Columbia Analytical Services™ 2655 Park Center Drive, Suite A | Simi Valley, CA 93065 | 805.526.7161 | 805.526.7270 fax | www.caslab.com

LABORATORY REPORT

June 4, 2010

Brian Baker
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

RE: 17131

Dear Brian:

Enclosed are the results of the samples submitted to our laboratory on May 11, 2010. For your reference, these analyses have been assigned our service request number P1001651.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 668 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Kate Aguilera
Project Manager

Client: Environmental Health & Engineering, Inc. CAS Project No: P1001651
Project: 17131

CASE NARRATIVE

The samples were received intact under chain of custody on May 11, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

The Relative Percent Difference (RPD) for chloromethane and tetrahydrofuran in the sample duplicate was outside control criteria. However, precision for these compounds was exhibited by the analysis of a Laboratory Control Sample (LCS) and Duplicate Laboratory Control Sample (DLCS). No further corrective action was required.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Client: Environmental Health & Engineering, Incorporated

Folder: P1001651

Project: 17131

Detailed Sample Information

CAS Sample ID	Client Sample ID	Container Type	Pi1 (Hg)	Pi1 (psig)	Pf1	Pi2 (Hg)	Pi2 (psig)	Pf2	Cont ID	Order #	FC ID
P1001651-001.01	110416	6.0 L-Summa Canister Ambient	-7.2	-3.5	3.5				AC00790	**17433**	
P1001651-002.01	110417	6.0 L-Summa Canister Ambient	-6.7	-3.3	3.5				AC01559	**17433**	
P1001651-003.01	110418	6.0 L-Summa Canister Ambient	-6.9	-3.4	3.5				AC00410	**17433**	
P1001651-004.01	110419	6.0 L-Summa Canister Ambient	-7.1	-3.5	3.5				AC01124	**17433**	
P1001651-005.01	110512	6.0 L-Summa Canister Ambient	-7.0	-3.4	3.5				AC01651	**17433**	
P1001651-006.01	110513	6.0 L-Summa Canister Ambient	-8.3	-4.1	3.5				AC01215	**17433**	
P1001651-007.01	110514	6.0 L-Summa Canister Ambient	-4.7	-2.3	3.7				AC01420	**17433**	
P1001651-008.01	110516	6.0 L-Summa Canister Ambient	-28.5	-14.0	3.5				AC01684	**17433**	
P1001651-009.01	110515	6.0 L-Summa Canister Ambient	-1.7	-0.8	3.5				AC00826	**17433**	
P1001651-010.01	110519	6.0 L-Summa Canister Ambient	-9.1	-4.5	3.5				AC01688	**17433**	
P1001651-011.01	110520	6.0 L-Summa Canister Ambient	-4.5	-2.2	3.5				AC01612	**17433**	
P1001651-012.01	110521	6.0 L-Summa Canister Ambient	-7.1	-3.5	3.5				AC01581	**17433**	
P1001651-013.01	110522	6.0 L-Summa Canister Ambient	-6.2	-3.0	3.5				AC01477	**17433**	

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 10 MAY 10

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

P1001651

TO: COLUMBIA ANALYTICAL

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17131

The cost of this analysis will be covered by EH&E Purchase Order # 17131

For EH & E Data Coordinator - URGENT DATA ☐

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER: Time/Date/Vol.	
1	110416	AIR	EPA TO-15	2 HRS	-7.4
2	110417				-6.9
3	110418				-7.1
4	110419				-7.0
5	110512				-7.1
6	110513				-8.5
7	110514				-5.2
8	110516			Ø HOURS	-27.
9	110515				-1.6
10	110519				-9.0
11	110520				-4.7
12	110521				-7.0
13	110522				-6.4

Special instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient SBAKER@EHEINC.COM

Each signatory please return one copy of this form to the above address

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 5/10/10

Received by: Wtanning of (company name) CAS Date: 5/11/10 0955

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 1

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Environmental Health & Engineering, Inc. Work order: P1001651

Project: 17131

Sample(s) received on: 05/11/10 Date opened: 05/11/10 by: MZAMORA

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Was a **chain-of-custody** provided?	☒	☐	☐
5	Was the **chain-of-custody** properly completed?	☐	☒	☐
6	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
7	Was **sample volume** received adequate for analysis?	☒	☐	☐
8	Are samples within specified holding times?	☒	☐	☐
9	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature _____ °C Blank Temperature _____ °C			
10	Was a **trip blank** received?	☐	☒	☐
	Trip blank supplied by CAS: _____			
11	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
12	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
13	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
14	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1001651-001.01	6.0 L Ambient Can					
P1001651-002.01	6.0 L Ambient Can					
P1001651-003.01	6.0 L Ambient Can					
P1001651-004.01	6.0 L Ambient Can					
P1001651-005.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers):

Chain of Custody is missing time collected

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Environmental Health & Engineering, Inc. Work order: P1001651

Project: 17131

Sample(s) received on: 05/11/10 Date opened: 05/11/10 by: MZAMORA

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1001651-006.01	6.0 L Ambient Can					
P1001651-007.01	6.0 L Ambient Can					
P1001651-008.01	6.0 L Ambient Can					
P1001651-009.01	6.0 L Ambient Can					
P1001651-010.01	6.0 L Ambient Can					
P1001651-011.01	6.0 L Ambient Can					
P1001651-012.01	6.0 L Ambient Can					
P1001651-013.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers):

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

RESULTS OF VOLATILE ORGANIC ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110416** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-001

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00790

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**4.9**	0.82	**2.8**	0.47	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.2**	0.82	**0.44**	0.16	
74-87-3	**Chloromethane**	**0.57**	0.33	**0.28**	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.82	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.064	
106-99-0	1,3-Butadiene	ND	0.33	ND	0.15	
74-83-9	Bromomethane	ND	0.16	ND	0.042	
75-00-3	Chloroethane	ND	0.16	ND	0.062	
64-17-5	**Ethanol**	**850**	82	**450**	43	**D**
75-05-8	Acetonitrile	ND	0.82	ND	0.49	
107-02-8	**Acrolein**	**4.7**	3.3	**2.1**	1.4	
67-64-1	**Acetone**	**61**	8.2	**26**	3.4	
75-69-4	**Trichlorofluoromethane**	**1.1**	0.16	**0.20**	0.029	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**13**	1.6	**5.4**	0.66	
107-13-1	Acrylonitrile	ND	0.82	ND	0.38	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.041	
75-09-2	Methylene Chloride	ND	0.82	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	ND	0.052	
76-13-1	**Trichlorotrifluoroethane**	**0.49**	0.16	**0.064**	0.021	
75-15-0	Carbon Disulfide	ND	8.2	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.041	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.040	
1634-04-4	**Methyl tert-Butyl Ether**	**1.3**	0.16	**0.37**	0.045	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.2	ND	2.8	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: P Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110416** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-001

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Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.041	
141-78-6	**Ethyl Acetate**	**66**	0.82	**18**	0.23	
110-54-3	**n-Hexane**	**15**	0.82	**4.3**	0.23	
67-66-3	**Chloroform**	**12**	0.16	**2.5**	0.033	
109-99-9	**Tetrahydrofuran (THF)**	**1.7**	0.82	**0.58**	0.28	
107-06-2	1,2-Dichloroethane	ND	0.16	ND	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.16	ND	0.030	
71-43-2	**Benzene**	**8.9**	0.16	**2.8**	0.051	
56-23-5	**Carbon Tetrachloride**	**0.61**	0.16	**0.097**	0.026	
110-82-7	**Cyclohexane**	**4.2**	0.82	**1.2**	0.24	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.035	
75-27-4	**Bromodichloromethane**	**3.8**	0.16	**0.56**	0.024	
79-01-6	Trichloroethene	ND	0.16	ND	0.030	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	0.82	ND	0.20	
142-82-5	**n-Heptane**	**9.7**	0.82	**2.4**	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	ND	0.18	
108-10-1	**4-Methyl-2-pentanone**	**2.0**	0.82	**0.48**	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.030	
108-88-3	**Toluene**	**40**	0.82	**11**	0.22	
591-78-6	2-Hexanone	ND	0.82	ND	0.20	
124-48-1	**Dibromochloromethane**	**1.4**	0.16	**0.17**	0.019	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.021	
123-86-4	**n-Butyl Acetate**	**10**	0.82	**2.1**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110416**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00790

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17 - 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**4.3**	0.82	**0.92**	0.17	
127-18-4	**Tetrachloroethene**	**1.4**	0.16	**0.20**	0.024	
108-90-7	Chlorobenzene	ND	0.16	ND	0.035	
100-41-4	**Ethylbenzene**	**8.8**	0.82	**2.0**	0.19	
179601-23-1	**m,p-Xylenes**	**26**	0.82	**6.1**	0.19	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	**Styrene**	**1.3**	0.82	**0.31**	0.19	
95-47-6	**o-Xylene**	**11**	0.82	**2.6**	0.19	
111-84-2	**n-Nonane**	**2.4**	0.82	**0.46**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.024	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	**alpha-Pinene**	**8.8**	0.82	**1.6**	0.15	
103-65-1	**n-Propylbenzene**	**3.3**	0.82	**0.67**	0.17	
622-96-8	**4-Ethyltoluene**	**5.1**	0.82	**1.0**	0.17	
108-67-8	**1,3,5-Trimethylbenzene**	**5.4**	0.82	**1.1**	0.17	
95-63-6	**1,2,4-Trimethylbenzene**	**18**	0.82	**3.6**	0.17	
100-44-7	Benzyl Chloride	ND	0.82	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.16	ND	0.027	
106-46-7	**1,4-Dichlorobenzene**	**0.51**	0.16	**0.084**	0.027	
95-50-1	1,2-Dichlorobenzene	ND	0.16	ND	0.027	
5989-27-5	**d-Limonene**	**15**	0.82	**2.8**	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.82	ND	0.084	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	**Naphthalene**	**3.4**	0.82	**0.65**	0.16	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.076	

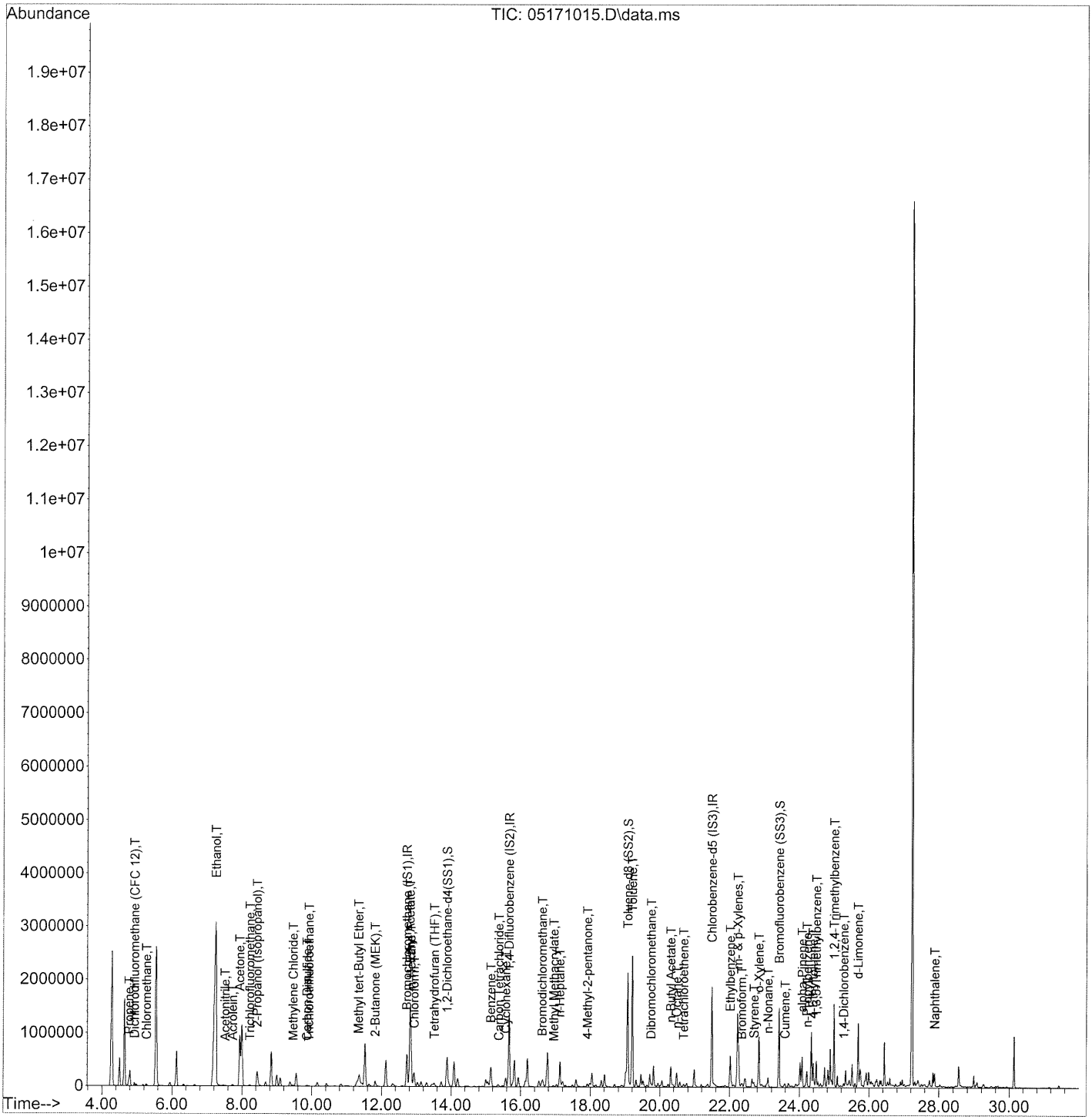
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 20 14:59:41 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 20 14:59:41 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	312319	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1557723	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	773305	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	557718	23.996	ng		-0.03
Spiked Amount 25.000			Recovery	=	96.00%		✓
57) Toluene-d8 (SS2)	19.07	98	1826042	24.752	ng		0.00
Spiked Amount 25.000			Recovery	=	99.00%		✓
73) Bromofluorobenzene (SS3)	23.42	174	480165	25.495	ng		0.00
Spiked Amount 25.000			Recovery	=	101.96%		✓
Target Compounds							Qvalue
2) Propene	4.77	42	72947	2.994	ng M	#	1
3) Dichlorodifluoromethan...	4.93	85	55750	1.334	ng		99
4) Chloromethane	5.27	50	10844	0.351	ng		95
10) Ethanol	7.25	45	7411982	558.051	ng SU dil		99
11) Acetonitrile	7.51	41	12643	0.377	ng		83
12) Acrolein	7.73	56	30144	2.912	ng		97
13) Acetone	7.93	58	603769	37.185	ng	#	51
14) Trichlorofluoromethane	8.22	101	25490	0.704	ng		100
15) 2-Propanol (Isopropanol)	8.43	45	408308	8.111	ng		98
19) Methylene Chloride	9.46	84	5005	0.234	ng		91
21) Trichlorotrifluoroethane	9.91	151	4636	0.303	ng		94
22) Carbon Disulfide	9.86	76	38383	0.503	ng		98
25) Methyl tert-Butyl Ether	11.34	73	53645	0.807	ng		94
27) 2-Butanone (MEK)	11.82	72	50832	3.769	ng		96
30) Ethyl Acetate	12.81	61	323821	40.389	ng		96
31) n-Hexane	12.84	57	384299	9.361	ng		97
32) Chloroform	12.93	83	260567	7.606	ng		100
34) Tetrahydrofuran (THF)	13.52	72	13616	1.044	ng	#	29
41) Benzene	15.14	78	473180	5.442	ng		100
42) Carbon Tetrachloride	15.37	117	8636	0.373	ng		99
43) Cyclohexane	15.57	84	94655	2.590	ng		95
46) Bromodichloromethane	16.62	83	60292	2.312	ng		75
50) Methyl Methacrylate	16.95	100	2492	0.273	ng	#	1
51) n-Heptane	17.12	71	148560	5.976	ng		95
53) 4-Methyl-2-pentanone	17.92	58	22512	1.198	ng		90
58) Toluene	19.20	91	2227613	24.341	ng		99
60) Dibromochloromethane	19.74	129	15713	0.867	ng		96
62) n-Butyl Acetate	20.31	43	302725	6.170	ng		96
63) n-Octane	20.48	57	56090	2.642	ng		92
64) Tetrachloroethene	20.67	166	17985	0.839	ng		99

DA 5/20/10

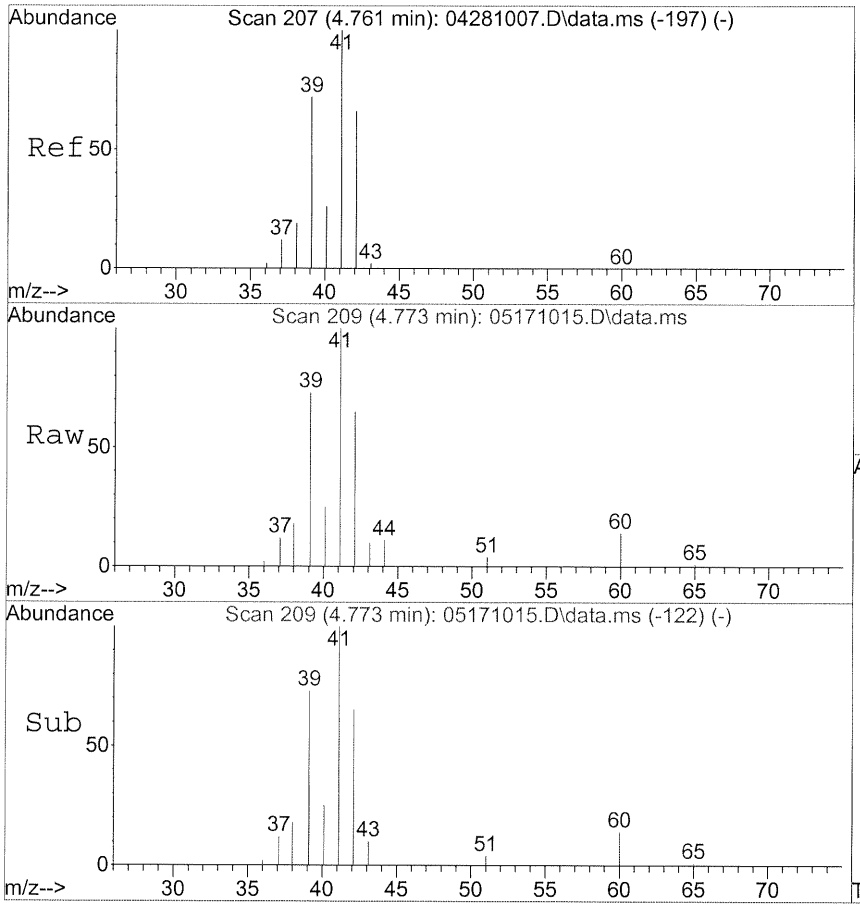
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 20 14:59:41 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) Ethylbenzene	22.01	91	551453	5.385	ng	97
67) m- & p-Xylenes	22.22	91	1337802	16.116	ng	98
68) Bromoform	22.34	173	1989	0.132	ng	85
69) Styrene	22.70	104	47761	0.816	ng	96
70) o-Xylene	22.84	91	602699	6.815	ng	98
71) n-Nonane	23.10	43	71669m	1.493	ng	
74) Cumene	23.59	105	50269	0.470	ng	98
75) alpha-Pinene	24.08	93	270413	5.390	ng	96
76) n-Propylbenzene	24.22	91	263885	2.014	ng	94
78) 4-Ethyltoluene	24.39	105	314664	3.152	ng	98
79) 1,3,5-Trimethylbenzene	24.48	105	278533	3.327	ng	97
82) 1,2,4-Trimethylbenzene	24.99	105	956782	10.934	ng	87
86) 1,4-Dichlorobenzene	25.27	146	13482	0.311	ng	98
91) d-Limonene	25.68	68	324168	9.411	ng	94
95) Naphthalene	27.88	128	201210	2.082	ng	98

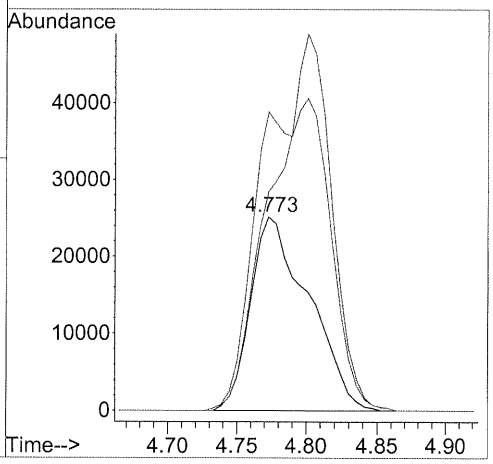
(#) = qualifier out of range (m) = manual integration (+) = signals summed

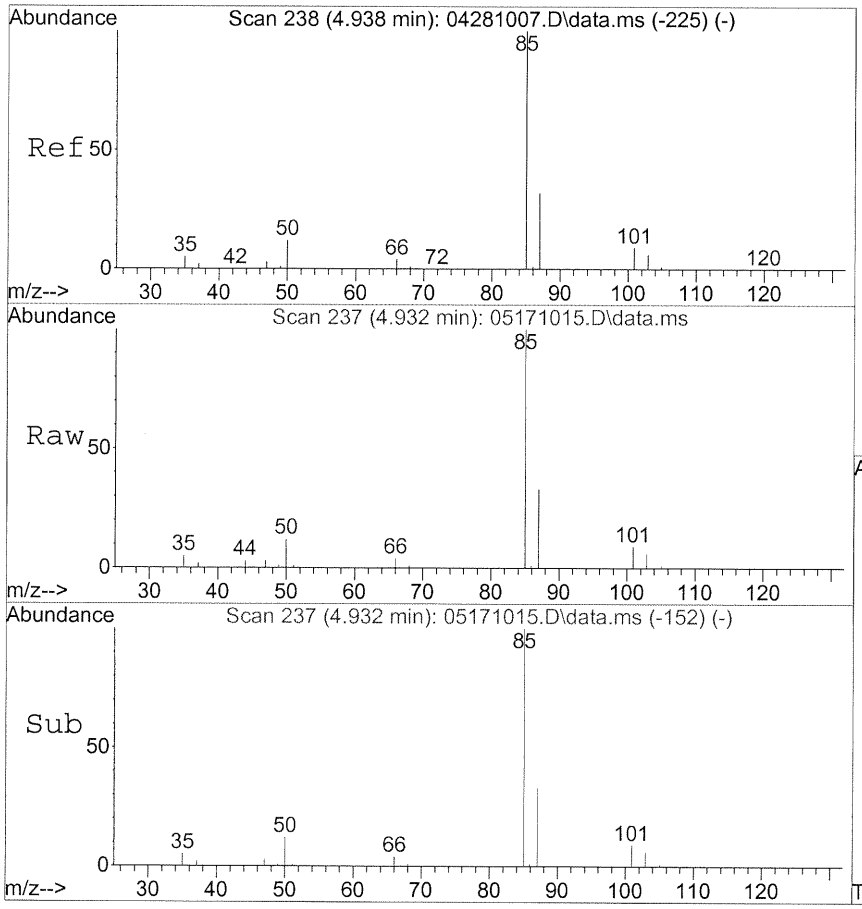


#2
Propene
Concen: 2.99 ng
RT: 4.77 min Scan# 209
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 42 Resp: 72947

Ion	Ratio	Lower	Upper
42	100		
39	0.0	88.4	128.4#
41	0.0	129.9	169.9#

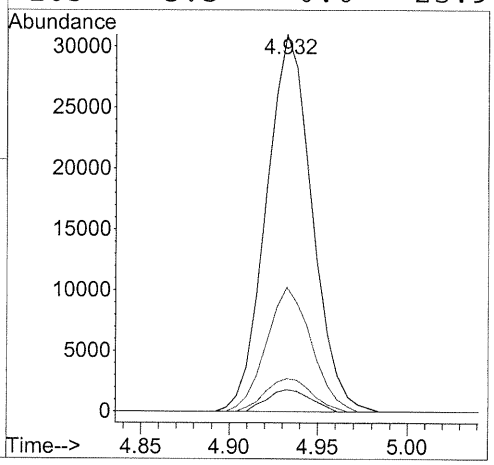


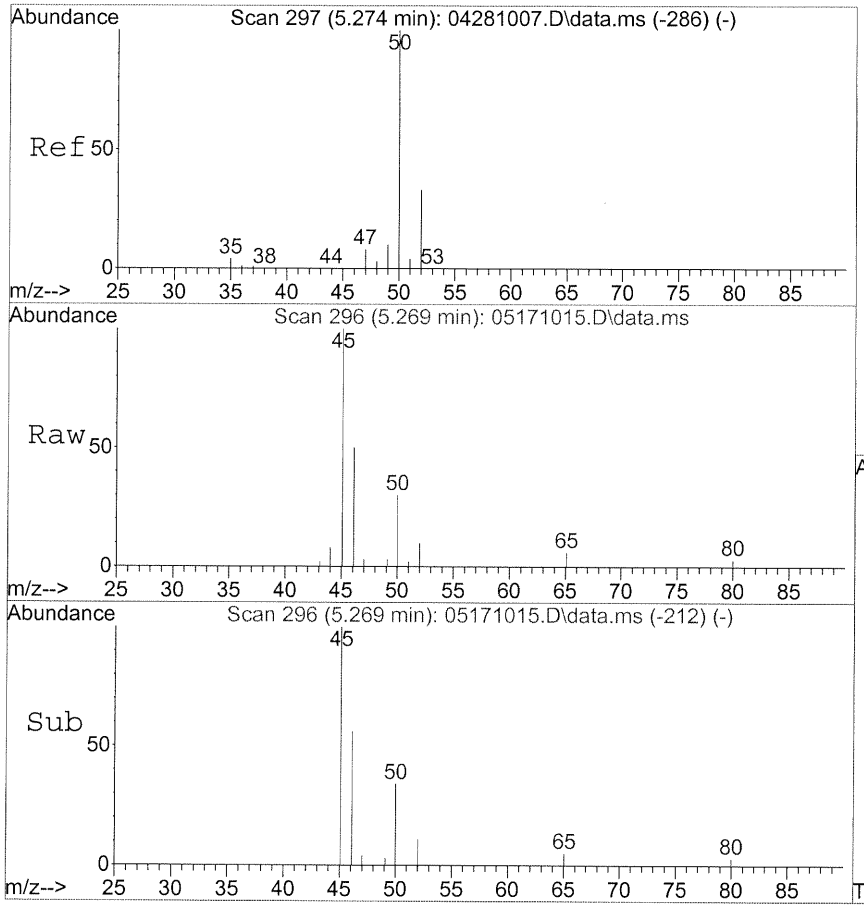


#3
Dichlorodifluoromethane (CFC
Concen: 1.33 ng
RT: 4.93 min Scan# 237
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 85 Resp: 55750

Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.6	52.6
101	8.8	0.0	29.3
103	5.5	0.0	25.9

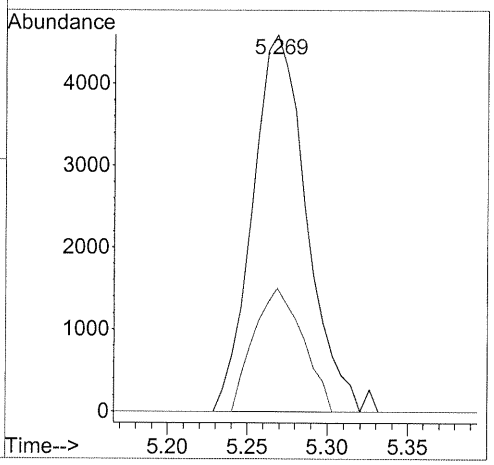


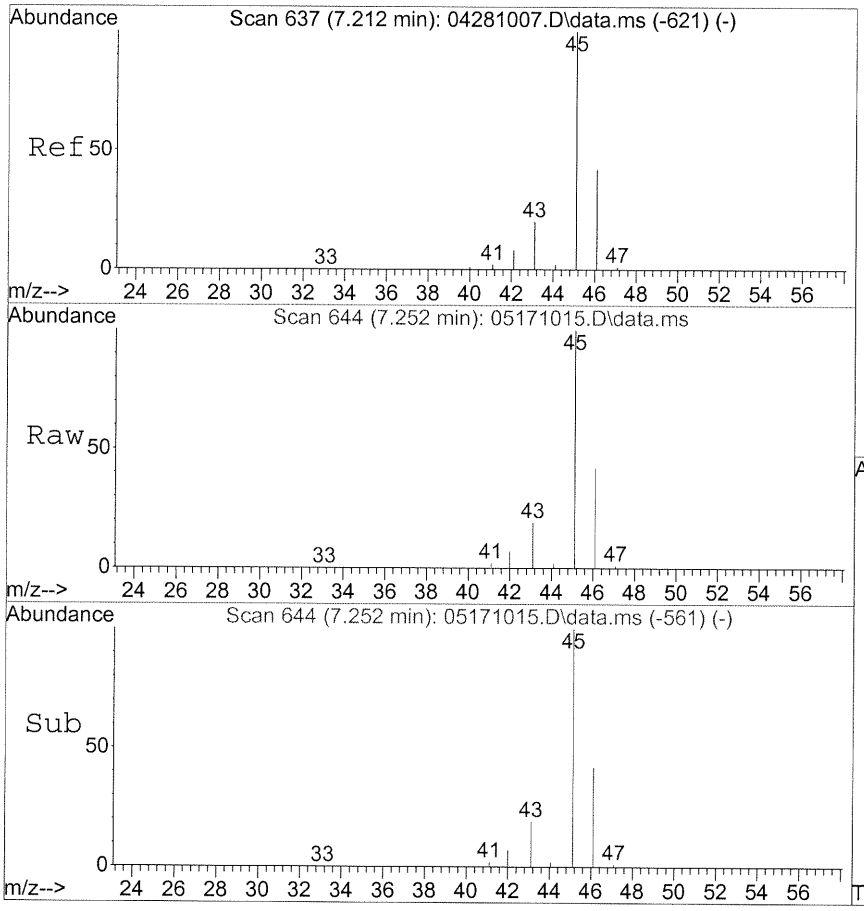


#4
Chloromethane
Concen: 0.35 ng
RT: 5.27 min Scan# 296
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 50 Resp: 10844

Ion	Ratio	Lower	Upper
50	100		
52	29.6	12.3	52.3

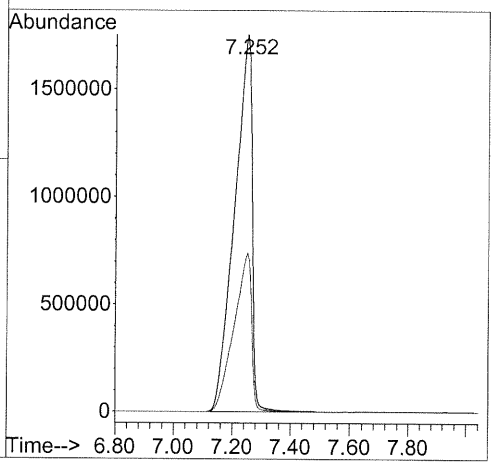


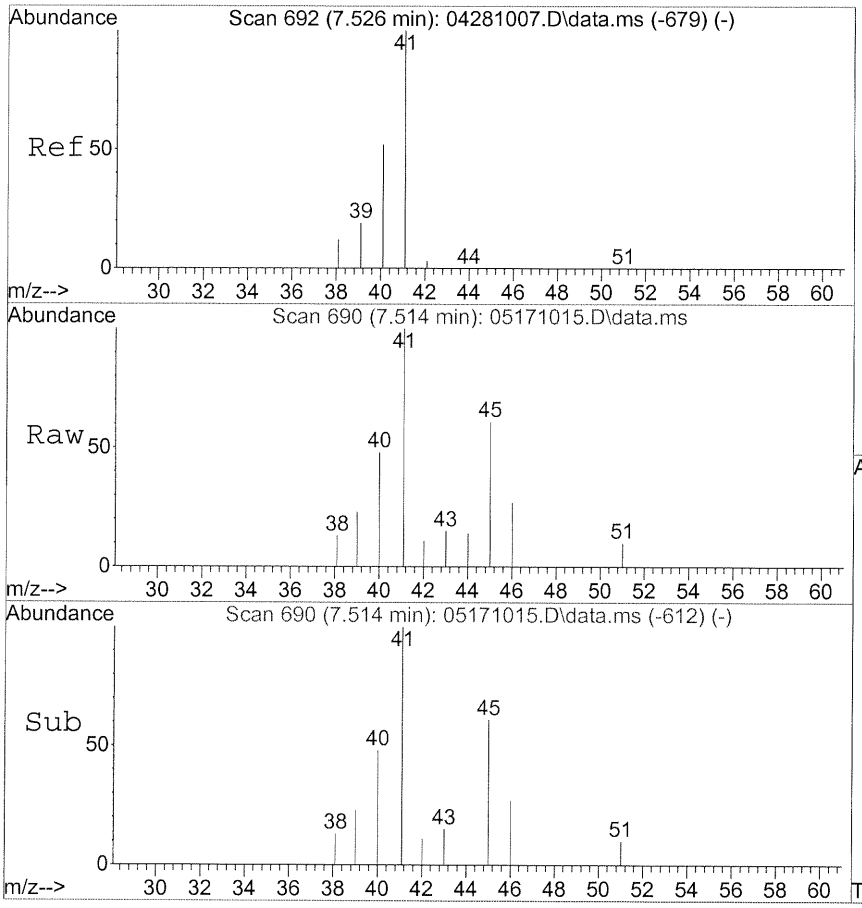


#10
Ethanol
Concen: 558.05 ng
RT: 7.25 min Scan# 644
Delta R.T. -0.028 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 45 Resp: 7411982

Ion	Ratio	Lower	Upper
45	100		
46	42.1	21.3	61.3

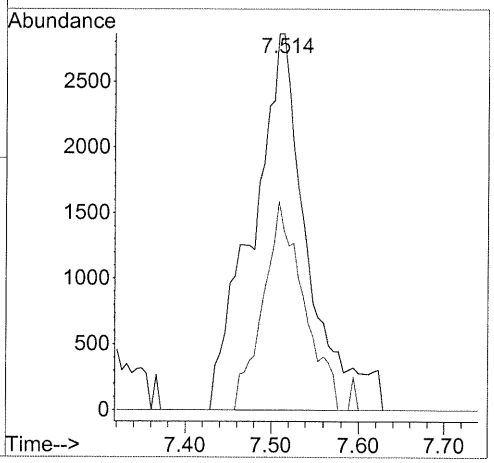


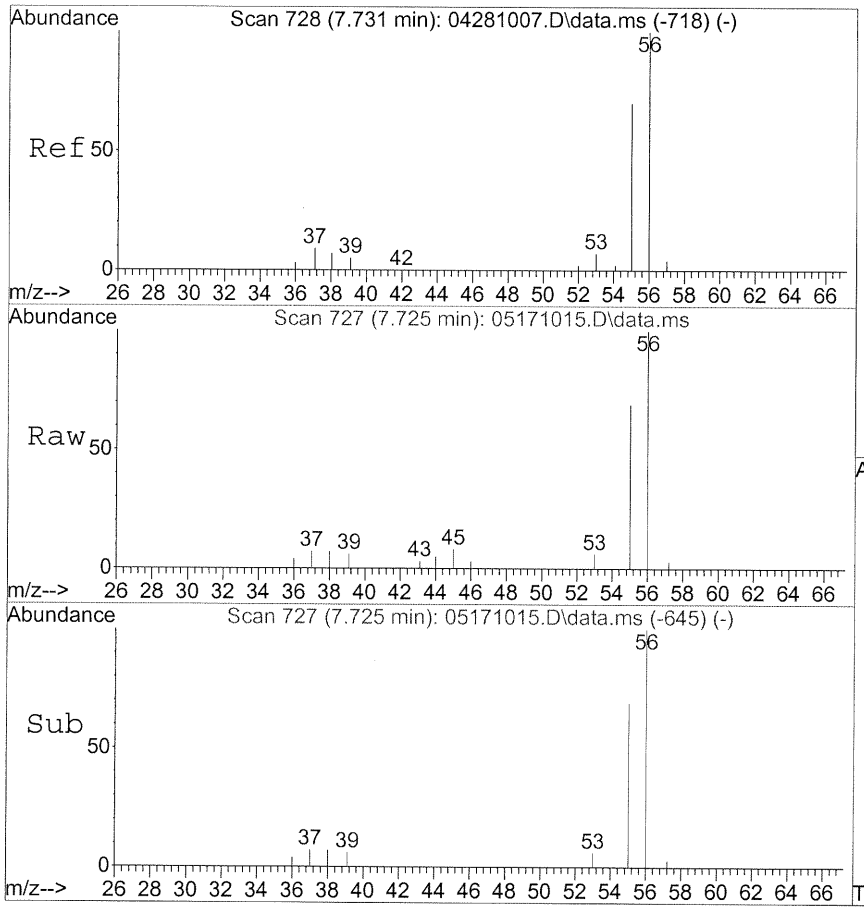


#11
Acetonitrile
Concen: 0.38 ng
RT: 7.51 min Scan# 690
Delta R.T. -0.057 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 41 Resp: 12643

Ion	Ratio	Lower	Upper
41	100		
40	41.1	33.2	73.2

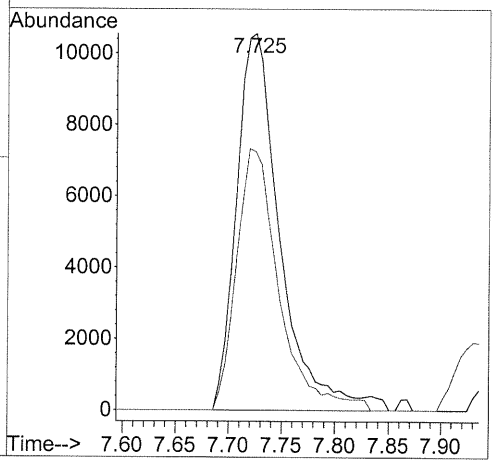


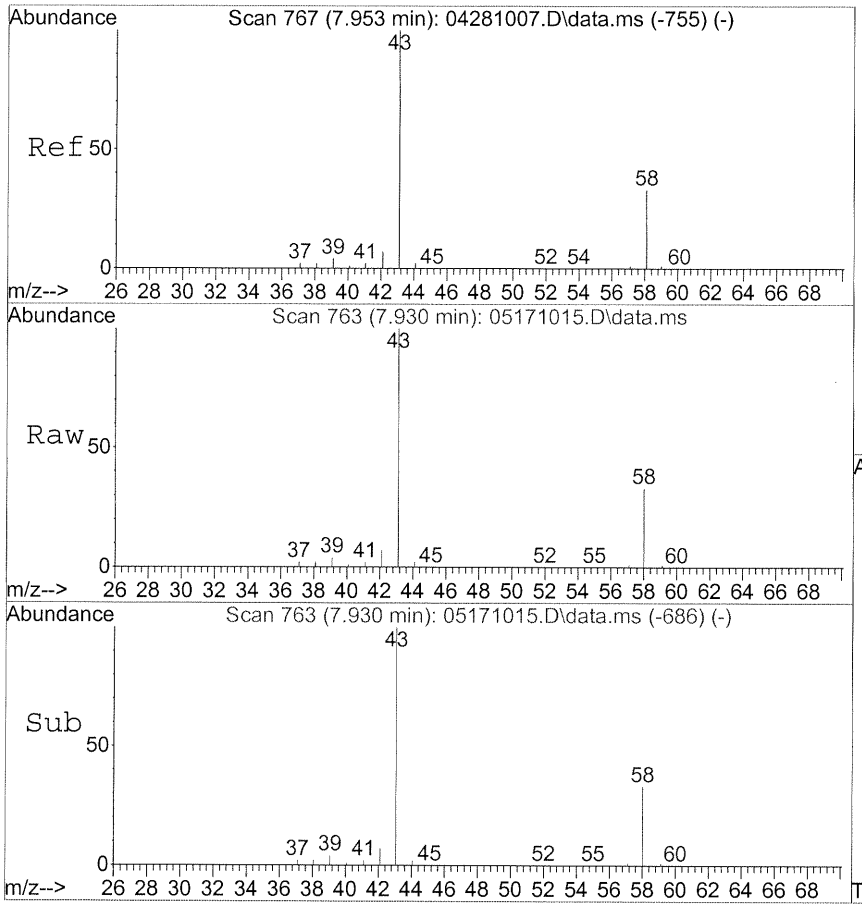


#12
Acrolein
Concen: 2.91 ng
RT: 7.73 min Scan# 727
Delta R.T. -0.034 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 56 Resp: 30144

Ion	Ratio	Lower	Upper
56	100		
55	67.8	50.2	90.2

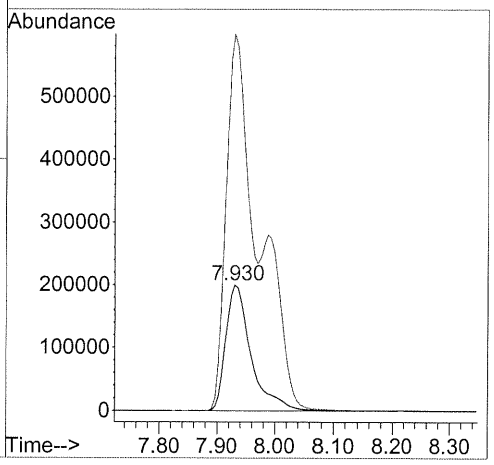


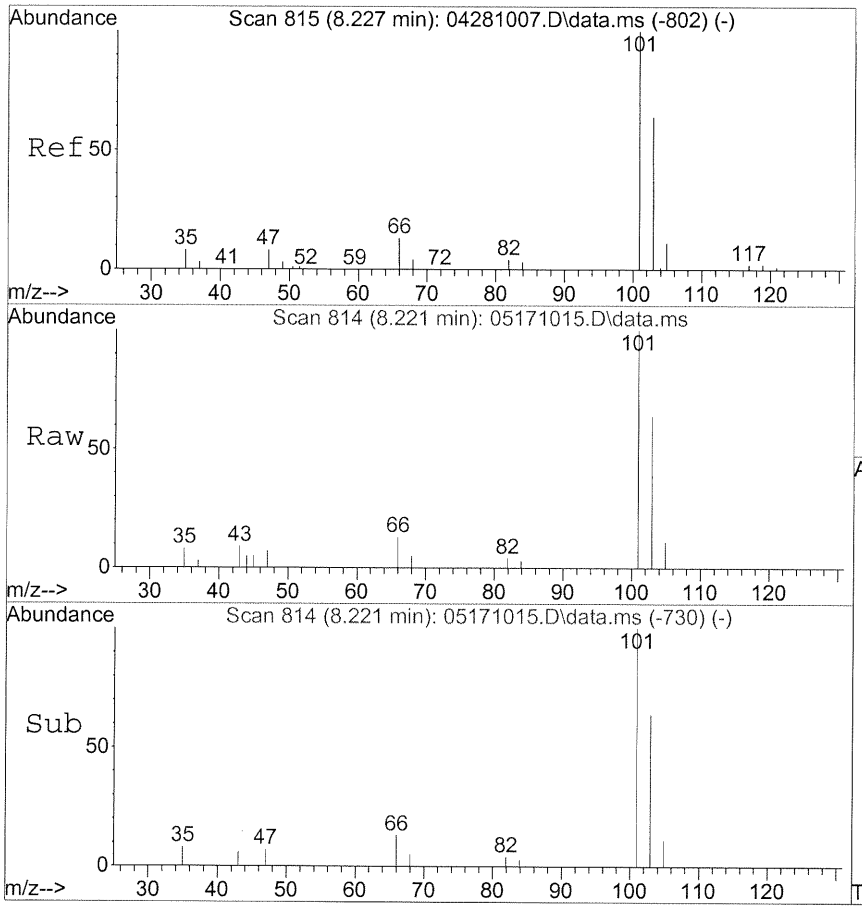


#13
Acetone
Concen: 37.19 ng
RT: 7.93 min Scan# 763
Delta R.T. -0.063 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 58 Resp: 603769

Ion	Ratio	Lower	Upper
58	100		
43	388.4	264.2	324.2#

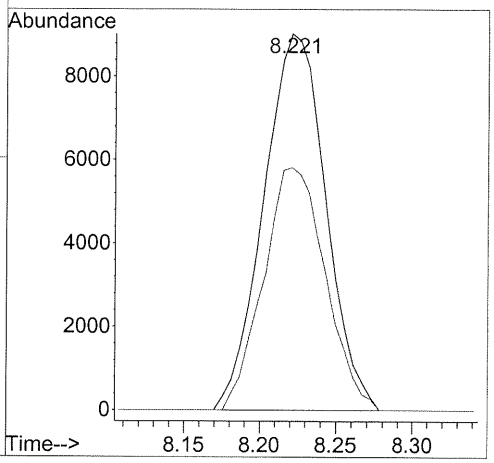


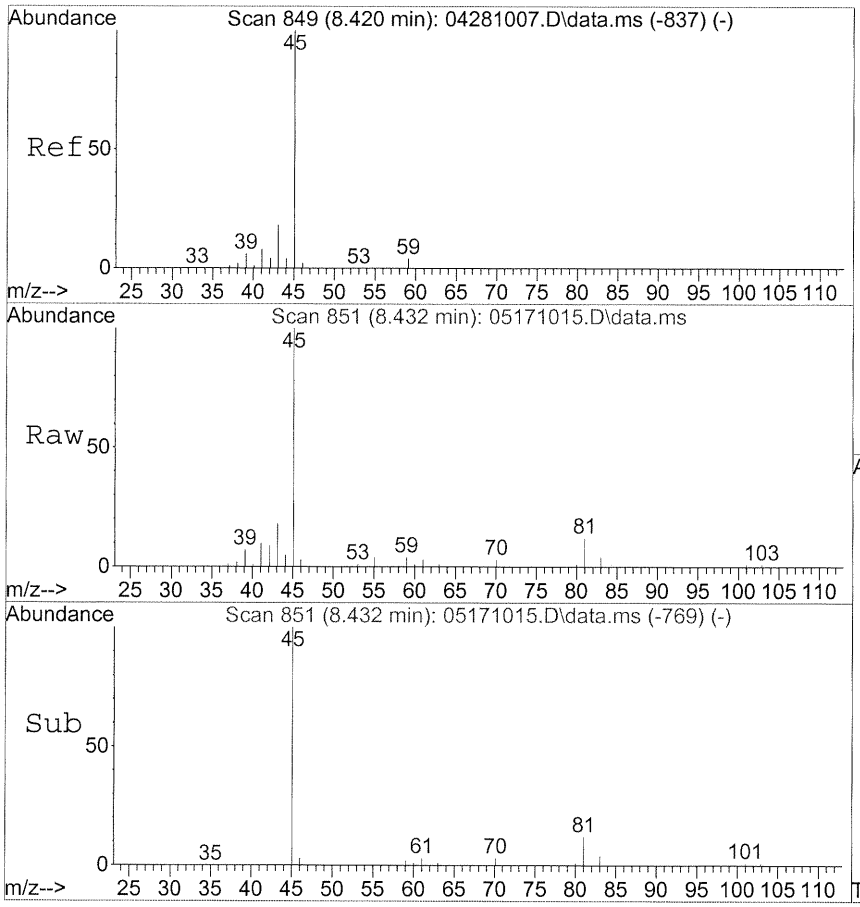


#14
Trichlorofluoromethane
Concen: 0.70 ng
RT: 8.22 min Scan# 814
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:101 Resp: 25490

Ion	Ratio	Lower	Upper
101	100		
103	64.2	44.6	84.6

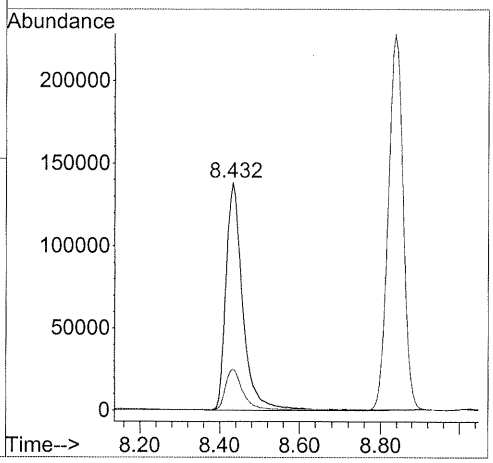


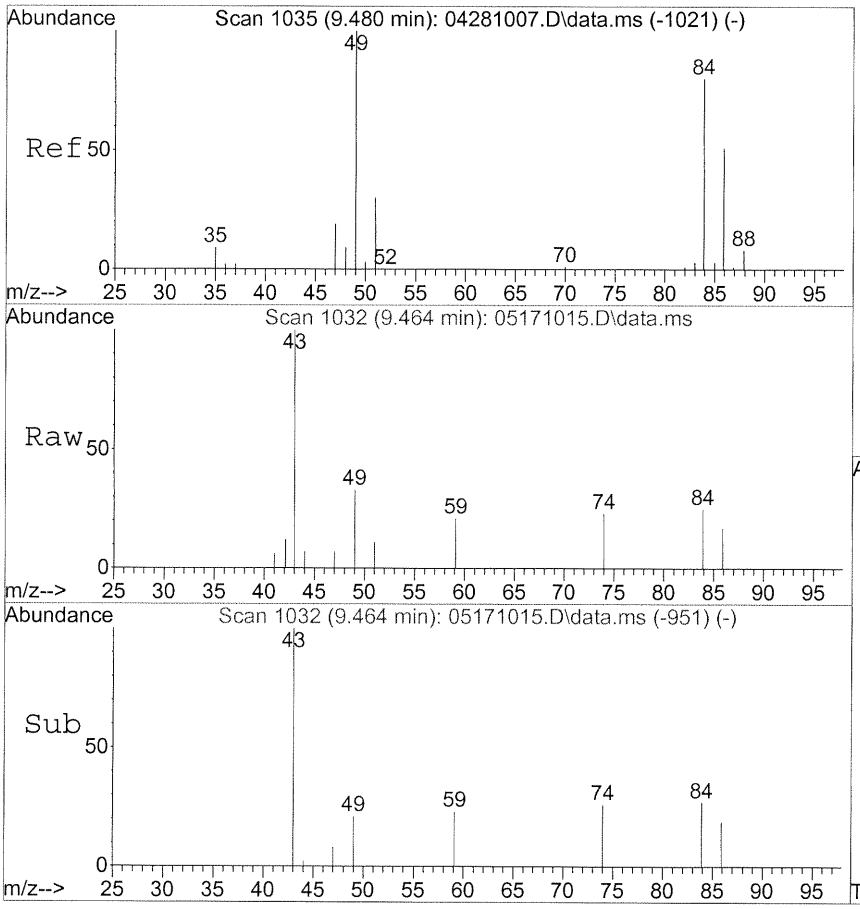


#15
2-Propanol (Isopropanol)
Concen: 8.11 ng
RT: 8.43 min Scan# 851
Delta R.T. -0.034 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 45 Resp: 408308

Ion	Ratio	Lower	Upper
45	100		
43	17.4	0.0	38.5

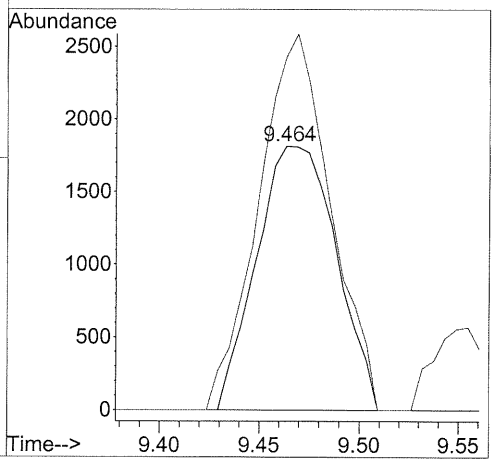


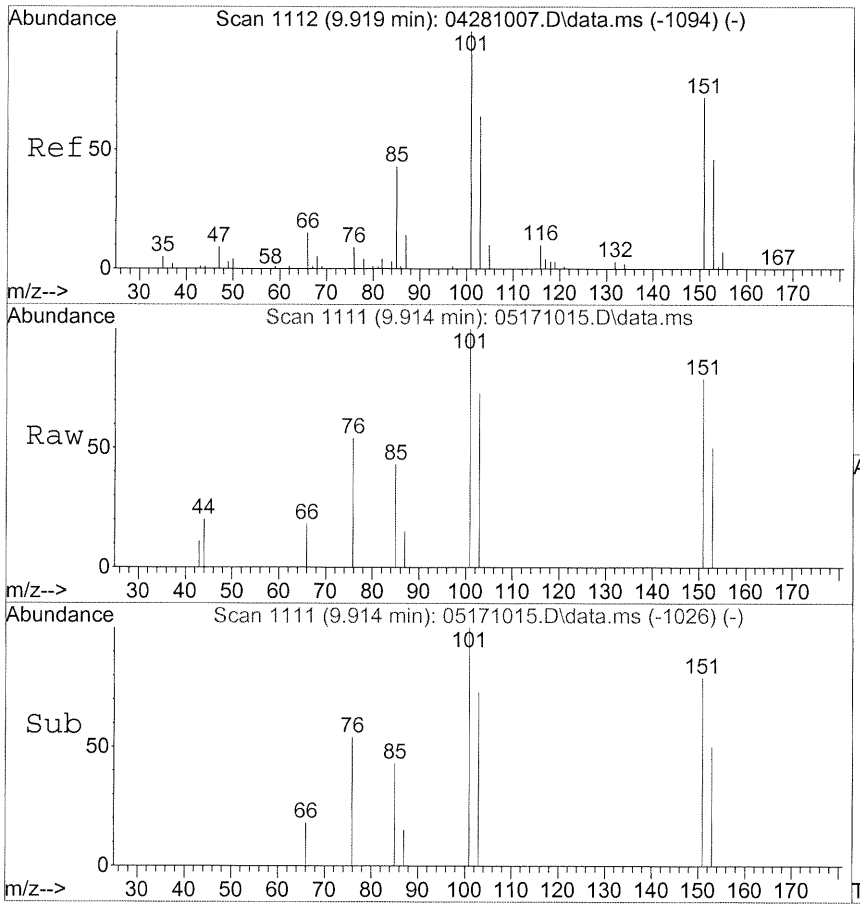


#19
Methylene Chloride
Concen: 0.23 ng
RT: 9.46 min Scan# 1032
Delta R.T. -0.040 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 84 Resp: 5005

Ion	Ratio	Lower	Upper
84	100		
49	129.4	94.5	144.5

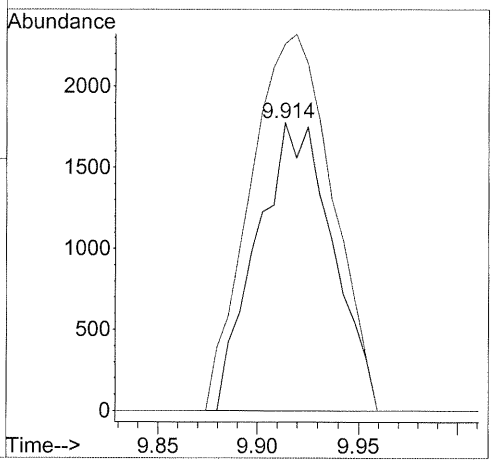


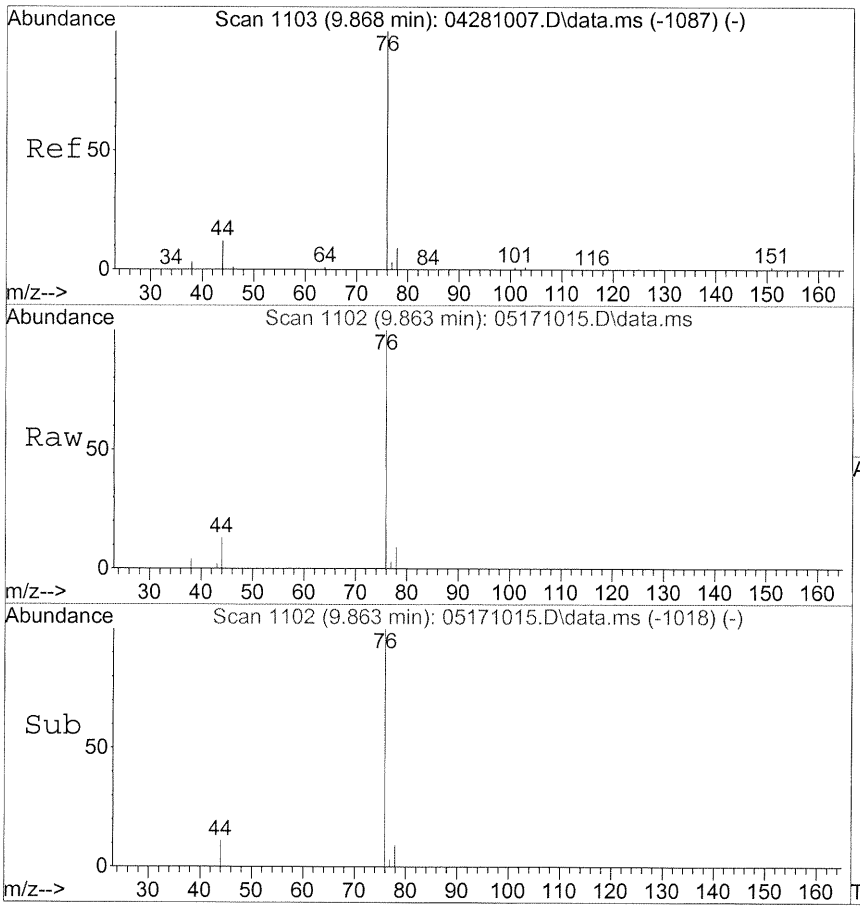


#21
Trichlorotrifluoroethane
Concen: 0.30 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:151 Resp: 4636

Ion	Ratio	Lower	Upper
151	100		
101	142.2	114.9	154.9

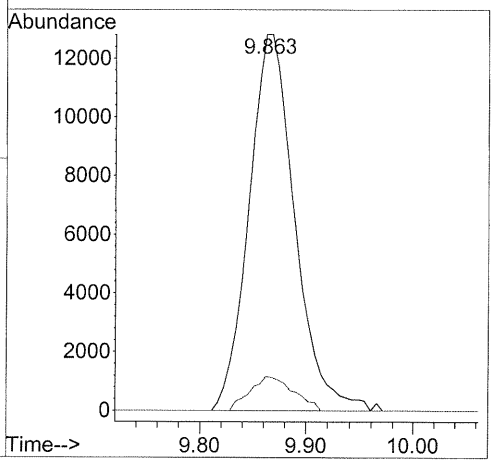


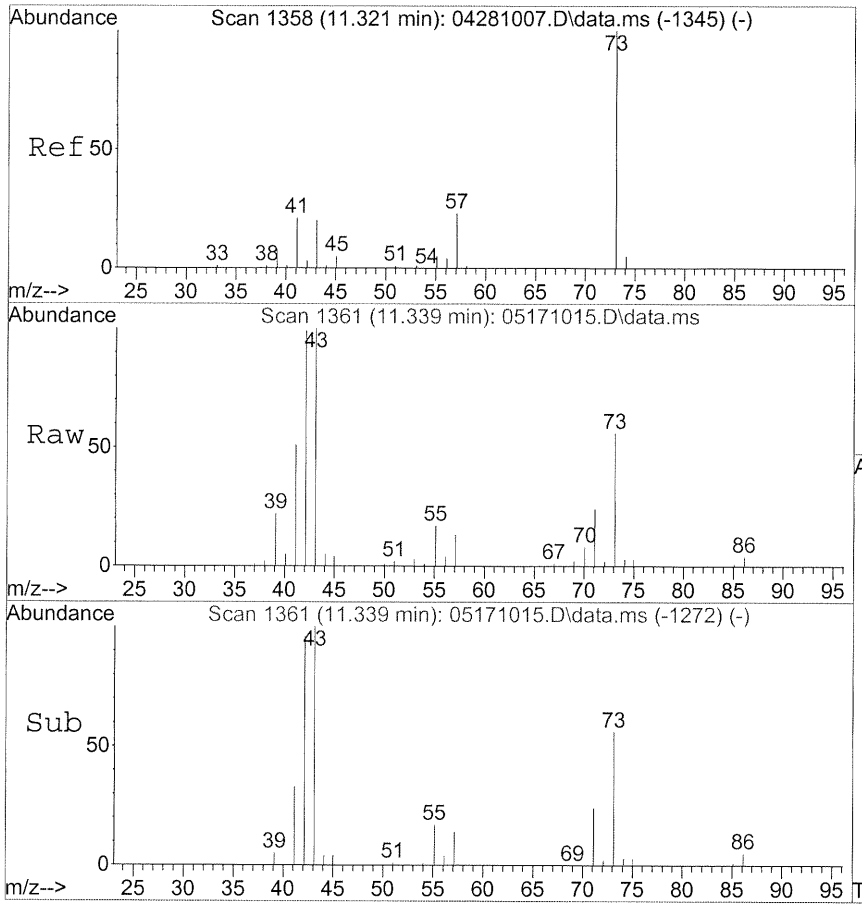


#22
Carbon Disulfide
Concen: 0.50 ng
RT: 9.86 min Scan# 1102
Delta R.T. -0.022 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 76 Resp: 38383

Ion	Ratio	Lower	Upper
76	100		
78	8.6	0.0	29.2

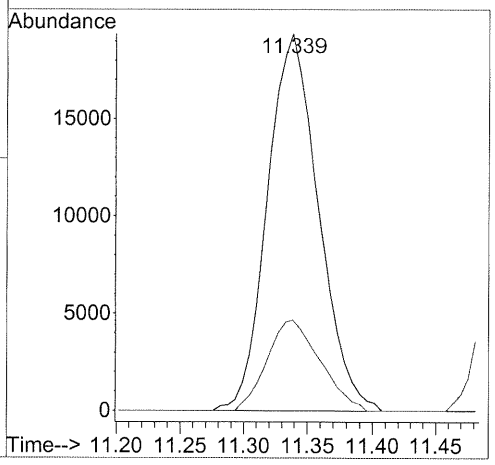


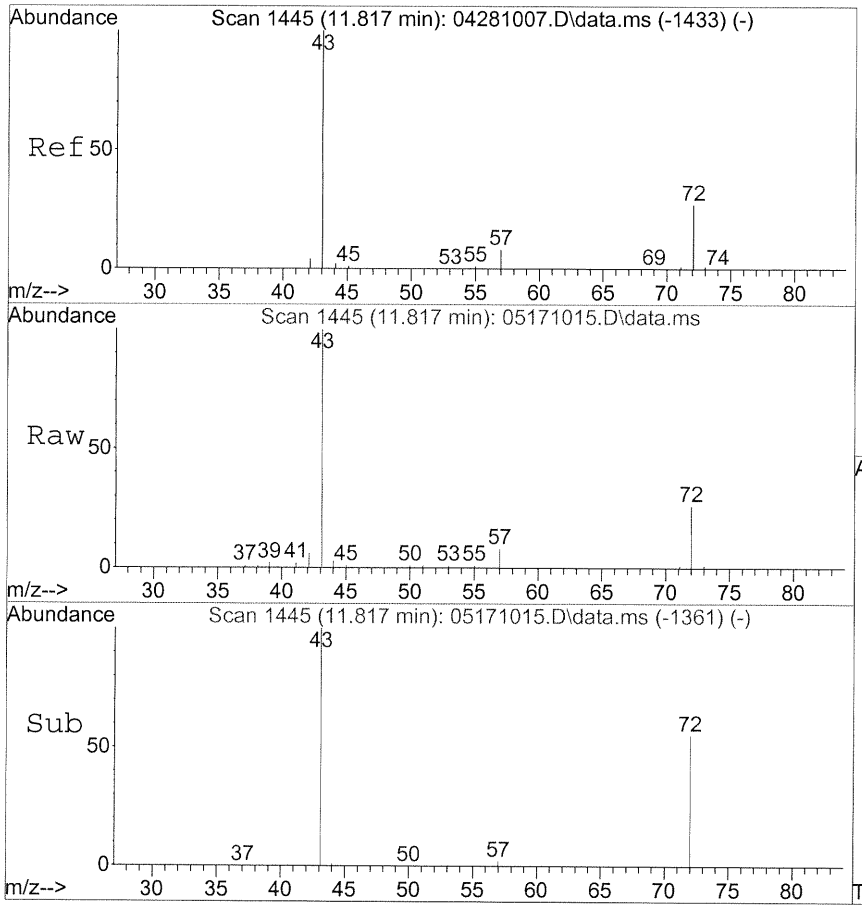


#25
Methyl tert-Butyl Ether
Concen: 0.81 ng
RT: 11.34 min Scan# 1361
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 73 Resp: 53645

Ion	Ratio	Lower	Upper
73	100		
57	24.9	1.9	41.9

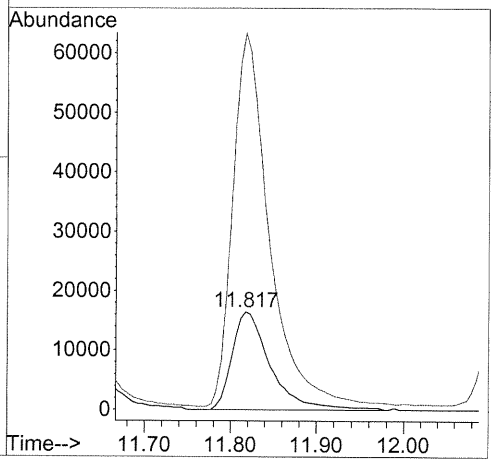


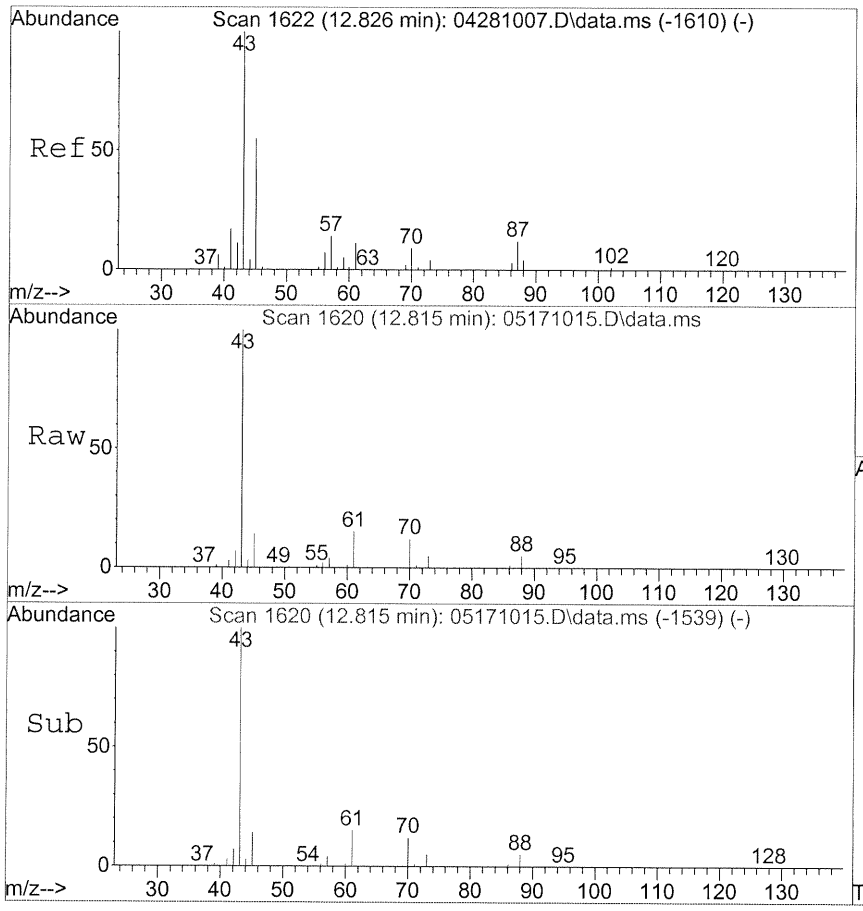


#27
2-Butanone (MEK)
Concen: 3.77 ng
RT: 11.82 min Scan# 1445
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 72 Resp: 50832

Ion	Ratio	Lower	Upper
72	100		
43	371.7	342.0	382.0

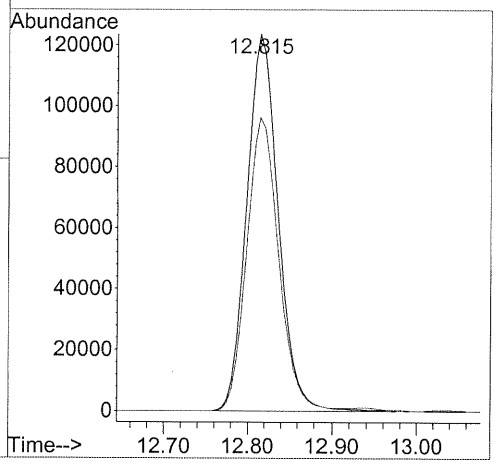


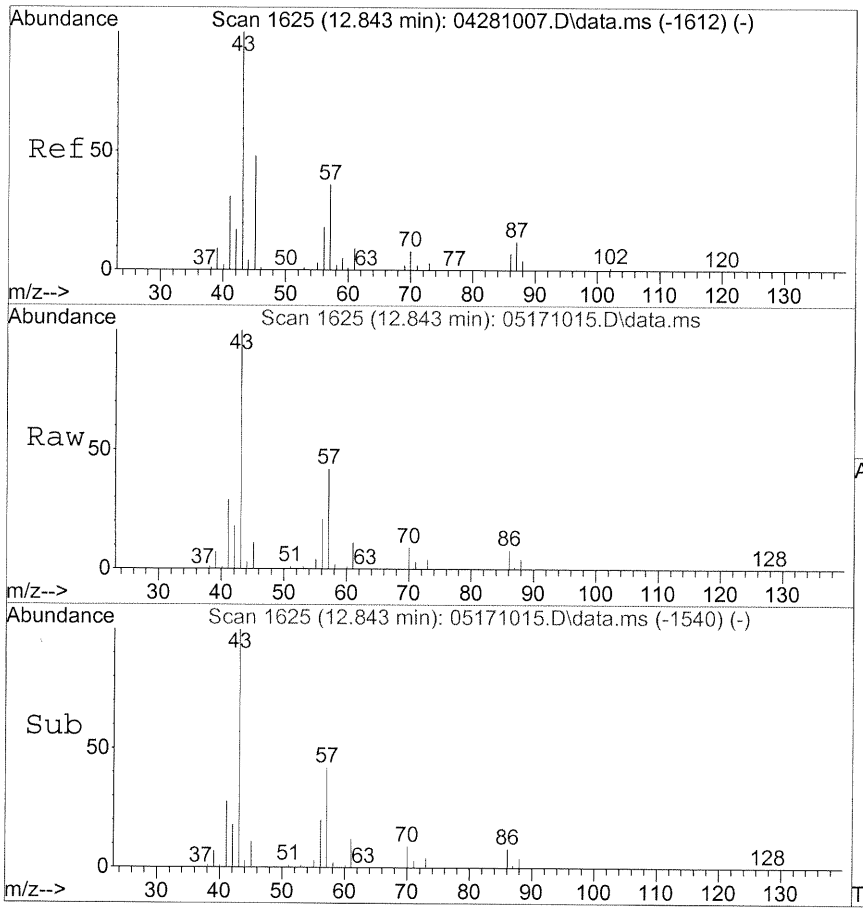


#30
Ethyl Acetate
Concen: 40.39 ng
RT: 12.81 min Scan# 1620
Delta R.T. -0.040 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 61 Resp: 323821

Ion	Ratio	Lower	Upper
61	100		
70	80.0	63.6	103.6

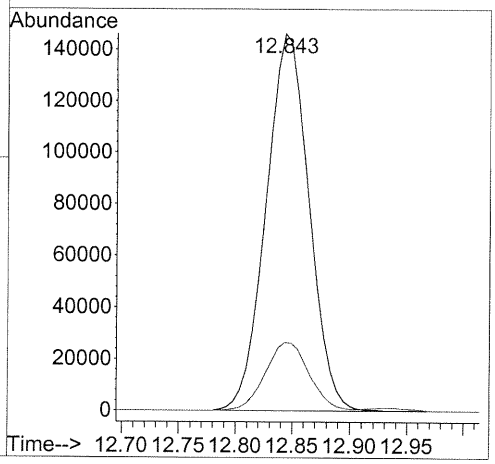


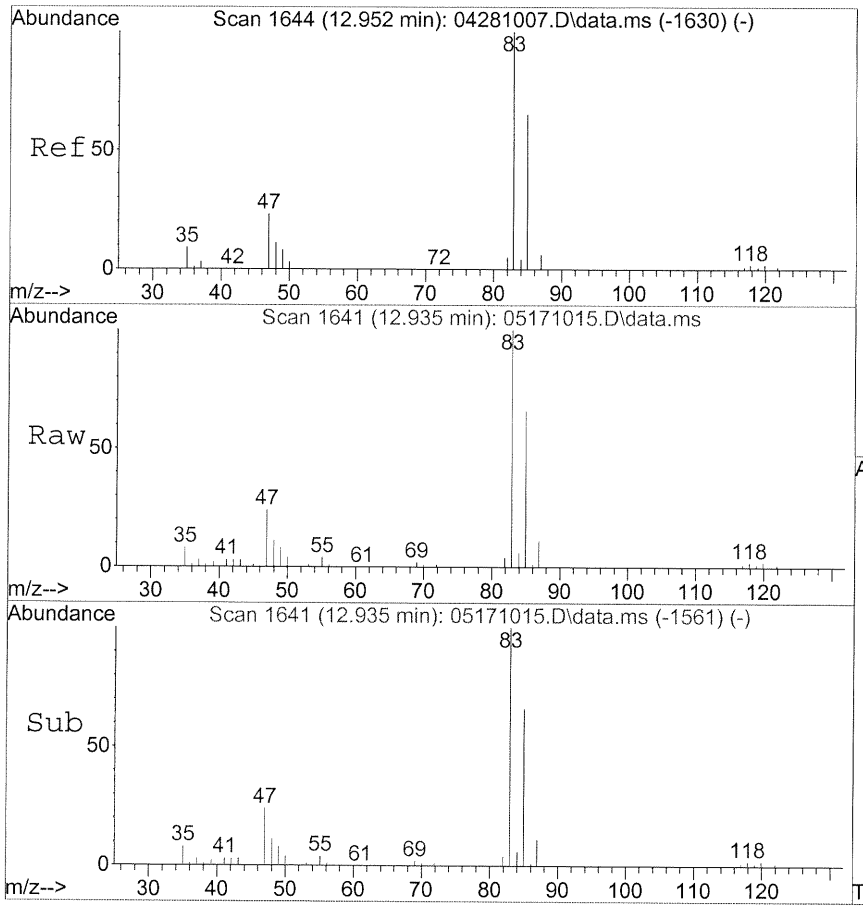


#31
n-Hexane
Concen: 9.36 ng
RT: 12.84 min Scan# 1625
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 57 Resp: 384299

Ion	Ratio	Lower	Upper
57	100		
86	18.5	0.0	39.8

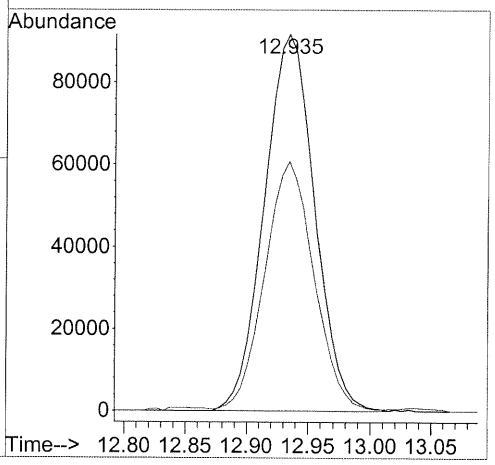


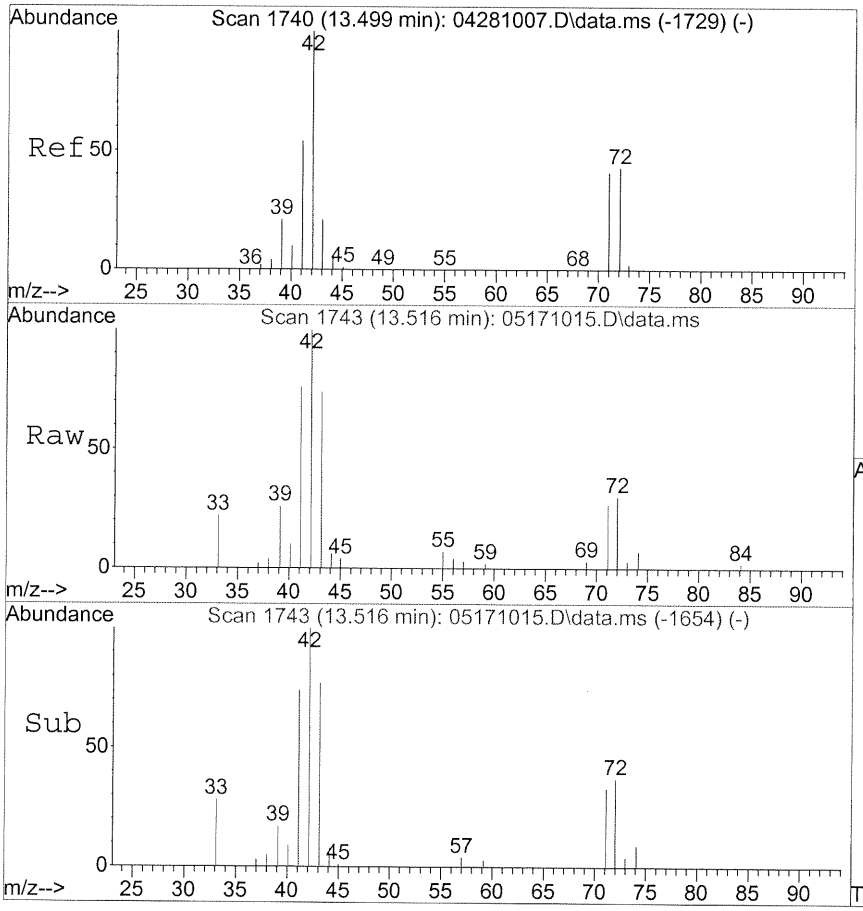


#32
Chloroform
Concen: 7.61 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 83 Resp: 260567

Ion	Ratio	Lower	Upper
83	100		
85	65.1	44.9	84.9

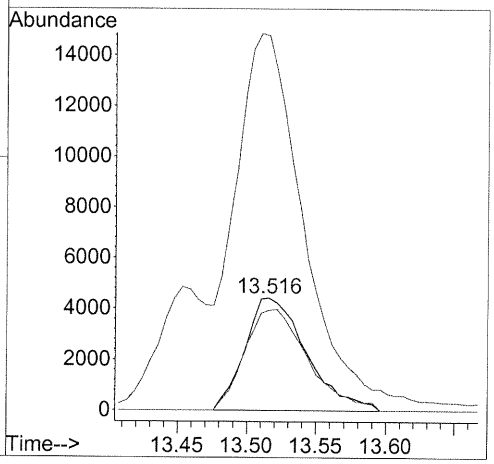


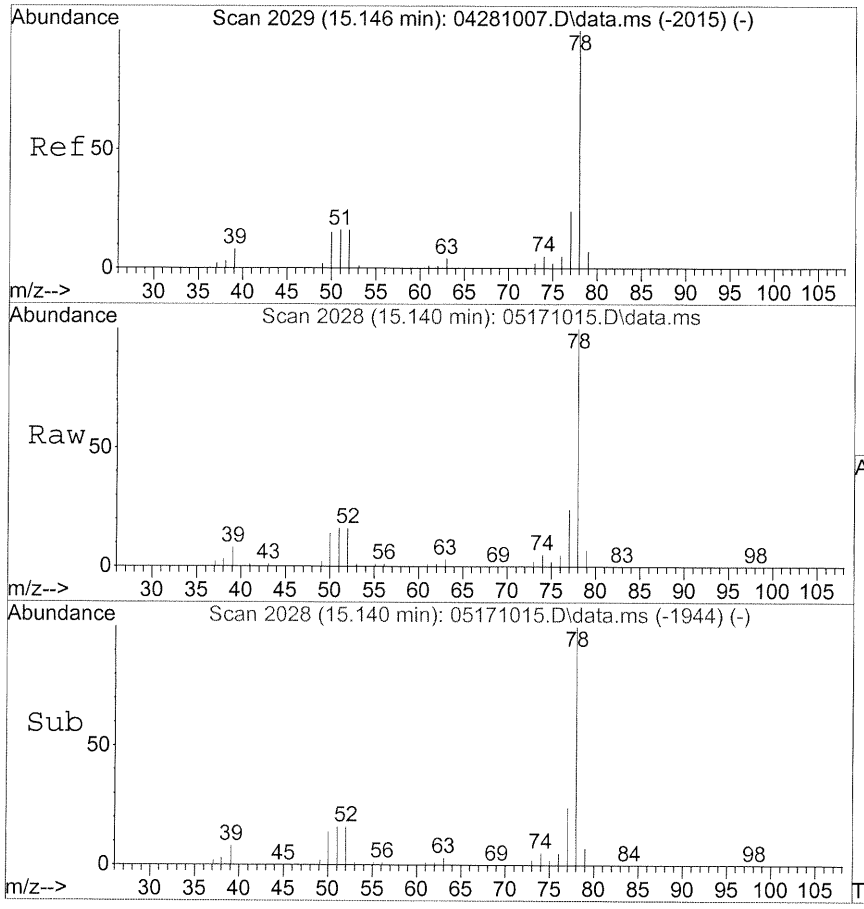


#34
Tetrahydrofuran (THF)
Concen: 1.04 ng
RT: 13.52 min Scan# 1743
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 72 Resp: 13616

Ion	Ratio	Lower	Upper
72	100		
71	92.3	74.5	114.5
42	378.1	197.7	237.7#

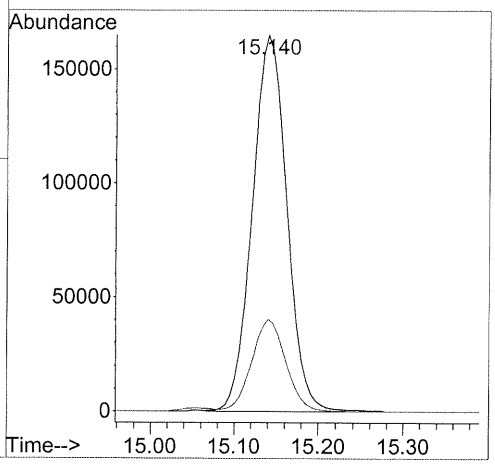


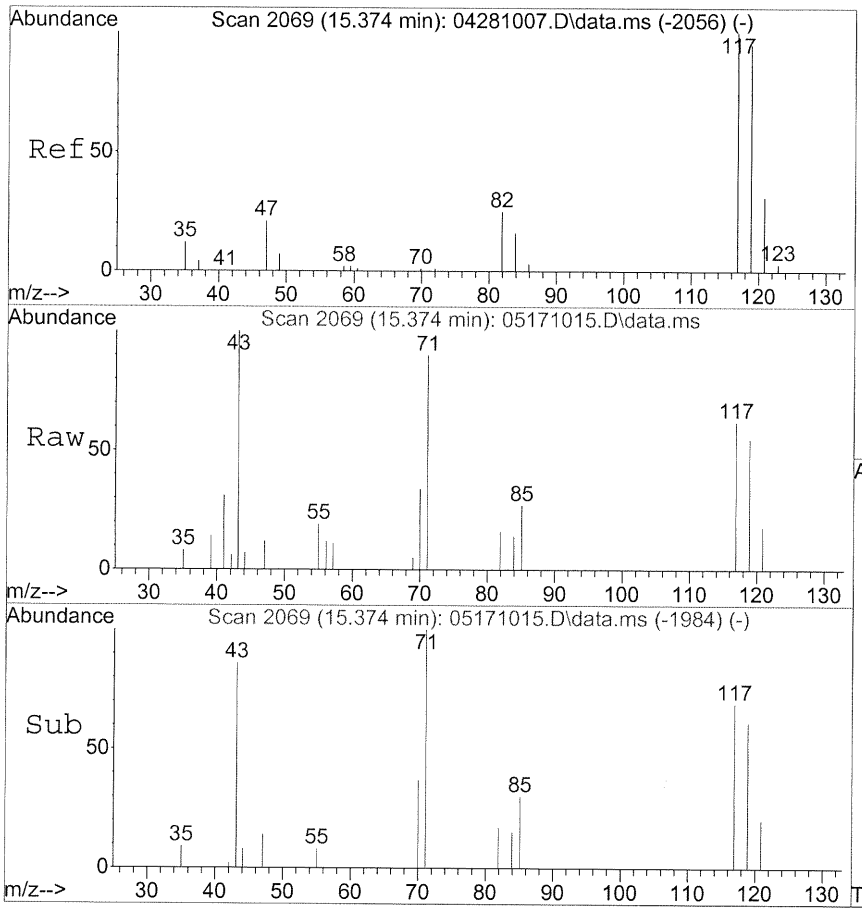


#41
Benzene
Concen: 5.44 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 78 Resp: 473180

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.1	44.1

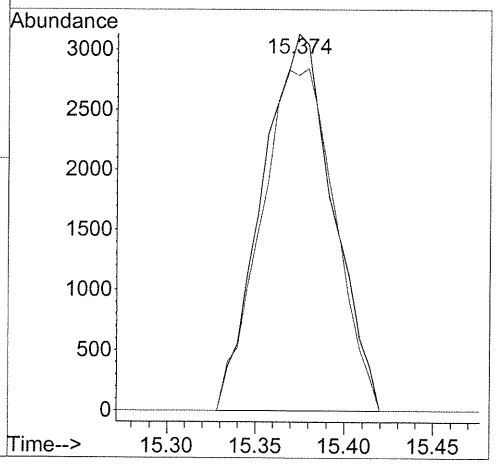


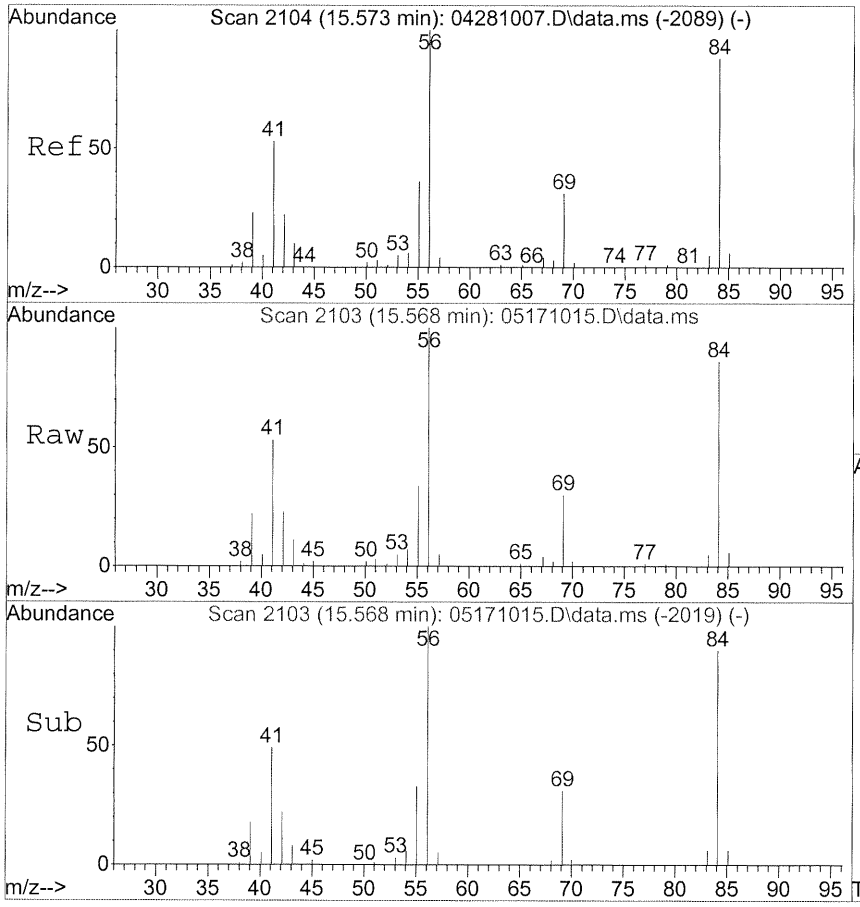


#42
Carbon Tetrachloride
Concen: 0.37 ng
RT: 15.37 min Scan# 2069
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:117 Resp: 8636

Ion	Ratio	Lower	Upper
117	100		
119	94.7	76.1	116.1

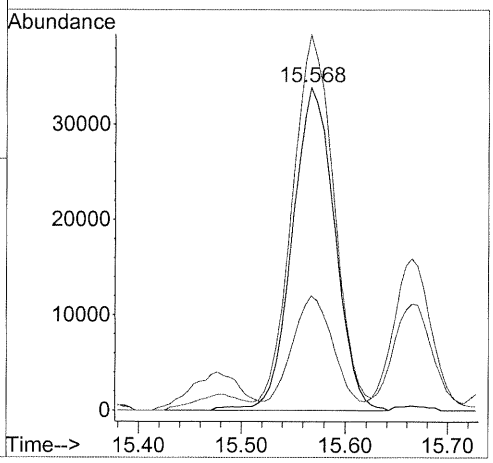


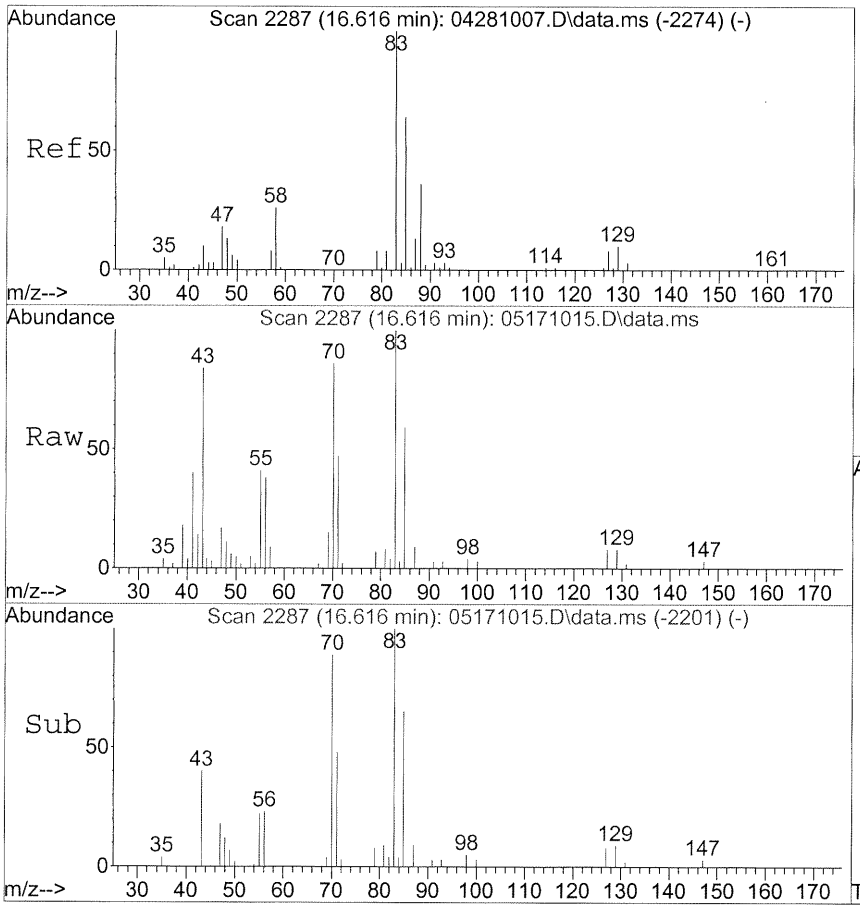


#43
Cyclohexane
Concen: 2.59 ng
RT: 15.57 min Scan# 2103
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 84 Resp: 94655

Ion	Ratio	Lower	Upper
84	100		
69	35.2	14.9	54.9
56	115.8	89.2	129.2

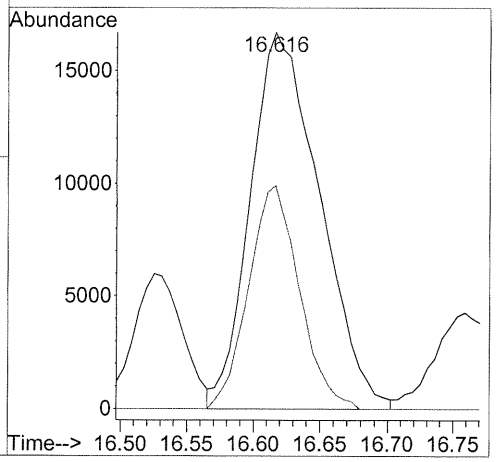


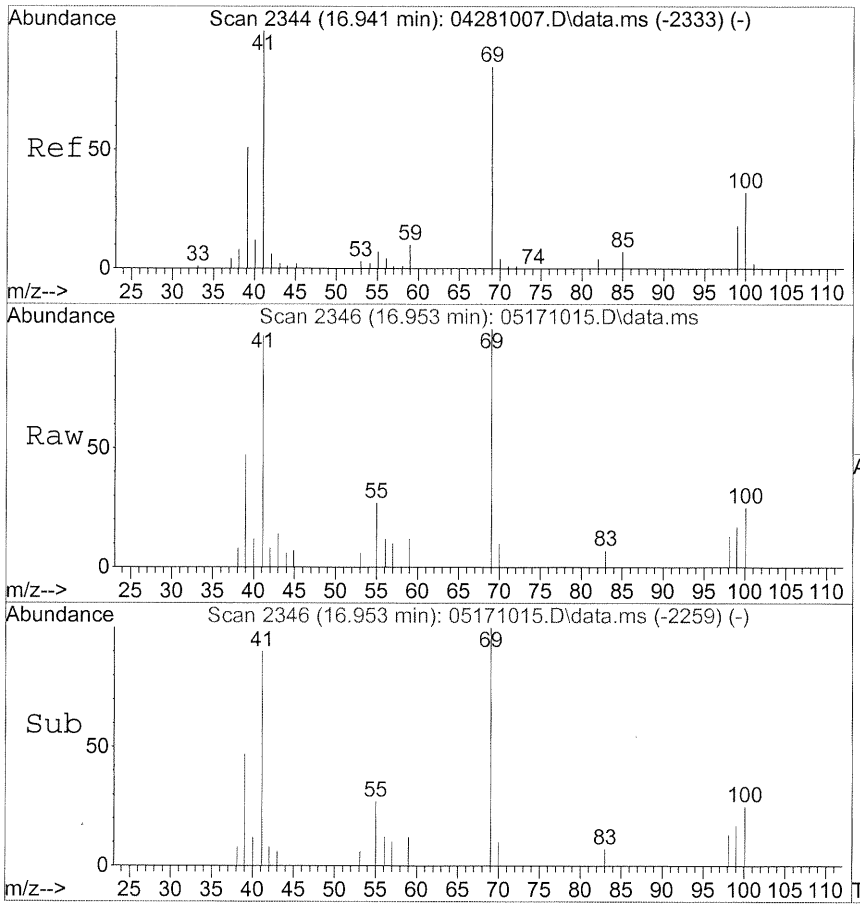


#46
Bromodichloromethane
Concen: 2.31 ng
RT: 16.62 min Scan# 2287
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 83 Resp: 60292

Ion	Ratio	Lower	Upper
83	100		
85	43.6	43.4	83.4

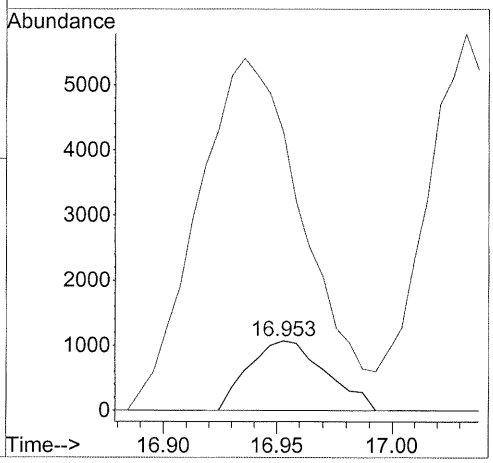


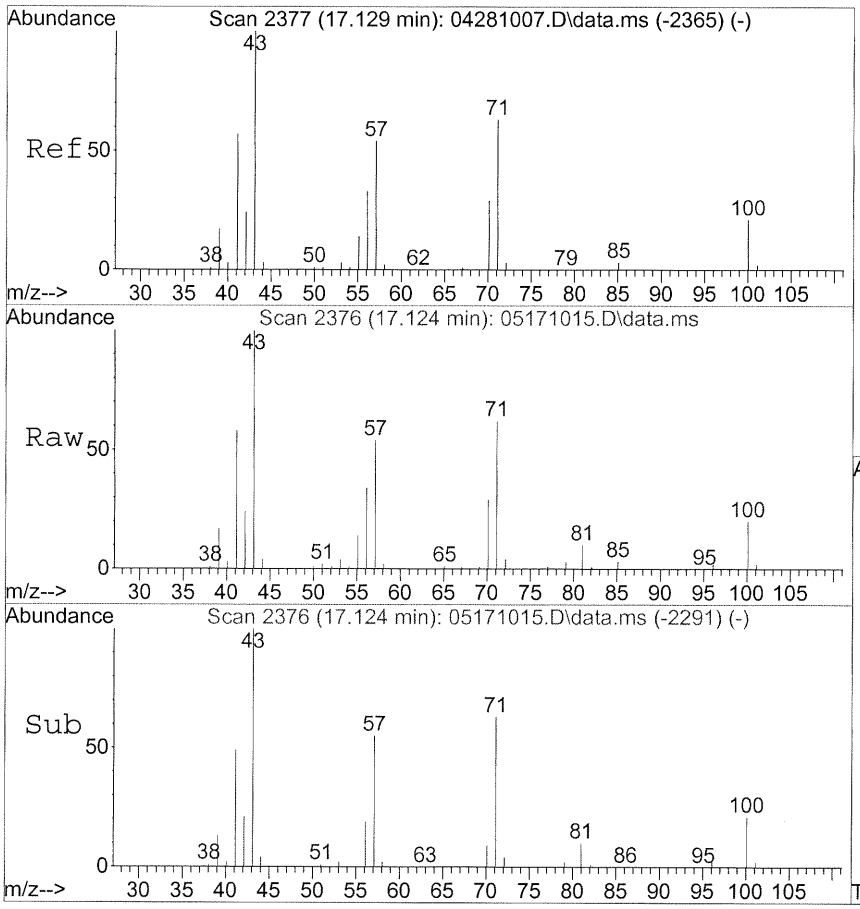


#50
Methyl Methacrylate
Concen: 0.27 ng
RT: 16.95 min Scan# 2346
Delta R.T. -0.005 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:100 Resp: 2492

Ion	Ratio	Lower	Upper
100	100		
69	703.7	226.7	266.7#

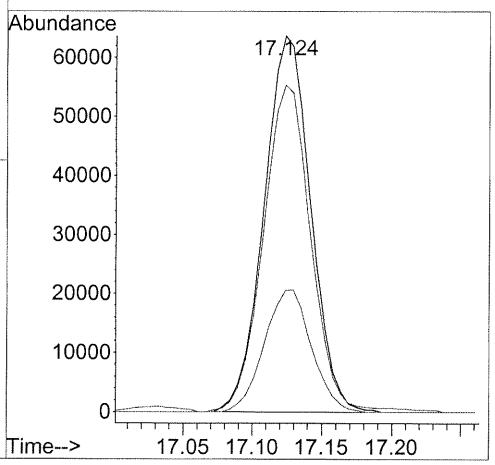


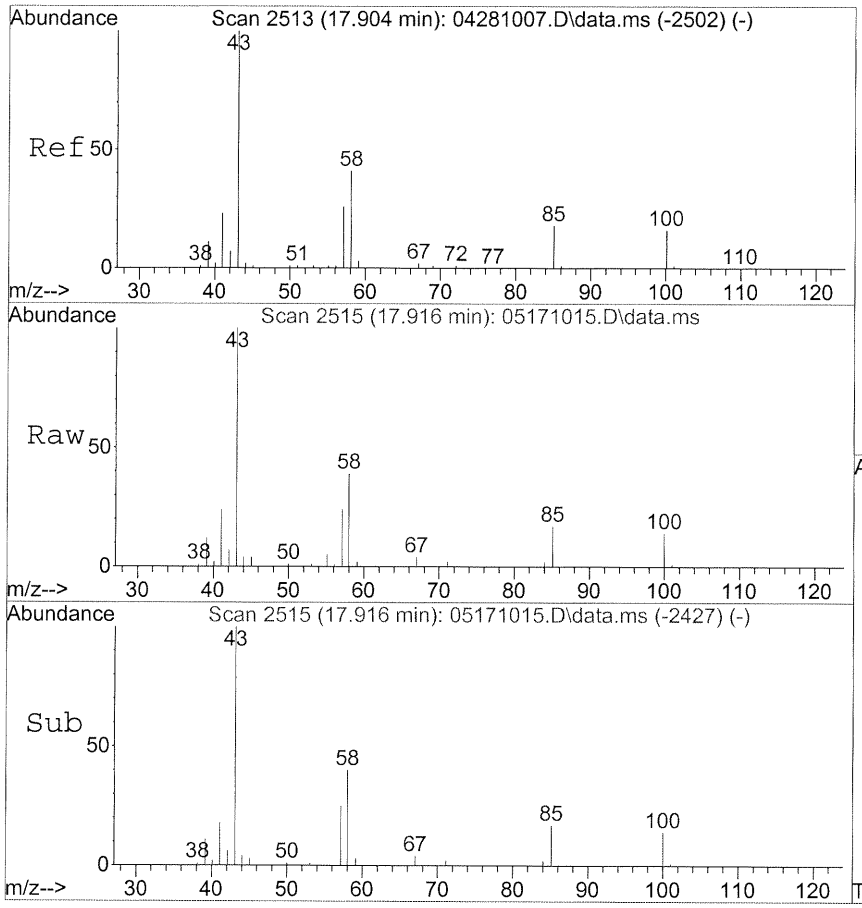


#51
n-Heptane
Concen: 5.98 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 71 Resp: 148560

Ion	Ratio	Lower	Upper
71	100		
57	88.7	63.9	103.9
100	32.6	14.1	54.1

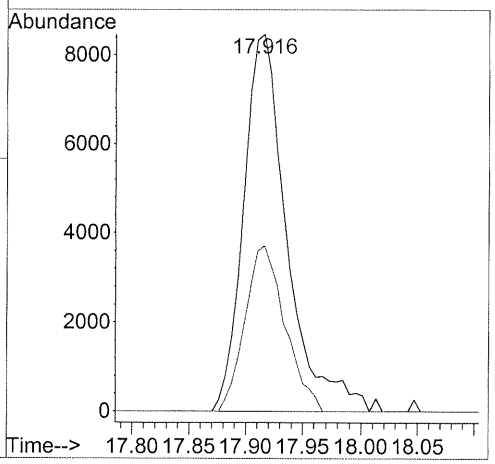


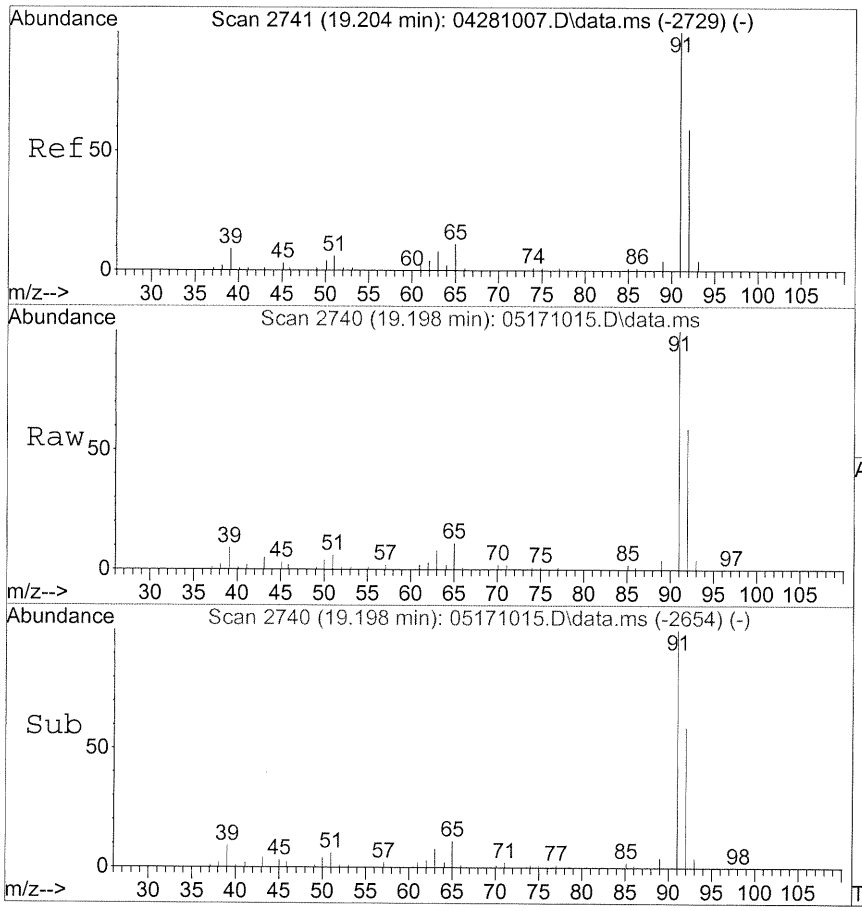


#53
4-Methyl-2-pentanone
Concen: 1.20 ng
RT: 17.92 min Scan# 2515
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 58 Resp: 22512

Ion	Ratio	Lower	Upper
58	100		
85	40.3	26.7	66.7

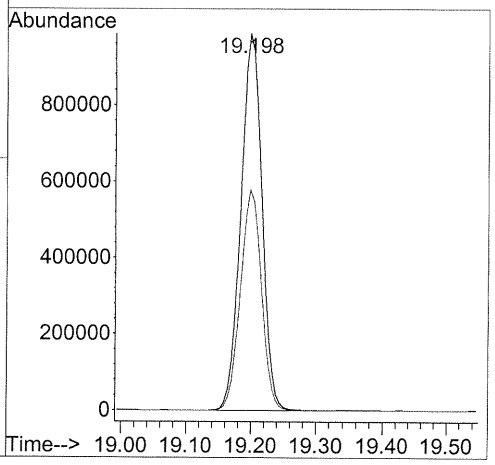


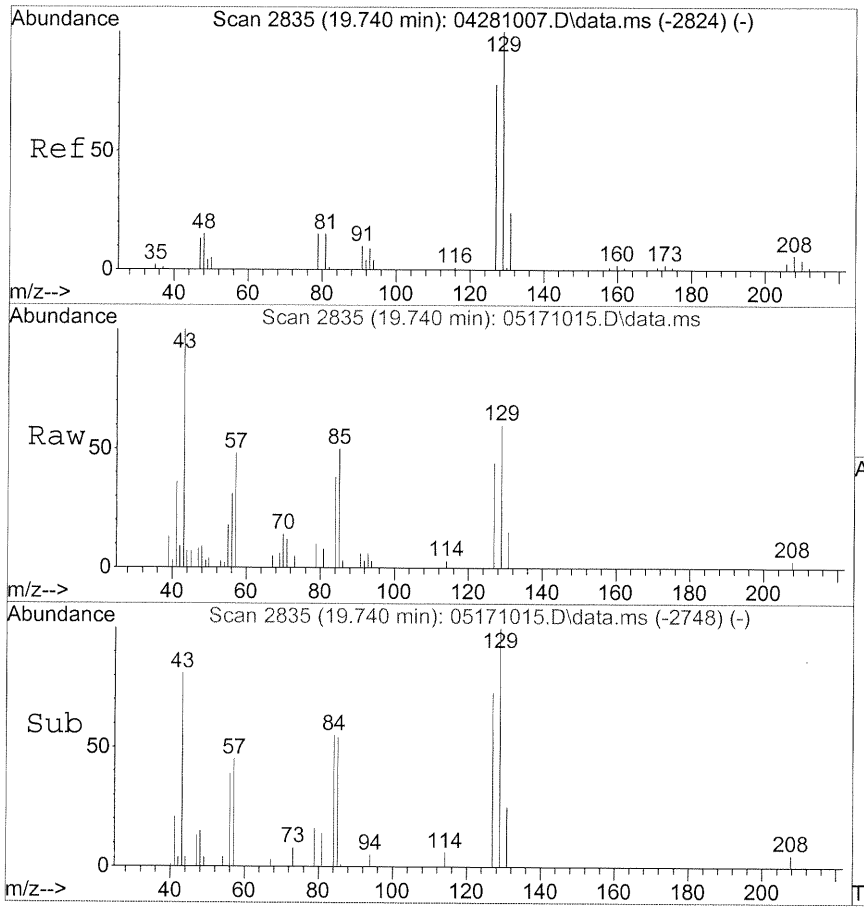


#58
Toluene
Concen: 24.34 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 91 Resp: 2227613

Ion	Ratio	Lower	Upper
91	100		
92	58.4	39.2	79.2

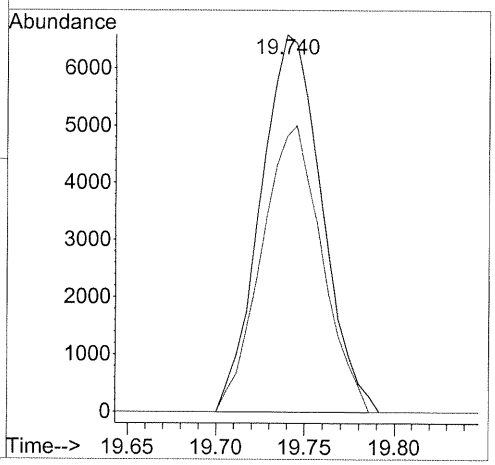


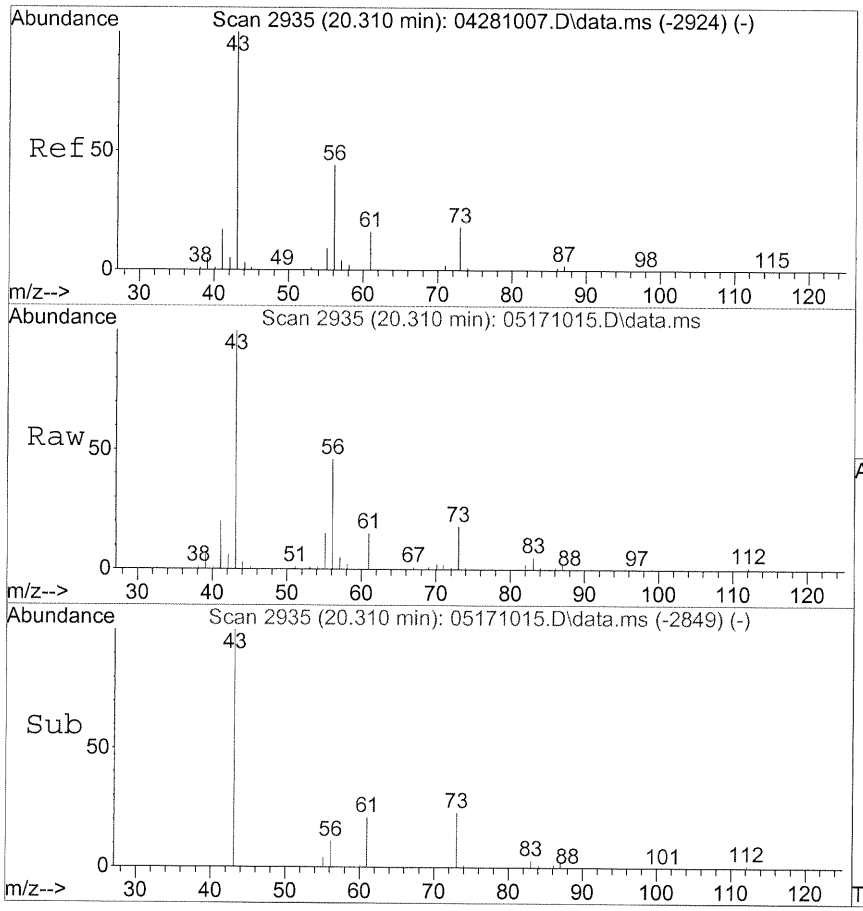


#60
Dibromochloromethane
Concen: 0.87 ng
RT: 19.74 min Scan# 2835
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:129 Resp: 15713

Ion	Ratio	Lower	Upper
129	100		
127	74.7	58.2	98.2

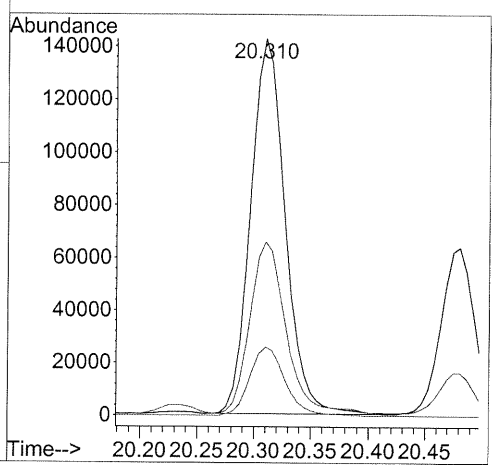


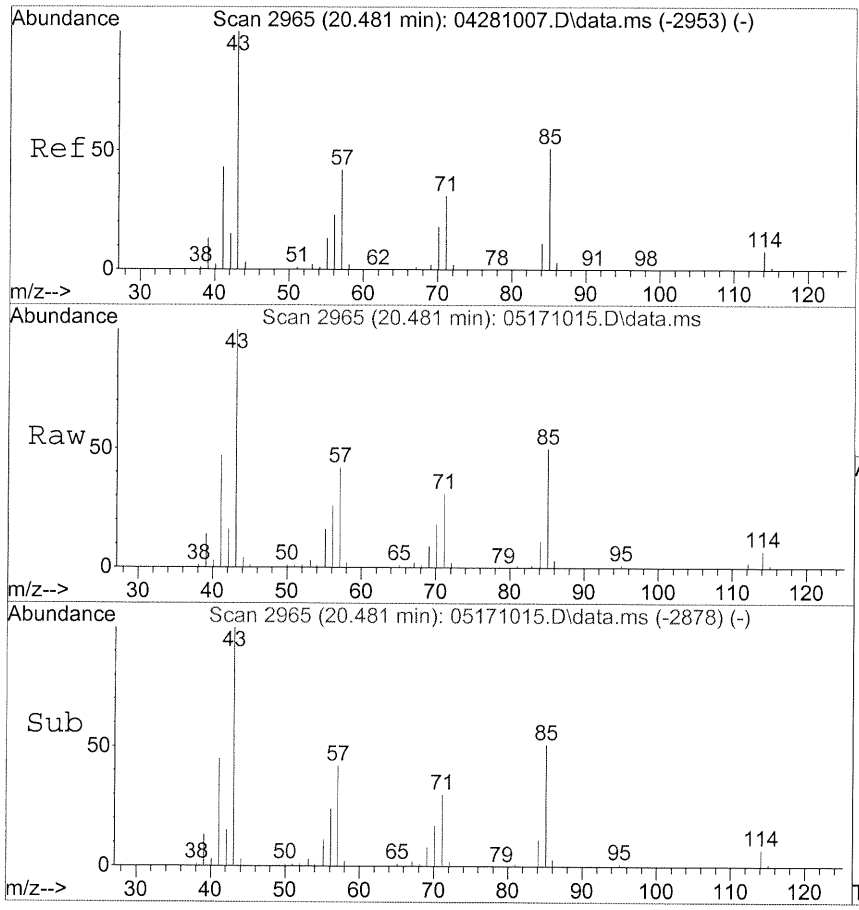


#62
n-Butyl Acetate
Concen: 6.17 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 43 Resp: 302725

Ion	Ratio	Lower	Upper
43	100		
56	48.6	25.0	65.0
73	18.6	0.0	39.1

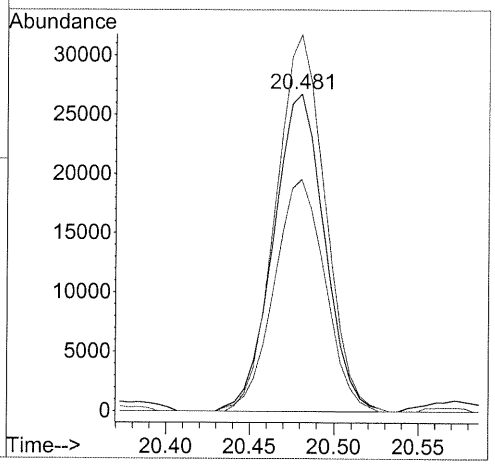


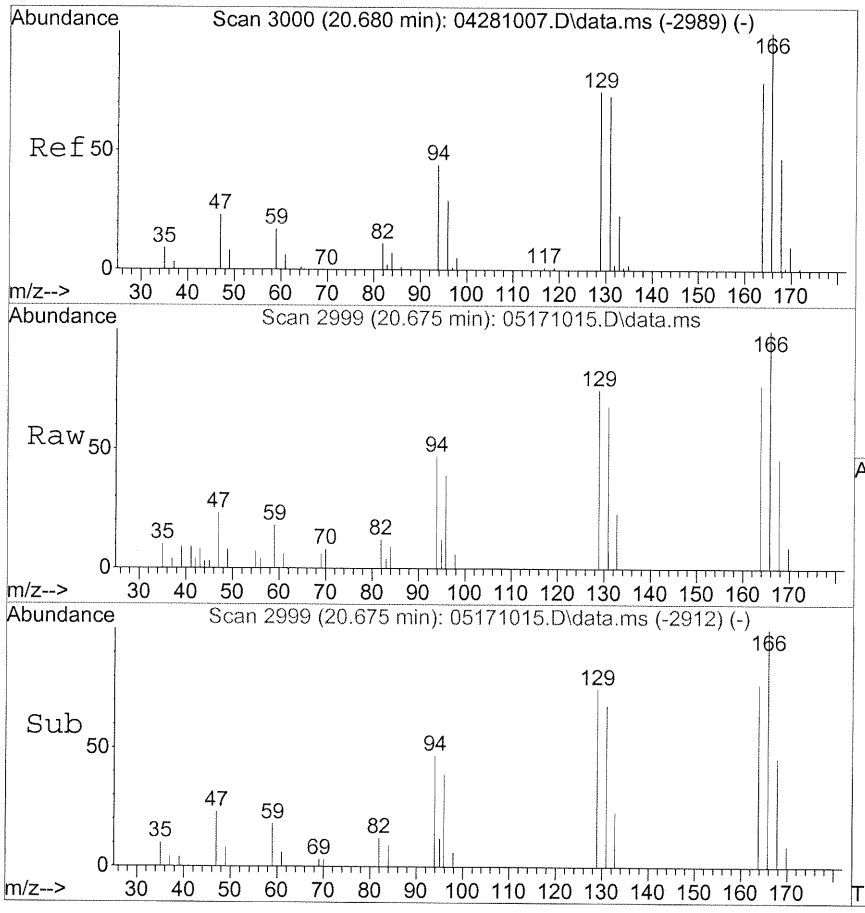


#63
n-Octane
Concen: 2.64 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 57 Resp: 56090

Ion	Ratio	Lower	Upper
57	100		
85	114.6	101.4	152.2
71	72.6	60.7	91.1

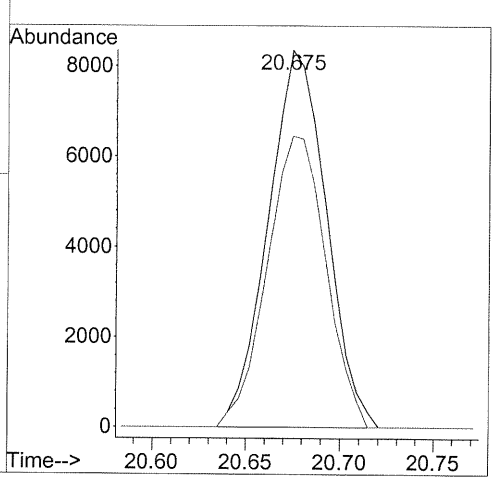


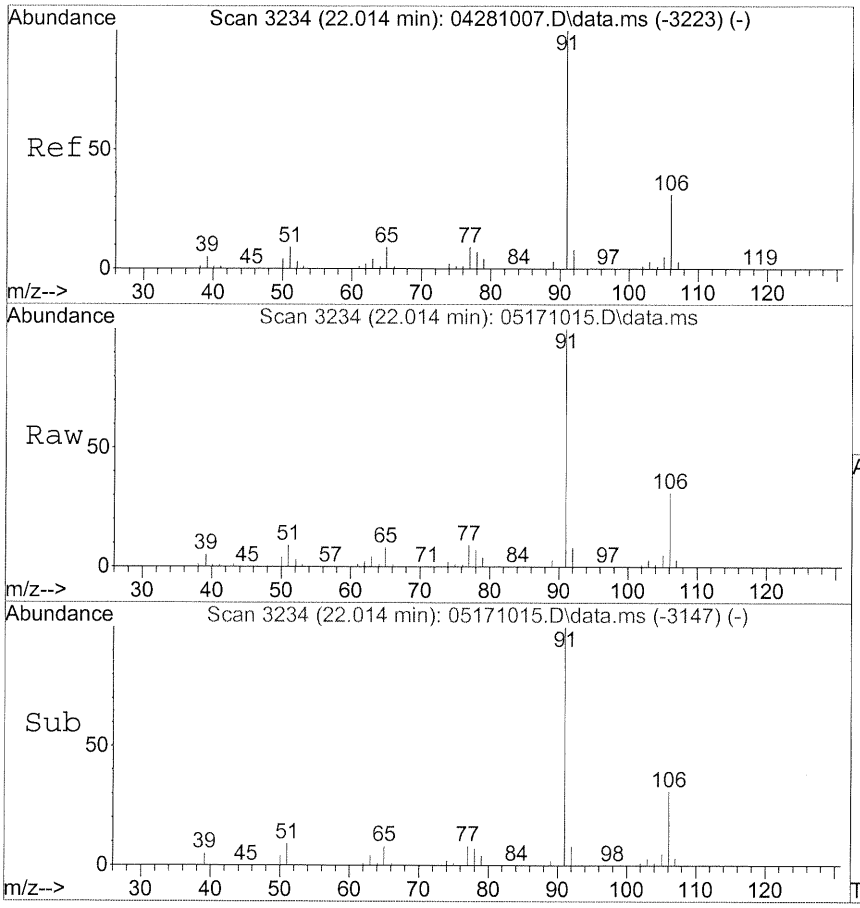


#64
Tetrachloroethene
Concen: 0.84 ng
RT: 20.67 min Scan# 2999
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:166 Resp: 17985

Ion	Ratio	Lower	Upper
166	100		
164	78.0	59.0	99.0

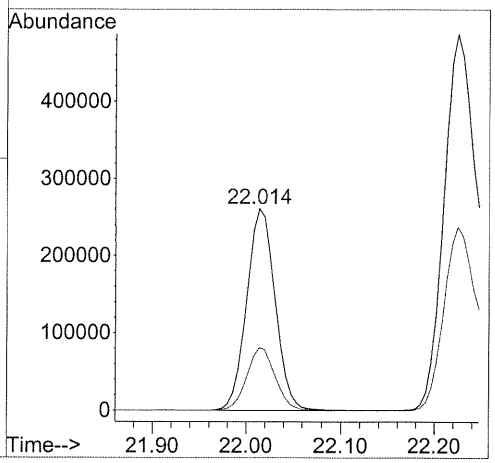


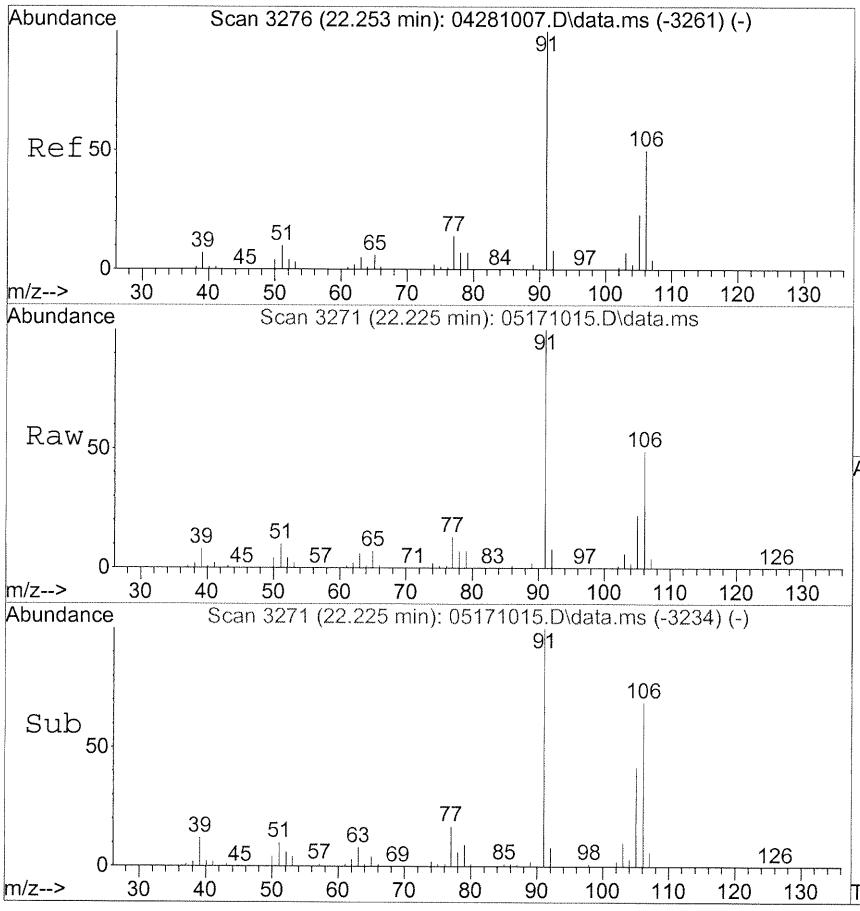


#66
Ethylbenzene
Concen: 5.39 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 91 Resp: 551453

Ion	Ratio	Lower	Upper
91	100		
106	30.7	12.2	52.2

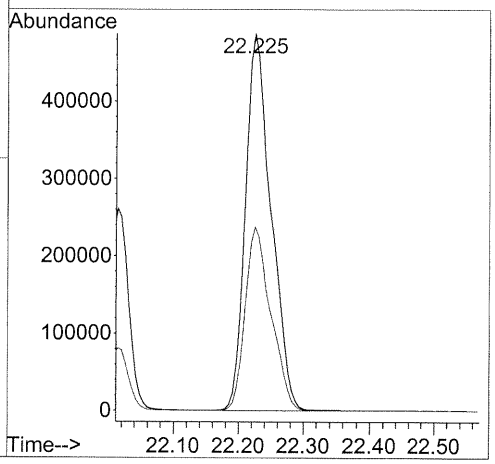


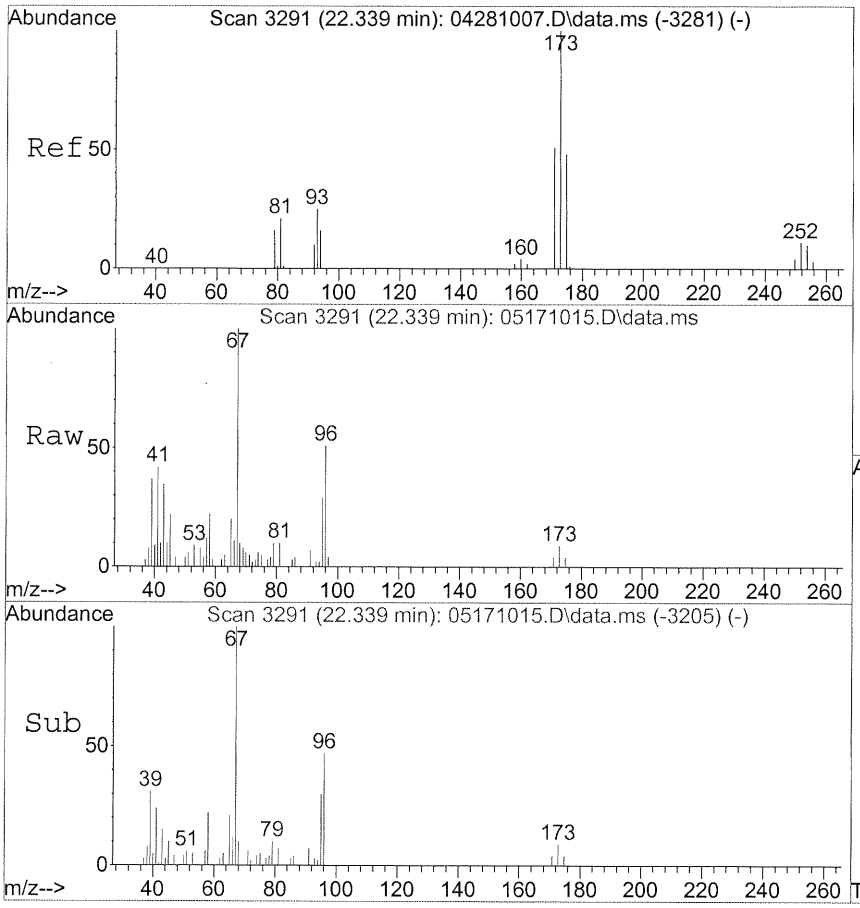


#67
m- & p-Xylenes
Concen: 16.12 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 91 Resp: 1337802

Ion	Ratio	Lower	Upper
91	100		
106	48.9	30.6	70.6

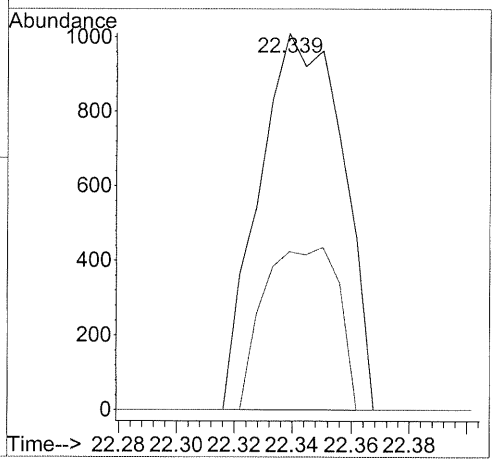


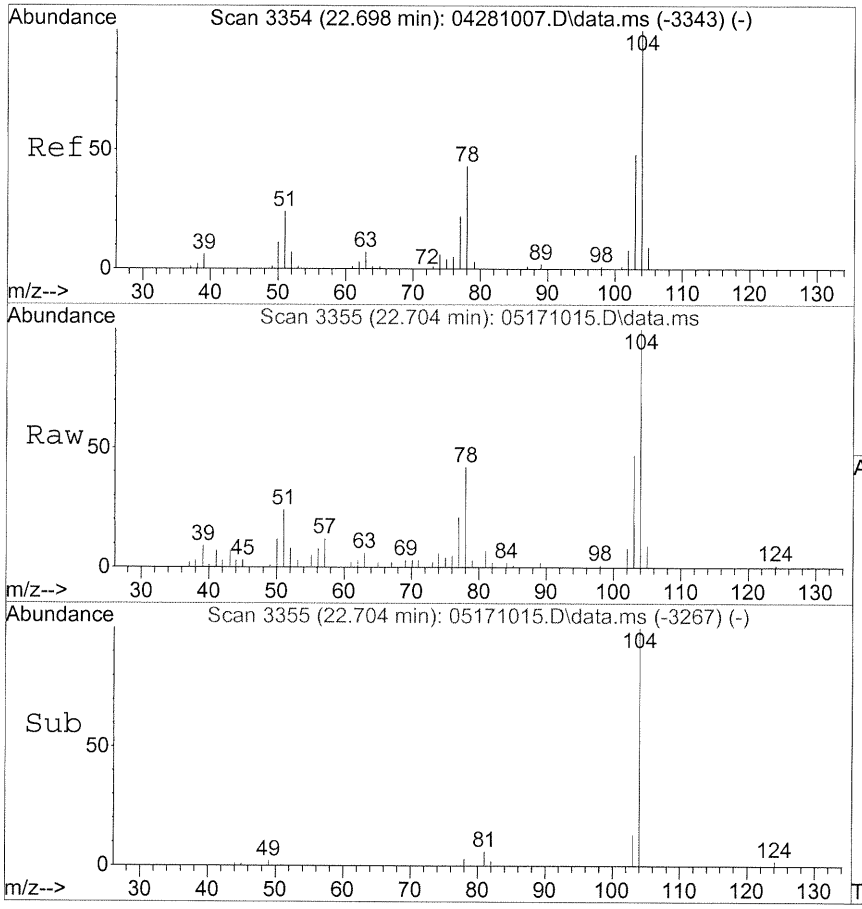


#68
Bromoform
Concen: 0.13 ng
RT: 22.34 min Scan# 3291
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:173 Resp: 1989

Ion	Ratio	Lower	Upper
173	100		
175	38.7	28.9	68.9

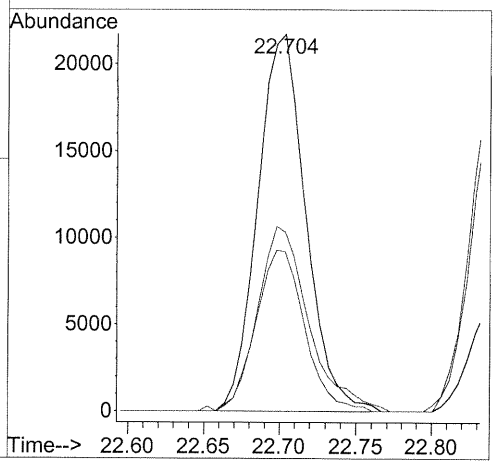


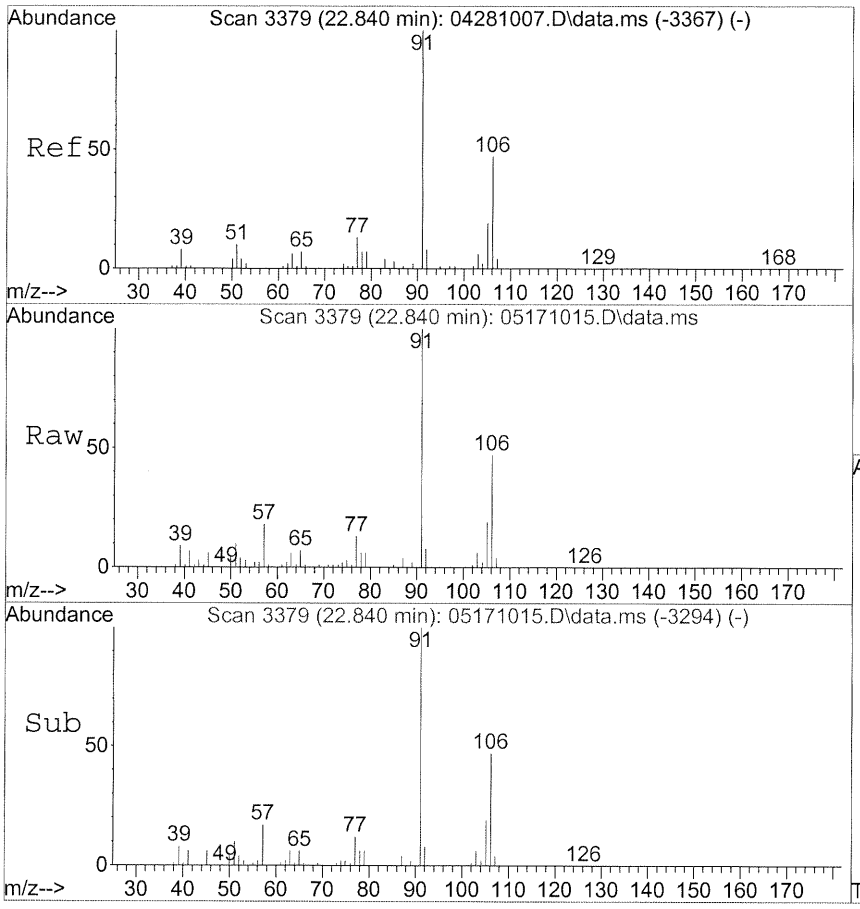


#69
Styrene
Concen: 0.82 ng
RT: 22.70 min Scan# 3355
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:104 Resp: 47761

Ion	Ratio	Lower	Upper
104	100		
78	43.2	22.5	62.5
103	52.3	27.5	67.5

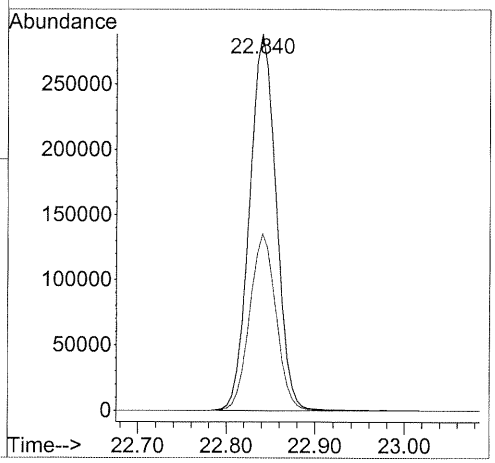


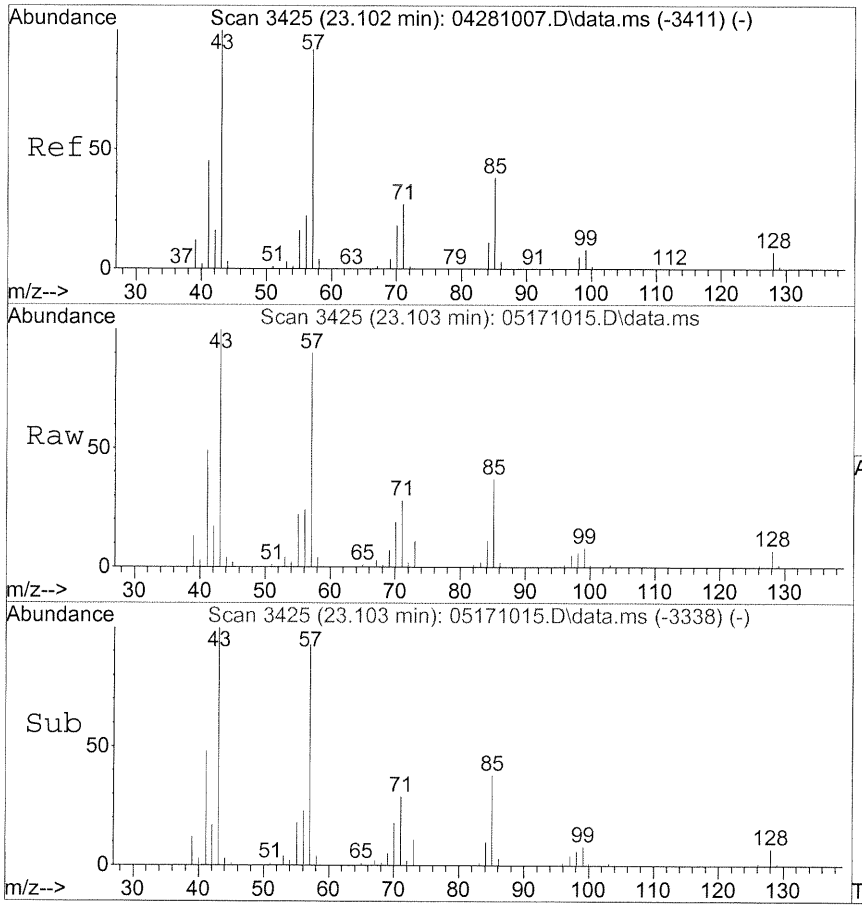


#70
o-Xylene
Concen: 6.81 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 91 Resp: 602699

Ion	Ratio	Lower	Upper
91	100		
106	46.3	27.8	67.8

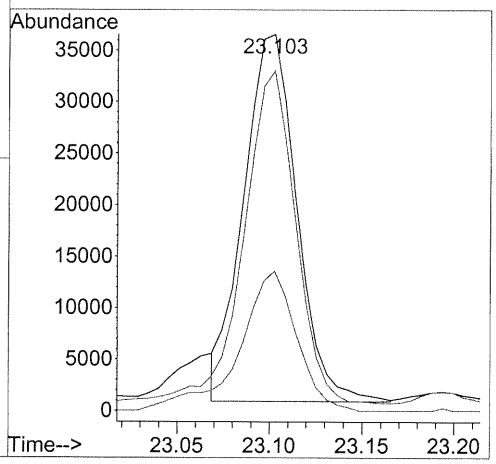


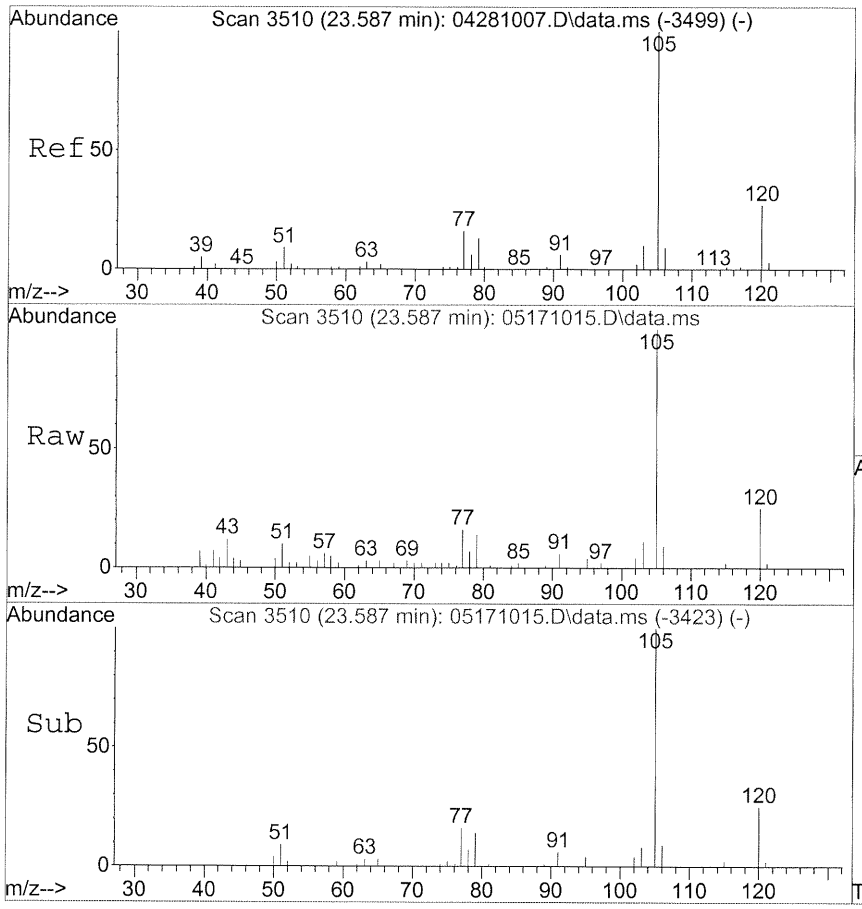


#71
n-Nonane
Concen: 1.49 ng m
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 43 Resp: 71669

Ion	Ratio	Lower	Upper
43	100		
57	89.2	74.6	114.6
85	41.0	20.5	60.5

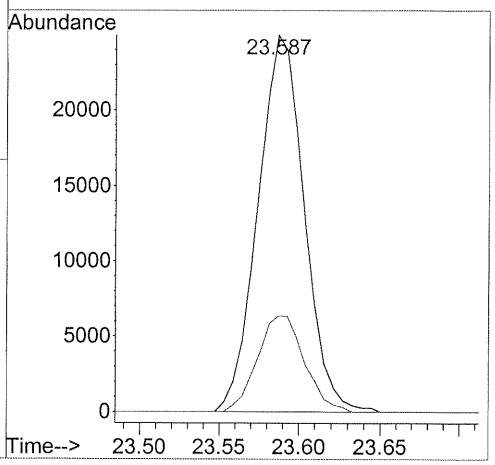


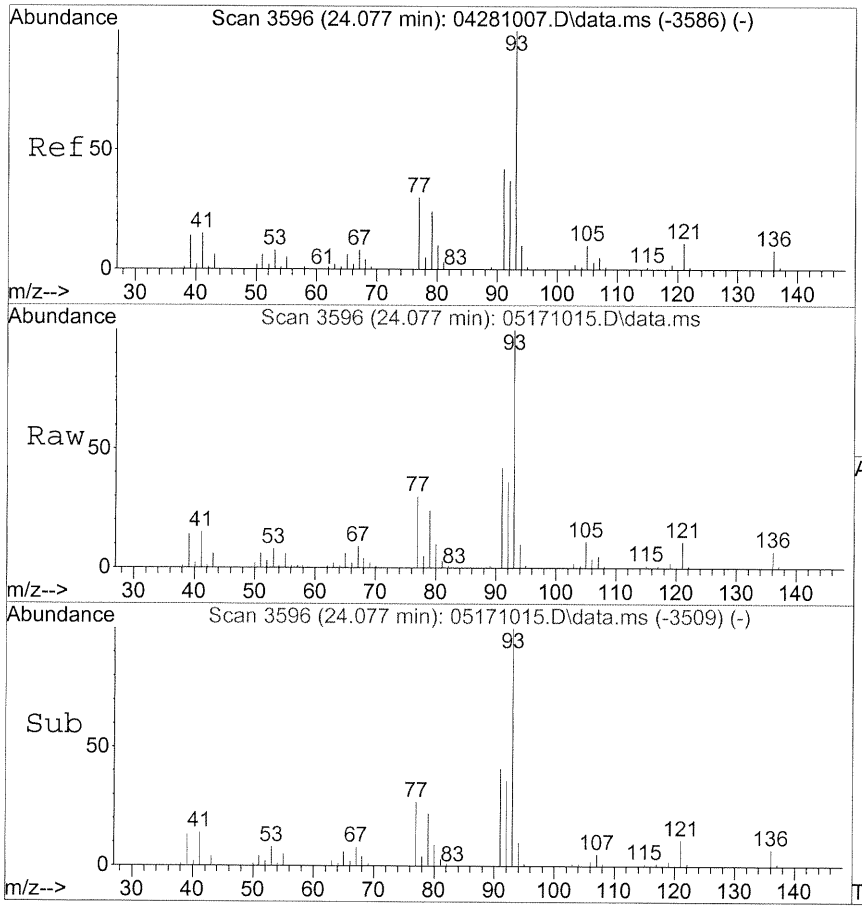


#74
Cumene
Concen: 0.47 ng
RT: 23.59 min Scan# 3510
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:105 Resp: 50269

Ion	Ratio	Lower	Upper
105	100		
120	25.8	6.8	46.8

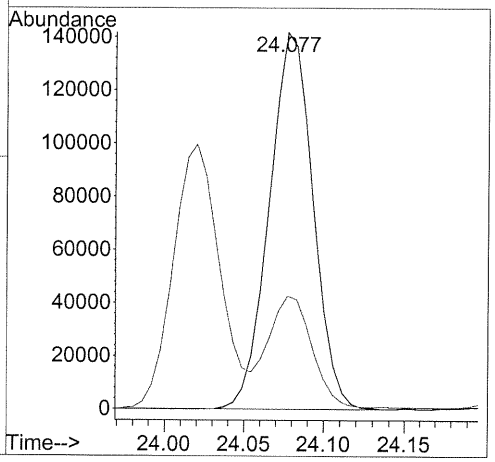


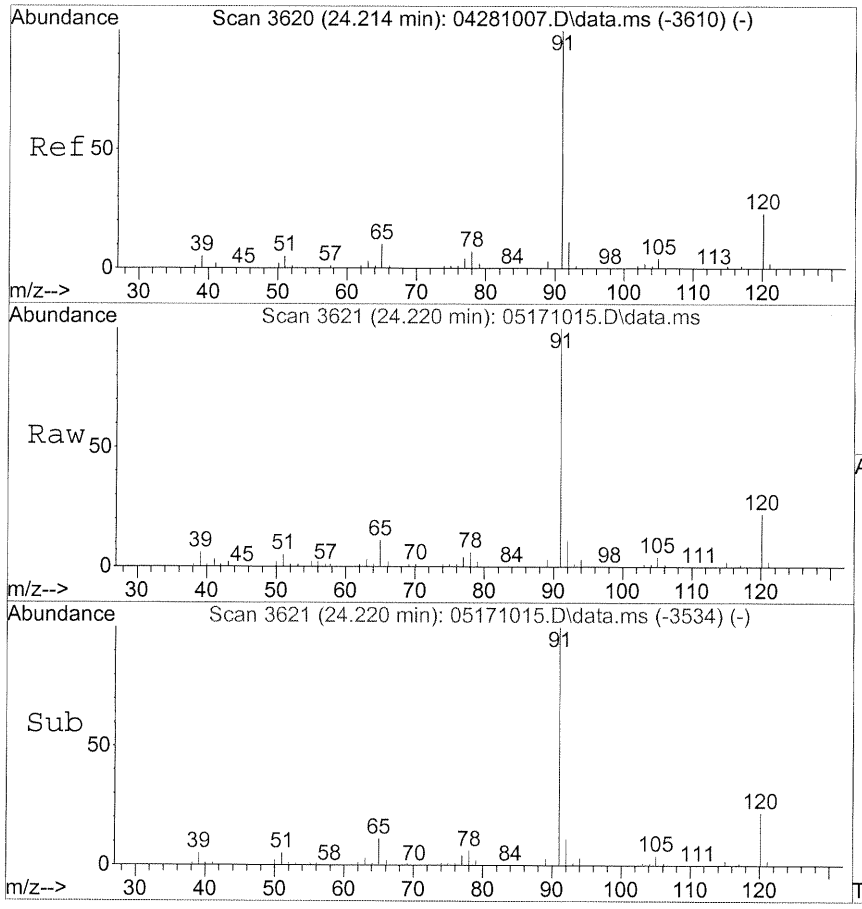


#75
alpha-Pinene
Concen: 5.39 ng
RT: 24.08 min Scan# 3596
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 93 Resp: 270413

Ion	Ratio	Lower	Upper
93	100		
77	31.0	8.7	48.7

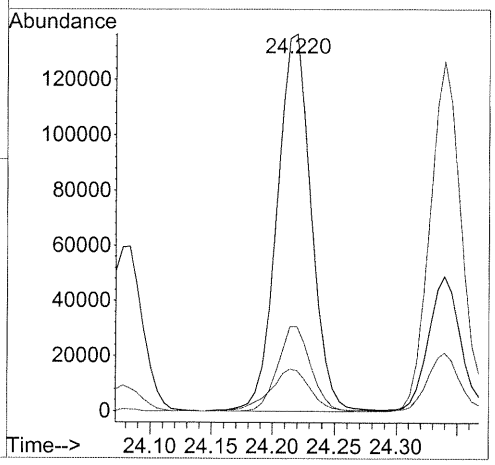


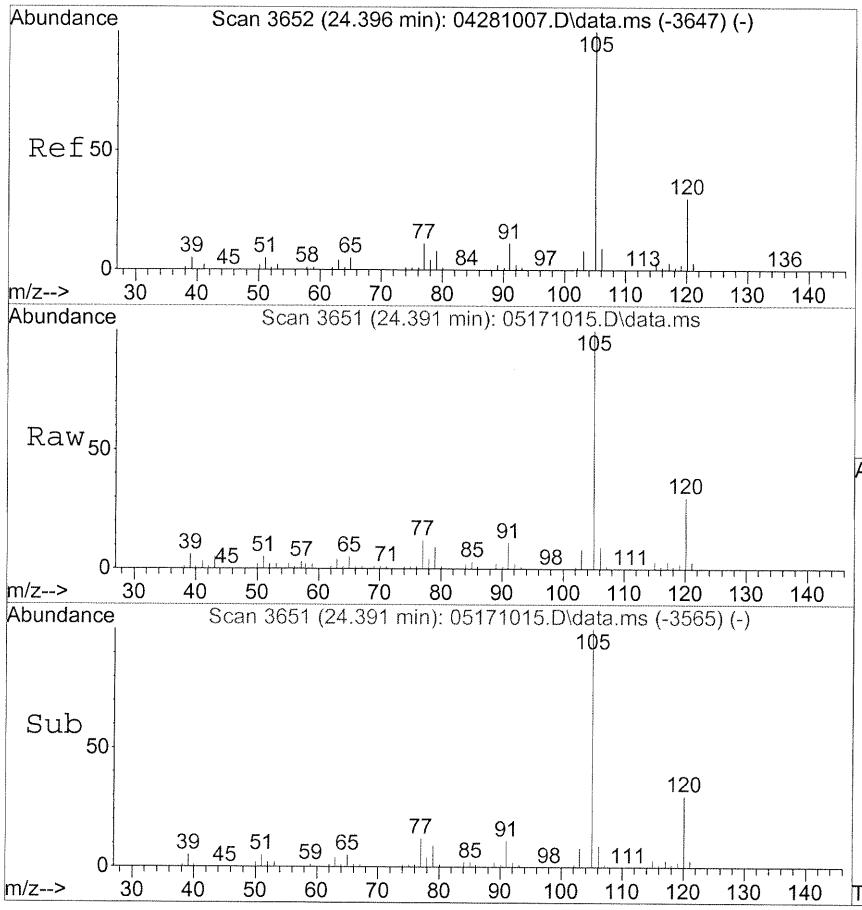


#76
n-Propylbenzene
Concen: 2.01 ng
RT: 24.22 min Scan# 3621
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 91 Resp: 263885

Ion	Ratio	Lower	Upper
91	100		
120	21.5	3.8	43.8
65	13.1	0.0	30.1

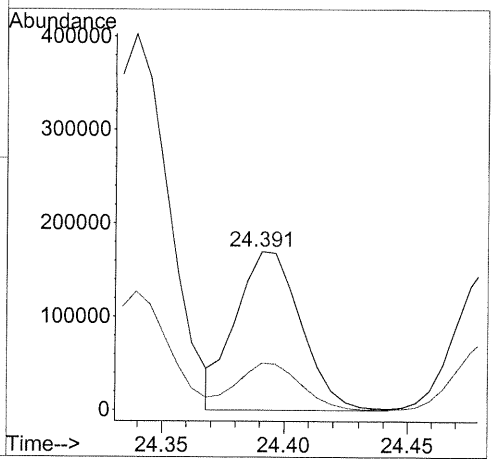


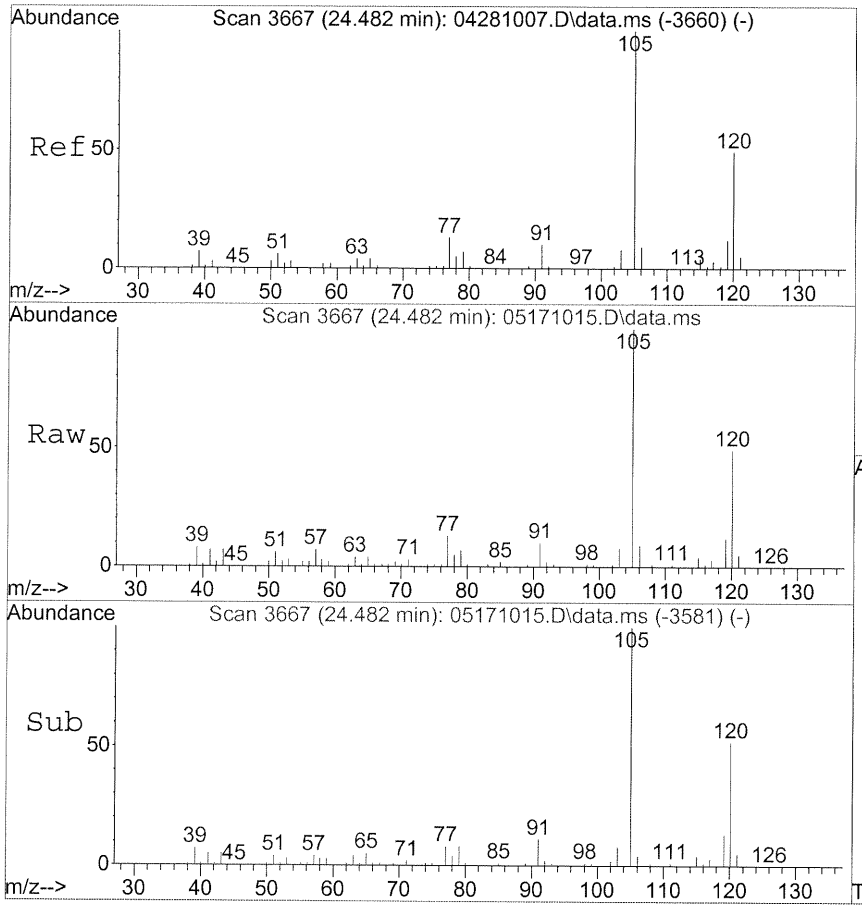


#78
4-Ethyltoluene
Concen: 3.15 ng
RT: 24.39 min Scan# 3651
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:105 Resp: 314664

Ion	Ratio	Lower	Upper
105	100		
120	29.3	10.2	50.2

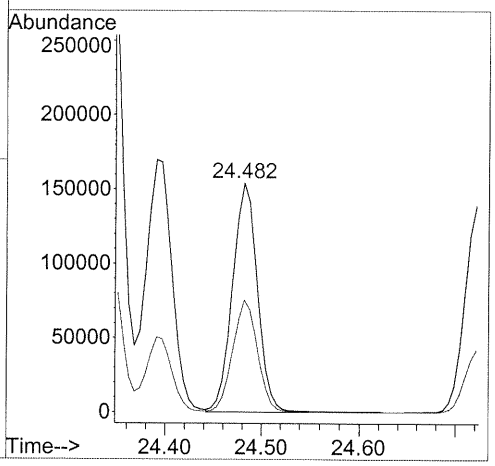


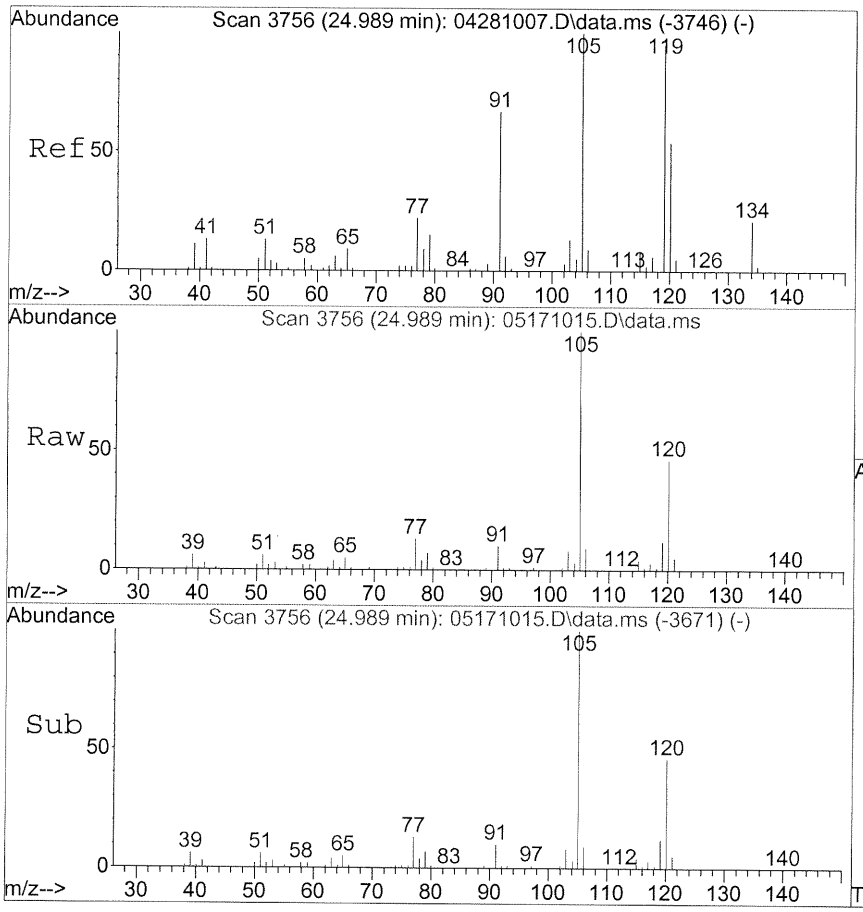


#79
1,3,5-Trimethylbenzene
Concen: 3.33 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:105 Resp: 278533

Ion	Ratio	Lower	Upper
105	100		
120	48.4	30.4	70.4

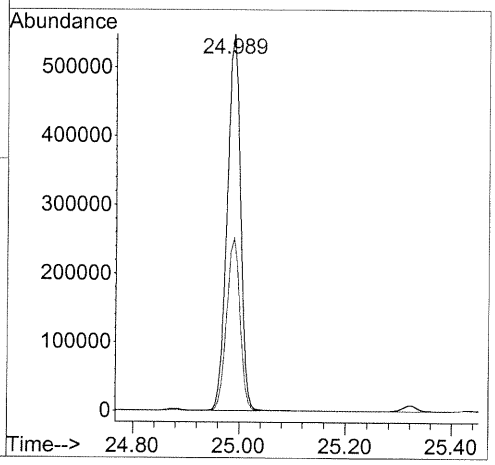


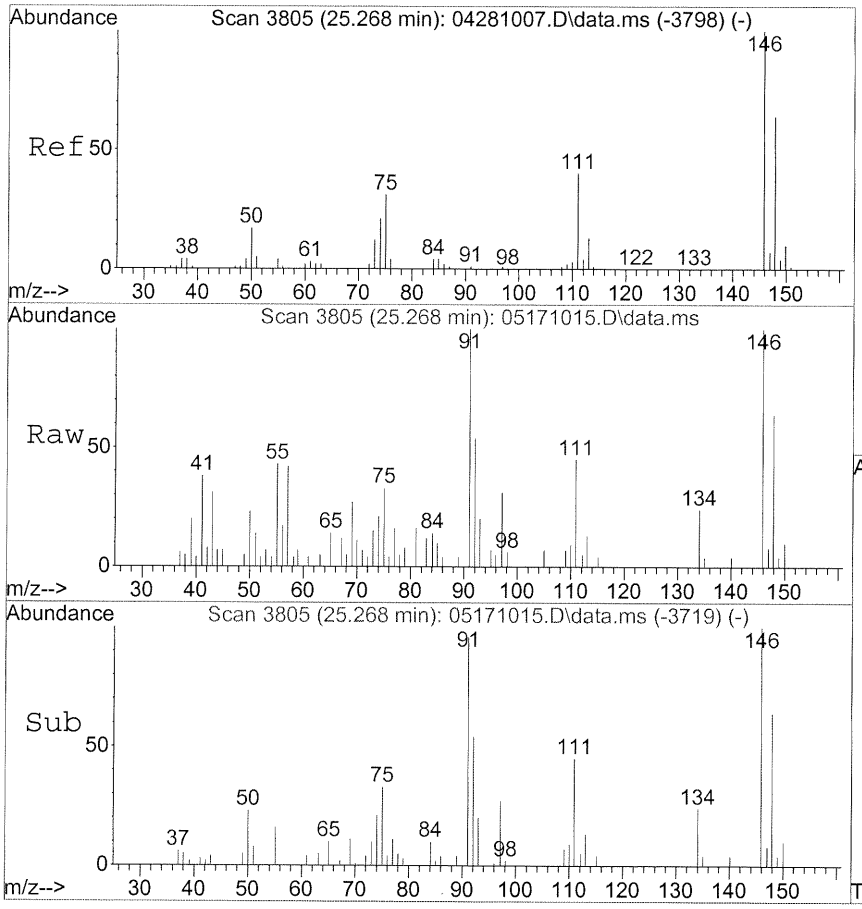


#82
1,2,4-Trimethylbenzene
Concen: 10.93 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:105 Resp: 956782

Ion	Ratio	Lower	Upper
105	100		
120	45.9	35.1	75.1

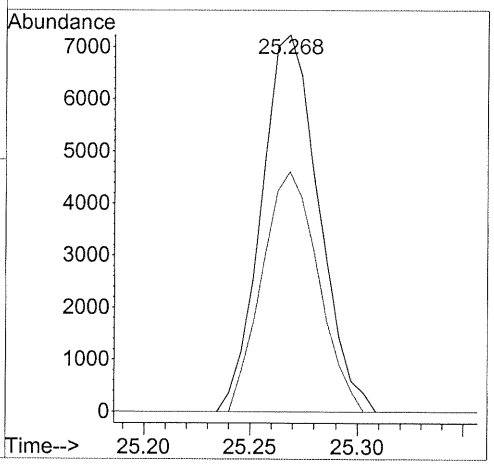


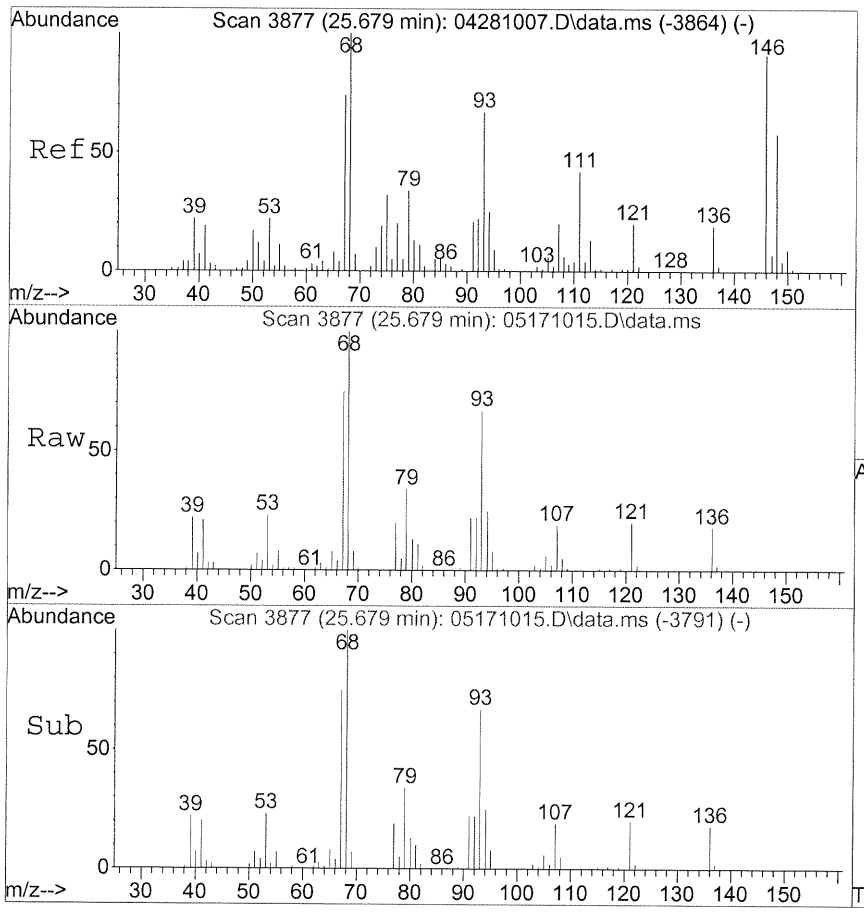


#86
1,4-Dichlorobenzene
Concen: 0.31 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:146 Resp: 13482

Ion	Ratio	Lower	Upper
146	100		
148	62.3	44.0	84.0

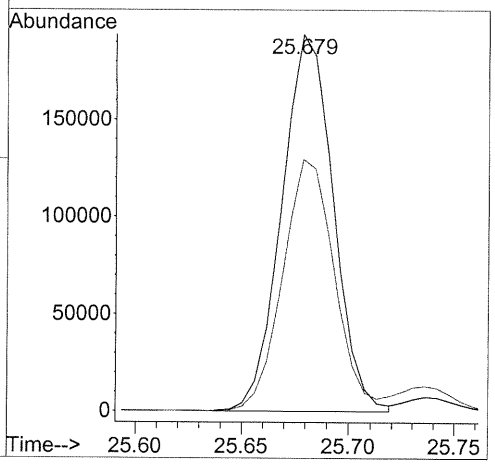


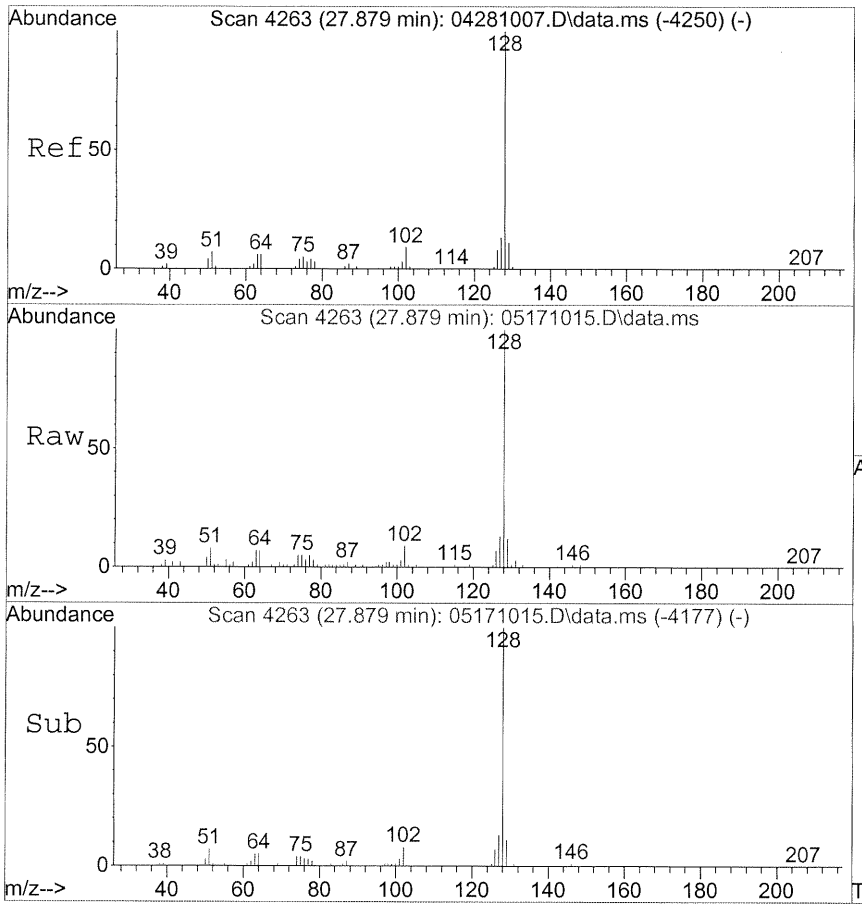


#91
d-Limonene
Concen: 9.41 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion: 68 Resp: 324168

Ion	Ratio	Lower	Upper
68	100		
93	66.9	51.5	91.5

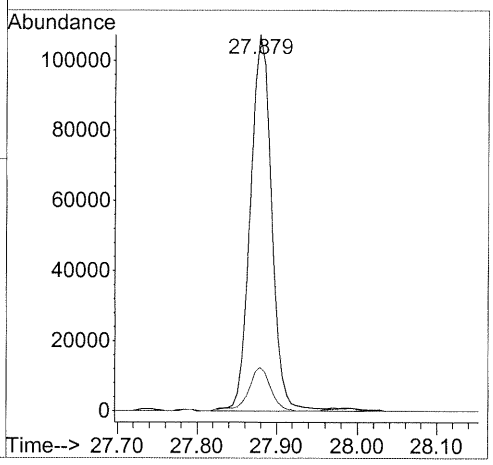




#95
Naphthalene
Concen: 2.08 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 20:30

Tgt Ion:128 Resp: 201210

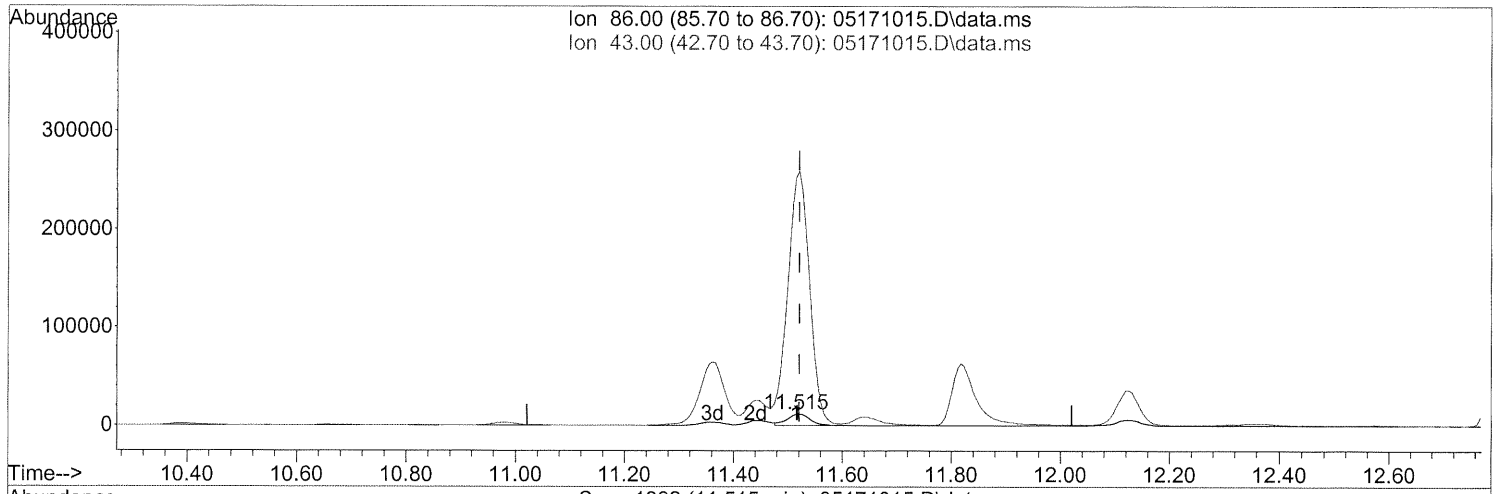
Ion	Ratio	Lower	Upper
128	100		
129	11.7	0.0	31.1

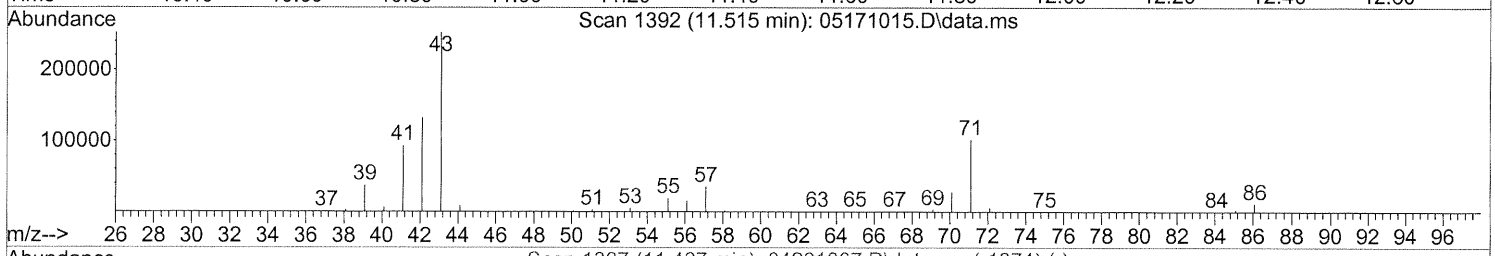


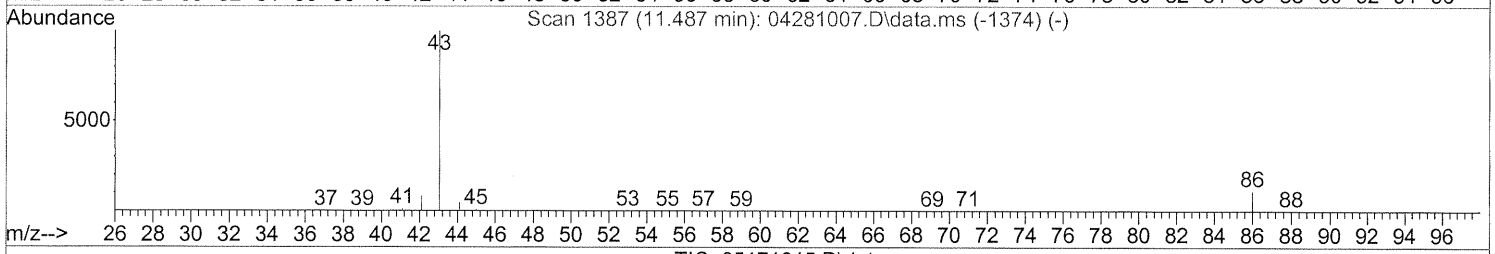
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171015.D\data.ms

(26) Vinyl Acetate (T)

11.515min (-0.006) 6.71ng

response 32879

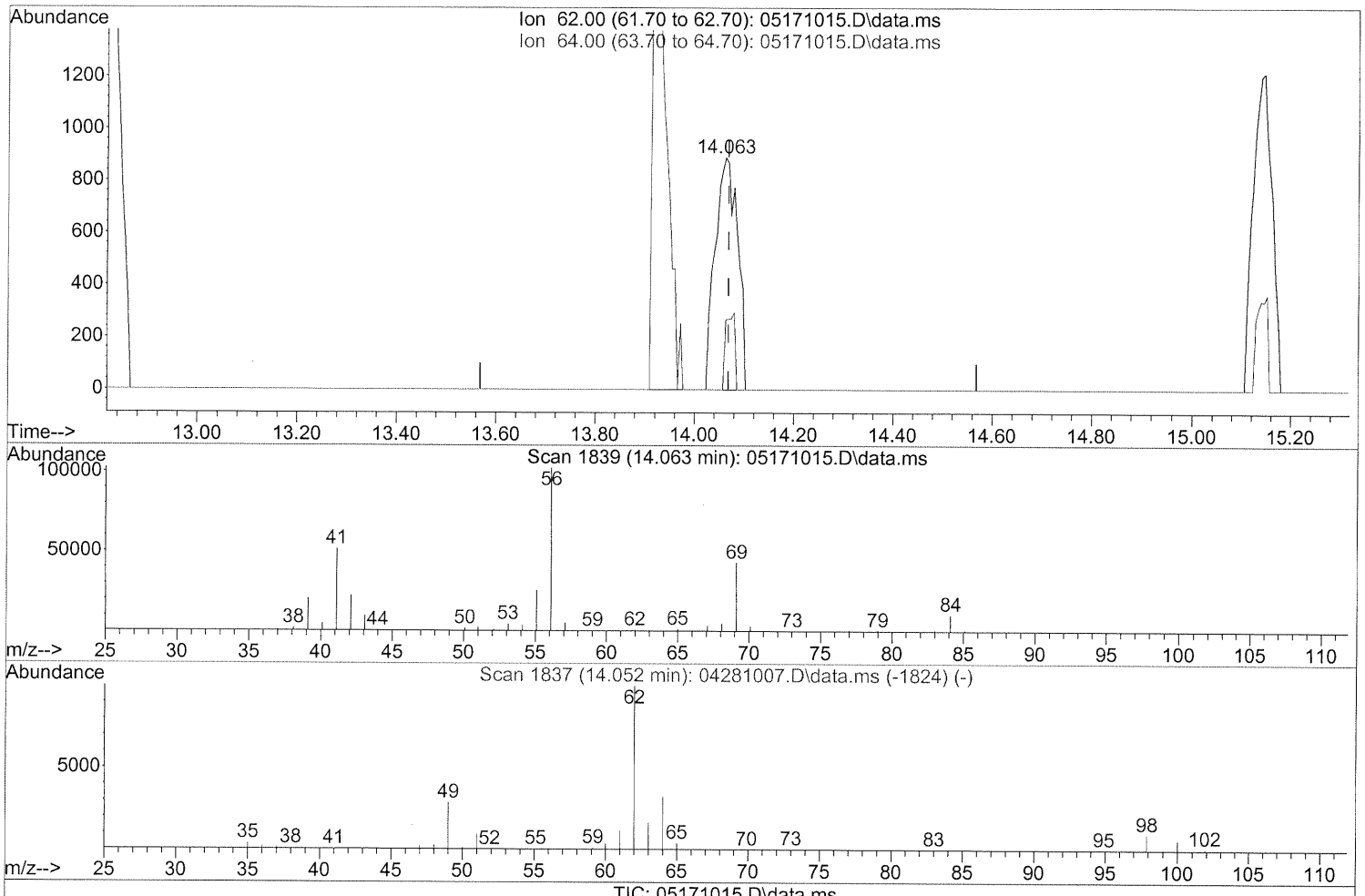
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2189.81#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(36) 1,2-Dichloroethane (T)

14.063min (-0.006) 0.10ng

response 2781

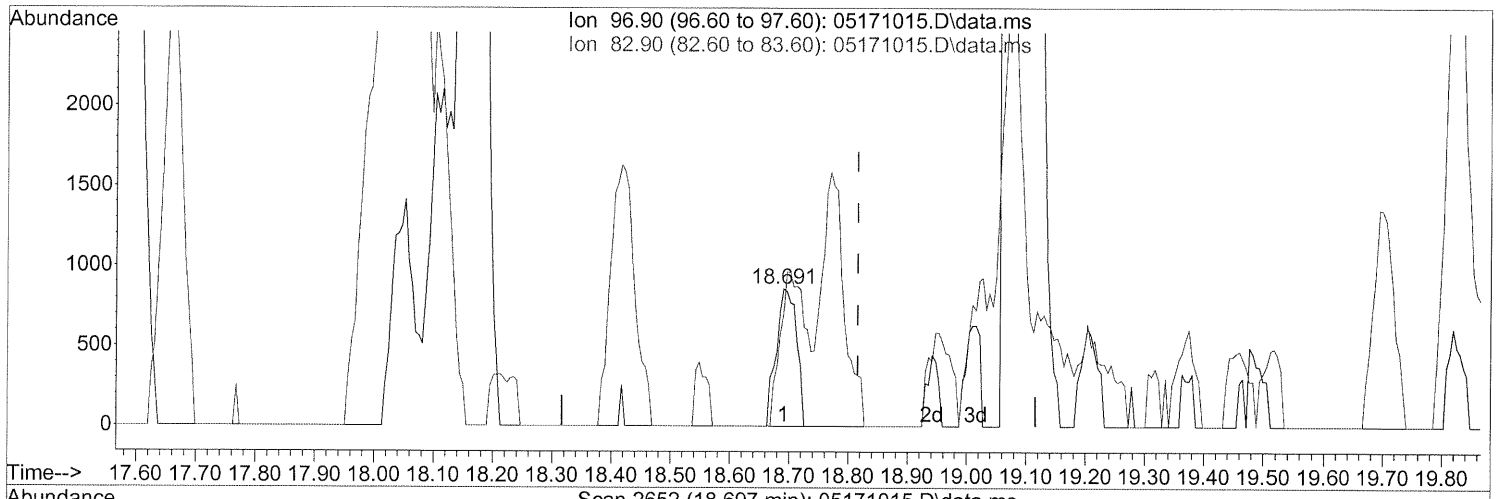
Ion	Exp%	Act%
62.00	100	100
64.00	32.80	13.56
0.00	0.00	0.00
0.00	0.00	0.00

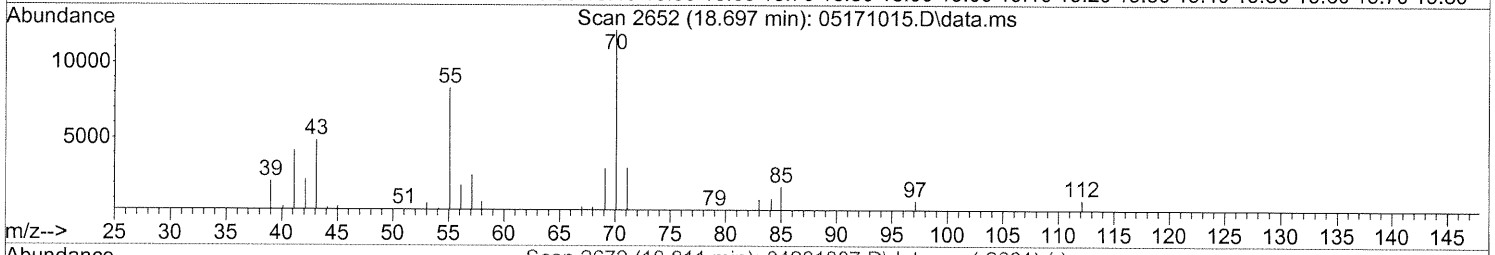
TP

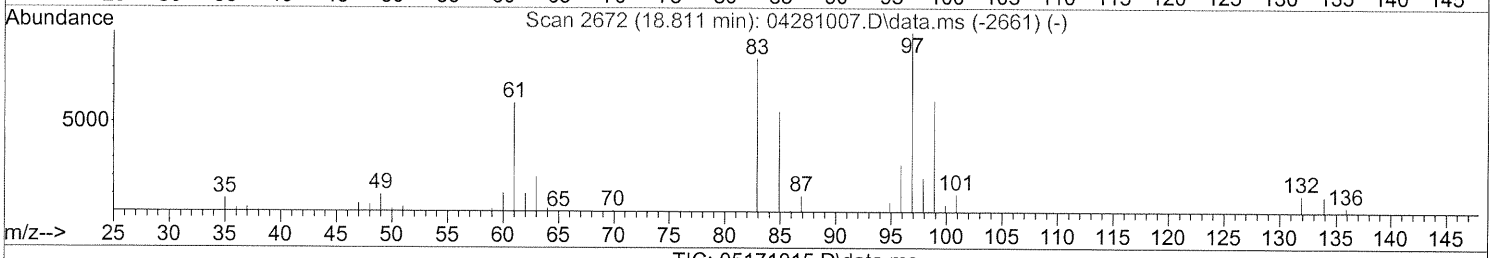
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171015.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.691min (-0.125) 0.11ng

response 2041

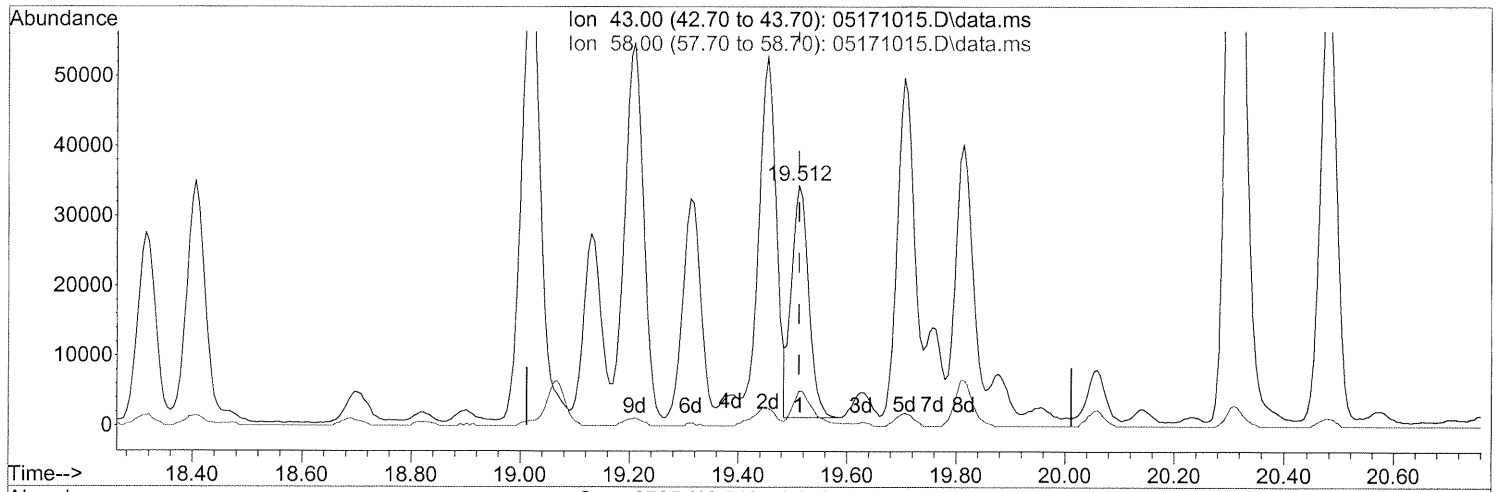
Ion	Exp%	Act%
96.90	100	100
82.90	84.60	136.11#
0.00	0.00	0.00
0.00	0.00	0.00

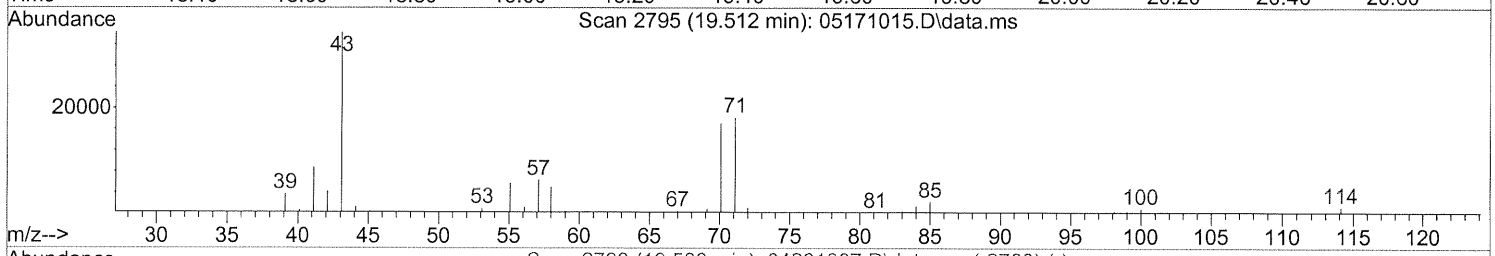
TP

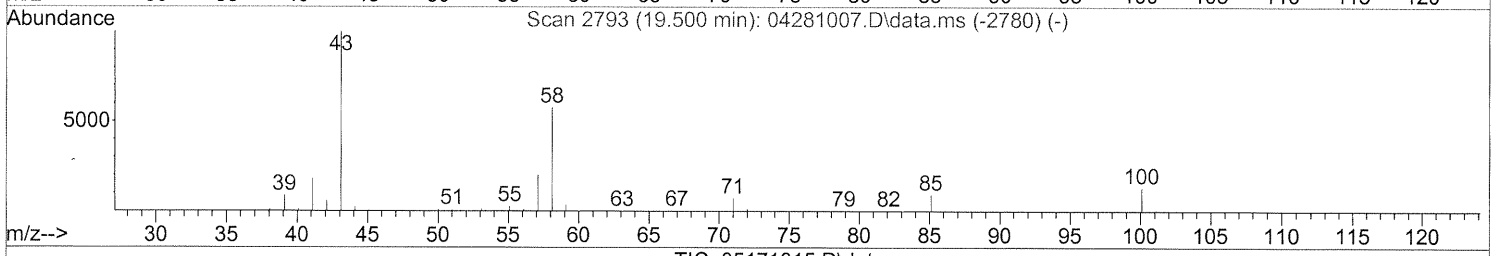
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171015.D\data.ms

(59) 2-Hexanone (T)

19.512min (-0.000) 1.66ng

response 72577

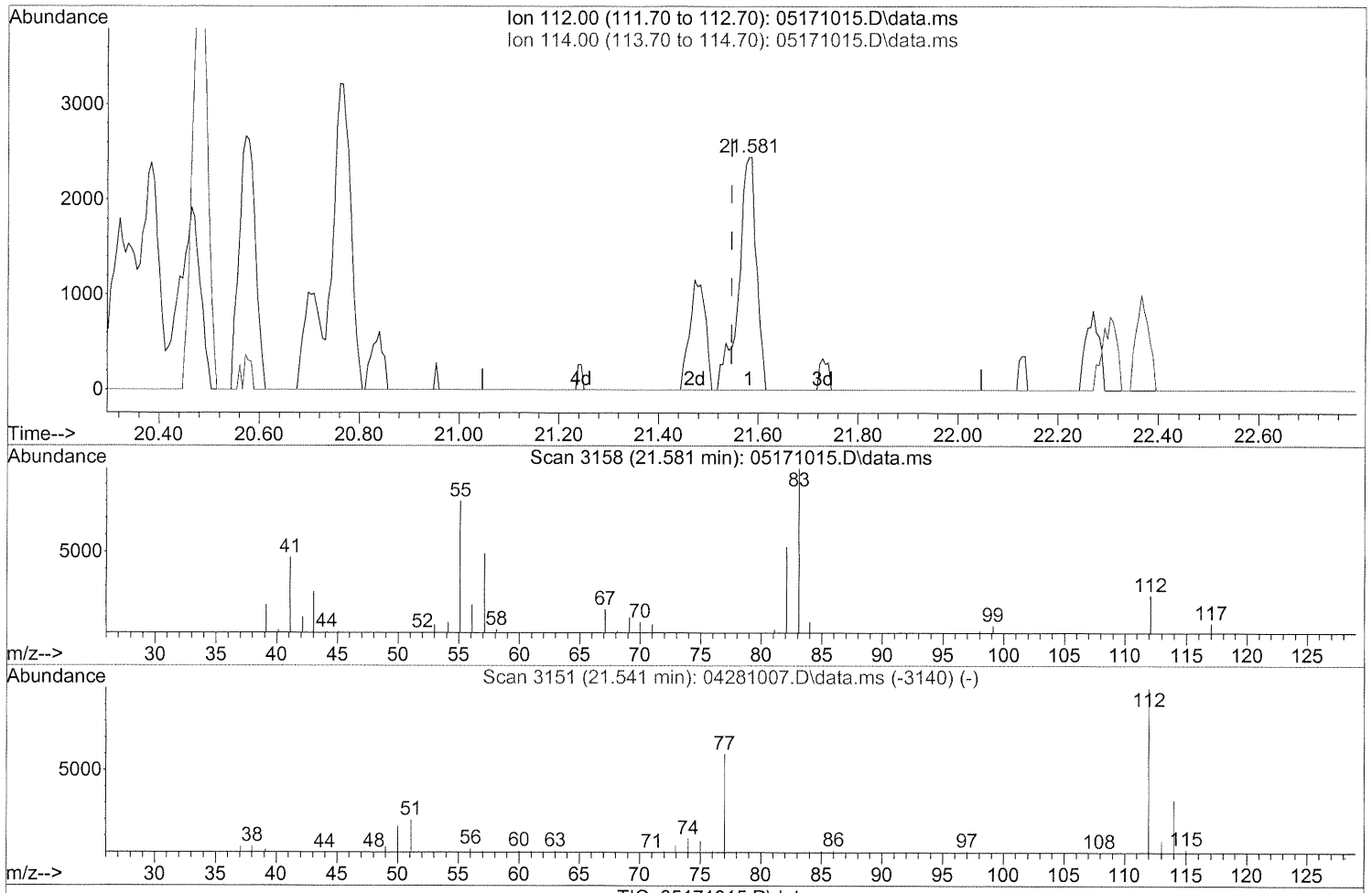
Ion	Exp%	Act%
43.00	100	100
58.00	58.30	18.85#
0.00	0.00	0.00
0.00	0.00	0.00

FP

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(65) Chlorobenzene (T)

21.581min (+0.034) 0.11ng

response 6069

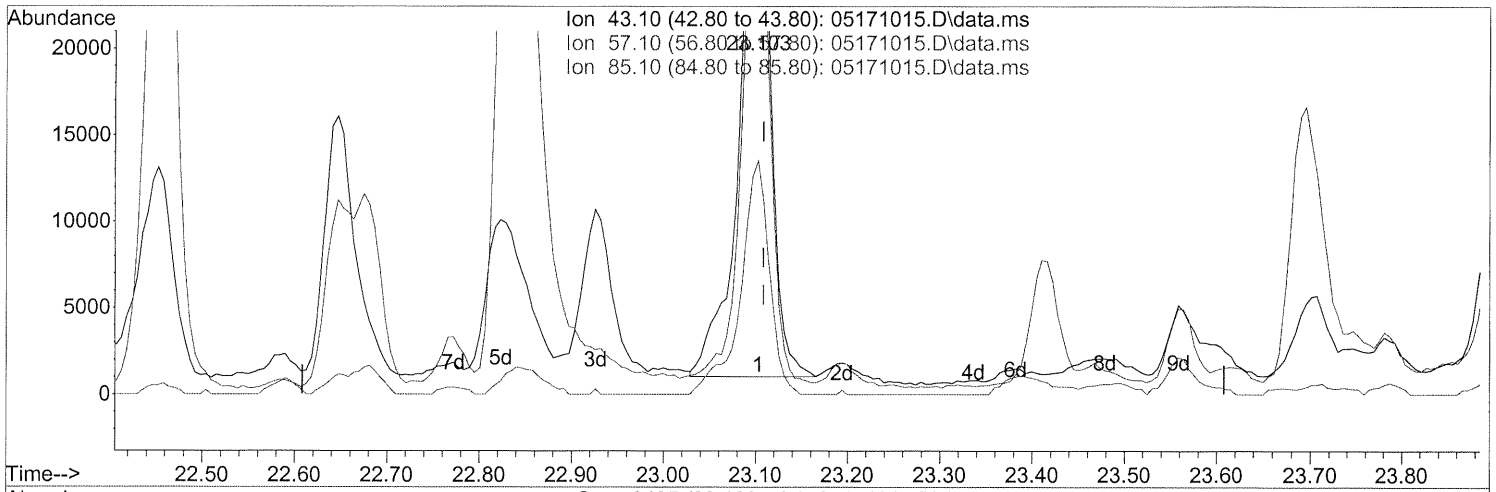
Ion	Exp%	Act%
112.00	100	100
114.00	31.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

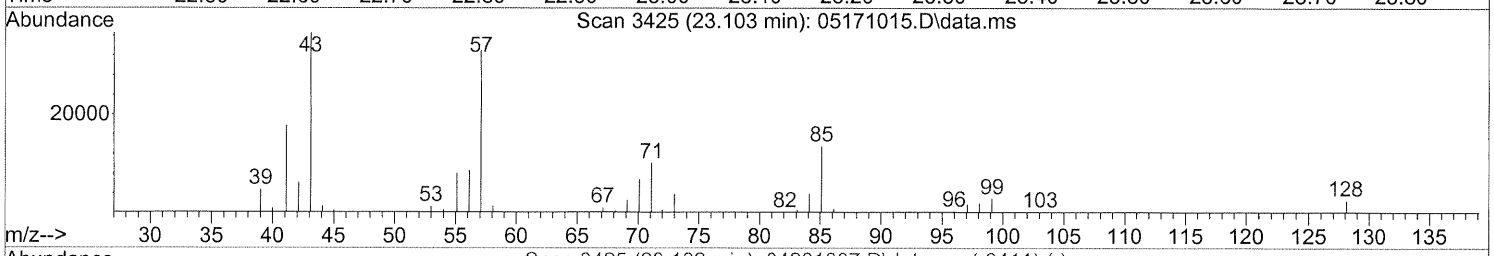
FP

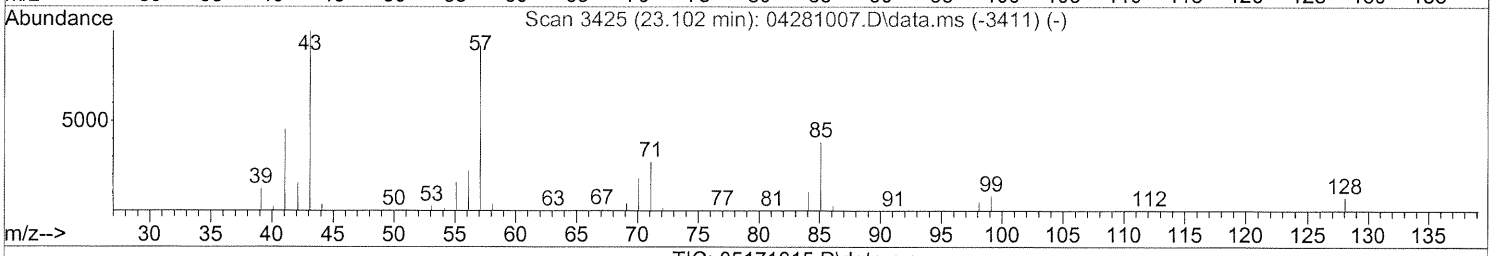
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171015.D\data.ms

(71) n-Nonane (T)

23.103min (-0.006) 1.62ng

response 77659

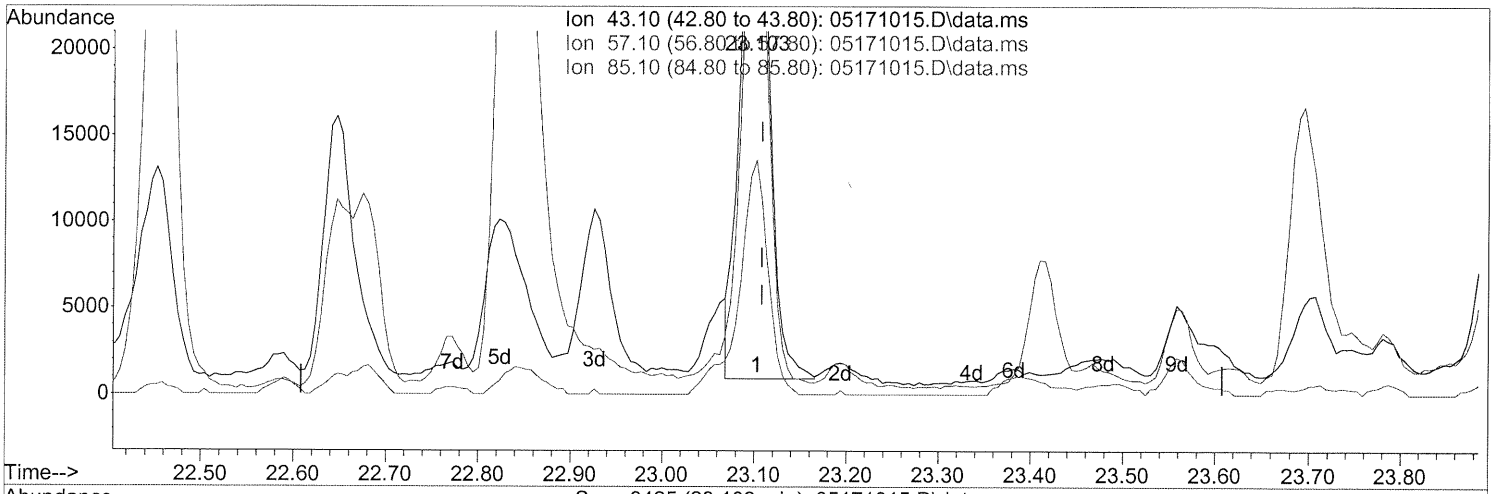
Ion	Exp%	Act%
43.10	100	100
57.10	94.60	82.33
85.10	40.50	37.82
0.00	0.00	0.00

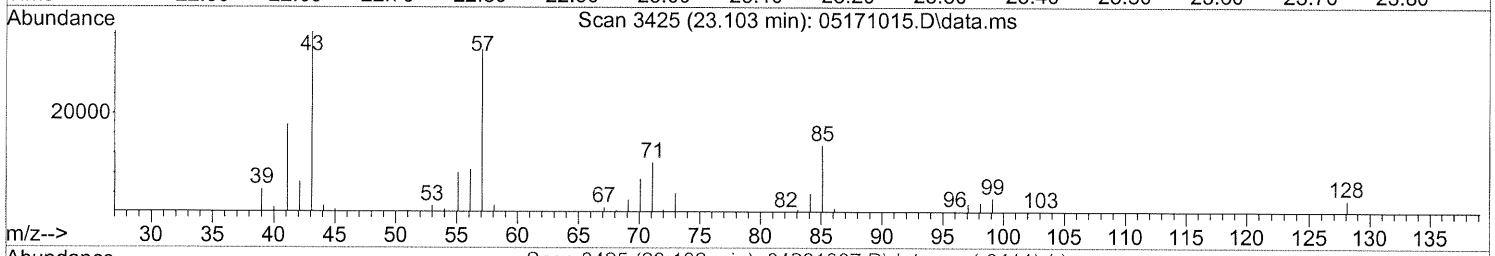
SH

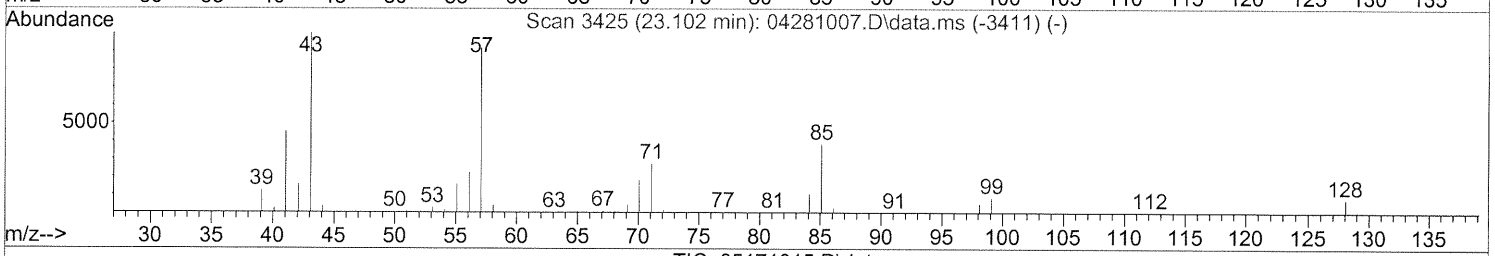
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171015.D\data.ms

(71) n-Nonane (T)

23.103min (-0.006) 1.49ng m

response 71669

Ion	Exp%	Act%
43.10	100	100
57.10	94.60	89.21
85.10	40.50	40.98
0.00	0.00	0.00

SH → IC

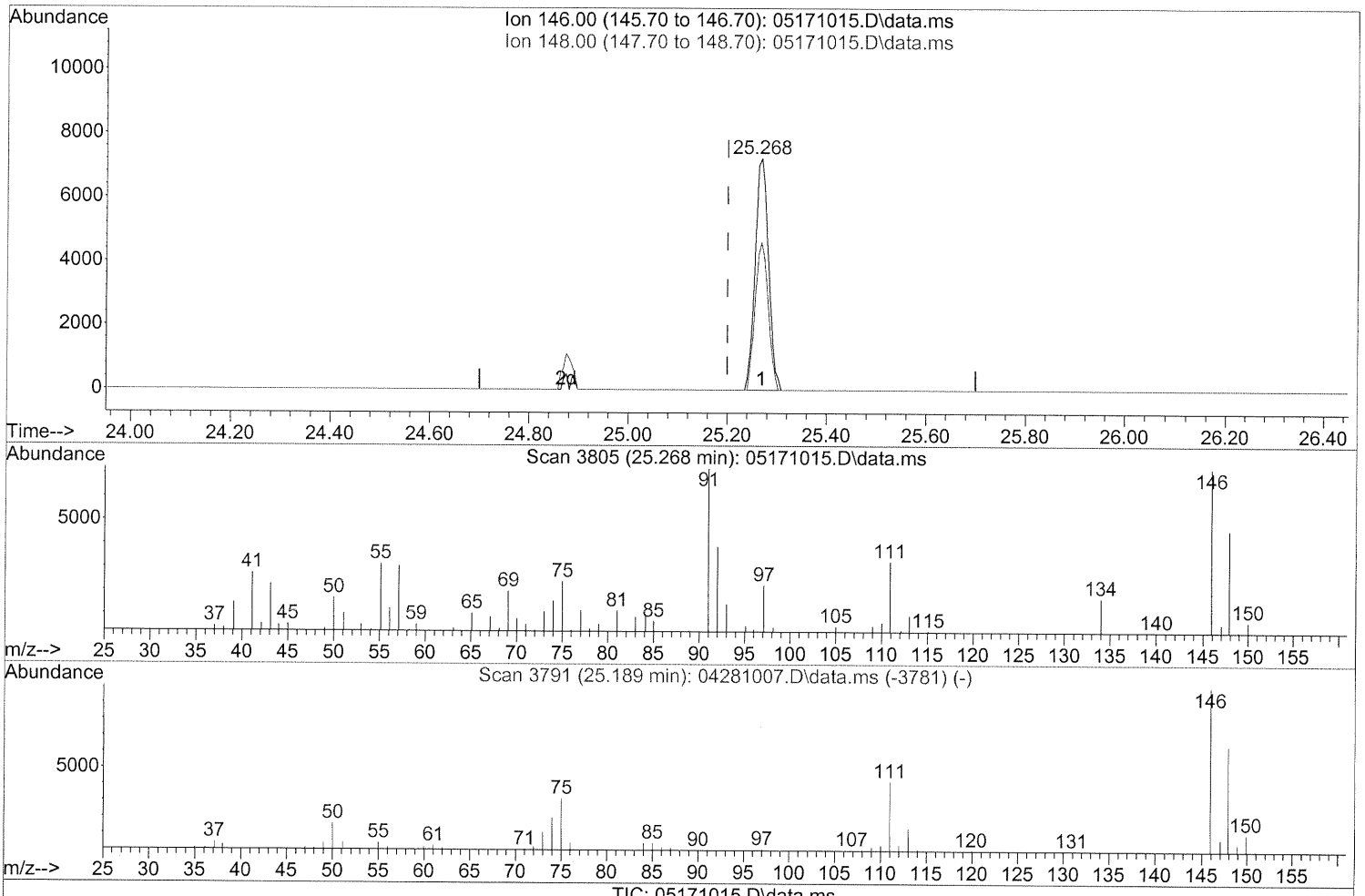
DA 5/20/10

EM 5/24/10

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.268min (+0.068) 0.33ng

response 13482

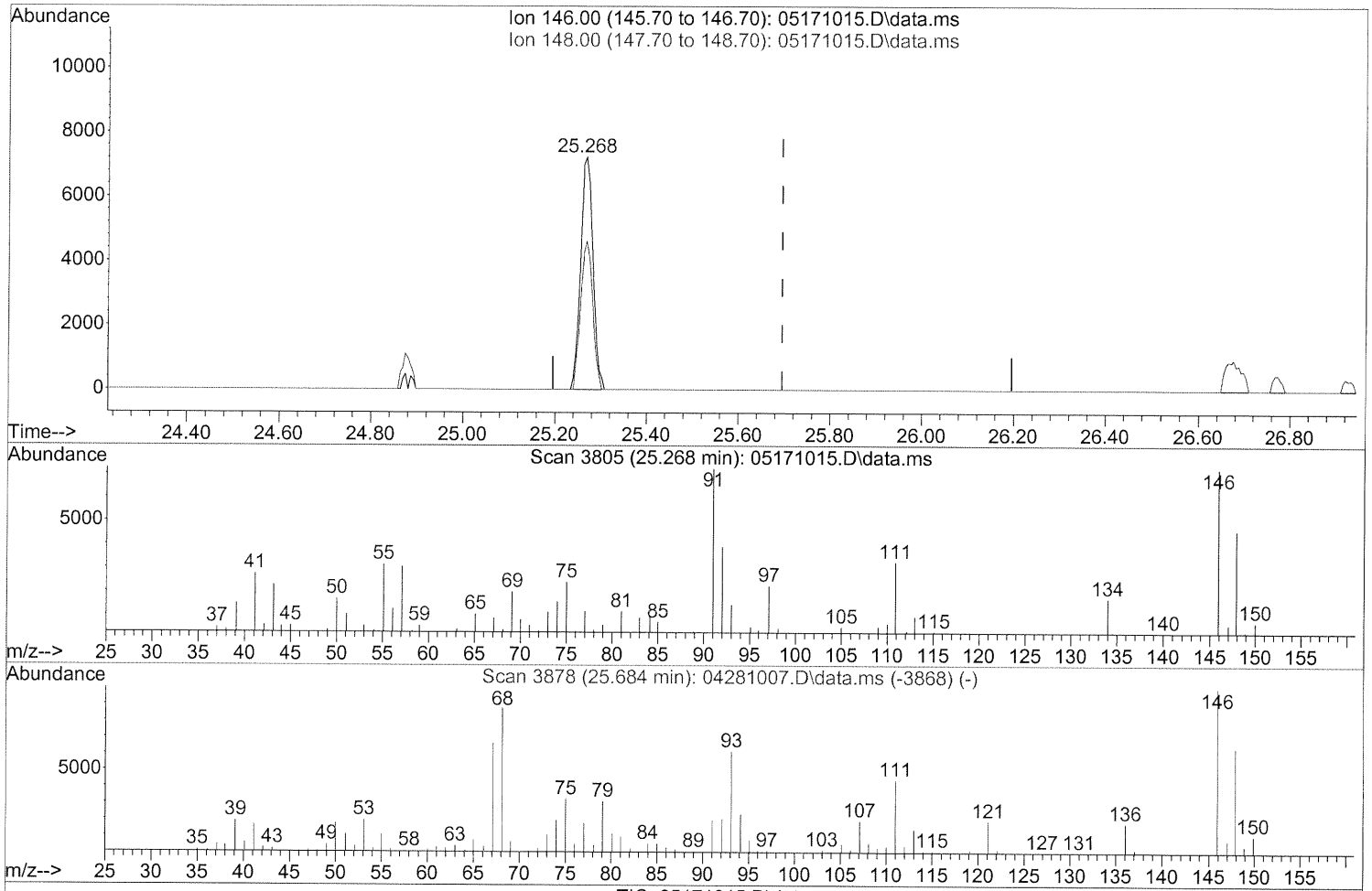
Ion	Exp%	Act%
146.00	100	100
148.00	64.30	62.34
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(90) 1,2-Dichlorobenzene (T)

25.268min (-0.427) 0.33ng

response 13482

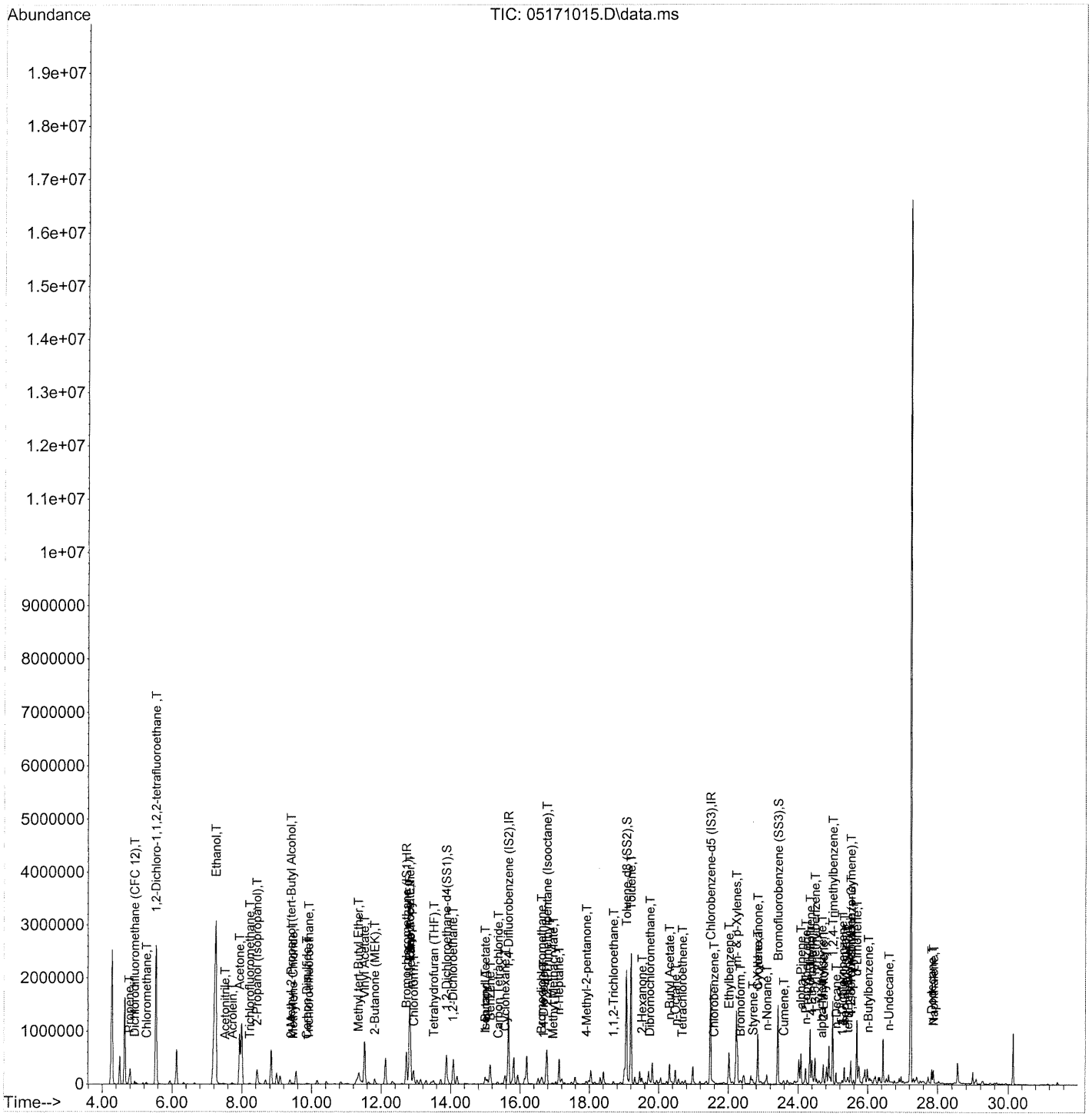
Ion	Exp%	Act%
146.00	100	100
148.00	64.80	62.34
0.00	0.00	0.00
0.00	0.00	0.00

FP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	312319	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1557723	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	773305	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	557718	23.996	ng		-0.03
Spiked Amount 25.000			Recovery	=	96.00%		
57) Toluene-d8 (SS2)	19.07	98	1826042	24.752	ng		0.00
Spiked Amount 25.000			Recovery	=	99.00%		
73) Bromofluorobenzene (SS3)	23.42	174	480165	25.495	ng		0.00
Spiked Amount 25.000			Recovery	=	101.96%		
Target Compounds							Qvalue
2) Propene	4.77	42	72947	2.994	ng	#	1
3) Dichlorodifluoromethan...	4.93	85	55750	1.334	ng		99
4) Chloromethane	5.27	50	10844	0.351	ng		95
5) 1,2-Dichloro-1,1,2,2-t...	5.54	135	1050	0.051	ng	#	42
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	6.02	54	800	N.D.			
8) Bromomethane	6.52	94	202	N.D.			
9) Chloroethane	6.86	64	307	N.D.			
10) Ethanol	7.25	45	7411982	558.051	ng		99
11) Acetonitrile	7.51	41	12643	0.377	ng		83
12) Acrolein	7.73	56	30144	2.912	ng		97
13) Acetone	7.93	58	603769	37.185	ng	#	51
14) Trichlorofluoromethane	8.22	101	25490	0.704	ng		100
15) 2-Propanol (Isopropanol)	8.43	45	408308	8.111	ng		98
16) Acrylonitrile	8.76	53	1095	N.D.			
17) 1,1-Dichloroethene	9.25	96	86	N.D.			
18) 2-Methyl-2-Propanol (t...	9.41	59	18193	0.350	ng	#	68
19) Methylene Chloride	9.46	84	5005	0.234	ng		91
20) 3-Chloro-1-propene (Al...	9.65	41	1261	N.D.			
21) Trichlorotrifluoroethane	9.91	151	4636	0.303	ng		94
22) Carbon Disulfide	9.86	76	38383	0.503	ng		98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.32	63	86	N.D.			
25) Methyl tert-Butyl Ether	11.34	73	53645	0.807	ng		94
26) Vinyl Acetate	11.52	86	32879	6.709	ng	#	1
27) 2-Butanone (MEK)	11.82	72	50832	3.769	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.82	87	11785	0.590	ng	#	1
30) Ethyl Acetate	12.81	61	323821	40.389	ng		96
31) n-Hexane	12.84	57	384299	9.361	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	260567	7.606	ng		100
34) Tetrahydrofuran (THF)	13.52	72	13616	1.044	ng	#	29
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	14.06	62	2781	0.100	ng		66
38) 1,1,1-Trichloroethane	14.46	97	700	N.D.			
39) Isopropyl Acetate	15.00	61	3092	0.231	ng	#	1
40) 1-Butanol	14.99	56	120381	5.592	ng		83
41) Benzene	15.14	78	473180	5.442	ng		100
42) Carbon Tetrachloride	15.37	117	8636	0.373	ng		99
43) Cyclohexane	15.57	84	94655	2.590	ng		95
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	16.19	63	826	N.D.			
46) Bromodichloromethane	16.62	83	60292	2.312	ng		75
47) Trichloroethene	0.00	130	0	N.D.			
48) 1,4-Dioxane	16.67	88	1378	0.084	ng		79
49) 2,2,4-Trimethylpentane...	16.77	57	752555	7.389	ng		96
50) Methyl Methacrylate	16.95	100	2492	0.273	ng	#	1
51) n-Heptane	17.12	71	148560	5.976	ng		95
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
53) 4-Methyl-2-pentanone	17.92	58	22512	1.198	ng		90
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.			
55) 1,1,2-Trichloroethane	18.69	97	2041	0.107	ng	#	43
58) Toluene	19.20	91	2227613	24.341	ng		99
59) 2-Hexanone	19.51	43	72577	1.662	ng	#	47
60) Dibromochloromethane	19.74	129	15713	0.867	ng		96
61) 1,2-Dibromoethane	0.00	107	0	N.D.			
62) n-Butyl Acetate	20.31	43	302725	6.170	ng		96
63) n-Octane	20.48	57	56090	2.642	ng		92
64) Tetrachloroethene	20.67	166	17985	0.839	ng		99
65) Chlorobenzene	21.58	112	6069	0.109	ng	#	43
66) Ethylbenzene	22.01	91	551453	5.385	ng		97
67) m- & p-Xylenes	22.22	91	1337802	16.116	ng		98
68) Bromoform	22.34	173	1989	0.132	ng		85
69) Styrene	22.70	104	47761	0.816	ng		96
70) o-Xylene	22.84	91	602699	6.815	ng		98
71) n-Nonane	23.10	43	77659	1.618	ng		90
72) 1,1,2,2-Tetrachloroethane	22.85	83	915	N.D.			
74) Cumene	23.59	105	50269	0.470	ng		98
75) alpha-Pinene	24.08	93	270413	5.390	ng		96
76) n-Propylbenzene	24.22	91	263885	2.014	ng		94
77) 3-Ethyltoluene	24.34	105	724827	7.337	ng		98
78) 4-Ethyltoluene	24.39	105	314664	3.152	ng		98
79) 1,3,5-Trimethylbenzene	24.48	105	278533	3.327	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 20:30
Operator : EM
Sample : P1001651-001 (1000ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 08:04:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

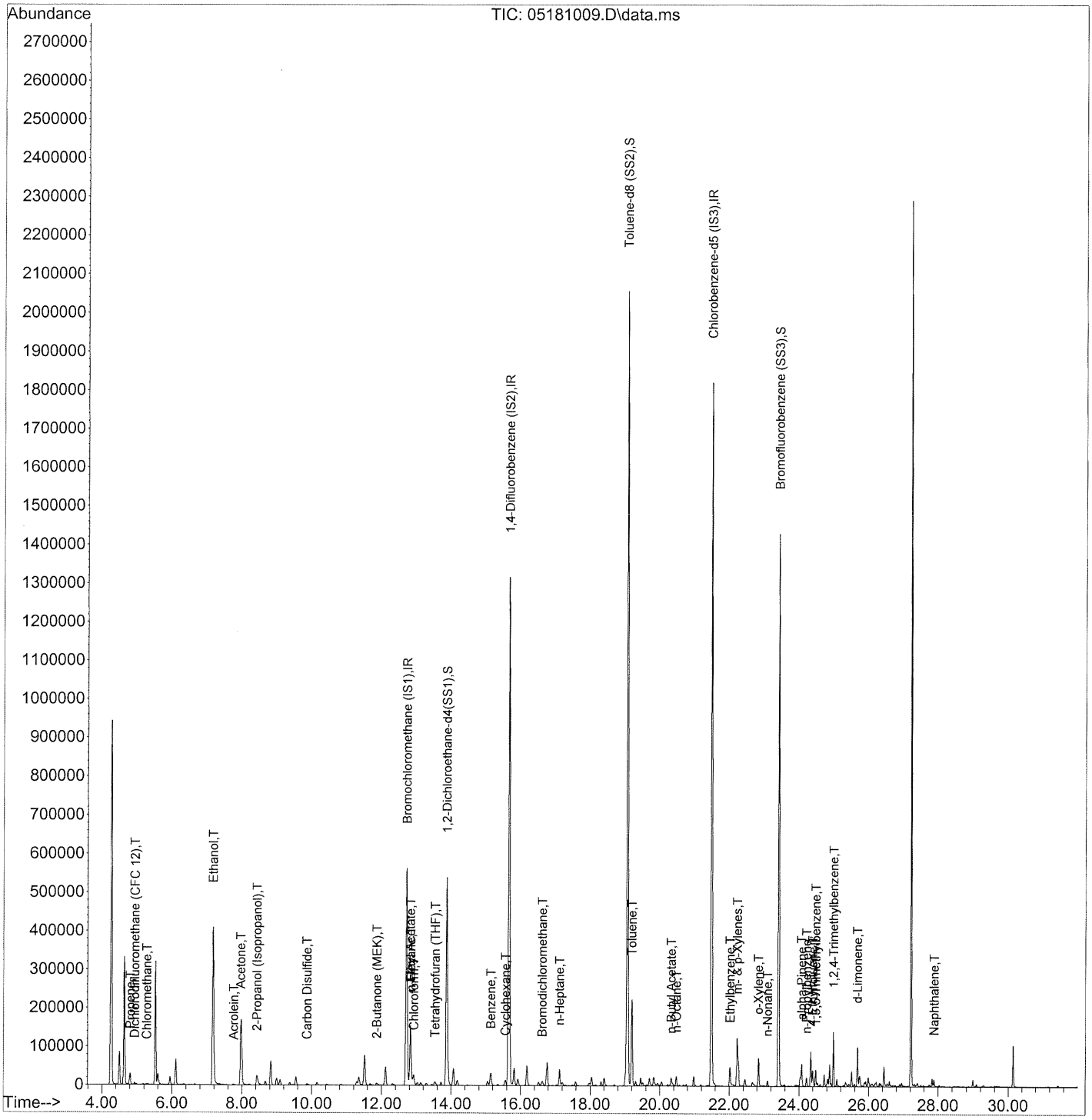
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	3624	0.082 ng		98
81) 2-Ethyltoluene	24.72	105	256189	2.484 ng		71
82) 1,2,4-Trimethylbenzene	24.99	105	956782	10.934 ng		87
83) n-Decane	25.09	57	79325	1.577 ng		94
84) Benzyl Chloride	25.17	91	1075	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	13482	0.329 ng		98
86) 1,4-Dichlorobenzene	25.27	146	13482	0.311 ng		98
87) sec-Butylbenzene	25.32	105	15879	0.138 ng		79
88) 4-Isopropyltoluene (p-...	25.51	119	69391	0.616 ng	#	74
89) 1,2,3-Trimethylbenzene	25.51	105	201778	2.251 ng		80
90) 1,2-Dichlorobenzene	25.27	146	13482	0.328 ng		97
91) d-Limonene	25.68	68	324168	9.411 ng		94
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	57625	1.142 ng		82
94) 1,2,4-Trichlorobenzene	27.74	180	1037	N.D.		
95) Naphthalene	27.88	128	201210	2.082 ng		98
96) n-Dodecane	27.83	57	83577	1.616 ng		97
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.84	55	5465	0.189 ng		89
99) tert-Butylbenzene	25.43	119	22777	0.257 ng		93
100) n-Butylbenzene	26.01	91	59476	0.662 ng	#	63

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 20 17:24:52 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 20 17:24:52 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	304213	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1533897	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	773804	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	547810	24.198	ng		-0.03
Spiked Amount 25.000			Recovery =	96.80%			✓
57) Toluene-d8 (SS2)	19.06	98	1816491	24.606	ng		-0.01
Spiked Amount 25.000			Recovery =	98.44%			✓
73) Bromofluorobenzene (SS3)	23.42	174	473862	25.144	ng		0.00
Spiked Amount 25.000			Recovery =	100.56%			✓
Target Compounds							Qvalue
2) Propene	4.81	42	3964	0.167	ng	#	1
3) Dichlorodifluoromethan...	4.94	85	5484	0.135	ng	#	91
4) Chloromethane	5.27	50	2766	0.092	ng		87
10) Ethanol	7.17	45	676393	52.283	ng		100
12) Acrolein	7.76	56	2392	0.237	ng		89
13) Acetone	7.96	58	59725	3.776	ng	#	51
15) 2-Propanol (Isopropanol)	8.43	45	48207	0.983	ng		100
22) Carbon Disulfide	9.86	76	8950	0.121	ng		77
27) 2-Butanone (MEK)	11.86	72	3641	0.277	ng	#	28
30) Ethyl Acetate	12.83	61	28226	3.614	ng		96
31) n-Hexane	12.84	57	36595	0.915	ng		96
32) Chloroform	12.93	83	24403	0.731	ng		100
34) Tetrahydrofuran (THF)	13.54	72	3971	0.313	ng	#	70
41) Benzene	15.15	78	45191	0.528	ng		98
43) Cyclohexane	15.56	84	9051	0.252	ng		93
46) Bromodichloromethane	16.63	83	5244	0.204	ng	#	71
51) n-Heptane	17.12	71	13753	0.562	ng		96
58) Toluene	19.20	91	212118	2.316	ng		99
62) n-Butyl Acetate	20.33	43	24566	0.500	ng		93
63) n-Octane	20.48	57	5410	0.255	ng		88
66) Ethylbenzene	22.02	91	52177	0.509	ng		96
67) m- & p-Xylenes	22.22	91	126962	1.528	ng		98
70) o-Xylene	22.84	91	57468	0.649	ng		97
71) n-Nonane	23.10	43	6841	0.142	ng		93
75) alpha-Pinene	24.08	93	25413	0.506	ng		70
76) n-Propylbenzene	24.22	91	24346	0.186	ng		96
78) 4-Ethyltoluene	24.40	105	30251	0.303	ng		98
79) 1,3,5-Trimethylbenzene	24.48	105	27287	0.326	ng		96
82) 1,2,4-Trimethylbenzene	24.99	105	88179	1.007	ng		86
91) d-Limonene	25.68	68	28458	0.826	ng		93

5/20/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 20 17:24:52 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

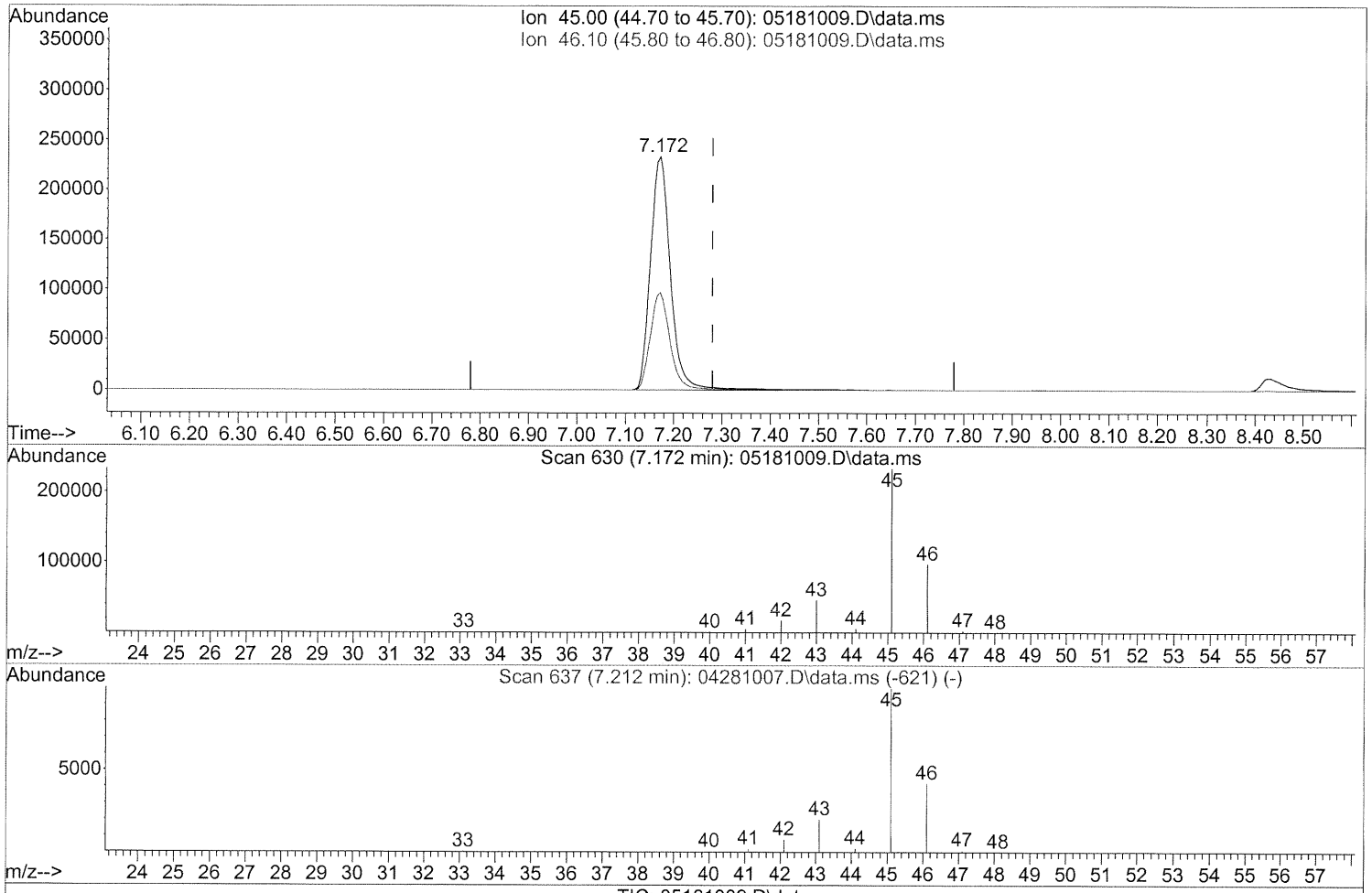
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
95) Naphthalene	27.88	128	18625	0.193 ng	98

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

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



TIC: 05181009.D\data.ms

(10) Ethanol (T)

7.172min (-0.108) 52.28ng

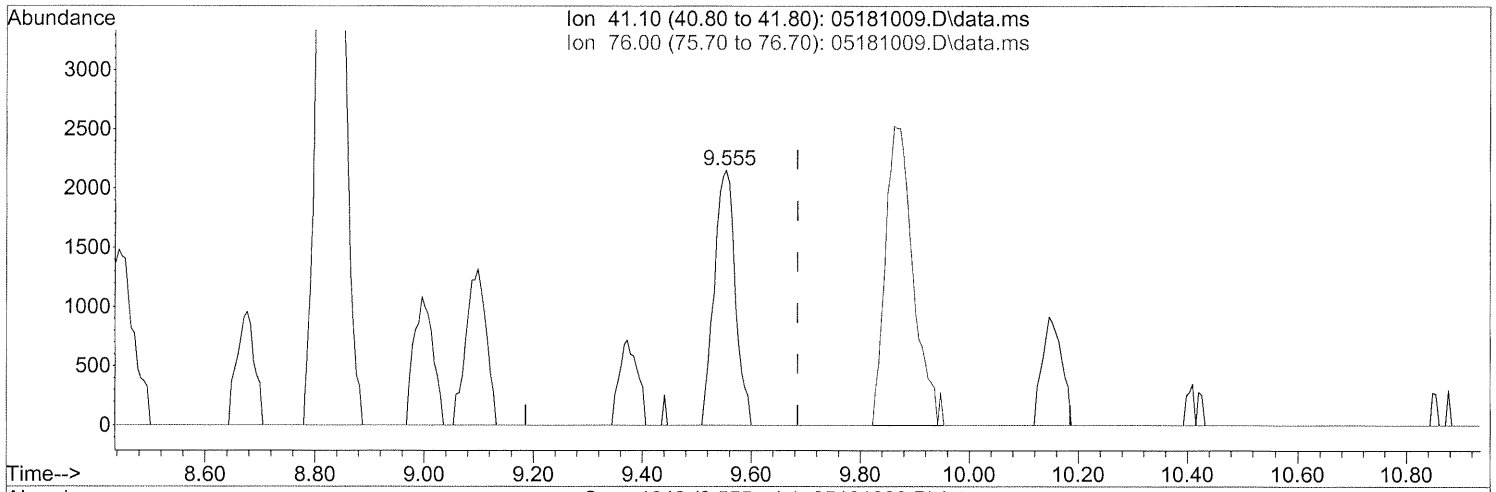
response 676393

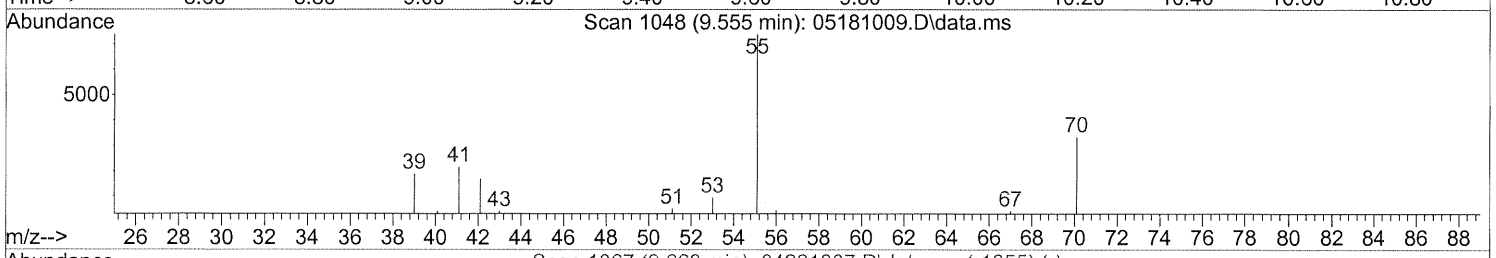
Ion	Exp%	Act%
45.00	100	100
46.10	41.30	41.10
0.00	0.00	0.00
0.00	0.00	0.00

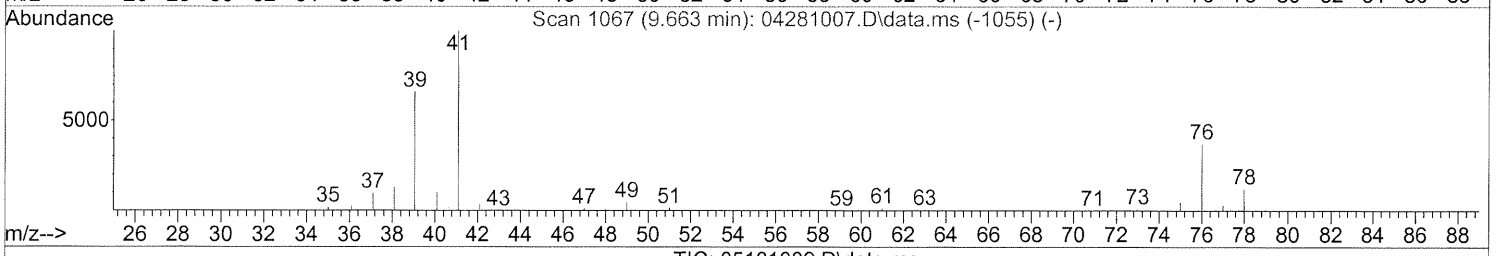
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181009.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.555min (-0.131) 0.21ng

response 5825

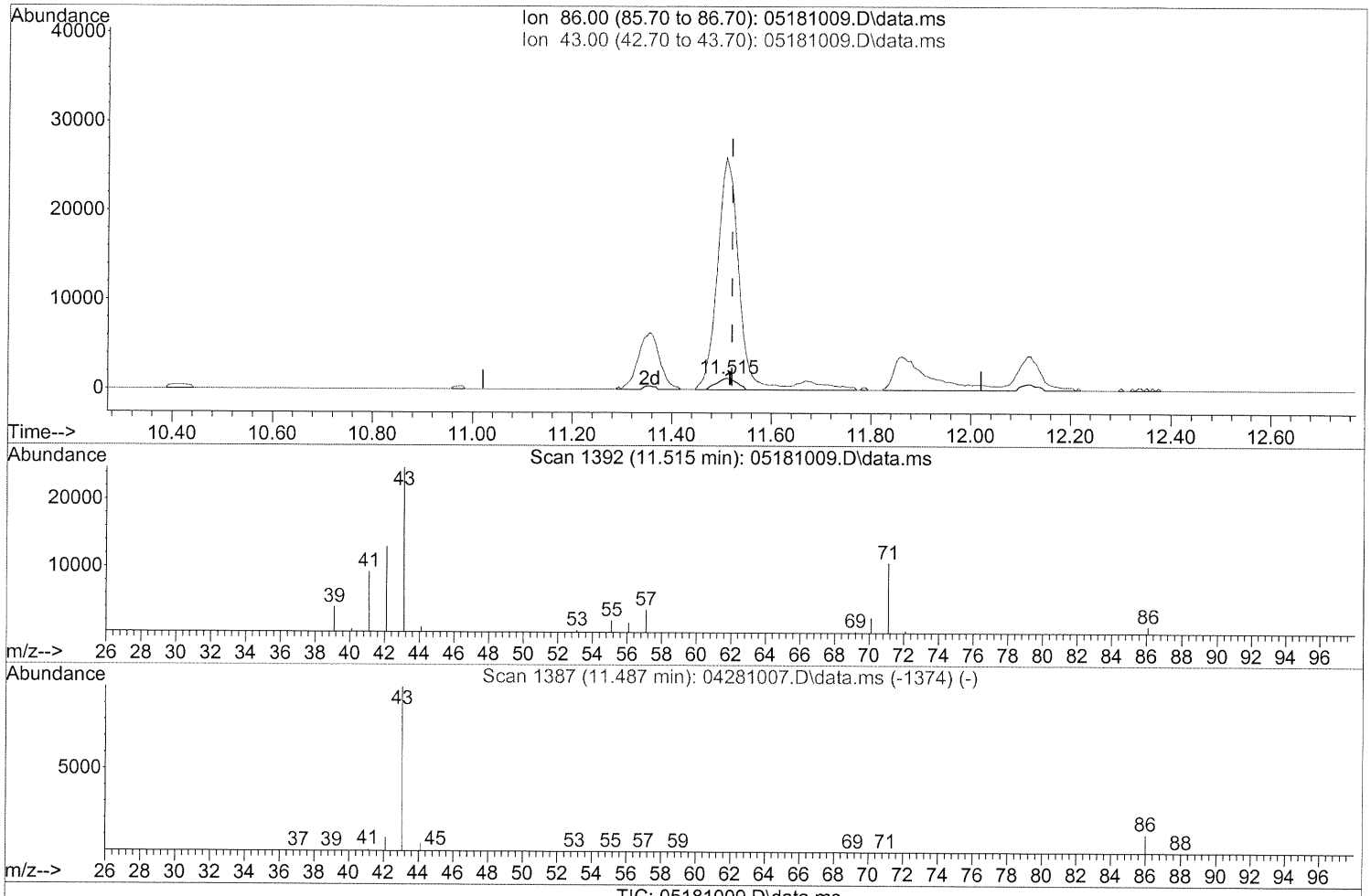
7P

Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.515min (-0.006) 0.73ng

response 3465

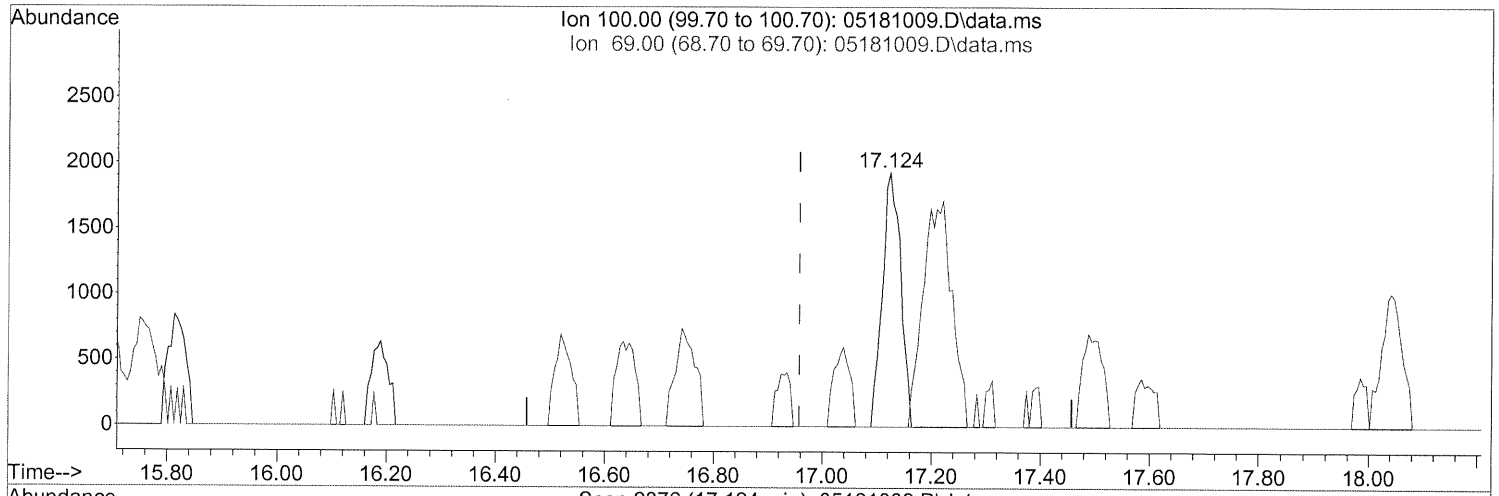
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2198.87#
0.00	0.00	0.00
0.00	0.00	0.00

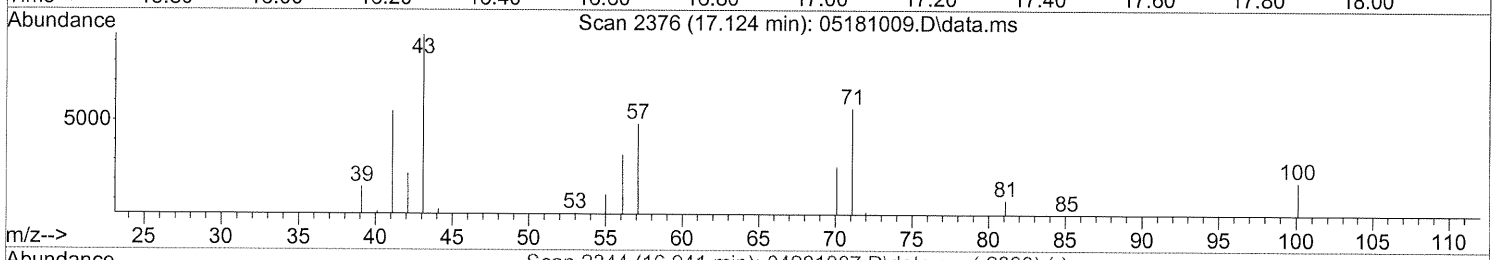
FP

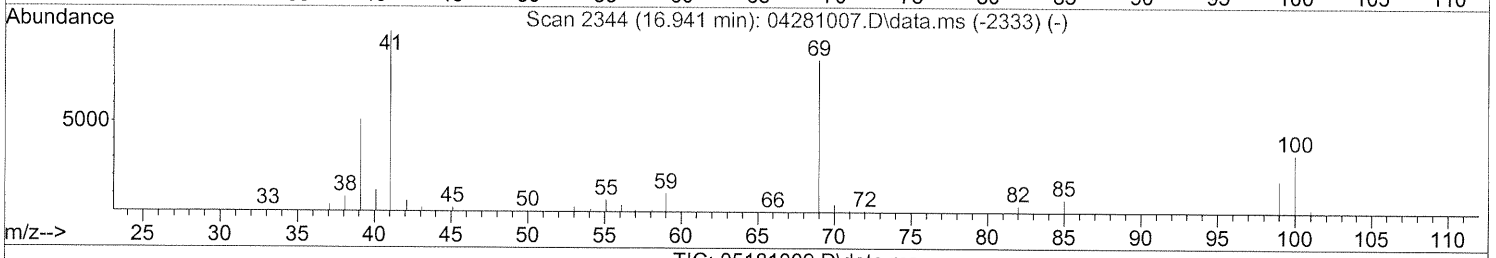
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181009.D\data.ms

(50) Methyl Methacrylate (T)

17.124min (+0.166) 0.50ng

response 4489

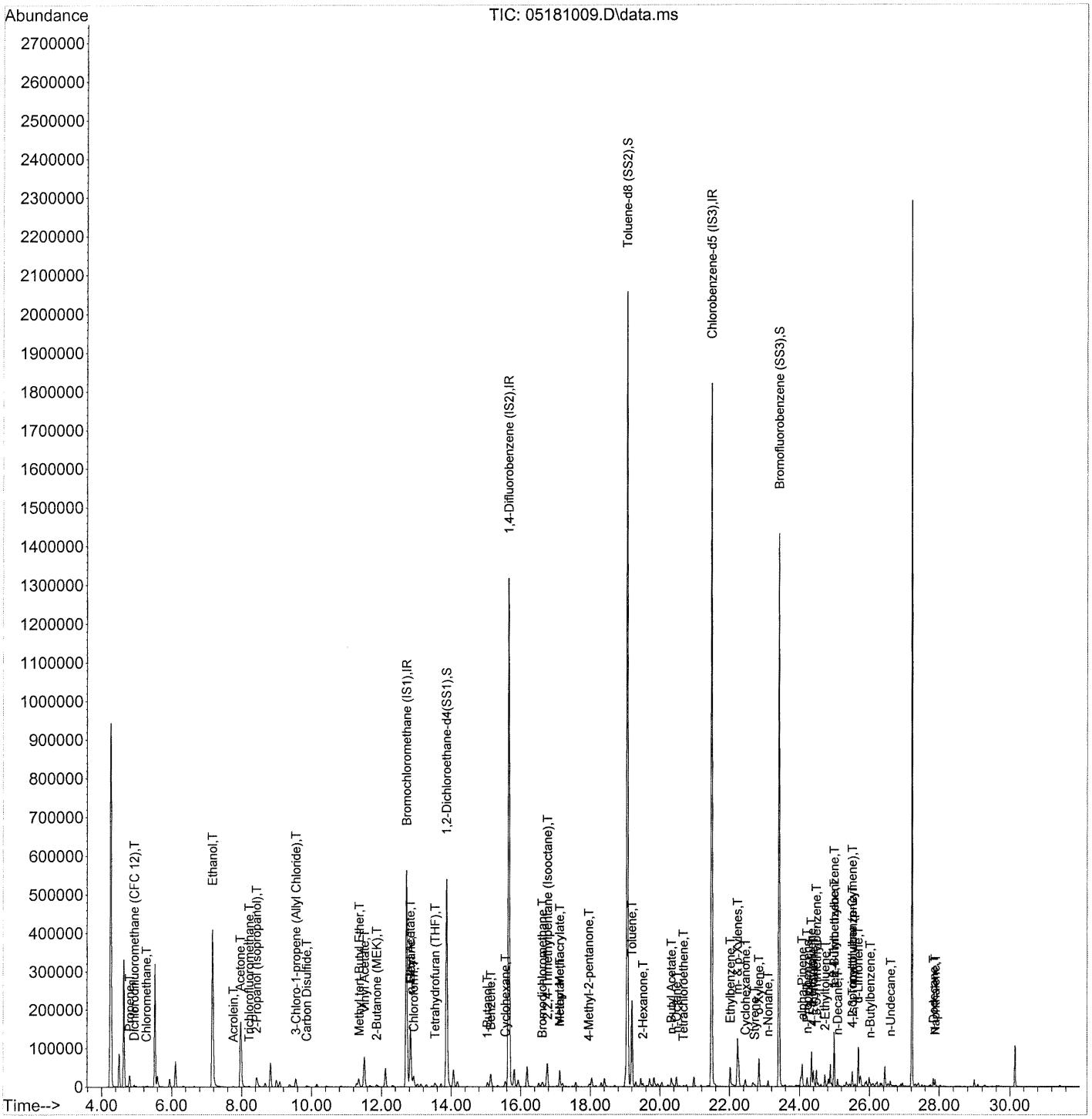
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	304213	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1533897	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	773804	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	547810	24.198	ng		-0.03
Spiked Amount 25.000			Recovery	=	96.80%		
57) Toluene-d8 (SS2)	19.06	98	1816491	24.606	ng		-0.01
Spiked Amount 25.000			Recovery	=	98.44%		
73) Bromofluorobenzene (SS3)	23.42	174	473862	25.144	ng		0.00
Spiked Amount 25.000			Recovery	=	100.56%		
Target Compounds							Qvalue
2) Propene	4.81	42	3964	0.167	ng	#	1
3) Dichlorodifluoromethan...	4.94	85	5484	0.135	ng	#	91
4) Chloromethane	5.27	50	2766	0.092	ng		87
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.17	45	676393	52.283	ng		100
11) Acetonitrile	7.54	41	415	N.D.			
12) Acrolein	7.76	56	2392	0.237	ng		89
13) Acetone	7.96	58	59725	3.776	ng	#	51
14) Trichlorofluoromethane	8.22	101	2203	0.062	ng		92
15) 2-Propanol (Isopropanol)	8.43	45	48207	0.983	ng		100
16) Acrylonitrile	8.68	53	789	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.43	59	2442	N.D.			
19) Methylene Chloride	9.47	84	807	N.D.			
20) 3-Chloro-1-propene (Al...	9.55	41	5825	0.214	ng	#	36
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	9.86	76	8950	0.121	ng		77
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.37	73	4771	0.074	ng		98
26) Vinyl Acetate	11.52	86	3465	0.726	ng	#	1
27) 2-Butanone (MEK)	11.86	72	3641	0.277	ng	#	28
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.83	87	680	N.D.			
30) Ethyl Acetate	12.83	61	28226	3.614	ng		96
31) n-Hexane	12.84	57	36595	0.915	ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	24403	0.731 ng		100
34) Tetrahydrofuran (THF)	13.54	72	3971	0.313 ng	#	70
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.04	56	7718	0.364 ng		94
41) Benzene	15.15	78	45191	0.528 ng		98
42) Carbon Tetrachloride	15.37	117	299	N.D.		
43) Cyclohexane	15.56	84	9051	0.252 ng		93
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.63	83	5244	0.204 ng	#	71
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	71841	0.716 ng		94
50) Methyl Methacrylate	17.12	100	4489	0.500 ng	#	1
51) n-Heptane	17.12	71	13753	0.562 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.96	58	1218	0.066 ng	#	30
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	212118	2.316 ng		99
59) 2-Hexanone	19.51	43	5685	0.130 ng	#	22
60) Dibromochloromethane	19.75	129	876	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.33	43	24566	0.500 ng		93
63) n-Octane	20.48	57	5410	0.255 ng		88
64) Tetrachloroethene	20.68	166	1561	0.073 ng		99
65) Chlorobenzene	21.57	112	88	N.D.		
66) Ethylbenzene	22.02	91	52177	0.509 ng		96
67) m- & p-Xylenes	22.22	91	126962	1.528 ng		98
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.71	104	3994	0.068 ng		96
70) o-Xylene	22.84	91	57468	0.649 ng		97
71) n-Nonane	23.10	43	6841	0.142 ng		93
72) 1,1,2,2-Tetrachloroethane	22.46	83	445	N.D.		
74) Cumene	23.60	105	4456	N.D.		
75) alpha-Pinene	24.08	93	25413	0.506 ng		70
76) n-Propylbenzene	24.22	91	24346	0.186 ng		96
77) 3-Ethyltoluene	24.34	105	67872	0.687 ng		97
78) 4-Ethyltoluene	24.40	105	30251	0.303 ng		98
79) 1,3,5-Trimethylbenzene	24.48	105	27287	0.326 ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181009.D
Acq On : 18 May 2010 14:23
Operator : EM
Sample : P1001651-001 dil (100ml)
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 15:01:32 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.88	118	793	N.D.		
81) 2-Ethyltoluene	24.73	105	24314	0.236 ng		71
82) 1,2,4-Trimethylbenzene	24.99	105	88179	1.007 ng		86
83) n-Decane	25.09	57	7806	0.155 ng		96
84) Benzyl Chloride	25.27	91	1014	N.D.		
85) 1,3-Dichlorobenzene	25.28	146	1187	N.D.		
86) 1,4-Dichlorobenzene	25.28	146	1187	N.D.		
87) sec-Butylbenzene	25.33	105	1475	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	7024	0.062 ng		75
89) 1,2,3-Trimethylbenzene	25.51	105	19033	0.212 ng		78
90) 1,2-Dichlorobenzene	25.28	146	1187	N.D.		
91) d-Limonene	25.68	68	28458	0.826 ng		93
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	4719	0.093 ng	#	75
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95) Naphthalene	27.88	128	18625	0.193 ng		98
96) n-Dodecane	27.84	57	7752	0.150 ng		94
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.45	55	7125	0.247 ng		94
99) tert-Butylbenzene	24.99	119	10463	0.118 ng	#	53
100) n-Butylbenzene	26.02	91	5567	0.062 ng	#	58

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110417** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-002

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01559

Initial Pressure (psig): -3.3 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**5.1**	0.80	**3.0**	0.47	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.2**	0.80	**0.45**	0.16	
74-87-3	**Chloromethane**	**0.58**	0.32	**0.28**	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.80	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.063	
106-99-0	1,3-Butadiene	ND	0.32	ND	0.14	
74-83-9	Bromomethane	ND	0.16	ND	0.041	
75-00-3	Chloroethane	ND	0.16	ND	0.061	
64-17-5	**Ethanol**	**870**	80	**460**	42	**D**
75-05-8	Acetonitrile	ND	0.80	ND	0.48	
107-02-8	**Acrolein**	**5.7**	3.2	**2.5**	1.4	
67-64-1	**Acetone**	**65**	8.0	**27**	3.4	
75-69-4	**Trichlorofluoromethane**	**1.2**	0.16	**0.21**	0.028	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**13**	1.6	**5.1**	0.65	
107-13-1	Acrylonitrile	ND	0.80	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.040	
75-09-2	Methylene Chloride	ND	0.80	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	ND	0.051	
76-13-1	**Trichlorotrifluoroethane**	**0.52**	0.16	**0.068**	0.021	
75-15-0	Carbon Disulfide	ND	8.0	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.040	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.040	
1634-04-4	**Methyl tert-Butyl Ether**	**1.3**	0.16	**0.37**	0.044	
108-05-4	Vinyl Acetate	ND	8.0	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.0	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110417** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-002

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01559

Initial Pressure (psig): -3.3 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.040	
141-78-6	**Ethyl Acetate**	**66**	0.80	**18**	0.22	
110-54-3	**n-Hexane**	**15**	0.80	**4.4**	0.23	
67-66-3	**Chloroform**	**13**	0.16	**2.6**	0.033	
109-99-9	**Tetrahydrofuran (THF)**	**1.7**	0.80	**0.56**	0.27	
107-06-2	1,2-Dichloroethane	ND	0.16	ND	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.16	ND	0.029	
71-43-2	**Benzene**	**8.9**	0.16	**2.8**	0.050	
56-23-5	**Carbon Tetrachloride**	**0.67**	0.16	**0.11**	0.025	
110-82-7	**Cyclohexane**	**4.1**	0.80	**1.2**	0.23	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.035	
75-27-4	**Bromodichloromethane**	**3.8**	0.16	**0.57**	0.024	
79-01-6	Trichloroethene	ND	0.16	ND	0.030	
123-91-1	1,4-Dioxane	ND	0.80	ND	0.22	
80-62-6	Methyl Methacrylate	ND	0.80	ND	0.20	
142-82-5	**n-Heptane**	**9.8**	0.80	**2.4**	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	ND	0.18	
108-10-1	**4-Methyl-2-pentanone**	**2.0**	0.80	**0.49**	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.029	
108-88-3	**Toluene**	**40**	0.80	**11**	0.21	
591-78-6	2-Hexanone	ND	0.80	ND	0.20	
124-48-1	**Dibromochloromethane**	**1.4**	0.16	**0.17**	0.019	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.021	
123-86-4	**n-Butyl Acetate**	**9.1**	0.80	**1.9**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110417**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01559

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17 - 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.3 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**4.3**	0.80	**0.93**	0.17	
127-18-4	**Tetrachloroethene**	**1.4**	0.16	**0.20**	0.024	
108-90-7	Chlorobenzene	ND	0.16	ND	0.035	
100-41-4	**Ethylbenzene**	**8.8**	0.80	**2.0**	0.18	
179601-23-1	**m,p-Xylenes**	**26**	0.80	**6.1**	0.18	
75-25-2	Bromoform	ND	0.80	ND	0.077	
100-42-5	**Styrene**	**1.3**	0.80	**0.31**	0.19	
95-47-6	**o-Xylene**	**11**	0.80	**2.6**	0.18	
111-84-2	**n-Nonane**	**2.3**	0.80	**0.44**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.023	
98-82-8	Cumene	ND	0.80	ND	0.16	
80-56-8	**alpha-Pinene**	**8.7**	0.80	**1.6**	0.14	
103-65-1	**n-Propylbenzene**	**3.3**	0.80	**0.67**	0.16	
622-96-8	**4-Ethyltoluene**	**5.1**	0.80	**1.0**	0.16	
108-67-8	**1,3,5-Trimethylbenzene**	**5.4**	0.80	**1.1**	0.16	
95-63-6	**1,2,4-Trimethylbenzene**	**18**	0.80	**3.6**	0.16	
100-44-7	Benzyl Chloride	ND	0.80	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.16	ND	0.027	
106-46-7	**1,4-Dichlorobenzene**	**0.50**	0.16	**0.084**	0.027	
95-50-1	1,2-Dichlorobenzene	ND	0.16	ND	0.027	
5989-27-5	**d-Limonene**	**14**	0.80	**2.6**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.80	ND	0.11	
91-20-3	**Naphthalene**	**3.3**	0.80	**0.63**	0.15	
87-68-3	Hexachlorobutadiene	ND	0.80	ND	0.075	

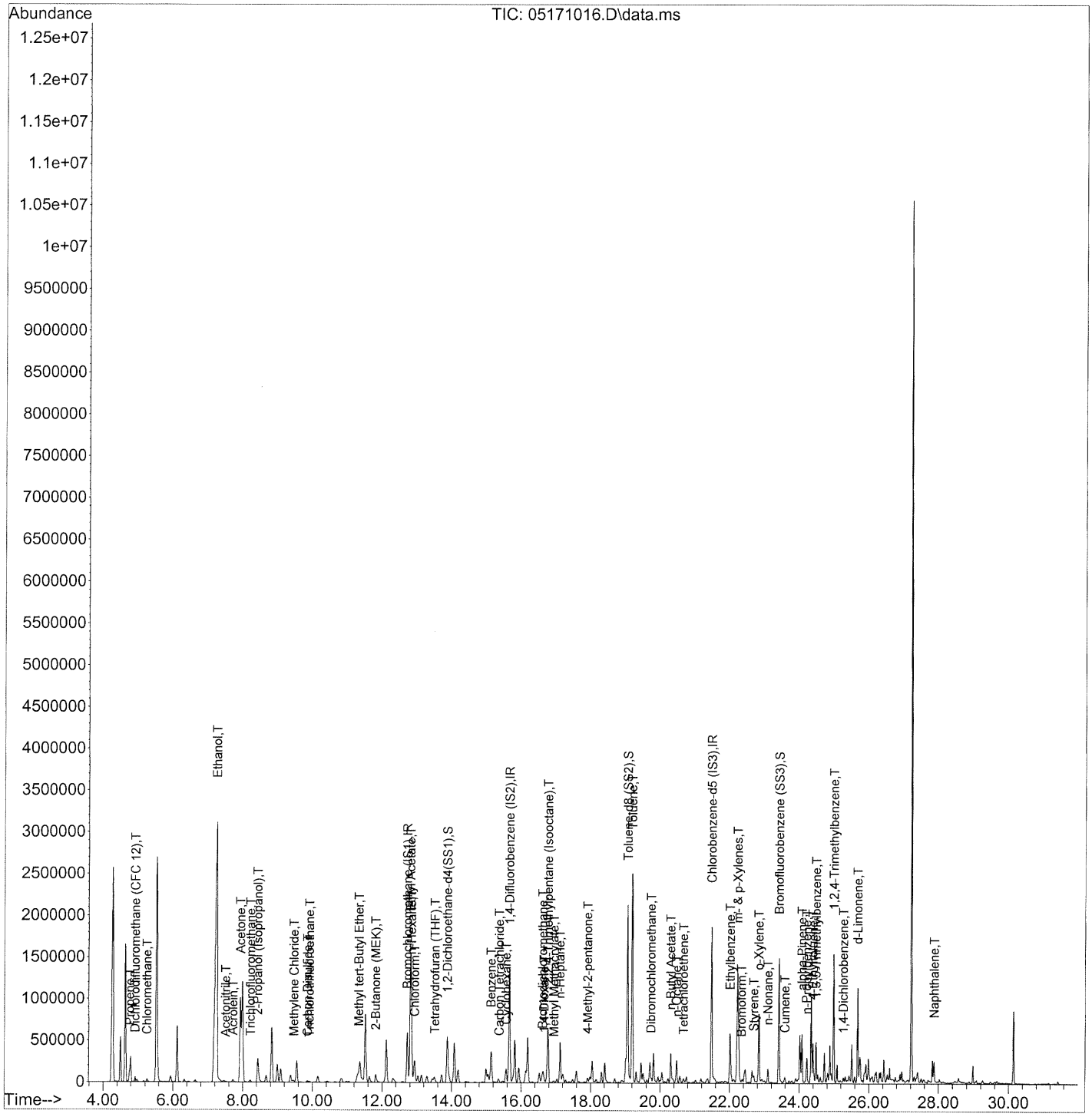
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 20 15:03:46 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 20 15:03:46 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	312533	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1570469	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	776825	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	558521	24.014	ng		-0.03
Spiked Amount 25.000			Recovery	=	96.04%		✓
57) Toluene-d8 (SS2)	19.07	98	1839327	24.819	ng		0.00
Spiked Amount 25.000			Recovery	=	99.28%		✓
73) Bromofluorobenzene (SS3)	23.42	174	485051	25.638	ng		0.00
Spiked Amount 25.000			Recovery	=	102.56%		✓
Target Compounds							Qvalue
2) Propene	4.77	42	77726	3.188	ng M	#	1
3) Dichlorodifluoromethan...	4.93	85	57881	1.384	ng		99
4) Chloromethane	5.26	50	11183	0.362	ng		97
10) Ethanol	7.25	45	7600787	571.875	ng SW dil		99
11) Acetonitrile	7.51	41	9126	0.272	ng		95
12) Acrolein	7.72	56	36991	3.570	ng		98
13) Acetone	7.93	58	659833	40.610	ng	#	56
14) Trichlorofluoromethane	8.22	101	26812	0.740	ng		99
15) 2-Propanol (Isopropanol)	8.43	45	396558	7.872	ng		98
19) Methylene Chloride	9.47	84	5653	0.264	ng		95
21) Trichlorotrifluoroethane	9.91	151	4962	0.324	ng		96
22) Carbon Disulfide	9.86	76	40385	0.529	ng		98
25) Methyl tert-Butyl Ether	11.33	73	55184	0.829	ng		92
27) 2-Butanone (MEK)	11.82	72	49807	3.690	ng		96
30) Ethyl Acetate	12.81	61	332206	41.406	ng		96
31) n-Hexane	12.84	57	397378	9.673	ng		97
32) Chloroform	12.93	83	269639	7.865	ng		99
34) Tetrahydrofuran (THF)	13.52	72	13466	1.032	ng	#	20
41) Benzene	15.14	78	489348	5.582	ng		100
42) Carbon Tetrachloride	15.37	117	9768	0.419	ng		98
43) Cyclohexane	15.57	84	95253	2.585	ng		93
46) Bromodichloromethane	16.62	83	62369	2.372	ng		74
48) 1,4-Dioxane	16.66	88	3096	0.186	ng		82
49) 2,2,4-Trimethylpentane...	16.77	57	775214	7.550	ng		96
50) Methyl Methacrylate	16.95	100	2387	0.260	ng	#	1
51) n-Heptane	17.12	71	153866	6.139	ng		96
53) 4-Methyl-2-pentanone	17.92	58	23857	1.260	ng		94
58) Toluene	19.20	91	2300280	25.021	ng		99
60) Dibromochloromethane	19.74	129	16184	0.889	ng		98
62) n-Butyl Acetate	20.31	43	280900	5.699	ng		95

DA 5/20/10

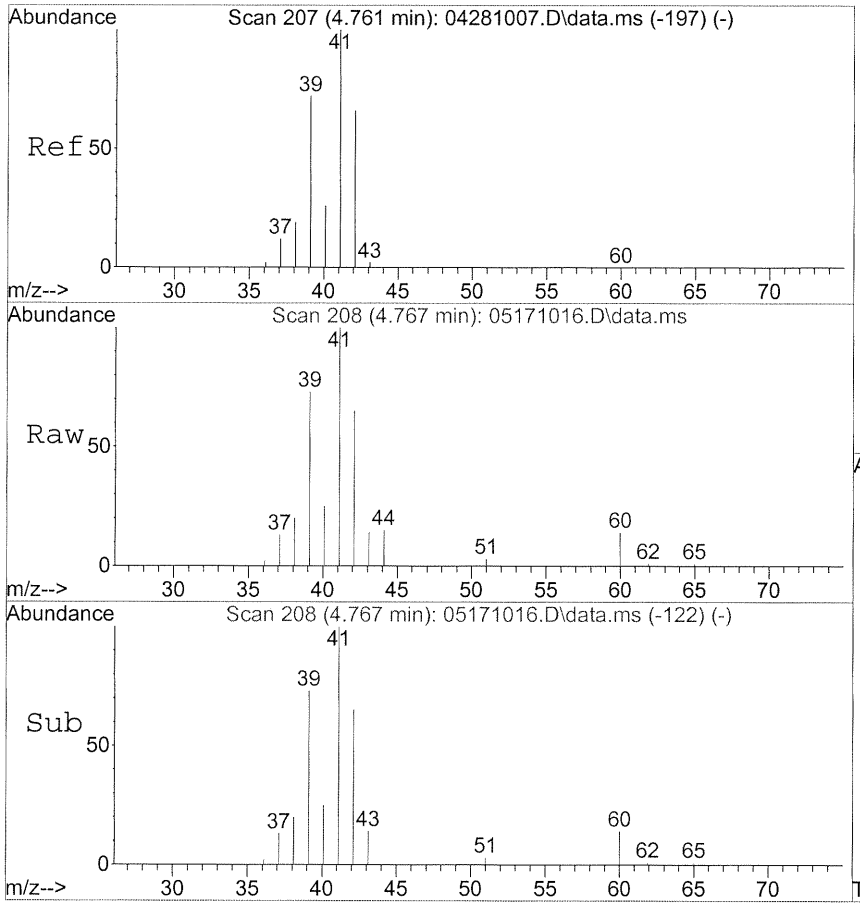
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 20 15:03:46 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
63) n-Octane	20.48	57	57623	2.702	ng	91
64) Tetrachloroethene	20.67	166	18663	0.867	ng	100
66) Ethylbenzene	22.01	91	566843	5.510	ng	97
67) m- & p-Xylenes	22.22	91	1374296	16.480	ng	97
68) Bromoform	22.34	173	1890	0.125	ng	79
69) Styrene	22.70	104	48591	0.826	ng	98
70) o-Xylene	22.84	91	617948	6.956	ng	98
71) n-Nonane	23.10	43	70290	1.458	ng	93
74) Cumene	23.59	105	52570	0.489	ng	98
75) alpha-Pinene	24.08	93	272840	5.414	ng	95
76) n-Propylbenzene	24.21	91	271816	2.065	ng	96
78) 4-Ethyltoluene	24.39	105	318644	3.177	ng	99
79) 1,3,5-Trimethylbenzene	24.48	105	282687	3.361	ng	99
82) 1,2,4-Trimethylbenzene	24.99	105	973225	11.071	ng	87
86) 1,4-Dichlorobenzene	25.27	146	13695	0.314	ng	99
91) d-Limonene	25.68	68	307991	8.901	ng	95
95) Naphthalene	27.88	128	201684	2.077	ng	98

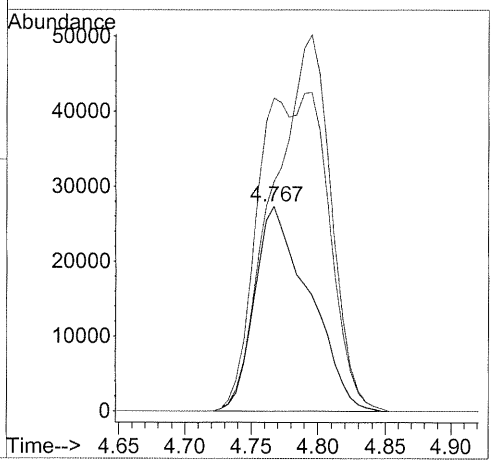
(#) = qualifier out of range (m) = manual integration (+) = signals summed

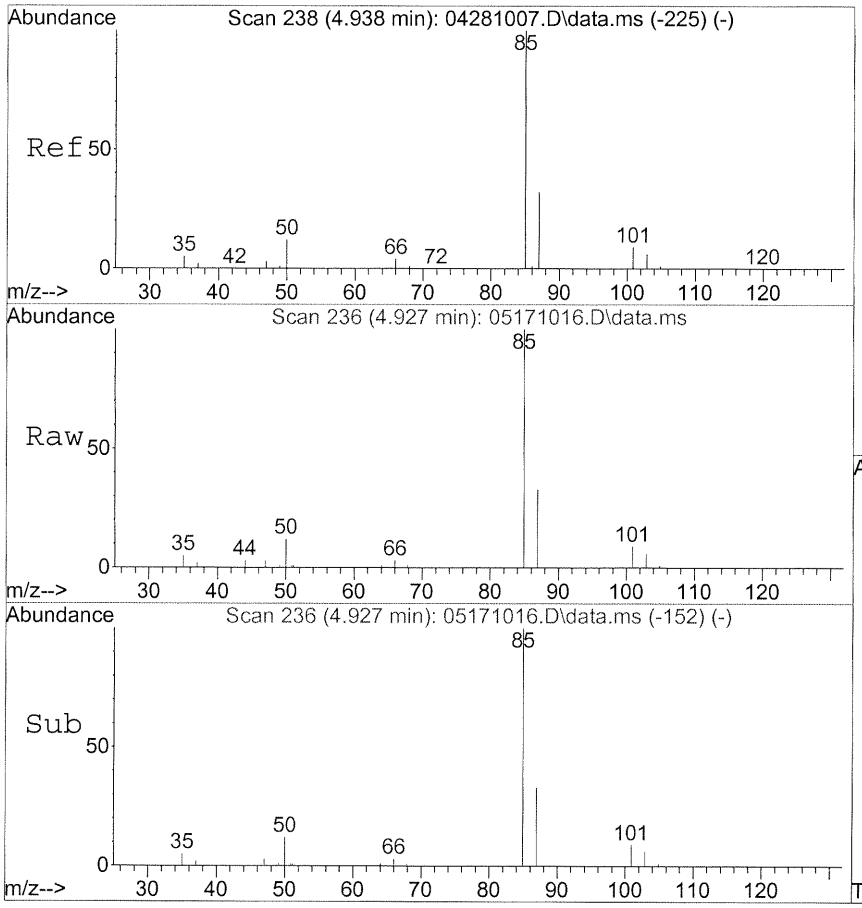


#2
Propene
Concen: 3.19 ng
RT: 4.77 min Scan# 208
Delta R.T. -0.011 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 42 Resp: 77726

Ion	Ratio	Lower	Upper
42	100		
39	0.0	88.4	128.4#
41	0.0	129.9	169.9#

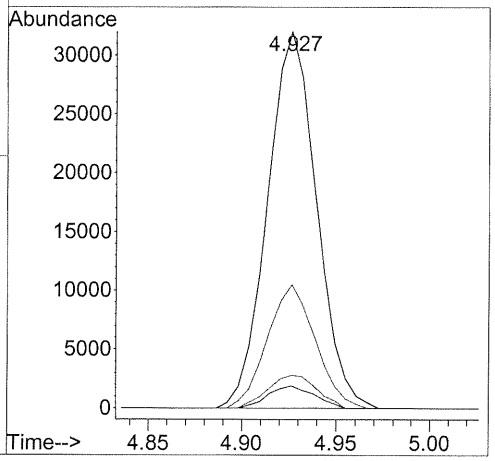


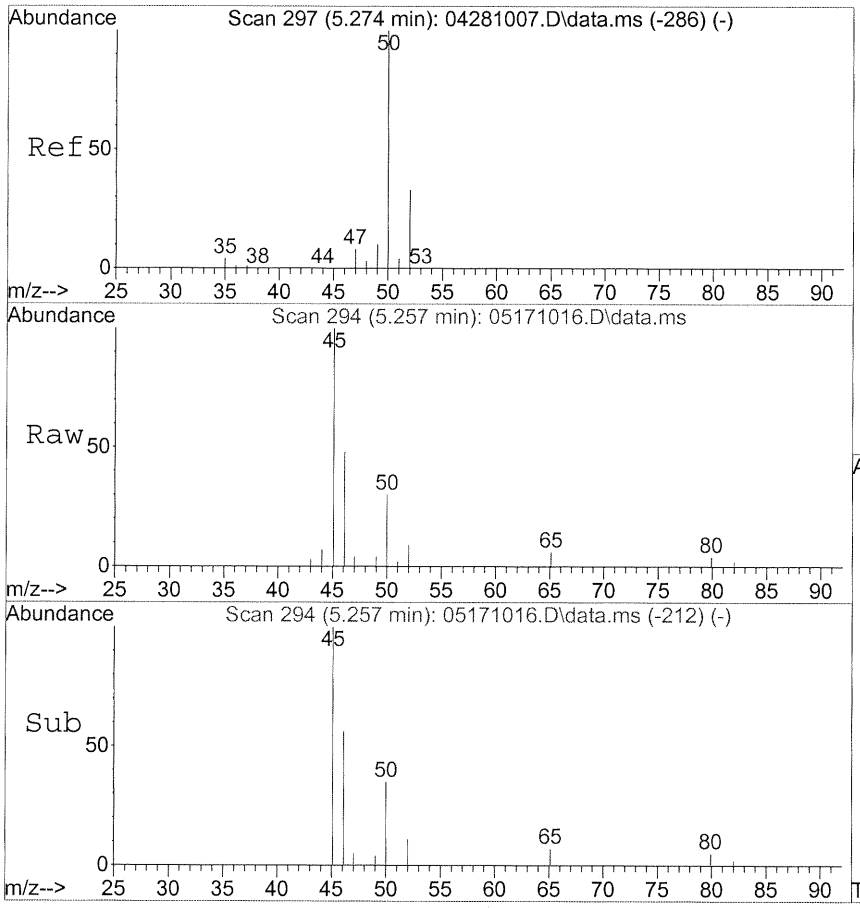


#3
Dichlorodifluoromethane (CFC
Concen: 1.38 ng
RT: 4.93 min Scan# 236
Delta R.T. -0.023 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 85 Resp: 57881

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.6	52.6
101	8.7	0.0	29.3
103	5.5	0.0	25.9

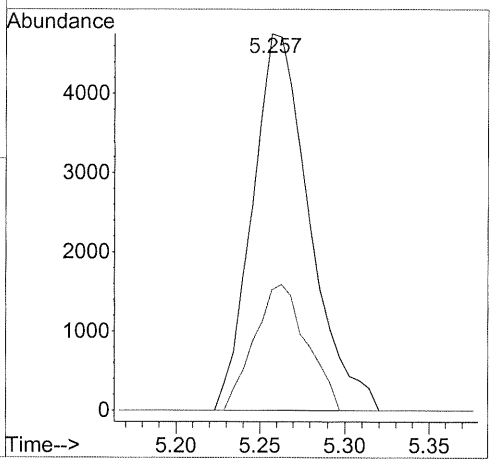


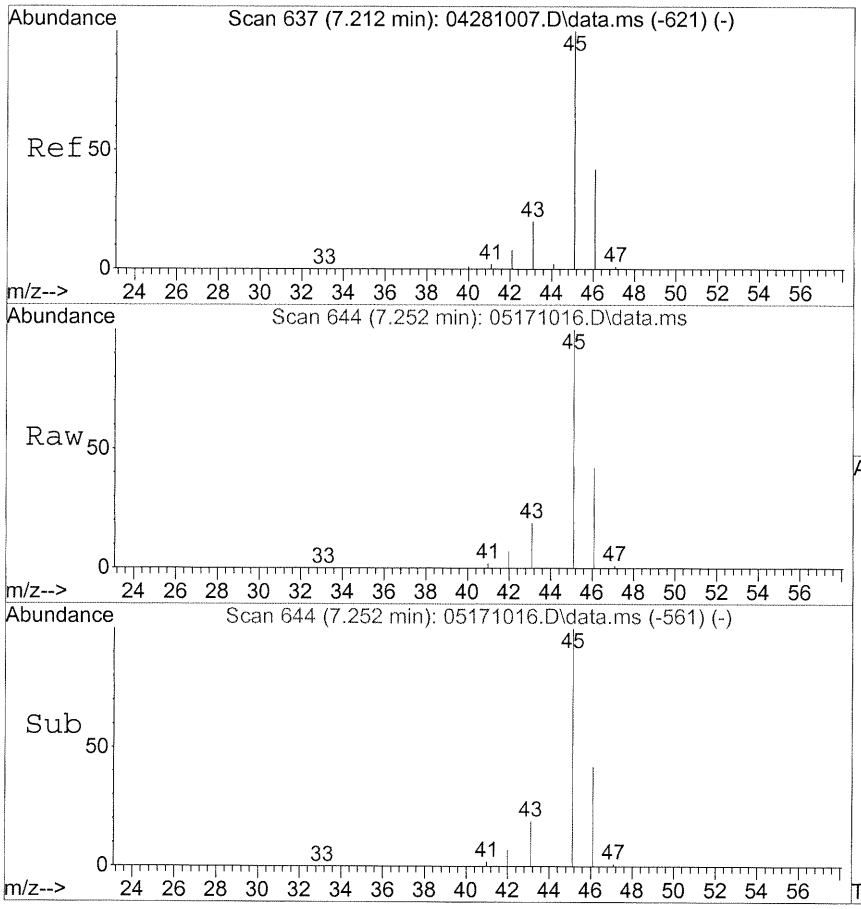


#4
Chloromethane
Concen: 0.36 ng
RT: 5.26 min Scan# 294
Delta R.T. -0.034 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 50 Resp: 11183

Ion	Ratio	Lower	Upper
50	100		
52	30.6	12.3	52.3

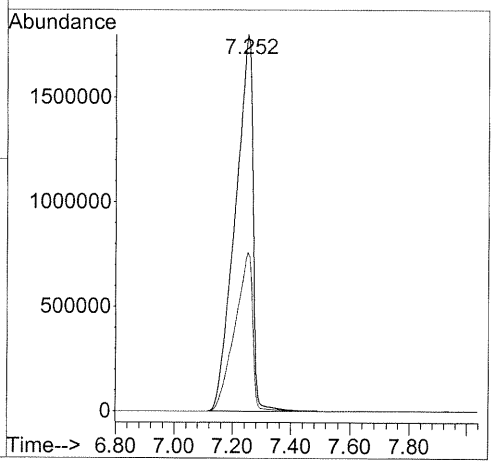


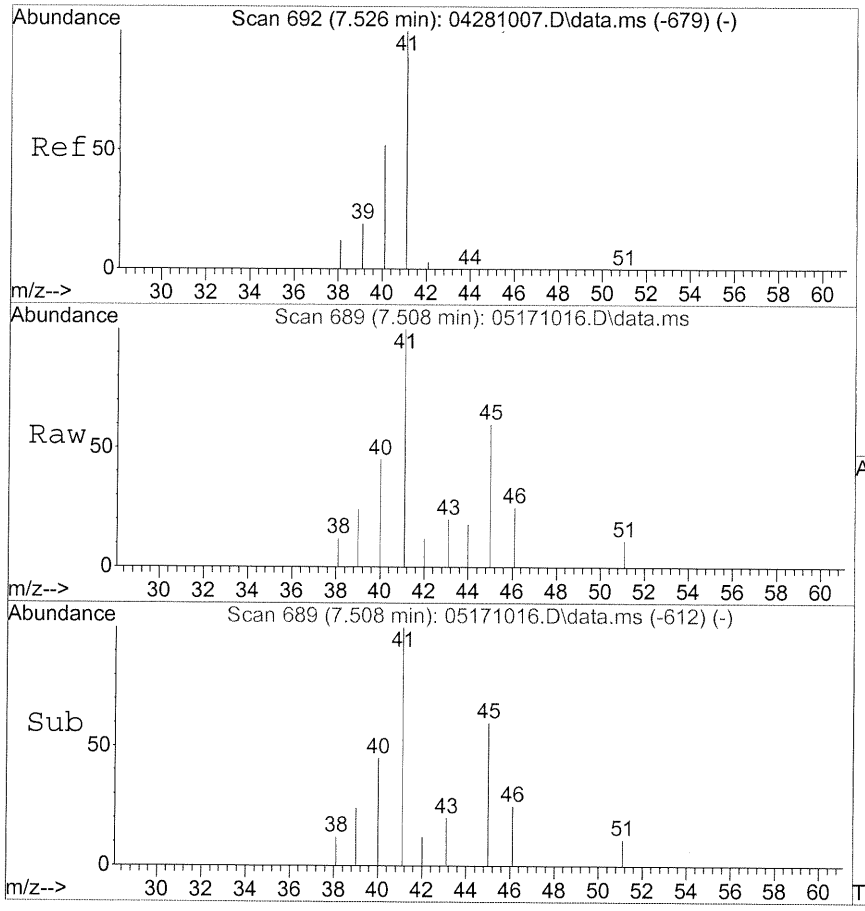


#10
Ethanol
Concen: 571.87 ng
RT: 7.25 min Scan# 644
Delta R.T. -0.029 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 45 Resp: 7600787

Ion	Ratio	Lower	Upper
45	100		
46	42.0	21.3	61.3

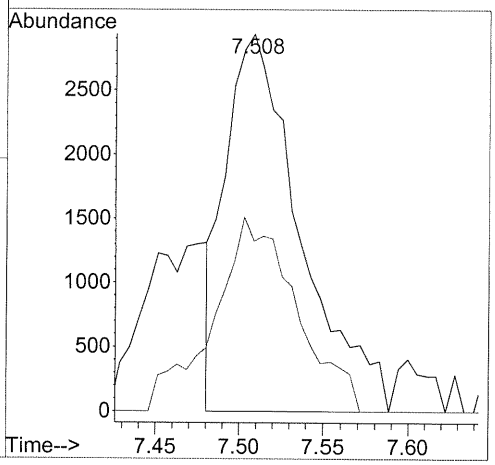


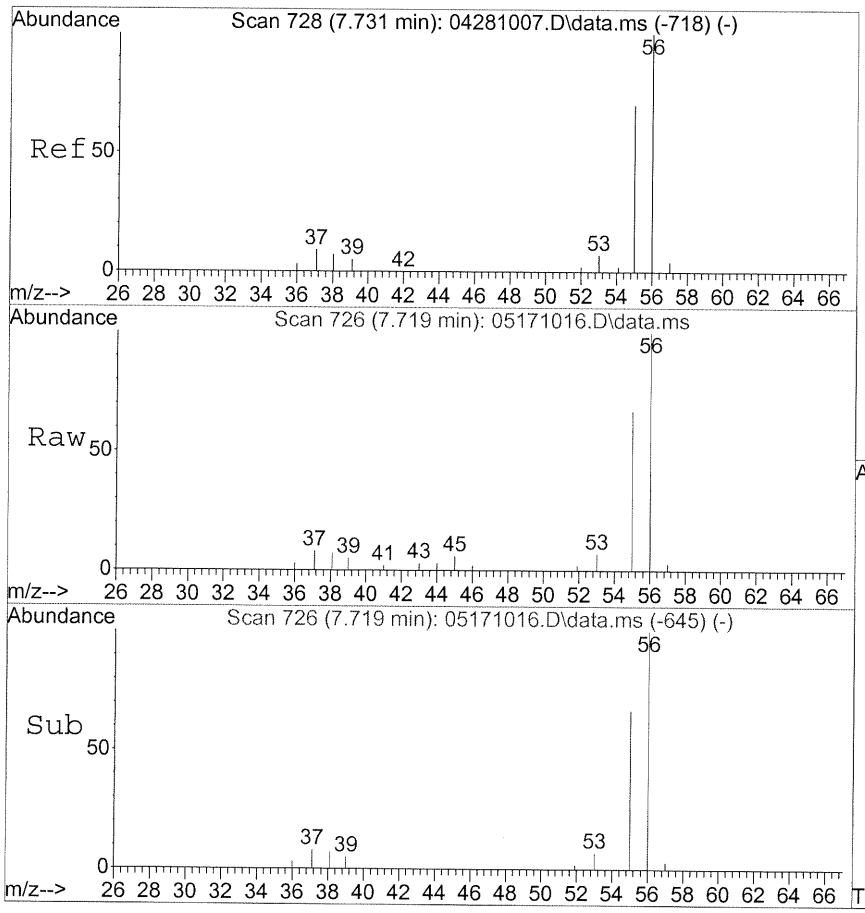


#11
Acetonitrile
Concen: 0.27 ng
RT: 7.51 min Scan# 689
Delta R.T. -0.063 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 41 Resp: 9126

Ion	Ratio	Lower	Upper
41	100		
40	56.8	33.2	73.2

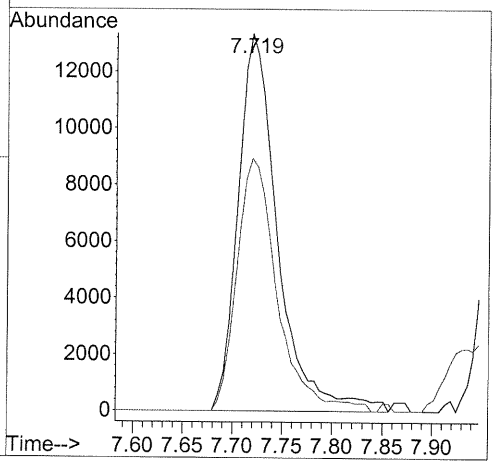


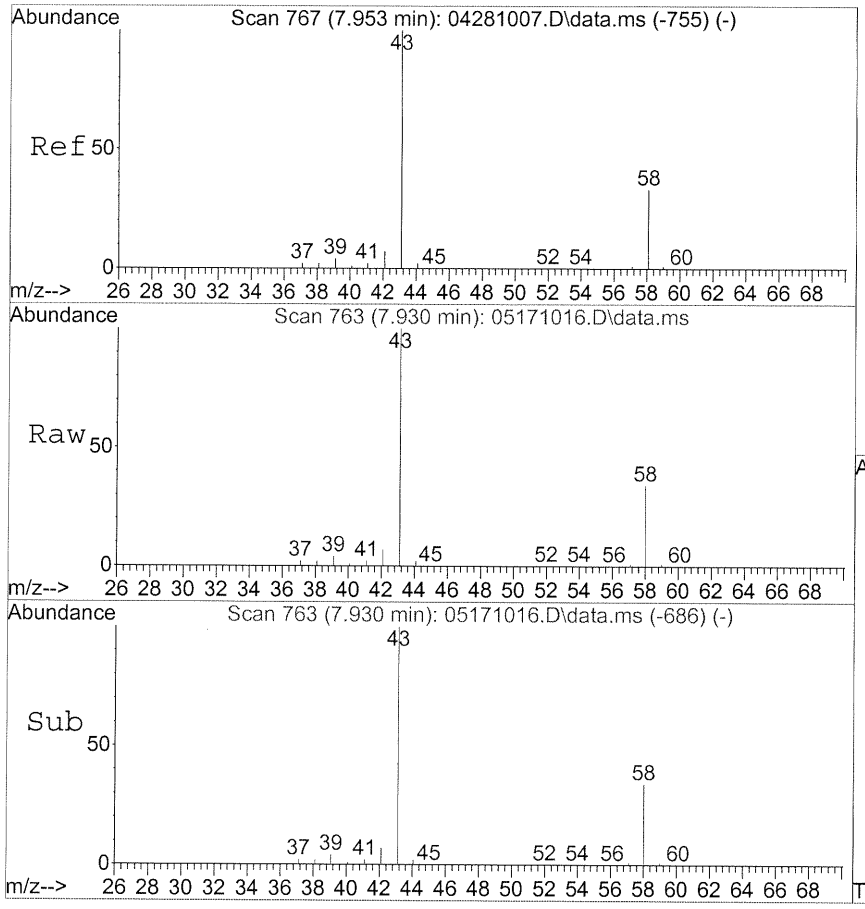


#12
Acrolein
Concen: 3.57 ng
RT: 7.72 min Scan# 726
Delta R.T. -0.040 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 56 Resp: 36991

Ion	Ratio	Lower	Upper
56	100		
55	68.2	50.2	90.2

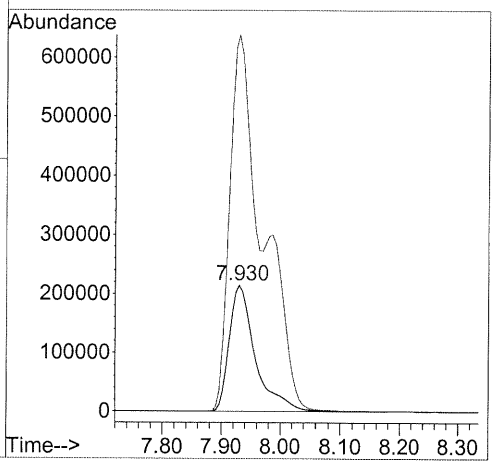


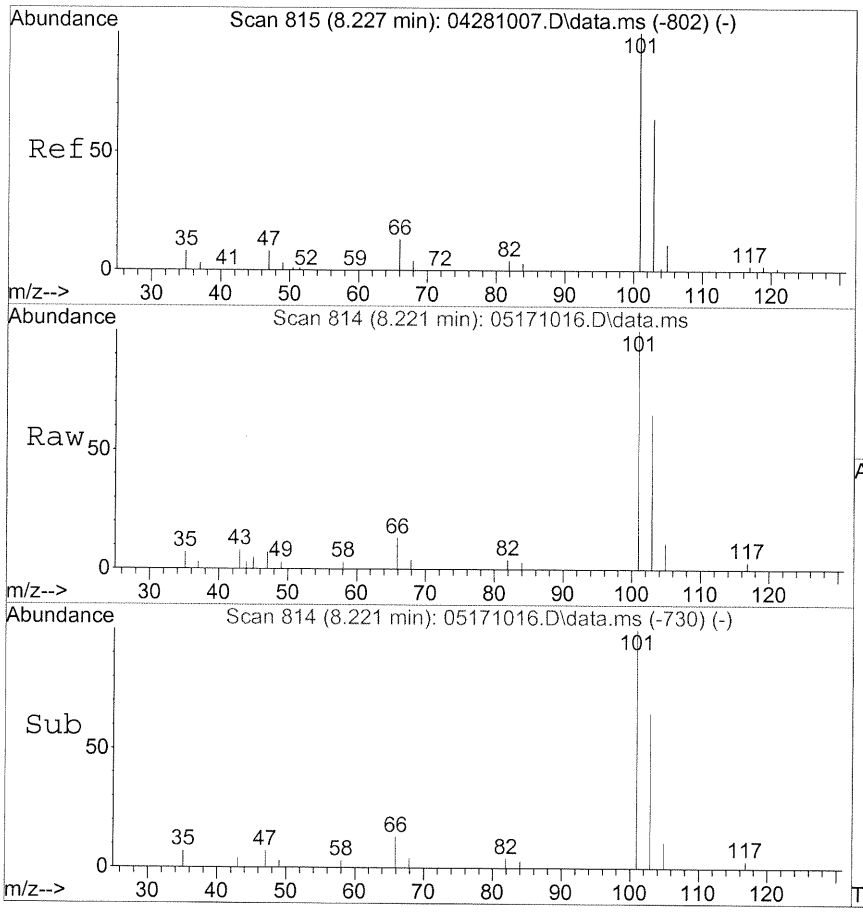


#13
Acetone
Concen: 40.61 ng
RT: 7.93 min Scan# 763
Delta R.T. -0.063 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 58 Resp: 659833

Ion	Ratio	Lower	Upper
58	100		
43	379.7	264.2	324.2#

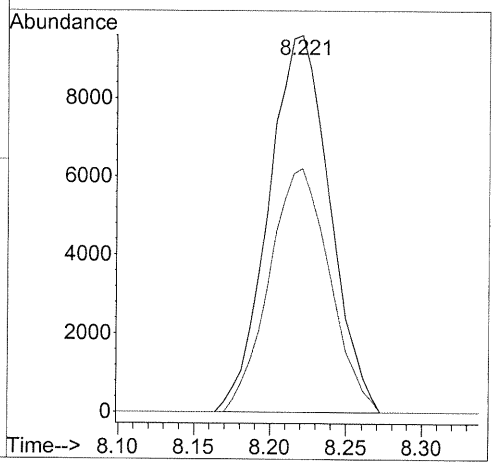


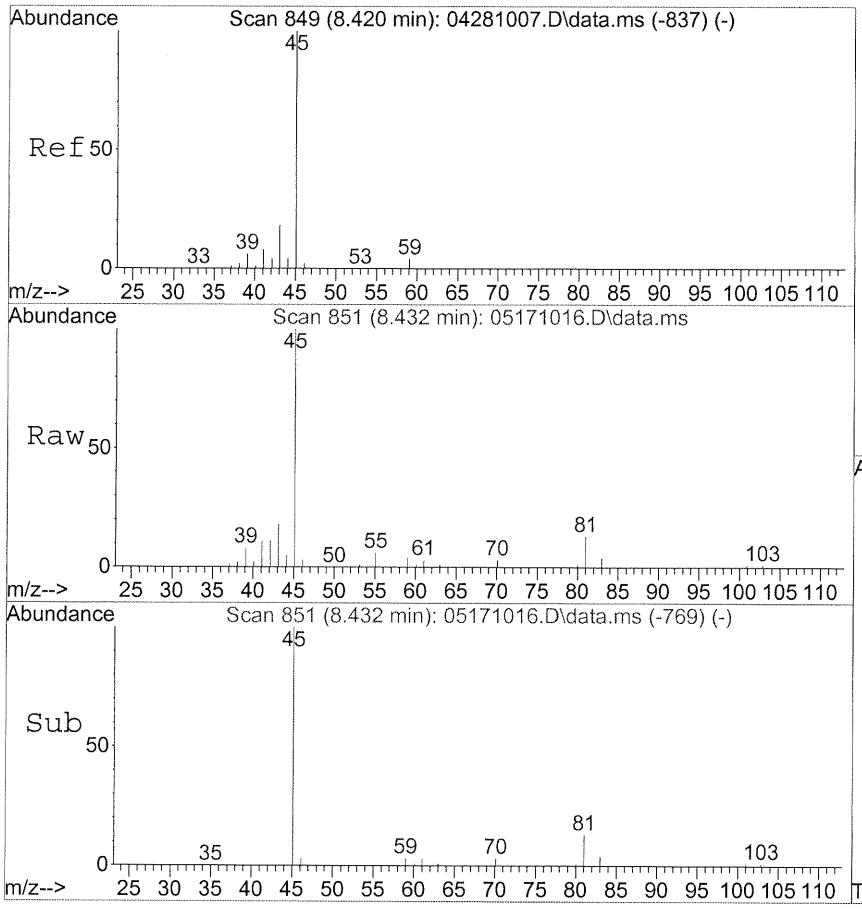


#14
Trichlorofluoromethane
Concen: 0.74 ng
RT: 8.22 min Scan# 814
Delta R.T. -0.023 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:101 Resp: 26812

Ion	Ratio	Lower	Upper
101	100		
103	63.8	44.6	84.6

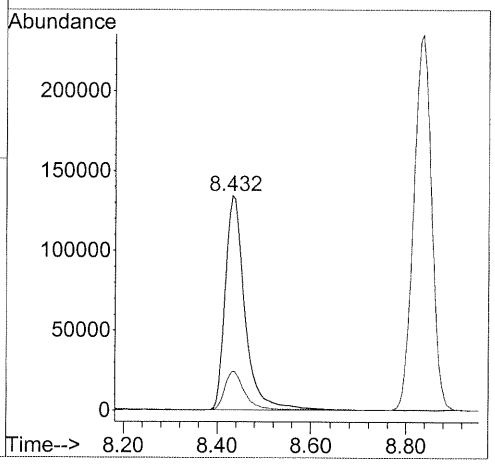


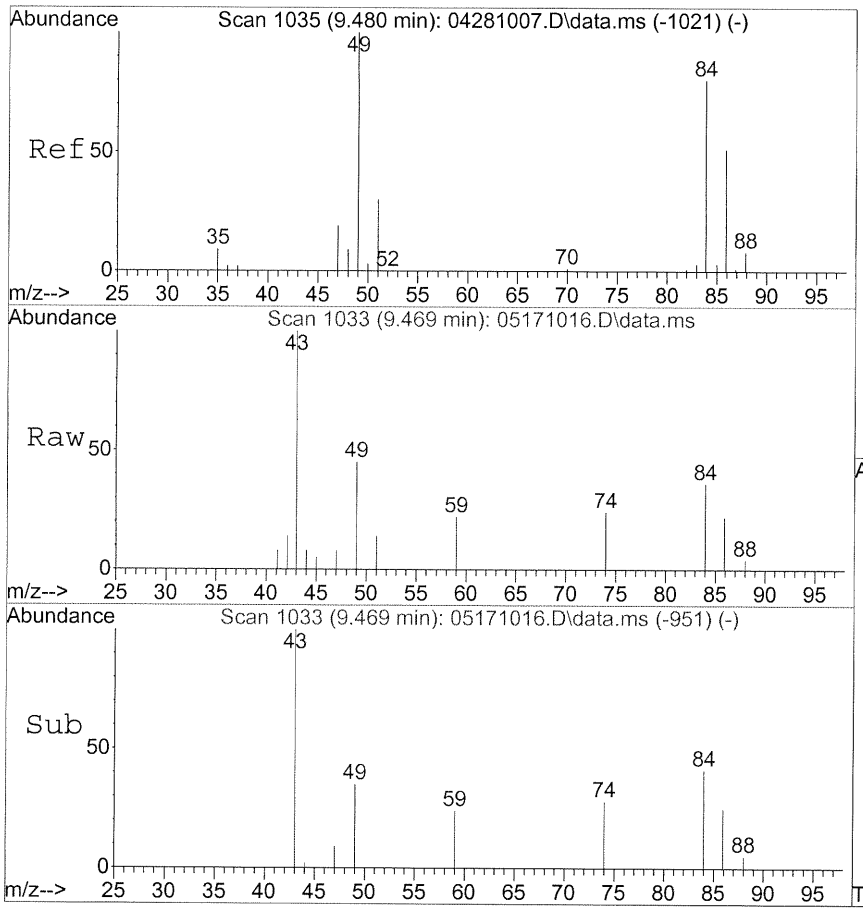


#15
2-Propanol (Isopropanol)
Concen: 7.87 ng
RT: 8.43 min Scan# 851
Delta R.T. -0.034 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 45 Resp: 396558

Ion	Ratio	Lower	Upper
45	100		
43	17.7	0.0	38.5

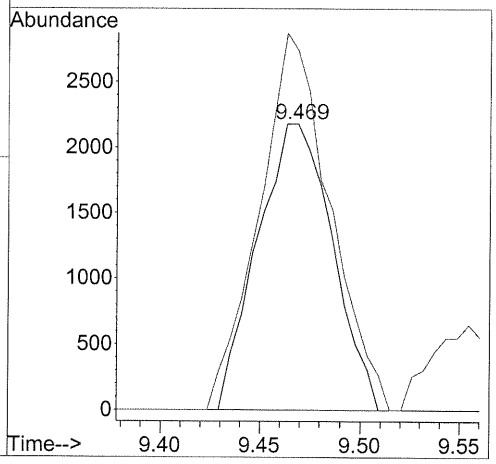


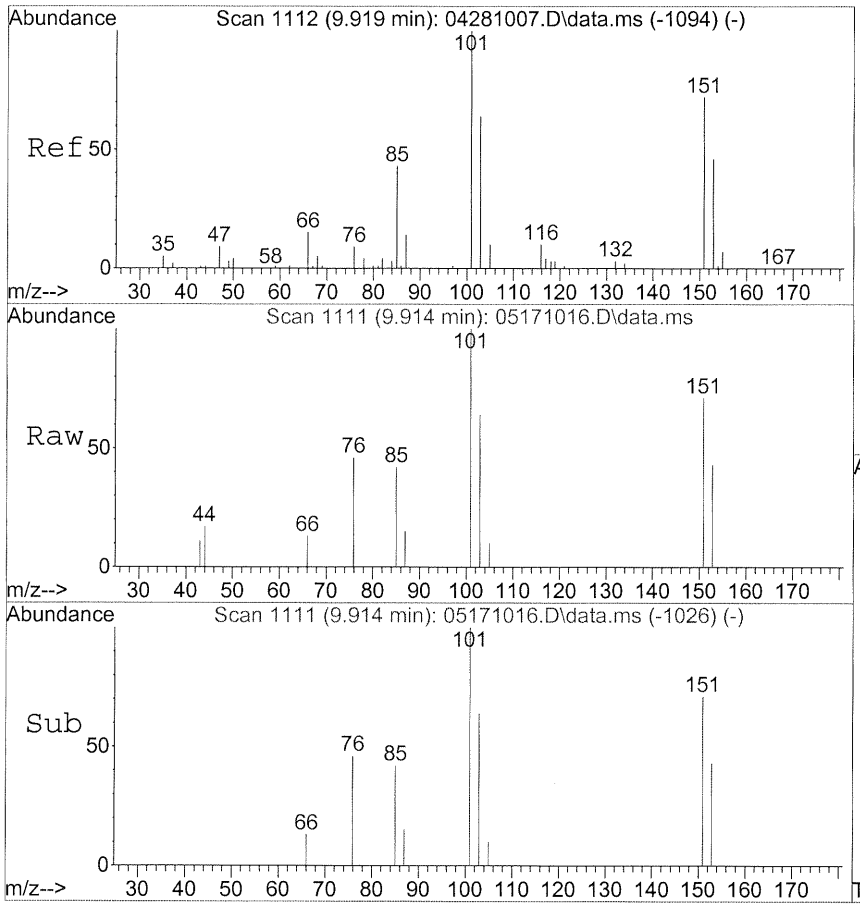


#19
Methylene Chloride
Concen: 0.26 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 84 Resp: 5653

Ion	Ratio	Lower	Upper
84	100		
49	124.8	94.5	144.5

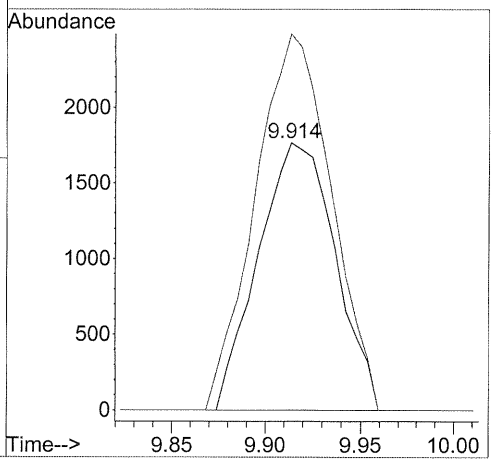


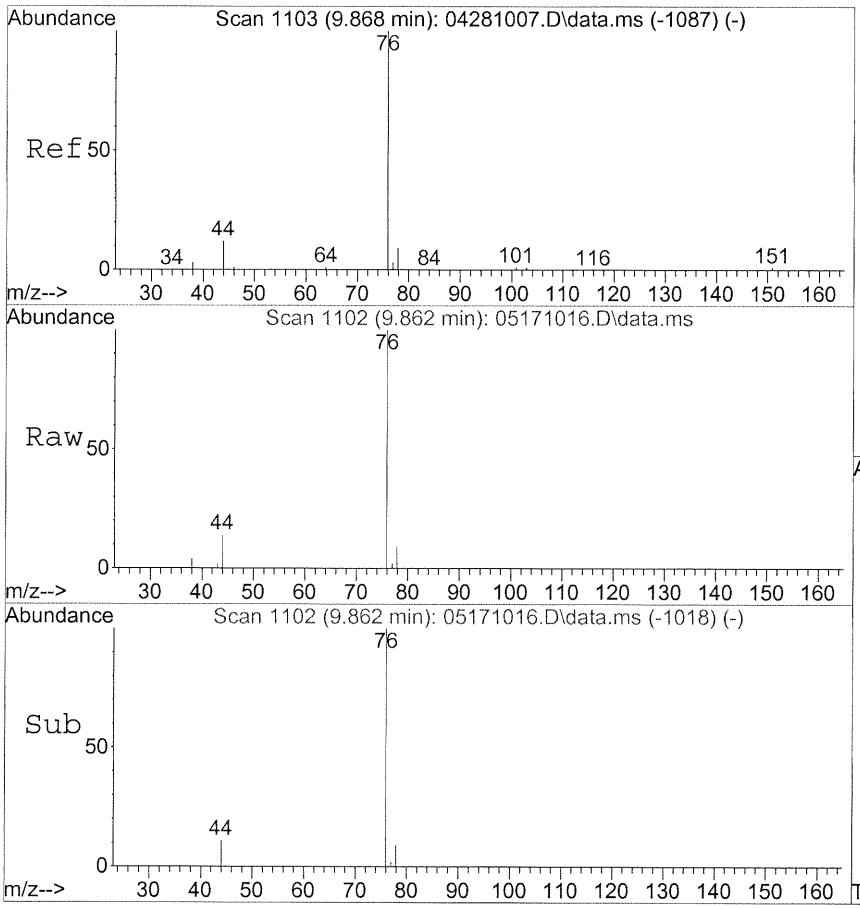


#21
Trichlorotrifluoroethane
Concen: 0.32 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:151 Resp: 4962

Ion	Ratio	Lower	Upper
151	100		
101	140.0	114.9	154.9

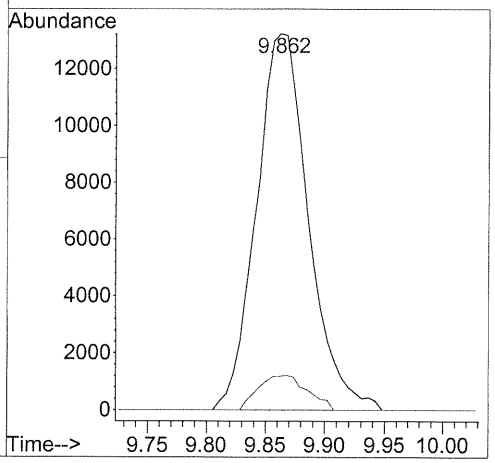


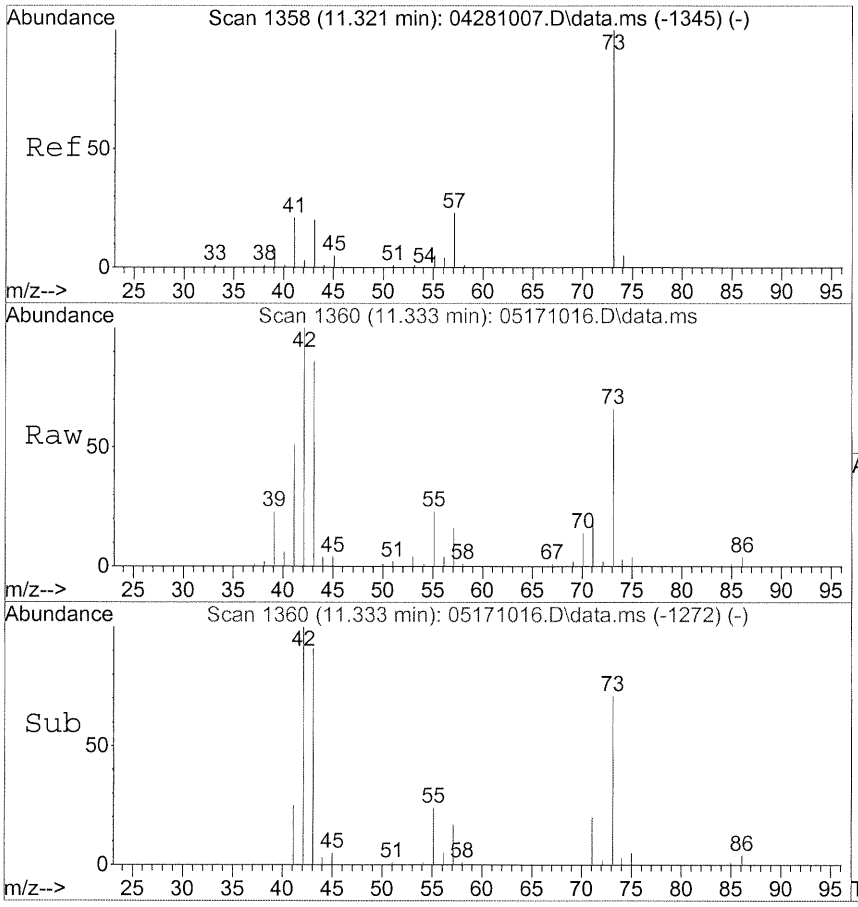


#22
Carbon Disulfide
Concen: 0.53 ng
RT: 9.86 min Scan# 1102
Delta R.T. -0.023 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 76 Resp: 40385

Ion	Ratio	Lower	Upper
76	100		
78	8.6	0.0	29.2

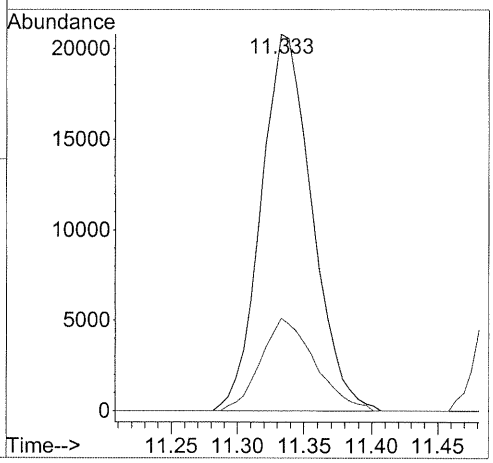


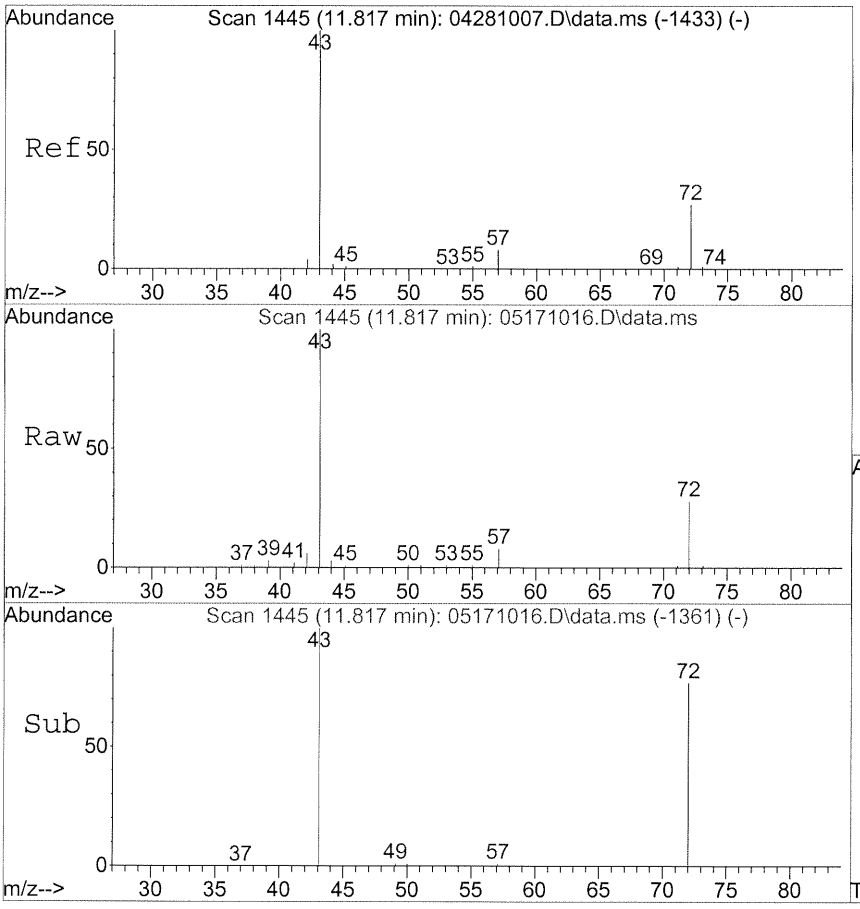


#25
Methyl tert-Butyl Ether
Concen: 0.83 ng
RT: 11.33 min Scan# 1360
Delta R.T. -0.000 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 73 Resp: 55184

Ion	Ratio	Lower	Upper
73	100		
57	25.8	1.9	41.9

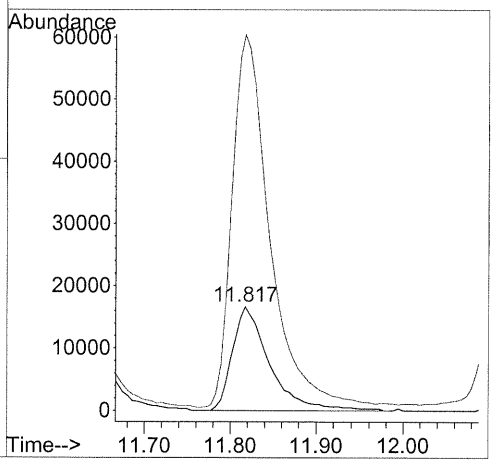


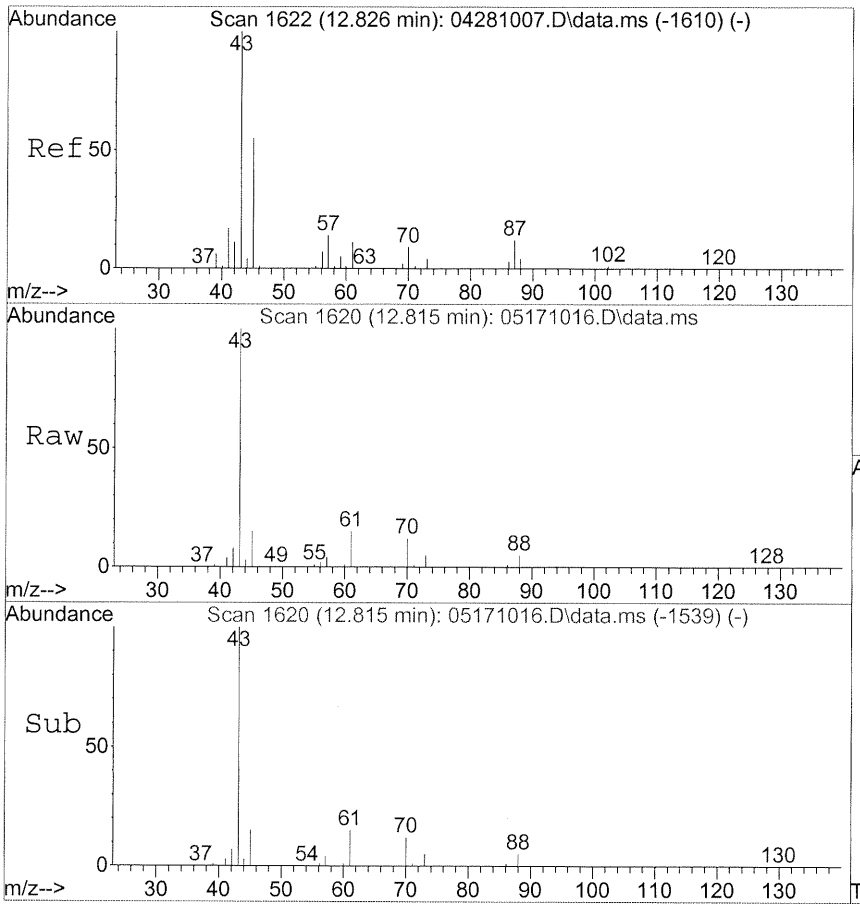


#27
2-Butanone (MEK)
Concen: 3.69 ng
RT: 11.82 min Scan# 1445
Delta R.T. -0.023 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 72 Resp: 49807

Ion	Ratio	Lower	Upper
72	100		
43	370.8	342.0	382.0

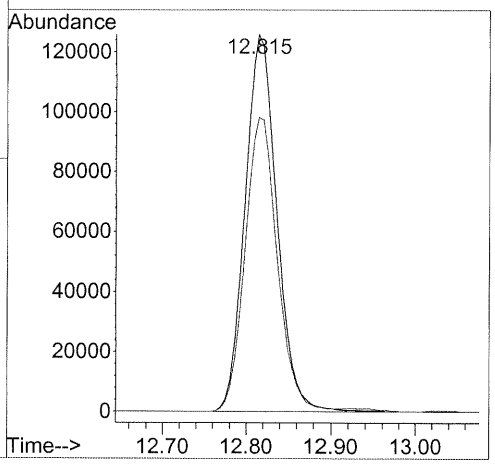


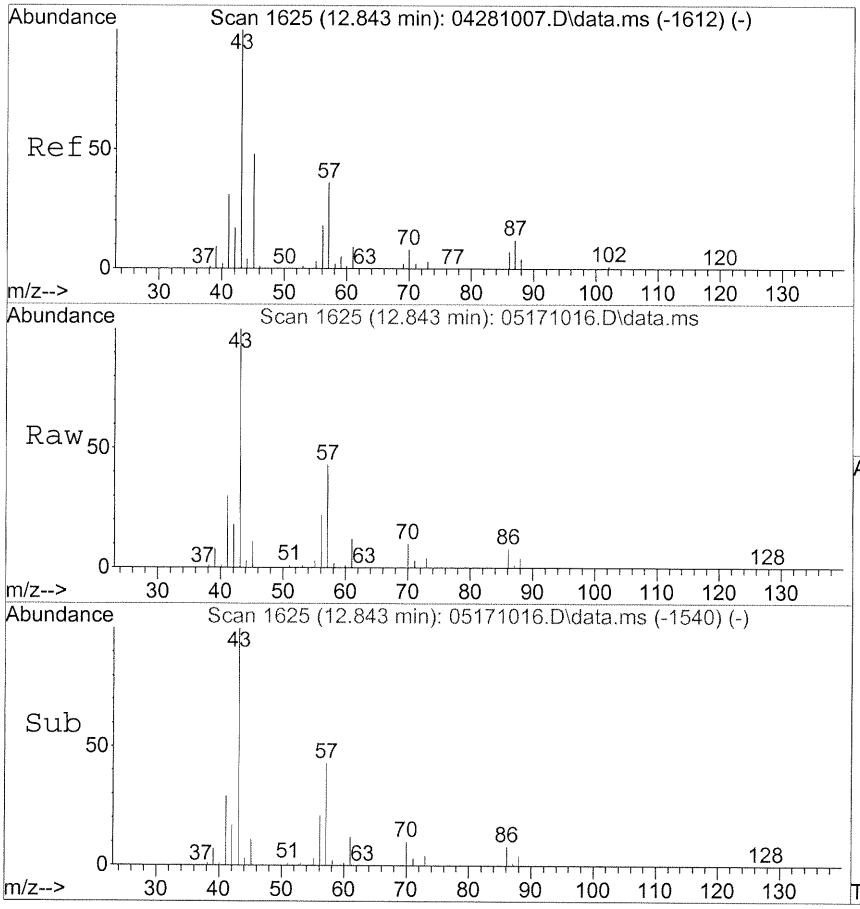


#30
Ethyl Acetate
Concen: 41.41 ng
RT: 12.81 min Scan# 1620
Delta R.T. -0.040 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 61 Resp: 332206

Ion	Ratio	Lower	Upper
61	100		
70	80.0	63.6	103.6

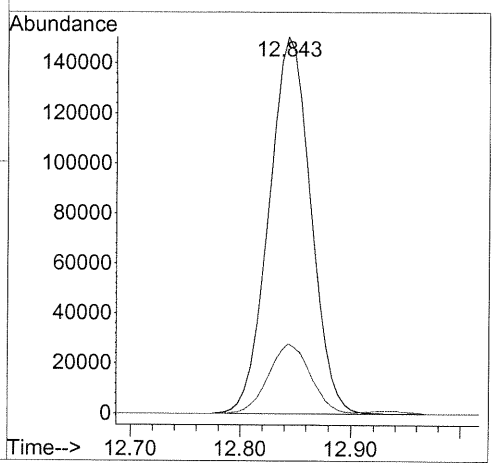


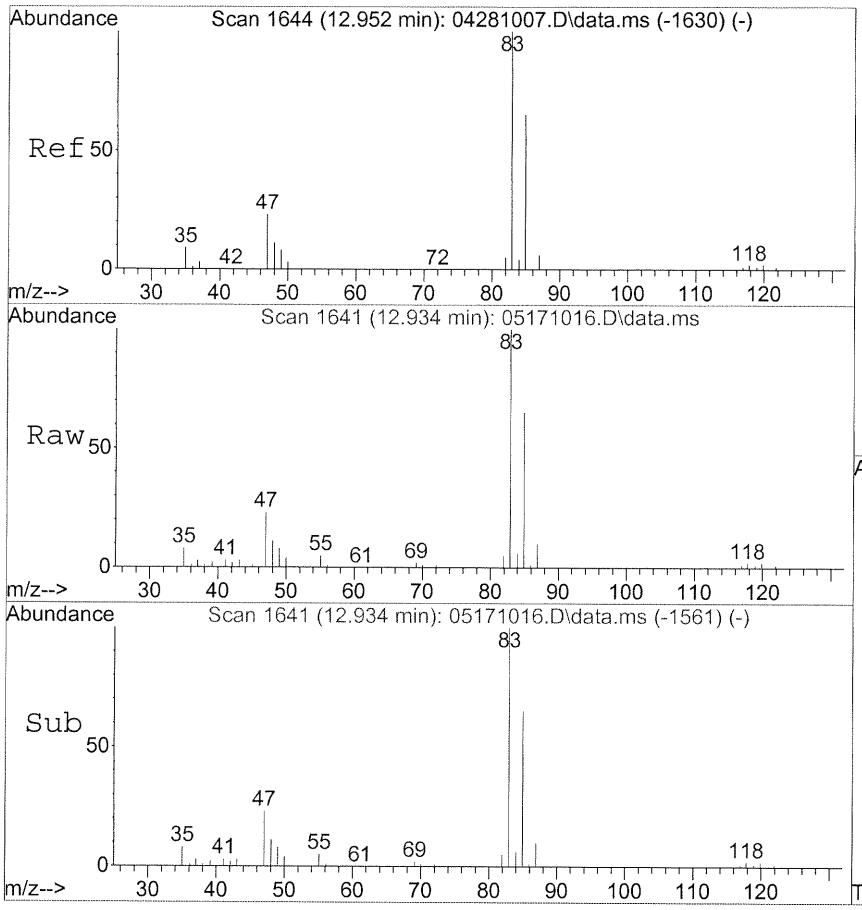


#31
n-Hexane
Concen: 9.67 ng
RT: 12.84 min Scan# 1625
Delta R.T. -0.017 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 57 Resp: 397378

Ion	Ratio	Lower	Upper
57	100		
86	18.5	0.0	39.8

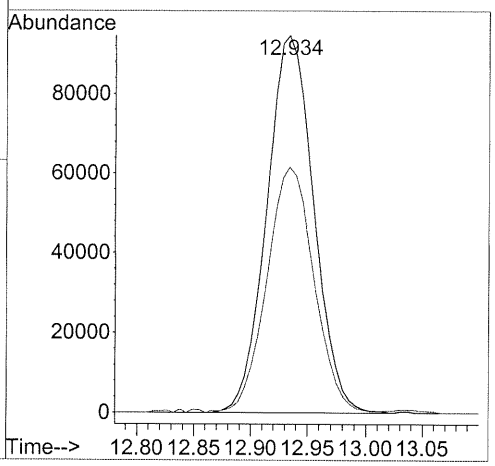


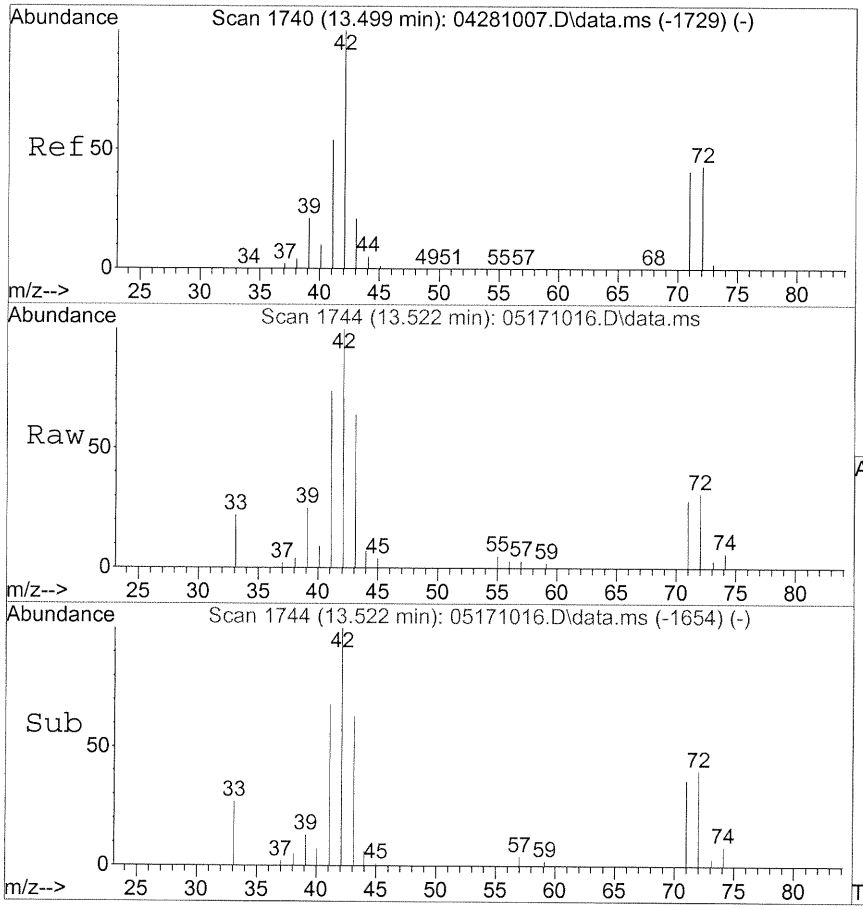


#32
Chloroform
Concen: 7.87 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 83 Resp: 269639

Ion	Ratio	Lower	Upper
83	100		
85	65.4	44.9	84.9

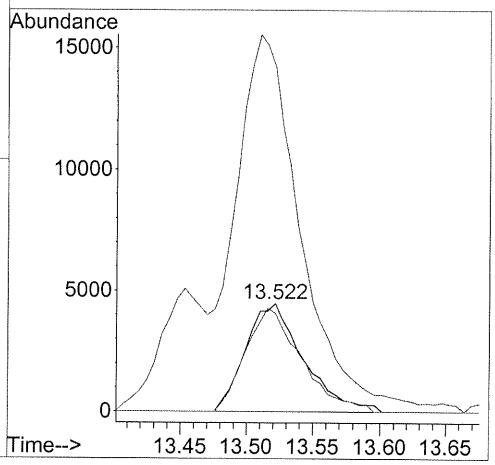


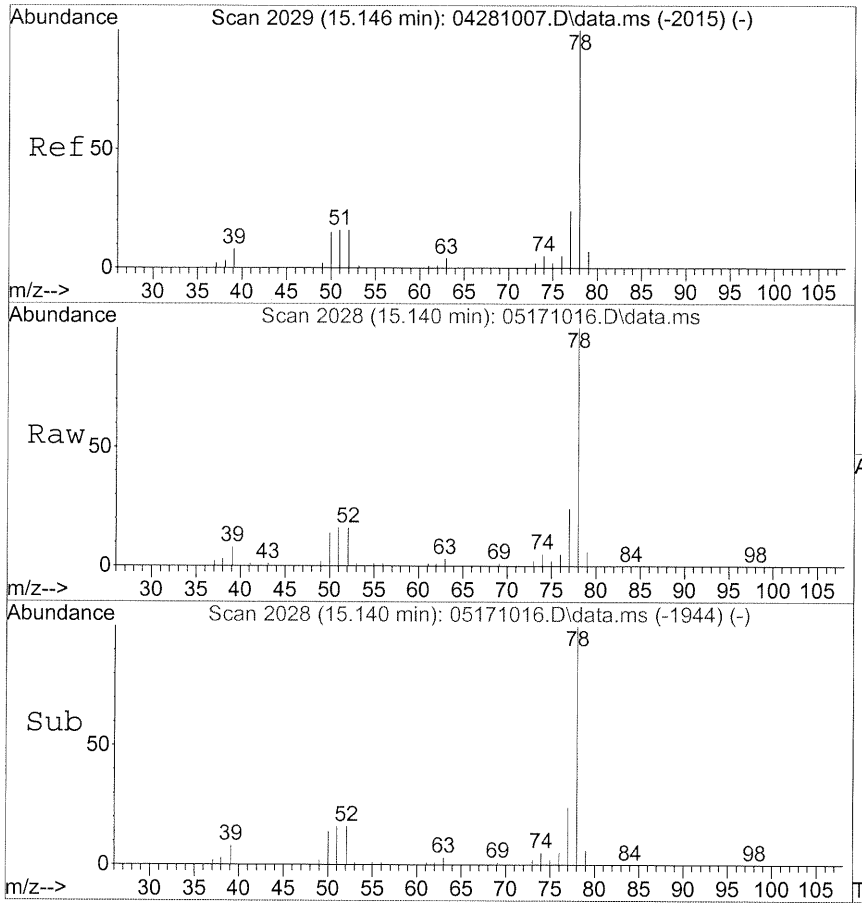


#34
Tetrahydrofuran (THF)
Concen: 1.03 ng
RT: 13.52 min Scan# 1744
Delta R.T. 0.011 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 72 Resp: 13466

Ion	Ratio	Lower	Upper
72	100		
71	92.6	74.5	114.5
42	399.6	197.7	237.7#

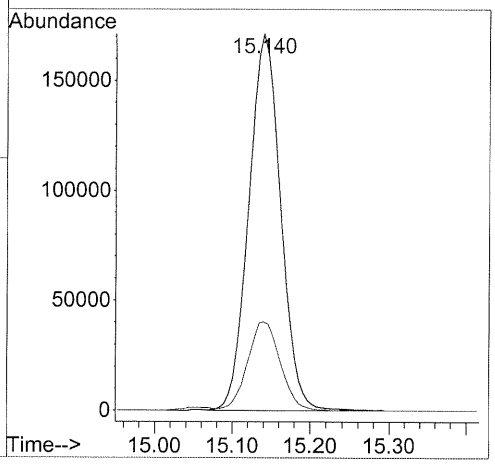


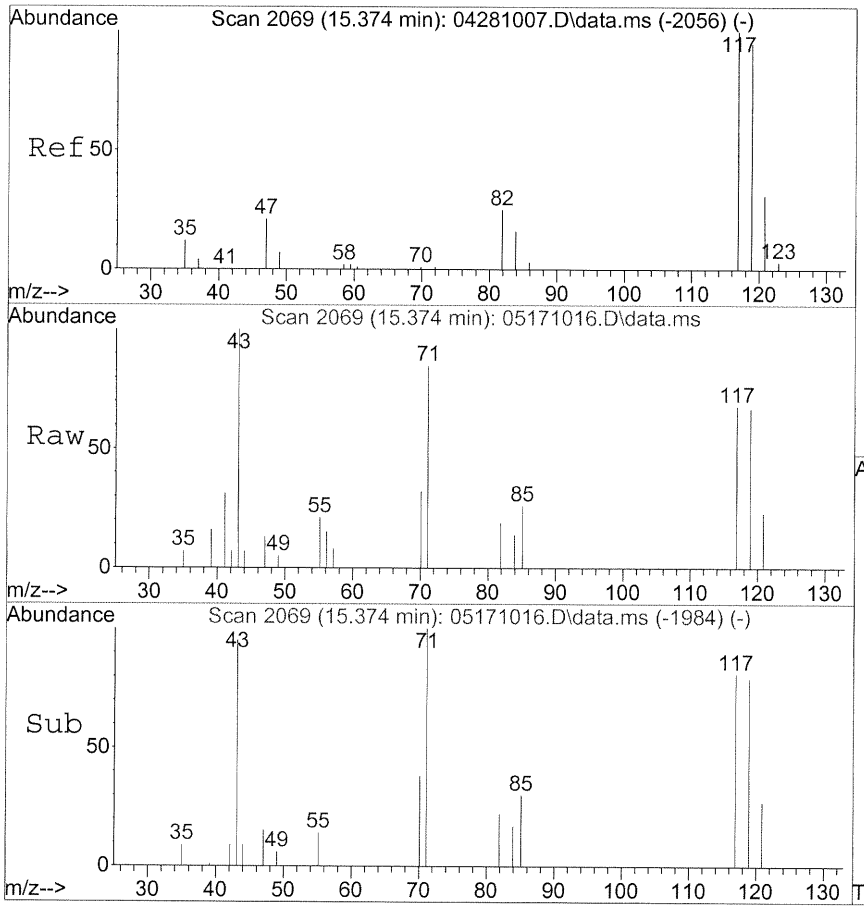


#41
Benzene
Concen: 5.58 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 78 Resp: 489348

Ion	Ratio	Lower	Upper
78	100		
77	24.0	4.1	44.1

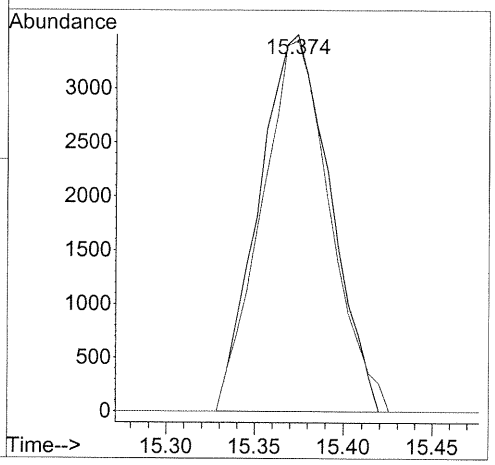


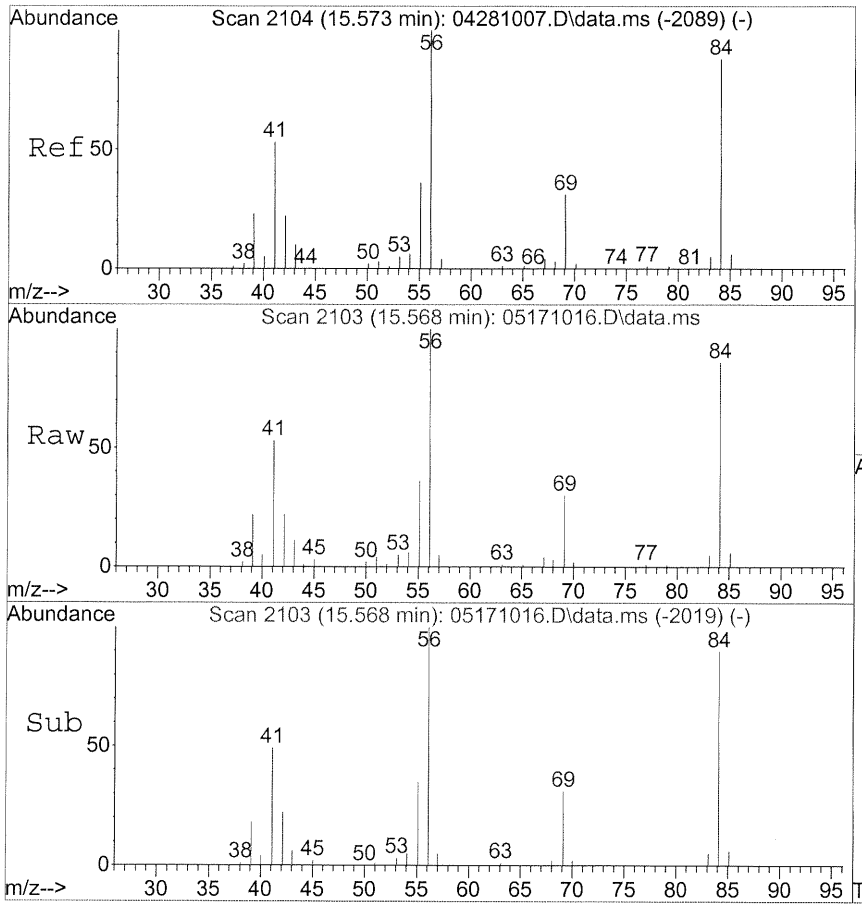


#42
Carbon Tetrachloride
Concen: 0.42 ng
RT: 15.37 min Scan# 2069
Delta R.T. -0.017 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:117 Resp: 9768

Ion	Ratio	Lower	Upper
117	100		
119	94.4	76.1	116.1

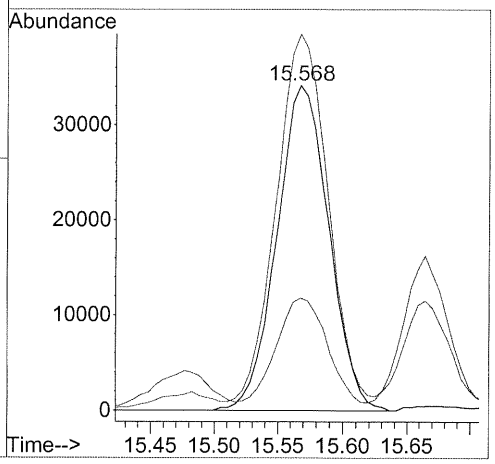


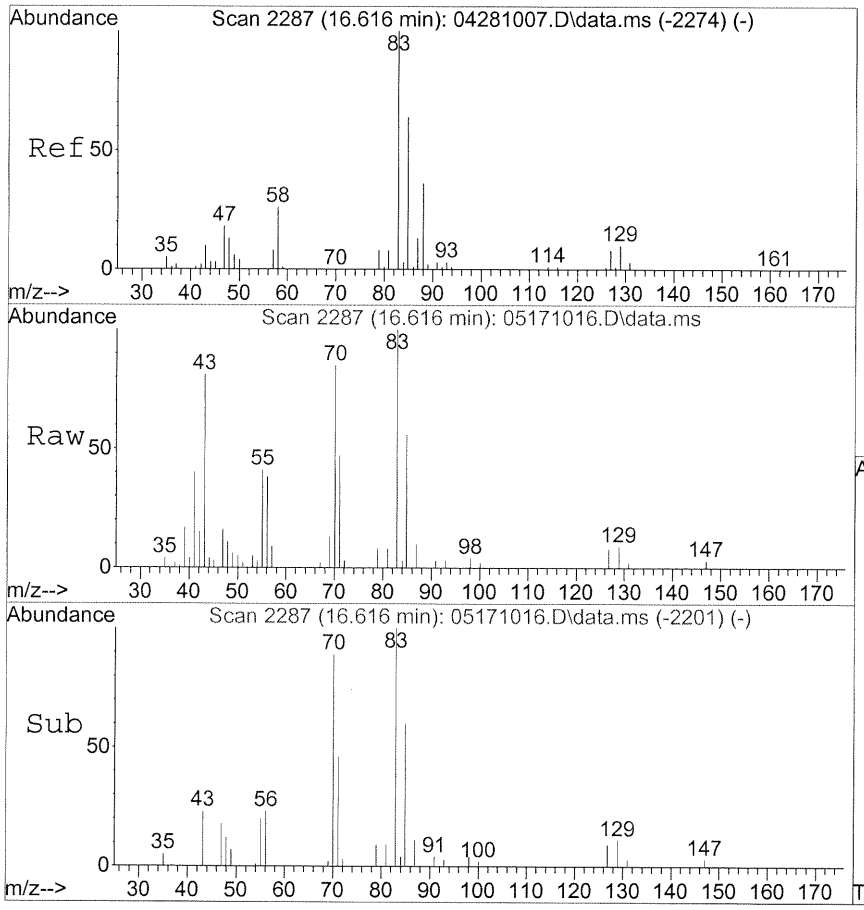


#43
Cyclohexane
Concen: 2.59 ng
RT: 15.57 min Scan# 2103
Delta R.T. -0.023 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 84 Resp: 95253

Ion	Ratio	Lower	Upper
84	100		
69	35.7	14.9	54.9
56	118.1	89.2	129.2

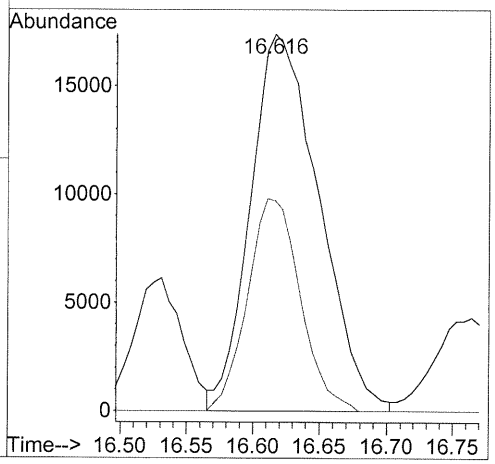


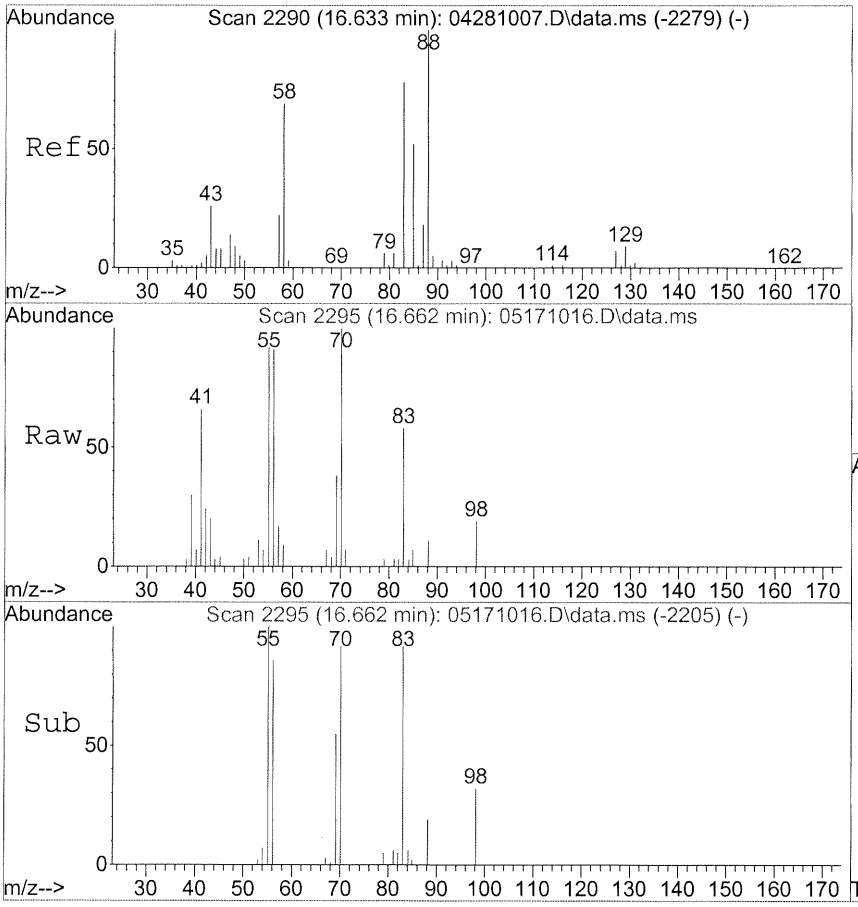


#46
Bromodichloromethane
Concen: 2.37 ng
RT: 16.62 min Scan# 2287
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 83 Resp: 62369

Ion	Ratio	Lower	Upper
83	100		
85	43.4	43.4	83.4

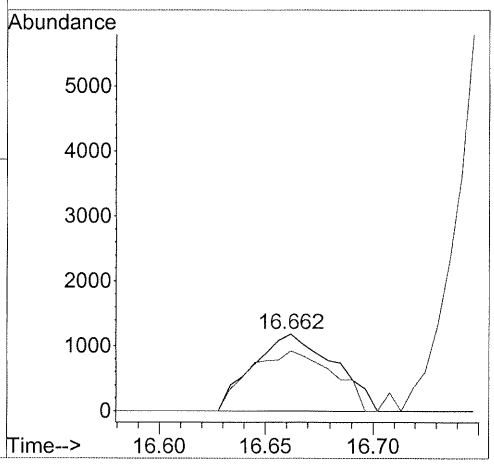


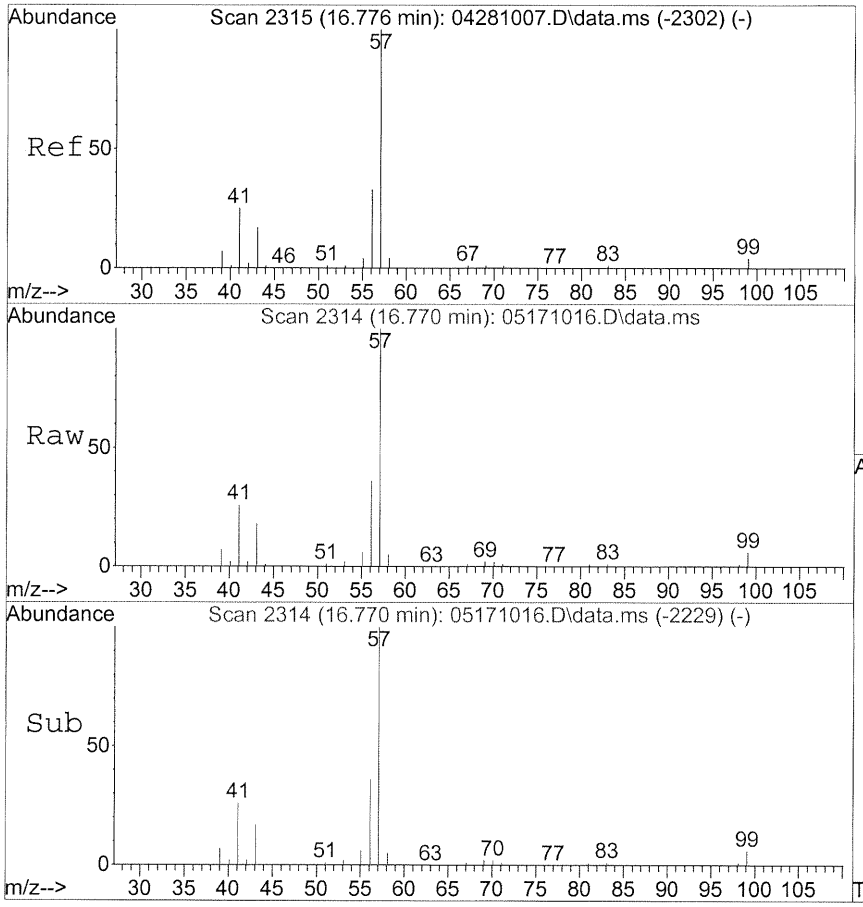


#48
1,4-Dioxane
Concen: 0.19 ng
RT: 16.66 min Scan# 2295
Delta R.T. 0.011 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 88 Resp: 3096

Ion	Ratio	Lower	Upper
88	100		
58	80.3	45.8	85.8

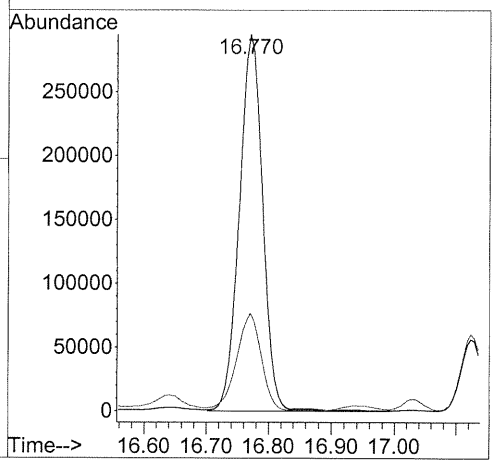


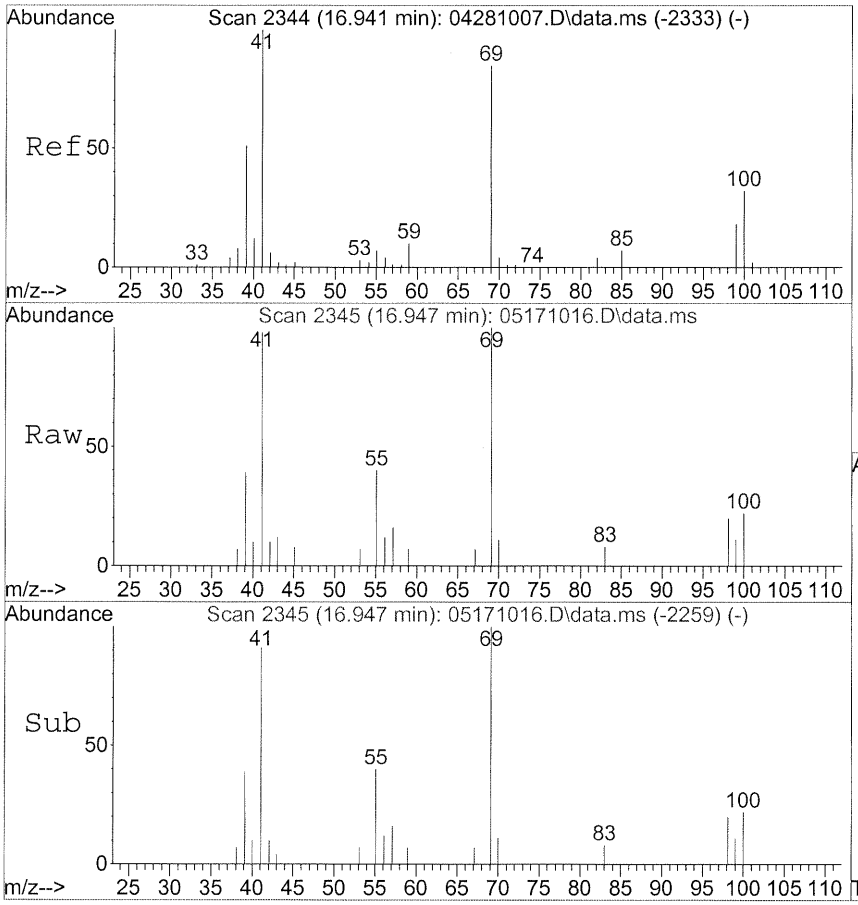


#49
2,2,4-Trimethylpentane (Isooc
Concen: 7.55 ng
RT: 16.77 min Scan# 2314
Delta R.T. -0.017 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 57 Resp: 775214

Ion	Ratio	Lower	Upper
57	100		
41	27.1	5.2	45.2

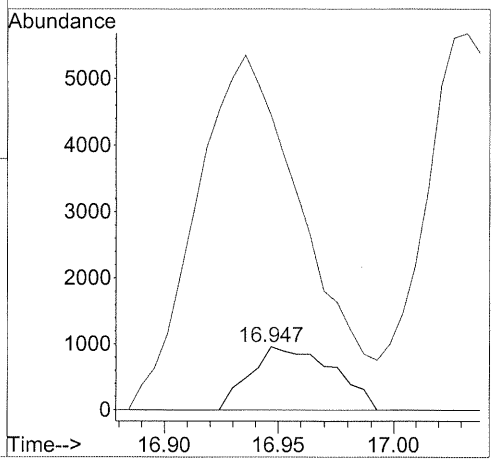


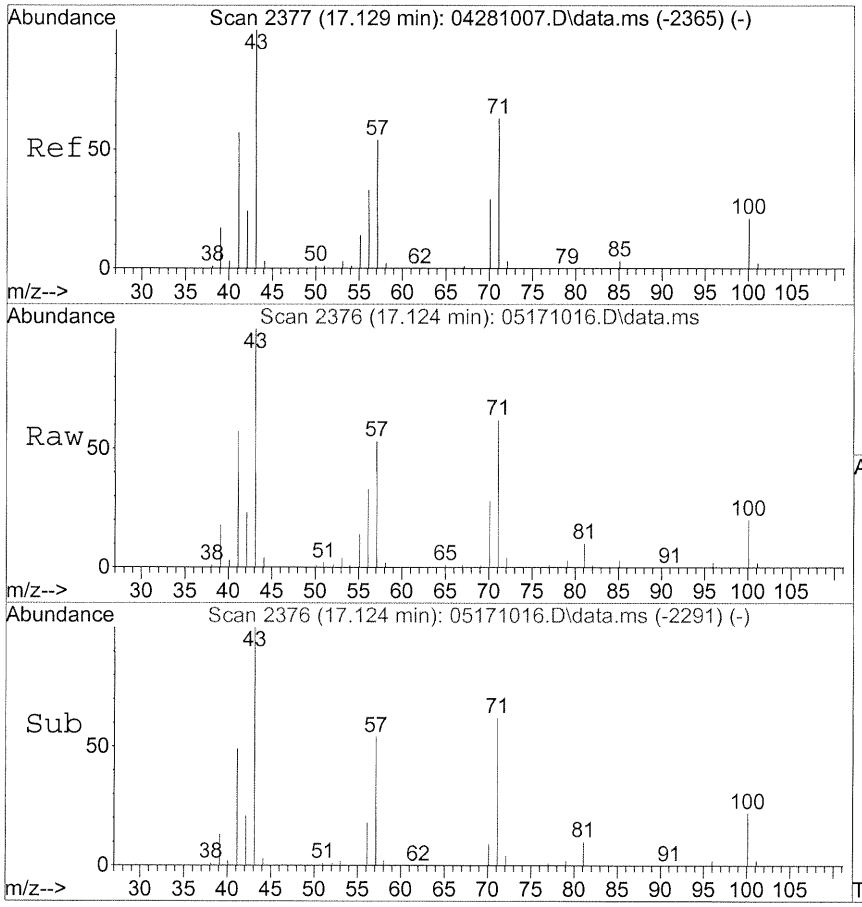


#50
Methyl Methacrylate
Concen: 0.26 ng
RT: 16.95 min Scan# 2345
Delta R.T. -0.011 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:100 Resp: 2387

Ion	Ratio	Lower	Upper
100	100		
69	736.2	226.7	266.7#

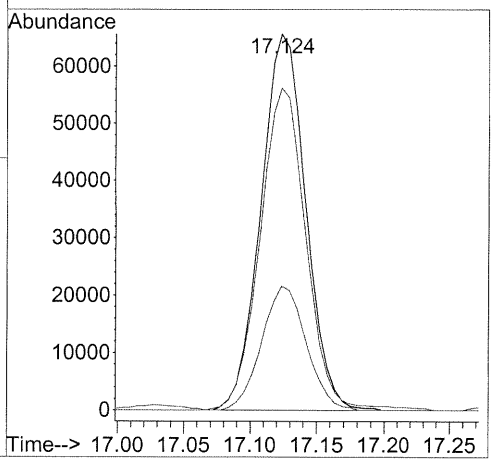


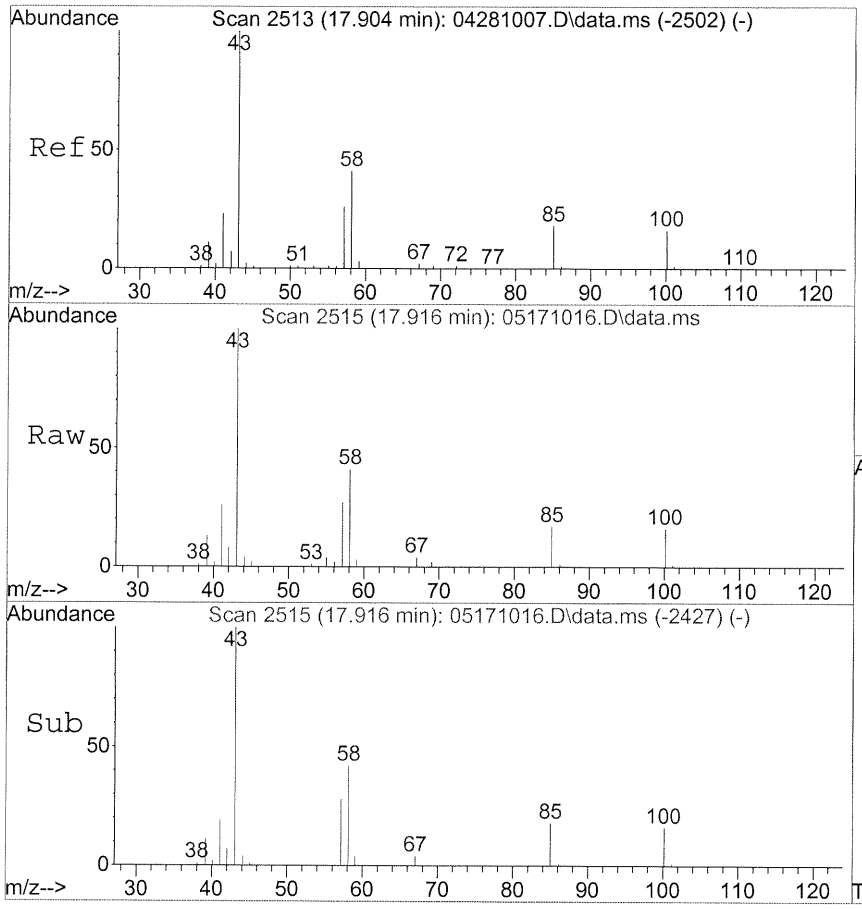


#51
n-Heptane
Concen: 6.14 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 71 Resp: 153866

Ion	Ratio	Lower	Upper
71	100		
57	87.6	63.9	103.9
100	32.6	14.1	54.1

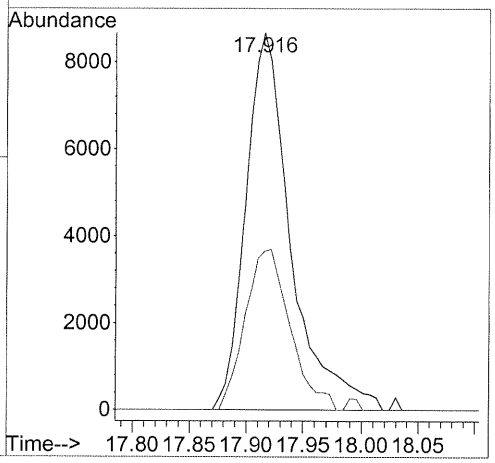


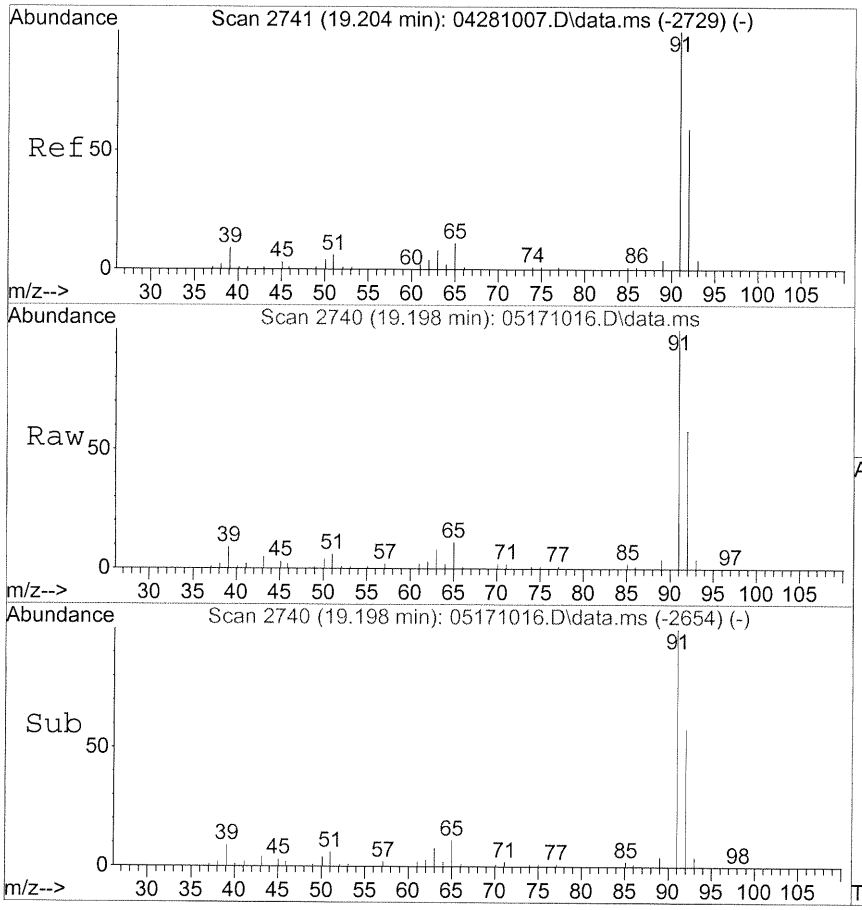


#53
4-Methyl-2-pentanone
Concen: 1.26 ng
RT: 17.92 min Scan# 2515
Delta R.T. -0.000 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 58 Resp: 23857

Ion	Ratio	Lower	Upper
58	100		
85	42.5	26.7	66.7

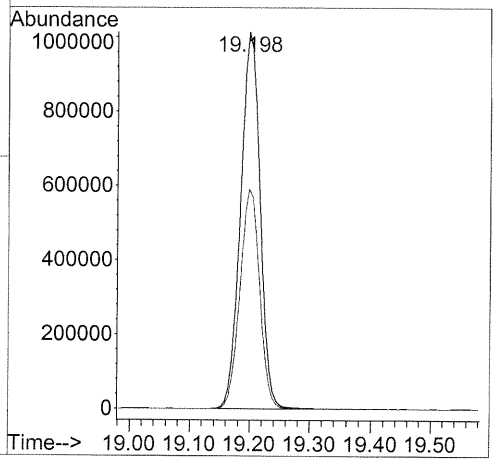


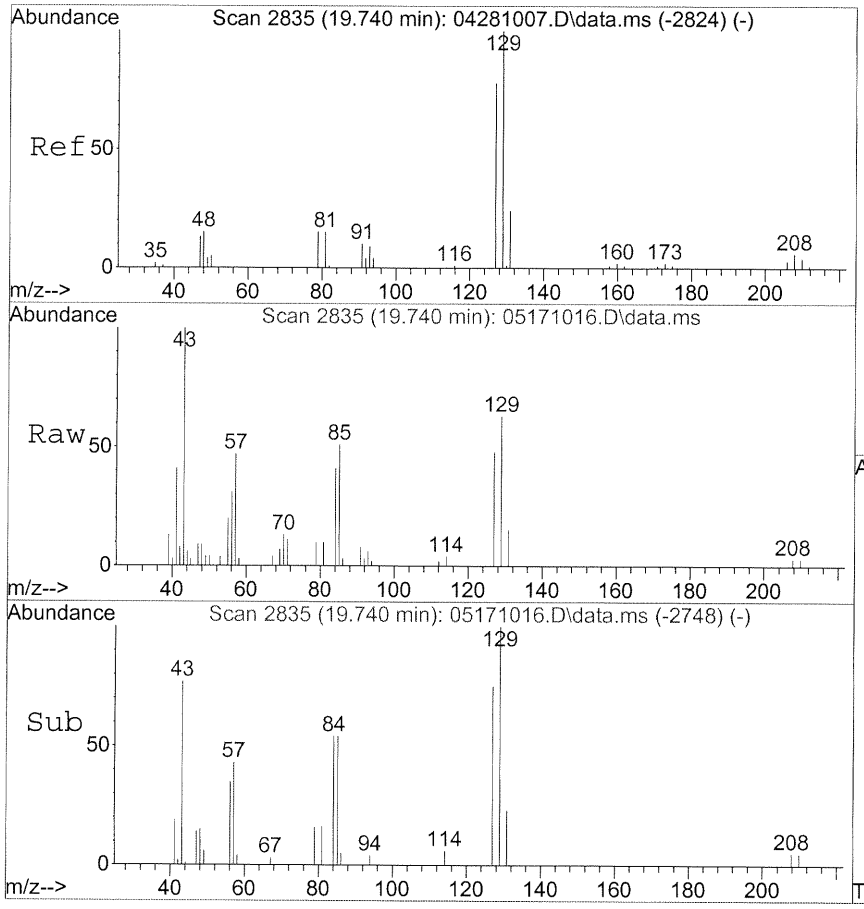


#58
Toluene
Concen: 25.02 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 91 Resp: 2300280

Ion	Ratio	Lower	Upper
91	100		
92	58.5	39.2	79.2

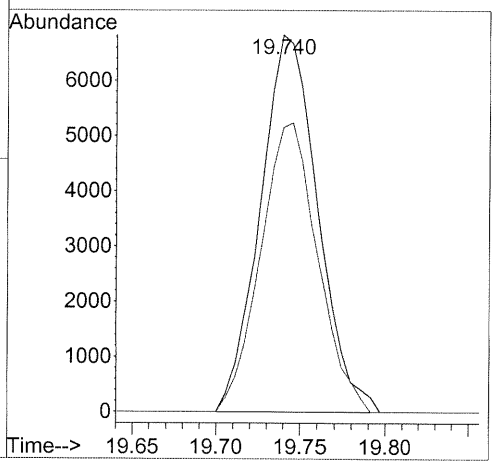


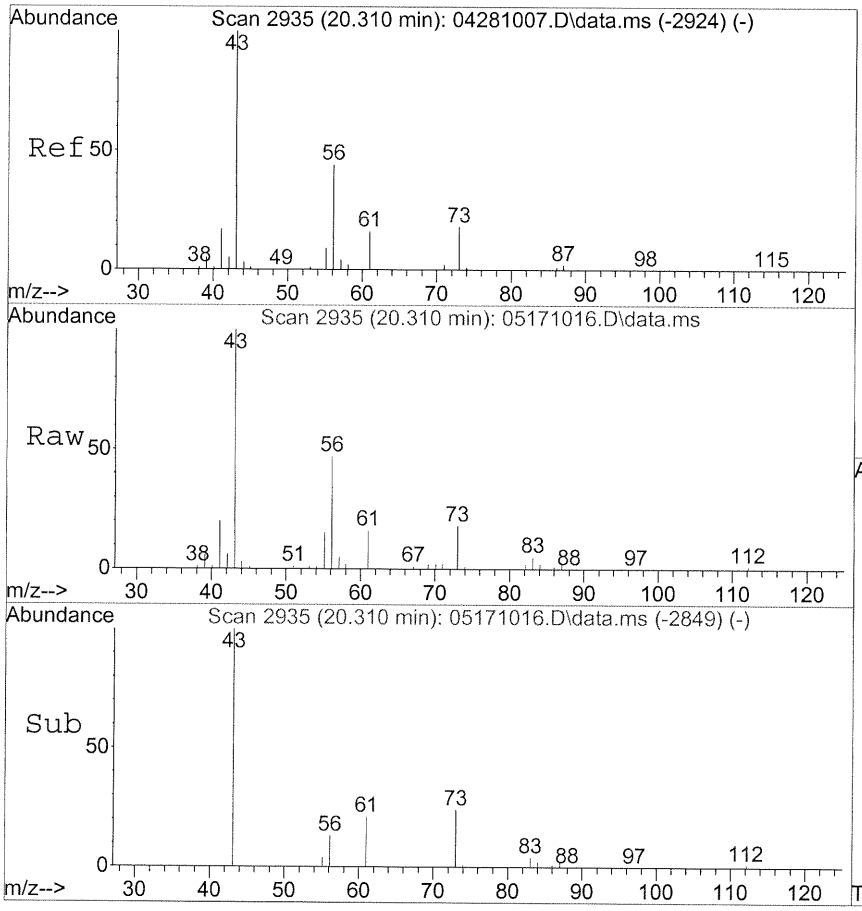


#60
Dibromochloromethane
Concen: 0.89 ng
RT: 19.74 min Scan# 2835
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:129 Resp: 16184

Ion	Ratio	Lower	Upper
129	100		
127	76.0	58.2	98.2

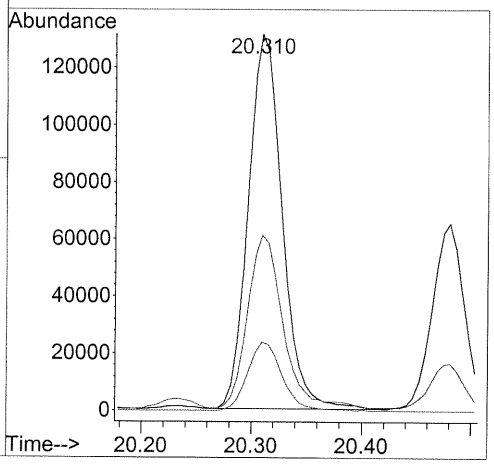


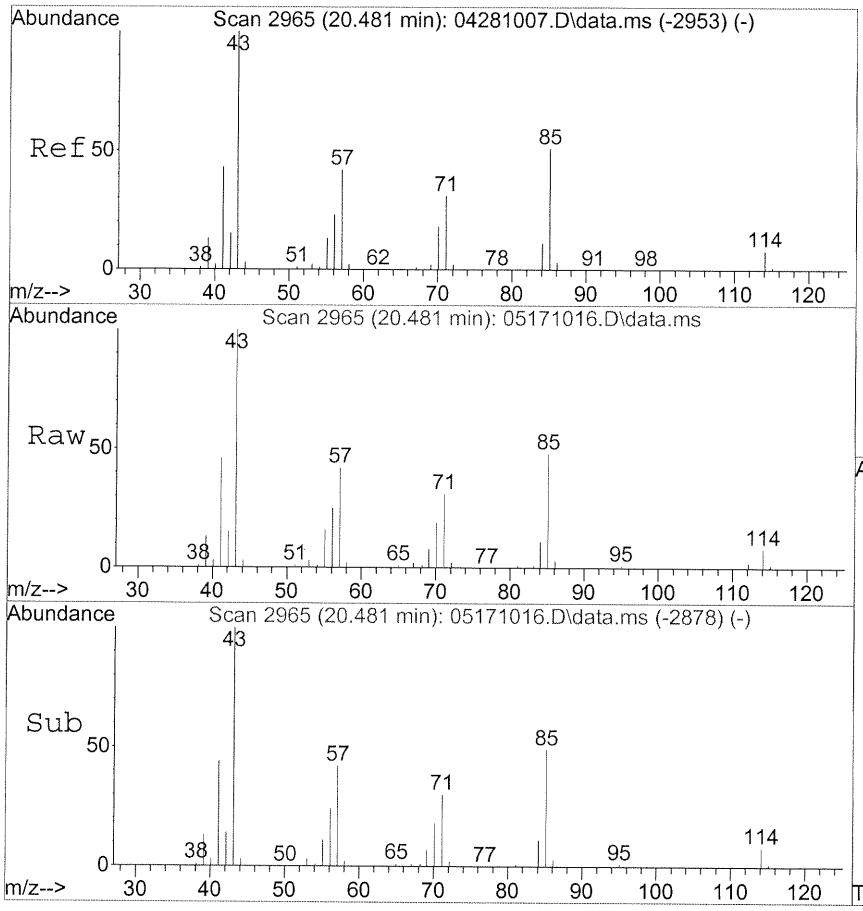


#62
n-Butyl Acetate
Concen: 5.70 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 43 Resp: 280900

Ion	Ratio	Lower	Upper
43	100		
56	49.2	25.0	65.0
73	18.5	0.0	39.1

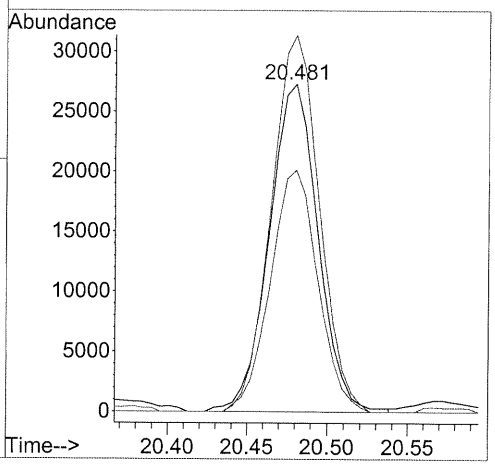


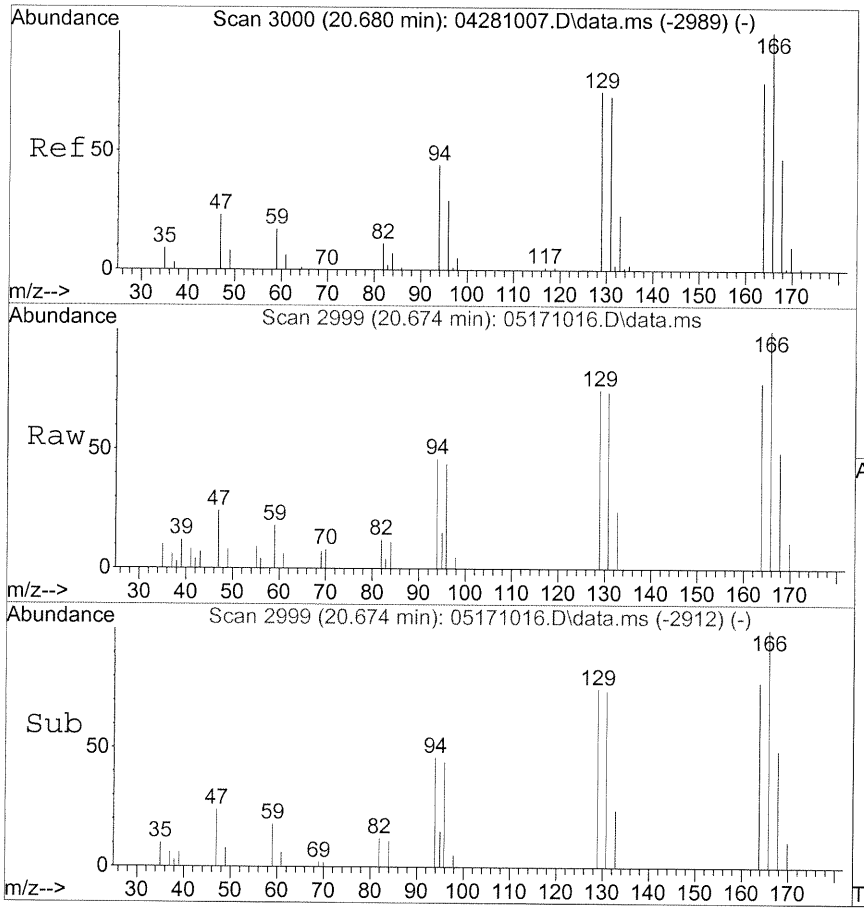


#63
n-Octane
Concen: 2.70 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 57 Resp: 57623

Ion	Ratio	Lower	Upper
57	100		
85	113.1	101.4	152.2
71	71.8	60.7	91.1

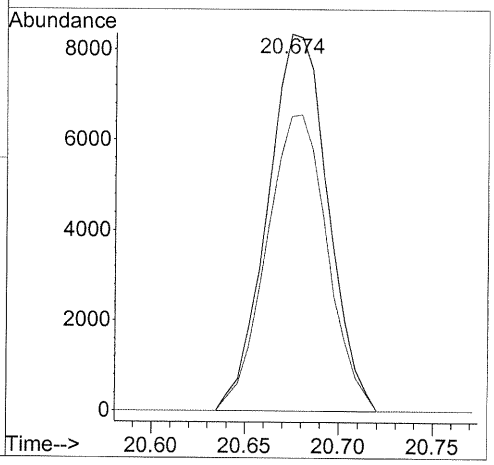


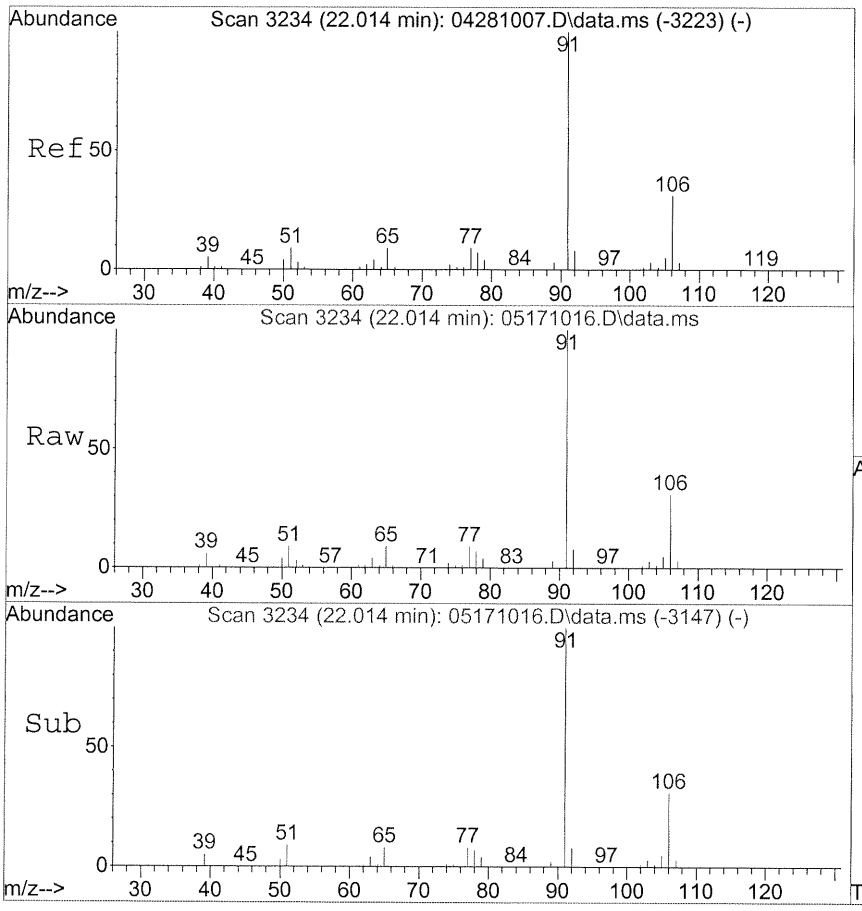


#64
Tetrachloroethene
Concen: 0.87 ng
RT: 20.67 min Scan# 2999
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:166 Resp: 18663

Ion	Ratio	Lower	Upper
166	100		
164	79.1	59.0	99.0

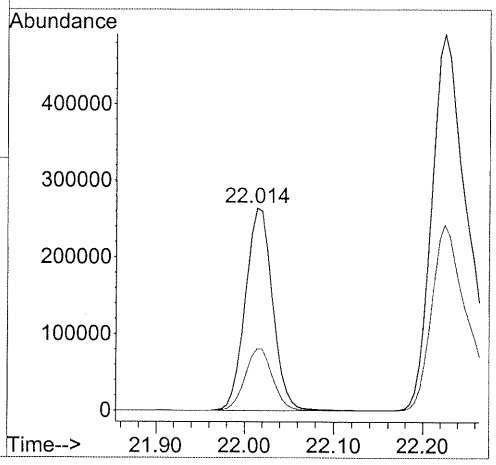


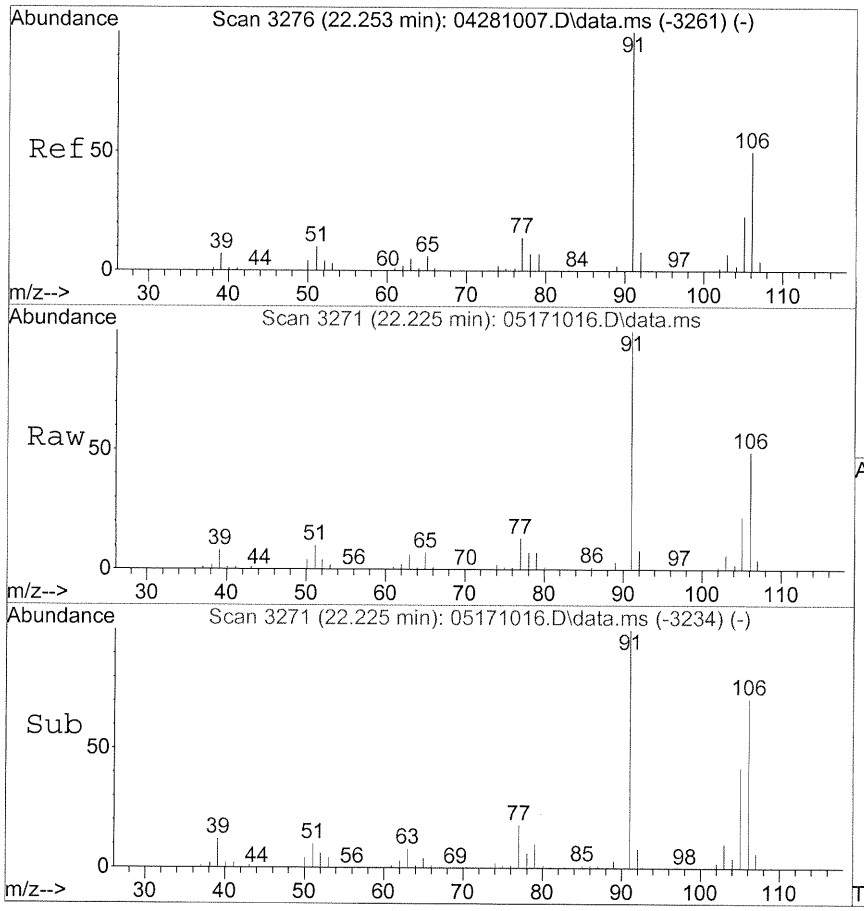


#66
Ethylbenzene
Concen: 5.51 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 91 Resp: 566843

Ion	Ratio	Lower	Upper
91	100		
106	30.6	12.2	52.2

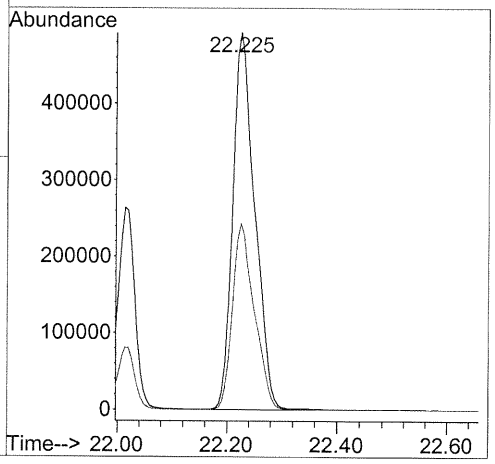


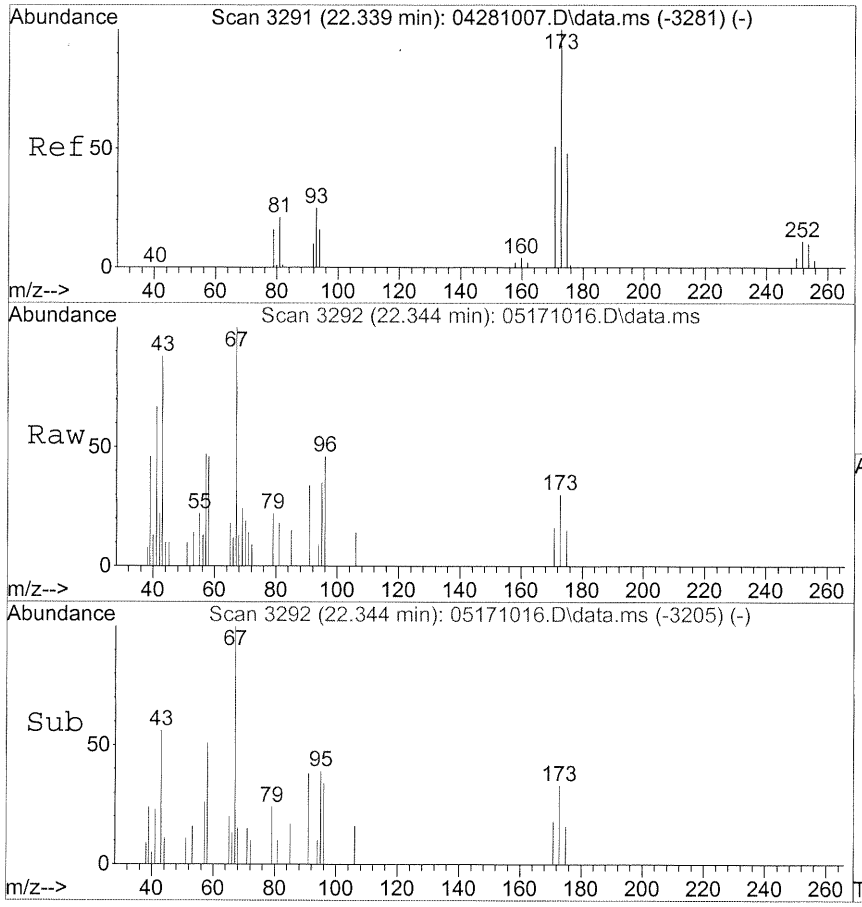


#67
m- & p-Xylenes
Concen: 16.48 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 91 Resp: 1374296

Ion	Ratio	Lower	Upper
91	100		
106	48.9	30.6	70.6

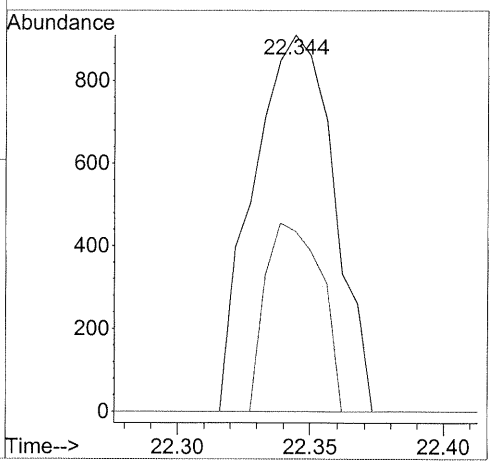


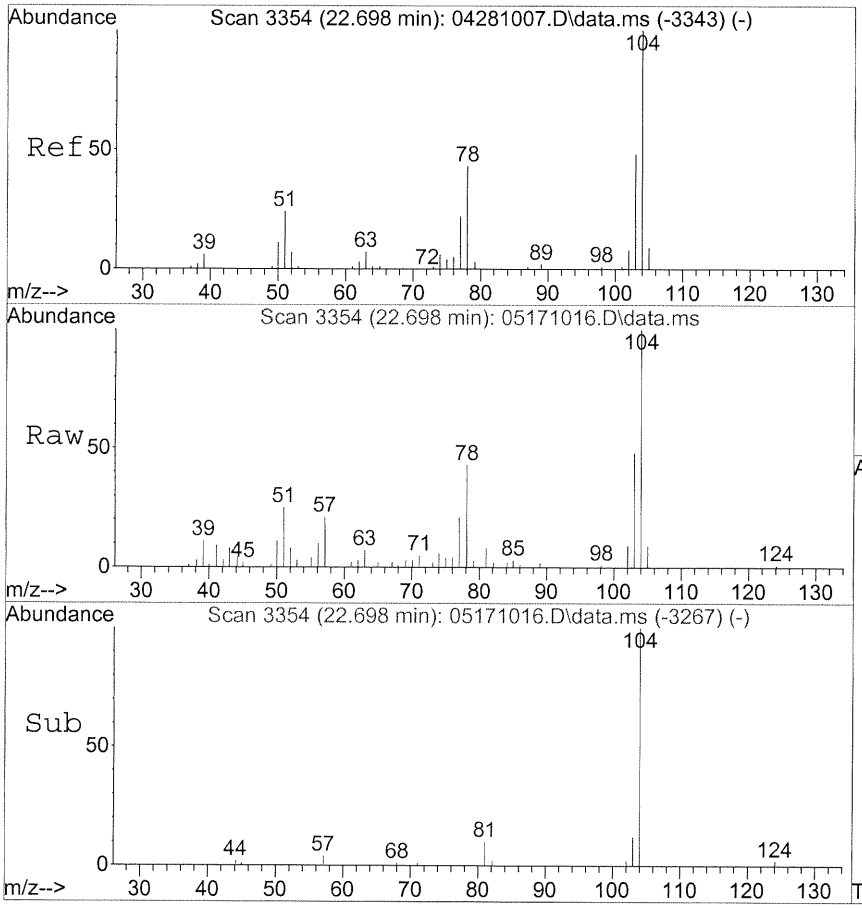


#68
Bromoform
Concen: 0.13 ng
RT: 22.34 min Scan# 3292
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:173 Resp: 1890

Ion	Ratio	Lower	Upper
173	100		
175	34.7	28.9	68.9

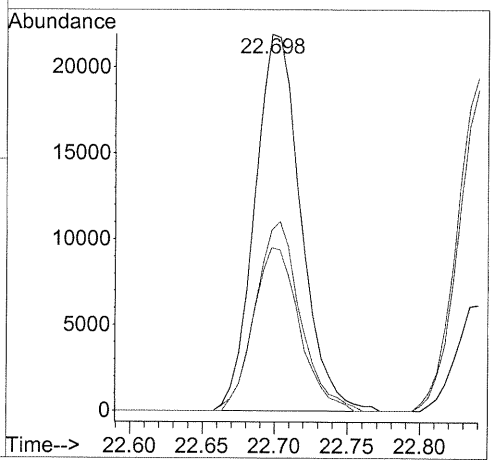


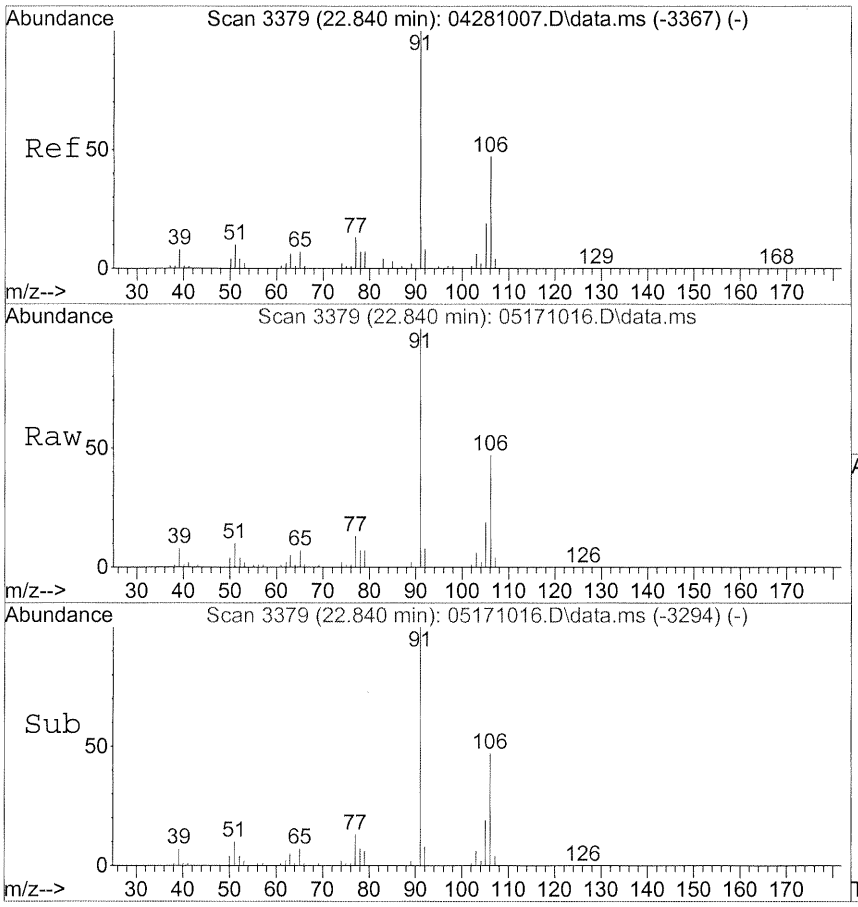


#69
Styrene
Concen: 0.83 ng
RT: 22.70 min Scan# 3354
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:104 Resp: 48591

Ion	Ratio	Lower	Upper
104	100		
78	43.5	22.5	62.5
103	48.9	27.5	67.5

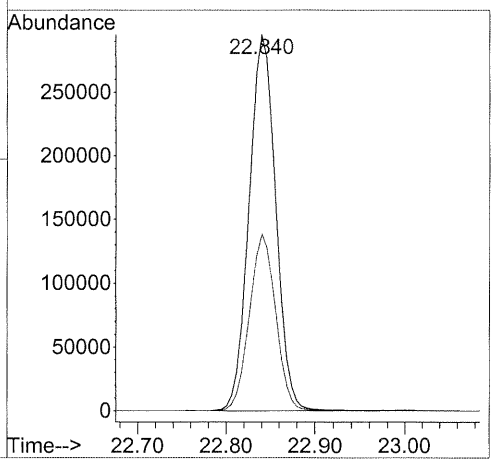


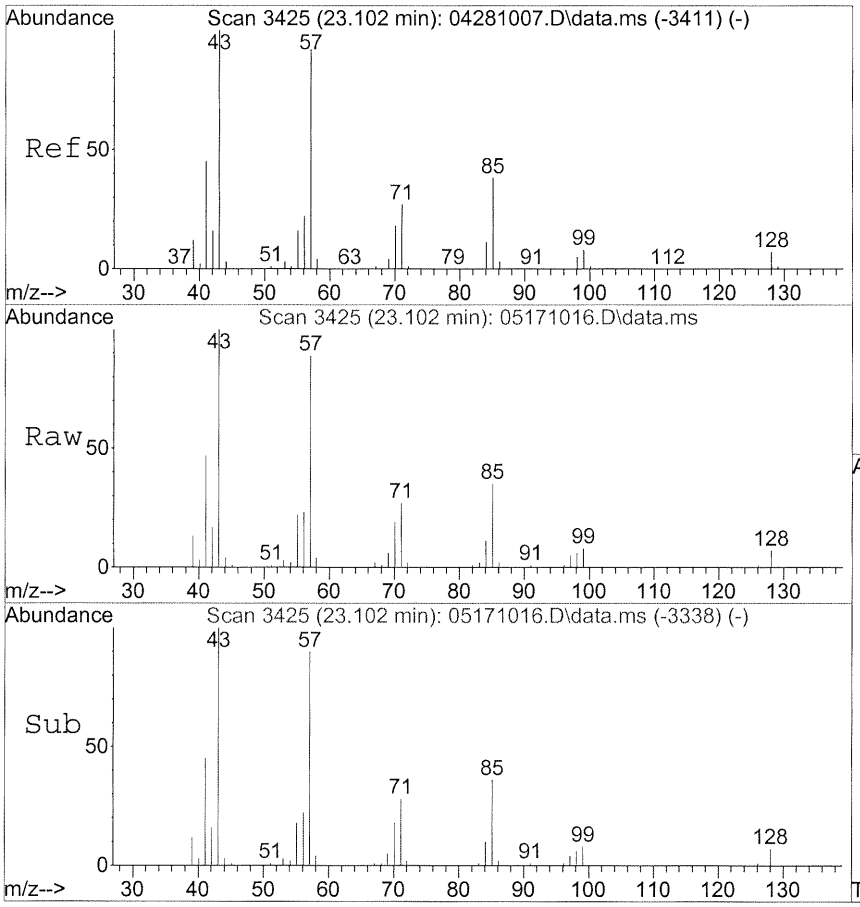


#70
o-Xylene
Concen: 6.96 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 91 Resp: 617948

Ion	Ratio	Lower	Upper
91	100		
106	46.1	27.8	67.8

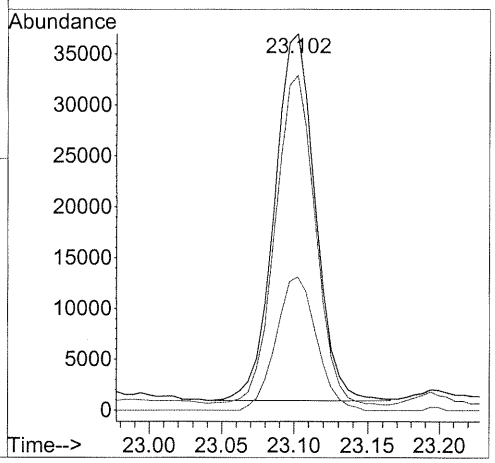


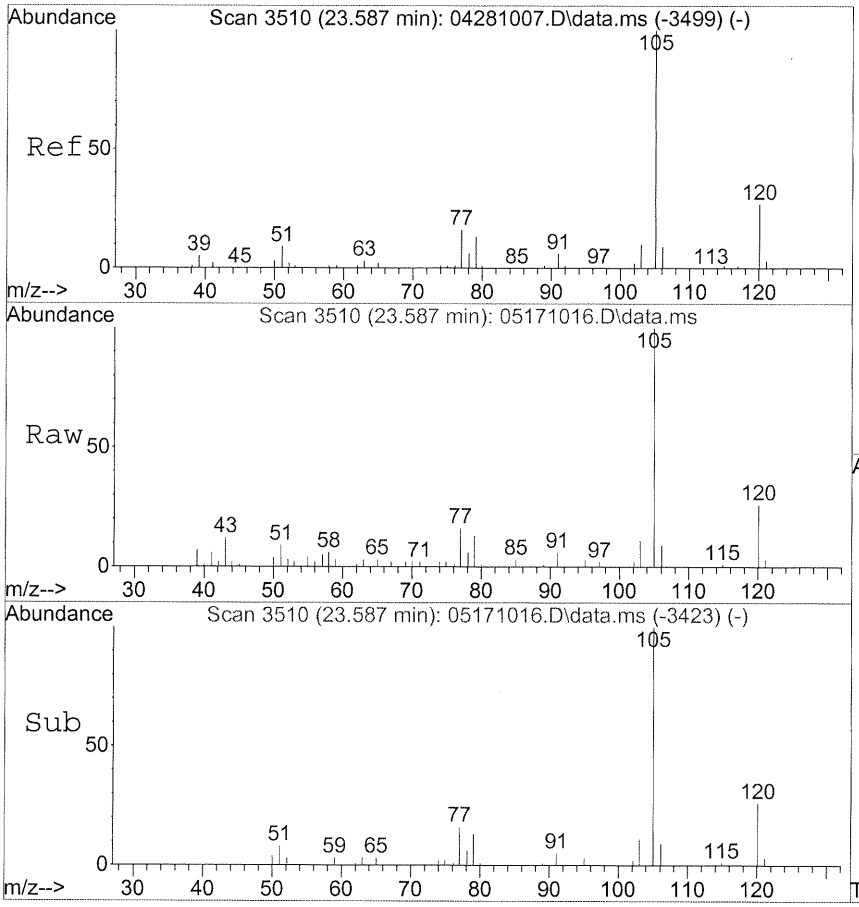


#71
n-Nonane
Concen: 1.46 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 43 Resp: 70290

Ion	Ratio	Lower	Upper
43	100		
57	88.0	74.6	114.6
85	35.9	20.5	60.5

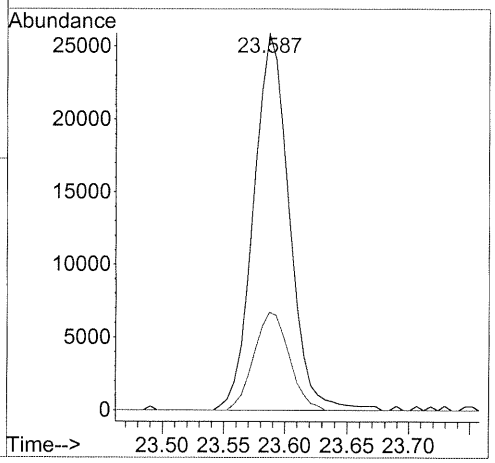


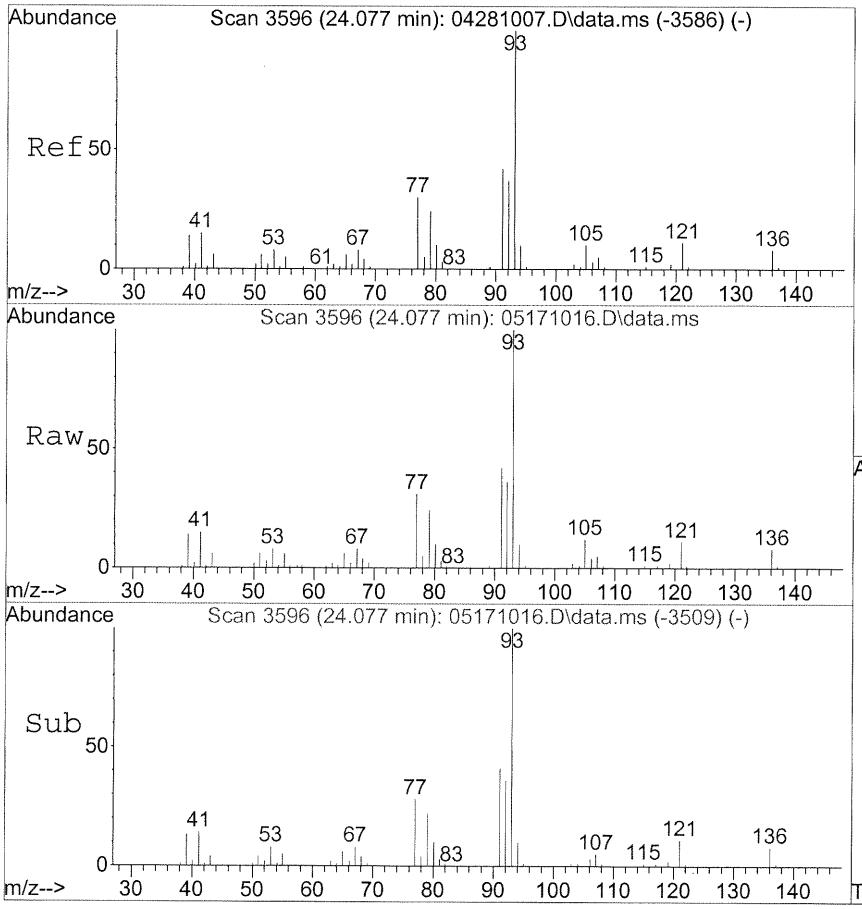


#74
Cumene
Concen: 0.49 ng
RT: 23.59 min Scan# 3510
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:105 Resp: 52570

Ion	Ratio	Lower	Upper
105	100		
120	25.6	6.8	46.8

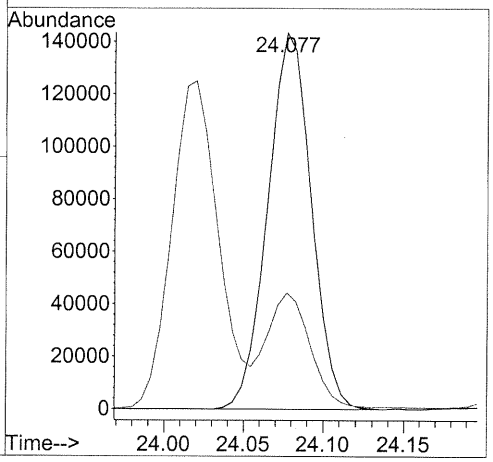


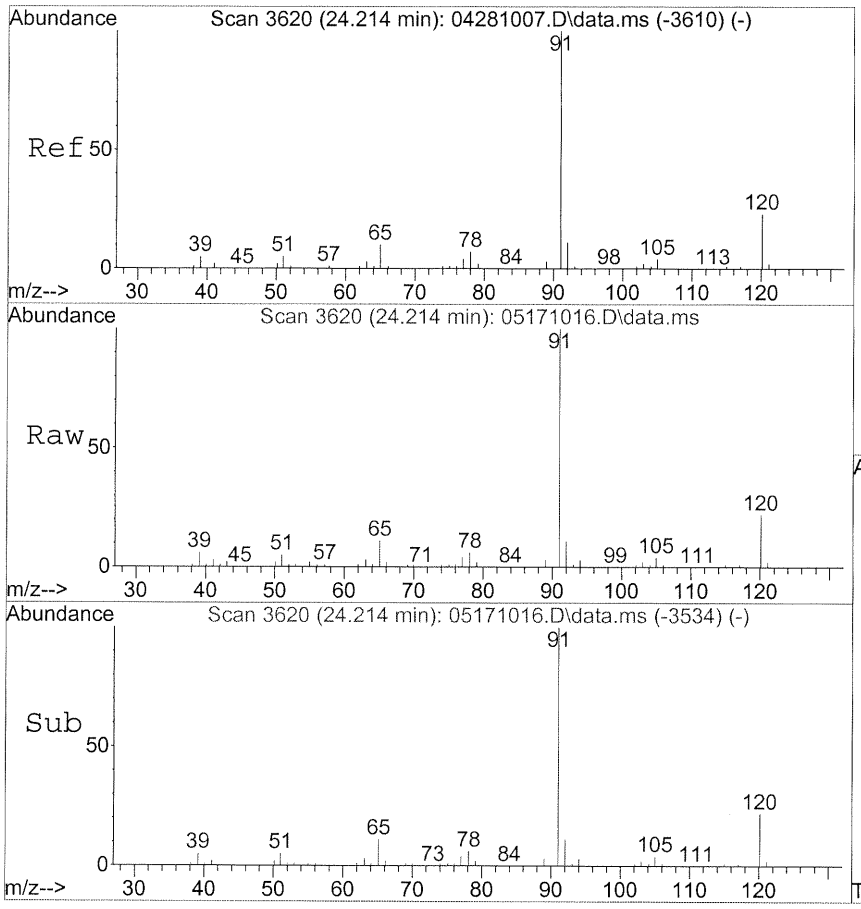


#75
alpha-Pinene
Concen: 5.41 ng
RT: 24.08 min Scan# 3596
Delta R.T. -0.006 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 93 Resp: 272840

Ion	Ratio	Lower	Upper
93	100		
77	31.5	8.7	48.7

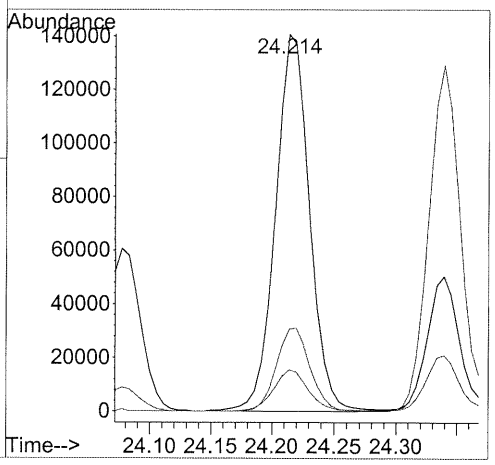


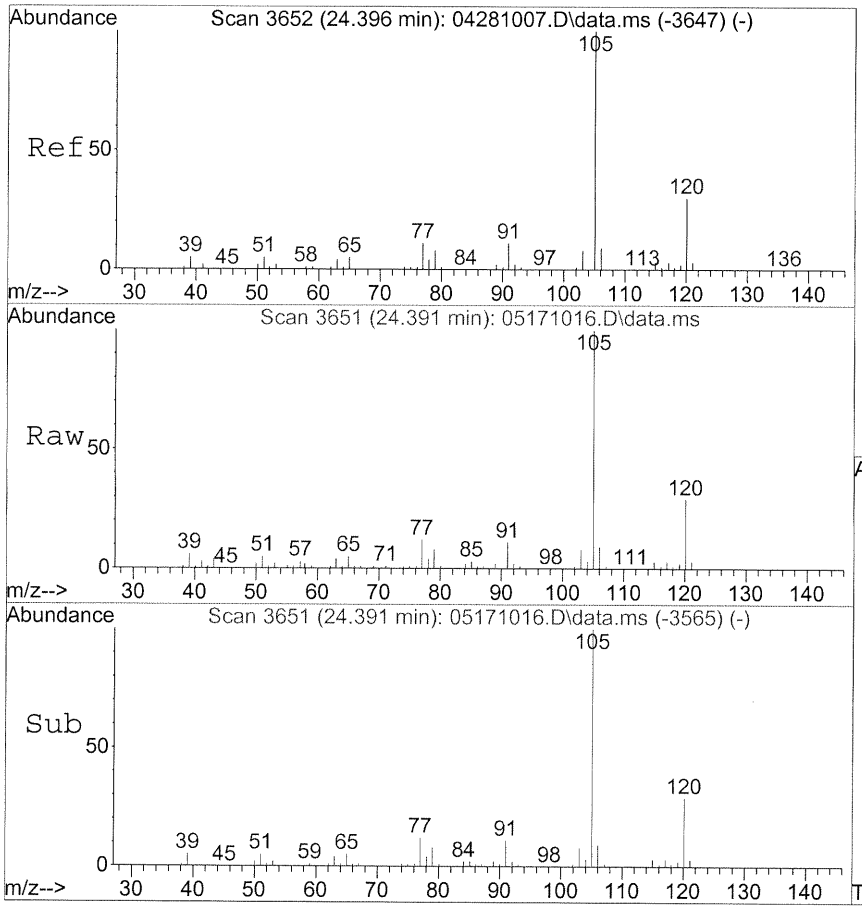


#76
n-Propylbenzene
Concen: 2.06 ng
RT: 24.21 min Scan# 3620
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 91 Resp: 271816

Ion	Ratio	Lower	Upper
91	100		
120	21.7	3.8	43.8
65	11.4	0.0	30.1

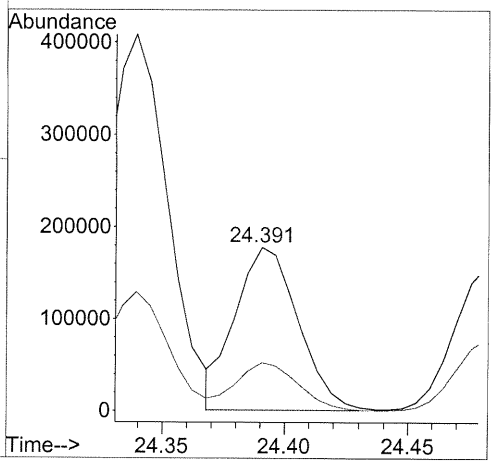


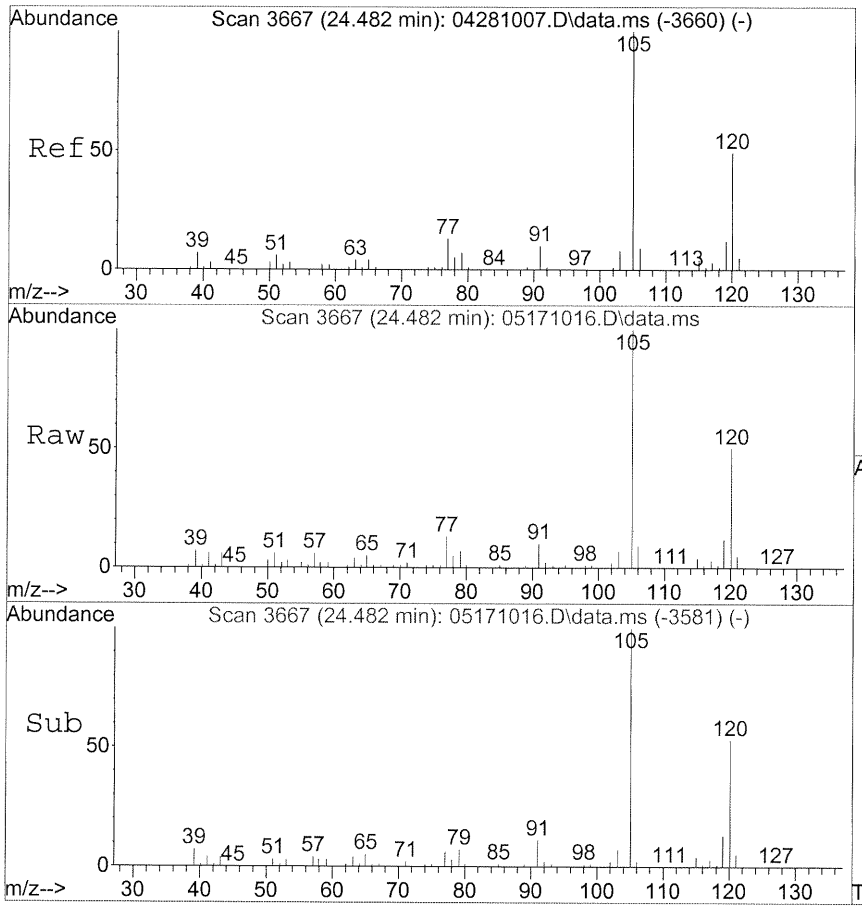


#78
4-Ethyltoluene
Concen: 3.18 ng
RT: 24.39 min Scan# 3651
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:105 Resp: 318644

Ion	Ratio	Lower	Upper
105	100		
120	29.5	10.2	50.2

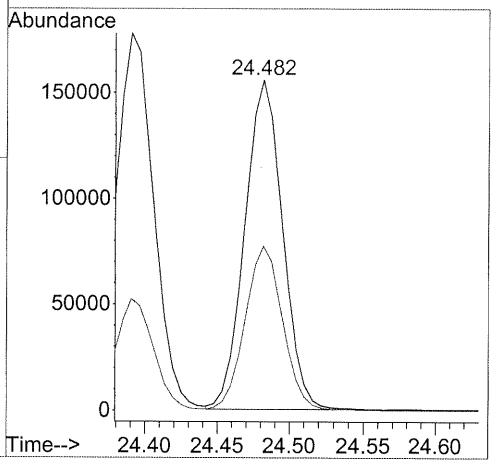


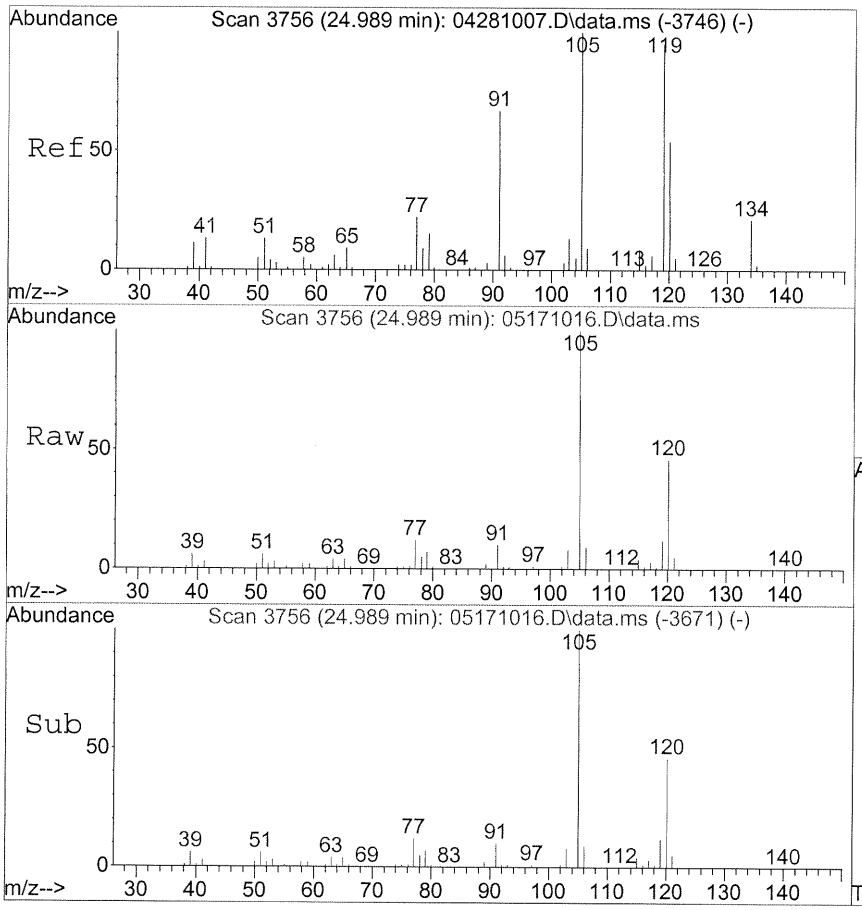


#79
1,3,5-Trimethylbenzene
Concen: 3.36 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:105 Resp: 282687

Ion	Ratio	Lower	Upper
105	100		
120	49.5	30.4	70.4

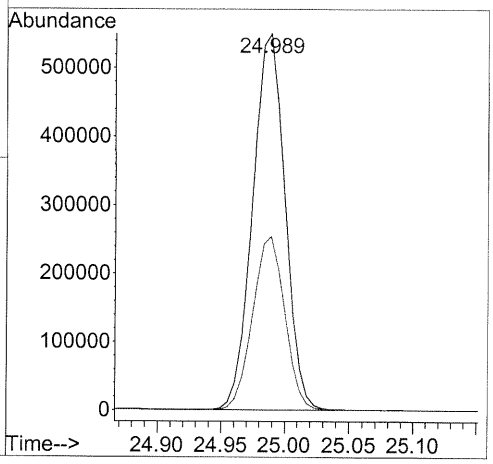


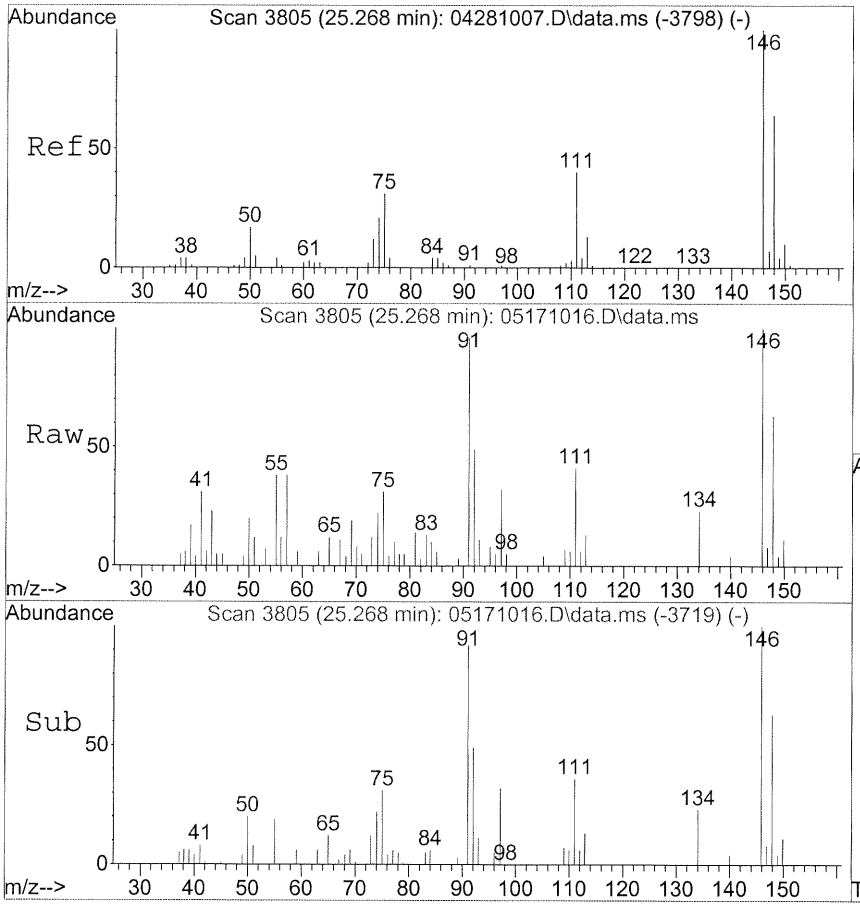


#82
1,2,4-Trimethylbenzene
Concen: 11.07 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:105 Resp: 973225

Ion	Ratio	Lower	Upper
105	100		
120	46.0	35.1	75.1

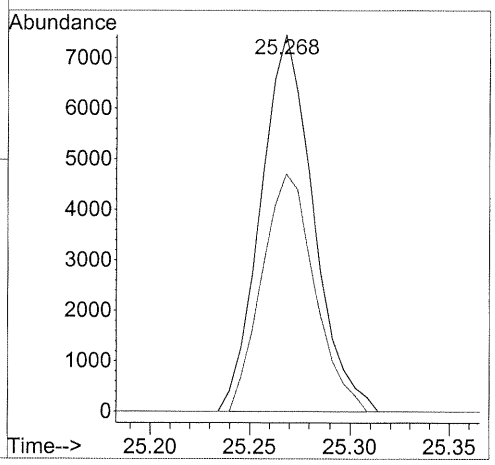


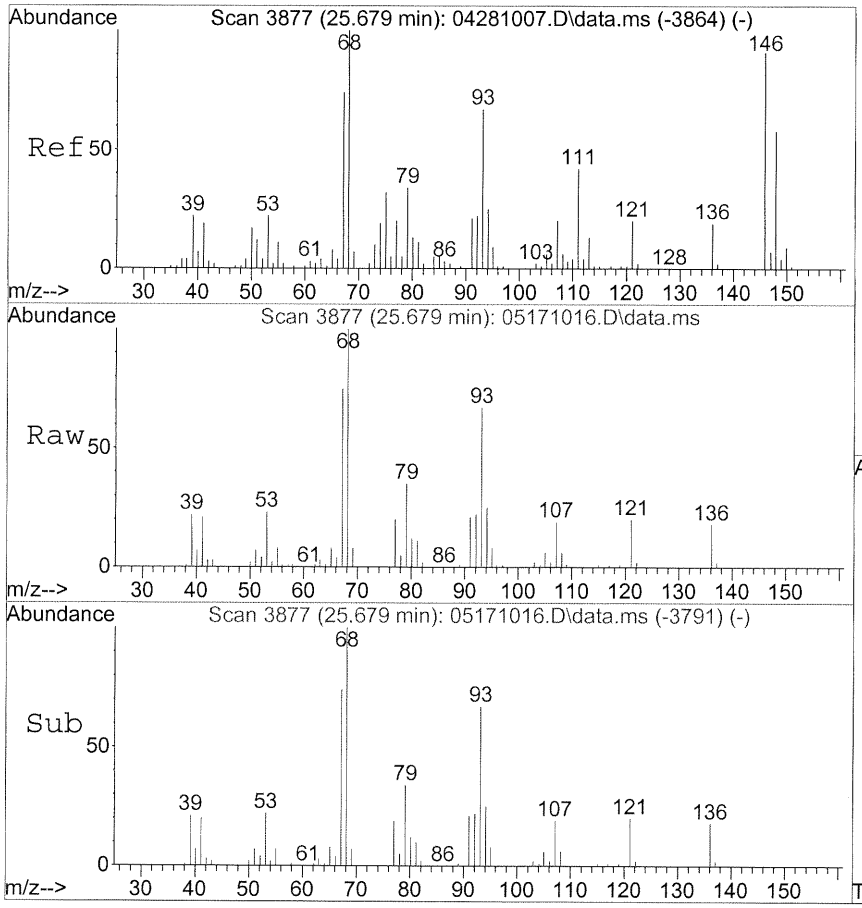


#86
1,4-Dichlorobenzene
Concen: 0.31 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:146 Resp: 13695

Ion	Ratio	Lower	Upper
146	100		
148	63.0	44.0	84.0

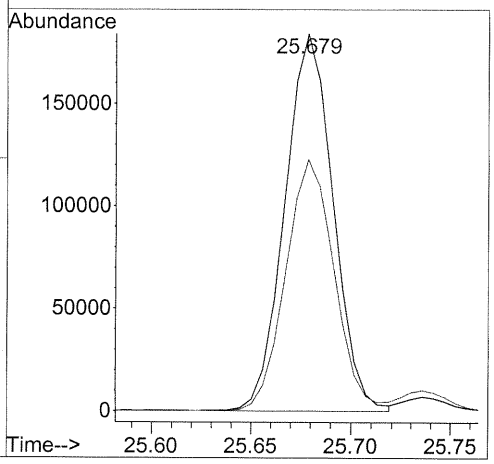


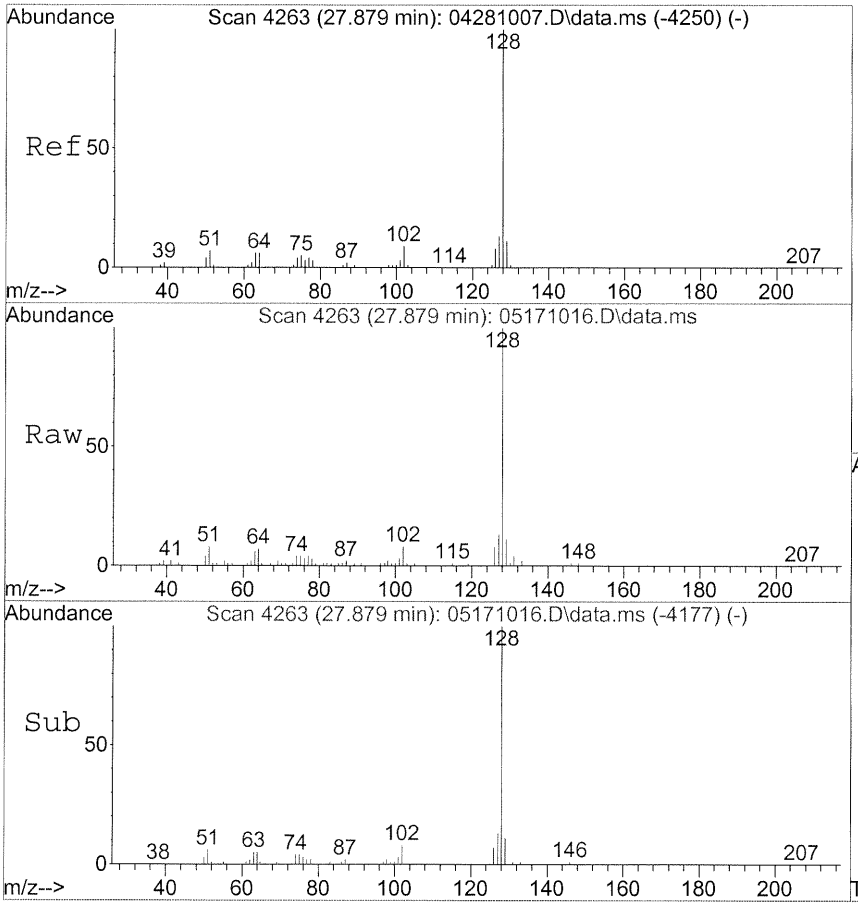


#91
d-Limonene
Concen: 8.90 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion: 68 Resp: 307991

Ion	Ratio	Lower	Upper
68	100		
93	67.4	51.5	91.5

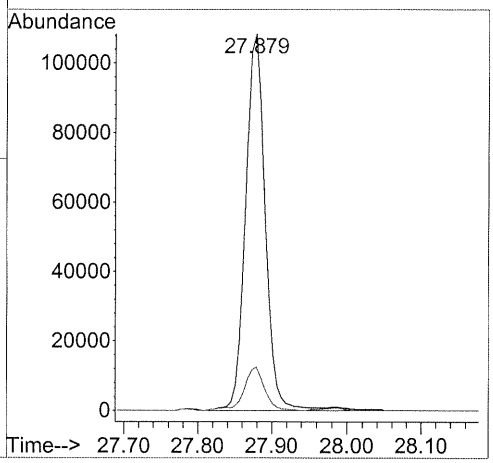




#95
Naphthalene
Concen: 2.08 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.012 min
Lab File: 05171016.D
Acq: 17 May 2010 21:12

Tgt Ion:128 Resp: 201684

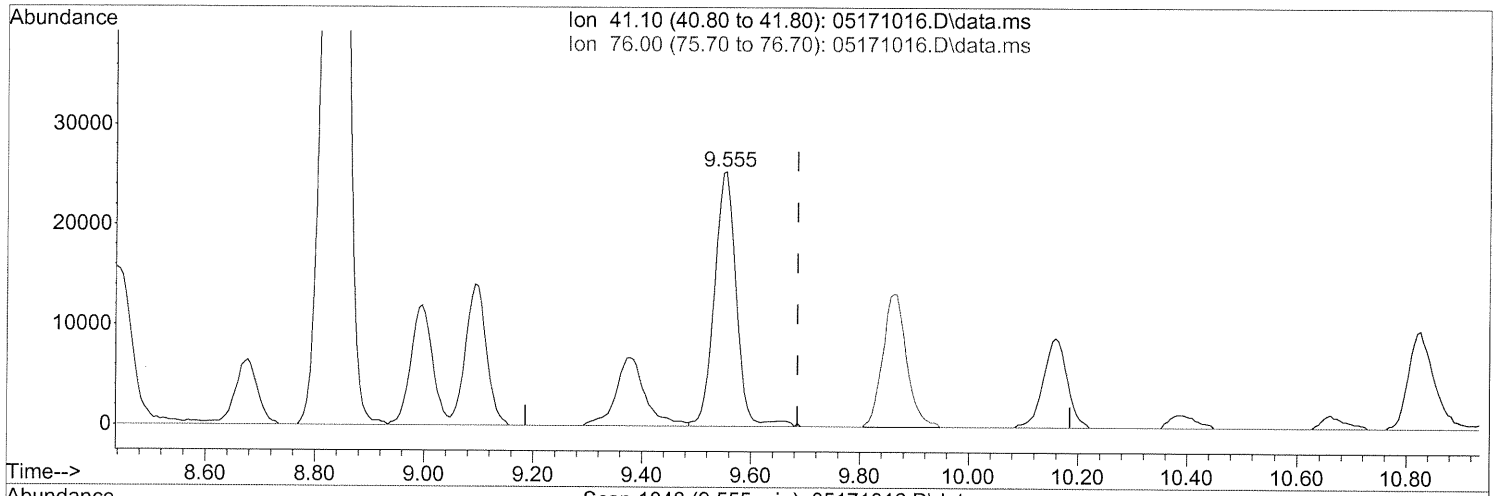
Ion	Ratio	Lower	Upper
128	100		
129	11.8	0.0	31.1

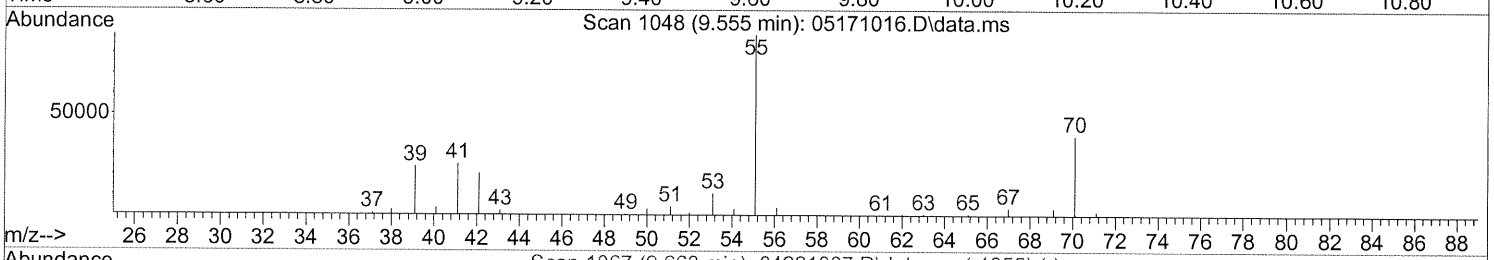


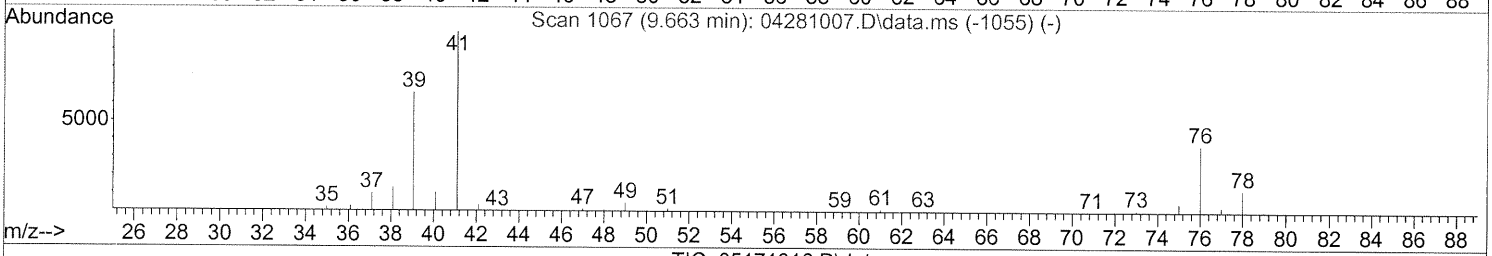
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171016.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.555min (-0.131) 2.55ng

response 71189

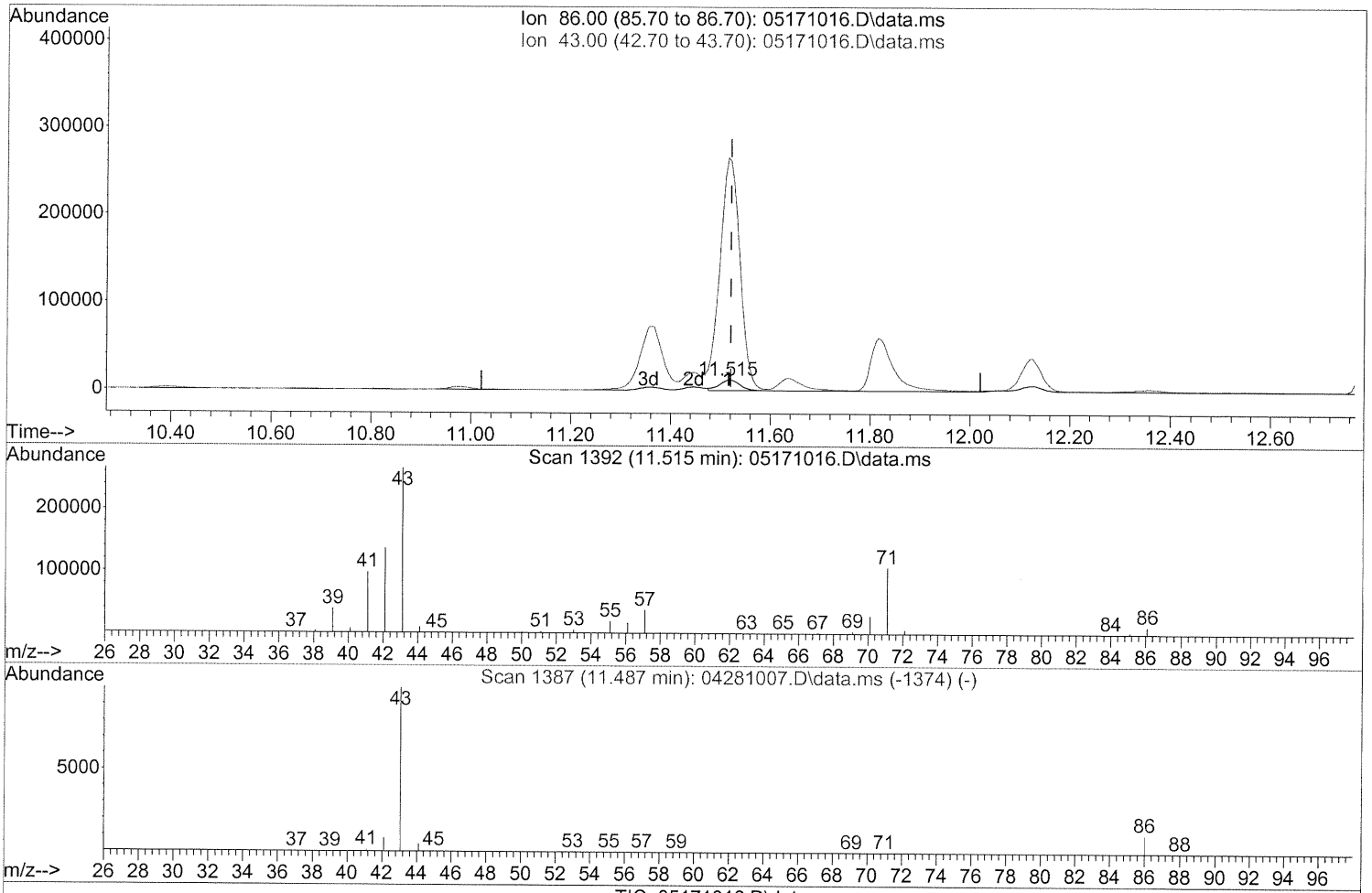
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.515min (-0.006) 6.79ng

response 33279

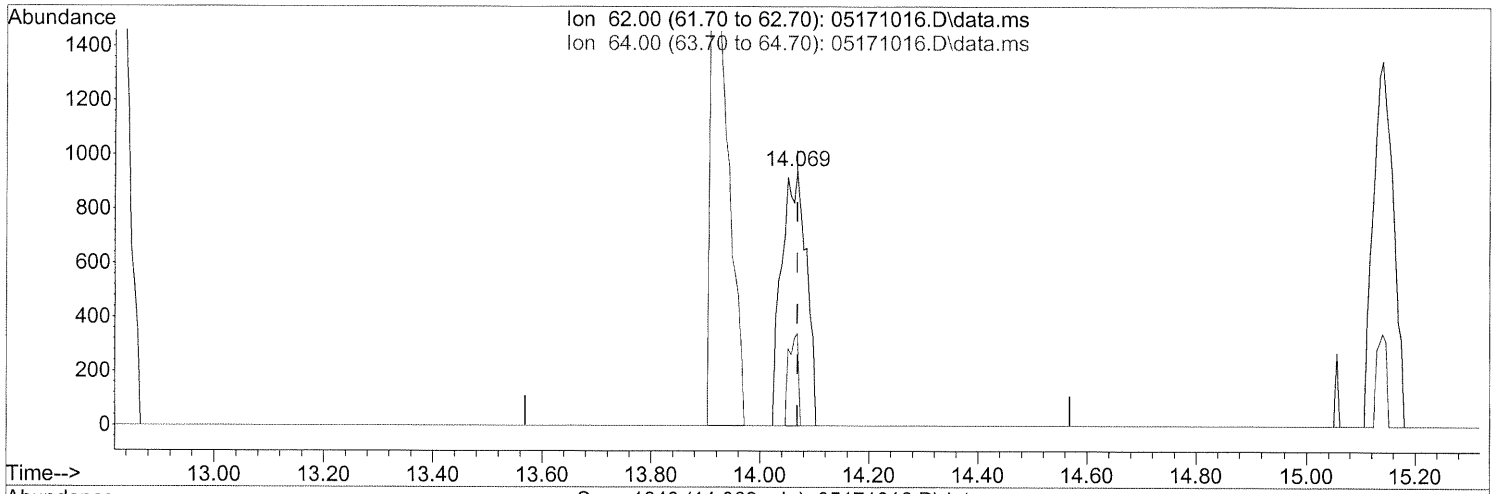
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2236.09#
0.00	0.00	0.00
0.00	0.00	0.00

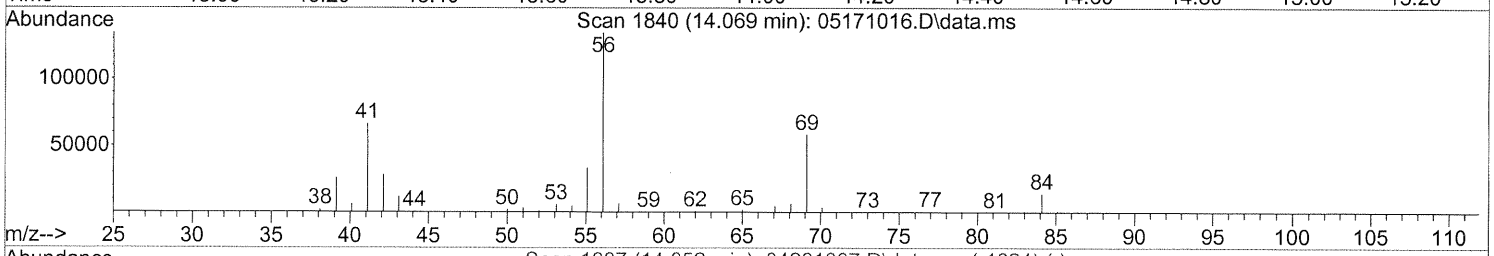
FP

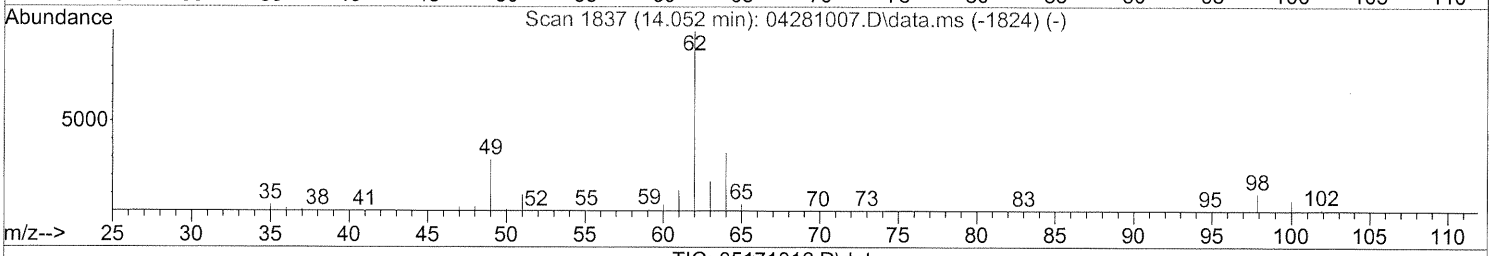
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171016.D\data.ms

(36) 1,2-Dichloroethane (T)

14.069min (-0.000) 0.11ng

response 2947

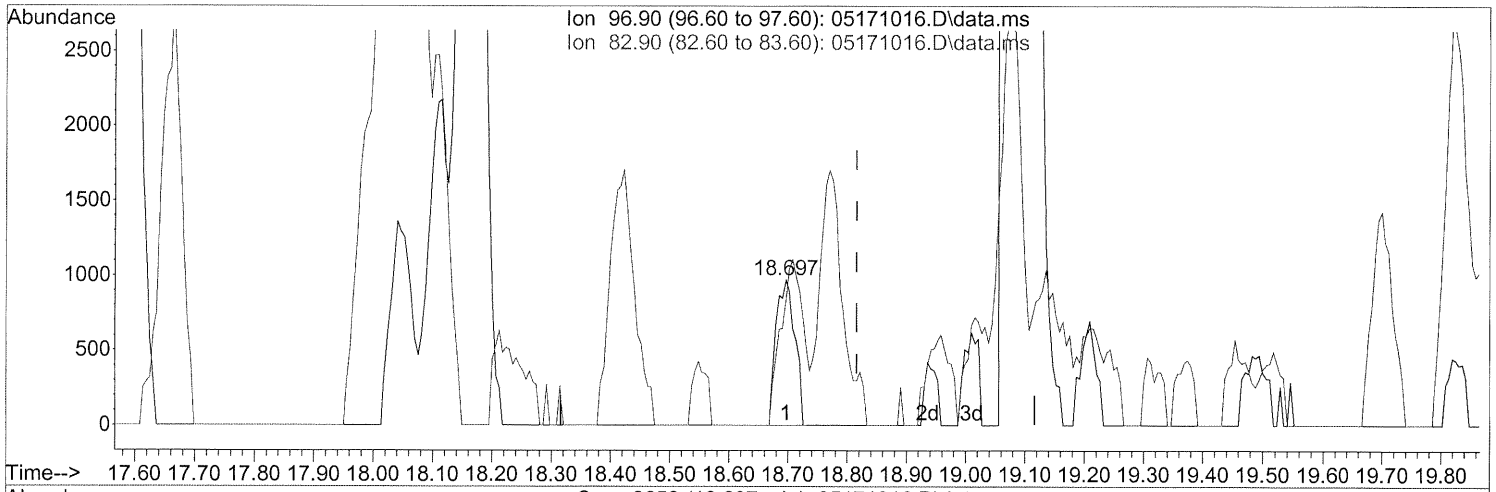
Ion	Exp%	Act%
62.00	100	100
64.00	32.80	14.05
0.00	0.00	0.00
0.00	0.00	0.00

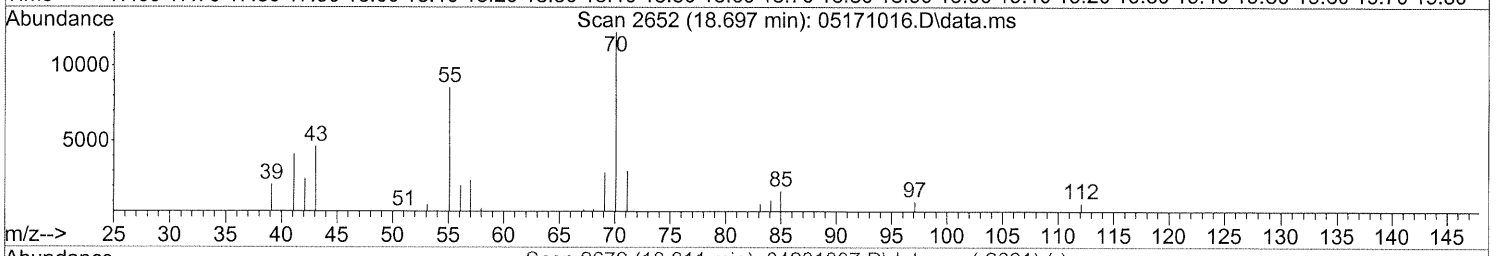
7P

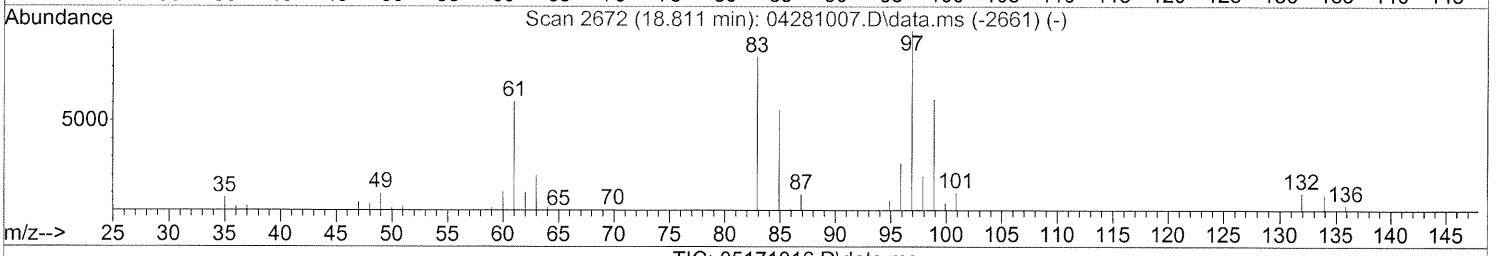
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171016.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.697min (-0.120) 0.11ng

response 2140

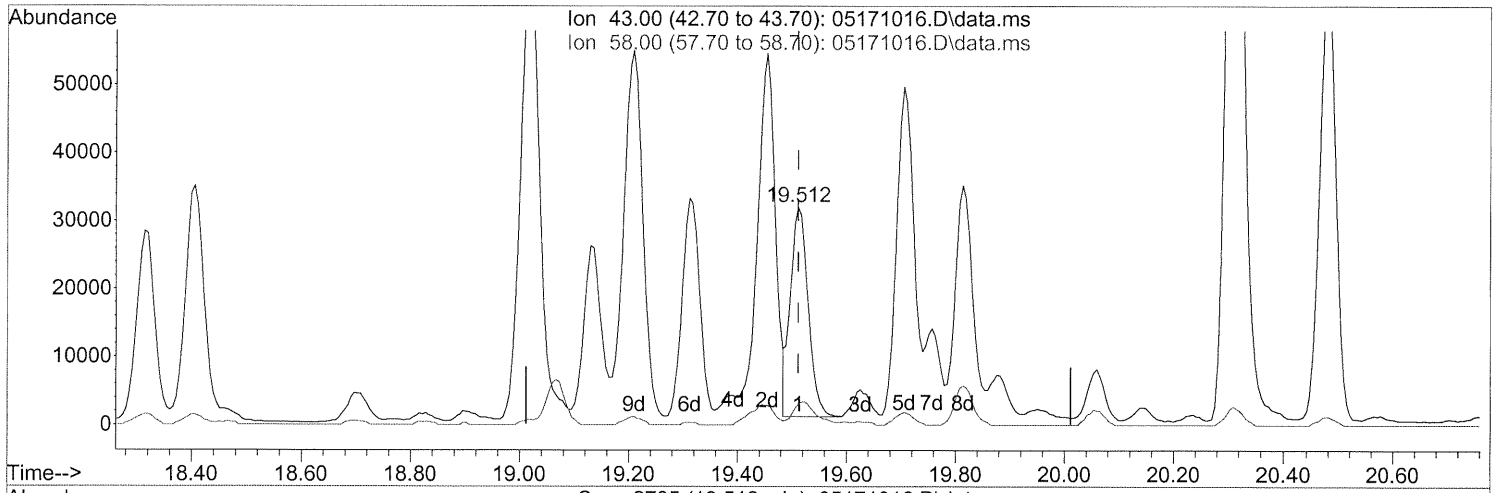
Ion	Exp%	Act%
96.90	100	100
82.90	84.60	135.56#
0.00	0.00	0.00
0.00	0.00	0.00

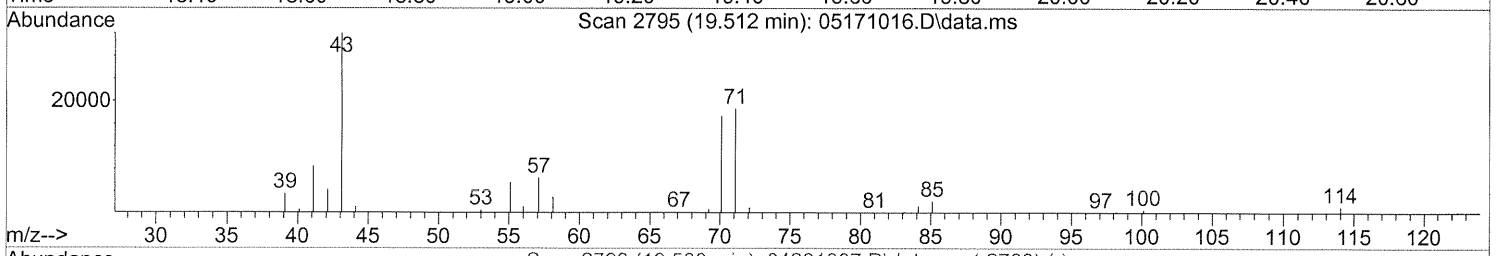
7P

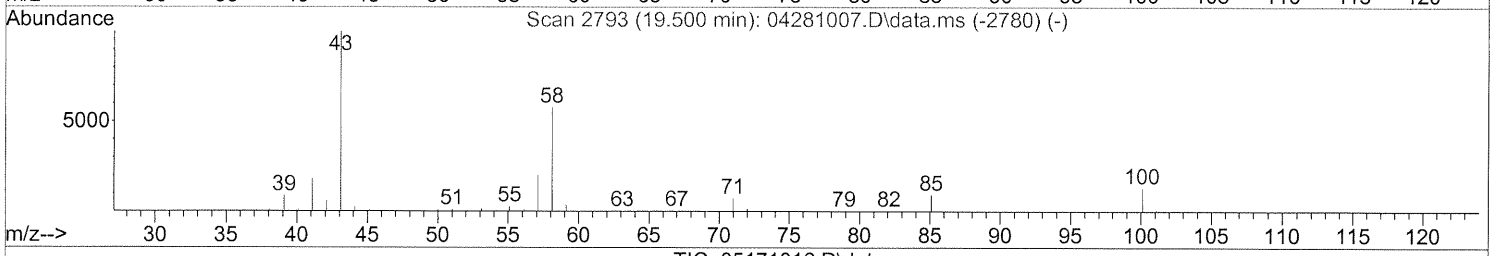
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171016.D\data.ms

(59) 2-Hexanone (T)

19.512min (-0.000) 1.59ng

response 69941

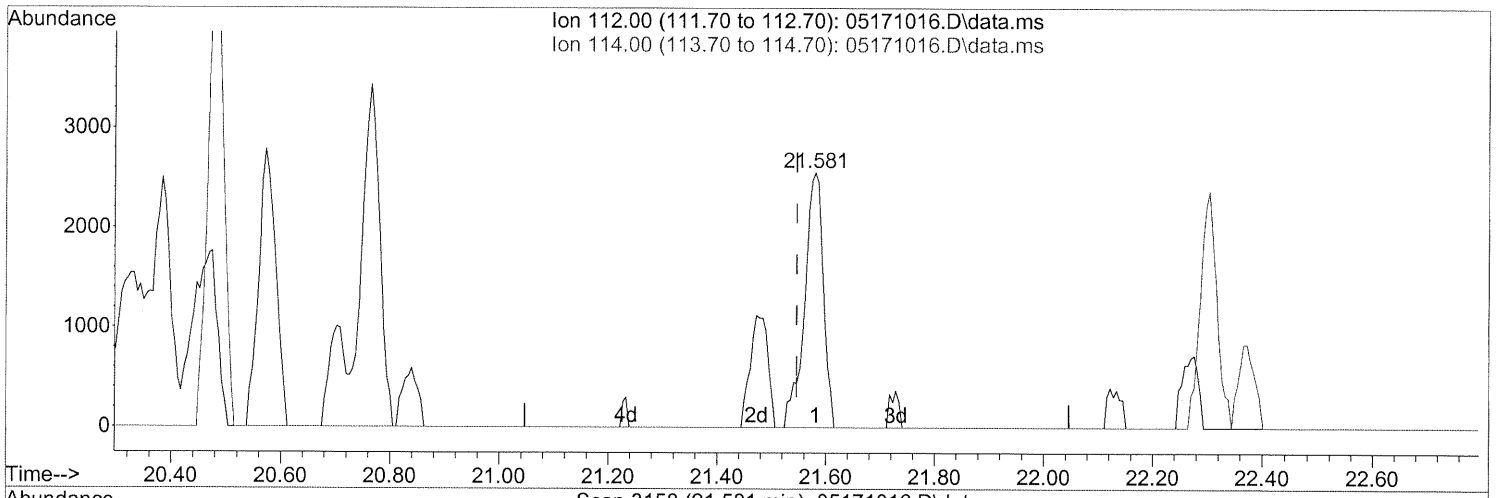
Ion	Exp%	Act%
43.00	100	100
58.00	58.30	14.94#
0.00	0.00	0.00
0.00	0.00	0.00

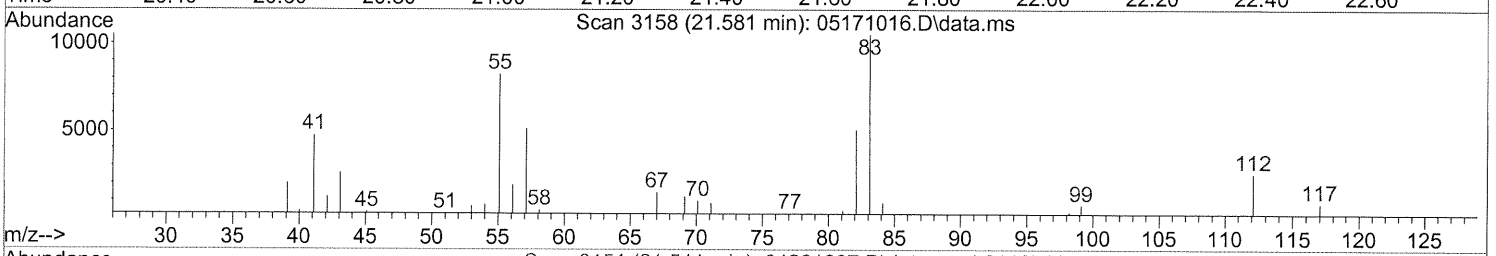
TP

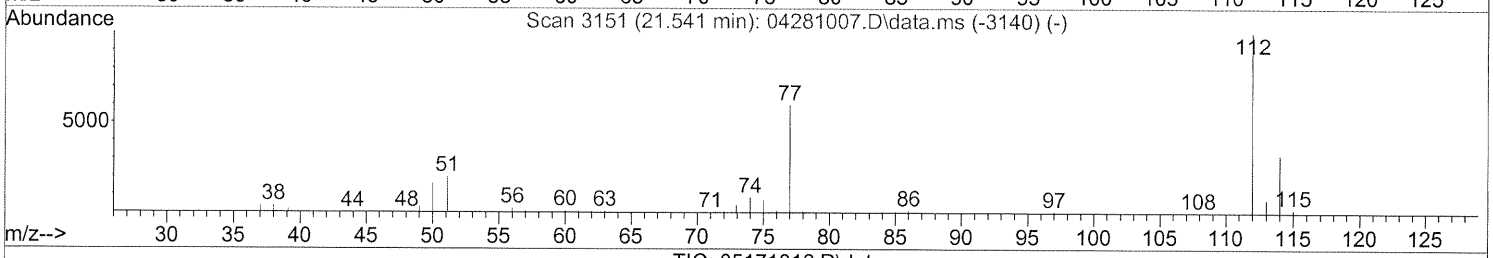
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171016.D\data.ms

(65) Chlorobenzene (T)

21.581min (+0.034) 0.11ng

response 6141

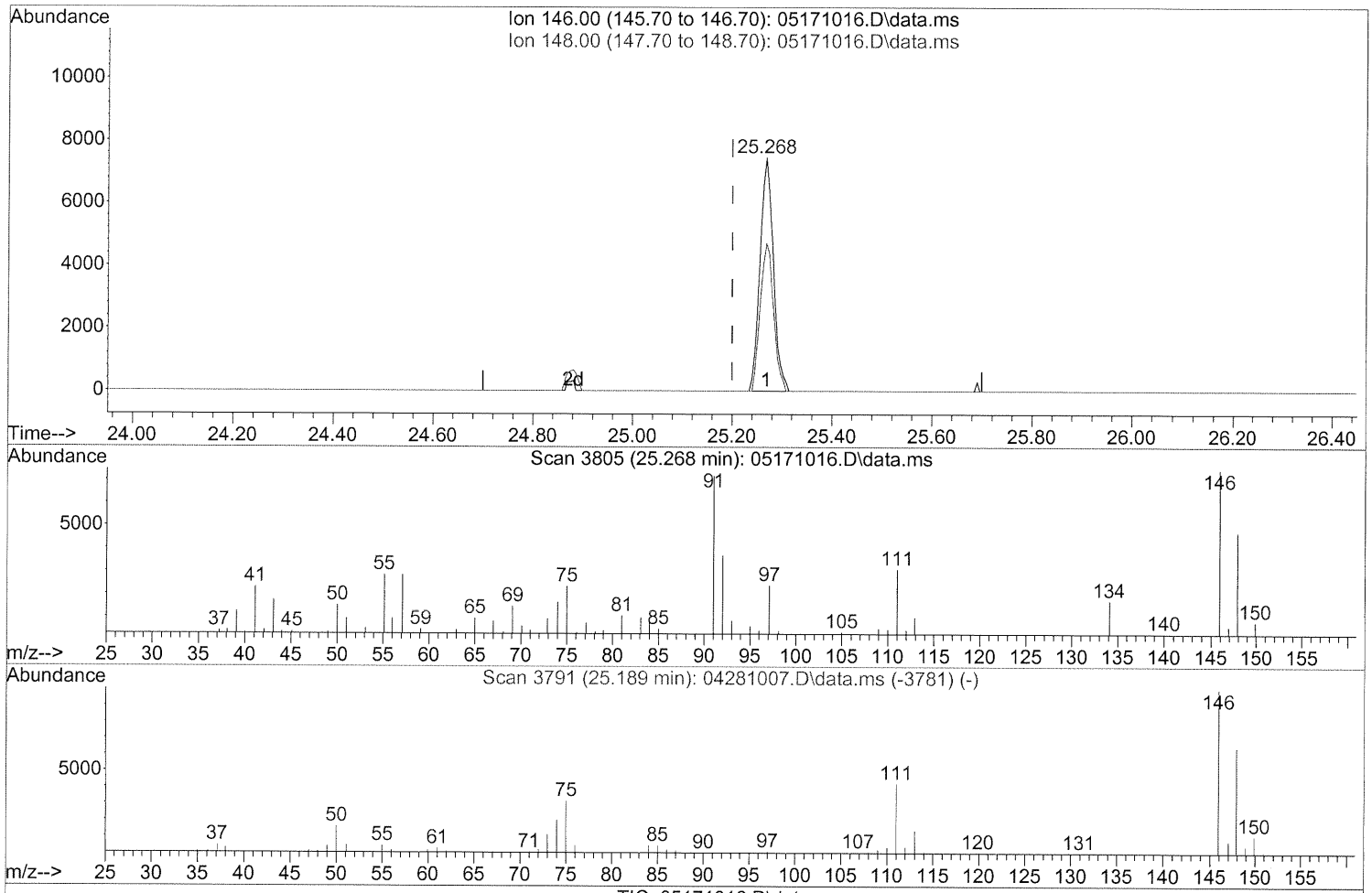
Ion	Exp%	Act%
112.00	100	100
114.00	31.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.268min (+0.068) 0.33ng

response 13695

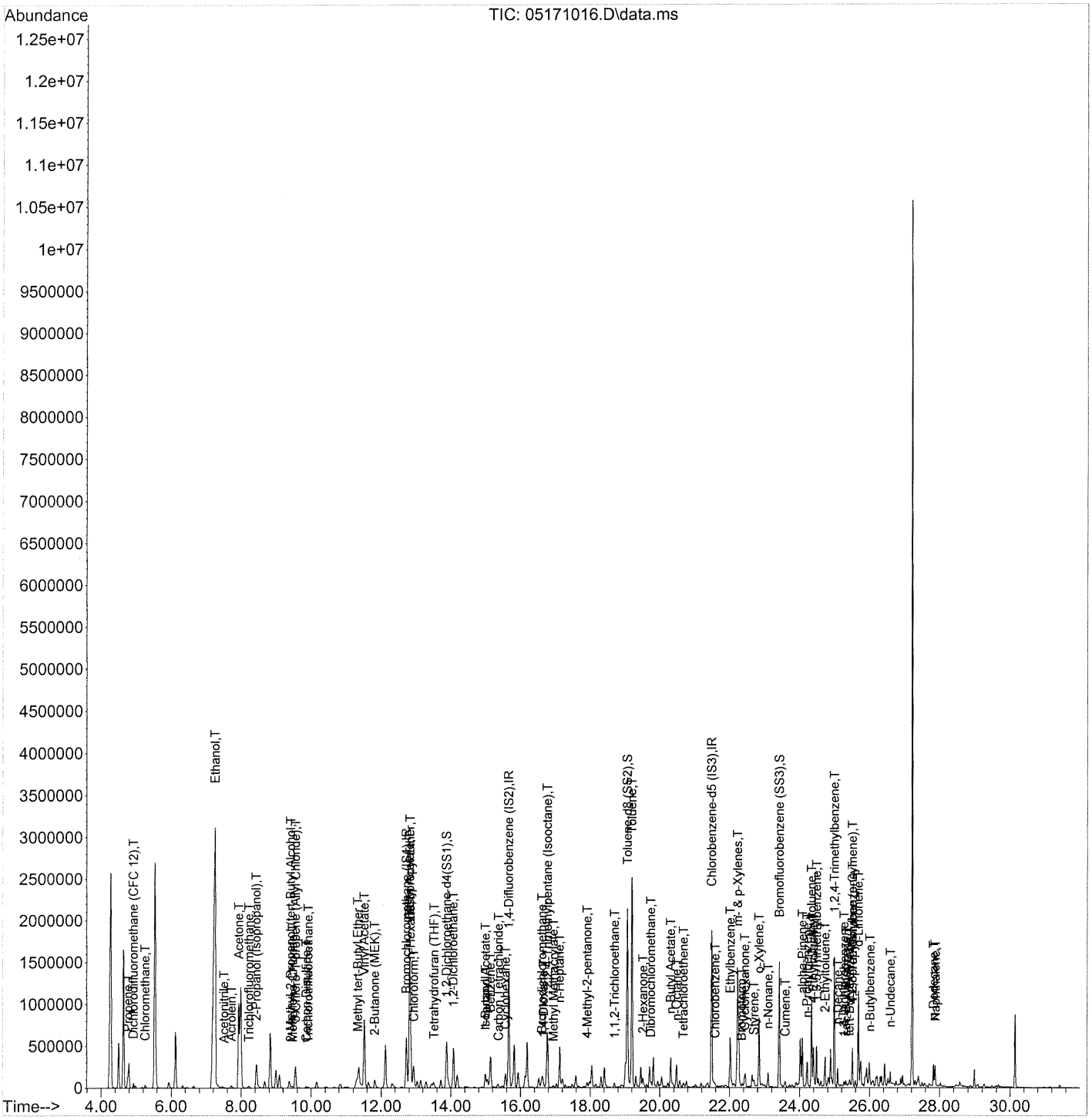
Ion	Exp%	Act%
146.00	100	100
148.00	64.30	62.96
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	312533	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1570469	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	776825	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	558521	24.014	ng		-0.03
Spiked Amount 25.000			Recovery = 96.04%				
57) Toluene-d8 (SS2)	19.07	98	1839327	24.819	ng		0.00
Spiked Amount 25.000			Recovery = 99.28%				
73) Bromofluorobenzene (SS3)	23.42	174	485051	25.638	ng		0.00
Spiked Amount 25.000			Recovery = 102.56%				
Target Compounds							Qvalue
2) Propene	4.77	42	77726	3.188	ng	#	1
3) Dichlorodifluoromethan...	4.93	85	57881	1.384	ng		99
4) Chloromethane	5.26	50	11183	0.362	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	912	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	6.02	54	1083	N.D.			
8) Bromomethane	6.51	94	397	N.D.			
9) Chloroethane	6.85	64	401	N.D.			
10) Ethanol	7.25	45	7600787	571.875	ng		99
11) Acetonitrile	7.51	41	9126	0.272	ng		95
12) Acrolein	7.72	56	36991	3.570	ng		98
13) Acetone	7.93	58	659833	40.610	ng	#	56
14) Trichlorofluoromethane	8.22	101	26812	0.740	ng		99
15) 2-Propanol (Isopropanol)	8.43	45	396558	7.872	ng		98
16) Acrylonitrile	8.76	53	945	N.D.			
17) 1,1-Dichloroethene	9.25	96	384	N.D.			
18) 2-Methyl-2-Propanol (t...	9.41	59	22389	0.431	ng	#	69
19) Methylene Chloride	9.47	84	5653	0.264	ng		95
20) 3-Chloro-1-propene (Al...	9.55	41	71189	2.551	ng	#	36
21) Trichlorotrifluoroethane	9.91	151	4962	0.324	ng		96
22) Carbon Disulfide	9.86	76	40385	0.529	ng		98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.29	63	281	N.D.			
25) Methyl tert-Butyl Ether	11.33	73	55184	0.829	ng		92
26) Vinyl Acetate	11.52	86	33279	6.786	ng	#	1
27) 2-Butanone (MEK)	11.82	72	49807	3.690	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.83	87	11943	0.598	ng	#	1
30) Ethyl Acetate	12.81	61	332206	41.406	ng		96
31) n-Hexane	12.84	57	397378	9.673	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	269639	7.865 ng		99
34) Tetrahydrofuran (THF)	13.52	72	13466	1.032 ng	#	20
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.07	62	2947	0.106 ng		67
38) 1,1,1-Trichloroethane	14.45	97	654	N.D.		
39) Isopropyl Acetate	15.00	61	3265	0.241 ng	#	1
40) 1-Butanol	14.99	56	146298	6.741 ng		85
41) Benzene	15.14	78	489348	5.582 ng		100
42) Carbon Tetrachloride	15.37	117	9768	0.419 ng		98
43) Cyclohexane	15.57	84	95253	2.585 ng		93
44) tert-Amyl Methyl Ether	16.06	73	87	N.D.		
45) 1,2-Dichloropropane	16.20	63	686	N.D.		
46) Bromodichloromethane	16.62	83	62369	2.372 ng		74
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.66	88	3096	0.186 ng		82
49) 2,2,4-Trimethylpentane...	16.77	57	775214	7.550 ng		96
50) Methyl Methacrylate	16.95	100	2387	0.260 ng	#	1
51) n-Heptane	17.12	71	153866	6.139 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.92	58	23857	1.260 ng		94
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	18.70	97	2140	0.112 ng	#	44
58) Toluene	19.20	91	2300280	25.021 ng		99
59) 2-Hexanone	19.51	43	69941	1.595 ng	#	42
60) Dibromochloromethane	19.74	129	16184	0.889 ng		98
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.31	43	280900	5.699 ng		95
63) n-Octane	20.48	57	57623	2.702 ng		91
64) Tetrachloroethene	20.67	166	18663	0.867 ng		100
65) Chlorobenzene	21.58	112	6141	0.110 ng	#	43
66) Ethylbenzene	22.01	91	566843	5.510 ng		97
67) m- & p-Xylenes	22.22	91	1374296	16.480 ng		97
68) Bromoform	22.34	173	1890	0.125 ng		79
69) Styrene	22.70	104	48591	0.826 ng		98
70) o-Xylene	22.84	91	617948	6.956 ng		98
71) n-Nonane	23.10	43	70290	1.458 ng		93
72) 1,1,2,2-Tetrachloroethane	22.83	83	928	N.D.		
74) Cumene	23.59	105	52570	0.489 ng		98
75) alpha-Pinene	24.08	93	272840	5.414 ng		95
76) n-Propylbenzene	24.21	91	271816	2.065 ng		96
77) 3-Ethyltoluene	24.34	105	739318	7.450 ng		99
78) 4-Ethyltoluene	24.39	105	318644	3.177 ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	282687	3.361 ng		99

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:12
Operator : EM
Sample : P1001651-002 (1000ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 08:04:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

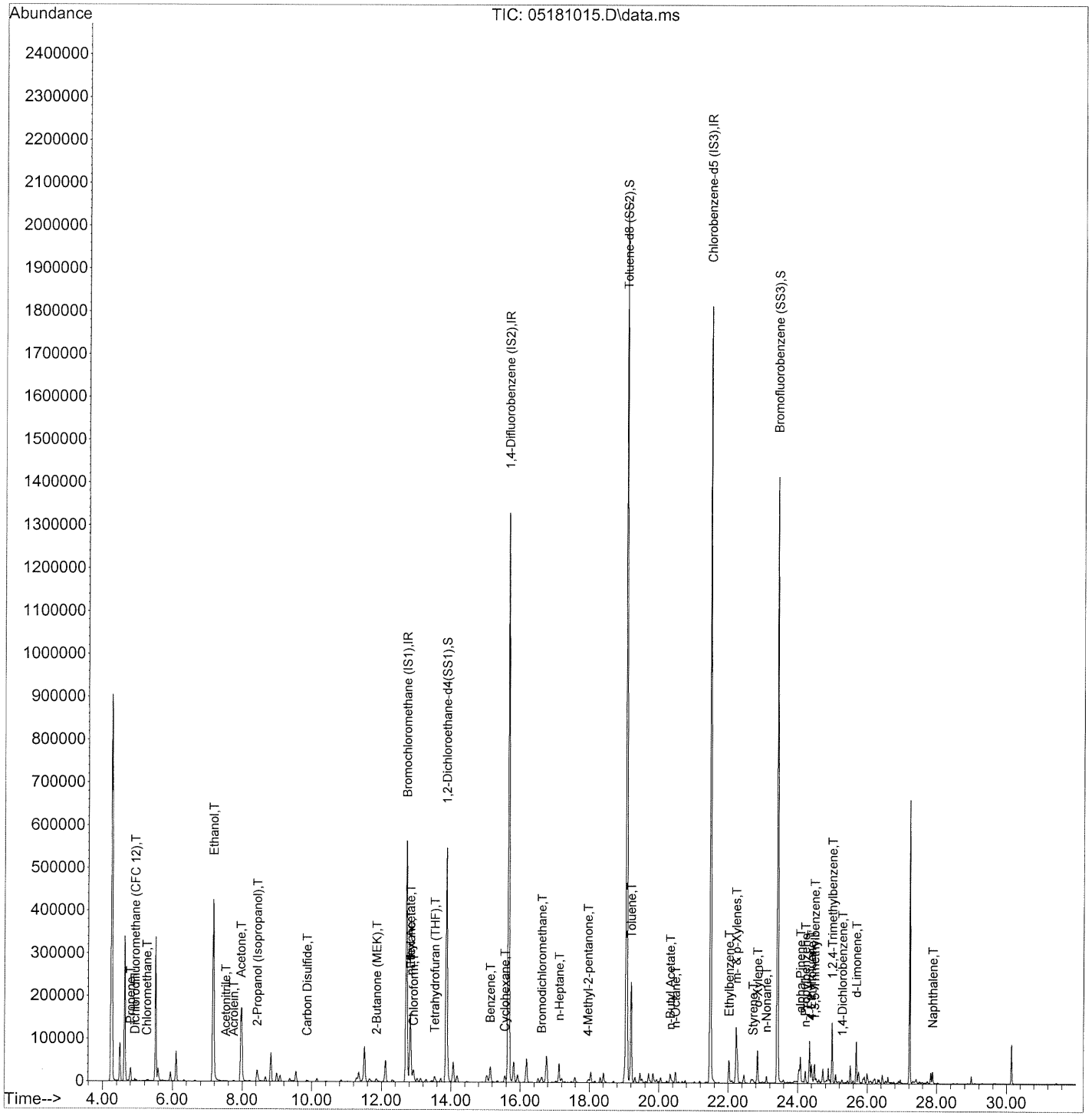
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.67	118	1731	N.D.		
81) 2-Ethyltoluene	24.72	105	260388	2.513 ng		72
82) 1,2,4-Trimethylbenzene	24.99	105	973225	11.071 ng		87
83) n-Decane	25.09	57	83501	1.652 ng		95
84) Benzyl Chloride	25.17	91	1542	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	13695	0.333 ng		98
86) 1,4-Dichlorobenzene	25.27	146	13695	0.314 ng		99
87) sec-Butylbenzene	25.32	105	15649	0.135 ng		94
88) 4-Isopropyltoluene (p-...	25.51	119	80669	0.712 ng		78
89) 1,2,3-Trimethylbenzene	25.51	105	206263	2.290 ng		81
90) 1,2-Dichlorobenzene	25.69	146	99	N.D.		
91) d-Limonene	25.68	68	307991	8.901 ng		95
92) 1,2-Dibromo-3-Chloropr...	26.59	157	88	N.D.		
93) n-Undecane	26.60	57	62711	1.238 ng		84
94) 1,2,4-Trichlorobenzene	27.74	180	1049	N.D.		
95) Naphthalene	27.88	128	201684	2.077 ng		98
96) n-Dodecane	27.83	57	84120	1.619 ng		97
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.44	55	67493	2.329 ng	#	89
99) tert-Butylbenzene	25.42	119	22846	0.257 ng		91
100) n-Butylbenzene	26.01	91	66326	0.735 ng	#	60

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 20 17:26:44 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 20 17:26:44 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	304129	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1542083	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	770364	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	555252	24.534	ng	-0.03
Spiked Amount 25.000			Recovery =	98.12%	✓	
57) Toluene-d8 (SS2)	19.06	98	1817739	24.733	ng	-0.01
Spiked Amount 25.000			Recovery =	98.92%	✓	
73) Bromofluorobenzene (SS3)	23.42	174	468825	24.988	ng	0.00
Spiked Amount 25.000			Recovery =	99.96%	✓	

Target Compounds							Qvalue
2) Propene	4.80	42	4769	0.201	ng	#	10
3) Dichlorodifluoromethan...	4.93	85	5832	0.143	ng	#	93
4) Chloromethane	5.26	50	3264	0.108	ng		83
10) Ethanol	7.17	45	701891	54.269	ng		100
11) Acetonitrile	7.53	41	3134	0.096	ng		99
12) Acrolein	7.75	56	3571	0.354	ng		90
13) Acetone	7.95	58	69374	4.388	ng	#	59
15) 2-Propanol (Isopropanol)	8.43	45	51284	1.046	ng		96
22) Carbon Disulfide	9.86	76	9047	0.122	ng		78
27) 2-Butanone (MEK)	11.86	72	4371	0.333	ng	#	31
30) Ethyl Acetate	12.83	61	29603	3.792	ng		96
31) n-Hexane	12.84	57	38194	0.955	ng		96
32) Chloroform	12.92	83	25578	0.767	ng		100
34) Tetrahydrofuran (THF)	13.53	72	5265	0.415	ng	#	79
41) Benzene	15.14	78	47076	0.547	ng		99
43) Cyclohexane	15.56	84	9239	0.255	ng		90
46) Bromodichloromethane	16.62	83	5948	0.230	ng	#	71
51) n-Heptane	17.13	71	14438	0.587	ng		95
53) 4-Methyl-2-pentanone	17.96	58	1746	0.094	ng	#	61
58) Toluene	19.20	91	221834	2.433	ng		98
62) n-Butyl Acetate	20.33	43	24863	0.509	ng		93
63) n-Octane	20.48	57	5564	0.263	ng		90
66) Ethylbenzene	22.02	91	57269	0.561	ng		96
67) m- & p-Xylenes	22.22	91	134927	1.632	ng		97
69) Styrene	22.71	104	5347	0.092	ng		98
70) o-Xylene	22.85	91	69189	0.785	ng		88
71) n-Nonane	23.10	43	7615	0.159	ng		84
75) alpha-Pinene	24.08	93	25299	0.506	ng	#	46
76) n-Propylbenzene	24.22	91	26558	0.203	ng		95
78) 4-Ethyltoluene	24.40	105	32271	0.324	ng		97

JBA 5/20/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 20 17:26:44 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

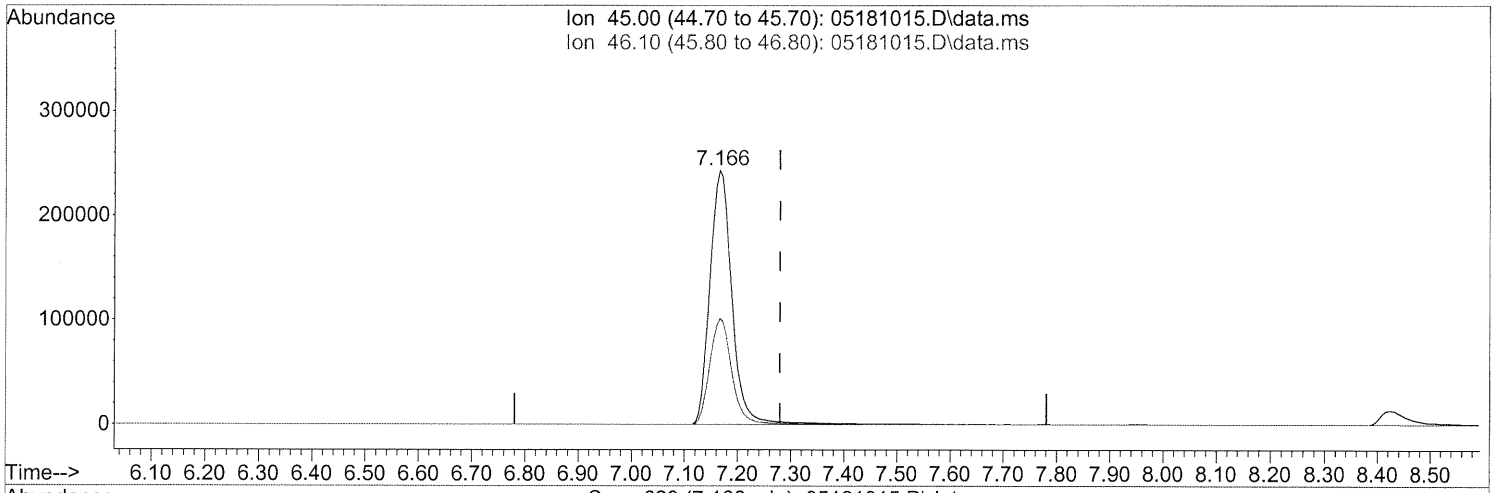
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
79) 1,3,5-Trimethylbenzene	24.49	105	30709	0.368 ng	100
82) 1,2,4-Trimethylbenzene	24.99	105	97519	1.119 ng	84
86) 1,4-Dichlorobenzene	25.28	146	4120	0.095 ng	96
91) d-Limonene	25.68	68	27025	0.788 ng	94
95) Naphthalene	27.88	128	29862	0.310 ng	98

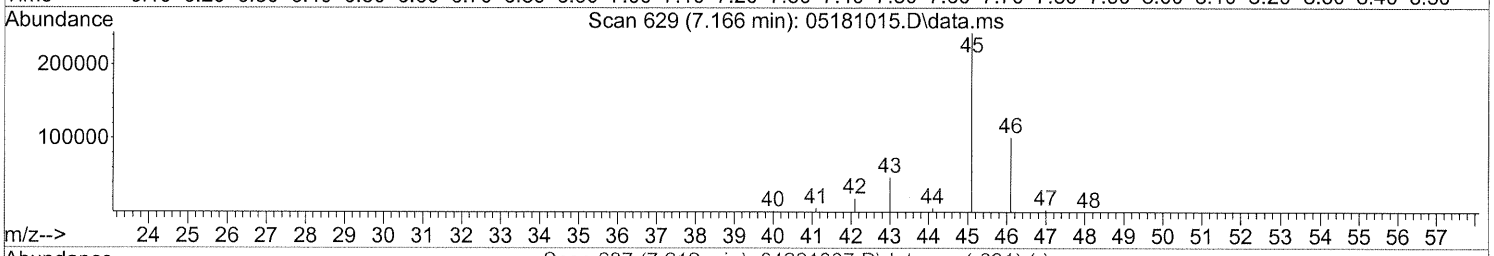
(#) = qualifier out of range (m) = manual integration (+) = signals summed

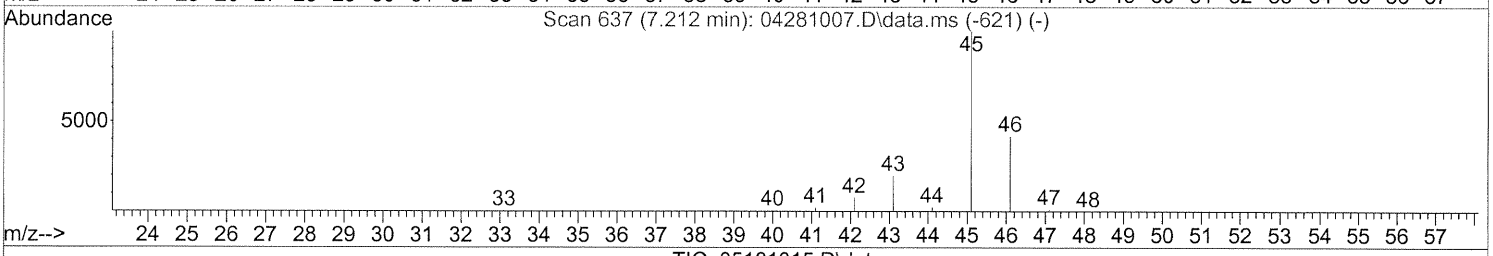
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181015.D\data.ms

(10) Ethanol (T)

7.166min (-0.114) 54.27ng

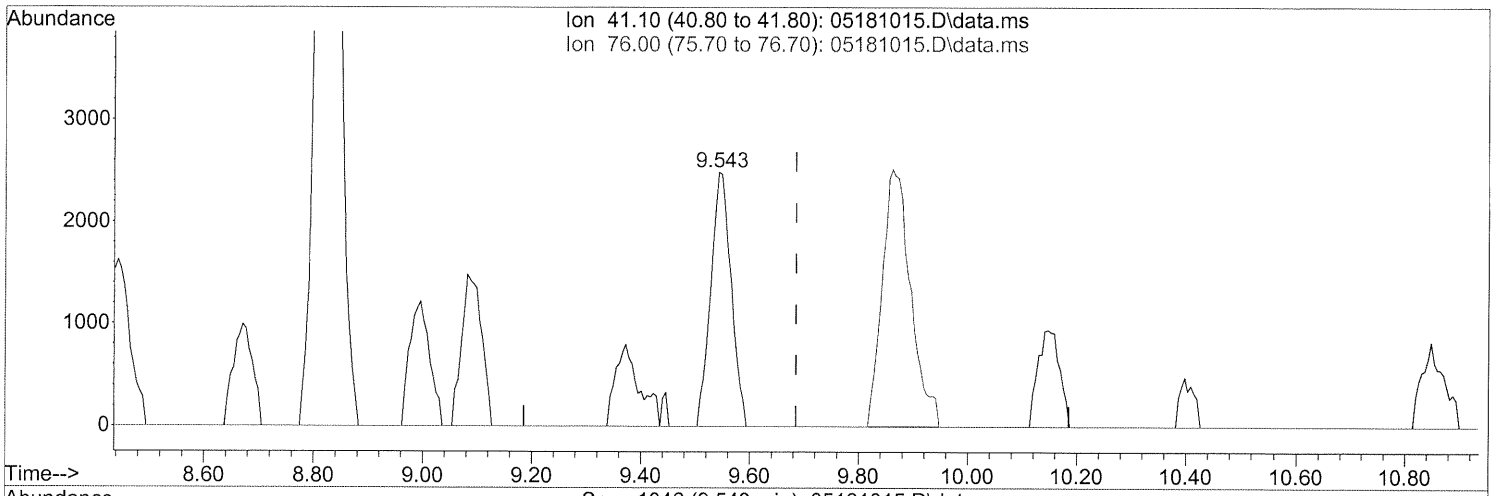
response 701891

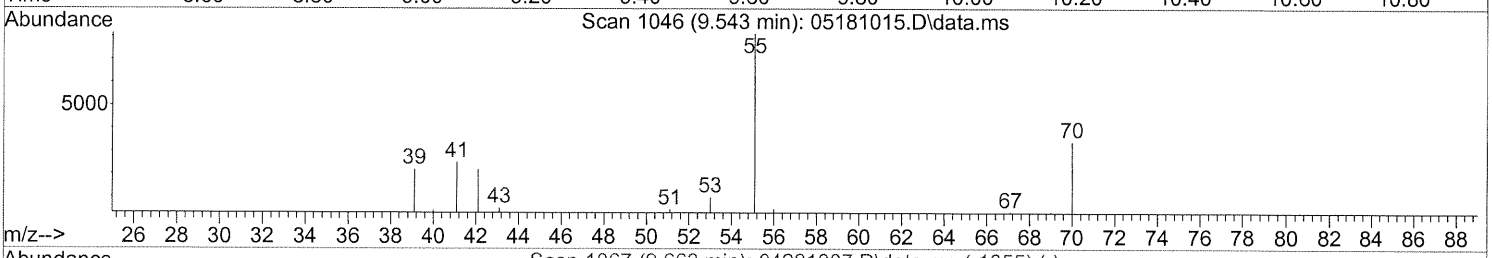
Ion	Exp%	Act%
45.00	100	100
46.10	41.30	41.39
0.00	0.00	0.00
0.00	0.00	0.00

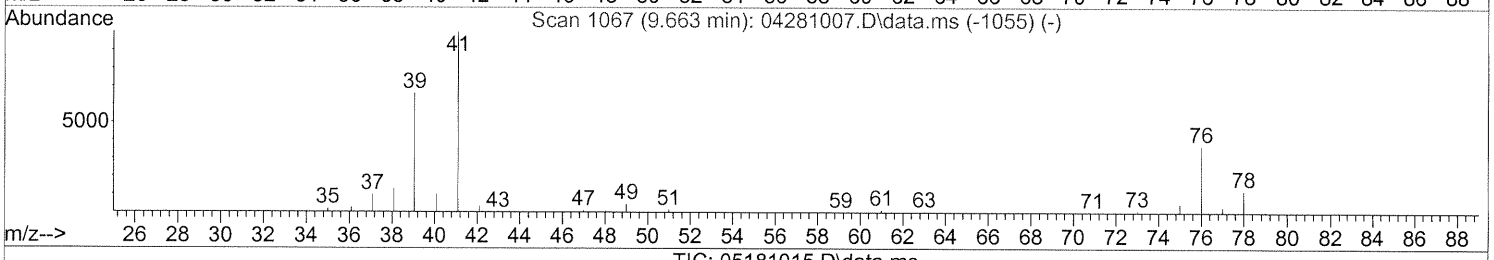
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181015.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.543min (-0.143) 0.24ng

response 6480

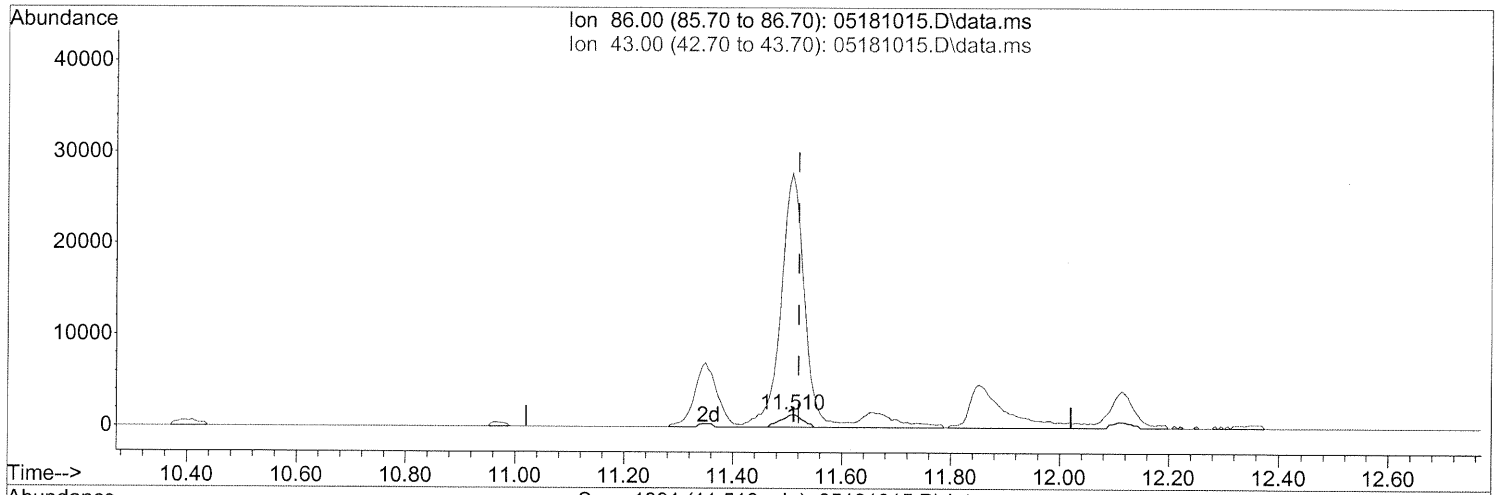
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

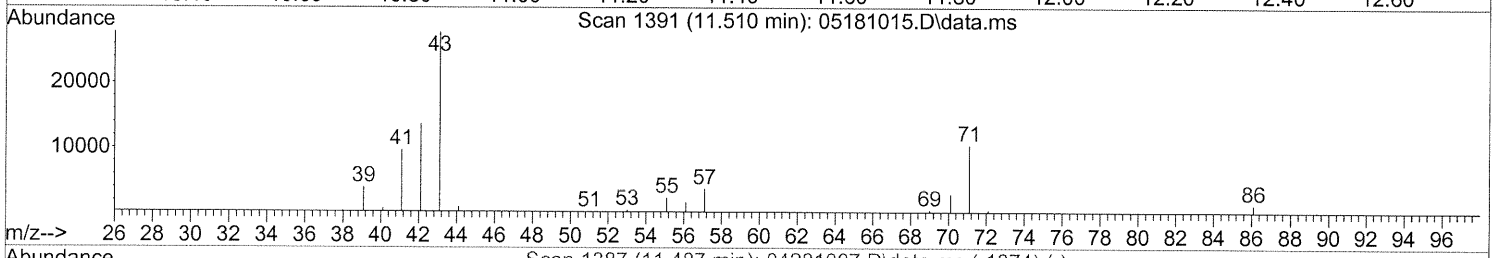
70

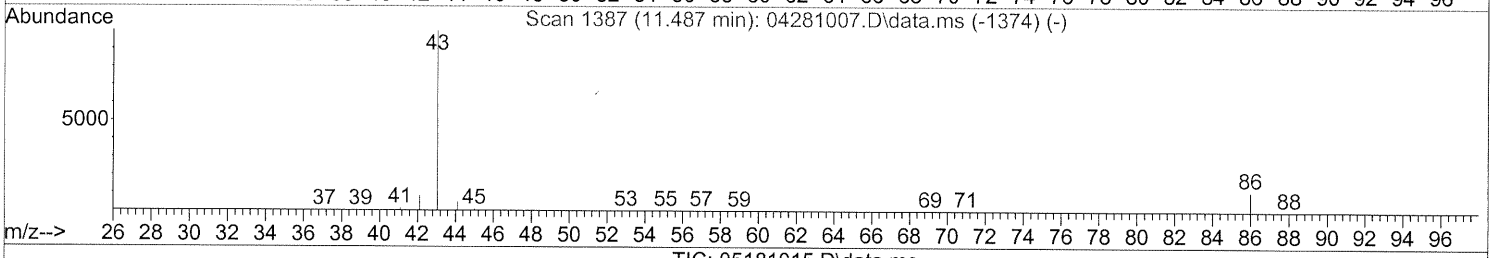
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181015.D\data.ms

(26) Vinyl Acetate (T)

11.510min (-0.011) 0.78ng

response 3717

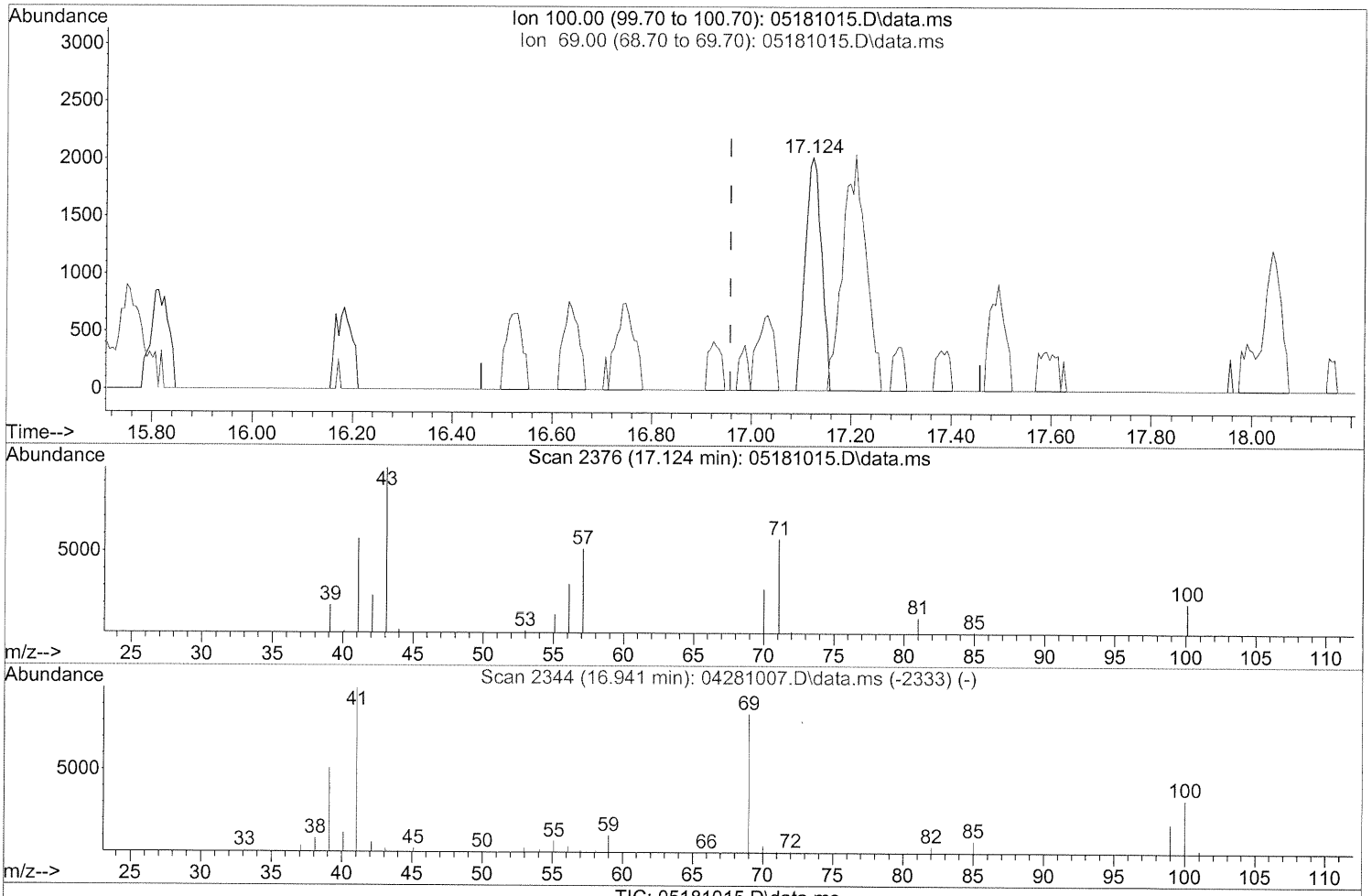
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2160.21#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(50) Methyl Methacrylate (T)

17.124min (+0.166) 0.51ng

response 4601

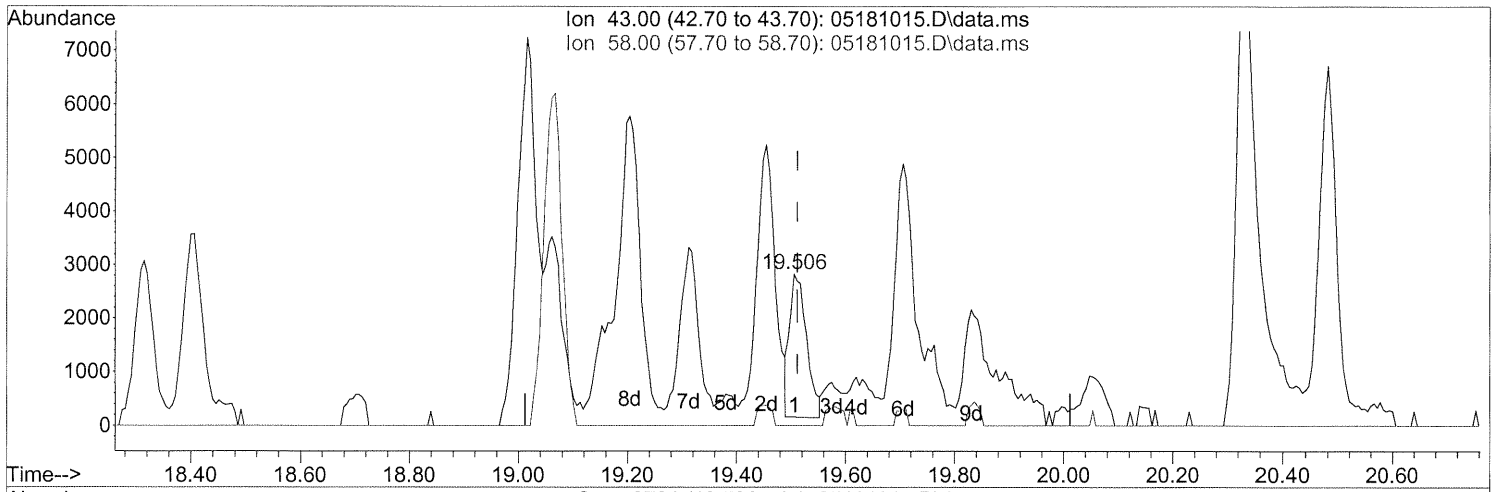
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

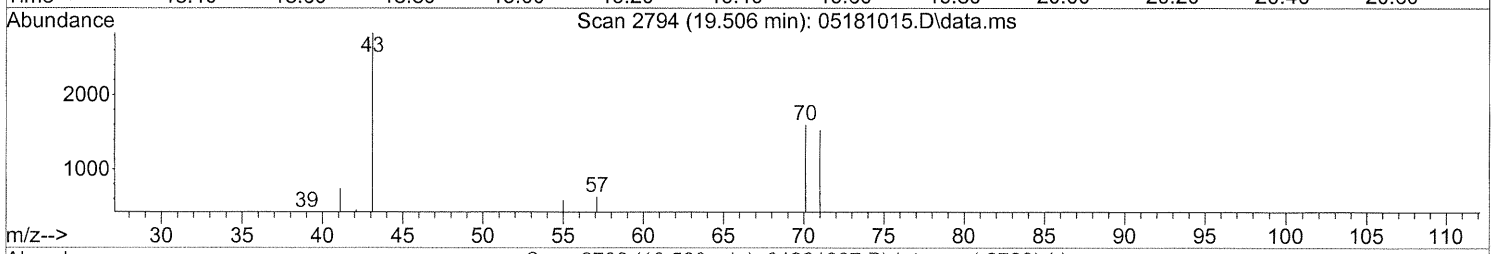
TP

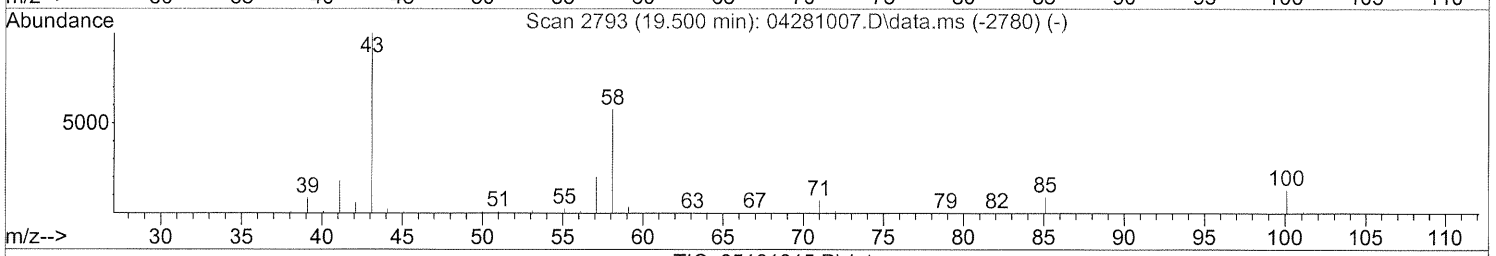
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181015.D\data.ms

(59) 2-Hexanone (T)

19.506min (-0.006) 0.13ng

response 5795

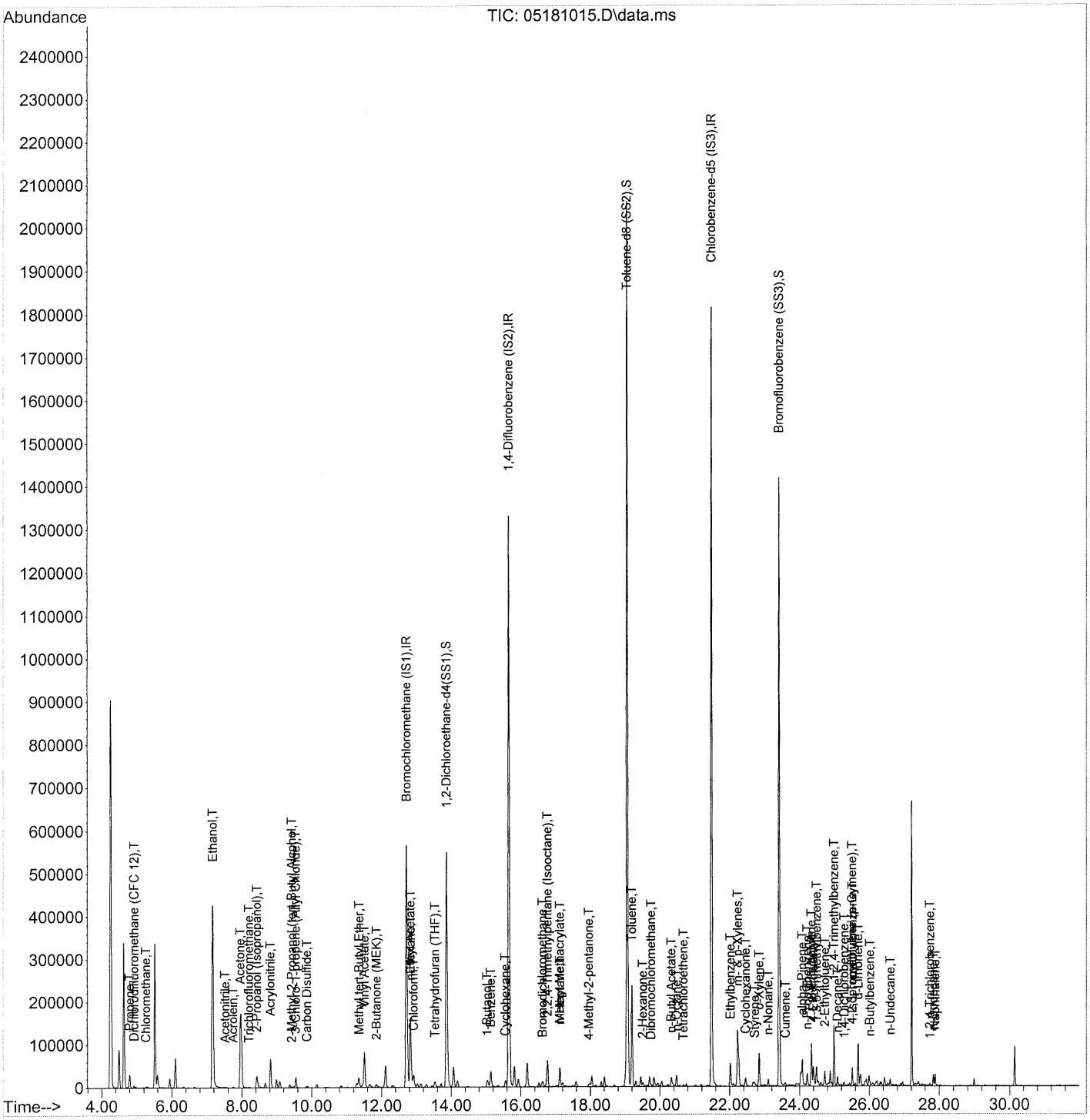
Ion	Exp%	Act%
43.00	100	100
58.00	58.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	304129	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1542083	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	770364	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	555252	24.534	ng		-0.03
Spiked Amount 25.000			Recovery = 98.12%				
57) Toluene-d8 (SS2)	19.06	98	1817739	24.733	ng		-0.01
Spiked Amount 25.000			Recovery = 98.92%				
73) Bromofluorobenzene (SS3)	23.42	174	468825	24.988	ng		0.00
Spiked Amount 25.000			Recovery = 99.96%				
Target Compounds							Qvalue
2) Propene	4.80	42	4769	0.201	ng	#	10
3) Dichlorodifluoromethan...	4.93	85	5832	0.143	ng	#	93
4) Chloromethane	5.26	50	3264	0.108	ng		83
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.17	45	701891	54.269	ng		100
11) Acetonitrile	7.53	41	3134	0.096	ng		99
12) Acrolein	7.75	56	3571	0.354	ng		90
13) Acetone	7.95	58	69374	4.388	ng	#	59
14) Trichlorofluoromethane	8.20	101	2500	0.071	ng		88
15) 2-Propanol (Isopropanol)	8.43	45	51284	1.046	ng		96
16) Acrylonitrile	8.82	53	1340	0.057	ng	#	8
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.43	59	4473	0.088	ng	#	67
19) Methylene Chloride	9.46	84	916	N.D.			
20) 3-Chloro-1-propene (Al...	9.54	41	6480	0.239	ng	#	36
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	9.86	76	9047	0.122	ng		78
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.36	73	5120	0.079	ng		99
26) Vinyl Acetate	11.51	86	3717	0.779	ng	#	1
27) 2-Butanone (MEK)	11.86	72	4371	0.333	ng	#	31
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.84	87	816	N.D.			
30) Ethyl Acetate	12.83	61	29603	3.792	ng		96
31) n-Hexane	12.84	57	38194	0.955	ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.92	83	25578	0.767 ng		100
34) Tetrahydrofuran (THF)	13.53	72	5265	0.415 ng	#	79
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.03	56	15367	0.721 ng		90
41) Benzene	15.14	78	47076	0.547 ng		99
42) Carbon Tetrachloride	15.37	117	411	N.D.		
43) Cyclohexane	15.56	84	9239	0.255 ng		90
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.62	83	5948	0.230 ng	#	71
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.76	57	74624	0.740 ng		94
50) Methyl Methacrylate	17.12	100	4601	0.510 ng	#	1
51) n-Heptane	17.13	71	14438	0.587 ng		95
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.96	58	1746	0.094 ng	#	61
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	221834	2.433 ng		98
59) 2-Hexanone	19.51	43	5795	0.133 ng	#	22
60) Dibromochloromethane	19.75	129	1174	0.065 ng		99
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.33	43	24863	0.509 ng		93
63) n-Octane	20.48	57	5564	0.263 ng		90
64) Tetrachloroethene	20.68	166	1629	0.076 ng		97
65) Chlorobenzene	21.55	112	1303	N.D.		
66) Ethylbenzene	22.02	91	57269	0.561 ng		96
67) m- & p-Xylenes	22.22	91	134927	1.632 ng		97
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.71	104	5347	0.092 ng		98
70) o-Xylene	22.85	91	69189	0.785 ng		88
71) n-Nonane	23.10	43	7615	0.159 ng		84
72) 1,1,2,2-Tetrachloroethane	22.90	83	190	N.D.		
74) Cumene	23.59	105	5518	0.052 ng	#	55
75) alpha-Pinene	24.08	93	25299	0.506 ng	#	46
76) n-Propylbenzene	24.22	91	26558	0.203 ng		95
77) 3-Ethyltoluene	24.34	105	70696	0.718 ng		99
78) 4-Ethyltoluene	24.40	105	32271	0.324 ng		97
79) 1,3,5-Trimethylbenzene	24.49	105	30709	0.368 ng		100

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181015.D
Acq On : 18 May 2010 19:16
Operator : EM
Sample : P1001651-002 dil (100ml)
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 19 08:43:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	632	N.D.		
81) 2-Ethyltoluene	24.73	105	27197	0.265 ng		74
82) 1,2,4-Trimethylbenzene	24.99	105	97519	1.119 ng		84
83) n-Decane	25.09	57	8775	0.175 ng		94
84) Benzyl Chloride	25.17	91	3042	N.D.		
85) 1,3-Dichlorobenzene	25.19	146	1946	N.D.		
86) 1,4-Dichlorobenzene	25.28	146	4120	0.095 ng		96
87) sec-Butylbenzene	25.33	105	2876	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	8890	0.079 ng	#	52
89) 1,2,3-Trimethylbenzene	25.51	105	20111	0.225 ng		80
90) 1,2-Dichlorobenzene	25.69	146	1243	N.D.		
91) d-Limonene	25.68	68	27025	0.788 ng		94
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	5702	0.113 ng	#	74
94) 1,2,4-Trichlorobenzene	27.74	180	2173	0.082 ng	#	92
95) Naphthalene	27.88	128	29862	0.310 ng		98
96) n-Dodecane	27.83	57	9519	0.185 ng		95
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.45	55	6631	0.231 ng		91
99) tert-Butylbenzene	25.43	119	2118	N.D.		
100) n-Butylbenzene	26.01	91	7323	0.082 ng	#	61

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110418** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-003

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00410

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**5.2**	0.81	**3.0**	0.47	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.2**	0.81	**0.44**	0.16	
74-87-3	**Chloromethane**	**0.58**	0.32	**0.28**	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.81	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.063	
106-99-0	1,3-Butadiene	ND	0.32	ND	0.15	
74-83-9	Bromomethane	ND	0.16	ND	0.041	
75-00-3	Chloroethane	ND	0.16	ND	0.061	
64-17-5	**Ethanol**	**850**	81	**450**	43	**D**
75-05-8	Acetonitrile	ND	0.81	ND	0.48	
107-02-8	**Acrolein**	**4.3**	3.2	**1.9**	1.4	
67-64-1	**Acetone**	**58**	8.1	**25**	3.4	
75-69-4	**Trichlorofluoromethane**	**1.2**	0.16	**0.21**	0.029	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**13**	1.6	**5.1**	0.66	
107-13-1	Acrylonitrile	ND	0.81	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.041	
75-09-2	Methylene Chloride	ND	0.81	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	ND	0.051	
76-13-1	**Trichlorotrifluoroethane**	**0.51**	0.16	**0.066**	0.021	
75-15-0	Carbon Disulfide	ND	8.1	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.041	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.040	
1634-04-4	**Methyl tert-Butyl Ether**	**1.3**	0.16	**0.36**	0.045	
108-05-4	Vinyl Acetate	ND	8.1	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.1	ND	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110418** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-003

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00410

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.041	
141-78-6	**Ethyl Acetate**	**65**	0.81	**18**	0.22	
110-54-3	**n-Hexane**	**15**	0.81	**4.3**	0.23	
67-66-3	**Chloroform**	**13**	0.16	**2.6**	0.033	
109-99-9	**Tetrahydrofuran (THF)**	**0.82**	0.81	**0.28**	0.27	
107-06-2	1,2-Dichloroethane	ND	0.16	ND	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.16	ND	0.030	
71-43-2	**Benzene**	**8.7**	0.16	**2.7**	0.050	
56-23-5	**Carbon Tetrachloride**	**0.58**	0.16	**0.092**	0.026	
110-82-7	**Cyclohexane**	**4.1**	0.81	**1.2**	0.23	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.035	
75-27-4	**Bromodichloromethane**	**3.7**	0.16	**0.55**	0.024	
79-01-6	Trichloroethene	ND	0.16	ND	0.030	
123-91-1	1,4-Dioxane	ND	0.81	ND	0.22	
80-62-6	Methyl Methacrylate	ND	0.81	ND	0.20	
142-82-5	**n-Heptane**	**9.6**	0.81	**2.3**	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	ND	0.18	
108-10-1	**4-Methyl-2-pentanone**	**1.9**	0.81	**0.45**	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.81	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.030	
108-88-3	**Toluene**	**39**	0.81	**10**	0.21	
591-78-6	2-Hexanone	ND	0.81	ND	0.20	
124-48-1	**Dibromochloromethane**	**1.4**	0.16	**0.16**	0.019	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.021	
123-86-4	**n-Butyl Acetate**	**9.0**	0.81	**1.9**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110418**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00410

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17 - 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**4.3**	0.81	**0.92**	0.17	
127-18-4	**Tetrachloroethene**	**1.3**	0.16	**0.20**	0.024	
108-90-7	Chlorobenzene	ND	0.16	ND	0.035	
100-41-4	**Ethylbenzene**	**8.6**	0.81	**2.0**	0.19	
179601-23-1	**m,p-Xylenes**	**26**	0.81	**5.9**	0.19	
75-25-2	Bromoform	ND	0.81	ND	0.078	
100-42-5	**Styrene**	**1.3**	0.81	**0.30**	0.19	
95-47-6	**o-Xylene**	**11**	0.81	**2.5**	0.19	
111-84-2	**n-Nonane**	**2.3**	0.81	**0.44**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.023	
98-82-8	**Cumene**	**0.81**	0.81	**0.16**	0.16	
80-56-8	**alpha-Pinene**	**8.2**	0.81	**1.5**	0.14	
103-65-1	**n-Propylbenzene**	**3.2**	0.81	**0.65**	0.16	
622-96-8	**4-Ethyltoluene**	**5.0**	0.81	**1.0**	0.16	
108-67-8	**1,3,5-Trimethylbenzene**	**5.2**	0.81	**1.1**	0.16	
95-63-6	**1,2,4-Trimethylbenzene**	**17**	0.81	**3.6**	0.16	
100-44-7	Benzyl Chloride	ND	0.81	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.16	ND	0.027	
106-46-7	**1,4-Dichlorobenzene**	**0.56**	0.16	**0.093**	0.027	
95-50-1	1,2-Dichlorobenzene	ND	0.16	ND	0.027	
5989-27-5	**d-Limonene**	**14**	0.81	**2.5**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.81	ND	0.11	
91-20-3	**Naphthalene**	**2.8**	0.81	**0.54**	0.15	
87-68-3	Hexachlorobutadiene	ND	0.81	ND	0.075	

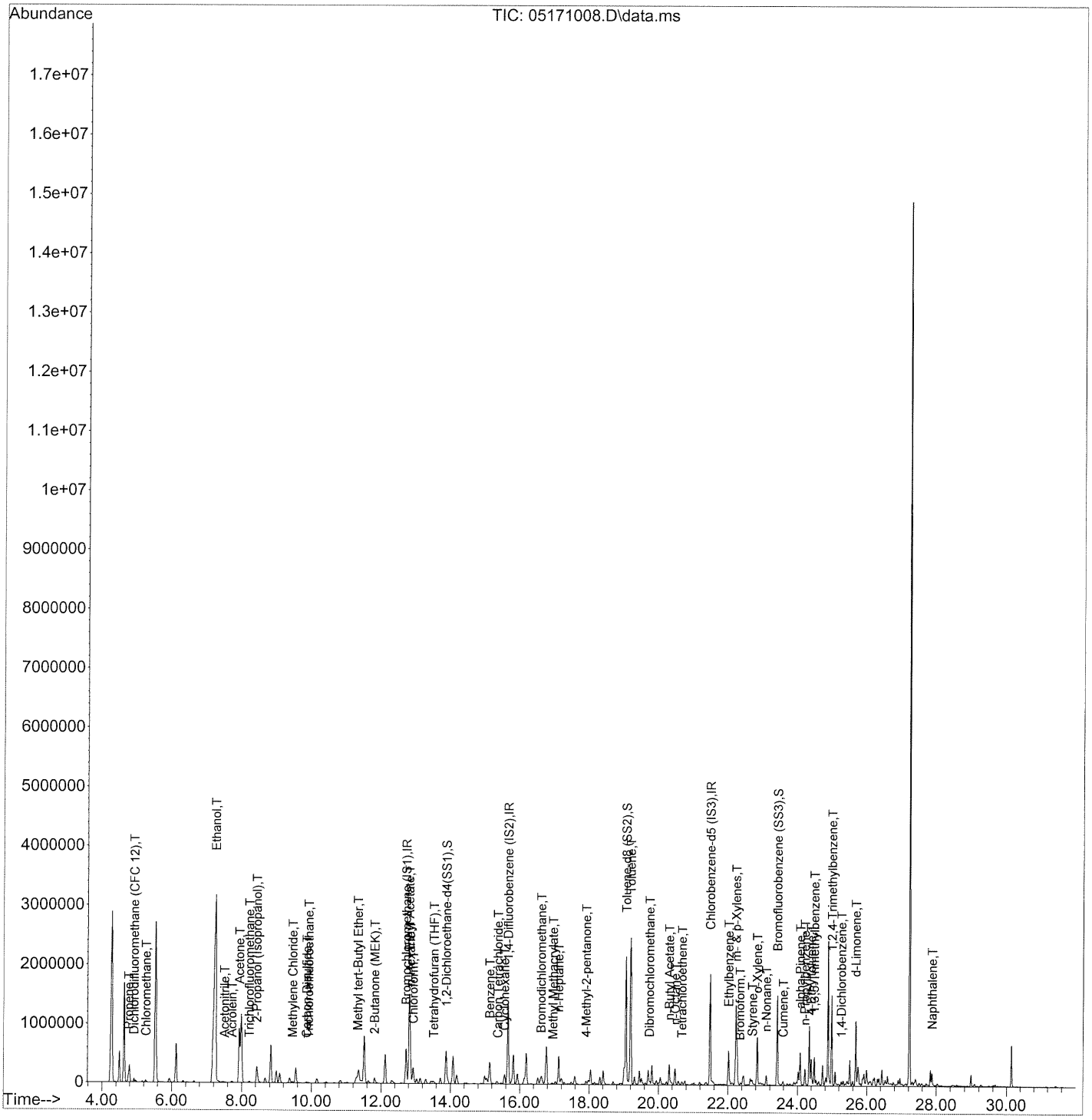
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 15:35:33 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 15:35:33 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	312517	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1577742	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	779290	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.88	65	559731	24.068	ng	-0.03
Spiked Amount 25.000			Recovery =	96.28%	✓	
57) Toluene-d8 (SS2)	19.07	98	1843407	24.795	ng	0.00
Spiked Amount 25.000			Recovery =	99.20%	✓	
73) Bromofluorobenzene (SS3)	23.42	174	490224	25.829	ng	0.00
Spiked Amount 25.000			Recovery =	103.32%	✓	
Target Compounds						Qvalue
2) Propene	4.77	42	78518	3.221	ng M #	35
3) Dichlorodifluoromethan...	4.93	85	56991	1.363	ng	99
4) Chloromethane	5.26	50	11093	0.359	ng	99
10) Ethanol	7.25	45	7780852	585.453	ng su dil	99
11) Acetonitrile	7.51	41	16333	0.486	ng	86
12) Acrolein	7.72	56	27758	2.679	ng	96
13) Acetone	7.93	58	590041	36.317	ng #	48
14) Trichlorofluoromethane	8.22	101	26183	0.723	ng	99
15) 2-Propanol (Isopropanol)	8.43	45	393013	7.802	ng	98
19) Methylene Chloride	9.46	84	5362	0.251	ng	99
21) Trichlorotrifluoroethane	9.91	151	4840	0.316	ng	95
22) Carbon Disulfide	9.86	76	41944	0.550	ng	99
25) Methyl tert-Butyl Ether	11.33	73	53843	0.809	ng	93
27) 2-Butanone (MEK)	11.82	72	46855	3.472	ng	96
30) Ethyl Acetate	12.81	61	321885	40.122	ng	96
31) n-Hexane	12.84	57	387374	9.430	ng	98
32) Chloroform	12.93	83	274436	8.006	ng	99
34) Tetrahydrofuran (THF)	13.52	72	6615	0.507	ng #	1
41) Benzene	15.13	78	478573	5.434	ng	100
42) Carbon Tetrachloride	15.37	117	8448	0.360	ng	99
43) Cyclohexane	15.56	84	93851	2.536	ng	96
46) Bromodichloromethane	16.62	83	60686	2.297	ng	76
50) Methyl Methacrylate	16.96	100	2252	0.244	ng #	1
51) n-Heptane	17.12	71	150469	5.976	ng	95
53) 4-Methyl-2-pentanone	17.92	58	21932	1.153	ng	90
58) Toluene	19.20	91	2243865	24.330	ng	99
60) Dibromochloromethane	19.74	129	15580	0.853	ng	100
62) n-Butyl Acetate	20.31	43	277907	5.620	ng	95
63) n-Octane	20.48	57	56898	2.659	ng	92
64) Tetrachloroethene	20.68	166	17992	0.833	ng	99

LDM 5/20/10

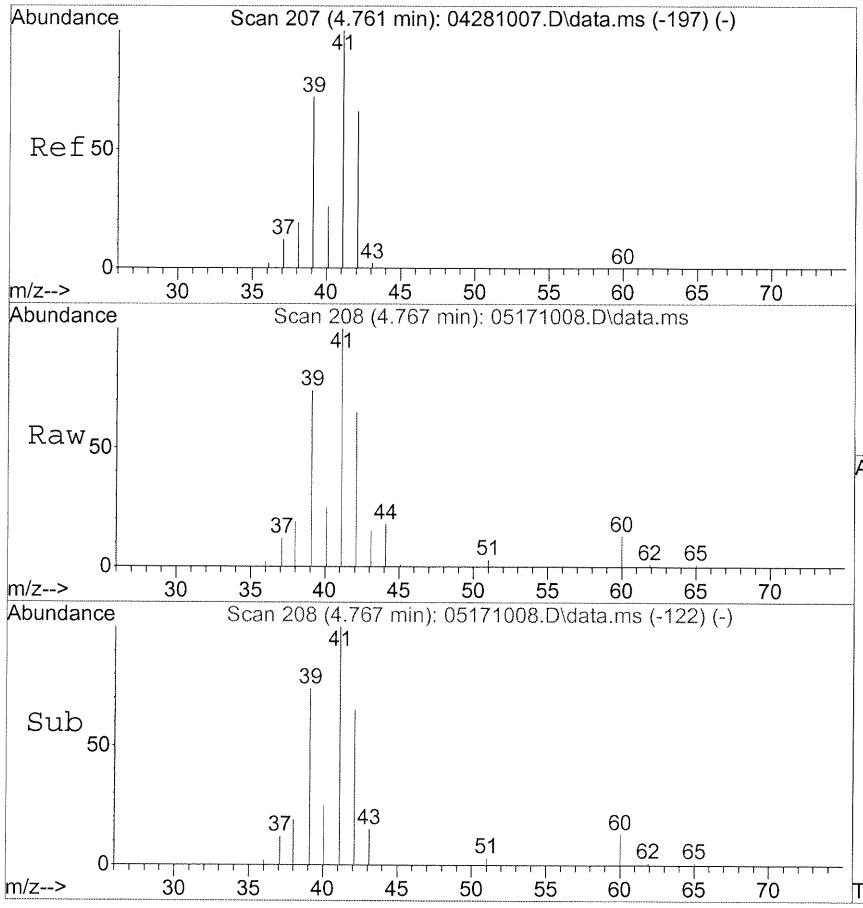
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 15:35:33 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) Ethylbenzene	22.01	91	553470	5.363	ng	97
67) m- & p-Xylenes	22.22	91	1329543	15.893	ng	98
68) Bromoform	22.34	173	1891	0.125	ng	89
69) Styrene	22.70	104	47014	0.797	ng	99
70) o-Xylene	22.84	91	600901	6.742	ng	97
71) n-Nonane	23.10	43	68904	1.424	ng	94
74) Cumene	23.59	105	54149	0.502	ng	96
75) alpha-Pinene	24.08	93	256642	5.076	ng	93
76) n-Propylbenzene	24.21	91	261924	1.983	ng	96
78) 4-Ethyltoluene	24.39	105	309442	3.075	ng	99
79) 1,3,5-Trimethylbenzene	24.48	105	270783	3.210	ng	98
82) 1,2,4-Trimethylbenzene	24.99	105	956402	10.845	ng	87
86) 1,4-Dichlorobenzene	25.27	146	15249	0.349	ng	99
91) d-Limonene	25.68	68	294281	8.478	ng	95
95) Naphthalene	27.88	128	170405	1.749	ng	99

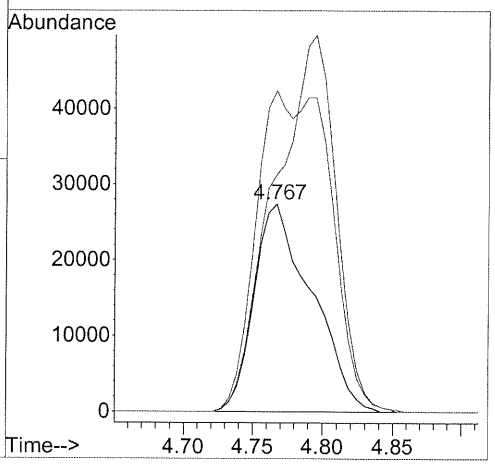
(#) = qualifier out of range (m) = manual integration (+) = signals summed

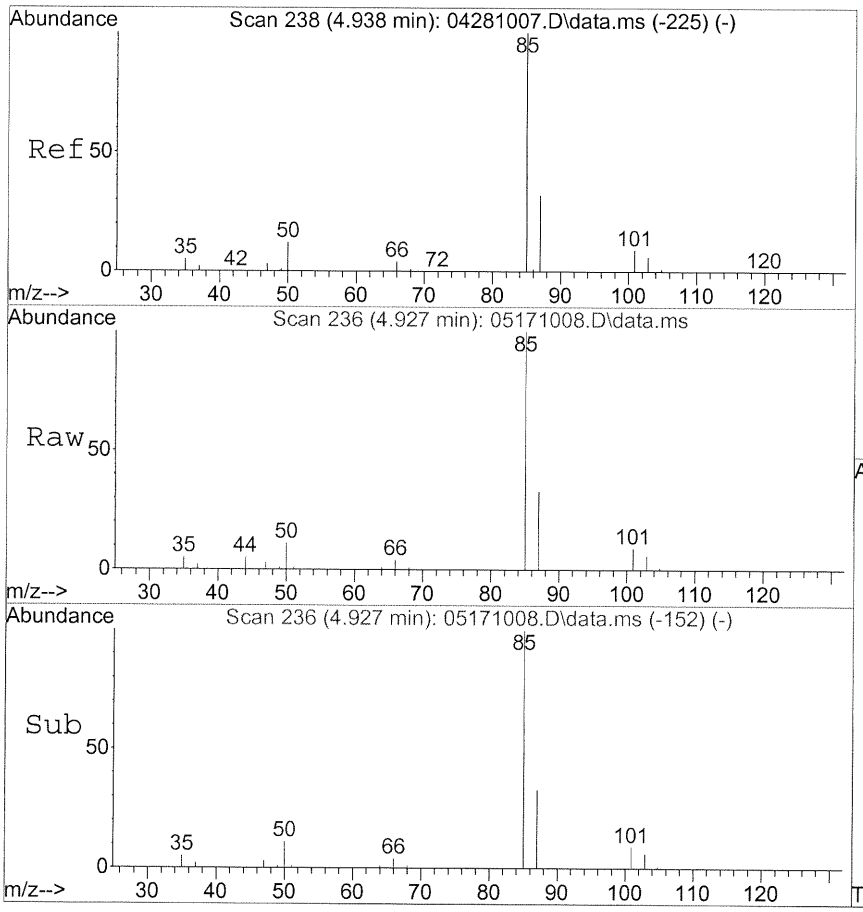


#2
Propene
Concen: 3.22 ng
RT: 4.77 min Scan# 208
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 42 Resp: 78518

Ion	Ratio	Lower	Upper
42	100		
39	0.0	88.4	128.4#
41	197.5	129.9	169.9#

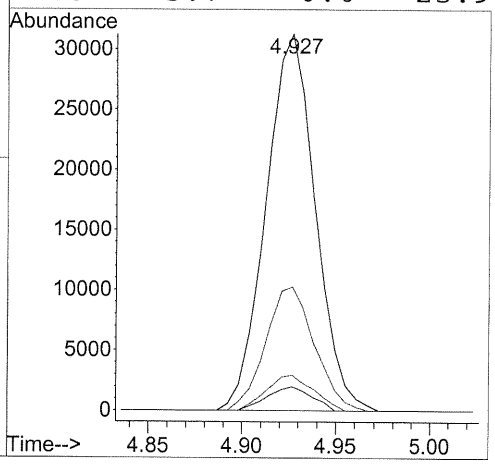


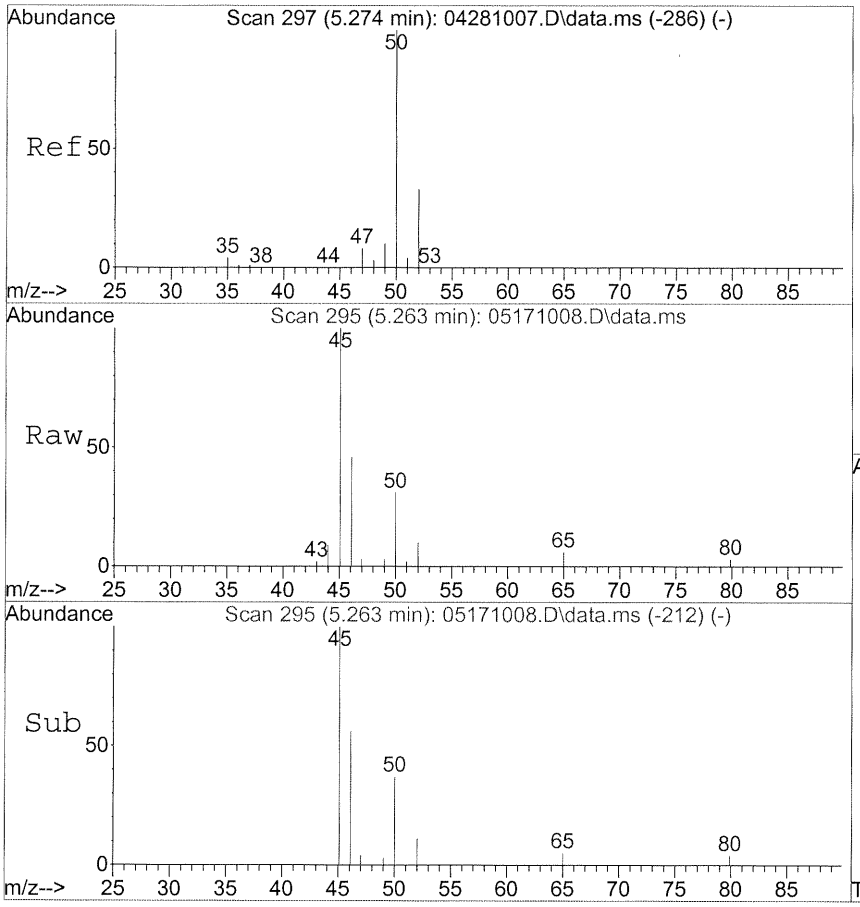


#3
Dichlorodifluoromethane (CFC
Concen: 1.36 ng
RT: 4.93 min Scan# 236
Delta R.T. -0.023 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 85 Resp: 56991

Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.6	52.6
101	8.9	0.0	29.3
103	5.7	0.0	25.9

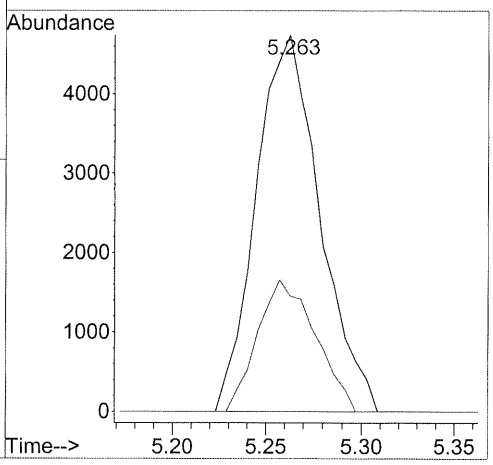


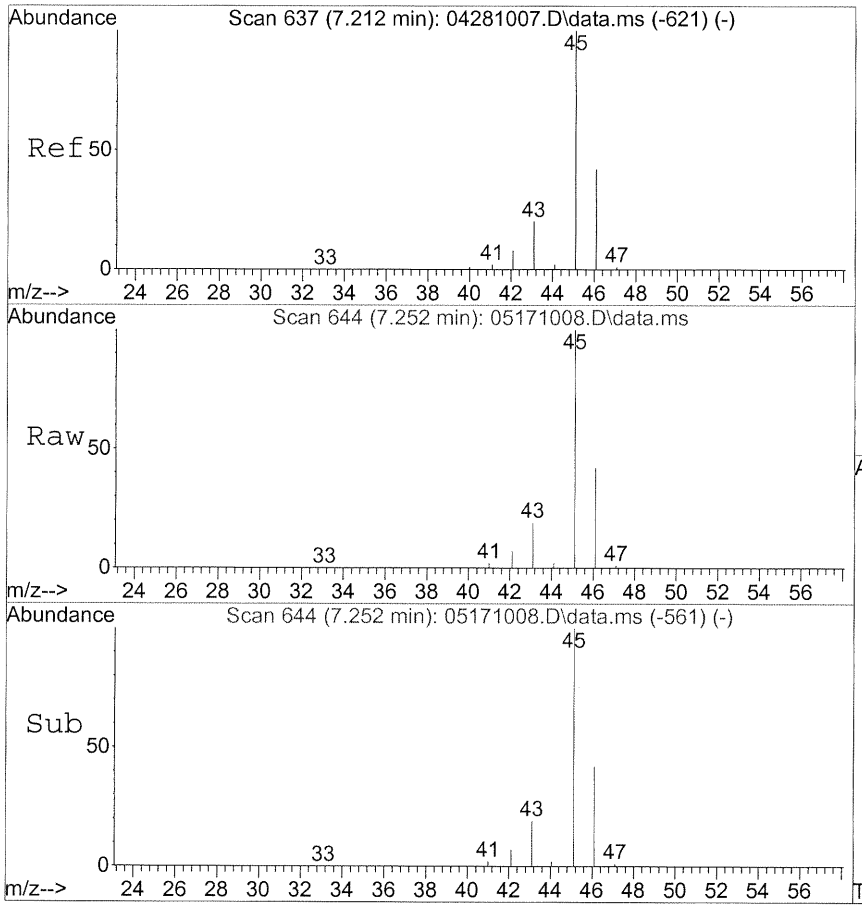


#4
Chloromethane
Concen: 0.36 ng
RT: 5.26 min Scan# 295
Delta R.T. -0.029 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 50 Resp: 11093

Ion	Ratio	Lower	Upper
50	100		
52	31.7	12.3	52.3

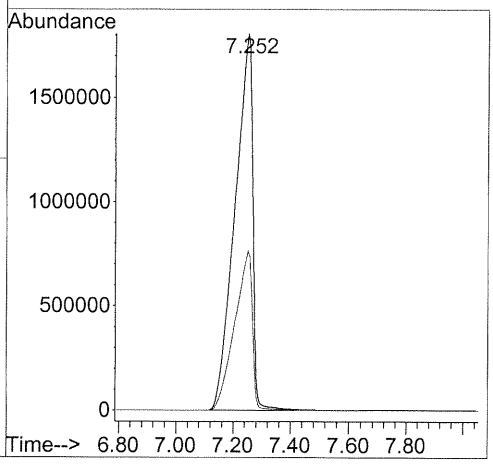


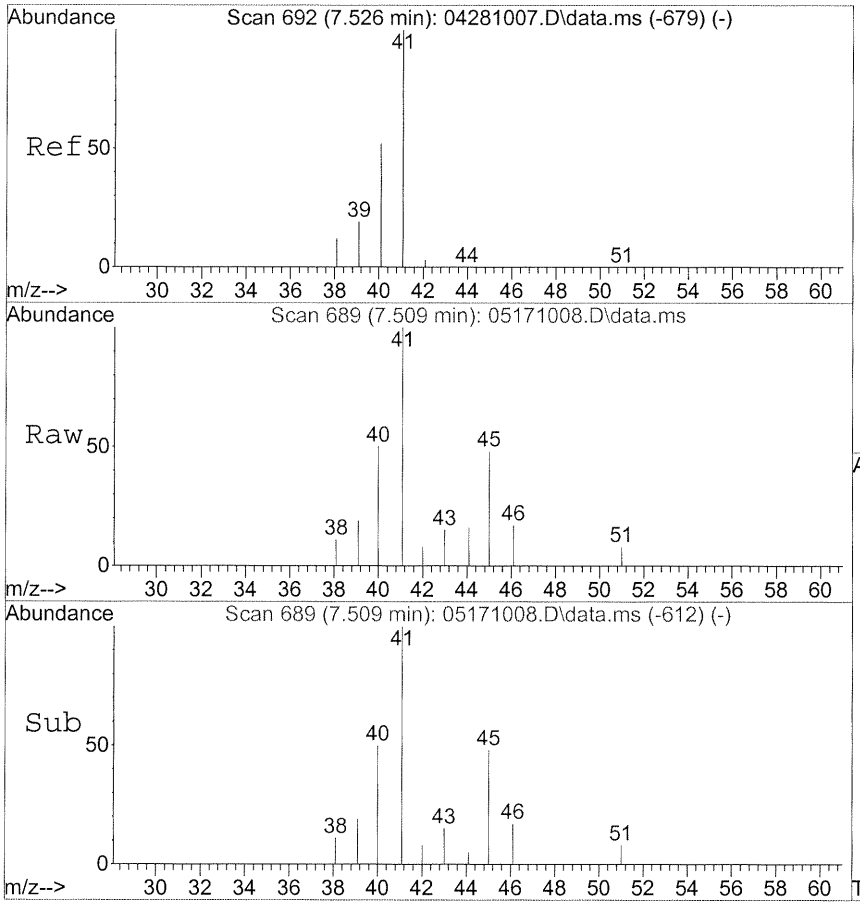


#10
Ethanol
Concen: 585.45 ng
RT: 7.25 min Scan# 644
Delta R.T. -0.028 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 45 Resp: 7780852

Ion	Ratio	Lower	Upper
45	100		
46	42.0	21.3	61.3

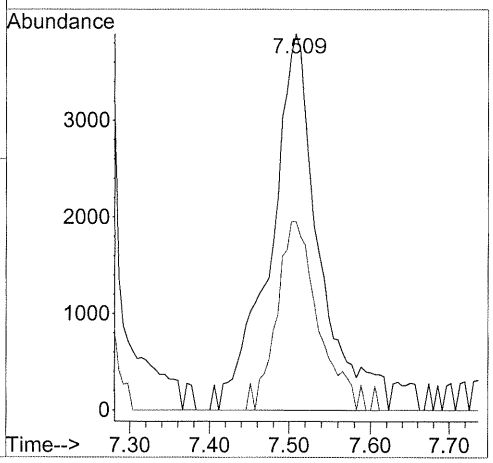


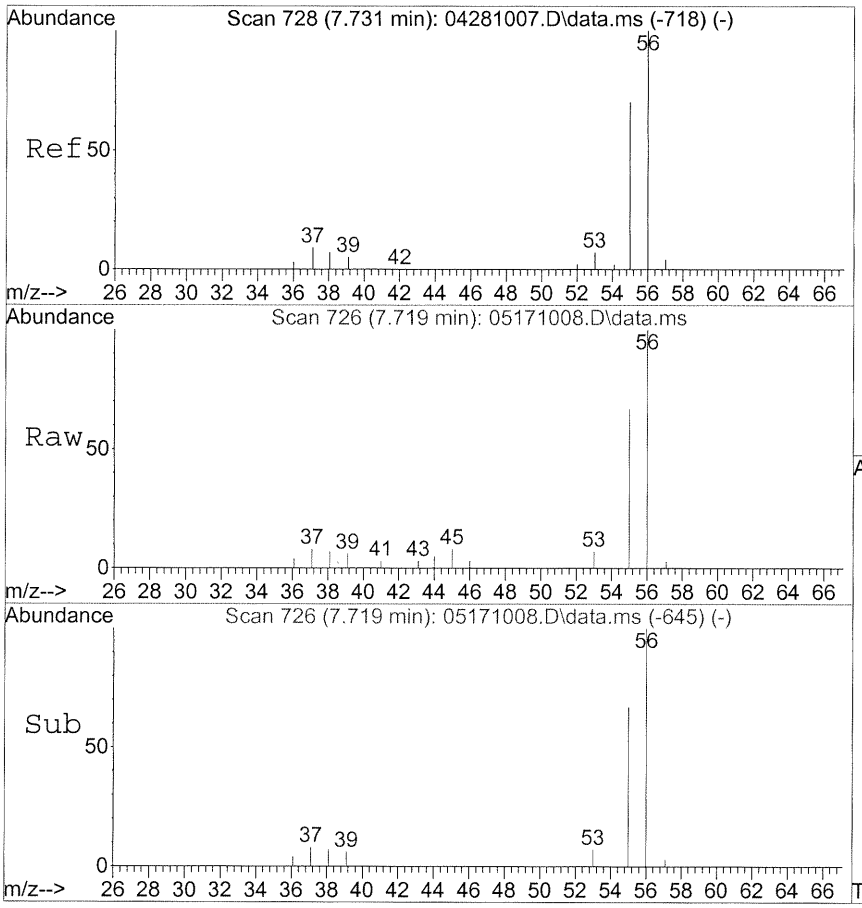


#11
Acetonitrile
Concen: 0.49 ng
RT: 7.51 min Scan# 689
Delta R.T. -0.063 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 41 Resp: 16333

Ion	Ratio	Lower	Upper
41	100		
40	43.1	33.2	73.2

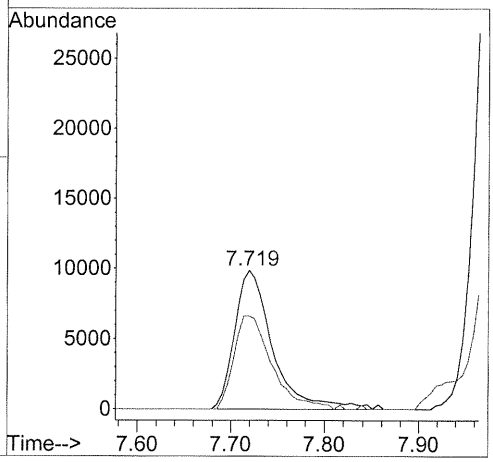


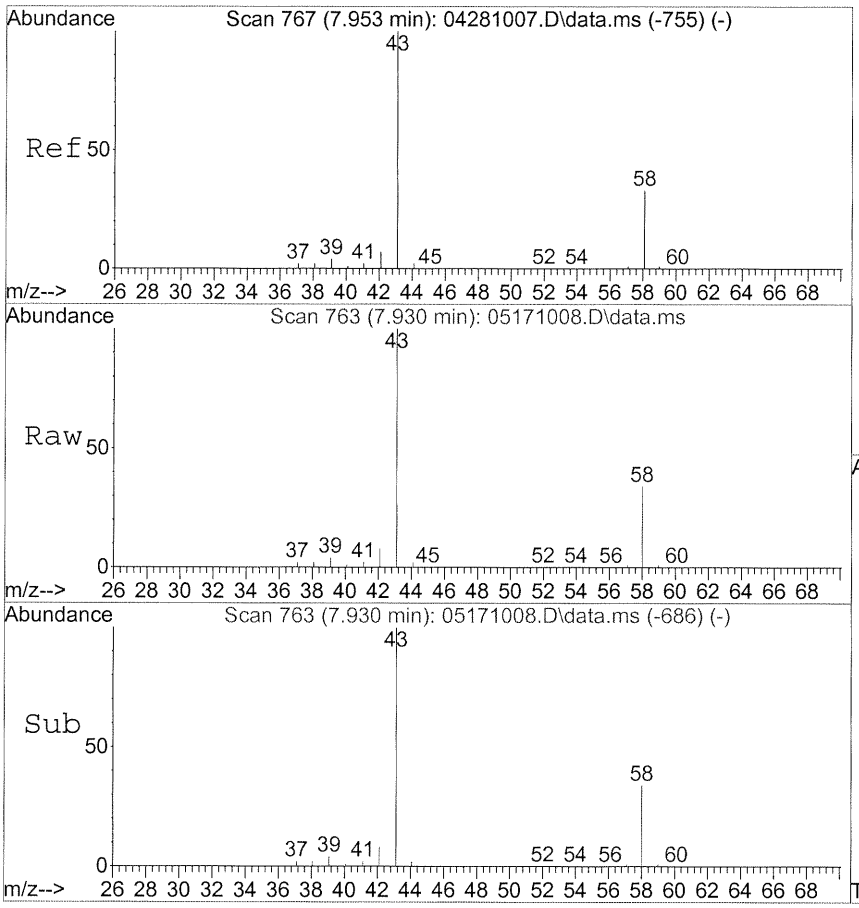


#12
Acrolein
Concen: 2.68 ng
RT: 7.72 min Scan# 726
Delta R.T. -0.040 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 56 Resp: 27758

Ion	Ratio	Lower	Upper
56	100		
55	67.1	50.2	90.2

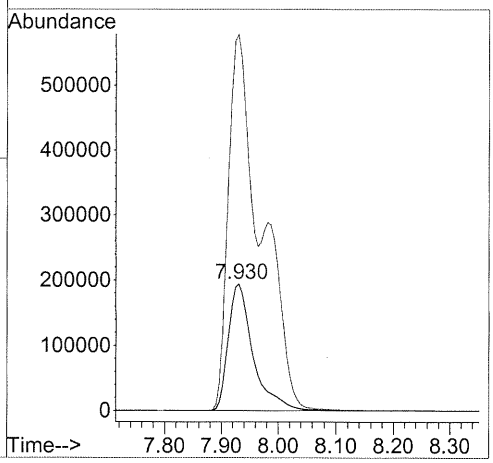


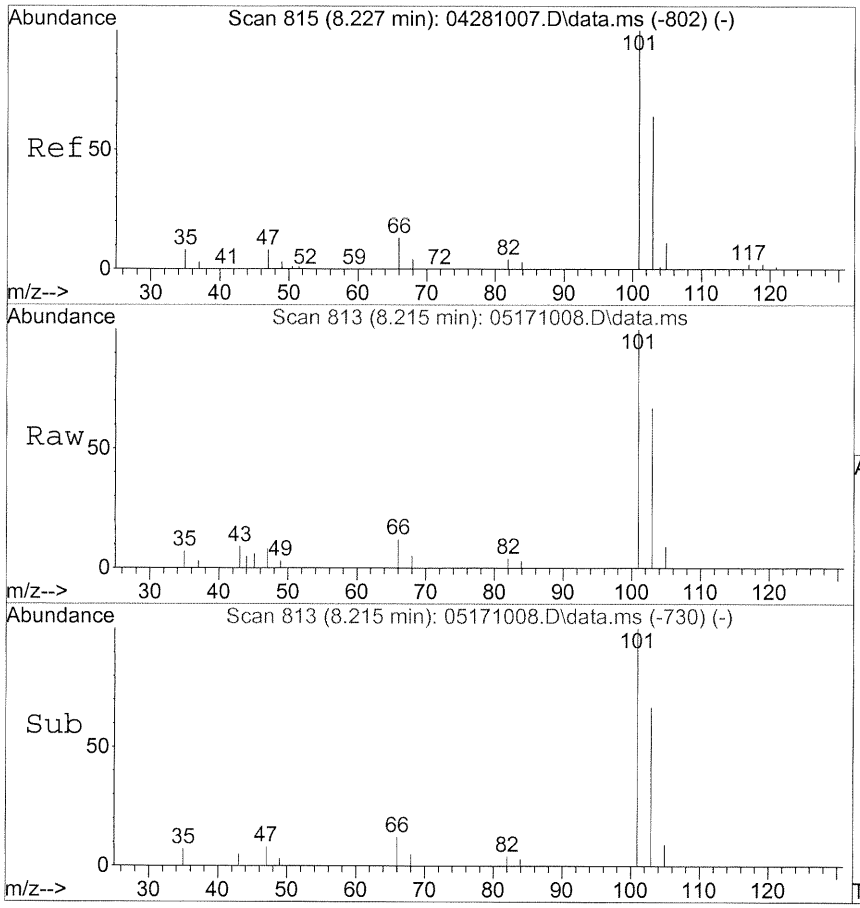


#13
Acetone
Concen: 36.32 ng
RT: 7.93 min Scan# 763
Delta R.T. -0.063 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 58 Resp: 590041

Ion	Ratio	Lower	Upper
58	100		
43	394.7	264.2	324.2#

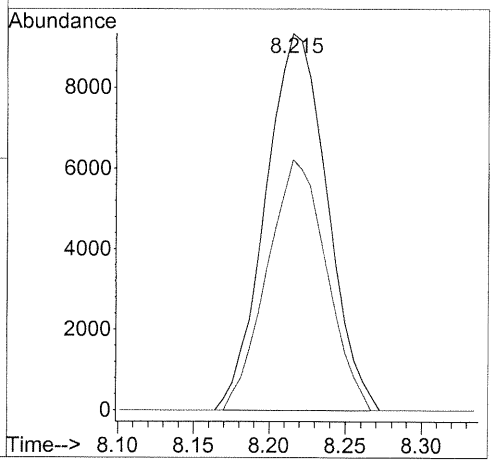


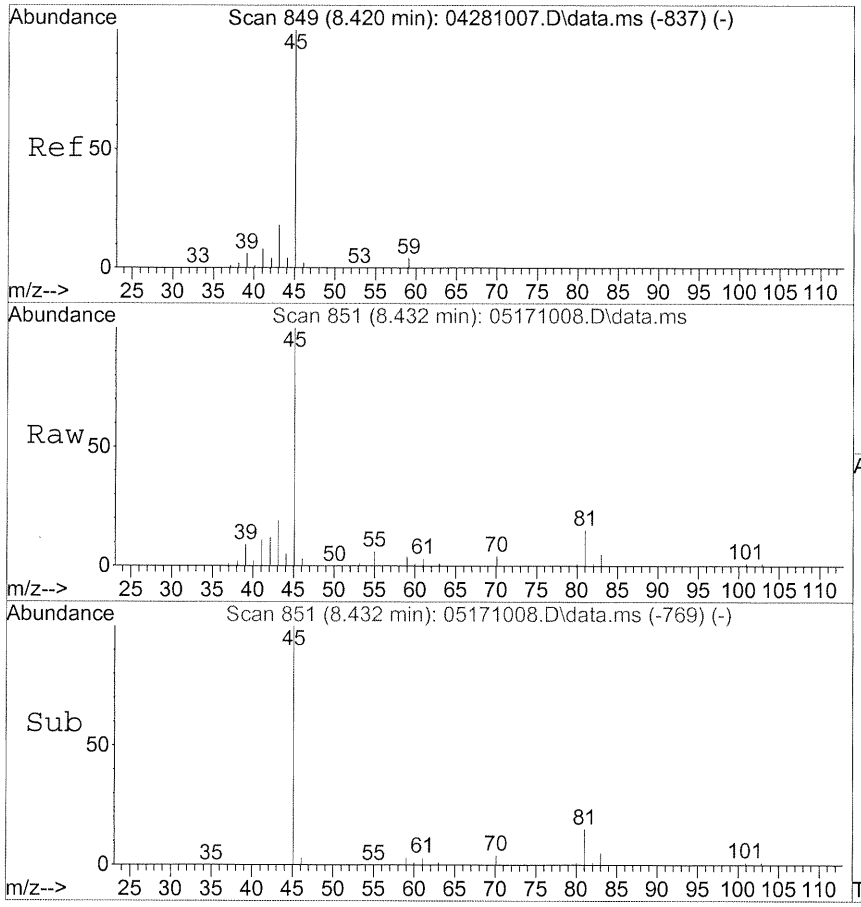


#14
Trichlorofluoromethane
Concen: 0.72 ng
RT: 8.22 min Scan# 813
Delta R.T. -0.028 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:101 Resp: 26183

Ion	Ratio	Lower	Upper
101	100		
103	64.1	44.6	84.6

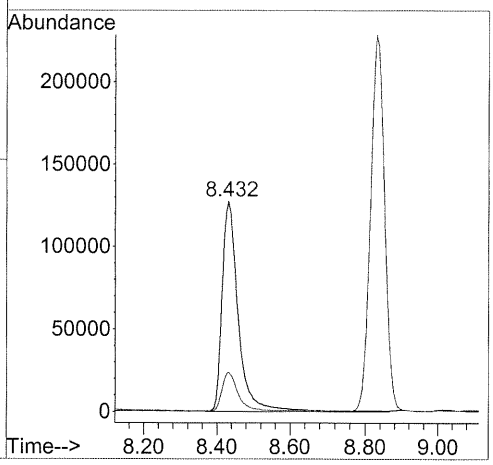


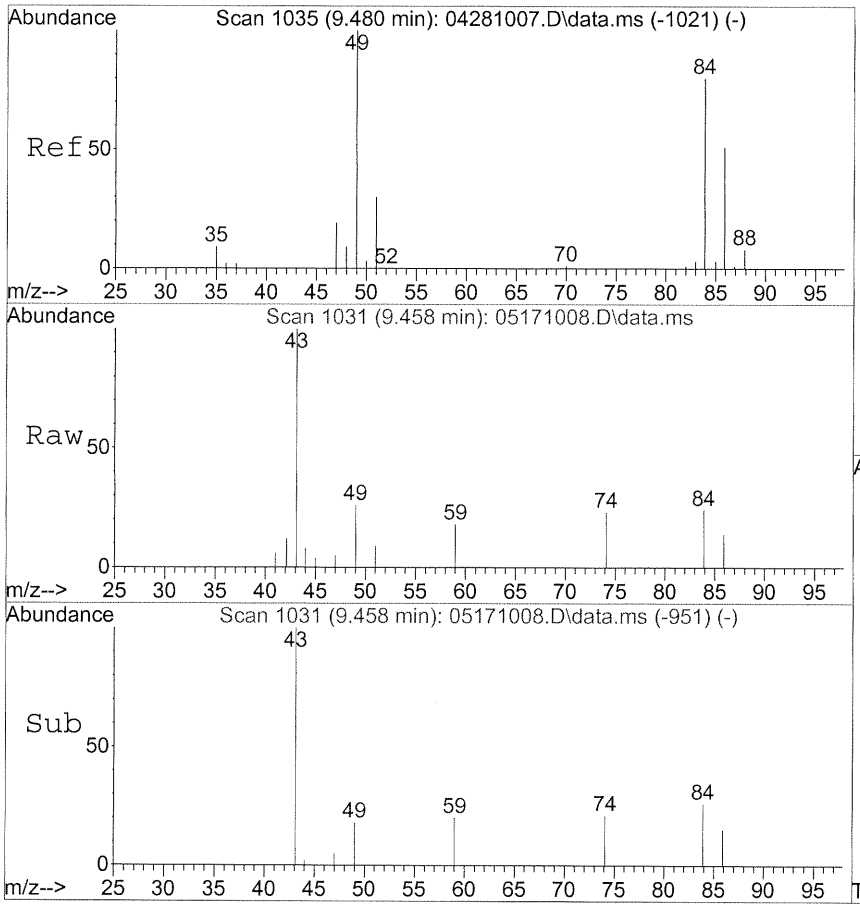


#15
2-Propanol (Isopropanol)
Concen: 7.80 ng
RT: 8.43 min Scan# 851
Delta R.T. -0.034 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 45 Resp: 393013

Ion	Ratio	Lower	Upper
45	100		
43	17.5	0.0	38.5

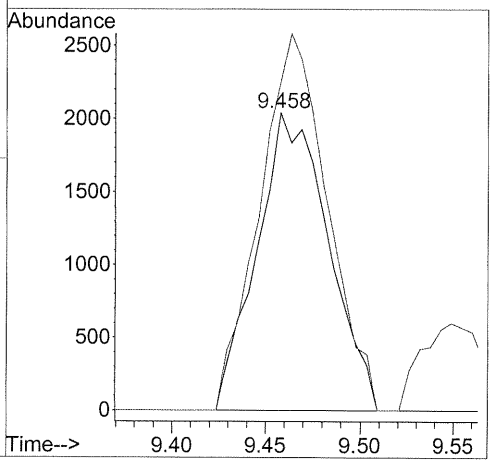


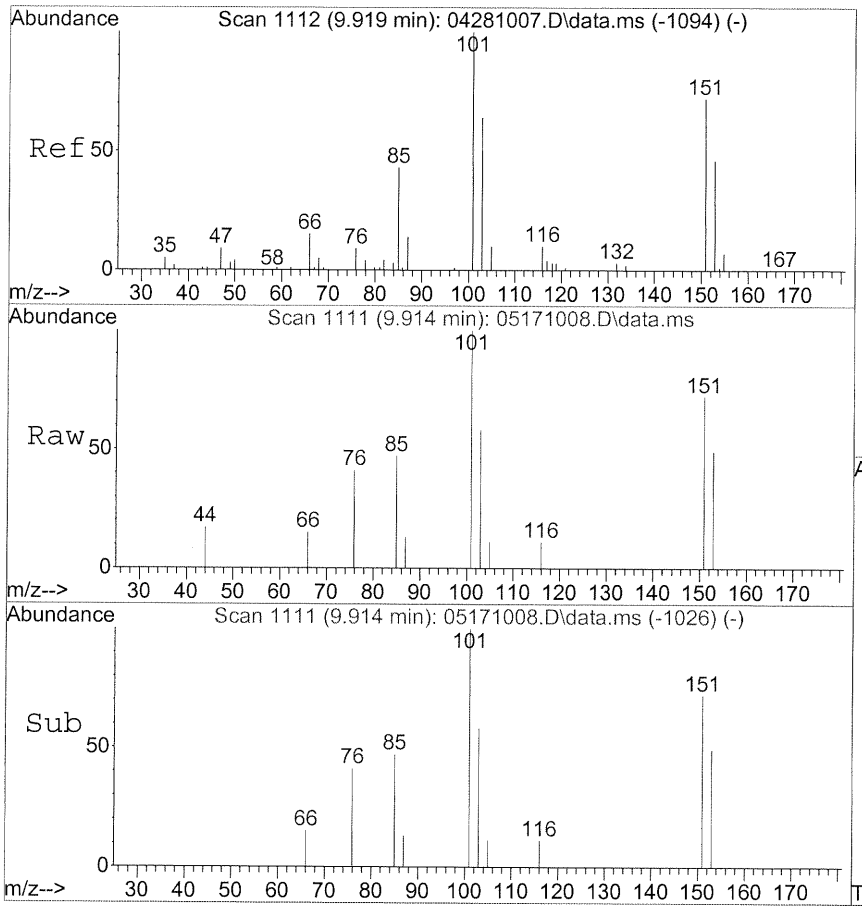


#19
Methylene Chloride
Concen: 0.25 ng
RT: 9.46 min Scan# 1031
Delta R.T. -0.046 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 84 Resp: 5362

Ion	Ratio	Lower	Upper
84	100		
49	120.5	94.5	144.5

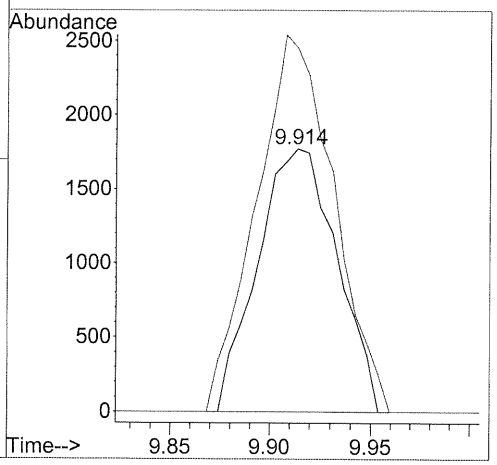


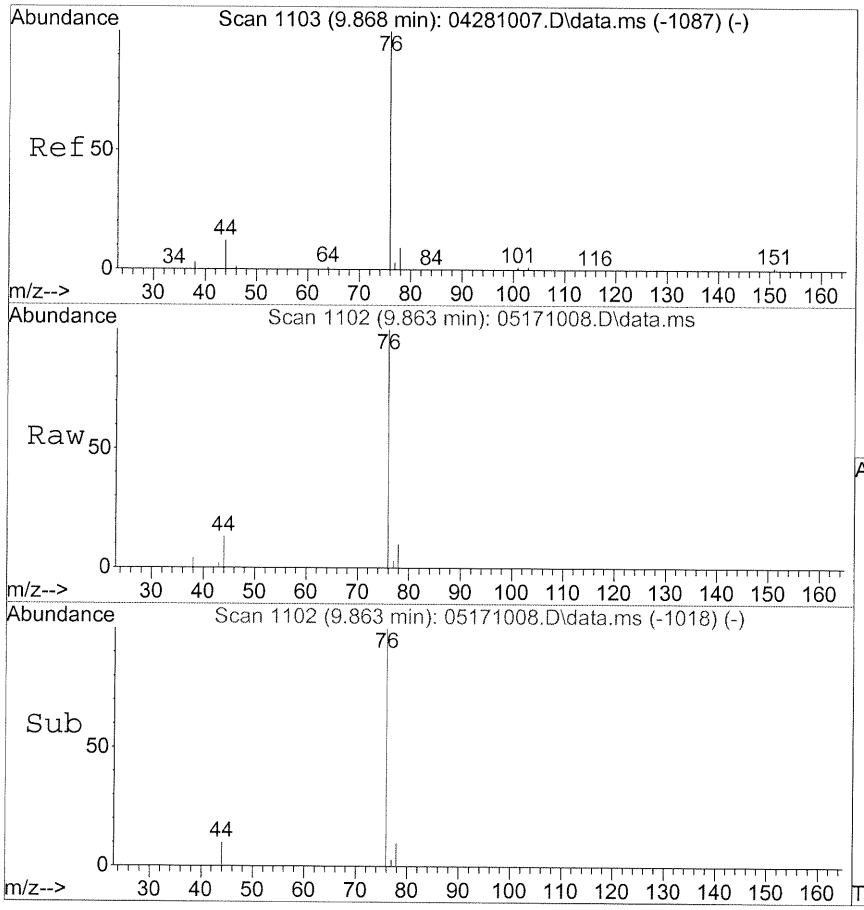


#21
Trichlorotrifluoroethane
Concen: 0.32 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:151 Resp: 4840

Ion	Ratio	Lower	Upper
151	100		
101	140.5	114.9	154.9

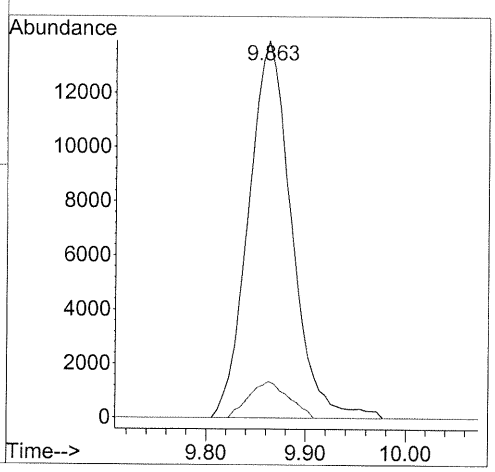


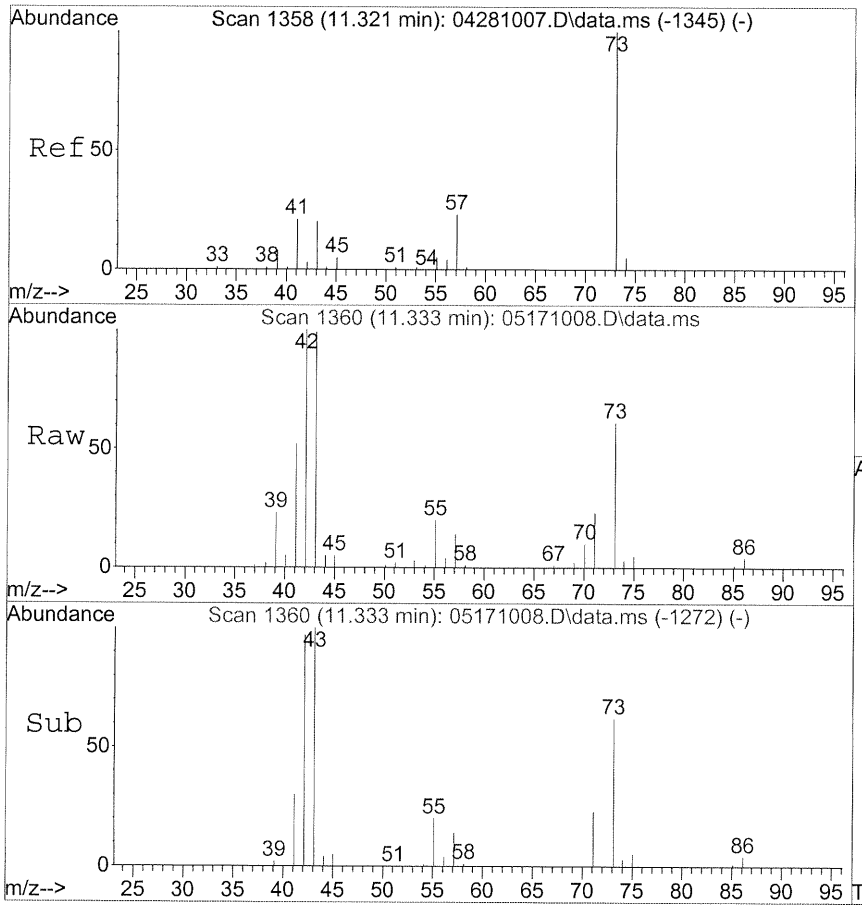


#22
Carbon Disulfide
Concen: 0.55 ng
RT: 9.86 min Scan# 1102
Delta R.T. -0.022 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 76 Resp: 41944

Ion	Ratio	Lower	Upper
76	100		
78	8.9	0.0	29.2

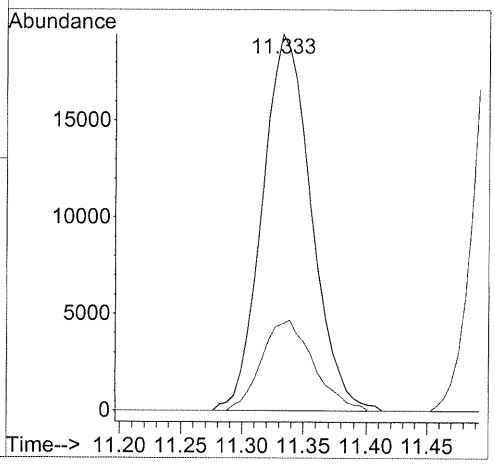


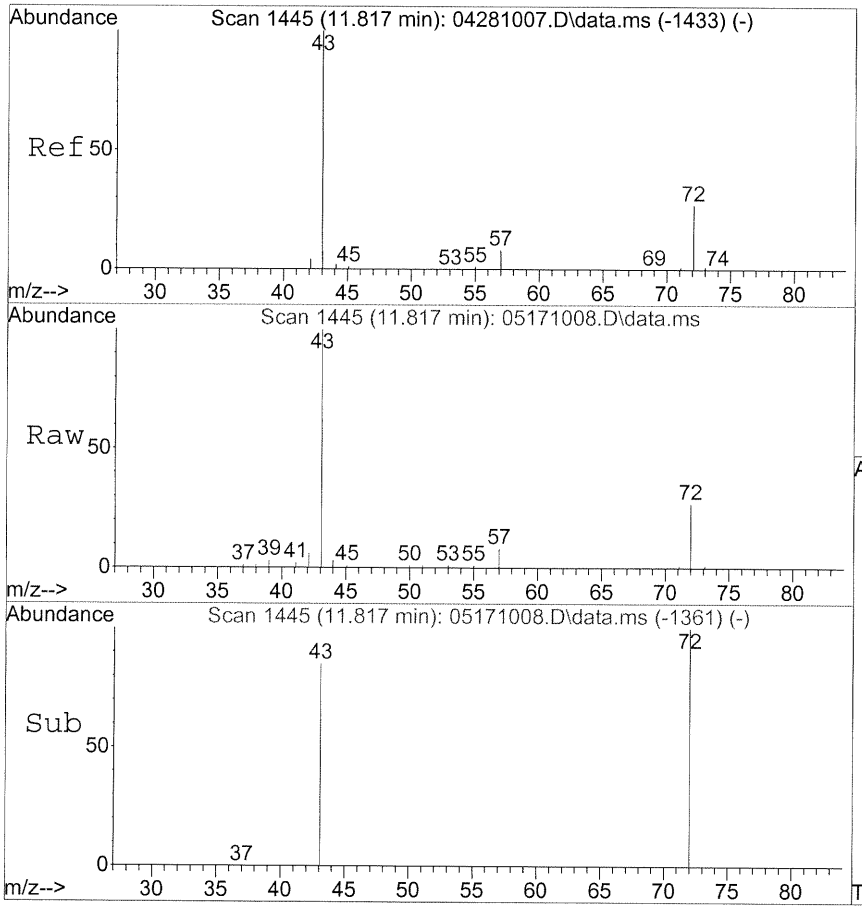


#25
Methyl tert-Butyl Ether
Concen: 0.81 ng
RT: 11.33 min Scan# 1360
Delta R.T. -0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 73 Resp: 53843

Ion	Ratio	Lower	Upper
73	100		
57	25.2	1.9	41.9

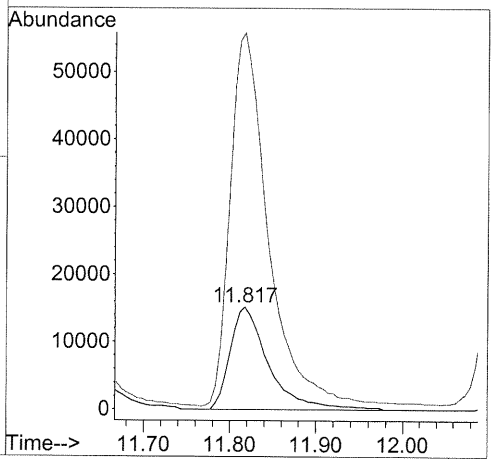


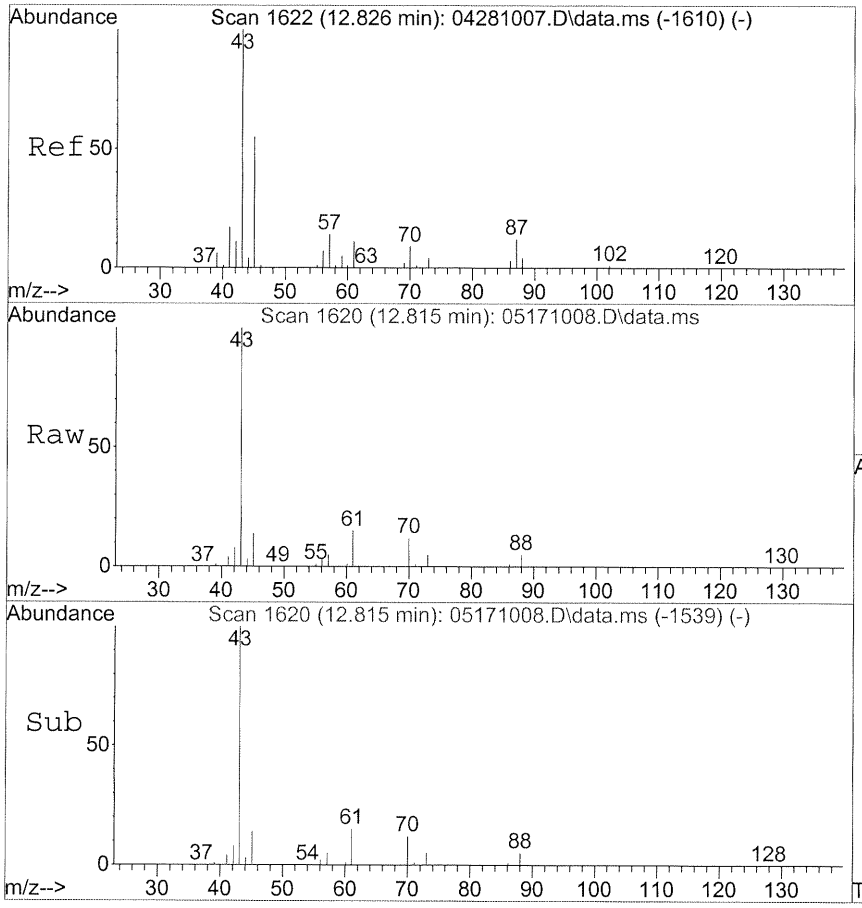


#27
2-Butanone (MEK)
Concen: 3.47 ng
RT: 11.82 min Scan# 1445
Delta R.T. -0.023 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 72 Resp: 46855

Ion	Ratio	Lower	Upper
72	100		
43	370.3	342.0	382.0

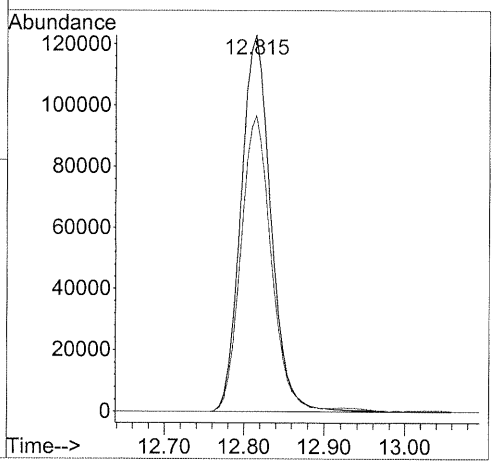


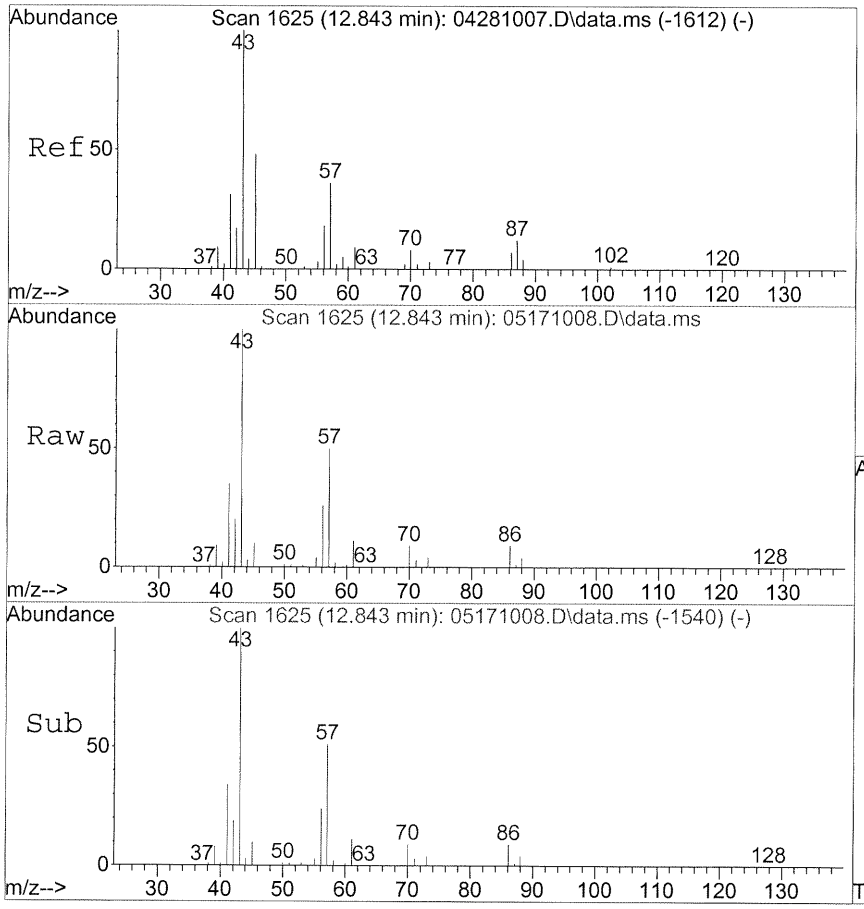


#30
Ethyl Acetate
Concen: 40.12 ng
RT: 12.81 min Scan# 1620
Delta R.T. -0.040 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 61 Resp: 321885

Ion	Ratio	Lower	Upper
61	100		
70	80.3	63.6	103.6

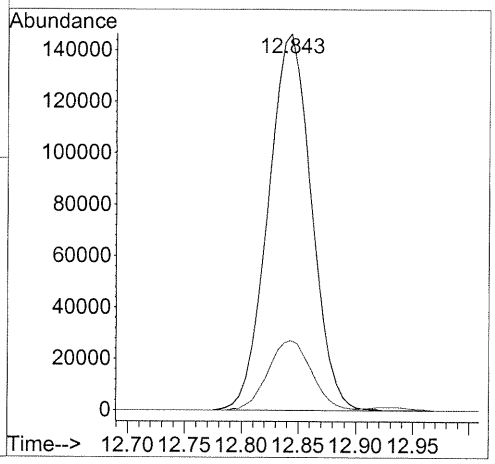


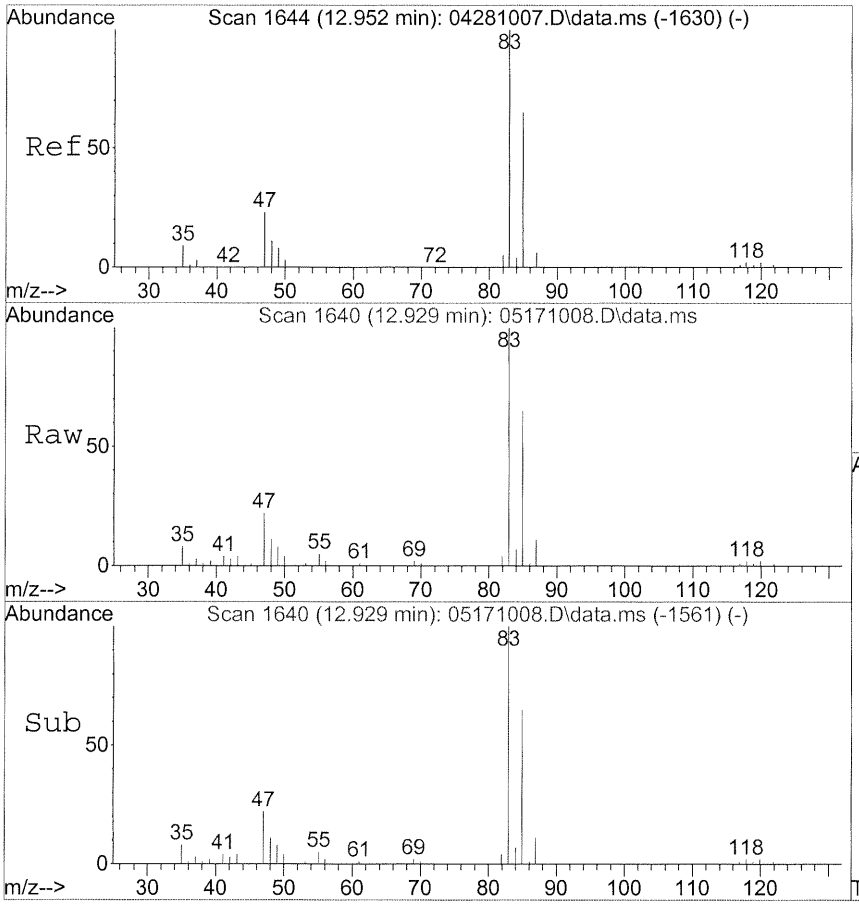


#31
n-Hexane
Concen: 9.43 ng
RT: 12.84 min Scan# 1625
Delta R.T. -0.017 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 57 Resp: 387374

Ion	Ratio	Lower	Upper
57	100		
86	18.7	0.0	39.8

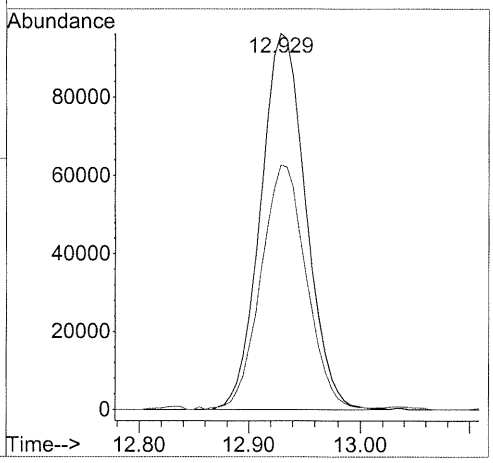


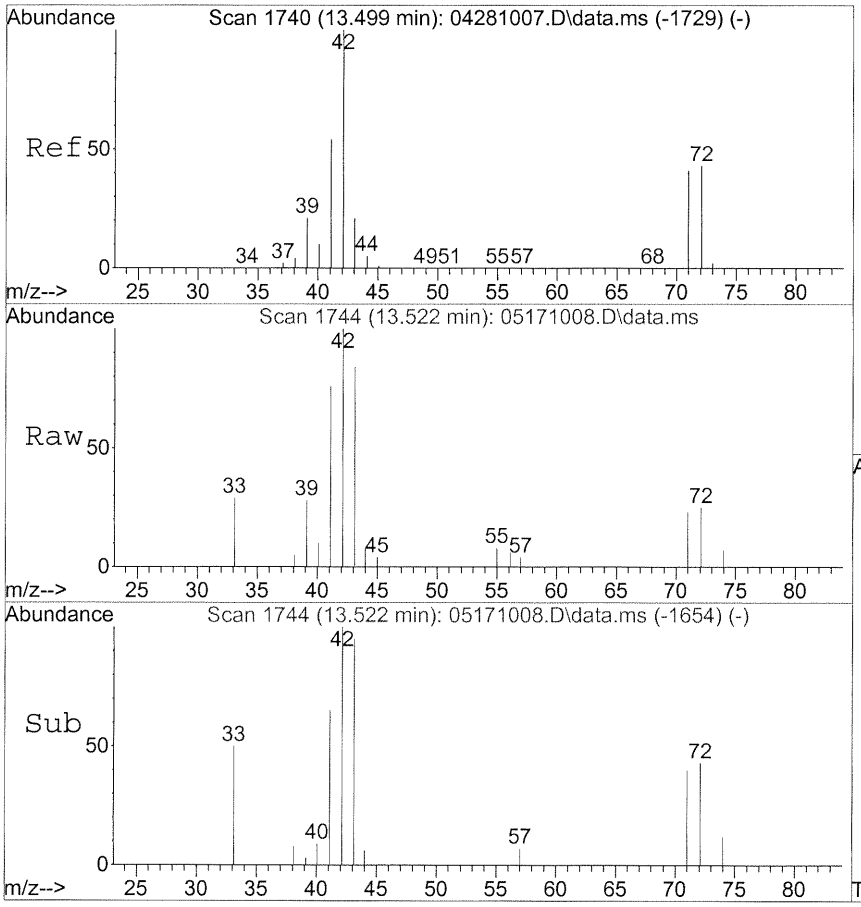


#32
Chloroform
Concen: 8.01 ng
RT: 12.93 min Scan# 1640
Delta R.T. -0.051 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 83 Resp: 274436

Ion	Ratio	Lower	Upper
83	100		
85	65.5	44.9	84.9

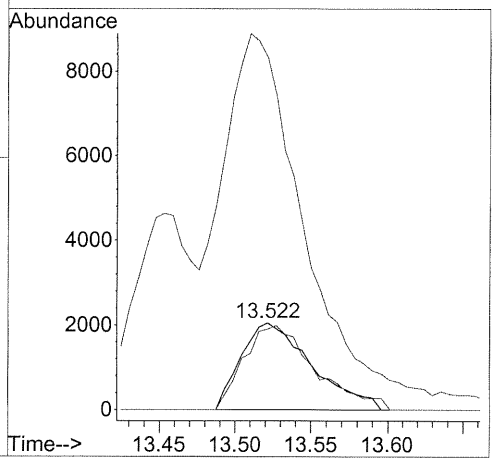


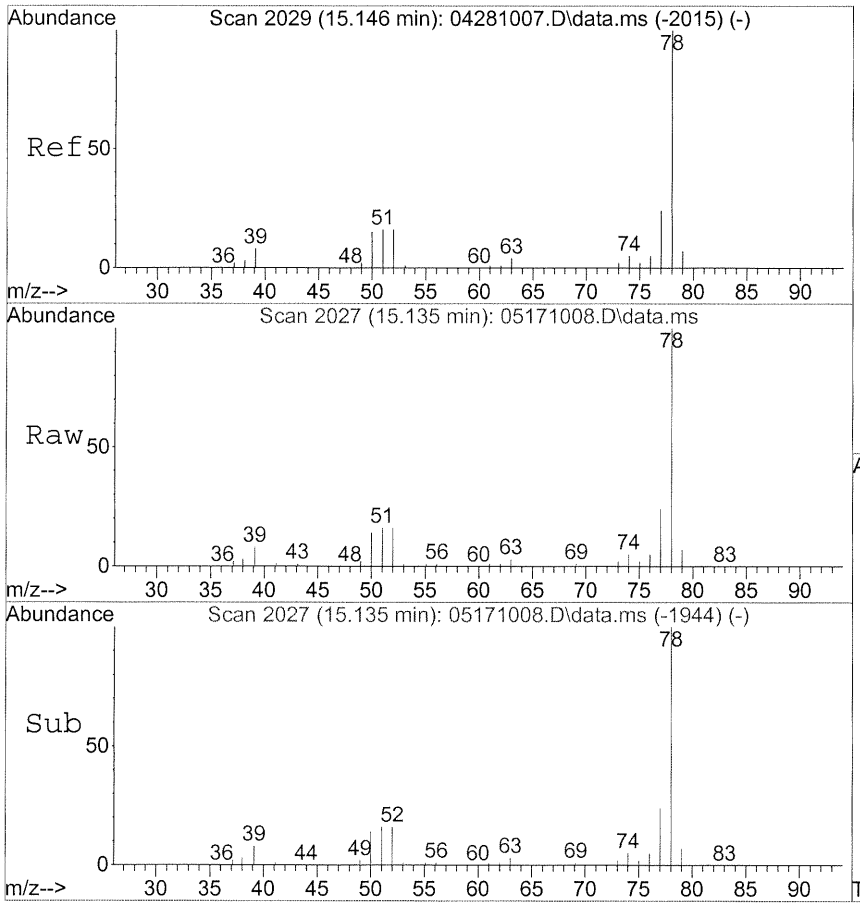


#34
Tetrahydrofuran (THF)
Concen: 0.51 ng
RT: 13.52 min Scan# 1744
Delta R.T. 0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 72 Resp: 6615

Ion	Ratio	Lower	Upper
72	100		
71	97.2	74.5	114.5
42	522.9	197.7	237.7#

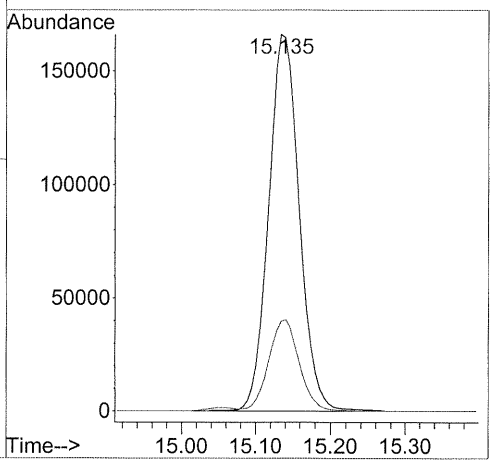


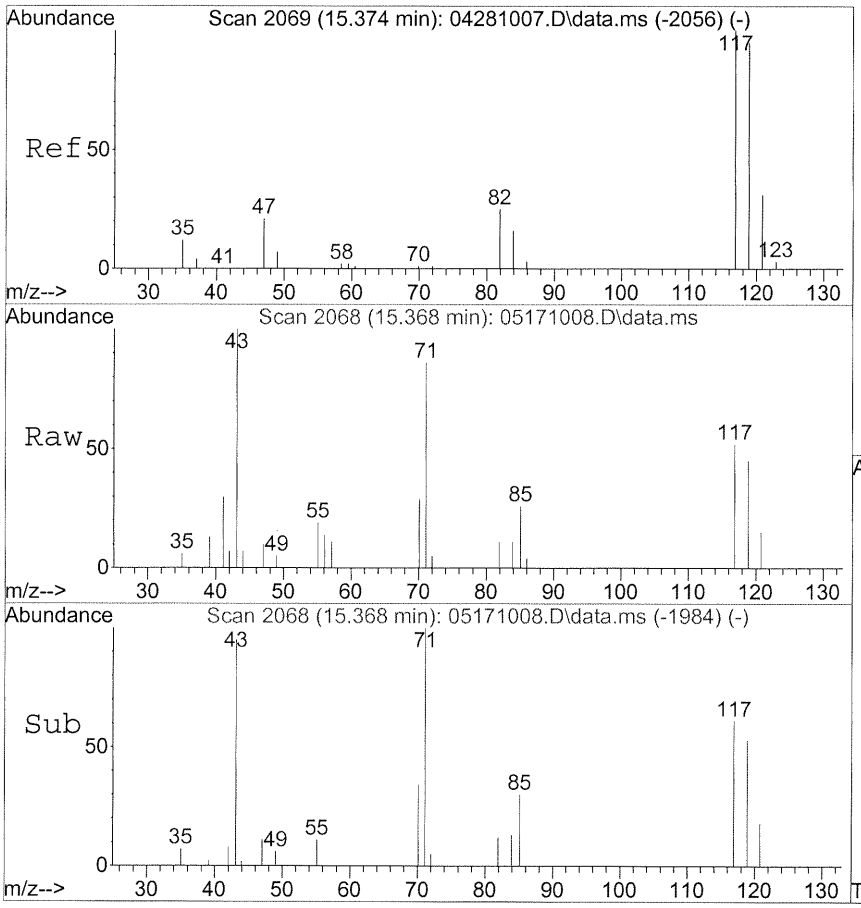


#41
Benzene
Concen: 5.43 ng
RT: 15.13 min Scan# 2027
Delta R.T. -0.028 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 78 Resp: 478573

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.1	44.1

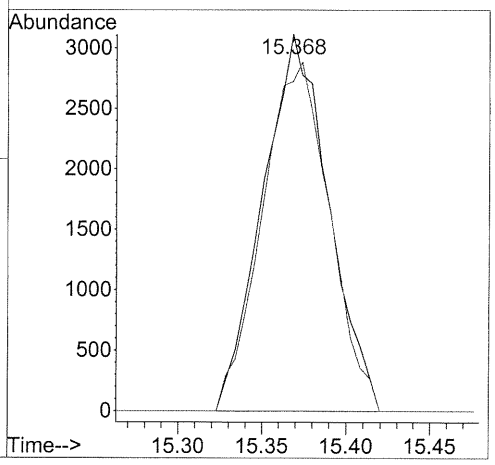


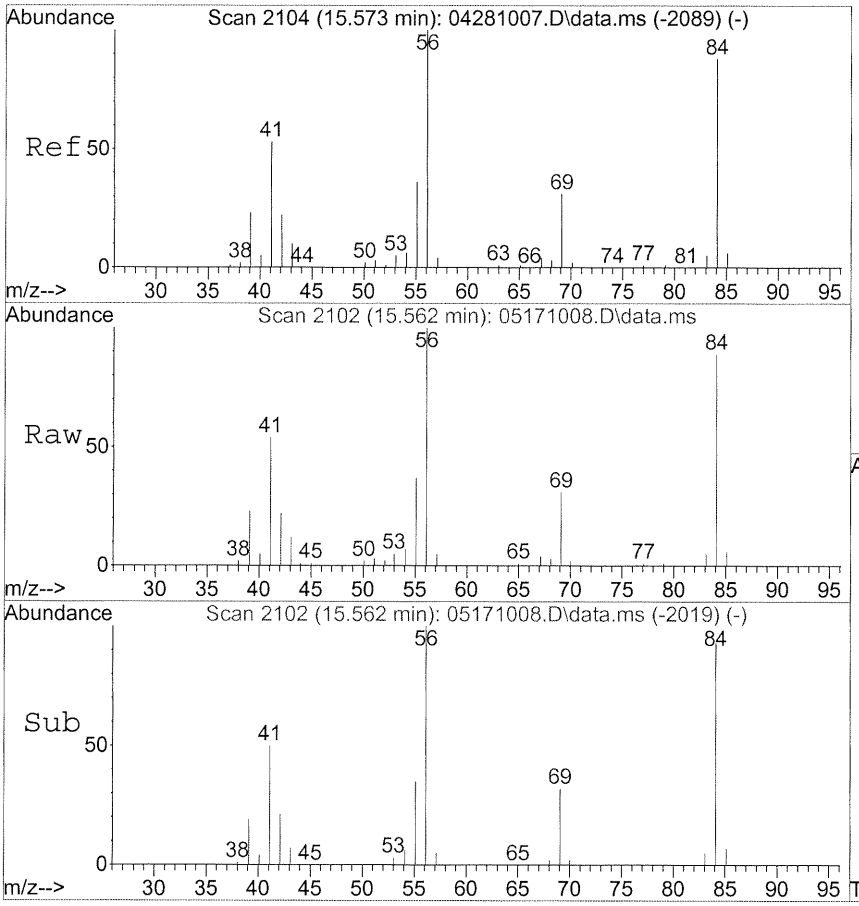


#42
Carbon Tetrachloride
Concen: 0.36 ng
RT: 15.37 min Scan# 2068
Delta R.T. -0.023 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:117 Resp: 8448

Ion	Ratio	Lower	Upper
117	100		
119	95.0	76.1	116.1

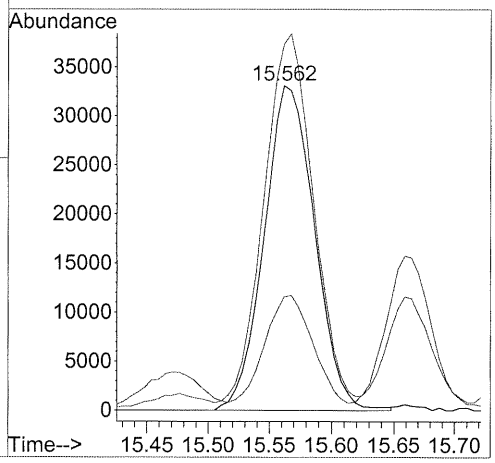


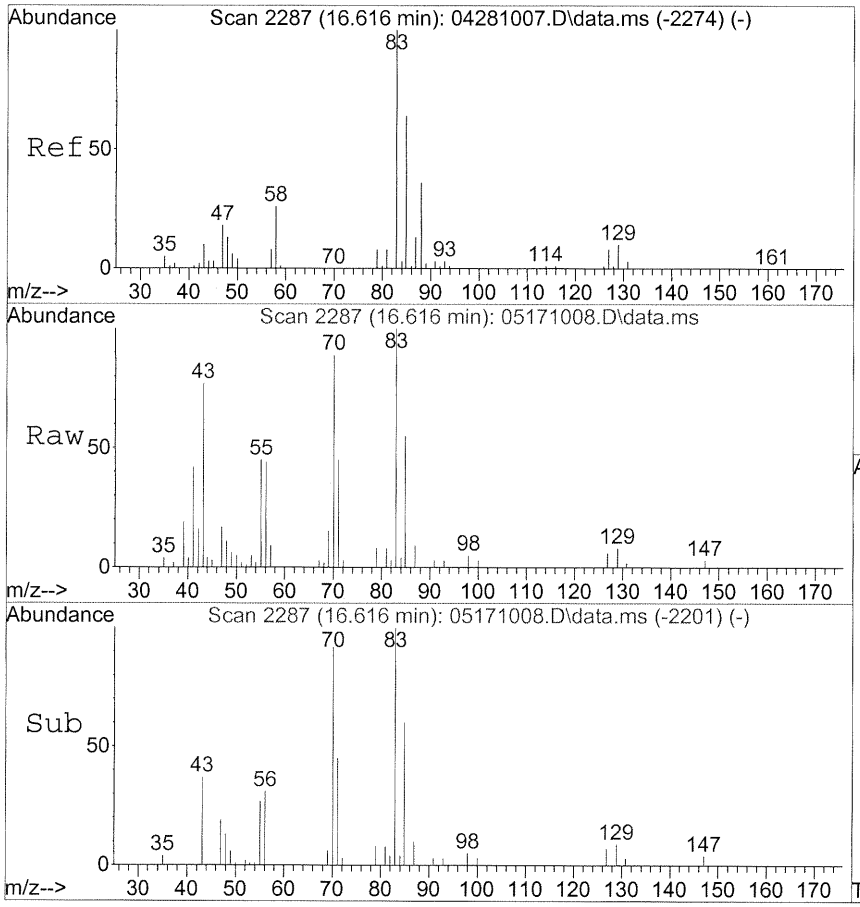


#43
Cyclohexane
Concen: 2.54 ng
RT: 15.56 min Scan# 2102
Delta R.T. -0.028 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 84 Resp: 93851

Ion	Ratio	Lower	Upper
84	100		
69	35.2	14.9	54.9
56	114.8	89.2	129.2

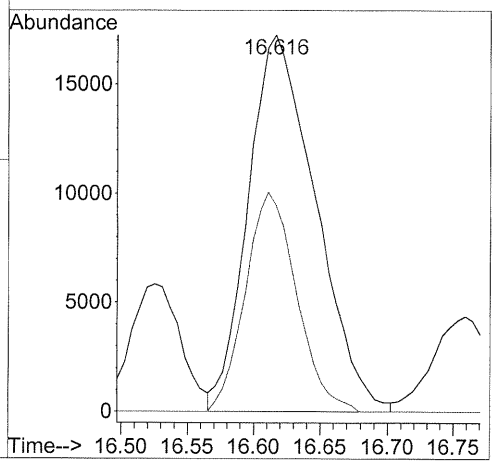


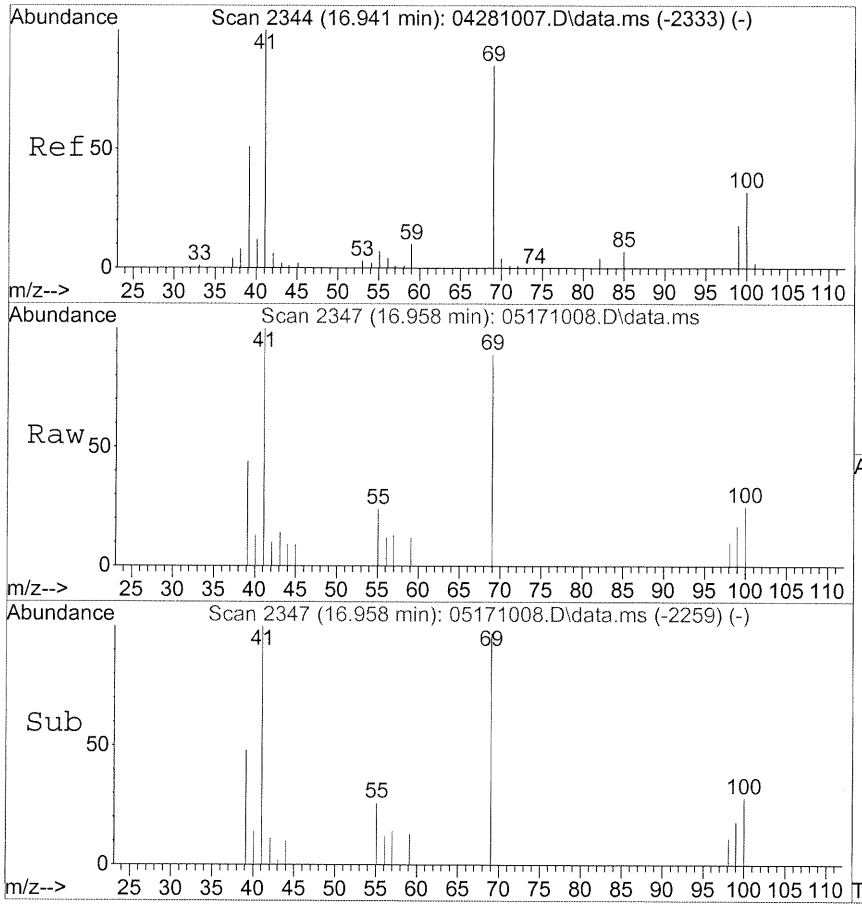


#46
Bromodichloromethane
Concen: 2.30 ng
RT: 16.62 min Scan# 2287
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 83 Resp: 60686

Ion	Ratio	Lower	Upper
83	100		
85	44.4	43.4	83.4

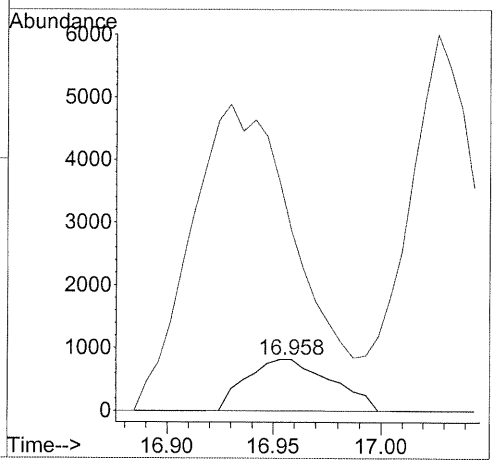


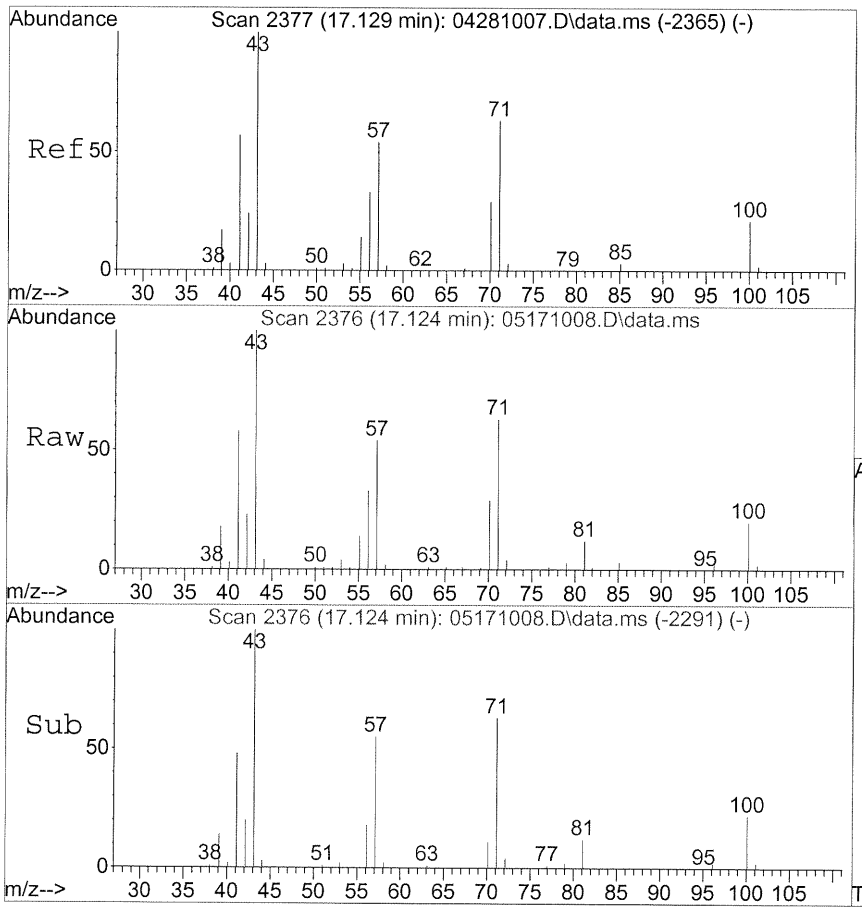


#50
Methyl Methacrylate
Concen: 0.24 ng
RT: 16.96 min Scan# 2347
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:100 Resp: 2252

Ion	Ratio	Lower	Upper
100	100		
69	0.0	226.7	266.7#

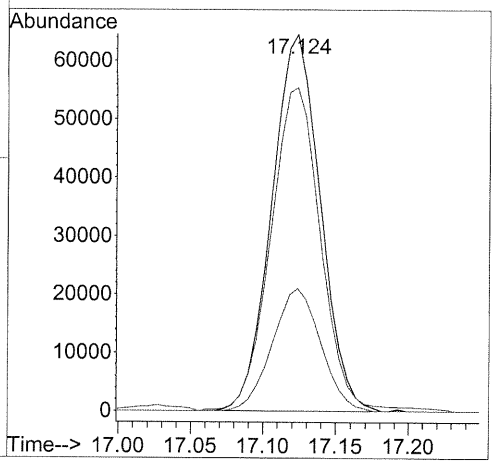


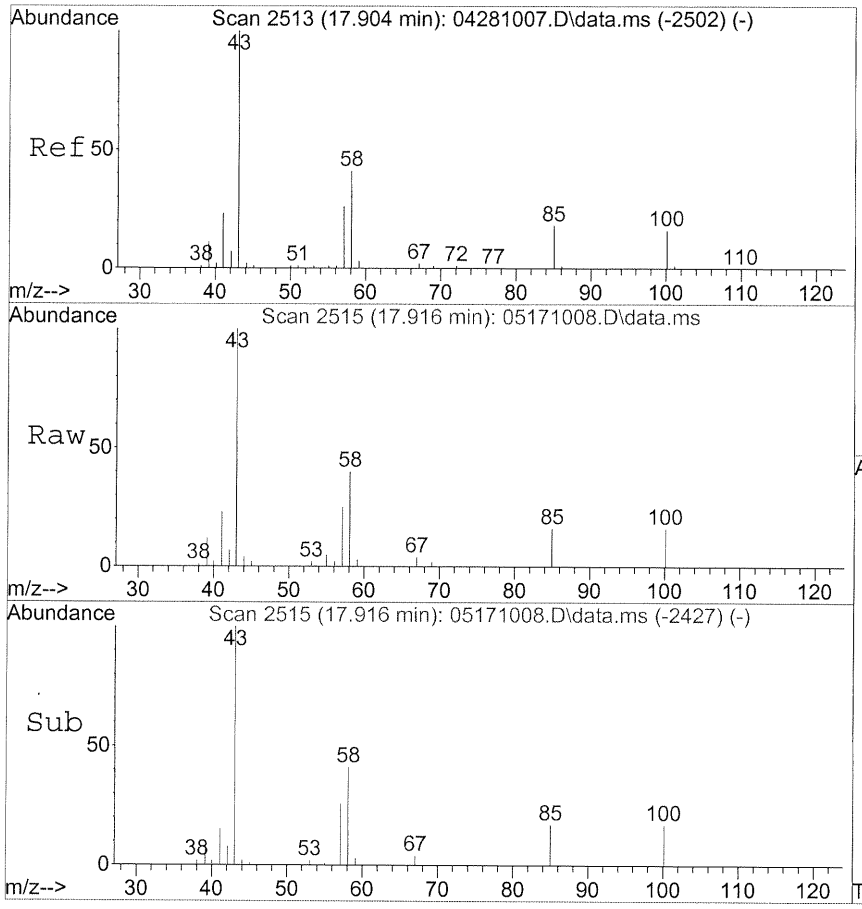


#51
n-Heptane
Concen: 5.98 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 71 Resp: 150469

Ion	Ratio	Lower	Upper
71	100		
57	88.5	63.9	103.9
100	32.3	14.1	54.1

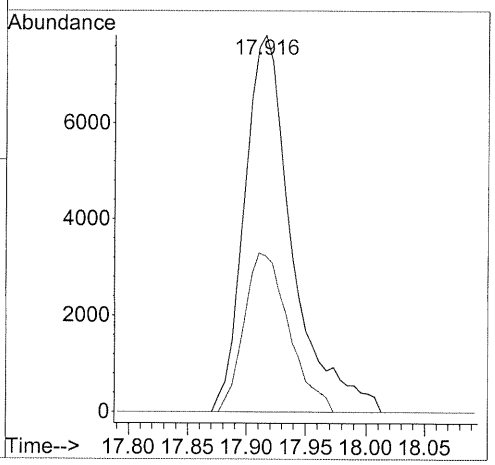


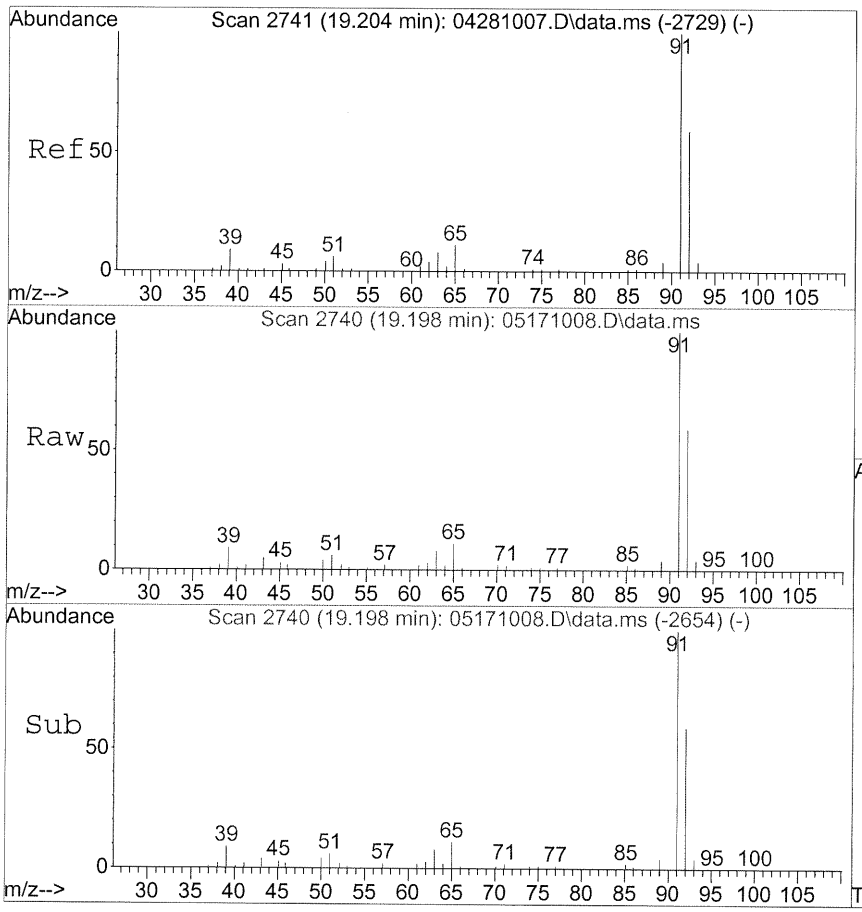


#53
4-Methyl-2-pentanone
Concen: 1.15 ng
RT: 17.92 min Scan# 2515
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 58 Resp: 21932

Ion	Ratio	Lower	Upper
58	100		
85	39.8	26.7	66.7

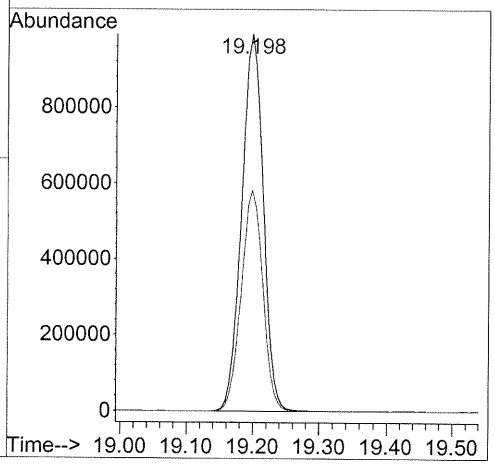


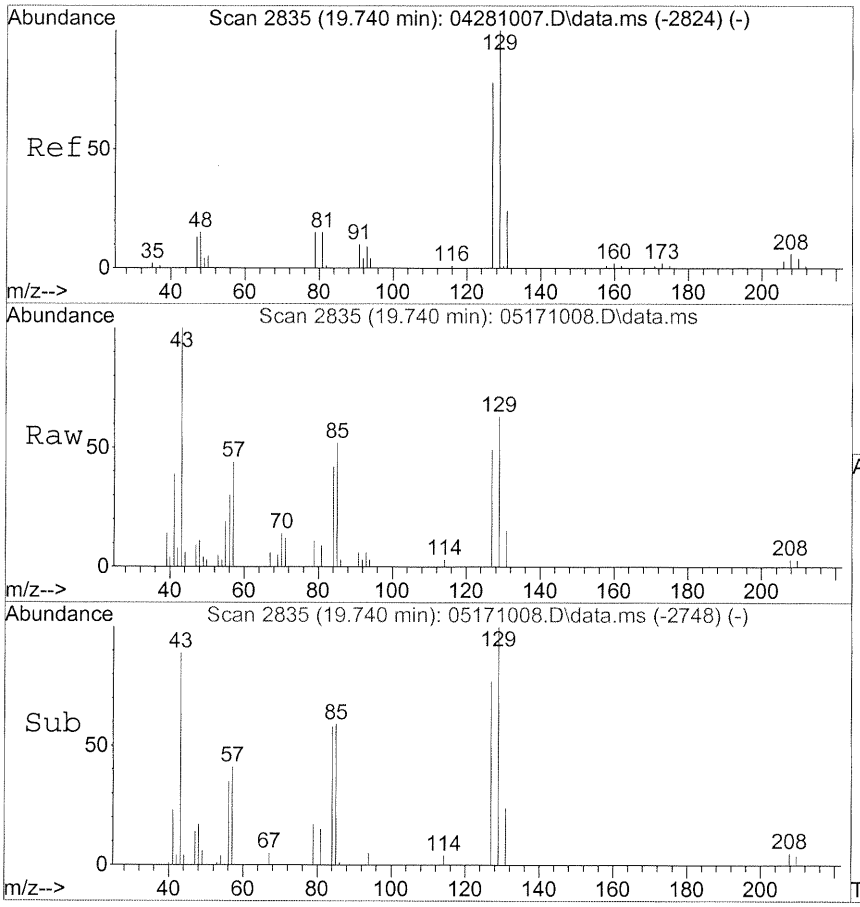


#58
Toluene
Concen: 24.33 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 91 Resp: 2243865

Ion	Ratio	Lower	Upper
91	100		
92	58.5	39.2	79.2

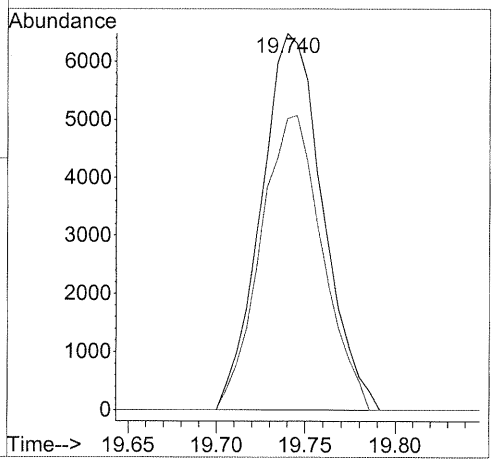


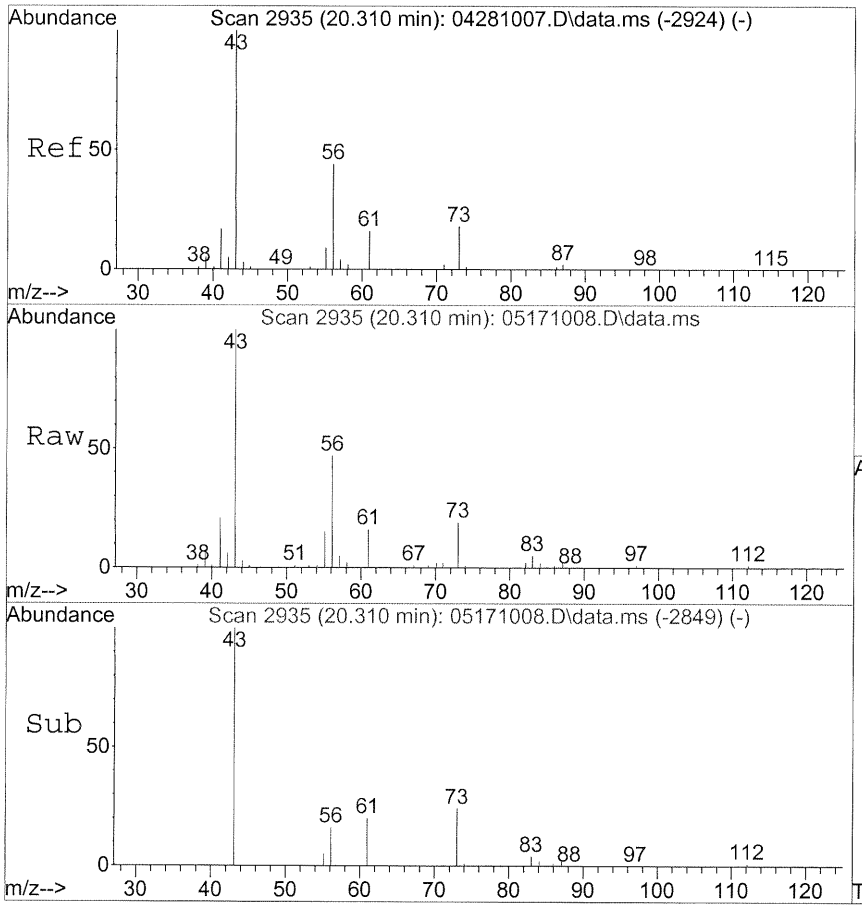


#60
Dibromochloromethane
Concen: 0.85 ng
RT: 19.74 min Scan# 2835
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:129 Resp: 15580

Ion	Ratio	Lower	Upper
129	100		
127	78.3	58.2	98.2

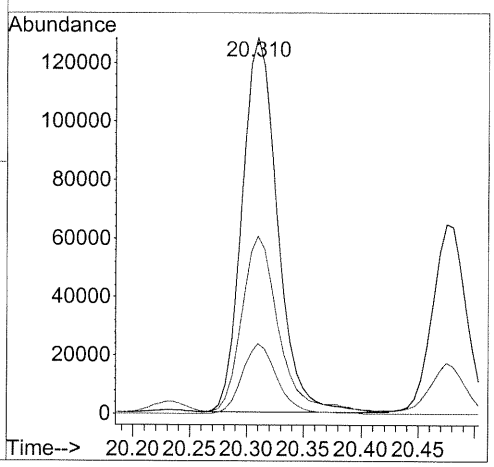


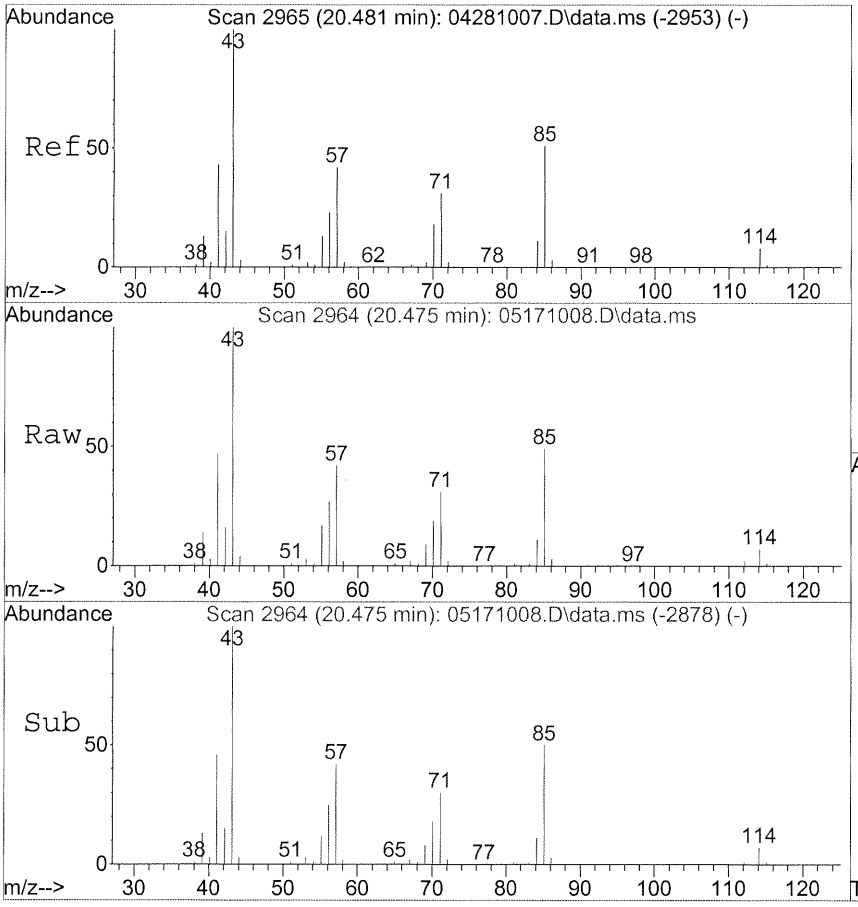


#62
n-Butyl Acetate
Concen: 5.62 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 43 Resp: 277907

Ion	Ratio	Lower	Upper
43	100		
56	48.9	25.0	65.0
73	18.2	0.0	39.1

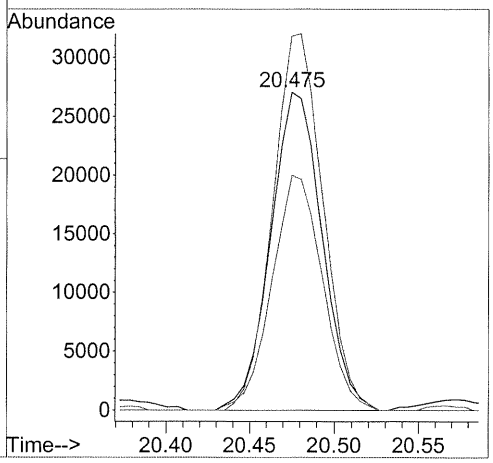


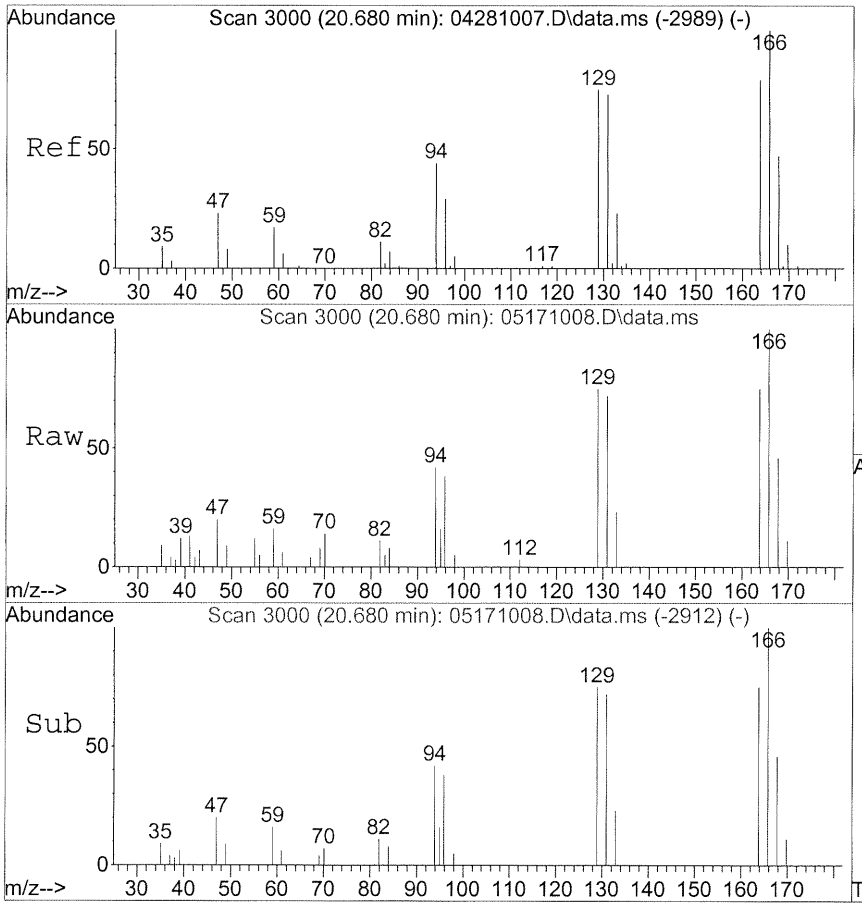


#63
n-Octane
Concen: 2.66 ng
RT: 20.48 min Scan# 2964
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 57 Resp: 56898

Ion	Ratio	Lower	Upper
57	100		
85	115.5	101.4	152.2
71	72.8	60.7	91.1

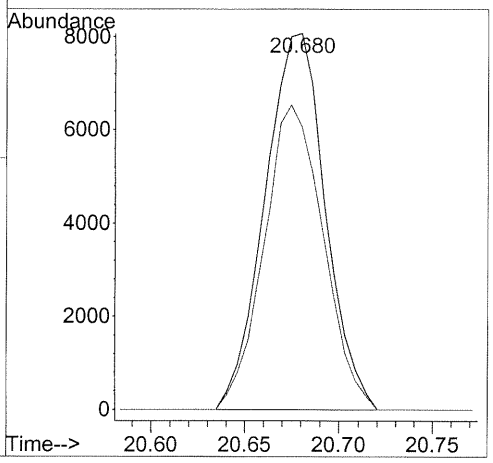


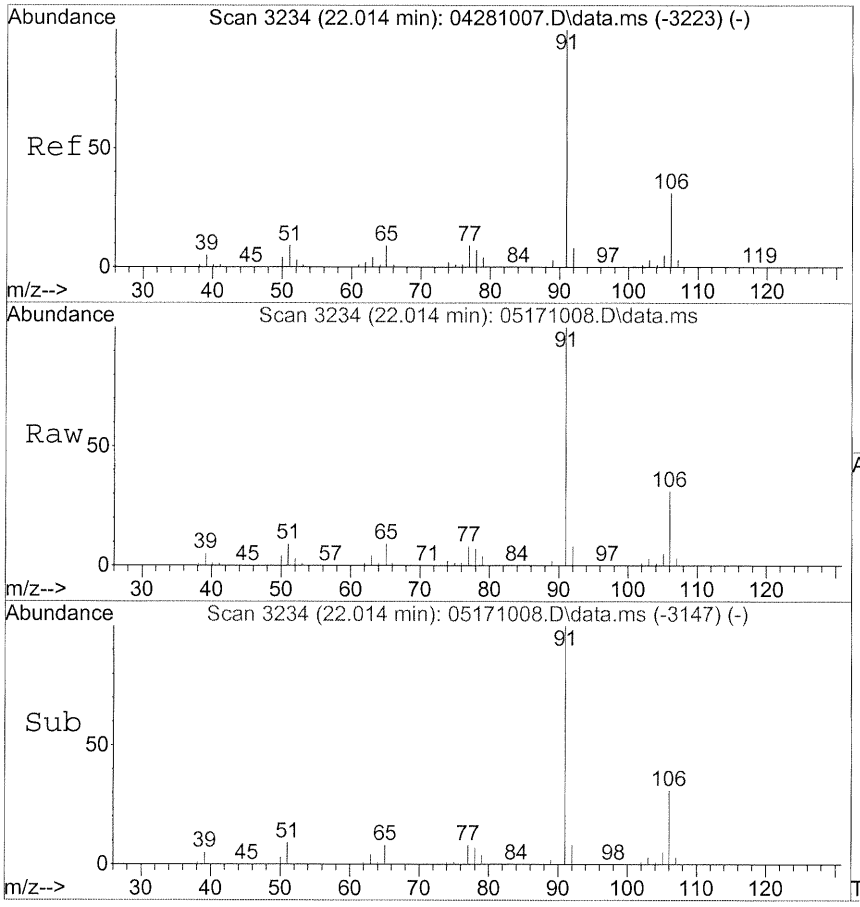


#64
Tetrachloroethene
Concen: 0.83 ng
RT: 20.68 min Scan# 3000
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:166 Resp: 17992

Ion	Ratio	Lower	Upper
166	100		
164	79.6	59.0	99.0

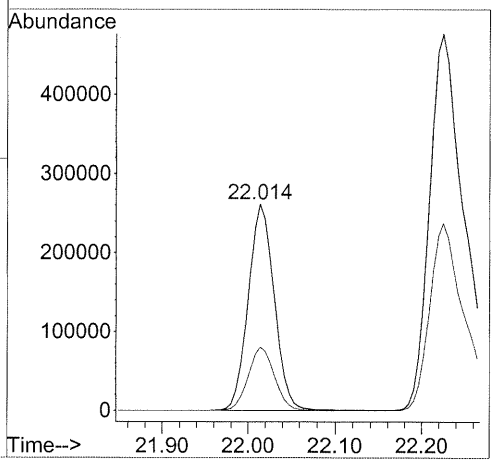


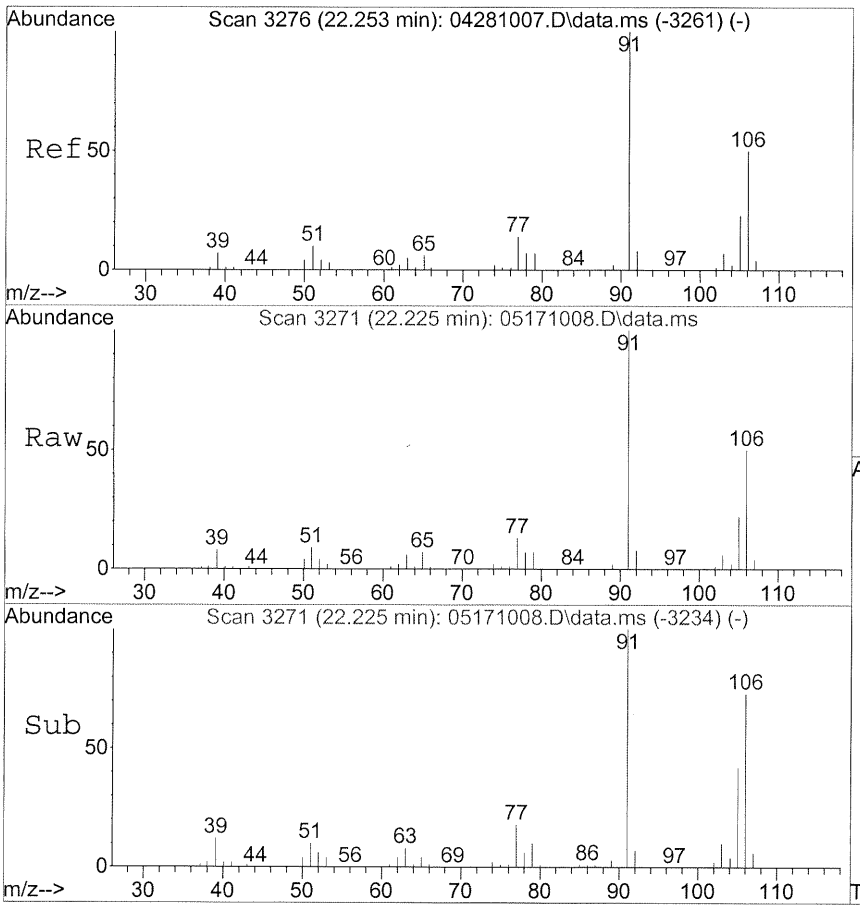


#66
Ethylbenzene
Concen: 5.36 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 91 Resp: 553470

Ion	Ratio	Lower	Upper
91	100		
106	30.6	12.2	52.2

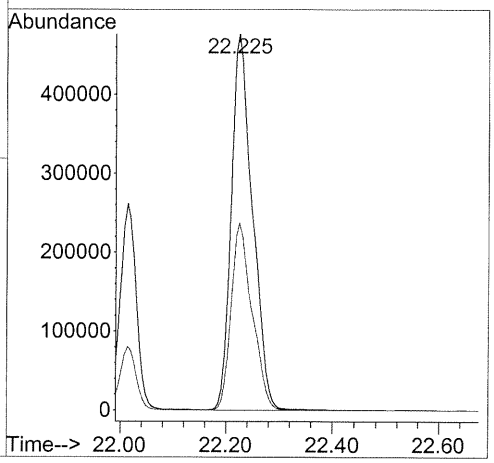


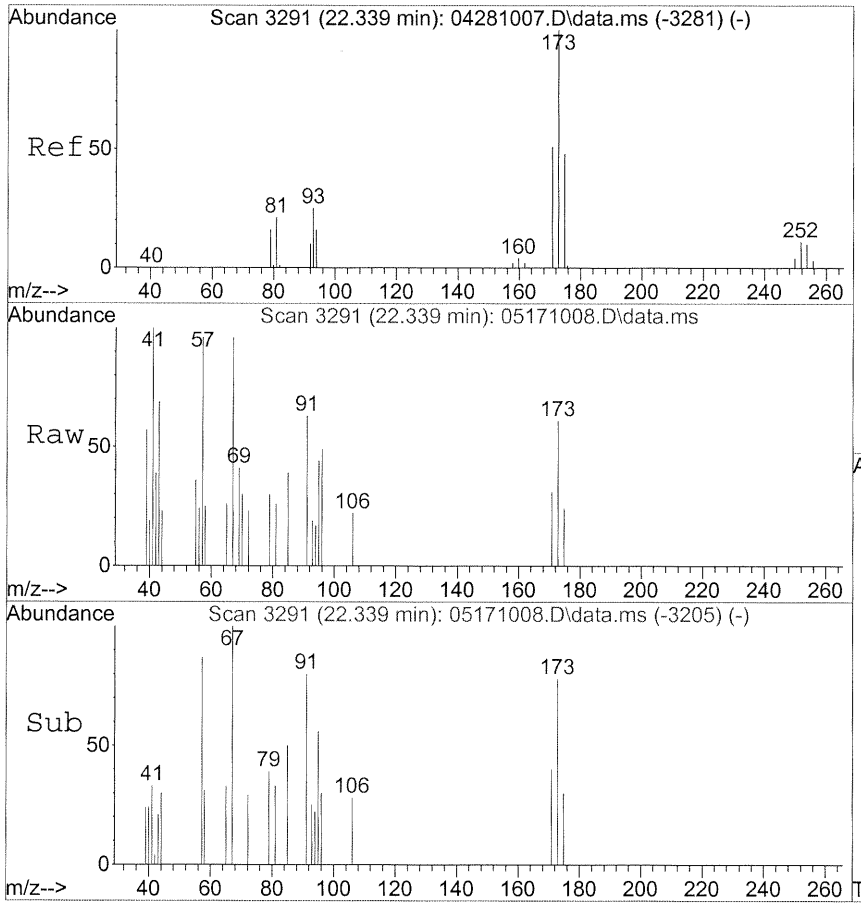


#67
m- & p-Xylenes
Concen: 15.89 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 91 Resp: 1329543

Ion	Ratio	Lower	Upper
91	100		
106	49.1	30.6	70.6

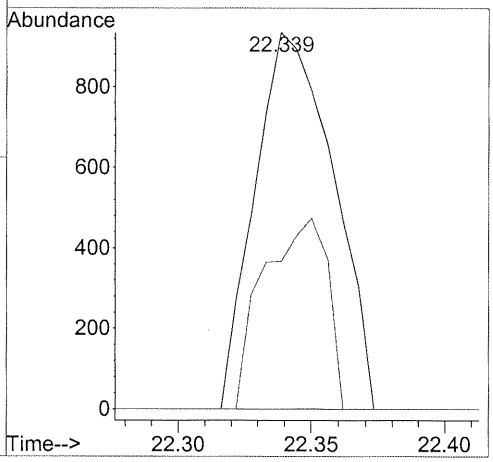


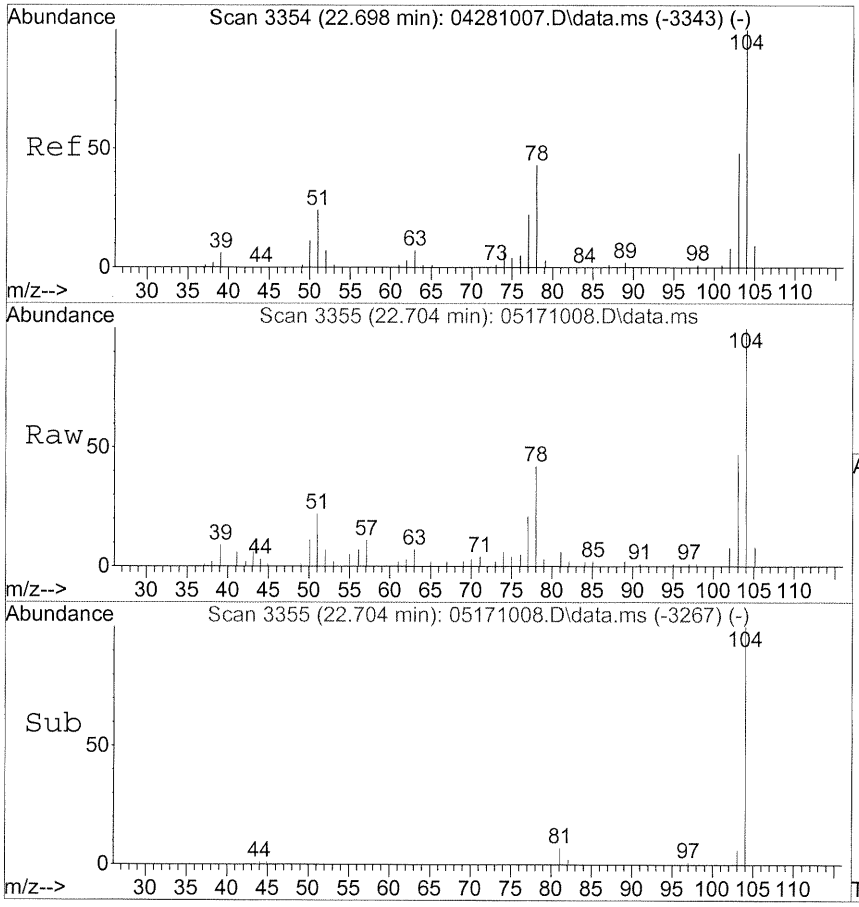


#68
Bromoform
Concen: 0.12 ng
RT: 22.34 min Scan# 3291
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:173 Resp: 1891

Ion	Ratio	Lower	Upper
173	100		
175	41.4	28.9	68.9

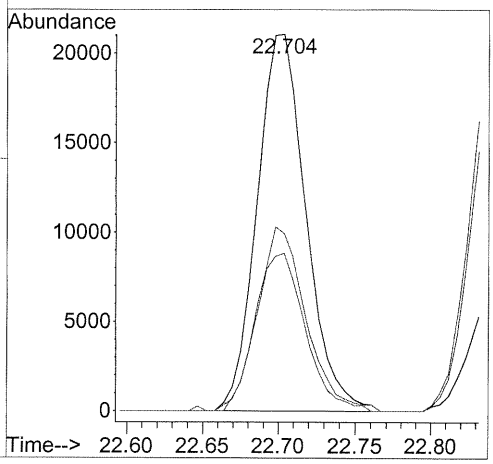


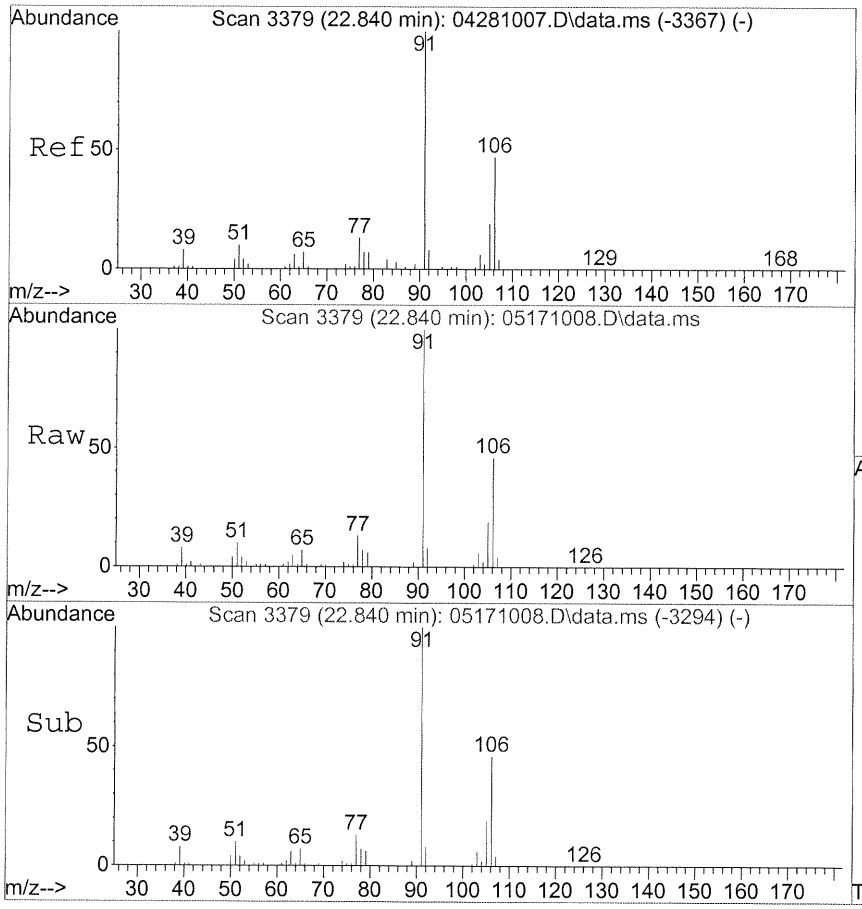


#69
Styrene
Concen: 0.80 ng
RT: 22.70 min Scan# 3355
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:104 Resp: 47014

Ion	Ratio	Lower	Upper
104	100		
78	42.7	22.5	62.5
103	48.9	27.5	67.5

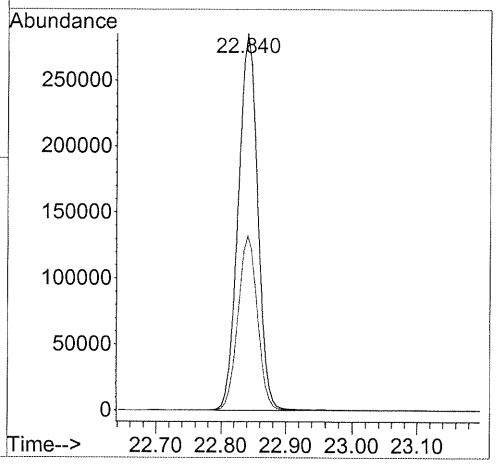


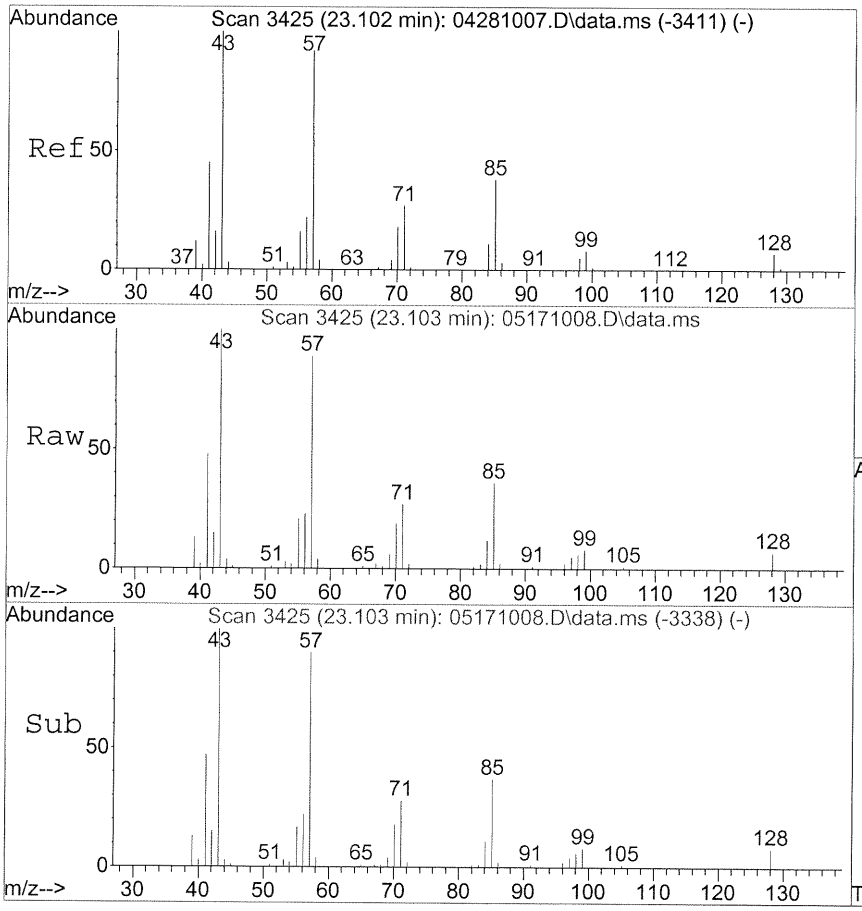


#70
o-Xylene
Concen: 6.74 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 91 Resp: 600901

Ion	Ratio	Lower	Upper
91	100		
106	45.9	27.8	67.8

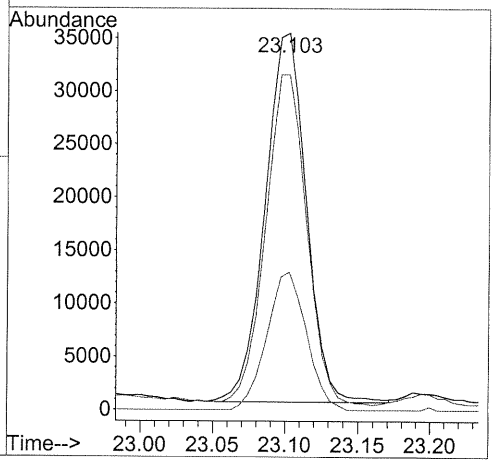


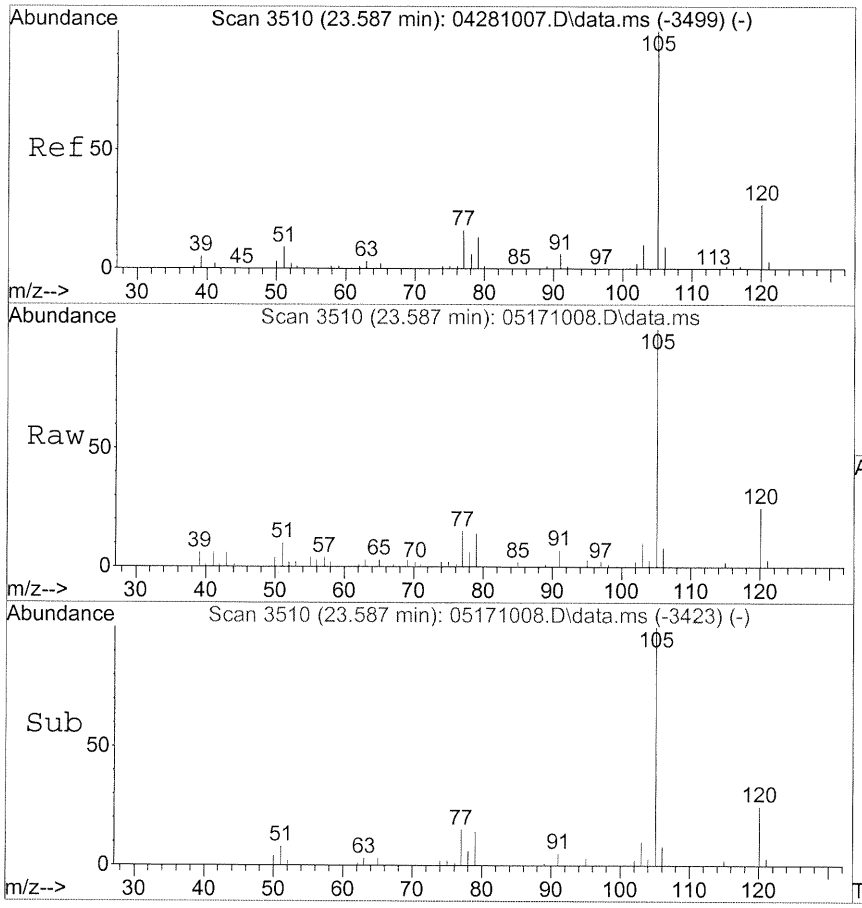


#71
n-Nonane
Concen: 1.42 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 43 Resp: 68904

Ion	Ratio	Lower	Upper
43	100		
57	89.9	74.6	114.6
85	35.7	20.5	60.5

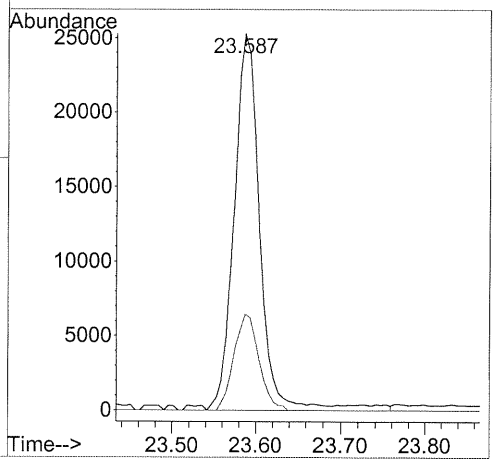


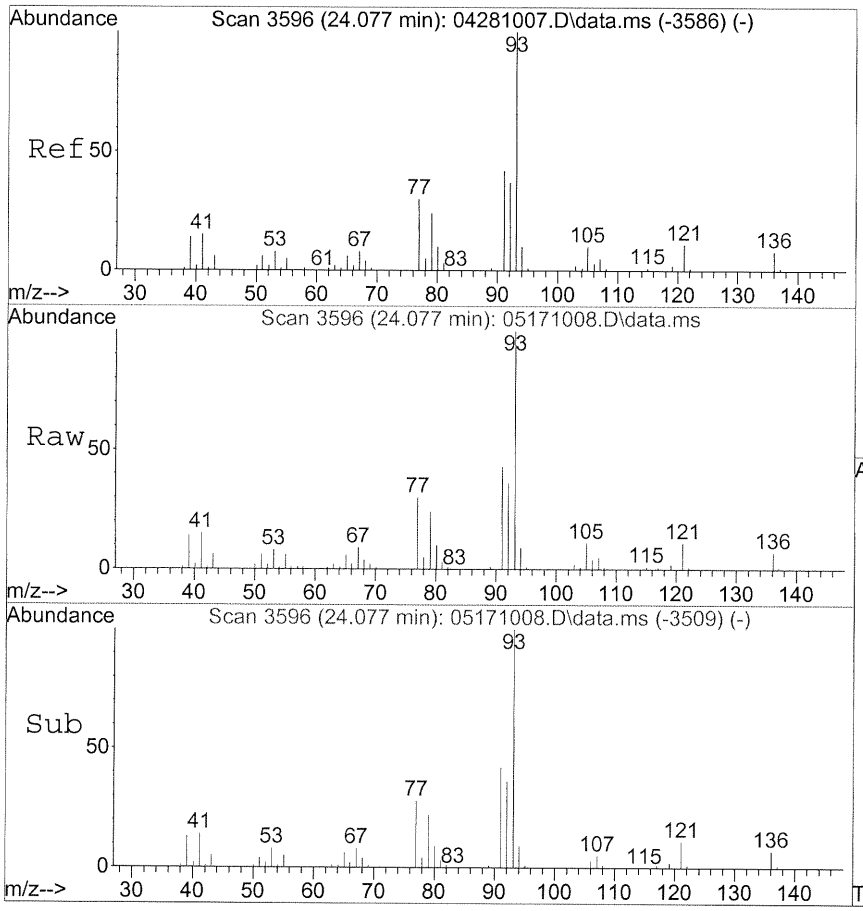


#74
Cumene
Concen: 0.50 ng
RT: 23.59 min Scan# 3510
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:105 Resp: 54149

Ion	Ratio	Lower	Upper
105	100		
120	24.5	6.8	46.8

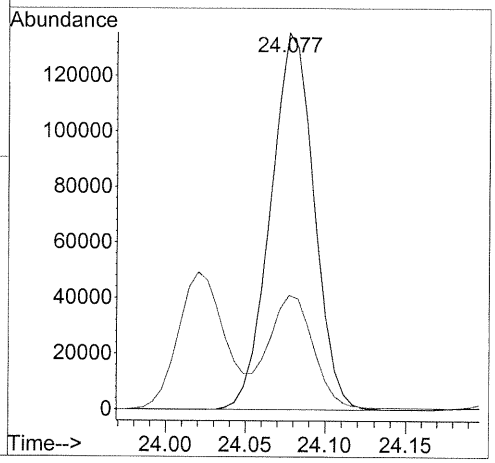


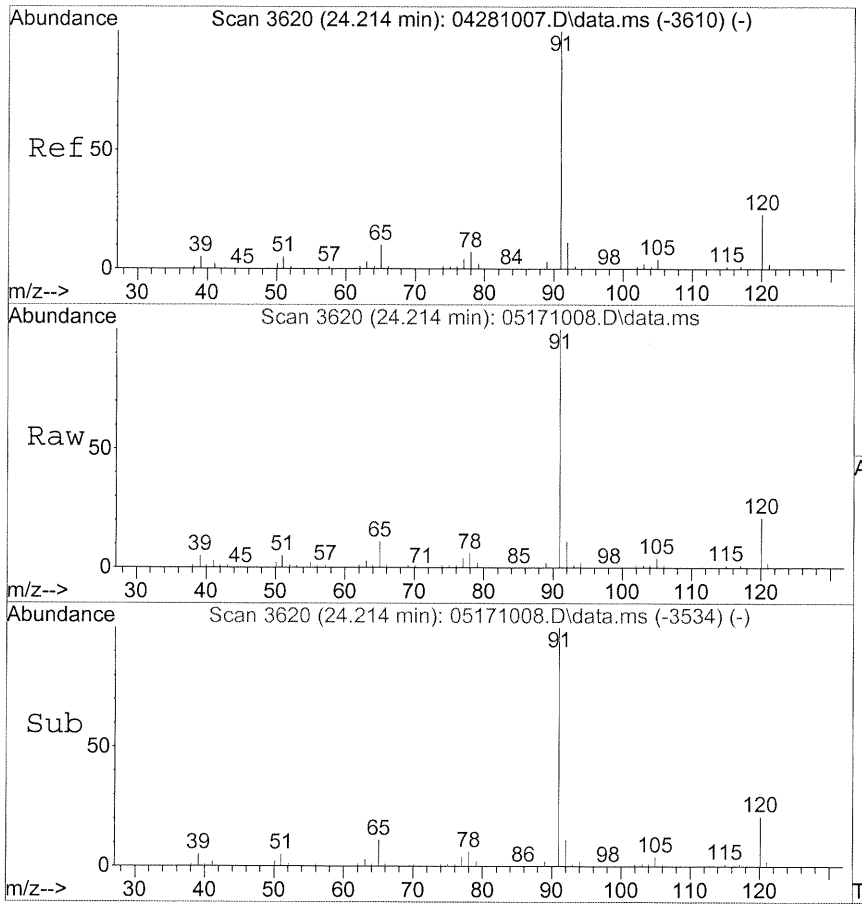


#75
alpha-Pinene
Concen: 5.08 ng
RT: 24.08 min Scan# 3596
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 93 Resp: 256642

Ion	Ratio	Lower	Upper
93	100		
77	32.7	8.7	48.7

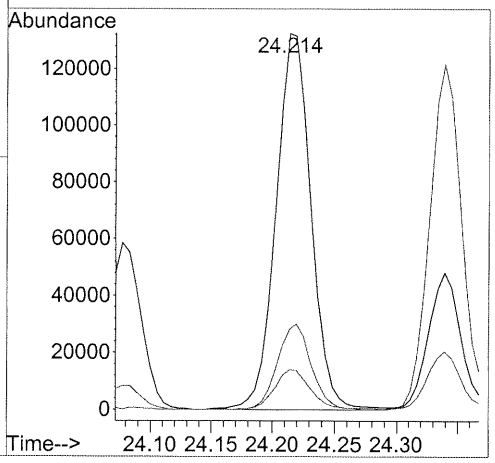


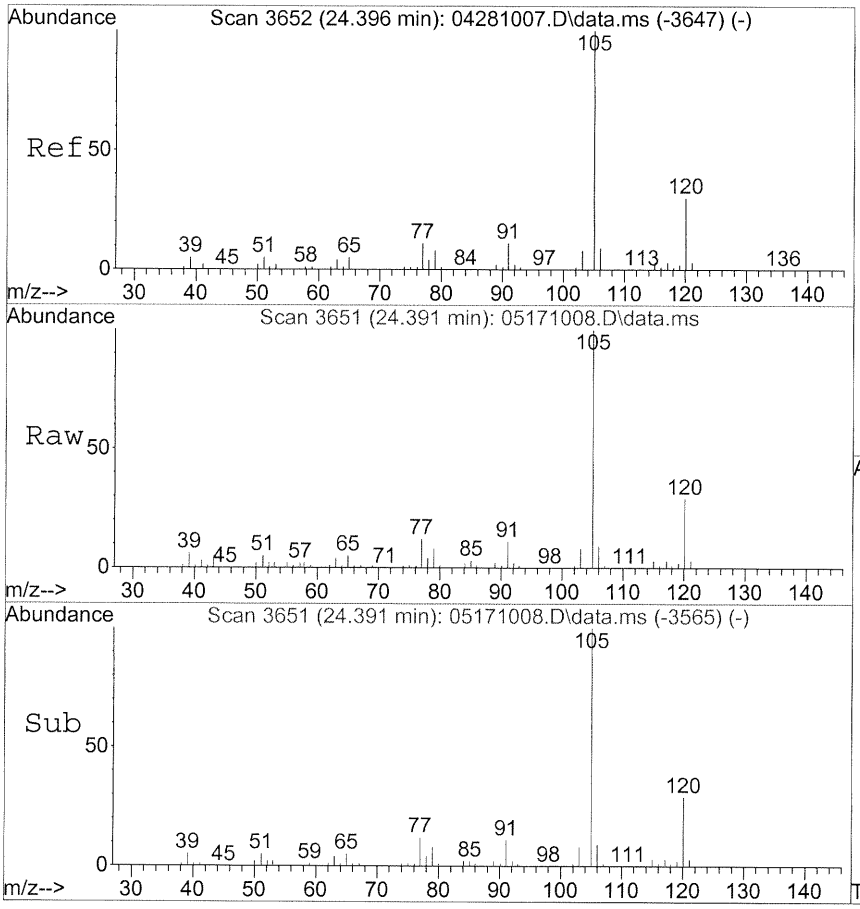


#76
n-Propylbenzene
Concen: 1.98 ng
RT: 24.21 min Scan# 3620
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 91 Resp: 261924

Ion	Ratio	Lower	Upper
91	100		
120	21.7	3.8	43.8
65	11.0	0.0	30.1

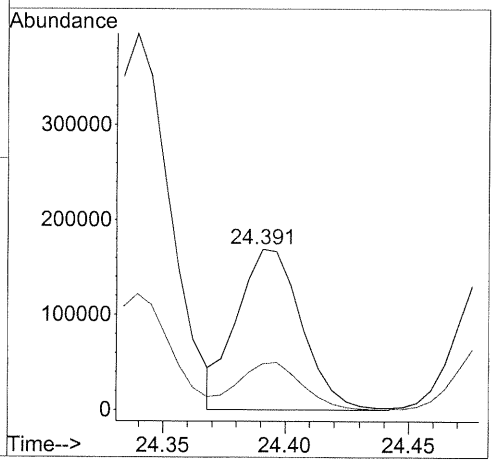


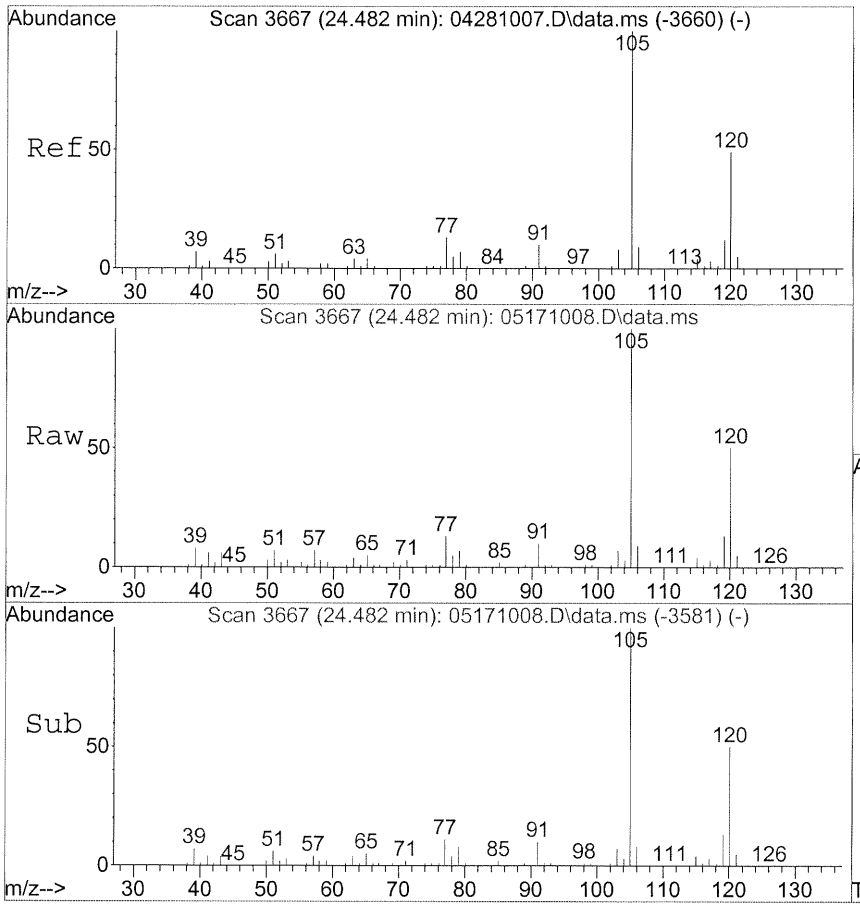


#78
4-Ethyltoluene
Concen: 3.08 ng
RT: 24.39 min Scan# 3651
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:105 Resp: 309442

Ion	Ratio	Lower	Upper
105	100		
120	29.4	10.2	50.2

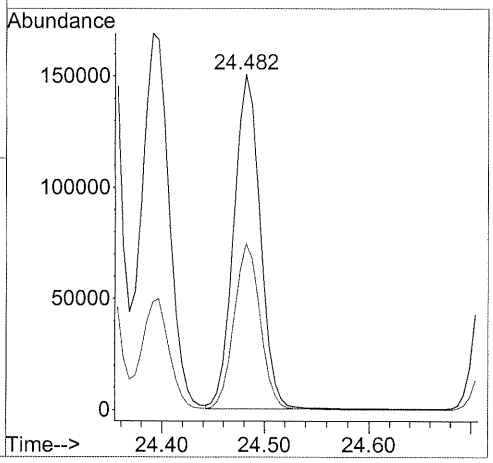


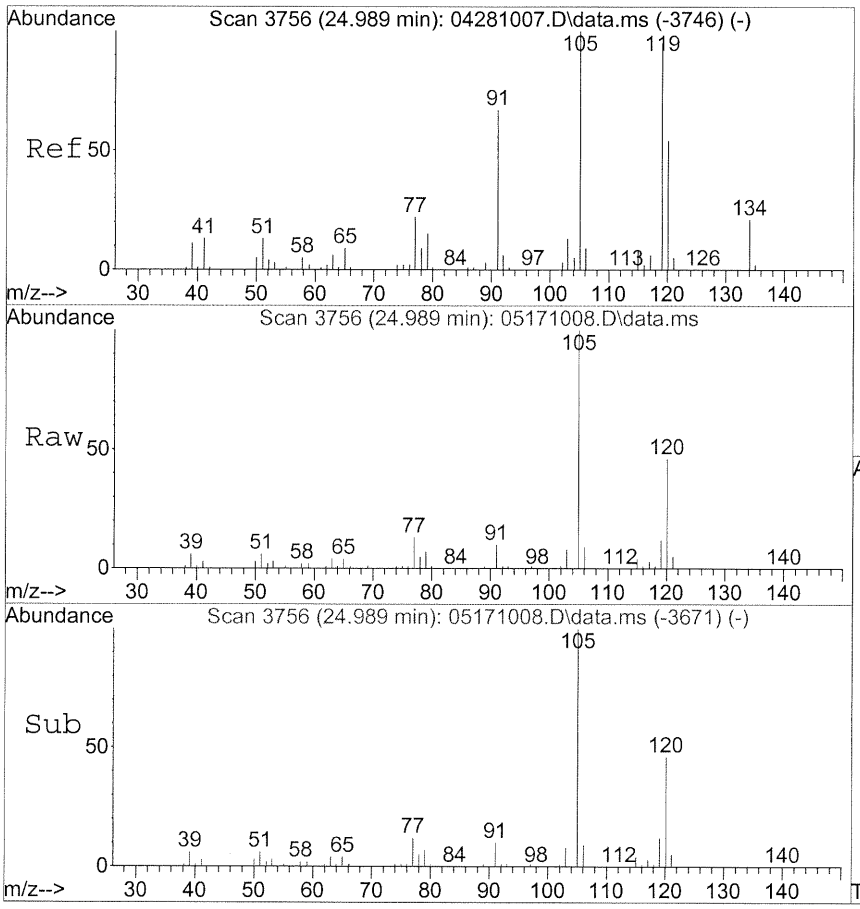


#79
1,3,5-Trimethylbenzene
Concen: 3.21 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:105 Resp: 270783

Ion	Ratio	Lower	Upper
105	100		
120	49.1	30.4	70.4

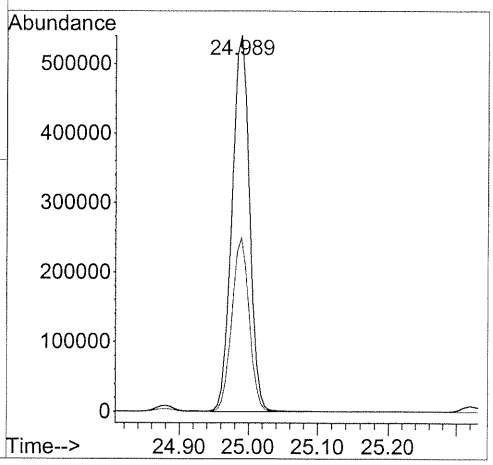


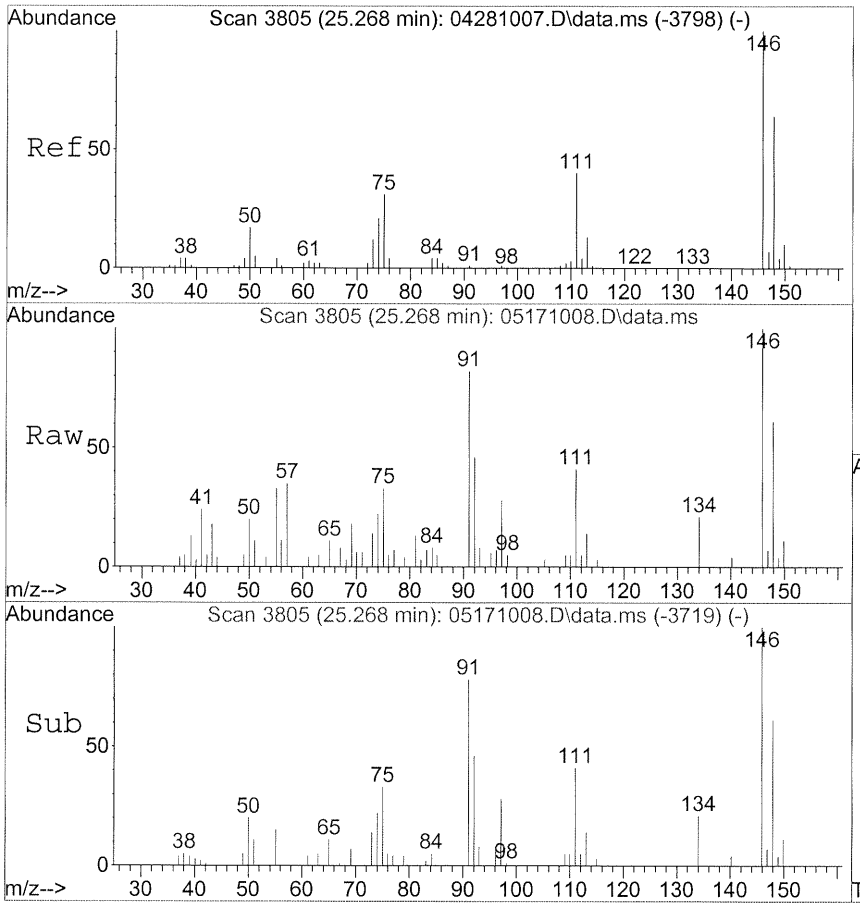


#82
1,2,4-Trimethylbenzene
Concen: 10.85 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:105 Resp: 956402

Ion	Ratio	Lower	Upper
105	100		
120	45.3	35.1	75.1

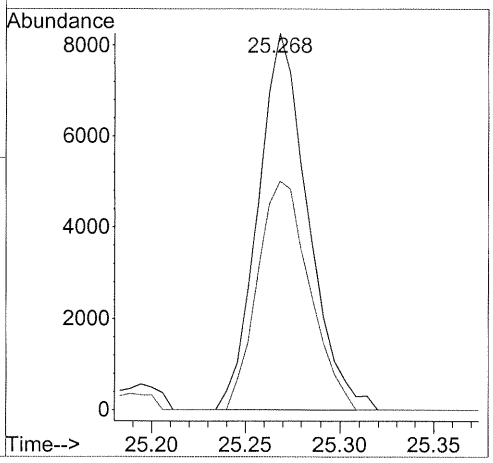


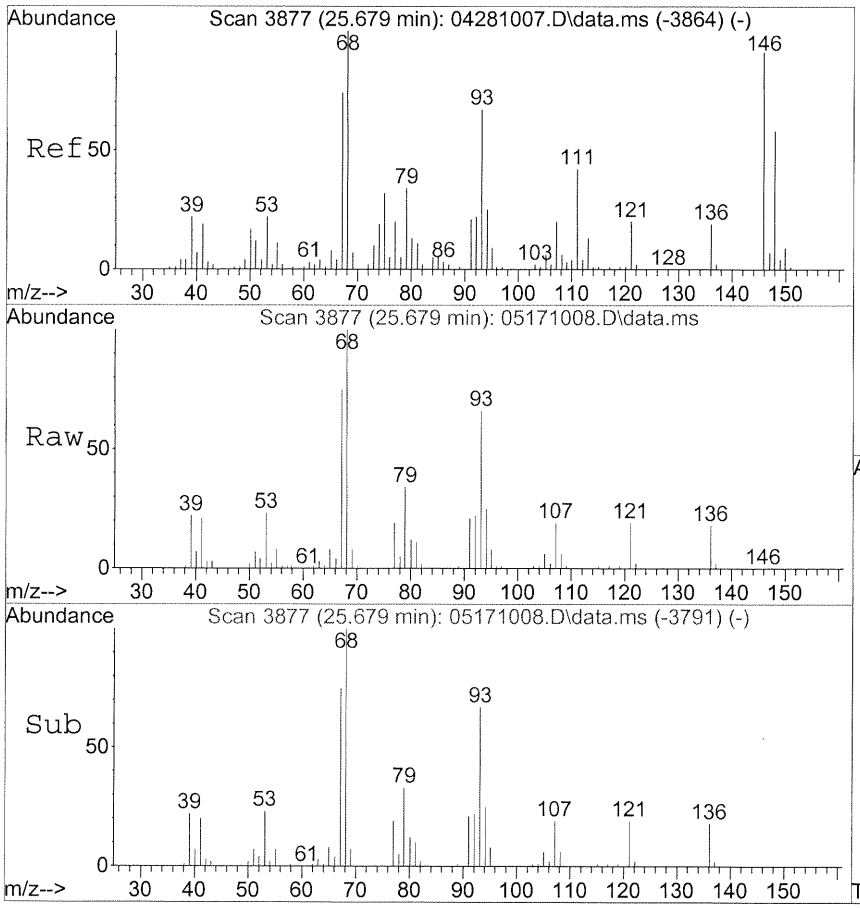


#86
1,4-Dichlorobenzene
Concen: 0.35 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:146 Resp: 15249

Ion	Ratio	Lower	Upper
146	100		
148	63.2	44.0	84.0

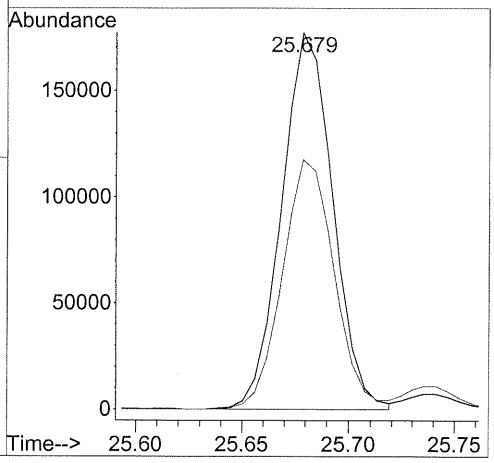


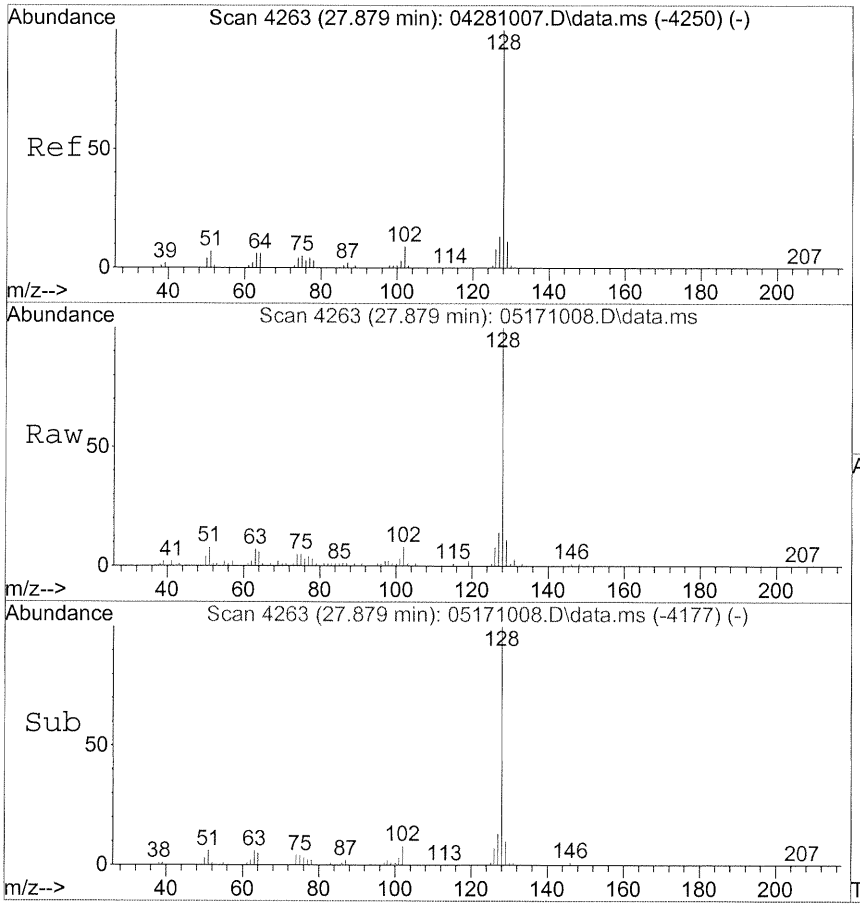


#91
d-Limonene
Concen: 8.48 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion: 68 Resp: 294281

Ion	Ratio	Lower	Upper
68	100		
93	67.3	51.5	91.5

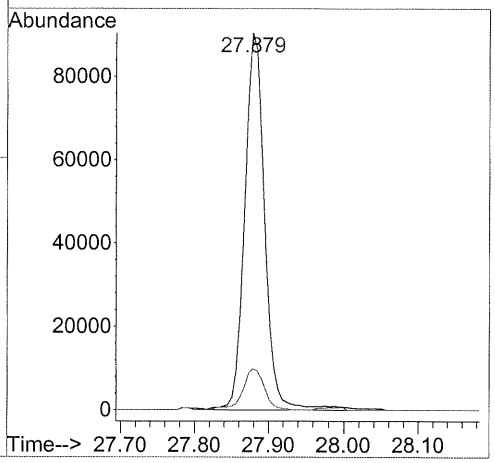




#95
Naphthalene
Concen: 1.75 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 14:48

Tgt Ion:128 Resp: 170405

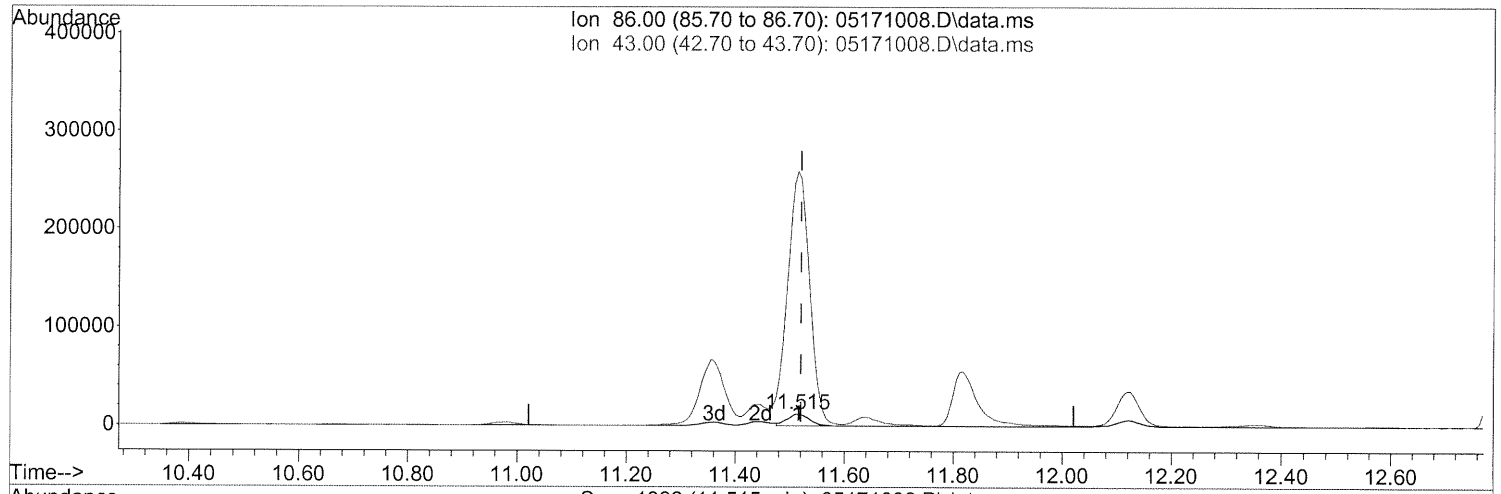
Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	31.1

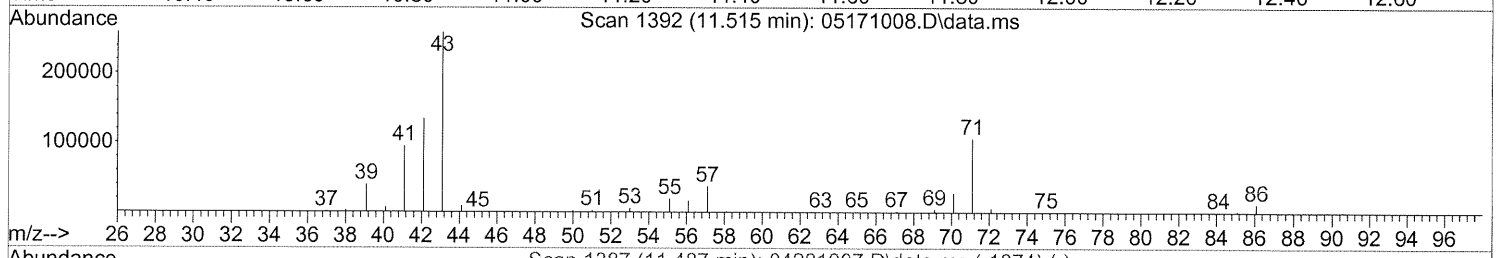


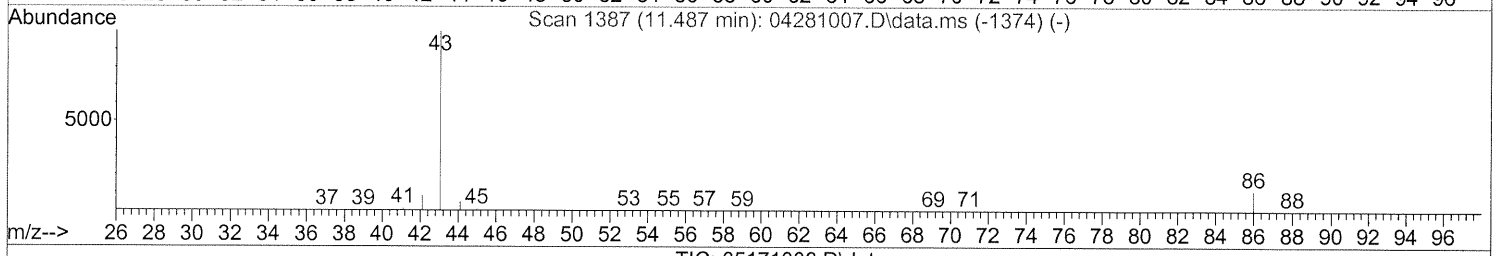
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171008.D\data.ms

(26) Vinyl Acetate (T)

11.515min (-0.006) 6.68ng

response 32761

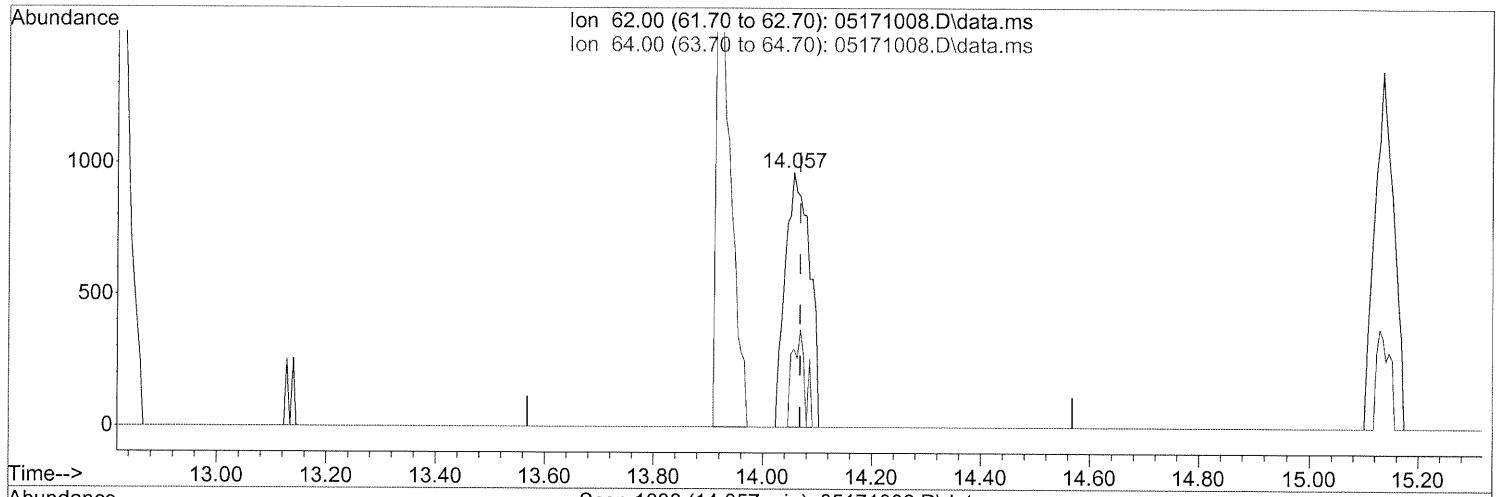
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2226.31#
0.00	0.00	0.00
0.00	0.00	0.00

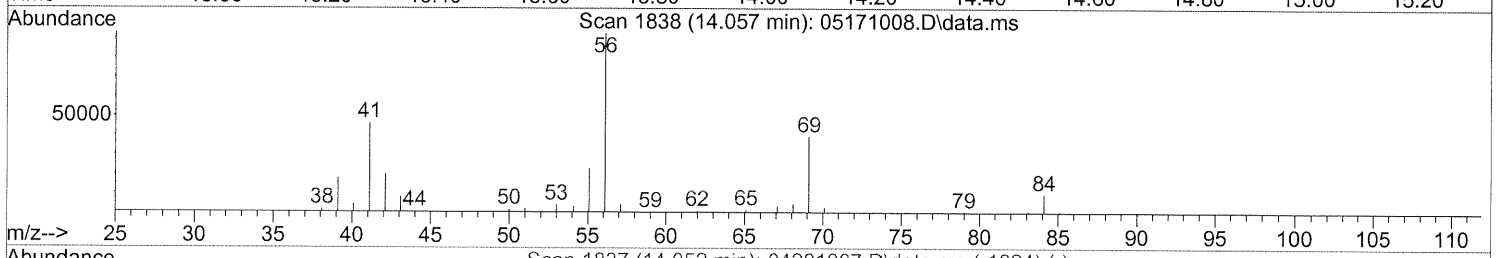
FP

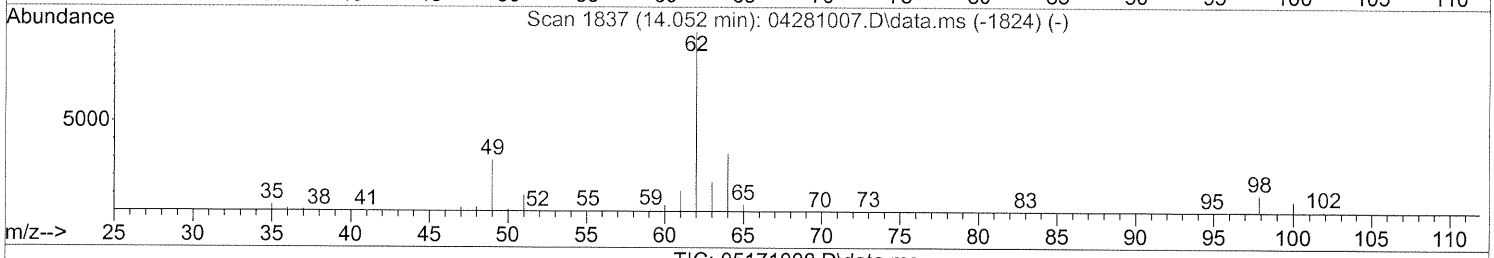
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171008.D\data.ms

(36) 1,2-Dichloroethane (T)

14.057min (-0.011) 0.11ng

response 2992

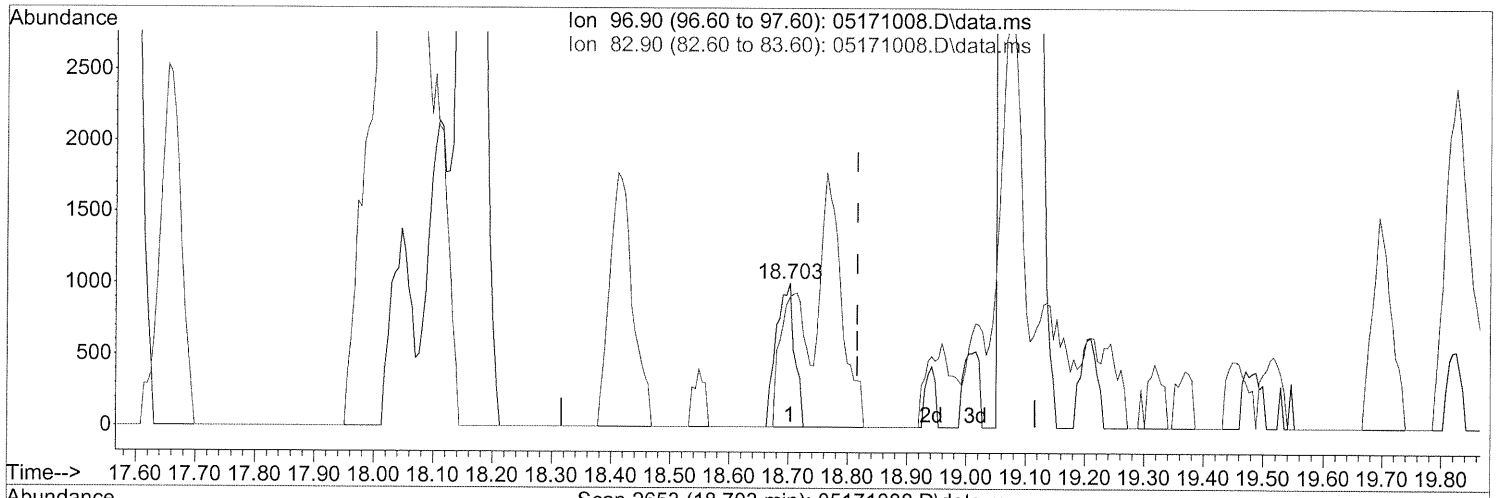
Ion	Exp%	Act%
62.00	100	100
64.00	32.80	19.72
0.00	0.00	0.00
0.00	0.00	0.00

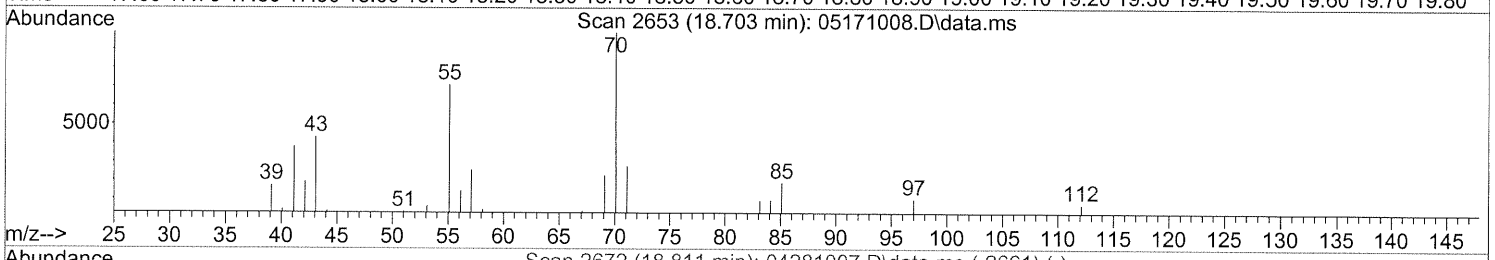
TP

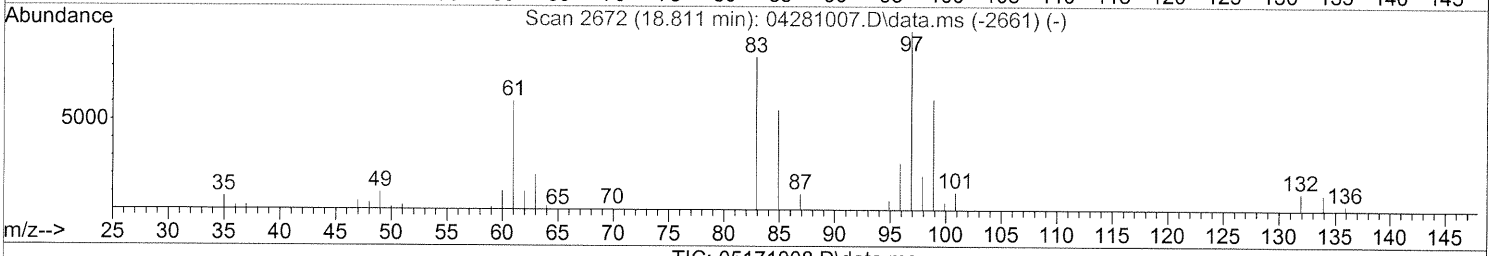
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171008.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.703min (-0.114) 0.11ng

response 2165

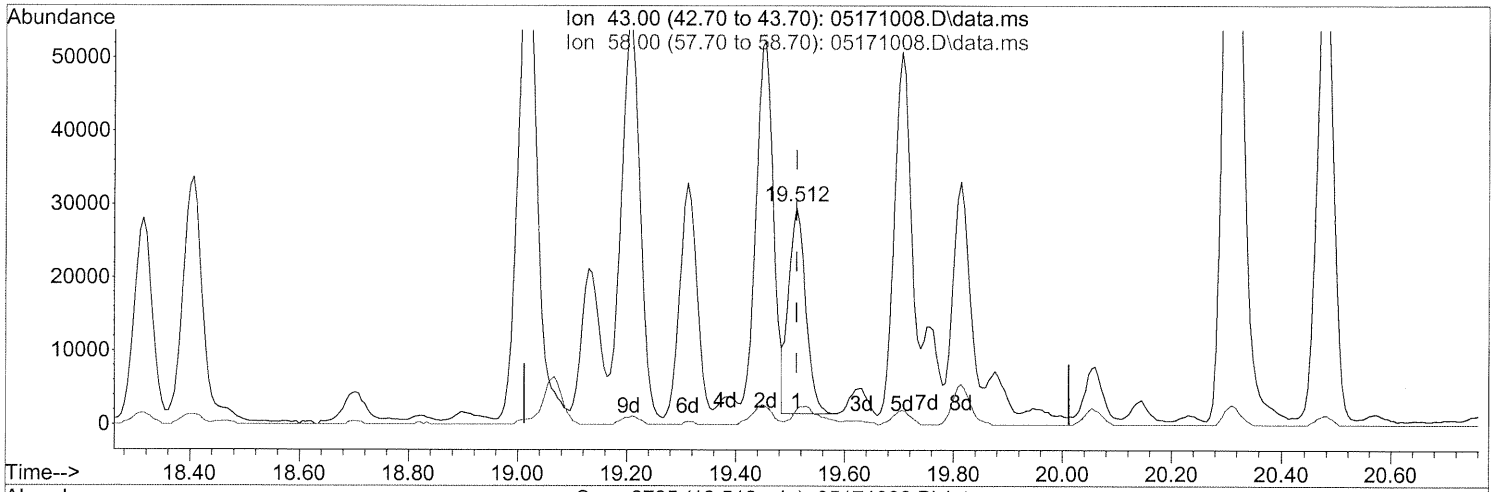
Ion	Exp%	Act%
96.90	100	100
82.90	84.60	132.47#
0.00	0.00	0.00
0.00	0.00	0.00

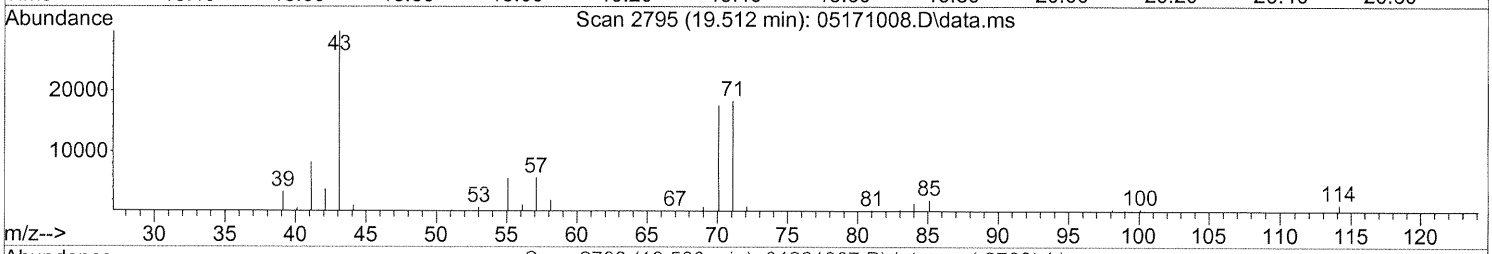
#P

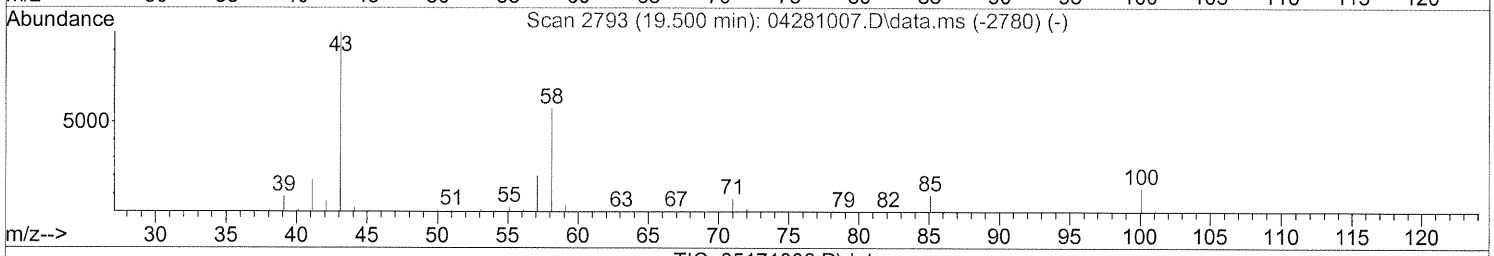
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171008.D\data.ms

(59) 2-Hexanone (T)

19.512min (-0.000) 1.40ng

response 61409

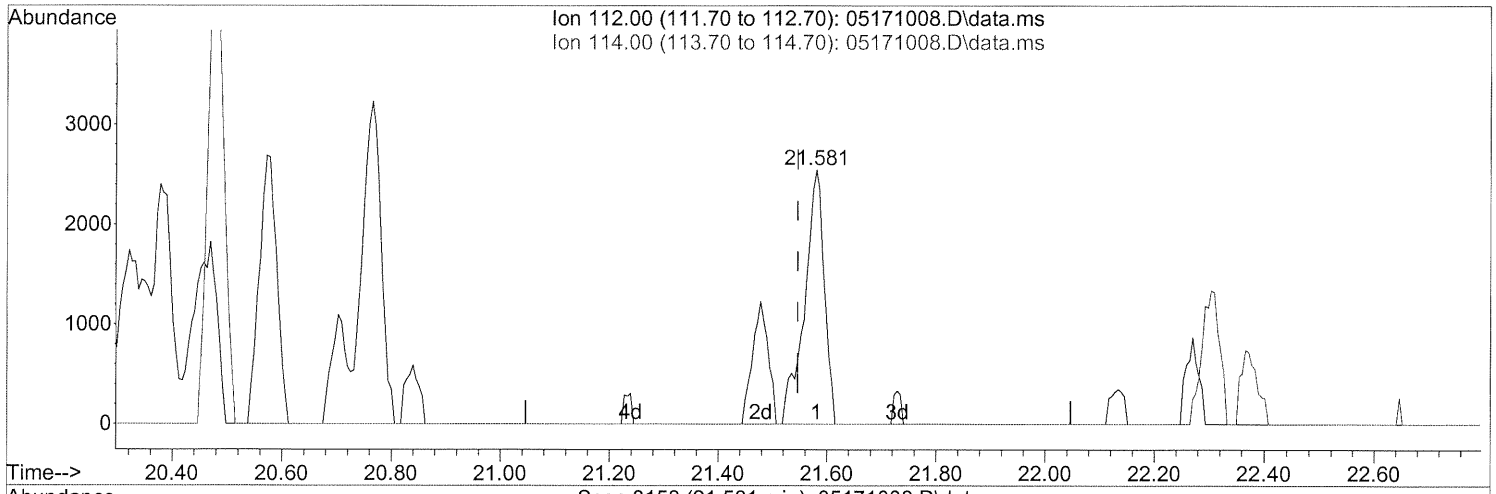
Ion	Exp%	Act%
43.00	100	100
58.00	58.30	15.56#
0.00	0.00	0.00
0.00	0.00	0.00

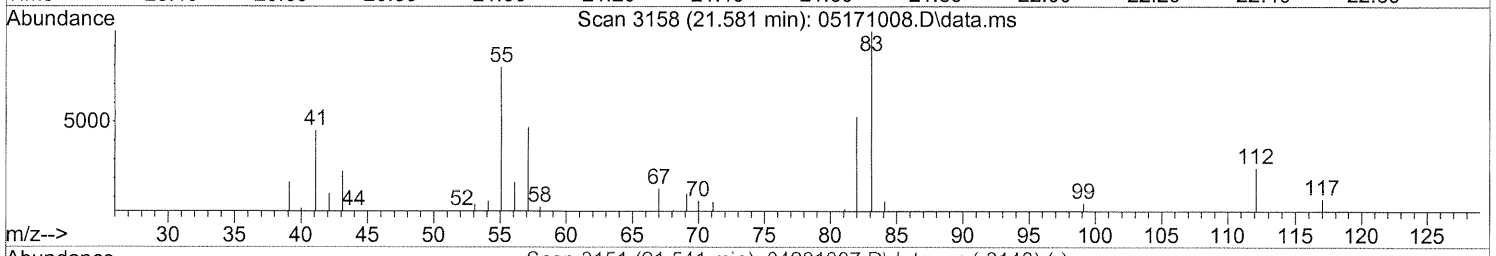
7P

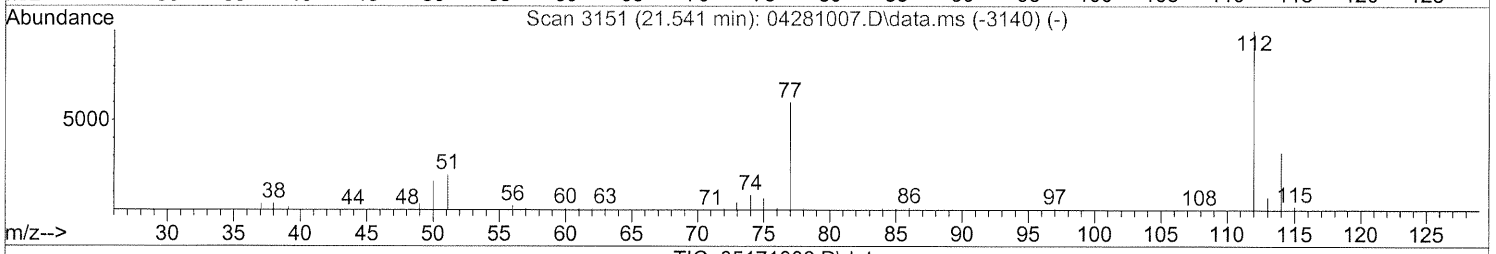
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171008.D\data.ms

(65) Chlorobenzene (T)

21.581min (+0.034) 0.11ng

response 6465

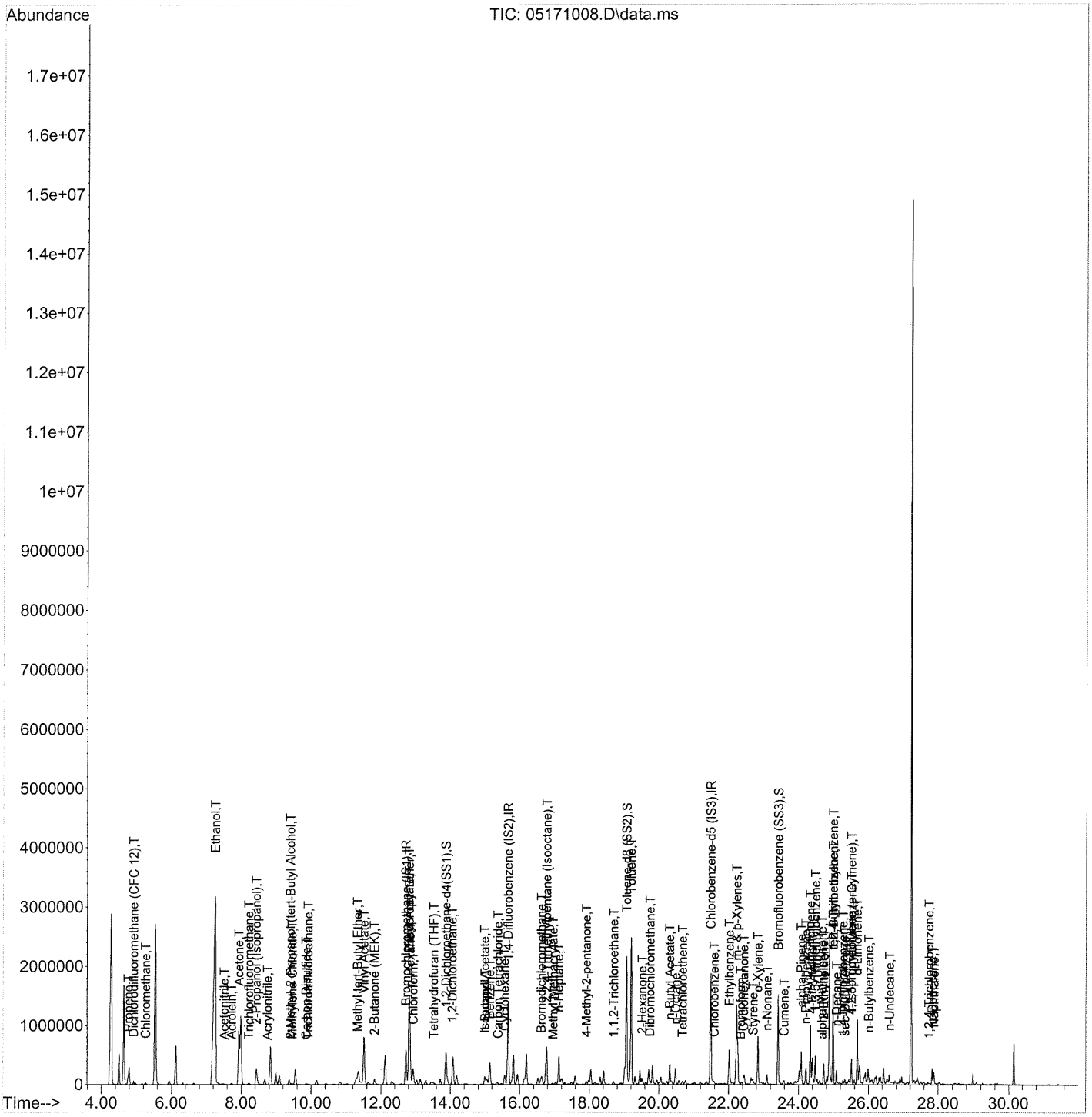
7P

Ion	Exp%	Act%
112.00	100	100
114.00	31.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	312517	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1577742	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	779290	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	559731	24.068	ng		-0.03
Spiked Amount 25.000			Recovery = 96.28%				
57) Toluene-d8 (SS2)	19.07	98	1843407	24.795	ng		0.00
Spiked Amount 25.000			Recovery = 99.20%				
73) Bromofluorobenzene (SS3)	23.42	174	490224	25.829	ng		0.00
Spiked Amount 25.000			Recovery = 103.32%				
Target Compounds							Qvalue
2) Propene	4.77	42	78518	3.221	ng	#	35
3) Dichlorodifluoromethan...	4.93	85	56991	1.363	ng		99
4) Chloromethane	5.26	50	11093	0.359	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	1025	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	6.02	54	801	N.D.			
8) Bromomethane	6.52	94	554	N.D.			
9) Chloroethane	6.86	64	529	N.D.			
10) Ethanol	7.25	45	7780852	585.453	ng		99
11) Acetonitrile	7.51	41	16333	0.486	ng		86
12) Acrolein	7.72	56	27758	2.679	ng		96
13) Acetone	7.93	58	590041	36.317	ng	#	48
14) Trichlorofluoromethane	8.22	101	26183	0.723	ng		99
15) 2-Propanol (Isopropanol)	8.43	45	393013	7.802	ng		98
16) Acrylonitrile	8.75	53	1820	0.075	ng		94
17) 1,1-Dichloroethene	9.25	96	489	N.D.			
18) 2-Methyl-2-Propanol (t...	9.41	59	17899	0.344	ng	#	68
19) Methylene Chloride	9.46	84	5362	0.251	ng		99
20) 3-Chloro-1-propene (Al...	9.64	41	1380	N.D.			
21) Trichlorotrifluoroethane	9.91	151	4840	0.316	ng		95
22) Carbon Disulfide	9.86	76	41944	0.550	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.29	63	180	N.D.			
25) Methyl tert-Butyl Ether	11.33	73	53843	0.809	ng		93
26) Vinyl Acetate	11.52	86	32761	6.681	ng	#	1
27) 2-Butanone (MEK)	11.82	72	46855	3.472	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.82	87	11710	0.586	ng	#	1
30) Ethyl Acetate	12.81	61	321885	40.122	ng		96
31) n-Hexane	12.84	57	387374	9.430	ng		98

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	274436	8.006 ng		99
34) Tetrahydrofuran (THF)	13.52	72	6615	0.507 ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.06	62	2992	0.108 ng		77
38) 1,1,1-Trichloroethane	14.44	97	596	N.D.		
39) Isopropyl Acetate	14.99	61	3156	0.232 ng	#	1
40) 1-Butanol	14.99	56	121920	5.592 ng		87
41) Benzene	15.13	78	478573	5.434 ng		100
42) Carbon Tetrachloride	15.37	117	8448	0.360 ng		99
43) Cyclohexane	15.56	84	93851	2.536 ng		96
44) tert-Amyl Methyl Ether	16.05	73	86	N.D.		
45) 1,2-Dichloropropane	16.18	63	780	N.D.		
46) Bromodichloromethane	16.62	83	60686	2.297 ng		76
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.67	88	742	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	755559	7.325 ng		96
50) Methyl Methacrylate	16.96	100	2252	0.244 ng	#	1
51) n-Heptane	17.12	71	150469	5.976 ng		95
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.92	58	21932	1.153 ng		90
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	18.70	97	2165	0.113 ng	#	47
58) Toluene	19.20	91	2243865	24.330 ng		99
59) 2-Hexanone	19.51	43	61409	1.396 ng	#	43
60) Dibromochloromethane	19.74	129	15580	0.853 ng		100
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.31	43	277907	5.620 ng		95
63) n-Octane	20.48	57	56898	2.659 ng		92
64) Tetrachloroethene	20.68	166	17992	0.833 ng		99
65) Chlorobenzene	21.58	112	6465	0.115 ng	#	43
66) Ethylbenzene	22.01	91	553470	5.363 ng		97
67) m- & p-Xylenes	22.22	91	1329543	15.893 ng		98
68) Bromoform	22.34	173	1891	0.125 ng		89
69) Styrene	22.70	104	47014	0.797 ng		99
70) o-Xylene	22.84	91	600901	6.742 ng		97
71) n-Nonane	23.10	43	68904	1.424 ng		94
72) 1,1,2,2-Tetrachloroethane	22.83	83	1499	N.D.		
74) Cumene	23.59	105	54149	0.502 ng		96
75) alpha-Pinene	24.08	93	256642	5.076 ng		93
76) n-Propylbenzene	24.21	91	261924	1.983 ng		96
77) 3-Ethyltoluene	24.34	105	711929	7.151 ng		98
78) 4-Ethyltoluene	24.39	105	309442	3.075 ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	270783	3.210 ng		98

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 14:48
Operator : EM
Sample : P1001651-003 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 15:22:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

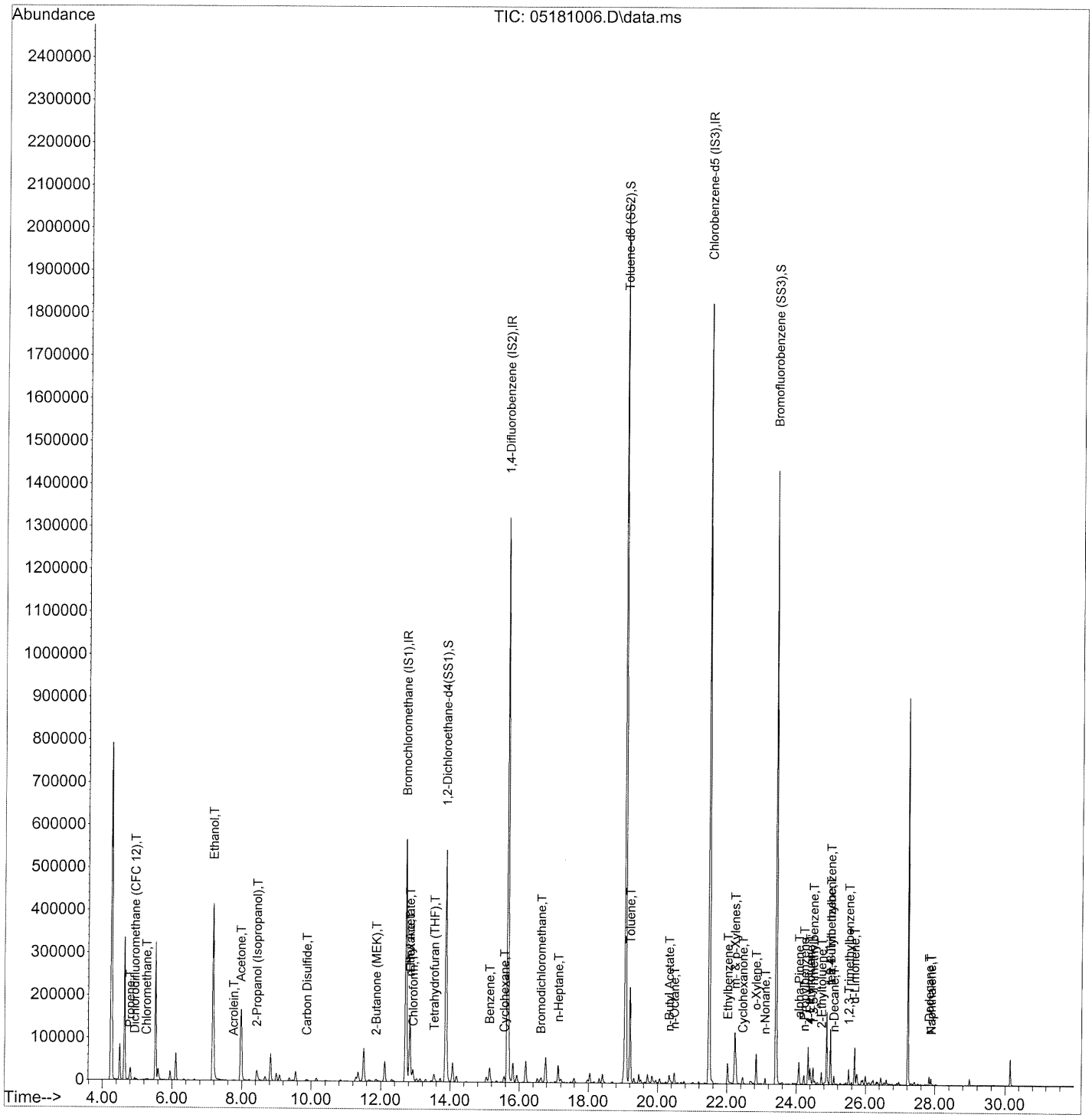
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.67	118	2357	0.053 ng		98
81) 2-Ethyltoluene	24.72	105	249026	2.396 ng		72
82) 1,2,4-Trimethylbenzene	24.99	105	956402	10.845 ng		87
83) n-Decane	25.09	57	88495	1.745 ng		94
84) Benzyl Chloride	25.16	91	2291	N.D.		
85) 1,3-Dichlorobenzene	25.19	146	895	N.D.		
86) 1,4-Dichlorobenzene	25.27	146	15249	0.349 ng		99
87) sec-Butylbenzene	25.32	105	15288	0.132 ng		91
88) 4-Isopropyltoluene (p-...	25.51	119	73662	0.648 ng		77
89) 1,2,3-Trimethylbenzene	25.51	105	194482	2.153 ng		81
90) 1,2-Dichlorobenzene	25.68	146	727	N.D.		
91) d-Limonene	25.68	68	294281	8.478 ng		95
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	51599	1.015 ng	#	72
94) 1,2,4-Trichlorobenzene	27.74	180	2284	0.085 ng	#	93
95) Naphthalene	27.88	128	170405	1.749 ng		99
96) n-Dodecane	27.83	57	85139	1.634 ng		96
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.44	55	69570	2.393 ng	#	88
99) tert-Butylbenzene	24.99	119	114852	1.287 ng	#	53
100) n-Butylbenzene	26.01	91	61581	0.680 ng	#	61

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 17:19:36 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 17:19:36 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	306847	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1555866	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	778141	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	556445	24.369	ng	-0.03
Spiked Amount 25.000			Recovery = 97.48%			✓
57) Toluene-d8 (SS2)	19.06	98	1826985	24.610	ng	-0.01
Spiked Amount 25.000			Recovery = 98.44%			✓
73) Bromofluorobenzene (SS3)	23.42	174	478223	25.234	ng	0.00
Spiked Amount 25.000			Recovery = 100.92%			✓

Target Compounds							Qvalue
2) Propene	4.80	42	4298	0.180	ng	#	4
3) Dichlorodifluoromethan...	4.93	85	5467	0.133	ng	#	92
4) Chloromethane	5.26	50	2892	0.095	ng		87
10) Ethanol	7.17	45	690269	52.897	ng		100
12) Acrolein	7.76	56	2223	0.219	ng		87
13) Acetone	7.96	58	58413	3.662	ng	#	49
15) 2-Propanol (Isopropanol)	8.43	45	46868	0.948	ng		99
22) Carbon Disulfide	9.87	76	9132	0.122	ng		86
27) 2-Butanone (MEK)	11.86	72	3479	0.263	ng	#	30
30) Ethyl Acetate	12.83	61	27712	3.518	ng		95
31) n-Hexane	12.84	57	36013	0.893	ng		96
32) Chloroform	12.93	83	25510	0.758	ng		100
34) Tetrahydrofuran (THF)	13.53	72	7459	0.582	ng	#	77
41) Benzene	15.14	78	45193	0.520	ng		98
43) Cyclohexane	15.56	84	8536	0.234	ng		90
46) Bromodichloromethane	16.63	83	5247	0.201	ng	#	74
51) n-Heptane	17.13	71	13507	0.544	ng		94
58) Toluene	19.20	91	213987	2.324	ng		99
62) n-Butyl Acetate	20.33	43	21688	0.439	ng		90
63) n-Octane	20.48	57	5372	0.251	ng		89
66) Ethylbenzene	22.02	91	54068	0.525	ng		96
67) m- & p-Xylenes	22.22	91	128041	1.533	ng		97
70) o-Xylene	22.84	91	56803	0.638	ng		97
71) n-Nonane	23.10	43	6944	0.144	ng		84
75) alpha-Pinene	24.08	93	23475	0.465	ng	#	34
76) n-Propylbenzene	24.23	91	24593	0.186	ng		96
78) 4-Ethyltoluene	24.40	105	28550	0.284	ng		98
79) 1,3,5-Trimethylbenzene	24.49	105	29452	0.350	ng		88
81) 2-Ethyltoluene	24.73	105	24724	0.238	ng	#	70
82) 1,2,4-Trimethylbenzene	24.99	105	85571	0.972	ng		86

5/20/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 17:19:36 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

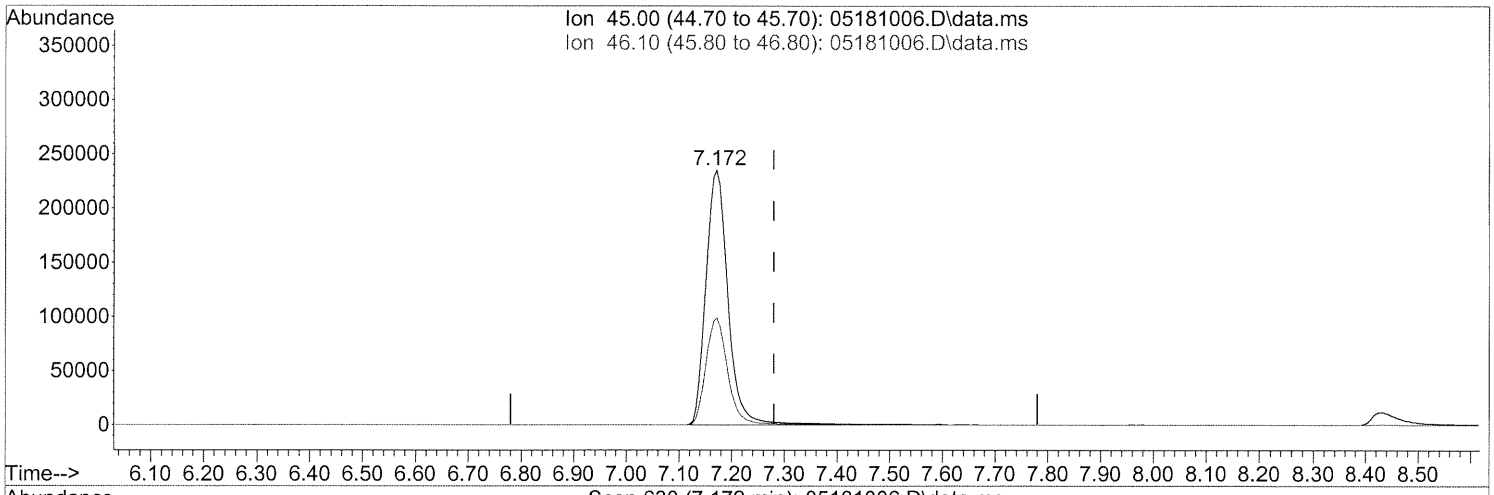
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
83) n-Decane	25.09	57	8467	0.167 ng		97
89) 1,2,3-Trimethylbenzene	25.51	105	17948	0.199 ng		79
91) d-Limonene	25.68	68	24443	0.705 ng		98
95) Naphthalene	27.89	128	17726	0.182 ng		92
96) n-Dodecane	27.83	57	7141	0.137 ng		96
98) Cyclohexanone	22.45	55	5948	0.205 ng		89
99) tert-Butylbenzene	24.99	119	10315	0.116 ng	#	53

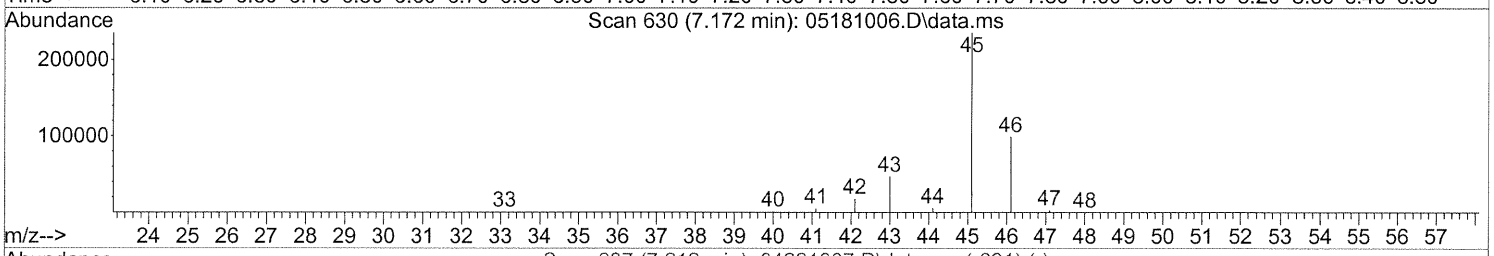
(#) = qualifier out of range (m) = manual integration (+) = signals summed

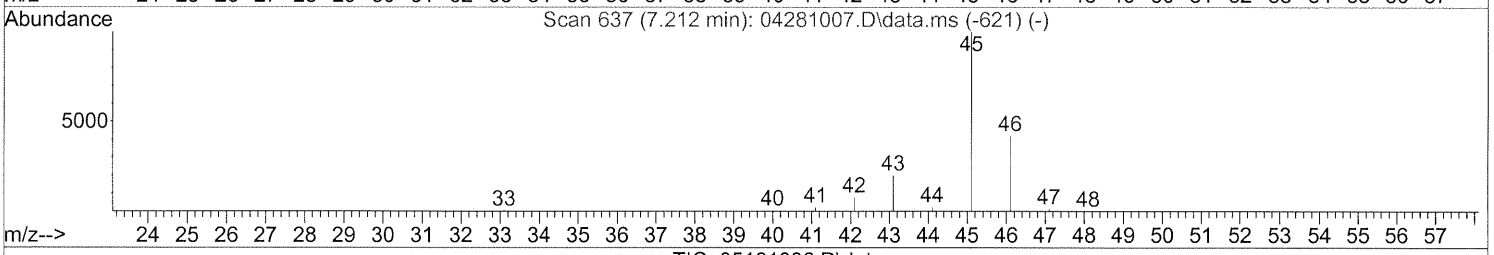
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 17:19:36 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181006.D\data.ms

(10) Ethanol (T)

7.172min (-0.108) 52.90ng

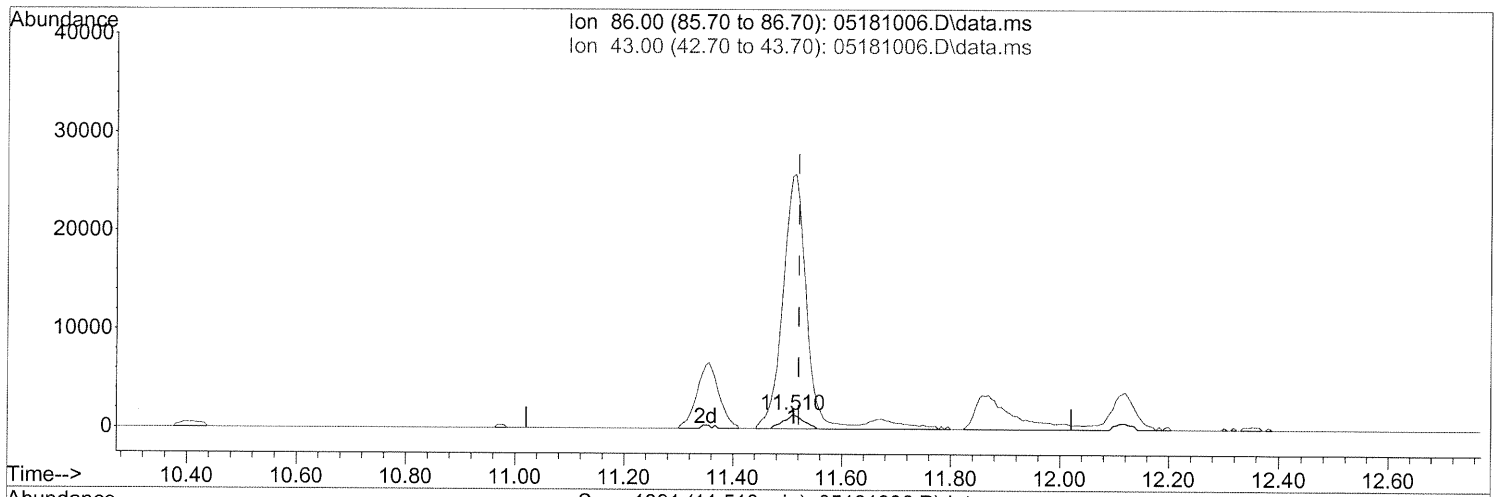
response 690269

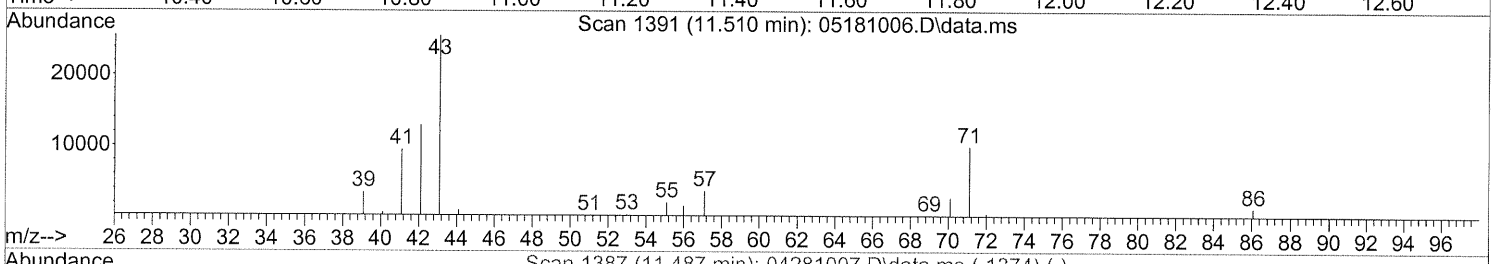
Ion	Exp%	Act%
45.00	100	100
46.10	41.30	41.40
0.00	0.00	0.00
0.00	0.00	0.00

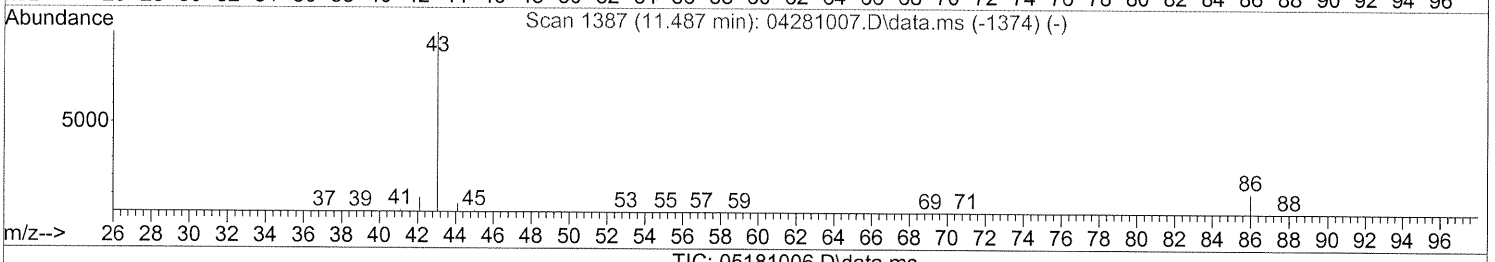
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181006.D\data.ms

(26) Vinyl Acetate (T)

11.510min (-0.011) 0.73ng

response 3509

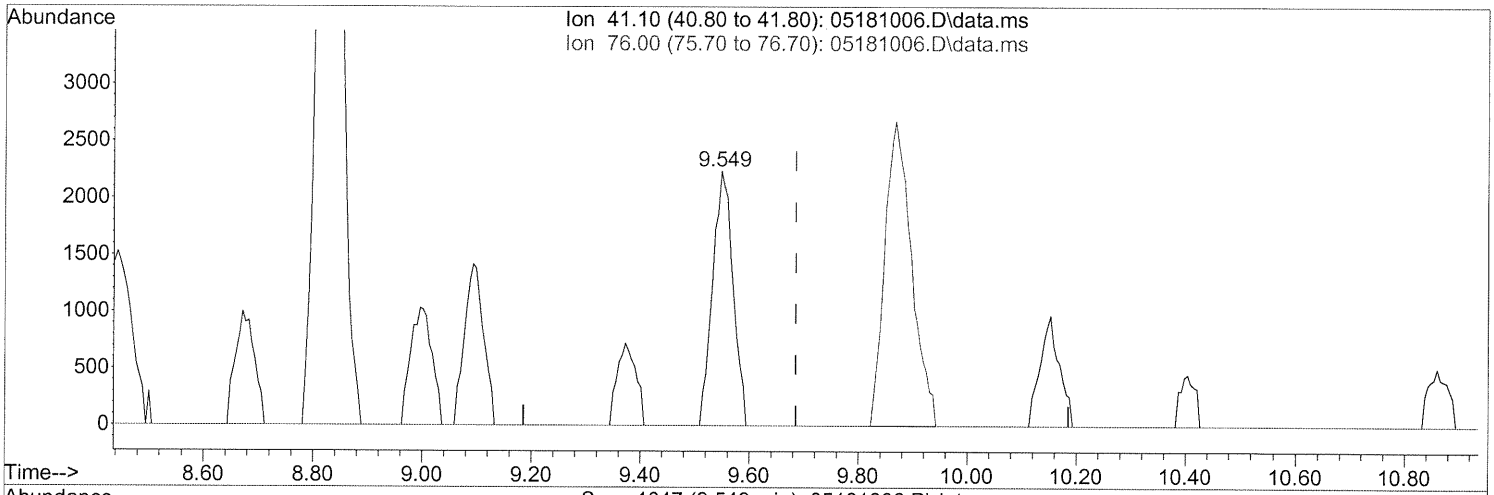
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2182.07#
0.00	0.00	0.00
0.00	0.00	0.00

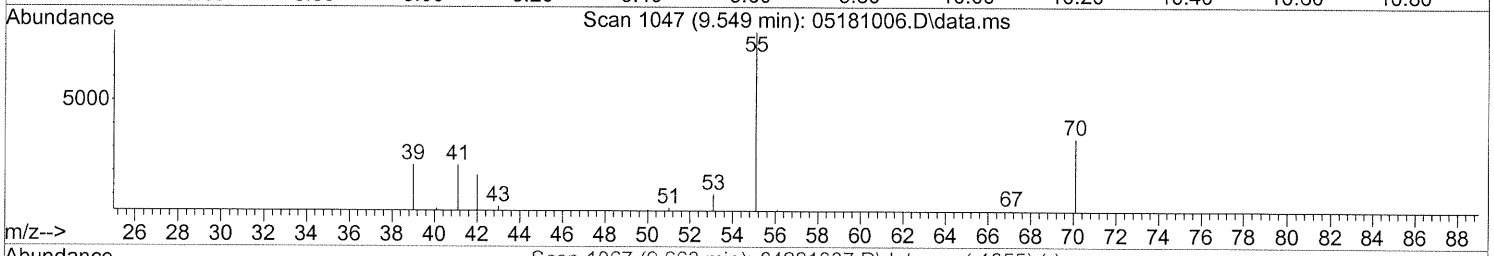
7P

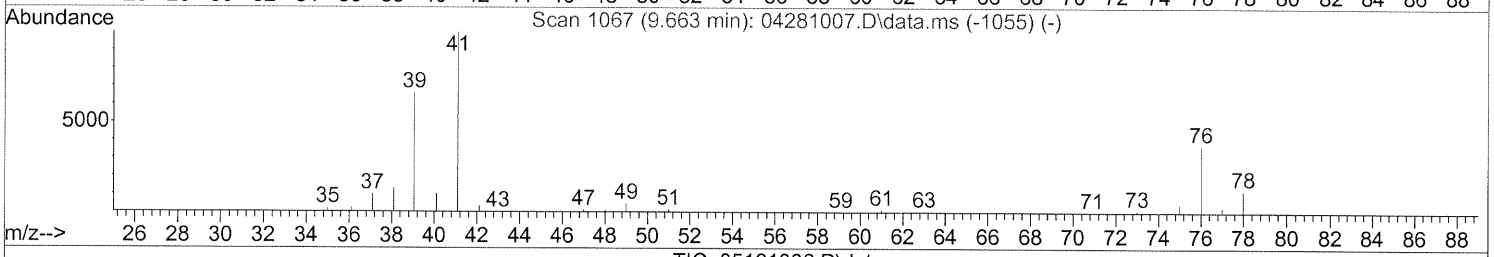
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181006.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.549min (-0.137) 0.21ng

response 5825

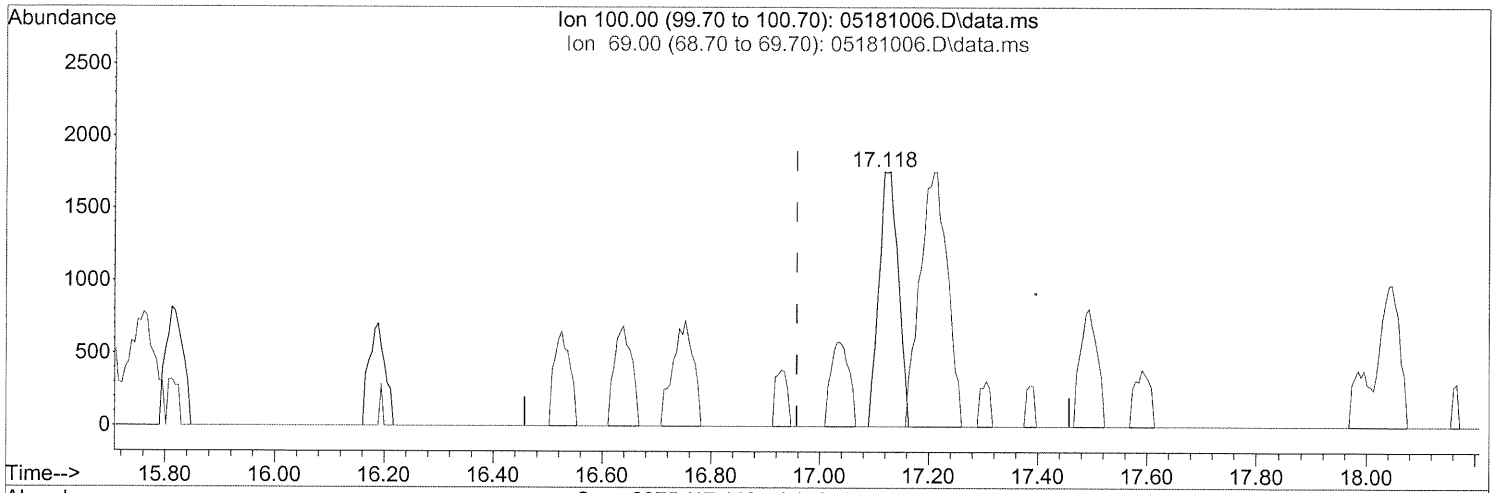
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

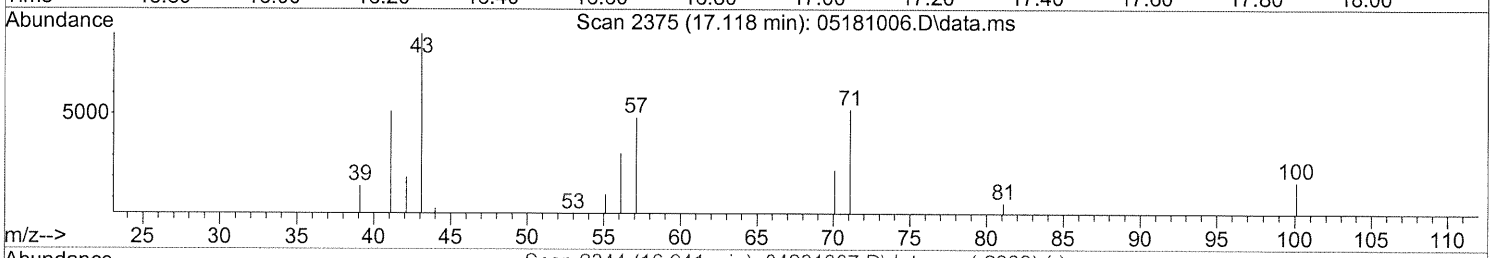
7P

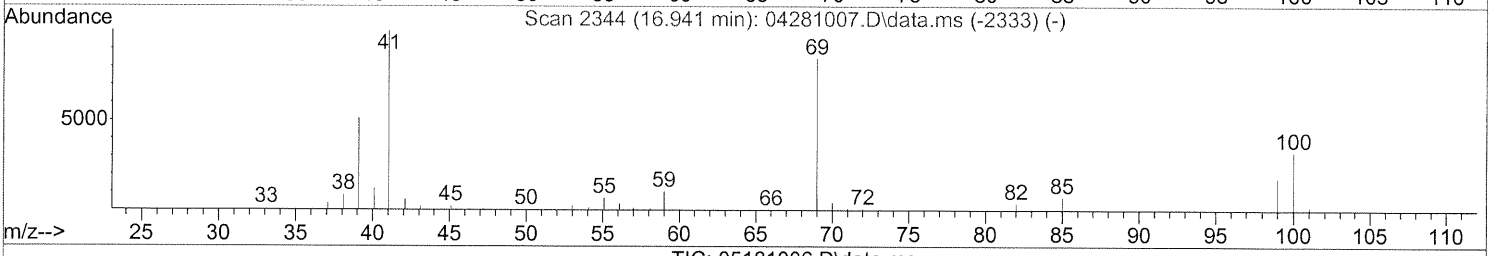
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181006.D\data.ms

(50) Methyl Methacrylate (T)

17.118min (+0.160) 0.48ng

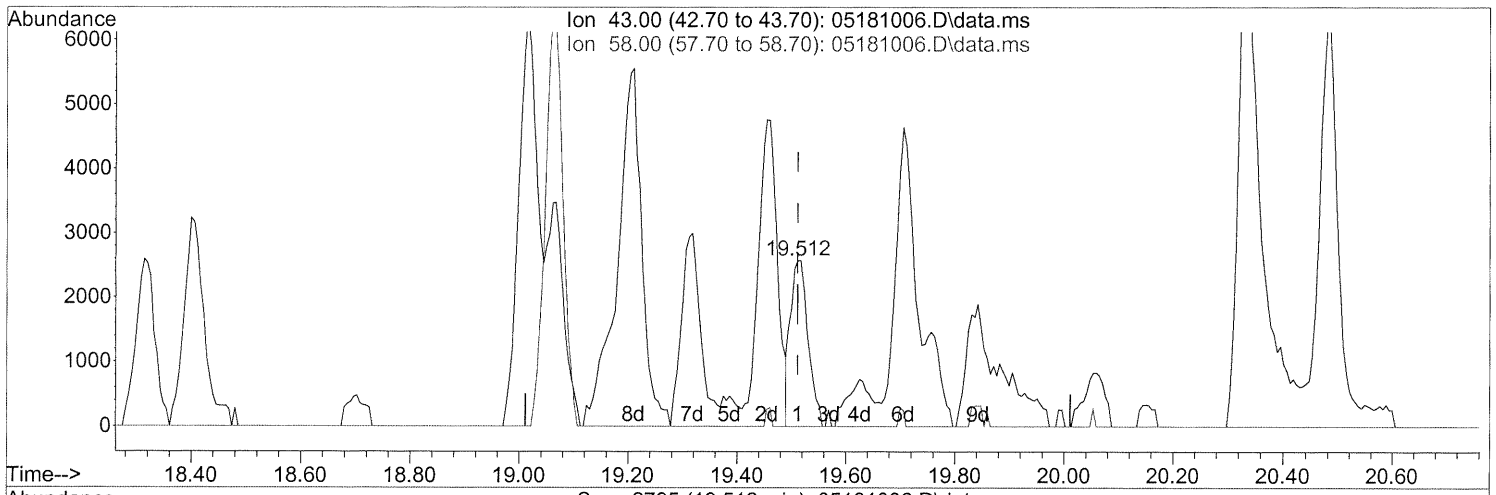
response 4370

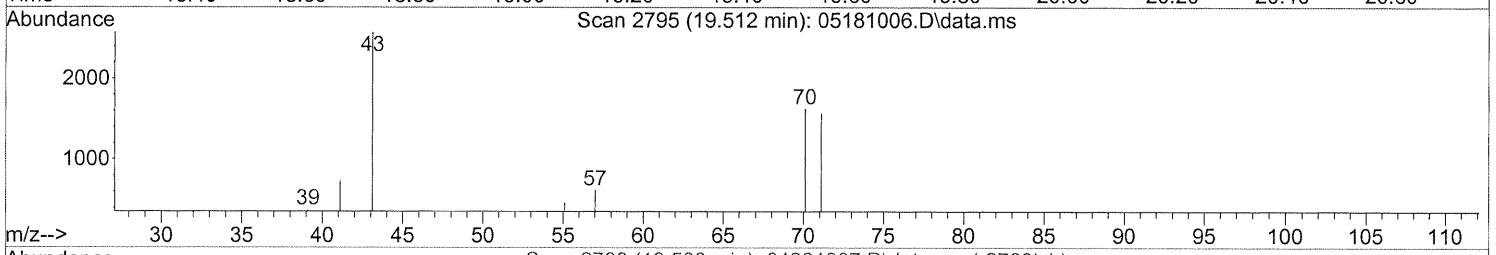
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

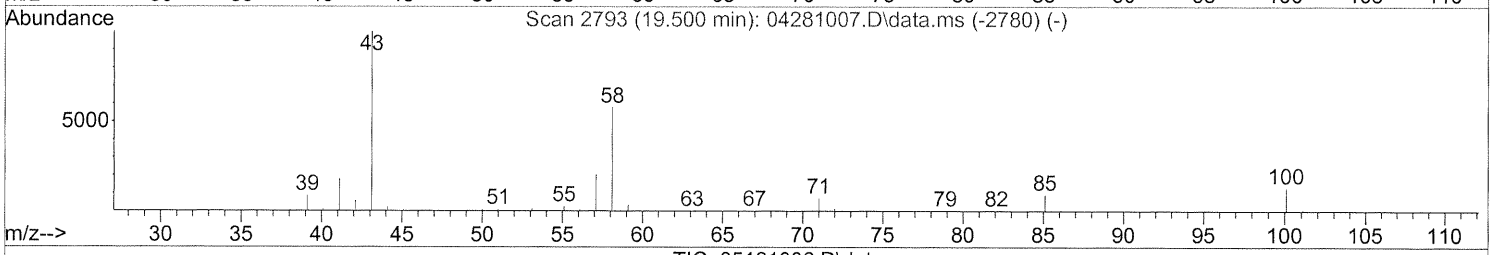
FP

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181006.D\data.ms

(59) 2-Hexanone (T)

19.512min (-0.000) 0.13ng

response 5797

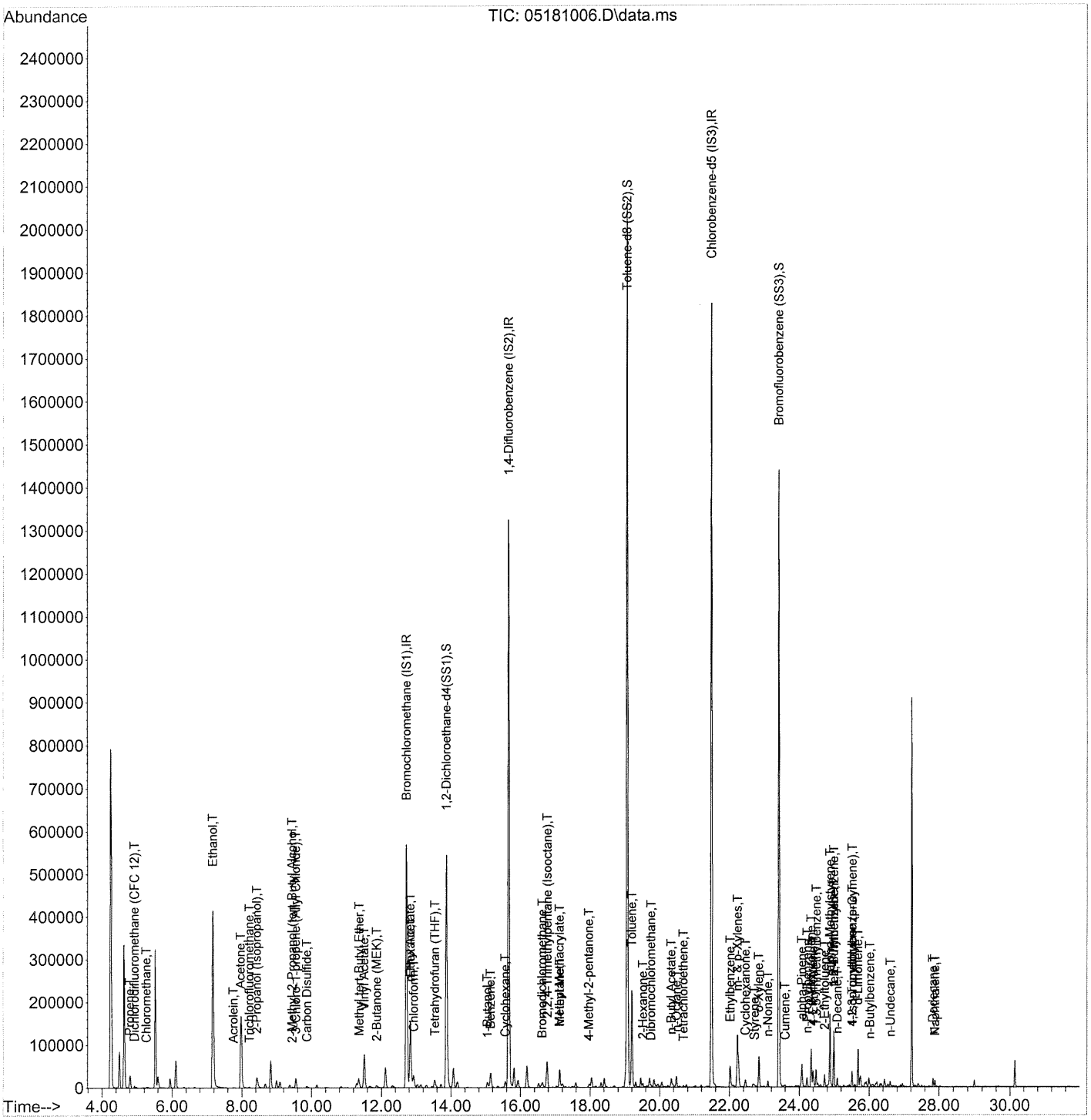
Ion	Exp%	Act%
43.00	100	100
58.00	58.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	306847	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1555866	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	778141	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	556445	24.369	ng		-0.03
Spiked Amount 25.000			Recovery = 97.48%				
57) Toluene-d8 (SS2)	19.06	98	1826985	24.610	ng		-0.01
Spiked Amount 25.000			Recovery = 98.44%				
73) Bromofluorobenzene (SS3)	23.42	174	478223	25.234	ng		0.00
Spiked Amount 25.000			Recovery = 100.92%				
Target Compounds							Qvalue
2) Propene	4.80	42	4298	0.180	ng	#	4
3) Dichlorodifluoromethan...	4.93	85	5467	0.133	ng	#	92
4) Chloromethane	5.26	50	2892	0.095	ng		87
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.17	45	690269	52.897	ng		100
11) Acetonitrile	7.54	41	1075	N.D.			
12) Acrolein	7.76	56	2223	0.219	ng		87
13) Acetone	7.96	58	58413	3.662	ng	#	49
14) Trichlorofluoromethane	8.22	101	2303	0.065	ng		92
15) 2-Propanol (Isopropanol)	8.43	45	46868	0.948	ng		99
16) Acrylonitrile	8.83	53	610	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.44	59	2641	0.052	ng	#	64
19) Methylene Chloride	9.46	84	800	N.D.			
20) 3-Chloro-1-propene (Al...	9.55	41	5825	0.213	ng	#	36
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	9.87	76	9132	0.122	ng		86
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.37	73	4903	0.075	ng		95
26) Vinyl Acetate	11.51	86	3509	0.729	ng	#	1
27) 2-Butanone (MEK)	11.86	72	3479	0.263	ng	#	30
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.84	87	654	N.D.			
30) Ethyl Acetate	12.83	61	27712	3.518	ng		95
31) n-Hexane	12.84	57	36013	0.893	ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	25510	0.758 ng		100
34) Tetrahydrofuran (THF)	13.53	72	7459	0.582 ng	#	77
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.04	56	9381	0.436 ng		100
41) Benzene	15.14	78	45193	0.520 ng		98
42) Carbon Tetrachloride	15.37	117	93	N.D.		
43) Cyclohexane	15.56	84	8536	0.234 ng		90
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.63	83	5247	0.201 ng	#	74
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	70446	0.693 ng		93
50) Methyl Methacrylate	17.12	100	4370	0.480 ng	#	1
51) n-Heptane	17.13	71	13507	0.544 ng		94
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.96	58	1274	0.068 ng	#	30
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	213987	2.324 ng		99
59) 2-Hexanone	19.51	43	5797	0.132 ng	#	22
60) Dibromochloromethane	19.75	129	1036	0.057 ng		90
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.33	43	21688	0.439 ng		90
63) n-Octane	20.48	57	5372	0.251 ng		89
64) Tetrachloroethene	20.67	166	1418	0.066 ng		98
65) Chlorobenzene	21.58	112	191	N.D.		
66) Ethylbenzene	22.02	91	54068	0.525 ng		96
67) m- & p-Xylenes	22.22	91	128041	1.533 ng		97
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.72	104	3875	0.066 ng		95
70) o-Xylene	22.84	91	56803	0.638 ng		97
71) n-Nonane	23.10	43	6944	0.144 ng		84
72) 1,1,2,2-Tetrachloroethane	22.45	83	186	N.D.		
74) Cumene	23.59	105	6005	0.056 ng		93
75) alpha-Pinene	24.08	93	23475	0.465 ng	#	34
76) n-Propylbenzene	24.23	91	24593	0.186 ng		96
77) 3-Ethyltoluene	24.34	105	65678	0.661 ng		98
78) 4-Ethyltoluene	24.40	105	28550	0.284 ng		98
79) 1,3,5-Trimethylbenzene	24.49	105	29452	0.350 ng		88

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 12:19
Operator : EM
Sample : P1001651-003 dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 13:19:24 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.88	118	2673	0.060 ng	#	6
81) 2-Ethyltoluene	24.73	105	24724	0.238 ng	#	70
82) 1,2,4-Trimethylbenzene	24.99	105	85571	0.972 ng		86
83) n-Decane	25.09	57	8467	0.167 ng		97
84) Benzyl Chloride	25.18	91	883	N.D.		
85) 1,3-Dichlorobenzene	25.19	146	280	N.D.		
86) 1,4-Dichlorobenzene	25.28	146	1605	N.D.		
87) sec-Butylbenzene	25.33	105	1439	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	6904	0.061 ng	#	74
89) 1,2,3-Trimethylbenzene	25.51	105	17948	0.199 ng		79
90) 1,2-Dichlorobenzene	25.28	146	1605	N.D.		
91) d-Limonene	25.68	68	24443	0.705 ng		98
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	4546	0.090 ng	#	70
94) 1,2,4-Trichlorobenzene	27.75	180	640	N.D.		
95) Naphthalene	27.89	128	17726	0.182 ng		92
96) n-Dodecane	27.83	57	7141	0.137 ng		96
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.45	55	5948	0.205 ng		89
99) tert-Butylbenzene	24.99	119	10315	0.116 ng	#	53
100) n-Butylbenzene	26.02	91	6028	0.067 ng	#	58

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110419** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-004

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01124

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.82	ND	0.47	
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.2**	0.82	**0.44**	0.16	
74-87-3	**Chloromethane**	**0.39**	0.33	**0.19**	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.82	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.064	
106-99-0	1,3-Butadiene	ND	0.33	ND	0.15	
74-83-9	Bromomethane	ND	0.16	ND	0.042	
75-00-3	Chloroethane	ND	0.16	ND	0.062	
64-17-5	**Ethanol**	**14**	8.2	**7.6**	4.3	
75-05-8	Acetonitrile	ND	0.82	ND	0.49	
107-02-8	Acrolein	ND	3.3	ND	1.4	
67-64-1	**Acetone**	**25**	8.2	**10**	3.4	
75-69-4	**Trichlorofluoromethane**	**1.1**	0.16	**0.20**	0.029	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.6	ND	0.66	
107-13-1	Acrylonitrile	ND	0.82	ND	0.38	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.041	
75-09-2	Methylene Chloride	ND	0.82	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	ND	0.052	
76-13-1	**Trichlorotrifluoroethane**	**0.50**	0.16	**0.066**	0.021	
75-15-0	Carbon Disulfide	ND	8.2	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.041	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	ND	0.045	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	8.2	ND	2.8	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110419** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-004

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01124

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.041	
141-78-6	Ethyl Acetate	ND	0.82	ND	0.23	
110-54-3	n-Hexane	ND	0.82	ND	0.23	
67-66-3	**Chloroform**	**0.81**	0.16	**0.17**	0.033	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.16	ND	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.16	ND	0.030	
71-43-2	**Benzene**	**0.16**	0.16	**0.052**	0.051	
56-23-5	**Carbon Tetrachloride**	**0.39**	0.16	**0.061**	0.026	
110-82-7	Cyclohexane	ND	0.82	ND	0.24	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.035	
75-27-4	Bromodichloromethane	ND	0.16	ND	0.024	
79-01-6	Trichloroethene	ND	0.16	ND	0.030	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	0.82	ND	0.20	
142-82-5	n-Heptane	ND	0.82	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.030	
108-88-3	Toluene	ND	0.82	ND	0.22	
591-78-6	2-Hexanone	ND	0.82	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.16	ND	0.019	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.021	
123-86-4	n-Butyl Acetate	ND	0.82	ND	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110419**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01124

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.82	ND	0.17	
127-18-4	Tetrachloroethene	ND	0.16	ND	0.024	
108-90-7	Chlorobenzene	ND	0.16	ND	0.035	
100-41-4	Ethylbenzene	ND	0.82	ND	0.19	
179601-23-1	m,p-Xylenes	ND	0.82	ND	0.19	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	ND	0.82	ND	0.19	
111-84-2	n-Nonane	ND	0.82	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.024	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.82	ND	0.15	
103-65-1	n-Propylbenzene	ND	0.82	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	0.82	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.16	ND	0.027	
106-46-7	1,4-Dichlorobenzene	ND	0.16	ND	0.027	
95-50-1	1,2-Dichlorobenzene	ND	0.16	ND	0.027	
5989-27-5	d-Limonene	ND	0.82	ND	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.82	ND	0.084	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.82	ND	0.16	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.076	

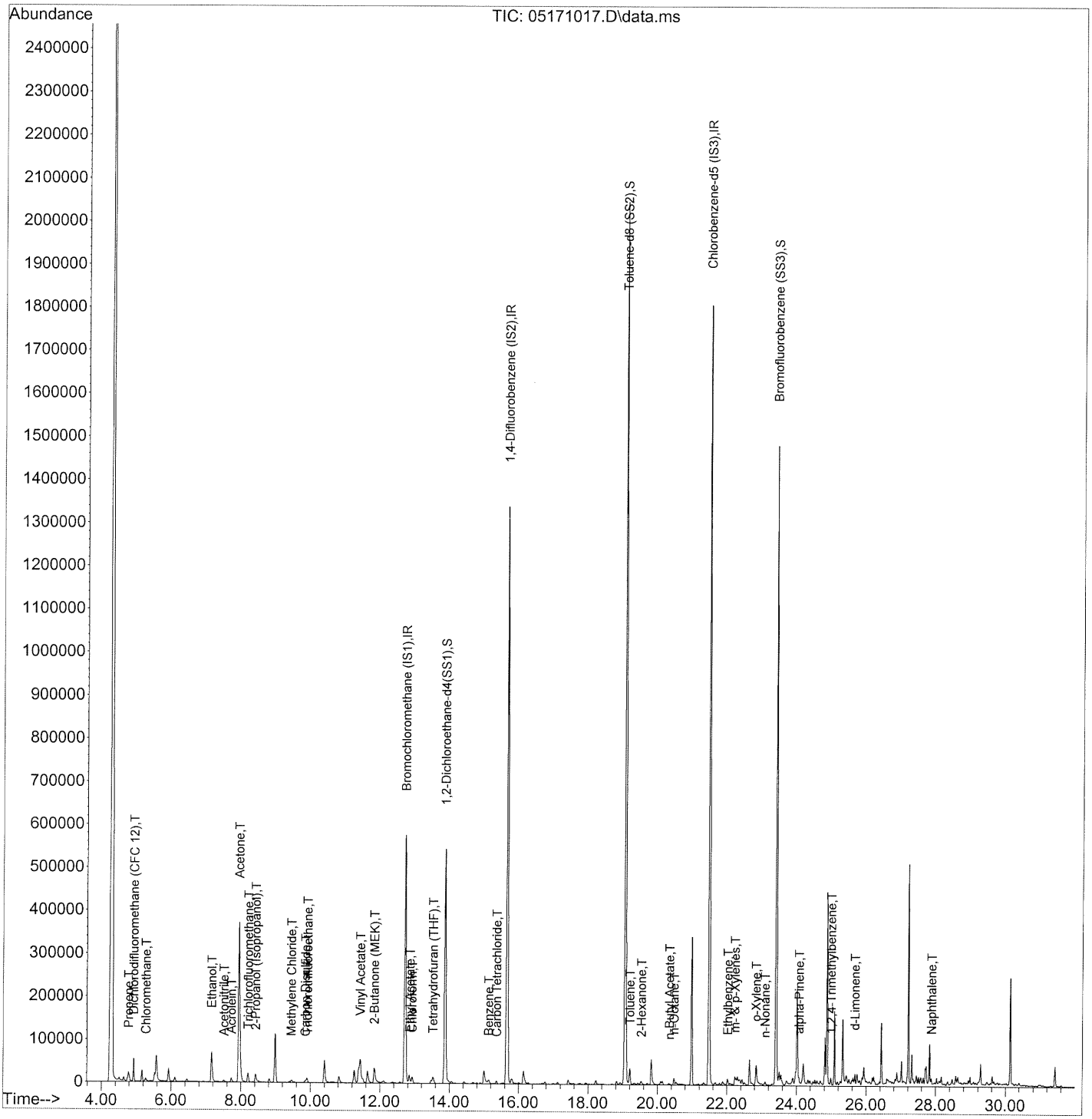
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 21:54
Operator : EM
Sample : P1001651-004 (1000ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 15:31:36 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 21:54
Operator : EM
Sample : P1001651-004 (1000ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 15:31:36 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	304195	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1560527	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	776823	25.000	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	552587	24.411	ng		-0.03
Spiked Amount 25.000			Recovery	=	97.64%		✓
57) Toluene-d8 (SS2)	19.06	98	1824821	24.623	ng		-0.01
Spiked Amount 25.000			Recovery	=	98.48%		✓
73) Bromofluorobenzene (SS3)	23.41	174	481116	25.430	ng		-0.01
Spiked Amount 25.000			Recovery	=	101.72%		✓
Target Compounds							Qvalue
2) Propene	4.78	42	7895	0.333	ng	#	85
3) Dichlorodifluoromethan...	4.93	85	54841	1.347	ng		99
4) Chloromethane	5.27	50	7298	0.242	ng		93
10) Ethanol	7.16	45	113726	8.791	ng		98
11) Acetonitrile	7.51	41	6248	0.191	ng		94
12) Acrolein	7.73	56	12299	1.220	ng		96
13) Acetone	7.94	58	238501	15.081	ng		95
14) Trichlorofluoromethane	8.21	101	23987	0.680	ng		99
15) 2-Propanol (Isopropanol)	8.42	45	35190	0.718	ng		93
19) Methylene Chloride	9.45	84	2163	0.104	ng		91
21) Trichlorotrifluoroethane	9.91	151	4587	0.308	ng		89
22) Carbon Disulfide	9.86	76	11153	0.150	ng		90
26) Vinyl Acetate	11.44	86	19642	4.115	ng	#	59
27) 2-Butanone (MEK)	11.83	72	16320	1.242	ng	#	41
30) Ethyl Acetate	12.85	61	2949	0.378	ng		93
32) Chloroform	12.92	83	16663	0.499	ng		98
34) Tetrahydrofuran (THF)	13.53	72	5920	0.466	ng	#	82
41) Benzene	15.14	78	8757	0.101	ng		97
42) Carbon Tetrachloride	15.36	117	5500	0.237	ng		100
58) Toluene	19.20	91	36185	0.394	ng		97
59) 2-Hexanone	19.53	43	12030	0.274	ng		76
62) n-Butyl Acetate	20.34	43	5291	0.107	ng		78
63) n-Octane	20.48	57	3253	0.153	ng		91
66) Ethylbenzene	22.02	91	14843	0.144	ng		96
67) m- & p-Xylenes	22.22	91	22812	0.274	ng		96
70) o-Xylene	22.84	91	8535	0.096	ng		93
71) n-Nonane	23.10	43	4600	0.095	ng		89
75) alpha-Pinene	24.08	93	5424	0.108	ng	#	46
82) 1,2,4-Trimethylbenzene	24.99	105	8634	0.098	ng		80
91) d-Limonene	25.68	68	6314	0.182	ng		98

ABM 5/20/10

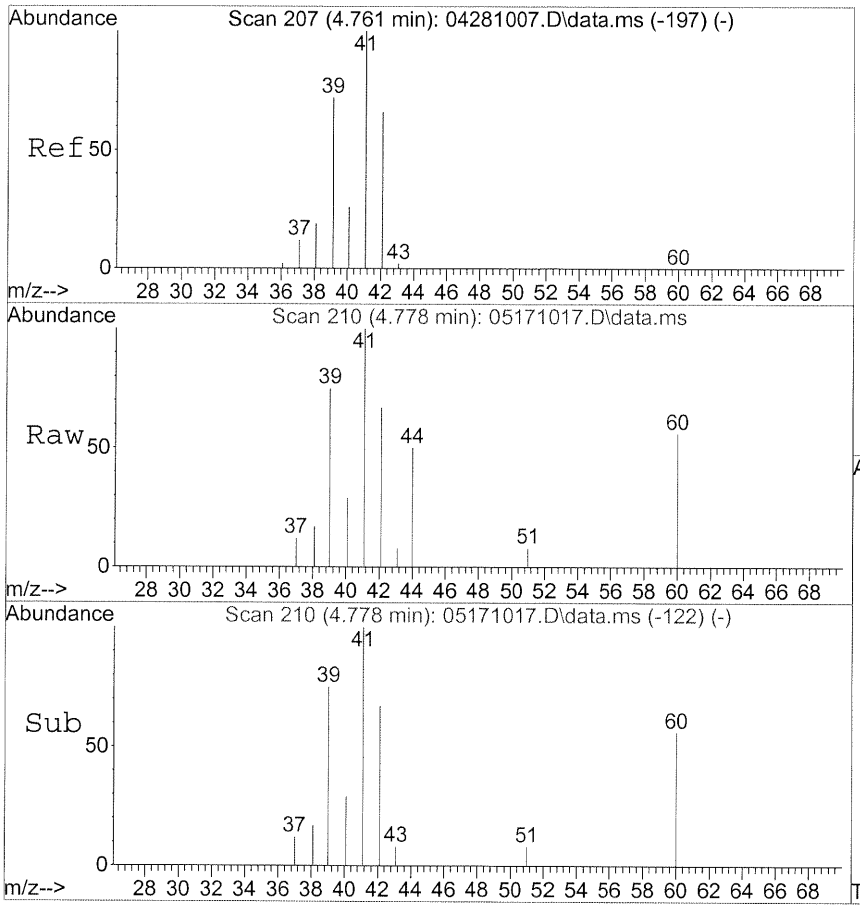
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 21:54
Operator : EM
Sample : P1001651-004 (1000ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 15:31:36 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Naphthalene	27.88	128	10641	0.110	ng	95

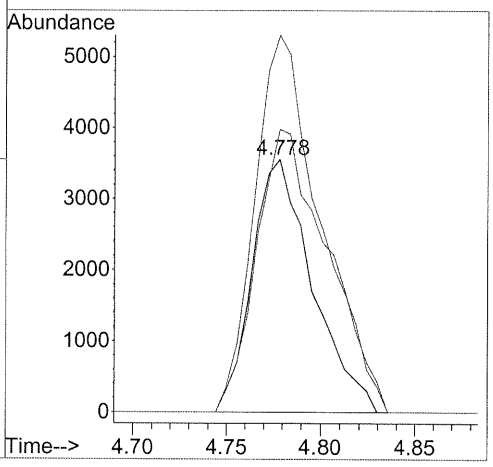
(#) = qualifier out of range (m) = manual integration (+) = signals summed

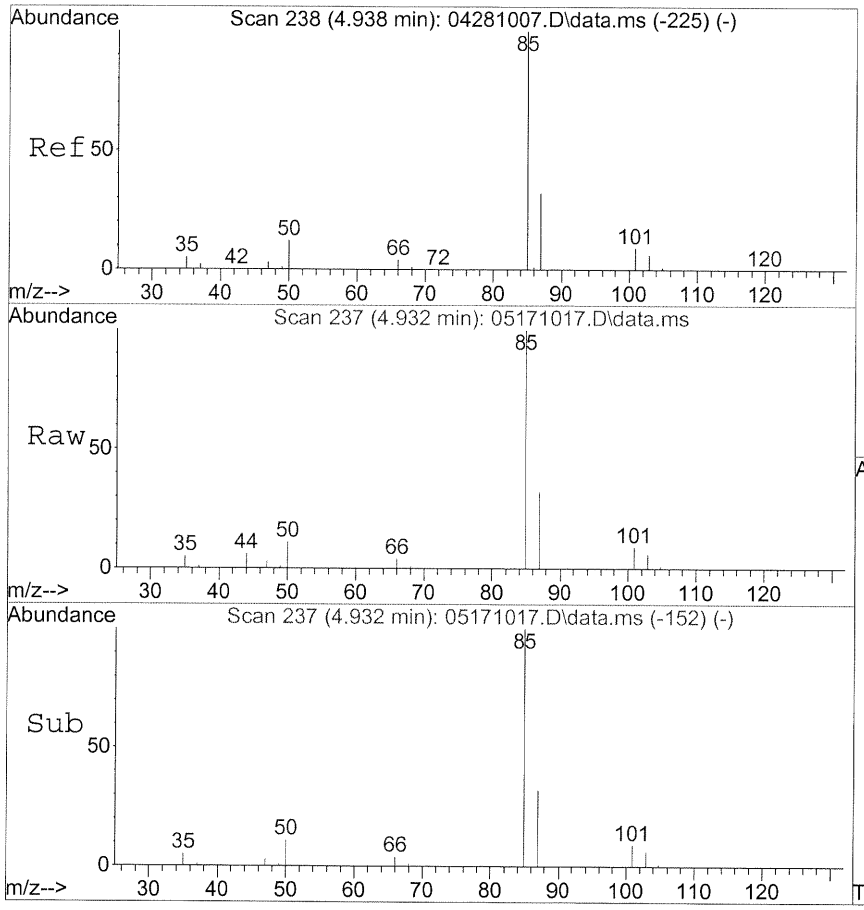


#2
Propene
Concen: 0.33 ng
RT: 4.78 min Scan# 210
Delta R.T. -0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 42 Resp: 7895

Ion	Ratio	Lower	Upper
42	100		
39	132.1	88.4	128.4#
41	162.1	129.9	169.9

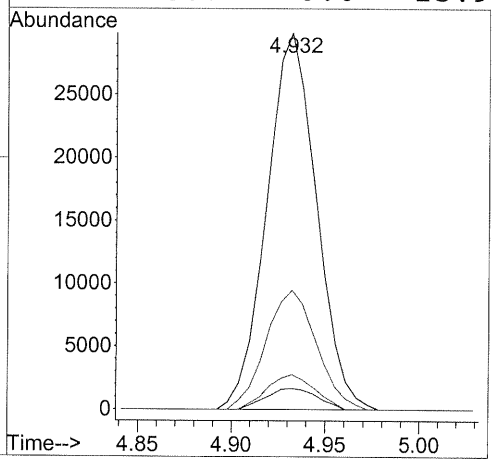


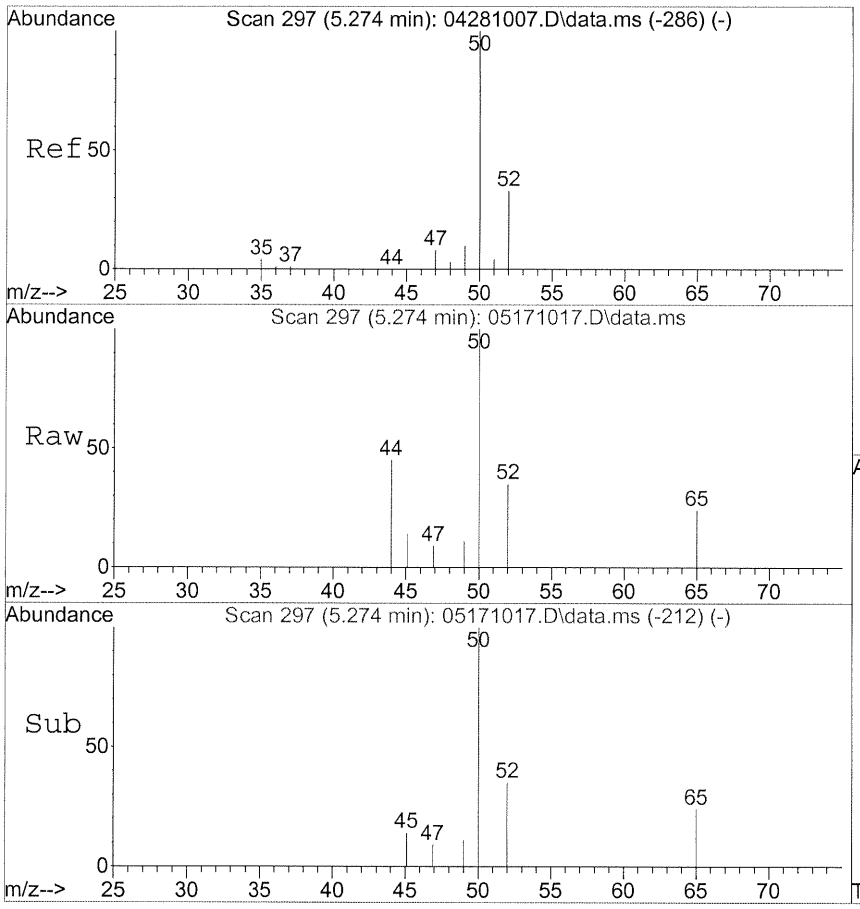


#3
Dichlorodifluoromethane (CFC
Concen: 1.35 ng
RT: 4.93 min Scan# 237
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 85 Resp: 54841

Ion	Ratio	Lower	Upper
85	100		
87	32.2	12.6	52.6
101	8.8	0.0	29.3
103	5.7	0.0	25.9

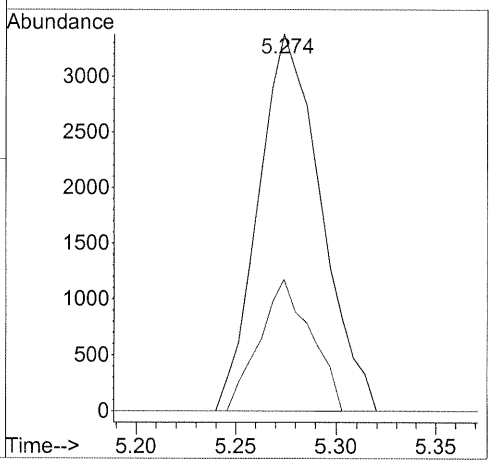


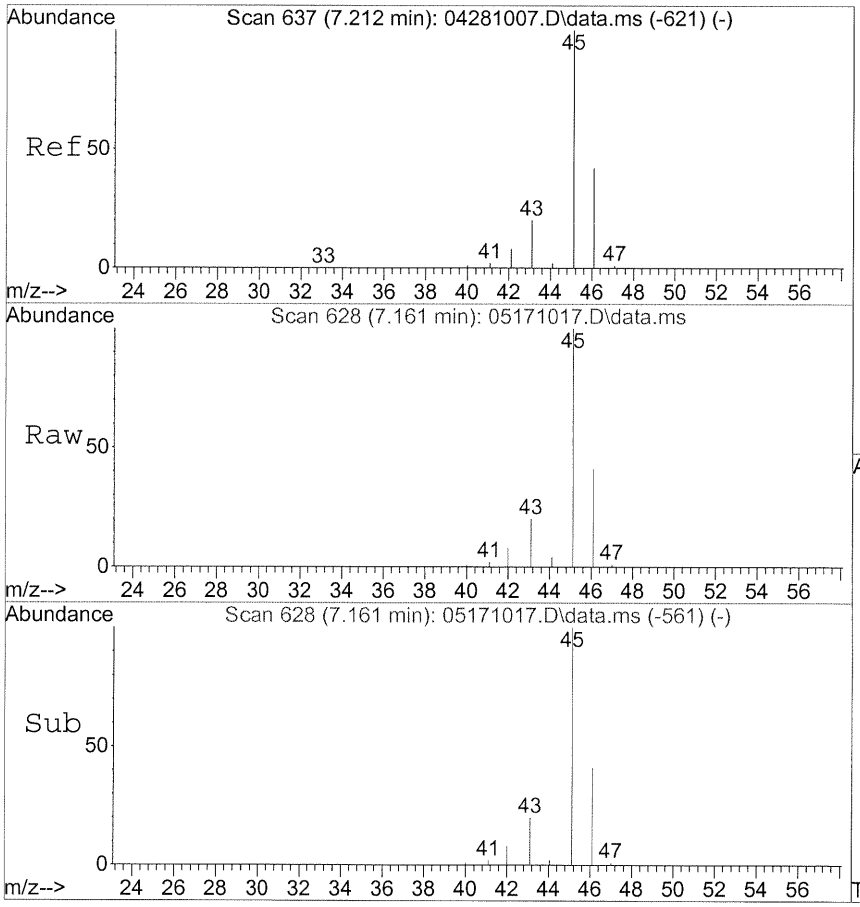


#4
Chloromethane
Concen: 0.24 ng
RT: 5.27 min Scan# 297
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 50 Resp: 7298

Ion	Ratio	Lower	Upper
50	100		
52	28.7	12.3	52.3

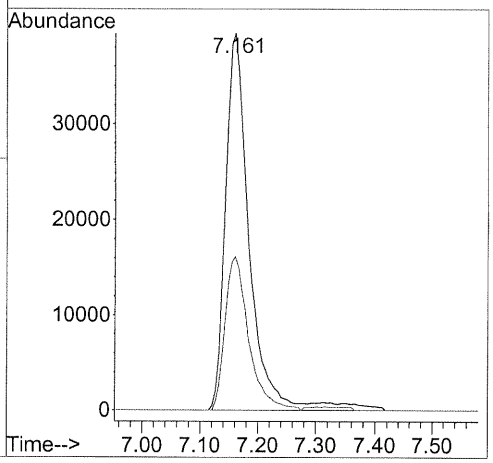


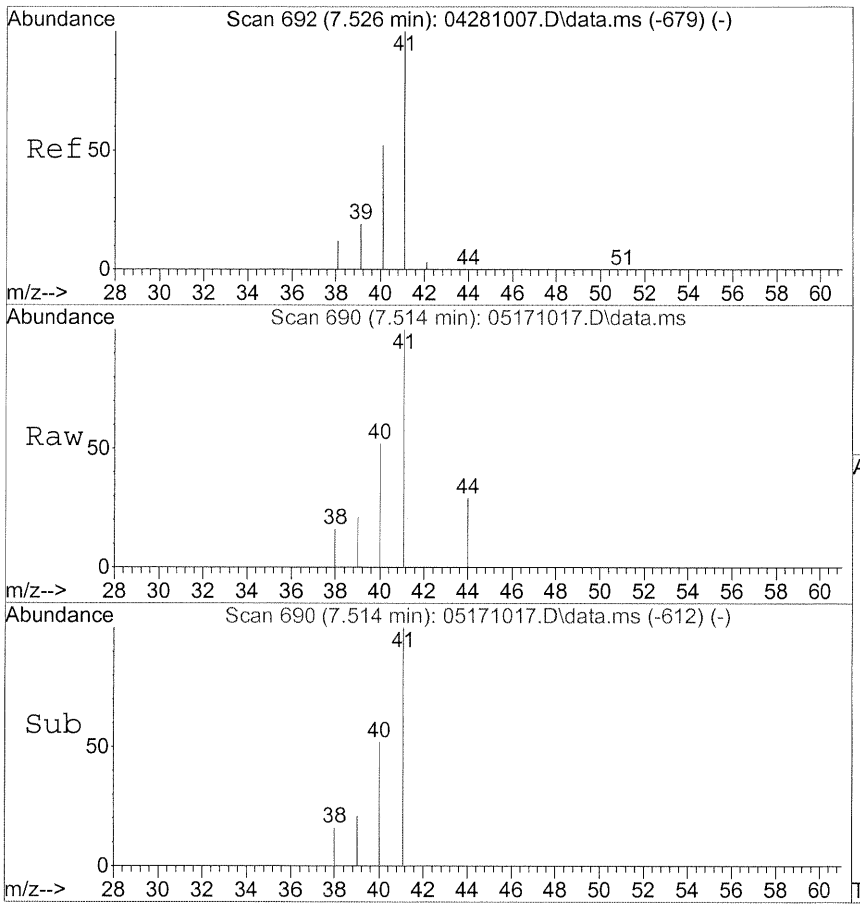


#10
Ethanol
Concen: 8.79 ng
RT: 7.16 min Scan# 628
Delta R.T. -0.120 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 45 Resp: 113726

Ion	Ratio	Lower	Upper
45	100		
46	40.0	21.3	61.3

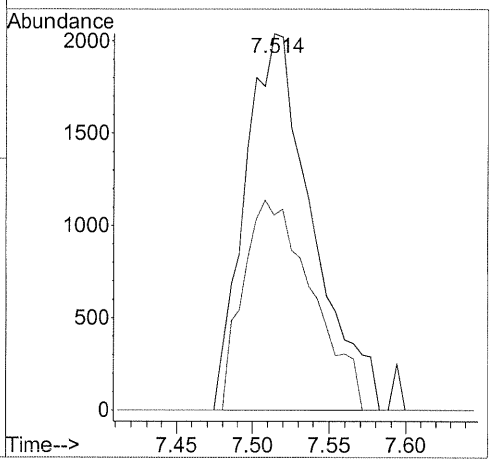


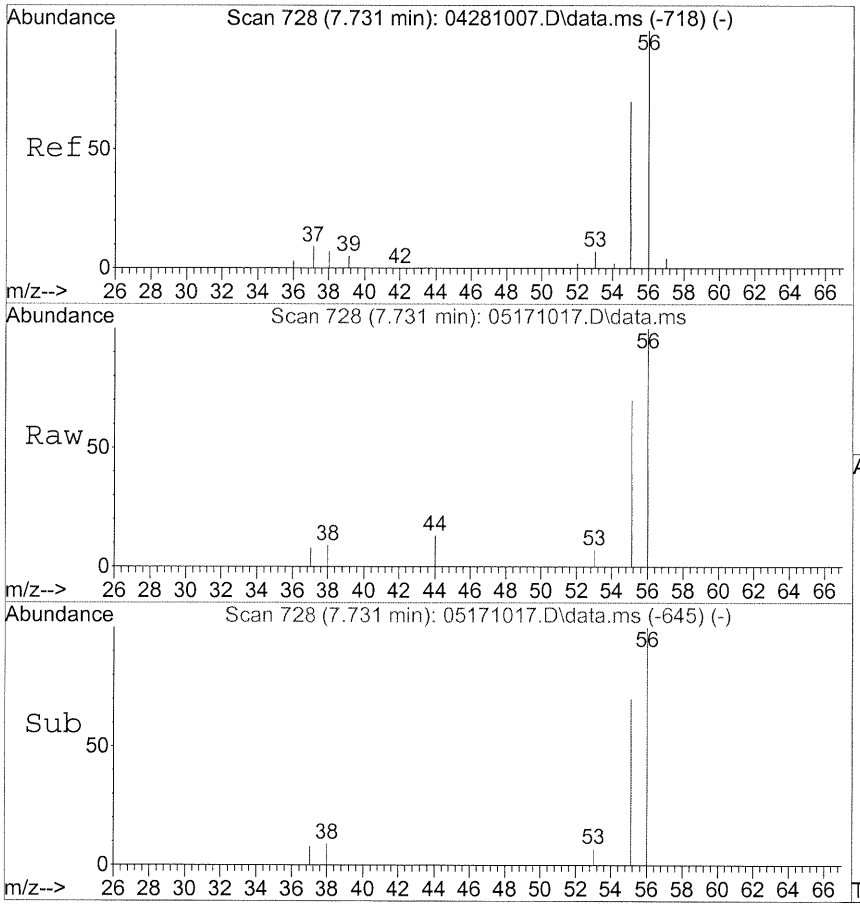


#11
Acetonitrile
Concen: 0.19 ng
RT: 7.51 min Scan# 690
Delta R.T. -0.057 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 41 Resp: 6248

Ion	Ratio	Lower	Upper
41	100		
40	57.2	33.2	73.2

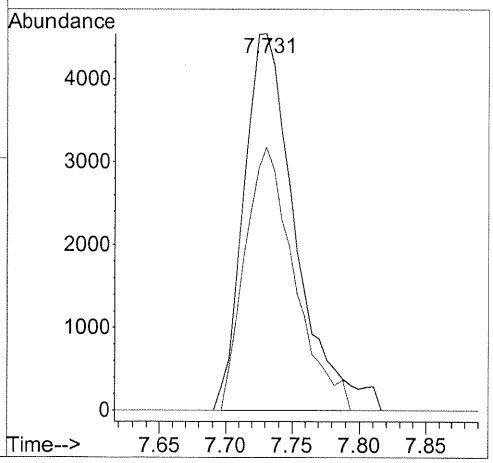


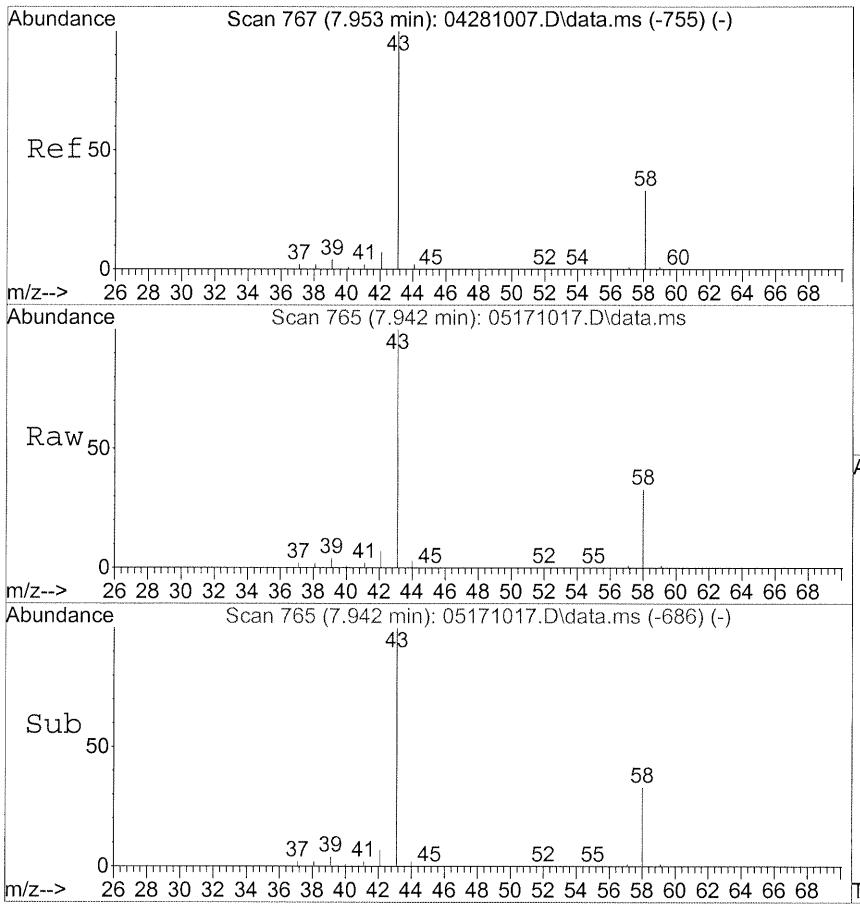


#12
Acrolein
Concen: 1.22 ng
RT: 7.73 min Scan# 728
Delta R.T. -0.029 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 56 Resp: 12299

Ion	Ratio	Lower	Upper
56	100		
55	66.9	50.2	90.2

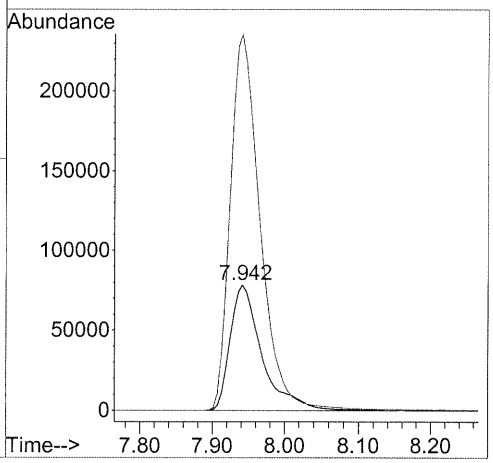


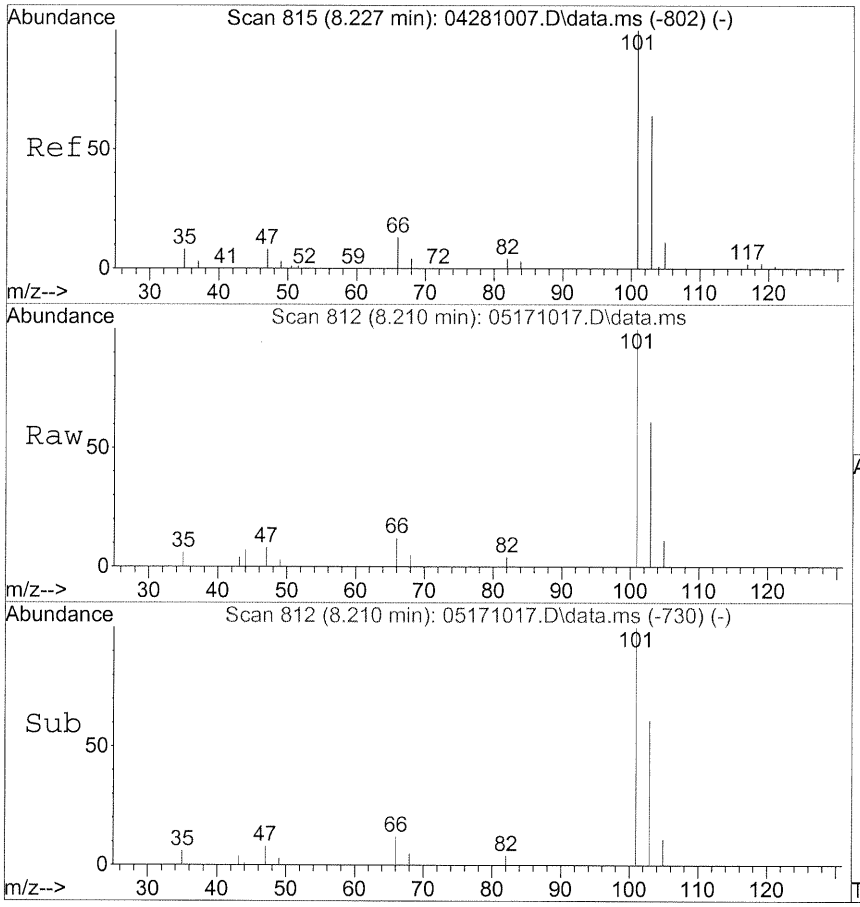


#13
Acetone
Concen: 15.08 ng
RT: 7.94 min Scan# 765
Delta R.T. -0.051 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 58 Resp: 238501

Ion	Ratio	Lower	Upper
58	100		
43	284.7	264.2	324.2

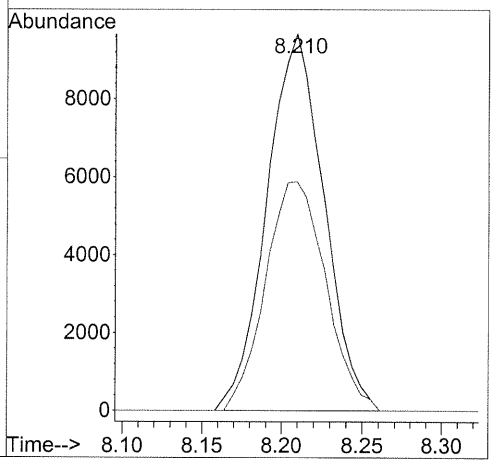


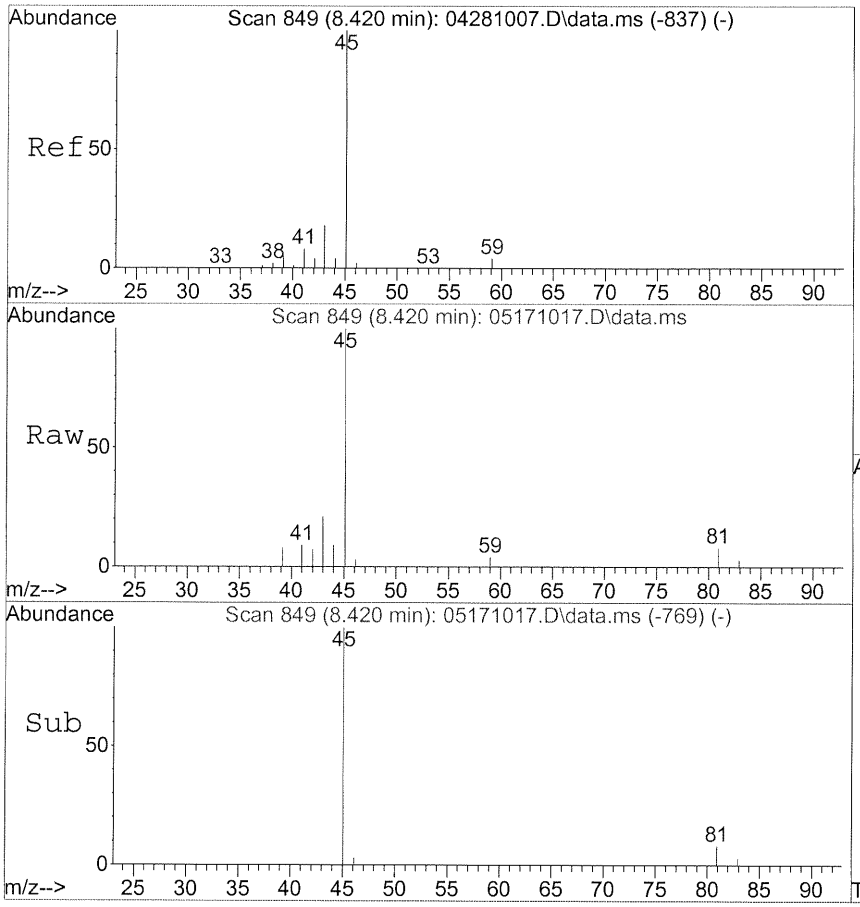


#14
Trichlorofluoromethane
Concen: 0.68 ng
RT: 8.21 min Scan# 812
Delta R.T. -0.034 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion:101 Resp: 23987

Ion	Ratio	Lower	Upper
101	100		
103	64.2	44.6	84.6

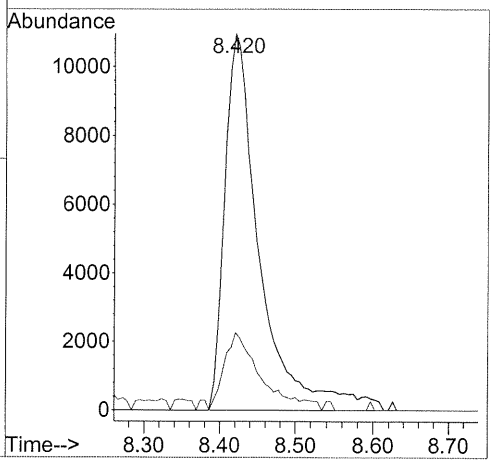


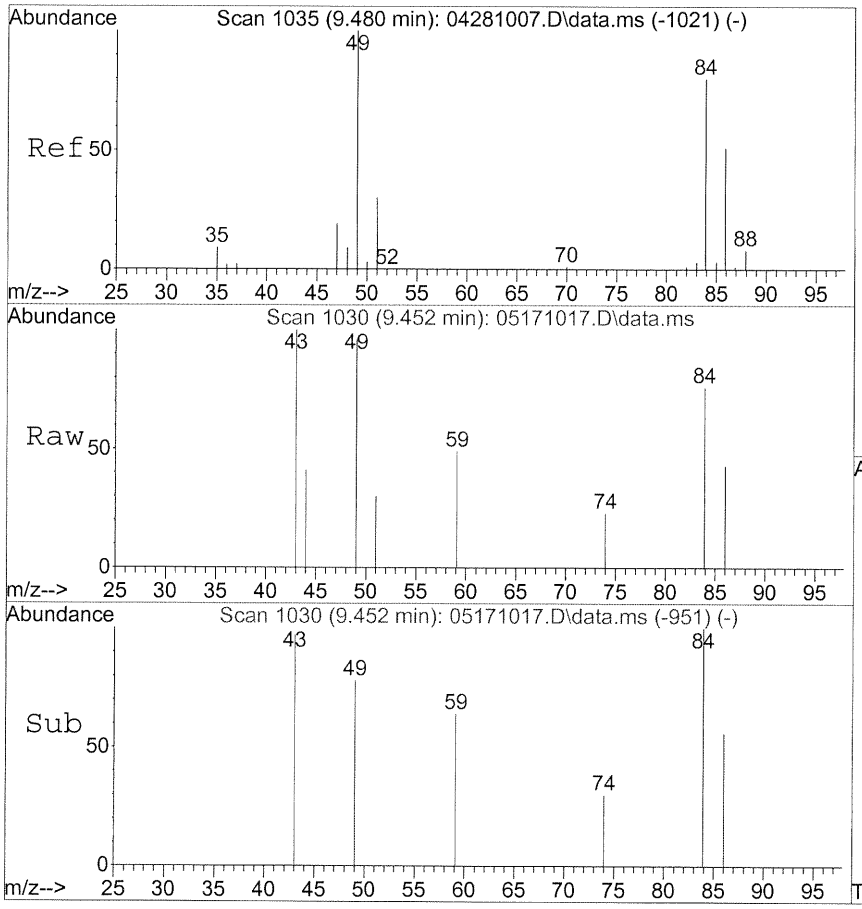


#15
2-Propanol (Isopropanol)
Concen: 0.72 ng
RT: 8.42 min Scan# 849
Delta R.T. -0.046 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 45 Resp: 35190

Ion	Ratio	Lower	Upper
45	100		
43	21.5	0.0	38.5

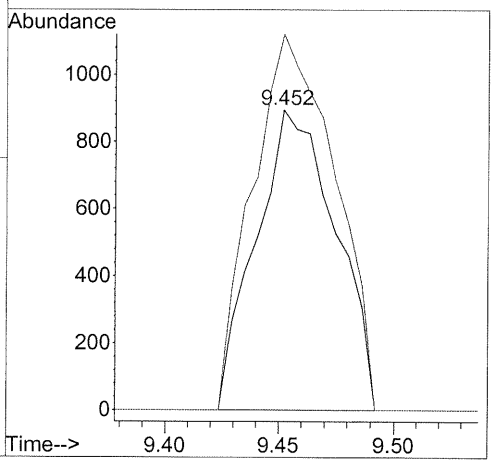


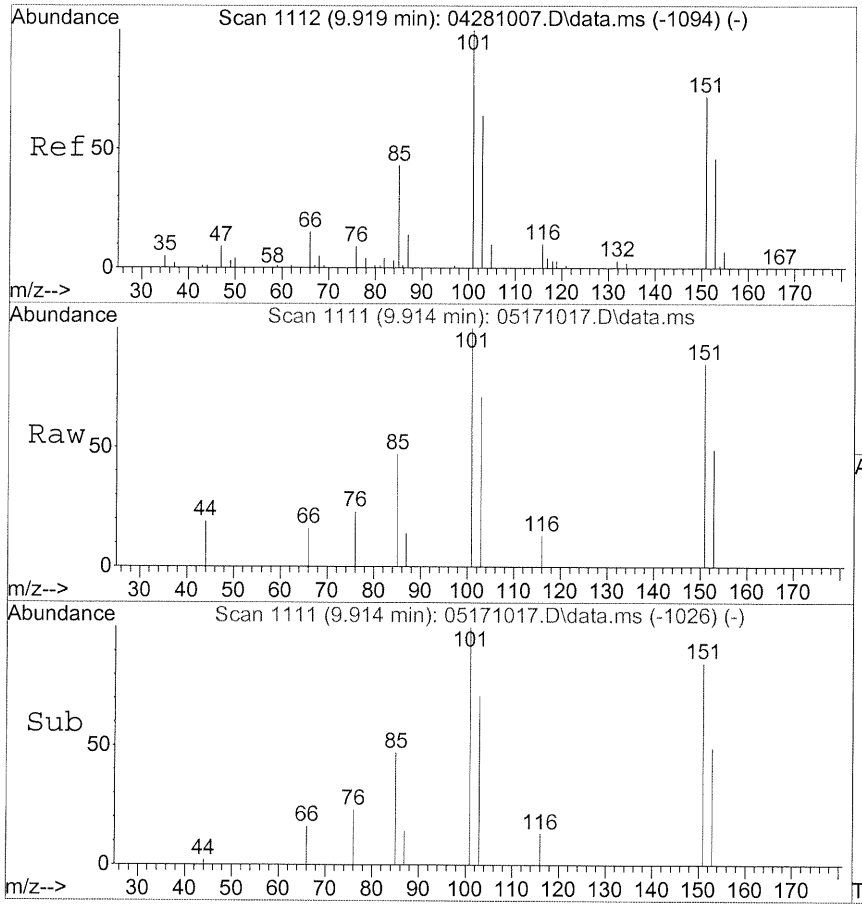


#19
Methylene Chloride
Concen: 0.10 ng
RT: 9.45 min Scan# 1030
Delta R.T. -0.051 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 84 Resp: 2163

Ion	Ratio	Lower	Upper
84	100		
49	129.5	94.5	144.5

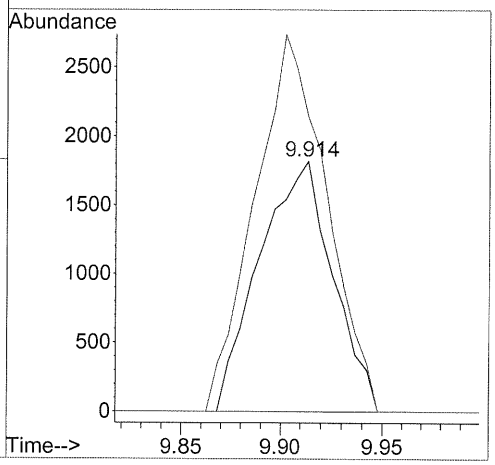


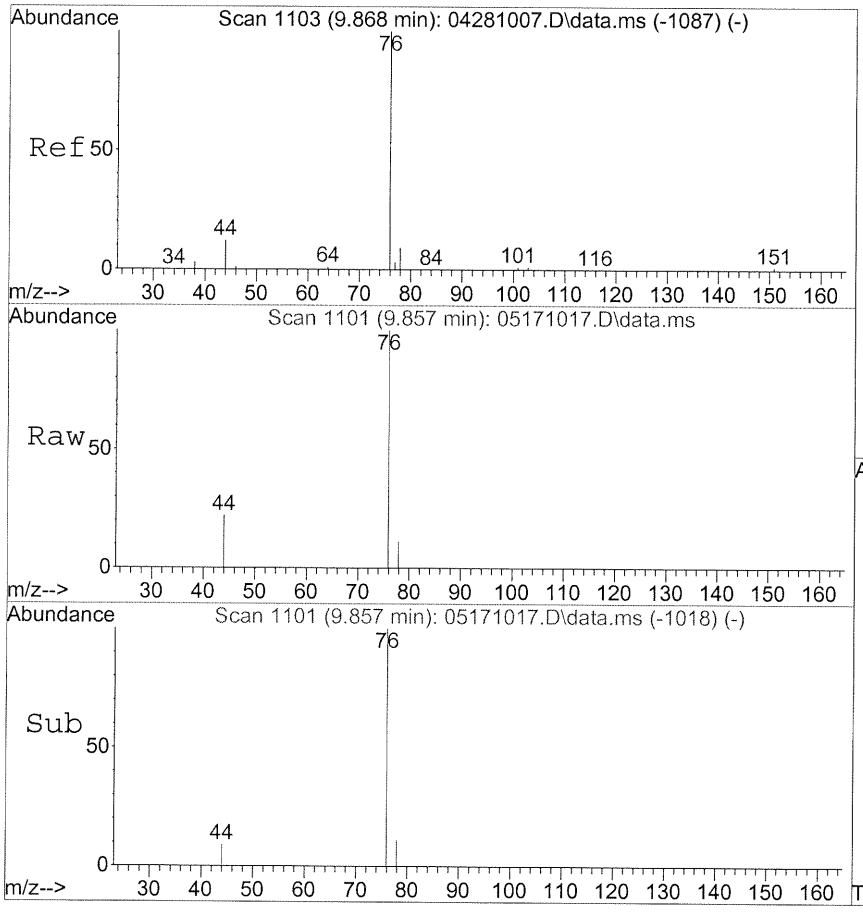


#21
Trichlorotrifluoroethane
Concen: 0.31 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion:151 Resp: 4587

Ion	Ratio	Lower	Upper
151	100		
101	147.9	114.9	154.9

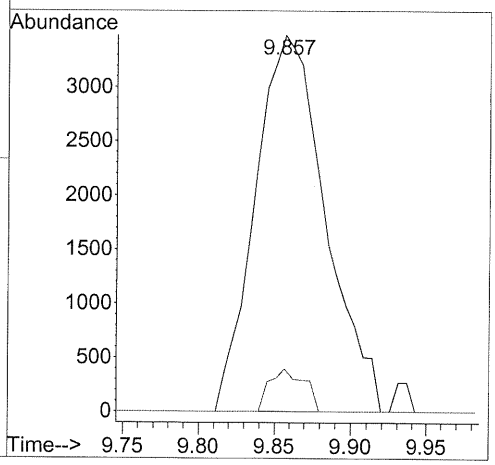


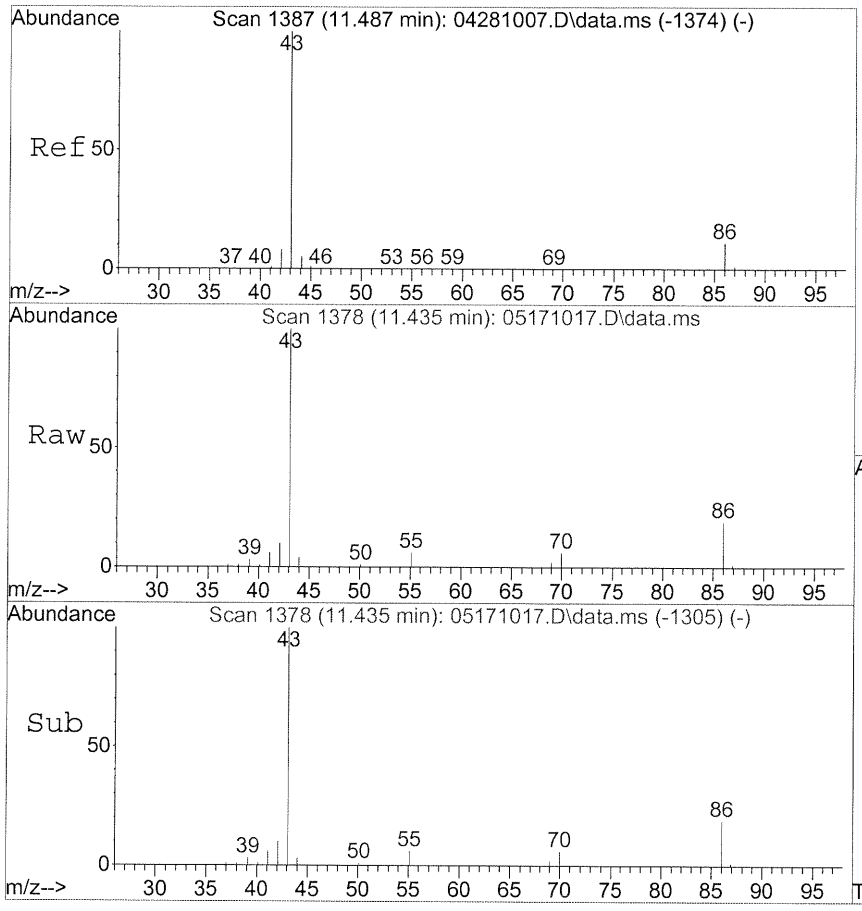


#22
Carbon Disulfide
Concen: 0.15 ng
RT: 9.86 min Scan# 1101
Delta R.T. -0.028 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 76 Resp: 11153

Ion	Ratio	Lower	Upper
76	100		
78	5.7	0.0	29.2

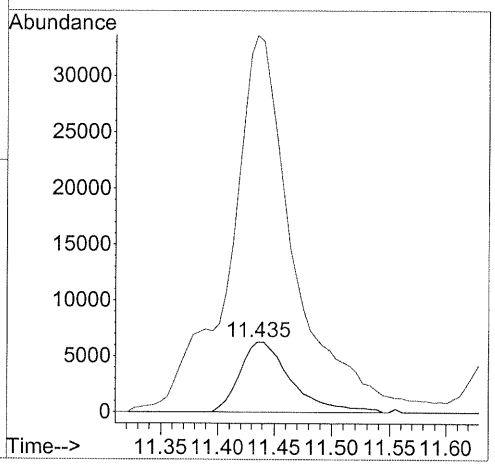


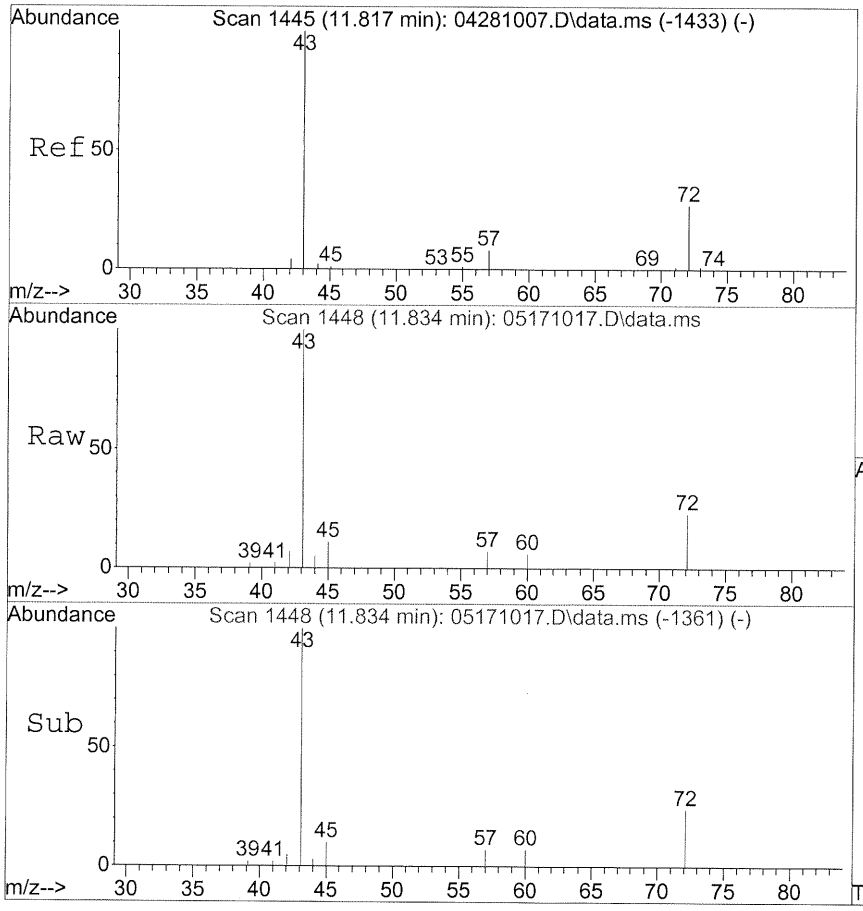


#26
Vinyl Acetate
Concen: 4.12 ng
RT: 11.44 min Scan# 1378
Delta R.T. -0.086 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 86 Resp: 19642

Ion	Ratio	Lower	Upper
86	100		
43	685.9	829.7	869.7#

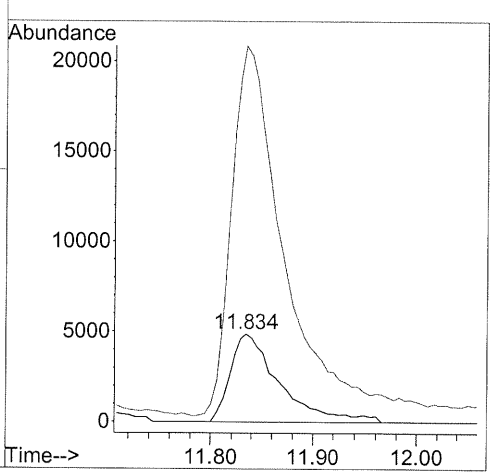


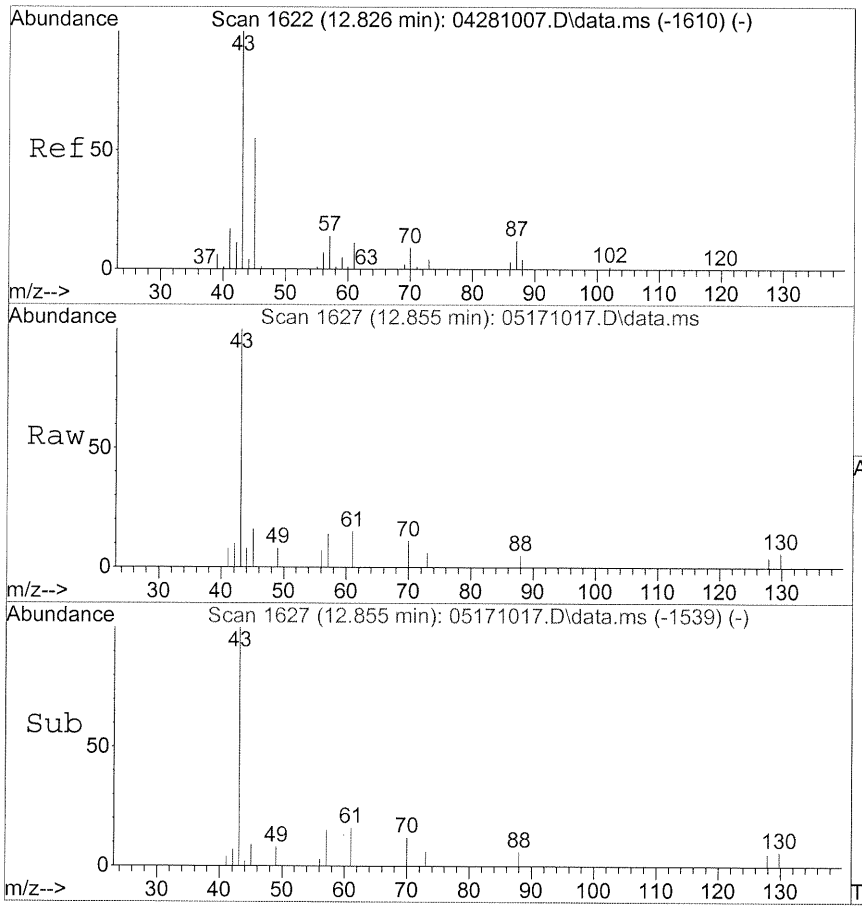


#27
2-Butanone (MEK)
Concen: 1.24 ng
RT: 11.83 min Scan# 1448
Delta R.T. -0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 72 Resp: 16320

Ion	Ratio	Lower	Upper
72	100		
43	492.5	342.0	382.0#

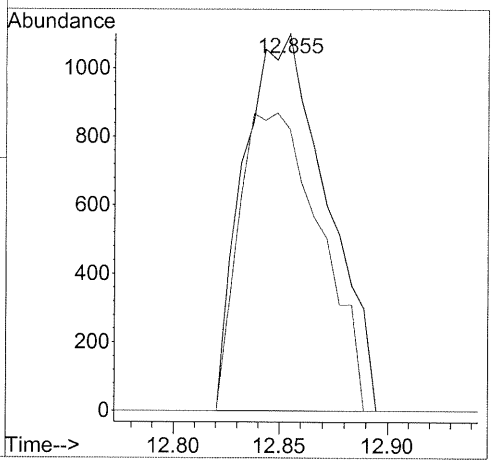


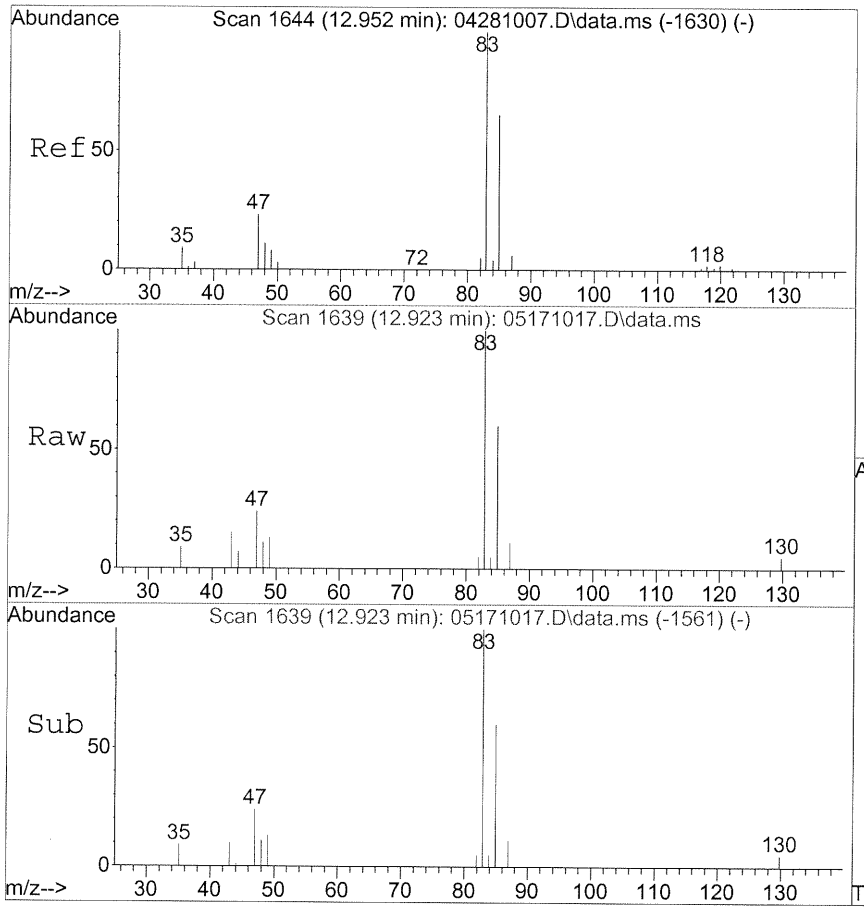


#30
Ethyl Acetate
Concen: 0.38 ng
RT: 12.85 min Scan# 1627
Delta R.T. -0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 61 Resp: 2949

Ion	Ratio	Lower	Upper
61	100		
70	77.7	63.6	103.6

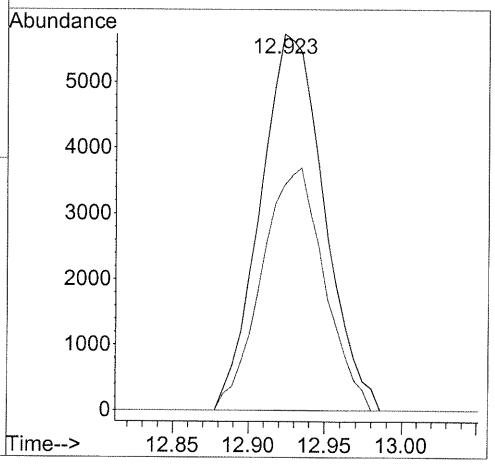


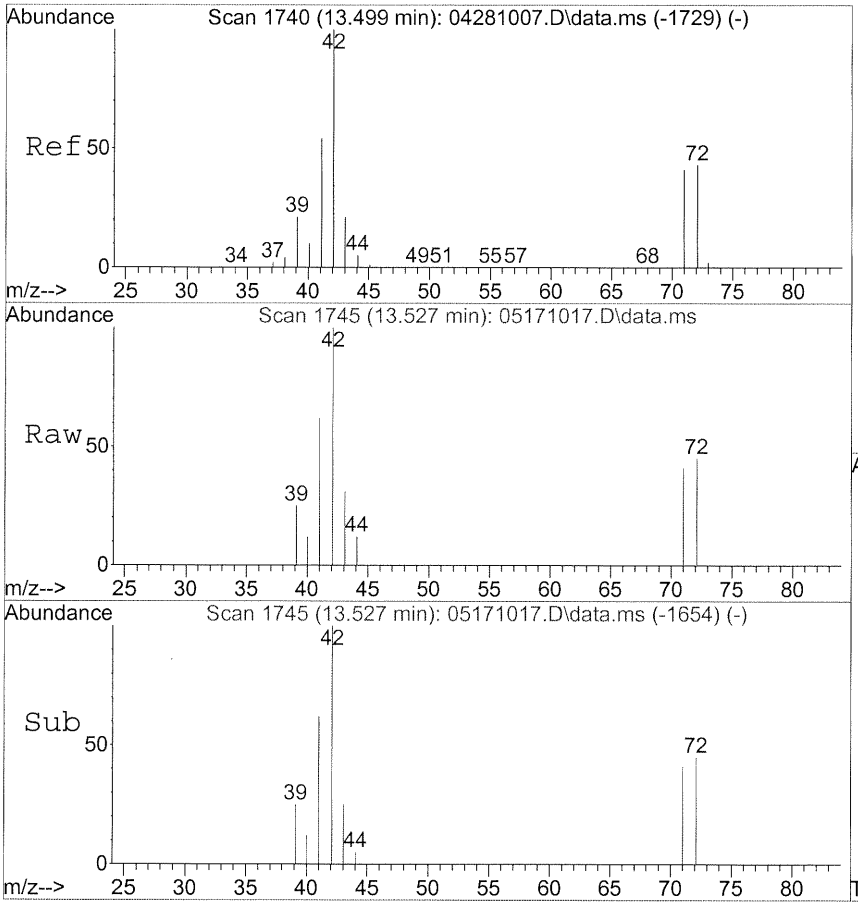


#32
Chloroform
Concen: 0.50 ng
RT: 12.92 min Scan# 1639
Delta R.T. -0.057 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 83 Resp: 16663

Ion	Ratio	Lower	Upper
83	100		
85	63.2	44.9	84.9

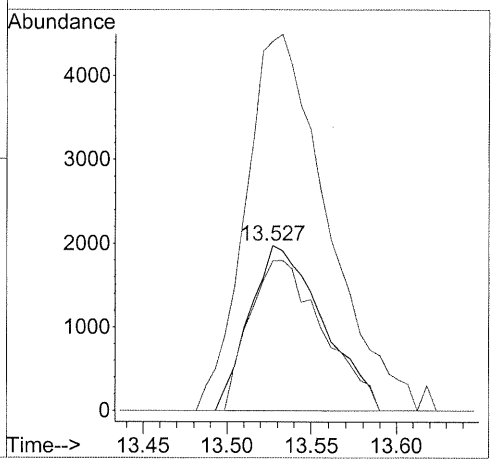


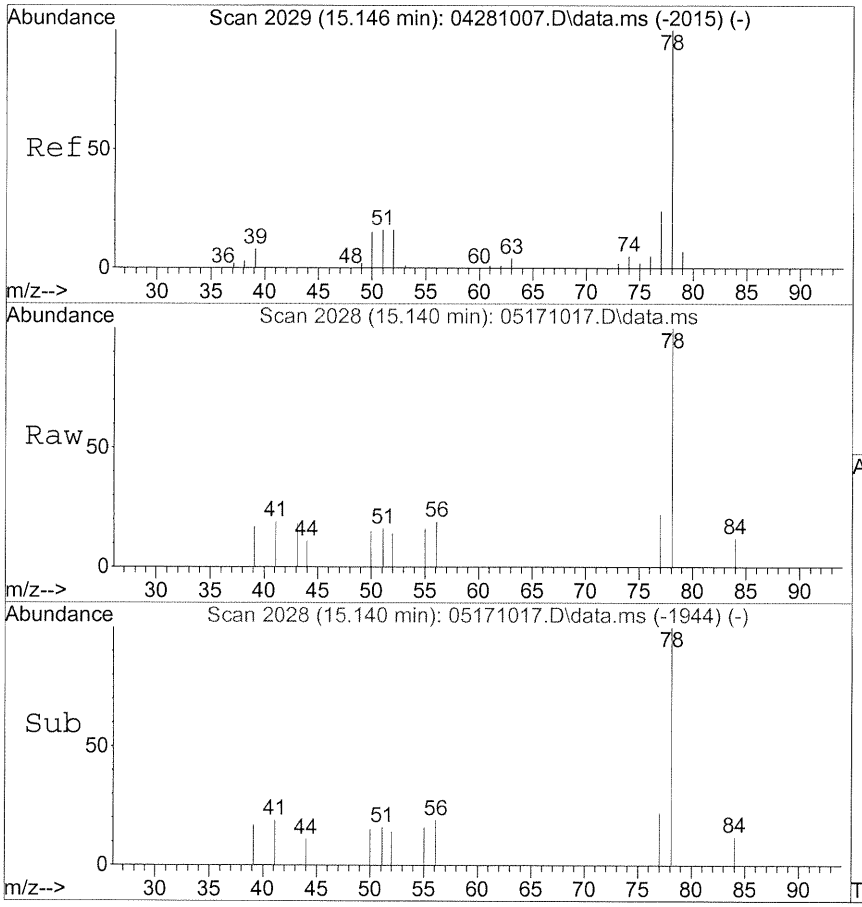


#34
Tetrahydrofuran (THF)
Concen: 0.47 ng
RT: 13.53 min Scan# 1745
Delta R.T. 0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 72 Resp: 5920

Ion	Ratio	Lower	Upper
72	100		
71	91.6	74.5	114.5
42	257.7	197.7	237.7#

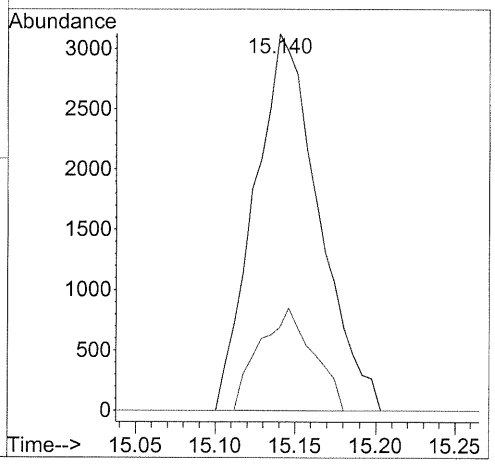


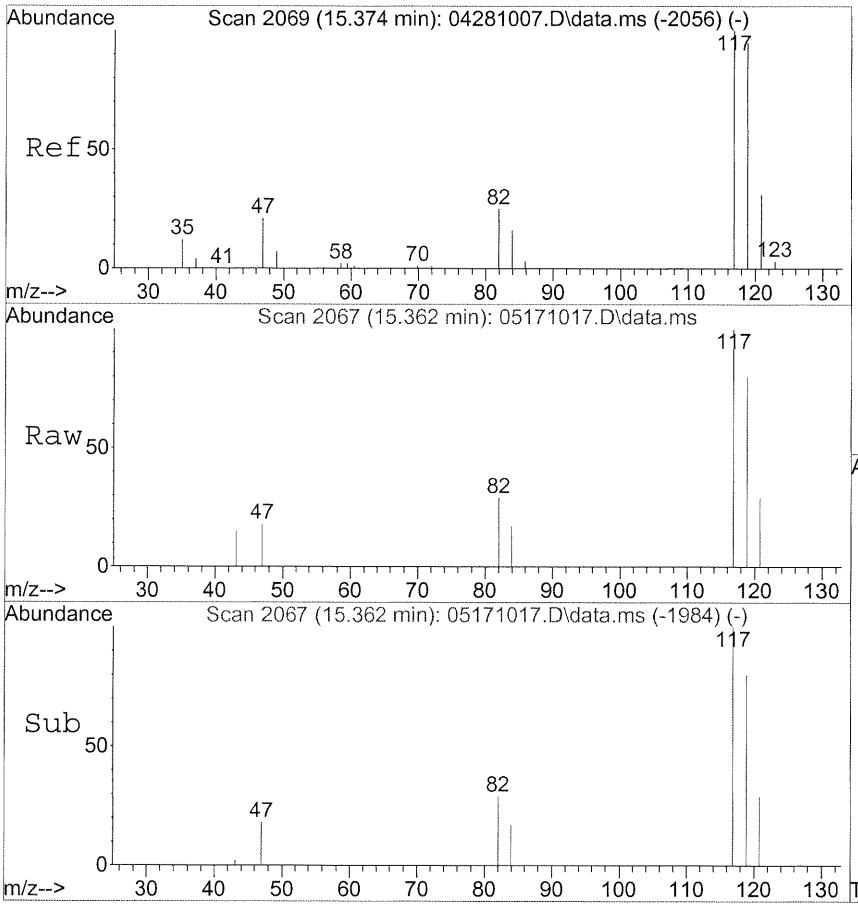


#41
Benzene
Concen: 0.10 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 78 Resp: 8757

Ion	Ratio	Lower	Upper
78	100		
77	22.8	4.1	44.1

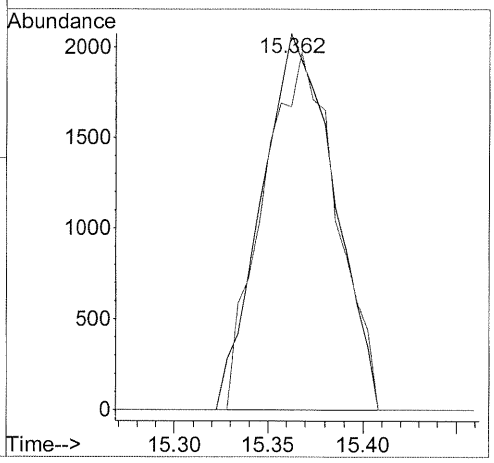


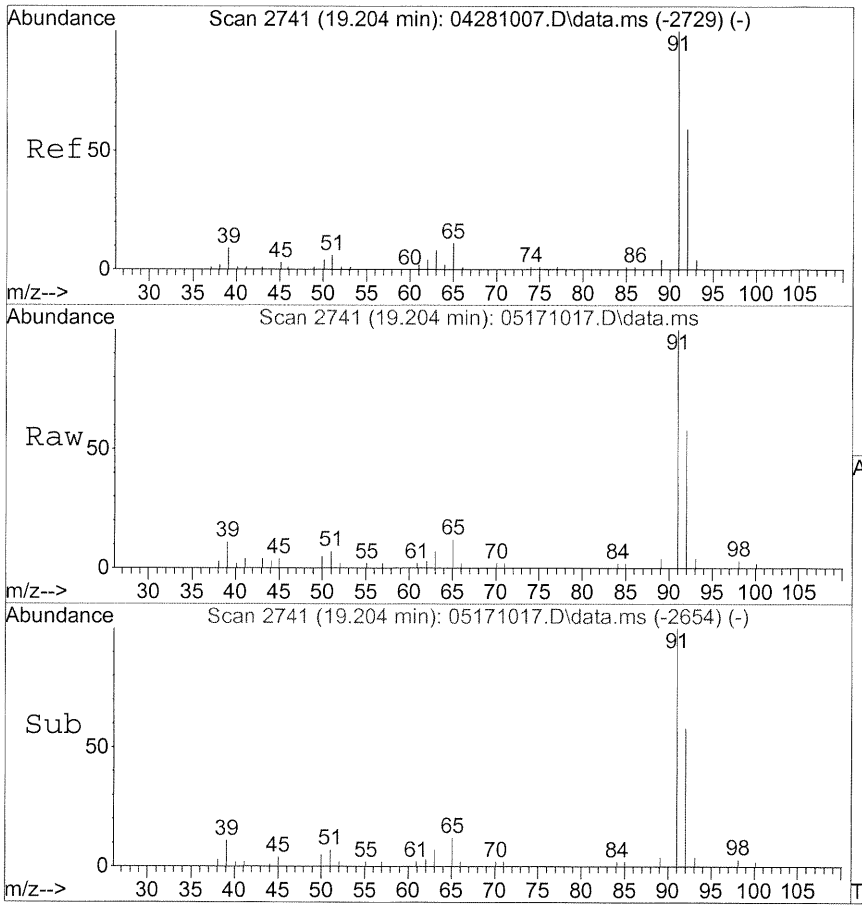


#42
Carbon Tetrachloride
Concen: 0.24 ng
RT: 15.36 min Scan# 2067
Delta R.T. -0.029 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion:117 Resp: 5500

Ion	Ratio	Lower	Upper
117	100		
119	96.0	76.1	116.1

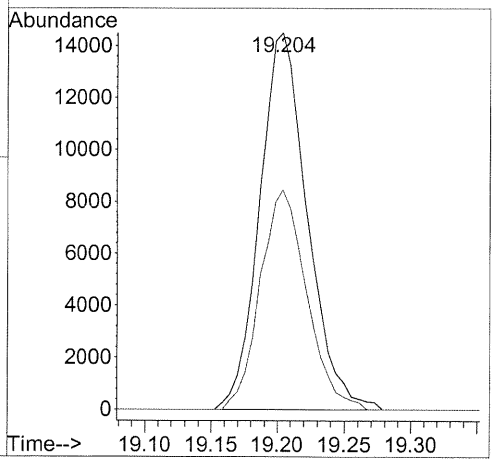


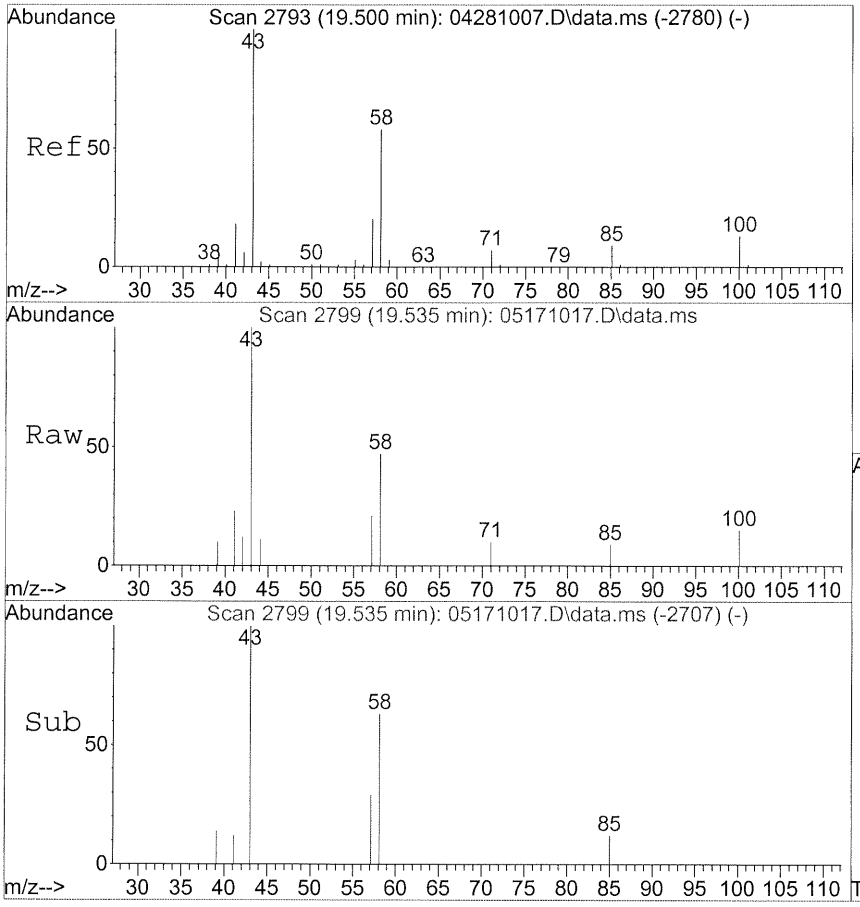


#58
Toluene
Concen: 0.39 ng
RT: 19.20 min Scan# 2741
Delta R.T. -0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 91 Resp: 36185

Ion	Ratio	Lower	Upper
91	100		
92	57.0	39.2	79.2

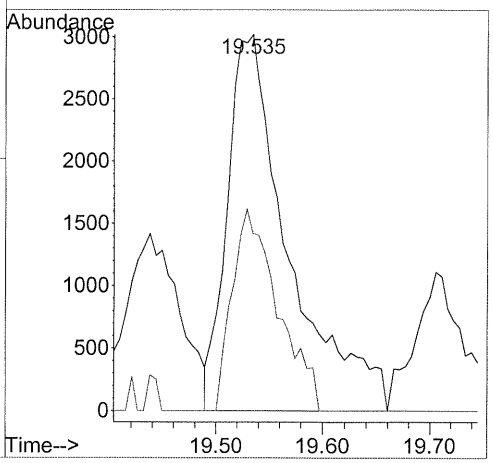


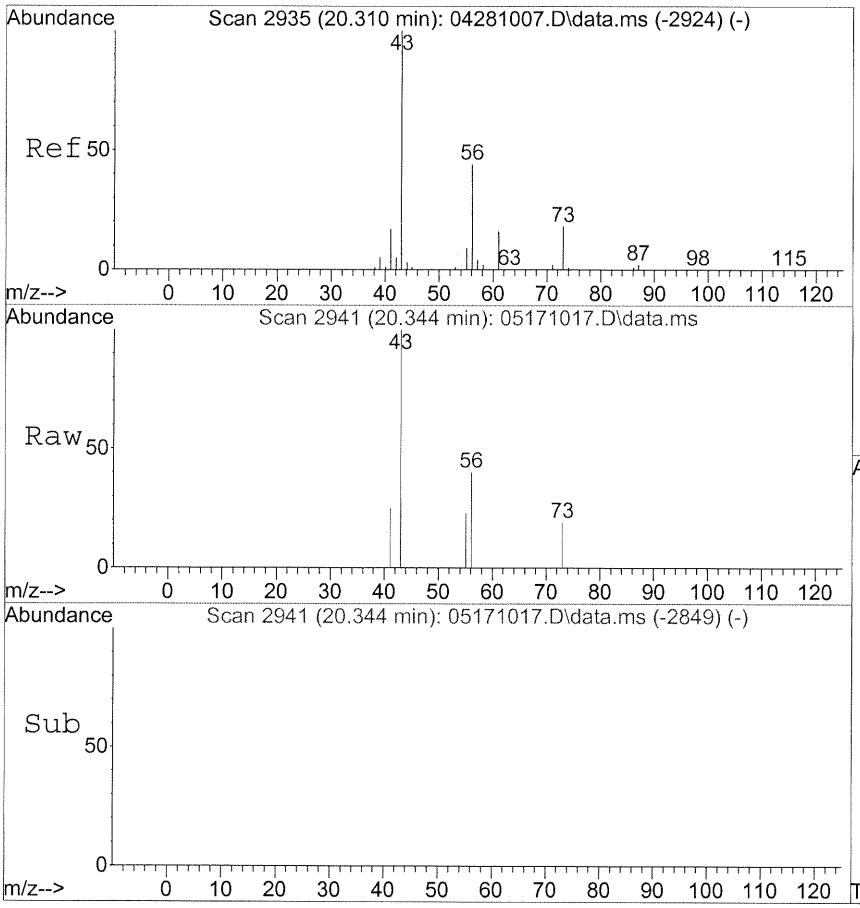


#59
2-Hexanone
Concen: 0.27 ng
RT: 19.53 min Scan# 2799
Delta R.T. 0.023 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 43 Resp: 12030

Ion	Ratio	Lower	Upper
43	100		
58	40.3	38.3	78.3

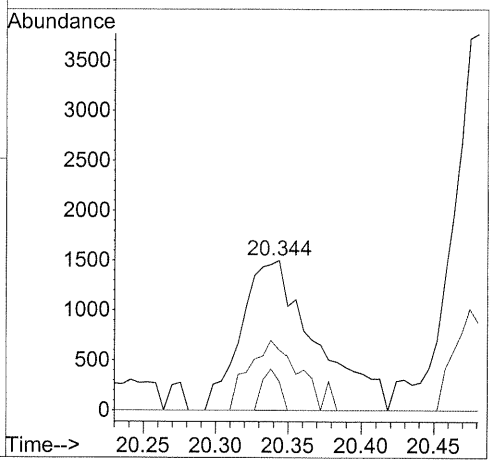


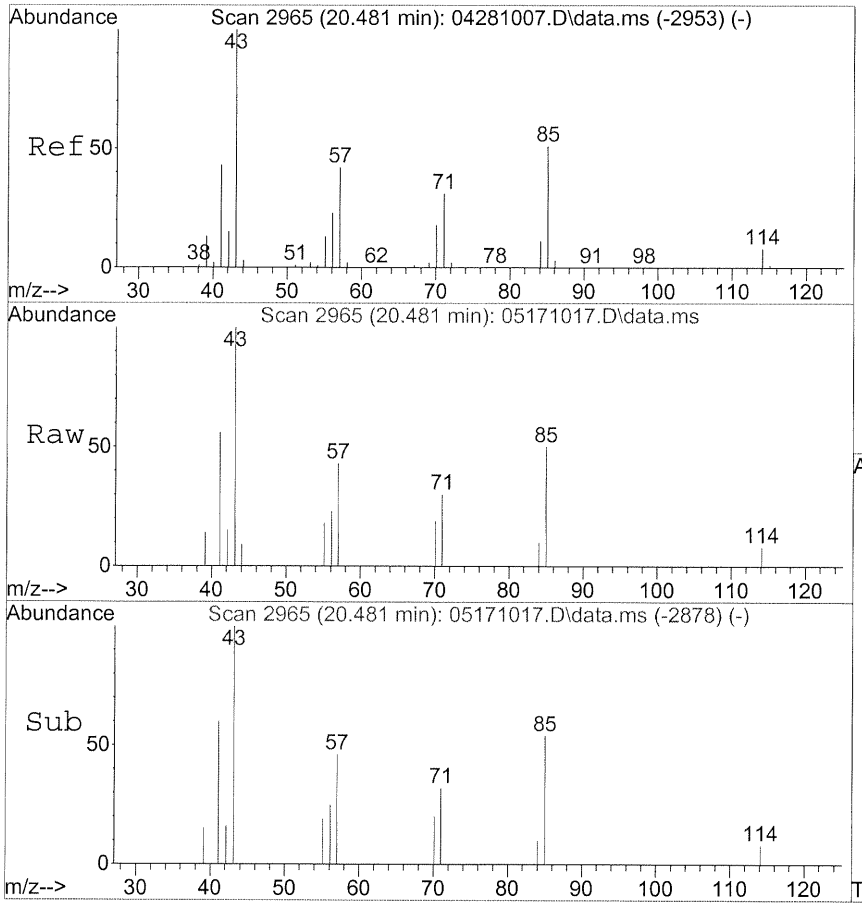


#62
n-Butyl Acetate
Concen: 0.11 ng
RT: 20.34 min Scan# 2941
Delta R.T. 0.023 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 43 Resp: 5291

Ion	Ratio	Lower	Upper
43	100		
56	32.1	25.0	65.0
73	6.4	0.0	39.1

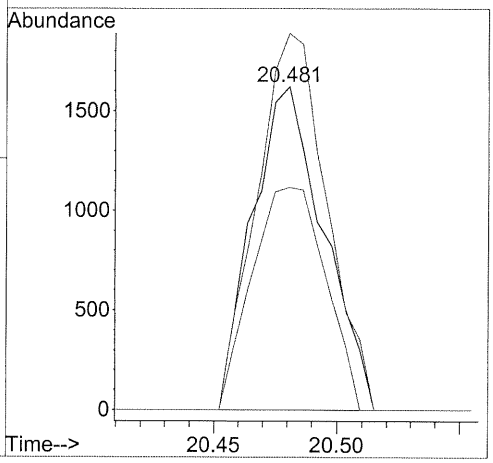


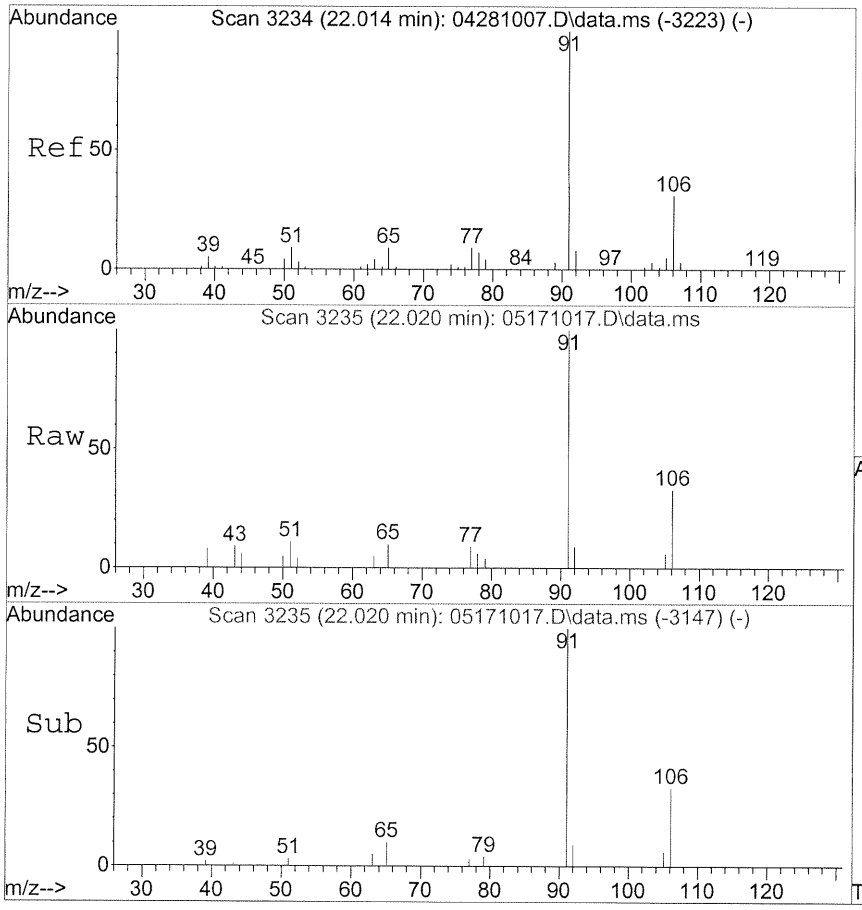


#63
n-Octane
Concen: 0.15 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 57 Resp: 3253

Ion	Ratio	Lower	Upper
57	100		
85	114.5	101.4	152.2
71	71.1	60.7	91.1

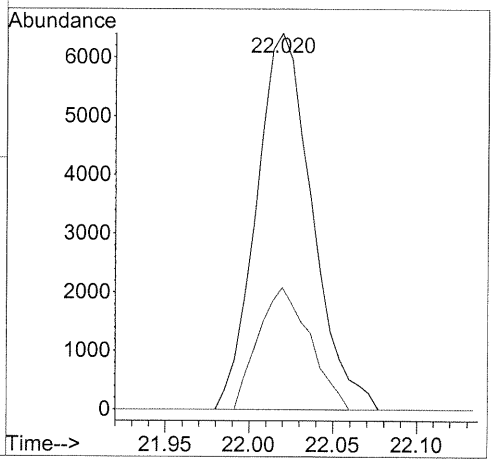


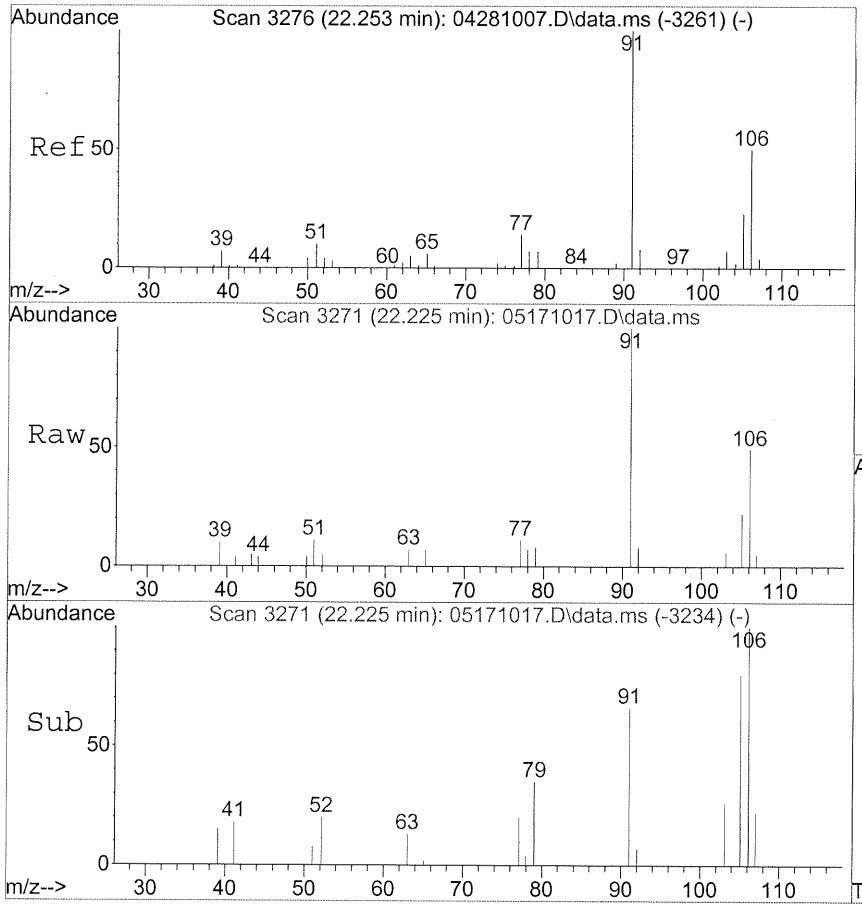


#66
Ethylbenzene
Concen: 0.14 ng
RT: 22.02 min Scan# 3235
Delta R.T. -0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 91 Resp: 14843

Ion	Ratio	Lower	Upper
91	100		
106	30.0	12.2	52.2

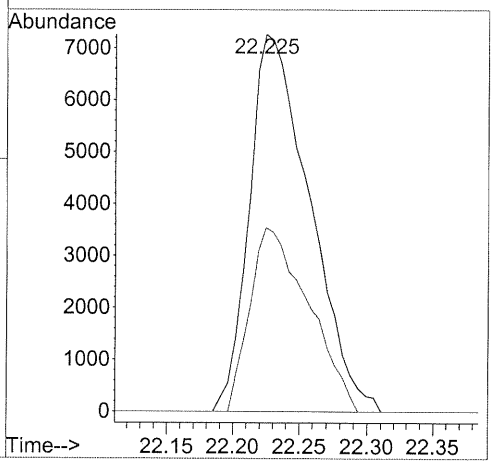


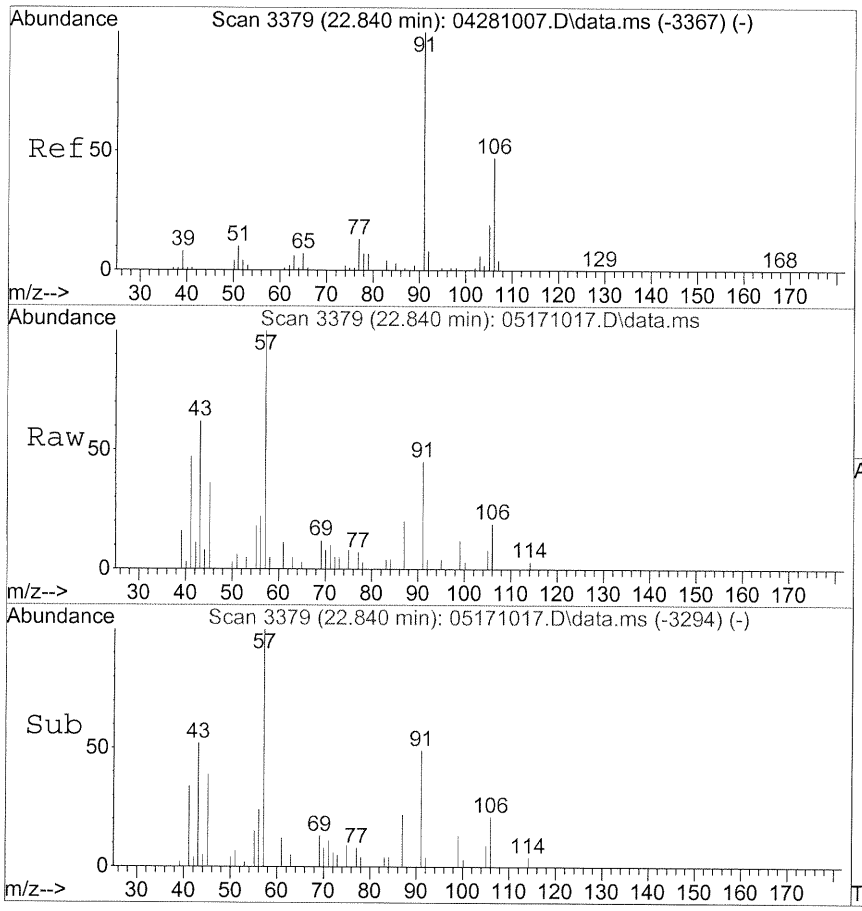


#67
m- & p-Xylenes
Concen: 0.27 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 91 Resp: 22812

Ion	Ratio	Lower	Upper
91	100		
106	47.5	30.6	70.6

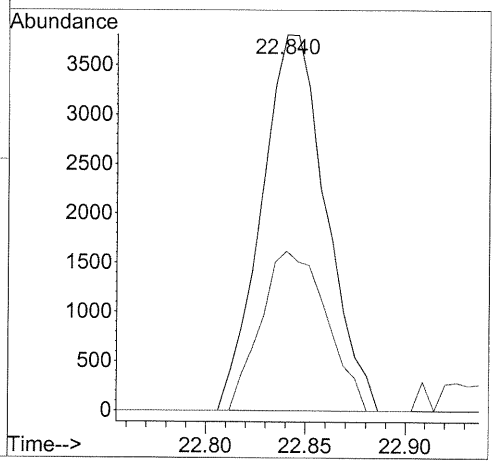


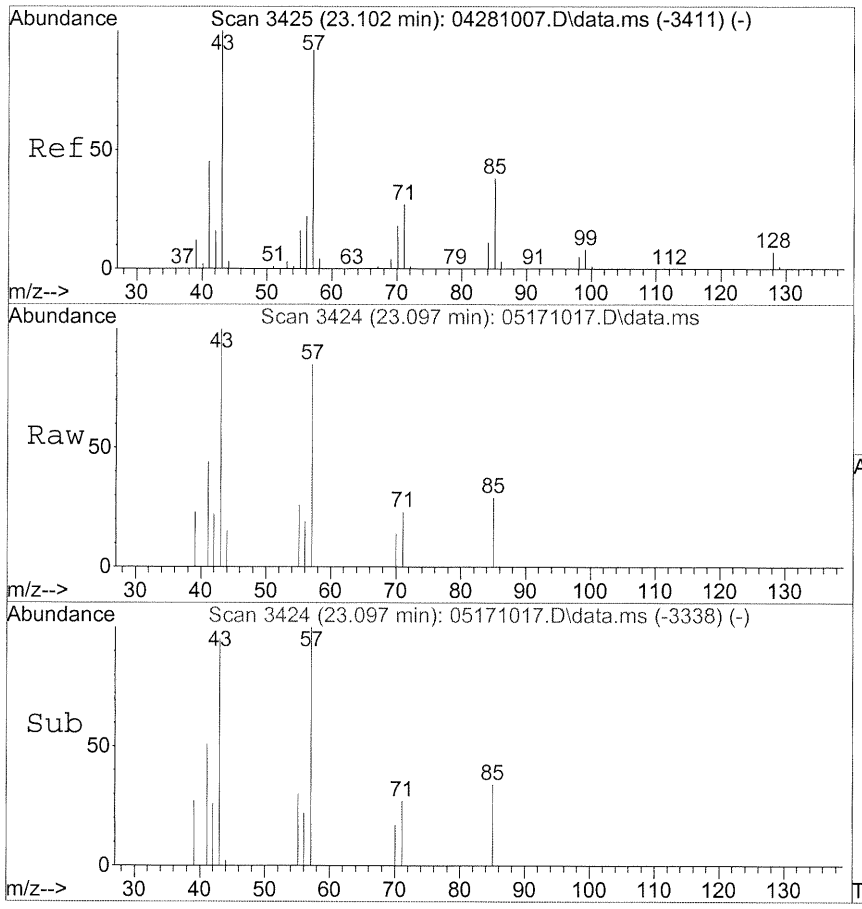


#70
o-Xylene
Concen: 0.10 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 91 Resp: 8535

Ion	Ratio	Lower	Upper
91	100		
106	43.2	27.8	67.8

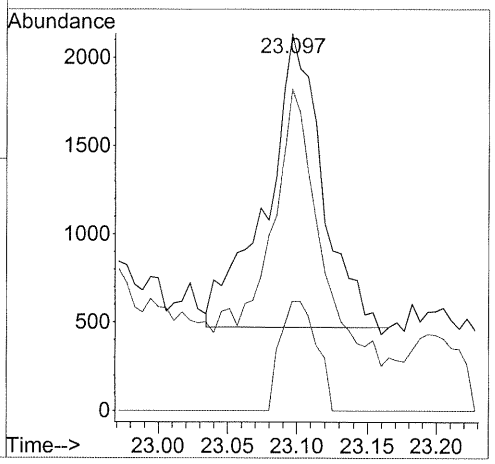


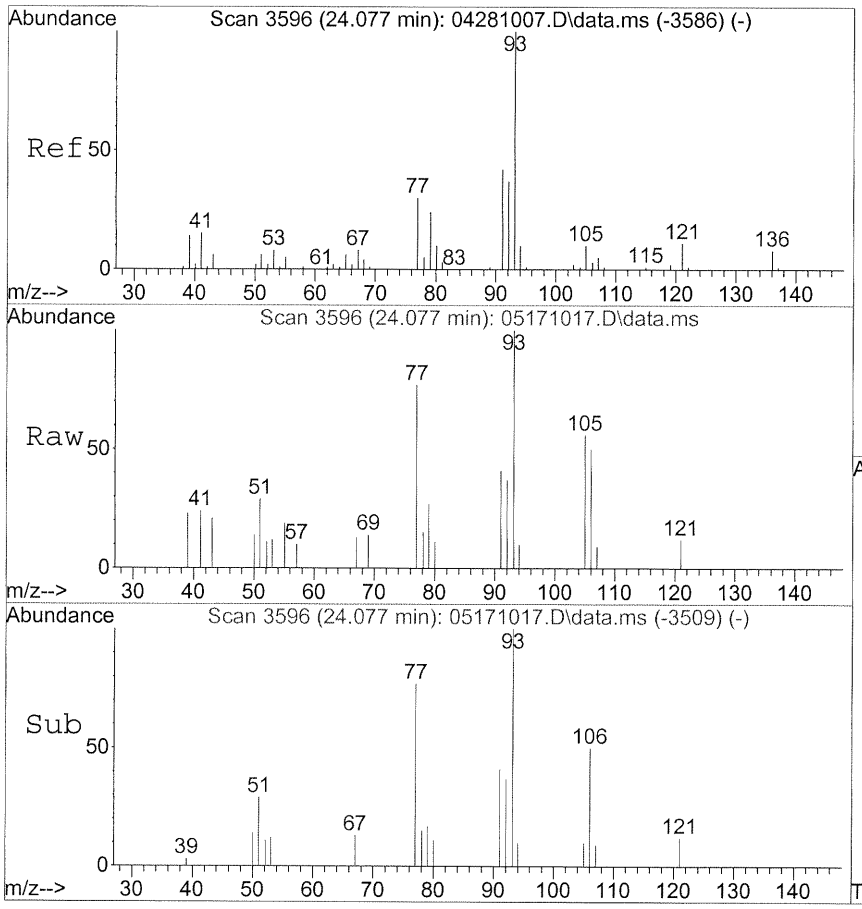


#71
n-Nonane
Concen: 0.10 ng
RT: 23.10 min Scan# 3424
Delta R.T. -0.012 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 43 Resp: 4600

Ion	Ratio	Lower	Upper
43	100		
57	90.0	74.6	114.6
85	24.3	20.5	60.5

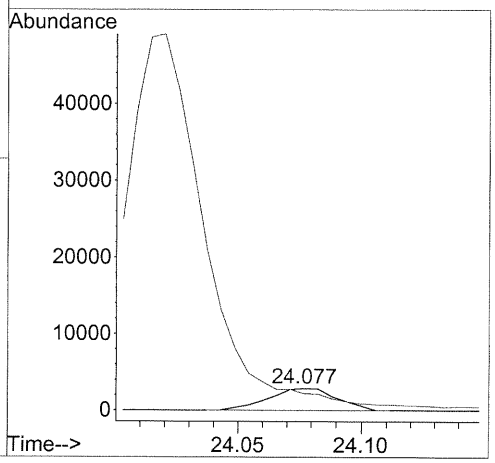


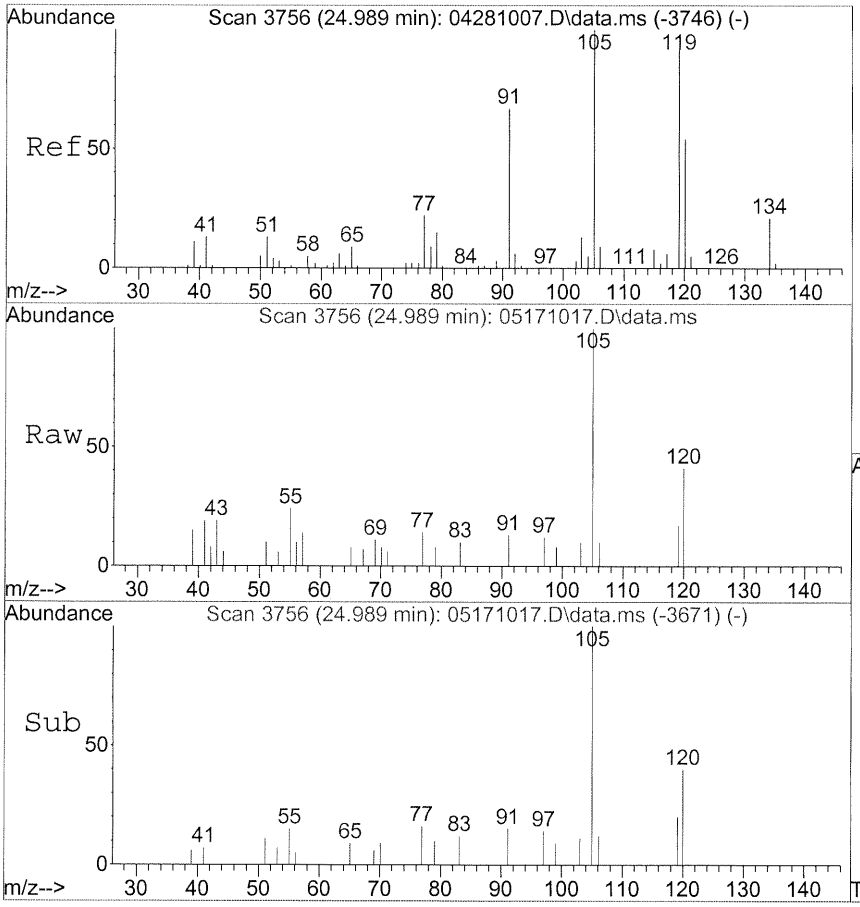


#75
alpha-Pinene
Concen: 0.11 ng
RT: 24.08 min Scan# 3596
Delta R.T. -0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 93 Resp: 5424

Ion	Ratio	Lower	Upper
93	100		
77	0.0	8.7	48.7#

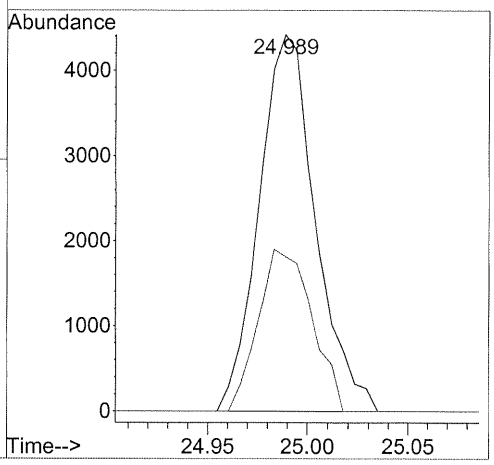


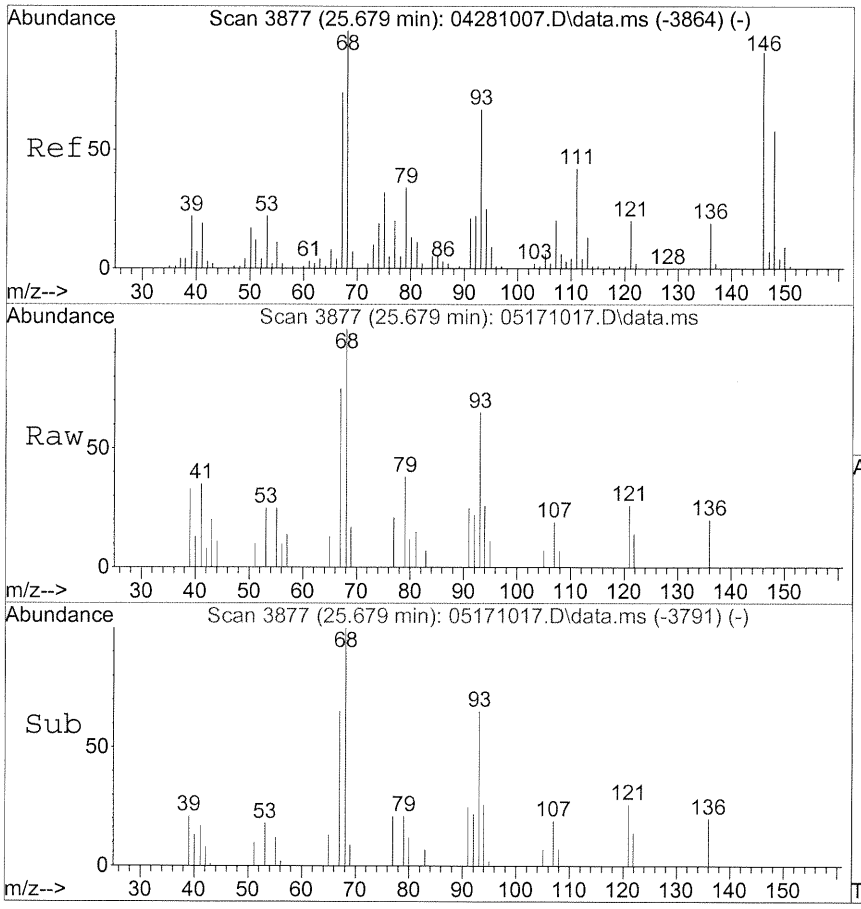


#82
1,2,4-Trimethylbenzene
Concen: 0.10 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion:105 Resp: 8634

Ion	Ratio	Lower	Upper
105	100		
120	40.9	35.1	75.1

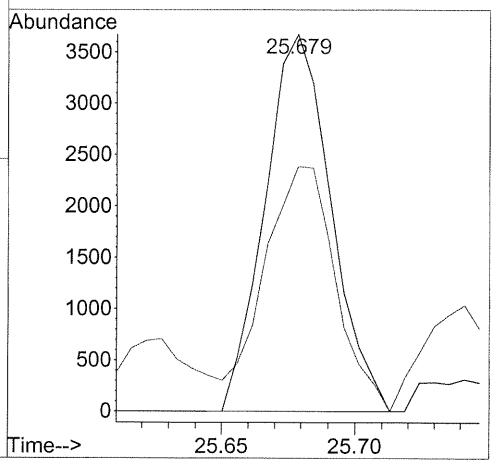


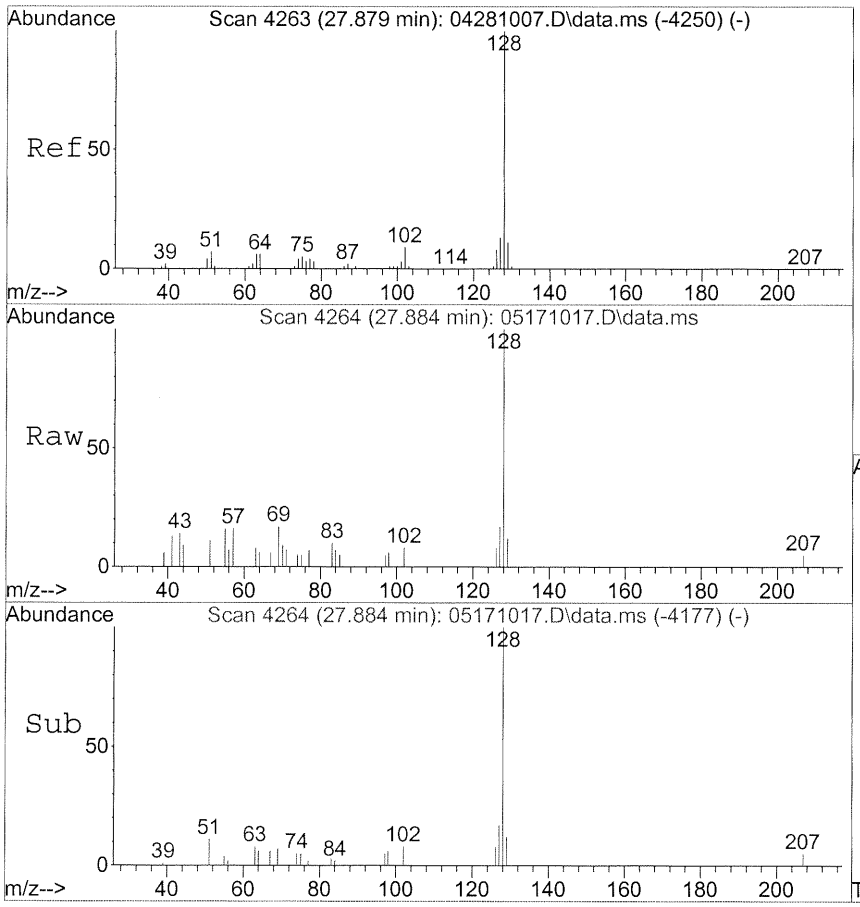


#91
d-Limonene
Concen: 0.18 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.012 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion: 68 Resp: 6314

Ion	Ratio	Lower	Upper
68	100		
93	69.7	51.5	91.5

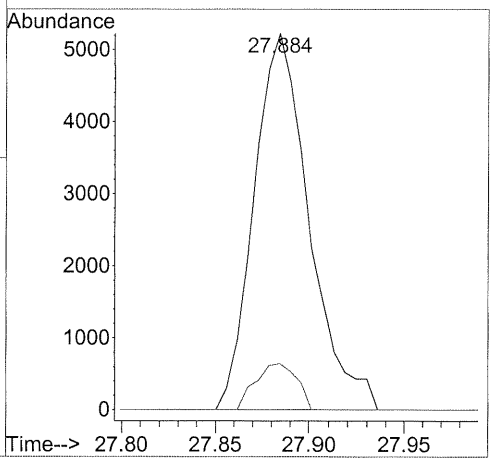




#95
Naphthalene
Concen: 0.11 ng
RT: 27.88 min Scan# 4264
Delta R.T. -0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 21:54

Tgt Ion:128 Resp: 10641

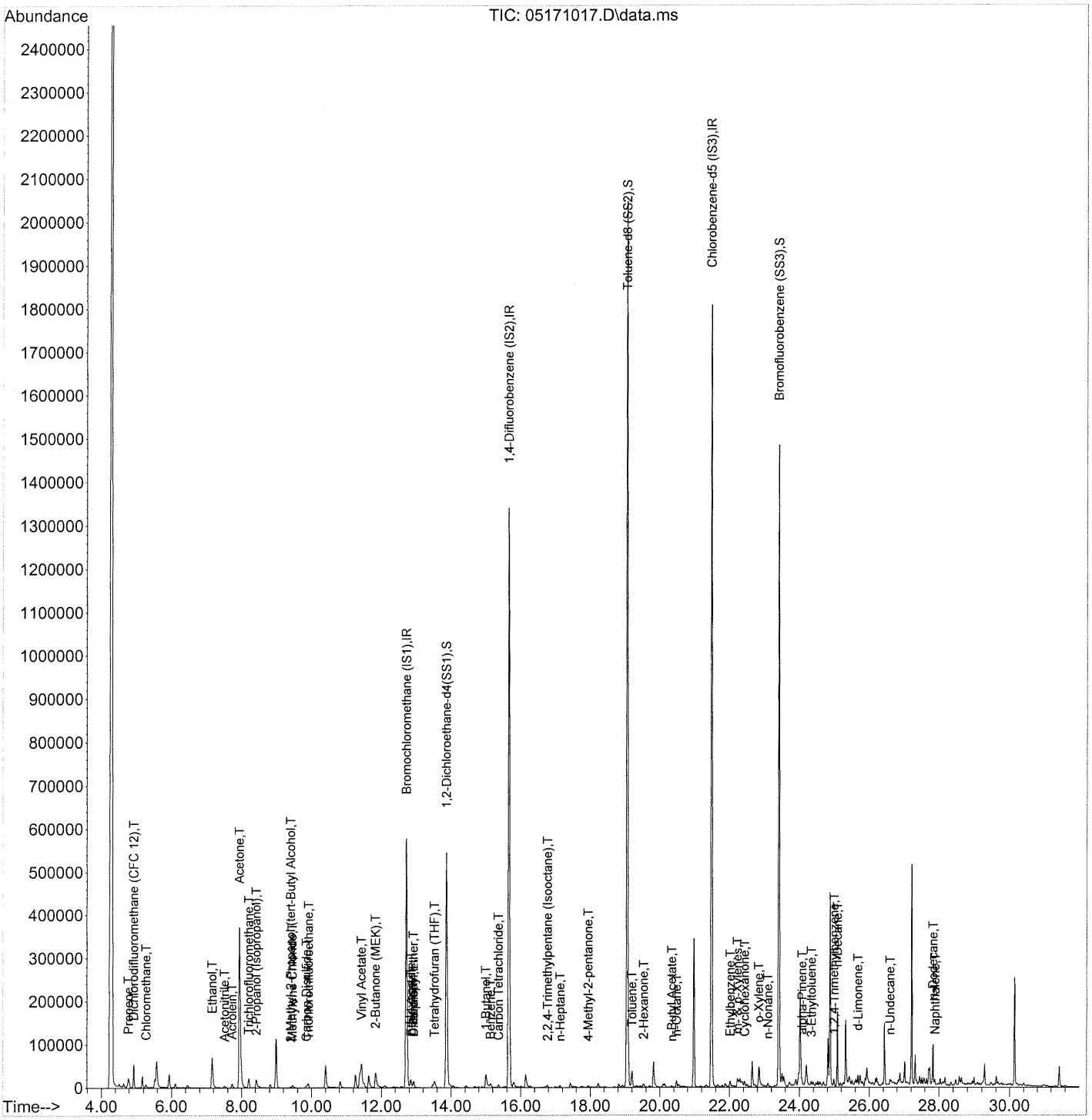
Ion	Ratio	Lower	Upper
128	100		
129	9.2	0.0	31.1



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 21:54
Operator : EM
Sample : P1001651-004 (1000ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 08:05:03 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 21:54
Operator : EM
Sample : P1001651-004 (1000ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 08:05:03 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	304195	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1560527	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	776823	25.000	ng		-0.01
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	552587	24.411	ng		-0.03
Spiked Amount 25.000			Recovery	=	97.64%		
57) Toluene-d8 (SS2)	19.06	98	1824821	24.623	ng		-0.01
Spiked Amount 25.000			Recovery	=	98.48%		
73) Bromofluorobenzene (SS3)	23.41	174	481116	25.430	ng		-0.01
Spiked Amount 25.000			Recovery	=	101.72%		
Target Compounds							Qvalue
2) Propene	4.78	42	7895	0.333	ng	#	85
3) Dichlorodifluoromethan...	4.93	85	54841	1.347	ng		99
4) Chloromethane	5.27	50	7298	0.242	ng		93
5) 1,2-Dichloro-1,1,2,2-t...	5.54	135	930	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	5.94	54	198	N.D.			
8) Bromomethane	6.52	94	90	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.16	45	113726	8.791	ng		98
11) Acetonitrile	7.51	41	6248	0.191	ng		94
12) Acrolein	7.73	56	12299	1.220	ng		96
13) Acetone	7.94	58	238501	15.081	ng		95
14) Trichlorofluoromethane	8.21	101	23987	0.680	ng		99
15) 2-Propanol (Isopropanol)	8.42	45	35190	0.718	ng		93
16) Acrylonitrile	0.00	53	0	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.41	59	6132	0.121	ng	#	82
19) Methylene Chloride	9.45	84	2163	0.104	ng		91
20) 3-Chloro-1-propene (Al...	9.54	41	177	N.D.			
21) Trichlorotrifluoroethane	9.91	151	4587	0.308	ng		89
22) Carbon Disulfide	9.86	76	11153	0.150	ng		90
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.36	73	311	N.D.			
26) Vinyl Acetate	11.44	86	19642	4.115	ng	#	59
27) 2-Butanone (MEK)	11.83	72	16320	1.242	ng	#	41
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.92	87	1432	0.074	ng	#	1
30) Ethyl Acetate	12.85	61	2949	0.378	ng		93
31) n-Hexane	12.84	57	3513	0.088	ng		62

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 21:54
Operator : EM
Sample : P1001651-004 (1000ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 08:05:03 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.92	83	16663	0.499 ng		98
34) Tetrahydrofuran (THF)	13.53	72	5920	0.466 ng	#	82
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.06	62	174	N.D.		
38) 1,1,1-Trichloroethane	14.44	97	87	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.00	56	37118	1.721 ng	#	79
41) Benzene	15.14	78	8757	0.101 ng		97
42) Carbon Tetrachloride	15.36	117	5500	0.237 ng		100
43) Cyclohexane	15.56	84	726	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.61	83	920	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.68	88	640	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	6526	0.064 ng		70
50) Methyl Methacrylate	17.12	100	98	N.D.		
51) n-Heptane	17.14	71	1456	0.058 ng	#	81
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.94	58	982	0.052 ng	#	30
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	36185	0.394 ng		97
59) 2-Hexanone	19.53	43	12030	0.274 ng		76
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.34	43	5291	0.107 ng		78
63) n-Octane	20.48	57	3253	0.153 ng		91
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	22.02	91	14843	0.144 ng		96
67) m- & p-Xylenes	22.22	91	22812	0.274 ng		96
68) Bromoform	22.34	173	193	N.D.		
69) Styrene	22.70	104	2702	N.D.		
70) o-Xylene	22.84	91	8535	0.096 ng		93
71) n-Nonane	23.10	43	4600	0.095 ng		89
72) 1,1,2,2-Tetrachloroethane	22.83	83	713	N.D.		
74) Cumene	23.59	105	3237	N.D.		
75) alpha-Pinene	24.08	93	5424	0.108 ng	#	46
76) n-Propylbenzene	24.22	91	3108	N.D.		
77) 3-Ethyltoluene	24.34	105	6687	0.067 ng		91
78) 4-Ethyltoluene	24.40	105	3875	N.D.		
79) 1,3,5-Trimethylbenzene	24.49	105	2976	N.D.		

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 21:54
Operator : EM
Sample : P1001651-004 (1000ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 08:05:03 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.67	118	1340	N.D.		
81) 2-Ethyltoluene	24.72	105	2737	N.D.		
82) 1,2,4-Trimethylbenzene	24.99	105	8634	0.098 ng		80
83) n-Decane	25.09	57	62144	1.230 ng		97
84) Benzyl Chloride	25.17	91	91	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	1870	N.D.		
86) 1,4-Dichlorobenzene	25.27	146	1870	N.D.		
87) sec-Butylbenzene	25.33	105	401	N.D.		
88) 4-Isopropyltoluene (p-...	25.50	119	2671	N.D.		
89) 1,2,3-Trimethylbenzene	25.51	105	2475	N.D.		
90) 1,2-Dichlorobenzene	25.27	146	1870	N.D.		
91) d-Limonene	25.68	68	6314	0.182 ng		98
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	4488	0.089 ng	#	60
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95) Naphthalene	27.88	128	10641	0.110 ng		95
96) n-Dodecane	27.83	57	31724	0.611 ng		98
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.44	55	7144	0.246 ng		88
99) tert-Butylbenzene	24.99	119	1124	N.D.		
100) n-Butylbenzene	26.01	91	2957	N.D.		

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110512** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-005

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01651

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**21**	0.81	**12**	0.47	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.5**	0.81	**0.50**	0.16	
74-87-3	**Chloromethane**	**0.82**	0.32	**0.40**	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.81	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.063	
106-99-0	1,3-Butadiene	ND	0.32	ND	0.15	
74-83-9	Bromomethane	ND	0.16	ND	0.041	
75-00-3	Chloroethane	ND	0.16	ND	0.061	
64-17-5	**Ethanol**	**750**	8.1	**400**	4.3	
75-05-8	Acetonitrile	ND	0.81	ND	0.48	
107-02-8	**Acrolein**	**11**	3.2	**5.0**	1.4	
67-64-1	**Acetone**	**170**	8.1	**70**	3.4	
75-69-4	**Trichlorofluoromethane**	**2.4**	0.16	**0.43**	0.029	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**85**	1.6	**35**	0.66	
107-13-1	Acrylonitrile	ND	0.81	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.041	
75-09-2	**Methylene Chloride**	**2.2**	0.81	**0.63**	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	ND	0.051	
76-13-1	**Trichlorotrifluoroethane**	**0.51**	0.16	**0.067**	0.021	
75-15-0	Carbon Disulfide	ND	8.1	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.041	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	ND	0.045	
108-05-4	**Vinyl Acetate**	**19**	8.1	**5.3**	2.3	
78-93-3	**2-Butanone (MEK)**	**14**	8.1	**4.7**	2.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110512** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-005

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01651

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.041	
141-78-6	**Ethyl Acetate**	**34**	0.81	**9.5**	0.22	
110-54-3	**n-Hexane**	**1.8**	0.81	**0.51**	0.23	
67-66-3	**Chloroform**	**4.4**	0.16	**0.90**	0.033	
109-99-9	**Tetrahydrofuran (THF)**	**1.6**	0.81	**0.55**	0.27	
107-06-2	**1,2-Dichloroethane**	**3.4**	0.16	**0.85**	0.040	
71-55-6	**1,1,1-Trichloroethane**	**0.25**	0.16	**0.045**	0.030	
71-43-2	**Benzene**	**2.4**	0.16	**0.76**	0.050	
56-23-5	**Carbon Tetrachloride**	**0.64**	0.16	**0.10**	0.026	
110-82-7	**Cyclohexane**	**1.5**	0.81	**0.43**	0.23	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.035	
75-27-4	**Bromodichloromethane**	**0.37**	0.16	**0.055**	0.024	
79-01-6	Trichloroethene	ND	0.16	ND	0.030	
123-91-1	1,4-Dioxane	ND	0.81	ND	0.22	
80-62-6	Methyl Methacrylate	ND	0.81	ND	0.20	
142-82-5	**n-Heptane**	**4.1**	0.81	**0.99**	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	ND	0.18	
108-10-1	**4-Methyl-2-pentanone**	**2.7**	0.81	**0.67**	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.81	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.030	
108-88-3	**Toluene**	**19**	0.81	**5.1**	0.21	
591-78-6	**2-Hexanone**	**3.3**	0.81	**0.80**	0.20	
124-48-1	Dibromochloromethane	ND	0.16	ND	0.019	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.021	
123-86-4	**n-Butyl Acetate**	**6.0**	0.81	**1.3**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110512**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01651

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**2.0**	0.81	**0.43**	0.17	
127-18-4	Tetrachloroethene	ND	0.16	ND	0.024	
108-90-7	Chlorobenzene	ND	0.16	ND	0.035	
100-41-4	**Ethylbenzene**	**1.6**	0.81	**0.37**	0.19	
179601-23-1	**m,p-Xylenes**	**3.5**	0.81	**0.80**	0.19	
75-25-2	Bromoform	ND	0.81	ND	0.078	
100-42-5	**Styrene**	**2.2**	0.81	**0.53**	0.19	
95-47-6	**o-Xylene**	**1.3**	0.81	**0.31**	0.19	
111-84-2	**n-Nonane**	**2.2**	0.81	**0.42**	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.023	
98-82-8	Cumene	ND	0.81	ND	0.16	
80-56-8	**alpha-Pinene**	**100**	0.81	**18**	0.14	
103-65-1	n-Propylbenzene	ND	0.81	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.81	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.81	ND	0.16	
95-63-6	**1,2,4-Trimethylbenzene**	**1.3**	0.81	**0.26**	0.16	
100-44-7	Benzyl Chloride	ND	0.81	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.16	ND	0.027	
106-46-7	**1,4-Dichlorobenzene**	**0.30**	0.16	**0.049**	0.027	
95-50-1	1,2-Dichlorobenzene	ND	0.16	ND	0.027	
5989-27-5	**d-Limonene**	**43**	0.81	**7.8**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.81	ND	0.11	
91-20-3	**Naphthalene**	**1.1**	0.81	**0.20**	0.15	
87-68-3	Hexachlorobutadiene	ND	0.81	ND	0.075	

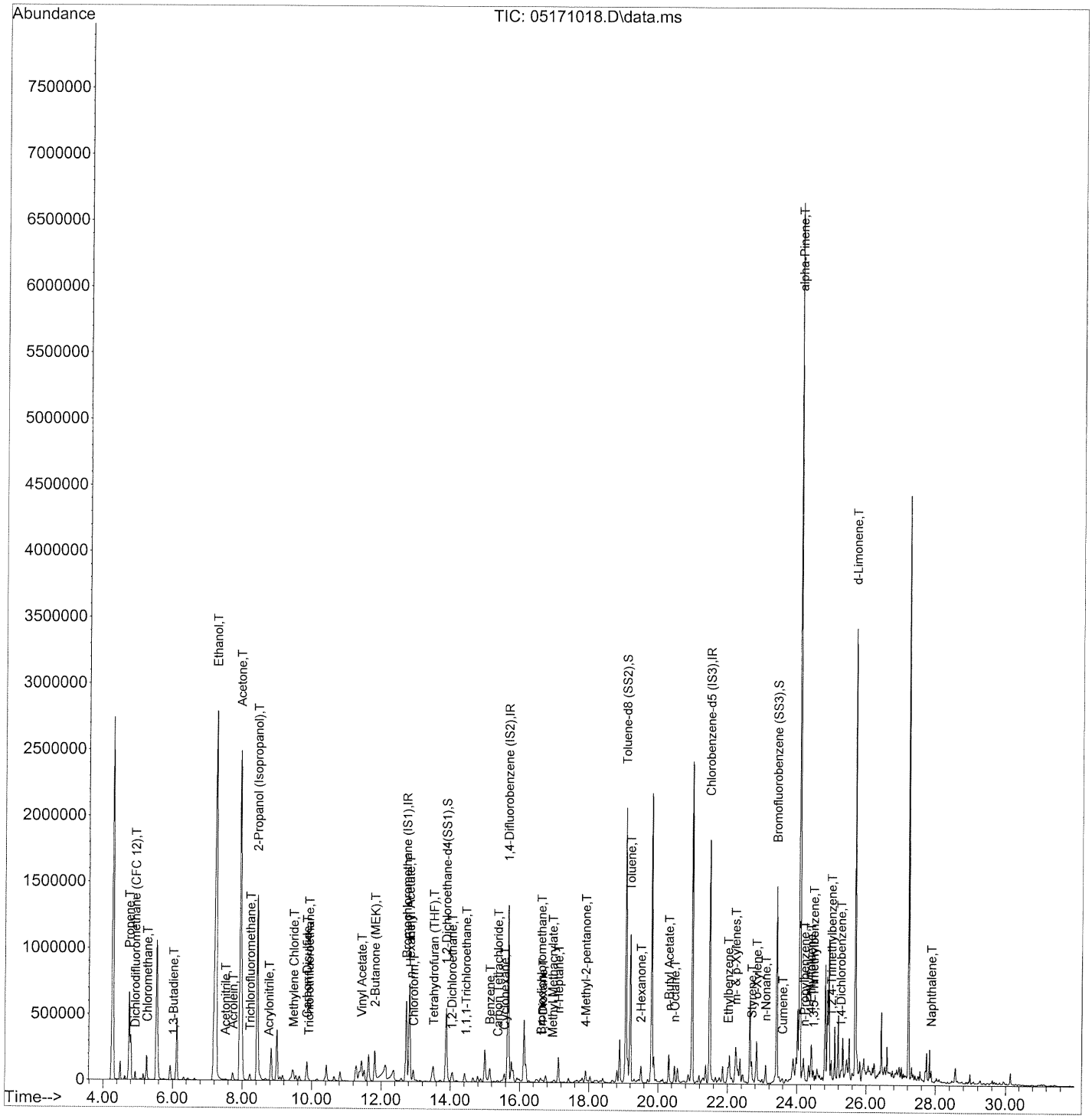
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 20 15:50:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 20 15:50:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	312539	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1556951	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	779064	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	552720	23.765	ng	-0.03
Spiked Amount 25.000			Recovery	=	95.04%	✓
57) Toluene-d8 (SS2)	19.06	98	1816421	24.439	ng	-0.01
Spiked Amount 25.000			Recovery	=	97.76%	✓
73) Bromofluorobenzene (SS3)	23.42	174	488196	25.730	ng	0.00
Spiked Amount 25.000			Recovery	=	102.92%	✓

Target Compounds							Qvalue
2) Propene	4.76	42	320860	13.161	ng M	#	84
3) Dichlorodifluoromethan...	4.93	85	64334	1.538	ng		99
4) Chloromethane	5.27	50	15800	0.511	ng		97
7) 1,3-Butadiene	6.02	54	2927	0.119	ng		93
10) Ethanol	7.25	45	6232744	468.936	ng		99
11) Acetonitrile	7.51	41	9791	0.292	ng		98
12) Acrolein	7.73	56	73751	7.118	ng		99
13) Acetone	7.94	58	1669807	102.768	ng		96
14) Trichlorofluoromethane	8.22	101	54578	1.507	ng		100
15) 2-Propanol (Isopropanol)	8.43	45	2663977	52.883	ng		98
16) Acrylonitrile	8.76	53	2514	0.103	ng		97
19) Methylene Chloride	9.47	84	29169	1.363	ng		95
21) Trichlorotrifluoroethane	9.91	151	4848	0.317	ng		94
22) Carbon Disulfide	9.86	76	322904	4.232	ng		99
26) Vinyl Acetate	11.44	86	56763	11.575	ng	#	1
27) 2-Butanone (MEK)	11.81	72	115832	8.582	ng	#	1
30) Ethyl Acetate	12.82	61	170512	21.252	ng		95
31) n-Hexane	12.84	57	45759	1.114	ng		98
32) Chloroform	12.93	83	93642	2.731	ng		99
34) Tetrahydrofuran (THF)	13.52	72	13027	0.998	ng	#	1
36) 1,2-Dichloroethane	14.04	62	59361	2.136	ng		100
38) 1,1,1-Trichloroethane	14.44	97	4766	0.153	ng		97
41) Benzene	15.14	78	130793	1.505	ng		99
42) Carbon Tetrachloride	15.37	117	9142	0.395	ng		98
43) Cyclohexane	15.56	84	33790	0.925	ng		94
46) Bromodichloromethane	16.62	83	5964	0.229	ng	#	73
48) 1,4-Dioxane	16.66	88	2034	0.123	ng	#	65
50) Methyl Methacrylate	16.95	100	955	0.105	ng	#	58
51) n-Heptane	17.12	71	62540	2.517	ng		97
53) 4-Methyl-2-pentanone	17.91	58	31934	1.701	ng		93

MM 5/20/10

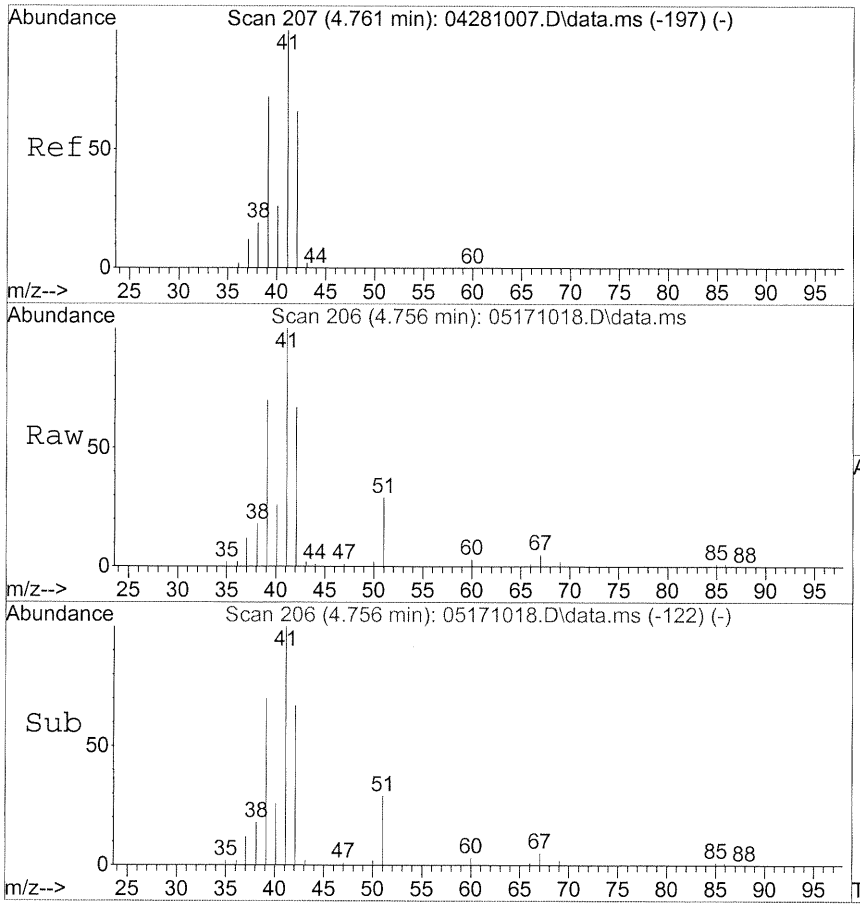
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 20 15:50:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
58) Toluene	19.20	91	1093138	11.856	ng		99
59) 2-Hexanone	19.50	43	89140	2.027	ng		95
62) n-Butyl Acetate	20.31	43	185074	3.744	ng		99
63) n-Octane	20.48	57	26869	1.256	ng		93
66) Ethylbenzene	22.01	91	103785	1.006	ng		97
67) m- & p-Xylenes	22.22	91	180356	2.157	ng		97
69) Styrene	22.70	104	81826	1.388	ng		96
70) o-Xylene	22.84	91	73561	0.826	ng		97
71) n-Nonane	23.10	43	66429	1.374	ng		89
74) Cumene	23.59	105	9786	0.091	ng		95
75) alpha-Pinene	24.08	93	3202288	63.355	ng		98
76) n-Propylbenzene	24.21	91	25906	0.196	ng	#	85
78) 4-Ethyltoluene	24.40	105	34077	0.339	ng		89
79) 1,3,5-Trimethylbenzene	24.48	105	24523	0.291	ng		97
82) 1,2,4-Trimethylbenzene	24.99	105	70527	0.800	ng		87
86) 1,4-Dichlorobenzene	25.27	146	8048	0.184	ng		100
91) d-Limonene	25.68	68	933414	26.898	ng		99
95) Naphthalene	27.88	128	64602	0.663	ng		99

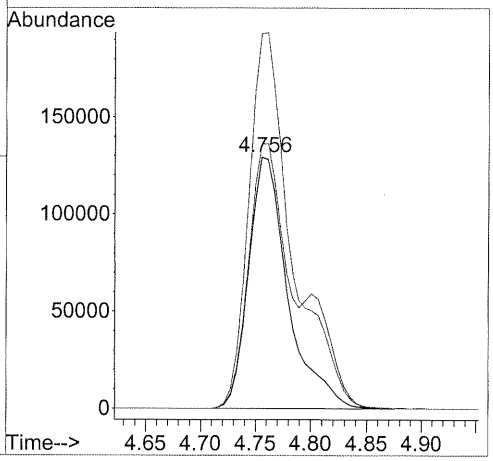
(#) = qualifier out of range (m) = manual integration (+) = signals summed

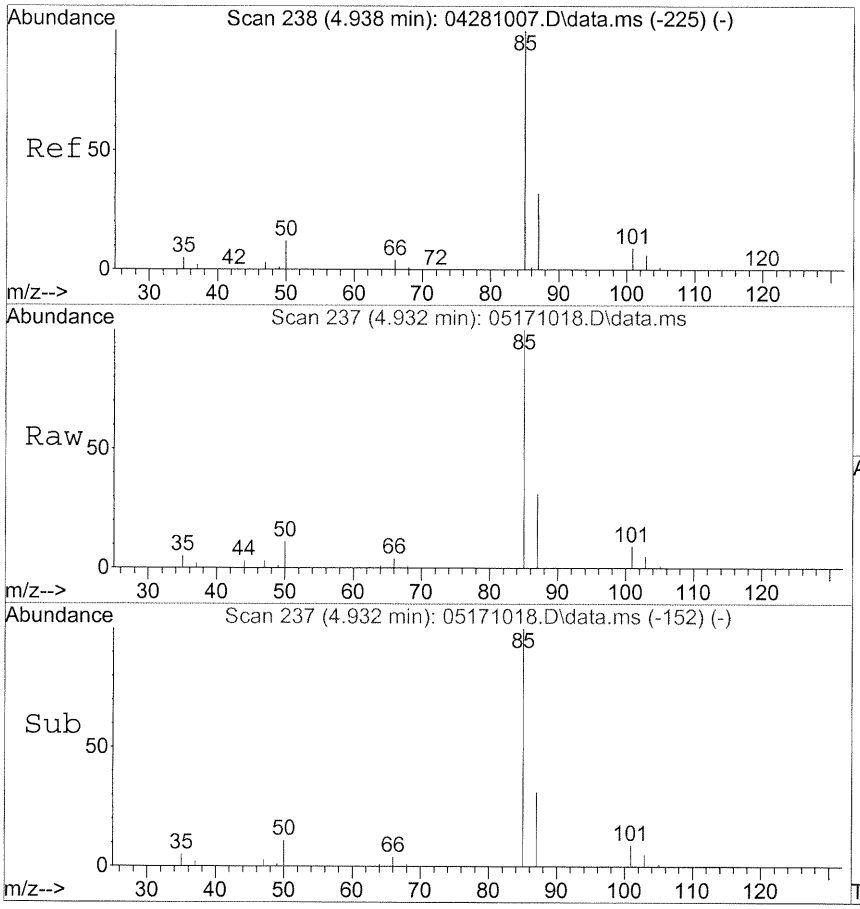


#2
Propene
Concen: 13.16 ng
RT: 4.76 min Scan# 206
Delta R.T. -0.023 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 42 Resp: 320860

Ion	Ratio	Lower	Upper
42	100		
39	130.8	88.4	128.4#
41	164.3	129.9	169.9

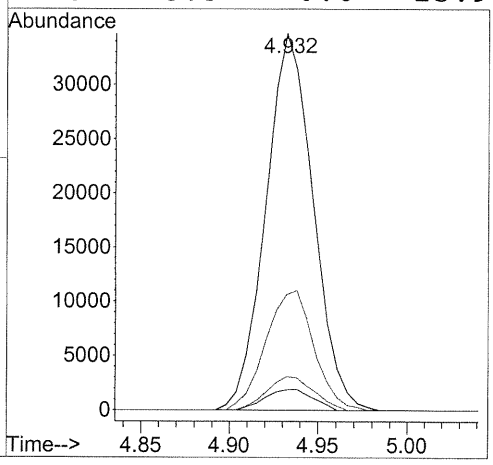


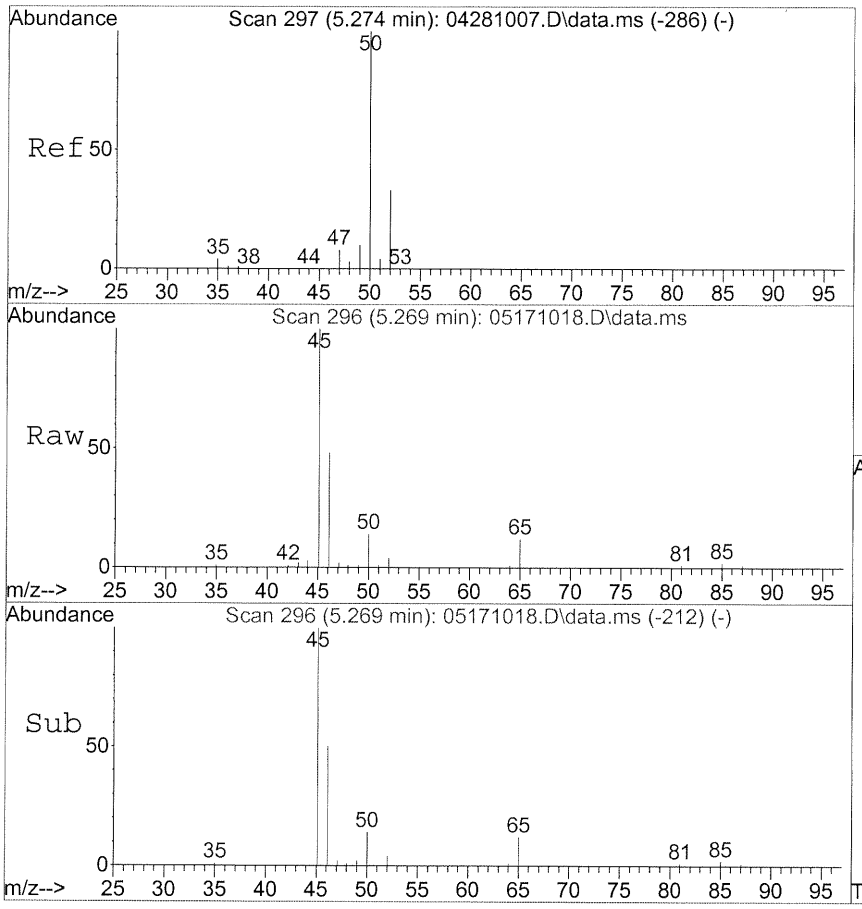


#3
Dichlorodifluoromethane (CFC
Concen: 1.54 ng
RT: 4.93 min Scan# 237
Delta R.T. -0.017 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 85 Resp: 64334

Ion	Ratio	Lower	Upper
85	100		
87	32.1	12.6	52.6
101	8.7	0.0	29.3
103	5.5	0.0	25.9

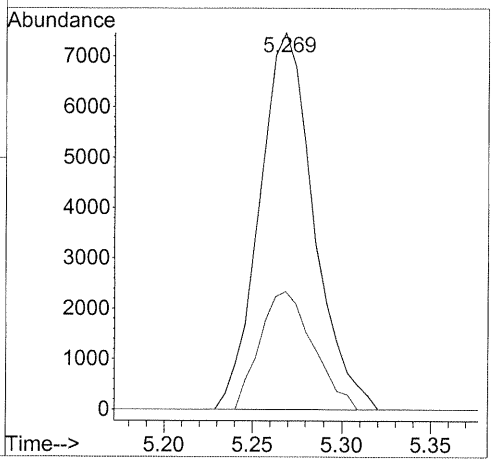


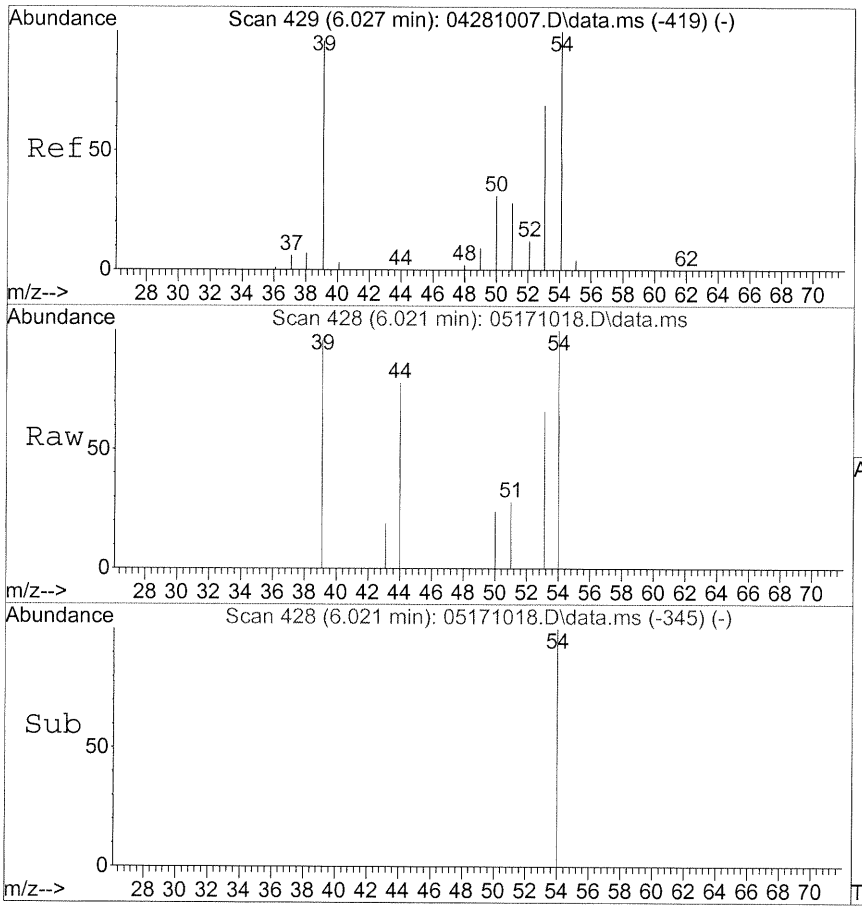


#4
Chloromethane
Concen: 0.51 ng
RT: 5.27 min Scan# 296
Delta R.T. -0.023 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 50 Resp: 15800

Ion	Ratio	Lower	Upper
50	100		
52	30.6	12.3	52.3

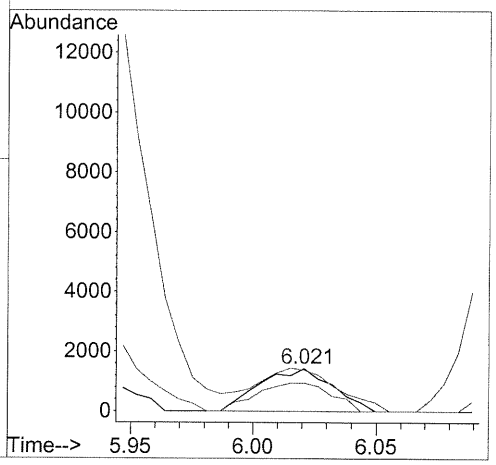


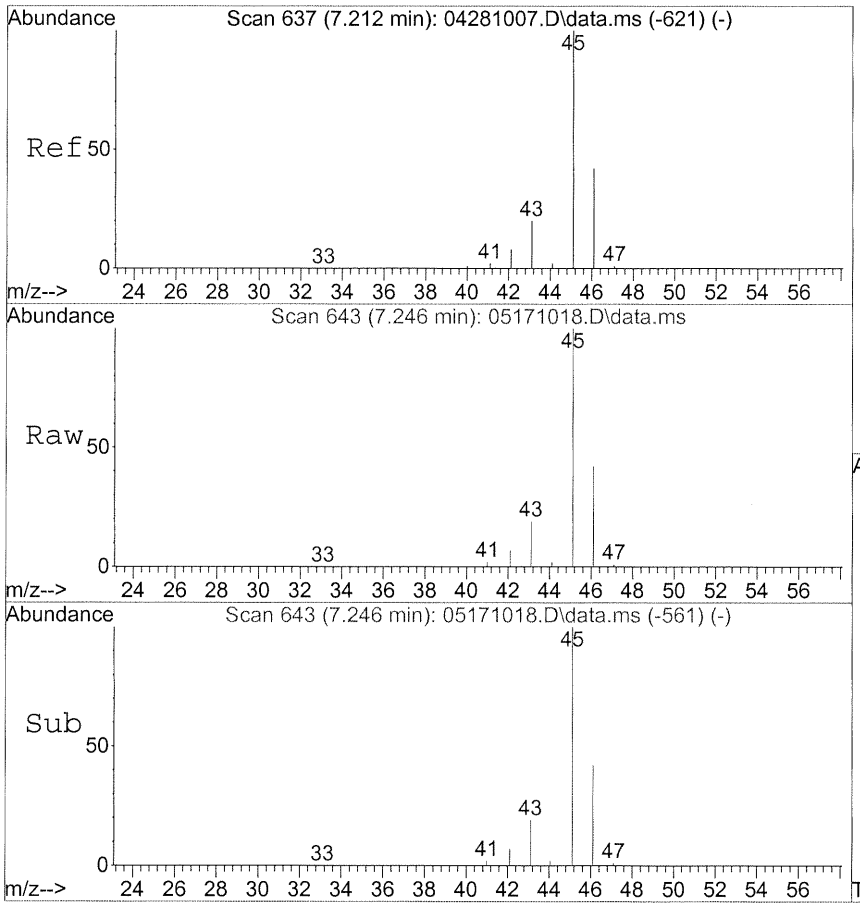


#7
1,3-Butadiene
Concen: 0.12 ng
RT: 6.02 min Scan# 428
Delta R.T. -0.029 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 54 Resp: 2927

Ion	Ratio	Lower	Upper
54	100		
39	107.5	76.6	116.6
53	68.0	49.7	89.7

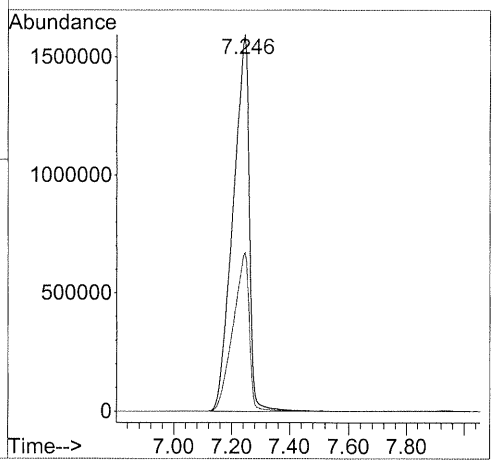


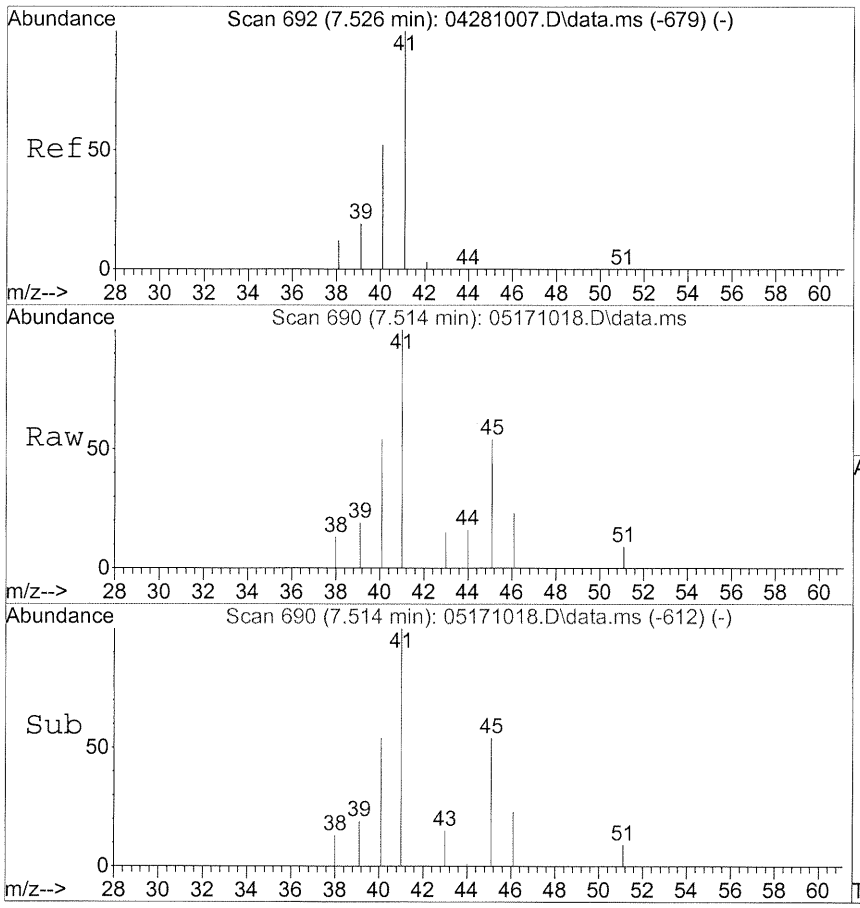


#10
Ethanol
Concen: 468.94 ng
RT: 7.25 min Scan# 643
Delta R.T. -0.034 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 45 Resp: 6232744

Ion	Ratio	Lower	Upper
45	100		
46	42.0	21.3	61.3

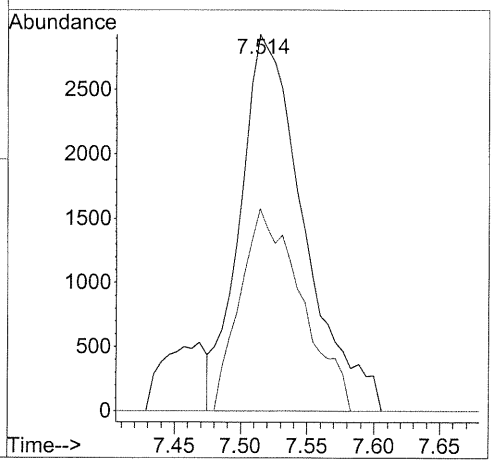


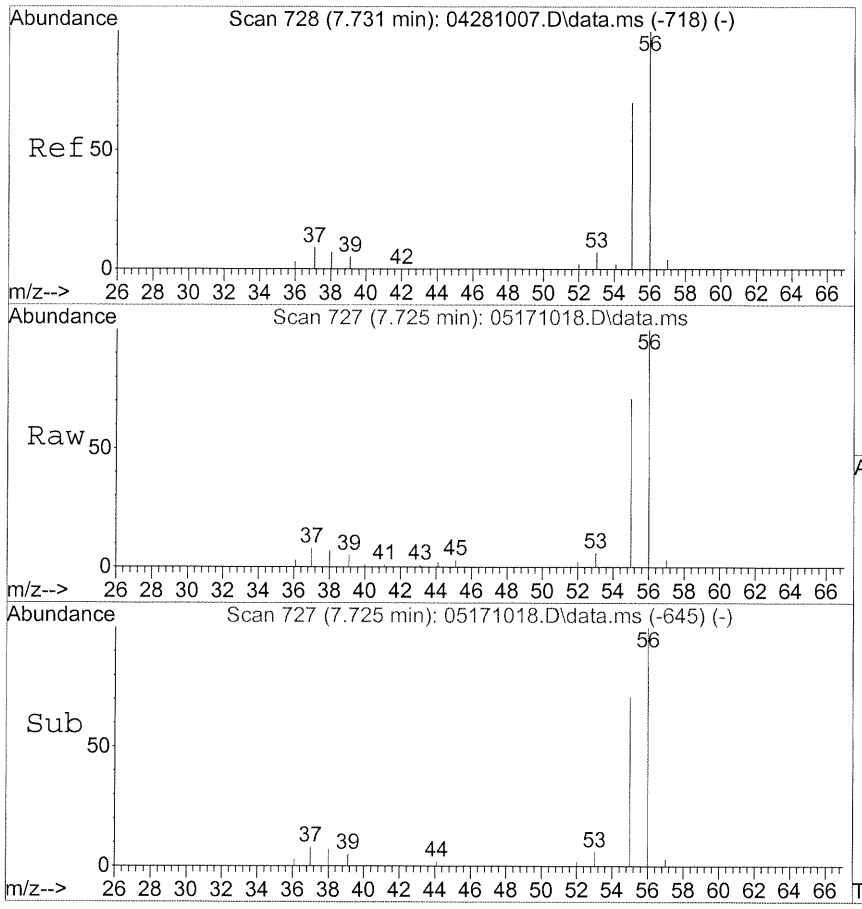


#11
Acetonitrile
Concen: 0.29 ng
RT: 7.51 min Scan# 690
Delta R.T. -0.057 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 41 Resp: 9791

Ion	Ratio	Lower	Upper
41	100		
40	51.7	33.2	73.2

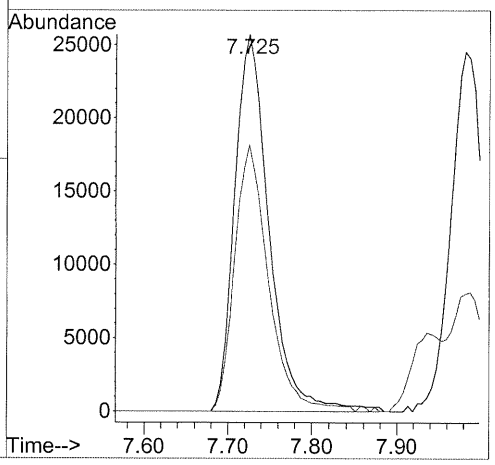


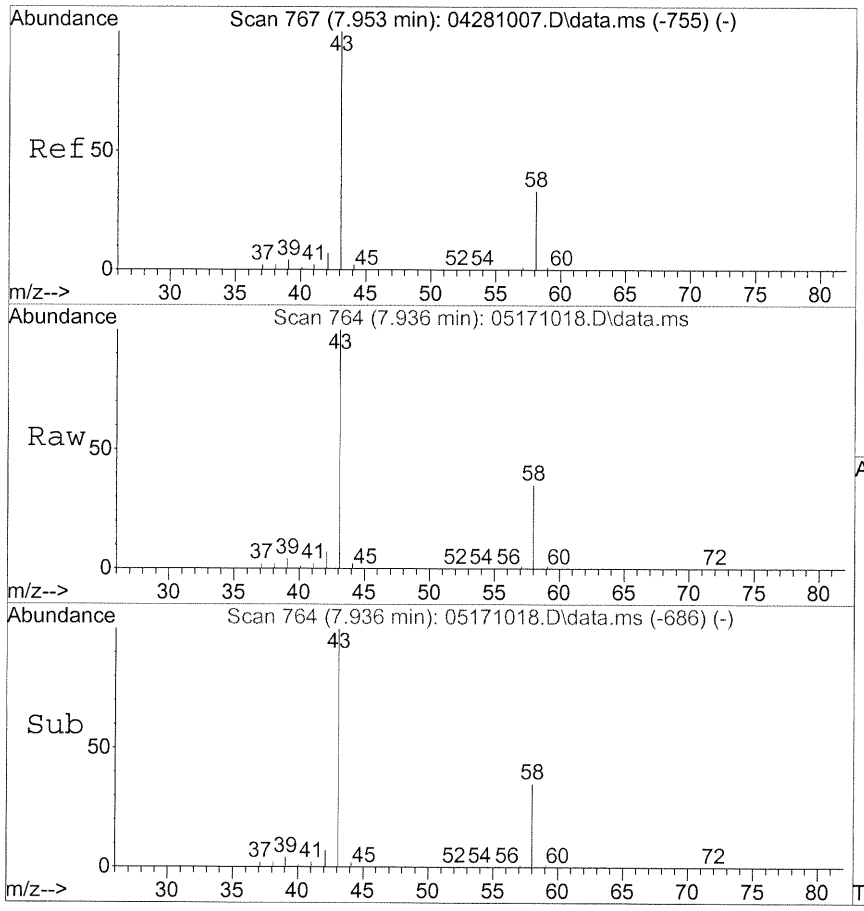


#12
Acrolein
Concen: 7.12 ng
RT: 7.73 min Scan# 727
Delta R.T. -0.034 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 56 Resp: 73751

Ion	Ratio	Lower	Upper
56	100		
55	69.4	50.2	90.2

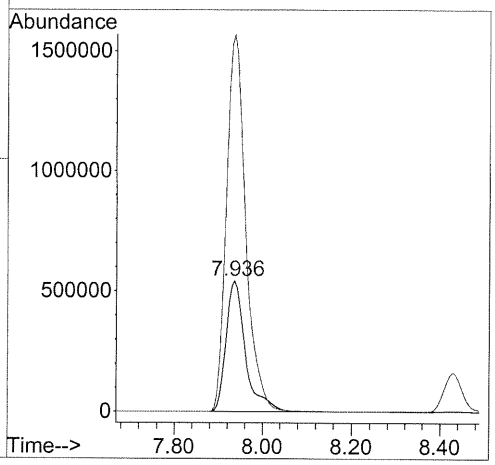


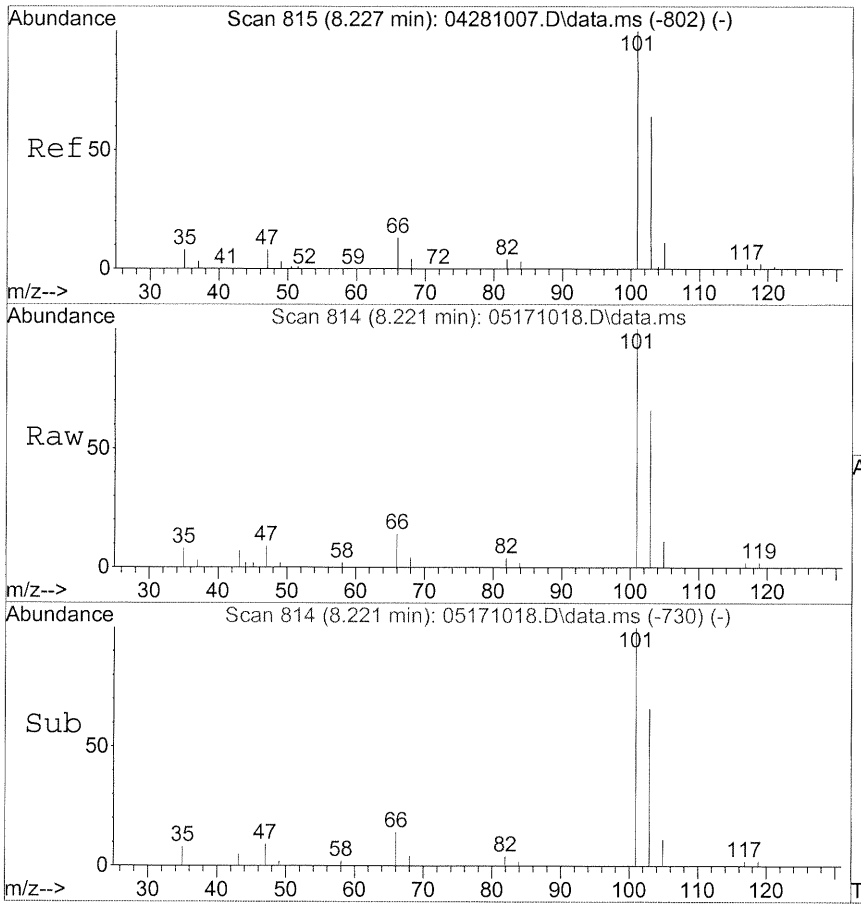


#13
Acetone
Concen: 102.77 ng
RT: 7.94 min Scan# 764
Delta R.T. -0.057 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 58 Resp: 1669807

Ion	Ratio	Lower	Upper
58	100		
43	286.7	264.2	324.2

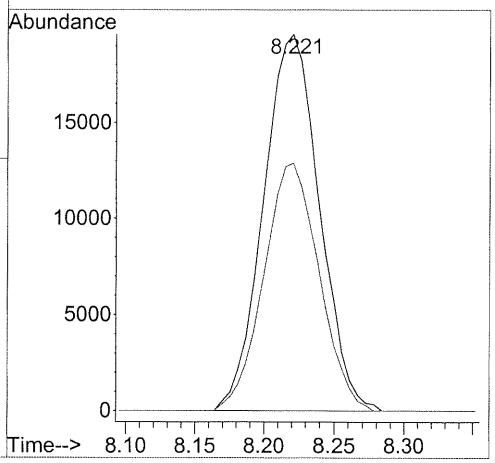


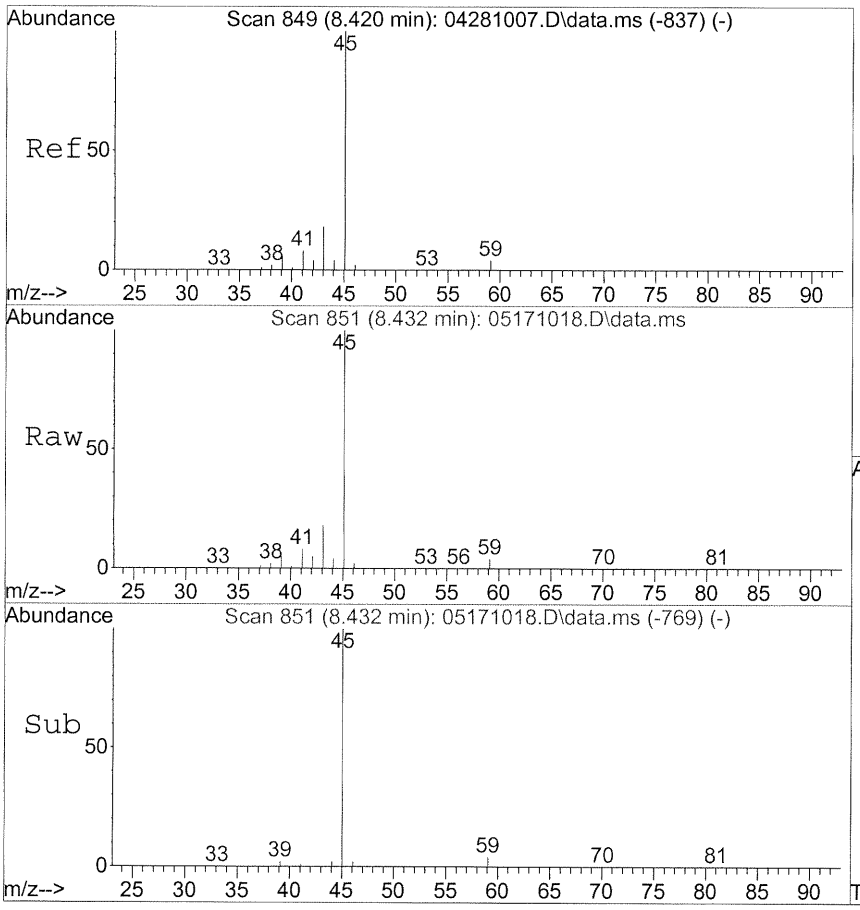


#14
Trichlorofluoromethane
Concen: 1.51 ng
RT: 8.22 min Scan# 814
Delta R.T. -0.023 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:101 Resp: 54578

Ion	Ratio	Lower	Upper
101	100		
103	65.0	44.6	84.6

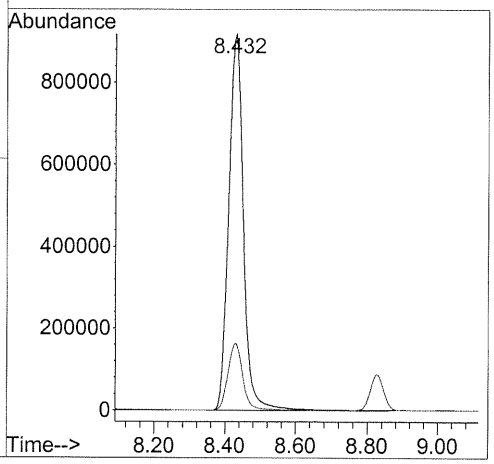


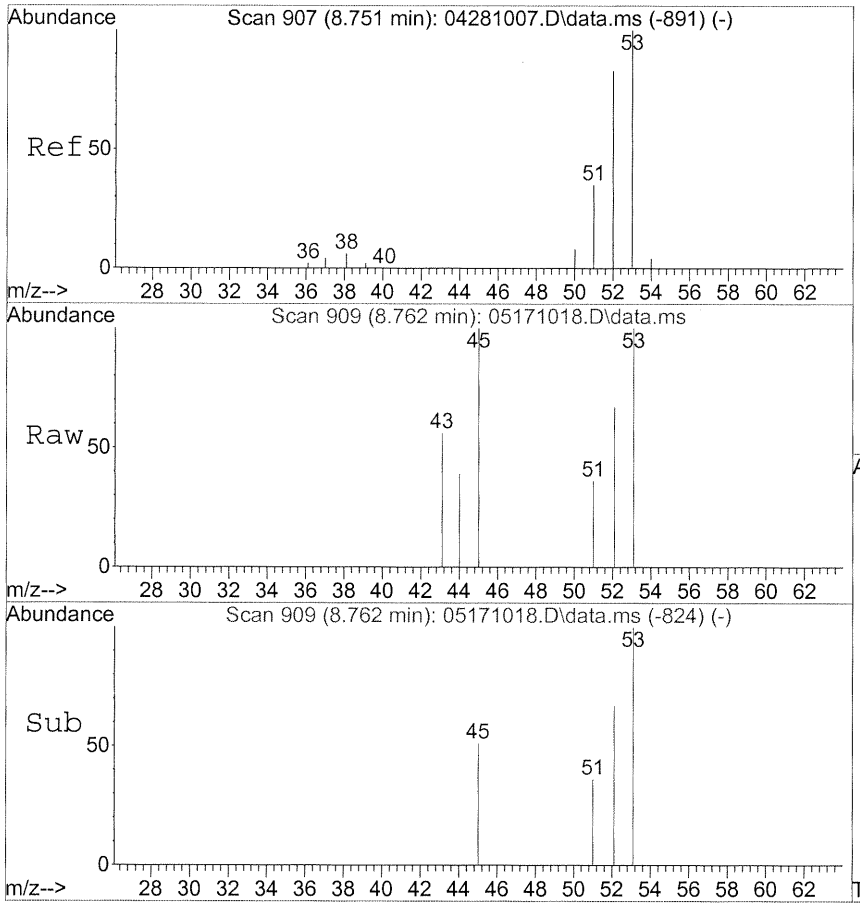


#15
2-Propanol (Isopropanol)
Concen: 52.88 ng
RT: 8.43 min Scan# 851
Delta R.T. -0.034 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 45 Resp: 2663977

Ion	Ratio	Lower	Upper
45	100		
43	17.8	0.0	38.5

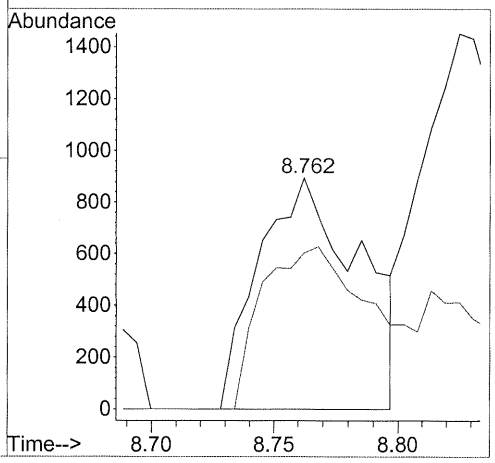


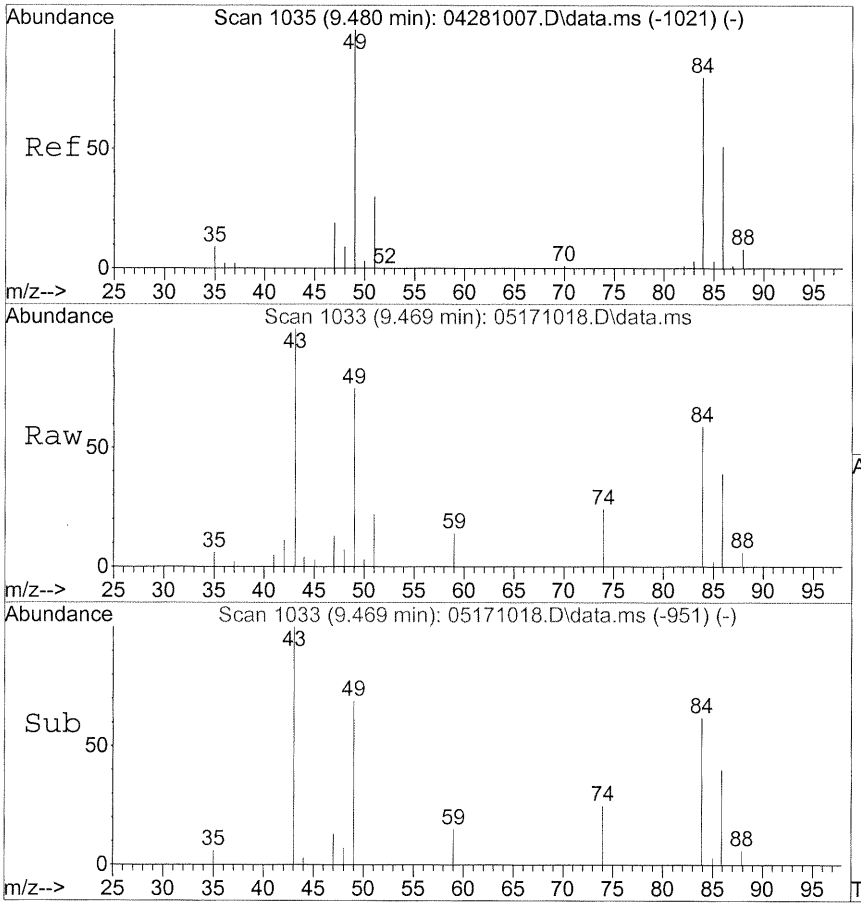


#16
Acrylonitrile
Concen: 0.10 ng
RT: 8.76 min Scan# 909
Delta R.T. -0.018 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 53 Resp: 2514

Ion	Ratio	Lower	Upper
53	100		
52	80.2	62.4	102.4

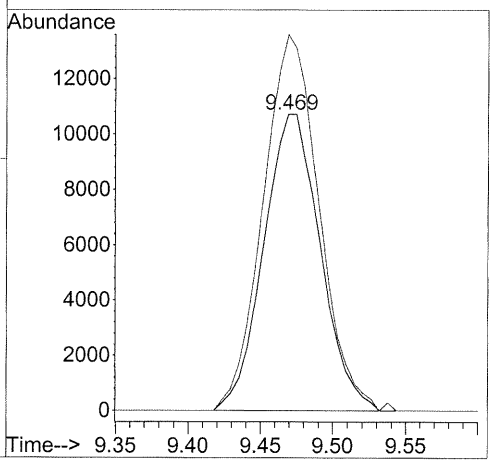


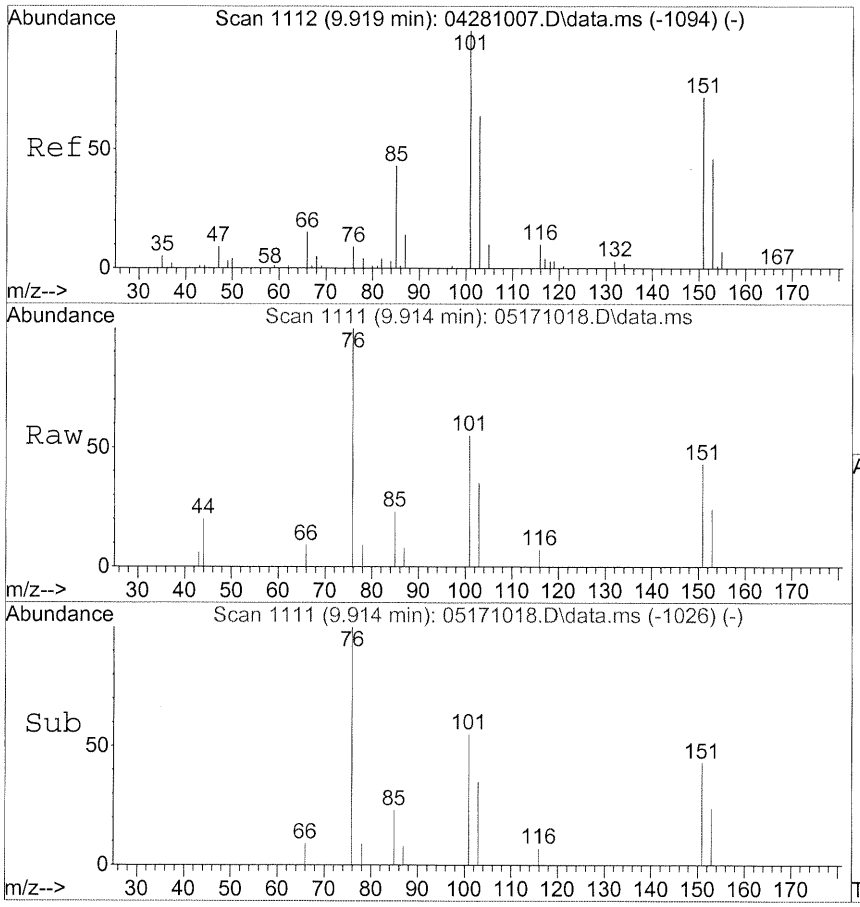


#19
Methylene Chloride
Concen: 1.36 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 84 Resp: 29169

Ion	Ratio	Lower	Upper
84	100		
49	125.5	94.5	144.5

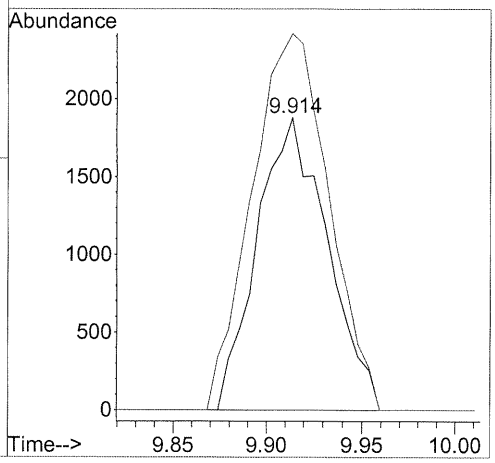


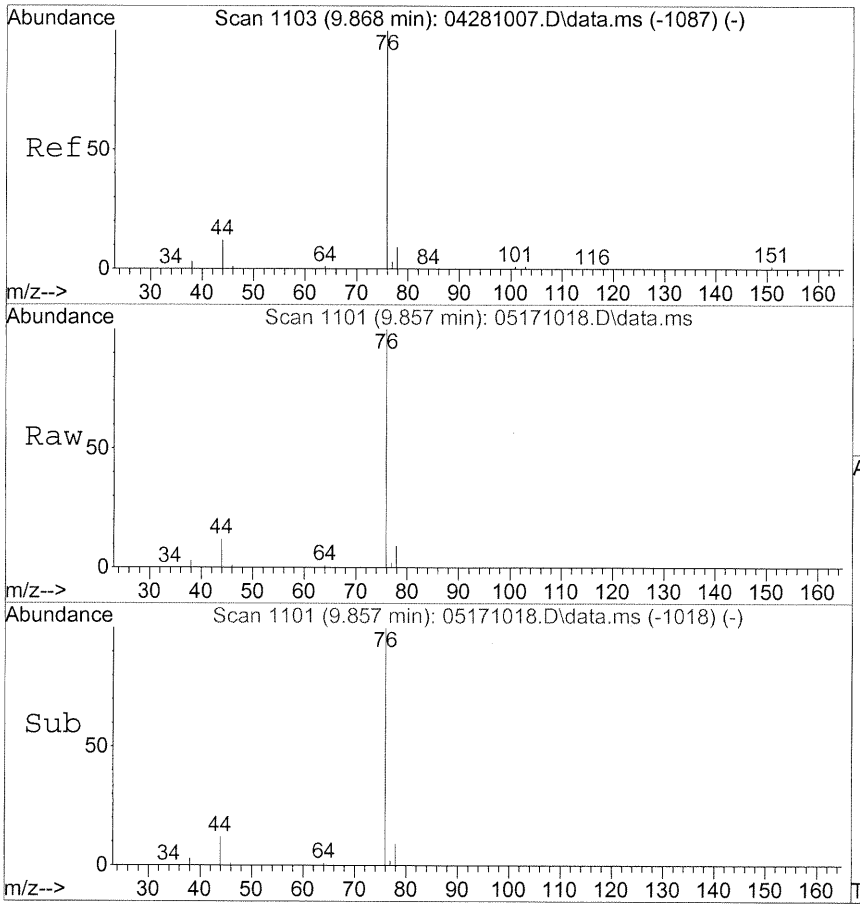


#21
Trichlorotrifluoroethane
Concen: 0.32 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:151 Resp: 4848

Ion	Ratio	Lower	Upper
151	100		
101	141.5	114.9	154.9

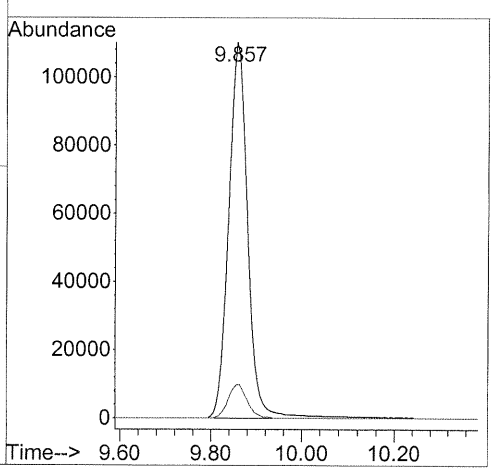


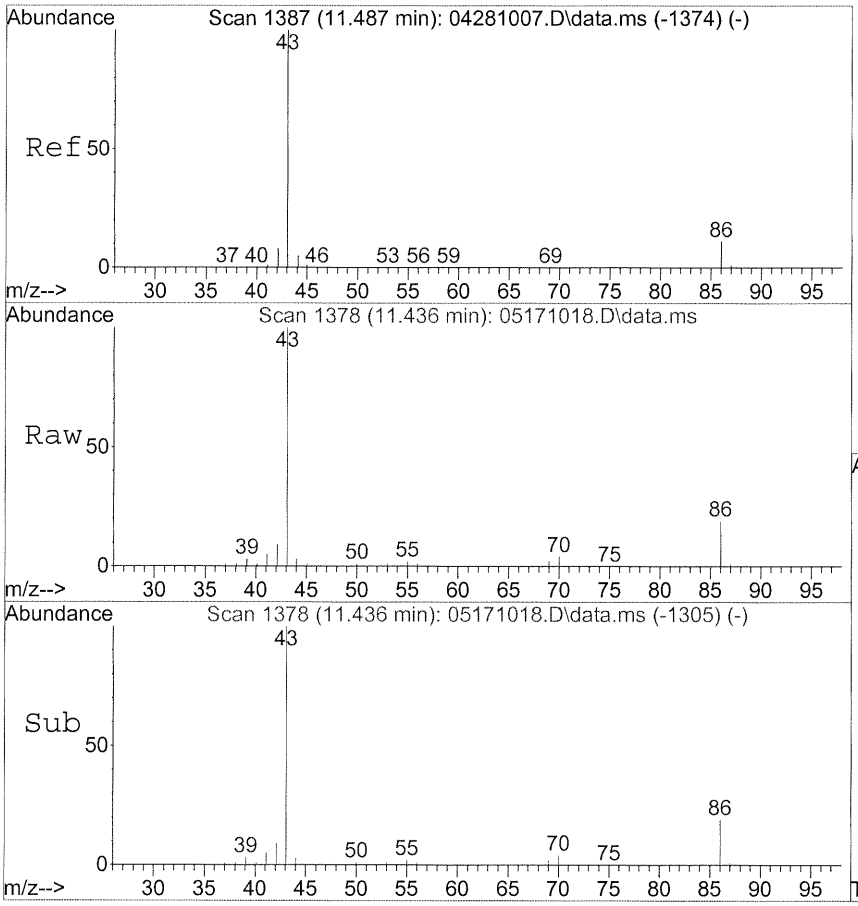


#22
Carbon Disulfide
Concen: 4.23 ng
RT: 9.86 min Scan# 1101
Delta R.T. -0.028 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 76 Resp: 322904

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	29.2

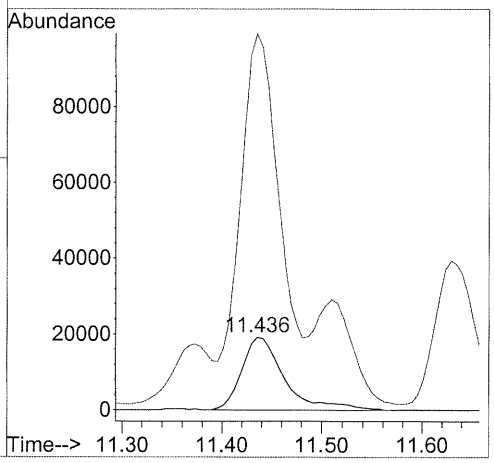


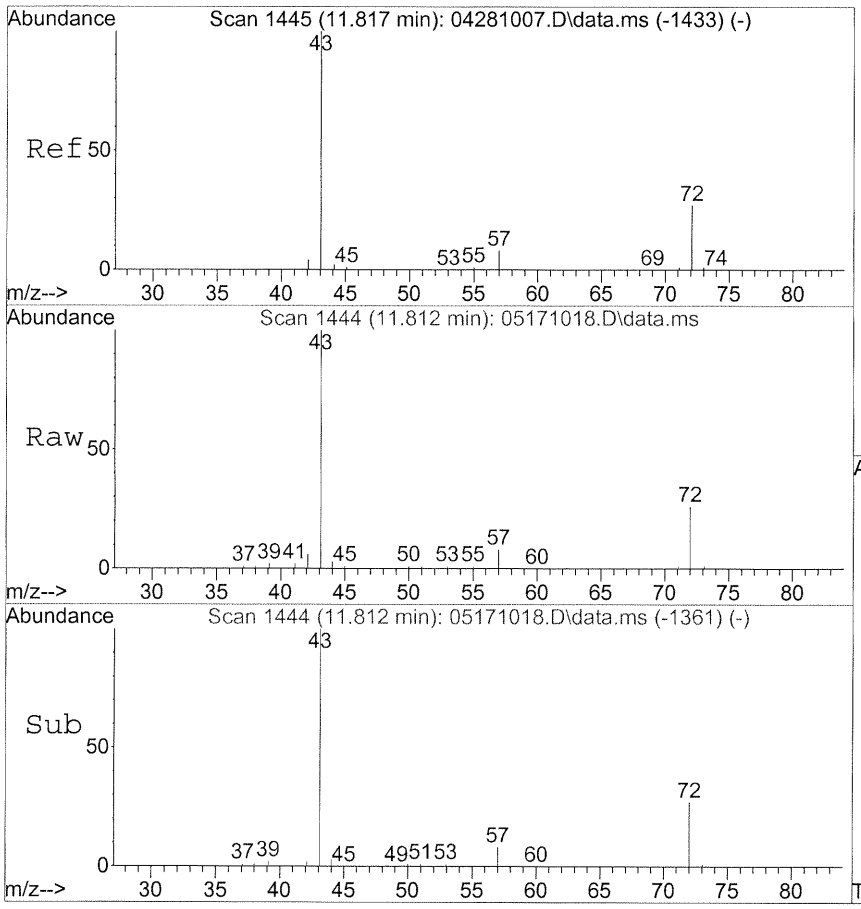


#26
Vinyl Acetate
Concen: 11.57 ng
RT: 11.44 min Scan# 1378
Delta R.T. -0.085 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 86 Resp: 56763

Ion	Ratio	Lower	Upper
86	100		
43	457.7	829.7	869.7#

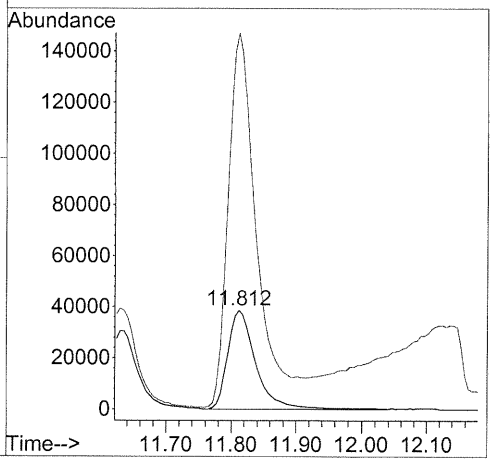


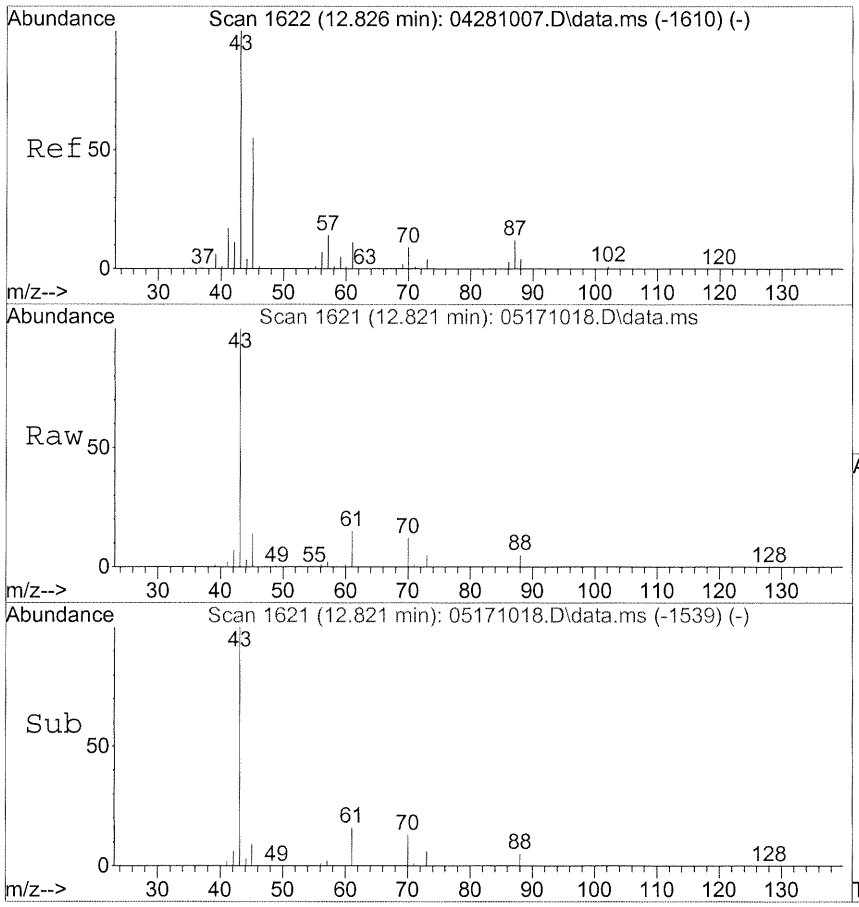


#27
2-Butanone (MEK)
Concen: 8.58 ng
RT: 11.81 min Scan# 1444
Delta R.T. -0.028 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 72 Resp: 115832

Ion	Ratio	Lower	Upper
72	100		
43	706.9	342.0	382.0#

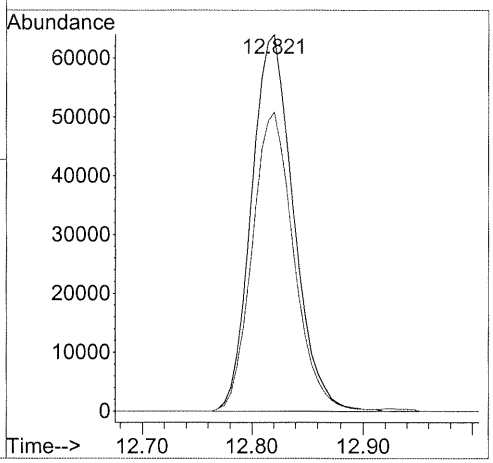


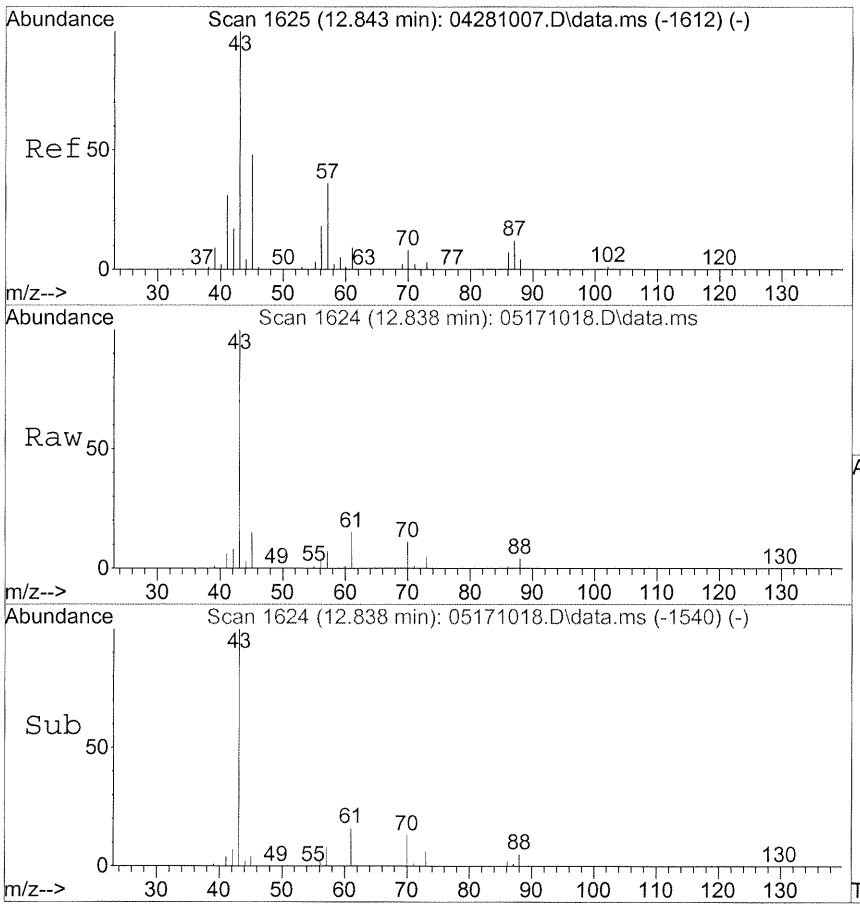


#30
Ethyl Acetate
Concen: 21.25 ng
RT: 12.82 min Scan# 1621
Delta R.T. -0.034 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 61 Resp: 170512

Ion	Ratio	Lower	Upper
61	100		
70	79.2	63.6	103.6

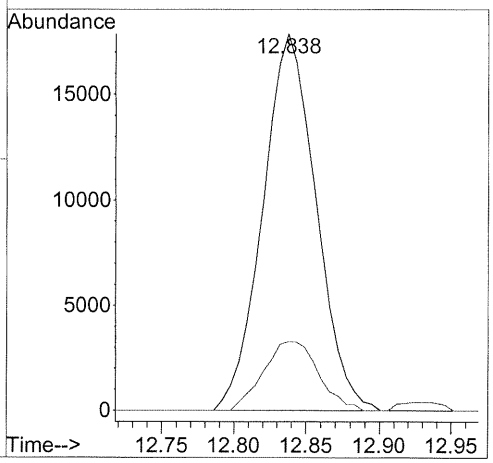


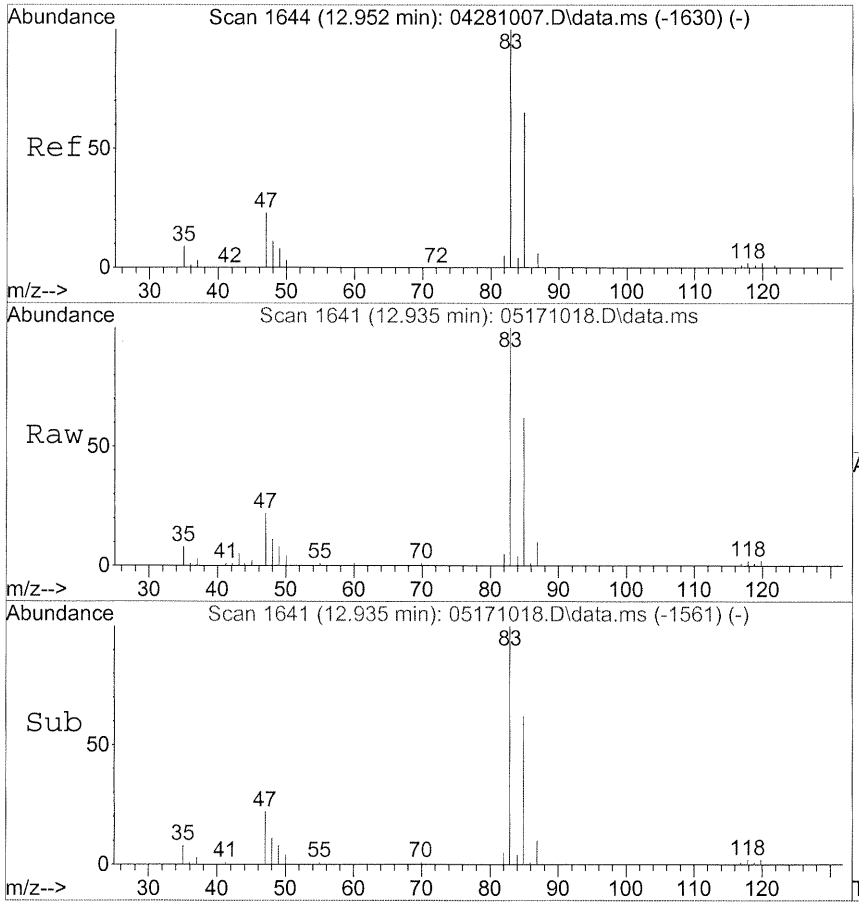


#31
n-Hexane
Concen: 1.11 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 57 Resp: 45759

Ion	Ratio	Lower	Upper
57	100		
86	18.9	0.0	39.8

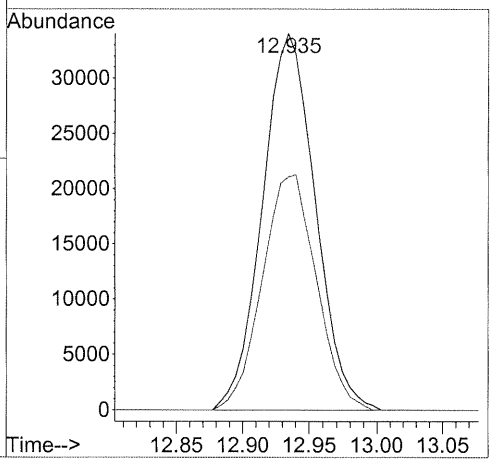


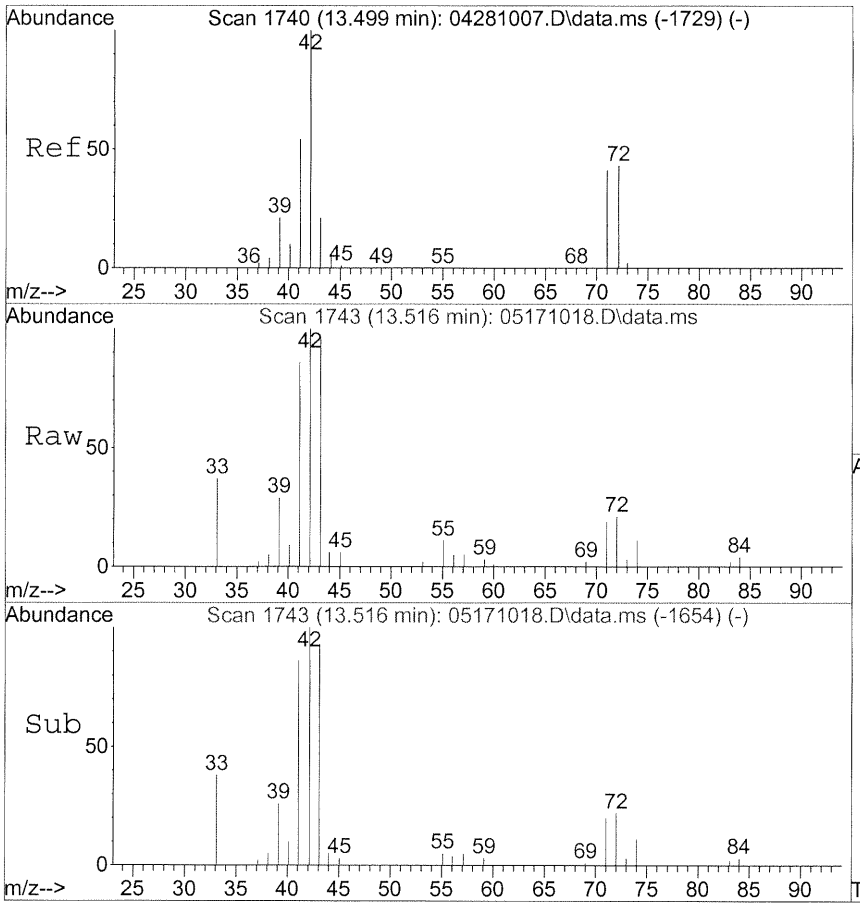


#32
Chloroform
Concen: 2.73 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 83 Resp: 93642

Ion	Ratio	Lower	Upper
83	100		
85	63.8	44.9	84.9

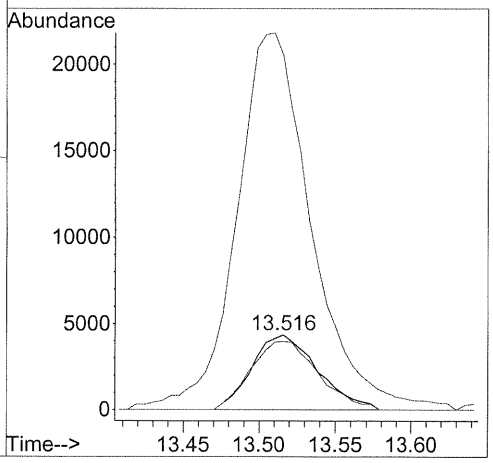


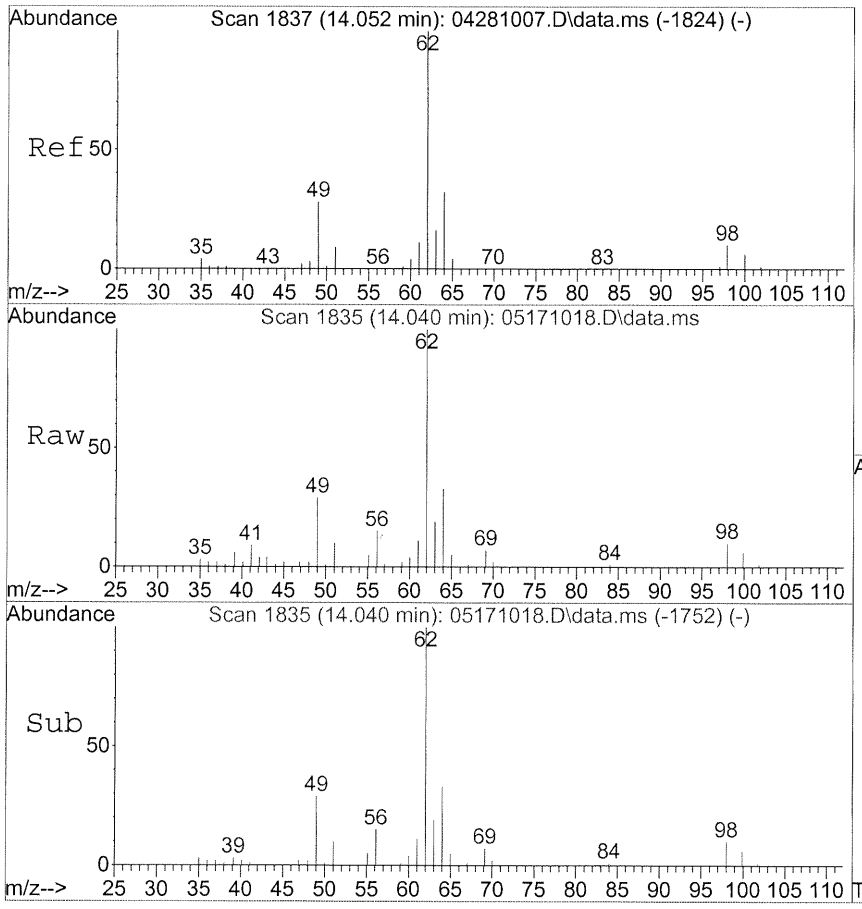


#34
Tetrahydrofuran (THF)
Concen: 1.00 ng
RT: 13.52 min Scan# 1743
Delta R.T. 0.006 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 72 Resp: 13027

Ion	Ratio	Lower	Upper
72	100		
71	93.8	74.5	114.5
42	575.4	197.7	237.7#

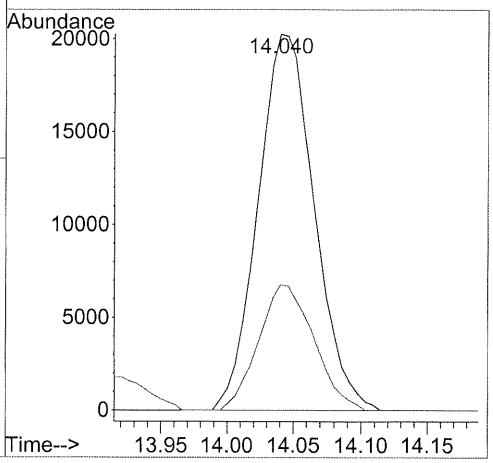


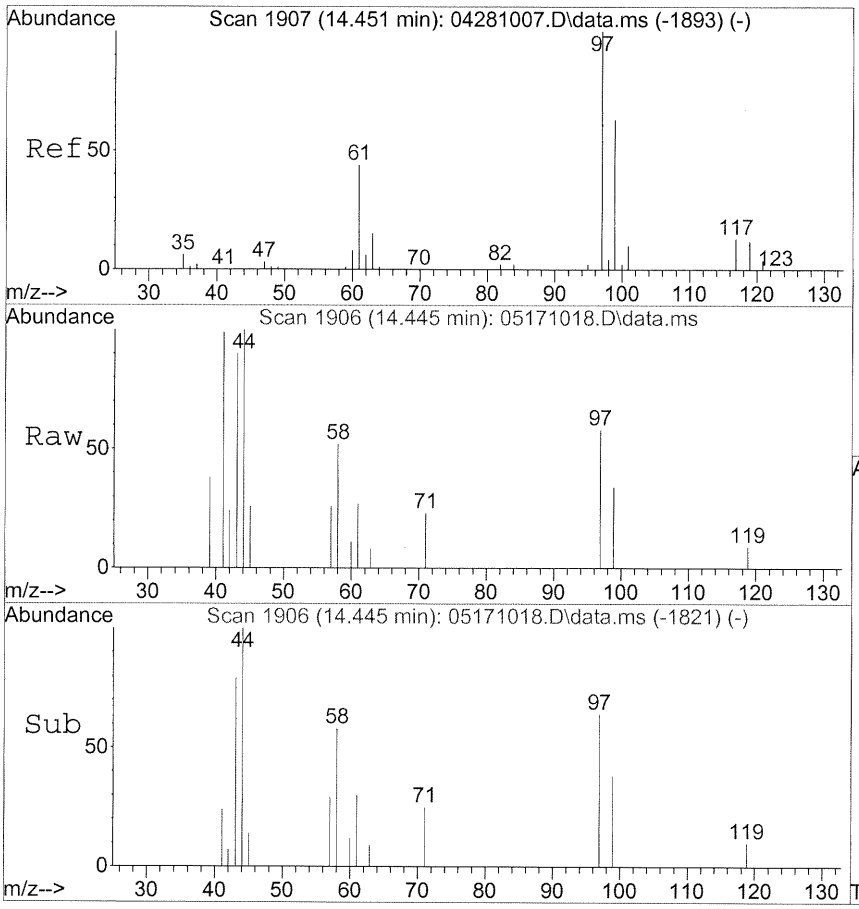


#36
1,2-Dichloroethane
Concen: 2.14 ng
RT: 14.04 min Scan# 1835
Delta R.T. -0.029 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 62 Resp: 59361

Ion	Ratio	Lower	Upper
62	100		
64	32.8	12.8	52.8

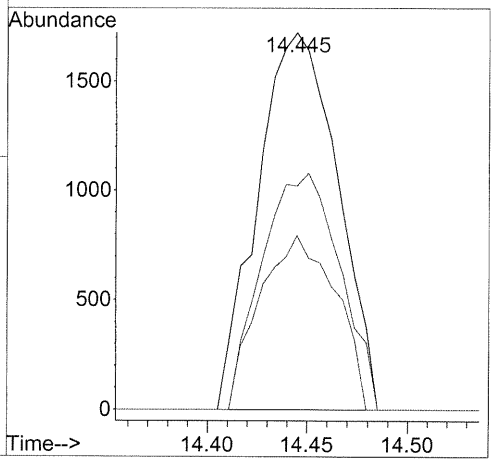


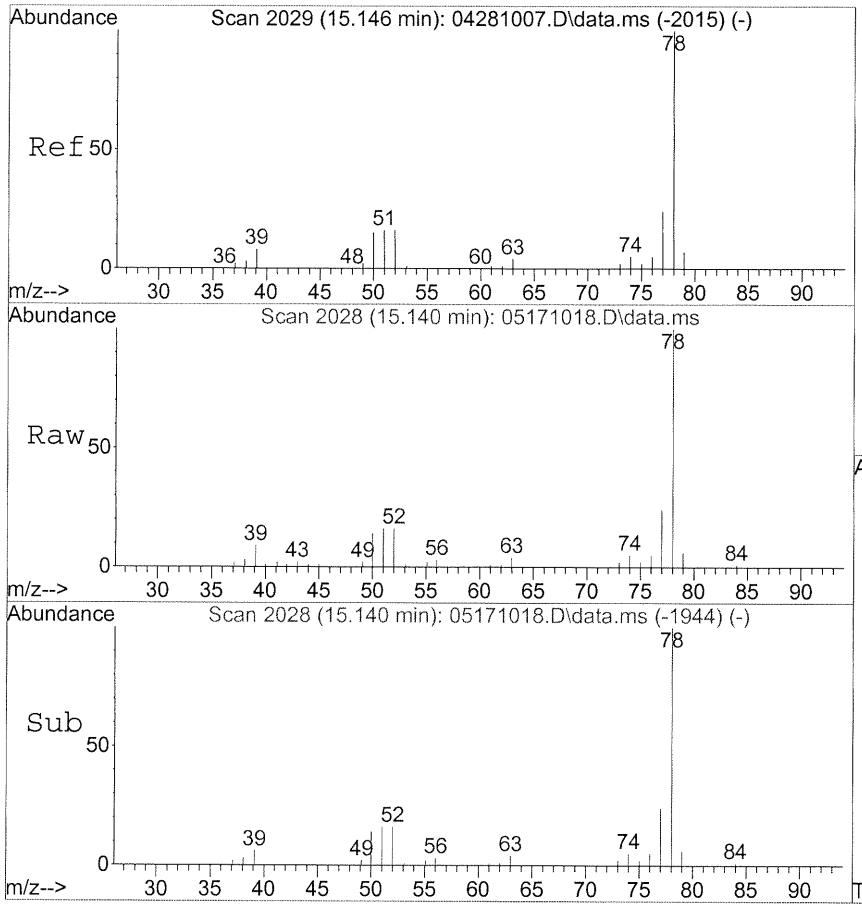


#38
1,1,1-Trichloroethane
Concen: 0.15 ng
RT: 14.44 min Scan# 1906
Delta R.T. -0.017 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 97 Resp: 4766

Ion	Ratio	Lower	Upper
97	100		
99	61.2	44.3	84.3
61	44.0	22.8	62.8

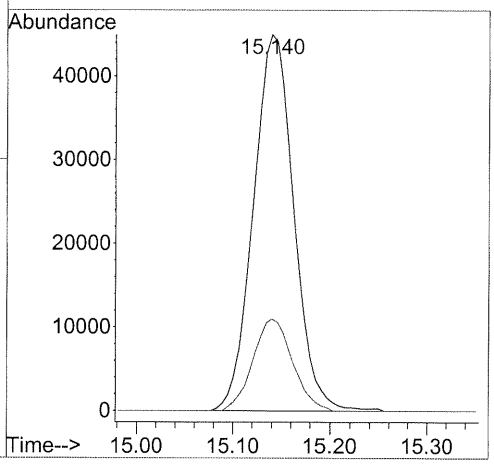


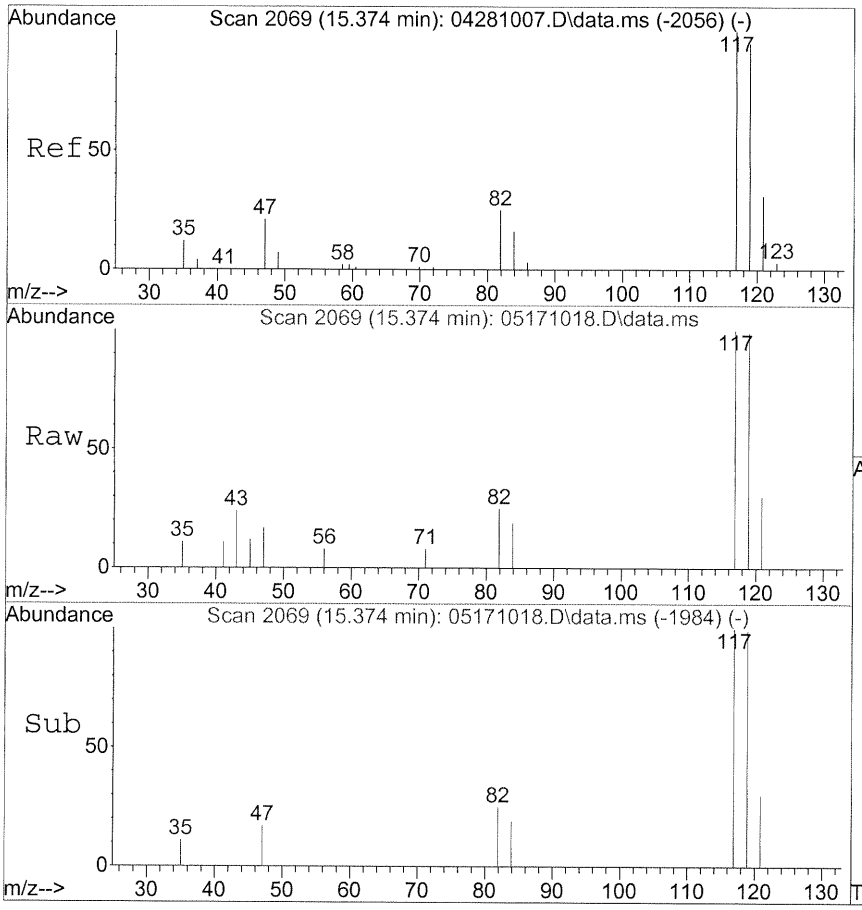


#41
Benzene
Concen: 1.50 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 78 Resp: 130793

Ion	Ratio	Lower	Upper
78	100		
77	23.8	4.1	44.1

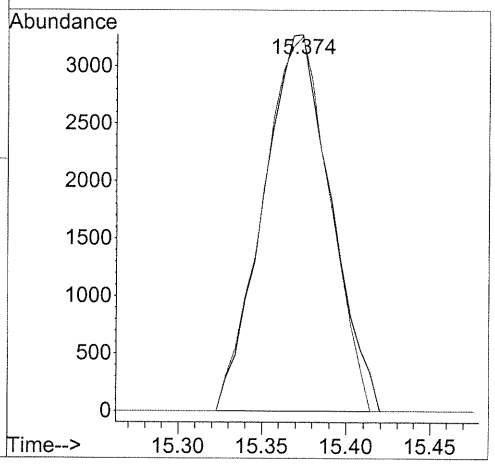


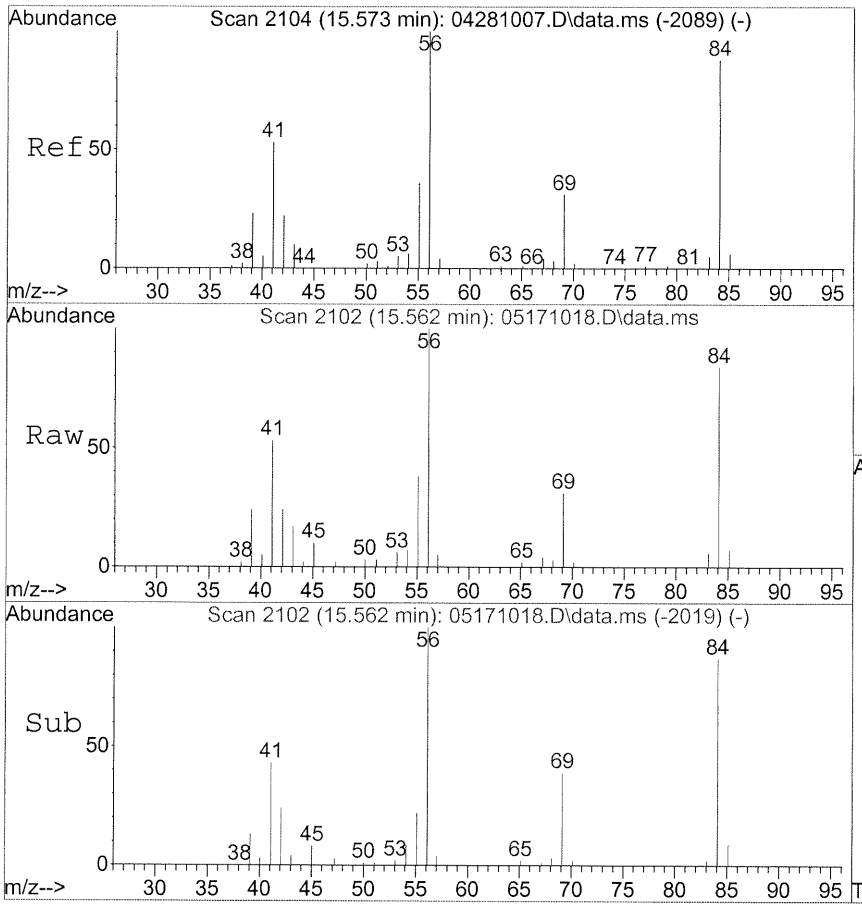


#42
Carbon Tetrachloride
Concen: 0.40 ng
RT: 15.37 min Scan# 2069
Delta R.T. -0.017 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:117 Resp: 9142

Ion	Ratio	Lower	Upper
117	100		
119	98.5	76.1	116.1

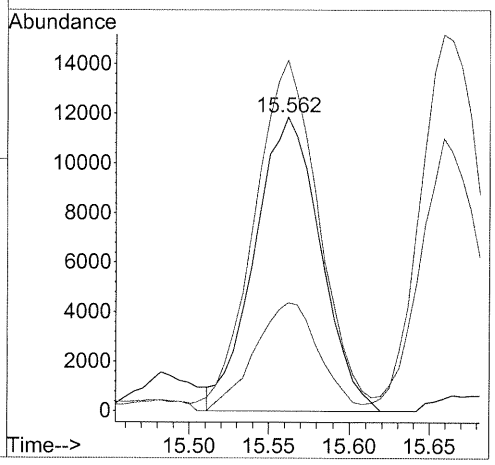


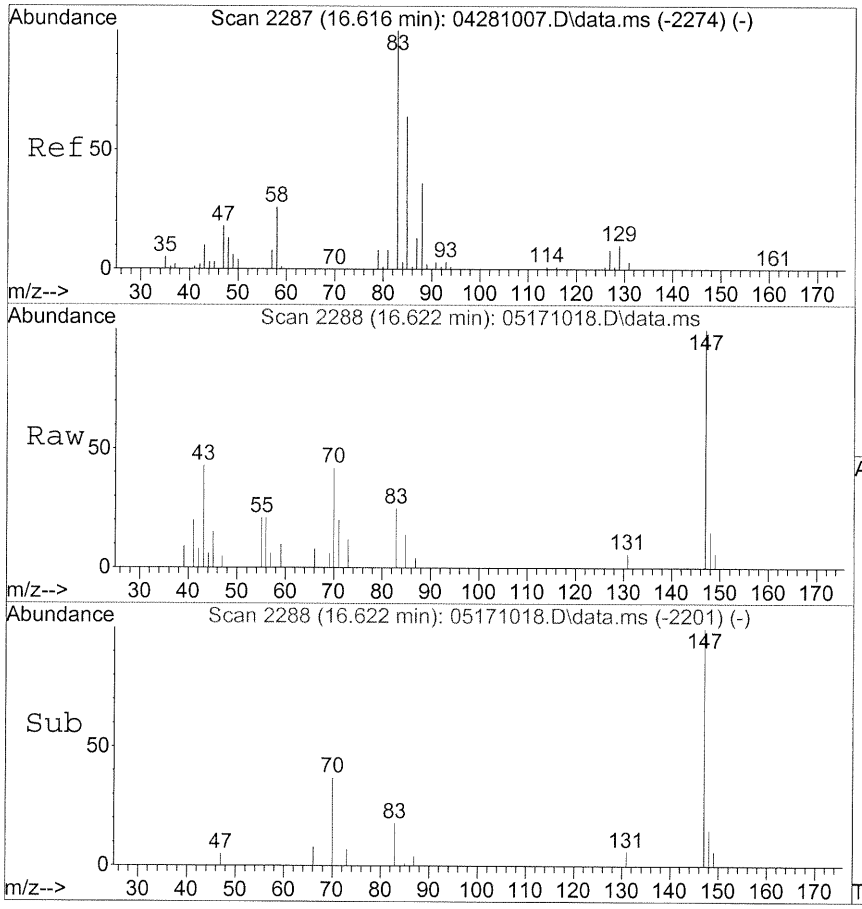


#43
Cyclohexane
Concen: 0.93 ng
RT: 15.56 min Scan# 2102
Delta R.T. -0.029 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 84 Resp: 33790

Ion	Ratio	Lower	Upper
84	100		
69	36.3	14.9	54.9
56	116.6	89.2	129.2

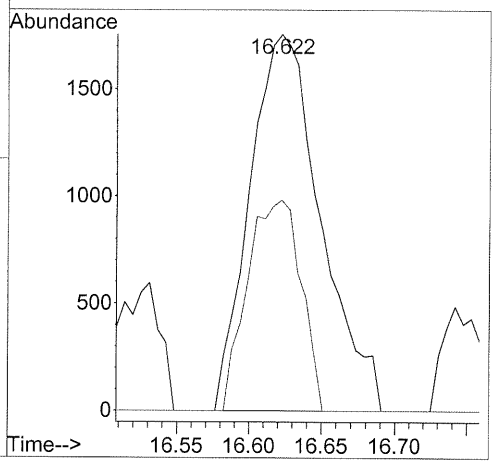


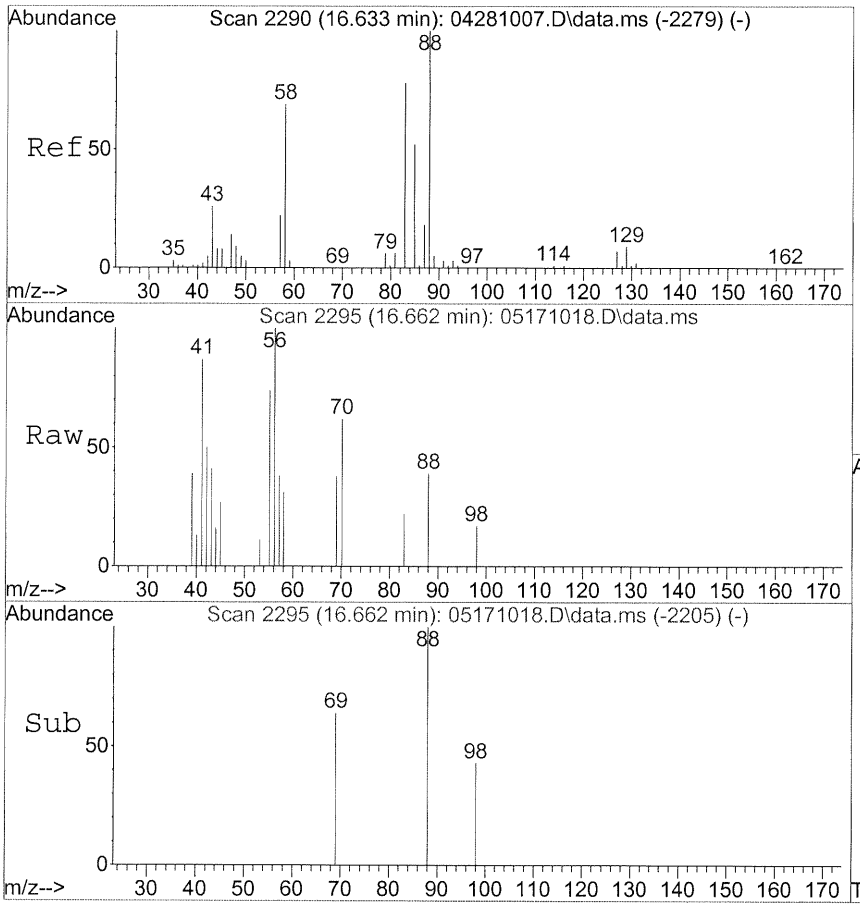


#46
Bromodichloromethane
Concen: 0.23 ng
RT: 16.62 min Scan# 2288
Delta R.T. -0.006 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 83 Resp: 5964

Ion	Ratio	Lower	Upper
83	100		
85	42.4	43.4	83.4#

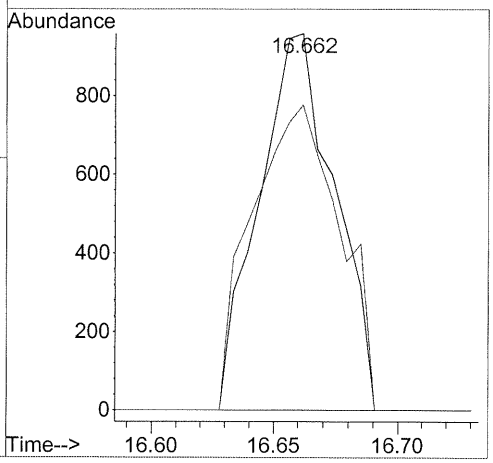


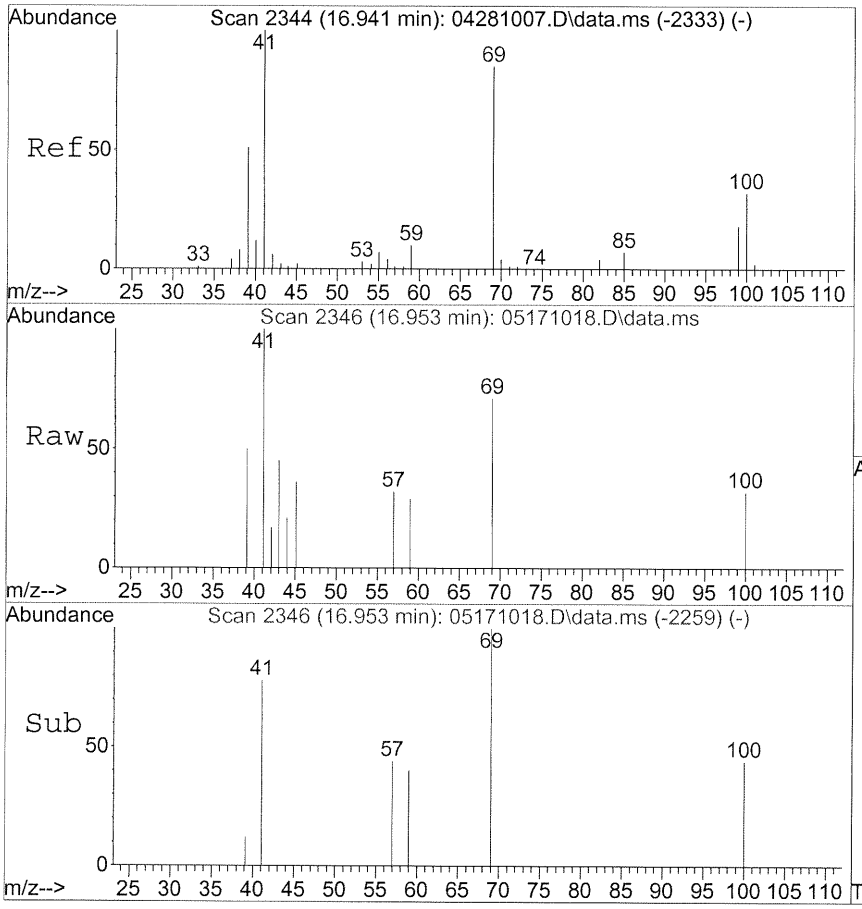


#48
1,4-Dioxane
Concen: 0.12 ng
RT: 16.66 min Scan# 2295
Delta R.T. 0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 88 Resp: 2034

Ion	Ratio	Lower	Upper
88	100		
58	93.9	45.8	85.8#

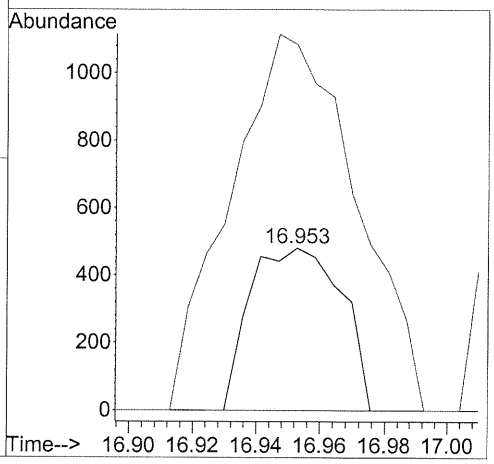


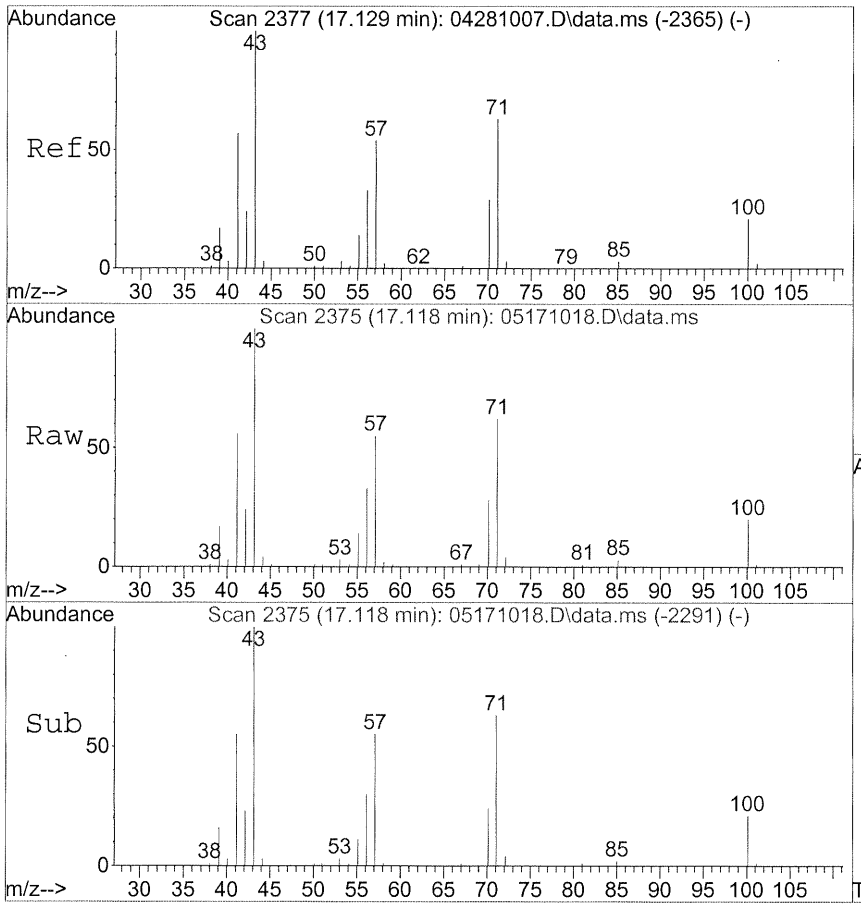


#50
Methyl Methacrylate
Concen: 0.10 ng
RT: 16.95 min Scan# 2346
Delta R.T. -0.005 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:100 Resp: 955

Ion	Ratio	Lower	Upper
100	100		
69	319.3	226.7	266.7#

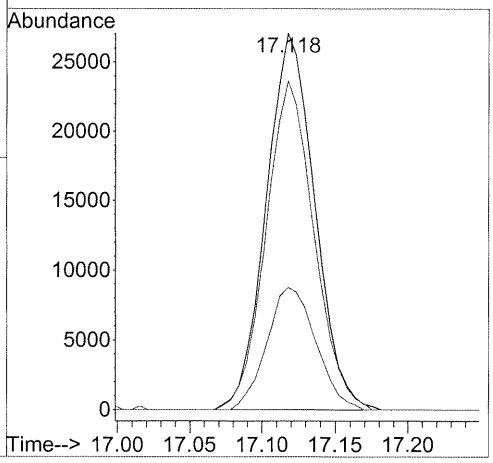


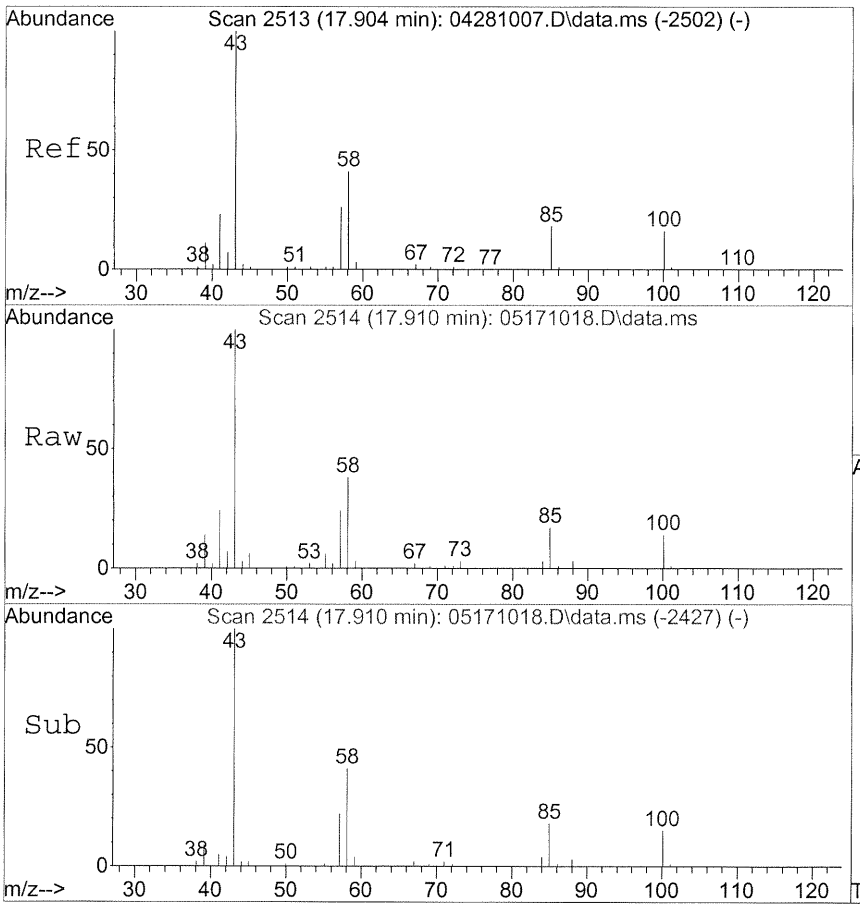


#51
n-Heptane
Concen: 2.52 ng
RT: 17.12 min Scan# 2375
Delta R.T. -0.023 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 71 Resp: 62540

Ion	Ratio	Lower	Upper
71	100		
57	86.5	63.9	103.9
100	32.7	14.1	54.1

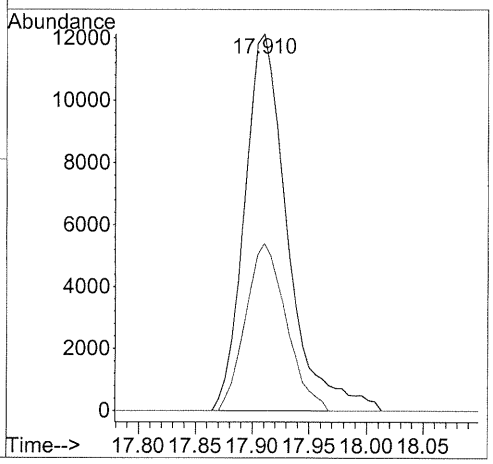


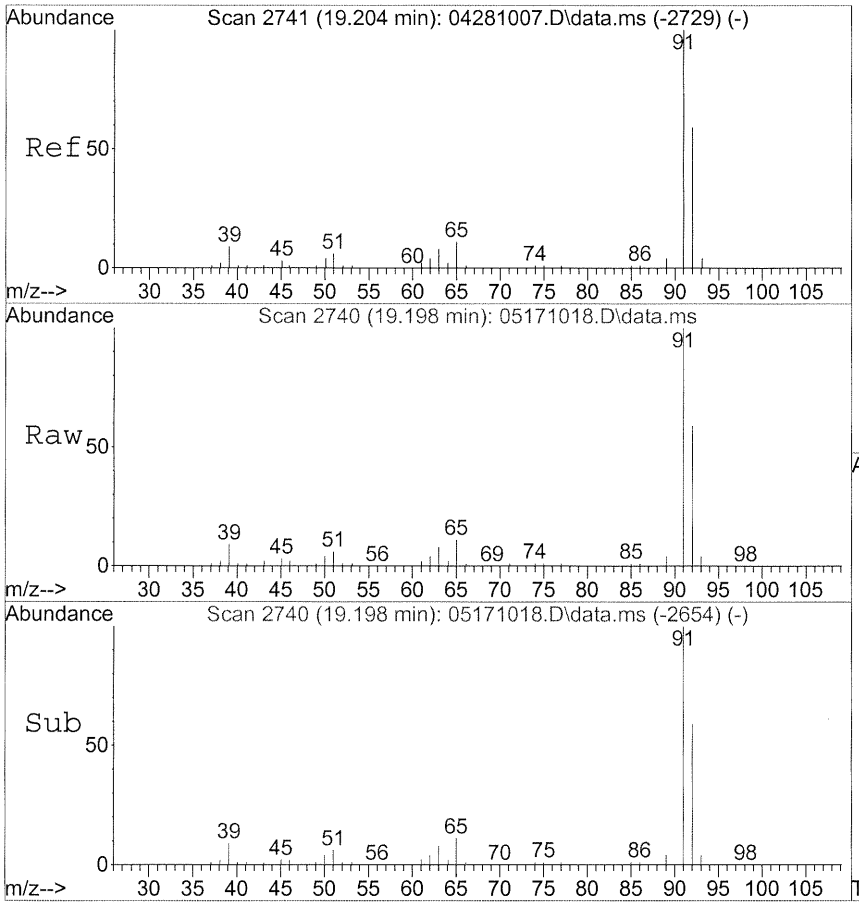


#53
4-Methyl-2-pentanone
Concen: 1.70 ng
RT: 17.91 min Scan# 2514
Delta R.T. -0.006 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 58 Resp: 31934

Ion	Ratio	Lower	Upper
58	100		
85	42.1	26.7	66.7

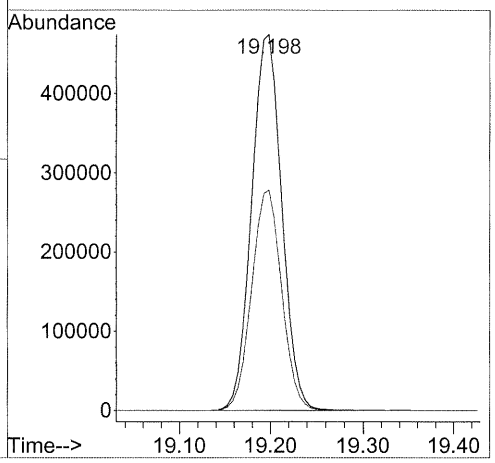


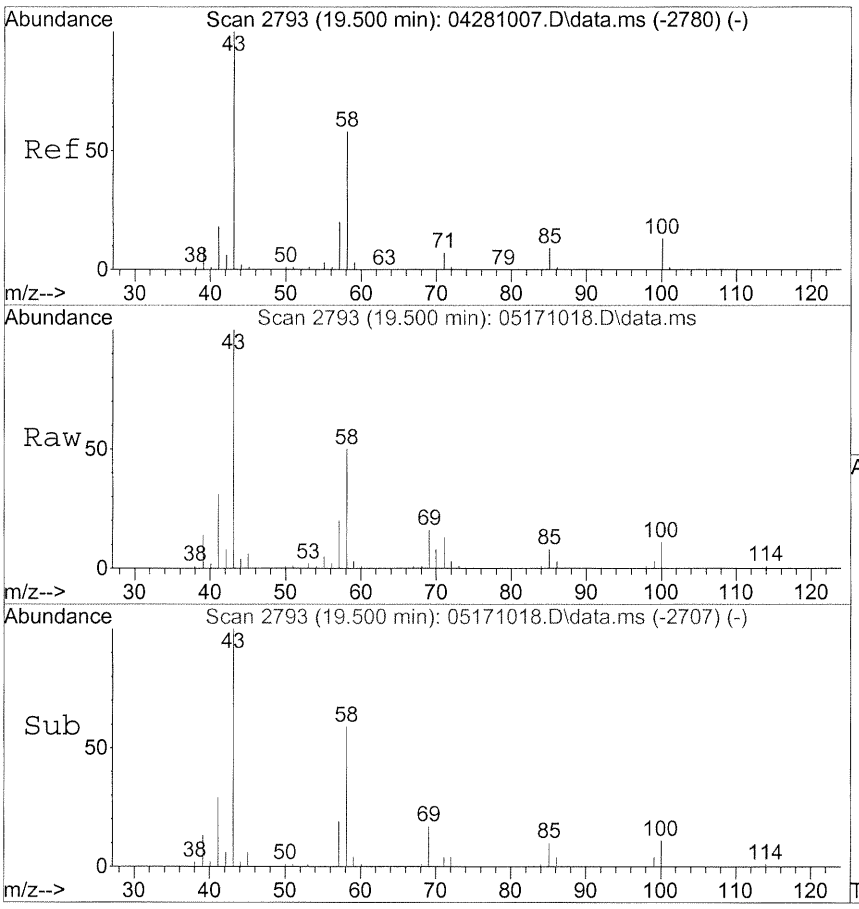


#58
Toluene
Concen: 11.86 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 91 Resp: 1093138

Ion	Ratio	Lower	Upper
91	100		
92	58.4	39.2	79.2

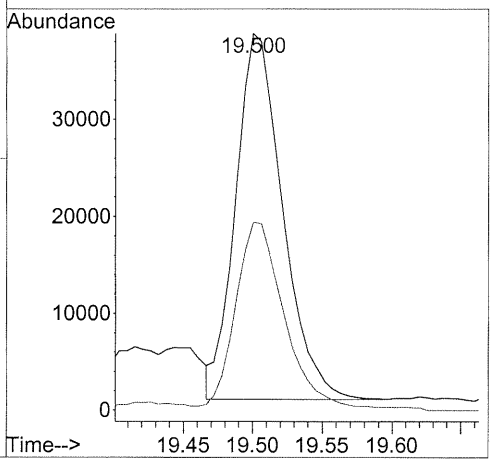


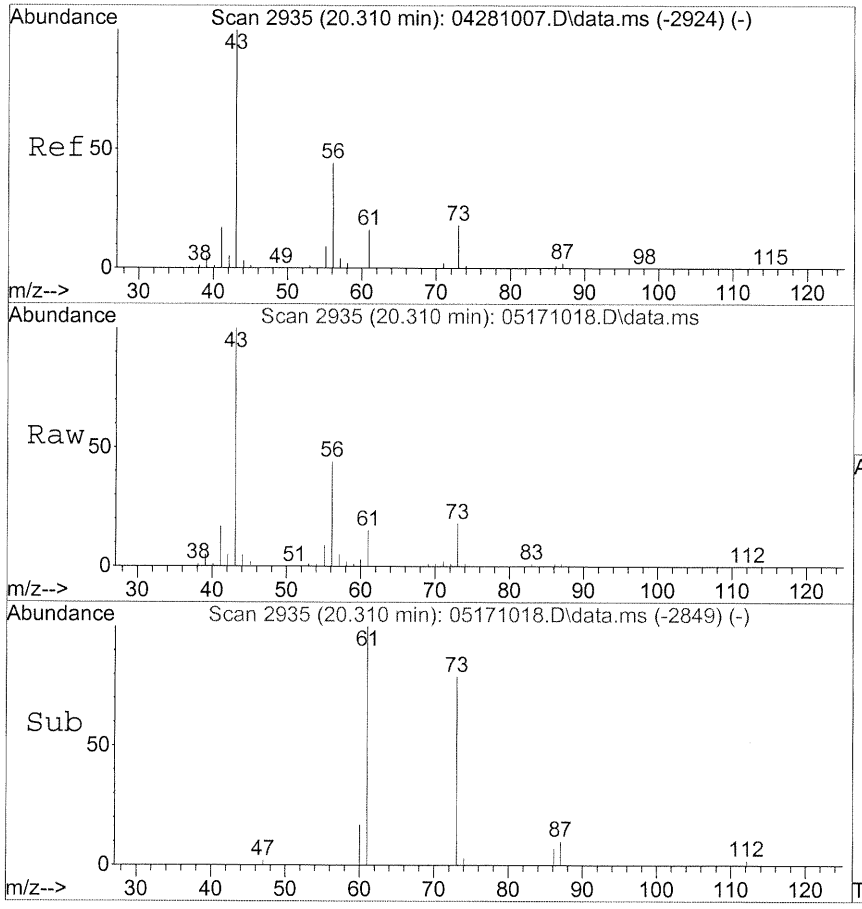


#59
2-Hexanone
Concen: 2.03 ng
RT: 19.50 min Scan# 2793
Delta R.T. -0.012 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 43 Resp: 89140

Ion	Ratio	Lower	Upper
43	100		
58	54.2	38.3	78.3

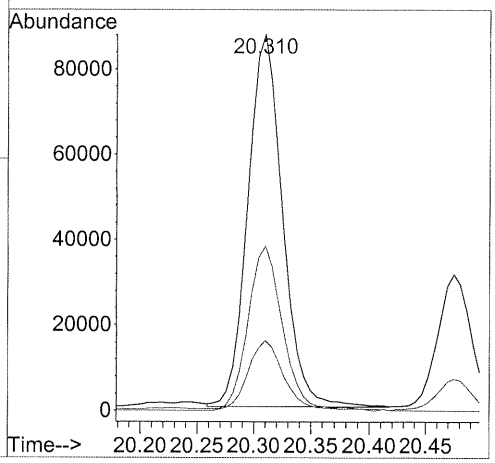


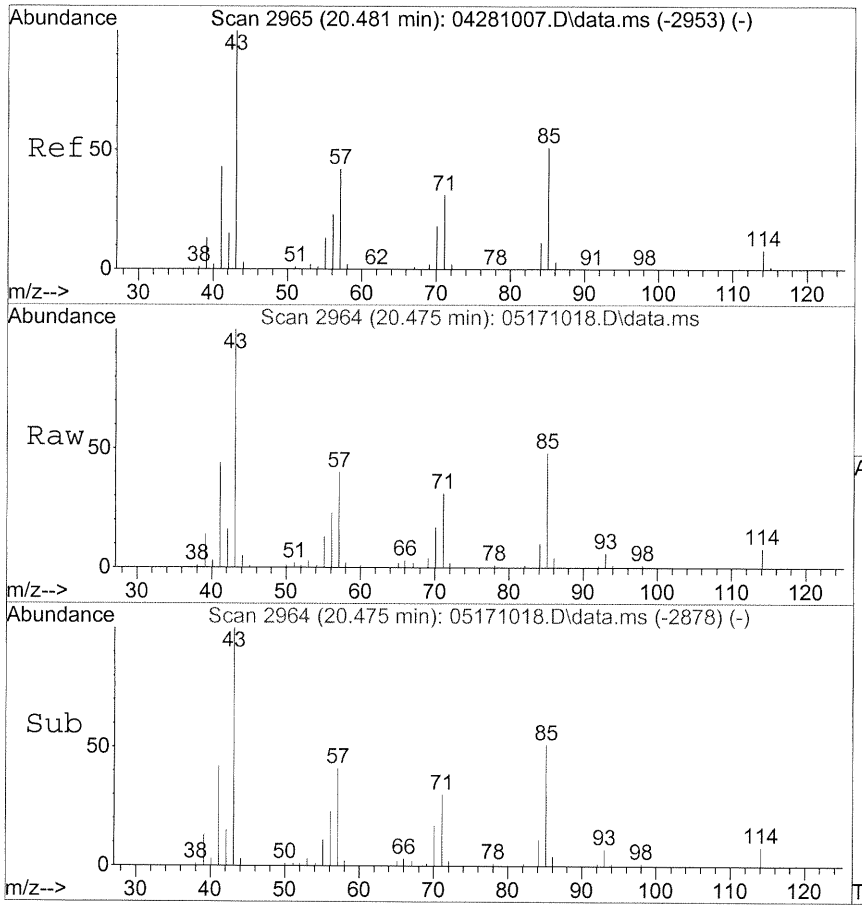


#62
n-Butyl Acetate
Concen: 3.74 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 43 Resp: 185074

Ion	Ratio	Lower	Upper
43	100		
56	44.1	25.0	65.0
73	19.2	0.0	39.1

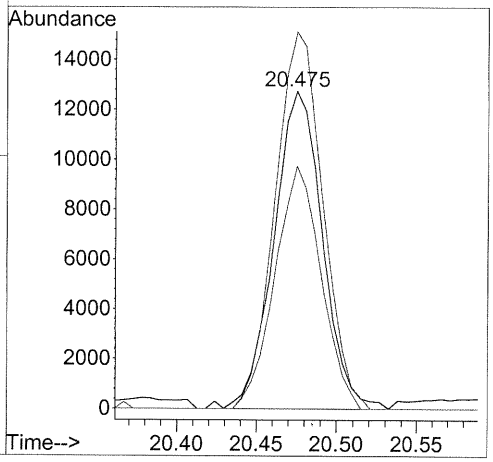


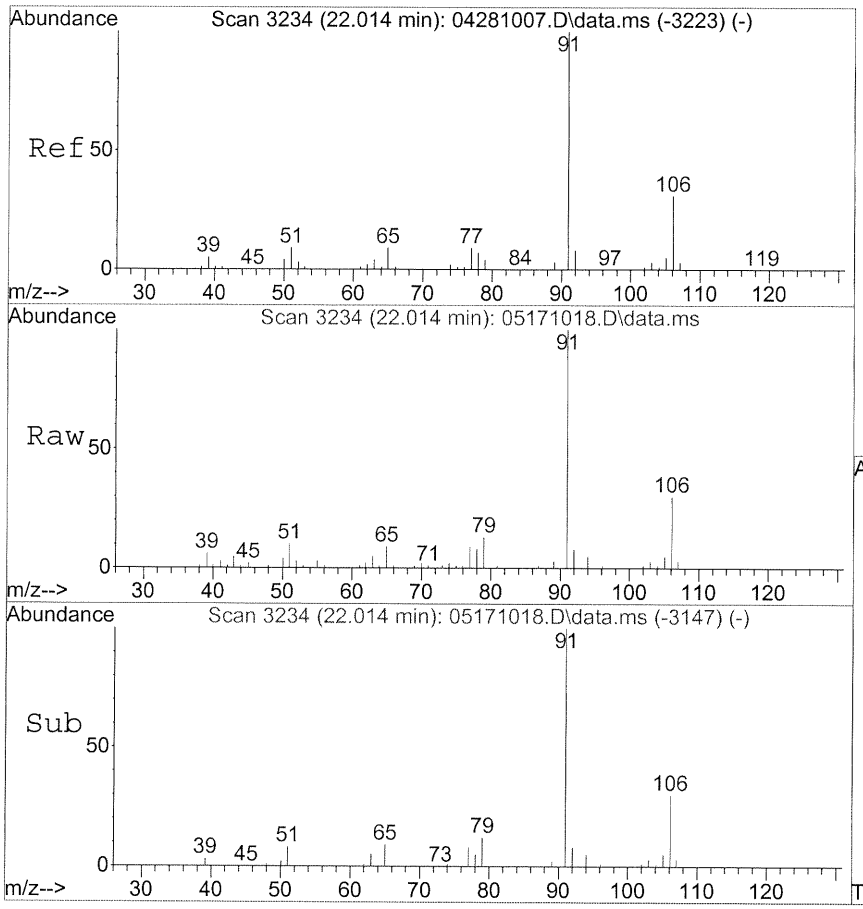


#63
n-Octane
Concen: 1.26 ng
RT: 20.48 min Scan# 2964
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 57 Resp: 26869

Ion	Ratio	Lower	Upper
57	100		
85	116.6	101.4	152.2
71	72.7	60.7	91.1

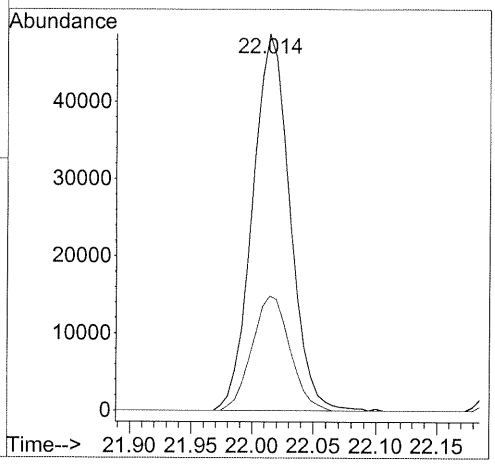


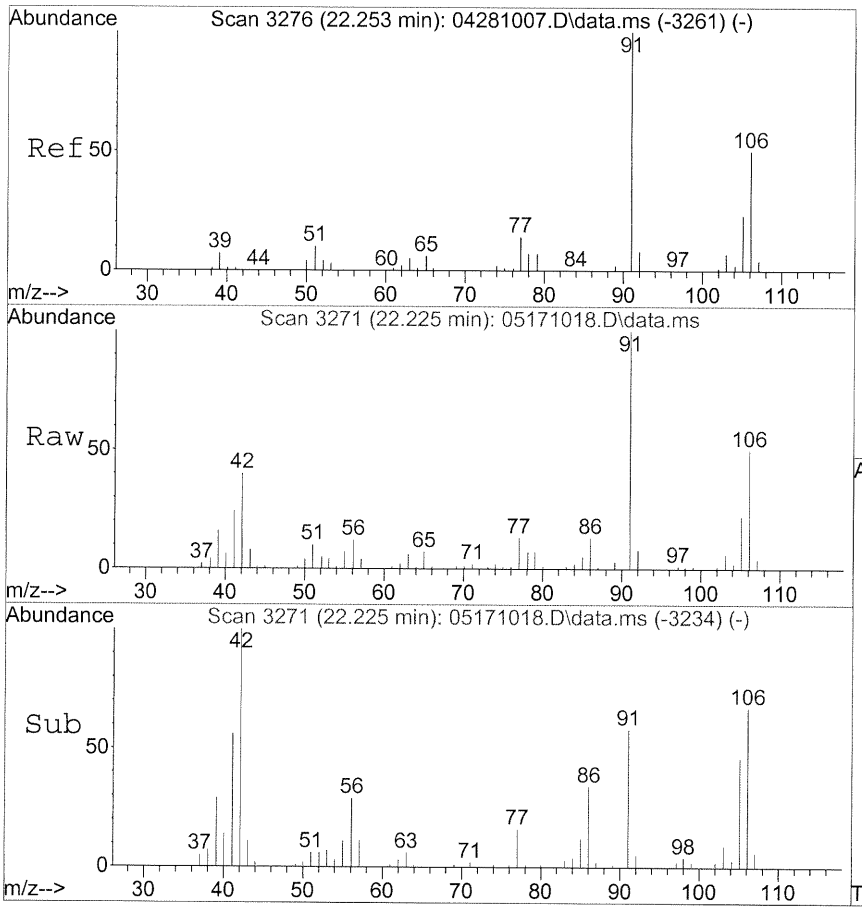


#66
Ethylbenzene
Concen: 1.01 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 91 Resp: 103785

Ion	Ratio	Lower	Upper
91	100		
106	30.7	12.2	52.2

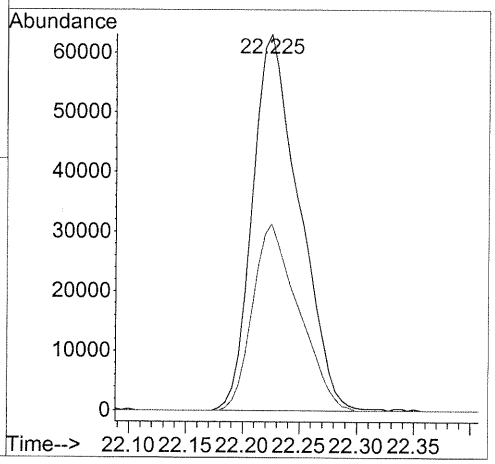


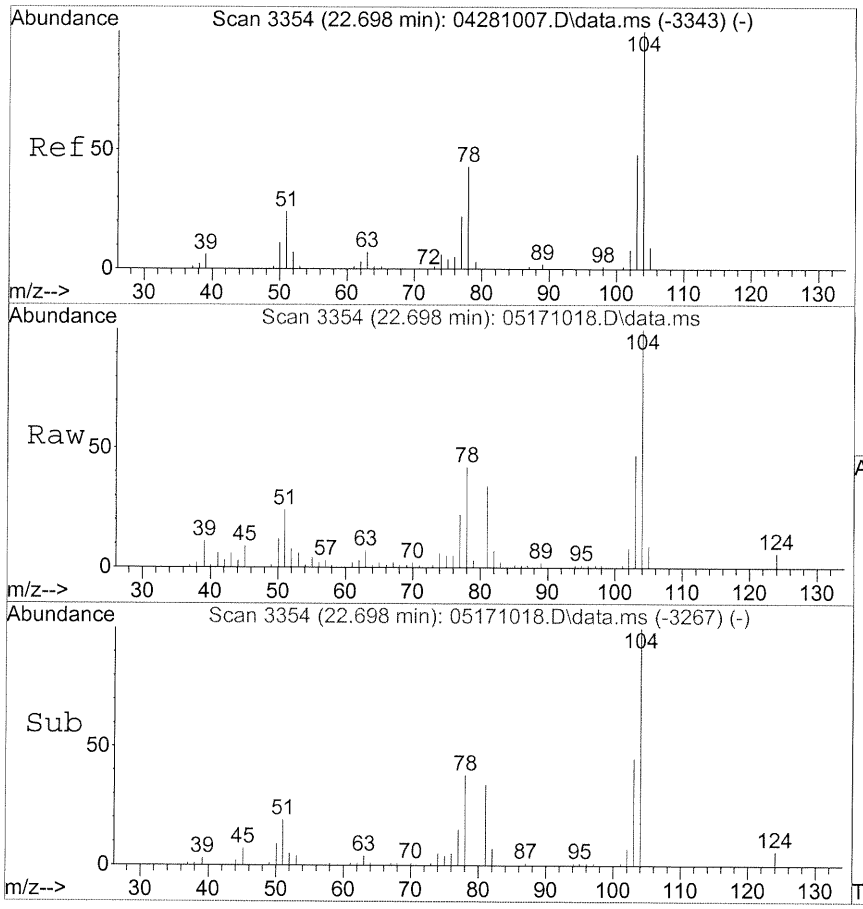


#67
m- & p-Xylenes
Concen: 2.16 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 91 Resp: 180356

Ion	Ratio	Lower	Upper
91	100		
106	48.8	30.6	70.6

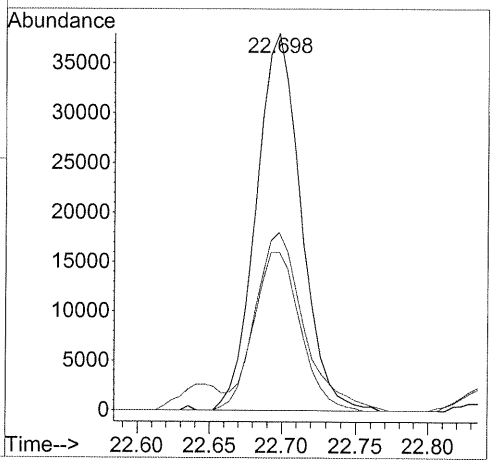


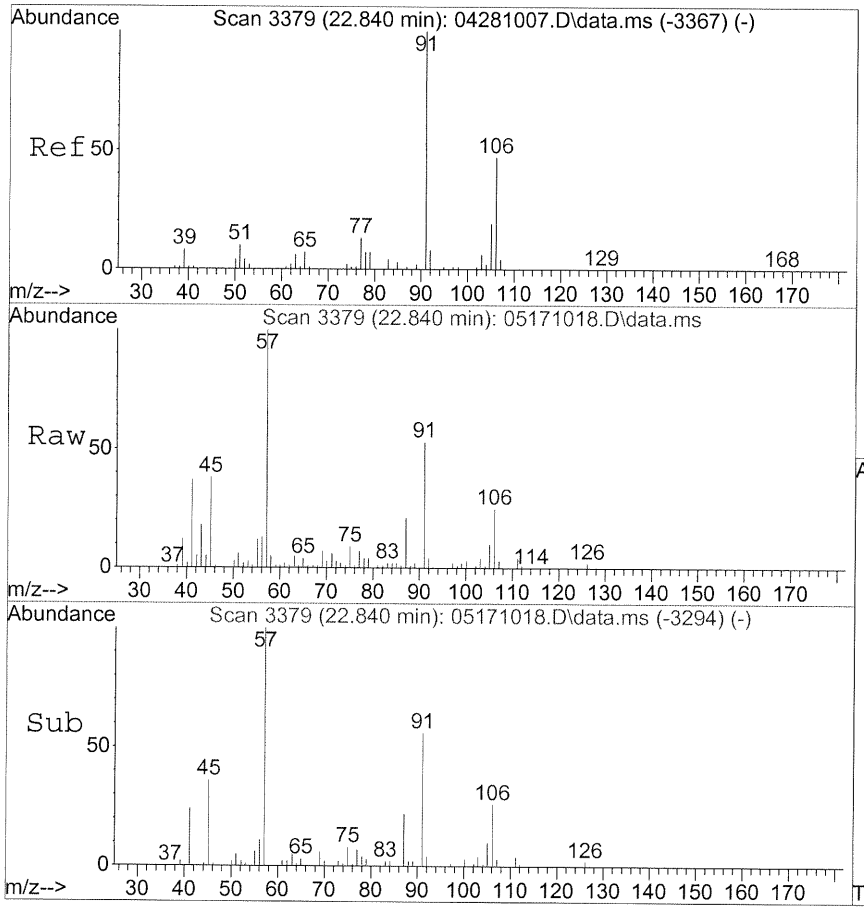


#69
Styrene
Concen: 1.39 ng
RT: 22.70 min Scan# 3354
Delta R.T. -0.006 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:104 Resp: 81826

Ion	Ratio	Lower	Upper
104	100		
78	43.5	22.5	62.5
103	51.2	27.5	67.5

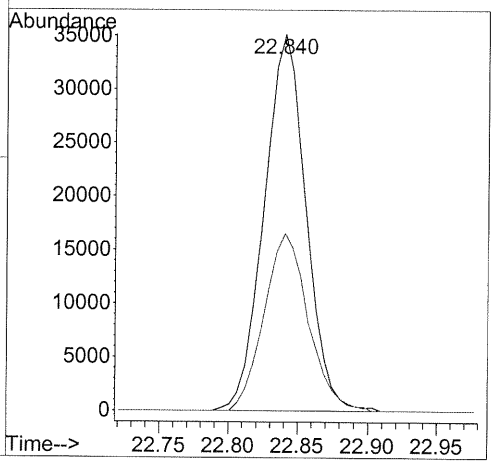


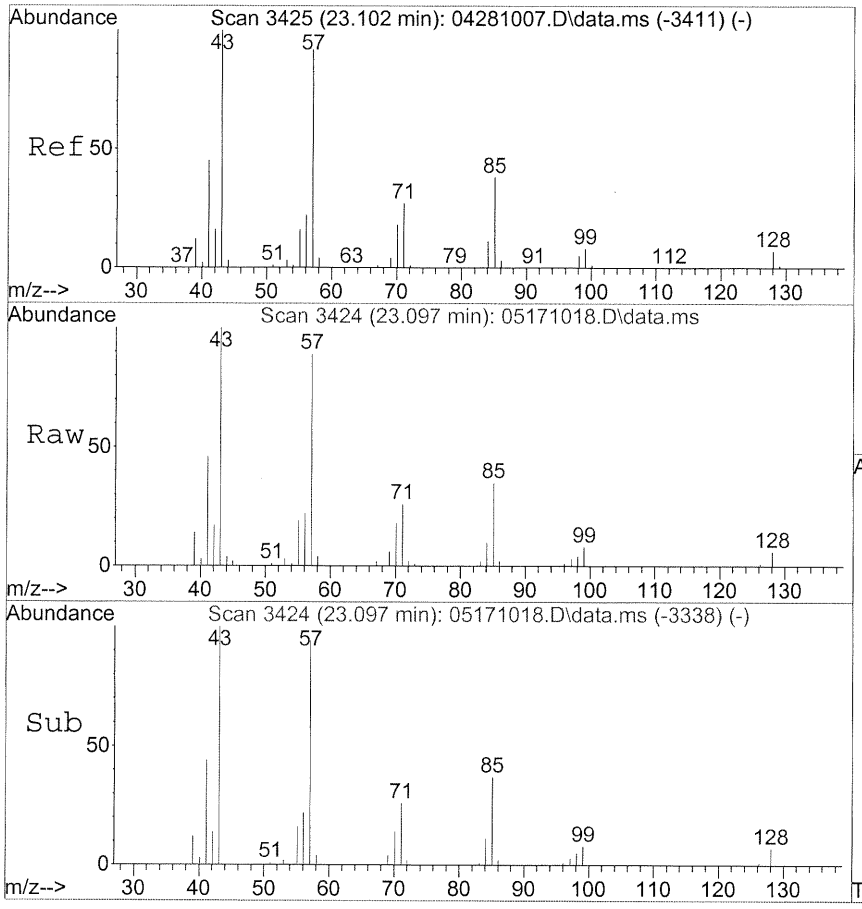


#70
o-Xylene
Concen: 0.83 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 91 Resp: 73561

Ion	Ratio	Lower	Upper
91	100		
106	49.6	27.8	67.8

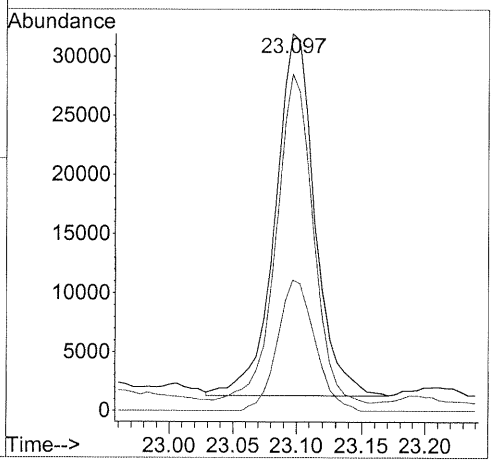


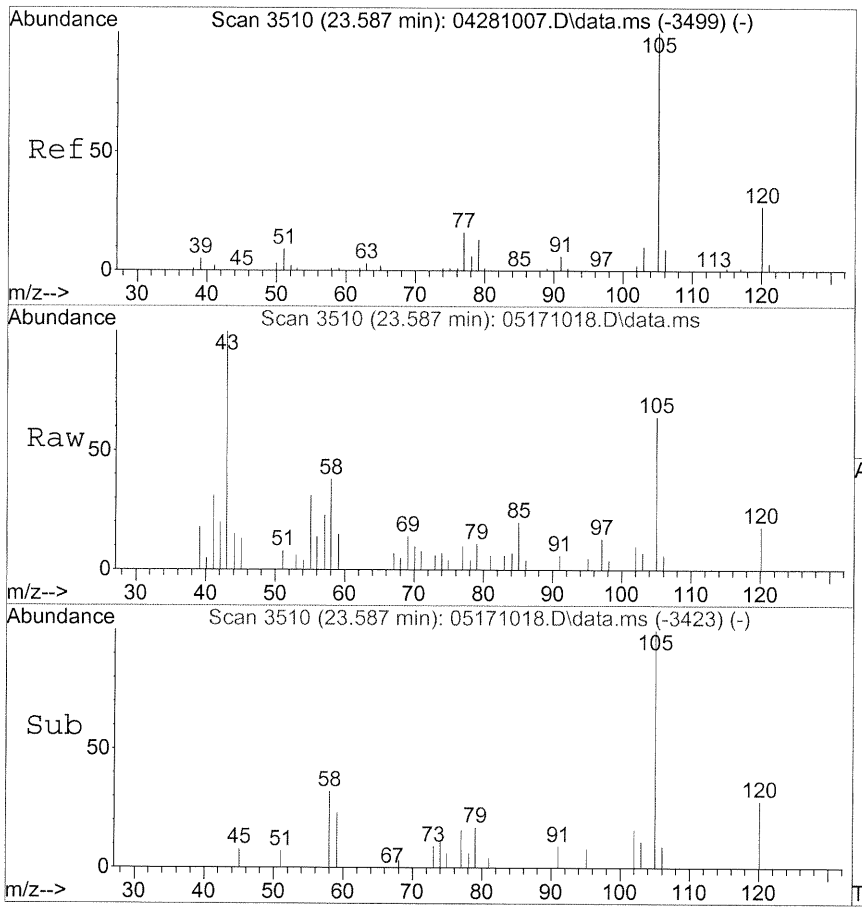


#71
n-Nonane
Concen: 1.37 ng
RT: 23.10 min Scan# 3424
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 43 Resp: 66429

Ion	Ratio	Lower	Upper
43	100		
57	84.2	74.6	114.6
85	33.8	20.5	60.5

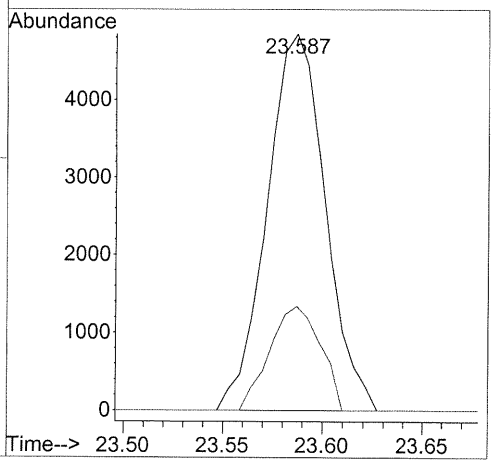


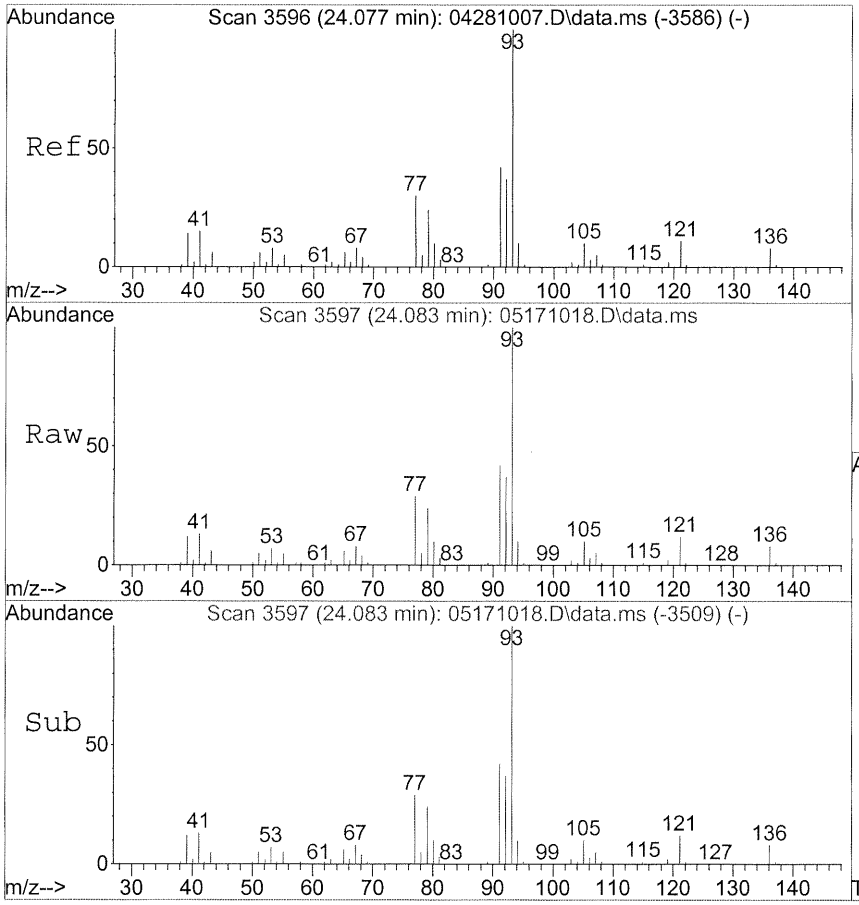


#74
Cumene
Concen: 0.09 ng
RT: 23.59 min Scan# 3510
Delta R.T. -0.006 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:105 Resp: 9786

Ion	Ratio	Lower	Upper
105	100		
120	24.2	6.8	46.8

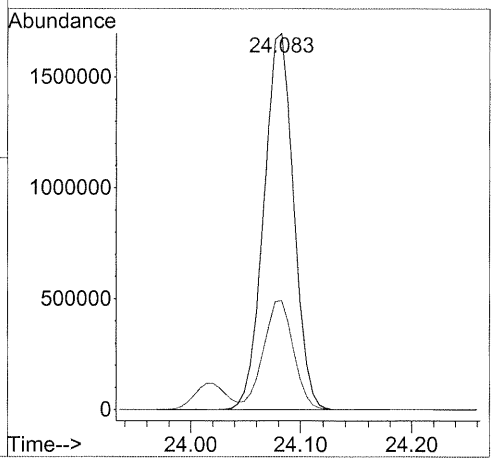


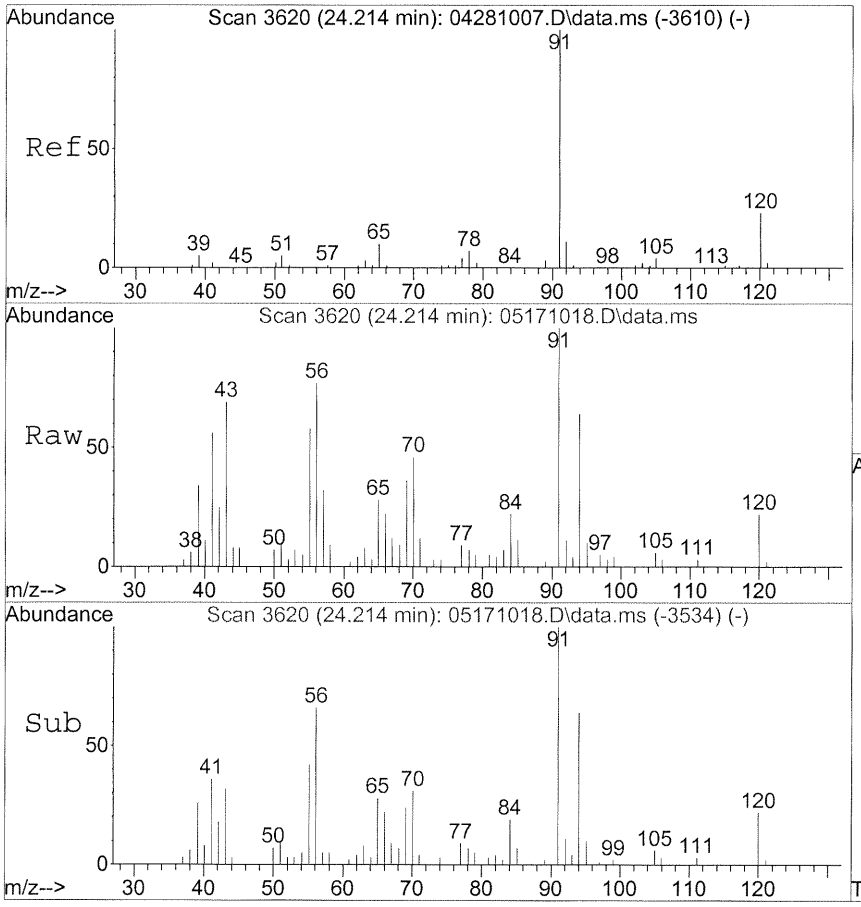


#75
alpha-Pinene
Concen: 63.36 ng
RT: 24.08 min Scan# 3597
Delta R.T. -0.000 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 93 Resp: 3202288

Ion	Ratio	Lower	Upper
93	100		
77	29.5	8.7	48.7

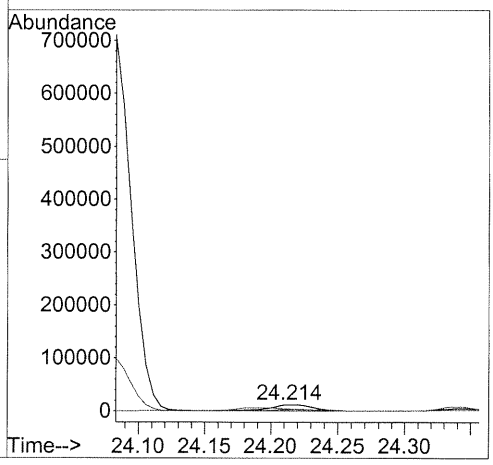


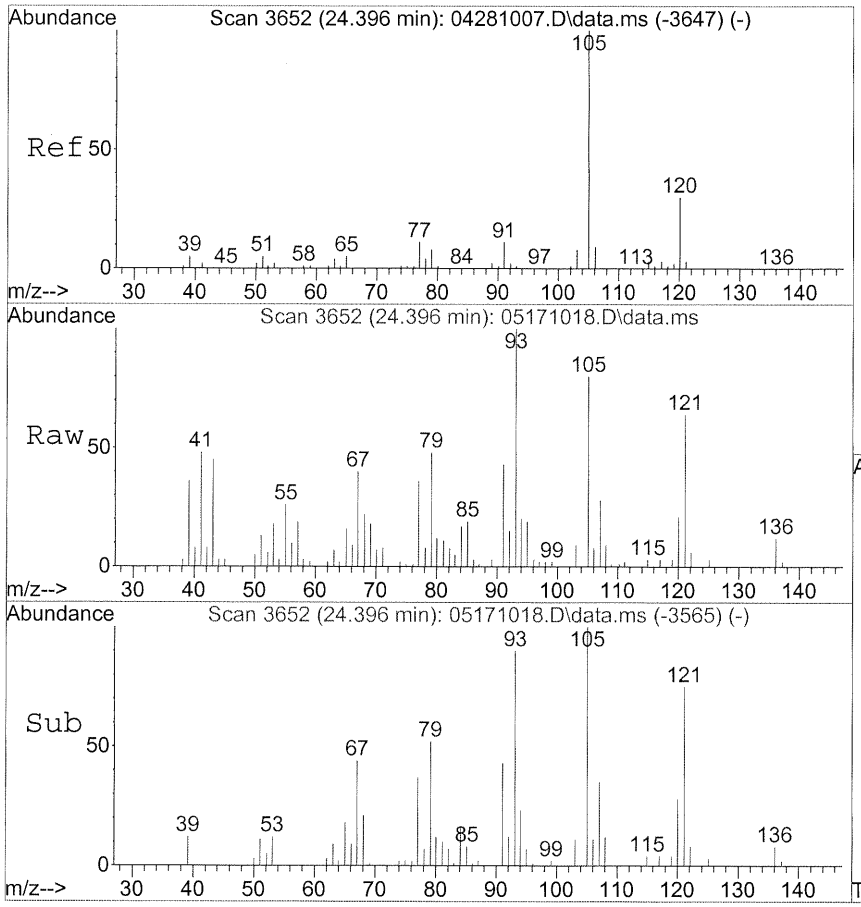


#76
n-Propylbenzene
Concen: 0.20 ng
RT: 24.21 min Scan# 3620
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 91 Resp: 25906

Ion	Ratio	Lower	Upper
91	100		
120	18.8	3.8	43.8
65	0.0	0.0	30.1

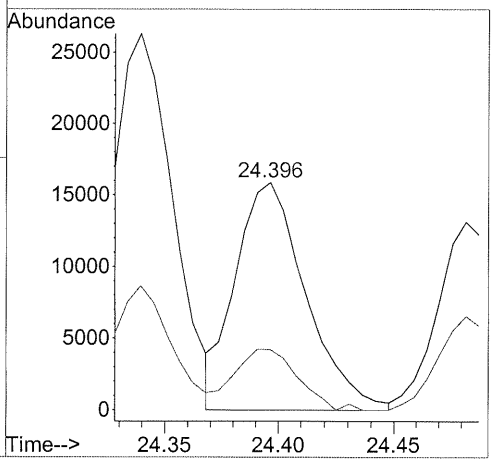


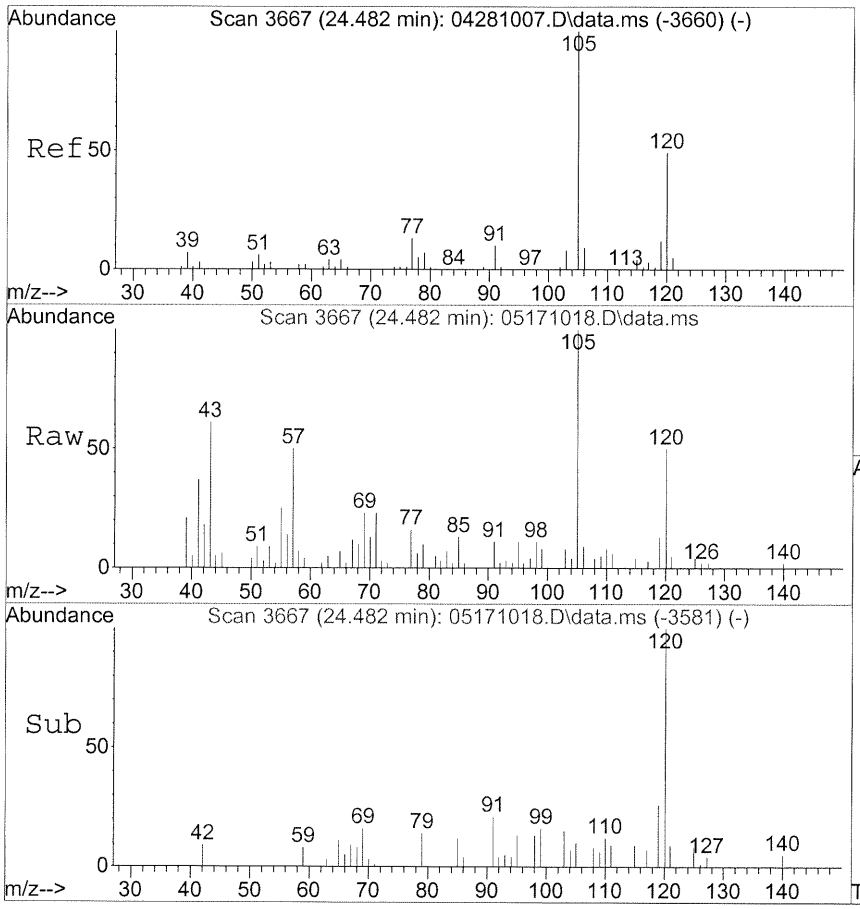


#78
4-Ethyltoluene
Concen: 0.34 ng
RT: 24.40 min Scan# 3652
Delta R.T. -0.006 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:105 Resp: 34077

Ion	Ratio	Lower	Upper
105	100		
120	24.2	10.2	50.2

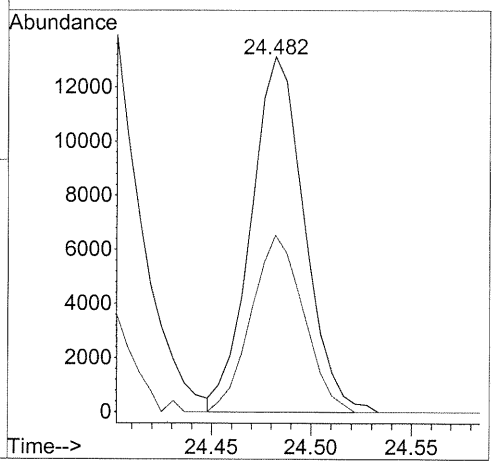


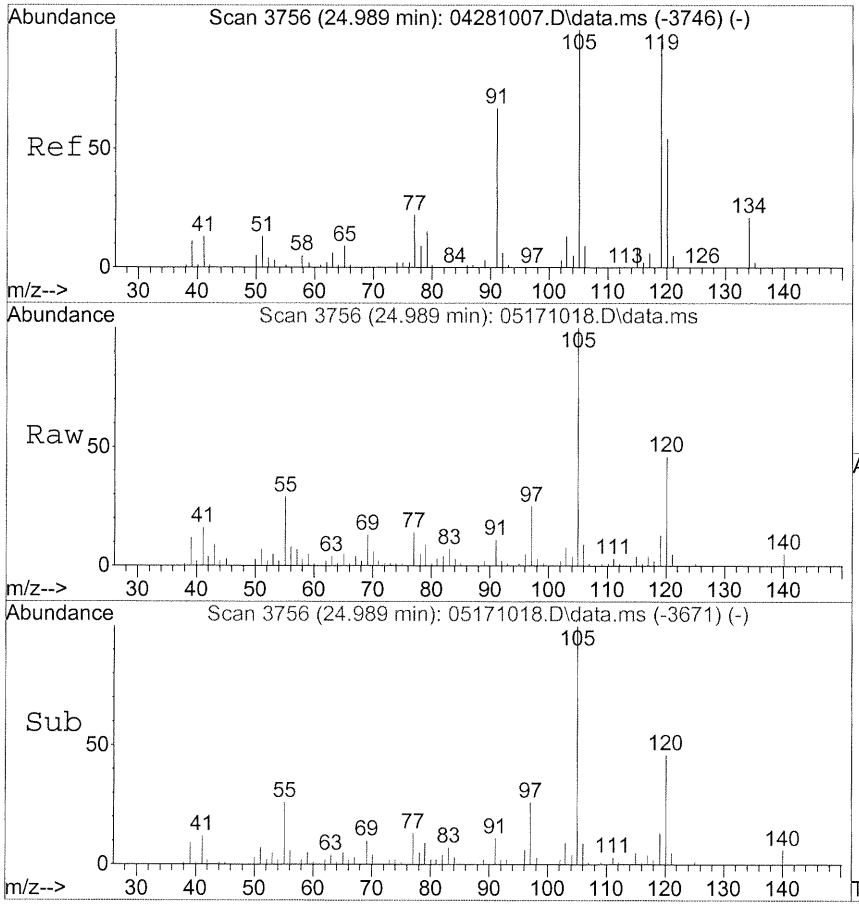


#79
1,3,5-Trimethylbenzene
Concen: 0.29 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:105 Resp: 24523

Ion	Ratio	Lower	Upper
105	100		
120	48.6	30.4	70.4

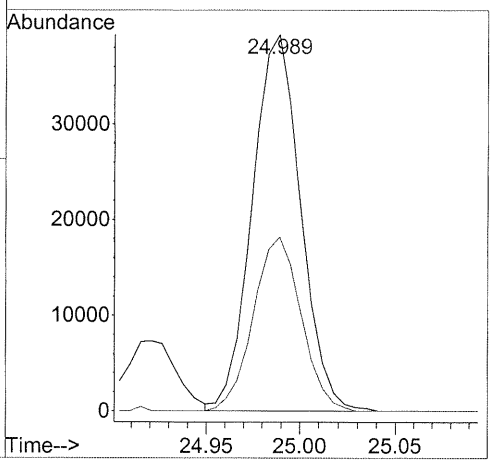


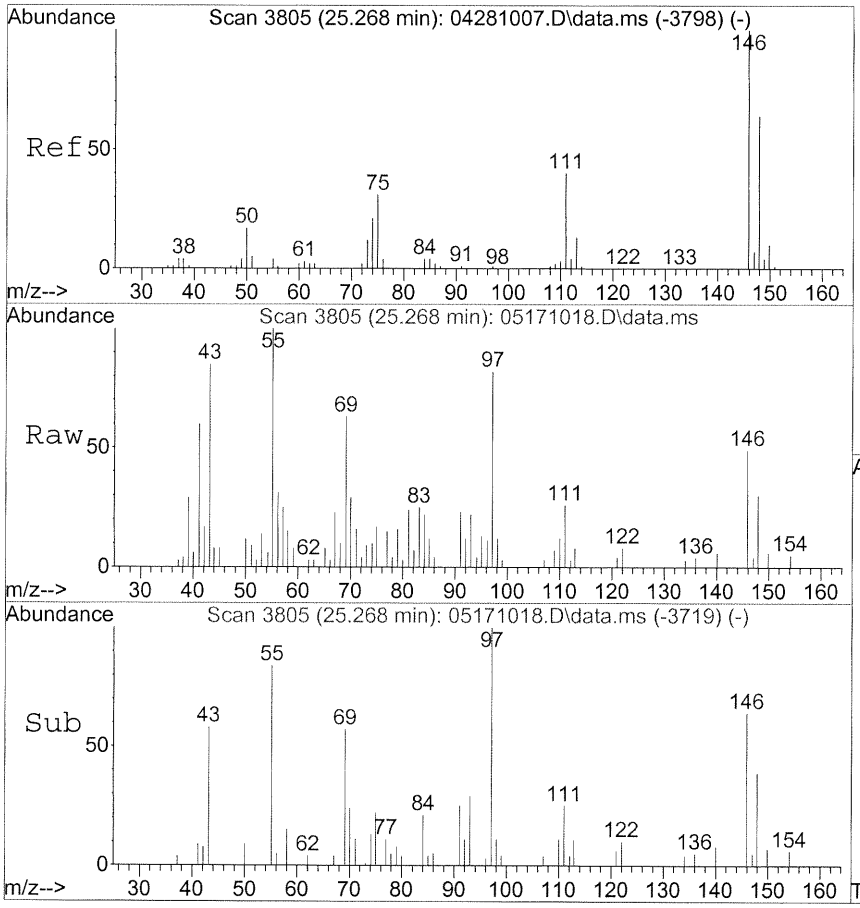


#82
1,2,4-Trimethylbenzene
Concen: 0.80 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:105 Resp: 70527

Ion	Ratio	Lower	Upper
105	100		
120	45.5	35.1	75.1

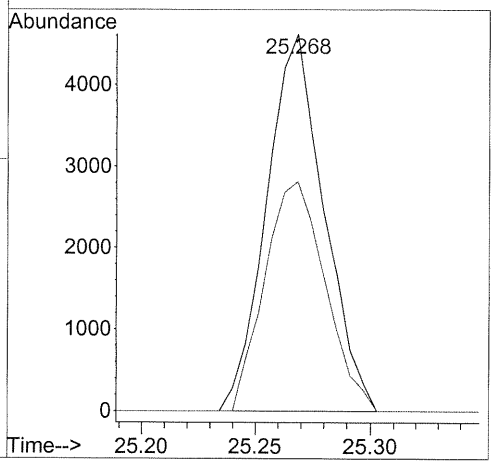


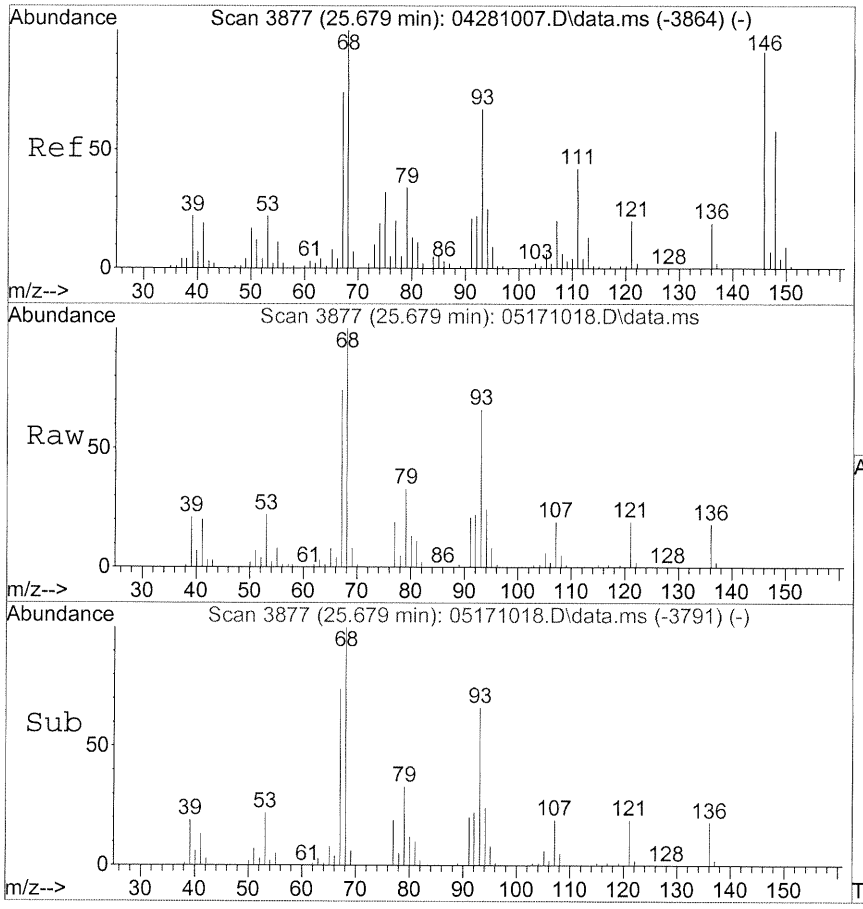


#86
1,4-Dichlorobenzene
Concen: 0.18 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:146 Resp: 8048

Ion	Ratio	Lower	Upper
146	100		
148	64.1	44.0	84.0

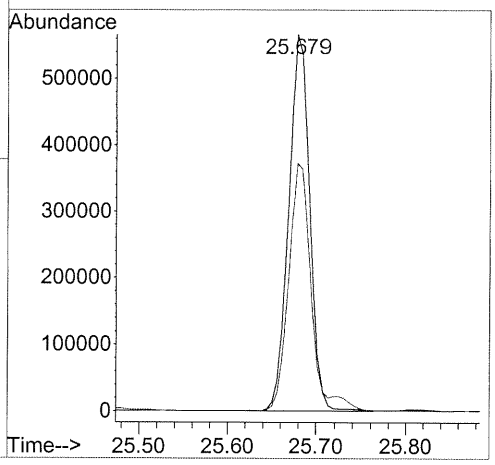


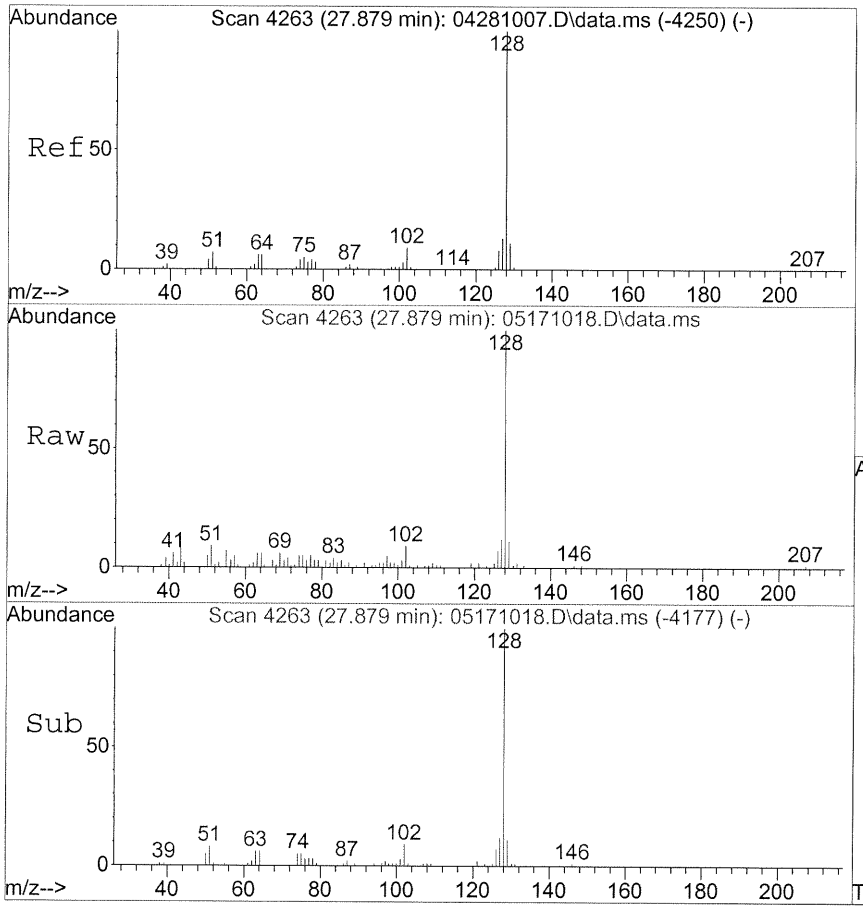


#91
d-Limonene
Concen: 26.90 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion: 68 Resp: 933414

Ion	Ratio	Lower	Upper
68	100		
93	70.6	51.5	91.5

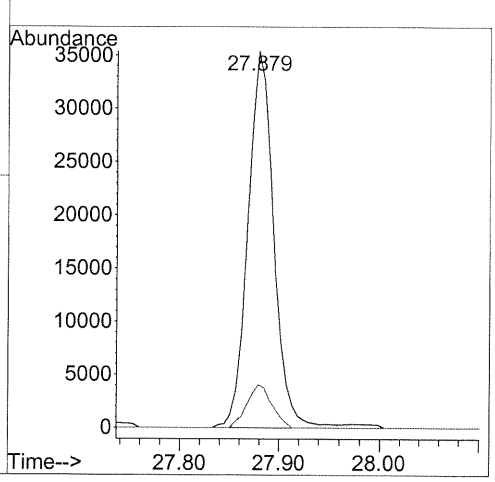




#95
Naphthalene
Concen: 0.66 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.011 min
Lab File: 05171018.D
Acq: 17 May 2010 22:36

Tgt Ion:128 Resp: 64602

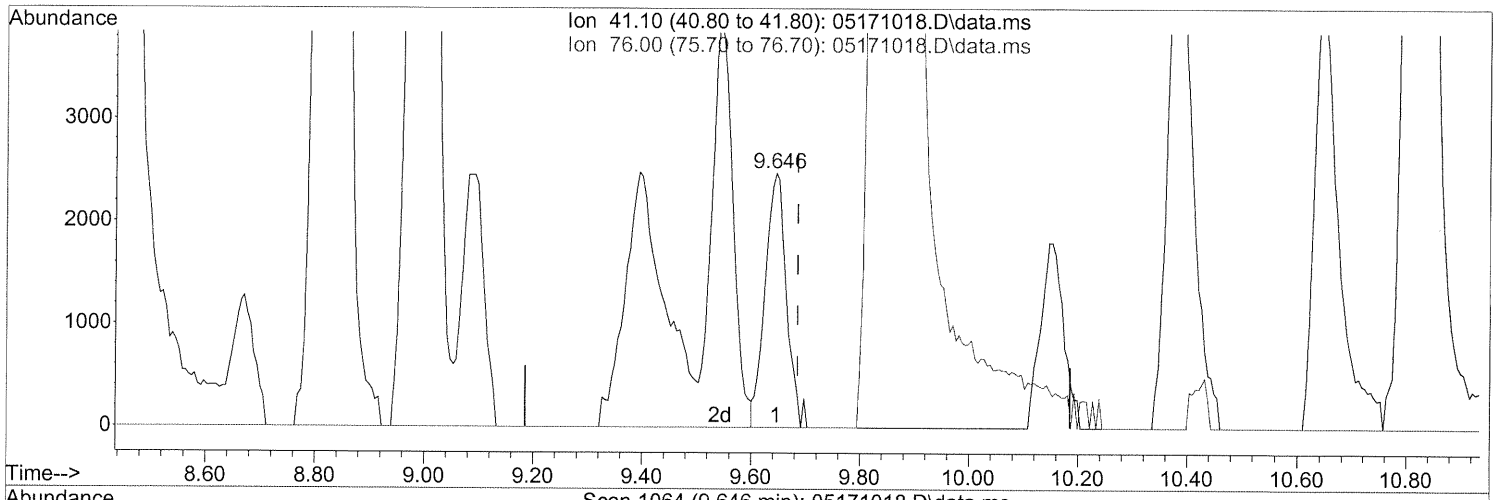
Ion	Ratio	Lower	Upper
128	100		
129	10.8	0.0	31.1

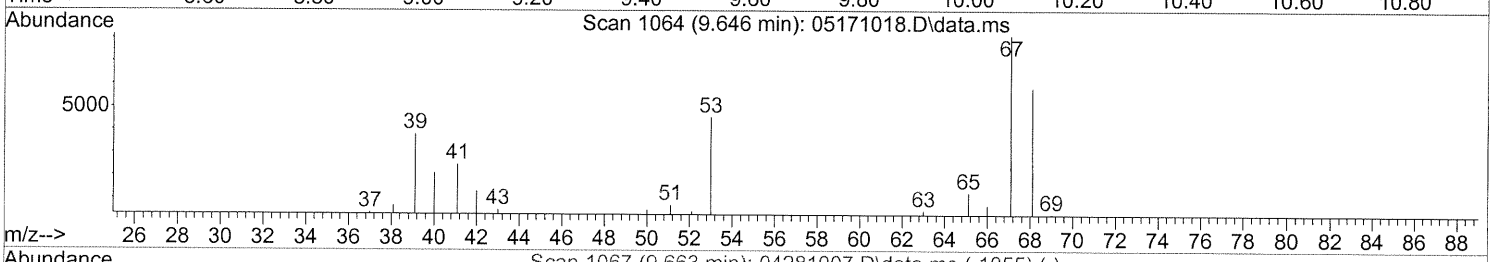


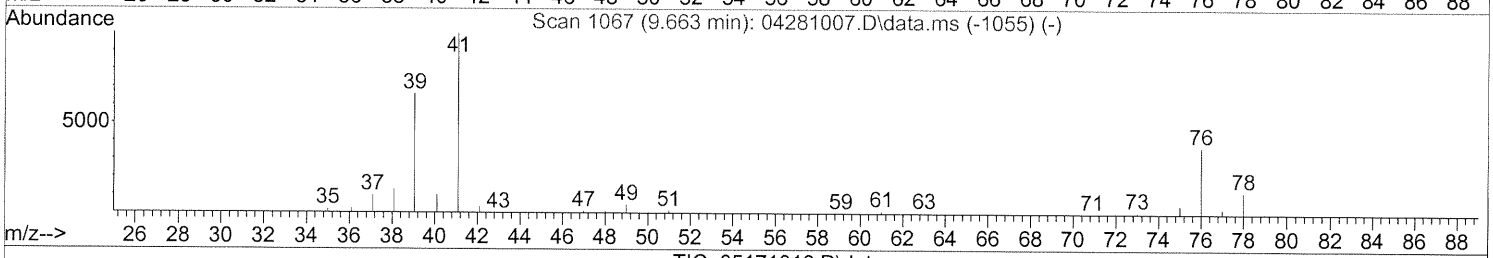
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 18 08:05:07 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171018.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.646min (-0.040) 0.24ng

response 6752

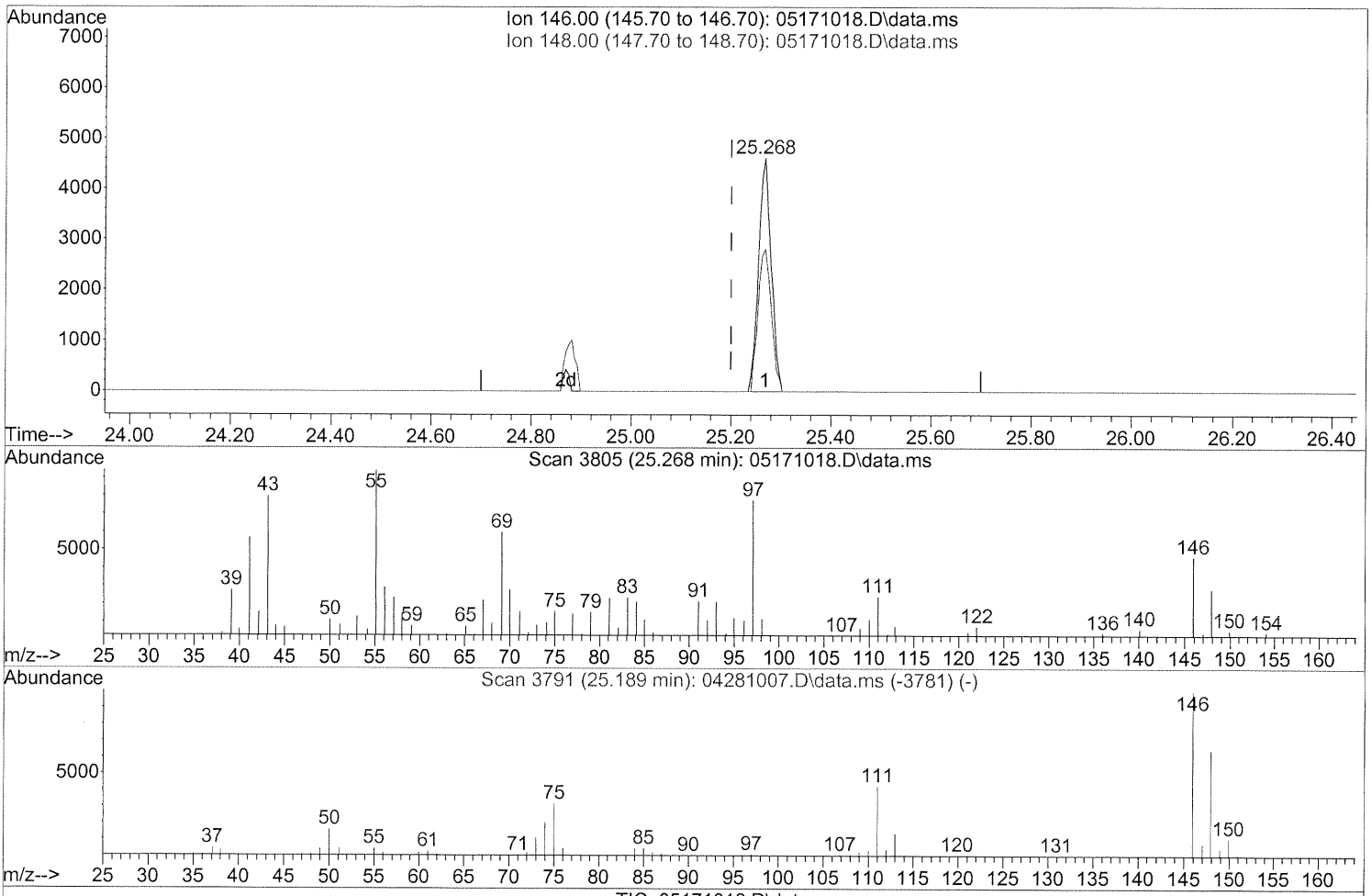
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 18 08:05:07 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.268min (+0.068) 0.19ng

response 8048

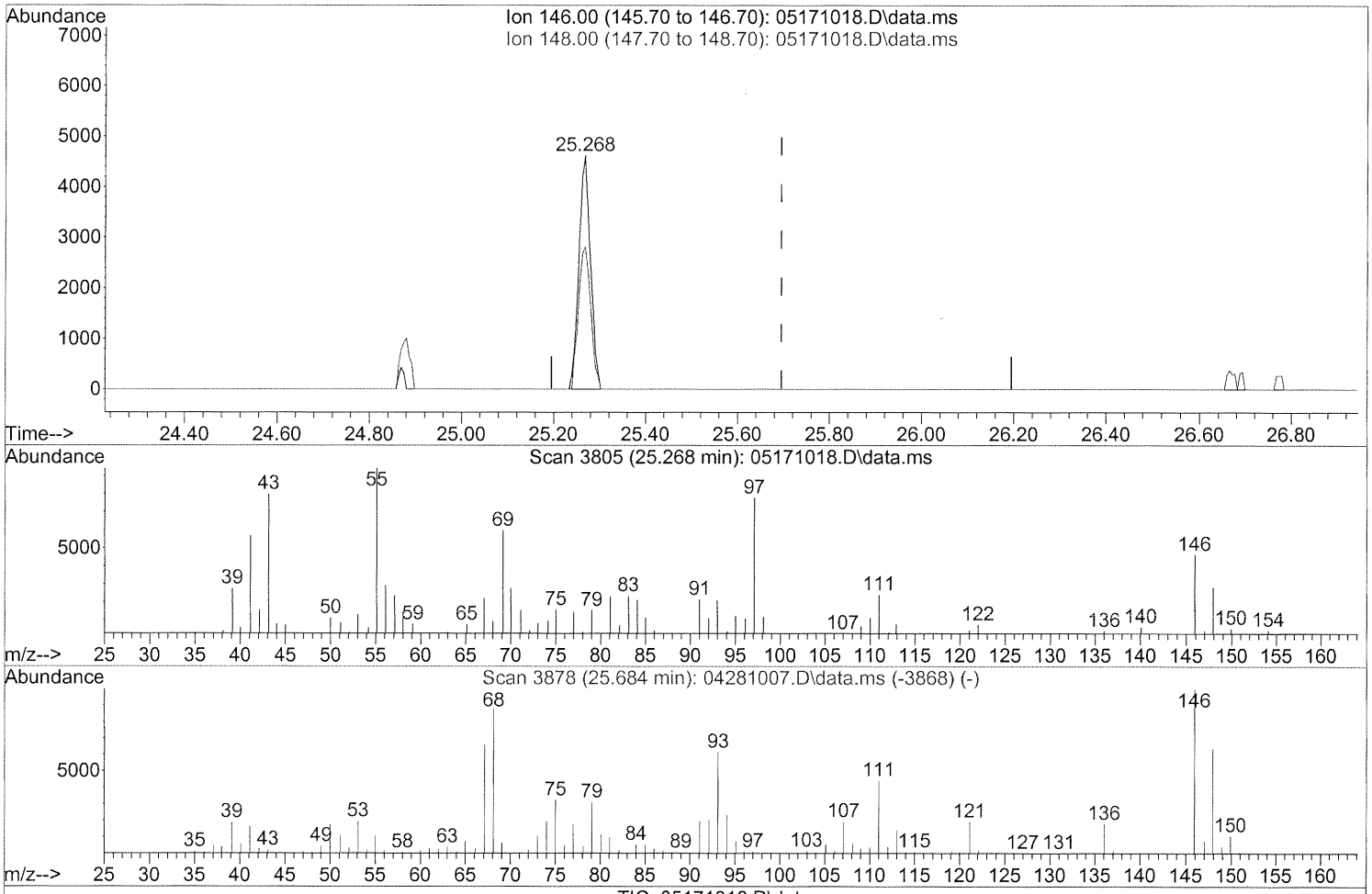
Ion	Exp%	Act%
146.00	100	100
148.00	64.30	64.13
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 18 08:05:07 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(90) 1,2-Dichlorobenzene (T)

25.268min (-0.427) 0.19ng

response 8048

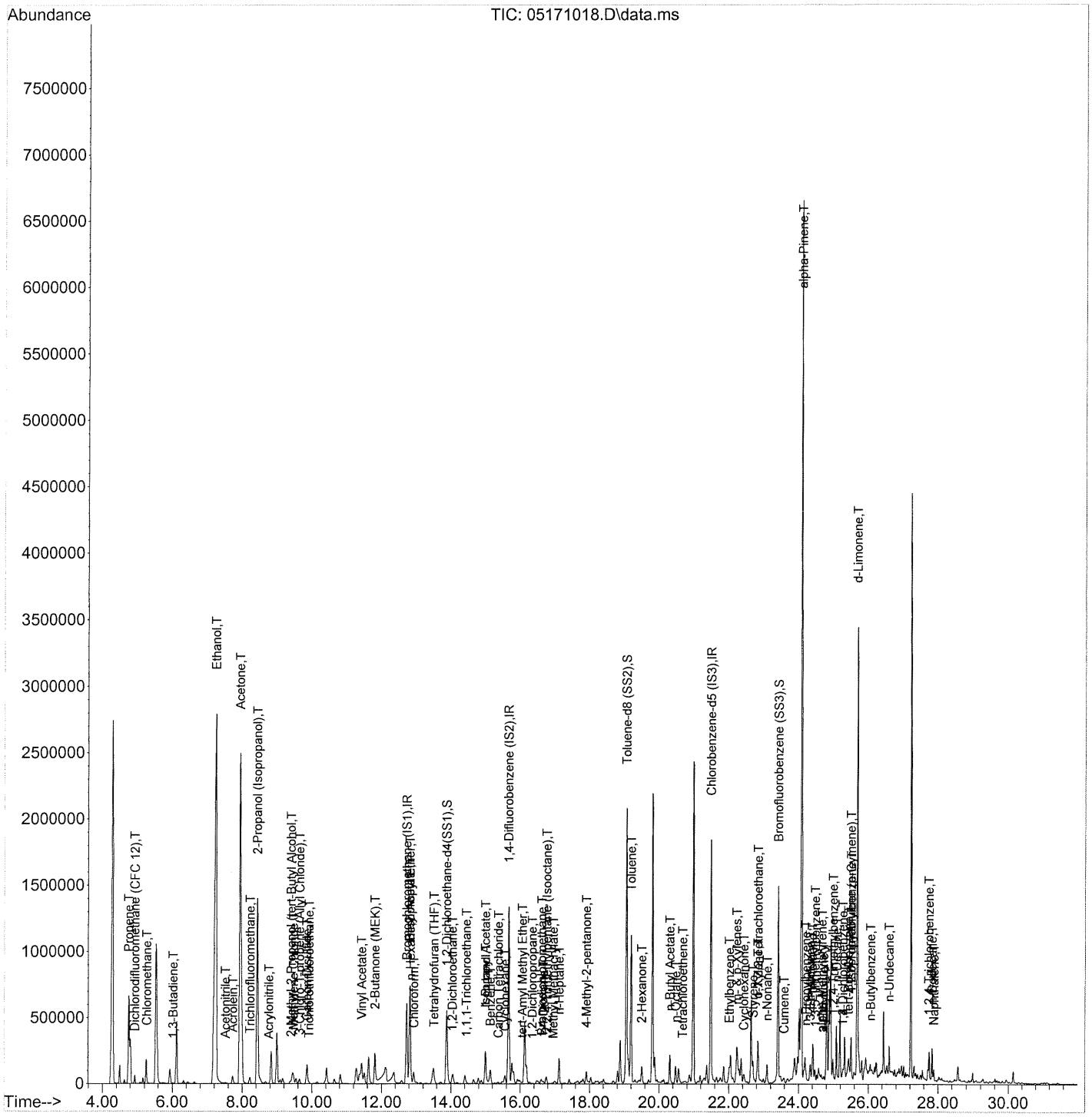
Ion	Exp%	Act%
146.00	100	100
148.00	64.80	64.13
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 18 08:05:07 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 18 08:05:07 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	312539	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1556951	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	779064	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	552720	23.765	ng		-0.03
Spiked Amount 25.000			Recovery = 95.04%				
57) Toluene-d8 (SS2)	19.06	98	1816421	24.439	ng		-0.01
Spiked Amount 25.000			Recovery = 97.76%				
73) Bromofluorobenzene (SS3)	23.42	174	488196	25.730	ng		0.00
Spiked Amount 25.000			Recovery = 102.92%				
Target Compounds							Qvalue
2) Propene	4.76	42	320860	13.161	ng	#	84
3) Dichlorodifluoromethan...	4.93	85	64334	1.538	ng		99
4) Chloromethane	5.27	50	15800	0.511	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	982	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	6.02	54	2927	0.119	ng		93
8) Bromomethane	6.52	94	814	N.D.			
9) Chloroethane	6.86	64	305	N.D.			
10) Ethanol	7.25	45	6232744	468.936	ng		99
11) Acetonitrile	7.51	41	9791	0.292	ng		98
12) Acrolein	7.73	56	73751	7.118	ng		99
13) Acetone	7.94	58	1669807	102.768	ng		96
14) Trichlorofluoromethane	8.22	101	54578	1.507	ng		100
15) 2-Propanol (Isopropanol)	8.43	45	2663977	52.883	ng		98
16) Acrylonitrile	8.76	53	2514	0.103	ng		97
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.40	59	42894	0.825	ng	#	78
19) Methylene Chloride	9.47	84	29169	1.363	ng		95
20) 3-Chloro-1-propene (Al...	9.65	41	6752	0.242	ng	#	36
21) Trichlorotrifluoroethane	9.91	151	4848	0.317	ng		94
22) Carbon Disulfide	9.86	76	322904	4.232	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.34	73	772	N.D.			
26) Vinyl Acetate	11.44	86	56763	11.575	ng	#	1
27) 2-Butanone (MEK)	11.81	72	115832	8.582	ng	#	1
28) cis-1,2-Dichloroethene	12.36	61	504	N.D.			
29) Diisopropyl Ether	12.82	87	4145	0.207	ng	#	1
30) Ethyl Acetate	12.82	61	170512	21.252	ng		95
31) n-Hexane	12.84	57	45759	1.114	ng		98

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 18 08:05:07 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	93642	2.731	ng		99
34) Tetrahydrofuran (THF)	13.52	72	13027	0.998	ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	14.04	62	59361	2.136	ng		100
38) 1,1,1-Trichloroethane	14.44	97	4766	0.153	ng		97
39) Isopropyl Acetate	14.99	61	5021	0.375	ng	#	1
40) 1-Butanol	14.99	56	217606	10.114	ng	#	75
41) Benzene	15.14	78	130793	1.505	ng		99
42) Carbon Tetrachloride	15.37	117	9142	0.395	ng		98
43) Cyclohexane	15.56	84	33790	0.925	ng		94
44) tert-Amyl Methyl Ether	16.06	73	6844	0.107	ng	#	54
45) 1,2-Dichloropropane	16.35	63	1177	0.055	ng		86
46) Bromodichloromethane	16.62	83	5964	0.229	ng	#	73
47) Trichloroethene	16.69	130	336	N.D.			
48) 1,4-Dioxane	16.66	88	2034	0.123	ng	#	65
49) 2,2,4-Trimethylpentane...	16.76	57	38941	0.383	ng		80
50) Methyl Methacrylate	16.95	100	955	0.105	ng	#	58
51) n-Heptane	17.12	71	62540	2.517	ng		97
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
53) 4-Methyl-2-pentanone	17.91	58	31934	1.701	ng		93
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.			
55) 1,1,2-Trichloroethane	18.75	97	178	N.D.			
58) Toluene	19.20	91	1093138	11.856	ng		99
59) 2-Hexanone	19.50	43	89140	2.027	ng		95
60) Dibromochloromethane	19.73	129	504	N.D.			
61) 1,2-Dibromoethane	0.00	107	0	N.D.			
62) n-Butyl Acetate	20.31	43	185074	3.744	ng		99
63) n-Octane	20.48	57	26869	1.256	ng		93
64) Tetrachloroethene	20.67	166	1761	0.082	ng		93
65) Chlorobenzene	21.54	112	1201	N.D.			
66) Ethylbenzene	22.01	91	103785	1.006	ng		97
67) m- & p-Xylenes	22.22	91	180356	2.157	ng		97
68) Bromoform	22.33	173	309	N.D.			
69) Styrene	22.70	104	81826	1.388	ng		96
70) o-Xylene	22.84	91	73561	0.826	ng		97
71) n-Nonane	23.10	43	66429	1.374	ng		89
72) 1,1,2,2-Tetrachloroethane	22.84	83	2305	0.072	ng	#	1
74) Cumene	23.59	105	9786	0.091	ng		95
75) alpha-Pinene	24.08	93	3202288	63.355	ng		98
76) n-Propylbenzene	24.21	91	25906	0.196	ng	#	85
77) 3-Ethyltoluene	24.34	105	49967	0.502	ng		98
78) 4-Ethyltoluene	24.40	105	34077	0.339	ng		89
79) 1,3,5-Trimethylbenzene	24.48	105	24523	0.291	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171018.D
Acq On : 17 May 2010 22:36
Operator : EM
Sample : P1001651-005 (1000ml)
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 18 08:05:07 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.67	118	2536	0.057 ng	#	68
81) 2-Ethyltoluene	24.72	105	22429	0.216 ng		73
82) 1,2,4-Trimethylbenzene	24.99	105	70527	0.800 ng		87
83) n-Decane	25.09	57	150371	2.967 ng		100
84) Benzyl Chloride	25.19	91	2016	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	8048	0.195 ng		100
86) 1,4-Dichlorobenzene	25.27	146	8048	0.184 ng		100
87) sec-Butylbenzene	25.32	105	3420	N.D.		
88) 4-Isopropyltoluene (p-...	25.50	119	146469	1.290 ng		99
89) 1,2,3-Trimethylbenzene	25.51	105	30031	0.333 ng	#	69
90) 1,2-Dichlorobenzene	25.27	146	8048	0.194 ng		99
91) d-Limonene	25.68	68	933414	26.898 ng		99
92) 1,2-Dibromo-3-Chloropr...	26.59	157	92	N.D.		
93) n-Undecane	26.60	57	74498	1.466 ng		85
94) 1,2,4-Trichlorobenzene	27.74	180	1490	0.056 ng	#	88
95) Naphthalene	27.88	128	64602	0.663 ng		99
96) n-Dodecane	27.83	57	82197	1.578 ng		94
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.43	55	26709	0.919 ng	#	84
99) tert-Butylbenzene	25.43	119	5625	0.063 ng		93
100) n-Butylbenzene	26.07	91	11170	0.123 ng	#	69

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110513** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-006

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01215

Initial Pressure (psig): -4.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**20**	0.86	**12**	0.50	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.5**	0.86	**0.50**	0.17	
74-87-3	**Chloromethane**	**0.82**	0.34	**0.40**	0.17	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.86	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.17	ND	0.067	
106-99-0	1,3-Butadiene	ND	0.34	ND	0.16	
74-83-9	Bromomethane	ND	0.17	ND	0.044	
75-00-3	Chloroethane	ND	0.17	ND	0.065	
64-17-5	**Ethanol**	**750**	8.6	**400**	4.6	
75-05-8	Acetonitrile	ND	0.86	ND	0.51	
107-02-8	**Acrolein**	**6.6**	3.4	**2.9**	1.5	
67-64-1	**Acetone**	**130**	8.6	**55**	3.6	
75-69-4	**Trichlorofluoromethane**	**2.5**	0.17	**0.44**	0.031	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**82**	1.7	**34**	0.70	
107-13-1	Acrylonitrile	ND	0.86	ND	0.40	
75-35-4	1,1-Dichloroethene	ND	0.17	ND	0.043	
75-09-2	**Methylene Chloride**	**2.2**	0.86	**0.62**	0.25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.17	ND	0.055	
76-13-1	**Trichlorotrifluoroethane**	**0.50**	0.17	**0.066**	0.022	
75-15-0	Carbon Disulfide	ND	8.6	ND	2.8	
156-60-5	trans-1,2-Dichloroethene	ND	0.17	ND	0.043	
75-34-3	1,1-Dichloroethane	ND	0.17	ND	0.043	
1634-04-4	Methyl tert-Butyl Ether	ND	0.17	ND	0.048	
108-05-4	Vinyl Acetate	ND	8.6	ND	2.4	
78-93-3	2-Butanone (MEK)	ND	8.6	ND	2.9	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110513** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-006

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01215

Initial Pressure (psig): -4.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.17	ND	0.043	
141-78-6	**Ethyl Acetate**	**33**	0.86	**9.3**	0.24	
110-54-3	**n-Hexane**	**1.8**	0.86	**0.50**	0.24	
67-66-3	**Chloroform**	**4.4**	0.17	**0.89**	0.035	
109-99-9	**Tetrahydrofuran (THF)**	**1.6**	0.86	**0.55**	0.29	
107-06-2	**1,2-Dichloroethane**	**3.4**	0.17	**0.84**	0.043	
71-55-6	**1,1,1-Trichloroethane**	**0.24**	0.17	**0.043**	0.032	
71-43-2	**Benzene**	**2.4**	0.17	**0.75**	0.054	
56-23-5	**Carbon Tetrachloride**	**0.55**	0.17	**0.087**	0.027	
110-82-7	**Cyclohexane**	**1.4**	0.86	**0.42**	0.25	
78-87-5	1,2-Dichloropropane	ND	0.17	ND	0.037	
75-27-4	**Bromodichloromethane**	**0.35**	0.17	**0.052**	0.026	
79-01-6	Trichloroethene	ND	0.17	ND	0.032	
123-91-1	1,4-Dioxane	ND	0.86	ND	0.24	
80-62-6	Methyl Methacrylate	ND	0.86	ND	0.21	
142-82-5	**n-Heptane**	**4.0**	0.86	**0.97**	0.21	
10061-01-5	cis-1,3-Dichloropropene	ND	0.86	ND	0.19	
108-10-1	**4-Methyl-2-pentanone**	**2.1**	0.86	**0.52**	0.21	
10061-02-6	trans-1,3-Dichloropropene	ND	0.86	ND	0.19	
79-00-5	1,1,2-Trichloroethane	ND	0.17	ND	0.032	
108-88-3	**Toluene**	**19**	0.86	**5.0**	0.23	
591-78-6	**2-Hexanone**	**1.0**	0.86	**0.25**	0.21	
124-48-1	Dibromochloromethane	ND	0.17	ND	0.020	
106-93-4	1,2-Dibromoethane	ND	0.17	ND	0.022	
123-86-4	**n-Butyl Acetate**	**5.2**	0.86	**1.1**	0.18	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110513**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01215

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -4.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**1.6**	0.86	**0.35**	0.18	
127-18-4	Tetrachloroethene	ND	0.17	ND	0.025	
108-90-7	Chlorobenzene	ND	0.17	ND	0.037	
100-41-4	**Ethylbenzene**	**1.6**	0.86	**0.36**	0.20	
179601-23-1	**m,p-Xylenes**	**3.4**	0.86	**0.78**	0.20	
75-25-2	Bromoform	ND	0.86	ND	0.083	
100-42-5	**Styrene**	**2.2**	0.86	**0.53**	0.20	
95-47-6	**o-Xylene**	**1.3**	0.86	**0.30**	0.20	
111-84-2	**n-Nonane**	**2.0**	0.86	**0.37**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.17	ND	0.025	
98-82-8	Cumene	ND	0.86	ND	0.18	
80-56-8	**alpha-Pinene**	**110**	0.86	**19**	0.15	
103-65-1	n-Propylbenzene	ND	0.86	ND	0.18	
622-96-8	4-Ethyltoluene	ND	0.86	ND	0.18	
108-67-8	1,3,5-Trimethylbenzene	ND	0.86	ND	0.18	
95-63-6	**1,2,4-Trimethylbenzene**	**1.3**	0.86	**0.26**	0.18	
100-44-7	Benzyl Chloride	ND	0.86	ND	0.17	
541-73-1	1,3-Dichlorobenzene	ND	0.17	ND	0.029	
106-46-7	**1,4-Dichlorobenzene**	**0.28**	0.17	**0.046**	0.029	
95-50-1	1,2-Dichlorobenzene	ND	0.17	ND	0.029	
5989-27-5	**d-Limonene**	**50**	0.86	**8.9**	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.86	ND	0.089	
120-82-1	1,2,4-Trichlorobenzene	ND	0.86	ND	0.12	
91-20-3	**Naphthalene**	**1.1**	0.86	**0.20**	0.16	
87-68-3	Hexachlorobutadiene	ND	0.86	ND	0.081	

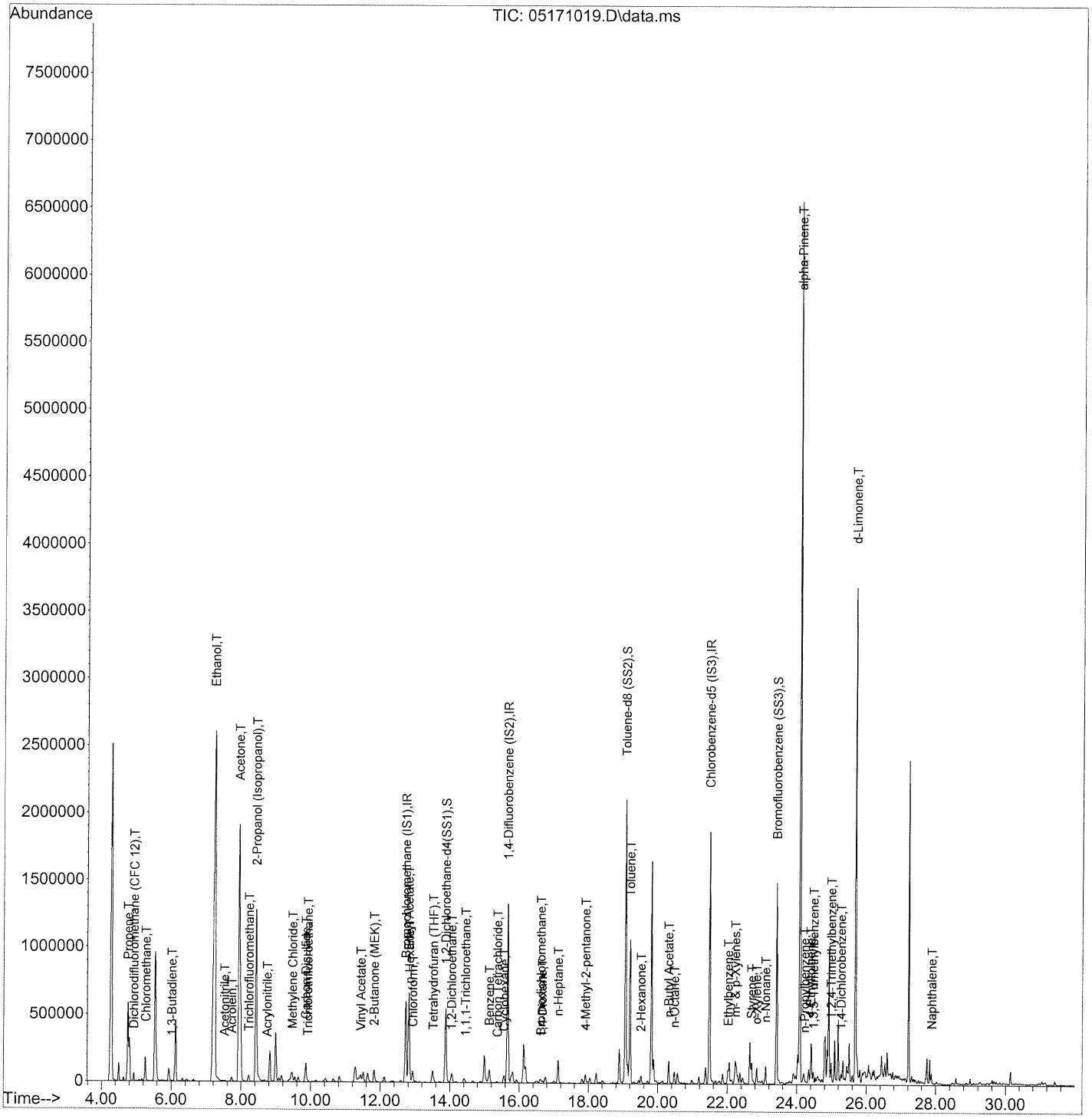
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 20 15:56:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 20 15:56:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	311952	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1558456	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	785093	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	551385	23.752	ng	-0.03
Spiked Amount 25.000			Recovery =	95.00%		✓
57) Toluene-d8 (SS2)	19.07	98	1840114	24.568	ng	0.00
Spiked Amount 25.000			Recovery =	98.28%		✓
73) Bromofluorobenzene (SS3)	23.42	174	484697	25.349	ng	0.00
Spiked Amount 25.000			Recovery =	101.40%		✓

Target Compounds							Qvalue
2) Propene	4.76	42	280893	11.543	ng M	#	84
3) Dichlorodifluoromethan...	4.93	85	59806	1.432	ng		100
4) Chloromethane	5.27	50	14746	0.478	ng		98
7) 1,3-Butadiene	6.02	54	2511	0.102	ng	#	82
10) Ethanol	7.24	45	5803626	437.472	ng		99
11) Acetonitrile	7.52	41	8926	0.266	ng		95
12) Acrolein	7.73	56	39900	3.858	ng		97
13) Acetone	7.94	58	1230188	75.854	ng		95
14) Trichlorofluoromethane	8.22	101	52382	1.449	ng		99
15) 2-Propanol (Isopropanol)	8.43	45	2410888	47.949	ng		98
16) Acrylonitrile	8.75	53	2299	0.095	ng		92
19) Methylene Chloride	9.47	84	26773	1.253	ng		94
21) Trichlorotrifluoroethane	9.91	151	4476	0.293	ng		95
22) Carbon Disulfide	9.86	76	310747	4.080	ng		98
26) Vinyl Acetate	11.44	86	23110	4.721	ng	#	1
27) 2-Butanone (MEK)	11.82	72	47417	3.520	ng		96
30) Ethyl Acetate	12.81	61	155538	19.422	ng		95
31) n-Hexane	12.84	57	41756	1.018	ng		97
32) Chloroform	12.93	83	86745	2.535	ng		99
34) Tetrahydrofuran (THF)	13.52	72	12315	0.945	ng	#	1
36) 1,2-Dichloroethane	14.05	62	54944	1.981	ng		99
38) 1,1,1-Trichloroethane	14.45	97	4284	0.137	ng		95
41) Benzene	15.14	78	121688	1.399	ng		99
42) Carbon Tetrachloride	15.37	117	7376	0.318	ng		98
43) Cyclohexane	15.57	84	30738	0.841	ng		92
46) Bromodichloromethane	16.63	83	5252	0.201	ng	#	74
48) 1,4-Dioxane	16.66	88	1648	0.100	ng		81
51) n-Heptane	17.12	71	57756	2.322	ng		96
53) 4-Methyl-2-pentanone	17.92	58	23325	1.241	ng		91
58) Toluene	19.20	91	1025110	11.033	ng		99

JBA 5/20/10

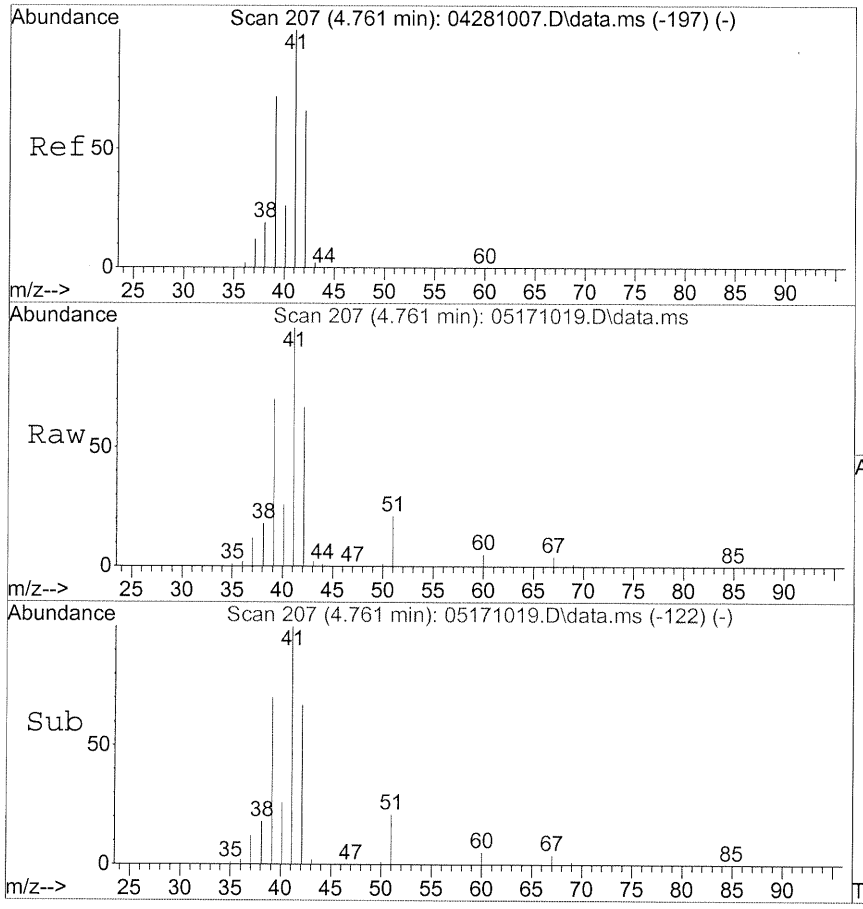
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 20 15:56:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
59) 2-Hexanone	19.52	43	26619	0.601	ng		90
62) n-Butyl Acetate	20.31	43	151898	3.049	ng		99
63) n-Octane	20.48	57	20213	0.938	ng		94
66) Ethylbenzene	22.02	91	95426	0.918	ng		97
67) m- & p-Xylenes	22.22	91	166658	1.977	ng		96
69) Styrene	22.70	104	77569	1.305	ng		100
70) o-Xylene	22.84	91	68916	0.768	ng		96
71) n-Nonane	23.10	43	55694	1.143	ng		94
75) alpha-Pinene	24.08	93	3138006	61.607	ng		99
76) n-Propylbenzene	24.22	91	24267	0.182	ng	#	75
78) 4-Ethyltoluene	24.40	105	32289	0.319	ng		89
79) 1,3,5-Trimethylbenzene	24.48	105	23283	0.274	ng		95
82) 1,2,4-Trimethylbenzene	24.99	105	65112	0.733	ng		86
86) 1,4-Dichlorobenzene	25.27	146	7070	0.161	ng		97
91) d-Limonene	25.68	68	1012112	28.942	ng		97
95) Naphthalene	27.88	128	61174	0.623	ng		99

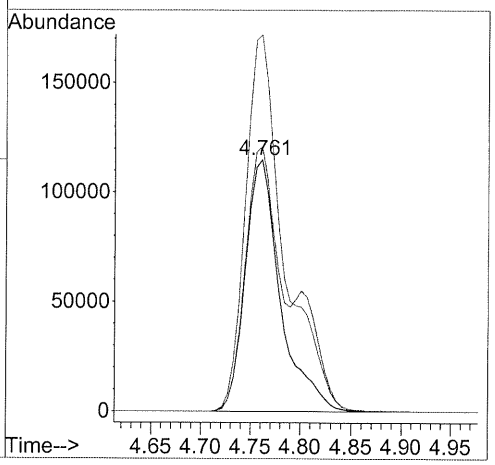
(#) = qualifier out of range (m) = manual integration (+) = signals summed

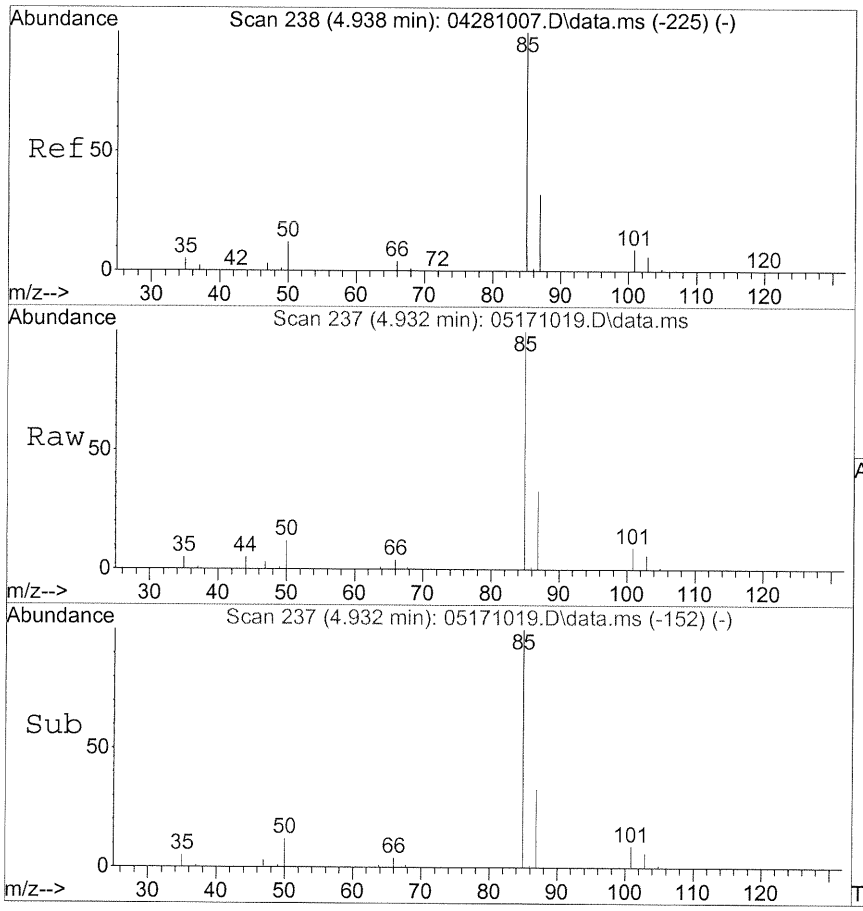


#2
Propene
Concen: 11.54 ng
RT: 4.76 min Scan# 207
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 42 Resp: 280893

Ion	Ratio	Lower	Upper
42	100		
39	131.6	88.4	128.4#
41	164.8	129.9	169.9

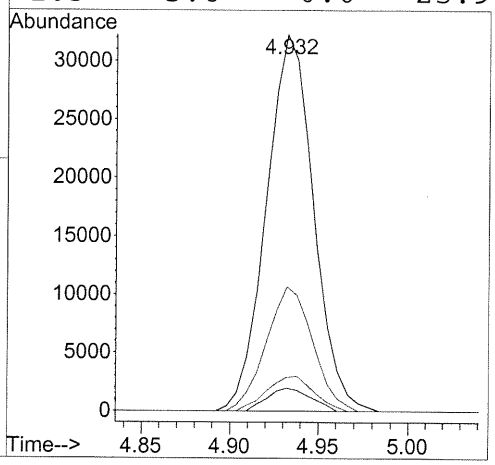


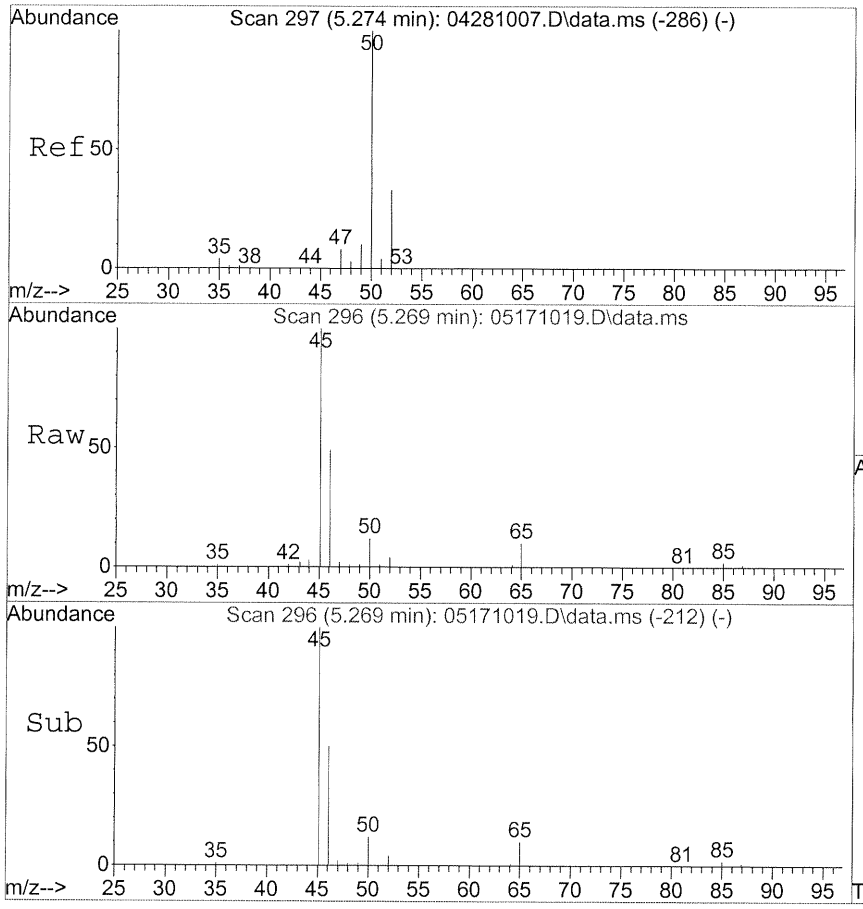


#3
Dichlorodifluoromethane (CFC
Concen: 1.43 ng
RT: 4.93 min Scan# 237
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 85 Resp: 59806

Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.6	52.6
101	9.2	0.0	29.3
103	5.6	0.0	25.9

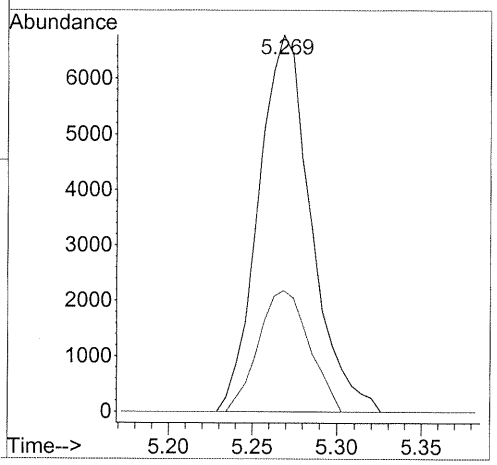


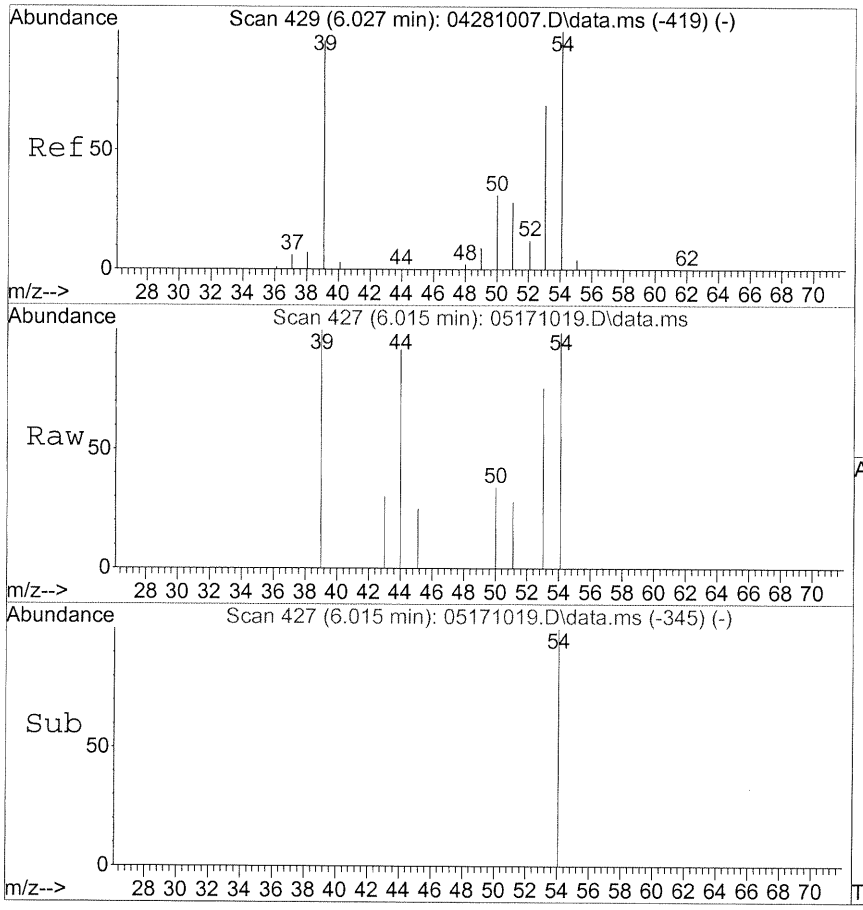


#4
Chloromethane
Concen: 0.48 ng
RT: 5.27 min Scan# 296
Delta R.T. -0.023 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 50 Resp: 14746

Ion	Ratio	Lower	Upper
50	100		
52	31.0	12.3	52.3

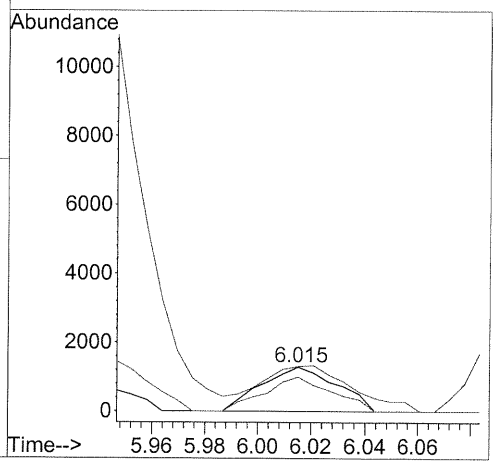


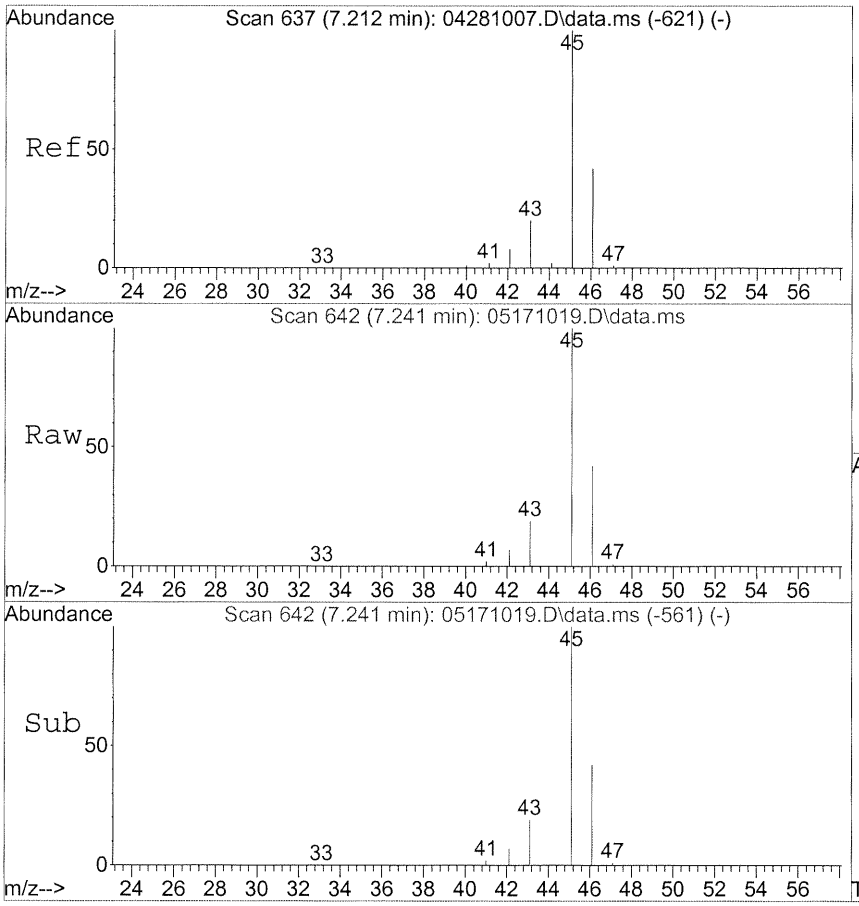


#7
1,3-Butadiene
Concen: 0.10 ng
RT: 6.02 min Scan# 427
Delta R.T. -0.034 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 54 Resp: 2511

Ion	Ratio	Lower	Upper
54	100		
39	127.3	76.6	116.6#
53	69.9	49.7	89.7

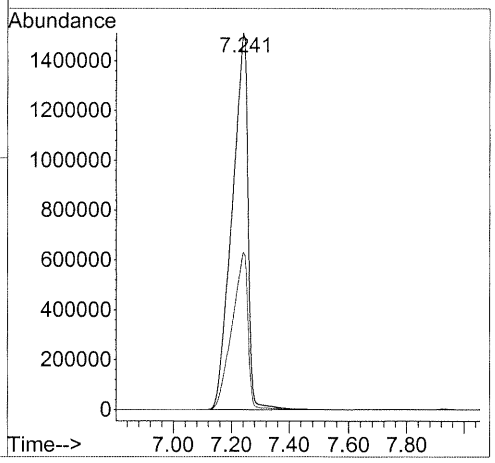


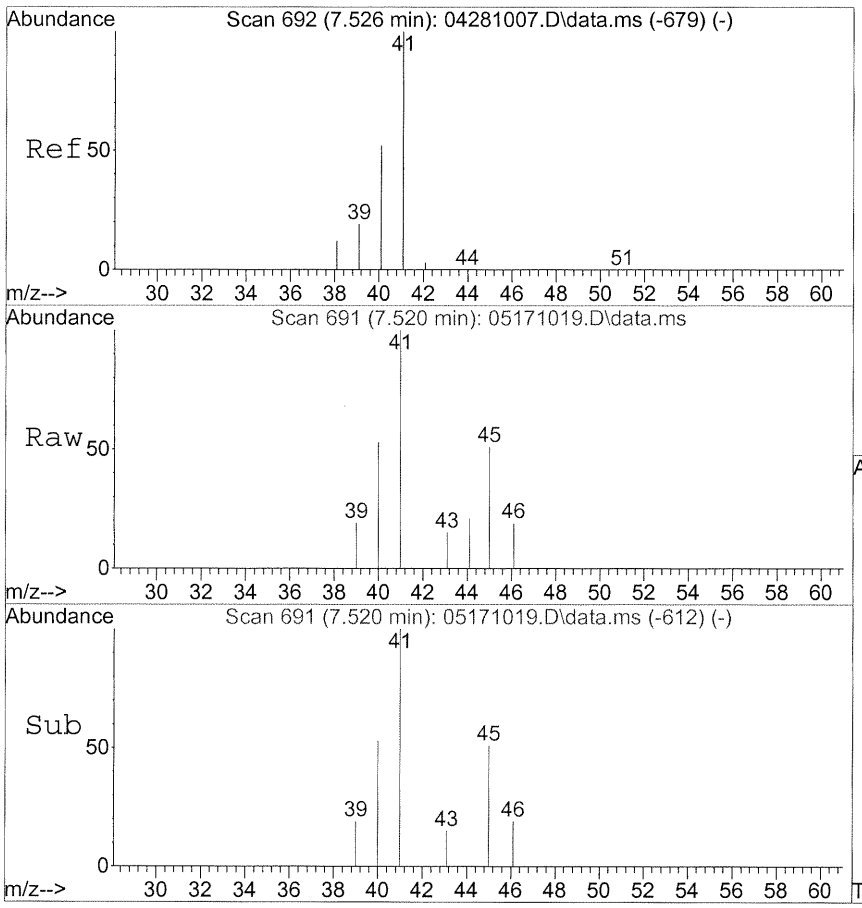


#10
Ethanol
Concen: 437.47 ng
RT: 7.24 min Scan# 642
Delta R.T. -0.040 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 45 Resp: 5803626

Ion	Ratio	Lower	Upper
45	100		
46	41.9	21.3	61.3

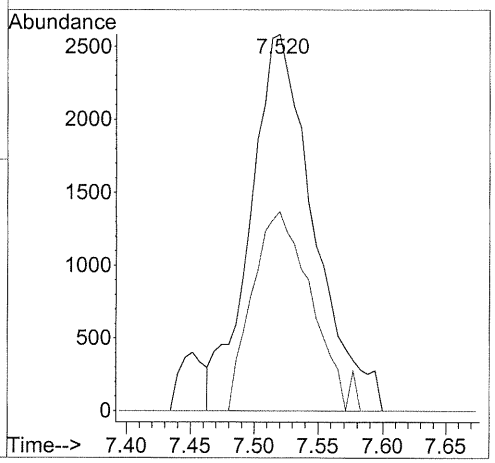


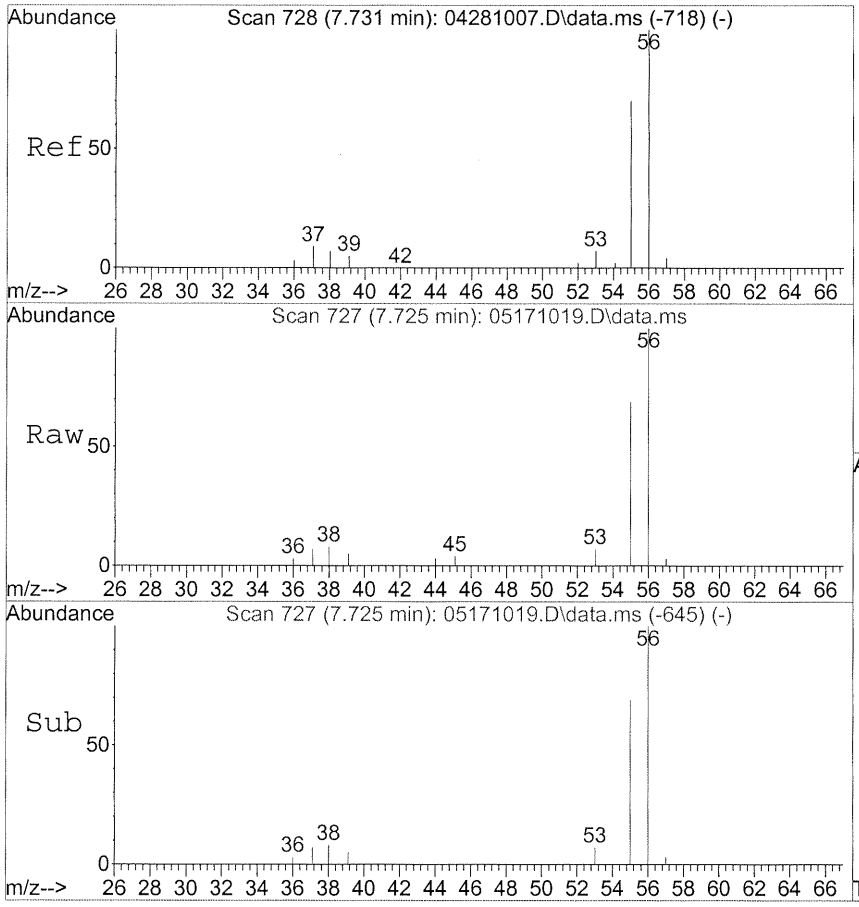


#11
Acetonitrile
Concen: 0.27 ng
RT: 7.52 min Scan# 691
Delta R.T. -0.051 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 41 Resp: 8926

Ion	Ratio	Lower	Upper
41	100		
40	49.4	33.2	73.2

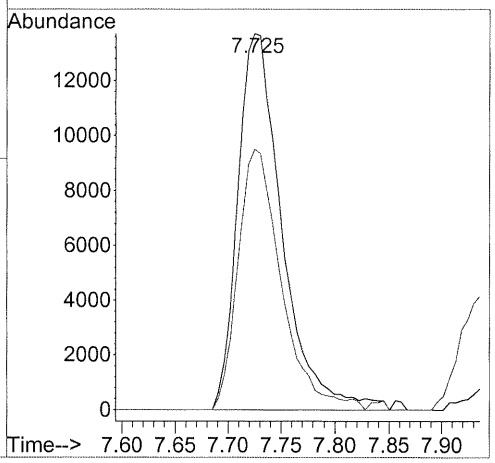


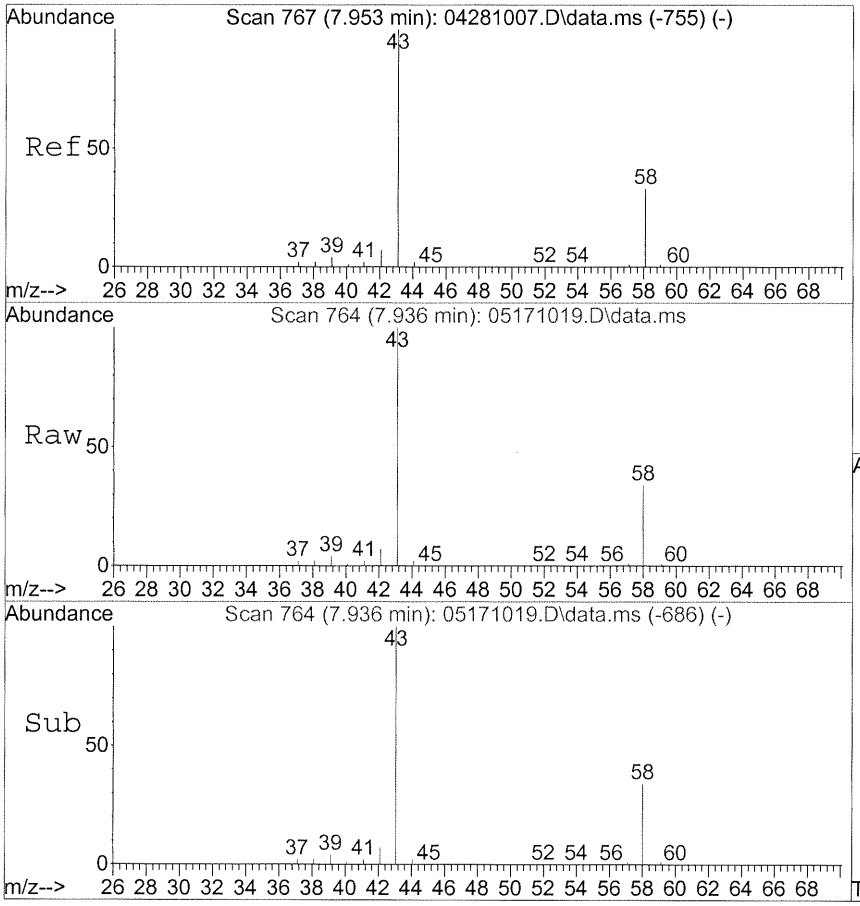


#12
Acrolein
Concen: 3.86 ng
RT: 7.73 min Scan# 727
Delta R.T. -0.034 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 56 Resp: 39900

Ion	Ratio	Lower	Upper
56	100		
55	67.7	50.2	90.2

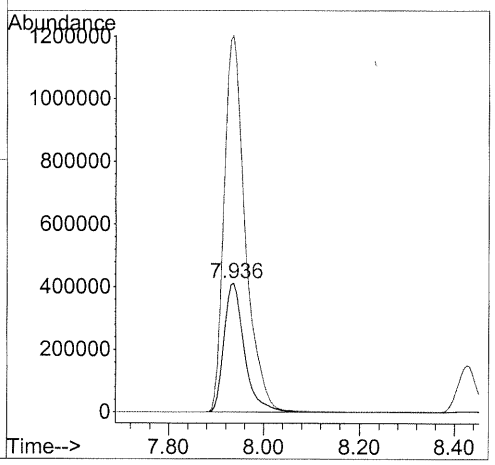


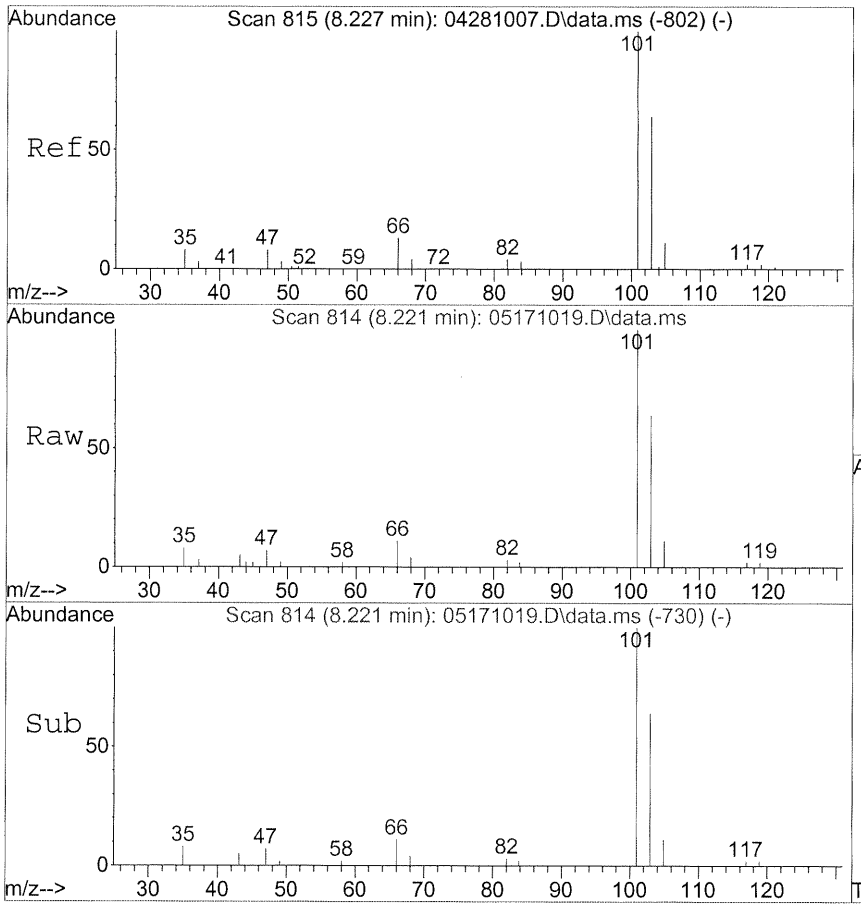


#13
Acetone
Concen: 75.85 ng
RT: 7.94 min Scan# 764
Delta R.T. -0.057 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 58 Resp: 1230188

Ion	Ratio	Lower	Upper
58	100		
43	304.7	264.2	324.2

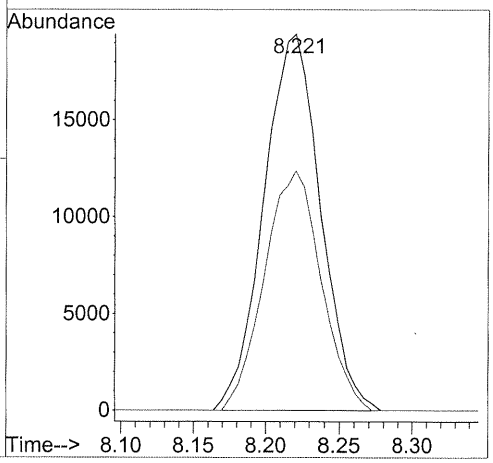


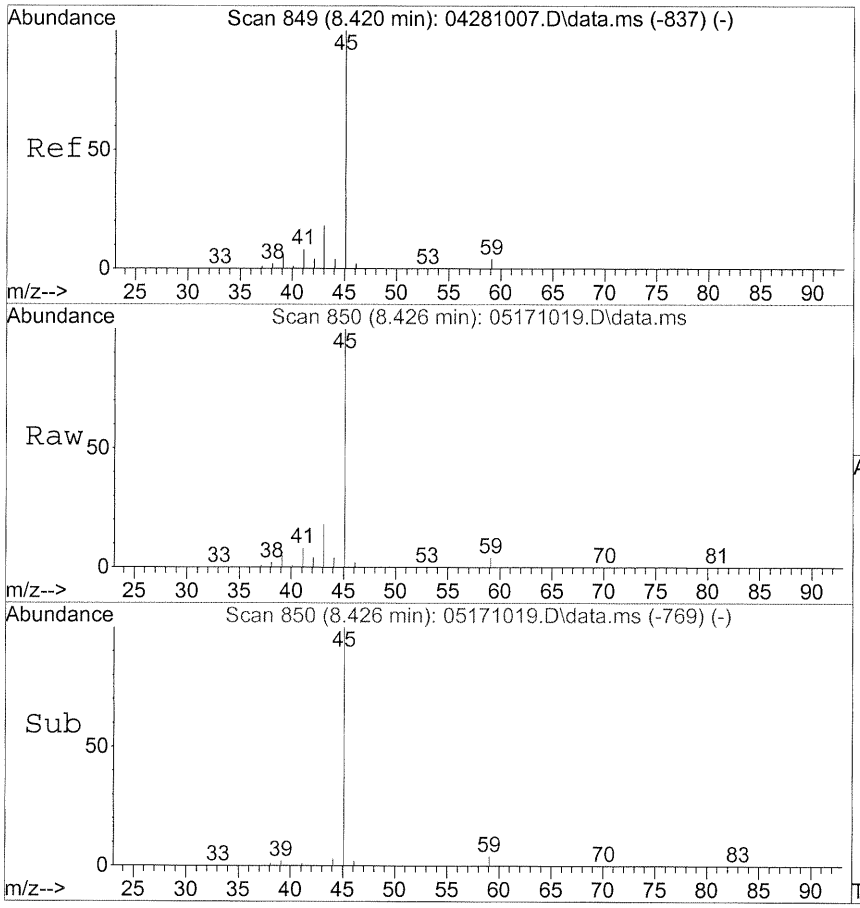


#14
Trichlorofluoromethane
Concen: 1.45 ng
RT: 8.22 min Scan# 814
Delta R.T. -0.023 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:101 Resp: 52382

Ion	Ratio	Lower	Upper
101	100		
103	63.8	44.6	84.6

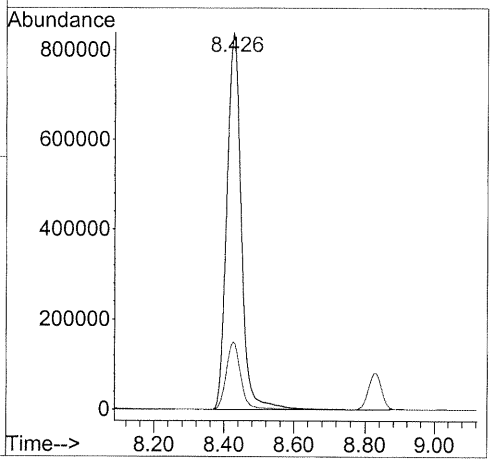


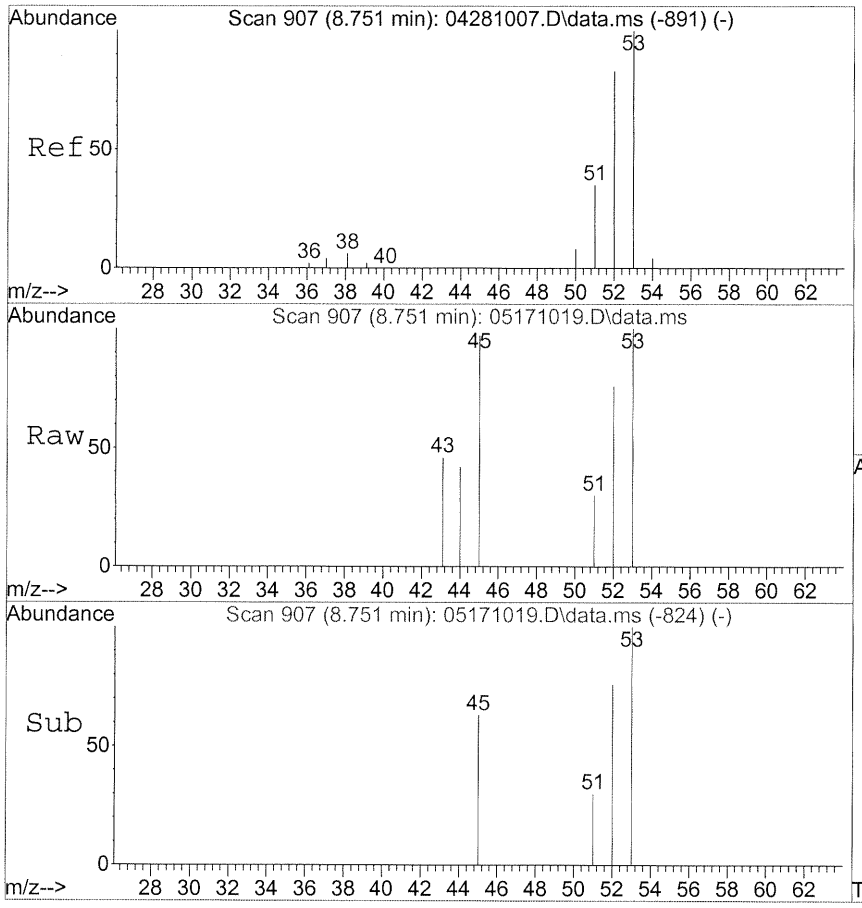


#15
2-Propanol (Isopropanol)
Concen: 47.95 ng
RT: 8.43 min Scan# 850
Delta R.T. -0.040 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 45 Resp: 2410888

Ion	Ratio	Lower	Upper
45	100		
43	17.7	0.0	38.5

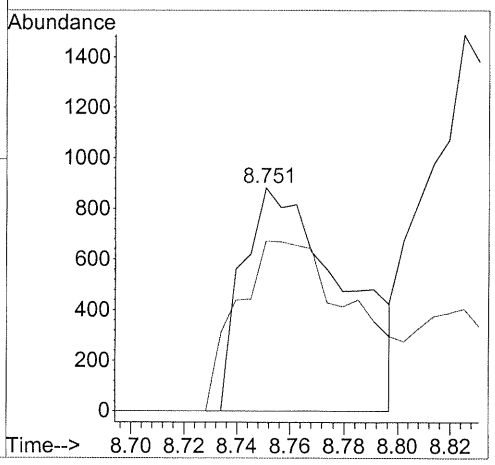


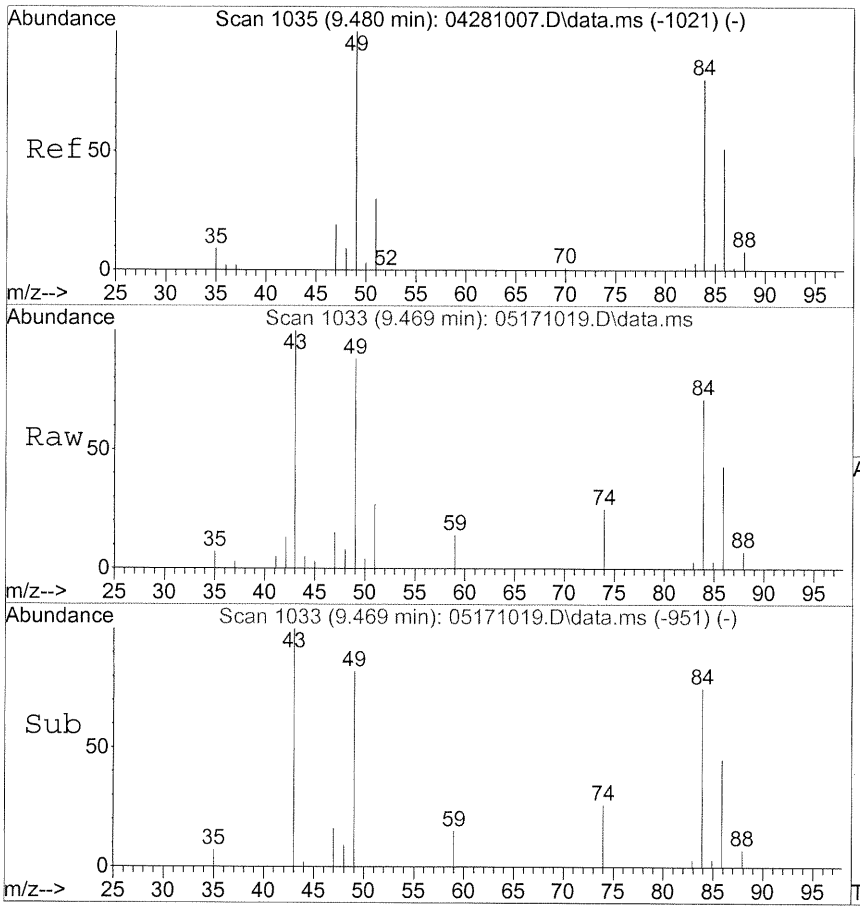


#16
Acrylonitrile
Concen: 0.09 ng
RT: 8.75 min Scan# 907
Delta R.T. -0.029 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 53 Resp: 2299

Ion	Ratio	Lower	Upper
53	100		
52	89.7	62.4	102.4

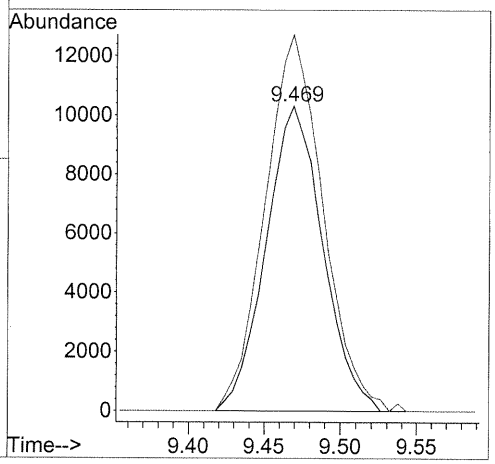


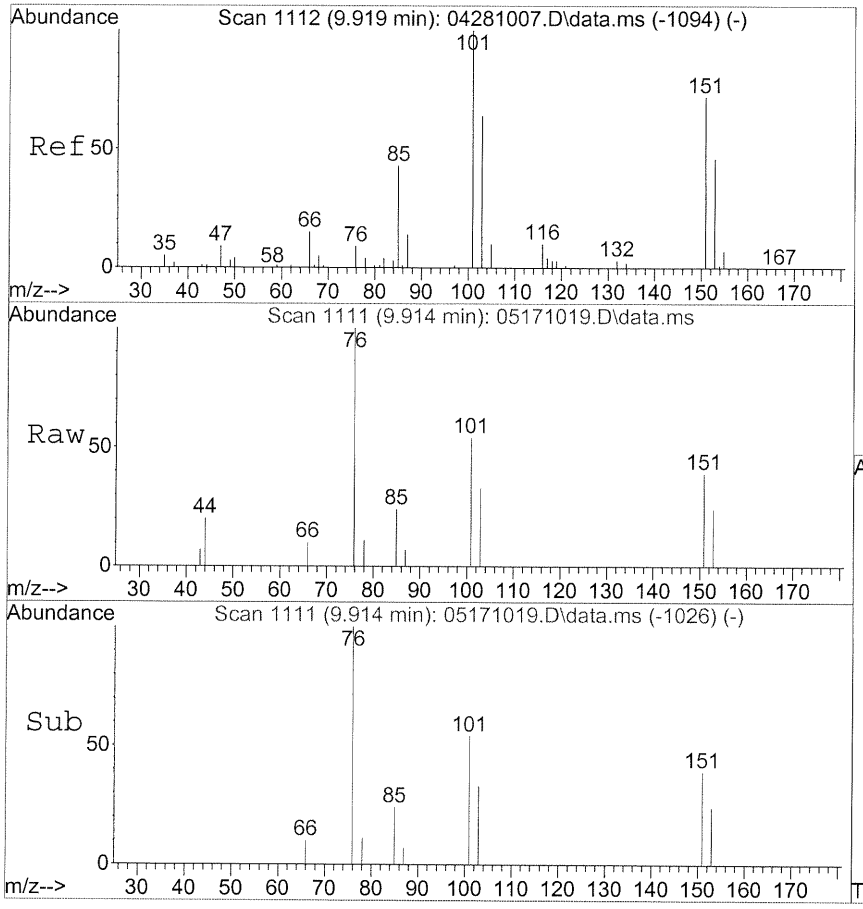


#19
Methylene Chloride
Concen: 1.25 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 84 Resp: 26773

Ion	Ratio	Lower	Upper
84	100		
49	125.8	94.5	144.5

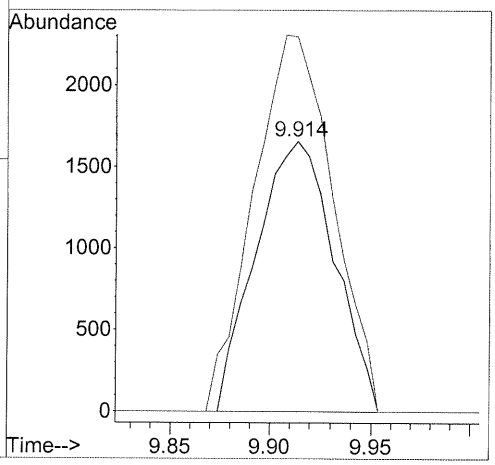


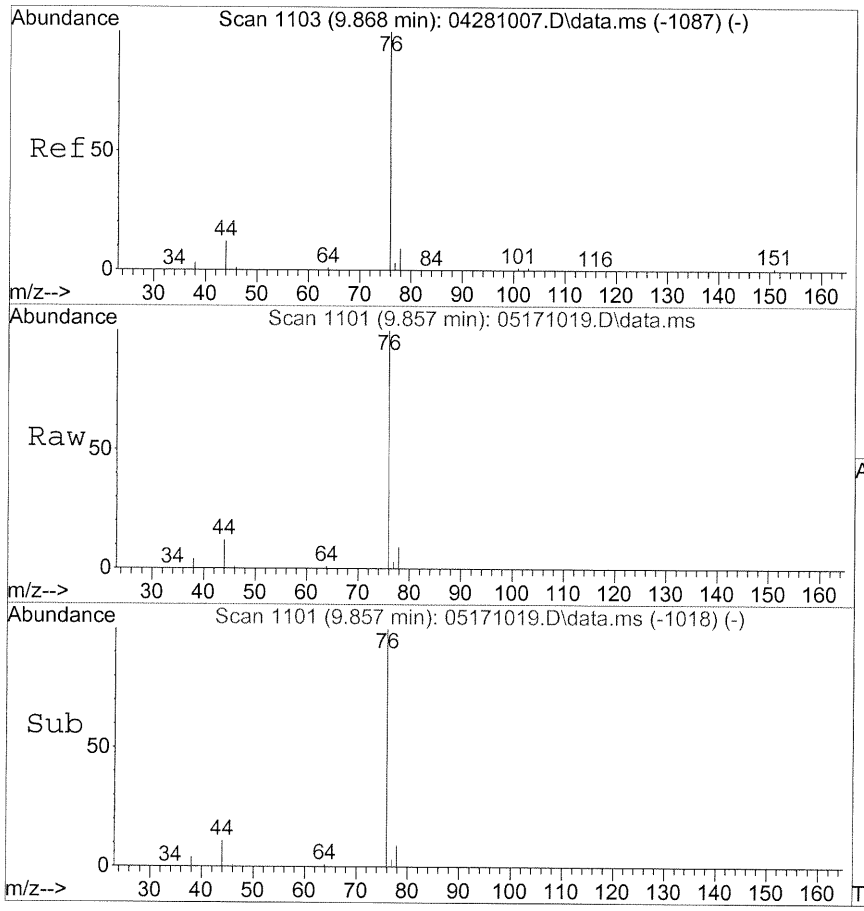


#21
Trichlorotrifluoroethane
Concen: 0.29 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:151 Resp: 4476

Ion	Ratio	Lower	Upper
151	100		
101	140.9	114.9	154.9

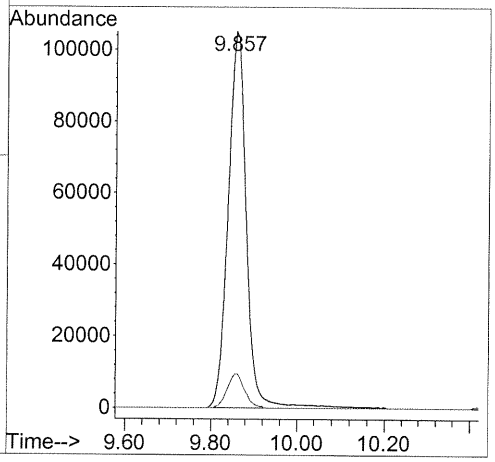


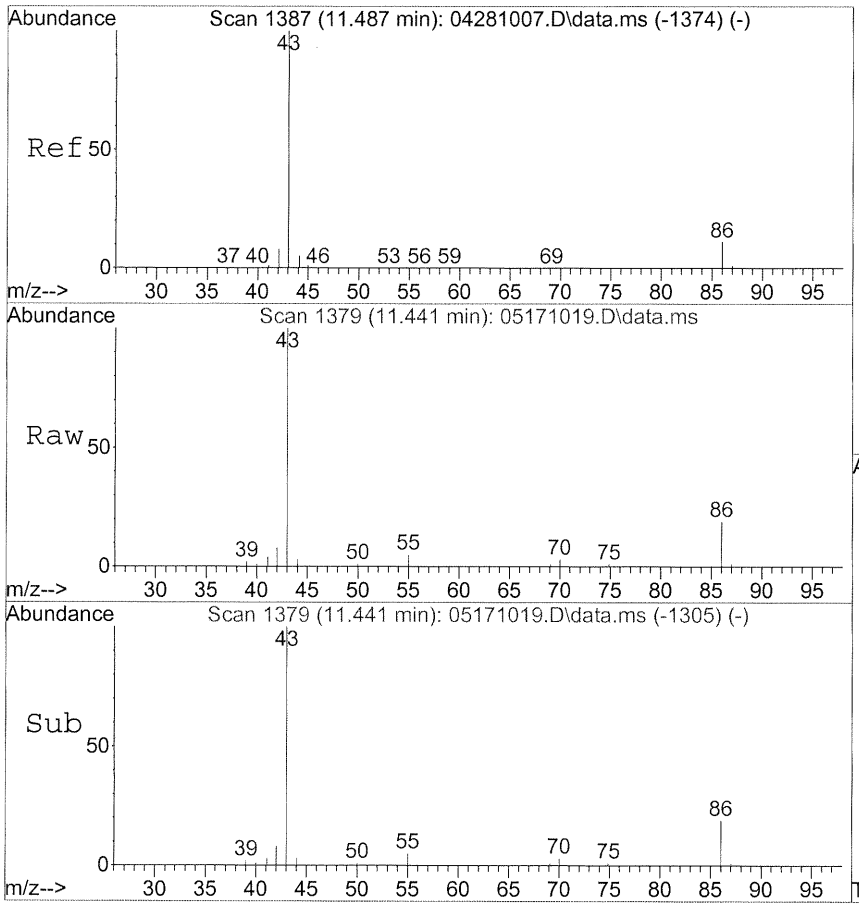


#22
Carbon Disulfide
Concen: 4.08 ng
RT: 9.86 min Scan# 1101
Delta R.T. -0.028 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 76 Resp: 310747

Ion	Ratio	Lower	Upper
76	100		
78	8.6	0.0	29.2

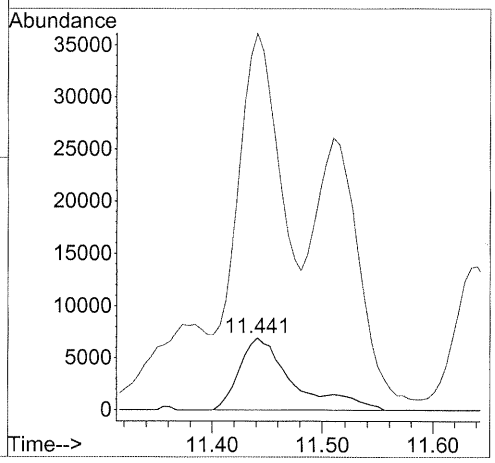


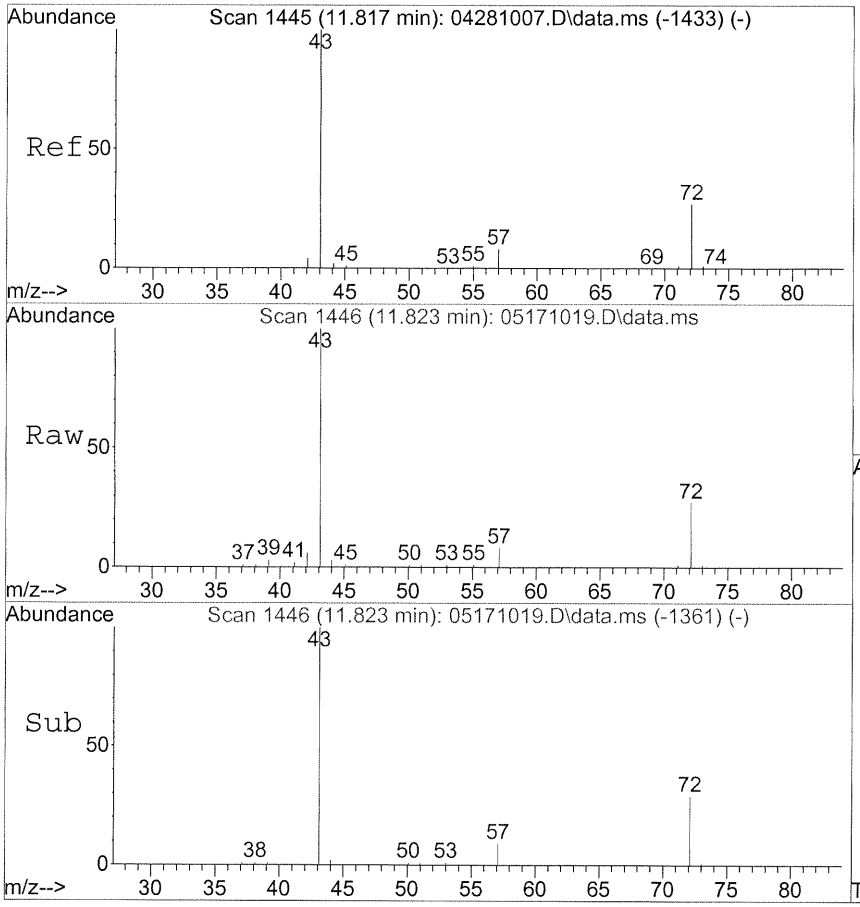


#26
Vinyl Acetate
Concen: 4.72 ng
RT: 11.44 min Scan# 1379
Delta R.T. -0.080 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 86 Resp: 23110

Ion	Ratio	Lower	Upper
86	100		
43	452.5	829.7	869.7#

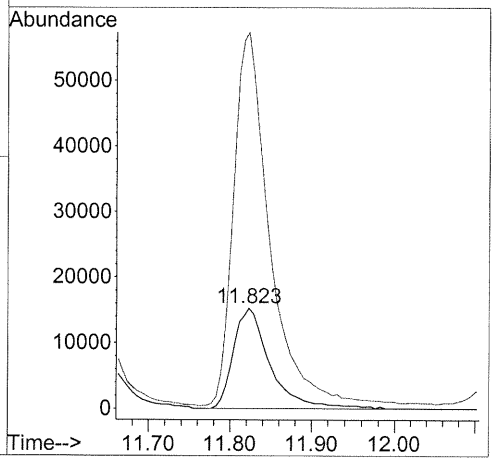


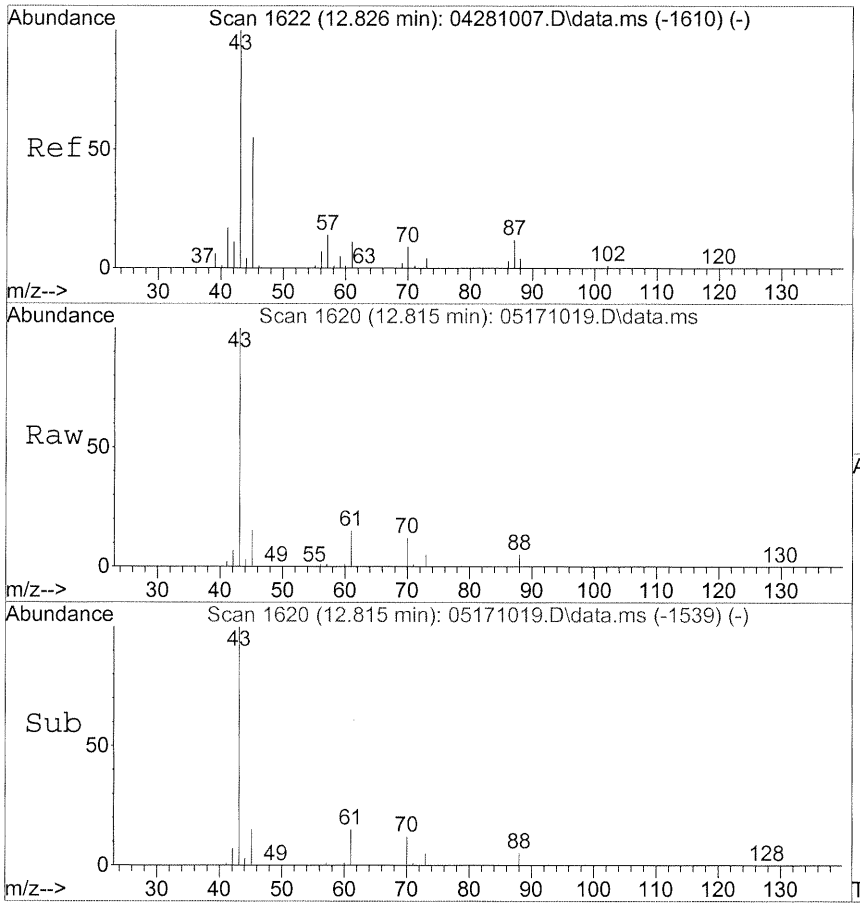


#27
2-Butanone (MEK)
Concen: 3.52 ng
RT: 11.82 min Scan# 1446
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 72 Resp: 47417

Ion	Ratio	Lower	Upper
72	100		
43	370.7	342.0	382.0

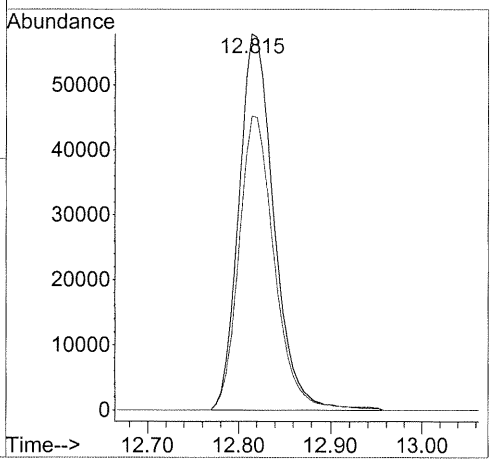


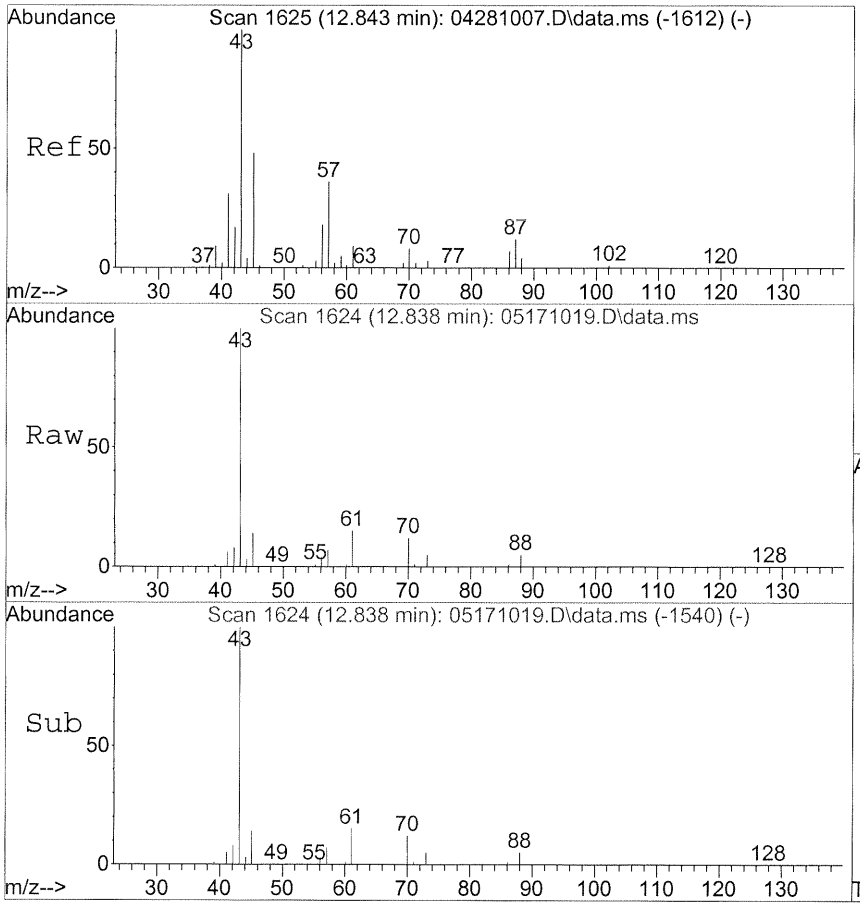


#30
Ethyl Acetate
Concen: 19.42 ng
RT: 12.81 min Scan# 1620
Delta R.T. -0.040 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 61 Resp: 155538

Ion	Ratio	Lower	Upper
61	100		
70	78.8	63.6	103.6

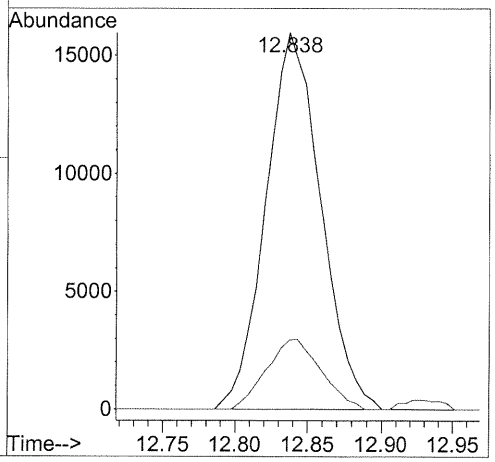


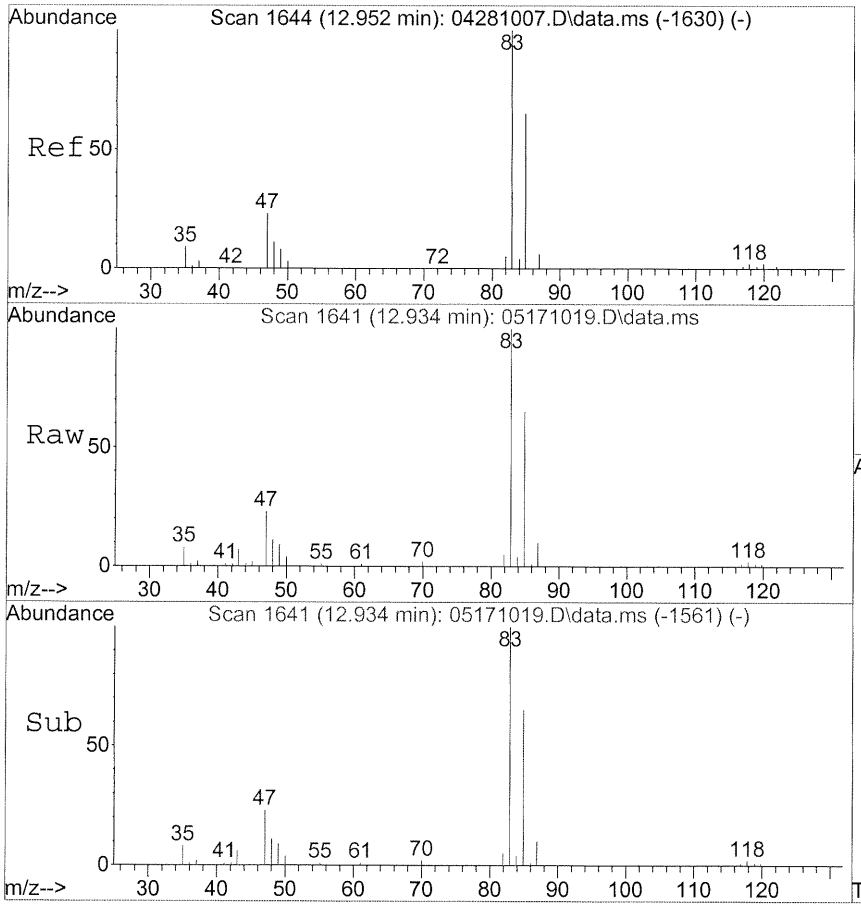


#31
n-Hexane
Concen: 1.02 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 57 Resp: 41756

Ion	Ratio	Lower	Upper
57	100		
86	18.5	0.0	39.8

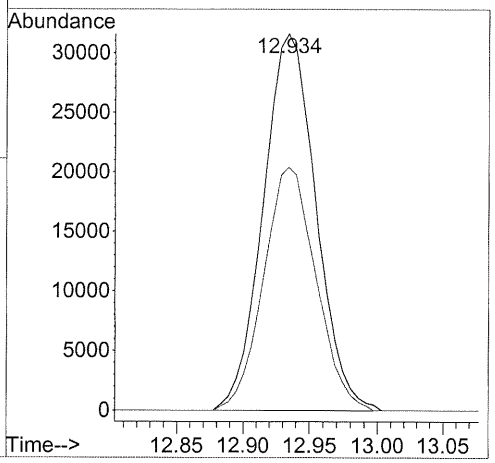


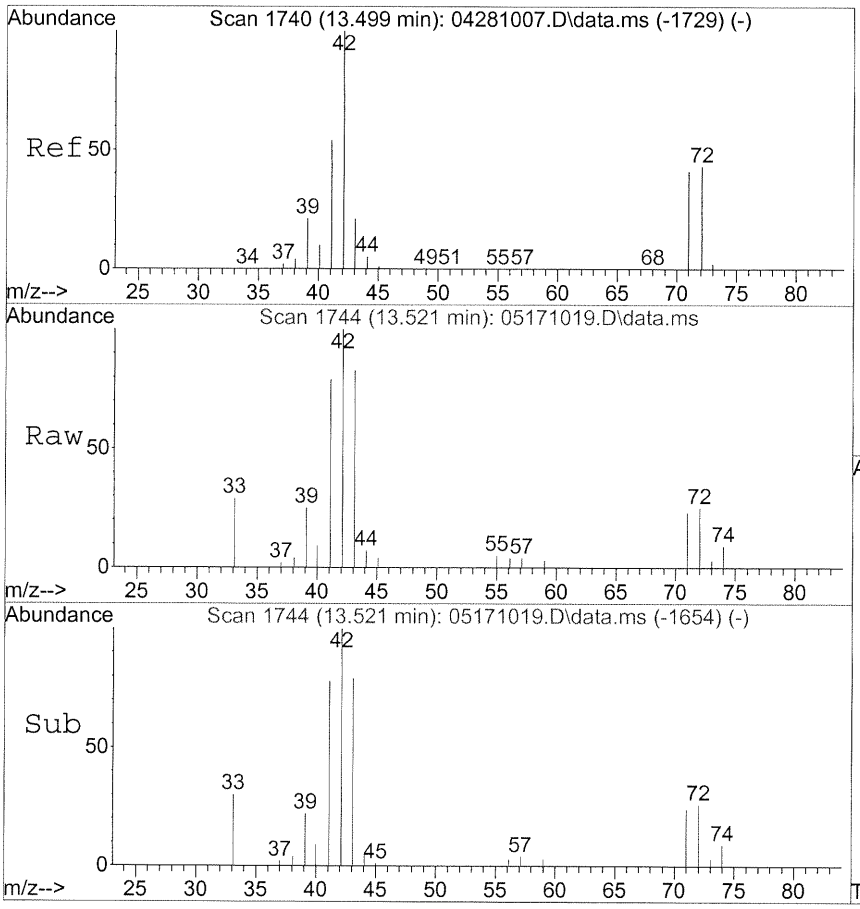


#32
Chloroform
Concen: 2.54 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 83 Resp: 86745

Ion	Ratio	Lower	Upper
83	100		
85	64.1	44.9	84.9

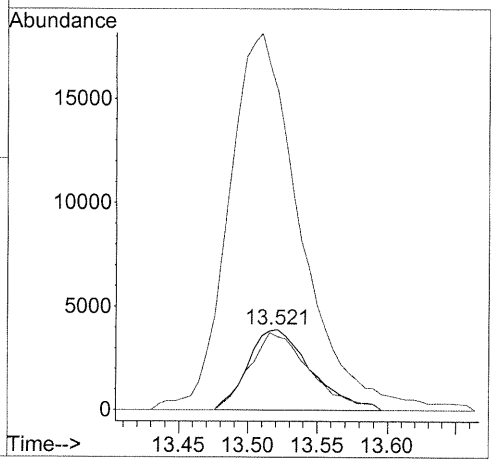


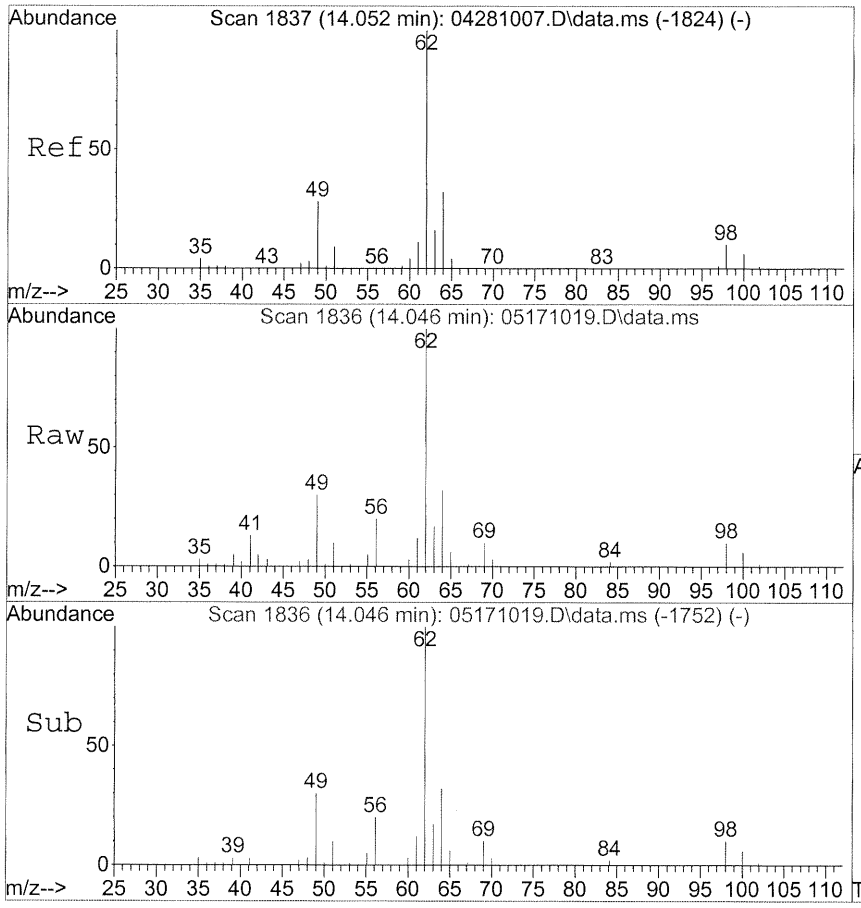


#34
Tetrahydrofuran (THF)
Concen: 0.95 ng
RT: 13.52 min Scan# 1744
Delta R.T. 0.011 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 72 Resp: 12315

Ion	Ratio	Lower	Upper
72	100		
71	91.9	74.5	114.5
42	536.2	197.7	237.7#

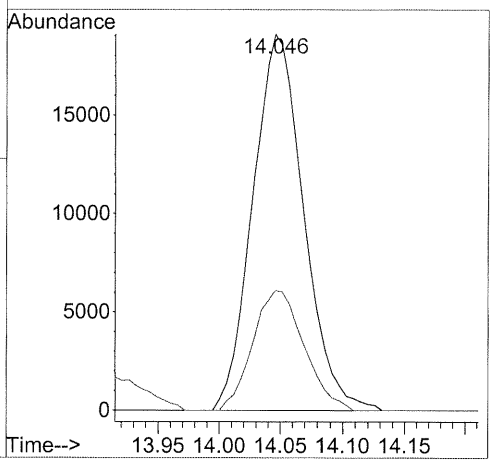


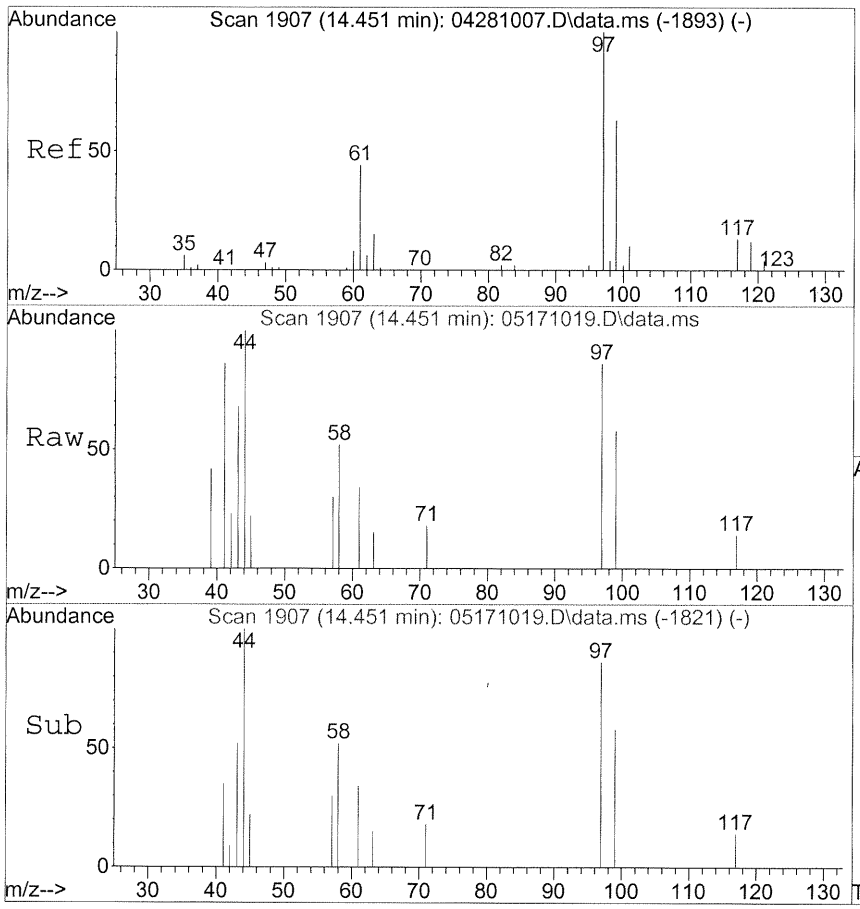


#36
1,2-Dichloroethane
Concen: 1.98 ng
RT: 14.05 min Scan# 1836
Delta R.T. -0.023 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 62 Resp: 54944

Ion	Ratio	Lower	Upper
62	100		
64	32.0	12.8	52.8

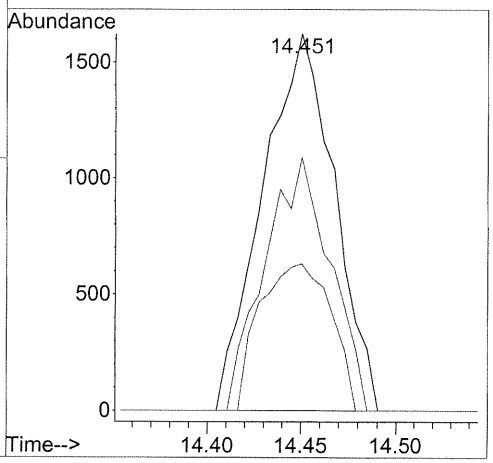


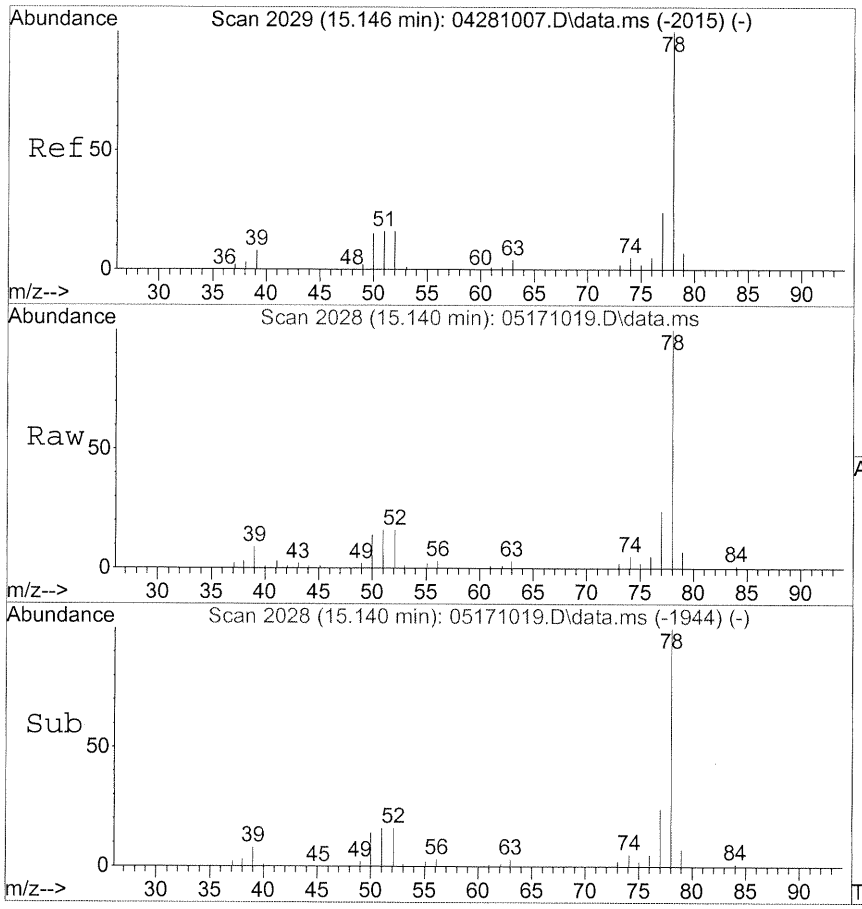


#38
1,1,1-Trichloroethane
Concen: 0.14 ng
RT: 14.45 min Scan# 1907
Delta R.T. -0.012 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 97 Resp: 4284

Ion	Ratio	Lower	Upper
97	100		
99	61.4	44.3	84.3
61	38.8	22.8	62.8

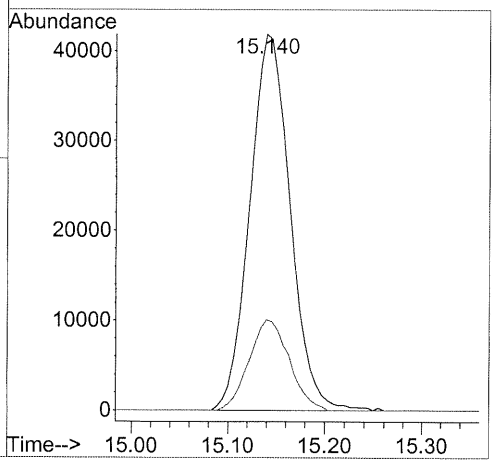


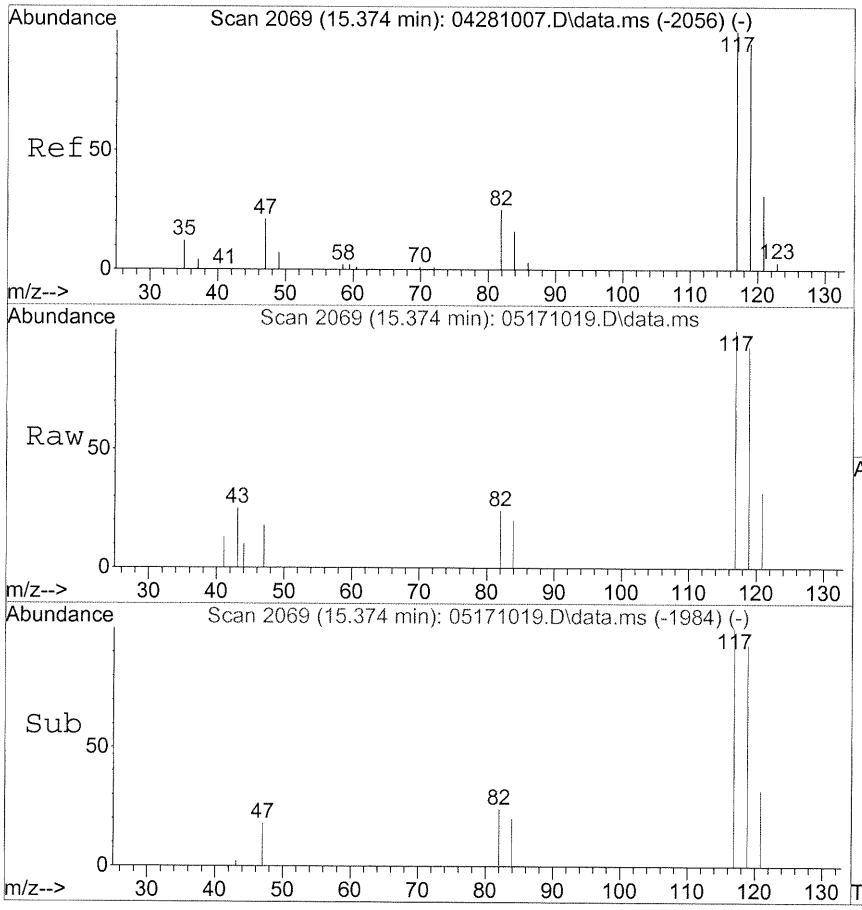


#41
Benzene
Concen: 1.40 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 78 Resp: 121688

Ion	Ratio	Lower	Upper
78	100		
77	23.8	4.1	44.1

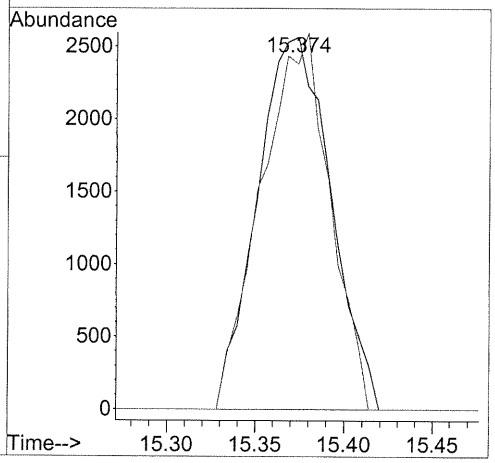


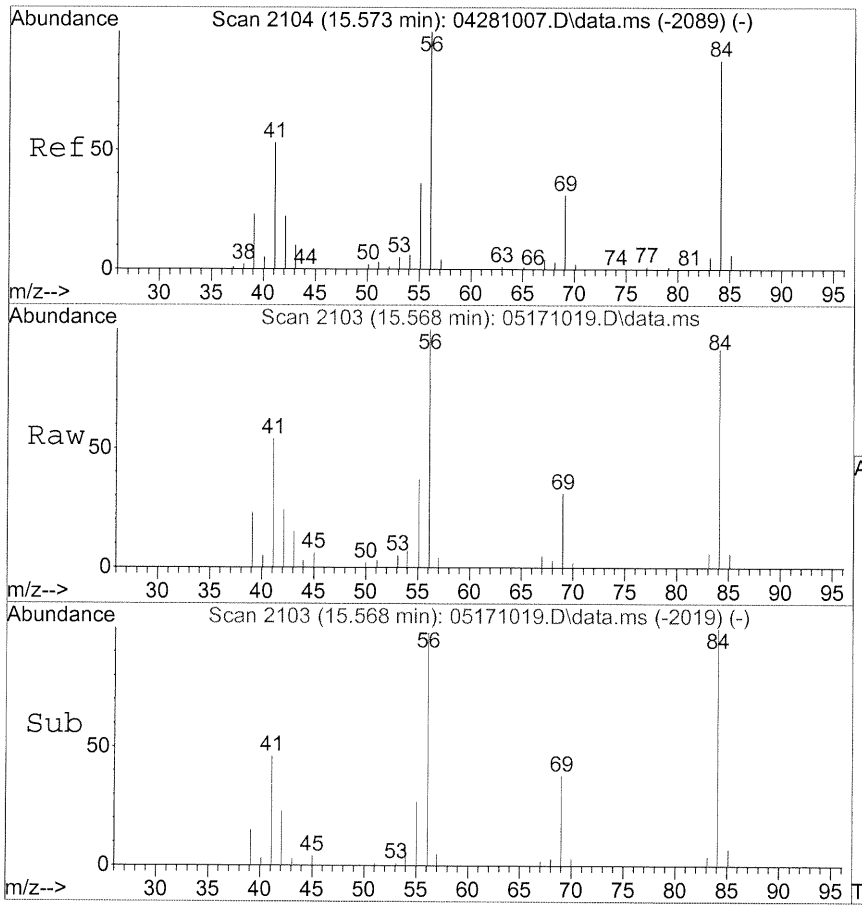


#42
Carbon Tetrachloride
Concen: 0.32 ng
RT: 15.37 min Scan# 2069
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:117 Resp: 7376

Ion	Ratio	Lower	Upper
117	100		
119	94.1	76.1	116.1

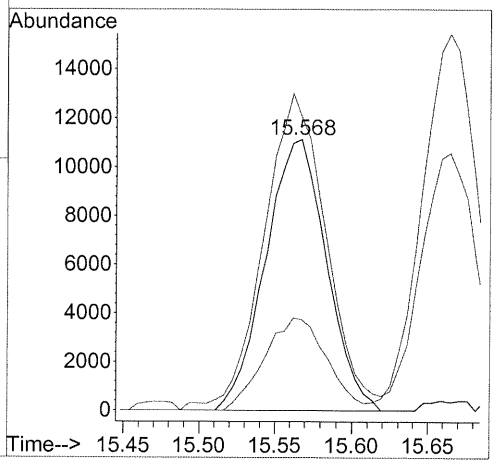


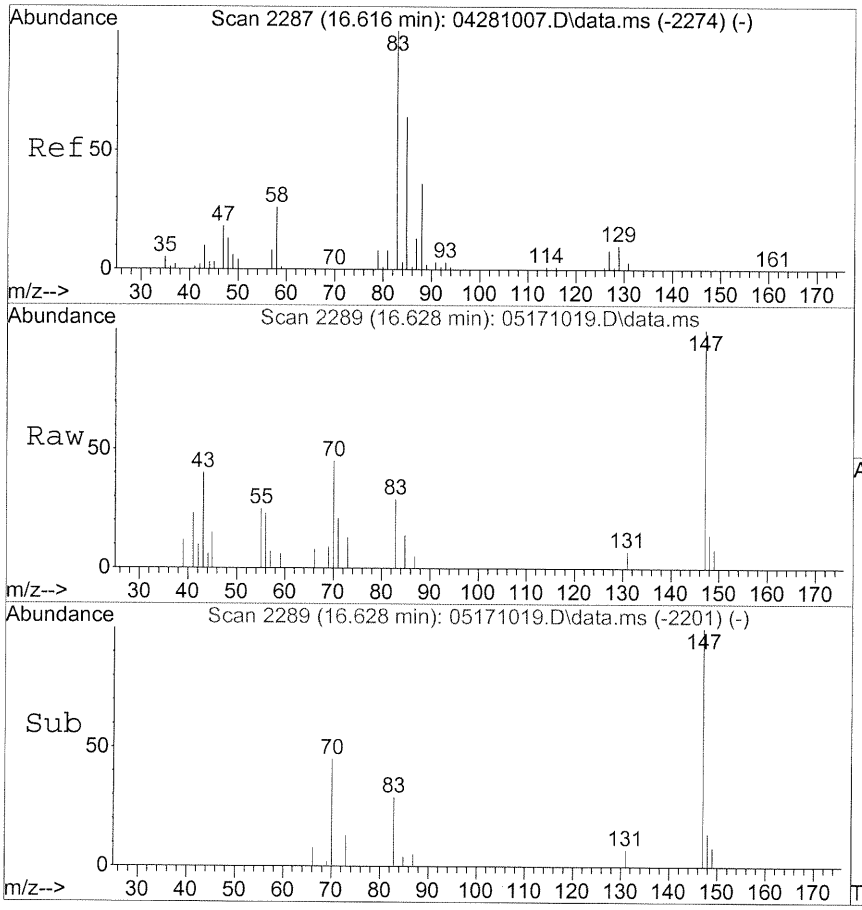


#43
Cyclohexane
Concen: 0.84 ng
RT: 15.57 min Scan# 2103
Delta R.T. -0.023 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 84 Resp: 30738

Ion	Ratio	Lower	Upper
84	100		
69	34.8	14.9	54.9
56	119.6	89.2	129.2

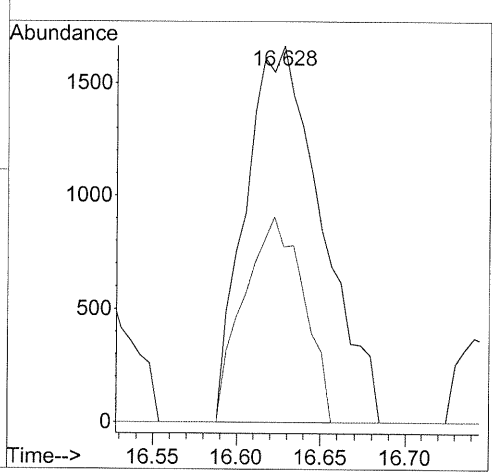


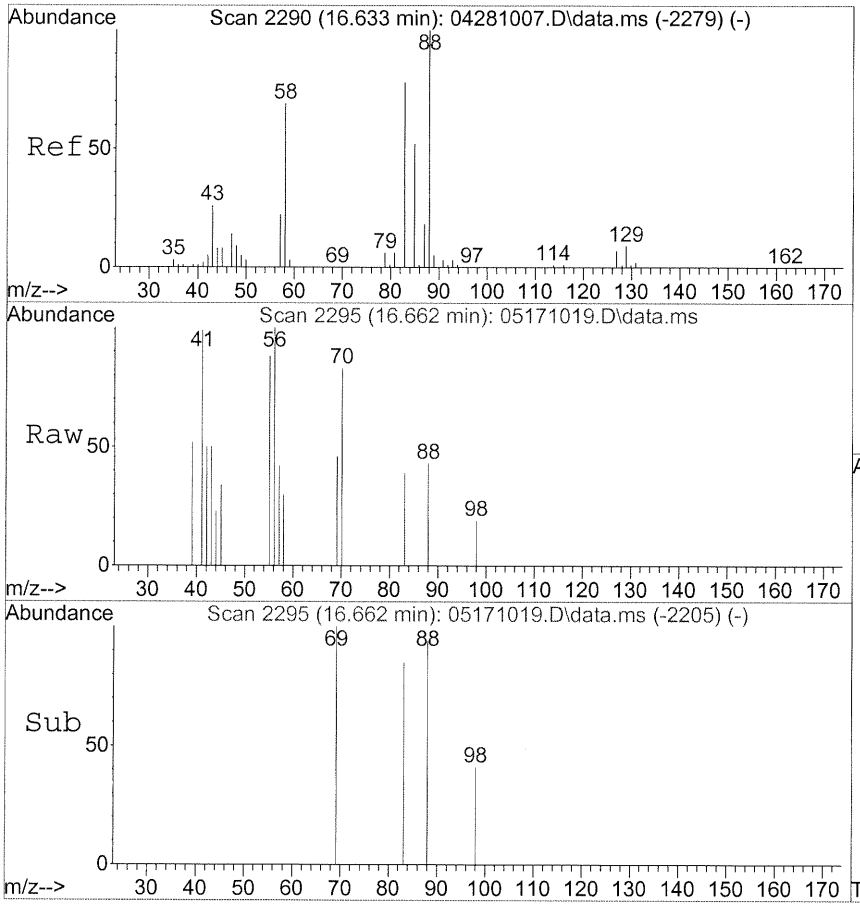


#46
Bromodichloromethane
Concen: 0.20 ng
RT: 16.63 min Scan# 2289
Delta R.T. -0.000 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 83 Resp: 5252

Ion	Ratio	Lower	Upper
83	100		
85	43.0	43.4	83.4#

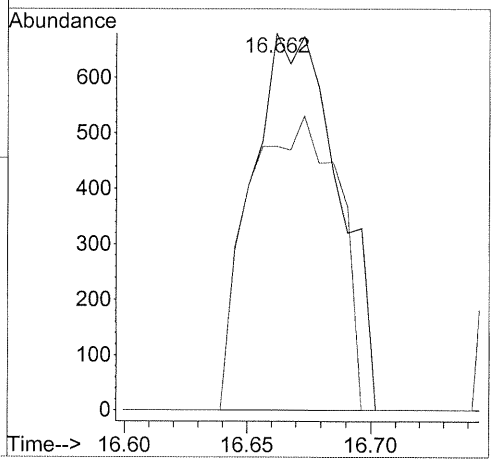


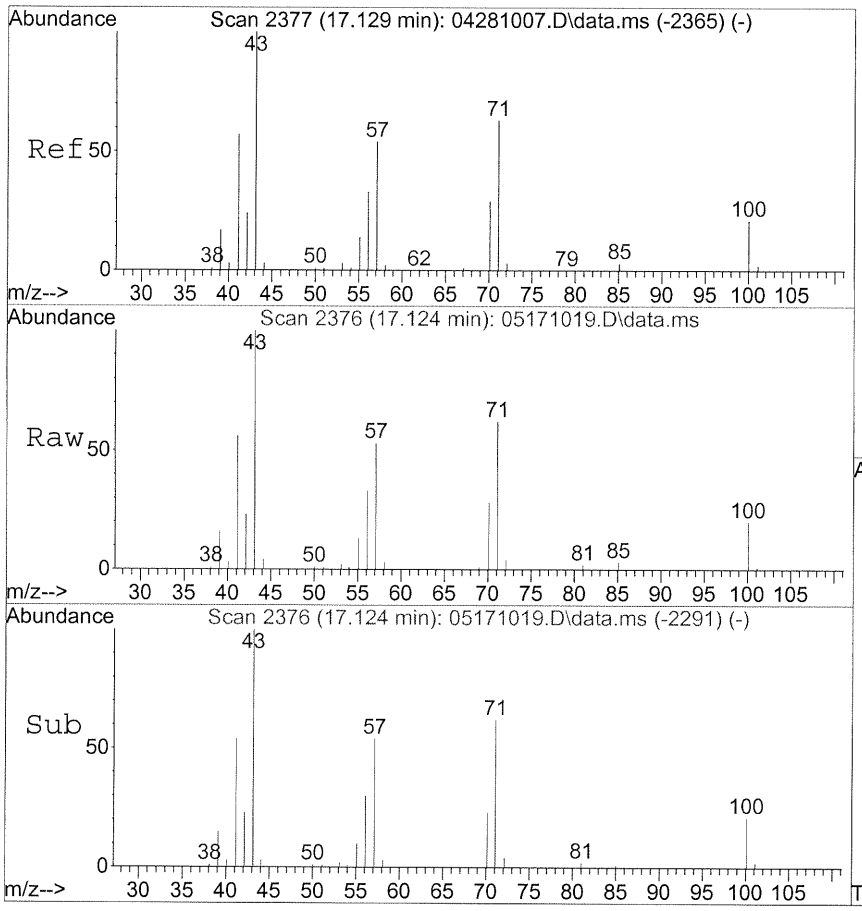


#48
1,4-Dioxane
Concen: 0.10 ng
RT: 16.66 min Scan# 2295
Delta R.T. 0.011 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 88 Resp: 1648

Ion	Ratio	Lower	Upper
88	100		
58	81.2	45.8	85.8

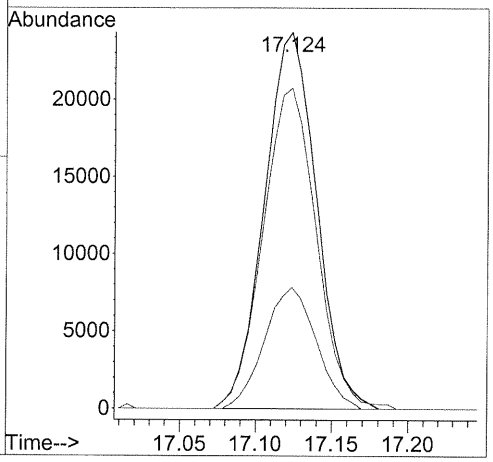


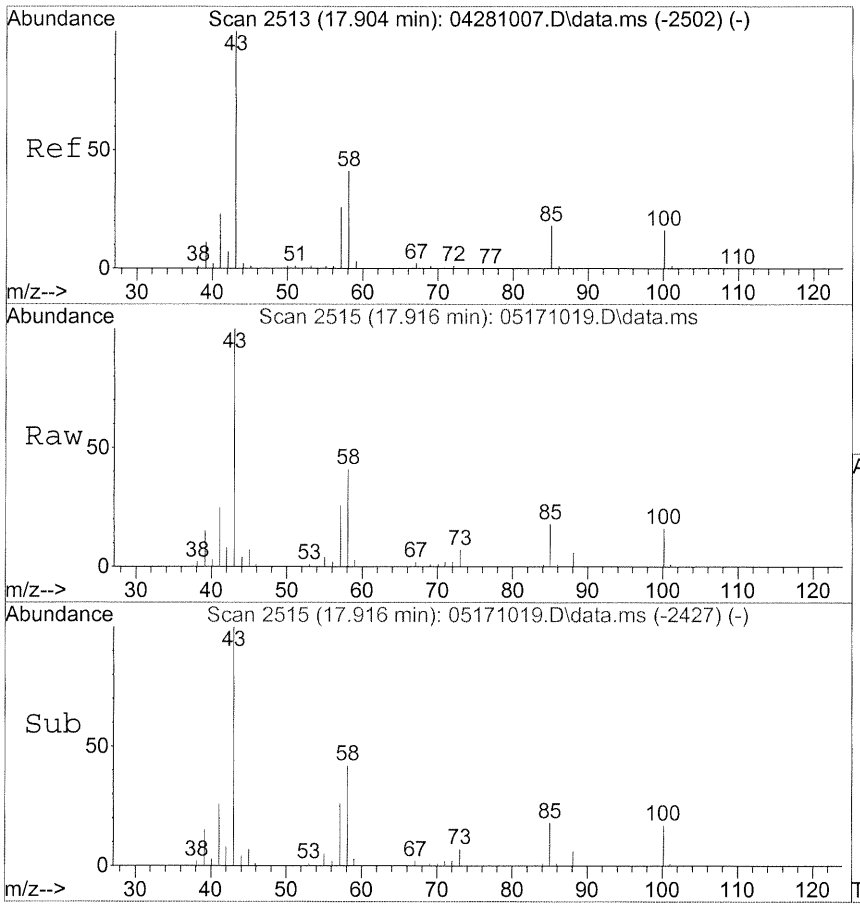


#51
n-Heptane
Concen: 2.32 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 71 Resp: 57756

Ion	Ratio	Lower	Upper
71	100		
57	87.0	63.9	103.9
100	31.9	14.1	54.1

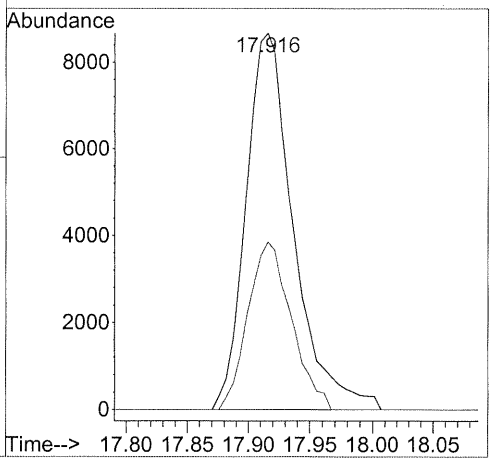


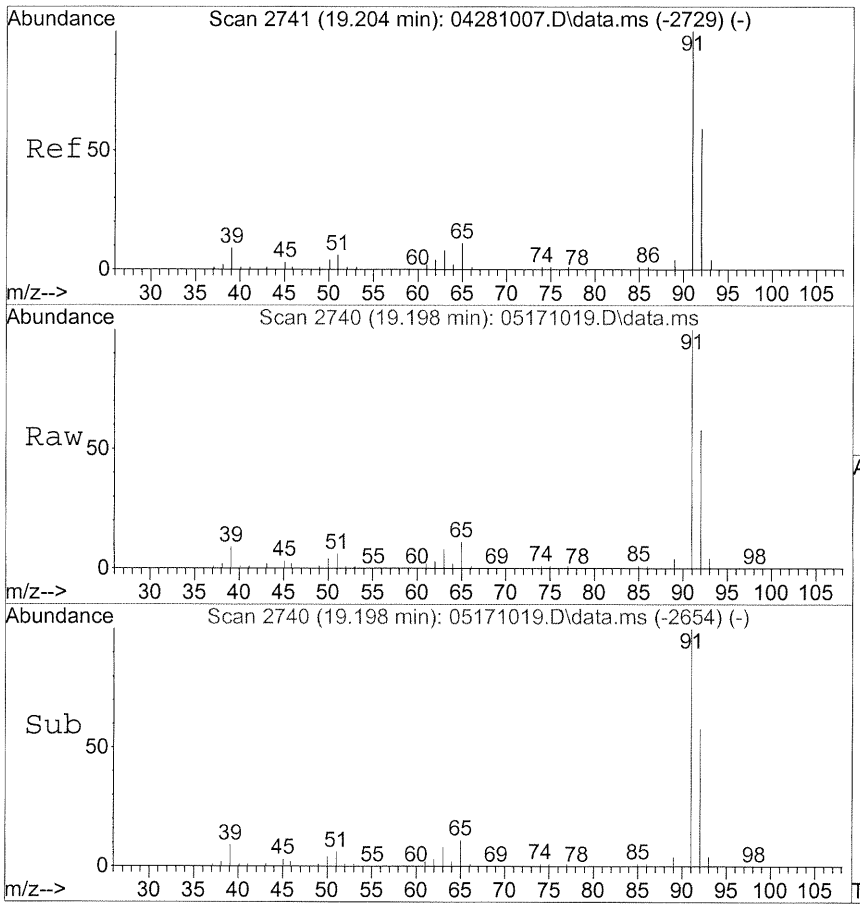


#53
4-Methyl-2-pentanone
Concen: 1.24 ng
RT: 17.92 min Scan# 2515
Delta R.T. -0.000 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 58 Resp: 23325

Ion	Ratio	Lower	Upper
58	100		
85	40.7	26.7	66.7

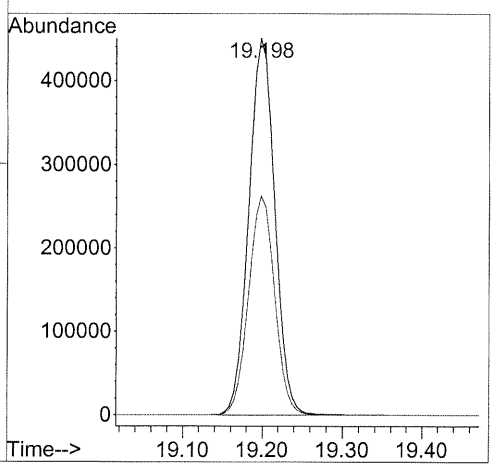


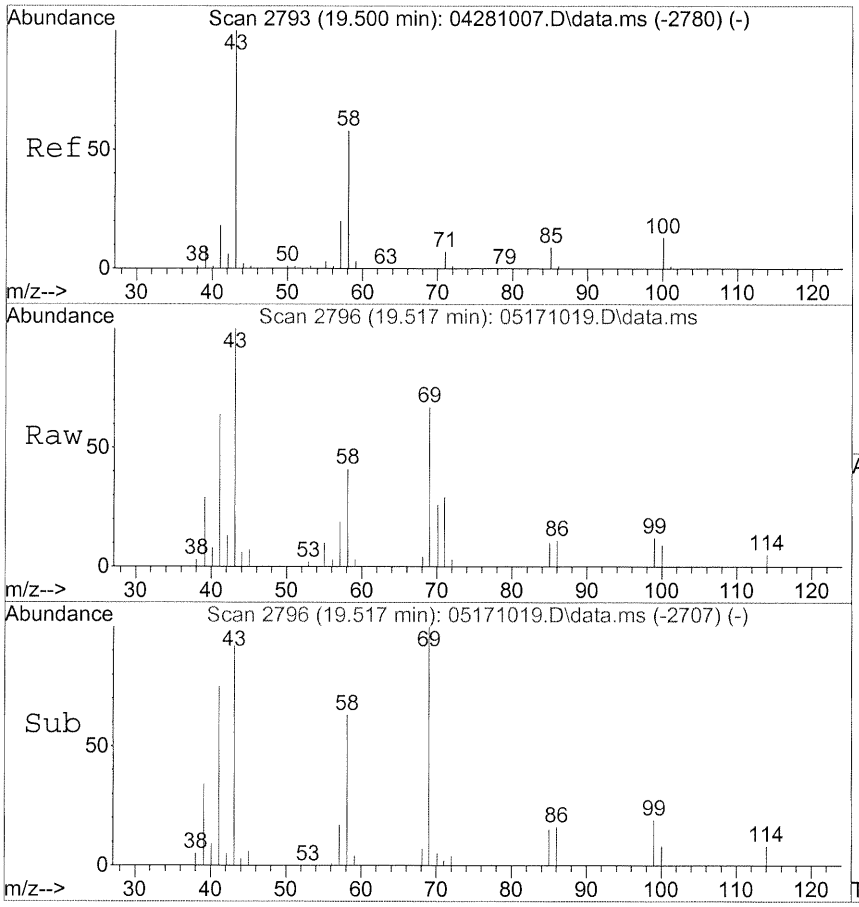


#58
Toluene
Concen: 11.03 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.012 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 91 Resp: 1025110

Ion	Ratio	Lower	Upper
91	100		
92	58.4	39.2	79.2

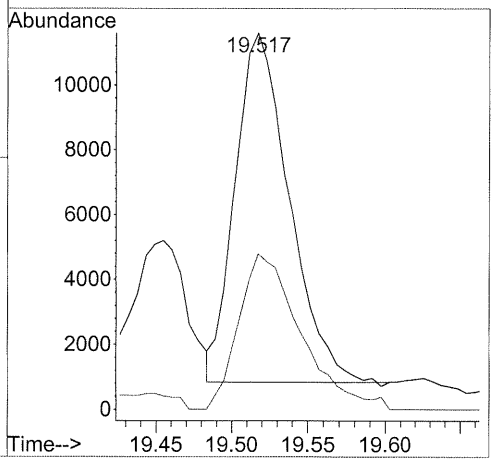


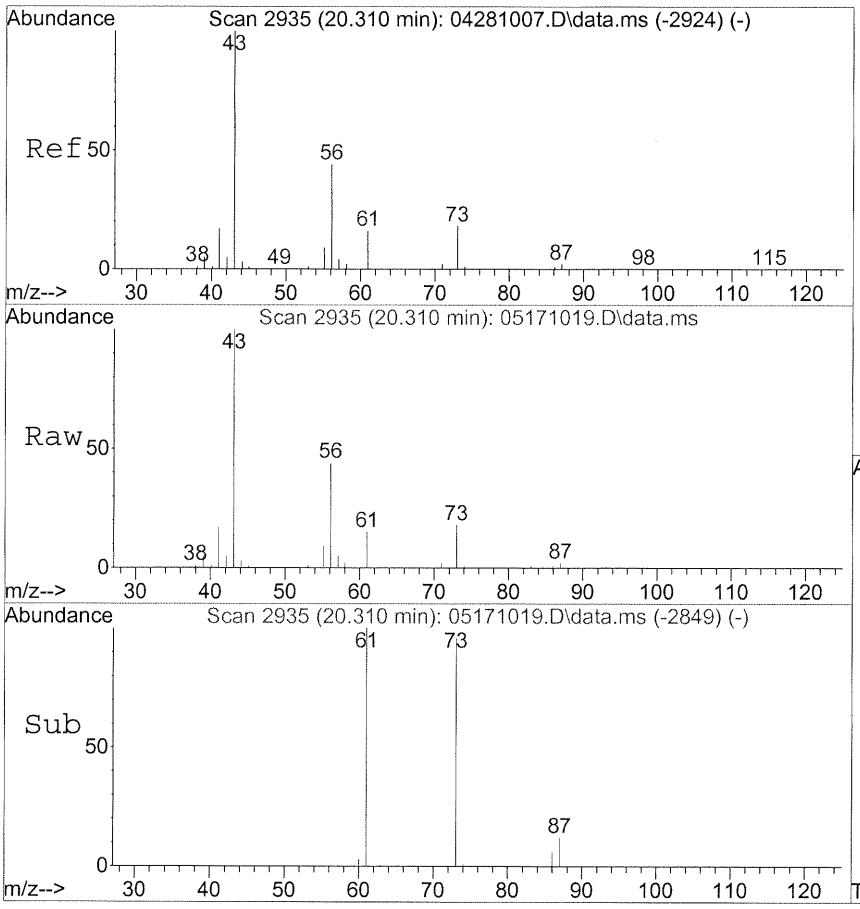


#59
2-Hexanone
Concen: 0.60 ng
RT: 19.52 min Scan# 2796
Delta R.T. 0.005 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 43 Resp: 26619

Ion	Ratio	Lower	Upper
43	100		
58	50.7	38.3	78.3

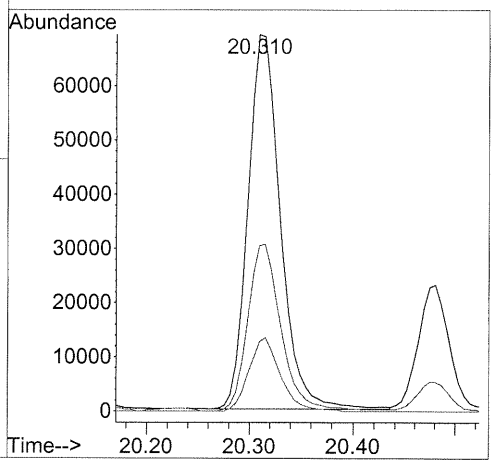


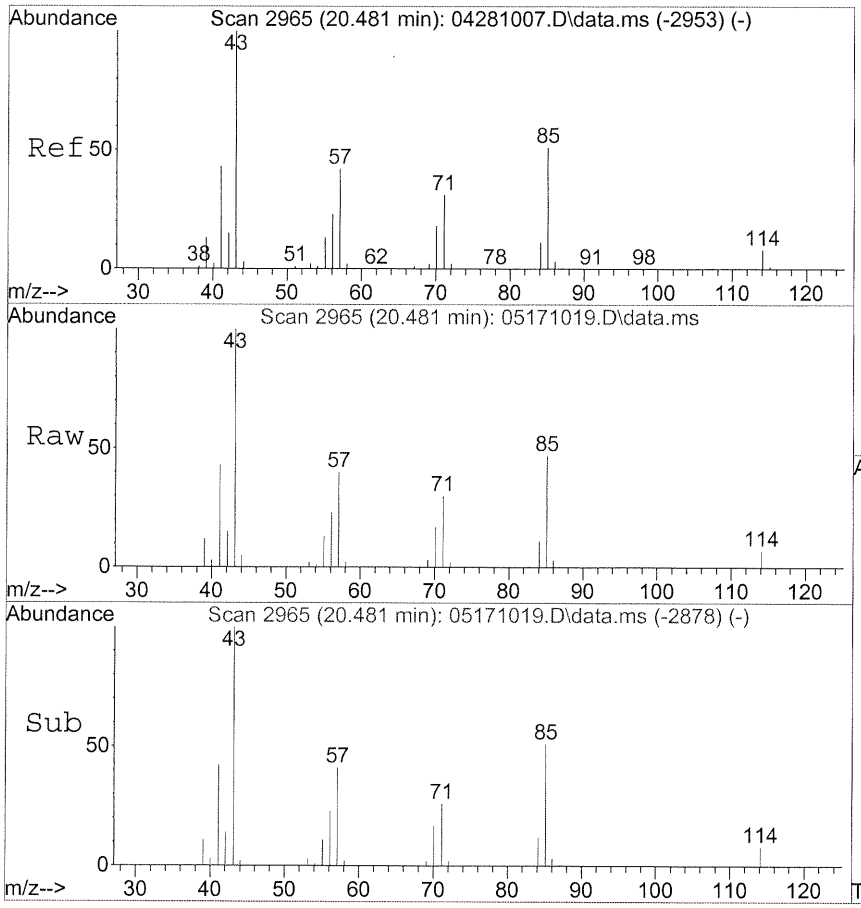


#62
n-Butyl Acetate
Concen: 3.05 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.012 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 43 Resp: 151898

Ion	Ratio	Lower	Upper
43	100		
56	45.9	25.0	65.0
73	18.8	0.0	39.1

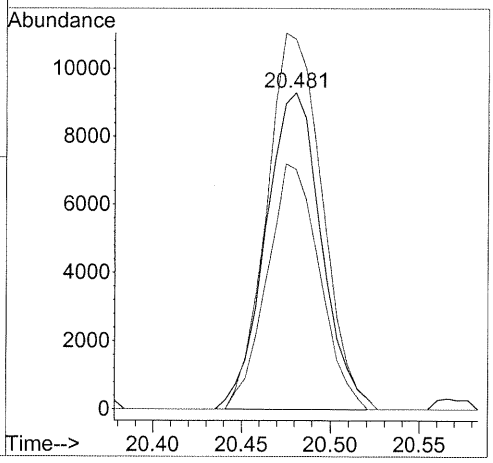


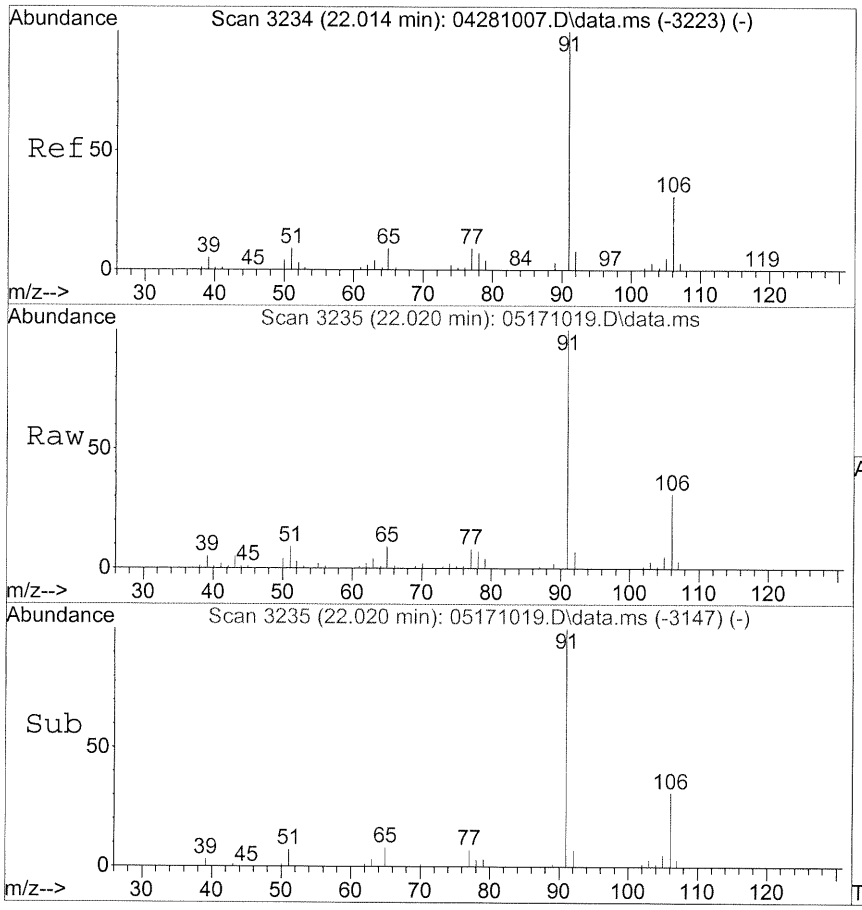


#63
n-Octane
Concen: 0.94 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 57 Resp: 20213

Ion	Ratio	Lower	Upper
57	100		
85	118.0	101.4	152.2
71	72.9	60.7	91.1

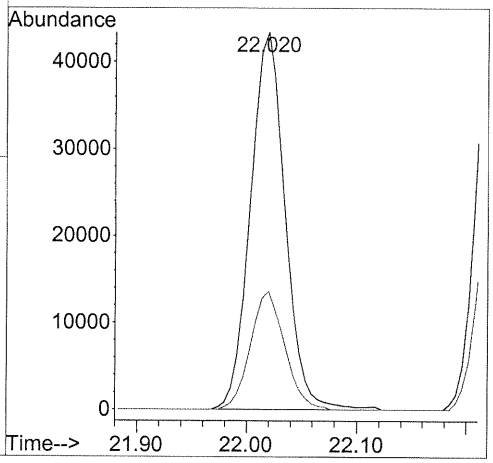


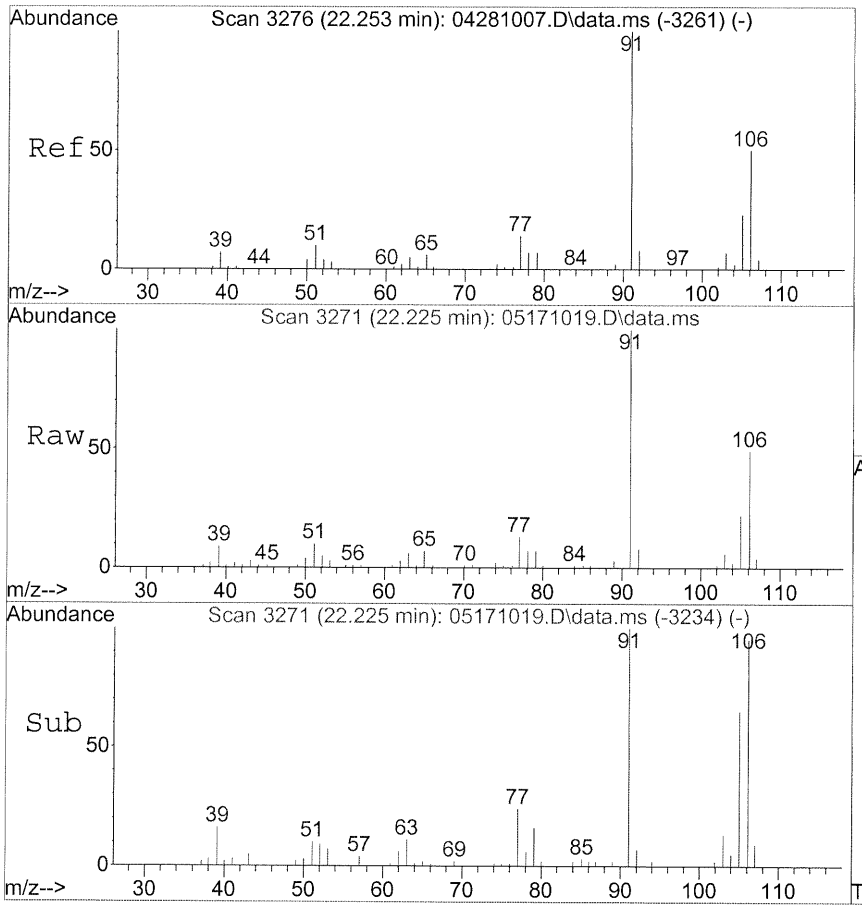


#66
Ethylbenzene
Concen: 0.92 ng
RT: 22.02 min Scan# 3235
Delta R.T. -0.000 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 91 Resp: 95426

Ion	Ratio	Lower	Upper
91	100		
106	30.8	12.2	52.2

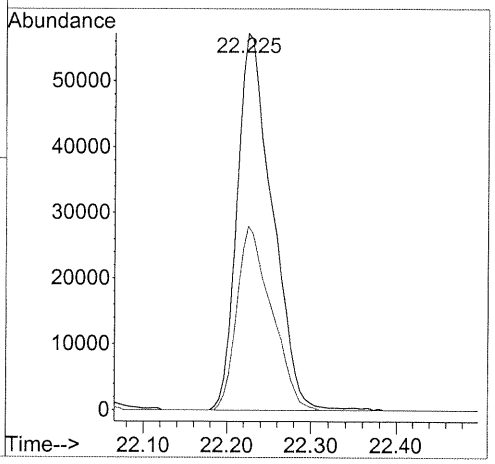


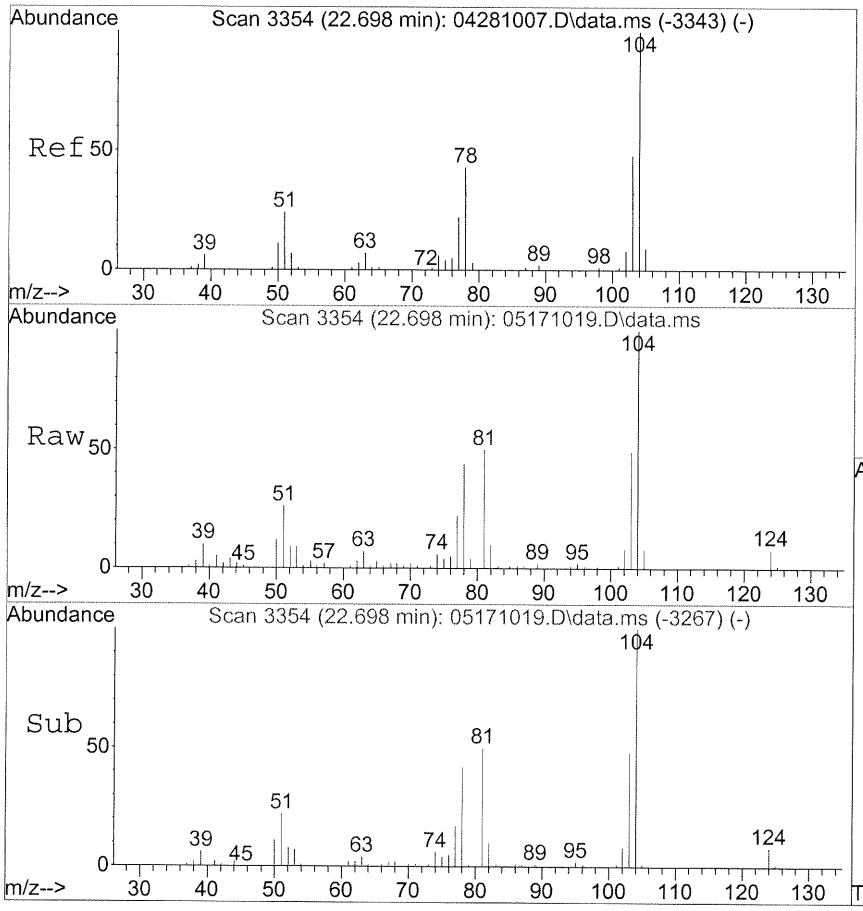


#67
m- & p-Xylenes
Concen: 1.98 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 91 Resp: 166658

Ion	Ratio	Lower	Upper
91	100		
106	48.1	30.6	70.6

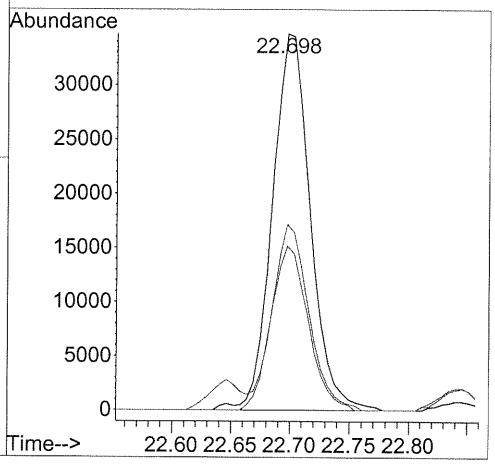


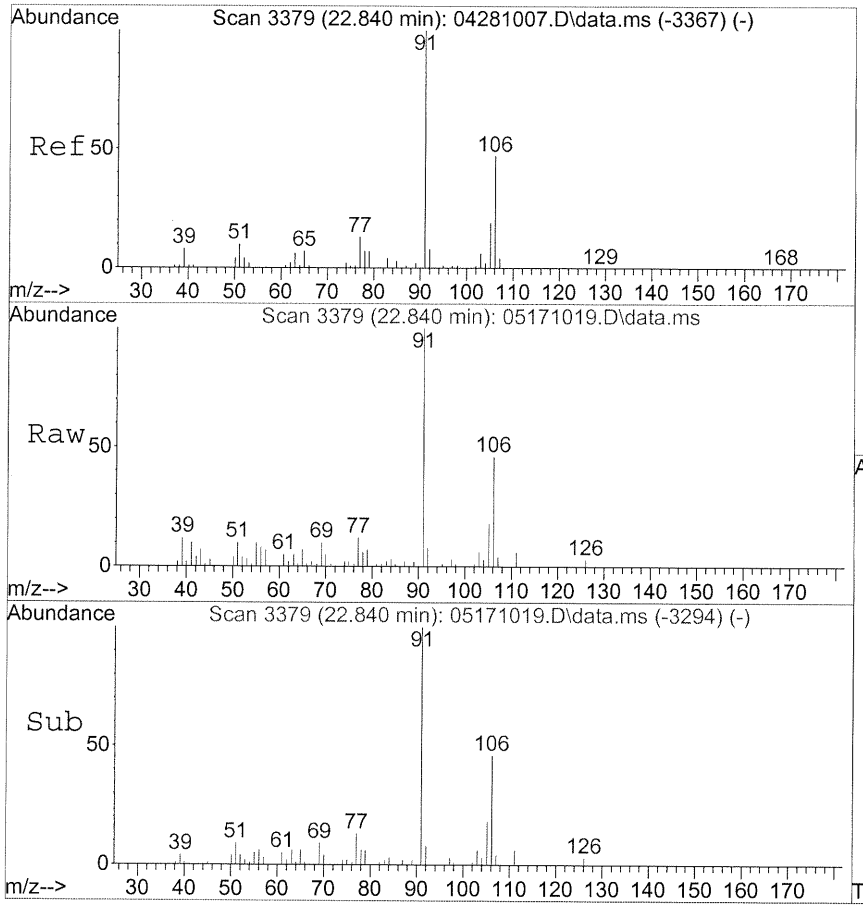


#69
Styrene
Concen: 1.31 ng
RT: 22.70 min Scan# 3354
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:104 Resp: 77569

Ion	Ratio	Lower	Upper
104	100		
78	42.8	22.5	62.5
103	47.8	27.5	67.5

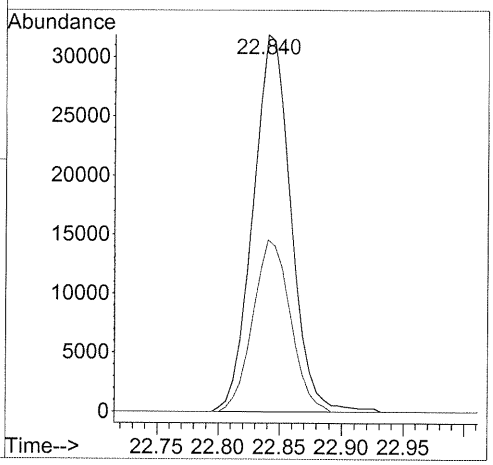


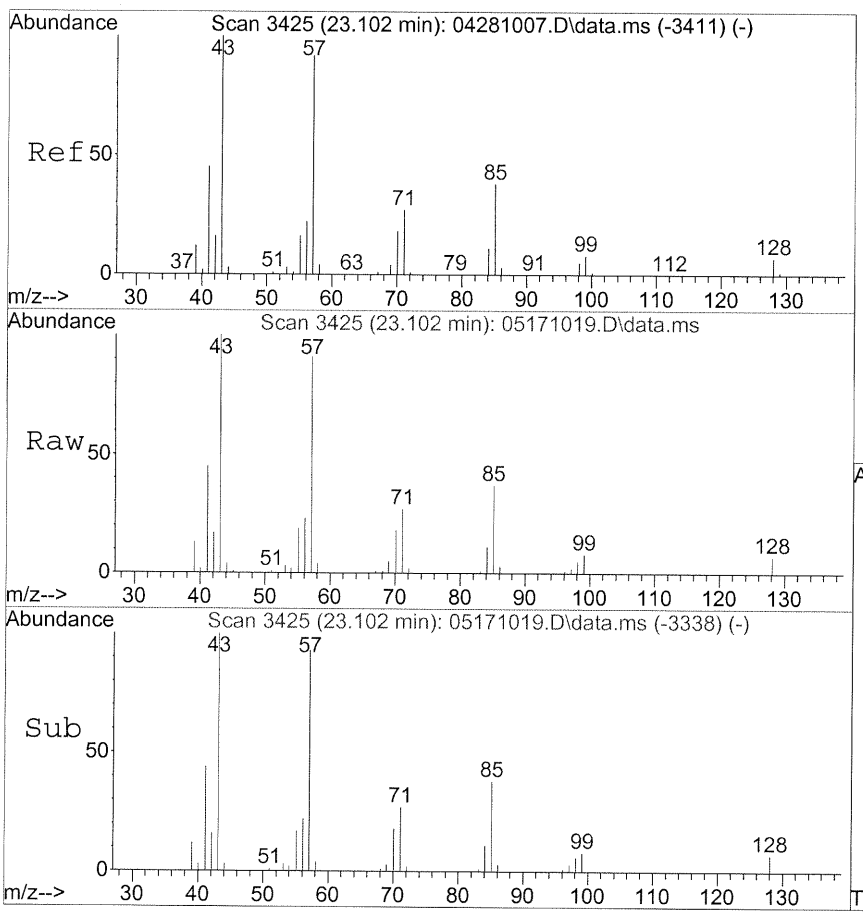


#70
o-Xylene
Concen: 0.77 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 91 Resp: 68916

Ion	Ratio	Lower	Upper
91	100		
106	45.1	27.8	67.8

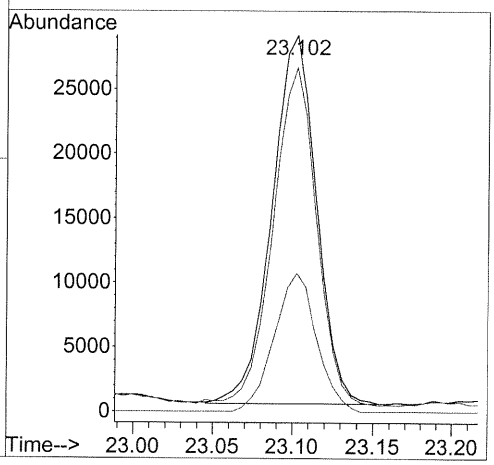


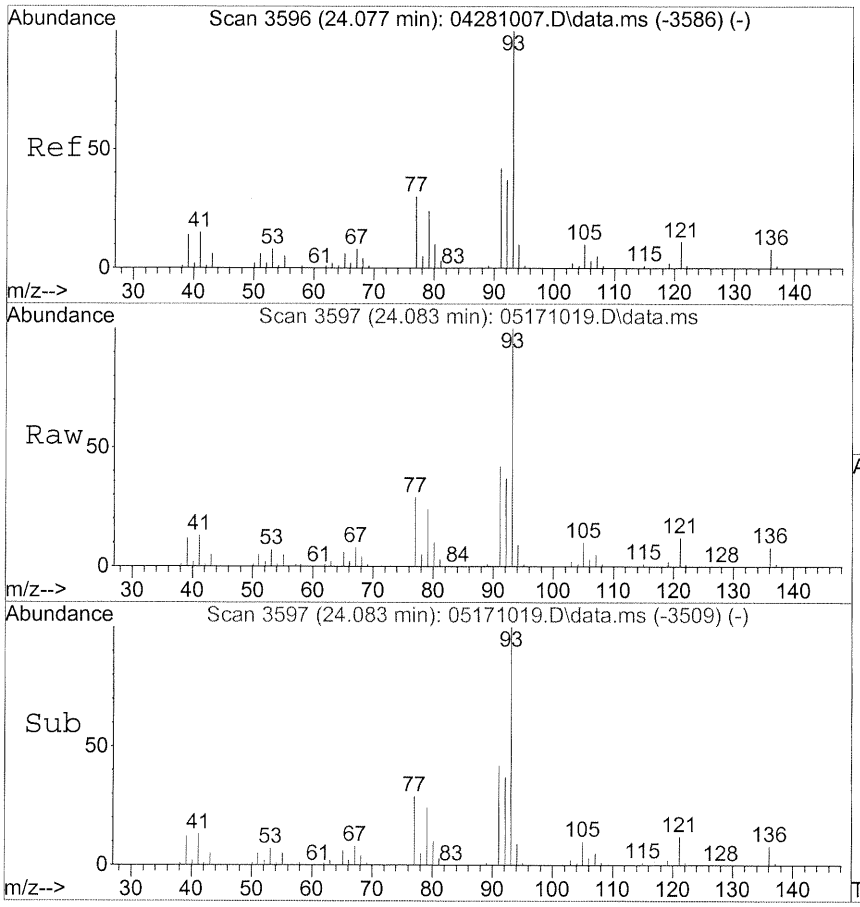


#71
n-Nonane
Concen: 1.14 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 43 Resp: 55694

Ion	Ratio	Lower	Upper
43	100		
57	90.1	74.6	114.6
85	35.5	20.5	60.5

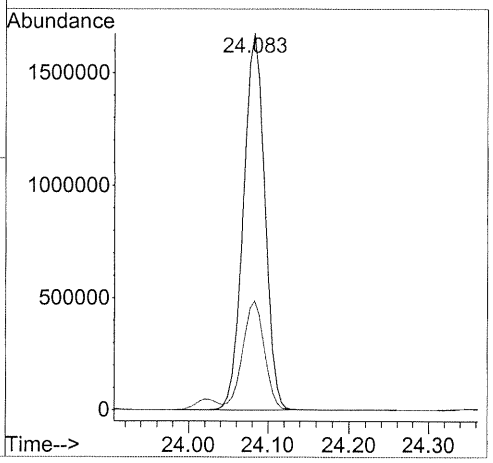


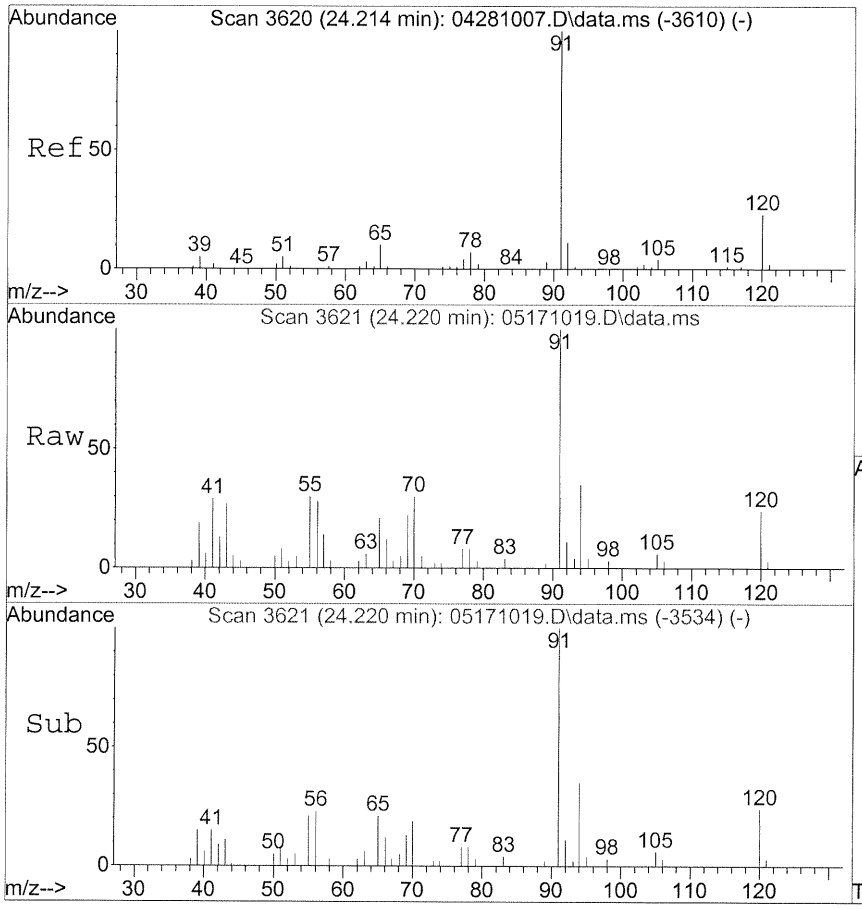


#75
alpha-Pinene
Concen: 61.61 ng
RT: 24.08 min Scan# 3597
Delta R.T. -0.000 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 93 Resp: 3138006

Ion	Ratio	Lower	Upper
93	100		
77	29.5	8.7	48.7

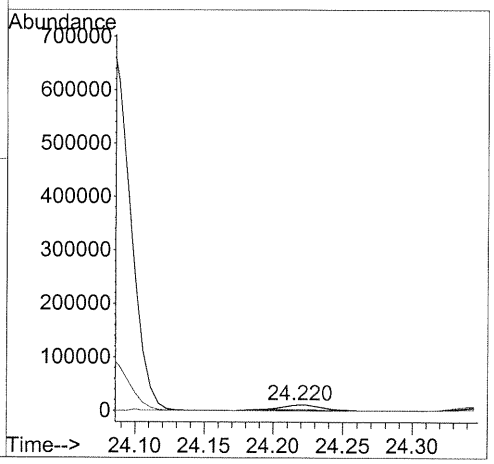


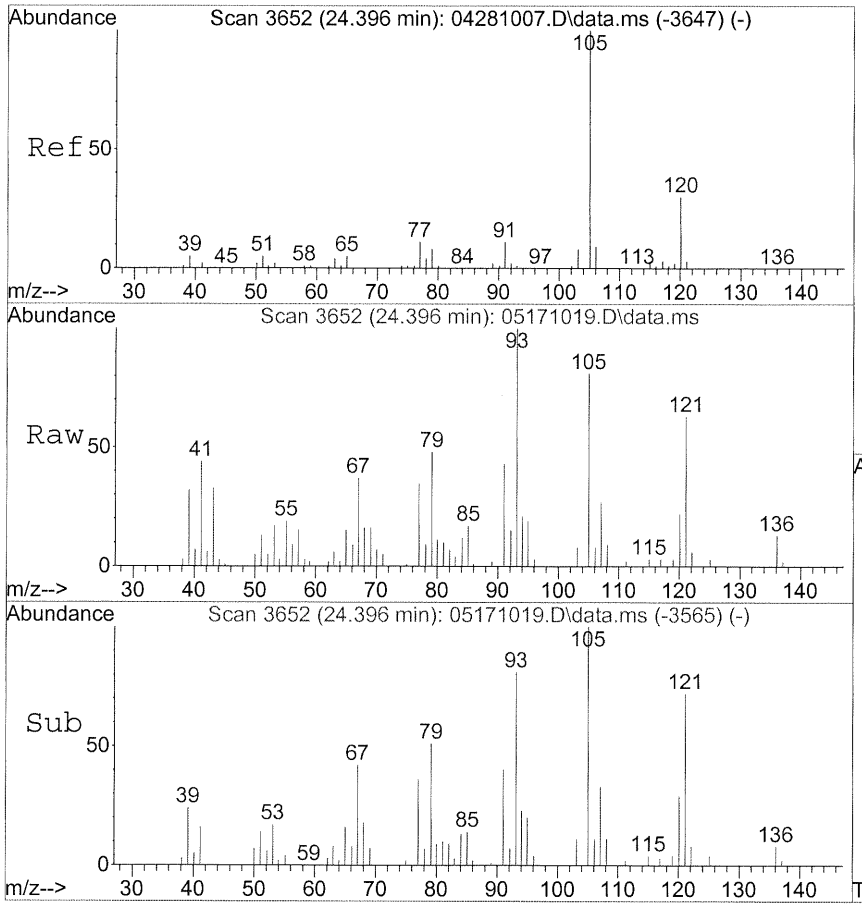


#76
n-Propylbenzene
Concen: 0.18 ng
RT: 24.22 min Scan# 3621
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 91 Resp: 24267

Ion	Ratio	Lower	Upper
91	100		
120	18.3	3.8	43.8
65	31.9	0.0	30.1#

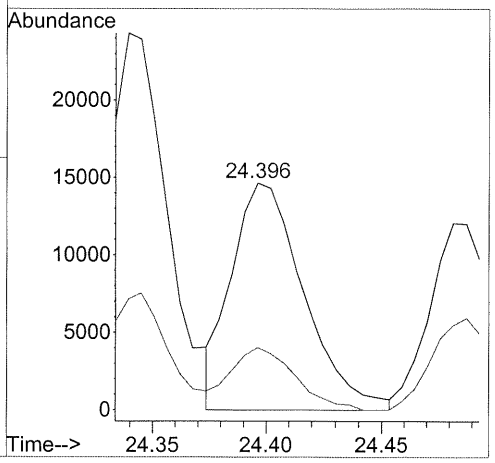


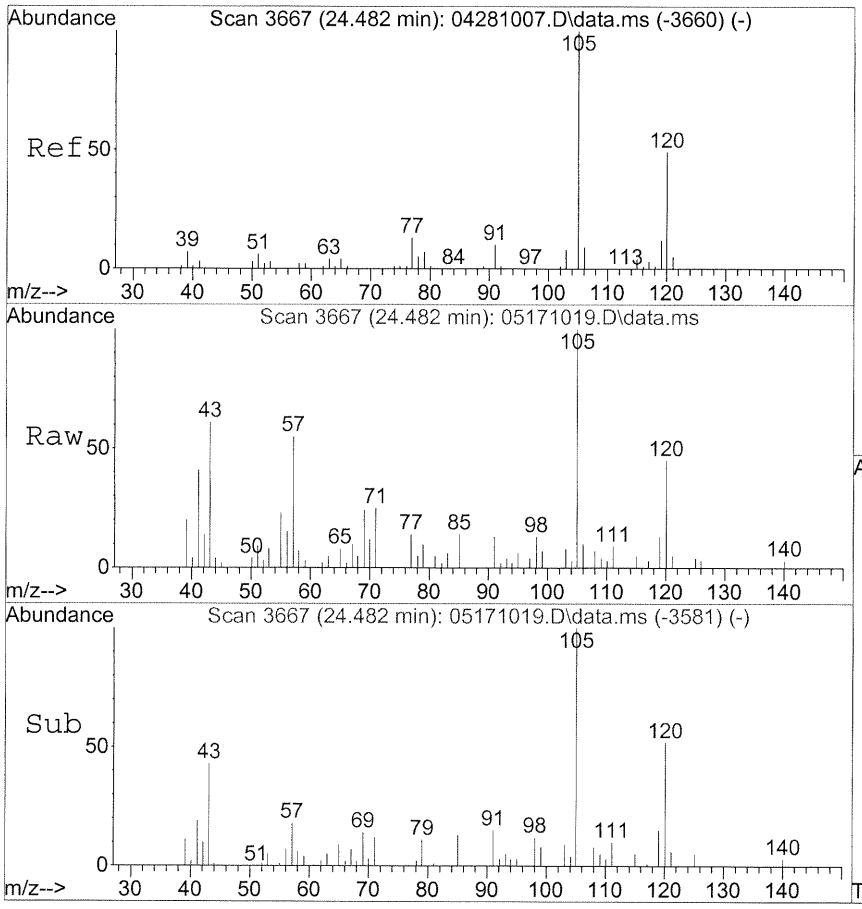


#78
4-Ethyltoluene
Concen: 0.32 ng
RT: 24.40 min Scan# 3652
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:105 Resp: 32289

Ion	Ratio	Lower	Upper
105	100		
120	24.4	10.2	50.2

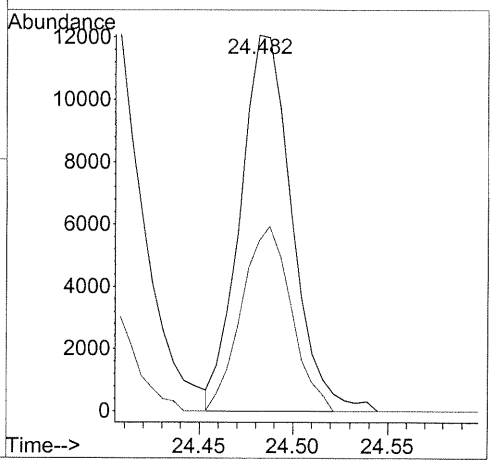


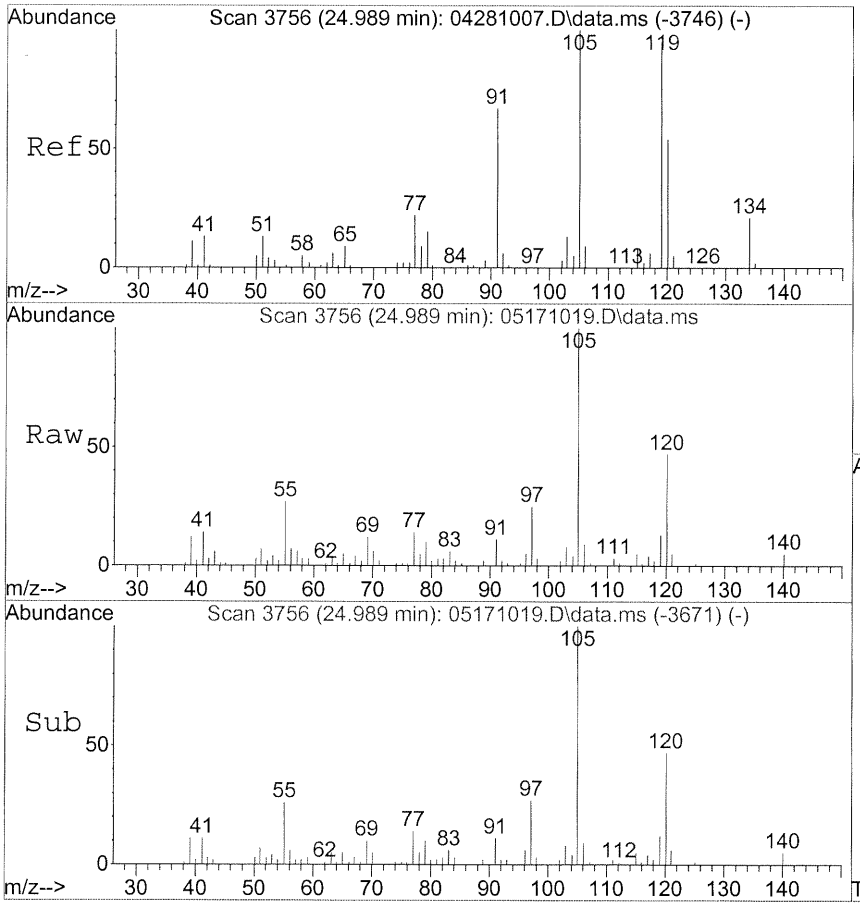


#79
1,3,5-Trimethylbenzene
Concen: 0.27 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.012 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:105 Resp: 23283

Ion	Ratio	Lower	Upper
105	100		
120	47.0	30.4	70.4

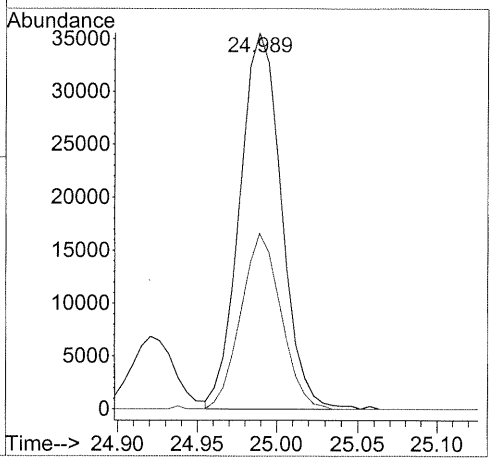


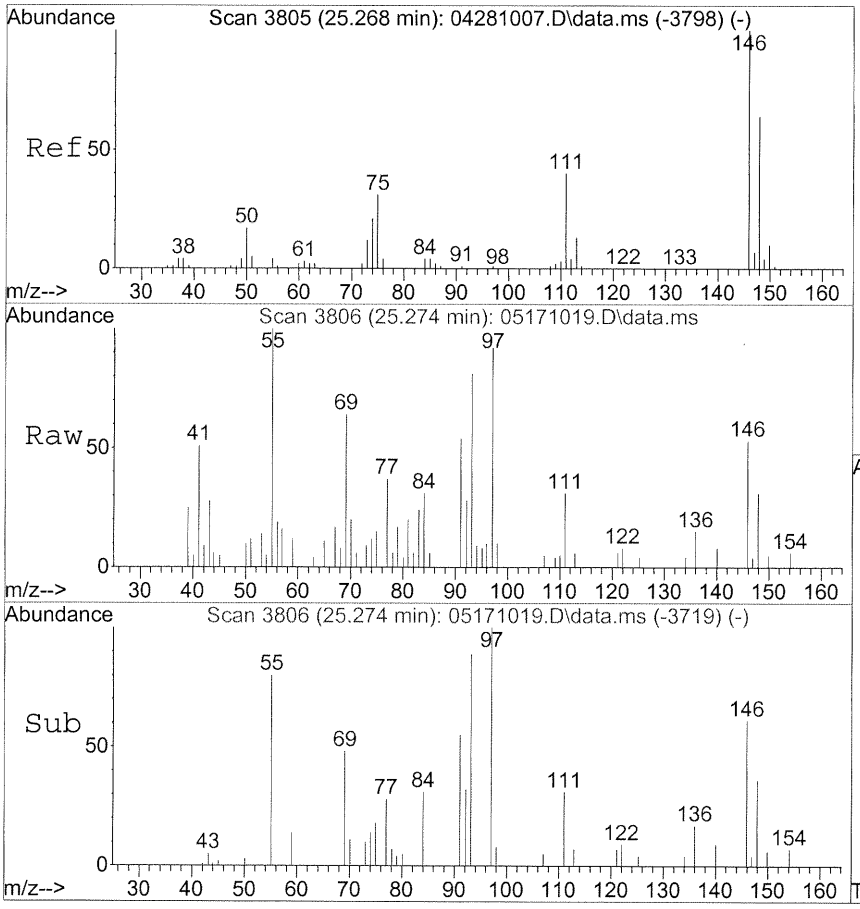


#82
1,2,4-Trimethylbenzene
Concen: 0.73 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:105 Resp: 65112

Ion	Ratio	Lower	Upper
105	100		
120	44.7	35.1	75.1

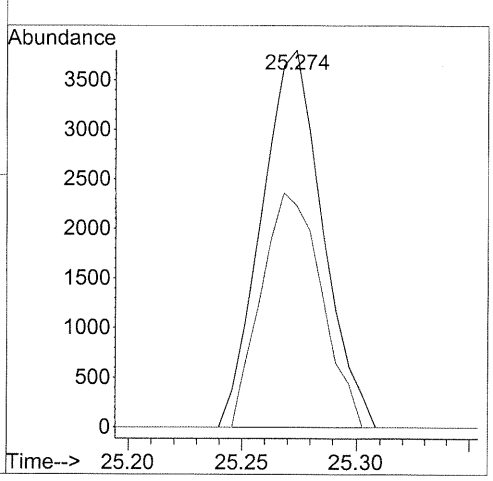


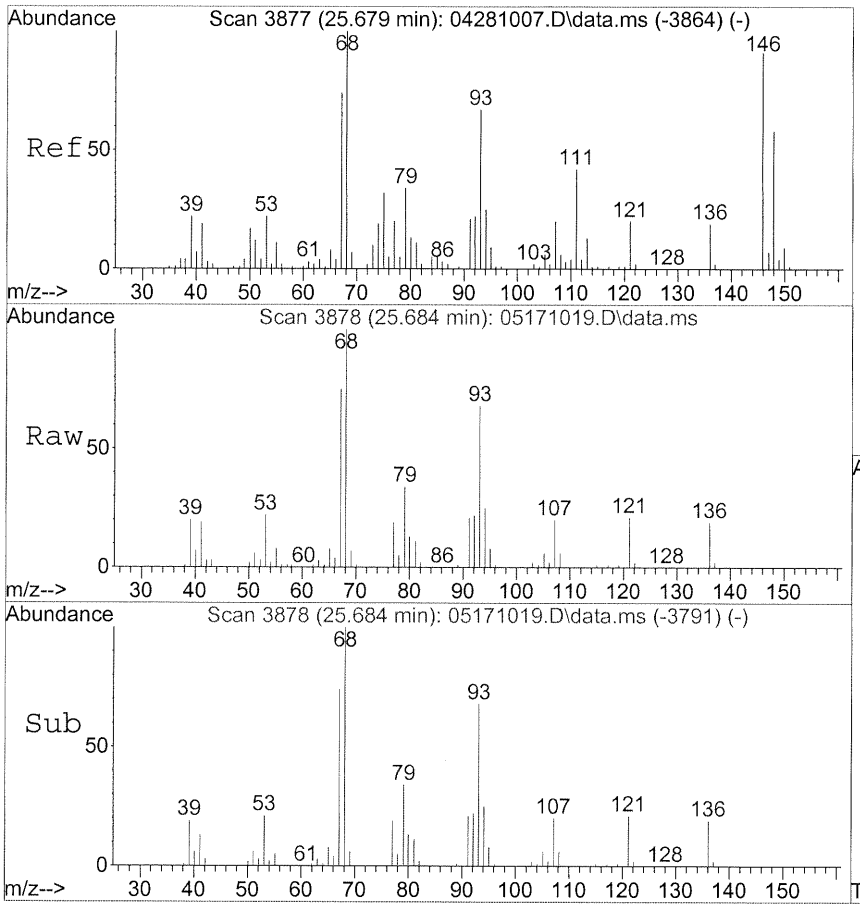


#86
1,4-Dichlorobenzene
Concen: 0.16 ng
RT: 25.27 min Scan# 3806
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:146 Resp: 7070

Ion	Ratio	Lower	Upper
146	100		
148	61.4	44.0	84.0

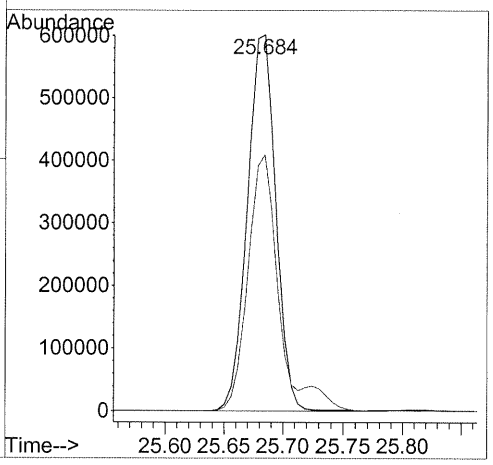


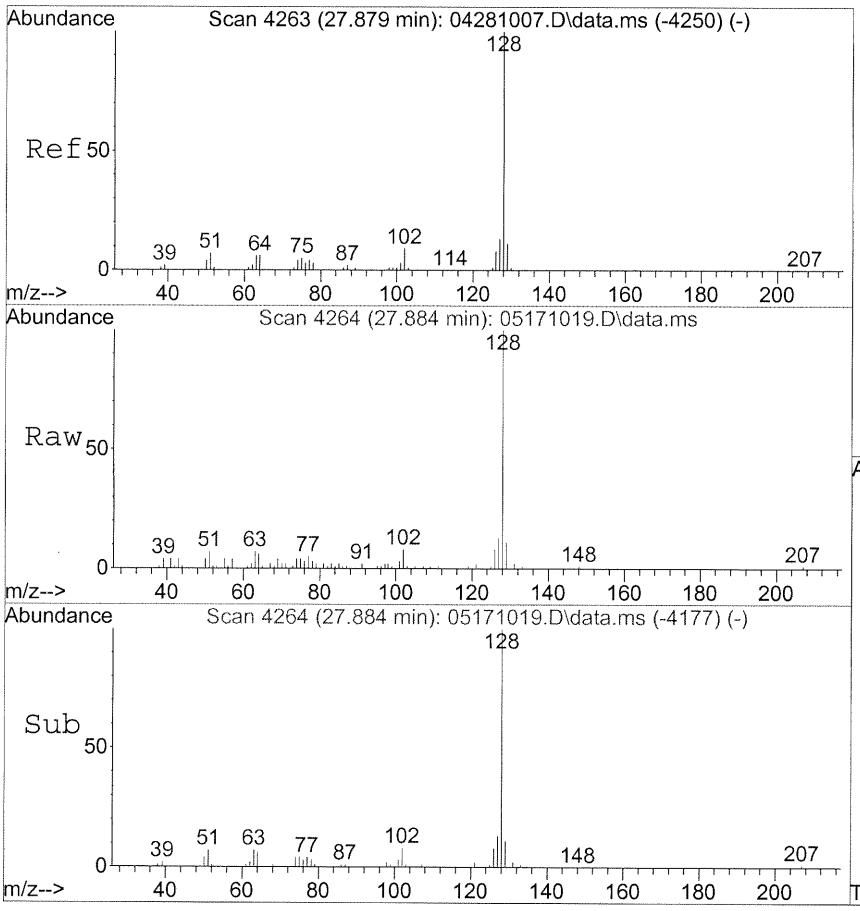


#91
d-Limonene
Concen: 28.94 ng
RT: 25.68 min Scan# 3878
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion: 68 Resp: 1012112

Ion	Ratio	Lower	Upper
68	100		
93	73.7	51.5	91.5

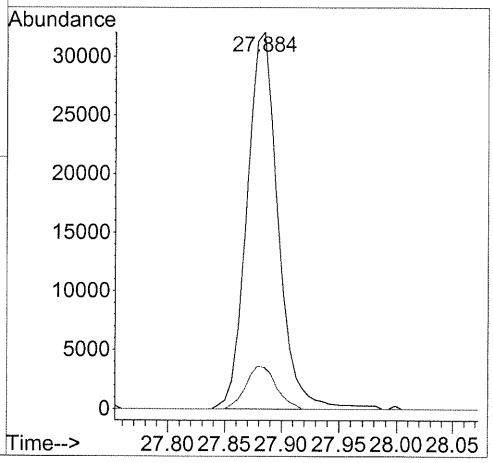




#95
Naphthalene
Concen: 0.62 ng
RT: 27.88 min Scan# 4264
Delta R.T. -0.006 min
Lab File: 05171019.D
Acq: 17 May 2010 23:18

Tgt Ion:128 Resp: 61174

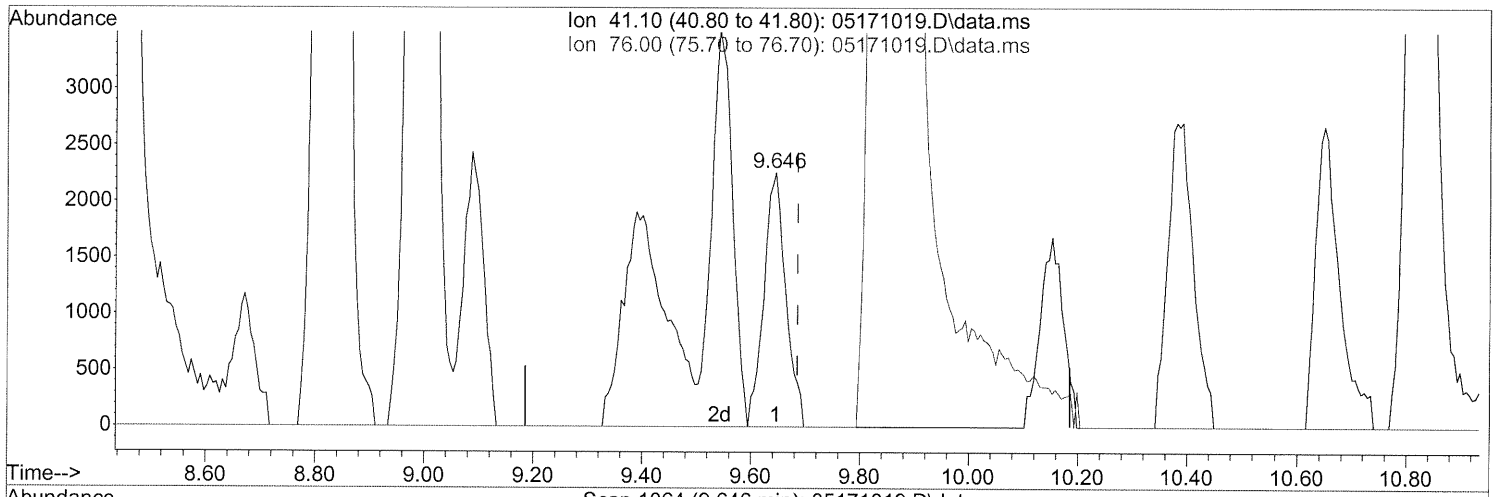
Ion	Ratio	Lower	Upper
128	100		
129	10.9	0.0	31.1

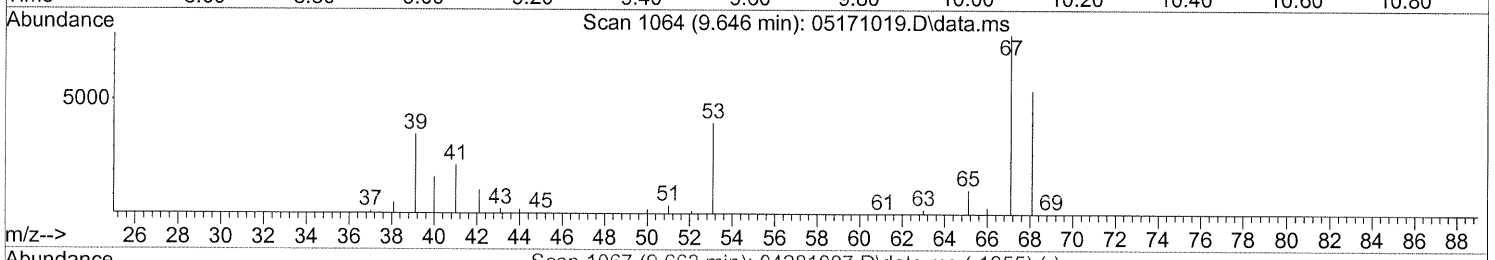


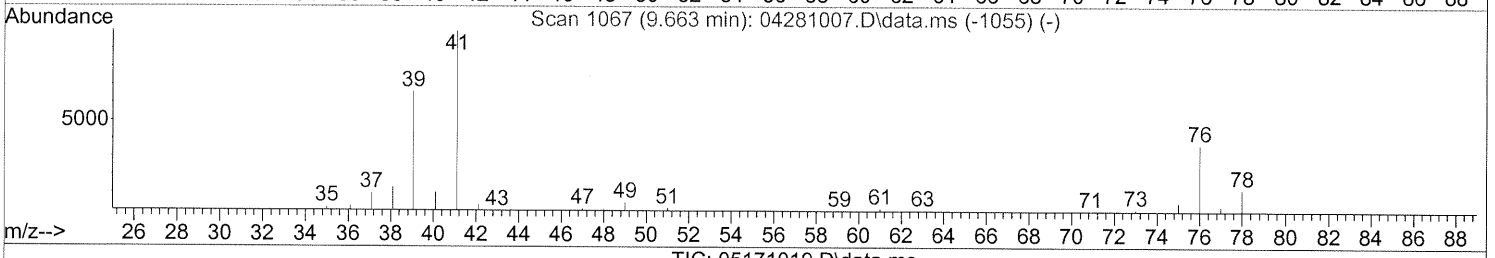
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 18 08:05:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171019.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.646min (-0.040) 0.23ng

response 6327

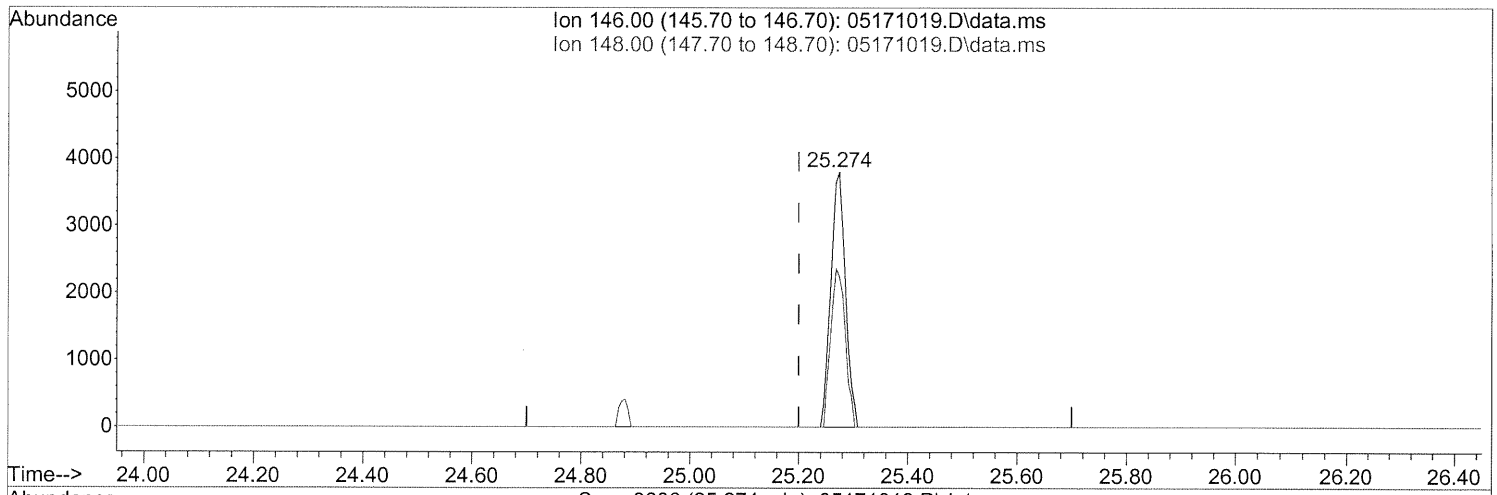
TP

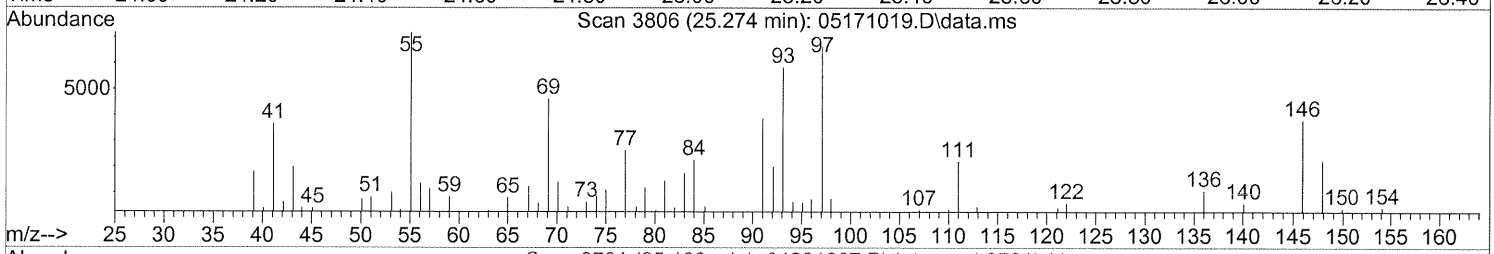
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

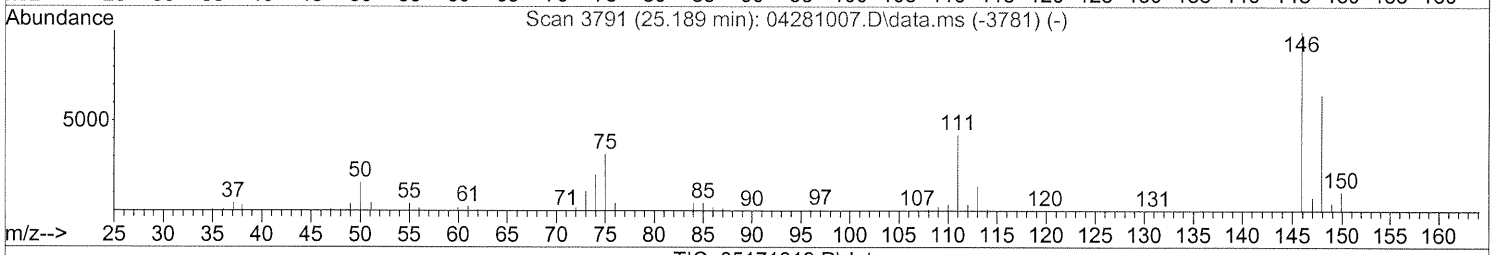
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 18 08:05:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171019.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.274min (+0.074) 0.17ng

response 7070

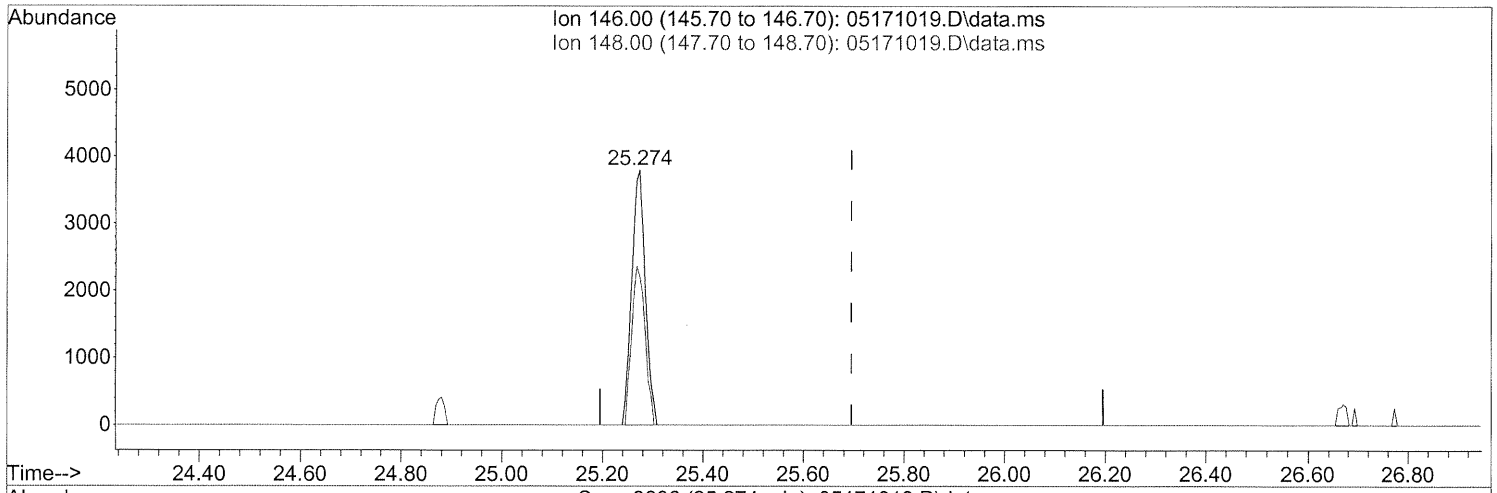
Ion	Exp%	Act%
146.00	100	100
148.00	64.30	61.36
0.00	0.00	0.00
0.00	0.00	0.00

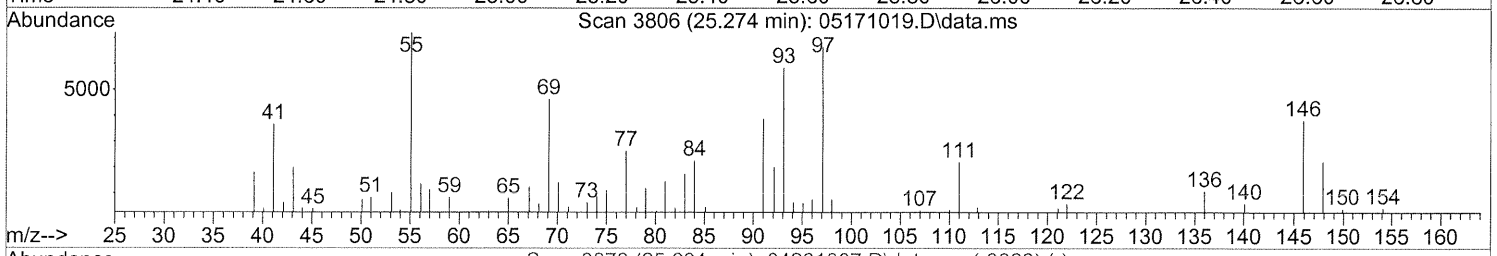
FP

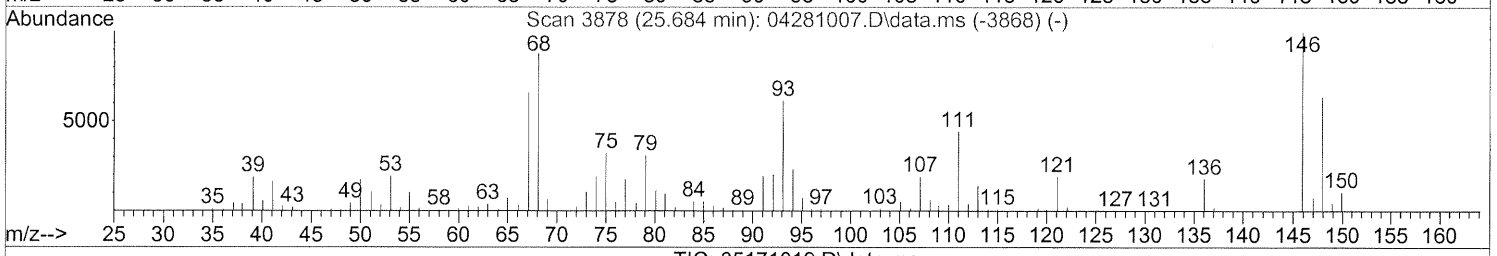
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 18 08:05:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171019.D\data.ms

(90) 1,2-Dichlorobenzene (T)

25.274min (-0.422) 0.17ng

response 7070

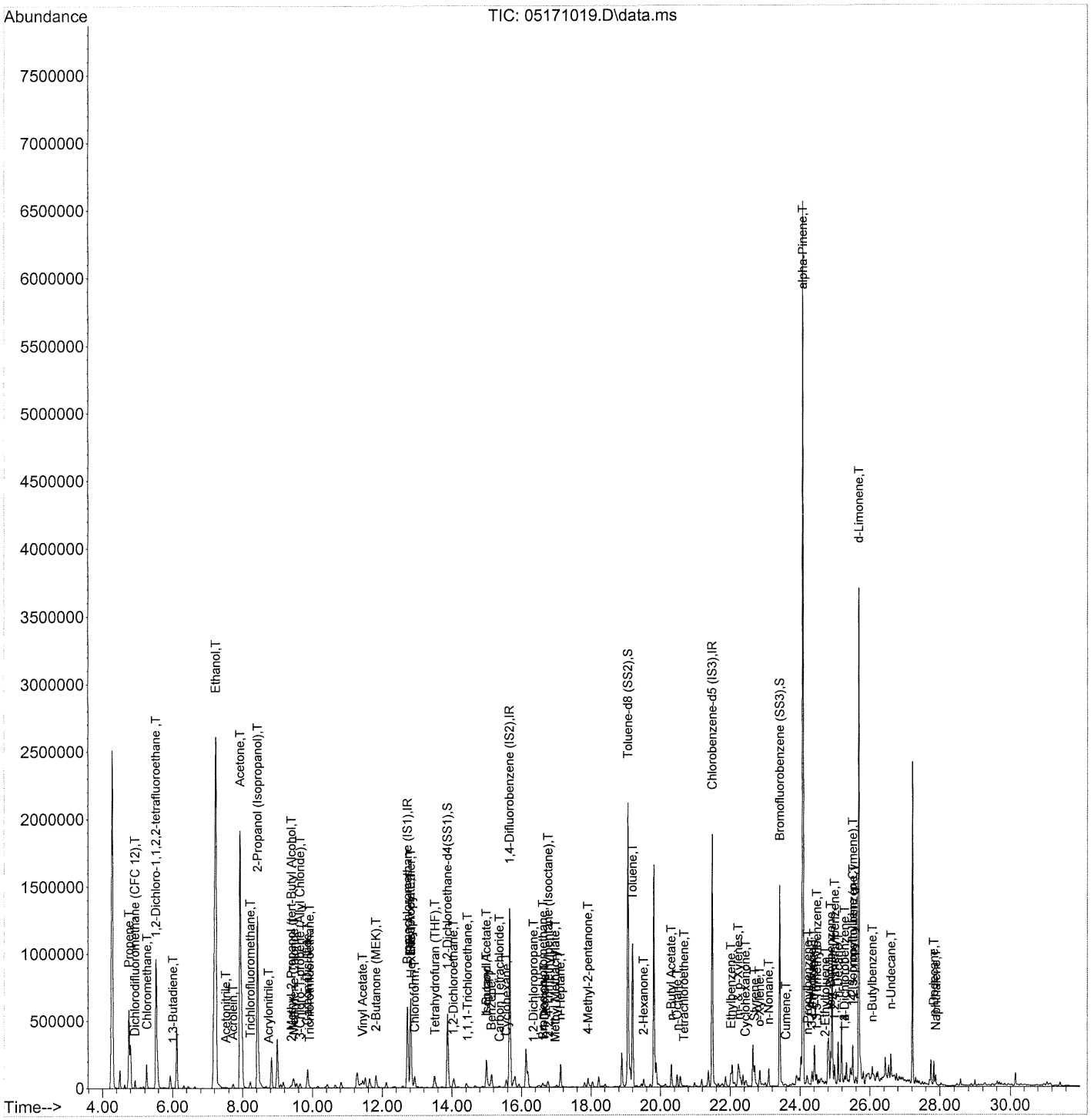
Ion	Exp%	Act%
146.00	100	100
148.00	64.80	61.36
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 18 08:05:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 18 08:05:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	311952	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1558456	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	785093	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	551385	23.752	ng		-0.03
Spiked Amount 25.000			Recovery = 95.00%				
57) Toluene-d8 (SS2)	19.07	98	1840114	24.568	ng		0.00
Spiked Amount 25.000			Recovery = 98.28%				
73) Bromofluorobenzene (SS3)	23.42	174	484697	25.349	ng		0.00
Spiked Amount 25.000			Recovery = 101.40%				
Target Compounds							Qvalue
2) Propene	4.76	42	280893	11.543	ng	#	84
3) Dichlorodifluoromethan...	4.93	85	59806	1.432	ng		100
4) Chloromethane	5.27	50	14746	0.478	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	5.52	135	1056	0.051	ng	#	42
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	6.02	54	2511	0.102	ng	#	82
8) Bromomethane	6.51	94	696	N.D.			
9) Chloroethane	6.85	64	364	N.D.			
10) Ethanol	7.24	45	5803626	437.472	ng		99
11) Acetonitrile	7.52	41	8926	0.266	ng		95
12) Acrolein	7.73	56	39900	3.858	ng		97
13) Acetone	7.94	58	1230188	75.854	ng		95
14) Trichlorofluoromethane	8.22	101	52382	1.449	ng		99
15) 2-Propanol (Isopropanol)	8.43	45	2410888	47.949	ng		98
16) Acrylonitrile	8.75	53	2299	0.095	ng		92
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.40	59	33072	0.637	ng	#	75
19) Methylene Chloride	9.47	84	26773	1.253	ng		94
20) 3-Chloro-1-propene (Al...	9.65	41	6327	0.227	ng	#	36
21) Trichlorotrifluoroethane	9.91	151	4476	0.293	ng		95
22) Carbon Disulfide	9.86	76	310747	4.080	ng		98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.28	73	1071	N.D.			
26) Vinyl Acetate	11.44	86	23110	4.721	ng	#	1
27) 2-Butanone (MEK)	11.82	72	47417	3.520	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.82	87	3784	0.190	ng	#	1
30) Ethyl Acetate	12.81	61	155538	19.422	ng		95
31) n-Hexane	12.84	57	41756	1.018	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 18 08:05:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	86745	2.535 ng		99
34) Tetrahydrofuran (THF)	13.52	72	12315	0.945 ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.05	62	54944	1.981 ng		99
38) 1,1,1-Trichloroethane	14.45	97	4284	0.137 ng		95
39) Isopropyl Acetate	14.99	61	4418	0.329 ng	#	1
40) 1-Butanol	14.99	56	177635	8.248 ng	#	78
41) Benzene	15.14	78	121688	1.399 ng		99
42) Carbon Tetrachloride	15.37	117	7376	0.318 ng		98
43) Cyclohexane	15.57	84	30738	0.841 ng		92
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	16.35	63	1183	0.056 ng		80
46) Bromodichloromethane	16.63	83	5252	0.201 ng	#	74
47) Trichloroethene	16.70	130	1031	N.D.		
48) 1,4-Dioxane	16.66	88	1648	0.100 ng		81
49) 2,2,4-Trimethylpentane...	16.77	57	32565	0.320 ng		72
50) Methyl Methacrylate	16.97	100	647	0.071 ng	#	1
51) n-Heptane	17.12	71	57756	2.322 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.92	58	23325	1.241 ng		91
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	1025110	11.033 ng		99
59) 2-Hexanone	19.52	43	26619	0.601 ng		90
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.31	43	151898	3.049 ng		99
63) n-Octane	20.48	57	20213	0.938 ng		94
64) Tetrachloroethene	20.67	166	1625	0.075 ng		96
65) Chlorobenzene	21.54	112	781	N.D.		
66) Ethylbenzene	22.02	91	95426	0.918 ng		97
67) m- & p-Xylenes	22.22	91	166658	1.977 ng		96
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.70	104	77569	1.305 ng		100
70) o-Xylene	22.84	91	68916	0.768 ng		96
71) n-Nonane	23.10	43	55694	1.143 ng		94
72) 1,1,2,2-Tetrachloroethane	22.83	83	1124	N.D.		
74) Cumene	23.59	105	8602	0.079 ng		94
75) alpha-Pinene	24.08	93	3138006	61.607 ng		99
76) n-Propylbenzene	24.22	91	24267	0.182 ng	#	75
77) 3-Ethyltoluene	24.34	105	46530	0.464 ng		97
78) 4-Ethyltoluene	24.40	105	32289	0.319 ng		89
79) 1,3,5-Trimethylbenzene	24.48	105	23283	0.274 ng		95

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171019.D
Acq On : 17 May 2010 23:18
Operator : EM
Sample : P1001651-006 (1000ml)
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 18 08:05:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	1578	N.D.		
81) 2-Ethyltoluene	24.72	105	20955	0.200 ng	#	70
82) 1,2,4-Trimethylbenzene	24.99	105	65112	0.733 ng		86
83) n-Decane	25.09	57	118507	2.320 ng		99
84) Benzyl Chloride	25.19	91	1481	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	7070	0.170 ng		96
86) 1,4-Dichlorobenzene	25.27	146	7070	0.161 ng		97
87) sec-Butylbenzene	25.32	105	2816	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	132817	1.160 ng		98
89) 1,2,3-Trimethylbenzene	25.51	105	28052	0.308 ng		74
90) 1,2-Dichlorobenzene	25.27	146	7070	0.169 ng		96
91) d-Limonene	25.68	68	1012112	28.942 ng		97
92) 1,2-Dibromo-3-Chloropr...	26.60	157	190	N.D.		
93) n-Undecane	26.60	57	69094	1.349 ng		89
94) 1,2,4-Trichlorobenzene	27.74	180	1229	N.D.		
95) Naphthalene	27.88	128	61174	0.623 ng		99
96) n-Dodecane	27.83	57	59501	1.133 ng		98
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.44	55	18928	0.646 ng	#	92
99) tert-Butylbenzene	24.88	119	6045	0.067 ng		97
100) n-Butylbenzene	26.07	91	19045	0.209 ng	#	68

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110514** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-007

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01420

Initial Pressure (psig): -2.3 Final Pressure (psig): 3.7

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**20**	0.74	**11**	0.43	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.4**	0.74	**0.49**	0.15	
74-87-3	**Chloromethane**	**0.82**	0.30	**0.40**	0.14	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.74	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.15	ND	0.058	
106-99-0	1,3-Butadiene	ND	0.30	ND	0.13	
74-83-9	Bromomethane	ND	0.15	ND	0.038	
75-00-3	Chloroethane	ND	0.15	ND	0.056	
64-17-5	**Ethanol**	**660**	7.4	**350**	3.9	
75-05-8	Acetonitrile	ND	0.74	ND	0.44	
107-02-8	**Acrolein**	**8.3**	3.0	**3.6**	1.3	
67-64-1	**Acetone**	**120**	7.4	**52**	3.1	
75-69-4	**Trichlorofluoromethane**	**2.3**	0.15	**0.41**	0.026	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**87**	1.5	**35**	0.60	
107-13-1	Acrylonitrile	ND	0.74	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.15	ND	0.037	
75-09-2	**Methylene Chloride**	**1.9**	0.74	**0.56**	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	ND	0.047	
76-13-1	**Trichlorotrifluoroethane**	**0.50**	0.15	**0.066**	0.019	
75-15-0	Carbon Disulfide	ND	7.4	ND	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	ND	0.037	
75-34-3	1,1-Dichloroethane	ND	0.15	ND	0.037	
1634-04-4	Methyl tert-Butyl Ether	ND	0.15	ND	0.041	
108-05-4	**Vinyl Acetate**	**9.6**	7.4	**2.7**	2.1	
78-93-3	2-Butanone (MEK)	ND	7.4	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110514** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-007

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01420

Initial Pressure (psig): -2.3 Final Pressure (psig): 3.7

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.15	ND	0.037	
141-78-6	**Ethyl Acetate**	**31**	0.74	**8.5**	0.21	
110-54-3	**n-Hexane**	**1.6**	0.74	**0.46**	0.21	
67-66-3	**Chloroform**	**4.2**	0.15	**0.85**	0.030	
109-99-9	**Tetrahydrofuran (THF)**	**1.4**	0.74	**0.47**	0.25	
107-06-2	**1,2-Dichloroethane**	**4.0**	0.15	**0.99**	0.037	
71-55-6	**1,1,1-Trichloroethane**	**0.22**	0.15	**0.041**	0.027	
71-43-2	**Benzene**	**2.4**	0.15	**0.74**	0.046	
56-23-5	**Carbon Tetrachloride**	**0.59**	0.15	**0.094**	0.024	
110-82-7	**Cyclohexane**	**1.5**	0.74	**0.44**	0.22	
78-87-5	1,2-Dichloropropane	ND	0.15	ND	0.032	
75-27-4	**Bromodichloromethane**	**0.34**	0.15	**0.051**	0.022	
79-01-6	Trichloroethene	ND	0.15	ND	0.028	
123-91-1	1,4-Dioxane	ND	0.74	ND	0.21	
80-62-6	Methyl Methacrylate	ND	0.74	ND	0.18	
142-82-5	**n-Heptane**	**3.8**	0.74	**0.92**	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.74	ND	0.16	
108-10-1	**4-Methyl-2-pentanone**	**1.7**	0.74	**0.43**	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.74	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	**Toluene**	**18**	0.74	**4.8**	0.20	
591-78-6	**2-Hexanone**	**1.0**	0.74	**0.25**	0.18	
124-48-1	Dibromochloromethane	ND	0.15	ND	0.017	
106-93-4	1,2-Dibromoethane	ND	0.15	ND	0.019	
123-86-4	**n-Butyl Acetate**	**4.9**	0.74	**1.0**	0.16	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110514**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-007

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01420

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.3 Final Pressure (psig): 3.7

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**1.6**	0.74	**0.34**	0.16	
127-18-4	Tetrachloroethene	ND	0.15	ND	0.022	
108-90-7	Chlorobenzene	ND	0.15	ND	0.032	
100-41-4	**Ethylbenzene**	**1.4**	0.74	**0.33**	0.17	
179601-23-1	**m,p-Xylenes**	**2.9**	0.74	**0.67**	0.17	
75-25-2	Bromoform	ND	0.74	ND	0.072	
100-42-5	**Styrene**	**2.0**	0.74	**0.48**	0.17	
95-47-6	**o-Xylene**	**1.2**	0.74	**0.27**	0.17	
111-84-2	**n-Nonane**	**1.8**	0.74	**0.34**	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.15	ND	0.022	
98-82-8	Cumene	ND	0.74	ND	0.15	
80-56-8	**alpha-Pinene**	**98**	0.74	**18**	0.13	
103-65-1	n-Propylbenzene	ND	0.74	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.74	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.74	ND	0.15	
95-63-6	**1,2,4-Trimethylbenzene**	**1.5**	0.74	**0.31**	0.15	
100-44-7	Benzyl Chloride	ND	0.74	ND	0.14	
541-73-1	1,3-Dichlorobenzene	ND	0.15	ND	0.025	
106-46-7	**1,4-Dichlorobenzene**	**0.22**	0.15	**0.037**	0.025	
95-50-1	1,2-Dichlorobenzene	ND	0.15	ND	0.025	
5989-27-5	**d-Limonene**	**40**	0.74	**7.2**	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	ND	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	0.74	ND	0.10	
91-20-3	**Naphthalene**	**1.1**	0.74	**0.22**	0.14	
87-68-3	Hexachlorobutadiene	ND	0.74	ND	0.069	

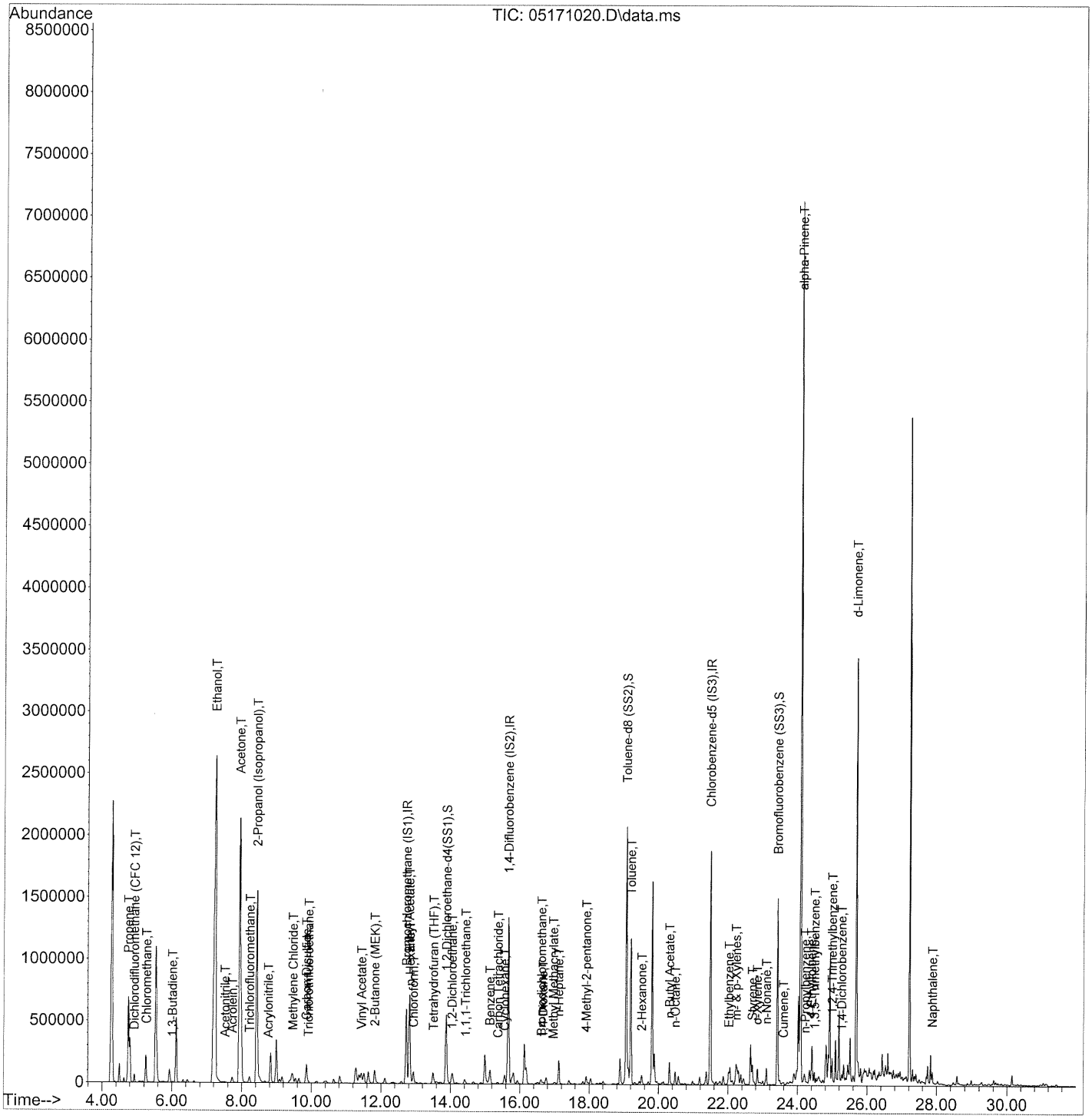
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 20 15:59:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 20 15:59:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	316862	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1568552	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	787966	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	556472	23.600	ng		-0.02
Spiked Amount 25.000			Recovery	=	94.40%		✓
57) Toluene-d8 (SS2)	19.07	98	1835001	24.410	ng		0.00
Spiked Amount 25.000			Recovery	=	97.64%		✓
73) Bromofluorobenzene (SS3)	23.42	174	492215	25.648	ng		0.00
Spiked Amount 25.000			Recovery	=	102.60%		✓
Target Compounds							Qvalue
2) Propene	4.76	42	327542	13.252	ng M	#	84
3) Dichlorodifluoromethan...	4.93	85	69254	1.633	ng		99
4) Chloromethane	5.27	50	17332	0.553	ng		97
7) 1,3-Butadiene	6.02	54	2301	0.092	ng		90
10) Ethanol	7.25	45	6028743	447.399	ng		99
11) Acetonitrile	7.52	41	9826	0.289	ng		93
12) Acrolein	7.73	56	58893	5.607	ng		98
13) Acetone	7.94	58	1387132	84.206	ng		97
14) Trichlorofluoromethane	8.22	101	56739	1.545	ng		99
15) 2-Propanol (Isopropanol)	8.43	45	2988290	58.512	ng		98
16) Acrylonitrile	8.76	53	2559	0.104	ng		82
19) Methylene Chloride	9.47	84	28508	1.314	ng		97
21) Trichlorotrifluoroethane	9.91	151	5295	0.341	ng		98
22) Carbon Disulfide	9.86	76	335749	4.340	ng		99
26) Vinyl Acetate	11.44	86	32244	6.485	ng	#	7
27) 2-Butanone (MEK)	11.82	72	54543	3.986	ng		96
30) Ethyl Acetate	12.81	61	168177	20.675	ng		96
31) n-Hexane	12.84	57	45557	1.094	ng		98
32) Chloroform	12.93	83	97806	2.814	ng		100
34) Tetrahydrofuran (THF)	13.52	72	12427	0.939	ng	#	1
36) 1,2-Dichloroethane	14.05	62	76263	2.707	ng		99
38) 1,1,1-Trichloroethane	14.44	97	4784	0.152	ng		95
41) Benzene	15.14	78	140205	1.601	ng		100
42) Carbon Tetrachloride	15.37	117	9332	0.400	ng		100
43) Cyclohexane	15.56	84	37734	1.025	ng		92
46) Bromodichloromethane	16.63	83	6036	0.230	ng		76
48) 1,4-Dioxane	16.67	88	1859	0.112	ng		85
50) Methyl Methacrylate	16.96	100	897	0.098	ng	#	51
51) n-Heptane	17.12	71	63671	2.543	ng		97
53) 4-Methyl-2-pentanone	17.92	58	22359	1.182	ng		91

DM 5/20/10

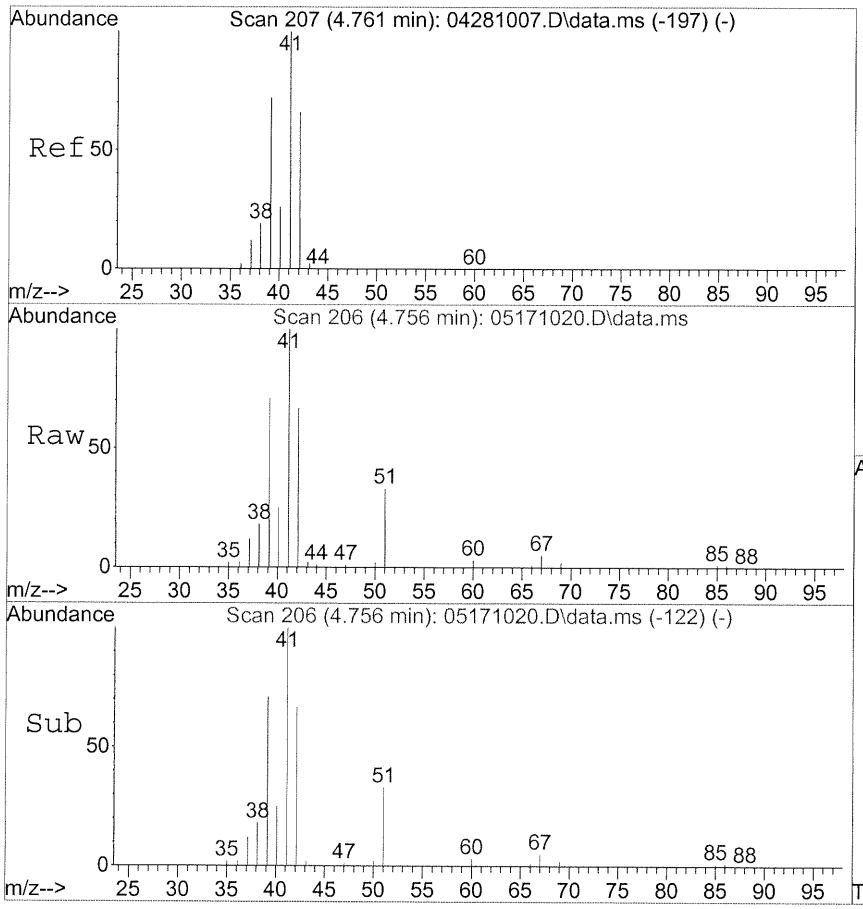
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 20 15:59:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
58) Toluene	19.20	91	1142115	12.248	ng		99
59) 2-Hexanone	19.52	43	30664	0.689	ng		86
62) n-Butyl Acetate	20.32	43	166306	3.326	ng		99
63) n-Octane	20.48	57	23360	1.080	ng		92
66) Ethylbenzene	22.02	91	99725	0.956	ng		96
67) m- & p-Xylenes	22.22	91	165404	1.955	ng		97
69) Styrene	22.70	104	82627	1.385	ng		99
70) o-Xylene	22.84	91	70677	0.784	ng		96
71) n-Nonane	23.10	43	58823	1.203	ng		94
74) Cumene	23.59	105	10375	0.095	ng		96
75) alpha-Pinene	24.08	93	3375203	66.022	ng		99
76) n-Propylbenzene	24.22	91	28568	0.214	ng	#	84
78) 4-Ethyltoluene	24.40	105	34568	0.340	ng		87
79) 1,3,5-Trimethylbenzene	24.49	105	38719	0.454	ng		96
82) 1,2,4-Trimethylbenzene	24.99	105	92999	1.043	ng		87
86) 1,4-Dichlorobenzene	25.27	146	6668	0.151	ng		98
91) d-Limonene	25.68	68	953234	27.159	ng		99
95) Naphthalene	27.88	128	75866	0.770	ng		99

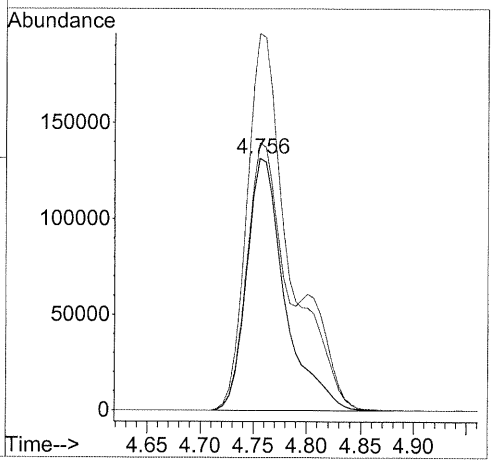
(#) = qualifier out of range (m) = manual integration (+) = signals summed

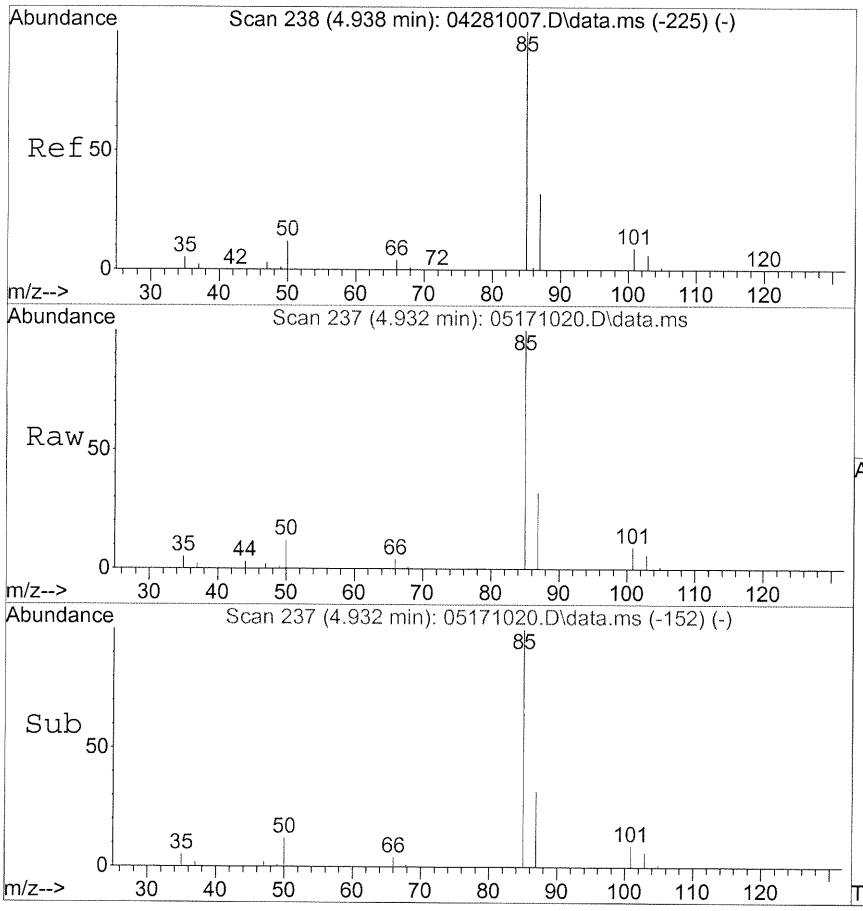


#2
Propene
Concen: 13.25 ng
RT: 4.76 min Scan# 206
Delta R.T. -0.023 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 42 Resp: 327542

Ion	Ratio	Lower	Upper
42	100		
39	131.8	88.4	128.4#
41	164.2	129.9	169.9

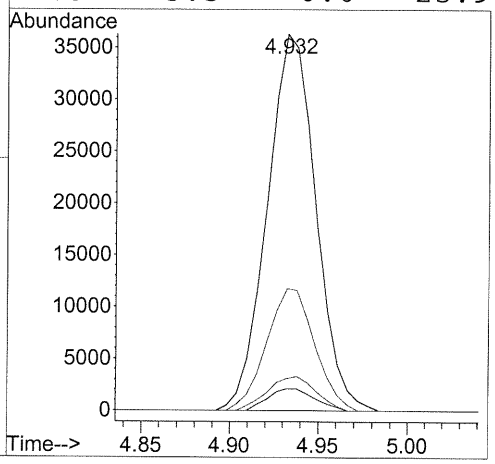


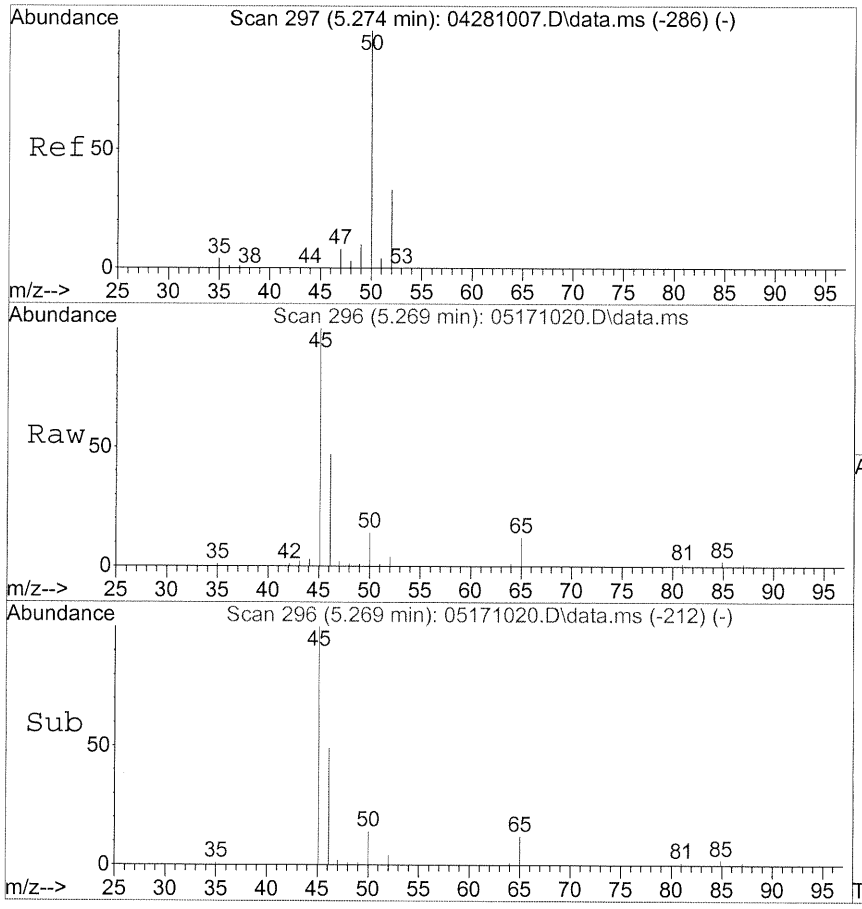


#3
Dichlorodifluoromethane (CFC
Concen: 1.63 ng
RT: 4.93 min Scan# 237
Delta R.T. -0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 85 Resp: 69254

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.6	52.6
101	8.9	0.0	29.3
103	5.5	0.0	25.9

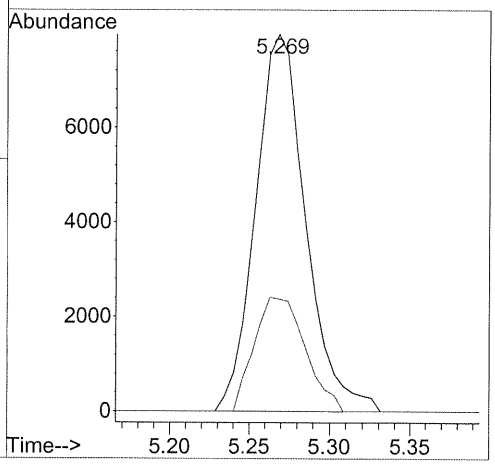


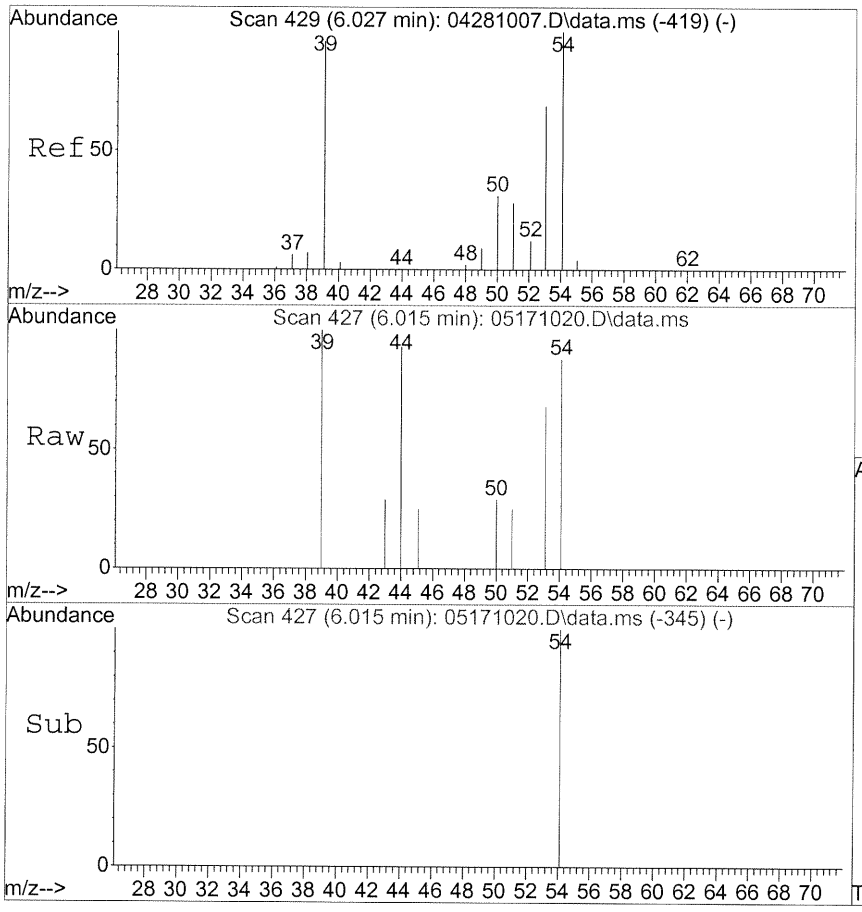


#4
Chloromethane
Concen: 0.55 ng
RT: 5.27 min Scan# 296
Delta R.T. -0.023 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 50 Resp: 17332

Ion	Ratio	Lower	Upper
50	100		
52	30.7	12.3	52.3

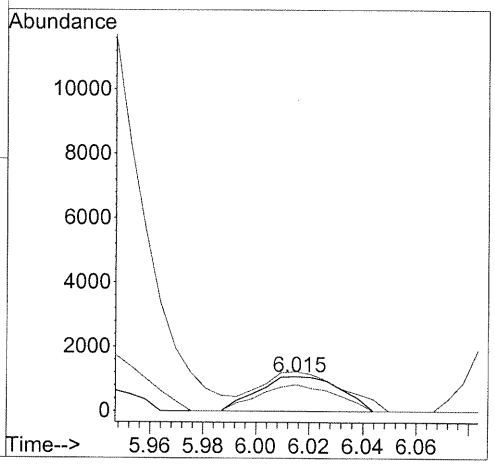


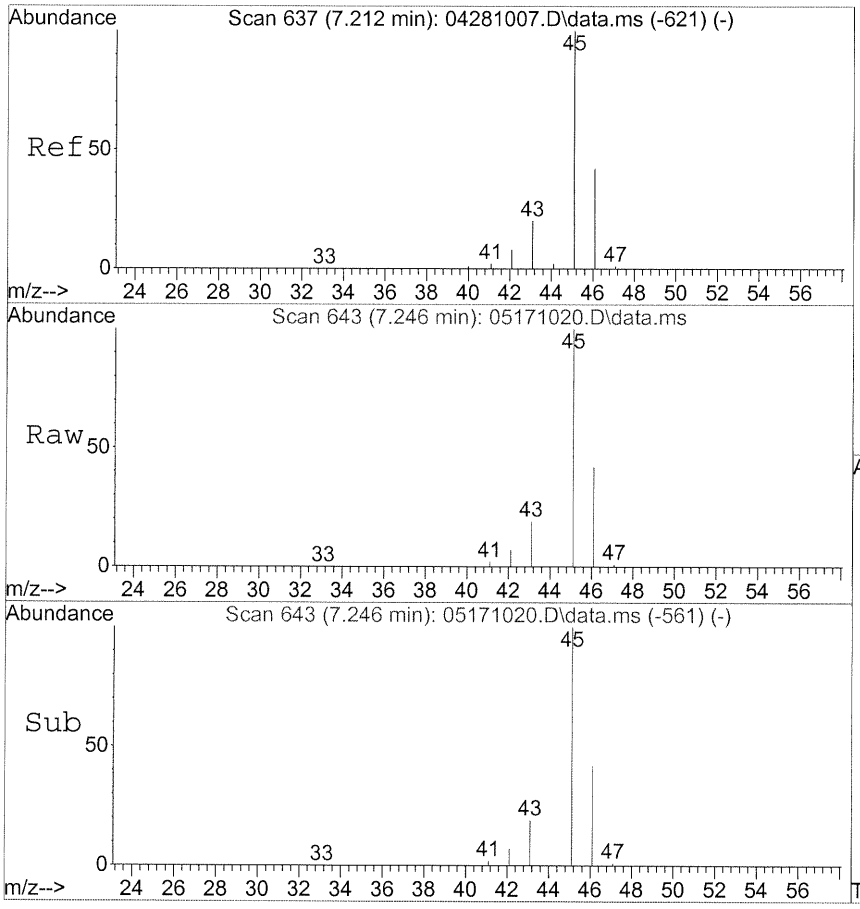


#7
1,3-Butadiene
Concen: 0.09 ng
RT: 6.02 min Scan# 427
Delta R.T. -0.034 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 54 Resp: 2301

Ion	Ratio	Lower	Upper
54	100		
39	112.2	76.6	116.6
53	71.8	49.7	89.7

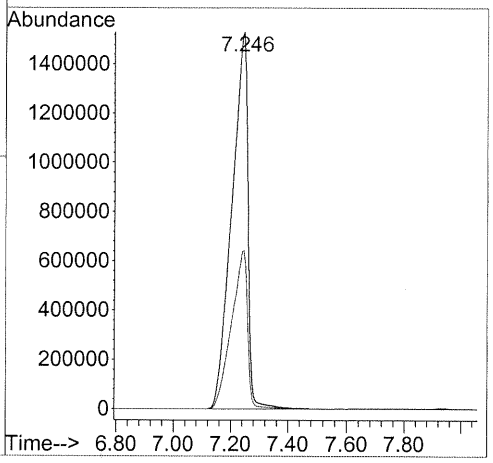


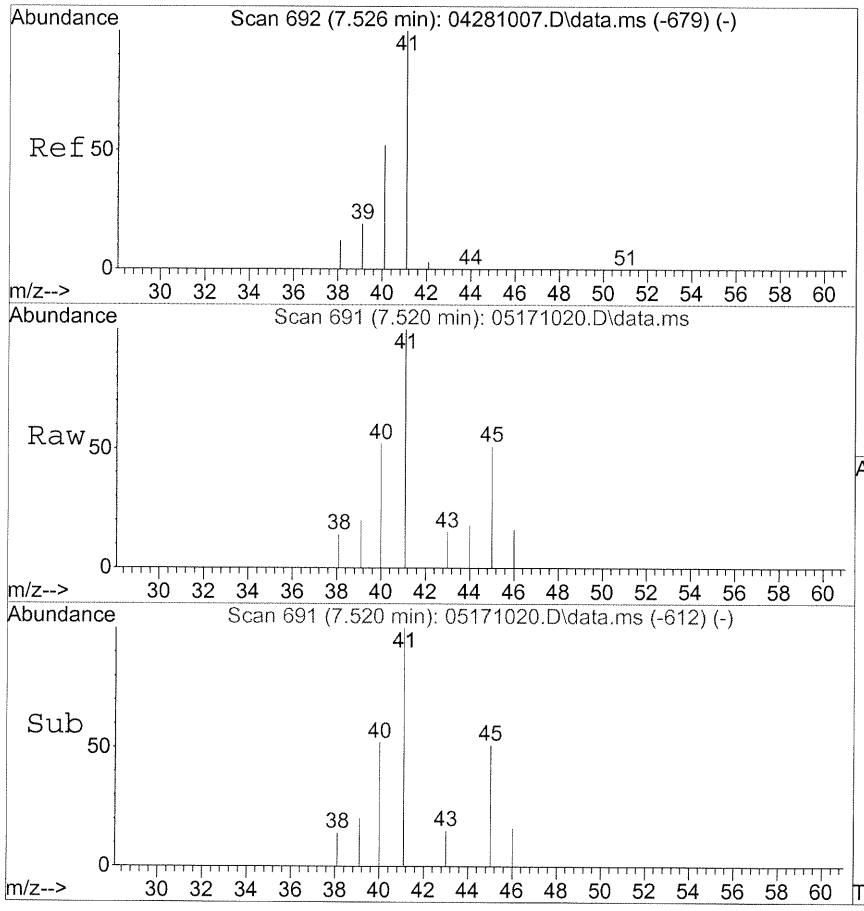


#10
Ethanol
Concen: 447.40 ng
RT: 7.25 min Scan# 643
Delta R.T. -0.034 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 45 Resp: 6028743

Ion	Ratio	Lower	Upper
45	100		
46	41.9	21.3	61.3

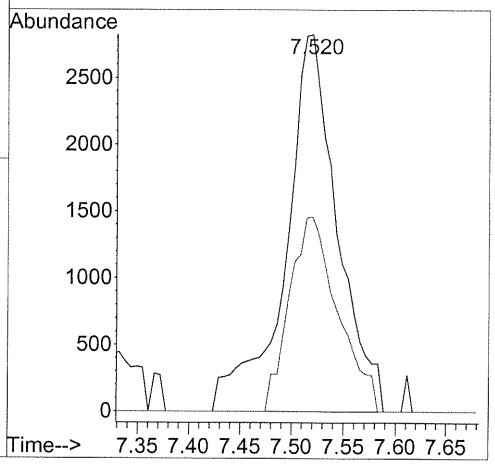


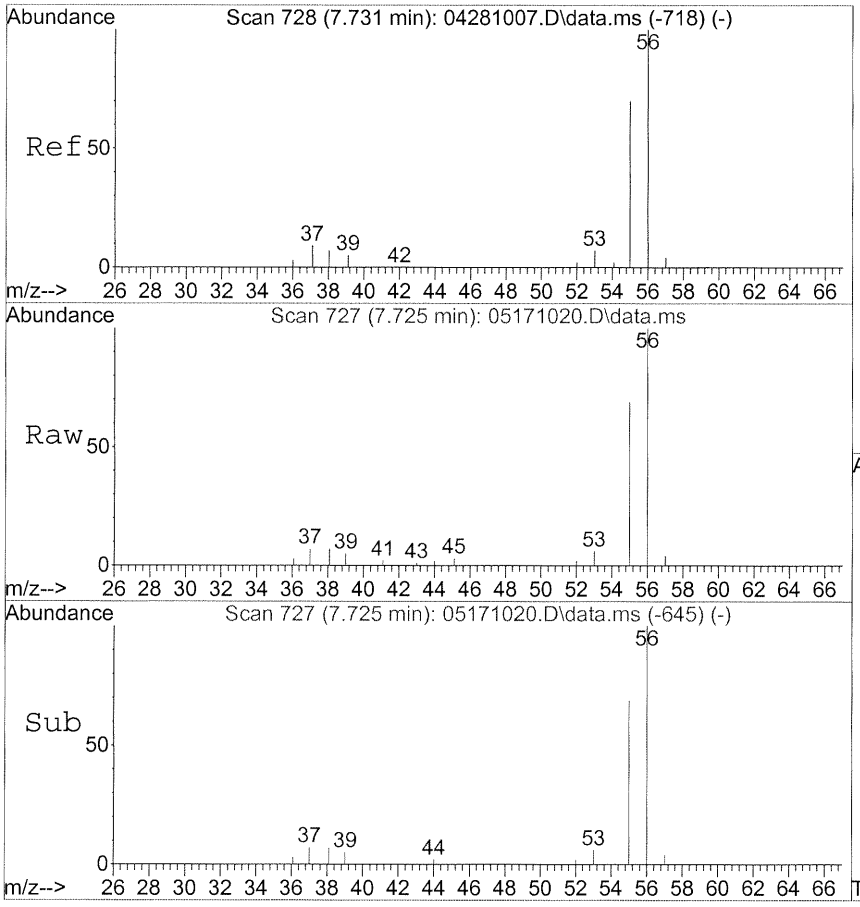


#11
Acetonitrile
Concen: 0.29 ng
RT: 7.52 min Scan# 691
Delta R.T. -0.051 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 41 Resp: 9826

Ion	Ratio	Lower	Upper
41	100		
40	48.2	33.2	73.2

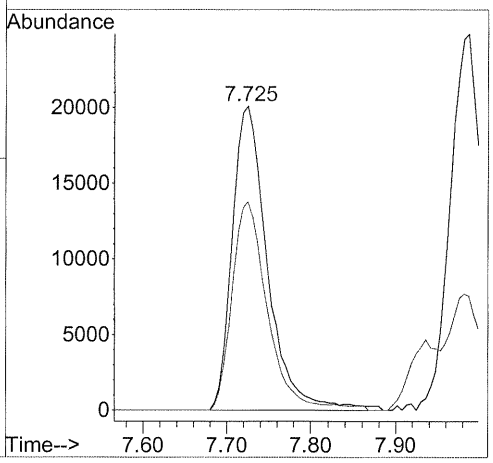


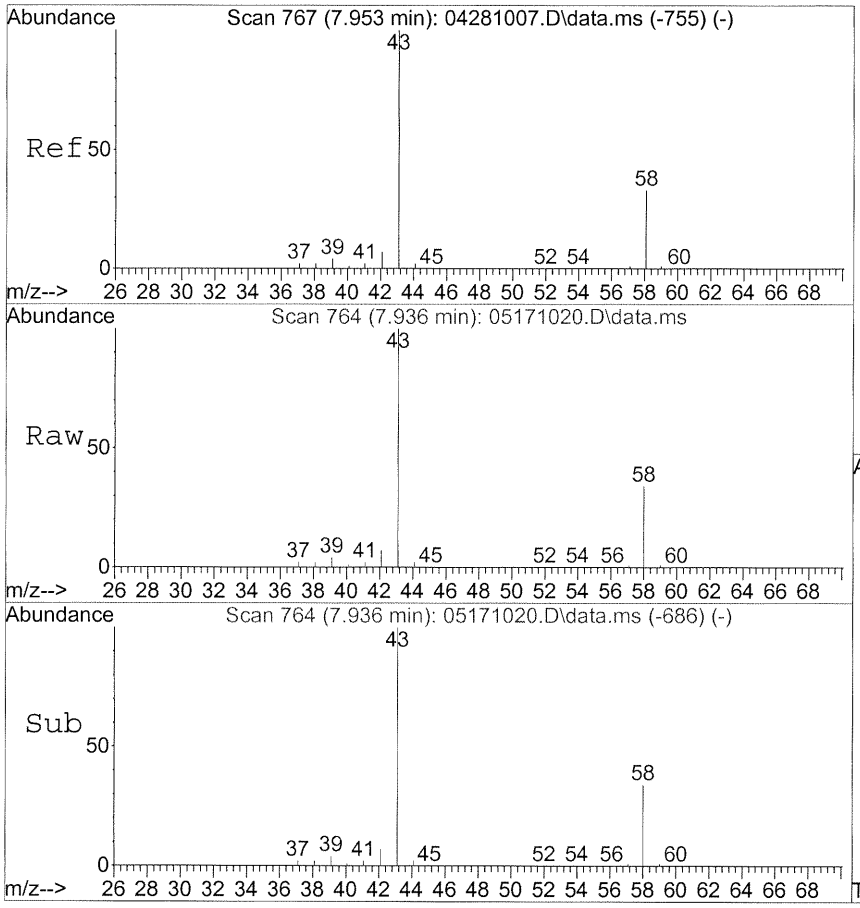


#12
Acrolein
Concen: 5.61 ng
RT: 7.73 min Scan# 727
Delta R.T. -0.034 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 56 Resp: 58893

Ion	Ratio	Lower	Upper
56	100		
55	68.7	50.2	90.2

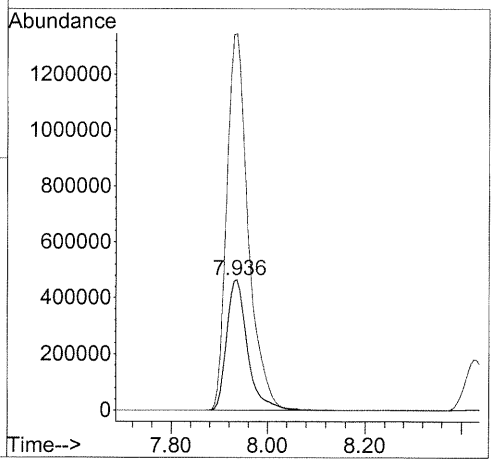


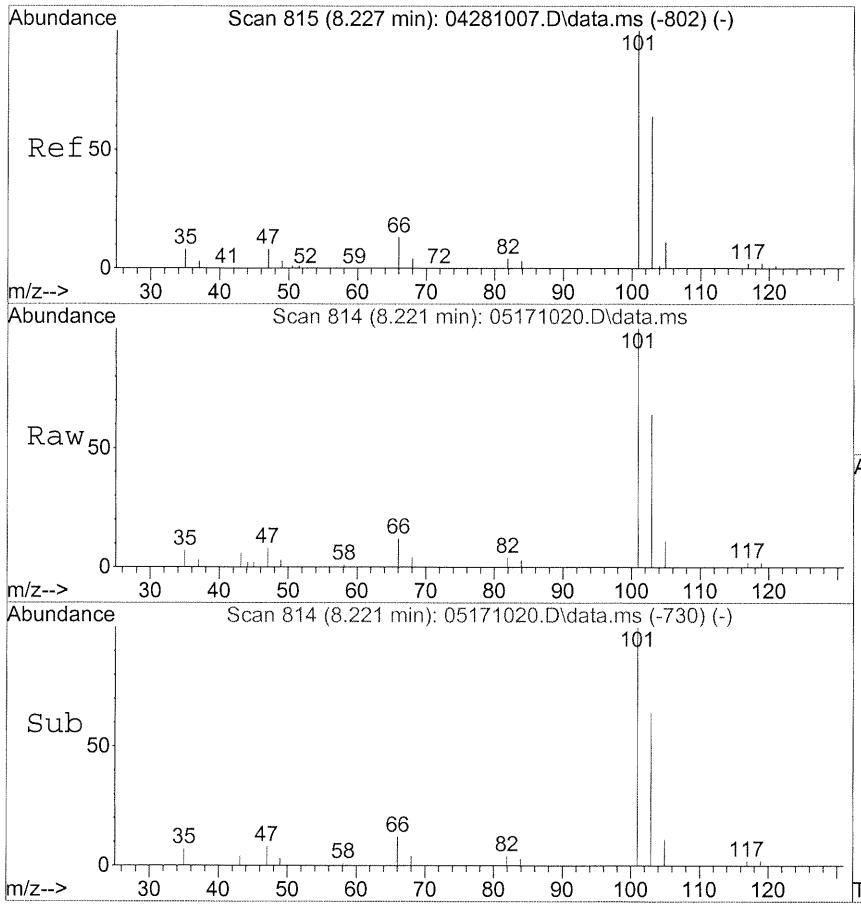


#13
Acetone
Concen: 84.21 ng
RT: 7.94 min Scan# 764
Delta R.T. -0.057 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 58 Resp: 1387132

Ion	Ratio	Lower	Upper
58	100		
43	300.5	264.2	324.2

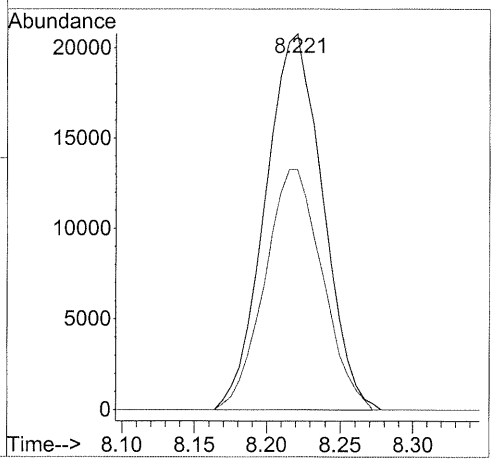


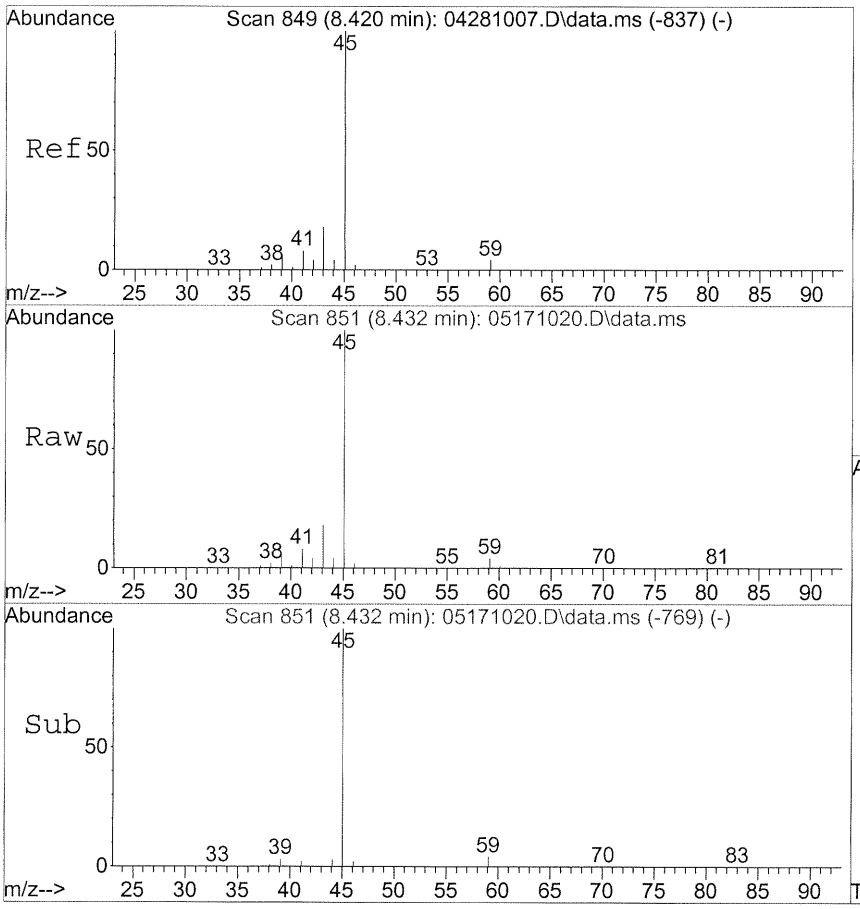


#14
Trichlorofluoromethane
Concen: 1.55 ng
RT: 8.22 min Scan# 814
Delta R.T. -0.023 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:101 Resp: 56739

Ion	Ratio	Lower	Upper
101	100		
103	64.0	44.6	84.6

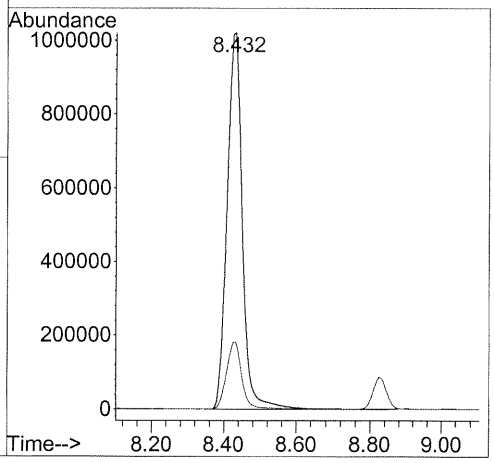


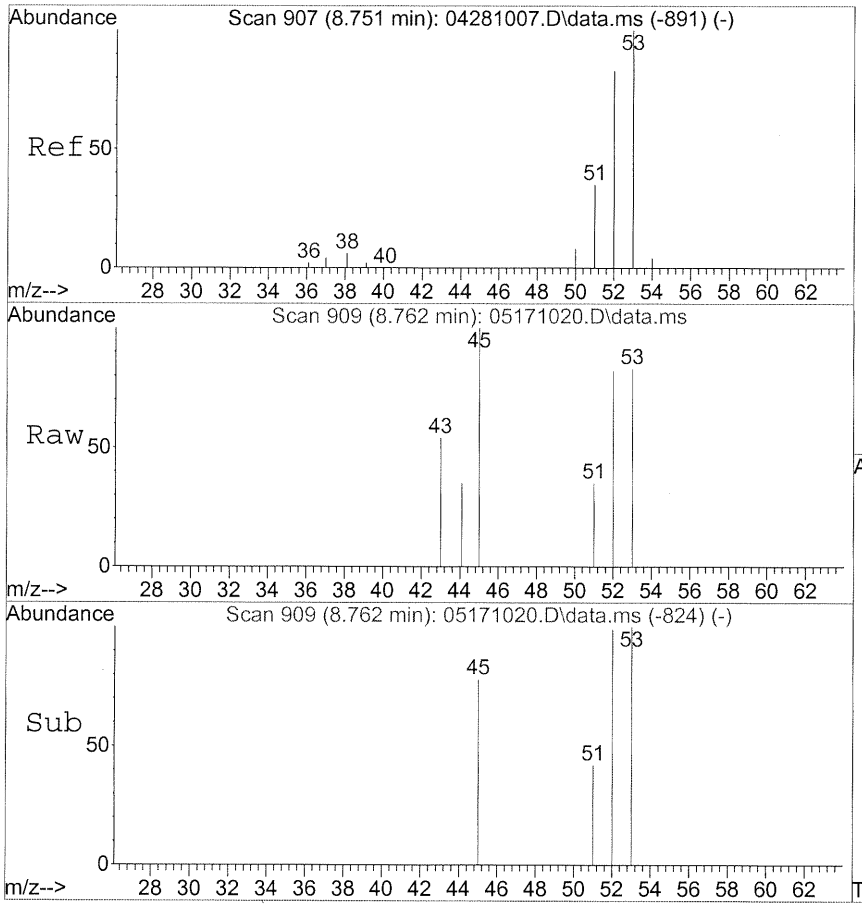


#15
2-Propanol (Isopropanol)
Concen: 58.51 ng
RT: 8.43 min Scan# 851
Delta R.T. -0.034 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 45 Resp: 2988290

Ion	Ratio	Lower	Upper
45	100		
43	17.6	0.0	38.5

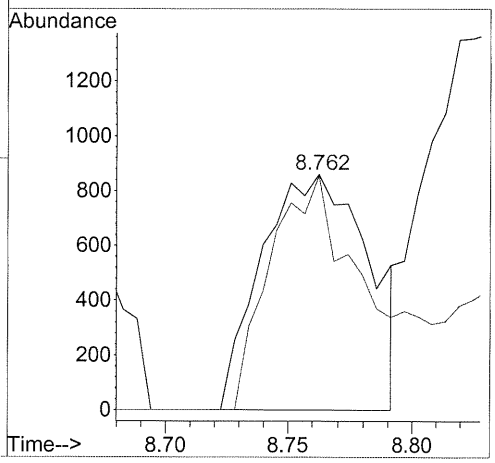


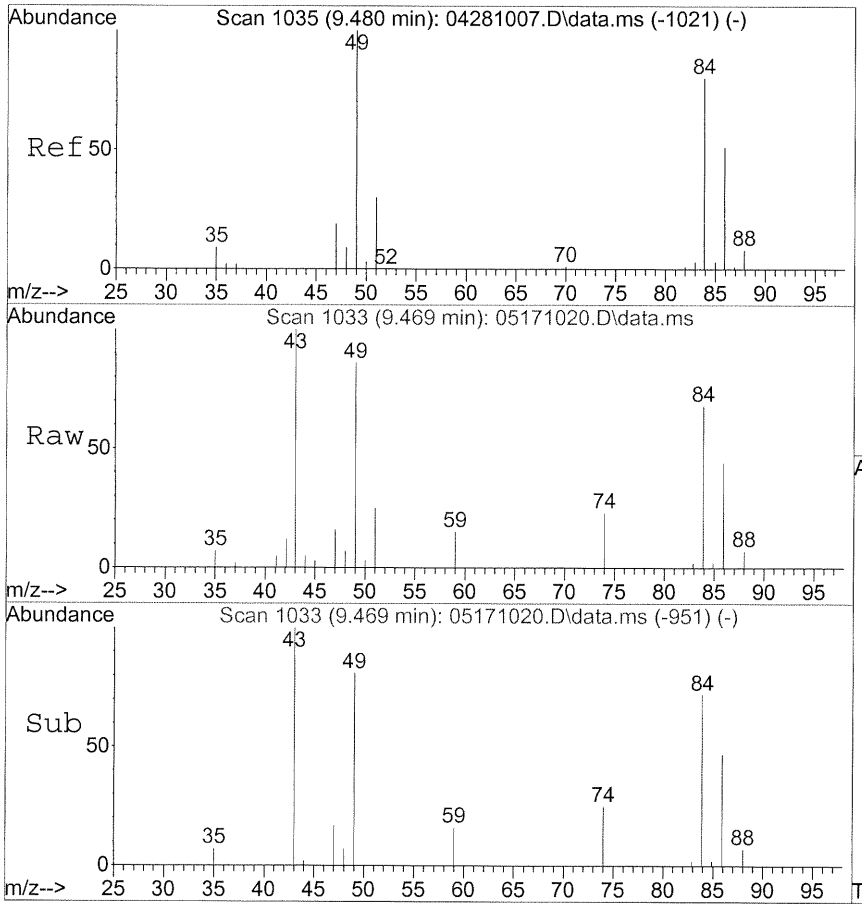


#16
Acrylonitrile
Concen: 0.10 ng
RT: 8.76 min Scan# 909
Delta R.T. -0.018 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 53 Resp: 2559

Ion	Ratio	Lower	Upper
53	100		
52	98.3	62.4	102.4

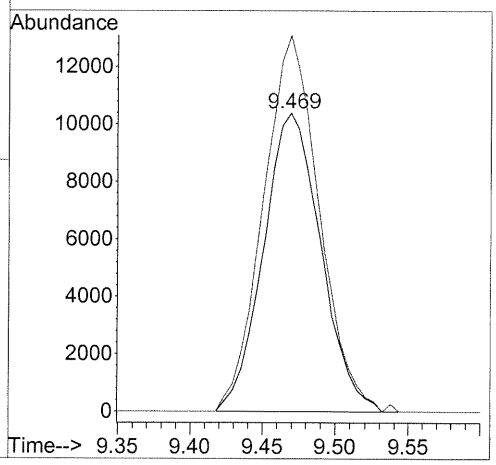


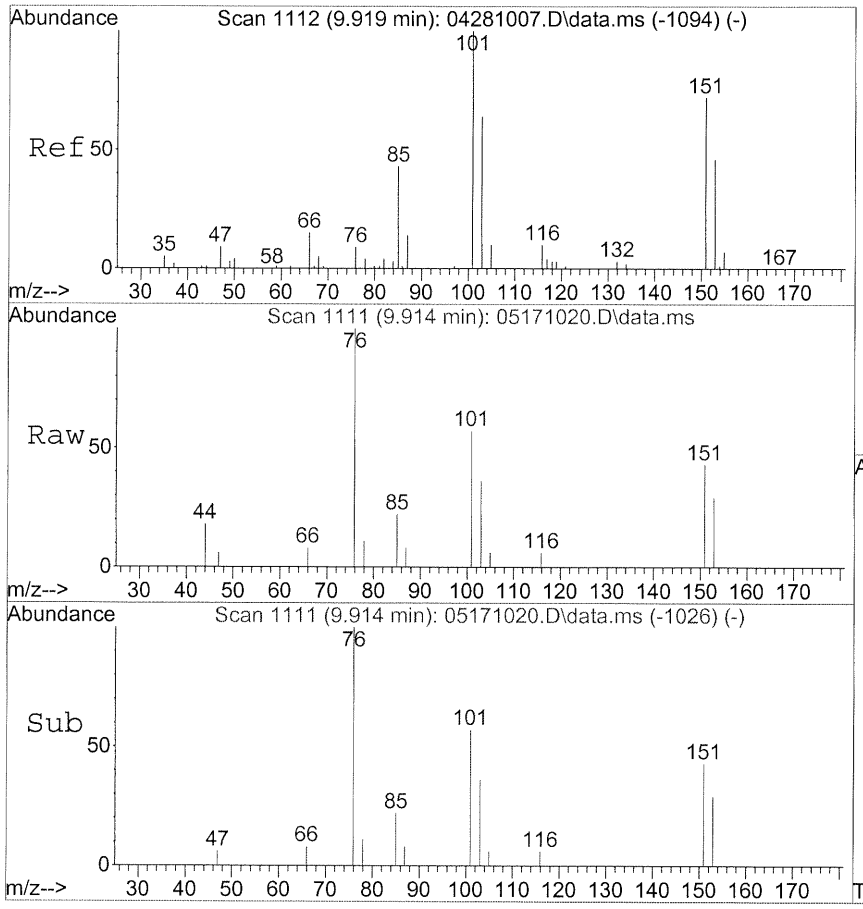


#19
Methylene Chloride
Concen: 1.31 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 84 Resp: 28508

Ion	Ratio	Lower	Upper
84	100		
49	123.1	94.5	144.5

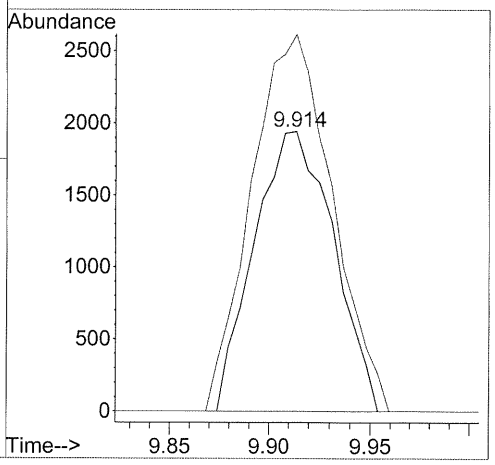


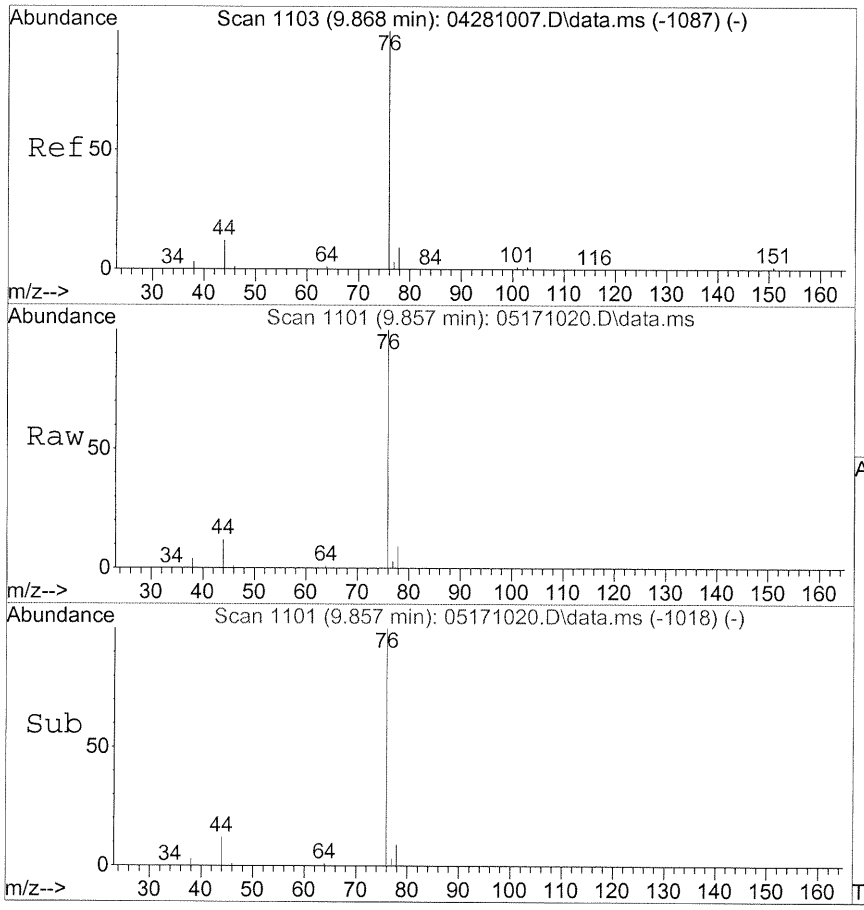


#21
Trichlorotrifluoroethane
Concen: 0.34 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:151 Resp: 5295

Ion	Ratio	Lower	Upper
151	100		
101	137.6	114.9	154.9

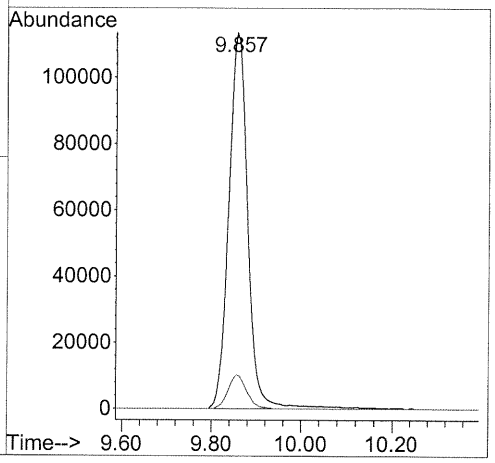


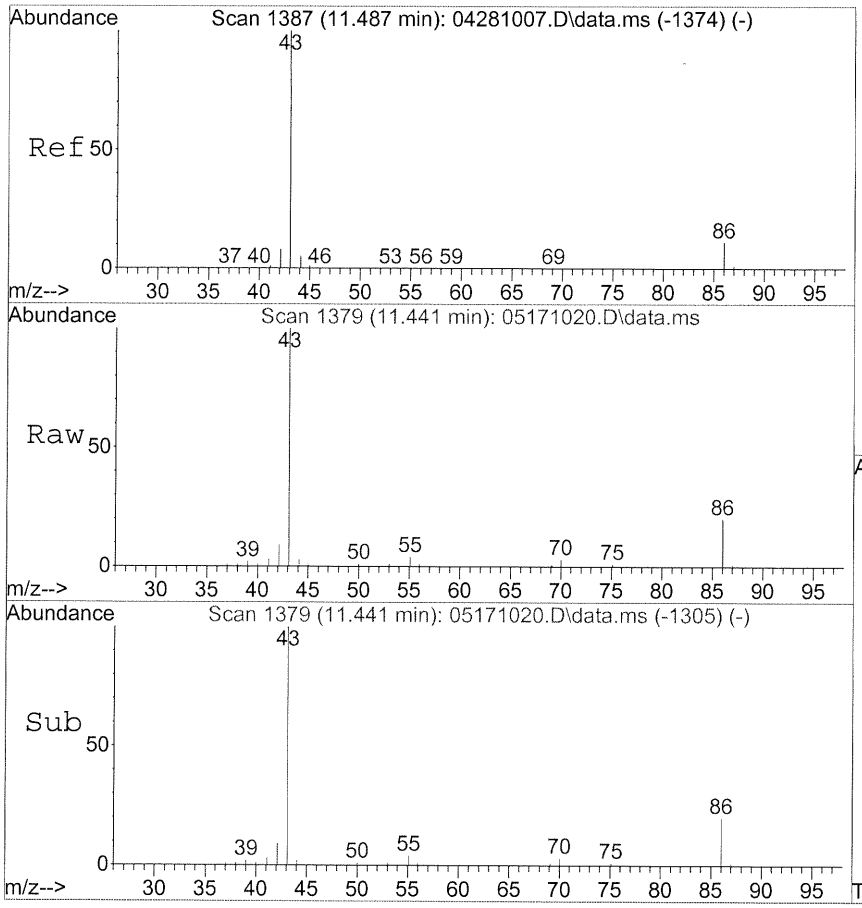


#22
Carbon Disulfide
Concen: 4.34 ng
RT: 9.86 min Scan# 1101
Delta R.T. -0.028 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 76 Resp: 335749

Ion	Ratio	Lower	Upper
76	100		
78	8.7	0.0	29.2

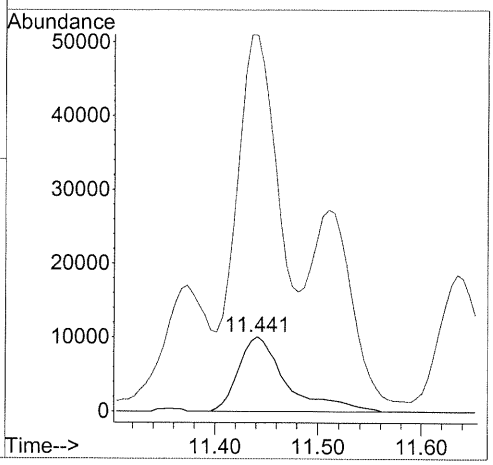


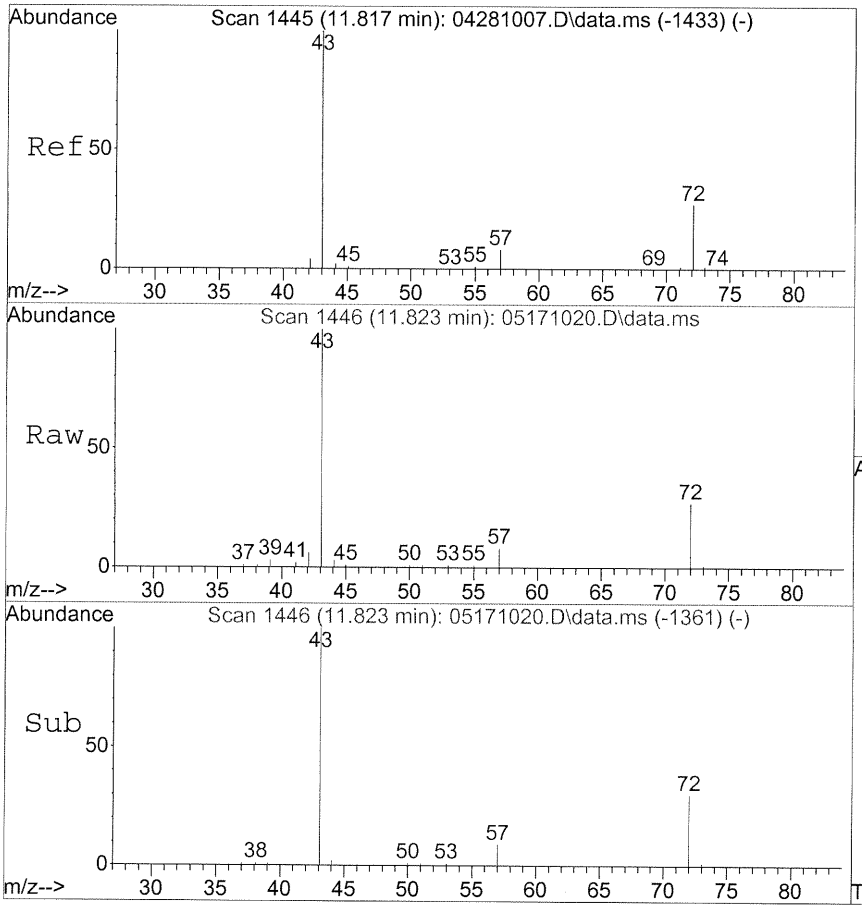


#26
Vinyl Acetate
Concen: 6.49 ng
RT: 11.44 min Scan# 1379
Delta R.T. -0.080 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 86 Resp: 32244

Ion	Ratio	Lower	Upper
86	100		
43	478.1	829.7	869.7#

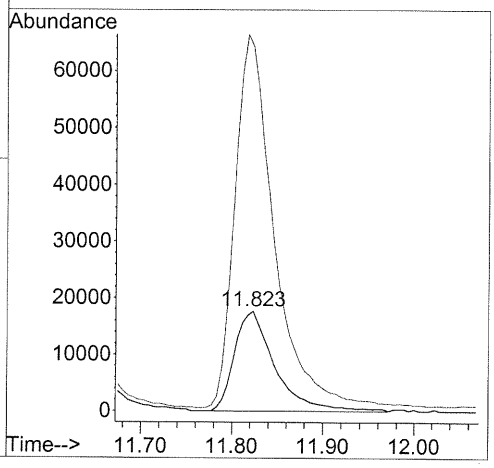


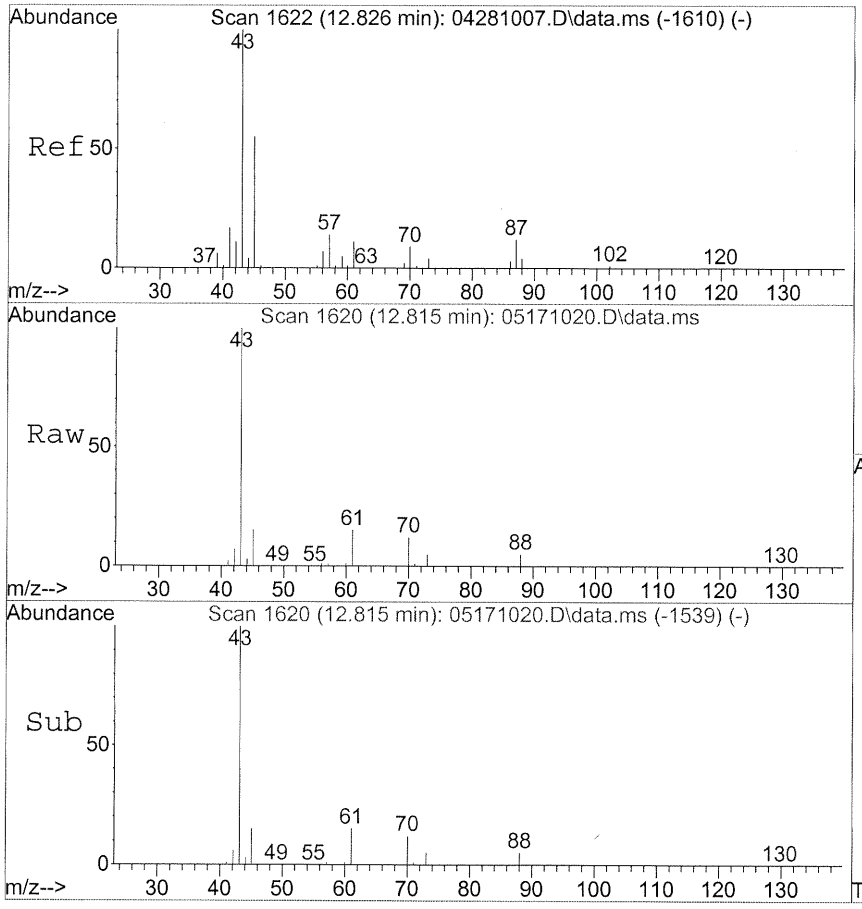


#27
2-Butanone (MEK)
Concen: 3.99 ng
RT: 11.82 min Scan# 1446
Delta R.T. -0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 72 Resp: 54543

Ion	Ratio	Lower	Upper
72	100		
43	370.2	342.0	382.0

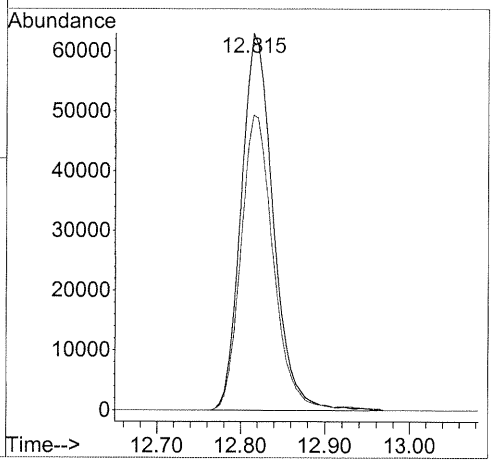


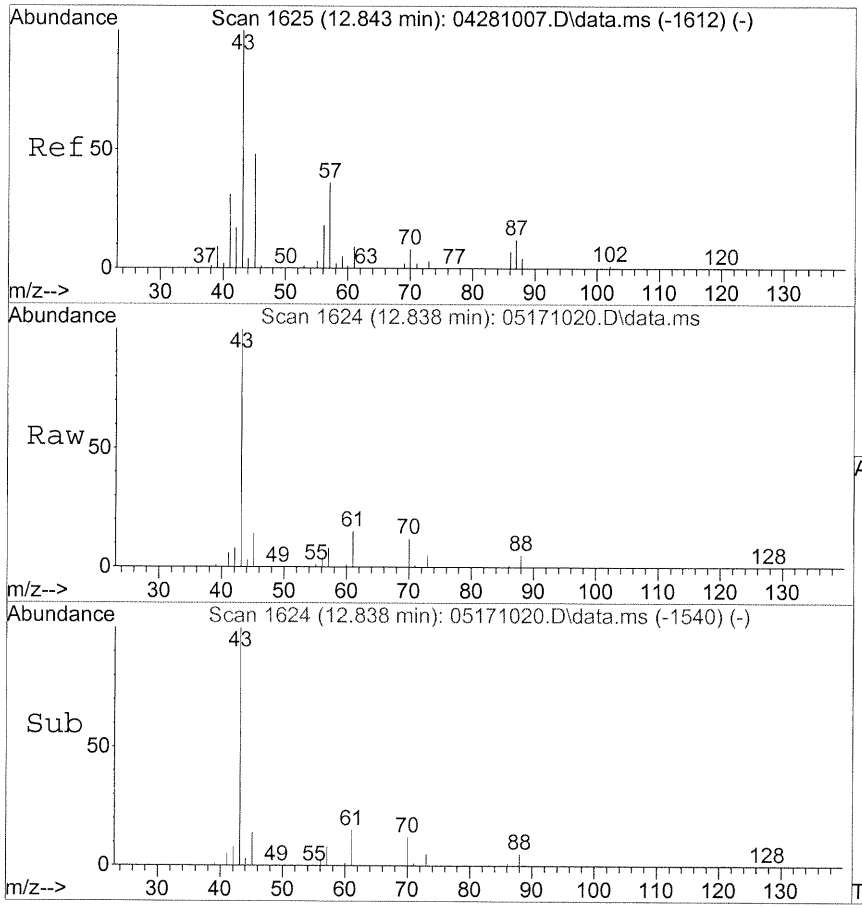


#30
Ethyl Acetate
Concen: 20.68 ng
RT: 12.81 min Scan# 1620
Delta R.T. -0.040 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 61 Resp: 168177

Ion	Ratio	Lower	Upper
61	100		
70	79.5	63.6	103.6

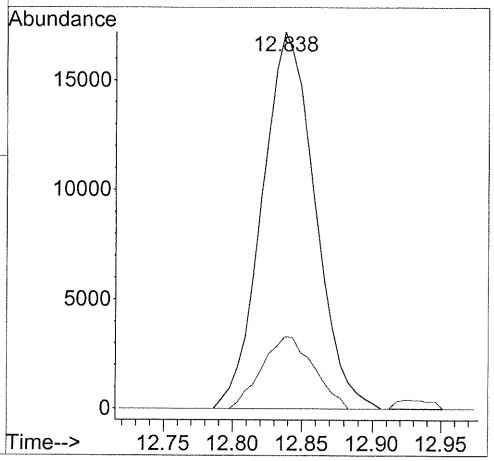


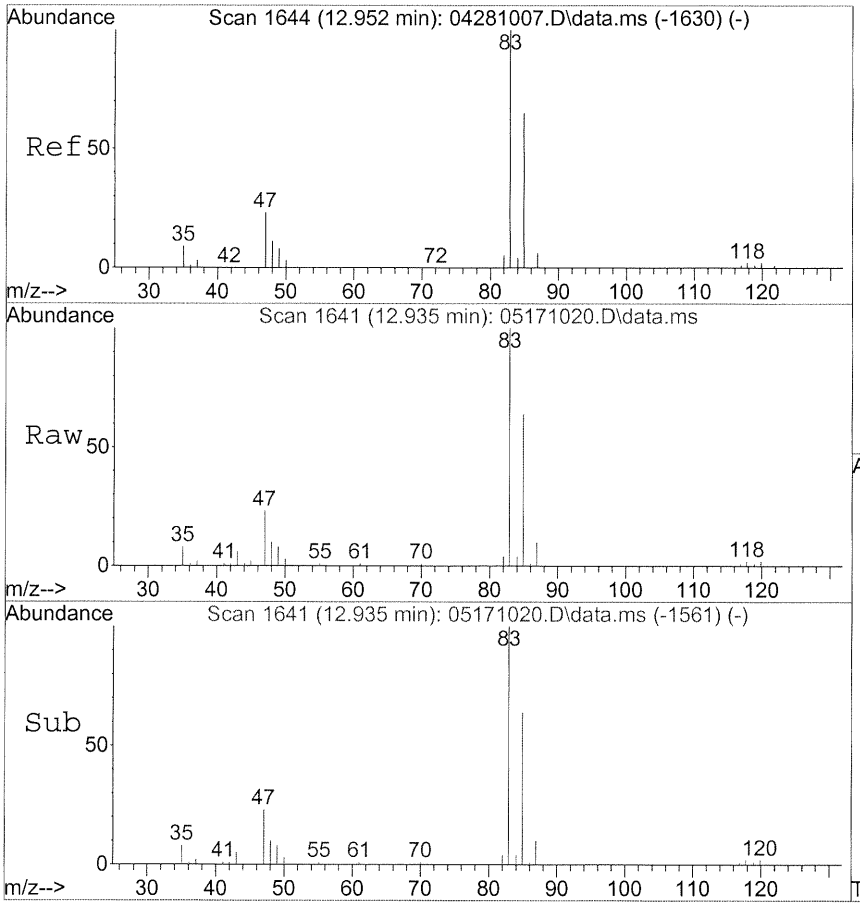


#31
n-Hexane
Concen: 1.09 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 57 Resp: 45557

Ion	Ratio	Lower	Upper
57	100		
86	18.8	0.0	39.8

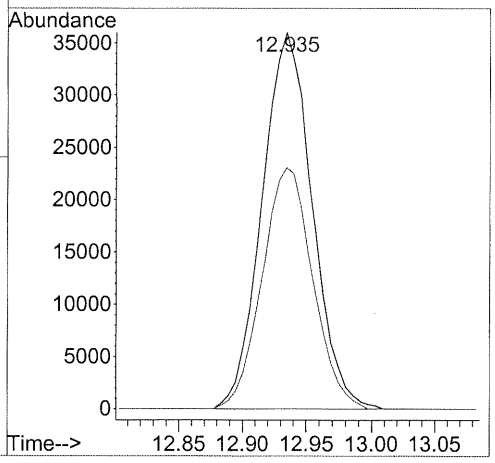


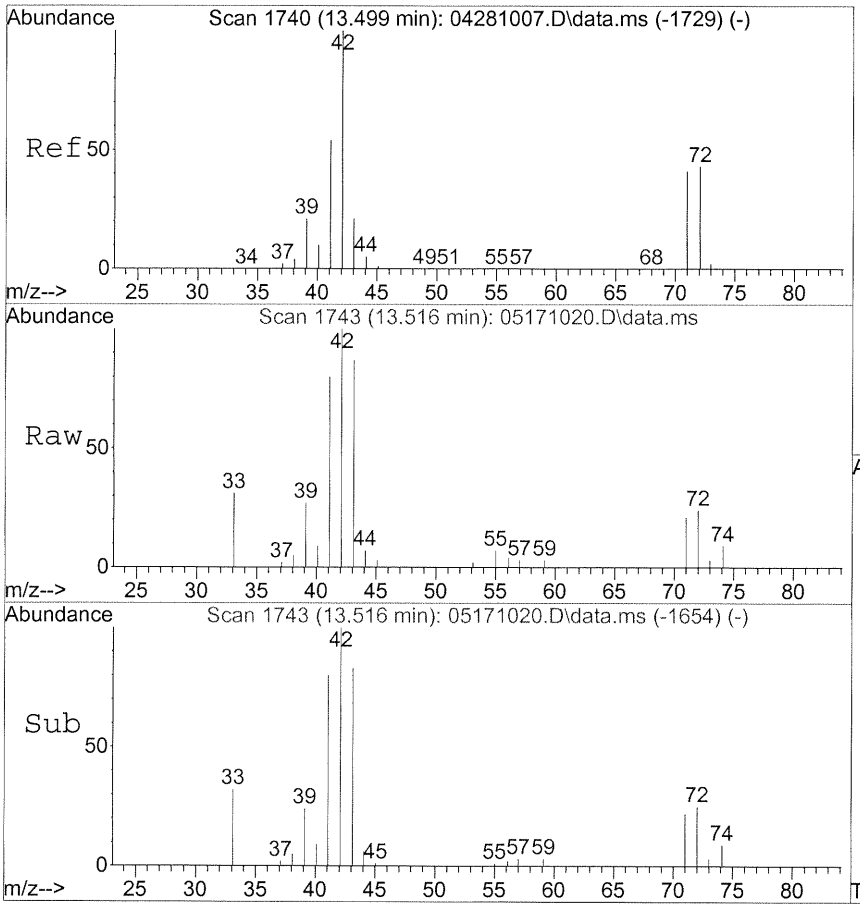


#32
Chloroform
Concen: 2.81 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 83 Resp: 97806

Ion	Ratio	Lower	Upper
83	100		
85	64.6	44.9	84.9

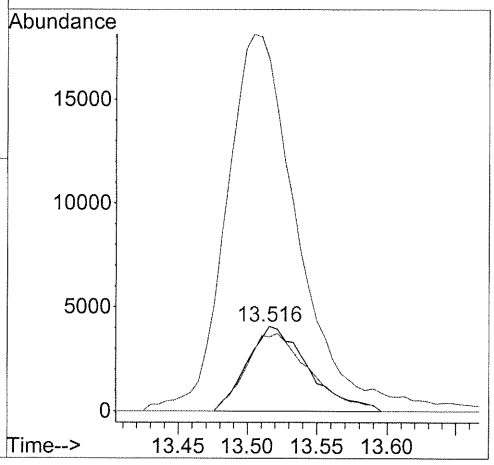


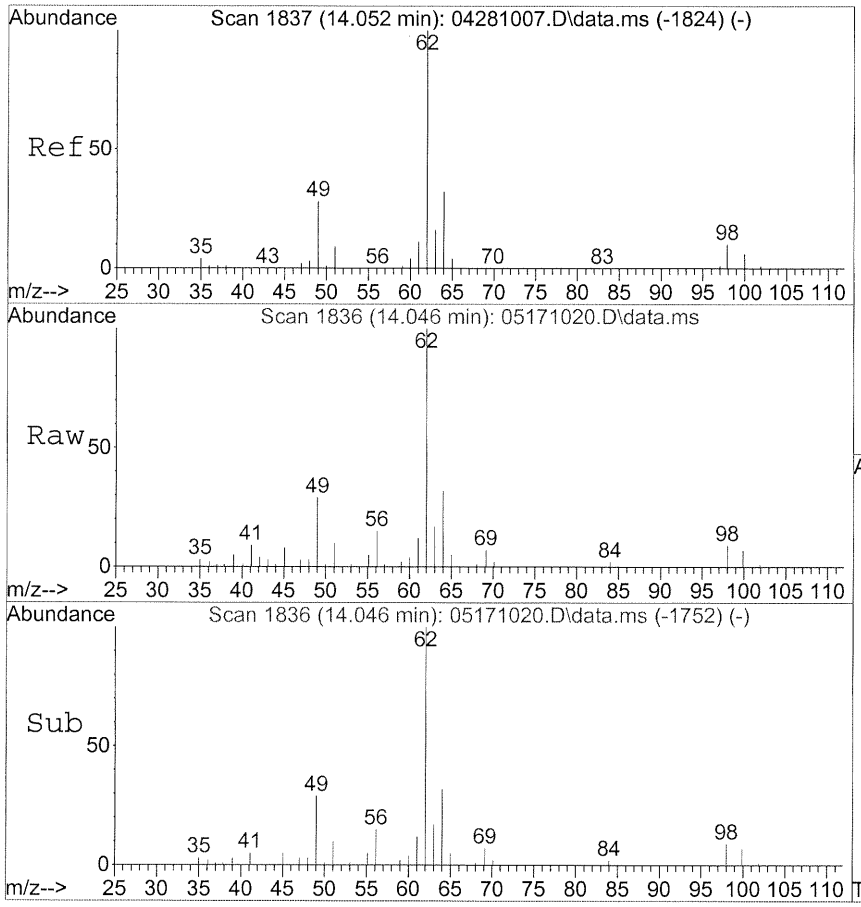


#34
Tetrahydrofuran (THF)
Concen: 0.94 ng
RT: 13.52 min Scan# 1743
Delta R.T. 0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 72 Resp: 12427

Ion	Ratio	Lower	Upper
72	100		
71	95.3	74.5	114.5
42	530.8	197.7	237.7#

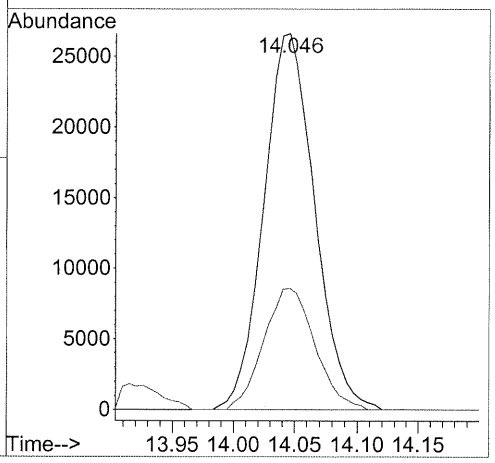


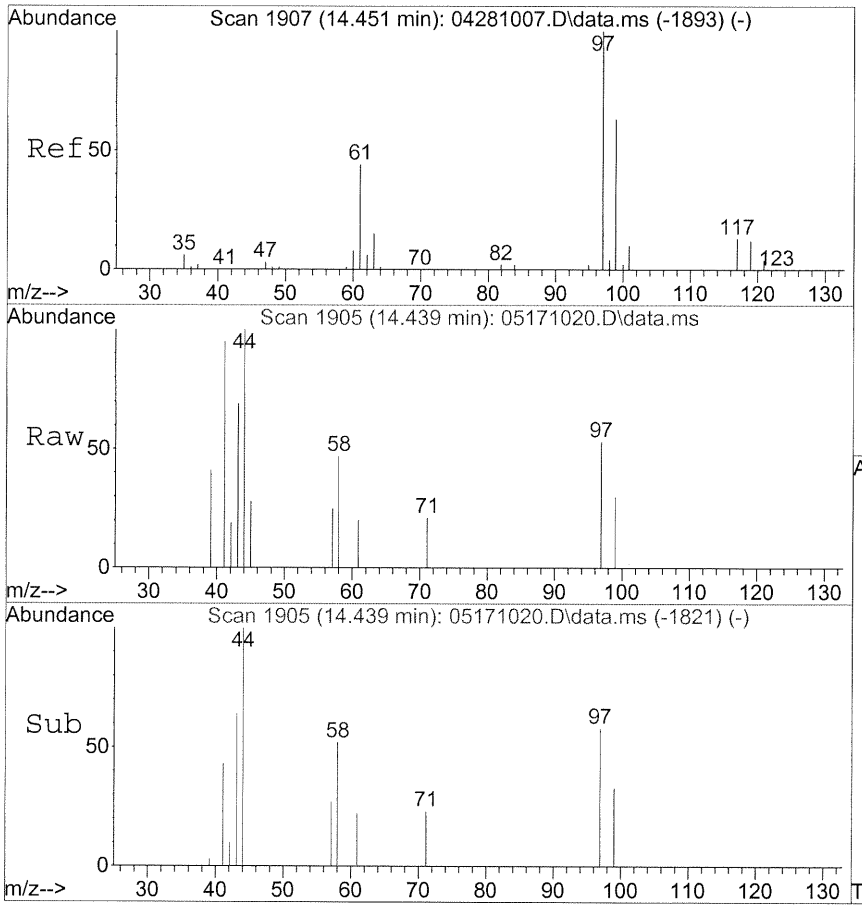


#36
1,2-Dichloroethane
Concen: 2.71 ng
RT: 14.05 min Scan# 1836
Delta R.T. -0.023 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 62 Resp: 76263

Ion	Ratio	Lower	Upper
62	100		
64	32.4	12.8	52.8

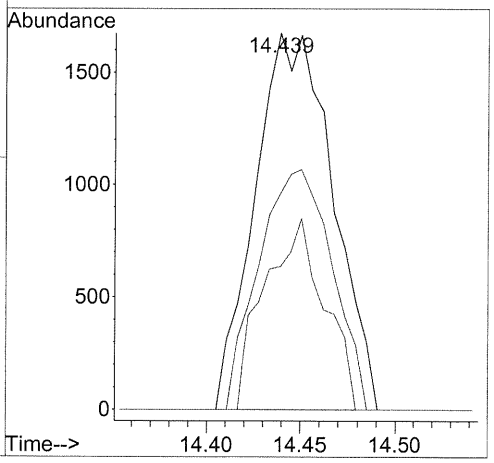


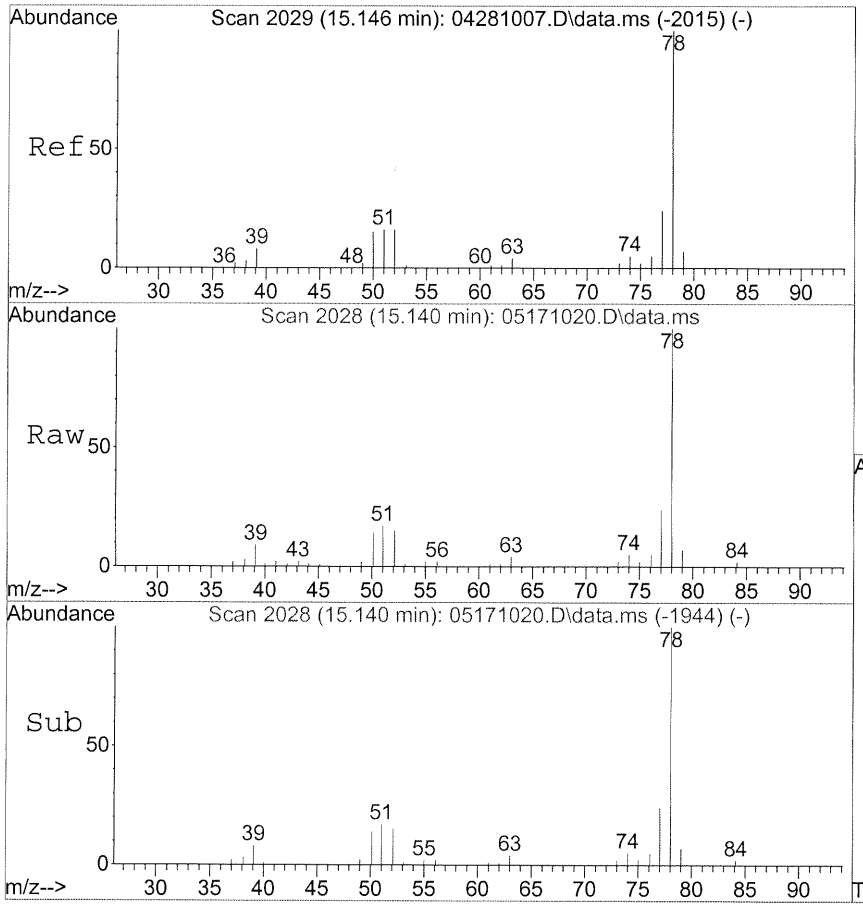


#38
1,1,1-Trichloroethane
Concen: 0.15 ng
RT: 14.44 min Scan# 1905
Delta R.T. -0.023 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 97 Resp: 4784

Ion	Ratio	Lower	Upper
97	100		
99	60.3	44.3	84.3
61	39.2	22.8	62.8

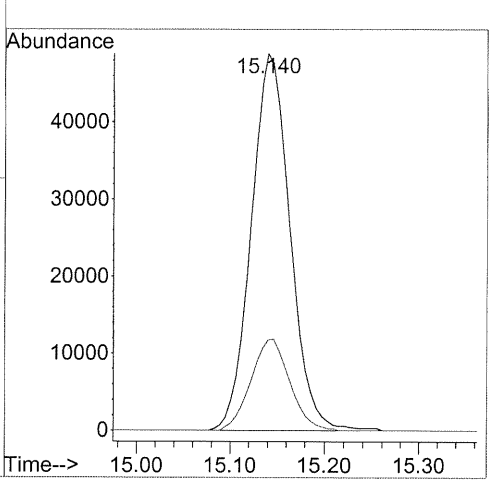


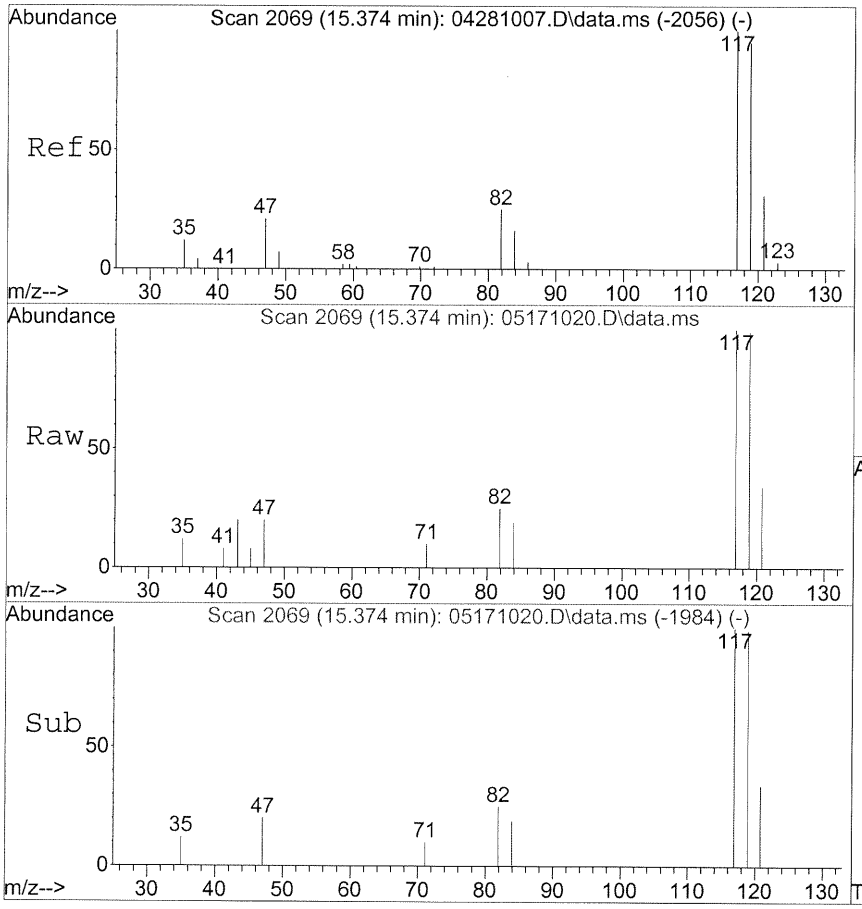


#41
Benzene
Concen: 1.60 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 78 Resp: 140205

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.1	44.1

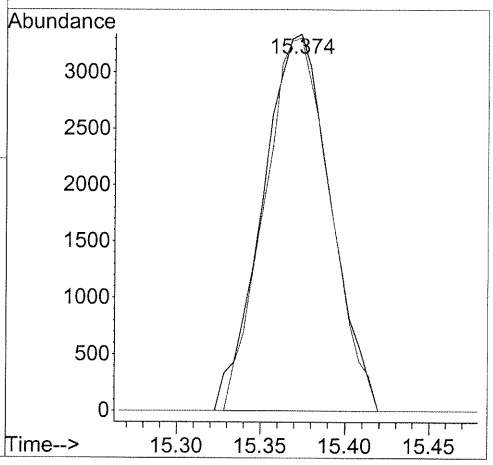


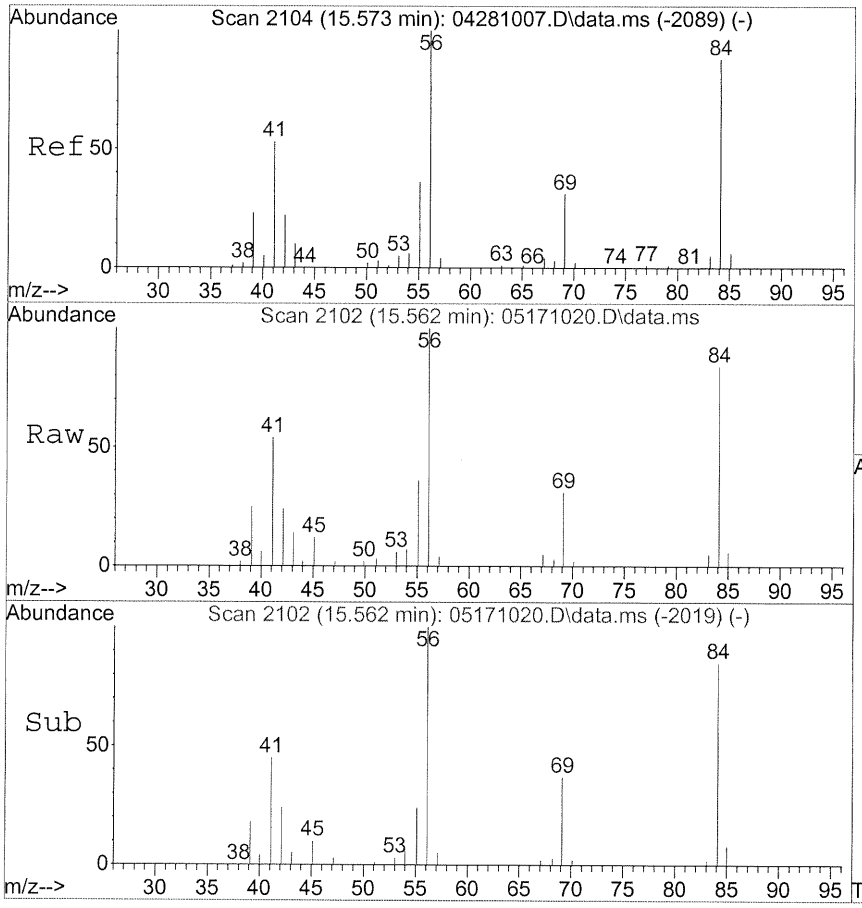


#42
Carbon Tetrachloride
Concen: 0.40 ng
RT: 15.37 min Scan# 2069
Delta R.T. -0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:117 Resp: 9332

Ion	Ratio	Lower	Upper
117	100		
119	95.9	76.1	116.1

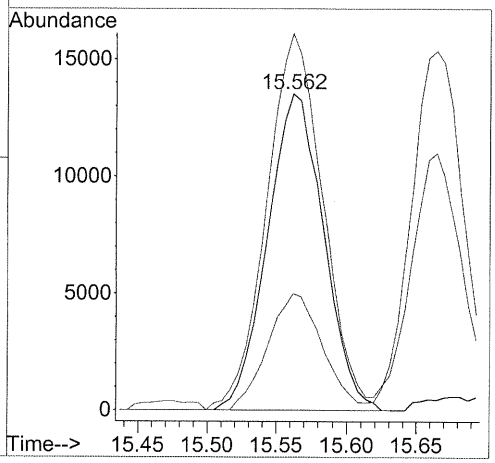


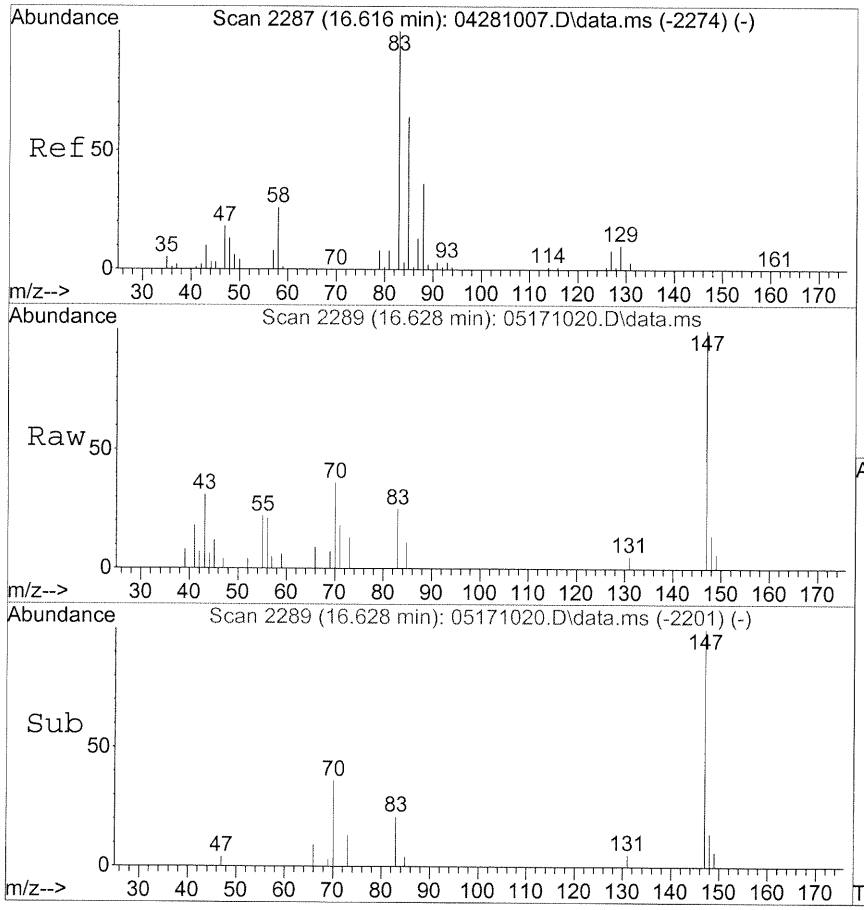


#43
Cyclohexane
Concen: 1.03 ng
RT: 15.56 min Scan# 2102
Delta R.T. -0.029 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 84 Resp: 37734

Ion	Ratio	Lower	Upper
84	100		
69	36.1	14.9	54.9
56	119.2	89.2	129.2

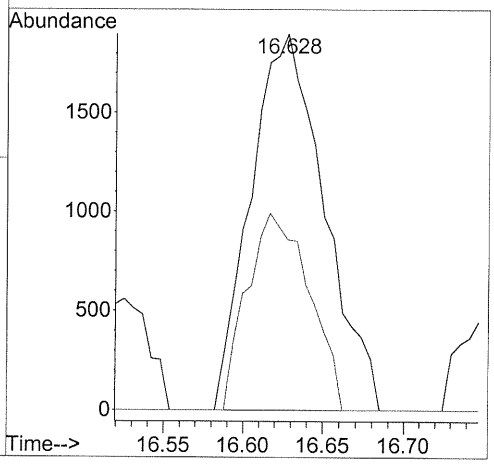


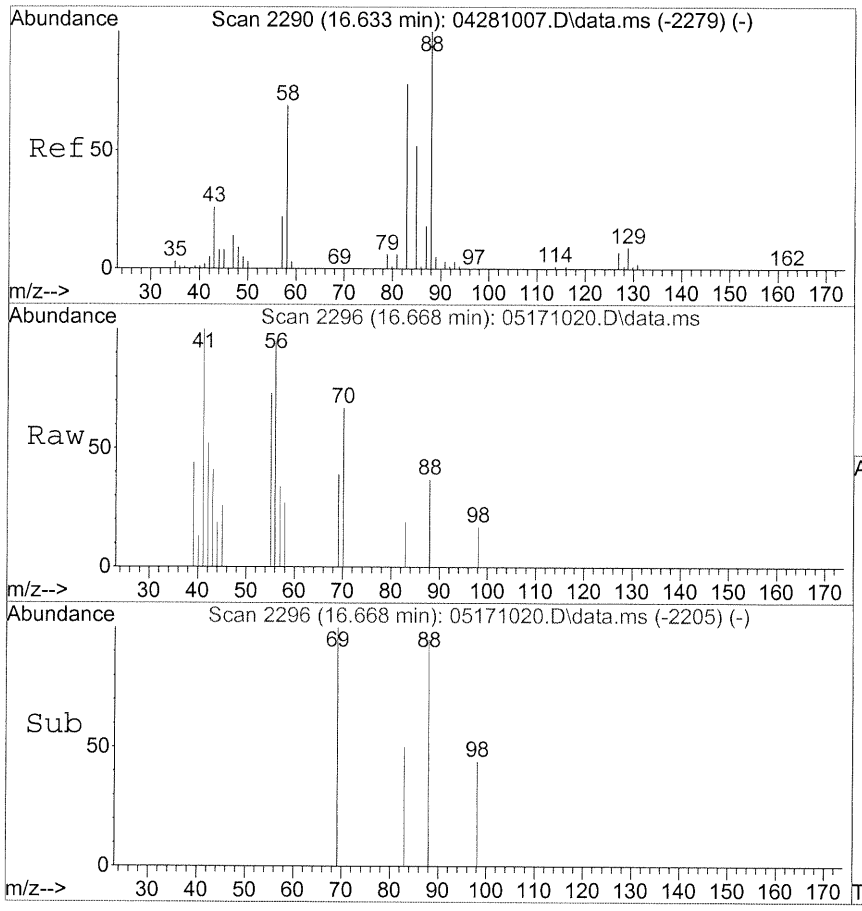


#46
Bromodichloromethane
Concen: 0.23 ng
RT: 16.63 min Scan# 2289
Delta R.T. -0.000 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 83 Resp: 6036

Ion	Ratio	Lower	Upper
83	100		
85	44.6	43.4	83.4

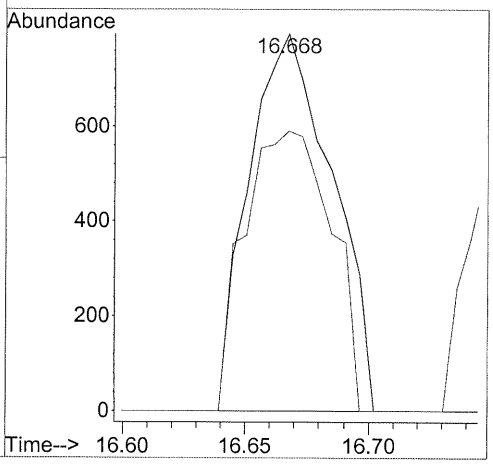


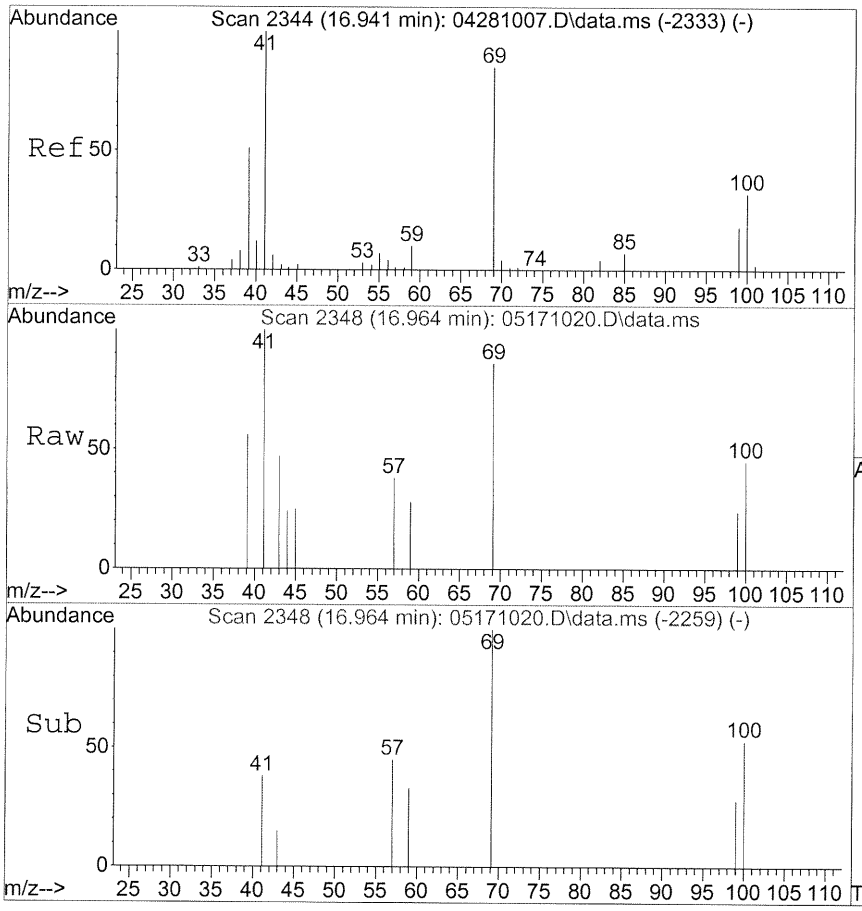


#48
1,4-Dioxane
Concen: 0.11 ng
RT: 16.67 min Scan# 2296
Delta R.T. 0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 88 Resp: 1859

Ion	Ratio	Lower	Upper
88	100		
58	77.5	45.8	85.8

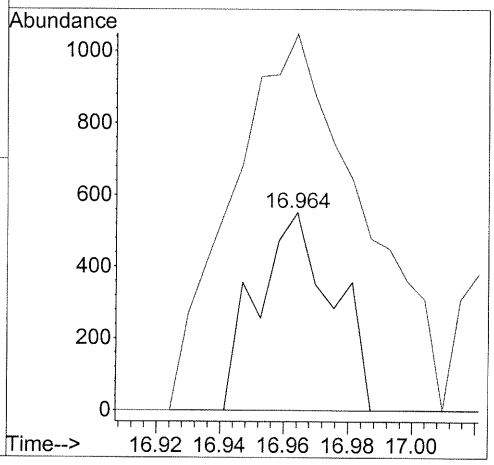


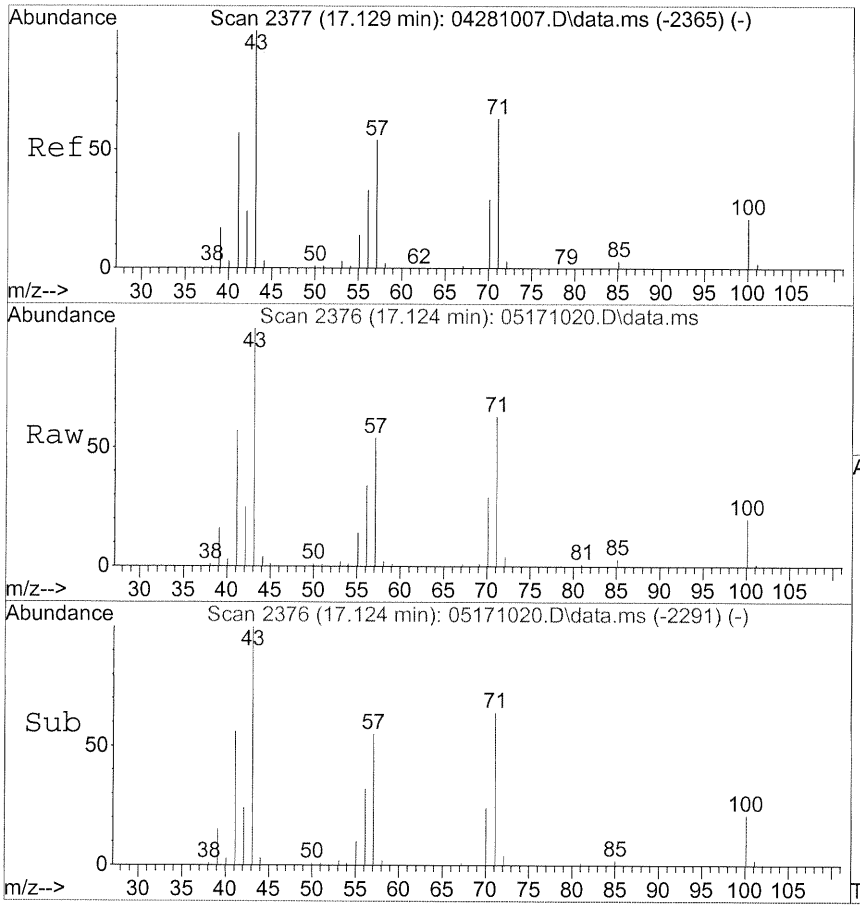


#50
Methyl Methacrylate
Concen: 0.10 ng
RT: 16.96 min Scan# 2348
Delta R.T. 0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:100 Resp: 897

Ion	Ratio	Lower	Upper
100	100		
69	330.8	226.7	266.7#

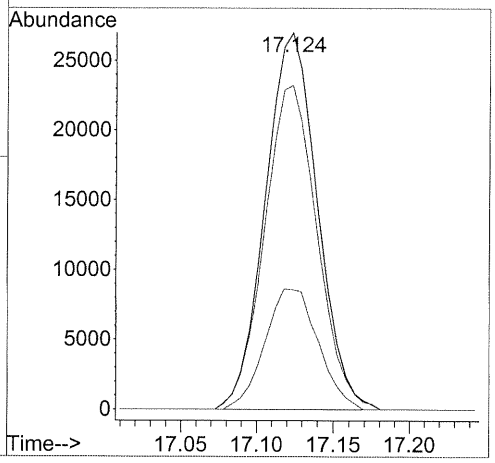


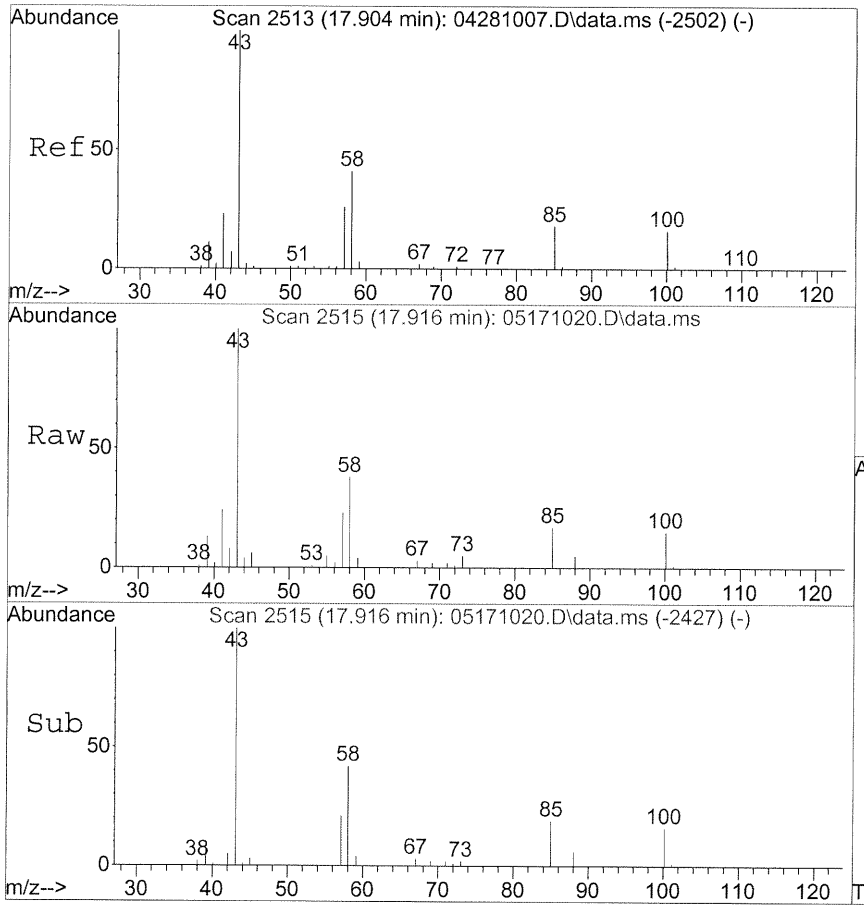


#51
n-Heptane
Concen: 2.54 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 71 Resp: 63671

Ion	Ratio	Lower	Upper
71	100		
57	86.9	63.9	103.9
100	32.6	14.1	54.1

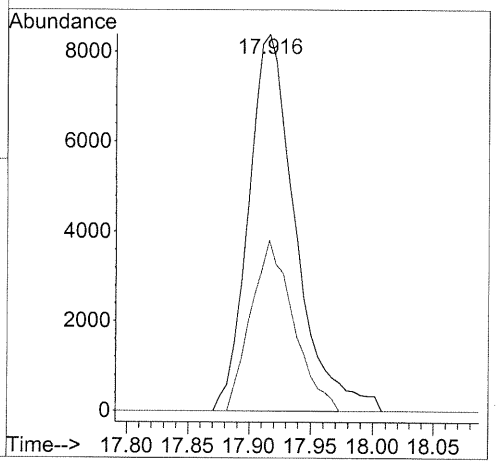


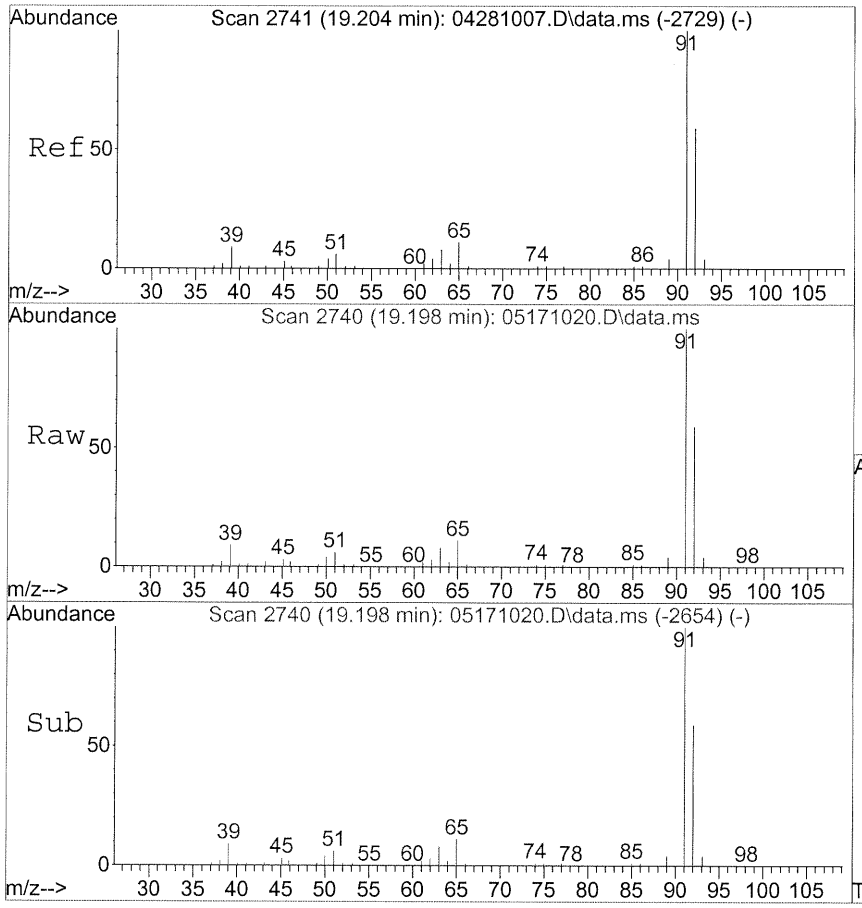


#53
4-Methyl-2-pentanone
Concen: 1.18 ng
RT: 17.92 min Scan# 2515
Delta R.T. -0.000 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 58 Resp: 22359

Ion	Ratio	Lower	Upper
58	100		
85	41.0	26.7	66.7

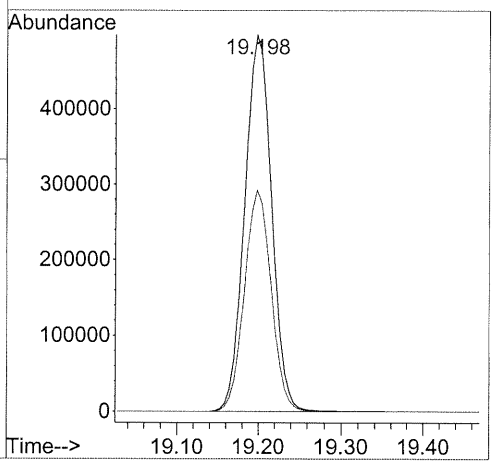


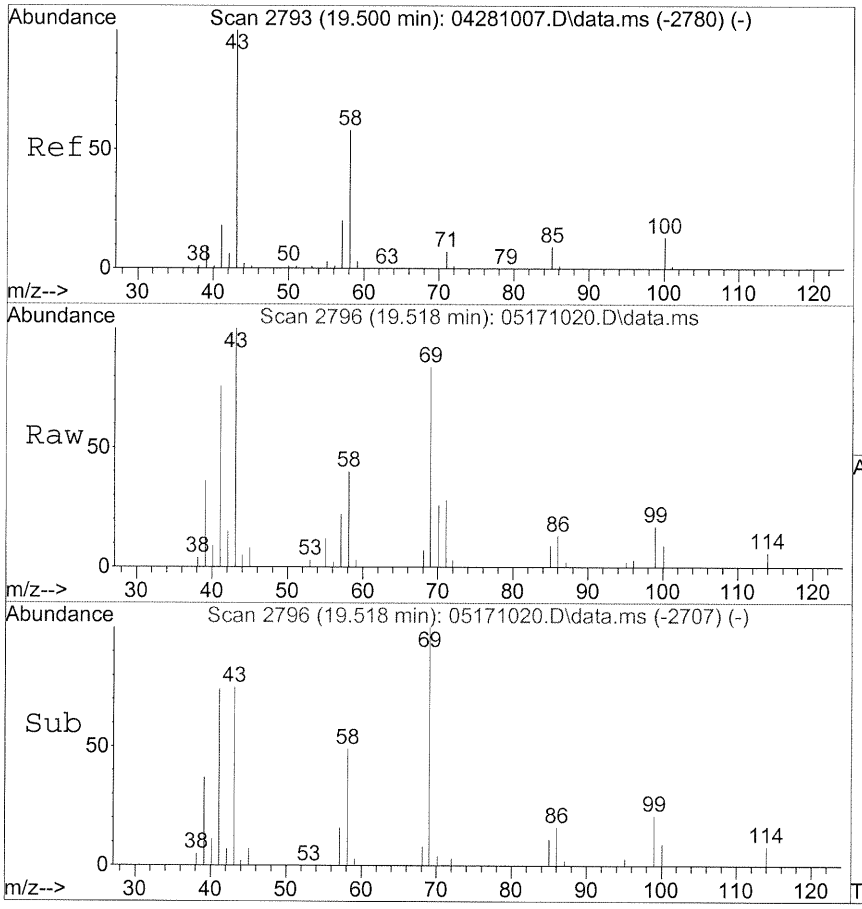


#58
Toluene
Concen: 12.25 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.011 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 91 Resp: 1142115

Ion	Ratio	Lower	Upper
91	100		
92	58.4	39.2	79.2

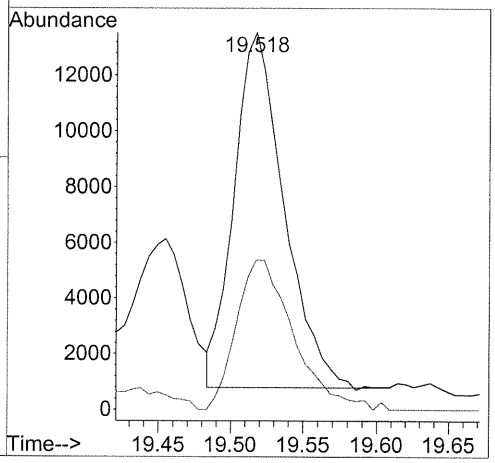


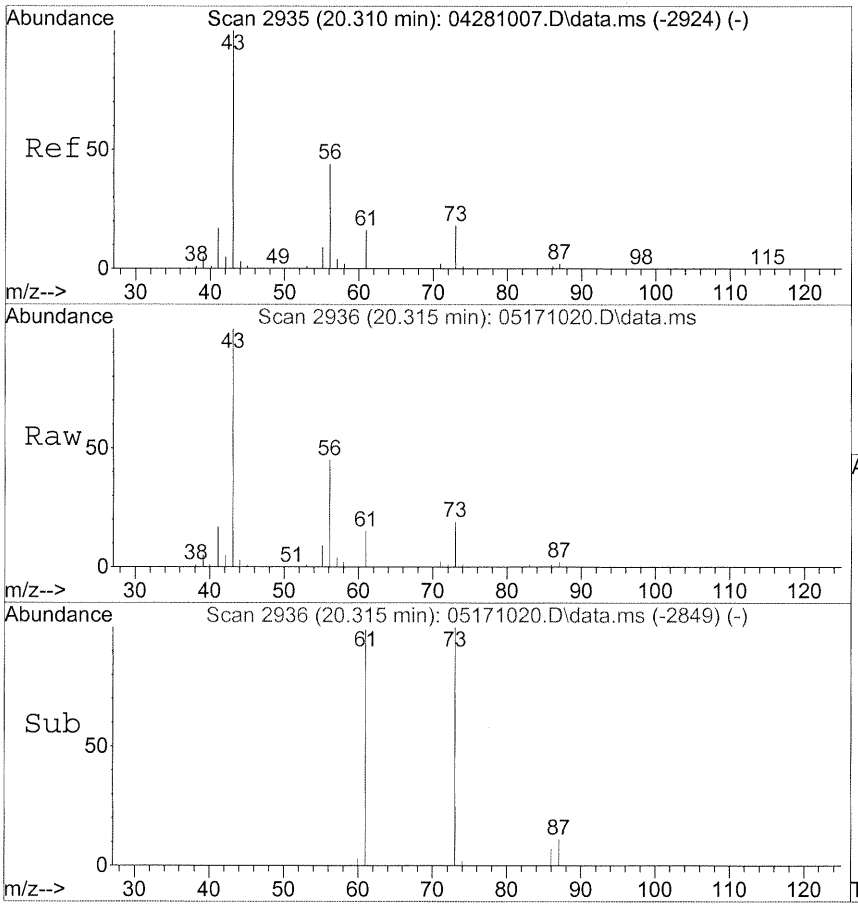


#59
2-Hexanone
Concen: 0.69 ng
RT: 19.52 min Scan# 2796
Delta R.T. 0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 43 Resp: 30664

Ion	Ratio	Lower	Upper
43	100		
58	48.1	38.3	78.3

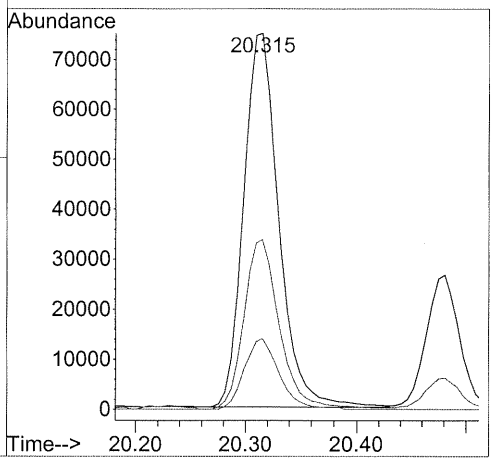


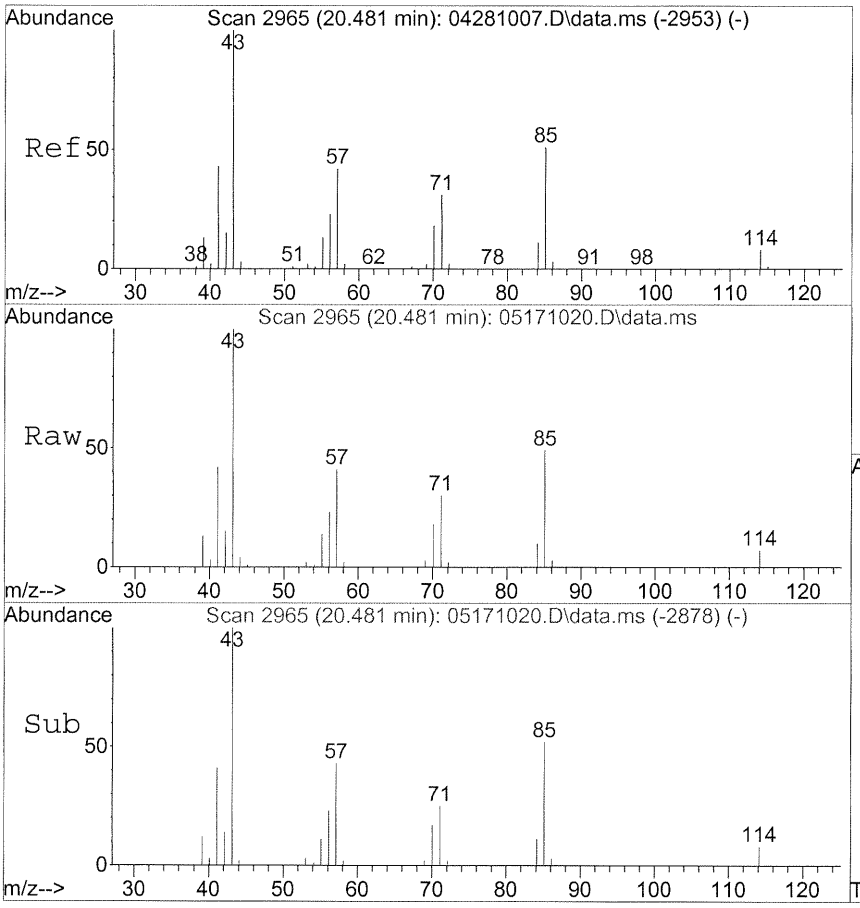


#62
n-Butyl Acetate
Concen: 3.33 ng
RT: 20.32 min Scan# 2936
Delta R.T. -0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 43 Resp: 166306

Ion	Ratio	Lower	Upper
43	100		
56	46.0	25.0	65.0
73	18.6	0.0	39.1

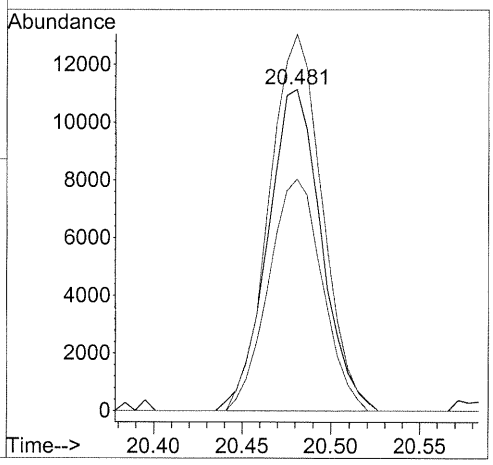


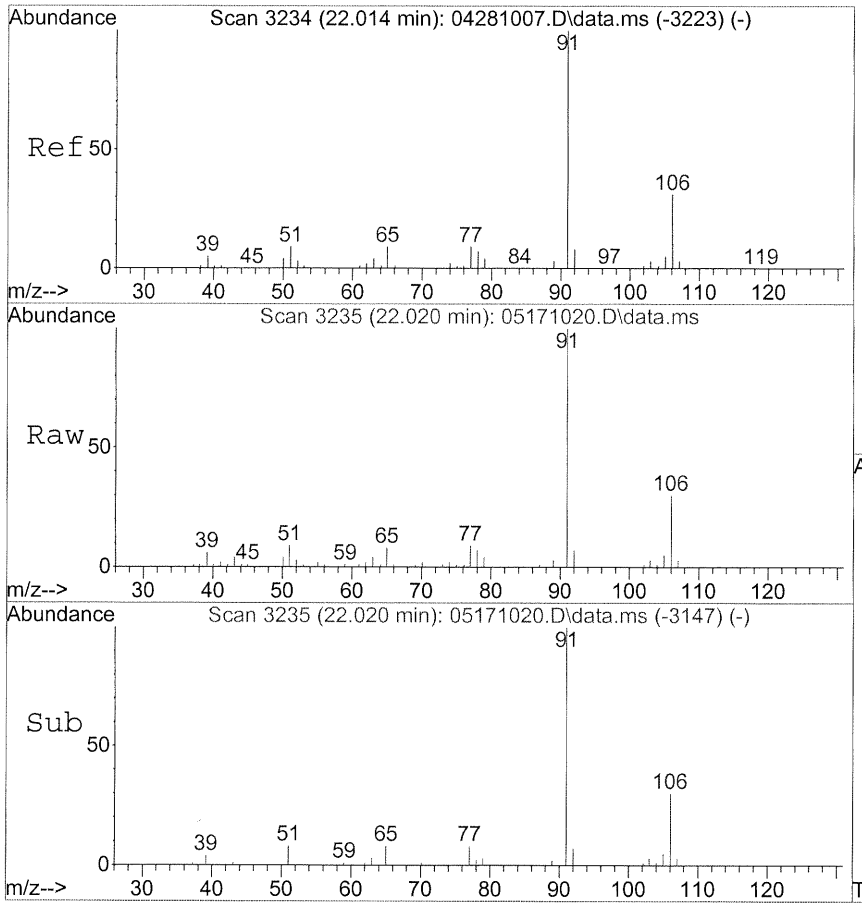


#63
n-Octane
Concen: 1.08 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 57 Resp: 23360

Ion	Ratio	Lower	Upper
57	100		
85	115.8	101.4	152.2
71	72.2	60.7	91.1

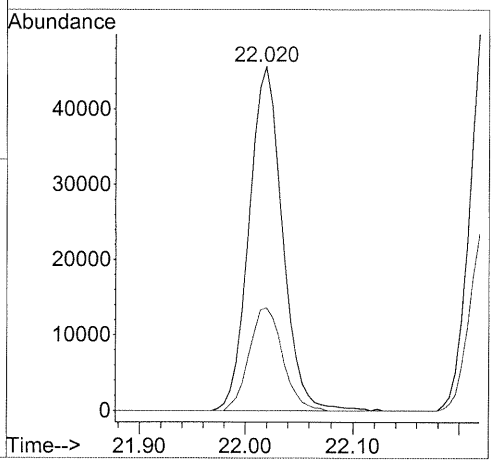


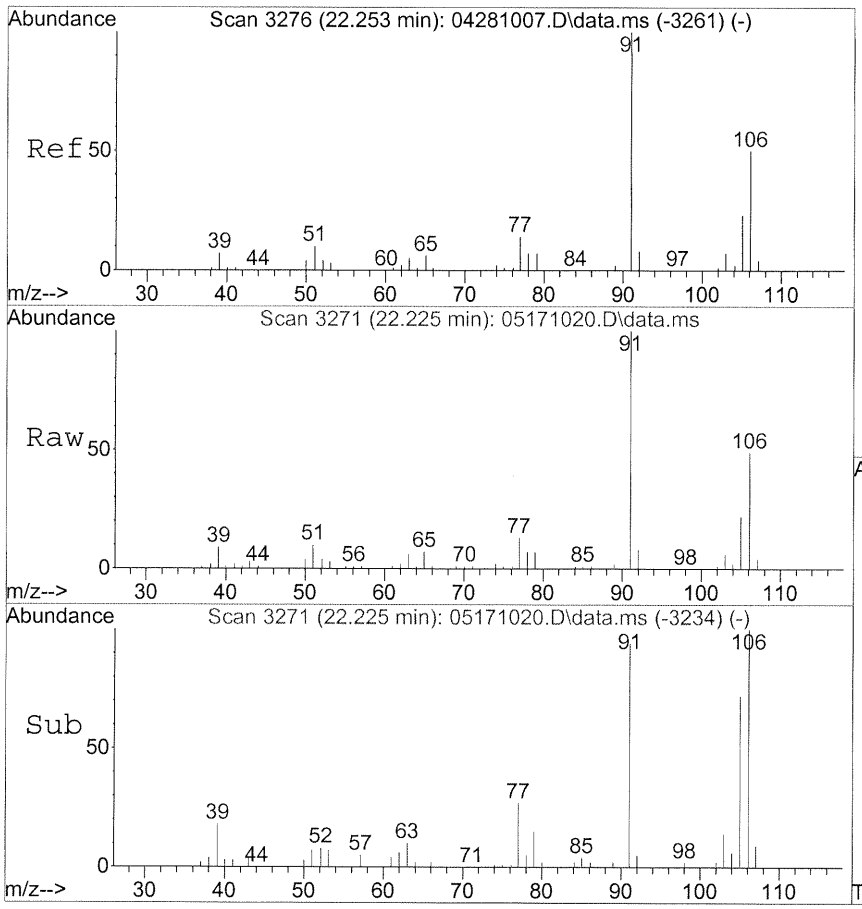


#66
Ethylbenzene
Concen: 0.96 ng
RT: 22.02 min Scan# 3235
Delta R.T. -0.000 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 91 Resp: 99725

Ion	Ratio	Lower	Upper
91	100		
106	29.8	12.2	52.2

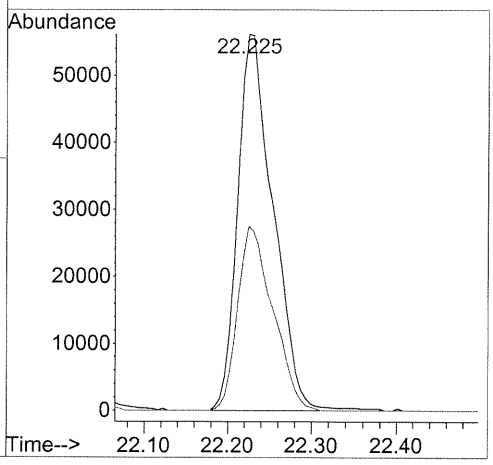


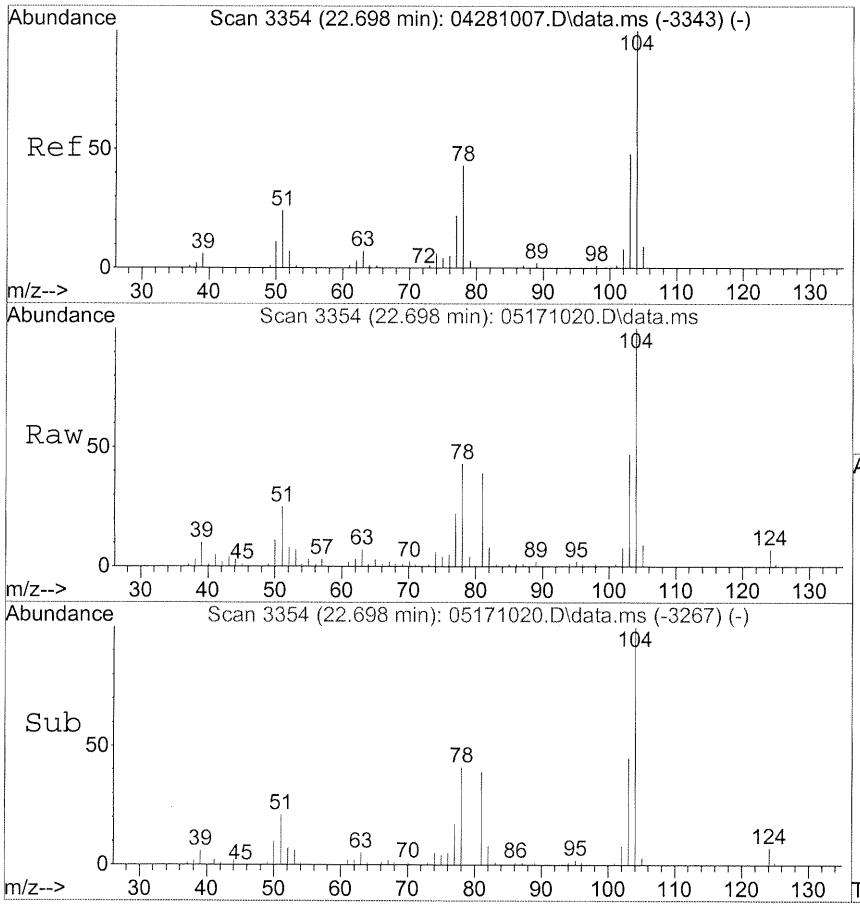


#67
m- & p-Xylenes
Concen: 1.96 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 91 Resp: 165404

Ion	Ratio	Lower	Upper
91	100		
106	48.6	30.6	70.6

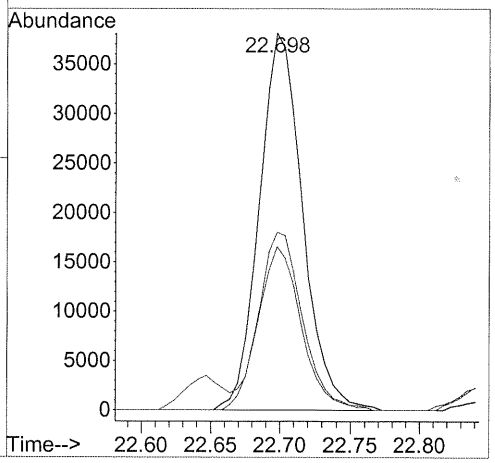


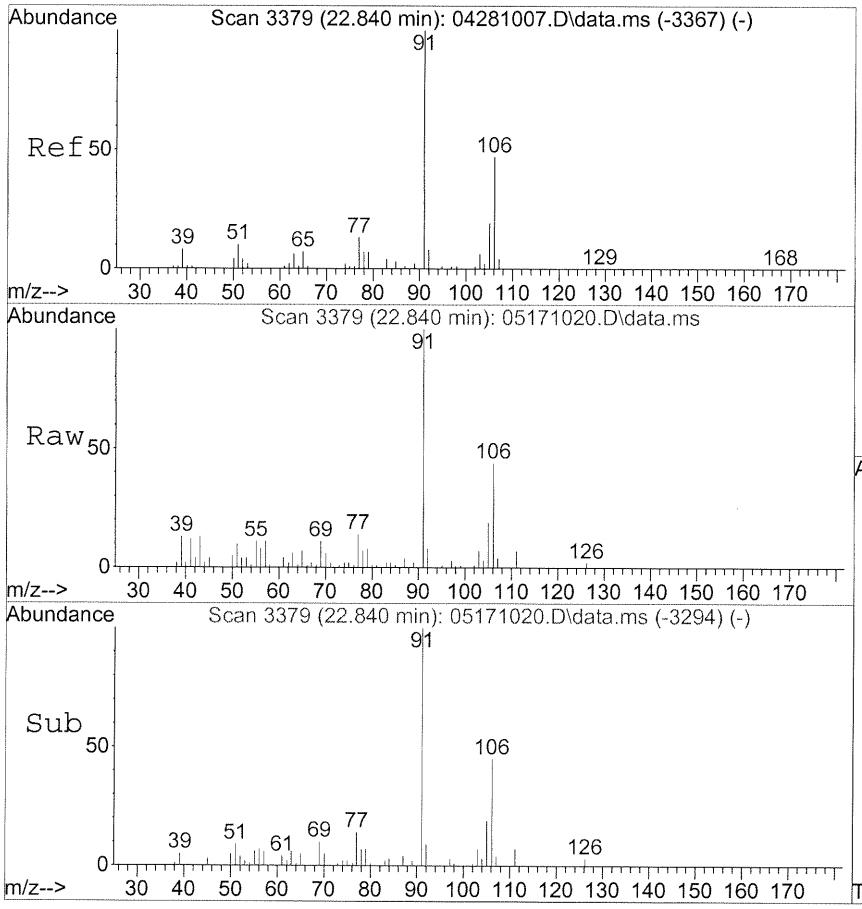


#69
Styrene
Concen: 1.39 ng
RT: 22.70 min Scan# 3354
Delta R.T. -0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:104 Resp: 82627

Ion	Ratio	Lower	Upper
104	100		
78	43.1	22.5	62.5
103	48.0	27.5	67.5

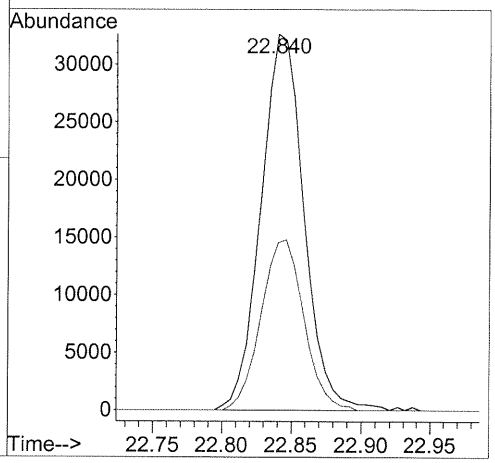


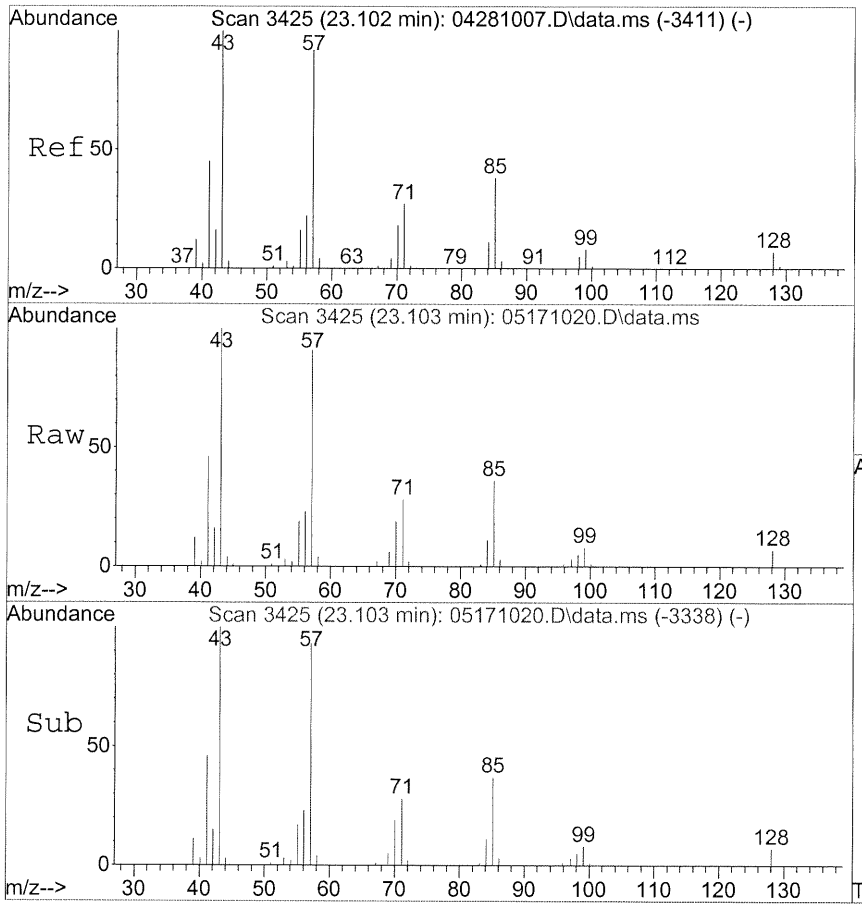


#70
o-Xylene
Concen: 0.78 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 91 Resp: 70677

Ion	Ratio	Lower	Upper
91	100		
106	45.0	27.8	67.8

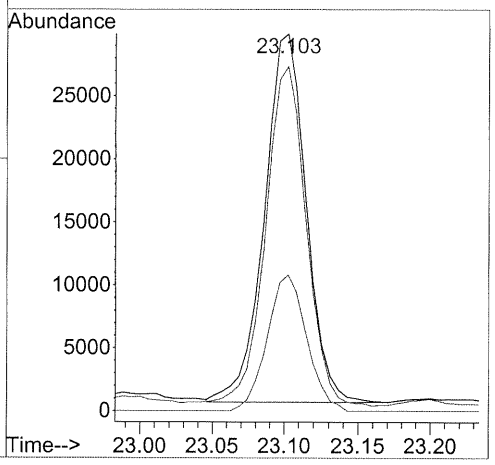


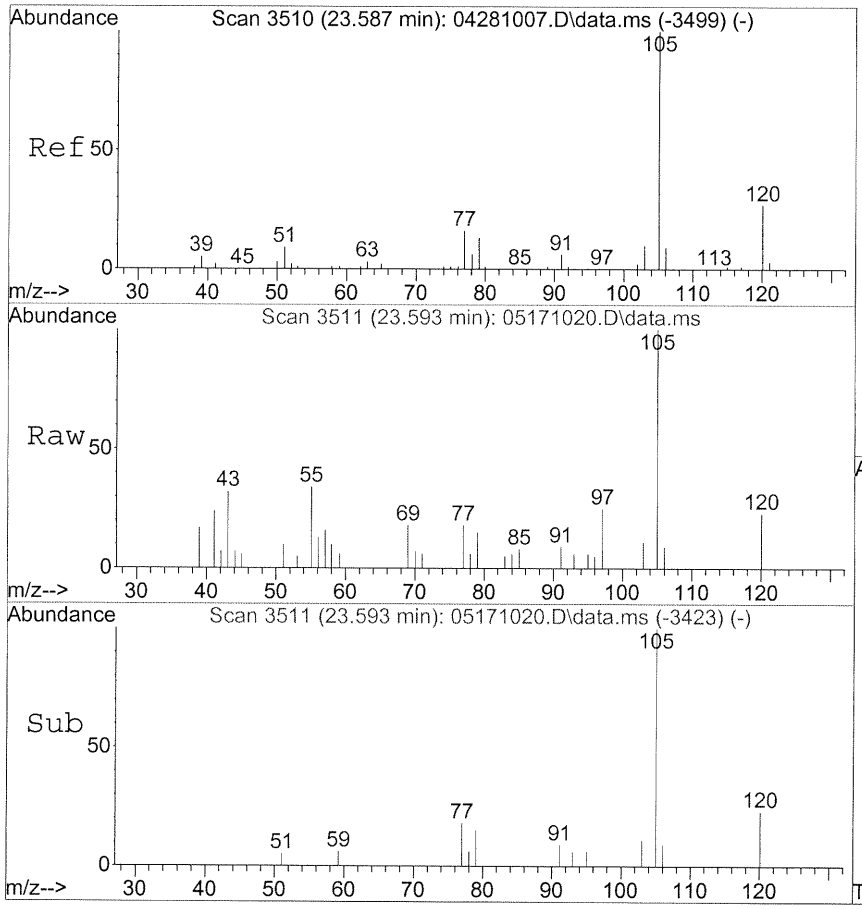


#71
n-Nonane
Concen: 1.20 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 43 Resp: 58823

Ion	Ratio	Lower	Upper
43	100		
57	90.0	74.6	114.6
85	34.6	20.5	60.5

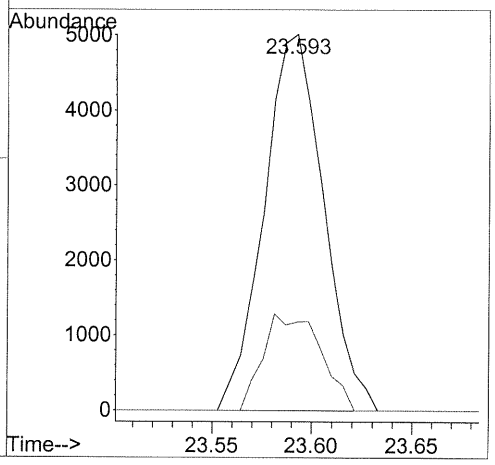


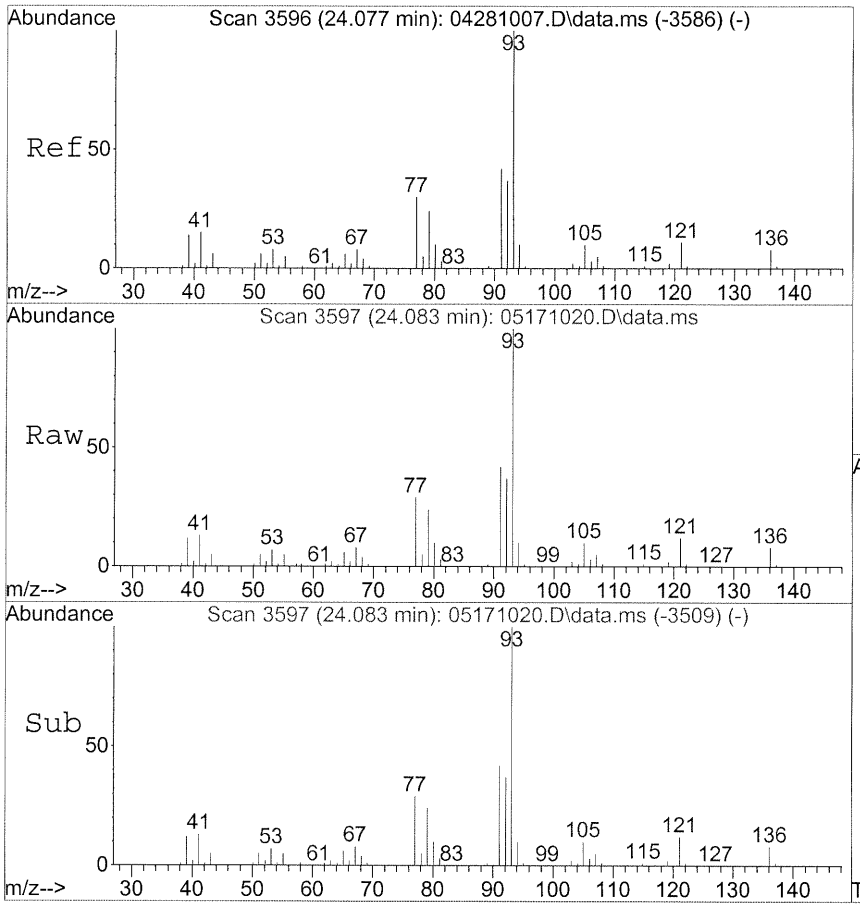


#74
Cumene
Concen: 0.10 ng
RT: 23.59 min Scan# 3511
Delta R.T. -0.000 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:105 Resp: 10375

Ion	Ratio	Lower	Upper
105	100		
120	24.7	6.8	46.8

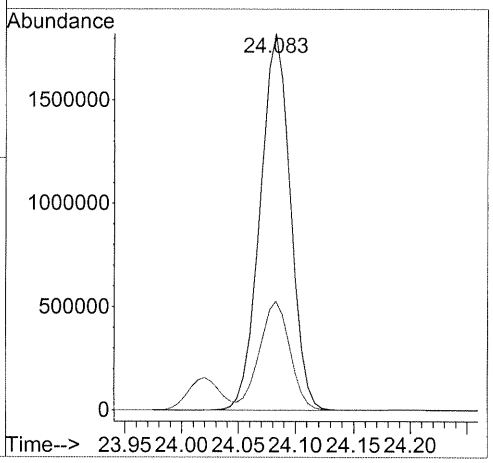


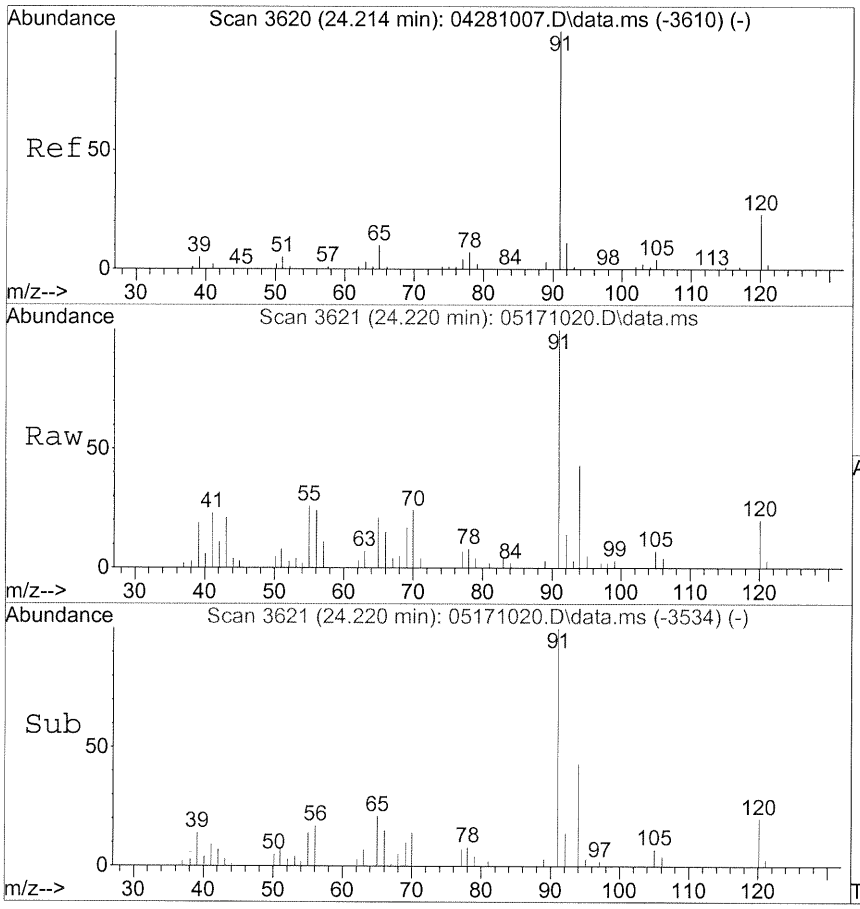


#75
alpha-Pinene
Concen: 66.02 ng
RT: 24.08 min Scan# 3597
Delta R.T. -0.000 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 93 Resp: 3375203

Ion	Ratio	Lower	Upper
93	100		
77	29.2	8.7	48.7

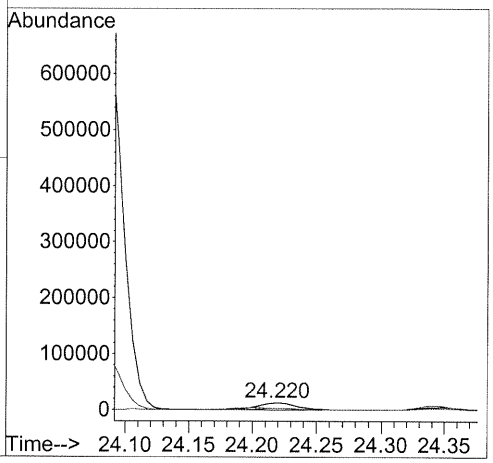


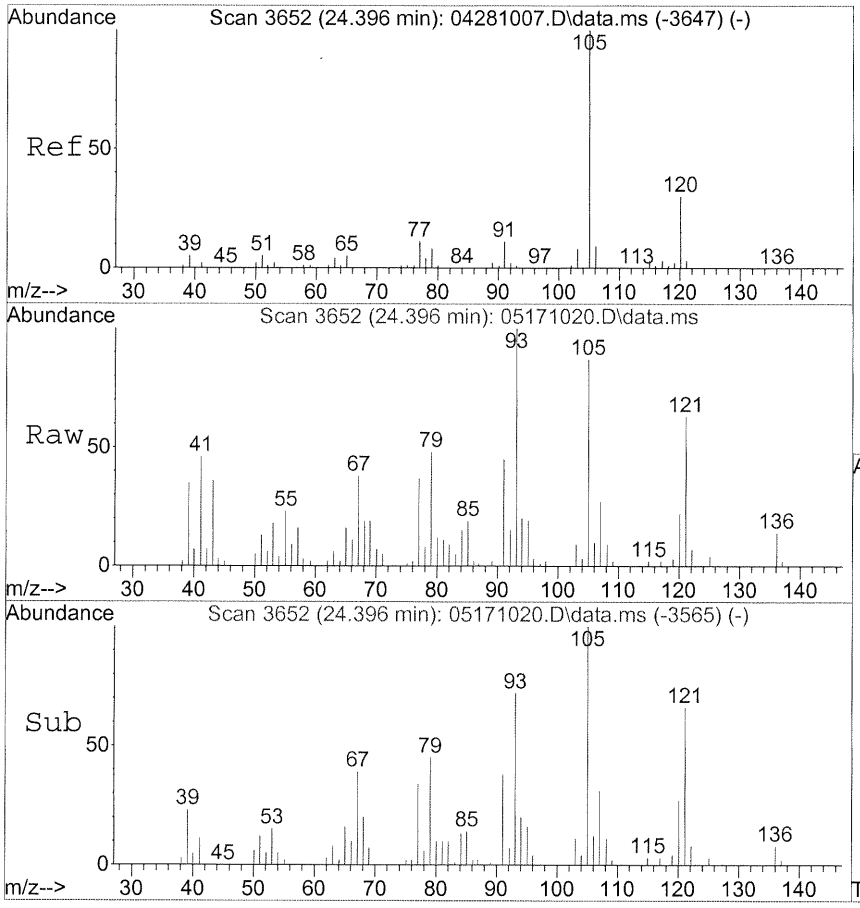


#76
n-Propylbenzene
Concen: 0.21 ng
RT: 24.22 min Scan# 3621
Delta R.T. -0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 91 Resp: 28568

Ion	Ratio	Lower	Upper
91	100		
120	18.2	3.8	43.8
65	0.0	0.0	30.1

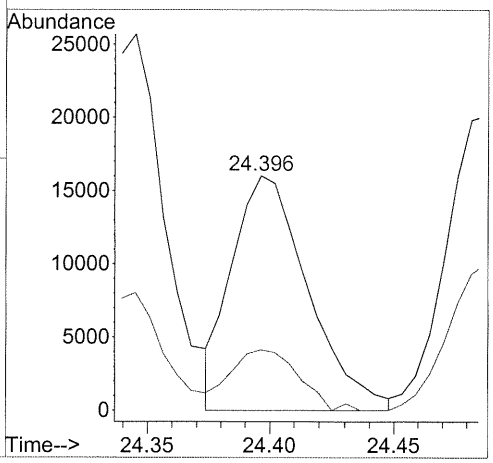


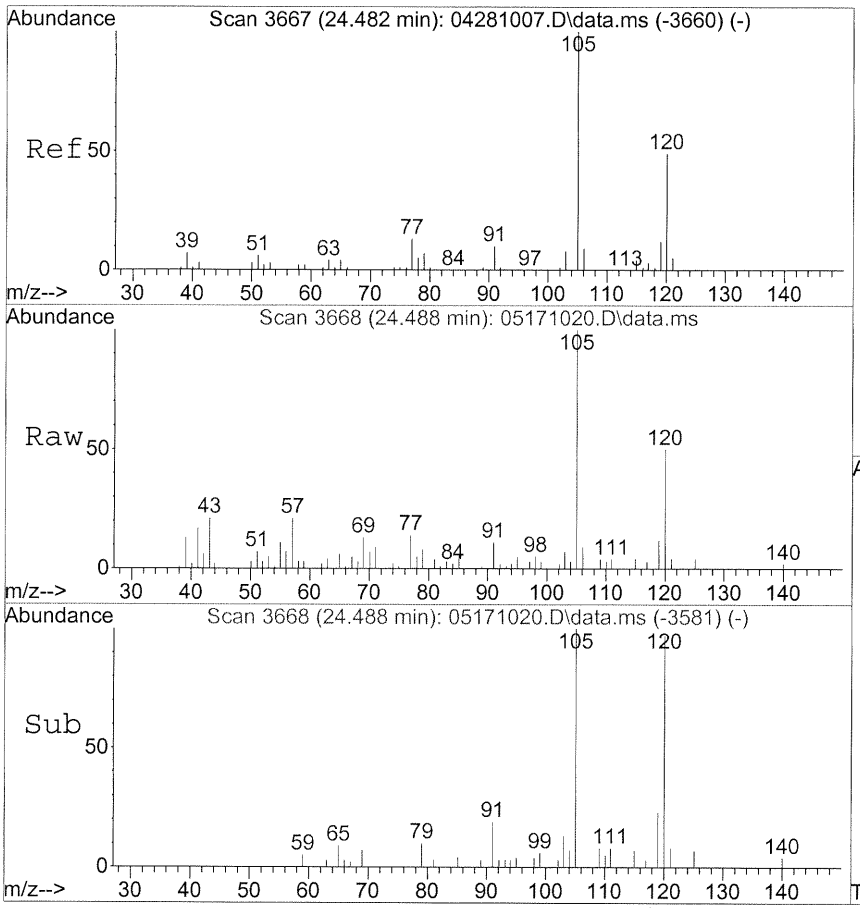


#78
4-Ethyltoluene
Concen: 0.34 ng
RT: 24.40 min Scan# 3652
Delta R.T. -0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:105 Resp: 34568

Ion	Ratio	Lower	Upper
105	100		
120	23.0	10.2	50.2

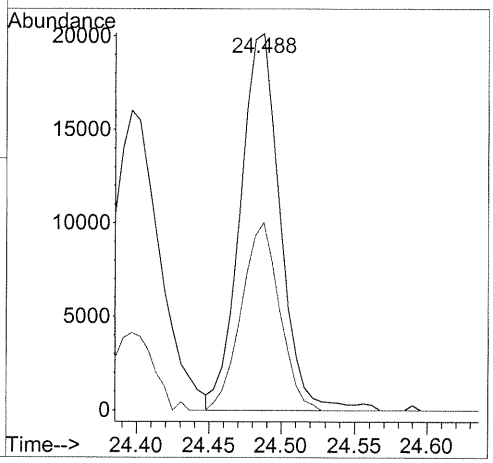


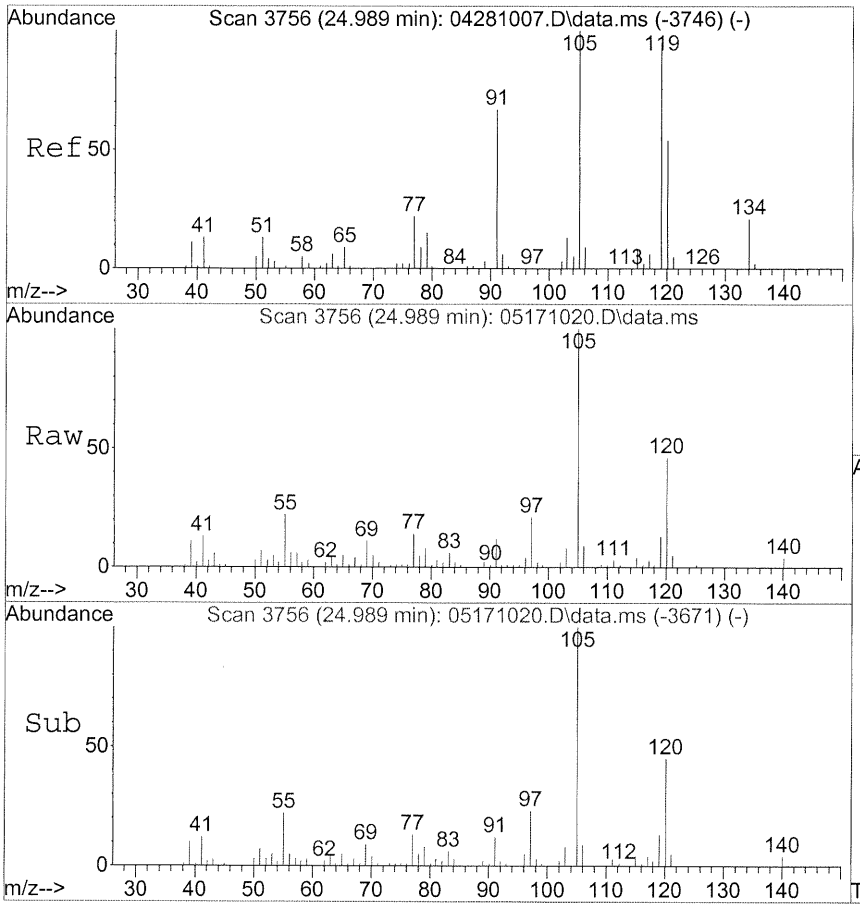


#79
1,3,5-Trimethylbenzene
Concen: 0.45 ng
RT: 24.49 min Scan# 3668
Delta R.T. -0.006 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:105 Resp: 38719

Ion	Ratio	Lower	Upper
105	100		
120	47.4	30.4	70.4

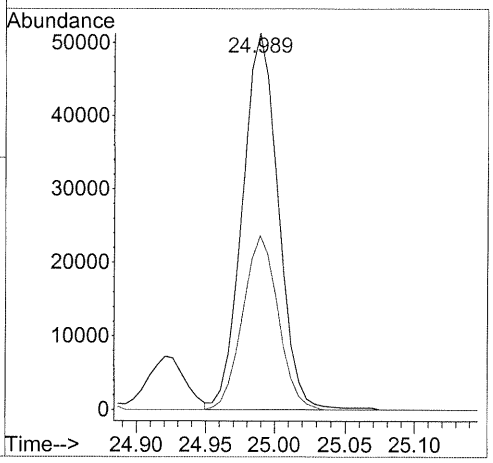


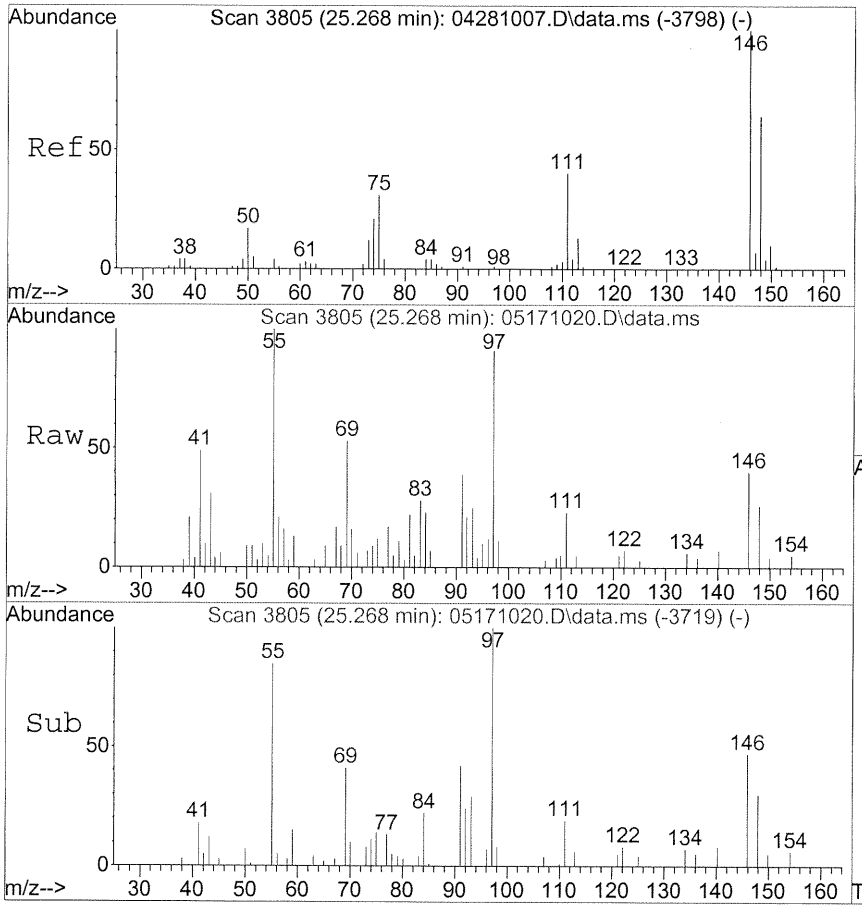


#82
1,2,4-Trimethylbenzene
Concen: 1.04 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:105 Resp: 92999

Ion	Ratio	Lower	Upper
105	100		
120	45.3	35.1	75.1

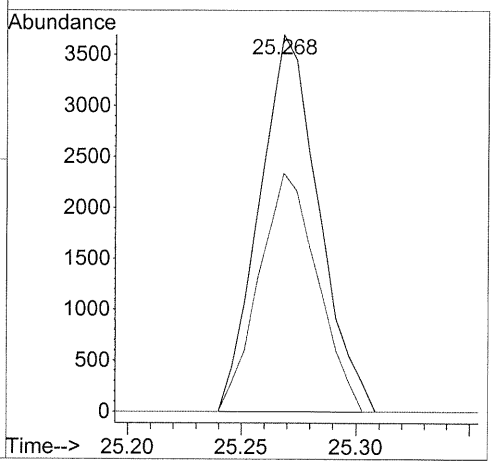


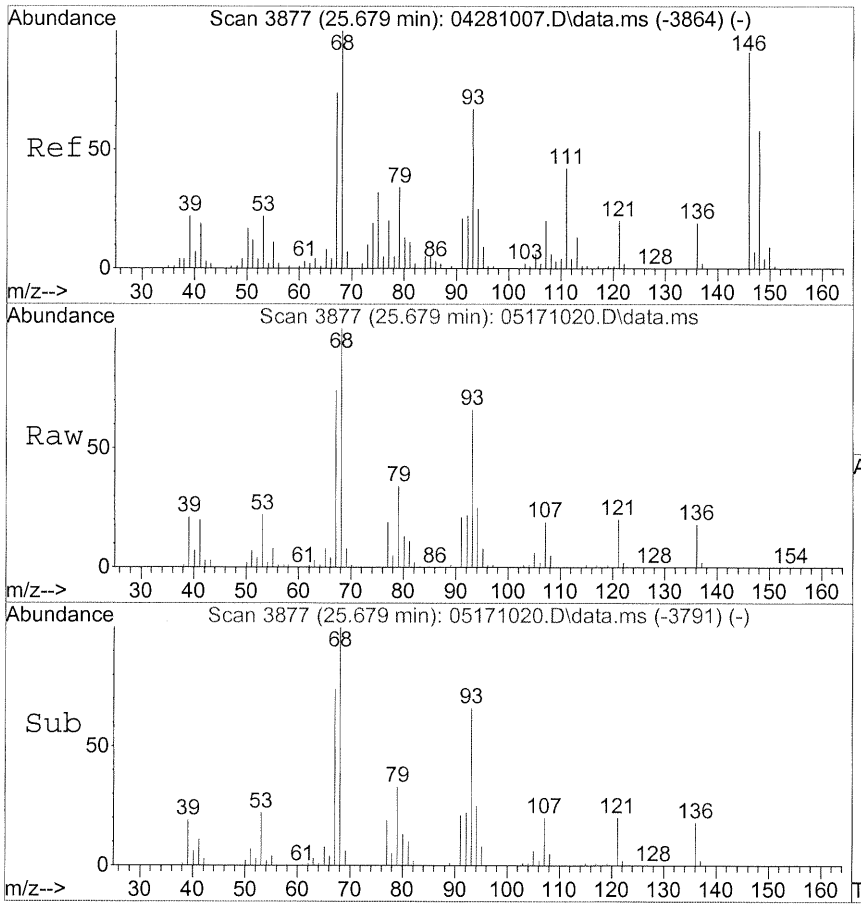


#86
1,4-Dichlorobenzene
Concen: 0.15 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.011 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:146 Resp: 6668

Ion	Ratio	Lower	Upper
146	100		
148	62.2	44.0	84.0

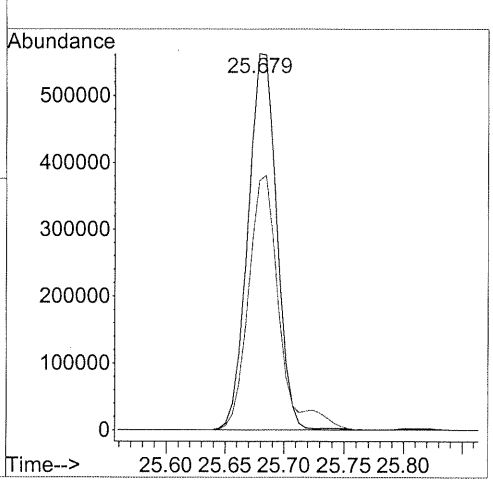


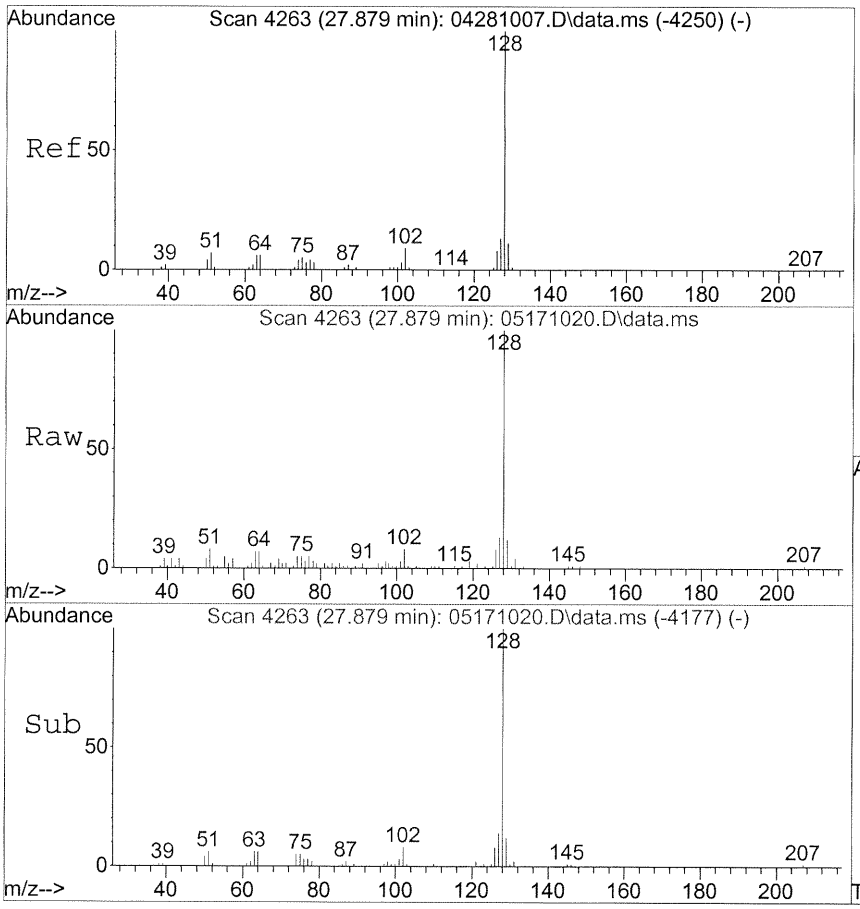


#91
d-Limonene
Concen: 27.16 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.011 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion: 68 Resp: 953234

Ion	Ratio	Lower	Upper
68	100		
93	72.3	51.5	91.5

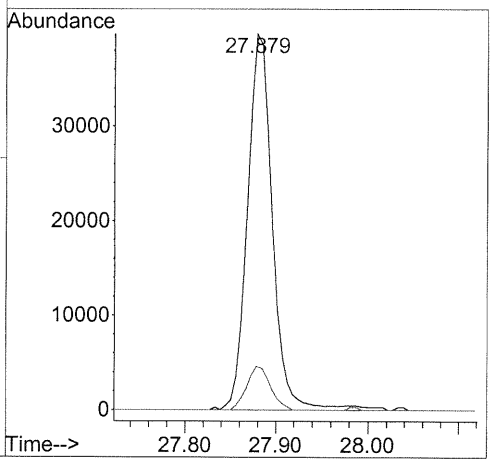




#95
Naphthalene
Concen: 0.77 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.011 min
Lab File: 05171020.D
Acq: 17 May 2010 23:59

Tgt Ion:128 Resp: 75866

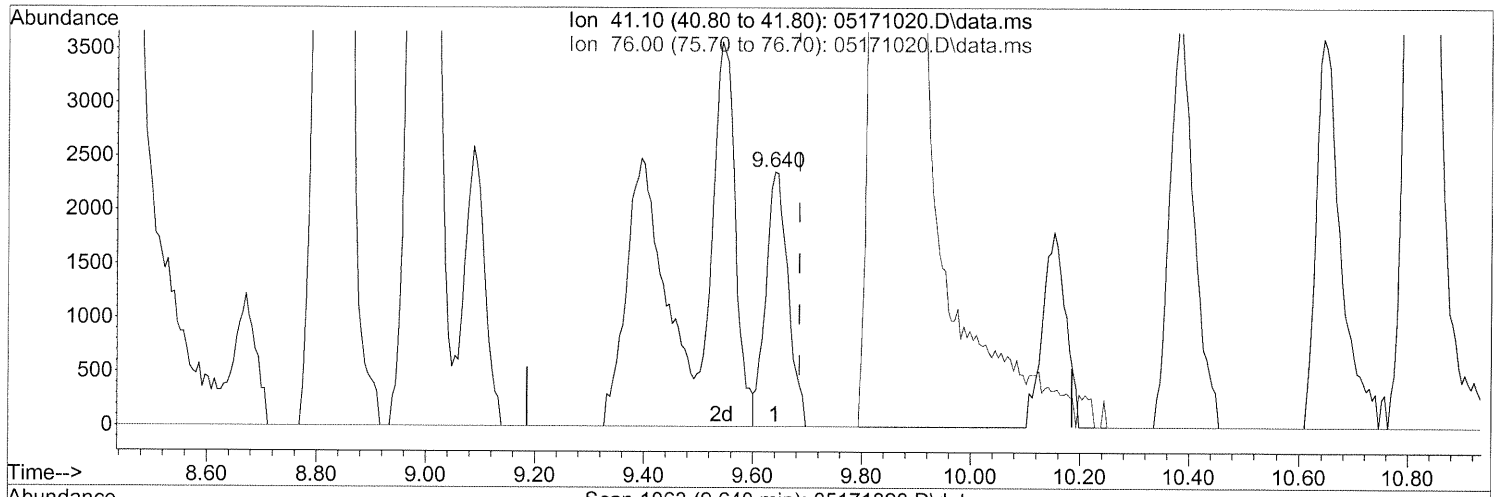
Ion	Ratio	Lower	Upper
128	100		
129	10.9	0.0	31.1

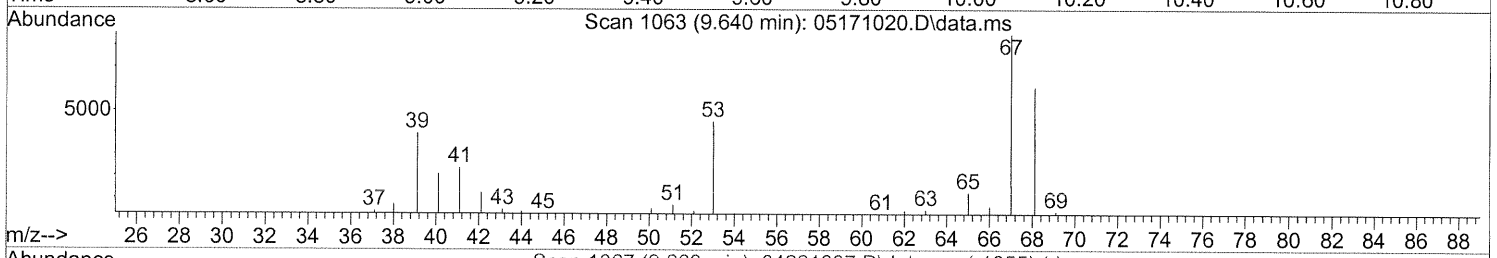


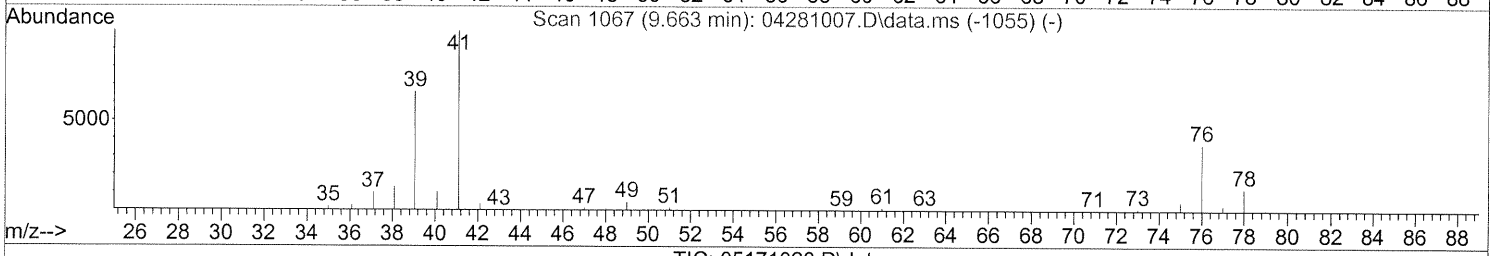
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 08:05:15 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171020.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.640min (-0.046) 0.24ng

response 6703

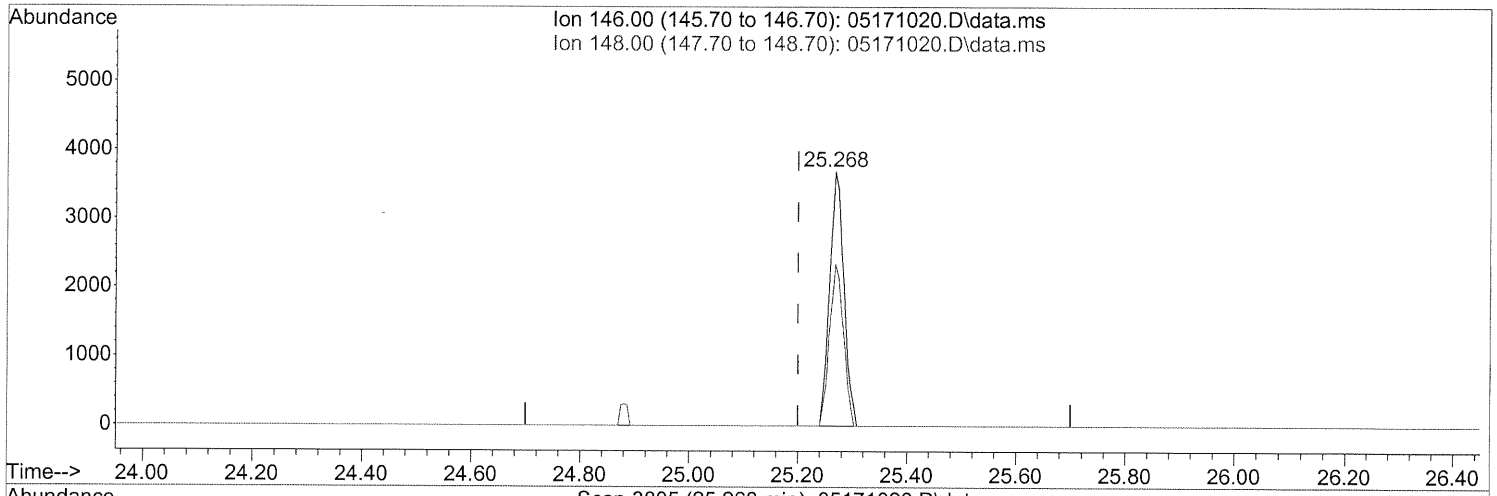
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

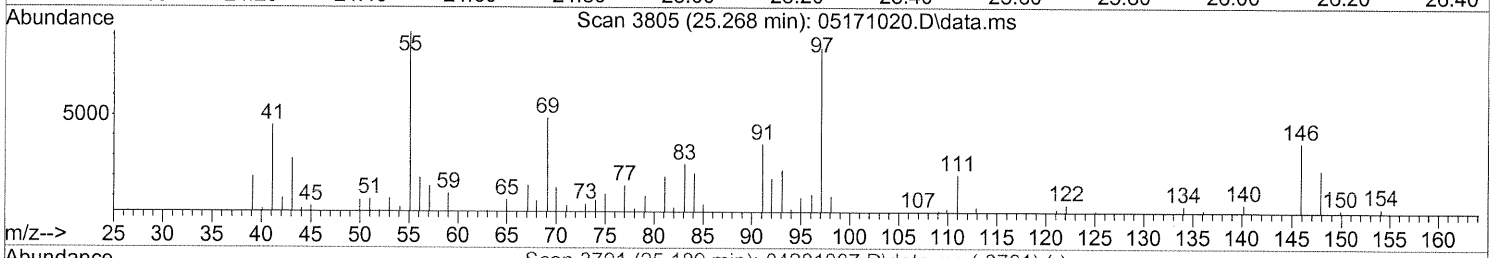
FP

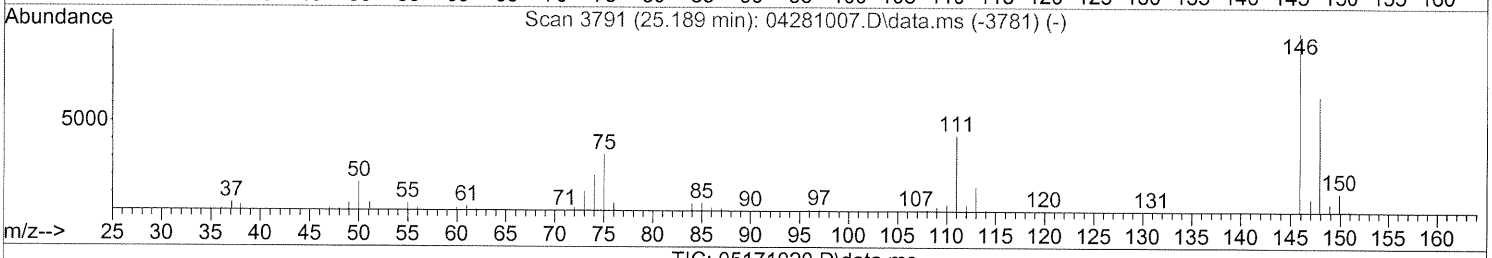
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 08:05:15 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171020.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.268min (+0.068) 0.16ng

response 6668

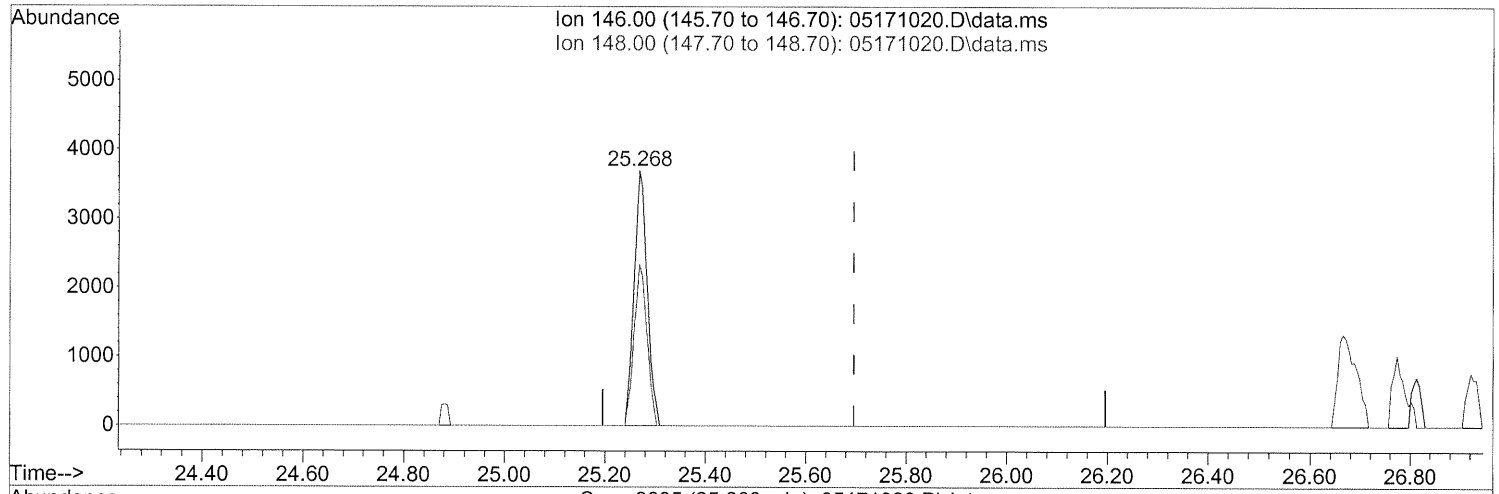
Ion	Exp%	Act%
146.00	100	100
148.00	64.30	62.19
0.00	0.00	0.00
0.00	0.00	0.00

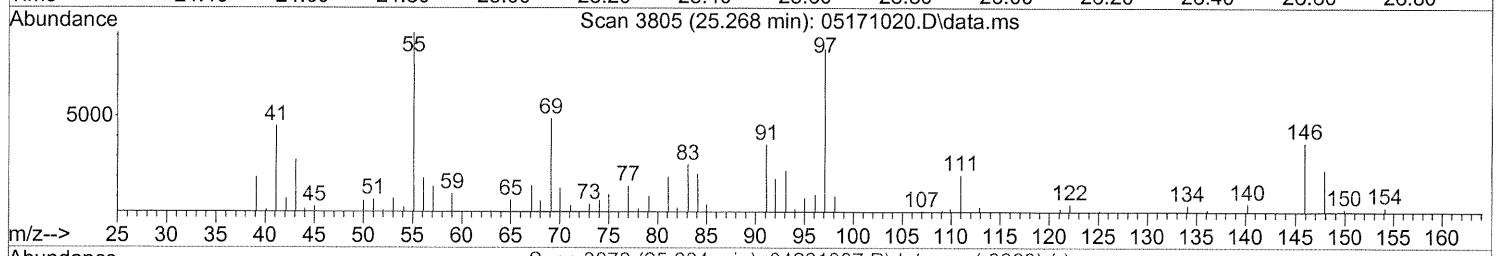
FP

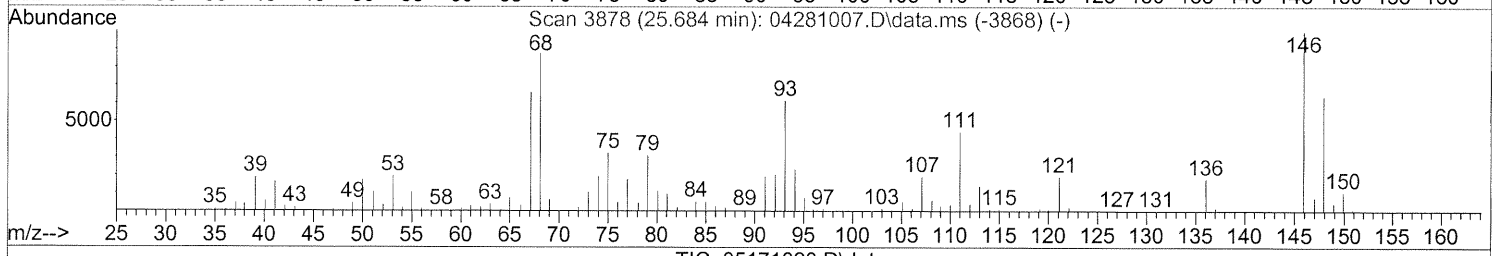
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 08:05:15 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171020.D\data.ms

(90) 1,2-Dichlorobenzene (T)

25.268min (-0.428) 0.16ng

response 6668

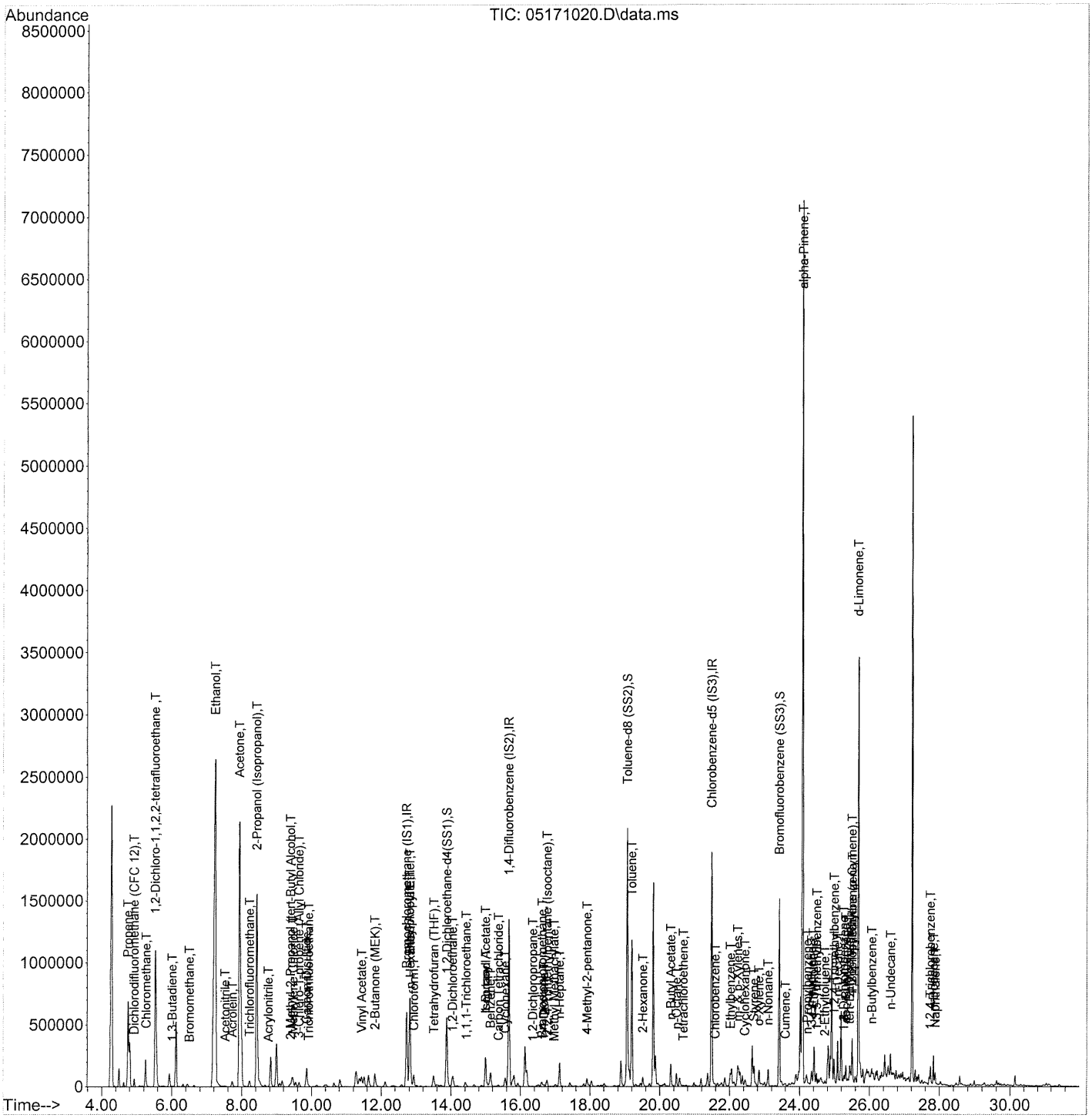
Ion	Exp%	Act%
146.00	100	100
148.00	64.80	62.19
0.00	0.00	0.00
0.00	0.00	0.00

FP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 08:05:15 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 08:05:15 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	316862	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1568552	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	787966	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	556472	23.600	ng		-0.02
Spiked Amount 25.000			Recovery = 94.40%				
57) Toluene-d8 (SS2)	19.07	98	1835001	24.410	ng		0.00
Spiked Amount 25.000			Recovery = 97.64%				
73) Bromofluorobenzene (SS3)	23.42	174	492215	25.648	ng		0.00
Spiked Amount 25.000			Recovery = 102.60%				
Target Compounds							Qvalue
2) Propene	4.76	42	327542	13.252	ng	#	84
3) Dichlorodifluoromethan...	4.93	85	69254	1.633	ng		99
4) Chloromethane	5.27	50	17332	0.553	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	1169	0.055	ng	#	56
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	6.02	54	2301	0.092	ng		90
8) Bromomethane	6.51	94	893	0.051	ng		100
9) Chloroethane	6.86	64	295	N.D.			
10) Ethanol	7.25	45	6028743	447.399	ng		99
11) Acetonitrile	7.52	41	9826	0.289	ng		93
12) Acrolein	7.73	56	58893	5.607	ng		98
13) Acetone	7.94	58	1387132	84.206	ng		97
14) Trichlorofluoromethane	8.22	101	56739	1.545	ng		99
15) 2-Propanol (Isopropanol)	8.43	45	2988290	58.512	ng		98
16) Acrylonitrile	8.76	53	2559	0.104	ng		82
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.40	59	42946	0.815	ng	#	78
19) Methylene Chloride	9.47	84	28508	1.314	ng		97
20) 3-Chloro-1-propene (Al...	9.64	41	6703	0.237	ng	#	36
21) Trichlorotrifluoroethane	9.91	151	5295	0.341	ng		98
22) Carbon Disulfide	9.86	76	335749	4.340	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.34	73	708	N.D.			
26) Vinyl Acetate	11.44	86	32244	6.485	ng	#	7
27) 2-Butanone (MEK)	11.82	72	54543	3.986	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.82	87	3875	0.191	ng	#	1
30) Ethyl Acetate	12.81	61	168177	20.675	ng		96
31) n-Hexane	12.84	57	45557	1.094	ng		98

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 08:05:15 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	97806	2.814	ng		100
34) Tetrahydrofuran (THF)	13.52	72	12427	0.939	ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36) 1,2-Dichloroethane	14.05	62	76263	2.707	ng		99
38) 1,1,1-Trichloroethane	14.44	97	4784	0.152	ng		95
39) Isopropyl Acetate	14.99	61	6276	0.465	ng	#	1
40) 1-Butanol	14.99	56	202972	9.364	ng	#	79
41) Benzene	15.14	78	140205	1.601	ng		100
42) Carbon Tetrachloride	15.37	117	9332	0.400	ng		100
43) Cyclohexane	15.56	84	37734	1.025	ng		92
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	16.35	63	1603	0.075	ng		93
46) Bromodichloromethane	16.63	83	6036	0.230	ng		76
47) Trichloroethene	16.69	130	410	N.D.			
48) 1,4-Dioxane	16.67	88	1859	0.112	ng		85
49) 2,2,4-Trimethylpentane...	16.76	57	37126	0.362	ng		68
50) Methyl Methacrylate	16.96	100	897	0.098	ng	#	51
51) n-Heptane	17.12	71	63671	2.543	ng		97
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
53) 4-Methyl-2-pentanone	17.92	58	22359	1.182	ng		91
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.			
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.			
58) Toluene	19.20	91	1142115	12.248	ng		99
59) 2-Hexanone	19.52	43	30664	0.689	ng		86
60) Dibromochloromethane	19.75	129	428	N.D.			
61) 1,2-Dibromoethane	0.00	107	0	N.D.			
62) n-Butyl Acetate	20.32	43	166306	3.326	ng		99
63) n-Octane	20.48	57	23360	1.080	ng		92
64) Tetrachloroethene	20.67	166	1868	0.086	ng		98
65) Chlorobenzene	21.58	112	3574	0.063	ng	#	43
66) Ethylbenzene	22.02	91	99725	0.956	ng		96
67) m- & p-Xylenes	22.22	91	165404	1.955	ng		97
68) Bromoform	22.34	173	188	N.D.			
69) Styrene	22.70	104	82627	1.385	ng		99
70) o-Xylene	22.84	91	70677	0.784	ng		96
71) n-Nonane	23.10	43	58823	1.203	ng		94
72) 1,1,2,2-Tetrachloroethane	22.83	83	1452	N.D.			
74) Cumene	23.59	105	10375	0.095	ng		96
75) alpha-Pinene	24.08	93	3375203	66.022	ng		99
76) n-Propylbenzene	24.22	91	28568	0.214	ng	#	84
77) 3-Ethyltoluene	24.35	105	49884	0.496	ng		97
78) 4-Ethyltoluene	24.40	105	34568	0.340	ng		87
79) 1,3,5-Trimethylbenzene	24.49	105	38719	0.454	ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171020.D
Acq On : 17 May 2010 23:59
Operator : EM
Sample : P1001651-007 (1000ml)
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 08:05:15 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	1672	N.D.		
81) 2-Ethyltoluene	24.72	105	23584	0.224 ng	#	70
82) 1,2,4-Trimethylbenzene	24.99	105	92999	1.043 ng		87
83) n-Decane	25.09	57	130527	2.546 ng		99
84) Benzyl Chloride	25.19	91	2098	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	6668	0.160 ng		97
86) 1,4-Dichlorobenzene	25.27	146	6668	0.151 ng		98
87) sec-Butylbenzene	25.32	105	6646	0.057 ng	#	78
88) 4-Isopropyltoluene (p-...	25.50	119	147066	1.280 ng		100
89) 1,2,3-Trimethylbenzene	25.51	105	45600	0.499 ng		89
90) 1,2-Dichlorobenzene	25.27	146	6668	0.159 ng		97
91) d-Limonene	25.68	68	953234	27.159 ng		99
92) 1,2-Dibromo-3-Chloropr...	26.60	157	290	N.D.		
93) n-Undecane	26.60	57	72708	1.415 ng		85
94) 1,2,4-Trichlorobenzene	27.74	180	1414	0.052 ng	#	81
95) Naphthalene	27.88	128	75866	0.770 ng		99
96) n-Dodecane	27.83	57	76561	1.453 ng		96
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.44	55	17456	0.594 ng	#	73
99) tert-Butylbenzene	25.43	119	8224	0.091 ng		99
100) n-Butylbenzene	26.07	91	13858	0.151 ng	#	68

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110516** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-008

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01684

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.20	ND	0.097	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.10	ND	0.039	
106-99-0	1,3-Butadiene	ND	0.20	ND	0.090	
74-83-9	Bromomethane	ND	0.10	ND	0.026	
75-00-3	Chloroethane	ND	0.10	ND	0.038	
64-17-5	**Ethanol**	**6.8**	5.0	**3.6**	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.10	ND	0.018	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.0	ND	0.41	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.10	ND	0.025	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	ND	0.032	
76-13-1	Trichlorotrifluoroethane	ND	0.10	ND	0.013	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	ND	0.025	
75-34-3	1,1-Dichloroethane	ND	0.10	ND	0.025	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	ND	0.028	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110516**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01684

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.10	ND	0.025	
141-78-6	**Ethyl Acetate**	**2.8**	0.50	**0.78**	0.14	
110-54-3	**n-Hexane**	**0.96**	0.50	**0.27**	0.14	
67-66-3	Chloroform	ND	0.10	ND	0.020	
109-99-9	**Tetrahydrofuran (THF)**	**0.52**	0.50	**0.18**	0.17	
107-06-2	1,2-Dichloroethane	ND	0.10	ND	0.025	
71-55-6	1,1,1-Trichloroethane	ND	0.10	ND	0.018	
71-43-2	Benzene	ND	0.10	ND	0.031	
56-23-5	Carbon Tetrachloride	ND	0.10	ND	0.016	
110-82-7	Cyclohexane	ND	0.50	ND	0.15	
78-87-5	1,2-Dichloropropane	ND	0.10	ND	0.022	
75-27-4	Bromodichloromethane	ND	0.10	ND	0.015	
79-01-6	Trichloroethene	ND	0.10	ND	0.019	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	0.50	ND	0.12	
142-82-5	**n-Heptane**	**2.9**	0.50	**0.72**	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	**Toluene**	**1.9**	0.50	**0.50**	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.10	ND	0.012	
106-93-4	1,2-Dibromoethane	ND	0.10	ND	0.013	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110516**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-008

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01684

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.10	ND	0.015	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	**Ethylbenzene**	**0.77**	0.50	**0.18**	0.12	
179601-23-1	**m,p-Xylenes**	**0.60**	0.50	**0.14**	0.12	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	ND	0.015	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.10	ND	0.017	
106-46-7	1,4-Dichlorobenzene	ND	0.10	ND	0.017	
95-50-1	1,2-Dichlorobenzene	ND	0.10	ND	0.017	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

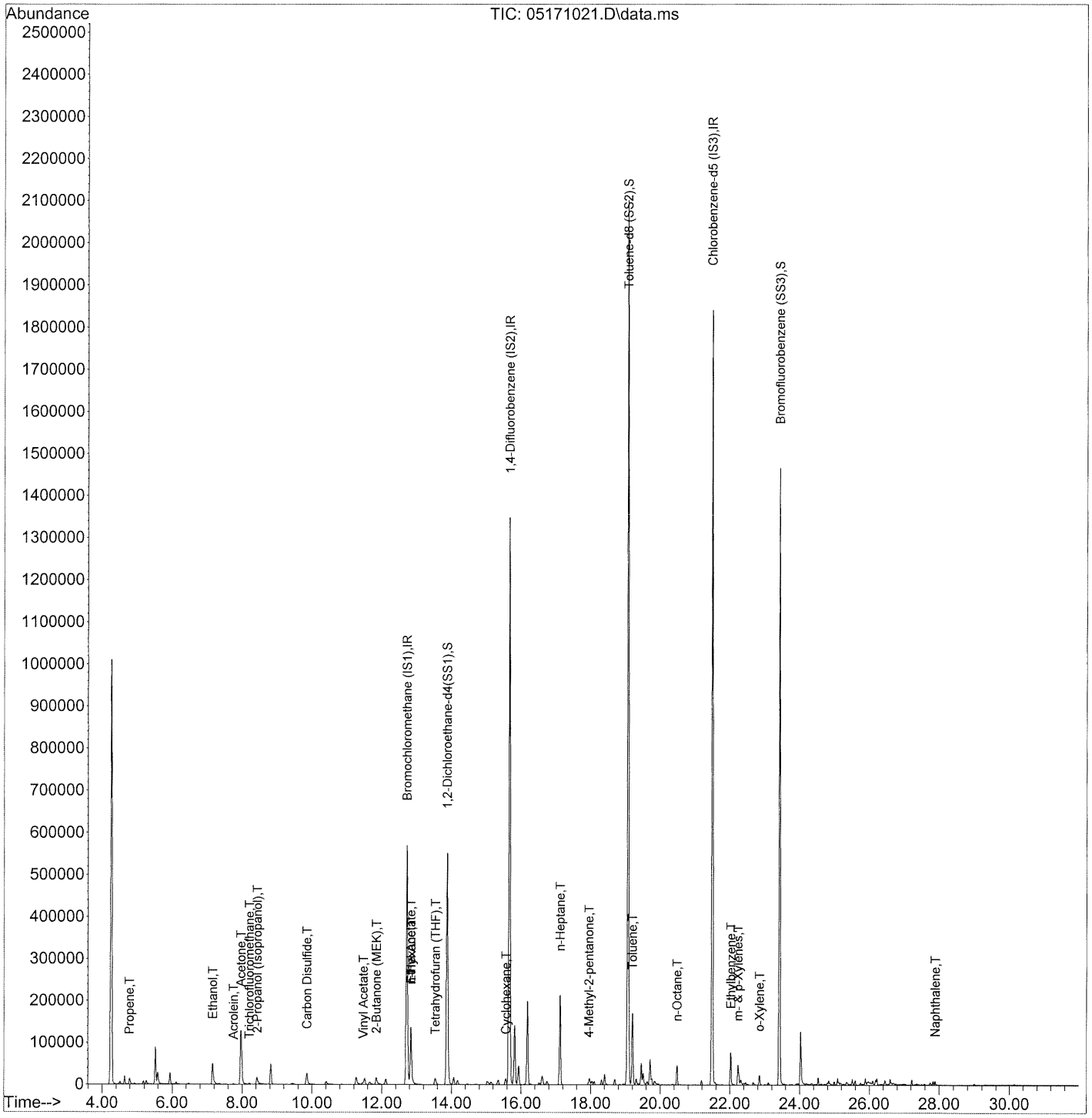
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 20 16:10:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

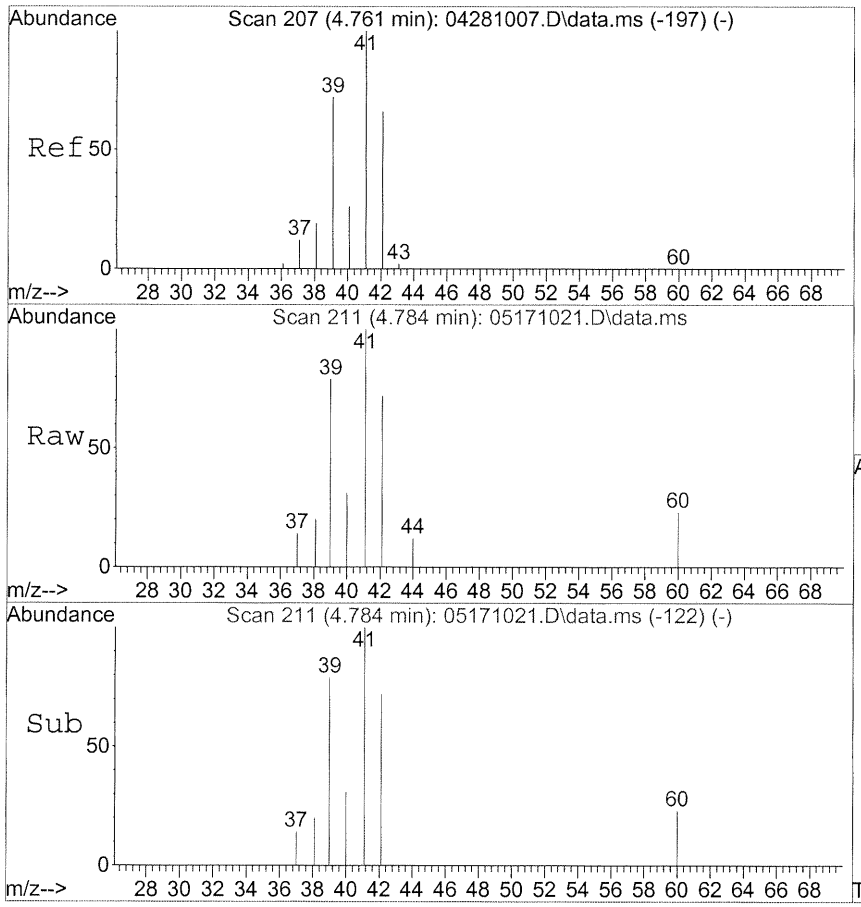
Quant Time: May 20 16:10:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	307252	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	15.66	114	1580729	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	782351	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	556592	24.343	ng	-0.03
Spiked Amount 25.000			Recovery = 97.36%			✓
57) Toluene-d8 (SS2)	19.07	98	1853540	24.834	ng	0.00
Spiked Amount 25.000			Recovery = 99.32%			✓
73) Bromofluorobenzene (SS3)	23.42	174	487983	25.610	ng	0.00
Spiked Amount 25.000			Recovery = 102.44%			✓

Target Compounds							Qvalue
2) Propene	4.78	42	5515	0.230	ng	#	86
10) Ethanol	7.16	45	88266	6.755	ng		99
12) Acrolein	7.75	56	1842	0.181	ng		93
13) Acetone	7.96	58	61446	3.847	ng	#	79
14) Trichlorofluoromethane	8.20	101	3531	0.099	ng		100
15) 2-Propanol (Isopropanol)	8.43	45	40980	0.828	ng		99
22) Carbon Disulfide	9.85	76	74118	0.988	ng		96
26) Vinyl Acetate	11.47	86	1621	0.336	ng	#	1
27) 2-Butanone (MEK)	11.85	72	10603	0.799	ng	#	78
30) Ethyl Acetate	12.83	61	22043	2.795	ng		96
31) n-Hexane	12.84	57	38767	0.960	ng		97
34) Tetrahydrofuran (THF)	13.54	72	6690	0.521	ng		91
43) Cyclohexane	15.56	84	8558	0.231	ng		94
51) n-Heptane	17.12	71	74111	2.938	ng		97
53) 4-Methyl-2-pentanone	17.95	58	2708	0.142	ng	#	60
58) Toluene	19.20	91	173821	1.877	ng		98
63) n-Octane	20.48	57	10243	0.477	ng		96
66) Ethylbenzene	22.02	91	79253	0.765	ng		97
67) m- & p-Xylenes	22.23	91	50096	0.596	ng		97
70) o-Xylene	22.85	91	19038	0.213	ng		95
95) Naphthalene	27.89	128	10968	0.112	ng		93

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

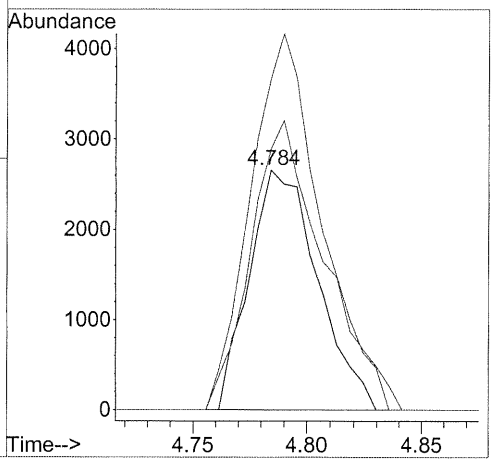
JA 5/20/10

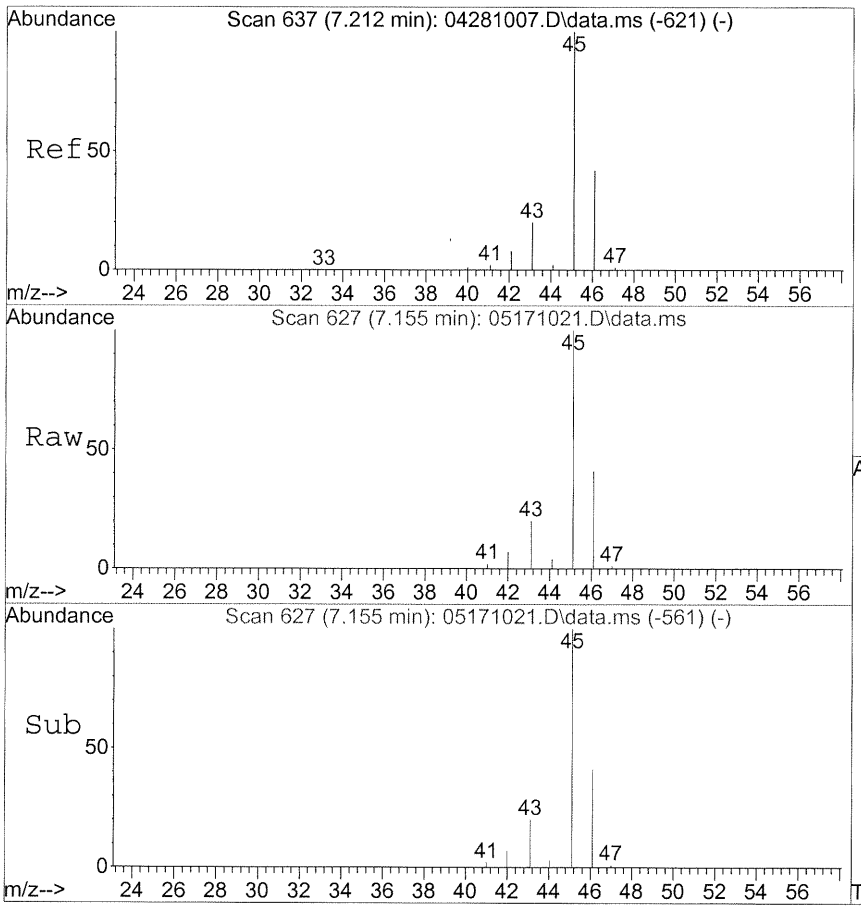


#2
Propene
Concen: 0.23 ng
RT: 4.78 min Scan# 211
Delta R.T. 0.006 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 42 Resp: 5515

Ion	Ratio	Lower	Upper
42	100		
39	129.8	88.4	128.4#
41	162.5	129.9	169.9

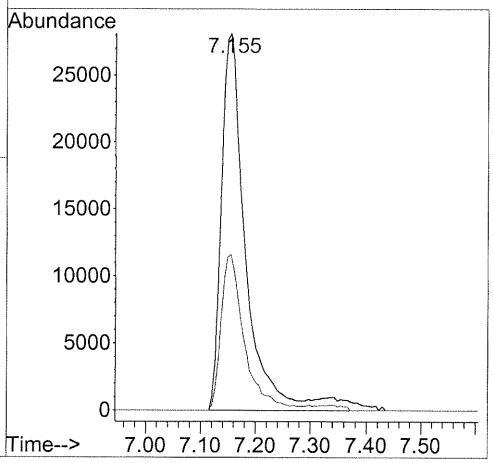


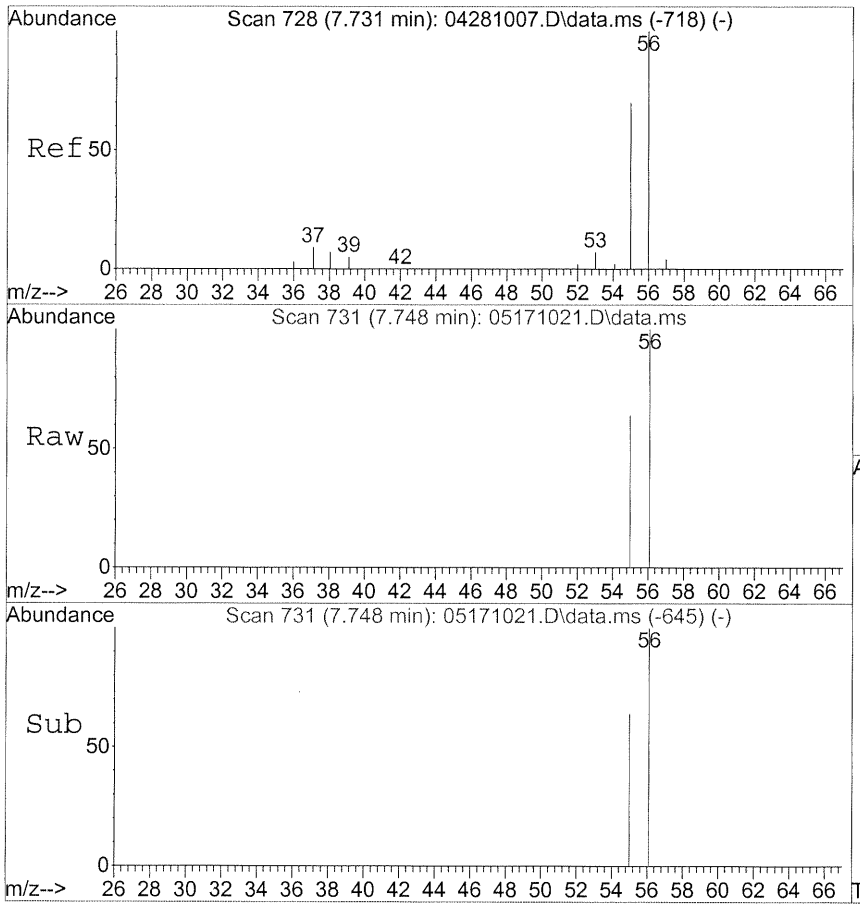


#10
Ethanol
Concen: 6.76 ng
RT: 7.16 min Scan# 627
Delta R.T. -0.125 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 45 Resp: 88266

Ion	Ratio	Lower	Upper
45	100		
46	40.5	21.3	61.3

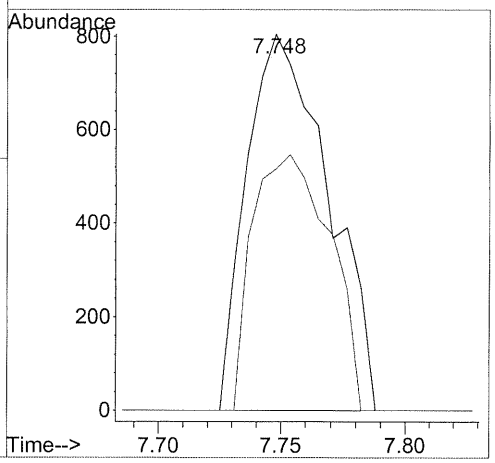


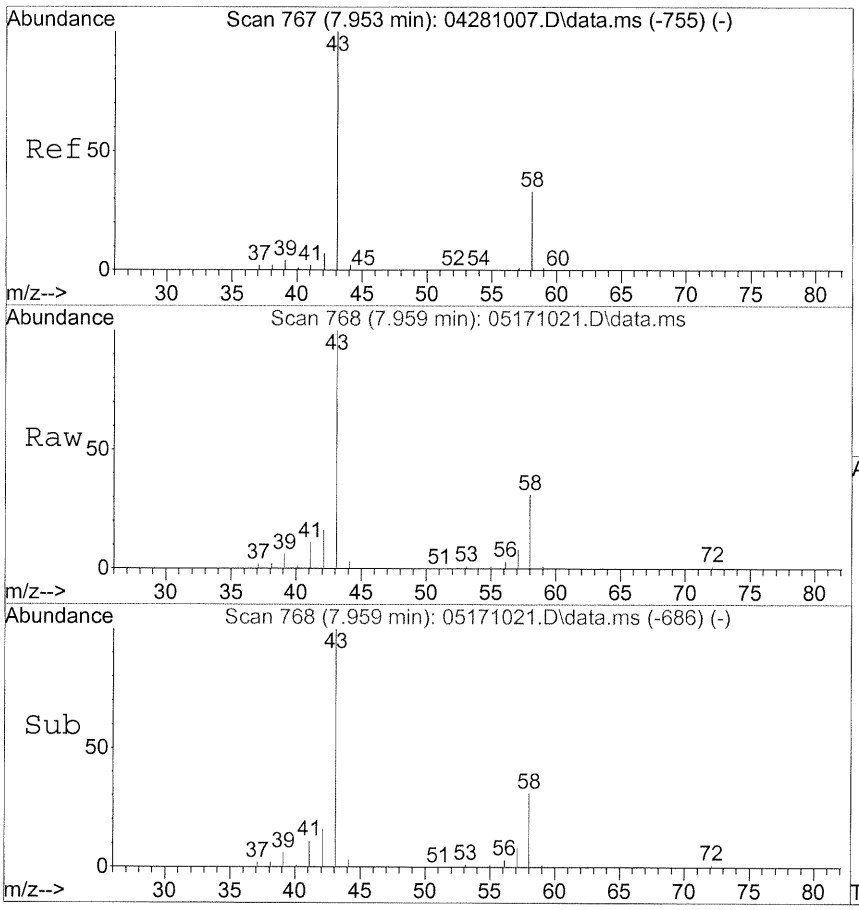


#12
Acrolein
Concen: 0.18 ng
RT: 7.75 min Scan# 731
Delta R.T. -0.011 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 56 Resp: 1842

Ion	Ratio	Lower	Upper
56	100		
55	64.3	50.2	90.2

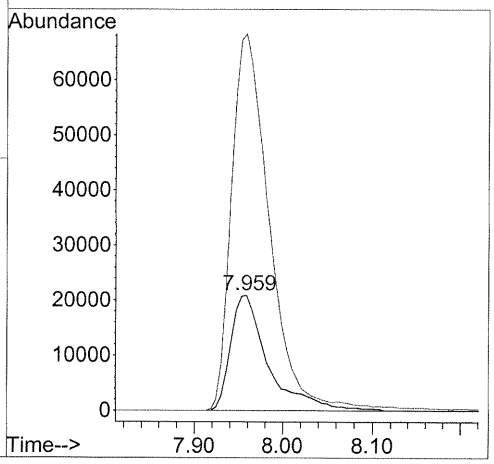


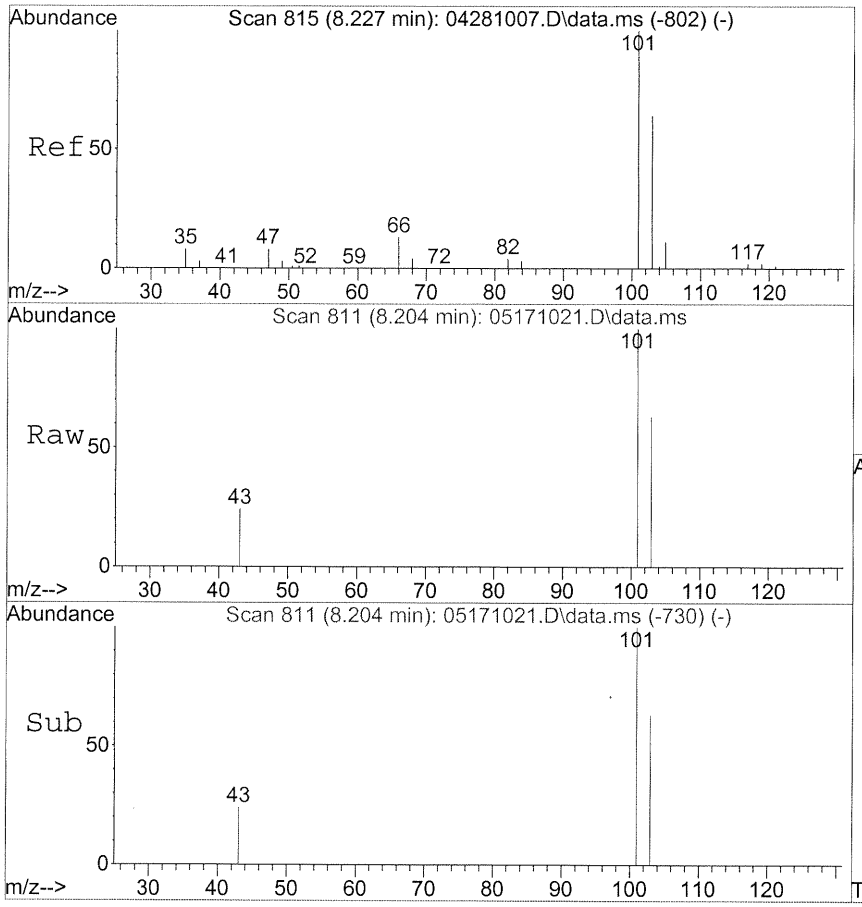


#13
Acetone
Concen: 3.85 ng
RT: 7.96 min Scan# 768
Delta R.T. -0.034 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 58 Resp: 61446

Ion	Ratio	Lower	Upper
58	100		
43	334.1	264.2	324.2#

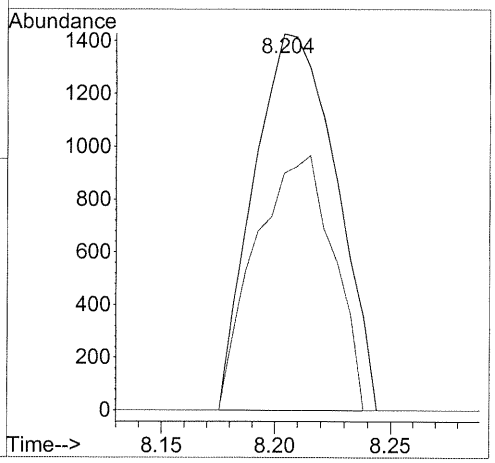


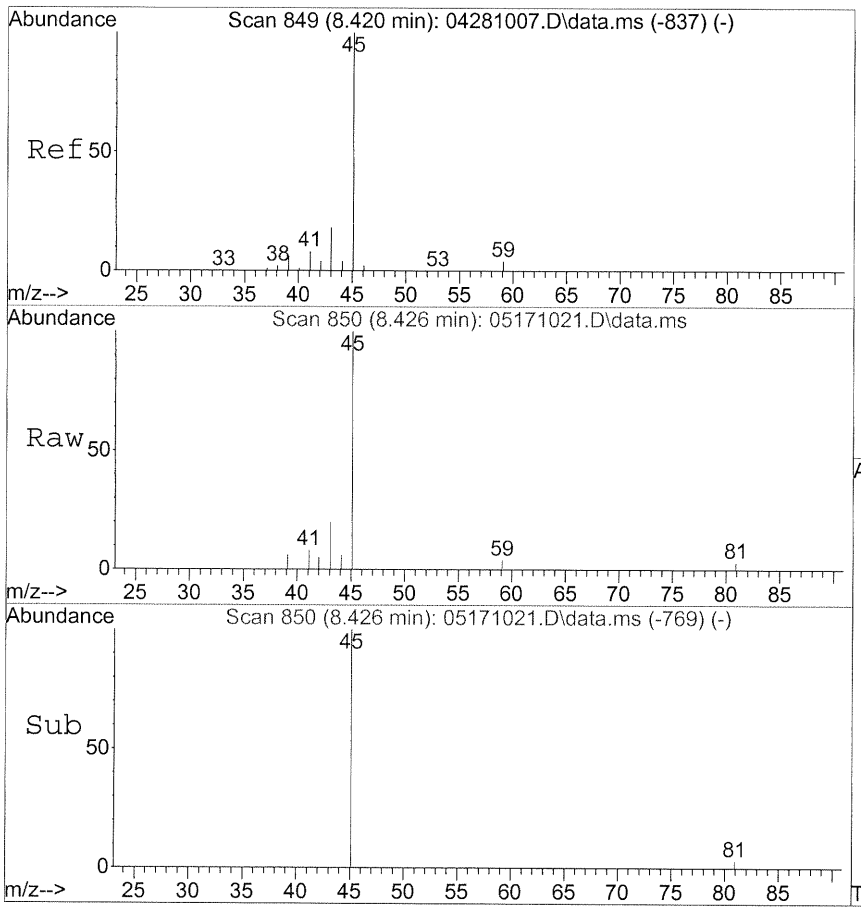


#14
Trichlorofluoromethane
Concen: 0.10 ng
RT: 8.20 min Scan# 811
Delta R.T. -0.040 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion:101 Resp: 3531

Ion	Ratio	Lower	Upper
101	100		
103	64.2	44.6	84.6

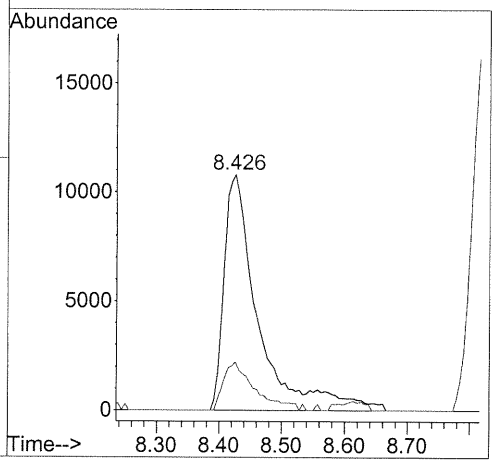


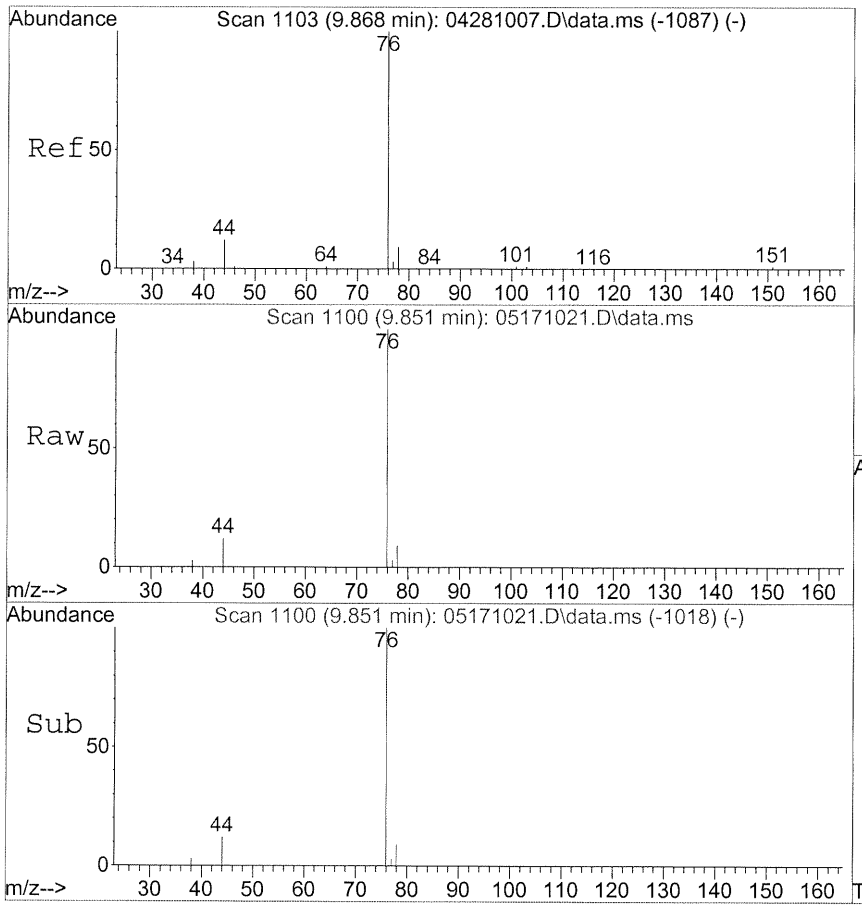


#15
2-Propanol (Isopropanol)
Concen: 0.83 ng
RT: 8.43 min Scan# 850
Delta R.T. -0.040 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 45 Resp: 40980

Ion	Ratio	Lower	Upper
45	100		
43	18.7	0.0	38.5

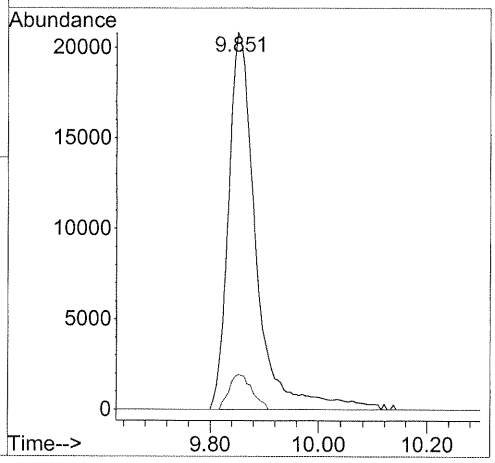


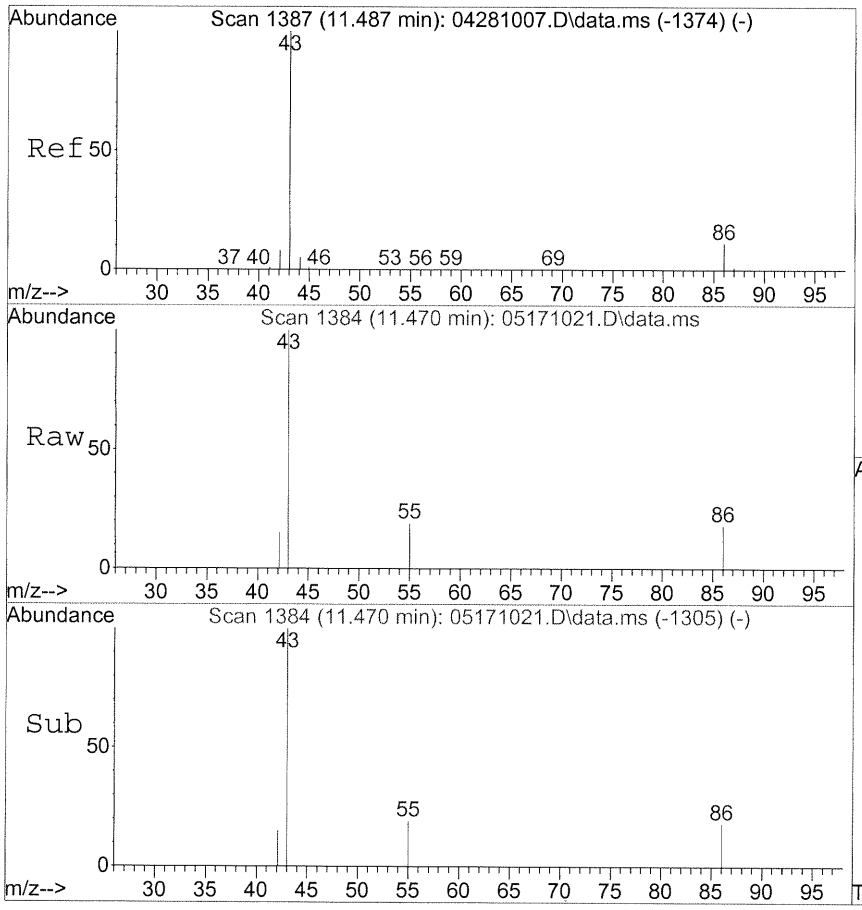


#22
Carbon Disulfide
Concen: 0.99 ng
RT: 9.85 min Scan# 1100
Delta R.T. -0.034 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 76 Resp: 74118

Ion	Ratio	Lower	Upper
76	100		
78	7.6	0.0	29.2

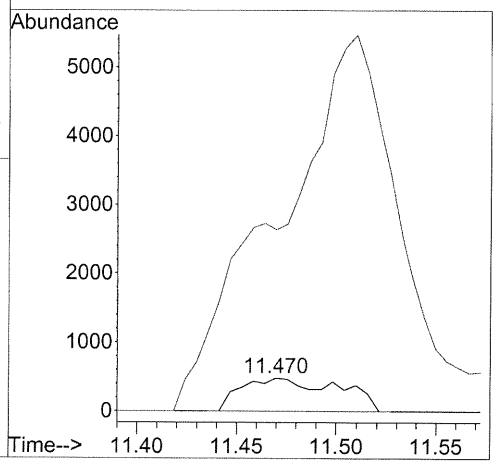


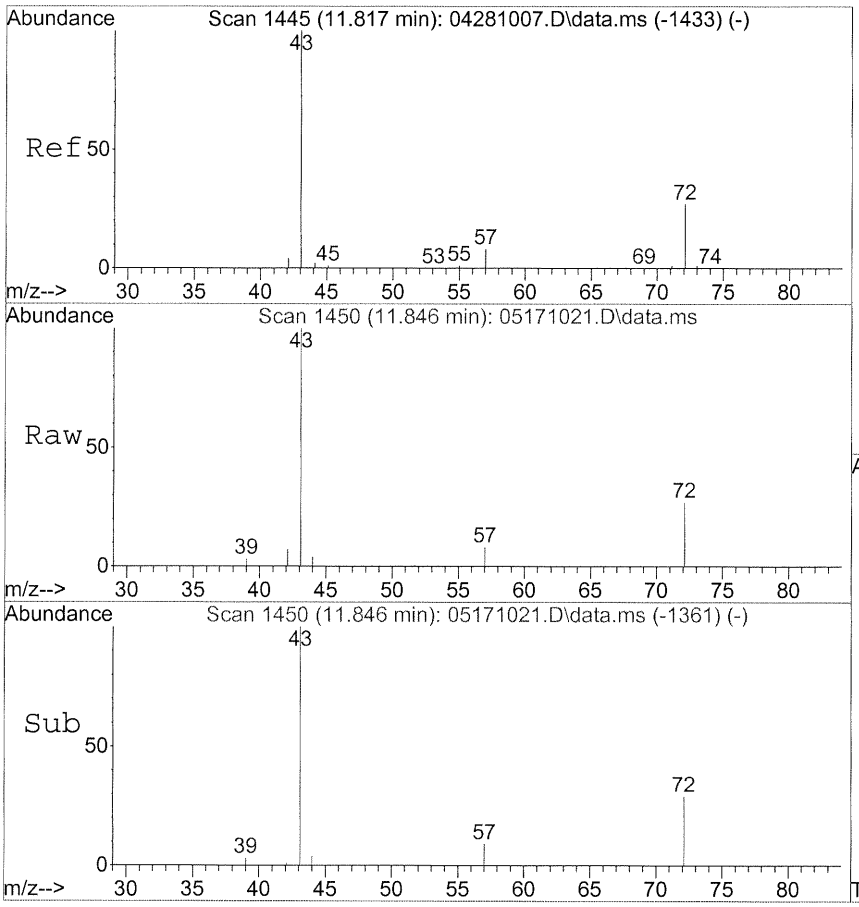


#26
Vinyl Acetate
Concen: 0.34 ng
RT: 11.47 min Scan# 1384
Delta R.T. -0.051 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 86 Resp: 1621

Ion	Ratio	Lower	Upper
86	100		
43	0.0	829.7	869.7#

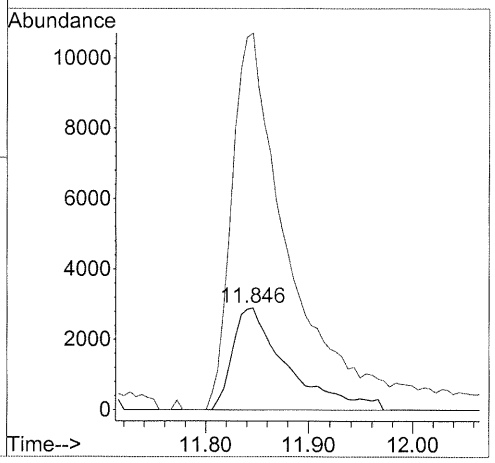


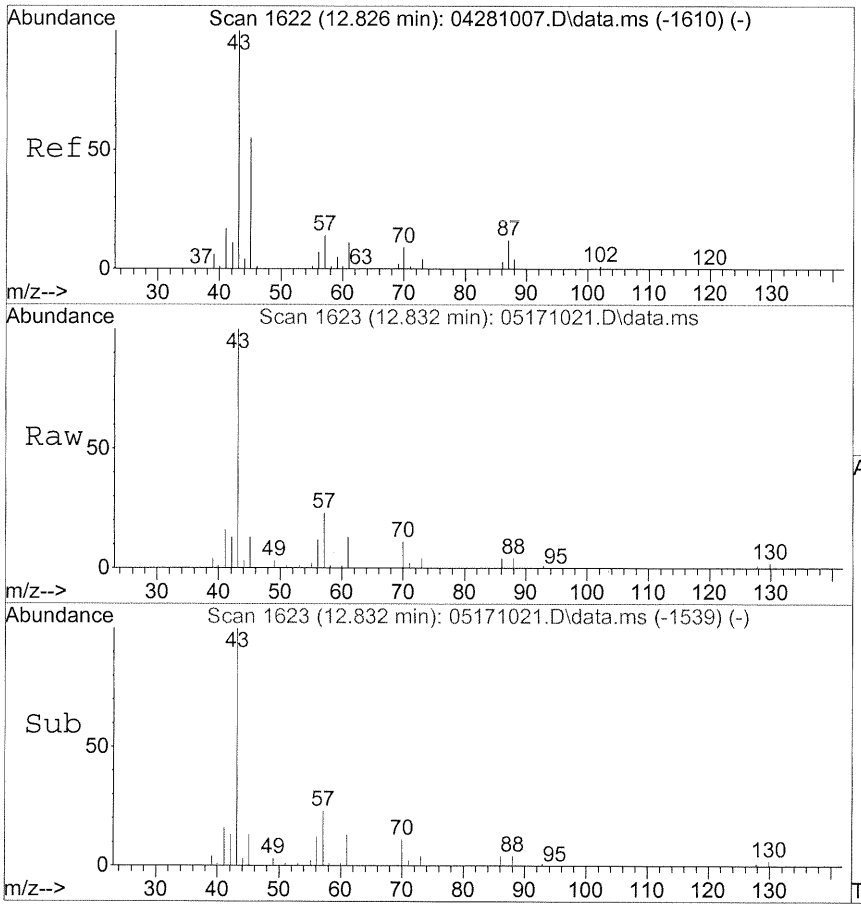


#27
2-Butanone (MEK)
Concen: 0.80 ng
RT: 11.85 min Scan# 1450
Delta R.T. 0.006 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 72 Resp: 10603

Ion	Ratio	Lower	Upper
72	100		
43	410.5	342.0	382.0#

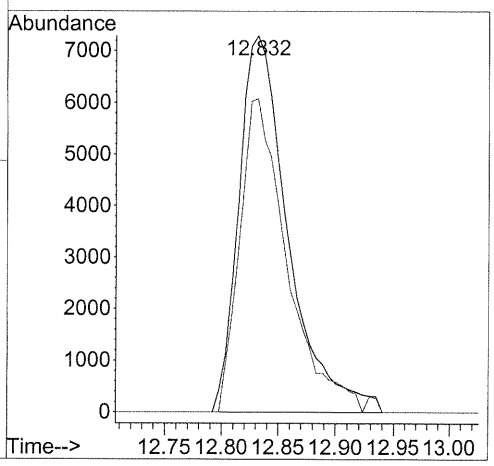


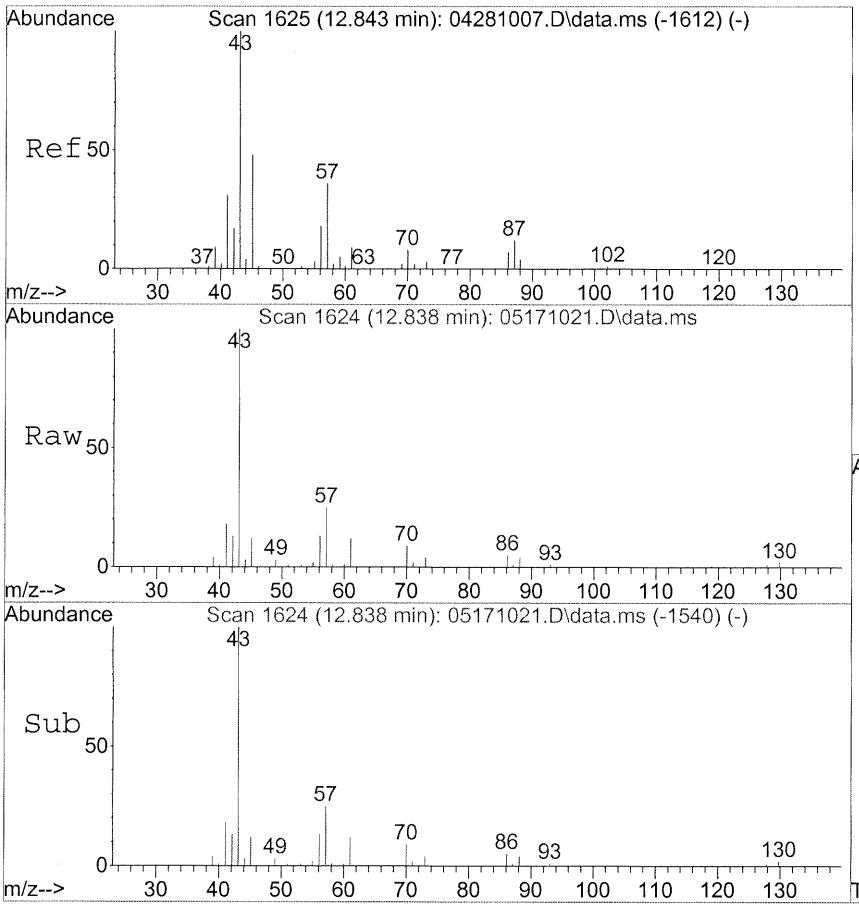


#30
Ethyl Acetate
Concen: 2.79 ng
RT: 12.83 min Scan# 1623
Delta R.T. -0.023 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 61 Resp: 22043

Ion	Ratio	Lower	Upper
61	100		
70	79.8	63.6	103.6

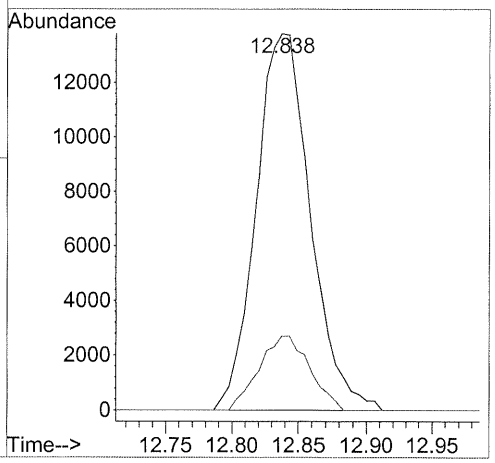


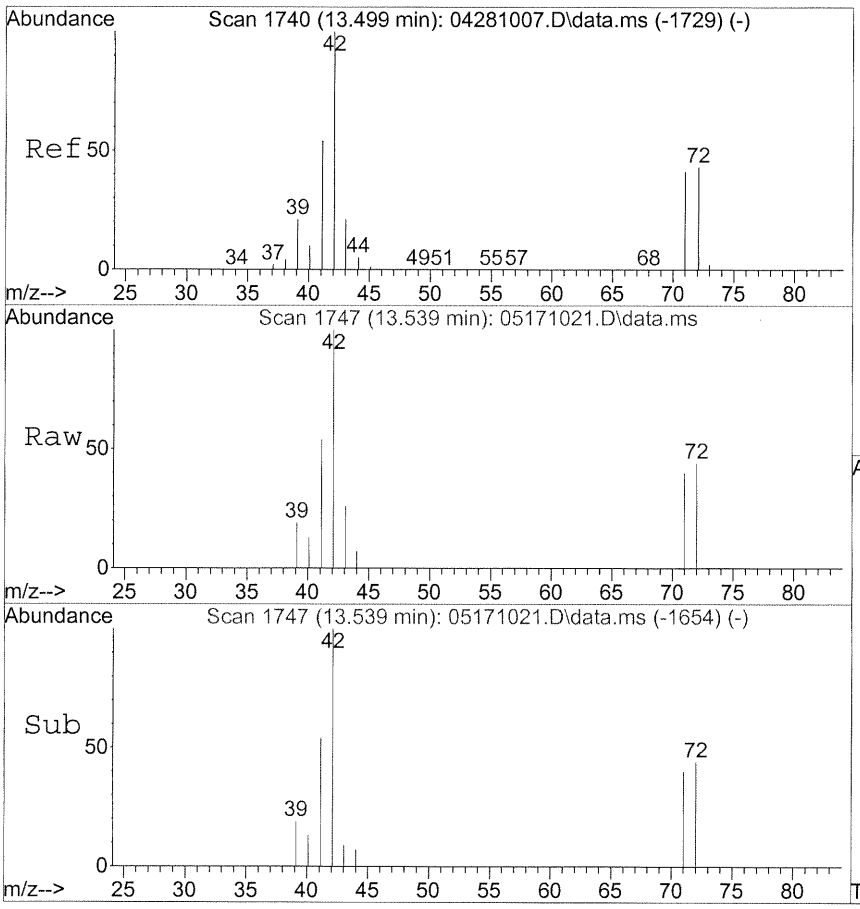


#31
n-Hexane
Concen: 0.96 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 57 Resp: 38767

Ion	Ratio	Lower	Upper
57	100		
86	18.3	0.0	39.8

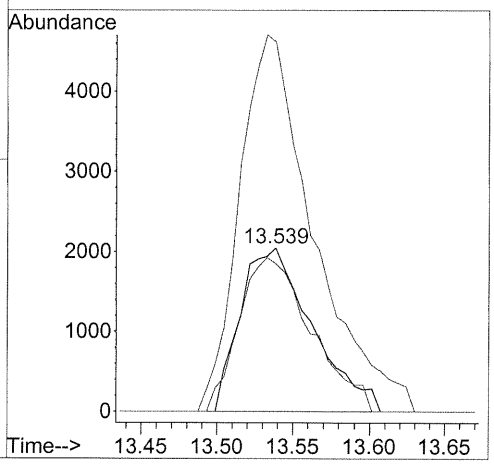


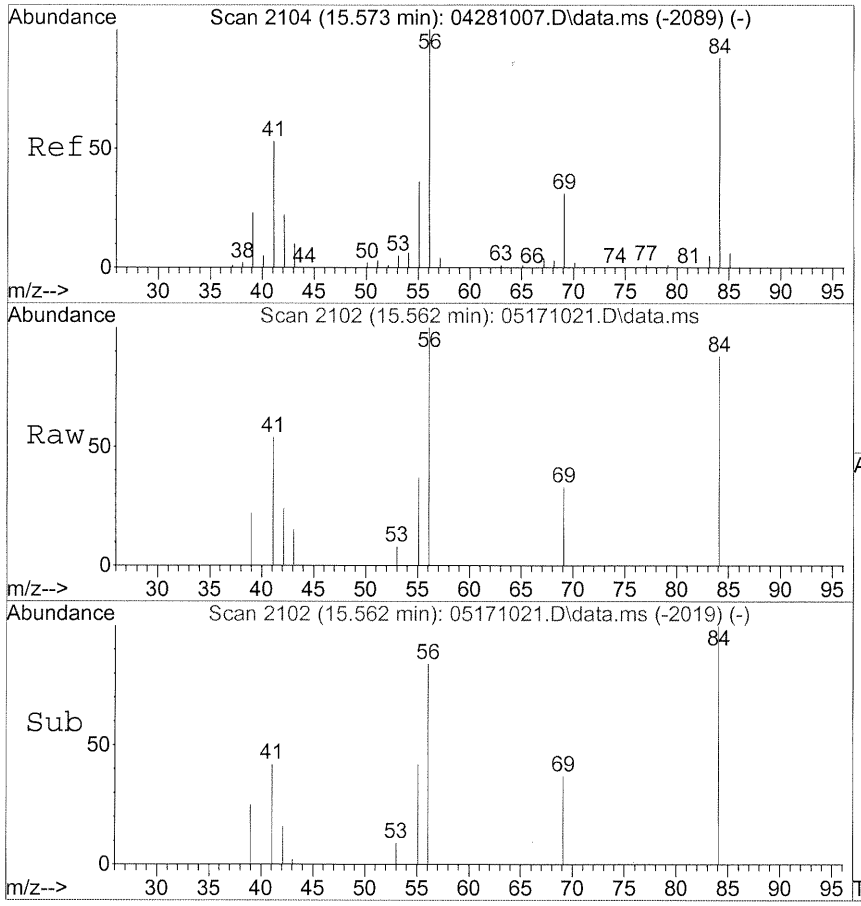


#34
Tetrahydrofuran (THF)
Concen: 0.52 ng
RT: 13.54 min Scan# 1747
Delta R.T. 0.028 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 72 Resp: 6690

Ion	Ratio	Lower	Upper
72	100		
71	95.0	74.5	114.5
42	237.5	197.7	237.7

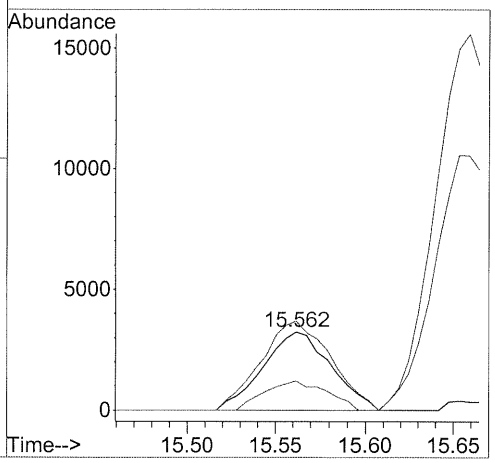


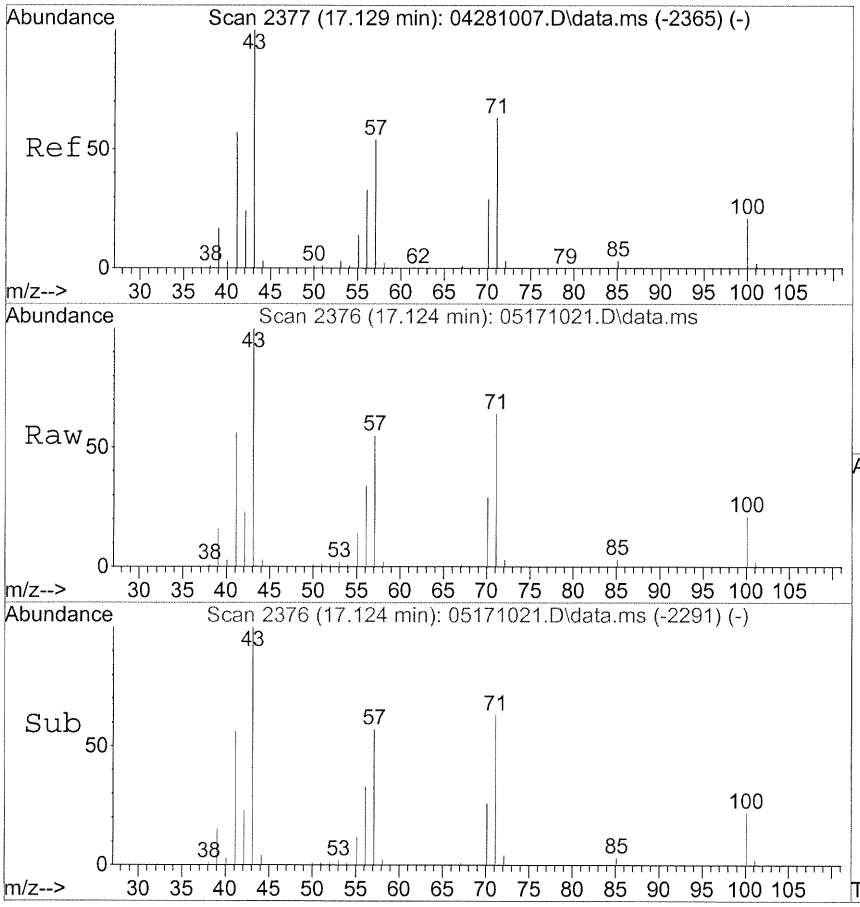


#43
Cyclohexane
Concen: 0.23 ng
RT: 15.56 min Scan# 2102
Delta R.T. -0.029 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 84 Resp: 8558

Ion	Ratio	Lower	Upper
84	100		
69	34.1	14.9	54.9
56	117.0	89.2	129.2

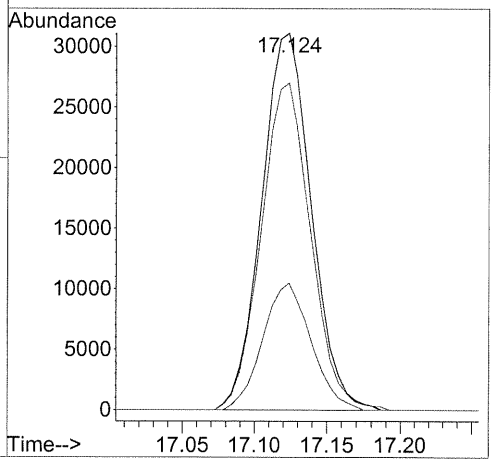


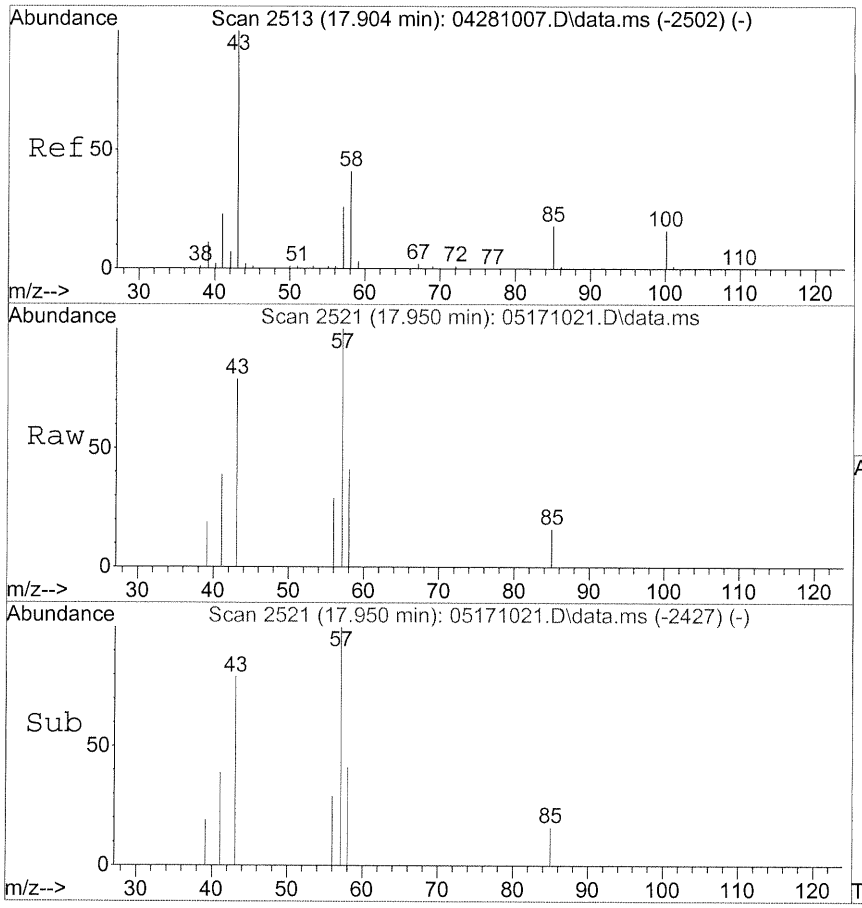


#51
n-Heptane
Concen: 2.94 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 71 Resp: 74111

Ion	Ratio	Lower	Upper
71	100		
57	86.4	63.9	103.9
100	32.7	14.1	54.1

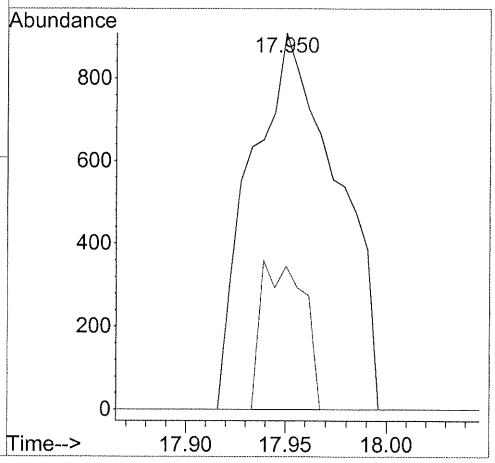


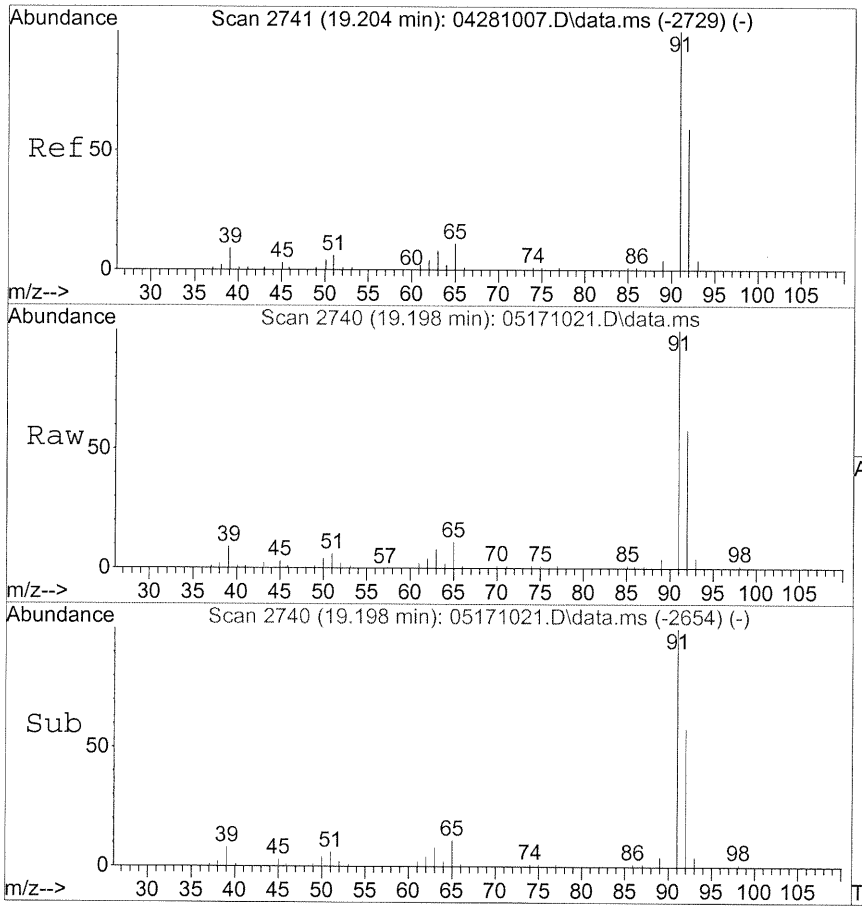


#53
4-Methyl-2-pentanone
Concen: 0.14 ng
RT: 17.95 min Scan# 2521
Delta R.T. 0.034 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 58 Resp: 2708

Ion	Ratio	Lower	Upper
58	100		
85	19.8	26.7	66.7#

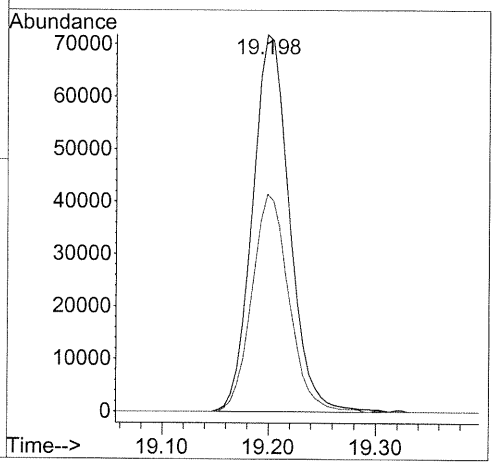


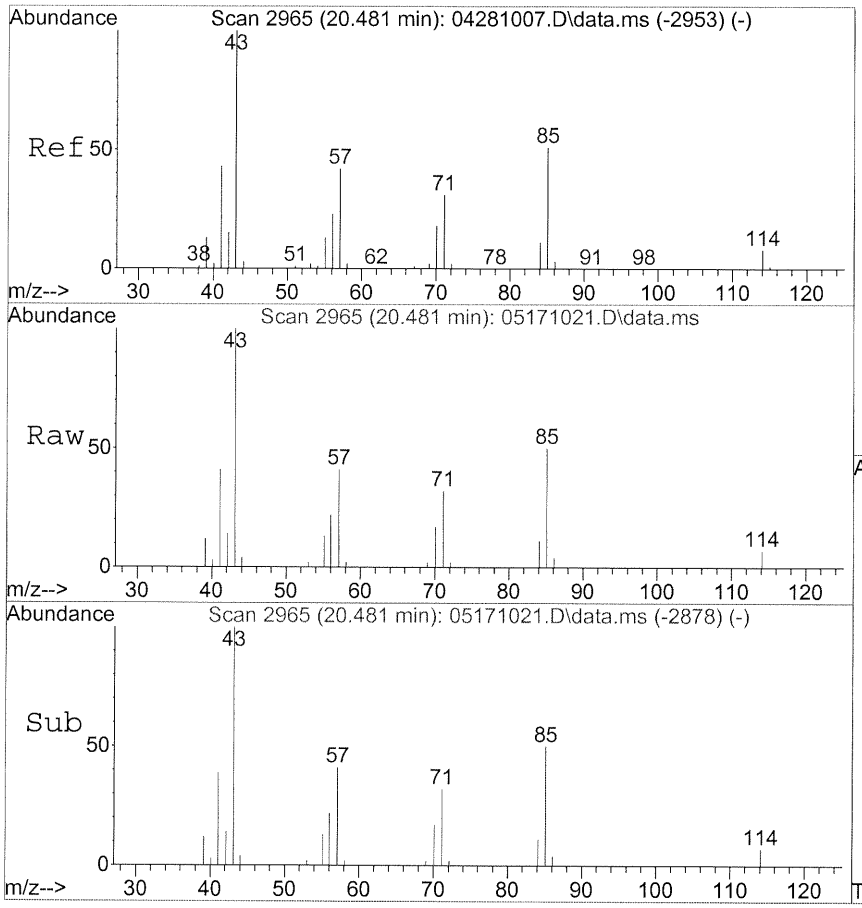


#58
Toluene
Concen: 1.88 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.011 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 91 Resp: 173821

Ion	Ratio	Lower	Upper
91	100		
92	57.6	39.2	79.2

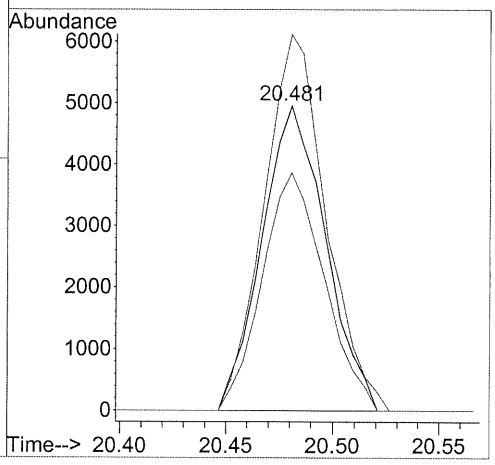


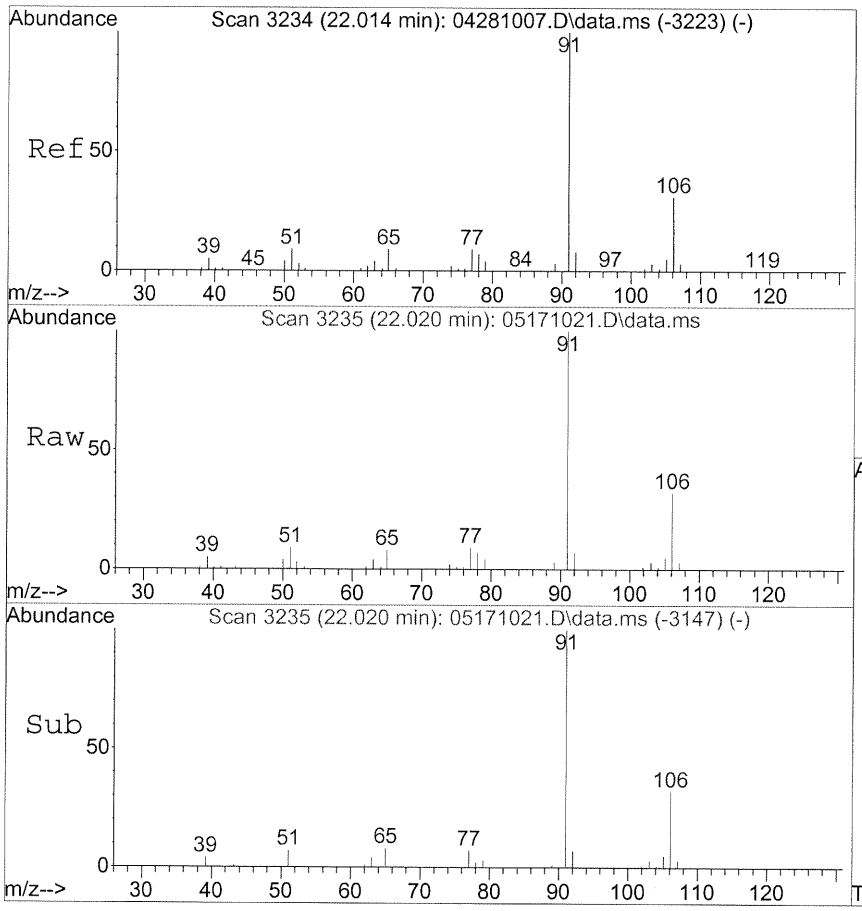


#63
n-Octane
Concen: 0.48 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 57 Resp: 10243

Ion	Ratio	Lower	Upper
57	100		
85	120.0	101.4	152.2
71	76.1	60.7	91.1

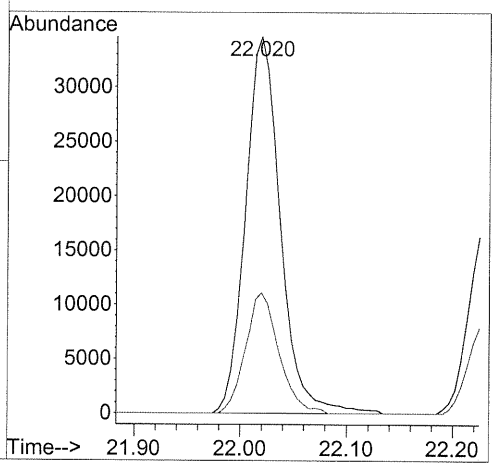


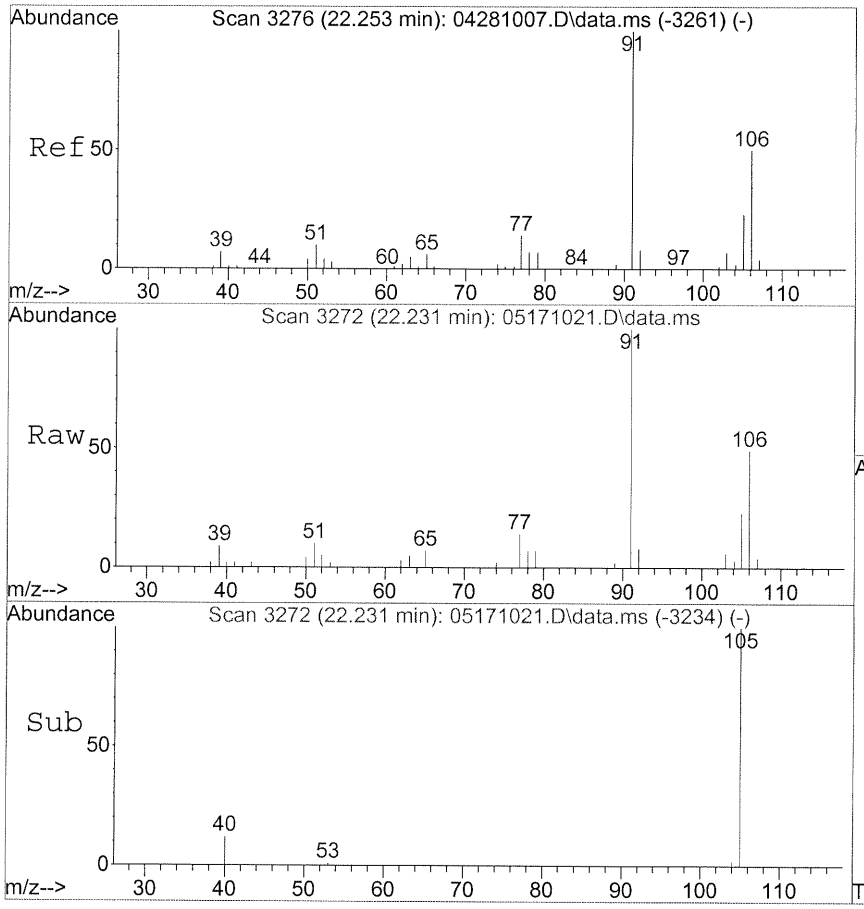


#66
Ethylbenzene
Concen: 0.76 ng
RT: 22.02 min Scan# 3235
Delta R.T. -0.000 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 91 Resp: 79253

Ion	Ratio	Lower	Upper
91	100		
106	30.5	12.2	52.2

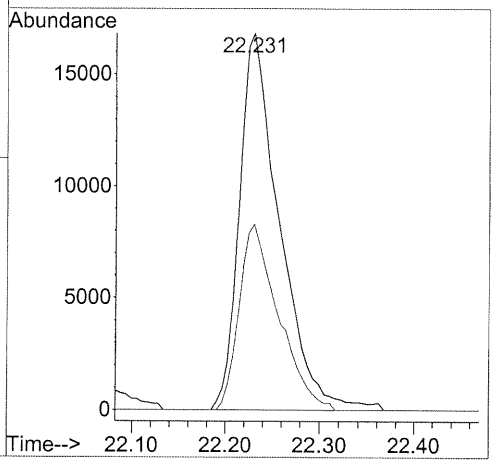


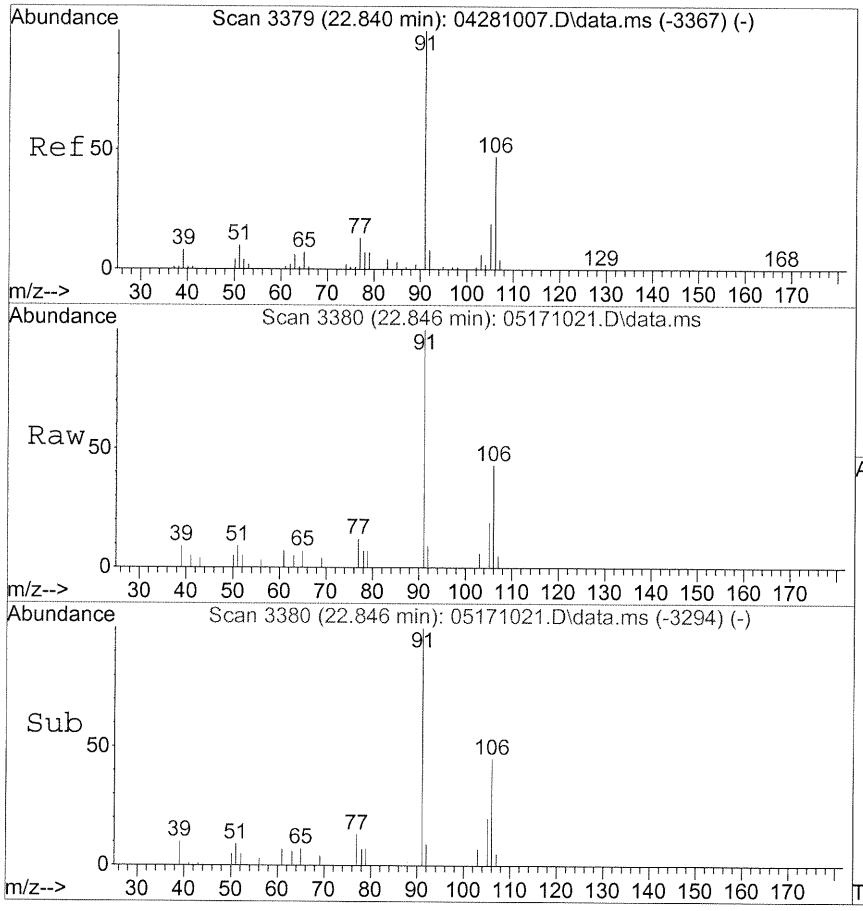


#67
m- & p-Xylenes
Concen: 0.60 ng
RT: 22.23 min Scan# 3272
Delta R.T. -0.034 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 91 Resp: 50096

Ion	Ratio	Lower	Upper
91	100		
106	48.3	30.6	70.6

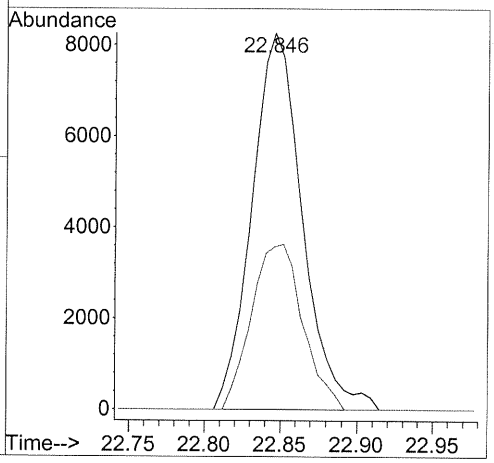


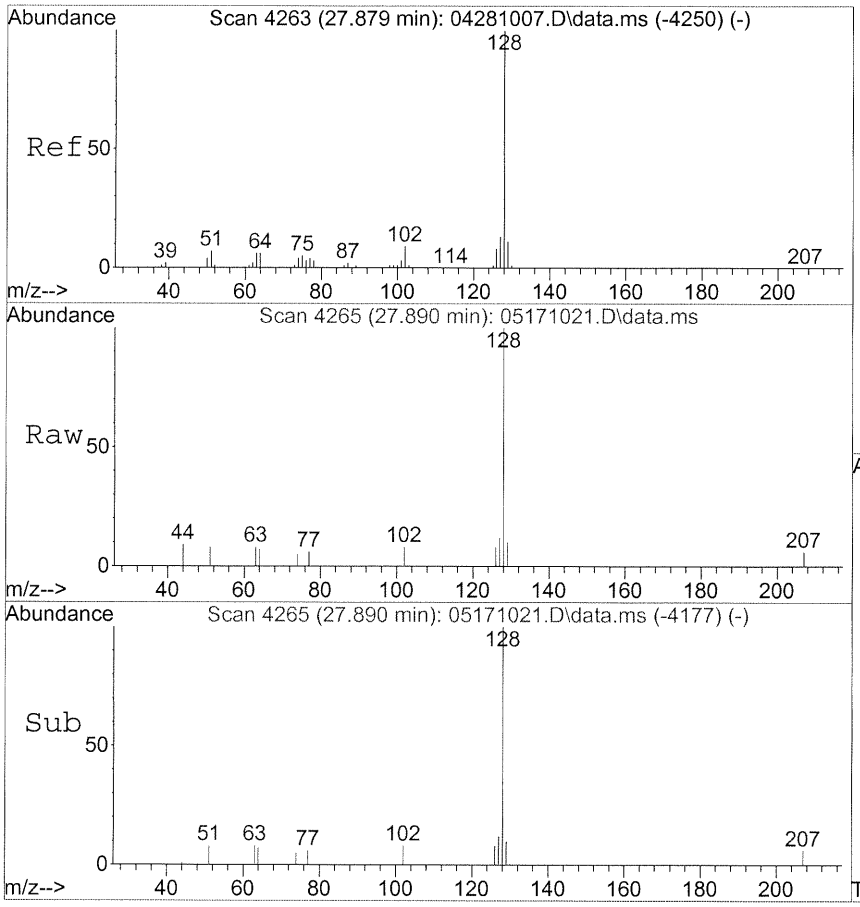


#70
o-Xylene
Concen: 0.21 ng
RT: 22.85 min Scan# 3380
Delta R.T. -0.011 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion: 91 Resp: 19038

Ion	Ratio	Lower	Upper
91	100		
106	44.7	27.8	67.8

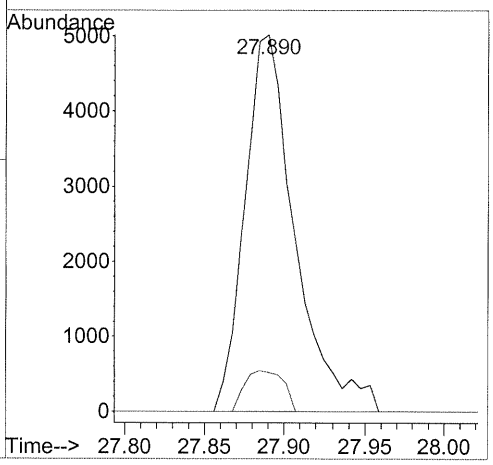




#95
Naphthalene
Concen: 0.11 ng
RT: 27.89 min Scan# 4265
Delta R.T. -0.000 min
Lab File: 05171021.D
Acq: 18 May 2010 00:41

Tgt Ion:128 Resp: 10968

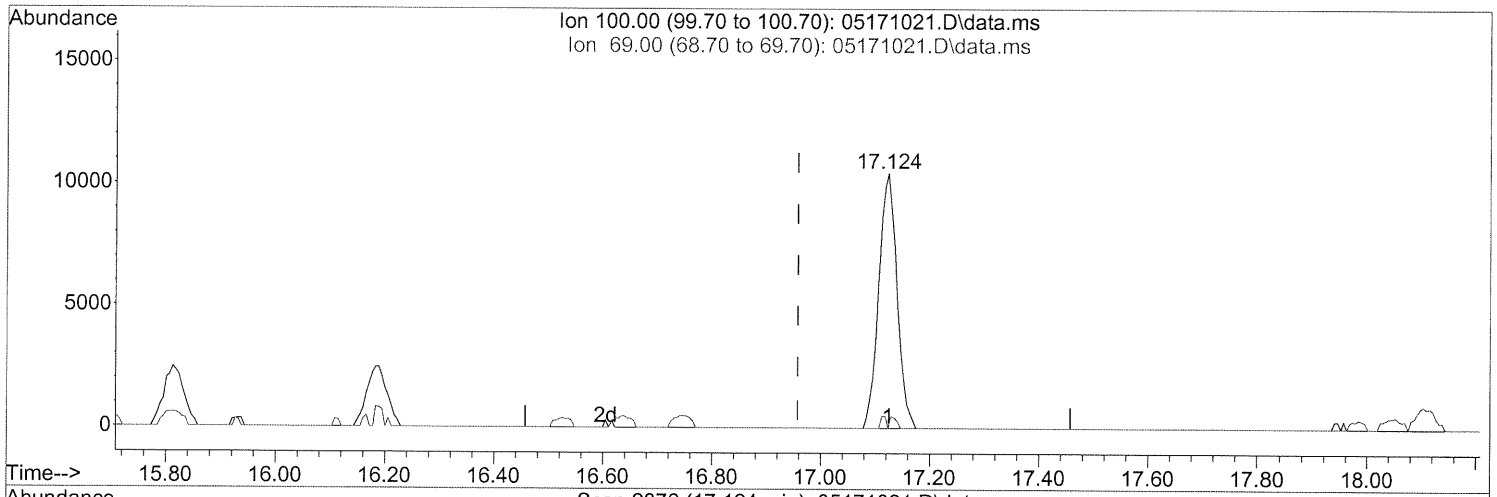
Ion	Ratio	Lower	Upper
128	100		
129	8.4	0.0	31.1

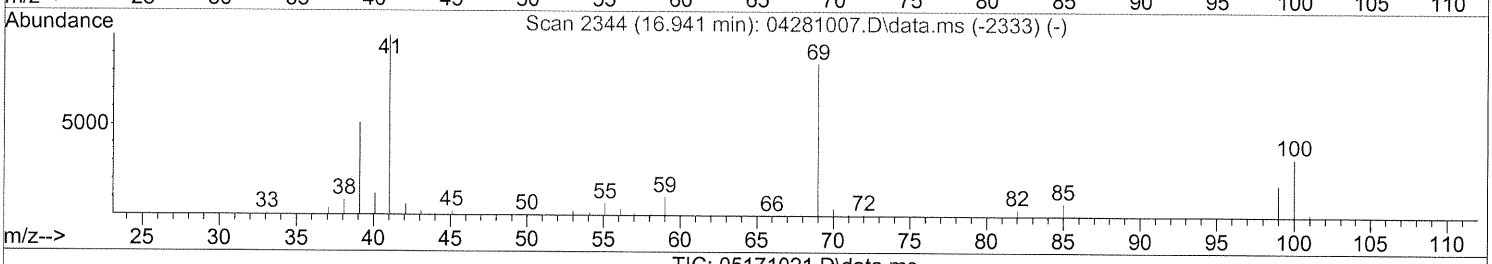


Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 08:05:19 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration





TIC: 05171021.D\data.ms

(50) Methyl Methacrylate (T)

17.124min (+0.166) 2.62ng

response 24252

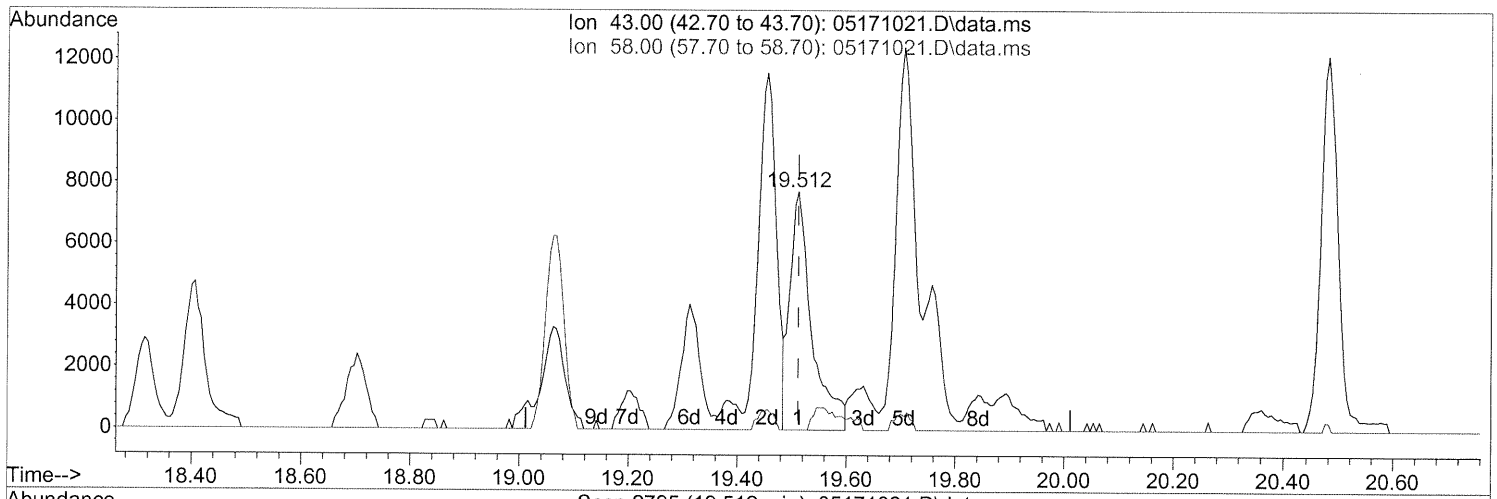
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	1.63#
0.00	0.00	0.00
0.00	0.00	0.00

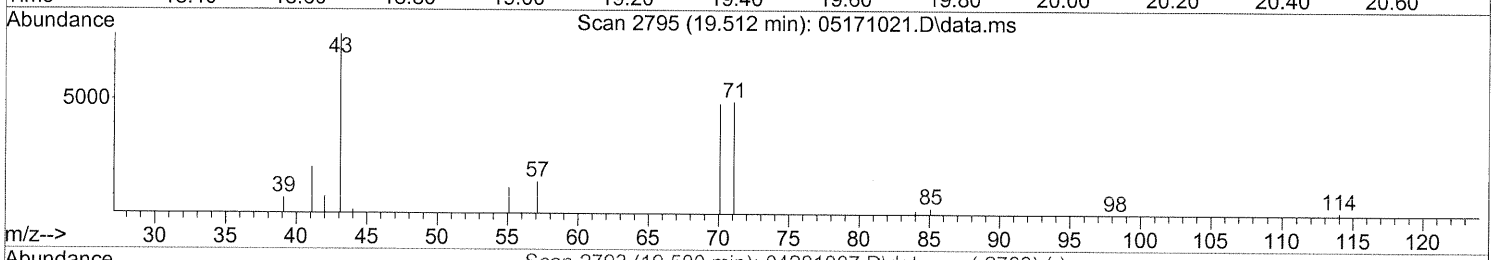
FP

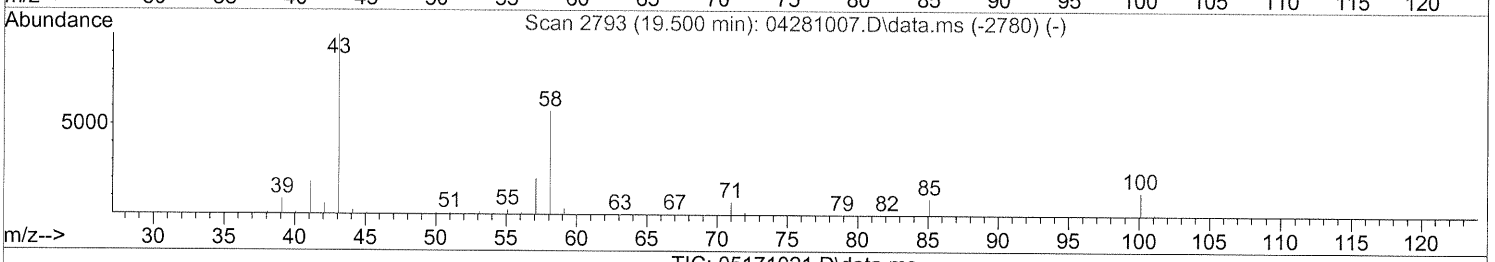
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 08:05:19 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171021.D\data.ms

(59) 2-Hexanone (T)

19.512min (-0.000) 0.49ng

response 21590

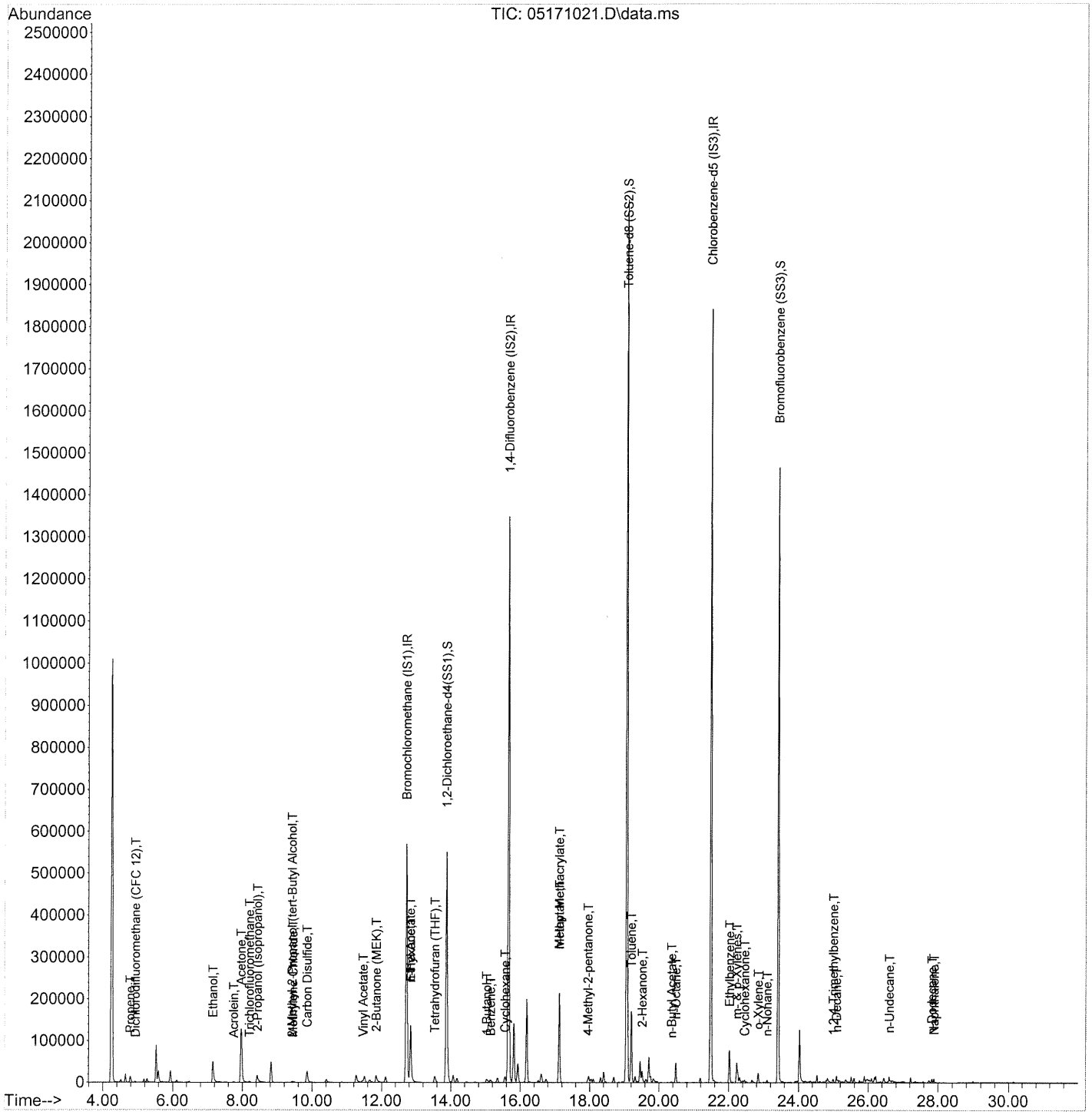
Ion	Exp%	Act%
43.00	100	100
58.00	58.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

FP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 08:05:19 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 08:05:19 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	307252	25.000 ng	-0.05
37) 1,4-Difluorobenzene (IS2)	15.66	114	1580729	25.000 ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	782351	25.000 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(...	13.87	65	556592	24.343 ng	-0.03
Spiked Amount 25.000			Recovery	= 97.36%	
57) Toluene-d8 (SS2)	19.07	98	1853540	24.834 ng	0.00
Spiked Amount 25.000			Recovery	= 99.32%	
73) Bromofluorobenzene (SS3)	23.42	174	487983	25.610 ng	0.00
Spiked Amount 25.000			Recovery	= 102.44%	

Target Compounds						Qvalue
2) Propene	4.78	42	5515	0.230 ng	#	86
3) Dichlorodifluoromethan...	4.94	85	2605	0.063 ng	#	79
4) Chloromethane	5.27	50	612	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.94	54	87	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	7.16	45	88266	6.755 ng		99
11) Acetonitrile	7.53	41	1375	N.D.		
12) Acrolein	7.75	56	1842	0.181 ng		93
13) Acetone	7.96	58	61446	3.847 ng	#	79
14) Trichlorofluoromethane	8.20	101	3531	0.099 ng		100
15) 2-Propanol (Isopropanol)	8.43	45	40980	0.828 ng		99
16) Acrylonitrile	8.83	53	380	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	9.42	59	5756	0.113 ng	#	77
19) Methylene Chloride	9.45	84	1256	0.060 ng		91
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	9.85	76	74118	0.988 ng		96
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	11.47	86	1621	0.336 ng	#	1
27) 2-Butanone (MEK)	11.85	72	10603	0.799 ng	#	78
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	12.84	87	524	N.D.		
30) Ethyl Acetate	12.83	61	22043	2.795 ng		96
31) n-Hexane	12.84	57	38767	0.960 ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 08:05:19 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	0.00	83	0	N.D.		
34) Tetrahydrofuran (THF)	13.54	72	6690	0.521 ng		91
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.03	56	12433	0.569 ng		79
41) Benzene	15.15	78	7060	0.080 ng		95
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	15.56	84	8558	0.231 ng		94
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.64	83	502	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.70	88	89	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	3777	N.D.		
50) Methyl Methacrylate	17.12	100	24252	2.621 ng	#	1
51) n-Heptane	17.12	71	74111	2.938 ng		97
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.95	58	2708	0.142 ng	#	60
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	173821	1.877 ng		98
59) 2-Hexanone	19.51	43	21590	0.489 ng	#	22
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.36	43	2626	0.053 ng	#	73
63) n-Octane	20.48	57	10243	0.477 ng		96
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	22.02	91	79253	0.765 ng		97
67) m- & p-Xylenes	22.23	91	50096	0.596 ng		97
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	22.85	91	19038	0.213 ng		95
71) n-Nonane	23.10	43	3239	0.067 ng		80
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	23.60	105	308	N.D.		
75) alpha-Pinene	23.75	93	181	N.D.		
76) n-Propylbenzene	24.22	91	2722	N.D.		
77) 3-Ethyltoluene	24.35	105	3548	N.D.		
78) 4-Ethyltoluene	24.41	105	1481	N.D.		
79) 1,3,5-Trimethylbenzene	24.49	105	1452	N.D.		

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171021.D
Acq On : 18 May 2010 00:41
Operator : EM
Sample : P1001651-008 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 08:05:19 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	24.73	105	1663	N.D.		
82) 1,2,4-Trimethylbenzene	24.99	105	5175	0.058 ng		81
83) n-Decane	25.09	57	8735	0.172 ng		85
84) Benzyl Chloride	24.99	91	845	N.D.		
85) 1,3-Dichlorobenzene	25.28	146	620	N.D.		
86) 1,4-Dichlorobenzene	25.28	146	620	N.D.		
87) sec-Butylbenzene	25.33	105	93	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	3649	N.D.		
89) 1,2,3-Trimethylbenzene	25.51	105	2779	N.D.		
90) 1,2-Dichlorobenzene	25.28	146	620	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	5693	0.112 ng		86
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95) Naphthalene	27.89	128	10968	0.112 ng		93
96) n-Dodecane	27.83	57	4215	0.081 ng		84
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.45	55	3001	0.103 ng	#	55
99) tert-Butylbenzene	25.00	119	708	N.D.		
100) n-Butylbenzene	26.02	91	3591	N.D.		

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110515** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-009

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00826

Initial Pressure (psig): -0.8 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.66	ND	0.38	
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.2**	0.66	**0.44**	0.13	
74-87-3	**Chloromethane**	**0.46**	0.26	**0.22**	0.13	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.66	ND	0.094	
75-01-4	Vinyl Chloride	ND	0.13	ND	0.051	
106-99-0	1,3-Butadiene	ND	0.26	ND	0.12	
74-83-9	Bromomethane	ND	0.13	ND	0.034	
75-00-3	Chloroethane	ND	0.13	ND	0.050	
64-17-5	**Ethanol**	**7.2**	6.6	**3.8**	3.5	
75-05-8	Acetonitrile	ND	0.66	ND	0.39	
107-02-8	Acrolein	ND	2.6	ND	1.1	
67-64-1	**Acetone**	**24**	6.6	**10**	2.8	
75-69-4	**Trichlorofluoromethane**	**1.1**	0.13	**0.20**	0.023	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.3	ND	0.53	
107-13-1	Acrylonitrile	ND	0.66	ND	0.30	
75-35-4	1,1-Dichloroethene	ND	0.13	ND	0.033	
75-09-2	Methylene Chloride	ND	0.66	ND	0.19	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.13	ND	0.042	
76-13-1	**Trichlorotrifluoroethane**	**0.51**	0.13	**0.067**	0.017	
75-15-0	Carbon Disulfide	ND	6.6	ND	2.1	
156-60-5	trans-1,2-Dichloroethene	ND	0.13	ND	0.033	
75-34-3	1,1-Dichloroethane	ND	0.13	ND	0.032	
1634-04-4	Methyl tert-Butyl Ether	ND	0.13	ND	0.036	
108-05-4	Vinyl Acetate	ND	6.6	ND	1.9	
78-93-3	2-Butanone (MEK)	ND	6.6	ND	2.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110515** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-009

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00826

Initial Pressure (psig): -0.8 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.13	ND	0.033	
141-78-6	Ethyl Acetate	ND	0.66	ND	0.18	
110-54-3	n-Hexane	ND	0.66	ND	0.19	
67-66-3	**Chloroform**	**0.23**	0.13	**0.046**	0.027	
109-99-9	**Tetrahydrofuran (THF)**	**0.68**	0.66	**0.23**	0.22	
107-06-2	1,2-Dichloroethane	ND	0.13	ND	0.032	
71-55-6	1,1,1-Trichloroethane	ND	0.13	ND	0.024	
71-43-2	**Benzene**	**0.27**	0.13	**0.084**	0.041	
56-23-5	**Carbon Tetrachloride**	**0.38**	0.13	**0.060**	0.021	
110-82-7	Cyclohexane	ND	0.66	ND	0.19	
78-87-5	1,2-Dichloropropane	ND	0.13	ND	0.028	
75-27-4	Bromodichloromethane	ND	0.13	ND	0.020	
79-01-6	Trichloroethene	ND	0.13	ND	0.024	
123-91-1	1,4-Dioxane	ND	0.66	ND	0.18	
80-62-6	Methyl Methacrylate	ND	0.66	ND	0.16	
142-82-5	n-Heptane	ND	0.66	ND	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.66	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.66	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.13	ND	0.024	
108-88-3	Toluene	ND	0.66	ND	0.17	
591-78-6	2-Hexanone	ND	0.66	ND	0.16	
124-48-1	Dibromochloromethane	ND	0.13	ND	0.015	
106-93-4	1,2-Dibromoethane	ND	0.13	ND	0.017	
123-86-4	n-Butyl Acetate	ND	0.66	ND	0.14	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110515**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-009

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00826

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.8 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.66	ND	0.14	
127-18-4	Tetrachloroethene	ND	0.13	ND	0.019	
108-90-7	Chlorobenzene	ND	0.13	ND	0.028	
100-41-4	Ethylbenzene	ND	0.66	ND	0.15	
179601-23-1	m,p-Xylenes	ND	0.66	ND	0.15	
75-25-2	Bromoform	ND	0.66	ND	0.063	
100-42-5	Styrene	ND	0.66	ND	0.15	
95-47-6	o-Xylene	ND	0.66	ND	0.15	
111-84-2	n-Nonane	ND	0.66	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.13	ND	0.019	
98-82-8	Cumene	ND	0.66	ND	0.13	
80-56-8	alpha-Pinene	ND	0.66	ND	0.12	
103-65-1	n-Propylbenzene	ND	0.66	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.66	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.66	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.66	ND	0.13	
100-44-7	Benzyl Chloride	ND	0.66	ND	0.13	
541-73-1	1,3-Dichlorobenzene	ND	0.13	ND	0.022	
106-46-7	1,4-Dichlorobenzene	ND	0.13	ND	0.022	
95-50-1	1,2-Dichlorobenzene	ND	0.13	ND	0.022	
5989-27-5	d-Limonene	ND	0.66	ND	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.66	ND	0.068	
120-82-1	1,2,4-Trichlorobenzene	ND	0.66	ND	0.088	
91-20-3	Naphthalene	ND	0.66	ND	0.13	
87-68-3	Hexachlorobutadiene	ND	0.66	ND	0.061	

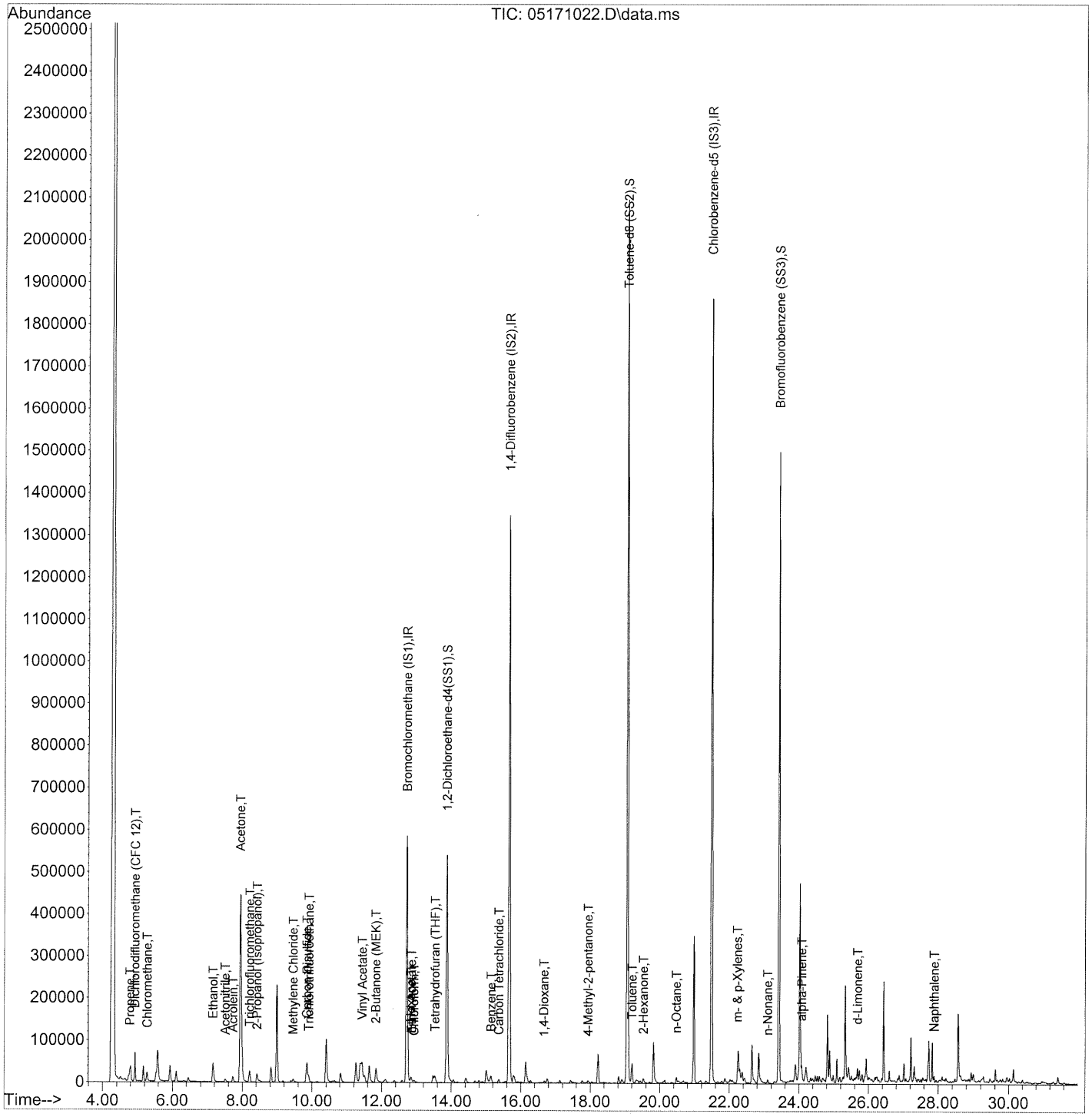
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171022.D
Acq On : 18 May 2010 1:23
Operator : EM
Sample : P1001651-009 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 20 16:11:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171022.D
Acq On : 18 May 2010 1:23
Operator : EM
Sample : P1001651-009 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 20 16:11:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	307469	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1569287	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	783376	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	549236	24.004	ng		-0.03
Spiked Amount 25.000			Recovery	=	96.00%		✓
57) Toluene-d8 (SS2)	19.07	98	1845488	24.694	ng		0.00
Spiked Amount 25.000			Recovery	=	98.76%		✓
73) Bromofluorobenzene (SS3)	23.42	174	489253	25.643	ng		0.00
Spiked Amount 25.000			Recovery	=	102.56%		✓
Target Compounds							Qvalue
2) Propene	4.78	42	10490	0.437	ng	#	40
3) Dichlorodifluoromethan...	4.93	85	69047	1.678	ng		99
4) Chloromethane	5.27	50	10722	0.352	ng		93
10) Ethanol	7.16	45	71485	5.467	ng		97
11) Acetonitrile	7.51	41	10183	0.308	ng		98
12) Acrolein	7.73	56	15089	1.480	ng		98
13) Acetone	7.94	58	295165	18.465	ng		96
14) Trichlorofluoromethane	8.21	101	30584	0.858	ng		100
15) 2-Propanol (Isopropanol)	8.42	45	32448	0.655	ng		94
19) Methylene Chloride	9.46	84	2802	0.133	ng		86
21) Trichlorotrifluoroethane	9.91	151	5874	0.390	ng		91
22) Carbon Disulfide	9.85	76	117454	1.565	ng		98
26) Vinyl Acetate	11.44	86	16144	3.346	ng	#	41
27) 2-Butanone (MEK)	11.83	72	19925	1.501	ng	#	85
30) Ethyl Acetate	12.85	61	1007	0.128	ng		86
31) n-Hexane	12.84	57	5618	0.139	ng		89
32) Chloroform	12.93	83	5800	0.172	ng		95
34) Tetrahydrofuran (THF)	13.53	72	6644	0.517	ng	#	78
41) Benzene	15.15	78	17872	0.204	ng		97
42) Carbon Tetrachloride	15.36	117	6720	0.288	ng		98
48) 1,4-Dioxane	16.67	88	2297	0.138	ng		98
53) 4-Methyl-2-pentanone	17.93	58	1905	0.101	ng		71
58) Toluene	19.20	91	44783	0.483	ng		98
59) 2-Hexanone	19.53	43	12935	0.292	ng		95
63) n-Octane	20.48	57	3294	0.153	ng		86
67) m- & p-Xylenes	22.23	91	17846	0.212	ng		98
71) n-Nonane	23.10	43	4829	0.099	ng	#	69
75) alpha-Pinene	24.08	93	15897	0.313	ng	#	46
91) d-Limonene	25.68	68	9158	0.262	ng		97
95) Naphthalene	27.88	128	13303	0.136	ng		96

DM 5/20/10

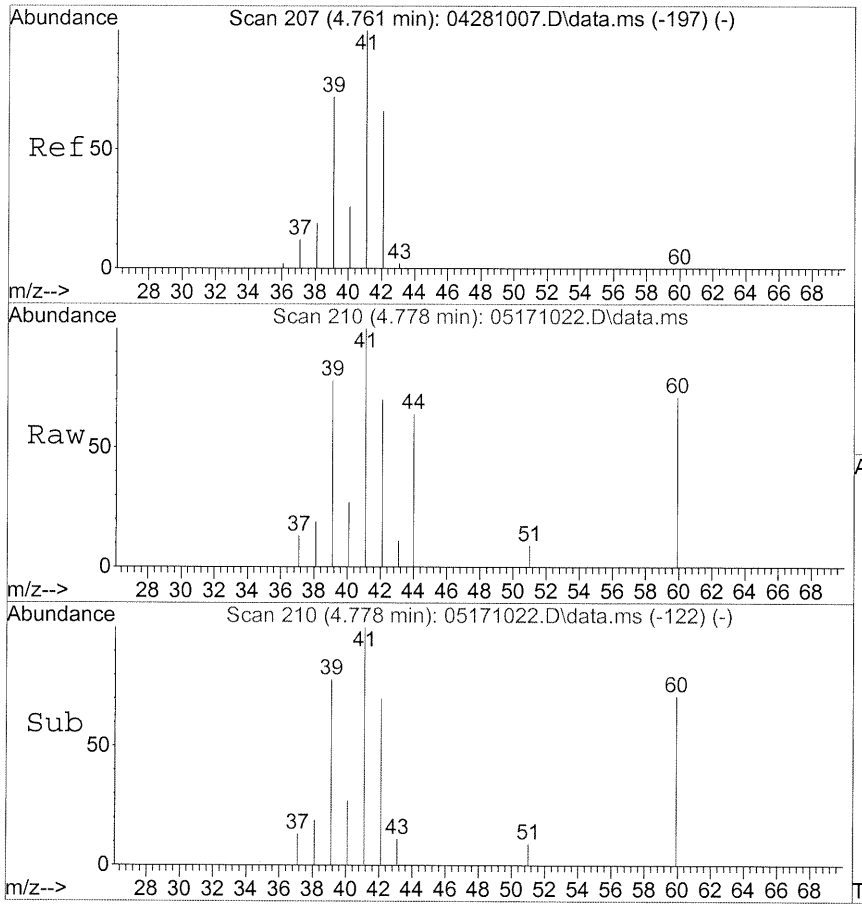
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171022.D
Acq On : 18 May 2010 1:23
Operator : EM
Sample : P1001651-009 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 20 16:11:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

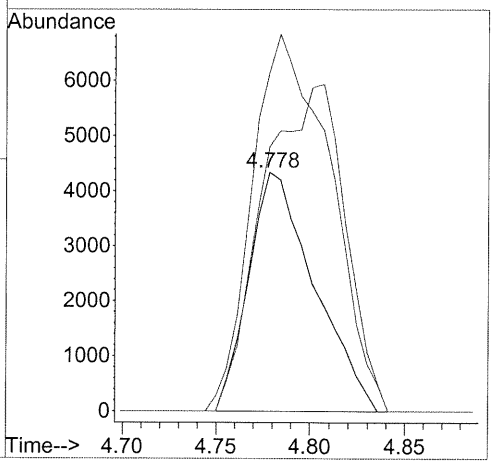
(#) = qualifier out of range (m) = manual integration (+) = signals summed

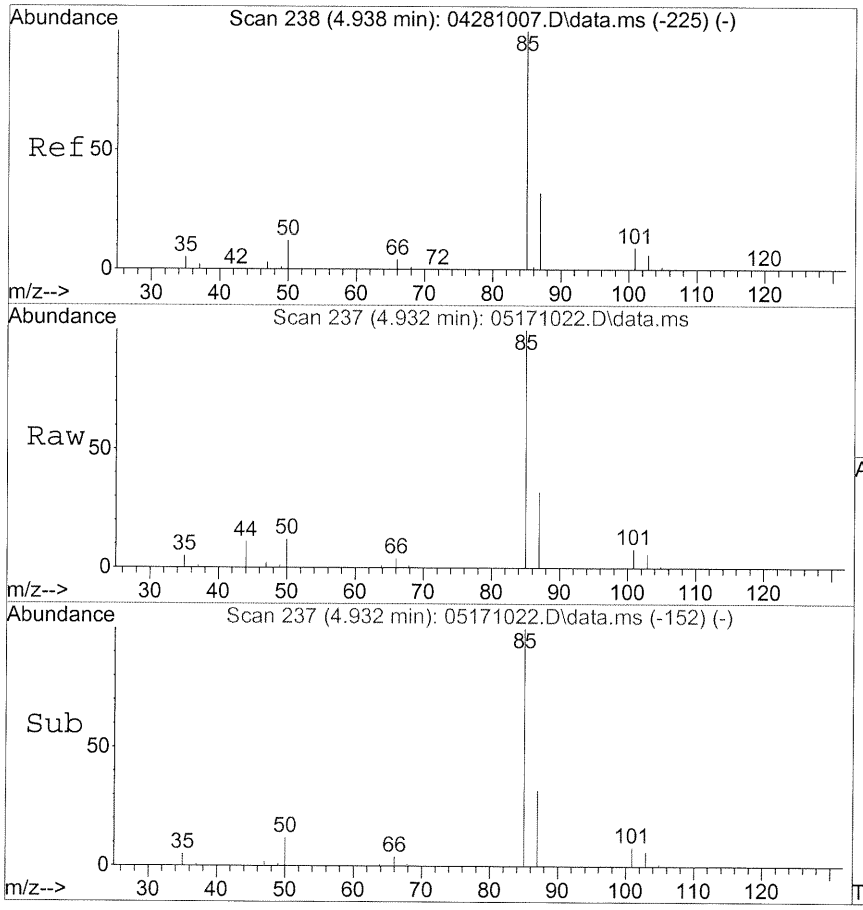


#2
Propene
Concen: 0.44 ng
RT: 4.78 min Scan# 210
Delta R.T. -0.000 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 42 Resp: 10490

Ion	Ratio	Lower	Upper
42	100		
39	0.0	88.4	128.4#
41	186.6	129.9	169.9#

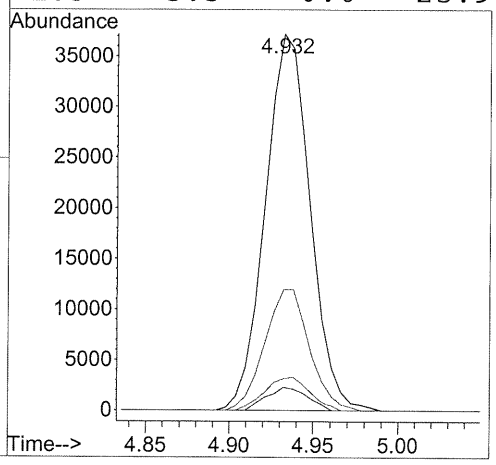


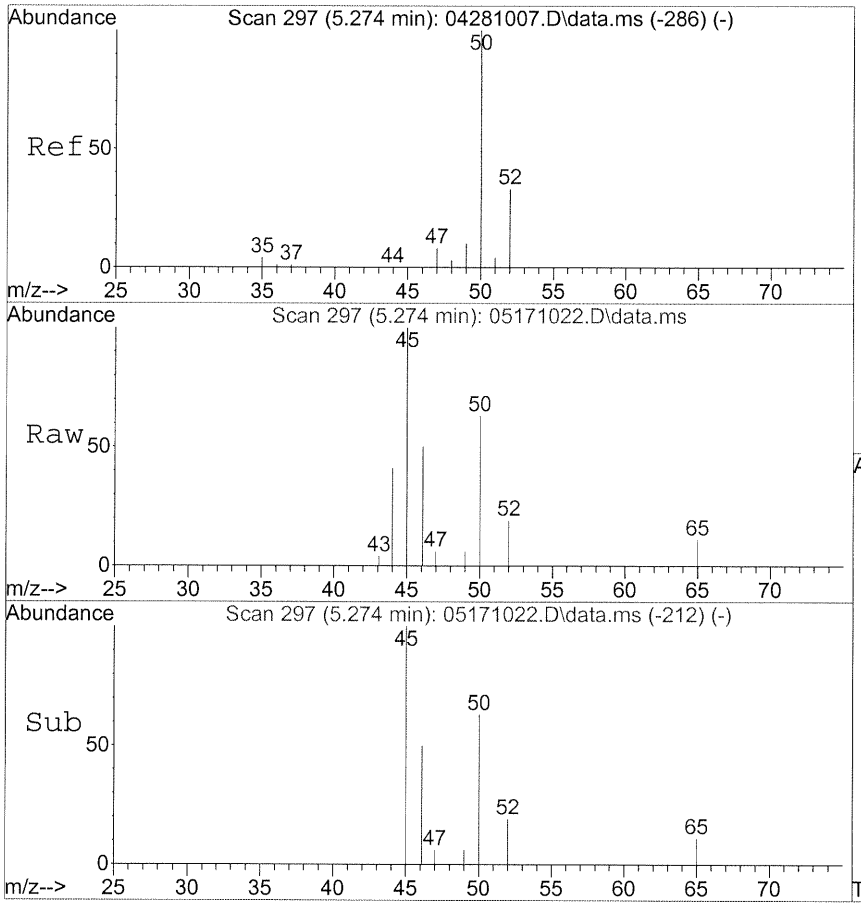


#3
Dichlorodifluoromethane (CFC
Concen: 1.68 ng
RT: 4.93 min Scan# 237
Delta R.T. -0.017 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 85 Resp: 69047

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.6	52.6
101	8.8	0.0	29.3
103	5.5	0.0	25.9

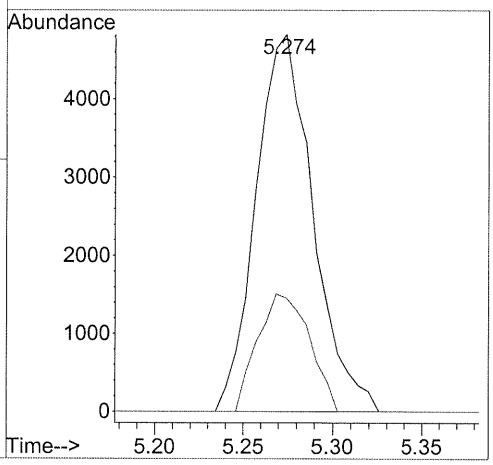


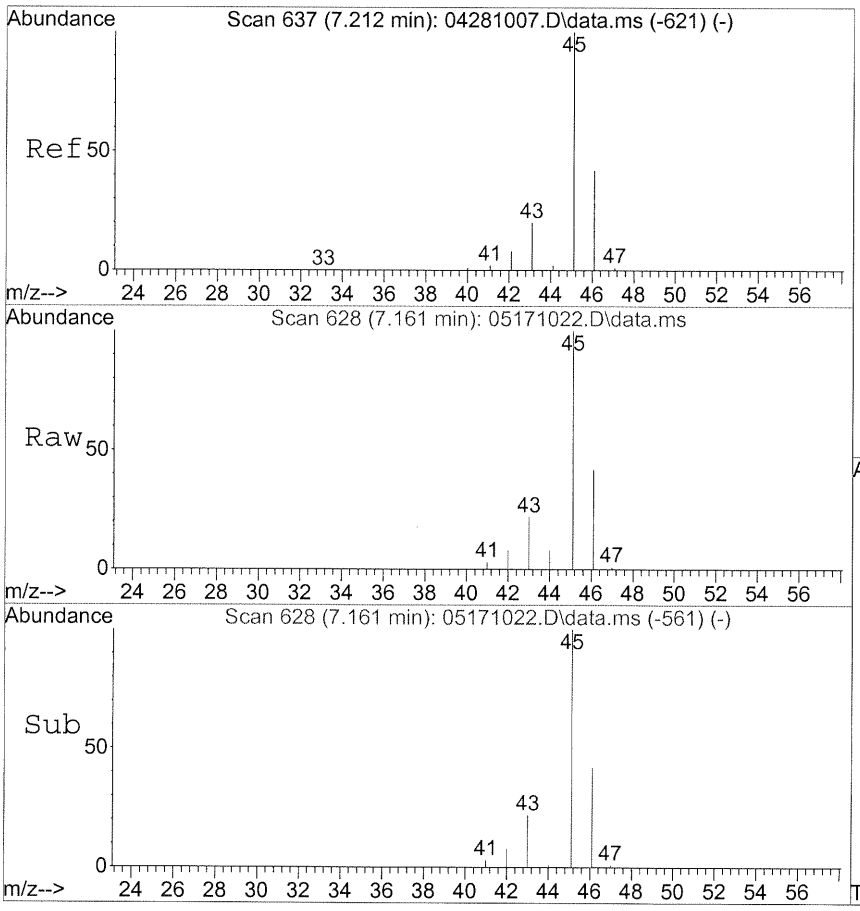


#4
Chloromethane
Concen: 0.35 ng
RT: 5.27 min Scan# 297
Delta R.T. -0.017 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 50 Resp: 10722

Ion	Ratio	Lower	Upper
50	100		
52	28.4	12.3	52.3

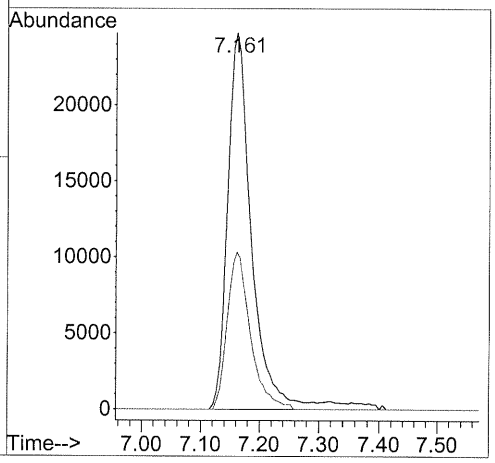


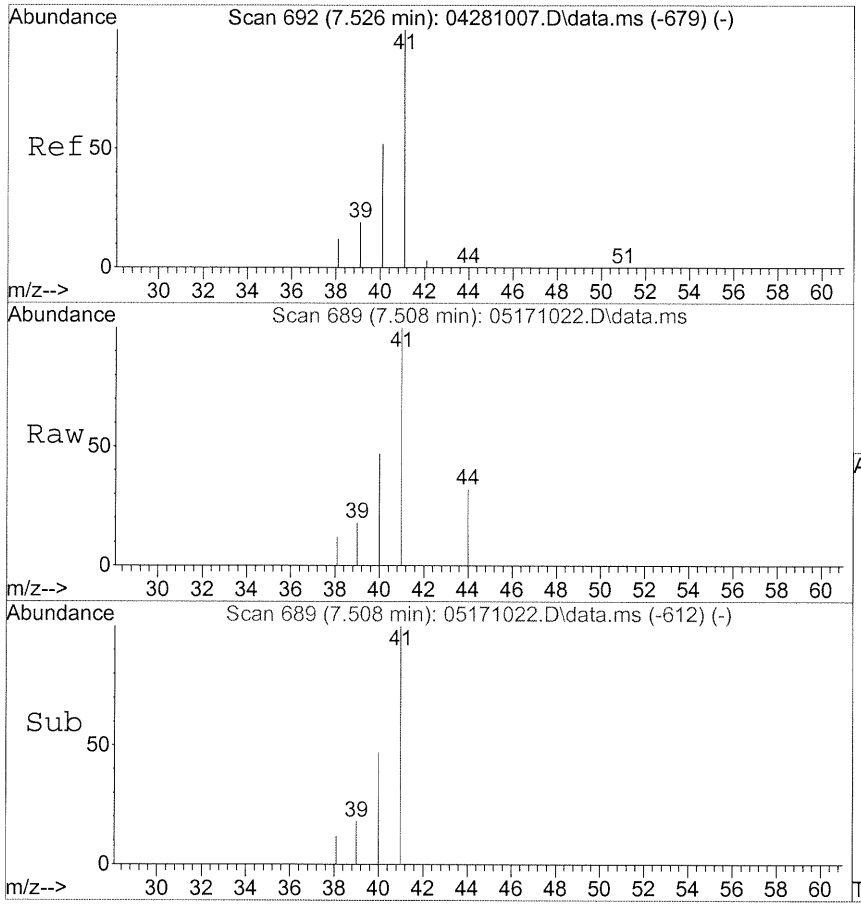


#10
Ethanol
Concen: 5.47 ng
RT: 7.16 min Scan# 628
Delta R.T. -0.120 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 45 Resp: 71485

Ion	Ratio	Lower	Upper
45	100		
46	39.6	21.3	61.3

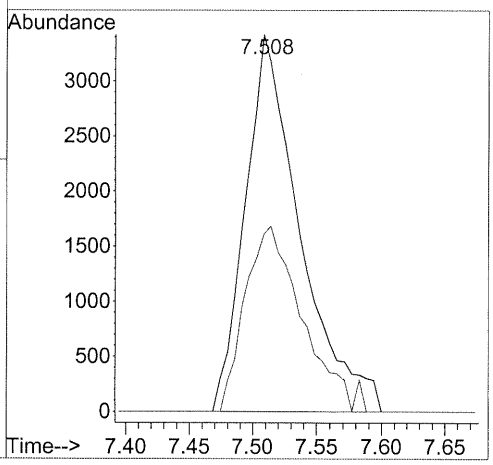


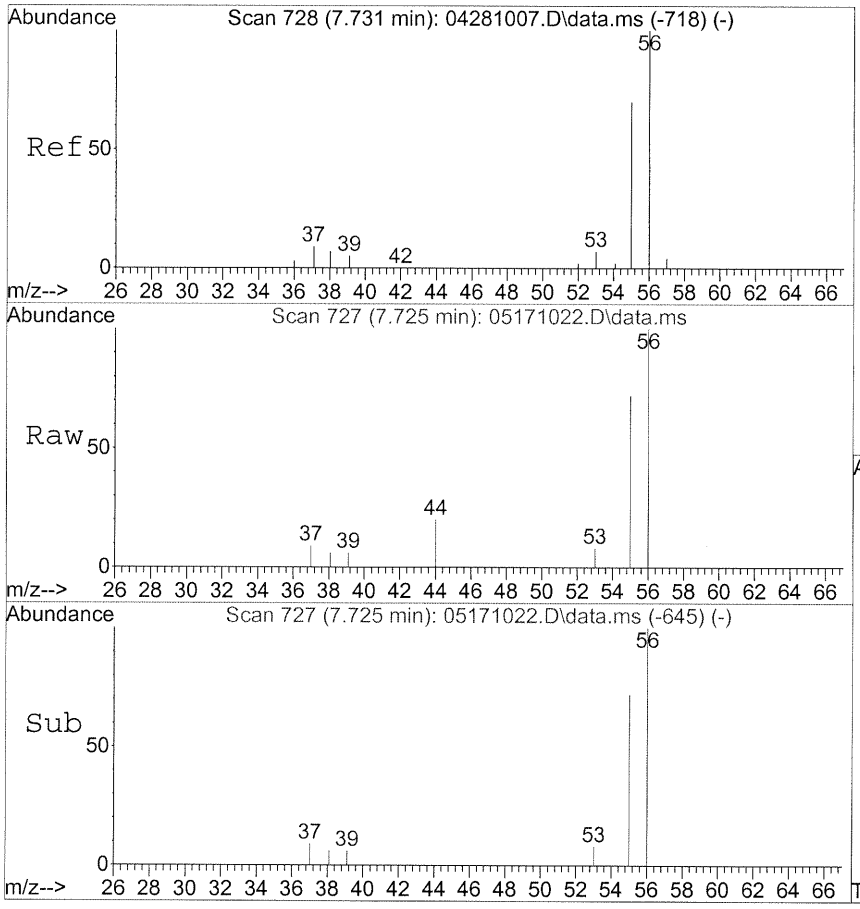


#11
Acetonitrile
Concen: 0.31 ng
RT: 7.51 min Scan# 689
Delta R.T. -0.063 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 41 Resp: 10183

Ion	Ratio	Lower	Upper
41	100		
40	51.7	33.2	73.2

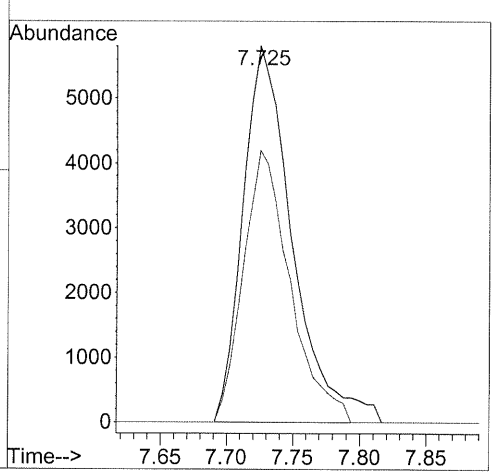


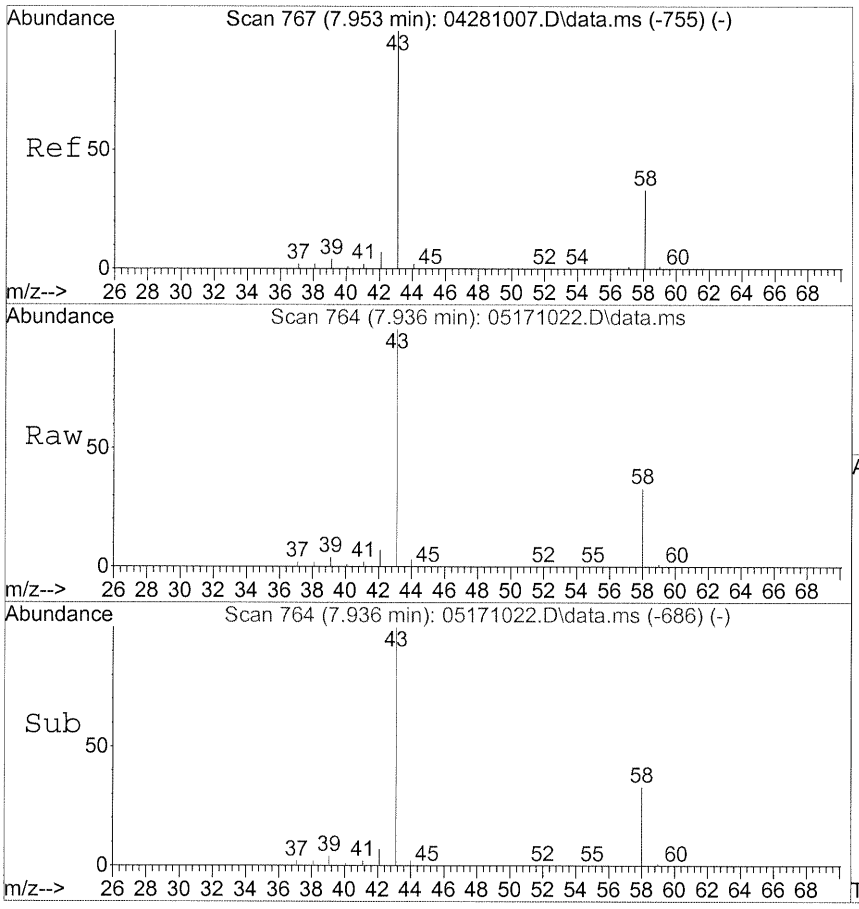


#12
Acrolein
Concen: 1.48 ng
RT: 7.73 min Scan# 727
Delta R.T. -0.034 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 56 Resp: 15089

Ion	Ratio	Lower	Upper
56	100		
55	68.6	50.2	90.2

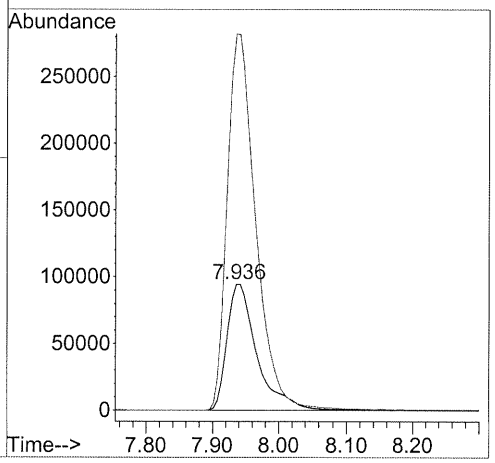


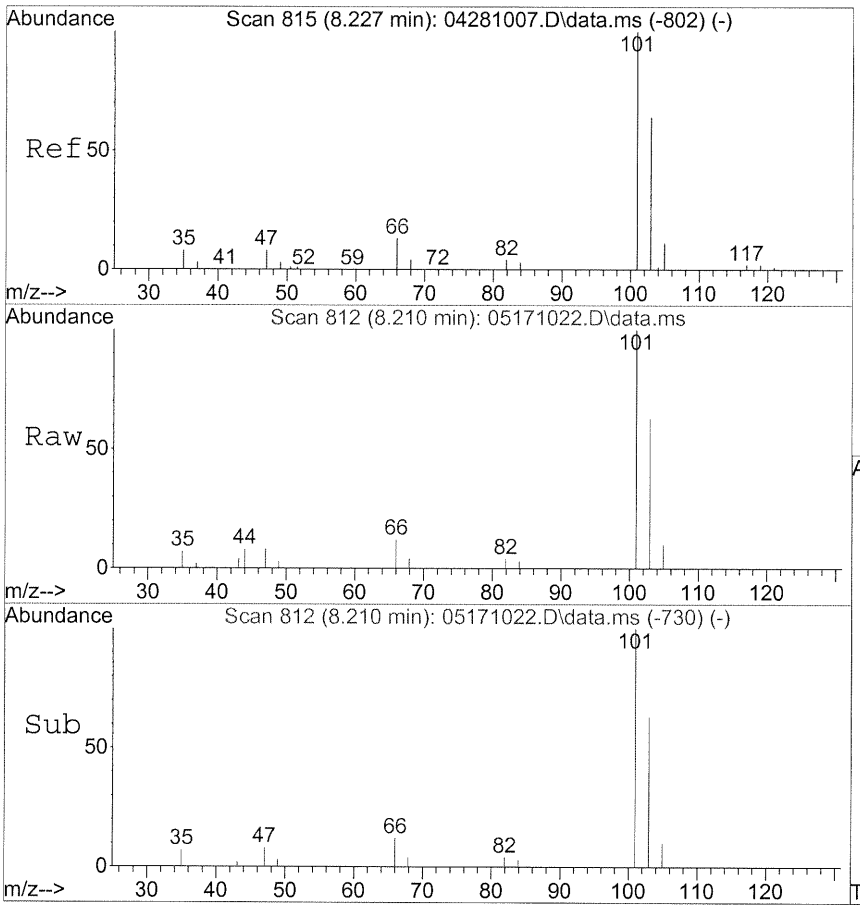


#13
Acetone
Concen: 18.47 ng
RT: 7.94 min Scan# 764
Delta R.T. -0.057 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 58 Resp: 295165

Ion	Ratio	Lower	Upper
58	100		
43	287.3	264.2	324.2

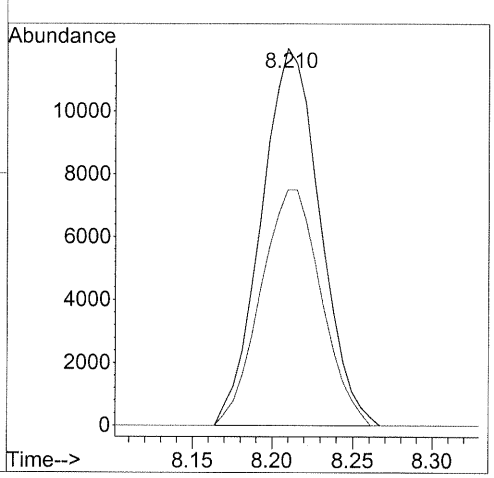


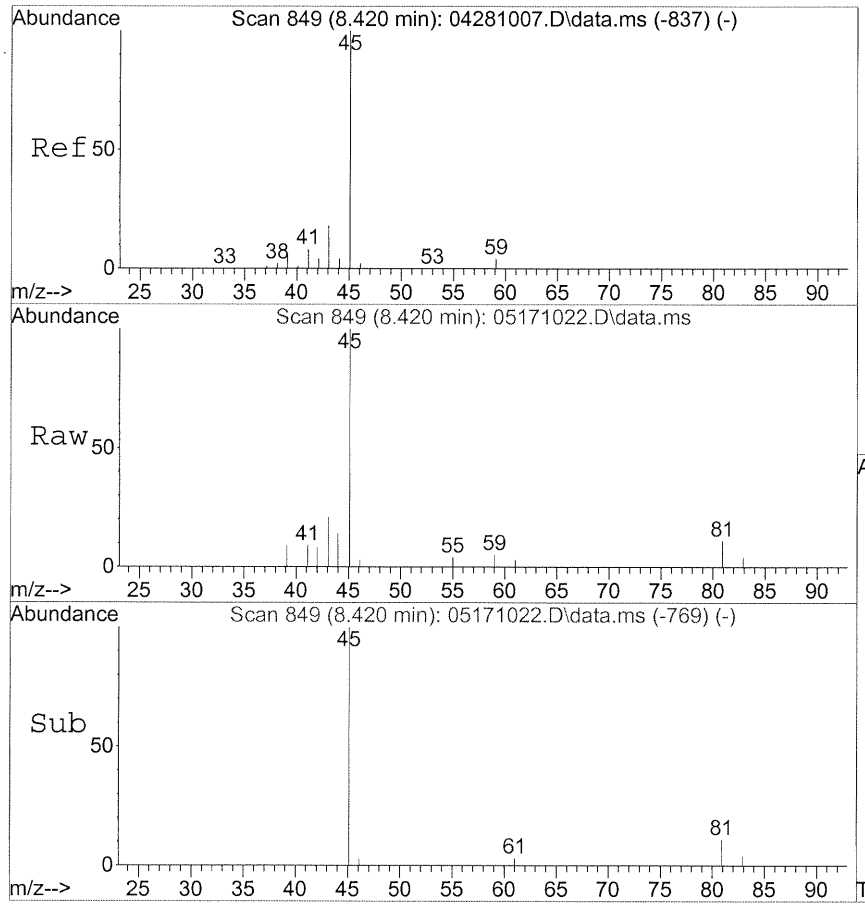


#14
Trichlorofluoromethane
Concen: 0.86 ng
RT: 8.21 min Scan# 812
Delta R.T. -0.034 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion:101 Resp: 30584

Ion	Ratio	Lower	Upper
101	100		
103	64.3	44.6	84.6

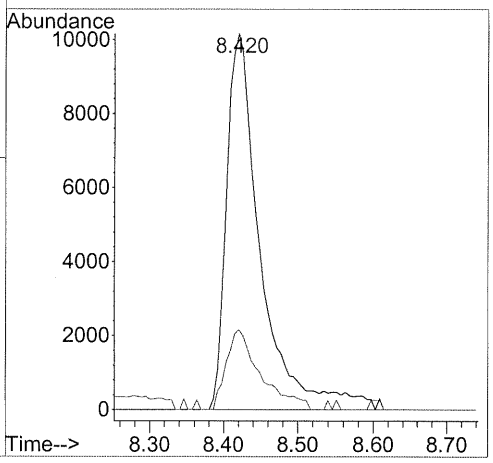


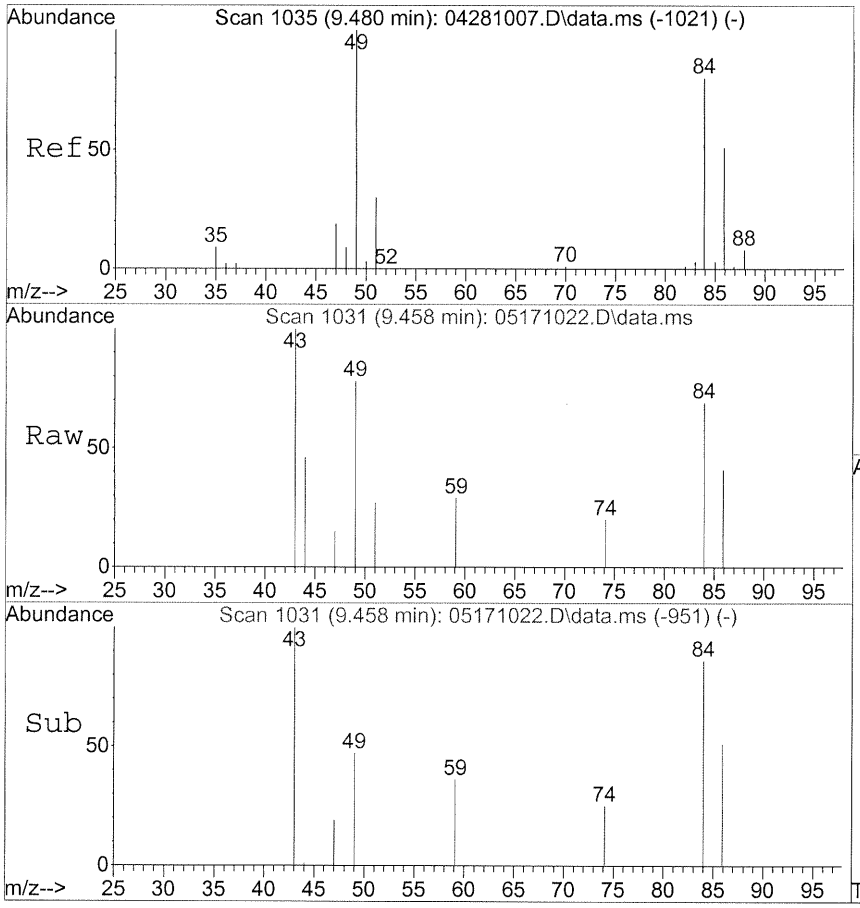


#15
2-Propanol (Isopropanol)
Concen: 0.65 ng
RT: 8.42 min Scan# 849
Delta R.T. -0.046 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 45 Resp: 32448

Ion	Ratio	Lower	Upper
45	100		
43	21.4	0.0	38.5

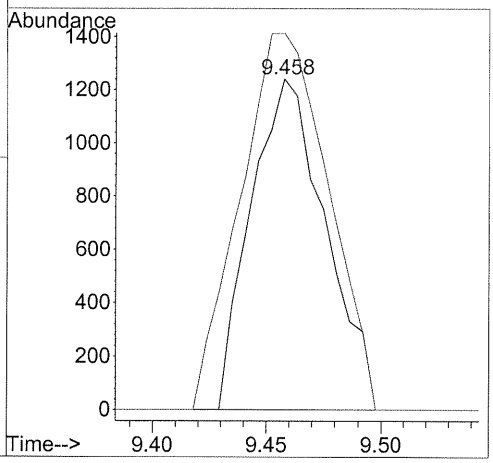


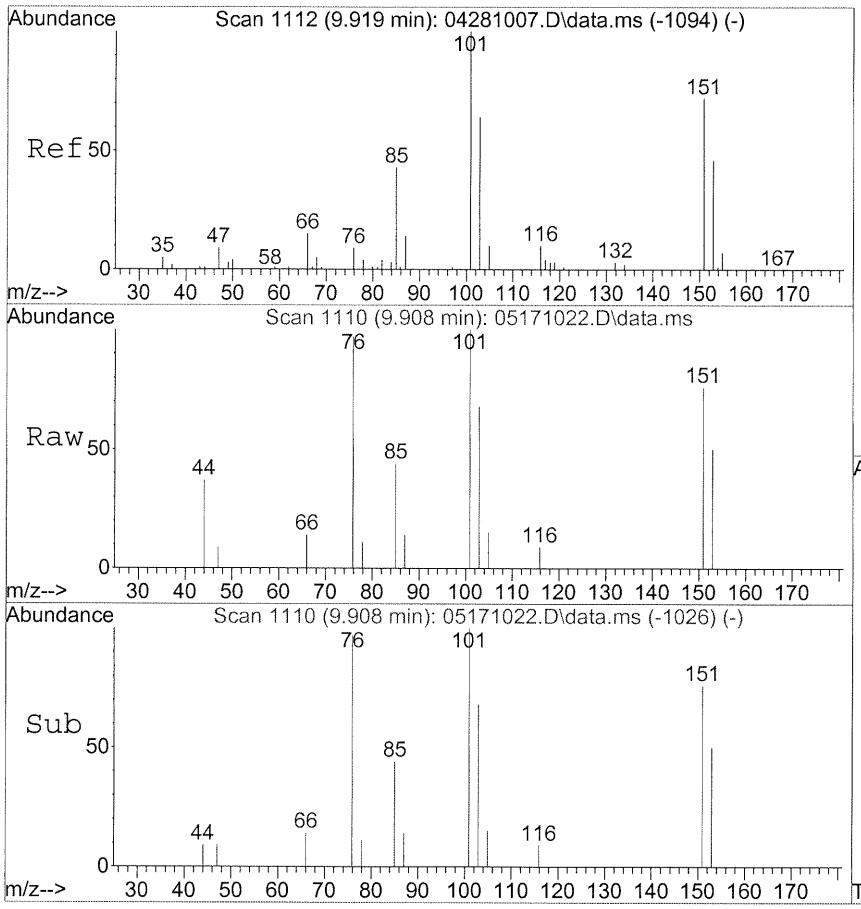


#19
Methylene Chloride
Concen: 0.13 ng
RT: 9.46 min Scan# 1031
Delta R.T. -0.046 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 84 Resp: 2802

Ion	Ratio	Lower	Upper
84	100		
49	135.1	94.5	144.5

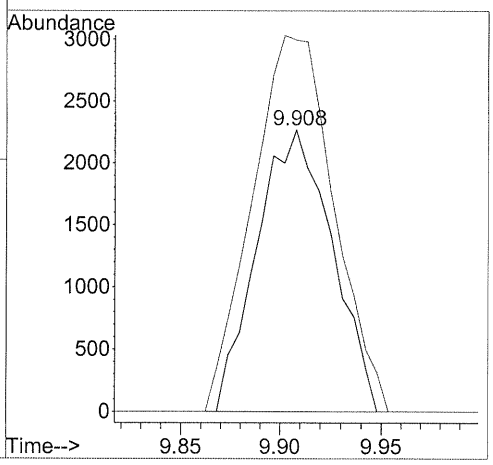


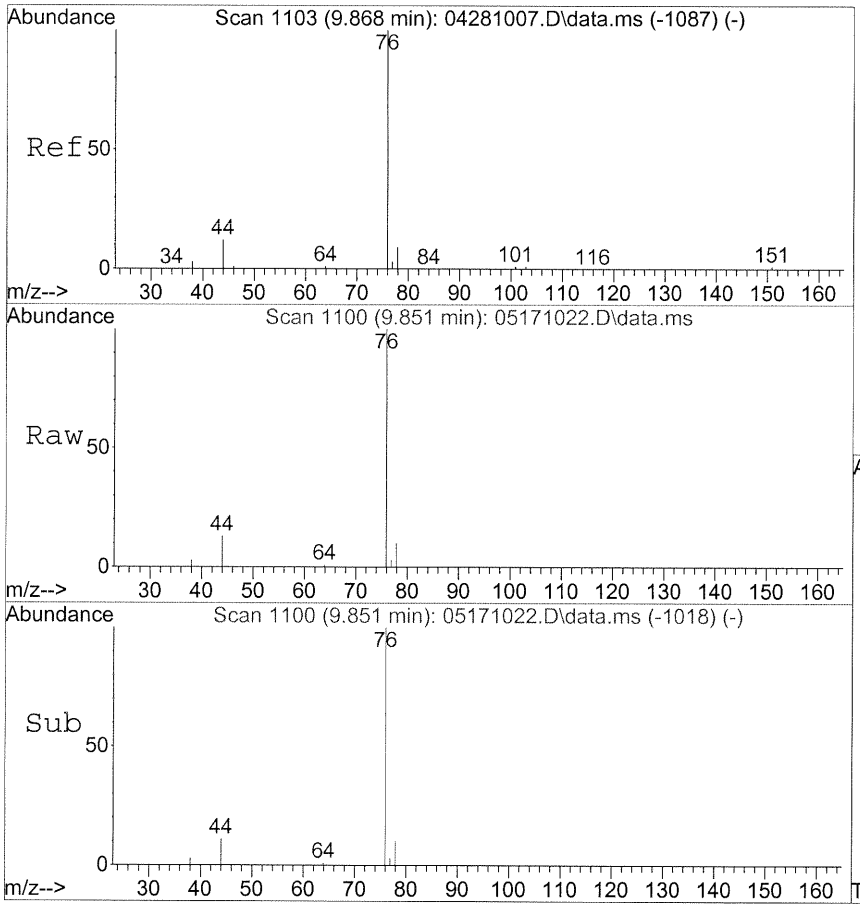


#21
Trichlorotrifluoroethane
Concen: 0.39 ng
RT: 9.91 min Scan# 1110
Delta R.T. -0.023 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion:151 Resp: 5874

Ion	Ratio	Lower	Upper
151	100		
101	145.2	114.9	154.9

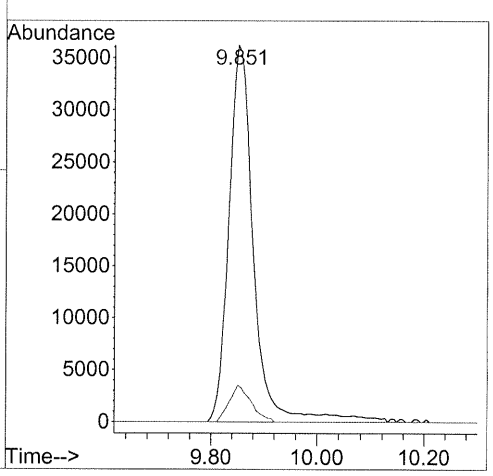


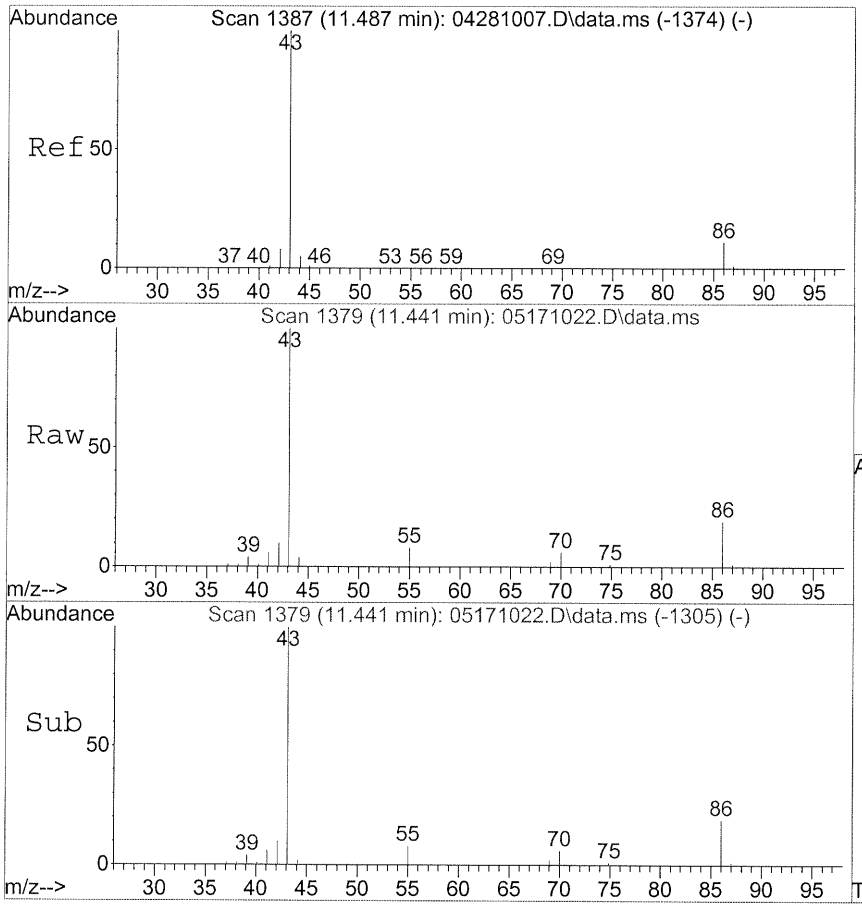


#22
Carbon Disulfide
Concen: 1.56 ng
RT: 9.85 min Scan# 1100
Delta R.T. -0.034 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 76 Resp: 117454

Ion	Ratio	Lower	Upper
76	100		
78	8.5	0.0	29.2

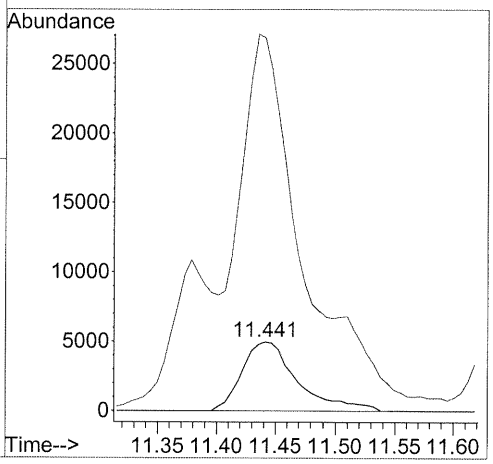


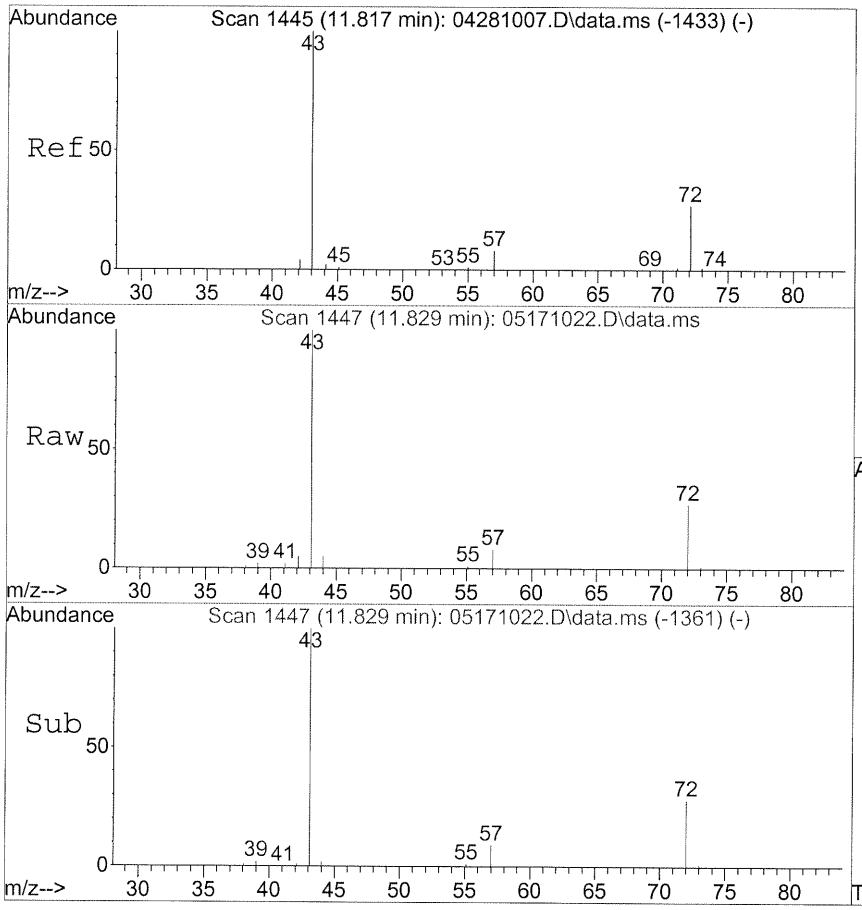


#26
Vinyl Acetate
Concen: 3.35 ng
RT: 11.44 min Scan# 1379
Delta R.T. -0.080 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 86 Resp: 16144

Ion	Ratio	Lower	Upper
86	100		
43	613.5	829.7	869.7#

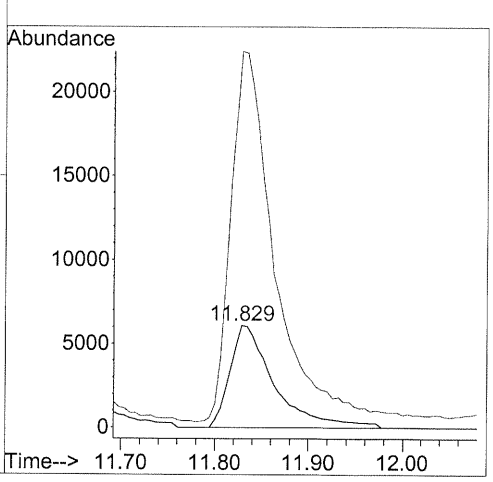


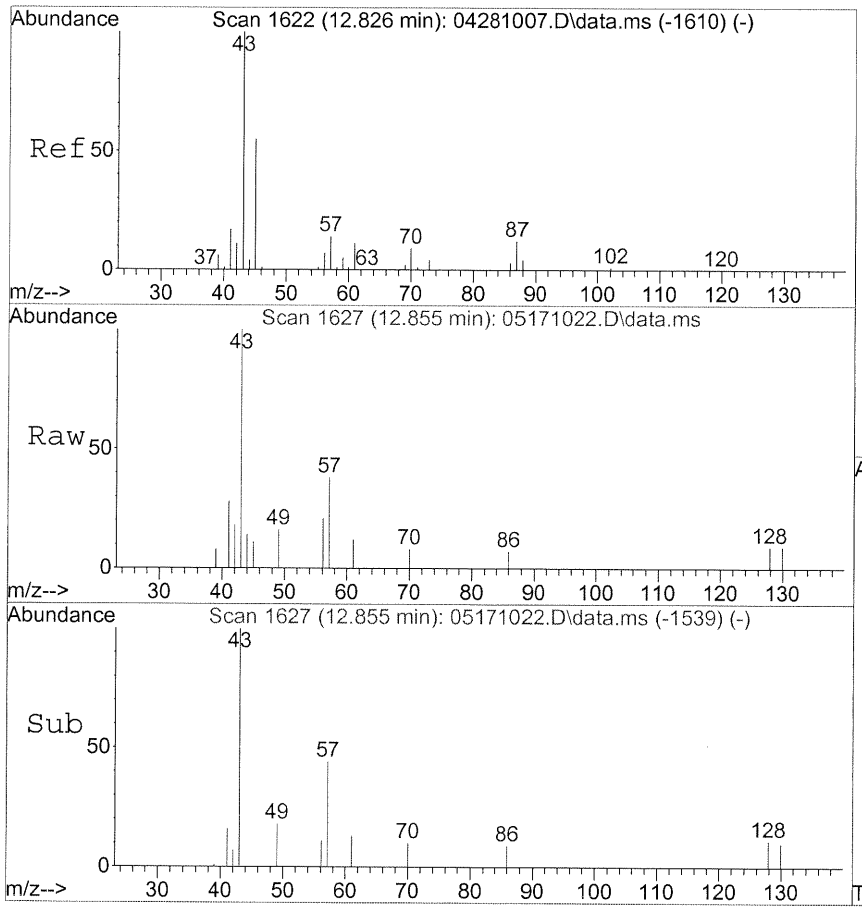


#27
2-Butanone (MEK)
Concen: 1.50 ng
RT: 11.83 min Scan# 1447
Delta R.T. -0.011 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 72 Resp: 19925

Ion	Ratio	Lower	Upper
72	100		
43	395.1	342.0	382.0#

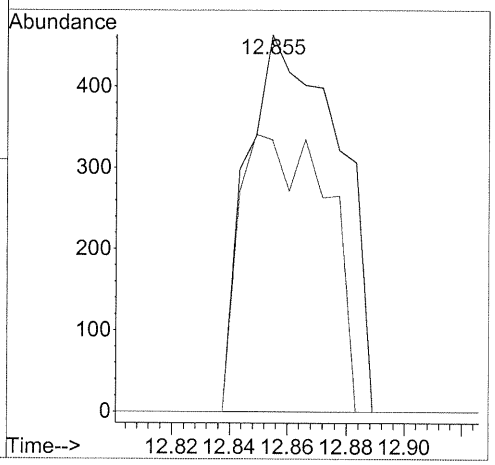


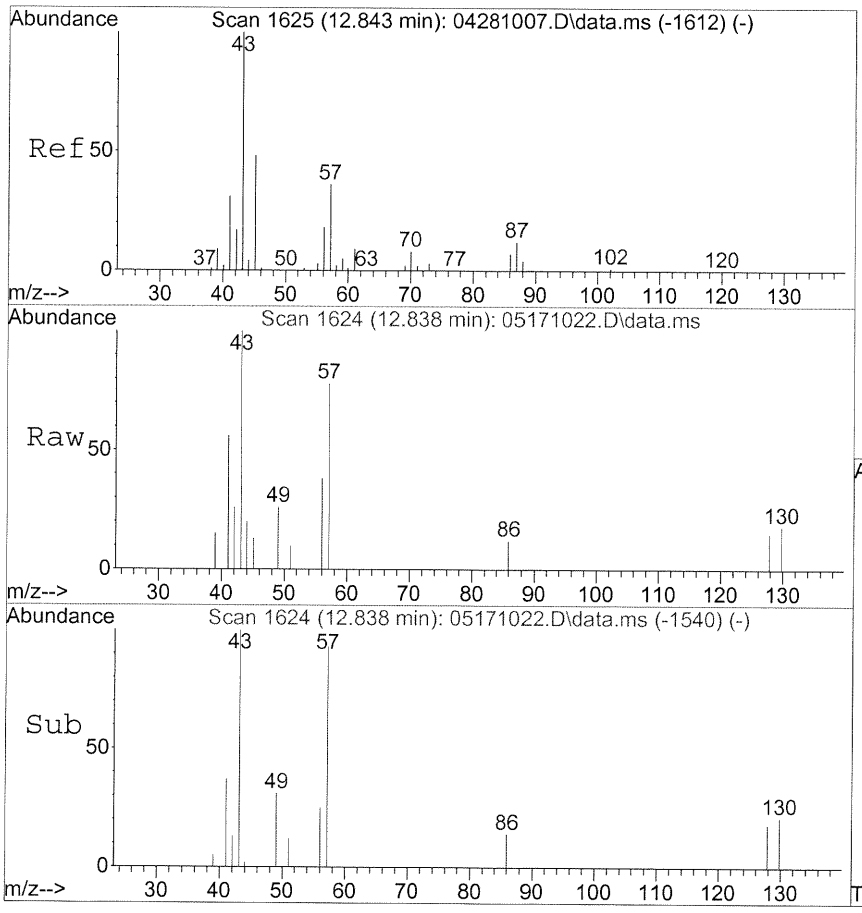


#30
Ethyl Acetate
Concen: 0.13 ng
RT: 12.85 min Scan# 1627
Delta R.T. -0.000 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 61 Resp: 1007

Ion	Ratio	Lower	Upper
61	100		
70	70.6	63.6	103.6

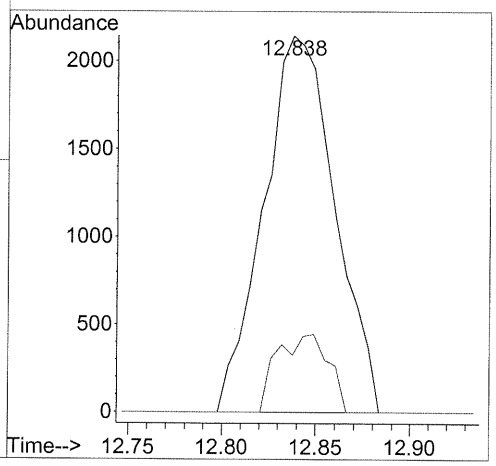


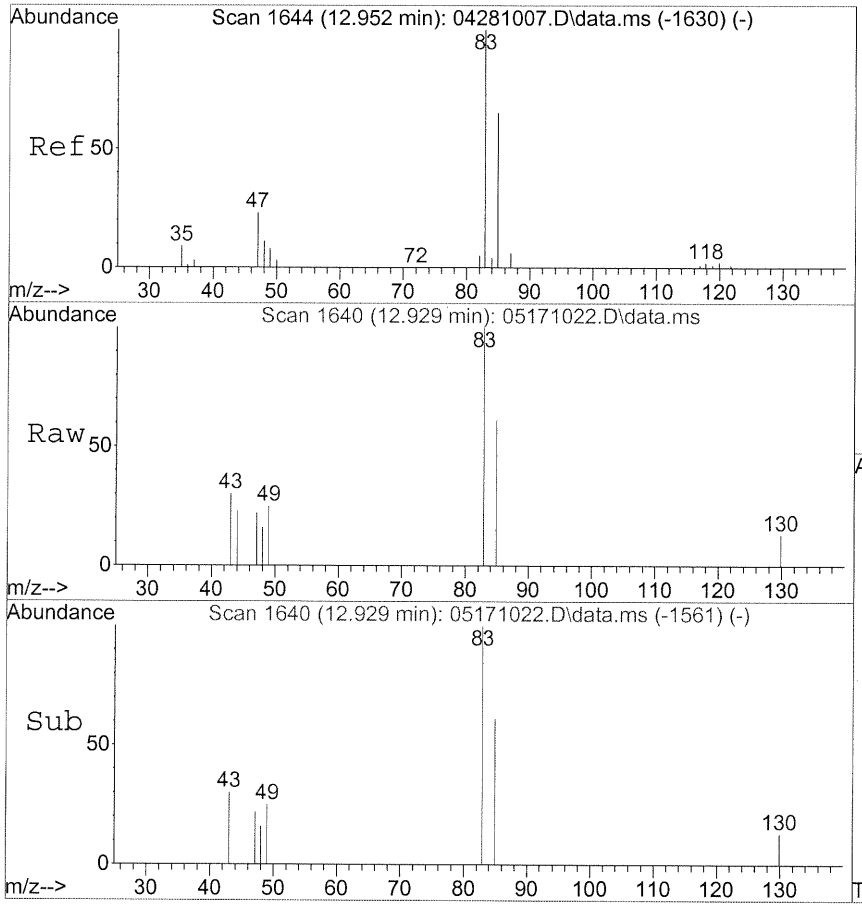


#31
n-Hexane
Concen: 0.14 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 57 Resp: 5618

Ion	Ratio	Lower	Upper
57	100		
86	14.9	0.0	39.8

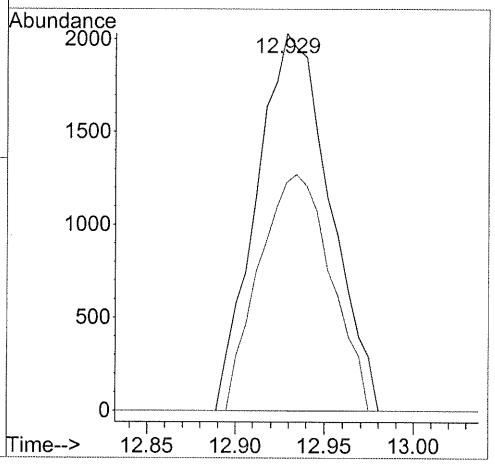


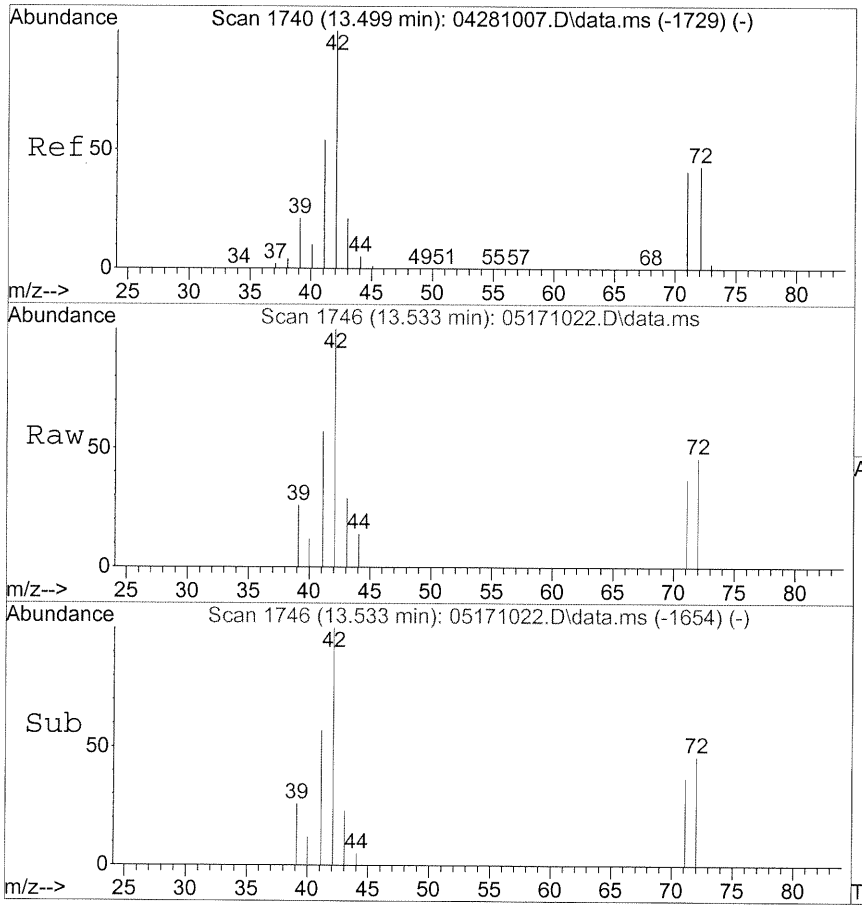


#32
Chloroform
Concen: 0.17 ng
RT: 12.93 min Scan# 1640
Delta R.T. -0.051 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 83 Resp: 5800

Ion	Ratio	Lower	Upper
83	100		
85	61.0	44.9	84.9

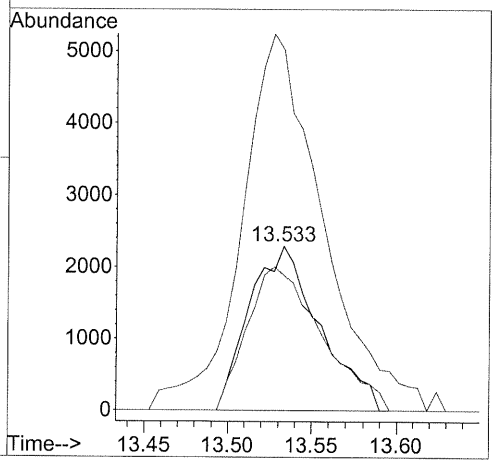


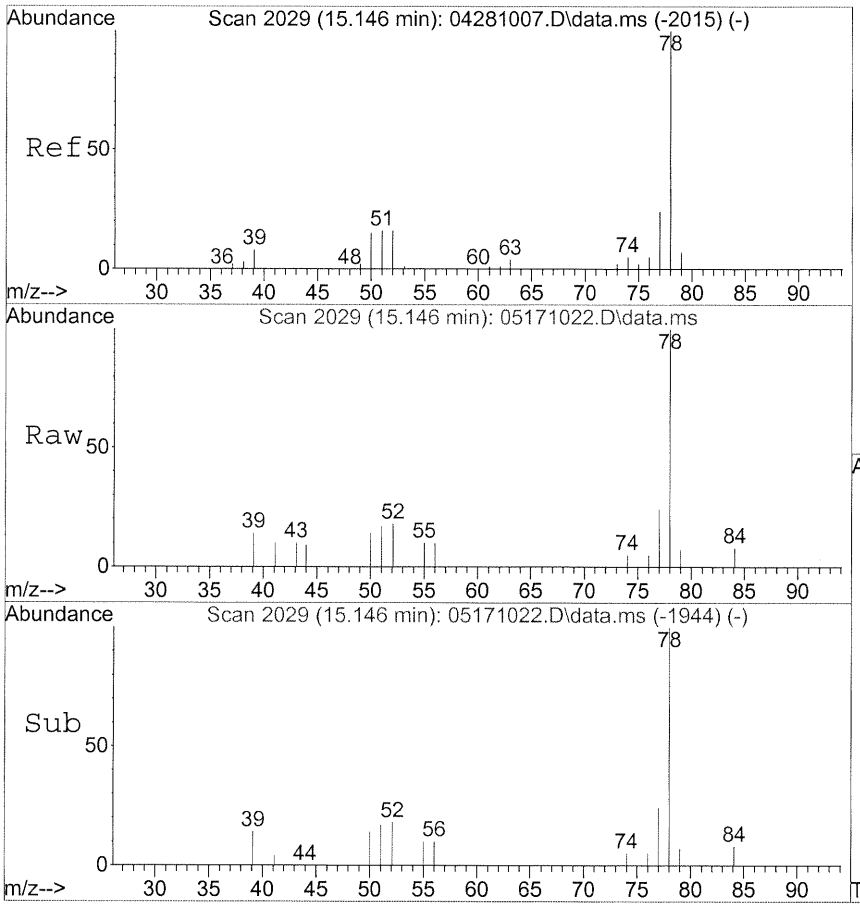


#34
Tetrahydrofuran (THF)
Concen: 0.52 ng
RT: 13.53 min Scan# 1746
Delta R.T. 0.023 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 72 Resp: 6644

Ion	Ratio	Lower	Upper
72	100		
71	92.7	74.5	114.5
42	266.1	197.7	237.7#

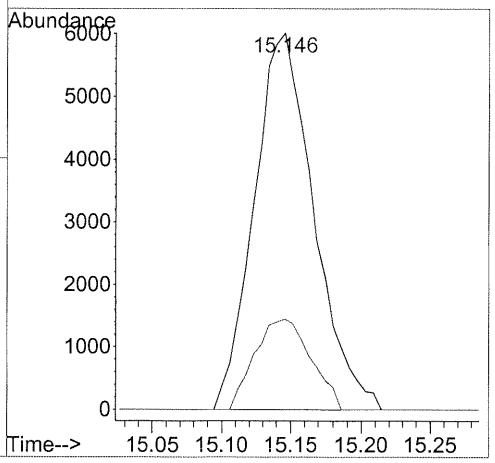


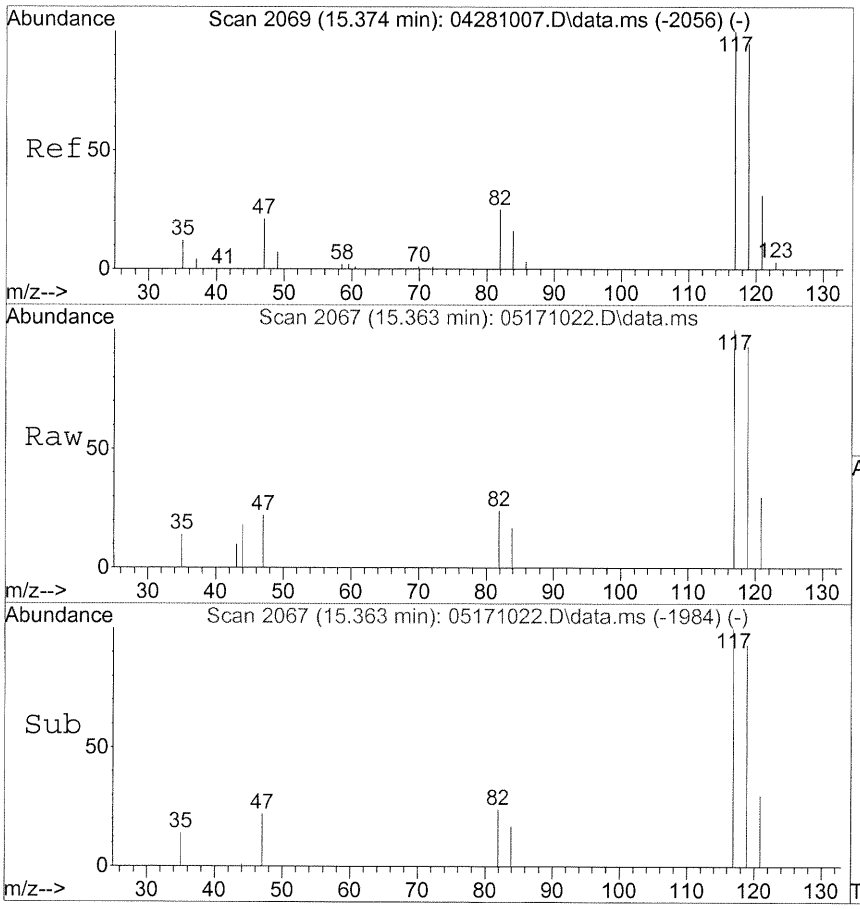


#41
Benzene
Concen: 0.20 ng
RT: 15.15 min Scan# 2029
Delta R.T. -0.017 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 78 Resp: 17872

Ion	Ratio	Lower	Upper
78	100		
77	22.6	4.1	44.1

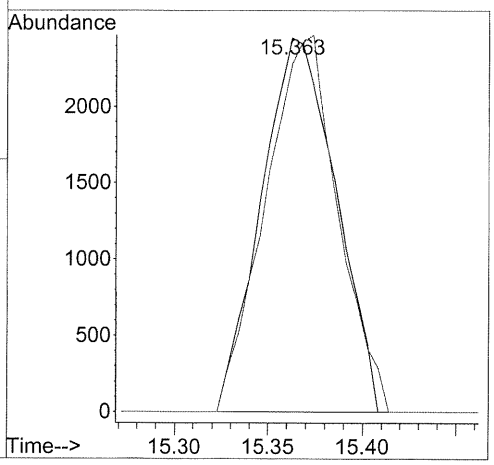


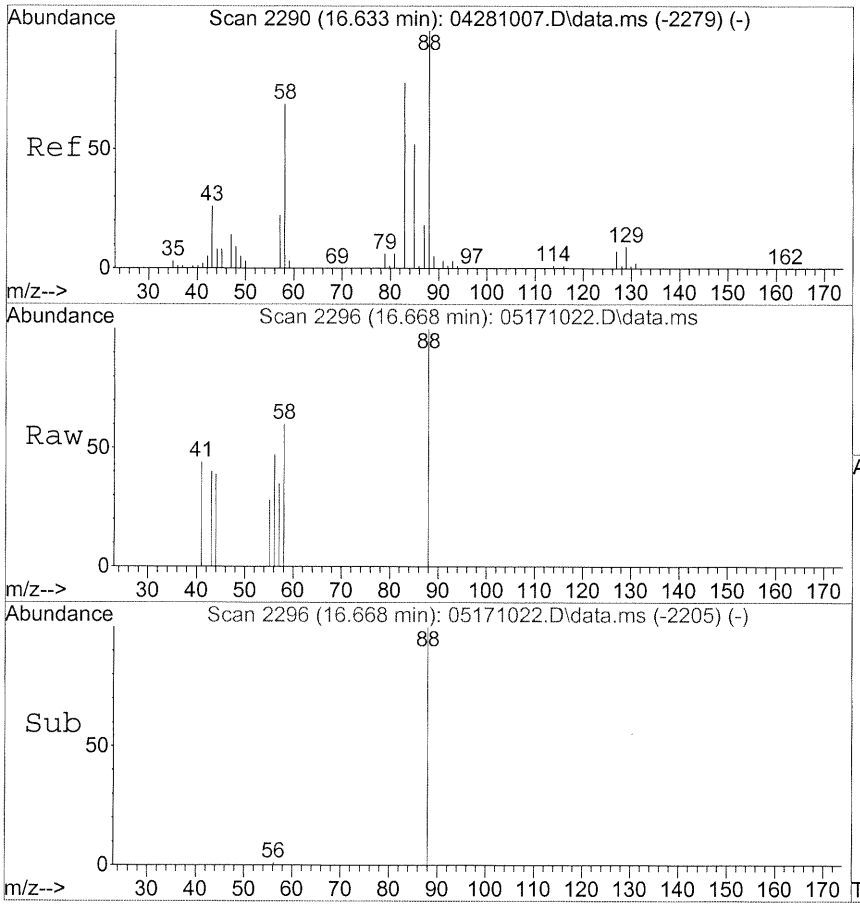


#42
Carbon Tetrachloride
Concen: 0.29 ng
RT: 15.36 min Scan# 2067
Delta R.T. -0.029 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion:117 Resp: 6720

Ion	Ratio	Lower	Upper
117	100		
119	97.7	76.1	116.1

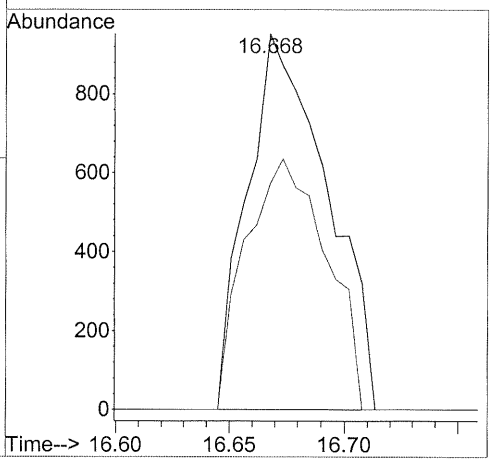


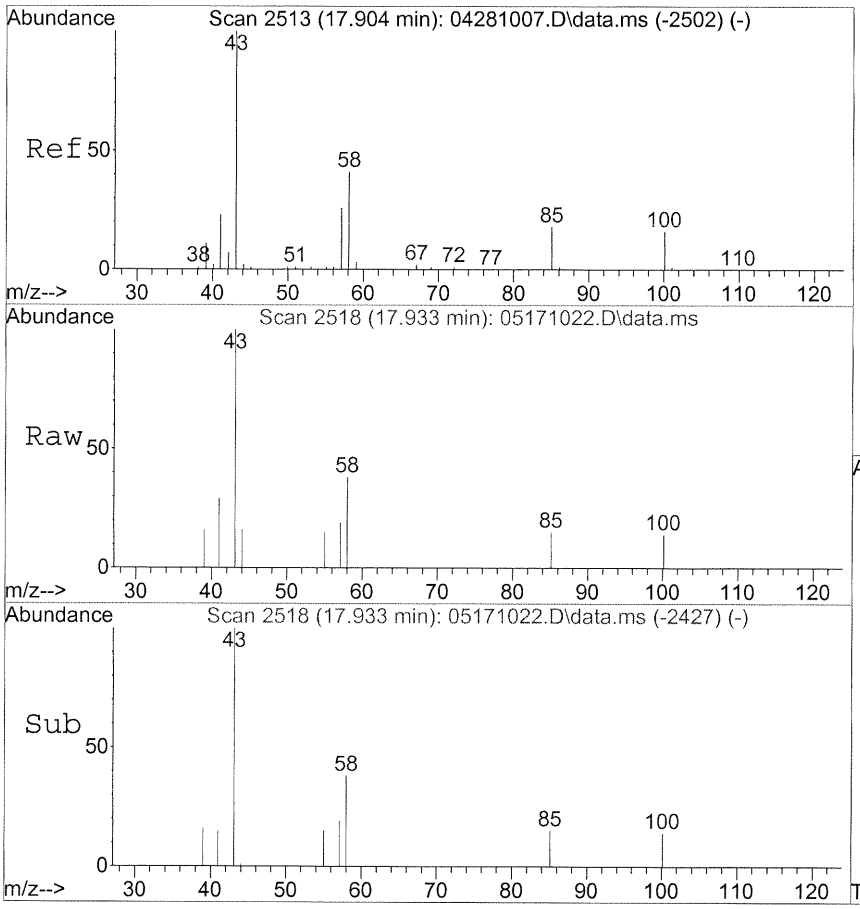


#48
1,4-Dioxane
Concen: 0.14 ng
RT: 16.67 min Scan# 2296
Delta R.T. 0.017 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 88 Resp: 2297

Ion	Ratio	Lower	Upper
88	100		
58	67.6	45.8	85.8

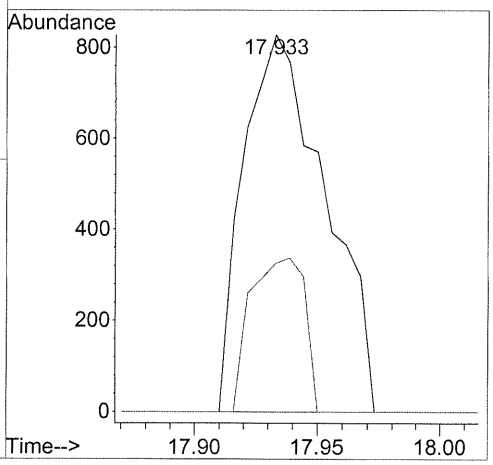


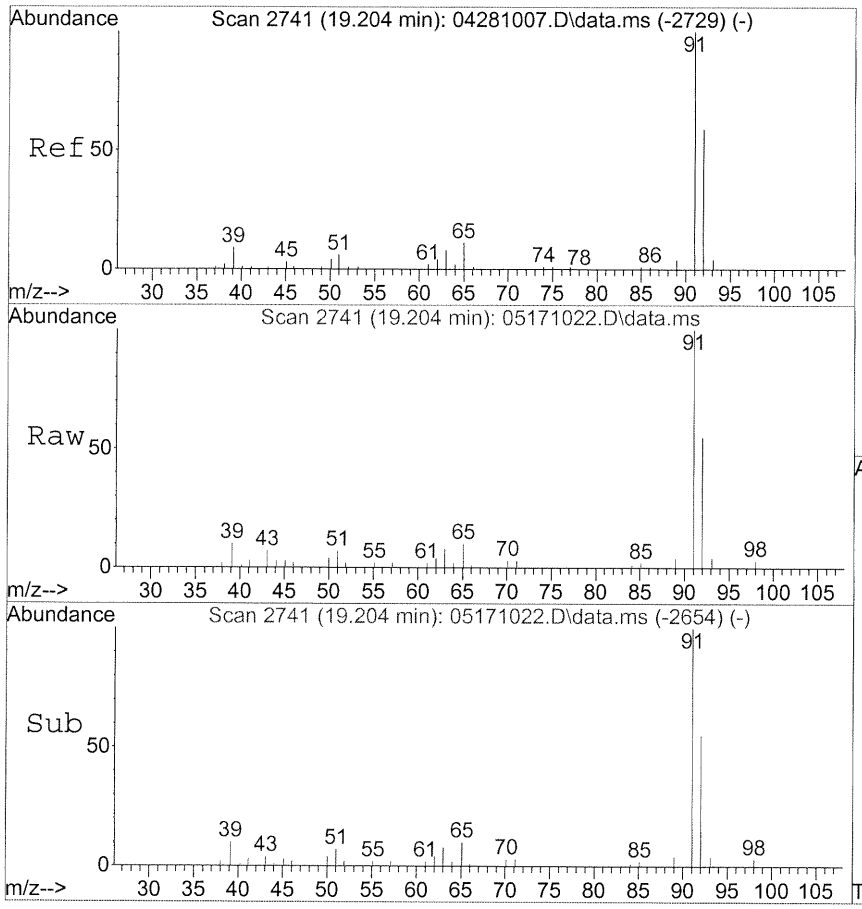


#53
4-Methyl-2-pentanone
Concen: 0.10 ng
RT: 17.93 min Scan# 2518
Delta R.T. 0.017 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 58 Resp: 1905

Ion	Ratio	Lower	Upper
58	100		
85	27.1	26.7	66.7

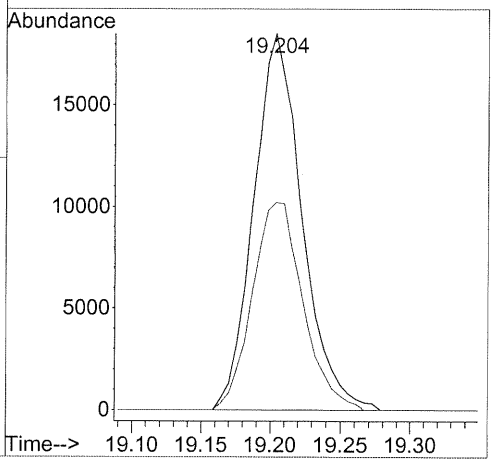


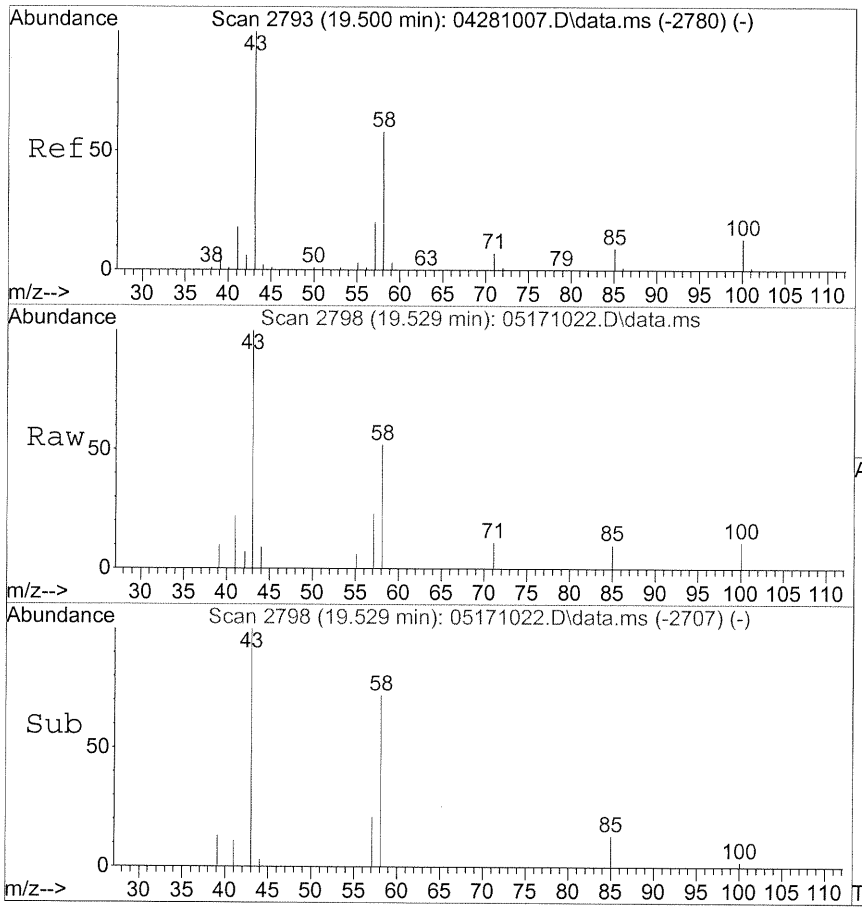


#58
Toluene
Concen: 0.48 ng
RT: 19.20 min Scan# 2741
Delta R.T. -0.006 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 91 Resp: 44783

Ion	Ratio	Lower	Upper
91	100		
92	57.7	39.2	79.2

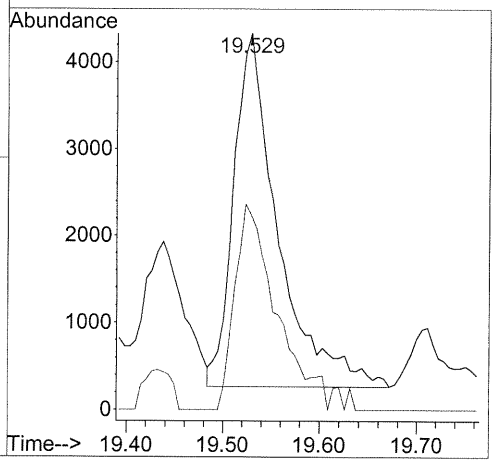


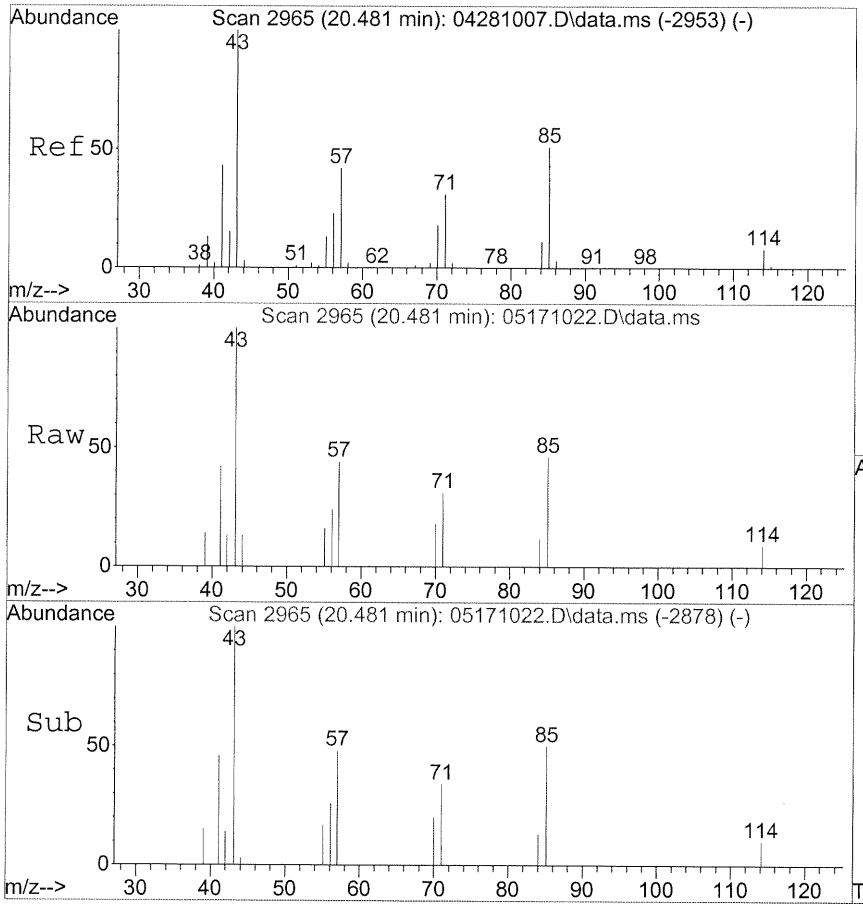


#59
2-Hexanone
Concen: 0.29 ng
RT: 19.53 min Scan# 2798
Delta R.T. 0.017 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 43 Resp: 12935

Ion	Ratio	Lower	Upper
43	100		
58	54.7	38.3	78.3

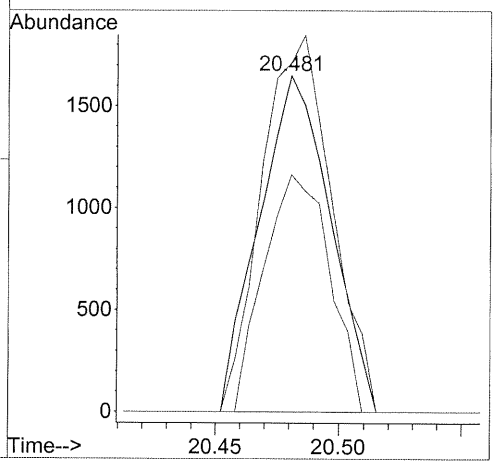


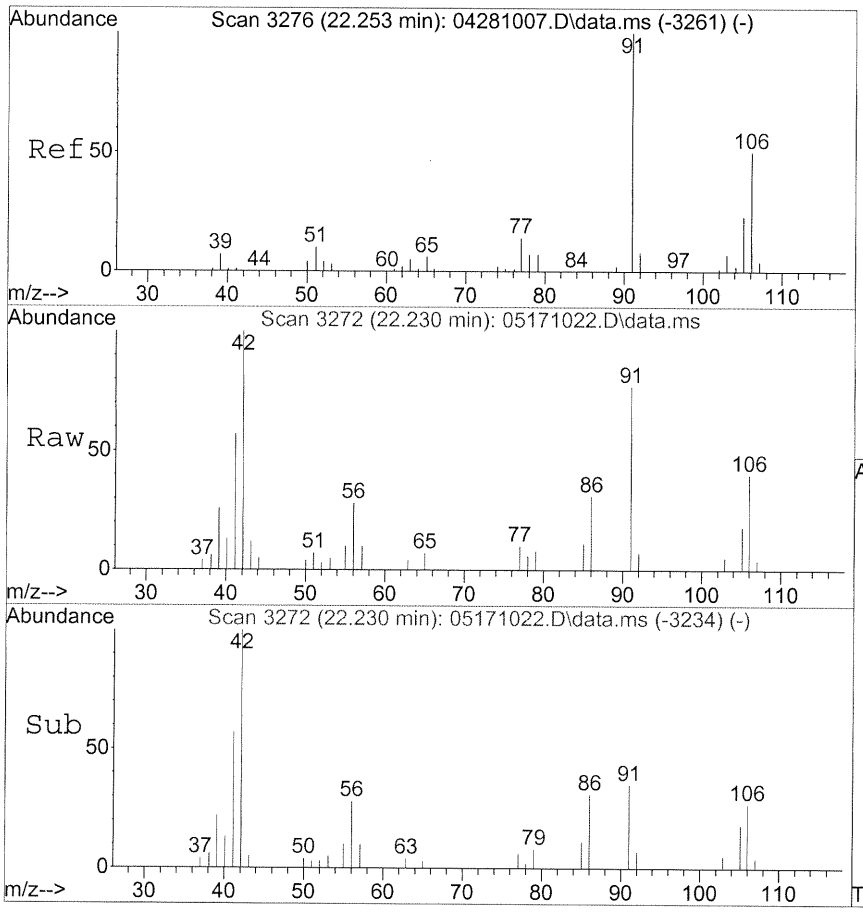


#63
n-Octane
Concen: 0.15 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 57 Resp: 3294

Ion	Ratio	Lower	Upper
57	100		
85	110.1	101.4	152.2
71	65.2	60.7	91.1

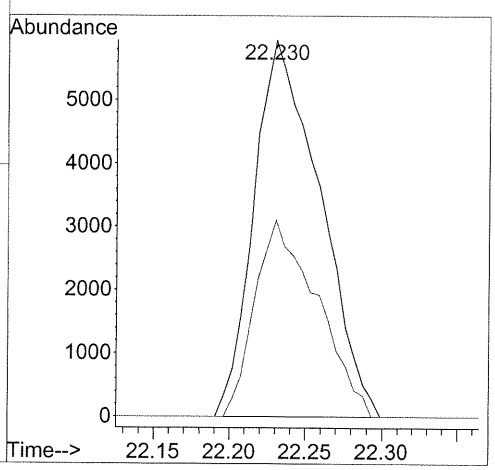


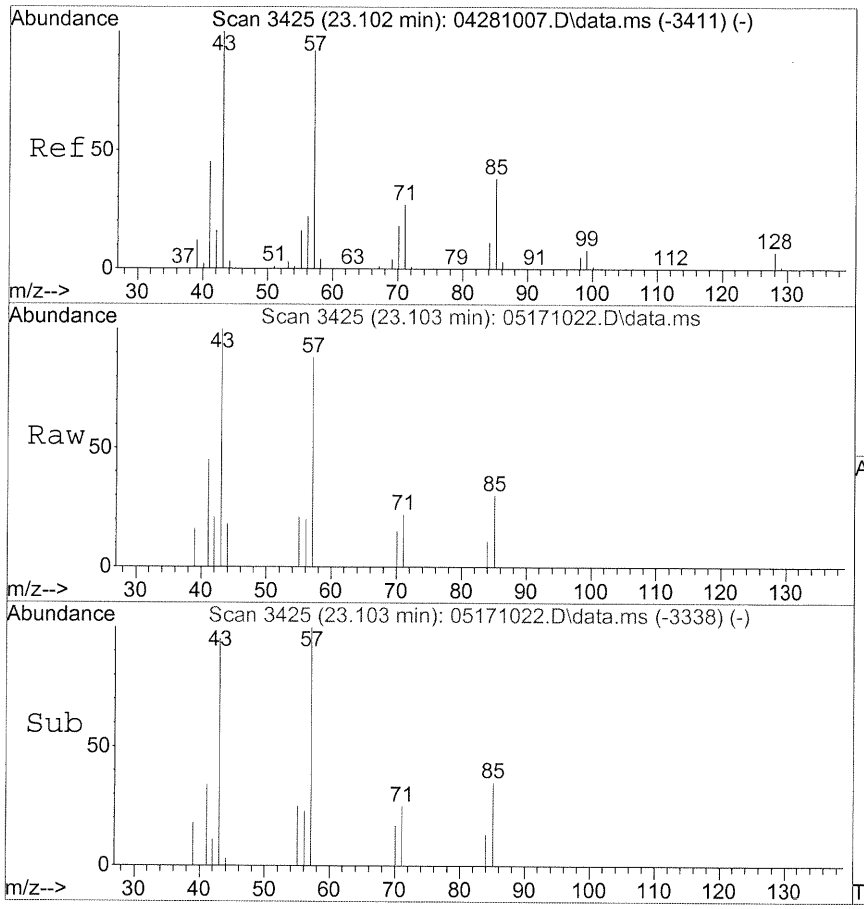


#67
m- & p-Xylenes
Concen: 0.21 ng
RT: 22.23 min Scan# 3272
Delta R.T. -0.034 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 91 Resp: 17846

Ion	Ratio	Lower	Upper
91	100		
106	49.5	30.6	70.6

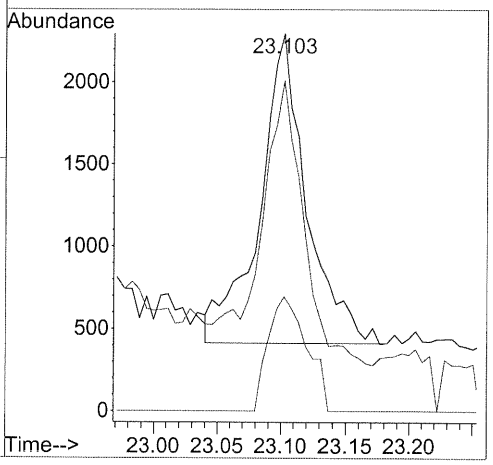


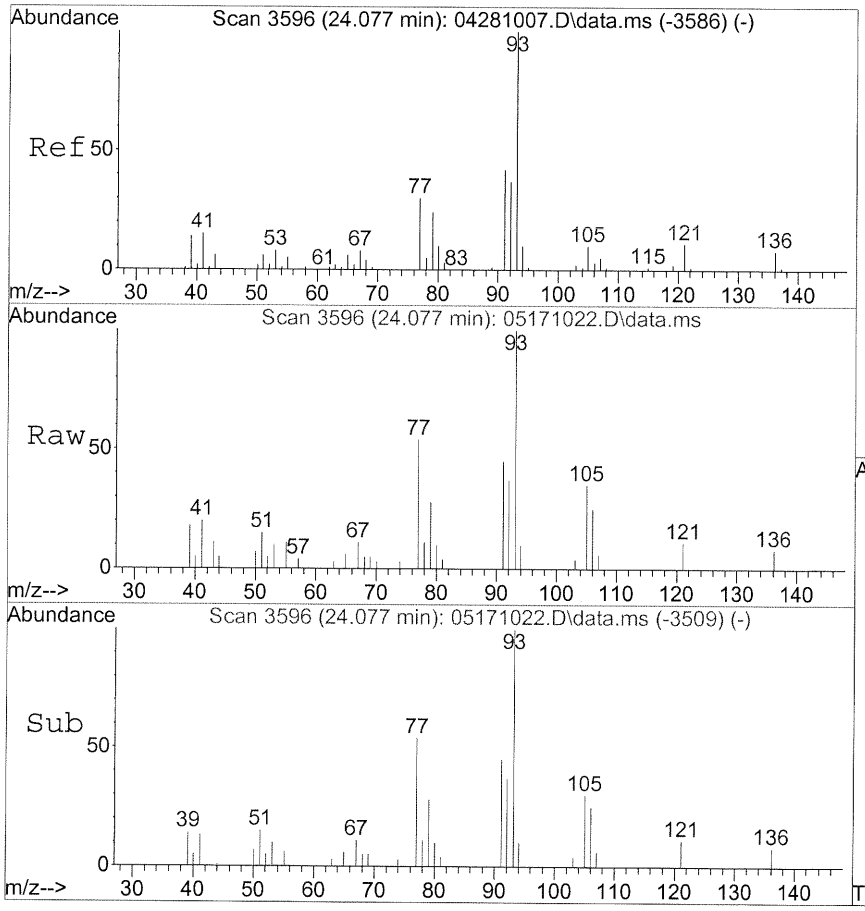


#71
n-Nonane
Concen: 0.10 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 43 Resp: 4829

Ion	Ratio	Lower	Upper
43	100		
57	130.8	74.6	114.6#
85	30.2	20.5	60.5

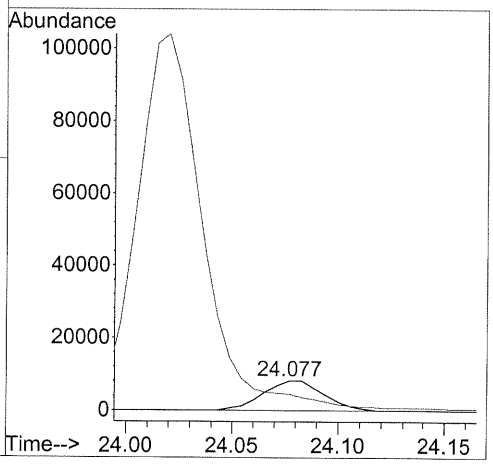


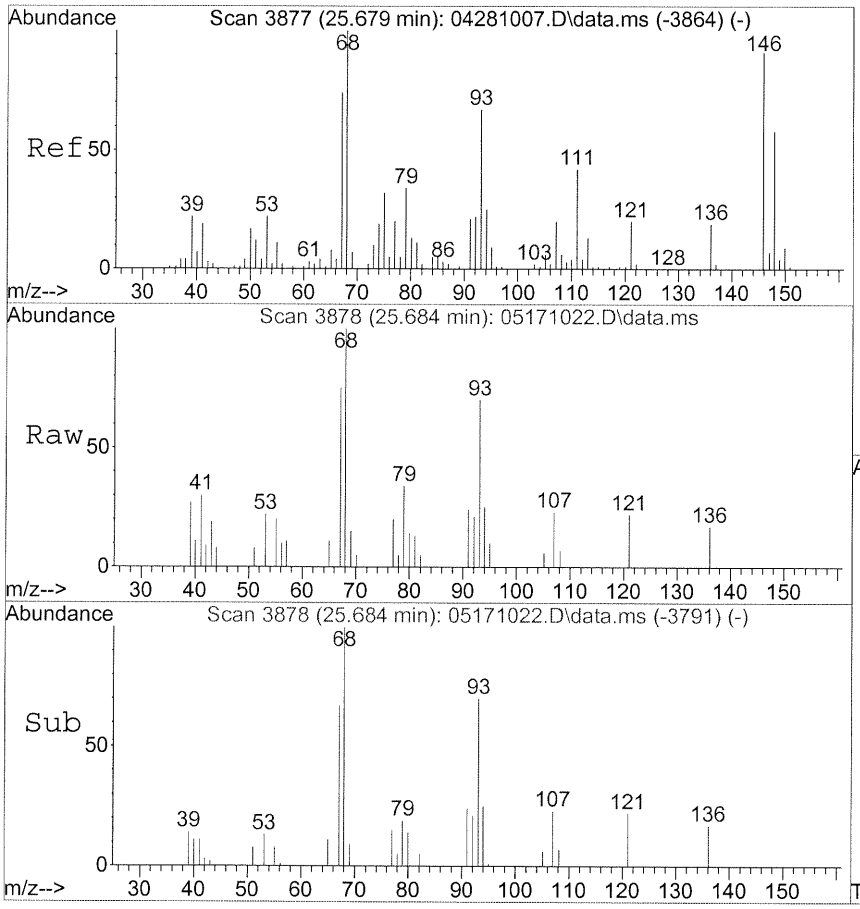


#75
alpha-Pinene
Concen: 0.31 ng
RT: 24.08 min Scan# 3596
Delta R.T. -0.006 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 93 Resp: 15897

Ion	Ratio	Lower	Upper
93	100		
77	0.0	8.7	48.7#

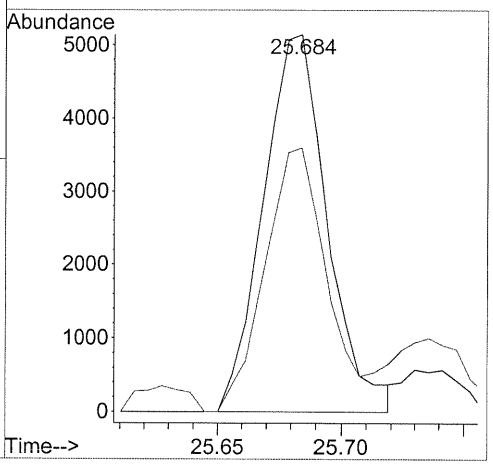


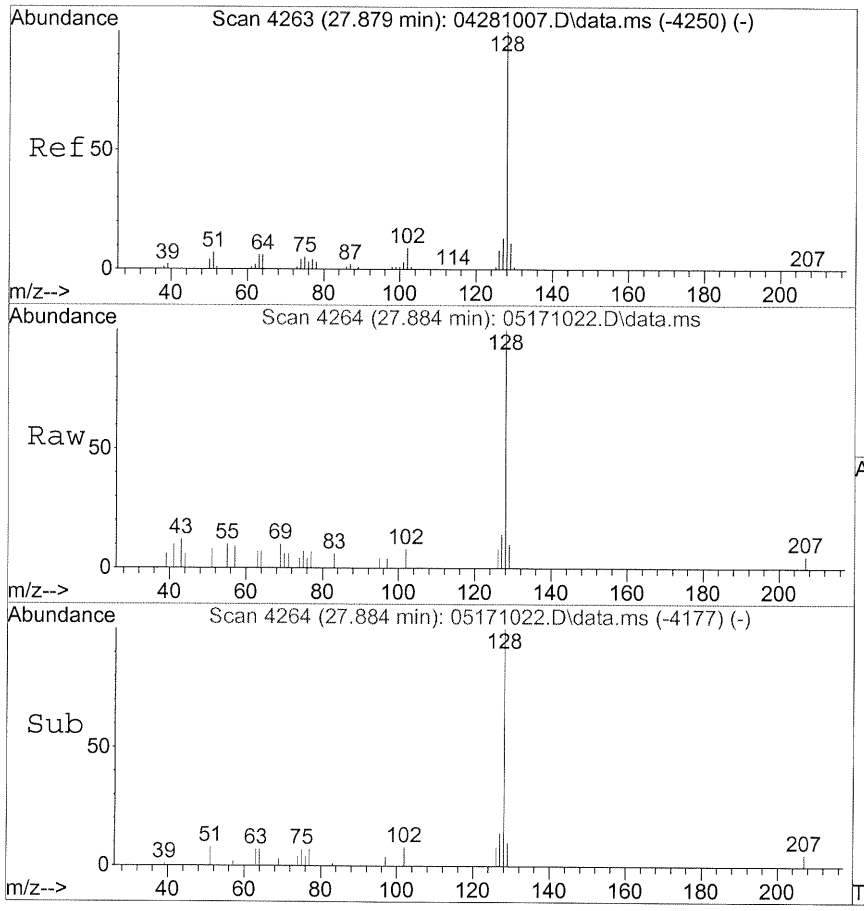


#91
d-Limonene
Concen: 0.26 ng
RT: 25.68 min Scan# 3878
Delta R.T. -0.006 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion: 68 Resp: 9158

Ion	Ratio	Lower	Upper
68	100		
93	68.8	51.5	91.5

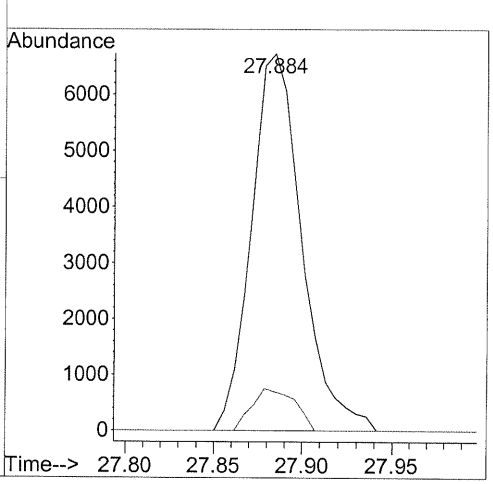




#95
Naphthalene
Concen: 0.14 ng
RT: 27.88 min Scan# 4264
Delta R.T. -0.006 min
Lab File: 05171022.D
Acq: 18 May 2010 1:23

Tgt Ion:128 Resp: 13303

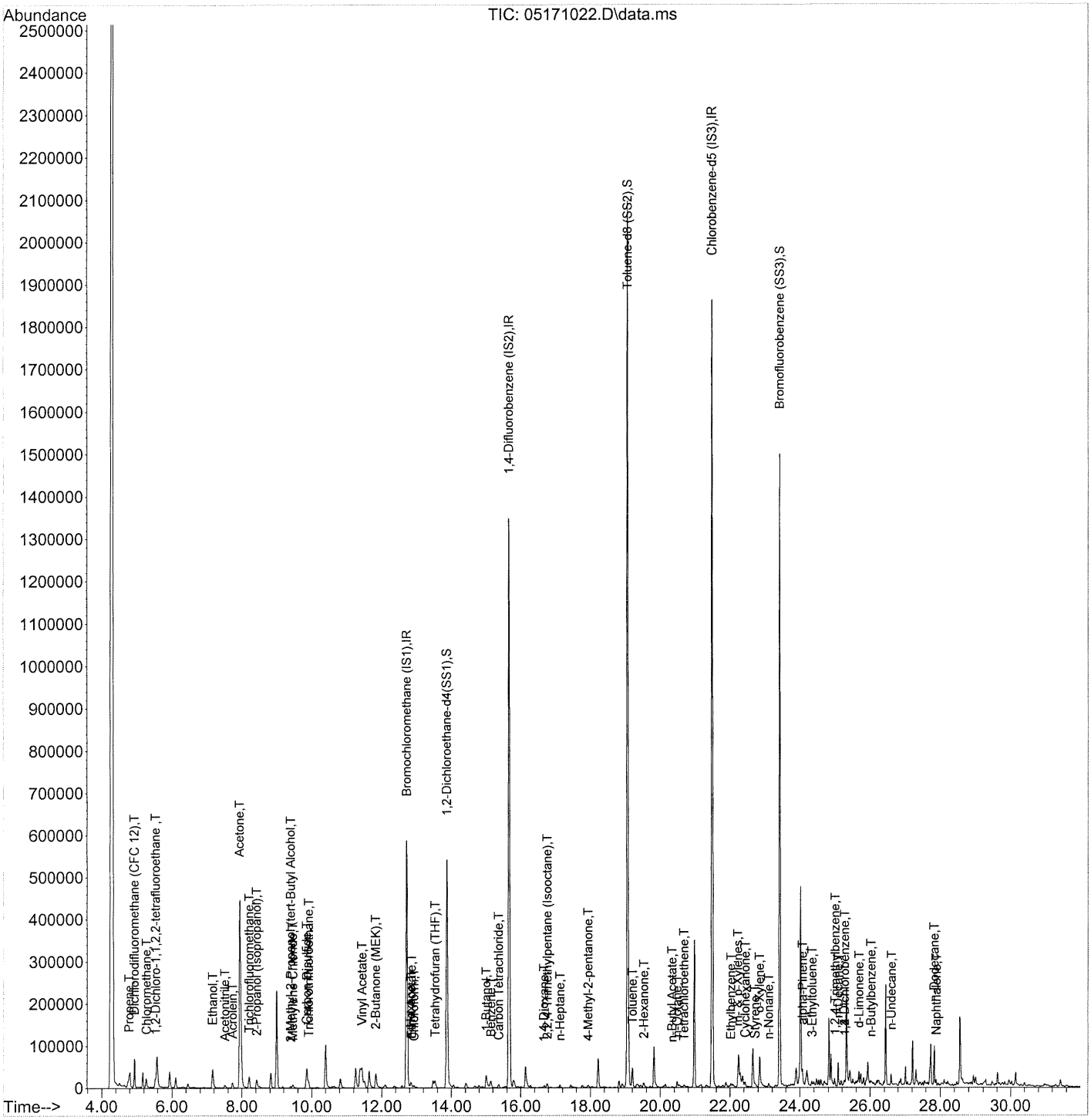
Ion	Ratio	Lower	Upper
128	100		
129	9.5	0.0	31.1



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171022.D
Acq On : 18 May 2010 1:23
Operator : EM
Sample : P1001651-009 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 08:05:23 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171022.D
Acq On : 18 May 2010 1:23
Operator : EM
Sample : P1001651-009 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 08:05:23 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	307469	25.000 ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1569287	25.000 ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	783376	25.000 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(...	13.87	65	549236	24.004 ng	-0.03
Spiked Amount 25.000			Recovery	= 96.00%	
57) Toluene-d8 (SS2)	19.07	98	1845488	24.694 ng	0.00
Spiked Amount 25.000			Recovery	= 98.76%	
73) Bromofluorobenzene (SS3)	23.42	174	489253	25.643 ng	0.00
Spiked Amount 25.000			Recovery	= 102.56%	
Target Compounds					Qvalue
2) Propene	4.78	42	10490	0.437 ng #	40
3) Dichlorodifluoromethan...	4.93	85	69047	1.678 ng	99
4) Chloromethane	5.27	50	10722	0.352 ng	93
5) 1,2-Dichloro-1,1,2,2-t...	5.54	135	1362	0.067 ng #	55
6) Vinyl Chloride	0.00	62	0	N.D.	
7) 1,3-Butadiene	5.93	54	383	N.D.	
8) Bromomethane	6.51	94	474	N.D.	
9) Chloroethane	0.00	64	0	N.D.	
10) Ethanol	7.16	45	71485	5.467 ng	97
11) Acetonitrile	7.51	41	10183	0.308 ng	98
12) Acrolein	7.73	56	15089	1.480 ng	98
13) Acetone	7.94	58	295165	18.465 ng	96
14) Trichlorofluoromethane	8.21	101	30584	0.858 ng	100
15) 2-Propanol (Isopropanol)	8.42	45	32448	0.655 ng	94
16) Acrylonitrile	0.00	53	0	N.D.	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	
18) 2-Methyl-2-Propanol (t...	9.40	59	8115	0.159 ng	86
19) Methylene Chloride	9.46	84	2802	0.133 ng	86
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.	
21) Trichlorotrifluoroethane	9.91	151	5874	0.390 ng	91
22) Carbon Disulfide	9.85	76	117454	1.565 ng	98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	
25) Methyl tert-Butyl Ether	11.26	73	275	N.D.	
26) Vinyl Acetate	11.44	86	16144	3.346 ng #	41
27) 2-Butanone (MEK)	11.83	72	19925	1.501 ng #	85
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	
29) Diisopropyl Ether	0.00	87	0	N.D.	
30) Ethyl Acetate	12.85	61	1007	0.128 ng	86
31) n-Hexane	12.84	57	5618	0.139 ng	89

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171022.D
Acq On : 18 May 2010 1:23
Operator : EM
Sample : P1001651-009 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 08:05:23 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	5800	0.172 ng		95
34) Tetrahydrofuran (THF)	13.53	72	6644	0.517 ng	#	78
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.05	62	299	N.D.		
38) 1,1,1-Trichloroethane	14.44	97	412	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.00	56	36314	1.675 ng	#	78
41) Benzene	15.15	78	17872	0.204 ng		97
42) Carbon Tetrachloride	15.36	117	6720	0.288 ng		98
43) Cyclohexane	15.56	84	1355	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.62	83	90	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.67	88	2297	0.138 ng		98
49) 2,2,4-Trimethylpentane...	16.76	57	11927	0.116 ng		82
50) Methyl Methacrylate	17.12	100	340	N.D.		
51) n-Heptane	17.13	71	2094	0.084 ng		88
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.93	58	1905	0.101 ng		71
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	44783	0.483 ng		98
59) 2-Hexanone	19.53	43	12935	0.292 ng		95
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.34	43	3710	0.075 ng	#	68
63) n-Octane	20.48	57	3294	0.153 ng		86
64) Tetrachloroethene	20.68	166	1708	0.079 ng		99
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	22.02	91	8865	0.085 ng		94
67) m- & p-Xylenes	22.23	91	17846	0.212 ng		98
68) Bromoform	22.34	173	90	N.D.		
69) Styrene	22.71	104	5078	0.086 ng		92
70) o-Xylene	22.84	91	7540	0.084 ng		100
71) n-Nonane	23.10	43	4829	0.099 ng	#	69
72) 1,1,2,2-Tetrachloroethane	22.83	83	512	N.D.		
74) Cumene	23.59	105	825	N.D.		
75) alpha-Pinene	24.08	93	15897	0.313 ng	#	46
76) n-Propylbenzene	24.22	91	3141	N.D.		
77) 3-Ethyltoluene	24.35	105	6521	0.065 ng		90
78) 4-Ethyltoluene	24.40	105	4089	N.D.		
79) 1,3,5-Trimethylbenzene	24.49	105	1845	N.D.		

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171022.D
Acq On : 18 May 2010 1:23
Operator : EM
Sample : P1001651-009 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 08:05:23 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	1312	N.D.		
81) 2-Ethyltoluene	24.73	105	2956	N.D.		
82) 1,2,4-Trimethylbenzene	24.99	105	6739	0.076 ng		82
83) n-Decane	25.09	57	20581	0.404 ng		88
84) Benzyl Chloride	25.17	91	675	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	3074	0.074 ng		93
86) 1,4-Dichlorobenzene	25.27	146	3074	0.070 ng		93
87) sec-Butylbenzene	25.33	105	1317	N.D.		
88) 4-Isopropyltoluene (p-...	25.50	119	4131	N.D.		
89) 1,2,3-Trimethylbenzene	25.51	105	2373	N.D.		
90) 1,2-Dichlorobenzene	25.27	146	3074	0.074 ng		92
91) d-Limonene	25.68	68	9158	0.262 ng		97
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	8226	0.161 ng	#	47
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95) Naphthalene	27.88	128	13303	0.136 ng		96
96) n-Dodecane	27.83	57	31575	0.603 ng		98
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.44	55	5759	0.197 ng	#	63
99) tert-Butylbenzene	24.99	119	856	N.D.		
100) n-Butylbenzene	26.03	91	6212	0.068 ng	#	39

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110519** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-010

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01688

Initial Pressure (psig): -4.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**5.4**	0.89	**3.1**	0.52	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.1**	0.89	**0.43**	0.18	
74-87-3	**Chloromethane**	**0.69**	0.36	**0.33**	0.17	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.89	ND	0.13	
75-01-4	Vinyl Chloride	ND	0.18	ND	0.070	
106-99-0	1,3-Butadiene	ND	0.36	ND	0.16	
74-83-9	Bromomethane	ND	0.18	ND	0.046	
75-00-3	Chloroethane	ND	0.18	ND	0.067	
64-17-5	**Ethanol**	**1,400**	89	**770**	47	**D**
75-05-8	Acetonitrile	ND	0.89	ND	0.53	
107-02-8	**Acrolein**	**8.2**	3.6	**3.6**	1.6	
67-64-1	**Acetone**	**130**	8.9	**54**	3.7	
75-69-4	**Trichlorofluoromethane**	**1.1**	0.18	**0.20**	0.032	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**28**	1.8	**11**	0.72	
107-13-1	Acrylonitrile	ND	0.89	ND	0.41	
75-35-4	1,1-Dichloroethene	ND	0.18	ND	0.045	
75-09-2	**Methylene Chloride**	**2.3**	0.89	**0.66**	0.26	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.18	ND	0.057	
76-13-1	**Trichlorotrifluoroethane**	**0.52**	0.18	**0.068**	0.023	
75-15-0	Carbon Disulfide	ND	8.9	ND	2.9	
156-60-5	trans-1,2-Dichloroethene	ND	0.18	ND	0.045	
75-34-3	1,1-Dichloroethane	ND	0.18	ND	0.044	
1634-04-4	Methyl tert-Butyl Ether	ND	0.18	ND	0.049	
108-05-4	Vinyl Acetate	ND	8.9	ND	2.5	
78-93-3	**2-Butanone (MEK)**	**26**	8.9	**8.9**	3.0	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110519** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-010

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01688

Initial Pressure (psig): -4.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.18	ND	0.045	
141-78-6	**Ethyl Acetate**	**17**	0.89	**4.7**	0.25	
110-54-3	**n-Hexane**	**5.0**	0.89	**1.4**	0.25	
67-66-3	**Chloroform**	**2.1**	0.18	**0.42**	0.036	
109-99-9	**Tetrahydrofuran (THF)**	**2.1**	0.89	**0.71**	0.30	
107-06-2	**1,2-Dichloroethane**	**92**	0.18	**23**	0.044	
71-55-6	1,1,1-Trichloroethane	ND	0.18	ND	0.033	
71-43-2	**Benzene**	**5.6**	0.18	**1.8**	0.056	
56-23-5	**Carbon Tetrachloride**	**0.96**	0.18	**0.15**	0.028	
110-82-7	**Cyclohexane**	**1.6**	0.89	**0.47**	0.26	
78-87-5	1,2-Dichloropropane	ND	0.18	ND	0.039	
75-27-4	Bromodichloromethane	ND	0.18	ND	0.027	
79-01-6	**Trichloroethene**	**6.8**	0.18	**1.3**	0.033	
123-91-1	1,4-Dioxane	ND	0.89	ND	0.25	
80-62-6	**Methyl Methacrylate**	**1.1**	0.89	**0.26**	0.22	
142-82-5	**n-Heptane**	**4.4**	0.89	**1.1**	0.22	
10061-01-5	cis-1,3-Dichloropropene	ND	0.89	ND	0.20	
108-10-1	**4-Methyl-2-pentanone**	**2.4**	0.89	**0.59**	0.22	
10061-02-6	trans-1,3-Dichloropropene	ND	0.89	ND	0.20	
79-00-5	1,1,2-Trichloroethane	ND	0.18	ND	0.033	
108-88-3	**Toluene**	**38**	0.89	**10**	0.24	
591-78-6	**2-Hexanone**	**1.2**	0.89	**0.30**	0.22	
124-48-1	Dibromochloromethane	ND	0.18	ND	0.021	
106-93-4	1,2-Dibromoethane	ND	0.18	ND	0.023	
123-86-4	**n-Butyl Acetate**	**12**	0.89	**2.6**	0.19	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110519**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-010

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01688

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -4.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**1.5**	0.89	**0.31**	0.19	
127-18-4	**Tetrachloroethene**	**1.6**	0.18	**0.24**	0.026	
108-90-7	Chlorobenzene	ND	0.18	ND	0.039	
100-41-4	**Ethylbenzene**	**8.5**	0.89	**2.0**	0.20	
179601-23-1	**m,p-Xylenes**	**20**	0.89	**4.7**	0.20	
75-25-2	Bromoform	ND	0.89	ND	0.086	
100-42-5	**Styrene**	**17**	0.89	**4.1**	0.21	
95-47-6	**o-Xylene**	**7.4**	0.89	**1.7**	0.20	
111-84-2	**n-Nonane**	**0.98**	0.89	**0.19**	0.17	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.18	ND	0.026	
98-82-8	Cumene	ND	0.89	ND	0.18	
80-56-8	**alpha-Pinene**	**110**	0.89	**20**	0.16	
103-65-1	**n-Propylbenzene**	**1.2**	0.89	**0.25**	0.18	
622-96-8	**4-Ethyltoluene**	**1.8**	0.89	**0.37**	0.18	
108-67-8	**1,3,5-Trimethylbenzene**	**1.4**	0.89	**0.28**	0.18	
95-63-6	**1,2,4-Trimethylbenzene**	**4.6**	0.89	**0.94**	0.18	
100-44-7	Benzyl Chloride	ND	0.89	ND	0.17	
541-73-1	1,3-Dichlorobenzene	ND	0.18	ND	0.030	
106-46-7	**1,4-Dichlorobenzene**	**0.38**	0.18	**0.063**	0.030	
95-50-1	1,2-Dichlorobenzene	ND	0.18	ND	0.030	
5989-27-5	**d-Limonene**	**40**	0.89	**7.1**	0.16	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.89	ND	0.092	
120-82-1	1,2,4-Trichlorobenzene	ND	0.89	ND	0.12	
91-20-3	**Naphthalene**	**1.7**	0.89	**0.32**	0.17	
87-68-3	Hexachlorobutadiene	ND	0.89	ND	0.083	

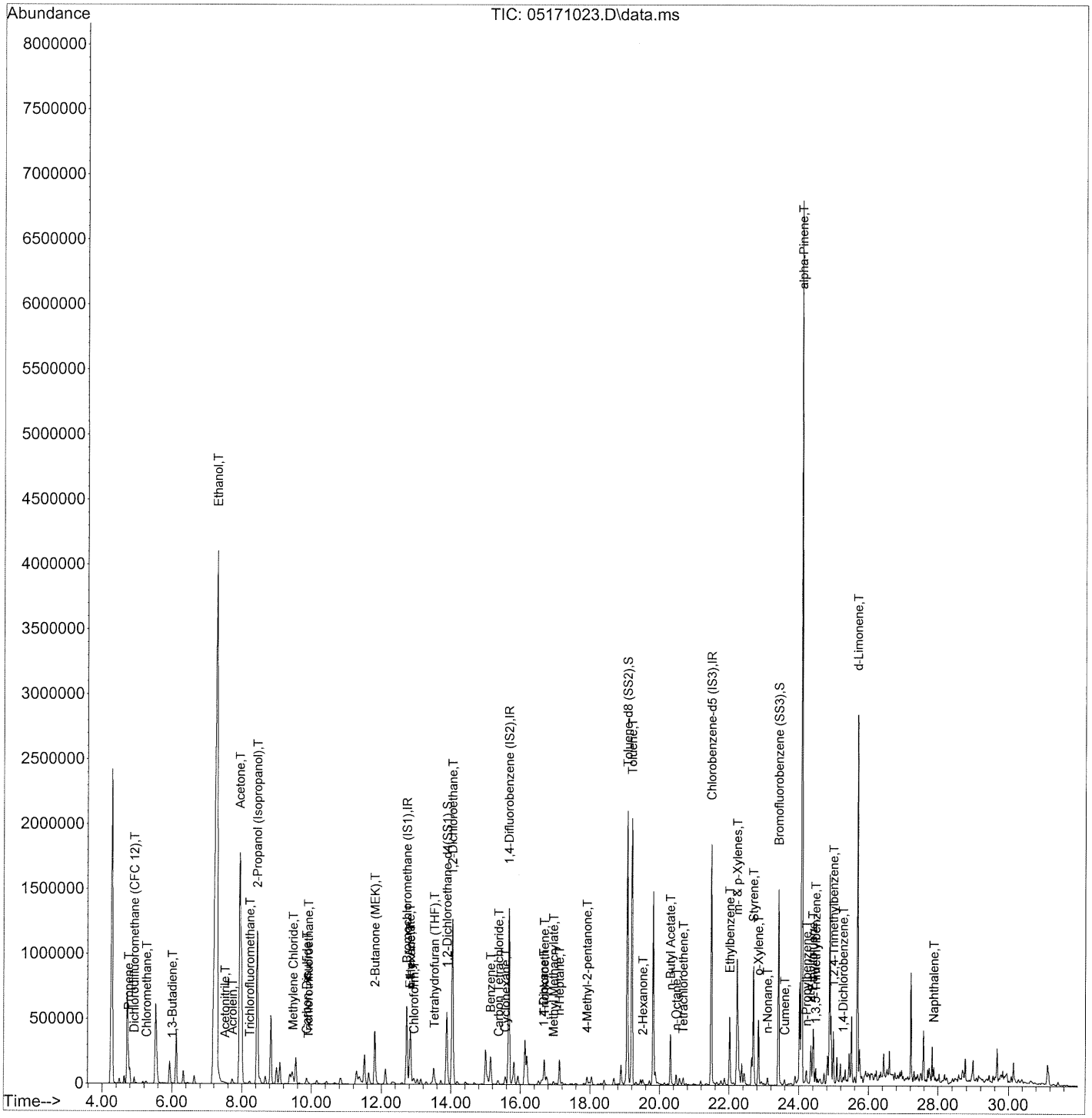
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 20 16:15:20 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171023.D
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Operator : EM
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	314996	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1572523	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	783654	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.88	65	558229	23.814	ng	-0.02
Spiked Amount 25.000			Recovery	=	95.24%	✓
57) Toluene-d8 (SS2)	19.07	98	1844352	24.670	ng	0.00
Spiked Amount 25.000			Recovery	=	98.68%	✓
73) Bromofluorobenzene (SS3)	23.42	174	488111	25.574	ng	0.00
Spiked Amount 25.000			Recovery	=	102.28%	✓

Target Compounds							Qvalue
2) Propene	4.76	42	74016	3.012	ng M	#	78
3) Dichlorodifluoromethan...	4.92	85	50819	1.205	ng		99
4) Chloromethane	5.27	50	12023	0.386	ng		95
7) 1,3-Butadiene	6.01	54	2547	0.102	ng		91
10) Ethanol	7.28	45	11528729	860.626	ng sat dil		98
11) Acetonitrile	7.51	41	12278	0.363	ng		99
12) Acrolein	7.73	56	48175	4.614	ng		98
13) Acetone	7.94	58	1190401	72.692	ng		86
14) Trichlorofluoromethane	8.22	101	22635	0.620	ng		99
15) 2-Propanol (Isopropanol)	8.44	45	798466	15.727	ng		89
19) Methylene Chloride	9.47	84	27644	1.281	ng		91
21) Trichlorotrifluoroethane	9.91	151	4484	0.291	ng		97
22) Carbon Disulfide	9.86	76	104209	1.355	ng		99
27) 2-Butanone (MEK)	11.81	72	201538	14.816	ng		96
30) Ethyl Acetate	12.82	61	77233	9.551	ng		94
31) n-Hexane	12.84	57	116855	2.822	ng		97
32) Chloroform	12.93	83	40076	1.160	ng		100
34) Tetrahydrofuran (THF)	13.52	72	15497	1.178	ng	#	1
36) 1,2-Dichloroethane	14.04	62	1444148	51.555	ng		100
41) Benzene	15.14	78	278234	3.170	ng		100
42) Carbon Tetrachloride	15.37	117	12642	0.541	ng		97
43) Cyclohexane	15.57	84	33868	0.918	ng		93
47) Trichloroethene	16.68	130	85886	3.838	ng		100
48) 1,4-Dioxane	16.67	88	3570	0.214	ng		81
50) Methyl Methacrylate	16.95	100	5575	0.606	ng	#	70
51) n-Heptane	17.12	71	62597	2.494	ng		96
53) 4-Methyl-2-pentanone	17.92	58	25818	1.361	ng		92
58) Toluene	19.20	91	1981950	21.370	ng		99
59) 2-Hexanone	19.52	43	30907	0.699	ng		93
62) n-Butyl Acetate	20.31	43	340240	6.843	ng		99

BA 5/20/10

Quantitation Report (QT Reviewed)

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Data File : 05171023.D
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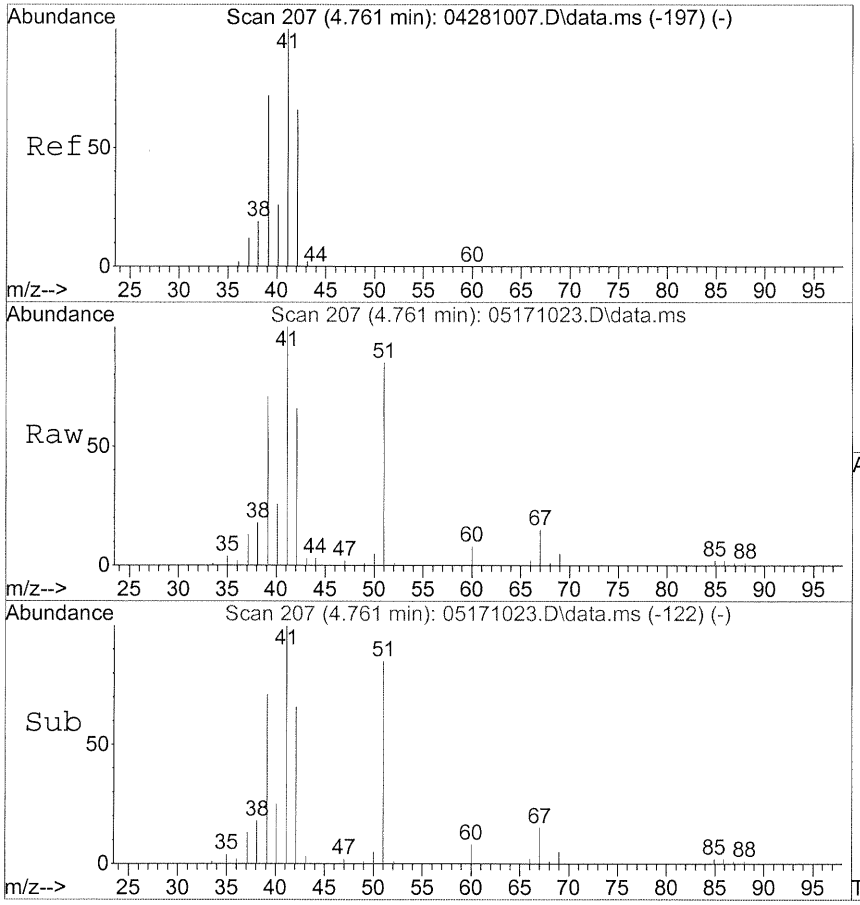
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 20 16:15:20 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
63) n-Octane	20.48	57	17715	0.823	ng	91
64) Tetrachloroethene	20.67	166	19914	0.917	ng	100
66) Ethylbenzene	22.01	91	496904	4.788	ng	97
67) m- & p-Xylenes	22.22	91	963244	11.450	ng	97
69) Styrene	22.70	104	577483	9.735	ng	99
70) o-Xylene	22.84	91	370975	4.139	ng	98
71) n-Nonane	23.10	43	26873	0.552	ng	89
74) Cumene	23.59	105	29208	0.270	ng	98
75) alpha-Pinene	24.08	93	3228202	63.494	ng	99
76) n-Propylbenzene	24.22	91	92865	0.699	ng	91
78) 4-Ethyltoluene	24.40	105	102217	1.010	ng	94
79) 1,3,5-Trimethylbenzene	24.48	105	65964	0.778	ng	95
82) 1,2,4-Trimethylbenzene	24.99	105	229571	2.589	ng	87
86) 1,4-Dichlorobenzene	25.27	146	9379	0.213	ng	96
91) d-Limonene	25.68	68	774976	22.202	ng	96
95) Naphthalene	27.88	128	91533	0.934	ng	100

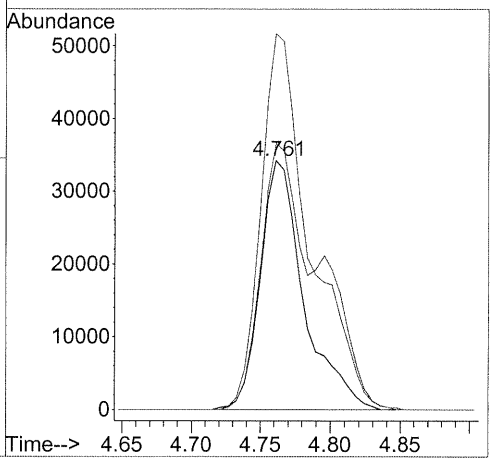
(#) = qualifier out of range (m) = manual integration (+) = signals summed

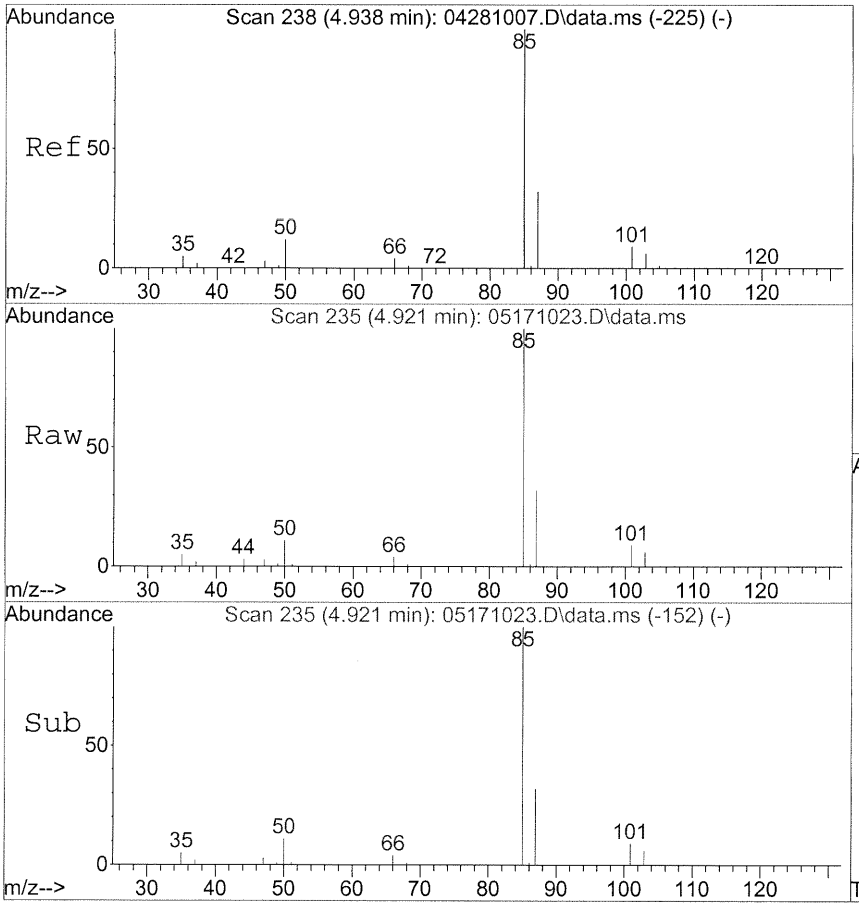


#2
Propene
Concen: 3.01 ng
RT: 4.76 min Scan# 207
Delta R.T. -0.017 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 42 Resp: 74016

Ion	Ratio	Lower	Upper
42	100		
39	140.7	88.4	128.4#
41	170.5	129.9	169.9#

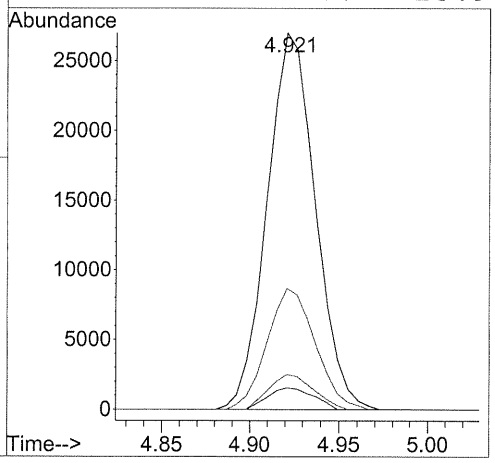


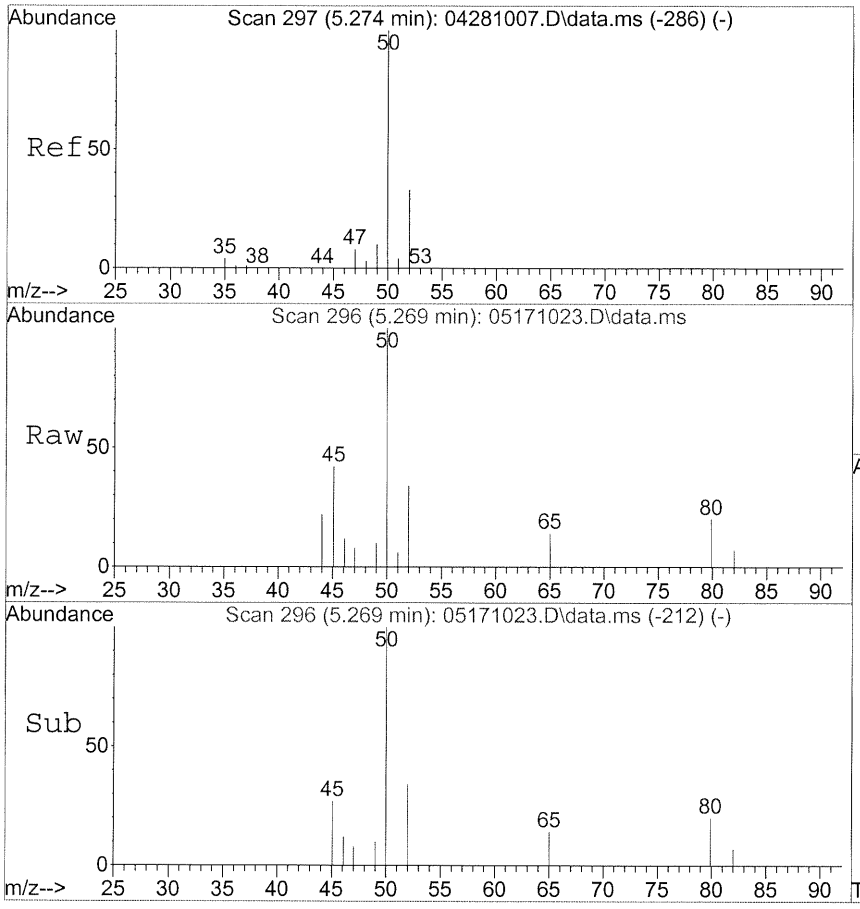


#3
Dichlorodifluoromethane (CFC
Concen: 1.21 ng
RT: 4.92 min Scan# 235
Delta R.T. -0.029 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 85 Resp: 50819

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.6	52.6
101	8.5	0.0	29.3
103	5.4	0.0	25.9

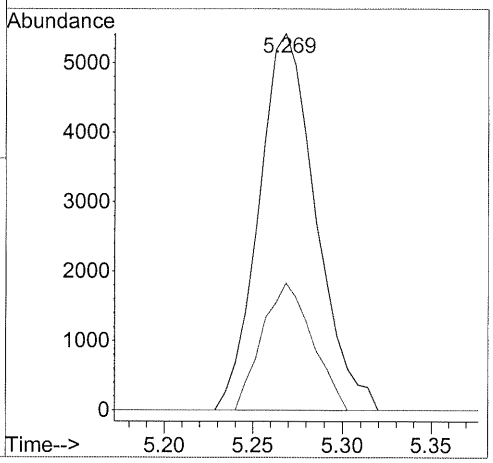


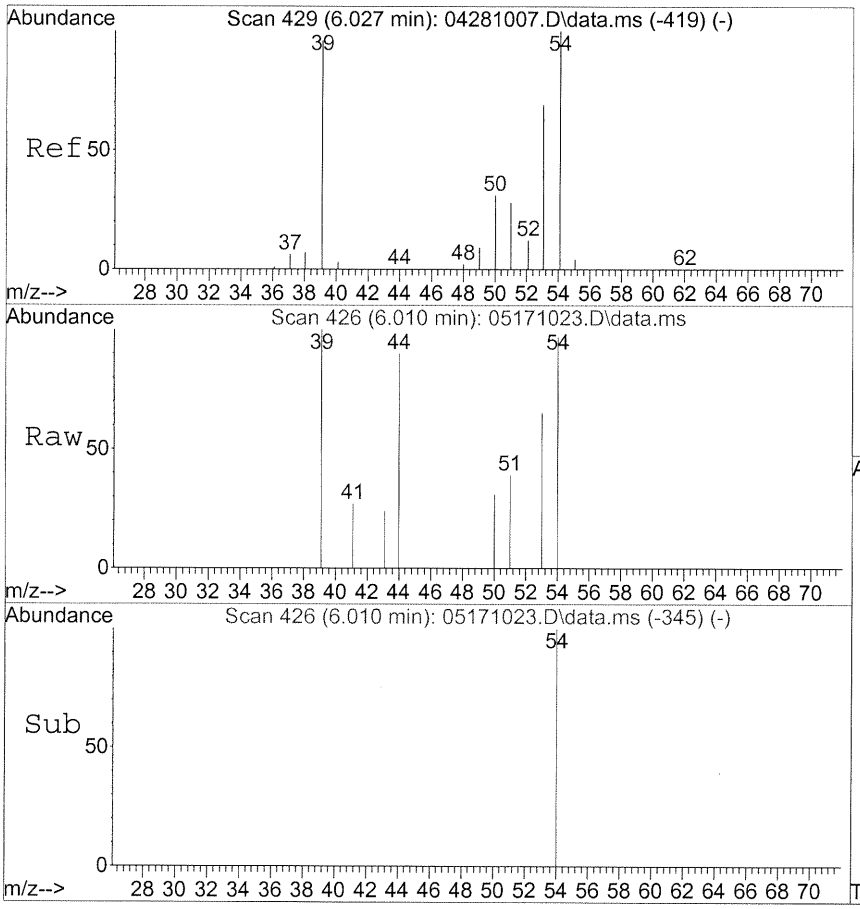


#4
Chloromethane
Concen: 0.39 ng
RT: 5.27 min Scan# 296
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 50 Resp: 12023

Ion	Ratio	Lower	Upper
50	100		
52	29.8	12.3	52.3

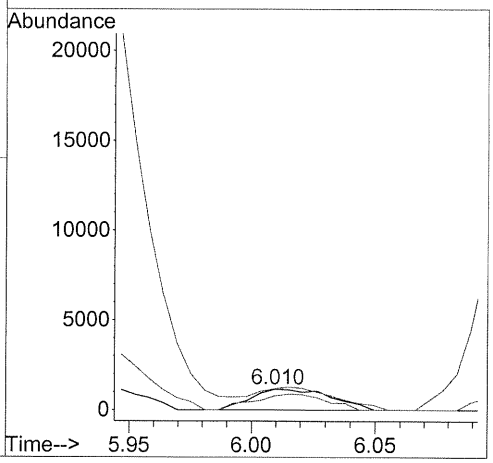


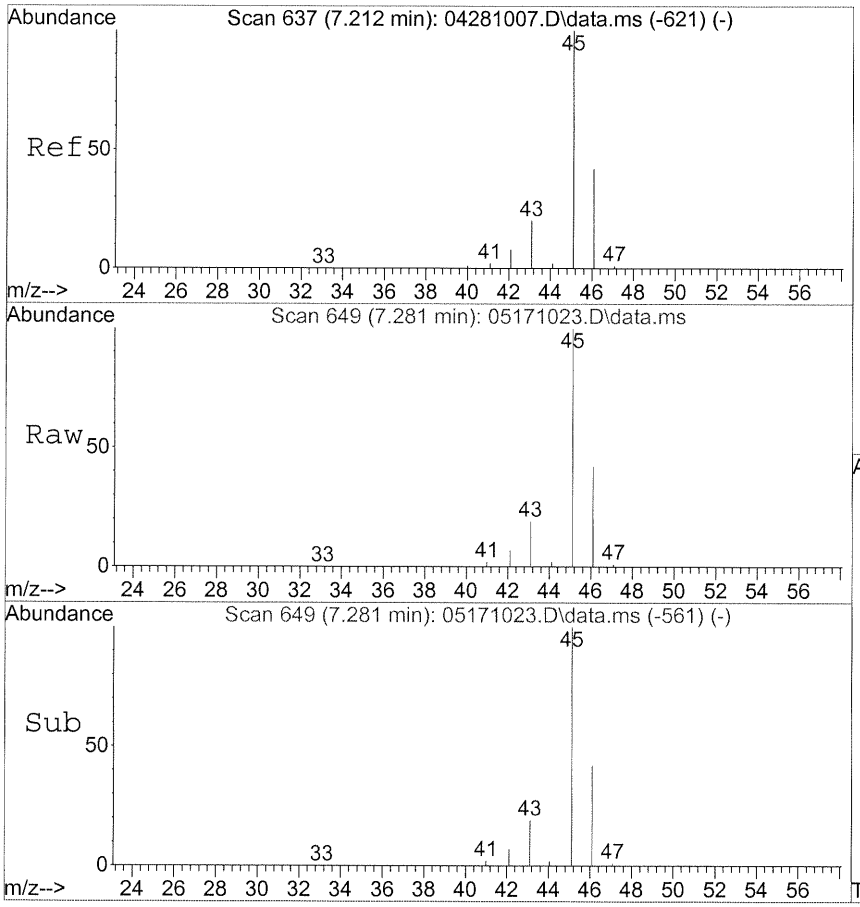


#7
1,3-Butadiene
Concen: 0.10 ng
RT: 6.01 min Scan# 426
Delta R.T. -0.040 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 54 Resp: 2547

Ion	Ratio	Lower	Upper
54	100		
39	111.2	76.6	116.6
53	69.1	49.7	89.7

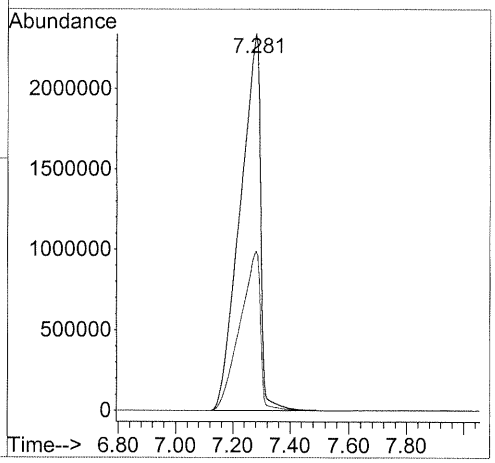


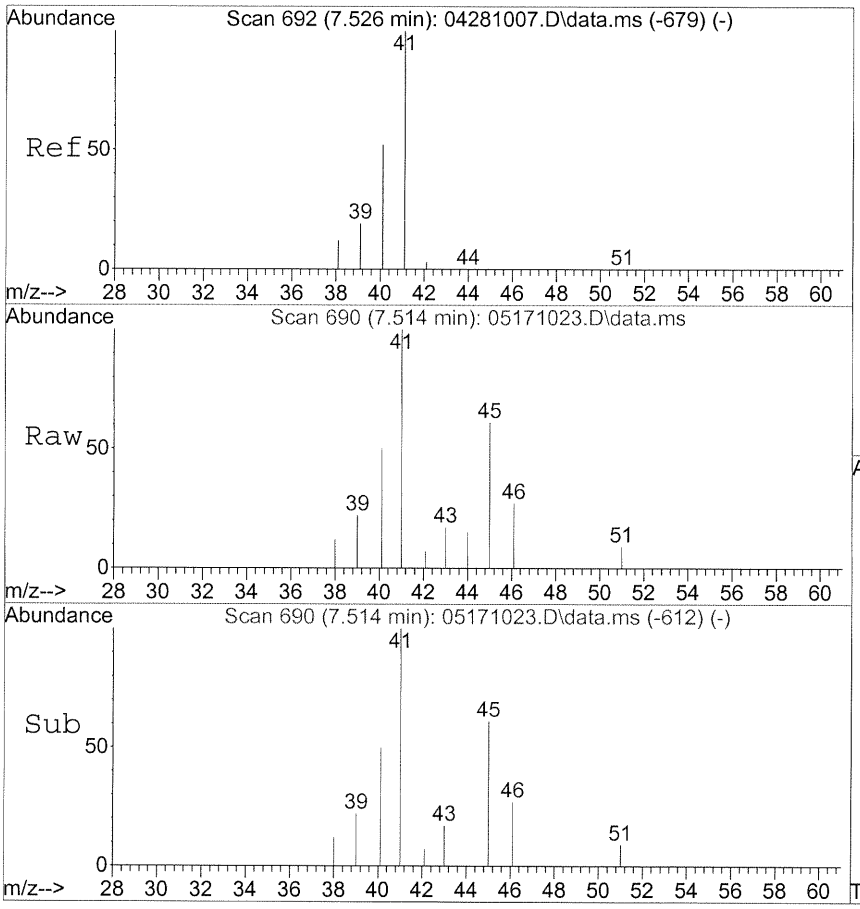


#10
Ethanol
Concen: 860.63 ng
RT: 7.28 min Scan# 649
Delta R.T. -0.000 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 45 Resp:11528729

Ion	Ratio	Lower	Upper
45	100		
46	42.3	21.3	61.3

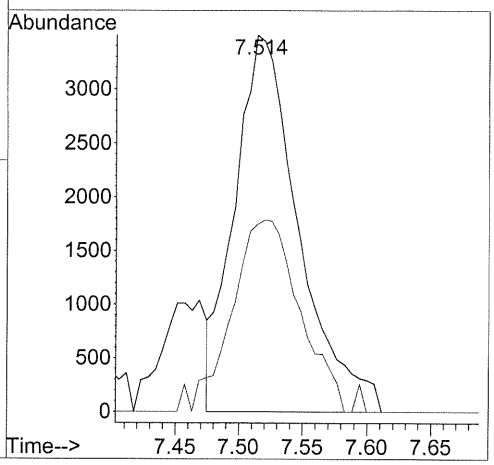


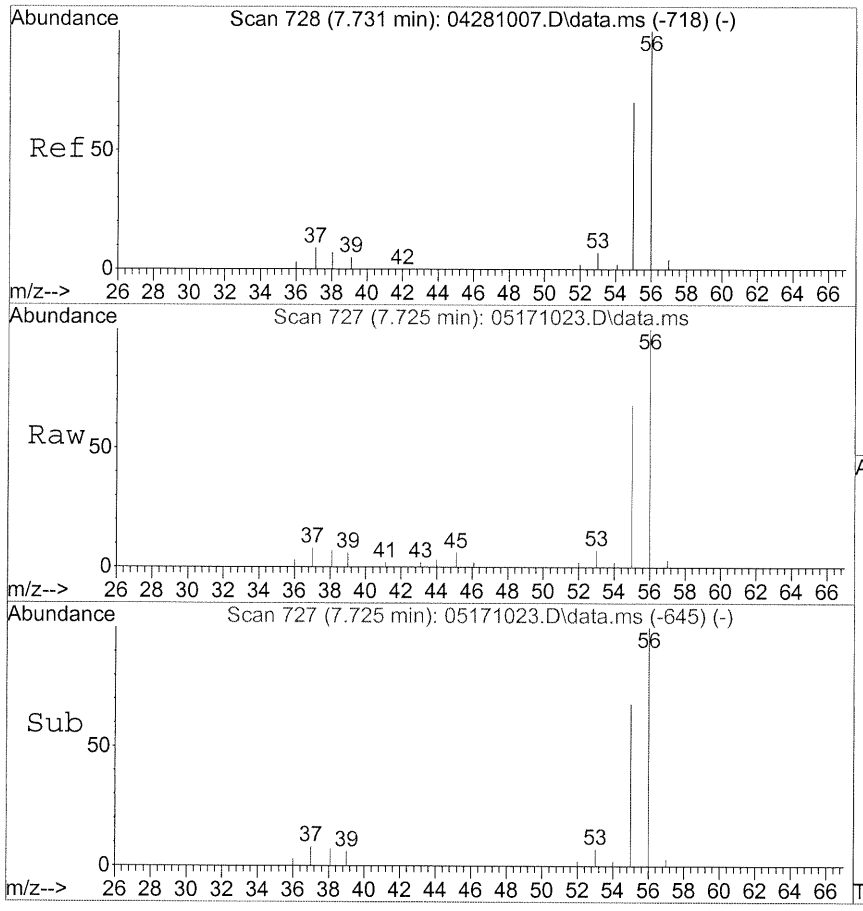


#11
Acetonitrile
Concen: 0.36 ng
RT: 7.51 min Scan# 690
Delta R.T. -0.057 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 41 Resp: 12278

Ion	Ratio	Lower	Upper
41	100		
40	54.2	33.2	73.2

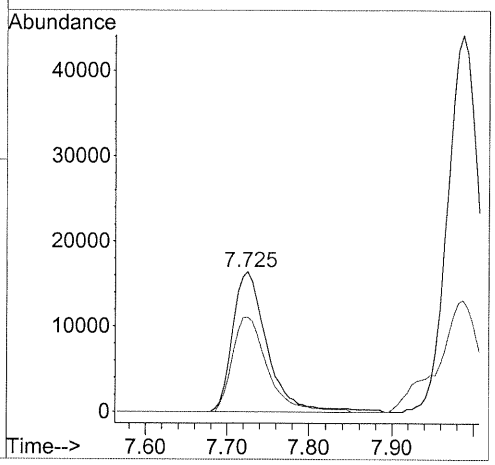


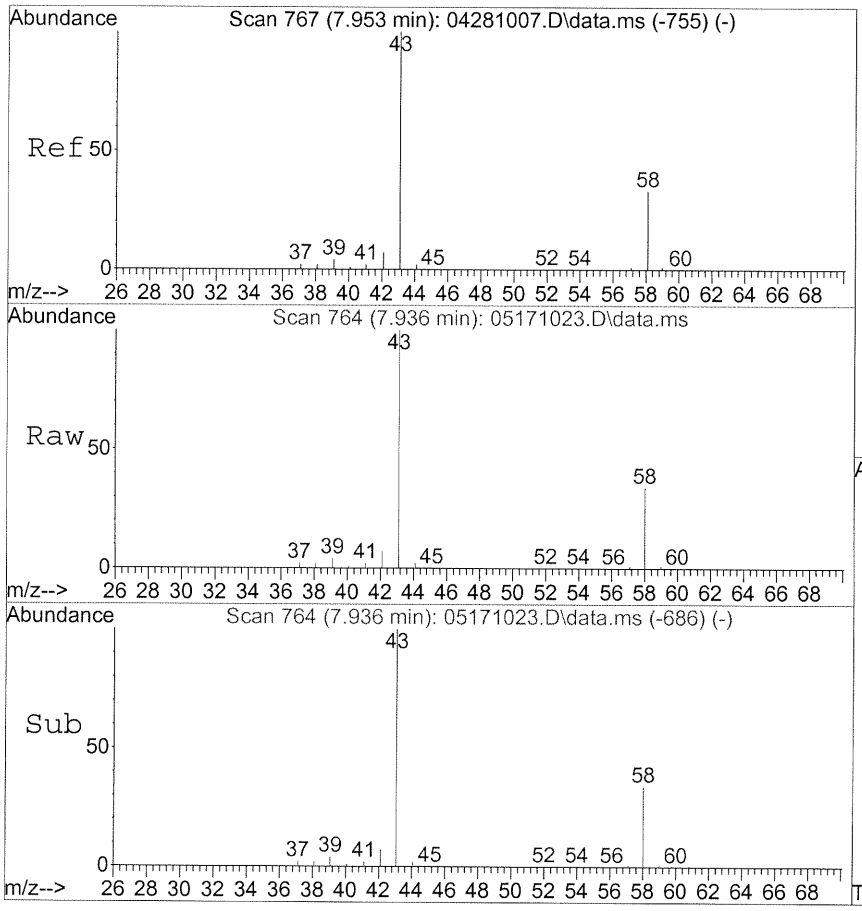


#12
Acrolein
Concen: 4.61 ng
RT: 7.73 min Scan# 727
Delta R.T. -0.034 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 56 Resp: 48175

Ion	Ratio	Lower	Upper
56	100		
55	68.2	50.2	90.2

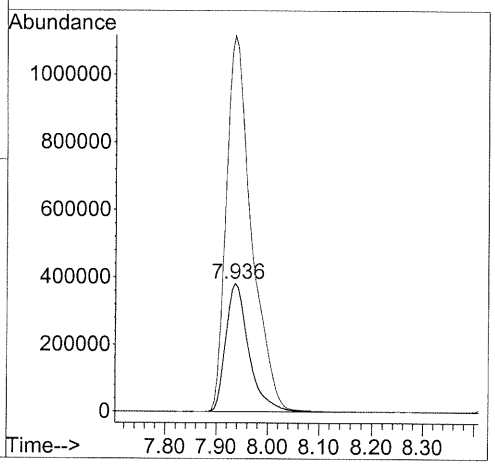


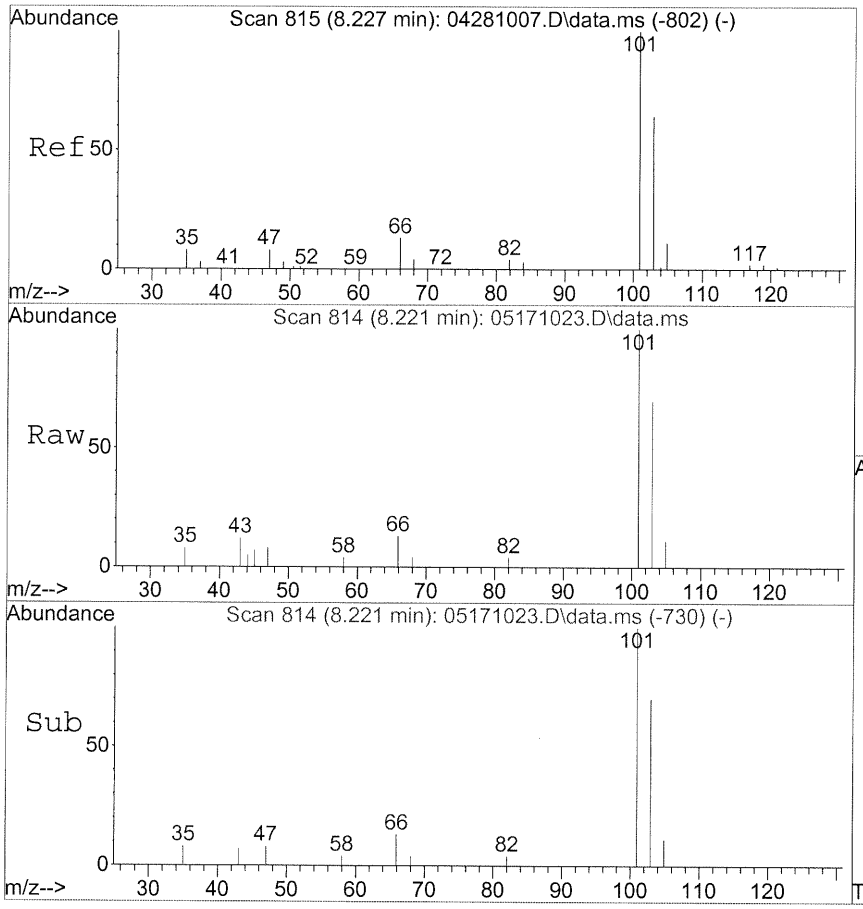


#13
Acetone
Concen: 72.69 ng
RT: 7.94 min Scan# 764
Delta R.T. -0.057 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 58 Resp: 1190401

Ion	Ratio	Lower	Upper
58	100		
43	321.5	264.2	324.2

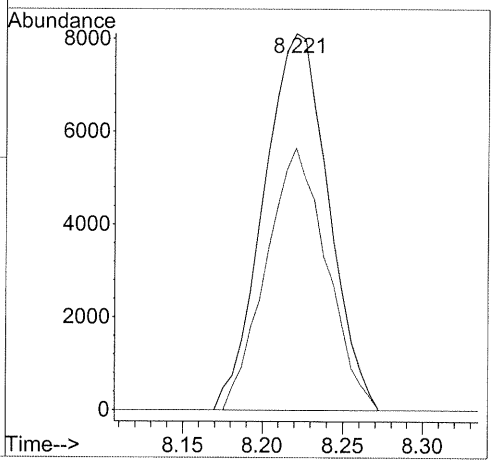


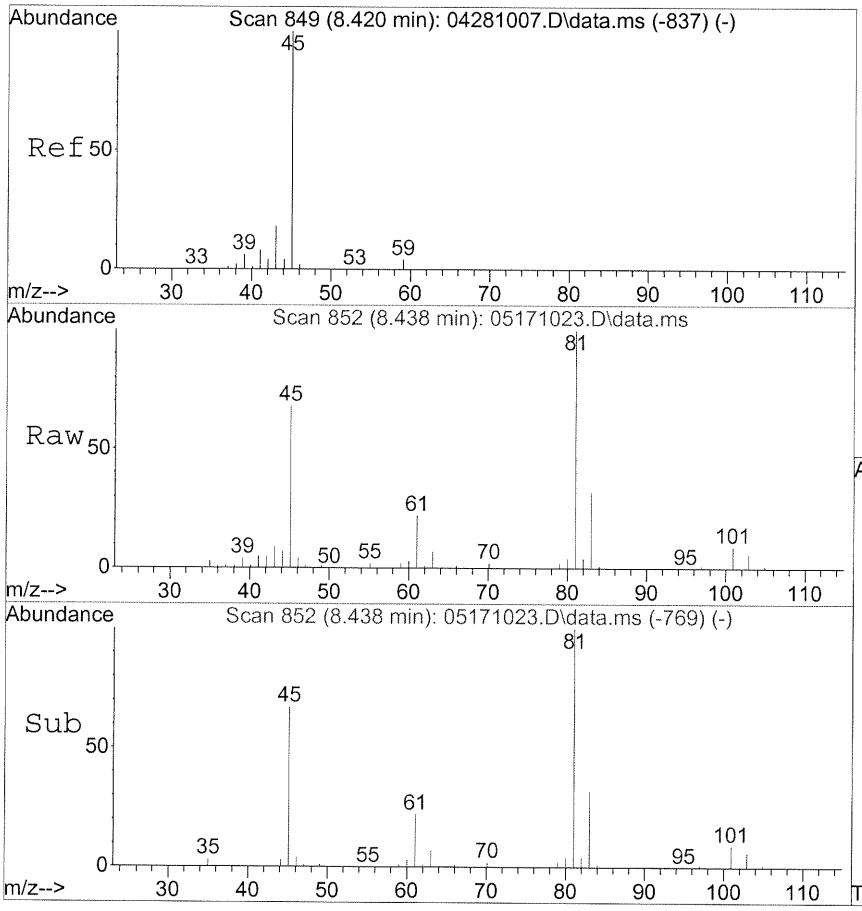


#14
Trichlorofluoromethane
Concen: 0.62 ng
RT: 8.22 min Scan# 814
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:101 Resp: 22635

Ion	Ratio	Lower	Upper
101	100		
103	65.4	44.6	84.6

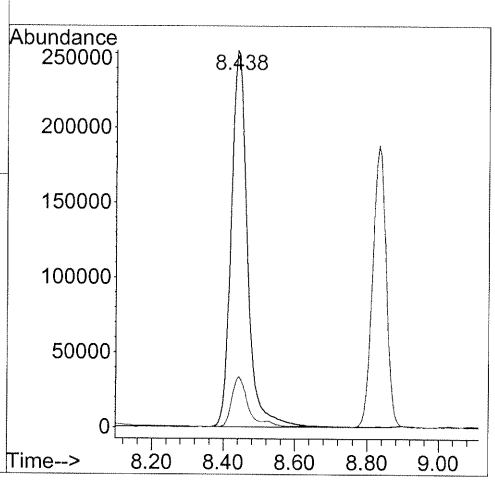


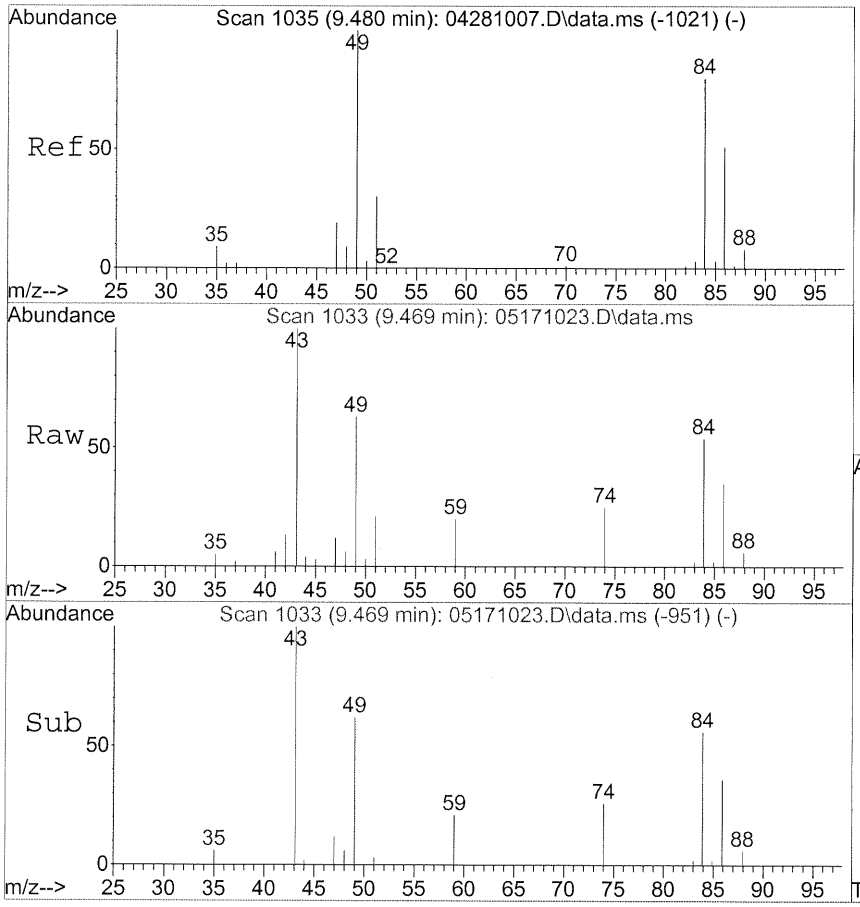


#15
2-Propanol (Isopropanol)
Concen: 15.73 ng
RT: 8.44 min Scan# 852
Delta R.T. -0.029 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 45 Resp: 798466

Ion	Ratio	Lower	Upper
45	100		
43	13.6	0.0	38.5

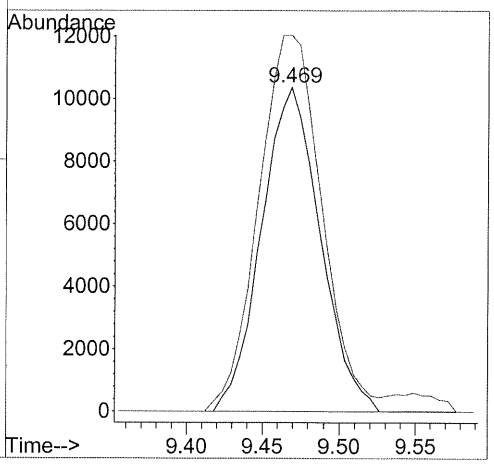


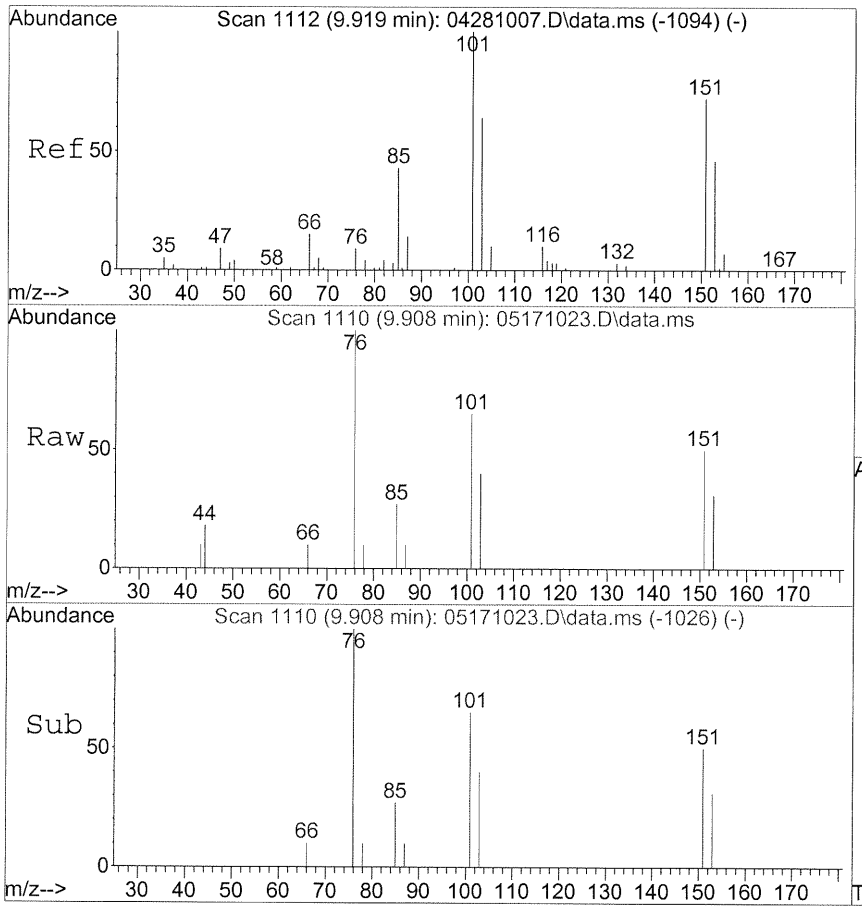


#19
Methylene Chloride
Concen: 1.28 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 84 Resp: 27644

Ion	Ratio	Lower	Upper
84	100		
49	129.7	94.5	144.5

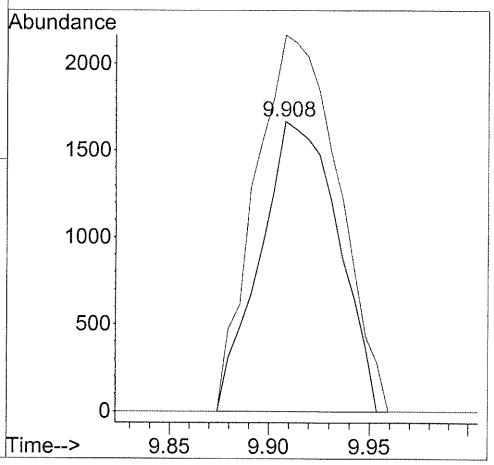


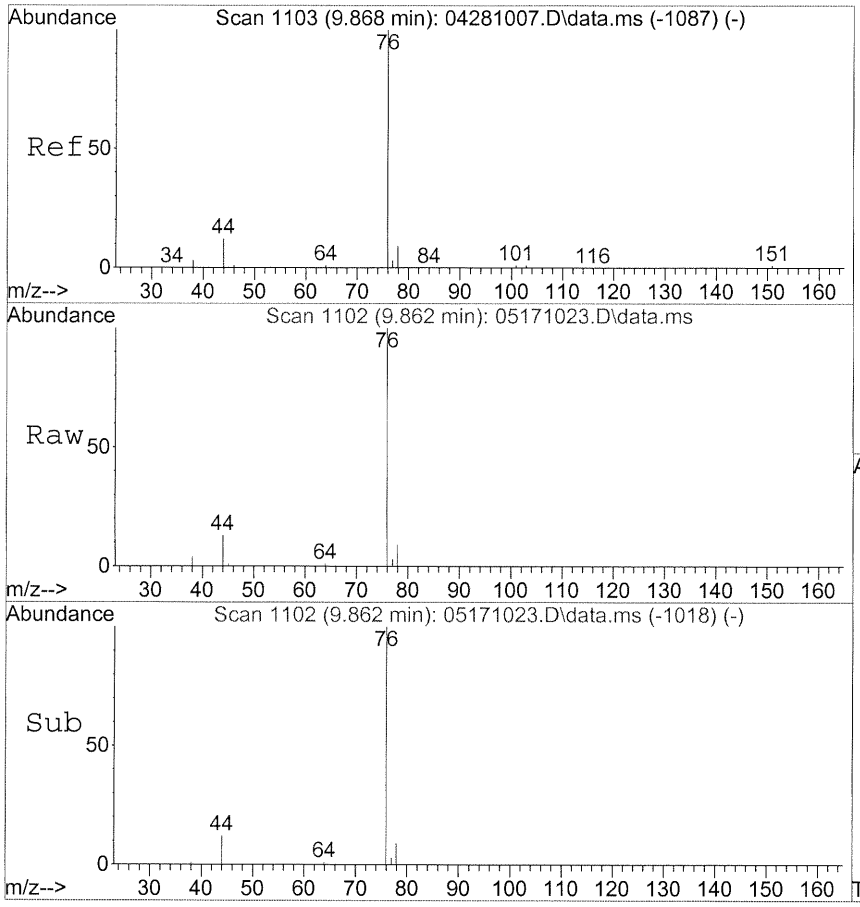


#21
Trichlorotrifluoroethane
Concen: 0.29 ng
RT: 9.91 min Scan# 1110
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:151 Resp: 4484

Ion	Ratio	Lower	Upper
151	100		
101	138.4	114.9	154.9

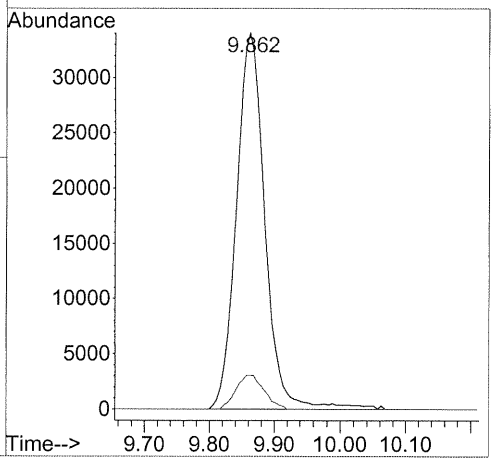


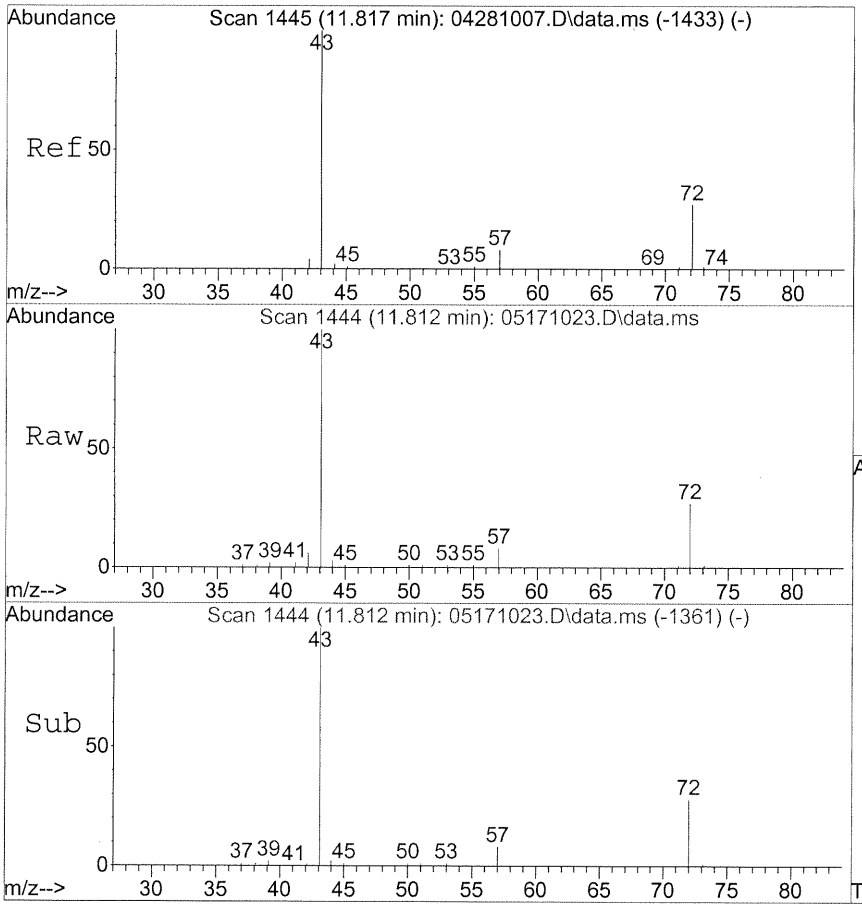


#22
Carbon Disulfide
Concen: 1.36 ng
RT: 9.86 min Scan# 1102
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 76 Resp: 104209

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	29.2

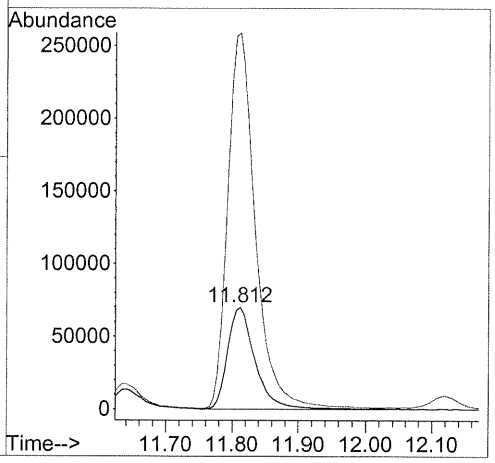


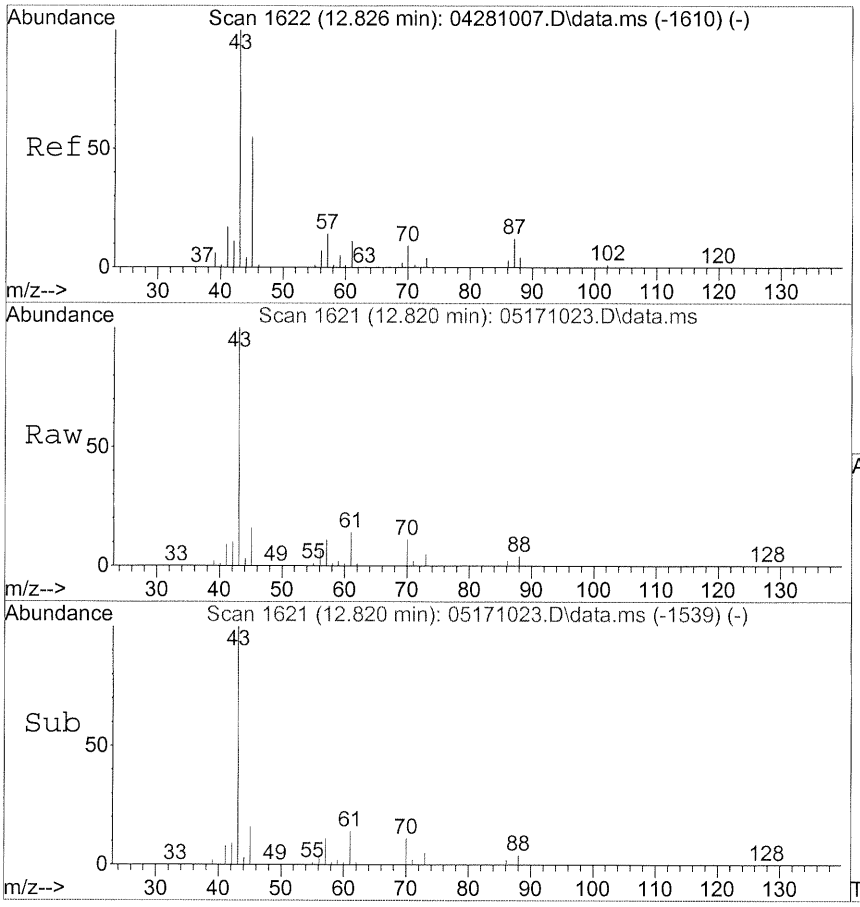


#27
2-Butanone (MEK)
Concen: 14.82 ng
RT: 11.81 min Scan# 1444
Delta R.T. -0.028 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 72 Resp: 201538

Ion	Ratio	Lower	Upper
72	100		
43	370.5	342.0	382.0

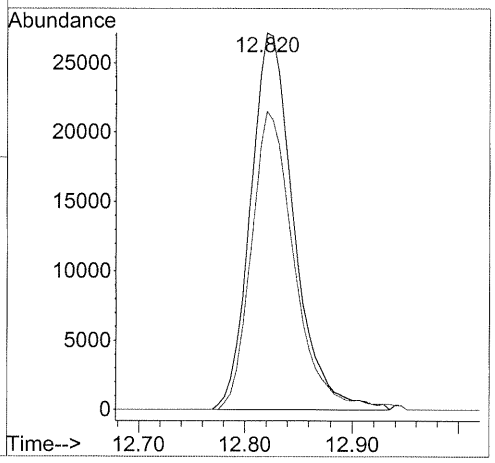


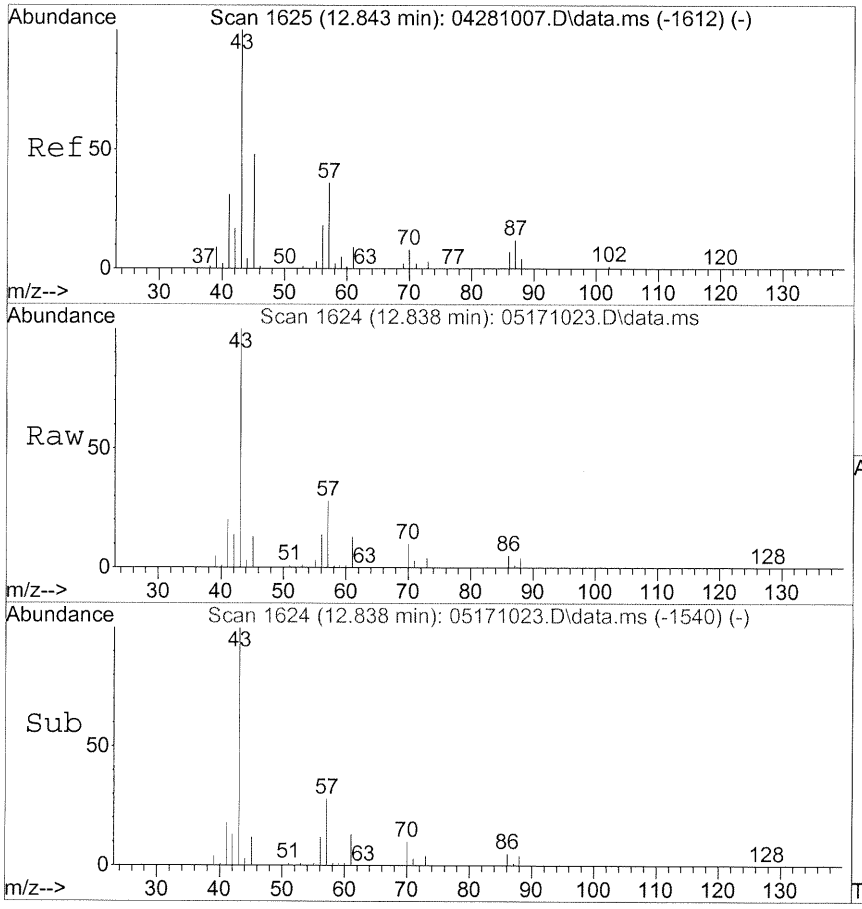


#30
Ethyl Acetate
Concen: 9.55 ng
RT: 12.82 min Scan# 1621
Delta R.T. -0.035 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 61 Resp: 77233

Ion	Ratio	Lower	Upper
61	100		
70	78.5	63.6	103.6

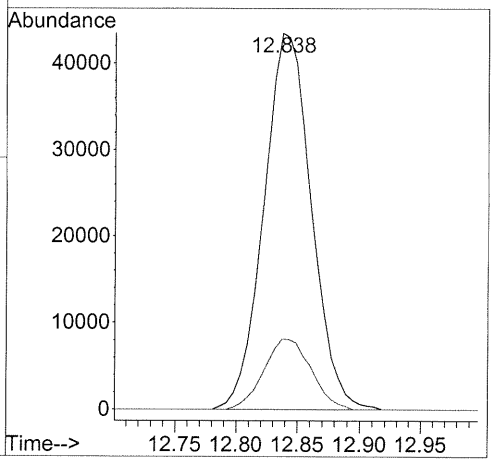


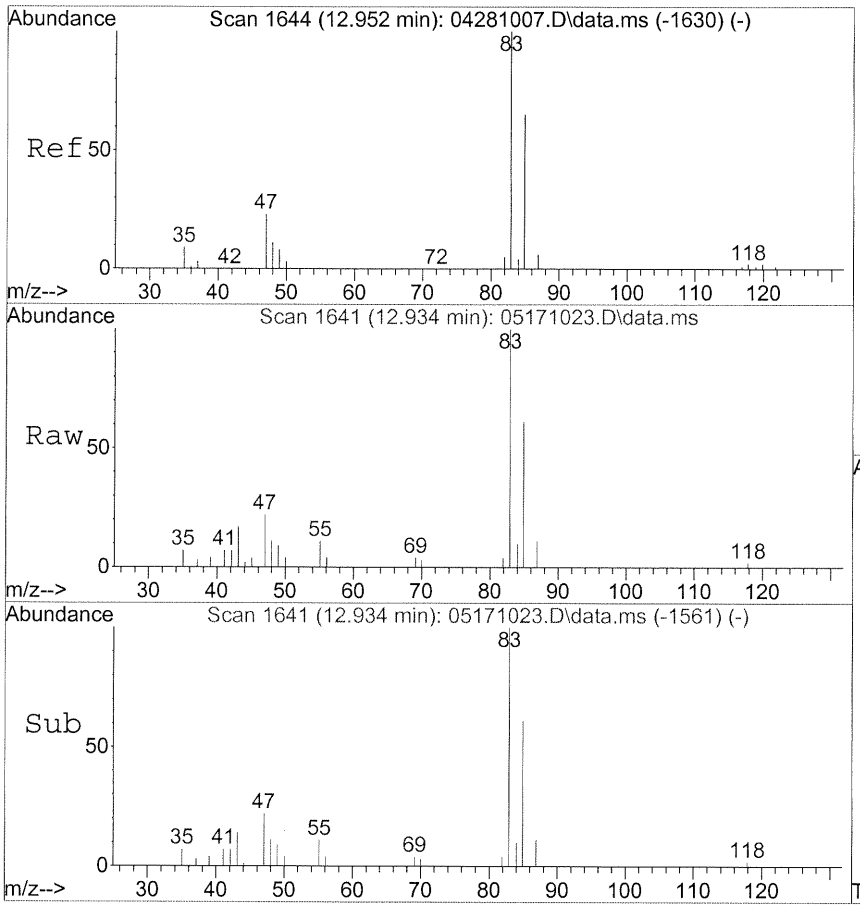


#31
n-Hexane
Concen: 2.82 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 57 Resp: 116855

Ion	Ratio	Lower	Upper
57	100		
86	18.5	0.0	39.8

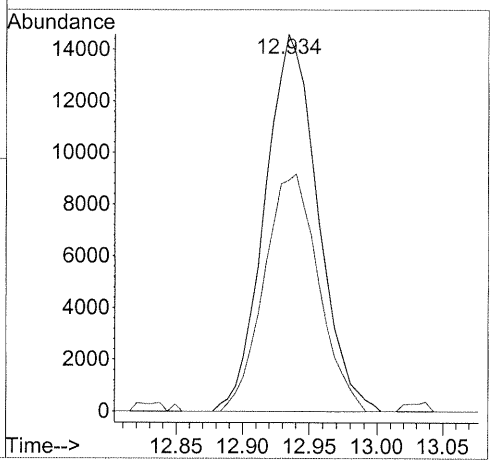


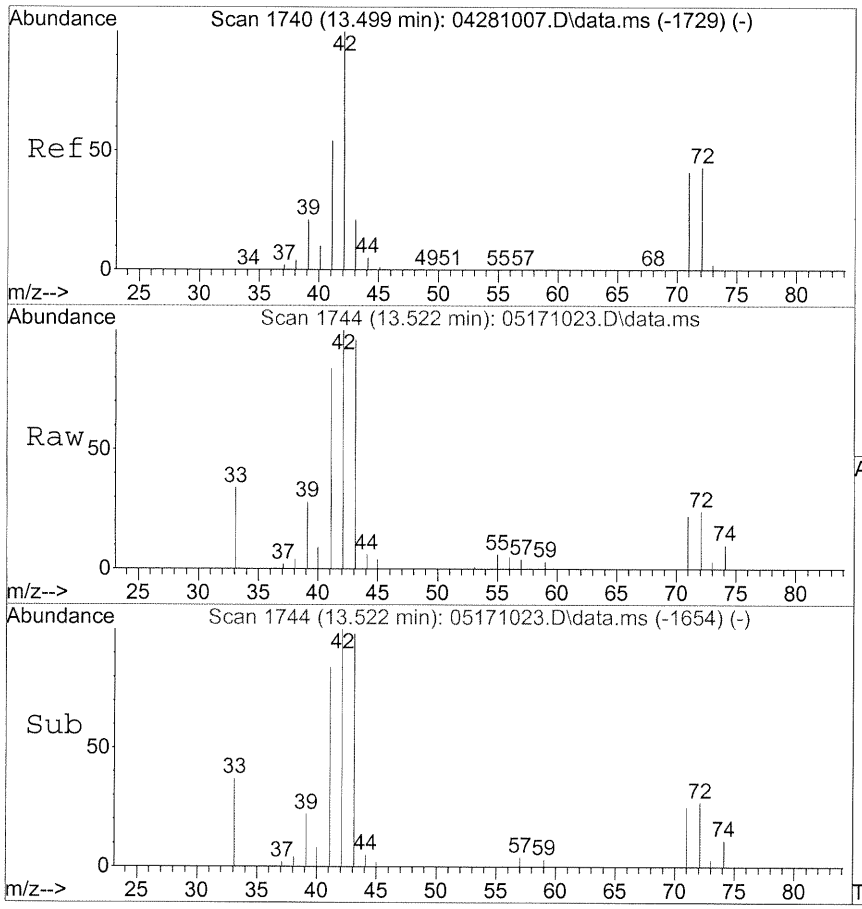


#32
Chloroform
Concen: 1.16 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 83 Resp: 40076

Ion	Ratio	Lower	Upper
83	100		
85	64.6	44.9	84.9

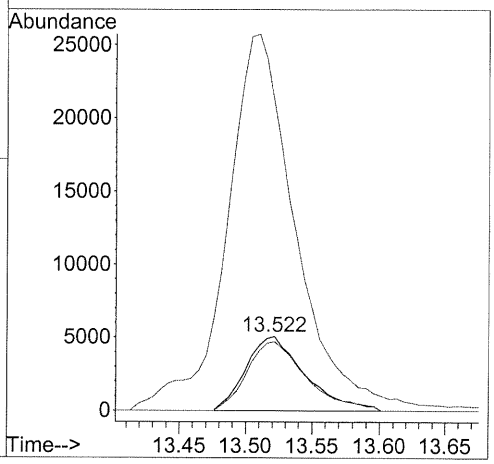


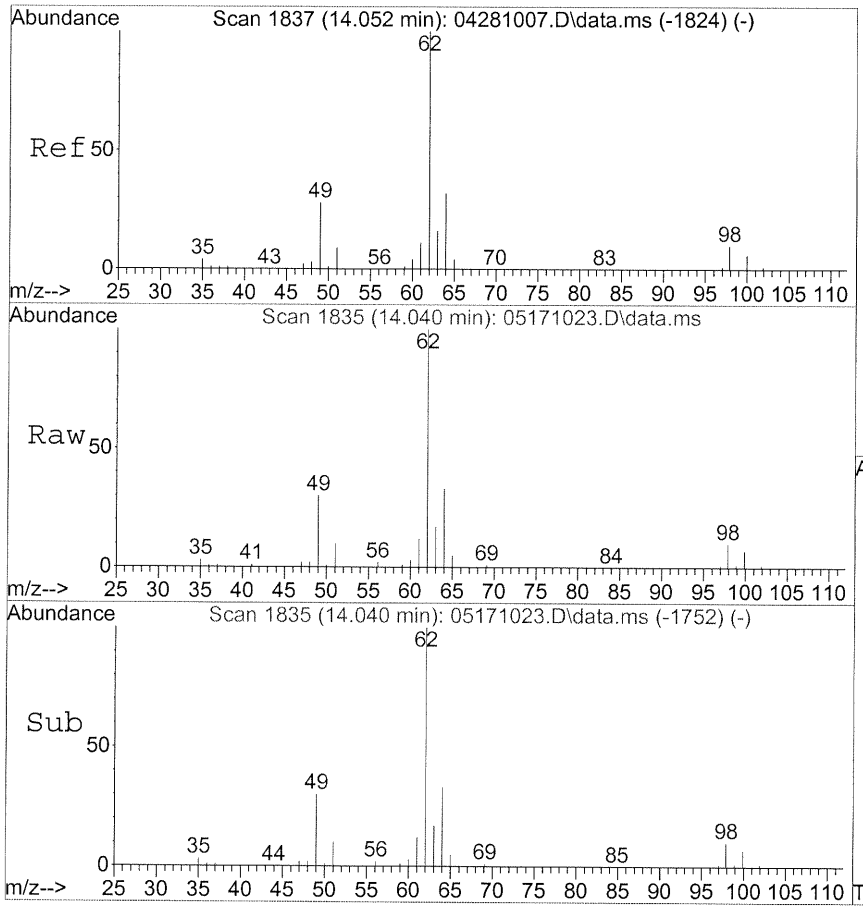


#34
Tetrahydrofuran (THF)
Concen: 1.18 ng
RT: 13.52 min Scan# 1744
Delta R.T. 0.011 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 72 Resp: 15497

Ion	Ratio	Lower	Upper
72	100		
71	92.6	74.5	114.5
42	602.3	197.7	237.7#

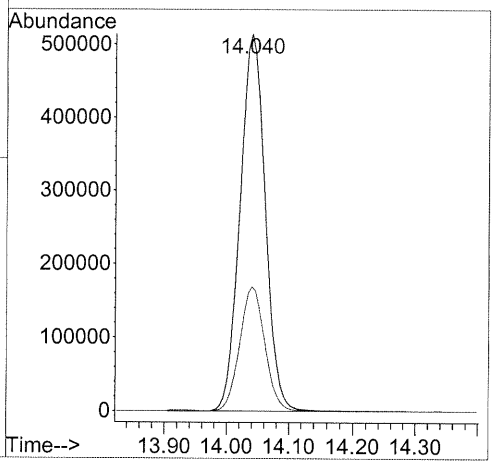


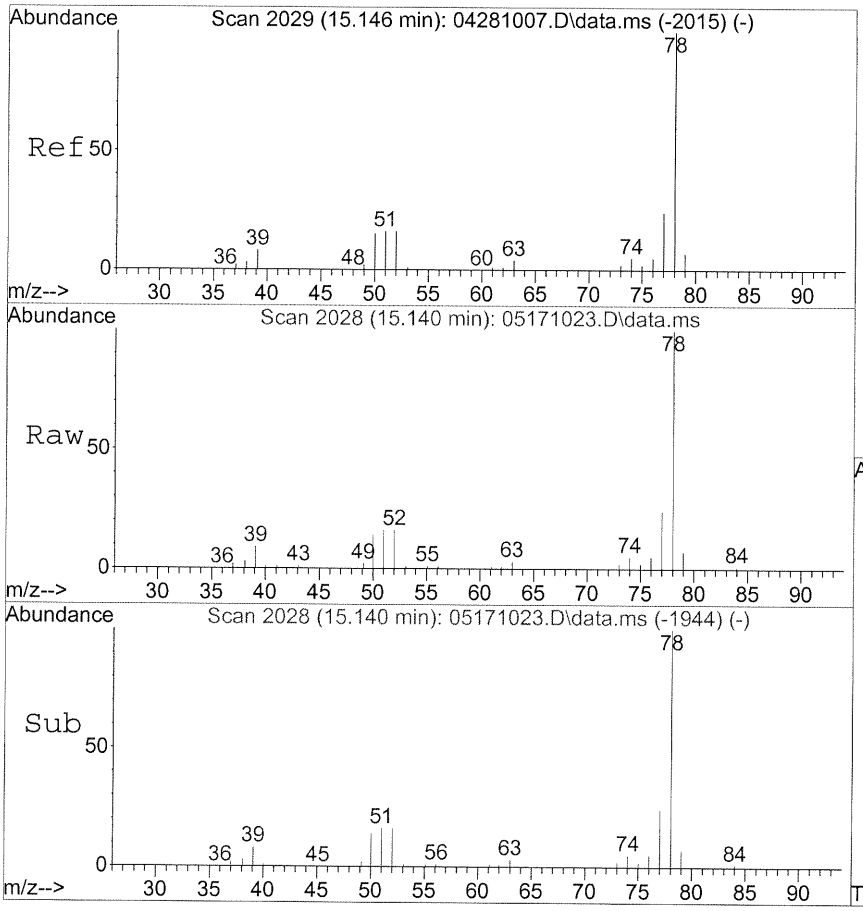


#36
1,2-Dichloroethane
Concen: 51.56 ng
RT: 14.04 min Scan# 1835
Delta R.T. -0.029 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 62 Resp: 1444148

Ion	Ratio	Lower	Upper
62	100		
64	32.7	12.8	52.8

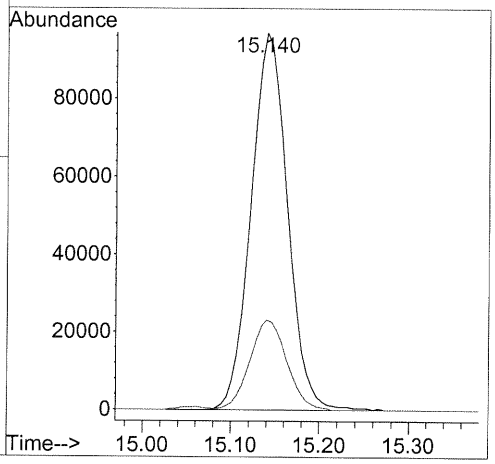


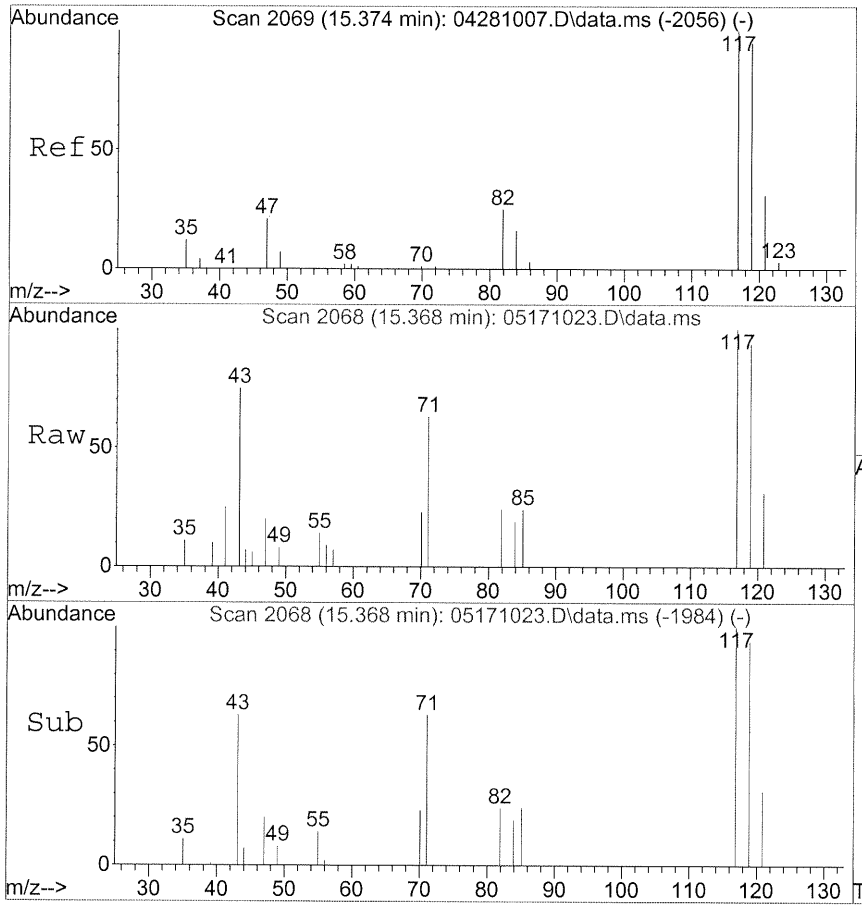


#41
Benzene
Concen: 3.17 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 78 Resp: 278234

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.1	44.1

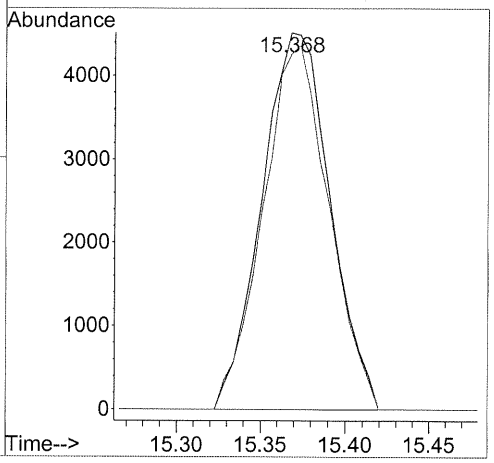


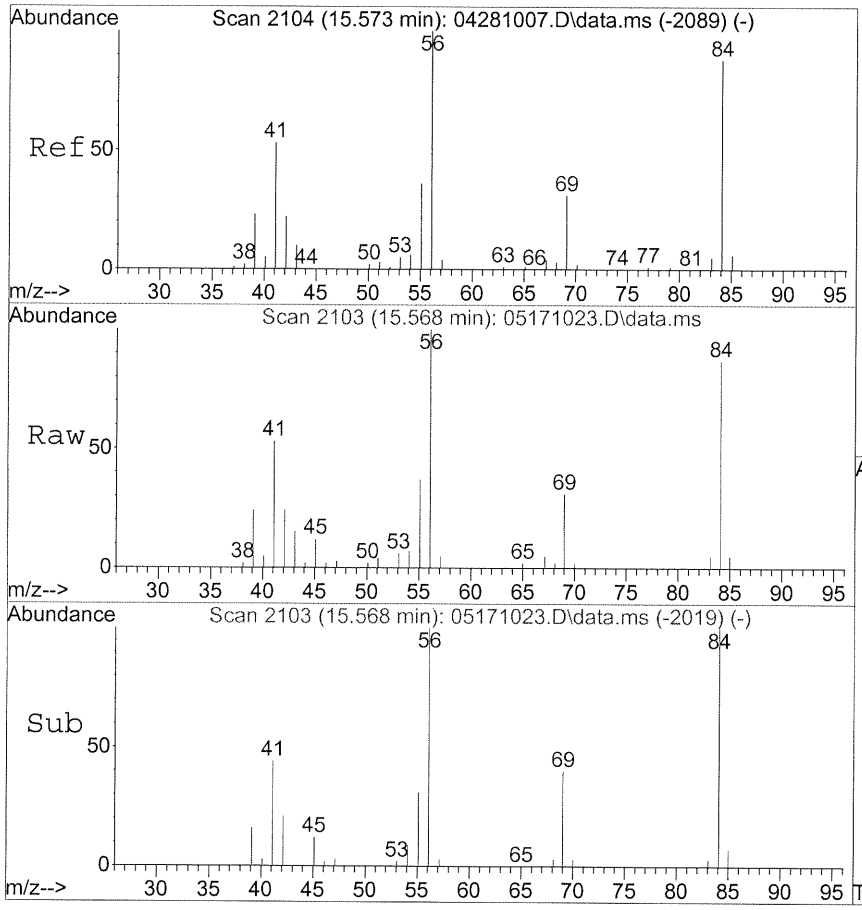


#42
Carbon Tetrachloride
Concen: 0.54 ng
RT: 15.37 min Scan# 2068
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:117 Resp: 12642

Ion	Ratio	Lower	Upper
117	100		
119	93.3	76.1	116.1

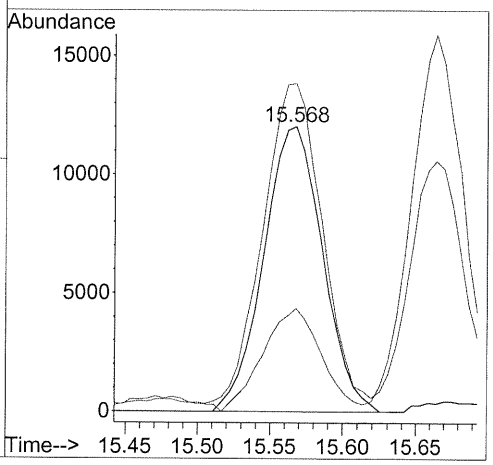


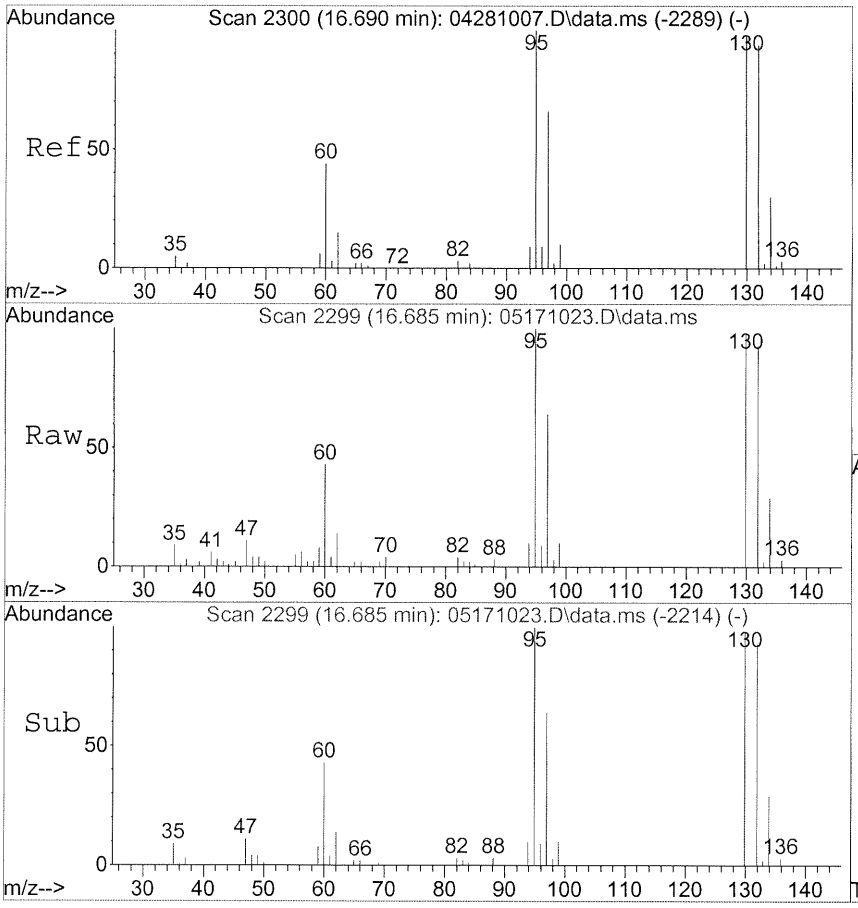


#43
Cyclohexane
Concen: 0.92 ng
RT: 15.57 min Scan# 2103
Delta R.T. -0.023 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 84 Resp: 33868

Ion	Ratio	Lower	Upper
84	100		
69	36.0	14.9	54.9
56	118.2	89.2	129.2

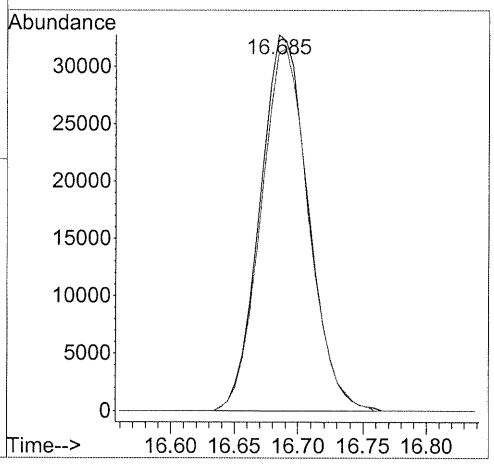


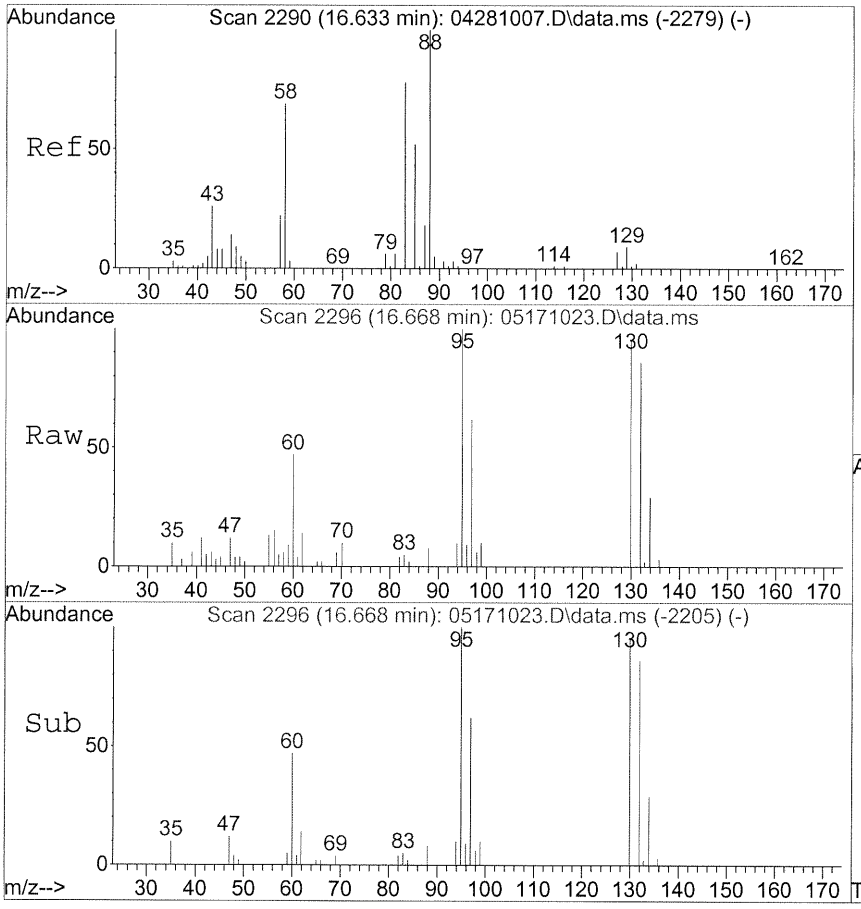


#47
Trichloroethene
Concen: 3.84 ng
RT: 16.68 min Scan# 2299
Delta R.T. -0.017 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:130 Resp: 85886

Ion	Ratio	Lower	Upper
130	100		
132	95.4	75.2	115.2

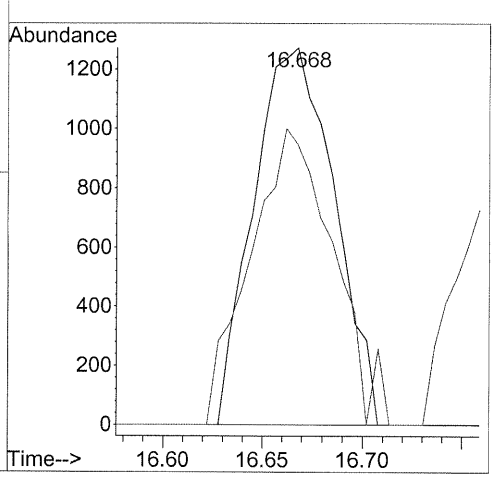


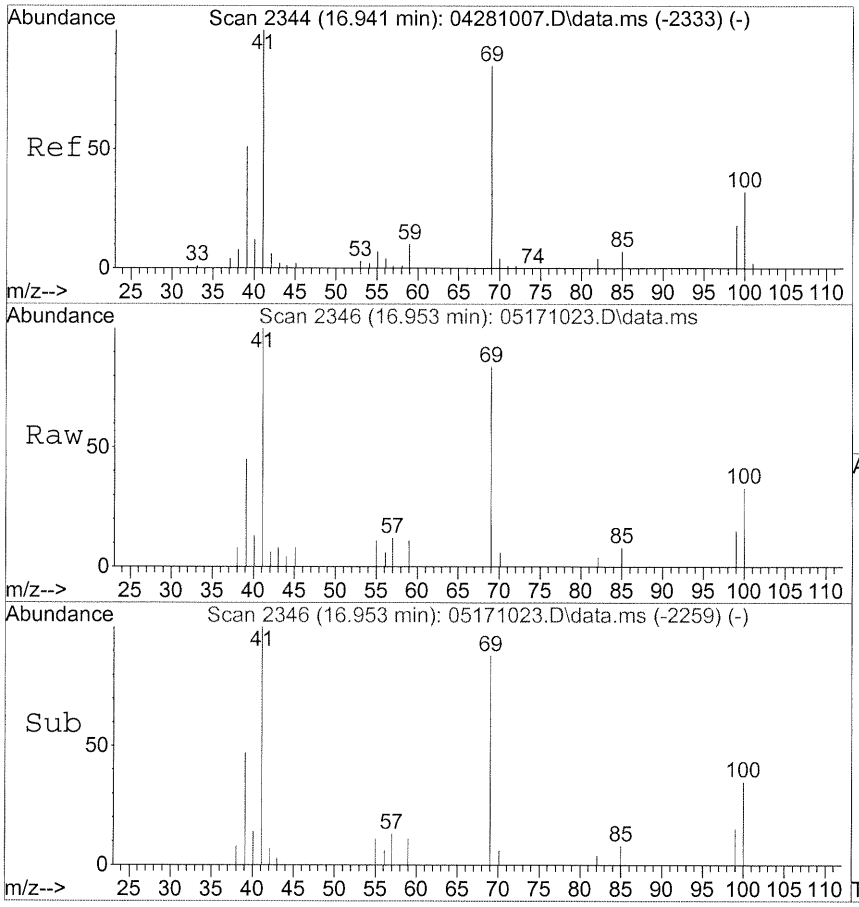


#48
1,4-Dioxane
Concen: 0.21 ng
RT: 16.67 min Scan# 2296
Delta R.T. 0.017 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 88 Resp: 3570

Ion	Ratio	Lower	Upper
88	100		
58	81.1	45.8	85.8

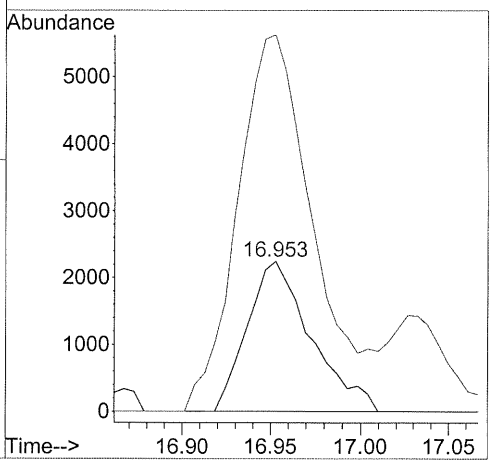


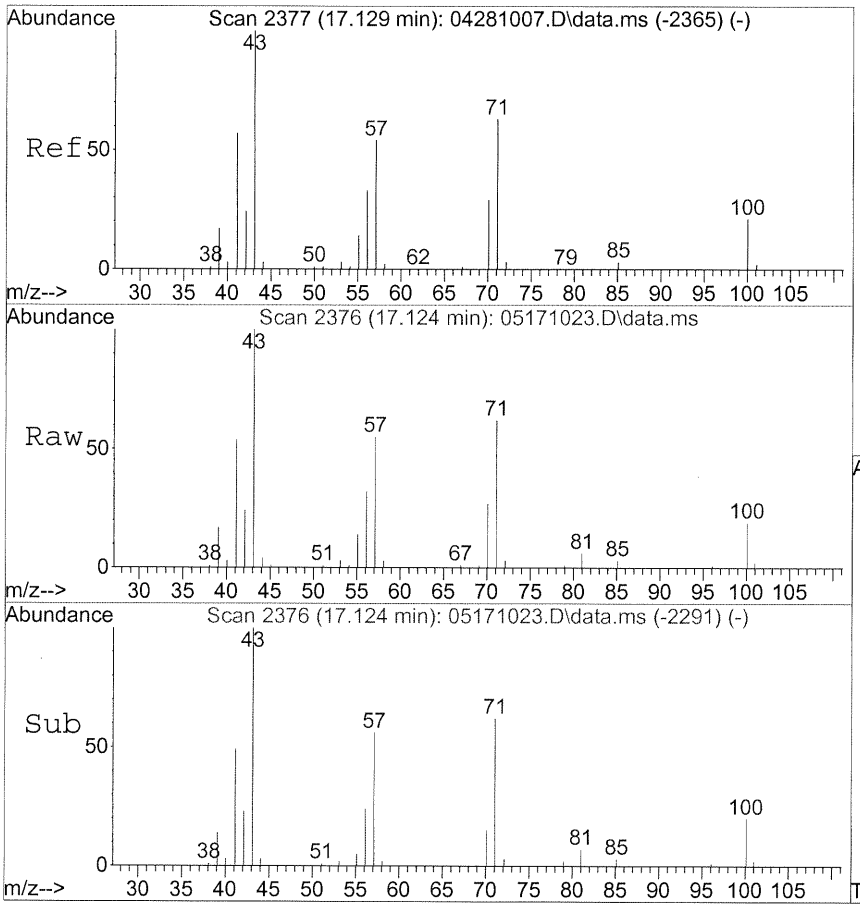


#50
Methyl Methacrylate
Concen: 0.61 ng
RT: 16.95 min Scan# 2346
Delta R.T. -0.005 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:100 Resp: 5575

Ion	Ratio	Lower	Upper
100	100		
69	299.0	226.7	266.7#

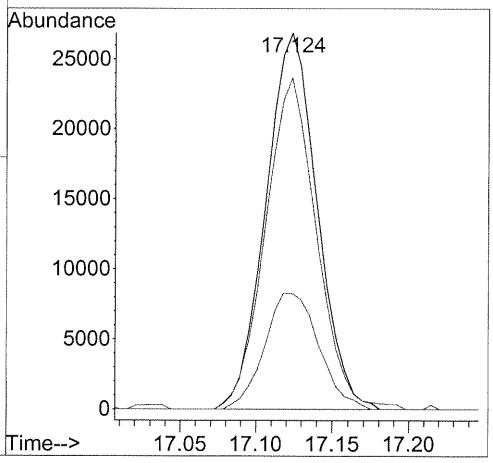


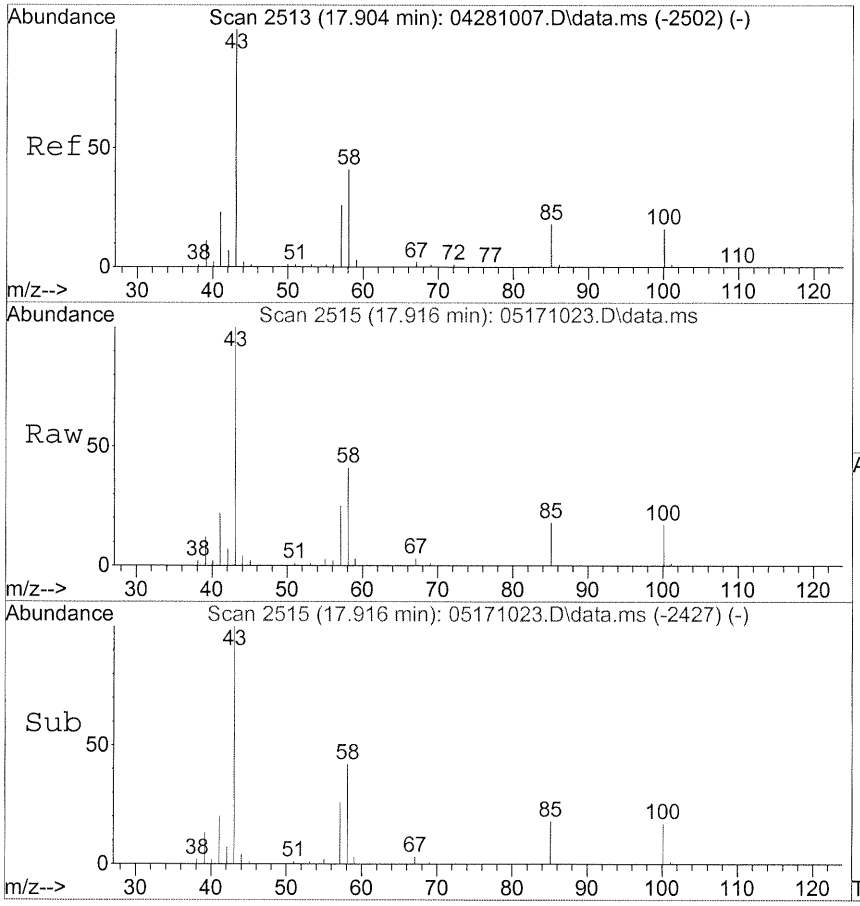


#51
n-Heptane
Concen: 2.49 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 71 Resp: 62597

Ion	Ratio	Lower	Upper
71	100		
57	87.6	63.9	103.9
100	32.5	14.1	54.1

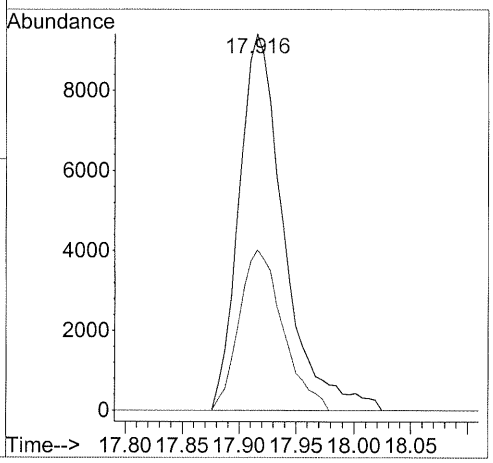


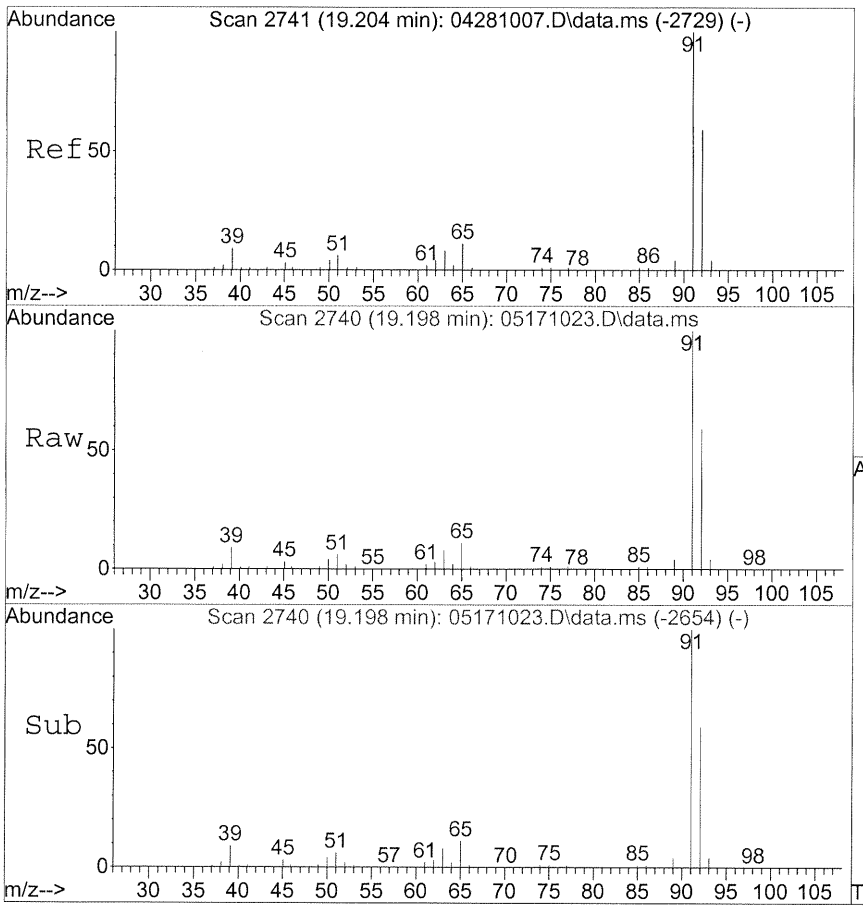


#53
4-Methyl-2-pentanone
Concen: 1.36 ng
RT: 17.92 min Scan# 2515
Delta R.T. -0.000 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 58 Resp: 25818

Ion	Ratio	Lower	Upper
58	100		
85	41.5	26.7	66.7

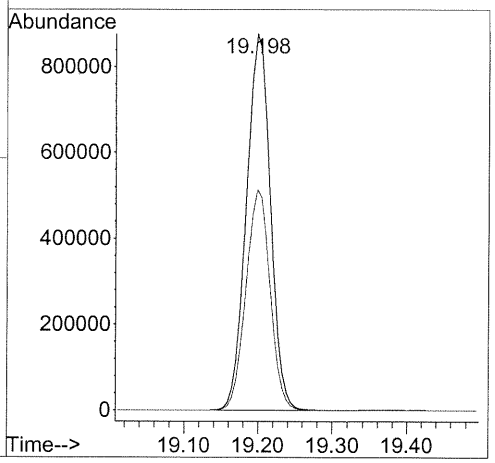


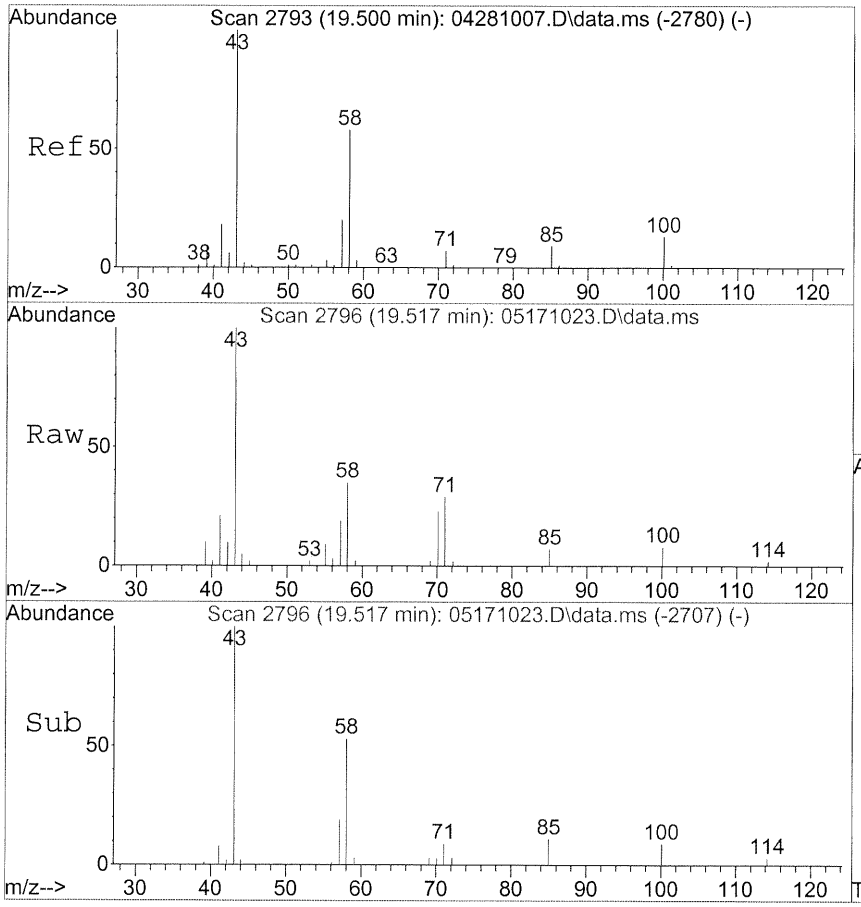


#58
Toluene
Concen: 21.37 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.011 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 91 Resp: 1981950

Ion	Ratio	Lower	Upper
91	100		
92	58.7	39.2	79.2

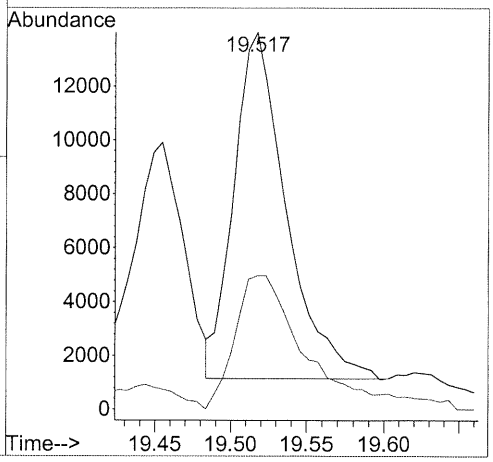


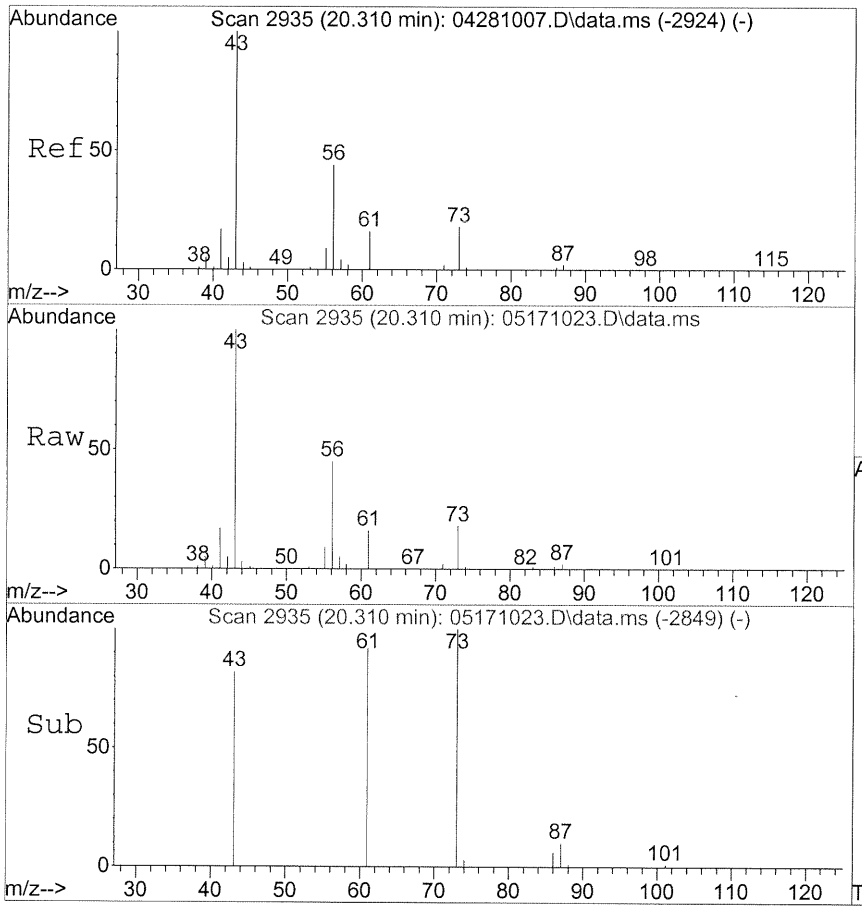


#59
2-Hexanone
Concen: 0.70 ng
RT: 19.52 min Scan# 2796
Delta R.T. 0.005 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 43 Resp: 30907

Ion	Ratio	Lower	Upper
43	100		
58	52.8	38.3	78.3

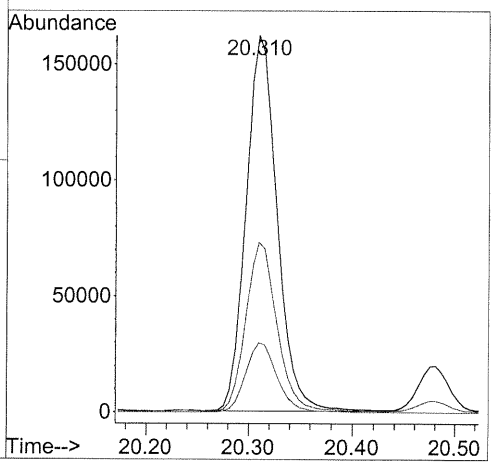


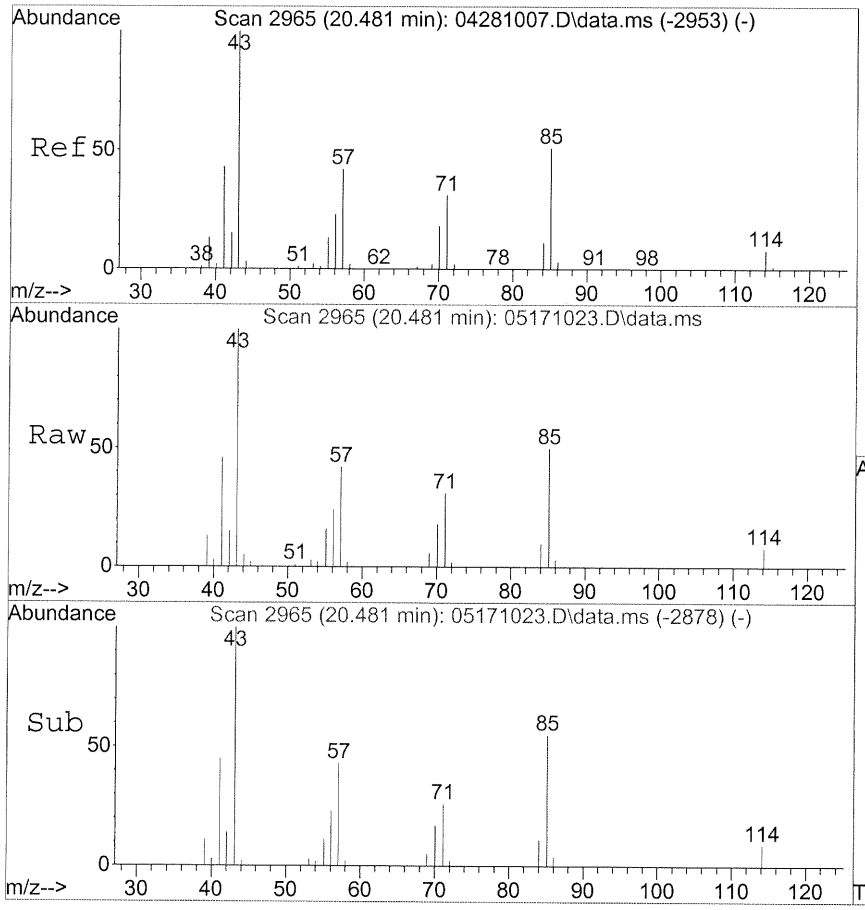


#62
n-Butyl Acetate
Concen: 6.84 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.011 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 43 Resp: 340240

Ion	Ratio	Lower	Upper
43	100		
56	45.4	25.0	65.0
73	18.7	0.0	39.1

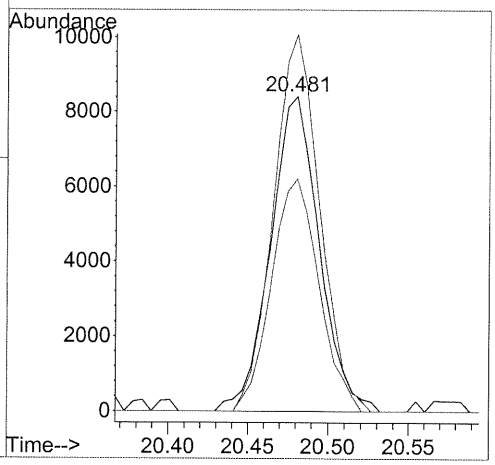


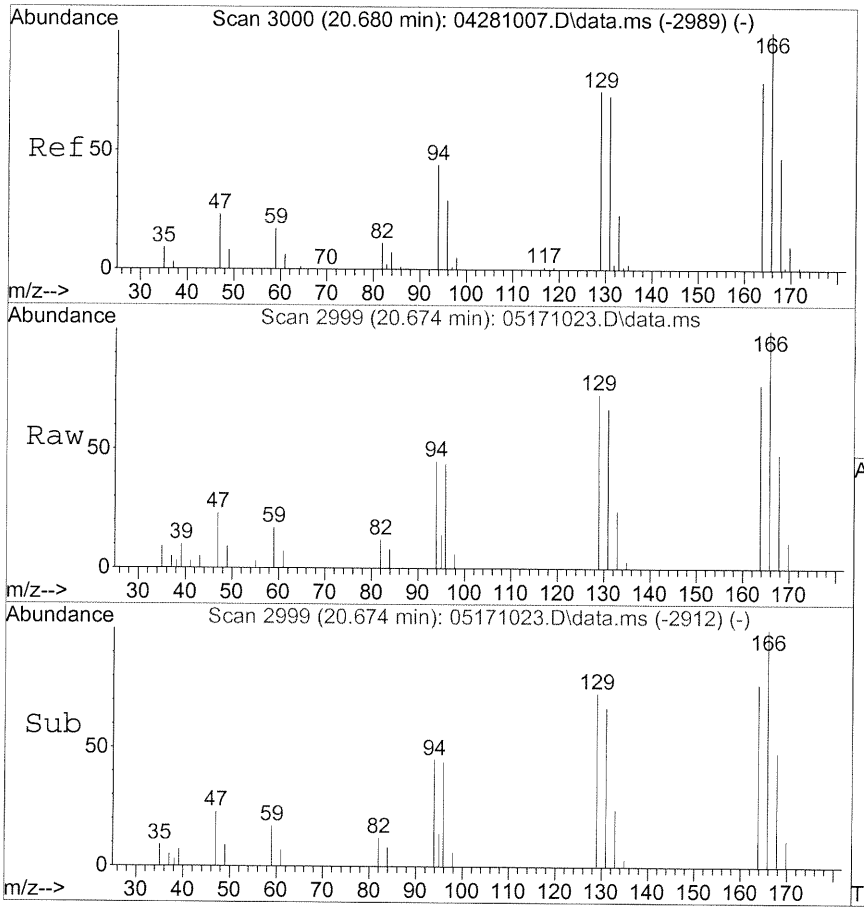


#63
n-Octane
Concen: 0.82 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 57 Resp: 17715

Ion	Ratio	Lower	Upper
57	100		
85	113.9	101.4	152.2
71	72.2	60.7	91.1

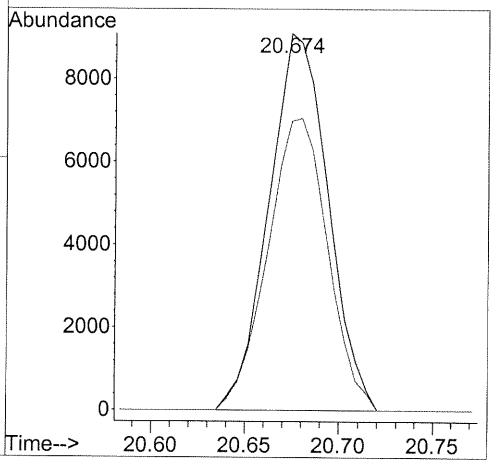


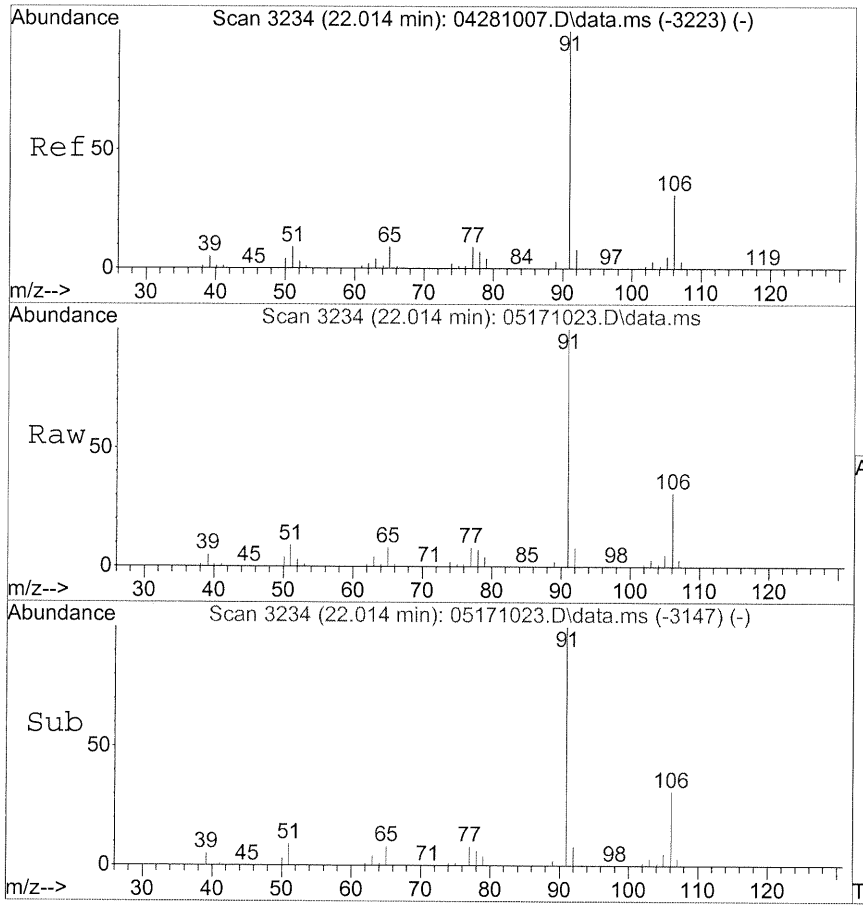


#64
Tetrachloroethene
Concen: 0.92 ng
RT: 20.67 min Scan# 2999
Delta R.T. -0.006 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:166 Resp: 19914

Ion	Ratio	Lower	Upper
166	100		
164	78.7	59.0	99.0

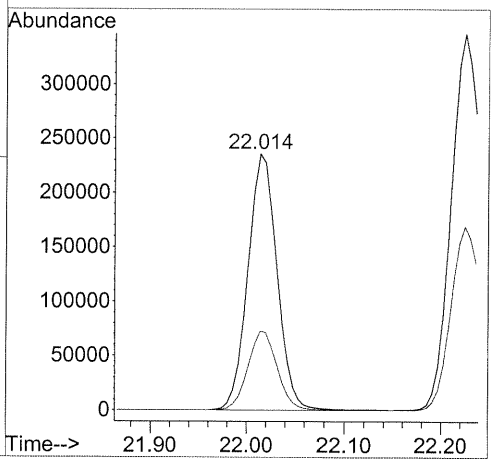


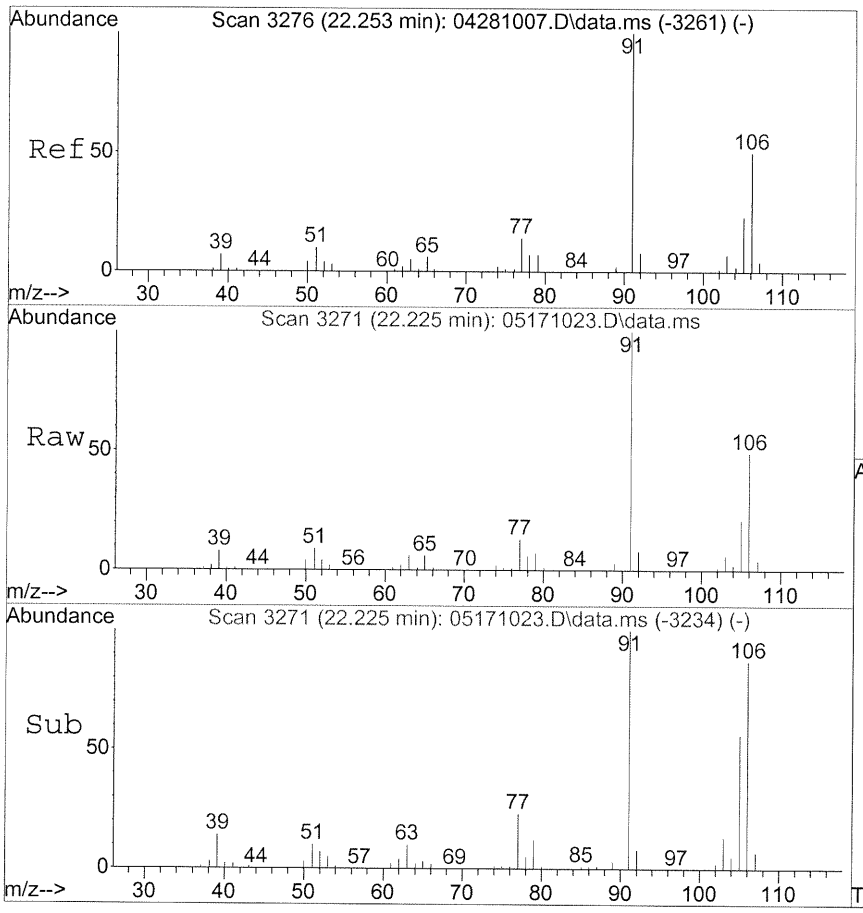


#66
Ethylbenzene
Concen: 4.79 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 91 Resp: 496904

Ion	Ratio	Lower	Upper
91	100		
106	30.7	12.2	52.2

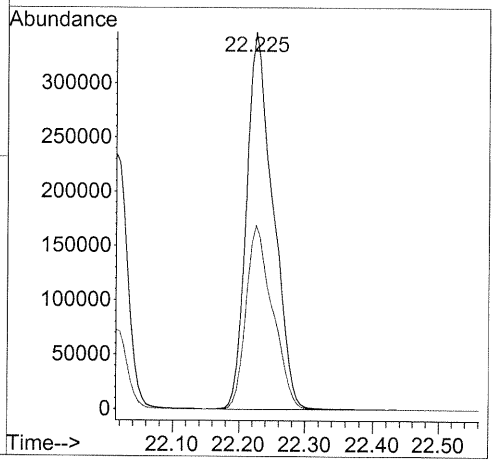


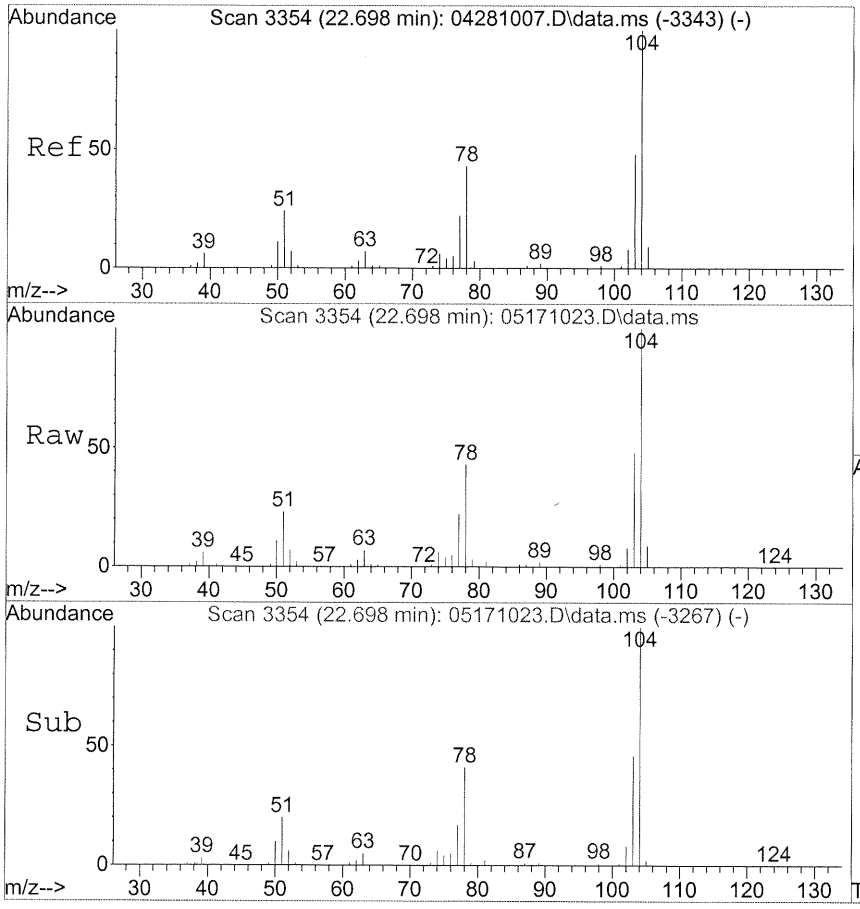


#67
m- & p-Xylenes
Concen: 11.45 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 91 Resp: 963244

Ion	Ratio	Lower	Upper
91	100		
106	48.9	30.6	70.6

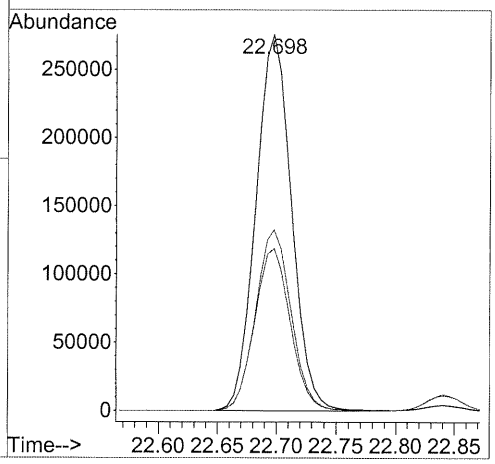


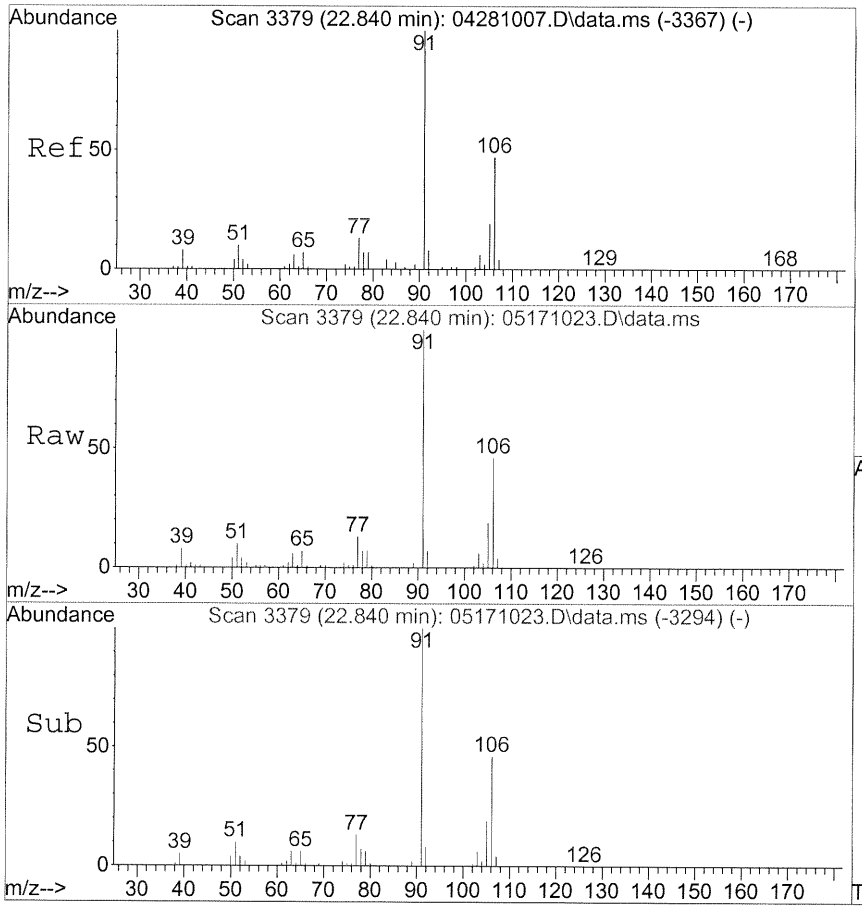


#69
Styrene
Concen: 9.73 ng
RT: 22.70 min Scan# 3354
Delta R.T. -0.006 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:104 Resp: 577483

Ion	Ratio	Lower	Upper
104	100		
78	43.0	22.5	62.5
103	47.9	27.5	67.5

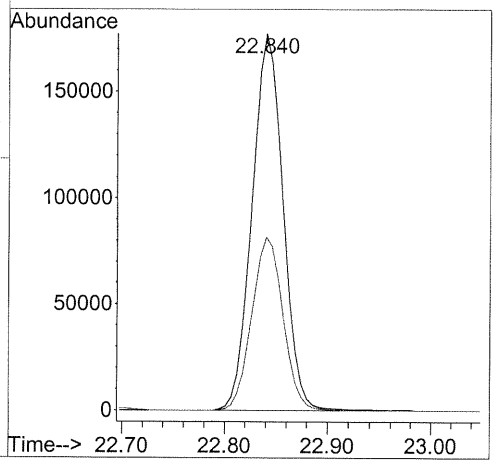


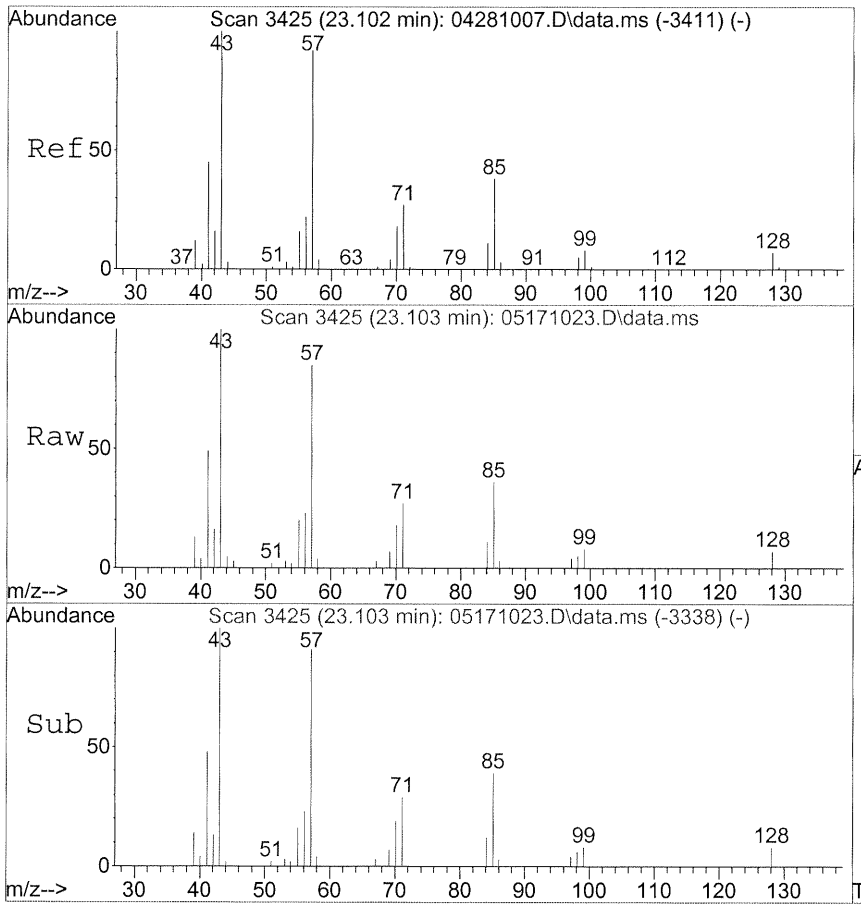


#70
o-Xylene
Concen: 4.14 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 91 Resp: 370975

Ion	Ratio	Lower	Upper
91	100		
106	46.3	27.8	67.8

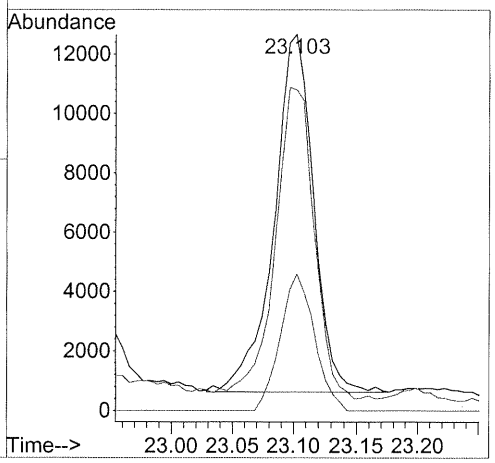


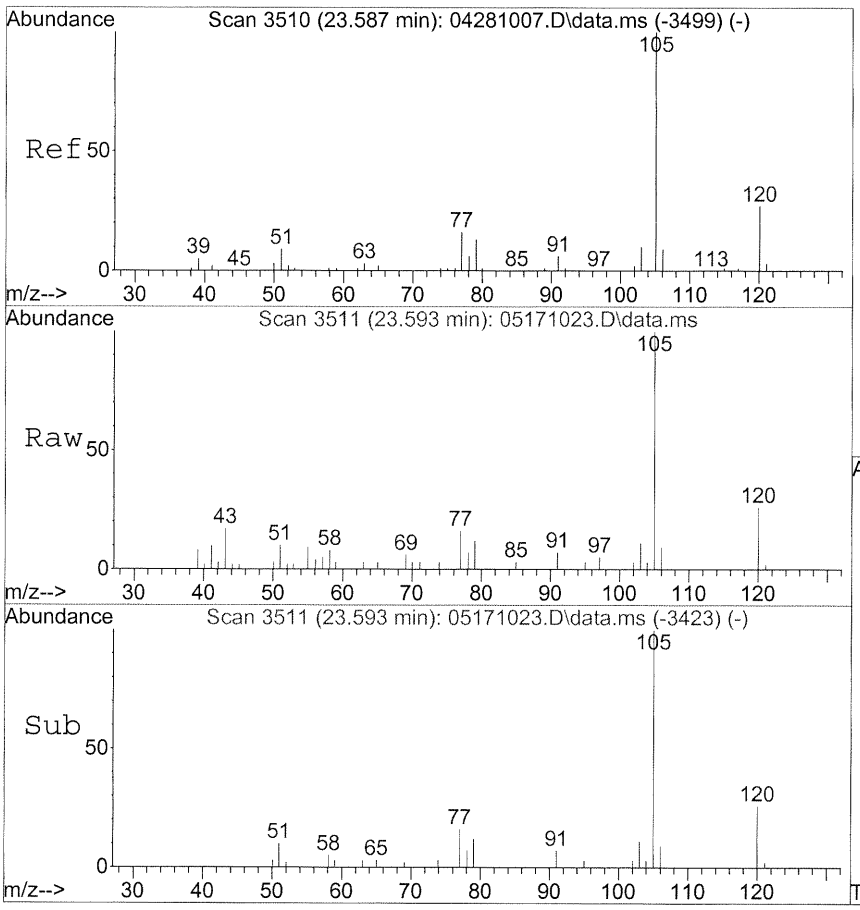


#71
n-Nonane
Concen: 0.55 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 43 Resp: 26873

Ion	Ratio	Lower	Upper
43	100		
57	85.1	74.6	114.6
85	32.7	20.5	60.5

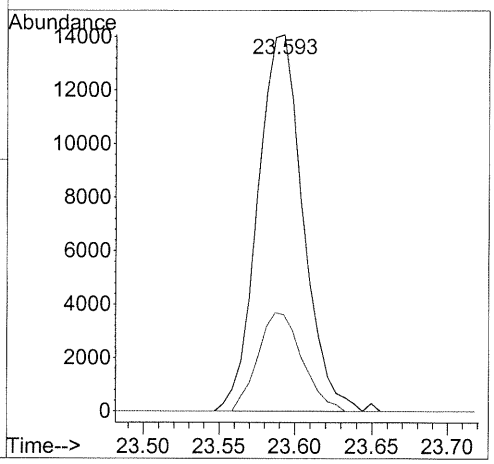


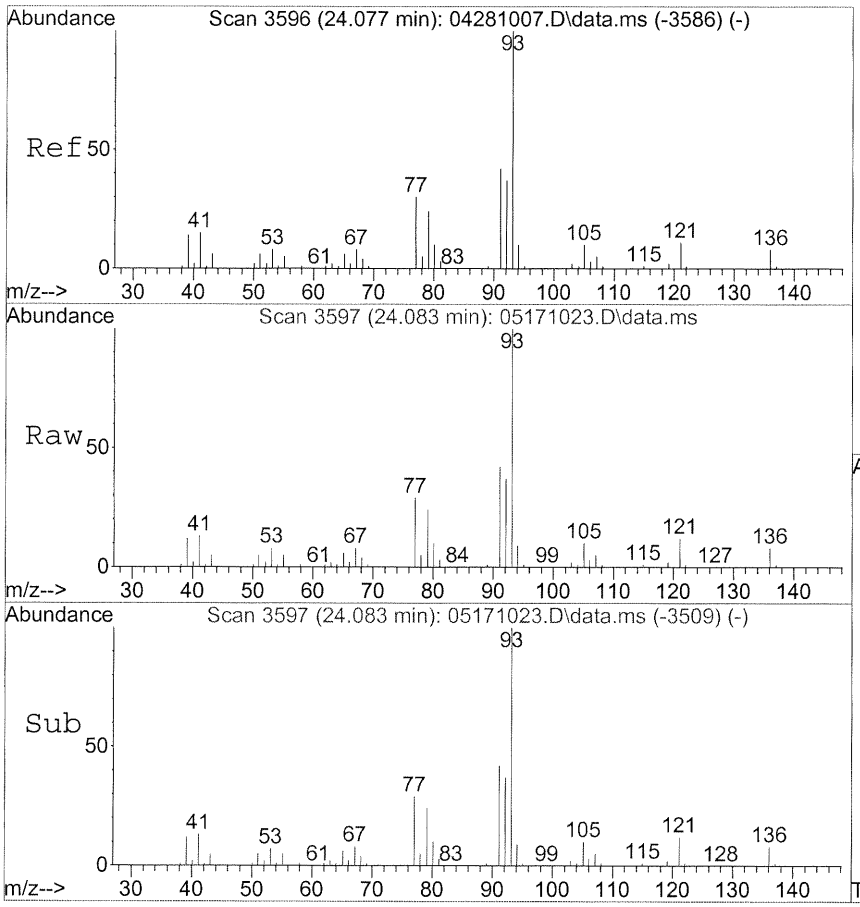


#74
Cumene
Concen: 0.27 ng
RT: 23.59 min Scan# 3511
Delta R.T. -0.000 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:105 Resp: 29208

Ion	Ratio	Lower	Upper
105	100		
120	25.5	6.8	46.8

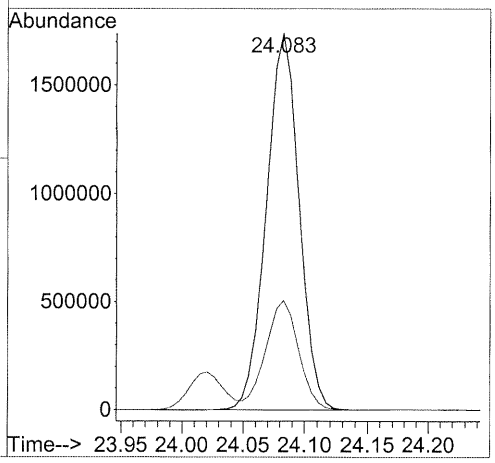


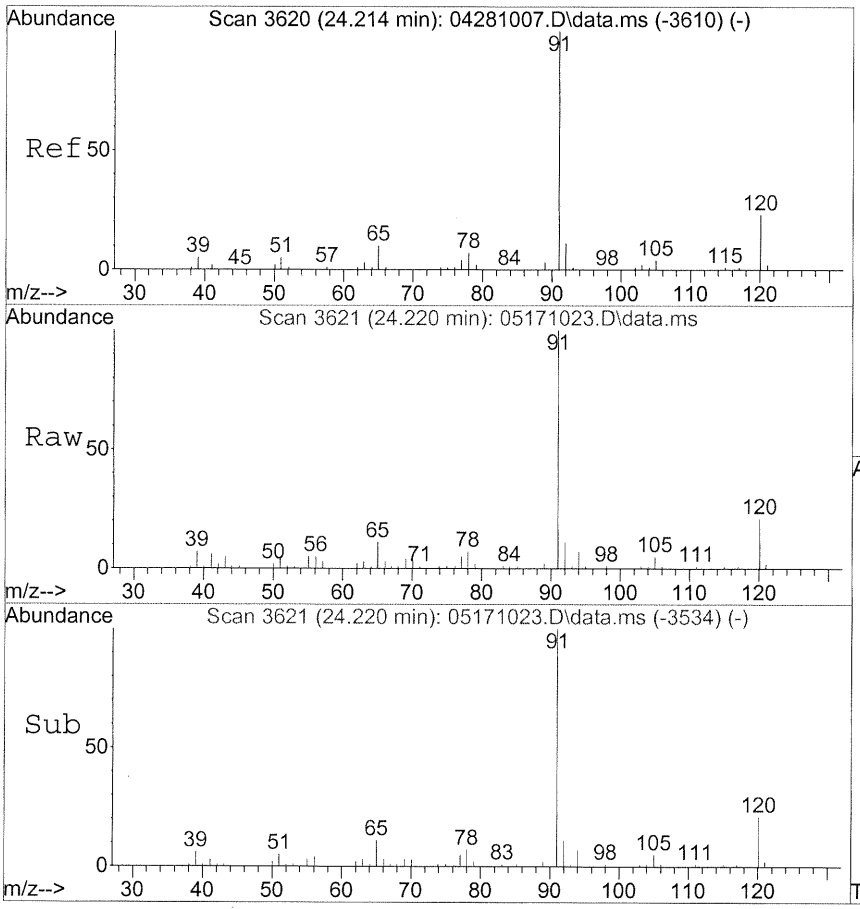


#75
alpha-Pinene
Concen: 63.49 ng
RT: 24.08 min Scan# 3597
Delta R.T. -0.000 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 93 Resp: 3228202

Ion	Ratio	Lower	Upper
93	100		
77	29.3	8.7	48.7

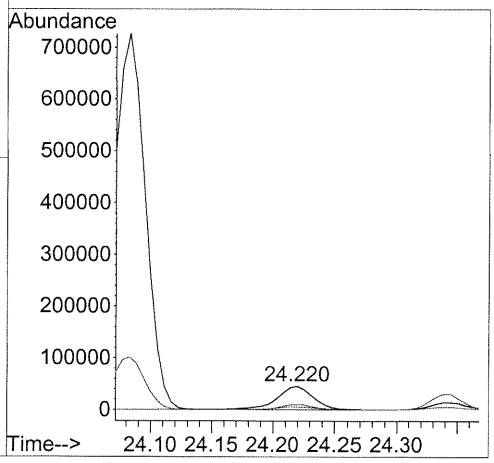


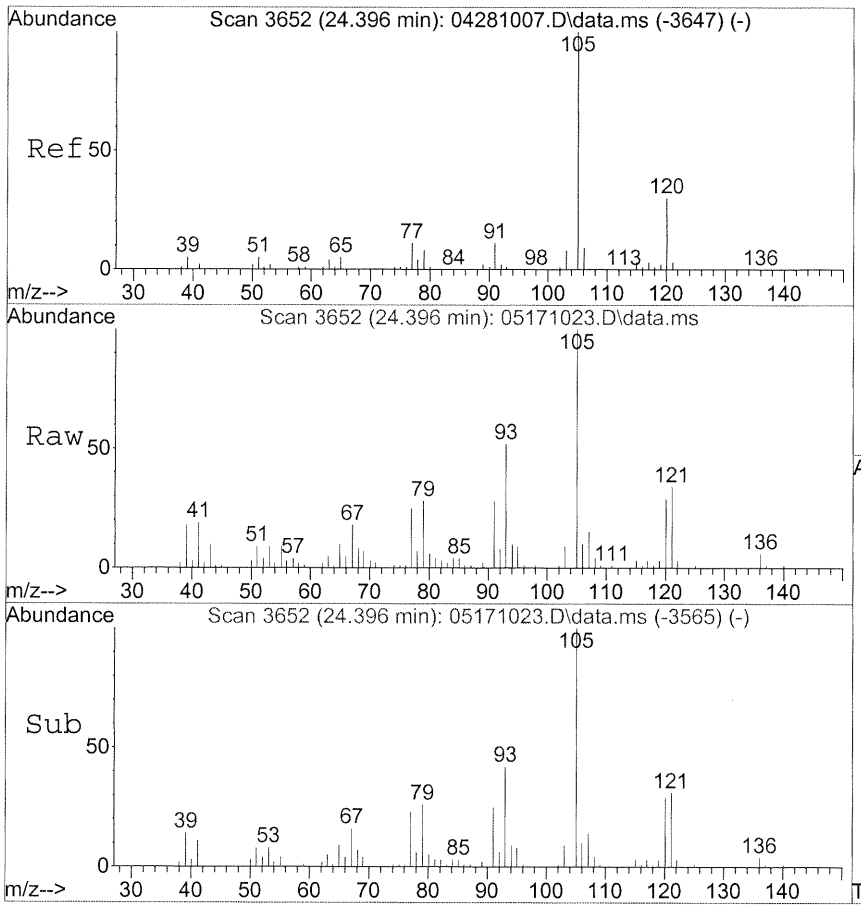


#76
n-Propylbenzene
Concen: 0.70 ng
RT: 24.22 min Scan# 3621
Delta R.T. -0.006 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 91 Resp: 92865

Ion	Ratio	Lower	Upper
91	100		
120	19.6	3.8	43.8
65	13.7	0.0	30.1

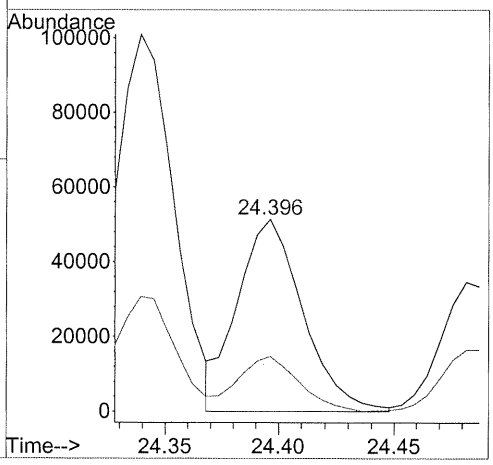


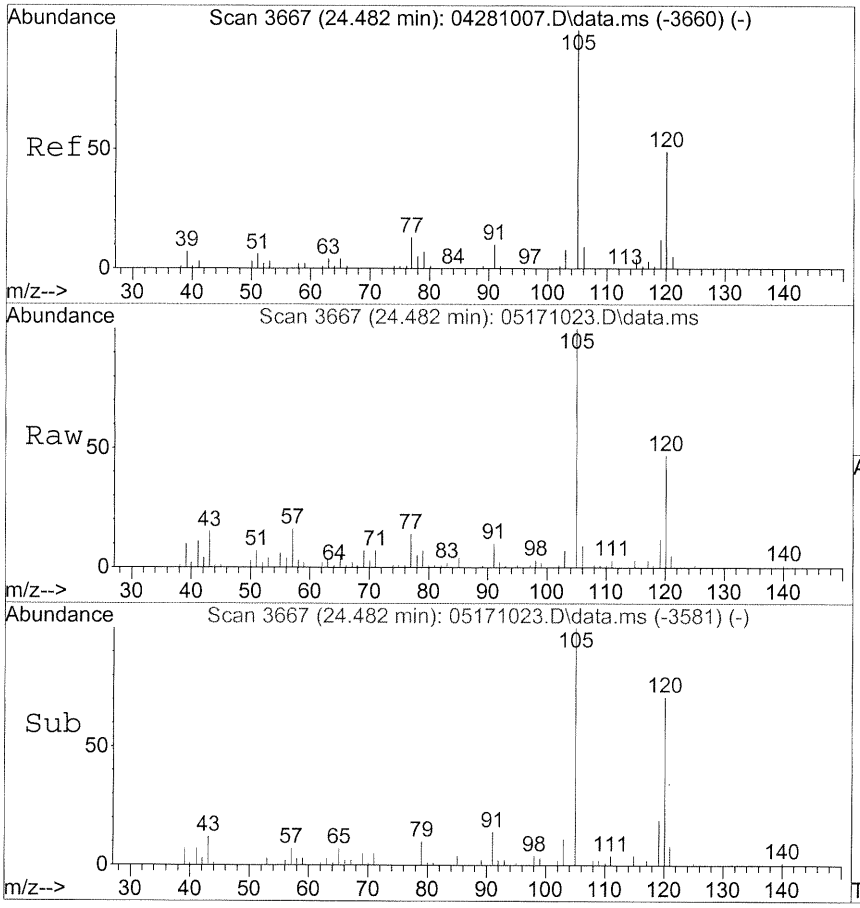


#78
4-Ethyltoluene
Concen: 1.01 ng
RT: 24.40 min Scan# 3652
Delta R.T. -0.006 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:105 Resp: 102217

Ion	Ratio	Lower	Upper
105	100		
120	26.9	10.2	50.2

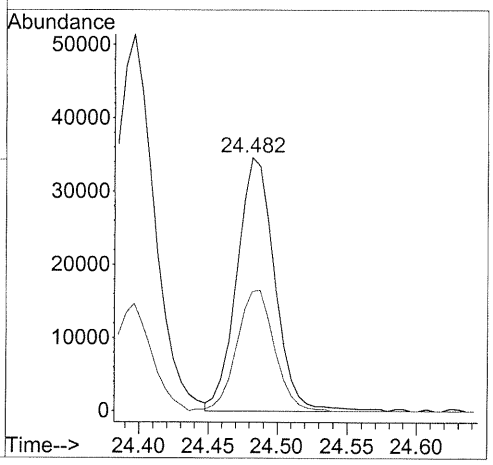


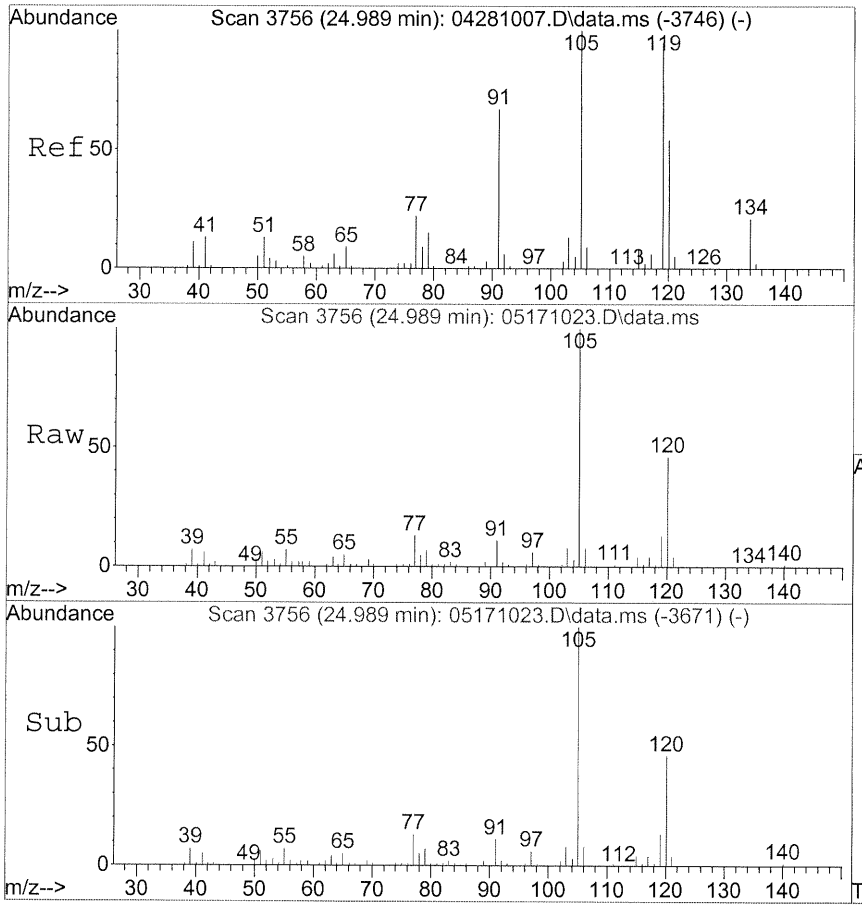


#79
1,3,5-Trimethylbenzene
Concen: 0.78 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.011 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:105 Resp: 65964

Ion	Ratio	Lower	Upper
105	100		
120	47.2	30.4	70.4

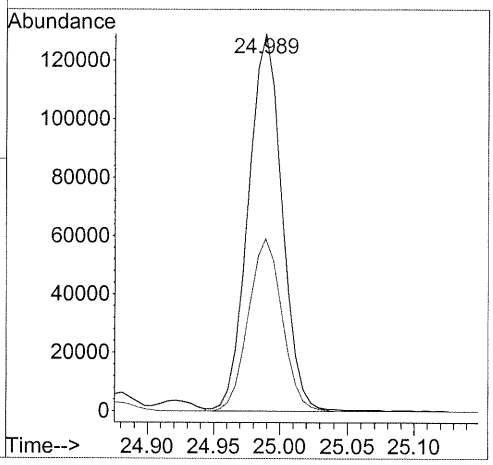


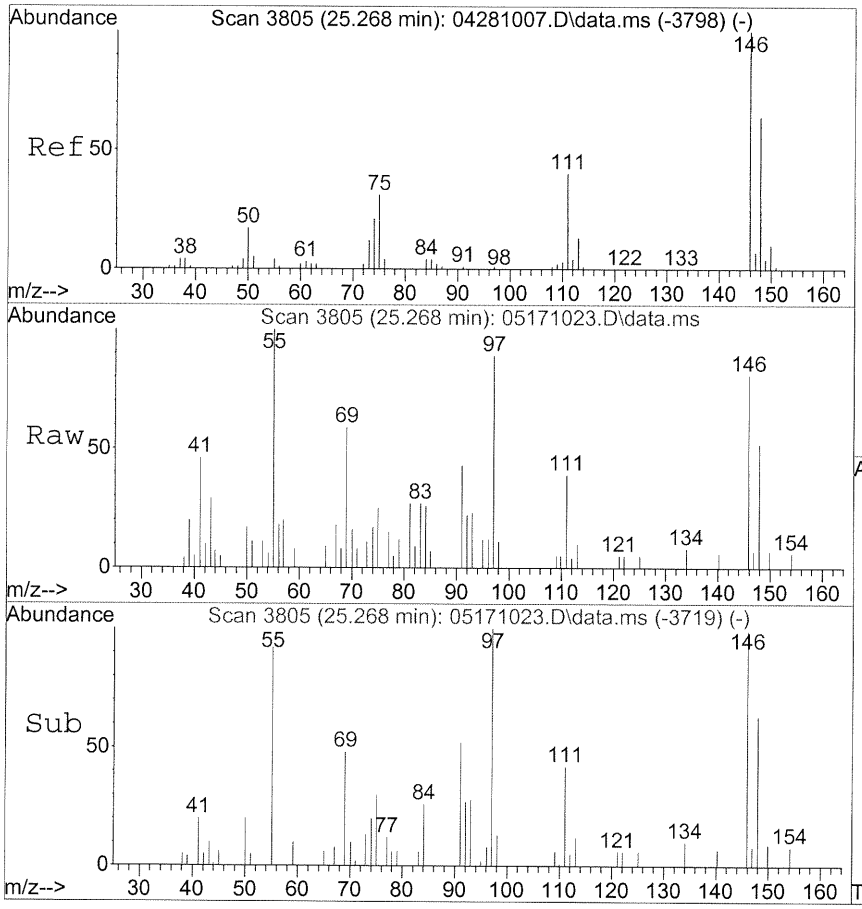


#82
1,2,4-Trimethylbenzene
Concen: 2.59 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:105 Resp: 229571

Ion	Ratio	Lower	Upper
105	100		
120	45.4	35.1	75.1

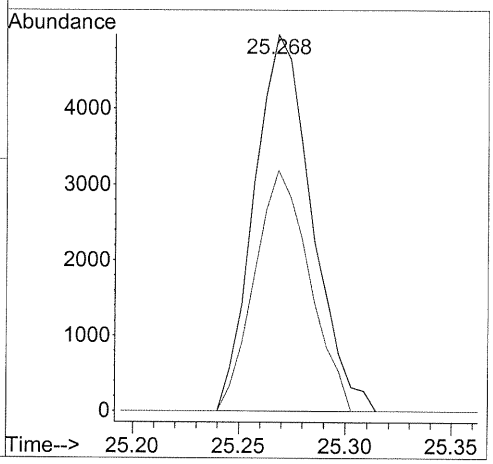


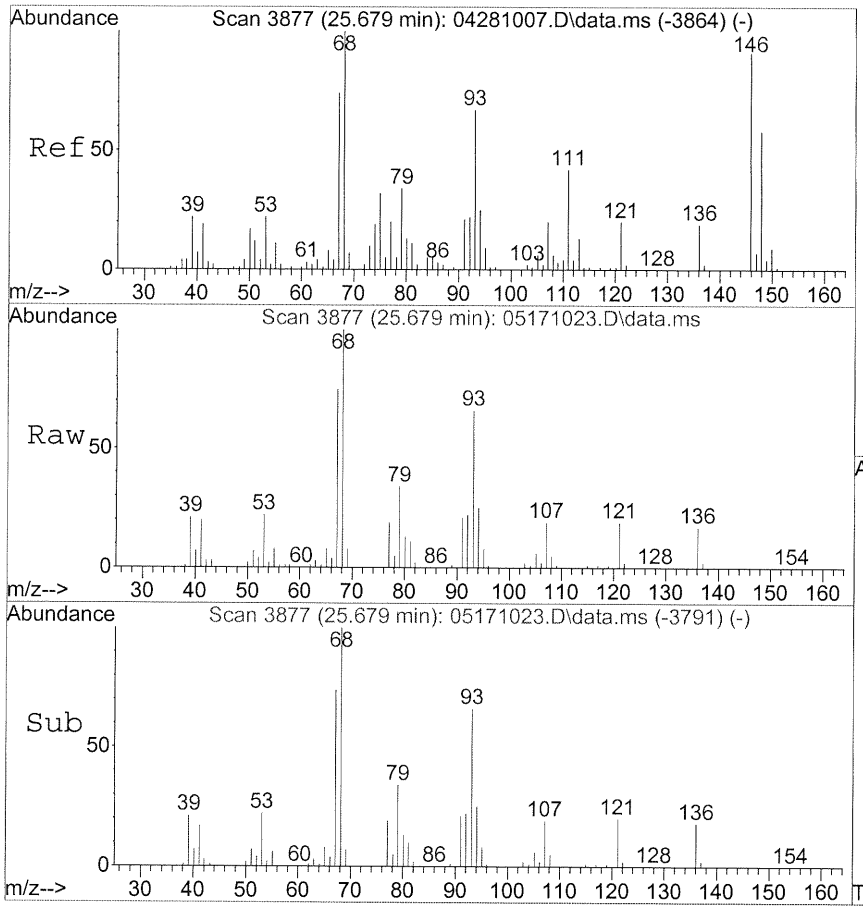


#86
1,4-Dichlorobenzene
Concen: 0.21 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.011 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:146 Resp: 9379

Ion	Ratio	Lower	Upper
146	100		
148	61.2	44.0	84.0

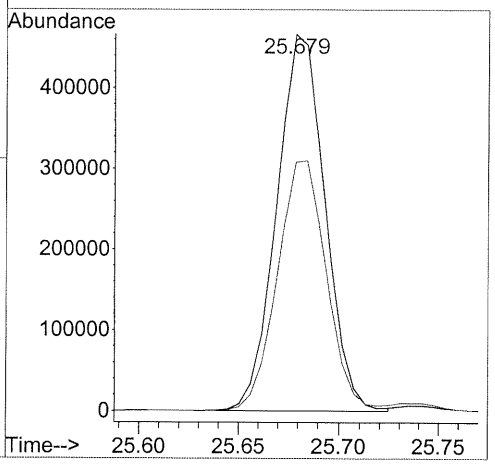


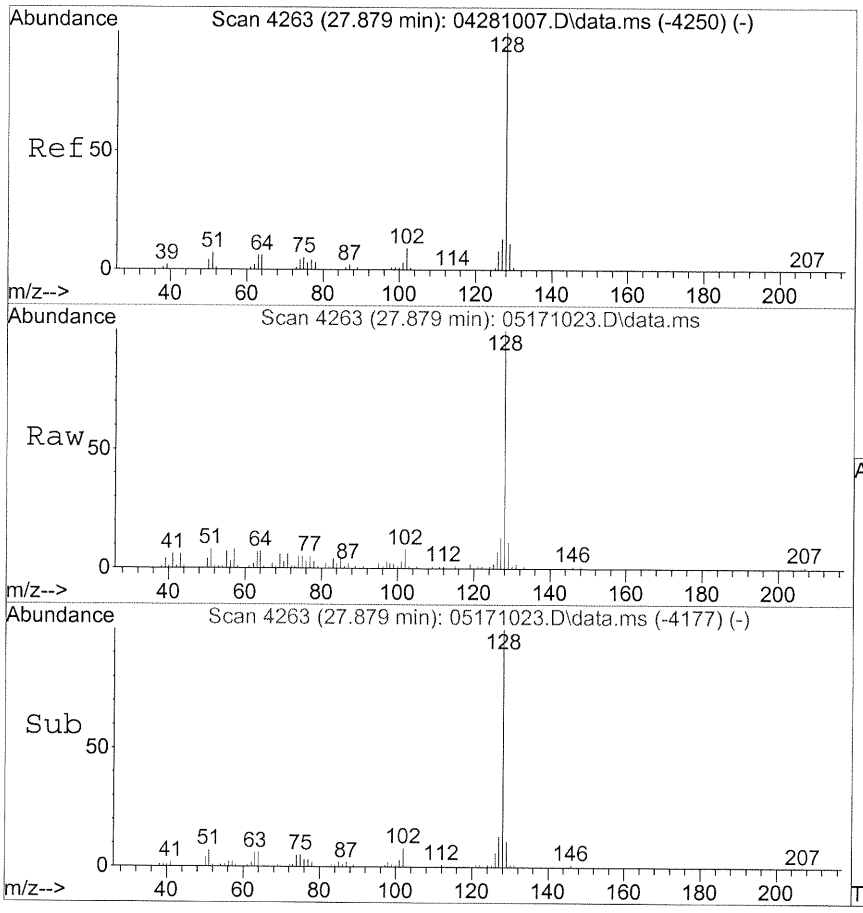


#91
d-Limonene
Concen: 22.20 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.012 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion: 68 Resp: 774976

Ion	Ratio	Lower	Upper
68	100		
93	67.8	51.5	91.5

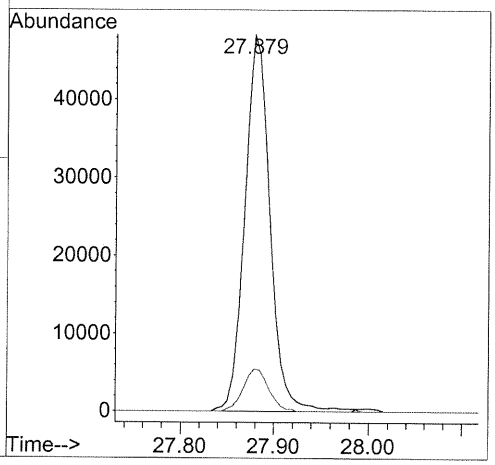




#95
Naphthalene
Concen: 0.93 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.012 min
Lab File: 05171023.D
Acq: 18 May 2010 2:05

Tgt Ion:128 Resp: 91533

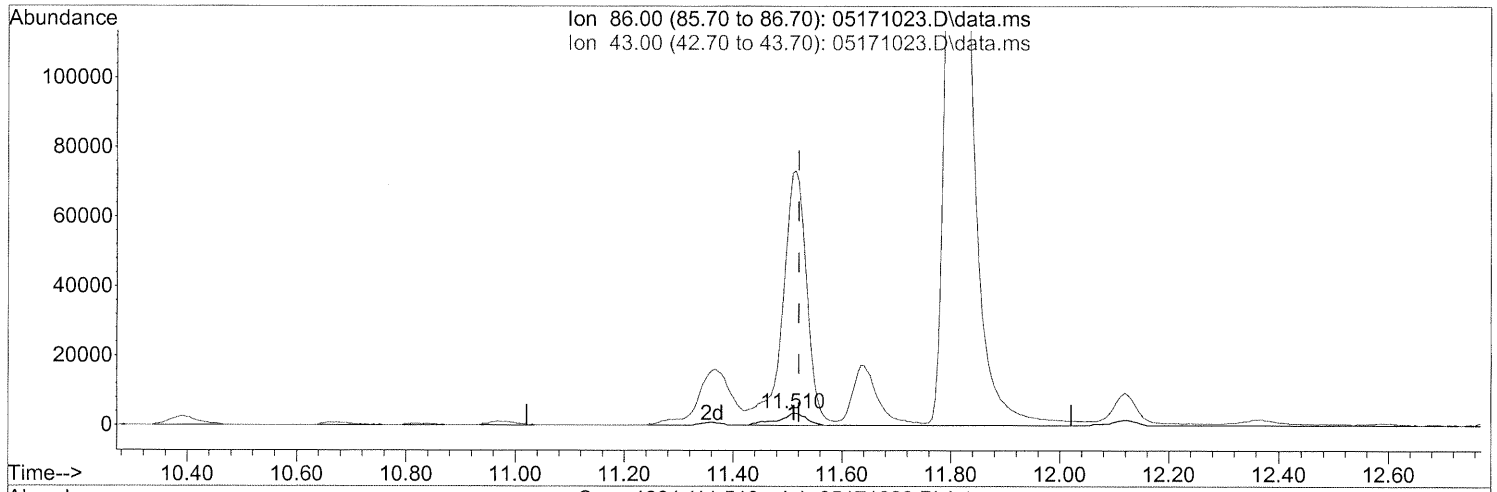
Ion	Ratio	Lower	Upper
128	100		
129	11.3	0.0	31.1

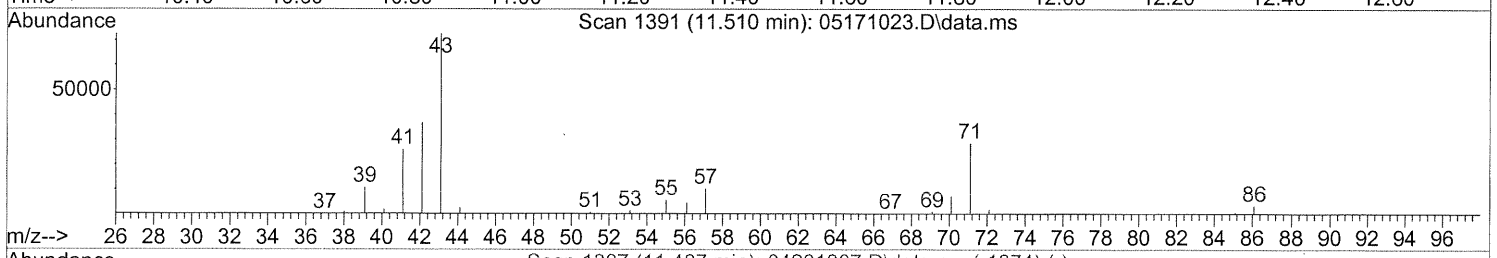


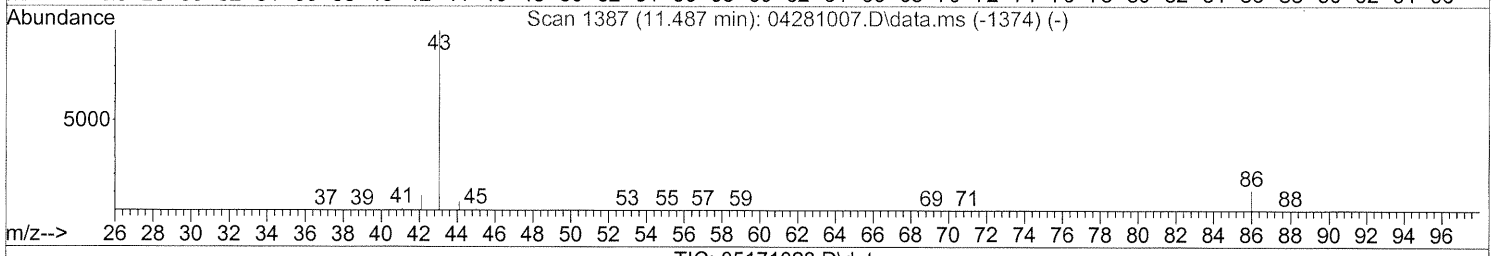
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 08:05:27 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171023.D\data.ms

(26) Vinyl Acetate (T)

11.510min (-0.011) 2.44ng

response 12043

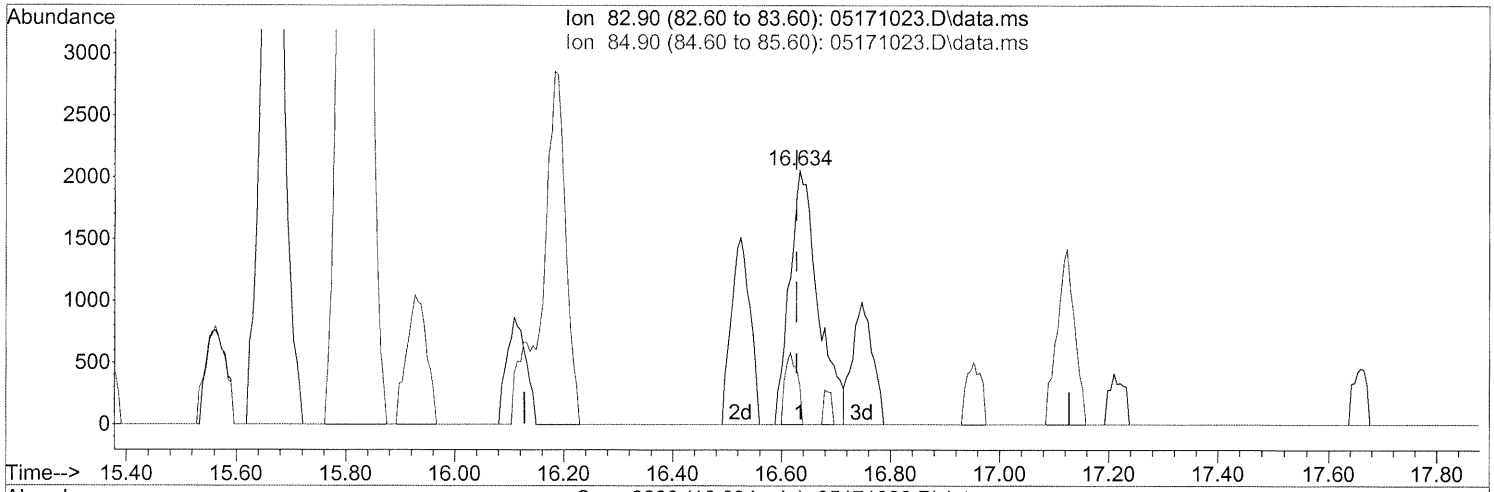
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	1810.61#
0.00	0.00	0.00
0.00	0.00	0.00

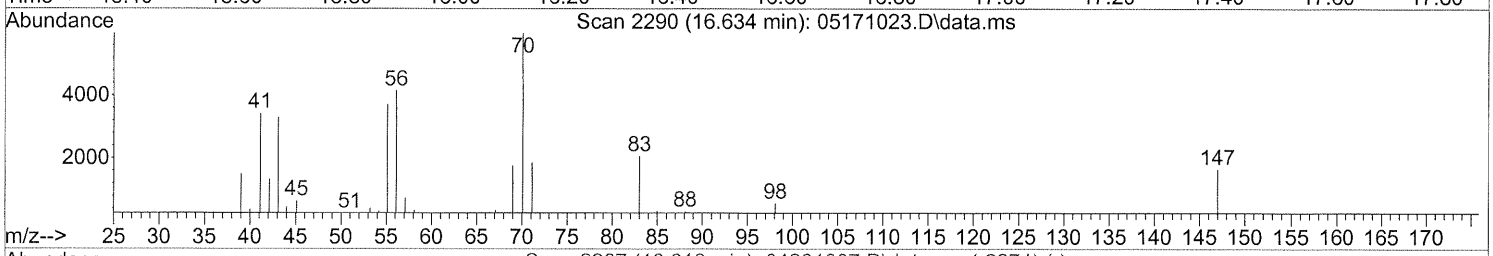
TP

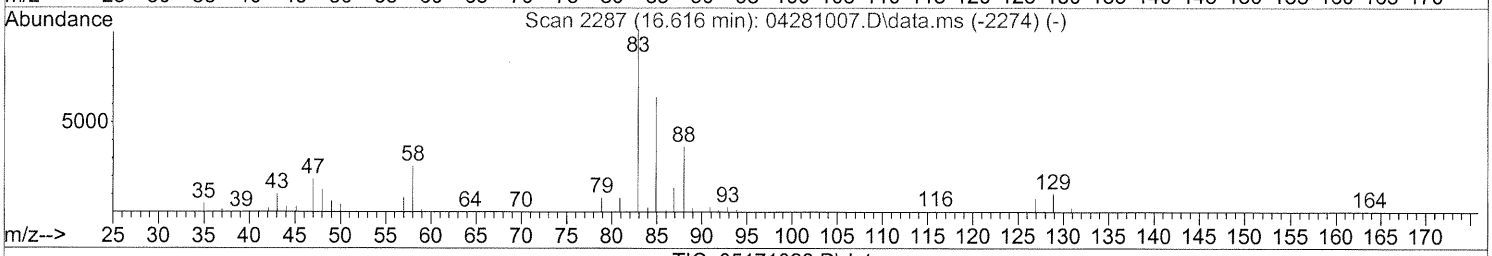
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 08:05:27 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171023.D\data.ms

(46) Bromodichloromethane (T)

16.634min (+0.006) 0.28ng

response 7501

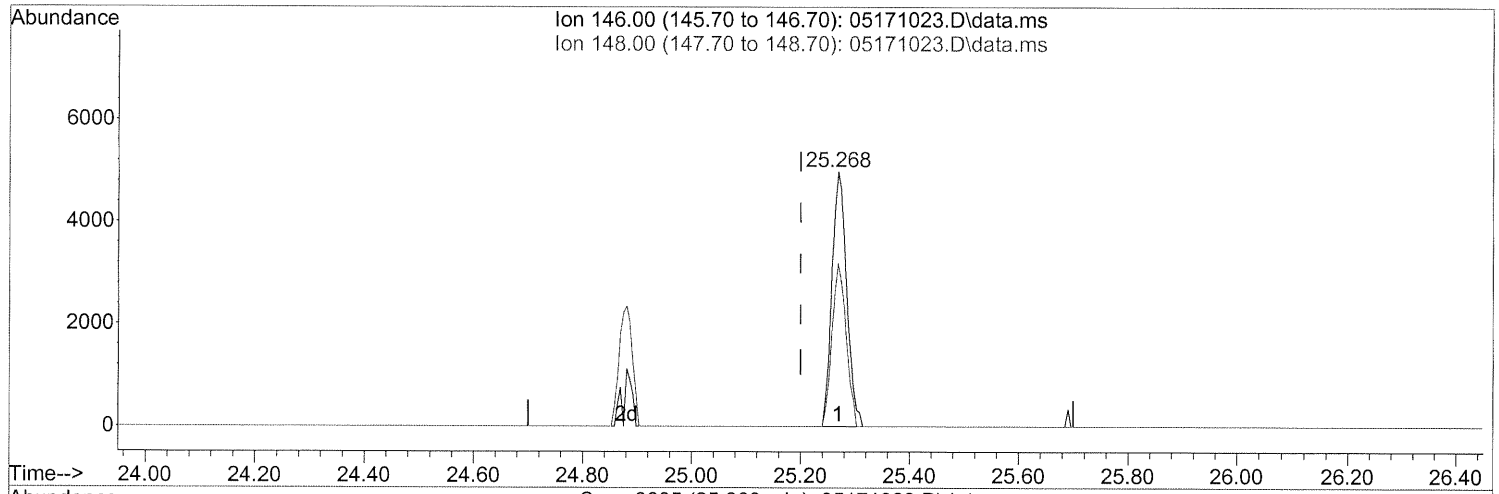
Ion	Exp%	Act%
82.90	100	100
84.90	63.40	12.31#
0.00	0.00	0.00
0.00	0.00	0.00

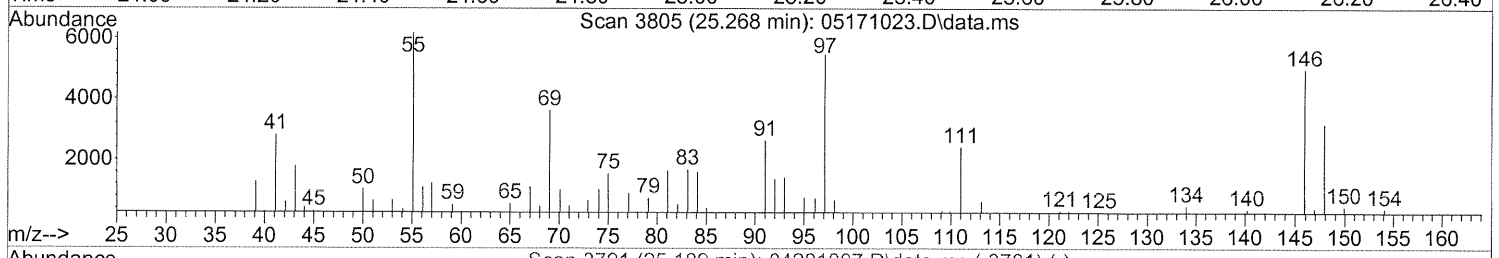
TP

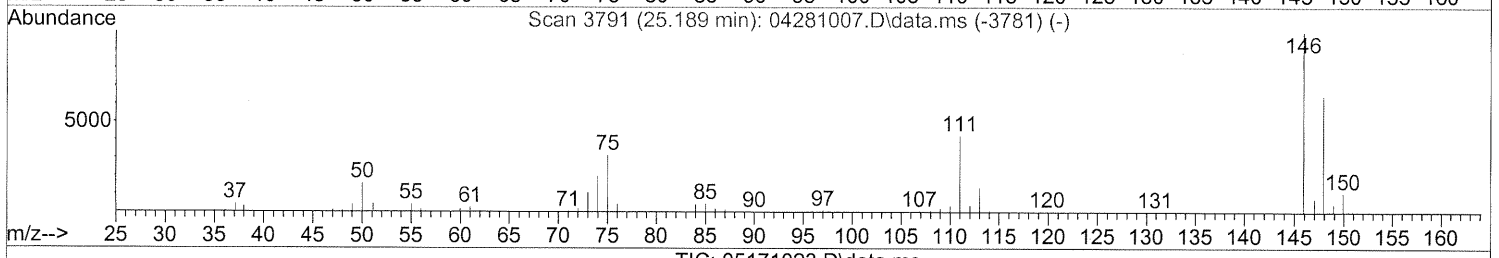
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 08:05:27 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171023.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.268min (+0.068) 0.23ng

response 9379

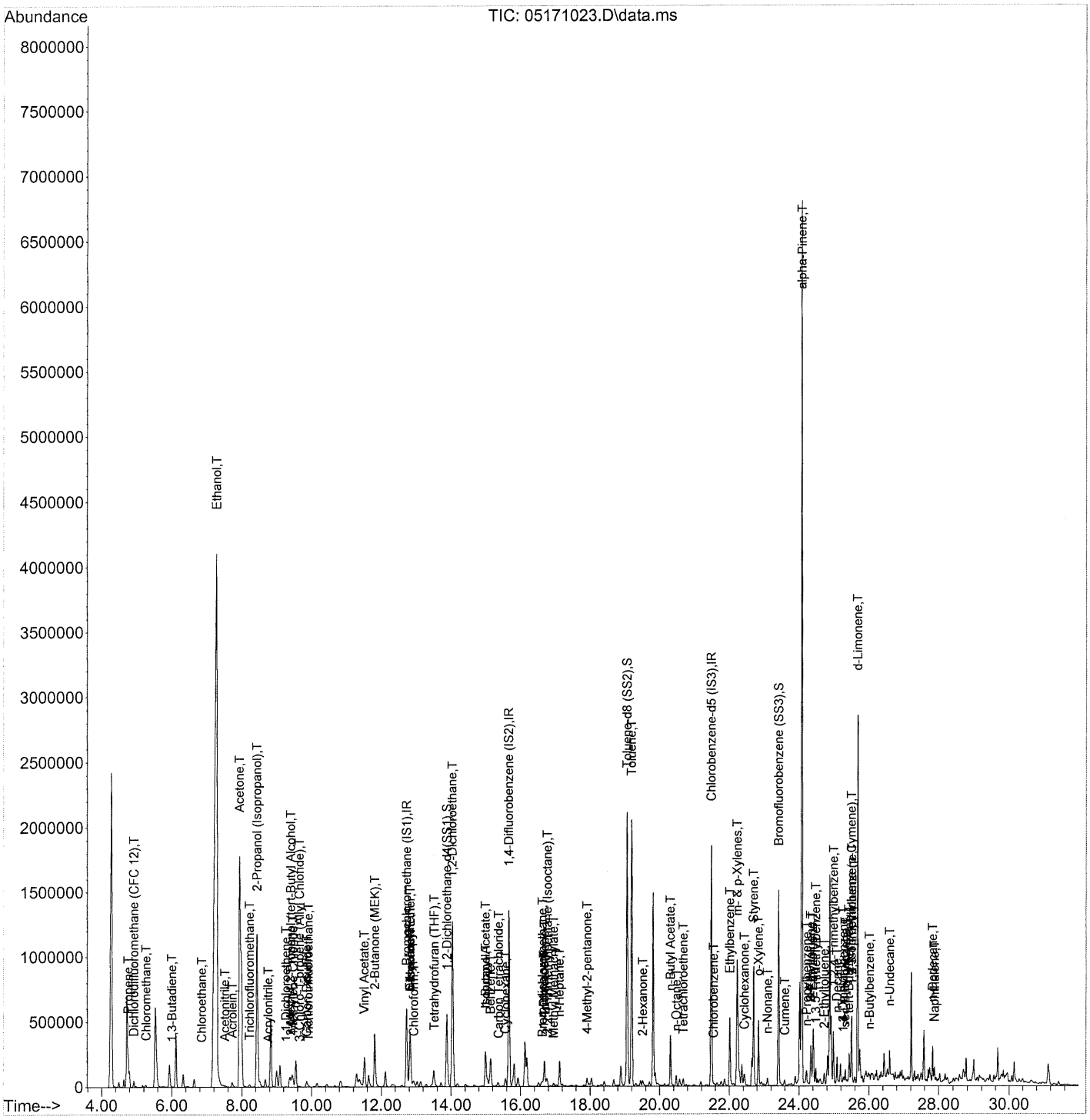
Ion	Exp%	Act%
146.00	100	100
148.00	64.30	61.19
0.00	0.00	0.00
0.00	0.00	0.00

FP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 08:05:27 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 08:05:27 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	314996	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1572523	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	783654	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	558229	23.814	ng		-0.02
Spiked Amount 25.000			Recovery = 95.24%				
57) Toluene-d8 (SS2)	19.07	98	1844352	24.670	ng		0.00
Spiked Amount 25.000			Recovery = 98.68%				
73) Bromofluorobenzene (SS3)	23.42	174	488111	25.574	ng		0.00
Spiked Amount 25.000			Recovery = 102.28%				
Target Compounds							Qvalue
2) Propene	4.76	42	74016	3.012	ng	#	78
3) Dichlorodifluoromethan...	4.92	85	50819	1.205	ng		99
4) Chloromethane	5.27	50	12023	0.386	ng		95
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	843	N.D.			
6) Vinyl Chloride	5.72	62	820	N.D.			
7) 1,3-Butadiene	6.01	54	2547	0.102	ng		91
8) Bromomethane	6.52	94	831	N.D.			
9) Chloroethane	6.86	64	1433	0.081	ng	#	53
10) Ethanol	7.28	45	11528729	860.626	ng		98
11) Acetonitrile	7.51	41	12278	0.363	ng		99
12) Acrolein	7.73	56	48175	4.614	ng		98
13) Acetone	7.94	58	1190401	72.692	ng		86
14) Trichlorofluoromethane	8.22	101	22635	0.620	ng		99
15) 2-Propanol (Isopropanol)	8.44	45	798466	15.727	ng		89
16) Acrylonitrile	8.76	53	1338	0.055	ng		99
17) 1,1-Dichloroethene	9.26	96	1014	0.052	ng	#	77
18) 2-Methyl-2-Propanol (t...	9.41	59	74712	1.426	ng	#	69
19) Methylene Chloride	9.47	84	27644	1.281	ng		91
20) 3-Chloro-1-propene (Al...	9.66	41	1963	0.070	ng	#	36
21) Trichlorotrifluoroethane	9.91	151	4484	0.291	ng		97
22) Carbon Disulfide	9.86	76	104209	1.355	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.30	63	187	N.D.			
25) Methyl tert-Butyl Ether	11.28	73	90	N.D.			
26) Vinyl Acetate	11.51	86	12043	2.437	ng	#	1
27) 2-Butanone (MEK)	11.81	72	201538	14.816	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.84	87	2681	0.133	ng	#	1
30) Ethyl Acetate	12.82	61	77233	9.551	ng		94
31) n-Hexane	12.84	57	116855	2.822	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 08:05:27 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	40076	1.160 ng		100
34) Tetrahydrofuran (THF)	13.52	72	15497	1.178 ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.04	62	1444148	51.555 ng		100
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	15.00	61	1130	0.083 ng	#	1
40) 1-Butanol	14.99	56	245160	11.282 ng	#	77
41) Benzene	15.14	78	278234	3.170 ng		100
42) Carbon Tetrachloride	15.37	117	12642	0.541 ng		97
43) Cyclohexane	15.57	84	33868	0.918 ng		93
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	16.35	63	892	N.D.		
46) Bromodichloromethane	16.63	83	7501	0.285 ng	#	34
47) Trichloroethene	16.68	130	85886	3.838 ng		100
48) 1,4-Dioxane	16.67	88	3570	0.214 ng		81
49) 2,2,4-Trimethylpentane...	16.77	57	46013	0.448 ng		66
50) Methyl Methacrylate	16.95	100	5575	0.606 ng	#	70
51) n-Heptane	17.12	71	62597	2.494 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.92	58	25818	1.361 ng		92
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	1981950	21.370 ng		99
59) 2-Hexanone	19.52	43	30907	0.699 ng		93
60) Dibromochloromethane	19.74	129	87	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.31	43	340240	6.843 ng		99
63) n-Octane	20.48	57	17715	0.823 ng		91
64) Tetrachloroethene	20.67	166	19914	0.917 ng		100
65) Chlorobenzene	21.55	112	4645	0.082 ng		73
66) Ethylbenzene	22.01	91	496904	4.788 ng		97
67) m- & p-Xylenes	22.22	91	963244	11.450 ng		97
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.70	104	577483	9.735 ng		99
70) o-Xylene	22.84	91	370975	4.139 ng		98
71) n-Nonane	23.10	43	26873	0.552 ng		89
72) 1,1,2,2-Tetrachloroethane	22.85	83	846	N.D.		
74) Cumene	23.59	105	29208	0.270 ng		98
75) alpha-Pinene	24.08	93	3228202	63.494 ng		99
76) n-Propylbenzene	24.22	91	92865	0.699 ng		91
77) 3-Ethyltoluene	24.34	105	185213	1.850 ng		97
78) 4-Ethyltoluene	24.40	105	102217	1.010 ng		94
79) 1,3,5-Trimethylbenzene	24.48	105	65964	0.778 ng		95

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:05
Operator : EM
Sample : P1001651-010 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 08:05:27 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

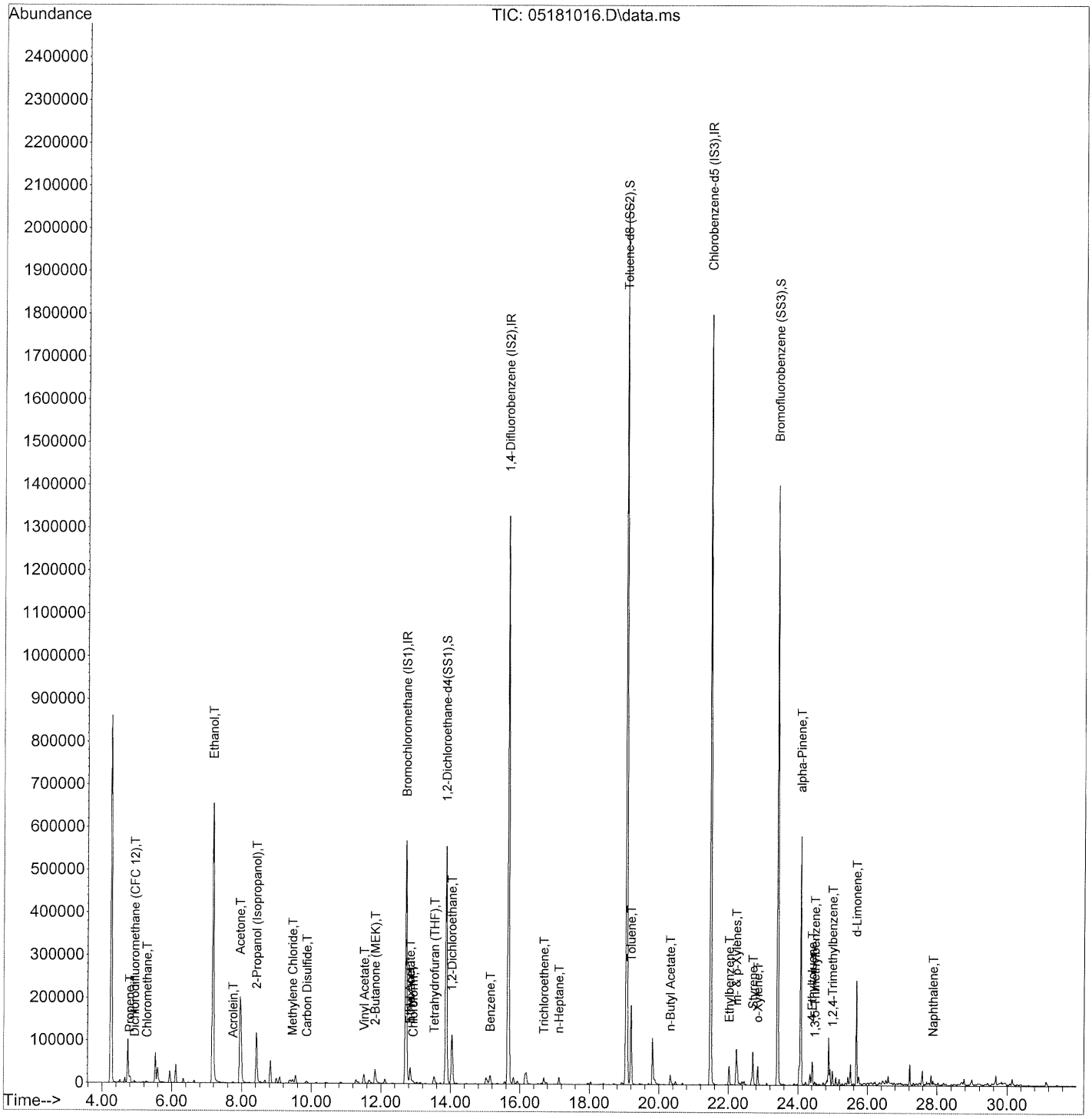
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	2185	N.D.		
81) 2-Ethyltoluene	24.72	105	67939	0.650 ng	#	70
82) 1,2,4-Trimethylbenzene	24.99	105	229571	2.589 ng		87
83) n-Decane	25.09	57	78583	1.541 ng		98
84) Benzyl Chloride	25.18	91	1480	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	9379	0.226 ng		96
86) 1,4-Dichlorobenzene	25.27	146	9379	0.213 ng		96
87) sec-Butylbenzene	25.32	105	7338	0.063 ng	#	77
88) 4-Isopropyltoluene (p-...	25.50	119	263914	2.310 ng		97
89) 1,2,3-Trimethylbenzene	25.51	105	63611	0.700 ng		78
90) 1,2-Dichlorobenzene	25.69	146	115	N.D.		
91) d-Limonene	25.68	68	774976	22.202 ng		96
92) 1,2-Dibromo-3-Chloropr...	26.60	157	257	N.D.		
93) n-Undecane	26.60	57	76862	1.504 ng		81
94) 1,2,4-Trichlorobenzene	27.74	180	592	N.D.		
95) Naphthalene	27.88	128	91533	0.934 ng		100
96) n-Dodecane	27.83	57	94190	1.797 ng		95
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.43	55	48331	1.653 ng		95
99) tert-Butylbenzene	25.43	119	11151	0.124 ng		95
100) n-Butylbenzene	26.02	91	25489	0.280 ng	#	54

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 20 17:28:21 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 20 17:28:21 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	303510	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1546553	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	767094	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	555177	24.580	ng		-0.03
Spiked Amount 25.000			Recovery	=	98.32%		✓
57) Toluene-d8 (SS2)	19.06	98	1812119	24.762	ng		-0.01
Spiked Amount 25.000			Recovery	=	99.04%		✓
73) Bromofluorobenzene (SS3)	23.42	174	465631	24.923	ng		0.00
Spiked Amount 25.000			Recovery	=	99.68%		✓
Target Compounds							Qvalue
2) Propene	4.79	42	3546	0.150	ng	#	35
3) Dichlorodifluoromethan...	4.94	85	4820	0.119	ng	#	88
4) Chloromethane	5.29	50	3274	0.109	ng		94
10) Ethanol	7.18	45	1050212	81.366	ng		100
12) Acrolein	7.75	56	3753	0.373	ng		97
13) Acetone	7.95	58	116316	7.372	ng	#	81
15) 2-Propanol (Isopropanol)	8.42	45	87617	1.791	ng		94
19) Methylene Chloride	9.46	84	3004	0.145	ng		98
22) Carbon Disulfide	9.87	76	13957	0.188	ng		89
26) Vinyl Acetate	11.52	86	558	0.117	ng	#	1
27) 2-Butanone (MEK)	11.83	72	19774	1.509	ng	#	84
30) Ethyl Acetate	12.84	61	5671	0.728	ng		92
31) n-Hexane	12.84	57	10894	0.273	ng		90
32) Chloroform	12.93	83	3626	0.109	ng		97
34) Tetrahydrofuran (THF)	13.53	72	5273	0.416	ng	#	54
36) 1,2-Dichloroethane	14.03	62	141284	5.235	ng		98
41) Benzene	15.15	78	26993	0.313	ng		99
47) Trichloroethene	16.69	130	8075	0.367	ng		99
51) n-Heptane	17.12	71	5638	0.228	ng		93
58) Toluene	19.20	91	189460	2.087	ng		98
62) n-Butyl Acetate	20.33	43	28479	0.585	ng		98
66) Ethylbenzene	22.02	91	47096	0.464	ng		96
67) m- & p-Xylenes	22.23	91	91371	1.110	ng		96
69) Styrene	22.70	104	51718	0.891	ng		99
70) o-Xylene	22.85	91	36320	0.414	ng		95
75) alpha-Pinene	24.08	93	274894	5.523	ng		92
78) 4-Ethyltoluene	24.40	105	11116	0.112	ng		89
79) 1,3,5-Trimethylbenzene	24.49	105	8309	0.100	ng		81
82) 1,2,4-Trimethylbenzene	24.99	105	21840	0.252	ng		83
91) d-Limonene	25.68	68	67844	1.986	ng		94

5/20/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 20 17:28:21 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

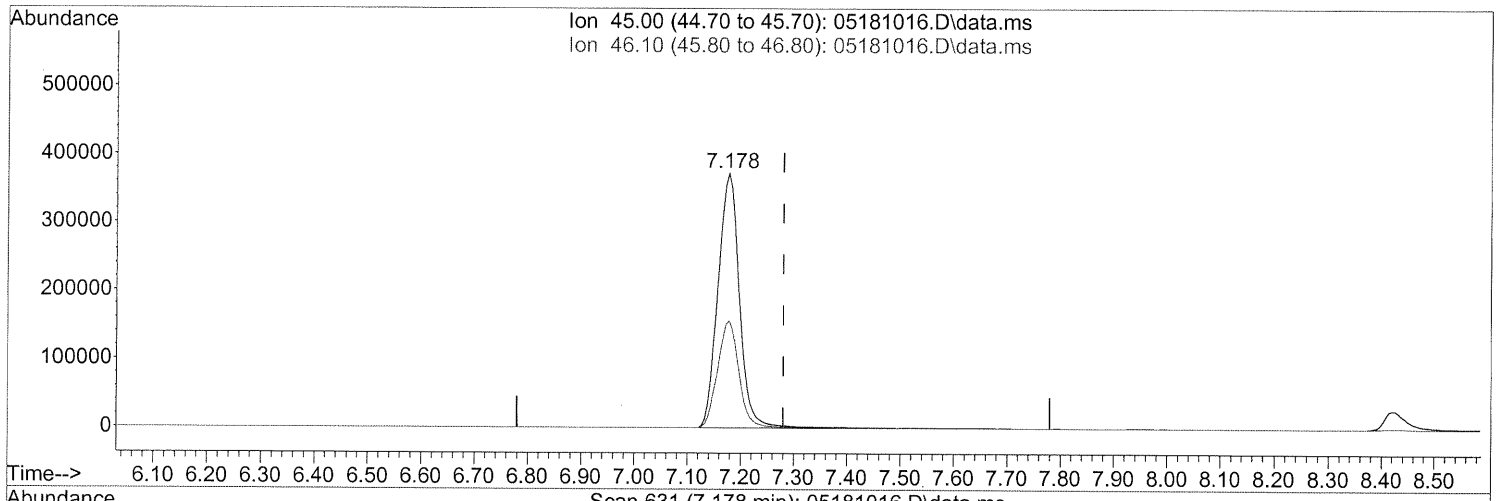
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Naphthalene	27.89	128	12404	0.129	ng	92

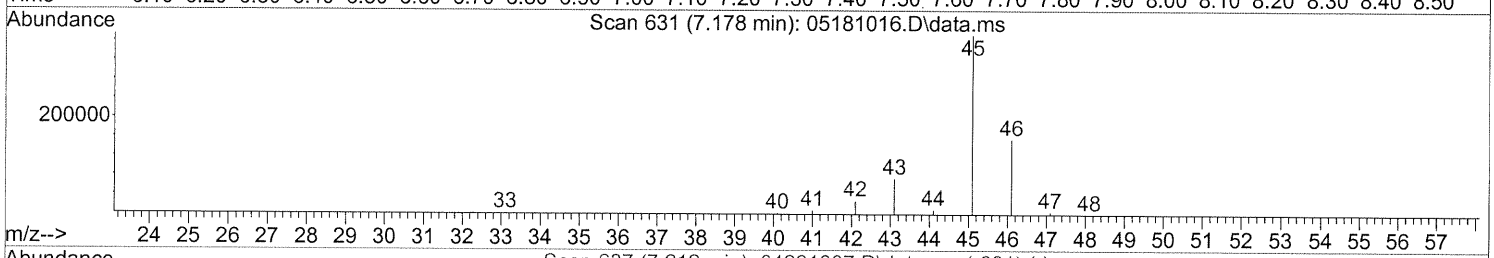
(#) = qualifier out of range (m) = manual integration (+) = signals summed

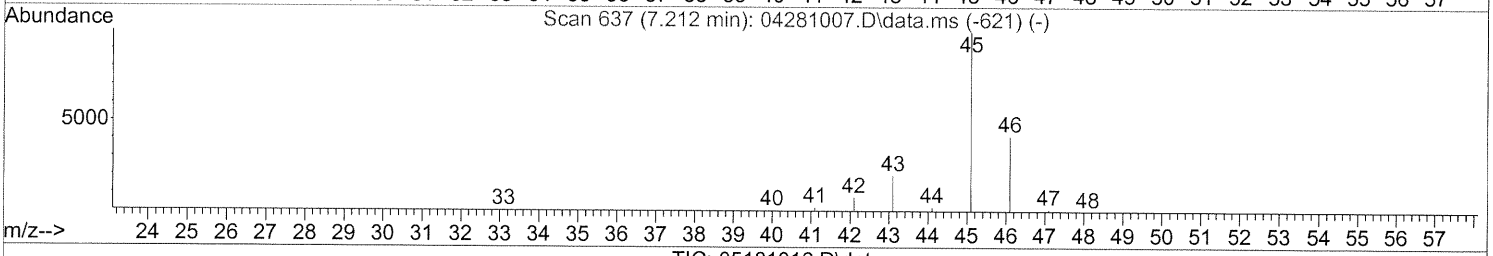
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 08:43:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181016.D\data.ms

(10) Ethanol (T)

7.178min (-0.103) 81.37ng

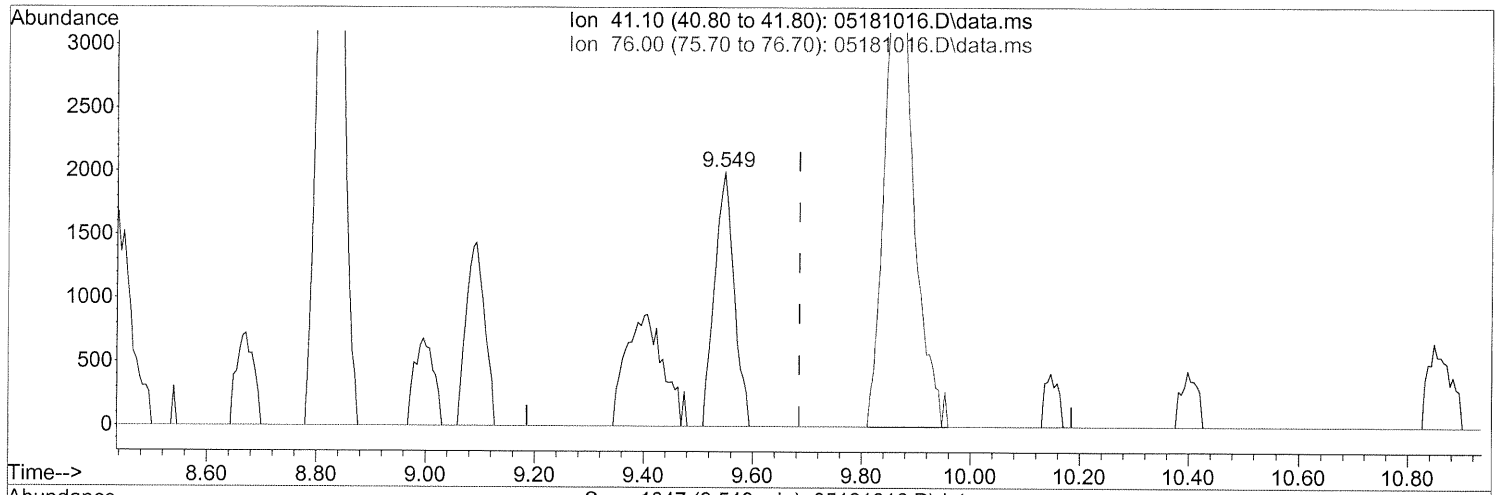
response 1050212

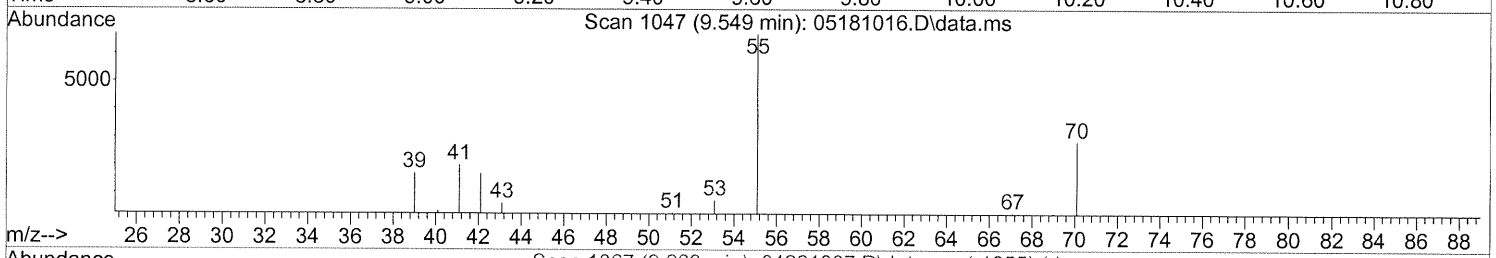
Ion	Exp%	Act%
45.00	100	100
46.10	41.30	41.49
0.00	0.00	0.00
0.00	0.00	0.00

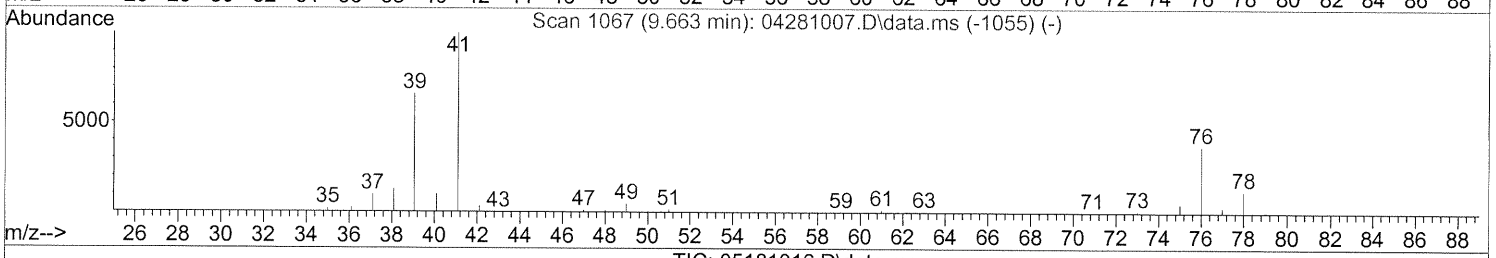
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 08:43:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181016.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.549min (-0.137) 0.18ng

response 4957

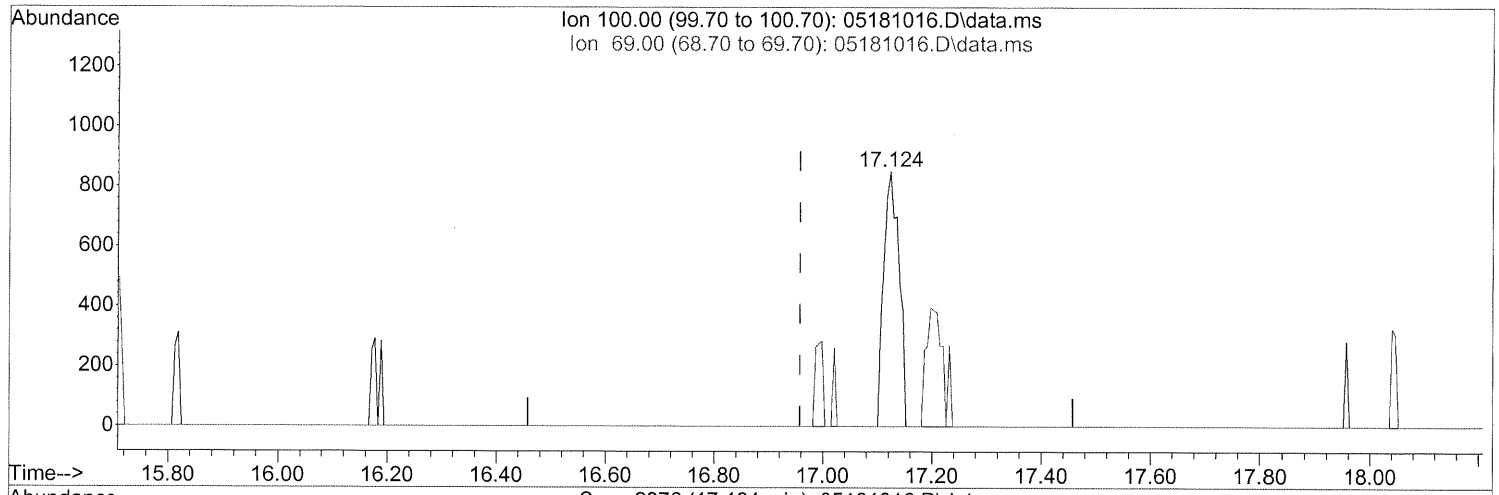
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

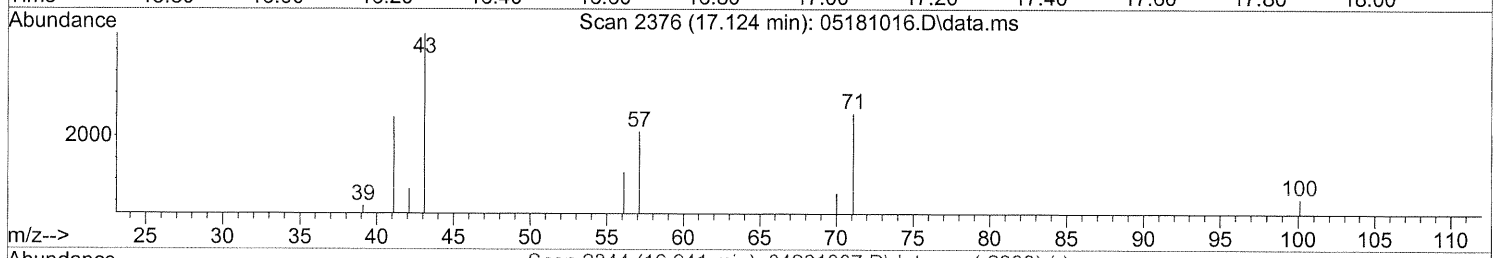
7P

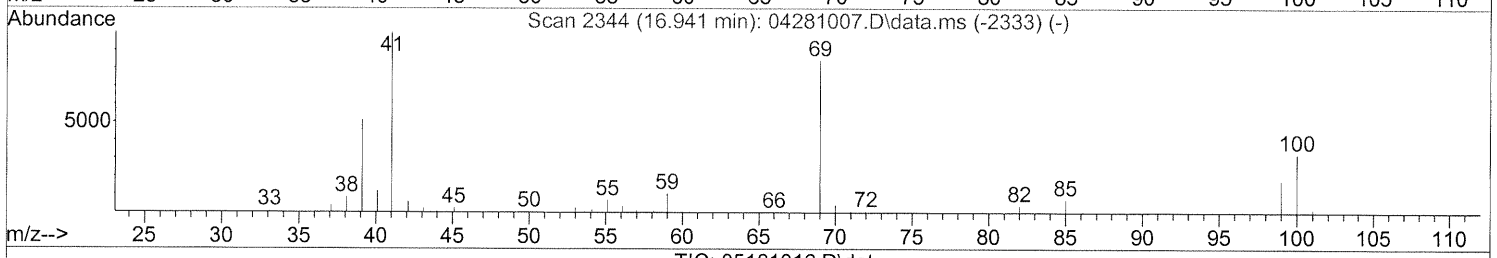
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 08:43:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181016.D\data.ms

(50) Methyl Methacrylate (T)

17.124min (+0.166) 0.18ng

response 1645

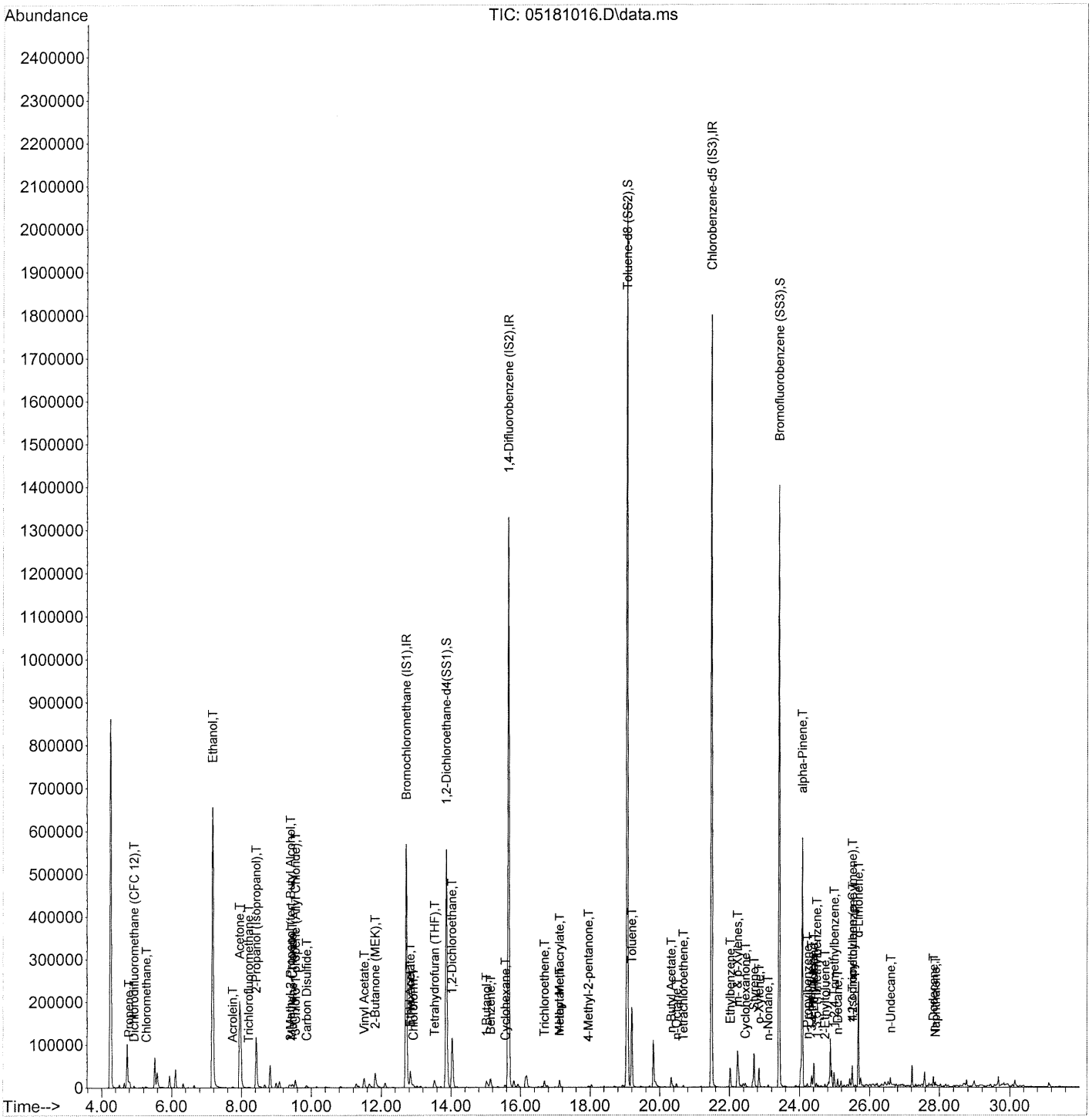
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 08:43:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 08:43:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	303510	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1546553	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	767094	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	555177	24.580	ng	-0.03
Spiked Amount 25.000			Recovery = 98.32%			
57) Toluene-d8 (SS2)	19.06	98	1812119	24.762	ng	-0.01
Spiked Amount 25.000			Recovery = 99.04%			
73) Bromofluorobenzene (SS3)	23.42	174	465631	24.923	ng	0.00
Spiked Amount 25.000			Recovery = 99.68%			

Target Compounds							Qvalue
2) Propene	4.79	42	3546	0.150	ng	#	35
3) Dichlorodifluoromethan...	4.94	85	4820	0.119	ng	#	88
4) Chloromethane	5.29	50	3274	0.109	ng		94
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	5.95	54	88	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.18	45	1050212	81.366	ng		100
11) Acetonitrile	7.54	41	1228	N.D.			
12) Acrolein	7.75	56	3753	0.373	ng		97
13) Acetone	7.95	58	116316	7.372	ng	#	81
14) Trichlorofluoromethane	8.21	101	1897	0.054	ng		96
15) 2-Propanol (Isopropanol)	8.42	45	87617	1.791	ng		94
16) Acrylonitrile	8.83	53	595	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.41	59	13309	0.264	ng		84
19) Methylene Chloride	9.46	84	3004	0.145	ng		98
20) 3-Chloro-1-propene (Al...	9.55	41	4957	0.183	ng	#	36
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	9.87	76	13957	0.188	ng		89
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	11.52	86	558	0.117	ng	#	1
27) 2-Butanone (MEK)	11.83	72	19774	1.509	ng	#	84
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	12.84	61	5671	0.728	ng		92
31) n-Hexane	12.84	57	10894	0.273	ng		90

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 08:43:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	3626	0.109 ng		97
34) Tetrahydrofuran (THF)	13.53	72	5273	0.416 ng	#	54
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.03	62	141284	5.235 ng		98
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.03	56	18610	0.871 ng		85
41) Benzene	15.15	78	26993	0.313 ng		99
42) Carbon Tetrachloride	15.36	117	870	N.D.		
43) Cyclohexane	15.57	84	2905	0.080 ng	#	79
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.64	83	91	N.D.		
47) Trichloroethene	16.69	130	8075	0.367 ng		99
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	4298	N.D.		
50) Methyl Methacrylate	17.12	100	1645	0.182 ng	#	1
51) n-Heptane	17.12	71	5638	0.228 ng		93
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.95	58	1403	0.075 ng	#	30
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	189460	2.087 ng		98
59) 2-Hexanone	19.51	43	1000	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.33	43	28479	0.585 ng		98
63) n-Octane	20.49	57	1569	0.074 ng		86
64) Tetrachloroethene	20.68	166	1738	0.082 ng		99
65) Chlorobenzene	21.55	112	180	N.D.		
66) Ethylbenzene	22.02	91	47096	0.464 ng		96
67) m- & p-Xylenes	22.23	91	91371	1.110 ng		96
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.70	104	51718	0.891 ng		99
70) o-Xylene	22.85	91	36320	0.414 ng		95
71) n-Nonane	23.10	43	2999	0.063 ng	#	67
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	23.59	105	3623	N.D.		
75) alpha-Pinene	24.08	93	274894	5.523 ng		92
76) n-Propylbenzene	24.23	91	9313	0.072 ng		88
77) 3-Ethyltoluene	24.34	105	18298	0.187 ng		96
78) 4-Ethyltoluene	24.40	105	11116	0.112 ng		89
79) 1,3,5-Trimethylbenzene	24.49	105	8309	0.100 ng		81

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181016.D
Acq On : 18 May 2010 19:57
Operator : EM
Sample : P1001651-010 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 08:43:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.69	118	91	N.D.		
81) 2-Ethyltoluene	24.73	105	7341	0.072 ng	#	66
82) 1,2,4-Trimethylbenzene	24.99	105	21840	0.252 ng		83
83) n-Decane	25.09	57	7660	0.153 ng		91
84) Benzyl Chloride	25.17	91	739	N.D.		
85) 1,3-Dichlorobenzene	25.21	146	214	N.D.		
86) 1,4-Dichlorobenzene	25.27	146	1444	N.D.		
87) sec-Butylbenzene	25.33	105	833	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	27069	0.242 ng		99
89) 1,2,3-Trimethylbenzene	25.51	105	6130	0.069 ng		81
90) 1,2-Dichlorobenzene	25.27	146	1444	N.D.		
91) d-Limonene	25.68	68	67844	1.986 ng		94
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	6904	0.138 ng	#	65
94) 1,2,4-Trichlorobenzene	27.74	180	851	N.D.		
95) Naphthalene	27.89	128	12404	0.129 ng		92
96) n-Dodecane	27.83	57	8794	0.171 ng		91
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.45	55	4374	0.153 ng	#	75
99) tert-Butylbenzene	24.88	119	2901	N.D.		
100) n-Butylbenzene	26.02	91	2294	N.D.		

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110520** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-011

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01612

Initial Pressure (psig): -2.2 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**6.2**	0.73	**3.6**	0.42	**M1**
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.1**	0.73	**0.43**	0.15	
74-87-3	**Chloromethane**	**0.66**	0.29	**0.32**	0.14	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.73	ND	0.10	
75-01-4	Vinyl Chloride	ND	0.15	ND	0.057	
106-99-0	1,3-Butadiene	ND	0.29	ND	0.13	
74-83-9	Bromomethane	ND	0.15	ND	0.038	
75-00-3	Chloroethane	ND	0.15	ND	0.055	
64-17-5	**Ethanol**	**1,500**	73	**810**	39	**D**
75-05-8	Acetonitrile	ND	0.73	ND	0.43	
107-02-8	**Acrolein**	**10**	2.9	**4.6**	1.3	
67-64-1	**Acetone**	**140**	7.3	**60**	3.1	
75-69-4	**Trichlorofluoromethane**	**1.1**	0.15	**0.19**	0.026	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**28**	1.5	**11**	0.59	
107-13-1	Acrylonitrile	ND	0.73	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.15	ND	0.037	
75-09-2	**Methylene Chloride**	**2.3**	0.73	**0.66**	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	ND	0.047	
76-13-1	**Trichlorotrifluoroethane**	**0.51**	0.15	**0.066**	0.019	
75-15-0	Carbon Disulfide	ND	7.3	ND	2.3	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	ND	0.037	
75-34-3	1,1-Dichloroethane	ND	0.15	ND	0.036	
1634-04-4	Methyl tert-Butyl Ether	ND	0.15	ND	0.041	
108-05-4	**Vinyl Acetate**	**14**	7.3	**3.9**	2.1	
78-93-3	**2-Butanone (MEK)**	**29**	7.3	**9.7**	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110520** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-011

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01612

Initial Pressure (psig): -2.2 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.15	ND	0.037	
141-78-6	**Ethyl Acetate**	**18**	0.73	**5.1**	0.20	
110-54-3	**n-Hexane**	**5.0**	0.73	**1.4**	0.21	
67-66-3	**Chloroform**	**2.0**	0.15	**0.42**	0.030	
109-99-9	**Tetrahydrofuran (THF)**	**1.8**	0.73	**0.62**	0.25	
107-06-2	**1,2-Dichloroethane**	**91**	0.15	**23**	0.036	
71-55-6	1,1,1-Trichloroethane	ND	0.15	ND	0.027	
71-43-2	**Benzene**	**5.6**	0.15	**1.8**	0.046	
56-23-5	**Carbon Tetrachloride**	**0.95**	0.15	**0.15**	0.023	
110-82-7	**Cyclohexane**	**1.6**	0.73	**0.47**	0.21	
78-87-5	1,2-Dichloropropane	ND	0.15	ND	0.032	
75-27-4	Bromodichloromethane	ND	0.15	ND	0.022	
79-01-6	**Trichloroethene**	**6.6**	0.15	**1.2**	0.027	
123-91-1	1,4-Dioxane	ND	0.73	ND	0.20	
80-62-6	**Methyl Methacrylate**	**1.2**	0.73	**0.29**	0.18	
142-82-5	**n-Heptane**	**4.5**	0.73	**1.1**	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.73	ND	0.16	
108-10-1	**4-Methyl-2-pentanone**	**2.8**	0.73	**0.68**	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.73	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.15	ND	0.027	
108-88-3	**Toluene**	**39**	0.73	**10**	0.19	
591-78-6	**2-Hexanone**	**1.9**	0.73	**0.47**	0.18	
124-48-1	Dibromochloromethane	ND	0.15	ND	0.017	
106-93-4	1,2-Dibromoethane	ND	0.15	ND	0.019	
123-86-4	**n-Butyl Acetate**	**15**	0.73	**3.1**	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110520**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-011

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01612

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -2.2 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**1.6**	0.73	**0.33**	0.16	
127-18-4	**Tetrachloroethene**	**1.6**	0.15	**0.24**	0.022	
108-90-7	**Chlorobenzene**	**0.16**	0.15	**0.035**	0.032	**M1**
100-41-4	**Ethylbenzene**	**8.6**	0.73	**2.0**	0.17	
179601-23-1	**m,p-Xylenes**	**21**	0.73	**4.7**	0.17	
75-25-2	Bromoform	ND	0.73	ND	0.071	
100-42-5	**Styrene**	**18**	0.73	**4.2**	0.17	
95-47-6	**o-Xylene**	**7.5**	0.73	**1.7**	0.17	
111-84-2	**n-Nonane**	**1.0**	0.73	**0.19**	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.15	ND	0.021	
98-82-8	Cumene	ND	0.73	ND	0.15	
80-56-8	**alpha-Pinene**	**120**	0.73	**21**	0.13	
103-65-1	**n-Propylbenzene**	**1.2**	0.73	**0.25**	0.15	
622-96-8	**4-Ethyltoluene**	**1.8**	0.73	**0.36**	0.15	
108-67-8	**1,3,5-Trimethylbenzene**	**1.4**	0.73	**0.28**	0.15	
95-63-6	**1,2,4-Trimethylbenzene**	**4.9**	0.73	**1.0**	0.15	
100-44-7	Benzyl Chloride	ND	0.73	ND	0.14	
541-73-1	1,3-Dichlorobenzene	ND	0.15	ND	0.024	
106-46-7	**1,4-Dichlorobenzene**	**0.41**	0.15	**0.069**	0.024	
95-50-1	1,2-Dichlorobenzene	ND	0.15	ND	0.024	
5989-27-5	**d-Limonene**	**35**	0.73	**6.2**	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.73	ND	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	0.73	ND	0.098	
91-20-3	**Naphthalene**	**1.6**	0.73	**0.31**	0.14	
87-68-3	Hexachlorobutadiene	ND	0.73	ND	0.068	

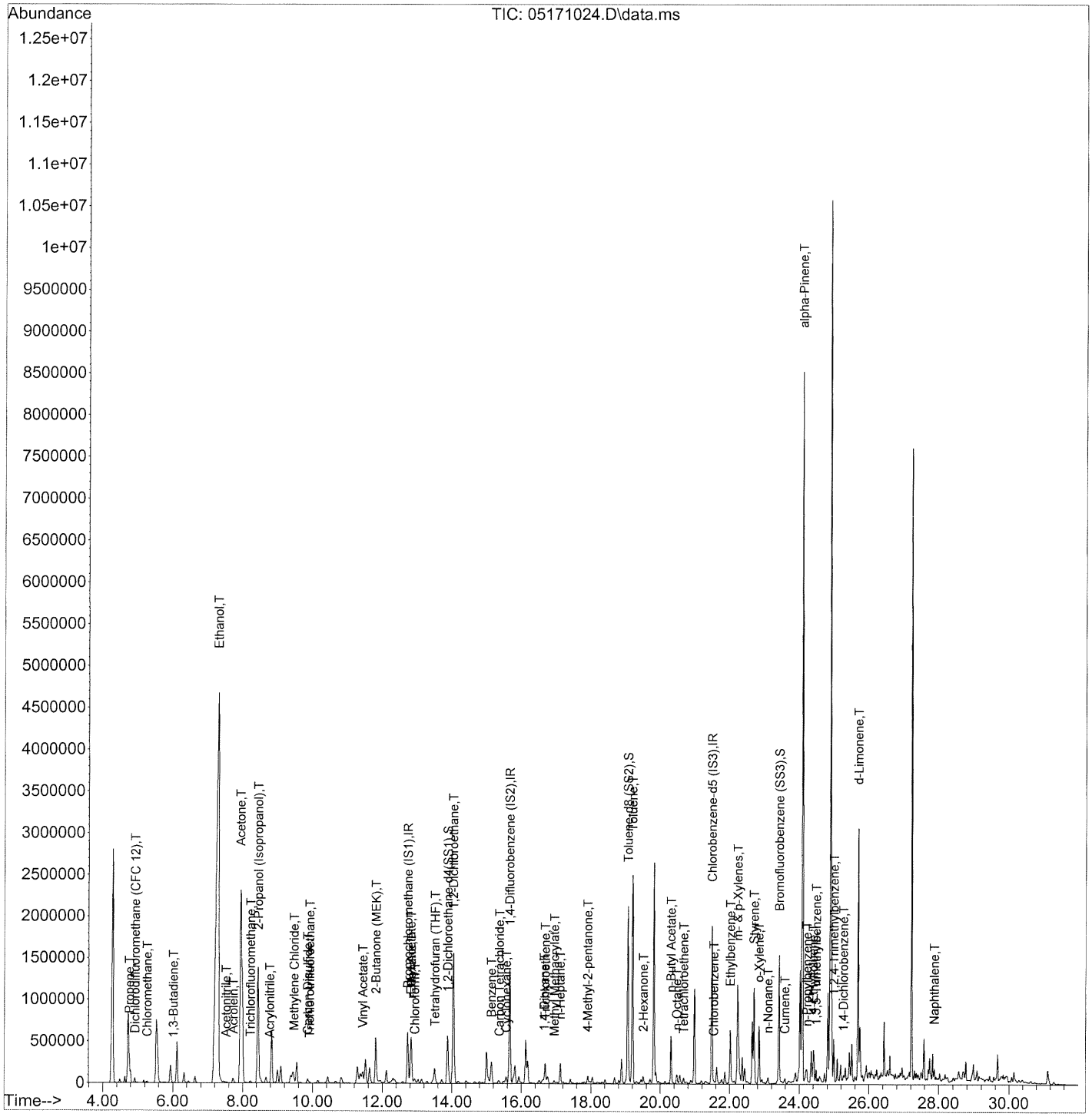
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 16:19:52 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 16:19:52 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	316945	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1582259	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	780335	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	561132	23.791	ng		-0.02
Spiked Amount 25.000			Recovery	=	95.16%	✓	
57) Toluene-d8 (SS2)	19.07	98	1847878	24.822	ng		0.00
Spiked Amount 25.000			Recovery	=	99.28%	✓	
73) Bromofluorobenzene (SS3)	23.42	174	492522	25.915	ng		0.00
Spiked Amount 25.000			Recovery	=	103.68%	✓	
Target Compounds							Qvalue
2) Propene	4.76	42	105086	4.251	ng M	#	81
3) Dichlorodifluoromethan...	4.92	85	61857	1.458	ng		99
4) Chloromethane	5.26	50	14159	0.451	ng		100
7) 1,3-Butadiene	6.02	54	3417	0.136	ng		97
10) Ethanol	7.30	45	14528454	1077.888	ng see dil		98
11) Acetonitrile	7.52	41	14255	0.419	ng		97
12) Acrolein	7.72	56	75481	7.184	ng		99
13) Acetone	7.94	58	1608041	97.591	ng		93
14) Trichlorofluoromethane	8.22	101	27108	0.738	ng		99
15) 2-Propanol (Isopropanol)	8.44	45	984731	19.276	ng		89
16) Acrylonitrile	8.77	53	2511	0.102	ng		91
19) Methylene Chloride	9.47	84	34212	1.576	ng		95
21) Trichlorotrifluoroethane	9.92	151	5369	0.346	ng		94
22) Carbon Disulfide	9.86	76	114062	1.474	ng		99
26) Vinyl Acetate	11.44	86	47324m	9.516	ng		
27) 2-Butanone (MEK)	11.81	72	268694	19.632	ng	#	87
30) Ethyl Acetate	12.82	61	102211	12.562	ng		95
31) n-Hexane	12.84	57	144064	3.458	ng		97
32) Chloroform	12.93	83	48365	1.391	ng		100
34) Tetrahydrofuran (THF)	13.52	72	16671	1.260	ng	#	1
36) 1,2-Dichloroethane	14.04	62	1765765	62.649	ng		100
41) Benzene	15.14	78	339801	3.847	ng		100
42) Carbon Tetrachloride	15.37	117	15363	0.653	ng		100
43) Cyclohexane	15.57	84	41347	1.114	ng		93
47) Trichloroethene	16.68	130	102398	4.548	ng		99
48) 1,4-Dioxane	16.66	88	3089	0.184	ng	#	74
50) Methyl Methacrylate	16.95	100	7560	0.816	ng	#	76
51) n-Heptane	17.12	71	78143	3.095	ng		96
53) 4-Methyl-2-pentanone	17.91	58	36203	1.897	ng		90
58) Toluene	19.20	91	2441297	26.435	ng		99

MM 5/20/10

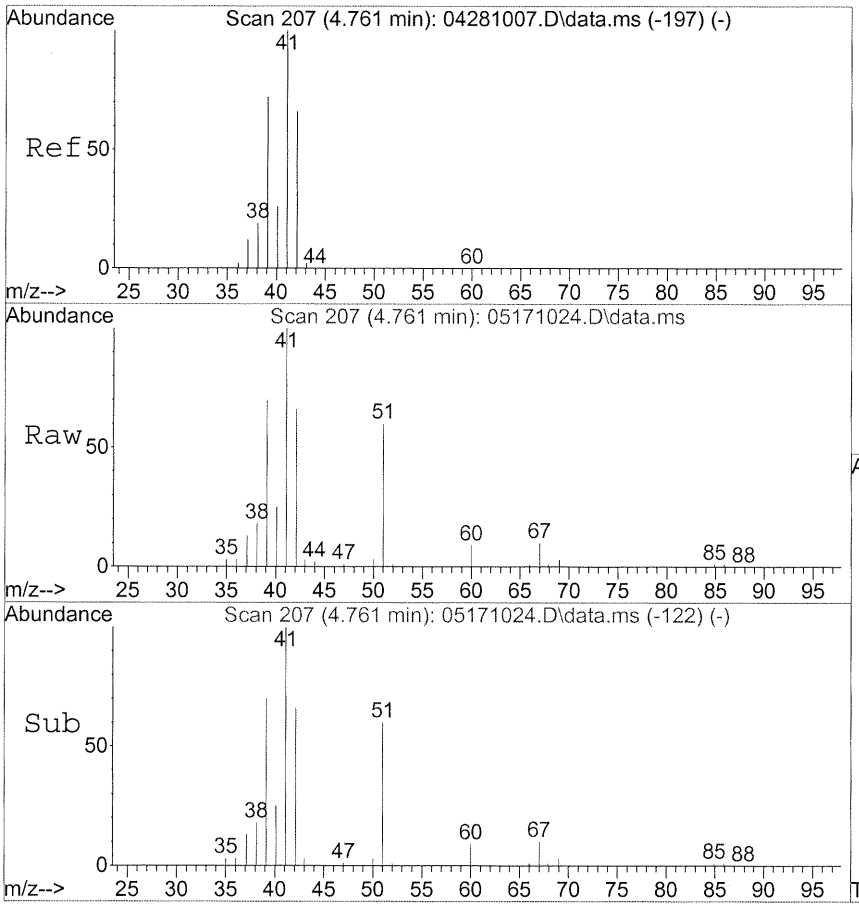
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 16:19:52 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
59) 2-Hexanone	19.51	43	58227	1.322	ng	88
62) n-Butyl Acetate	20.31	43	496338	10.024	ng	100
63) n-Octane	20.48	57	22770	1.063	ng	91
64) Tetrachloroethene	20.67	166	24364	1.126	ng	100
65) Chlorobenzene	21.54	112	6187	0.110	ng M	85
66) Ethylbenzene	22.01	91	607552	5.880	ng	97
67) m- & p-Xylenes	22.22	91	1182432	14.116	ng	98
69) Styrene	22.70	104	717147	12.141	ng	99
70) o-Xylene	22.84	91	457179	5.123	ng	98
71) n-Nonane	23.10	43	33064m	0.683	ng	
74) Cumene	23.59	105	35909	0.333	ng	99
75) alpha-Pinene	24.08	93	4040174	79.802	ng	99
76) n-Propylbenzene	24.22	91	112795	0.853	ng	86
78) 4-Ethyltoluene	24.40	105	122044	1.211	ng	96
79) 1,3,5-Trimethylbenzene	24.48	105	80261	0.950	ng	96
82) 1,2,4-Trimethylbenzene	24.99	105	298057	3.375	ng	87
86) 1,4-Dichlorobenzene	25.27	146	12432	0.284	ng	98
91) d-Limonene	25.68	68	823985	23.706	ng	95
95) Naphthalene	27.88	128	110200	1.130	ng	100

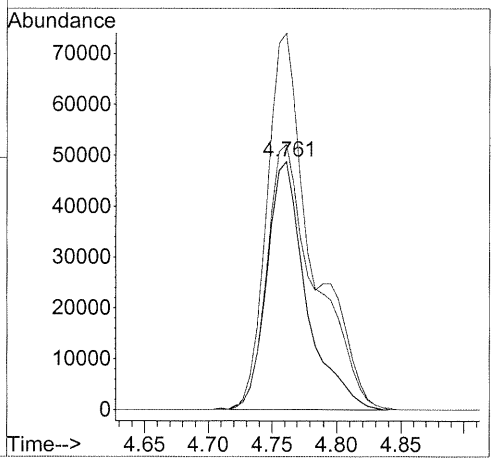
(#) = qualifier out of range (m) = manual integration (+) = signals summed

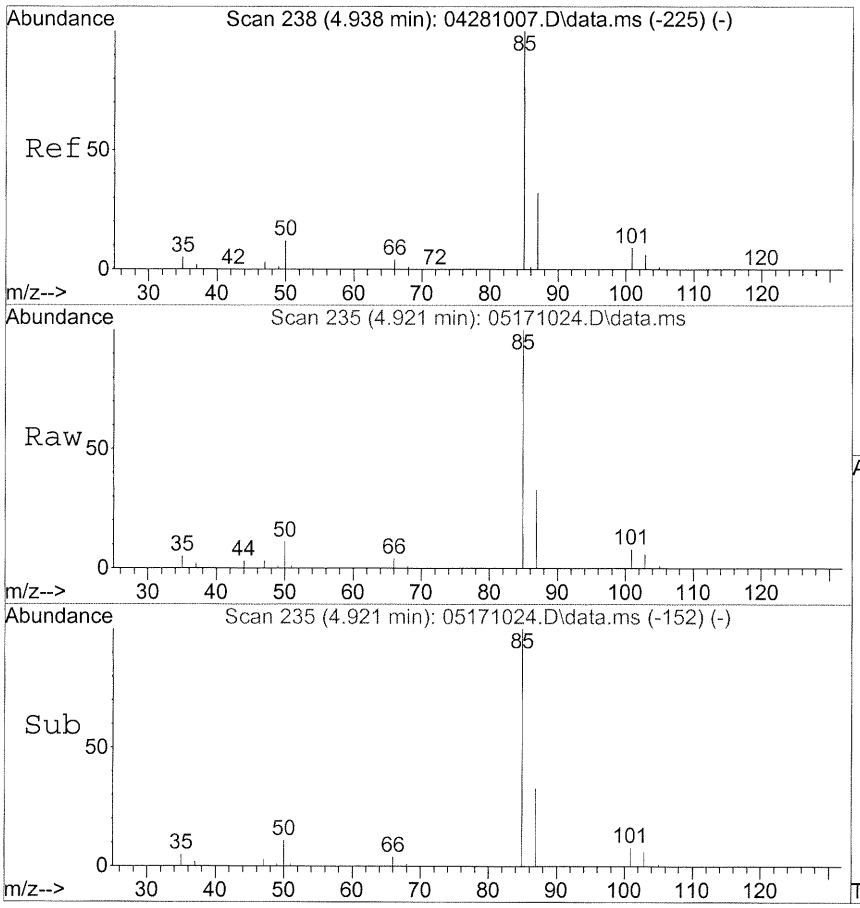


#2
Propene
Concen: 4.25 ng
RT: 4.76 min Scan# 207
Delta R.T. -0.017 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 42 Resp: 105086

Ion	Ratio	Lower	Upper
42	100		
39	135.7	88.4	128.4#
41	167.4	129.9	169.9

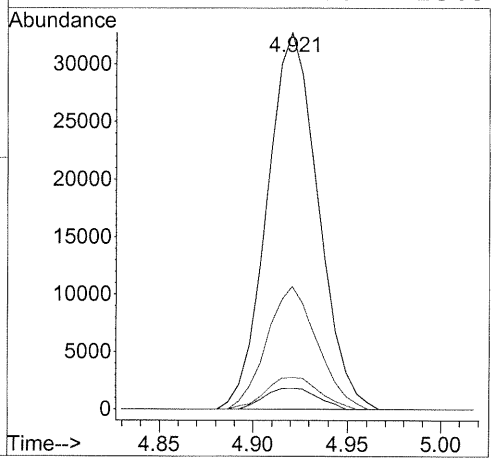


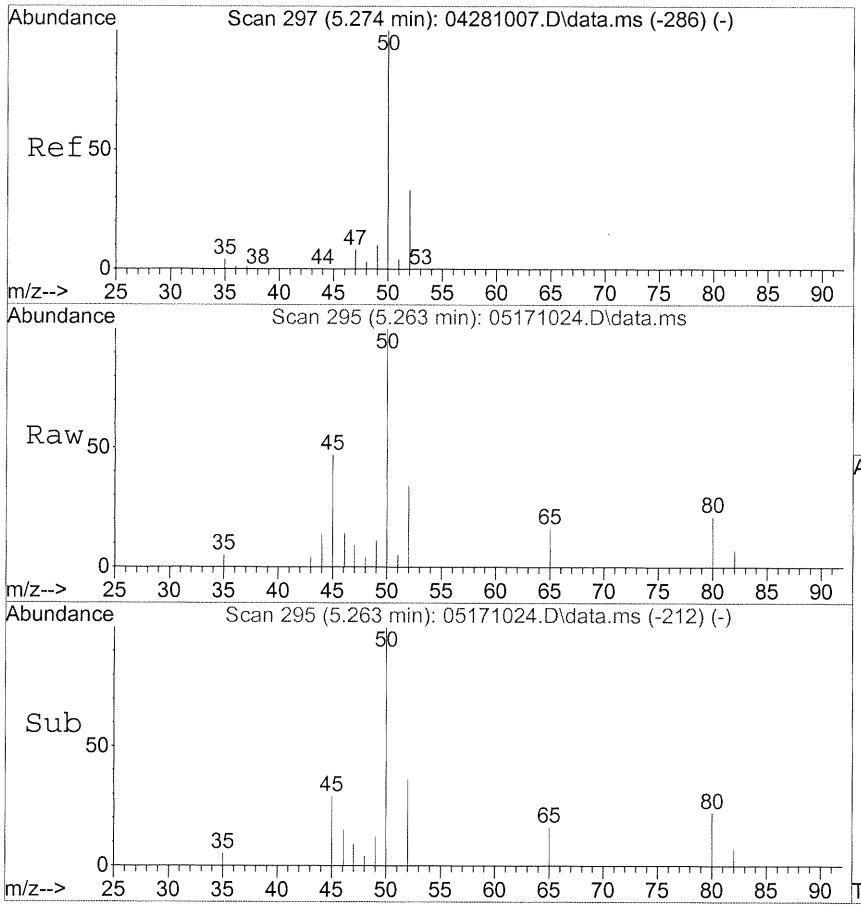


#3
Dichlorodifluoromethane (CFC
Concen: 1.46 ng
RT: 4.92 min Scan# 235
Delta R.T. -0.029 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 85 Resp: 61857

Ion	Ratio	Lower	Upper
85	100		
87	32.3	12.6	52.6
101	8.9	0.0	29.3
103	5.7	0.0	25.9

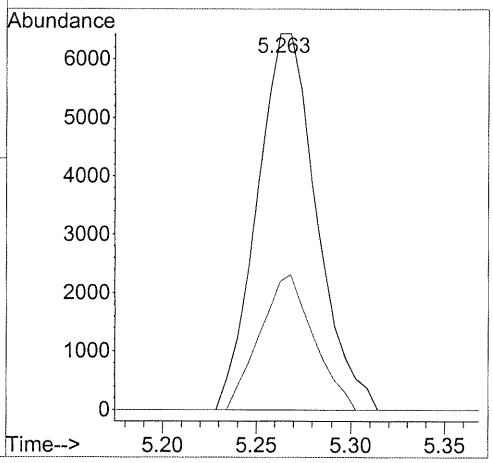


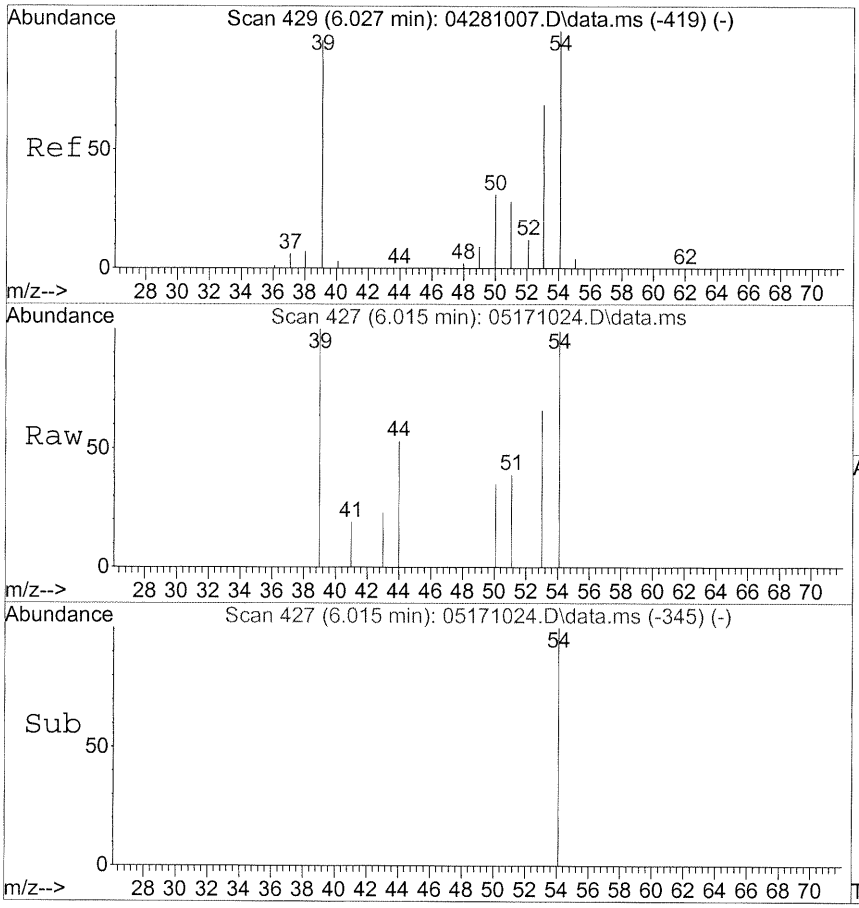


#4
Chloromethane
Concen: 0.45 ng
RT: 5.26 min Scan# 295
Delta R.T. -0.029 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 50 Resp: 14159

Ion	Ratio	Lower	Upper
50	100		
52	32.4	12.3	52.3

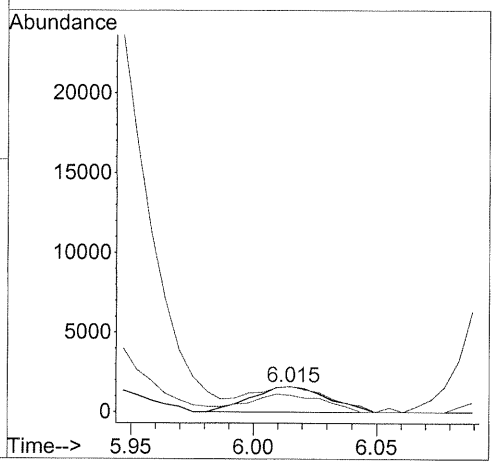


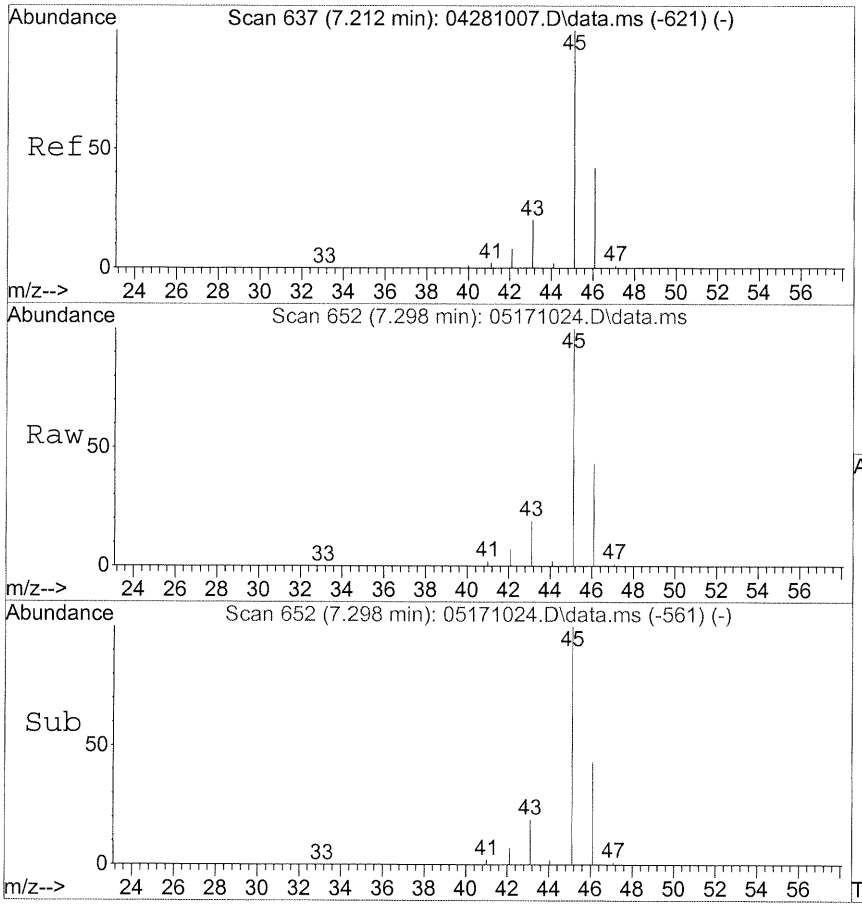


#7
1,3-Butadiene
Concen: 0.14 ng
RT: 6.02 min Scan# 427
Delta R.T. -0.034 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 54 Resp: 3417

Ion	Ratio	Lower	Upper
54	100		
39	99.3	76.6	116.6
53	67.4	49.7	89.7

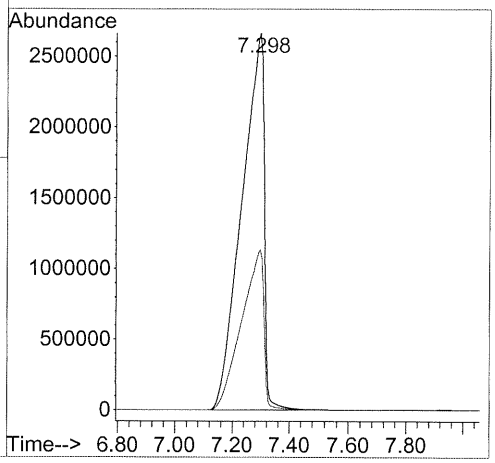


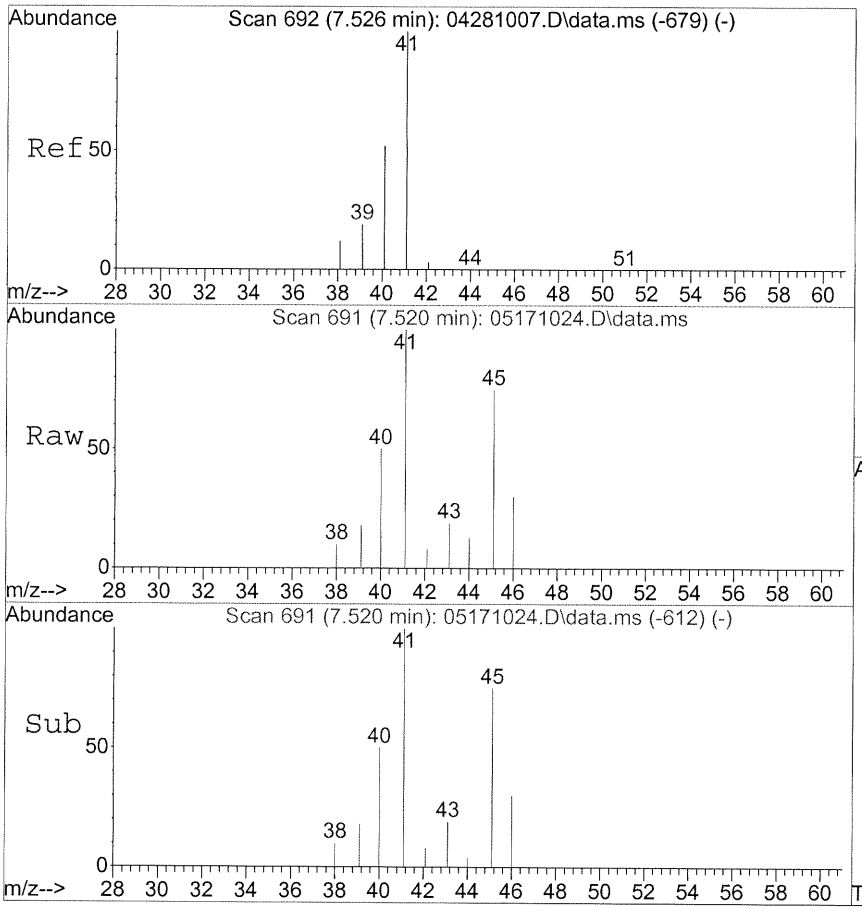


#10
Ethanol
Concen: 1077.89 ng
RT: 7.30 min Scan# 652
Delta R.T. 0.017 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 45 Resp:14528454

Ion	Ratio	Lower	Upper
45	100		
46	42.3	21.3	61.3

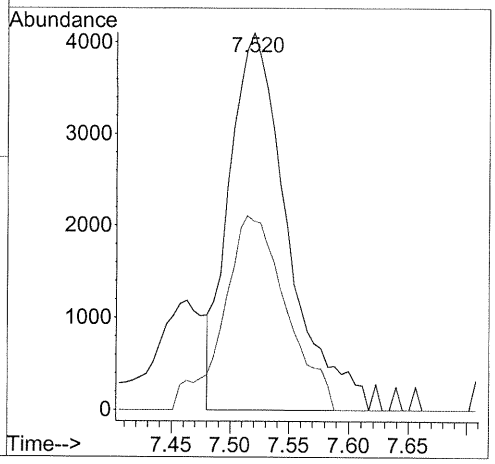


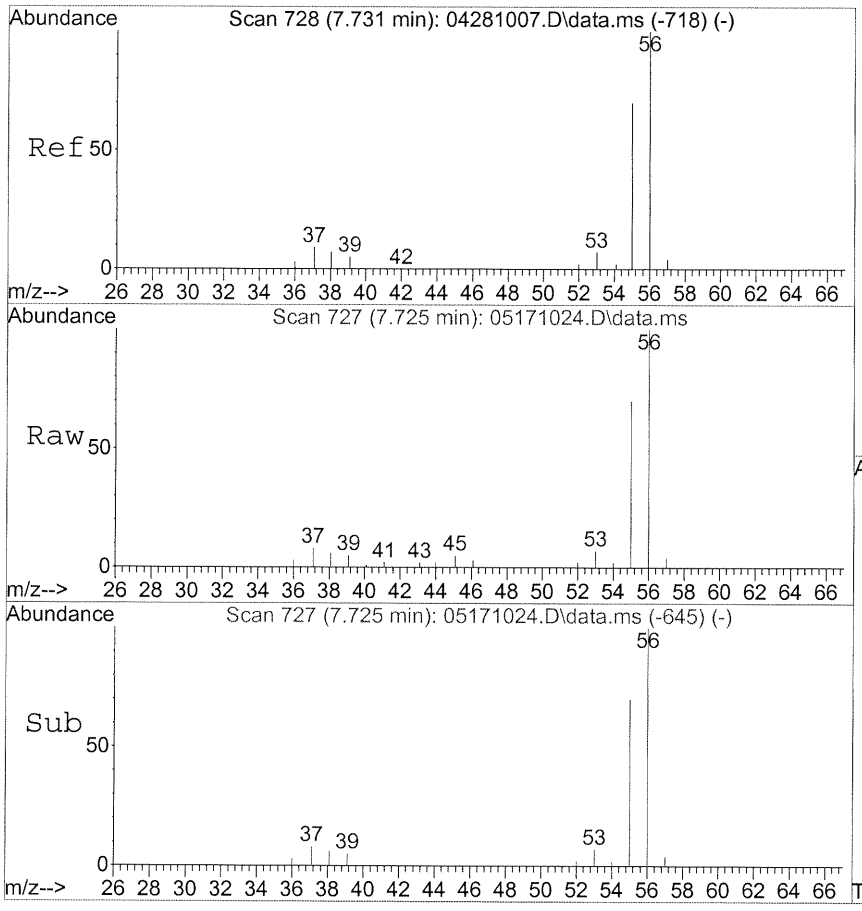


#11
Acetonitrile
Concen: 0.42 ng
RT: 7.52 min Scan# 691
Delta R.T. -0.051 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 41 Resp: 14255

Ion	Ratio	Lower	Upper
41	100		
40	55.1	33.2	73.2

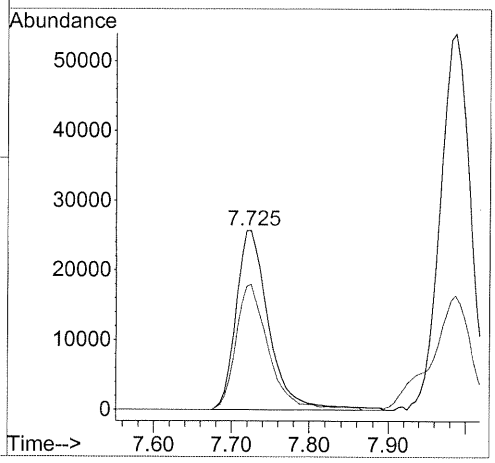


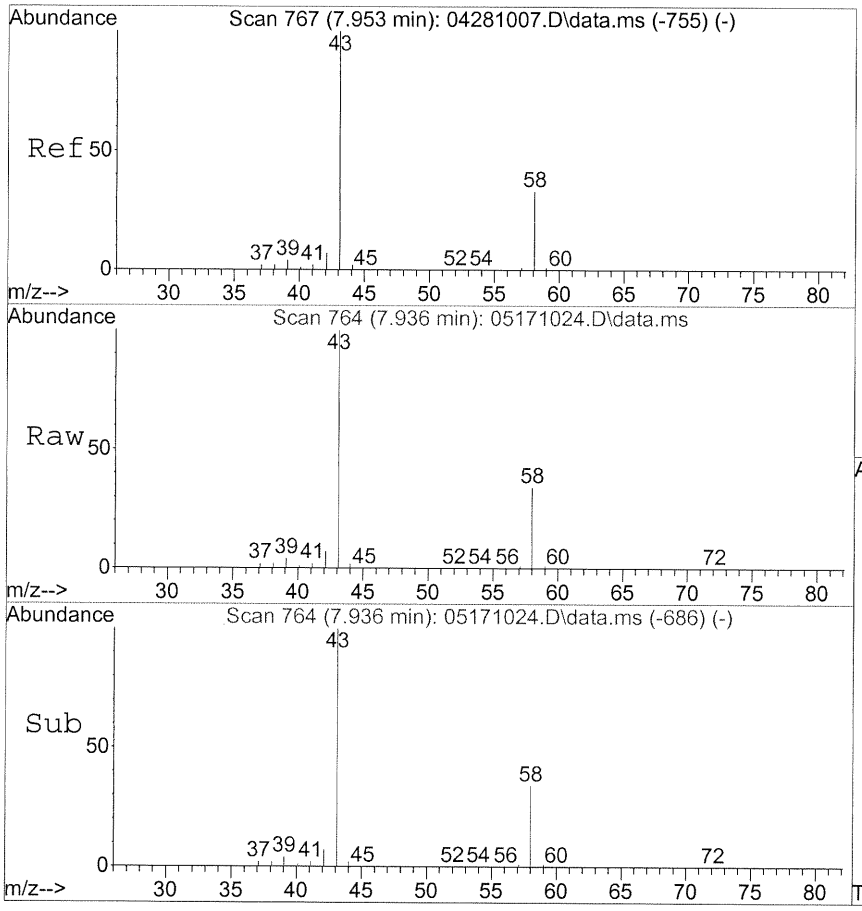


#12
Acrolein
Concen: 7.18 ng
RT: 7.72 min Scan# 727
Delta R.T. -0.034 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 56 Resp: 75481

Ion	Ratio	Lower	Upper
56	100		
55	69.3	50.2	90.2

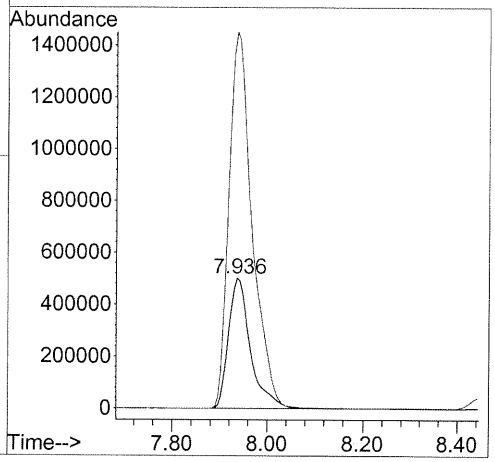


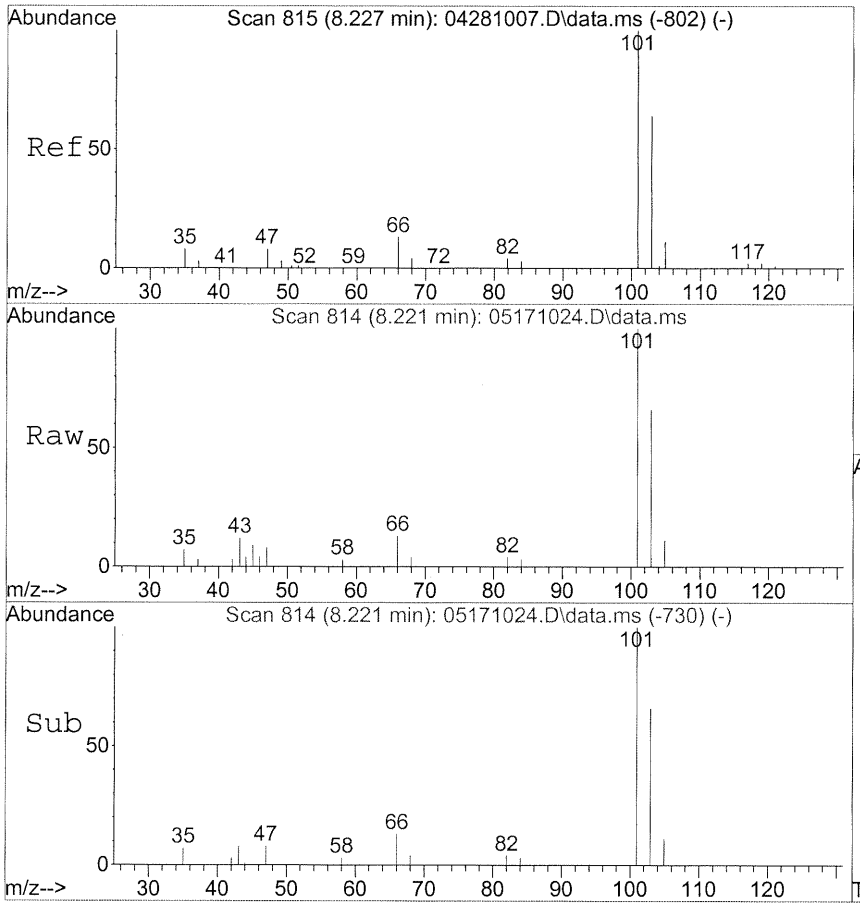


#13
Acetone
Concen: 97.59 ng
RT: 7.94 min Scan# 764
Delta R.T. -0.057 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 58 Resp: 1608041

Ion	Ratio	Lower	Upper
58	100		
43	307.3	264.2	324.2

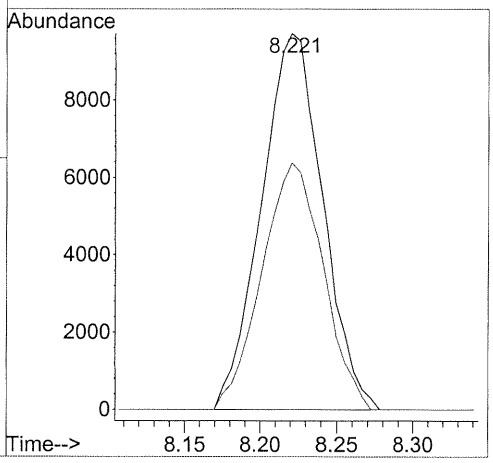


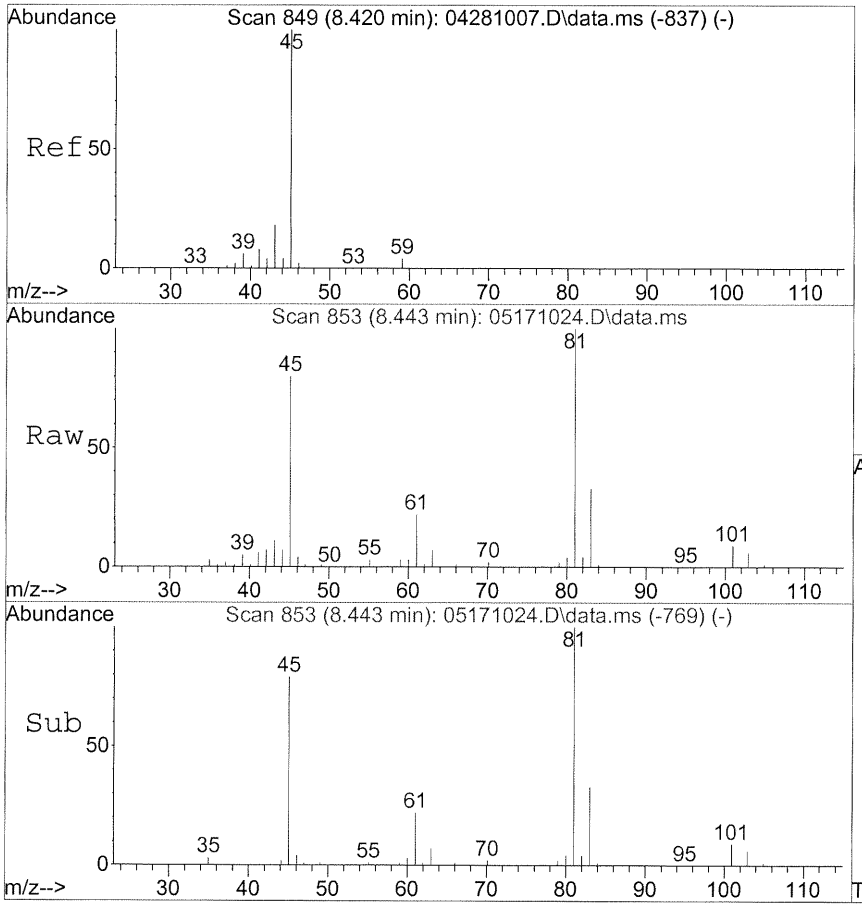


#14
Trichlorofluoromethane
Concen: 0.74 ng
RT: 8.22 min Scan# 814
Delta R.T. -0.023 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:101 Resp: 27108

Ion	Ratio	Lower	Upper
101	100		
103	65.6	44.6	84.6

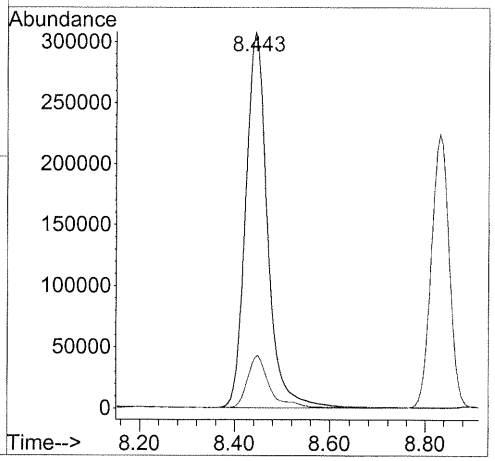


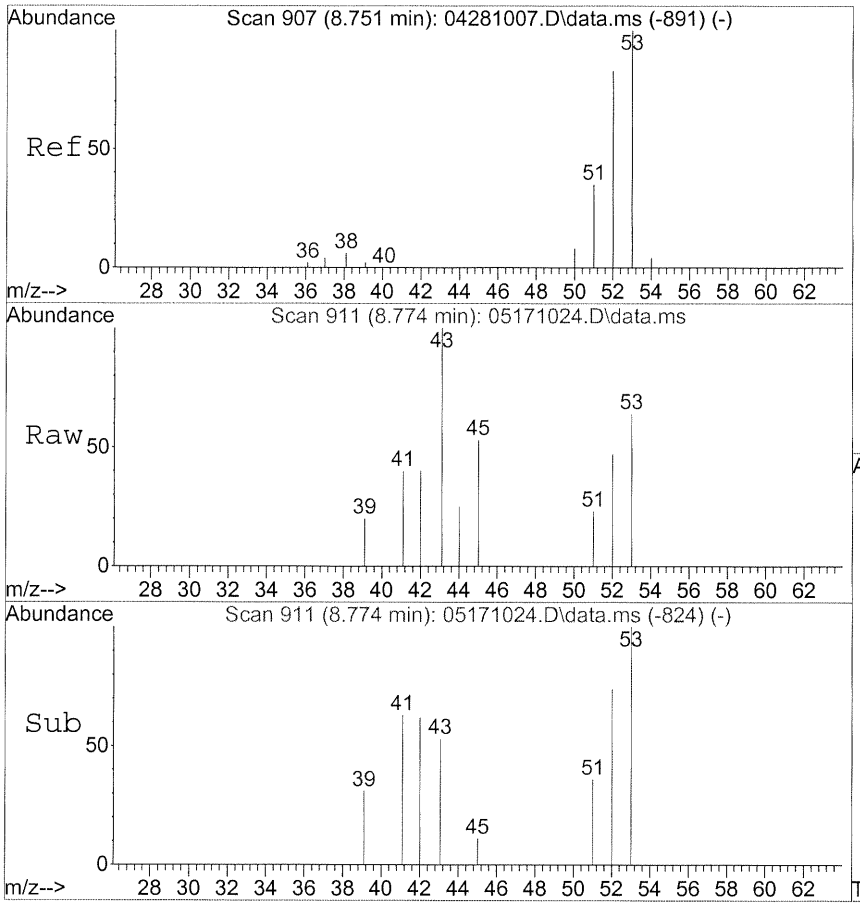


#15
2-Propanol (Isopropanol)
Concen: 19.28 ng
RT: 8.44 min Scan# 853
Delta R.T. -0.023 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 45 Resp: 984731

Ion	Ratio	Lower	Upper
45	100		
43	13.8	0.0	38.5

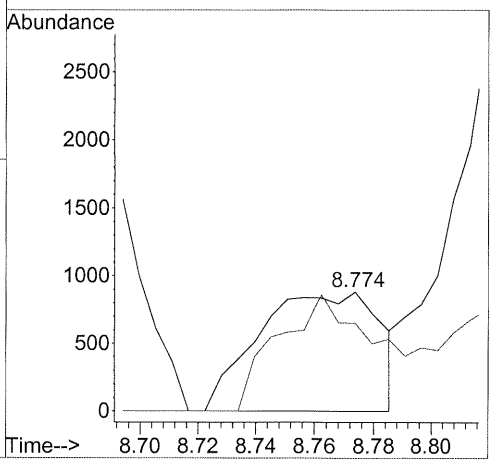


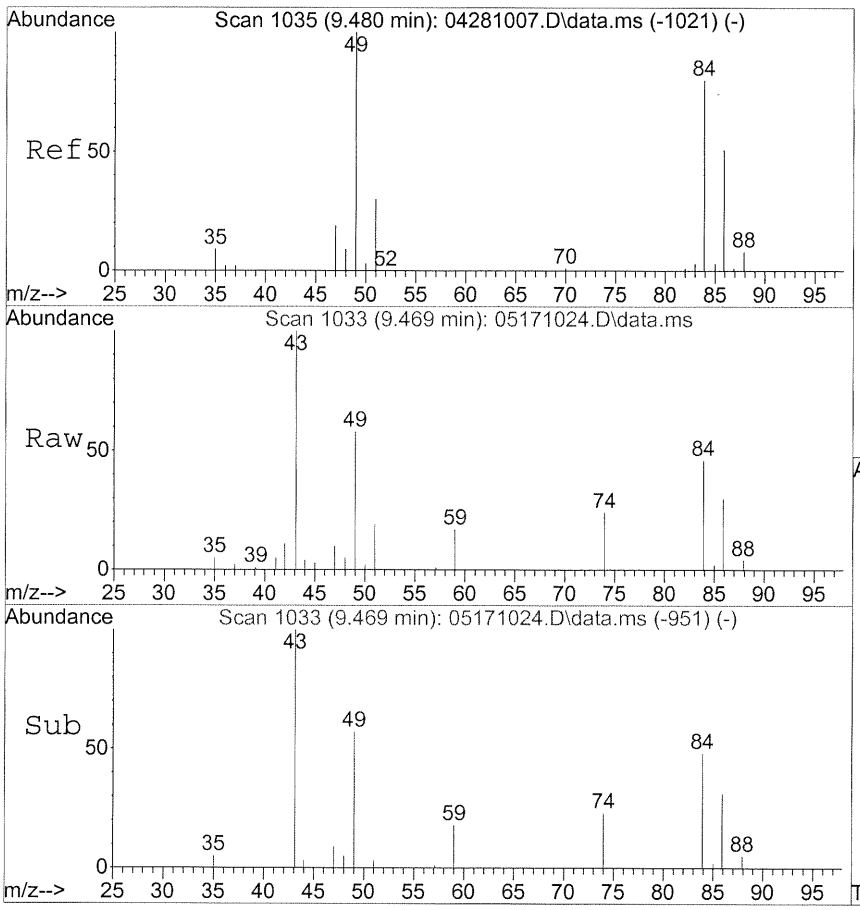


#16
Acrylonitrile
Concen: 0.10 ng
RT: 8.77 min Scan# 911
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 53 Resp: 2511

Ion	Ratio	Lower	Upper
53	100		
52	90.4	62.4	102.4

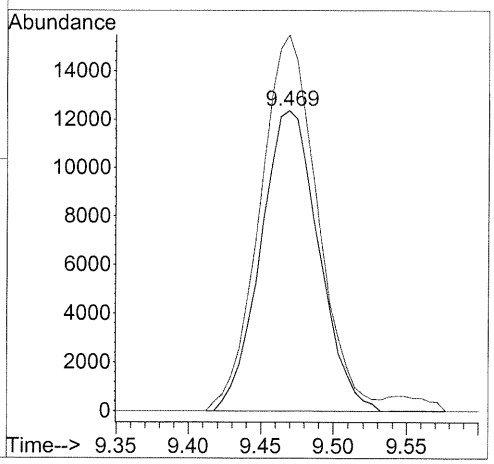


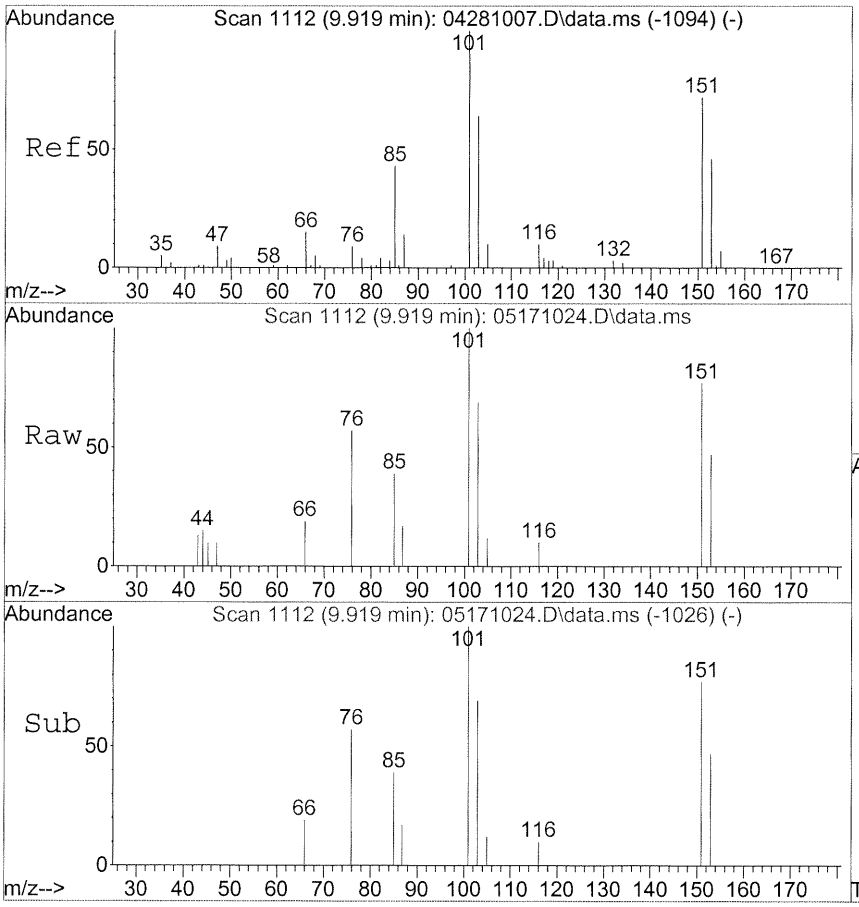


#19
Methylene Chloride
Concen: 1.58 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 84 Resp: 34212

Ion	Ratio	Lower	Upper
84	100		
49	124.7	94.5	144.5

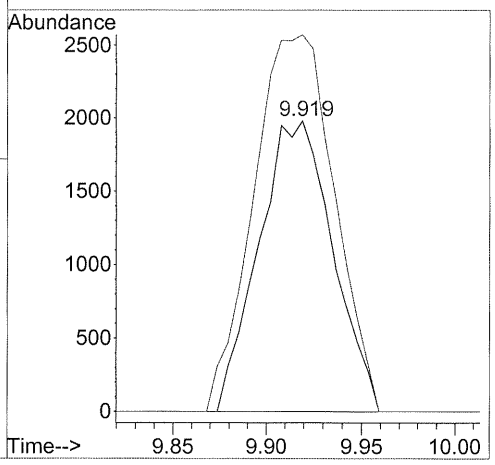


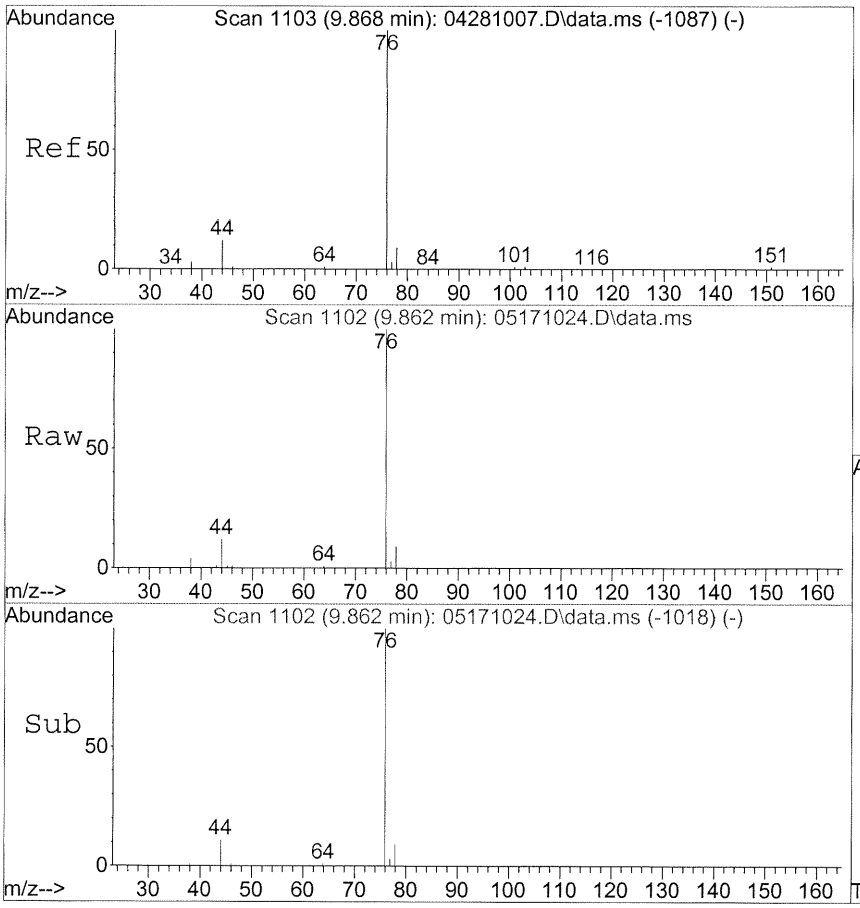


#21
Trichlorotrifluoroethane
Concen: 0.35 ng
RT: 9.92 min Scan# 1112
Delta R.T. -0.012 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:151 Resp: 5369

Ion	Ratio	Lower	Upper
151	100		
101	142.0	114.9	154.9

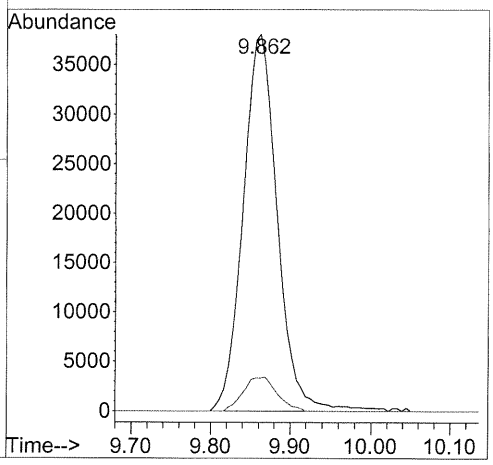


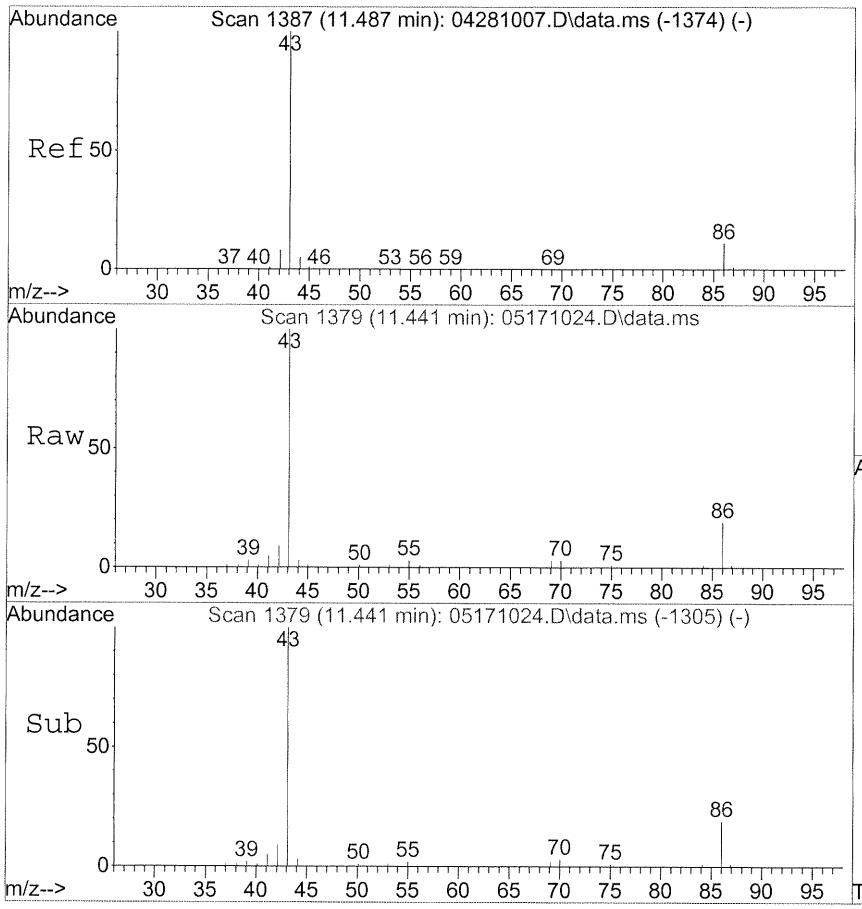


#22
Carbon Disulfide
Concen: 1.47 ng
RT: 9.86 min Scan# 1102
Delta R.T. -0.023 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 76 Resp: 114062

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	29.2

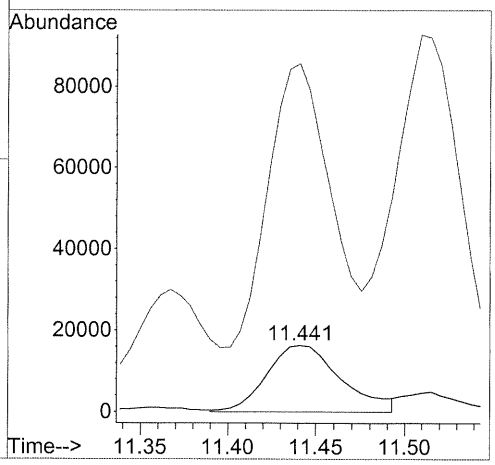


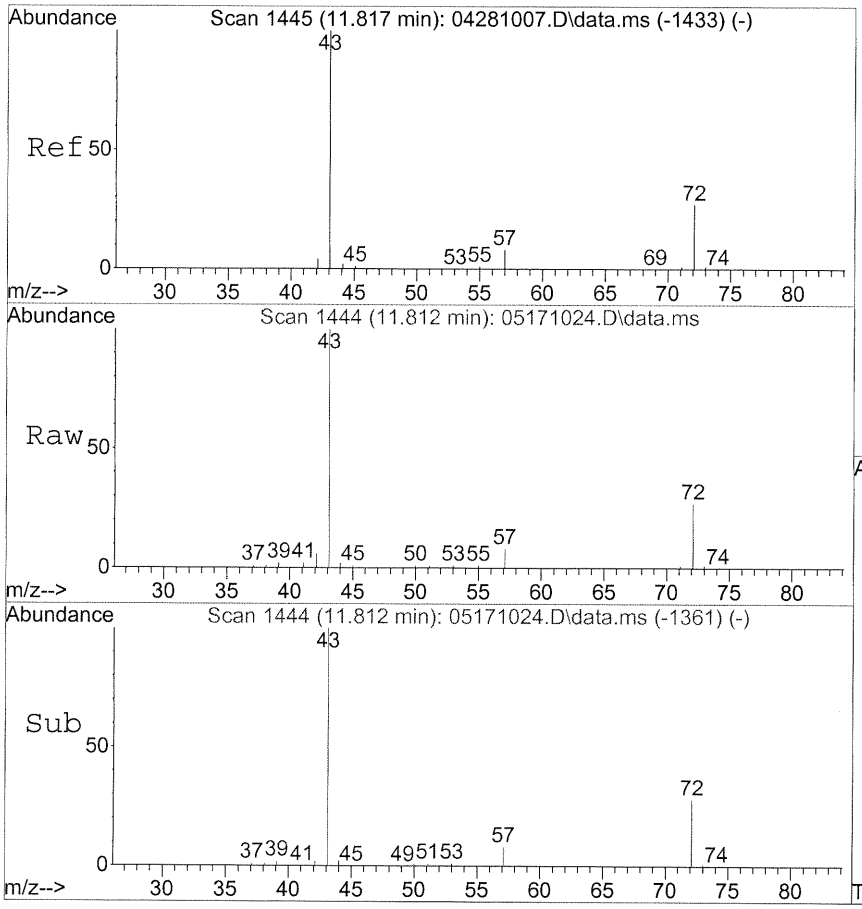


#26
Vinyl Acetate
Concen: 9.52 ng m
RT: 11.44 min Scan# 1379
Delta R.T. -0.080 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 86 Resp: 47324

Ion	Ratio	Lower	Upper
86	100		
43	532.1	829.7	869.7#

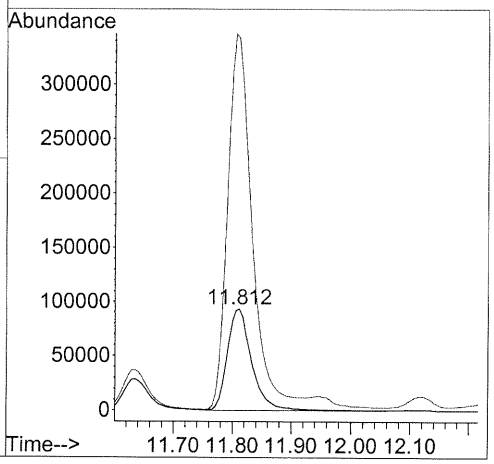


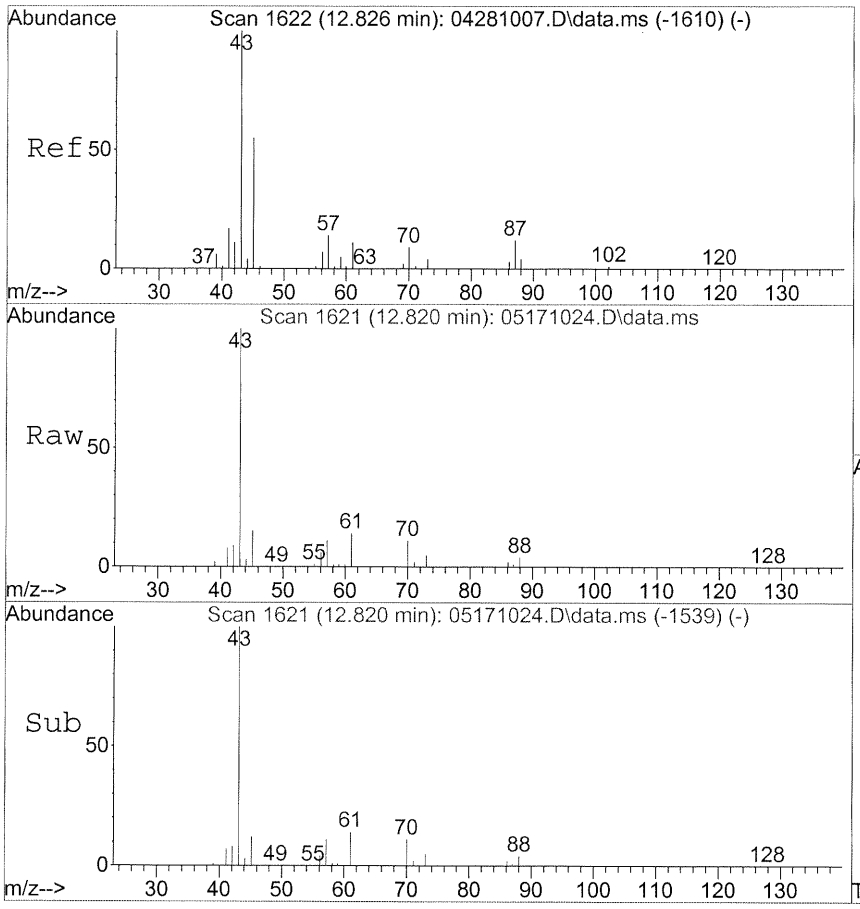


#27
2-Butanone (MEK)
Concen: 19.63 ng
RT: 11.81 min Scan# 1444
Delta R.T. -0.028 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 72 Resp: 268694

Ion	Ratio	Lower	Upper
72	100		
43	391.1	342.0	382.0#

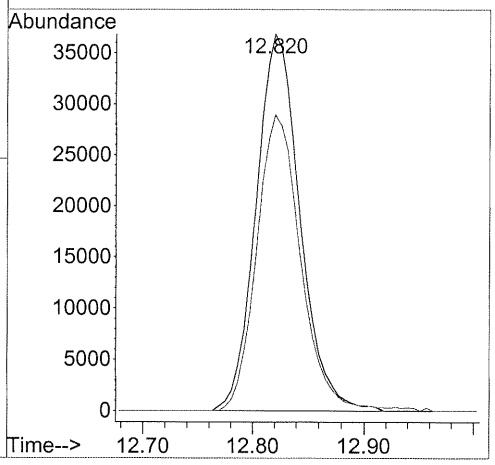


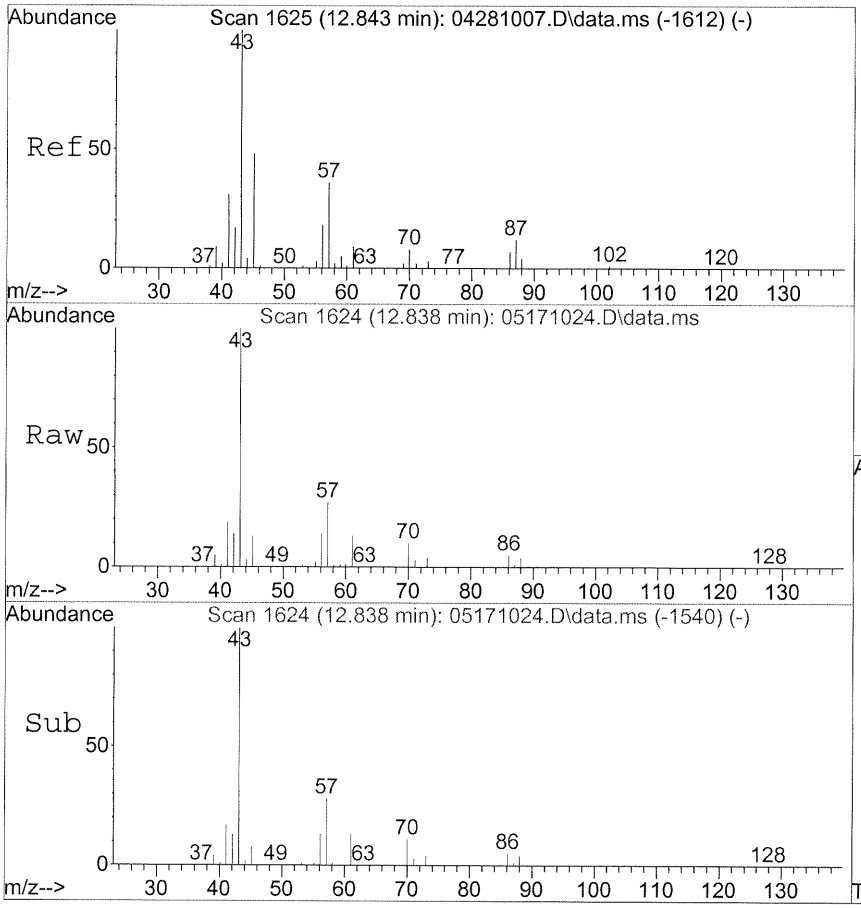


#30
Ethyl Acetate
Concen: 12.56 ng
RT: 12.82 min Scan# 1621
Delta R.T. -0.035 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 61 Resp: 102211

Ion	Ratio	Lower	Upper
61	100		
70	79.1	63.6	103.6

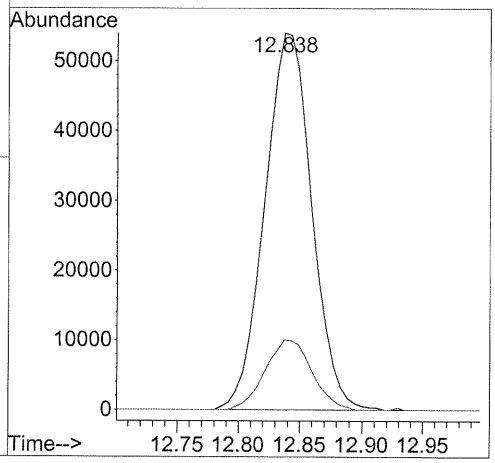


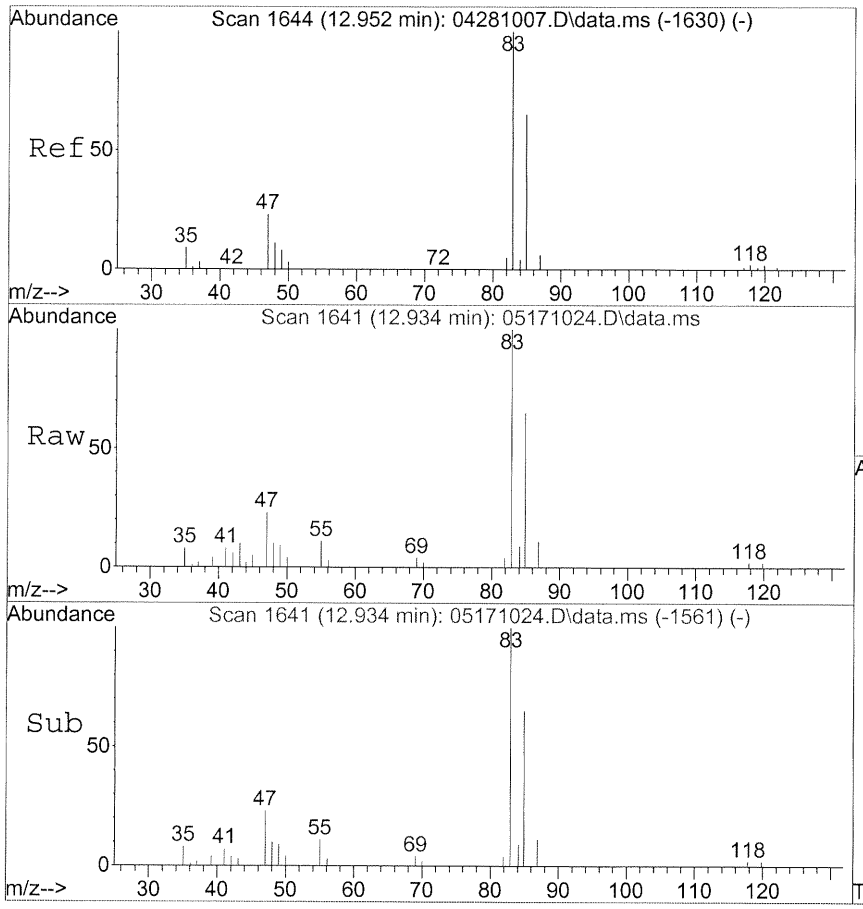


#31
n-Hexane
Concen: 3.46 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 57 Resp: 144064

Ion	Ratio	Lower	Upper
57	100		
86	18.4	0.0	39.8

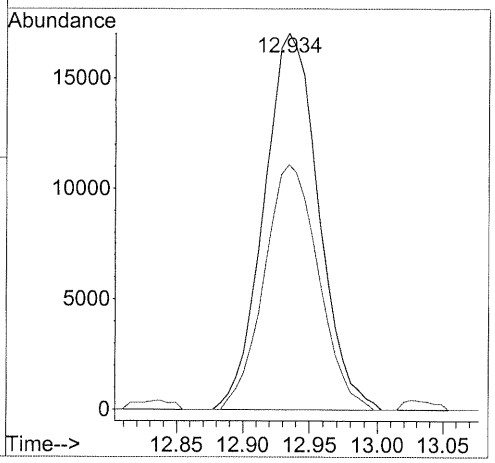


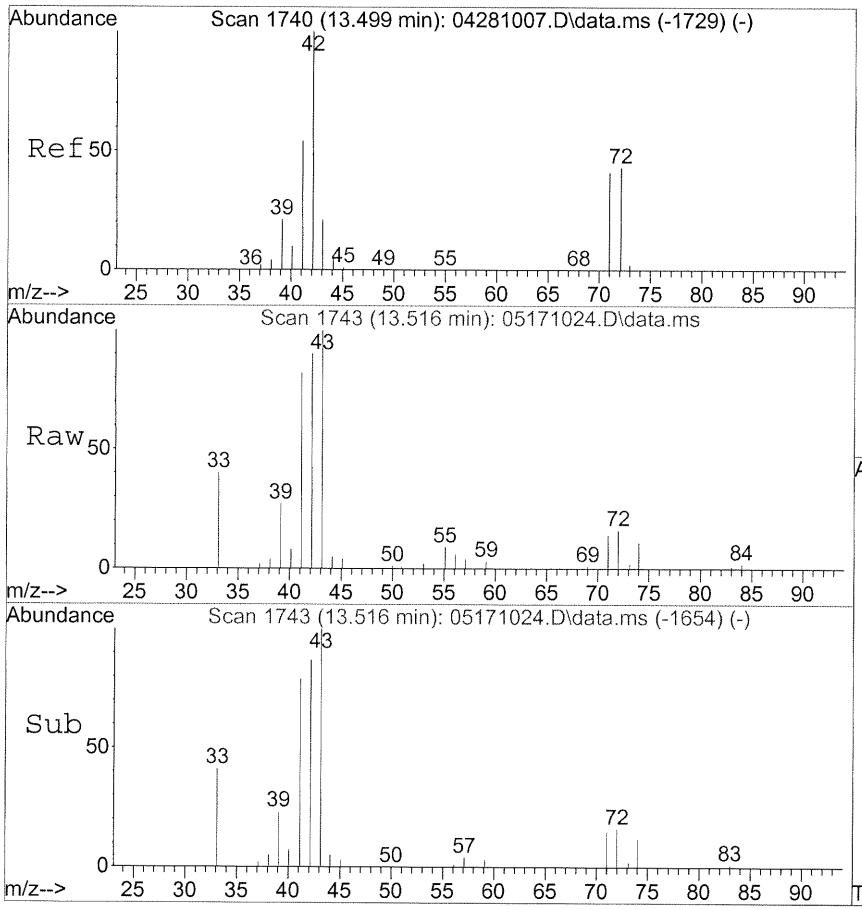


#32
Chloroform
Concen: 1.39 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 83 Resp: 48365

Ion	Ratio	Lower	Upper
83	100		
85	64.7	44.9	84.9

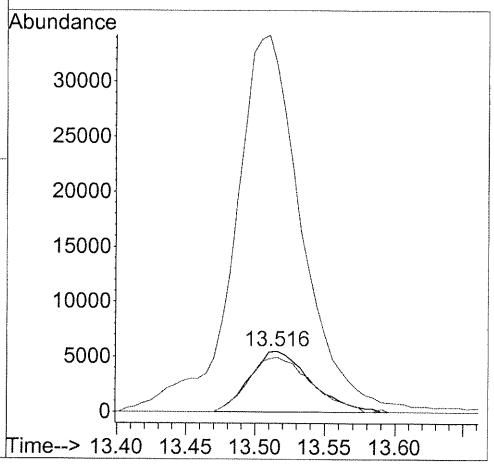


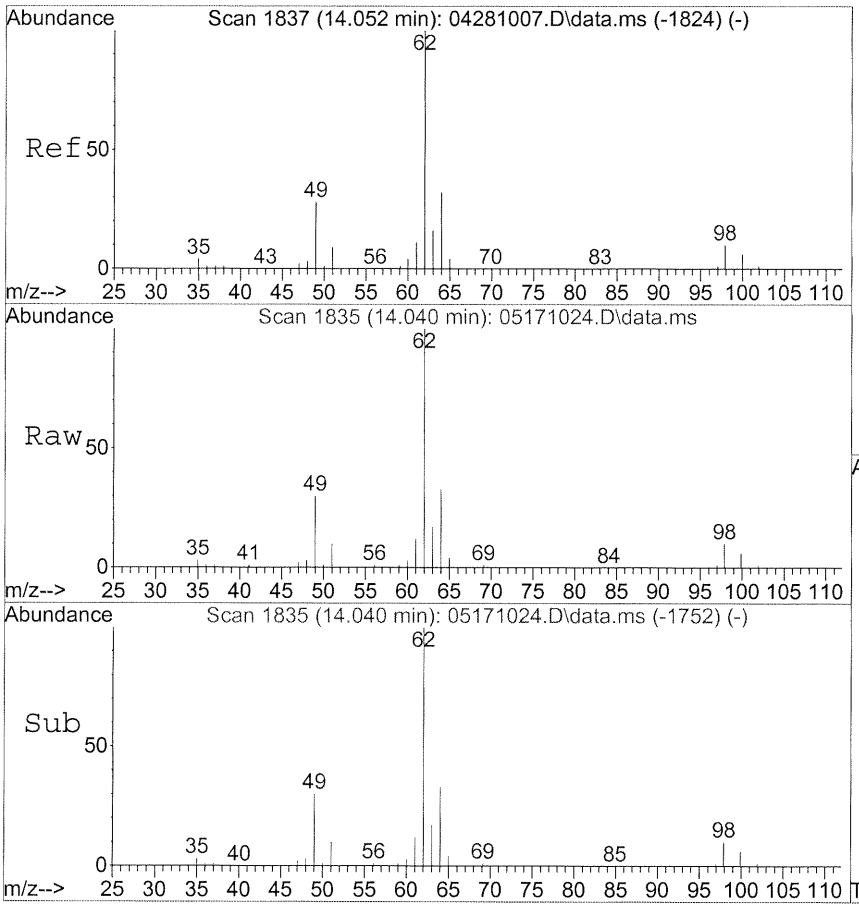


#34
Tetrahydrofuran (THF)
Concen: 1.26 ng
RT: 13.52 min Scan# 1743
Delta R.T. 0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 72 Resp: 16671

Ion	Ratio	Lower	Upper
72	100		
71	93.3	74.5	114.5
42	704.2	197.7	237.7#

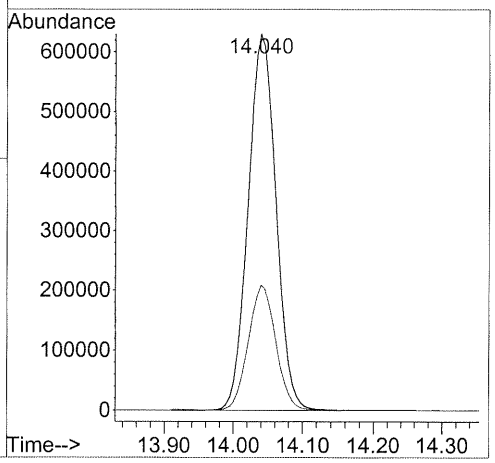


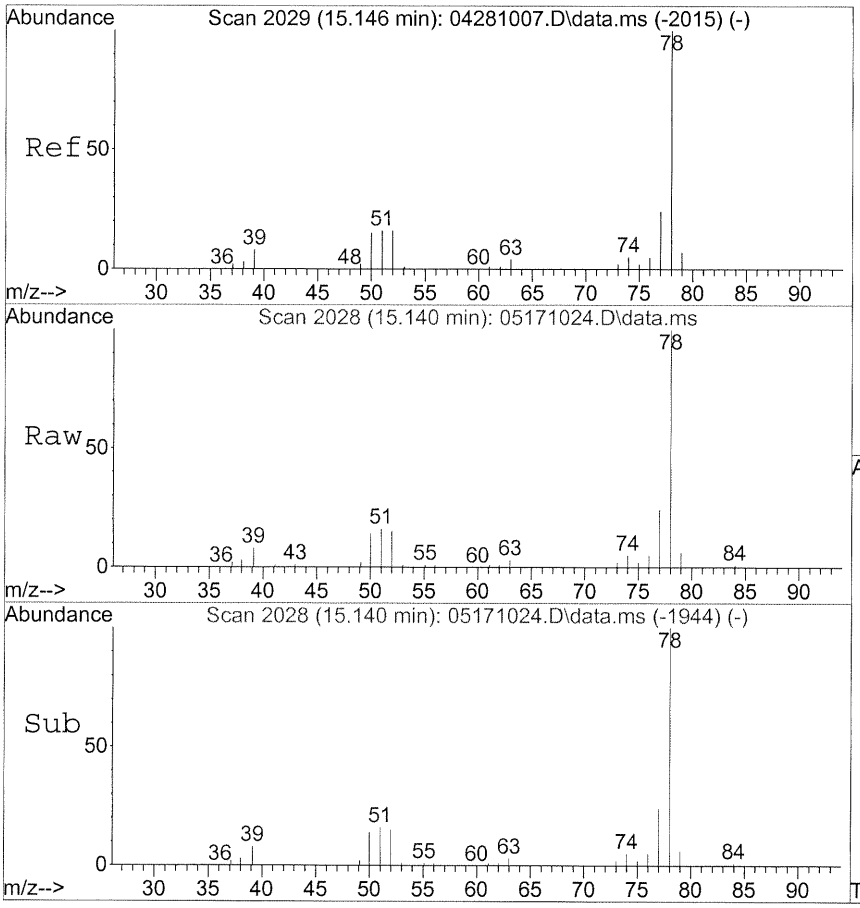


#36
1,2-Dichloroethane
Concen: 62.65 ng
RT: 14.04 min Scan# 1835
Delta R.T. -0.029 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 62 Resp: 1765765

Ion	Ratio	Lower	Upper
62	100		
64	32.6	12.8	52.8

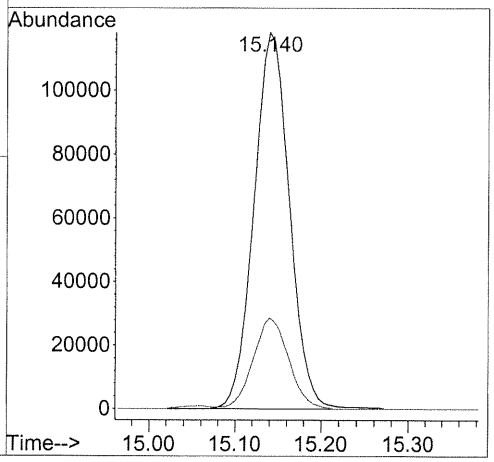


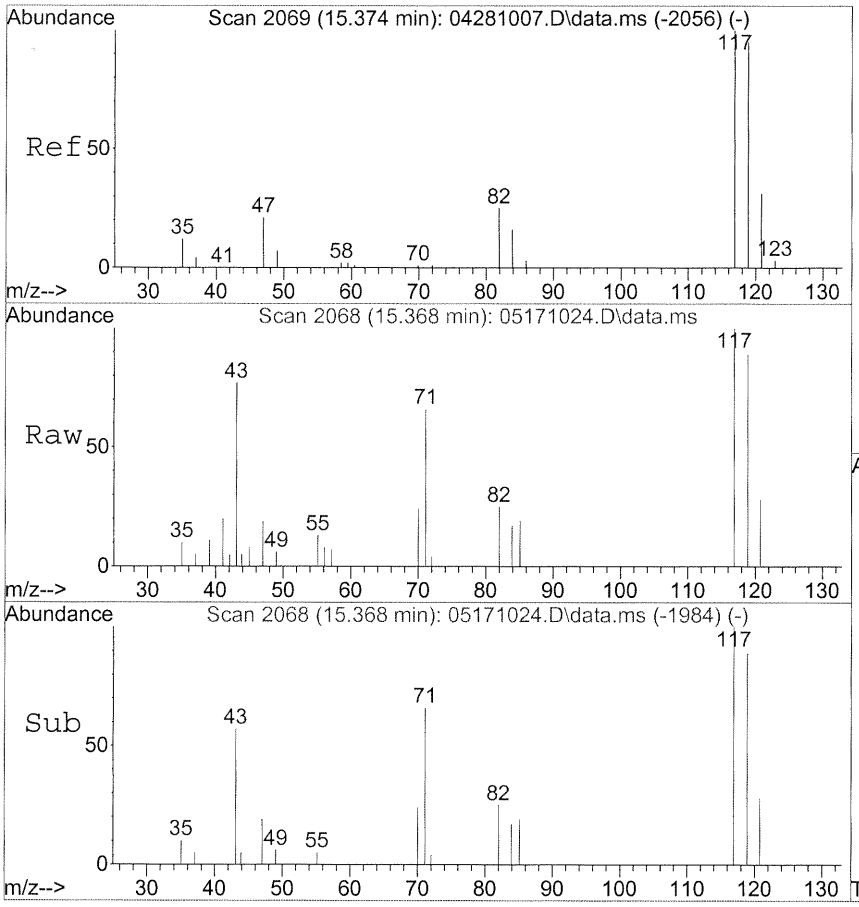


#41
Benzene
Concen: 3.85 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 78 Resp: 339801

Ion	Ratio	Lower	Upper
78	100		
77	24.1	4.1	44.1

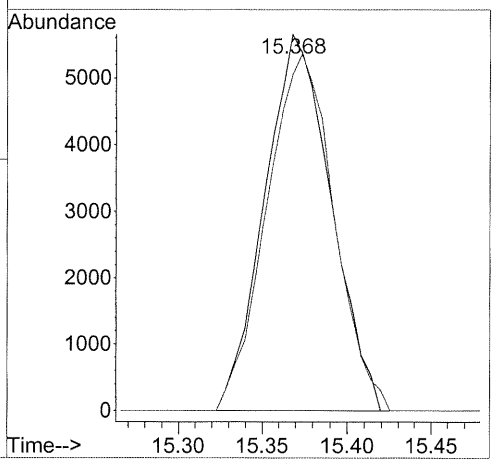


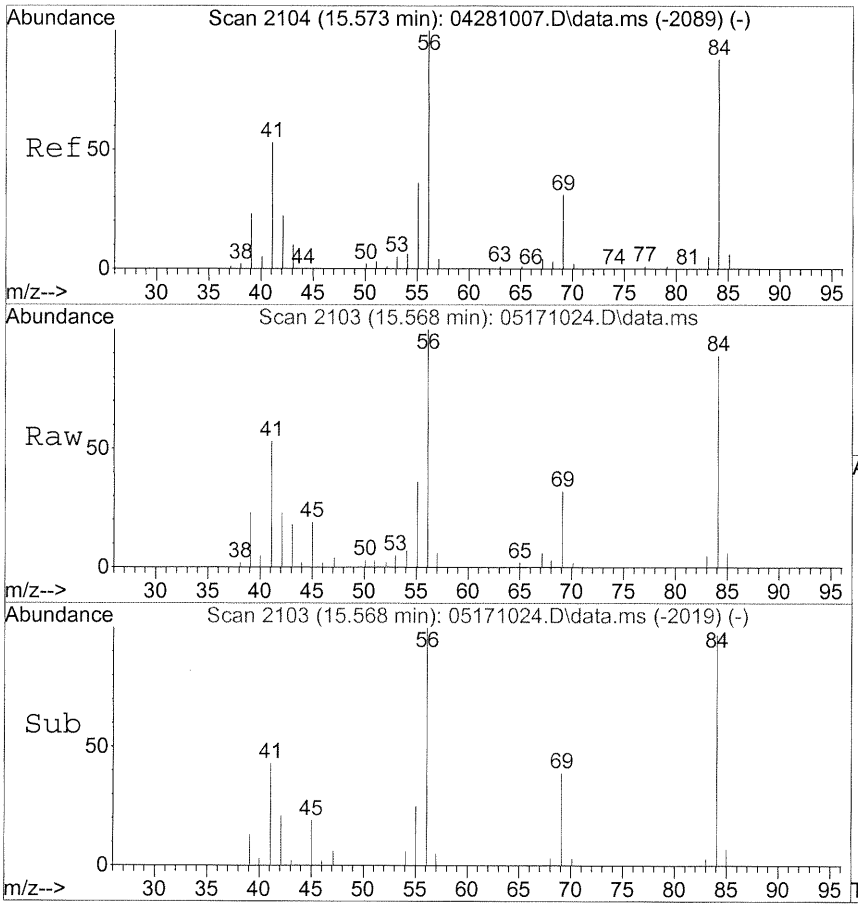


#42
Carbon Tetrachloride
Concen: 0.65 ng
RT: 15.37 min Scan# 2068
Delta R.T. -0.023 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:117 Resp: 15363

Ion	Ratio	Lower	Upper
117	100		
119	96.3	76.1	116.1

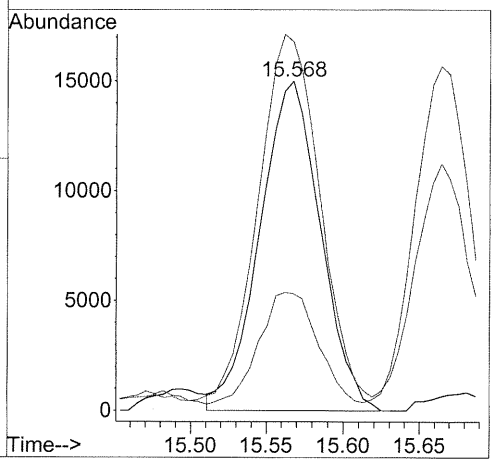


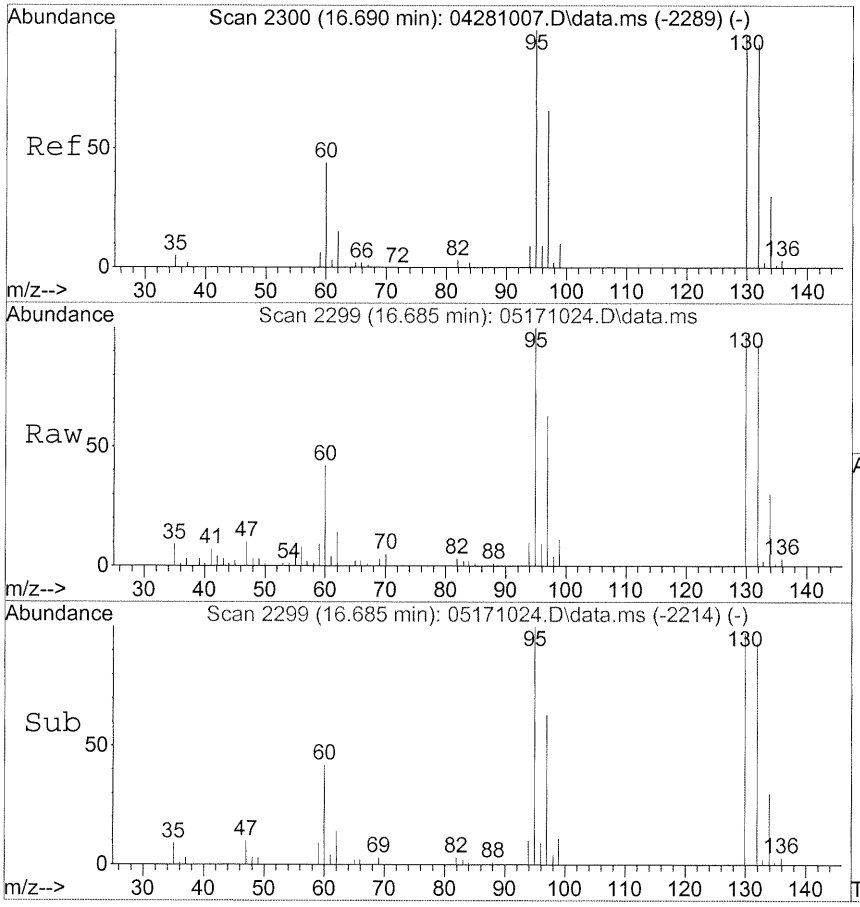


#43
Cyclohexane
Concen: 1.11 ng
RT: 15.57 min Scan# 2103
Delta R.T. -0.023 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 84 Resp: 41347

Ion	Ratio	Lower	Upper
84	100		
69	36.9	14.9	54.9
56	118.1	89.2	129.2

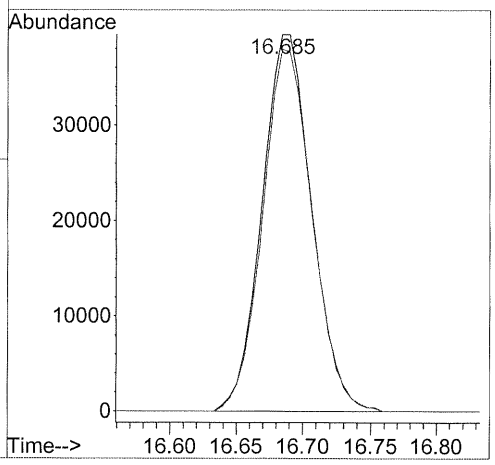


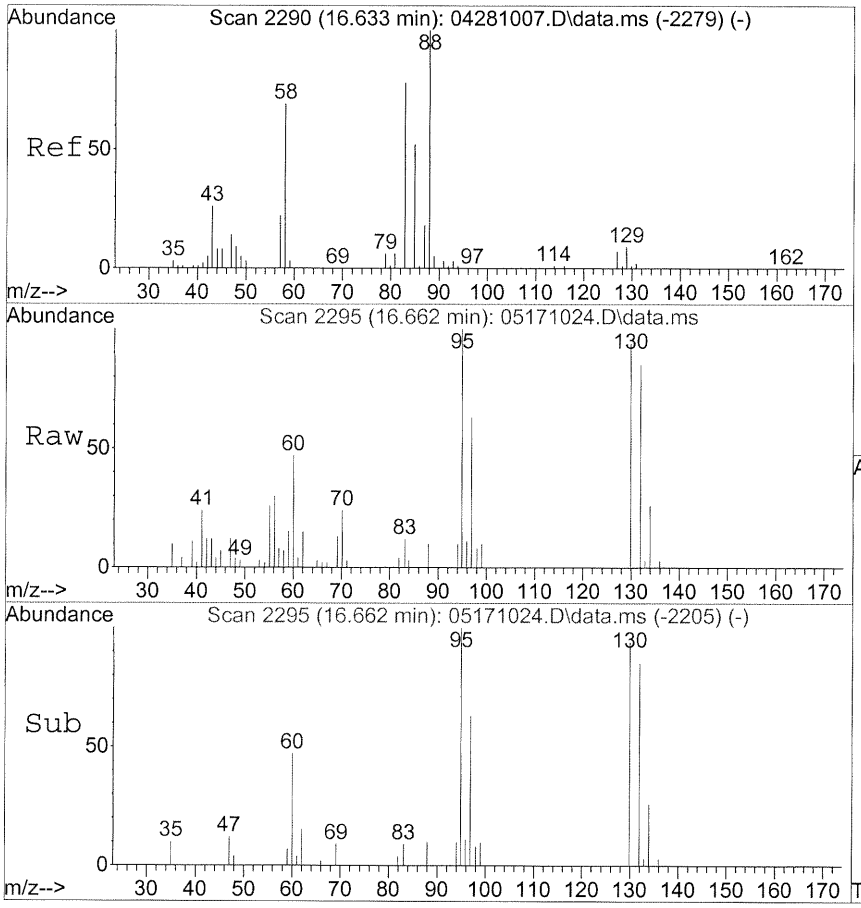


#47
Trichloroethene
Concen: 4.55 ng
RT: 16.68 min Scan# 2299
Delta R.T. -0.017 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:130 Resp: 102398

Ion	Ratio	Lower	Upper
130	100		
132	95.7	75.2	115.2

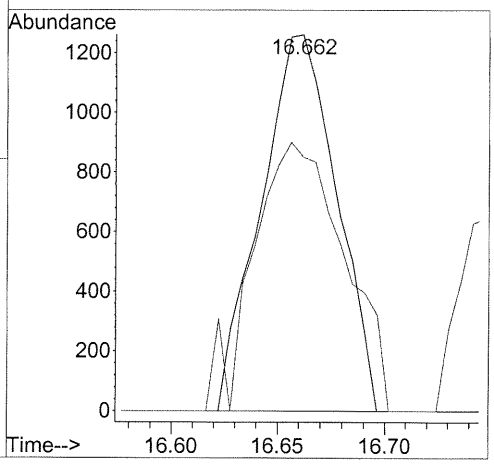


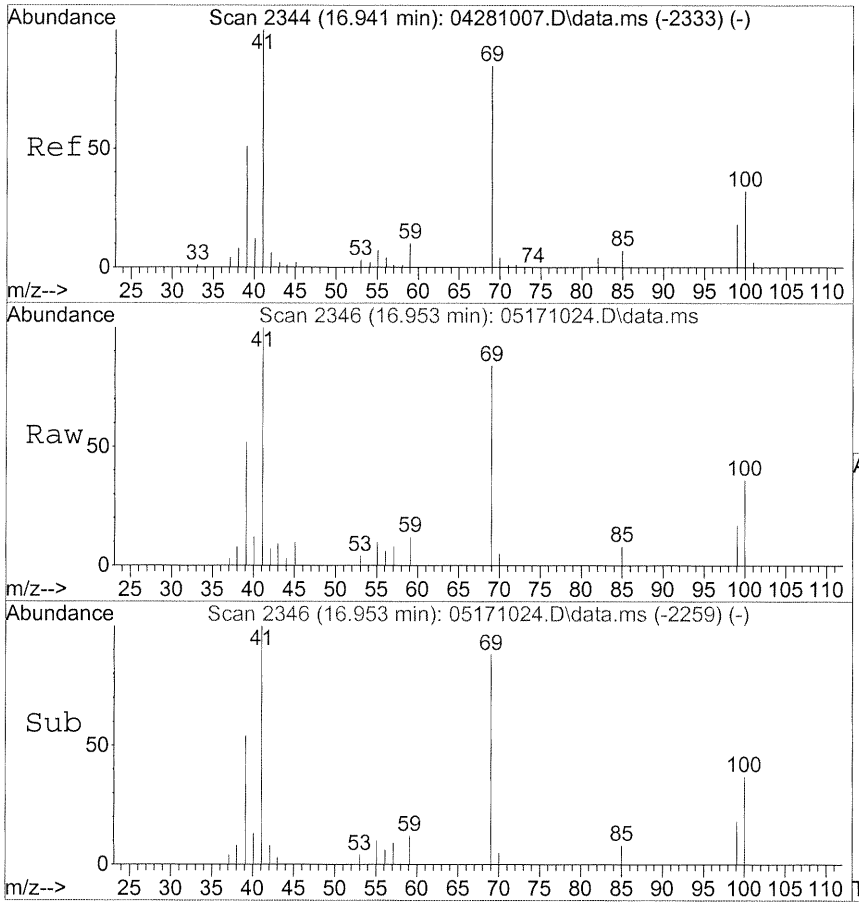


#48
1,4-Dioxane
Concen: 0.18 ng
RT: 16.66 min Scan# 2295
Delta R.T. 0.011 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 88 Resp: 3089

Ion	Ratio	Lower	Upper
88	100		
58	86.2	45.8	85.8#

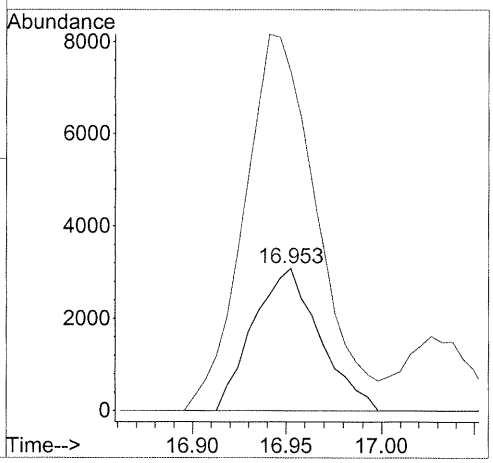


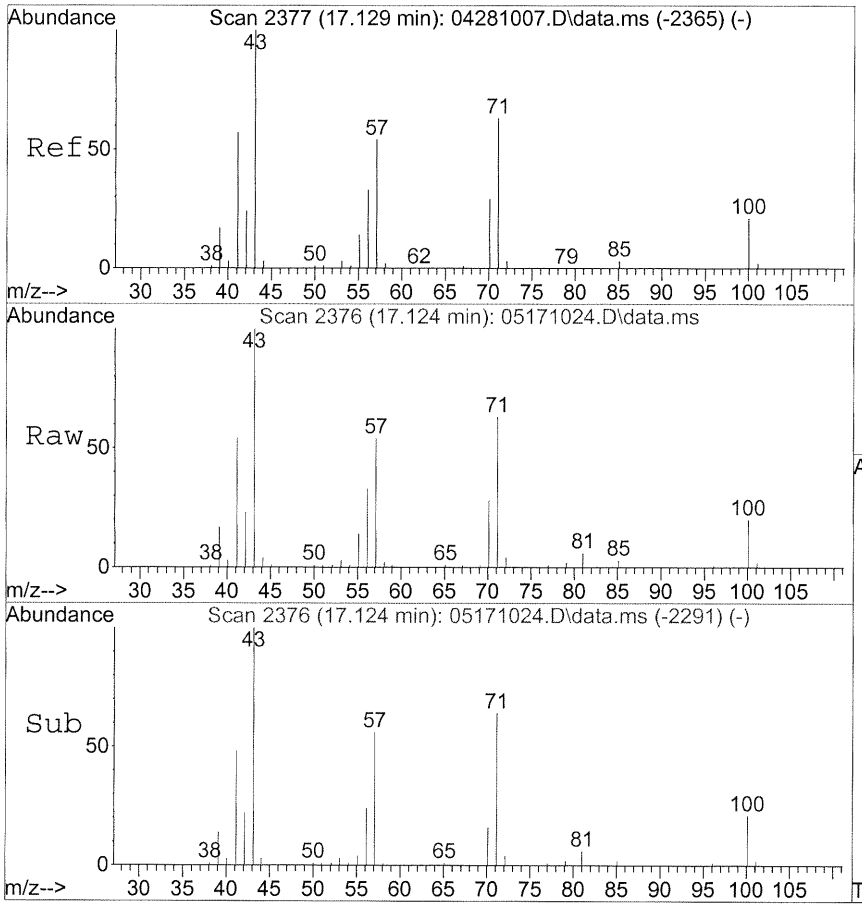


#50
Methyl Methacrylate
Concen: 0.82 ng
RT: 16.95 min Scan# 2346
Delta R.T. -0.005 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:100 Resp: 7560

Ion	Ratio	Lower	Upper
100	100		
69	288.6	226.7	266.7#

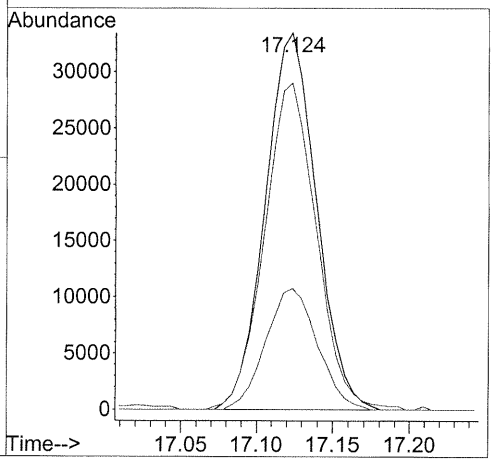


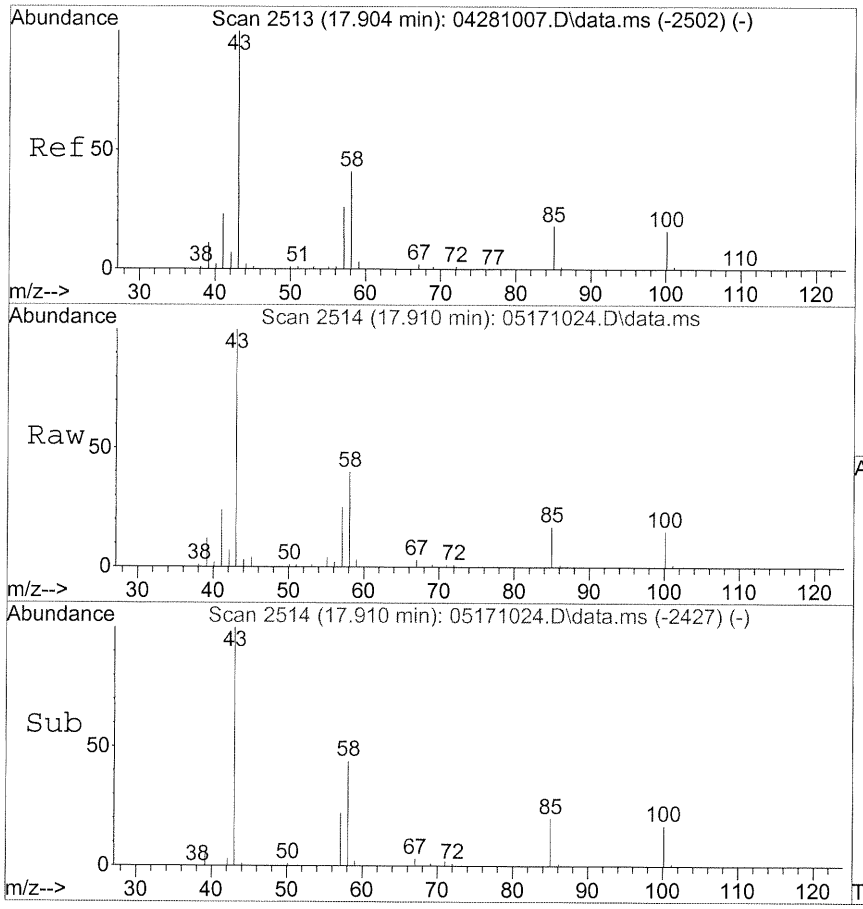


#51
n-Heptane
Concen: 3.09 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 71 Resp: 78143

Ion	Ratio	Lower	Upper
71	100		
57	87.8	63.9	103.9
100	32.3	14.1	54.1

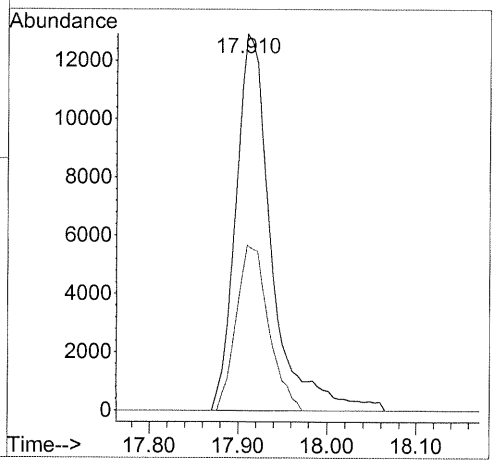


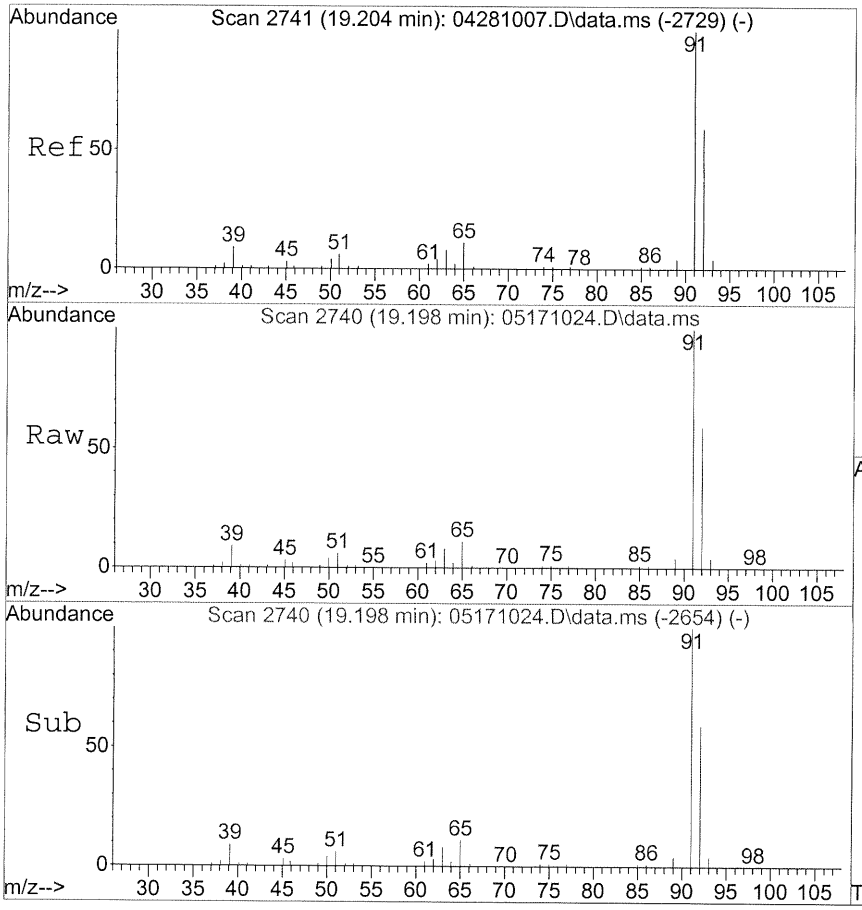


#53
4-Methyl-2-pentanone
Concen: 1.90 ng
RT: 17.91 min Scan# 2514
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 58 Resp: 36203

Ion	Ratio	Lower	Upper
58	100		
85	39.9	26.7	66.7

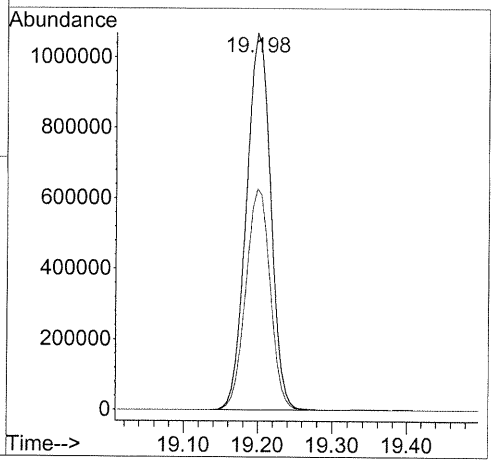


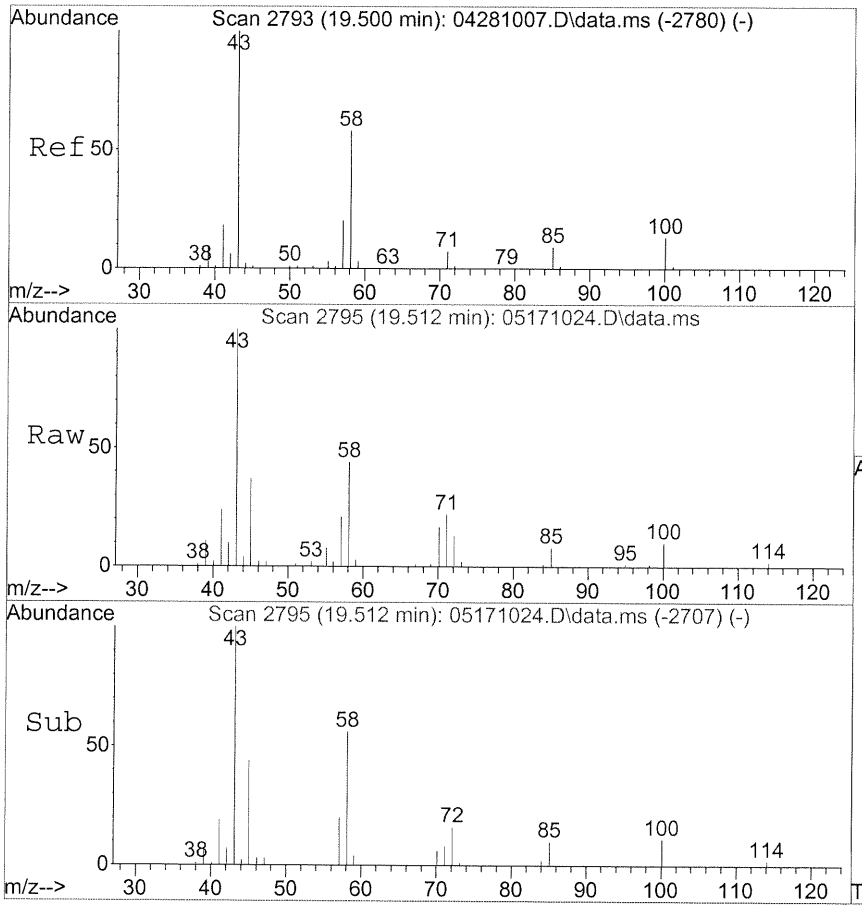


#58
Toluene
Concen: 26.44 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.012 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 91 Resp: 2441297

Ion	Ratio	Lower	Upper
91	100		
92	58.7	39.2	79.2

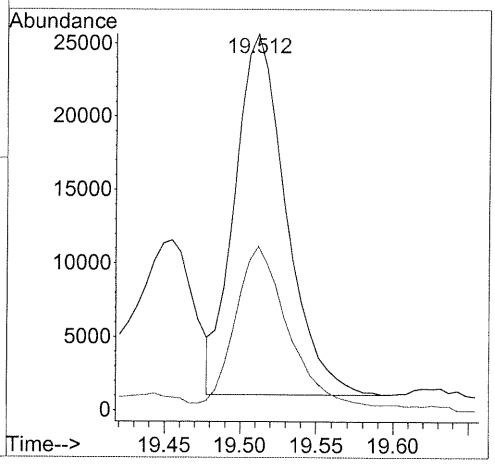


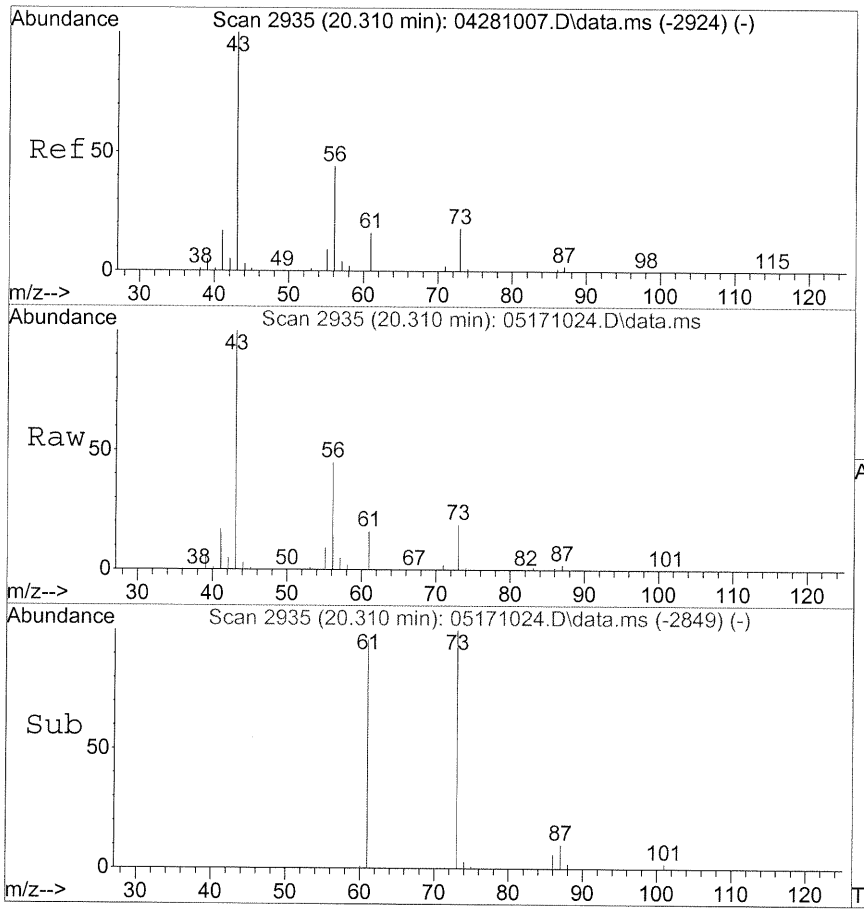


#59
2-Hexanone
Concen: 1.32 ng
RT: 19.51 min Scan# 2795
Delta R.T. -0.000 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 43 Resp: 58227

Ion	Ratio	Lower	Upper
43	100		
58	49.5	38.3	78.3

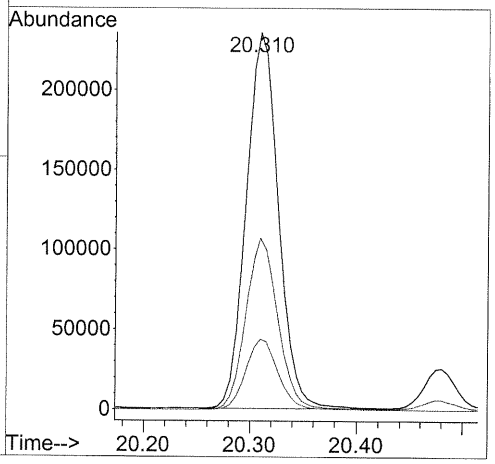


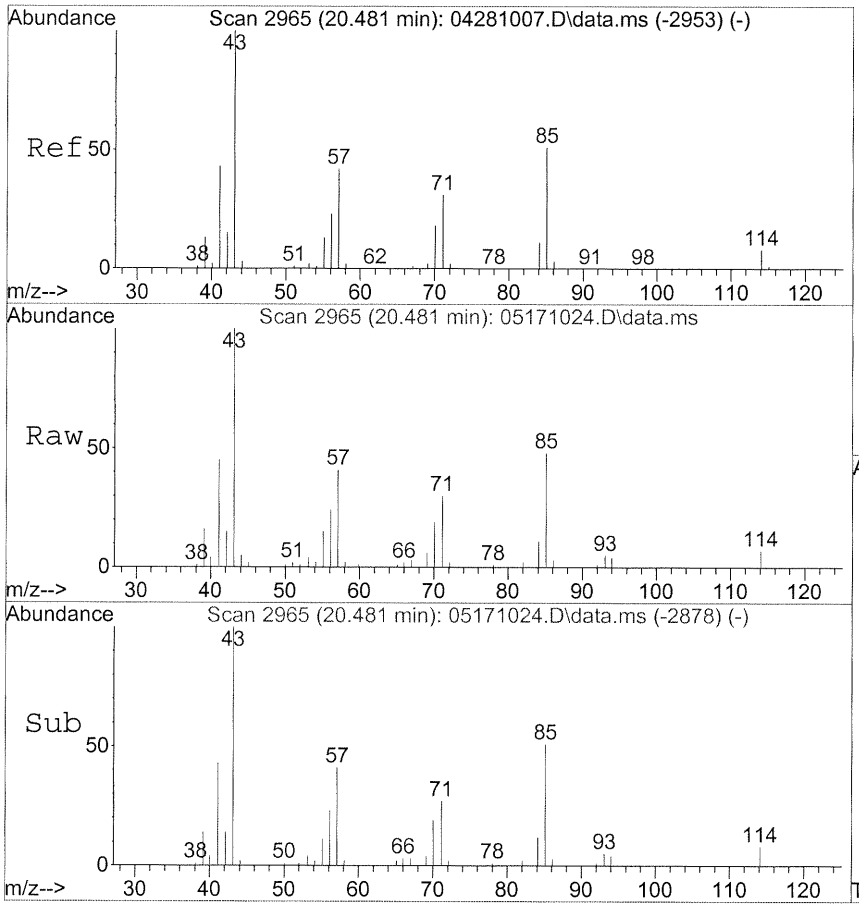


#62
n-Butyl Acetate
Concen: 10.02 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.012 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 43 Resp: 496338

Ion	Ratio	Lower	Upper
43	100		
56	44.7	25.0	65.0
73	18.8	0.0	39.1

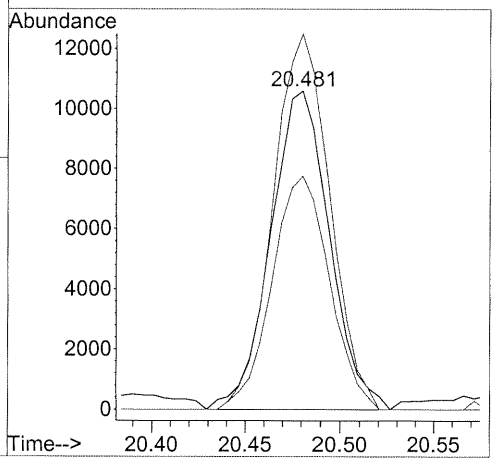


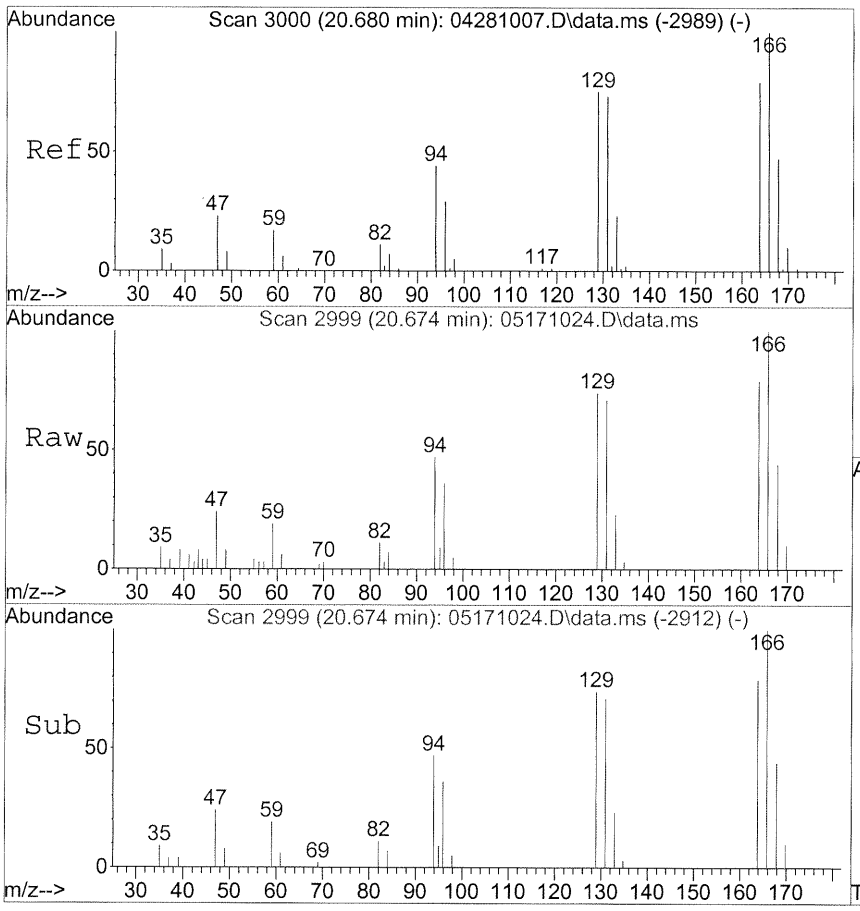


#63
n-Octane
Concen: 1.06 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 57 Resp: 22770

Ion	Ratio	Lower	Upper
57	100		
85	114.0	101.4	152.2
71	71.6	60.7	91.1

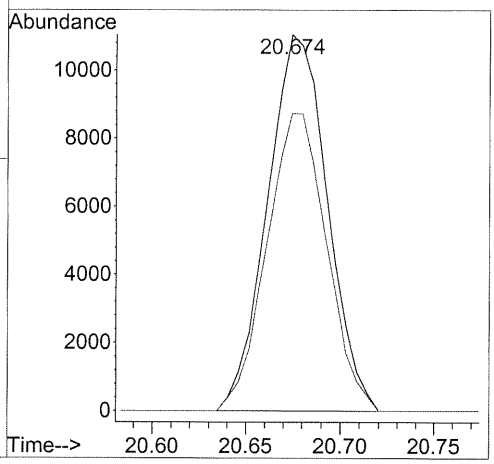


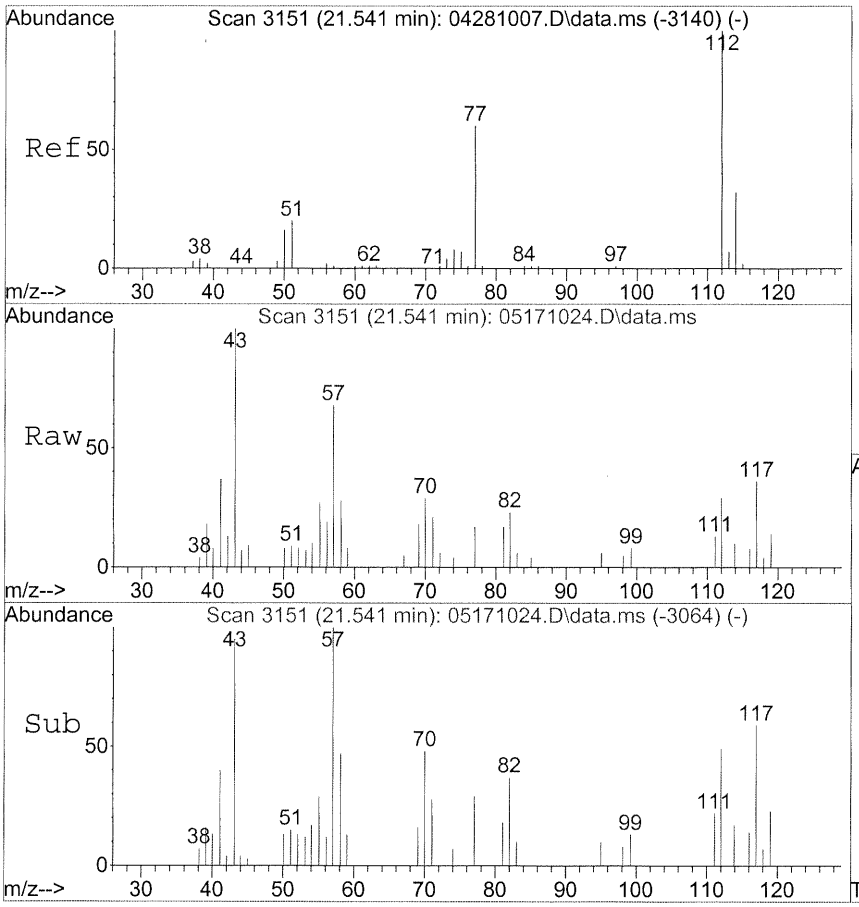


#64
Tetrachloroethene
Concen: 1.13 ng
RT: 20.67 min Scan# 2999
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:166 Resp: 24364

Ion	Ratio	Lower	Upper
166	100		
164	78.9	59.0	99.0

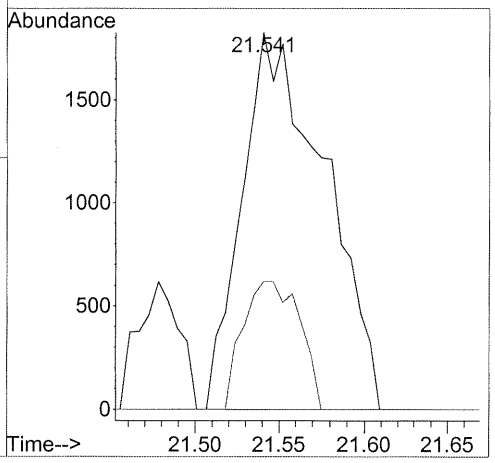


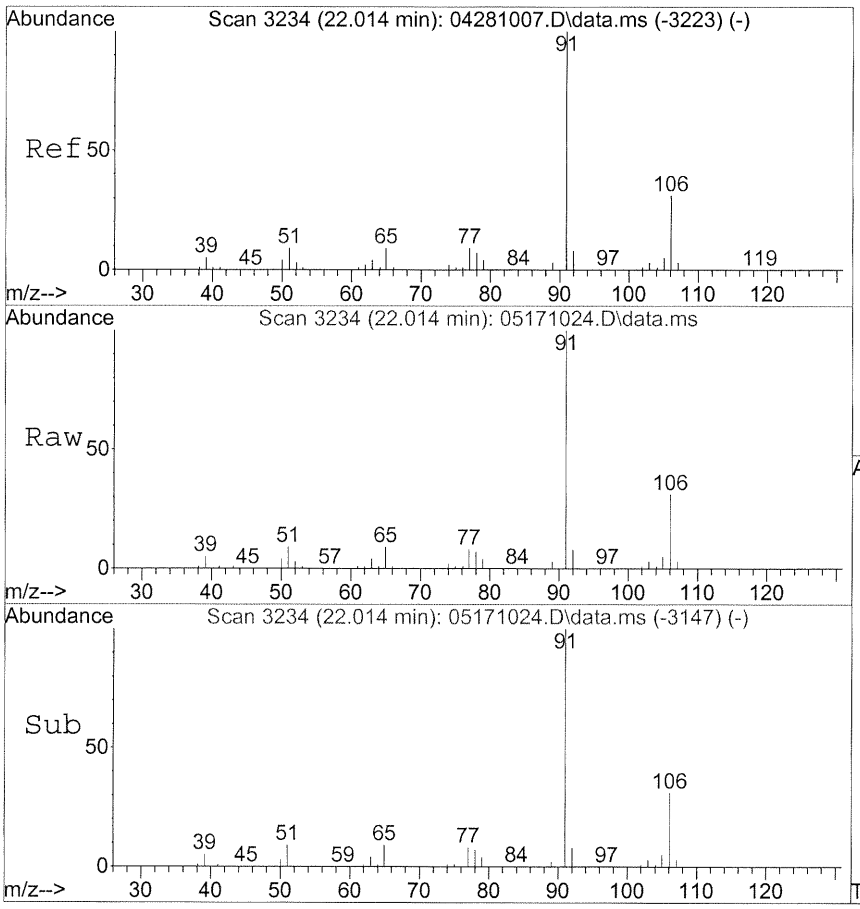


#65
Chlorobenzene
Concen: 0.11 ng
RT: 21.54 min Scan# 3151
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:112 Resp: 6187

Ion	Ratio	Lower	Upper
112	100		
114	23.5	11.8	51.8

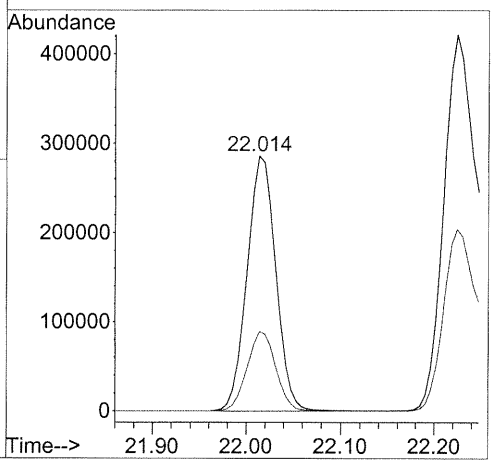


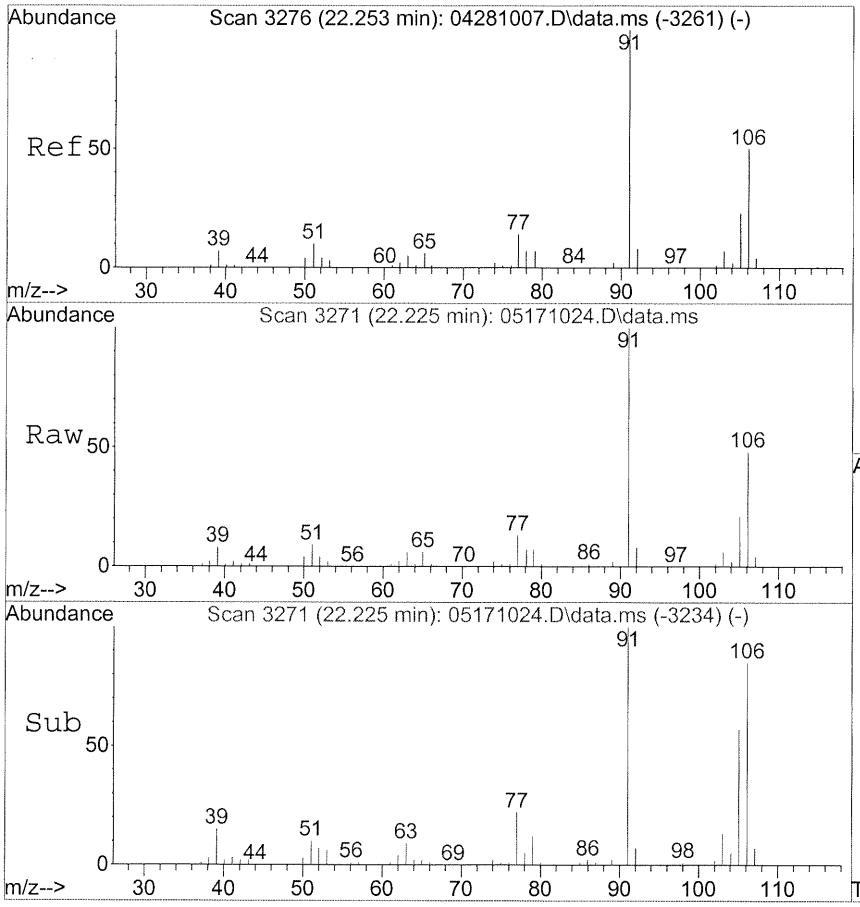


#66
Ethylbenzene
Concen: 5.88 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 91 Resp: 607552

Ion	Ratio	Lower	Upper
91	100		
106	30.8	12.2	52.2

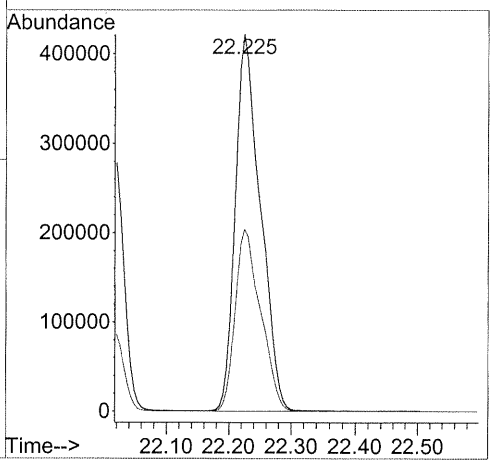


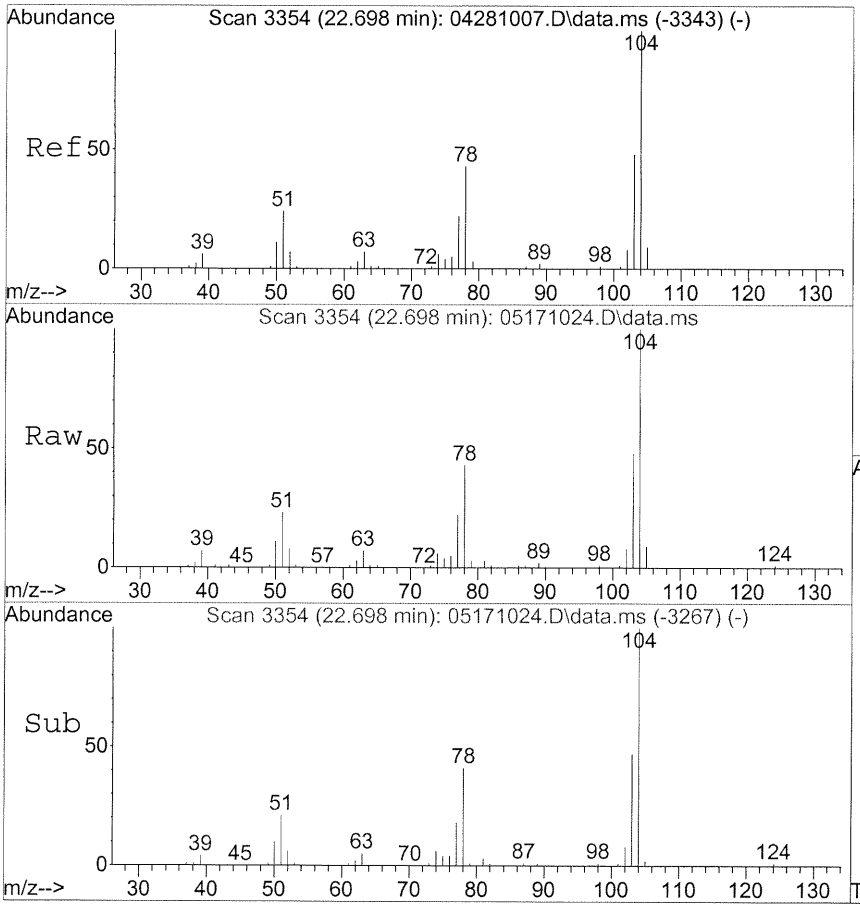


#67
m- & p-Xylenes
Concen: 14.12 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 91 Resp: 1182432

Ion	Ratio	Lower	Upper
91	100		
106	48.9	30.6	70.6

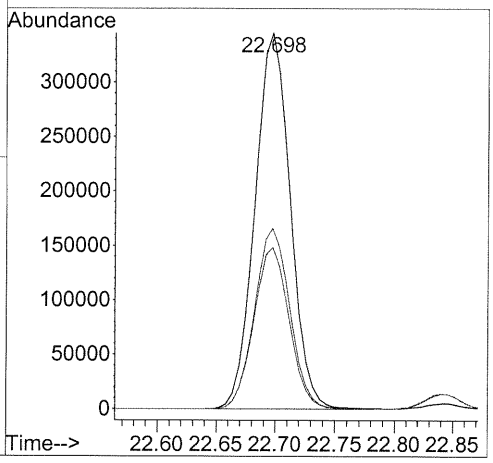


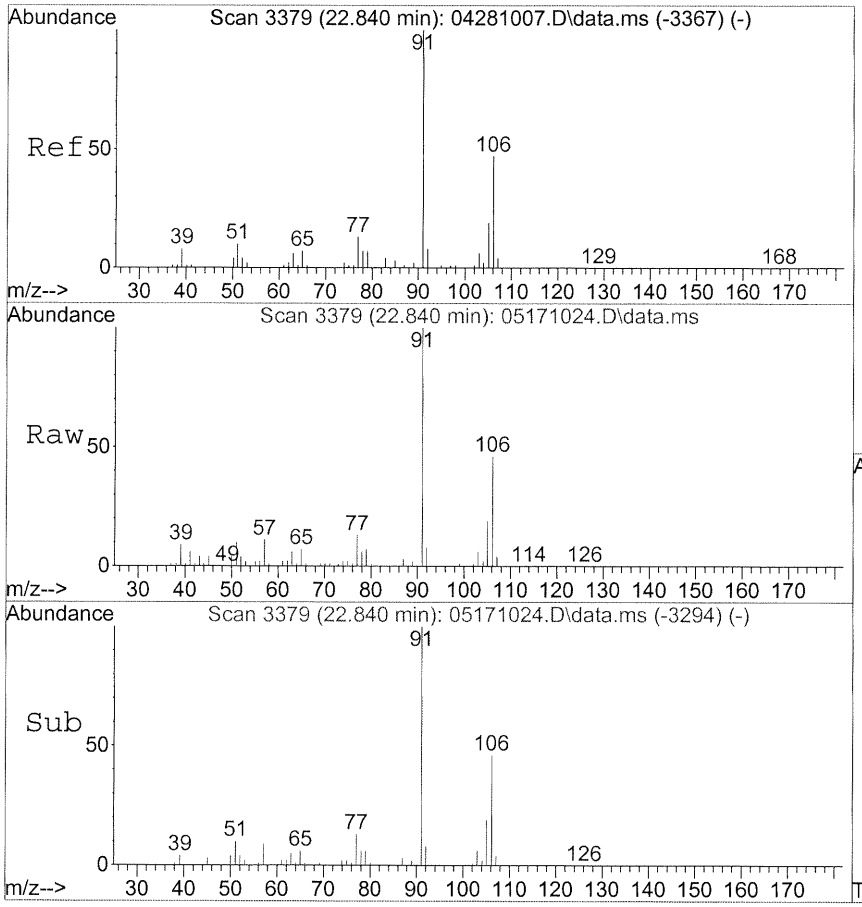


#69
Styrene
Concen: 12.14 ng
RT: 22.70 min Scan# 3354
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:104 Resp: 717147

Ion	Ratio	Lower	Upper
104	100		
78	43.0	22.5	62.5
103	48.2	27.5	67.5

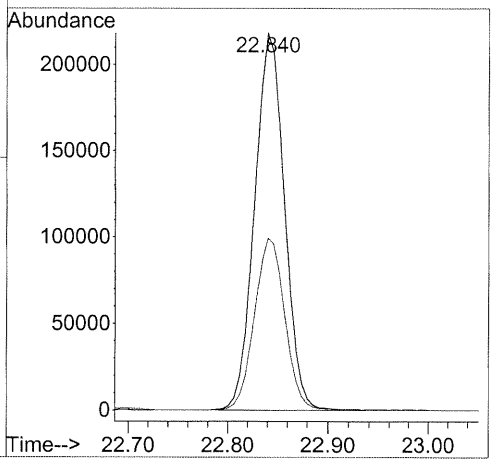


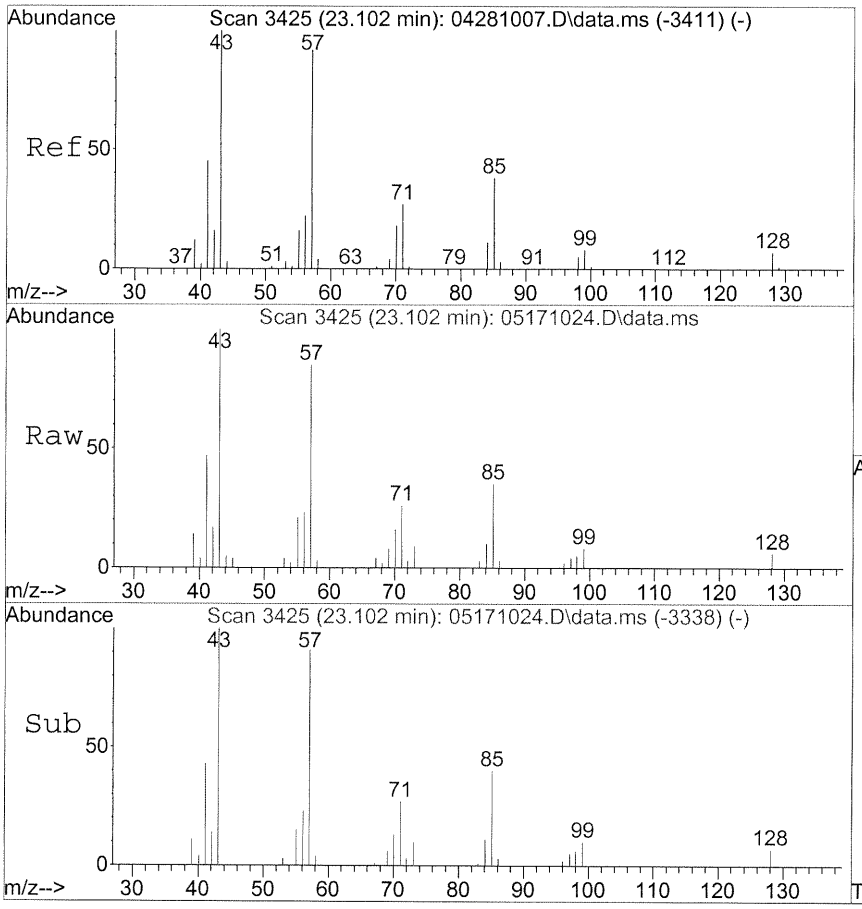


#70
o-Xylene
Concen: 5.12 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 91 Resp: 457179

Ion	Ratio	Lower	Upper
91	100		
106	46.3	27.8	67.8

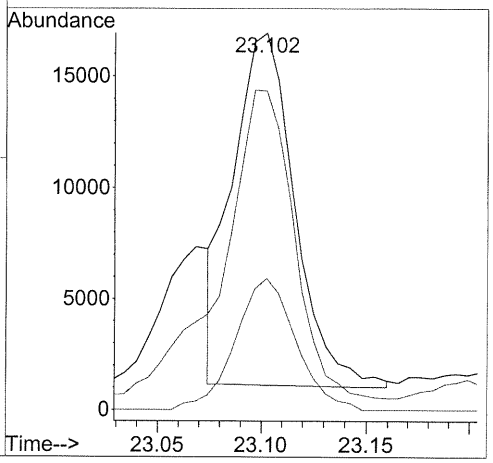


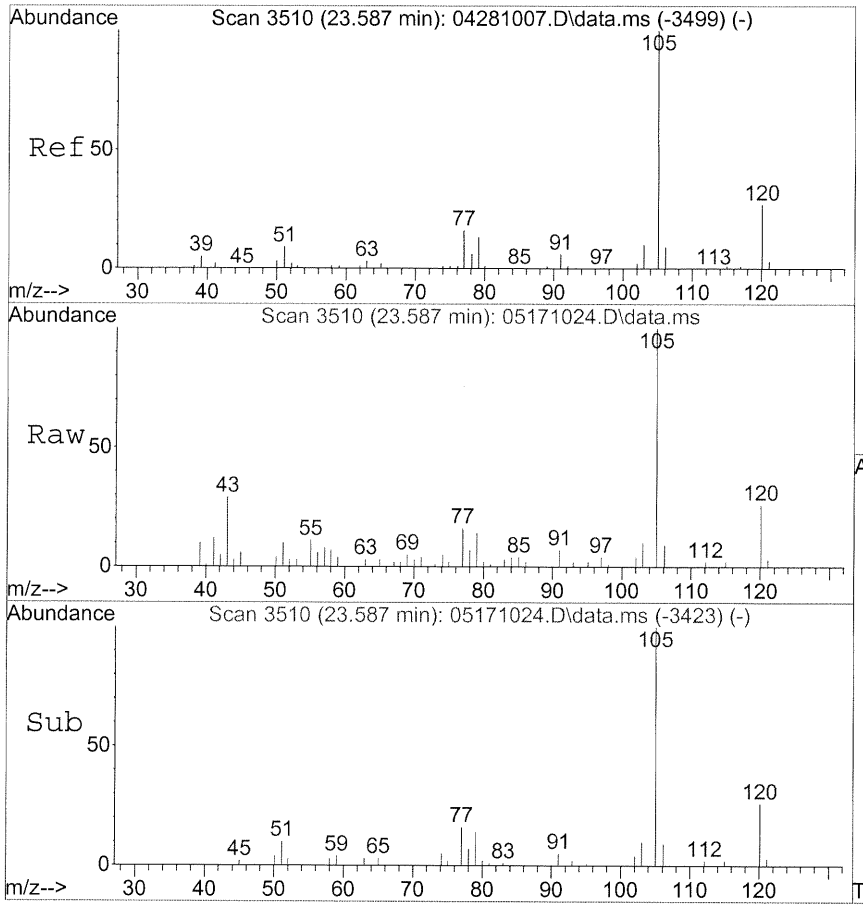


#71
n-Nonane
Concen: 0.68 ng m
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 43 Resp: 33064

Ion	Ratio	Lower	Upper
43	100		
57	100.2	74.6	114.6
85	36.2	20.5	60.5

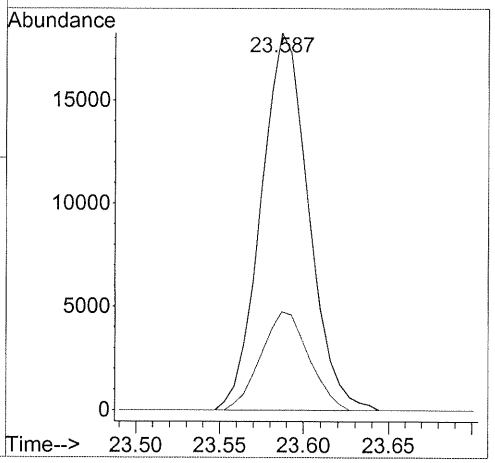


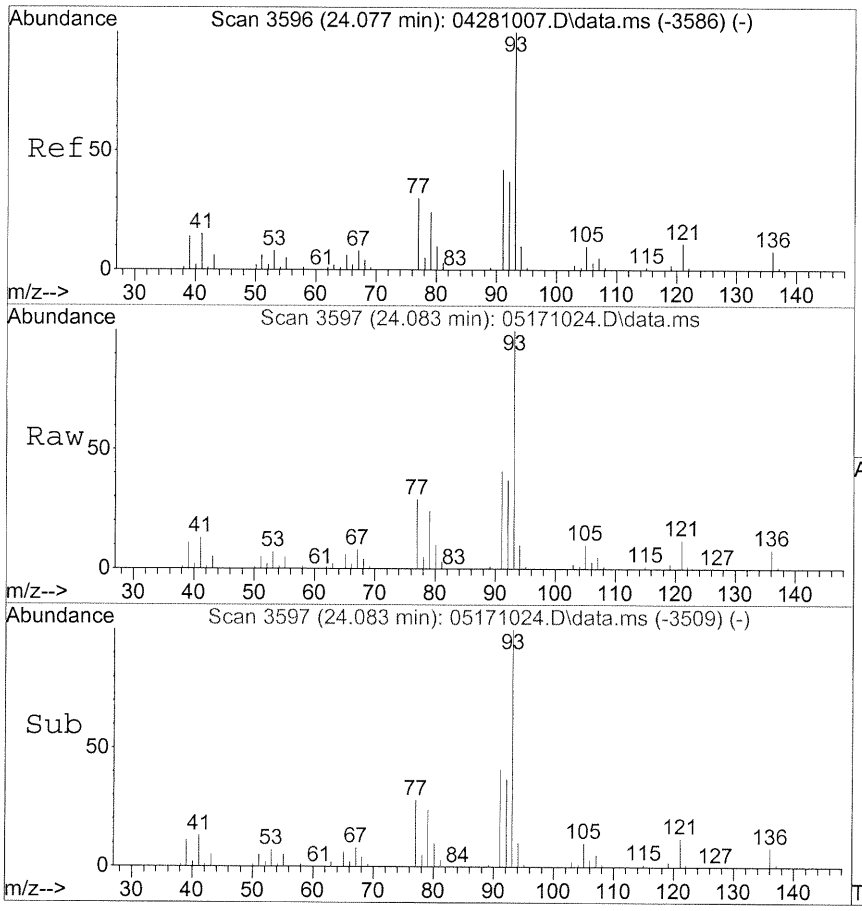


#74
Cumene
Concen: 0.33 ng
RT: 23.59 min Scan# 3510
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:105 Resp: 35909

Ion	Ratio	Lower	Upper
105	100		
120	26.0	6.8	46.8

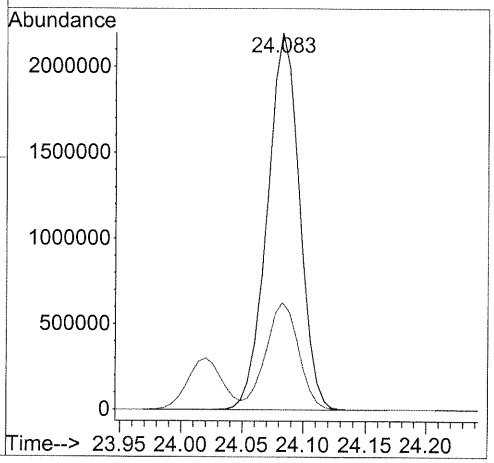


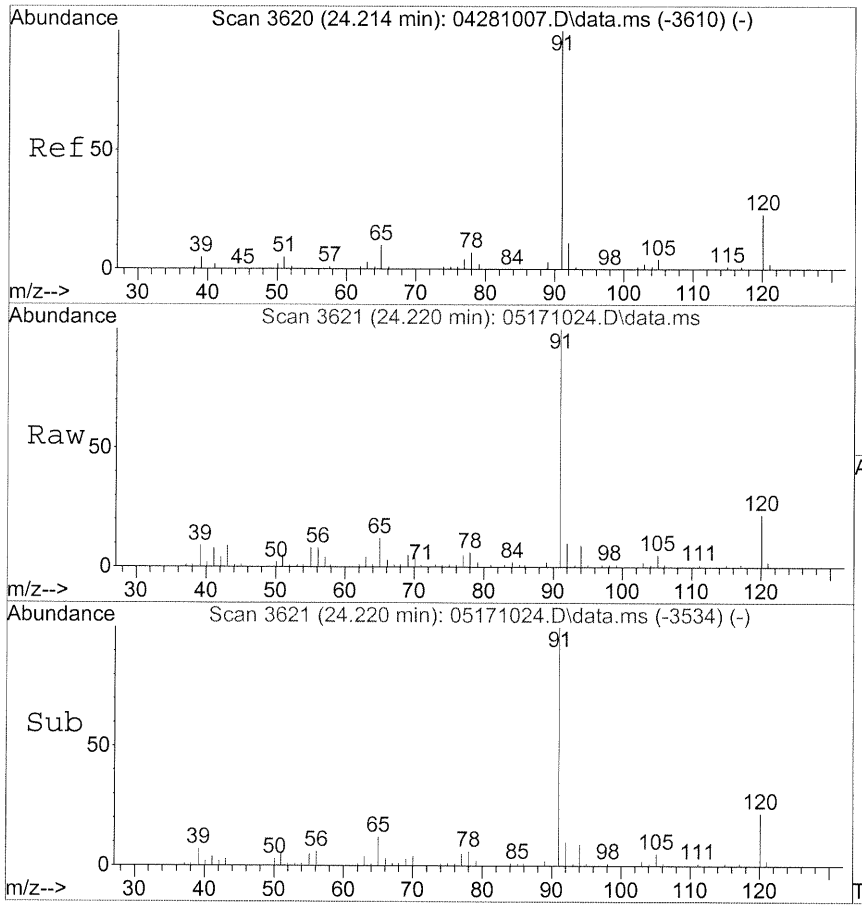


#75
alpha-Pinene
Concen: 79.80 ng
RT: 24.08 min Scan# 3597
Delta R.T. -0.000 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 93 Resp: 4040174

Ion	Ratio	Lower	Upper
93	100		
77	29.1	8.7	48.7

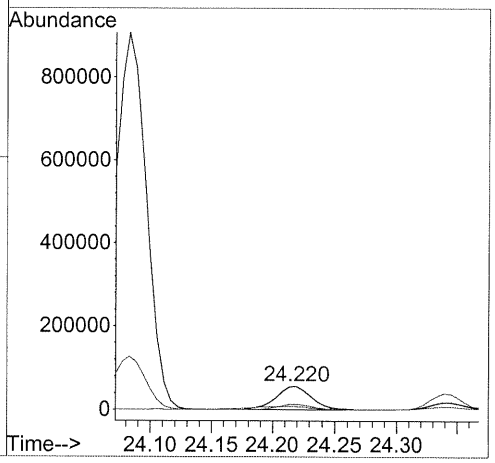


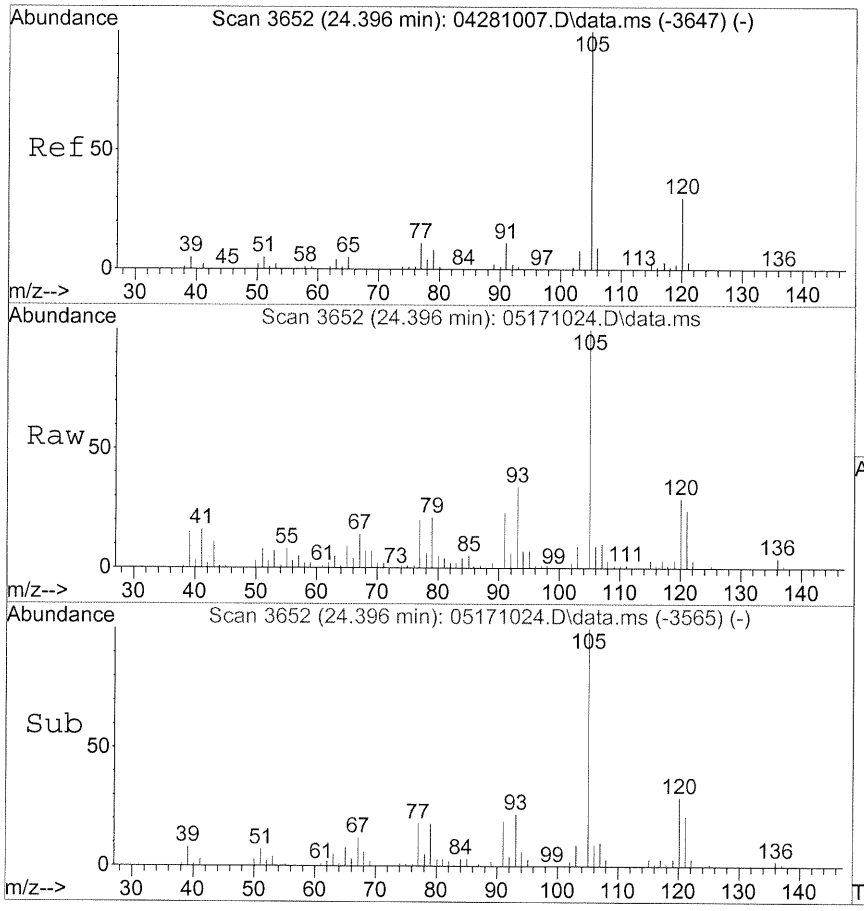


#76
n-Propylbenzene
Concen: 0.85 ng
RT: 24.22 min Scan# 3621
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 91 Resp: 112795

Ion	Ratio	Lower	Upper
91	100		
120	20.6	3.8	43.8
65	21.4	0.0	30.1

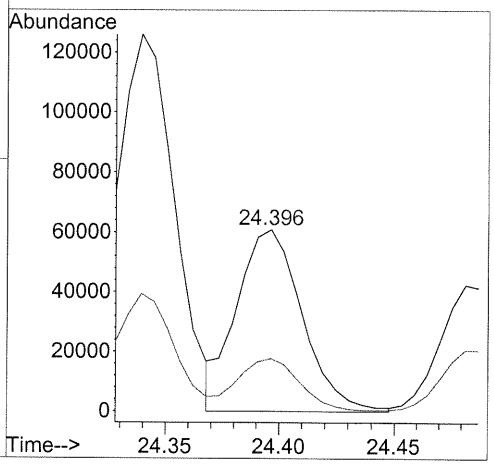


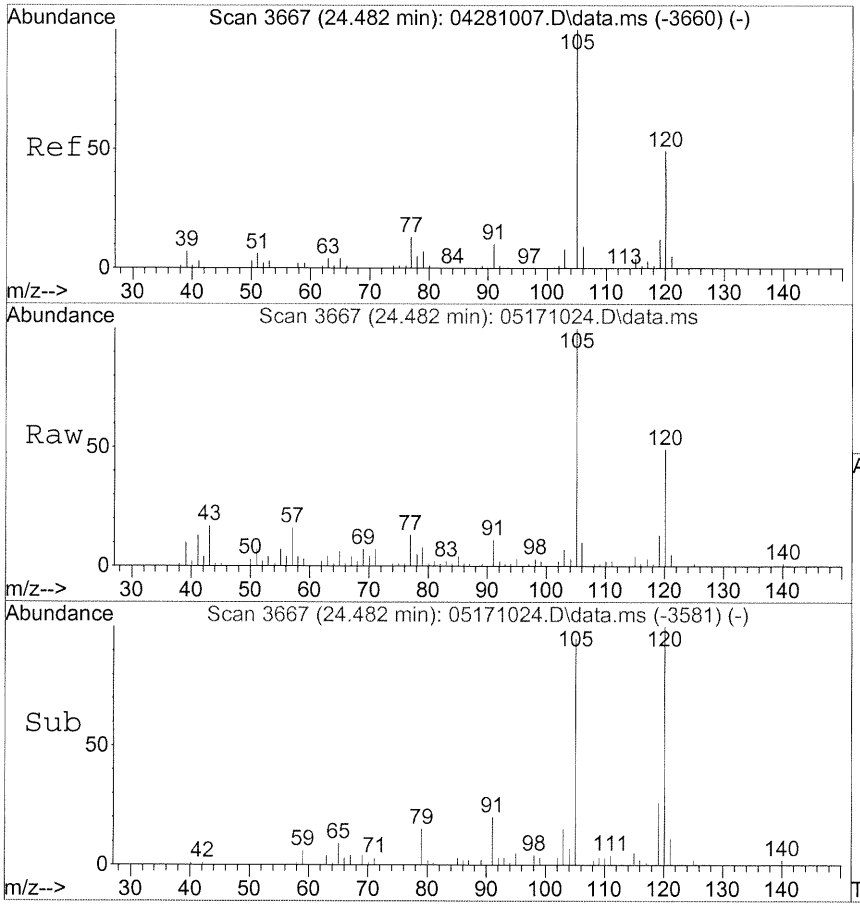


#78
4-Ethyltoluene
Concen: 1.21 ng
RT: 24.40 min Scan# 3652
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:105 Resp: 122044

Ion	Ratio	Lower	Upper
105	100		
120	28.1	10.2	50.2

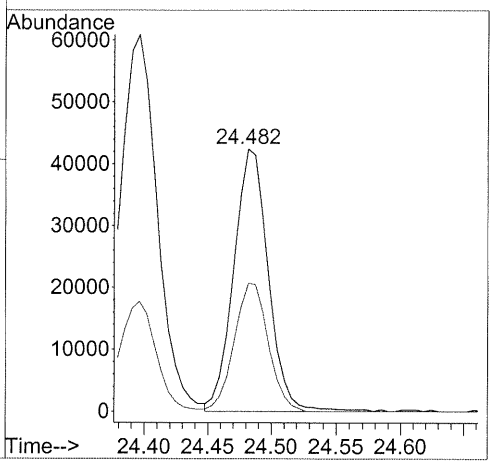


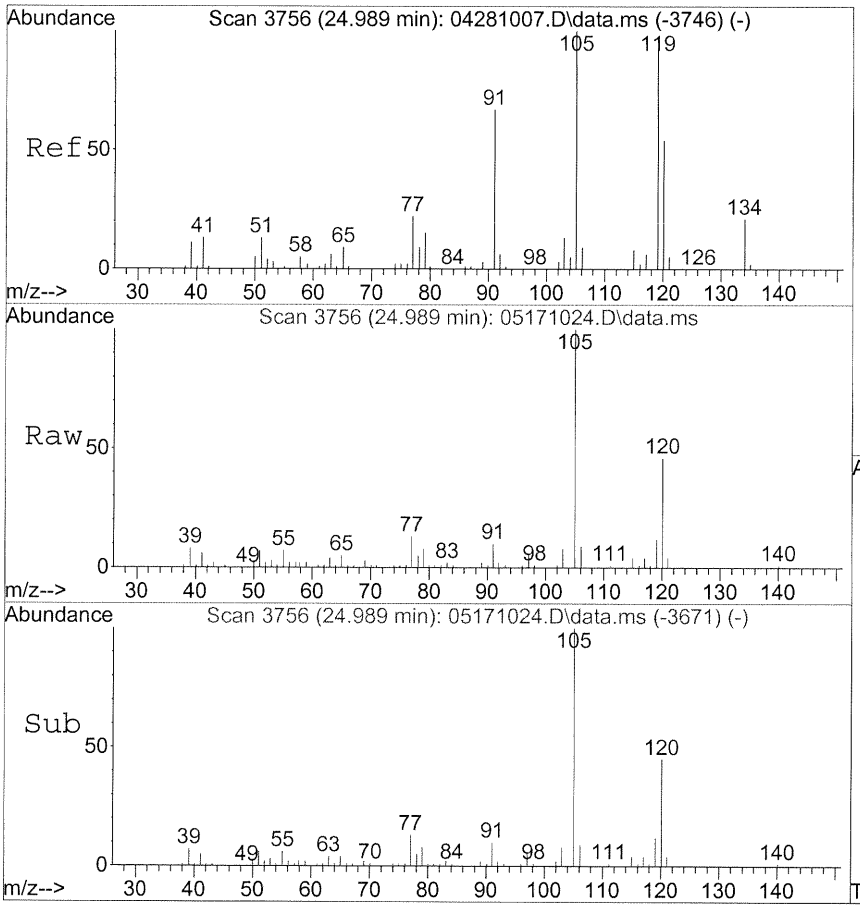


#79
1,3,5-Trimethylbenzene
Concen: 0.95 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.012 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:105 Resp: 80261

Ion	Ratio	Lower	Upper
105	100		
120	47.9	30.4	70.4

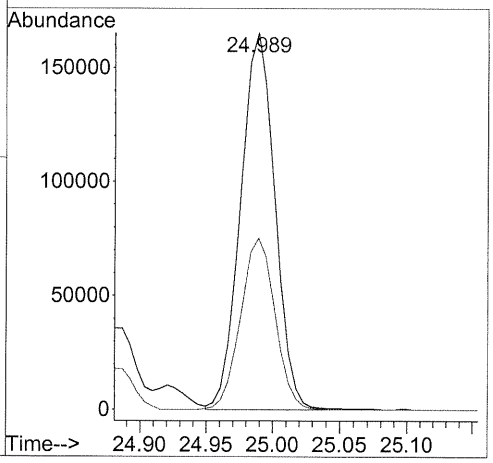


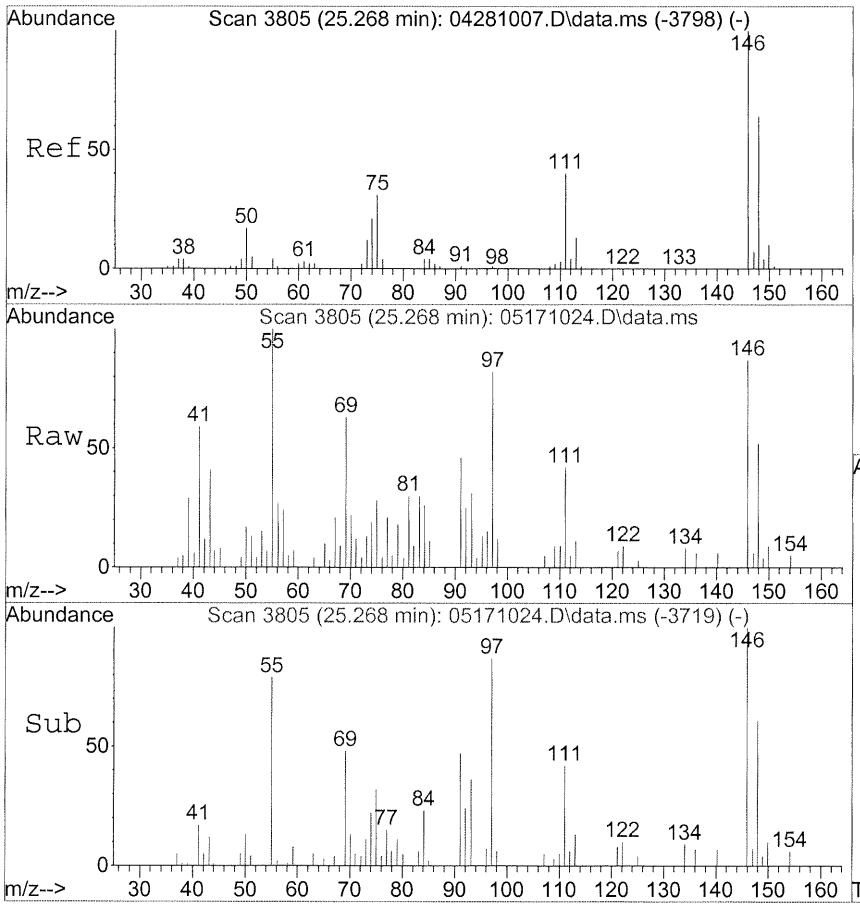


#82
1,2,4-Trimethylbenzene
Concen: 3.38 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:105 Resp: 298057

Ion	Ratio	Lower	Upper
105	100		
120	45.5	35.1	75.1

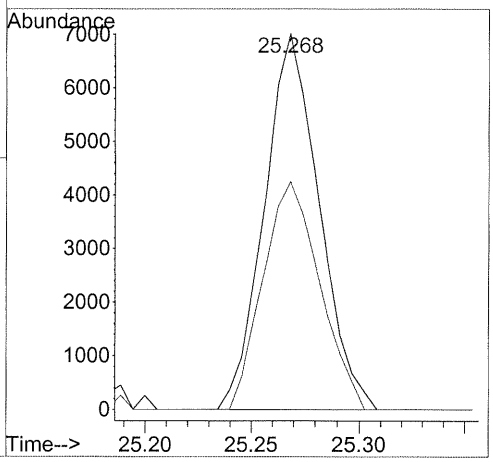


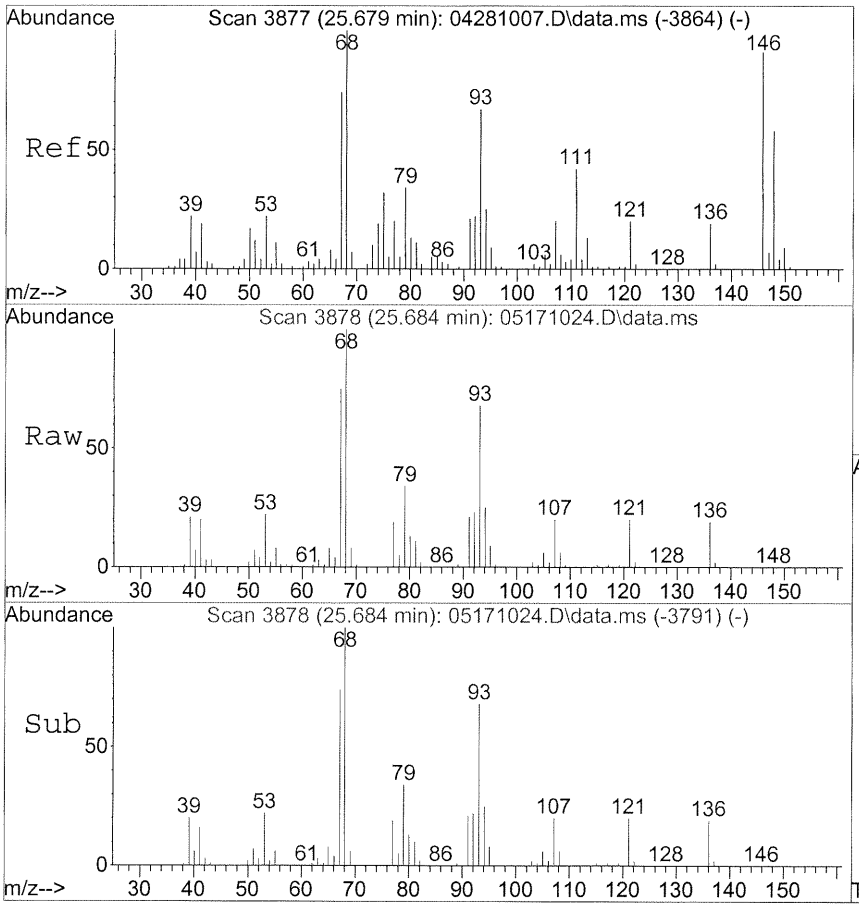


#86
1,4-Dichlorobenzene
Concen: 0.28 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.012 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:146 Resp: 12432

Ion	Ratio	Lower	Upper
146	100		
148	62.8	44.0	84.0

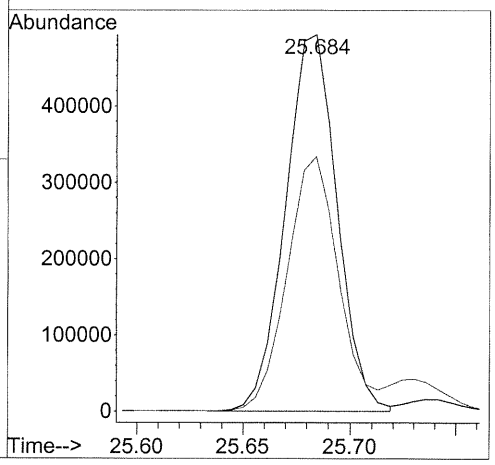


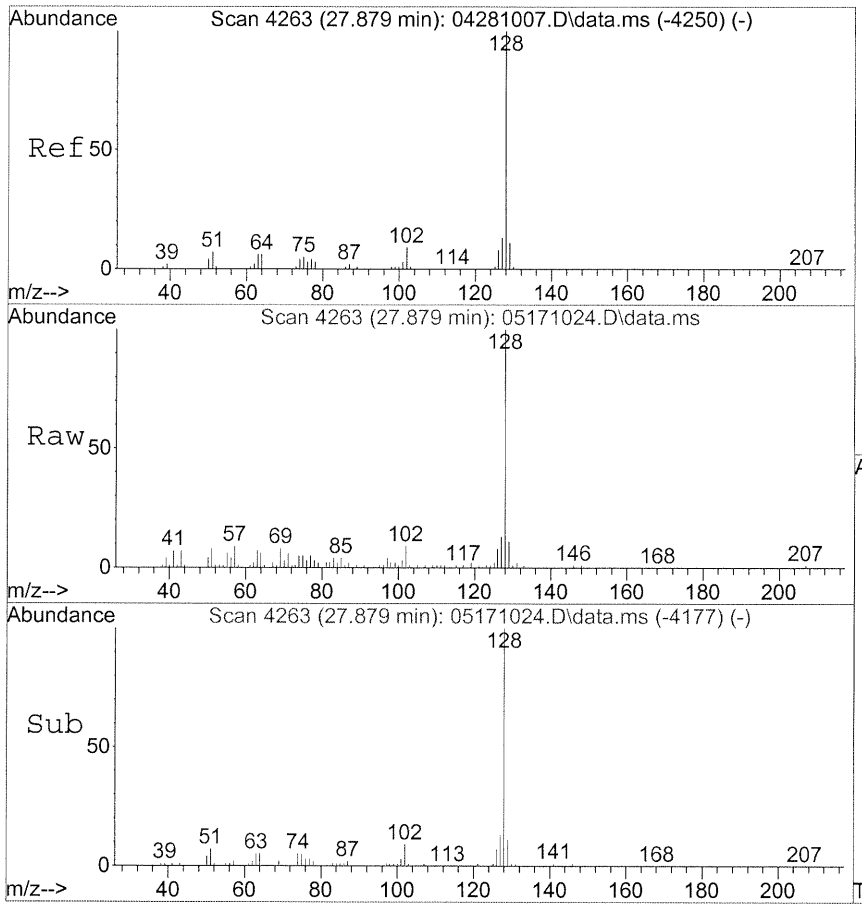


#91
d-Limonene
Concen: 23.71 ng
RT: 25.68 min Scan# 3878
Delta R.T. -0.006 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion: 68 Resp: 823985

Ion	Ratio	Lower	Upper
68	100		
93	67.8	51.5	91.5

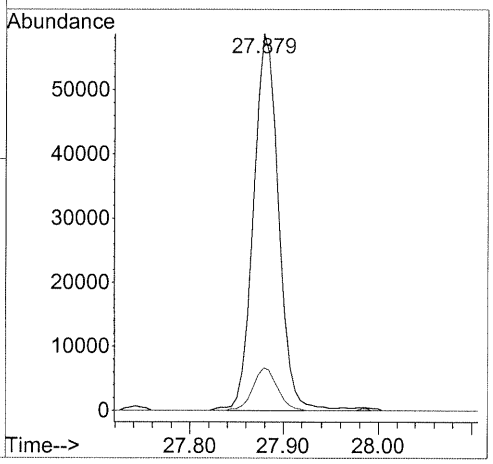




#95
Naphthalene
Concen: 1.13 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.012 min
Lab File: 05171024.D
Acq: 18 May 2010 2:47

Tgt Ion:128 Resp: 110200

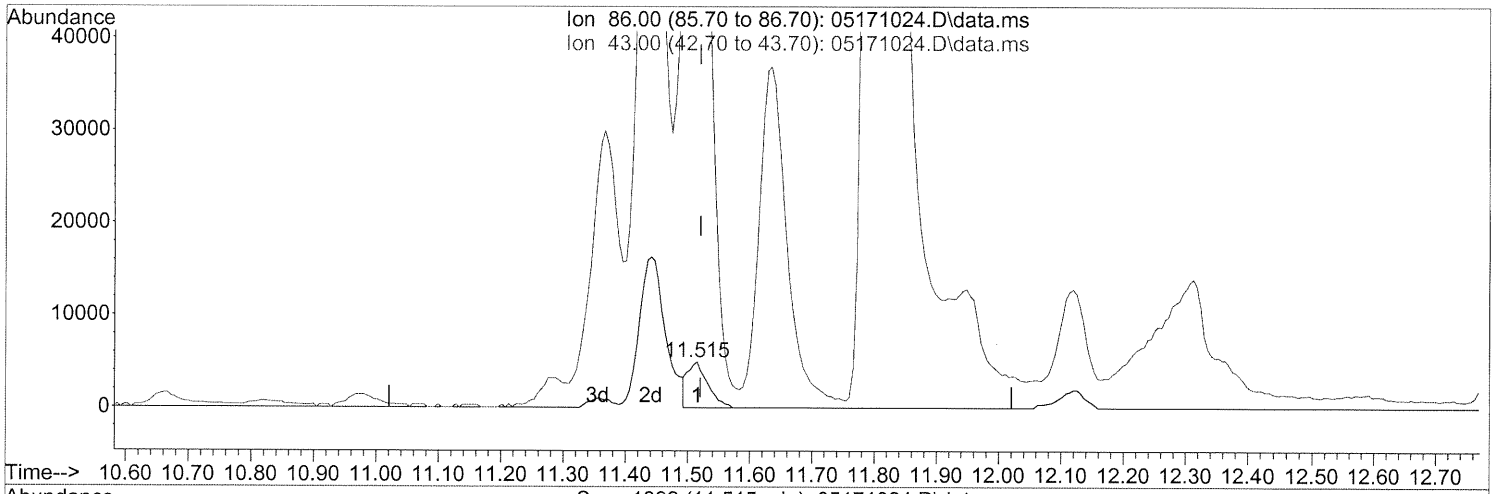
Ion	Ratio	Lower	Upper
128	100		
129	11.0	0.0	31.1

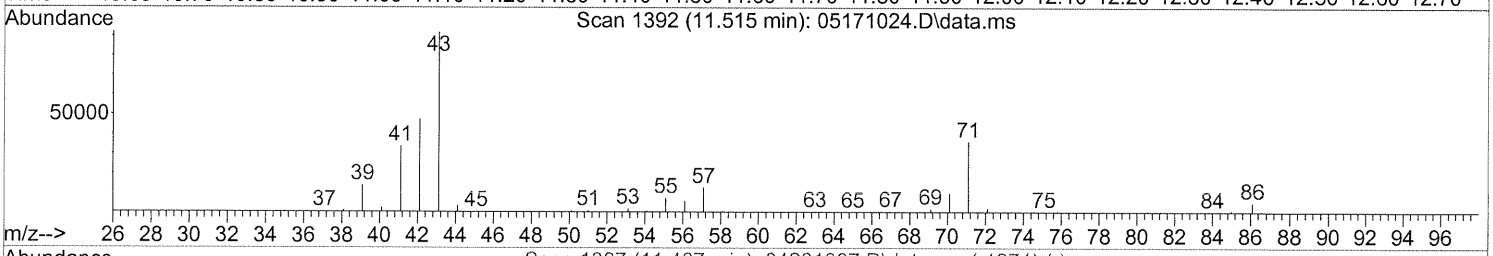


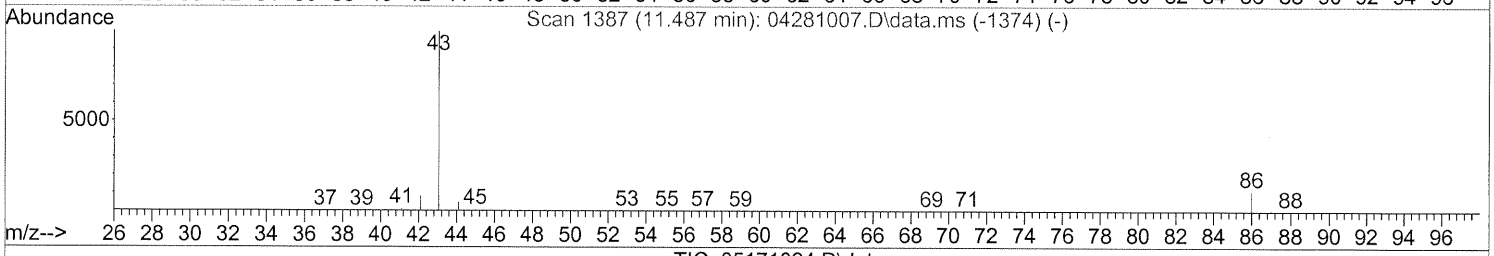
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171024.D\data.ms

(26) Vinyl Acetate (T)

11.515min (-0.006) 2.23ng

response 11087

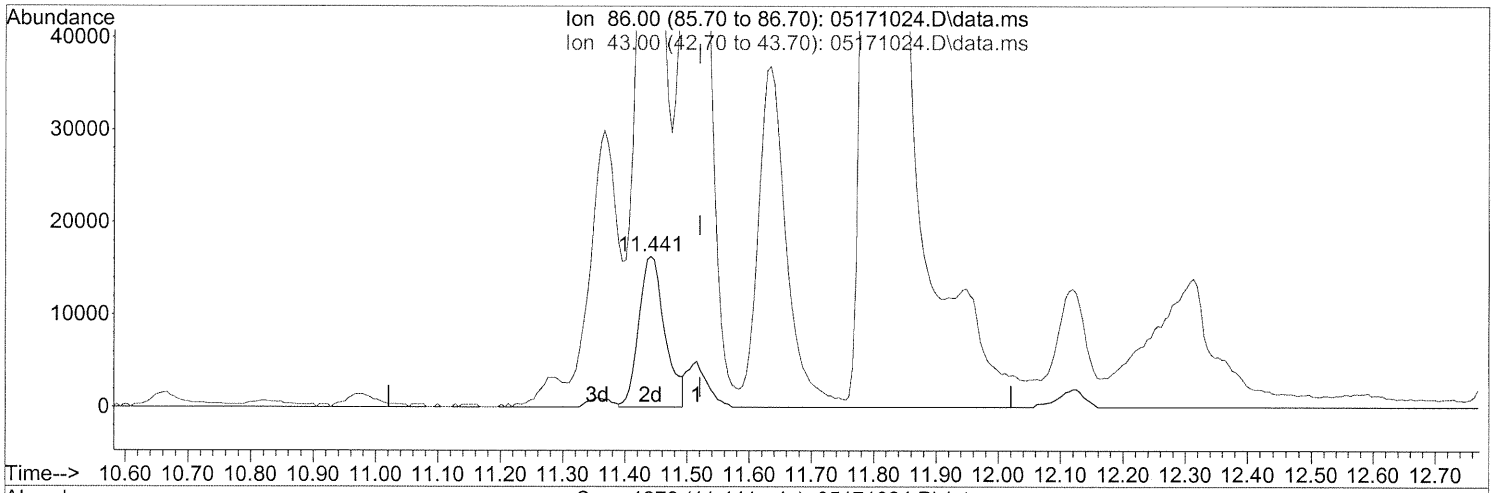
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2271.07#
0.00	0.00	0.00
0.00	0.00	0.00

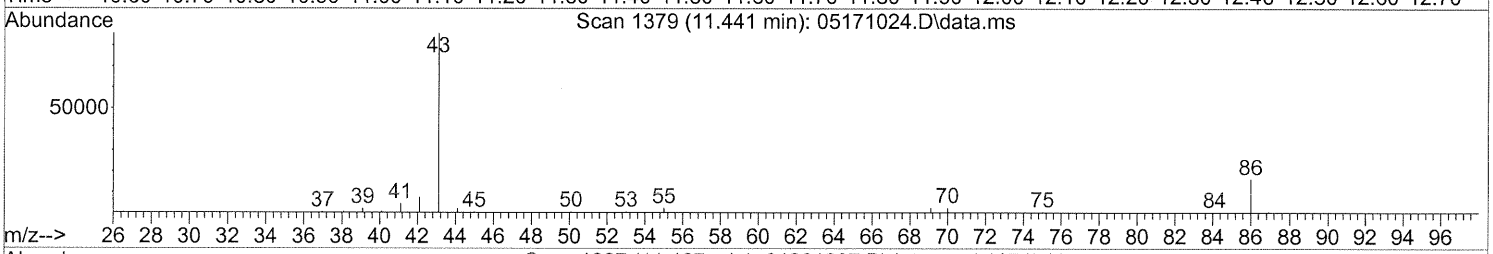
MP

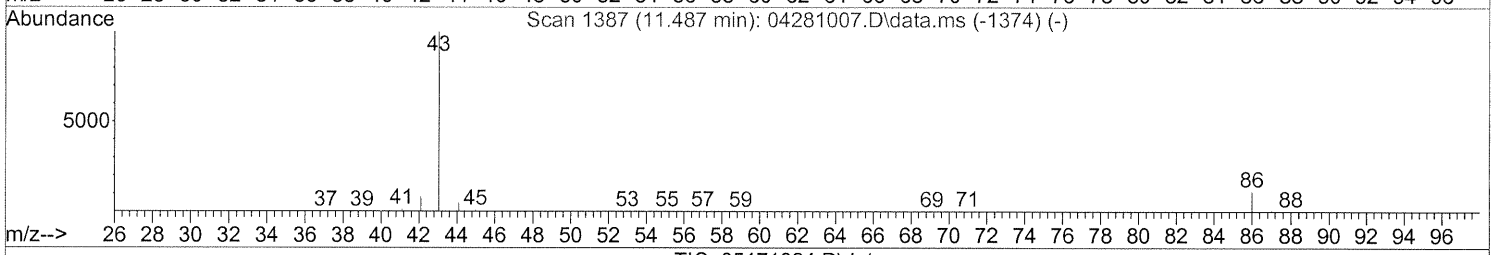
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171024.D\data.ms

(26) Vinyl Acetate (T)

11.441min (-0.080) 9.52ng m

response 47324

Ion	Exp%	Act%
86.00	100	100
43.00	849.70	532.06#
0.00	0.00	0.00
0.00	0.00	0.00

MP 7/C

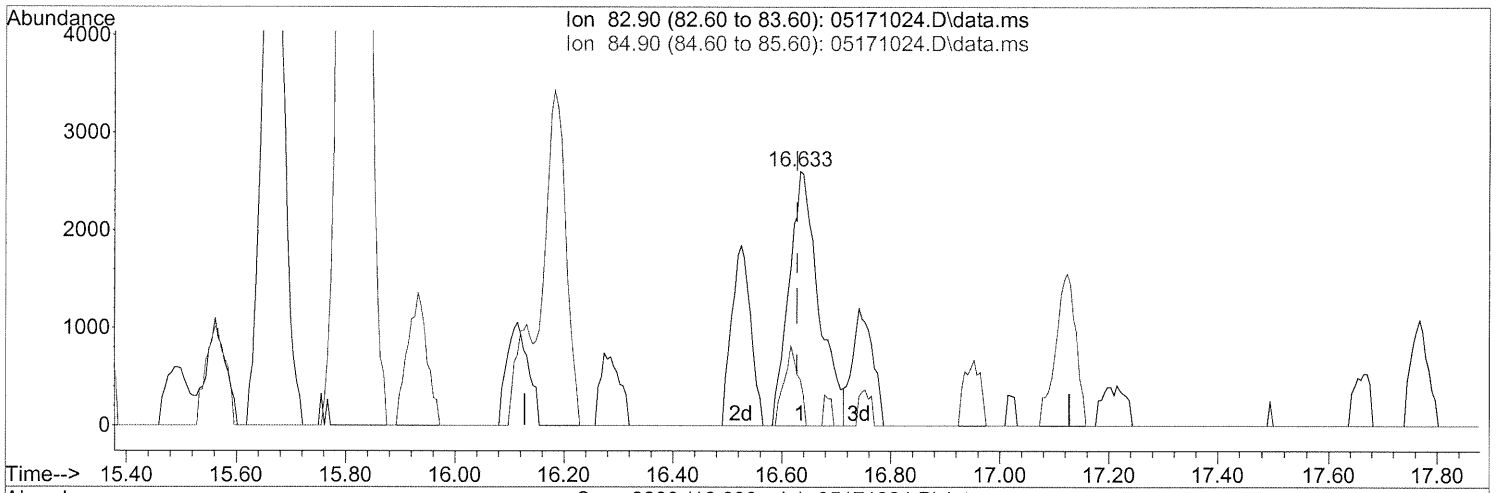
DM 5/20/10

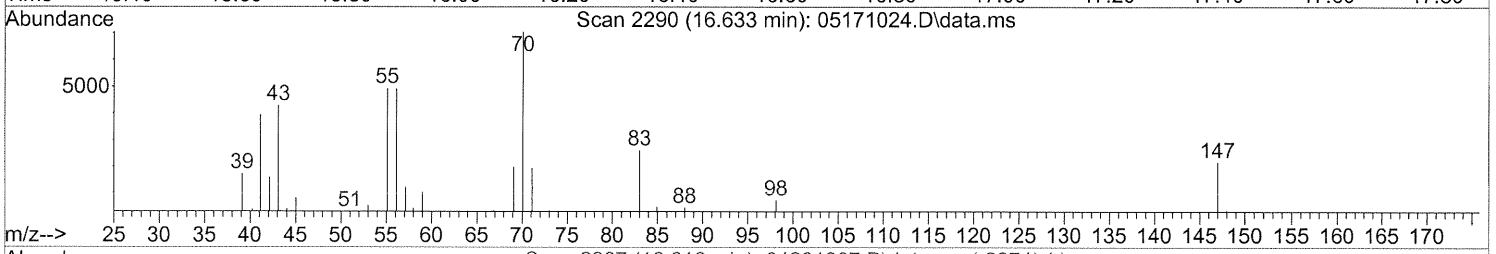
EM 5/24/10

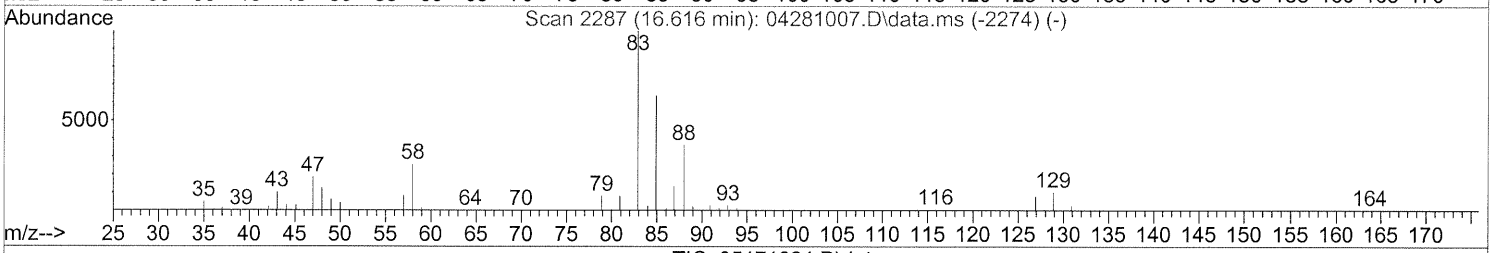
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171024.D\data.ms

(46) Bromodichloromethane (T)

16.633min (+0.006) 0.38ng

response 9938

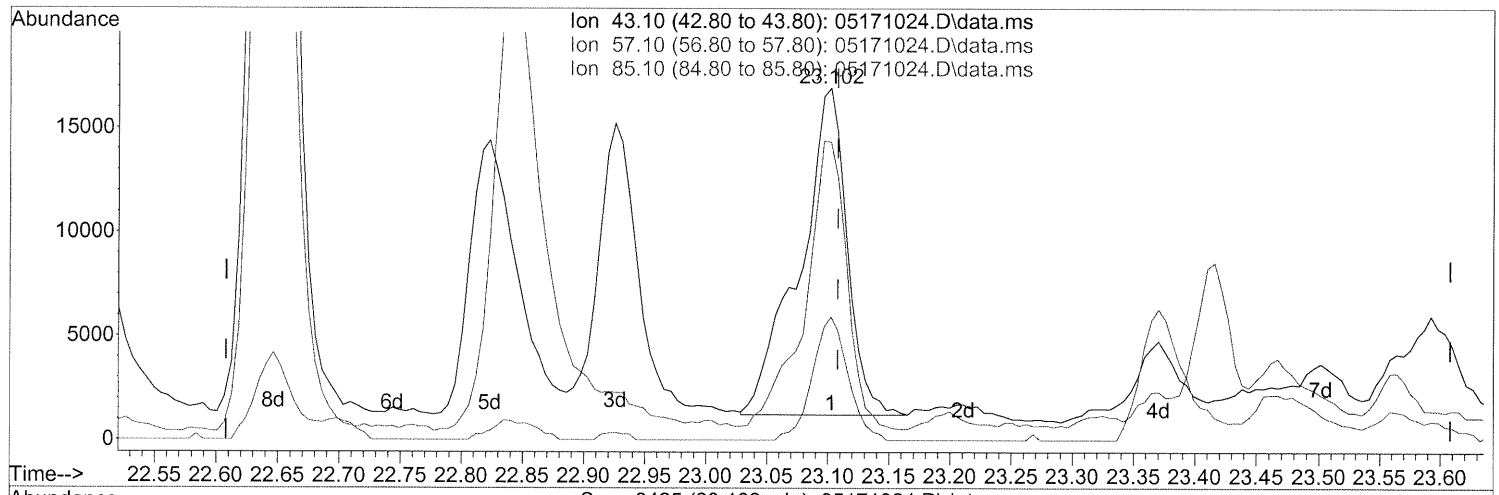
Ion	Exp%	Act%
82.90	100	100
84.90	63.40	15.33#
0.00	0.00	0.00
0.00	0.00	0.00

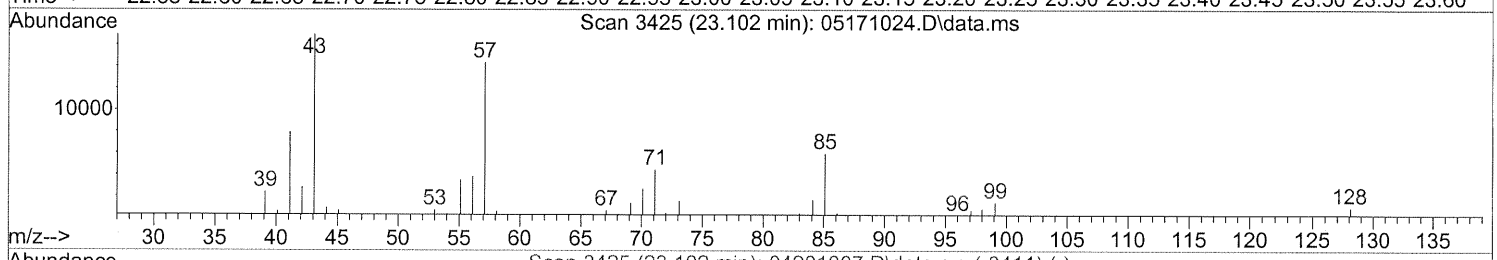
7P

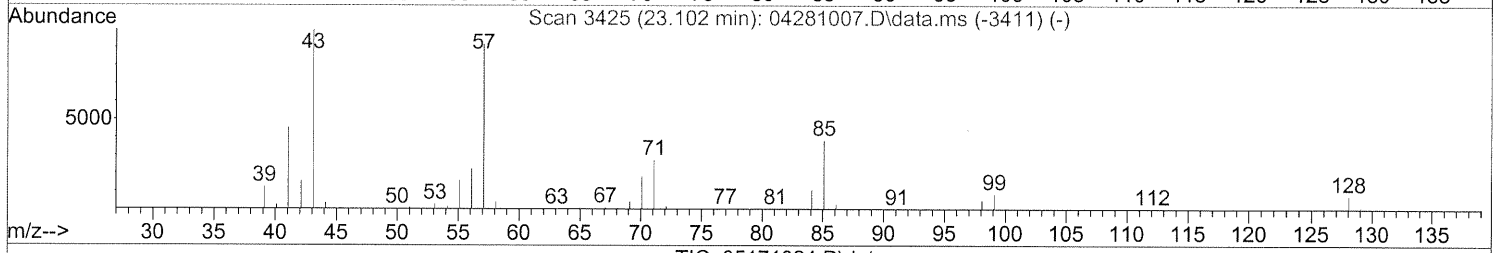
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171024.D\data.ms

(71) n-Nonane (T)

23.102min (-0.006) 0.87ng

response 42369

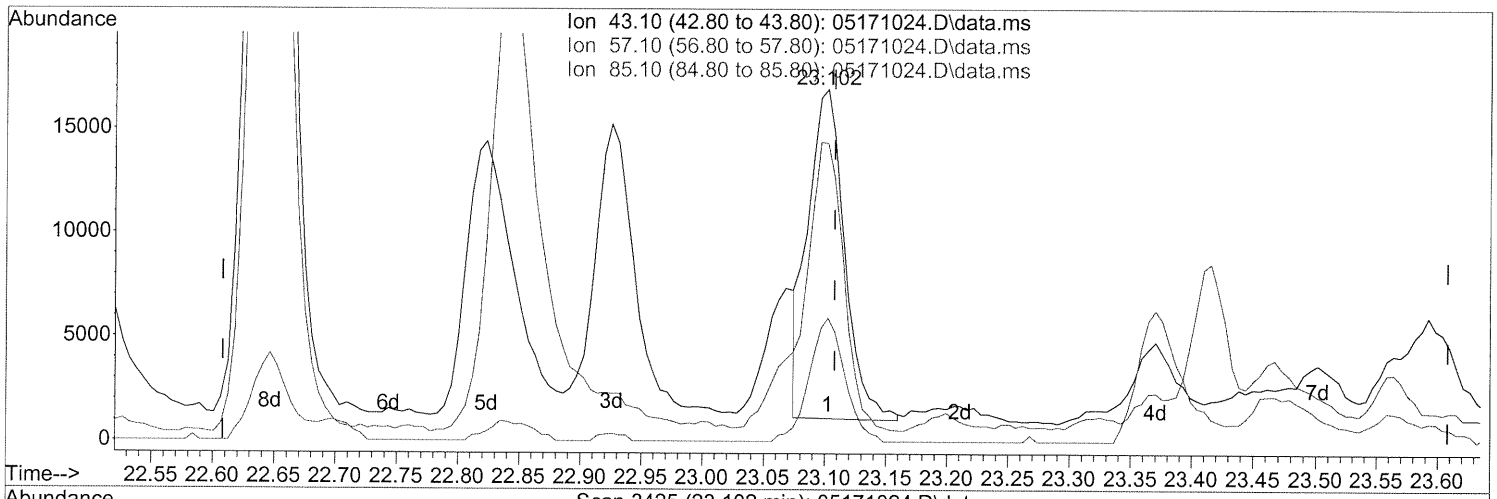
Ion	Exp%	Act%
43.10	100	100
57.10	94.60	78.23
85.10	40.50	28.28
0.00	0.00	0.00

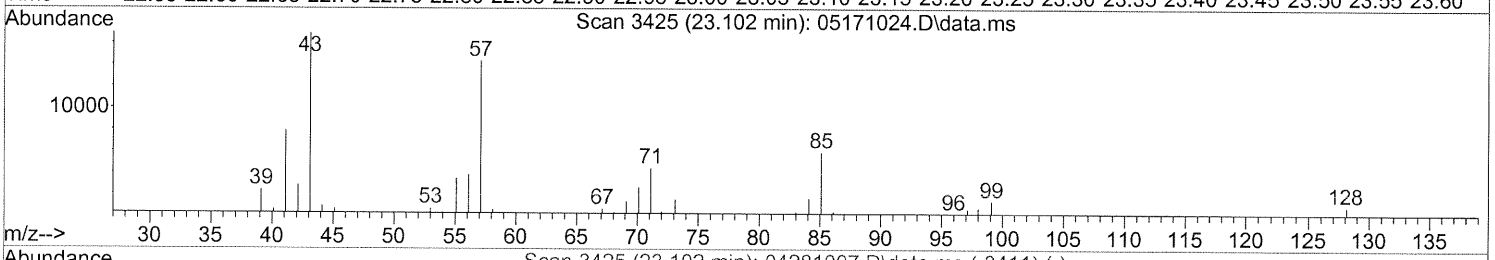
87

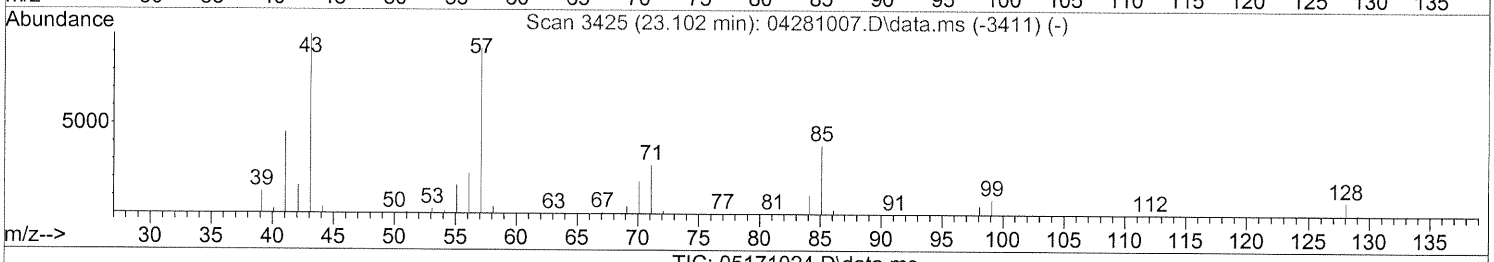
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171024.D\data.ms

(71) n-Nonane (T)

23.102min (-0.006) 0.68ng m

response 33064

Ion	Exp%	Act%
43.10	100	100
57.10	94.60	100.25
85.10	40.50	36.24
0.00	0.00	0.00

SH -7 IC

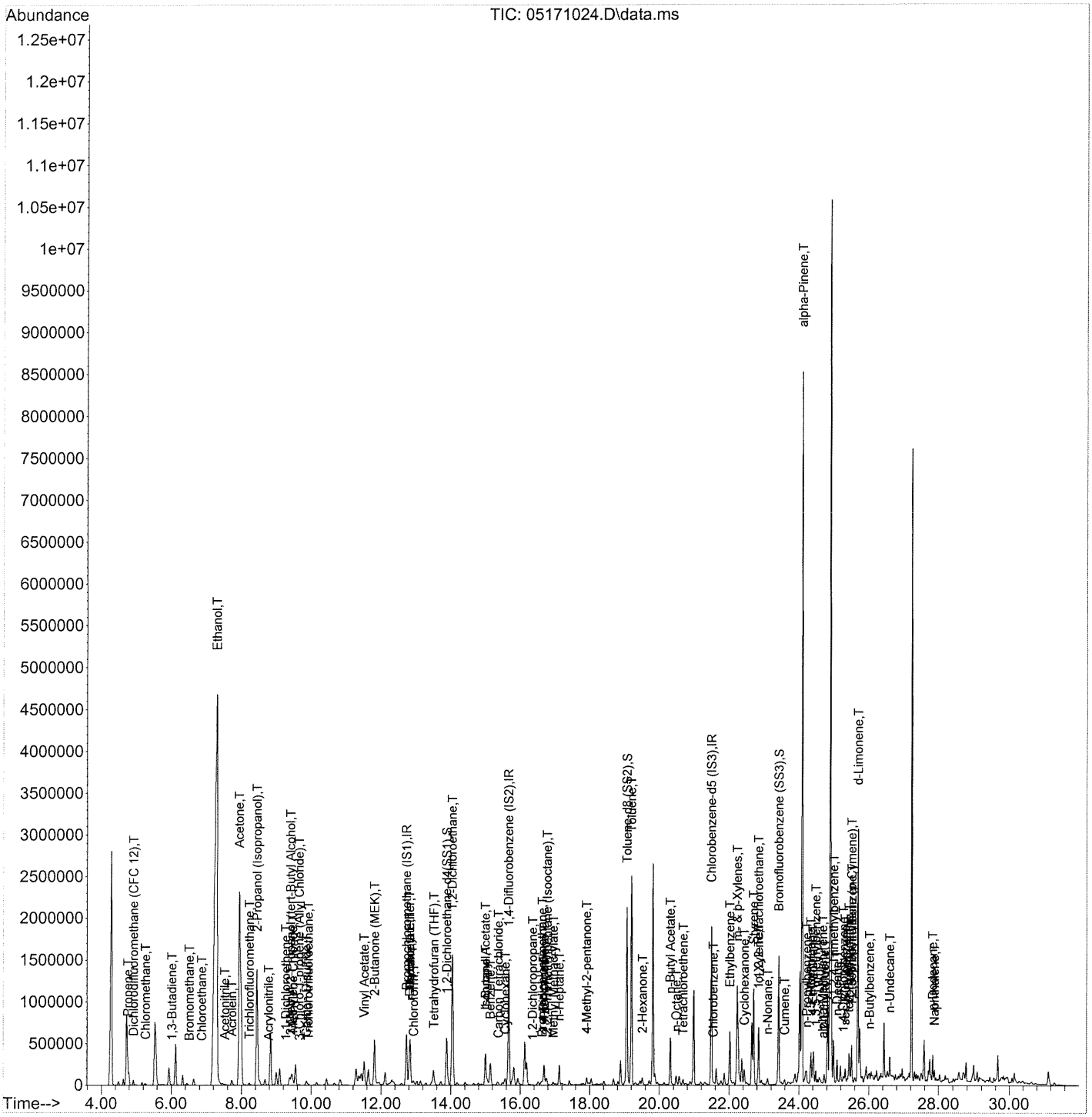
5/20/10

5/24/10

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.73	130	316945	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1582259	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	780335	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	561132	23.791	ng		-0.02
Spiked Amount 25.000			Recovery	=	95.16%		
57) Toluene-d8 (SS2)	19.07	98	1847878	24.822	ng		0.00
Spiked Amount 25.000			Recovery	=	99.28%		
73) Bromofluorobenzene (SS3)	23.42	174	492522	25.915	ng		0.00
Spiked Amount 25.000			Recovery	=	103.68%		
Target Compounds							Qvalue
2) Propene	4.76	42	105086	4.251	ng	#	81
3) Dichlorodifluoromethan...	4.92	85	61857	1.458	ng		99
4) Chloromethane	5.26	50	14159	0.451	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	1051	N.D.			
6) Vinyl Chloride	5.72	62	1031	N.D.			
7) 1,3-Butadiene	6.02	54	3417	0.136	ng		97
8) Bromomethane	6.51	94	1125	0.064	ng		89
9) Chloroethane	6.86	64	1158	0.065	ng	#	42
10) Ethanol	7.30	45	14528454	1077.888	ng		98
11) Acetonitrile	7.52	41	14255	0.419	ng		97
12) Acrolein	7.72	56	75481	7.184	ng		99
13) Acetone	7.94	58	1608041	97.591	ng		93
14) Trichlorofluoromethane	8.22	101	27108	0.738	ng		99
15) 2-Propanol (Isopropanol)	8.44	45	984731	19.276	ng		89
16) Acrylonitrile	8.77	53	2511	0.102	ng		91
17) 1,1-Dichloroethene	9.26	96	1130	0.058	ng	#	63
18) 2-Methyl-2-Propanol (t...	9.41	59	96569	1.832	ng	#	69
19) Methylene Chloride	9.47	84	34212	1.576	ng		95
20) 3-Chloro-1-propene (Al...	9.65	41	2147	0.076	ng	#	36
21) Trichlorotrifluoroethane	9.92	151	5369	0.346	ng		94
22) Carbon Disulfide	9.86	76	114062	1.474	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.28	63	89	N.D.			
25) Methyl tert-Butyl Ether	11.28	73	1992	N.D.			
26) Vinyl Acetate	11.52	86	11087	2.229	ng	#	1
27) 2-Butanone (MEK)	11.81	72	268694	19.632	ng	#	87
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.82	87	3707	0.183	ng	#	1
30) Ethyl Acetate	12.82	61	102211	12.562	ng		95
31) n-Hexane	12.84	57	144064	3.458	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	48365	1.391 ng		100
34) Tetrahydrofuran (THF)	13.52	72	16671	1.260 ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.04	62	1765765	62.649 ng		100
38) 1,1,1-Trichloroethane	14.45	97	481	N.D.		
39) Isopropyl Acetate	14.99	61	1573	0.115 ng	#	1
40) 1-Butanol	15.00	56	339404	15.522 ng	#	75
41) Benzene	15.14	78	339801	3.847 ng		100
42) Carbon Tetrachloride	15.37	117	15363	0.653 ng		100
43) Cyclohexane	15.57	84	41347	1.114 ng		93
44) tert-Amyl Methyl Ether	16.04	73	2098	N.D.		
45) 1,2-Dichloropropane	16.35	63	1118	0.052 ng		87
46) Bromodichloromethane	16.63	83	9938	0.375 ng	#	38
47) Trichloroethene	16.68	130	102398	4.548 ng		99
48) 1,4-Dioxane	16.66	88	3089	0.184 ng	#	74
49) 2,2,4-Trimethylpentane...	16.77	57	60229	0.582 ng		64
50) Methyl Methacrylate	16.95	100	7560	0.816 ng	#	76
51) n-Heptane	17.12	71	78143	3.095 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.91	58	36203	1.897 ng		90
54) trans-1,3-Dichloropropene	18.59	75	290	N.D.		
55) 1,1,2-Trichloroethane	18.76	97	188	N.D.		
58) Toluene	19.20	91	2441297	26.435 ng		99
59) 2-Hexanone	19.51	43	58227	1.322 ng		88
60) Dibromochloromethane	19.73	129	205	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.31	43	496338	10.024 ng		100
63) n-Octane	20.48	57	22770	1.063 ng		91
64) Tetrachloroethene	20.67	166	24364	1.126 ng		100
65) Chlorobenzene	21.54	112	6187	0.110 ng		85
66) Ethylbenzene	22.01	91	607552	5.880 ng		97
67) m- & p-Xylenes	22.22	91	1182432	14.116 ng		98
68) Bromoform	22.34	173	176	N.D.		
69) Styrene	22.70	104	717147	12.141 ng		99
70) o-Xylene	22.84	91	457179	5.123 ng		98
71) n-Nonane	23.10	43	42369	0.875 ng		82
72) 1,1,2,2-Tetrachloroethane	22.83	83	2064	0.065 ng	#	39
74) Cumene	23.59	105	35909	0.333 ng		99
75) alpha-Pinene	24.08	93	4040174	79.802 ng		99
76) n-Propylbenzene	24.22	91	112795	0.853 ng		86
77) 3-Ethyltoluene	24.34	105	230491	2.312 ng		98
78) 4-Ethyltoluene	24.40	105	122044	1.211 ng		96
79) 1,3,5-Trimethylbenzene	24.48	105	80261	0.950 ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171024.D
Acq On : 18 May 2010 2:47
Operator : EM
Sample : P1001651-011 (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 08:05:31 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

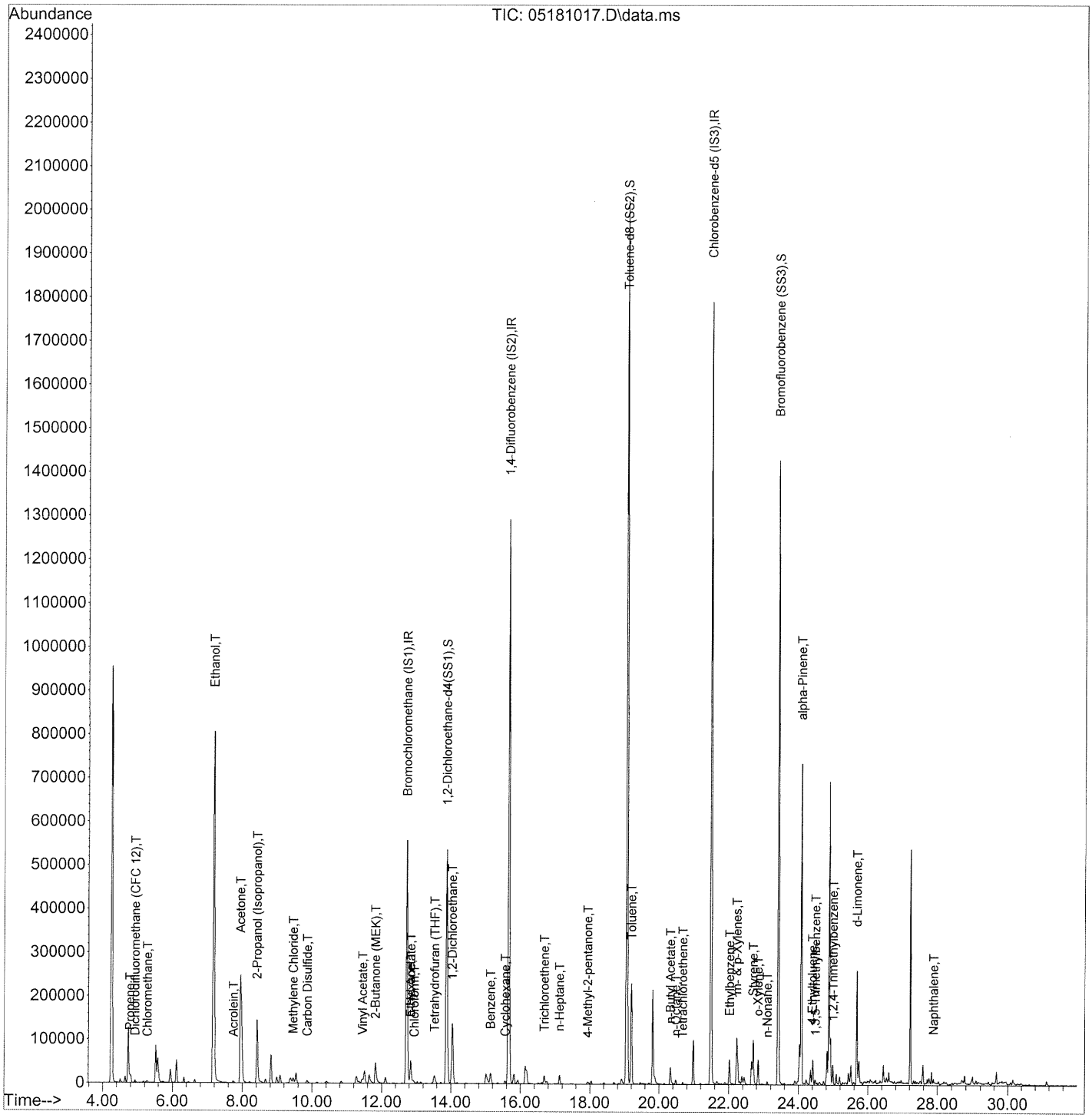
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	2937	0.066 ng		91
81) 2-Ethyltoluene	24.72	105	83572	0.803 ng		71
82) 1,2,4-Trimethylbenzene	24.99	105	298057	3.375 ng		87
83) n-Decane	25.09	57	103266	2.034 ng		98
84) Benzyl Chloride	25.16	91	1680	N.D.		
85) 1,3-Dichlorobenzene	25.19	146	343	N.D.		
86) 1,4-Dichlorobenzene	25.27	146	12432	0.284 ng		98
87) sec-Butylbenzene	25.32	105	9812	0.085 ng		84
88) 4-Isopropyltoluene (p-...	25.51	119	189266	1.664 ng		100
89) 1,2,3-Trimethylbenzene	25.51	105	74896	0.828 ng		95
90) 1,2-Dichlorobenzene	25.68	146	556	N.D.		
91) d-Limonene	25.68	68	823985	23.706 ng		95
92) 1,2-Dibromo-3-Chloropr...	26.60	157	271	N.D.		
93) n-Undecane	26.60	57	117784	2.314 ng		97
94) 1,2,4-Trichlorobenzene	27.74	180	746	N.D.		
95) Naphthalene	27.88	128	110200	1.130 ng		100
96) n-Dodecane	27.83	57	111950	2.145 ng		95
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.43	55	94008	3.229 ng		98
99) tert-Butylbenzene	25.43	119	14078	0.158 ng		97
100) n-Butylbenzene	26.01	91	27497	0.303 ng	#	58

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 17:30:08 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 17:30:08 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	300199	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1509281	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	767306	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	541773	24.251	ng		-0.03
Spiked Amount 25.000			Recovery	=	97.00%		✓
57) Toluene-d8 (SS2)	19.06	98	1790673	24.462	ng		-0.01
Spiked Amount 25.000			Recovery	=	97.84%		✓
73) Bromofluorobenzene (SS3)	23.42	174	468440	25.067	ng		0.00
Spiked Amount 25.000			Recovery	=	100.28%		✓
Target Compounds							Qvalue
2) Propene	4.78	42	5445	0.233	ng	#	64
3) Dichlorodifluoromethan...	4.93	85	6040	0.150	ng	#	91
4) Chloromethane	5.27	50	4272	0.144	ng		87
10) Ethanol	7.18	45	1329443	104.135	ng		100
12) Acrolein	7.74	56	6254	0.628	ng		89
13) Acetone	7.94	58	154018	9.869	ng		89
15) 2-Propanol (Isopropanol)	8.41	45	111517	2.305	ng		91
19) Methylene Chloride	9.46	84	3463	0.168	ng		87
22) Carbon Disulfide	9.86	76	15792	0.215	ng		91
26) Vinyl Acetate	11.45	86	4325	0.918	ng	#	1
27) 2-Butanone (MEK)	11.82	72	26221	2.023	ng	#	82
30) Ethyl Acetate	12.84	61	7877	1.022	ng		94
31) n-Hexane	12.84	57	13380	0.339	ng		93
32) Chloroform	12.94	83	4293	0.130	ng		99
34) Tetrahydrofuran (THF)	13.53	72	5291	0.422	ng	#	41
36) 1,2-Dichloroethane	14.03	62	168318	6.305	ng		99
41) Benzene	15.14	78	32188	0.382	ng		98
43) Cyclohexane	15.56	84	3867	0.109	ng		88
47) Trichloroethene	16.69	130	9628	0.448	ng		99
51) n-Heptane	17.12	71	6881	0.286	ng		96
53) 4-Methyl-2-pentanone	17.94	58	2423	0.133	ng	#	68
58) Toluene	19.20	91	229858	2.531	ng		99
62) n-Butyl Acetate	20.32	43	43951	0.903	ng		98
63) n-Octane	20.48	57	2165	0.103	ng		81
64) Tetrachloroethene	20.68	166	2130	0.100	ng		95
66) Ethylbenzene	22.02	91	57621	0.567	ng		96
67) m- & p-Xylenes	22.22	91	112891	1.371	ng		97
69) Styrene	22.70	104	65139	1.121	ng		99
70) o-Xylene	22.84	91	43593	0.497	ng		97
71) n-Nonane	23.10	43	5760	0.121	ng	#	65

DM 5/20/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 17:30:08 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

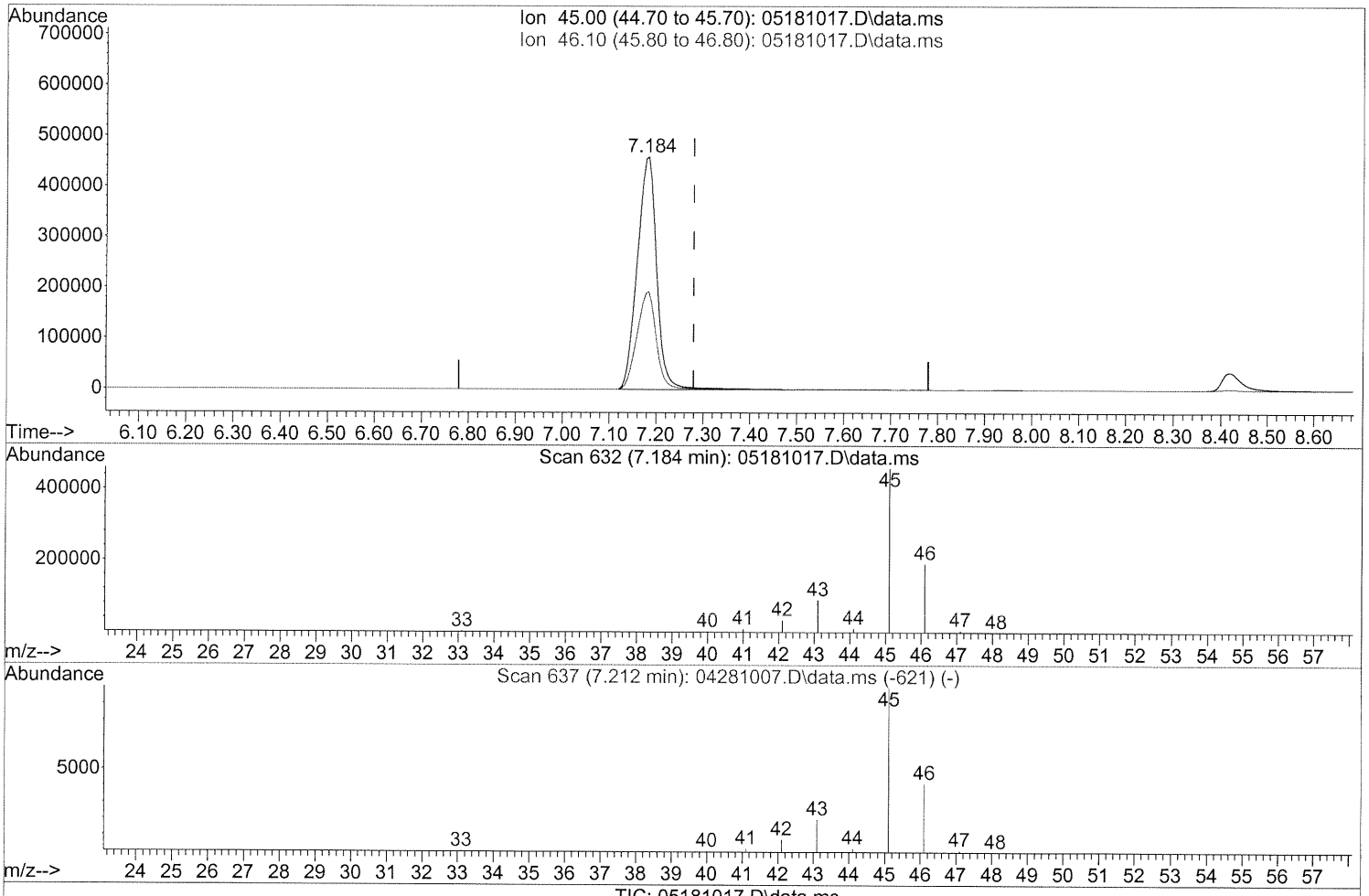
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
75) alpha-Pinene	24.08	93	344016	6.910	ng	95
78) 4-Ethyltoluene	24.40	105	12696	0.128	ng	93
79) 1,3,5-Trimethylbenzene	24.49	105	8212	0.099	ng	86
82) 1,2,4-Trimethylbenzene	24.99	105	26823	0.309	ng	85
91) d-Limonene	25.68	68	71453	2.091	ng	96
95) Naphthalene	27.88	128	12947	0.135	ng	93

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

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 19 08:43:18 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(10) Ethanol (T)

7.184min (-0.097) 104.14ng

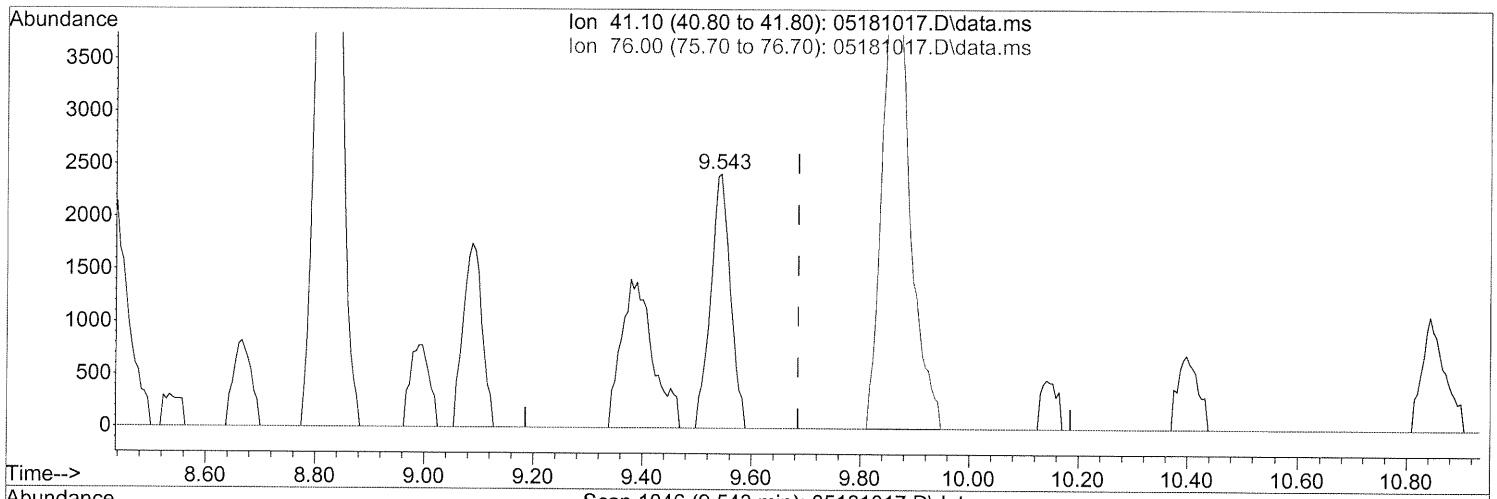
response 1329443

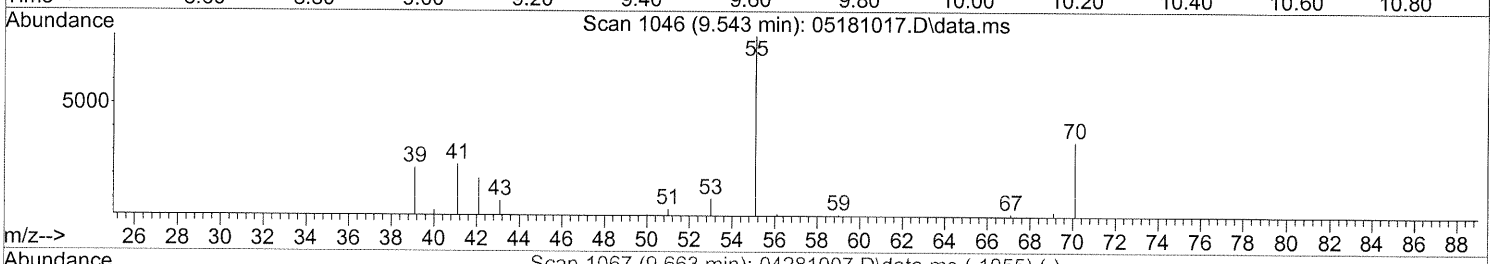
Ion	Exp%	Act%
45.00	100	100
46.10	41.30	41.60
0.00	0.00	0.00
0.00	0.00	0.00

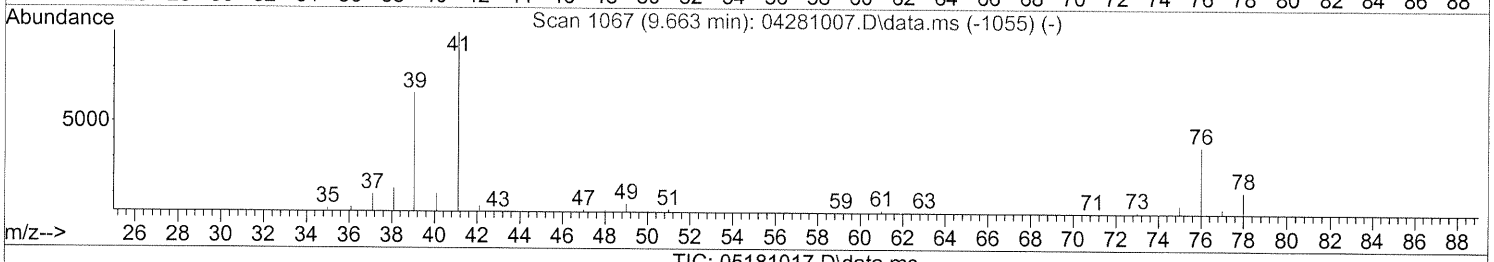
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 19 08:43:18 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181017.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.543min (-0.142) 0.23ng

response 6084

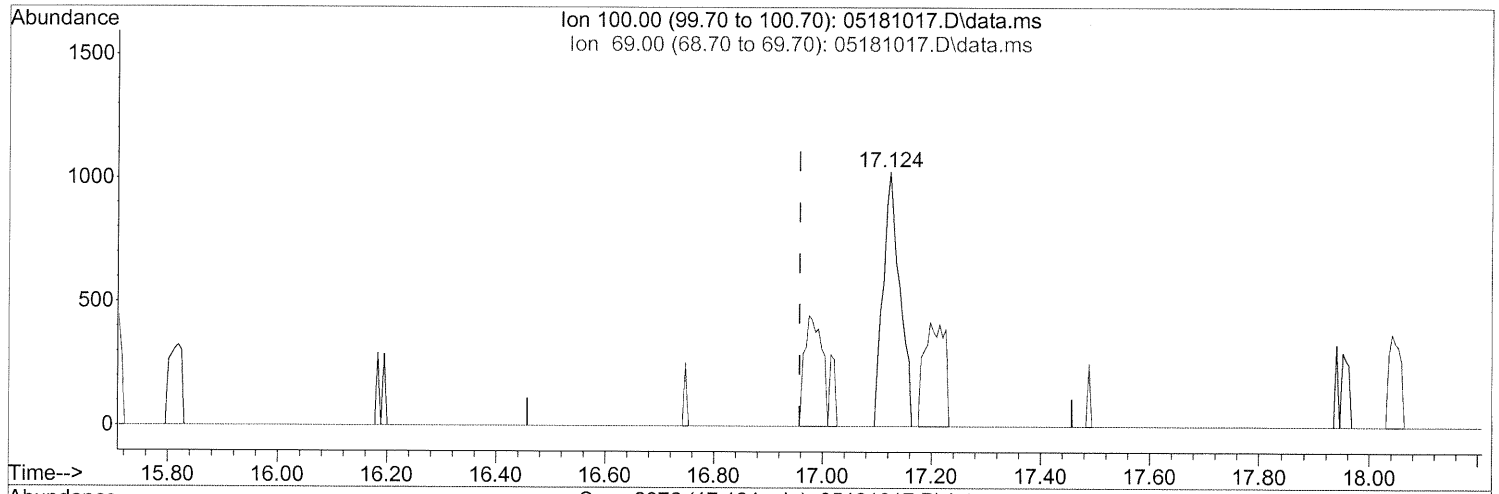
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

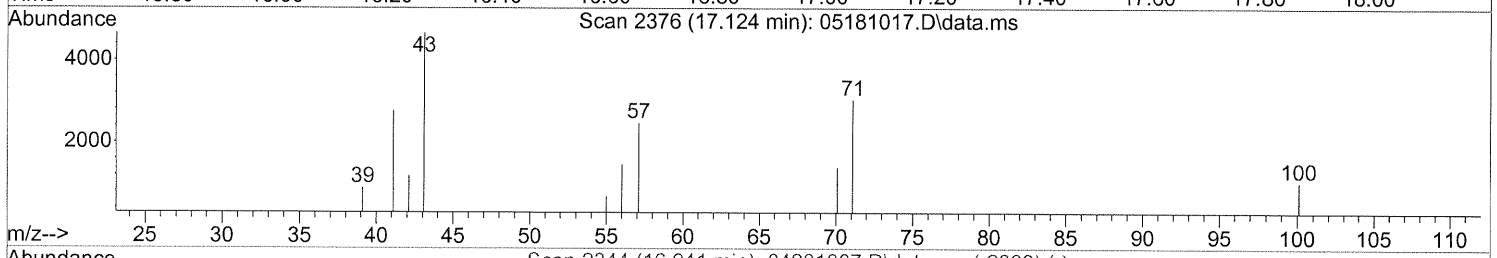
TP

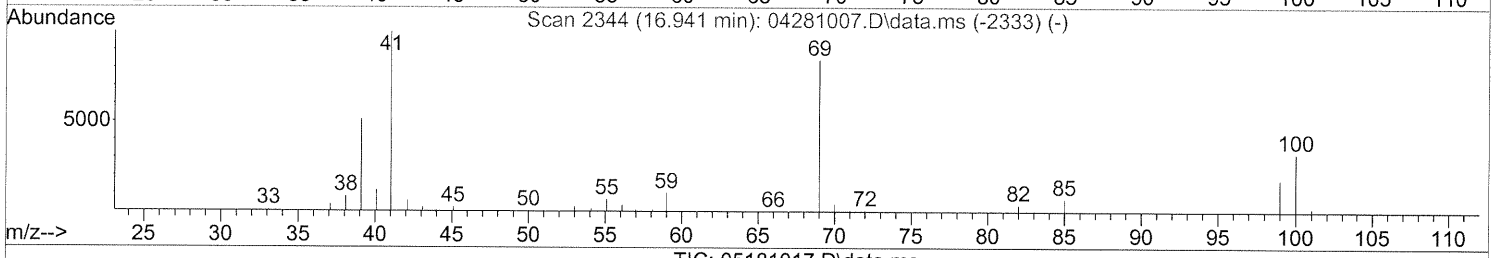
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 19 08:43:18 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181017.D\data.ms

(50) Methyl Methacrylate (T)

17.124min (+0.166) 0.25ng

response 2182

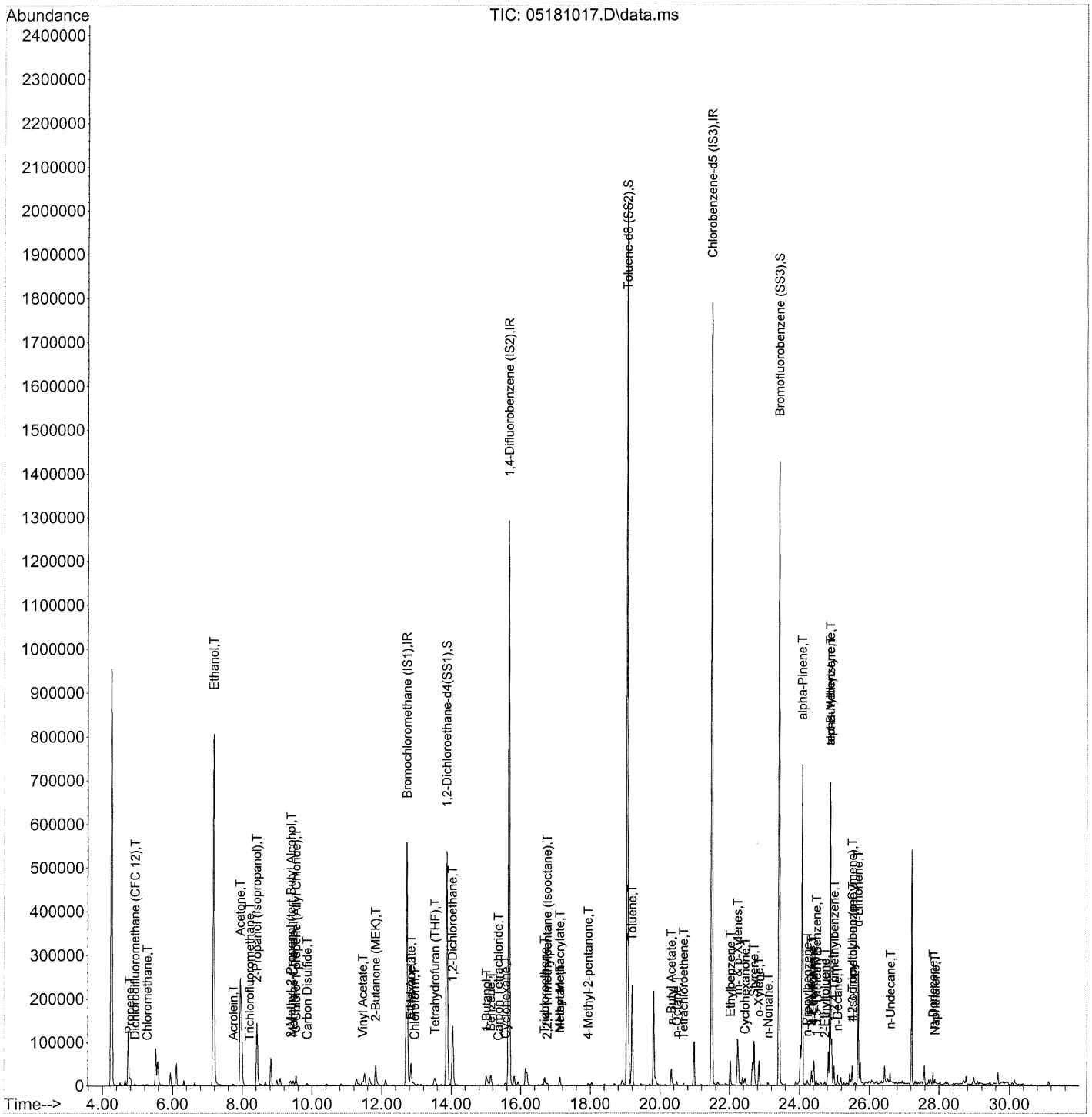
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 19 08:43:18 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 19 08:43:18 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	300199	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1509281	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	767306	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	541773	24.251	ng		-0.03
Spiked Amount 25.000			Recovery = 97.00%				
57) Toluene-d8 (SS2)	19.06	98	1790673	24.462	ng		-0.01
Spiked Amount 25.000			Recovery = 97.84%				
73) Bromofluorobenzene (SS3)	23.42	174	468440	25.067	ng		0.00
Spiked Amount 25.000			Recovery = 100.28%				
Target Compounds							Qvalue
2) Propene	4.78	42	5445	0.233	ng	#	64
3) Dichlorodifluoromethan...	4.93	85	6040	0.150	ng	#	91
4) Chloromethane	5.27	50	4272	0.144	ng		87
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	5.94	54	283	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.18	45	1329443	104.135	ng		100
11) Acetonitrile	7.53	41	1214	N.D.			
12) Acrolein	7.74	56	6254	0.628	ng		89
13) Acetone	7.94	58	154018	9.869	ng		89
14) Trichlorofluoromethane	8.21	101	2476	0.071	ng		88
15) 2-Propanol (Isopropanol)	8.41	45	111517	2.305	ng		91
16) Acrylonitrile	8.81	53	785	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.40	59	18615	0.373	ng		84
19) Methylene Chloride	9.46	84	3463	0.168	ng		87
20) 3-Chloro-1-propene (Al...	9.54	41	6084	0.227	ng	#	36
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	9.86	76	15792	0.215	ng		91
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	11.45	86	4325	0.918	ng	#	1
27) 2-Butanone (MEK)	11.82	72	26221	2.023	ng	#	82
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	12.84	61	7877	1.022	ng		94
31) n-Hexane	12.84	57	13380	0.339	ng		93

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 19 08:43:18 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.94	83	4293	0.130 ng		99
34) Tetrahydrofuran (THF)	13.53	72	5291	0.422 ng	#	41
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.03	62	168318	6.305 ng		99
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.01	56	28161	1.350 ng		80
41) Benzene	15.14	78	32188	0.382 ng		98
42) Carbon Tetrachloride	15.36	117	1138	0.051 ng		83
43) Cyclohexane	15.56	84	3867	0.109 ng		88
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.63	83	89	N.D.		
47) Trichloroethene	16.69	130	9628	0.448 ng		99
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.76	57	5722	0.058 ng	#	55
50) Methyl Methacrylate	17.12	100	2182	0.247 ng	#	1
51) n-Heptane	17.12	71	6881	0.286 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.94	58	2423	0.133 ng	#	68
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	229858	2.531 ng		99
59) 2-Hexanone	19.51	43	1182	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.32	43	43951	0.903 ng		98
63) n-Octane	20.48	57	2165	0.103 ng		81
64) Tetrachloroethene	20.68	166	2130	0.100 ng		95
65) Chlorobenzene	21.55	112	88	N.D.		
66) Ethylbenzene	22.02	91	57621	0.567 ng		96
67) m- & p-Xylenes	22.22	91	112891	1.371 ng		97
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.70	104	65139	1.121 ng		99
70) o-Xylene	22.84	91	43593	0.497 ng		97
71) n-Nonane	23.10	43	5760	0.121 ng	#	65
72) 1,1,2,2-Tetrachloroethane	22.45	83	468	N.D.		
74) Cumene	23.59	105	3590	N.D.		
75) alpha-Pinene	24.08	93	344016	6.910 ng		95
76) n-Propylbenzene	24.22	91	10522	0.081 ng		94
77) 3-Ethyltoluene	24.35	105	21442	0.219 ng		97
78) 4-Ethyltoluene	24.40	105	12696	0.128 ng		93
79) 1,3,5-Trimethylbenzene	24.49	105	8212	0.099 ng		86

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181017.D
Acq On : 18 May 2010 20:39
Operator : EM
Sample : P1001651-011 dil (100ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 19 08:43:18 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.88	118	11019	0.253 ng	#	9
81) 2-Ethyltoluene	24.73	105	8226	0.080 ng	#	66
82) 1,2,4-Trimethylbenzene	24.99	105	26823	0.309 ng		85
83) n-Decane	25.09	57	10253	0.205 ng		96
84) Benzyl Chloride	25.18	91	401	N.D.		
85) 1,3-Dichlorobenzene	25.20	146	94	N.D.		
86) 1,4-Dichlorobenzene	25.27	146	1502	N.D.		
87) sec-Butylbenzene	25.32	105	811	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	20848	0.186 ng		98
89) 1,2,3-Trimethylbenzene	25.51	105	6912	0.078 ng		93
90) 1,2-Dichlorobenzene	25.27	146	1502	N.D.		
91) d-Limonene	25.68	68	71453	2.091 ng		96
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	8433	0.168 ng	#	73
94) 1,2,4-Trichlorobenzene	27.74	180	590	N.D.		
95) Naphthalene	27.88	128	12947	0.135 ng		93
96) n-Dodecane	27.83	57	10439	0.203 ng		99
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.44	55	9302	0.325 ng		93
99) tert-Butylbenzene	24.88	119	17102	0.195 ng		98
100) n-Butylbenzene	26.02	91	2599	N.D.		

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110521**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-012

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01581

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	**Propene**	**16**	0.82	**9.2**	0.47	
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.2**	0.82	**0.44**	0.16	
74-87-3	**Chloromethane**	**0.78**	0.33	**0.38**	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.82	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.064	
106-99-0	1,3-Butadiene	ND	0.33	ND	0.15	
74-83-9	Bromomethane	ND	0.16	ND	0.042	
75-00-3	Chloroethane	ND	0.16	ND	0.062	
64-17-5	**Ethanol**	**2,500**	82	**1,300**	43	**D**
75-05-8	Acetonitrile	ND	0.82	ND	0.49	
107-02-8	**Acrolein**	**9.1**	3.3	**4.0**	1.4	
67-64-1	**Acetone**	**140**	8.2	**58**	3.4	
75-69-4	**Trichlorofluoromethane**	**1.1**	0.16	**0.20**	0.029	
67-63-0	**2-Propanol (Isopropyl Alcohol)**	**88**	1.6	**36**	0.66	
107-13-1	Acrylonitrile	ND	0.82	ND	0.38	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.041	
75-09-2	**Methylene Chloride**	**2.4**	0.82	**0.68**	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	ND	0.052	
76-13-1	**Trichlorotrifluoroethane**	**0.51**	0.16	**0.067**	0.021	
75-15-0	Carbon Disulfide	ND	8.2	ND	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.041	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	ND	0.045	
108-05-4	**Vinyl Acetate**	**9.3**	8.2	**2.7**	2.3	
78-93-3	**2-Butanone (MEK)**	**31**	8.2	**11**	2.8	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110521** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-012

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01581

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.041	
141-78-6	**Ethyl Acetate**	**22**	0.82	**6.2**	0.23	
110-54-3	**n-Hexane**	**5.4**	0.82	**1.5**	0.23	
67-66-3	**Chloroform**	**1.6**	0.16	**0.33**	0.033	
109-99-9	**Tetrahydrofuran (THF)**	**2.1**	0.82	**0.71**	0.28	
107-06-2	**1,2-Dichloroethane**	**100**	0.16	**25**	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.16	ND	0.030	
71-43-2	**Benzene**	**6.3**	0.16	**2.0**	0.051	
56-23-5	**Carbon Tetrachloride**	**1.1**	0.16	**0.18**	0.026	
110-82-7	**Cyclohexane**	**1.7**	0.82	**0.50**	0.24	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.035	
75-27-4	Bromodichloromethane	ND	0.16	ND	0.024	
79-01-6	**Trichloroethene**	**7.5**	0.16	**1.4**	0.030	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	**Methyl Methacrylate**	**1.2**	0.82	**0.28**	0.20	
142-82-5	**n-Heptane**	**4.9**	0.82	**1.2**	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	ND	0.18	
108-10-1	**4-Methyl-2-pentanone**	**2.7**	0.82	**0.67**	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.030	
108-88-3	**Toluene**	**43**	0.82	**11**	0.22	
591-78-6	**2-Hexanone**	**1.6**	0.82	**0.39**	0.20	
124-48-1	Dibromochloromethane	ND	0.16	ND	0.019	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.021	
123-86-4	**n-Butyl Acetate**	**13**	0.82	**2.7**	0.17	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110521**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-012

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01581

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.5 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	**n-Octane**	**1.6**	0.82	**0.35**	0.17	
127-18-4	**Tetrachloroethene**	**1.9**	0.16	**0.29**	0.024	
108-90-7	**Chlorobenzene**	**0.20**	0.16	**0.044**	0.035	
100-41-4	**Ethylbenzene**	**9.2**	0.82	**2.1**	0.19	
179601-23-1	**m,p-Xylenes**	**22**	0.82	**5.1**	0.19	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	**Styrene**	**19**	0.82	**4.5**	0.19	
95-47-6	**o-Xylene**	**8.0**	0.82	**1.8**	0.19	
111-84-2	**n-Nonane**	**1.1**	0.82	**0.21**	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.024	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	**alpha-Pinene**	**120**	0.82	**21**	0.15	
103-65-1	**n-Propylbenzene**	**1.4**	0.82	**0.29**	0.17	
622-96-8	**4-Ethyltoluene**	**2.0**	0.82	**0.40**	0.17	
108-67-8	**1,3,5-Trimethylbenzene**	**1.6**	0.82	**0.32**	0.17	
95-63-6	**1,2,4-Trimethylbenzene**	**5.5**	0.82	**1.1**	0.17	
100-44-7	Benzyl Chloride	ND	0.82	ND	0.16	
541-73-1	1,3-Dichlorobenzene	ND	0.16	ND	0.027	
106-46-7	**1,4-Dichlorobenzene**	**0.46**	0.16	**0.077**	0.027	
95-50-1	1,2-Dichlorobenzene	ND	0.16	ND	0.027	
5989-27-5	**d-Limonene**	**40**	0.82	**7.2**	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.82	ND	0.084	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	**Naphthalene**	**1.6**	0.82	**0.30**	0.16	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.076	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
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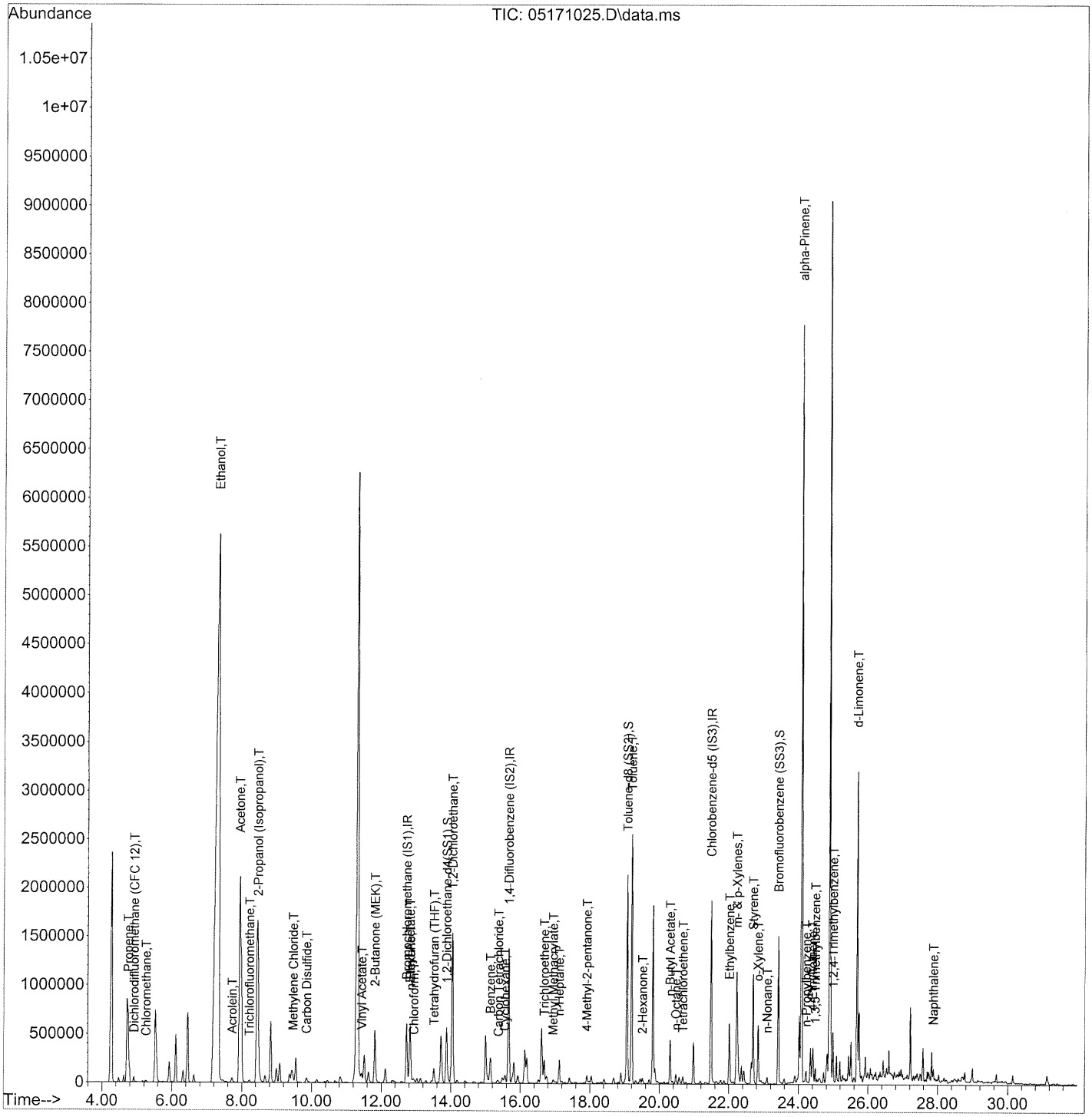
Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 20 16:42:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	318230	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1593414	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	791171	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	562154	23.738	ng		-0.03
Spiked Amount 25.000			Recovery	=	94.96%	✓	
57) Toluene-d8 (SS2)	19.07	98	1864037	24.696	ng		0.00
Spiked Amount 25.000			Recovery	=	98.80%	✓	
73) Bromofluorobenzene (SS3)	23.42	174	490225	25.441	ng		0.00
Spiked Amount 25.000			Recovery	=	101.76%	✓	
Target Compounds							Qvalue
2) Propene	4.74	42	239821	9.661	ng		92
3) Dichlorodifluoromethan...	4.92	85	56508	1.327	ng		99
4) Chloromethane	5.26	50	15031	0.477	ng		96
10) Ethanol	7.33	45	22090869	1632.337	ng	see dil	98
12) Acrolein	7.72	56	59200	5.612	ng		98
13) Acetone	7.94	58	1400502	84.652	ng		87
14) Trichlorofluoromethane	8.22	101	25141	0.682	ng		99
15) 2-Propanol (Isopropanol)	8.46	45	2770210	54.009	ng		95
19) Methylene Chloride	9.47	84	31713	1.455	ng		95
22) Carbon Disulfide	9.86	76	107568	1.385	ng		99
26) Vinyl Acetate	11.44	86	28575m	5.723	ng		
27) 2-Butanone (MEK)	11.81	72	261703	19.044	ng		96
30) Ethyl Acetate	12.82	61	112717	13.798	ng		94
31) n-Hexane	12.84	57	139749	3.341	ng		97
32) Chloroform	12.93	83	34220	0.980	ng		98
34) Tetrahydrofuran (THF)	13.52	72	17061	1.284	ng	#	1
36) 1,2-Dichloroethane	14.04	62	1731403	61.182	ng		100
41) Benzene	15.14	78	342266	3.848	ng		100
42) Carbon Tetrachloride	15.37	117	16185	0.683	ng	#	71
43) Cyclohexane	15.56	84	39552	1.058	ng		93
47) Trichloroethene	16.68	130	104619	4.614	ng		99
50) Methyl Methacrylate	16.95	100	6642	0.712	ng	#	66
51) n-Heptane	17.12	71	76751	3.018	ng		96
53) 4-Methyl-2-pentanone	17.92	58	32218	1.677	ng		93
58) Toluene	19.20	91	2459976	26.273	ng		99
59) 2-Hexanone	19.51	43	43741	0.979	ng		88
62) n-Butyl Acetate	20.31	43	393289	7.834	ng		99
63) n-Octane	20.48	57	21653	0.997	ng		93
64) Tetrachloroethene	20.67	166	26144	1.192	ng		98
66) Ethylbenzene	22.01	91	591001	5.641	ng		97

BA 5/20/10

Quantitation Report (QT Reviewed)

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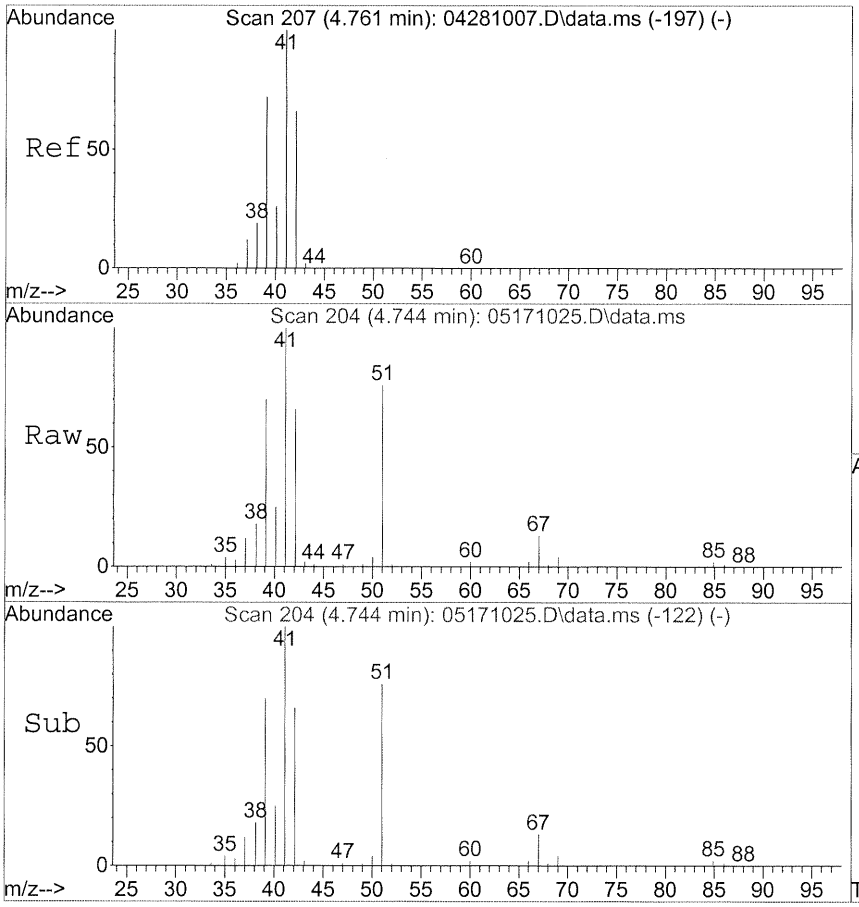
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 20 16:42:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
67) m- & p-Xylenes	22.22	91	1154397	13.592	ng	97
69) Styrene	22.70	104	710640	11.866	ng	99
70) o-Xylene	22.84	91	442916	4.895	ng	97
71) n-Nonane	23.10	43	33435	0.681	ng	88
75) alpha-Pinene	24.08	93	3691584	71.918	ng	99
76) n-Propylbenzene	24.22	91	115961	0.865	ng	92
78) 4-Ethyltoluene	24.40	105	123497	1.209	ng	96
79) 1,3,5-Trimethylbenzene	24.48	105	83065	0.970	ng	96
82) 1,2,4-Trimethylbenzene	24.99	105	303998	3.396	ng	87
91) d-Limonene	25.68	68	871318	24.725	ng	96
95) Naphthalene	27.88	128	95029	0.961	ng	99

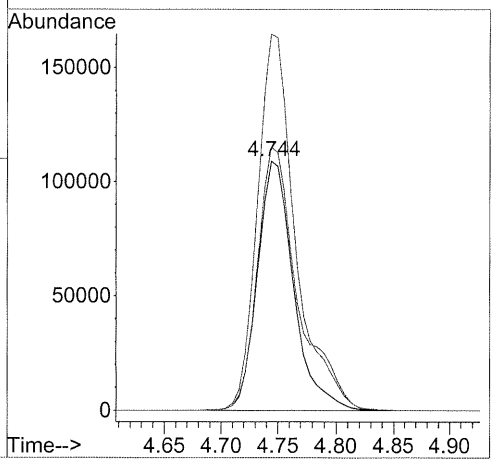
(#) = qualifier out of range (m) = manual integration (+) = signals summed

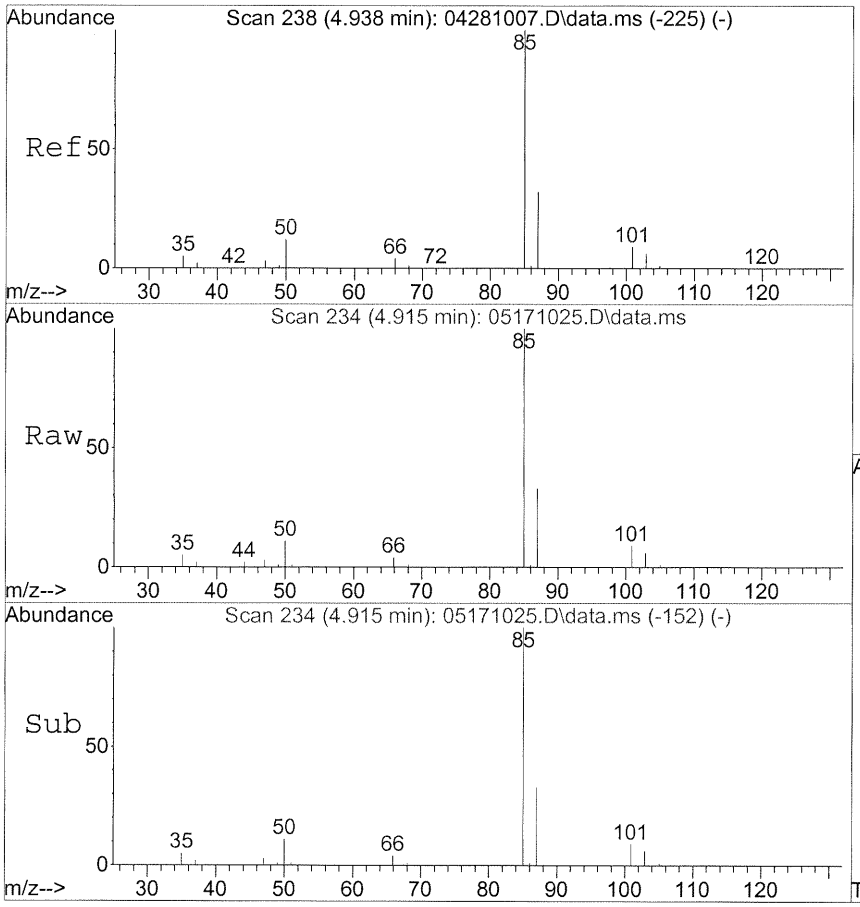


#2
Propene
Concen: 9.66 ng
RT: 4.74 min Scan# 204
Delta R.T. -0.034 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 42 Resp: 239821

Ion	Ratio	Lower	Upper
42	100		
39	118.7	88.4	128.4
41	158.5	129.9	169.9

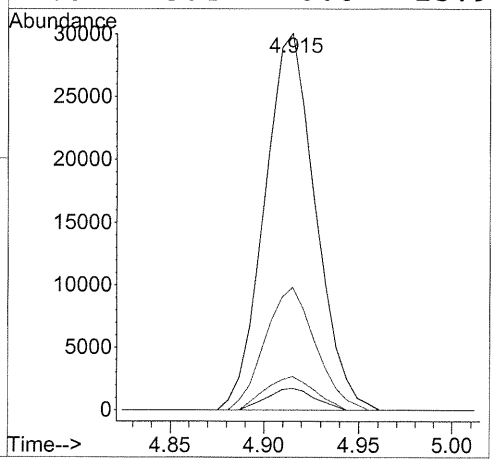


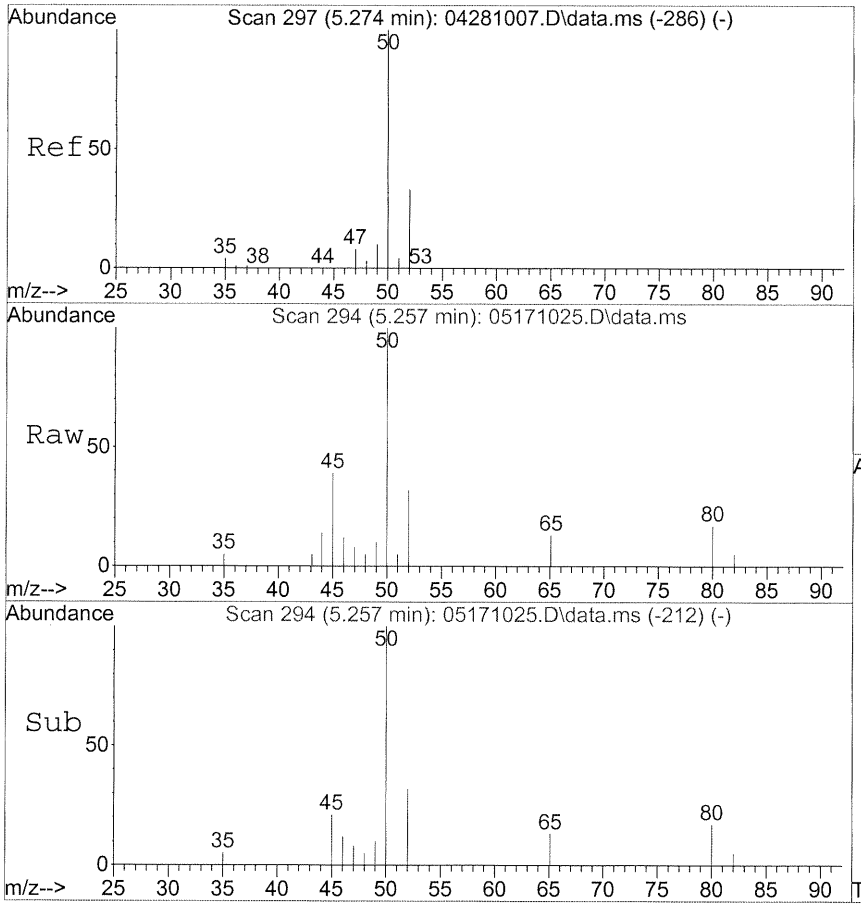


#3
Dichlorodifluoromethane (CFC
Concen: 1.33 ng
RT: 4.92 min Scan# 234
Delta R.T. -0.034 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 85 Resp: 56508

Ion	Ratio	Lower	Upper
85	100		
87	32.2	12.6	52.6
101	8.5	0.0	29.3
103	5.4	0.0	25.9

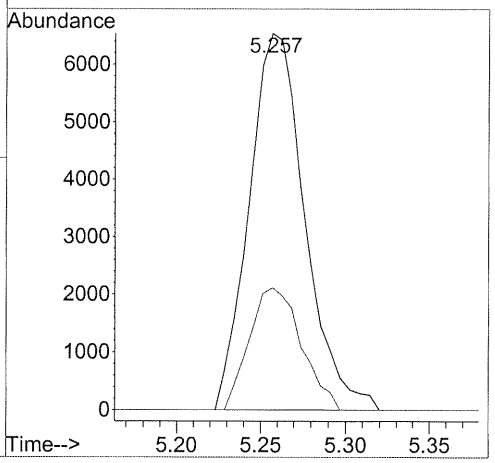


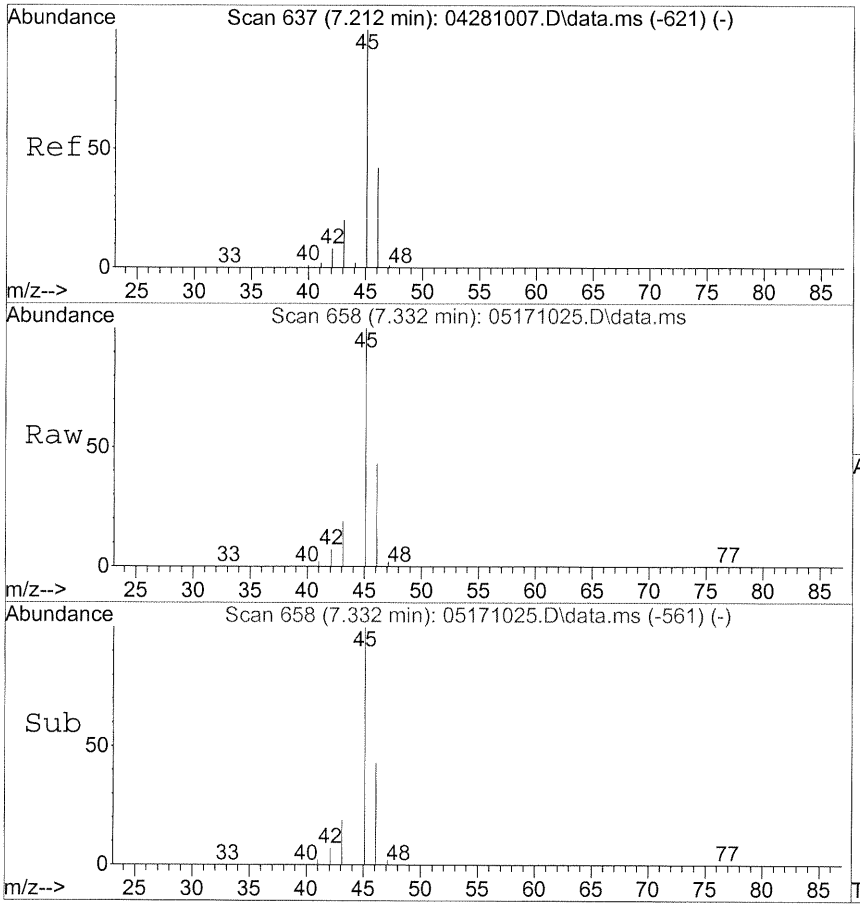


#4
Chloromethane
Concen: 0.48 ng
RT: 5.26 min Scan# 294
Delta R.T. -0.034 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 50 Resp: 15031

Ion	Ratio	Lower	Upper
50	100		
52	30.1	12.3	52.3

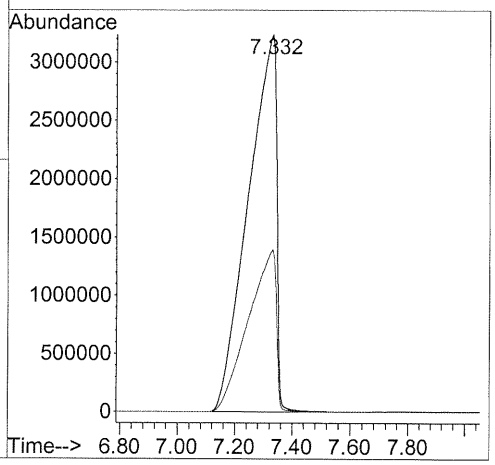


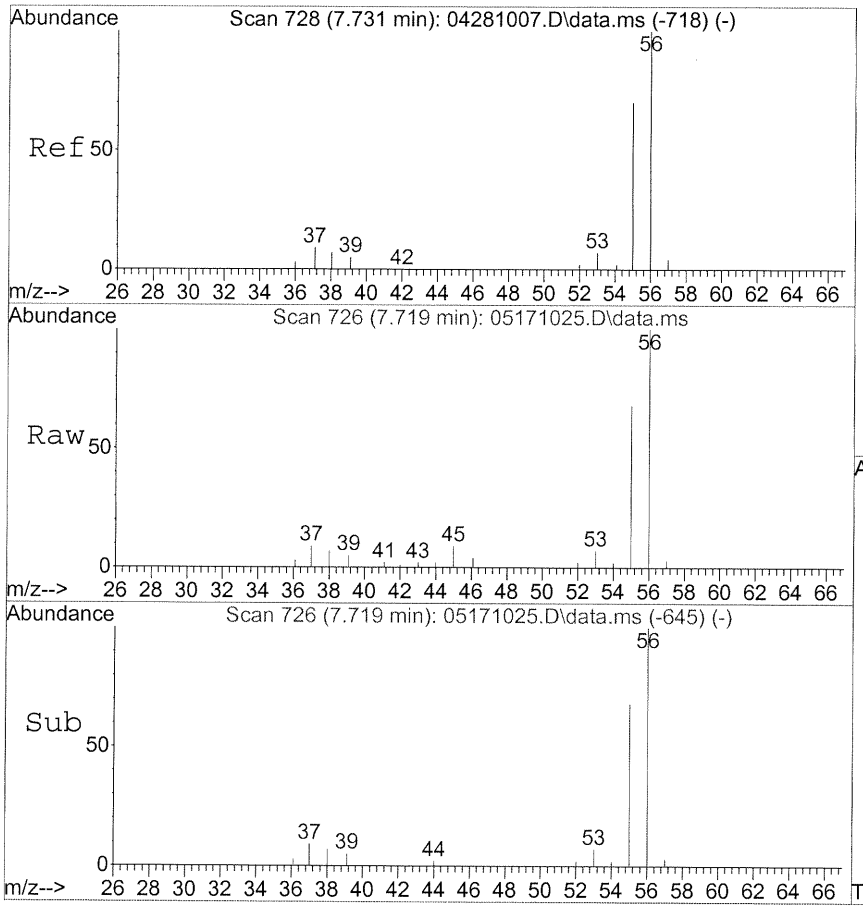


#10
Ethanol
Concen: 1632.34 ng
RT: 7.33 min Scan# 658
Delta R.T. 0.051 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 45 Resp:22090869

Ion	Ratio	Lower	Upper
45	100		
46	42.5	21.3	61.3

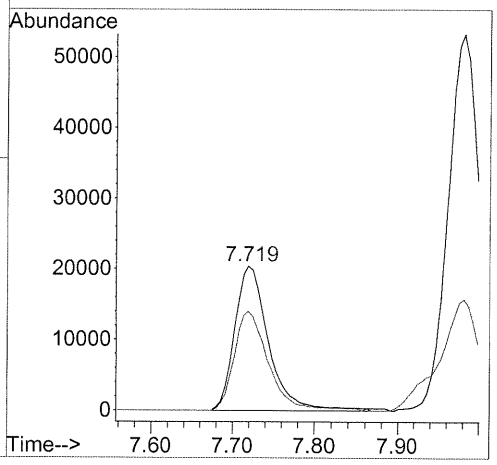


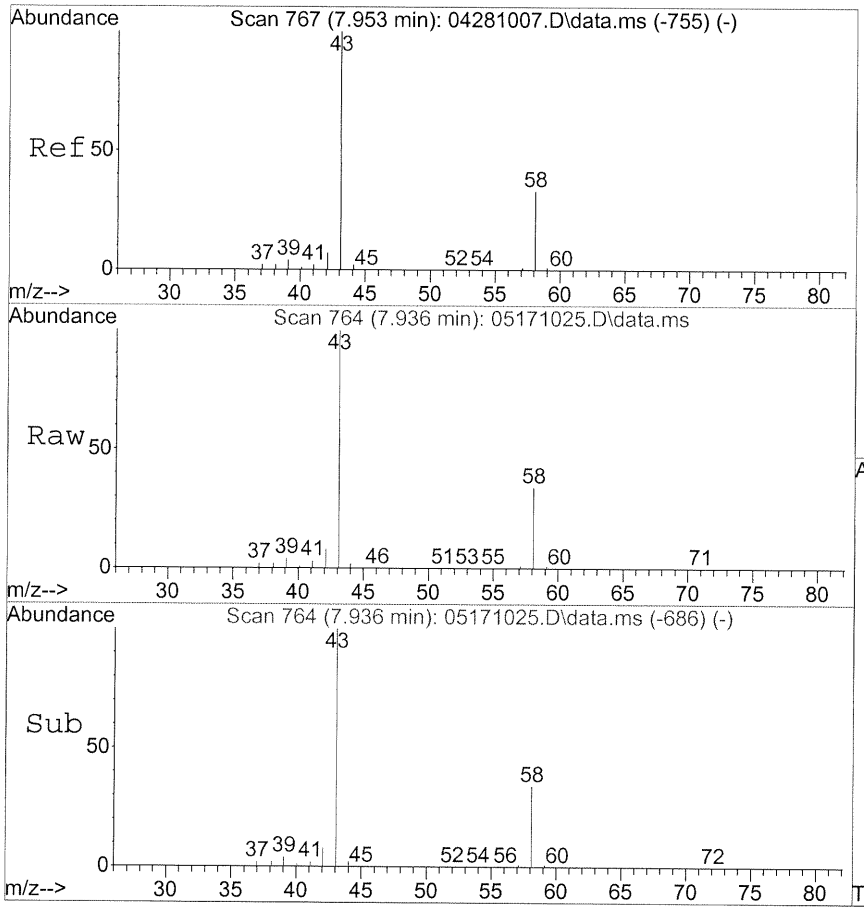


#12
Acrolein
Concen: 5.61 ng
RT: 7.72 min Scan# 726
Delta R.T. -0.040 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 56 Resp: 59200

Ion	Ratio	Lower	Upper
56	100		
55	68.8	50.2	90.2

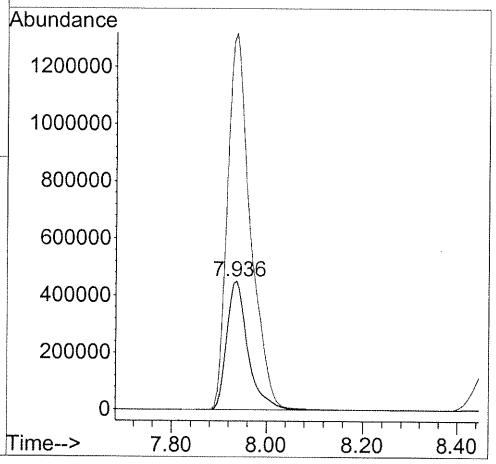


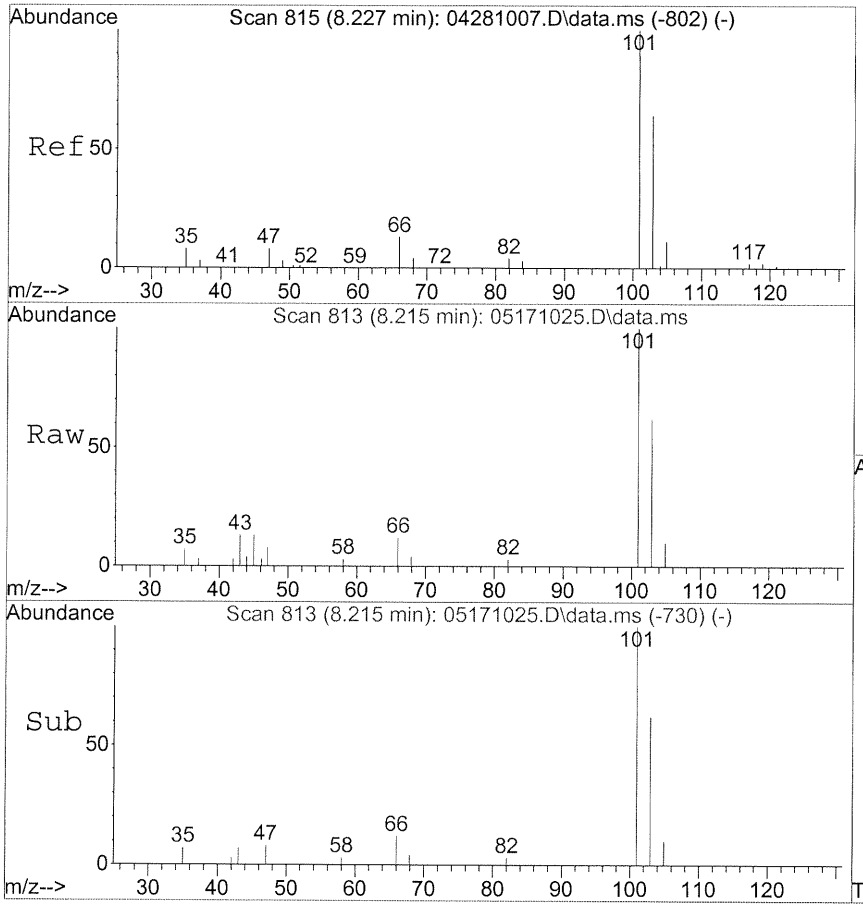


#13
Acetone
Concen: 84.65 ng
RT: 7.94 min Scan# 764
Delta R.T. -0.057 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 58 Resp: 1400502

Ion	Ratio	Lower	Upper
58	100		
43	318.5	264.2	324.2

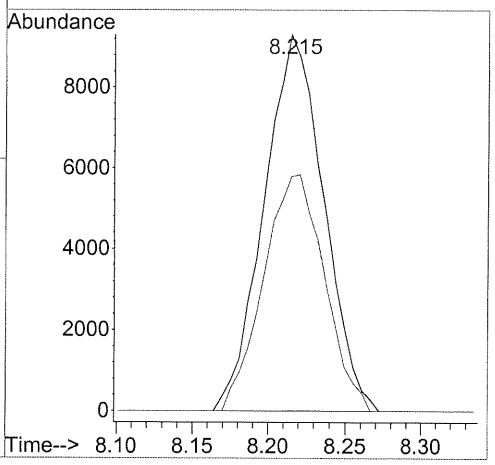


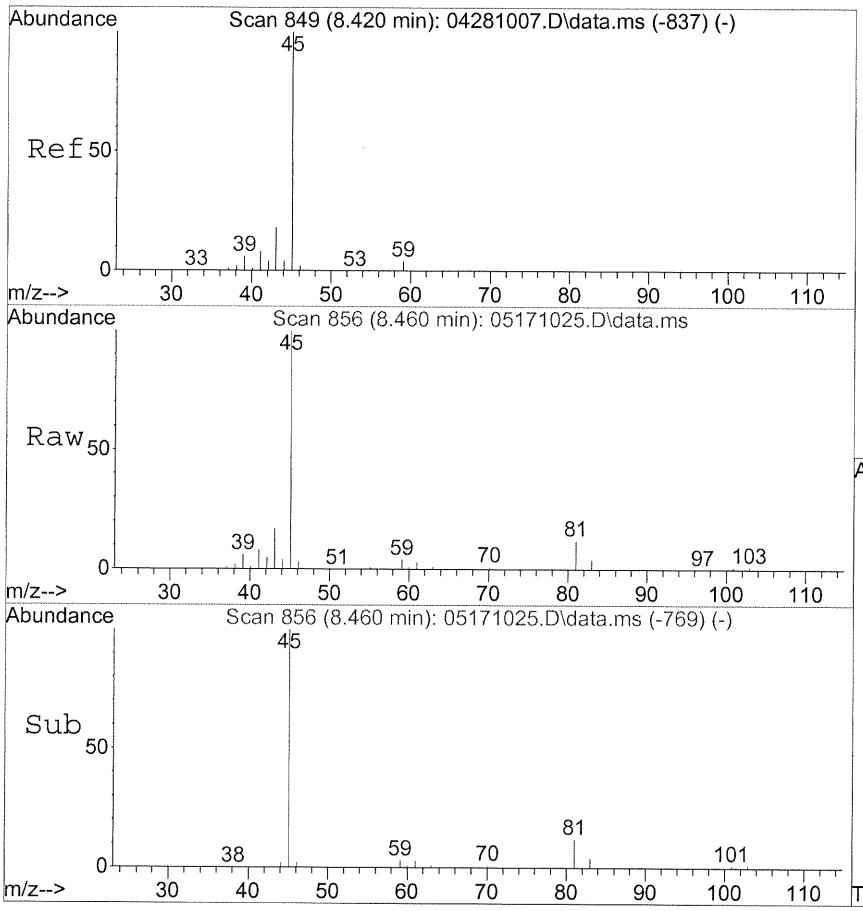


#14
Trichlorofluoromethane
Concen: 0.68 ng
RT: 8.22 min Scan# 813
Delta R.T. -0.029 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:101 Resp: 25141

Ion	Ratio	Lower	Upper
101	100		
103	63.9	44.6	84.6

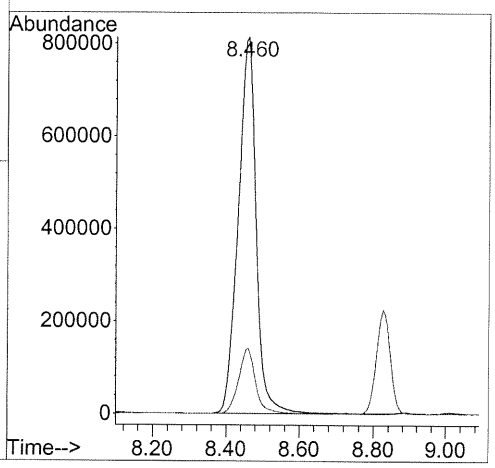


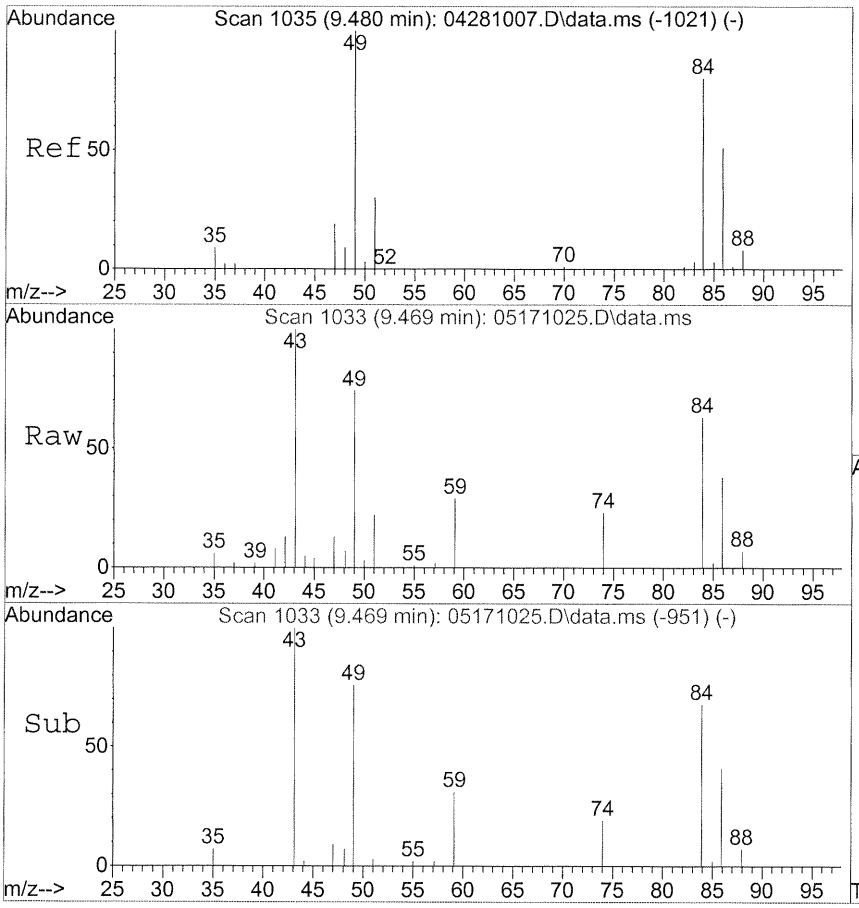


#15
2-Propanol (Isopropanol)
Concen: 54.01 ng
RT: 8.46 min Scan# 856
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 45 Resp: 2770210

Ion	Ratio	Lower	Upper
45	100		
43	16.3	0.0	38.5

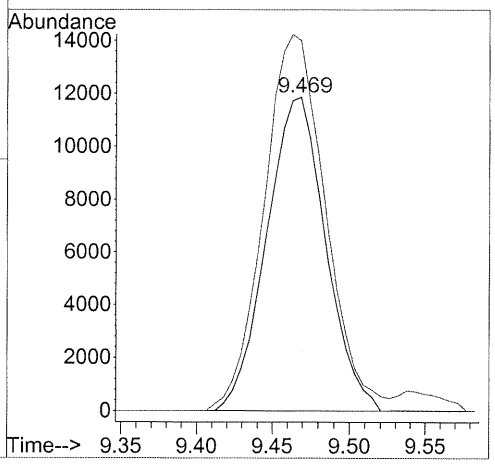


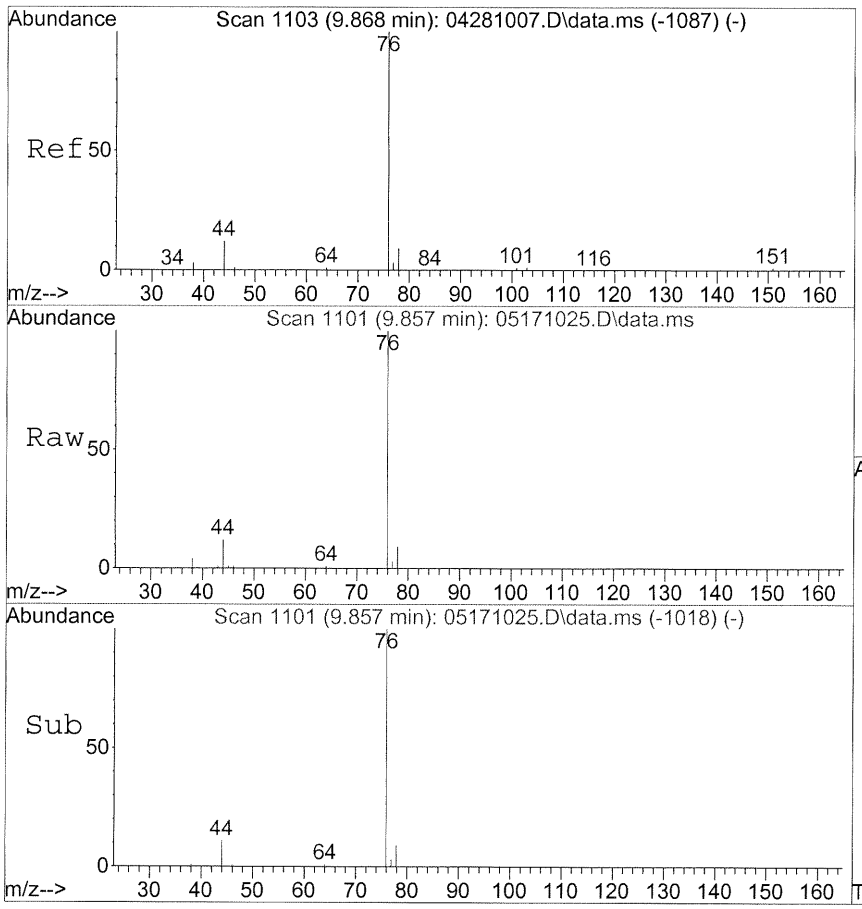


#19
Methylene Chloride
Concen: 1.46 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 84 Resp: 31713

Ion	Ratio	Lower	Upper
84	100		
49	125.4	94.5	144.5

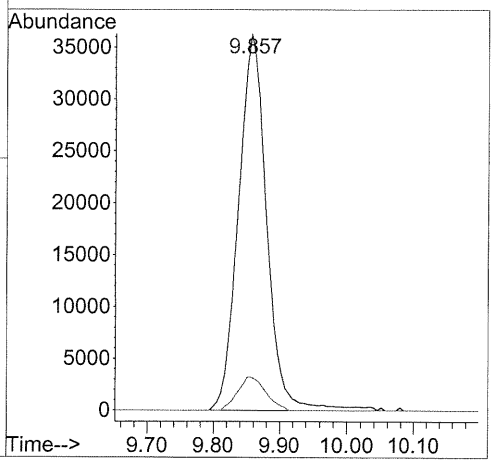


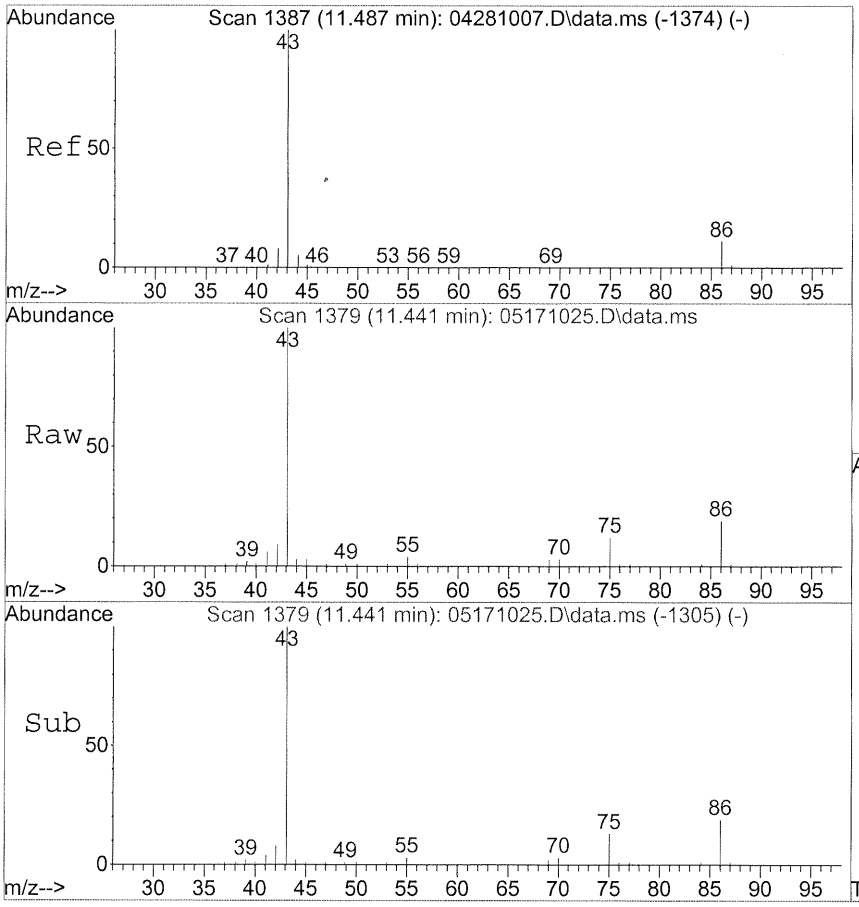


#22
Carbon Disulfide
Concen: 1.38 ng
RT: 9.86 min Scan# 1101
Delta R.T. -0.028 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 76 Resp: 107568

Ion	Ratio	Lower	Upper
76	100		
78	8.8	0.0	29.2

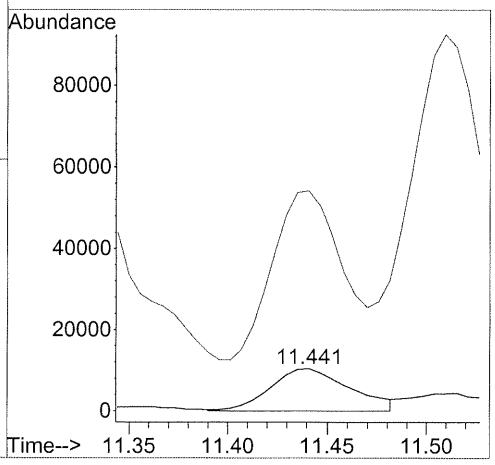


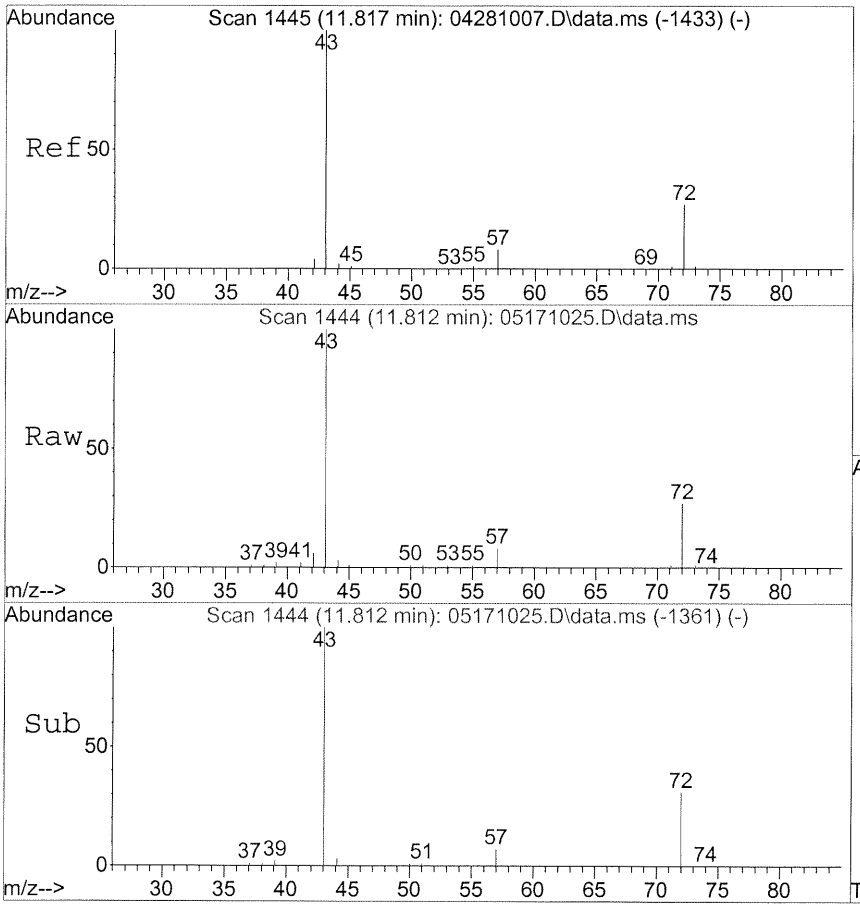


#26
Vinyl Acetate
Concen: 5.72 ng m
RT: 11.44 min Scan# 1379
Delta R.T. -0.080 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 86 Resp: 28575

Ion	Ratio	Lower	Upper
86	100		
43	903.9	829.7	869.7#

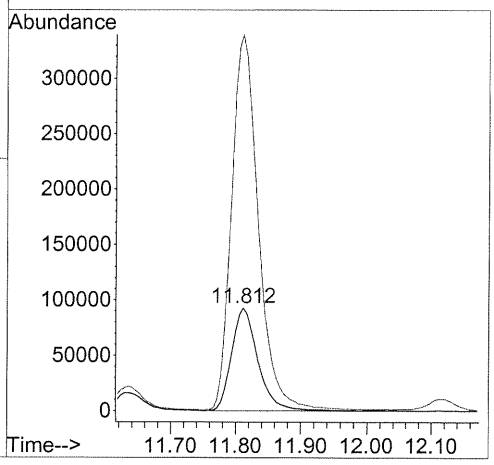


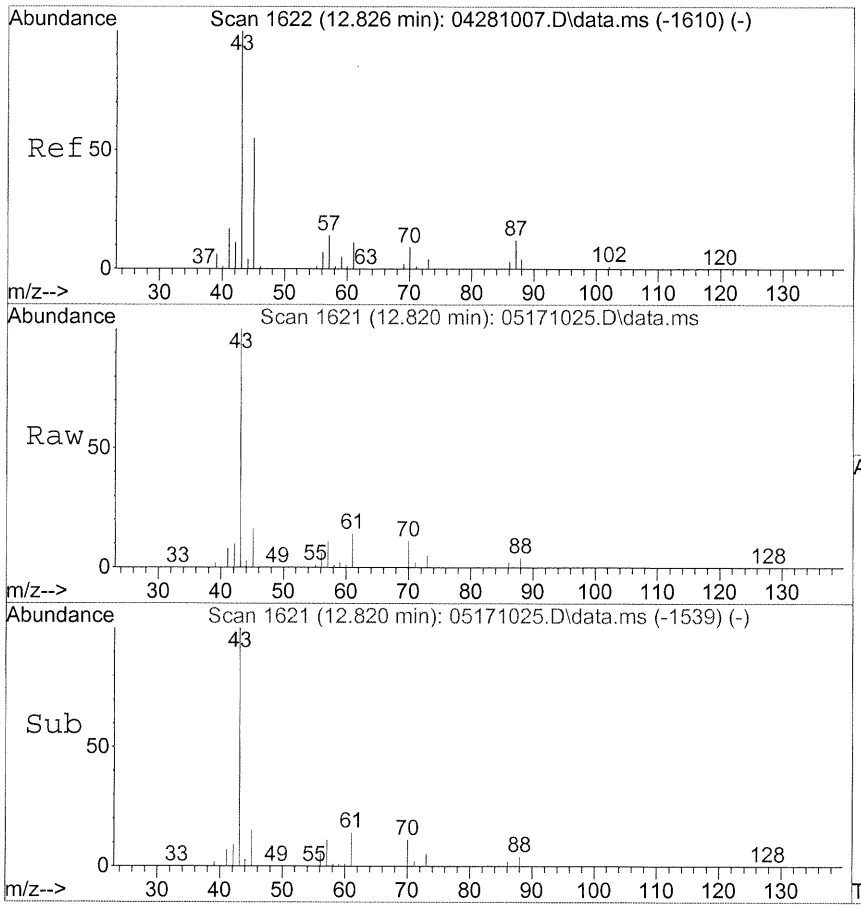


#27
2-Butanone (MEK)
Concen: 19.04 ng
RT: 11.81 min Scan# 1444
Delta R.T. -0.028 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 72 Resp: 261703

Ion	Ratio	Lower	Upper
72	100		
43	371.0	342.0	382.0

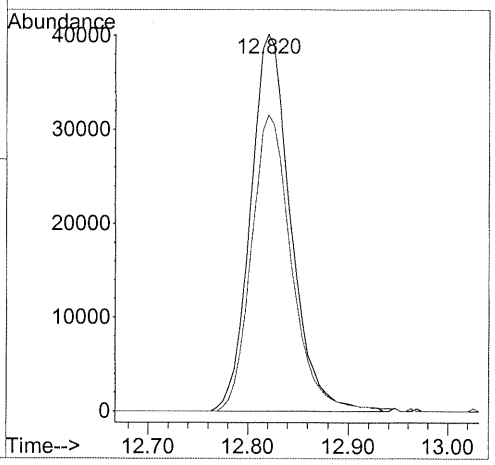


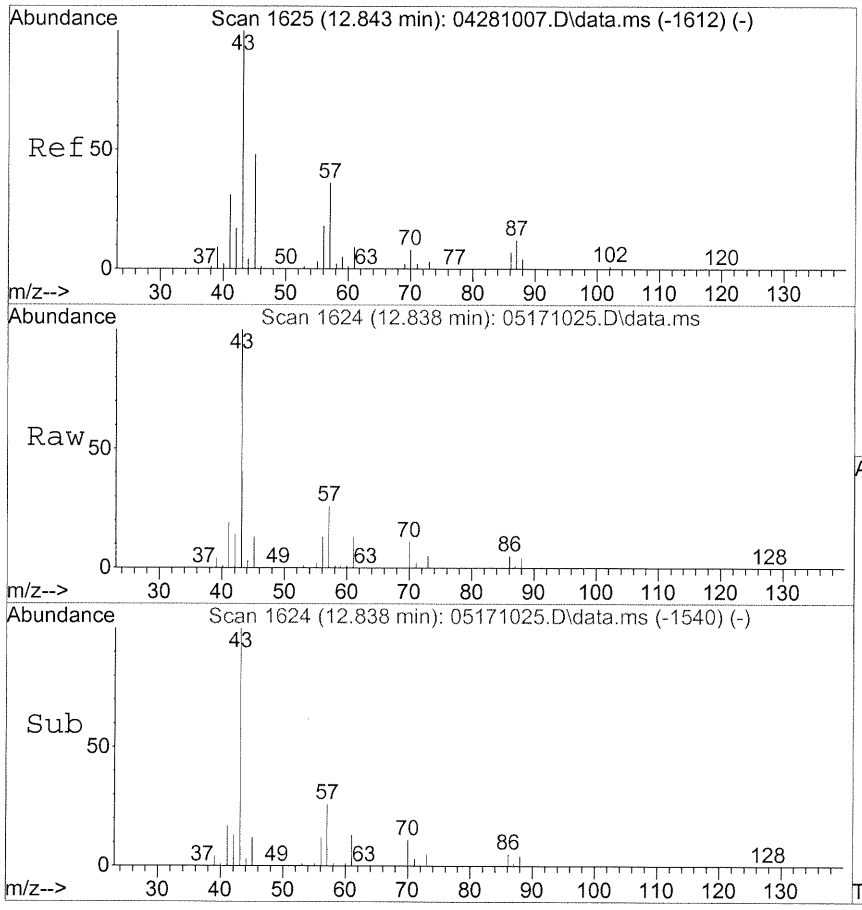


#30
Ethyl Acetate
Concen: 13.80 ng
RT: 12.82 min Scan# 1621
Delta R.T. -0.035 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 61 Resp: 112717

Ion	Ratio	Lower	Upper
61	100		
70	78.6	63.6	103.6

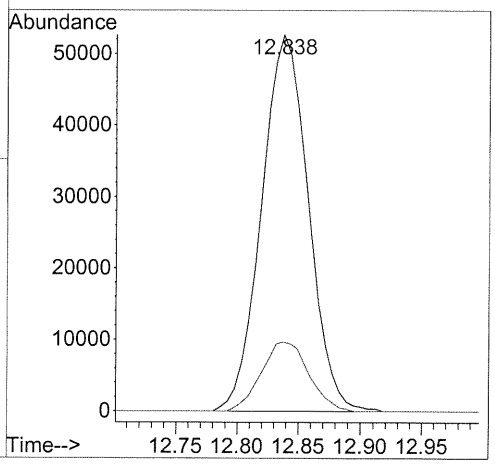


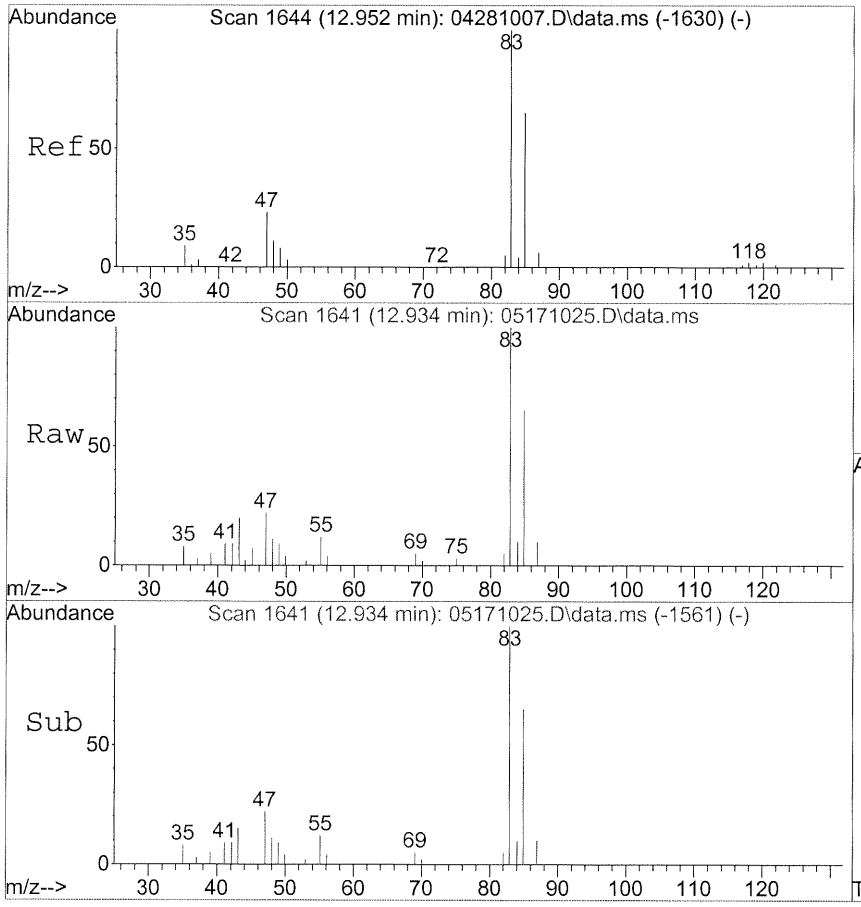


#31
n-Hexane
Concen: 3.34 ng
RT: 12.84 min Scan# 1624
Delta R.T. -0.023 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 57 Resp: 139749

Ion	Ratio	Lower	Upper
57	100		
86	18.6	0.0	39.8

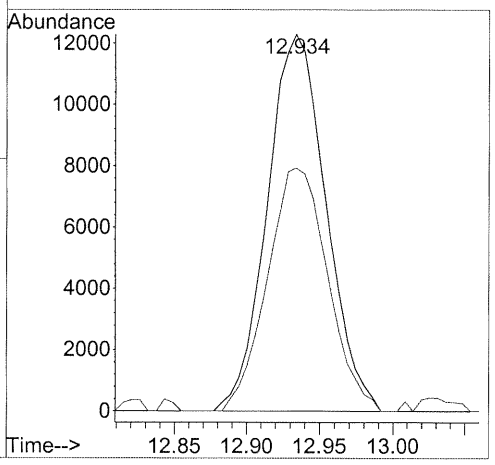


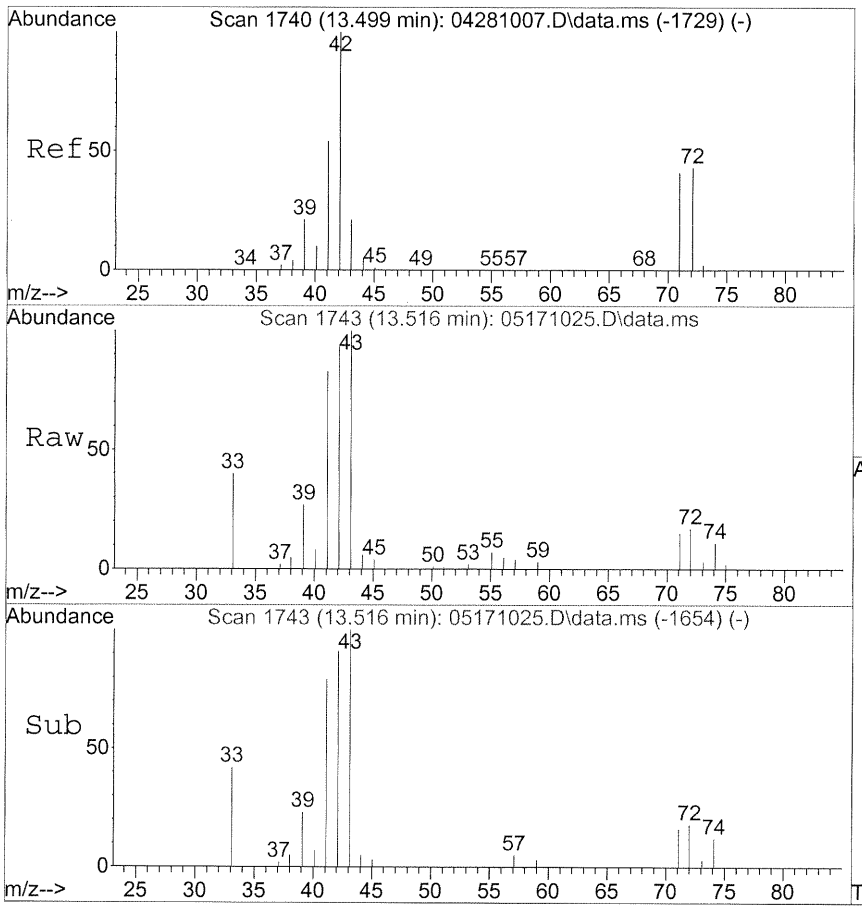


#32
Chloroform
Concen: 0.98 ng
RT: 12.93 min Scan# 1641
Delta R.T. -0.046 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 83 Resp: 34220

Ion	Ratio	Lower	Upper
83	100		
85	66.3	44.9	84.9

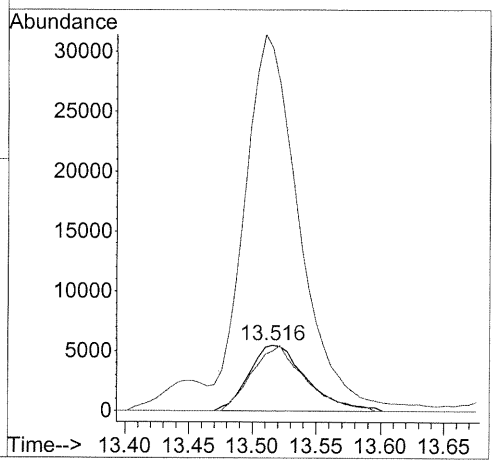


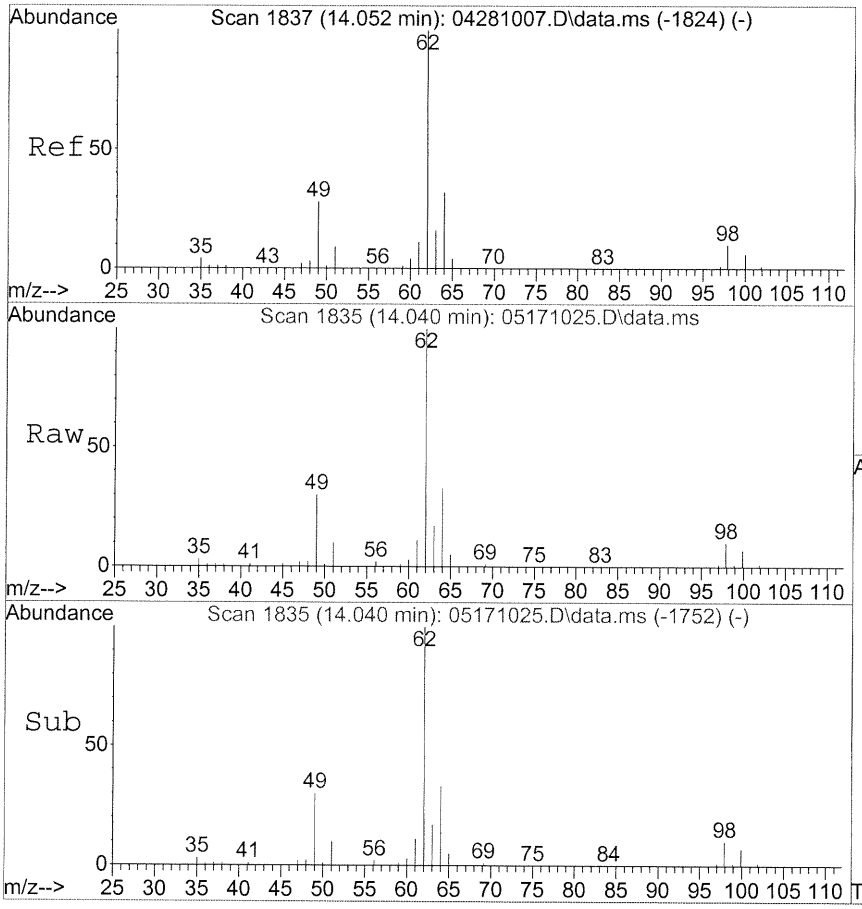


#34
Tetrahydrofuran (THF)
Concen: 1.28 ng
RT: 13.52 min Scan# 1743
Delta R.T. 0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 72 Resp: 17061

Ion	Ratio	Lower	Upper
72	100		
71	91.7	74.5	114.5
42	544.8	197.7	237.7#

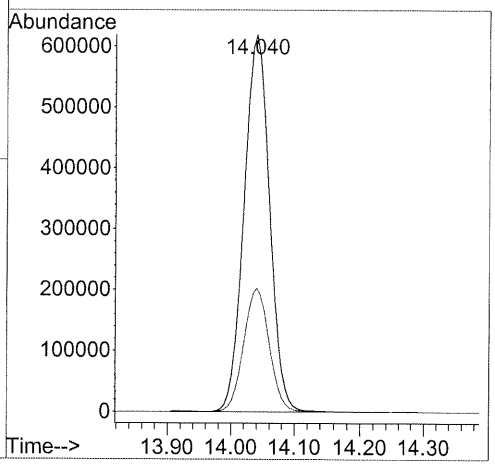


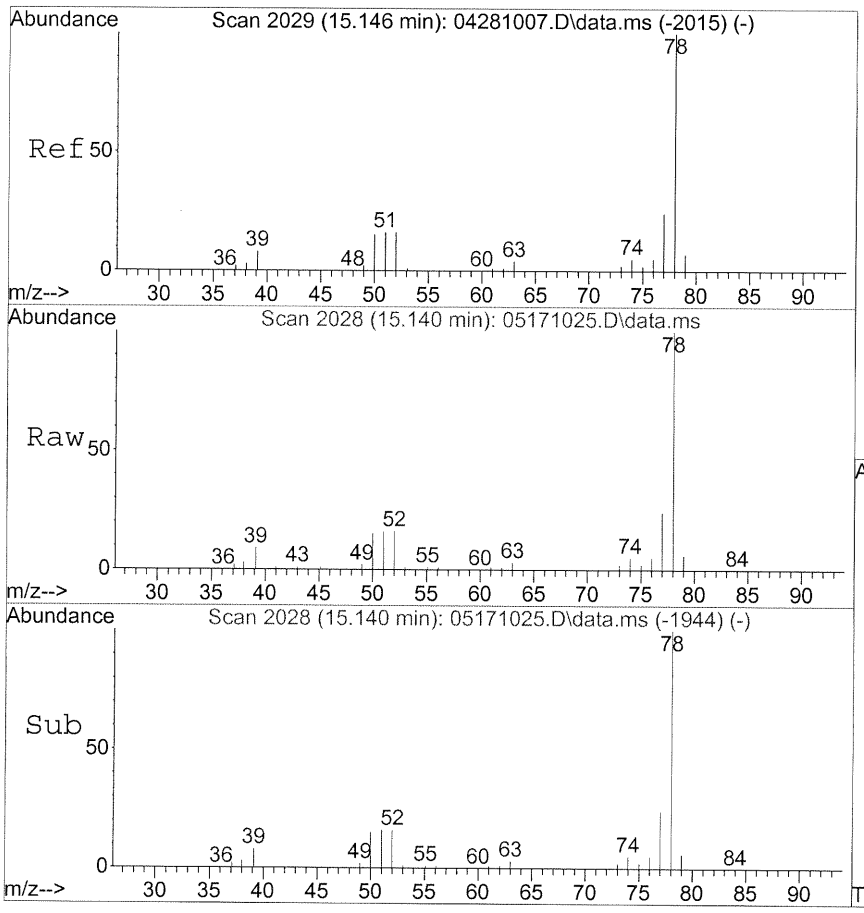


#36
1,2-Dichloroethane
Concen: 61.18 ng
RT: 14.04 min Scan# 1835
Delta R.T. -0.029 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 62 Resp: 1731403

Ion	Ratio	Lower	Upper
62	100		
64	32.6	12.8	52.8

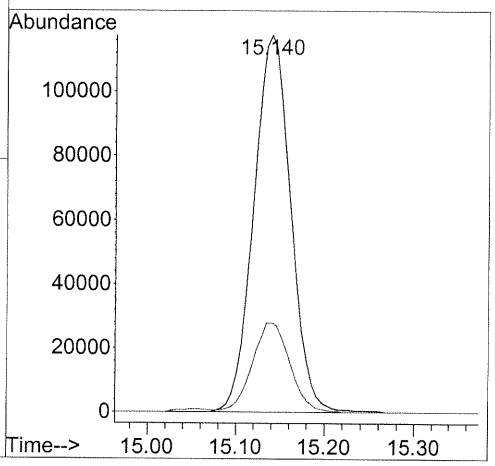


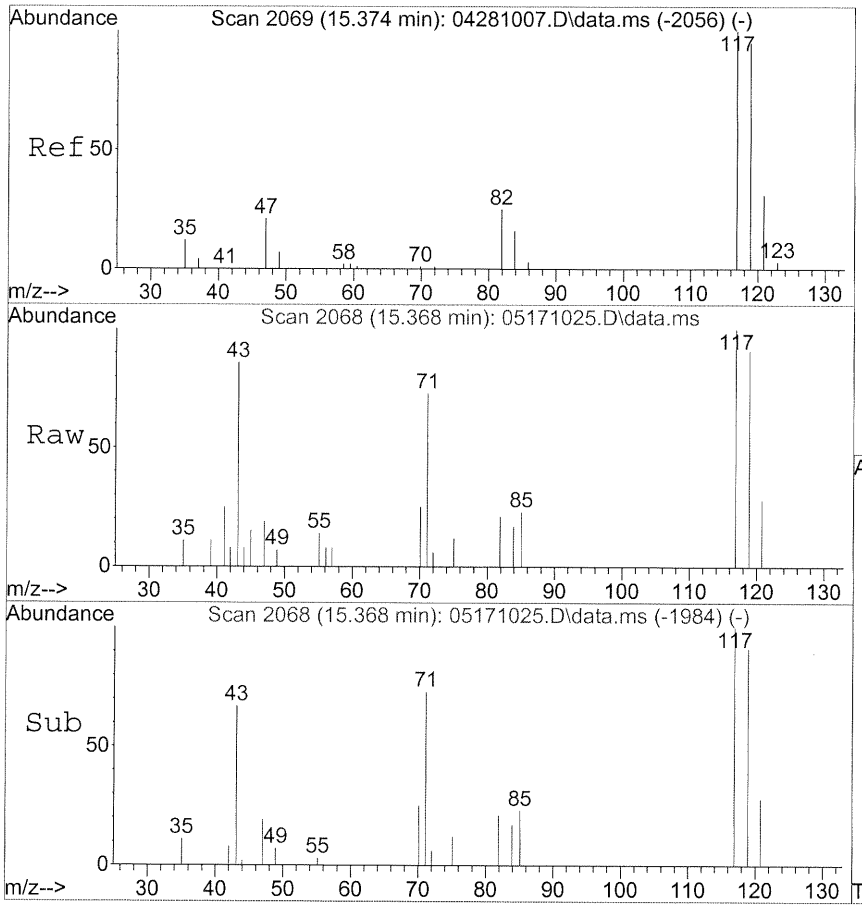


#41
Benzene
Concen: 3.85 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 78 Resp: 342266

Ion	Ratio	Lower	Upper
78	100		
77	24.0	4.1	44.1

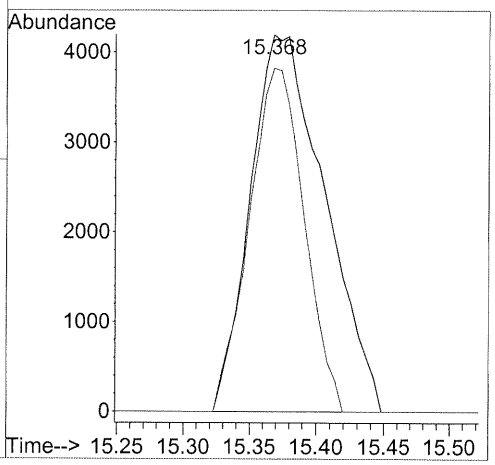


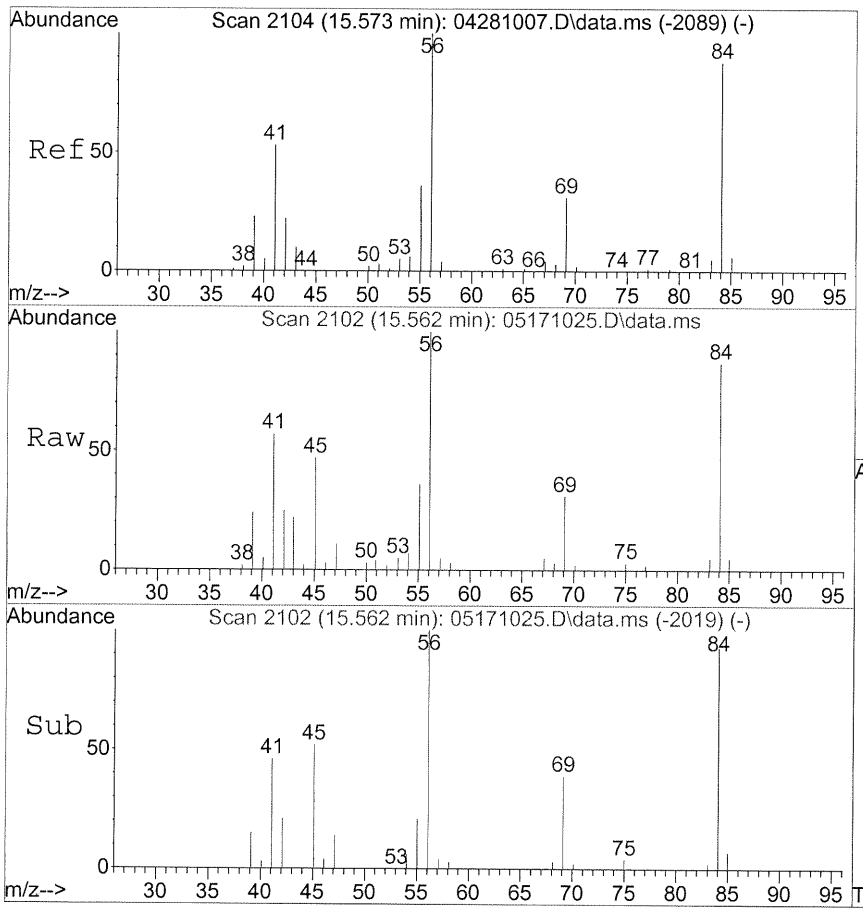


#42
Carbon Tetrachloride
Concen: 0.68 ng
RT: 15.37 min Scan# 2068
Delta R.T. -0.023 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:117 Resp: 16185

Ion	Ratio	Lower	Upper
117	100		
119	68.1	76.1	116.1#

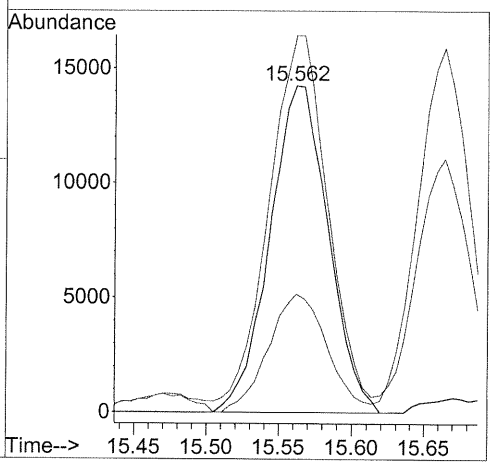


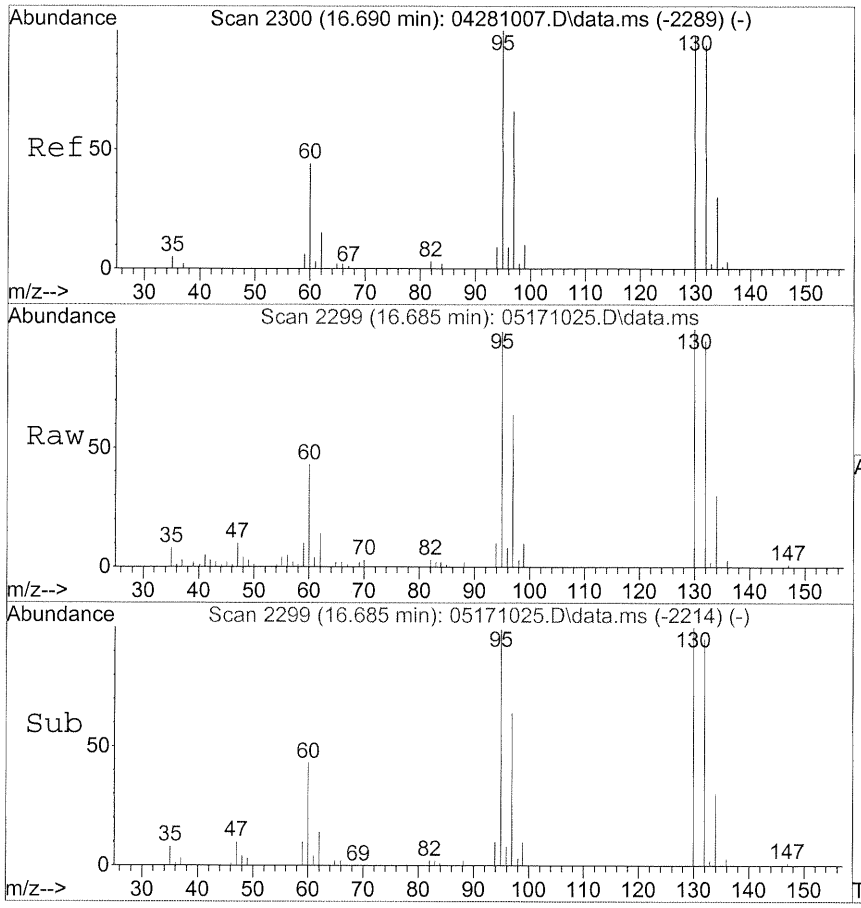


#43
Cyclohexane
Concen: 1.06 ng
RT: 15.56 min Scan# 2102
Delta R.T. -0.029 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 84 Resp: 39552

Ion	Ratio	Lower	Upper
84	100		
69	36.8	14.9	54.9
56	117.5	89.2	129.2

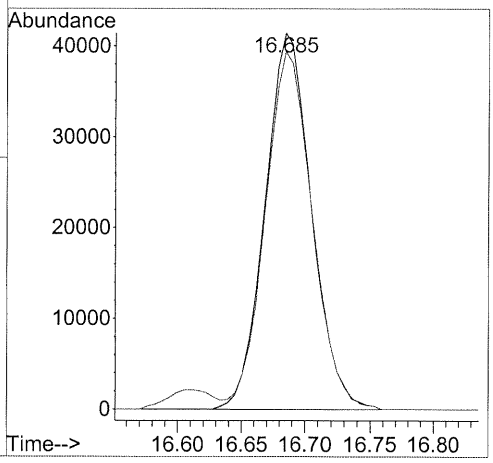


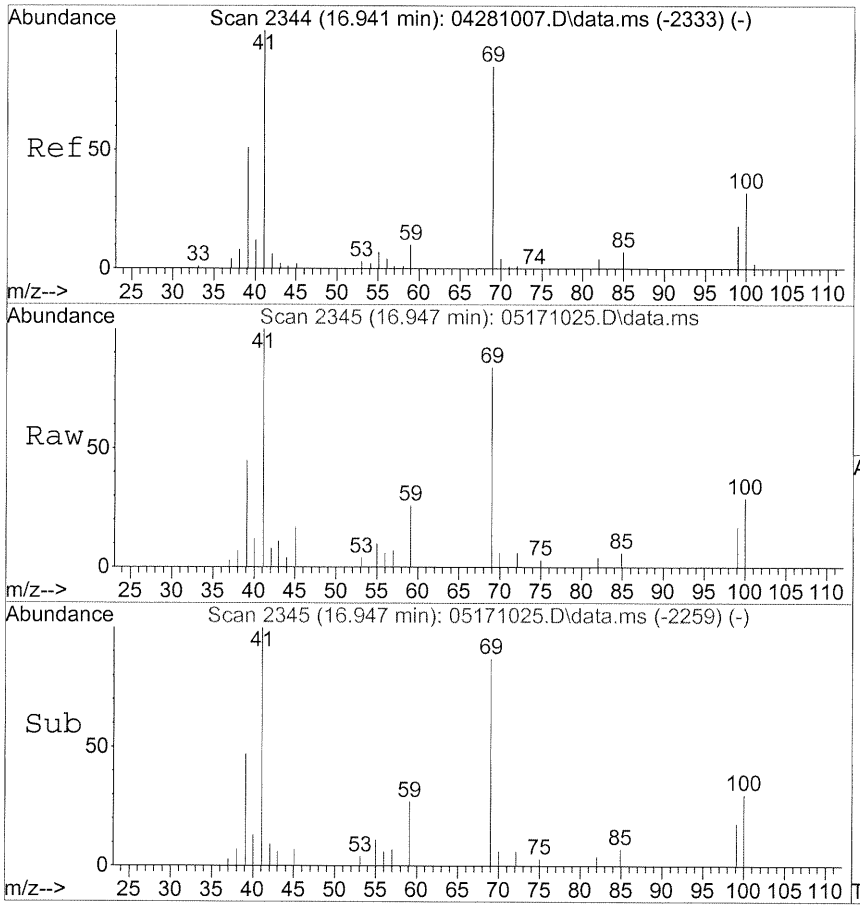


#47
Trichloroethene
Concen: 4.61 ng
RT: 16.68 min Scan# 2299
Delta R.T. -0.017 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:130 Resp: 104619

Ion	Ratio	Lower	Upper
130	100		
132	96.4	75.2	115.2

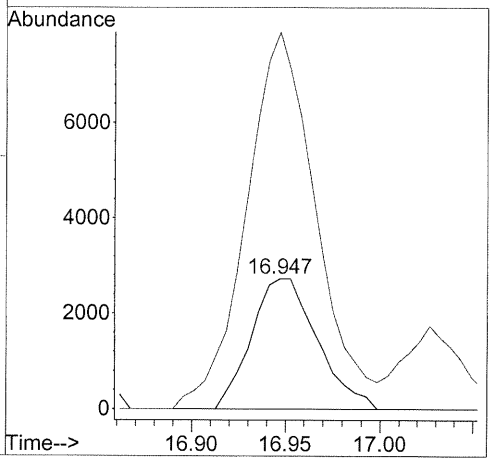


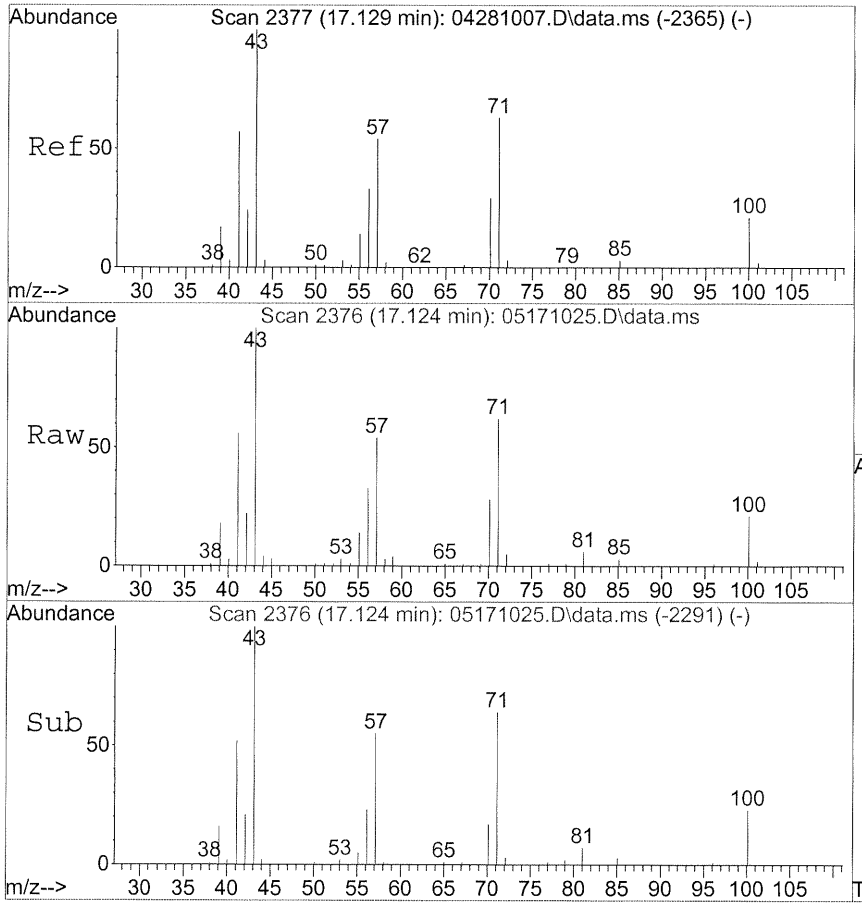


#50
Methyl Methacrylate
Concen: 0.71 ng
RT: 16.95 min Scan# 2345
Delta R.T. -0.011 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:100 Resp: 6642

Ion	Ratio	Lower	Upper
100	100		
69	305.1	226.7	266.7#

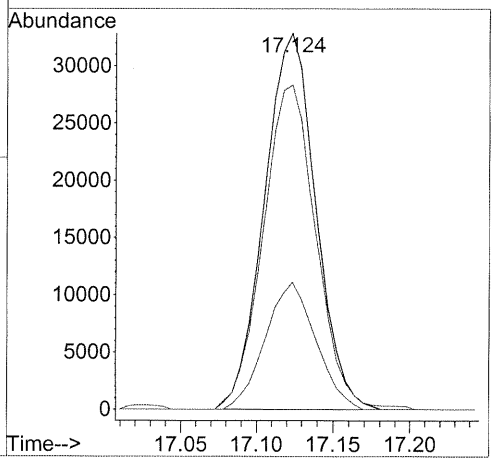


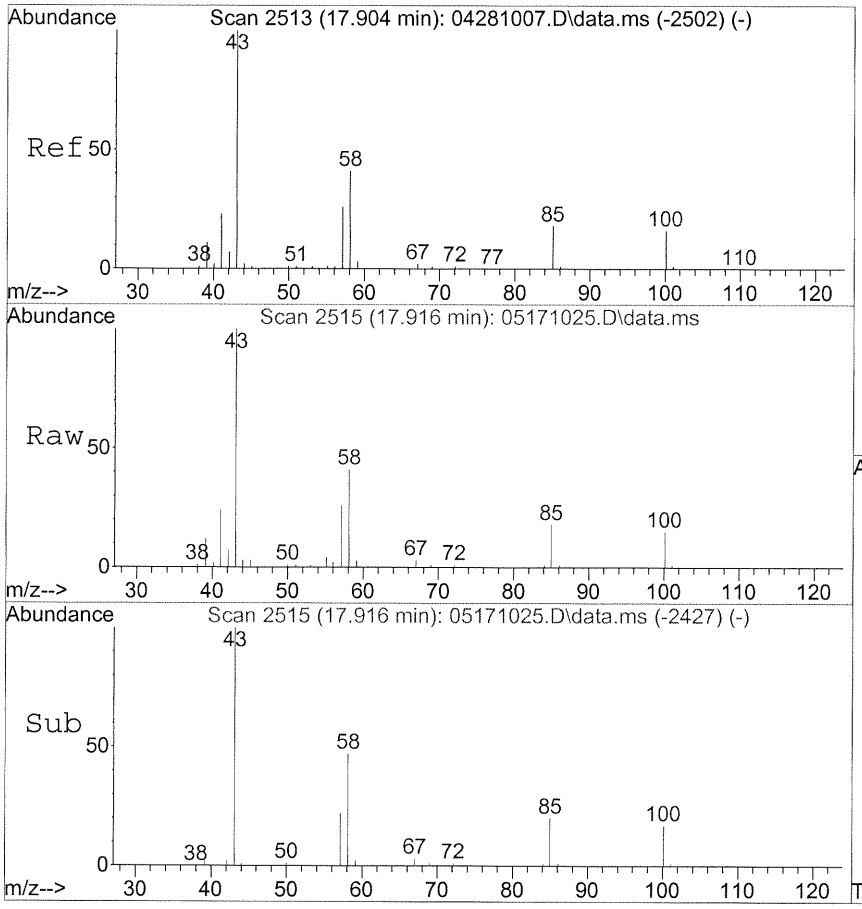


#51
n-Heptane
Concen: 3.02 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 71 Resp: 76751

Ion	Ratio	Lower	Upper
71	100		
57	88.6	63.9	103.9
100	33.1	14.1	54.1

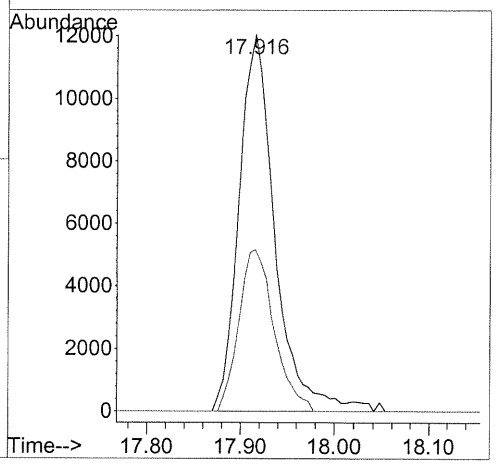


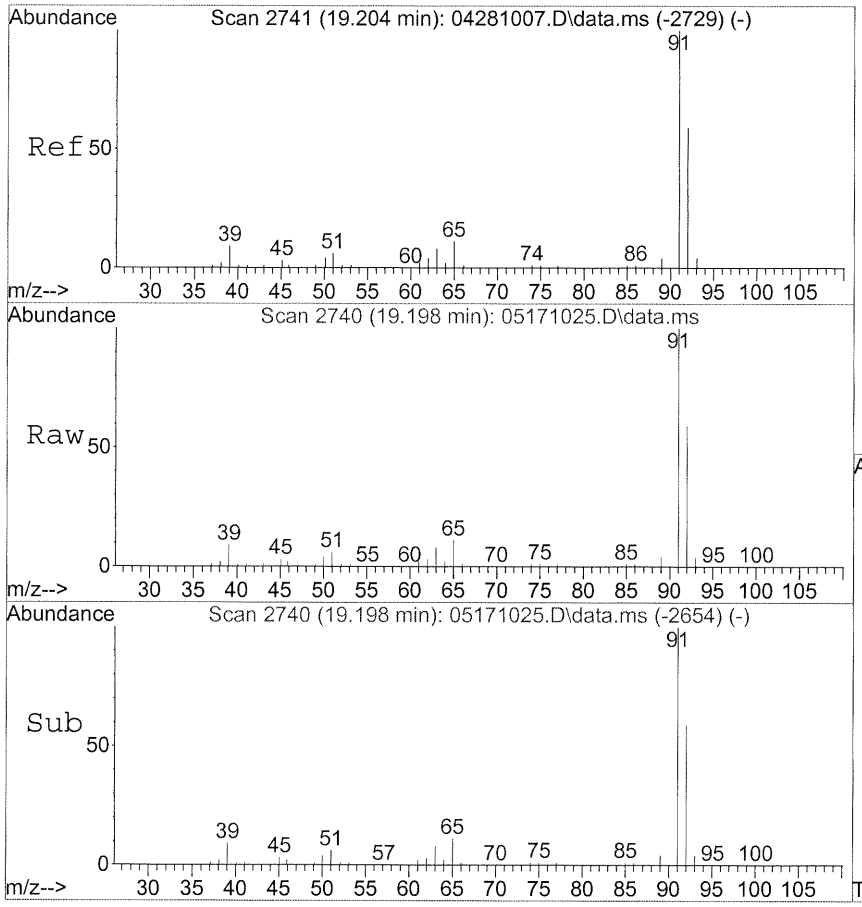


#53
4-Methyl-2-pentanone
Concen: 1.68 ng
RT: 17.92 min Scan# 2515
Delta R.T. -0.000 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 58 Resp: 32218

Ion	Ratio	Lower	Upper
58	100		
85	42.0	26.7	66.7

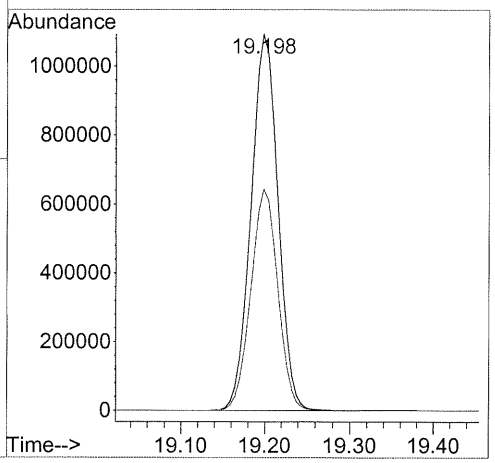


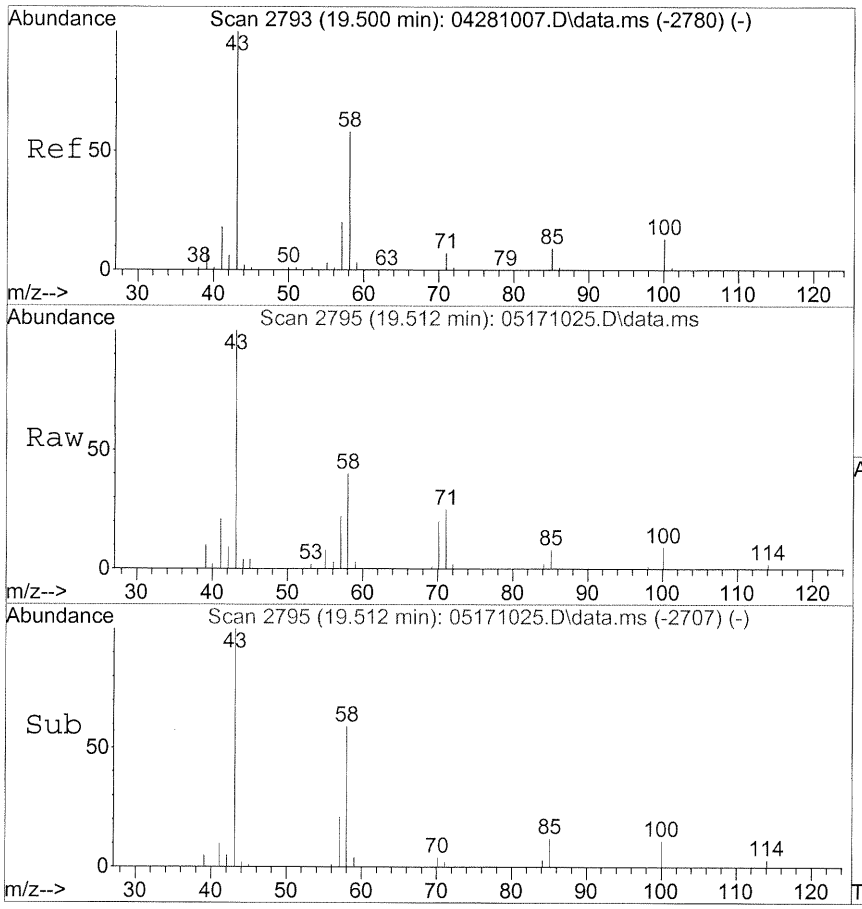


#58
Toluene
Concen: 26.27 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.012 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 91 Resp: 2459976

Ion	Ratio	Lower	Upper
91	100		
92	58.8	39.2	79.2

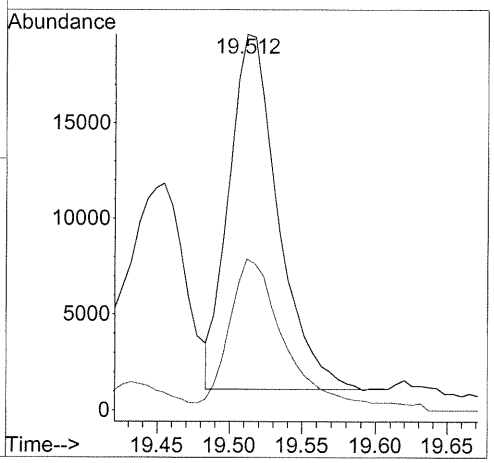


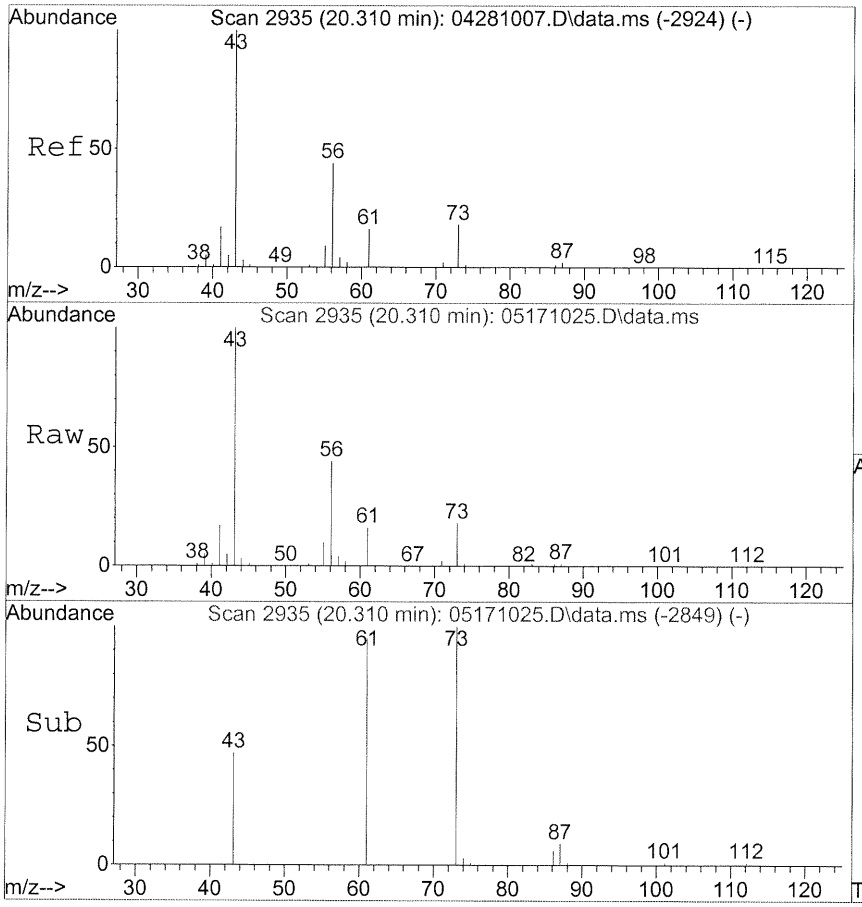


#59
2-Hexanone
Concen: 0.98 ng
RT: 19.51 min Scan# 2795
Delta R.T. -0.000 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 43 Resp: 43741

Ion	Ratio	Lower	Upper
43	100		
58	49.7	38.3	78.3

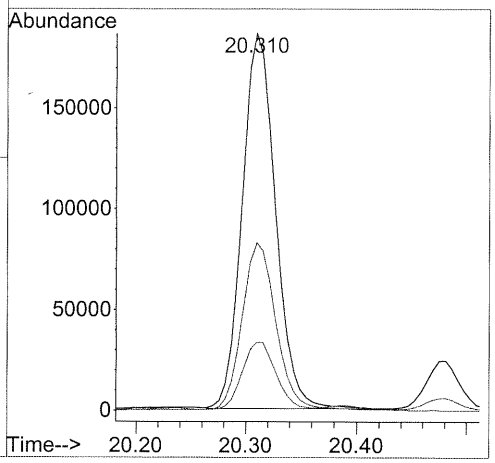


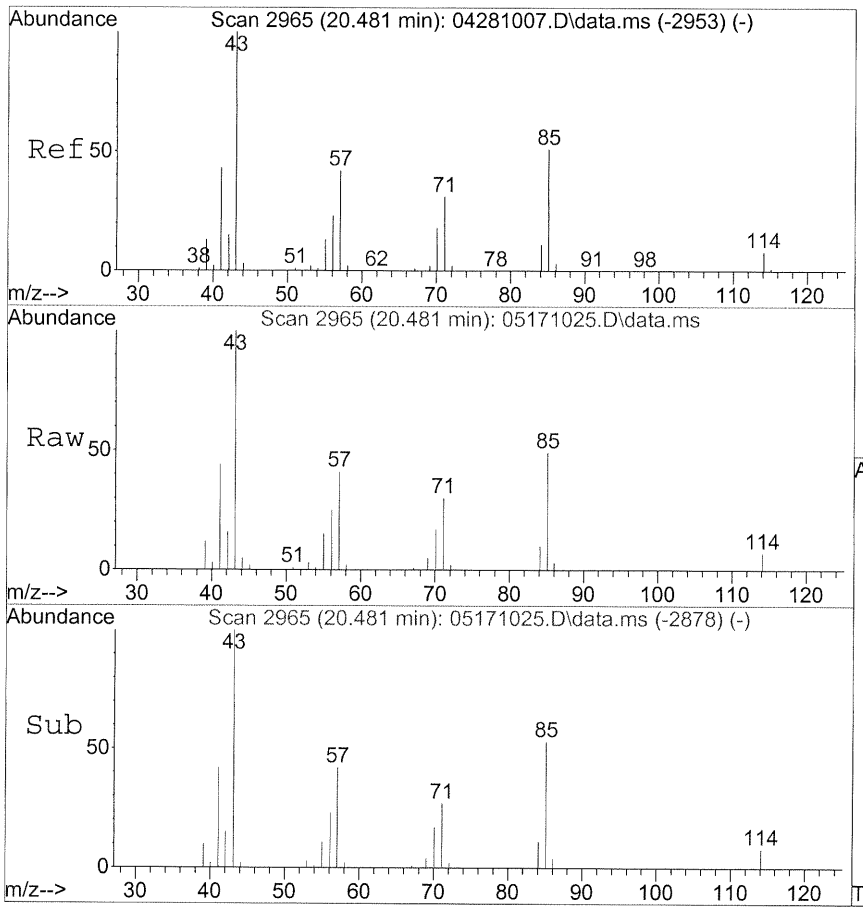


#62
n-Butyl Acetate
Concen: 7.83 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.012 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 43 Resp: 393289

Ion	Ratio	Lower	Upper
43	100		
56	45.2	25.0	65.0
73	18.7	0.0	39.1

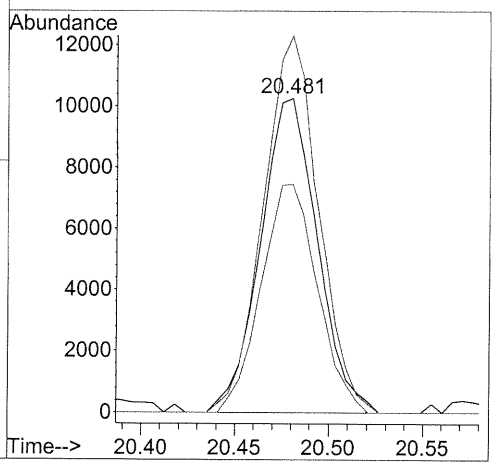


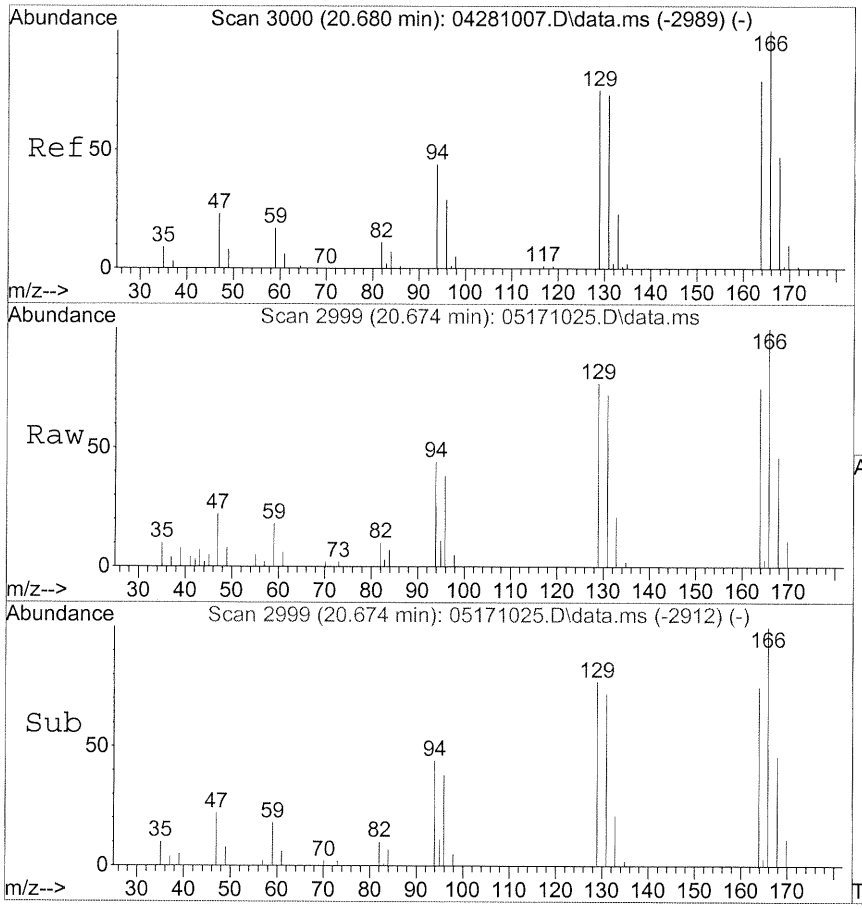


#63
n-Octane
Concen: 1.00 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 57 Resp: 21653

Ion	Ratio	Lower	Upper
57	100		
85	116.5	101.4	152.2
71	71.9	60.7	91.1

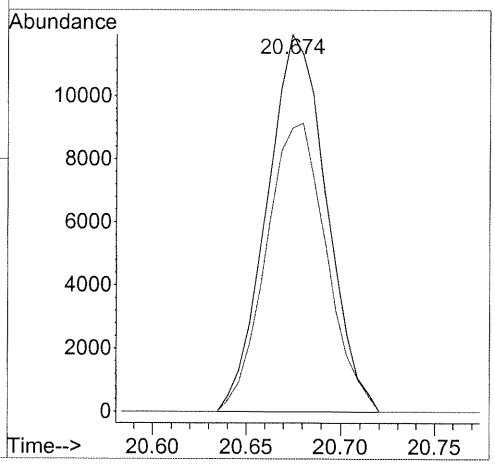


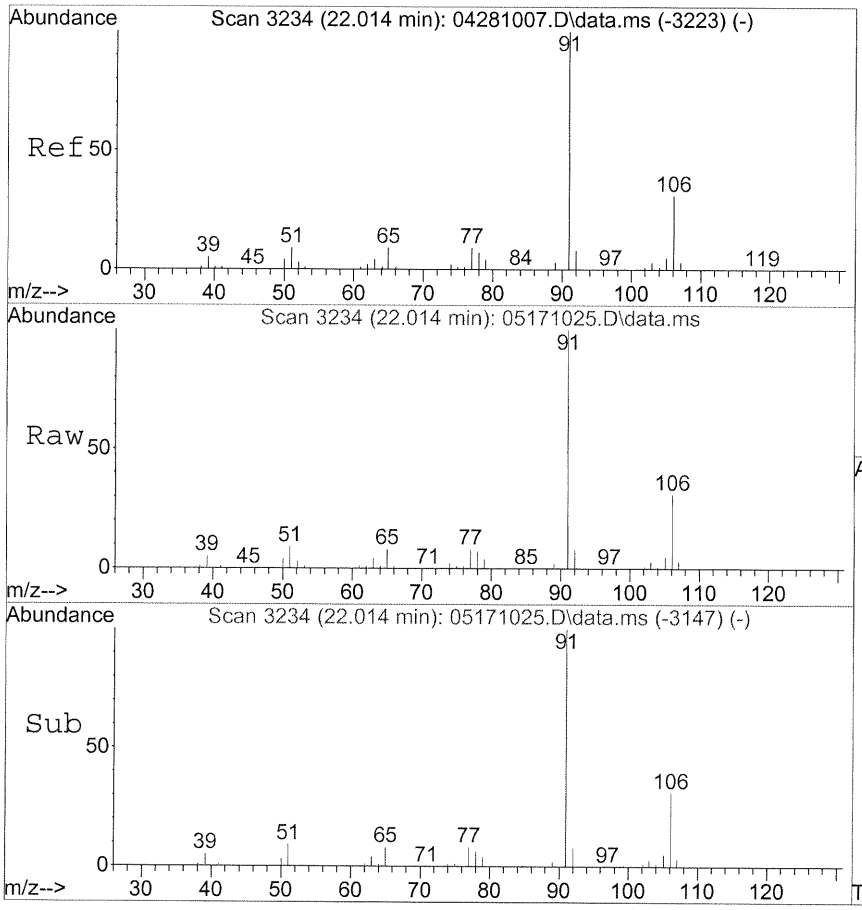


#64
Tetrachloroethene
Concen: 1.19 ng
RT: 20.67 min Scan# 2999
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:166 Resp: 26144

Ion	Ratio	Lower	Upper
166	100		
164	77.4	59.0	99.0

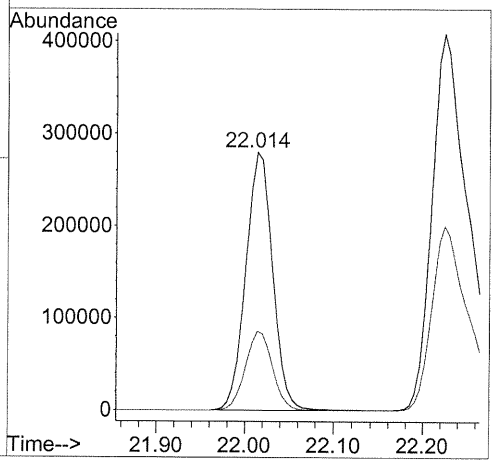


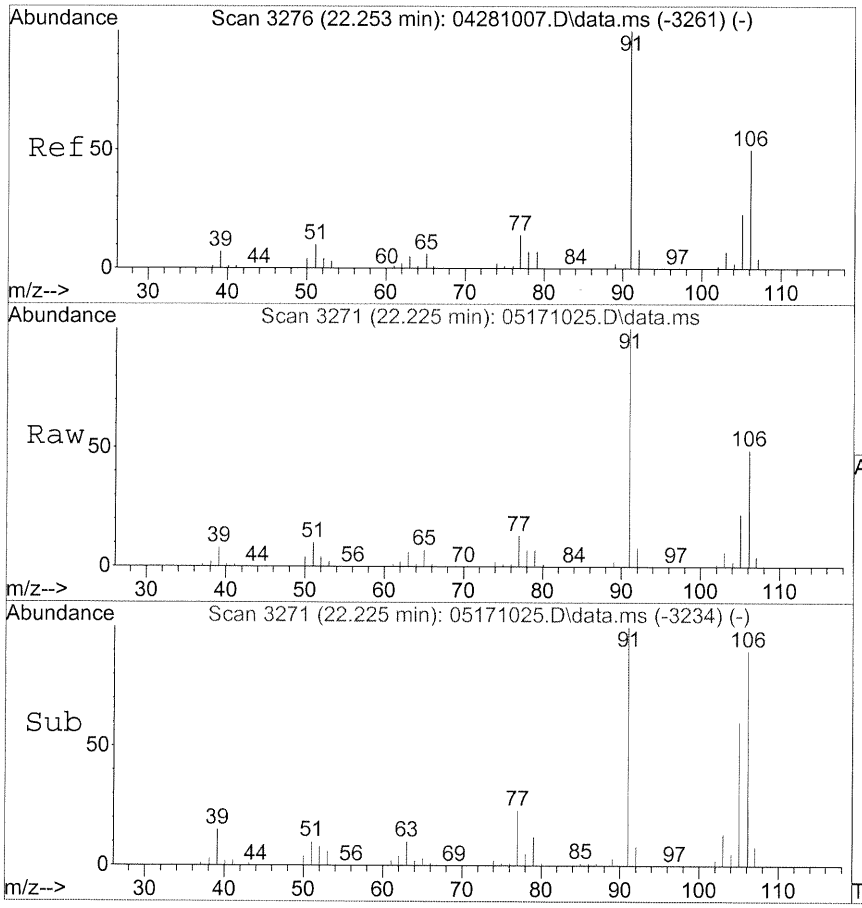


#66
Ethylbenzene
Concen: 5.64 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 91 Resp: 591001

Ion	Ratio	Lower	Upper
91	100		
106	30.6	12.2	52.2

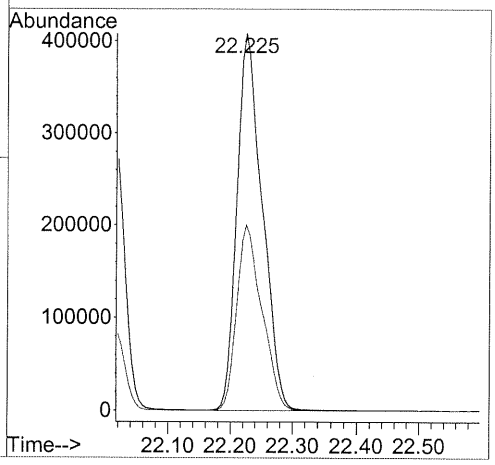


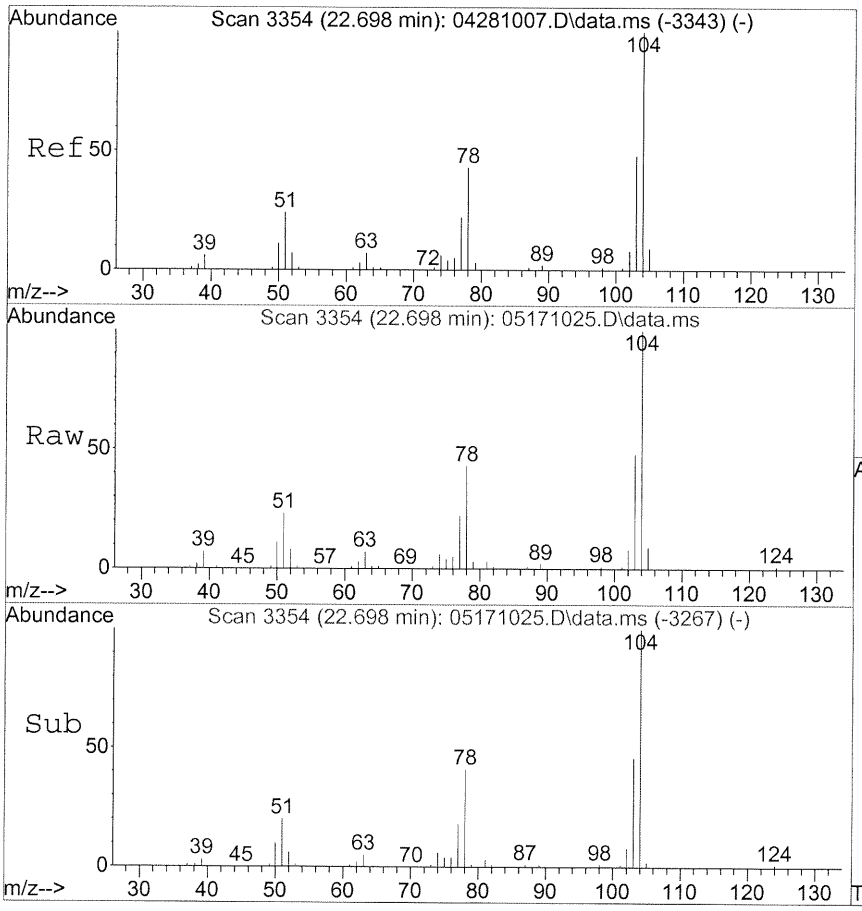


#67
m- & p-Xylenes
Concen: 13.59 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 91 Resp: 1154397

Ion	Ratio	Lower	Upper
91	100		
106	48.8	30.6	70.6

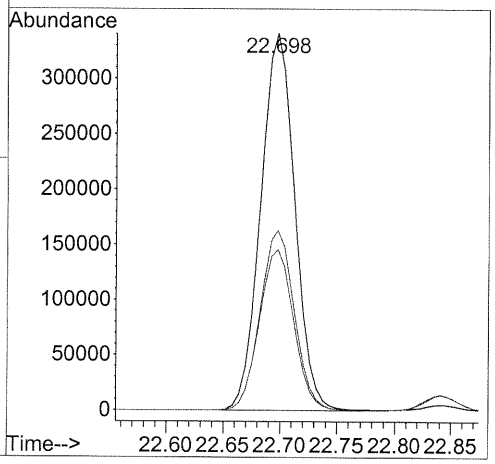


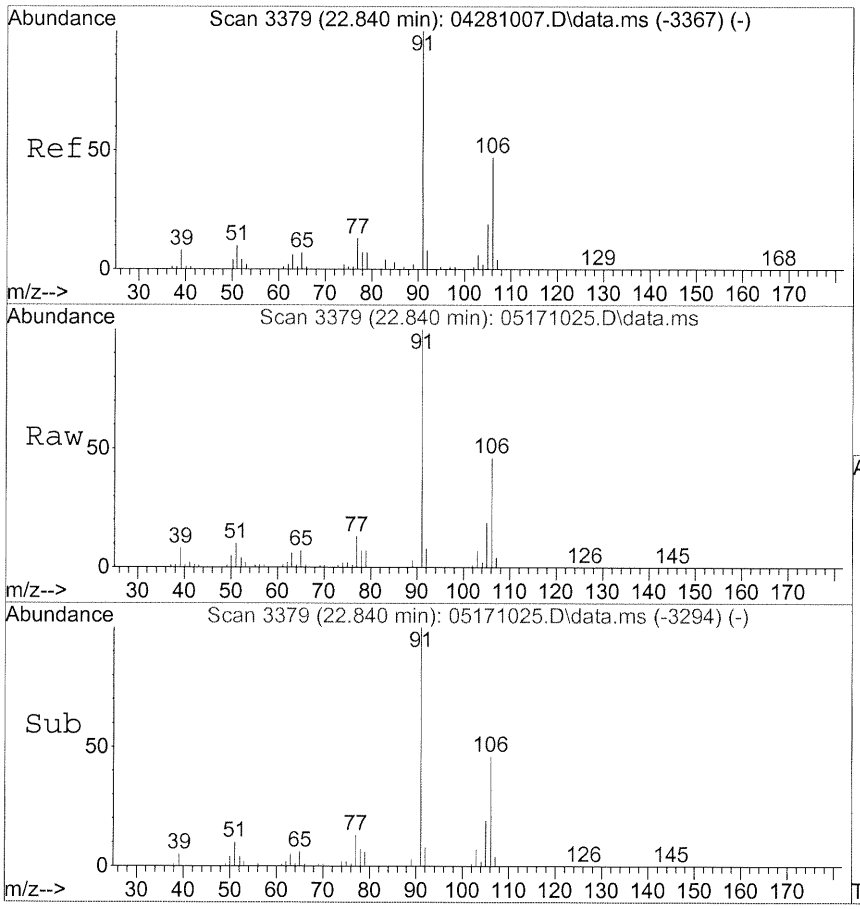


#69
Styrene
Concen: 11.87 ng
RT: 22.70 min Scan# 3354
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:104 Resp: 710640

Ion	Ratio	Lower	Upper
104	100		
78	43.0	22.5	62.5
103	48.1	27.5	67.5

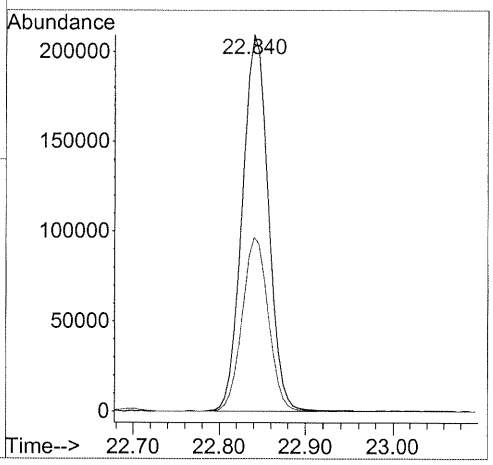


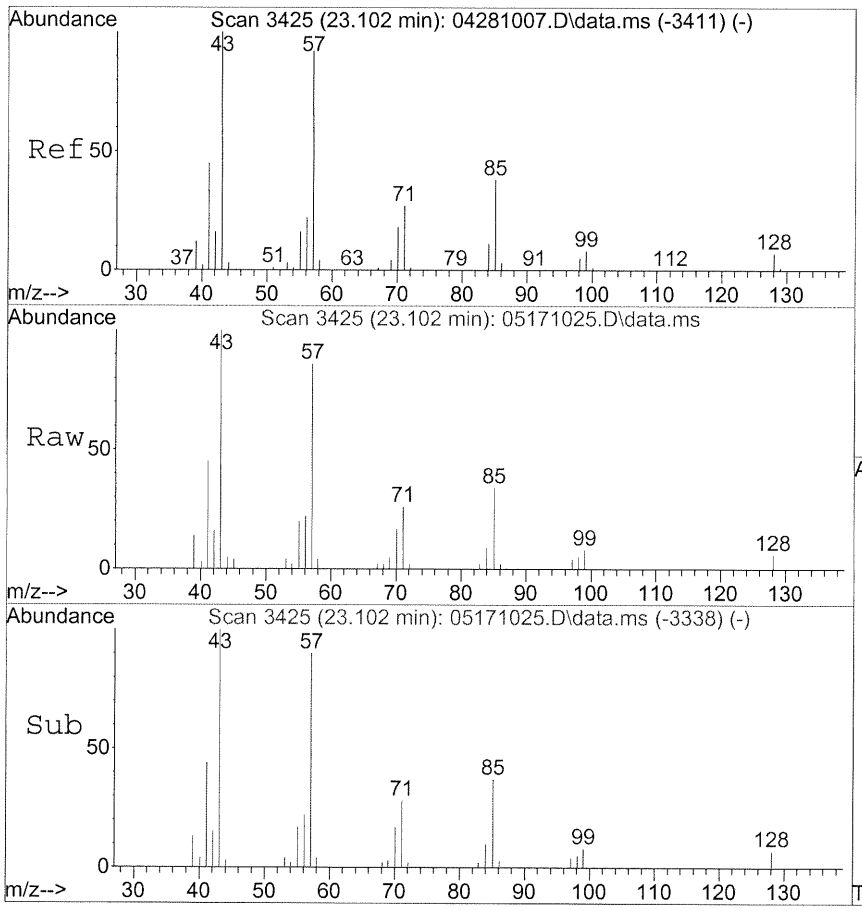


#70
o-Xylene
Concen: 4.90 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 91 Resp: 442916

Ion	Ratio	Lower	Upper
91	100		
106	46.0	27.8	67.8

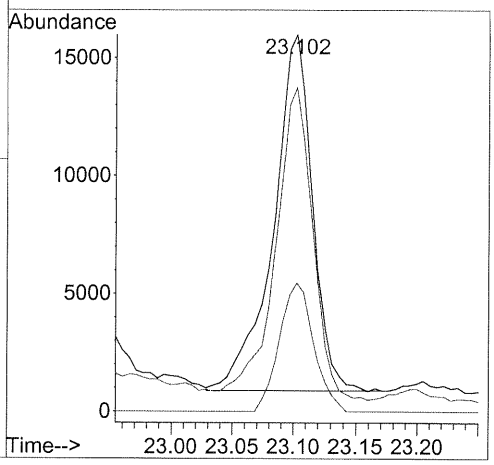


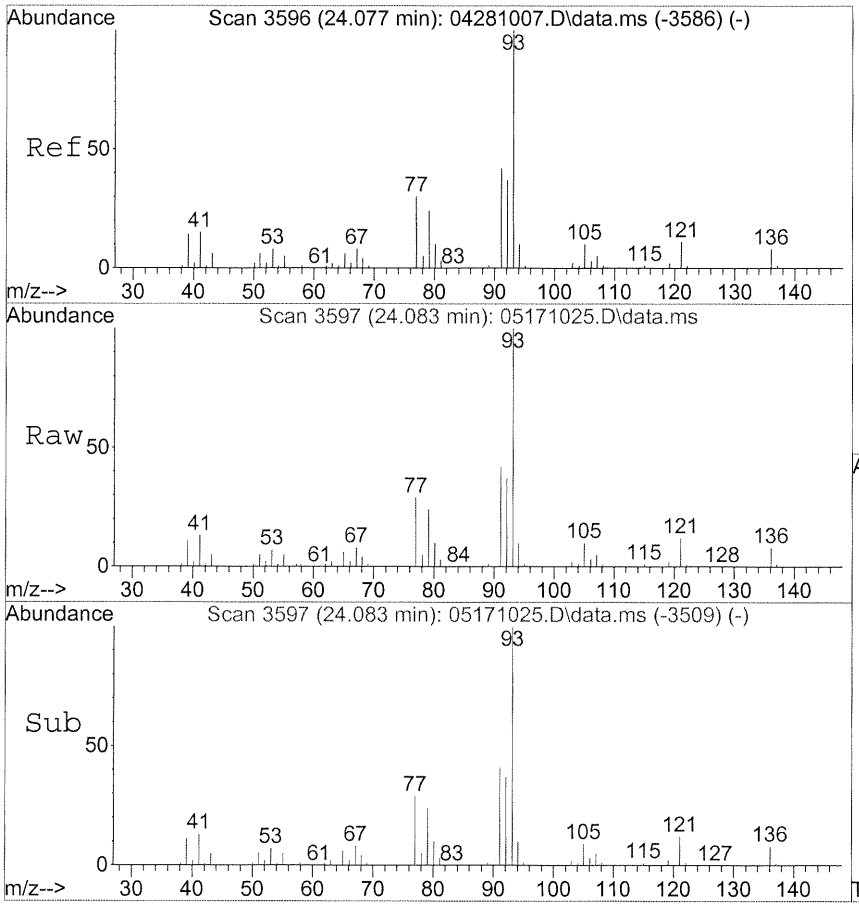


#71
n-Nonane
Concen: 0.68 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 43 Resp: 33435

Ion	Ratio	Lower	Upper
43	100		
57	84.3	74.6	114.6
85	31.6	20.5	60.5

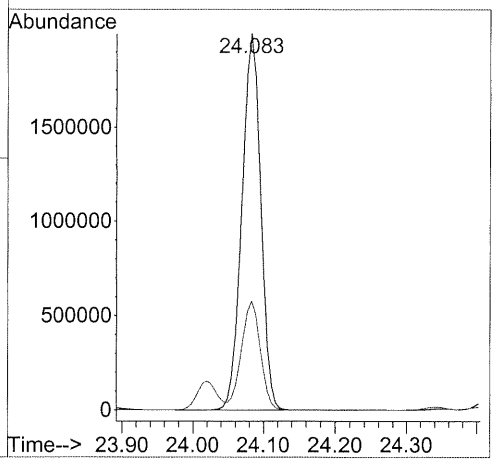


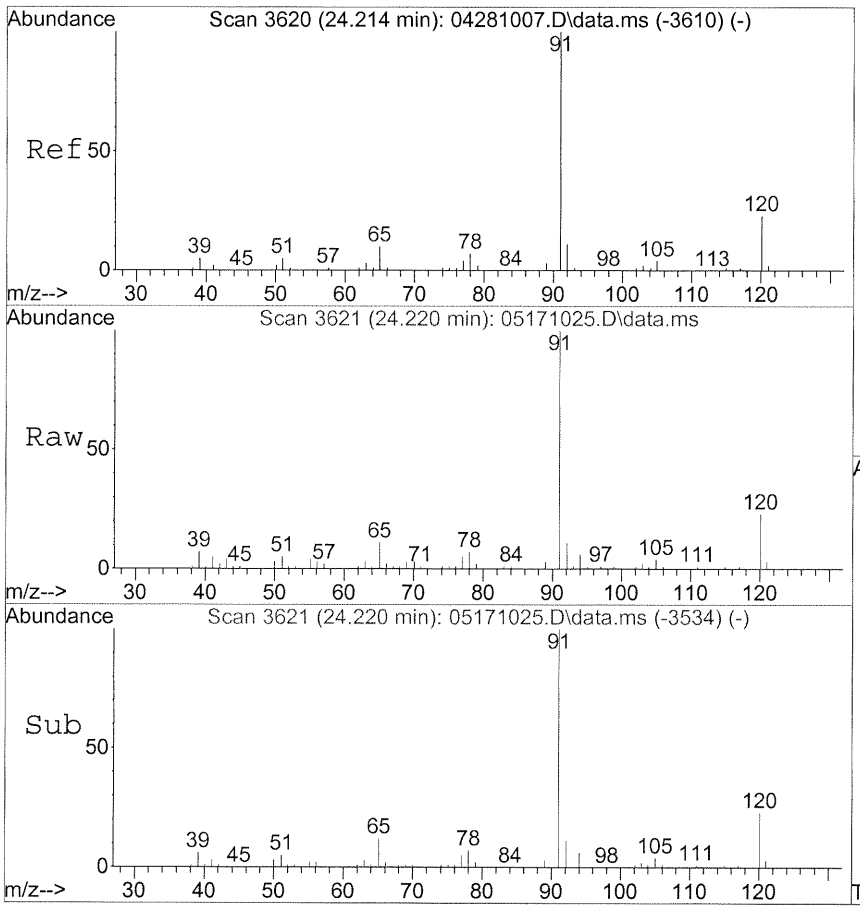


#75
alpha-Pinene
Concen: 71.92 ng
RT: 24.08 min Scan# 3597
Delta R.T. -0.000 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 93 Resp: 3691584

Ion	Ratio	Lower	Upper
93	100		
77	29.0	8.7	48.7

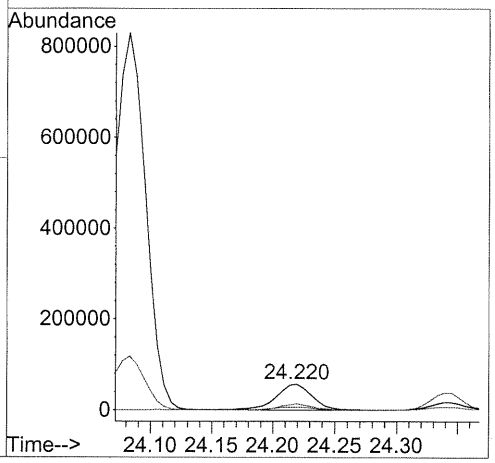


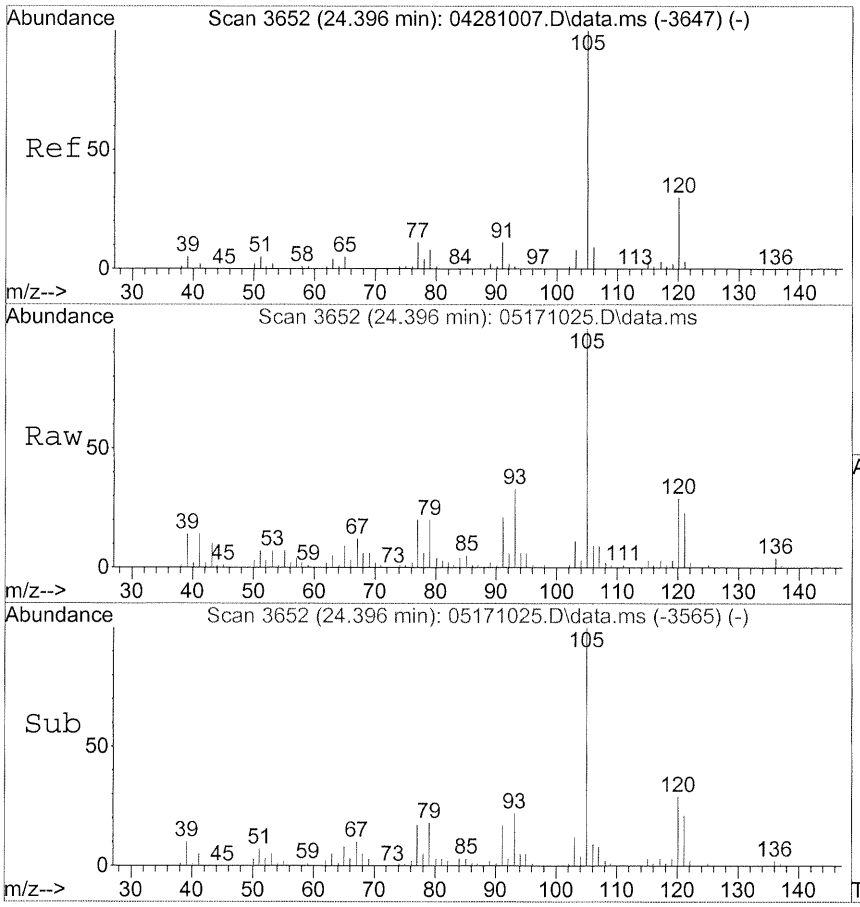


#76
n-Propylbenzene
Concen: 0.86 ng
RT: 24.22 min Scan# 3621
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 91 Resp: 115961

Ion	Ratio	Lower	Upper
91	100		
120	20.4	3.8	43.8
65	13.5	0.0	30.1

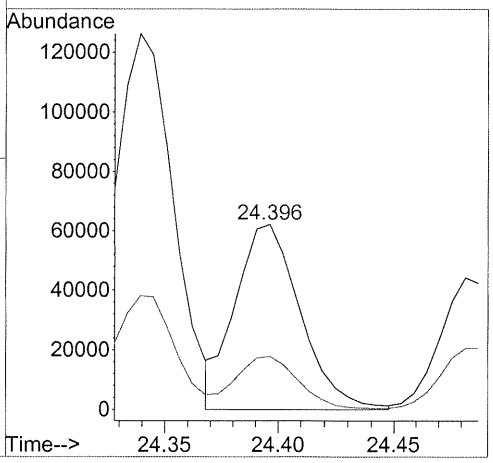


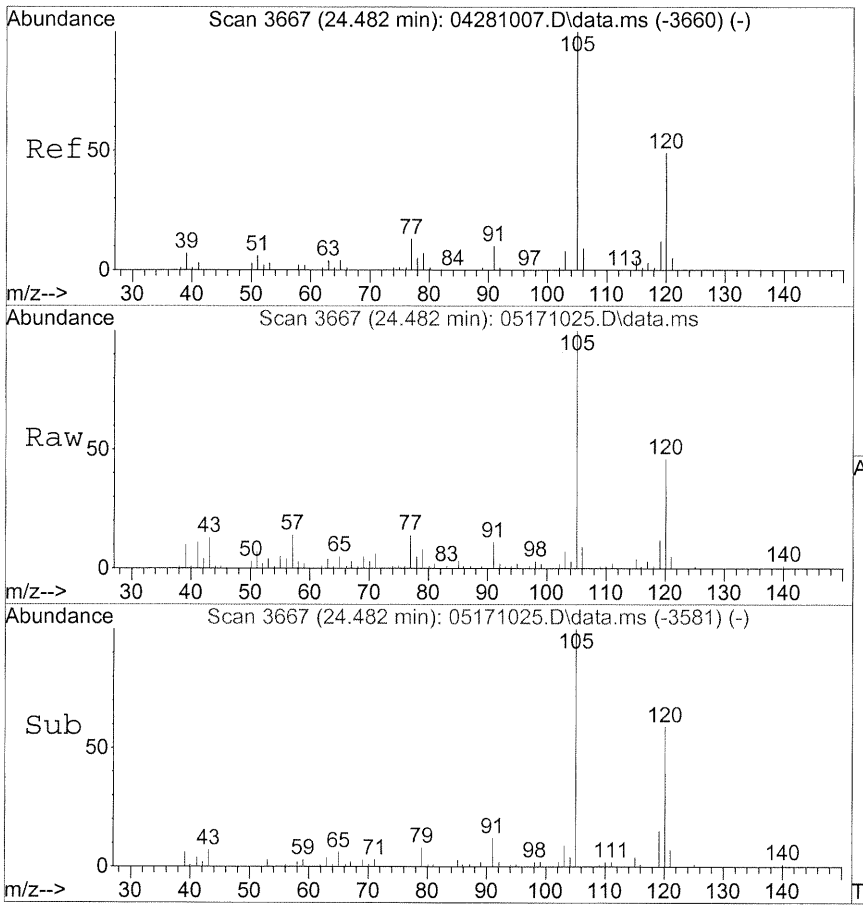


#78
4-Ethyltoluene
Concen: 1.21 ng
RT: 24.40 min Scan# 3652
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:105 Resp: 123497

Ion	Ratio	Lower	Upper
105	100		
120	27.8	10.2	50.2

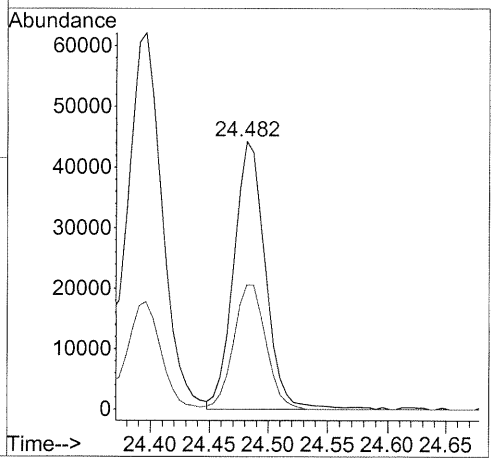


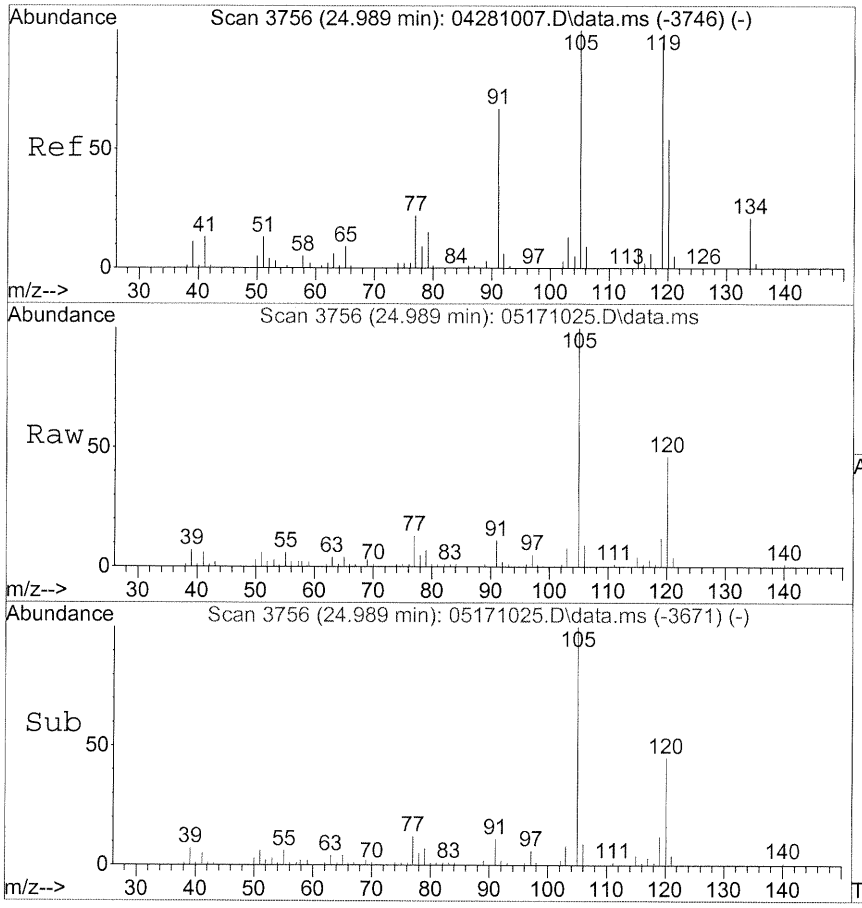


#79
1,3,5-Trimethylbenzene
Concen: 0.97 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.012 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:105 Resp: 83065

Ion	Ratio	Lower	Upper
105	100		
120	47.3	30.4	70.4

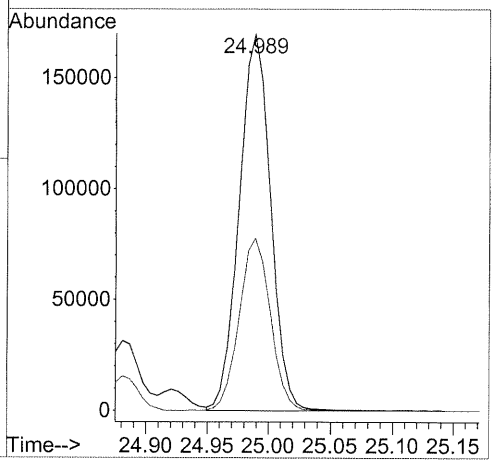


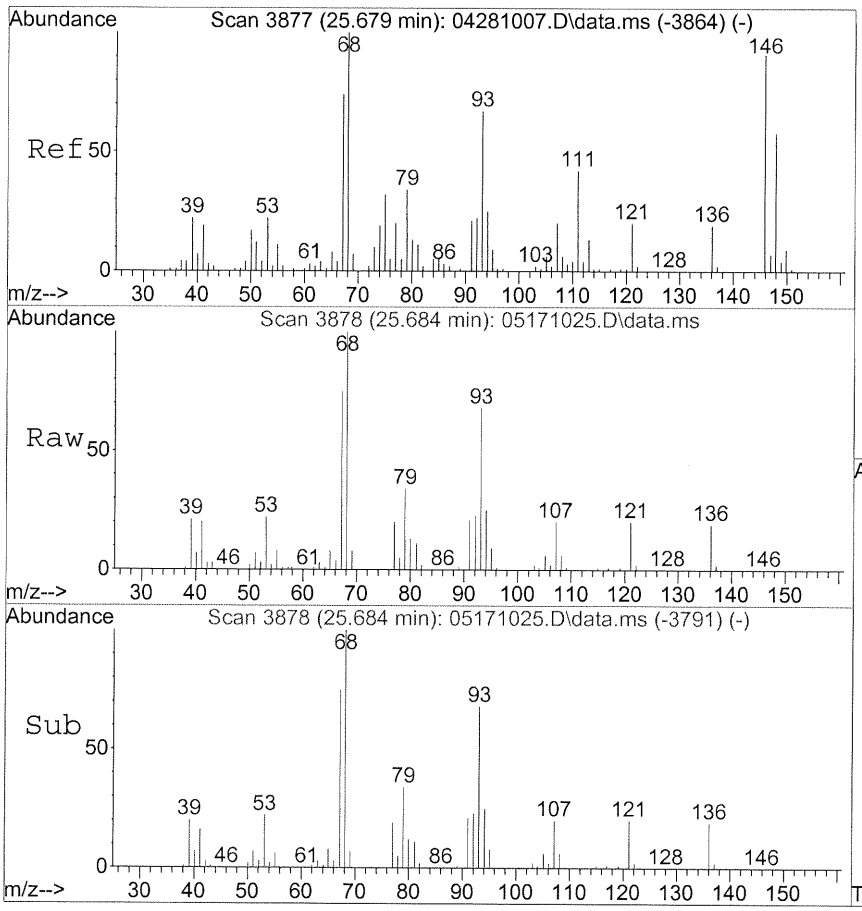


#82
1,2,4-Trimethylbenzene
Concen: 3.40 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:105 Resp: 303998

Ion	Ratio	Lower	Upper
105	100		
120	45.4	35.1	75.1

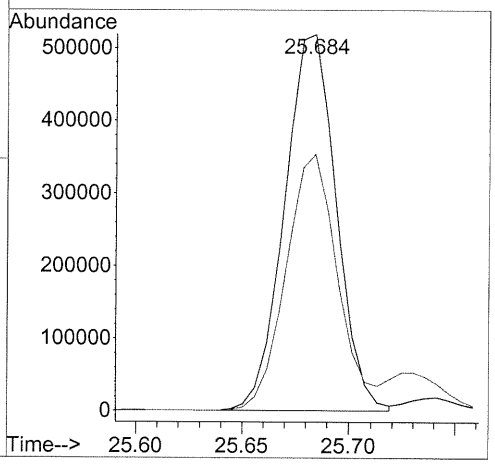


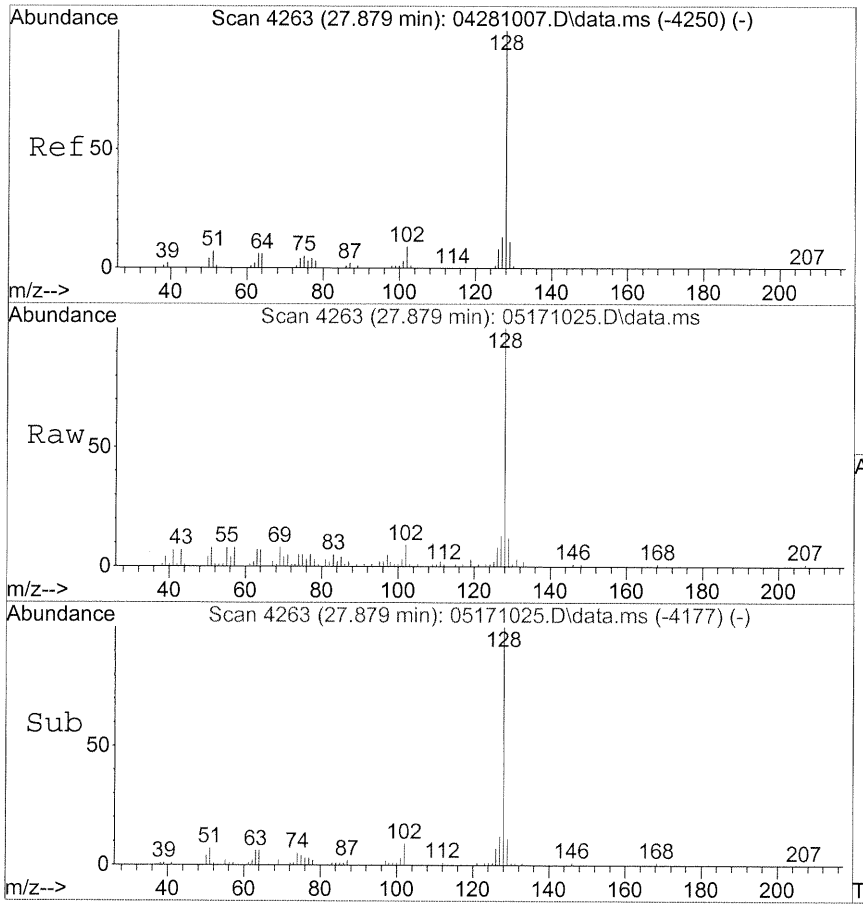


#91
d-Limonene
Concen: 24.72 ng
RT: 25.68 min Scan# 3878
Delta R.T. -0.006 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion: 68 Resp: 871318

Ion	Ratio	Lower	Upper
68	100		
93	68.5	51.5	91.5

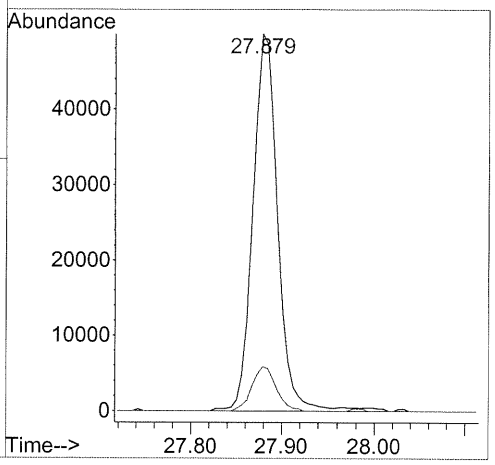




#95
Naphthalene
Concen: 0.96 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.012 min
Lab File: 05171025.D
Acq: 18 May 2010 3:29

Tgt Ion:128 Resp: 95029

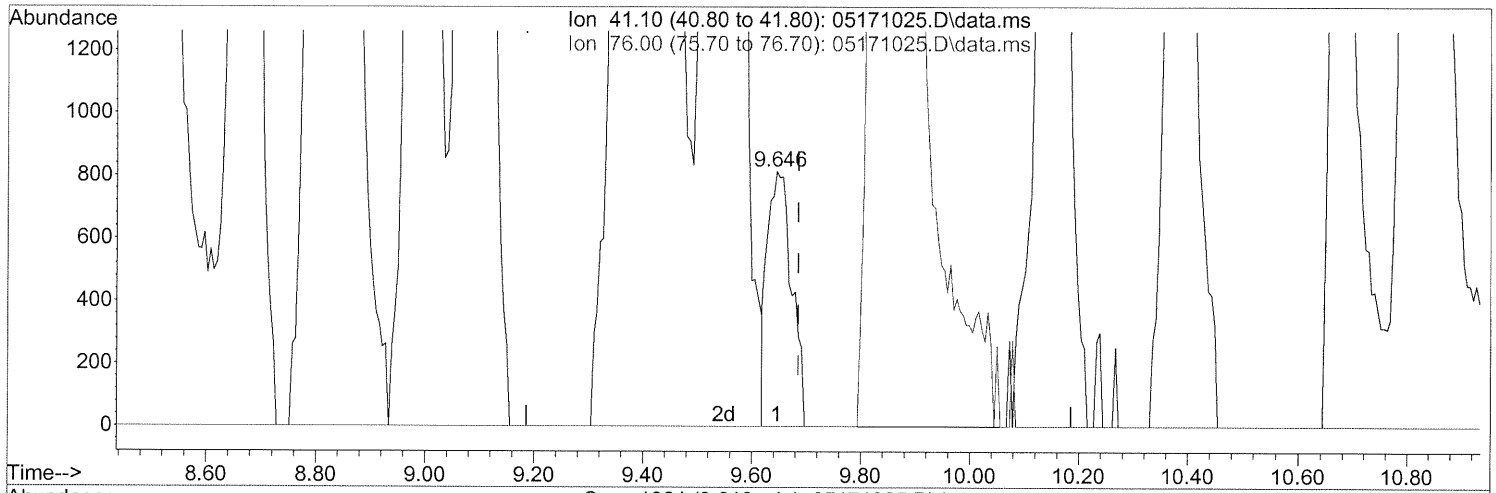
Ion	Ratio	Lower	Upper
128	100		
129	11.4	0.0	31.1

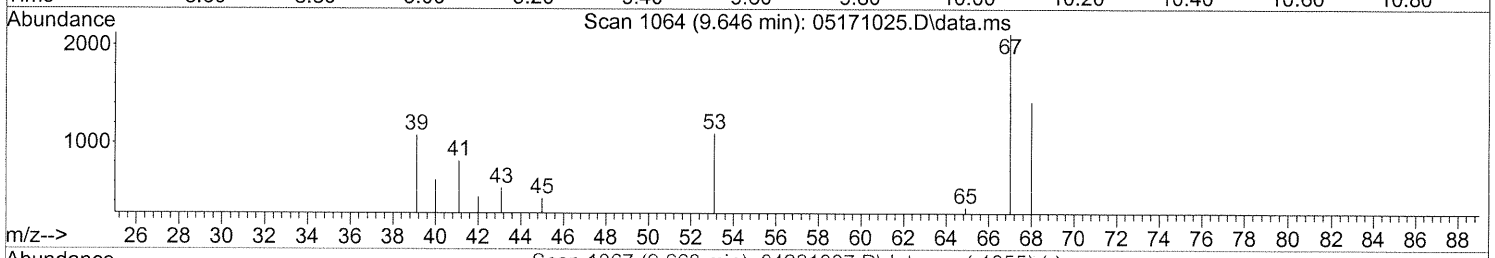


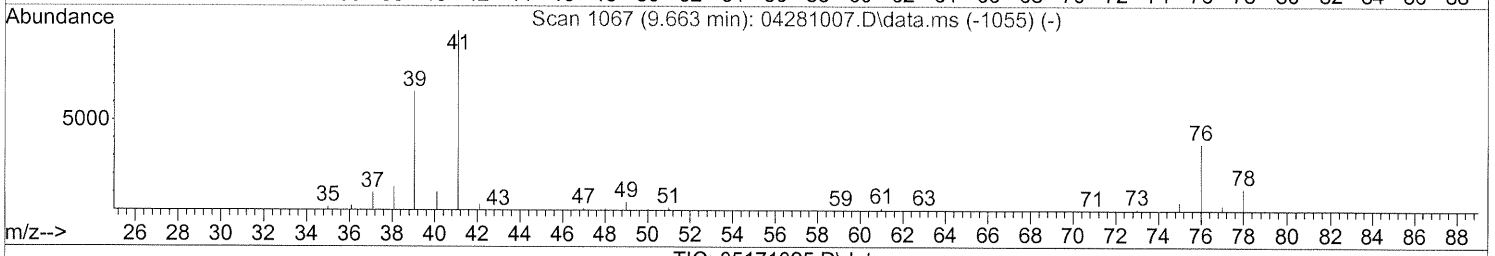
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171025.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.646min (-0.040) 0.09ng

response 2580

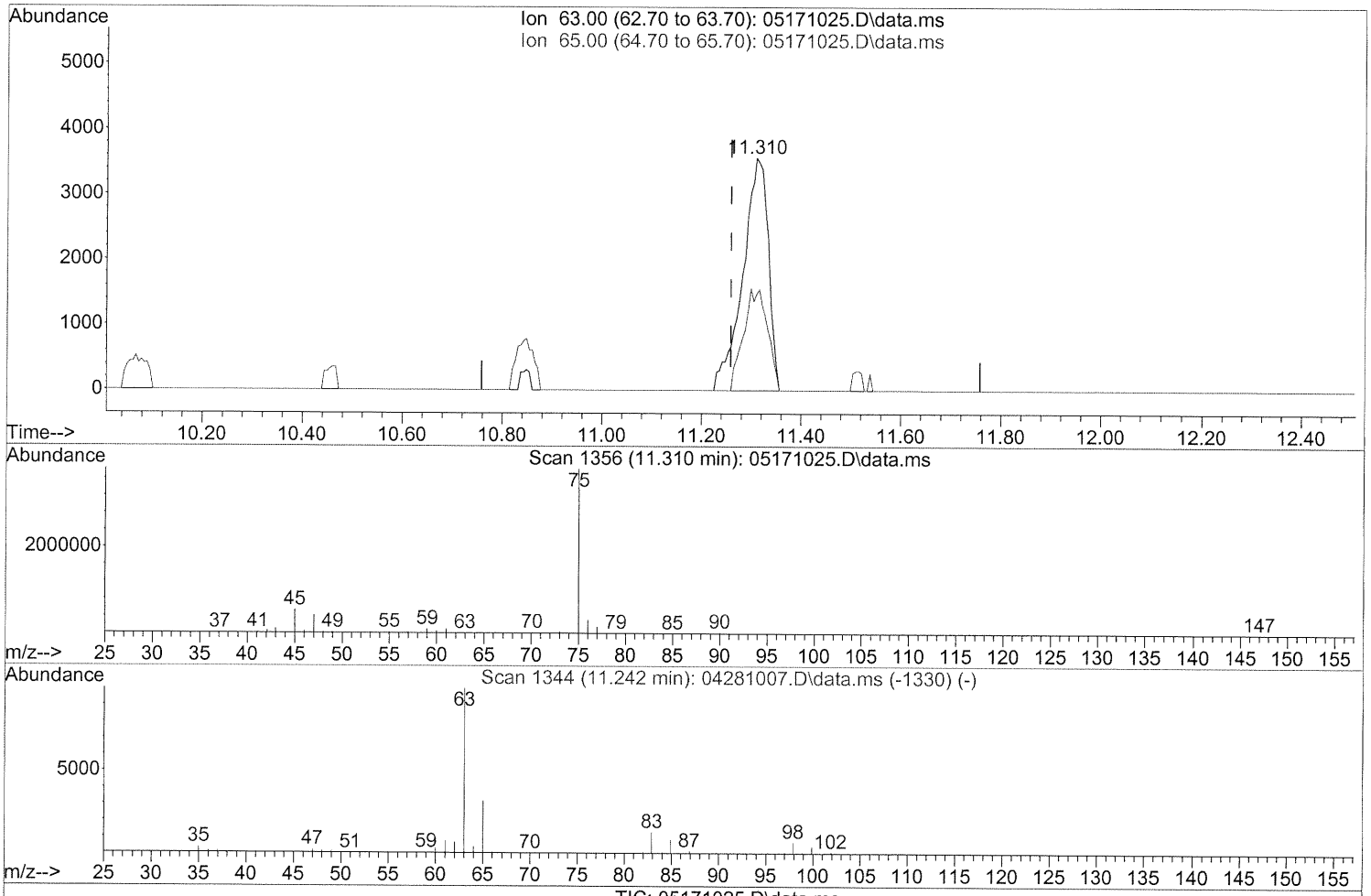
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

11.310min (+0.051) 0.34ng

response 12629

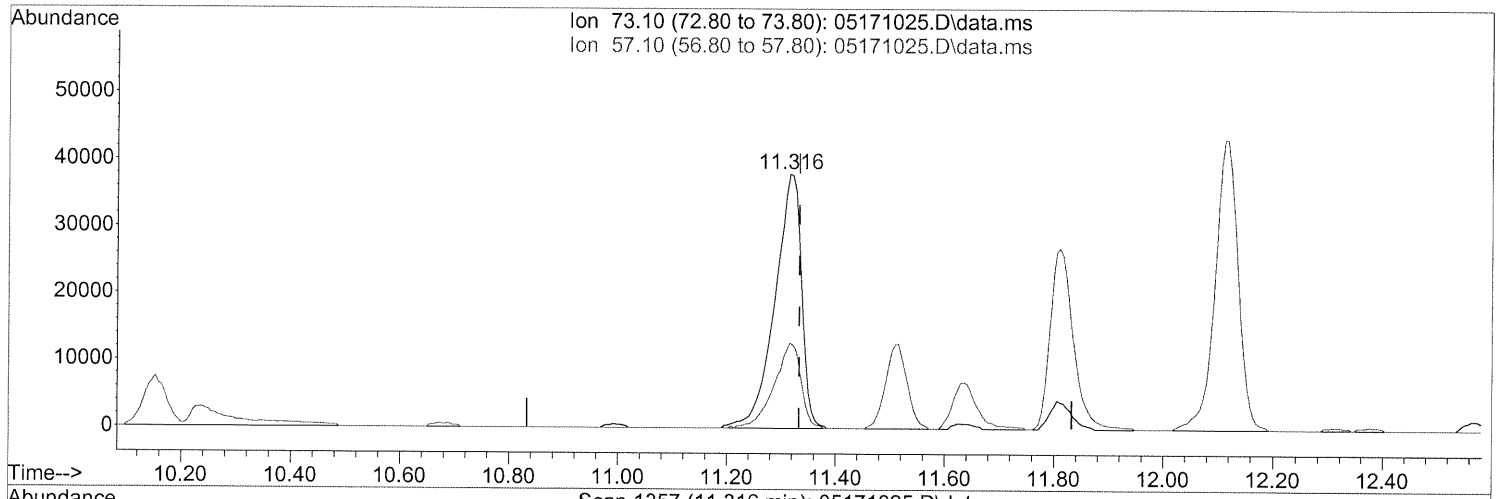
Ion	Exp%	Act%
63.00	100	100
65.00	32.00	41.09
0.00	0.00	0.00
0.00	0.00	0.00

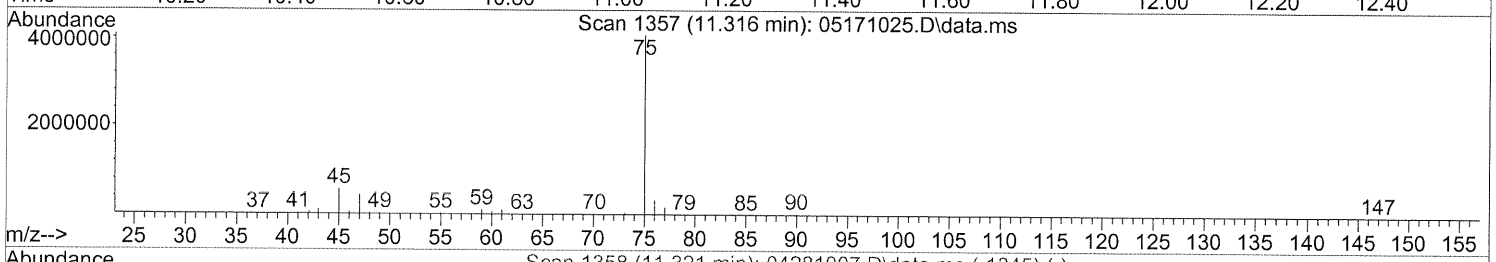
FP

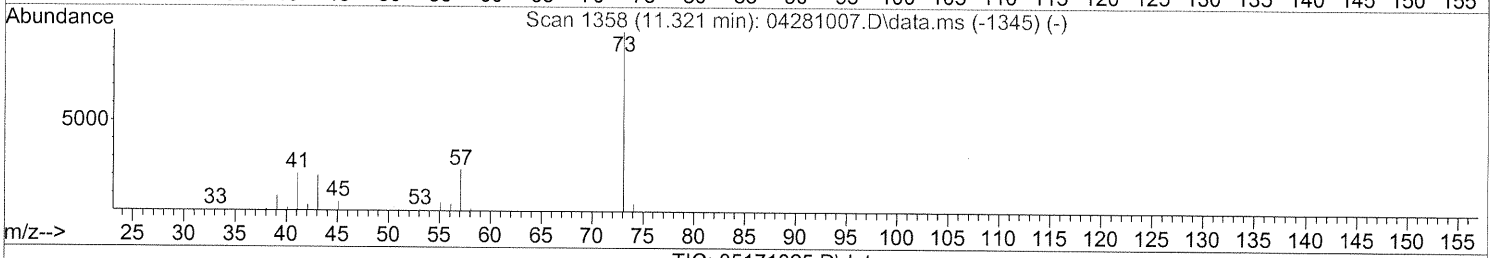
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171025.D\data.ms

(25) Methyl tert-Butyl Ether (T)

11.316min (-0.017) 1.89ng

response 128407

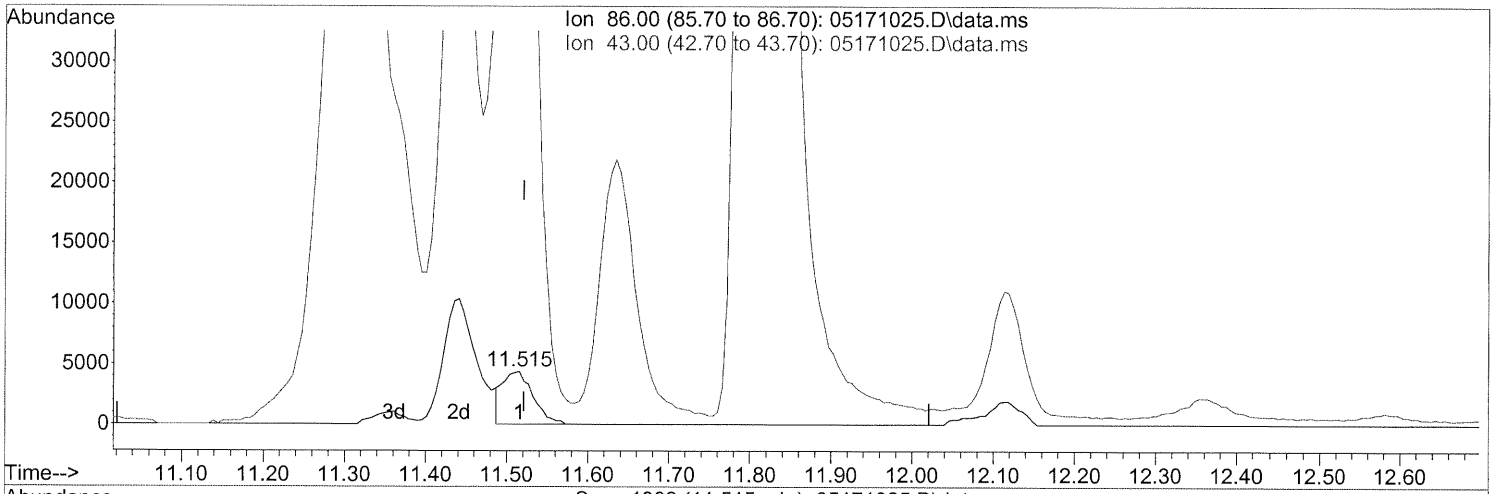
Ion	Exp%	Act%
73.10	100	100
57.10	21.90	33.62
0.00	0.00	0.00
0.00	0.00	0.00

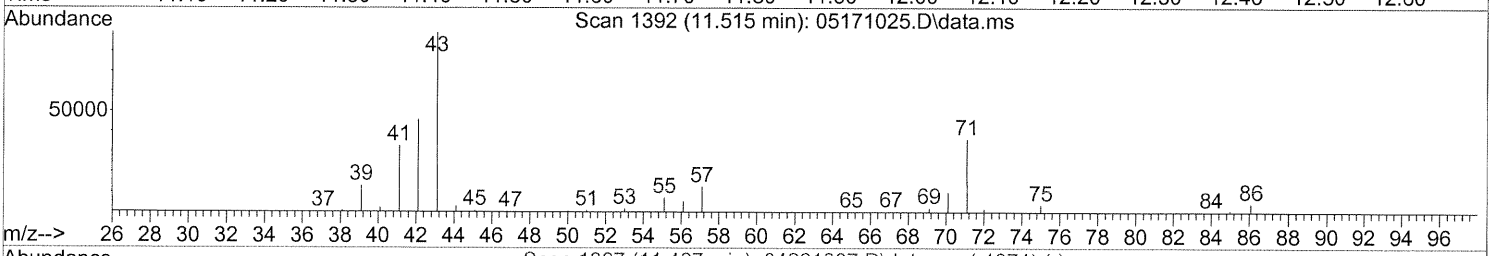
TP

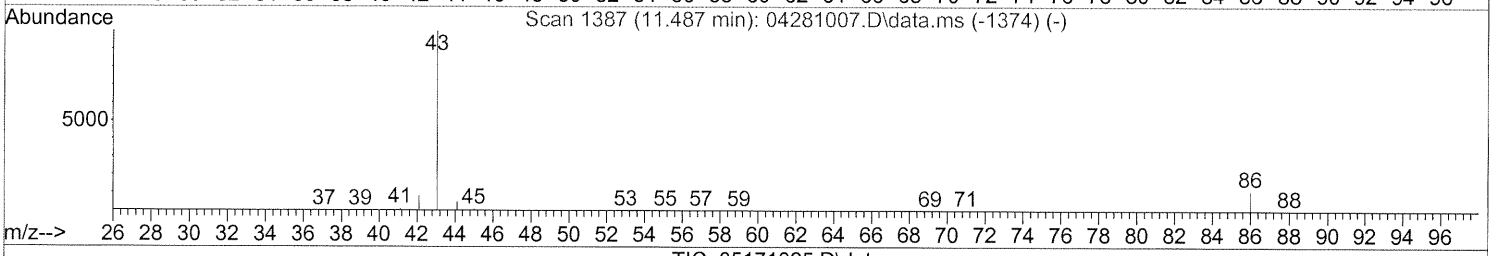
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171025.D\data.ms

(26) Vinyl Acetate (T)

11.515min (-0.006) 2.27ng

response 11316

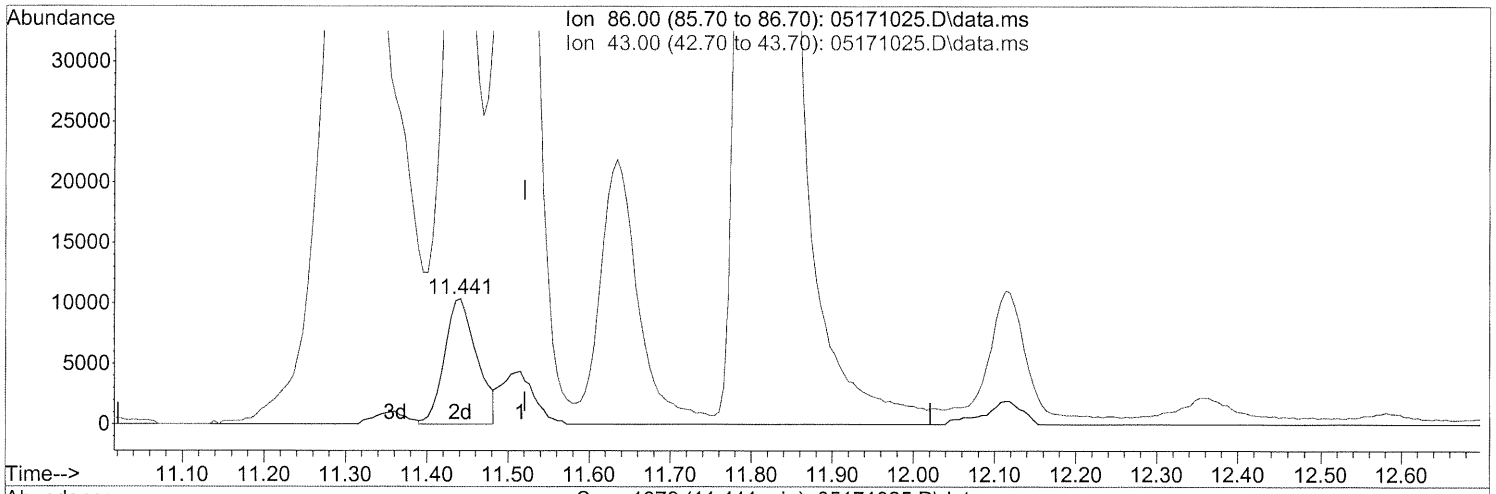
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2282.48#
0.00	0.00	0.00
0.00	0.00	0.00

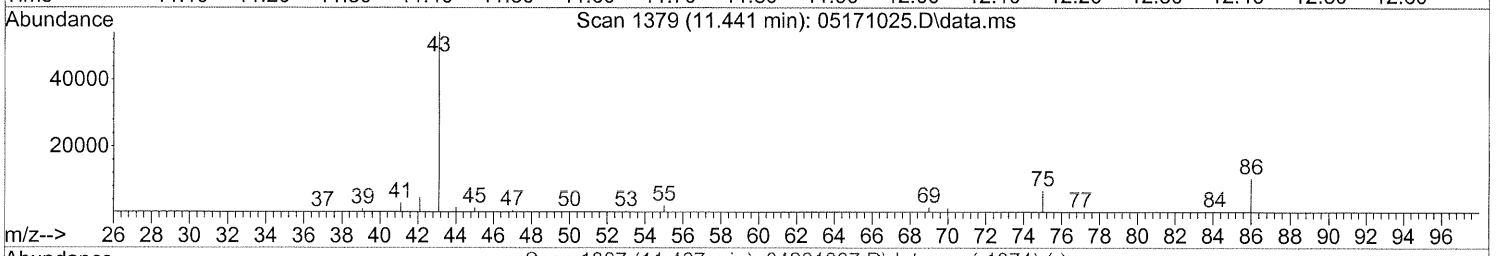
HP

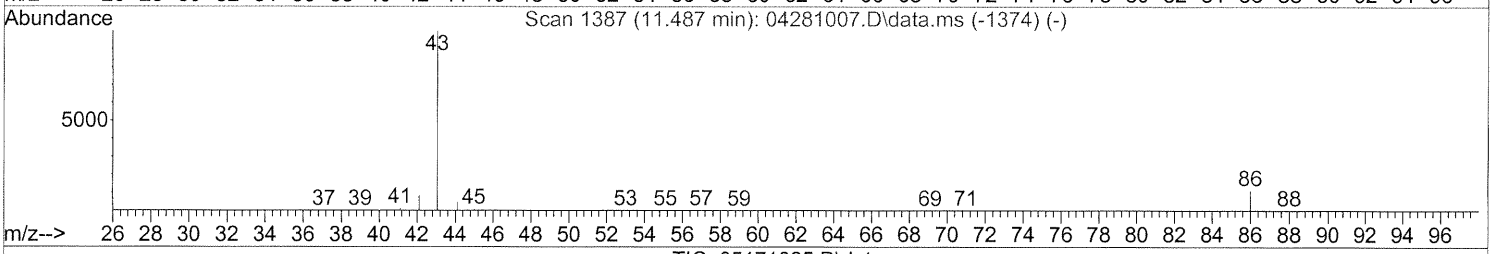
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171025.D\data.ms

(26) Vinyl Acetate (T)

11.441min (-0.080) 5.72ng m

response 28575

Ion	Exp%	Act%
86.00	100	100
43.00	849.70	903.88#
0.00	0.00	0.00
0.00	0.00	0.00

MP → IC

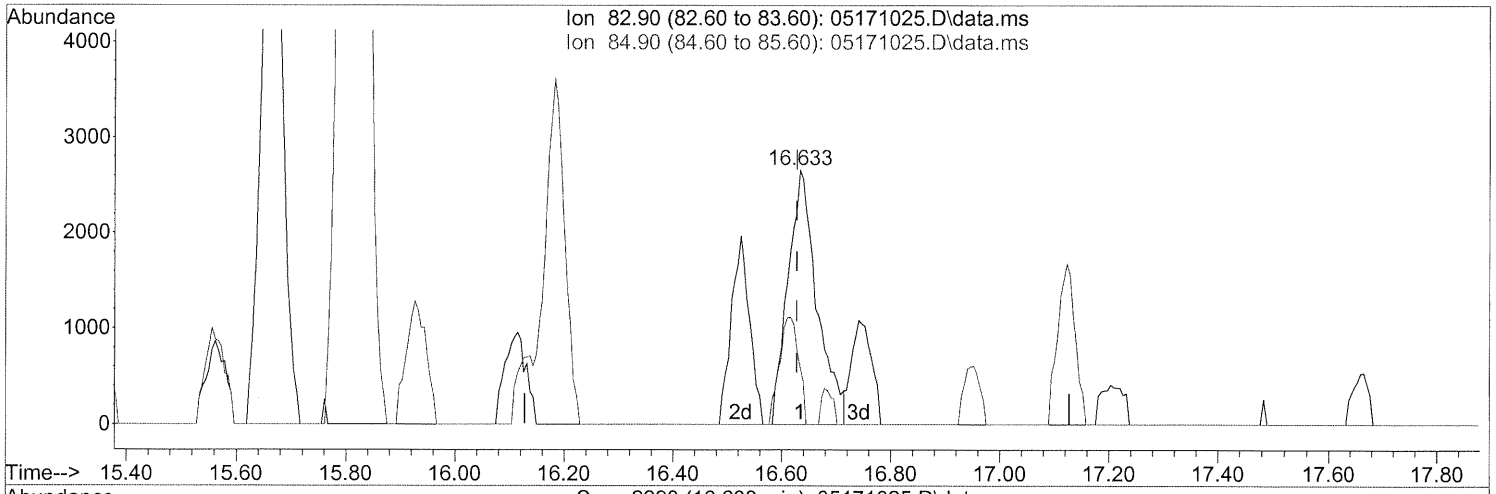
JDA 5/20/10

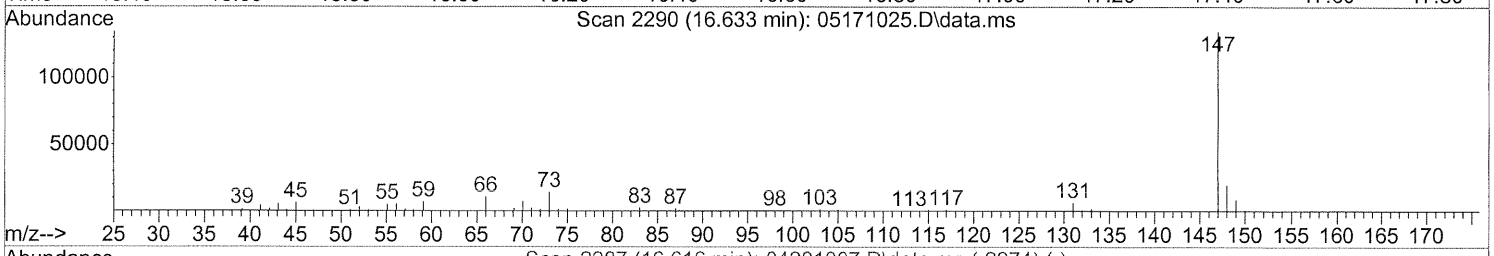
Sam 5/24/10

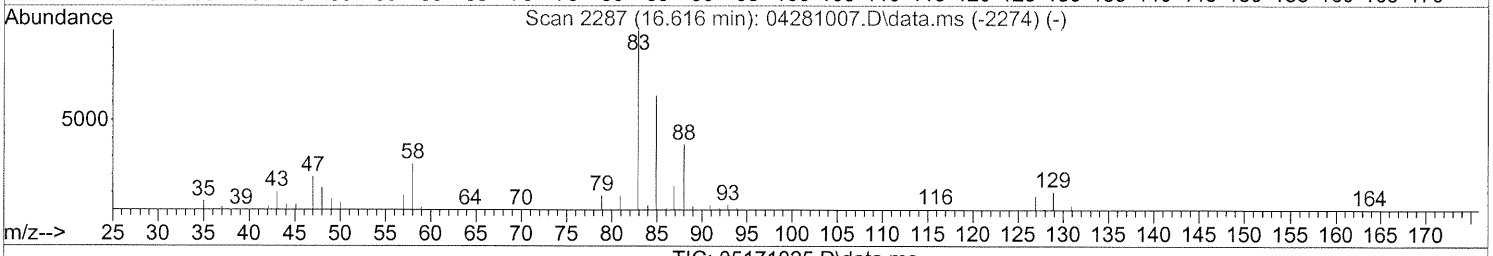
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171025.D\data.ms

(46) Bromodichloromethane (T)

16.633min (+0.006) 0.37ng

response 9831

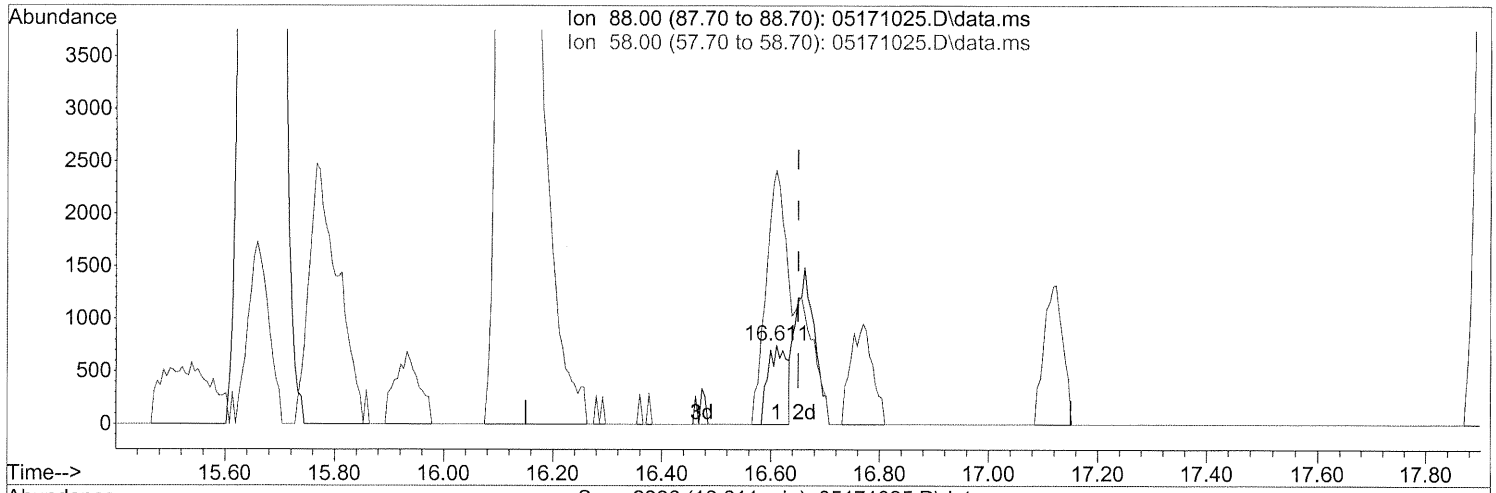
Ion	Exp%	Act%
82.90	100	100
84.90	63.40	27.83#
0.00	0.00	0.00
0.00	0.00	0.00

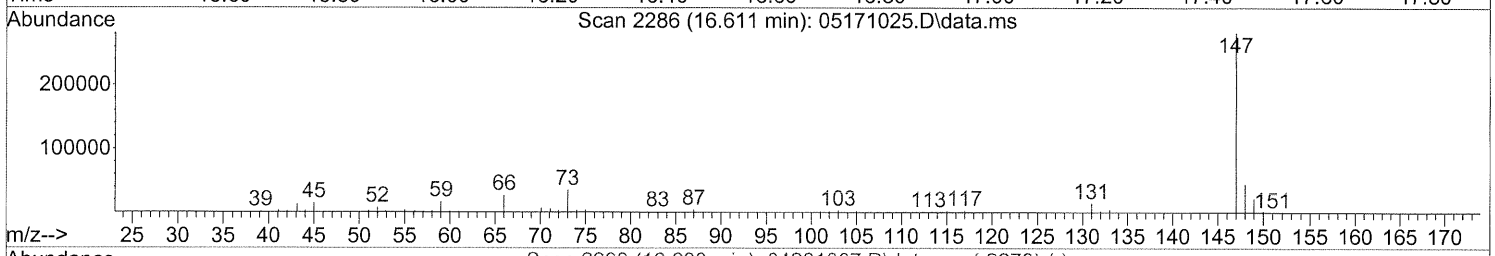
FP

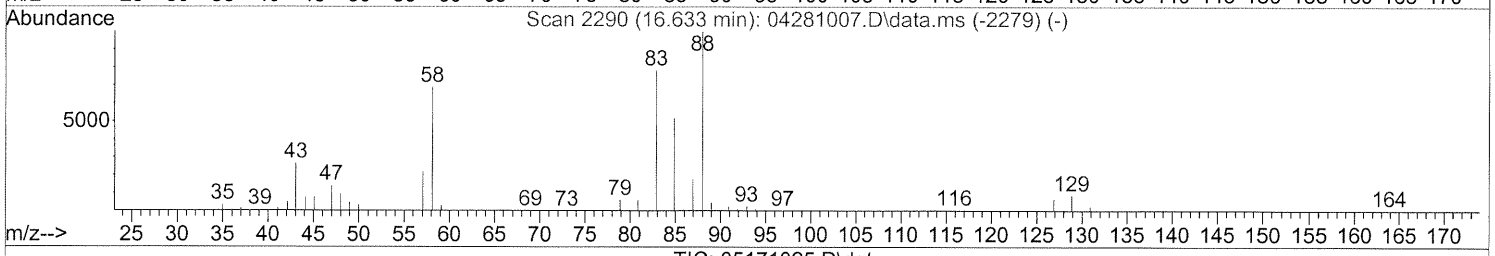
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171025.D\data.ms

(48) 1,4-Dioxane (T)

16.611min (-0.040) 0.11ng

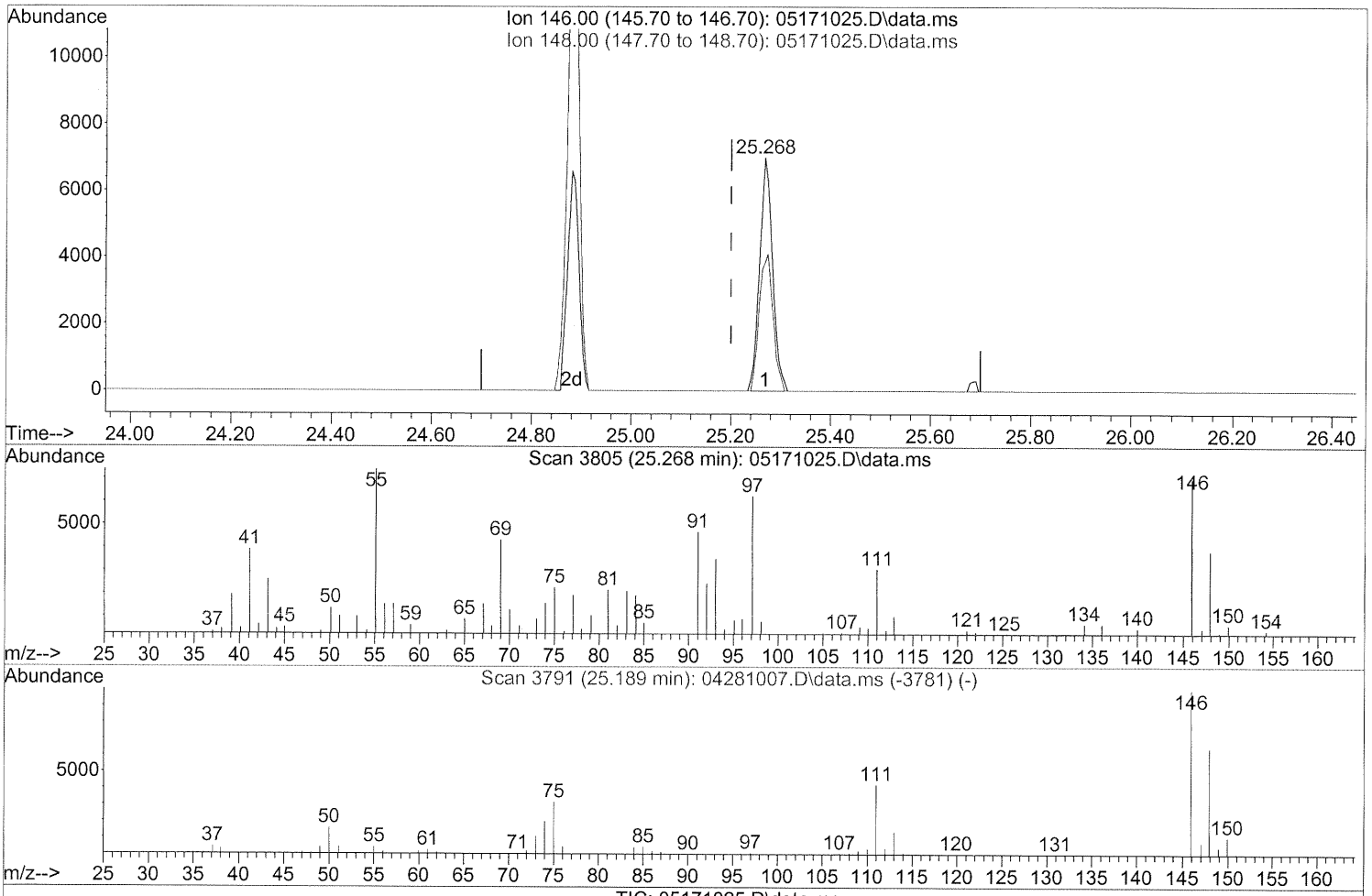
response 1826

Ion	Exp%	Act%
88.00	100	100
58.00	65.80	521.36#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.268min (+0.068) 0.30ng

response 12549

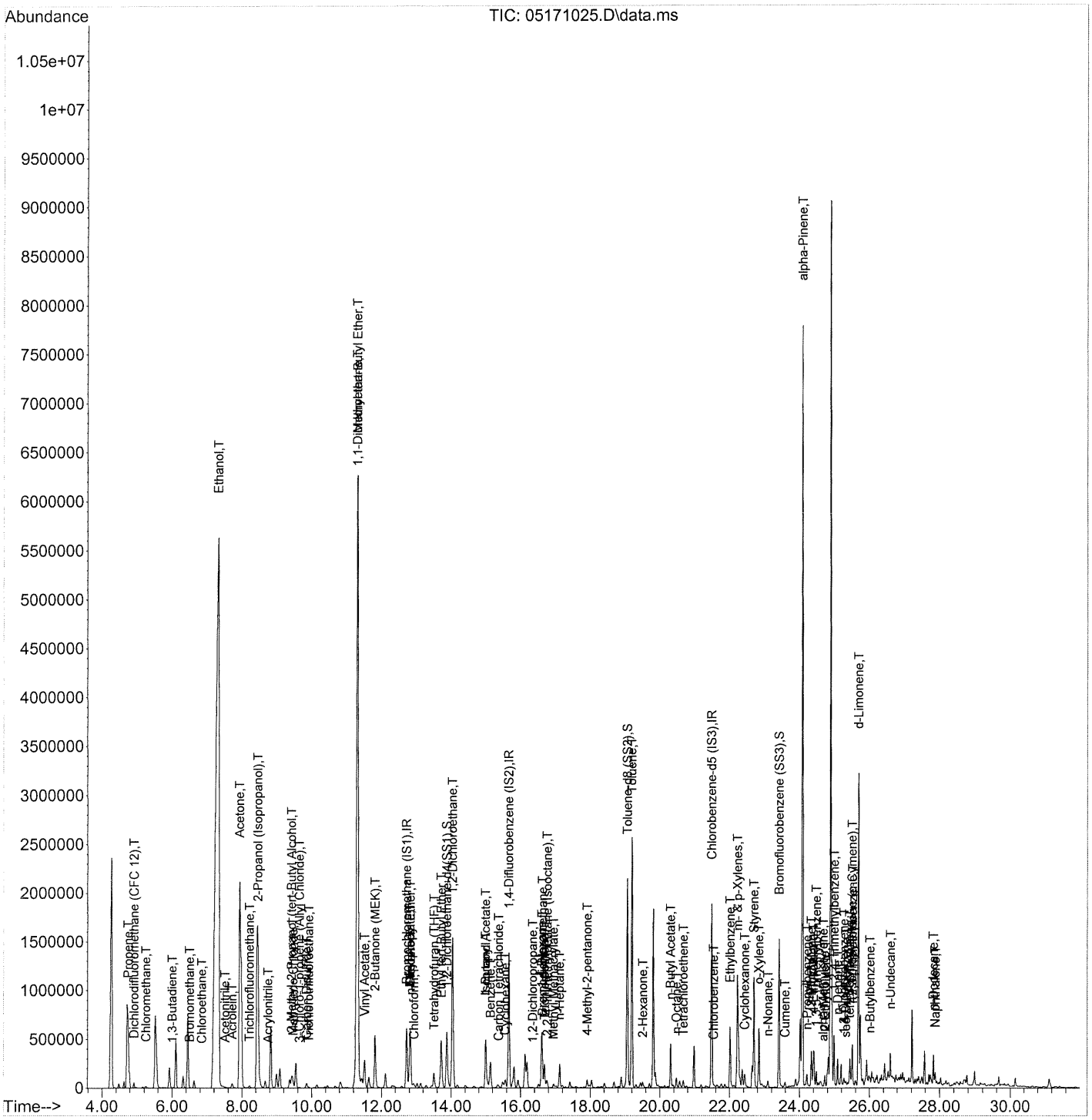
Ion	Exp%	Act%
146.00	100	100
148.00	64.30	62.39
0.00	0.00	0.00
0.00	0.00	0.00

FP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	318230	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1593414	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	791171	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	562154	23.738	ng		-0.03
Spiked Amount 25.000			Recovery = 94.96%				
57) Toluene-d8 (SS2)	19.07	98	1864037	24.696	ng		0.00
Spiked Amount 25.000			Recovery = 98.80%				
73) Bromofluorobenzene (SS3)	23.42	174	490225	25.441	ng		0.00
Spiked Amount 25.000			Recovery = 101.76%				
Target Compounds							Qvalue
2) Propene	4.74	42	239821	9.661	ng		92
3) Dichlorodifluoromethan...	4.92	85	56508	1.327	ng		99
4) Chloromethane	5.26	50	15031	0.477	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	5.51	135	904	N.D.			
6) Vinyl Chloride	5.72	62	887	N.D.			
7) 1,3-Butadiene	6.01	54	3107	0.124	ng		96
8) Bromomethane	6.50	94	1196	0.068	ng		83
9) Chloroethane	6.85	64	1217	0.068	ng	#	42
10) Ethanol	7.33	45	22090869	1632.337	ng		98
11) Acetonitrile	7.51	41	12111	0.354	ng		94
12) Acrolein	7.72	56	59200	5.612	ng		98
13) Acetone	7.94	58	1400502	84.652	ng		87
14) Trichlorofluoromethane	8.22	101	25141	0.682	ng		99
15) 2-Propanol (Isopropanol)	8.46	45	2770210	54.009	ng		95
16) Acrylonitrile	8.75	53	2127	0.086	ng		96
17) 1,1-Dichloroethene	9.25	96	931	N.D.			
18) 2-Methyl-2-Propanol (t...	9.42	59	87110	1.646	ng	#	1
19) Methylene Chloride	9.47	84	31713	1.455	ng		95
20) 3-Chloro-1-propene (Al...	9.65	41	2580	0.091	ng	#	36
21) Trichlorotrifluoroethane	9.92	151	4888	0.314	ng		96
22) Carbon Disulfide	9.86	76	107568	1.385	ng		99
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.31	63	12629	0.337	ng		84
25) Methyl tert-Butyl Ether	11.32	73	128407	1.895	ng		75
26) Vinyl Acetate	11.52	86	11316	2.266	ng	#	1
27) 2-Butanone (MEK)	11.81	72	261703	19.044	ng		96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.83	87	4066	0.200	ng	#	1
30) Ethyl Acetate	12.82	61	112717	13.798	ng		94
31) n-Hexane	12.84	57	139749	3.341	ng		97

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	34220	0.980	ng		98
34) Tetrahydrofuran (THF)	13.52	72	17061	1.284	ng	#	1
35) Ethyl tert-Butyl Ether	13.72	87	5275	0.186	ng	#	1
36) 1,2-Dichloroethane	14.04	62	1731403	61.182	ng		100
38) 1,1,1-Trichloroethane	14.45	97	489	N.D.			
39) Isopropyl Acetate	15.00	61	1777	0.130	ng	#	1
40) 1-Butanol	15.00	56	421634	19.148	ng	#	76
41) Benzene	15.14	78	342266	3.848	ng		100
42) Carbon Tetrachloride	15.37	117	16185	0.683	ng	#	71
43) Cyclohexane	15.56	84	39552	1.058	ng		93
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.			
45) 1,2-Dichloropropane	16.35	63	1150	0.053	ng		89
46) Bromodichloromethane	16.63	83	9831	0.369	ng	#	54
47) Trichloroethene	16.68	130	104619	4.614	ng		99
48) 1,4-Dioxane	16.61	88	1826	0.108	ng	#	1
49) 2,2,4-Trimethylpentane...	16.76	57	55986	0.537	ng		70
50) Methyl Methacrylate	16.95	100	6642	0.712	ng	#	66
51) n-Heptane	17.12	71	76751	3.018	ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.			
53) 4-Methyl-2-pentanone	17.92	58	32218	1.677	ng		93
54) trans-1,3-Dichloropropene	18.69	75	104	N.D.			
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.			
58) Toluene	19.20	91	2459976	26.273	ng		99
59) 2-Hexanone	19.51	43	43741	0.979	ng		88
60) Dibromochloromethane	19.75	129	100	N.D.			
61) 1,2-Dibromoethane	0.00	107	0	N.D.			
62) n-Butyl Acetate	20.31	43	393289	7.834	ng		99
63) n-Octane	20.48	57	21653	0.997	ng		93
64) Tetrachloroethene	20.67	166	26144	1.192	ng		98
65) Chlorobenzene	21.54	112	7110	0.125	ng		88
66) Ethylbenzene	22.01	91	591001	5.641	ng		97
67) m- & p-Xylenes	22.22	91	1154397	13.592	ng		97
68) Bromoform	22.34	173	86	N.D.			
69) Styrene	22.70	104	710640	11.866	ng		99
70) o-Xylene	22.84	91	442916	4.895	ng		97
71) n-Nonane	23.10	43	33435	0.681	ng		88
72) 1,1,2,2-Tetrachloroethane	22.83	83	1086	N.D.			
74) Cumene	23.59	105	37142	0.339	ng		97
75) alpha-Pinene	24.08	93	3691584	71.918	ng		99
76) n-Propylbenzene	24.22	91	115961	0.865	ng		92
77) 3-Ethyltoluene	24.34	105	232895	2.304	ng		97
78) 4-Ethyltoluene	24.40	105	123497	1.209	ng		96
79) 1,3,5-Trimethylbenzene	24.48	105	83065	0.970	ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171025.D
Acq On : 18 May 2010 3:29
Operator : EM
Sample : P1001651-012 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 08:05:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

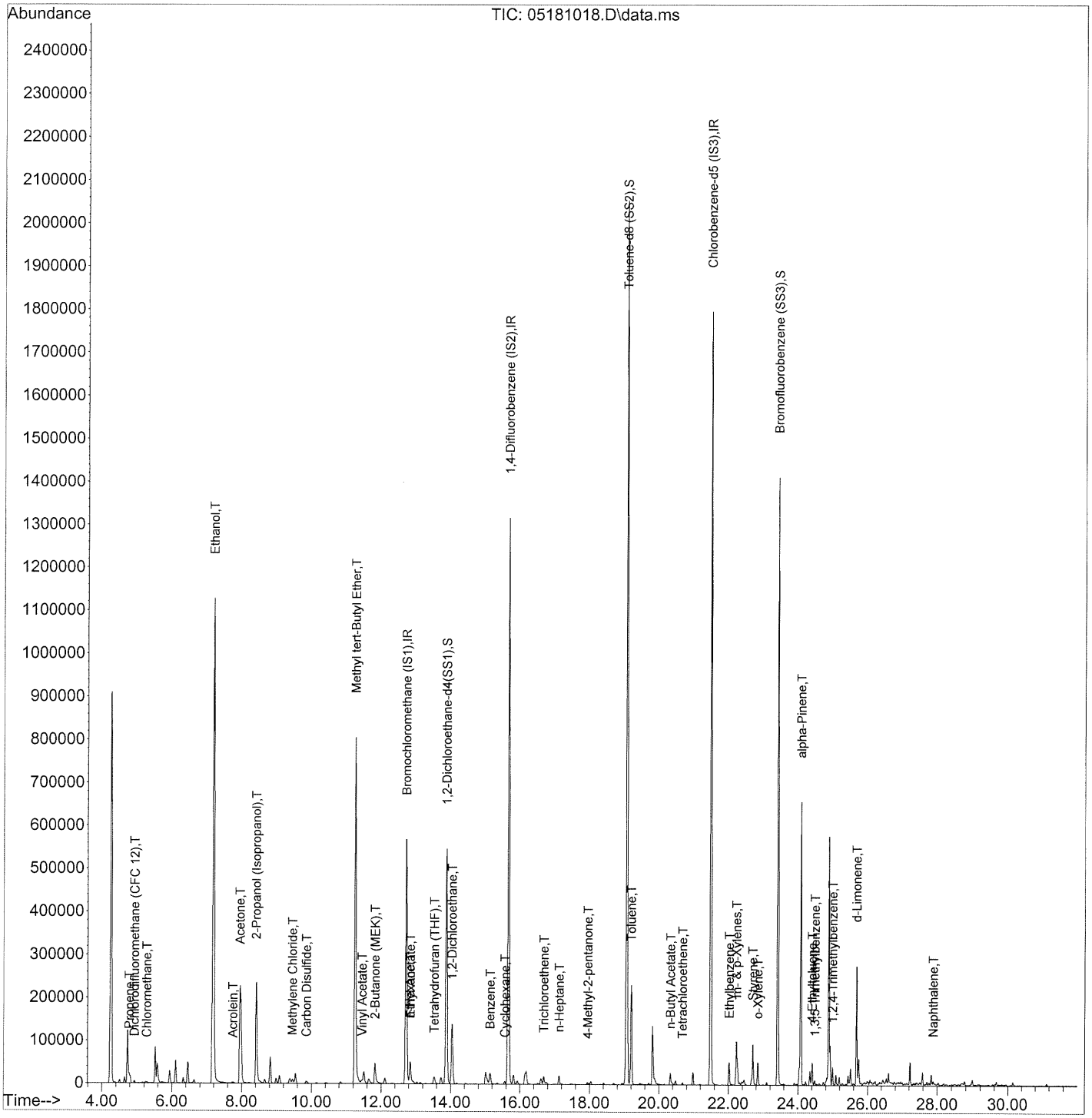
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	2560	0.057 ng		90
81) 2-Ethyltoluene	24.72	105	84431	0.800 ng		71
82) 1,2,4-Trimethylbenzene	24.99	105	303998	3.396 ng		87
83) n-Decane	25.09	57	103631	2.013 ng		99
84) Benzyl Chloride	25.17	91	829	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	12549	0.299 ng		98
86) 1,4-Dichlorobenzene	25.27	146	12549	0.283 ng		98
87) sec-Butylbenzene	25.32	105	9740	0.083 ng	#	78
88) 4-Isopropyltoluene (p-...	25.50	119	168111	1.458 ng		99
89) 1,2,3-Trimethylbenzene	25.51	105	76275	0.832 ng		100
90) 1,2-Dichlorobenzene	25.69	146	288	N.D.		
91) d-Limonene	25.68	68	871318	24.725 ng		96
92) 1,2-Dibromo-3-Chloropr...	26.60	157	400	N.D.		
93) n-Undecane	26.60	57	116758	2.263 ng		95
94) 1,2,4-Trichlorobenzene	27.74	180	299	N.D.		
95) Naphthalene	27.88	128	95029	0.961 ng		99
96) n-Dodecane	27.83	57	104015	1.966 ng		96
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.43	55	74705	2.531 ng		97
99) tert-Butylbenzene	25.43	119	13651	0.151 ng		98
100) n-Butylbenzene	26.01	91	27024	0.294 ng	#	56

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 20 17:32:05 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 20 17:32:05 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	301462	25.000	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	15.66	114	1535149	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	768632	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	550990	24.561	ng		-0.03
Spiked Amount 25.000			Recovery	=	98.24%		✓
57) Toluene-d8 (SS2)	19.06	98	1808425	24.662	ng		-0.01
Spiked Amount 25.000			Recovery	=	98.64%		✓
73) Bromofluorobenzene (SS3)	23.42	174	467001	24.947	ng		0.00
Spiked Amount 25.000			Recovery	=	99.80%		✓
Target Compounds							Qvalue
2) Propene	4.78	42	7133	0.303	ng	#	71
3) Dichlorodifluoromethan...	4.93	85	5325	0.132	ng	#	92
4) Chloromethane	5.28	50	4208	0.141	ng		89
10) Ethanol	7.19	45	1995277	155.636	ng		99
12) Acrolein	7.74	56	4516	0.452	ng		95
13) Acetone	7.94	58	132199	8.435	ng	#	81
15) 2-Propanol (Isopropanol)	8.41	45	314640	6.476	ng		98
19) Methylene Chloride	9.45	84	3367	0.163	ng		93
22) Carbon Disulfide	9.85	76	14872	0.202	ng		92
25) Methyl tert-Butyl Ether	11.25	73	12329	0.192	ng		74
26) Vinyl Acetate	11.45	86	2998	0.634	ng	#	1
27) 2-Butanone (MEK)	11.82	72	25034	1.923	ng	#	79
30) Ethyl Acetate	12.84	61	8207	1.060	ng		91
31) n-Hexane	12.83	57	13206	0.333	ng		92
34) Tetrahydrofuran (THF)	13.53	72	4883	0.388	ng	#	43
36) 1,2-Dichloroethane	14.03	62	166789	6.222	ng		99
41) Benzene	15.14	78	32285	0.377	ng		98
43) Cyclohexane	15.56	84	3554	0.099	ng	#	81
47) Trichloroethene	16.69	130	9755	0.447	ng		100
51) n-Heptane	17.13	71	6928	0.283	ng		98
53) 4-Methyl-2-pentanone	17.95	58	1934	0.104	ng	#	65
58) Toluene	19.20	91	232309	2.554	ng		99
62) n-Butyl Acetate	20.33	43	33447	0.686	ng		98
64) Tetrachloroethene	20.68	166	2303	0.108	ng		97
66) Ethylbenzene	22.02	91	55584	0.546	ng		95
67) m- & p-Xylenes	22.23	91	108862	1.319	ng		96
69) Styrene	22.70	104	62289	1.071	ng		99
70) o-Xylene	22.85	91	41771	0.475	ng		97
75) alpha-Pinene	24.08	93	311813	6.253	ng		84
78) 4-Ethyltoluene	24.40	105	12630	0.127	ng		93

JBA 5/20/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 20 17:32:05 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

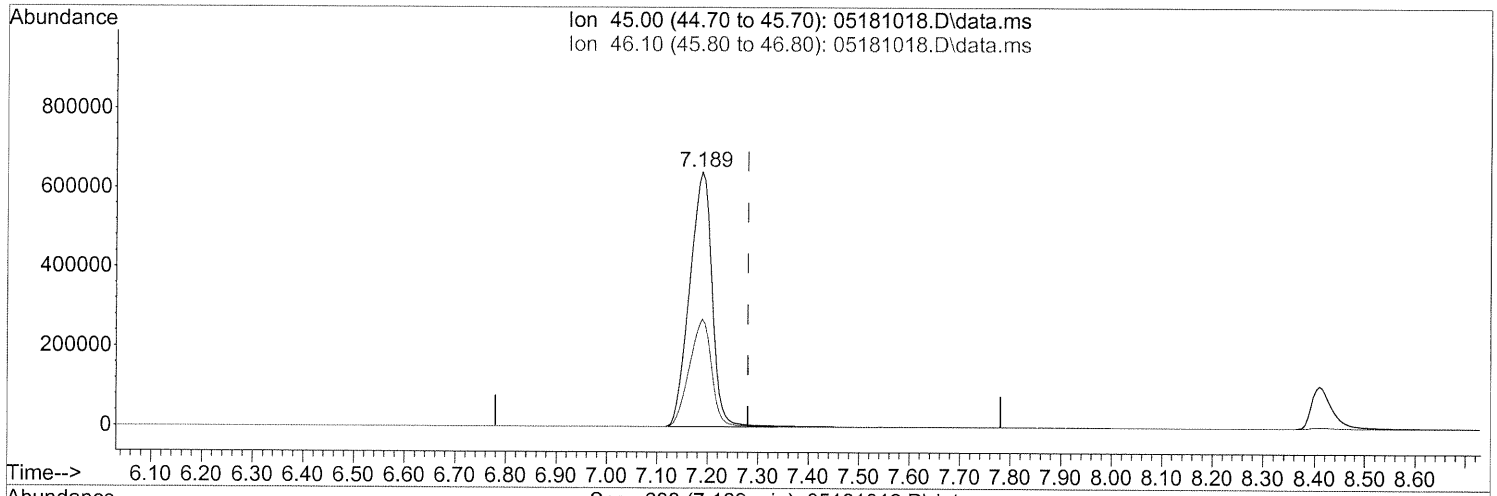
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
79) 1,3,5-Trimethylbenzene	24.49	105	8426	0.101 ng	88
82) 1,2,4-Trimethylbenzene	24.99	105	26586	0.306 ng	85
91) d-Limonene	25.68	68	75232	2.197 ng	96
95) Naphthalene	27.89	128	9979	0.104 ng	93

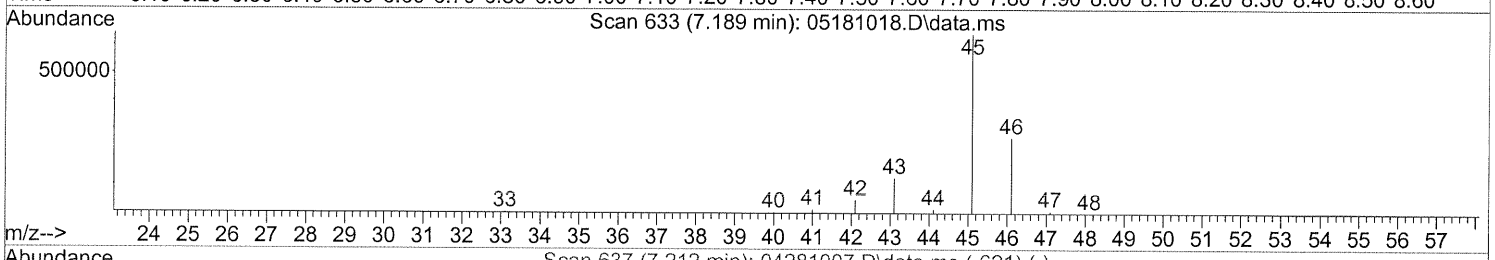
(#) = qualifier out of range (m) = manual integration (+) = signals summed

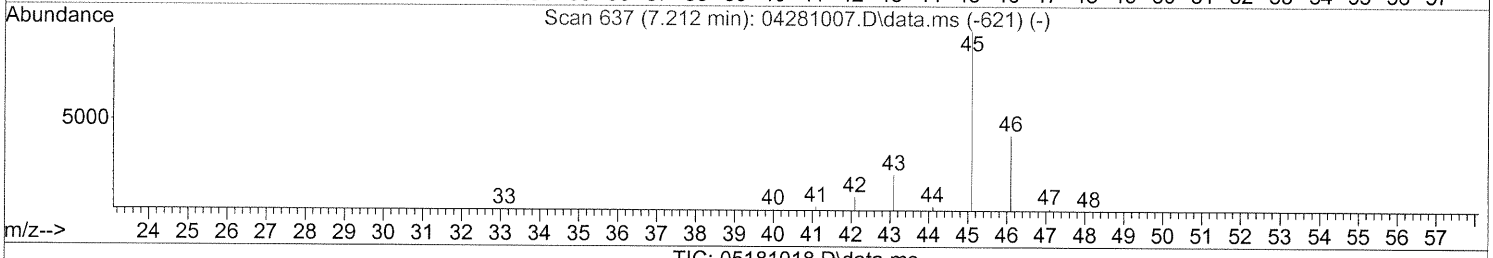
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 08:43:22 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181018.D\data.ms

(10) Ethanol (T)

7.189min (-0.091) 155.64ng

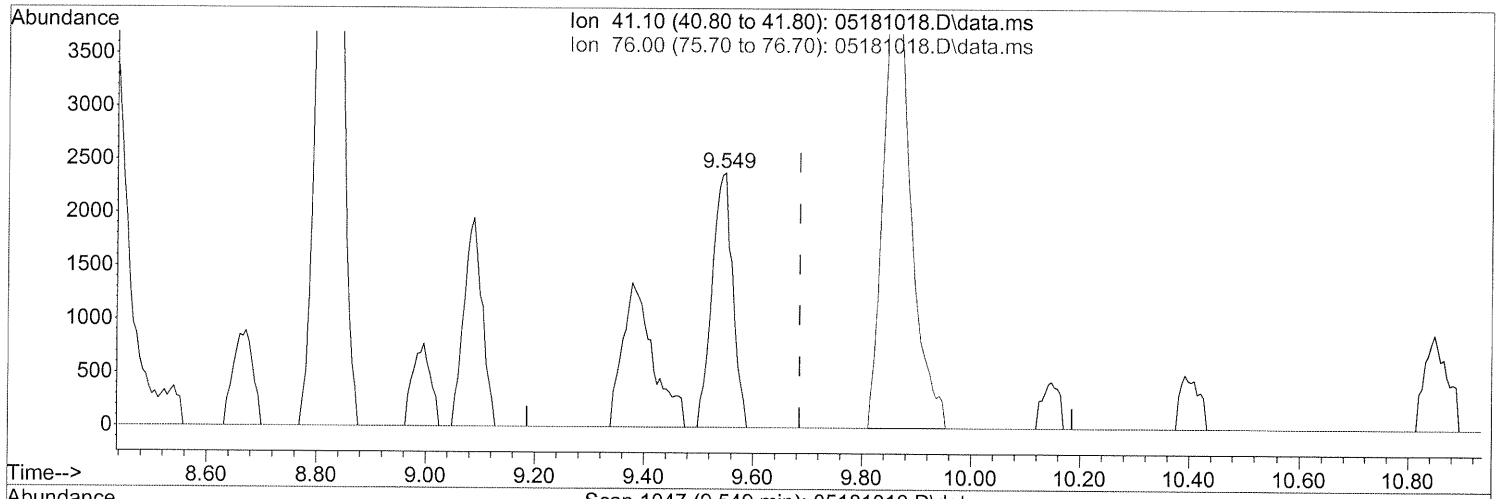
response 1995277

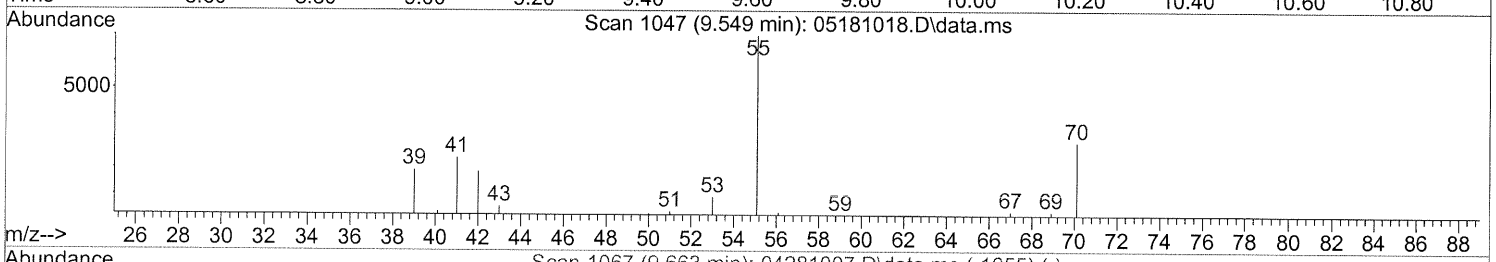
Ion	Exp%	Act%
45.00	100	100
46.10	41.30	41.66
0.00	0.00	0.00
0.00	0.00	0.00

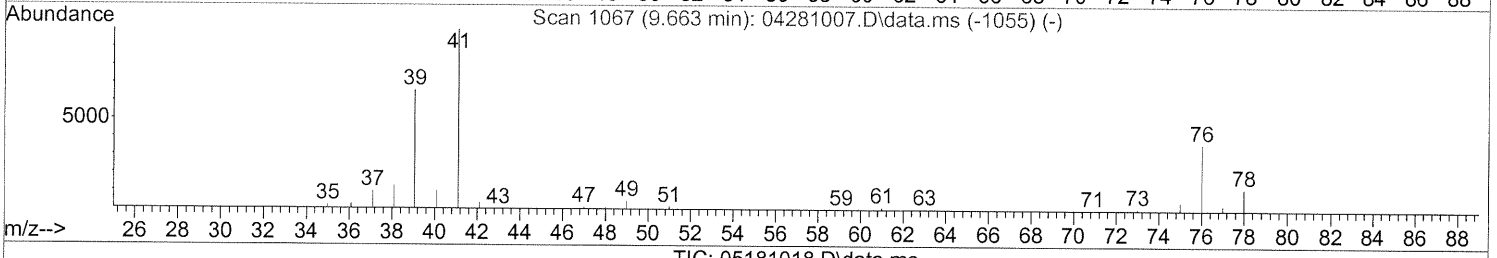
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 08:43:22 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181018.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.549min (-0.137) 0.23ng

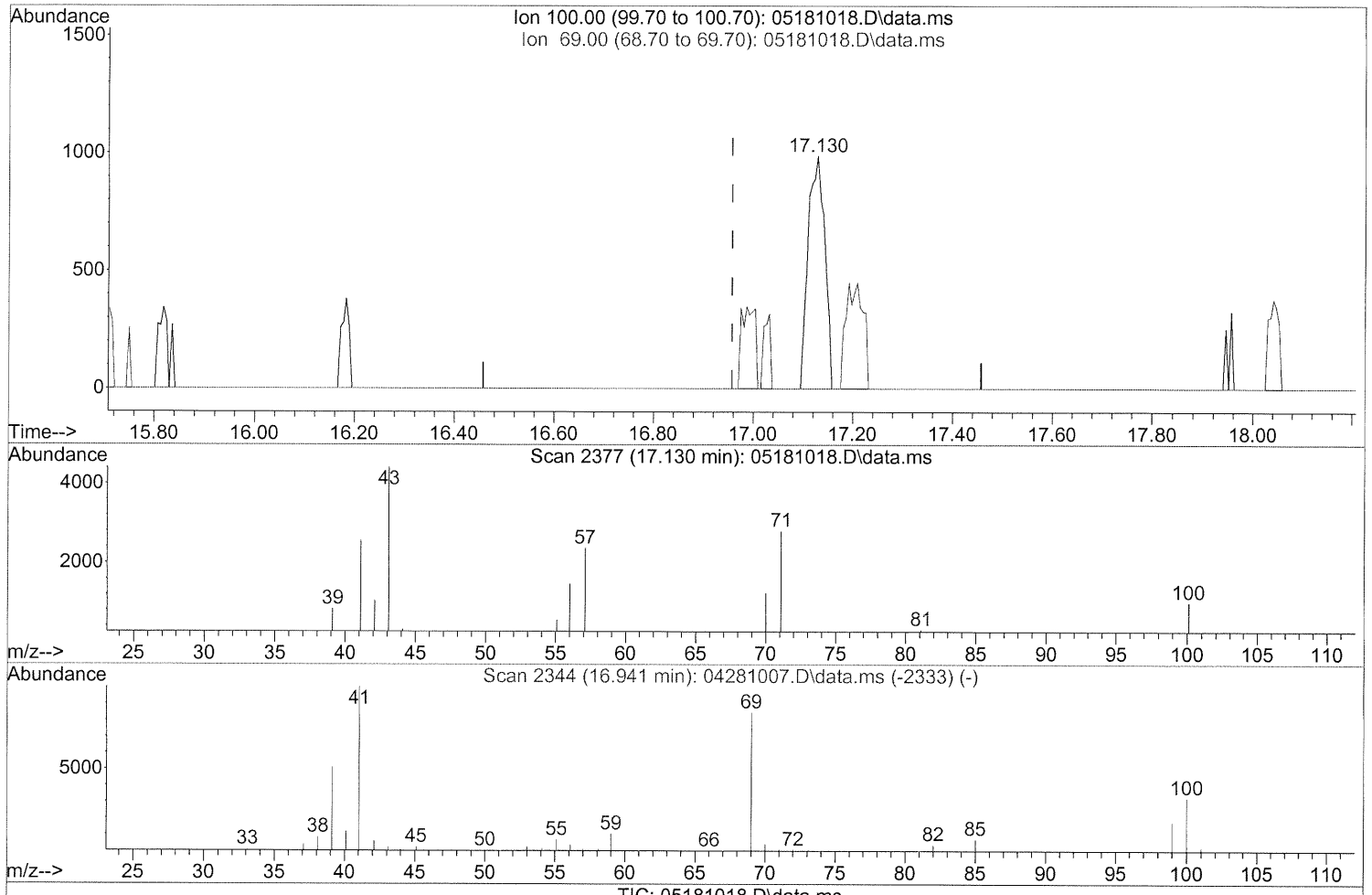
response 6268

Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 08:43:22 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(50) Methyl Methacrylate (T)

17.130min (+0.172) 0.25ng

response 2272

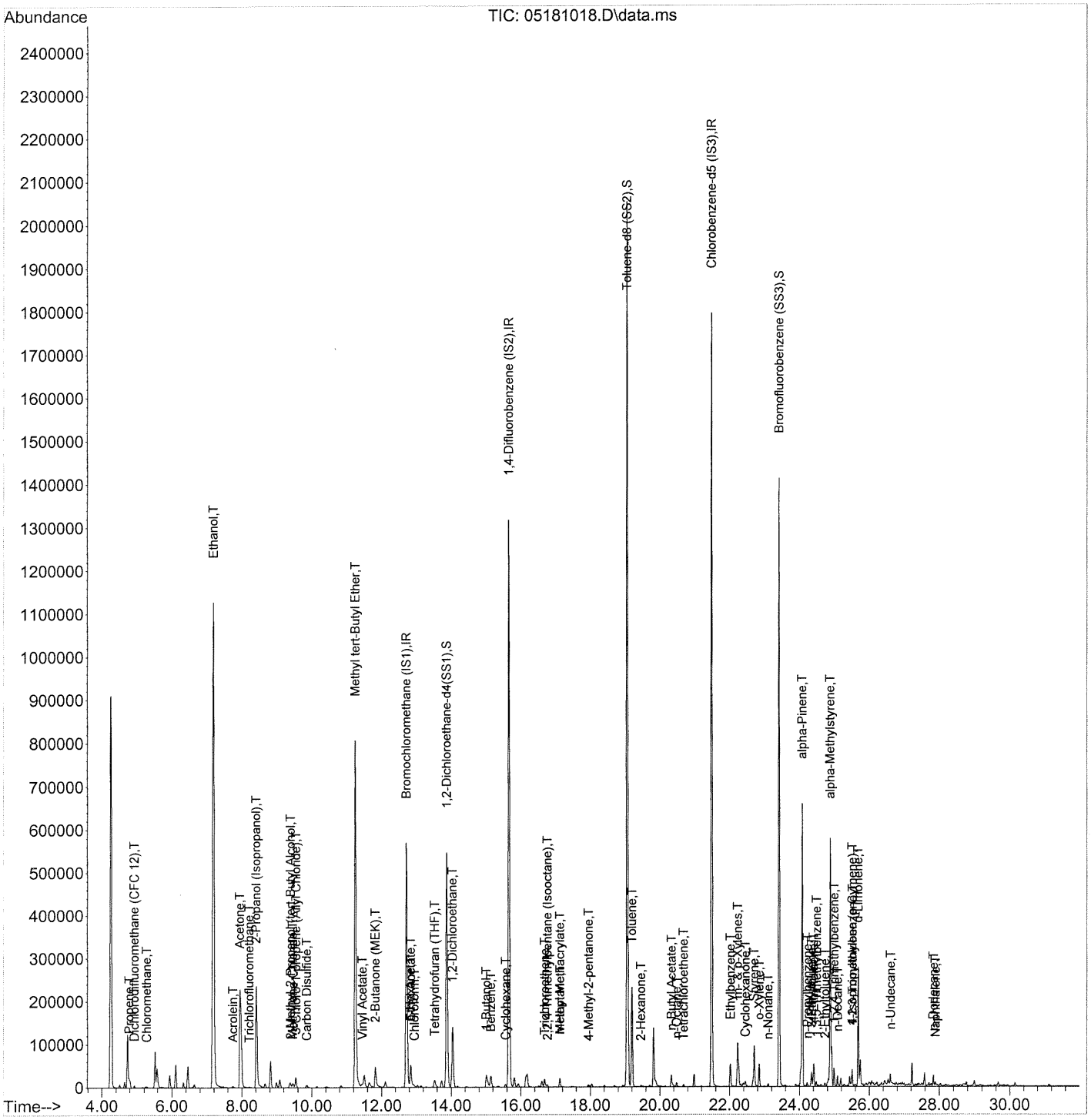
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 08:43:22 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 08:43:22 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	301462	25.000	ng		-0.05
37) 1,4-Difluorobenzene (IS2)	15.66	114	1535149	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	768632	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	550990	24.561	ng		-0.03
Spiked Amount 25.000			Recovery	=	98.24%		
57) Toluene-d8 (SS2)	19.06	98	1808425	24.662	ng		-0.01
Spiked Amount 25.000			Recovery	=	98.64%		
73) Bromofluorobenzene (SS3)	23.42	174	467001	24.947	ng		0.00
Spiked Amount 25.000			Recovery	=	99.80%		
Target Compounds							Qvalue
2) Propene	4.78	42	7133	0.303	ng	#	71
3) Dichlorodifluoromethan...	4.93	85	5325	0.132	ng	#	92
4) Chloromethane	5.28	50	4208	0.141	ng		89
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	5.95	54	93	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.19	45	1995277	155.636	ng		99
11) Acetonitrile	7.53	41	452	N.D.			
12) Acrolein	7.74	56	4516	0.452	ng		95
13) Acetone	7.94	58	132199	8.435	ng	#	81
14) Trichlorofluoromethane	8.21	101	2040	0.058	ng		99
15) 2-Propanol (Isopropanol)	8.41	45	314640	6.476	ng		98
16) Acrylonitrile	8.82	53	558	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.40	59	17362	0.346	ng		84
19) Methylene Chloride	9.45	84	3367	0.163	ng		93
20) 3-Chloro-1-propene (Al...	9.55	41	6268	0.233	ng	#	36
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	9.85	76	14872	0.202	ng		92
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.25	63	876	N.D.			
25) Methyl tert-Butyl Ether	11.25	73	12329	0.192	ng		74
26) Vinyl Acetate	11.45	86	2998	0.634	ng	#	1
27) 2-Butanone (MEK)	11.82	72	25034	1.923	ng	#	79
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	12.84	61	8207	1.060	ng		91
31) n-Hexane	12.83	57	13206	0.333	ng		92

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 08:43:22 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.94	83	2921	0.088 ng		89
34) Tetrahydrofuran (THF)	13.53	72	4883	0.388 ng	#	43
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.03	62	166789	6.222 ng		99
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.00	56	34944	1.647 ng		80
41) Benzene	15.14	78	32285	0.377 ng		98
42) Carbon Tetrachloride	15.36	117	683	N.D.		
43) Cyclohexane	15.56	84	3554	0.099 ng	#	81
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.63	83	96	N.D.		
47) Trichloroethene	16.69	130	9755	0.447 ng		100
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.76	57	5126	0.051 ng	#	56
50) Methyl Methacrylate	17.13	100	2272	0.253 ng	#	1
51) n-Heptane	17.13	71	6928	0.283 ng		98
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.95	58	1934	0.104 ng	#	65
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	232309	2.554 ng		99
59) 2-Hexanone	19.45	43	5015	0.116 ng	#	22
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.33	43	33447	0.686 ng		98
63) n-Octane	20.48	57	1873	0.089 ng		87
64) Tetrachloroethene	20.68	166	2303	0.108 ng		97
65) Chlorobenzene	21.55	112	88	N.D.		
66) Ethylbenzene	22.02	91	55584	0.546 ng		95
67) m- & p-Xylenes	22.23	91	108862	1.319 ng		96
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.70	104	62289	1.071 ng		99
70) o-Xylene	22.85	91	41771	0.475 ng		97
71) n-Nonane	23.10	43	3584	0.075 ng	#	75
72) 1,1,2,2-Tetrachloroethane	22.46	83	86	N.D.		
74) Cumene	23.59	105	3239	N.D.		
75) alpha-Pinene	24.08	93	311813	6.253 ng		84
76) n-Propylbenzene	24.23	91	10567	0.081 ng		88
77) 3-Ethyltoluene	24.35	105	21439	0.218 ng		95
78) 4-Ethyltoluene	24.40	105	12630	0.127 ng		93
79) 1,3,5-Trimethylbenzene	24.49	105	8426	0.101 ng		88

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181018.D
Acq On : 18 May 2010 21:20
Operator : EM
Sample : P1001651-012 dil (100ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 08:43:22 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.88	118	8915	0.204 ng	#	5
81) 2-Ethyltoluene	24.73	105	7984	0.078 ng	#	69
82) 1,2,4-Trimethylbenzene	24.99	105	26586	0.306 ng		85
83) n-Decane	25.09	57	9667	0.193 ng		93
84) Benzyl Chloride	25.28	91	986	N.D.		
85) 1,3-Dichlorobenzene	25.27	146	1165	N.D.		
86) 1,4-Dichlorobenzene	25.27	146	1165	N.D.		
87) sec-Butylbenzene	25.33	105	656	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	19037	0.170 ng		98
89) 1,2,3-Trimethylbenzene	25.51	105	7022	0.079 ng		98
90) 1,2-Dichlorobenzene	25.27	146	1165	N.D.		
91) d-Limonene	25.68	68	75232	2.197 ng		96
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	11260	0.225 ng		91
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95) Naphthalene	27.89	128	9979	0.104 ng		93
96) n-Dodecane	27.83	57	9344	0.182 ng		97
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.45	55	6631	0.231 ng		94
99) tert-Butylbenzene	24.99	119	3179	N.D.		
100) n-Butylbenzene	26.02	91	1162	N.D.		

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110522**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01477

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.0 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.78	ND	0.45	
75-71-8	**Dichlorodifluoromethane (CFC 12)**	**2.1**	0.78	**0.43**	0.16	
74-87-3	**Chloromethane**	**0.41**	0.31	**0.20**	0.15	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.78	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.16	ND	0.061	
106-99-0	1,3-Butadiene	ND	0.31	ND	0.14	
74-83-9	Bromomethane	ND	0.16	ND	0.040	
75-00-3	Chloroethane	ND	0.16	ND	0.059	
64-17-5	**Ethanol**	**16**	7.8	**8.6**	4.1	
75-05-8	Acetonitrile	ND	0.78	ND	0.46	
107-02-8	Acrolein	ND	3.1	ND	1.4	
67-64-1	**Acetone**	**13**	7.8	**5.4**	3.3	
75-69-4	**Trichlorofluoromethane**	**1.1**	0.16	**0.19**	0.028	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.6	ND	0.63	
107-13-1	Acrylonitrile	ND	0.78	ND	0.36	
75-35-4	1,1-Dichloroethene	ND	0.16	ND	0.039	
75-09-2	Methylene Chloride	ND	0.78	ND	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	ND	0.050	
76-13-1	**Trichlorotrifluoroethane**	**0.51**	0.16	**0.067**	0.020	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	ND	0.039	
75-34-3	1,1-Dichloroethane	ND	0.16	ND	0.039	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	ND	0.043	
108-05-4	Vinyl Acetate	ND	7.8	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	7.8	ND	2.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110522**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01477

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.0 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.16	ND	0.039	
141-78-6	Ethyl Acetate	ND	0.78	ND	0.22	
110-54-3	n-Hexane	ND	0.78	ND	0.22	
67-66-3	Chloroform	ND	0.16	ND	0.032	
109-99-9	Tetrahydrofuran (THF)	ND	0.78	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.16	ND	0.039	
71-55-6	1,1,1-Trichloroethane	ND	0.16	ND	0.029	
71-43-2	**Benzene**	**0.17**	0.16	**0.053**	0.049	
56-23-5	**Carbon Tetrachloride**	**0.38**	0.16	**0.061**	0.025	
110-82-7	Cyclohexane	ND	0.78	ND	0.23	
78-87-5	1,2-Dichloropropane	ND	0.16	ND	0.034	
75-27-4	Bromodichloromethane	ND	0.16	ND	0.023	
79-01-6	Trichloroethene	ND	0.16	ND	0.029	
123-91-1	1,4-Dioxane	ND	0.78	ND	0.22	
80-62-6	Methyl Methacrylate	ND	0.78	ND	0.19	
142-82-5	n-Heptane	ND	0.78	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.78	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.78	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.16	ND	0.029	
108-88-3	Toluene	ND	0.78	ND	0.21	
591-78-6	2-Hexanone	ND	0.78	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.16	ND	0.018	
106-93-4	1,2-Dibromoethane	ND	0.16	ND	0.020	
123-86-4	n-Butyl Acetate	ND	0.78	ND	0.16	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: P Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110522**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-013

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01477

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.0 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.78	ND	0.17	
127-18-4	Tetrachloroethene	ND	0.16	ND	0.023	
108-90-7	Chlorobenzene	ND	0.16	ND	0.034	
100-41-4	Ethylbenzene	ND	0.78	ND	0.18	
179601-23-1	m,p-Xylenes	ND	0.78	ND	0.18	
75-25-2	Bromoform	ND	0.78	ND	0.075	
100-42-5	Styrene	ND	0.78	ND	0.18	
95-47-6	o-Xylene	ND	0.78	ND	0.18	
111-84-2	n-Nonane	ND	0.78	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	ND	0.023	
98-82-8	Cumene	ND	0.78	ND	0.16	
80-56-8	alpha-Pinene	ND	0.78	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.78	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.78	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.78	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.78	ND	0.16	
100-44-7	Benzyl Chloride	ND	0.78	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	0.16	ND	0.026	
106-46-7	1,4-Dichlorobenzene	ND	0.16	ND	0.026	
95-50-1	1,2-Dichlorobenzene	ND	0.16	ND	0.026	
5989-27-5	**d-Limonene**	**0.96**	0.78	**0.17**	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.78	ND	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	0.78	ND	0.11	
91-20-3	Naphthalene	ND	0.78	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.78	ND	0.073	

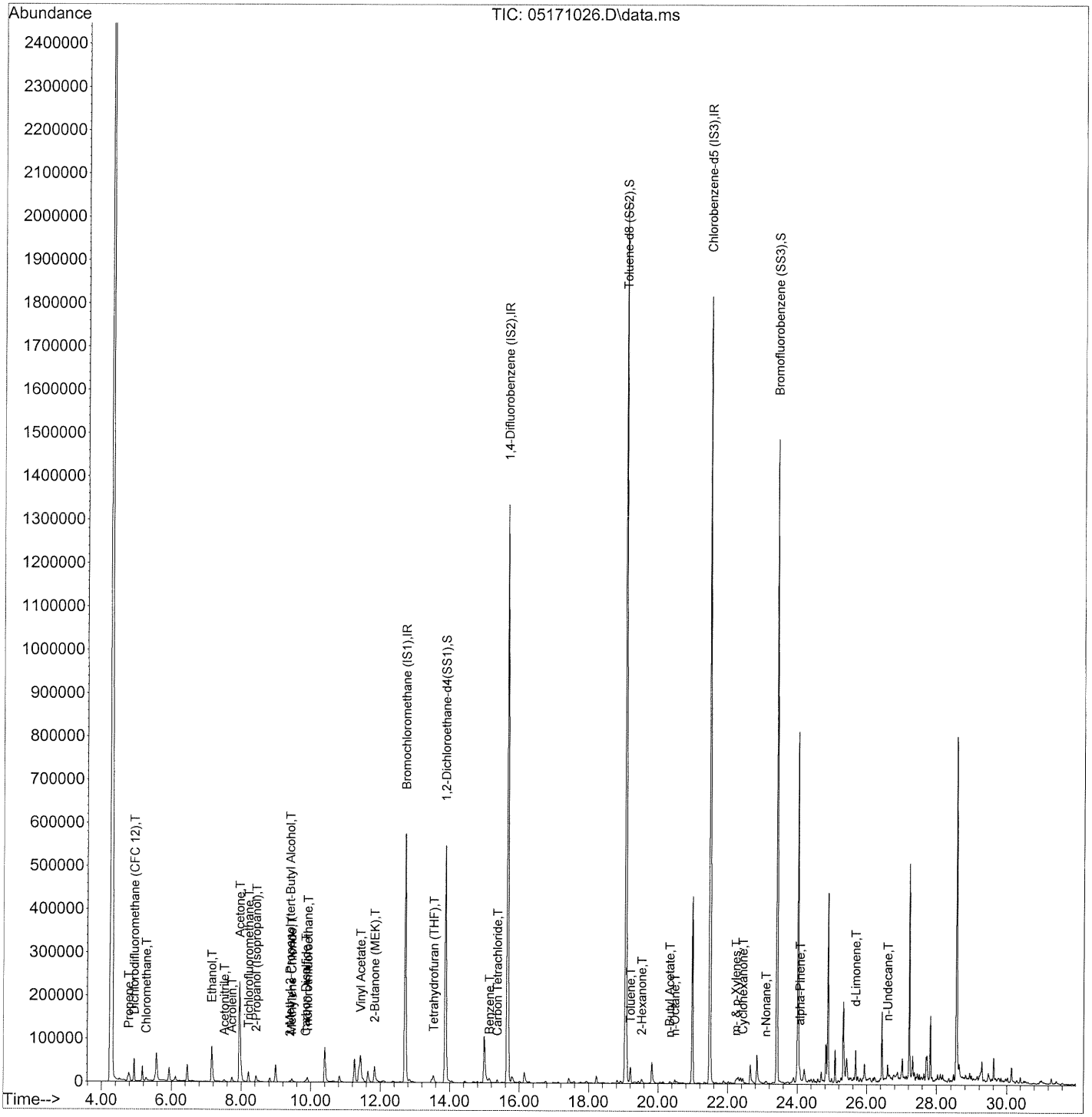
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 20 17:12:13 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 20 17:12:13 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

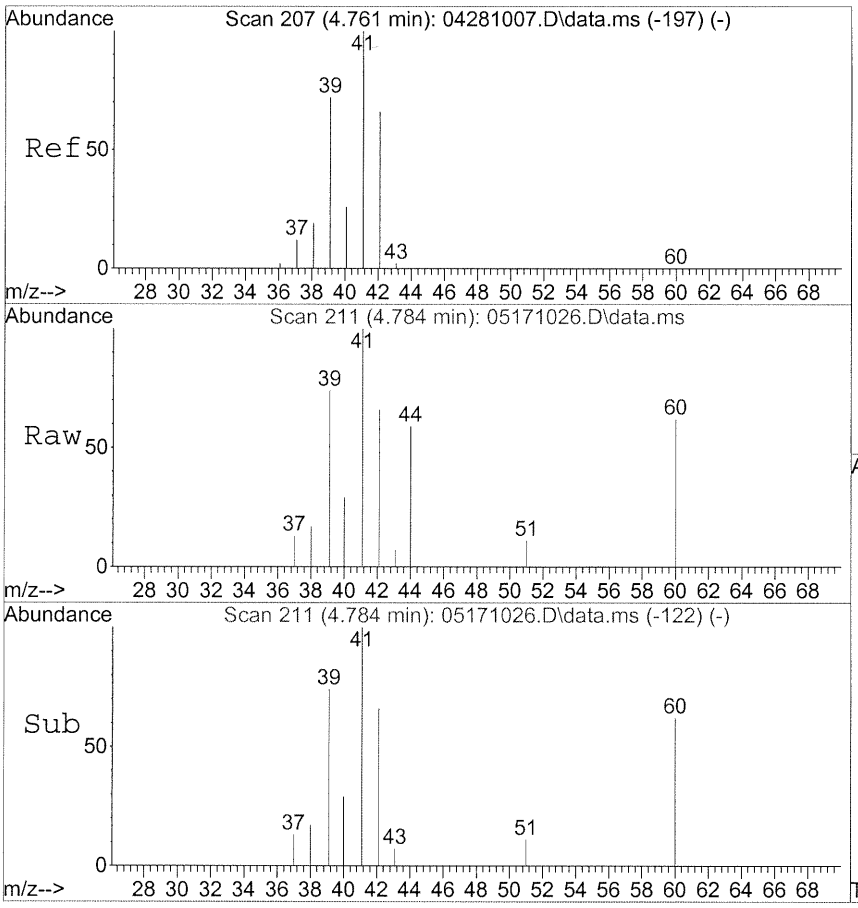
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	305487	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1560957	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	780064	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	551862	24.275	ng		-0.03
Spiked Amount 25.000			Recovery	=	97.12%	✓	
57) Toluene-d8 (SS2)	19.06	98	1826125	24.538	ng		-0.01
Spiked Amount 25.000			Recovery	=	98.16%	✓	
73) Bromofluorobenzene (SS3)	23.42	174	485924	25.577	ng		0.00
Spiked Amount 25.000			Recovery	=	102.32%	✓	
Target Compounds							Qvalue
2) Propene	4.78	42	6929	0.291	ng	#	82
3) Dichlorodifluoromethan...	4.94	85	55921	1.368	ng		99
4) Chloromethane	5.28	50	8015	0.265	ng		97
10) Ethanol	7.16	45	135018	10.393	ng		100
11) Acetonitrile	7.51	41	7016	0.214	ng		99
12) Acrolein	7.73	56	12950	1.279	ng		97
13) Acetone	7.95	58	130568m	8.221	ng		
14) Trichlorofluoromethane	8.21	101	24758	0.699	ng		98
15) 2-Propanol (Isopropanol)	8.43	45	24063	0.489	ng		95
18) 2-Methyl-2-Propanol (t...	9.40	59	6891	0.136	ng	#	84
19) Methylene Chloride	9.45	84	2156	0.103	ng		91
21) Trichlorotrifluoroethane	9.91	151	4889	0.327	ng		93
22) Carbon Disulfide	9.86	76	10396	0.139	ng		88
26) Vinyl Acetate	11.44	86	21689	4.525	ng	#	53
27) 2-Butanone (MEK)	11.83	72	19195	1.455	ng	#	68
34) Tetrahydrofuran (THF)	13.53	72	5946	0.466	ng	#	75
41) Benzene	15.14	78	9414	0.108	ng		94
42) Carbon Tetrachloride	15.36	117	5664	0.244	ng		98
58) Toluene	19.20	91	35053	0.380	ng		100
59) 2-Hexanone	19.53	43	11516	0.261	ng		85
62) n-Butyl Acetate	20.33	43	7506	0.152	ng		79
63) n-Octane	20.48	57	1934	0.090	ng		82
67) m- & p-Xylenes	22.24	91	10942	0.131	ng		96
71) n-Nonane	23.10	43	4544	0.094	ng	#	31
75) alpha-Pinene	24.08	93	10103	0.200	ng	#	46
91) d-Limonene	25.68	68	21409	0.616	ng		97
93) n-Undecane	26.60	57	13143	0.258	ng		87
98) Cyclohexanone	22.44	55	6418	0.221	ng		86

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 20 17:12:13 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

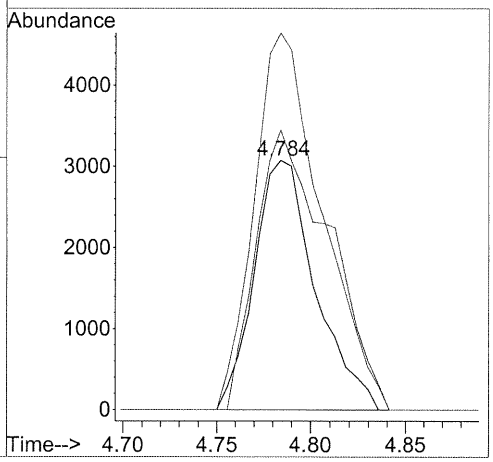
(#) = qualifier out of range (m) = manual integration (+) = signals summed

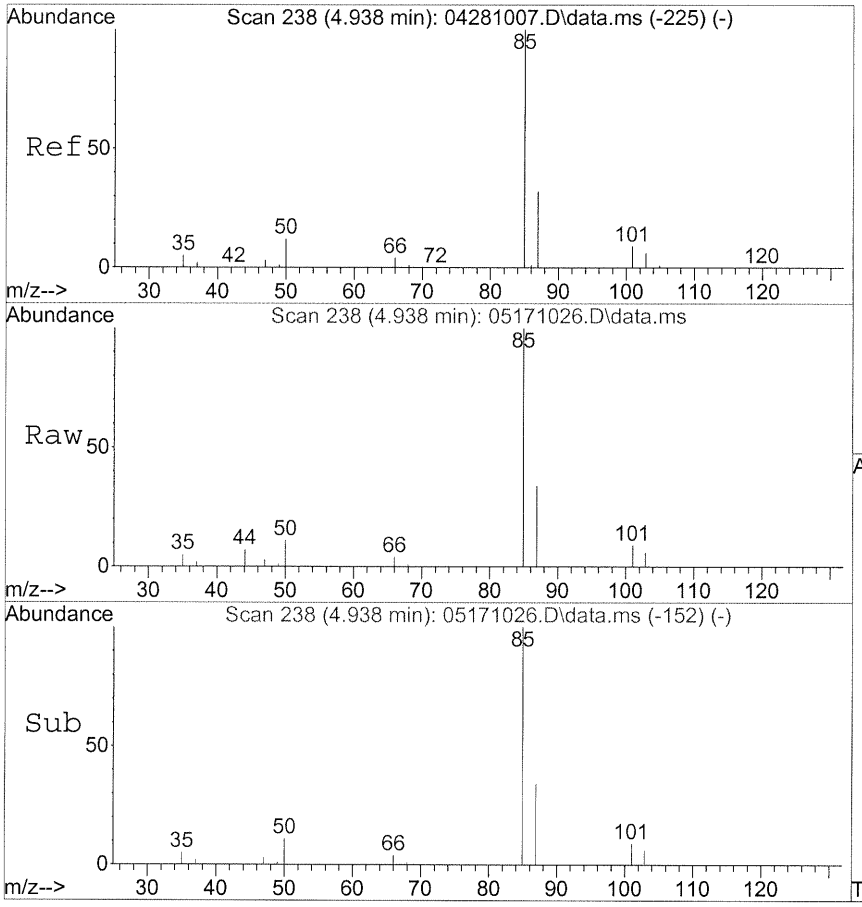


#2
Propene
Concen: 0.29 ng
RT: 4.78 min Scan# 211
Delta R.T. 0.006 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 42 Resp: 6929

Ion	Ratio	Lower	Upper
42	100		
39	134.4	88.4	128.4#
41	167.2	129.9	169.9

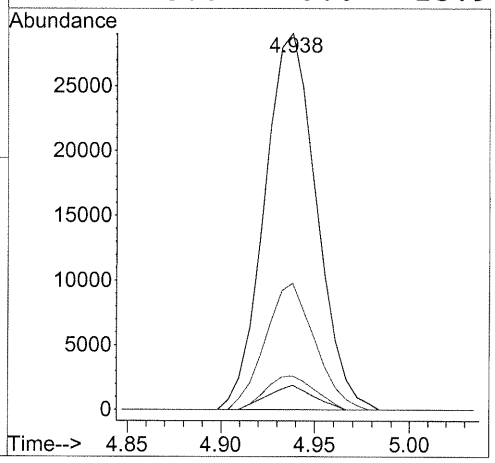


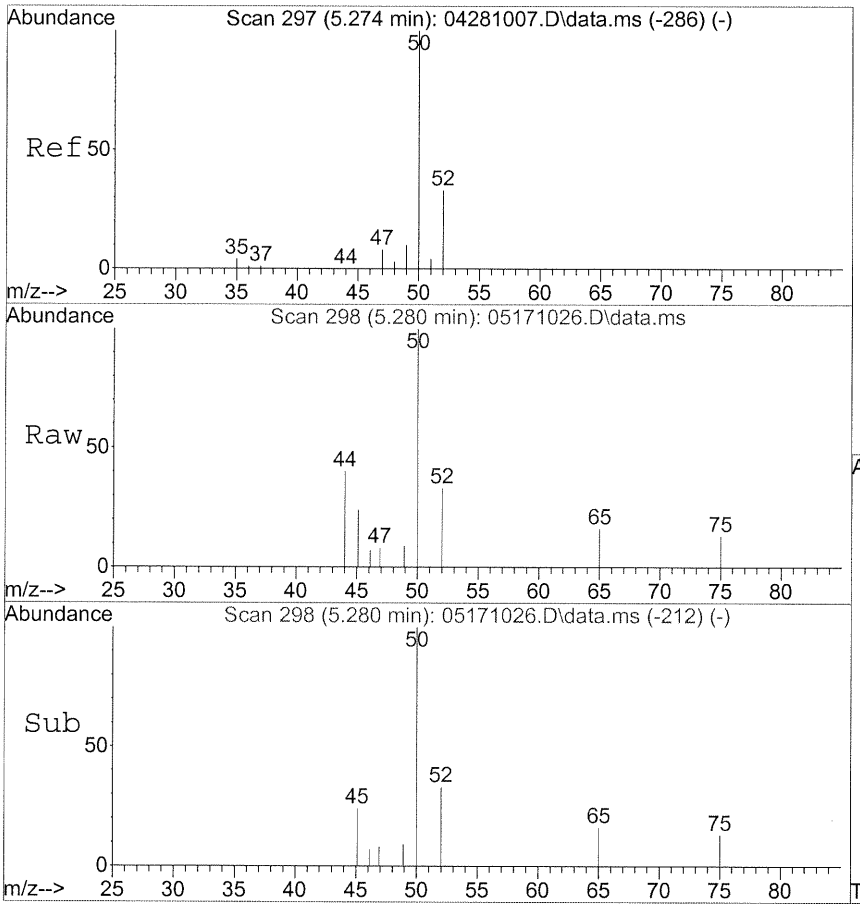


#3
Dichlorodifluoromethane (CFC
Concen: 1.37 ng
RT: 4.94 min Scan# 238
Delta R.T. -0.011 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 85 Resp: 55921

Ion	Ratio	Lower	Upper
85	100		
87	32.0	12.6	52.6
101	8.4	0.0	29.3
103	5.6	0.0	25.9

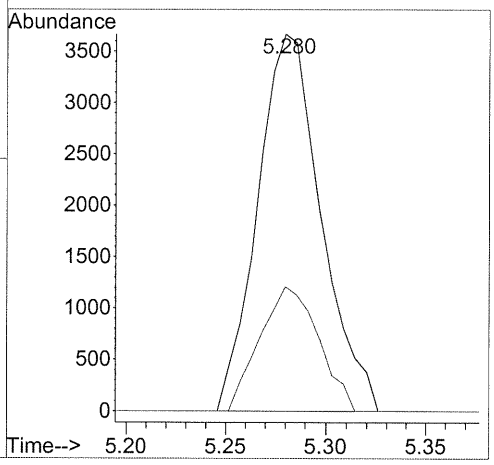


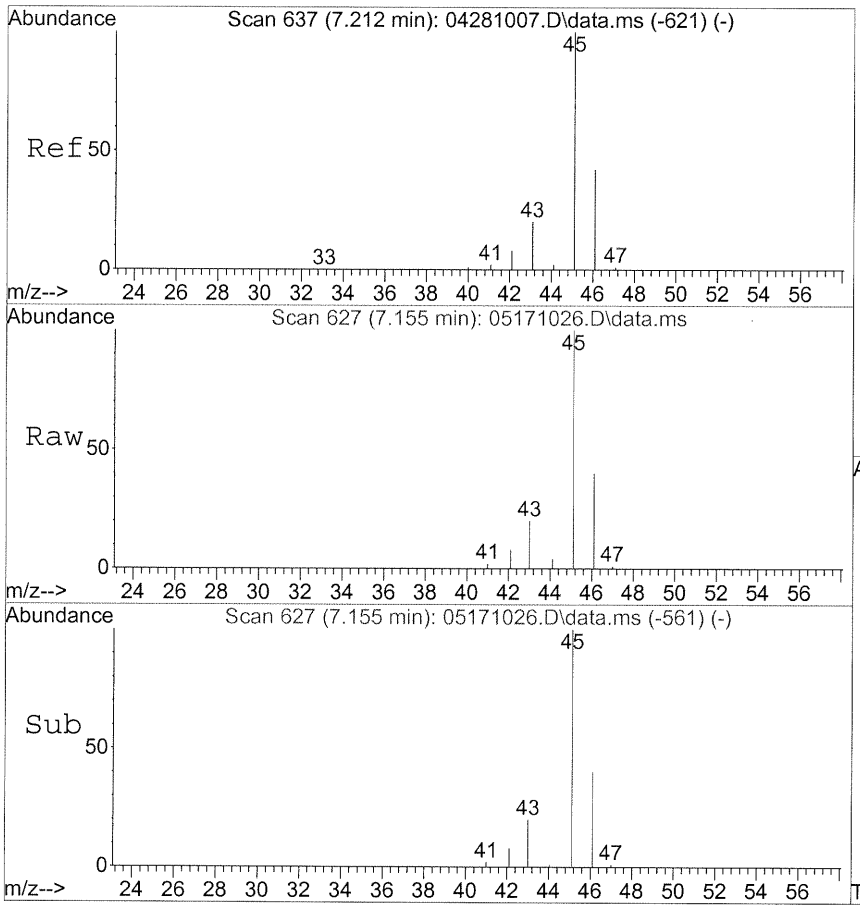


#4
Chloromethane
Concen: 0.27 ng
RT: 5.28 min Scan# 298
Delta R.T. -0.011 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 50 Resp: 8015

Ion	Ratio	Lower	Upper
50	100		
52	30.5	12.3	52.3

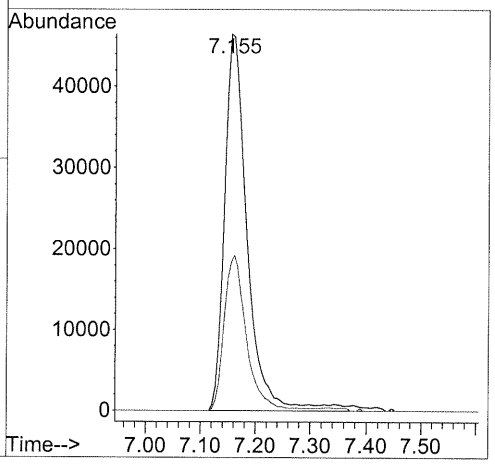


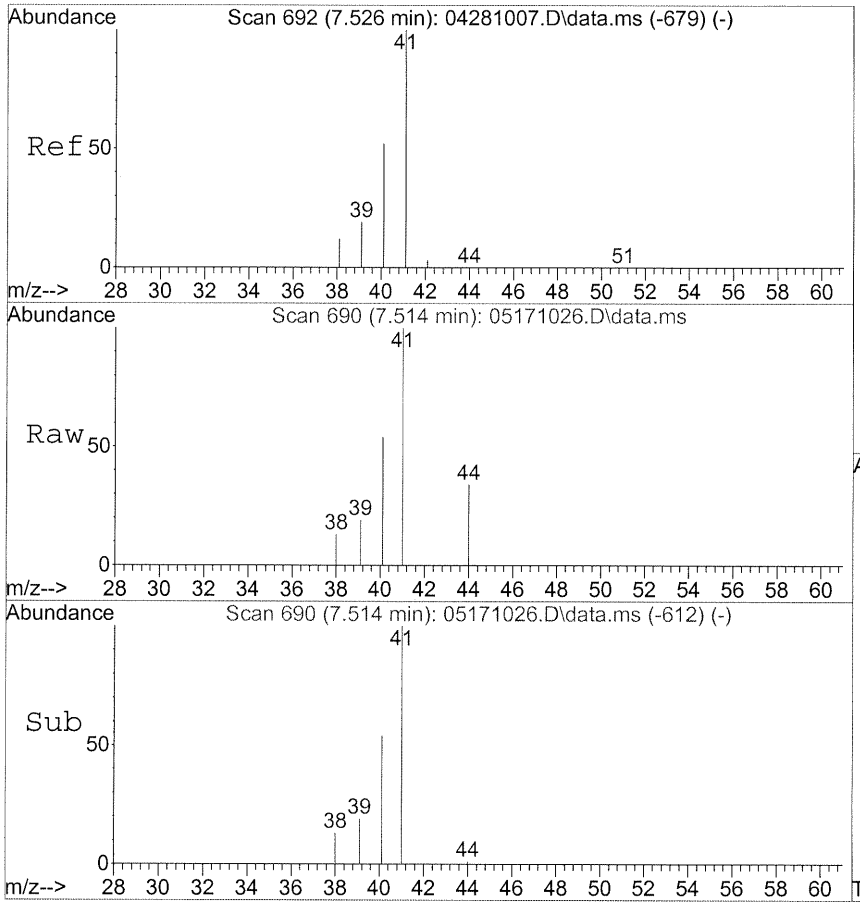


#10
Ethanol
Concen: 10.39 ng
RT: 7.16 min Scan# 627
Delta R.T. -0.125 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 45 Resp: 135018

Ion	Ratio	Lower	Upper
45	100		
46	41.3	21.3	61.3

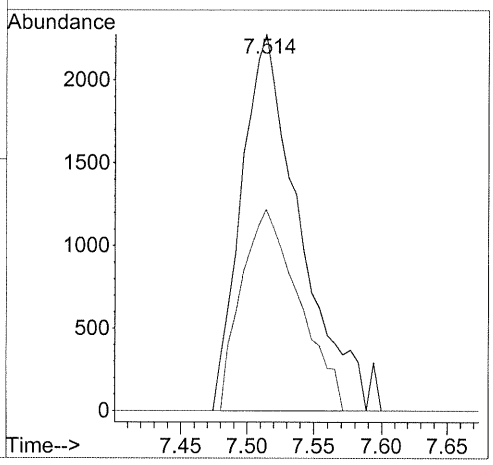


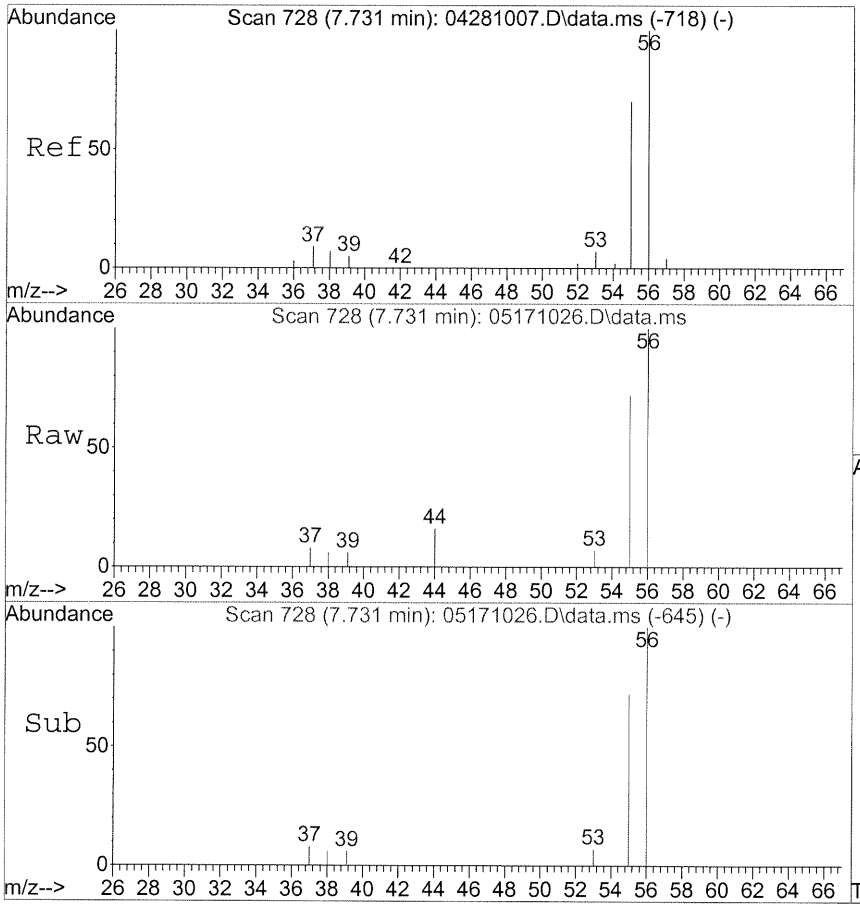


#11
Acetonitrile
Concen: 0.21 ng
RT: 7.51 min Scan# 690
Delta R.T. -0.057 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 41 Resp: 7016

Ion	Ratio	Lower	Upper
41	100		
40	52.5	33.2	73.2

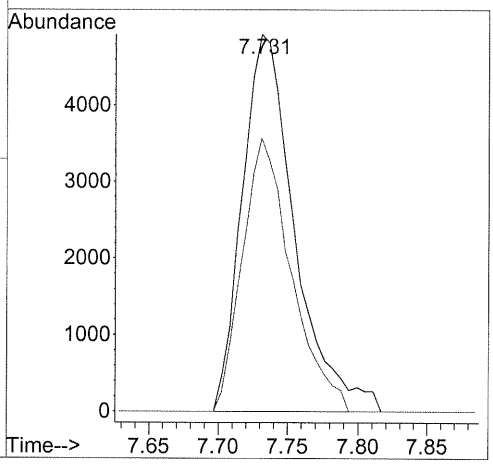


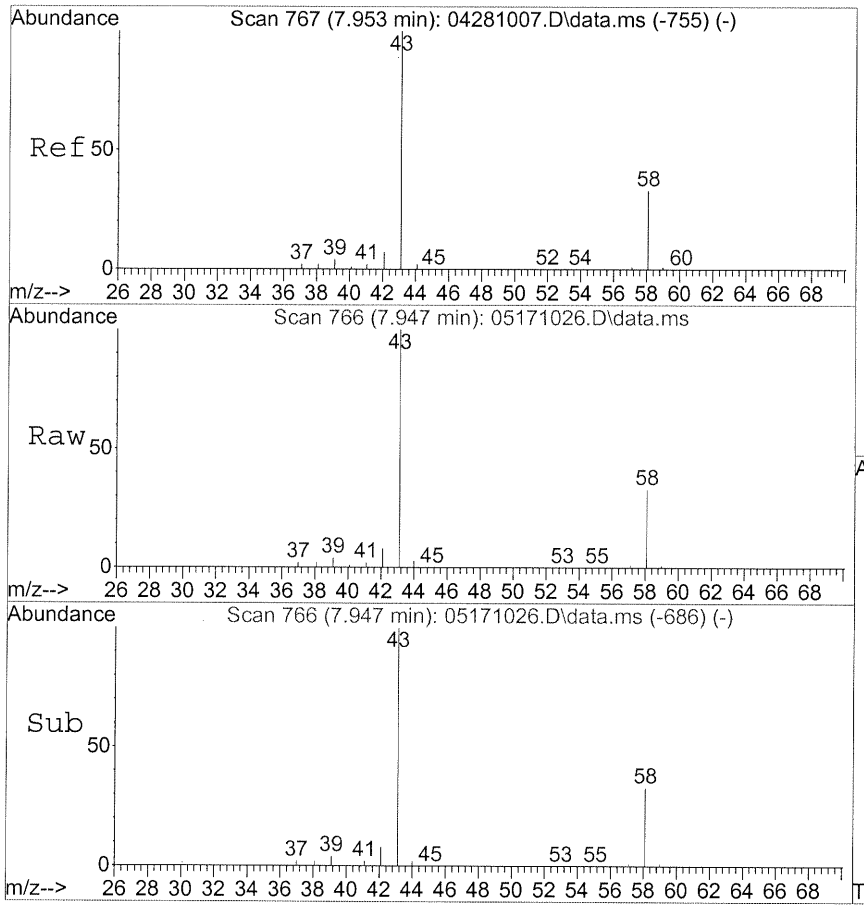


#12
Acrolein
Concen: 1.28 ng
RT: 7.73 min Scan# 728
Delta R.T. -0.028 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 56 Resp: 12950

Ion	Ratio	Lower	Upper
56	100		
55	67.7	50.2	90.2

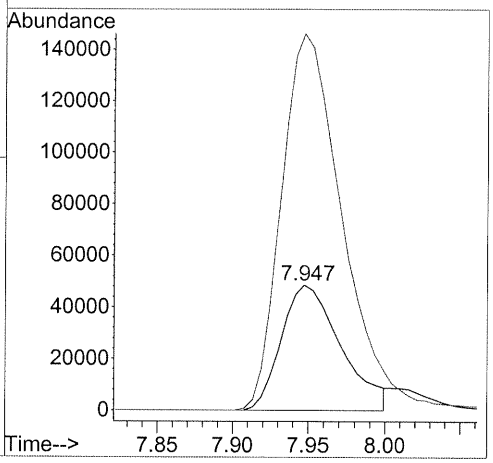


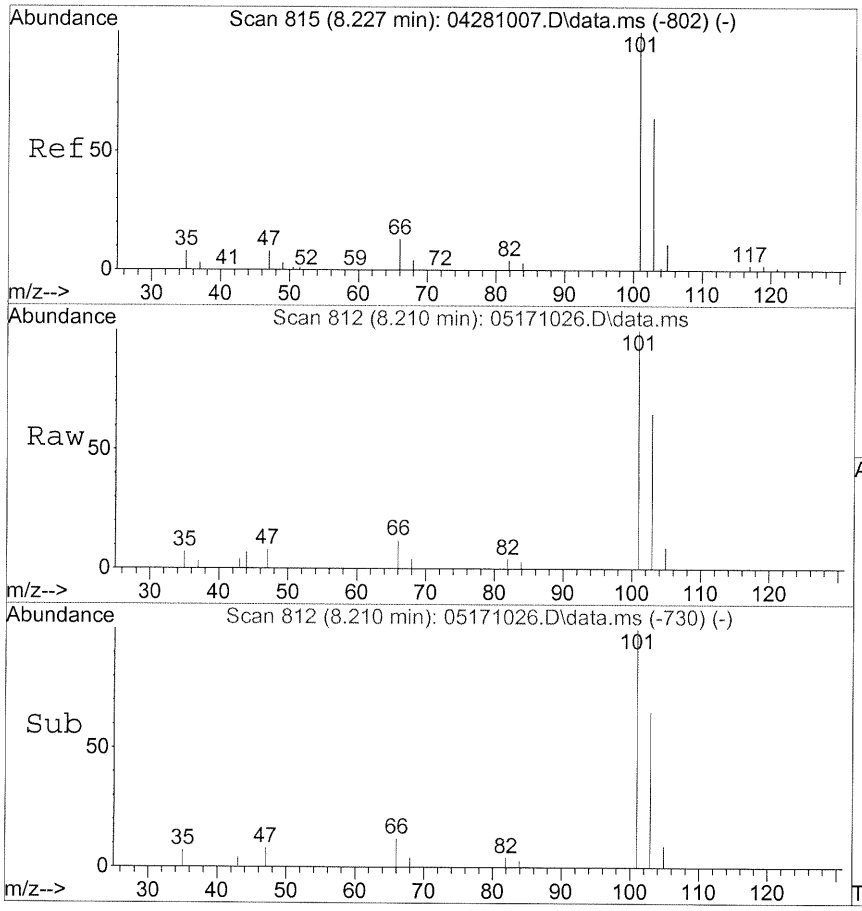


#13
Acetone
Concen: 8.22 ng m
RT: 7.95 min Scan# 766
Delta R.T. -0.046 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 58 Resp: 130568

Ion	Ratio	Lower	Upper
58	100		
43	315.0	264.2	324.2

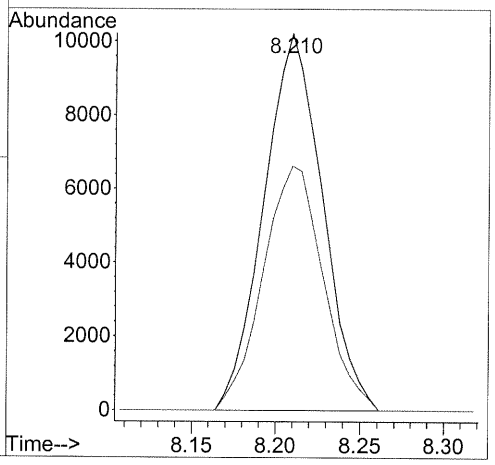


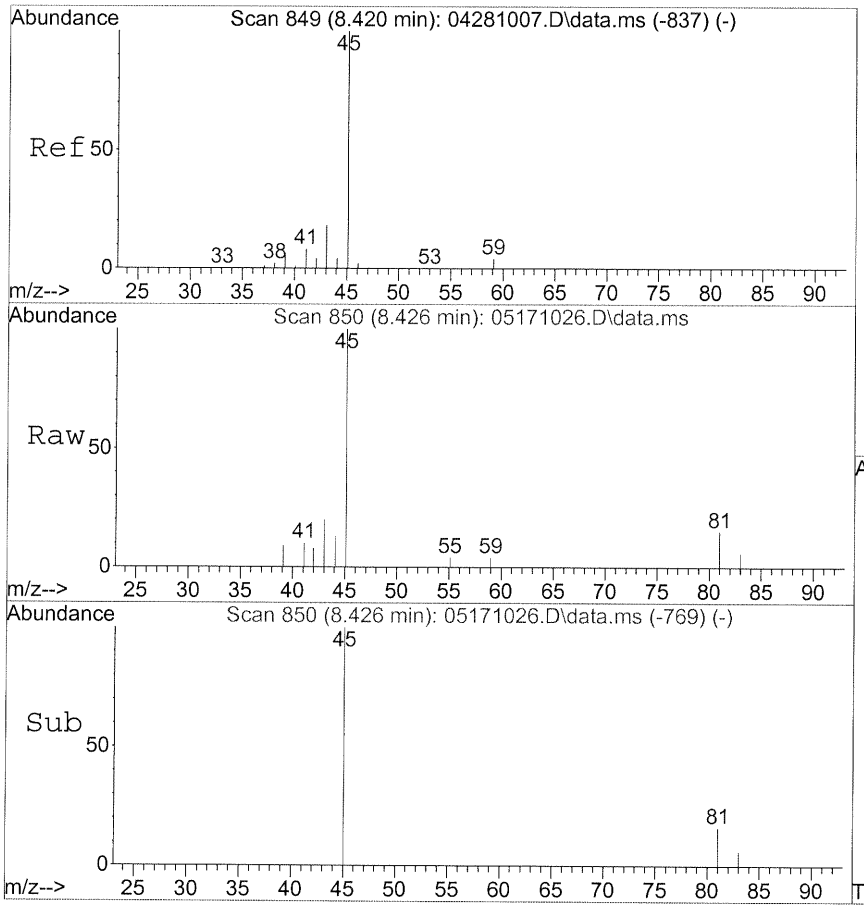


#14
Trichlorofluoromethane
Concen: 0.70 ng
RT: 8.21 min Scan# 812
Delta R.T. -0.034 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion:101 Resp: 24758

Ion	Ratio	Lower	Upper
101	100		
103	66.5	44.6	84.6

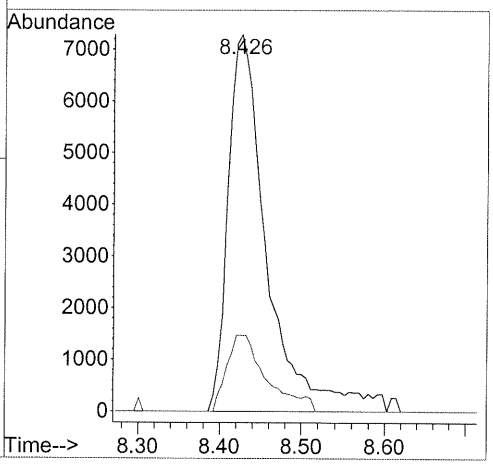


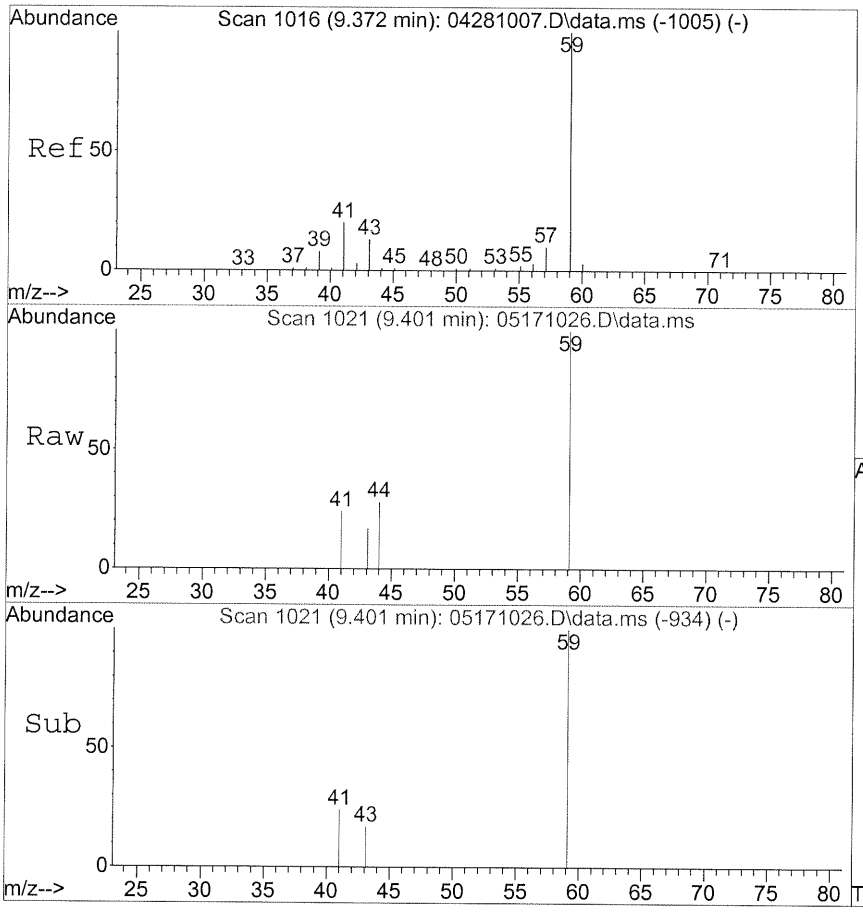


#15
2-Propanol (Isopropanol)
Concen: 0.49 ng
RT: 8.43 min Scan# 850
Delta R.T. -0.040 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 45 Resp: 24063

Ion	Ratio	Lower	Upper
45	100		
43	20.7	0.0	38.5

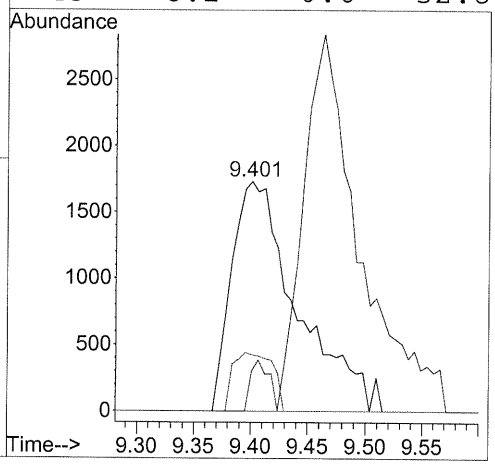


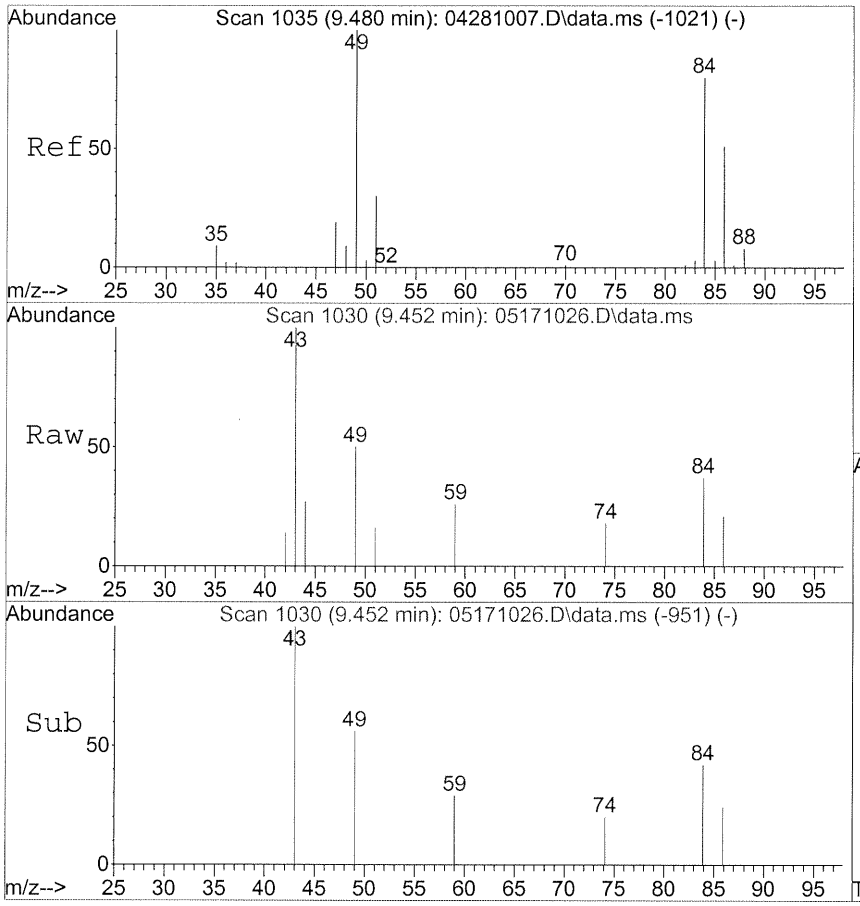


#18
2-Methyl-2-Propanol (tert-But
Concen: 0.14 ng
RT: 9.40 min Scan# 1021
Delta R.T. -0.006 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 59 Resp: 6891

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	30.3
41	15.3	0.0	39.6
43	6.2	0.0	32.8

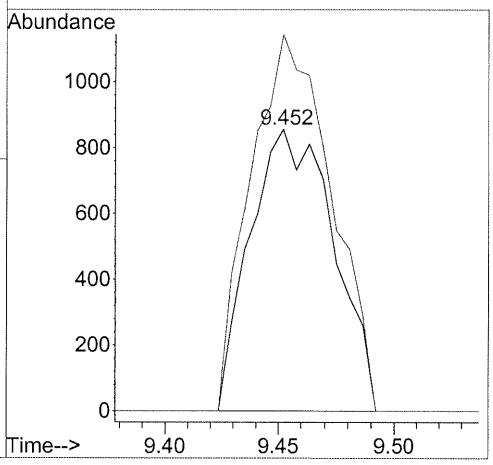


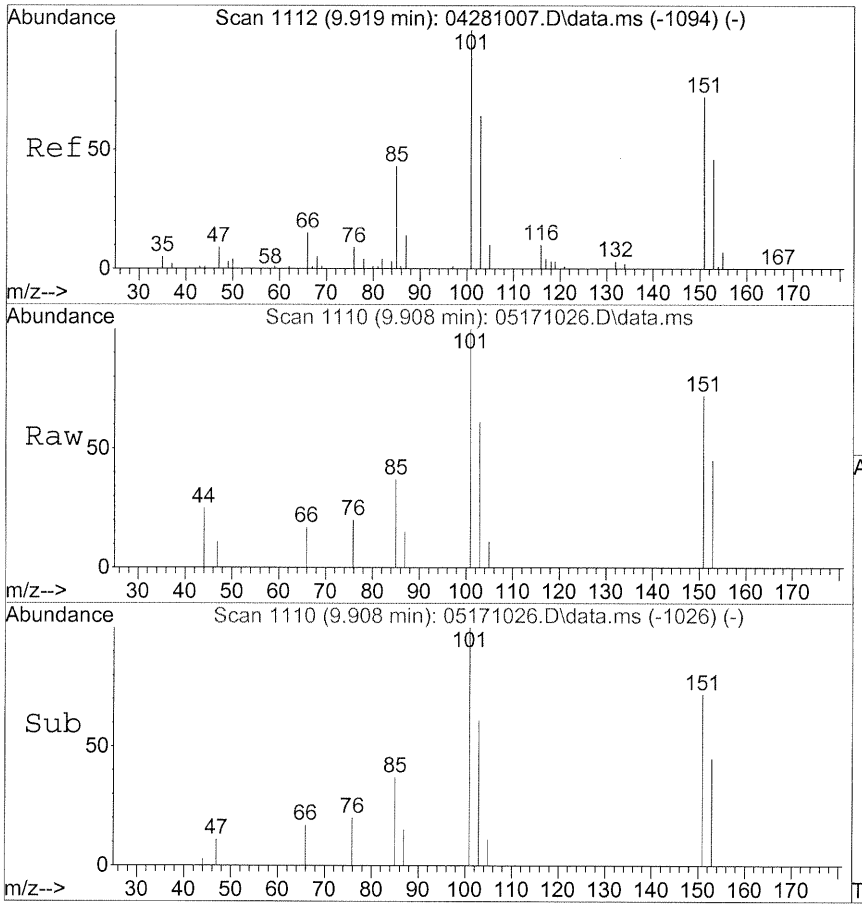


#19
Methylene Chloride
Concen: 0.10 ng
RT: 9.45 min Scan# 1030
Delta R.T. -0.051 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 84 Resp: 2156

Ion	Ratio	Lower	Upper
84	100		
49	129.1	94.5	144.5

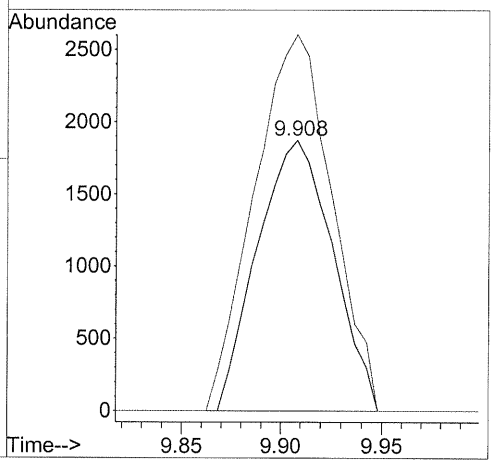


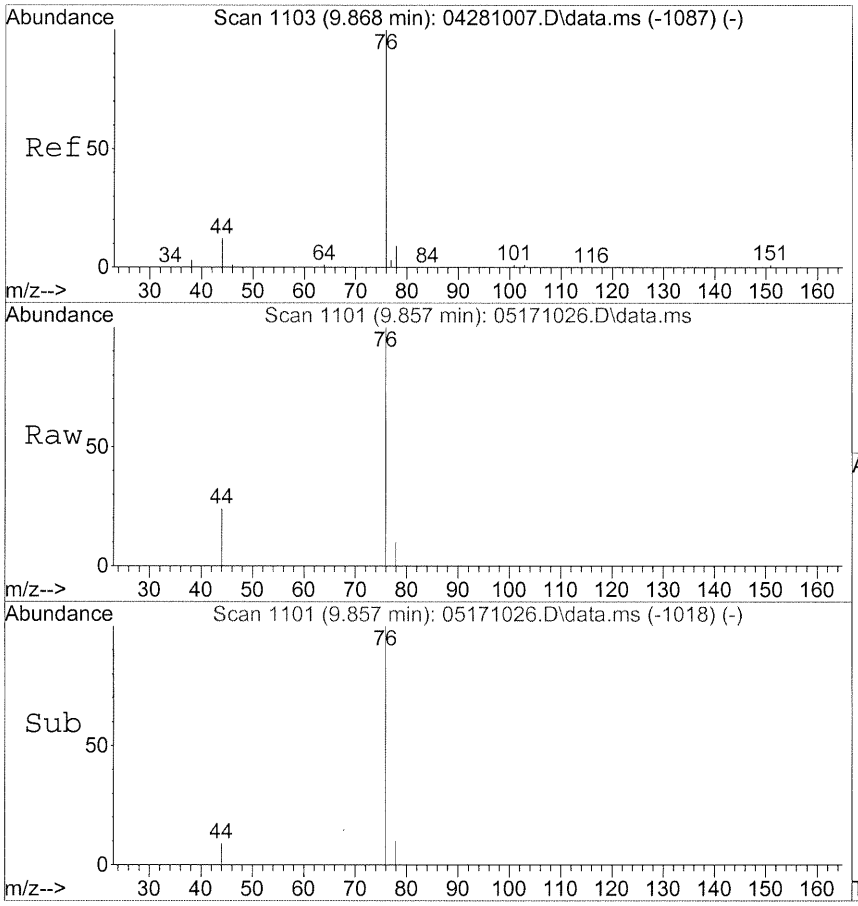


#21
Trichlorotrifluoroethane
Concen: 0.33 ng
RT: 9.91 min Scan# 1110
Delta R.T. -0.023 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion:151 Resp: 4889

Ion	Ratio	Lower	Upper
151	100		
101	143.5	114.9	154.9

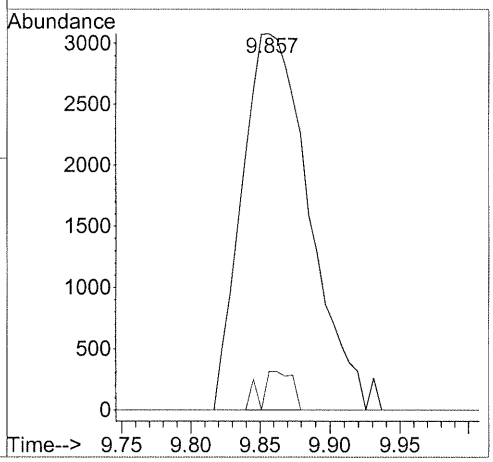


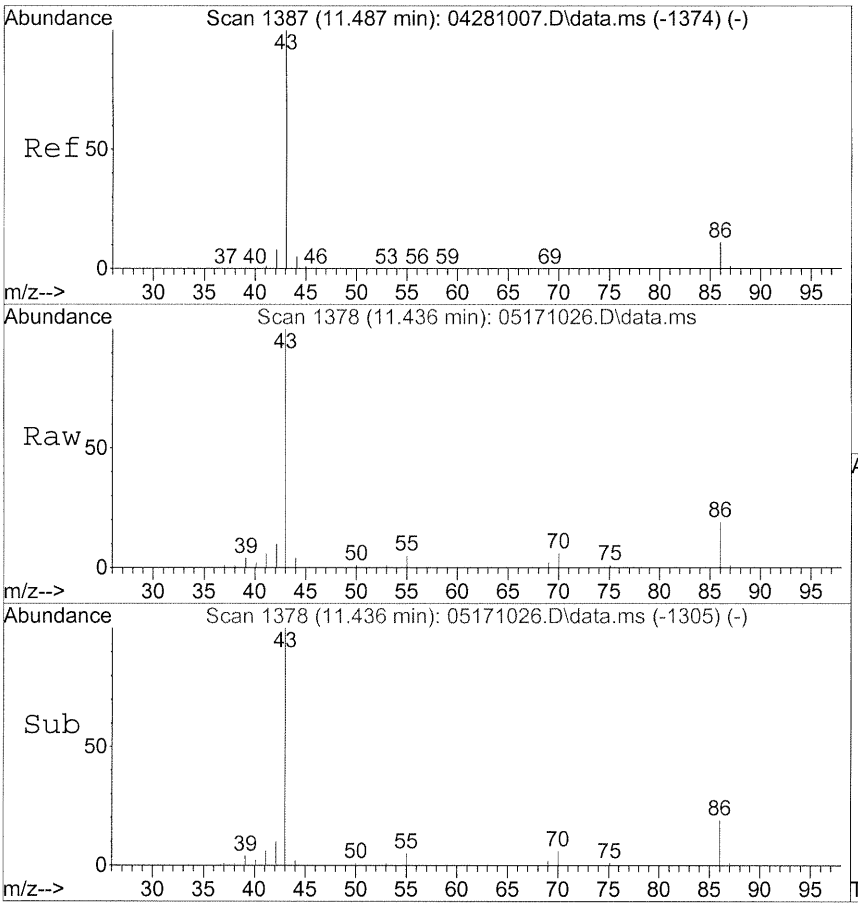


#22
Carbon Disulfide
Concen: 0.14 ng
RT: 9.86 min Scan# 1101
Delta R.T. -0.028 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 76 Resp: 10396

Ion	Ratio	Lower	Upper
76	100		
78	4.7	0.0	29.2

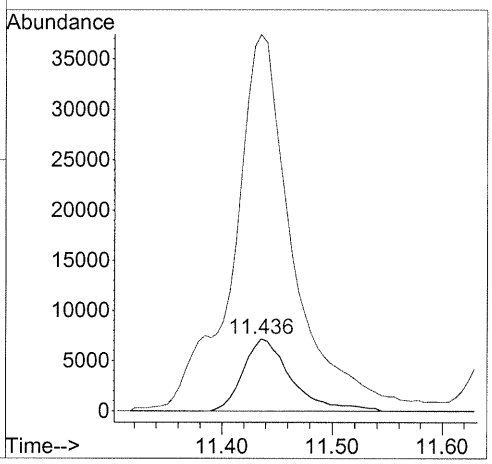


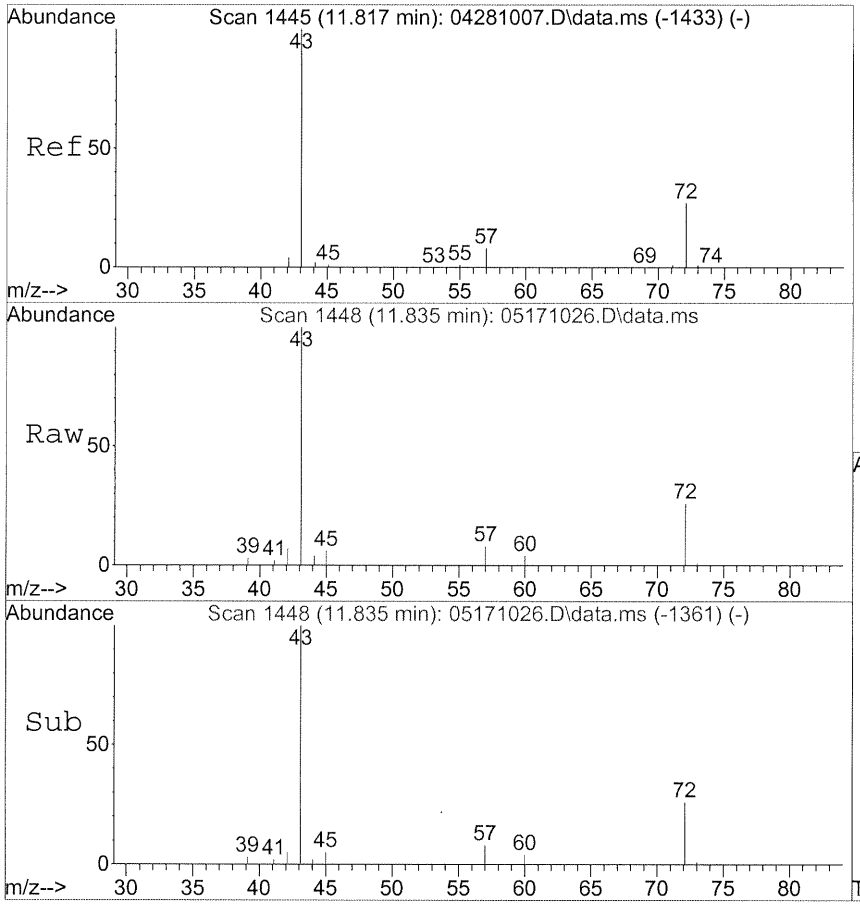


#26
Vinyl Acetate
Concen: 4.52 ng
RT: 11.44 min Scan# 1378
Delta R.T. -0.085 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 86 Resp: 21689

Ion	Ratio	Lower	Upper
86	100		
43	661.8	829.7	869.7#

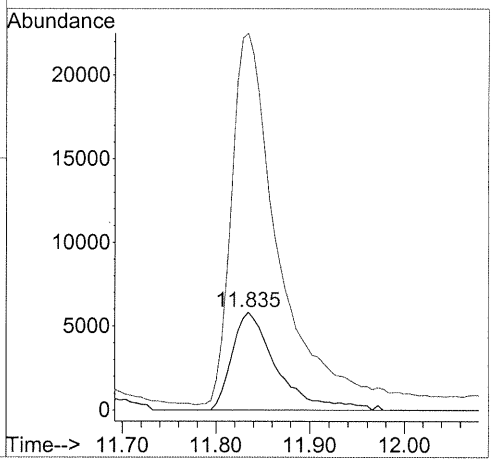


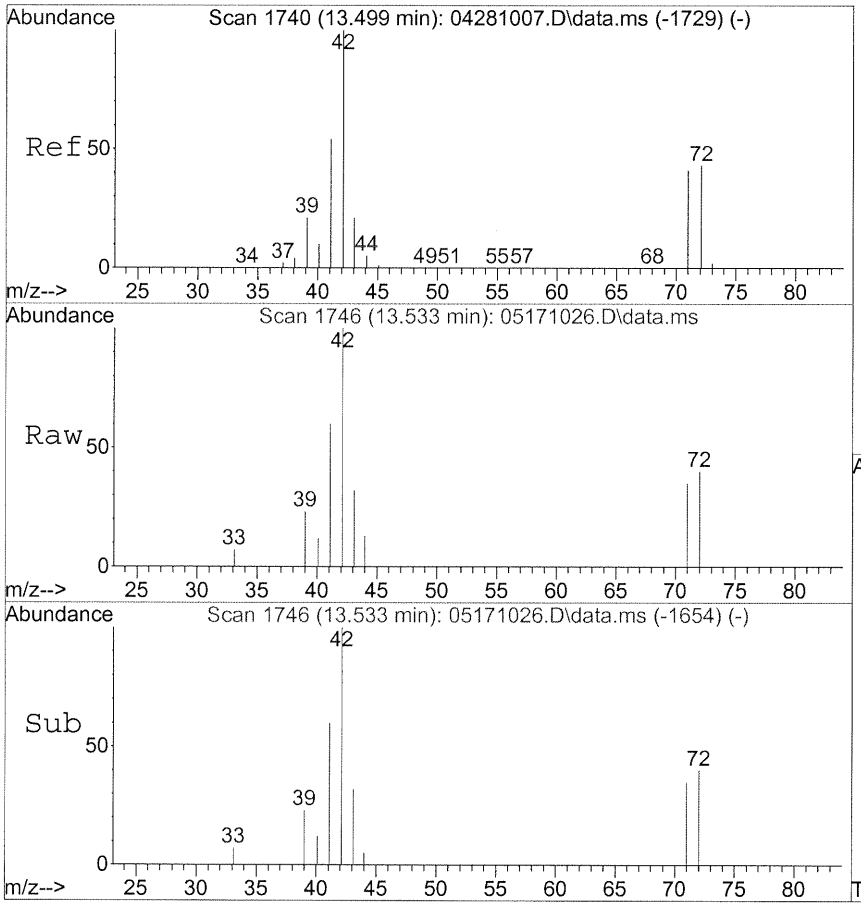


#27
2-Butanone (MEK)
Concen: 1.46 ng
RT: 11.83 min Scan# 1448
Delta R.T. -0.005 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 72 Resp: 19195

Ion	Ratio	Lower	Upper
72	100		
43	431.9	342.0	382.0#

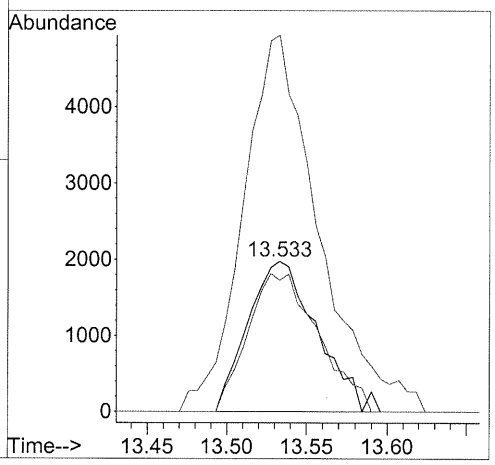


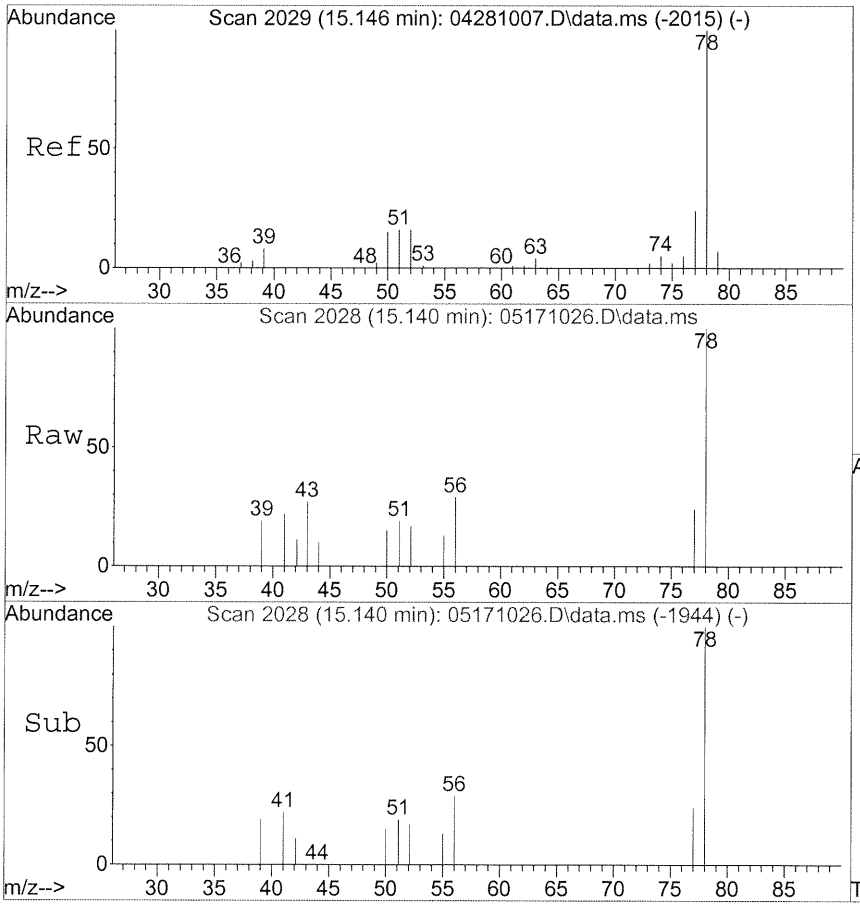


#34
Tetrahydrofuran (THF)
Concen: 0.47 ng
RT: 13.53 min Scan# 1746
Delta R.T. 0.023 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 72 Resp: 5946

Ion	Ratio	Lower	Upper
72	100		
71	93.8	74.5	114.5
42	273.6	197.7	237.7#

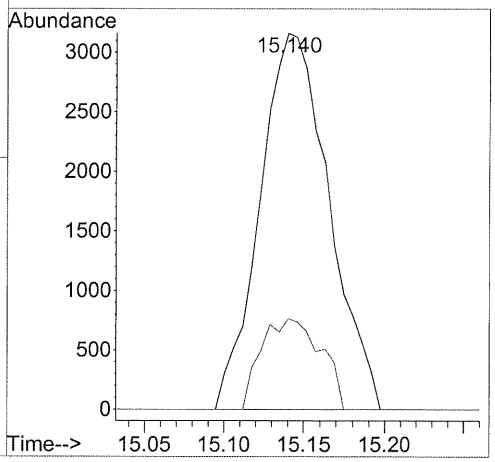


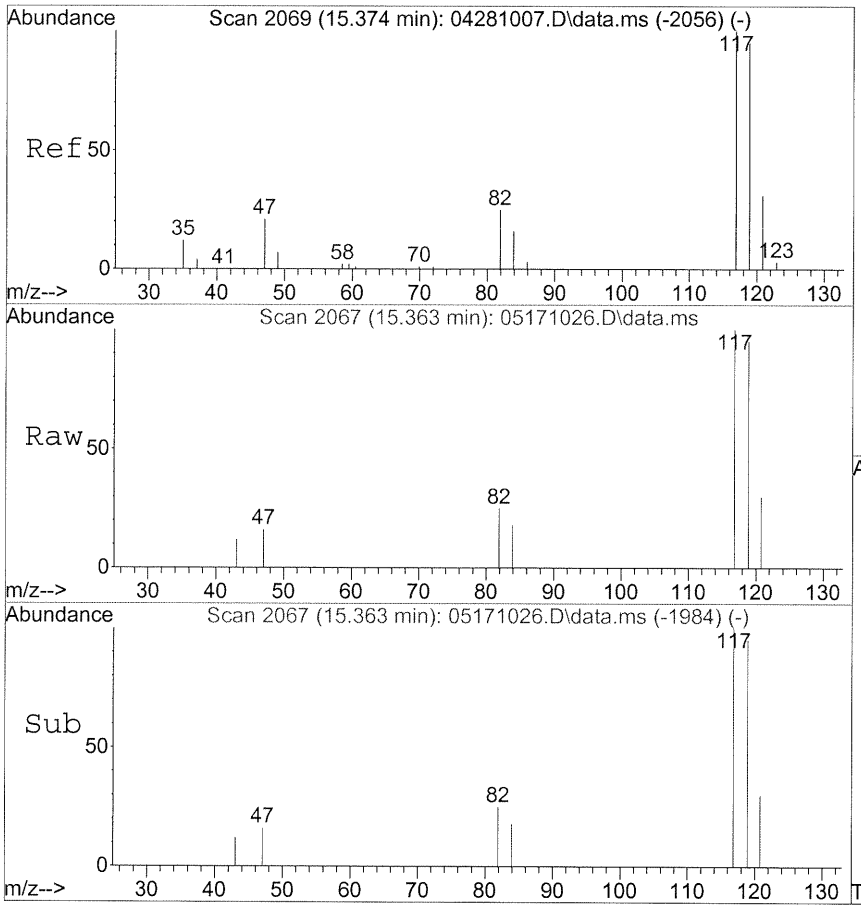


#41
Benzene
Concen: 0.11 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 78 Resp: 9414

Ion	Ratio	Lower	Upper
78	100		
77	20.9	4.1	44.1

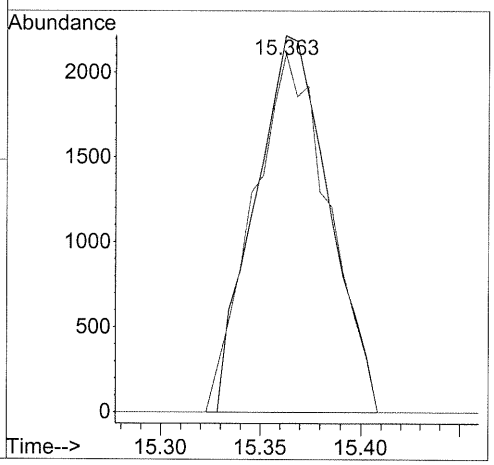


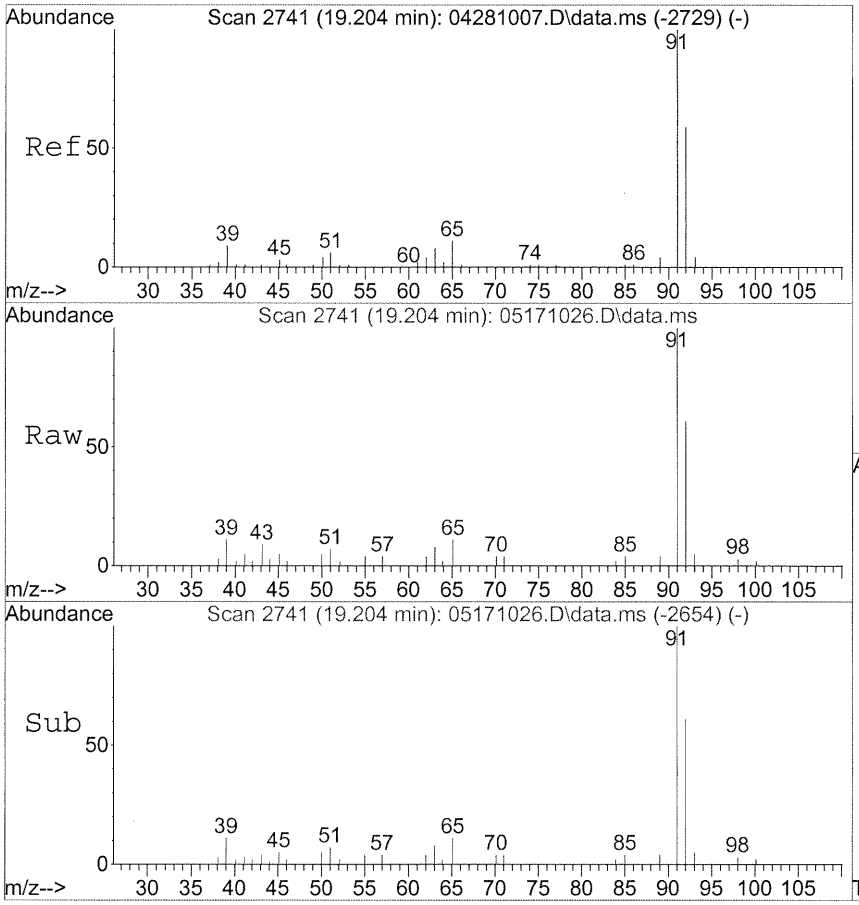


#42
Carbon Tetrachloride
Concen: 0.24 ng
RT: 15.36 min Scan# 2067
Delta R.T. -0.028 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion:117 Resp: 5664

Ion	Ratio	Lower	Upper
117	100		
119	97.8	76.1	116.1

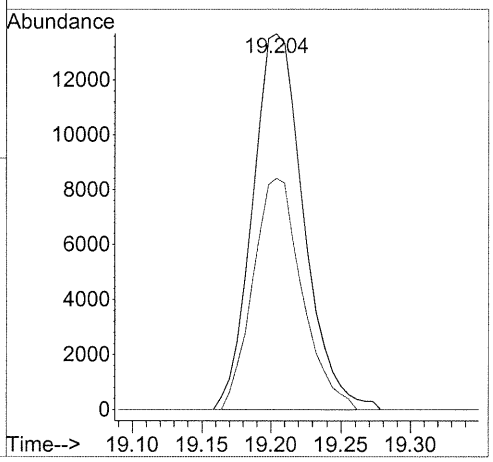


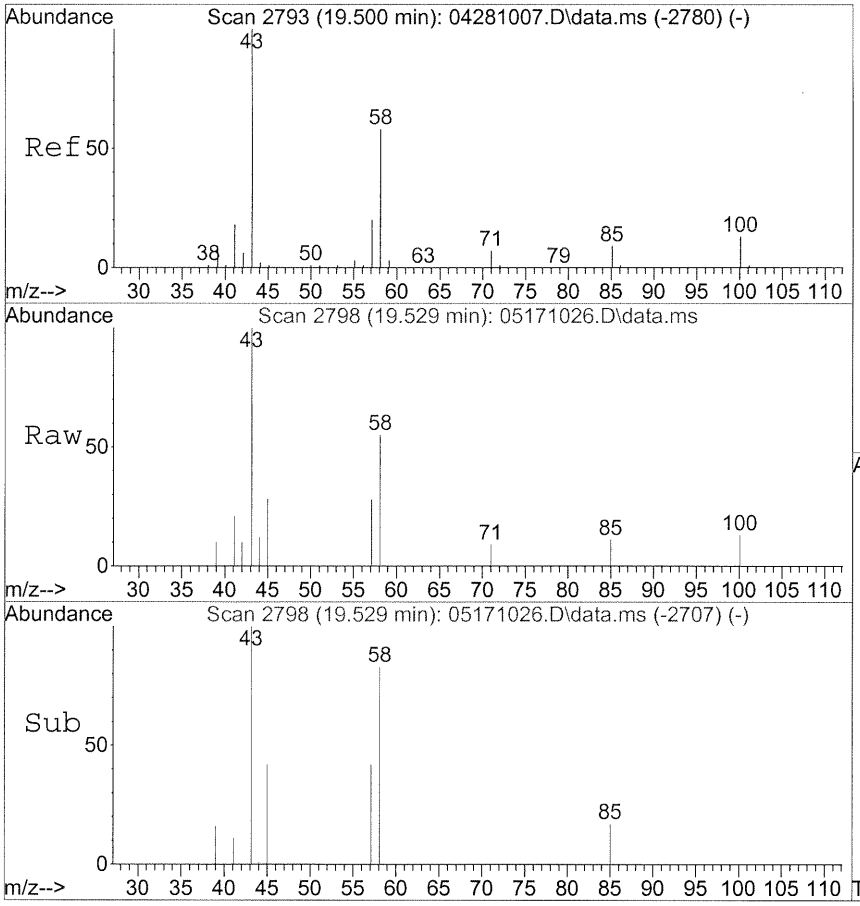


#58
Toluene
Concen: 0.38 ng
RT: 19.20 min Scan# 2741
Delta R.T. -0.006 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 91 Resp: 35053

Ion	Ratio	Lower	Upper
91	100		
92	59.1	39.2	79.2

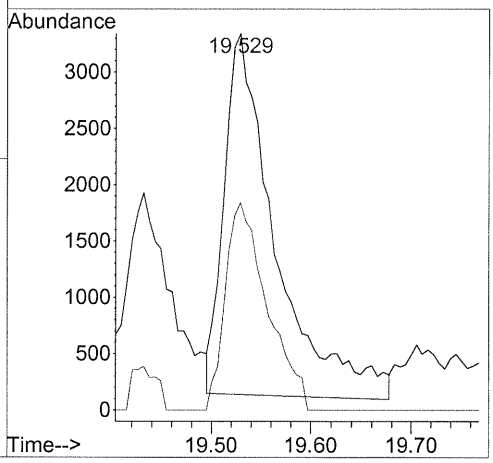


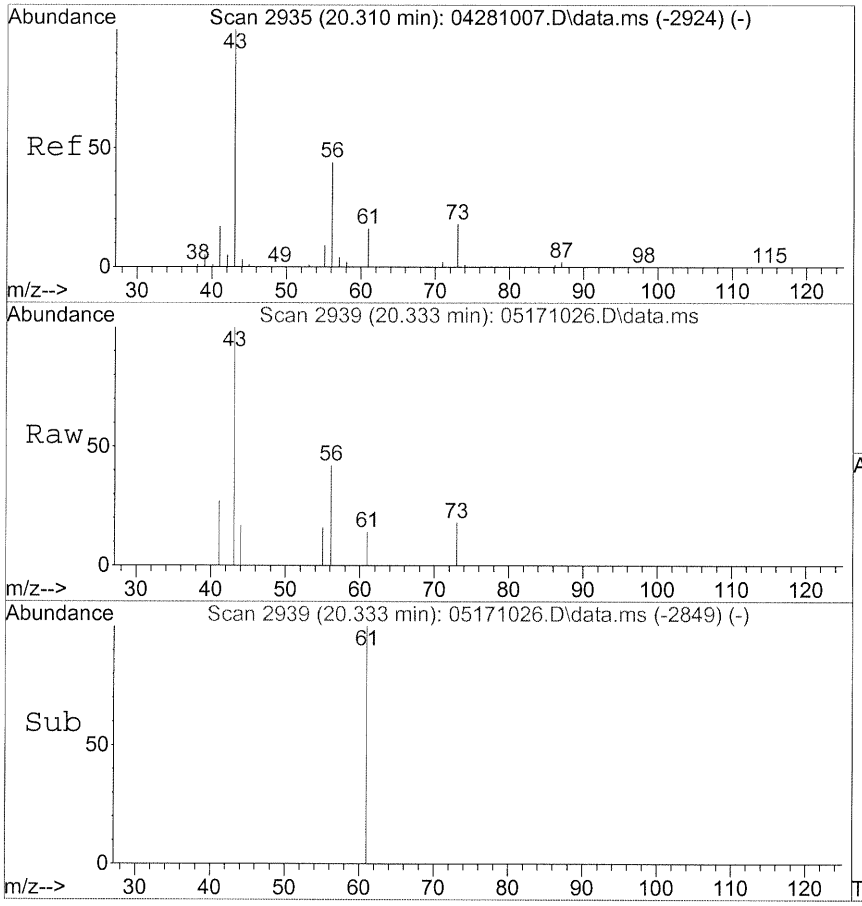


#59
2-Hexanone
Concen: 0.26 ng
RT: 19.53 min Scan# 2798
Delta R.T. 0.017 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 43 Resp: 11516

Ion	Ratio	Lower	Upper
43	100		
58	46.8	38.3	78.3

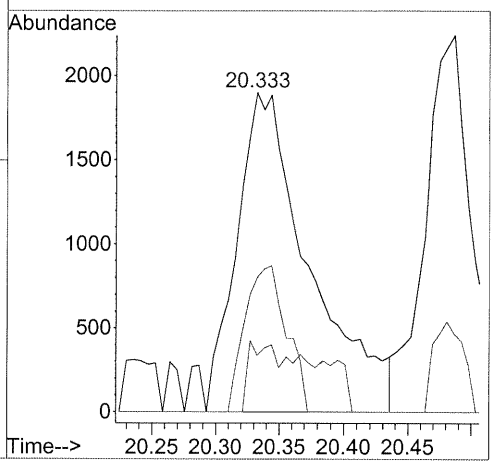


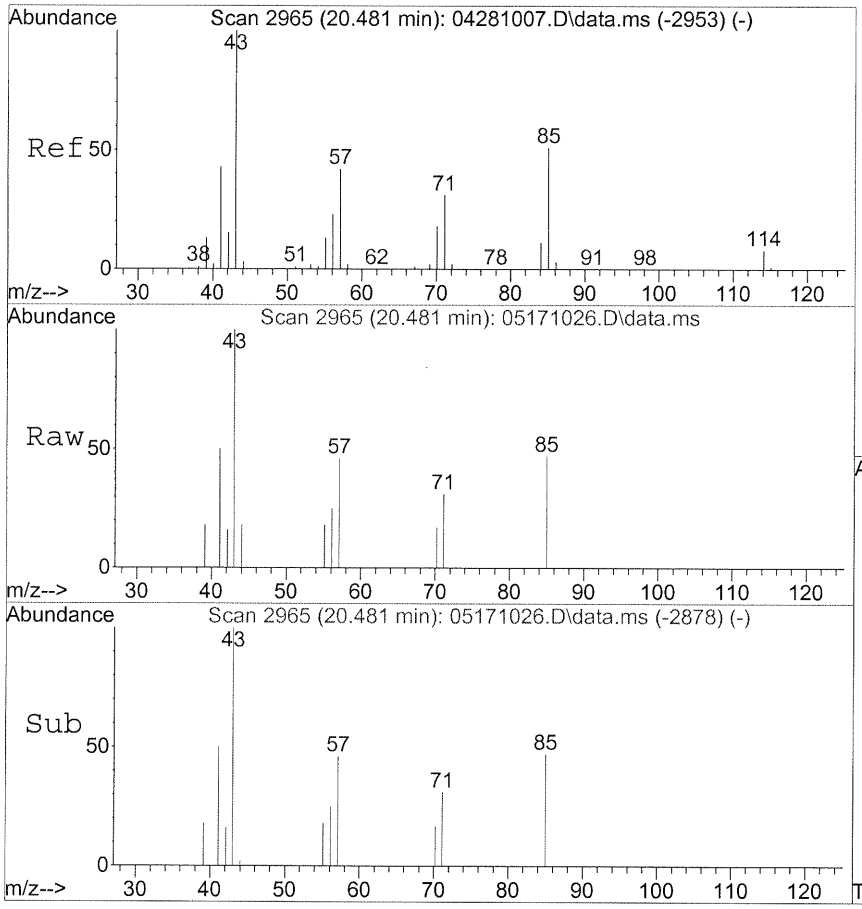


#62
n-Butyl Acetate
Concen: 0.15 ng
RT: 20.33 min Scan# 2939
Delta R.T. 0.011 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 43 Resp: 7506

Ion	Ratio	Lower	Upper
43	100		
56	26.4	25.0	65.0
73	20.5	0.0	39.1

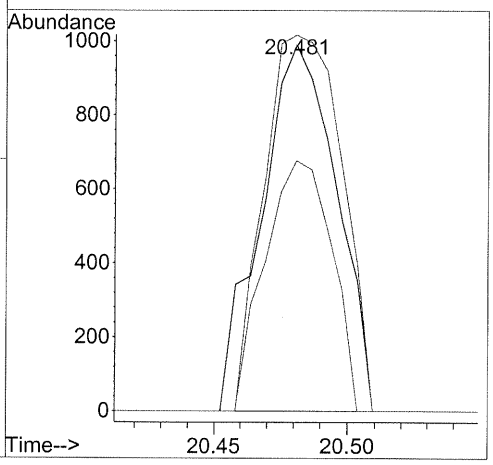


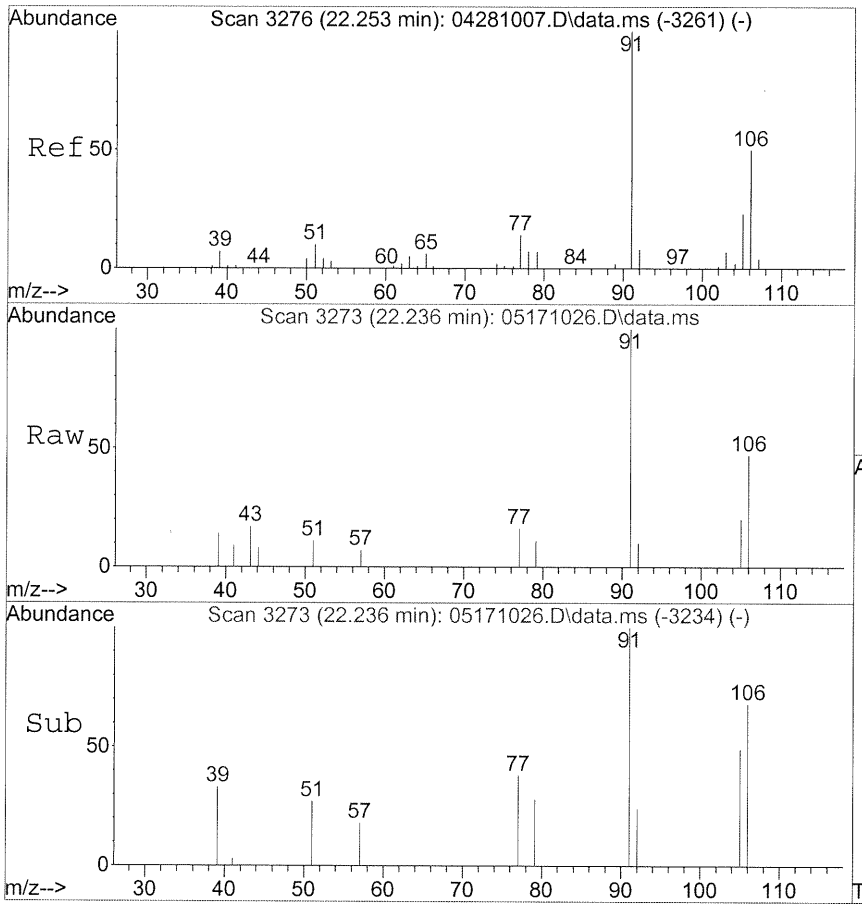


#63
n-Octane
Concen: 0.09 ng
RT: 20.48 min Scan# 2965
Delta R.T. -0.006 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 57 Resp: 1934

Ion	Ratio	Lower	Upper
57	100		
85	106.1	101.4	152.2
71	60.8	60.7	91.1

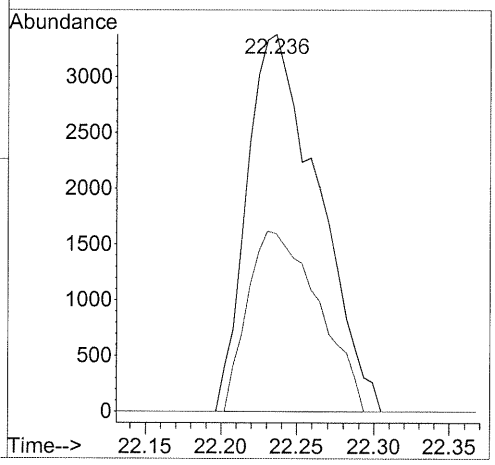


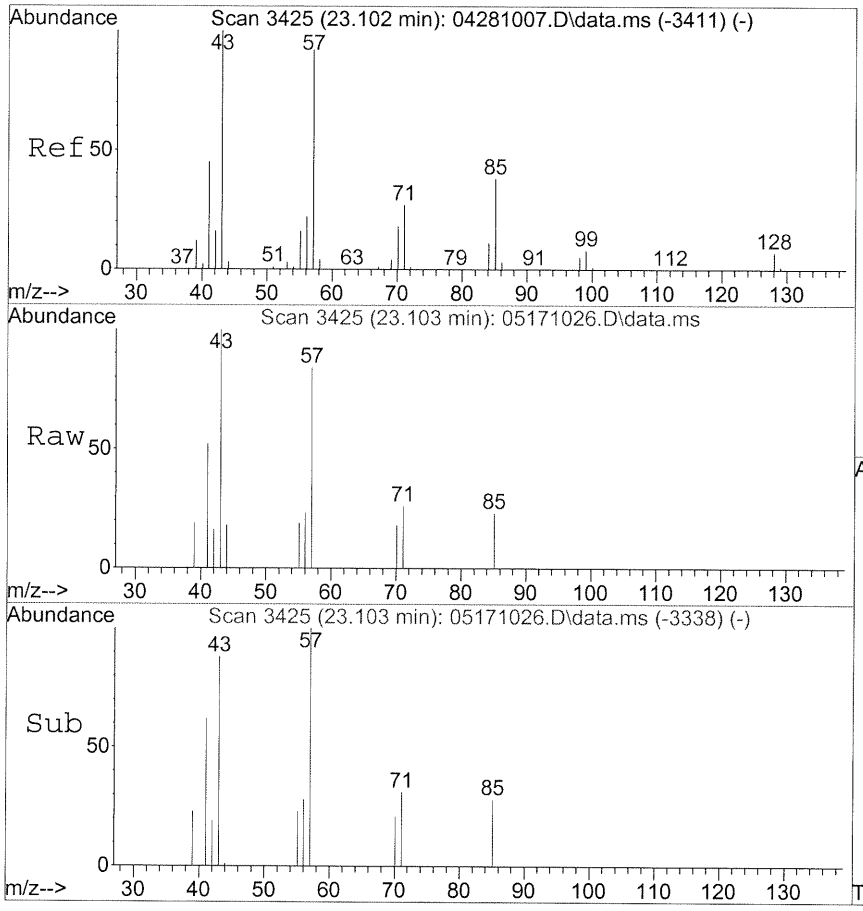


#67
m- & p-Xylenes
Concen: 0.13 ng
RT: 22.24 min Scan# 3273
Delta R.T. -0.028 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 91 Resp: 10942

Ion	Ratio	Lower	Upper
91	100		
106	47.7	30.6	70.6

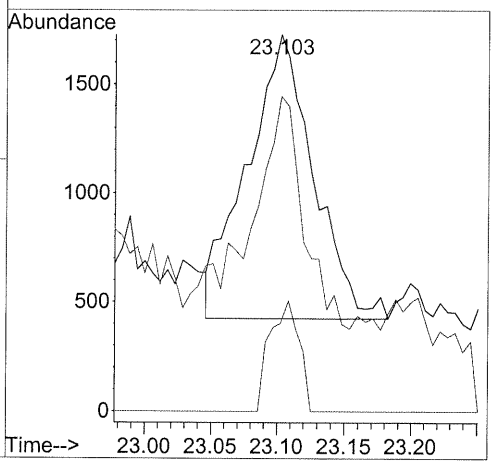


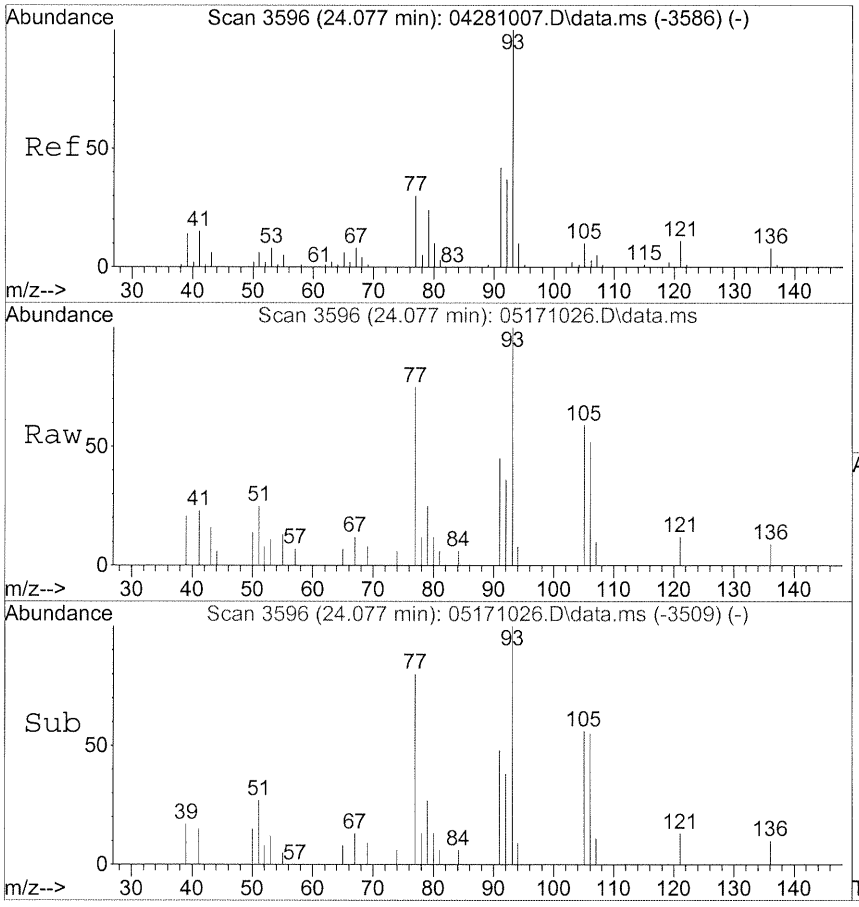


#71
n-Nonane
Concen: 0.09 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 43 Resp: 4544

Ion	Ratio	Lower	Upper
43	100		
57	174.0	74.6	114.6#
85	17.0	20.5	60.5#

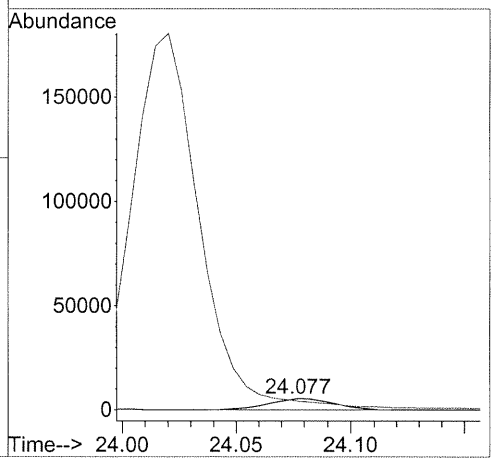


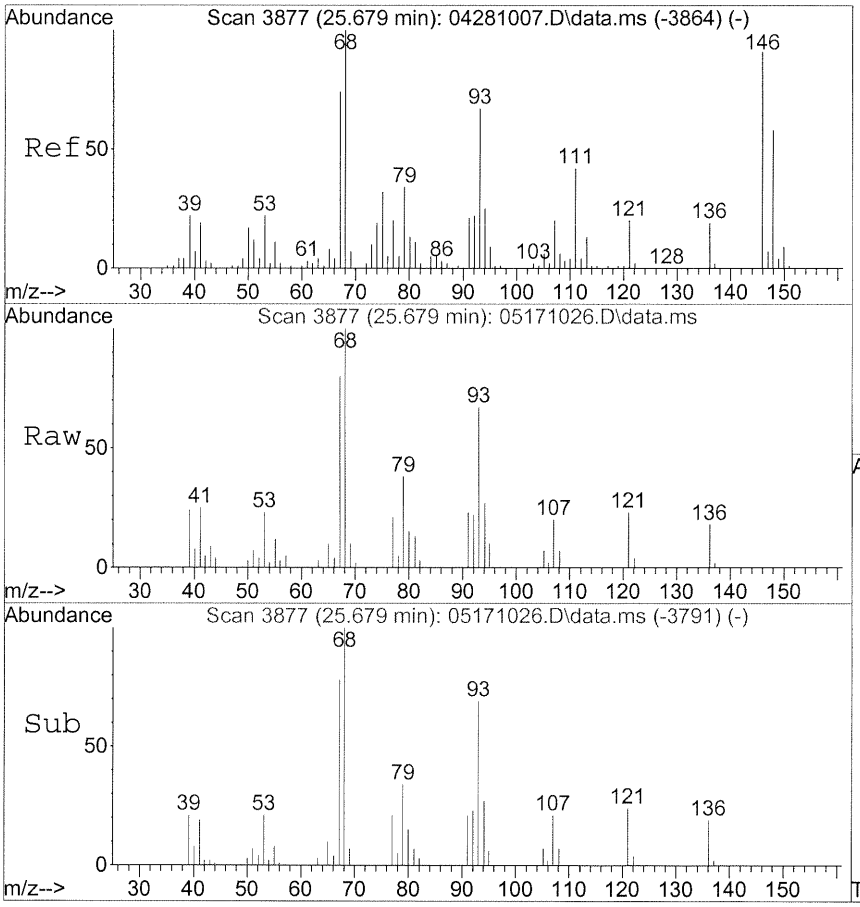


#75
alpha-Pinene
Concen: 0.20 ng
RT: 24.08 min Scan# 3596
Delta R.T. -0.006 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 93 Resp: 10103

Ion	Ratio	Lower	Upper
93	100		
77	0.0	8.7	48.7#

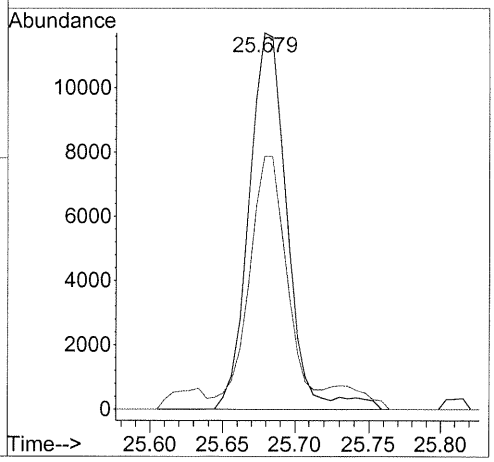


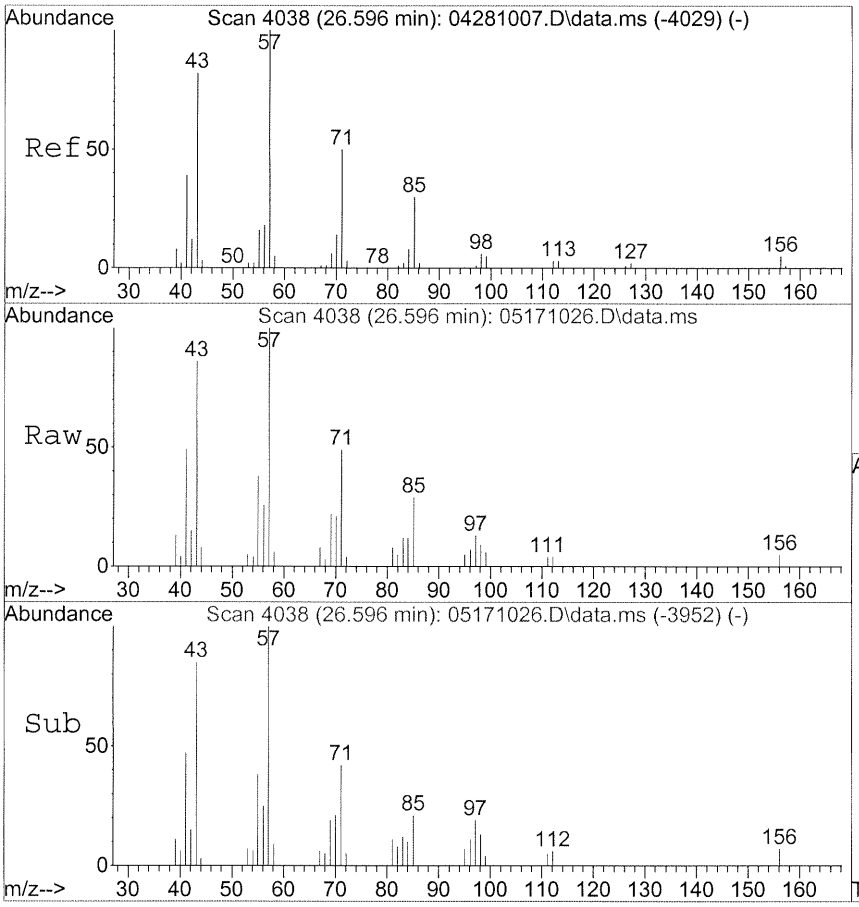


#91
d-Limonene
Concen: 0.62 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.011 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 68 Resp: 21409

Ion	Ratio	Lower	Upper
68	100		
93	73.8	51.5	91.5

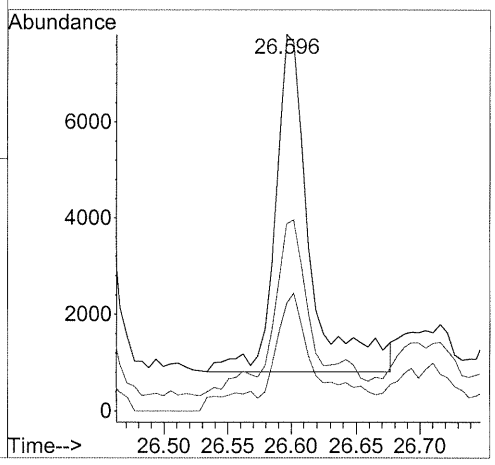


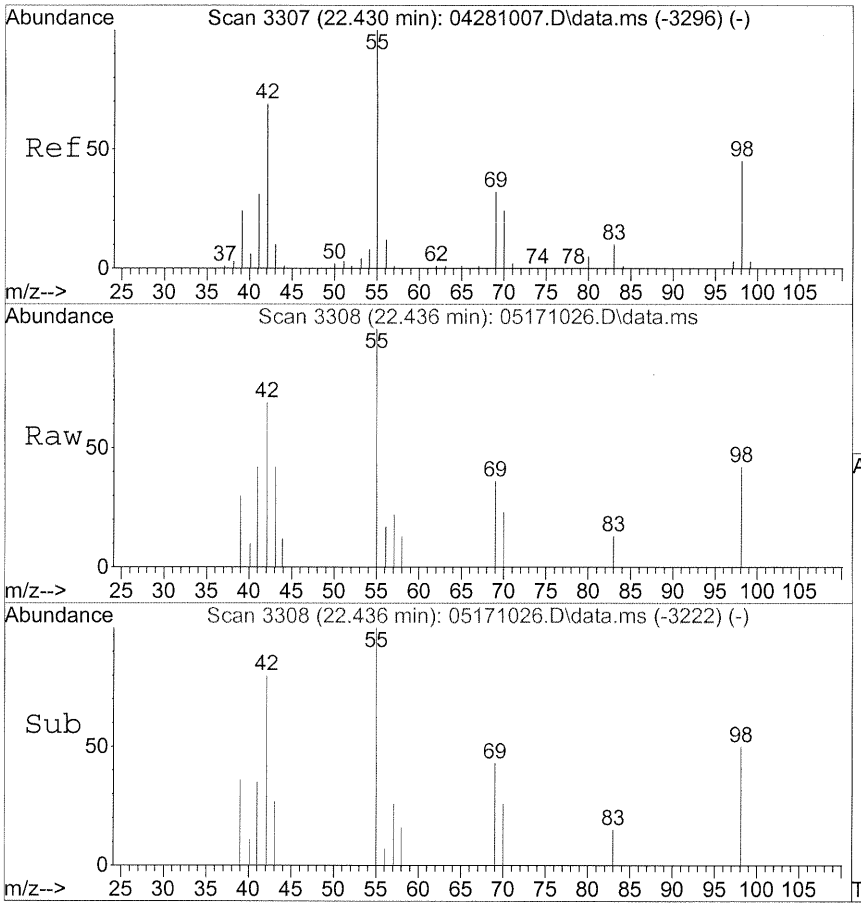


#93
n-Undecane
Concen: 0.26 ng
RT: 26.60 min Scan# 4038
Delta R.T. -0.011 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 57 Resp: 13143

Ion	Ratio	Lower	Upper
57	100		
71	63.1	32.0	72.0
85	35.9	11.5	51.5

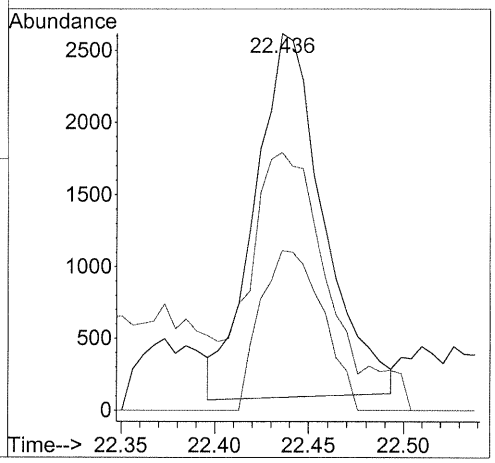




#98
Cyclohexanone
Concen: 0.22 ng
RT: 22.44 min Scan# 3308
Delta R.T. -0.011 min
Lab File: 05171026.D
Acq: 18 May 2010 4:11

Tgt Ion: 55 Resp: 6418

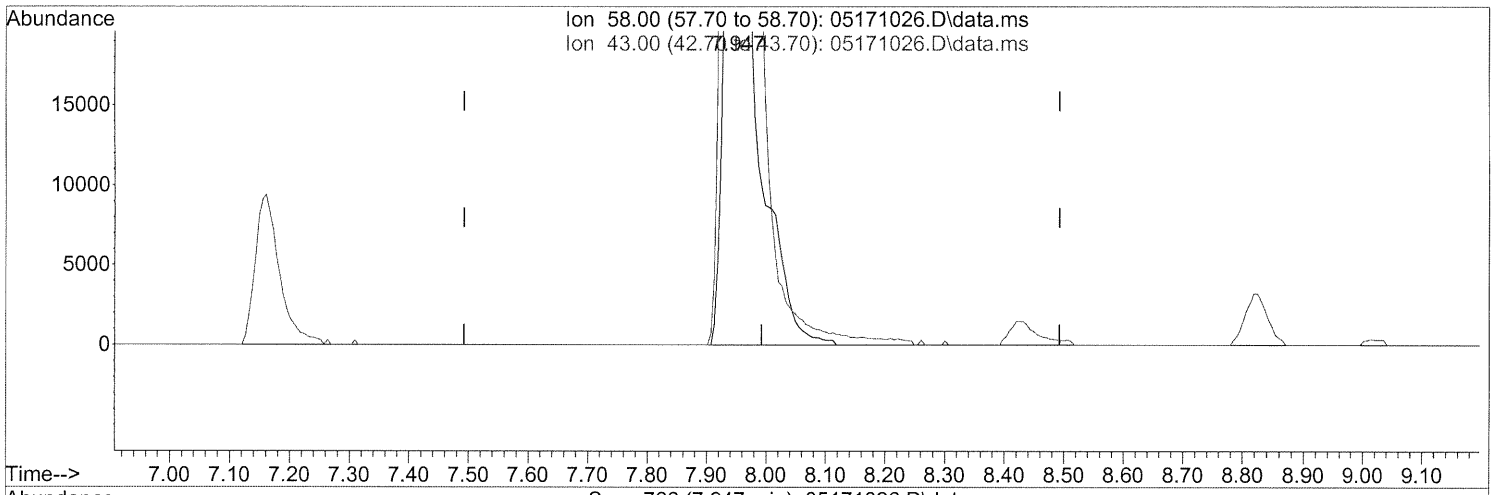
Ion	Ratio	Lower	Upper
55	100		
98	39.9	38.2	57.4
42	81.5	55.1	82.7

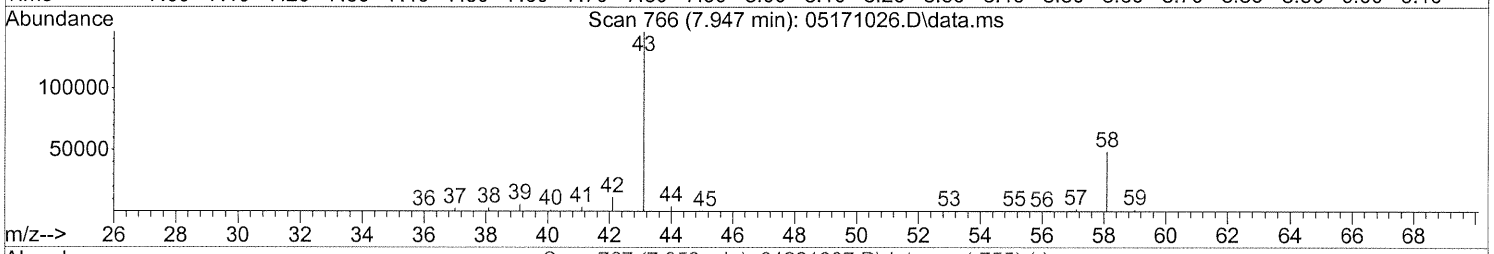


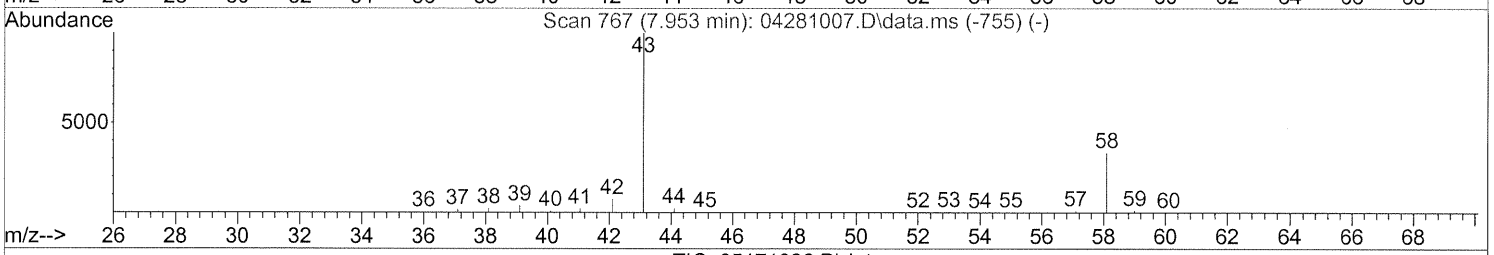
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 18 08:05:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171026.D\data.ms

(13) Acetone (T)

7.947min (-0.046) 9.38ng

response 148906

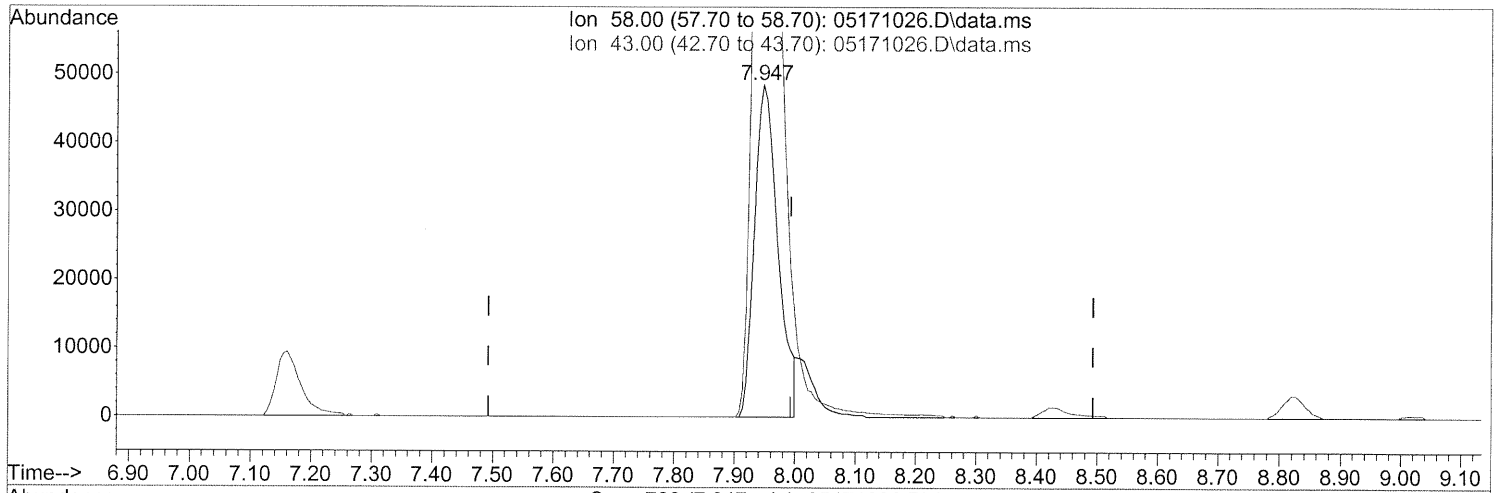
Ion	Exp%	Act%
58.00	100	100
43.00	294.20	276.21
0.00	0.00	0.00
0.00	0.00	0.00

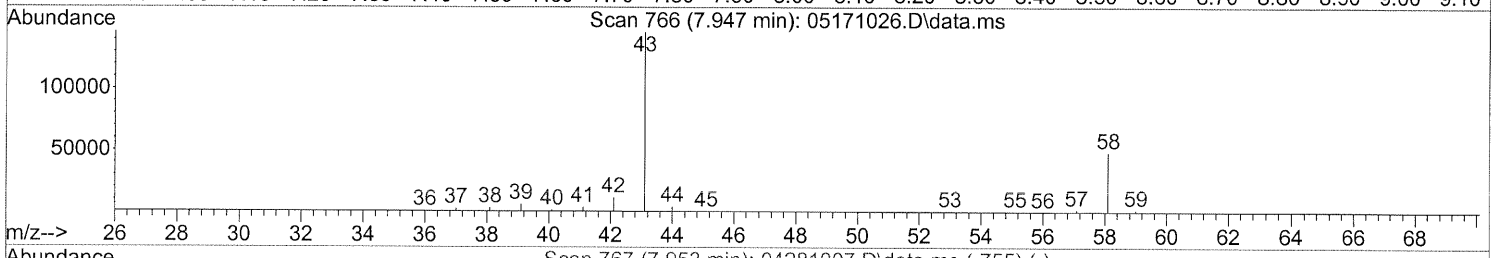
SH

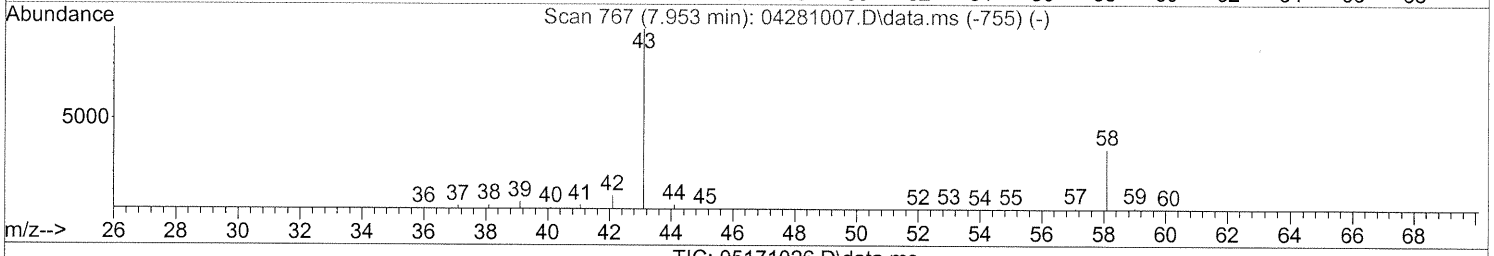
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 18 08:05:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171026.D\data.ms

(13) Acetone (T)

7.947min (-0.046) 8.22ng m

response 130568

Ion	Exp%	Act%
58.00	100	100
43.00	294.20	315.00
0.00	0.00	0.00
0.00	0.00	0.00

SH-71C

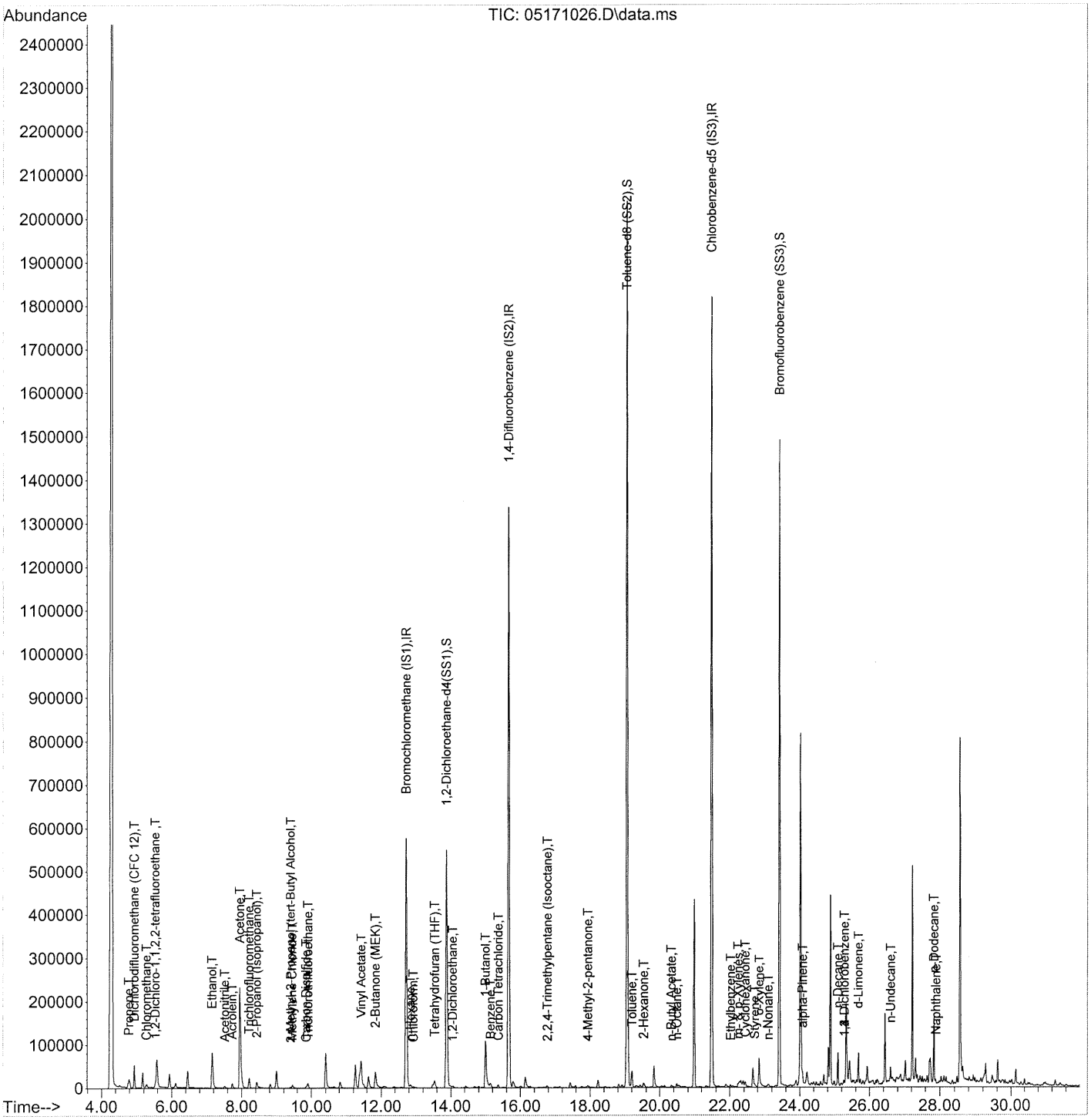
5/20/10

5/24/10

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 18 08:05:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 18 08:05:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	305487	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1560957	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	780064	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	551862	24.275	ng		-0.03
Spiked Amount 25.000			Recovery = 97.12%				
57) Toluene-d8 (SS2)	19.06	98	1826125	24.538	ng		-0.01
Spiked Amount 25.000			Recovery = 98.16%				
73) Bromofluorobenzene (SS3)	23.42	174	485924	25.577	ng		0.00
Spiked Amount 25.000			Recovery = 102.32%				
Target Compounds							Qvalue
2) Propene	4.78	42	6929	0.291	ng	#	82
3) Dichlorodifluoromethan...	4.94	85	55921	1.368	ng		99
4) Chloromethane	5.28	50	8015	0.265	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	1086	0.053	ng	#	42
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	5.94	54	200	N.D.			
8) Bromomethane	6.51	94	179	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	7.16	45	135018	10.393	ng		100
11) Acetonitrile	7.51	41	7016	0.214	ng		99
12) Acrolein	7.73	56	12950	1.279	ng		97
13) Acetone	7.95	58	148906	9.376	ng		91
14) Trichlorofluoromethane	8.21	101	24758	0.699	ng		98
15) 2-Propanol (Isopropanol)	8.43	45	24063	0.489	ng		95
16) Acrylonitrile	0.00	53	0	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) 2-Methyl-2-Propanol (t...	9.40	59	6891	0.136	ng	#	84
19) Methylene Chloride	9.45	84	2156	0.103	ng		91
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	9.91	151	4889	0.327	ng		93
22) Carbon Disulfide	9.86	76	10396	0.139	ng		88
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	11.26	73	390	N.D.			
26) Vinyl Acetate	11.44	86	21689	4.525	ng	#	53
27) 2-Butanone (MEK)	11.83	72	19195	1.455	ng	#	68
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	0.00	87	0	N.D.			
30) Ethyl Acetate	12.87	61	89	N.D.			
31) n-Hexane	12.84	57	2187	0.054	ng	#	57

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 18 08:05:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.92	83	2818	0.084 ng		99
34) Tetrahydrofuran (THF)	13.53	72	5946	0.466 ng	#	75
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.05	62	2078	0.076 ng	#	50
38) 1,1,1-Trichloroethane	14.44	97	274	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.99	56	111762	5.181 ng	#	76
41) Benzene	15.14	78	9414	0.108 ng		94
42) Carbon Tetrachloride	15.36	117	5664	0.244 ng		98
43) Cyclohexane	15.56	84	92	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.29	83	89	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	5563	0.055 ng		81
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	17.12	71	758	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.94	58	1410	0.075 ng	#	30
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	35053	0.380 ng		100
59) 2-Hexanone	19.53	43	11516	0.261 ng		85
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.33	43	7506	0.152 ng		79
63) n-Octane	20.48	57	1934	0.090 ng		82
64) Tetrachloroethene	20.98	166	205	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	22.03	91	5610	0.054 ng		89
67) m- & p-Xylenes	22.24	91	10942	0.131 ng		96
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.71	104	4440	0.075 ng		92
70) o-Xylene	22.85	91	5197	0.058 ng		90
71) n-Nonane	23.10	43	4544	0.094 ng	#	31
72) 1,1,2,2-Tetrachloroethane	22.84	83	310	N.D.		
74) Cumene	23.42	105	889	N.D.		
75) alpha-Pinene	24.08	93	10103	0.200 ng	#	46
76) n-Propylbenzene	24.22	91	2078	N.D.		
77) 3-Ethyltoluene	24.35	105	4256	N.D.		
78) 4-Ethyltoluene	24.40	105	3035	N.D.		
79) 1,3,5-Trimethylbenzene	24.49	105	1910	N.D.		

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171026.D
Acq On : 18 May 2010 4:11
Operator : EM
Sample : P1001651-013 (1000ml)
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 18 08:05:39 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	24.68	118	957	N.D.	
81) 2-Ethyltoluene	24.73	105	1862	N.D.	
82) 1,2,4-Trimethylbenzene	24.99	105	4320	N.D.	
83) n-Decane	25.09	57	27529	0.542 ng	96
84) Benzyl Chloride	25.17	91	600	N.D.	
85) 1,3-Dichlorobenzene	25.27	146	2876	0.070 ng	99
86) 1,4-Dichlorobenzene	25.27	146	2876	0.066 ng	99
87) sec-Butylbenzene	25.33	105	1714	N.D.	
88) 4-Isopropyltoluene (p-...	25.51	119	2974	N.D.	
89) 1,2,3-Trimethylbenzene	25.51	105	1600	N.D.	
90) 1,2-Dichlorobenzene	25.27	146	2876	0.069 ng	98
91) d-Limonene	25.68	68	21409	0.616 ng	97
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	26.60	57	13143	0.258 ng	87
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.	
95) Naphthalene	27.88	128	7462	0.077 ng	92
96) n-Dodecane	27.83	57	51090	0.979 ng	98
97) Hexachlorobutadiene	0.00	225	0	N.D.	
98) Cyclohexanone	22.44	55	6418	0.221 ng	86
99) tert-Butylbenzene	24.99	119	433	N.D.	
100) n-Butylbenzene	26.03	91	3013	N.D.	

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P100517-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.20	ND	0.097	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.10	ND	0.039	
106-99-0	1,3-Butadiene	ND	0.20	ND	0.090	
74-83-9	Bromomethane	ND	0.10	ND	0.026	
75-00-3	Chloroethane	ND	0.10	ND	0.038	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.10	ND	0.018	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.0	ND	0.41	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.10	ND	0.025	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	ND	0.032	
76-13-1	Trichlorotrifluoroethane	ND	0.10	ND	0.013	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	ND	0.025	
75-34-3	1,1-Dichloroethane	ND	0.10	ND	0.025	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	ND	0.028	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P100517-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.10	ND	0.025	
141-78-6	Ethyl Acetate	ND	0.50	ND	0.14	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.10	ND	0.020	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.10	ND	0.025	
71-55-6	1,1,1-Trichloroethane	ND	0.10	ND	0.018	
71-43-2	Benzene	ND	0.10	ND	0.031	
56-23-5	Carbon Tetrachloride	ND	0.10	ND	0.016	
110-82-7	Cyclohexane	ND	0.50	ND	0.15	
78-87-5	1,2-Dichloropropane	ND	0.10	ND	0.022	
75-27-4	Bromodichloromethane	ND	0.10	ND	0.015	
79-01-6	Trichloroethene	ND	0.10	ND	0.019	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	0.50	ND	0.12	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.10	ND	0.012	
106-93-4	1,2-Dibromoethane	ND	0.10	ND	0.013	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P100517-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.10	ND	0.015	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	0.50	ND	0.12	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	ND	0.015	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.10	ND	0.017	
106-46-7	1,4-Dichlorobenzene	ND	0.10	ND	0.017	
95-50-1	1,2-Dichlorobenzene	ND	0.10	ND	0.017	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

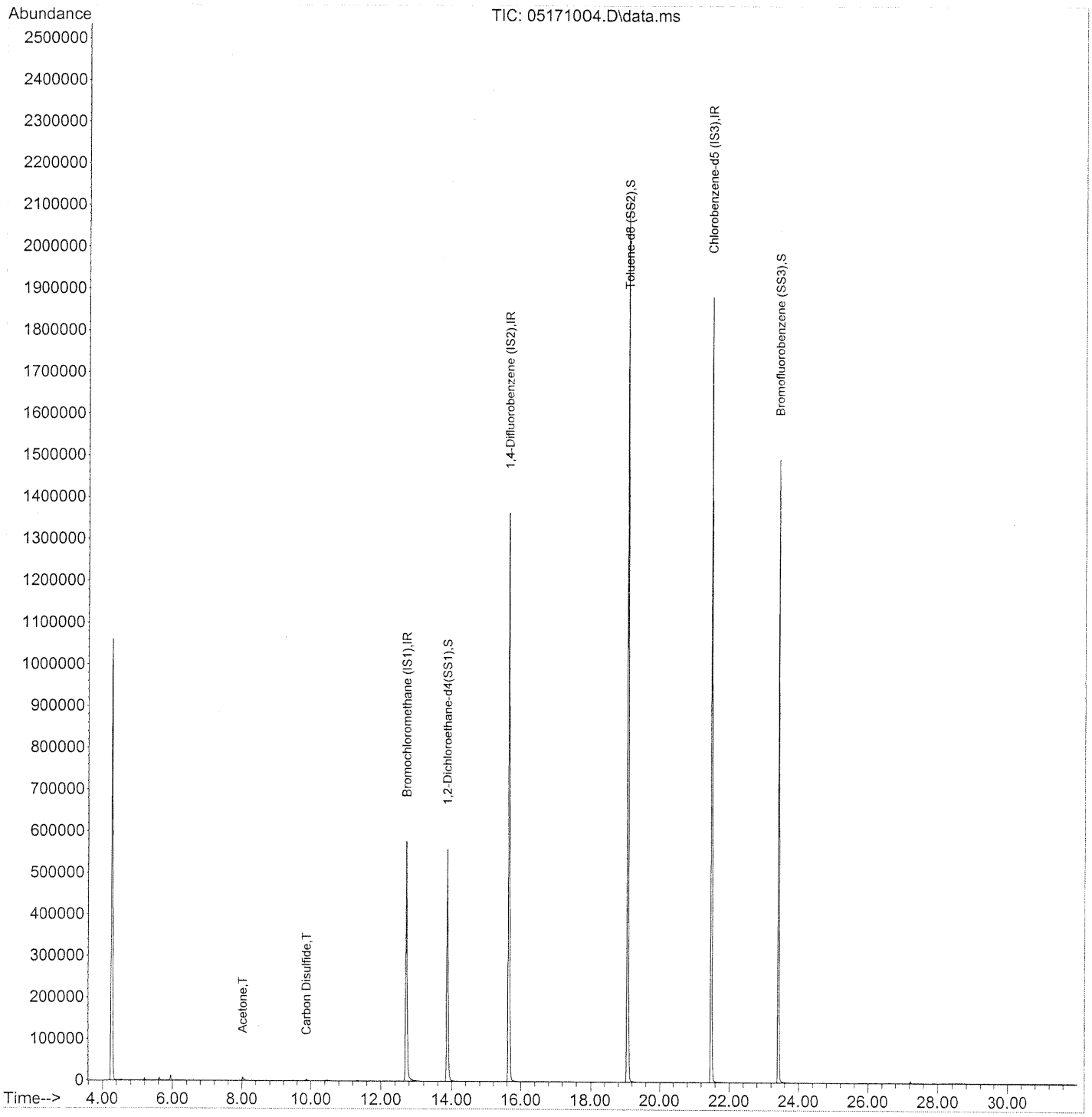
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:31
Operator : EM
Sample : TO-15 Method Blank (1000ml)
Misc : S20-04261001
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 12:08:09 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:31
Operator : EM
Sample : TO-15 Method Blank (1000ml)
Misc : S20-04261001
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 12:08:09 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	316182	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1607122	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	801790	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	570781	24.258	ng	-0.03
Spiked Amount 25.000			Recovery = 97.04%			
57) Toluene-d8 (SS2)	19.07	98	1876194	24.528	ng	0.00
Spiked Amount 25.000			Recovery = 98.12%			
73) Bromofluorobenzene (SS3)	23.42	174	496166	25.408	ng	0.00
Spiked Amount 25.000			Recovery = 101.64%			
Target Compounds						Qvalue
2) Propene	4.81	42	186	N.D.		
3) Dichlorodifluoromethan...	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	0.00	45	0	N.D. d		
11) Acetonitrile	7.58	41	91	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) Acetone	8.02	58	6674	0.406	ng	88
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	9.46	84	180	N.D.		
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	9.87	76	9701	0.126	ng	83
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone (MEK)	0.00	72	0	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

EM 5/17/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:31
Operator : EM
Sample : TO-15 Method Blank (1000ml)
Misc : S20-04261001
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 12:08:09 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
32) Chloroform	0.00	83	0	N.D.	
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	0.00	62	0	N.D.	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
39) Isopropyl Acetate	0.00	61	0	N.D.	
40) 1-Butanol	0.00	56	0	N.D.	
41) Benzene	15.16	78	100	N.D.	
42) Carbon Tetrachloride	0.00	117	0	N.D.	
43) Cyclohexane	15.66	84	683	N.D.	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	
46) Bromodichloromethane	0.00	83	0	N.D.	
47) Trichloroethene	0.00	130	0	N.D.	
48) 1,4-Dioxane	0.00	88	0	N.D.	
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D.	
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	0.00	91	0	N.D.	
59) 2-Hexanone	0.00	43	0	N.D.	
60) Dibromochloromethane	0.00	129	0	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	0.00	166	0	N.D.	
65) Chlorobenzene	0.00	112	0	N.D.	
66) Ethylbenzene	0.00	91	0	N.D.	
67) m- & p-Xylenes	0.00	91	0	N.D.	
68) Bromoform	0.00	173	0	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	0.00	91	0	N.D.	
71) n-Nonane	0.00	43	0	N.D.	
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
74) Cumene	23.42	105	646	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	0.00	91	0	N.D.	
77) 3-Ethyltoluene	0.00	105	0	N.D.	
78) 4-Ethyltoluene	0.00	105	0	N.D.	
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D.	

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:31
Operator : EM
Sample : TO-15 Method Blank (1000ml)
Misc : S20-04261001
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 12:08:09 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

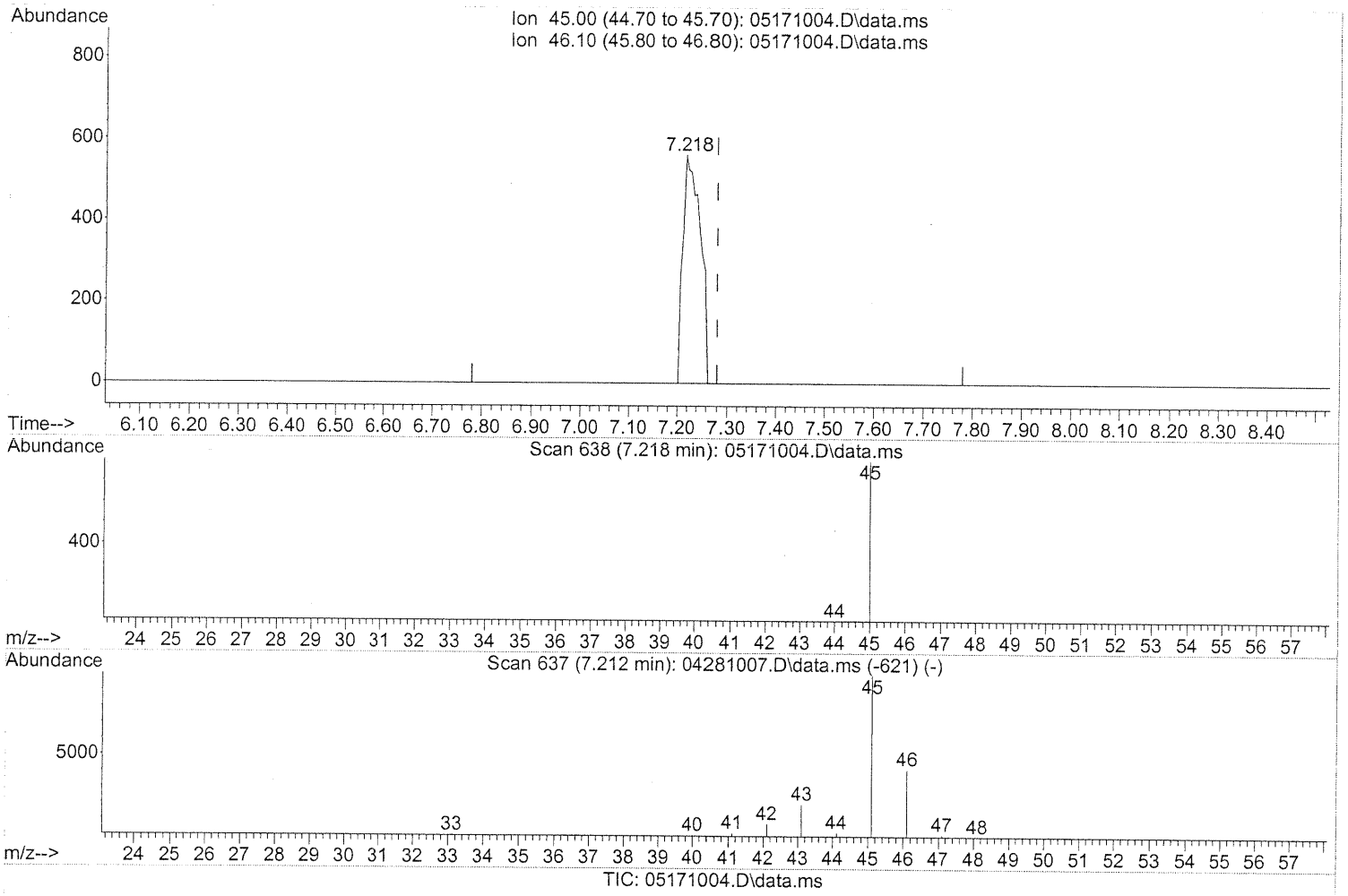
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	0.00	105	0	N.D.	
82) 1,2,4-Trimethylbenzene	0.00	105	0	N.D.	
83) n-Decane	25.39	57	653	N.D.	
84) Benzyl Chloride	0.00	91	0	N.D.	
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.	
86) 1,4-Dichlorobenzene	0.00	146	0	N.D.	
87) sec-Butylbenzene	0.00	105	0	N.D.	
88) 4-Isopropyltoluene (p-...	0.00	119	0	N.D.	
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D.	
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	26.22	57	97	N.D.	
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.	
95) Naphthalene	27.91	128	1027	N.D.	
96) n-Dodecane	0.00	57	0	N.D.	
97) Hexachlorobutadiene	0.00	225	0	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	0.00	119	0	N.D.	
100) n-Butylbenzene	0.00	91	0	N.D.	

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

Quantitation Report (Qedit)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:31
Operator : EM
Sample : TO-15 Method Blank (1000ml)
Misc : S20-04261001
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 12:07:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(10) Ethanol (T)

7.218min (-0.063) 0.11ng

response 1417

Ion	Exp%	Act%
45.00	100	100
46.10	41.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

FP

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P100518-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.20	ND	0.097	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.10	ND	0.039	
106-99-0	1,3-Butadiene	ND	0.20	ND	0.090	
74-83-9	Bromomethane	ND	0.10	ND	0.026	
75-00-3	Chloroethane	ND	0.10	ND	0.038	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.10	ND	0.018	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.0	ND	0.41	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.10	ND	0.025	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	ND	0.032	
76-13-1	Trichlorotrifluoroethane	ND	0.10	ND	0.013	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	ND	0.025	
75-34-3	1,1-Dichloroethane	ND	0.10	ND	0.025	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	ND	0.028	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P100518-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.10	ND	0.025	
141-78-6	Ethyl Acetate	ND	0.50	ND	0.14	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.10	ND	0.020	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.10	ND	0.025	
71-55-6	1,1,1-Trichloroethane	ND	0.10	ND	0.018	
71-43-2	Benzene	ND	0.10	ND	0.031	
56-23-5	Carbon Tetrachloride	ND	0.10	ND	0.016	
110-82-7	Cyclohexane	ND	0.50	ND	0.15	
78-87-5	1,2-Dichloropropane	ND	0.10	ND	0.022	
75-27-4	Bromodichloromethane	ND	0.10	ND	0.015	
79-01-6	Trichloroethene	ND	0.10	ND	0.019	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	0.50	ND	0.12	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.10	ND	0.012	
106-93-4	1,2-Dibromoethane	ND	0.10	ND	0.013	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P100518-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.10	ND	0.015	
108-90-7	Chlorobenzene	ND	0.10	ND	0.022	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	0.50	ND	0.12	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	ND	0.015	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.10	ND	0.017	
106-46-7	1,4-Dichlorobenzene	ND	0.10	ND	0.017	
95-50-1	1,2-Dichlorobenzene	ND	0.10	ND	0.017	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

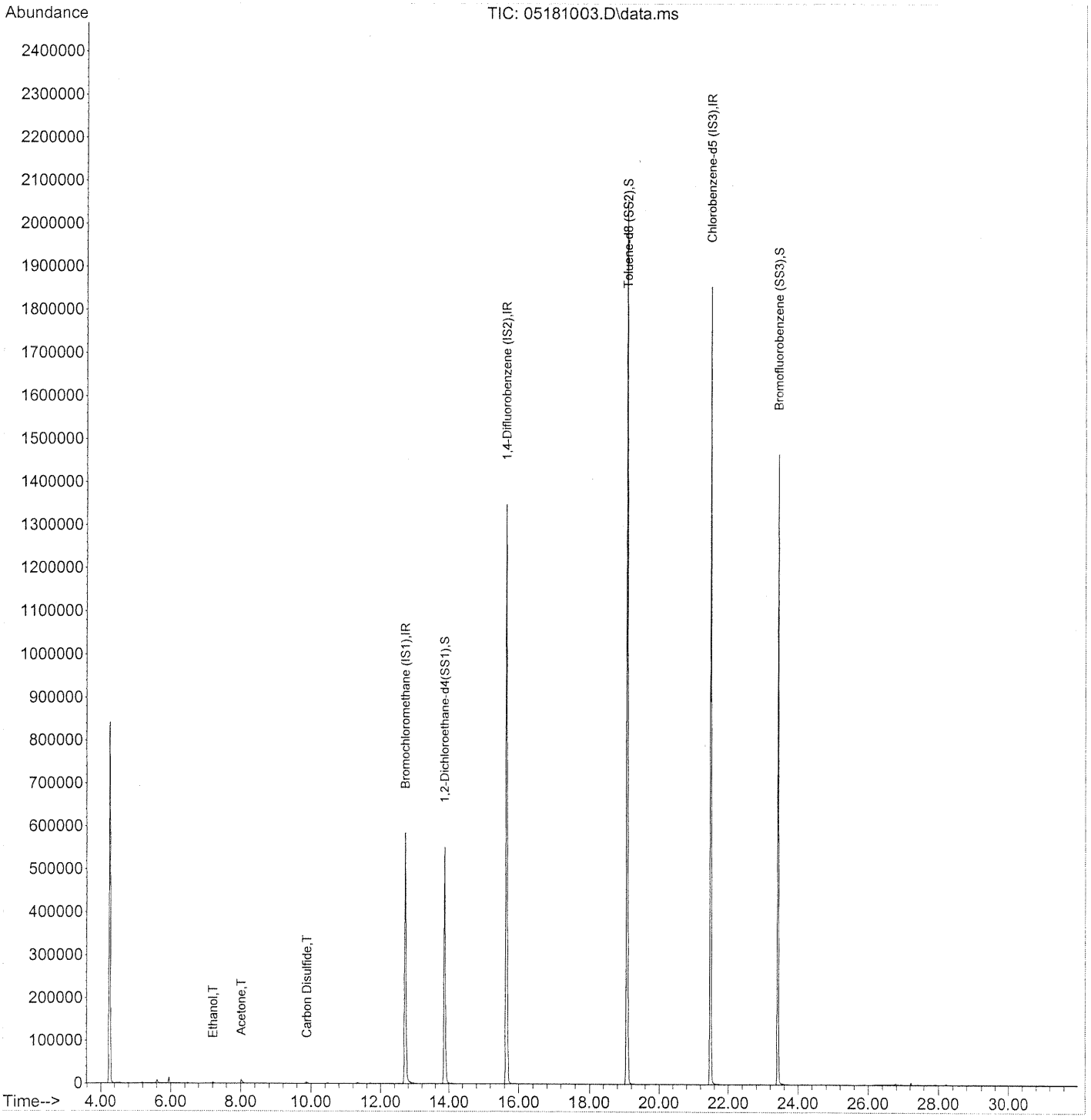
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181003.D
Acq On : 18 May 2010 10:03
Operator : EM
Sample : TO-15 Method Blank (1000ml)
Misc : S20-04261001
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 11:30:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

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Acq On : 18 May 2010 10:03
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	315084	25.000 ng	-0.05
37) 1,4-Difluorobenzene (IS2)	15.66	114	1576672	25.000 ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	790345	25.000 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(...	13.87	65	561691	23.955 ng	-0.03
Spiked Amount 25.000			Recovery	= 95.84%	
57) Toluene-d8 (SS2)	19.07	98	1835385	24.342 ng	0.00
Spiked Amount 25.000			Recovery	= 97.36%	
73) Bromofluorobenzene (SS3)	23.42	174	488974	25.403 ng	0.00
Spiked Amount 25.000			Recovery	= 101.60%	
Target Compounds					Qvalue
2) Propene	4.81	42	102	N.D.	
3) Dichlorodifluoromethan...	0.00	85	0	N.D.	
4) Chloromethane	0.00	50	0	N.D.	
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.	
6) Vinyl Chloride	0.00	62	0	N.D.	
7) 1,3-Butadiene	0.00	54	0	N.D.	
8) Bromomethane	0.00	94	0	N.D.	
9) Chloroethane	0.00	64	0	N.D.	
10) Ethanol	7.21	45	4772	0.356 ng	87
11) Acetonitrile	7.58	41	469	N.D.	
12) Acrolein	7.79	56	103	N.D.	
13) Acetone	8.01	58	7216	0.441 ng	85
14) Trichlorofluoromethane	0.00	101	0	N.D.	
15) 2-Propanol (Isopropanol)	0.00	45	0	N.D.	
16) Acrylonitrile	0.00	53	0	N.D.	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.	
19) Methylene Chloride	9.47	84	93	N.D.	
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	
22) Carbon Disulfide	9.88	76	8522	0.111 ng	81
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	
26) Vinyl Acetate	0.00	86	0	N.D.	
27) 2-Butanone (MEK)	0.00	72	0	N.D.	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	
29) Diisopropyl Ether	0.00	87	0	N.D.	
30) Ethyl Acetate	0.00	61	0	N.D.	
31) n-Hexane	0.00	57	0	N.D.	

EM 5/18/10

Quantitation Report (QT Reviewed)

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Operator : EM
Sample : TO-15 Method Blank (1000ml)
Misc : S20-04261001
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 18 11:30:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
32) Chloroform	0.00	83	0	N.D.	
34) Tetrahydrofuran (THF)	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	0.00	62	0	N.D.	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
39) Isopropyl Acetate	0.00	61	0	N.D.	
40) 1-Butanol	0.00	56	0	N.D.	
41) Benzene	0.00	78	0	N.D.	
42) Carbon Tetrachloride	0.00	117	0	N.D.	
43) Cyclohexane	15.65	84	645	N.D.	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	
46) Bromodichloromethane	0.00	83	0	N.D.	
47) Trichloroethene	0.00	130	0	N.D.	
48) 1,4-Dioxane	0.00	88	0	N.D.	
49) 2,2,4-Trimethylpentane...	0.00	57	0	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D.	
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	
58) Toluene	19.22	91	524	N.D.	
59) 2-Hexanone	0.00	43	0	N.D.	
60) Dibromochloromethane	0.00	129	0	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) n-Butyl Acetate	0.00	43	0	N.D.	
63) n-Octane	0.00	57	0	N.D.	
64) Tetrachloroethene	0.00	166	0	N.D.	
65) Chlorobenzene	0.00	112	0	N.D.	
66) Ethylbenzene	22.29	91	86	N.D.	
67) m- & p-Xylenes	22.29	91	86	N.D.	
68) Bromoform	0.00	173	0	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	22.86	91	565	N.D.	
71) n-Nonane	0.00	43	0	N.D.	
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
74) Cumene	23.40	105	1052	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	24.24	91	88	N.D.	
77) 3-Ethyltoluene	24.36	105	89	N.D.	
78) 4-Ethyltoluene	24.41	105	294	N.D.	
79) 1,3,5-Trimethylbenzene	24.41	105	294	N.D.	

Quantitation Report (QT Reviewed)

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Operator : EM
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Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	24.41	105	294	N.D.	
82) 1,2,4-Trimethylbenzene	0.00	105	0	N.D.	
83) n-Decane	25.40	57	487	N.D.	
84) Benzyl Chloride	25.18	91	282	N.D.	
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.	
86) 1,4-Dichlorobenzene	0.00	146	0	N.D.	
87) sec-Butylbenzene	0.00	105	0	N.D.	
88) 4-Isopropyltoluene (p-...	0.00	119	0	N.D.	
89) 1,2,3-Trimethylbenzene	0.00	105	0	N.D.	
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	
91) d-Limonene	0.00	68	0	N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	
93) n-Undecane	0.00	57	0	N.D.	
94) 1,2,4-Trichlorobenzene	27.75	180	585	N.D.	
95) Naphthalene	27.90	128	2815	N.D.	
96) n-Dodecane	0.00	57	0	N.D.	
97) Hexachlorobutadiene	0.00	225	0	N.D.	
98) Cyclohexanone	0.00	55	0	N.D.	
99) tert-Butylbenzene	0.00	119	0	N.D.	
100) n-Butylbenzene	0.00	91	0	N.D.	

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

QC SUMMARY FORMS

COLUMBIA ANALYTICAL SERVICES, INC.

SURROGATE SPIKE RECOVERY RESULTS

Client: **Environmental Health & Engineering, Inc.**
Client Project ID: **17131**

CAS Project ID: P1001651

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 5/10/10
Date(s) Received: 5/11/10
Date(s) Analyzed: 5/17 - 5/18/10

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4 % Recovered	Acceptance Limits	Toluene-d8 % Recovered	Acceptance Limits	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P100517-MB	**97**	70-130	**98**	70-130	**102**	70-130	
Method Blank	P100518-MB	**96**	70-130	**97**	70-130	**102**	70-130	
Lab Control Sample	P100517-LCS	**97**	70-130	**99**	70-130	**102**	70-130	
Lab Control Sample	P100518-LCS	**96**	70-130	**99**	70-130	**102**	70-130	
110416	P1001651-001	**96**	70-130	**99**	70-130	**102**	70-130	
110417	P1001651-002	**96**	70-130	**99**	70-130	**103**	70-130	
110418	P1001651-003	**96**	70-130	**99**	70-130	**103**	70-130	
110418	P1001651-003DUP	**96**	70-130	**98**	70-130	**101**	70-130	
110419	P1001651-004	**98**	70-130	**98**	70-130	**102**	70-130	
110512	P1001651-005	**95**	70-130	**98**	70-130	**103**	70-130	
110513	P1001651-006	**95**	70-130	**98**	70-130	**101**	70-130	
110514	P1001651-007	**94**	70-130	**98**	70-130	**103**	70-130	
110516	P1001651-008	**97**	70-130	**99**	70-130	**102**	70-130	
110515	P1001651-009	**96**	70-130	**99**	70-130	**103**	70-130	
110519	P1001651-010	**95**	70-130	**99**	70-130	**102**	70-130	
110520	P1001651-011	**95**	70-130	**99**	70-130	**104**	70-130	
110521	P1001651-012	**95**	70-130	**99**	70-130	**102**	70-130	
110522	P1001651-013	**97**	70-130	**98**	70-130	**102**	70-130	

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P100517-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
115-07-1	Propene	26.3	**22.9**	**87**	58-133	
75-71-8	Dichlorodifluoromethane (CFC 12)	26.0	**23.3**	**90**	63-114	
74-87-3	Chloromethane	25.0	**25.1**	**100**	60-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	**24.7**	**95**	63-118	
75-01-4	Vinyl Chloride	25.3	**24.6**	**97**	63-123	
106-99-0	1,3-Butadiene	26.8	**27.5**	**103**	63-141	
74-83-9	Bromomethane	25.8	**26.3**	**102**	67-133	
75-00-3	Chloroethane	25.5	**25.3**	**99**	65-122	
64-17-5	Ethanol	130	**149**	**115**	54-137	
75-05-8	Acetonitrile	26.0	**28.2**	**108**	59-128	
107-02-8	Acrolein	26.3	**29.6**	**113**	61-131	
67-64-1	Acetone	132	**125**	**95**	60-117	
75-69-4	Trichlorofluoromethane	26.3	**23.8**	**90**	62-125	
67-63-0	2-Propanol (Isopropyl Alcohol)	48.0	**56.4**	**118**	57-125	
107-13-1	Acrylonitrile	25.8	**29.4**	**114**	66-136	
75-35-4	1,1-Dichloroethene	27.5	**27.3**	**99**	71-121	
75-09-2	Methylene Chloride	26.8	**24.8**	**93**	67-109	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	27.0	**29.3**	**109**	64-145	
76-13-1	Trichlorotrifluoroethane	27.5	**26.6**	**97**	71-124	
75-15-0	Carbon Disulfide	26.0	**25.3**	**97**	64-119	
156-60-5	trans-1,2-Dichloroethene	25.5	**26.9**	**105**	68-126	
75-34-3	1,1-Dichloroethane	26.5	**25.9**	**98**	67-124	
1634-04-4	Methyl tert-Butyl Ether	26.3	**25.2**	**96**	67-124	
108-05-4	Vinyl Acetate	126	**154**	**122**	50-171	
78-93-3	2-Butanone (MEK)	26.8	**29.6**	**110**	69-136	

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P100517-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	27.0	**26.6**	**99**	68-123	
141-78-6	Ethyl Acetate	52.0	**54.8**	**105**	75-131	
110-54-3	n-Hexane	26.0	**25.6**	**98**	63-118	
67-66-3	Chloroform	27.5	**25.8**	**94**	66-124	
109-99-9	Tetrahydrofuran (THF)	26.5	**29.3**	**111**	66-129	
107-06-2	1,2-Dichloroethane	26.3	**25.4**	**97**	64-125	
71-55-6	1,1,1-Trichloroethane	26.0	**24.7**	**95**	71-123	
71-43-2	Benzene	25.8	**24.9**	**97**	63-112	
56-23-5	Carbon Tetrachloride	26.3	**27.0**	**103**	73-129	
110-82-7	Cyclohexane	51.8	**49.8**	**96**	68-118	
78-87-5	1,2-Dichloropropane	26.0	**26.4**	**102**	74-122	
75-27-4	Bromodichloromethane	26.3	**26.9**	**102**	75-125	
79-01-6	Trichloroethene	25.8	**24.8**	**96**	66-120	
123-91-1	1,4-Dioxane	26.0	**29.6**	**114**	75-127	
80-62-6	Methyl Methacrylate	52.8	**57.3**	**109**	80-130	
142-82-5	n-Heptane	25.8	**25.3**	**98**	71-121	
10061-01-5	cis-1,3-Dichloropropene	24.5	**27.0**	**110**	77-130	
108-10-1	4-Methyl-2-pentanone	26.8	**31.9**	**119**	74-134	
10061-02-6	trans-1,3-Dichloropropene	27.0	**30.9**	**114**	78-134	
79-00-5	1,1,2-Trichloroethane	26.0	**26.6**	**102**	76-122	
108-88-3	Toluene	26.8	**25.5**	**95**	66-120	
591-78-6	2-Hexanone	27.0	**31.6**	**117**	72-135	
124-48-1	Dibromochloromethane	28.3	**29.2**	**103**	79-136	
106-93-4	1,2-Dibromoethane	26.3	**27.9**	**106**	76-129	
123-86-4	n-Butyl Acetate	27.5	**30.5**	**111**	68-138	

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P100517-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

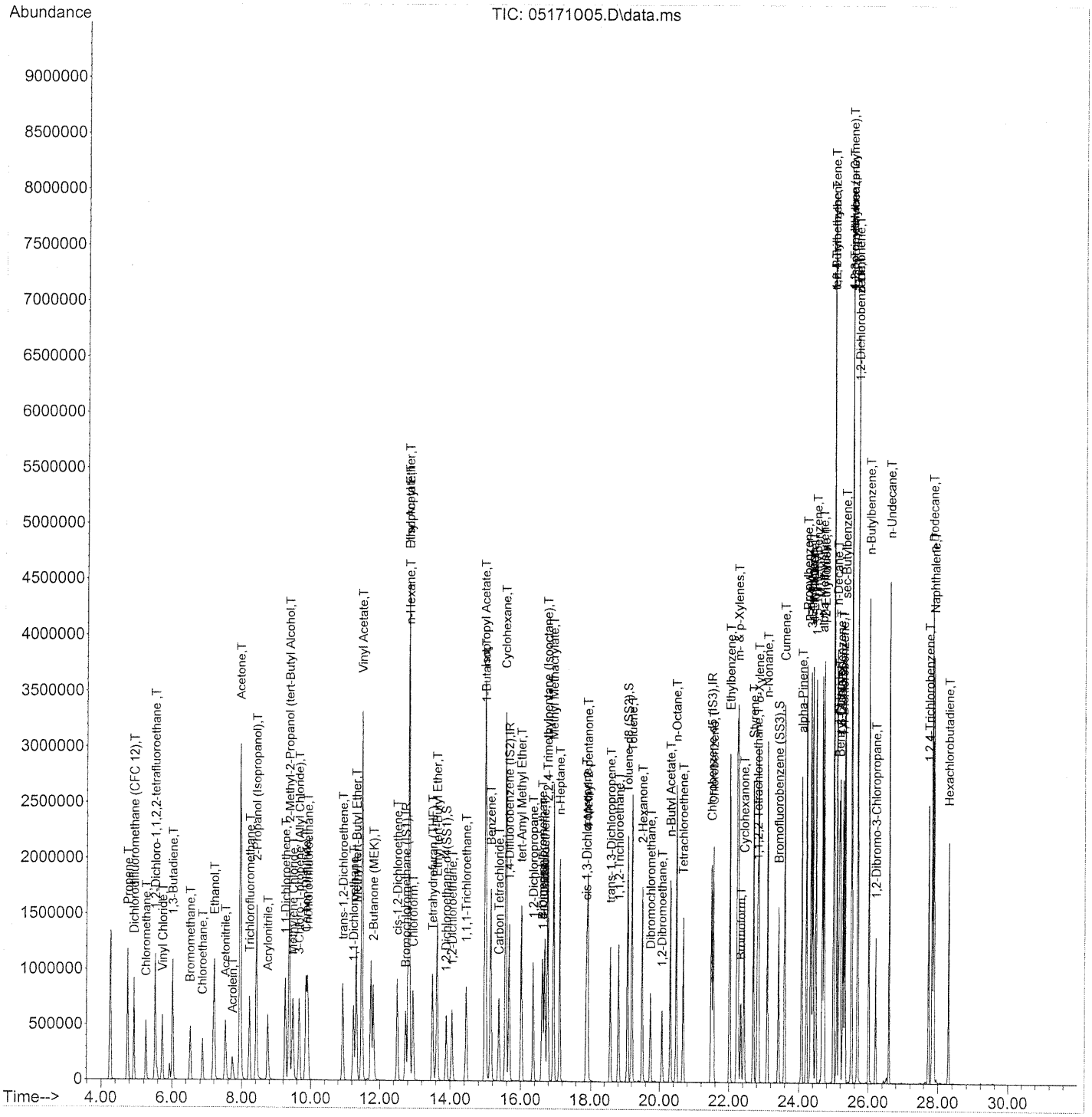
CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	26.3	**25.6**	**97**	71-122	
127-18-4	Tetrachloroethene	25.3	**24.0**	**95**	65-132	
108-90-7	Chlorobenzene	26.5	**25.6**	**97**	66-122	
100-41-4	Ethylbenzene	26.3	**25.3**	**96**	69-122	
179601-23-1	m,p-Xylenes	51.5	**48.8**	**95**	69-122	
75-25-2	Bromoform	26.5	**26.4**	**100**	73-150	
100-42-5	Styrene	26.3	**27.6**	**105**	75-130	
95-47-6	o-Xylene	26.0	**23.6**	**91**	69-122	
111-84-2	n-Nonane	25.8	**25.2**	**98**	68-125	
79-34-5	1,1,2,2-Tetrachloroethane	27.0	**29.5**	**109**	80-126	
98-82-8	Cumene	25.3	**24.2**	**96**	70-123	
80-56-8	alpha-Pinene	24.8	**24.7**	**100**	75-128	
103-65-1	n-Propylbenzene	25.3	**24.6**	**97**	70-125	
622-96-8	4-Ethyltoluene	26.3	**25.8**	**98**	71-129	
108-67-8	1,3,5-Trimethylbenzene	26.5	**25.9**	**98**	71-125	
95-63-6	1,2,4-Trimethylbenzene	25.5	**26.6**	**104**	69-132	
100-44-7	Benzyl Chloride	26.8	**29.5**	**110**	78-144	
541-73-1	1,3-Dichlorobenzene	26.0	**27.2**	**105**	65-132	
106-46-7	1,4-Dichlorobenzene	26.3	**26.1**	**99**	66-126	
95-50-1	1,2-Dichlorobenzene	25.8	**26.7**	**103**	67-134	
5989-27-5	d-Limonene	26.5	**29.0**	**109**	68-149	
96-12-8	1,2-Dibromo-3-chloropropane	27.0	**29.0**	**107**	76-150	
120-82-1	1,2,4-Trichlorobenzene	27.3	**29.3**	**107**	66-145	
91-20-3	Naphthalene	25.0	**31.9**	**128**	71-147	
87-68-3	Hexachlorobutadiene	26.8	**27.4**	**102**	65-140	

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171005.D
Acq On : 17 May 2010 12:15
Operator : EM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261001/S20-05101005
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 13:09:10 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.74	130	327525	25.000	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	15.67	114	1653508	25.000	ng		-0.01
56) Chlorobenzene-d5 (IS3)	21.49	82	826069	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.89	65	590861	24.242	ng		-0.02
Spiked Amount 25.000			Recovery	=	96.96%		
57) Toluene-d8 (SS2)	19.07	98	1944575	24.675	ng		0.00
Spiked Amount 25.000			Recovery	=	98.68%		
73) Bromofluorobenzene (SS3)	23.42	174	513800	25.538	ng		0.00
Spiked Amount 25.000			Recovery	=	102.16%		
Target Compounds							Qvalue
2) Propene	4.75	42	584411	22.875	ng		99
3) Dichlorodifluoromethan...	4.93	85	1022891	23.334	ng		100
4) Chloromethane	5.26	50	813355	25.096	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.52	135	538007	24.687	ng		99
6) Vinyl Chloride	5.73	62	881343	24.629	ng		99
7) 1,3-Butadiene	6.02	54	712466	27.529	ng		99
8) Bromomethane	6.52	94	477860	26.264	ng		100
9) Chloroethane	6.86	64	465212	25.326	ng		99
10) Ethanol	7.21	45	2069609	148.587	ng		99
11) Acetonitrile	7.52	41	991994	28.188	ng		99
12) Acrolein	7.72	56	321441	29.606	ng		99
13) Acetone	7.95	58	2130969	125.149	ng		100
14) Trichlorofluoromethane	8.22	101	904130	23.819	ng		100
15) 2-Propanol (Isopropanol)	8.42	45	2975826	56.371	ng		99
16) Acrylonitrile	8.75	53	749075	29.400	ng		100
17) 1,1-Dichloroethene	9.26	96	555008	27.336	ng		98
18) 2-Methyl-2-Propanol (t...	9.37	59	3176256	58.308	ng		99
19) Methylene Chloride	9.48	84	557208	24.842	ng		95
20) 3-Chloro-1-propene (Al...	9.66	41	857192	29.306	ng		97
21) Trichlorotrifluoroethane	9.91	151	426448	26.599	ng		98
22) Carbon Disulfide	9.86	76	2024379	25.318	ng		98
23) trans-1,2-Dichloroethene	10.93	61	805343	26.873	ng		97
24) 1,1-Dichloroethane	11.24	63	999283	25.878	ng		100
25) Methyl tert-Butyl Ether	11.32	73	1757863	25.204	ng		98
26) Vinyl Acetate	11.49	86	793327	154.367	ng	#	85
27) 2-Butanone (MEK)	11.81	72	419289	29.645	ng		93
28) cis-1,2-Dichloroethene	12.50	61	794362	26.638	ng		96
29) Diisopropyl Ether	12.83	87	537791	25.675	ng	#	78
30) Ethyl Acetate	12.83	61	460515	54.771	ng		97
31) n-Hexane	12.84	57	1103642	25.635	ng		98

EM 5/17/10

Quantitation Report (QT Reviewed)

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Misc : S20-04261001/S20-05101005
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Quant Time: May 17 13:09:10 2010
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.95	83	927299	25.811	ng		100
34) Tetrahydrofuran (THF)	13.50	72	401236	29.337	ng		95
35) Ethyl tert-Butyl Ether	13.63	87	735632	25.141	ng		94
36) 1,2-Dichloroethane	14.05	62	740079	25.410	ng		100
38) 1,1,1-Trichloroethane	14.45	97	816237	24.659	ng		99
39) Isopropyl Acetate	14.98	61	811856	57.029	ng	#	86
40) 1-Butanol	15.00	56	1524142	66.701	ng		95
41) Benzene	15.15	78	2297032	24.887	ng		100
42) Carbon Tetrachloride	15.38	117	662626	26.964	ng		100
43) Cyclohexane	15.57	84	1932856	49.827	ng		95
44) tert-Amyl Methyl Ether	16.02	73	1737898	25.684	ng		99
45) 1,2-Dichloropropane	16.35	63	596118	26.444	ng		100
46) Bromodichloromethane	16.62	83	744349	26.887	ng		99
47) Trichloroethene	16.69	130	582768	24.766	ng		100
48) 1,4-Dioxane	16.63	88	517677	29.574	ng		97
49) 2,2,4-Trimethylpentane...	16.78	57	2620917	24.244	ng		98
50) Methyl Methacrylate	16.94	100	554811	57.324	ng		89
51) n-Heptane	17.13	71	668624	25.337	ng		97
52) cis-1,3-Dichloropropene	17.87	75	930172	26.982	ng		100
53) 4-Methyl-2-pentanone	17.90	58	635211	31.855	ng		98
54) trans-1,3-Dichloropropene	18.57	75	938348	30.858	ng		100
55) 1,1,2-Trichloroethane	18.81	97	537040	26.646	ng		98
58) Toluene	19.20	91	2492039	25.491	ng		99
59) 2-Hexanone	19.50	43	1475495	31.638	ng		100
60) Dibromochloromethane	19.74	129	565331	29.203	ng		100
61) 1,2-Dibromoethane	20.07	107	602461	27.910	ng		100
62) n-Butyl Acetate	20.31	43	1598515	30.497	ng		99
63) n-Octane	20.48	57	580108	25.578	ng		96
64) Tetrachloroethene	20.68	166	550561	24.042	ng		100
65) Chlorobenzene	21.55	112	1525759	25.600	ng		100
66) Ethylbenzene	22.02	91	2770414	25.326	ng		98
67) m- & p-Xylenes	22.25	91	4326107	48.785	ng		98
68) Bromoform	22.34	173	423283	26.354	ng		100
69) Styrene	22.70	104	1727798	27.631	ng		99
70) o-Xylene	22.85	91	2227885	23.582	ng		98
71) n-Nonane	23.10	43	1290179	25.161	ng		96
72) 1,1,2,2-Tetrachloroethane	22.81	83	997701	29.484	ng		99
74) Cumene	23.59	105	2764694	24.201	ng		100
75) alpha-Pinene	24.08	93	1321542	24.658	ng		97
76) n-Propylbenzene	24.22	91	3449097	24.638	ng		98
77) 3-Ethyltoluene	24.34	105	2758227	26.136	ng		99
78) 4-Ethyltoluene	24.40	105	2749769	25.782	ng		99
79) 1,3,5-Trimethylbenzene	24.49	105	2312935	25.863	ng		98

Quantitation Report (QT Reviewed)

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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.68	118	1277257	27.214	ng	98
81) 2-Ethyltoluene	24.73	105	2752271	24.982	ng	73
82) 1,2,4-Trimethylbenzene	24.99	105	2485739	26.592	ng	99
83) n-Decane	25.09	57	1420856	26.435	ng	98
84) Benzyl Chloride	25.16	91	2047600	29.526	ng	98
85) 1,3-Dichlorobenzene	25.19	146	1190838	27.189	ng	99
86) 1,4-Dichlorobenzene	25.27	146	1210776	26.130	ng	100
87) sec-Butylbenzene	25.33	105	3131137	25.493	ng	99
88) 4-Isopropyltoluene (p-...	25.51	119	3029747	25.158	ng	98
89) 1,2,3-Trimethylbenzene	25.51	105	2517520	26.289	ng	91
90) 1,2-Dichlorobenzene	25.69	146	1173191	26.687	ng	99
91) d-Limonene	25.68	68	1067113	29.001	ng	95
92) 1,2-Dibromo-3-Chloropr...	26.21	157	403308	28.952	ng	92
93) n-Undecane	26.60	57	1487411	27.606	ng	97
94) 1,2,4-Trichlorobenzene	27.74	180	831939	29.308	ng	98
95) Naphthalene	27.88	128	3298578	31.946	ng	100
96) n-Dodecane	27.83	57	1483090	26.850	ng	97
97) Hexachlorobutadiene	28.30	225	438052	27.392	ng	99
98) Cyclohexanone	22.44	55	915327	29.698	ng	97
99) tert-Butylbenzene	24.99	119	2413102	25.503	ng	99
100) n-Butylbenzene	26.01	91	2622359	27.328	ng	99

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

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Lab Control Sample**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P100518-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
115-07-1	Propene	26.3	**22.3**	**85**	58-133	
75-71-8	Dichlorodifluoromethane (CFC 12)	26.0	**23.1**	**89**	63-114	
74-87-3	Chloromethane	25.0	**24.6**	**98**	60-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	**23.9**	**92**	63-118	
75-01-4	Vinyl Chloride	25.3	**23.9**	**94**	63-123	
106-99-0	1,3-Butadiene	26.8	**26.7**	**100**	63-141	
74-83-9	Bromomethane	25.8	**25.3**	**98**	67-133	
75-00-3	Chloroethane	25.5	**24.4**	**96**	65-122	
64-17-5	Ethanol	130	**144**	**111**	54-137	
75-05-8	Acetonitrile	26.0	**27.7**	**107**	59-128	
107-02-8	Acrolein	26.3	**29.0**	**110**	61-131	
67-64-1	Acetone	132	**124**	**94**	60-117	
75-69-4	Trichlorofluoromethane	26.3	**23.0**	**87**	62-125	
67-63-0	2-Propanol (Isopropyl Alcohol)	48.0	**54.1**	**113**	57-125	
107-13-1	Acrylonitrile	25.8	**29.0**	**112**	66-136	
75-35-4	1,1-Dichloroethene	27.5	**26.0**	**95**	71-121	
75-09-2	Methylene Chloride	26.8	**24.4**	**91**	67-109	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	27.0	**28.2**	**104**	64-145	
76-13-1	Trichlorotrifluoroethane	27.5	**25.3**	**92**	71-124	
75-15-0	Carbon Disulfide	26.0	**24.4**	**94**	64-119	
156-60-5	trans-1,2-Dichloroethene	25.5	**26.4**	**104**	68-126	
75-34-3	1,1-Dichloroethane	26.5	**25.7**	**97**	67-124	
1634-04-4	Methyl tert-Butyl Ether	26.3	**25.0**	**95**	67-124	
108-05-4	Vinyl Acetate	126	**151**	**120**	50-171	
78-93-3	2-Butanone (MEK)	26.8	**29.0**	**108**	69-136	

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P100518-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	27.0	**26.3**	**97**	68-123	
141-78-6	Ethyl Acetate	52.0	**53.2**	**102**	75-131	
110-54-3	n-Hexane	26.0	**24.6**	**95**	63-118	
67-66-3	Chloroform	27.5	**25.3**	**92**	66-124	
109-99-9	Tetrahydrofuran (THF)	26.5	**28.7**	**108**	66-129	
107-06-2	1,2-Dichloroethane	26.3	**24.8**	**94**	64-125	
71-55-6	1,1,1-Trichloroethane	26.0	**24.7**	**95**	71-123	
71-43-2	Benzene	25.8	**24.7**	**96**	63-112	
56-23-5	Carbon Tetrachloride	26.3	**27.1**	**103**	73-129	
110-82-7	Cyclohexane	51.8	**49.3**	**95**	68-118	
78-87-5	1,2-Dichloropropane	26.0	**25.9**	**100**	74-122	
75-27-4	Bromodichloromethane	26.3	**26.3**	**100**	75-125	
79-01-6	Trichloroethene	25.8	**24.4**	**95**	66-120	
123-91-1	1,4-Dioxane	26.0	**28.9**	**111**	75-127	
80-62-6	Methyl Methacrylate	52.8	**56.5**	**107**	80-130	
142-82-5	n-Heptane	25.8	**25.2**	**98**	71-121	
10061-01-5	cis-1,3-Dichloropropene	24.5	**26.5**	**108**	77-130	
108-10-1	4-Methyl-2-pentanone	26.8	**31.0**	**116**	74-134	
10061-02-6	trans-1,3-Dichloropropene	27.0	**30.2**	**112**	78-134	
79-00-5	1,1,2-Trichloroethane	26.0	**26.0**	**100**	76-122	
108-88-3	Toluene	26.8	**25.1**	**94**	66-120	
591-78-6	2-Hexanone	27.0	**31.4**	**116**	72-135	
124-48-1	Dibromochloromethane	28.3	**28.9**	**102**	79-136	
106-93-4	1,2-Dibromoethane	26.3	**27.4**	**104**	76-129	
123-86-4	n-Butyl Acetate	27.5	**30.1**	**109**	68-138	

Verified By: _____ Date: 5/24

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P100518-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Elsa Moctezuma Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

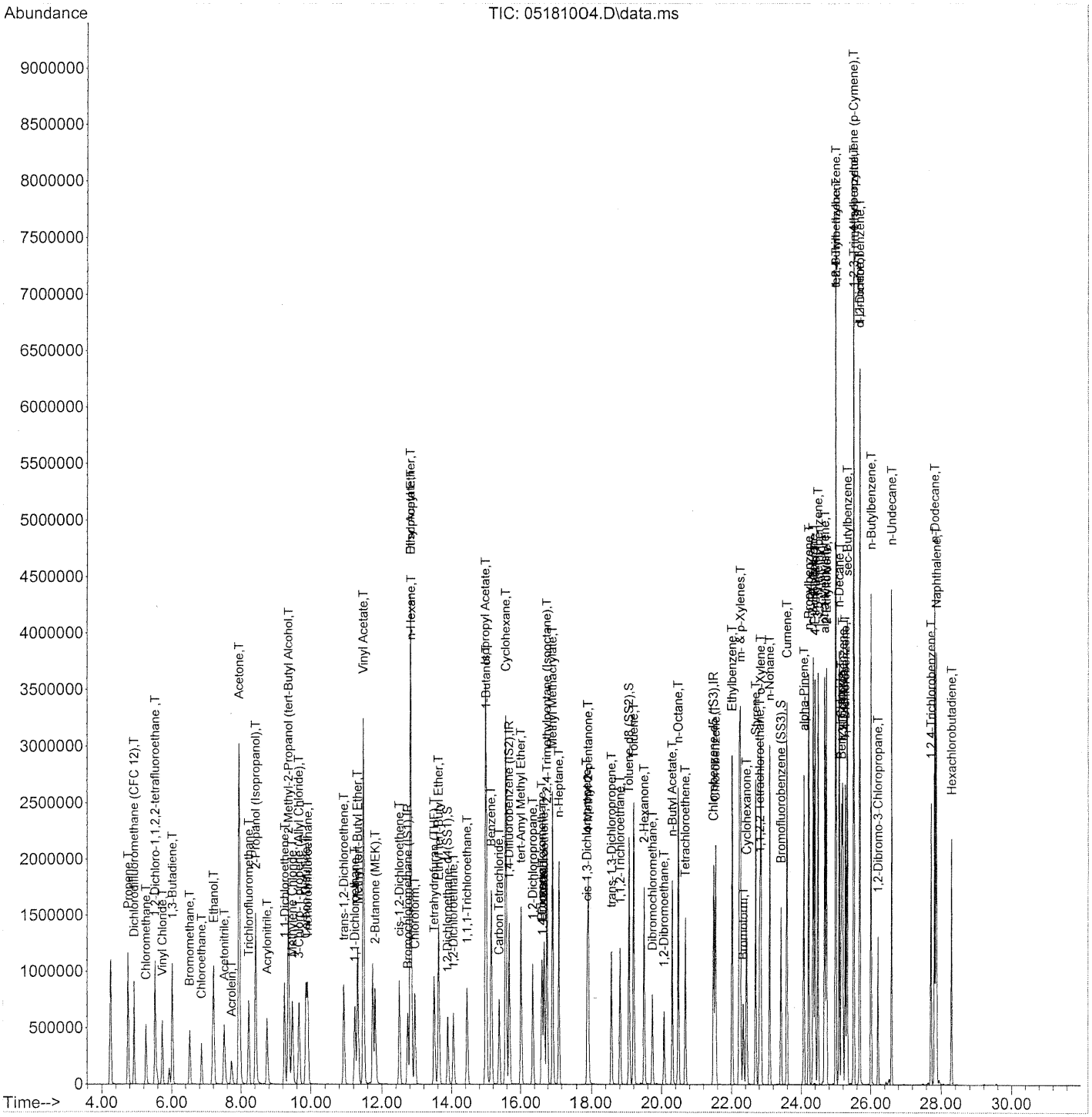
CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	26.3	**25.2**	**96**	71-122	
127-18-4	Tetrachloroethene	25.3	**23.8**	**94**	65-132	
108-90-7	Chlorobenzene	26.5	**25.2**	**95**	66-122	
100-41-4	Ethylbenzene	26.3	**25.0**	**95**	69-122	
179601-23-1	m,p-Xylenes	51.5	**48.3**	**94**	69-122	
75-25-2	Bromoform	26.5	**26.3**	**99**	73-150	
100-42-5	Styrene	26.3	**27.4**	**104**	75-130	
95-47-6	o-Xylene	26.0	**23.5**	**90**	69-122	
111-84-2	n-Nonane	25.8	**24.8**	**96**	68-125	
79-34-5	1,1,2,2-Tetrachloroethane	27.0	**29.0**	**107**	80-126	
98-82-8	Cumene	25.3	**23.9**	**94**	70-123	
80-56-8	alpha-Pinene	24.8	**24.6**	**99**	75-128	
103-65-1	n-Propylbenzene	25.3	**24.3**	**96**	70-125	
622-96-8	4-Ethyltoluene	26.3	**25.1**	**95**	71-129	
108-67-8	1,3,5-Trimethylbenzene	26.5	**25.6**	**97**	71-125	
95-63-6	1,2,4-Trimethylbenzene	25.5	**26.1**	**102**	69-132	
100-44-7	Benzyl Chloride	26.8	**29.3**	**109**	78-144	
541-73-1	1,3-Dichlorobenzene	26.0	**27.0**	**104**	65-132	
106-46-7	1,4-Dichlorobenzene	26.3	**25.7**	**98**	66-126	
95-50-1	1,2-Dichlorobenzene	25.8	**26.3**	**102**	67-134	
5989-27-5	d-Limonene	26.5	**28.7**	**108**	68-149	
96-12-8	1,2-Dibromo-3-chloropropane	27.0	**28.5**	**106**	76-150	
120-82-1	1,2,4-Trichlorobenzene	27.3	**28.9**	**106**	66-145	
91-20-3	Naphthalene	25.0	**31.6**	**126**	71-147	
87-68-3	Hexachlorobutadiene	26.8	**27.0**	**101**	65-140	

Verified By: _____ Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181004.D
Acq On : 18 May 2010 10:53
Operator : EM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261001/S20-05101005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 11:36:41 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



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Sample : 25ng TO-15 LCS STD
Misc : S20-04261001/S20-05101005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 11:36:41 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.74	130	332336	25.000	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	15.67	114	1667203	25.000	ng		-0.01
56) Chlorobenzene-d5 (IS3)	21.48	82	827491	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.89	65	593922	24.015	ng		-0.02
Spiked Amount 25.000			Recovery	=	96.04%		
57) Toluene-d8 (SS2)	19.07	98	1950017	24.701	ng		0.00
Spiked Amount 25.000			Recovery	=	98.80%		
73) Bromofluorobenzene (SS3)	23.42	174	513538	25.481	ng		0.00
Spiked Amount 25.000			Recovery	=	101.92%		
Target Compounds							Qvalue
2) Propene	4.75	42	578457	22.314	ng		99
3) Dichlorodifluoromethan...	4.93	85	1026820	23.085	ng		100
4) Chloromethane	5.26	50	807579	24.557	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	528866	23.917	ng		99
6) Vinyl Chloride	5.73	62	867347	23.887	ng		99
7) 1,3-Butadiene	6.02	54	701774	26.723	ng		99
8) Bromomethane	6.52	94	467960	25.347	ng		100
9) Chloroethane	6.86	64	455250	24.425	ng		99
10) Ethanol	7.21	45	2040953	144.409	ng		100
11) Acetonitrile	7.52	41	987773	27.662	ng		99
12) Acrolein	7.73	56	318996	28.955	ng		100
13) Acetone	7.95	58	2148823	124.371	ng		99
14) Trichlorofluoromethane	8.22	101	886774	23.023	ng		100
15) 2-Propanol (Isopropanol)	8.42	45	2899891	54.137	ng		99
16) Acrylonitrile	8.75	53	748966	28.970	ng		100
17) 1,1-Dichloroethene	9.26	96	536524	26.043	ng		98
18) 2-Methyl-2-Propanol (t...	9.37	59	3104293	56.162	ng		100
19) Methylene Chloride	9.48	84	555777	24.420	ng		96
20) 3-Chloro-1-propene (Al...	9.66	41	838349	28.246	ng		97
21) Trichlorotrifluoroethane	9.91	151	411943	25.323	ng		98
22) Carbon Disulfide	9.86	76	1980519	24.411	ng		99
23) trans-1,2-Dichloroethene	10.93	61	802249	26.382	ng		97
24) 1,1-Dichloroethane	11.24	63	1008140	25.729	ng		100
25) Methyl tert-Butyl Ether	11.32	73	1766045	24.955	ng		98
26) Vinyl Acetate	11.48	86	784926	150.521	ng	#	87
27) 2-Butanone (MEK)	11.81	72	415899	28.980	ng		94
28) cis-1,2-Dichloroethene	12.50	61	796278	26.316	ng		96
29) Diisopropyl Ether	12.83	87	538668	25.344	ng	#	82
30) Ethyl Acetate	12.83	61	454018	53.217	ng		97
31) n-Hexane	12.84	57	1074660	24.600	ng		98

EM 5/18/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181004.D
Acq On : 18 May 2010 10:53
Operator : EM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261001/S20-05101005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 11:36:41 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.95	83	921457	25.277	ng		100
34) Tetrahydrofuran (THF)	13.50	72	398966	28.749	ng		96
35) Ethyl tert-Butyl Ether	13.63	87	740354	24.936	ng		95
36) 1,2-Dichloroethane	14.05	62	731462	24.750	ng		99
38) 1,1,1-Trichloroethane	14.45	97	824748	24.712	ng		99
39) Isopropyl Acetate	14.98	61	802004	55.875	ng	#	87
40) 1-Butanol	15.00	56	1528146	66.327	ng		96
41) Benzene	15.15	78	2302511	24.742	ng		100
42) Carbon Tetrachloride	15.37	117	671061	27.083	ng		99
43) Cyclohexane	15.57	84	1928130	49.297	ng		95
44) tert-Amyl Methyl Ether	16.02	73	1731519	25.379	ng		99
45) 1,2-Dichloropropane	16.35	63	588544	25.893	ng		100
46) Bromodichloromethane	16.62	83	734765	26.323	ng		99
47) Trichloroethene	16.69	130	578090	24.366	ng		100
48) 1,4-Dioxane	16.63	88	510212	28.908	ng		98
49) 2,2,4-Trimethylpentane...	16.78	57	2629488	24.124	ng		97
50) Methyl Methacrylate	16.94	100	551665	56.530	ng		90
51) n-Heptane	17.13	71	671030	25.220	ng		97
52) cis-1,3-Dichloropropene	17.87	75	920931	26.495	ng		100
53) 4-Methyl-2-pentanone	17.90	58	622981	30.985	ng		98
54) trans-1,3-Dichloropropene	18.57	75	924663	30.158	ng		99
55) 1,1,2-Trichloroethane	18.81	97	529024	26.033	ng		98
58) Toluene	19.20	91	2459553	25.115	ng		99
59) 2-Hexanone	19.50	43	1464974	31.358	ng		100
60) Dibromochloromethane	19.74	129	560576	28.907	ng		100
61) 1,2-Dibromoethane	20.07	107	593269	27.437	ng		100
62) n-Butyl Acetate	20.31	43	1582890	30.147	ng		100
63) n-Octane	20.48	57	573263	25.233	ng		96
64) Tetrachloroethene	20.68	166	546070	23.805	ng		99
65) Chlorobenzene	21.54	112	1507336	25.248	ng		99
66) Ethylbenzene	22.01	91	2743054	25.033	ng		98
67) m- & p-Xylenes	22.25	91	4292096	48.319	ng		98
68) Bromoform	22.34	173	422927	26.287	ng		99
69) Styrene	22.70	104	1719368	27.449	ng		99
70) o-Xylene	22.84	91	2223515	23.495	ng		98
71) n-Nonane	23.10	43	1271650	24.757	ng		97
72) 1,1,2,2-Tetrachloroethane	22.81	83	981989	28.970	ng		99
74) Cumene	23.59	105	2737121	23.918	ng		100
75) alpha-Pinene	24.08	93	1320656	24.599	ng		97
76) n-Propylbenzene	24.21	91	3403673	24.272	ng		98
77) 3-Ethyltoluene	24.34	105	2766692	26.171	ng		99
78) 4-Ethyltoluene	24.40	105	2677558	25.061	ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	2297617	25.648	ng		98

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181004.D
Acq On : 18 May 2010 10:53
Operator : EM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261001/S20-05101005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 11:36:41 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	24.67	118	1260603	26.813 ng	97
81) 2-Ethyltoluene	24.72	105	2715620	24.607 ng	73
82) 1,2,4-Trimethylbenzene	24.99	105	2445274	26.114 ng	99
83) n-Decane	25.09	57	1406371	26.121 ng	98
84) Benzyl Chloride	25.15	91	2034786	29.291 ng	98
85) 1,3-Dichlorobenzene	25.19	146	1183666	26.979 ng	99
86) 1,4-Dichlorobenzene	25.26	146	1192639	25.695 ng	100
87) sec-Butylbenzene	25.32	105	3096083	25.164 ng	99
88) 4-Isopropyltoluene (p-...	25.50	119	2977137	24.679 ng	98
89) 1,2,3-Trimethylbenzene	25.51	105	2469688	25.745 ng	91
90) 1,2-Dichlorobenzene	25.68	146	1158096	26.299 ng	99
91) d-Limonene	25.68	68	1058408	28.715 ng	95
92) 1,2-Dibromo-3-Chloropr...	26.21	157	397909	28.515 ng	93
93) n-Undecane	26.60	57	1468030	27.199 ng	97
94) 1,2,4-Trichlorobenzene	27.73	180	820415	28.852 ng	98
95) Naphthalene	27.88	128	3265739	31.574 ng	100
96) n-Dodecane	27.83	57	1481805	26.780 ng	97
97) Hexachlorobutadiene	28.29	225	432270	26.984 ng	99
98) Cyclohexanone	22.43	55	903937	29.278 ng	97
99) tert-Butylbenzene	24.99	119	2372849	25.035 ng	99
100) n-Butylbenzene	26.01	91	2582919	26.871 ng	99

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

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110418**
Client Project ID: **17131**

CAS Project ID: P1001651
CAS Sample ID: P1001651-003DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8
Analyst: Elsa Moctezuma
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00410

Date Collected: 5/10/10
Date Received: 5/11/10
Date Analyzed: 5/17 - 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Propene	5.19	3.01	5.13	2.98	5.16	**1**	25	**M1**
Dichlorodifluoromethane (CFC 12)	2.19	0.444	2.13	0.432	2.16	**3**	25	
Chloromethane	0.578	0.280	0.422	0.204	0.5	**31**	25	**R**
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	852	452	846	449	849	**0.7**	25	**D**
Acetonitrile	ND	ND	ND	ND	-	-	25	
Acrolein	4.31	1.88	4.27	1.86	4.29	**0.9**	25	
Acetone	58.5	24.6	58.2	24.5	58.35	**0.5**	25	
Trichlorofluoromethane	1.16	0.207	1.18	0.211	1.17	**2**	25	
2-Propanol (Isopropyl Alcohol)	12.6	5.11	12.3	5.02	12.45	**2**	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	0.509	0.0664	0.483	0.0630	0.496	**5**	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	1.30	0.361	1.30	0.361	1.3	**0**	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
R = Duplicate precision not met.
D = The reported result is from a dilution.
M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110418** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-003DUP

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00410

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Ethyl Acetate	64.6	17.9	64.4	17.9	64.5	**0.3**	25	
n-Hexane	15.2	4.31	15.1	4.30	15.15	**0.7**	25	
Chloroform	12.9	2.64	12.8	2.63	12.85	**0.8**	25	
Tetrahydrofuran (THF)	0.816	0.277	2.91	0.987	1.863	**112**	25	**R**
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	8.75	2.74	8.73	2.73	8.74	**0.2**	25	
Carbon Tetrachloride	0.580	0.0922	0.552	0.0878	0.566	**5**	25	
Cyclohexane	4.08	1.19	4.09	1.19	4.085	**0.2**	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	3.70	0.552	3.68	0.549	3.69	**0.5**	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
Methyl Methacrylate	ND	ND	ND	ND	-	-	25	
n-Heptane	9.62	2.35	9.61	2.35	9.615	**0.1**	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	1.86	0.453	1.85	0.451	1.855	**0.5**	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	39.2	10.4	38.7	10.3	38.95	**1**	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	1.37	0.161	1.36	0.160	1.365	**0.7**	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
n-Butyl Acetate	9.05	1.91	8.87	1.87	8.96	**2**	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
R = Duplicate precision not met.

Verified By: _____ Date: 5/24/10

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **110418** CAS Project ID: P1001651
Client Project ID: **17131** CAS Sample ID: P1001651-003DUP

Test Code: EPA TO-15 Date Collected: 5/10/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 5/11/10
Analyst: Elsa Moctezuma Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00410

Initial Pressure (psig): -3.4 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.61

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
n-Octane	4.28	0.917	4.22	0.905	4.25	**1**	25	
Tetrachloroethene	1.34	0.198	1.33	0.196	1.335	**0.7**	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	8.63	1.99	8.55	1.97	8.59	**0.9**	25	
m,p-Xylenes	25.6	5.89	25.4	5.84	25.5	**0.8**	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	1.28	0.302	1.24	0.291	1.26	**3**	25	
o-Xylene	10.9	2.50	10.6	2.45	10.75	**3**	25	
n-Nonane	2.29	0.437	2.25	0.430	2.27	**2**	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	0.808	0.164	ND	ND	-	-	25	
alpha-Pinene	8.17	1.47	8.07	1.45	8.12	**1**	25	
n-Propylbenzene	3.19	0.650	3.12	0.634	3.155	**2**	25	
4-Ethyltoluene	4.95	1.01	4.83	0.982	4.89	**2**	25	
1,3,5-Trimethylbenzene	5.17	1.05	5.03	1.02	5.1	**3**	25	
1,2,4-Trimethylbenzene	17.5	3.55	17.0	3.47	17.25	**3**	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	0.562	0.0935	0.544	0.0905	0.553	**3**	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
d-Limonene	13.6	2.45	13.4	2.41	13.5	**1**	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	2.82	0.537	2.73	0.520	2.775	**3**	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

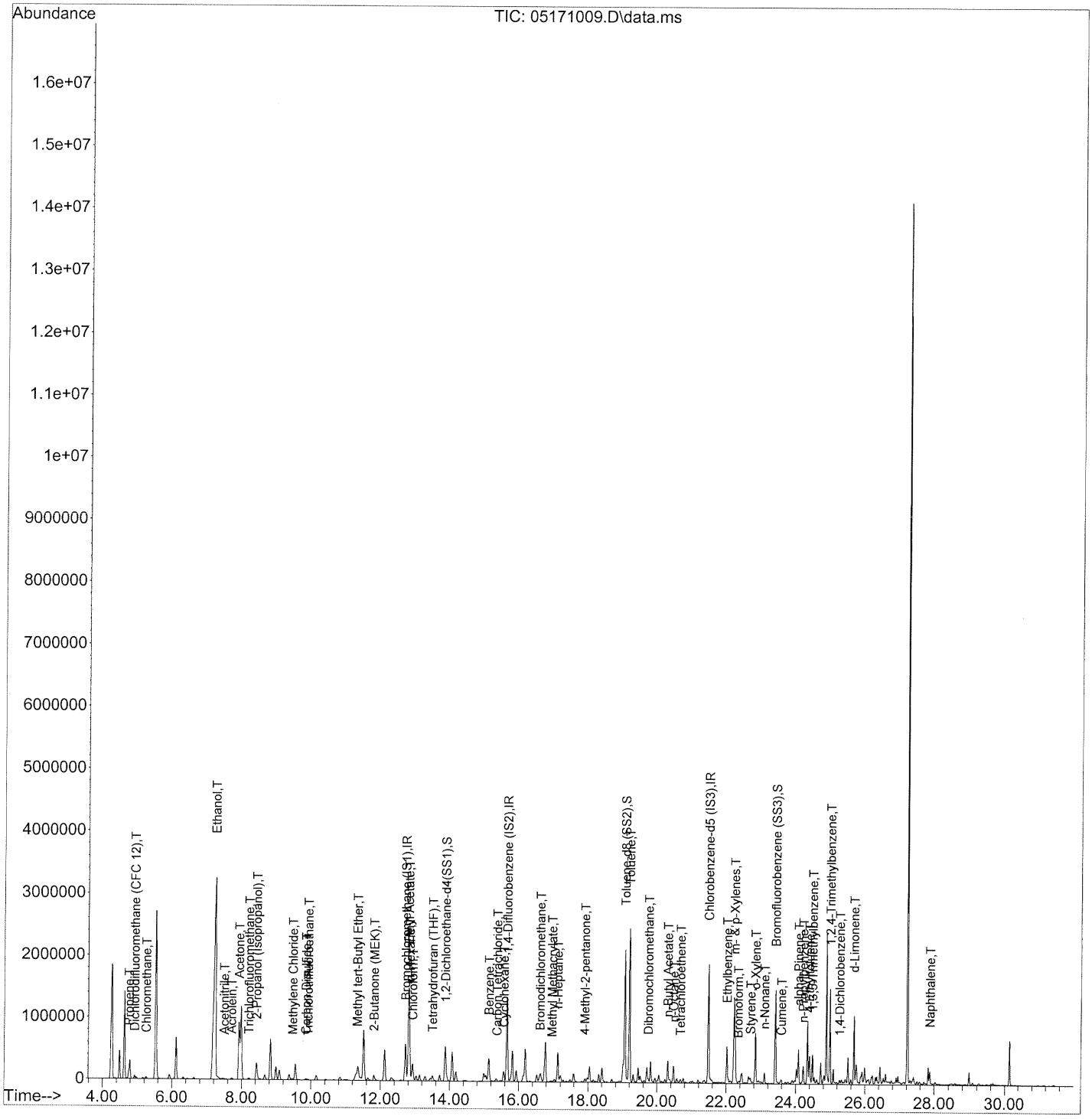
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

Verified By: Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 15:38:06 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 15:38:06 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	313228	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1574233	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	791652	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	562136	24.116	ng	-0.03
Spiked Amount 25.000			Recovery =	96.48%	✓	
57) Toluene-d8 (SS2)	19.07	98	1857597	24.596	ng	0.00
Spiked Amount 25.000			Recovery =	98.40%	✓	
73) Bromofluorobenzene (SS3)	23.42	174	489021	25.363	ng	0.00
Spiked Amount 25.000			Recovery =	101.44%	✓	

Target Compounds							Qvalue
2) Propene	4.76	42	77917	3.189	ng M	#	1
3) Dichlorodifluoromethan...	4.92	85	55531	1.325	ng		100
4) Chloromethane	5.26	50	8108	0.262	ng		98
10) Ethanol	7.25	45	7821787	587.197	ng see dil		99
11) Acetonitrile	7.50	41	16329	0.485	ng		82
12) Acrolein	7.71	56	27554	2.654	ng		99
13) Acetone	7.92	58	588805	36.158	ng	#	48
14) Trichlorofluoromethane	8.21	101	26730	0.736	ng		100
15) 2-Propanol (Isopropanol)	8.43	45	386523	7.656	ng		99
19) Methylene Chloride	9.47	84	5261	0.245	ng		98
21) Trichlorotrifluoroethane	9.91	151	4598	0.300	ng		84
22) Carbon Disulfide	9.86	76	42980	0.562	ng		98
25) Methyl tert-Butyl Ether	11.33	73	53878	0.808	ng		93
27) 2-Butanone (MEK)	11.82	72	42928	3.174	ng		94
30) Ethyl Acetate	12.81	61	321844	40.026	ng		96
31) n-Hexane	12.84	57	387274	9.406	ng		98
32) Chloroform	12.93	83	273774	7.968	ng		100
34) Tetrahydrofuran (THF)	13.51	72	23637	1.807	ng	#	59
41) Benzene	15.14	78	476621	5.424	ng		100
42) Carbon Tetrachloride	15.37	117	8026	0.343	ng		98
43) Cyclohexane	15.57	84	93754	2.539	ng		95
46) Bromodichloromethane	16.62	83	60226	2.285	ng		75
50) Methyl Methacrylate	16.96	100	2124	0.231	ng	#	1
51) n-Heptane	17.12	71	149922	5.967	ng		96
53) 4-Methyl-2-pentanone	17.91	58	21770	1.147	ng		91
58) Toluene	19.20	91	2249256	24.008	ng		99
60) Dibromochloromethane	19.75	129	15680	0.845	ng		100
62) n-Butyl Acetate	20.31	43	276610	5.507	ng		95
63) n-Octane	20.48	57	57039	2.624	ng		93
64) Tetrachloroethene	20.68	166	18150	0.827	ng		99

5/20/10

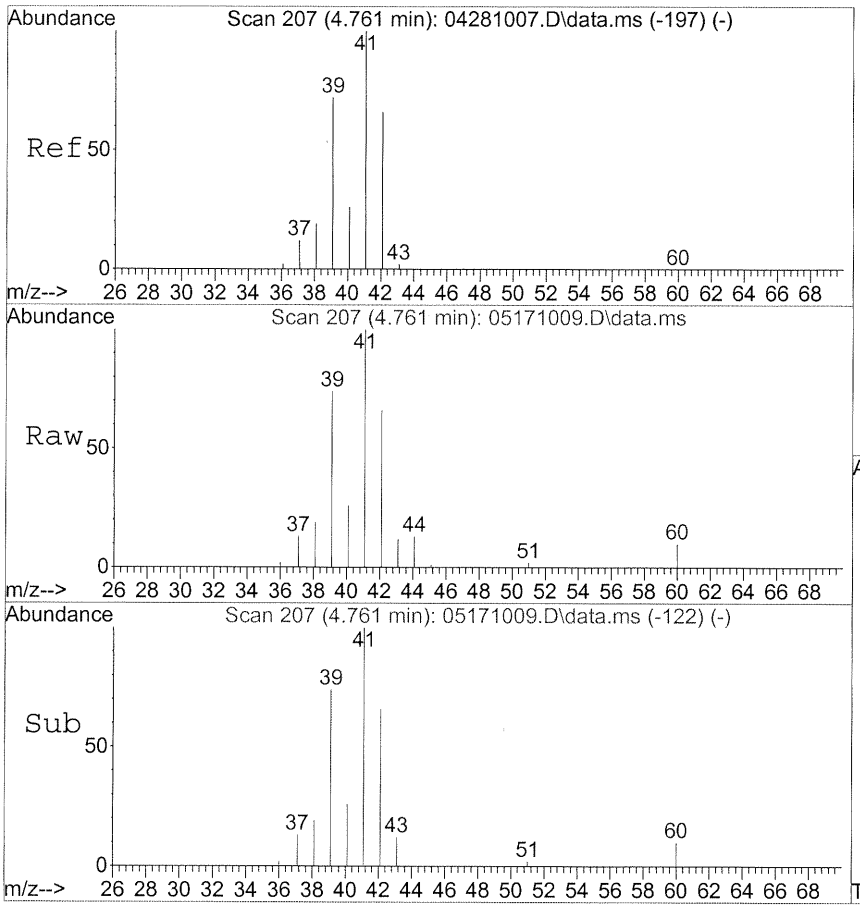
Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 20 15:38:06 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) Ethylbenzene	22.01	91	556956	5.313	ng	98
67) m- & p-Xylenes	22.22	91	1339443	15.762	ng	98
68) Bromoform	22.34	173	1668	0.108	ng	84
69) Styrene	22.70	104	46114	0.770	ng	97
70) o-Xylene	22.84	91	597768	6.602	ng	98
71) n-Nonane	23.10	43	68811	1.400	ng	94
74) Cumene	23.59	105	50853	0.464	ng	98
75) alpha-Pinene	24.08	93	257432	5.012	ng	95
76) n-Propylbenzene	24.21	91	259536	1.935	ng	96
78) 4-Ethyltoluene	24.39	105	306456	2.998	ng	98
79) 1,3,5-Trimethylbenzene	24.48	105	267924	3.126	ng	98
82) 1,2,4-Trimethylbenzene	24.99	105	948652	10.590	ng	87
86) 1,4-Dichlorobenzene	25.27	146	14995	0.338	ng	97
91) d-Limonene	25.68	68	294283	8.346	ng	95
95) Naphthalene	27.88	128	167563	1.693	ng	99

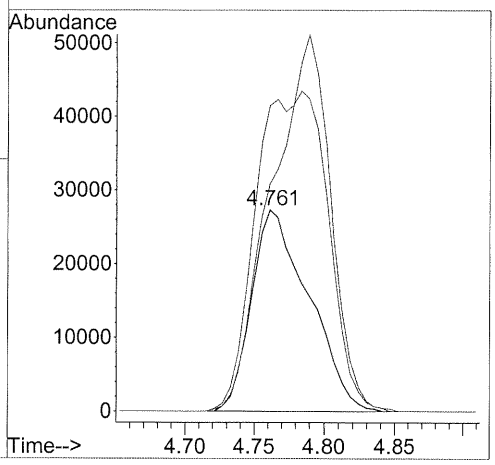
(#) = qualifier out of range (m) = manual integration (+) = signals summed

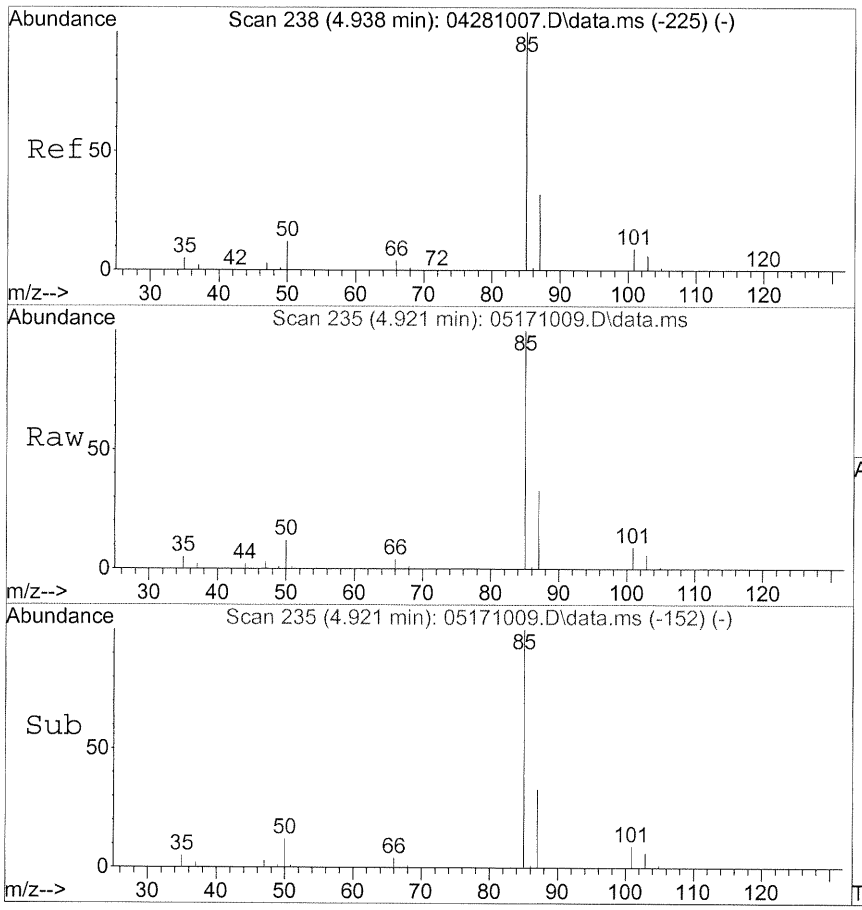


#2
Propene
Concen: 3.19 ng
RT: 4.76 min Scan# 207
Delta R.T. -0.017 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 42 Resp: 77917

Ion	Ratio	Lower	Upper
42	100		
39	0.0	88.4	128.4#
41	0.0	129.9	169.9#

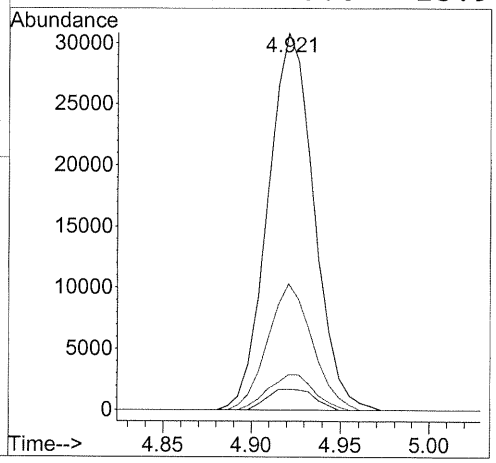


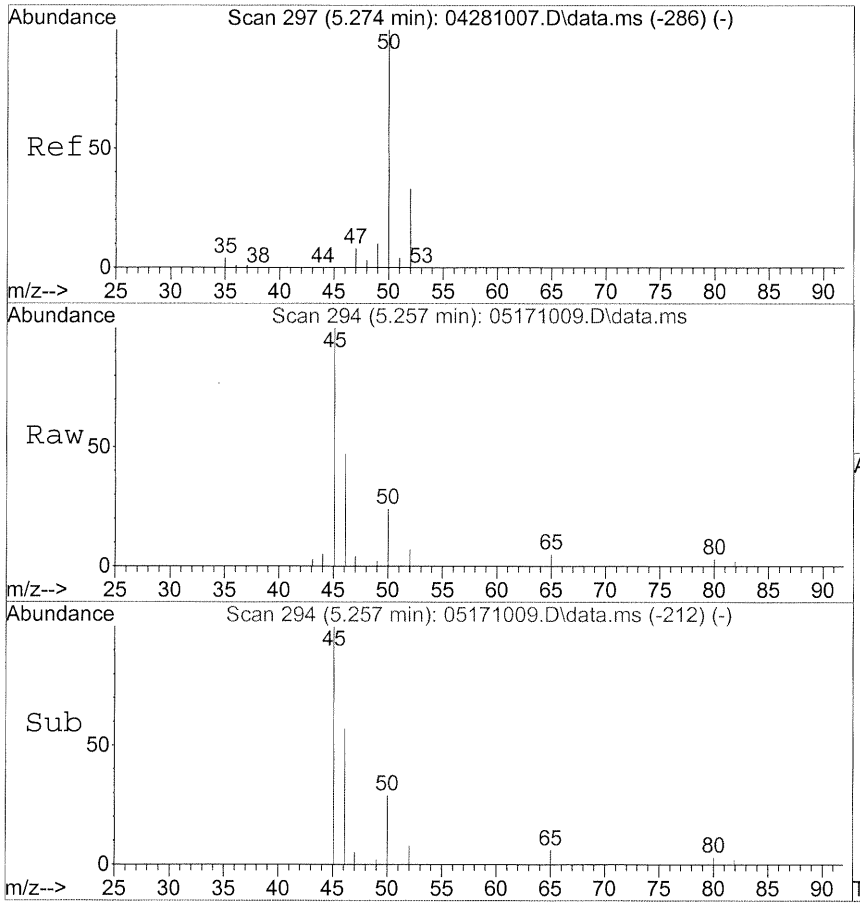


#3
Dichlorodifluoromethane (CFC
Concen: 1.32 ng
RT: 4.92 min Scan# 235
Delta R.T. -0.029 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 85 Resp: 55531

Ion	Ratio	Lower	Upper
85	100		
87	32.3	12.6	52.6
101	9.3	0.0	29.3
103	5.6	0.0	25.9

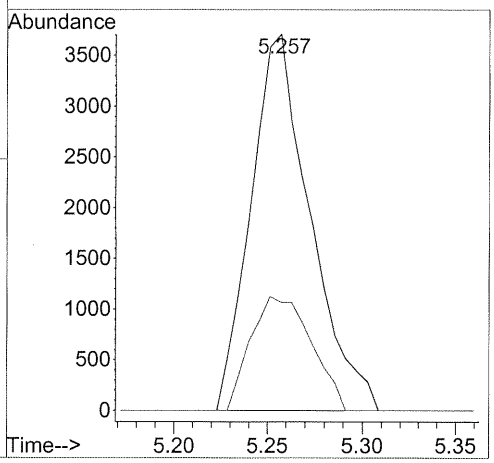


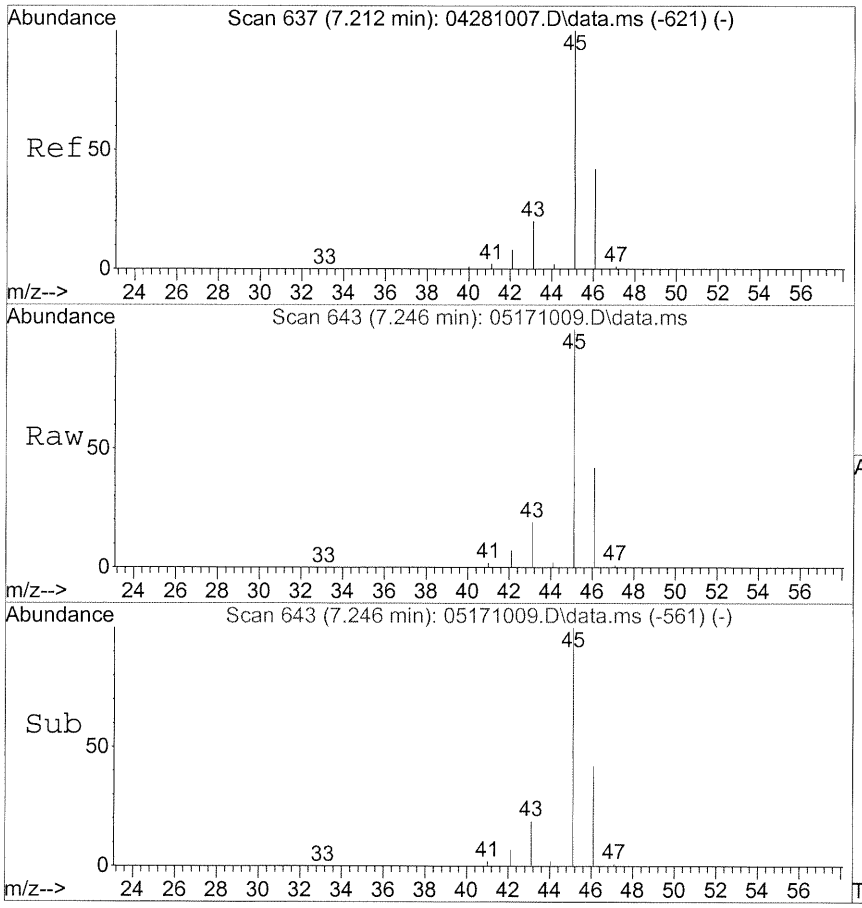


#4
Chloromethane
Concen: 0.26 ng
RT: 5.26 min Scan# 294
Delta R.T. -0.034 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 50 Resp: 8108

Ion	Ratio	Lower	Upper
50	100		
52	31.1	12.3	52.3

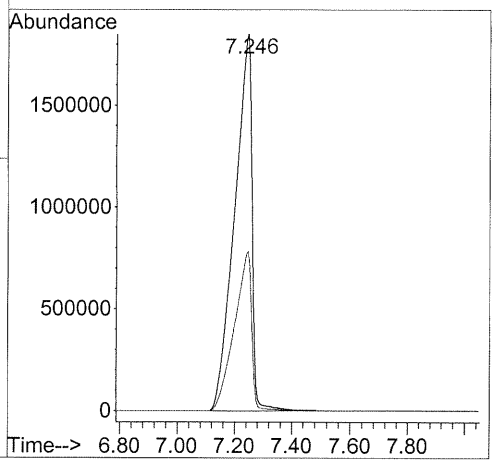


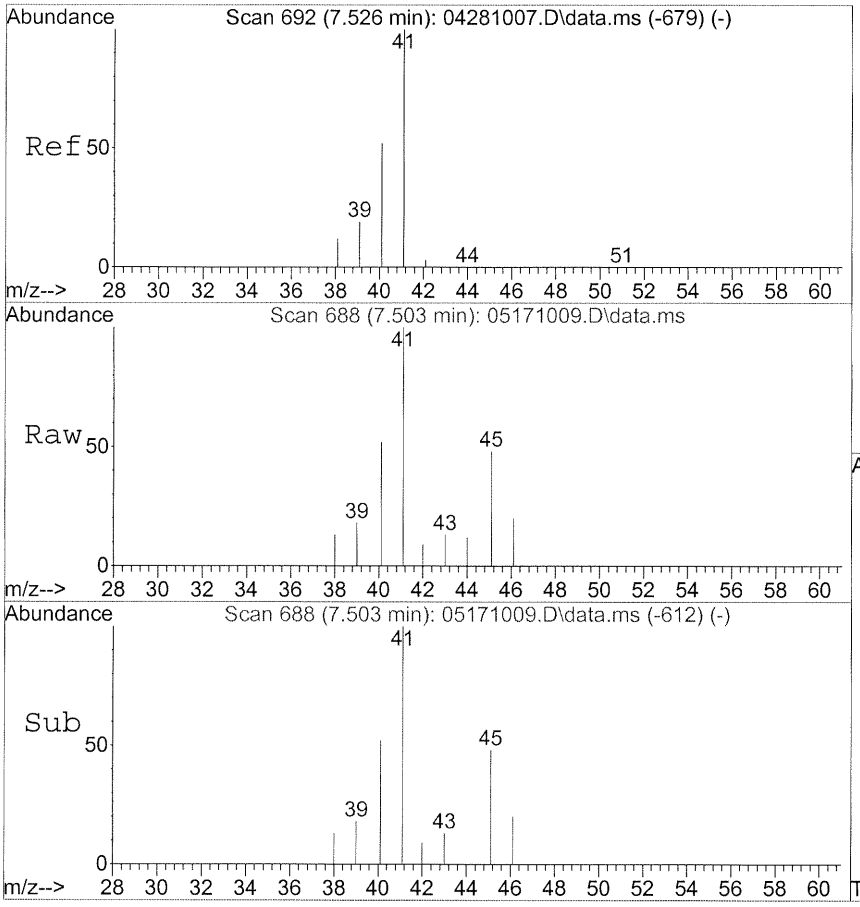


#10
Ethanol
Concen: 587.20 ng
RT: 7.25 min Scan# 643
Delta R.T. -0.034 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 45 Resp: 7821787

Ion	Ratio	Lower	Upper
45	100		
46	42.0	21.3	61.3

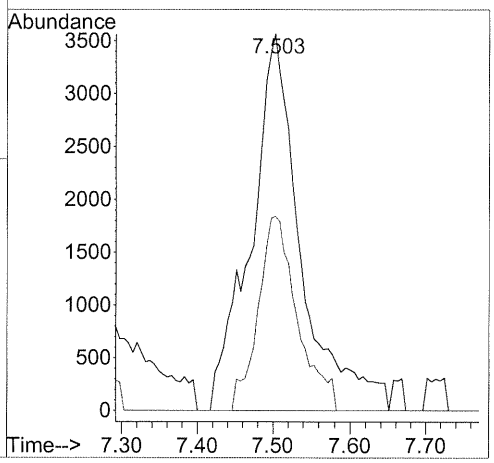


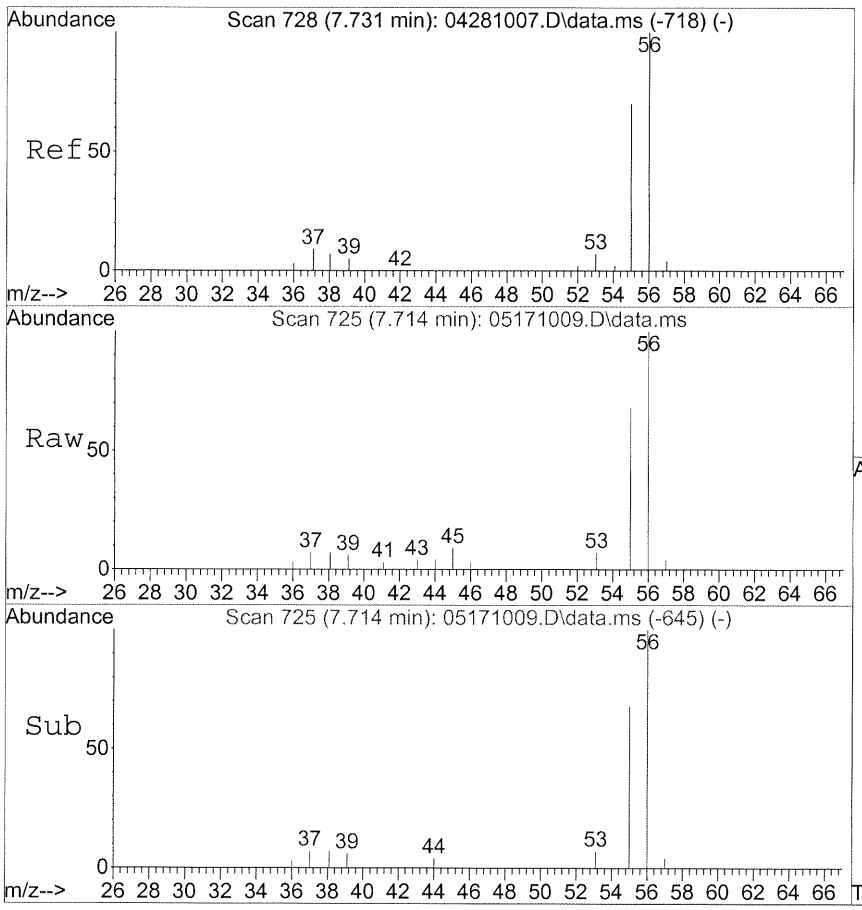


#11
Acetonitrile
Concen: 0.49 ng
RT: 7.50 min Scan# 688
Delta R.T. -0.069 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 41 Resp: 16329

Ion	Ratio	Lower	Upper
41	100		
40	40.5	33.2	73.2

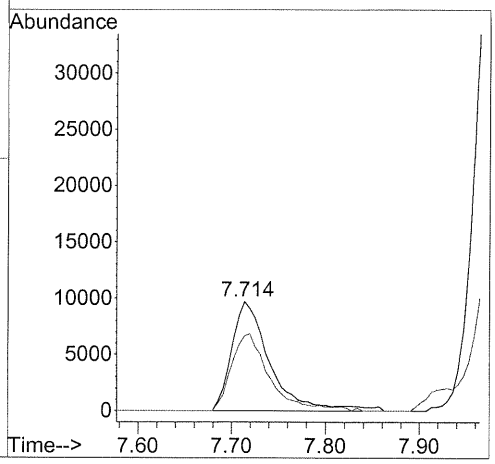


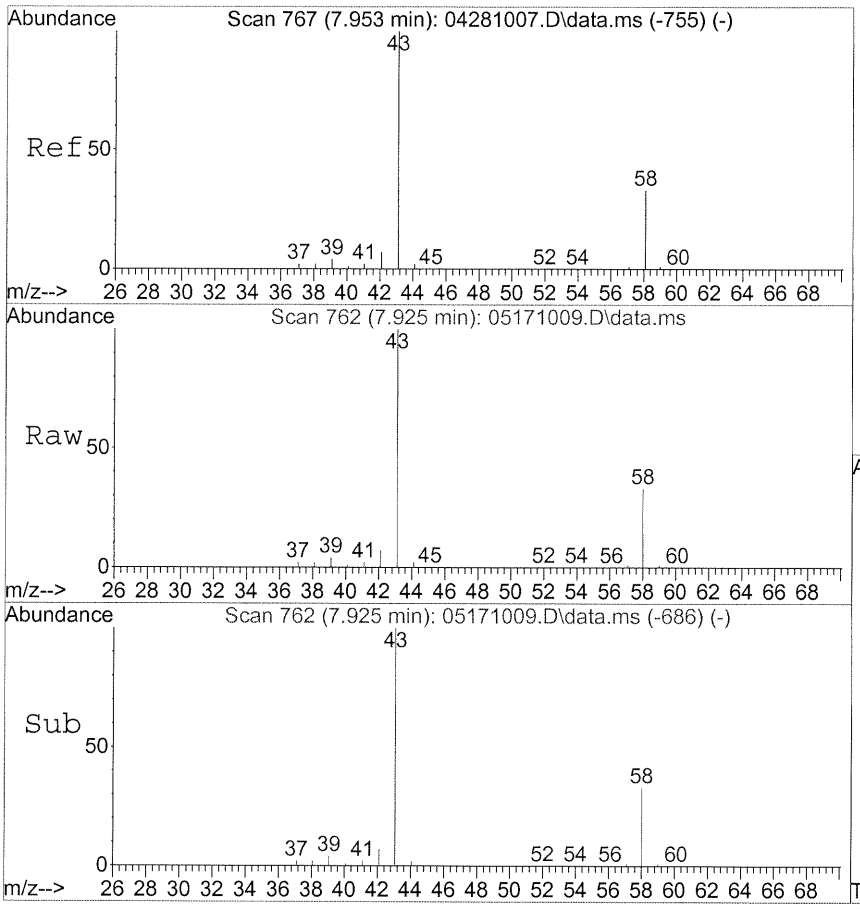


#12
Acrolein
Concen: 2.65 ng
RT: 7.71 min Scan# 725
Delta R.T. -0.046 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 56 Resp: 27554

Ion	Ratio	Lower	Upper
56	100		
55	69.4	50.2	90.2

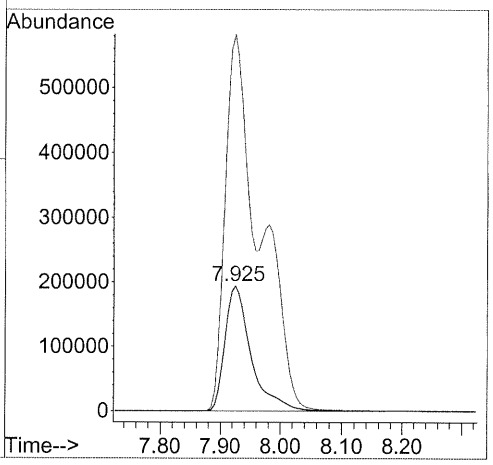


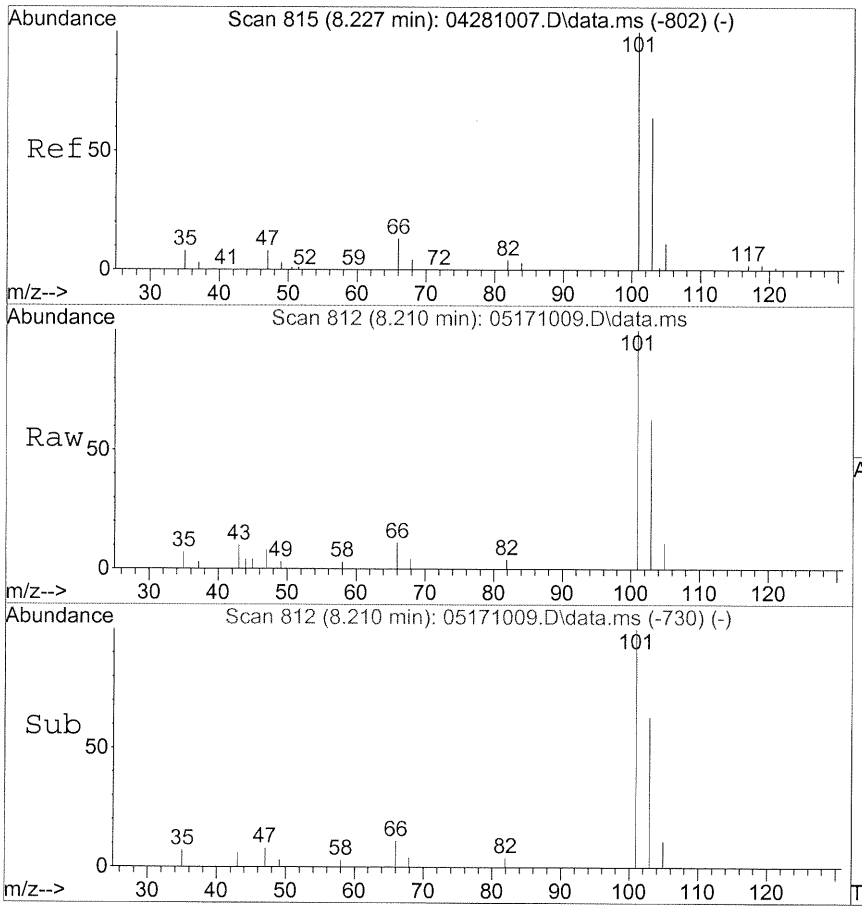


#13
Acetone
Concen: 36.16 ng
RT: 7.92 min Scan# 762
Delta R.T. -0.069 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 58 Resp: 588805

Ion	Ratio	Lower	Upper
58	100		
43	395.7	264.2	324.2#

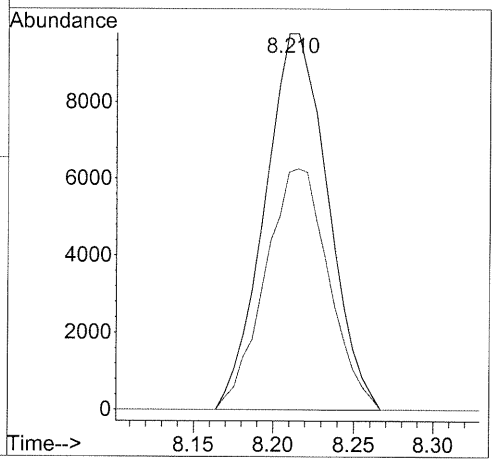


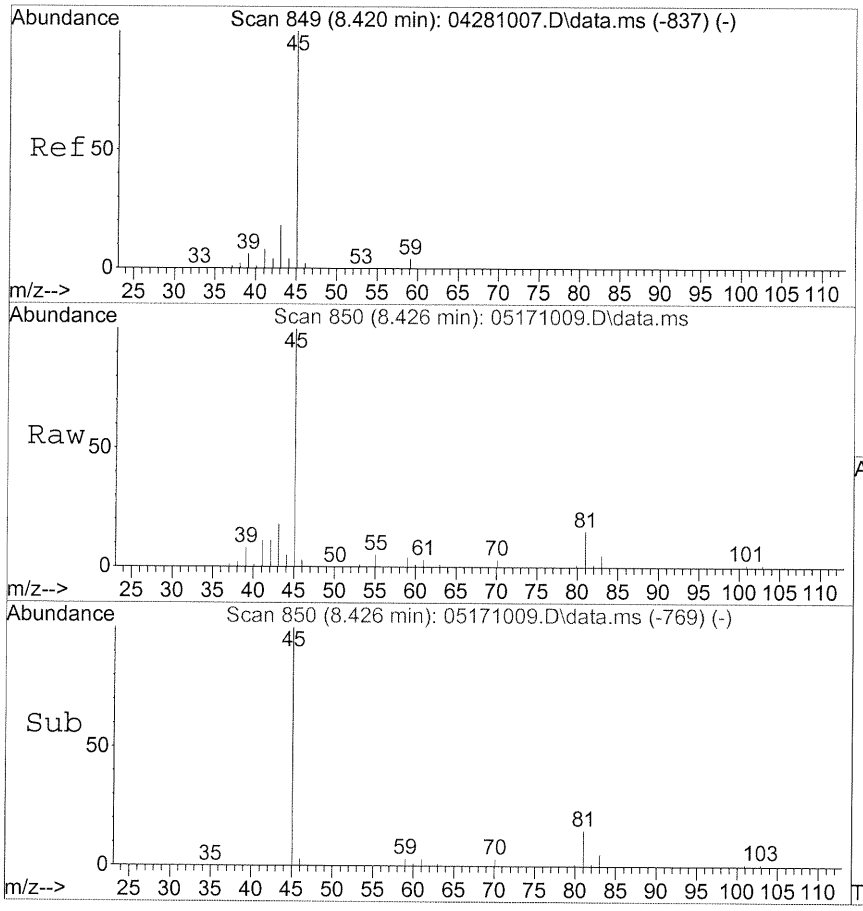


#14
Trichlorofluoromethane
Concen: 0.74 ng
RT: 8.21 min Scan# 812
Delta R.T. -0.034 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:101 Resp: 26730

Ion	Ratio	Lower	Upper
101	100		
103	64.5	44.6	84.6

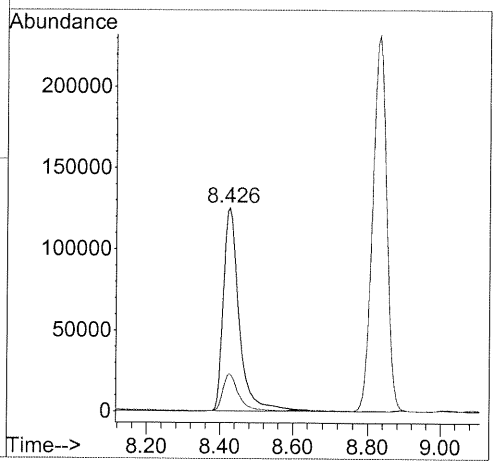


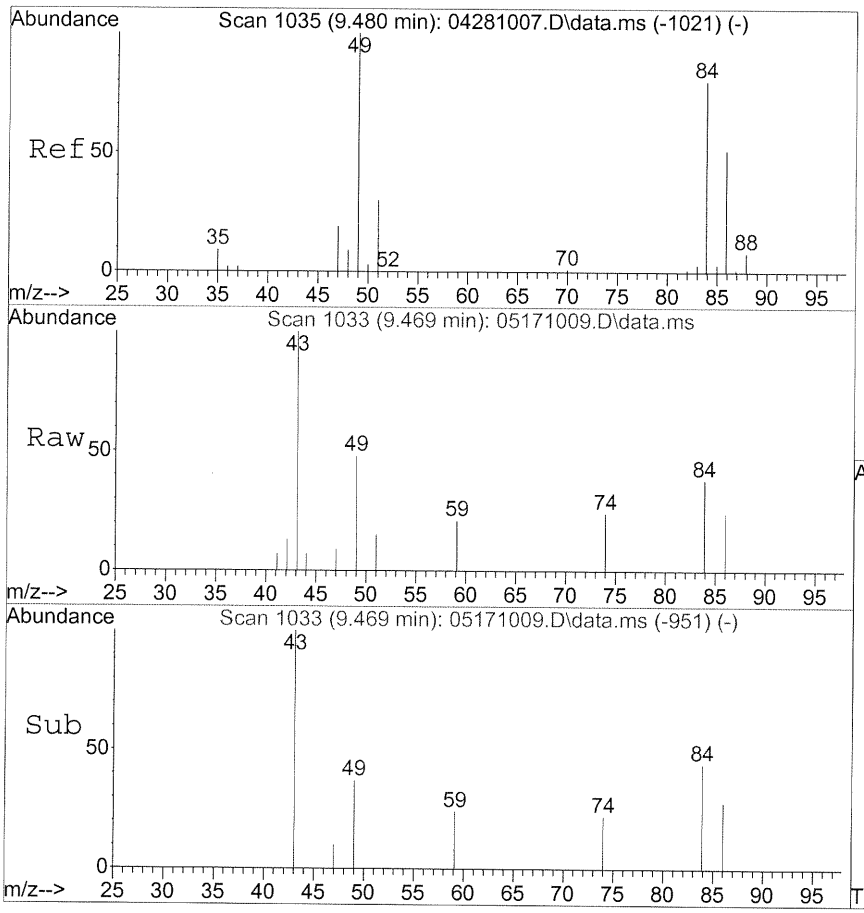


#15
2-Propanol (Isopropanol)
Concen: 7.66 ng
RT: 8.43 min Scan# 850
Delta R.T. -0.040 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 45 Resp: 386523

Ion	Ratio	Lower	Upper
45	100		
43	18.0	0.0	38.5

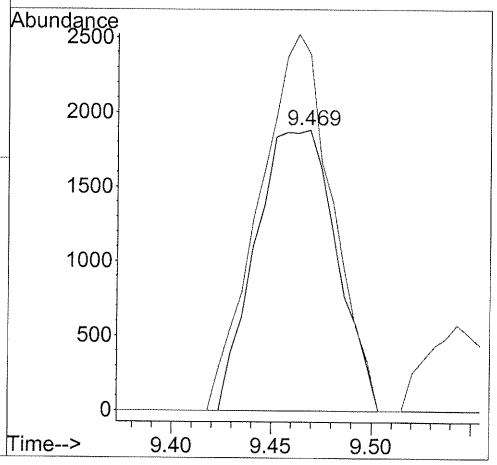


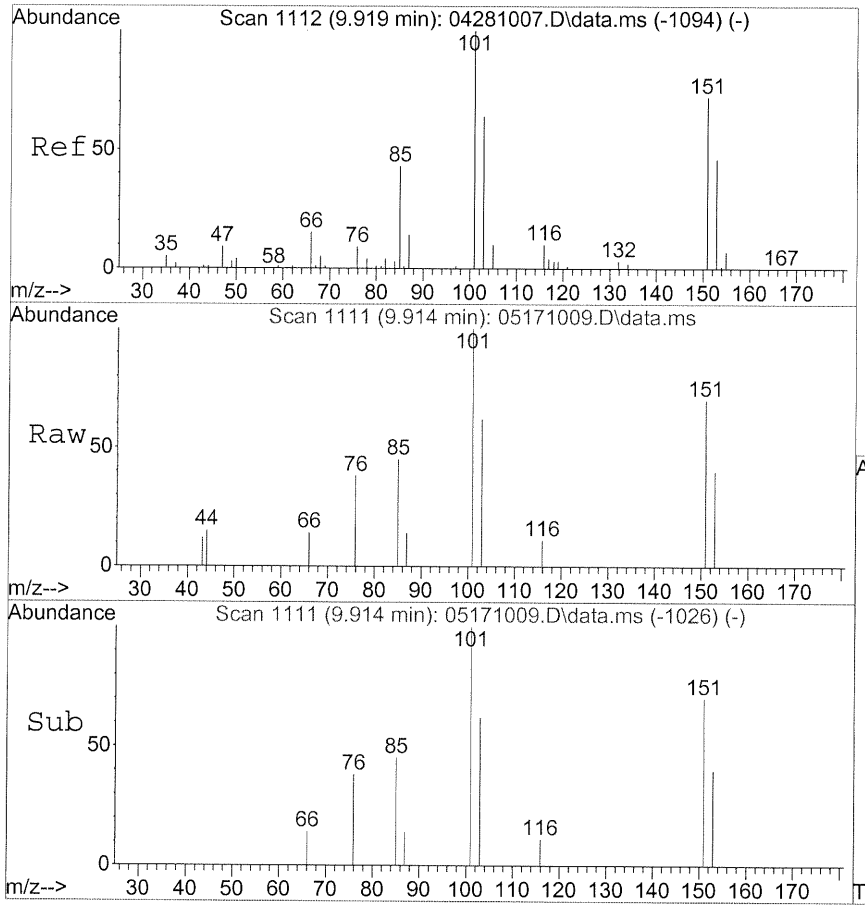


#19
Methylene Chloride
Concen: 0.25 ng
RT: 9.47 min Scan# 1033
Delta R.T. -0.034 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 84 Resp: 5261

Ion	Ratio	Lower	Upper
84	100		
49	121.4	94.5	144.5

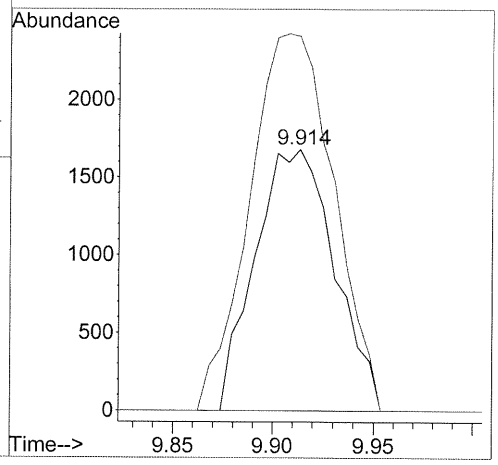


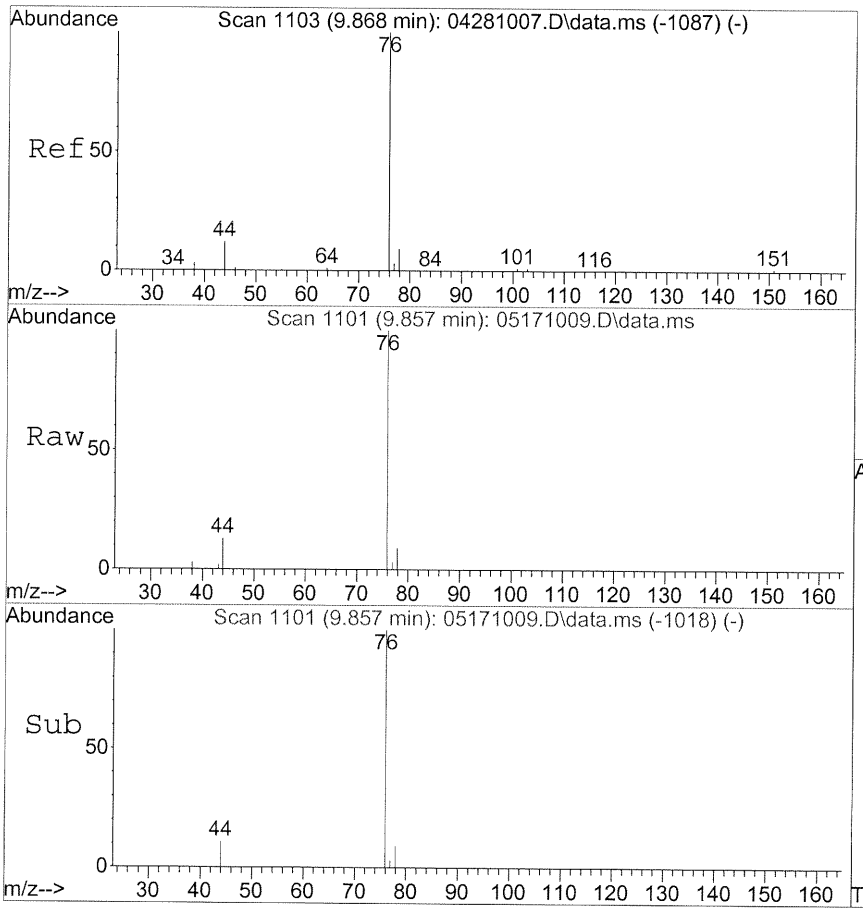


#21
Trichlorotrifluoroethane
Concen: 0.30 ng
RT: 9.91 min Scan# 1111
Delta R.T. -0.017 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:151 Resp: 4598

Ion	Ratio	Lower	Upper
151	100		
101	153.7	114.9	154.9

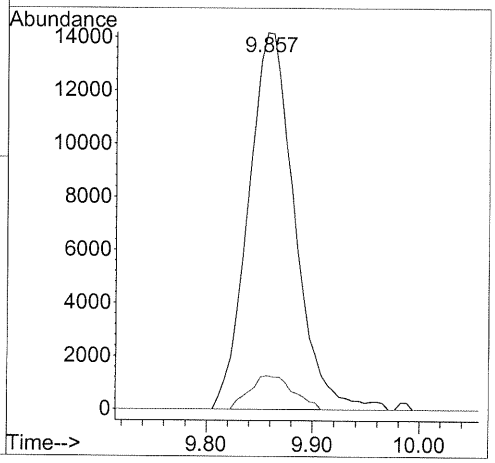


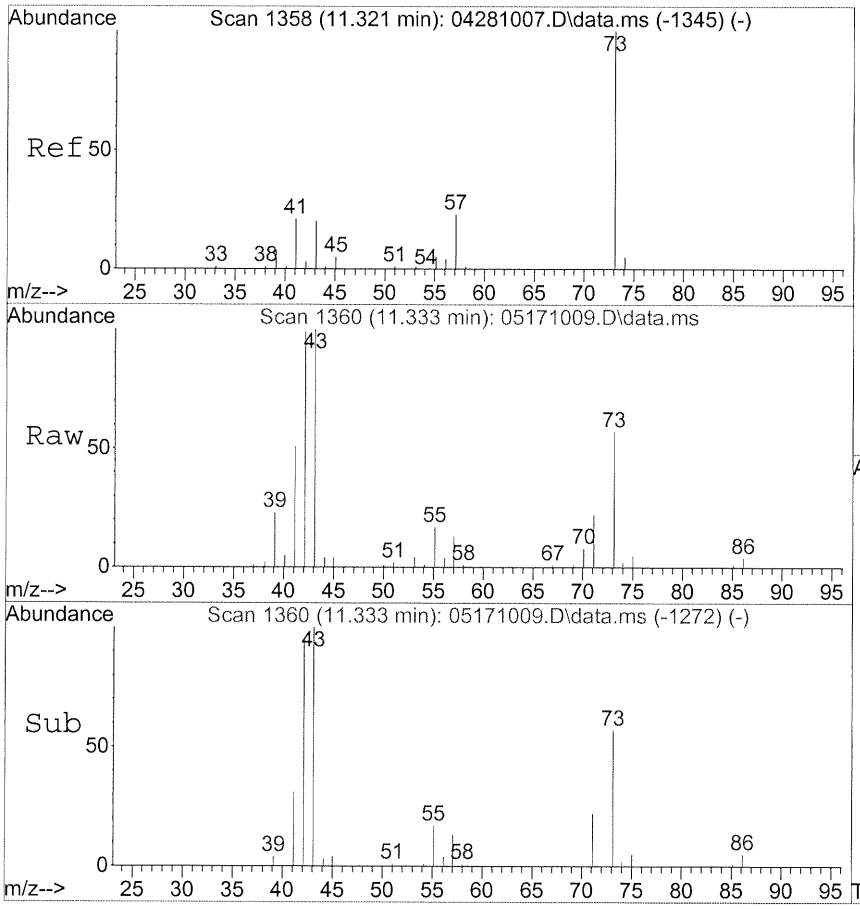


#22
Carbon Disulfide
Concen: 0.56 ng
RT: 9.86 min Scan# 1101
Delta R.T. -0.028 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 76 Resp: 42980

Ion	Ratio	Lower	Upper
76	100		
78	8.4	0.0	29.2

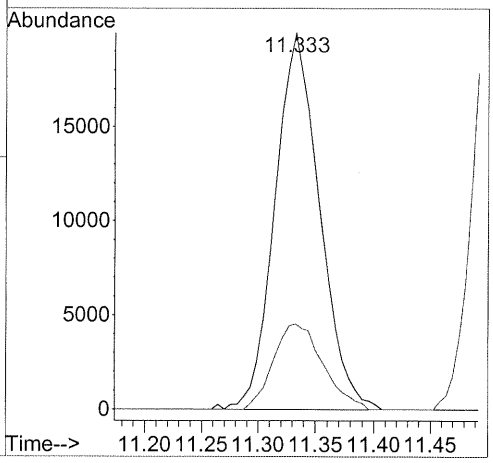


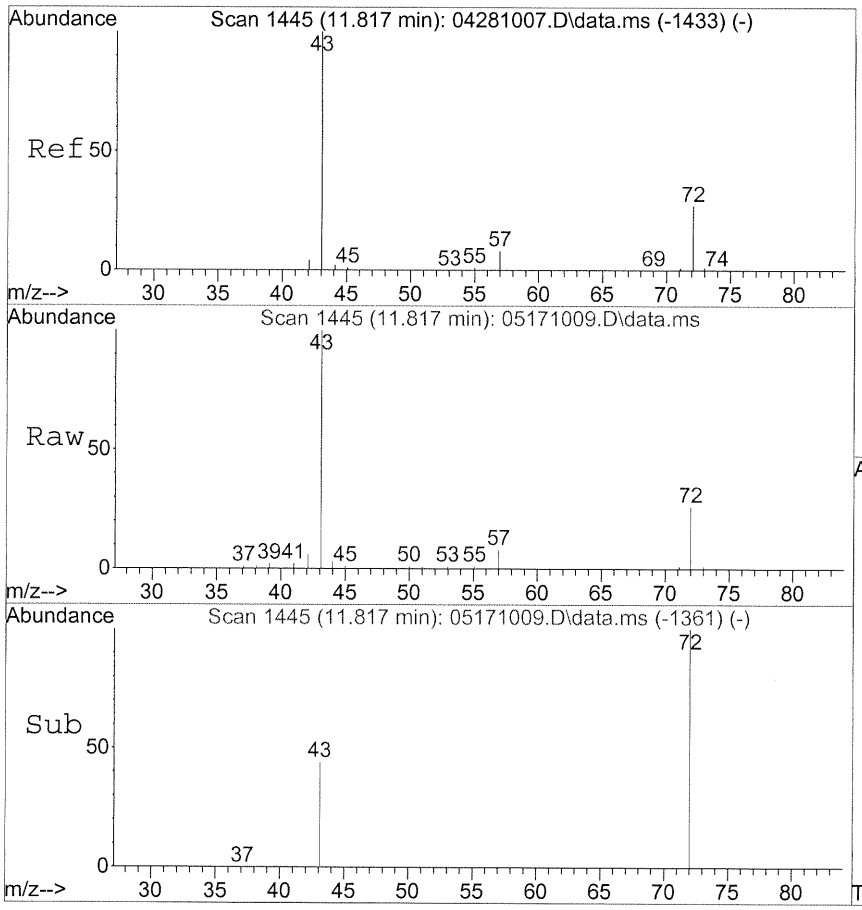


#25
Methyl tert-Butyl Ether
Concen: 0.81 ng
RT: 11.33 min Scan# 1360
Delta R.T. -0.000 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 73 Resp: 53878

Ion	Ratio	Lower	Upper
73	100		
57	25.1	1.9	41.9

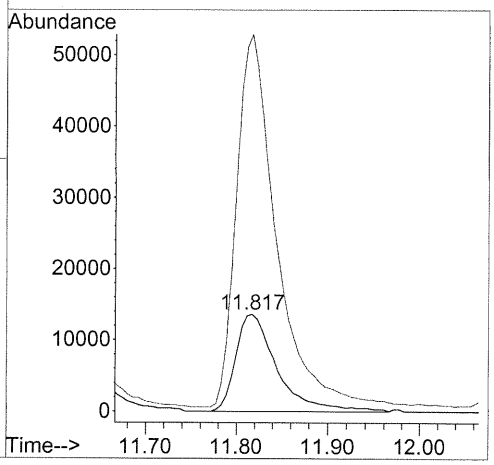


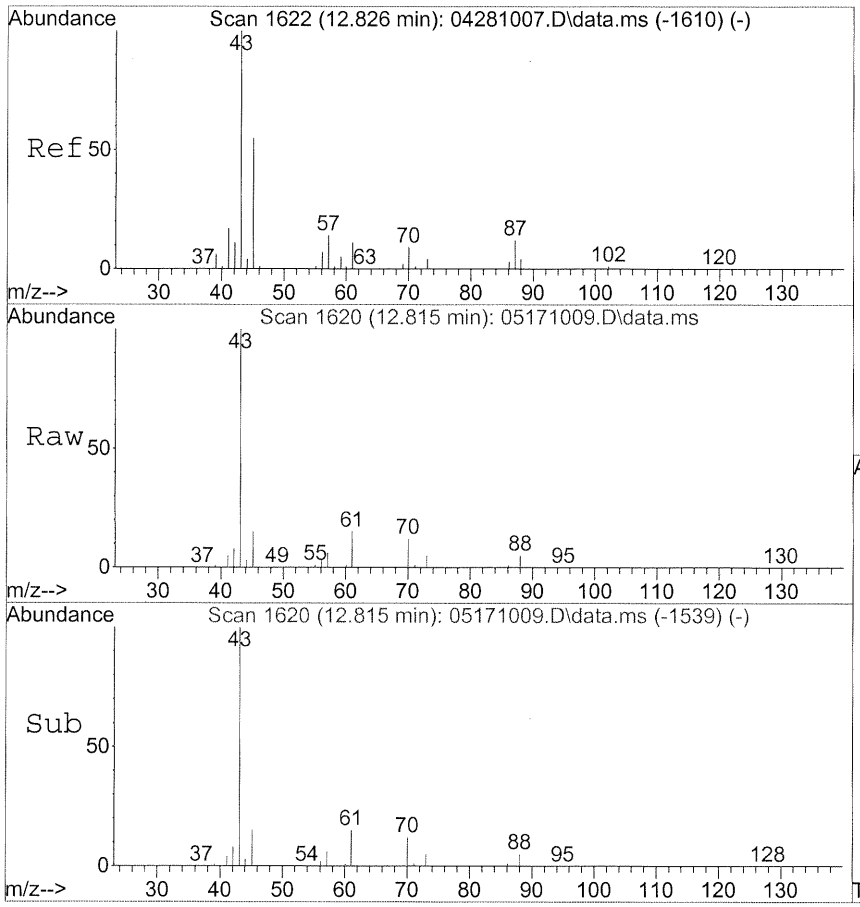


#27
2-Butanone (MEK)
Concen: 3.17 ng
RT: 11.82 min Scan# 1445
Delta R.T. -0.023 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 72 Resp: 42928

Ion	Ratio	Lower	Upper
72	100		
43	375.5	342.0	382.0

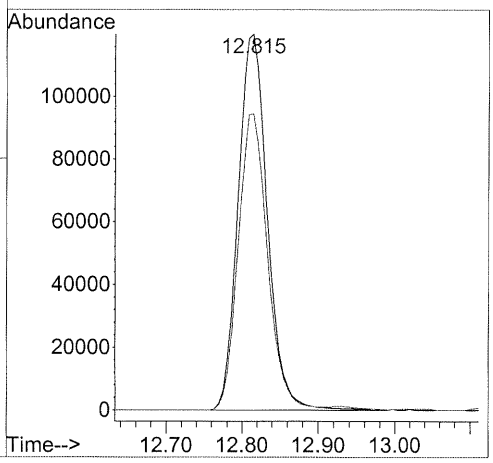


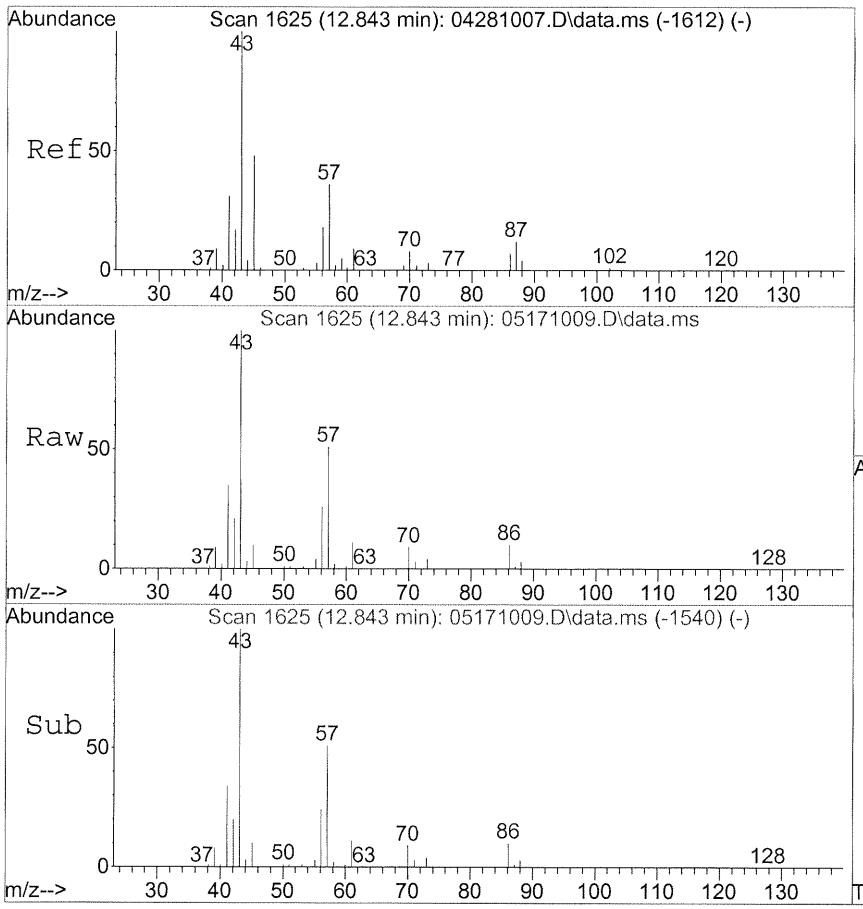


#30
Ethyl Acetate
Concen: 40.03 ng
RT: 12.81 min Scan# 1620
Delta R.T. -0.040 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 61 Resp: 321844

Ion	Ratio	Lower	Upper
61	100		
70	80.1	63.6	103.6

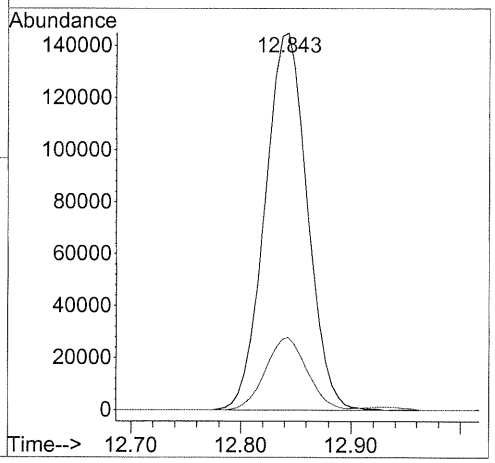


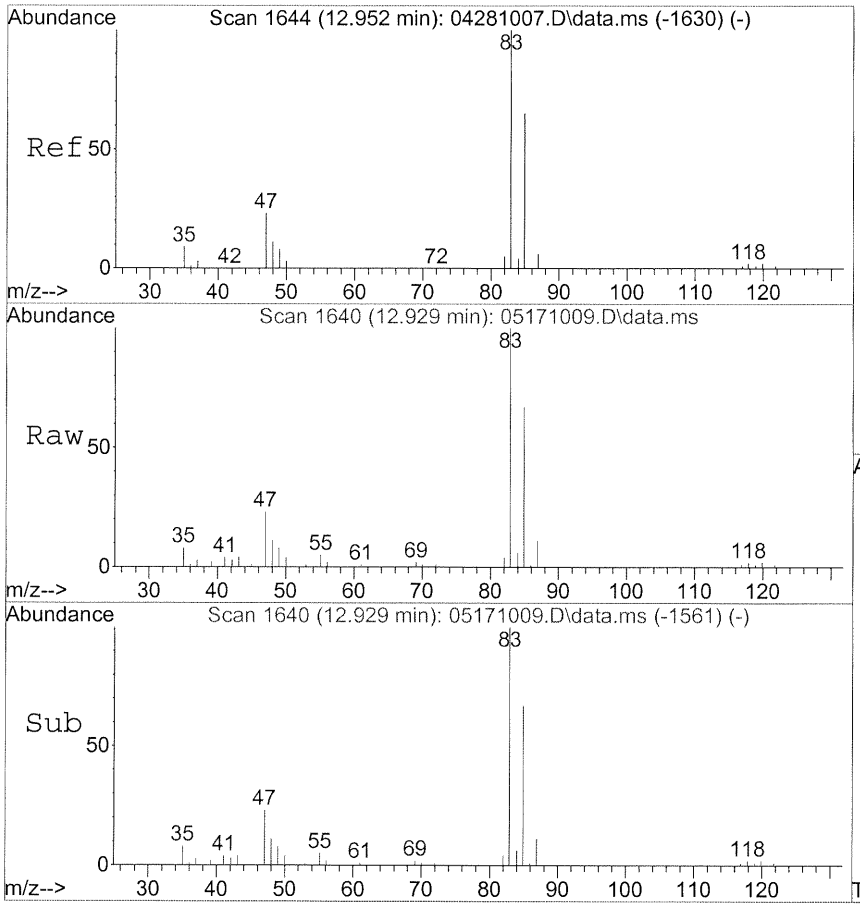


#31
n-Hexane
Concen: 9.41 ng
RT: 12.84 min Scan# 1625
Delta R.T. -0.017 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 57 Resp: 387274

Ion	Ratio	Lower	Upper
57	100		
86	18.7	0.0	39.8

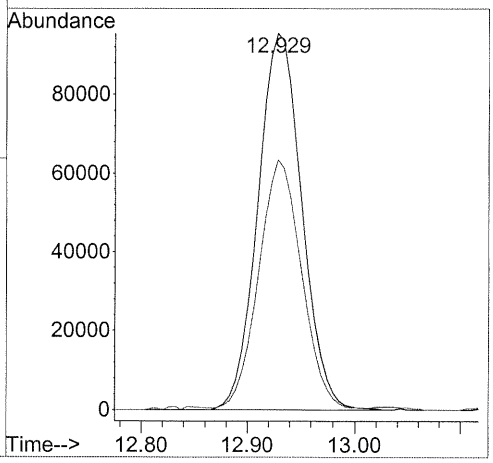


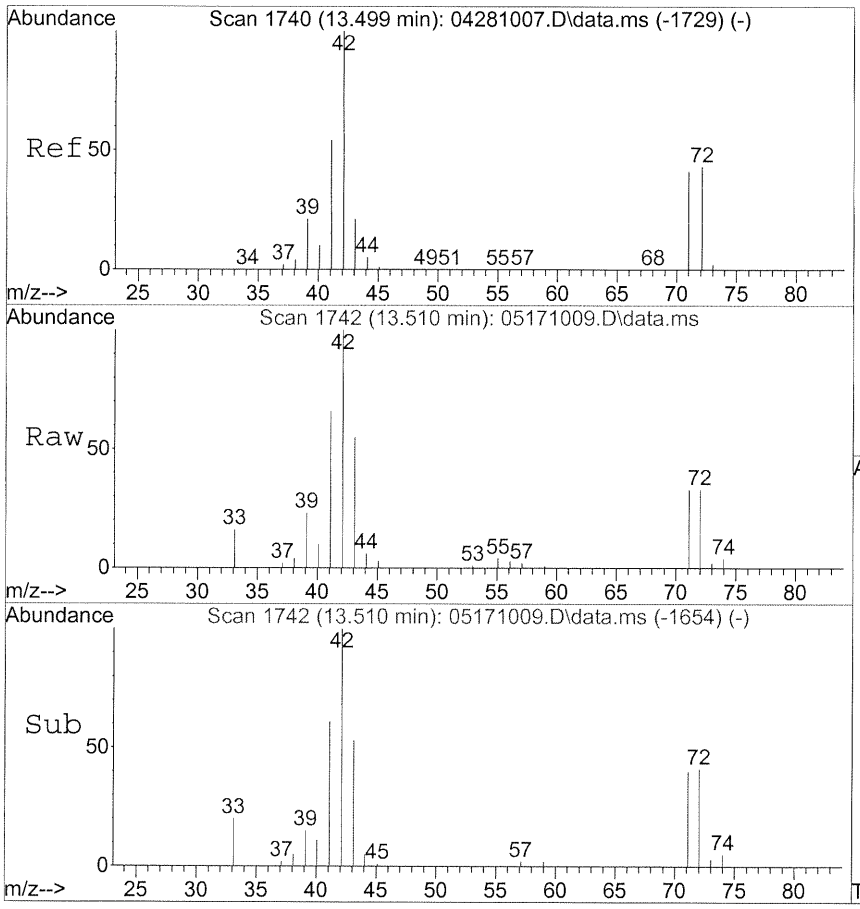


#32
Chloroform
Concen: 7.97 ng
RT: 12.93 min Scan# 1640
Delta R.T. -0.051 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 83 Resp: 273774

Ion	Ratio	Lower	Upper
83	100		
85	65.2	44.9	84.9

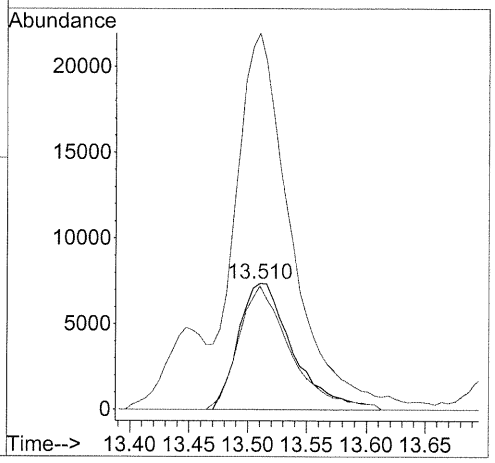


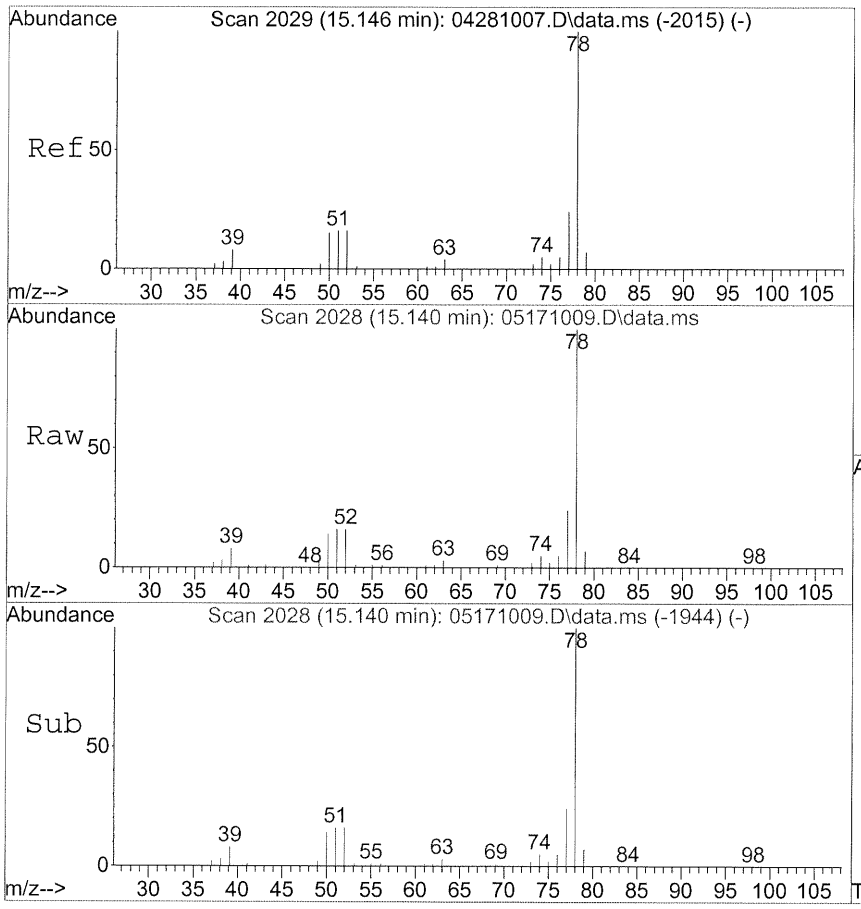


#34
Tetrahydrofuran (THF)
Concen: 1.81 ng
RT: 13.51 min Scan# 1742
Delta R.T. -0.000 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 72 Resp: 23637

Ion	Ratio	Lower	Upper
72	100		
71	92.8	74.5	114.5
42	310.2	197.7	237.7#

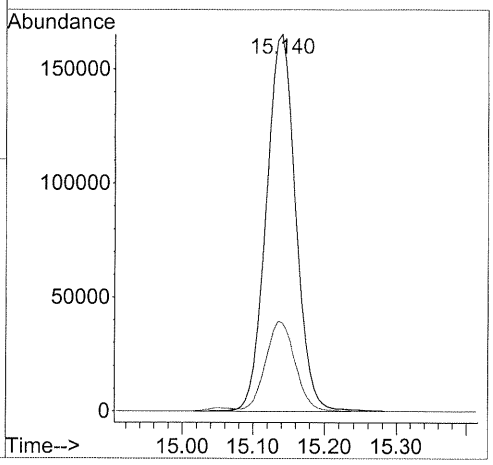


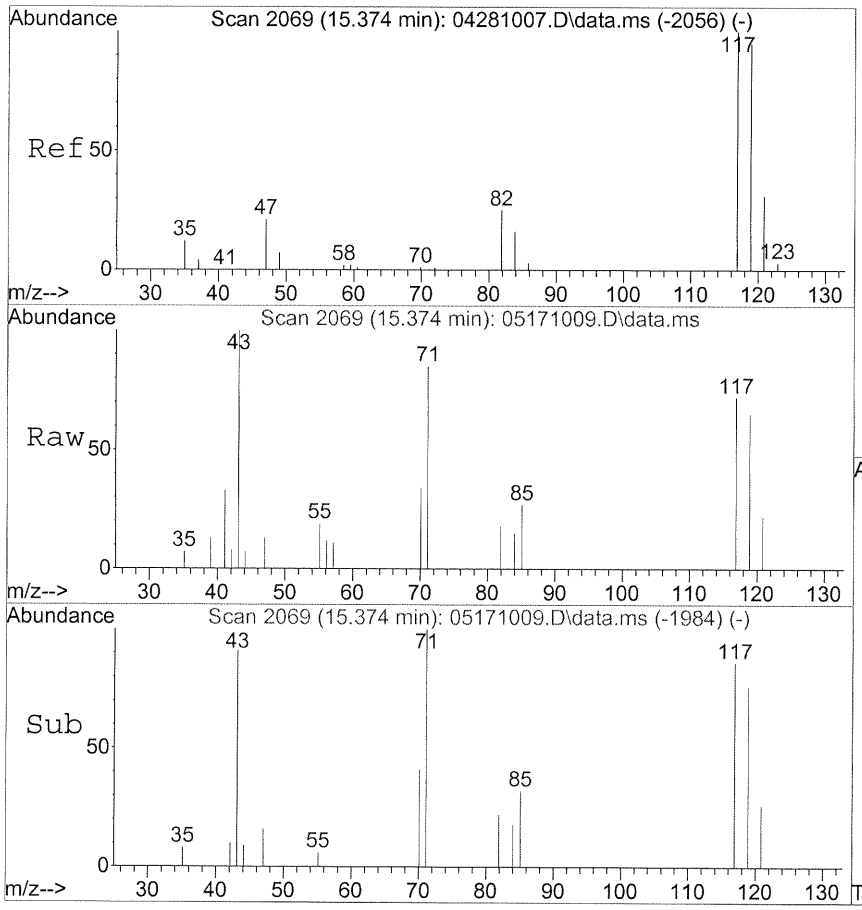


#41
Benzene
Concen: 5.42 ng
RT: 15.14 min Scan# 2028
Delta R.T. -0.023 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 78 Resp: 476621

Ion	Ratio	Lower	Upper
78	100		
77	23.9	4.1	44.1

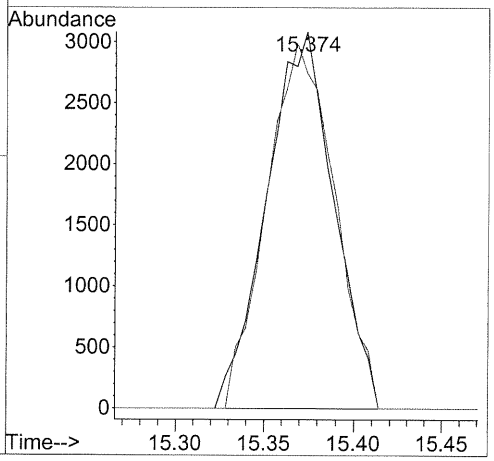


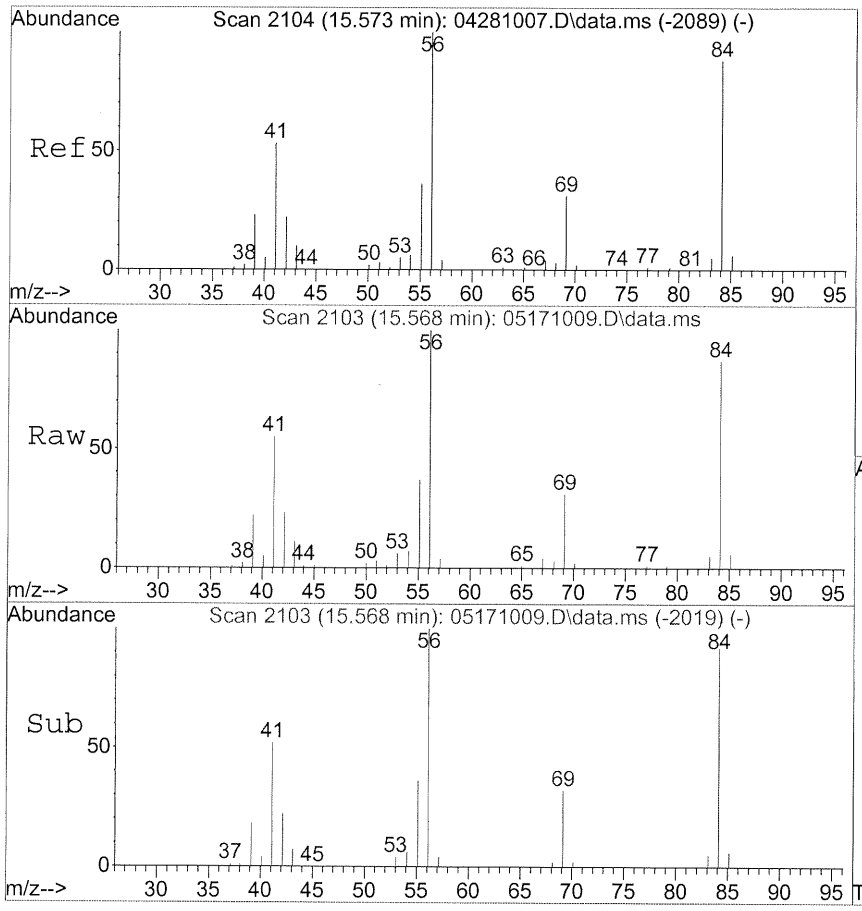


#42
Carbon Tetrachloride
Concen: 0.34 ng
RT: 15.37 min Scan# 2069
Delta R.T. -0.017 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:117 Resp: 8026

Ion	Ratio	Lower	Upper
117	100		
119	98.5	76.1	116.1

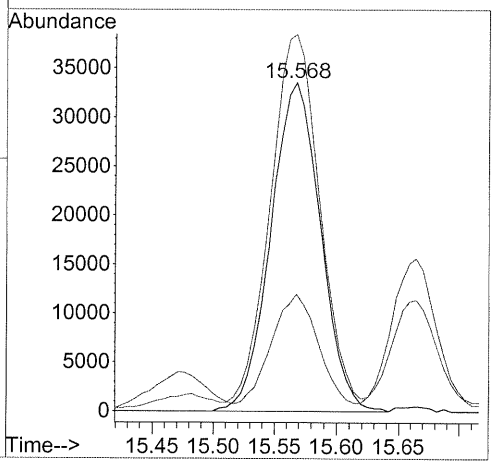


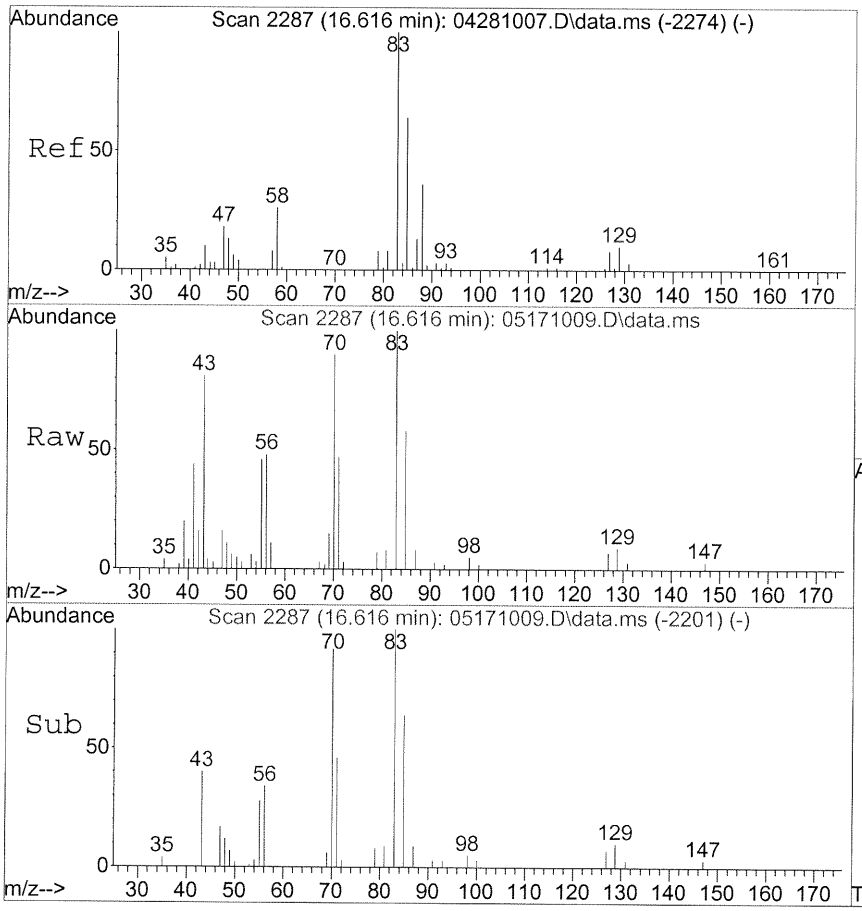


#43
Cyclohexane
Concen: 2.54 ng
RT: 15.57 min Scan# 2103
Delta R.T. -0.023 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 84 Resp: 93754

Ion	Ratio	Lower	Upper
84	100		
69	35.5	14.9	54.9
56	116.3	89.2	129.2

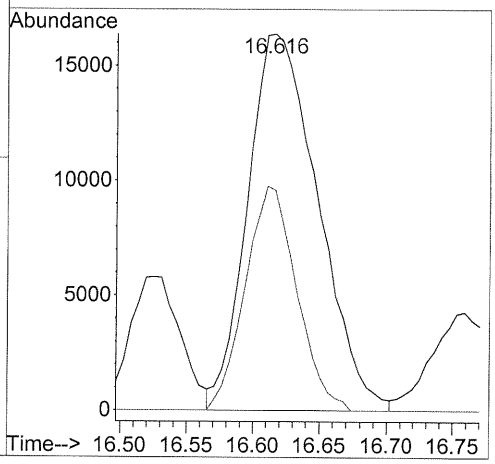


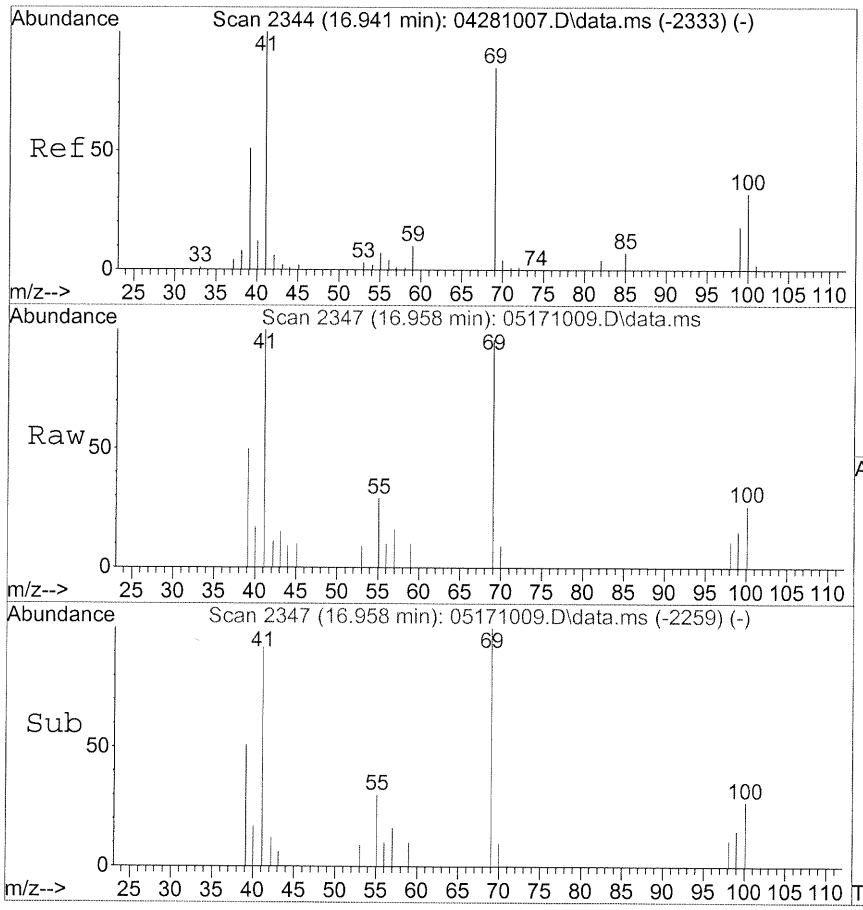


#46
Bromodichloromethane
Concen: 2.29 ng
RT: 16.62 min Scan# 2287
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 83 Resp: 60226

Ion	Ratio	Lower	Upper
83	100		
85	43.7	43.4	83.4

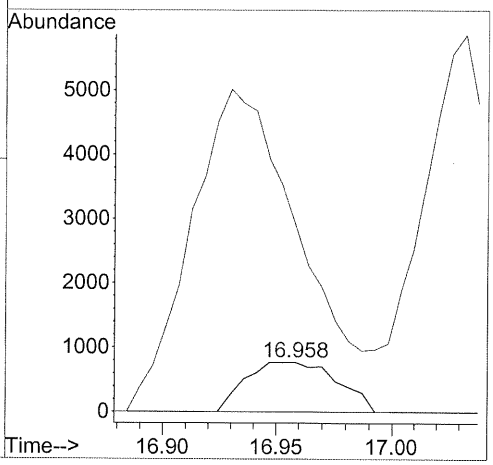


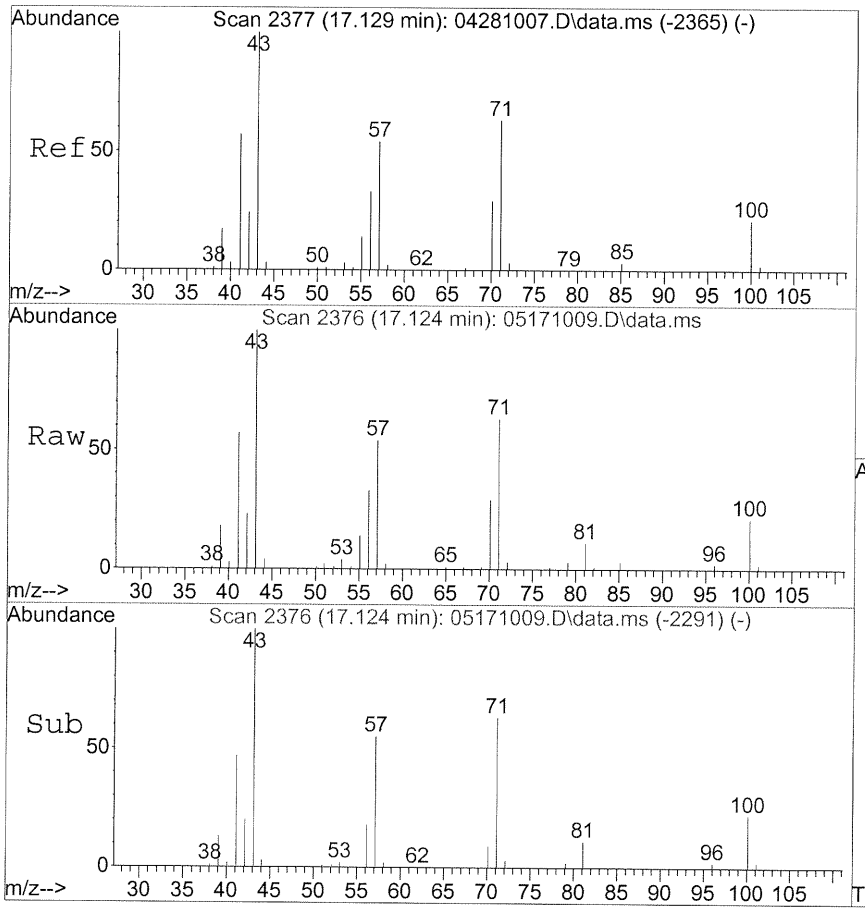


#50
Methyl Methacrylate
Concen: 0.23 ng
RT: 16.96 min Scan# 2347
Delta R.T. 0.000 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:100 Resp: 2124

Ion	Ratio	Lower	Upper
100	100		
69	0.0	226.7	266.7#

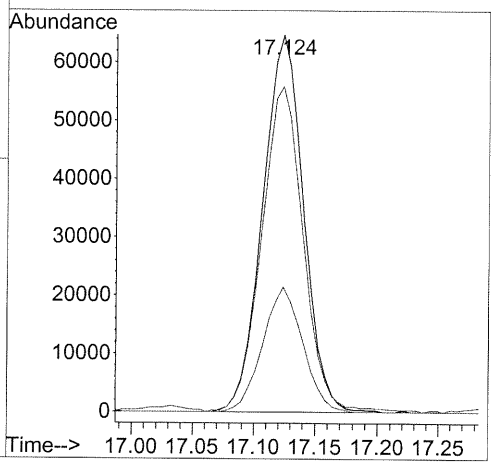


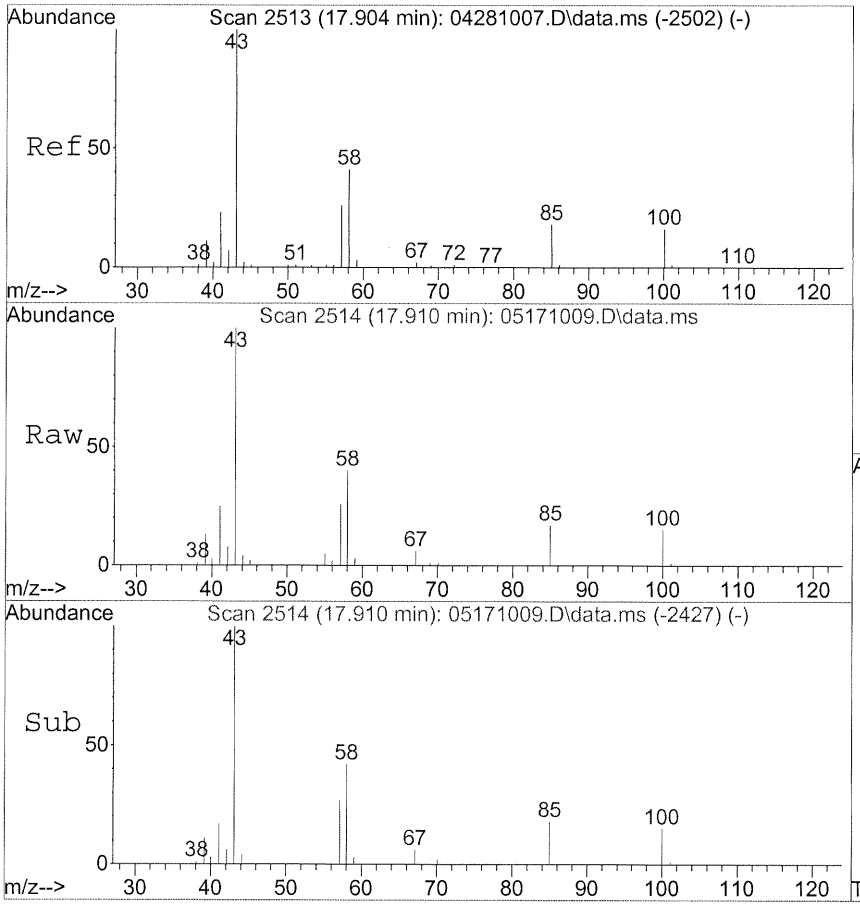


#51
n-Heptane
Concen: 5.97 ng
RT: 17.12 min Scan# 2376
Delta R.T. -0.017 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 71 Resp: 149922

Ion	Ratio	Lower	Upper
71	100		
57	88.3	63.9	103.9
100	32.5	14.1	54.1

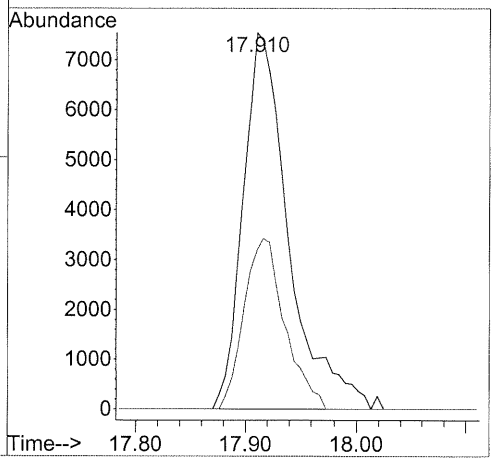


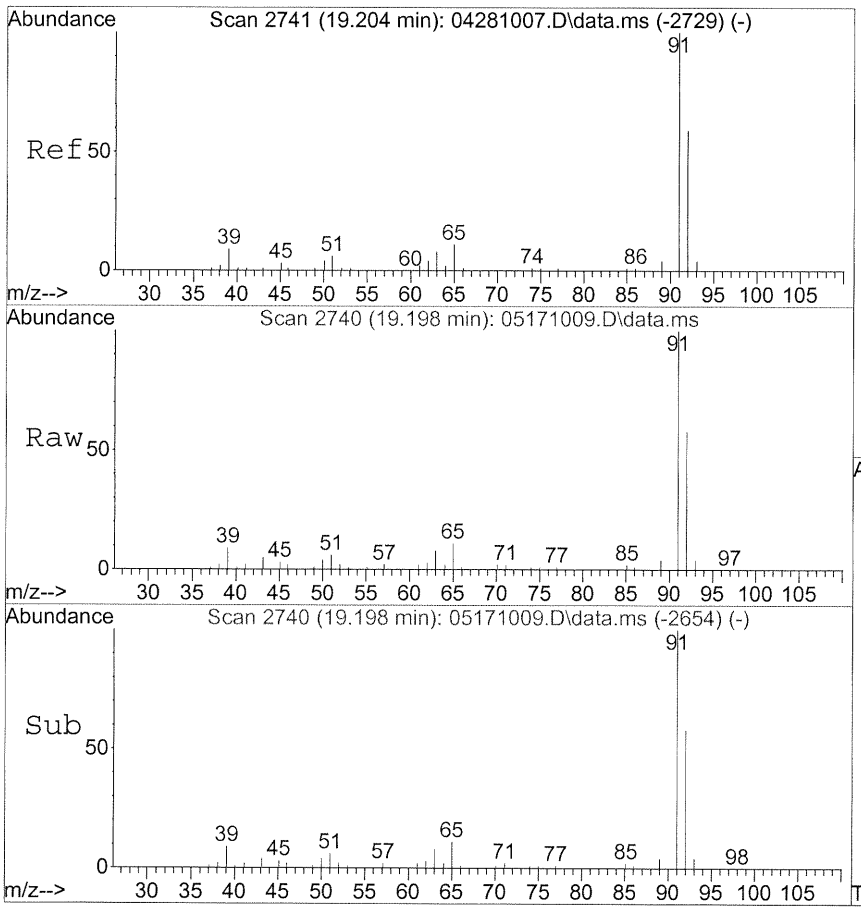


#53
4-Methyl-2-pentanone
Concen: 1.15 ng
RT: 17.91 min Scan# 2514
Delta R.T. -0.006 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 58 Resp: 21770

Ion	Ratio	Lower	Upper
58	100		
85	40.5	26.7	66.7

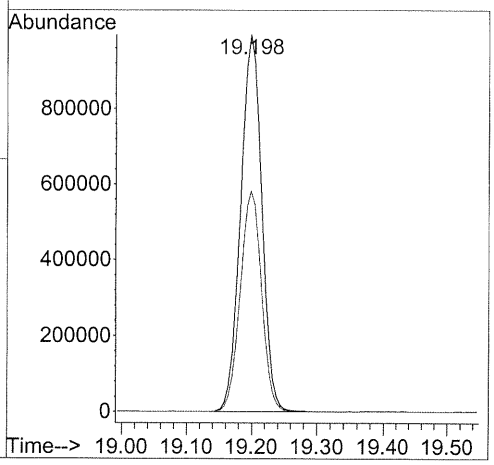


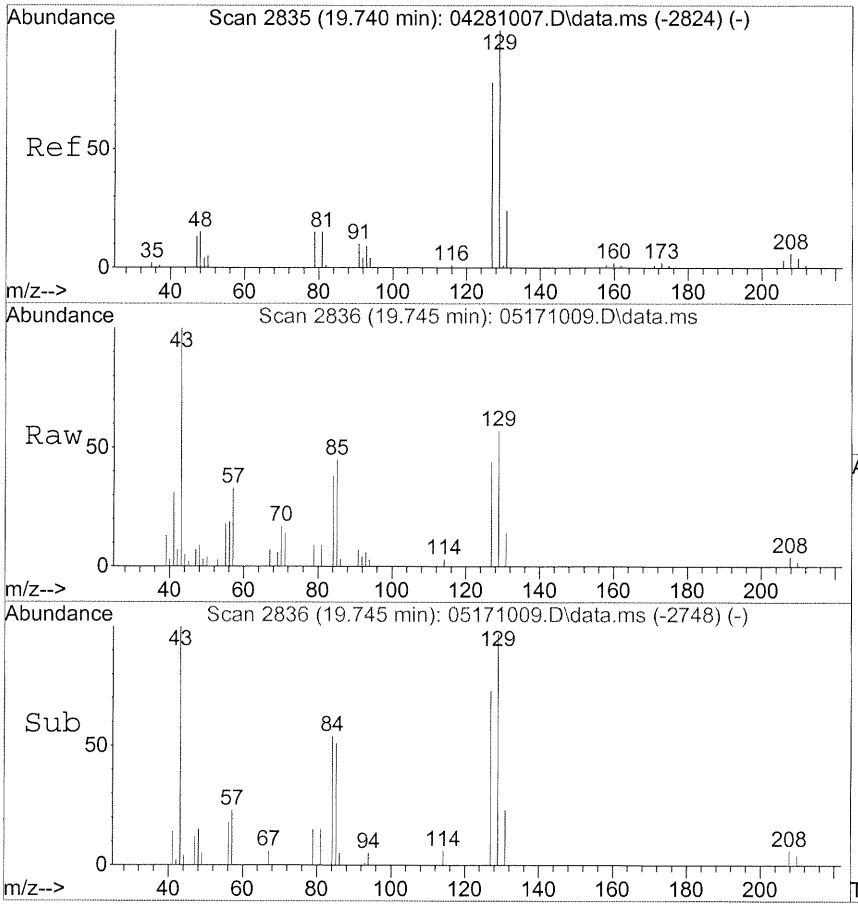


#58
Toluene
Concen: 24.01 ng
RT: 19.20 min Scan# 2740
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 91 Resp: 2249256

Ion	Ratio	Lower	Upper
91	100		
92	58.7	39.2	79.2

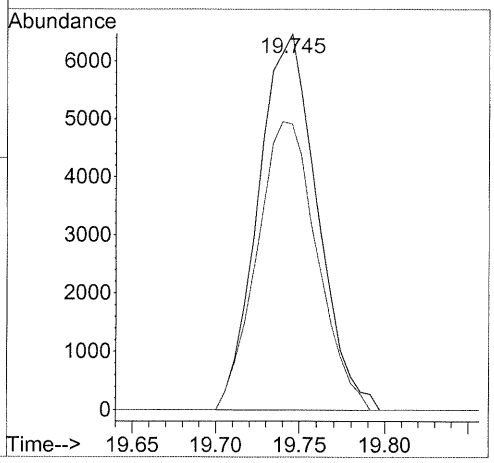


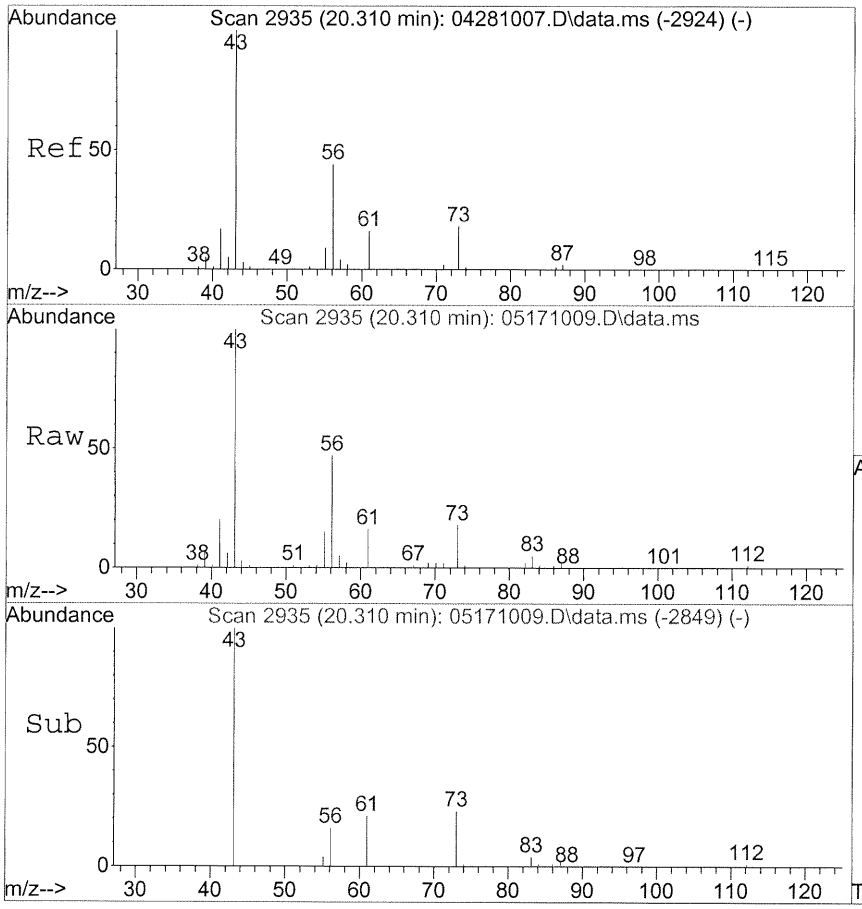


#60
Dibromochloromethane
Concen: 0.85 ng
RT: 19.75 min Scan# 2836
Delta R.T. -0.000 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:129 Resp: 15680

Ion	Ratio	Lower	Upper
129	100		
127	78.3	58.2	98.2

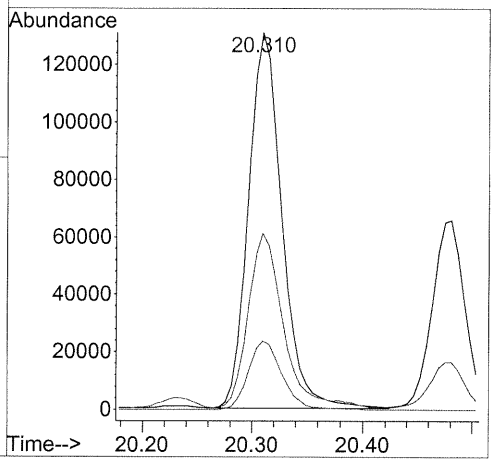


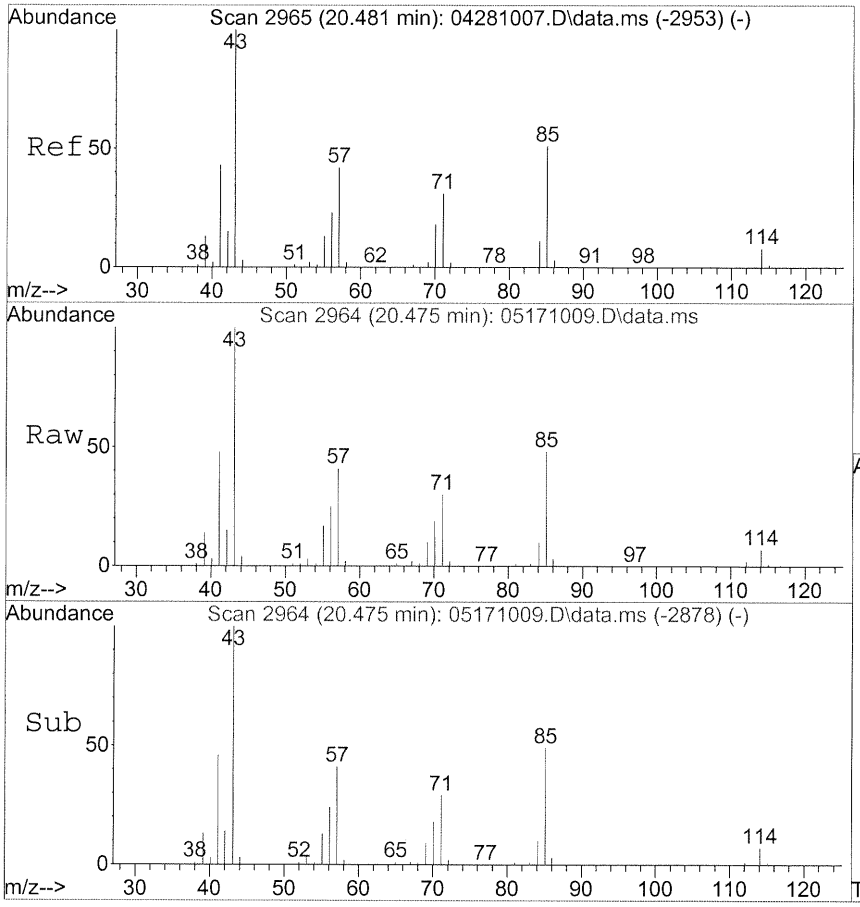


#62
n-Butyl Acetate
Concen: 5.51 ng
RT: 20.31 min Scan# 2935
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 43 Resp: 276610

Ion	Ratio	Lower	Upper
43	100		
56	48.7	25.0	65.0
73	18.3	0.0	39.1

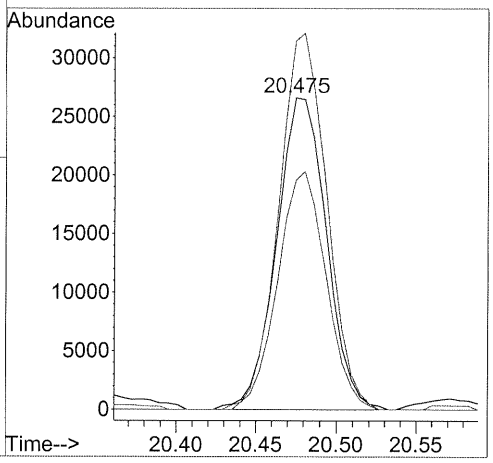


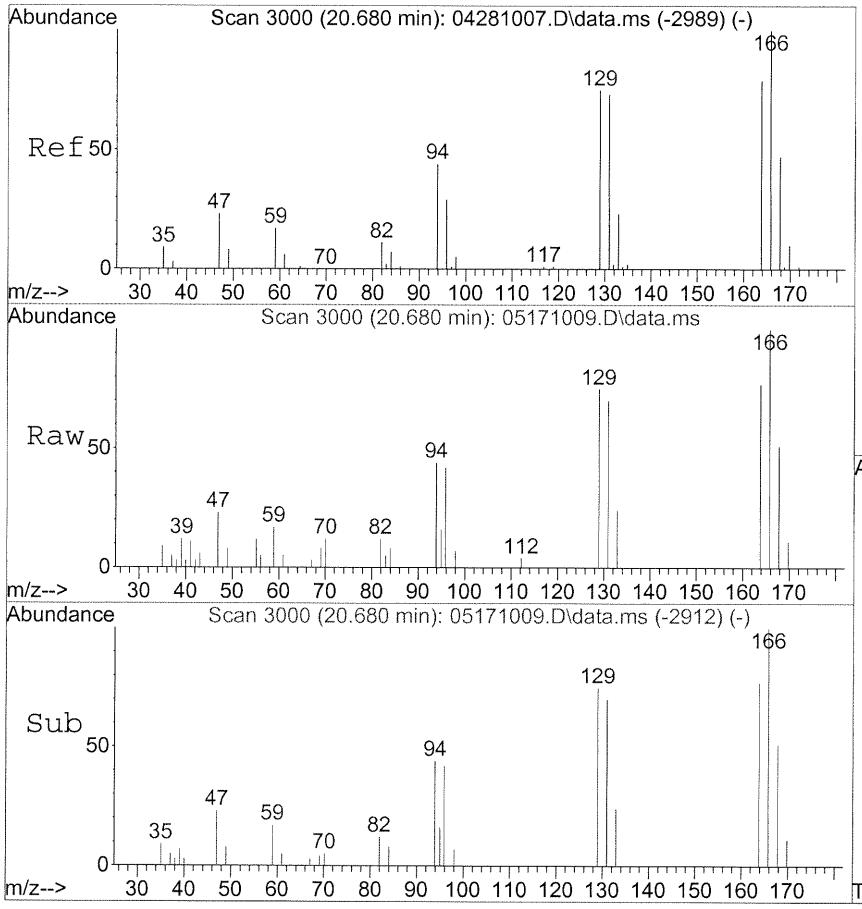


#63
n-Octane
Concen: 2.62 ng
RT: 20.48 min Scan# 2964
Delta R.T. -0.011 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 57 Resp: 57039

Ion	Ratio	Lower	Upper
57	100		
85	115.9	101.4	152.2
71	74.1	60.7	91.1

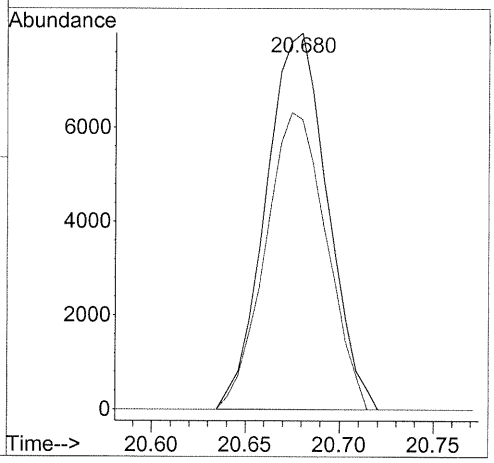


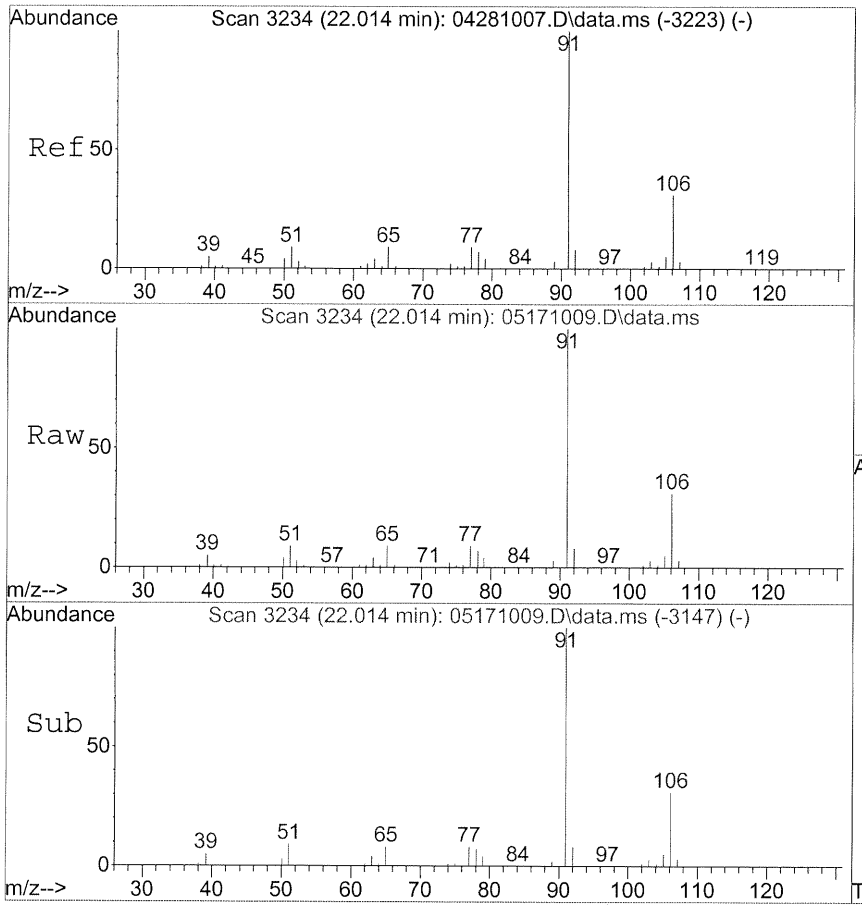


#64
Tetrachloroethene
Concen: 0.83 ng
RT: 20.68 min Scan# 3000
Delta R.T. -0.000 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:166 Resp: 18150

Ion	Ratio	Lower	Upper
166	100		
164	78.2	59.0	99.0

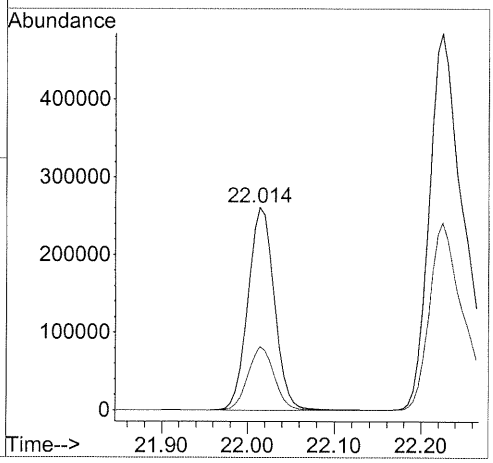


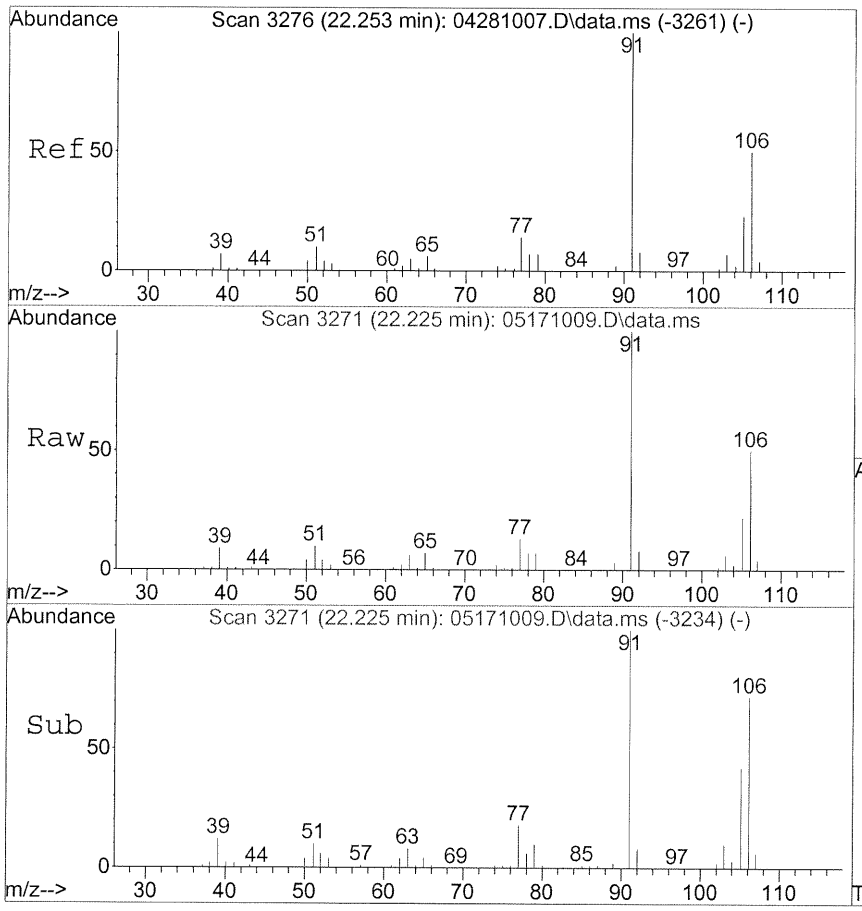


#66
Ethylbenzene
Concen: 5.31 ng
RT: 22.01 min Scan# 3234
Delta R.T. -0.006 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 91 Resp: 556956

Ion	Ratio	Lower	Upper
91	100		
106	30.9	12.2	52.2

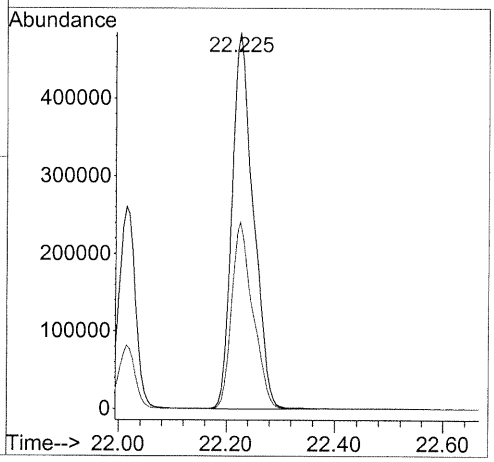


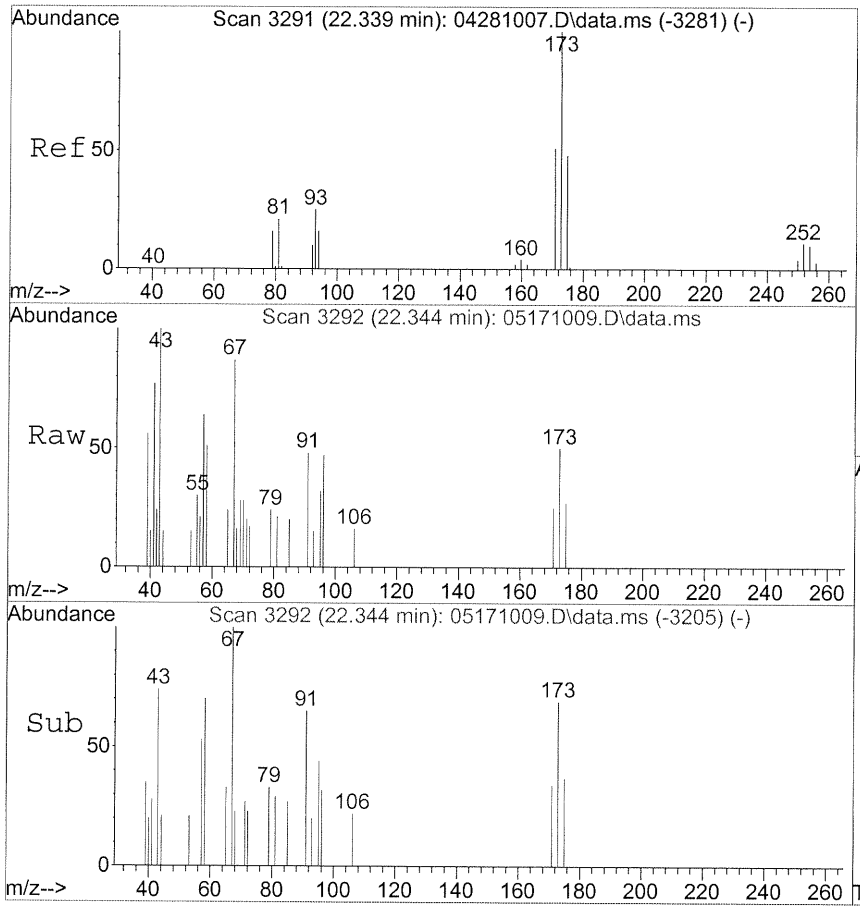


#67
m- & p-Xylenes
Concen: 15.76 ng
RT: 22.22 min Scan# 3271
Delta R.T. -0.040 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 91 Resp: 1339443

Ion	Ratio	Lower	Upper
91	100		
106	49.0	30.6	70.6

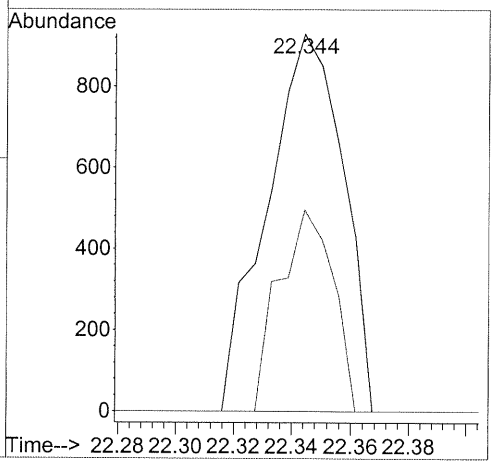


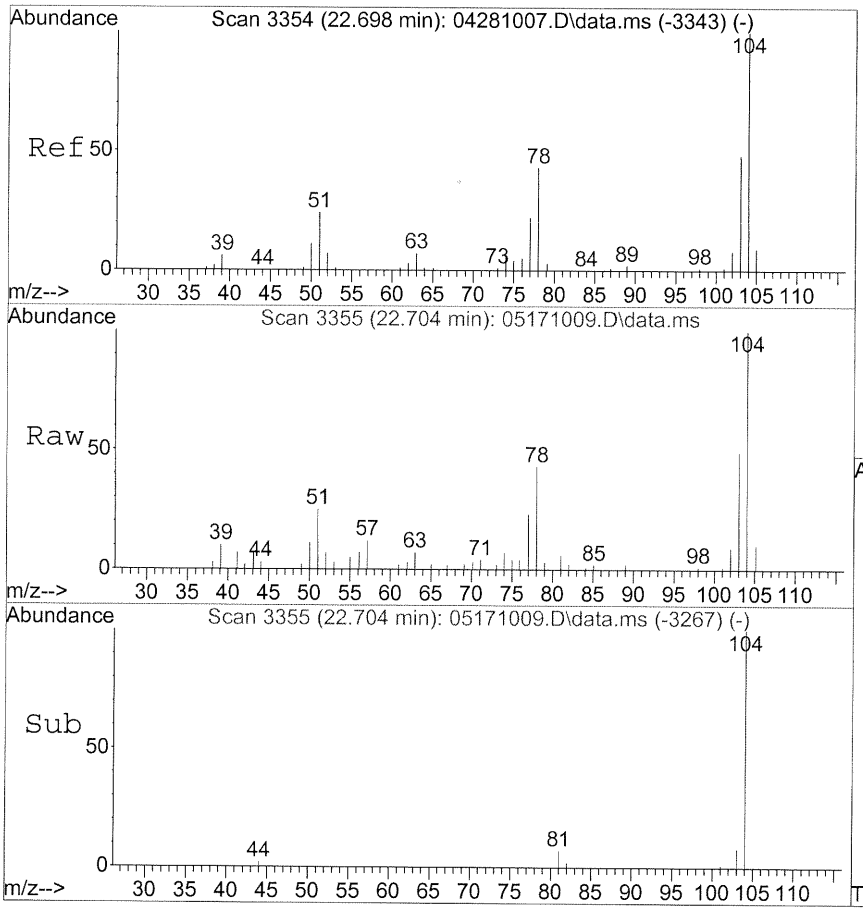


#68
Bromoform
Concen: 0.11 ng
RT: 22.34 min Scan# 3292
Delta R.T. -0.006 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:173 Resp: 1668

Ion	Ratio	Lower	Upper
173	100		
175	37.9	28.9	68.9

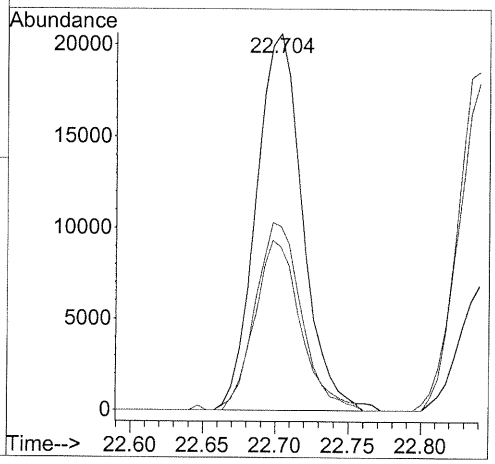


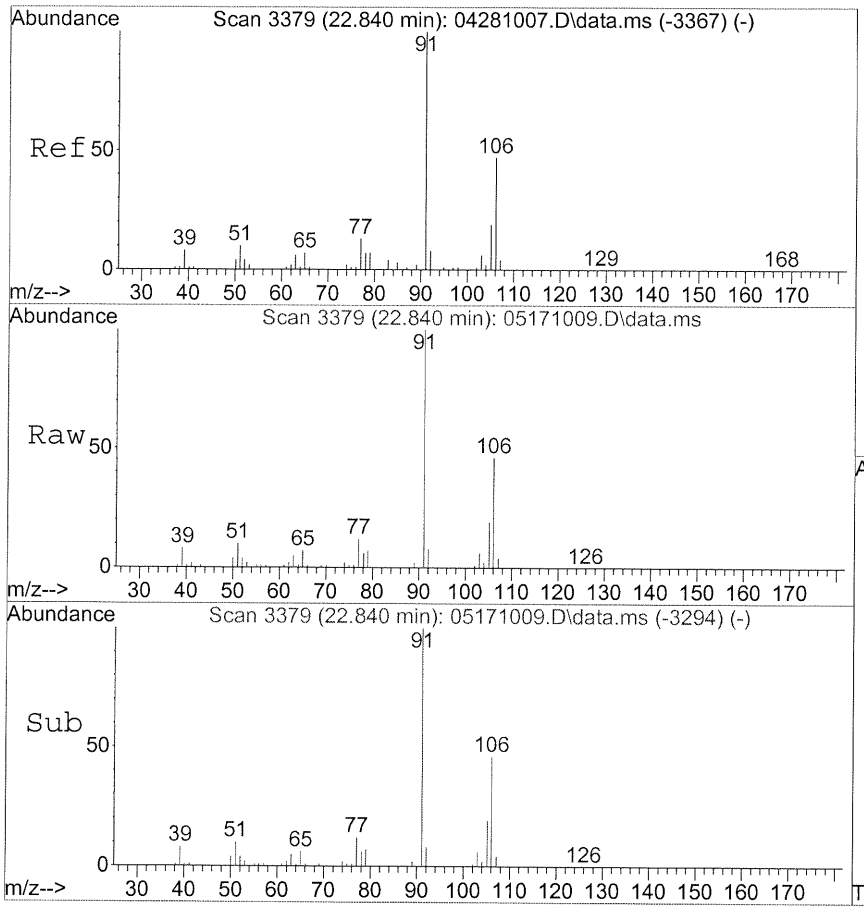


#69
Styrene
Concen: 0.77 ng
RT: 22.70 min Scan# 3355
Delta R.T. -0.000 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:104 Resp: 46114

Ion	Ratio	Lower	Upper
104	100		
78	44.1	22.5	62.5
103	49.7	27.5	67.5

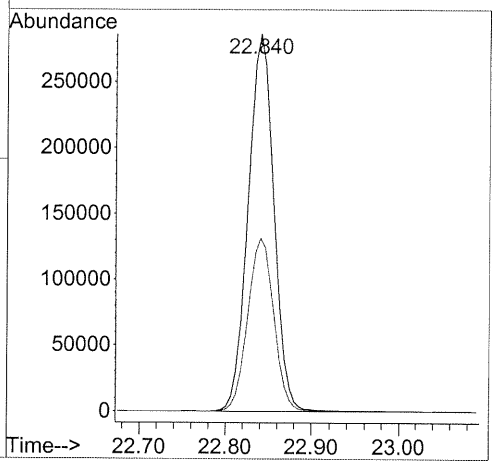


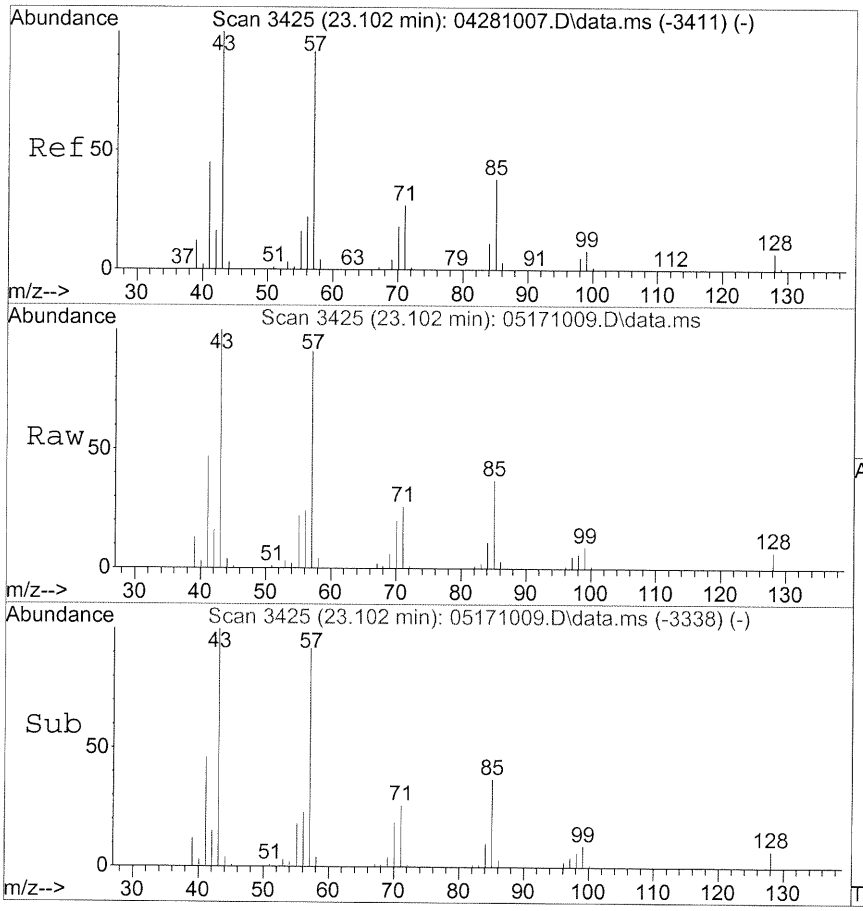


#70
o-Xylene
Concen: 6.60 ng
RT: 22.84 min Scan# 3379
Delta R.T. -0.017 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 91 Resp: 597768

Ion	Ratio	Lower	Upper
91	100		
106	46.3	27.8	67.8

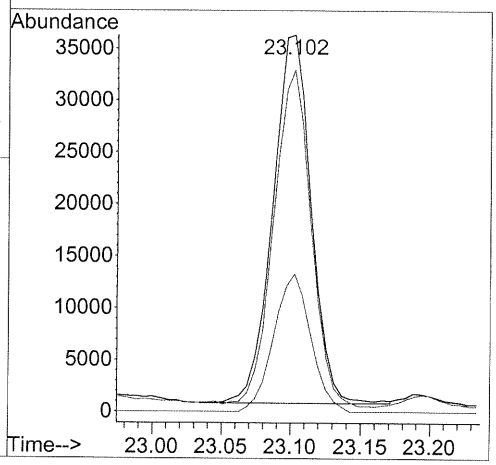


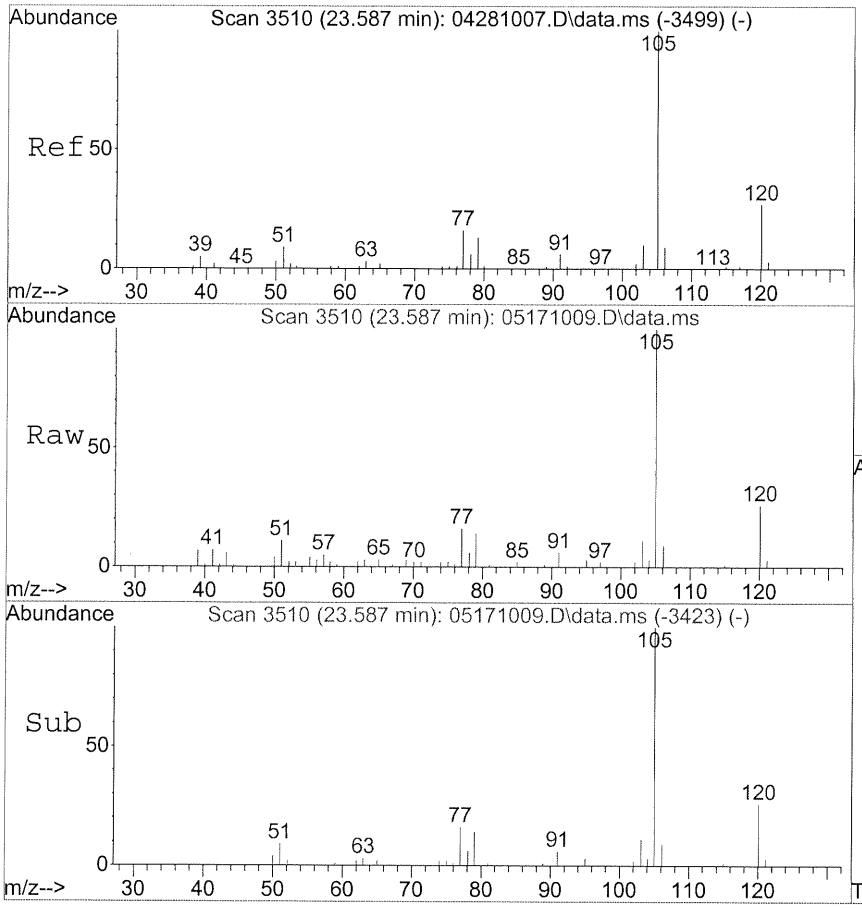


#71
n-Nonane
Concen: 1.40 ng
RT: 23.10 min Scan# 3425
Delta R.T. -0.006 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 43 Resp: 68811

Ion	Ratio	Lower	Upper
43	100		
57	89.1	74.6	114.6
85	36.1	20.5	60.5

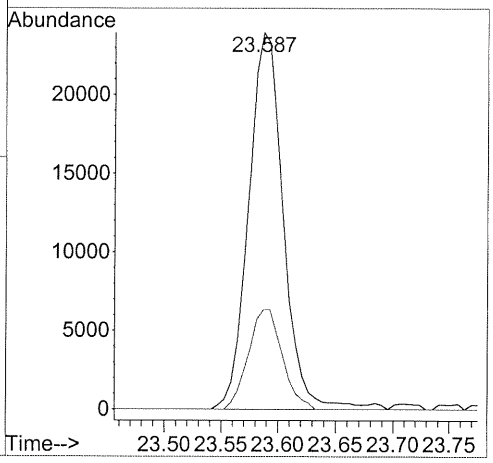


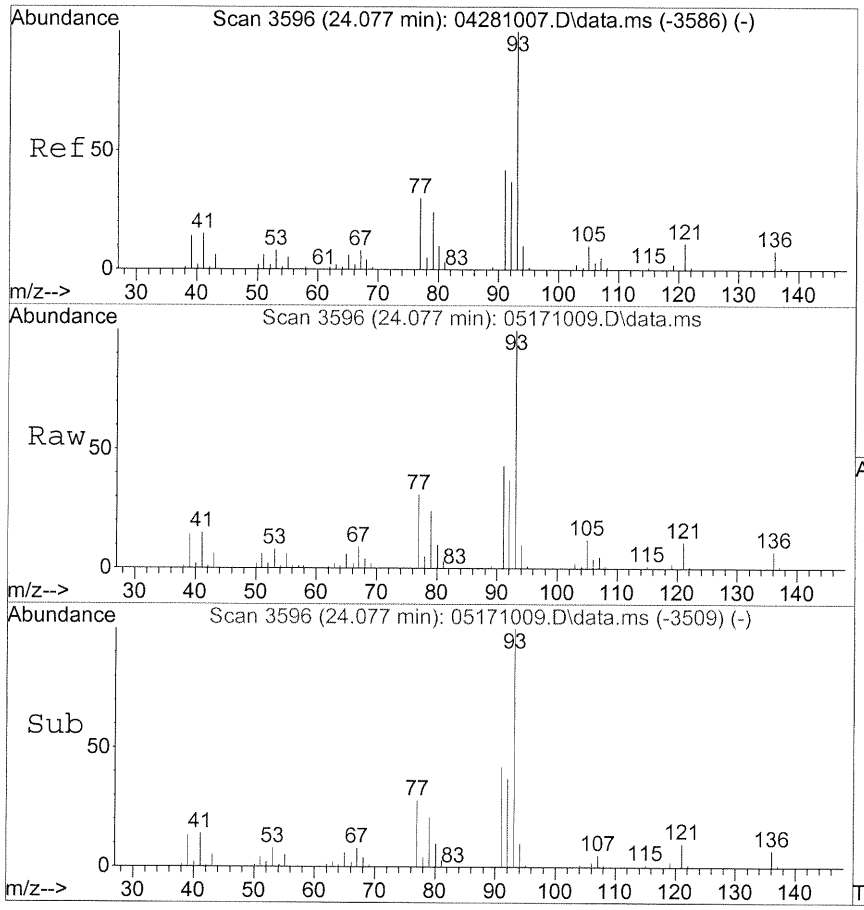


#74
Cumene
Concen: 0.46 ng
RT: 23.59 min Scan# 3510
Delta R.T. -0.006 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:105 Resp: 50853

Ion	Ratio	Lower	Upper
105	100		
120	25.8	6.8	46.8

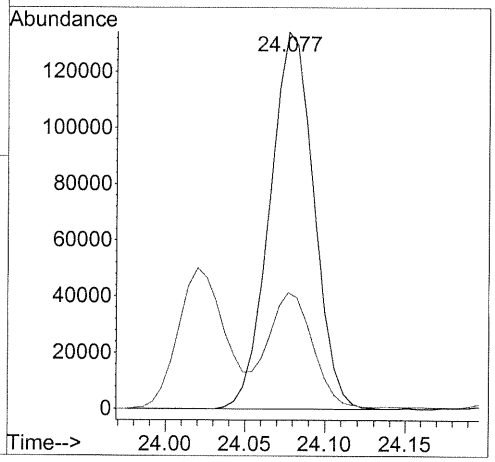


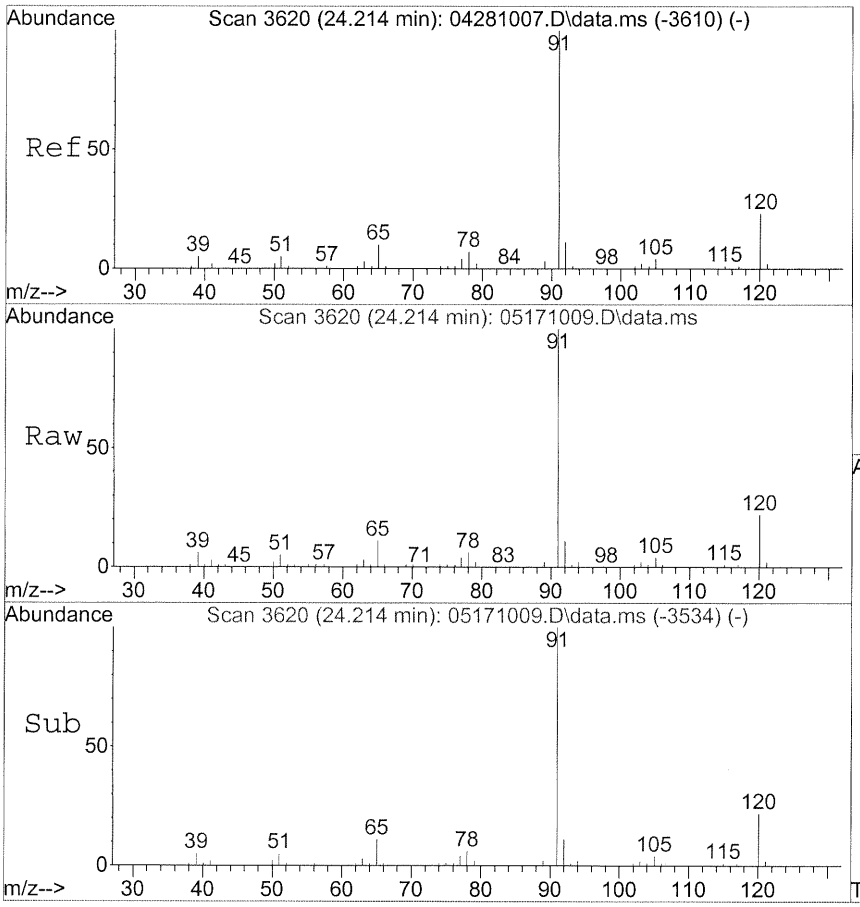


#75
alpha-Pinene
Concen: 5.01 ng
RT: 24.08 min Scan# 3596
Delta R.T. -0.006 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 93 Resp: 257432

Ion	Ratio	Lower	Upper
93	100		
77	31.6	8.7	48.7

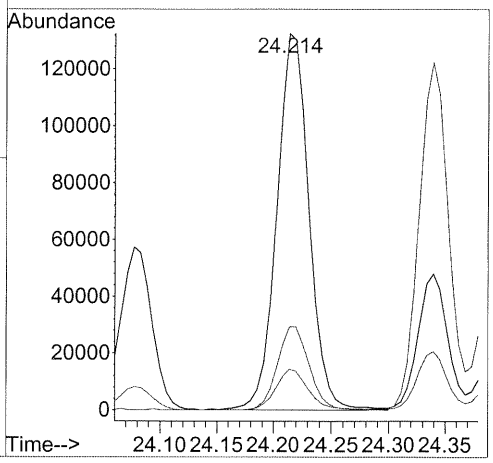


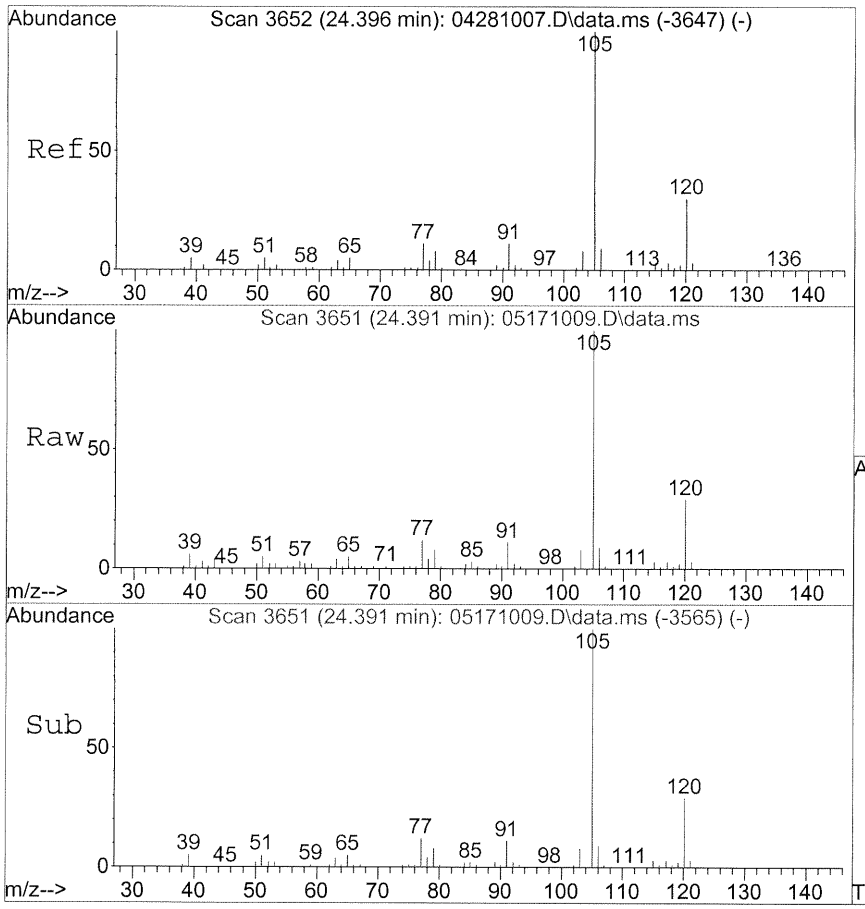


#76
n-Propylbenzene
Concen: 1.93 ng
RT: 24.21 min Scan# 3620
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 91 Resp: 259536

Ion	Ratio	Lower	Upper
91	100		
120	21.8	3.8	43.8
65	11.0	0.0	30.1

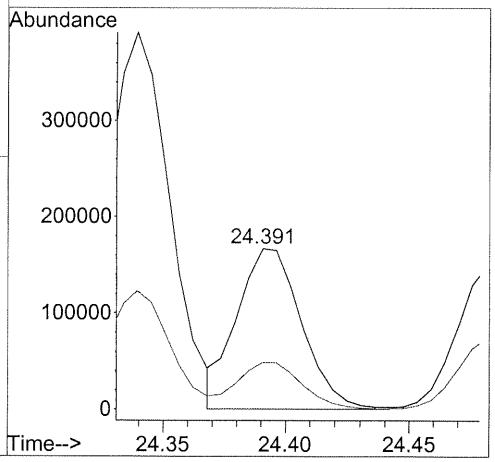


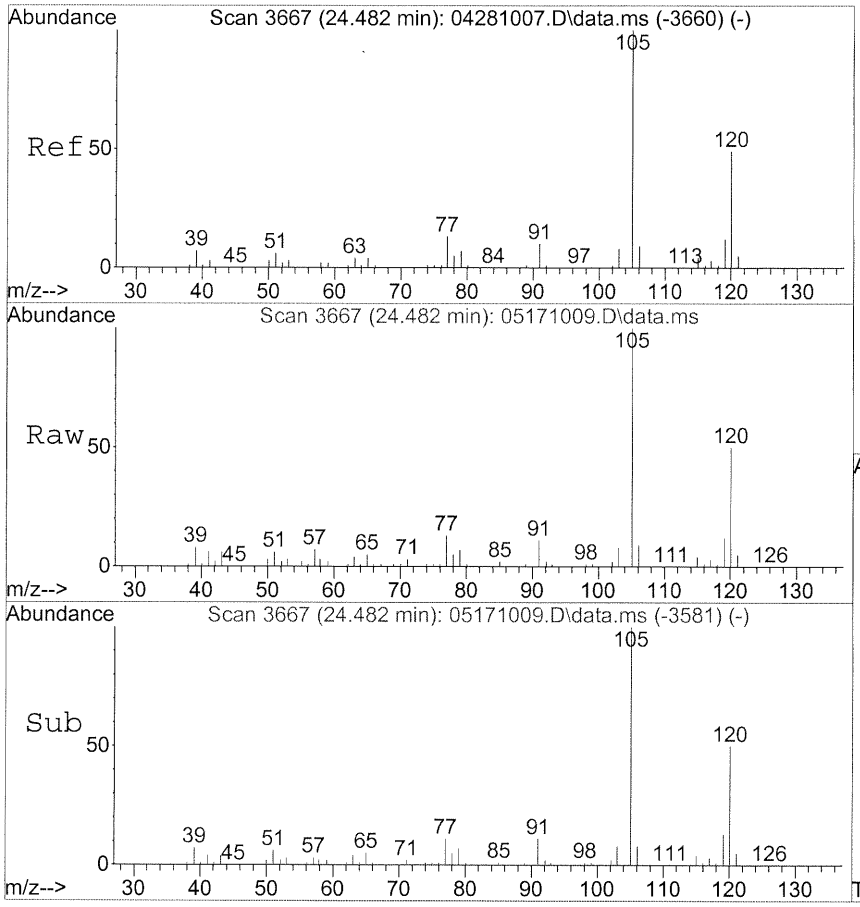


#78
4-Ethyltoluene
Concen: 3.00 ng
RT: 24.39 min Scan# 3651
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:105 Resp: 306456

Ion	Ratio	Lower	Upper
105	100		
120	29.4	10.2	50.2

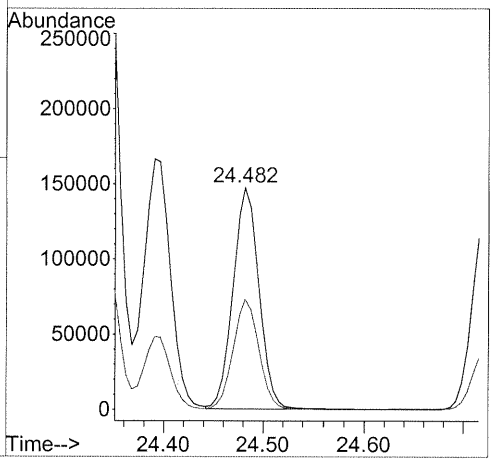


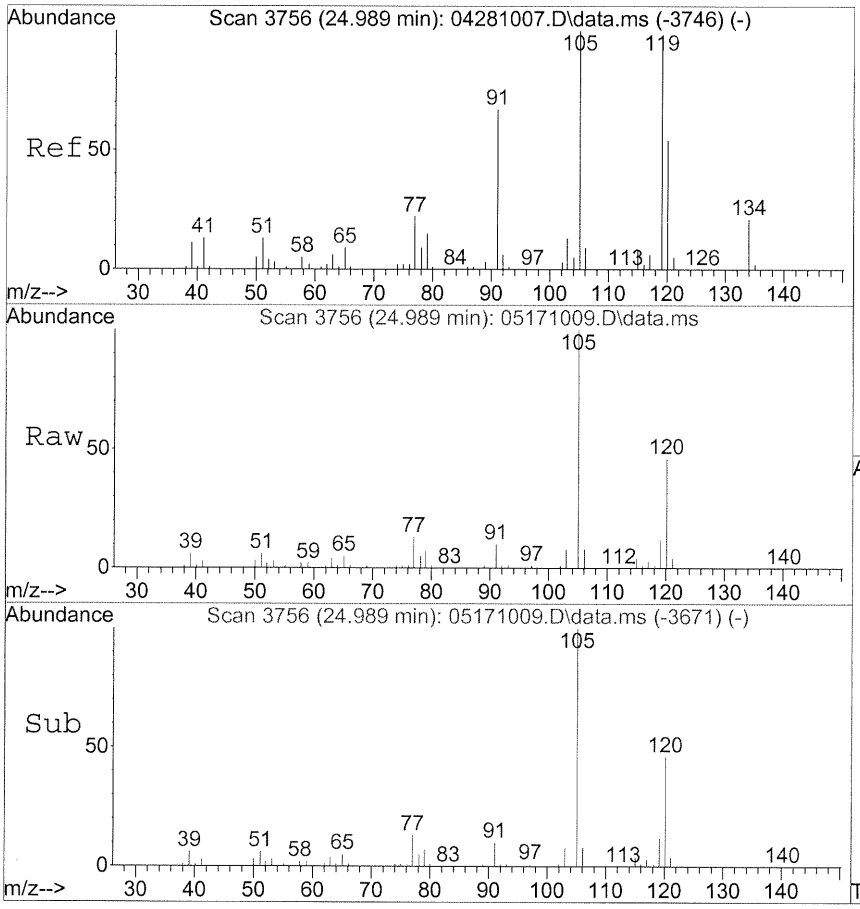


#79
1,3,5-Trimethylbenzene
Concen: 3.13 ng
RT: 24.48 min Scan# 3667
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:105 Resp: 267924

Ion	Ratio	Lower	Upper
105	100		
120	49.3	30.4	70.4

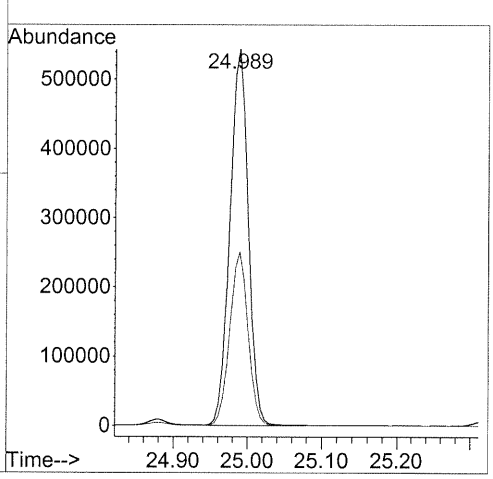


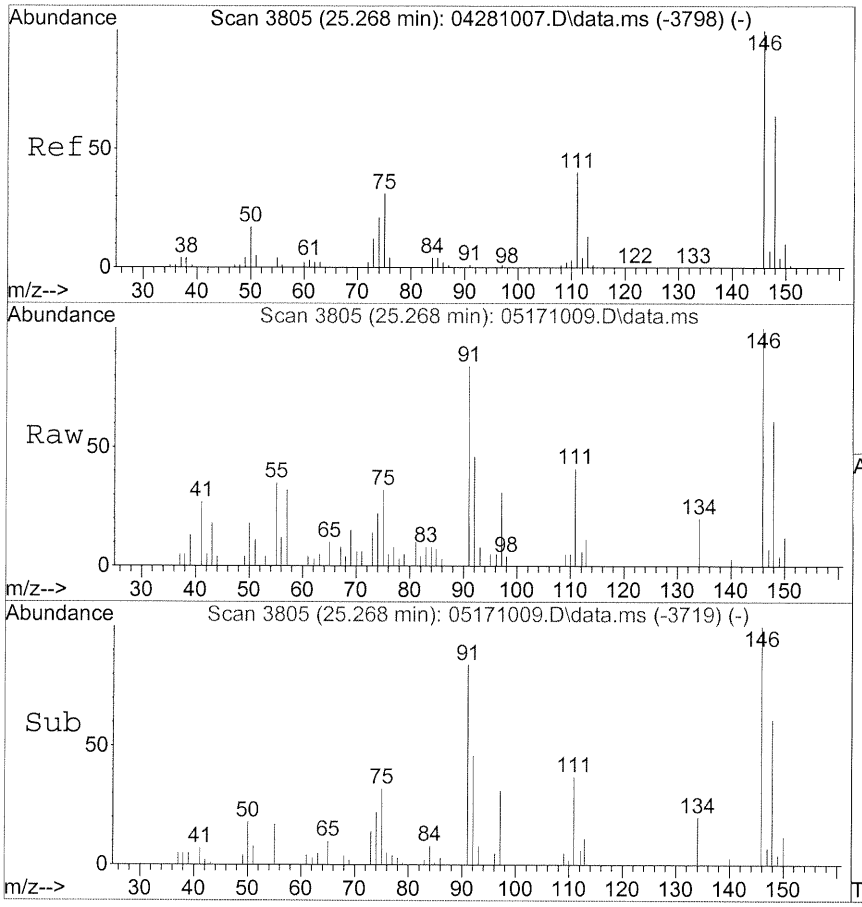


#82
1,2,4-Trimethylbenzene
Concen: 10.59 ng
RT: 24.99 min Scan# 3756
Delta R.T. -0.017 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:105 Resp: 948652

Ion	Ratio	Lower	Upper
105	100		
120	45.6	35.1	75.1

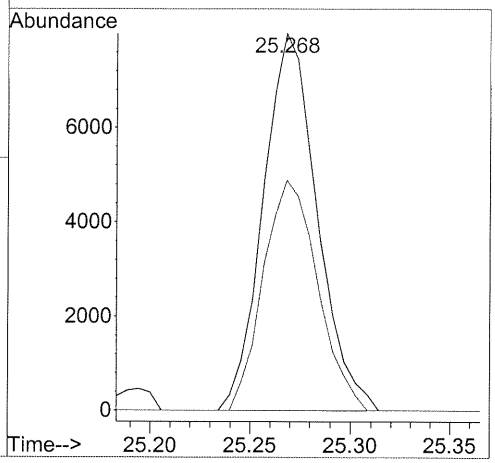


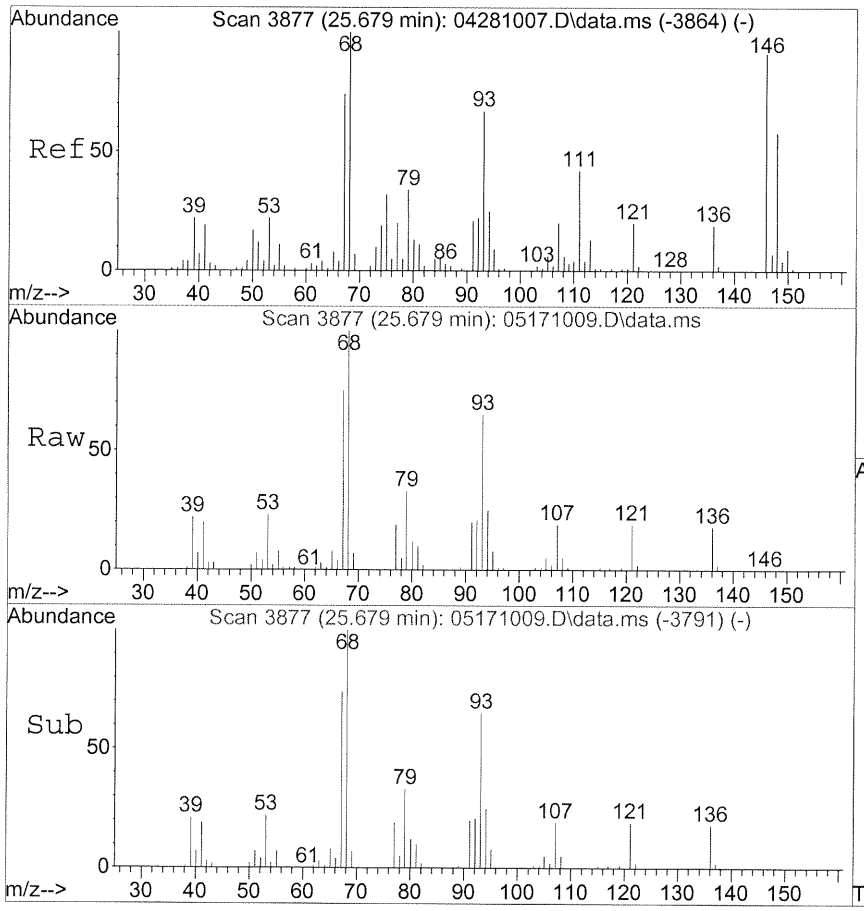


#86
1,4-Dichlorobenzene
Concen: 0.34 ng
RT: 25.27 min Scan# 3805
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:146 Resp: 14995

Ion	Ratio	Lower	Upper
146	100		
148	61.7	44.0	84.0

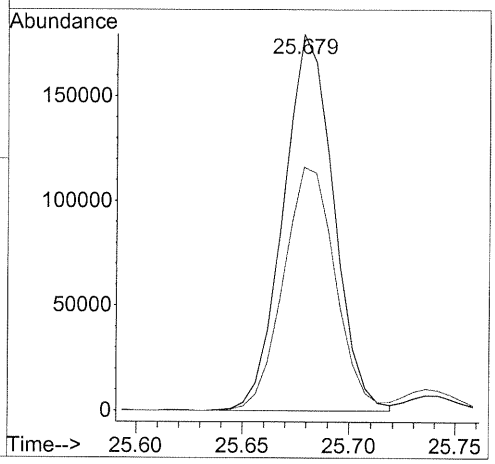


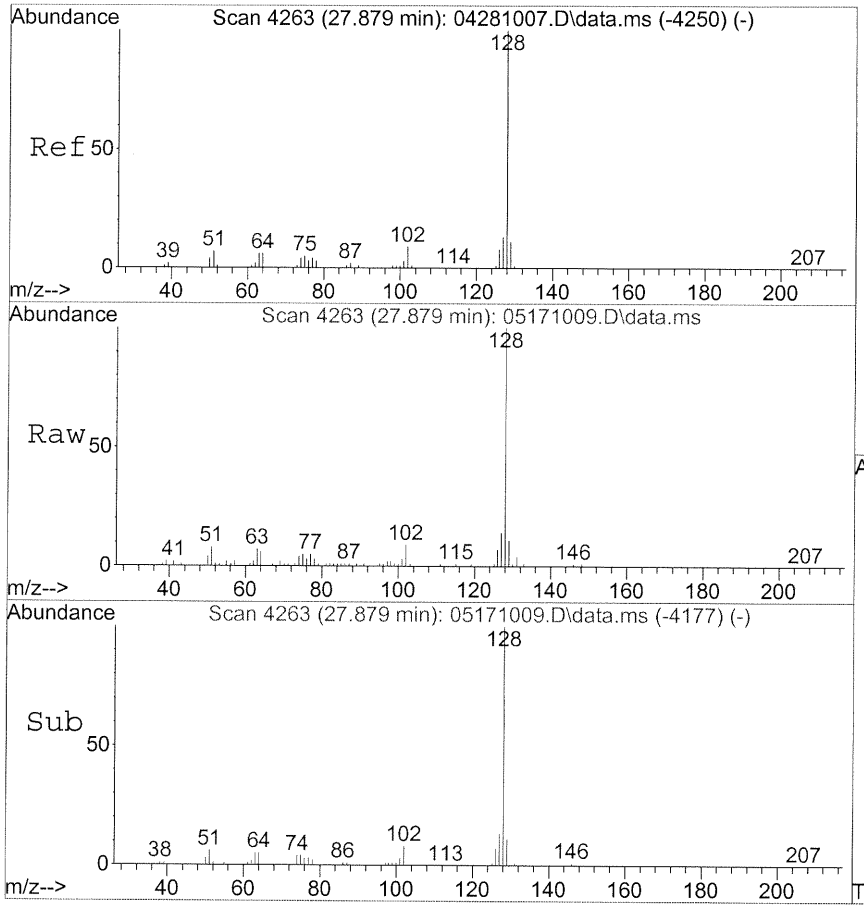


#91
d-Limonene
Concen: 8.35 ng
RT: 25.68 min Scan# 3877
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion: 68 Resp: 294283

Ion	Ratio	Lower	Upper
68	100		
93	67.0	51.5	91.5

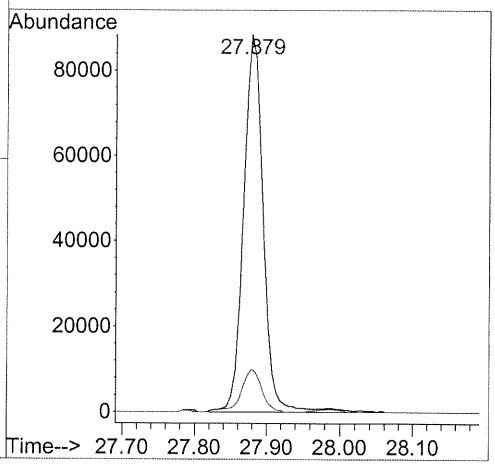




#95
Naphthalene
Concen: 1.69 ng
RT: 27.88 min Scan# 4263
Delta R.T. -0.012 min
Lab File: 05171009.D
Acq: 17 May 2010 15:31

Tgt Ion:128 Resp: 167563

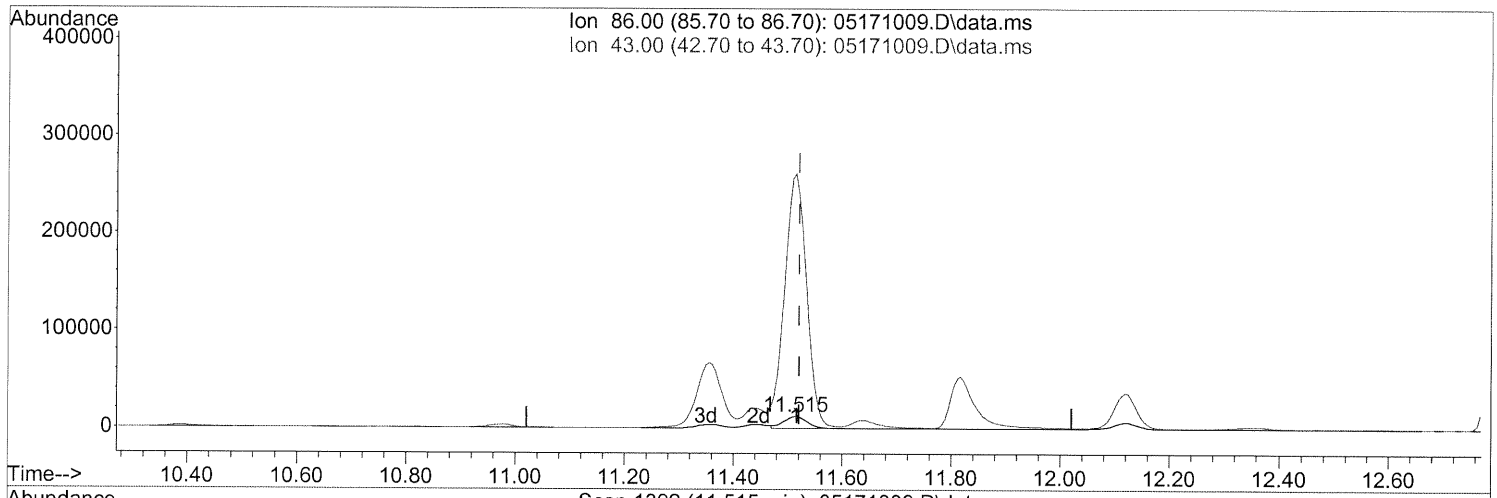
Ion	Ratio	Lower	Upper
128	100		
129	11.6	0.0	31.1

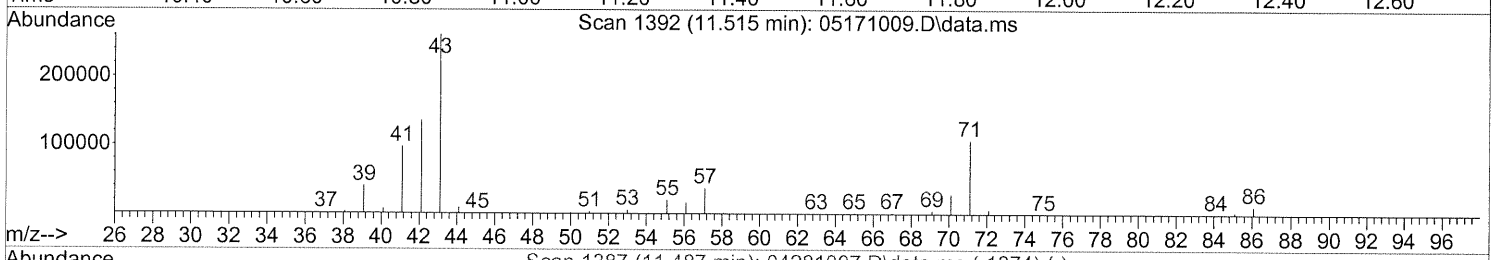


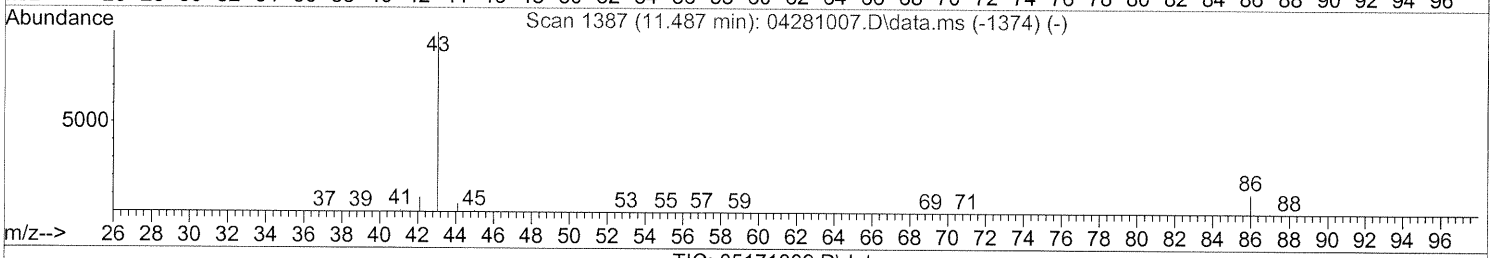
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171009.D\data.ms

(26) Vinyl Acetate (T)

11.515min (-0.006) 6.86ng

response 33696

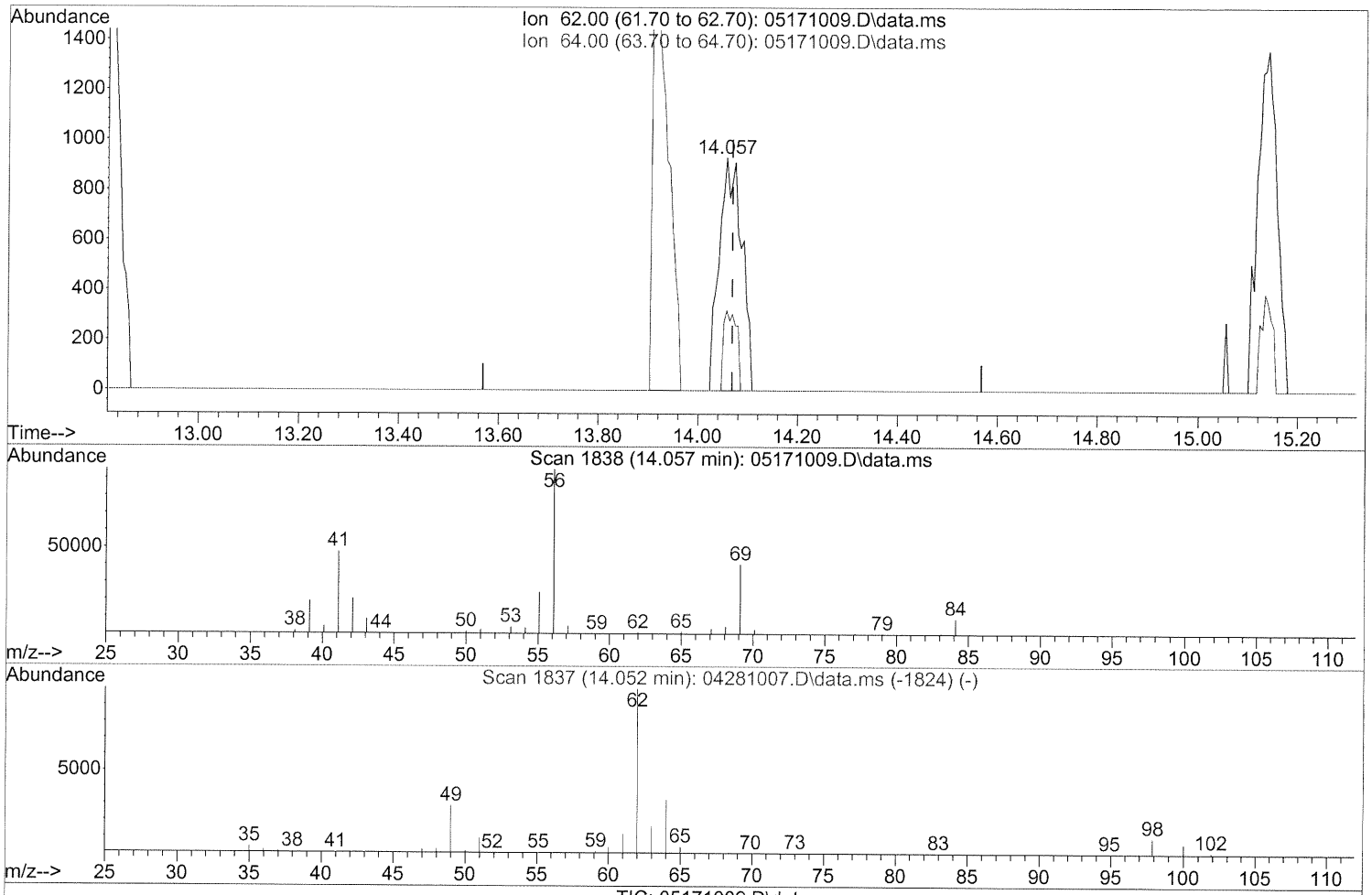
Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2180.49#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(36) 1,2-Dichloroethane (T)

14.057min (-0.012) 0.10ng

response 2910

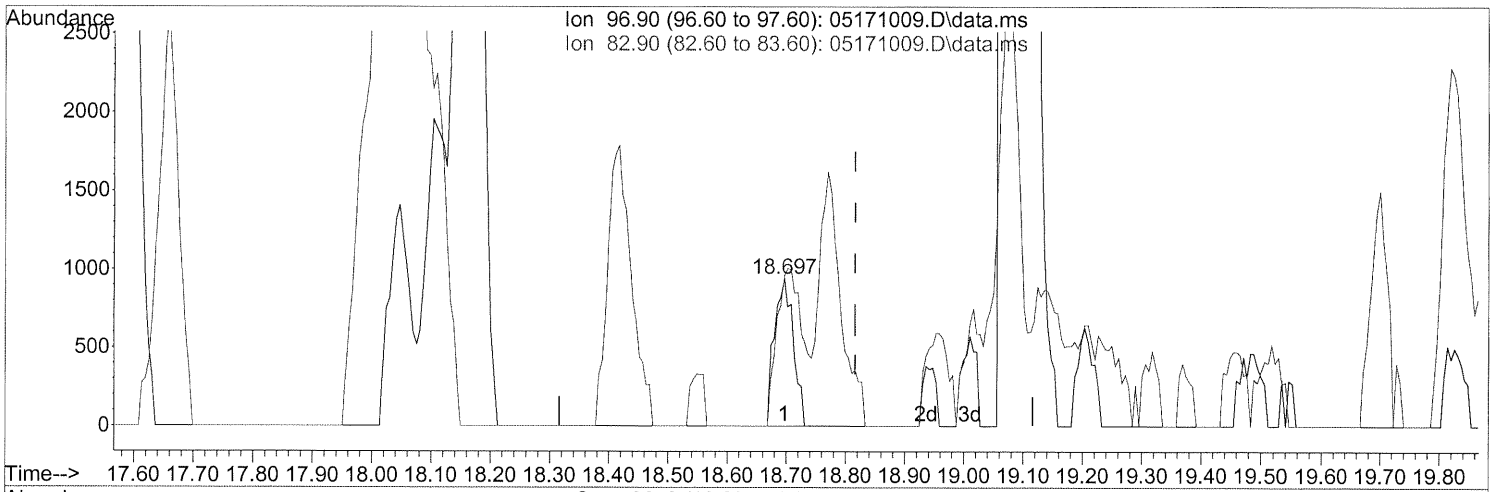
Ion	Exp%	Act%
62.00	100	100
64.00	32.80	19.79
0.00	0.00	0.00
0.00	0.00	0.00

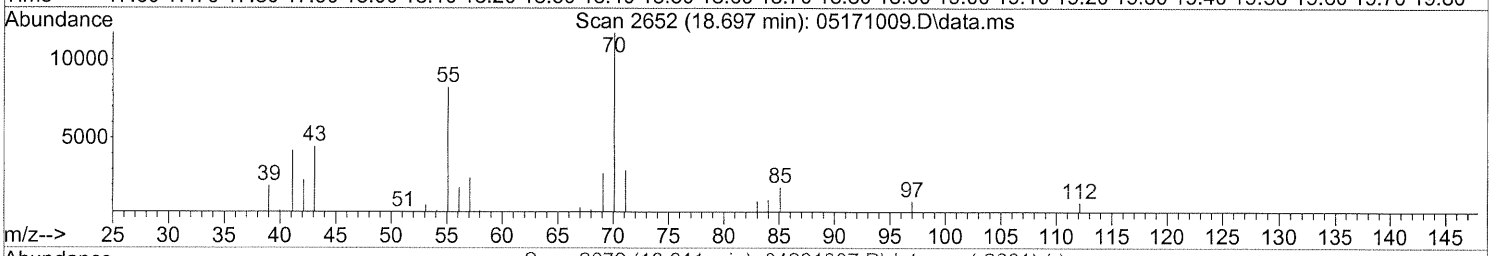
FP

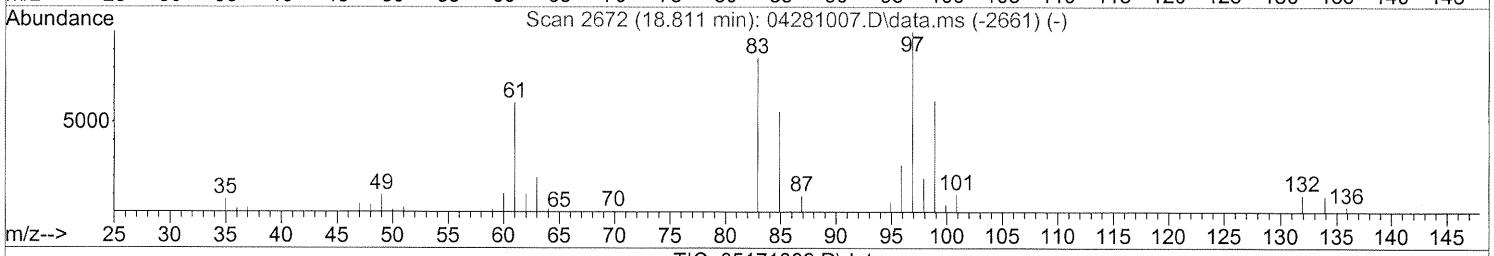
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171009.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.697min (-0.120) 0.11ng

response 2080

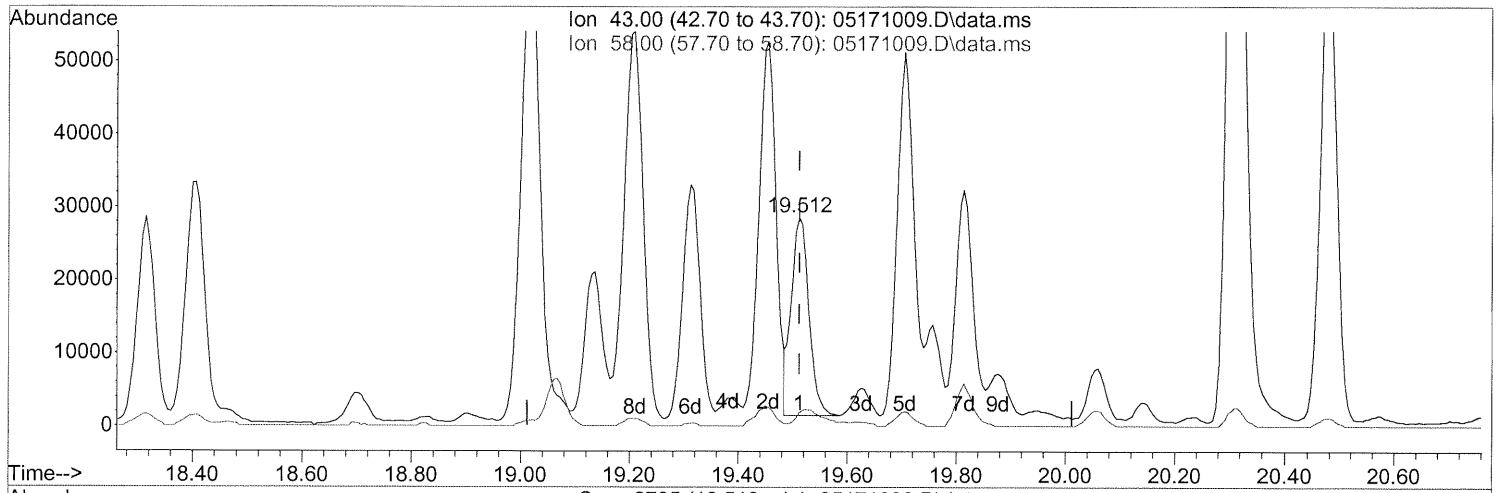
Ion	Exp%	Act%
96.90	100	100
82.90	84.60	146.01#
0.00	0.00	0.00
0.00	0.00	0.00

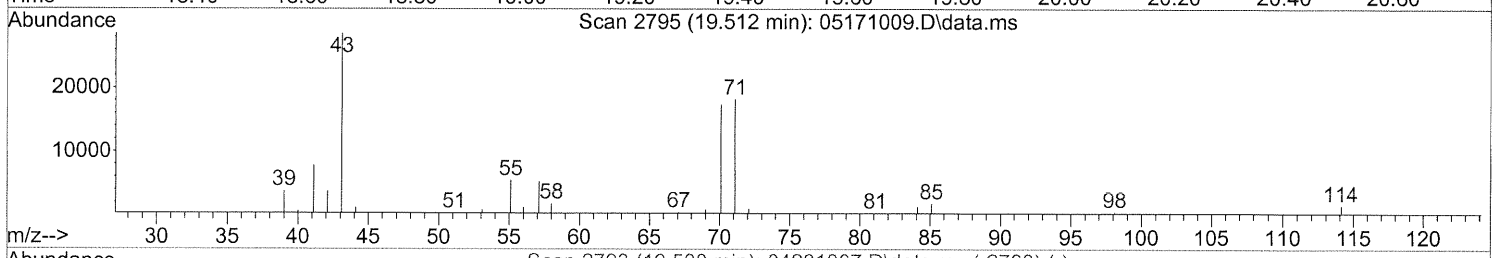
TP

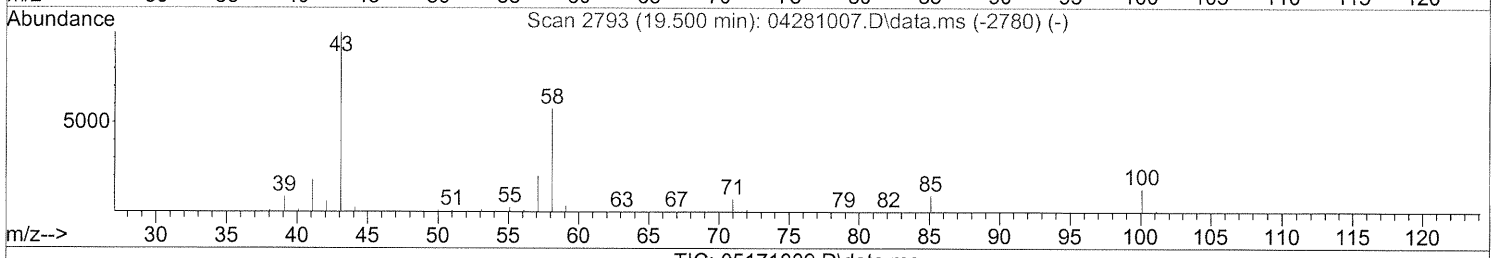
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05171009.D\data.ms

(59) 2-Hexanone (T)

19.512min (-0.000) 1.37ng

response 61100

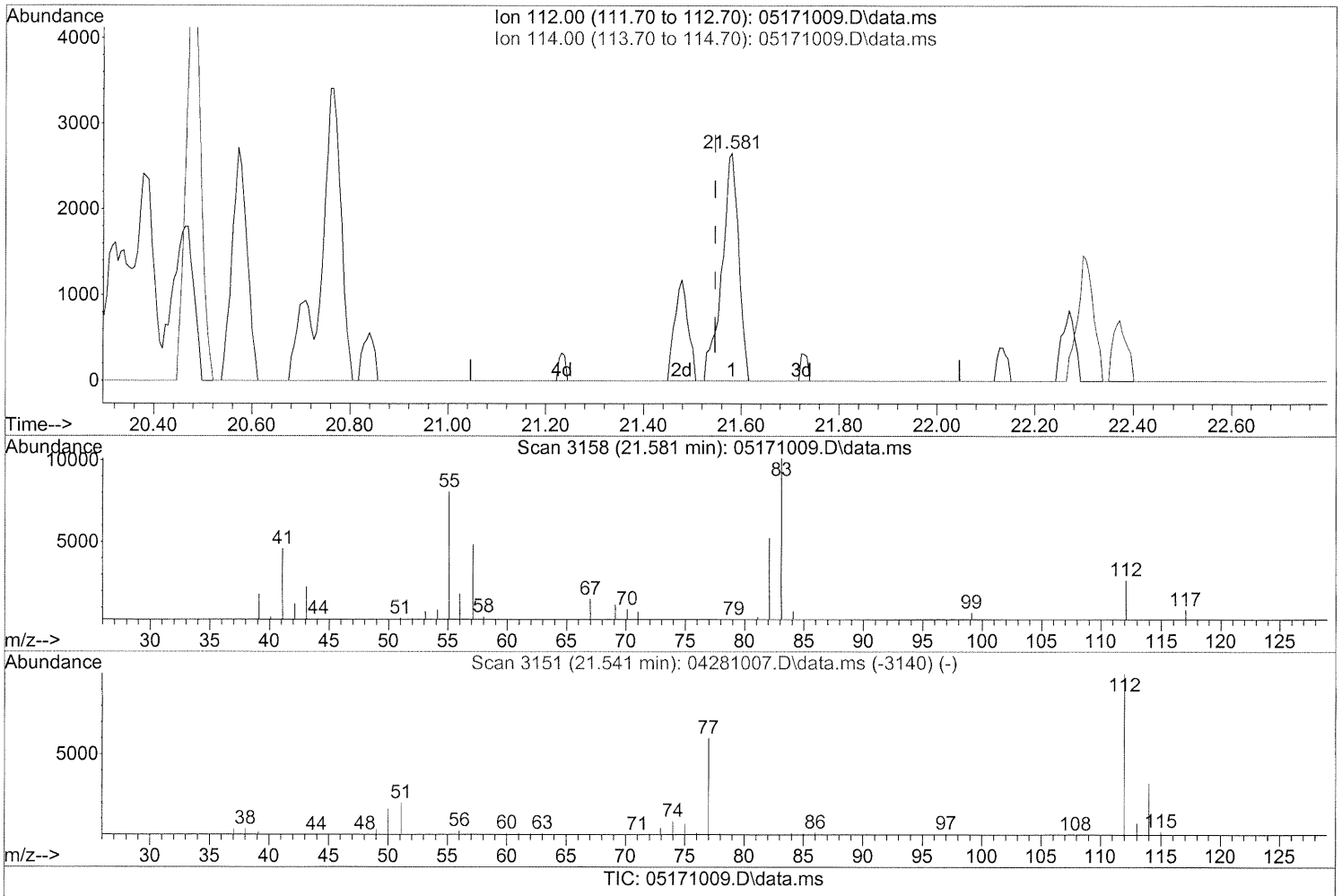
Ion	Exp%	Act%
43.00	100	100
58.00	58.30	13.09#
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(65) Chlorobenzene (T)

21.581min (+0.034) 0.11ng

response 6351

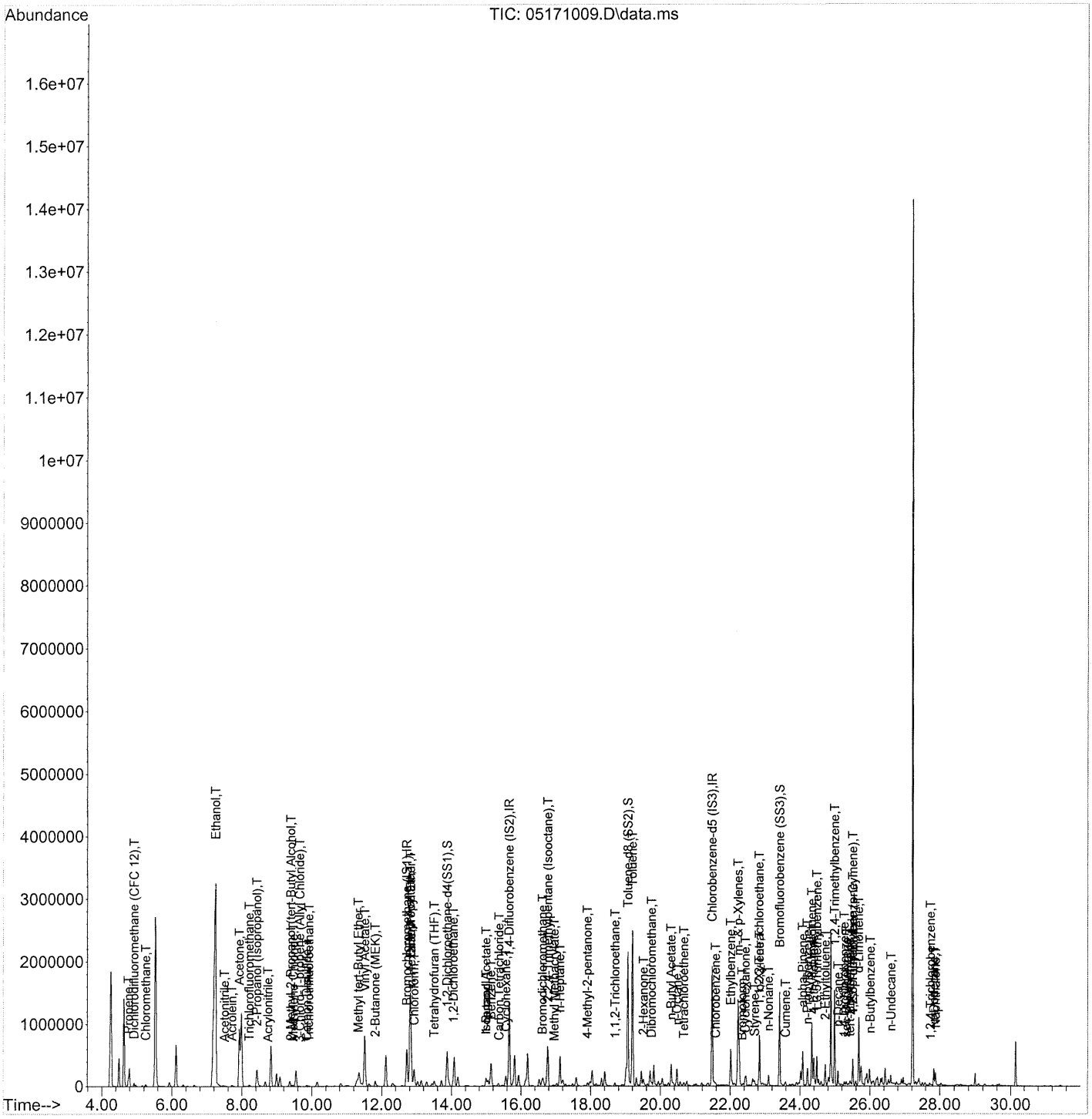
Ion	Exp%	Act%
112.00	100	100
114.00	31.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

7P

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	313228	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1574233	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	791652	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	562136	24.116	ng		-0.03
Spiked Amount 25.000			Recovery = 96.48%				
57) Toluene-d8 (SS2)	19.07	98	1857597	24.596	ng		0.00
Spiked Amount 25.000			Recovery = 98.40%				
73) Bromofluorobenzene (SS3)	23.42	174	489021	25.363	ng		0.00
Spiked Amount 25.000			Recovery = 101.44%				
Target Compounds							Qvalue
2) Propene	4.76	42	77917	3.189	ng	#	1
3) Dichlorodifluoromethan...	4.92	85	55531	1.325	ng		100
4) Chloromethane	5.26	50	8108	0.262	ng		98
5) 1,2-Dichloro-1,1,2,2-t...	5.52	135	970	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	6.01	54	942	N.D.			
8) Bromomethane	6.51	94	385	N.D.			
9) Chloroethane	6.86	64	312	N.D.			
10) Ethanol	7.25	45	7821787	587.197	ng		99
11) Acetonitrile	7.50	41	16329	0.485	ng		82
12) Acrolein	7.71	56	27554	2.654	ng		99
13) Acetone	7.92	58	588805	36.158	ng	#	48
14) Trichlorofluoromethane	8.21	101	26730	0.736	ng		100
15) 2-Propanol (Isopropanol)	8.43	45	386523	7.656	ng		99
16) Acrylonitrile	8.75	53	1300	0.053	ng		86
17) 1,1-Dichloroethene	9.25	96	507	N.D.			
18) 2-Methyl-2-Propanol (t...	9.40	59	15700	0.301	ng	#	68
19) Methylene Chloride	9.47	84	5261	0.245	ng		98
20) 3-Chloro-1-propene (Al...	9.65	41	1660	0.059	ng	#	36
21) Trichlorotrifluoroethane	9.91	151	4598	0.300	ng		84
22) Carbon Disulfide	9.86	76	42980	0.562	ng		98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	11.30	63	94	N.D.			
25) Methyl tert-Butyl Ether	11.33	73	53878	0.808	ng		93
26) Vinyl Acetate	11.52	86	33696	6.856	ng	#	1
27) 2-Butanone (MEK)	11.82	72	42928	3.174	ng		94
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	12.83	87	11901	0.594	ng	#	1
30) Ethyl Acetate	12.81	61	321844	40.026	ng		96
31) n-Hexane	12.84	57	387274	9.406	ng		98

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	273774	7.968 ng		100
34) Tetrahydrofuran (THF)	13.51	72	23637	1.807 ng	#	59
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	14.06	62	2910	0.104 ng		77
38) 1,1,1-Trichloroethane	14.44	97	724	N.D.		
39) Isopropyl Acetate	15.00	61	2927	0.216 ng	#	1
40) 1-Butanol	14.99	56	118155	5.431 ng		87
41) Benzene	15.14	78	476621	5.424 ng		100
42) Carbon Tetrachloride	15.37	117	8026	0.343 ng		98
43) Cyclohexane	15.57	84	93754	2.539 ng		95
44) tert-Amyl Methyl Ether	16.04	73	87	N.D.		
45) 1,2-Dichloropropane	16.19	63	689	N.D.		
46) Bromodichloromethane	16.62	83	60226	2.285 ng		75
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.68	88	502	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	757912	7.364 ng		97
50) Methyl Methacrylate	16.96	100	2124	0.231 ng	#	1
51) n-Heptane	17.12	71	149922	5.967 ng		96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.91	58	21770	1.147 ng		91
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	18.70	97	2080	0.108 ng	#	33
58) Toluene	19.20	91	2249256	24.008 ng		99
59) 2-Hexanone	19.51	43	61100	1.367 ng	#	39
60) Dibromochloromethane	19.75	129	15680	0.845 ng		100
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.31	43	276610	5.507 ng		95
63) n-Octane	20.48	57	57039	2.624 ng		93
64) Tetrachloroethene	20.68	166	18150	0.827 ng		99
65) Chlorobenzene	21.58	112	6351	0.111 ng	#	43
66) Ethylbenzene	22.01	91	556956	5.313 ng		98
67) m- & p-Xylenes	22.22	91	1339443	15.762 ng		98
68) Bromoform	22.34	173	1668	0.108 ng		84
69) Styrene	22.70	104	46114	0.770 ng		97
70) o-Xylene	22.84	91	597768	6.602 ng		98
71) n-Nonane	23.10	43	68811	1.400 ng		94
72) 1,1,2,2-Tetrachloroethane	22.83	83	1660	0.051 ng	#	18
74) Cumene	23.59	105	50853	0.464 ng		98
75) alpha-Pinene	24.08	93	257432	5.012 ng		95
76) n-Propylbenzene	24.21	91	259536	1.935 ng		96
77) 3-Ethyltoluene	24.34	105	703749	6.958 ng		99
78) 4-Ethyltoluene	24.39	105	306456	2.998 ng		98
79) 1,3,5-Trimethylbenzene	24.48	105	267924	3.126 ng		98

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171009.D
Acq On : 17 May 2010 15:31
Operator : EM
Sample : P1001651-003 dup (1000ml)
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 17 16:16:53 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

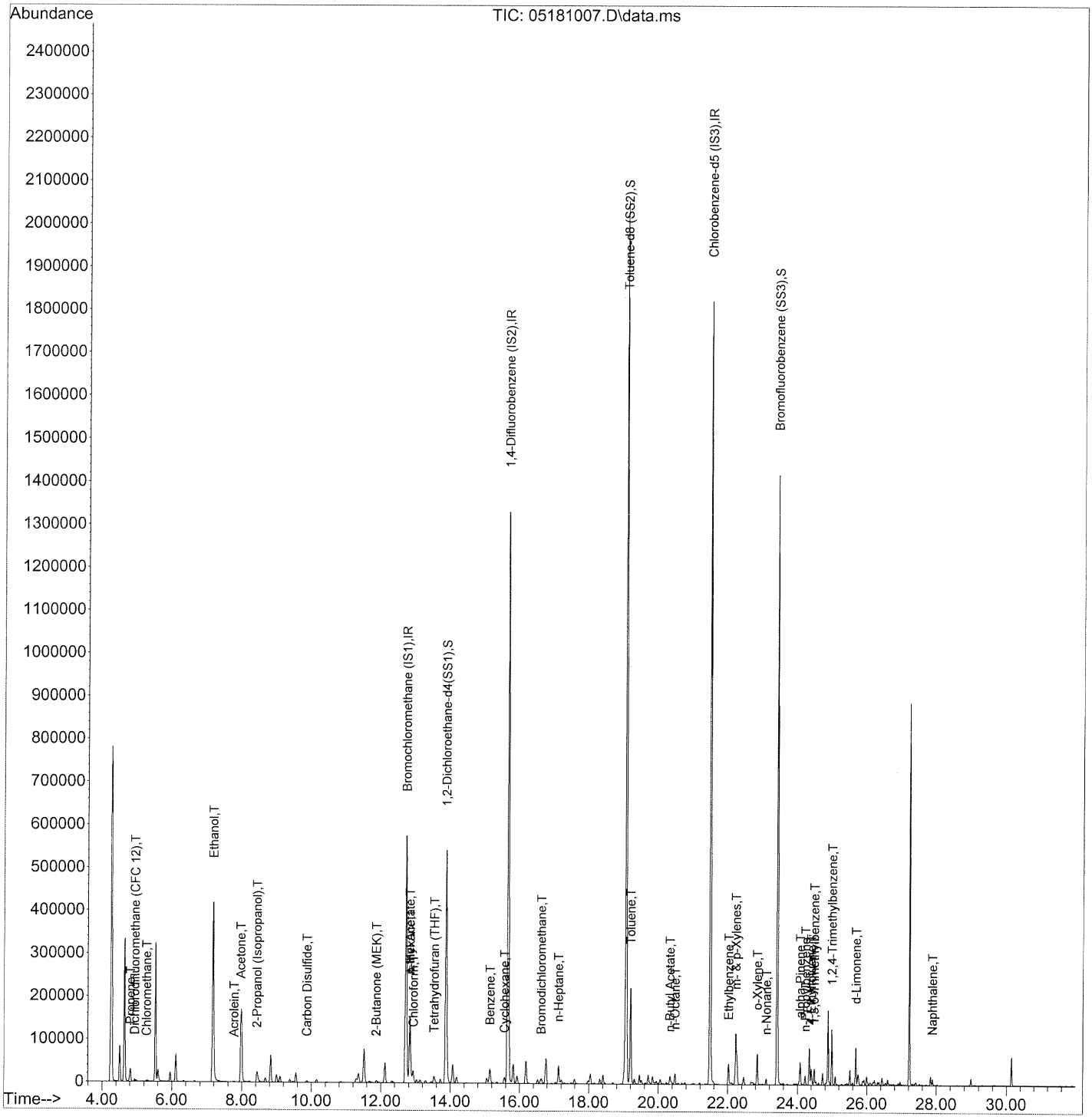
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	2150	N.D.		
81) 2-Ethyltoluene	24.72	105	246476	2.335 ng		72
82) 1,2,4-Trimethylbenzene	24.99	105	948652	10.590 ng		87
83) n-Decane	25.09	57	88753	1.723 ng		95
84) Benzyl Chloride	25.18	91	2235	N.D.		
85) 1,3-Dichlorobenzene	25.19	146	532	N.D.		
86) 1,4-Dichlorobenzene	25.27	146	14995	0.338 ng		97
87) sec-Butylbenzene	25.32	105	15032	0.128 ng		93
88) 4-Isopropyltoluene (p-...	25.51	119	73920	0.640 ng		77
89) 1,2,3-Trimethylbenzene	25.51	105	195504	2.130 ng		81
90) 1,2-Dichlorobenzene	25.69	146	586	N.D.		
91) d-Limonene	25.68	68	294283	8.346 ng		95
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	58861	1.140 ng		94
94) 1,2,4-Trichlorobenzene	27.74	180	1999	0.073 ng	#	89
95) Naphthalene	27.88	128	167563	1.693 ng		99
96) n-Dodecane	27.83	57	85371	1.613 ng		96
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.43	55	65529	2.219 ng	#	89
99) tert-Butylbenzene	25.43	119	21937	0.242 ng		91
100) n-Butylbenzene	26.01	91	61288	0.666 ng	#	60

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 17:22:47 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 17:22:47 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	309612	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1560613	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	778880	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	559453	24.282	ng	-0.03
Spiked Amount 25.000			Recovery = 97.12%			✓
57) Toluene-d8 (SS2)	19.07	98	1823193	24.536	ng	0.00
Spiked Amount 25.000			Recovery = 98.16%			✓
73) Bromofluorobenzene (SS3)	23.42	174	477948	25.195	ng	0.00
Spiked Amount 25.000			Recovery = 100.80%			✓

Target Compounds							Qvalue
2) Propene	4.81	42	4274	0.177	ng	#	2
3) Dichlorodifluoromethan...	4.94	85	5455	0.132	ng	#	92
4) Chloromethane	5.27	50	3122	0.102	ng		81
10) Ethanol	7.18	45	692057	52.561	ng		100
12) Acrolein	7.77	56	2098	0.204	ng		87
13) Acetone	7.96	58	58383	3.627	ng	#	50
15) 2-Propanol (Isopropanol)	8.43	45	45883	0.919	ng		100
22) Carbon Disulfide	9.87	76	9501	0.126	ng		77
27) 2-Butanone (MEK)	11.86	72	3005	0.225	ng	#	10
30) Ethyl Acetate	12.83	61	27383	3.445	ng		96
31) n-Hexane	12.84	57	35593	0.875	ng		96
32) Chloroform	12.93	83	25778	0.759	ng		100
34) Tetrahydrofuran (THF)	13.54	72	6456	0.499	ng	#	80
41) Benzene	15.15	78	44979	0.516	ng		98
43) Cyclohexane	15.56	84	8620	0.235	ng		89
46) Bromodichloromethane	16.62	83	5292	0.203	ng	#	68
51) n-Heptane	17.12	71	13582	0.545	ng		95
58) Toluene	19.20	91	209613	2.274	ng		99
62) n-Butyl Acetate	20.33	43	20975	0.424	ng		90
63) n-Octane	20.48	57	5002	0.234	ng		93
66) Ethylbenzene	22.02	91	51872	0.503	ng		97
67) m- & p-Xylenes	22.22	91	126140	1.509	ng		96
70) o-Xylene	22.85	91	56237	0.631	ng		97
71) n-Nonane	23.11	43	6650	0.138	ng		89
75) alpha-Pinene	24.08	93	23346	0.462	ng	#	40
76) n-Propylbenzene	24.23	91	23883	0.181	ng		95
78) 4-Ethyltoluene	24.40	105	29138	0.290	ng		98
79) 1,3,5-Trimethylbenzene	24.48	105	27232	0.323	ng		93
82) 1,2,4-Trimethylbenzene	24.99	105	84597	0.960	ng		86
91) d-Limonene	25.68	68	24837	0.716	ng		95

ldl 5/20/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 20 17:22:47 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

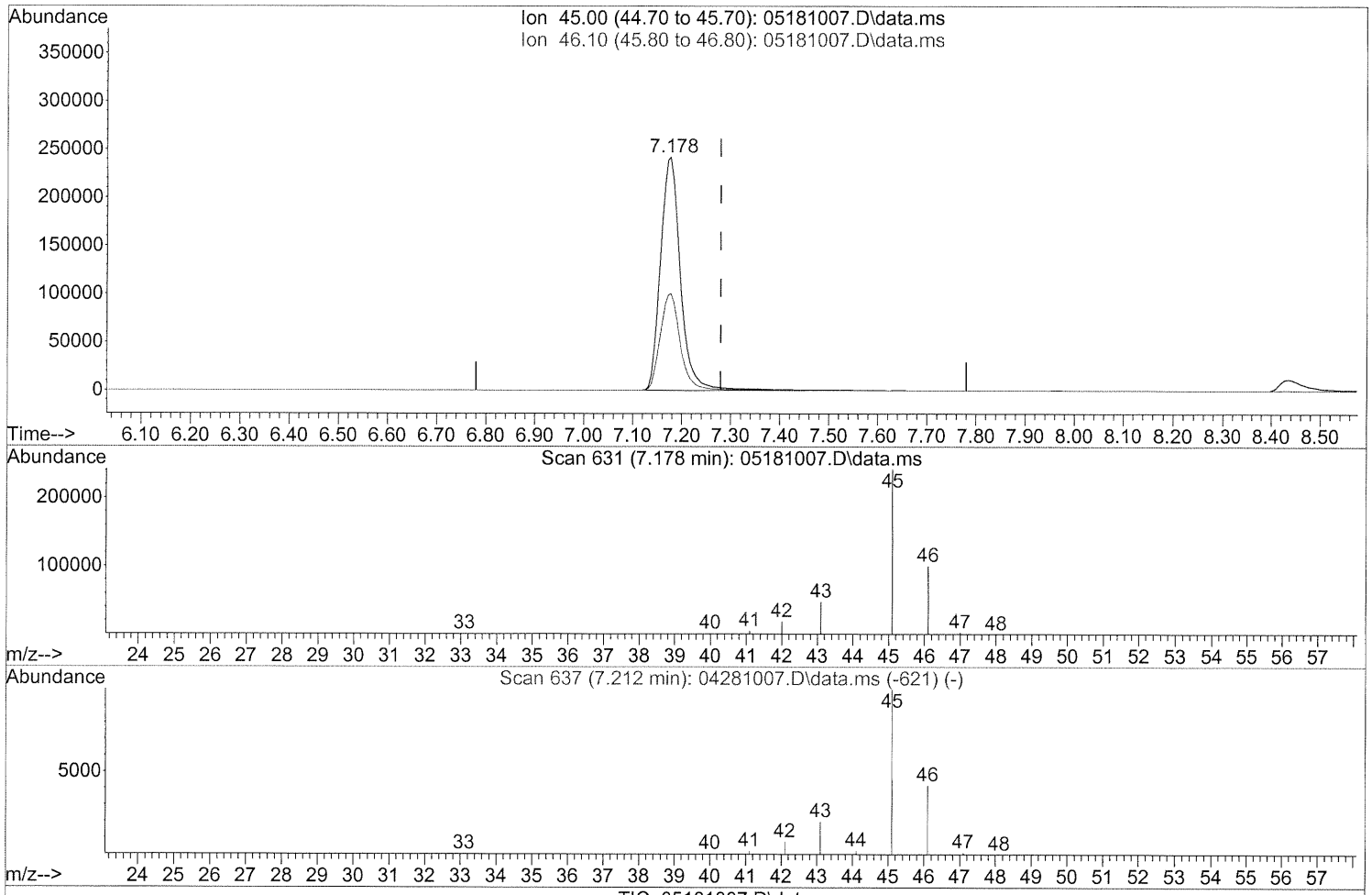
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) Naphthalene	27.88	128	15967	0.164	ng	96

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

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(10) Ethanol (T)

7.178min (-0.103) 52.56ng

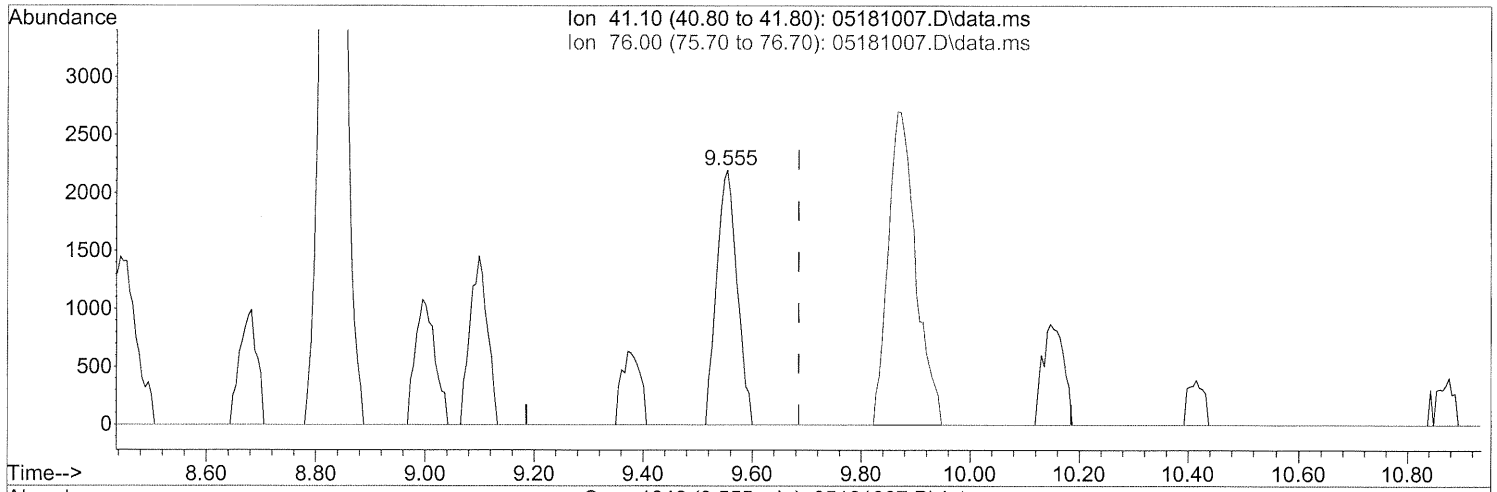
response 692057

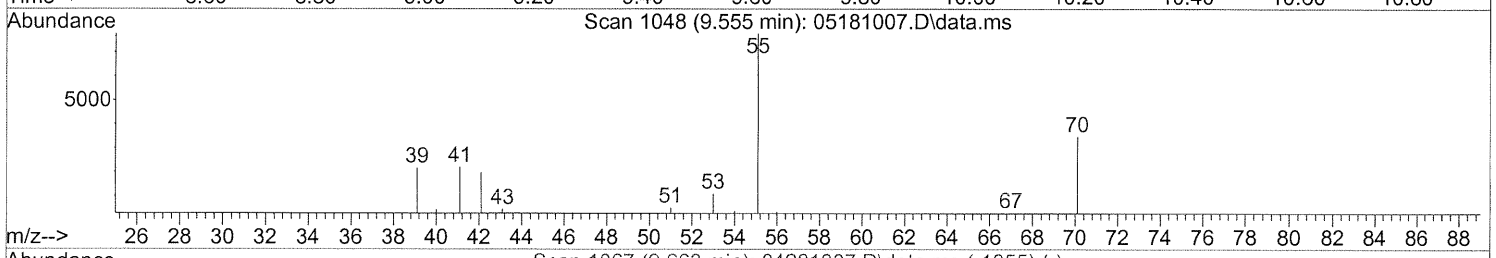
Ion	Exp%	Act%
45.00	100	100
46.10	41.30	41.48
0.00	0.00	0.00
0.00	0.00	0.00

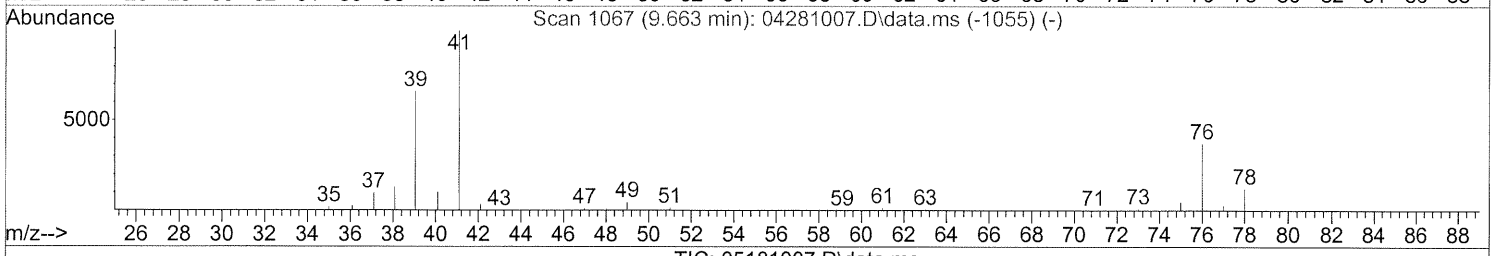
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181007.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.555min (-0.131) 0.21ng

response 5731

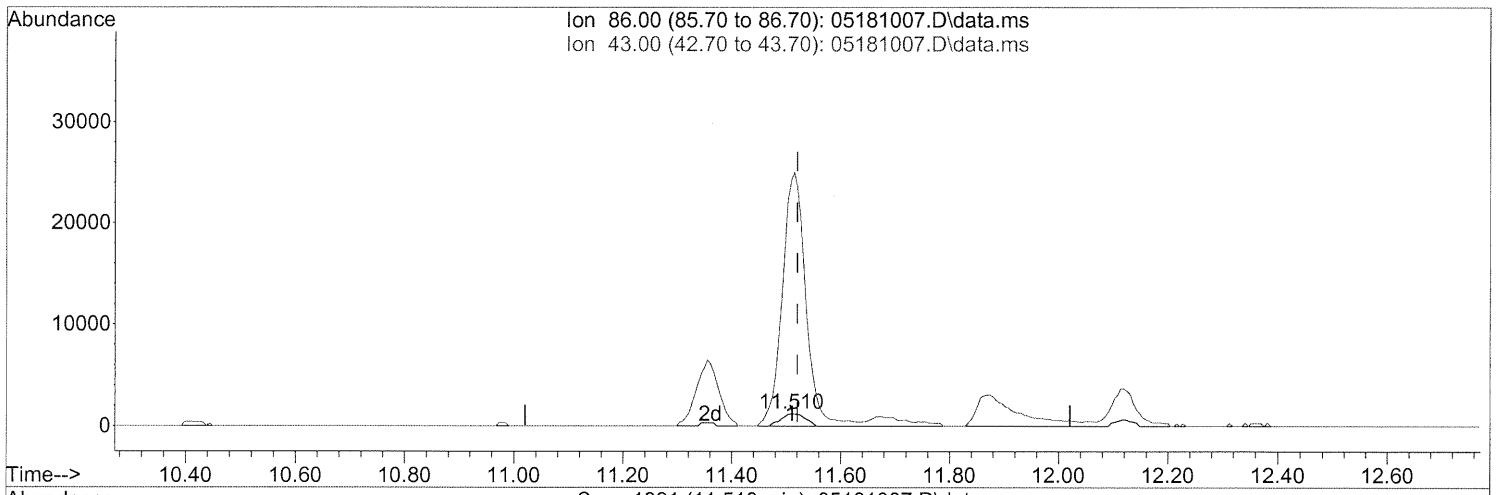
Ion	Exp%	Act%
41.10	100	100
76.00	38.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

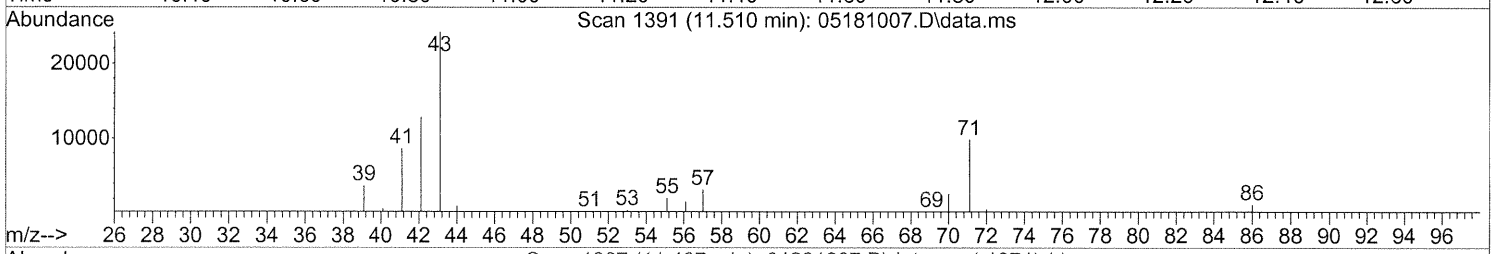
TP

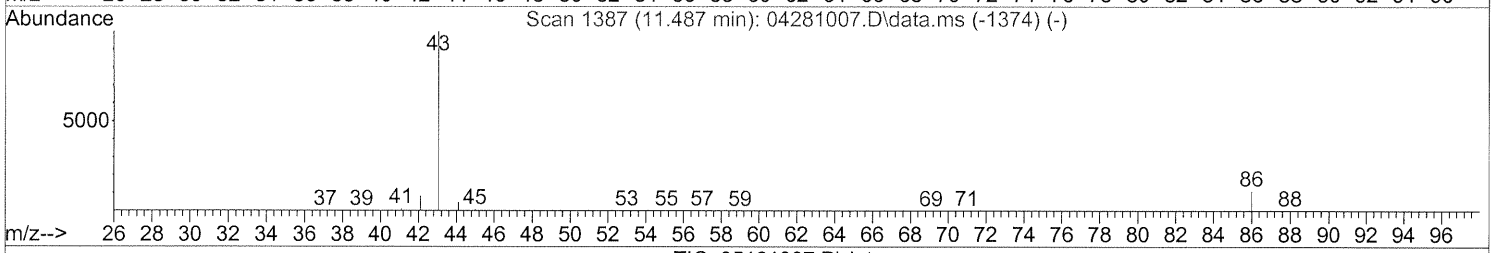
Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration







TIC: 05181007.D\data.ms

(26) Vinyl Acetate (T)

11.510min (-0.011) 0.75ng

response 3658

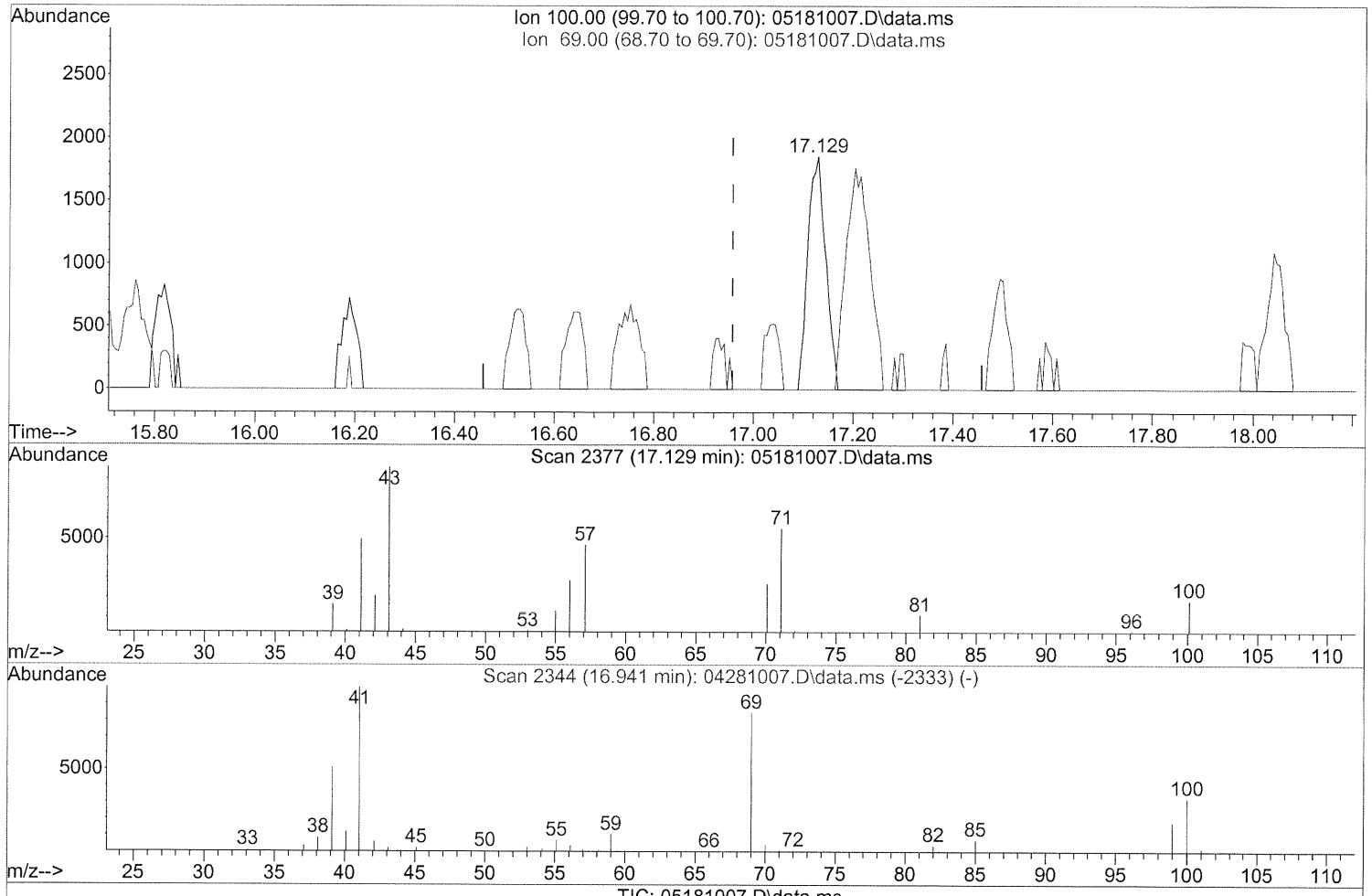
FP

Ion	Exp%	Act%
86.00	100	100
43.00	849.70	2045.95#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS08\Data\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



(50) Methyl Methacrylate (T)

17.129min (+0.171) 0.50ng

response 4606

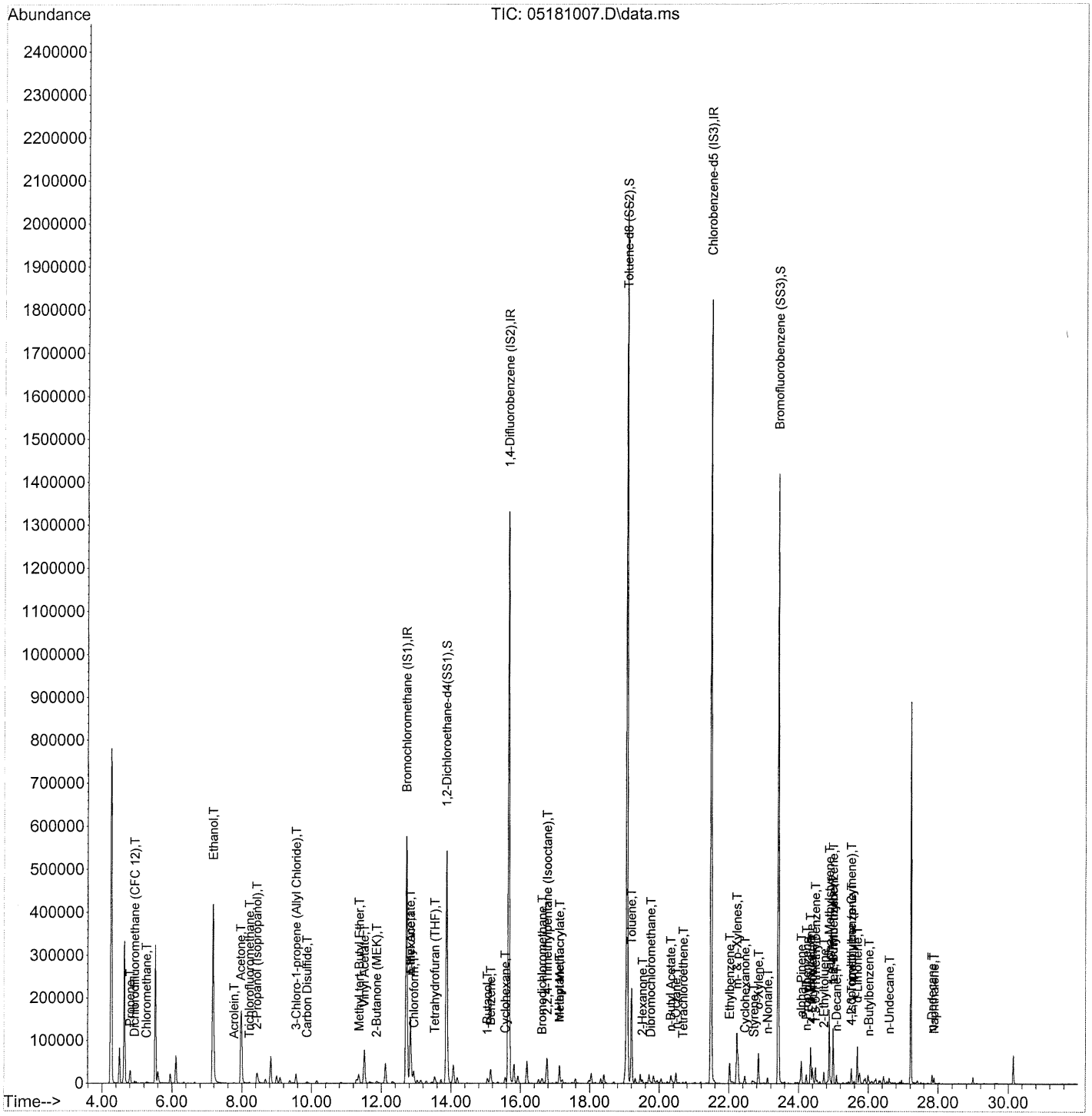
Ion	Exp%	Act%
100.00	100	100
69.00	246.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

TP

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	309612	25.000 ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1560613	25.000 ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	778880	25.000 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(...	13.87	65	559453	24.282 ng	-0.03
Spiked Amount 25.000			Recovery	= 97.12%	
57) Toluene-d8 (SS2)	19.07	98	1823193	24.536 ng	0.00
Spiked Amount 25.000			Recovery	= 98.16%	
73) Bromofluorobenzene (SS3)	23.42	174	477948	25.195 ng	0.00
Spiked Amount 25.000			Recovery	= 100.80%	

Target Compounds						Qvalue
2) Propene	4.81	42	4274	0.177 ng	#	2
3) Dichlorodifluoromethan...	4.94	85	5455	0.132 ng	#	92
4) Chloromethane	5.27	50	3122	0.102 ng		81
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	7.18	45	692057	52.561 ng		100
11) Acetonitrile	7.54	41	862	N.D.		
12) Acrolein	7.77	56	2098	0.204 ng		87
13) Acetone	7.96	58	58383	3.627 ng	#	50
14) Trichlorofluoromethane	8.22	101	2316	0.065 ng		99
15) 2-Propanol (Isopropanol)	8.43	45	45883	0.919 ng		100
16) Acrylonitrile	8.83	53	477	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	9.46	59	2446	N.D.		
19) Methylene Chloride	9.47	84	815	N.D.		
20) 3-Chloro-1-propene (Al...	9.55	41	5731	0.207 ng	#	36
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	9.87	76	9501	0.126 ng		77
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	11.37	73	4575	0.069 ng		90
26) Vinyl Acetate	11.51	86	3658	0.753 ng	#	1
27) 2-Butanone (MEK)	11.86	72	3005	0.225 ng	#	10
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	12.83	87	667	N.D.		
30) Ethyl Acetate	12.83	61	27383	3.445 ng		96
31) n-Hexane	12.84	57	35593	0.875 ng		96

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.93	83	25778	0.759 ng		100
34) Tetrahydrofuran (THF)	13.54	72	6456	0.499 ng	#	80
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	15.04	56	8546	0.396 ng		91
41) Benzene	15.15	78	44979	0.516 ng		98
42) Carbon Tetrachloride	15.36	117	86	N.D.		
43) Cyclohexane	15.56	84	8620	0.235 ng		89
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.62	83	5292	0.203 ng	#	68
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.77	57	70903	0.695 ng		93
50) Methyl Methacrylate	17.13	100	4606	0.504 ng	#	1
51) n-Heptane	17.12	71	13582	0.545 ng		95
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.96	58	866	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	19.20	91	209613	2.274 ng		99
59) 2-Hexanone	19.51	43	5446	0.124 ng	#	22
60) Dibromochloromethane	19.76	129	995	0.055 ng		80
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.33	43	20975	0.424 ng		90
63) n-Octane	20.48	57	5002	0.234 ng		93
64) Tetrachloroethene	20.69	166	1550	0.072 ng		86
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	22.02	91	51872	0.503 ng		97
67) m- & p-Xylenes	22.22	91	126140	1.509 ng		96
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.71	104	3927	0.067 ng		98
70) o-Xylene	22.85	91	56237	0.631 ng		97
71) n-Nonane	23.11	43	6650	0.138 ng		89
72) 1,1,2,2-Tetrachloroethane	22.91	83	175	N.D.		
74) Cumene	23.59	105	4545	N.D.		
75) alpha-Pinene	24.08	93	23346	0.462 ng	#	40
76) n-Propylbenzene	24.23	91	23883	0.181 ng		95
77) 3-Ethyltoluene	24.34	105	64543	0.649 ng		98
78) 4-Ethyltoluene	24.40	105	29138	0.290 ng		98
79) 1,3,5-Trimethylbenzene	24.48	105	27232	0.323 ng		93

Quantitation Report (Not Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181007.D
Acq On : 18 May 2010 13:01
Operator : EM
Sample : P1001651-003 dup dil (100ml)
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 18 14:06:30 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.88	118	2780	0.063 ng	#	9
81) 2-Ethyltoluene	24.73	105	23405	0.225 ng	#	70
82) 1,2,4-Trimethylbenzene	24.99	105	84597	0.960 ng		86
83) n-Decane	25.09	57	8387	0.165 ng		94
84) Benzyl Chloride	25.28	91	937	N.D.		
85) 1,3-Dichlorobenzene	25.29	146	1381	N.D.		
86) 1,4-Dichlorobenzene	25.29	146	1381	N.D.		
87) sec-Butylbenzene	25.32	105	1241	N.D.		
88) 4-Isopropyltoluene (p-...	25.51	119	7045	0.062 ng		78
89) 1,2,3-Trimethylbenzene	25.51	105	17573	0.195 ng		79
90) 1,2-Dichlorobenzene	25.29	146	1381	N.D.		
91) d-Limonene	25.68	68	24837	0.716 ng		95
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.60	57	5676	0.112 ng		94
94) 1,2,4-Trichlorobenzene	27.75	180	195	N.D.		
95) Naphthalene	27.88	128	15967	0.164 ng		96
96) n-Dodecane	27.83	57	7458	0.143 ng		91
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.46	55	6103	0.210 ng		89
99) tert-Butylbenzene	24.99	119	10290	0.115 ng	#	53
100) n-Butylbenzene	26.01	91	6007	0.066 ng	#	56

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

INITIAL CALIBRATION STANDARDS

Response Factor Report MS08

Method : J:\MS08\METHODS\R8042810.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Calibration Files
0.1 =04281002.D 0.2 =04281003.D 0.5 =04281004.D 1.0 =04281005.D 5.0 =04281006.D
25 =04281007.D 50 =04281008.D 100 =04281009.D = =

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethan	----------	----------	----------	----------	ISTD	----------	----------	----------		
2)	T	Propene	1.946	1.824	1.700	1.650	2.178	1.828	2.184	2.291	1.950	12.36
3)	T	Dichlorodifluorom	3.848	3.633	3.373	3.353	3.239	3.225	3.027	3.070	3.346	8.29
4)	T	Chloromethane	2.964	2.801	2.698	2.675	2.244	2.534	2.223	1.651	2.474	16.98
5)	T	1,2-Dichloro-1,1,	1.797	1.783	1.681	1.655	1.590	1.627	1.591	1.584	1.663	5.12
6)	T	Vinyl Chloride	2.811	2.818	2.803	2.750	2.677	2.724	2.648	2.621	2.731	2.81
7)	T	1,3-Butadiene	1.871	1.900	1.890	1.888	1.956	2.113	2.090	2.095	1.975	5.35
8)	T	Bromomethane	1.436	1.410	1.340	1.363	1.351	1.433	1.400	1.378	1.389	2.64
9)	T	Chloroethane	1.436	1.382	1.408	1.427	1.413	1.415	1.373	1.362	1.402	1.90
10)	T	Ethanol	0.950	0.895	1.023	1.023	1.014	1.212	1.184	1.204	1.063	11.41
11)	T	Acetonitrile	2.041	2.427	2.667	2.669	2.756	3.037	2.943	2.950	2.686	12.17
12)	T	Acrolein	0.555	0.727	0.806	0.858	0.915	0.937	0.915	0.918	0.829	15.89
13)	T	Acetone	1.437	1.429	1.310	1.274	1.201	1.242	1.231	1.274	1.300	6.81
14)	T	Trichlorofluorome	3.129	3.089	2.900	2.865	2.811	2.847	2.767	2.771	2.897	4.79
15)	T	2-Propanol (Isopr	4.326	4.421	4.404	4.559	3.489	4.572	3.364	3.101	4.029	14.99
16)	T	Acrylonitrile		1.185	1.696	1.938	2.092	2.269	2.200	2.233	1.945	20.07
17)	T	1,1-Dichloroethen	1.563	1.566	1.552	1.535	1.520	1.578	1.530	1.554	1.550	1.29
18)	T	2-Methyl-2-Propan	4.633	4.471	4.340	4.482	4.465	4.669	4.430	1.774	4.158	23.31
19)	T	Methylene Chlorid	2.128	1.799	1.649	1.636	1.620	1.644	1.600	1.621	1.712	10.45
20)	T	3-Chloro-1-propen	1.982	1.914	1.982	2.124	2.313	2.553	2.489	2.504	2.233	11.81
21)	T	Trichlorotrifluor	1.338	1.196	1.226	1.224	1.191	1.223	1.197	1.197	1.224	3.96
22)	T	Carbon Disulfide			6.724	6.208	5.908	6.024	5.851	5.903	6.103	5.41
23)	T	trans-1,2-Dichlor	1.964	1.996	2.171	2.337	2.427	2.509	2.435	2.461	2.287	9.44
24)	T	1,1-Dichloroethan	3.074	2.921	2.814	2.877	2.933	3.034	2.948	2.979	2.948	2.82
25)	T	Methyl tert-Butyl	5.820	5.376	5.104	5.218	5.174	5.334	5.247	5.316	5.324	4.12
26)	T	Vinyl Acetate			0.231	0.293	0.375	0.467	0.481	0.506	0.392	28.46
27)	T	2-Butanone (MEK)			0.887	1.045	1.142	1.215	1.175	1.012	1.080	11.27
28)	T	cis-1,2-Dichloroe	2.271	2.226	2.277	2.229	2.275	2.352	2.277	2.302	2.276	1.75
29)	T	Diisopropyl Ether	1.550	1.540	1.546	1.539	1.532	1.637	1.663	1.785	1.599	5.65

(#) = Out of Range ### Number of calibration levels exceeded format ###

EM 4/29/10

Response Factor Report MS08

Method : J:\MS08\METHODS\R8042810.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Calibration Files
0.1 =04281002.D 0.2 =04281003.D 0.5 =04281004.D 1.0 =04281005.D 5.0 =04281006.D
25 =04281007.D 50 =04281008.D 100 =04281009.D = =

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
30)	T	Ethyl Acetate			0.494	0.570	0.616	0.700	0.710	0.760	0.642	15.54
31)	T	n-Hexane	3.408	3.300	3.129	3.170	3.155	3.297	3.332	3.499	3.286	3.95
32)	T	Chloroform	2.850	2.766	2.734	2.721	2.668	2.767	2.688	2.744	2.742	2.03
33)	S	1,2-Dichloroethan	1.880	1.877	1.900	1.902	1.858	1.856	1.812	1.798	1.860	2.05
34)	T	Tetrahydrofuran (	0.718	0.983	1.037	1.122	1.143	1.177	1.085	1.087	1.044	13.91
35)	T	Ethyl tert-Butyl	2.181	2.198	2.126	2.182	2.210	2.301	2.294	2.376	2.233	3.68
36)	T	1,2-Dichloroethan	2.288	2.189	2.220	2.244	2.219	2.290	2.175	2.160	2.223	2.20
37)	IR	1,4-Difluorobenze	----------	----------	----------	----------	ISTD	----------	----------	----------		
38)	T	1,1,1-Trichloroet	0.516	0.517	0.495	0.480	0.488	0.504	0.498	0.506	0.500	2.56
39)	T	Isopropyl Acetate	0.169	0.195	0.197	0.209	0.220	0.241	0.240	0.250	0.215	12.96
40)	T	1-Butanol			0.231	0.272	0.327	0.410	0.414	0.418	0.345	23.54
41)	T	Benzene	1.593	1.442	1.382	1.325	1.330	1.369	1.350	1.373	1.395	6.28
42)	T	Carbon Tetrachlor	0.328	0.341	0.338	0.356	0.381	0.407	0.407	0.415	0.372	9.48
43)	T	Cyclohexane	0.621	0.594	0.562	0.558	0.559	0.587	0.591	0.620	0.587	4.33
44)	T	tert-Amyl Methyl	1.091	1.003	0.927	0.966	1.002	1.055	1.057	1.083	1.023	5.70
45)	T	1,2-Dichloropropa	0.328	0.336	0.336	0.335	0.340	0.354	0.347	0.351	0.341	2.59
46)	T	Bromodichlorometh	0.391	0.384	0.399	0.401	0.428	0.451	0.446	0.449	0.419	6.65
47)	T	Trichloroethene	0.395	0.367	0.354	0.348	0.336	0.347	0.344	0.356	0.356	5.13
48)	T	1,4-Dioxane	0.223	0.222	0.244	0.259	0.275	0.298	0.295	0.301	0.265	12.29
49)	T	2,2,4-Trimethylpe	1.834	1.688	1.598	1.550	1.575	1.623	1.596	1.612	1.634	5.51
50)	T	Methyl Methacryla		0.109	0.125	0.135	0.150	0.164	0.165	0.176	0.146	16.52
51)	T	n-Heptane	0.395	0.386	0.388	0.378	0.395	0.413	0.411	0.426	0.399	4.04
52)	T	cis-1,3-Dichlorop	0.420	0.441	0.476	0.505	0.548	0.593	0.589	0.598	0.521	13.60
53)	T	4-Methyl-2-pentan		0.210	0.266	0.277	0.315	0.347	0.345	0.351	0.301	17.53
54)	T	trans-1,3-Dichlor		0.315	0.376	0.416	0.487	0.539	0.539	0.546	0.460	20.02
55)	T	1,1,2-Trichloroet	0.281	0.293	0.292	0.303	0.306	0.322	0.317	0.323	0.305	5.02
56)	IR	Chlorobenzene-d5	----------	----------	----------	----------	ISTD	----------	----------	----------		
57)	S	Toluene-d8 (SS2)	2.382	2.368	2.394	2.385	2.394	2.386	2.381	2.388	2.385	0.35

(#) = Out of Range ### Number of calibration levels exceeded format ###

Bm 4/29/10

Response Factor Report MS08

Method : J:\MS08\METHODS\R8042810.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

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25 =04281007.D 50 =04281008.D 100 =04281009.D = =

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
58)	T	Toluene	3.293	2.940	2.885	2.819	2.837	2.952	2.919	3.024	2.959	5.08
59)	T	2-Hexanone		0.915	1.212	1.318	1.505	1.651	1.627	1.652	1.411	19.73
60)	T	Dibromochlorometh	0.487	0.494	0.533	0.556	0.601	0.659	0.662	0.695	0.586	13.74
61)	T	1,2-Dibromoethane	0.506	0.564	0.630	0.640	0.685	0.729	0.722	0.748	0.653	13.04
62)	T	n-Butyl Acetate	1.086	1.136	1.376	1.465	1.722	1.914	1.927	2.064	1.586	23.62
63)	T	n-Octane	0.715	0.639	0.666	0.668	0.672	0.700	0.699	0.731	0.686	4.38
64)	T	Tetrachloroethene	0.717	0.684	0.682	0.665	0.664	0.696	0.696	0.742	0.693	3.78
65)	T	Chlorobenzene	1.954	1.731	1.761	1.717	1.734	1.825	1.811	1.897	1.804	4.73
66)	T	Ethylbenzene	3.494	3.229	3.216	3.130	3.209	3.376	3.355	3.477	3.311	4.05
67)	T	m- & p-Xylenes	2.892	2.659	2.623	2.477	2.520	2.698	2.720	2.882	2.684	5.59
68)	T	Bromoform		0.364	0.398	0.418	0.485	0.557	0.569	0.611	0.486	19.65
69)	T	Styrene	1.662	1.672	1.728	1.789	1.909	2.075	2.085	2.220	1.892	11.25
70)	T	o-Xylene	4.080	2.728	2.572	2.522	2.562	2.732	2.746	2.932	2.859	17.87
71)	T	n-Nonane	1.581	1.556	1.521	1.494	1.531	1.590	1.557	1.586	1.552	2.21
72)	T	1,1,2,2-Tetrachlo	0.782	0.793	0.939	0.950	1.067	1.186	1.199	1.277	1.024	18.33
73)	S	Bromofluorobenzen	0.611	0.606	0.605	0.603	0.607	0.609	0.613	0.617	0.609	0.74
74)	T	Cumene	3.661	3.367	3.289	3.241	3.319	3.528	3.555	3.699	3.457	5.09
75)	T	alpha-Pinene	1.677	1.553	1.450	1.482	1.569	1.674	1.718	1.852	1.622	8.23
76)	T	n-Propylbenzene	4.463	4.091	4.081	4.043	4.123	4.355	4.357	4.380	4.237	3.95
77)	T	3-Ethyltoluene	3.134	2.992	2.958	2.972	3.135	3.362	3.371	3.626	3.194	7.47
78)	T	4-Ethyltoluene	3.379	3.040	3.124	3.045	3.049	3.305	3.414	3.467	3.228	5.64
79)	T	1,3,5-Trimethylbe	2.784	2.601	2.641	2.523	2.571	2.750	2.800	2.982	2.706	5.57
80)	T	alpha-Methylstyre	1.368	1.201	1.285	1.296	1.386	1.535	1.577	1.715	1.420	12.21
81)	T	2-Ethyltoluene	3.386	3.198	3.195	3.140	3.186	3.428	3.488	3.650	3.334	5.47
82)	T	1,2,4-Trimethylbe	2.643	2.478	2.602	2.558	2.672	3.046	3.218	3.415	2.829	12.31
83)	T	n-Decane	1.571	1.536	1.539	1.535	1.589	1.711	1.724	1.808	1.627	6.49
84)	T	Benzyl Chloride			1.322	1.508	1.908	2.467	2.585	2.803	2.099	29.04
85)	T	1,3-Dichlorobenze	1.187	1.173	1.250	1.250	1.283	1.419	1.446	1.596	1.326	11.11
86)	T	1,4-Dichlorobenze	1.310	1.265	1.356	1.320	1.343	1.476	1.510	1.637	1.402	9.02
87)	T	sec-Butylbenzene	3.750	3.531	3.589	3.501	3.579	3.869	3.928	3.991	3.717	5.19

(#) = Out of Range ### Number of calibration levels exceeded format ###

Bm 4/29/10

Response Factor Report MS08

Method : J:\MS08\METHODS\R8042810.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Calibration Files
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25 =04281007.D 50 =04281008.D 100 =04281009.D = =

	Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
88) T	4-Isopropyltoluen	3.529	3.264	3.506	3.331	3.422	3.898	4.074	4.133	3.645	9.34
89) T	1,2,3-Trimethylbe	2.807	2.573	2.702	2.616	2.698	3.097	3.256	3.436	2.898	11.14
90) T	1,2-Dichlorobenze	1.137	1.130	1.235	1.217	1.254	1.437	1.517	1.716	1.330	15.56
91) T	d-Limonene	1.032	0.962	0.927	1.012	1.094	1.239	1.296	1.346	1.114	14.32
92) T	1,2-Dibromo-3-Chl			0.317	0.325	0.380	0.483	0.493	0.531	0.422	21.96
93) T	n-Undecane	1.524	1.431	1.520	1.531	1.626	1.782	1.787	1.842	1.631	9.43
94) T	1,2,4-Trichlorobe	0.835	0.638	0.770	0.753	0.815	0.972	0.997	1.093	0.859	17.43
95) T	Naphthalene	2.268	2.190	2.880	2.870	3.063	3.847	3.887	3.993	3.125	22.93
96) T	n-Dodecane	1.380	1.390	1.530	1.566	1.689	1.900	1.923	1.996	1.672	14.60
97) T	Hexachlorobutadie	0.408	0.413	0.462	0.451	0.463	0.526	0.543	0.606	0.484	14.22
98) T	Cyclohexanone		0.637	0.810	0.873	0.962	1.073	1.071	1.103	0.933	18.30
99) T	tert-Butylbenzene	2.888	2.628	2.647	2.586	2.653	2.989	3.145	3.372	2.864	10.03
100) T	n-Butylbenzene	2.639	2.603	2.813	2.77	2.872	3.134	3.158	3.235	2.904	8.35

Sm 4/29/10

(#) = Out of Range ### Number of calibration levels exceeded format ###

Primary Source Standards Concentrations
(Working & Initial Calibration)

4ng/L Std. ID: S20-04191001
20ng/L Std. ID: S20-04191002
200ng/L Std. ID: S20-04191005

Dilution Factors:		5	50	250	Working STD Conc.(ng/L):	4	4	20	20	20	200	200	200
	Source Std.	Primary Working Standards				ICAL Concentrations (Primary Source)							
					Injection (L):	0.025	0.05	0.025	0.050	0.25	0.125	0.25	0.50
Compounds	mg/m³	200ng/L	20ng/L	4ng/L	ICAL Points:	0.1ng	0.2ng	0.5ng	1ng	5ng	25ng	50ng	100ng
Propene	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Dichlorodifluoromethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Chloromethane	1.00	200	20.0	4.00		0.100	0.200	0.500	1.00	5.00	25.0	50.0	100
Freon-114	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
Vinyl Chloride	1.01	202	20.2	4.04		0.101	0.202	0.505	1.01	5.05	25.3	50.5	101
1,3-Butadiene	1.20	240	24.0	4.80		0.120	0.240	0.600	1.20	6.00	30.0	60.0	120
Bromomethane	1.02	204	20.4	4.08		0.102	0.204	0.510	1.02	5.10	25.5	51.0	102
Chloroethane	1.01	202	20.2	4.04		0.101	0.202	0.505	1.01	5.05	25.3	50.5	101
Ethanol	5.20	1040	104	20.8		0.520	1.040	2.60	5.20	26.0	130	260	520
Acetonitrile	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Acrolein	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Acetone	5.50	1100	110	22.0		0.550	1.100	2.75	5.50	27.5	138	275	550
Trichlorofluoromethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Isopropanol	1.89	378	37.8	7.56		0.189	0.378	0.945	1.89	9.45	47.3	94.5	189
Acrylonitrile	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,1-Dichloroethene	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
tert-Butanol	2.02	404	40.4	8.08		0.202	0.404	1.01	2.02	10.1	50.5	101	202
Methylene Chloride	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Allyl Chloride	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Trichlorotrifluoroethane	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
Carbon Disulfide	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
trans-1,2-Dichloroethene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,1-Dichloroethane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
Methyl tert-Butyl Ether	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
Vinyl Acetate	5.02	1004	100	20.1		0.502	1.004	2.51	5.02	25.1	126	251	502
2-Butanone	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
cis-1,2-Dichloroethene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
Diisopropyl Ether	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Ethyl Acetate	2.13	426	42.6	8.52		0.213	0.426	1.07	2.13	10.7	53.3	107	213
n-Hexane	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
Chloroform	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Tetrahydrofuran	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
Ethyl tert-Butyl Ether	1.03	206	20.6	4.12		0.103	0.206	0.515	1.03	5.15	25.8	51.5	103
1,2-Dichloroethane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,1,1-Trichloroethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Isopropyl Acetate	2.09	418	41.8	8.36		0.209	0.418	1.05	2.09	10.5	52.3	105	209
1-Butanol	2.07	414	41.4	8.28		0.207	0.414	1.04	2.07	10.4	51.8	104	207
Benzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
Carbon Tetrachloride	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Cyclohexane	2.15	430	43.0	8.60		0.215	0.430	1.08	2.15	10.8	53.8	108	215
tert-Amyl Methyl Ether	1.04	208	20.8	4.16		0.104	0.208	0.520	1.04	5.20	26.0	52.0	104
1,2-Dichloropropane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Bromodichloromethane	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Trichloroethene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,4-Dioxane	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Isooctane	1.04	208	20.8	4.16		0.104	0.208	0.520	1.04	5.20	26.0	52.0	104
Methyl Methacrylate	2.13	426	42.6	8.52		0.213	0.426	1.07	2.13	10.7	53.3	107	213
n-Heptane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
cis-1,3-Dichloropropene	0.99	198	19.8	3.96		0.099	0.198	0.495	0.990	4.95	24.8	49.5	99.0
4-Methyl-2-pentanone	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
trans-1,3-Dichloropropene	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
1,1,2-Trichloroethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Toluene	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
2-Hexanone	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
Dibromochloromethane	1.15	230	23.0	4.60		0.115	0.230	0.575	1.15	5.75	28.8	57.5	115
1,2-Dibromoethane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
n-Butyl Acetate	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
n-Octane	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Tetrachloroethene	1.02	204	20.4	4.08		0.102	0.204	0.510	1.02	5.10	25.5	51.0	102
Chlorobenzene	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Ethylbenzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
m-&p-Xylene	2.08	416	41.6	8.32		0.208	0.416	1.04	2.08	10.4	52.0	104	208

Eom 4/29/10

Primary Source Standards Concentrations
(Working & Initial Calibration)

4ng/L Std. ID: S20-04191001
20ng/L Std. ID:
200ng/L Std. ID:
Dilution Factors: 5 50 250

Compounds	Source Std. mg/m³	Primary Working Standards 200ng/L	20ng/L	4ng/L
Bromoform	1.03	206	20.6	4.12
Styrene	1.07	214	21.4	4.28
o-Xylene	1.06	212	21.2	4.24
n-Nonane	1.06	212	21.2	4.24
1,1,2,2-Tetrachloroethane	1.07	214	21.4	4.28
Cumene	1.03	206	20.6	4.12
alpha-Pinene	1.01	202	20.2	4.04
n-Propylbenzene	1.03	206	20.6	4.12
3-Ethyltoluene	1.09	218	21.8	4.36
4-Ethyltoluene	1.09	218	21.8	4.36
1,3,5-Trimethylbenzene	1.09	218	21.8	4.36
alpha-Methylstyrene	1.07	214	21.4	4.28
2-Ethyltoluene	1.05	210	21.0	4.20
1,2,4-Trimethylbenzene	1.06	212	21.2	4.24
n-Decane	1.08	216	21.6	4.32
Benzyl Chloride	1.10	220	22.0	4.40
1,3-Dichlorobenzene	1.09	218	21.8	4.36
1,4-Dichlorobenzene	1.06	212	21.2	4.24
sec-Butylbenzene	1.06	212	21.2	4.24
p-Isopropyltoluene	1.03	206	20.6	4.12
1,2,3-Trimethylbenzene	1.07	214	21.4	4.28
1,2-Dichlorobenzene	1.06	212	21.2	4.24
d-Limonene	1.09	218	21.8	4.36
1,2-Dibromo-3-chloropropane	1.10	220	22.0	4.40
n-Undecane	1.09	218	21.8	4.36
1,2,4-Trichlorobenzene	1.12	224	22.4	4.48
Naphthalene	1.06	212	21.2	4.24
n-Dodecane	0.99	198	19.8	3.96
Hexachloro-1,3-butadiene	1.10	220	22.0	4.40
Methacrylonitrile	1.06	212	21.2	4.24
Cyclohexanone	0.98	196	19.6	3.92
tert-Butylbenzene	1.06	212	21.2	4.24
n-Butylbenzene	1.09	218	21.8	4.36

Working STD Conc.(ng/L):	ICAL Concentrations (Primary Source) 4	4	20	20	20	200	200	200
Injection (L):	0.025	0.050	0.025	0.05	0.25	0.125	0.25	0.50
ICAL Points:	0.1ng	0.2ng	0.5ng	1ng	5ng	25ng	50ng	100ng
	0.103	0.206	0.515	1.03	5.15	25.8	51.5	103
	0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
	0.103	0.206	0.515	1.03	5.15	25.8	51.5	103
	0.101	0.202	0.505	1.01	5.05	25.3	50.5	101
	0.103	0.206	0.515	1.03	5.15	25.8	51.5	103
	0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
	0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
	0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
	0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
	0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
	0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
	0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.103	0.206	0.515	1.03	5.15	25.8	51.5	103
	0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
	0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
	0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
	0.112	0.224	0.560	1.12	5.60	28.0	56.0	112
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.099	0.198	0.495	0.990	4.95	24.8	49.5	99.0
	0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.098	0.196	0.490	0.980	4.90	24.5	49.0	98.0
	0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
	0.109	0.218	0.545	1.09	5.45	27.3	54.5	109

*Enter Information in the Solid Shaded Areas ONLY.

Cam 4/29/10

Calibration Status Report MS08

Method Path : J:\MS08\METHODS\
Method File : R8042810.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 16:00:01 2010
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0	25	J:\MS08\DATA\2010_04\28\04281002.D
2	0.2	0	25	J:\MS08\DATA\2010_04\28\04281003.D
3	0.5	1	25	J:\MS08\DATA\2010_04\28\04281004.D
4	1.0	1	25	J:\MS08\DATA\2010_04\28\04281005.D
5	5.0	5	25	J:\MS08\DATA\2010_04\28\04281006.D
6	25	27	25	J:\MS08\DATA\2010_04\28\04281007.D
7	50	54	25	J:\MS08\DATA\2010_04\28\04281008.D
8	100	107	25	J:\MS08\DATA\2010_04\28\04281009.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	Apr 28 15:58 2010	Apr 28 11:49 2010	28 Apr 2010 10:13
2	0.2	Apr 28 15:58 2010	Apr 28 11:51 2010	28 Apr 2010 10:54
3	0.5	Apr 28 15:59 2010	Apr 28 14:11 2010	28 Apr 2010 11:35
4	1.0	Apr 28 15:59 2010	Apr 28 14:12 2010	28 Apr 2010 12:17
5	5.0	Apr 28 15:59 2010	Apr 28 14:14 2010	28 Apr 2010 12:58
6	25	Apr 28 15:59 2010	Apr 28 14:15 2010	28 Apr 2010 13:38
7	50	Apr 28 15:59 2010	Apr 28 15:53 2010	28 Apr 2010 14:19
8	100	Apr 28 15:59 2010	Apr 28 15:54 2010	28 Apr 2010 15:00

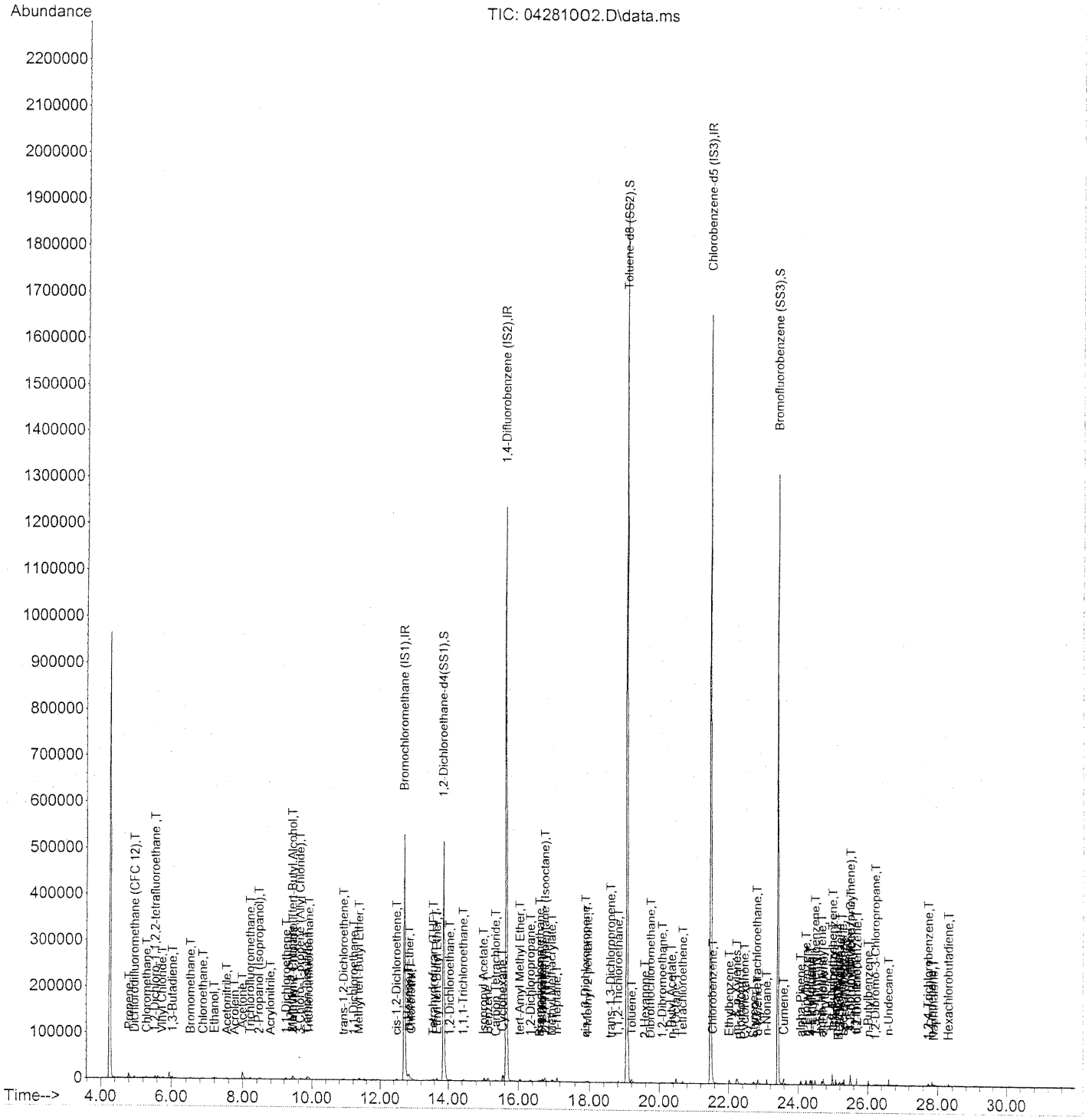
R8042810.M Wed Apr 28 16:11:26 2010

BM 4/29/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281002.D
Acq On : 28 Apr 2010 10:13
Operator : EM
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:49:01 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281002.D
Acq On : 28 Apr 2010 10:13
Operator : EM
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:49:01 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	285380	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1452539	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	709332	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.86	65	536402	26.493	ng		-0.03
Spiked Amount 25.000			Recovery	=	105.96%		
57) Toluene-d8 (SS2)	19.06	98	1689683	24.820	ng		-0.01
Spiked Amount 25.000			Recovery	=	99.28%		
73) Bromofluorobenzene (SS3)	23.42	174	433179	22.946	ng		0.00
Spiked Amount 25.000			Recovery	=	91.80%		
Target Compounds							Qvalue
2) Propene	4.81	42	2377	0.130	ng		94
3) Dichlorodifluoromethan...	4.96	85	4612	0.136	ng	#	89
4) Chloromethane	5.30	50	3384	0.143	ng		89
5) 1,2-Dichloro-1,1,2,2-t...	5.55	135	2174	0.124	ng		77
6) Vinyl Chloride	5.75	62	3241	0.123	ng		95
7) 1,3-Butadiene	6.04	54	2563	0.137	ng		91
8) Bromomethane	6.53	94	1672	0.119	ng		96
9) Chloroethane	6.88	64	1656	0.121	ng	#	53
10) Ethanol	7.20	45	5640	0.549	ng		86
11) Acetonitrile	7.55	41	2446	0.091	ng		97
12) Acrolein	7.78	56	684	0.077	ng	#	30
13) Acetone	8.00	58	9021	0.686	ng	#	79
14) Trichlorofluoromethane	8.22	101	3751	0.126	ng		95
15) 2-Propanol (Isopropanol)	8.47	45	9334	0.229	ng		95
16) Acrylonitrile	8.79	53	881m	0.046	ng		
17) 1,1-Dichloroethene	9.26	96	1962	0.125	ng		92
18) 2-Methyl-2-Propanol (t...	9.44	59	10684	0.248	ng		92
19) Methylene Chloride	9.46	84	2599	0.147	ng		96
20) 3-Chloro-1-propene (Al...	9.66	41	2444	0.115	ng		68
21) Trichlorotrifluoroethane	9.92	151	1680	0.127	ng		96
22) Carbon Disulfide	9.86	76	16767	0.265	ng		90
23) trans-1,2-Dichloroethene	10.93	61	2376	0.104	ng		89
24) 1,1-Dichloroethane	11.22	63	3720	0.131	ng		86
25) Methyl tert-Butyl Ether	11.38	73	7242	0.136	ng		89
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone (MEK)	0.00	72	0	N.D.			
28) cis-1,2-Dichloroethene	12.49	61	2826	0.126	ng		89
29) Diisopropyl Ether	12.87	87	1893	0.116	ng	#	81
30) Ethyl Acetate	12.88	61	195	N.D.			
31) n-Hexane	12.84	57	4240	0.134	ng		88

Bm 4/29/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281002.D
Acq On : 28 Apr 2010 10:13
Operator : EM
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:49:01 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
32) Chloroform	12.92	83	3481	0.125 ng		98
34) Tetrahydrofuran (THF)	13.57	72	901	0.085 ng	#	41
35) Ethyl tert-Butyl Ether	13.67	87	2564	0.111 ng	#	88
36) 1,2-Dichloroethane	14.06	62	2769	0.124 ng	#	60
38) 1,1,1-Trichloroethane	14.44	97	3147	0.117 ng		93
39) Isopropyl Acetate	15.01	61	2054	0.191 ng	#	55
40) 1-Butanol	15.11	56	396	N.D.		
41) Benzene	15.15	78	9809	0.136 ng		94
42) Carbon Tetrachloride	15.36	117	2056	0.101 ng		99
43) Cyclohexane	15.56	84	7761	0.254 ng		93
44) tert-Amyl Methyl Ether	16.05	73	6595	0.126 ng		94
45) 1,2-Dichloropropane	16.35	63	2003	0.117 ng		98
46) Bromodichloromethane	16.62	83	2456	0.112 ng		100
47) Trichloroethene	16.69	130	2432	0.119 ng		99
48) 1,4-Dioxane	16.70	88	1386	0.101 ng	#	55
49) 2,2,4-Trimethylpentane...	16.77	57	11083	0.136 ng		98
50) Methyl Methacrylate	16.97	100	903	0.118 ng	#	17
51) n-Heptane	17.12	71	2433	0.119 ng		97
52) cis-1,3-Dichloropropene	17.89	75	2418	0.090 ng	#	63
53) 4-Methyl-2-pentanone	17.96	58	1059	0.072 ng	#	44
54) trans-1,3-Dichloropropene	18.60	75	1880	0.082 ng	#	43
55) 1,1,2-Trichloroethane	18.82	97	1716	0.108 ng		92
58) Toluene	19.21	91	10092	0.129 ng		95
59) 2-Hexanone	19.59	43	2260	0.065 ng	#	39
60) Dibromochloromethane	19.75	129	1588	0.100 ng		87
61) 1,2-Dibromoethane	20.09	107	1523	0.087 ng		99
62) n-Butyl Acetate	20.36	43	3390	0.084 ng	#	64
63) n-Octane	20.48	57	2172	0.125 ng		92
64) Tetrachloroethene	20.67	166	2074	0.107 ng		92
65) Chlorobenzene	21.55	112	5987	0.122 ng		98
66) Ethylbenzene	22.03	91	10509	0.121 ng		94
67) m- & p-Xylenes	22.24	91	17066	0.242 ng		92
68) Bromoform	22.36	173	907	0.069 ng	#	28
69) Styrene	22.72	104	5046	0.098 ng		95
70) o-Xylene	22.85	91	12271	0.172 ng		73
71) n-Nonane	23.10	43	4754	0.124 ng		94
72) 1,1,2,2-Tetrachloroethane	22.82	83	2374	0.093 ng		91
74) Cumene	23.59	105	10700	0.111 ng		94
75) alpha-Pinene	24.08	93	4807	0.112 ng		93
76) n-Propylbenzene	24.23	91	13044	0.117 ng		92
77) 3-Ethyltoluene	24.35	105	9691	0.110 ng		98
78) 4-Ethyltoluene	24.40	105	10451	0.117 ng		94
79) 1,3,5-Trimethylbenzene	24.49	105	8609	0.112 ng		95

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281002.D
Acq On : 28 Apr 2010 10:13
Operator : EM
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:49:01 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

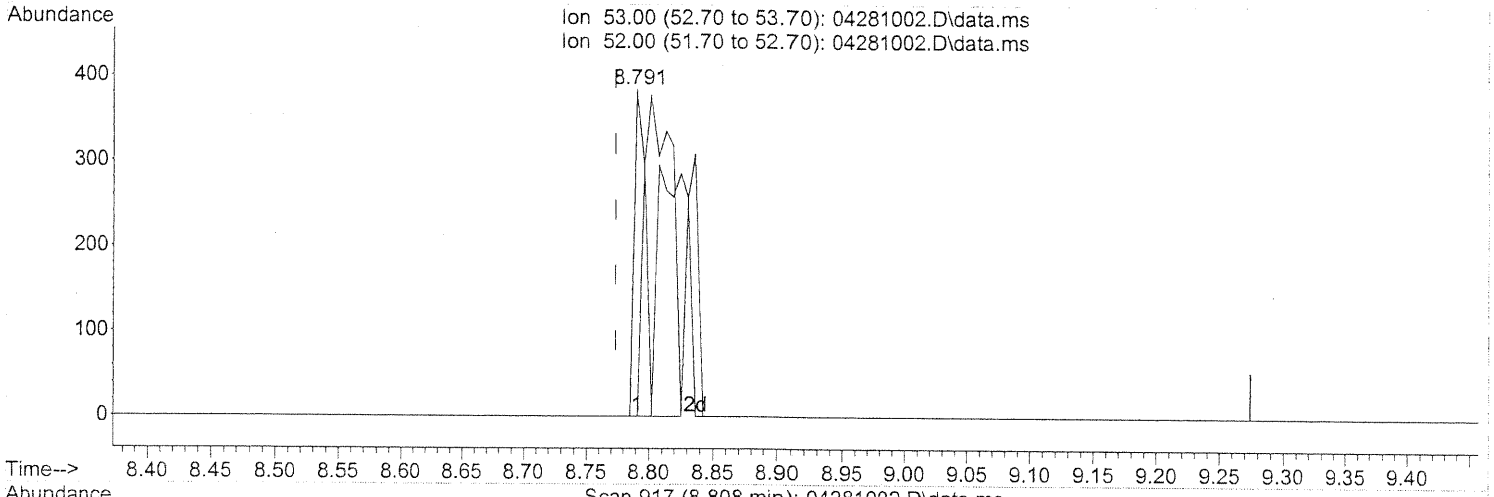
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	4153	0.107 ng	#	79
81) 2-Ethyltoluene	24.73	105	10087	0.110 ng	#	68
82) 1,2,4-Trimethylbenzene	24.99	105	7949	0.102 ng		97
83) n-Decane	25.09	57	4814	0.117 ng		92
84) Benzyl Chloride	25.17	91	3322	0.066 ng		74
85) 1,3-Dichlorobenzene	25.19	146	3671	0.098 ng		96
86) 1,4-Dichlorobenzene	25.28	146	3941	0.099 ng		98
87) sec-Butylbenzene	25.33	105	11277	0.112 ng		97
88) 4-Isopropyltoluene (p-...	25.51	119	10314	0.103 ng		96
89) 1,2,3-Trimethylbenzene	25.51	105	8522	0.110 ng		87
90) 1,2-Dichlorobenzene	25.70	146	3420	0.093 ng		94
91) d-Limonene	25.68	68	3193	0.112 ng		92
92) 1,2-Dibromo-3-Chloropr...	26.23	157	544	0.048 ng	#	41
93) n-Undecane	26.60	57	4714	0.113 ng		92
94) 1,2,4-Trichlorobenzene	27.74	180	2652	0.111 ng	#	90
95) Naphthalene	27.90	128	6821	0.076 ng		74
96) n-Dodecane	27.84	57	3875	0.088 ng		93
97) Hexachlorobutadiene	28.30	225	1272	0.092 ng		93
98) Cyclohexanone	22.46	55	1634	0.072 ng	#	81
99) tert-Butylbenzene	24.99	119	8687	0.112 ng		94
100) n-Butylbenzene	26.02	91	8163	0.106 ng		93

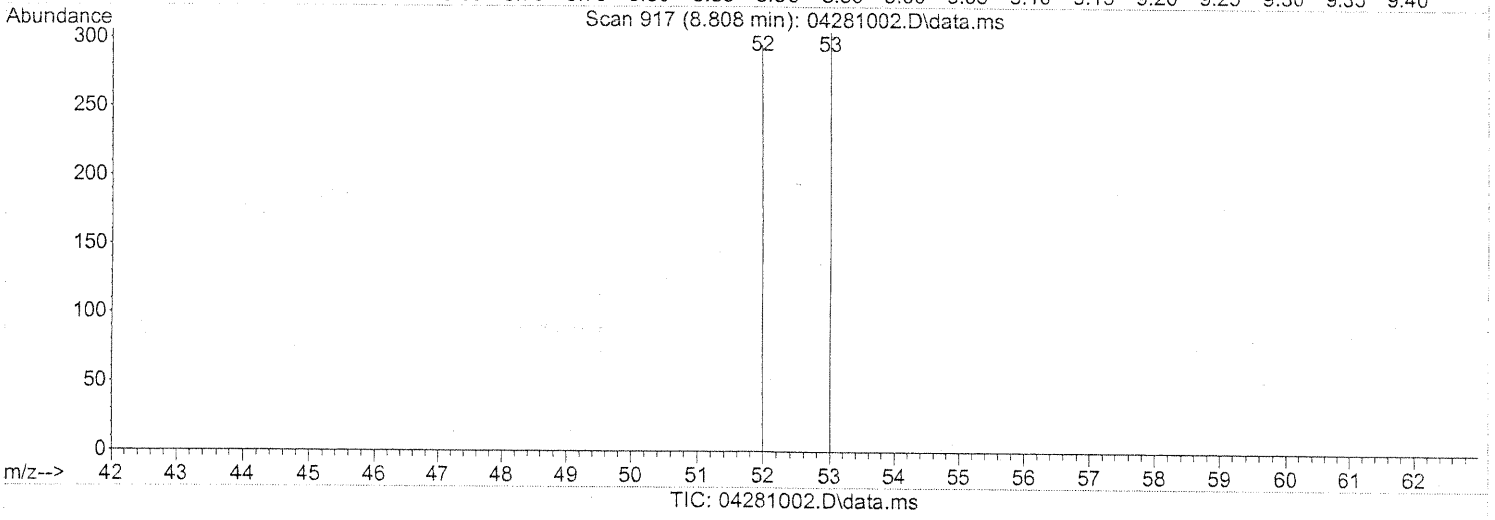
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281002.D
Acq On : 28 Apr 2010 10:13
Operator : EM
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:47:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration





(16) Acrylonitrile (T)

8.791min (+0.017) 0.04ng

response 688

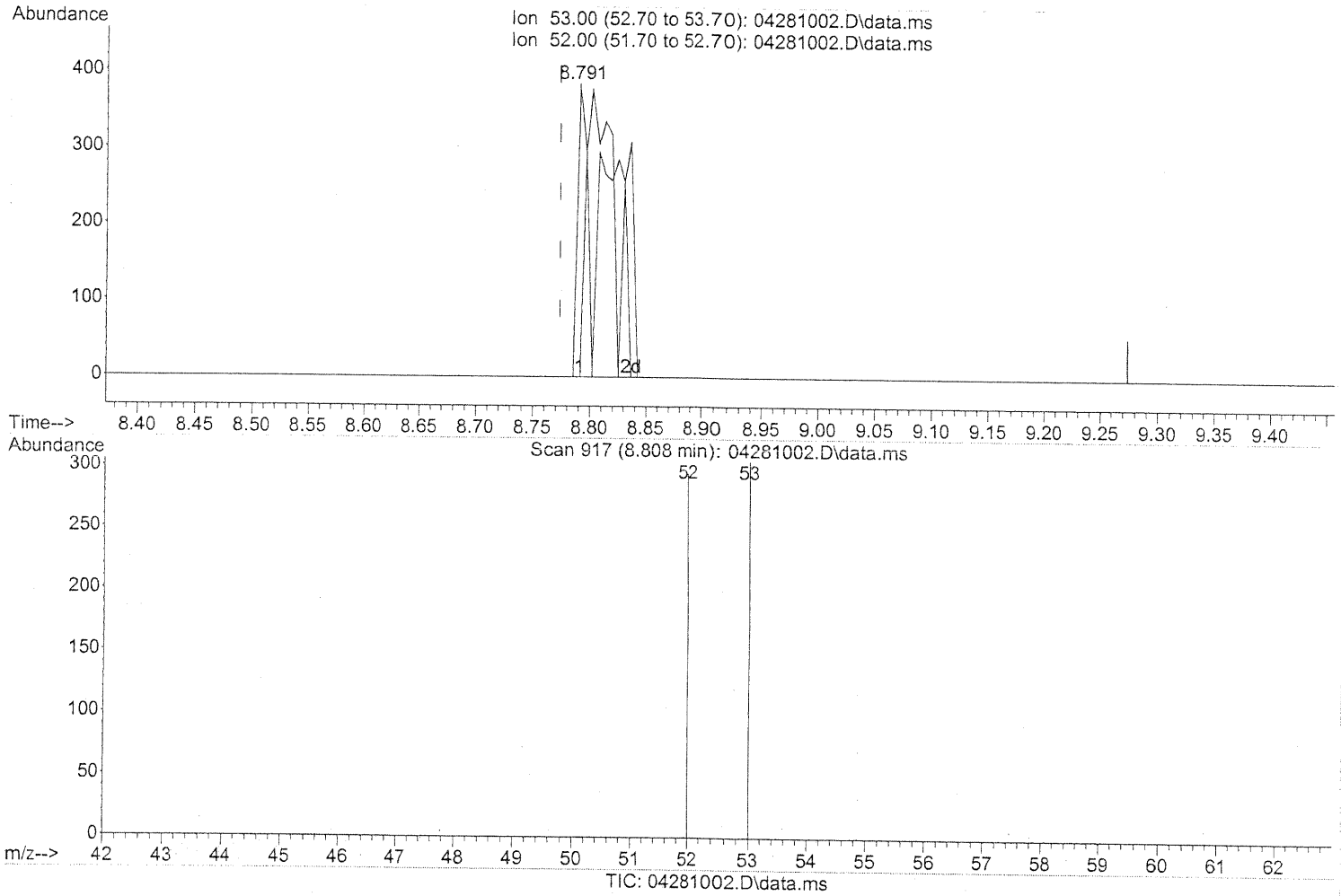
Ion	Exp%	Act%
53.00	100	100
52.00	82.40	82.41
0.00	0.00	0.00
0.00	0.00	0.00

SP

Quantitation Report (Qedit)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281002.D
Acq On : 28 Apr 2010 10:13
Operator : EM
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:47:59 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



(16) Acrylonitrile (T)

8.791min (+0.017) 0.05ng m

response 881

Ion	Exp%	Act%
53.00	100	100
52.00	82.40	64.36
0.00	0.00	0.00
0.00	0.00	0.00

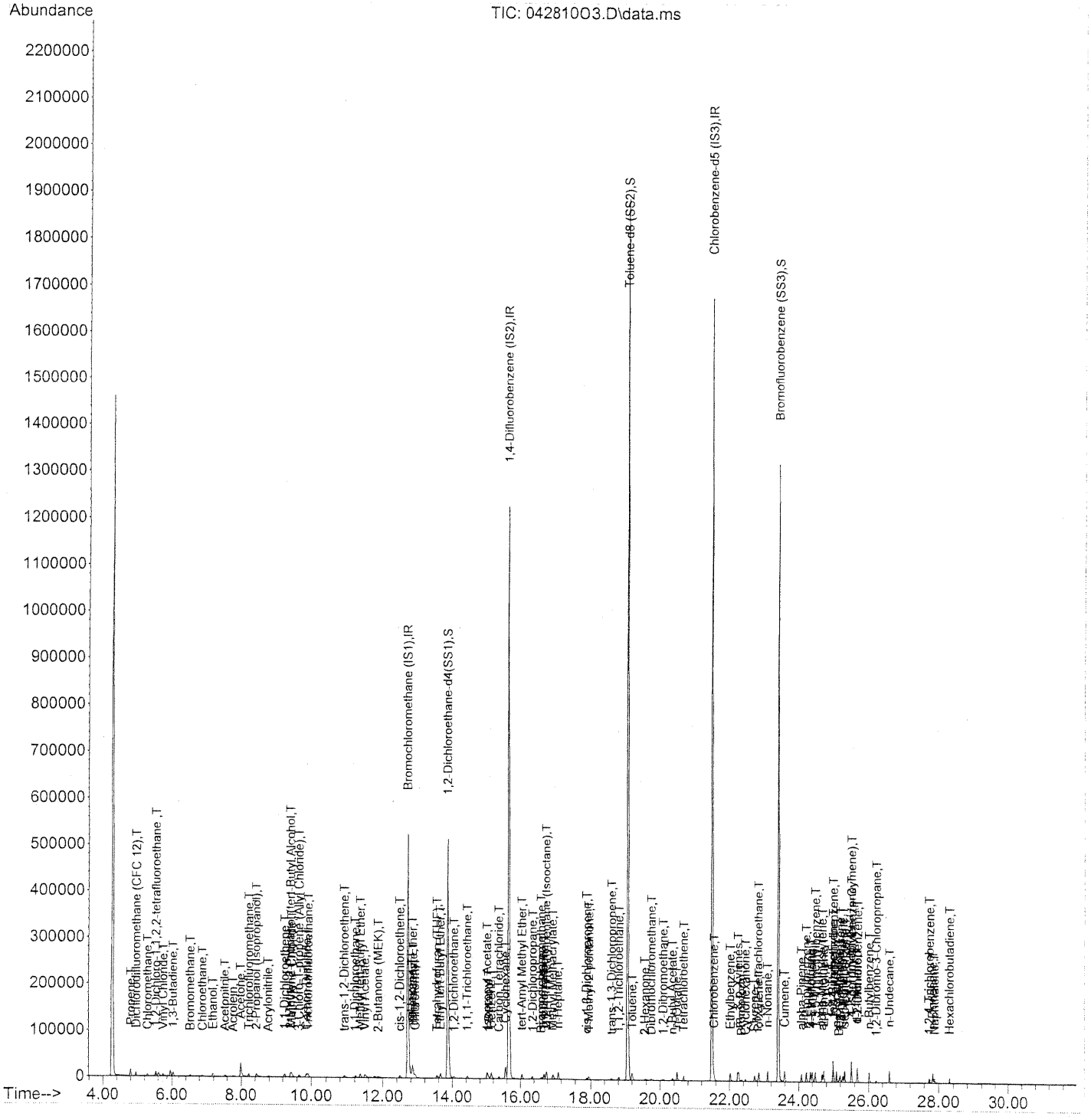
SP → IC
EM 4/29/10

DA 4/29/10
Not used

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281003.D
Acq On : 28 Apr 2010 10:54
Operator : EM
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:51:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281003.D
Acq On : 28 Apr 2010 10:54
Operator : EM
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:51:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	280952	25.000	ng		-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1425206	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	706752	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	527395	26.459	ng		-0.03
Spiked Amount 25.000			Recovery = 105.84%				
57) Toluene-d8 (SS2)	19.06	98	1673929	24.678	ng		-0.01
Spiked Amount 25.000			Recovery = 98.72%				
73) Bromofluorobenzene (SS3)	23.42	174	428624	22.787	ng		0.00
Spiked Amount 25.000			Recovery = 91.16%				
Target Compounds							Qvalue
2) Propene	4.80	42	4386	0.244	ng		98
3) Dichlorodifluoromethan...	4.96	85	8574	0.256	ng		95
4) Chloromethane	5.29	50	6296	0.270	ng		96
5) 1,2-Dichloro-1,1,2,2-t...	5.54	135	4249	0.246	ng		90
6) Vinyl Chloride	5.74	62	6396	0.247	ng		99
7) 1,3-Butadiene	6.04	54	5125	0.279	ng		96
8) Bromomethane	6.52	94	3233	0.234	ng		99
9) Chloroethane	6.88	64	3137	0.232	ng		88
10) Ethanol	7.18	45	10466	1.036	ng		95
11) Acetonitrile	7.53	41	5727	0.217	ng		95
12) Acrolein	7.77	56	1764	0.201	ng		93
13) Acetone	7.98	58	17665	1.364	ng		92
14) Trichlorofluoromethane	8.22	101	7290	0.248	ng		97
15) 2-Propanol (Isopropanol)	8.44	45	18779	0.469	ng		96
16) Acrylonitrile	8.78	53	2824	0.150	ng		98
17) 1,1-Dichloroethene	9.26	96	3872	0.250	ng		95
18) 2-Methyl-2-Propanol (t...	9.42	59	20301	0.479	ng		94
19) Methylene Chloride	9.46	84	4326	0.248	ng		85
20) 3-Chloro-1-propene (Al...	9.66	41	4646	0.222	ng		88
21) Trichlorotrifluoroethane	9.91	151	2956	0.227	ng		92
22) Carbon Disulfide	9.87	76	21088	0.338	ng		91
23) trans-1,2-Dichloroethene	10.92	61	4755	0.212	ng		94
24) 1,1-Dichloroethane	11.22	63	6960	0.250	ng		94
25) Methyl tert-Butyl Ether	11.37	73	13170	0.251	ng		99
26) Vinyl Acetate	11.50	86	1653	0.456	ng	#	1
27) 2-Butanone (MEK)	11.88	72	1376	0.126	ng	#	1
28) cis-1,2-Dichloroethene	12.49	61	5454	0.247	ng		97
29) Diisopropyl Ether	12.85	87	3703	0.231	ng	#	81
30) Ethyl Acetate	12.87	61	1747	0.291	ng		90
31) n-Hexane	12.84	57	8084	0.259	ng		90

Em 4/29/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281003.D
Acq On : 28 Apr 2010 10:54
Operator : EM
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:51:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	6652	0.242	ng		95
34) Tetrahydrofuran (THF)	13.56	72	2431	0.232	ng	#	72
35) Ethyl tert-Butyl Ether	13.65	87	5089	0.224	ng		91
36) 1,2-Dichloroethane	14.05	62	5216	0.237	ng		88
38) 1,1,1-Trichloroethane	14.44	97	6186	0.234	ng		97
39) Isopropyl Acetate	15.02	61	4648	0.441	ng	#	83
40) 1-Butanol	15.07	56	2841	0.165	ng	#	4
41) Benzene	15.15	78	17427	0.246	ng		96
42) Carbon Tetrachloride	15.36	117	4198	0.210	ng		99
43) Cyclohexane	15.56	84	14569	0.487	ng		93
44) tert-Amyl Methyl Ether	16.05	73	11899	0.231	ng		98
45) 1,2-Dichloropropane	16.36	63	4017	0.239	ng		94
46) Bromodichloromethane	16.61	83	4724	0.219	ng		96
47) Trichloroethene	16.70	130	4431	0.222	ng		99
48) 1,4-Dioxane	16.68	88	2714	0.202	ng		98
49) 2,2,4-Trimethylpentane...	16.76	57	20012	0.251	ng		98
50) Methyl Methacrylate	16.96	100	2654	0.354	ng	#	80
51) n-Heptane	17.12	71	4665	0.232	ng		93
52) cis-1,3-Dichloropropene	17.89	75	4973	0.188	ng		94
53) 4-Methyl-2-pentanone	17.95	58	2634	0.184	ng		81
54) trans-1,3-Dichloropropene	18.61	75	3947	0.175	ng		82
55) 1,1,2-Trichloroethane	18.82	97	3512	0.226	ng		97
58) Toluene	19.21	91	17952	0.231	ng		97
59) 2-Hexanone	19.56	43	5689	0.165	ng		79
60) Dibromochloromethane	19.75	129	3210	0.203	ng		97
61) 1,2-Dibromoethane	20.09	107	3382	0.194	ng		99
62) n-Butyl Acetate	20.35	43	7063	0.175	ng		81
63) n-Octane	20.48	57	3866	0.223	ng		97
64) Tetrachloroethene	20.68	166	3942	0.205	ng		94
65) Chlorobenzene	21.55	112	10573	0.217	ng		100
66) Ethylbenzene	22.03	91	19351	0.223	ng		95
67) m- & p-Xylenes	22.25	91	31265	0.445	ng		91
68) Bromoform	22.34	173	2120	0.162	ng		92
69) Styrene	22.71	104	10117	0.196	ng		97
70) o-Xylene	22.85	91	16348	0.230	ng		92
71) n-Nonane	23.10	43	9326	0.244	ng		93
72) 1,1,2,2-Tetrachloroethane	22.82	83	4800	0.189	ng		99
74) Cumene	23.59	105	19611	0.205	ng		97
75) alpha-Pinene	24.08	93	8871	0.207	ng		100
76) n-Propylbenzene	24.22	91	23823	0.215	ng		96
77) 3-Ethyltoluene	24.35	105	18441	0.210	ng		97
78) 4-Ethyltoluene	24.40	105	18735	0.210	ng		99
79) 1,3,5-Trimethylbenzene	24.49	105	16032	0.210	ng		94

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281003.D
Acq On : 28 Apr 2010 10:54
Operator : EM
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191001
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 11:51:55 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

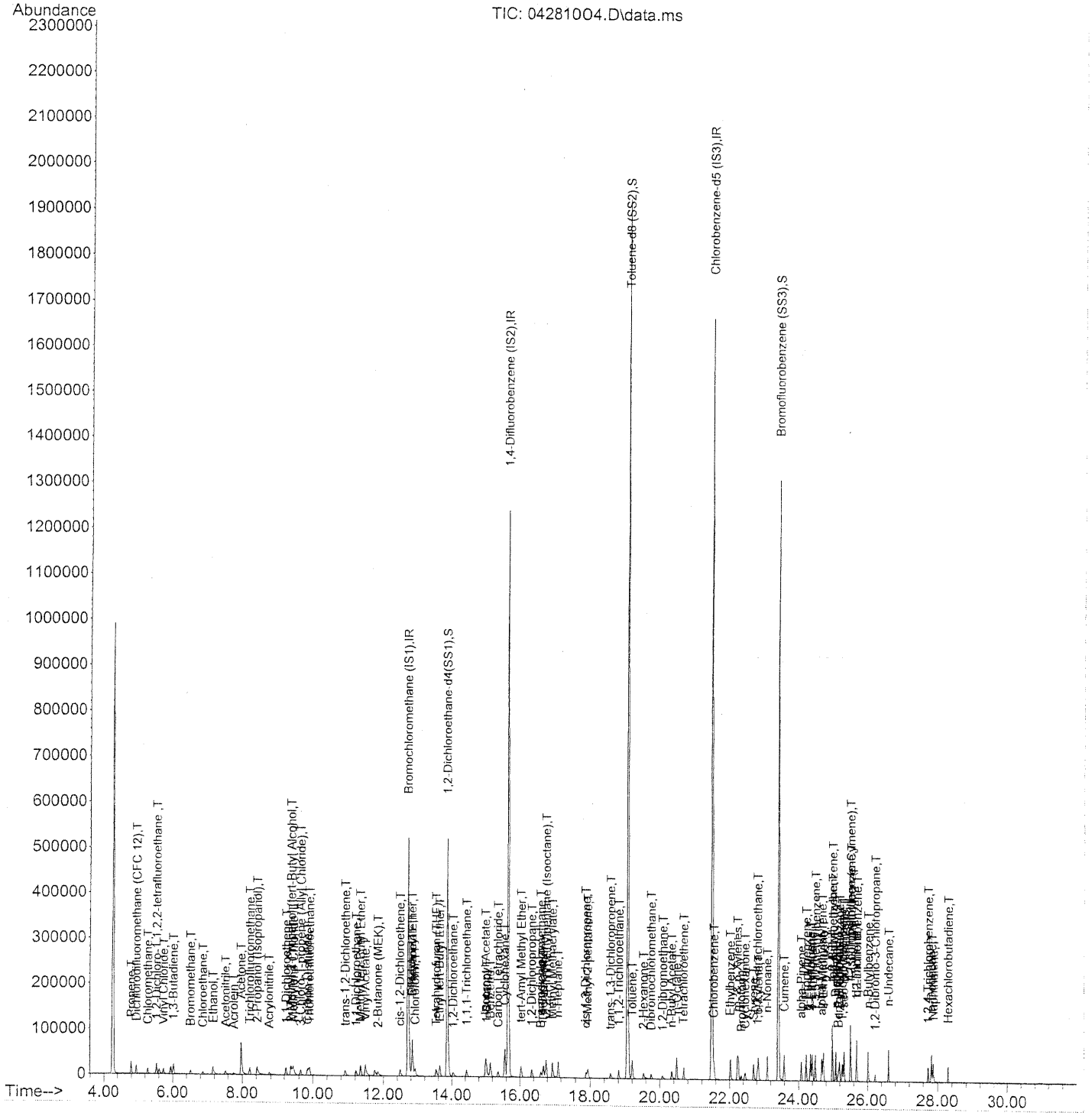
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	7264	0.189 ng		94
81) 2-Ethyltoluene	24.73	105	18987	0.208 ng	#	70
82) 1,2,4-Trimethylbenzene	24.99	105	14853	0.192 ng		98
83) n-Decane	25.09	57	9378	0.228 ng		95
84) Benzyl Chloride	25.16	91	6431	0.128 ng		88
85) 1,3-Dichlorobenzene	25.19	146	7232	0.194 ng		97
86) 1,4-Dichlorobenzene	25.27	146	7581	0.191 ng		100
87) sec-Butylbenzene	25.33	105	21160	0.211 ng		96
88) 4-Isopropyltoluene (p-...	25.51	119	19011	0.190 ng		98
89) 1,2,3-Trimethylbenzene	25.51	105	15565	0.201 ng		89
90) 1,2-Dichlorobenzene	25.69	146	6775	0.184 ng		98
91) d-Limonene	25.68	68	5928	0.209 ng		93
92) 1,2-Dibromo-3-Chloropr...	26.22	157	1406	0.126 ng	#	75
93) n-Undecane	26.60	57	8821	0.212 ng		94
94) 1,2,4-Trichlorobenzene	27.74	180	4040	0.169 ng	#	94
95) Naphthalene	27.89	128	13126	0.146 ng		92
96) n-Dodecane	27.84	57	7781	0.177 ng		93
97) Hexachlorobutadiene	28.30	225	2569	0.186 ng		96
98) Cyclohexanone	22.46	55	3530	0.155 ng		93
99) tert-Butylbenzene	24.99	119	15750	0.203 ng		98
100) n-Butylbenzene	26.02	91	16045	0.208 ng		94

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281004.D
Acq On : 28 Apr 2010 11:35
Operator : EM
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:11:12 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281004.D
Acq On : 28 Apr 2010 11:35
Operator : EM
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:11:12 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.71	130	280311	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	15.66	114	1436385	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	702249	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.87	65	532510	26.777	ng	-0.03
Spiked Amount 25.000			Recovery	=	107.12%	
57) Toluene-d8 (SS2)	19.07	98	1681461	24.948	ng	0.00
Spiked Amount 25.000			Recovery	=	99.80%	
73) Bromofluorobenzene (SS3)	23.42	174	424893	22.734	ng	0.00
Spiked Amount 25.000			Recovery	=	90.92%	

Target Compounds							Qvalue
2) Propene	4.79	42	10200	0.569	ng		98
3) Dichlorodifluoromethan...	4.94	85	19854	0.595	ng		98
4) Chloromethane	5.28	50	15125	0.650	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	9987	0.580	ng		97
6) Vinyl Chloride	5.74	62	15871	0.614	ng		98
7) 1,3-Butadiene	6.02	54	12717	0.694	ng		98
8) Bromomethane	6.52	94	7661	0.556	ng		96
9) Chloroethane	6.87	64	7975	0.592	ng		96
10) Ethanol	7.17	45	29825	2.958	ng		95
11) Acetonitrile	7.52	41	15700	0.597	ng		100
12) Acrolein	7.75	56	4878	0.557	ng		100
13) Acetone	7.96	58	40398	3.125	ng		90
14) Trichlorofluoromethane	8.22	101	17071	0.582	ng		100
15) 2-Propanol (Isopropanol)	8.42	45	46667	1.167	ng		99
16) Acrylonitrile	8.76	53	10076	0.538	ng		93
17) 1,1-Dichloroethene	9.25	96	9573	0.619	ng		98
18) 2-Methyl-2-Propanol (t...	9.40	59	49144	1.162	ng		96
19) Methylene Chloride	9.45	84	9889	0.568	ng		89
20) 3-Chloro-1-propene (Al...	9.65	41	12001	0.576	ng		93
21) Trichlorotrifluoroethane	9.91	151	7562	0.582	ng		98
22) Carbon Disulfide	9.85	76	40336	0.649	ng		98
23) trans-1,2-Dichloroethene	10.92	61	12901	0.577	ng		92
24) 1,1-Dichloroethane	11.22	63	16721	0.601	ng		98
25) Methyl tert-Butyl Ether	11.35	73	31190	0.596	ng		100
26) Vinyl Acetate	11.49	86	6512	1.799	ng	#	44
27) 2-Butanone (MEK)	11.85	72	5472	0.504	ng	#	61
28) cis-1,2-Dichloroethene	12.48	61	13916	0.632	ng		92
29) Diisopropyl Ether	12.84	87	9273	0.581	ng	#	80
30) Ethyl Acetate	12.84	61	5929	0.989	ng		100
31) n-Hexane	12.84	57	19122	0.613	ng		96

EM 4/29/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281004.D
Acq On : 28 Apr 2010 11:35
Operator : EM
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:11:12 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	16398	0.598	ng		100
34) Tetrahydrofuran (THF)	13.54	72	6393	0.611	ng	#	80
35) Ethyl tert-Butyl Ether	13.64	87	12278	0.541	ng		95
36) 1,2-Dichloroethane	14.05	62	13191	0.602	ng		96
38) 1,1,1-Trichloroethane	14.44	97	14943	0.560	ng		98
39) Isopropyl Acetate	15.00	61	11912	1.122	ng	#	81
40) 1-Butanol	15.03	56	13784	0.796	ng	#	59
41) Benzene	15.14	78	42088	0.589	ng		97
42) Carbon Tetrachloride	15.36	117	10488	0.520	ng		98
43) Cyclohexane	15.56	84	34904	1.157	ng		95
44) tert-Amyl Methyl Ether	16.04	73	27691	0.533	ng		97
45) 1,2-Dichloropropane	16.35	63	10137	0.598	ng		97
46) Bromodichloromethane	16.61	83	12382	0.571	ng		99
47) Trichloroethene	16.69	130	10790	0.535	ng		100
48) 1,4-Dioxane	16.67	88	7508	0.553	ng		93
49) 2,2,4-Trimethylpentane...	16.77	57	47750	0.594	ng		100
50) Methyl Methacrylate	16.95	100	7699	1.019	ng	#	82
51) n-Heptane	17.12	71	11827	0.583	ng		97
52) cis-1,3-Dichloropropene	17.88	75	13551	0.508	ng		99
53) 4-Methyl-2-pentanone	17.93	58	8411	0.582	ng		86
54) trans-1,3-Dichloropropene	18.58	75	11870	0.523	ng		92
55) 1,1,2-Trichloroethane	18.82	97	8821	0.563	ng		97
58) Toluene	19.20	91	43765	0.567	ng		99
59) 2-Hexanone	19.53	43	18732	0.547	ng		89
60) Dibromochloromethane	19.74	129	8611	0.547	ng		98
61) 1,2-Dibromoethane	20.08	107	9384	0.542	ng		97
62) n-Butyl Acetate	20.33	43	21252	0.529	ng		94
63) n-Octane	20.48	57	10011	0.581	ng		95
64) Tetrachloroethene	20.68	166	9770	0.511	ng		97
65) Chlorobenzene	21.54	112	26716	0.552	ng		98
66) Ethylbenzene	22.02	91	47872	0.555	ng		95
67) m- & p-Xylenes	22.23	91	76614	1.096	ng		95
68) Bromoform	22.35	173	5764	0.442	ng		95
69) Styrene	22.70	104	25965	0.507	ng		99
70) o-Xylene	22.85	91	38296	0.542	ng		97
71) n-Nonane	23.10	43	22637	0.595	ng		95
72) 1,1,2,2-Tetrachloroethane	22.82	83	14114	0.558	ng		99
74) Cumene	23.59	105	47582	0.501	ng		99
75) alpha-Pinene	24.08	93	20570	0.483	ng		99
76) n-Propylbenzene	24.22	91	59034	0.536	ng		98
77) 3-Ethyltoluene	24.35	105	45289	0.520	ng		97
78) 4-Ethyltoluene	24.40	105	47827	0.540	ng		99
79) 1,3,5-Trimethylbenzene	24.49	105	40435	0.533	ng		96

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281004.D
Acq On : 28 Apr 2010 11:35
Operator : EM
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:11:12 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

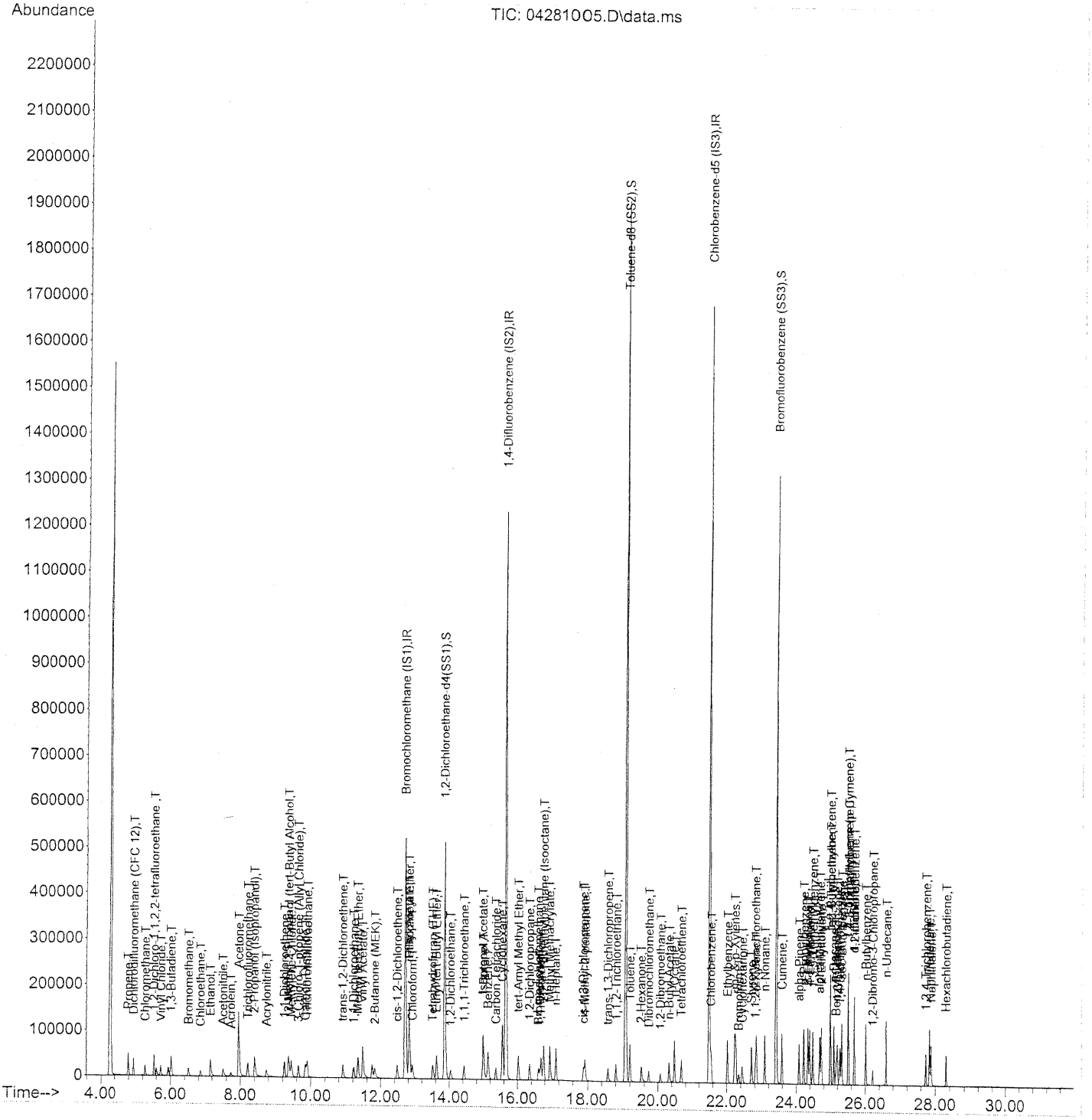
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
80) alpha-Methylstyrene	24.68	118	19316	0.505 ng		95
81) 2-Ethyltoluene	24.72	105	47124	0.520 ng		71
82) 1,2,4-Trimethylbenzene	24.99	105	38734	0.504 ng		98
83) n-Decane	25.09	57	23349	0.572 ng		98
84) Benzyl Chloride	25.16	91	20422	0.410 ng		94
85) 1,3-Dichlorobenzene	25.19	146	19133	0.517 ng		100
86) 1,4-Dichlorobenzene	25.27	146	20190	0.511 ng		98
87) sec-Butylbenzene	25.32	105	53439	0.536 ng		97
88) 4-Isopropyltoluene (p-...	25.51	119	50724	0.510 ng		98
89) 1,2,3-Trimethylbenzene	25.51	105	40604	0.528 ng		89
90) 1,2-Dichlorobenzene	25.69	146	18381	0.503 ng		97
91) d-Limonene	25.68	68	14191	0.503 ng		96
92) 1,2-Dibromo-3-Chloropr...	26.21	157	4900	0.440 ng	#	79
93) n-Undecane	26.60	57	23276	0.563 ng		97
94) 1,2,4-Trichlorobenzene	27.74	180	12111	0.511 ng		96
95) Naphthalene	27.88	128	42882	0.480 ng		96
96) n-Dodecane	27.84	57	21268	0.487 ng		94
97) Hexachlorobutadiene	28.29	225	7133	0.520 ng		100
98) Cyclohexanone	22.45	55	11150	0.493 ng		95
99) tert-Butylbenzene	24.99	119	39414	0.512 ng		98
100) n-Butylbenzene	26.02	91	43059	0.563 ng		96

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281005.D
Acq On : 28 Apr 2010 12:17
Operator : EM
Sample : 1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:12:46 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281005.D
Acq On : 28 Apr 2010 12:17
Operator : EM
Sample : 1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:12:46 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	276787	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1429451	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	704085	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	526506	26.812	ng		-0.03
Spiked Amount 25.000			Recovery = 107.24%				
57) Toluene-d8 (SS2)	19.07	98	1679369	24.852	ng		0.00
Spiked Amount 25.000			Recovery = 99.40%				
73) Bromofluorobenzene (SS3)	23.42	174	424731	22.666	ng		0.00
Spiked Amount 25.000			Recovery = 90.68%				
Target Compounds							Qvalue
2) Propene	4.78	42	19542	1.105	ng		99
3) Dichlorodifluoromethan...	4.94	85	38980	1.183	ng		99
4) Chloromethane	5.28	50	29616	1.290	ng		97
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	19420	1.141	ng		97
6) Vinyl Chloride	5.74	62	30750	1.204	ng		99
7) 1,3-Butadiene	6.02	54	25089	1.386	ng		98
8) Bromomethane	6.52	94	15390	1.131	ng		98
9) Chloroethane	6.86	64	15954	1.200	ng		97
10) Ethanol	7.16	45	58909	5.916	ng		97
11) Acetonitrile	7.51	41	31025	1.195	ng		97
12) Acrolein	7.74	56	10262	1.186	ng		97
13) Acetone	7.95	58	77566	6.077	ng		89
14) Trichlorofluoromethane	8.22	101	33306	1.150	ng		100
15) 2-Propanol (Isopropanol)	8.40	45	95397	2.417	ng		98
16) Acrylonitrile	8.75	53	22742	1.229	ng		99
17) 1,1-Dichloroethene	9.25	96	18700	1.224	ng		96
18) 2-Methyl-2-Propanol (t...	9.37	59	100230	2.400	ng		95
19) Methylene Chloride	9.45	84	19381	1.128	ng		93
20) 3-Chloro-1-propene (Al...	9.65	41	25399	1.234	ng		94
21) Trichlorotrifluoroethane	9.91	151	14905	1.163	ng		99
22) Carbon Disulfide	9.86	76	73541	1.198	ng		99
23) trans-1,2-Dichloroethene	10.92	61	27431	1.241	ng		92
24) 1,1-Dichloroethane	11.22	63	33766	1.229	ng		98
25) Methyl tert-Butyl Ether	11.34	73	62973	1.218	ng		99
26) Vinyl Acetate	11.48	86	16296	4.559	ng	#	61
27) 2-Butanone (MEK)	11.83	72	12729	1.187	ng	#	54
28) cis-1,2-Dichloroethene	12.49	61	26903	1.238	ng		96
29) Diisopropyl Ether	12.83	87	18226	1.156	ng	#	76
30) Ethyl Acetate	12.83	61	13432	2.270	ng		100
31) n-Hexane	12.84	57	38253	1.243	ng		97

EM 4/29/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281005.D
Acq On : 28 Apr 2010 12:17
Operator : EM
Sample : 1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:12:46 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	32236	1.191	ng		99
34) Tetrahydrofuran (THF)	13.52	72	13663	1.322	ng		96
35) Ethyl tert-Butyl Ether	13.63	87	24881	1.110	ng		93
36) 1,2-Dichloroethane	14.05	62	26337	1.217	ng		97
38) 1,1,1-Trichloroethane	14.44	97	28816	1.085	ng		98
39) Isopropyl Acetate	14.99	61	24925	2.360	ng	#	85
40) 1-Butanol	15.00	56	32219	1.869	ng	#	70
41) Benzene	15.14	78	80285	1.128	ng		99
42) Carbon Tetrachloride	15.37	117	22006	1.097	ng		100
43) Cyclohexane	15.56	84	68609	2.285	ng		95
44) tert-Amyl Methyl Ether	16.03	73	57436	1.111	ng		97
45) 1,2-Dichloropropane	16.35	63	20132	1.194	ng		99
46) Bromodichloromethane	16.61	83	24779	1.147	ng		98
47) Trichloroethene	16.69	130	21080	1.051	ng		99
48) 1,4-Dioxane	16.66	88	15852	1.174	ng		99
49) 2,2,4-Trimethylpentane...	16.77	57	92174	1.153	ng		99
50) Methyl Methacrylate	16.94	100	16409	2.183	ng	#	86
51) n-Heptane	17.12	71	22906	1.135	ng		95
52) cis-1,3-Dichloropropene	17.88	75	28585	1.076	ng		98
53) 4-Methyl-2-pentanone	17.92	58	17421	1.210	ng		94
54) trans-1,3-Dichloropropene	18.58	75	26176	1.160	ng		96
55) 1,1,2-Trichloroethane	18.81	97	18162	1.164	ng		99
58) Toluene	19.20	91	85738	1.108	ng		99
59) 2-Hexanone	19.52	43	40828	1.188	ng		94
60) Dibromochloromethane	19.74	129	18021	1.142	ng		99
61) 1,2-Dibromoethane	20.08	107	19102	1.101	ng		100
62) n-Butyl Acetate	20.33	43	45398	1.128	ng		97
63) n-Octane	20.48	57	20145	1.167	ng		93
64) Tetrachloroethene	20.68	166	19109	0.997	ng		99
65) Chlorobenzene	21.54	112	52229	1.076	ng		99
66) Ethylbenzene	22.02	91	93446	1.080	ng		97
67) m- & p-Xylenes	22.23	91	145107	2.071	ng		98
68) Bromoform	22.34	173	12129	0.929	ng		100
69) Styrene	22.70	104	53907	1.050	ng		99
70) o-Xylene	22.84	91	75275	1.062	ng		98
71) n-Nonane	23.10	43	44589	1.169	ng		94
72) 1,1,2,2-Tetrachloroethane	22.81	83	28641	1.129	ng		99
74) Cumene	23.59	105	94007	0.987	ng		99
75) alpha-Pinene	24.08	93	42151	0.988	ng		98
76) n-Propylbenzene	24.22	91	117293	1.062	ng		97
77) 3-Ethyltoluene	24.34	105	91232	1.044	ng		99
78) 4-Ethyltoluene	24.40	105	93470	1.053	ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	77460	1.018	ng		97

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281005.D
Acq On : 28 Apr 2010 12:17
Operator : EM
Sample : 1ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:12:46 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

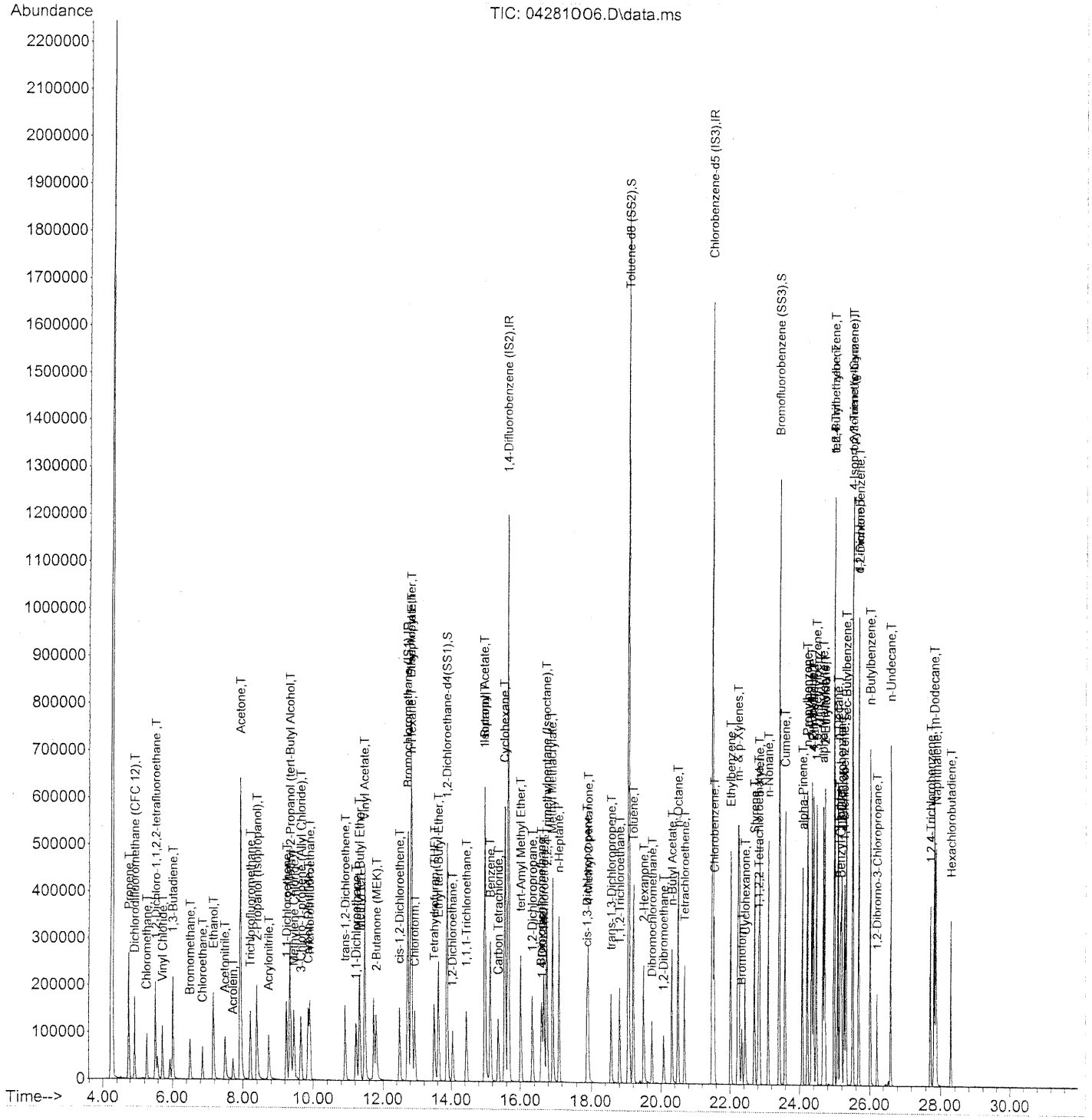
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	24.68	118	39066	1.018 ng	95
81) 2-Ethyltoluene	24.72	105	92853	1.022 ng	72
82) 1,2,4-Trimethylbenzene	24.99	105	76368	0.992 ng	98
83) n-Decane	25.09	57	46693	1.141 ng	98
84) Benzyl Chloride	25.16	91	46713	0.935 ng	96
85) 1,3-Dichlorobenzene	25.19	146	38385	1.035 ng	99
86) 1,4-Dichlorobenzene	25.27	146	39420	0.995 ng	100
87) sec-Butylbenzene	25.32	105	104512	1.046 ng	97
88) 4-Isopropyltoluene (p-...	25.51	119	96613	0.969 ng	97
89) 1,2,3-Trimethylbenzene	25.51	105	78843	1.022 ng	90
90) 1,2-Dichlorobenzene	25.68	146	36328	0.991 ng	97
91) d-Limonene	25.68	68	31076	1.099 ng	95
92) 1,2-Dibromo-3-Chloropr...	26.21	157	10065	0.902 ng	84
93) n-Undecane	26.60	57	46999	1.134 ng	96
94) 1,2,4-Trichlorobenzene	27.74	180	23764	1.000 ng	98
95) Naphthalene	27.88	128	85682	0.956 ng	98
96) n-Dodecane	27.83	57	43673	0.997 ng	95
97) Hexachlorobutadiene	28.29	225	13971	1.015 ng	97
98) Cyclohexanone	22.45	55	24083	1.062 ng	97
99) tert-Butylbenzene	24.99	119	77205	1.001 ng	98
100) n-Butylbenzene	26.01	91	85294	1.112 ng	97

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281006.D
Acq On : 28 Apr 2010 12:58
Operator : EM
Sample : 5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:14:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281006.D
Acq On : 28 Apr 2010 12:58
Operator : EM
Sample : 5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:14:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.72	130	276684	25.000	ng		-0.03
37) 1,4-Difluorobenzene (IS2)	15.66	114	1394326	25.000	ng		-0.02
56) Chlorobenzene-d5 (IS3)	21.48	82	686347	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.87	65	514182	26.194	ng		-0.02
Spiked Amount 25.000			Recovery = 104.76%				
57) Toluene-d8 (SS2)	19.07	98	1643116	24.944	ng		0.00
Spiked Amount 25.000			Recovery = 99.76%				
73) Bromofluorobenzene (SS3)	23.42	174	416320	22.791	ng		0.00
Spiked Amount 25.000			Recovery = 91.16%				
Target Compounds							Qvalue
2) Propene	4.76	42	128947	7.292	ng		99
3) Dichlorodifluoromethan...	4.93	85	188217	5.714	ng		99
4) Chloromethane	5.26	50	124200	5.411	ng		100
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	93283	5.485	ng		98
6) Vinyl Chloride	5.72	62	149644	5.864	ng		99
7) 1,3-Butadiene	6.01	54	129869	7.179	ng		99
8) Bromomethane	6.51	94	76255	5.604	ng		99
9) Chloroethane	6.86	64	78996	5.942	ng		99
10) Ethanol	7.16	45	291721	29.310	ng		100
11) Acetonitrile	7.50	41	160161	6.169	ng		100
12) Acrolein	7.72	56	54703	6.324	ng		98
13) Acetone	7.93	58	365476	28.646	ng		90
14) Trichlorofluoromethane	8.21	101	163331	5.644	ng		100
15) 2-Propanol (Isopropanol)	8.39	45	364920	9.248	ng		97
16) Acrylonitrile	8.73	53	122712	6.633	ng		100
17) 1,1-Dichloroethene	9.24	96	92512	6.058	ng		93
18) 2-Methyl-2-Propanol (t...	9.35	59	499135	11.958	ng		98
19) Methylene Chloride	9.46	84	95924	5.583	ng		94
20) 3-Chloro-1-propene (Al...	9.65	41	138230	6.720	ng		96
21) Trichlorotrifluoroethane	9.90	151	72469	5.655	ng		98
22) Carbon Disulfide	9.85	76	349832	5.700	ng		99
23) trans-1,2-Dichloroethene	10.92	61	142349	6.445	ng		95
24) 1,1-Dichloroethane	11.22	63	172032	6.263	ng		99
25) Methyl tert-Butyl Ether	11.32	73	312101	6.040	ng		99
26) Vinyl Acetate	11.46	86	104276	29.185	ng	#	76
27) 2-Butanone (MEK)	11.81	72	69537	6.486	ng	#	88
28) cis-1,2-Dichloroethene	12.48	61	137222	6.317	ng		94
29) Diisopropyl Ether	12.82	87	90696	5.753	ng	#	75
30) Ethyl Acetate	12.82	61	72973	12.334	ng		98
31) n-Hexane	12.84	57	190320	6.184	ng		98

EM 4/29/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281006.D
Acq On : 28 Apr 2010 12:58
Operator : EM
Sample : 5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:14:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.93	83	157974	5.840	ng		100
34) Tetrahydrofuran (THF)	13.50	72	69589	6.736	ng		96
35) Ethyl tert-Butyl Ether	13.62	87	125945	5.621	ng		95
36) 1,2-Dichloroethane	14.04	62	130133	6.015	ng		99
38) 1,1,1-Trichloroethane	14.44	97	142890	5.514	ng		98
39) Isopropyl Acetate	14.98	61	128739	12.496	ng	#	84
40) 1-Butanol	14.98	56	189893	11.291	ng		79
41) Benzene	15.14	78	393256	5.666	ng		100
42) Carbon Tetrachloride	15.37	117	114636	5.858	ng		100
43) Cyclohexane	15.56	84	336723	11.498	ng		95
44) tert-Amyl Methyl Ether	16.02	73	290599	5.763	ng		97
45) 1,2-Dichloropropane	16.35	63	99469	6.048	ng		100
46) Bromodichloromethane	16.61	83	128769	6.113	ng		100
47) Trichloroethene	16.68	130	99335	5.077	ng		99
48) 1,4-Dioxane	16.63	88	82004	6.227	ng		97
49) 2,2,4-Trimethylpentane...	16.77	57	456696	5.856	ng		100
50) Methyl Methacrylate	16.93	100	89439	12.197	ng		89
51) n-Heptane	17.12	71	116675	5.927	ng		97
52) cis-1,3-Dichloropropene	17.87	75	151425	5.845	ng		99
53) 4-Methyl-2-pentanone	17.90	58	96590	6.880	ng		98
54) trans-1,3-Dichloropropene	18.57	75	149513	6.792	ng		98
55) 1,1,2-Trichloroethane	18.81	97	89515	5.884	ng		98
58) Toluene	19.20	91	420653	5.575	ng		99
59) 2-Hexanone	19.50	43	227282	6.786	ng		98
60) Dibromochloromethane	19.74	129	94831	6.163	ng		99
61) 1,2-Dibromoethane	20.07	107	99707	5.895	ng		99
62) n-Butyl Acetate	20.31	43	260028	6.628	ng		98
63) n-Octane	20.48	57	98729	5.866	ng		96
64) Tetrachloroethene	20.67	166	92912	4.974	ng		99
65) Chlorobenzene	21.54	112	257084	5.434	ng		100
66) Ethylbenzene	22.01	91	466873	5.535	ng		97
67) m- & p-Xylenes	22.22	91	719628	10.536	ng		98
68) Bromoform	22.34	173	68552	5.384	ng		99
69) Styrene	22.70	104	280415	5.604	ng		99
70) o-Xylene	22.84	91	372788	5.397	ng		97
71) n-Nonane	23.10	43	222799	5.994	ng		95
72) 1,1,2,2-Tetrachloroethane	22.81	83	156647	6.335	ng		100
74) Cumene	23.59	105	469210	5.051	ng		99
75) alpha-Pinene	24.08	93	217512	5.231	ng		97
76) n-Propylbenzene	24.21	91	582932	5.412	ng		98
77) 3-Ethyltoluene	24.34	105	469121	5.508	ng		99
78) 4-Ethyltoluene	24.39	105	456149	5.272	ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	384734	5.189	ng		97

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281006.D
Acq On : 28 Apr 2010 12:58
Operator : EM
Sample : 5ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:14:14 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

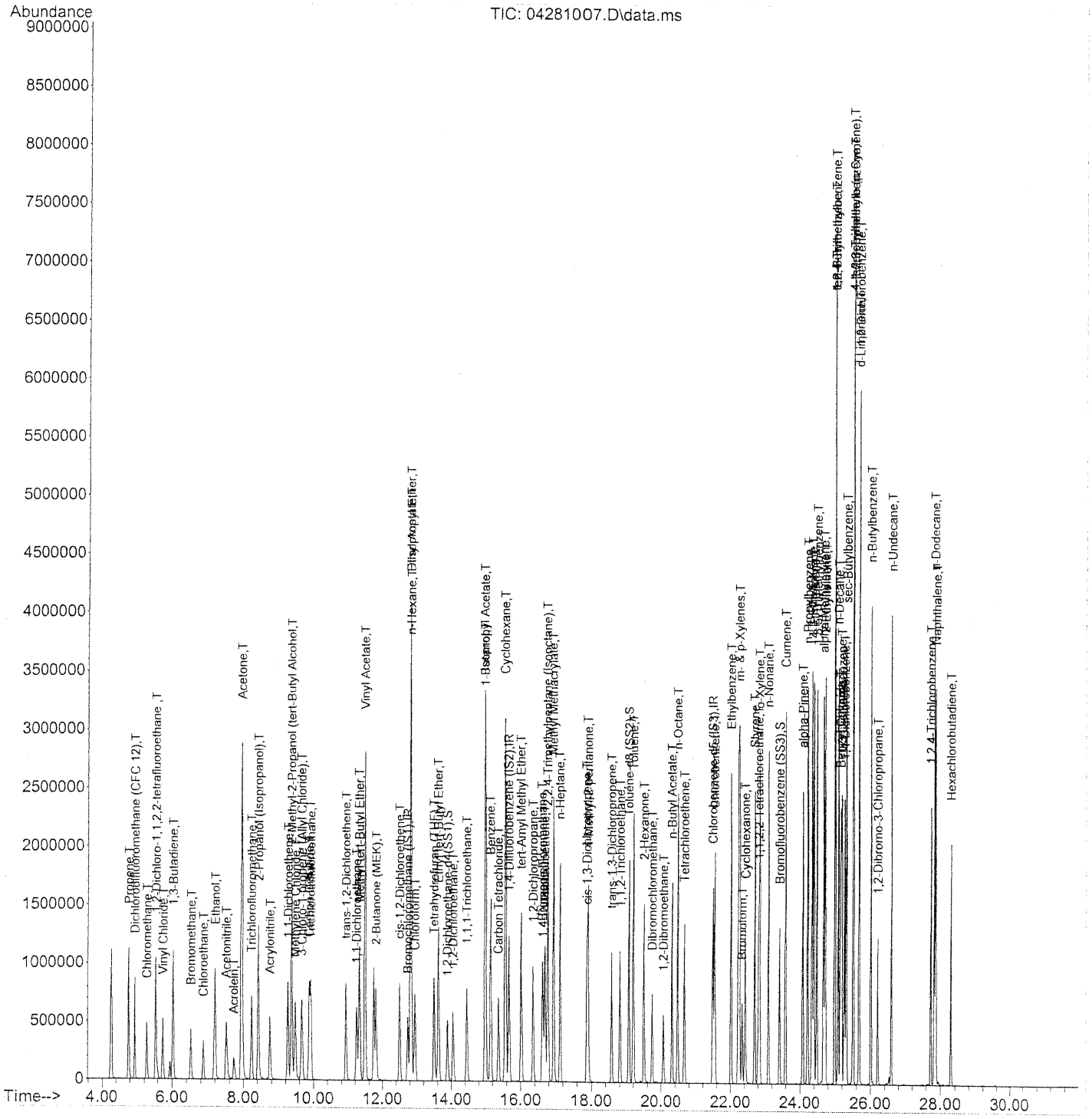
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	24.67	118	203503	5.441 ng	99
81) 2-Ethyltoluene	24.72	105	459252	5.184 ng	72
82) 1,2,4-Trimethylbenzene	24.99	105	388810	5.178 ng	99
83) n-Decane	25.09	57	235634	5.908 ng	98
84) Benzyl Chloride	25.15	91	288042	5.916 ng	97
85) 1,3-Dichlorobenzene	25.18	146	191904	5.308 ng	99
86) 1,4-Dichlorobenzene	25.26	146	195420	5.062 ng	100
87) sec-Butylbenzene	25.32	105	520715	5.348 ng	98
88) 4-Isopropyltoluene (p-...	25.50	119	483867	4.976 ng	97
89) 1,2,3-Trimethylbenzene	25.51	105	396322	5.270 ng	90
90) 1,2-Dichlorobenzene	25.68	146	182470	5.105 ng	99
91) d-Limonene	25.68	68	163680	5.938 ng	96
92) 1,2-Dibromo-3-Chloropr...	26.21	157	57399	5.279 ng	86
93) n-Undecane	26.60	57	243343	6.021 ng	97
94) 1,2,4-Trichlorobenzene	27.73	180	125298	5.407 ng	98
95) Naphthalene	27.88	128	445692	5.101 ng	99
96) n-Dodecane	27.83	57	229505	5.374 ng	96
97) Hexachlorobutadiene	28.29	225	69876	5.208 ng	98
98) Cyclohexanone	22.43	55	129469	5.859 ng	97
99) tert-Butylbenzene	24.99	119	385975	5.133 ng	99
100) n-Butylbenzene	26.01	91	429726	5.750 ng	97

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281007.D
Acq On : 28 Apr 2010 13:38
Operator : EM
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:15:42 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281007.D
Acq On : 28 Apr 2010 13:38
Operator : EM
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:15:42 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.74	130	282672	25.000	ng		-0.01
37) 1,4-Difluorobenzene (IS2)	15.67	114	1429793	25.000	ng		-0.01
56) Chlorobenzene-d5 (IS3)	21.48	82	703494	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.89	65	524658	26.161	ng		0.00
Spiked Amount 25.000			Recovery = 104.64%				
57) Toluene-d8 (SS2)	19.07	98	1678882	24.866	ng		0.00
Spiked Amount 25.000			Recovery = 99.48%				
73) Bromofluorobenzene (SS3)	23.42	174	428688	22.896	ng		0.00
Spiked Amount 25.000			Recovery = 91.60%				
Target Compounds							Qvalue
2) Propene	4.76	42	553939	30.663	ng		99
3) Dichlorodifluoromethan...	4.94	85	958934	28.496	ng		99
4) Chloromethane	5.27	50	716279	30.547	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.54	135	487361	28.047	ng		99
6) Vinyl Chloride	5.74	62	779249	29.887	ng		99
7) 1,3-Butadiene	6.03	54	716836	38.787	ng		99
8) Bromomethane	6.53	94	413077	29.716	ng		100
9) Chloroethane	6.88	64	404696	29.798	ng		100
10) Ethanol	7.21	45	1781256	175.174	ng		99
11) Acetonitrile	7.53	41	902983	34.046	ng		100
12) Acrolein	7.73	56	286073	32.369	ng		100
13) Acetone	7.95	58	1937250	148.626	ng		96
14) Trichlorofluoromethane	8.23	101	846563	28.632	ng		100
15) 2-Propanol (Isopropanol)	8.42	45	2444967	60.652	ng		100
16) Acrylonitrile	8.75	53	679957	35.974	ng		100
17) 1,1-Dichloroethene	9.26	96	490806	31.460	ng		96
18) 2-Methyl-2-Propanol (t...	9.37	59	2665757	62.513	ng		99
19) Methylene Chloride	9.48	84	498303	28.389	ng		94
20) 3-Chloro-1-propene (Al...	9.66	41	779340	37.082	ng		97
21) Trichlorotrifluoroethane	9.92	151	380128	29.036	ng		98
22) Carbon Disulfide	9.87	76	1825516	29.115	ng		98
23) trans-1,2-Dichloroethene	10.93	61	751925	33.321	ng		96
24) 1,1-Dichloroethane	11.24	63	909042	32.395	ng		100
25) Methyl tert-Butyl Ether	11.32	73	1646514	31.189	ng		98
26) Vinyl Acetate	11.49	86	664971	182.169	ng	#	82
27) 2-Butanone (MEK)	11.82	72	377830	34.495	ng		91
28) cis-1,2-Dichloroethene	12.50	61	725993	32.715	ng		95
29) Diisopropyl Ether	12.83	87	496045	30.798	ng	#	77
30) Ethyl Acetate	12.83	61	422043	69.826	ng		98
31) n-Hexane	12.84	57	1017711	32.369	ng		98

EM 4/29/10

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281007.D
Acq On : 28 Apr 2010 13:38
Operator : EM
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:15:42 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.95	83	838526	30.344	ng		100
34) Tetrahydrofuran (THF)	13.50	72	366125	34.691	ng		95
35) Ethyl tert-Butyl Ether	13.63	87	671243	29.325	ng		94
36) 1,2-Dichloroethane	14.05	62	686260	31.049	ng		99
38) 1,1,1-Trichloroethane	14.45	97	758365	28.540	ng		98
39) Isopropyl Acetate	14.98	61	721007	68.248	ng	#	86
40) 1-Butanol	15.00	56	1215965	70.507	ng		89
41) Benzene	15.15	78	2074512	29.148	ng		100
42) Carbon Tetrachloride	15.37	117	628000	31.293	ng		99
43) Cyclohexane	15.57	84	1805403	60.121	ng		96
44) tert-Amyl Methyl Ether	16.02	73	1568594	30.334	ng		98
45) 1,2-Dichloropropane	16.35	63	532130	31.551	ng		100
46) Bromodichloromethane	16.62	83	696160	32.228	ng		99
47) Trichloroethene	16.69	130	525395	26.184	ng		100
48) 1,4-Dioxane	16.63	88	456120	33.775	ng		98
49) 2,2,4-Trimethylpentane...	16.78	57	2413142	30.176	ng		99
50) Methyl Methacrylate	16.94	100	500282	66.531	ng		90
51) n-Heptane	17.13	71	626135	31.020	ng		97
52) cis-1,3-Dichloropropene	17.87	75	840800	31.648	ng		100
53) 4-Methyl-2-pentanone	17.90	58	545175	37.871	ng		98
54) trans-1,3-Dichloropropene	18.57	75	848455	37.586	ng		100
55) 1,1,2-Trichloroethane	18.81	97	484828	31.076	ng		98
58) Toluene	19.20	91	2242585	28.995	ng		99
59) 2-Hexanone	19.50	43	1277778	37.219	ng		98
60) Dibromochloromethane	19.74	129	534017	33.861	ng		100
61) 1,2-Dibromoethane	20.07	107	543928	31.373	ng		100
62) n-Butyl Acetate	20.31	43	1481095	36.831	ng		99
63) n-Octane	20.48	57	528132	30.617	ng		96
64) Tetrachloroethene	20.68	166	499387	26.084	ng		100
65) Chlorobenzene	21.54	112	1386256	28.587	ng		100
66) Ethylbenzene	22.01	91	2517314	29.118	ng		98
67) m- & p-Xylenes	22.25	91	3947342	56.384	ng		99
68) Bromoform	22.34	173	404153	30.966	ng		99
69) Styrene	22.70	104	1564690	30.506	ng		99
70) o-Xylene	22.84	91	2037015	28.772	ng		98
71) n-Nonane	23.10	43	1185425	31.115	ng		96
72) 1,1,2,2-Tetrachloroethane	22.81	83	894544	35.295	ng		99
74) Cumene	23.59	105	2561260	26.901	ng		100
75) alpha-Pinene	24.08	93	1191596	27.956	ng		98
76) n-Propylbenzene	24.21	91	3161515	28.637	ng		98
77) 3-Ethyltoluene	24.34	105	2582992	29.590	ng		99
78) 4-Ethyltoluene	24.40	105	2538991	28.629	ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	2112310	27.794	ng		98

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281007.D
Acq On : 28 Apr 2010 13:38
Operator : EM
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 14:15:42 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

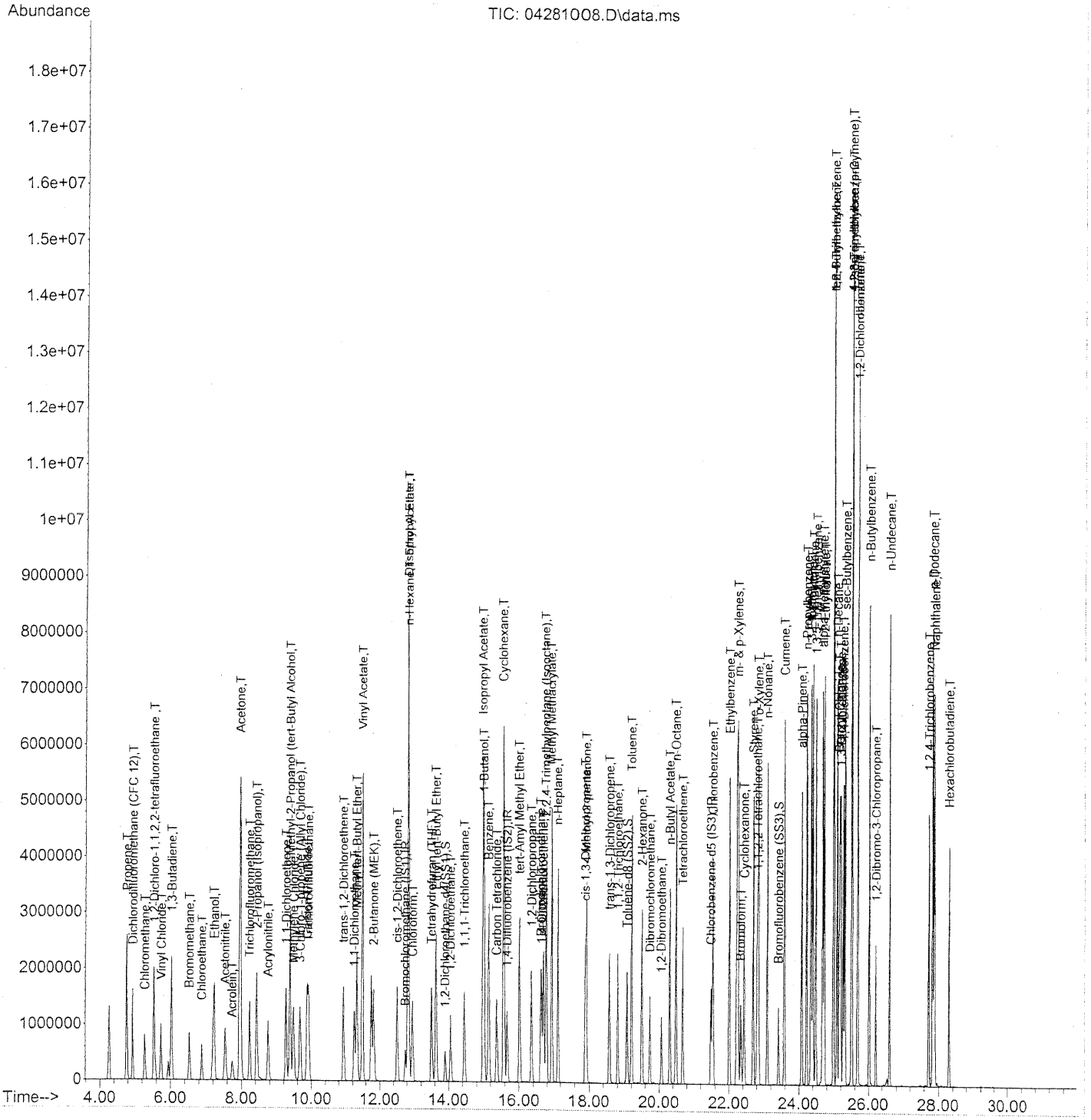
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	24.67	118	1157675	30.200 ng	98
81) 2-Ethyltoluene	24.72	105	2537323	27.941 ng	73
82) 1,2,4-Trimethylbenzene	24.99	105	2271048	29.510 ng	99
83) n-Decane	25.09	57	1299625	31.790 ng	99
84) Benzyl Chloride	25.15	91	1909269	38.255 ng	99
85) 1,3-Dichlorobenzene	25.19	146	1089861	29.412 ng	99
86) 1,4-Dichlorobenzene	25.27	146	1100925	27.824 ng	100
87) sec-Butylbenzene	25.32	105	2884980	28.909 ng	98
88) 4-Isopropyltoluene (p-...	25.51	119	2829677	28.393 ng	98
89) 1,2,3-Trimethylbenzene	25.51	105	2335513	30.299 ng	91
90) 1,2-Dichlorobenzene	25.68	146	1071868	29.257 ng	99
91) d-Limonene	25.68	68	951977	33.694 ng	96
92) 1,2-Dibromo-3-Chloropr...	26.21	157	373658	33.530 ng	90
93) n-Undecane	26.60	57	1369066	33.049 ng	98
94) 1,2,4-Trichlorobenzene	27.73	180	765981	32.250 ng	99
95) Naphthalene	27.88	128	2868737	32.034 ng	100
96) n-Dodecane	27.83	57	1326228	30.297 ng	97
97) Hexachlorobutadiene	28.29	225	407146	29.605 ng	99
98) Cyclohexanone	22.43	55	739734	32.662 ng	98
99) tert-Butylbenzene	24.99	119	2228752	28.920 ng	99
100) n-Butylbenzene	26.01	91	2407589	31.429 ng	99

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281008.D
Acq On : 28 Apr 2010 14:19
Operator : EM
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 15:53:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281008.D
Acq On : 28 Apr 2010 14:19
Operator : EM
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 15:53:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.75	130	295209	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.68	114	1472215	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.48	82	720502	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...	13.90	65	534847	25.537	ng	0.00
Spiked Amount 25.000			Recovery = 102.16%			
57) Toluene-d8 (SS2)	19.07	98	1715838	24.813	ng	0.00
Spiked Amount 25.000			Recovery = 99.24%			
73) Bromofluorobenzene (SS3)	23.42	174	441324	23.015	ng	0.00
Spiked Amount 25.000			Recovery = 92.04%			
Target Compounds						Qvalue
2) Propene	4.76	42	1380018	73.146	ng	100
3) Dichlorodifluoromethan...	4.94	85	1876450	53.393	ng	100
4) Chloromethane	5.27	50	1312322	53.589	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	5.54	135	995983	54.884	ng	99
6) Vinyl Chloride	5.74	62	1578920	57.986	ng	99
7) 1,3-Butadiene	6.03	54	1480900	76.726	ng	100
8) Bromomethane	6.53	94	843270	58.087	ng	100
9) Chloroethane	6.88	64	819006	57.742	ng	99
10) Ethanol	7.24	45	3634637	342.262	ng	99
11) Acetonitrile	7.54	41	1824693	65.876	ng	99
12) Acrolein	7.74	56	583176	63.184	ng	99
13) Acetone	7.96	58	3997487	293.663	ng	98
14) Trichlorofluoromethane	8.23	101	1715182	55.547	ng	100
15) 2-Propanol (Isopropanol)	8.44	45	3753308	89.154	ng	100
16) Acrylonitrile	8.76	53	1377048	69.760	ng	100
17) 1,1-Dichloroethene	9.26	96	993355	60.969	ng	97
18) 2-Methyl-2-Propanol (t...	9.39	59	5283448	118.638	ng	99
19) Methylene Chloride	9.49	84	1010518	55.125	ng	95
20) 3-Chloro-1-propene (Al...	9.67	41	1586964	72.303	ng	97
21) Trichlorotrifluoroethane	9.92	151	777155	56.841	ng	98
22) Carbon Disulfide	9.87	76	3696525	56.452	ng	98
23) trans-1,2-Dichloroethene	10.94	61	1523919	64.664	ng	97
24) 1,1-Dichloroethane	11.25	63	1844933	62.955	ng	100
25) Methyl tert-Butyl Ether	11.32	73	3376733	61.248	ng	98
26) Vinyl Acetate	11.50	86	1426670	374.239	ng #	93
27) 2-Butanone (MEK)	11.82	72	763104	66.710	ng	94
28) cis-1,2-Dichloroethene	12.51	61	1465082	63.216	ng	95
29) Diisopropyl Ether	12.83	87	1050458	62.451	ng #	87
30) Ethyl Acetate	12.84	61	897464	142.177	ng	98
31) n-Hexane	12.85	57	2144027	65.297	ng	99

EM 4/29/10

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281008.D
Acq On : 28 Apr 2010 14:19
Operator : EM
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 15:53:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.96	83	1698426	58.851	ng		100
34) Tetrahydrofuran (THF)	13.50	72	704479	63.916	ng		96
35) Ethyl tert-Butyl Ether	13.64	87	1395284	58.368	ng		96
36) 1,2-Dichloroethane	14.06	62	1361391	58.978	ng		99
38) 1,1,1-Trichloroethane	14.46	97	1539583	56.270	ng		99
39) Isopropyl Acetate	14.99	61	1486637	136.666	ng	#	92
40) 1-Butanol	15.01	56	2534660	142.736	ng		92
41) Benzene	15.15	78	4214003	57.503	ng		100
42) Carbon Tetrachloride	15.38	117	1293160	62.581	ng		100
43) Cyclohexane	15.58	84	3755654	121.462	ng		96
44) tert-Amyl Methyl Ether	16.02	73	3236252	60.781	ng		99
45) 1,2-Dichloropropane	16.36	63	1073581	61.821	ng		100
46) Bromodichloromethane	16.62	83	1418108	63.758	ng		99
47) Trichloroethene	16.70	130	1072477	51.909	ng		100
48) 1,4-Dioxane	16.64	88	929092	66.815	ng		98
49) 2,2,4-Trimethylpentane...	16.78	57	4888622	59.370	ng		99
50) Methyl Methacrylate	16.95	100	1042132	134.596	ng		92
51) n-Heptane	17.13	71	1282086	61.687	ng		97
52) cis-1,3-Dichloropropene	17.88	75	1715738	62.719	ng		100
53) 4-Methyl-2-pentanone	17.91	58	1116062	75.294	ng		99
54) trans-1,3-Dichloropropene	18.57	75	1746497	75.140	ng		100
55) 1,1,2-Trichloroethane	18.81	97	980222	61.019	ng		98
58) Toluene	19.20	91	4542480	57.345	ng		100
59) 2-Hexanone	19.50	43	2578193	73.325	ng		100
60) Dibromochloromethane	19.74	129	1097097	67.922	ng		100
61) 1,2-Dibromoethane	20.07	107	1103305	62.135	ng		100
62) n-Butyl Acetate	20.31	43	3055236	74.183	ng		100
63) n-Octane	20.48	57	1077459	60.987	ng		97
64) Tetrachloroethene	20.68	166	1022544	52.148	ng		100
65) Chlorobenzene	21.54	112	2817984	56.740	ng		99
66) Ethylbenzene	22.02	91	5124081	57.872	ng		99
67) m- & p-Xylenes	22.25	91	8152645	113.703	ng		99
68) Bromoform	22.34	173	844810	63.201	ng		100
69) Styrene	22.70	104	3214160	61.185	ng		99
70) o-Xylene	22.85	91	4194254	57.843	ng		99
71) n-Nonane	23.10	43	2378268	60.951	ng		98
72) 1,1,2,2-Tetrachloroethane	22.81	83	1847966	71.191	ng		99
74) Cumene	23.59	105	5276363	54.110	ng		100
75) alpha-Pinene	24.08	93	2500795	57.286	ng		98
76) n-Propylbenzene	24.22	91	6466272	57.189	ng		99
77) 3-Ethyltoluene	24.35	105	5295450	59.232	ng		99
78) 4-Ethyltoluene	24.40	105	5362338	59.036	ng		100
79) 1,3,5-Trimethylbenzene	24.49	105	4397339	56.494	ng		99

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281008.D
Acq On : 28 Apr 2010 14:19
Operator : EM
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 15:53:35 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

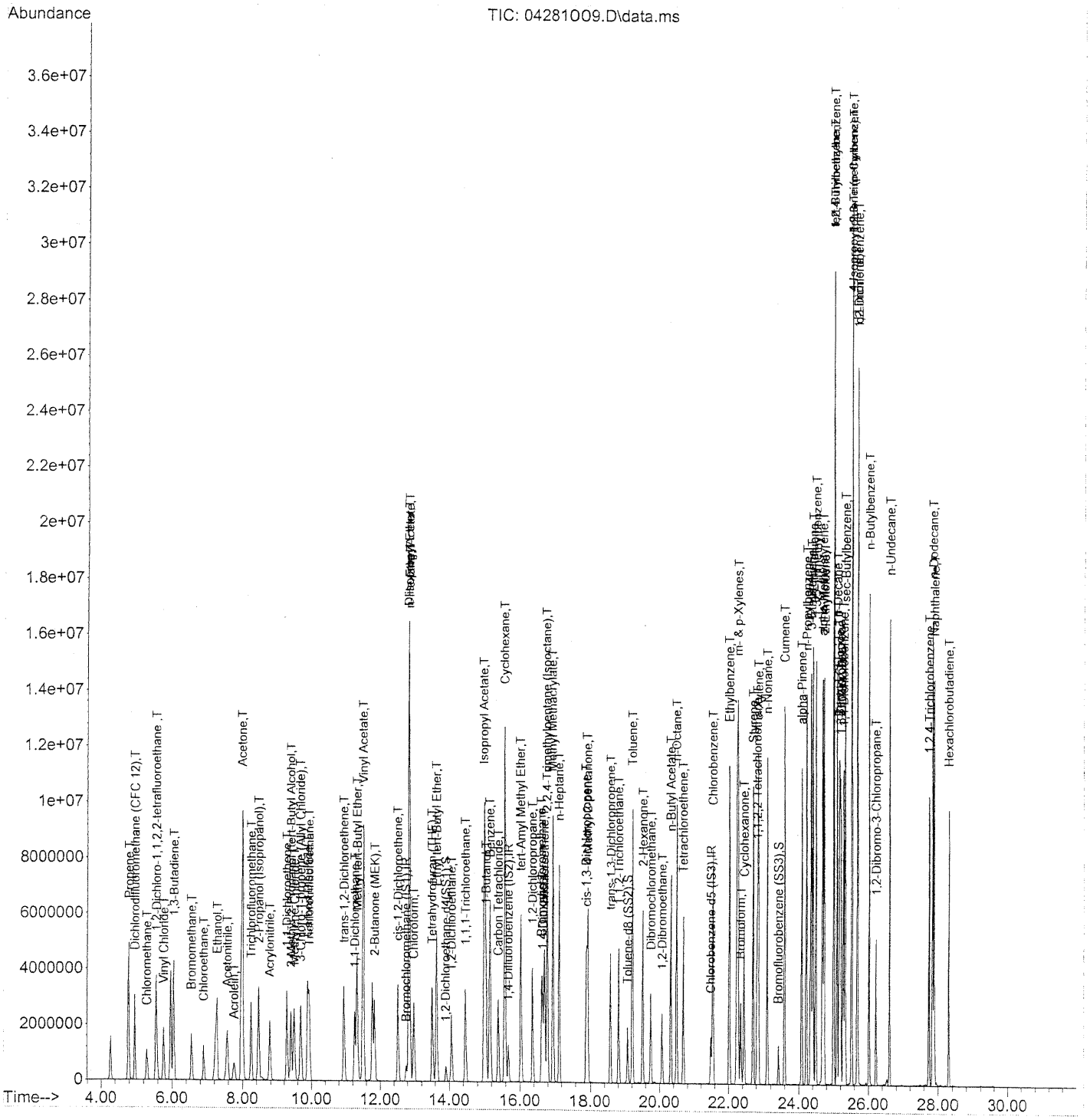
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	24.68	118	2431685	61.937 ng	98
81) 2-Ethyltoluene	24.73	105	5278030	56.750 ng	73
82) 1,2,4-Trimethylbenzene	24.99	105	4915186	62.361 ng	100
83) n-Decane	25.10	57	2682899	64.076 ng	100
84) Benzyl Chloride	25.16	91	4097037	80.153 ng	99
85) 1,3-Dichlorobenzene	25.19	146	2271700	59.858 ng	100
86) 1,4-Dichlorobenzene	25.27	146	2306535	56.917 ng	100
87) sec-Butylbenzene	25.32	105	5999584	58.699 ng	99
88) 4-Isopropyltoluene (p-...	25.51	119	6046668	59.240 ng	98
89) 1,2,3-Trimethylbenzene	25.51	105	5020865	63.598 ng	92
90) 1,2-Dichlorobenzene	25.69	146	2317175	61.754 ng	99
91) d-Limonene	25.68	68	2035131	70.331 ng	98
92) 1,2-Dibromo-3-Chloropr...	26.21	157	782090	68.524 ng	93
93) n-Undecane	26.60	57	2807590	66.175 ng	99
94) 1,2,4-Trichlorobenzene	27.74	180	1608537	66.126 ng	99
95) Naphthalene	27.88	128	5937102	64.733 ng	100
96) n-Dodecane	27.84	57	2743053	61.184 ng	99
97) Hexachlorobutadiene	28.30	225	861035	61.130 ng	99
98) Cyclohexanone	22.44	55	1512239	65.195 ng	98
99) tert-Butylbenzene	24.99	119	4803404	60.857 ng	100
100) n-Butylbenzene	26.02	91	4959739	63.216 ng	99

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281009.D
Acq On : 28 Apr 2010 15:00
Operator : EM
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 15:54:48 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281009.D
Acq On : 28 Apr 2010 15:00
Operator : EM
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 15:54:48 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-T015 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.76	130	298885	25.000	ng		0.00
37) 1,4-Difluorobenzene (IS2)	15.68	114	1496463	25.000	ng		0.00
56) Chlorobenzene-d5 (IS3)	21.49	82	718206	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.90	65	537527	25.349	ng		0.00
Spiked Amount 25.000			Recovery	=	101.40%		
57) Toluene-d8 (SS2)	19.07	98	1715287	24.884	ng		0.00
Spiked Amount 25.000			Recovery	=	99.52%		
73) Bromofluorobenzene (SS3)	23.42	174	443201	23.187	ng		0.00
Spiked Amount 25.000			Recovery	=	92.76%		
Target Compounds							Qvalue
2) Propene	4.78	42	2930421	153.412	ng		99
3) Dichlorodifluoromethan...	4.95	85	3854370	108.324	ng		100
4) Chloromethane	5.29	50	1973652	79.604	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.55	135	2007164	109.244	ng		99
6) Vinyl Chloride	5.76	62	3165135	114.810	ng		100
7) 1,3-Butadiene	6.05	54	3005184	153.785	ng		99
8) Bromomethane	6.55	94	1680057	114.303	ng		100
9) Chloroethane	6.89	64	1644264	114.499	ng		100
10) Ethanol	7.28	45	7484634	696.135	ng		99
11) Acetonitrile	7.57	41	3702909	132.041	ng		99
12) Acrolein	7.76	56	1184771	126.784	ng		99
13) Acetone	7.99	58	8379925	608.034	ng		88
14) Trichlorofluoromethane	8.24	101	3478760	111.276	ng		99
15) 2-Propanol (Isopropanol)	8.47	45	7007232	164.398	ng		99
16) Acrylonitrile	8.78	53	2830060	141.606	ng		100
17) 1,1-Dichloroethene	9.28	96	2043070	123.854	ng		99
18) 2-Methyl-2-Propanol (t...	9.41	59	4283853	95.009	ng		99
19) Methylene Chloride	9.50	84	2074069	111.752	ng		97
20) 3-Chloro-1-propene (Al...	9.69	41	3233324	145.501	ng		99
21) Trichlorotrifluoroethane	9.93	151	1573763	113.689	ng		98
22) Carbon Disulfide	9.89	76	7551664	113.909	ng		98
23) trans-1,2-Dichloroethene	10.95	61	3118680	130.706	ng		98
24) 1,1-Dichloroethane	11.26	63	3775411	127.245	ng		100
25) Methyl tert-Butyl Ether	11.33	73	6927348	124.104	ng		98
26) Vinyl Acetate	11.52	86	3034345	786.168	ng	#	83
27) 2-Butanone (MEK)	11.84	72	1331457	114.964	ng		97
28) cis-1,2-Dichloroethene	12.52	61	2999645	127.837	ng		96
29) Diisopropyl Ether	12.84	87	2283772	134.103	ng	#	94
30) Ethyl Acetate	12.85	61	1935561	302.862	ng		100
31) n-Hexane	12.86	57	4560210	137.174	ng		100

EM 4/29/10

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281009.D
Acq On : 28 Apr 2010 15:00
Operator : EM
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 15:54:48 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.98	83	3509697	120.117	ng		100
34) Tetrahydrofuran (THF)	13.51	72	1429113	128.067	ng		98
35) Ethyl tert-Butyl Ether	13.64	87	2925296	120.867	ng		98
36) 1,2-Dichloroethane	14.07	62	2736890	117.109	ng		100
38) 1,1,1-Trichloroethane	14.46	97	3177880	114.267	ng		99
39) Isopropyl Acetate	15.00	61	3131947	283.253	ng		98
40) 1-Butanol	15.05	56	5183081	287.150	ng	#	4
41) Benzene	15.16	78	8712357	116.961	ng		99
42) Carbon Tetrachloride	15.39	117	2685492	127.855	ng		100
43) Cyclohexane	15.59	84	7972836	253.672	ng		98
44) tert-Amyl Methyl Ether	16.03	73	6742660	124.583	ng		99
45) 1,2-Dichloropropane	16.37	63	2204248	124.873	ng		100
46) Bromodichloromethane	16.63	83	2901494	128.337	ng		99
47) Trichloroethene	16.70	130	2259820	107.605	ng		100
48) 1,4-Dioxane	16.65	88	1929029	136.476	ng		99
49) 2,2,4-Trimethylpentane...	16.79	57	10033748	119.880	ng		98
50) Methyl Methacrylate	16.96	100	2240277	284.654	ng		96
51) n-Heptane	17.14	71	2702235	127.911	ng		98
52) cis-1,3-Dichloropropene	17.88	75	3540806	127.338	ng		99
53) 4-Methyl-2-pentanone	17.92	58	2312409	153.476	ng		100
54) trans-1,3-Dichloropropene	18.58	75	3593010	152.078	ng		100
55) 1,1,2-Trichloroethane	18.82	97	2030725	124.365	ng		98
58) Toluene	19.21	91	9382535	118.825	ng		99
59) 2-Hexanone	19.51	43	5220361	148.944	ng		98
60) Dibromochloromethane	19.75	129	2297433	142.690	ng		100
61) 1,2-Dibromoethane	20.08	107	2278768	128.743	ng		100
62) n-Butyl Acetate	20.32	43	6522737	158.882	ng		98
63) n-Octane	20.49	57	2245978	127.535	ng		98
64) Tetrachloroethene	20.68	166	2173766	111.213	ng		100
65) Chlorobenzene	21.55	112	5884656	118.867	ng		99
66) Ethylbenzene	22.02	91	10586803	119.951	ng		99
67) m- & p-Xylenes	22.26	91	17218927	240.916	ng		99
68) Bromoform	22.35	173	1808555	135.731	ng		100
69) Styrene	22.70	104	6824270	130.323	ng		99
70) o-Xylene	22.86	91	8928325	123.525	ng		100
71) n-Nonane	23.11	43	4829091	124.158	ng		99
72) 1,1,2,2-Tetrachloroethane	22.82	83	3924165	151.658	ng		98
74) Cumene	23.59	105	10944591	112.598	ng		97
75) alpha-Pinene	24.08	93	5374082	123.498	ng		99
76) n-Propylbenzene	24.23	91	12961781	115.002	ng		97
77) 3-Ethyltoluene	24.35	105	11353401	127.399	ng		98
78) 4-Ethyltoluene	24.40	105	10855875	119.899	ng		97
79) 1,3,5-Trimethylbenzene	24.49	105	9336844	120.337	ng		98

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281009.D
Acq On : 28 Apr 2010 15:00
Operator : EM
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

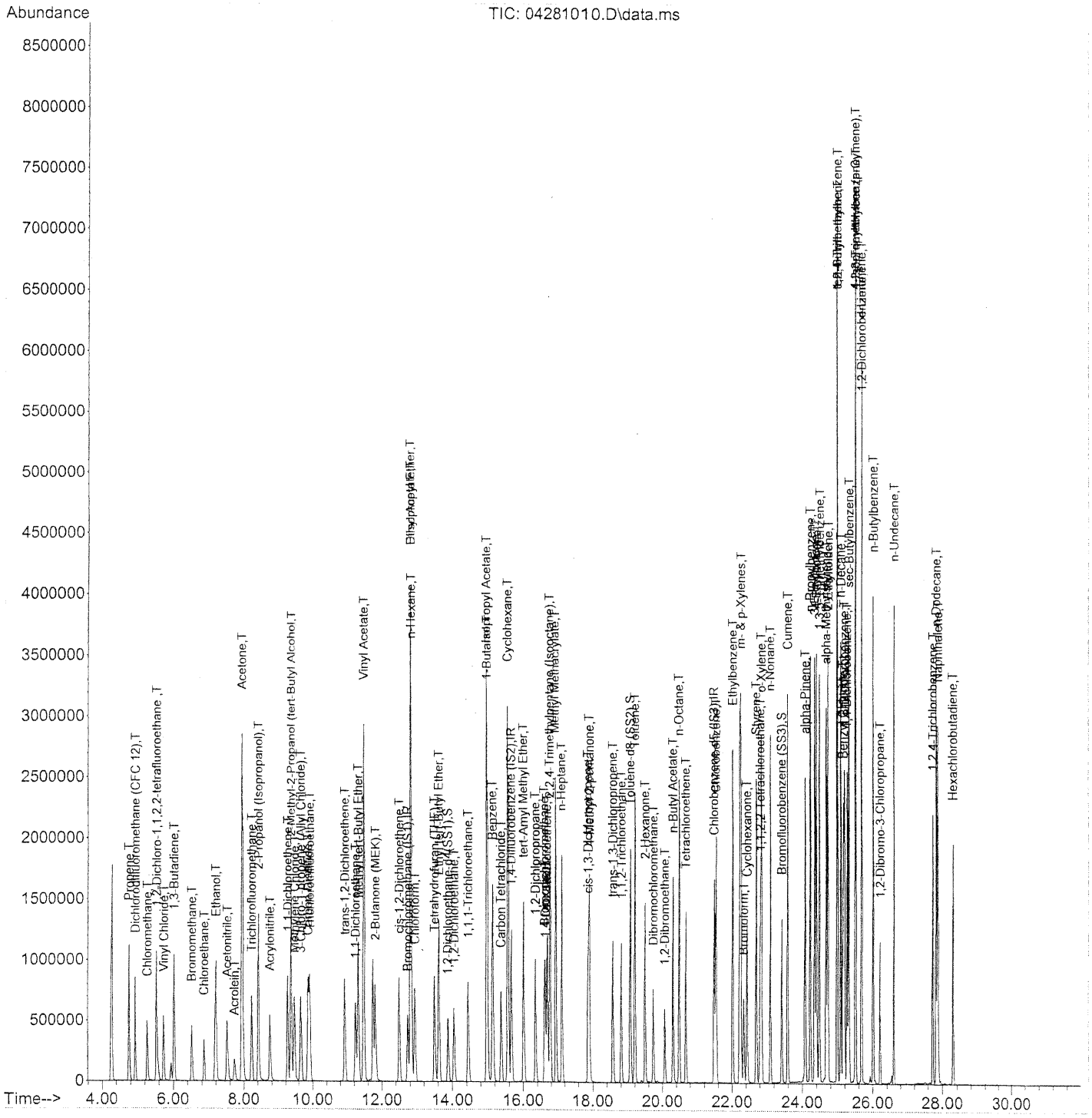
Quant Time: Apr 28 15:54:48 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 21 08:41:37 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.69	118	5271979	134.712	ng	98
81) 2-Ethyltoluene	24.73	105	11011350	118.774	ng	75
82) 1,2,4-Trimethylbenzene	25.01	105	10400641	132.379	ng	97
83) n-Decane	25.10	57	5609266	134.396	ng	98
84) Benzyl Chloride	25.17	91	8858211	173.853	ng	99
85) 1,3-Dichlorobenzene	25.20	146	4997006	132.090	ng	100
86) 1,4-Dichlorobenzene	25.28	146	4985268	123.412	ng	100
87) sec-Butylbenzene	25.33	105	12154453	119.298	ng	97
88) 4-Isopropyltoluene (p-...	25.52	119	12228664	120.188	ng	94
89) 1,2,3-Trimethylbenzene	25.52	105	10561748	134.211	ng	95
90) 1,2-Dichlorobenzene	25.70	146	5224837	139.690	ng	99
91) d-Limonene	25.69	68	4215264	146.139	ng	98
92) 1,2-Dibromo-3-Chloropr...	26.22	157	1678117	147.500	ng	97
93) n-Undecane	26.61	57	5768244	136.393	ng	99
94) 1,2,4-Trichlorobenzene	27.74	180	3516939	145.040	ng	99
95) Naphthalene	27.89	128	12160423	133.010	ng	98
96) n-Dodecane	27.84	57	5676608	127.021	ng	99
97) Hexachlorobutadiene	28.30	225	1916278	136.483	ng	99
98) Cyclohexanone	22.45	55	3106688	134.362	ng	98
99) tert-Butylbenzene	25.00	119	10269107	130.520	ng	97
100) n-Butylbenzene	26.02	91	10128493	129.509	ng	97

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

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281010.D
Acq On : 28 Apr 2010 15:41
Operator : EM
Sample : 25ng TO-15 ICV STD
Misc : S20-04261001/S20-04141003
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 16:15:49 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281010.D
Acq On : 28 Apr 2010 15:41
Operator : EM
Sample : 25ng TO-15 ICV STD
Misc : S20-04261001/S20-04141003
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 16:15:49 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.74	130	285582	25.000	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	15.67	114	1451812	25.000	ng		-0.01
56) Chlorobenzene-d5 (IS3)	21.48	82	706227	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.89	65	523791	24.647	ng		-0.02
Spiked Amount 25.000			Recovery = 98.60%				
57) Toluene-d8 (SS2)	19.07	98	1699992	25.232	ng		0.00
Spiked Amount 25.000			Recovery = 100.92%				
73) Bromofluorobenzene (SS3)	23.42	174	434230	25.246	ng		0.00
Spiked Amount 25.000			Recovery = 101.00%				
Target Compounds							Qvalue
2) Propene	4.76	42	547569	24.580	ng		99
3) Dichlorodifluoromethan...	4.93	85	969982	25.377	ng		100
4) Chloromethane	5.27	50	731169	25.874	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	510175	26.848	ng		99
6) Vinyl Chloride	5.74	62	815485	26.135	ng		100
7) 1,3-Butadiene	6.02	54	668181	29.609	ng		100
8) Bromomethane	6.52	94	442847	27.914	ng		99
9) Chloroethane	6.87	64	424465	26.502	ng		100
10) Ethanol	7.21	45	1881374	154.911	ng		100
11) Acetonitrile	7.52	41	916587	29.871	ng		100
12) Acrolein	7.73	56	278686	29.438	ng		99
13) Acetone	7.95	58	1973727	132.939	ng		99
14) Trichlorofluoromethane	8.23	101	848227	25.628	ng		100
15) 2-Propanol (Isopropanol)	8.42	45	2575696	55.957	ng		99
16) Acrylonitrile	8.75	53	688207	30.978	ng		100
17) 1,1-Dichloroethene	9.26	96	509609	28.787	ng		98
18) 2-Methyl-2-Propanol (t...	9.37	59	2733198	57.544	ng		100
19) Methylene Chloride	9.48	84	521868	26.684	ng		96
20) 3-Chloro-1-propene (Al...	9.66	41	792909	31.089	ng		97
21) Trichlorotrifluoroethane	9.91	151	401455	28.718	ng		99
22) Carbon Disulfide	9.86	76	1841477	26.413	ng		98
23) trans-1,2-Dichloroethene	10.93	61	758972	29.045	ng		97
24) 1,1-Dichloroethane	11.24	63	942257	27.984	ng		100
25) Methyl tert-Butyl Ether	11.32	73	1678126	27.594	ng		99
26) Vinyl Acetate	11.48	86	707421	157.868	ng	#	88
27) 2-Butanone (MEK)	11.81	72	385369	31.249	ng		95
28) cis-1,2-Dichloroethene	12.50	61	743598	28.598	ng		96
29) Diisopropyl Ether	12.83	87	508923	27.865	ng	#	85
30) Ethyl Acetate	12.83	61	420746	57.391	ng		98
31) n-Hexane	12.84	57	1025280	27.312	ng		99

EM 4/29/10

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281010.D
Acq On : 28 Apr 2010 15:41
Operator : EM
Sample : 25ng TO-15 ICV STD
Misc : S20-04261001/S20-04141003
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 16:15:49 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.95	83	870063	27.775	ng		100
34) Tetrahydrofuran (THF)	13.50	72	369241	30.963	ng		97
35) Ethyl tert-Butyl Ether	13.63	87	699305	27.409	ng		97
36) 1,2-Dichloroethane	14.05	62	703614	27.706	ng		99
38) 1,1,1-Trichloroethane	14.45	97	789171	27.154	ng		99
39) Isopropyl Acetate	14.98	61	741047	59.287	ng	#	90
40) 1-Butanol	15.00	56	1236352	61.624	ng		90
41) Benzene	15.15	78	2146590	26.488	ng		100
42) Carbon Tetrachloride	15.37	117	651056	30.174	ng		100
43) Cyclohexane	15.57	84	1828575	53.688	ng		96
44) tert-Amyl Methyl Ether	16.02	73	1622993	27.318	ng		99
45) 1,2-Dichloropropane	16.35	63	548910	27.732	ng		100
46) Bromodichloromethane	16.61	83	705247	29.014	ng		99
47) Trichloroethene	16.69	130	549651	26.604	ng		100
48) 1,4-Dioxane	16.63	88	454446	29.569	ng		97
49) 2,2,4-Trimethylpentane...	16.78	57	2442259	25.730	ng		99
50) Methyl Methacrylate	16.94	100	524959	61.775	ng		92
51) n-Heptane	17.12	71	625826	27.010	ng		98
52) cis-1,3-Dichloropropene	17.87	75	870648	28.764	ng		100
53) 4-Methyl-2-pentanone	17.90	58	538233	30.741	ng		100
54) trans-1,3-Dichloropropene	18.57	75	882295	33.046	ng		100
55) 1,1,2-Trichloroethane	18.81	97	499213	28.211	ng		98
58) Toluene	19.20	91	2330213	27.880	ng		99
59) 2-Hexanone	19.50	43	1237940	31.048	ng		100
60) Dibromochloromethane	19.74	129	542805	32.797	ng		100
61) 1,2-Dibromoethane	20.07	107	565357	30.636	ng		100
62) n-Butyl Acetate	20.31	43	1454340	32.455	ng		100
63) n-Octane	20.48	57	536216	27.655	ng		97
64) Tetrachloroethene	20.68	166	523393	26.734	ng		100
65) Chlorobenzene	21.54	112	1438406	28.230	ng		99
66) Ethylbenzene	22.02	91	2600815	27.810	ng		98
67) m- & p-Xylenes	22.25	91	4079741	53.814	ng		99
68) Bromoform	22.34	173	411816	29.991	ng		99
69) Styrene	22.70	104	1578009	29.518	ng		99
70) o-Xylene	22.85	91	2094124	25.928	ng		99
71) n-Nonane	23.10	43	1184226	27.014	ng		97
72) 1,1,2,2-Tetrachloroethane	22.81	83	908585	31.407	ng		99
74) Cumene	23.59	105	2628716	26.915	ng		100
75) alpha-Pinene	24.08	93	1203726	26.271	ng		96
76) n-Propylbenzene	24.22	91	3210686	26.827	ng		98
77) 3-Ethyltoluene	24.34	105	2604458	28.867	ng		99
78) 4-Ethyltoluene	24.40	105	2579115	28.285	ng		99
79) 1,3,5-Trimethylbenzene	24.49	105	2179640	28.509	ng		99

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281010.D
Acq On : 28 Apr 2010 15:41
Operator : EM
Sample : 25ng TO-15 ICV STD
Misc : S20-04261001/S20-04141003
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 16:15:49 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	24.68	118	1069861	26.663 ng	98
81) 2-Ethyltoluene	24.73	105	2582640	27.421 ng	73
82) 1,2,4-Trimethylbenzene	24.99	105	2323136	29.069 ng	99
83) n-Decane	25.09	57	1305210	28.405 ng	99
84) Benzyl Chloride	25.16	91	1849905	31.202 ng	99
85) 1,3-Dichlorobenzene	25.19	146	1125633	30.062 ng	100
86) 1,4-Dichlorobenzene	25.27	146	1156144	29.185 ng	100
87) sec-Butylbenzene	25.32	105	2919620	27.804 ng	98
88) 4-Isopropyltoluene (p-...	25.51	119	2819477	27.385 ng	98
89) 1,2,3-Trimethylbenzene	25.51	105	2335305	28.524 ng	91
90) 1,2-Dichlorobenzene	25.69	146	1093837	29.105 ng	99
91) d-Limonene	25.68	68	918126	29.186 ng	96
92) 1,2-Dibromo-3-Chloropr...	26.21	157	360572	30.277 ng	91
93) n-Undecane	26.60	57	1315554	28.559 ng	98
94) 1,2,4-Trichlorobenzene	27.74	180	735156	30.293 ng	98
95) Naphthalene	27.88	128	2580039	29.228 ng	100
96) n-Dodecane	27.83	57	1156288	24.485 ng	98
97) Hexachlorobutadiene	28.30	225	401994	29.403 ng	99
98) Cyclohexanone	22.43	55	716335	27.185 ng	98
99) tert-Butylbenzene	24.99	119	2263935	27.987 ng	99
100) n-Butylbenzene	26.01	91	2384228	29.063 ng	99

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

INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 04281010.D
Acq. Method File: TO15.M
Data File Path: J:\MS08\DATA\2010_04\28\
Name: 25ng TO-15 ICV STD
Operator: EM
Misc Info: S20-04261001/S20-04141003
Date Acquired: 4/28/10 15:41
Instrument Name: MS08

#	Compound	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
2)	Propene	4.76	24.6	26.3	93.5	70	130	*
3)	Dichlorodifluoromethane (CFC	4.93	25.4	26.0	97.7	70	130	*
4)	Chloromethane	5.27	25.9	25.0	103.6	70	130	*
5)	1,2-Dichloro-1,1,2,2-tetrafluoro(	5.53	26.8	26.0	103.1	70	130	*
6)	Vinyl Chloride	5.74	26.1	25.3	103.2	70	130	*
7)	1,3-Butadiene	6.02	29.6	26.8	110.4	70	130	*
8)	Bromomethane	6.52	27.9	25.8	108.1	70	130	*
9)	Chloroethane	6.87	26.5	25.5	103.9	70	130	*
10)	Ethanol	7.21	154.9	130.0	119.2	70	130	*
11)	Acetonitrile	7.52	29.9	26.0	115.0	70	130	*
12)	Acrolein	7.73	29.4	26.3	111.8	70	130	*
13)	Acetone	7.95	132.9	132.0	100.7	70	130	*
14)	Trichlorofluoromethane	8.23	25.6	26.3	97.3	70	130	*
15)	2-Propanol (Isopropanol)	8.42	56.0	48.0	116.7	70	130	*
16)	Acrylonitrile	8.75	31.0	25.8	120.2	70	130	*
17)	1,1-Dichloroethene	9.26	28.8	27.5	104.7	70	130	*
18)	2-Methyl-2-Propanol (tert-Butyl Al	9.37	57.5	50.0	115.0	70	130	*
19)	Methylene Chloride	9.48	26.7	26.8	99.6	70	130	*
20)	3-Chloro-1-propene (Allyl Chlor	9.66	31.1	27.0	115.2	70	130	*
21)	Trichlorotrifluoroethane	9.91	28.7	27.5	104.4	70	130	*
22)	Carbon Disulfide	9.86	26.4	26.0	101.5	70	130	*
23)	trans-1,2-Dichloroethene	10.93	29.0	25.5	113.7	70	130	*
24)	1,1-Dichloroethane	11.24	28.0	26.5	105.7	70	130	*
25)	Methyl tert-Butyl Ether	11.32	27.6	26.3	104.9	70	130	*
26)	Vinyl Acetate	11.48	157.9	126.0	125.3	70	130	*
27)	2-Butanone (MEK)	11.81	31.2	26.8	116.4	70	130	*
28)	cis-1,2-Dichloroethene	12.50	28.6	27.0	105.9	70	130	*
29)	Diisopropyl Ether	12.83	27.9	26.5	105.3	70	130	*
30)	Ethyl Acetate	12.83	57.4	52.0	110.4	70	130	*
31)	n-Hexane	12.84	27.3	26.0	105.0	70	130	*
32)	Chloroform	12.95	27.8	27.5	101.1	70	130	*
34)	Tetrahydrofuran (THF)	13.50	31.0	26.5	117.0	70	130	*
35)	Ethyl tert-Butyl Ether	13.63	27.4	25.5	107.5	70	130	*
36)	1,2-Dichloroethane	14.05	27.7	26.3	105.3	70	130	*
38)	1,1,1-Trichloroethane	14.45	27.2	26.0	104.6	70	130	*
39)	Isopropyl Acetate	14.98	59.3	52.3	113.4	70	130	*
40)	1-Butanol	15.00	61.6	52.8	116.7	70	130	*
41)	Benzene	15.15	26.5	25.8	102.7	70	130	*
42)	Carbon Tetrachloride	15.37	30.2	26.3	114.8	70	130	*
43)	Cyclohexane	15.57	53.7	51.8	103.7	70	130	*
44)	tert-Amyl Methyl Ether	16.02	27.3	25.5	107.1	70	130	*
45)	1,2-Dichloropropane	16.35	27.7	26.0	106.5	70	130	*
46)	Bromodichloromethane	16.61	29.0	26.3	110.3	70	130	*
47)	Trichloroethene	16.69	26.6	25.8	103.1	70	130	*
48)	1,4-Dioxane	16.63	29.6	26.0	113.8	70	130	*
49)	2,2,4-Trimethylpentane (Isooctan	16.78	25.7	25.8	99.6	70	130	*
50)	Methyl Methacrylate	16.94	61.8	52.8	117.0	70	130	*

EM 4/29/10

INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 04281010.D **Acq. Method File:** TO15.M
Data File Path: J:\MS08\DATA\2010_04\28\ **Name:** 25ng TO-15 ICV STD
Operator: EM **Misc Info:** S20-04261001/S20-04141003
Date Acquired: 4/28/10 15:41 **Instrument Name:** MS08

#	Compound	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
51)	n-Heptane	17.12	27.0	25.8	104.7	70	130	*
52)	cis-1,3-Dichloropropene	17.87	28.8	24.5	117.6	70	130	*
53)	4-Methyl-2-pentanone	17.90	30.7	26.8	114.6	70	130	*
54)	trans-1,3-Dichloropropene	18.57	33.0	27.0	122.2	70	130	*
55)	1,1,2-Trichloroethane	18.81	28.2	26.0	108.5	70	130	*
58)	Toluene	19.20	27.9	26.8	104.1	70	130	*
59)	2-Hexanone	19.50	31.0	27.0	114.8	70	130	*
60)	Dibromochloromethane	19.74	32.8	28.3	115.9	70	130	*
61)	1,2-Dibromoethane	20.07	30.6	26.3	116.3	70	130	*
62)	n-Butyl Acetate	20.31	32.5	27.5	118.2	70	130	*
63)	n-Octane	20.48	27.7	26.3	105.3	70	130	*
64)	Tetrachloroethene	20.68	26.7	25.3	105.5	70	130	*
65)	Chlorobenzene	21.54	28.2	26.5	106.4	70	130	*
66)	Ethylbenzene	22.02	27.8	26.3	105.7	70	130	*
67)	m- & p-Xylenes	22.25	53.8	51.5	104.5	70	130	*
68)	Bromoform	22.34	30.0	26.5	113.2	70	130	*
69)	Styrene	22.70	29.5	26.3	112.2	70	130	*
70)	o-Xylene	22.85	25.9	26.0	99.6	70	130	*
71)	n-Nonane	23.10	27.0	25.8	104.7	70	130	*
72)	1,1,2,2-Tetrachloroethane	22.81	31.4	27.0	116.3	70	130	*
74)	Cumene	23.59	26.9	25.3	106.3	70	130	*
75)	alpha-Pinene	24.08	26.3	24.8	106.0	70	130	*
76)	n-Propylbenzene	24.22	26.8	25.3	105.9	70	130	*
77)	3-Ethyltoluene	24.35	28.9	26.3	109.9	70	130	*
78)	4-Ethyltoluene	24.40	28.3	26.3	107.6	70	130	*
79)	1,3,5-Trimethylbenzene	24.49	28.5	26.5	107.5	70	130	*
80)	alpha-Methylstyrene	24.68	26.7	26.0	102.7	70	130	*
81)	2-Ethyltoluene	24.73	27.4	26.0	105.4	70	130	*
82)	1,2,4-Trimethylbenzene	24.99	29.1	25.5	114.1	70	130	*
83)	n-Decane	25.09	28.4	26.3	108.0	70	130	*
84)	Benzyl Chloride	25.16	31.2	26.8	116.4	70	130	*
85)	1,3-Dichlorobenzene	25.19	30.1	26.0	115.8	70	130	*
86)	1,4-Dichlorobenzene	25.27	29.2	26.3	111.0	70	130	*
87)	sec-Butylbenzene	25.32	27.8	25.8	107.8	70	130	*
88)	4-Isopropyltoluene (p-Cymene)	25.51	27.4	25.0	109.6	70	130	*
89)	1,2,3-Trimethylbenzene	25.51	28.5	26.0	109.6	70	130	*
90)	1,2-Dichlorobenzene	25.69	29.1	25.8	112.8	70	130	*
91)	d-Limonene	25.68	29.2	26.5	110.2	70	130	*
92)	1,2-Dibromo-3-Chloropropane	26.21	30.3	27.0	112.2	70	130	*
93)	n-Undecane	26.60	28.6	26.3	108.7	70	130	*
94)	1,2,4-Trichlorobenzene	27.74	30.3	27.3	111.0	70	130	*
95)	Naphthalene	27.88	29.2	25.0	116.8	70	130	*
96)	n-Dodecane	27.83	24.5	24.3	100.8	70	130	*
97)	Hexachlorobutadiene	28.30	29.4	26.8	109.7	70	130	*
98)	Cyclohexanone	22.43	27.2	24.8	109.7	70	130	*
99)	tert-Butylbenzene	24.99	28.0	26.5	105.7	70	130	*
100)	n-Butylbenzene	26.01	29.1	26.5	109.8	70	130	*

EM 4/29/10

* Denotes Passing Criterion

CONTINUING CALIBRATION STANDARDS

Evaluate Continuing Calibration Report

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 17 12:06:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	122	-0.02
2	T	Propene	1.950	1.596	18.2	106	-0.03
3	T	Dichlorodifluoromethane (CF	3.346	2.719	18.7	102	-0.03
4	T	Chloromethane	2.474	2.171	12.2	104	-0.03
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.663	1.372	17.5	102	-0.03
6	T	Vinyl Chloride	2.731	2.342	14.2	104	-0.03
7	T	1,3-Butadiene	1.975	1.845	6.6	106	-0.03
8	T	Bromomethane	1.389	1.249	10.1	106	-0.03
9	T	Chloroethane	1.402	1.206	14.0	104	-0.03
10	T	Ethanol	1.063	1.032	2.9	104	-0.09
11	T	Acetonitrile	2.686	2.567	4.4	103	-0.06
12	T	Acrolein	0.829	0.796	4.0	103	-0.04
13	T	Acetone	1.300	1.076	17.2	105	-0.06
14	T	Trichlorofluoromethane	2.897	2.363	18.4	101	-0.03
15	T	2-Propanol (Isopropanol)	4.029	3.698	8.2	98	-0.06
16	T	Acrylonitrile	1.945	1.926	1.0	103	-0.04
17	T	1,1-Dichloroethene	1.550	1.325	14.5	102	-0.03
18	T	2-Methyl-2-Propanol (tert-B	4.158	3.870	6.9	101	-0.05
19	T	Methylene Chloride	1.712	1.379	19.5	102	-0.03
20	T	3-Chloro-1-propene (Allyl C	2.233	2.137	4.3	102	-0.03
21	T	Trichlorotrifluoroethane	1.224	1.012	17.3	101	-0.02
22	T	Carbon Disulfide	6.103	5.302	13.1	107	-0.03
23	T	trans-1,2-Dichloroethene	2.287	2.072	9.4	100	-0.03
24	T	1,1-Dichloroethane	2.948	2.543	13.7	102	-0.02
25	T	Methyl tert-Butyl Ether	5.324	4.422	16.9	101	-0.02
26	T	Vinyl Acetate	0.392	0.407	-3.8	106	-0.05
27	T	2-Butanone (MEK)	1.080	1.025	5.1	102	-0.03
28	T	cis-1,2-Dichloroethene	2.276	1.949	14.4	101	-0.02
29	T	Diisopropyl Ether	1.599	1.352	15.4	100	-0.02
30	T	Ethyl Acetate	0.642	0.585	8.9	101	-0.03
31	T	n-Hexane	3.286	2.690	18.1	99	-0.02
32	T	Chloroform	2.742	2.312	15.7	102	-0.04
33	S	1,2-Dichloroethane-d4(SS1)	1.860	1.782	4.2	117	-0.02
34	T	Tetrahydrofuran (THF)	1.044	0.987	5.5	102	-0.02
35	T	Ethyl tert-Butyl Ether	2.233	1.919	14.1	101	-0.02
36	T	1,2-Dichloroethane	2.223	1.859	16.4	99	-0.02
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	119	-0.01
38	T	1,1,1-Trichloroethane	0.500	0.422	15.6	99	-0.02

Tom 5/17/10

Evaluate Continuing Calibration Report

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 17 12:06:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
39	T	Isopropyl Acetate	0.215	0.205	4.7	101	-0.03
40	T	1-Butanol	0.345	0.347	-0.6	100	-0.06
41	T	Benzene	1.395	1.182	15.3	102	-0.02
42	T	Carbon Tetrachloride	0.372	0.335	9.9	98	-0.02
43	T	Cyclohexane	0.587	0.495	15.7	100	-0.02
44	T	tert-Amyl Methyl Ether	1.023	0.902	11.8	101	-0.02
45	T	1,2-Dichloropropane	0.341	0.302	11.4	101	-0.02
46	T	Bromodichloromethane	0.419	0.377	10.0	99	-0.02
47	T	Trichloroethene	0.356	0.293	17.7	100	-0.02
48	T	1,4-Dioxane	0.265	0.249	6.0	99	-0.02
49	T	2,2,4-Trimethylpentane (Iso	1.634	1.375	15.9	100	-0.02
50	T	Methyl Methacrylate	0.146	0.138	5.5	100	-0.02
51	T	n-Heptane	0.399	0.352	11.8	101	-0.02
52	T	cis-1,3-Dichloropropene	0.521	0.498	4.4	99	0.00
53	T	4-Methyl-2-pentanone	0.301	0.291	3.3	100	-0.02
54	T	trans-1,3-Dichloropropene	0.460	0.453	1.5	100	-0.01
55	T	1,1,2-Trichloroethane	0.305	0.270	11.5	99	-0.01
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	121	0.00
57	S	Toluene-d8 (SS2)	2.385	2.348	1.6	119	0.00
58	T	Toluene	2.959	2.446	17.3	100	-0.01
59	T	2-Hexanone	1.411	1.361	3.5	100	-0.02
60	T	Dibromochloromethane	0.586	0.534	8.9	98	0.00
61	T	1,2-Dibromoethane	0.653	0.602	7.8	100	-0.01
62	T	n-Butyl Acetate	1.586	1.548	2.4	98	-0.01
63	T	n-Octane	0.686	0.577	15.9	100	0.00
64	T	Tetrachloroethene	0.693	0.570	17.7	99	0.00
65	T	Chlorobenzene	1.804	1.498	17.0	99	0.00
66	T	Ethylbenzene	3.311	2.786	15.9	100	0.00
67	T	m- & p-Xylenes	2.684	2.223	17.2	100	-0.01
68	T	Bromoform	0.486	0.459	5.6	100	-0.01
69	T	Styrene	1.892	1.706	9.8	99	0.00
70	T	o-Xylene	2.859	2.260	21.0	100	-0.02
71	T	n-Nonane	1.552	1.305	15.9	99	0.00
72	T	1,1,2,2-Tetrachloroethane	1.024	1.000	2.3	102	-0.01
73	S	Bromofluorobenzene (SS3)	0.609	0.625	-2.6	124	0.00
74	T	Cumene	3.457	2.910	15.8	100	0.00
75	T	alpha-Pinene	1.622	1.404	13.4	101	0.00
76	T	n-Propylbenzene	4.237	3.612	14.8	100	-0.01

EM 5/17/10

Evaluate Continuing Calibration Report

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 17 12:06:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77	T	3-Ethyltoluene	3.194	2.761	13.6	99	-0.01
78	T	4-Ethyltoluene	3.228	2.721	15.7	100	0.00
79	T	1,3,5-Trimethylbenzene	2.706	2.252	16.8	99	-0.01
80	T	alpha-Methylstyrene	1.420	1.222	13.9	96	-0.02
81	T	2-Ethyltoluene	3.334	2.819	15.4	99	-0.01
82	T	1,2,4-Trimethylbenzene	2.829	2.470	12.7	98	-0.02
83	T	n-Decane	1.627	1.409	13.4	100	-0.01
84	T	Benzyl Chloride	2.099	2.044	2.6	100	-0.02
85	T	1,3-Dichlorobenzene	1.326	1.166	12.1	99	-0.01
86	T	1,4-Dichlorobenzene	1.402	1.212	13.6	99	-0.01
87	T	sec-Butylbenzene	3.717	3.176	14.6	99	-0.01
88	T	4-Isopropyltoluene (p-Cymen	3.645	3.152	13.5	98	-0.01
89	T	1,2,3-Trimethylbenzene	2.898	2.497	13.8	98	-0.02
90	T	1,2-Dichlorobenzene	1.330	1.173	11.8	99	-0.01
91	T	d-Limonene	1.114	0.999	10.3	98	-0.01
92	T	1,2-Dibromo-3-Chloropropane	0.422	0.406	3.8	102	-0.01
93	T	n-Undecane	1.631	1.460	10.5	99	-0.01
94	T	1,2,4-Trichlorobenzene	0.859	0.788	8.3	98	-0.01
95	T	Naphthalene	3.125	3.139	-0.4	99	-0.01
96	T	n-Dodecane	1.672	1.581	5.4	101	0.00
97	T	Hexachlorobutadiene	0.484	0.424	12.4	98	0.00
98	T	Cyclohexanone	0.933	0.876	6.1	99	-0.02
99	T	tert-Butylbenzene	2.864	2.422	15.4	98	-0.01
100	T	n-Butylbenzene	2.904	2.566	11.6	99	-0.01

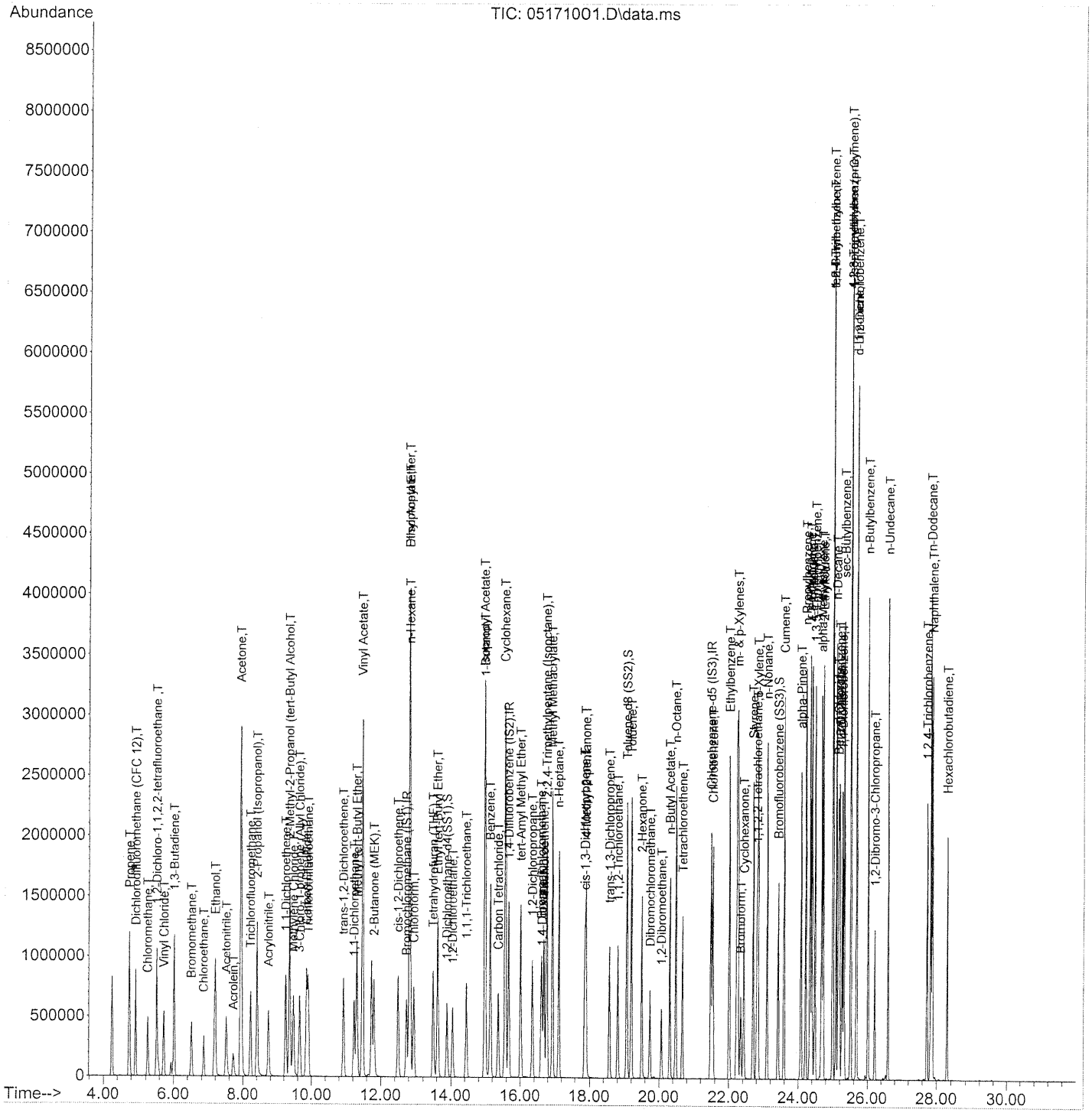
(#) = Out of Range SPCC's out = 0 CCC's out = 0

EM 5/17/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 17 12:06:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 17 12:06:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.74	130	343475	25.000	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	15.67	114	1694581	25.000	ng		-0.01
56) Chlorobenzene-d5 (IS3)	21.48	82	851138	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.88	65	611918	23.940	ng		-0.02
Spiked Amount 25.000			Recovery	=	95.76%		
57) Toluene-d8 (SS2)	19.07	98	1998856	24.616	ng		0.00
Spiked Amount 25.000			Recovery	=	98.48%		
73) Bromofluorobenzene (SS3)	23.42	174	532233	25.675	ng		0.00
Spiked Amount 25.000			Recovery	=	102.72%		
Target Compounds							Qvalue
2) Propene	4.74	42	587611	21.932	ng		99
3) Dichlorodifluoromethan...	4.92	85	982500	21.372	ng		100
4) Chloromethane	5.26	50	745853	21.945	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.52	135	499390	21.851	ng		99
6) Vinyl Chloride	5.72	62	814073	21.692	ng		99
7) 1,3-Butadiene	6.02	54	760390	28.016	ng		99
8) Bromomethane	6.51	94	437706	22.940	ng		100
9) Chloroethane	6.86	64	419243	21.764	ng		100
10) Ethanol	7.20	45	1844016	126.243	ng		100
11) Acetonitrile	7.51	41	927470	25.131	ng		99
12) Acrolein	7.72	56	295187	25.925	ng		99
13) Acetone	7.94	58	2040295	114.260	ng		99
14) Trichlorofluoromethane	8.22	101	853863	21.450	ng		100
15) 2-Propanol (Isopropanol)	8.41	45	2402999	43.406	ng		99
16) Acrylonitrile	8.74	53	701287	26.246	ng		100
17) 1,1-Dichloroethene	9.25	96	500547	23.509	ng		98
18) 2-Methyl-2-Propanol (t...	9.36	59	2684856	46.998	ng		100
19) Methylene Chloride	9.47	84	507851	21.590	ng		96
20) 3-Chloro-1-propene (Al...	9.65	41	792552	25.837	ng		97
21) Trichlorotrifluoroethane	9.91	151	382300	22.738	ng		97
22) Carbon Disulfide	9.86	76	1952273	23.282	ng		99
23) trans-1,2-Dichloroethene	10.92	61	754388	24.004	ng		97
24) 1,1-Dichloroethane	11.24	63	925745	22.860	ng		100
25) Methyl tert-Butyl Ether	11.32	73	1658405	22.674	ng		98
26) Vinyl Acetate	11.48	86	704792	130.771	ng	#	86
27) 2-Butanone (MEK)	11.81	72	387209	26.106	ng		93
28) cis-1,2-Dichloroethene	12.50	61	731133	23.380	ng		96
29) Diisopropyl Ether	12.82	87	497764	22.660	ng	#	78
30) Ethyl Acetate	12.82	61	428345	48.579	ng		97
31) n-Hexane	12.84	57	1008909	22.346	ng		98

EM 5/17/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 17 12:06:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.94	83	851334	22.596	ng		100
34) Tetrahydrofuran (THF)	13.49	72	372928	26.001	ng		95
35) Ethyl tert-Butyl Ether	13.62	87	680151	22.165	ng		94
36) 1,2-Dichloroethane	14.05	62	676655	22.153	ng		99
38) 1,1,1-Trichloroethane	14.44	97	752396	22.180	ng		99
39) Isopropyl Acetate	14.98	61	727014	49.832	ng	#	90
40) 1-Butanol	14.99	56	1218129	52.017	ng		91
41) Benzene	15.14	78	2122556	22.439	ng		100
42) Carbon Tetrachloride	15.37	117	612426	24.318	ng		100
43) Cyclohexane	15.57	84	1806136	45.432	ng		96
44) tert-Amyl Methyl Ether	16.01	73	1589127	22.916	ng		99
45) 1,2-Dichloropropane	16.35	63	538405	23.305	ng		100
46) Bromodichloromethane	16.61	83	690441	24.335	ng		99
47) Trichloroethene	16.68	130	525881	21.807	ng		100
48) 1,4-Dioxane	16.63	88	453016	25.253	ng		98
49) 2,2,4-Trimethylpentane...	16.77	57	2422922	21.869	ng		98
50) Methyl Methacrylate	16.94	100	497883	50.195	ng		90
51) n-Heptane	17.12	71	631741	23.359	ng		97
52) cis-1,3-Dichloropropene	17.87	75	836525	23.677	ng		100
53) 4-Methyl-2-pentanone	17.90	58	543292	26.585	ng		98
54) trans-1,3-Dichloropropene	18.57	75	845027	27.116	ng		99
55) 1,1,2-Trichloroethane	18.81	97	482087	23.340	ng		98
58) Toluene	19.20	91	2248571	22.323	ng		99
59) 2-Hexanone	19.49	43	1274607	26.525	ng		100
60) Dibromochloromethane	19.74	129	523840	26.262	ng		100
61) 1,2-Dibromoethane	20.06	107	542929	24.411	ng		100
62) n-Butyl Acetate	20.31	43	1449584	26.841	ng		100
63) n-Octane	20.48	57	526260	22.520	ng		96
64) Tetrachloroethene	20.67	166	495005	20.979	ng		100
65) Chlorobenzene	21.54	112	1377351	22.429	ng		100
66) Ethylbenzene	22.01	91	2513621	22.302	ng		98
67) m- & p-Xylenes	22.25	91	3936299	43.082	ng		99
68) Bromoform	22.34	173	403133	24.360	ng		99
69) Styrene	22.70	104	1556812	24.163	ng		99
70) o-Xylene	22.84	91	2038571	20.943	ng		98
71) n-Nonane	23.10	43	1177474	22.287	ng		97
72) 1,1,2,2-Tetrachloroethane	22.81	83	912382	26.168	ng		99
74) Cumene	23.59	105	2555698	21.712	ng		100
75) alpha-Pinene	24.08	93	1209334	21.900	ng		97
76) n-Propylbenzene	24.21	91	3172770	21.997	ng		98
77) 3-Ethyltoluene	24.34	105	2565952	23.598	ng		99
78) 4-Ethyltoluene	24.40	105	2529285	23.016	ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	2093379	22.719	ng		98

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 17 12:06:28 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.67	118	1114648	23.050	ng	98
81) 2-Ethyltoluene	24.72	105	2524304	22.238	ng	73
82) 1,2,4-Trimethylbenzene	24.99	105	2228532	23.138	ng	99
83) n-Decane	25.09	57	1295271	23.389	ng	99
84) Benzyl Chloride	25.15	91	1913606	26.781	ng	99
85) 1,3-Dichlorobenzene	25.19	146	1083783	24.016	ng	99
86) 1,4-Dichlorobenzene	25.27	146	1093100	22.896	ng	100
87) sec-Butylbenzene	25.32	105	2865122	22.640	ng	99
88) 4-Isopropyltoluene (p-...	25.51	119	2768407	22.311	ng	98
89) 1,2,3-Trimethylbenzene	25.51	105	2278598	23.093	ng	91
90) 1,2-Dichlorobenzene	25.68	146	1058287	23.365	ng	99
91) d-Limonene	25.68	68	928373	24.487	ng	95
92) 1,2-Dibromo-3-Chloropr...	26.21	157	380040	26.478	ng	92
93) n-Undecane	26.60	57	1356980	24.443	ng	97
94) 1,2,4-Trichlorobenzene	27.73	180	751635	25.699	ng	99
95) Naphthalene	27.88	128	2831988	26.620	ng	100
96) n-Dodecane	27.83	57	1335122	23.459	ng	97
97) Hexachlorobutadiene	28.29	225	396978	24.093	ng	99
98) Cyclohexanone	22.43	55	730407	23.000	ng	97
99) tert-Butylbenzene	24.99	119	2184970	22.412	ng	99
100) n-Butylbenzene	26.01	91	2385212	24.125	ng	99

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

Evaluate Continuing Calibration Report

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 08:49:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	118	-0.02
2	T	Propene	1.950	1.591	18.4	102	-0.03
3	T	Dichlorodifluoromethane (CF	3.346	2.637	21.2	96	-0.02
4	T	Chloromethane	2.474	2.044	17.4	95	-0.02
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.663	1.328	20.1	96	-0.02
6	T	Vinyl Chloride	2.731	2.260	17.2	98	-0.03
7	T	1,3-Butadiene	1.975	1.814	8.2	101	-0.03
8	T	Bromomethane	1.389	1.222	12.0	100	-0.02
9	T	Chloroethane	1.402	1.199	14.5	100	-0.02
10	T	Ethanol	1.063	1.027	3.4	100	-0.07
11	T	Acetonitrile	2.686	2.550	5.1	99	-0.05
12	T	Acrolein	0.829	0.802	3.3	101	-0.03
13	T	Acetone	1.300	1.076	17.2	102	-0.05
14	T	Trichlorofluoromethane	2.897	2.328	19.6	96	-0.02
15	T	2-Propanol (Isopropanol)	4.029	3.683	8.6	95	-0.05
16	T	Acrylonitrile	1.945	1.910	1.8	99	-0.03
17	T	1,1-Dichloroethene	1.550	1.295	16.5	97	-0.02
18	T	2-Methyl-2-Propanol (tert-B	4.158	3.940	5.2	99	-0.03
19	T	Methylene Chloride	1.712	1.387	19.0	99	-0.02
20	T	3-Chloro-1-propene (Allyl C	2.233	2.145	3.9	99	-0.02
21	T	Trichlorotrifluoroethane	1.224	1.000	18.3	96	-0.02
22	T	Carbon Disulfide	6.103	5.087	16.6	99	-0.02
23	T	trans-1,2-Dichloroethene	2.287	2.084	8.9	98	-0.02
24	T	1,1-Dichloroethane	2.948	2.542	13.8	99	-0.02
25	T	Methyl tert-Butyl Ether	5.324	4.456	16.3	98	-0.02
26	T	Vinyl Acetate	0.392	0.405	-3.3	102	-0.04
27	T	2-Butanone (MEK)	1.080	1.034	4.3	100	-0.03
28	T	cis-1,2-Dichloroethene	2.276	1.948	14.4	97	-0.02
29	T	Diisopropyl Ether	1.599	1.353	15.4	97	-0.02
30	T	Ethyl Acetate	0.642	0.584	9.0	98	-0.03
31	T	n-Hexane	3.286	2.734	16.8	97	-0.02
32	T	Chloroform	2.742	2.304	16.0	98	-0.03
33	S	1,2-Dichloroethane-d4(SS1)	1.860	1.778	4.4	113	-0.02
34	T	Tetrahydrofuran (THF)	1.044	0.990	5.2	99	-0.01
35	T	Ethyl tert-Butyl Ether	2.233	1.935	13.3	99	-0.02
36	T	1,2-Dichloroethane	2.223	1.841	17.2	95	-0.02
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	116	-0.01
38	T	1,1,1-Trichloroethane	0.500	0.421	15.8	97	-0.01

EM 5/18/10

Evaluate Continuing Calibration Report

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 08:49:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
39	T	Isopropyl Acetate	0.215	0.204	5.1	98	-0.02
40	T	1-Butanol	0.345	0.344	0.3	97	-0.05
41	T	Benzene	1.395	1.172	16.0	99	-0.02
42	T	Carbon Tetrachloride	0.372	0.335	9.9	95	-0.02
43	T	Cyclohexane	0.587	0.492	16.2	97	-0.02
44	T	tert-Amyl Methyl Ether	1.023	0.905	11.5	99	-0.02
45	T	1,2-Dichloropropane	0.341	0.300	12.0	98	-0.02
46	T	Bromodichloromethane	0.419	0.373	11.0	96	-0.02
47	T	Trichloroethene	0.356	0.290	18.5	97	-0.01
48	T	1,4-Dioxane	0.265	0.248	6.4	97	-0.02
49	T	2,2,4-Trimethylpentane (Iso	1.634	1.375	15.9	98	-0.02
50	T	Methyl Methacrylate	0.146	0.137	6.2	97	-0.02
51	T	n-Heptane	0.399	0.348	12.8	98	-0.02
52	T	cis-1,3-Dichloropropene	0.521	0.496	4.8	97	0.00
53	T	4-Methyl-2-pentanone	0.301	0.290	3.7	97	-0.01
54	T	trans-1,3-Dichloropropene	0.460	0.453	1.5	97	-0.01
55	T	1,1,2-Trichloroethane	0.305	0.268	12.1	96	-0.01
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	118	0.00
57	S	Toluene-d8 (SS2)	2.385	2.343	1.8	116	0.00
58	T	Toluene	2.959	2.433	17.8	97	-0.01
59	T	2-Hexanone	1.411	1.341	5.0	96	-0.02
60	T	Dibromochloromethane	0.586	0.536	8.5	96	0.00
61	T	1,2-Dibromoethane	0.653	0.600	8.1	97	0.00
62	T	n-Butyl Acetate	1.586	1.538	3.0	95	-0.01
63	T	n-Octane	0.686	0.575	16.2	97	0.00
64	T	Tetrachloroethene	0.693	0.566	18.3	96	0.00
65	T	Chlorobenzene	1.804	1.488	17.5	96	0.00
66	T	Ethylbenzene	3.311	2.754	16.8	96	0.00
67	T	m- & p-Xylenes	2.684	2.195	18.2	96	-0.02
68	T	Bromoform	0.486	0.457	6.0	97	-0.01
69	T	Styrene	1.892	1.686	10.9	96	0.00
70	T	o-Xylene	2.859	2.232	21.9	96	-0.02
71	T	n-Nonane	1.552	1.300	16.2	96	0.00
72	T	1,1,2,2-Tetrachloroethane	1.024	0.993	3.0	99	-0.01
73	S	Bromofluorobenzene (SS3)	0.609	0.626	-2.8	121	0.00
74	T	Cumene	3.457	2.874	16.9	96	0.00
75	T	alpha-Pinene	1.622	1.406	13.3	99	0.00
76	T	n-Propylbenzene	4.237	3.587	15.3	97	-0.01

EM 5/18/10

Evaluate Continuing Calibration Report

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 08:49:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77	T	3-Ethyltoluene	3.194	2.736	14.3	96	-0.01
78	T	4-Ethyltoluene	3.228	2.712	16.0	97	0.00
79	T	1,3,5-Trimethylbenzene	2.706	2.238	17.3	96	-0.01
80	T	alpha-Methylstyrene	1.420	1.215	14.4	93	-0.02
81	T	2-Ethyltoluene	3.334	2.799	16.0	96	-0.01
82	T	1,2,4-Trimethylbenzene	2.829	2.449	13.4	95	-0.02
83	T	n-Decane	1.627	1.410	13.3	97	-0.01
84	T	Benzyl Chloride	2.099	2.041	2.8	98	-0.02
85	T	1,3-Dichlorobenzene	1.326	1.154	13.0	96	-0.01
86	T	1,4-Dichlorobenzene	1.402	1.204	14.1	96	-0.01
87	T	sec-Butylbenzene	3.717	3.159	15.0	96	-0.01
88	T	4-Isopropyltoluene (p-Cymen	3.645	3.114	14.6	94	-0.01
89	T	1,2,3-Trimethylbenzene	2.898	2.474	14.6	94	-0.01
90	T	1,2-Dichlorobenzene	1.330	1.160	12.8	95	-0.01
91	T	d-Limonene	1.114	0.998	10.4	95	-0.01
92	T	1,2-Dibromo-3-Chloropropane	0.422	0.401	5.0	98	-0.01
93	T	n-Undecane	1.631	1.460	10.5	97	0.00
94	T	1,2,4-Trichlorobenzene	0.859	0.777	9.5	94	-0.01
95	T	Naphthalene	3.125	3.094	1.0	95	-0.01
96	T	n-Dodecane	1.672	1.564	6.5	97	0.00
97	T	Hexachlorobutadiene	0.484	0.417	13.8	93	0.00
98	T	Cyclohexanone	0.933	0.877	6.0	96	-0.02
99	T	tert-Butylbenzene	2.864	2.400	16.2	95	-0.01
100	T	n-Butylbenzene	2.904	2.550	12.2	96	-0.01

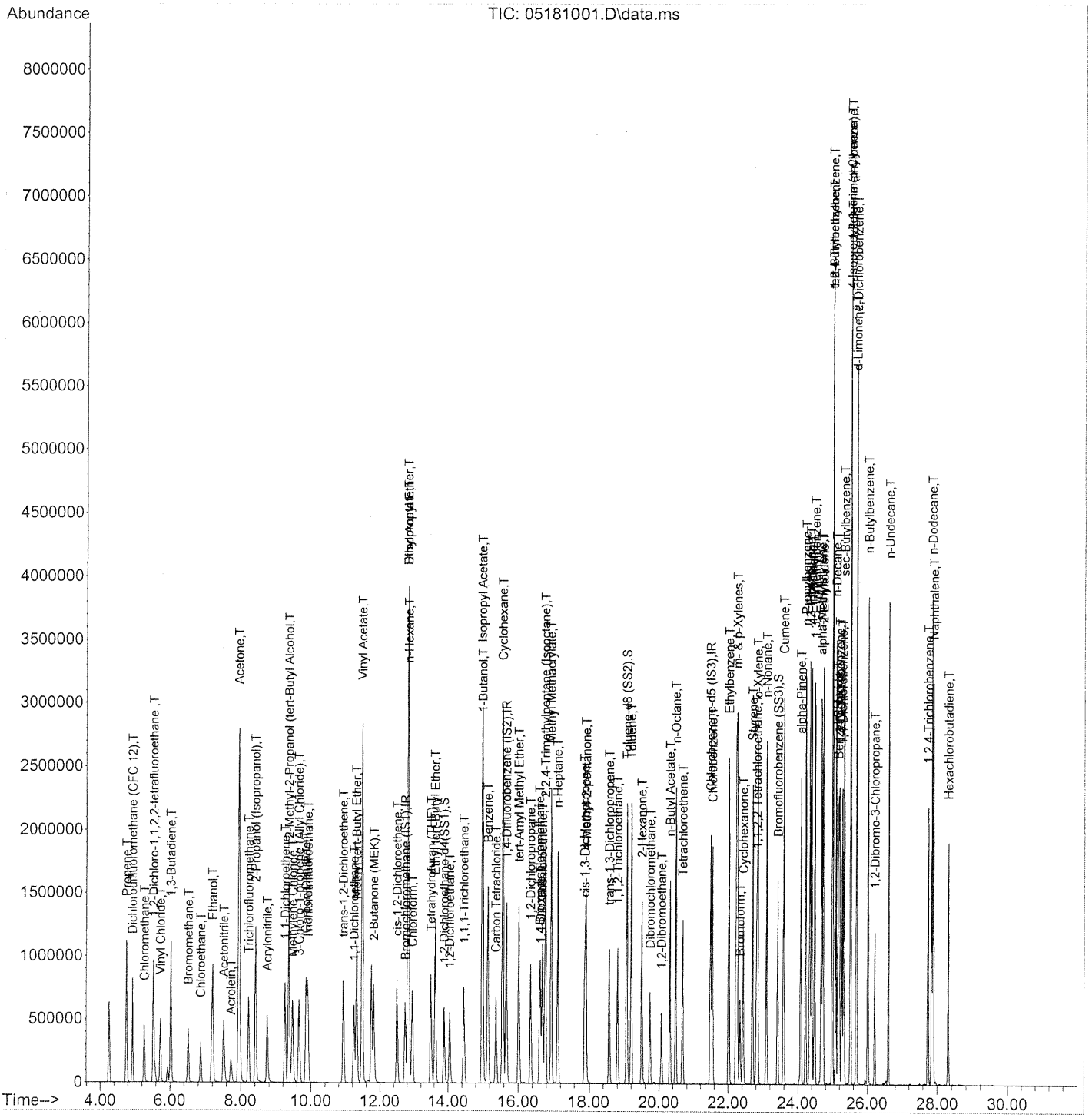
(#) = Out of Range SPCC's out = 0 CCC's out = 0

EM 5/18/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 08:49:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 08:49:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane (IS1)	12.74	130	332384	25.000	ng		-0.02
37) 1,4-Difluorobenzene (IS2)	15.67	114	1654948	25.000	ng		-0.01
56) Chlorobenzene-d5 (IS3)	21.48	82	829796	25.000	ng		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...	13.89	65	590854	23.887	ng		-0.02
Spiked Amount 25.000			Recovery	=	95.56%		
57) Toluene-d8 (SS2)	19.07	98	1944585	24.564	ng		0.00
Spiked Amount 25.000			Recovery	=	98.24%		
73) Bromofluorobenzene (SS3)	23.42	174	519821	25.721	ng		0.00
Spiked Amount 25.000			Recovery	=	102.88%		
Target Compounds							Qvalue
2) Propene	4.75	42	567049	21.871	ng		99
3) Dichlorodifluoromethan...	4.93	85	921995	20.725	ng		100
4) Chloromethane	5.27	50	679503	20.660	ng		99
5) 1,2-Dichloro-1,1,2,2-t...	5.53	135	467743	21.149	ng		99
6) Vinyl Chloride	5.73	62	760202	20.933	ng		99
7) 1,3-Butadiene	6.02	54	723535	27.548	ng		99
8) Bromomethane	6.52	94	414423	22.444	ng		100
9) Chloroethane	6.87	64	403240	21.632	ng		99
10) Ethanol	7.21	45	1774935	125.568	ng		100
11) Acetonitrile	7.52	41	891522	24.963	ng		99
12) Acrolein	7.73	56	287959	26.134	ng		99
13) Acetone	7.95	58	1974152	114.245	ng		99
14) Trichlorofluoromethane	8.22	101	814144	21.134	ng		100
15) 2-Propanol (Isopropanol)	8.41	45	2316382	43.238	ng		98
16) Acrylonitrile	8.75	53	672913	26.025	ng		100
17) 1,1-Dichloroethene	9.26	96	473658	22.989	ng		98
18) 2-Methyl-2-Propanol (t...	9.37	59	2645130	47.848	ng		99
19) Methylene Chloride	9.48	84	494041	21.704	ng		96
20) 3-Chloro-1-propene (Al...	9.66	41	770145	25.945	ng		97
21) Trichlorotrifluoroethane	9.91	151	365580	22.469	ng		98
22) Carbon Disulfide	9.86	76	1812744	22.340	ng		99
23) trans-1,2-Dichloroethene	10.93	61	734202	24.141	ng		97
24) 1,1-Dichloroethane	11.24	63	895783	22.858	ng		100
25) Methyl tert-Butyl Ether	11.32	73	1617370	22.850	ng		98
26) Vinyl Acetate	11.48	86	678281	130.052	ng	#	86
27) 2-Butanone (MEK)	11.81	72	378176	26.348	ng		94
28) cis-1,2-Dichloroethene	12.50	61	707226	23.370	ng		96
29) Diisopropyl Ether	12.82	87	482071	22.678	ng	#	78
30) Ethyl Acetate	12.82	61	413841	48.501	ng		97
31) n-Hexane	12.84	57	992194	22.709	ng		98

EM 5/18/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 08:49:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
32) Chloroform	12.95	83	821053	22.520	ng		100
34) Tetrahydrofuran (THF)	13.50	72	361938	26.077	ng		96
35) Ethyl tert-Butyl Ether	13.62	87	663915	22.358	ng		95
36) 1,2-Dichloroethane	14.05	62	648657	21.945	ng		99
38) 1,1,1-Trichloroethane	14.45	97	733043	22.127	ng		99
39) Isopropyl Acetate	14.98	61	707703	49.670	ng	#	91
40) 1-Butanol	15.00	56	1178569	51.533	ng		92
41) Benzene	15.15	78	2055252	22.248	ng		100
42) Carbon Tetrachloride	15.37	117	598950	24.352	ng		100
43) Cyclohexane	15.57	84	1753519	45.165	ng		95
44) tert-Amyl Methyl Ether	16.01	73	1557981	23.005	ng		99
45) 1,2-Dichloropropane	16.35	63	521910	23.132	ng		100
46) Bromodichloromethane	16.61	83	667367	24.085	ng		100
47) Trichloroethene	16.69	130	507999	21.570	ng		100
48) 1,4-Dioxane	16.63	88	440621	25.150	ng		98
49) 2,2,4-Trimethylpentane...	16.77	57	2366307	21.870	ng		98
50) Methyl Methacrylate	16.94	100	484586	50.024	ng		89
51) n-Heptane	17.12	71	611158	23.140	ng		97
52) cis-1,3-Dichloropropene	17.87	75	814773	23.614	ng		100
53) 4-Methyl-2-pentanone	17.90	58	528355	26.473	ng		98
54) trans-1,3-Dichloropropene	18.57	75	824585	27.093	ng		100
55) 1,1,2-Trichloroethane	18.81	97	466929	23.147	ng		97
58) Toluene	19.20	91	2180238	22.201	ng		99
59) 2-Hexanone	19.49	43	1224192	26.131	ng		100
60) Dibromochloromethane	19.74	129	512076	26.333	ng		100
61) 1,2-Dibromoethane	20.07	107	527847	24.344	ng		100
62) n-Butyl Acetate	20.31	43	1404300	26.671	ng		100
63) n-Octane	20.48	57	511721	22.461	ng		95
64) Tetrachloroethene	20.67	166	478686	20.809	ng		99
65) Chlorobenzene	21.54	112	1333233	22.269	ng		100
66) Ethylbenzene	22.01	91	2422388	22.045	ng		98
67) m- & p-Xylenes	22.25	91	3788681	42.533	ng		98
68) Bromoform	22.34	173	390976	24.233	ng		100
69) Styrene	22.70	104	1499361	23.870	ng		99
70) o-Xylene	22.84	91	1963151	20.686	ng		98
71) n-Nonane	23.10	43	1143644	22.203	ng		96
72) 1,1,2,2-Tetrachloroethane	22.81	83	883367	25.988	ng		99
74) Cumene	23.59	105	2460798	21.444	ng		100
75) alpha-Pinene	24.08	93	1181016	21.937	ng		96
76) n-Propylbenzene	24.21	91	3071529	21.843	ng		98
77) 3-Ethyltoluene	24.34	105	2479298	23.387	ng		99
78) 4-Ethyltoluene	24.40	105	2457269	22.936	ng		99
79) 1,3,5-Trimethylbenzene	24.48	105	2028071	22.576	ng		98

Quantitation Report (QT Reviewed)

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 08:49:11 2010
Quant Method : J:\MS08\METHODS\R8042810.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 16:00:01 2010
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.67	118	1080522	22.919	ng	98
81) 2-Ethyltoluene	24.72	105	2443216	22.077	ng	73
82) 1,2,4-Trimethylbenzene	24.99	105	2153885	22.938	ng	99
83) n-Decane	25.09	57	1264022	23.412	ng	98
84) Benzyl Chloride	25.15	91	1862913	26.743	ng	98
85) 1,3-Dichlorobenzene	25.19	146	1046068	23.777	ng	99
86) 1,4-Dichlorobenzene	25.27	146	1058729	22.746	ng	100
87) sec-Butylbenzene	25.32	105	2778471	22.520	ng	99
88) 4-Isopropyltoluene (p-...	25.51	119	2667065	22.047	ng	98
89) 1,2,3-Trimethylbenzene	25.51	105	2200459	22.875	ng	91
90) 1,2-Dichlorobenzene	25.68	146	1020115	23.101	ng	99
91) d-Limonene	25.68	68	904361	24.468	ng	95
92) 1,2-Dibromo-3-Chloropr...	26.21	157	365736	26.137	ng	92
93) n-Undecane	26.60	57	1322532	24.435	ng	97
94) 1,2,4-Trichlorobenzene	27.73	180	721837	25.315	ng	99
95) Naphthalene	27.88	128	2721446	26.238	ng	100
96) n-Dodecane	27.83	57	1287339	23.201	ng	97
97) Hexachlorobutadiene	28.29	225	380474	23.685	ng	100
98) Cyclohexanone	22.43	55	713385	23.042	ng	97
99) tert-Butylbenzene	24.99	119	2111339	22.214	ng	99
100) n-Butylbenzene	26.01	91	2311022	23.976	ng	99

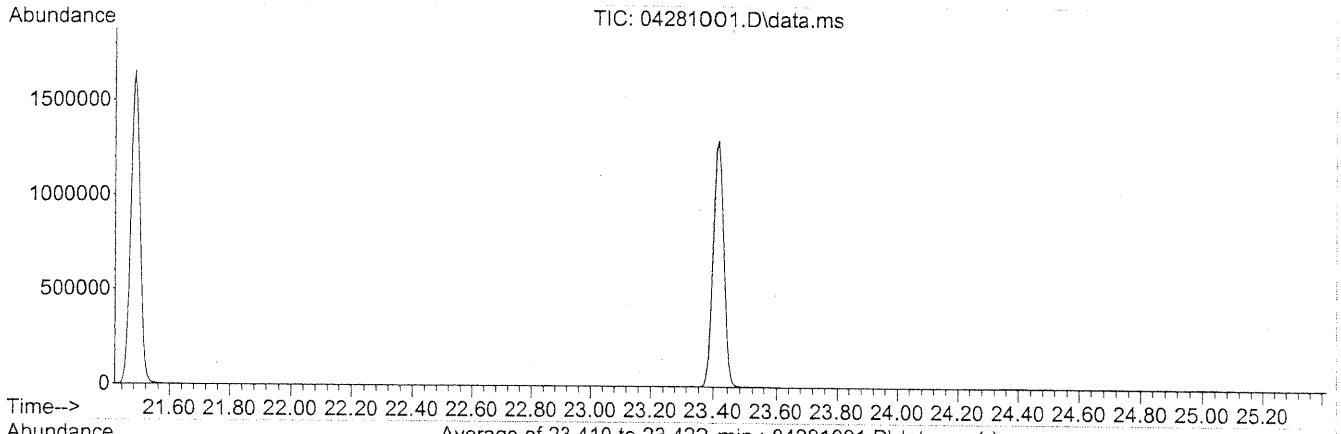
(#) = qualifier out of range (m) = manual integration (+) = signals summed

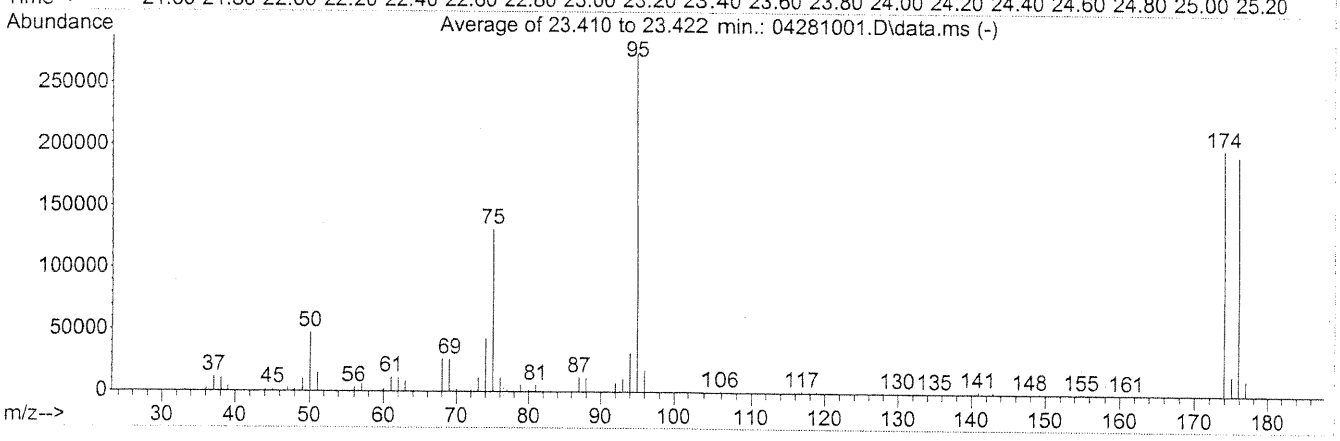
BFB TUNING & MASS CALIBRATIONS

Data Path : J:\MS08\DATA\2010_04\28\
Data File : 04281001.D
Acq On : 28 Apr 2010 9:32
Operator : EM
Sample : 25ng TO-15 BFB
Misc : S20-04261001
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS08\METHODS\R8042810.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 21 08:41:37 2010





AutoFind: Scans 3479, 3480, 3481; Background Corrected with Scan 3469

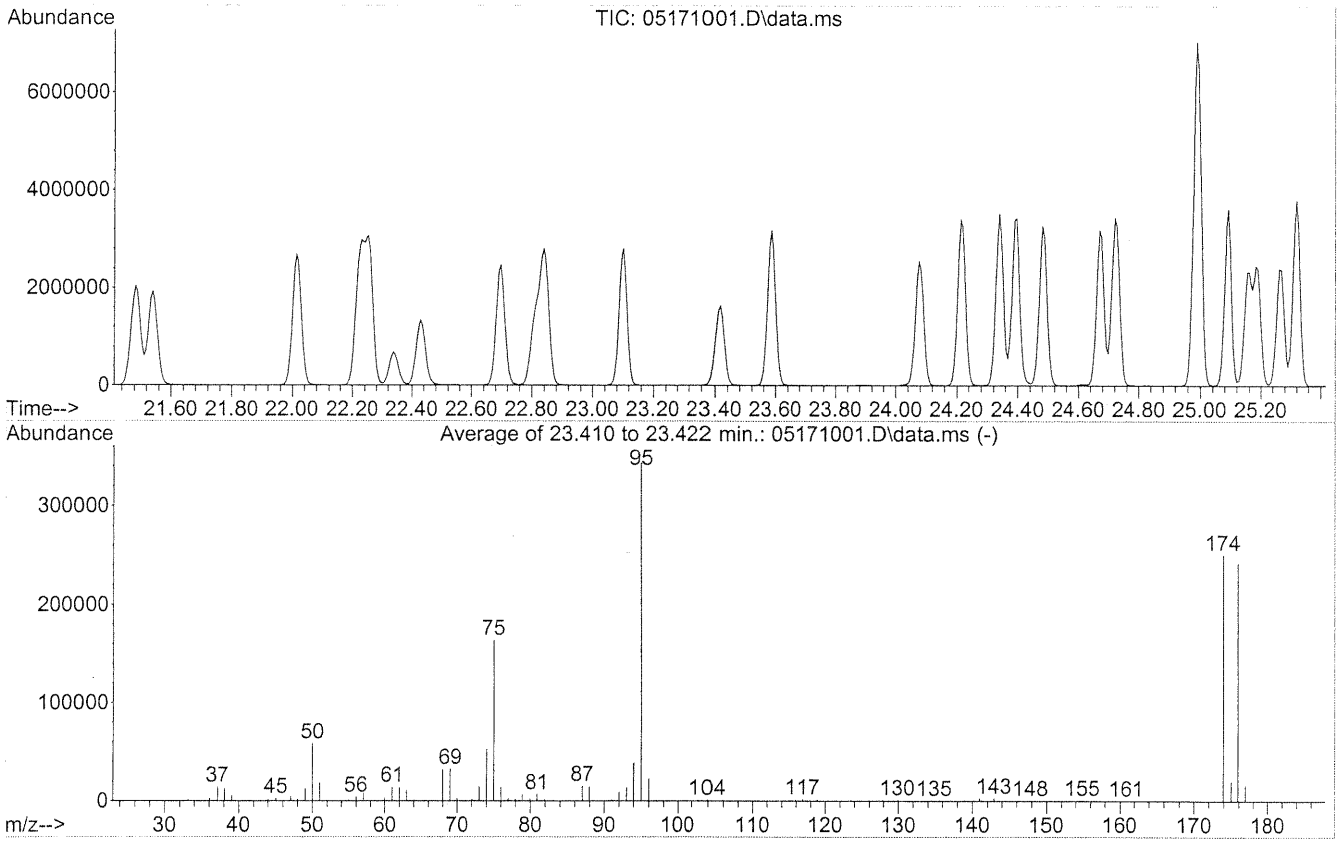
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.4	47581	PASS
75	95	30	66	48.0	131509	PASS
95	95	100	100	100.0	274155	PASS
96	95	5	9	6.5	17700	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	72.6	199147	PASS
175	174	4	9	7.9	15637	PASS
176	174	93	101	97.3	193707	PASS
177	176	5	9	6.4	12419	PASS

Com 4/29/10

Data Path : J:\MS08\DATA\2010_05\17\
Data File : 05171001.D
Acq On : 17 May 2010 8:50
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS08\METHODS\R8042810.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 16:00:01 2010



AutoFind: Scans 3479, 3480, 3481; Background Corrected with Scan 3469

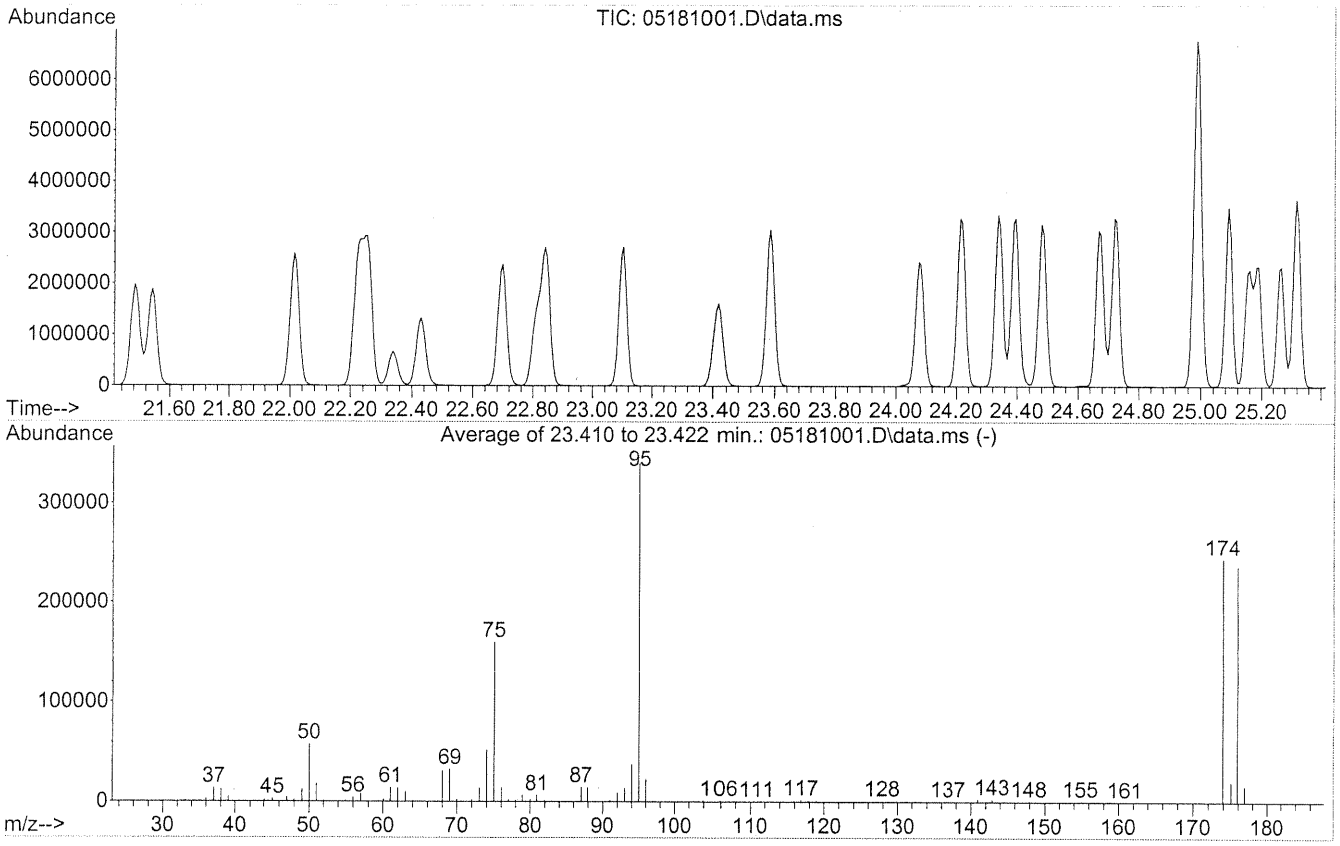
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.0	58411	PASS
75	95	30	66	47.7	163925	PASS
95	95	100	100	100.0	343744	PASS
96	95	5	9	6.5	22368	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	72.9	250517	PASS
175	174	4	9	7.8	19419	PASS
176	174	93	101	96.6	242069	PASS
177	176	5	9	6.5	15764	PASS

EM 5/17/10

Data Path : J:\MS08\DATA\2010_05\18\
Data File : 05181001.D
Acq On : 18 May 2010 8:16
Operator : EM
Sample : 25ng TO-15 CCV STD
Misc : S20-04261001/S20-04191005
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS08\METHODS\R8042810.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 16:00:01 2010



AutoFind: Scans 3479, 3480, 3481; Background Corrected with Scan 3469

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	16.9	57448	PASS
75	95	30	66	47.0	159723	PASS
95	95	100	100	100.0	340053	PASS
96	95	5	9	6.5	22195	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	71.8	244288	PASS
175	174	4	9	7.9	19187	PASS
176	174	93	101	96.9	236672	PASS
177	176	5	9	6.7	15838	PASS

Em 5/18/10

RUN LOGS

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	04/27/10 8:44	04271001.D	25ng std check	S20-04261001 (IS/SURR)	EM	4	New IS/SURR
2	04/27/10 9:28	04271002.D	5ng std check	S20-04261001/S20-04261004 (New Std)	EM	4	New Std can
3	04/27/10 10:21	04271003.D	5ng TO-15 CCV STD	S20-04261001/S20-04191002	EM	2	Passed
4	04/27/10 11:39	04271004.D	25ng TO-15/MAPH CCV STD	S20-04261001/S20-04061001	EM	2	Passed
5	04/27/10 12:43	04271005.D	TO-15/MAPH Method Blank (1000ml)	S20-04261001	EM	4	Passed
6	04/27/10 13:32	04271006.D	25ng TO-15/MAPH LCS STD	S20-04261001/S20-04141003	EM	3	Failed, IS/SURR low
7	04/27/10 14:13	04271007.D	25ng TO-15/MAPH LCSD STD	S20-04261001/S20-04141003	EM	3	Failed, IS/SURR low
8	04/27/10 15:24	04271008.D	25ng TO-15/MAPH BFB	S20-04261001	EM	4	Passed
9	04/27/10 16:05	04271009.D	0.5ng TO-15/MAPH ICAL STD	S20-04261001/S20-04061003	EM	1	
10	04/27/10 16:46	04271010.D	1.0ng TO-15/MAPH ICAL STD	S20-04261001/S20-04061003	EM	1	
11	04/27/10 17:27	04271011.D	5.0ng TO-15/MAPH ICAL STD	S20-04261001/S20-04061003	EM	1	**ICAL M8042710.M**
12	04/27/10 18:08	04271012.D	25ng TO-15/MAPH ICAL STD	S20-04261001/S20-04061001	EM	2	
13	04/27/10 18:50	04271013.D	50ng TO-15/MAPH ICAL STD	S20-04261001/S20-04061001	EM	2	
14	04/27/10 19:31	04271014.D	100ng TO-15/MAPH ICAL STD	S20-04261001/S20-04061001	EM	2	
15	04/27/10 20:12	04271015.D	25ng TO-15/MAPH ICV STD	S20-04261001/S20-04141003	EM	3	Passed
16	04/27/10 20:53	04271016.D	25ng TO-15/Custom BFB	S20-04261001	EM	4	Passed
17	04/27/10 21:34	04271017.D	0.5ng TO-15 Custom ICAL	S20-04261001/S02-04211004	EM	5	
18	04/27/10 22:15	04271018.D	1.0ng TO-15 Custom ICAL	S20-04261001/S02-04211004	EM	5	
19	04/27/10 22:57	04271019.D	2.5ng TO-15 Custom ICAL	S20-04261001/S02-04211004	EM	5	
20	04/27/10 23:38	04271020.D	5.0ng TO-15 Custom ICAL	S20-04261001/S02-04211004	EM	5	**ICAL ACF8042710.M**
21	04/28/10 0:19	04271021.D	25ng TO-15 Custom ICAL	S20-04261001/S02-04211002	EM	6	
22	04/28/10 1:01	04271022.D	50ng TO-15 Custom ICAL	S20-04261001/S02-04211002	EM	6	
23	04/28/10 1:42	04271023.D	100ng TO-15 Custom ICAL	S20-04261001/S02-04211002	EM	6	

EM
4/29/10

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	04/28/10 9:32	04281001.D	25ng TO-15 BFB	S20-04261001	EM	4	Passed
2	04/28/10 10:13	04281002.D	0.1ng TO-15 ICAL STD	S20-04261001/S20-04191001	EM	2	
3	04/28/10 10:54	04281003.D	0.2ng TO-15 ICAL STD	S20-04261001/S20-04191001	EM	2	
4	04/28/10 11:35	04281004.D	0.5ng TO-15 ICAL STD	S20-04261001/S20-04191002	EM	4	
5	04/28/10 12:17	04281005.D	1ng TO-15 ICAL STD	S20-04261001/S20-04191002	EM	4	
6	04/28/10 12:58	04281006.D	5ng TO-15 ICAL STD	S20-04261001/S20-04191002	EM	4	**ICAL R8042810.M**
7	04/28/10 13:38	04281007.D	25ng TO-15 ICAL STD	S20-04261001/S20-04191005	EM	4	
8	04/28/10 14:19	04281008.D	50ng TO-15 ICAL STD	S20-04261001/S20-04191005	EM	4	
9	04/28/10 15:00	04281009.D	100ng TO-15 ICAL STD	S20-04261001/S20-04191005	EM	4	
10	04/28/10 15:41	04281010.D	25ng TO-15 ICV STD	S20-04261001/S20-04141003	EM	3	Passed
11	04/28/10 17:18	04281011.D	Blank (200ml)	S20-04261001	EM	4	

ICAL R8042810.M Range: 0.1ng – 100ng except:
0.2–100ng: Acrylonitrile, 4-Methyl-2-pentanone, trans-1,3-Dichloropropene, 2-Hexanone
Bromoform, Cyclohexanone
0.4ng–100ng: Methyl Methacrylate
0.5ng–100ng: Carbon Disulfide, 2-Butanone, Benzyl Chloride, 1,2-Dibromo-3-Chloropropane
1.0ng–100ng: Ethyl Acetate, 1-Butanol
2.5ng–100ng: Vinyl Acetate

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/14/10 7:19	05141001.D	25ng TO-15 CCV STD	S20-04261001/S20-04191005	EM	4	Passed
2	05/14/10 8:00	05141002.D	25ng TO-15 Custom CCV STD	S20-04261001/S20-04211002	EM	15	Passed
3	05/14/10 8:54	05141003.D	TO-15 Method Blank (1000ml)	S20-04261001	EM	16	Passed
4	05/14/10 9:35	05141004.D	25ng TO-15 LCS STD	S20-04261001/S20-05101005	EM	4	Passed
5	05/14/10 10:28	05141005.D	25ng TO-15 LCSD STD	S20-04261001/S20-05101005	EM	4	Passed
6	05/14/10 11:26	05141006.D	P1001649-010 dil (25ml)		EM	11	
7	05/14/10 12:07	05141007.D	P1001649-014 (40ml)		EM	15	
8	05/14/10 13:41	05141008.D	P1001649-008 (1000ml)		EM	9	
9	05/14/10 14:23	05141009.D	P1001649-007 (1000ml)		EM	8	
10	05/14/10 15:05	05141010.D	P1001649-007 dup (1000ml)		EM	8	Passed
11	05/14/10 16:18	05141011.D	P1001705-001 (25ml)		EM	8	
12	05/14/10 16:59	05141012.D	P1001705-002 (0.050ml)		EM	4	
13	05/14/10 17:40	05141013.D	P1001705-007 (10ml)		EM	4	
14	05/14/10 18:39	05141014.D	P1001705-008 (0.025ml)		EM	4	
15	05/14/10 19:20	05141015.D	Blank (200ml)		EM	4	
16	05/14/10 20:02	05141016.D	P1001649-001 (1000ml)		EM	1	
17	05/14/10 20:44	05141017.D	P1001649-002 (1000ml)		EM	2	
18	05/14/10 21:26	05141018.D	P1001649-003 (1000ml)		EM	3	
19	05/14/10 22:08	05141019.D	P1001649-004 (1000ml)		EM	5	
20	05/14/10 22:50	05141020.D	P1001649-005 (1000ml)		EM	6	
21	05/14/10 23:32	05141021.D	P1001649-006 (1000ml)		EM	7	
22	05/15/10 0:14	05141022.D	P1001649-009 (1000ml)		EM	10	
23	05/15/10 0:56	05141023.D	P1001649-010 (1000ml)		EM	11	
24	05/15/10 1:37	05141024.D	P1001649-011 dil (100ml)		EM	12	
25	05/15/10 2:18	05141025.D	P1001649-012 dil (100ml)		EM	13	
26	05/15/10 3:00	05141026.D	P1001649-013 (1000ml)		EM	14	
27	05/15/10 3:42	05141027.D	CAS CAN QC CAN/FC/AVG	AC00648/FC00563/AVG00854	EM	8	
28	05/15/10 4:24	05141028.D	CAS CAN QC CAN/FC/AVG	AC00948/FC00355/AVG01252	EM	9	

EM 5/17/10

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/17/10 8:50	05171001.D	25ng TO-15 CCV STD	S20-04261001/S20-04191005	EM	4	Passed
2	05/17/10 9:32	05171002.D	25ng TO-15 Custom CCV STD	S20-04261001/S20-04211002	EM	8	Passed
3	05/17/10 10:31	05171003.D	TO-15 Method Blank (1000ml)	S20-04261001	EM	4	Case, file
4	05/17/10 11:31	05171004.D	TO-15 Method Blank (1000ml)	S20-04261001	EM	1	Passed
5	05/17/10 12:15	05171005.D	25ng TO-15 LCS STD	S20-04261001/S20-05101005	EM	1	Passed
6	05/17/10 12:56	05171006.D	25ng TO-15 LCSD STD	S20-04261001/S20-05101005	EM	1	Passed
7	05/17/10 14:06	05171007.D	P1001651-009 (150ml)		EM	10	Case, file
8	05/17/10 14:48	05171008.D	P1001651-003 (1000ml)		EM	3	
9	05/17/10 15:31	05171009.D	P1001651-003 dup (1000ml)		EM	3	Passed
10	05/17/10 16:12	05171010.D	P1001649-013 dil (100ml)		EM	14	
11	05/17/10 16:53	05171011.D	P1001649-011 (1000ml)		EM	12	
12	05/17/10 18:24	05171012.D	P1001649-012 (1000ml)		EM	13	

EM 5/18/10

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
13	05/17/10 19:06	05171013.D	P1001649-015 (1000ml)		EM	16	
14	05/17/10 19:48	05171014.D	P1001630-001 (1000ml)		EM	15	
15	05/17/10 20:30	05171015.D	P1001651-001 (1000ml)		EM	1	
16	05/17/10 21:12	05171016.D	P1001651-002 (1000ml)		EM	2	
17	05/17/10 21:54	05171017.D	P1001651-004 (1000ml)		EM	5	
18	05/17/10 22:36	05171018.D	P1001651-005 (1000ml)		EM	6	
19	05/17/10 23:18	05171019.D	P1001651-006 (1000ml)		EM	7	
20	05/17/10 23:59	05171020.D	P1001651-007 (1000ml)		EM	8	
21	05/18/10 0:41	05171021.D	P1001651-008 (1000ml)		EM	9	
22	05/18/10 1:23	05171022.D	P1001651-009 (1000ml)		EM	10	
23	05/18/10 2:05	05171023.D	P1001651-010 (1000ml)		EM	11	
24	05/18/10 2:47	05171024.D	P1001651-011 (1000ml)		EM	3	
25	05/18/10 3:29	05171025.D	P1001651-012 (1000ml)		EM	12	
26	05/18/10 4:11	05171026.D	P1001651-013 (1000ml)		EM	14	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/18/10 8:16	05181001.D	25ng TO-15 CCV STD	S20-04261001/S20-04191005	EM	4	Passed
2	05/18/10 8:57	05181002.D	25ng TO-15 Custom CCV STD	S20-04261001/S20-04211002	EM	8	Passed
3	05/18/10 10:03	05181003.D	TO-15 Method Blank (1000ml)	S20-04261001	EM	8	Passed
4	05/18/10 10:53	05181004.D	25ng TO-15 LCS STD	S20-04261001/S20-05101005	EM	4	Passed
5	05/18/10 11:38	05181005.D	P1001664-003 (1.8ml)		EM	4	
6	05/18/10 12:19	05181006.D	P1001651-003 dil (100ml)		EM	5	
7	05/18/10 13:01	05181007.D	P1001651-003 dup dil (100ml)		EM	5	Passed
8	05/18/10 13:42	05181008.D	P1001630-001 dil (25ml)		EM	15	
9	05/18/10 14:23	05181009.D	P1001651-001 dil (100ml)		EM	1	
10	05/18/10 15:36	05181010.D	P1001664-004 (1.8ml)		EM	4	
11	05/18/10 16:18	05181011.D	P1001664-005 (1.5ml)		EM	4	
12	05/18/10 16:59	05181012.D	P1001664-006 (2.5ml)		EM	4	
13	05/18/10 17:54	05181013.D	P1001664-020 (5ml)		EM	4	Case, file over diluted
14	05/18/10 18:35	05181014.D	25ng TO-15 LCSD STD	S20-04261001/S20-05101005	EM	4	Passed
15	05/18/10 19:16	05181015.D	P1001651-002 dil (100ml)		EM	2	
16	05/18/10 19:57	05181016.D	P1001651-010 dil (100ml)		EM	11	
17	05/18/10 20:39	05181017.D	P1001651-011 dil (100ml)		EM	3	
18	05/18/10 21:20	05181018.D	P1001651-012 dil (100ml)		EM	12	
19	05/18/10 22:01	05181019.D	P101664-001 (300ml)		EM	1	
20	05/18/10 22:42	05181020.D	P101664-002 (300ml)		EM	5	
21	05/18/10 23:23	05181021.D	P101664-007 (300ml)		EM	6	
22	05/19/10 0:05	05181022.D	P101664-008 (300ml)		EM	7	
23	05/19/10 0:46	05181023.D	P101664-019 (25ml)		EM	8	
24	05/19/10 1:28	05181024.D	Blank (200ml)	S20-04261001	EM	4	

EM
5/19/10