received 12/29/2015
CWW Sand Creek MW
Investigation

ALS Environmental

GC/MS Semivolatiles

Case Narrative

COGCC

MW

Work Order Number: 1512229

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 12/14/15.

2. The sample was prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water sample was extracted using continuous liquid-liquid extractors, according to SW-846 Method 3520C, utilizing the current revision of SOP 617.

3. The extract was analyzed using GC/MS with a DB-5MS capillary column according to the current revision of SOP 506 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 were met. If average response factors were used in the initial calibration, %RSD was ≤20%. 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 ≤30%.

6. All compounds in the daily (continuing) calibration verifications were within 20%D.

7. All method blank criteria were met.

8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria with the following exceptions:

Spiked Compound	QC Sample	Direction
2,4-Dinitrophenol	LCS	Low
Benzoic Acid	LCS & LCSD	RPD

Since the recoveries for benzoic acid in the laboratory control sample and laboratory control sample duplicate were within control limits, with only the RPD exceeding acceptance criteria, quantitations of target compounds were not compromised. No further action was taken.

Because of the large number of target analytes reported by this method, the lab allows for sporadic marginal exceedances. No further action was taken.

9. A matrix spike and matrix spike duplicate were not performed because of insufficient sample. A laboratory control sample and laboratory control sample duplicate were performed instead.

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

11. All surrogate recoveries were within acceptance criteria.

12. All internal standard recoveries were within acceptance criteria.

13. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

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.

Emily Lyons — 12/29/15
Organics Primary Data Reviewer — Date

Organics Final Data Reviewer — 12/29/15
Date

ALS
Data Qualifier Flags
Organics

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

OrderNum: 1512229
Client Name: COGCC
Client Project Name: MW
Client Project Number:
Client PO Number: CT 2016-141

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
754506 + 70	1512229-1		WATER	11-Dec-15	11:55

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 4.0°C

Form 202r8

WORKORDER #	1512229				
PAGE	1 of 1				
DISPOSAL	By Lab or Return to Client				

PROJECT NAME	MW	SAMPLER	PAG	DATE	14Dec15
PROJECT No.		SITE ID		TURNAROUND	14
		EDD FORMAT			
COMPANY NAME	Colorado Oil & Gas Conservation Comm	PURCHASE ORDER	CT 2016-141		
SEND REPORT TO	Peter Gintautas	BILL TO COMPANY			
ADDRESS	1120 Lincoln St #801	INVOICE ATTN TO			
CITY / STATE / ZIP	Denver CO 80203	ADDRESS			
PHONE	719-679-1326	CITY / STATE / ZIP			
FAX		PHONE			
E-MAIL	peter.gintautas@state.co.us	FAX			
		E-MAIL			

Sim-70 + SIM PAH

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	
(1)	754506 +70	W	11Dec15	11:55				X

*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)	
5 of 58	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	14Dec15	10:55
RECEIVED BY		Rebecca Mosic	12/14/15	10:50
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1512229

Project Manager: ARW Initials: ECP Date: 12/14

1. Does this project require any special handling in addition to standard ALS 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 any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	4.0°							
No. of custody seals on cooler:	0							
DOT Survey/ Acceptance Information — External µR/hr reading:	NA							
Background µR/hr reading:	11							

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: 12-14-15

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

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6086

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
110-86-1	PYRIDINE	1	10	10	3.7	U	
62-75-9	N-NITROSODIMETHYLAMINE	1	10	10	3	U	
62-53-3	ANILINE	1	10	10	3	U	
108-95-2	PHENOL	1	10	10	3	U	
111-44-4	BIS(2-CHLOROETHYL)ETHER	1	10	10	3	U	
95-57-8	2-CHLOROPHENOL	1	10	10	3	U	
541-73-1	1,3-DICHLOROBENZENE	1	10	10	3	U	
106-46-7	1,4-DICHLOROBENZENE	1	10	10	3	U	
95-50-1	1,2-DICHLOROBENZENE	1	10	10	3	U	
100-51-6	BENZYL ALCOHOL	1	10	10	3	U	
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	1	10	10	3	U	
95-48-7	2-METHYLPHENOL	1	10	10	3	U	
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	1	10	10	3	U	
108-39-4	3+4-METHYLPHENOL	1	10	10	3	U	
67-72-1	HEXACHLOROETHANE	1	10	10	3	U	
98-95-3	NITROBENZENE	1	10	10	3	U	
78-59-1	ISOPHORONE	1	10	10	3	U	
88-75-5	2-NITROPHENOL	1	10	10	3	U	
105-67-9	2,4-DIMETHYLPHENOL	1	10	10	3	U	
111-91-1	BIS(2-CHLOROETHOXY)METHANE	1	10	10	3	U	
120-83-2	2,4-DICHLOROPHENOL	1	10	10	3	U	
65-85-0	BENZOIC ACID	1	50	50	20	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	10	10	3	U	
91-20-3	NAPHTHALENE	1	10	10	3	U	
106-47-8	4-CHLOROANILINE	1	10	10	3	U	
87-68-3	HEXACHLOROBUTADIENE	1	10	10	3	U	
59-50-7	4-CHLORO-3-METHYLPHENOL	1	10	10	3	U	
91-57-6	2-METHYLNAPHTHALENE	1	10	10	3	U	

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6086

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
90-12-0	1-METHYLNAPHTHALENE	1	10	10	3	U	
77-47-4	HEXACHLOROCYCLOPENTADIENE	1	10	10	4.5	U	
88-06-2	2,4,6-TRICHLOROPHENOL	1	10	10	3	U	
95-95-4	2,4,5-TRICHLOROPHENOL	1	10	10	3	U	
91-58-7	2-CHLORONAPHTHALENE	1	10	10	3	U	
88-74-4	2-NITROANILINE	1	20	20	3	U	
131-11-3	DIMETHYL PHTHALATE	1	10	10	3	U	
606-20-2	2,6-DINITROTOLUENE	1	10	10	3	U	
208-96-8	ACENAPHTHYLENE	1	10	10	3	U	
99-09-2	3-NITROANILINE	1	20	20	3	U	
83-32-9	ACENAPHTHENE	1	10	10	3	U	
51-28-5	2,4-DINITROPHENOL	1	20	20	6.2	U	
100-02-7	4-NITROPHENOL	1	20	20	3.1	U	
132-64-9	DIBENZOFURAN	1	10	10	3	U	
121-14-2	2,4-DINITROTOLUENE	1	10	10	3	U	
84-66-2	DIETHYL PHTHALATE	1	10	10	3	U	
86-73-7	FLUORENE	1	10	10	3	U	
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	1	10	10	3	U	
100-01-6	4-NITROANILINE	1	20	20	3	U	
103-33-3	AZOBENZENE	1	10	10	3	U	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1	20	20	4.5	U	
86-30-6	N-NITROSODIPHENYLAMINE	1	10	10	3	U	
101-55-3	4-BROMOPHENYL PHENYL ETHER	1	10	10	3	U	
118-74-1	HEXACHLOROBENZENE	1	10	10	3	U	
58-90-2	2,3,4,6-TETRACHLOROPHENOL	1	10	10	3	U	
87-86-5	PENTACHLOROPHENOL	1	20	20	5.3	U	
85-01-8	PHENANTHRENE	1	10	10	3	U	
120-12-7	ANTHRACENE	1	10	10	3	U	

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6086

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
86-74-8	CARBAZOLE	1	10	10	3	U	
84-74-2	DI-N-BUTYL PHTHALATE	1	10	10	3	U	
206-44-0	FLUORANTHENE	1	10	10	3	U	
129-00-0	PYRENE	1	10	10	3	U	
85-68-7	BUTYL BENZYL PHTHALATE	1	10	10	3	U	
56-55-3	BENZO(A)ANTHRACENE	1	10	10	3	U	
91-94-1	3,3'-DICHLOROBENZIDINE	1	10	10	3	U	
218-01-9	CHRYSENE	1	10	10	3	U	
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1	10	10	3	U	
117-84-0	DI-N-OCTYL PHTHALATE	1	10	10	3	U	
205-99-2	BENZO(B)FLUORANTHENE	1	10	10	3	U	
207-08-9	BENZO(K)FLUORANTHENE	1	10	10	3	U	
50-32-8	BENZO(A)PYRENE	1	10	10	3	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	10	10	3	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	10	10	3	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	10	10	3	U	

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Method Blank

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6086

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	38		75	51	42 - 117
321-60-8	2-FLUOROBIPHENYL	32.6		50	65	55 - 108
367-12-4	2-FLUOROPHENOL	50.8		75	68	46 - 105
4165-60-0	NITROBENZENE-D5	37.2		50	74	53 - 111
4165-62-2	PHENOL-D5	55.6		75	74	50 - 109
1718-51-0	TERPHENYL-D14	41.1		50	82	34 - 139

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Field ID:
Lab ID: EX151216-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Clean DF: 1
File Name: R6086

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
	11.28	SATURATED HYDROCARBON1	1	4.9	UG/L	J
	11.56	SATURATED HYDROCARBON2	1	9.8	UG/L	J
	11.82	SATURATED HYDROCARBON3	1	10	UG/L	J
	12.08	SATURATED HYDROCARBON4	1	12	UG/L	J
	12.37	SATURATED HYDROCARBON5	1	9	UG/L	J

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Field ID: 754506 + 70
Lab ID: 1512229-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 11-Dec-15
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15
Prep Method: SW3520 Rev C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: As Received
File Name: R6089

Analyst: Tyler Knaebel
Sample Aliquot: 915 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
110-86-1	PYRIDINE	1	11	11	4	U	
62-75-9	N-NITROSODIMETHYLAMINE	1	11	11	3.3	U	
62-53-3	ANILINE	1	11	11	3.3	U	
108-95-2	PHENOL	1	11	11	3.3	U	
111-44-4	BIS(2-CHLOROETHYL)ETHER	1	11	11	3.3	U	
95-57-8	2-CHLOROPHENOL	1	11	11	3.3	U	
541-73-1	1,3-DICHLOROBENZENE	1	11	11	3.3	U	
106-46-7	1,4-DICHLOROBENZENE	1	11	11	3.3	U	
95-50-1	1,2-DICHLOROBENZENE	1	11	11	3.3	U	
100-51-6	BENZYL ALCOHOL	1	11	11	3.3	U	
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	1	11	11	3.3	U	
95-48-7	2-METHYLPHENOL	1	11	11	3.3	U	
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	1	11	11	3.3	U	
108-39-4	3+4-METHYLPHENOL	1	11	11	3.3	U	
67-72-1	HEXACHLOROETHANE	1	11	11	3.3	U	
98-95-3	NITROBENZENE	1	11	11	3.3	U	
78-59-1	ISOPHORONE	1	11	11	3.3	U	
88-75-5	2-NITROPHENOL	1	11	11	3.3	U	
105-67-9	2,4-DIMETHYLPHENOL	1	11	11	3.3	U	
111-91-1	BIS(2-CHLOROETHOXY)METHANE	1	11	11	3.3	U	
120-83-2	2,4-DICHLOROPHENOL	1	11	11	3.3	U	
65-85-0	BENZOIC ACID	1	55	55	22	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	11	11	3.3	U	
91-20-3	NAPHTHALENE	1	11	11	3.3	U	
106-47-8	4-CHLOROANILINE	1	11	11	3.3	U	
87-68-3	HEXACHLOROBUTADIENE	1	11	11	3.3	U	

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Field ID: 754506 + 70
Lab ID: 1512229-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 11-Dec-15
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15
Prep Method: SW3520 Rev C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: As Received
File Name: R6089

Analyst: Tyler Knaebel
Sample Aliquot: 915 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
59-50-7	4-CHLORO-3-METHYLPHENOL	1	11	11	3.3	U	
91-57-6	2-METHYLNAPHTHALENE	1	11	11	3.3	U	
90-12-0	1-METHYLNAPHTHALENE	1	11	11	3.3	U	
77-47-4	HEXACHLOROCYCLOPENTADIENE	1	11	11	4.9	U	
88-06-2	2,4,6-TRICHLOROPHENOL	1	11	11	3.3	U	
95-95-4	2,4,5-TRICHLOROPHENOL	1	11	11	3.3	U	
91-58-7	2-CHLORONAPHTHALENE	1	11	11	3.3	U	
88-74-4	2-NITROANILINE	1	22	22	3.3	U	
131-11-3	DIMETHYL PHTHALATE	1	11	11	3.3	U	
606-20-2	2,6-DINITROTOLUENE	1	11	11	3.3	U	
208-96-8	ACENAPHTHYLENE	1	11	11	3.3	U	
99-09-2	3-NITROANILINE	1	22	22	3.3	U	
83-32-9	ACENAPHTHENE	1	11	11	3.3	U	
51-28-5	2,4-DINITROPHENOL	1	22	22	6.8	U	
100-02-7	4-NITROPHENOL	1	22	22	3.4	U	
132-64-9	DIBENZOFURAN	1	11	11	3.3	U	
121-14-2	2,4-DINITROTOLUENE	1	11	11	3.3	U	
84-66-2	DIETHYL PHTHALATE	1	11	11	3.3	U	
86-73-7	FLUORENE	1	11	11	3.3	U	
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	1	11	11	3.3	U	
100-01-6	4-NITROANILINE	1	22	22	3.3	U	
103-33-3	AZOBENZENE	1	11	11	3.3	U	
534-52-1	4,6-DINITRO-2-METHYLPHENOL	1	22	22	4.9	U	
86-30-6	N-NITROSODIPHENYLAMINE	1	11	11	3.3	U	
101-55-3	4-BROMOPHENYL PHENYL ETHER	1	11	11	3.3	U	
118-74-1	HEXACHLOROBENZENE	1	11	11	3.3	U	

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Field ID: 754506 + 70
Lab ID: 1512229-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 11-Dec-15
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15
Prep Method: SW3520 Rev C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: As Received
File Name: R6089

Analyst: Tyler Knaebel
Sample Aliquot: 915 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier
58-90-2	2,3,4,6-TETRACHLOROPHENOL	1	11	11	3.3	U	
87-86-5	PENTACHLOROPHENOL	1	22	22	5.8	U	
85-01-8	PHENANTHRENE	1	11	11	3.3	U	
120-12-7	ANTHRACENE	1	11	11	3.3	U	
86-74-8	CARBAZOLE	1	11	11	3.3	U	
84-74-2	DI-N-BUTYL PHTHALATE	1	11	11	3.3	U	
206-44-0	FLUORANTHENE	1	11	11	3.3	U	
129-00-0	PYRENE	1	11	11	3.3	U	
85-68-7	BUTYL BENZYL PHTHALATE	1	11	11	3.3	U	
56-55-3	BENZO(A)ANTHRACENE	1	11	11	3.3	U	
91-94-1	3,3'-DICHLOROBENZIDINE	1	11	11	3.3	U	
218-01-9	CHRYSENE	1	11	11	3.3	U	
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1	11	11	3.3	U	
117-84-0	DI-N-OCTYL PHTHALATE	1	11	11	3.3	U	
205-99-2	BENZO(B)FLUORANTHENE	1	11	11	3.3	U	
207-08-9	BENZO(K)FLUORANTHENE	1	11	11	3.3	U	
50-32-8	BENZO(A)PYRENE	1	11	11	3.3	U	
193-39-5	INDENO(1,2,3-CD)PYRENE	1	11	11	3.3	U	
53-70-3	DIBENZO(A,H)ANTHRACENE	1	11	11	3.3	U	
191-24-2	BENZO(G,H,I)PERYLENE	1	11	11	3.3	U	

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Field ID:	754506 + 70
Lab ID:	1512229-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 11-Dec-15
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15
Prep Method: SW3520 Rev C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: As Received
File Name: R6089

Analyst: Tyler Knaebel
Sample Aliquot: 915 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit/ LOQ/LOD	MDL/DL	Result Qualifier	EPA Qualifier

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	50.6		82	62	42 - 117
321-60-8	2-FLUOROBIPHENYL	35.6		54.6	65	55 - 108
367-12-4	2-FLUOROPHENOL	54.7		82	67	46 - 105
4165-60-0	NITROBENZENE-D5	37.9		54.6	69	53 - 111
4165-62-2	PHENOL-D5	58		82	71	50 - 109
1718-51-0	TERPHENYL-D14	36.5		54.6	67	34 - 139

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Field ID: 754506 + 70
Lab ID: 1512229-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 11-Dec-15
Date Extracted: 16-Dec-15
Date Analyzed: 23-Dec-15

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 915 ml
Final Volume: 1 ml
Clean DF: 1
File Name: R6089

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
111-76-2	4.28	2-BUTOXY-ETHANOL	1	200	UG/L	J
	5.74	UNKNOWN1	1	17	UG/L	J
	10.16	UNKNOWN2	1	16	UG/L	J
	11.55	UNKNOWN3	1	79	UG/L	J
	12.90	UNKNOWN4	1	190	UG/L	J
	15.02	UNKNOWN5	1	42	UG/L	J

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12/16/2015
Date Analyzed: 12/23/2015
Prep Method: SW3520C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6087

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
110-86-1	PYRIDINE	60	36	10		60	29 - 100%
62-75-9	N-NITROSODIMETHYLAMINE	60	44.2	10		74	57 - 119%
62-53-3	ANILINE	60	64.7	10		108	38 - 116%
108-95-2	PHENOL	60	46.2	10		77	60 - 102%
111-44-4	BIS(2-CHLOROETHYL)ETHER	60	44.4	10		74	62 - 103%
95-57-8	2-CHLOROPHENOL	60	45.4	10		76	64 - 100%
541-73-1	1,3-DICHLOROBENZENE	60	38	10		63	49 - 100%
106-46-7	1,4-DICHLOROBENZENE	60	39.3	10		65	54 - 100%
95-50-1	1,2-DICHLOROBENZENE	60	37.2	10		62	54 - 100%
100-51-6	BENZYL ALCOHOL	60	49.1	10		82	66 - 105%
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	60	48.5	10		81	60 - 107%
95-48-7	2-METHYLPHENOL	60	47.6	10		79	63 - 103%
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	60	51.2	10		85	62 - 113%
108-39-4	3+4-METHYLPHENOL	60	49.1	10		82	54 - 106%
67-72-1	HEXACHLOROETHANE	60	39.5	10		66	47 - 100%
98-95-3	NITROBENZENE	60	48.6	10		81	36 - 107%
78-59-1	ISOPHORONE	60	51.9	10		86	58 - 102%
88-75-5	2-NITROPHENOL	60	47.7	10		79	72 - 110%
105-67-9	2,4-DIMETHYLPHENOL	60	45.5	10		76	57 - 101%
111-91-1	BIS(2-CHLOROETHOXY)METHANE	60	50.3	10		84	59 - 100%
120-83-2	2,4-DICHLOROPHENOL	60	48.1	10		80	61 - 100%
65-85-0	BENZOIC ACID	100	39.8	50	J	40	34 - 100%
120-82-1	1,2,4-TRICHLOROBENZENE	60	41.9	10		70	47 - 100%
91-20-3	NAPHTHALENE	60	46.9	10		78	58 - 100%
106-47-8	4-CHLOROANILINE	60	64.1	10		107	37 - 119%
87-68-3	HEXACHLOROBUTADIENE	60	40.7	10		68	43 - 100%

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12/16/2015
Date Analyzed: 12/23/2015
Prep Method: SW3520C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6087

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
59-50-7	4-CHLORO-3-METHYLPHENOL	60	53.4	10		89	61 - 105%
91-57-6	2-METHYLNAPHTHALENE	60	47.7	10		79	57 - 100%
90-12-0	1-METHYLNAPHTHALENE	60	45.3	10		76	58 - 101%
77-47-4	HEXACHLOROCYCLOPENTADIENE	60	10.4	10		17	8 - 100%
88-06-2	2,4,6-TRICHLOROPHENOL	60	44.1	10		74	61 - 110%
95-95-4	2,4,5-TRICHLOROPHENOL	60	46.1	10		77	59 - 122%
91-58-7	2-CHLORONAPHTHALENE	60	44.7	10		74	67 - 101%
88-74-4	2-NITROANILINE	60	48.4	20		81	76 - 121%
131-11-3	DIMETHYL PHTHALATE	60	48.7	10		81	70 - 110%
606-20-2	2,6-DINITROTOLUENE	60	49.2	10		82	71 - 113%
208-96-8	ACENAPHTHYLENE	60	49.1	10		82	67 - 108%
99-09-2	3-NITROANILINE	60	58	20		97	76 - 105%
83-32-9	ACENAPHTHENE	60	47.1	10		78	60 - 108%
51-28-5	2,4-DINITROPHENOL	60	39.4	20	*	66	67 - 113%
100-02-7	4-NITROPHENOL	60	46.9	20		78	24 - 128%
132-64-9	DIBENZOFURAN	60	47.8	10		80	67 - 107%
121-14-2	2,4-DINITROTOLUENE	60	50.7	10		84	46 - 114%
84-66-2	DIETHYL PHTHALATE	60	50.5	10		84	70 - 112%
86-73-7	FLUORENE	60	49.2	10		82	64 - 116%
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	60	47.3	10		79	71 - 111%
100-01-6	4-NITROANILINE	60	58	20		97	77 - 115%
103-33-3	AZOBENZENE	60	49.1	10		82	71 - 110%
534-52-1	4,6-DINITRO-2-METHYLPHENOL	60	46.4	20		77	66 - 122%
86-30-6	N-NITROSODIPHENYLAMINE	60	44.9	10		75	57 - 102%
101-55-3	4-BROMOPHENYL PHENYL ETHER	60	52.3	10		87	67 - 108%
118-74-1	HEXACHLOROBENZENE	60	51.1	10		85	48 - 115%
58-90-2	2,3,4,6-TETRACHLOROPHENOL	100	77.9	10		78	69 - 117%

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12/16/2015
Date Analyzed: 12/23/2015
Prep Method: SW3520C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6087

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
87-86-5	PENTACHLOROPHENOL	60	41.5	20		69	40 - 114%
85-01-8	PHENANTHRENE	60	54.2	10		90	64 - 113%
120-12-7	ANTHRACENE	60	52.9	10		88	72 - 108%
86-74-8	CARBAZOLE	60	65.8	10		110	65 - 119%
84-74-2	DI-N-BUTYL PHTHALATE	60	56.3	10		94	64 - 118%
206-44-0	FLUORANTHENE	60	55.7	10		93	63 - 122%
129-00-0	PYRENE	60	48.6	10		81	60 - 113%
85-68-7	BUTYL BENZYL PHTHALATE	60	50.5	10		84	64 - 121%
56-55-3	BENZO(A)ANTHRACENE	60	52	10		87	69 - 107%
91-94-1	3,3'-DICHLOROBENZIDINE	60	61.1	10		102	1 - 136%
218-01-9	CHRYSENE	60	53.5	10		89	68 - 114%
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	60	50.8	10		85	65 - 119%
117-84-0	DI-N-OCTYL PHTHALATE	60	53.5	10		89	62 - 119%
205-99-2	BENZO(B)FLUORANTHENE	60	51.4	10		86	67 - 111%
207-08-9	BENZO(K)FLUORANTHENE	60	55.2	10		92	65 - 118%
50-32-8	BENZO(A)PYRENE	60	47.1	10		78	62 - 104%
193-39-5	INDENO(1,2,3-CD)PYRENE	60	52.7	10		88	54 - 124%
53-70-3	DIBENZO(A,H)ANTHRACENE	60	54.7	10		91	57 - 126%
191-24-2	BENZO(G,H,I)PERYLENE	60	51.5	10		86	52 - 124%

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12/16/2015
Date Analyzed: 12/23/2015
Prep Method: SW3520C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6088

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
110-86-1	PYRIDINE	60	37.4	10		62	20	4
62-75-9	N-NITROSODIMETHYLAMINE	60	49.8	10		83	20	12
62-53-3	ANILINE	60	66.4	10		111	20	3
108-95-2	PHENOL	60	51.3	10		85	20	10
111-44-4	BIS(2-CHLOROETHYL)ETHER	60	47.5	10		79	20	7
95-57-8	2-CHLOROPHENOL	60	50	10		83	20	10
541-73-1	1,3-DICHLOROBENZENE	60	43	10		72	20	12
106-46-7	1,4-DICHLOROBENZENE	60	44.1	10		74	20	12
95-50-1	1,2-DICHLOROBENZENE	60	41.9	10		70	20	12
100-51-6	BENZYL ALCOHOL	60	54.6	10		91	20	11
108-60-1	BIS(2-CHLOROISOPROPYL)ETHER	60	53.6	10		89	20	10
95-48-7	2-METHYLPHENOL	60	51.8	10		86	20	8
621-64-7	N-NITROSO-DI-N-PROPYLAMINE	60	54.7	10		91	20	6
108-39-4	3+4-METHYLPHENOL	60	53.1	10		89	20	8
67-72-1	HEXACHLOROETHANE	60	44.9	10		75	20	13
98-95-3	NITROBENZENE	60	53.7	10		89	20	10
78-59-1	ISOPHORONE	60	54.9	10		92	20	6
88-75-5	2-NITROPHENOL	60	52.2	10		87	20	9
105-67-9	2,4-DIMETHYLPHENOL	60	47.9	10		80	20	5
111-91-1	BIS(2-CHLOROETHOXY)METHANE	60	52.5	10		88	20	4
120-83-2	2,4-DICHLOROPHENOL	60	51.6	10		86	20	7
65-85-0	BENZOIC ACID	100	51.5	50	+	51	20	26
120-82-1	1,2,4-TRICHLOROBENZENE	60	45	10		75	20	7
91-20-3	NAPHTHALENE	60	50.5	10		84	20	7
106-47-8	4-CHLOROANILINE	60	67.5	10		113	20	5
87-68-3	HEXACHLOROBUTADIENE	60	45.7	10		76	20	12
59-50-7	4-CHLORO-3-METHYLPHENOL	60	57.1	10		95	20	7

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12/16/2015
Date Analyzed: 12/23/2015
Prep Method: SW3520C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6088

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
91-57-6	2-METHYLNAPHTHALENE	60	50.9	10		85	20	6
90-12-0	1-METHYLNAPHTHALENE	60	48.8	10		81	20	7
77-47-4	HEXACHLOROCYCLOPENTADIENE	60	11.8	10		20	20	13
88-06-2	2,4,6-TRICHLOROPHENOL	60	48	10		80	20	8
95-95-4	2,4,5-TRICHLOROPHENOL	60	48.5	10		81	20	5
91-58-7	2-CHLORONAPHTHALENE	60	47.7	10		79	20	6
88-74-4	2-NITROANILINE	60	50.9	20		85	20	5
131-11-3	DIMETHYL PHTHALATE	60	51.4	10		86	20	5
606-20-2	2,6-DINITROTOLUENE	60	50.3	10		84	20	2
208-96-8	ACENAPHTHYLENE	60	52	10		87	20	6
99-09-2	3-NITROANILINE	60	62.3	20		104	20	7
83-32-9	ACENAPHTHENE	60	50	10		83	20	6
51-28-5	2,4-DINITROPHENOL	60	44.2	20		74	20	11
100-02-7	4-NITROPHENOL	60	51	20		85	20	8
132-64-9	DIBENZOFURAN	60	49.6	10		83	20	4
121-14-2	2,4-DINITROTOLUENE	60	52.9	10		88	20	4
84-66-2	DIETHYL PHTHALATE	60	52.4	10		87	20	4
86-73-7	FLUORENE	60	51.1	10		85	20	4
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	60	50.1	10		84	20	6
100-01-6	4-NITROANILINE	60	62.6	20		104	20	8
103-33-3	AZOBENZENE	60	50.6	10		84	20	3
534-52-1	4,6-DINITRO-2-METHYLPHENOL	60	52.2	20		87	20	12
86-30-6	N-NITROSODIPHENYLAMINE	60	46.7	10		78	20	4
101-55-3	4-BROMOPHENYL PHENYL ETHER	60	53	10		88	20	1
118-74-1	HEXACHLOROBENZENE	60	52.7	10		88	20	3
58-90-2	2,3,4,6-TETRACHLOROPHENOL	100	82.5	10		83	20	6
87-86-5	PENTACHLOROPHENOL	60	46.1	20		77	20	11

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Lab ID: EX151216-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12/16/2015
Date Analyzed: 12/23/2015
Prep Method: SW3520C

Prep Batch: EX151216-1
QCBatchID: EX151216-1-1
Run ID: SV151223-3
Cleanup: NONE
Basis: N/A
File Name: R6088

Sample Aliquot: 1000 ml
Final Volume: 1 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
85-01-8	PHENANTHRENE	60	56.8	10		95	20	5
120-12-7	ANTHRACENE	60	55.9	10		93	20	6
86-74-8	CARBAZOLE	60	70.4	10		117	20	7
84-74-2	DI-N-BUTYL PHTHALATE	60	58.3	10		97	20	3
206-44-0	FLUORANTHENE	60	60.6	10		101	20	8
129-00-0	PYRENE	60	48.6	10		81	20	0
85-68-7	BUTYL BENZYL PHTHALATE	60	49.2	10		82	20	2
56-55-3	BENZO(A)ANTHRACENE	60	54.6	10		91	20	5
91-94-1	3,3'-DICHLOROBENZIDINE	60	59.5	10		99	20	3
218-01-9	CHRYSENE	60	55.6	10		93	20	4
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	60	51.1	10		85	20	1
117-84-0	DI-N-OCTYL PHTHALATE	60	55.6	10		93	20	4
205-99-2	BENZO(B)FLUORANTHENE	60	56.4	10		94	20	9
207-08-9	BENZO(K)FLUORANTHENE	60	58.5	10		97	20	6
50-32-8	BENZO(A)PYRENE	60	50.7	10		85	20	7
193-39-5	INDENO(1,2,3-CD)PYRENE	60	54.5	10		91	20	3
53-70-3	DIBENZO(A,H)ANTHRACENE	60	55.5	10		93	20	1
191-24-2	BENZO(G,H,I)PERYLENE	60	50.5	10		84	20	2

Data Package ID: *SV1512229-1*

GC/MS Semi-volatiles

Method SW8270D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1512229
Client Name: COGCC
ClientProject ID: MW

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
118-79-6	2,4,6-TRIBROMOPHENOL	75	78		82		42 - 117
321-60-8	2-FLUOROBIPHENYL	50	73		74		55 - 108
367-12-4	2-FLUOROPHENOL	75	70		79		46 - 105
4165-60-0	NITROBENZENE-D5	50	79		82		53 - 111
4165-62-2	PHENOL-D5	75	78		83		50 - 109
1718-51-0	TERPHENYL-D14	50	78		76		34 - 139

Data Package ID: *SV1512229-1*

Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\122315\R6085.D Vial: 3
Acq On : 23 Dec 2015 11:28 Operator: twk SOP 506 Re
Sample : SV151223-3CCV Inst : HPSV-3
Misc : ST151012-3 Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:02 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Thu Dec 17 09:26:50 2015
Response via : Initial Calibration
DataAcq Meth : 121115

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	395348	40.00	ng/uL	0.00
25) Naphthalene-d8	6.45	136	1736997	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.99	164	794581	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.26	188	1225060	40.00	ng/uL	0.00
80) Chrysene-d12	11.53	240	601982	40.00	ng/uL	0.02
91) Perylene-d12	12.84	264	329275	40.00	ng/uL	0.03
System Monitoring Compounds						
5) 2-Fluorophenol	3.95	112	846519	62.09	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 82.79%			
6) 2-Chlorophenol-d4	5.06	132	930963	62.47	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 83.29%			
8) Phenol-d5	4.90	99	1080169	62.31	ng/uL	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery = 83.08%			
15) 1,2-Dichlorobenzene-d4	5.42	152	594175	61.23	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 122.46%#			
26) Nitrobenzene-d5	5.79	82	1043135	62.07	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 124.14%#			
46) 2-Fluorobiphenyl	7.39	172	1859991	59.45	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 118.90%#			
68) 2,4,6-Tribromophenol	8.67	330	249394	60.35	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 80.47%			
83) p-Terphenyl-d14	10.58	244	1279195	55.79	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 111.58%			
Target Compounds						Qvalue
2) 1,4-Dioxane	2.17	88	381614	63.39	ng/uL	98
3) Pyridine	2.55	79	970818m	62.95	ng/uL	
4) n-Nitrosodimethylamine	2.51	74	556061	64.33	ng/uL	99
7) Aniline	4.95	93	978327	61.46	ng/uL	98
9) Phenol	4.91	94	1113542	62.57	ng/uL	100
11) Bis(2-chloroethyl)ether	4.99	93	967153	64.16	ng/uL	97
12) 2-Chlorophenol	5.07	128	903426	61.10	ng/uL	99
13) 1,3-Dichlorobenzene	5.21	146	959637	60.77	ng/uL	99
14) 1,4-Dichlorobenzene	5.28	146	988888	60.99	ng/ul	99
16) 1,2-Dichlorobenzene	5.43	146	943314	60.82	ng/uL	100
17) Benzyl Alcohol	5.39	108	572966	62.30	ng/uL	93
18) Bis(2-chloroisopropyl)ethe	5.51	45	1212690	64.97	ng/uL	99
19) 2-Methylphenol	5.49	107	778022	61.98	ng/uL	98
20) n-Nitroso-di-n-propylamine	5.63	70	730776	64.55	ng/uL	99
21) 3+4-Methylphenol	5.63	108	916561	62.24	ng/uL	98
23) Hexachloroethane	5.75	117	391337	63.13	ng/uL	97

(#) = qualifier out of range (m) = manual integration
12/23/15
R6085.D 121115.M Wed Dec 23 12:03:15 2015 Page 1

Data File : E:\HPCHEM\1\DATA\122315\R6085.D Vial: 3
Acq On : 23 Dec 2015 11:28 Operator: twk SOP 506 Re
Sample : SV151223-3CCV Inst : HPSV-3
Misc : ST151012-3 Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:02 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Thu Dec 17 09:26:50 2015
Response via : Initial Calibration
DataAcq Meth : 121115

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	Nitrobenzene	5.81	123	442458	60.83	ng/uL	98
28)	Isophorone	6.02	82	1750957	62.09	ng/uL	100
30)	2-Nitrophenol	6.10	139	474830	60.05	ng/uL	98
31)	2,4-Dimethylphenol	6.12	107	979130	61.69	ng/uL	98
32)	Bis(2-chloroethoxy)methane	6.20	93	1022444	61.85	ng/uL	99
33)	2,4-Dichlorophenol	6.32	162	661195	59.33	ng/uL	100
34)	Benzoic acid	6.24	105	486717	55.33	ng/uL	96
35)	1,2,4-Trichlorobenzene	6.40	180	716989	59.26	ng/uL	99
36)	Naphthalene	6.47	128	2771014	60.38	ng/uL	99
37)	4-Chloroaniline	6.50	127	784798	62.94	ng/uL	98
38)	Hexachlorobutadiene	6.57	225	361620	59.87	ng/uL	95
39)	4-Chloro-3-methylphenol	6.92	107	807277	62.98	ng/uL	99
40)	2-Methylnaphthalene	7.08	142	1820498	59.59	ng/uL	99
41)	1-Methylnaphthalene	7.17	142	1661787	59.22	ng/uL	99
43)	Hexachlorocyclopentadiene	7.22	237	159204	49.14	ng/uL	98
44)	2,4,6-Trichlorophenol	7.32	196	386724	57.73	ng/uL	98
45)	2,4,5-Trichlorophenol	7.36	196	409374	59.68	ng/uL	96
47)	2-Chloronaphthalene	7.51	162	1494535	58.43	ng/uL	99
48)	2-Nitroaniline	7.59	65	489069	64.47	ng/uL	97
49)	1,4-Dinitrobenzene	7.70	168	218247	60.18	ng/uL	97
50)	Dimethylphthalate	7.72	163	1724891	59.80	ng/uL	100
51)	1,3-Dinitrobenzene	7.77	168	240598	57.75	ng/uL	90
52)	2,6-Dinitrotoluene	7.79	165	379600	59.40	ng/uL	96
53)	1,2-Dinitrobenzene	7.84	168	167284	58.22	ng/uL	95
54)	Acenaphthylene	7.87	152	2375573	59.38	ng/uL	100
55)	3-Nitroaniline	7.94	138	310712	57.60	ng/uL	80
56)	Acenaphthene	8.02	154	1588077	59.21	ng/uL	100
57)	2,4-Dinitrophenol	8.03	184	108821	49.61	ng/uL	43
58)	4-Nitrophenol	8.08	109	155903	59.31	ng/uL	96
59)	Dibenzofuran	8.16	168	2082163	59.44	ng/uL	98
60)	2,4-Dinitrotoluene	8.14	165	473925	59.07	ng/uL	98
61)	2,3,5,6-Tetrachlorophenol	8.23	232	294459	55.84	ng/uL	98
62)	2,3,4,6-Tetrachlorophenol	8.27	232	311937	57.20	ng/uL	96
63)	Diethylphthalate	8.31	149	1783621	60.91	ng/uL	100
64)	Fluorene	8.46	166	1722205	59.85	ng/uL	100
65)	4-Chlorophenyl phenyl ethe	8.43	204	713995	58.84	ng/uL	100
66)	4-Nitroaniline	8.46	138	292767m	62.27	ng/uL	
67)	Azobenzene	8.57	77	1986494	63.14	ng/uL	99
70)	4,6-Dinitro-2-methylphenol	8.49	198	183141	51.73	ng/uL	98
71)	n-Nitrosodiphenylamine	8.54	169	1343228	58.57	ng/uL	99
72)	4-Bromophenyl phenyl ether	8.85	248	409268	58.53	ng/uL	99

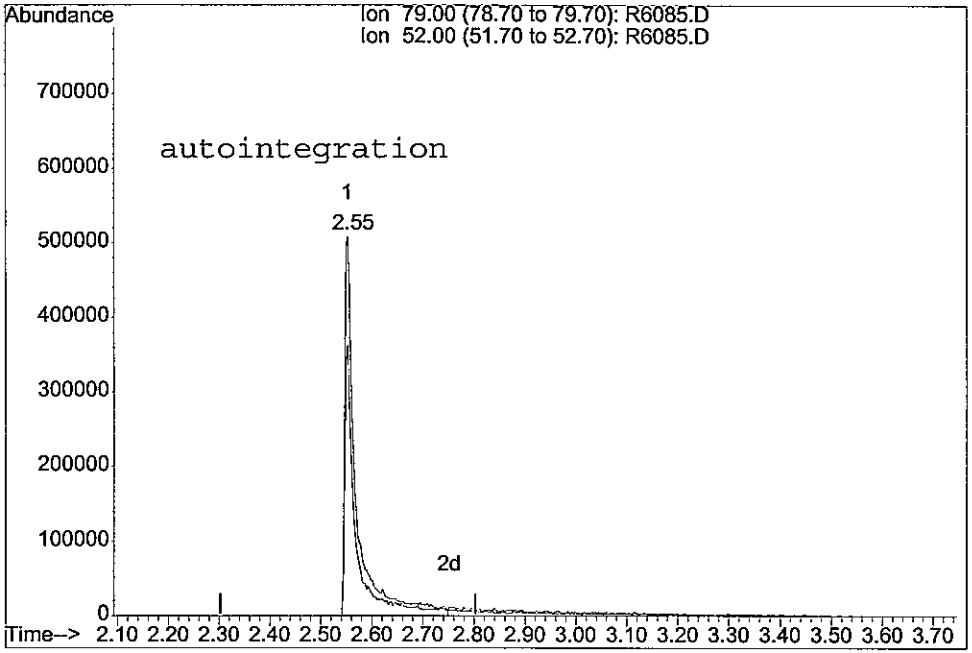
(#) = qualifier out of range (m) = manual integration

Data File : E:\HPCHEM\1\DATA\122315\R6085.D Vial: 3
Acq On : 23 Dec 2015 11:28 Operator: twk SOP 506 Re
Sample : SV151223-3CCV Inst : HPSV-3
Misc : ST151012-3 Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:02 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Thu Dec 17 09:26:50 2015
Response via : Initial Calibration
DataAcq Meth : 121115

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
73) Hexachlorobenzene	8.94	284	481423	56.81	ng/uL	96
74) Pentachlorophenol	9.10	266	199877	55.22	ng/uL	96
75) Phenanthrene	9.28	178	2206176	59.86	ng/uL	100
76) Anthracene	9.33	178	2169463	60.86	ng/uL	99
77) Carbazole	9.46	167	1493911	63.50	ng/uL	100
78) Di-n-butylphthalate	9.69	149	2978582	63.54	ng/uL	100
79) Fluoranthene	10.30	202	1826029	62.24	ng/uL	99
81) Benzidine	10.38	184	91577	72.67	ng/uL#	94
82) Pyrene	10.50	202	1797791	56.01	ng/uL	99
84) Butylbenzylphthalate	10.97	149	1014176	59.06	ng/uL	98
85) Bis(2-ethylhexyl) adipate	10.99	129	1045406	58.11	ng/uL	99
86) Benzo[a]anthracene	11.52	228	1020650	59.05	ng/uL	99
87) 3,3'-Dichlorobenzidine	11.46	252	244462	60.47	ng/uL	98
88) Chrysene	11.55	228	957222	58.41	ng/uL	98
89) Bis(2-ethylhexyl)phthalate	11.43	149	1427528	58.36	ng/uL	99
90) Di-n-octylphthalate	11.96	149	2060097	61.91	ng/uL	99
92) Benzo[b]fluoranthene	12.46	252	677818	62.54	ng/uL	97
93) Benzo[k]fluoranthene	12.48	252	627646	62.50	ng/uL	95
94) Benzo[a]pyrene	12.79	252	537591	61.58	ng/uL	98
95) Indeno(1,2,3-c,d)pyrene	14.10	276	436695	58.43	ng/uL	100
96) Dibenzo[a,h]anthracene	14.08	278	367905	60.25	ng/uL	96
97) Benzo[g,h,i]perylene	14.48	276	352382	55.68	ng/uL	99

(#) = qualifier out of range (m) = manual integration



TIC: R6085.D

(3) Pyridine (T)
2.55min 51.59ng/uL
response 795649

Ion	Exp%	Act%
79.00	100	100
52.00	56.10	71.16
0.00	0.00	0.00
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

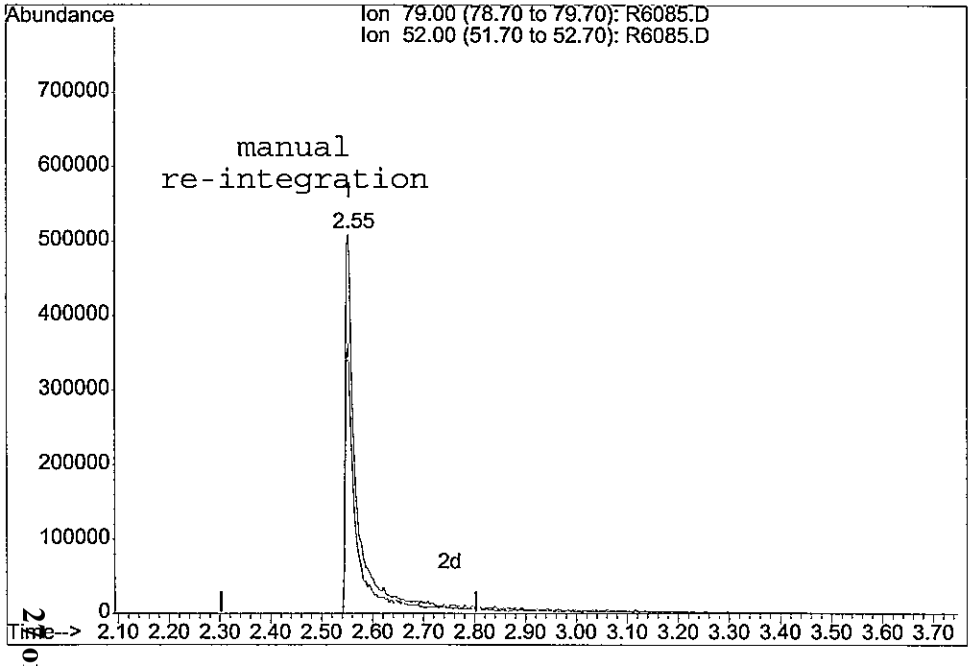
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[X] under-integrated peak's area

[] other (_____)

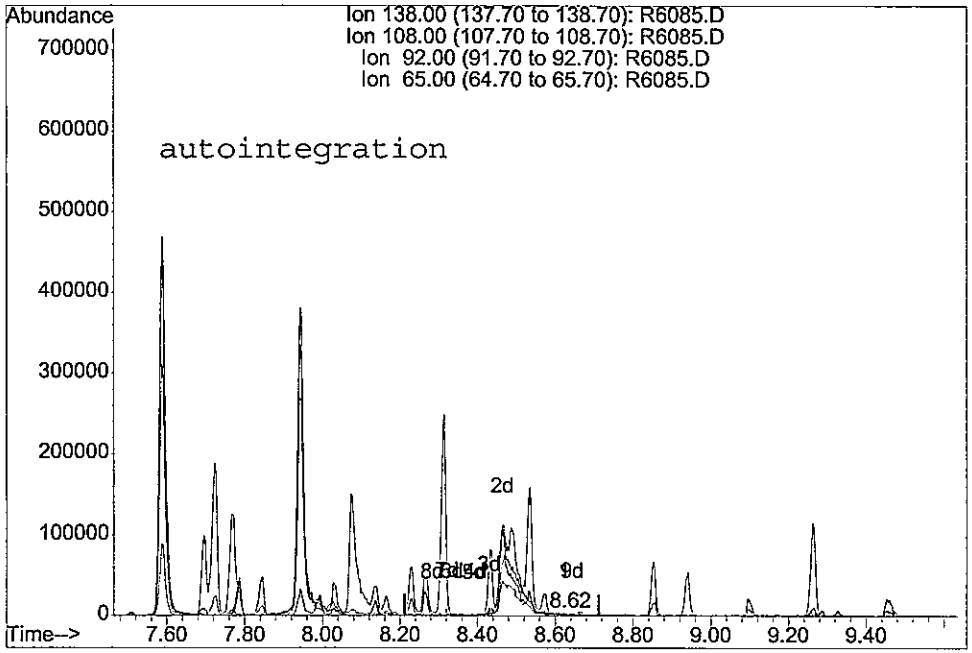
initials: Tw date: 12/23/15



TIC: R6085.D

(3) Pyridine (T)
2.55min 62.95ng/uL m
response 970818

Ion	Exp%	Act%
79.00	100	100
52.00	56.10	58.32
0.00	0.00	0.00
0.00	0.00	0.00



TIC: R6085.D

(66) 4-Nitroaniline (T)
8.62min 0.31ng/uL
response 1473

Ion	Exp%	Act%
138.00	100	100
108.00	75.50	69.31
92.00	47.80	54.58
65.00	114.00	114.60

Reason for manual re-integration?

[X] missed peak assignment

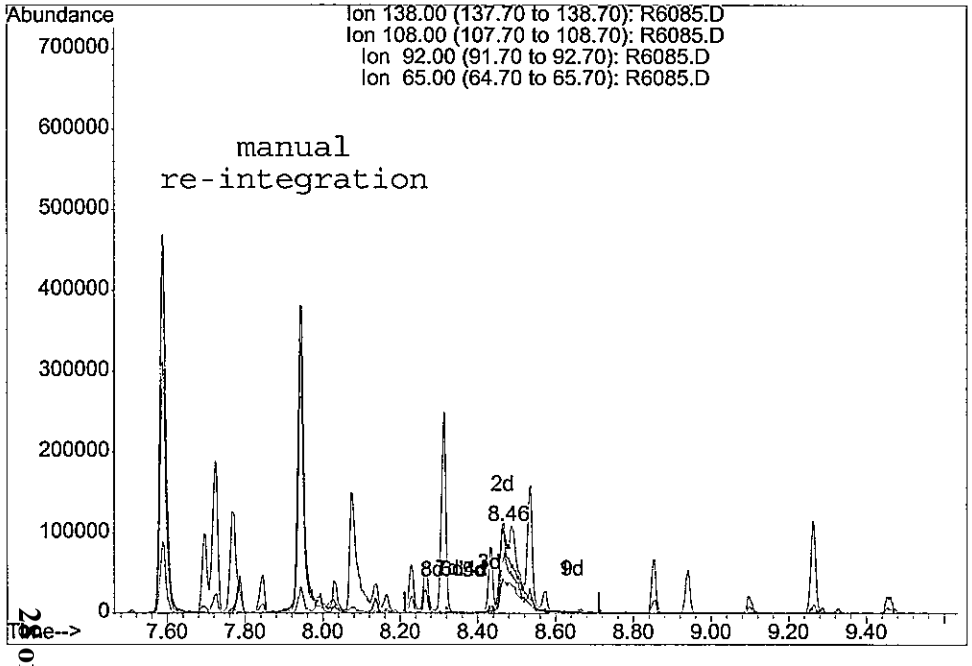
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[] under-integrated peak's area

[] other (_____)

initials: _____ date: 12/23/15



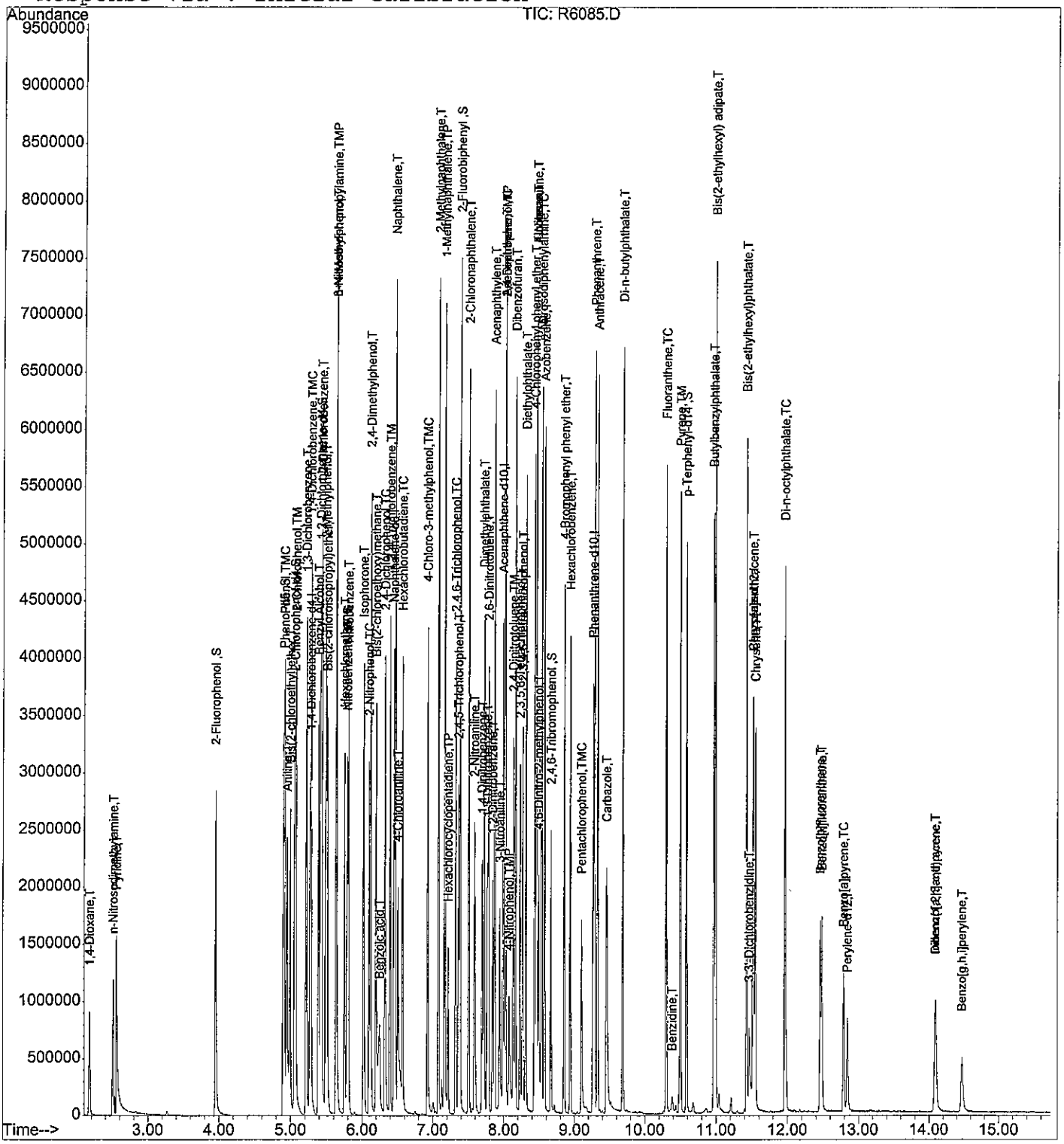
TIC: R6085.D

(66) 4-Nitroaniline (T)
8.46min 62.27ng/uL m
response 292767

Ion	Exp%	Act%
138.00	100	100
108.00	75.50	0.35#
92.00	47.80	0.27#
65.00	114.00	0.58#

Data File : E:\HPCHEM\1\DATA\122315\R6085.D Vial: 3
Acq On : 23 Dec 2015 11:28 Operator: twk SOP 506
Sample : SV151223-3CCV Inst : HPSV-3
Misc : ST151012-3 Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:02 2015 Quant Results File: 121115.RES

Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Thu Dec 17 09:26:50 2015
Response via : Initial Calibration



Data File : E:\HPCHEM\1\DATA\122315\R6086.D Vial: 4
Acq On : 23 Dec 2015 11:52 Operator: twk SOP 506 Re
Sample : EX151216-1MB Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:22 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	411958	40.00	ng/uL	0.00
25) Naphthalene-d8	6.44	136	1747917	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.98	164	848170	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.25	188	1071236	40.00	ng/uL	0.00
80) Chrysene-d12	11.51	240	455957	40.00	ng/uL	-0.02
91) Perylene-d12	12.82	264	290085	40.00	ng/uL	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.94	112	721897	50.82	ng/uL	-0.01
Spiked Amount 75.000	Range 46 - 105		Recovery = 67.76%			
6) 2-Chlorophenol-d4	5.04	132	848607	54.65	ng/uL	-0.01
Spiked Amount 75.000	Range 33 - 110		Recovery = 72.87%			
8) Phenol-d5	4.88	99	1004790	55.63	ng/uL	-0.02
Spiked Amount 75.000	Range 50 - 109		Recovery = 74.17%			
15) 1,2-Dichlorobenzene-d4	5.41	152	327372	32.37	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 64.74%			
26) Nitrobenzene-d5	5.78	82	629718	37.24	ng/uL	-0.01
Spiked Amount 50.000	Range 53 - 111		Recovery = 74.48%			
46) 2-Fluorobiphenyl	7.38	172	1088133	32.58	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 65.16%			
68) 2,4,6-Tribromophenol	8.66	330	167791	38.04	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 50.72%			
83) p-Terphenyl-d14	10.58	244	713296	41.07	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 82.14%			

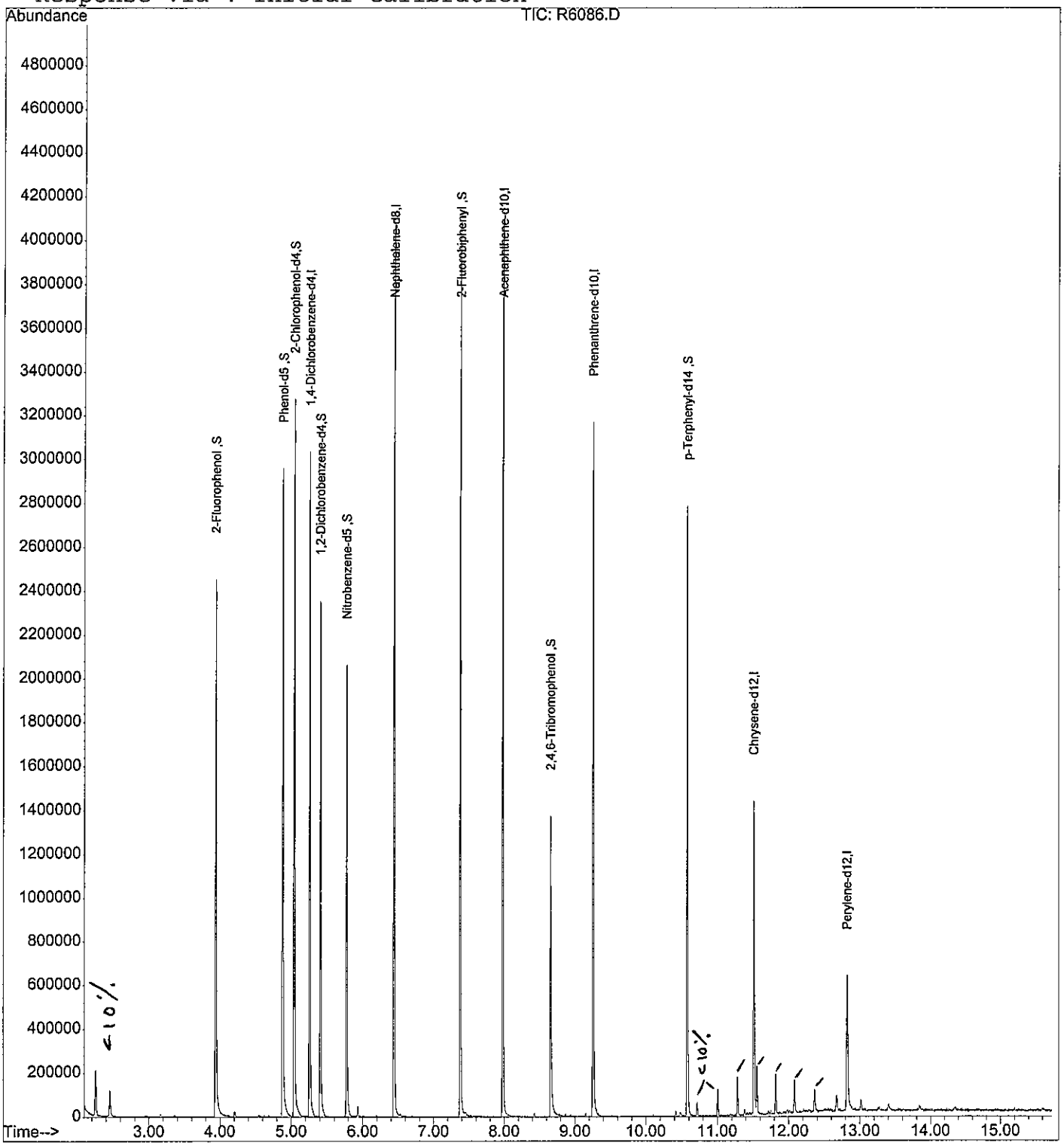
Target Compounds Qvalue

TW 12/23/15

(#) = qualifier out of range (m) = manual integration

Data File : E:\HPCHEM\1\DATA\122315\R6086.D Vial: 4
Acq On : 23 Dec 2015 11:52 Operator: twk SOP 506
Sample : EX151216-1MB Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:22 2015 Quant Results File: 121115.RES

Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6086.D
Acq On : 23 Dec 2015 11:52
Sample : EX151216-1MB
Misc : EX151216-1 WATER
MS Integration Params: LSCINT.P

Vial: 4
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

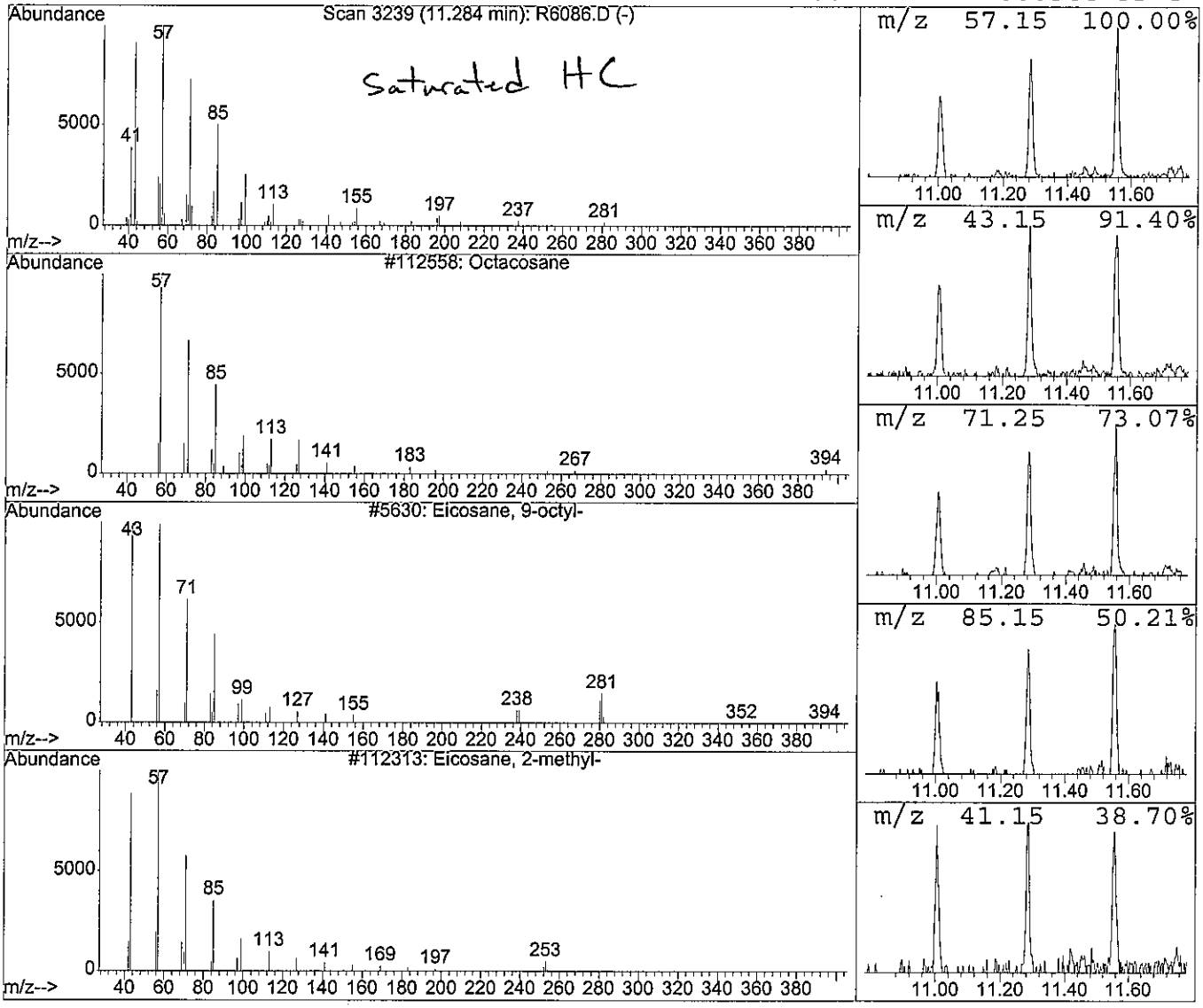
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

Peak Number 1 Octacosane — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.28	4.91 ng/uL	168263	Chrysene-d12	11.51

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octacosane	394	C28H58	000630-02-4	80
2	Eicosane, 9-octyl-	394	C28H58	013475-77-9	72
3	Eicosane, 2-methyl-	296	C21H44	001560-84-5	72
4	Dotriacontane	451	C32H66	000544-85-4	72



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6086.D
Acq On : 23 Dec 2015 11:52
Sample : EX151216-1MB
Misc : EX151216-1 WATER
MS Integration Params: LSCINT.P

Vial: 4
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

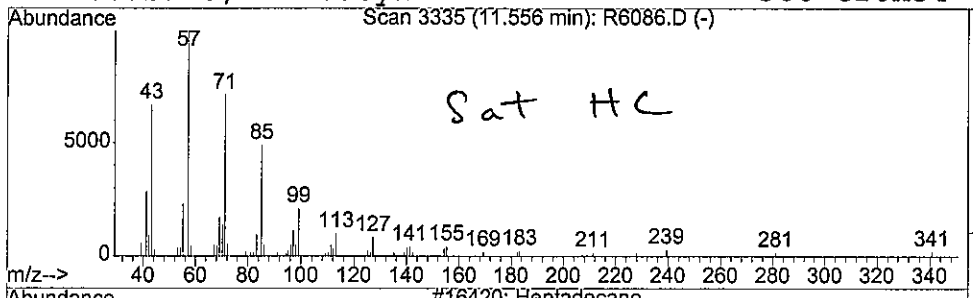
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

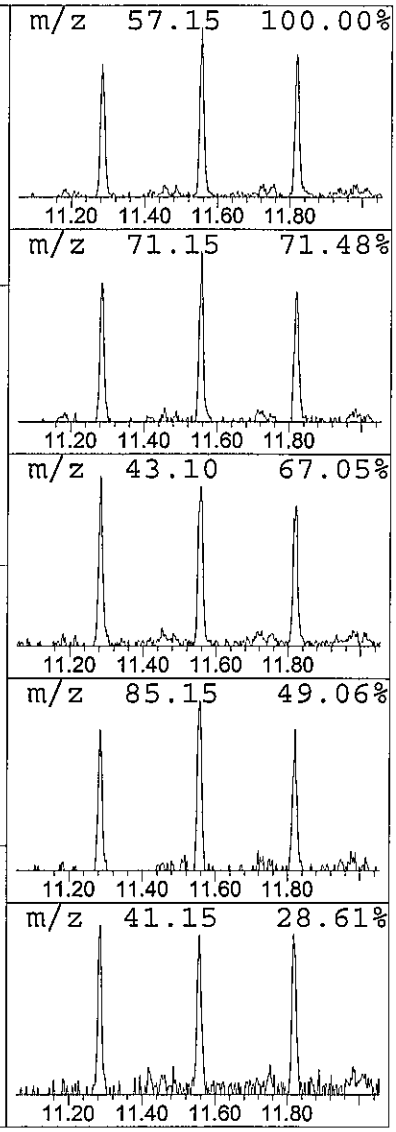
****

Peak Number 1 Heptadecane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.56	9.84 ng/uL	337190	Chrysene-d12	11.51

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane	240	C17H36	000629-78-7	87
2	Heneicosane	296	C21H44	000629-94-7	83
3	Docosane	310	C22H46	000629-97-0	83
4	Docosane, 11-butyl-	366	C26H54	013475-76-8	74





Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6086.D Vial: 4
Acq On : 23 Dec 2015 11:52 Operator: twk SOP 5
Sample : EX151216-1MB Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P

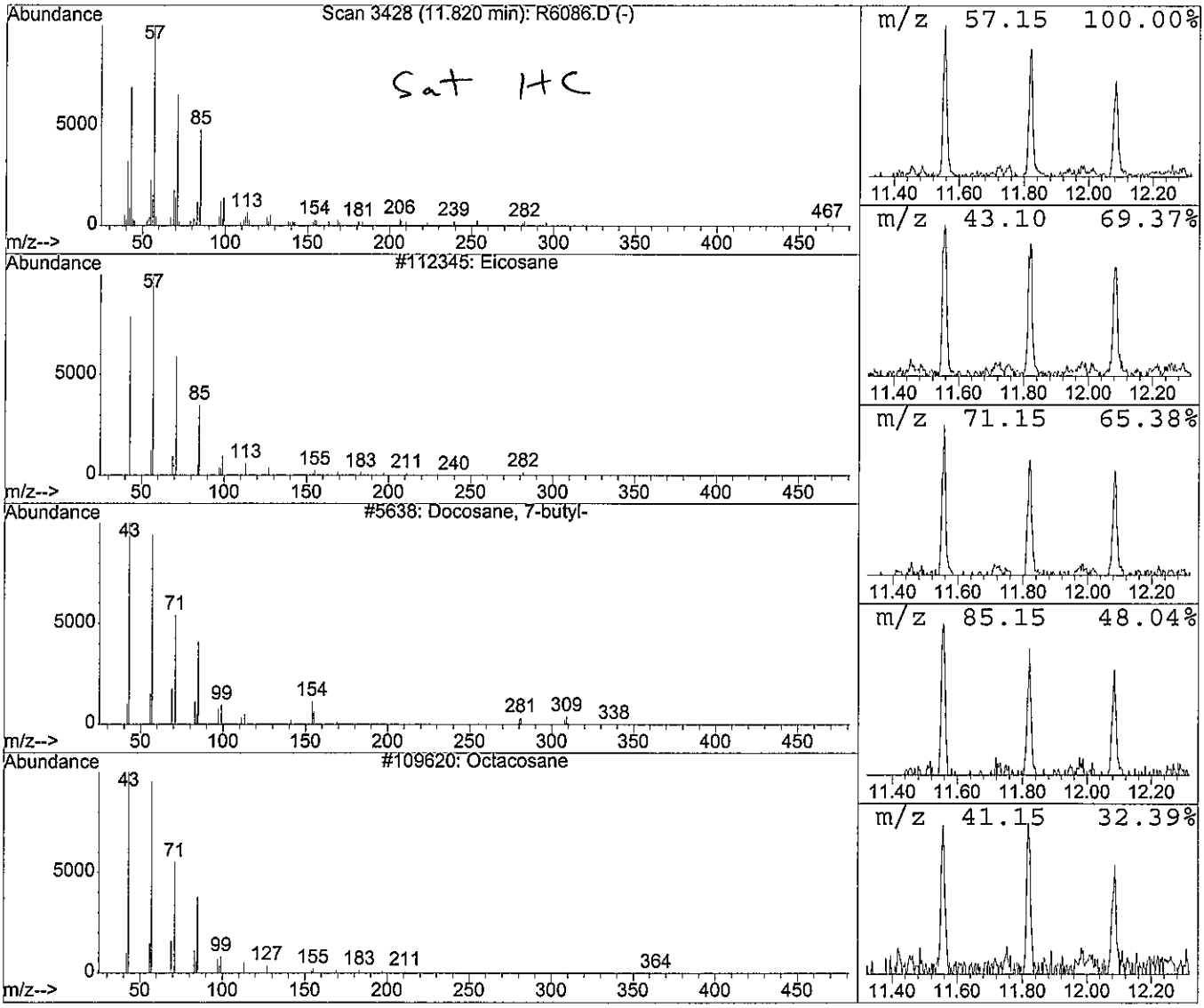
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

Peak Number 1 Eicosane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.82	10.16 ng/uL	348102	Chrysene-d12	11.51

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	93
2	Docosane, 7-butyl-	366	C26H54	055282-15-0	86
3	Octacosane	394	C28H58	000630-02-4	83
4	Pentacosane	352	C25H52	000629-99-2	80



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6086.D Vial: 4
Acq On : 23 Dec 2015 11:52 Operator: twk SOP 5
Sample : EX151216-1MB Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P

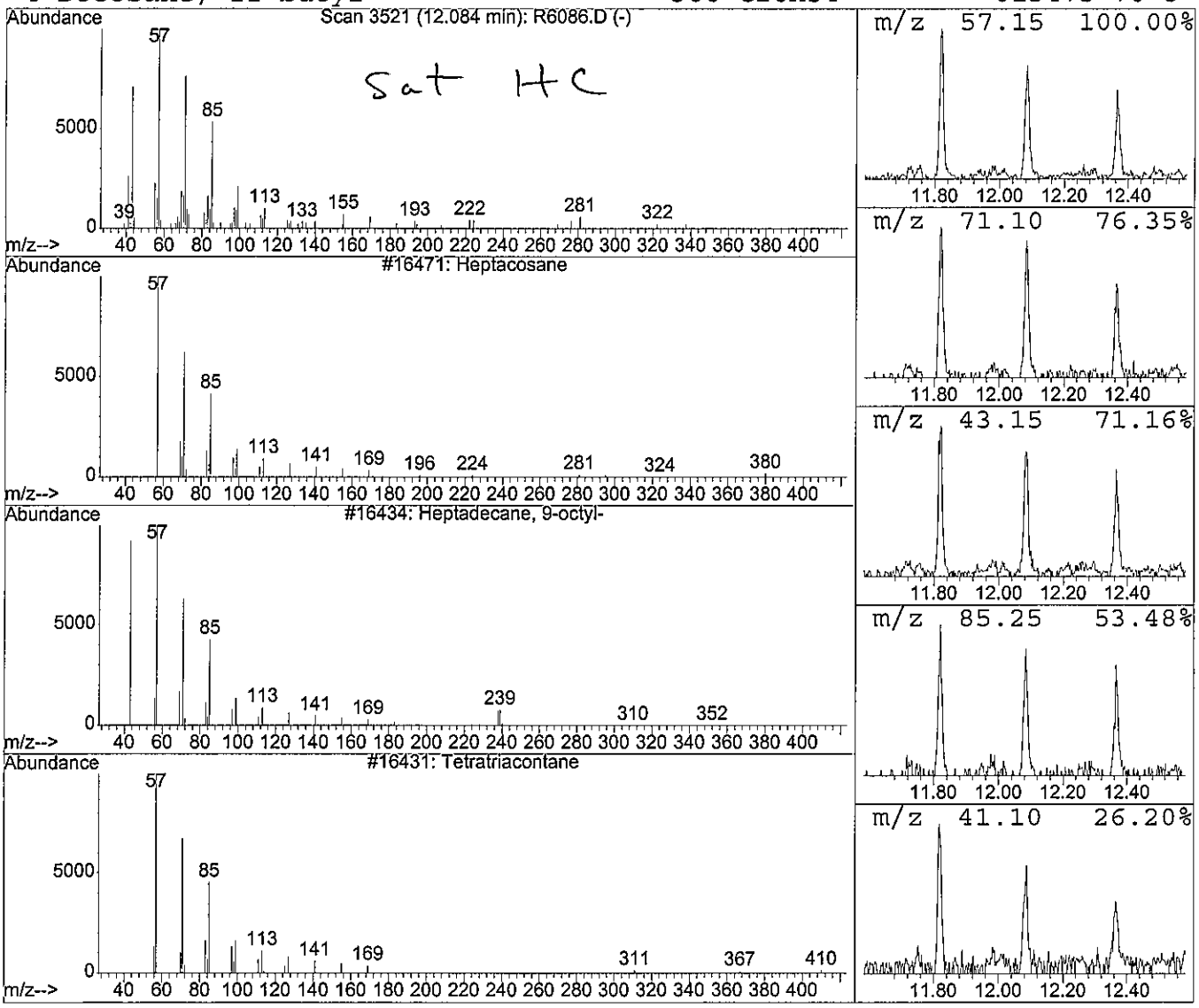
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

Peak Number 1 Heptacosane Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.08	11.68 ng/uL	400094	Chrysene-d12	11.51

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptacosane	380	C27H56	000593-49-7	83
2	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	83
3	Tetratriacontane	479	C34H70	014167-59-0	83
4	Docosane, 11-butyl-	366	C26H54	013475-76-8	80



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6086.D
Acq On : 23 Dec 2015 11:52
Sample : EX151216-1MB
Misc : EX151216-1 WATER
MS Integration Params: LSCINT.P

Vial: 4
Operator: twk SOP 5
Inst : HPSV-3
Multiplr: 1.00

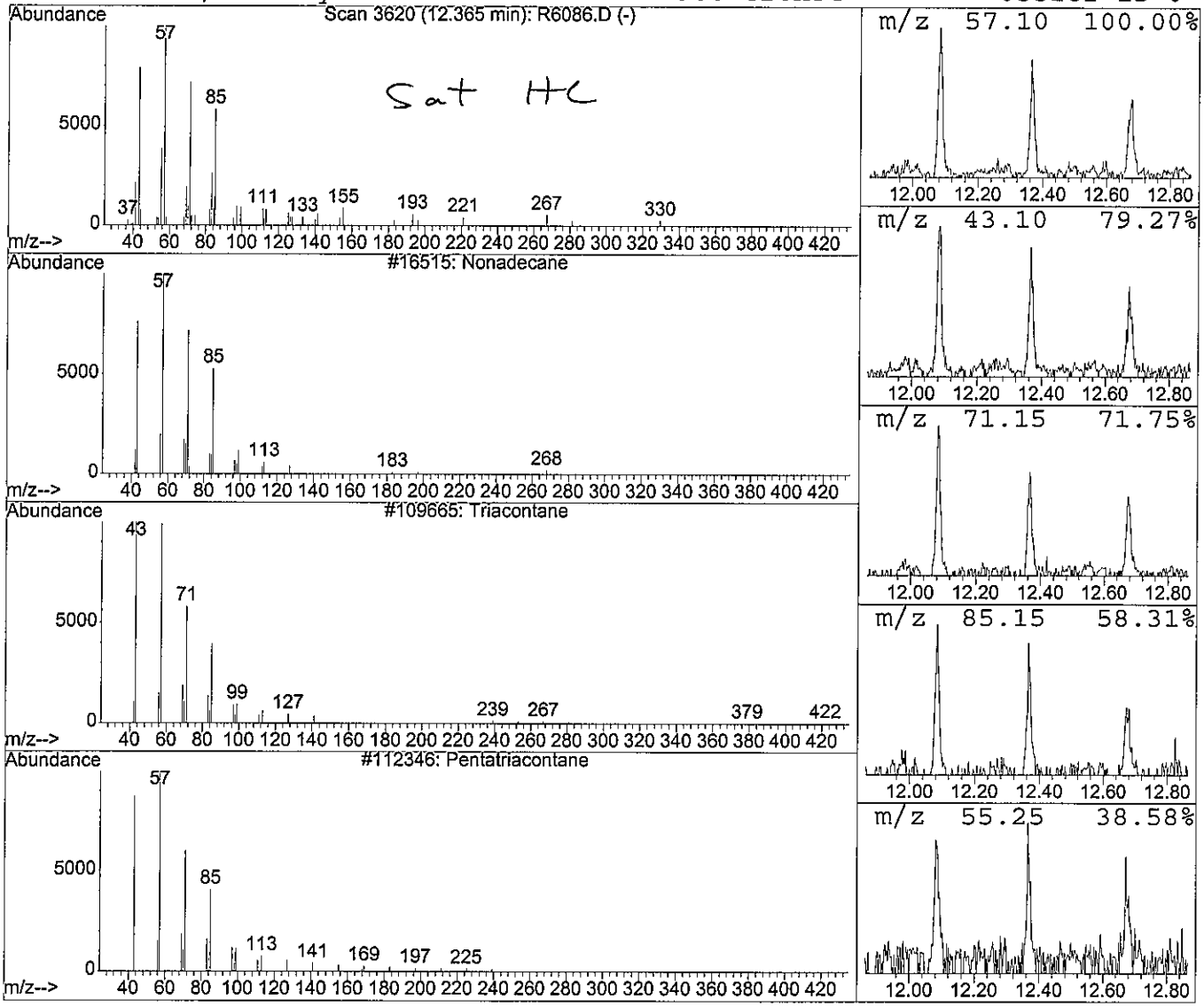
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

Peak Number 1 Nonadecane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.37	9.04 ng/uL	690957	Perylene-d12	12.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonadecane	268	C19H40	000629-92-5	58
2	Triacontane	422	C30H62	000638-68-6	49
3	Pentatriacontane	493	C35H72	000630-07-9	49
4	Docosane, 7-butyl-	366	C26H54	055282-15-0	47



Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\122315\R6087.D Vial: 5
Acq On : 23 Dec 2015 12:16 Operator: twk SOP 506 Re
Sample : EX151216-1LCS Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:33 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	404556	40.00	ng/uL	0.00
25) Naphthalene-d8	6.45	136	1749293	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.99	164	862542	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.26	188	1217030	40.00	ng/uL	0.00
80) Chrysene-d12	11.52	240	623968	40.00	ng/uL	-0.01
91) Perylene-d12	12.83	264	387709	40.00	ng/uL	-0.01
System Monitoring Compounds						
5) 2-Fluorophenol	3.94	112	735462	52.72	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 70.29%			
6) 2-Chlorophenol-d4	5.05	132	862638	56.57	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 75.43%			
8) Phenol-d5	4.89	99	1040888	58.68	ng/uL	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery = 78.24%			
15) 1,2-Dichlorobenzene-d4	5.41	152	332620	33.49	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 66.98%			
26) Nitrobenzene-d5	5.79	82	670697	39.63	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 79.26%			
46) 2-Fluorobiphenyl	7.38	172	1239951	36.51	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 73.02%			
68) 2,4,6-Tribromophenol	8.66	330	262569	58.53	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 78.04%			
83) p-Terphenyl-d14	10.59	244	930267	39.14	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 78.28%			
Target Compounds						Qvalue
3) Pyridine	2.55	79	567655m	35.97	ng/uL	
4) n-Nitrosodimethylamine	2.51	74	391040	44.21	ng/uL	99
7) Aniline	4.94	93	1053373	64.67	ng/uL	94
9) Phenol	4.91	94	842005	46.23	ng/uL	97
11) Bis(2-chloroethyl)ether	4.99	93	684338	44.36	ng/uL	96
12) 2-Chlorophenol	5.07	128	687154	45.42	ng/uL	100
13) 1,3-Dichlorobenzene	5.21	146	614077	38.00	ng/uL	100
14) 1,4-Dichlorobenzene	5.28	146	651790	39.28	ng/ul	99
16) 1,2-Dichlorobenzene	5.43	146	590807	37.23	ng/uL	99
17) Benzyl Alcohol	5.38	108	461888	49.08	ng/uL	95
18) Bis(2-chloroisopropyl)ethe	5.51	45	926556	48.51	ng/uL	99
19) 2-Methylphenol	5.48	107	610828	47.55	ng/uL	99
20) n-Nitroso-di-n-propylamine	5.63	70	593674	51.24	ng/uL	100
21) 3+4-Methylphenol	5.63	108	740654	49.15	ng/uL	99
23) Hexachloroethane	5.75	117	250445	39.48	ng/uL	99
27) Nitrobenzene	5.80	123	356005	48.60	ng/uL	100

(#) = qualifier out of range (m) = manual integration tw 12/23/15

Data File : E:\HPCHEM\1\DATA\122315\R6087.D Vial: 5
Acq On : 23 Dec 2015 12:16 Operator: twk SOP 506 Re
Sample : EX151216-1LCS Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:33 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28)	Isophorone	6.02	82	1473329	51.88	ng/uL	99
30)	2-Nitrophenol	6.10	139	379724	47.69	ng/uL	99
31)	2,4-Dimethylphenol	6.12	107	727948	45.54	ng/uL	96
32)	Bis(2-chloroethoxy)methane	6.20	93	837122	50.28	ng/uL	99
33)	2,4-Dichlorophenol	6.32	162	539870	48.10	ng/uL	98
34)	Benzoic acid	6.23	105	324332	39.76	ng/uL	95
35)	1,2,4-Trichlorobenzene	6.39	180	510192	41.87	ng/uL	100
36)	Naphthalene	6.47	128	2165346	46.85	ng/uL	100
37)	4-Chloroaniline	6.50	127	811679	64.12	ng/uL	98
38)	Hexachlorobutadiene	6.57	225	247779	40.73	ng/uL	96
39)	4-Chloro-3-methylphenol	6.92	107	689029	53.37	ng/uL	98
40)	2-Methylnaphthalene	7.08	142	1466416	47.66	ng/uL	99
41)	1-Methylnaphthalene	7.17	142	1280934	45.33	ng/uL	99
43)	Hexachlorocyclopentadiene	7.21	237	8747	10.39	ng/uL	92
44)	2,4,6-Trichlorophenol	7.32	196	321034	44.15	ng/uL	98
45)	2,4,5-Trichlorophenol	7.36	196	343144	46.09	ng/uL	97
47)	2-Chloronaphthalene	7.51	162	1240530	44.68	ng/uL	99
48)	2-Nitroaniline	7.58	65	398393	48.38	ng/uL	98
49)	1,4-Dinitrobenzene	7.69	168	189835	48.22	ng/uL	99
50)	Dimethylphthalate	7.72	163	1524736	48.70	ng/uL	99
51)	1,3-Dinitrobenzene	7.77	168	216235	47.81	ng/uL	94
52)	2,6-Dinitrotoluene	7.78	165	341370	49.21	ng/uL	96
53)	1,2-Dinitrobenzene	7.84	168	151901	48.70	ng/uL	96
54)	Acenaphthylene	7.87	152	2130066	49.05	ng/uL	99
55)	3-Nitroaniline	7.94	138	339654	58.00	ng/uL	88
56)	Acenaphthene	8.02	154	1371367	47.10	ng/uL	99
57)	2,4-Dinitrophenol	8.03	184	86054	39.39	ng/uL	80
58)	4-Nitrophenol	8.07	109	128441	46.91	ng/uL	95
59)	Dibenzofuran	8.16	168	1819400	47.85	ng/uL	98
60)	2,4-Dinitrotoluene	8.14	165	441199	50.66	ng/uL	96
61)	2,3,5,6-Tetrachlorophenol	8.23	232	425306	74.29	ng/uL	99
62)	2,3,4,6-Tetrachlorophenol	8.27	232	461001	77.87	ng/uL	97
63)	Diethylphthalate	8.31	149	1605934	50.52	ng/uL	99
64)	Fluorene	8.46	166	1538041	49.24	ng/uL	99
65)	4-Chlorophenyl phenyl ethe	8.43	204	623718	47.35	ng/uL	98
66)	4-Nitroaniline	8.46	138	295924	57.99	ng/uL#	1
67)	Azobenzene	8.57	77	1678348	49.14	ng/uL	99
70)	4,6-Dinitro-2-methylphenol	8.49	198	160507	46.37	ng/uL	97
71)	n-Nitrosodiphenylamine	8.53	169	1022357	44.88	ng/uL	100
72)	4-Bromophenyl phenyl ether	8.85	248	363609	52.34	ng/uL	99
73)	Hexachlorobenzene	8.94	284	429893	51.06	ng/uL	97

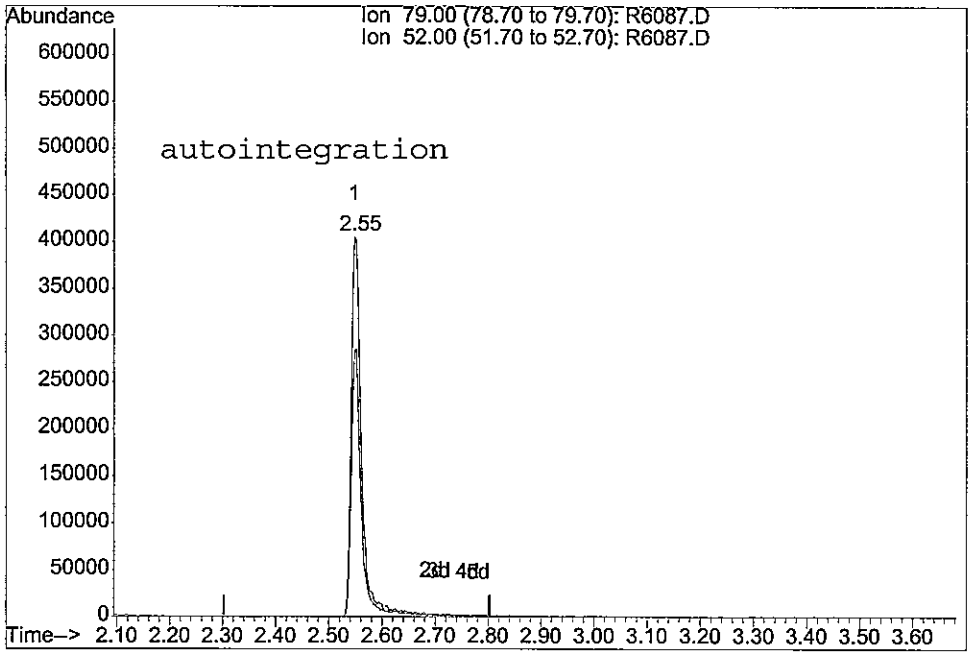
(#) = qualifier out of range (m) = manual integration

Data File : E:\HPCHEM\1\DATA\122315\R6087.D Vial: 5
Acq On : 23 Dec 2015 12:16 Operator: twk SOP 506 Re
Sample : EX151216-1LCS Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:33 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Pentachlorophenol	9.10	266	139050	41.46	ng/uL	98
75)	Phenanthrene	9.28	178	1983167	54.17	ng/uL	100
76)	Anthracene	9.33	178	1874533	52.93	ng/uL	100
77)	Carbazole	9.45	167	1537387	65.78	ng/uL	97
78)	Di-n-butylphthalate	9.69	149	2623476	56.34	ng/uL	100
79)	Fluoranthene	10.30	202	1623595	55.71	ng/uL	99
81)	Benzidine	10.38	184	288112	113.33	ng/uL	96
82)	Pyrene	10.50	202	1616463	48.58	ng/uL	99
84)	Butylbenzylphthalate	10.96	149	897984	50.45	ng/uL	99
85)	Bis(2-ethylhexyl) adipate	10.99	129	906978	48.64	ng/uL	99
86)	Benzo[a]anthracene	11.51	228	931683	52.00	ng/uL	99
87)	3,3'-Dichlorobenzidine	11.45	252	256096	61.12	ng/uL#	97
88)	Chrysene	11.54	228	909539	53.55	ng/uL	99
89)	Bis(2-ethylhexyl)phthalate	11.42	149	1288761	50.83	ng/uL	99
90)	Di-n-octylphthalate	11.95	149	1843934	53.47	ng/uL	100
92)	Benzo[b]fluoranthene	12.44	252	656535	51.44	ng/uL	97
93)	Benzo[k]fluoranthene	12.47	252	652601	55.19	ng/uL	98
94)	Benzo[a]pyrene	12.77	252	484087	47.09	ng/uL	98
95)	Indeno(1,2,3-c,d)pyrene	14.07	276	463754	52.70	ng/uL	98
96)	Dibenzo[a,h]anthracene	14.07	278	393660	54.75	ng/uL	97
97)	Benzo[g,h,i]perylene	14.46	276	383696	51.49	ng/uL	97

(#) = qualifier out of range (m) = manual integration



TIC: R6087.D

(3) Pyridine (T)
2.55min 34.65ng/uL
response 546790

Ion	Exp%	Act%
79.00	100	100
52.00	58.30	65.30
0.00	0.00	0.00
0.00	0.00	0.00

Reason for manual re-integration?

[] missed peak assignment

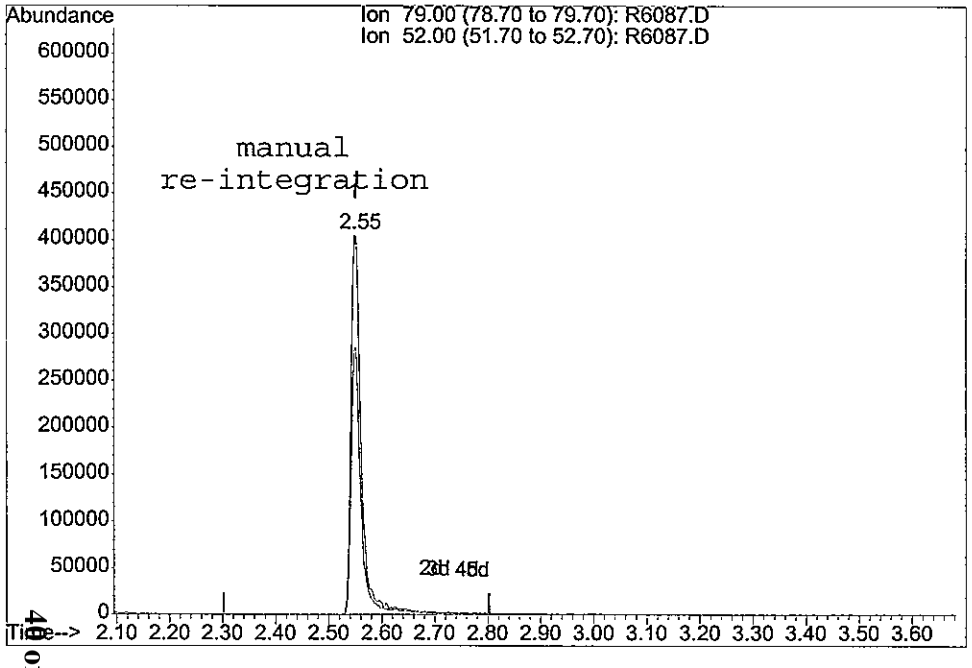
[] peak saturation (detector shutdown)

[] over-integrated peak's area

[X] under-integrated peak's area

[] other (_____)

initials: ZH date: 12/23/15



TIC: R6087.D

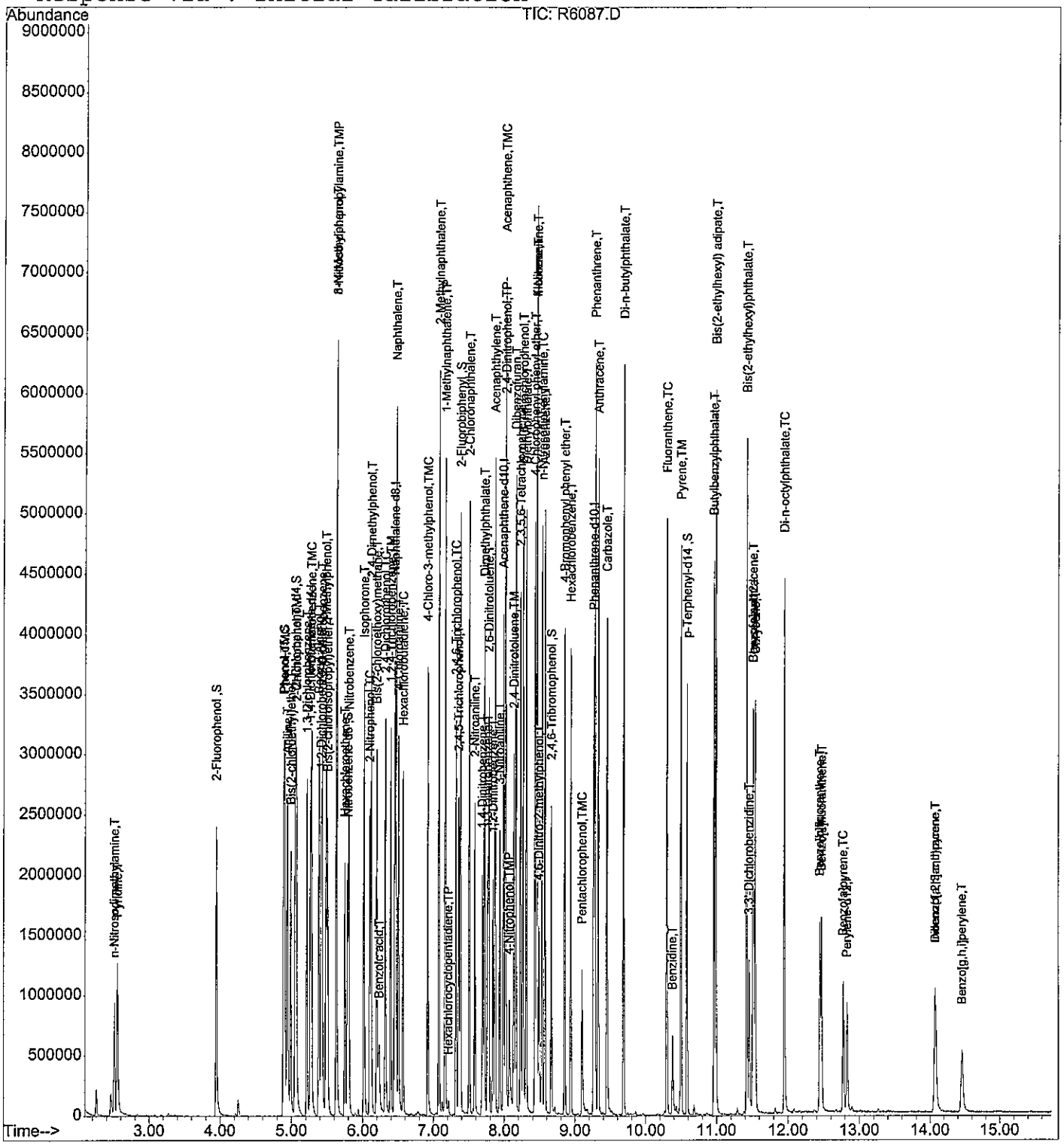
(3) Pyridine (T)
2.55min 35.97ng/uL m
response 567655

Ion	Exp%	Act%
79.00	100	100
52.00	58.30	62.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : E:\HPCHEM\1\DATA\122315\R6087.D Vial: 5
Acq On : 23 Dec 2015 12:16 Operator: twk SOP 506
Sample : EX151216-1LCS Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 12:33 2015 Quant Results File: 121115.RES

Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\122315\R6088.D
Acq On : 23 Dec 2015 12:40
Sample : EX151216-1LCSD
Misc : EX151216-1 WATER
MS Integration Params: LSCINT.P
Quant Time: Dec 23 13:04 2015

Vial: 6
Operator: twk SOP 506 Re
Inst : HPSV-3
Multiplr: 1.00
Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	435368	40.00	ng/uL	0.00
25) Naphthalene-d8	6.45	136	1909508	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.99	164	961039	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.26	188	1383681	40.00	ng/uL	0.00
80) Chrysene-d12	11.52	240	768161	40.00	ng/uL	0.00
91) Perylene-d12	12.83	264	463214	40.00	ng/uL	-0.02
System Monitoring Compounds						
5) 2-Fluorophenol	3.94	112	883931	58.88	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 78.51%			
6) 2-Chlorophenol-d4	5.05	132	1018114	62.04	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 82.72%			
8) Phenol-d5	4.89	99	1190401	62.36	ng/uL	0.00
Spiked Amount 75.000	Range 50 - 109		Recovery = 83.15%			
15) 1,2-Dichlorobenzene-d4	5.41	152	393335	36.81	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 73.62%			
26) Nitrobenzene-d5	5.78	82	761434	41.22	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 82.44%			
46) 2-Fluorobiphenyl	7.38	172	1409276	37.24	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 74.48%			
68) 2,4,6-Tribromophenol	8.66	330	308422	61.71	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 82.28%			
83) p-Terphenyl-d14	10.58	244	1117621	38.20	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 76.40%			
Target Compounds						Qvalue
3) Pyridine	2.55	79	635388	37.41	ng/uL	87
4) n-Nitrosodimethylamine	2.51	74	474496	49.85	ng/uL	97
7) Aniline	4.94	93	1164320	66.42	ng/uL	94
9) Phenol	4.91	94	1004997	51.28	ng/uL	98
11) Bis(2-chloroethyl)ether	4.99	93	788876	47.52	ng/uL	95
12) 2-Chlorophenol	5.07	128	813962	49.99	ng/uL	99
13) 1,3-Dichlorobenzene	5.21	146	747114	42.96	ng/uL	99
14) 1,4-Dichlorobenzene	5.28	146	788331	44.15	ng/ul	99
16) 1,2-Dichlorobenzene	5.43	146	715074	41.87	ng/uL	99
17) Benzyl Alcohol	5.38	108	552791	54.58	ng/uL	93
18) Bis(2-chloroisopropyl)ethe	5.50	45	1100957	53.57	ng/uL	98
19) 2-Methylphenol	5.48	107	715638	51.77	ng/uL	98
20) n-Nitroso-di-n-propylamine	5.63	70	681532	54.66	ng/uL	100
21) 3+4-Methylphenol	5.63	108	861625	53.13	ng/uL	99
23) Hexachloroethane	5.75	117	306531	44.90	ng/uL	98
27) Nitrobenzene	5.80	123	429123	53.67	ng/uL	96

(#) = qualifier out of range (m) = manual integration

tw 12/23/15

Data File : E:\HPCHEM\1\DATA\122315\R6088.D Vial: 6
Acq On : 23 Dec 2015 12:40 Operator: twk SOP 506 Re
Sample : EX151216-1LCSD Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 13:04 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
28)	Isophorone	6.02	82	1703513	54.95	ng/uL	100
30)	2-Nitrophenol	6.10	139	453686	52.19	ng/uL	98
31)	2,4-Dimethylphenol	6.12	107	835448	47.88	ng/uL	96
32)	Bis(2-chloroethoxy)methane	6.20	93	954170	52.50	ng/uL	98
33)	2,4-Dichlorophenol	6.31	162	632467	51.62	ng/uL	99
34)	Benzoic acid	6.24	105	489647	51.50	ng/uL	98
35)	1,2,4-Trichlorobenzene	6.39	180	598799	45.02	ng/uL	99
36)	Naphthalene	6.47	128	2545662	50.46	ng/uL	99
37)	4-Chloroaniline	6.50	127	954189	67.50	ng/uL	97
38)	Hexachlorobutadiene	6.57	225	303664	45.73	ng/uL	95
39)	4-Chloro-3-methylphenol	6.92	107	804134	57.06	ng/uL	98
40)	2-Methylnaphthalene	7.08	142	1707810	50.85	ng/uL	99
41)	1-Methylnaphthalene	7.17	142	1506670	48.84	ng/uL	99
43)	Hexachlorocyclopentadiene	7.21	237	15852	11.79	ng/uL	94
44)	2,4,6-Trichlorophenol	7.32	196	389105	48.03	ng/uL	99
45)	2,4,5-Trichlorophenol	7.36	196	402715	48.54	ng/uL	95
47)	2-Chloronaphthalene	7.50	162	1474121	47.65	ng/uL	100
48)	2-Nitroaniline	7.58	65	467305	50.93	ng/uL	97
49)	1,4-Dinitrobenzene	7.69	168	230635	52.58	ng/uL	95
50)	Dimethylphthalate	7.72	163	1794213	51.43	ng/uL	100
51)	1,3-Dinitrobenzene	7.77	168	254638	50.53	ng/uL	93
52)	2,6-Dinitrotoluene	7.78	165	388840	50.31	ng/uL	98
53)	1,2-Dinitrobenzene	7.84	168	174348	50.17	ng/uL	97
54)	Acenaphthylene	7.87	152	2514208	51.96	ng/uL	99
55)	3-Nitroaniline	7.94	138	406418	62.29	ng/uL	85
56)	Acenaphthene	8.02	154	1622080	50.00	ng/uL	98
57)	2,4-Dinitrophenol	8.03	184	112304	44.19	ng/uL	96
58)	4-Nitrophenol	8.07	109	157678	50.95	ng/uL	93
59)	Dibenzofuran	8.16	168	2103479	49.65	ng/uL	99
60)	2,4-Dinitrotoluene	8.14	165	513446	52.91	ng/uL	96
61)	2,3,5,6-Tetrachlorophenol	8.23	232	516619	80.99	ng/uL	100
62)	2,3,4,6-Tetrachlorophenol	8.27	232	544250	82.51	ng/uL	96
63)	Diethylphthalate	8.31	149	1855965	52.40	ng/uL	100
64)	Fluorene	8.46	166	1777651	51.08	ng/uL	99
65)	4-Chlorophenyl phenyl ethe	8.43	204	735603	50.12	ng/uL	98
66)	4-Nitroaniline	8.46	138	356113	62.63	ng/uL#	1
67)	Azobenzene	8.57	77	1926104	50.62	ng/uL	99
70)	4,6-Dinitro-2-methylphenol	8.49	198	208811	52.15	ng/uL	93
71)	n-Nitrosodiphenylamine	8.53	169	1208332	46.65	ng/uL	98
72)	4-Bromophenyl phenyl ether	8.85	248	418962	53.05	ng/uL	98
73)	Hexachlorobenzene	8.94	284	504825	52.74	ng/uL	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\122315\R6088.D Vial: 6
Acq On : 23 Dec 2015 12:40 Operator: twk SOP 506 Re
Sample : EX151216-1LCSD Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 13:04 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

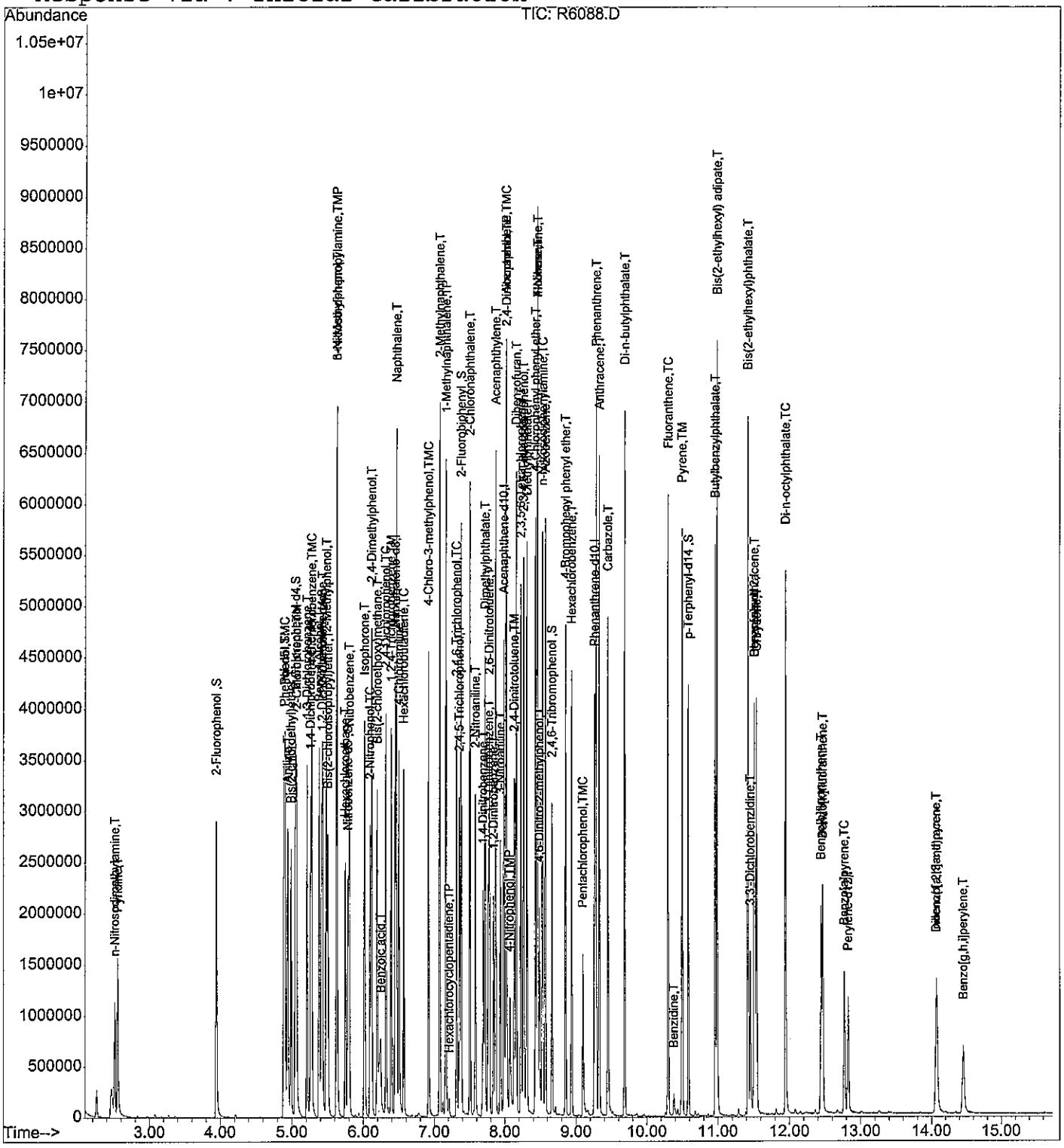
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74)	Pentachlorophenol	9.10	266	180575	46.09	ng/uL	97
75)	Phenanthrene	9.28	178	2365085	56.82	ng/uL	99
76)	Anthracene	9.33	178	2252207	55.94	ng/uL	100
77)	Carbazole	9.45	167	1870450	70.40	ng/uL	98
78)	Di-n-butylphthalate	9.69	149	3087548	58.32	ng/uL	100
79)	Fluoranthene	10.30	202	2007549	60.58	ng/uL	99
81)	Benzidine	10.38	184	106631	70.12	ng/uL	95
82)	Pyrene	10.50	202	1988736	48.55	ng/uL	99
84)	Butylbenzylphthalate	10.96	149	1078722	49.23	ng/uL	99
85)	Bis(2-ethylhexyl) adipate	10.99	129	1091502	47.55	ng/uL	99
86)	Benzo[a]anthracene	11.51	228	1204310	54.60	ng/uL	100
87)	3,3'-Dichlorobenzidine	11.45	252	306914	59.50	ng/uL	97
88)	Chrysene	11.54	228	1162498	55.59	ng/uL	99
89)	Bis(2-ethylhexyl)phthalate	11.42	149	1595455	51.11	ng/uL	100
90)	Di-n-octylphthalate	11.95	149	2359468	55.57	ng/uL	100
92)	Benzo[b]fluoranthene	12.44	252	860611	56.44	ng/uL	97
93)	Benzo[k]fluoranthene	12.47	252	825701	58.45	ng/uL	99
94)	Benzo[a]pyrene	12.77	252	622795	50.71	ng/uL	98
95)	Indeno(1,2,3-c,d)pyrene	14.07	276	573266	54.53	ng/uL	99
96)	Dibenzo[a,h]anthracene	14.07	278	476792	55.50	ng/uL	99
97)	Benzo[g,h,i]perylene	14.45	276	449292	50.46	ng/uL	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : E:\HPCHEM\1\DATA\122315\R6088.D Vial: 6
Acq On : 23 Dec 2015 12:40 Operator: twk SOP 506
Sample : EX151216-1LCSD Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 13:04 2015 Quant Results File: 121115.RES

Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 506 Re
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 13:42 2015 Quant Results File: 121115.RES

Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration
DataAcq Meth : 121115

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	444020	40.00	ng/uL	0.00
25) Naphthalene-d8	6.44	136	1841638	40.00	ng/uL	0.00
42) Acenaphthene-d10	7.99	164	897013	40.00	ng/uL	0.00
69) Phenanthrene-d10	9.26	188	1132785	40.00	ng/uL	0.00
80) Chrysene-d12	11.52	240	446682	40.00	ng/uL	-0.01
91) Perylene-d12	12.83	264	254043	40.00	ng/uL	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	3.94	112	765702	50.01	ng/uL	0.00
Spiked Amount 75.000	Range 46 - 105		Recovery = 66.68%			
6) 2-Chlorophenol-d4	5.05	132	879694	52.56	ng/uL	0.00
Spiked Amount 75.000	Range 33 - 110		Recovery = 70.08%			
8) Phenol-d5	4.89	99	1032742	53.05	ng/uL	-0.01
Spiked Amount 75.000	Range 50 - 109		Recovery = 70.73%			
15) 1,2-Dichlorobenzene-d4	5.41	152	337147	30.93	ng/uL	0.00
Spiked Amount 50.000	Range 16 - 110		Recovery = 61.86%			
26) Nitrobenzene-d5	5.78	82	618112	34.69	ng/uL	0.00
Spiked Amount 50.000	Range 53 - 111		Recovery = 69.38%			
46) 2-Fluorobiphenyl	7.38	172	1149073	32.54	ng/uL	0.00
Spiked Amount 50.000	Range 55 - 108		Recovery = 65.08%			
68) 2,4,6-Tribromophenol	8.66	330	216040	46.31	ng/uL	0.00
Spiked Amount 75.000	Range 42 - 117		Recovery = 61.75%			
83) p-Terphenyl-d14	10.58	244	568311	33.40	ng/uL	0.00
Spiked Amount 50.000	Range 34 - 139		Recovery = 66.80%			

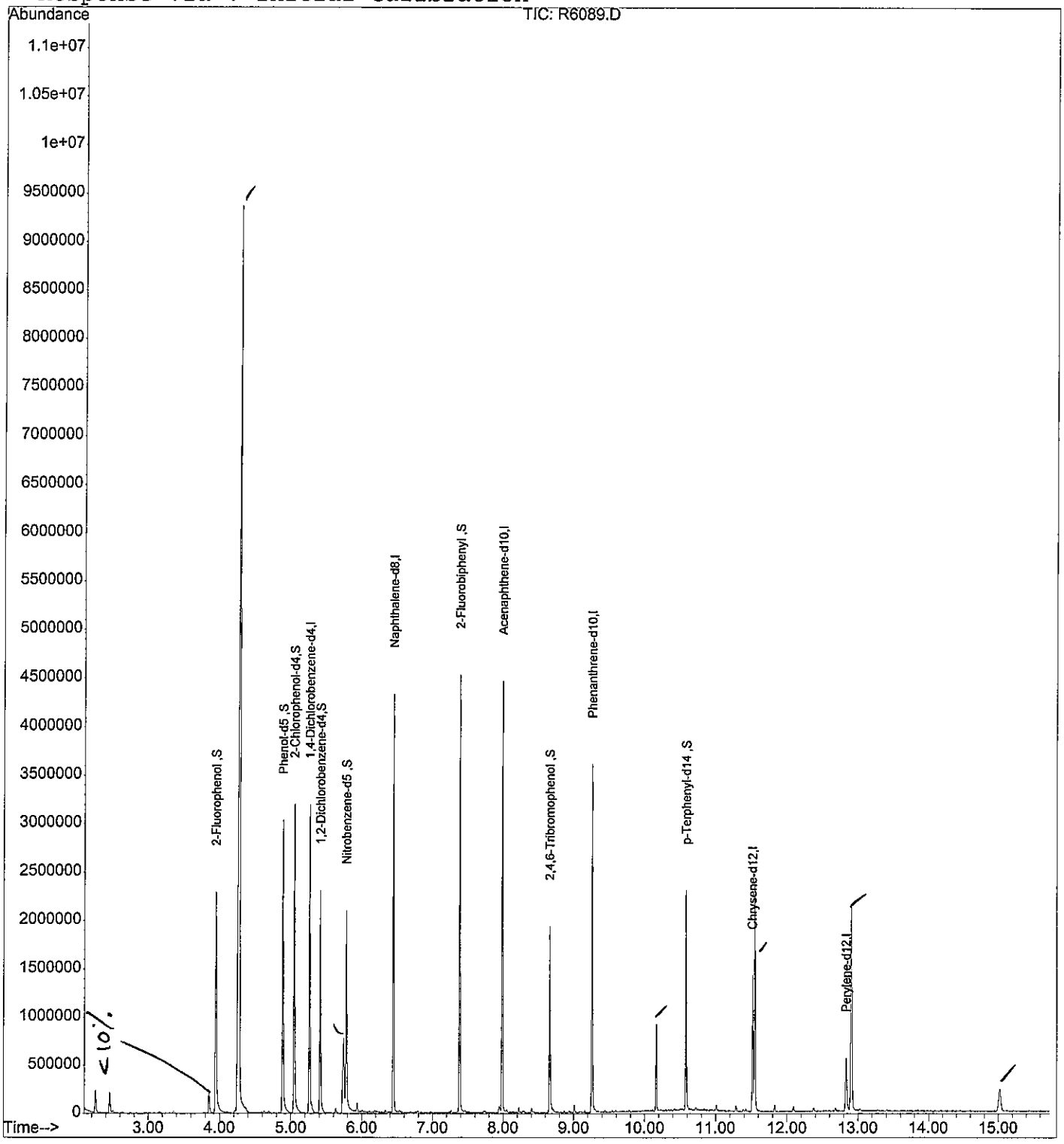
Target Compounds Qvalue

Tw 12/23/15

(#) = qualifier out of range (m) = manual integration

Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 506
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Dec 23 13:42 2015 Quant Results File: 121115.RES

Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Last Update : Wed Dec 23 12:22:23 2015
Response via : Initial Calibration



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 5
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: RTEINT.P

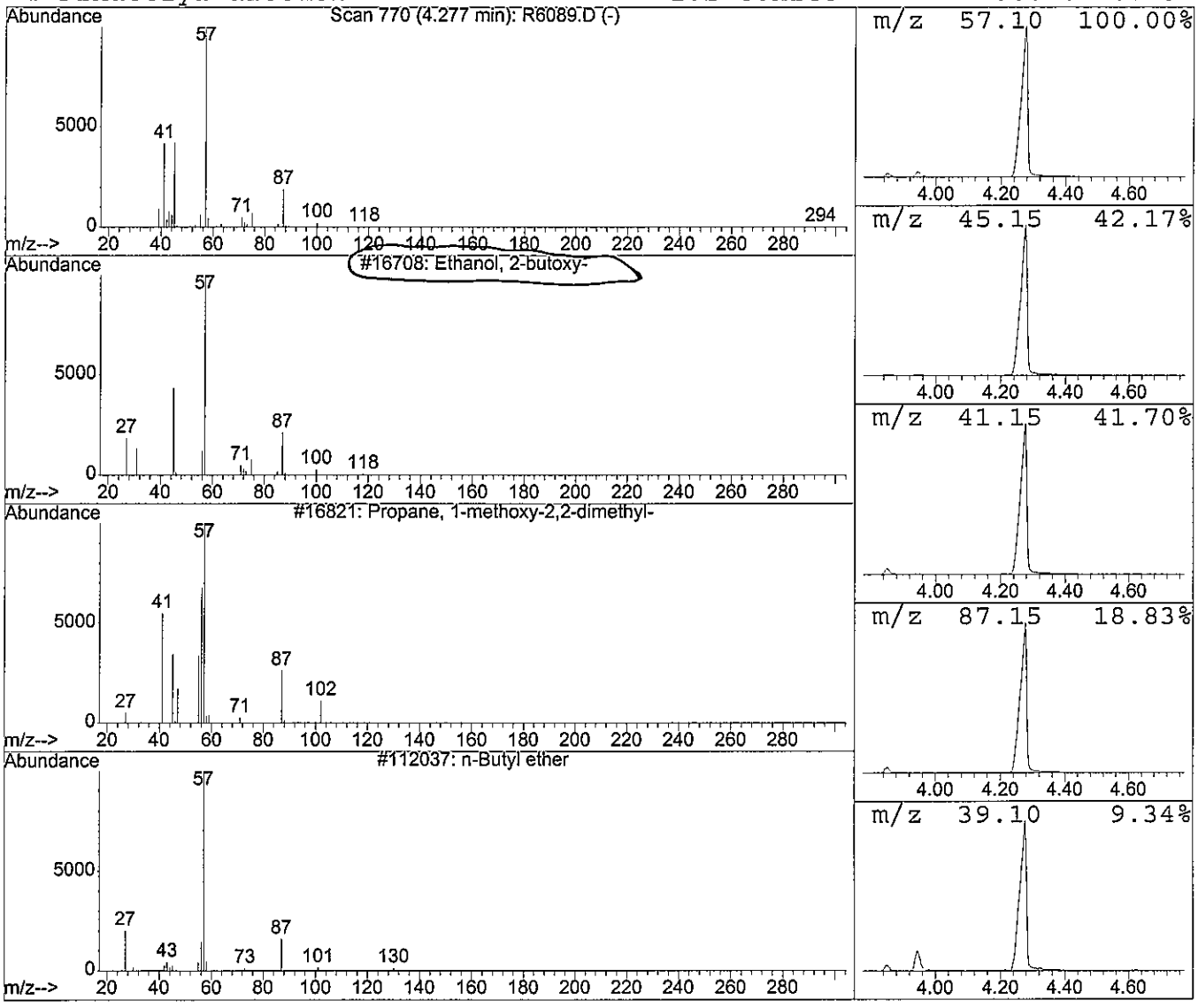
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

Peak Number 1 Ethanol, 2-butoxy- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.28	184.77 ng/uL	13650800	1,4-Dichlorobenzene-d4	5.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethanol, 2-butoxy-	118	C6H14O2	000111-76-2	91
2	Propane, 1-methoxy-2,2-dimethyl-	102	C6H14O	001118-00-9	39
3	n-Butyl ether	130	C8H18O	000142-96-1	16
4	Pinacolyl alcohol	102	C6H14O	000464-07-3	12



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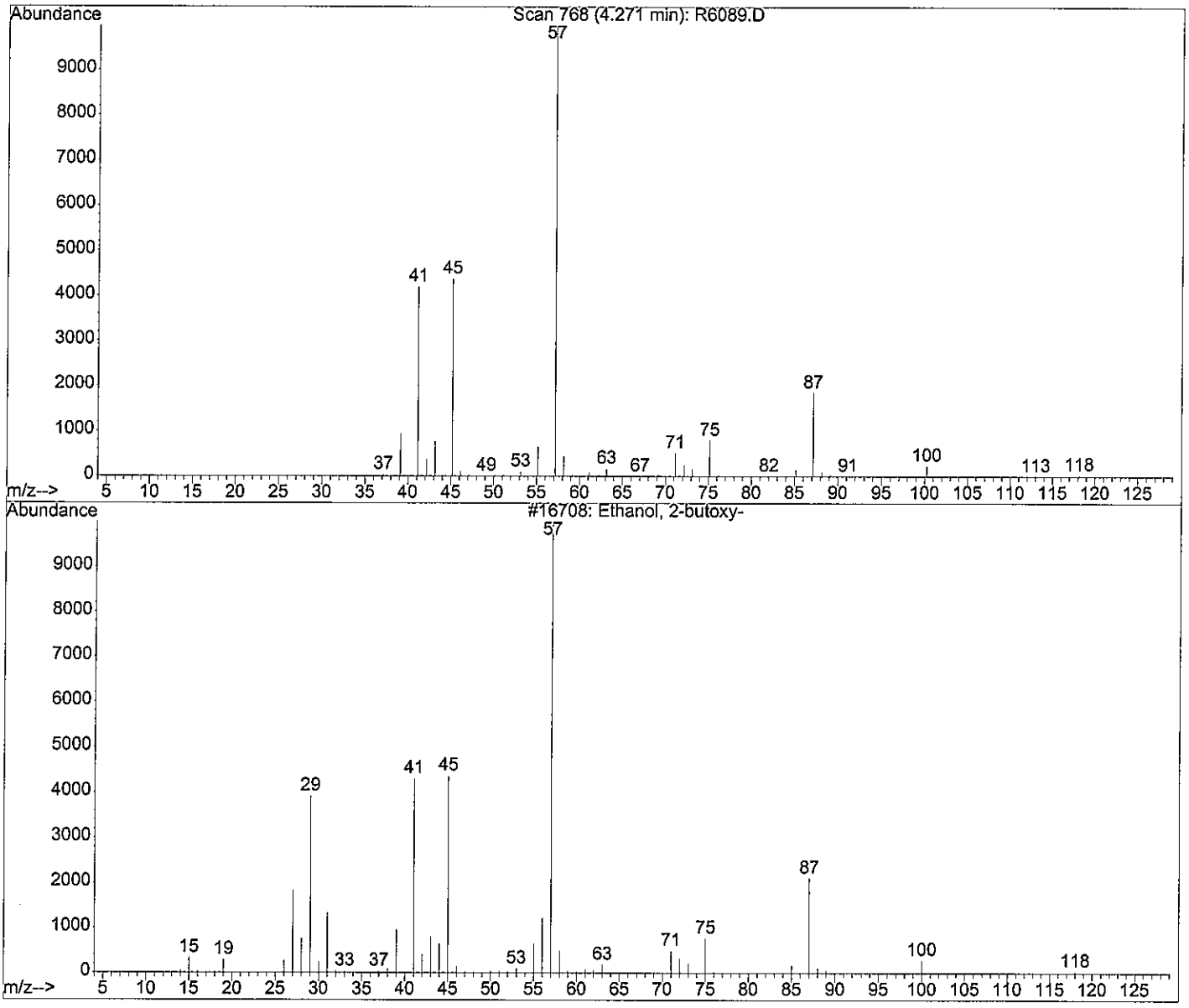
Quality : 91
ID : Ethanol, 2-butoxy-



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 5
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: RTEINT.P

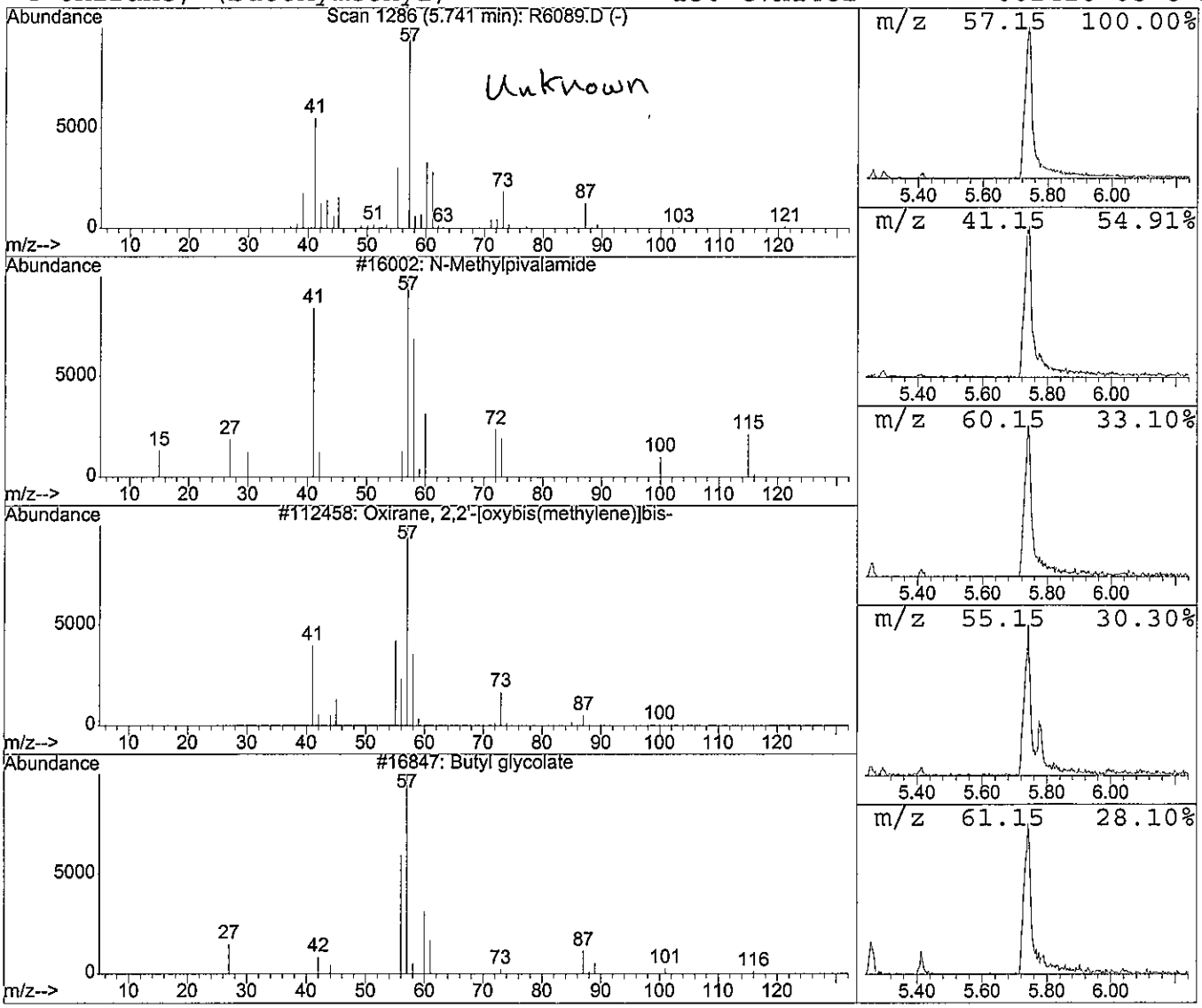
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

Peak Number 1 N-Methylpivalamide Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.74	15.93 ng/uL	1176770	1,4-Dichlorobenzene-d4	5.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	N-Methylpivalamide	115	C6H13NO	006830-83-7	38
2	Oxirane, 2,2'-[oxybis(methylene)]bi	130	C6H10O3	002238-07-5	38
3	Butyl glycolate	132	C6H12O3	007397-62-8	28
4	Oxirane, (butoxymethyl)-	130	C7H14O2	002426-08-6	25



Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 5
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: RTEINT.P

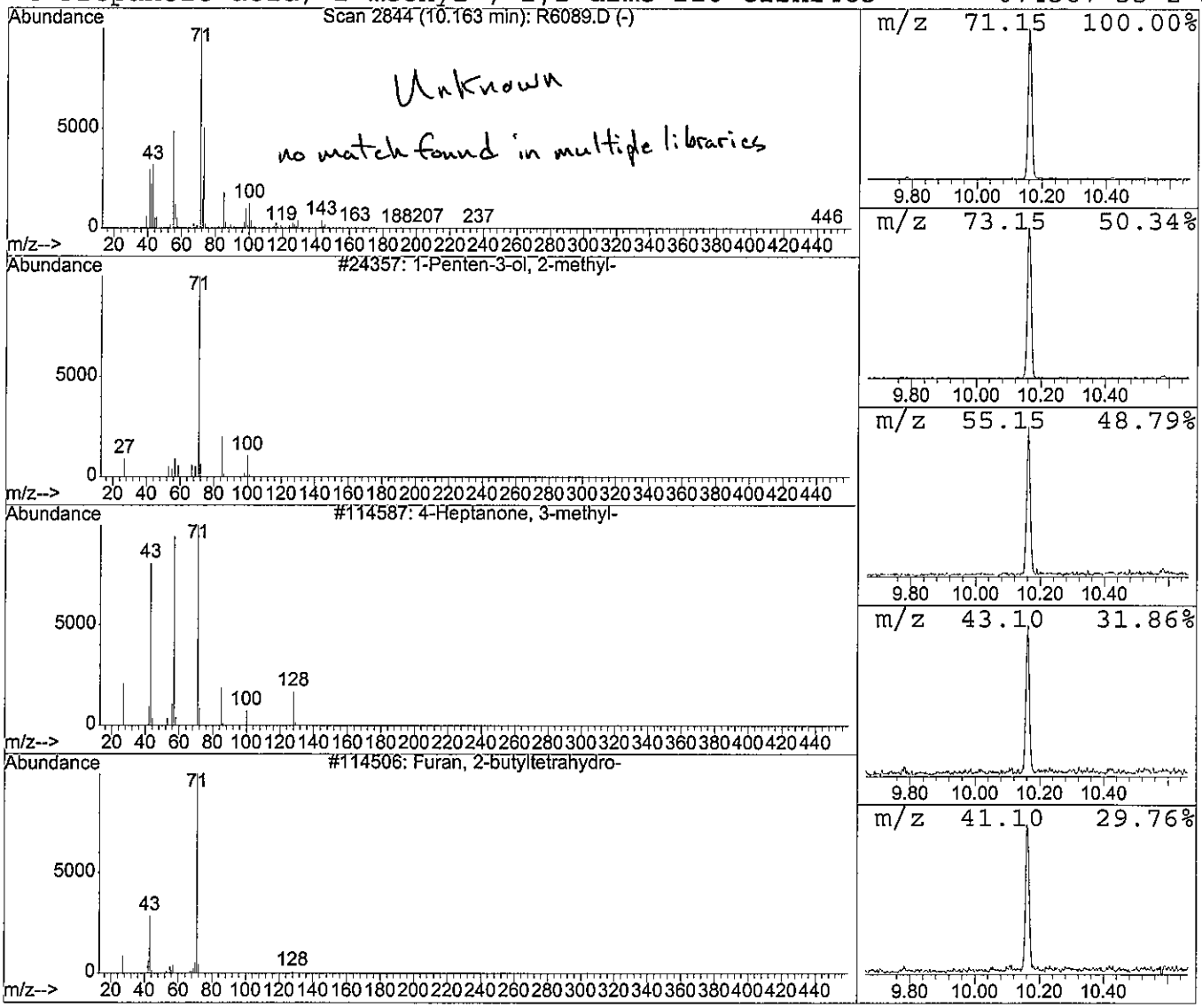
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

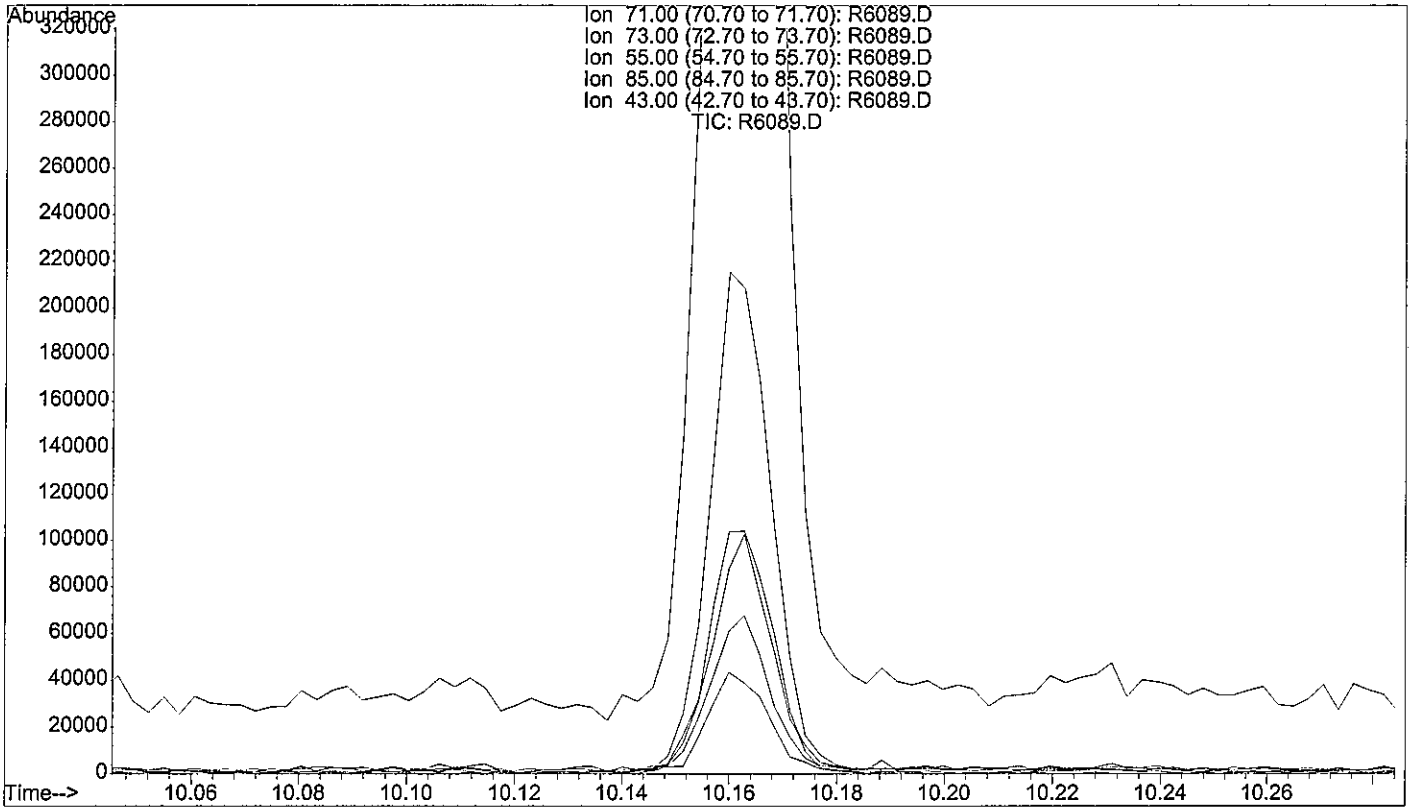
Peak Number 2 1-Penten-3-ol, 2-methyl- Concentration Rank 4

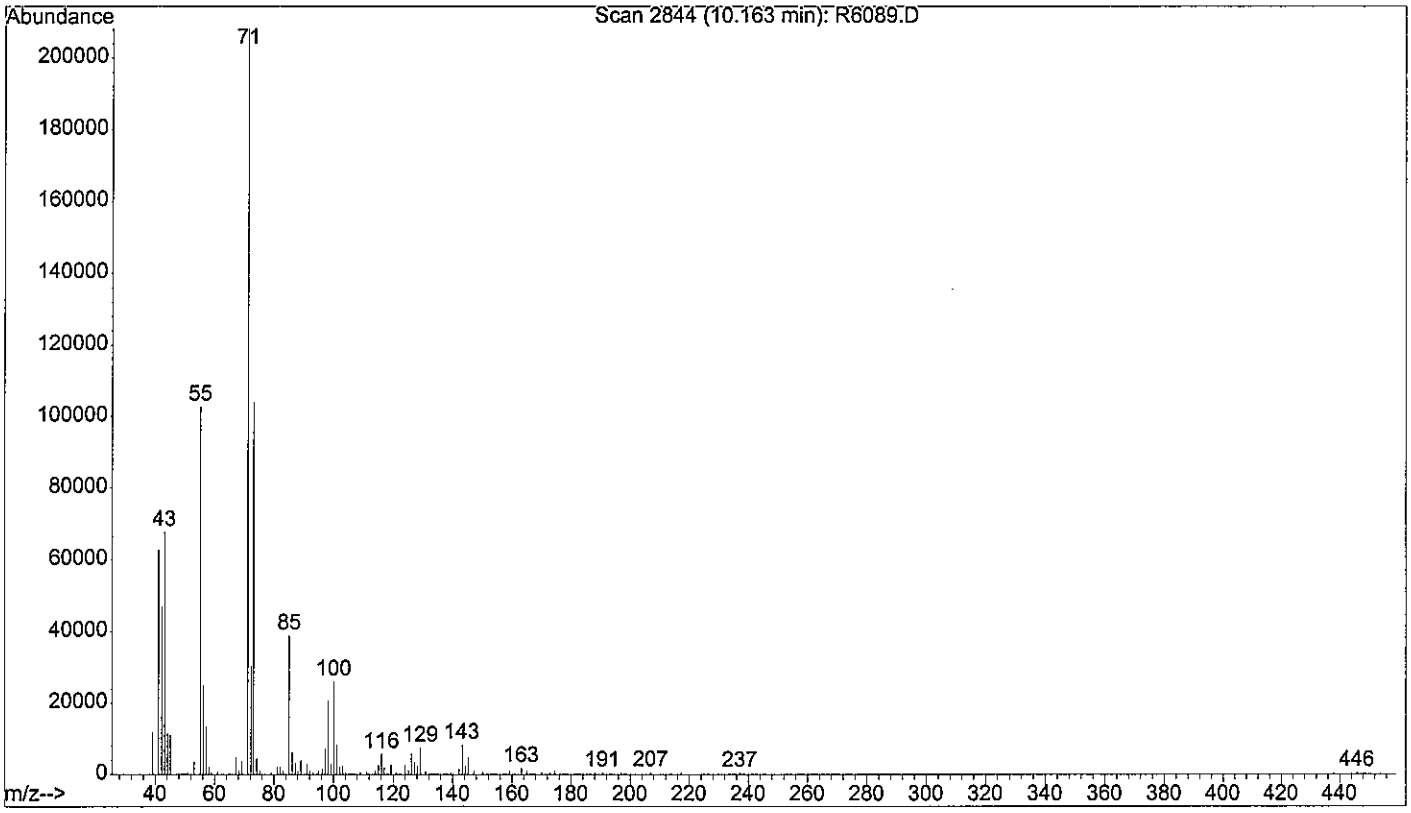
R.T.	EstConc	Area	Relative to ISTD	R.T.
10.16	15.04 ng/uL	1178820	Phenanthrene-d10	9.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Penten-3-ol, 2-methyl-	100	C6H12O	002088-07-5	50
2	4-Heptanone, 3-methyl-	128	C8H16O	015726-15-5	42
3	Furan, 2-butyltetrahydro-	128	C8H16O	001004-29-1	37
4	Propanoic acid, 2-methyl-, 2,2-dime	216	C12H24O3	074367-33-2	36



File : E:\HPCHEM\1\DATA\122315\R6089.D
Operator : twk SOP 506 Rev.20
Acquired : 23 Dec 2015 13:04 using AcqMethod 121115
Instrument : HPSV-3
Sample Name: 1512229-1
Misc Info : EX151216-1 WATER
Vial Number: 7





Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 5
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: RTEINT.P

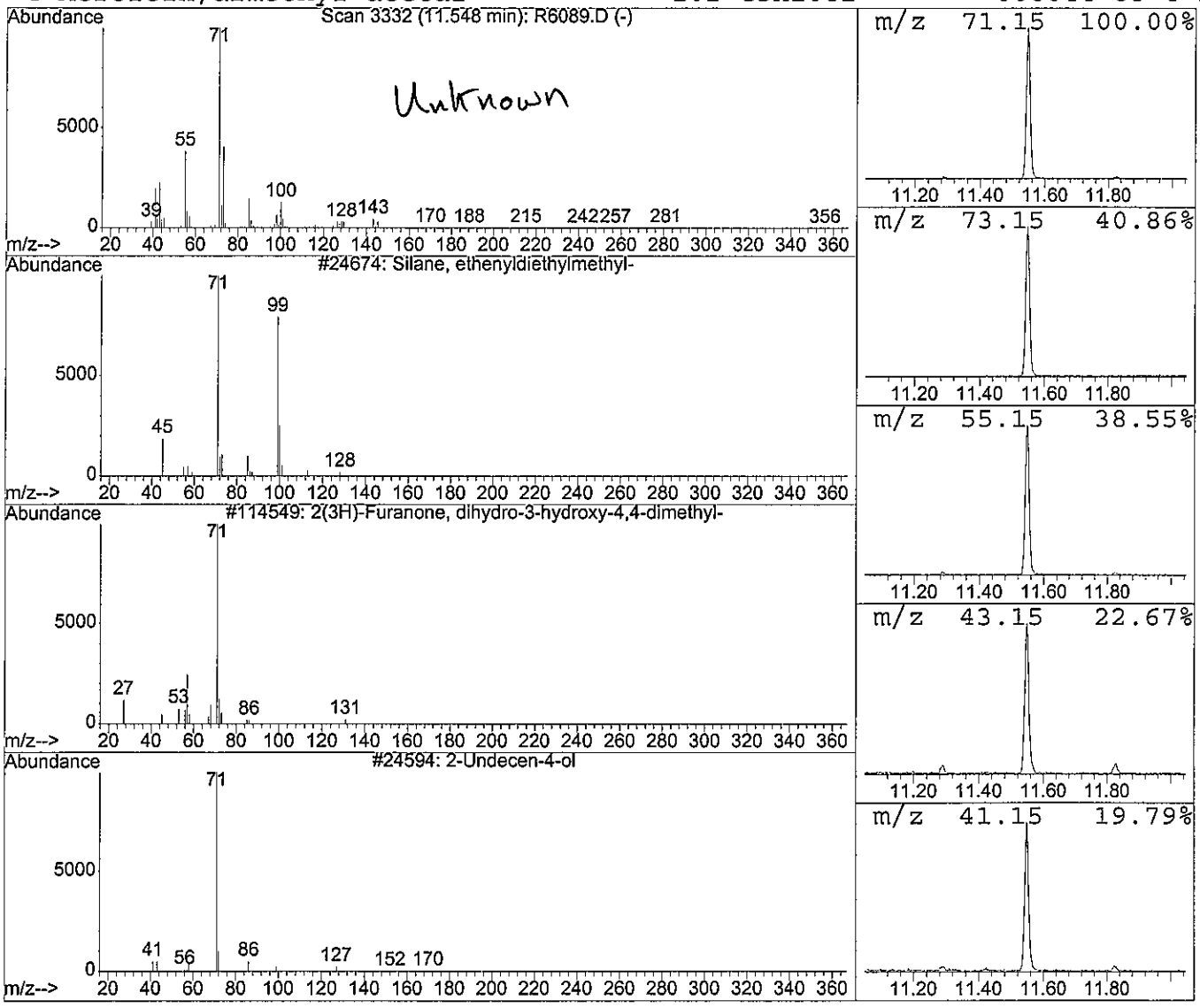
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

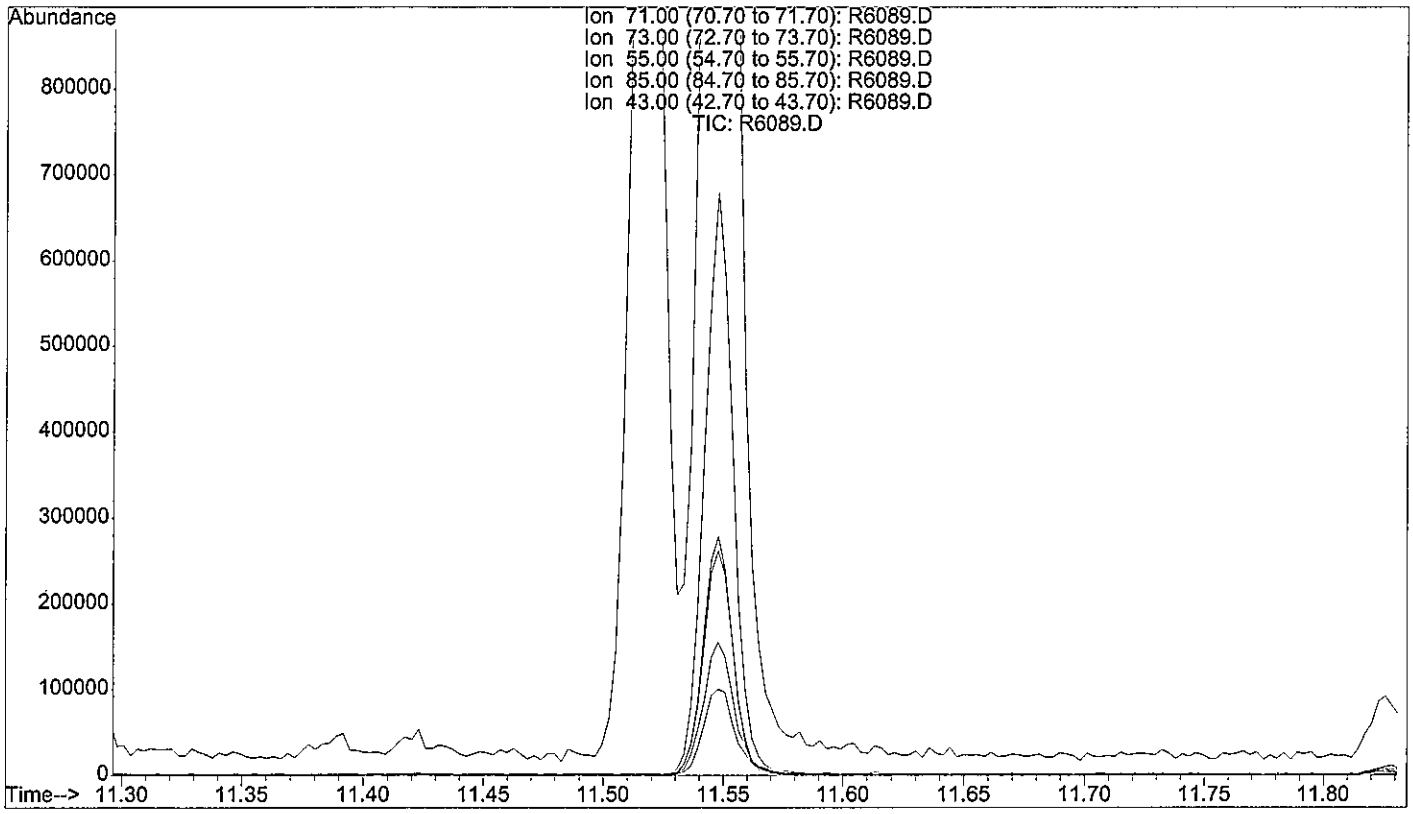
Peak Number 1 Silane, ethenyldiethylmethyl- Concentration Rank 10

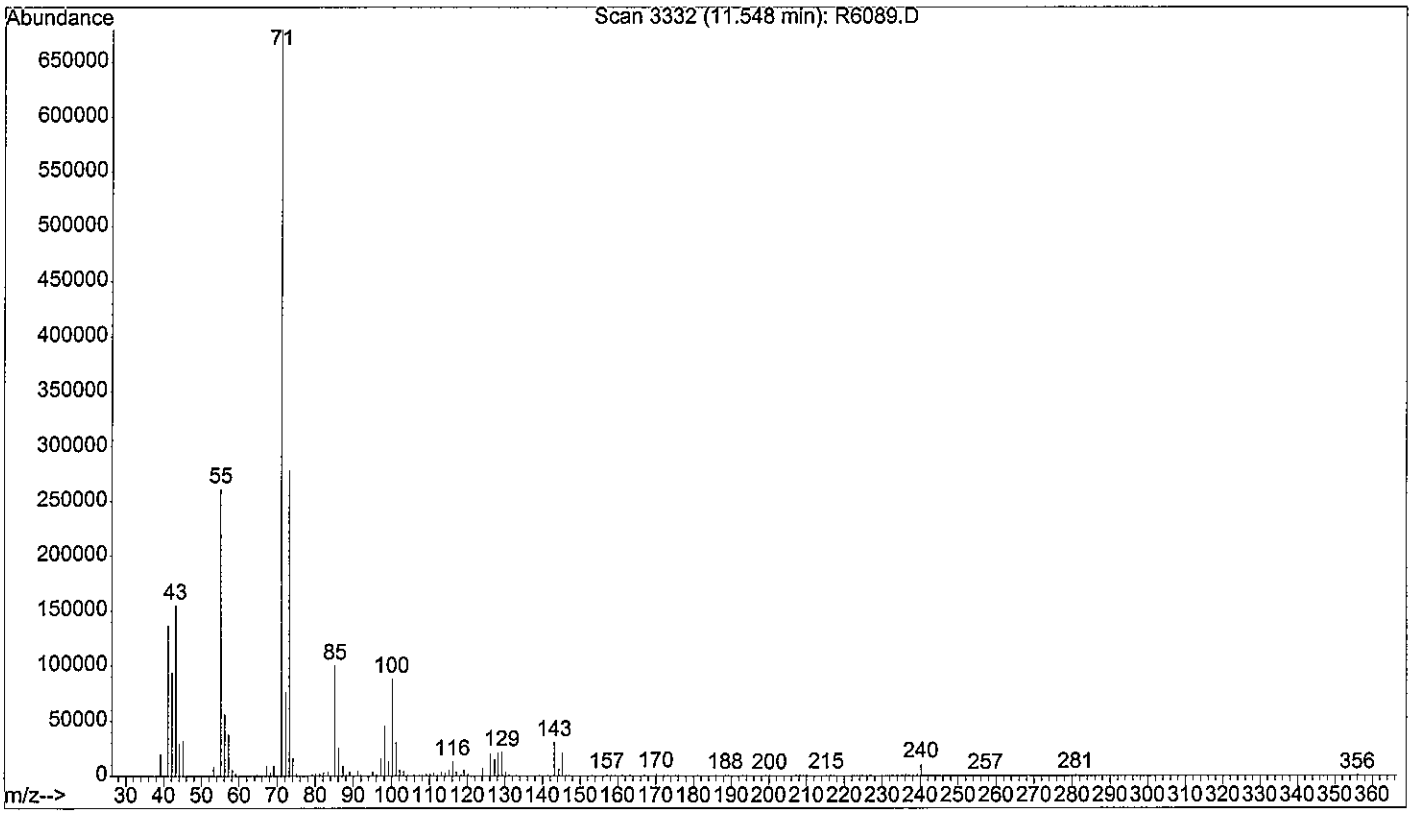
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.55	72.33 ng/uL	2300880	Chrysene-d12	11.52

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Silane, ethenyldiethylmethyl-	128	C7H16Si	018292-29-0	56
2	2(3H)-Furanone, dihydro-3-hydroxy-4	130	C6H10O3	052126-90-6	53
3	2-Undecen-4-ol	170	C11H22O	022381-86-8	50
4	Acrolein,dimethyl acetal	102	C5H10O2	006044-68-4	50



File : E:\HPCHEM\1\DATA\122315\R6089.D
Operator : twk SOP 506 Rev.20
Acquired : 23 Dec 2015 13:04 using AcqMethod 121115
Instrument : HPSV-3
Sample Name: 1512229-1
Misc Info : EX151216-1 WATER
Vial Number: 7





Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 5
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: RTEINT.P

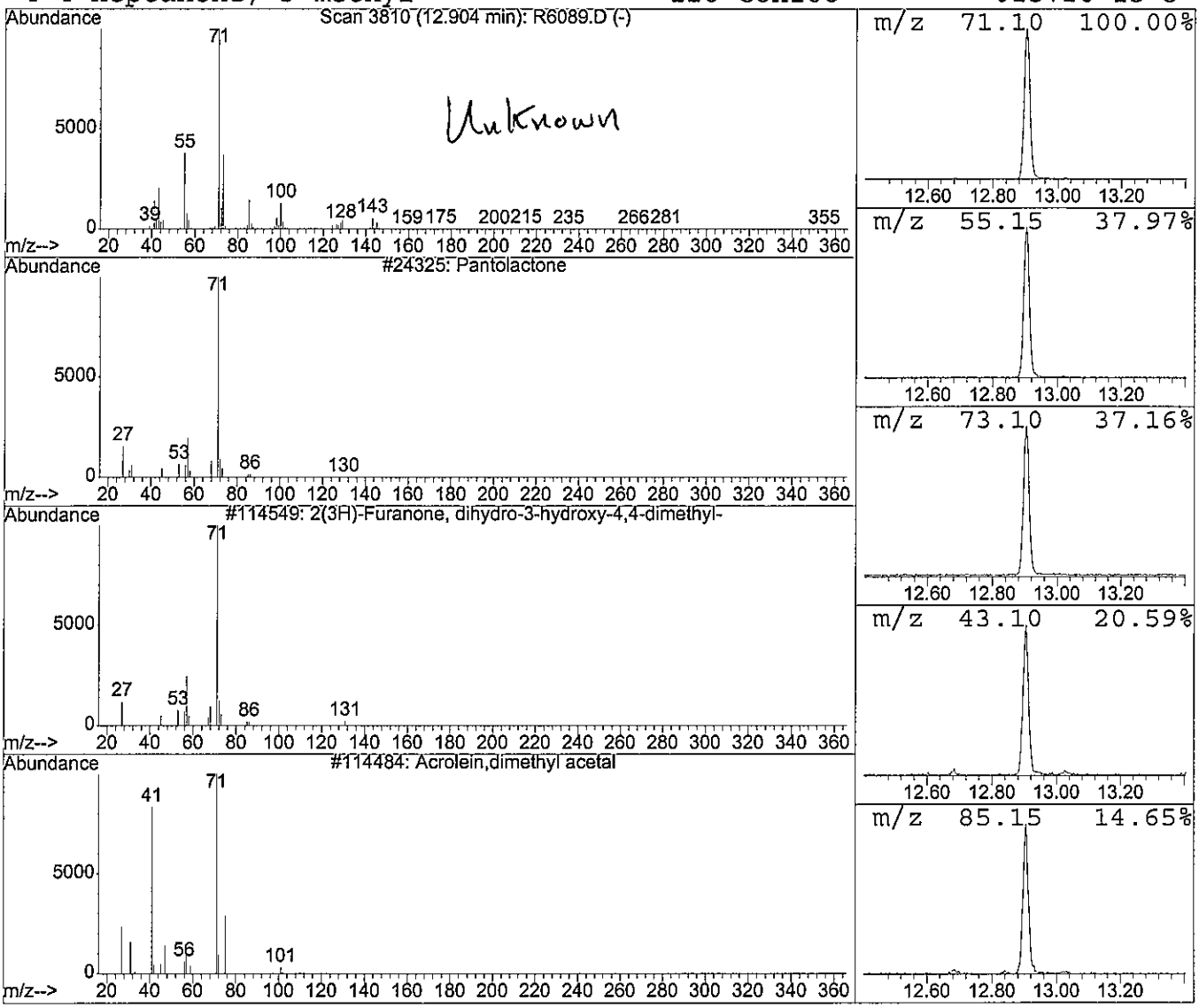
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

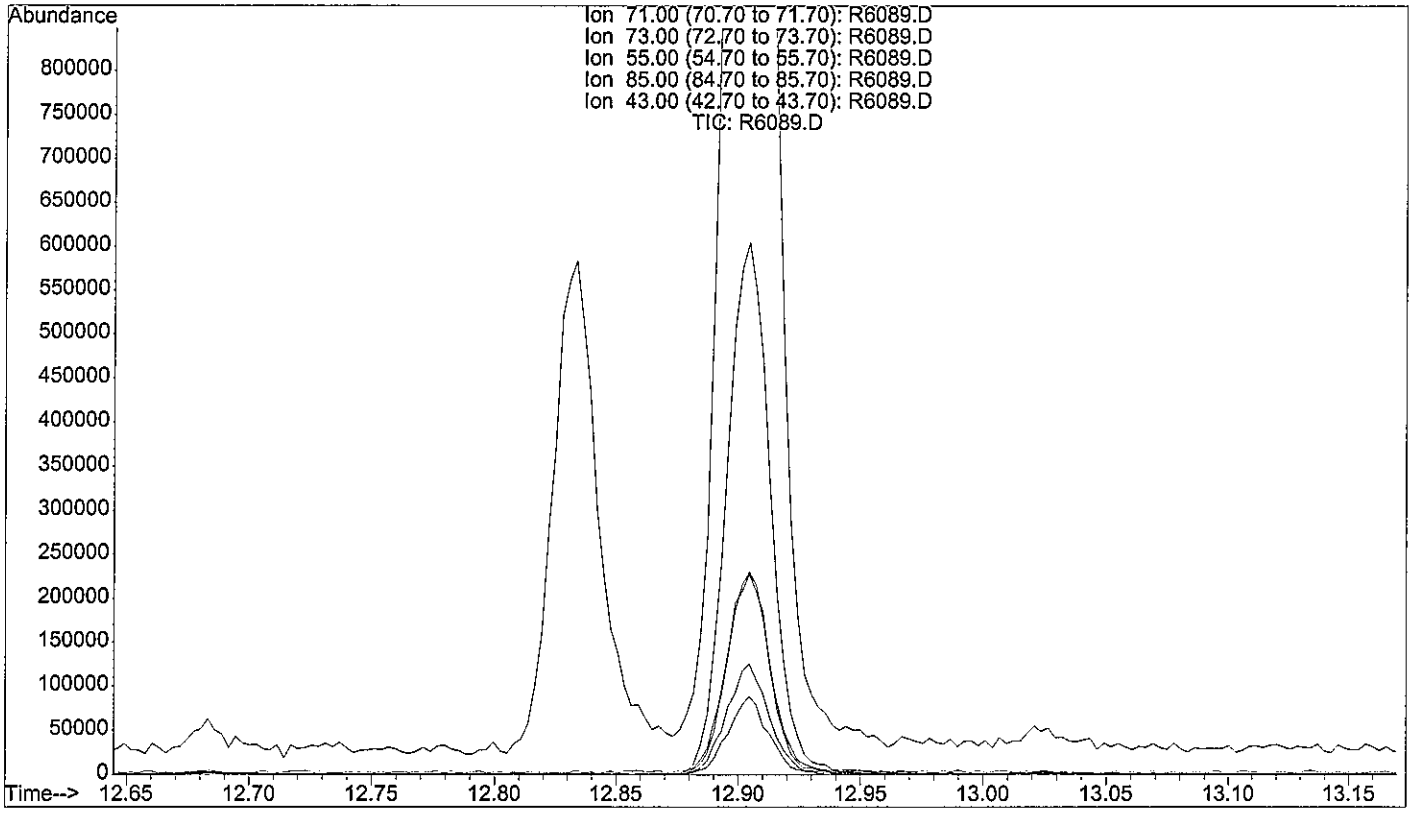
Peak Number 6 Pantolactone Concentration Rank 2

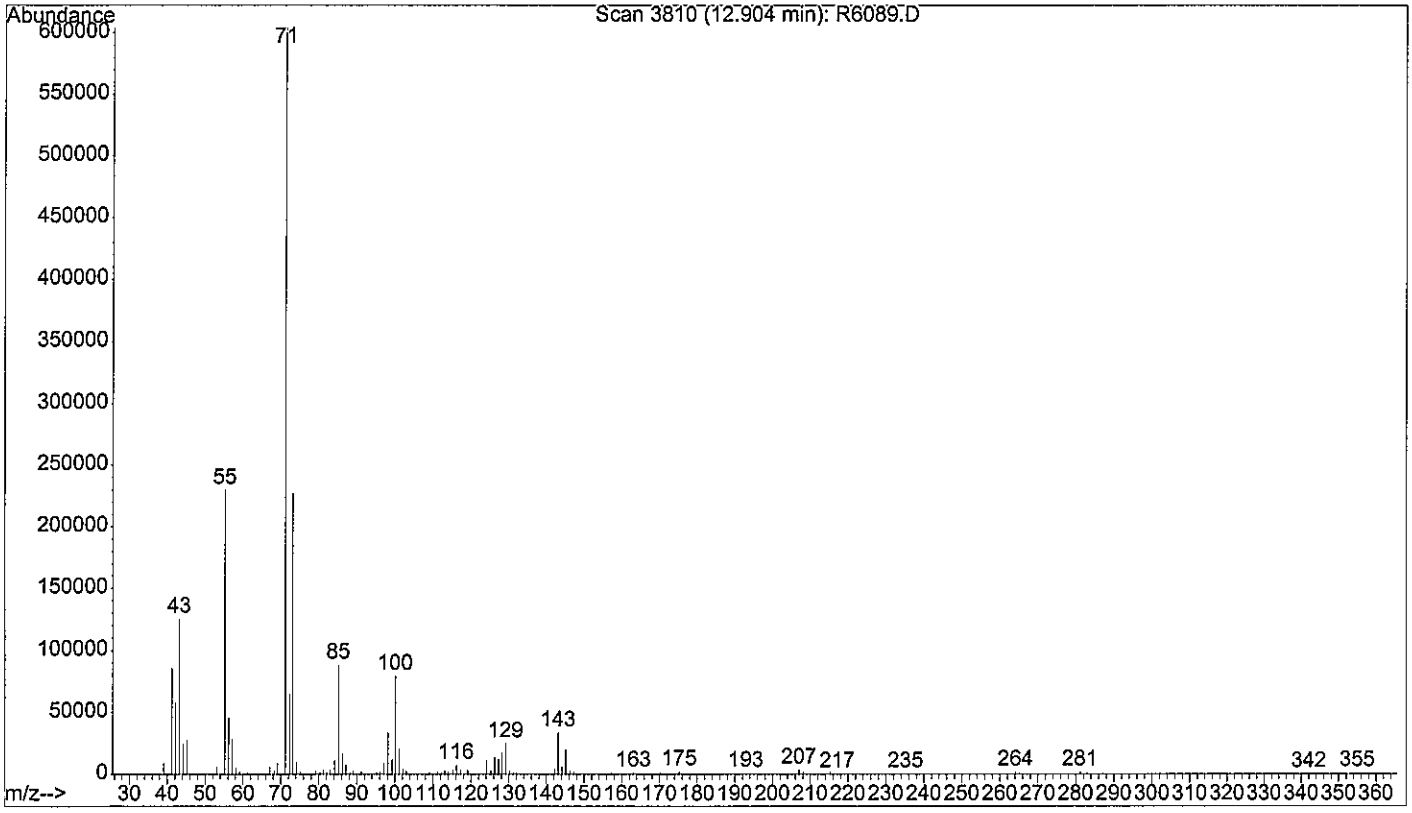
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.90	176.44 ng/uL	3325470	Perylene-d12	12.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pantolactone	130	C6H10O3	000599-04-2	47
2	2(3H)-Furanone, dihydro-3-hydroxy-4	130	C6H10O3	052126-90-6	47
3	Acrolein,dimethyl acetal	102	C5H10O2	006044-68-4	47
4	4-Heptanone, 3-methyl-	128	C8H16O	015726-15-5	42



File : E:\HPCHEM\1\DATA\122315\R6089.D
Operator : twk SOP 506 Rev.20
Acquired : 23 Dec 2015 13:04 using AcqMethod 121115
Instrument : HPSV-3
Sample Name: 1512229-1
Misc Info : EX151216-1 WATER
Vial Number: 7





Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\122315\R6089.D Vial: 7
Acq On : 23 Dec 2015 13:04 Operator: twk SOP 5
Sample : 1512229-1 Inst : HPSV-3
Misc : EX151216-1 WATER Multiplr: 1.00
MS Integration Params: RTEINT.P

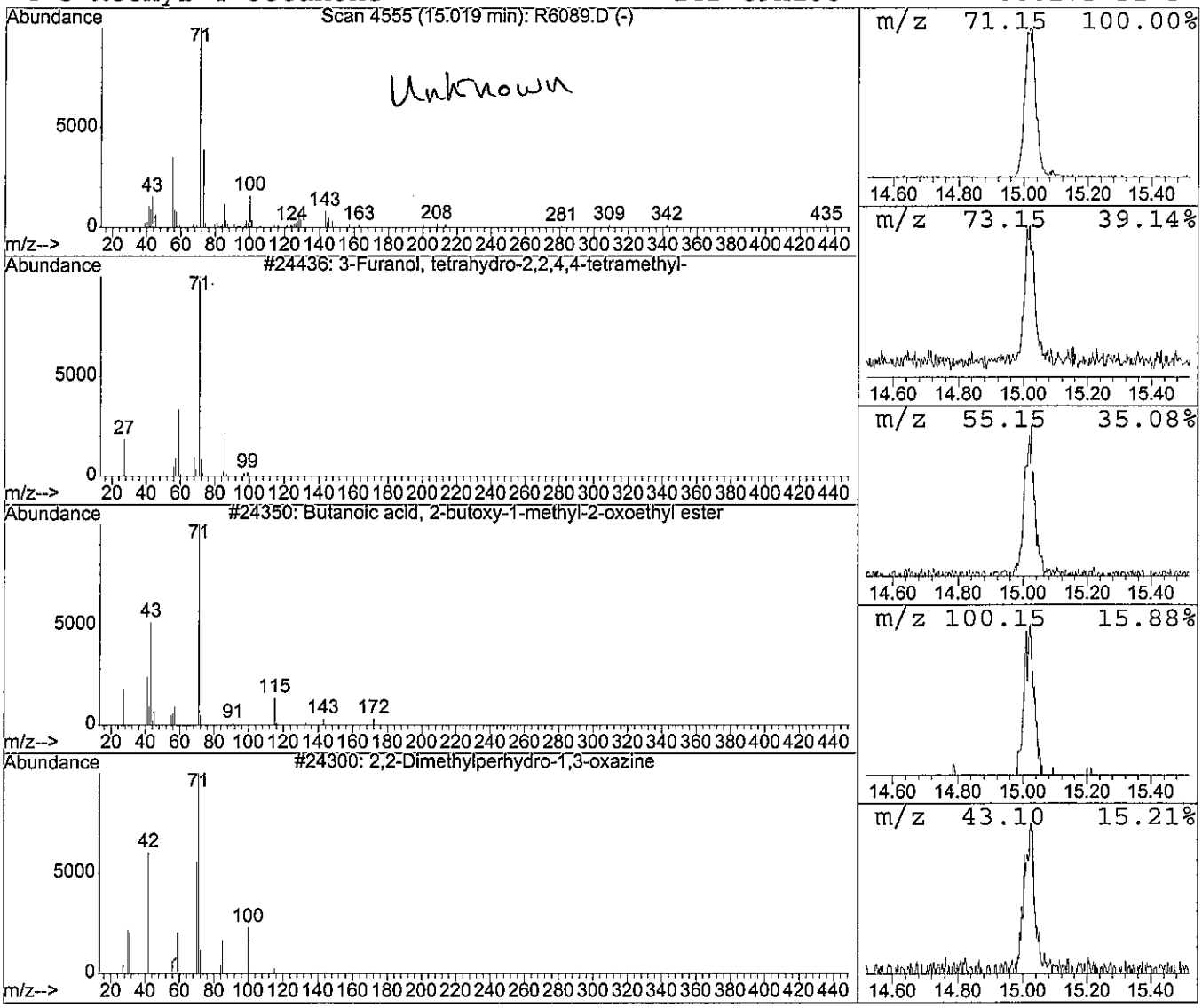
Quant Method : C:\HPCHEM\1\METHODS\121115.M (RTE Integrator)
Title : GC-MS Semivolatiles SOP no. 506
Library : C:\DATABASE\NIST98.L

****

Peak Number 7 3-Furanol, tetrahydro-2,2,4,4- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.02	38.59 ng/uL	727327	Perylene-d12	12.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Furanol, tetrahydro-2,2,4,4-tetra	144	C8H16O2	003611-76-5	42
2	Butanoic acid, 2-butoxy-1-methyl-2-	216	C11H20O4	007492-70-8	40
3	2,2-Dimethylperhydro-1,3-oxazine	115	C6H13NO	1000138-83-9	39
4	5-Methyl-4-octanone	142	C9H18O	006175-51-5	38



File : E:\HPCHEM\1\DATA\122315\R6089.D
Operator : twk SOP 506 Rev.20
Acquired : 23 Dec 2015 13:04 using AcqMethod 121115
Instrument : HPSV-3
Sample Name: 1512229-1
Misc Info : EX151216-1 WATER
Vial Number: 7