ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

GC/MS Semivolatiles

Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200265825

Work Order Number: 1008116

1. This report consists of 1 soil sample. The sample was received intact by ALS on 08/11/10 at 15° C.

2. The sample was prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the soil sample was extracted using soxhlet procedures according to SW-846 Method 3540C utilizing SOP 625 Revision 11.

3. The extracts were analyzed using GC/MS with a DB-5.625 capillary column according to SOP 506 Revision 16 based on SW-846 Method 8270D. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and mass spectrum of the sample versus the daily calibration standard.

4. All initial calibration criteria for SPCC's and CCC's were met. If average response factors were used in the initial calibration, %RSD was ≤15%. If linear or higher order regression calibrations were used in the initial calibration, the coefficient of determination (r^2) ≥0.99.

5. All initial calibration standards are verified by comparing a second source standard initial calibration verification (ICV) against the calibration curve. All target compounds in the second source verification had a %D of less than 25%.

6. All SPCC and CCC criteria were met in each of the daily (continuing) calibration verifications.

7. All method blank criteria were met.

8. All laboratory control sample recoveries were within the acceptance criteria.

9. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

10. The sample was extracted and analyzed within the established holding time.

11. All surrogate recoveries were within acceptance criteria.

12. All internal standard recoveries were within acceptance criteria.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Sharon L. Jobes
Organics Primary Data Reviewer

8-24-10
Date

Organics Final Data Reviewer

August 24, 2010
Date

ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

U or ND:	**This flag indicates that the compound was analyzed for but not detected.**
J:	**This flag indicates an estimated value. This flag is used as follows: (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.**
B:	**This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.**
E:	**This flag identifies compounds whose concentration exceeds the upper level of the calibration range.**
A:	**This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.**
X:	**This flag indicates that the analyte was diluted below an accurate quantitation level.**
***:**	**This flag indicates that a spike recovery is equal to or outside the control criteria used.**
+:	**This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.**

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 1008116
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: Complaint 200265825
Client Project Number:
Client PO Number: OE PHA 11000000014

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
United Oil 346	1008116-1		SOIL	04-Aug-10	11:40
Rix Background	1008116-2		SOIL	04-Aug-10	11:45

ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER #	1008116
PAGE	1 of 1
DISPOSAL	By Lab or Return to Client

SAMPLER	P. Gintautas
SITE ID	United Oil 346 location
EDD FORMAT	
PURCHASE ORDER	PHA 11-04
BILL TO COMPANY	
INVOICE ATTN TO	
ADDRESS	
CITY / STATE / ZIP	
PHONE	
FAX	
E-MAIL	

DATE: 9 Aug 2010
TURNAROUND: 14 day

PROJECT NAME	Complaint 200265825
PROJECT No.	
COMPANY NAME	Colo. Oil & Gas Cons. Comm.
SEND REPORT TO	Peter Gintautas
ADDRESS	PO Box 108
CITY / STATE / ZIP	Trinidad CO 81082
PHONE	719-846-3091
FAX	
E-MAIL	peter.gintautas@state.co.us

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	LOW metals 6/7471	GORE metals	TVPH	TEPH	PAHs (SIM 8270)	SAR, EC, pH (SUB)
1	United Oil 346	soil	9 Aug 2010	11:40	5	ICE/NP	—	X	X	X	X	X	X
2	KRIX Background	soil	9 Aug 2010	11:45	1	None	—		X				

LOW metals = Ba, B, Cd, Cr, Cu, Pb, Ni, Se, Ag, Zn
GORE metal = Ag

*Time Zone (Circle): EST CST (MST) PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:

QC PACKAGE (check below)	
X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Peter Gintautas	9 Aug 2010	11:45
RECEIVED BY		Colorado	8-11-10	0955
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COCGC Workorder No: 1008116

Project Manager: AW Initials: CKO Date: 8-11-10

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	NO
2. Are custody **seals** on **shipping containers** intact?	NONE	YES	NO
3. Are Custody seals on **sample containers** intact?	NONE	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		YES	NO
5. Are the **COC and bottle labels complete and legible**?		YES	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	NO
7. Were **airbills / shipping documents** present and/or removable?	DROP OFF	YES	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	YES	NO
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	YES	NO
10. Is there **sufficient sample** for the requested analyses?		YES	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		YES	NO
12. Are all samples within **holding times** for the requested analyses?		YES	NO
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble:** ____ < green pea ____ > green pea	N/A	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	N/A	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	YES	NO
17. Were the samples **shipped on ice**?		YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** #2 #4	RAD ONLY	YES	NO

Cooler #: 1

Temperature (°C): 1.5

No. of custody seals on cooler: 1

DOT Survey/ Acceptance Information

External µR/hr reading: 12

Background µR/hr reading: 12

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: 8/12/10

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1008116

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200265825

Lab ID: EX100812-4MB

Sample Matrix: SOIL
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12-Aug-10
Date Analyzed: 13-Aug-10
Prep Method: SW3540 Rev C

Prep Batch: EX100812-4
QCBatchID: EX100812-4-1
Run ID: SV100813-1
Cleanup: NONE
Basis: N/A
File Name: N9684

Sample Aliquot: 30 g
Final Volume: 1 ml
Result Units: UG/KG
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
91-20-3	NAPHTHALENE	1	3.3	3.3	U	
91-57-6	2-METHYLNAPHTHALENE	1	3.3	3.3	U	
90-12-0	1-METHYLNAPHTHALENE	1	3.3	3.3	U	
208-96-8	ACENAPHTHYLENE	1	3.3	3.3	U	
83-32-9	ACENAPHTHENE	1	3.3	3.3	U	
86-73-7	FLUORENE	1	3.3	3.3	U	
85-01-8	PHENANTHRENE	1	3.3	3.3	U	
120-12-7	ANTHRACENE	1	3.3	3.3	U	
206-44-0	FLUORANTHENE	1	3.3	3.3	U	
129-00-0	PYRENE	1	3.3	3.3	U	
56-55-3	BENZO(A)ANTHRACENE	1	3.3	3.3	U	
218-01-9	CHRYSENE	1	3.3	3.3	U	
205-99-2	BENZO(B)FLUORANTHENE	1	3.3	3.3	U	
207-08-9	BENZO(K)FLUORANTHENE	1	3.3	3.3	U	
50-32-8	BENZO(A)PYRENE	1	3.3	3.3	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	3.3	3.3	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	3.3	3.3	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	3.3	3.3	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
321-60-8	2-FLUOROBIPHENYL	55.4		66.7	83	41 - 106
4165-60-0	NITROBENZENE-D5	57.4		66.7	86	28 - 113
1718-51-0	TERPHENYL-D14	57.5		66.7	86	25 - 147

Data Package ID: *SV1008116-1*

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1008116

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200265825

Field ID: United Oil 346
Lab ID: 1008116-1

Sample Matrix: SOIL
% Moisture: 5.0
Date Collected: 04-Aug-10
Date Extracted: 12-Aug-10
Date Analyzed: 14-Aug-10
Prep Method: SW3540 Rev C

Prep Batch: EX100812-4
QCBatchID: EX100812-4-1
Run ID: SV100813-1
Cleanup: NONE
Basis: Dry Weight
File Name: N9699

Sample Aliquot: 30.28 g
Final Volume: 1 ml
Result Units: UG/KG
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
91-20-3	NAPHTHALENE	1	2.5	3.5	J	
91-57-6	2-METHYLNAPHTHALENE	1	3.4	3.5	J	
90-12-0	1-METHYLNAPHTHALENE	1	4	3.5		
208-96-8	ACENAPHTHYLENE	1	3.5	3.5	U	
83-32-9	ACENAPHTHENE	1	1.5	3.5	J	
86-73-7	FLUORENE	1	2.6	3.5	J	
85-01-8	PHENANTHRENE	1	2	3.5	J	
120-12-7	ANTHRACENE	1	2.4	3.5	J	
206-44-0	FLUORANTHENE	1	3.2	3.5	J	
129-00-0	PYRENE	1	3.5	3.5		
56-55-3	BENZO(A)ANTHRACENE	1	2.4	3.5	J	
218-01-9	CHRYSENE	1	2	3.5	J	
205-99-2	BENZO(B)FLUORANTHENE	1	3.1	3.5	J	
207-08-9	BENZO(K)FLUORANTHENE	1	2.9	3.5	J	
50-32-8	BENZO(A)PYRENE	1	2.6	3.5	J	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	2.1	3.5	J	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	1.8	3.5	J	
191-24-2	BENZO(G,H,I)PERYLENE	1	2.4	3.5	J	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
321-60-8	2-FLUOROBIPHENYL	50.4		69.5	72	41 - 106
4165-60-0	NITROBENZENE-D5	70.4		69.5	101	28 - 113
1718-51-0	TERPHENYL-D14	63.6		69.5	92	25 - 147

Data Package ID: *SV1008116-1*

GC/MS Semi-volatiles

Method SW8270SIMPAHD

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1008116

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200265825

Lab ID: EX100812-4LCS

Sample Matrix: SOIL
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/12/2010
Date Analyzed: 08/13/2010
Prep Method: SW3540C

Prep Batch: EX100812-4
QCBatchID: EX100812-4-1
Run ID: SV100813-1
Cleanup: NONE
Basis: N/A
File Name: N9685

Sample Aliquot: 30 g
Final Volume: 1 ml
Result Units: UG/KG
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
91-20-3	NAPHTHALENE	66.7	49.5	3.33		74	40 - 107%
91-57-6	2-METHYLNAPHTHALENE	66.7	45.1	3.33		68	47 - 107%
208-96-8	ACENAPHTHYLENE	66.7	45.2	3.33		68	44 - 107%
83-32-9	ACENAPHTHENE	66.7	50	3.33		75	46 - 108%
86-73-7	FLUORENE	66.7	46	3.33		69	49 - 108%
85-01-8	PHENANTHRENE	66.7	51.9	3.33		78	50 - 110%
120-12-7	ANTHRACENE	66.7	45.9	3.33		69	53 - 107%
206-44-0	FLUORANTHENE	66.7	55.1	3.33		83	54 - 114%
129-00-0	PYRENE	66.7	48.3	3.33		72	46 - 123%
56-55-3	BENZO(A)ANTHRACENE	66.7	54	3.33		81	52 - 111%
218-01-9	CHRYSENE	66.7	52.1	3.33		78	53 - 112%
205-99-2	BENZO(B)FLUORANTHENE	66.7	51.8	3.33		78	45 - 114%
207-08-9	BENZO(K)FLUORANTHENE	66.7	49.6	3.33		74	45 - 123%
50-32-8	BENZO(A)PYRENE	66.7	45.1	3.33		68	50 - 111%
193-39-5	INDENO(1,2,3-CD)PYRENE	66.7	46.9	3.33		70	38 - 121%
53-70-3	DIBENZO(A,H)ANTHRACENE	66.7	48.3	3.33		72	41 - 125%
191-24-2	BENZO(G,H,I)PERYLENE	66.7	46.3	3.33		70	38 - 126%

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
321-60-8	2-FLUOROBIPHENYL	51.1		66.7	77	41 - 106
4165-60-0	NITROBENZENE-D5	50.9		66.7	76	28 - 113
1718-51-0	TERPHENYL-D14	48.4		66.7	73	25 - 147

Data Package ID: *SV1008116-1*

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\081310\N9684.D
Acq On : 13 Aug 2010 19:05
Sample : EX100812-4MB
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 14 13:55 2010

Vial: 10
Operator: jk SOP 506 Rev
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 081310SH.RES

Quant Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 13 18:54:10 2010
Response via : Initial Calibration
DataAcq Meth : 081310SH

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	6.03	136	624900	4000.00	ng/ml	0.00
6) Acenaphthene-d10	7.61	164	248905	4000.00	ng/ml	0.00
11) Phenanthrene-d10	8.92	188	306110	4000.00	ng/ml	0.00
16) Chrysene-d12	11.29	240	243593	4000.00	ng/ml	0.02
21) Perylene-d12	13.05	264	140659	4000.00	ng/ml	0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	5.32	82	608391	1720.96	ng/ml	0.00
Spiked Amount 2000.000	Range 28 - 113		Recovery =	86.05%		
7) 2-Fluorobiphenyl	6.98	172	176452	1661.27	ng/ml	0.00
Spiked Amount 2000.000	Range 41 - 106		Recovery =	83.06%		
18) p-Terphenyl-d14	10.26	244	84164	1724.78	ng/ml	0.01
Spiked Amount 2000.000	Range 25 - 147		Recovery =	86.24%		
Target Compounds						Qvalue
3) Naphthalene	6.05	128	3699	Below Cal	#	89
13) Phenanthrene	8.94	178	2805	Below Cal	#	83
17) Pyrene	10.20	202	2645	Below Cal	#	94
19) Benzo[a]anthracene	11.28	228	2584	Below Cal	#	87
20) Chrysene	11.31	228	2046	Below Cal		91
22) Benzo[b]fluoranthene	12.50	252	1308	Below Cal	#	56

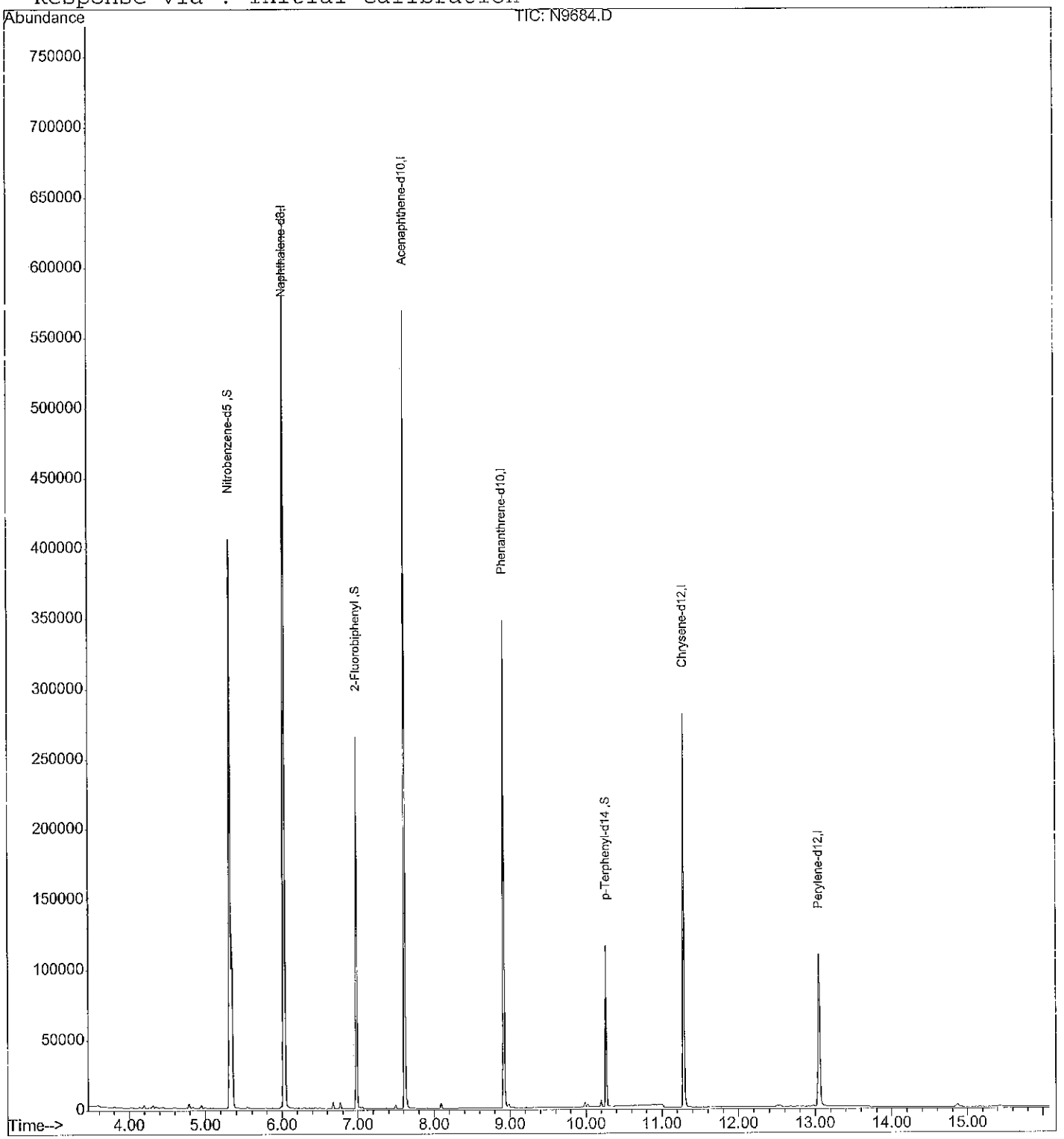
(#) = qualifier out of range (m) = manual integration
N9684.D 081310SH.M Sat Aug 14 13:55:31 2010

Data File : D:\HPCHEM\1\DATA\081310\N9684.D
Acq On : 13 Aug 2010 19:05
Sample : EX100812-4MB
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 14 13:55 2010

Vial: 10
Operator: jk SOP 506
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 081310SH.RES

Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 13 18:54:10 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\081310\N9699.D Vial: 25
Acq On : 14 Aug 2010 00:37 Operator: jk SOP 506 Rev
Sample : 1008116-1 Inst : GC/MS Ins
Misc : SOIL EX100812-4 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 15 16:25 2010 Quant Results File: 081310SH.RES

Quant Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Fri Aug 13 18:54:10 2010
Response via : Initial Calibration
DataAcq Meth : 081310SH

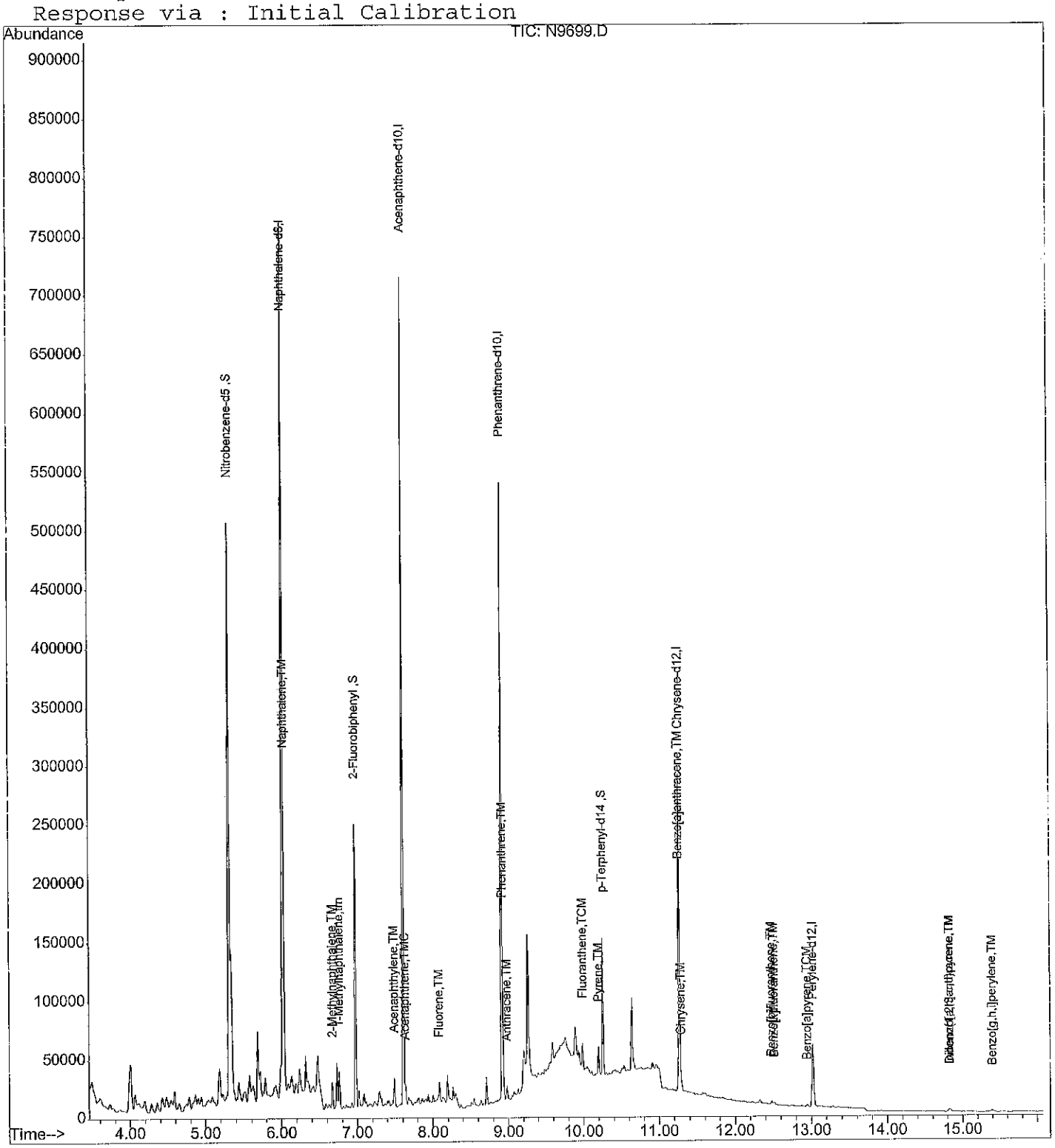
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	6.03	136	662376	4000.00	ng/ml	0.00
6) Acenaphthene-d10	7.61	164	304965	4000.00	ng/ml	0.00
11) Phenanthrene-d10	8.92	188	447685	4000.00	ng/ml	0.00
16) Chrysene-d12	11.27	240	232802	4000.00	ng/ml	0.00
21) Perylene-d12	13.02	264	68151	4000.00	ng/ml	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	5.32	82	758794	2024.97	ng/ml	0.00
Spiked Amount 2000.000	Range 28 - 113		Recovery = 101.25%			
7) 2-Fluorobiphenyl	6.98	172	188598	1449.22	ng/ml	0.00
Spiked Amount 2000.000	Range 41 - 106		Recovery = 72.46%			
18) p-Terphenyl-d14	10.26	244	85373	1830.66	ng/ml	0.00
Spiked Amount 2000.000	Range 25 - 147		Recovery = 91.53%			
Target Compounds						Qvalue
3) Naphthalene	6.05	128	15625	72.75	ng/ml#	86
4) 2-Methylnaphthalene	6.67	142	11764	98.93	ng/ml#	83
5) 1-Methylnaphthalene	6.76	142	13184	115.94	ng/ml#	76
8) Acenaphthylene	7.49	152	9972	70.14	ng/ml#	1
9) Acenaphthene	7.64	154	5680m	43.74	ng/ml	
10) Fluorene	8.09	166	7637	73.97	ng/ml#	83
13) Phenanthrene	8.94	178	12866	57.37	ng/ml	95
14) Anthracene	8.98	178	8700	68.57	ng/ml#	55
15) Fluoranthene	9.99	202	15108m	91.01	ng/ml	
17) Pyrene	10.20	202	15923	100.10	ng/ml#	86
19) Benzo[a]anthracene	11.25	228	7692	68.81	ng/ml	94
20) Chrysene	11.30	228	6368	56.12	ng/ml#	89
22) Benzo[b]fluoranthene	12.48	252	2734m	89.06	ng/ml	
23) Benzo[k]fluoranthene	12.51	252	2077m	82.79	ng/ml	
24) Benzo[a]pyrene	12.95	252	1570m	76.03	ng/ml	
25) Indeno(1,2,3-c,d)pyrene	14.83	276	3433	60.88	ng/ml#	95
26) Dibenzo[a,h]anthracene	14.82	278	2227	52.07	ng/ml#	85
27) Benzo[g,h,i]perylene	15.39	276	3370	67.65	ng/ml#	67

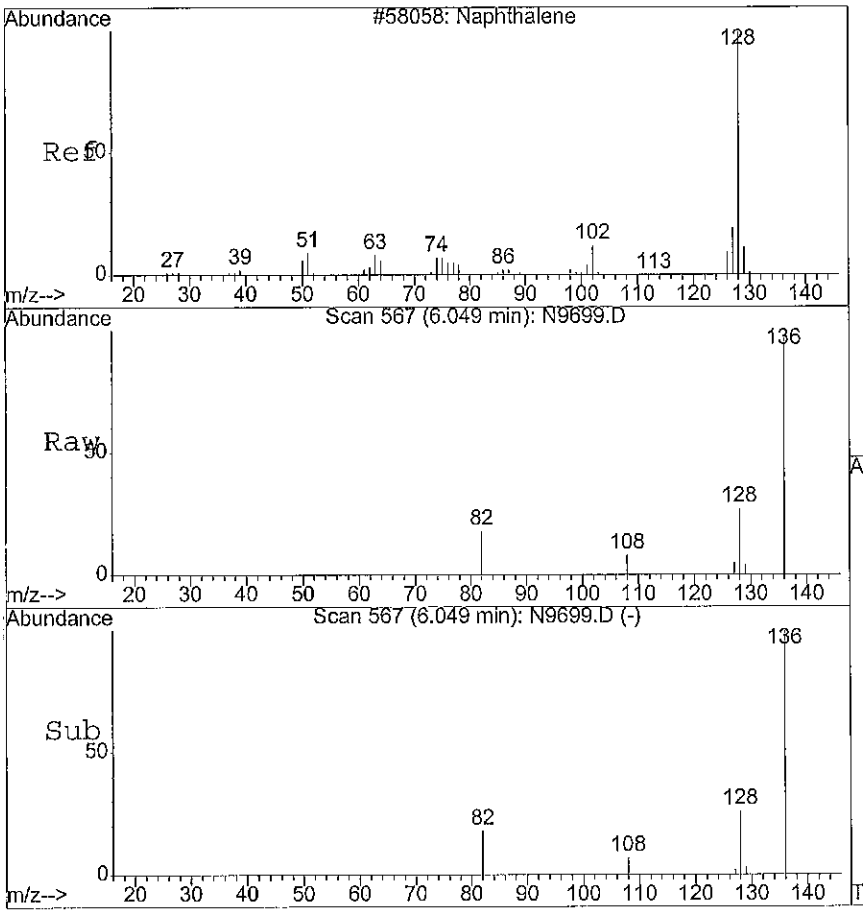
(#) = qualifier out of range (m) = manual integration
N9699.D 081310SH.M Sun Aug 15 16:25:25 2010

Data File : D:\HPCHEM\1\DATA\081310\N9699.D
Acq On : 14 Aug 2010 00:37
Sample : 1008116-1
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 15 16:25 2010

Vial: 25
Operator: jk SOP 506
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 081310SH.RES

Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Sat Aug 14 16:48:21 2010
Response via : Initial Calibration

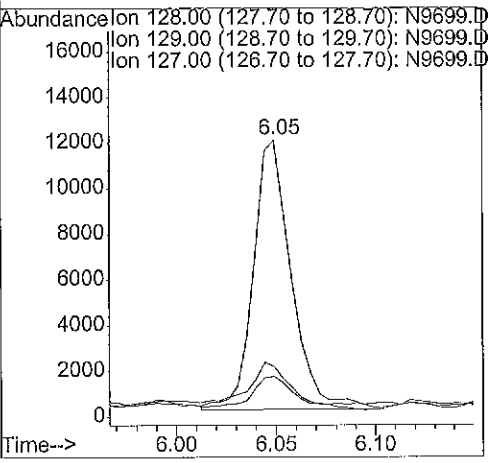


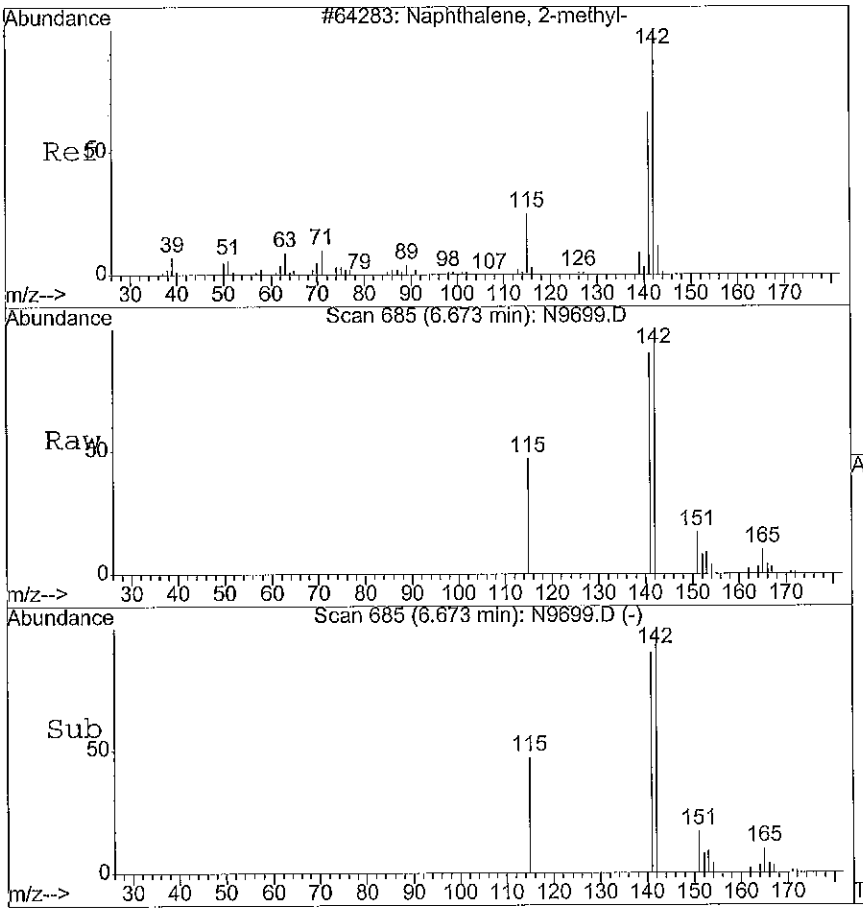


#3
Naphthalene
Concen: 72.75 ng/ml
RT: 6.05 min Scan# 567
Delta R.T. 0.00 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:128 Resp: 15625

Ion	Ratio	Lower	Upper
128	100		
129	15.2	8.3	13.8#
127	19.8	10.1	16.9#

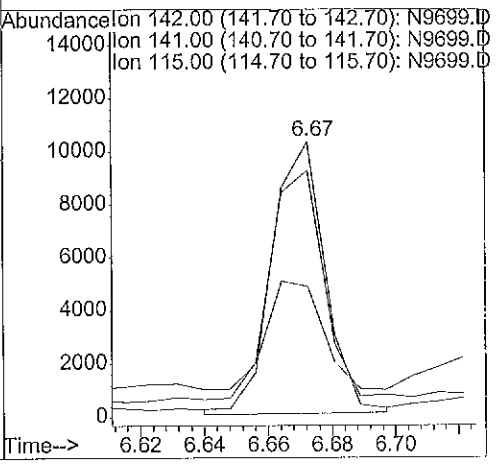


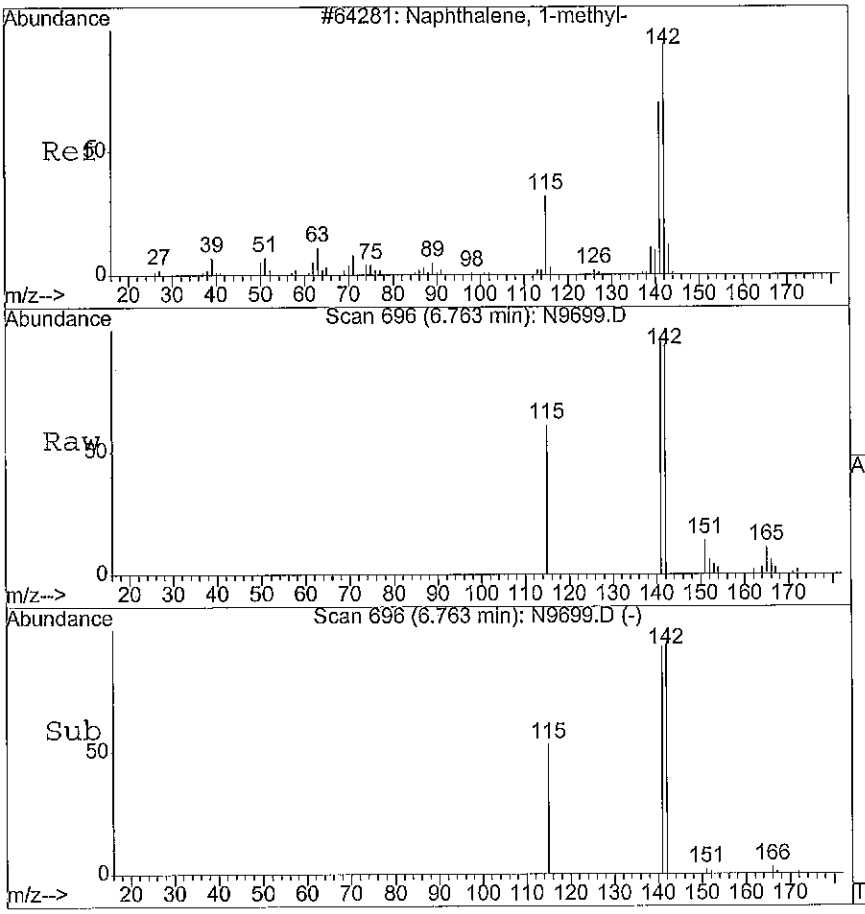


#4
2-Methylnaphthalene
Concen: 98.93 ng/ml
RT: 6.67 min Scan# 685
Delta R.T. 0.00 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:142 Resp: 11764

Ion	Ratio	Lower	Upper
142	100		
141	96.1	55.9	116.1
115	53.8	23.1	48.1#

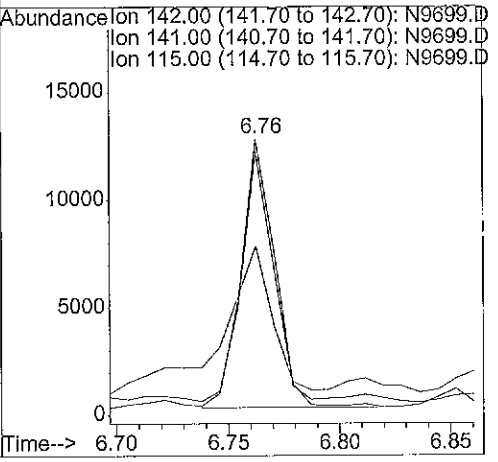


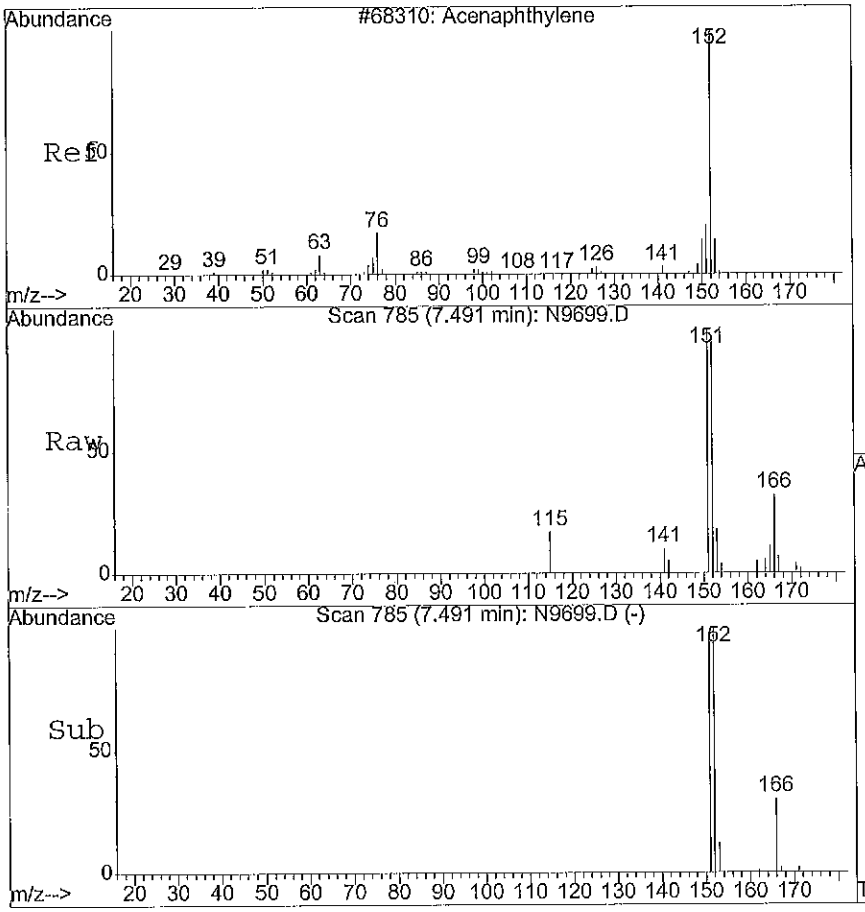


#5
1-Methylnaphthalene
Concen: 115.94 ng/ml
RT: 6.76 min Scan# 696
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:142 Resp: 13184

Ion	Ratio	Lower	Upper
142	100		
141	87.6	71.9	107.9
115	82.8	30.0	45.0#

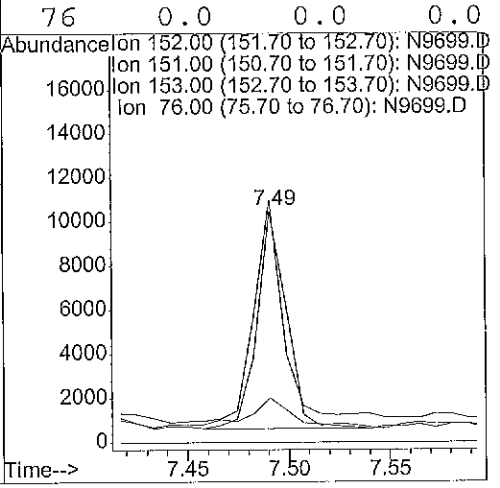


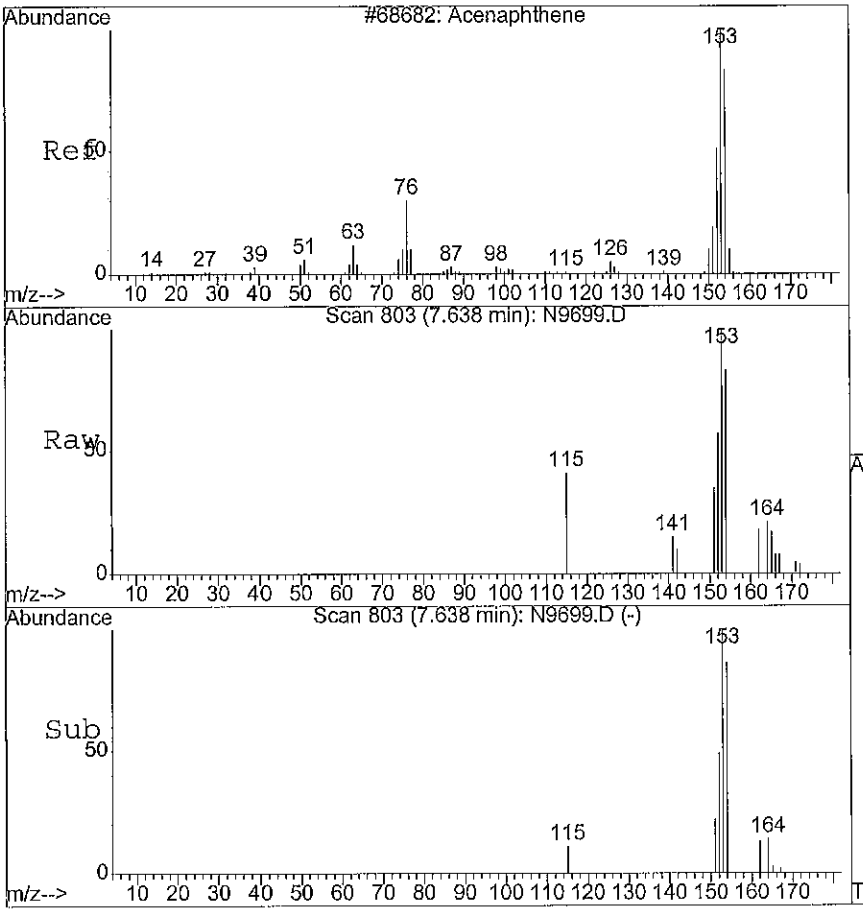


#8
Acenaphthylene
Concen: 70.14 ng/ml
RT: 7.49 min Scan# 785
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:152 Resp: 9972

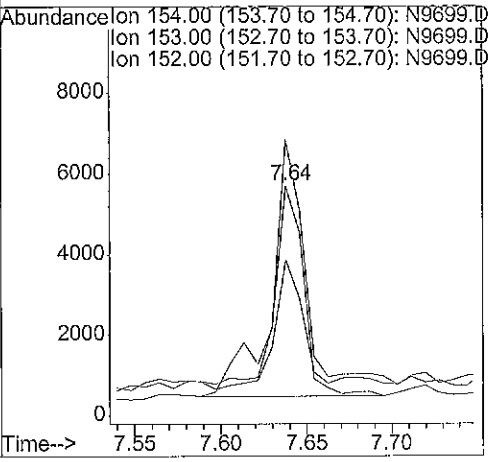
Ion	Ratio	Lower	Upper
152	100		
151	102.7	15.6	26.0#
153	23.8	9.9	16.5#
76	0.0	0.0	0.0

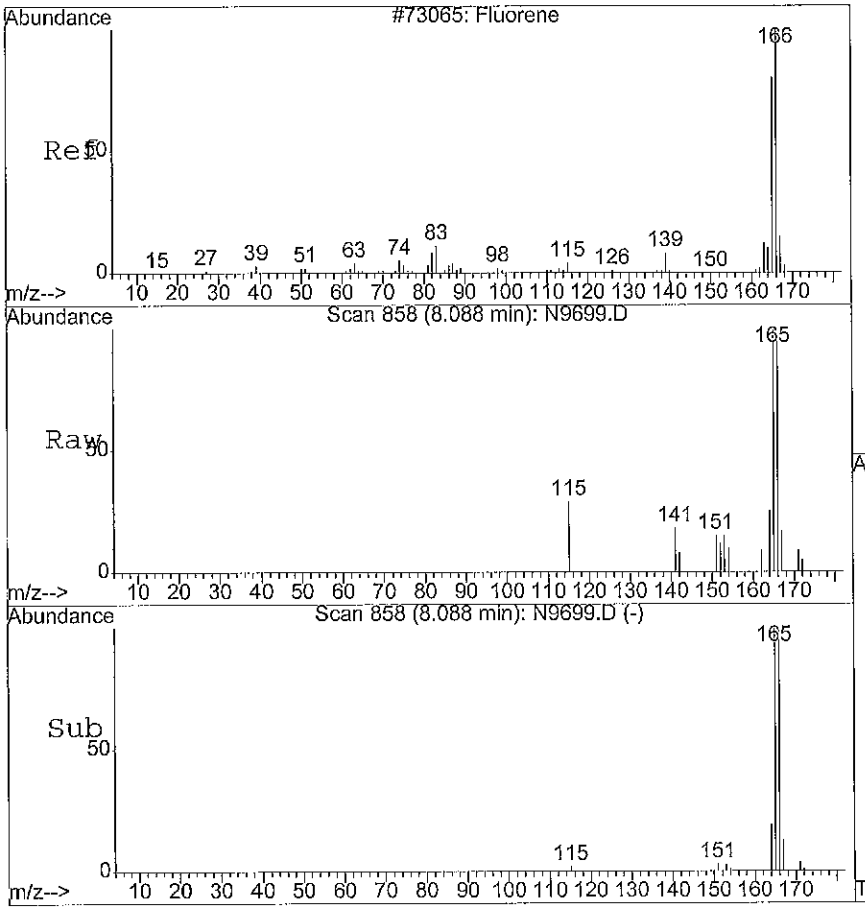




#9
Acenaphthene
Concen: ~~61.18~~ ng/ml
RT: 7.64 min Scan# 803
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

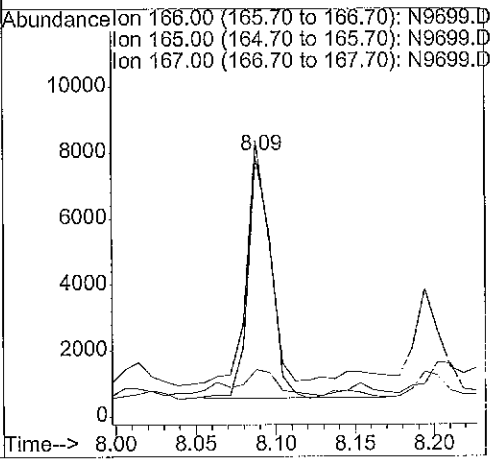
Tgt Ion:154	Resp:	7303	
Ion	Ratio	Lower	Upper
154	100		
153	114.5	78.5	130.9
152	57.7	37.2	62.0





#10
Fluorene
Concen: 73.97 ng/ml
RT: 8.09 min Scan# 858
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:166	Resp:	7637	
Ion	Ratio	Lower	Upper
166	100		
165	103.3	70.7	117.9
167	40.6	10.0	16.6#



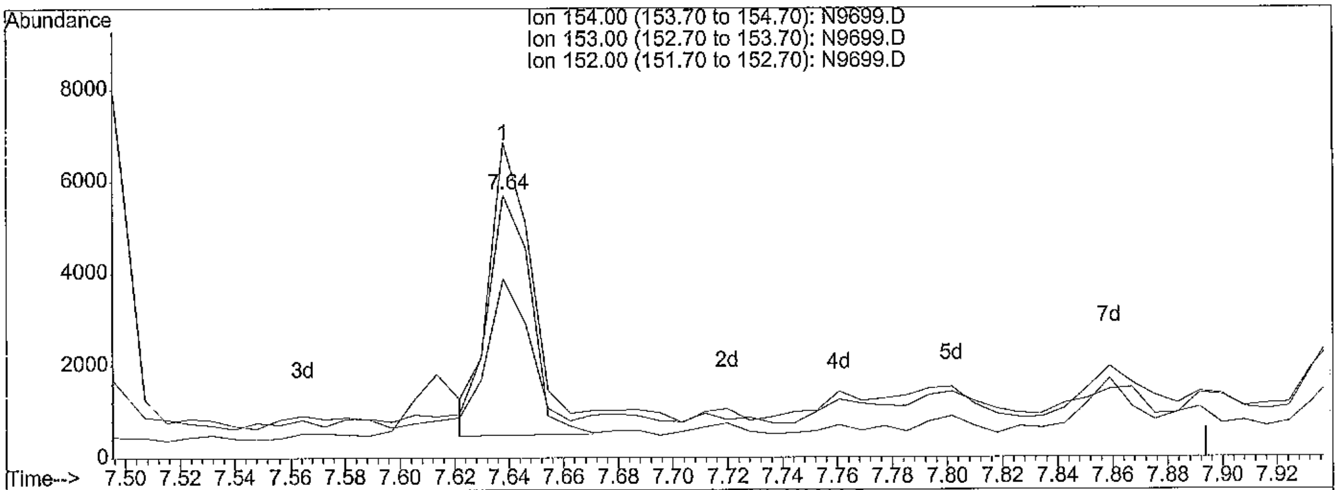
Quantitation Report (Qedit)

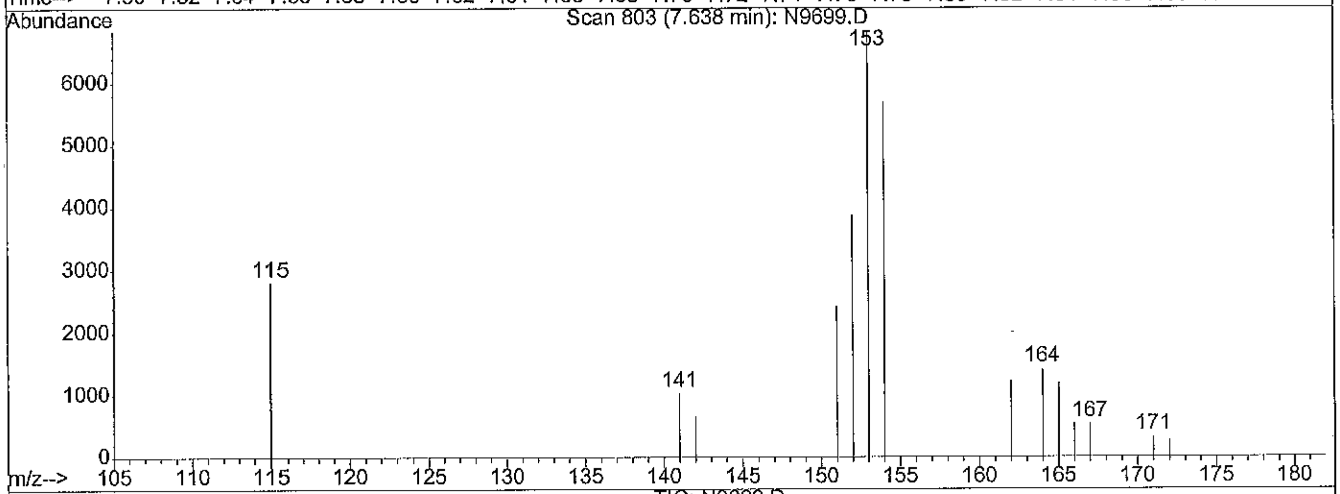
Data File : D:\HPCHEM\1\DATA\081310\N9699.D
Acq On : 14 Aug 2010 00:37
Sample : 1008116-1
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 15 16:23 2010

Vial: 25
Operator: jk SOP 50
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: temp.res

Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Sat Aug 14 16:48:21 2010
Response via : Multiple Level Calibration





TIC: N9699.D

(9) Acenaphthene (TMC)

7.64min 43.74ng/ml m

response 5680

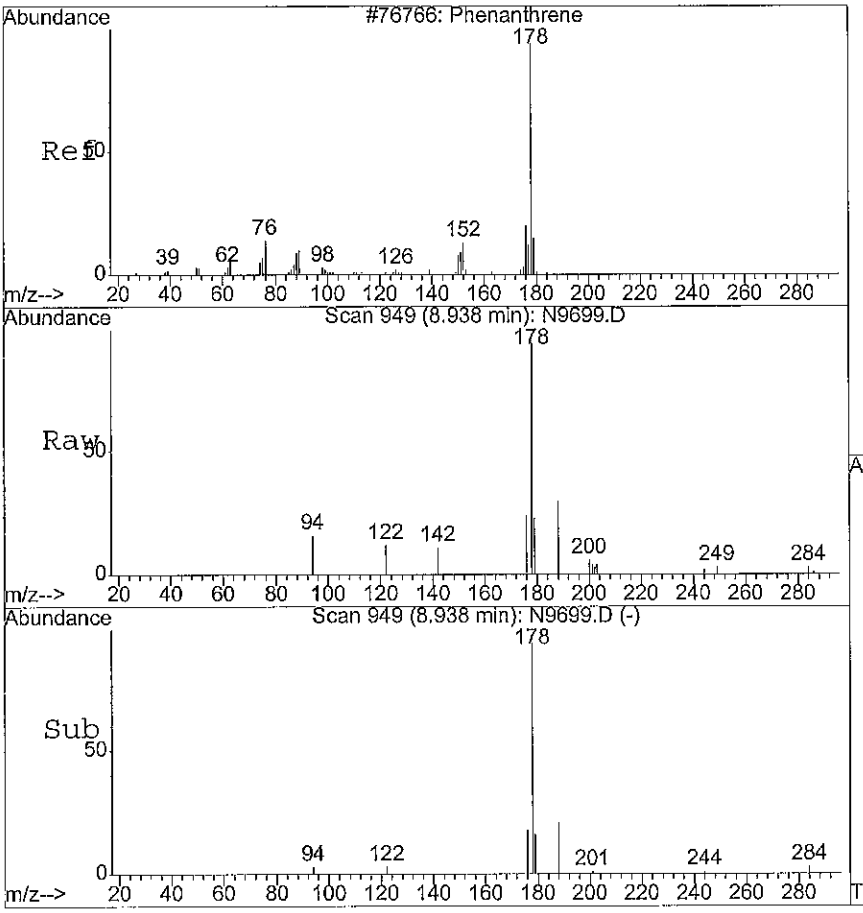
Ion	Exp%	Act%
154.00	100	100
153.00	104.70	147.18#
152.00	49.60	74.19#
0.00	0.00	0.00

MANUAL RE-INTEGRATION

- ☐ [illegible]
- ☐ [illegible] to peak
- ☑ [illegible] area
- ☐ [illegible] area
- ☐ other

Initials: jk date: 8-15-10

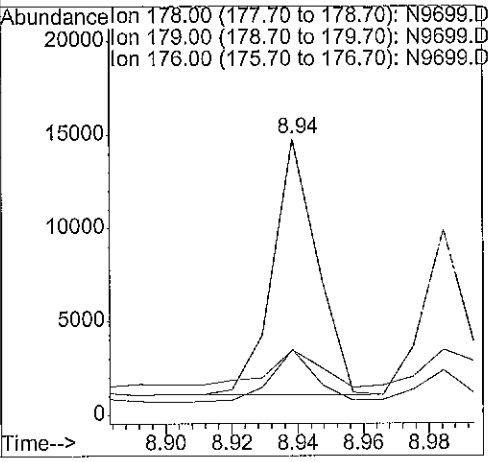
N9699.D 081310SH.M Sun Aug 15 16:23:38 2010

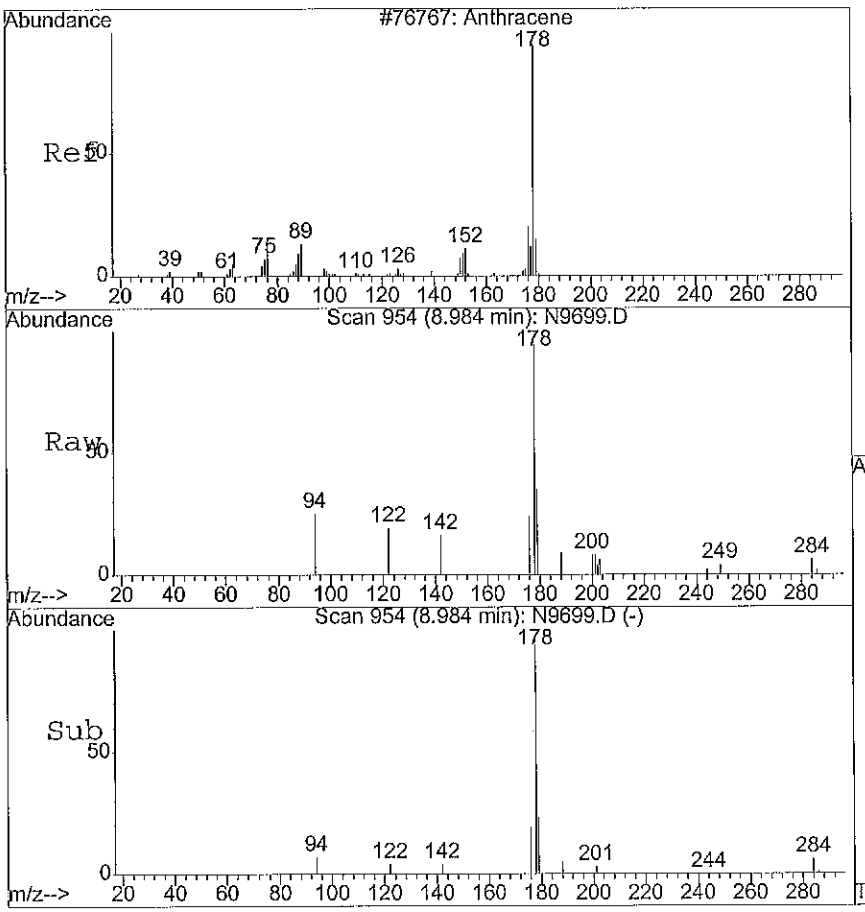


#13
Phenanthrene
Concen: 57.37 ng/ml
RT: 8.94 min Scan# 949
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:178 Resp: 12866

Ion	Ratio	Lower	Upper
178	100		
179	19.0	11.5	19.3
176	20.2	14.5	24.1

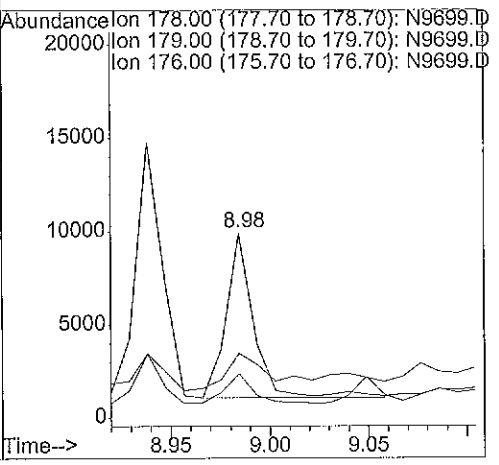


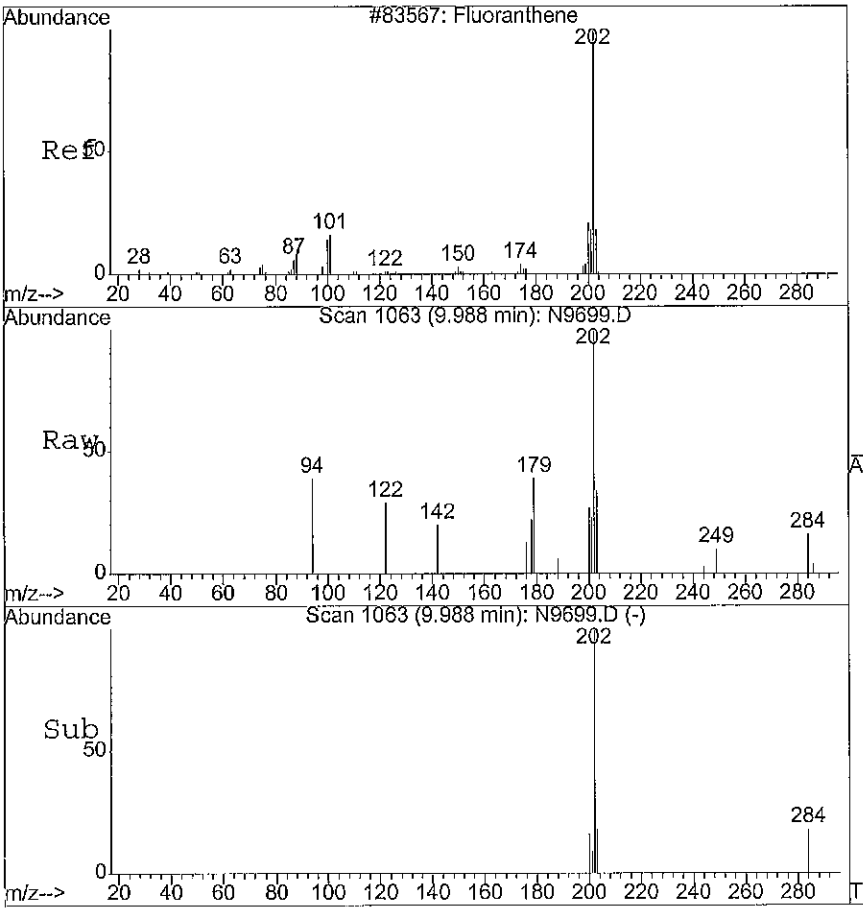


#14
Anthracene
Concen: 68.57 ng/ml
RT: 8.98 min Scan# 954
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:178 Resp: 8700

Ion	Ratio	Lower	Upper
178	100		
179	55.9	11.2	18.8#
176	17.4	14.4	24.0

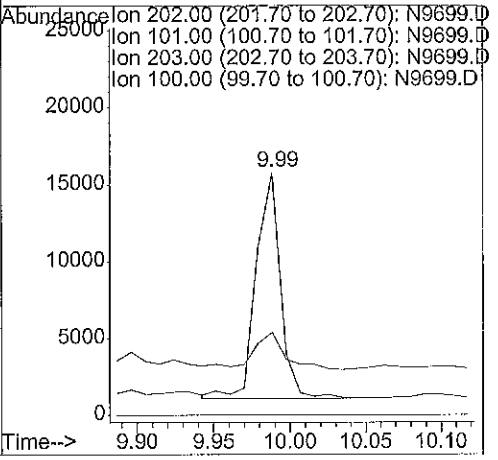


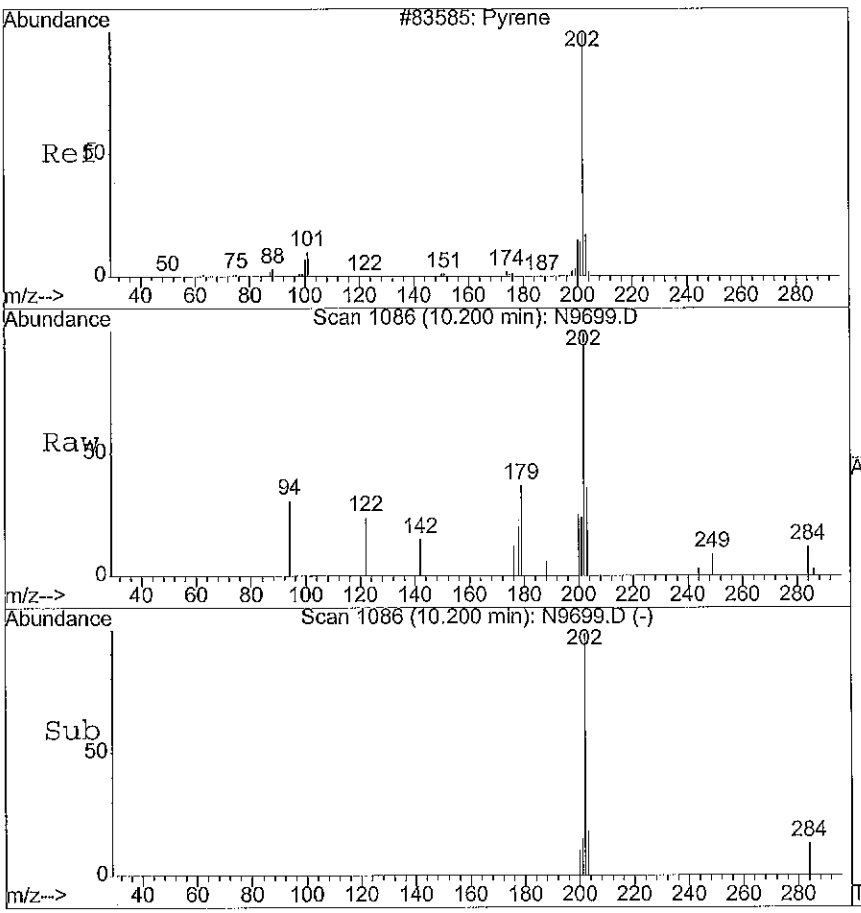


#15
Fluoranthene
Concen: ~~100.~~64 ng/ml
RT: 9.99 min Scan# 1063
Delta R.T. 0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:202 Resp: 16367

Ion	Ratio	Lower	Upper
202	100		
101	0.0	0.0	0.0
203	26.8	13.4	22.4#
100	0.0	0.0	0.0

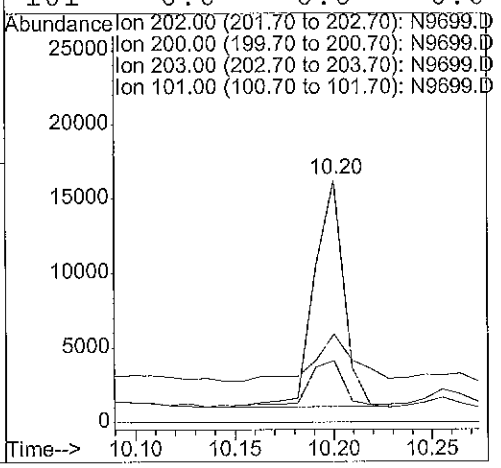




#17
Pyrene
Concen: 100.10 ng/ml
RT: 10.20 min Scan# 1086
Delta R.T. 0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:202 Resp: 15923

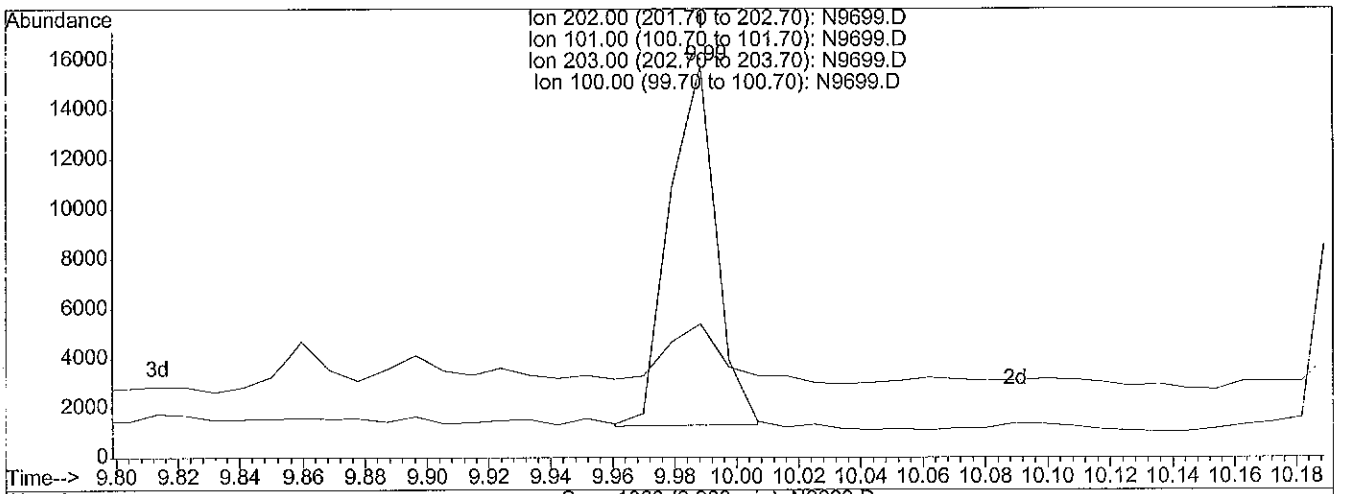
Ion	Ratio	Lower	Upper
202	100		
200	24.1	16.4	27.3
203	28.7	12.9	21.5#
101	0.0	0.0	0.0

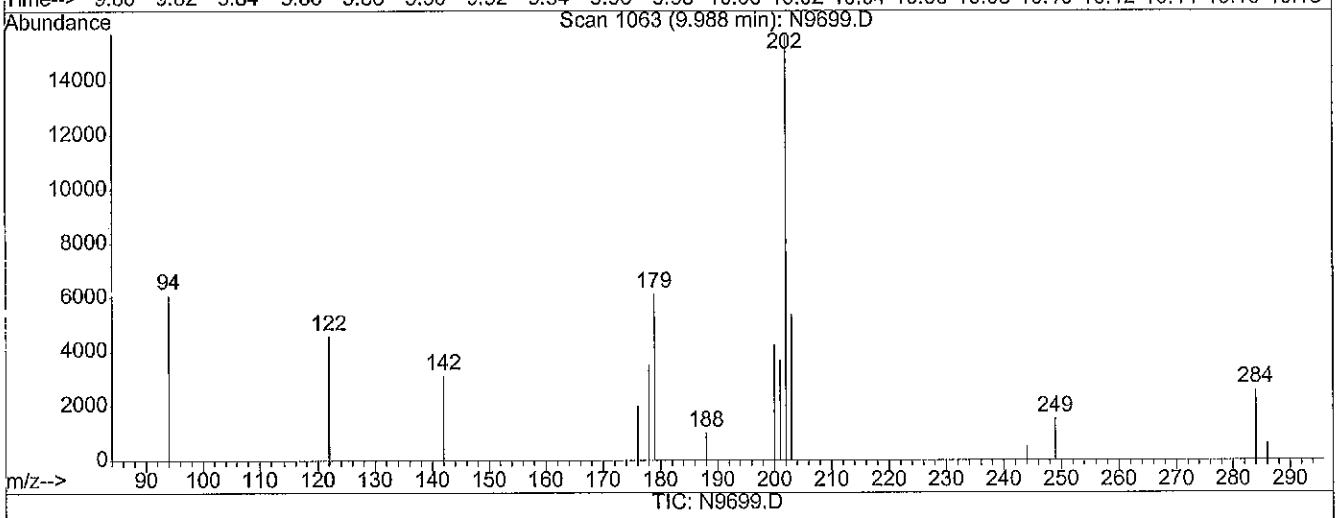


Data File : D:\HPCHEM\1\DATA\081310\N9699.D
Acq On : 14 Aug 2010 00:37
Sample : 1008116-1
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 15 16:24 2010

Vial: 25
Operator: jk SOP 50
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Sat Aug 14 16:48:21 2010
Response via : Multiple Level Calibration





TIC: N9699.D

(15) Fluoranthene (TCM)

9.99min 91.01ng/ml m

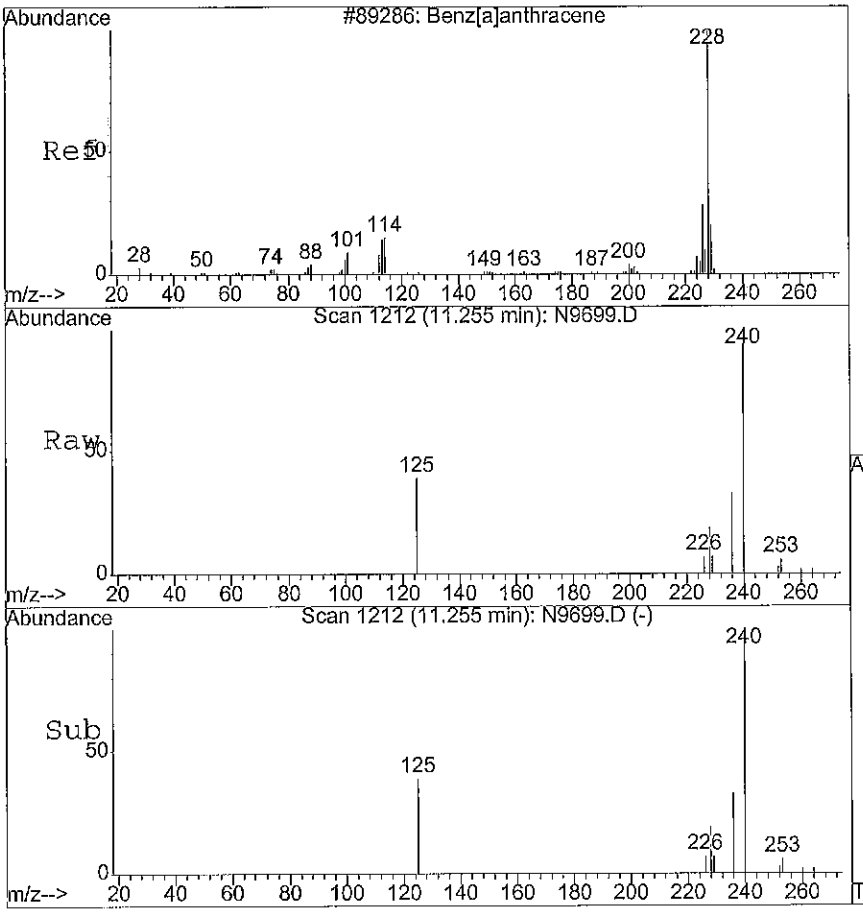
response 15108

Ion	Exp%	Act%
202.00	100	100
101.00	0.00	0.00
203.00	17.90	29.01#
100.00	0.00	0.00

MANUAL RE-INTEGRATION

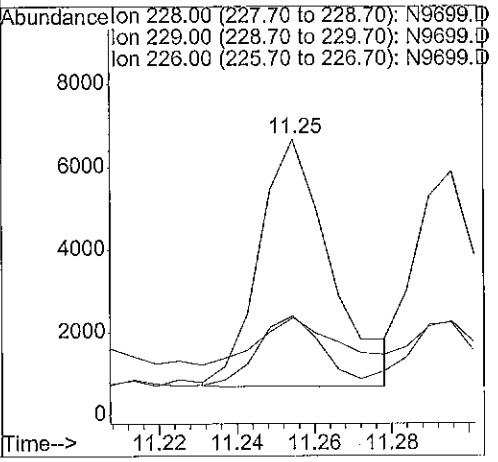
- [ ] [illegible]
- [ ] [illegible] to peak
- [x] [illegible] area
- [ ] [illegible] area
- [ ] [illegible]

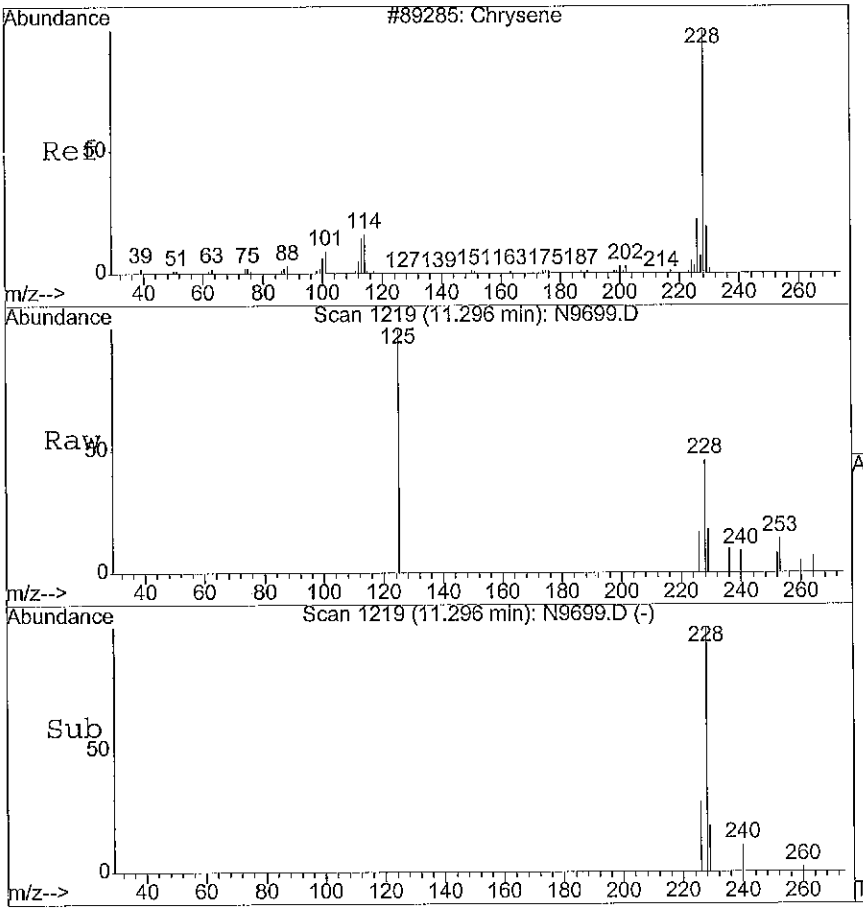
[illegible] jk date 8-15-10



#19
Benzo[a]anthracene
Concen: 68.81 ng/ml
RT: 11.25 min Scan# 1212
Delta R.T. 0.00 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

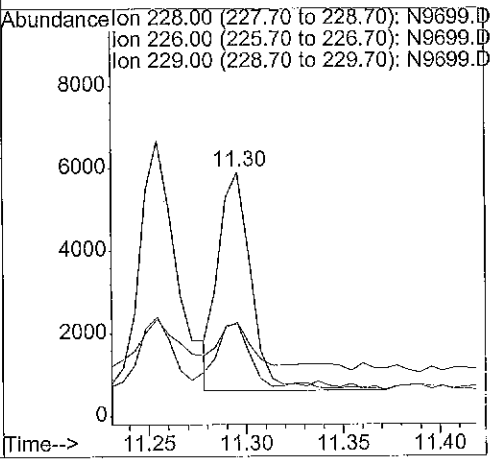
Tgt Ion:228	Resp:	7692	
Ion	Ratio	Lower	Upper
228	100		
229	22.1	14.0	23.4
226	26.0	21.1	35.3

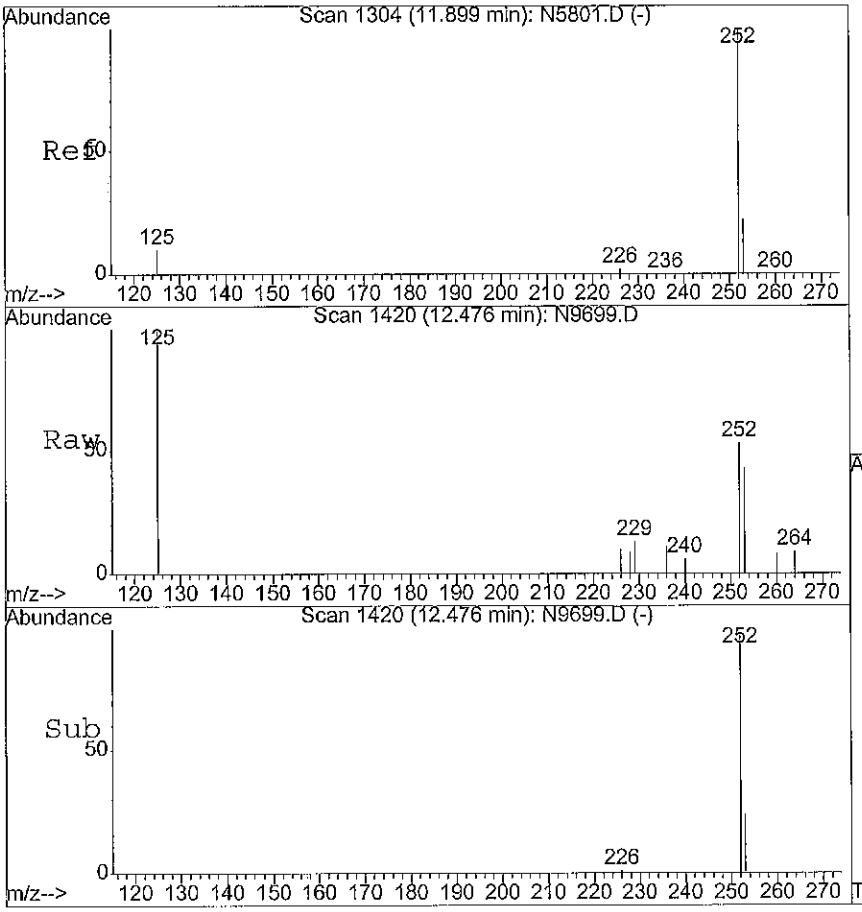




#20
Chrysene
Concen: 56.12 ng/ml
RT: 11.30 min Scan# 1219
Delta R.T. 0.00 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

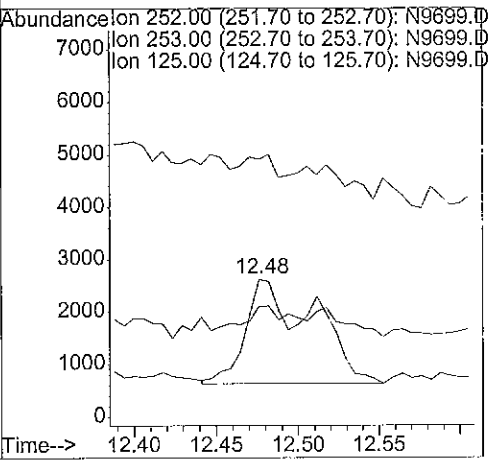
Tgt Ion:228	Resp:	6368	
Ion	Ratio	Lower	Upper
228	100		
226	35.9	24.4	40.6
229	27.6	14.6	24.3#

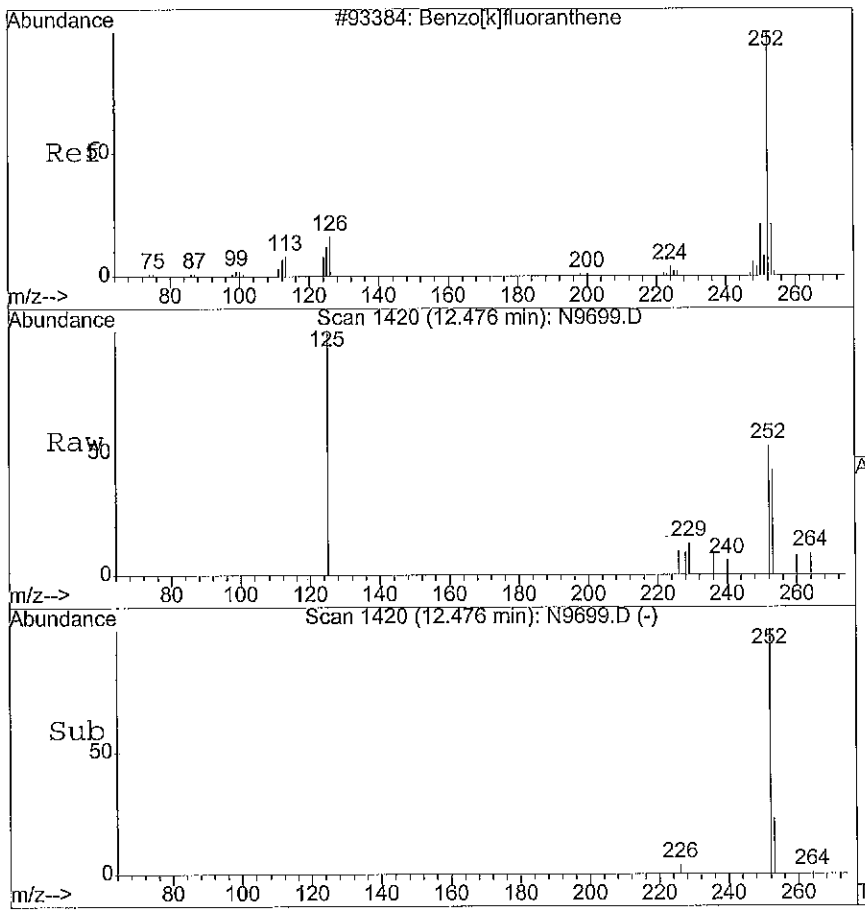




#22
Benzo[b]fluoranthene
Concen: ~~216~~.72 ng/ml
RT: 12.48 min Scan# 1420
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

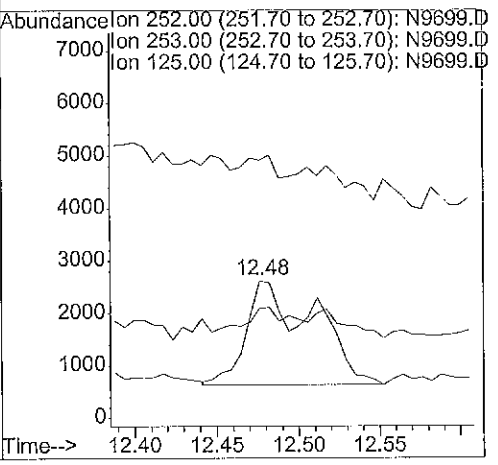
Tgt Ion:252	Resp:	5703	
Ion	Ratio	Lower	Upper
252	100		
253	14.3	14.0	29.2
125	0.0	10.9	22.5#





#23
Benzo[k]fluoranthene
Concen: ~~227~~.33 ng/ml
RT: 12.48 min Scan# 1420
Delta R.T. -0.04 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:252	Resp:	5703	
Ion	Ratio	Lower	Upper
252	100		
253	14.8	14.4	30.0
125	0.0	12.3	25.5#



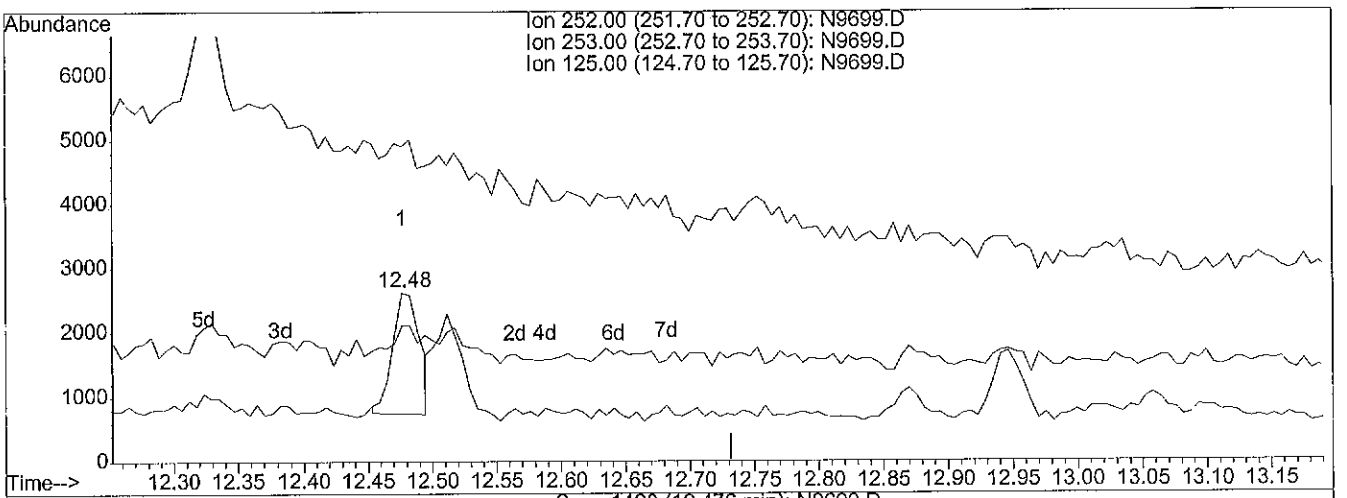
Quantitation Report (Qedit)

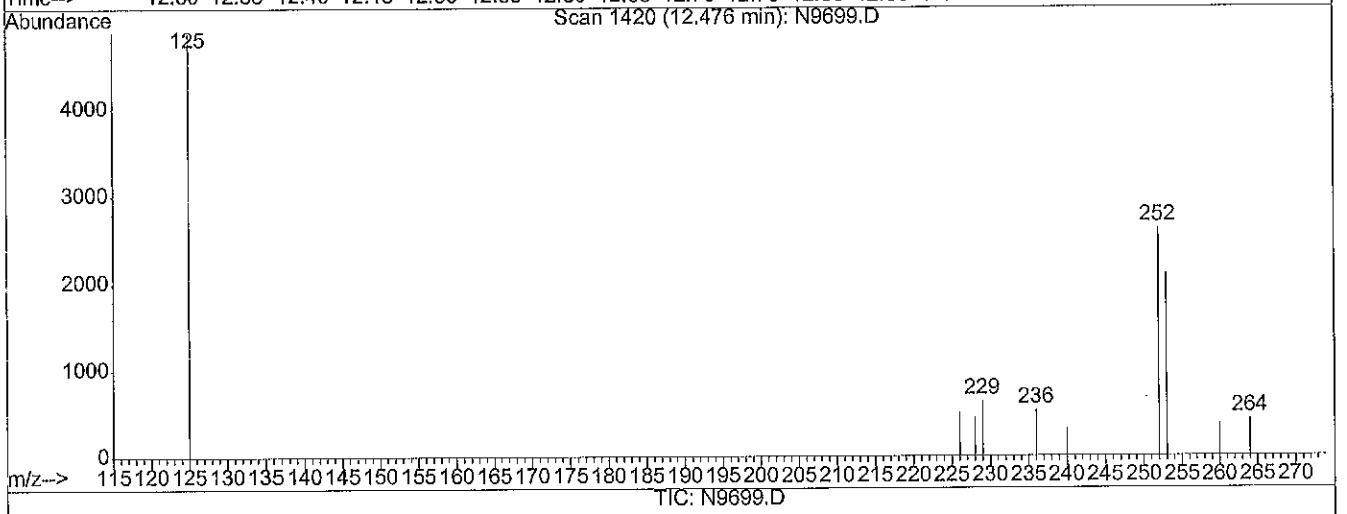
Data File : D:\HPCHEM\1\DATA\081310\N9699.D
Acq On : 14 Aug 2010 00:37
Sample : 1008116-1
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 15 16:24 2010

Vial: 25
Operator: jk SOP 50
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: temp.res

Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Sat Aug 14 16:48:21 2010
Response via : Multiple Level Calibration





TIC: N9699.D

(22) Benzo[b]fluoranthene (TM)

12.48min 89.06ng/ml m

response 2734

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	29.88#
125.00	16.70	0.00#
0.00	0.00	0.00

ACCEPT PEAK INTEGRATION

- [ ] [illegible]
- [ ] [illegible] to peak
- [x] [illegible]
- [ ] [illegible]
- [ ] other _____

date 8-15-10

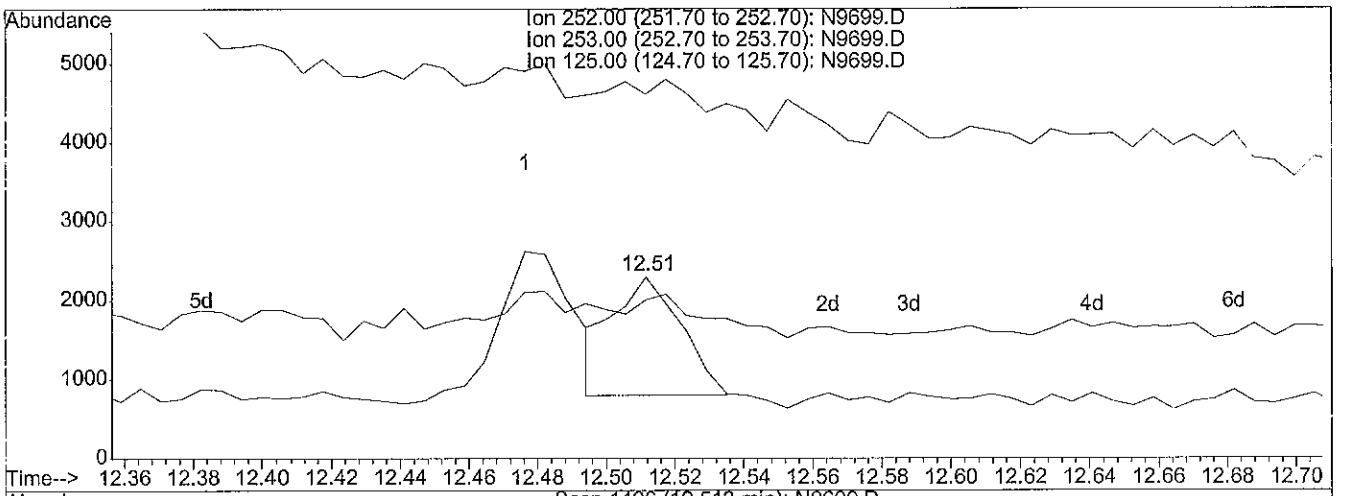
Quantitation Report (Qedit)

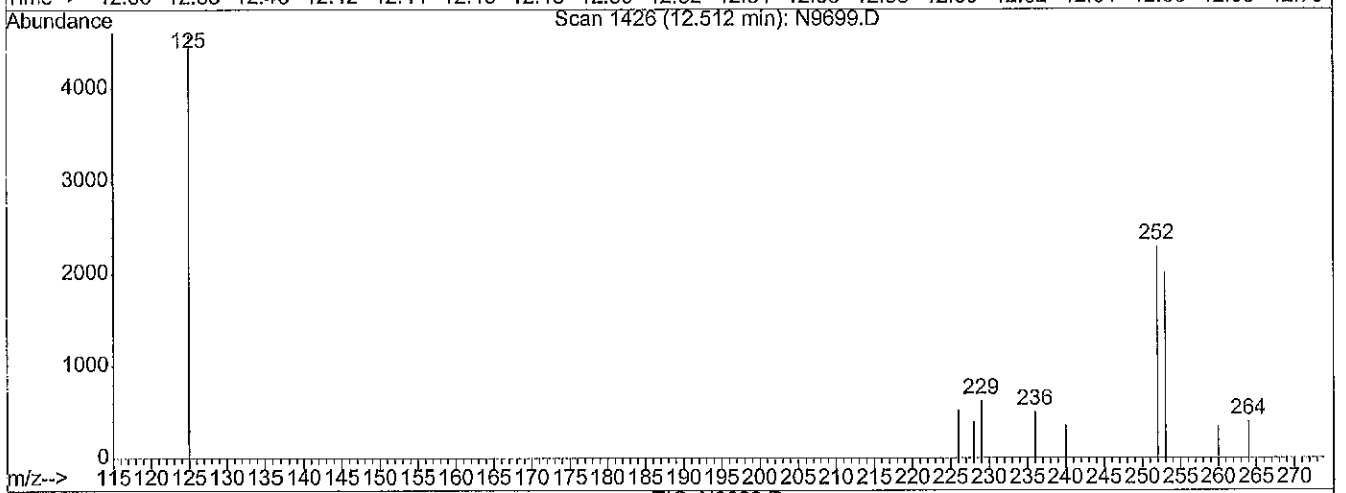
Data File : D:\HPCHEM\1\DATA\081310\N9699.D
Acq On : 14 Aug 2010 00:37
Sample : 1008116-1
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 15 16:24 2010

Vial: 25
Operator: jk SOP 50
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: temp.res

Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Sat Aug 14 16:48:21 2010
Response via : Multiple Level Calibration





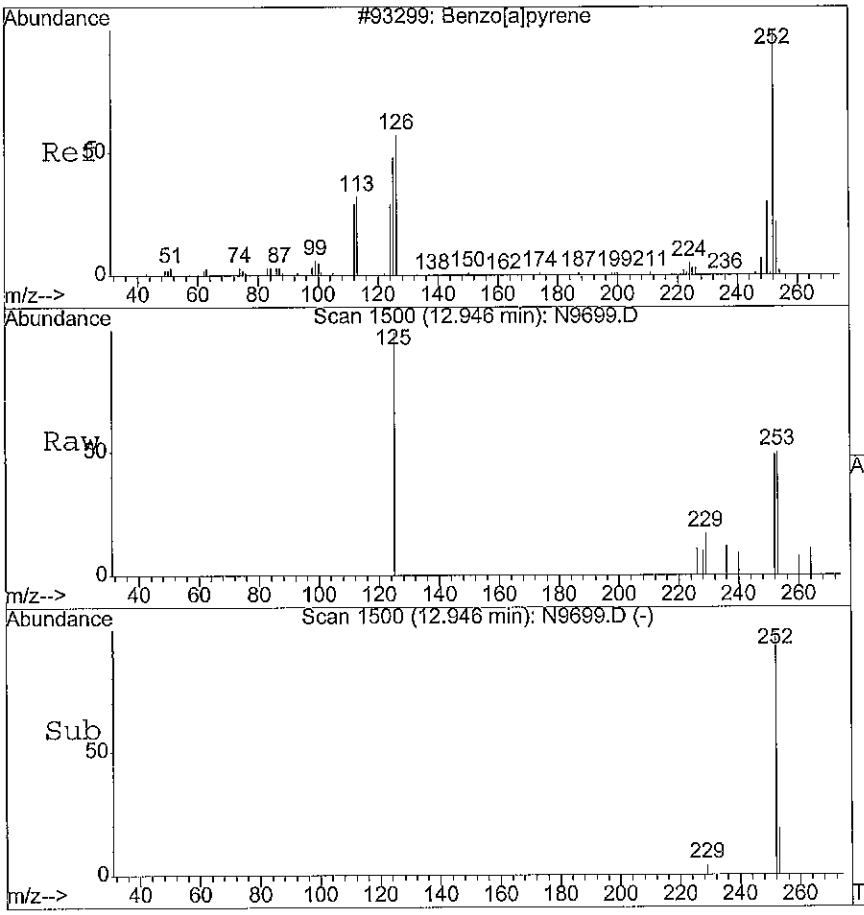
TIC: N9699.D

(23) Benzo[k]fluoranthene (TM)

12.51min 82.79ng/ml m

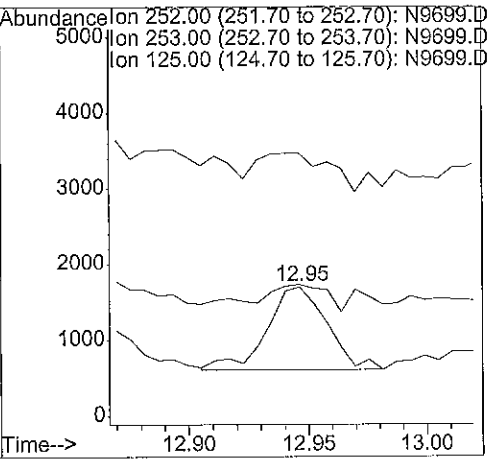
response 2077

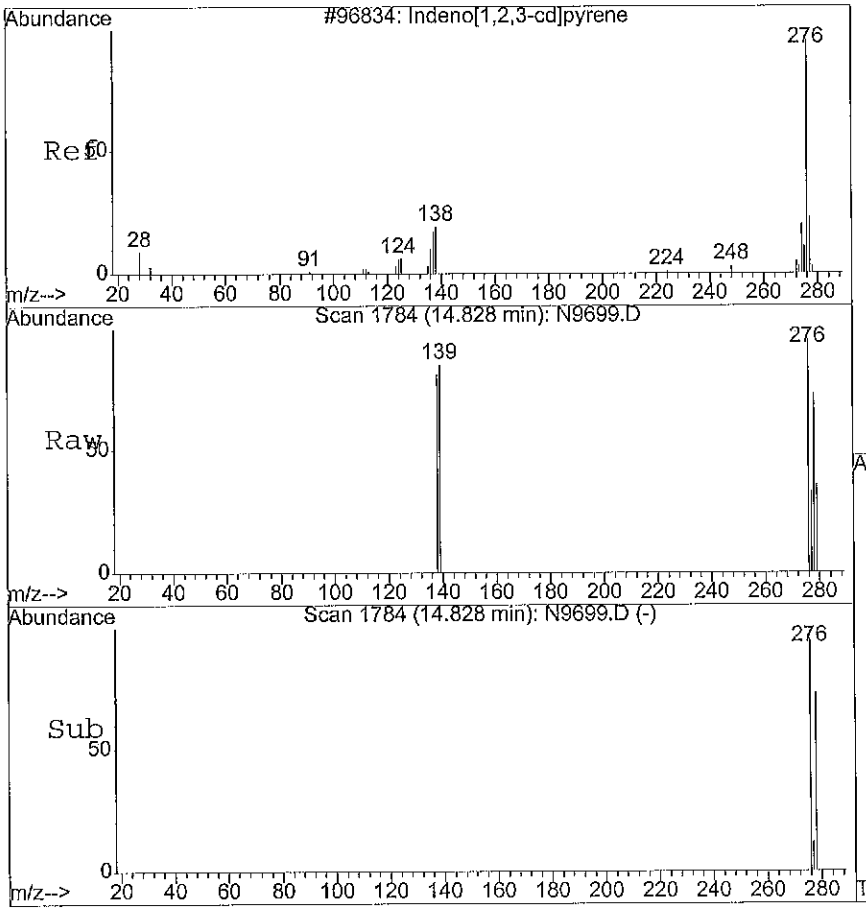
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	40.73#
125.00	18.90	0.00#
0.00	0.00	0.00



#24
Benzo[a]pyrene
Concen: ~~91.~~68 ng/ml
RT: 12.95 min Scan# 1500
Delta R.T. 0.00 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

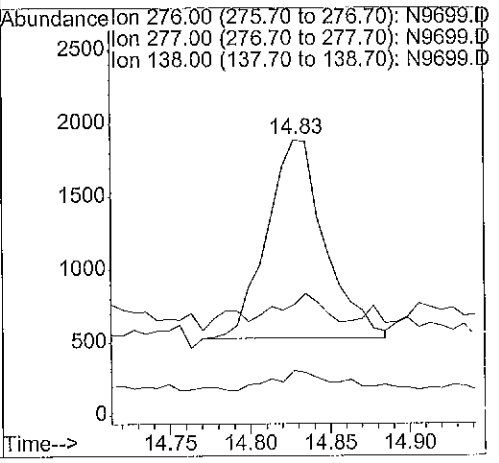
Tgt Ion:252	Resp:	1893	
Ion	Ratio	Lower	Upper
252	100		
253	29.3	14.6	30.2
125	55.9	13.7	28.5#





#25
Indeno(1,2,3-c,d)pyrene
Concen: 60.88 ng/ml
RT: 14.83 min Scan# 1784
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:276	Resp:	3433	
Ion	Ratio	Lower	Upper
276	100		
277	11.2	4.1	8.5#
138	13.9	9.1	18.9

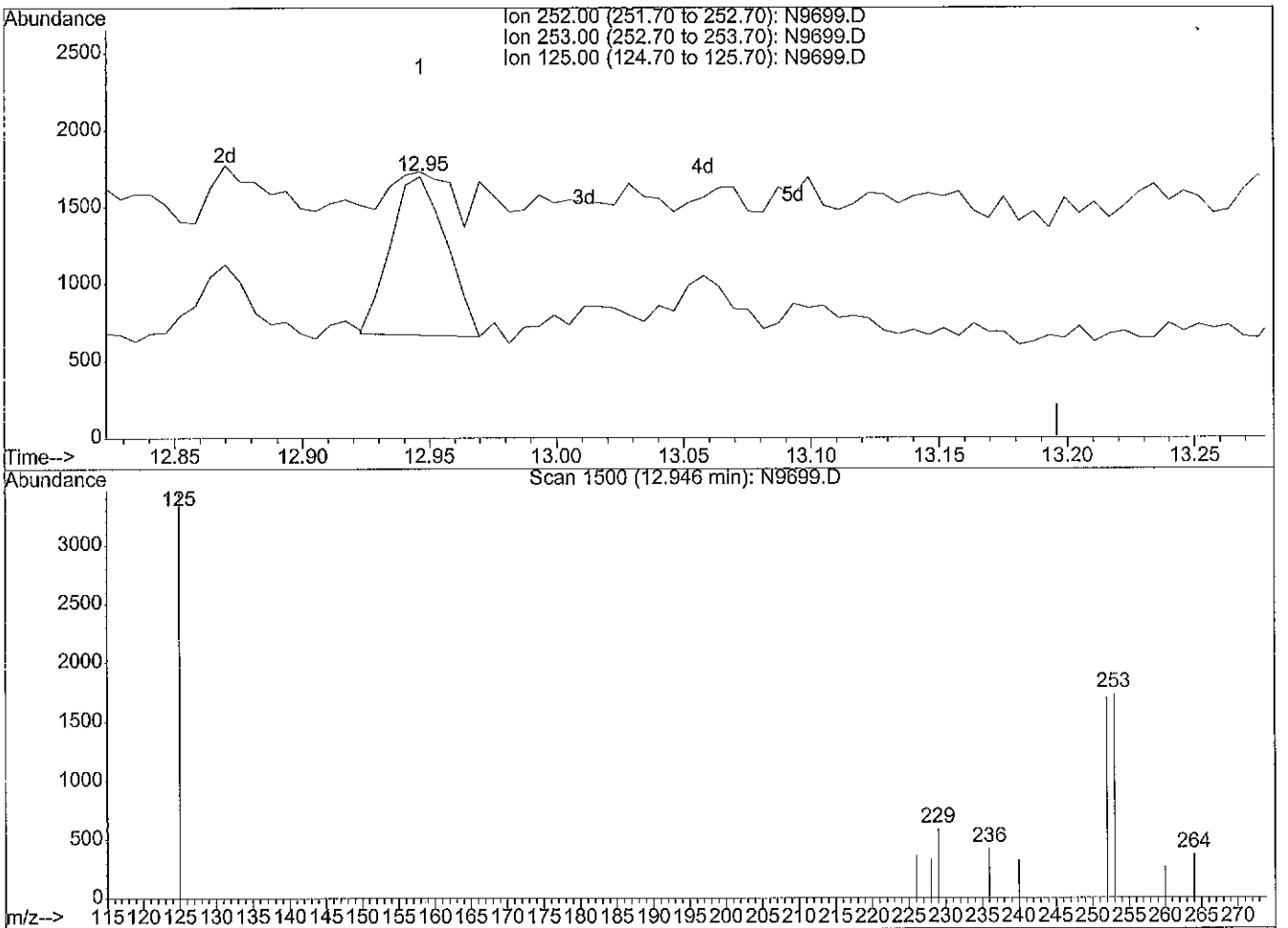


Quantitation Report (Qedit)

Data File : D:\HPCHEM\1\DATA\081310\N9699.D
Acq On : 14 Aug 2010 00:37
Sample : 1008116-1
Misc : SOIL EX100812-4
MS Integration Params: RTEINT.P
Quant Time: Aug 15 16:25 2010

Vial: 25
Operator: jk SOP 50
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : D:\HPCHEM\1\METHODS\081310SH.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Sat Aug 14 16:48:21 2010
Response via : Multiple Level Calibration

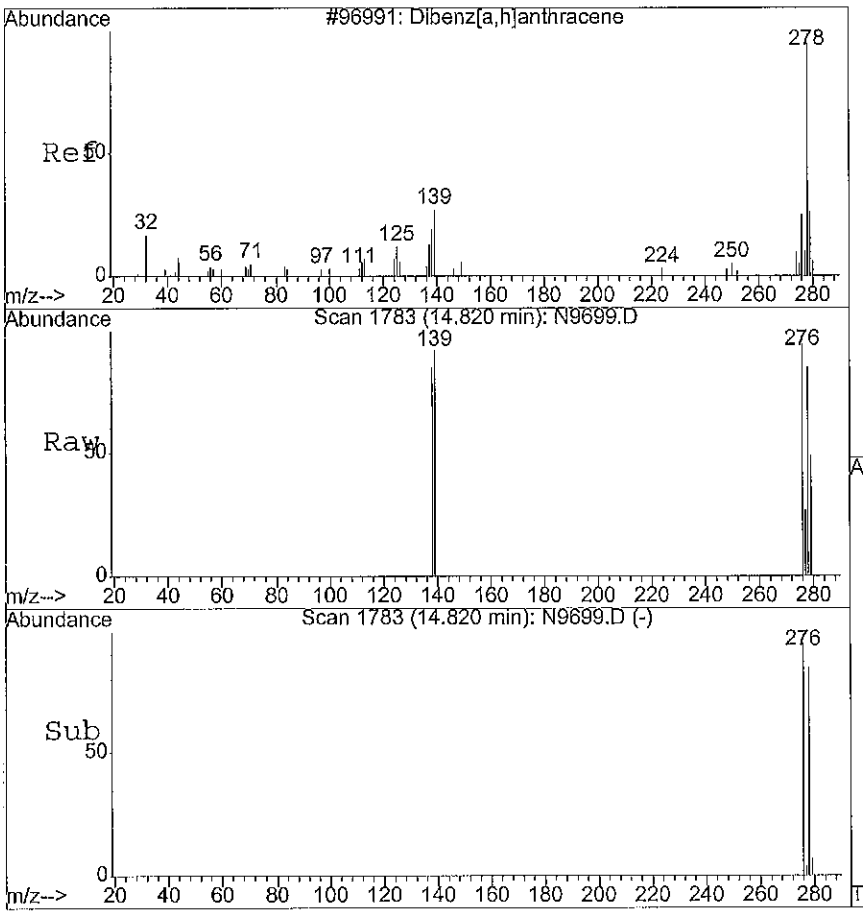


(24) Benzo[a]pyrene (TCM)

12.95min 76.03ng/ml m

response 1570

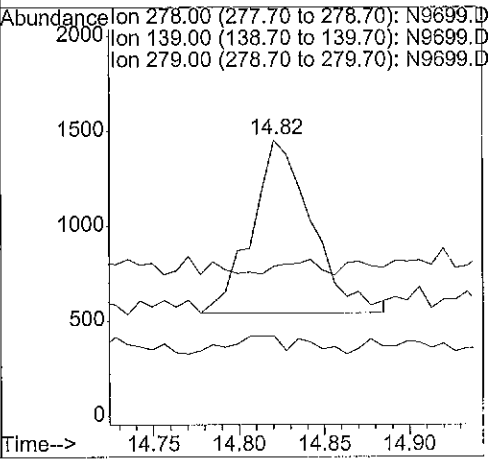
Ion	Exp%	Act%
252.00	100	100
253.00	22.40	35.35#
125.00	21.10	67.45#
0.00	0.00	0.00

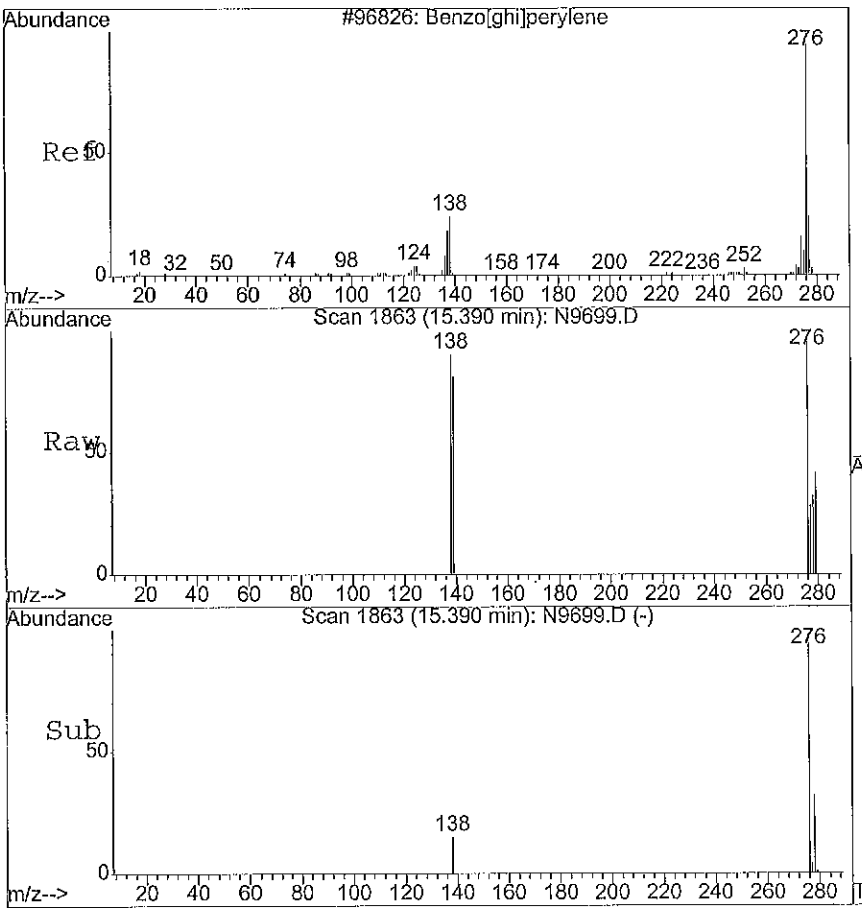


#26
Dibenzo[a,h]anthracene
Concen: 52.07 ng/ml
RT: 14.82 min Scan# 1783
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:278 Resp: 2227

Ion	Ratio	Lower	Upper
278	100		
139	5.3	5.8	12.2#
279	13.4	4.0	8.4#





#27
Benzo[g,h,i]perylene
Concen: 67.65 ng/ml
RT: 15.39 min Scan# 1863
Delta R.T. -0.01 min
Lab File: N9699.D
Acq: 14 Aug 2010 00:37

Tgt Ion:276 Resp: 3370

Ion	Ratio	Lower	Upper
276	100		
138	32.4	8.5	17.7#
277	6.5	4.0	8.2