

Appendix A.6
Focussed Remedial Investigation Report
Volume 3 of 6

299 Main Street Site
Westbury, New York
(Site Code 1-30-043S)

December 1999

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ANALAB/ICM DIVISION

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DATA PACKAGE FOR VOLATILE ORGANICS

PART I

**PROJECT NAME: # 1-30-0435
PROJECT # 98-335, WESTBURY**

**IMPACT ENVIRONMENTAL
1 VILLAGE PLAZA
KING PARK NY 11754
916-269-8800**

**CHEMTECH PROJECT
ATTENTION**

**13827ASP
KEVIN KLEAKA**

**PART I VOLATILE ORGANICS
PART II SEMIVOLATILE ORGANICS**

CASE NARRATIVE-VOLATILE ORGANICS**Impact Environmental****Project Name: # 1-30-0435****Project # 98-335, Westbury****Chemtech Project # 13827ASP****A. Number of Samples and Date of Receipt**

14 Soil samples were delivered to the laboratory intact on 10/18/99.

B. Parameters

Test requested was Volatile Organics & Semivolatile Organics. This data package contains results for Volatile Organics.

C. Analytical Techniques:

Samples were analyzed for Volatile Organics according Method 8260B. The analyses were performed on instruments VOA5, using GC column RTX624 which is 75 meters, 0.53mm ID, 3.0mm df (crossbond 6% cyanopropylphenyl-94%) dimethylpolysiloxane. The Purge Trap was supplied by Supelco, VO CARB 3000, Tekmar 3000.

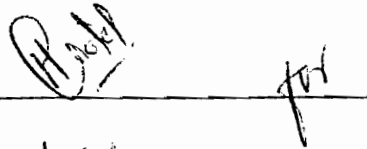
D. QA/ QC Samples:

The Surrogate Recoveries for each sample are found in Form II-A. Initial Calibration of Single Component Analytes results are found on Form 6 D & E. The Matrix Spike and Matrix Spike Duplicate were analyzed and are reported on Form 3F.

System Monitoring Compound recoveries were acceptable. MS/MSD recoveries and RPDs met requirements. Internal Standard Areas met requirements except for GP-017-SS8. Retention Times met criteria. Calibrations met requirements. Blank analyses did not indicate the presence of contamination.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature

Name: Divyajit Mehta

Date:

11/11/99Title: Lab Manager

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COVER PAGE

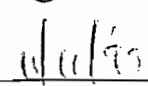
Lab Name: Chemtech Consulting Group
Lab Code: CHEM Project No.: 13827ASP

Client: IMPACT ENVIRONMENTAL

Client Sample No.	Lab Sample ID
GP-014-SS8	88007
GP-014-SS12	88008
GP-015-SS8	88009
GP-015-SS12	88010
GP-016-SS8	88011
GP-016-SS12	88012
GP-017-SS8	88013
GP-017-SS12	88014
GP-018-SS8	88015
GP-018-SS12	88016
GP-019-SS8	88017
GP-019-SS12	88018
GP-020-SS8	88019
GP-020-SS12	88020

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designed, as verified by the following signature.

Signature:  Name: DIVYAJIT MEHTA

Date:  Title: LAB DIRECTOR

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DATA REPORTING QUALIFIERS - ORGANIC

For reporting results, the following "Results Qualifiers" are used:

VALUE - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates the compound was analyzed for, but was not detected. Report the minimum detection limit for the sample with the U, ie "10 U". This is not necessarily the instrument detection limit. The figure represents the minimum detection limit attainable for this particular sample based on any concentration or dilution that may have been required.

J - Indicates an estimated value. This flag is used:

- (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed).
- (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit but greater than zero. If the detection limit was 10 ug/L and a concentration of 3 ug/L was calculated, report as "3 J".

B - Indicates the analyte was found in the blank as well as the sample; report as "12 B".

E - Indicates the analyte's concentration exceeds the calibrated range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

P - This flag is used for a Pesticide/Aroclor target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

N - This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.

000003

CHEMTECH CONSULTING GROUP

II

VOLATILES DATA

000004

CHEMTECH CONSULTING GROUP

VOLATILES

QC DATA

000005

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Level: (low/med) LOW

	SAMPLE NO.	SMC1 (DBFM) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLK01	98	94	98	108	
02	BLKSPK	90	89	92	90	
03	GP-014-SS8	95	97	93	99	
04	VBLK02	98	101	99	103	
05	GP-014-SS12	109	116	91	105	
06	GP-017-SS8	108	113	84	107	
07	GP-019-SS8	89	91	96	106	
08	GP-020-SS8	85	88	94	96	
09	GP-020-SS12	99	101	93	112	
10	VBLK03	96	120	99	96	
11	GP-015-SS8	118	119	105	102	
12	GP-017-SS8DL	98 D	98 D	98 D	107 D	
13	GP-020-SS12DL	95 D	96 D	93 D	100 D	
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SMC1 (DBFM) = Dibromofluoromethane

SMC2 (DCE) = 1,2-Dichloroethane-d4

SMC3 (TOL) = Toluene-d8

SMC4 (BFB) = 4-Bromofluorobenzene

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

QC LIMITS

(80-120)

(80-120)

(81-117)

(74-121)

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Level: (low/med) MED

	SAMPLE NO.	SMC1 (DBFM) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLK01	109	105	108	114	
02	GP-015-SS12	109	108	112	115	
03	GP-016-SS8	106	106	108	110	
04	GP-016-SS12	106	104	108	108	
05	GP-017-SS12	110	109	108	120	
06	GP-018-SS8	103	111	110	118	
07	GP-018-SS12	109	106	107	114	
08	GP-019-SS12	113	112	109	116	
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SMC1 (DBFM) = Dibromofluoromethane

SMC2 (DCE) = 1,2-Dichlorethane-d4

SMC3 (TOL) = Toluene-d8

SMC4 (BFB) = 4-Bromofluorobenzene

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

QC LIMITS

(80-120)

(80-120)

(81-117)

(74-121)

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: _____

Matrix Spike - Sample No.: BLKSPKLevel: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Benzene	57	0	48	89	(66-142)
Toluene	57	0	52	93	(59-139)

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

Comments: _____

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECHContract: EVERCLEAR ENVIRONMENTAL INC.,Project No.: 12729NJ

Site: _____

Location: COLORITE RIDGEFIELD Group: _____Matrix Spike - Sample No.: X-1Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	57	0	58	102	(59-172)
Benzene	57	0	59	104	(66-142)
Trichloroethene	57	0	47	82	(62-137)
Toluene	57	0	57	100	(59-139)
Chlorobenzene	57	0	55	96	(60-133)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MS % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	57	63	111	8	22 (59-172)
Benzene	57	63	111	7	21 (66-142)
Trichloroethene	57	52	91	10	24 (62-137)
Toluene	57	59	104	3	21 (59-139)
Chlorobenzene	57	59	104	7	21 (60-133)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECHContract: EARTH ENGINEERING INCProject No.: 12779NJ

Site: _____

Location: _____

Group: S-1Matrix Spike - Sample No.: S-12Level: (low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	4100	0	4500	110	(59-172)
Benzene	4100	0	4600	112	(66-142)
Trichloroethene	4100	0	4000	98	(62-137)
Toluene	4100	0	4500	110	(59-139)
Chlorobenzene	4100	0	4200	102	(60-133)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MS % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	4100	4800	117	6	22 (59-172)
Benzene	4100	5100	124	10	21 (66-142)
Trichloroethene	4100	4500	110	12	24 (62-137)
Toluene	4100	5000	122	11	21 (59-139)
Chlorobenzene	4100	4700	115	11	21 (60-133)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH Contract: IMPACT
Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS
Lab File ID: P19269.D Lab Sample ID: VBLK01
Date Analyzed: 10/21/99 Time Analyzed: 2308
GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) Y
Instrument ID: VOA 2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	BLKSPK	BLKSPK	P19270.D	2353
02	GP-014-SS8	O88007	P19281.D	0806
03				
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBK02

Lab Name: CHEMTECH Contract: IMPACT

Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS

Lab File ID: P19286.D Lab Sample ID: VBK02

Date Analyzed: 10/22/99 Time Analyzed: 1139

GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: VOA 2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	GP-014-SS12	O88008	P19288.D	1308
02	GP-017-SS8	O88013	P19293.D	1652
03	GP-019-SS8	O88017	P19297.D	1953
04	GP-020-SS8	O88019	P19299.D	2122
05	GP-020-SS12	O88020	P19300.D	2207
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBK03

Lab Name: CHEMTECH Contract: IMPACT

Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS

Lab File ID: P19304.D Lab Sample ID: VBK03

Date Analyzed: 10/25/99 Time Analyzed: 1910

GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: VOA 2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	GP-015-SS8	O88009	P19306.D	2040
02	GP-017-SS8DL	O88013DL	P19307.D	2125
03	GP-020-SS12DL	O88020DL	P19308.D	2210
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH Contract: IMPACT

Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS

Lab File ID: M13334.D Lab Sample ID: VBLK01

Date Analyzed: '10/25/99 Time Analyzed: 0958

GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA 2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	GP-015-SS12	O88010	M13338.D	1321
02	GP-016-SS8	O88011	M13339.D	1406
03	GP-016-SS12	O88012	M13340.D	1453
04	GP-017-SS12	O88014	M13341.D	1540
05	GP-018-SS8	O88015	M13342.D	1625
06	GP-018-SS12	O88016	M13343.D	1711
07	GP-019-SS12	O88018	M13344.D	1756
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COMMENTS:

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8

Lab File ID: P19048.D

BFB Injection Date: 10/6/99

Instrument ID: VOA 2

BFB Injection Time: 1715

GC Column: RTX624

ID: 0.53 (mm)

Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	21.1
75	30.0 - 66.0% of mass 95	58.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	99.4
175	4.0 - 9.0% of mass 174	7.4 (7.4)1
176	93.0 - 101.0% of mass 174	98.5 (99.1)1
177	5.0 - 9.0% of mass 176	6.4 (6.5)2

1-Value is % mass 174

2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	P19049.D	10/6/99	1753
02	VSTD200	VSTD200	P19051.D	10/6/99	1923
03	VSTD100	VSTD100	P19052.D	10/6/99	2007
04	VSTD020	VSTD020	P19053.D	10/6/99	2051
05	VSTD005	VSTD005	P19054.D	10/6/99	2135
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**VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)**

Lab Name : CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS8
 Lab File ID: P19267.D BFB Injection Date: ####
 Instrument ID: VOA 2 BFB Injection Time: 2145
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.2
75	30.0 - 66.0% of mass 95	59.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	85.6
175	4.0 - 9.0% of mass 174	5.9 (6.9)1
176	93.0 - 101.0% of mass 174	85.1 (99.4)1
177	5.0 - 9.0% of mass 176	5.8 (6.8)2

1-Value is % mass 174

2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5002	P19268.D	10/21/99	2223
02	VBLK01	VBLK01	P19269.D	10/21/99	2308
03	BLKSPK	BLKSPK	P19270.D	10/21/99	2353
04	GP-014-SS8	O88007	P19281.D	10/22/99	0806
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS8
 Lab File ID: P19284.D BFB Injection Date: ####
 Instrument ID: VOA 2 BFB Injection Time: 1017
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.3
75	30.0 - 66.0% of mass 95	59.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	98.3
175	4.0 - 9.0% of mass 174	7.1 (7.2)1
176	93.0 - 101.0% of mass 174	95.1 (96.7)1
177	5.0 - 9.0% of mass 176	6.1 (6.4)2

1-Value is % mass 174

2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5003	P19285.D	10/22/99	1055
02	VBLK02	VBLK02	P19286.D	10/22/99	1139
03	GP-014-SS12	O88008	P19288.D	10/22/99	1308
04	GP-017-SS8	O88013	P19293.D	10/22/99	1652
05	GP-019-SS8	O88017	P19297.D	10/22/99	1953
06	GP-020-SS8	O88019	P19299.D	10/22/99	2122
07	GP-020-SS12	O88020	P19300.D	10/22/99	2207
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS8
 Lab File ID: P19301.D BFB Injection Date: ####
 Instrument ID: VOA 2 BFB Injection Time: 1702
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.8
75	30.0 - 66.0% of mass 95	58.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	95.7
175	4.0 - 9.0% of mass 174	6.7 (7.0)1
176	93.0 - 101.0% of mass 174	95.4 (99.7)1
177	5.0 - 9.0% of mass 176	6.5 (6.8)2

1-Value is % mass 174

2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5004	P19302.D	10/25/99	1740
02	VBLK03	VBLK03	P19304.D	10/25/99	1910
03	GP-015-SS8	O88009	P19306.D	10/25/99	2040
04	GP-017-SS8DL	O88013DL	P19307.D	10/25/99	2125
05	GP-020-SS12D	O88020DL	P19308.D	10/25/99	2210
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS8
 Lab File ID: M12953.D BFB Injection Date: '10/9/99
 Instrument ID: VOA 2 BFB Injection Time: 0804
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.6
75	30.0 - 66.0% of mass 95	46.7
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.1 (0.1)1
174	50.0 - 120.0% of mass 95	81.3
175	4.0 - 9.0% of mass 174	5.6 (6.9)1
176	93.0 - 101.0% of mass 174	79.8 (98.2)1
177	5.0 - 9.0% of mass 176	4.9 (6.1)2

1-Value is % mass 174

2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	VSTD200	M12954.D	10/9/99	0832
02	VSTD100	VSTD100	M12955.D	10/9/99	0917
03	VSTD050	VSTD050	M12956.D	10/9/99	1002
04	VSTD020	VSTD020	M12957.D	10/9/99	1049
05	VSTD005	VSTD005	M12959.D	10/9/99	1235
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13827ASP Site: _____ Location: _____ Group: GP-014-SS8
 Lab File ID: M13332.D BFB Injection Date: 10/25/99
 Instrument ID: VOA 2 BFB Injection Time: 0820
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	21.2
75	30.0 - 66.0% of mass 95	46.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.5 (0.7)1
174	50.0 - 120.0% of mass 95	80.3
175	4.0 - 9.0% of mass 174	5.4 (6.8)1
176	93.0 - 101.0% of mass 174	77.7 (96.8)1
177	5.0 - 9.0% of mass 176	4.6 (5.9)2

1-Value is % mass 174

2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5002	M13333.D	10/25/99	0848
02	VBLK01	VBLK01	M13334.D	10/25/99	0958
03	GP-015-SS12	O88010	M13338.D	10/25/99	1321
04	GP-016-SS8	O88011	M13339.D	10/25/99	1406
05	GP-016-SS12	O88012	M13340.D	10/25/99	1453
06	GP-017-SS12	O88014	M13341.D	10/25/99	1540
07	GP-018-SS8	O88015	M13342.D	10/25/99	1625
08	GP-018-SS12	O88016	M13343.D	10/25/99	1711
09	GP-019-SS12	O88018	M13344.D	10/25/99	1756
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13827ASP Site: Location: Group: GP-014-SS8
 Lab File ID (Standard): M13333.D Date Analyzed: 10/25/99
 Instrument ID: VOA 2 Time Analyzed: 0848
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge (Y/N) N

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	2219784	14.12	1955812	20.46	924790	25.19
UPPER LIMIT	4439568	14.62	3911624	20.96	1849580	25.69
LOWER LIMIT	1109892	13.62	977906	19.96	462395	24.69
SAMPLE NO.						
01 VBLK01	1826740	14.12	1643968	20.46	732194	25.19
02 GP-015-SS12	1914469	14.11	1721024	20.46	753921	25.20
03 GP-016-SS8	1906236	14.11	1703407	20.46	750838	25.21
04 GP-016-SS12	1884194	14.11	1629859	20.47	712882	25.20
05 GP-017-SS12	1812835	14.12	1568194	20.46	655556	25.20
06 GP-018-SS8	1808159	14.12	1644078	20.47	736197	25.21
07 GP-018-SS12	1862516	14.12	1668061	20.47	663424	25.21
08 GP-019-SS12	1685878	14.12	1445238	20.47	640664	25.21
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): P19268.DDate Analyzed: 10/21/99Instrument ID: VOA 2Time Analyzed: 2223GC Column: RTX624ID: 0.53 (mm)Heated Purge (Y/N) Y

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1104200	9.26	1019715	16.33	762688	22.59
UPPER LIMIT	2208400	9.76	2039430	16.83	1525376	23.09
LOWER LIMIT	552100	8.76	509858	15.83	381344	22.09
SAMPLE NO.						
01 VBLK01	890527	9.25	1087899	16.33	796990	22.58
02 BLKSPK	967699	9.25	983973	16.32	707898	22.58
03 GP-014-SS8	905755	9.27	991851	16.33	693943	22.58
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): P19285.DDate Analyzed: 10/22/99Instrument ID: VOA 2Time Analyzed: 1055GC Column: RTX624ID: 0.53 (mm)Heated Purge (Y/N) Y

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	835841	9.28	803311	16.36	566634	22.62
UPPER LIMIT	1671682	9.78	1606622	16.86	1133268	23.12
LOWER LIMIT	417921	8.78	401656	15.86	283317	22.12
SAMPLE NO.						
01 VBLK02	725977	9.26	833868	16.34	604678	22.62
02 GP-014-SS12	476160	9.25	524842	16.34	295154	22.61
03 GP-017-SS8	700601	9.26	644757	16.34	239735 *	22.62
04 GP-019-SS8	979631	9.27	1063344	16.35	676873	22.61
05 GP-020-SS8	1052585	9.26	1093873	16.35	855293	22.62
06 GP-020-SS12	580872	9.26	648524	16.35	304766	22.62
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

000023

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): P19302.DDate Analyzed: 10/25/99Instrument ID: VOA 2Time Analyzed: 1740GC Column: RTX624ID: 0.53 (mm)Heated Purge (Y/N) Y

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1132941	9.24	1181098	16.29	772348	22.53
UPPER LIMIT	2265882	9.74	2362196	16.79	1544696	23.03
LOWER LIMIT	566471	8.74	590549	15.79	386174	22.03
SAMPLE NO.						
01 VBLK03	585896	9.25	636617	16.34	405271	22.60
02 GP-015-SS8	570707	9.22	744616	16.30	431299	22.56
03 GP-017-SS8DL	849610	9.24	897999	16.30	473083	22.55
04 GP-020-SS12DL	882415	9.23	913955	16.29	567920	22.53
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

000024

CHEMTECH CONSULTING GROUP

VOLATILES

SAMPLE DATA

000025

SAMPLE NO.

GP-014-SS8

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88007

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19281.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 3

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-014-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88007
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19281.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 2 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 112-40-3	Dodecane	27.16	7.4	J
2. 629-50-5	Tridecane	30.08	6	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19281.D
 Acq Time : 22 Oct 99 8:06 am
 Sample : 13827ASP-88007
 Misc : 5G/5ML
 Quant Time: Oct 22 13:16 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.27	96	905755	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	991851	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.58	152	693943	50.00	ug/L	-0.01
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	714914	47.37	ug/L	94.75%
30) 1,2-Dichlorethane-d4	8.66	65	573738	48.38	ug/L	96.77%
38) Toluene-d8	12.77	98	821785	46.52	ug/L	93.04%
42) 4-Bromofluorobenzene	19.47	95	893801	49.29	ug/L	98.57%
Target Compounds						Qvalue
M 10) Acetone	3.89	43	340741	209.93	ug/L	98
M 13) methylene chloride	4.58	84	12828	3.02	ug/L	87
66) 1,3,5-trimethylbenzene	20.63	105	60879	2.22	ug/L	97
68) 1,2,4-trimethylbenzene	21.63	105	146620	5.14	ug/L	91

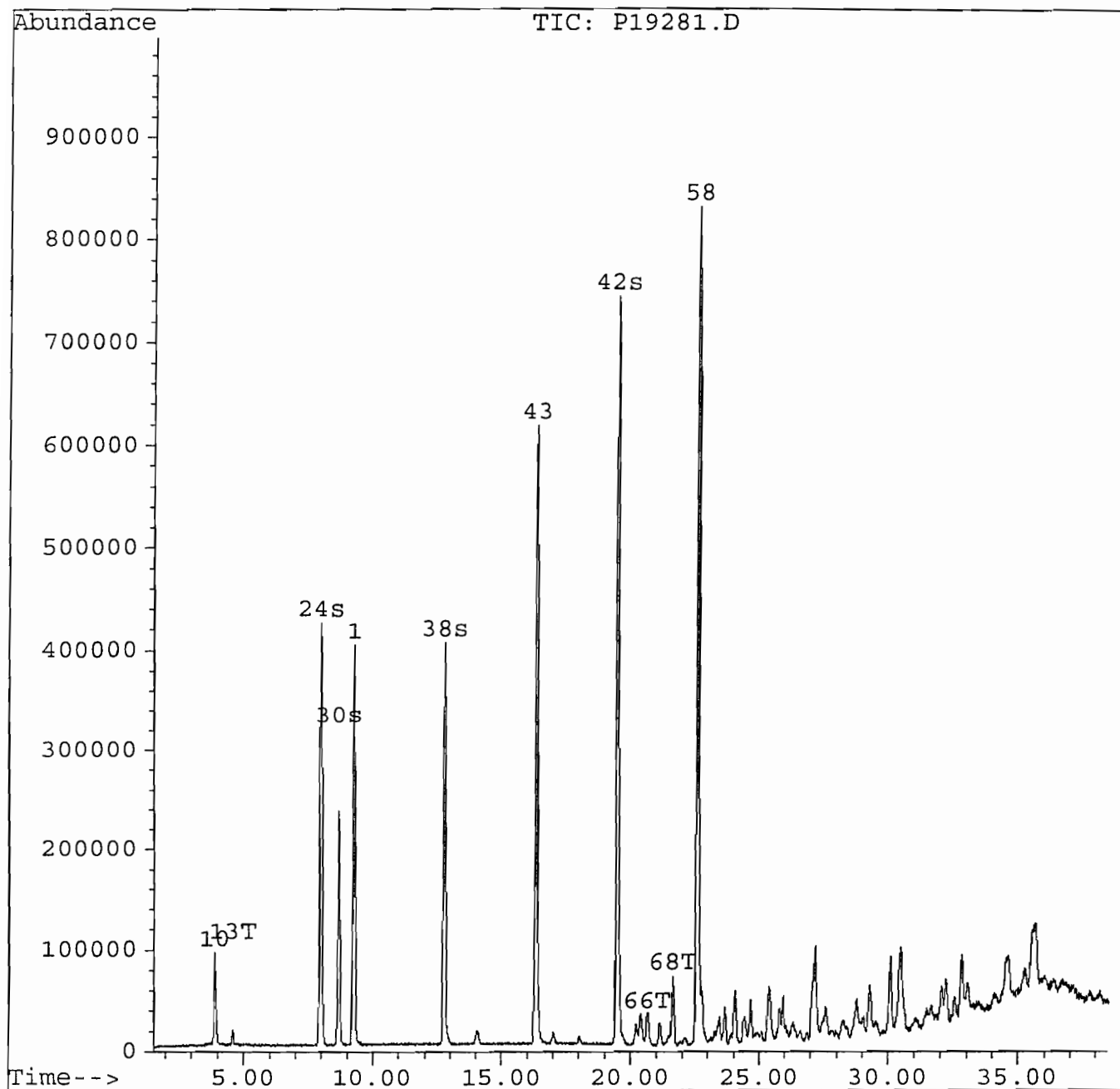
000028

Quantitation Report

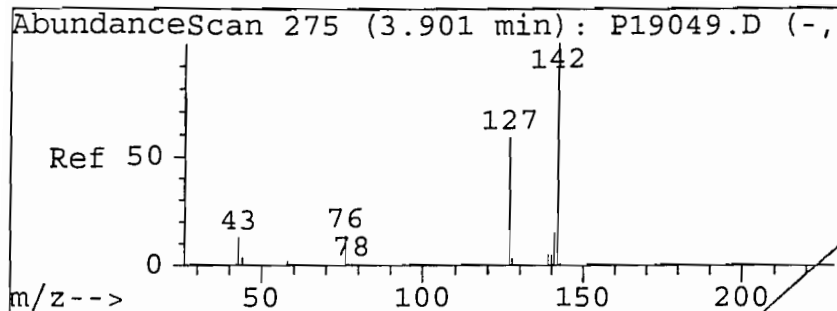
Data File : I:\HPCHEM\1\DATA\V2102199\P19281.D
Acq Time : 22 Oct 99 8:06 am
Sample : 13827ASP-88007
Misc : 5G/5ML
Quant Time: Oct 22 13:16 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

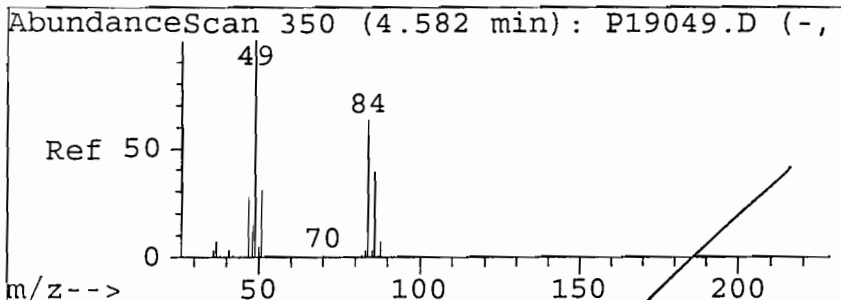
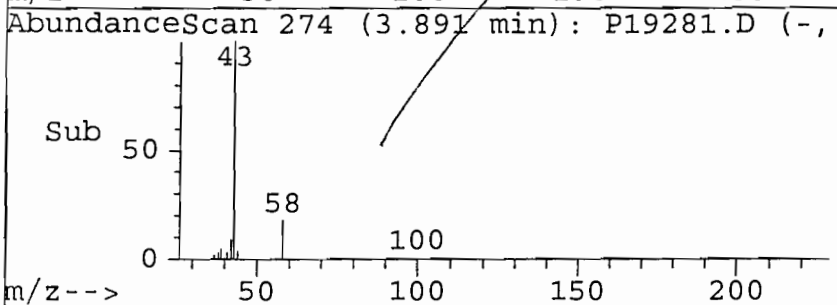
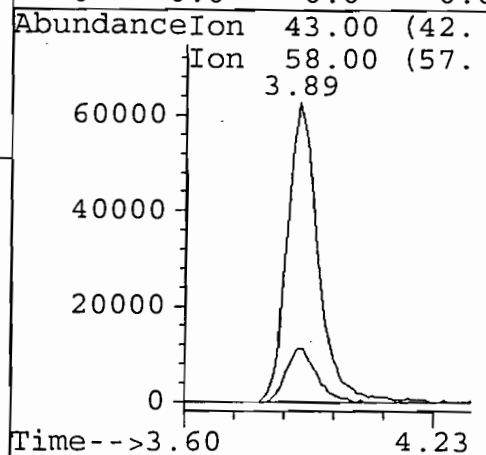
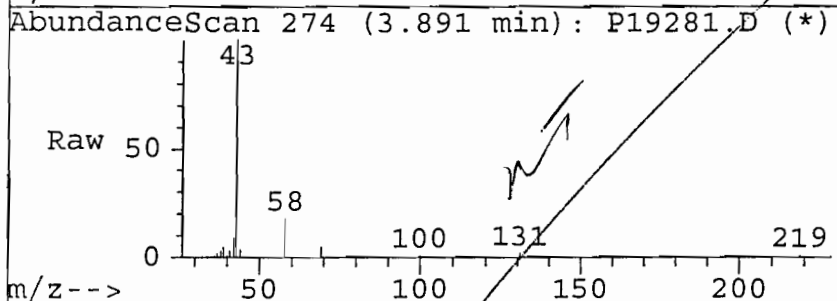


000029



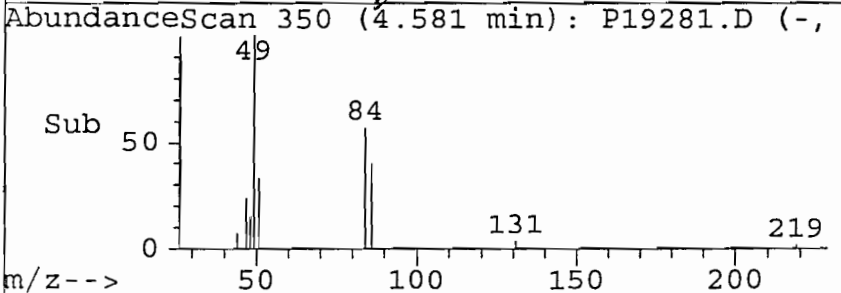
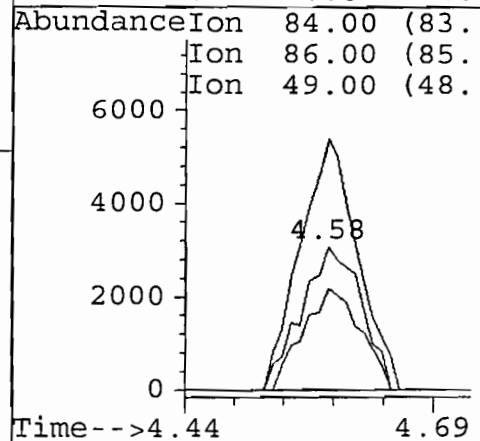
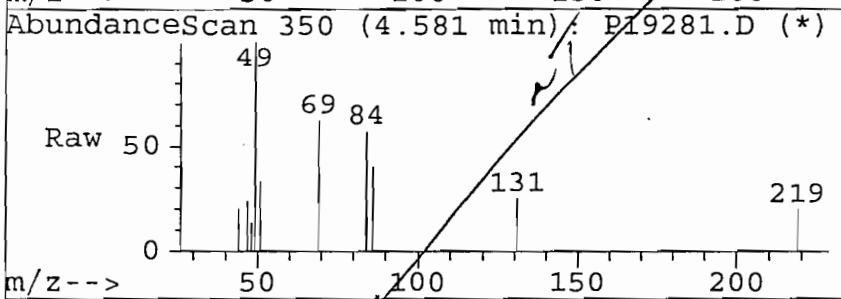
#10
Acetone
Concen: 209.93 ug/L
RT: 3.89 min Scan# 274
Delta R.T. -0.01 min
Lab File: P19281.D
Acq: 22 Oct 99 8:06 am

Tgt	Ion:43	Resp:	340741
Ion	Ratio	Lower	Upper
43	100		
58	17.7	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



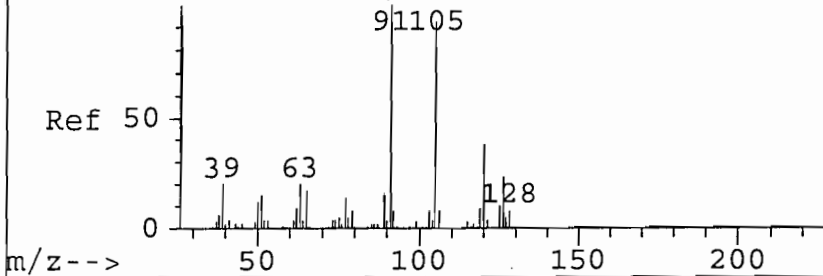
#13
methylene chloride
Concen: 3.02 ug/L
RT: 4.58 min Scan# 350
Delta R.T. -0.00 min
Lab File: P19281.D
Acq: 22 Oct 99 8:06 am

Tgt	Ion:84	Resp:	12828
Ion	Ratio	Lower	Upper
84	100		
86	70.8	43.3	80.3
49	175.1	110.4	205.0
0	0.0	0.0	0.0



000030

AbundanceScan 2125 (20.658 min): P19049.D (

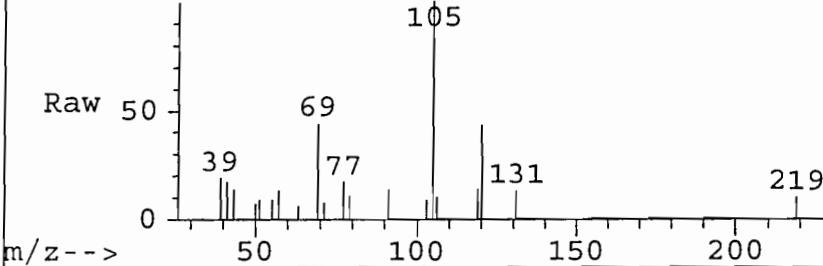


#66

1,3,5-trimethylbenzene
Concen: 2.22 ug/L
RT: 20.63 min Scan# 2119
Delta R.T. -0.02 min
Lab File: P19281.D
Acq: 22 Oct 99 8:06 am

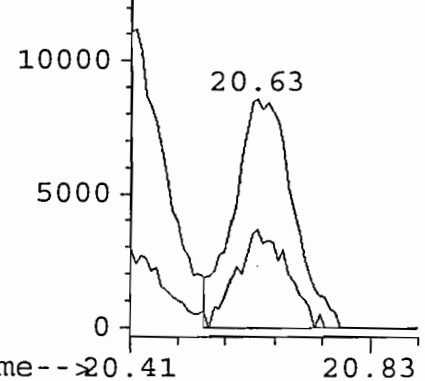
Tgt Ion:	105	Resp:	60879
Ion	Ratio	Lower	Upper
105	100		
120	42.8	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 2119 (20.634 min): P19281.D (

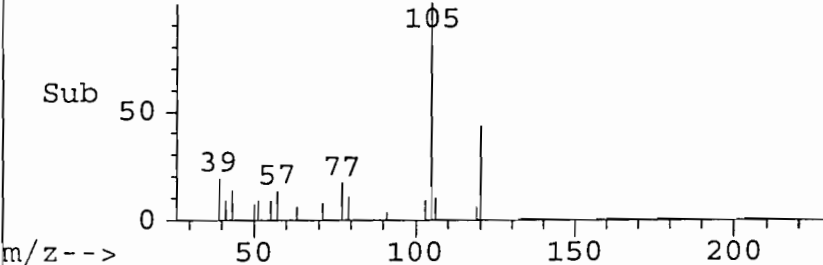


AbundanceIon 105.00 (104

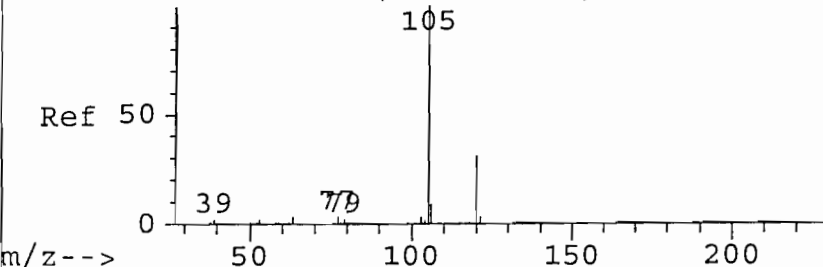
Ion 120.00 (119



AbundanceScan 2119 (20.634 min): P19281.D (



AbundanceScan 2233 (21.642 min): P19049.D (

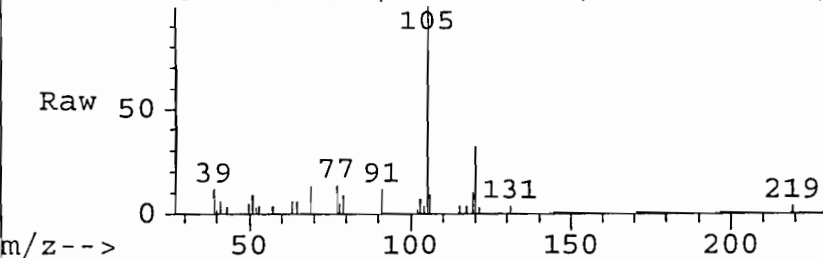


#68

1,2,4-trimethylbenzene
Concen: 5.14 ug/L
RT: 21.63 min Scan# 2229
Delta R.T. -0.01 min
Lab File: P19281.D
Acq: 22 Oct 99 8:06 am

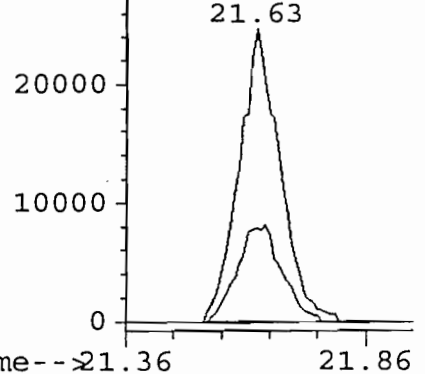
Tgt Ion:	105	Resp:	146620
Ion	Ratio	Lower	Upper
105	100		
120	31.7	26.0	48.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 2229 (21.634 min): P19281.D (

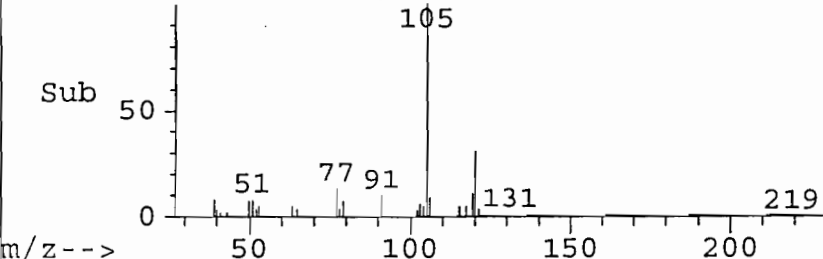


AbundanceIon 105.00 (104

Ion 120.00 (119



AbundanceScan 2229 (21.634 min): P19281.D (



Library Search Compound Report

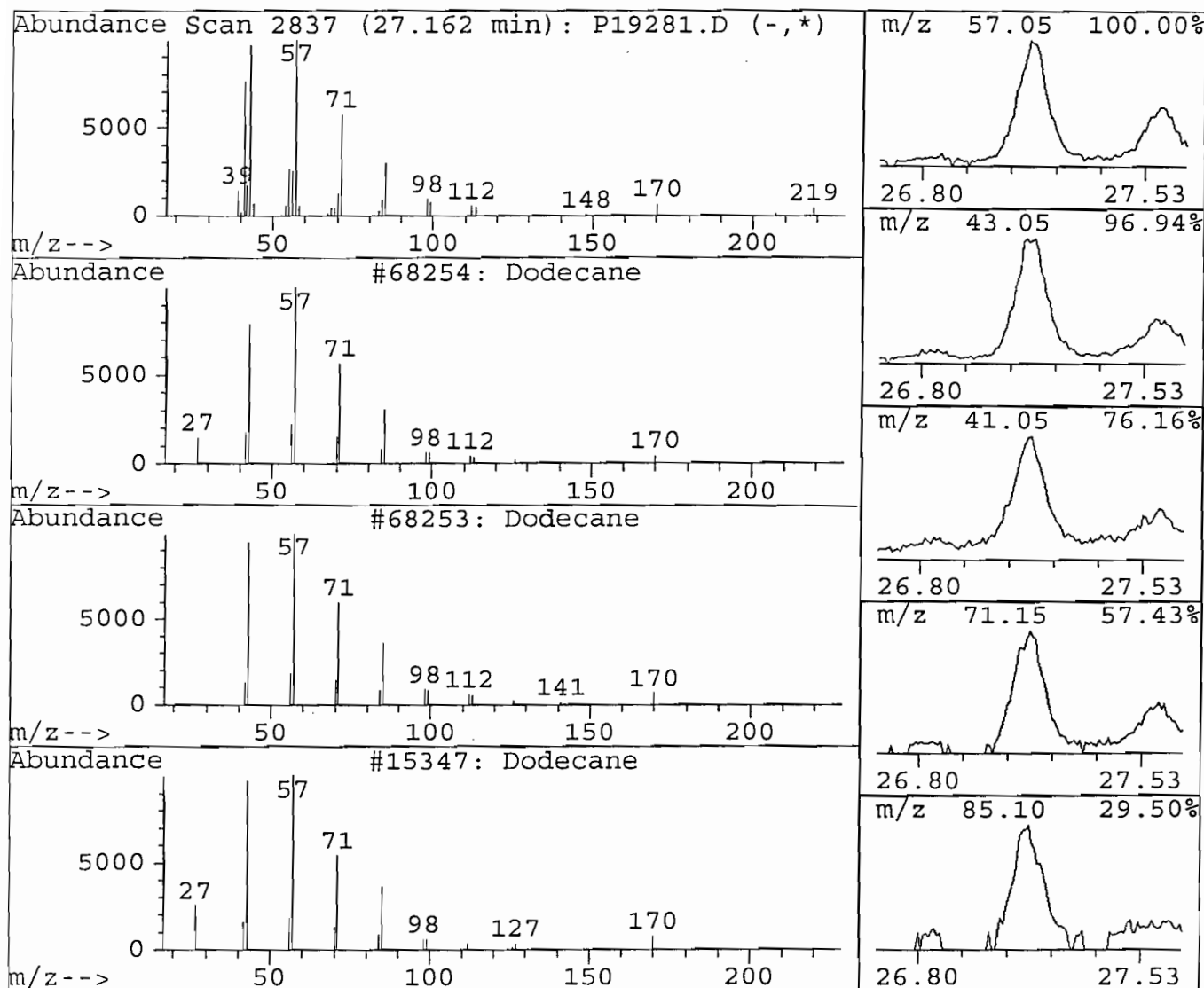
Data File : I:\HPCHEM\1\DATA\V2102199\P19281.D
Acq Time : 22 Oct 99 8:06 am
Sample : 13827ASP-88007
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.16	7.20 ug/L	754157	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	68254	000112-40-3	94
2	Dodecane	68253	000112-40-3	87
3	Dodecane	15347	000112-40-3	87
4	Dodecane	68252	000112-40-3	87
5	Dodecane	68251	000112-40-3	81



Library Search Compound Report

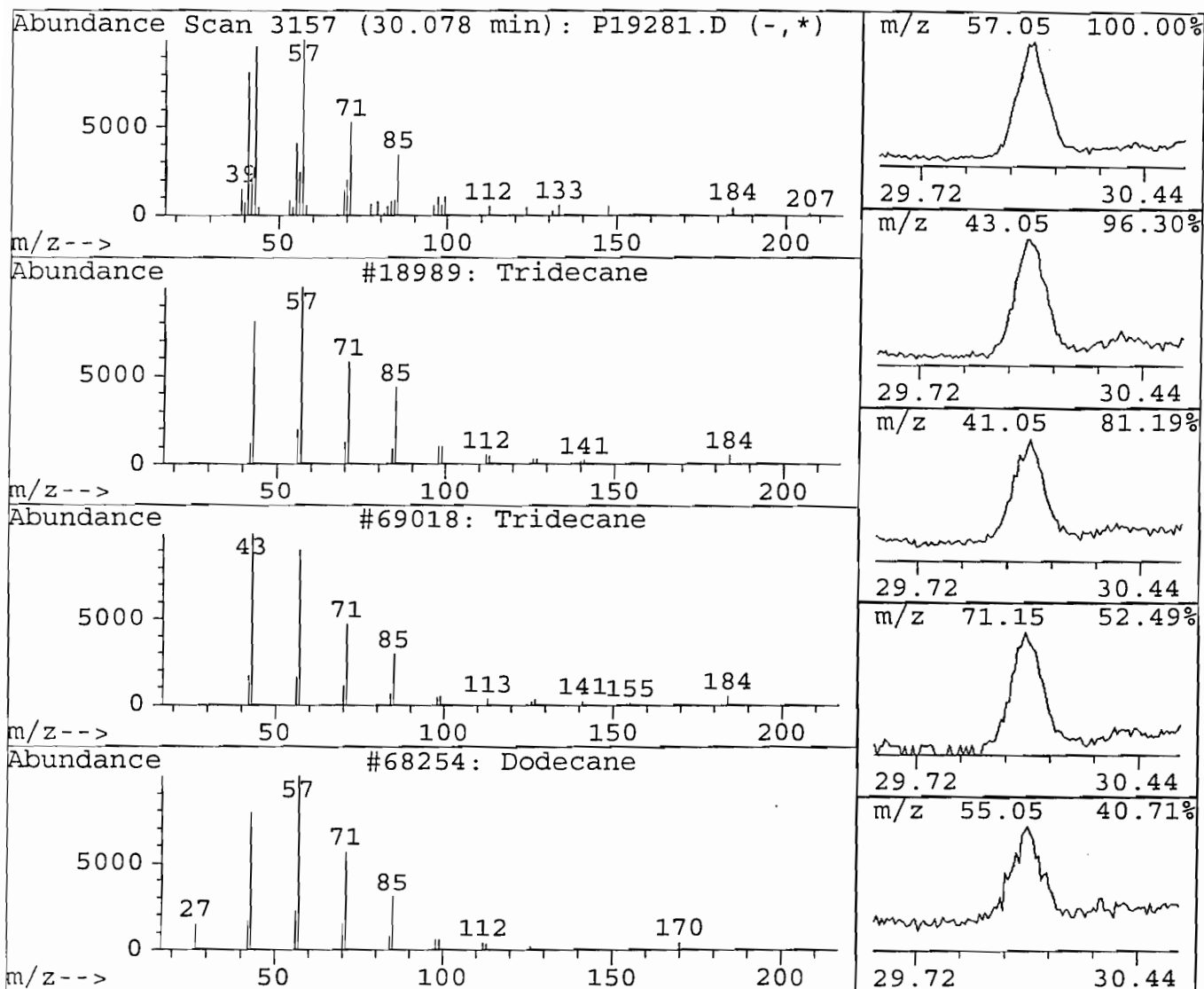
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Acq Time : 22 Oct 99 8:06 am
Sample : 13827ASP-88007
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.08	5.86 ug/L	614316	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	18989	000629-50-5	87
2	Tridecane	69018	000629-50-5	83
3	Dodecane	68254	000112-40-3	80
4	Hydroxylamine, O-decyl-	15973	029812-79-1	72
5	Tridecane	69016	000629-50-5	64



000033

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-014-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88008
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19288.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	21.58	93	J
2.	Unknown	22.16	130	J
3.	Unknown	22.83	100	J
4.	Unknown	23.49	150	J
5.	Unknown	26.33	170	J
6.	Unknown	26.61	75	J
7.	Unknown	26.91	150	J
8.	Unknown	29.34	130	J
9.	Unknown	29.67	92	J
10.	Unknown	32.27	79	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19288.D
 Acq Time : 22 Oct 99 1:08 pm
 Sample : 13827ASP-88008
 Misc : 5G/5ML
 Quant Time: Oct 23 14:28 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	476160	50.00	ug/L	-0.01
43) Chlorobenzene-d5	16.34	117	524842	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.61	152	295154	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	431173	54.35	ug/L	108.70%
30) 1,2-Dichlorethane-d4	8.67	65	361938	58.06	ug/L	116.12%
38) Toluene-d8	12.79	98	424494	45.71	ug/L	91.42%
42) 4-Bromofluorobenzene	19.49	95	498966	52.34	ug/L	104.67%
Target Compounds						Qvalue
13) methylene chloride	4.59	84	6574	2.94	ug/L	91
54) m&p-xylenes	17.02	106	60483	12.32	ug/L	100
55) o-xylene	18.04	91	191398	13.49	ug/L	96
64) 2-chlorotoluene	20.33	126	98049	31.18	ug/L	73
66) 1,3,5-trimethylbenzene	20.67	105	1005439	86.21	ug/L	95
68) 1,2,4-trimethylbenzene	21.66	105	865761	71.32	ug/L	91

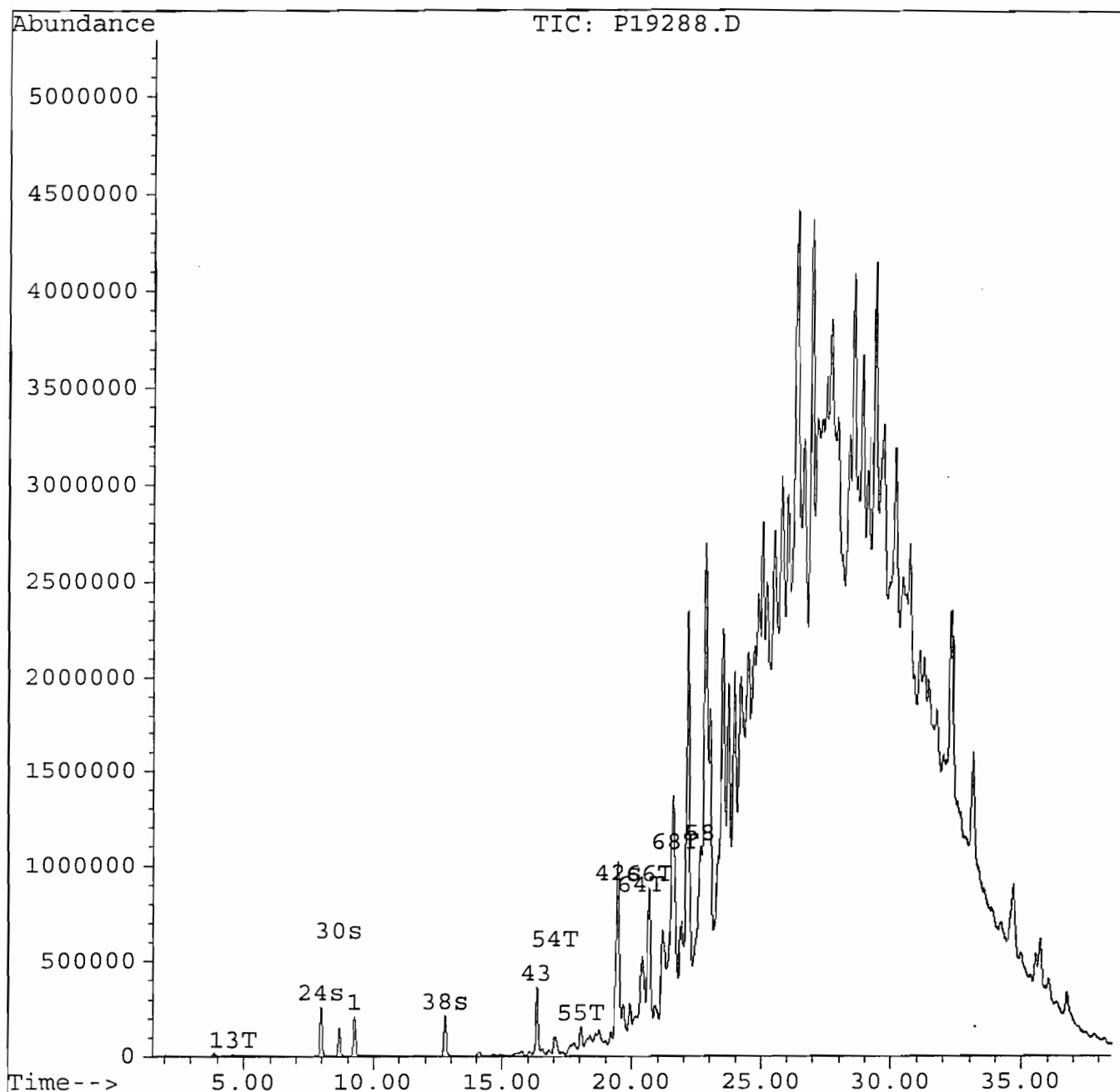
000036

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19288.D
Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML
Quant Time: Oct 23 14:28 1999

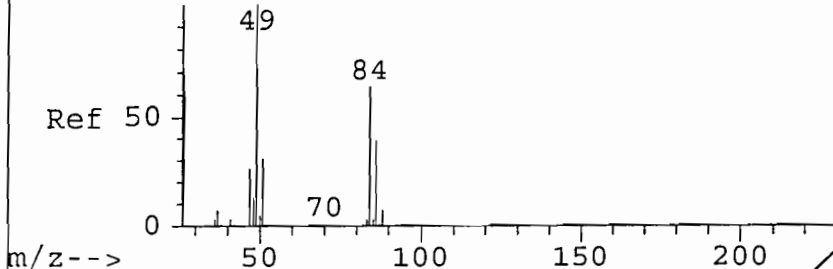
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000037

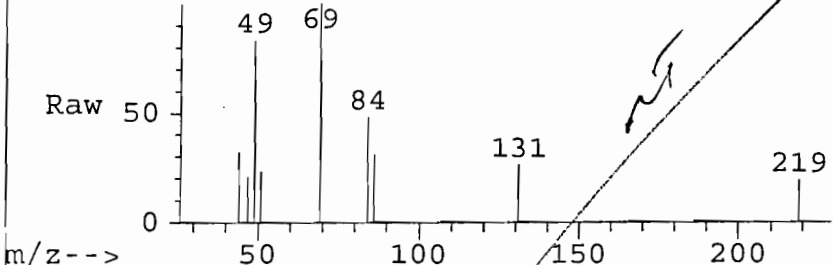
AbundanceScan 350 (4.582 min): P19049.D (-,



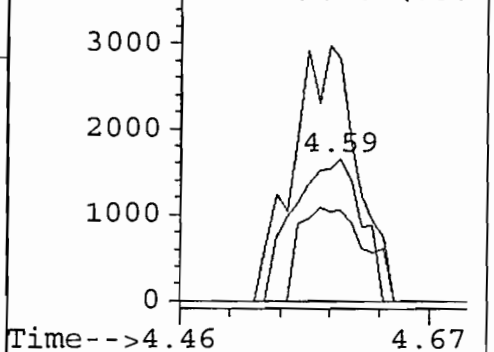
#13
methylene chloride
Concen: 2.94 ug/L
RT: 4.59 min Scan# 351
Delta R.T. 0.01 min
Lab File: P19288.D
Acq: 22 Oct 99 1:08 pm

Tgt Ion:	84	Resp:	6574
Ion	Ratio	Lower	Upper
84	100		
86	64.0	43.3	80.3
49	172.1	110.4	205.0
0	0.0	0.0	0.0

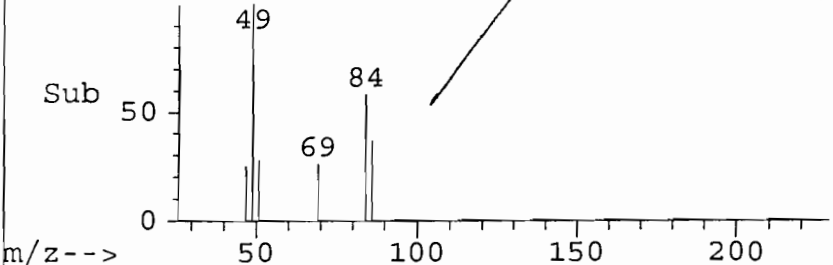
AbundanceScan 351 (4.595 min): P19288.D (*)



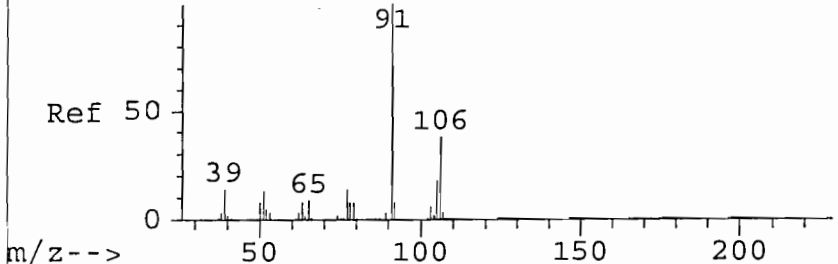
Abundance	Ion	84.00 (83.
4000	Ion	86.00 (85.
	Ion	49.00 (48.



AbundanceScan 351 (4.595 min): P19288.D (-,



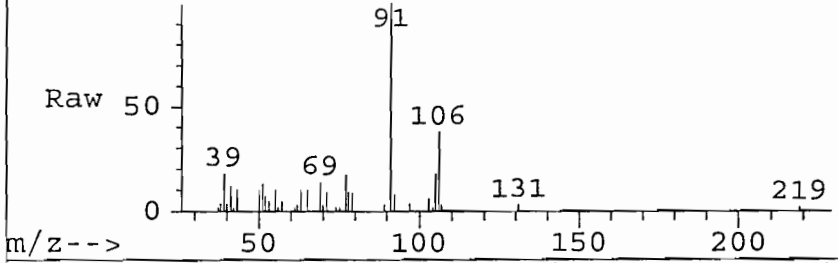
AbundanceScan 1721 (17.007 min): P19049.D (



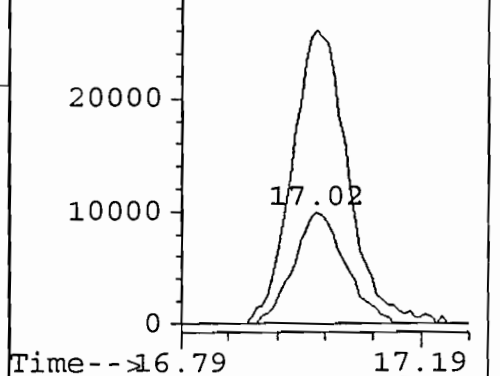
#54
m&p-xylenes
Concen: 12.32 ug/L
RT: 17.02 min Scan# 1725
Delta R.T. 0.01 min
Lab File: P19288.D
Acq: 22 Oct 99 1:08 pm

Tgt Ion:	106	Resp:	60483
Ion	Ratio	Lower	Upper
106	100		
91	262.7	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

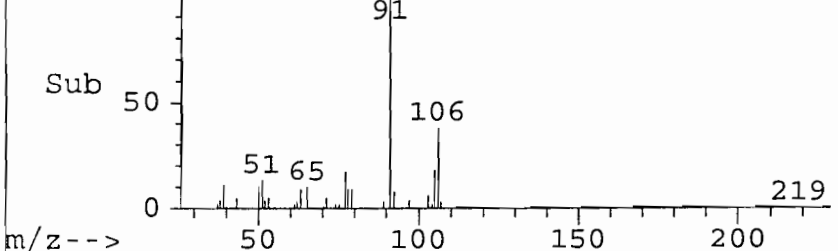
AbundanceScan 1725 (17.015 min): P19288.D (



Abundance	Ion	106.00 (105
30000	Ion	91.00 (90.

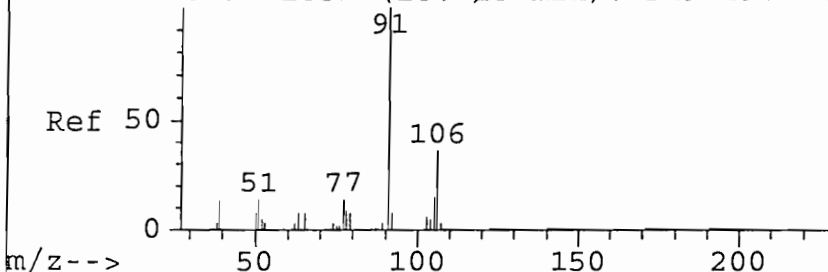


AbundanceScan 1725 (17.015 min): P19288.D (



000038

AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 13.49 ug/L

RT: 18.04 min Scan# 1837

Delta R.T. 0.02 min

Lab File: P19288.D

Acq: 22 Oct 99 1:08 pm

Tgt Ion:91 Resp: 191398

Ion Ratio Lower Upper

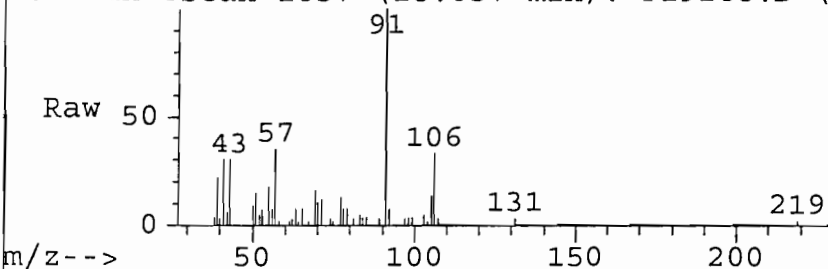
91 100

106 33.3 25.4 47.2

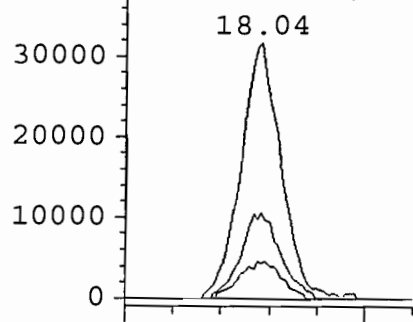
105 14.0 10.1 18.8

0 0.0 0.0 0.0

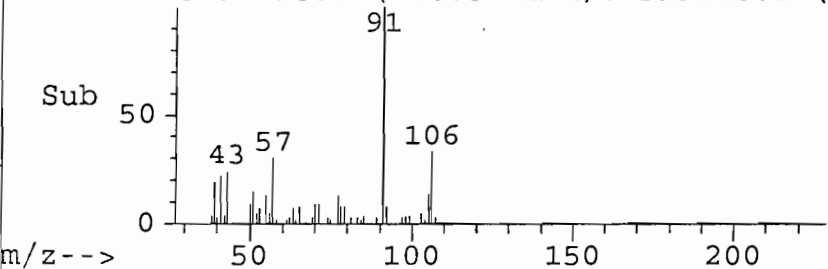
AbundanceScan 1837 (18.037 min): P19288.D (



AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104

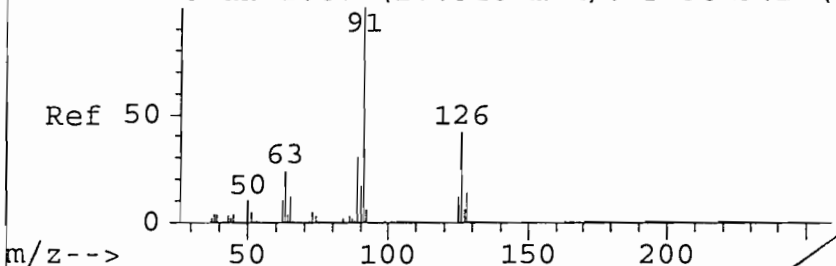


AbundanceScan 1837 (18.037 min): P19288.D (



Time-->17.75 18.26

AbundanceScan 2087 (20.310 min): P19049.D (



#64

2-chlorotoluene

Concen: 31.18 ug/L

RT: 20.33 min Scan# 2091

Delta R.T. 0.02 min

Lab File: P19288.D

Acq: 22 Oct 99 1:08 pm

Tgt Ion:126 Resp: 98049

Ion Ratio Lower Upper

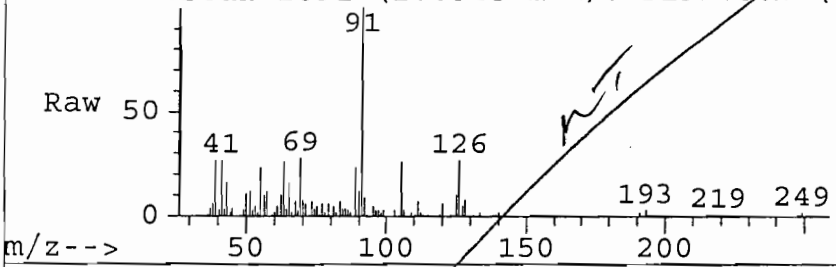
126 100

63 94.2 25.0 117.8

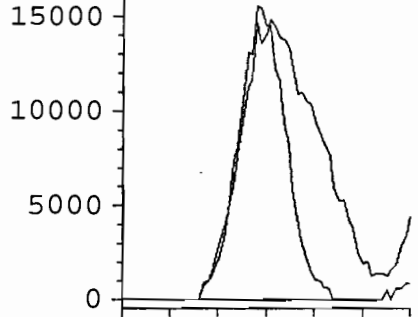
0 0.0 0.0 0.0

0 0.0 0.0 0.0

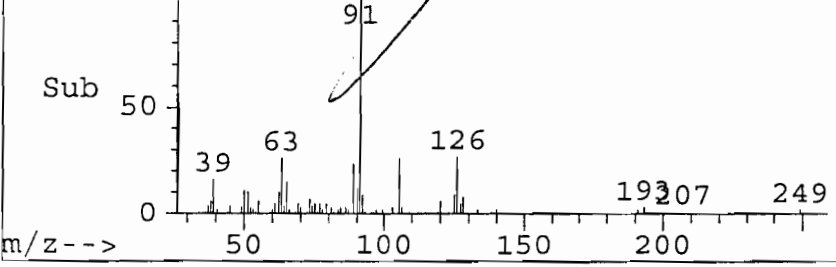
AbundanceScan 2091 (20.328 min): P19288.D (



AbundanceIon 126.00 (125
Ion 63.00 (62.
20.33



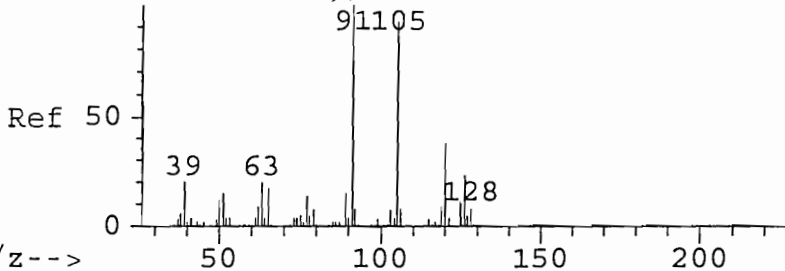
AbundanceScan 2091 (20.328 min): P19288.D (



Time-->20.08 20.53

000033

AbundanceScan 2125 (20.658 min): P19049.D (



#66

1,3,5-trimethylbenzene

Concen: 86.21 ug/L

RT: 20.67 min Scan# 2130

Delta R.T. 0.01 min

Lab File: P19288.D

Acq: 22 Oct 99 1:08 pm

Tgt Ion:105 Resp: 1005439

Ion Ratio Lower Upper

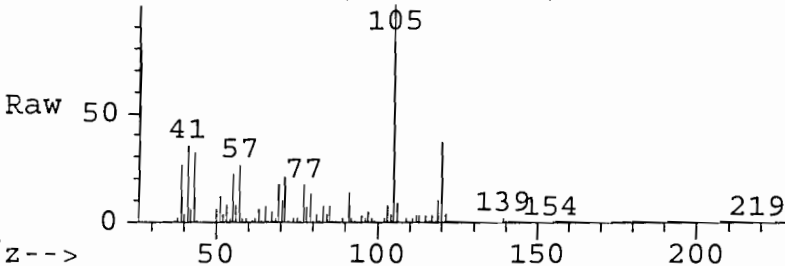
105 100

120 37.4 28.6 53.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2130 (20.668 min): P19288.D (



AbundanceIon 105.00 (104

Ion 120.00 (119

20.67

150000

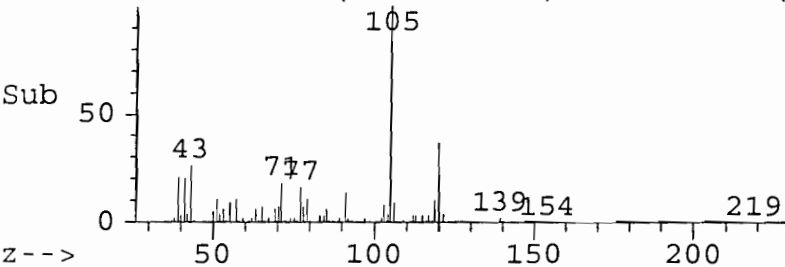
100000

50000

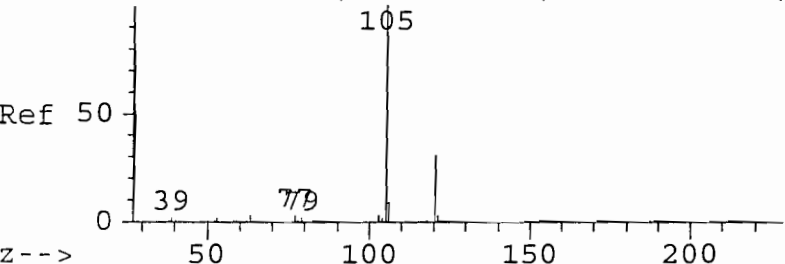
0

Time-->20.38 20.99

AbundanceScan 2130 (20.668 min): P19288.D (



AbundanceScan 2233 (21.642 min): P19049.D (



#68

1,2,4-trimethylbenzene

Concen: 71.32 ug/L

RT: 21.66 min Scan# 2242

Delta R.T. 0.02 min

Lab File: P19288.D

Acq: 22 Oct 99 1:08 pm

Tgt Ion:105 Resp: 865761

Ion Ratio Lower Upper

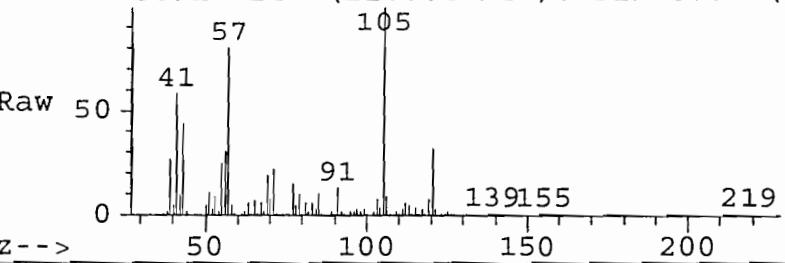
105 100

120 31.7 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2242 (21.662 min): P19288.D (



AbundanceIon 105.00 (104

Ion 120.00 (119

21.66

150000

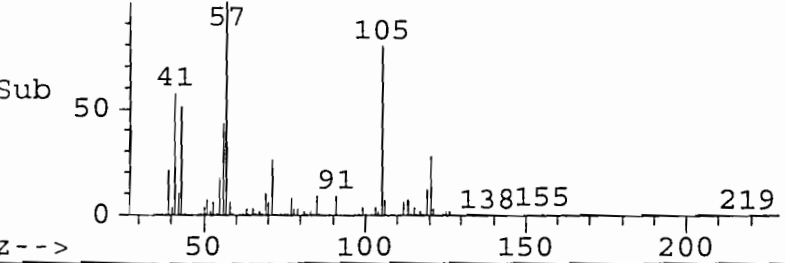
100000

50000

0

Time-->21.25 22.03

AbundanceScan 2242 (21.662 min): P19288.D (



000040

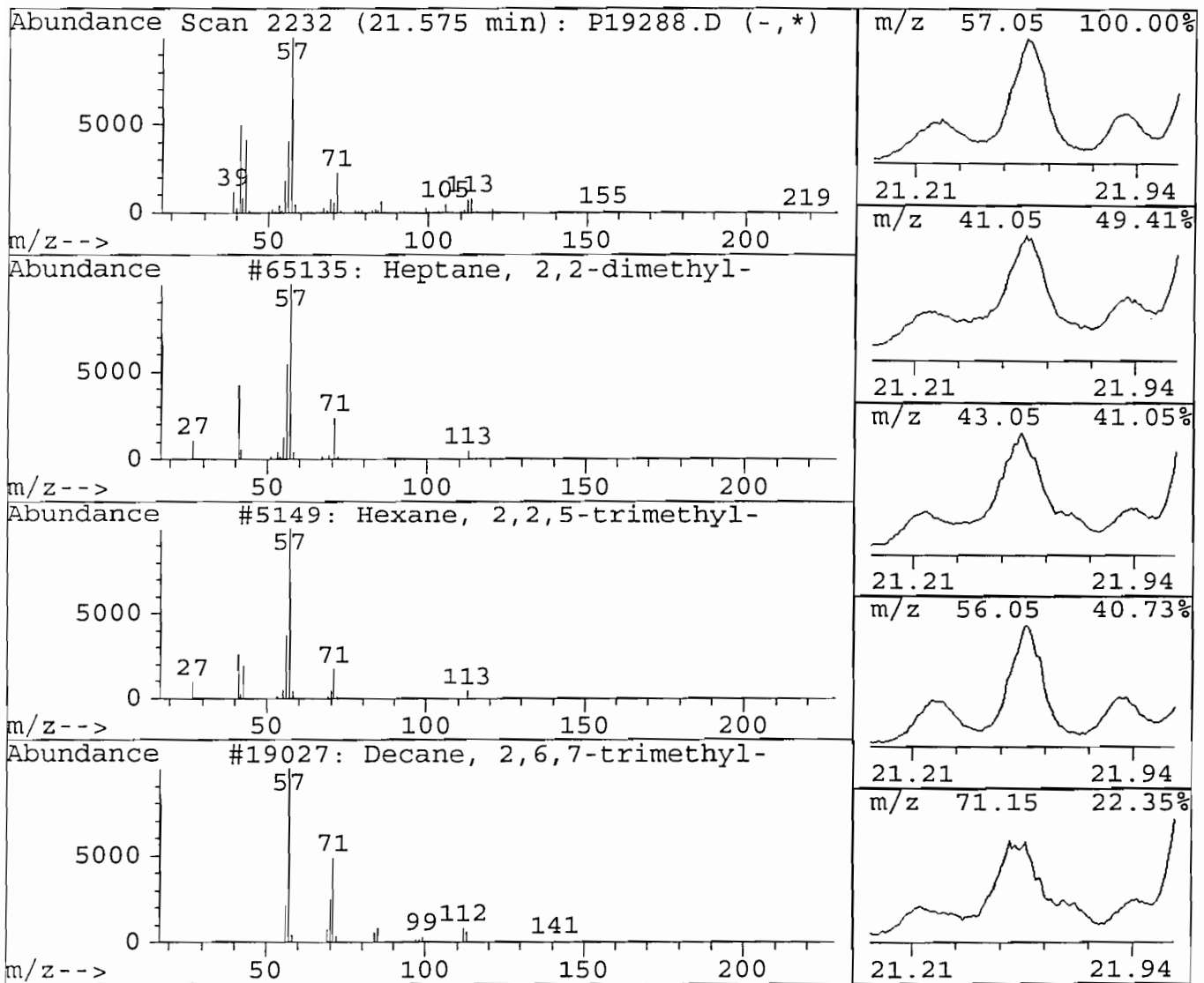
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19288.D
Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
21.58	89.35 ug/L	10580748	1,4-dichlorobenzene-d4	22.61	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Heptane, 2,2-dimethyl-		65135	001071-26-7	64
2	Hexane, 2,2,5-trimethyl-		5149	003522-94-9	53
3	Decane, 2,6,7-trimethyl-		19027	062108-25-2	53
4	Pentane, 2,2,4,4-tetramethyl-		5133	001070-87-7	50
5	Octane, 2,6-dimethyl-		66227	002051-30-1	43



000041

Library Search Compound Report

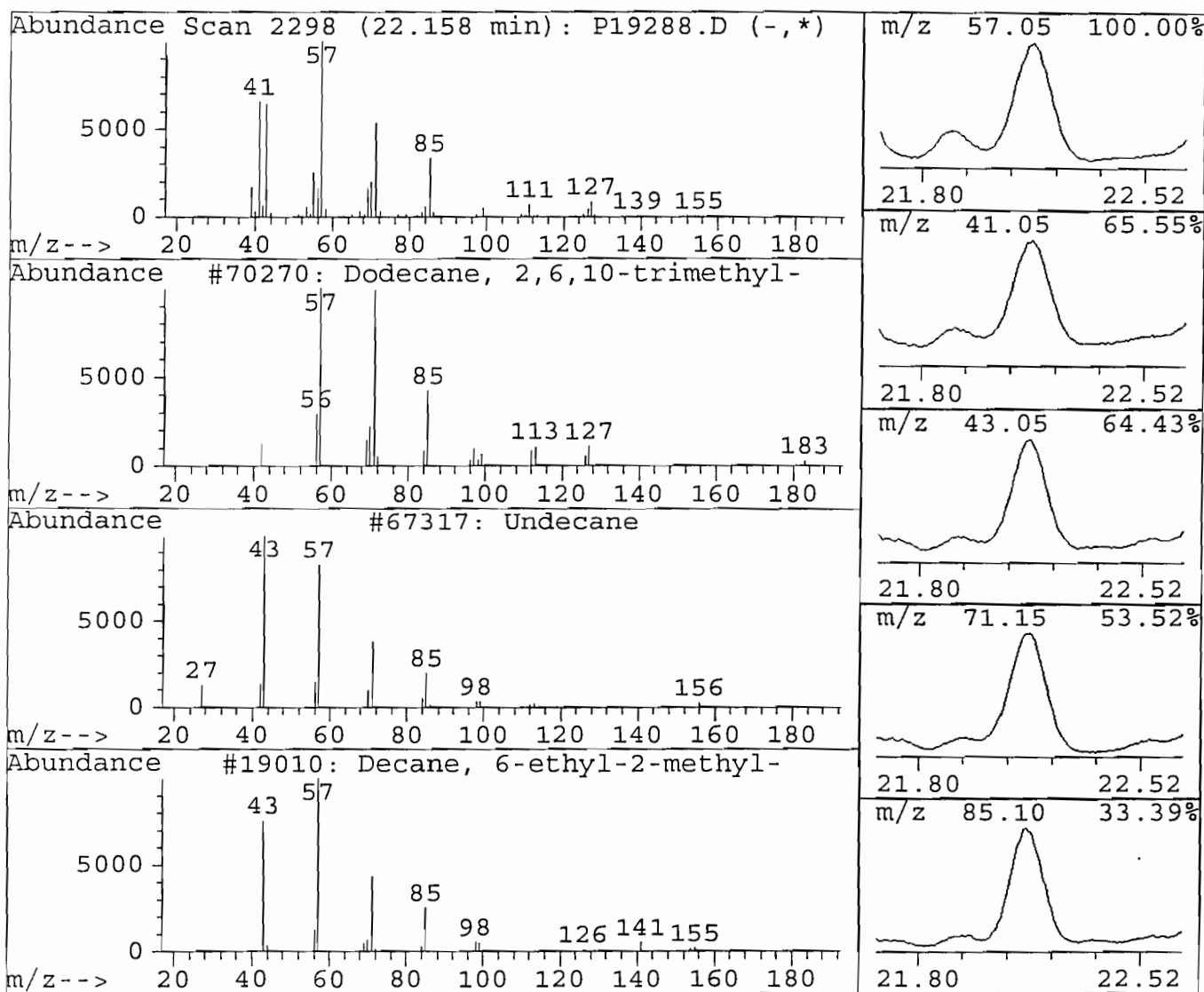
Data File : I:\HPCHEM\1\DATA\V2102199\P19288.D
Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.16	128.83 ug/L	15256122	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane, 2,6,10-trimethyl-	70270	003891-98-3	64
2	Undecane	67317	001120-21-4	59
3	Decane, 6-ethyl-2-methyl-	19010	062108-21-8	59
4	Undecane, 2,3-dimethyl-	18990	017312-77-5	59
5	Decane, 2,3,5-trimethyl-	19043	062238-11-3	59



Library Search Compound Report

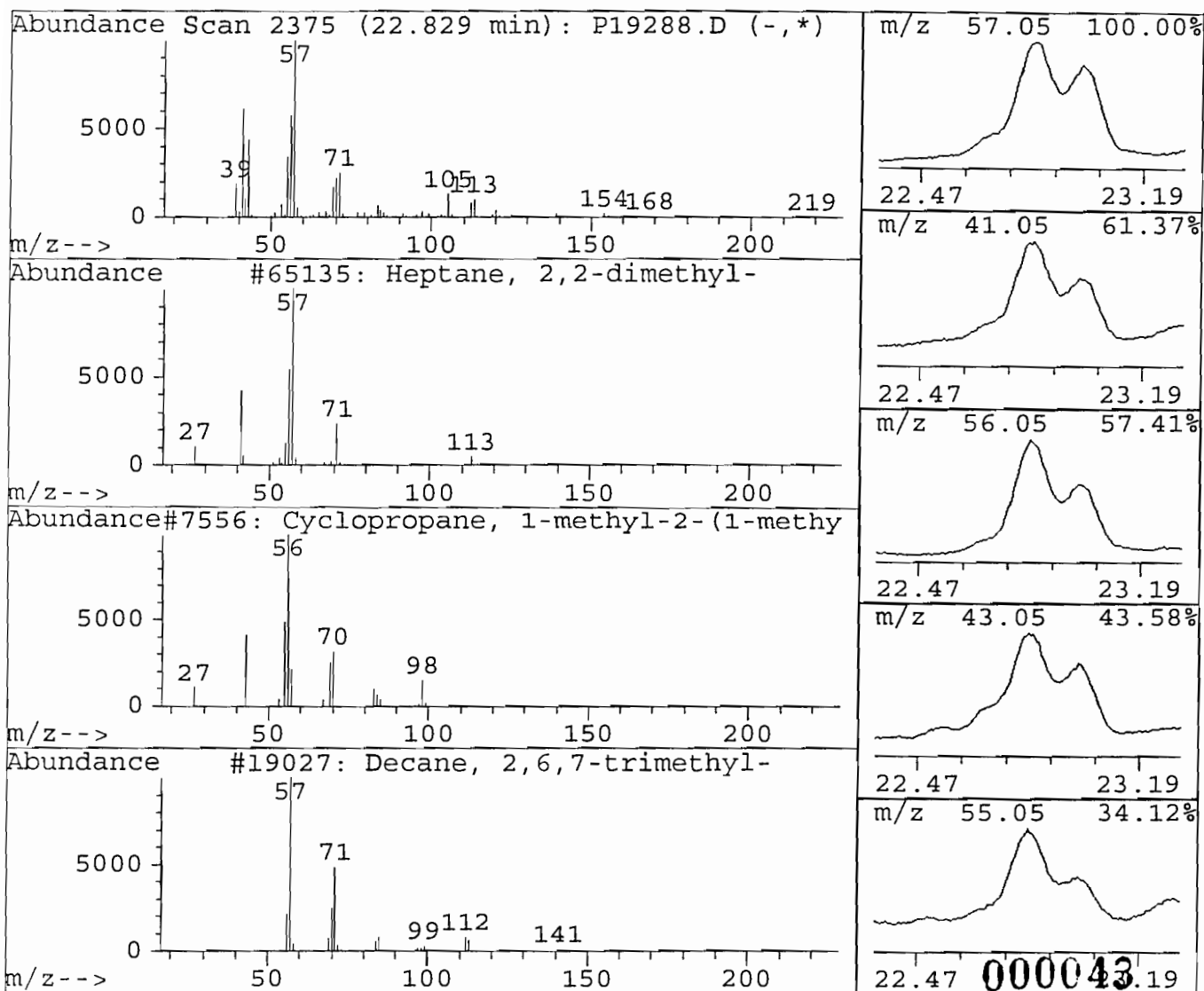
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Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.83	100.19 ug/L	11864199	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 2,2-dimethyl-	65135	001071-26-7	47
2	Cyclopropane, 1-methyl-2-(1-methylp	7556	062238-06-6	43
3	Decane, 2,6,7-trimethyl-	19027	062108-25-2	43
4	1-Heptene, 2-methyl-	2700	015870-10-7	43
5	1-Heptene, 2-methyl-	64030	015870-10-7	43



Library Search Compound Report

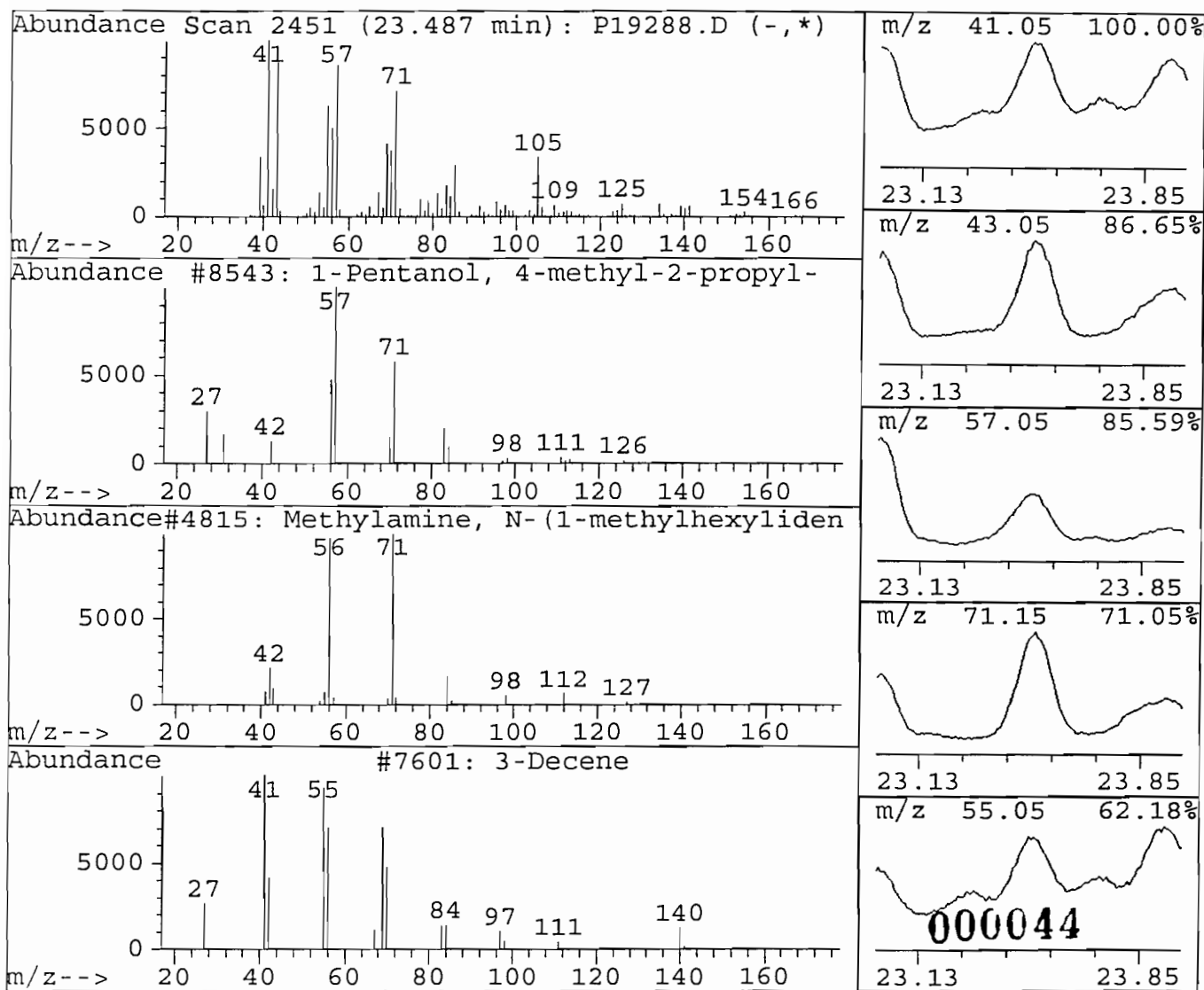
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Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.49	146.93 ug/L	17398807	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1-Pentanol, 4-methyl-2-propyl-	8543	054004-41-0	50
2	Methylamine, N-(1-methylhexylidene)	4815	022058-71-5	43
3	3-Decene	7601	019398-37-9	42
4	2-Decene, (Z)-	7542	020348-51-0	38
5	Cyclopropane, 1,2-dimethyl-3-pentyl	7568	062238-10-2	38



Library Search Compound Report

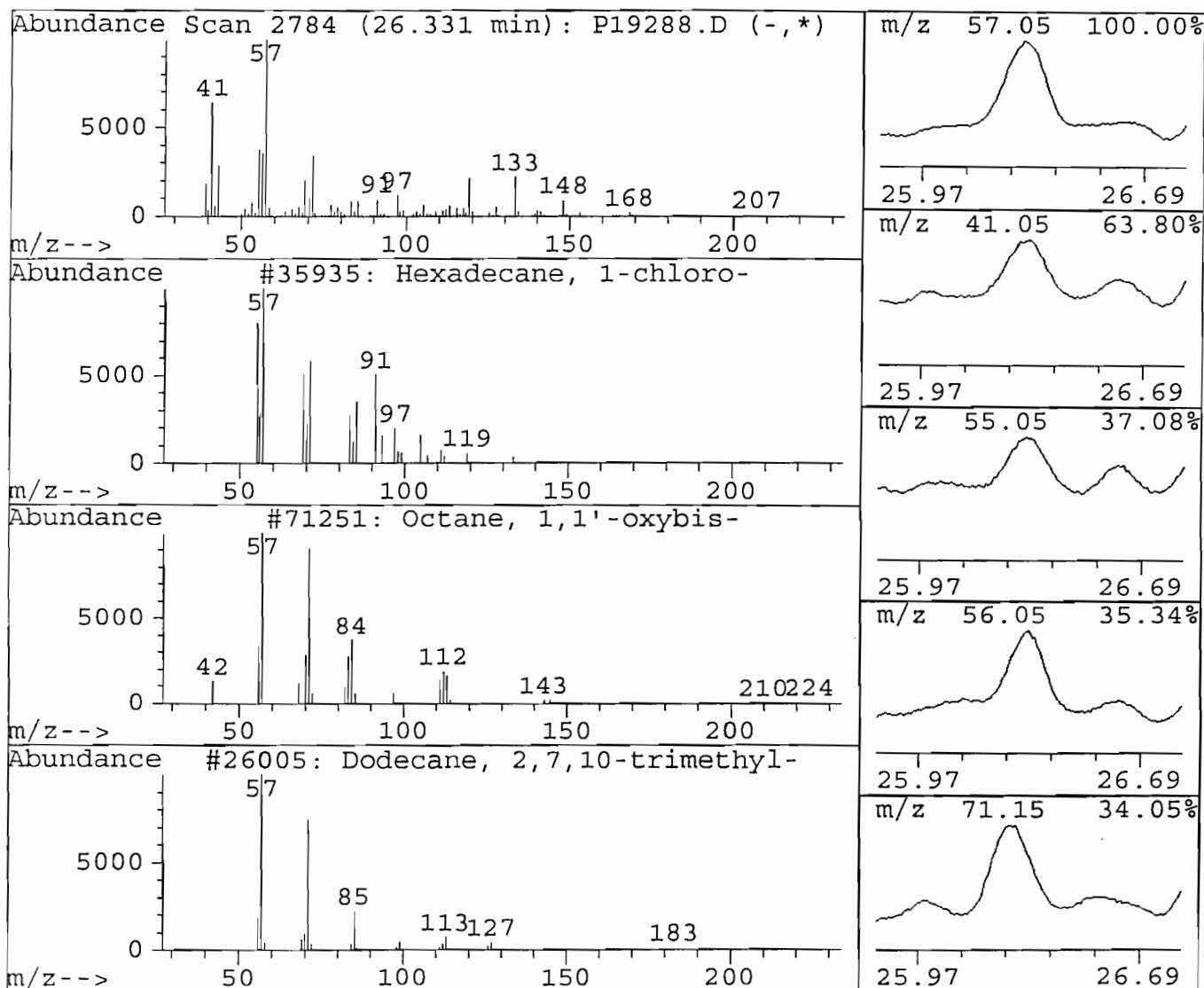
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Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
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Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.33	164.62 ug/L	19493529	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Hexadecane, 1-chloro-	35935	004860-03-1	38
2	Octane, 1,1'-oxybis-	71251	000629-82-3	35
3	Dodecane, 2,7,10-trimethyl-	26005	074645-98-0	35
4	Undecane, 2,6-dimethyl-	69033	017301-23-4	30
5	Decane, 2,6,8-trimethyl-	19030	062108-26-3	27



000045

Library Search Compound Report

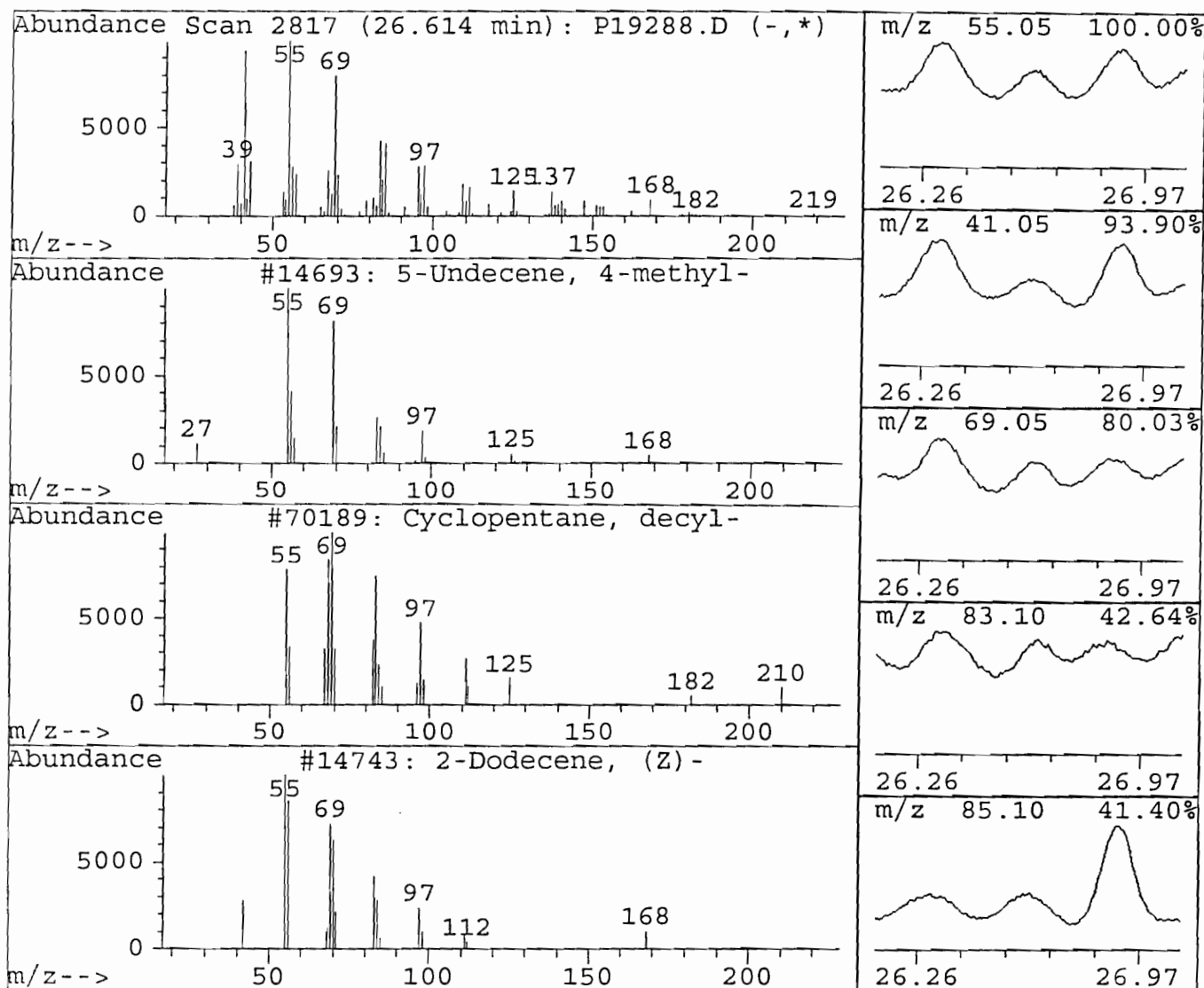
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Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.61	72.20 ug/L	8549586	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	5-Undecene, 4-methyl-	14693	000000-00-0	60
2	Cyclopentane, decyl-	70189	001795-21-7	50
3	2-Dodecene, (Z)-	14743	007206-26-0	43
4	4-Nonene, 3-methyl-, (Z)-	7574	063830-69-3	35
5	2,6-Octadienal, 3,7-dimethyl-, (E)-	66990	000141-27-5	35



Library Search Compound Report

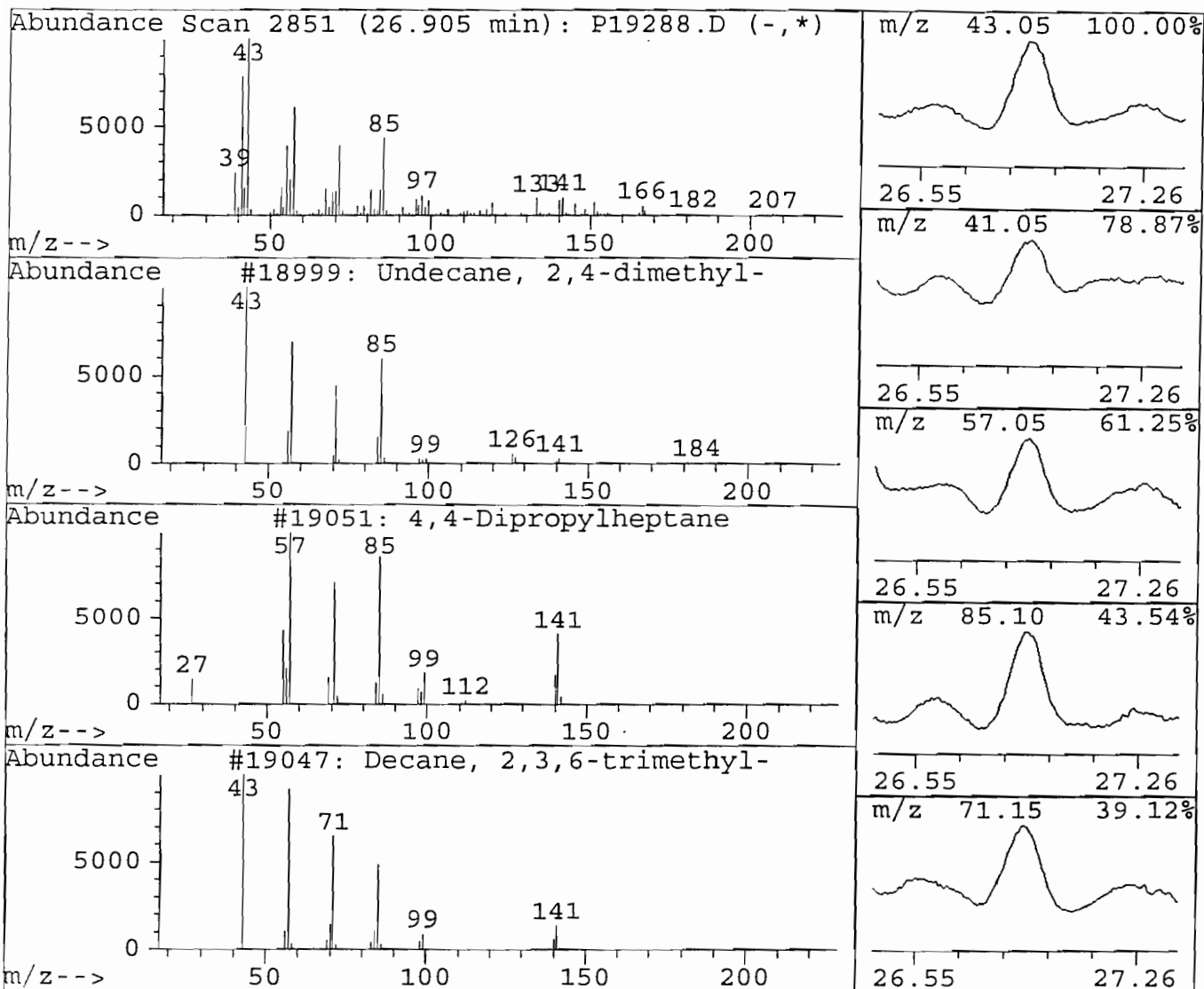
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Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.91	143.75 ug/L	17023072	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane, 2,4-dimethyl-	18999	017312-80-0	68
2	4,4-Dipropylheptane	19051	017312-72-0	53
3	Decane, 2,3,6-trimethyl-	19047	062238-12-4	52
4	Octane	3084	000111-65-9	50
5	Decane, 2,4,6-trimethyl-	19032	062108-27-4	50



Library Search Compound Report

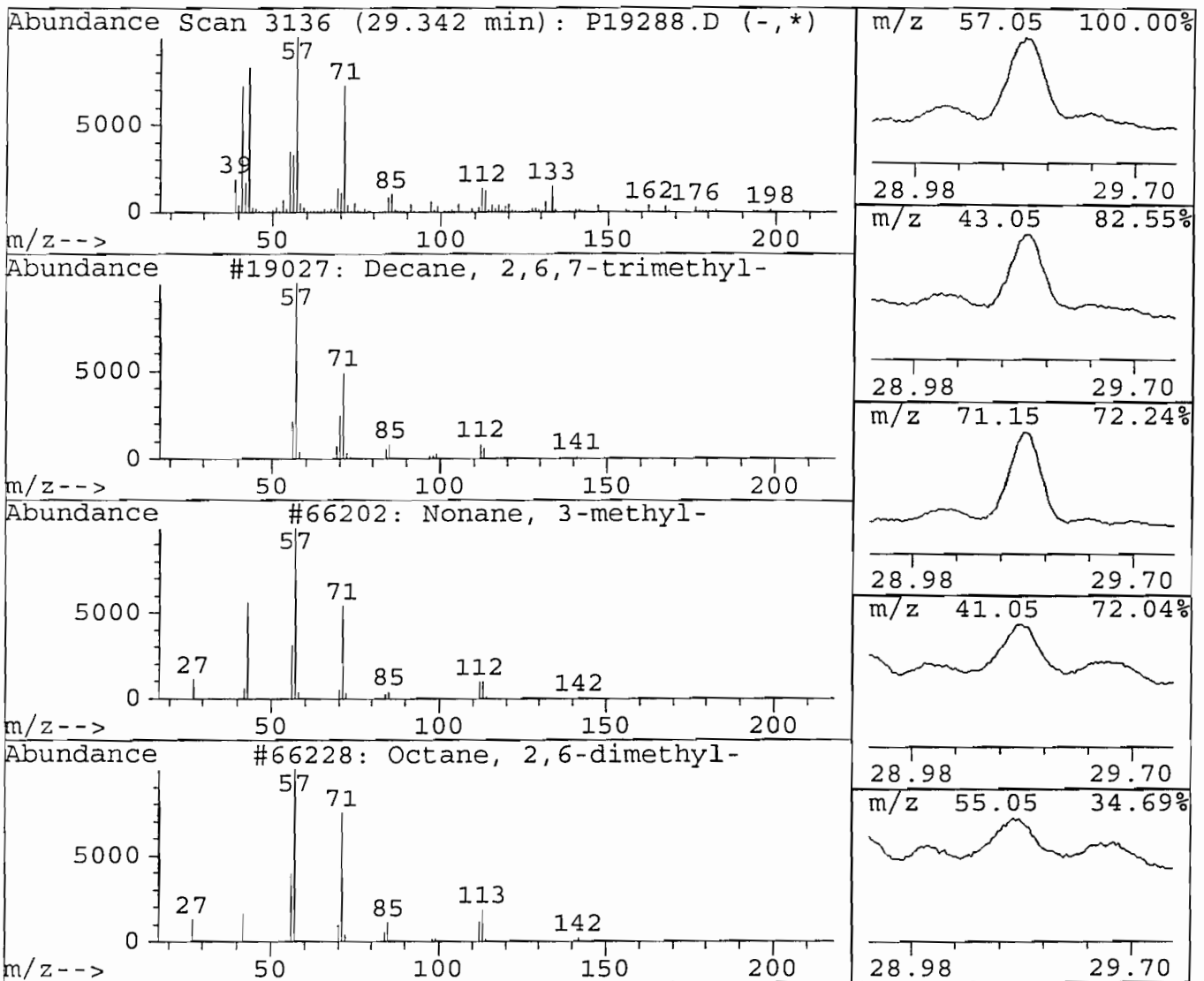
Data File : I:\HPCHEM\1\DATA\V2102199\P19288.D
 Acq Time : 22 Oct 99 1:08 pm
 Sample : 13827ASP-88008
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.34	126.54 ug/L	14984372	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Decane, 2,6,7-trimethyl-	19027	062108-25-2	64
2	Nonane, 3-methyl-	66202	005911-04-6	64
3	Octane, 2,6-dimethyl-	66228	002051-30-1	59
4	Octane, 2,3,7-trimethyl-	11603	062016-34-6	59
5	Tridecane, 7-methyl-	22538	026730-14-3	52



Library Search Compound Report

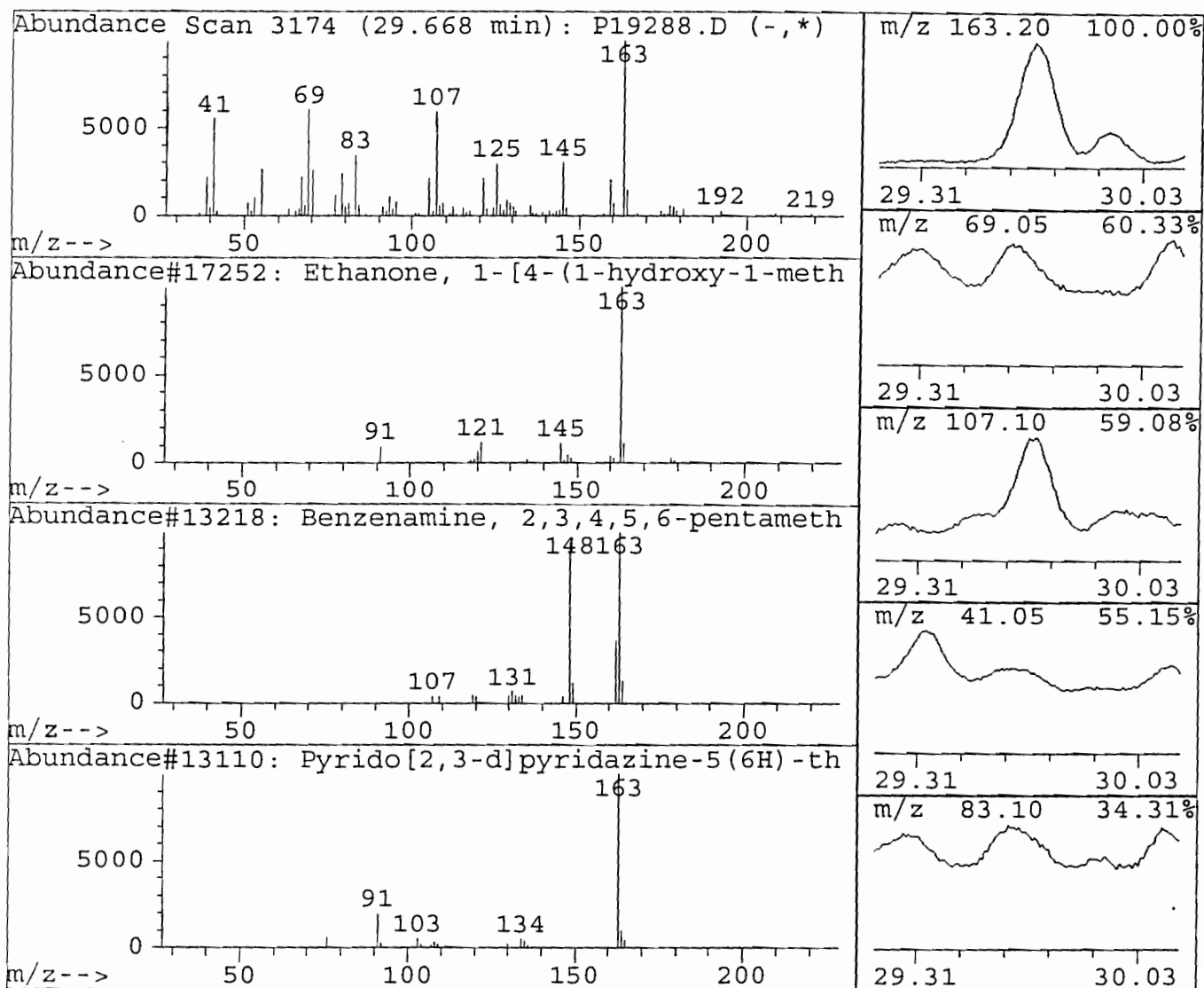
Data File : I:\HPCHEM\1\DATA\V2102199\P19288.D
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R.T.	Conc	Area	Relative to ISTD	R.T.
29.67	88.19 ug/L	10443152	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Ethanone, 1-[4-(1-hydroxy-1-methyle	17252	054549-72-3	22
2	Benzenamine, 2,3,4,5,6-pentamethyl-	13218	002243-30-3	22
3	Pyrido[2,3-d]pyridazine-5(6H)-thion	13110	015370-85-1	22
4	2-Oxazolidinone, 4-methyl-5-phenyl-	16910	028044-22-6	18
5	4H-1,3,2-Dioxaborin, 4,6-diethenyl-	17195	074630-03-8	16



Library Search Compound Report

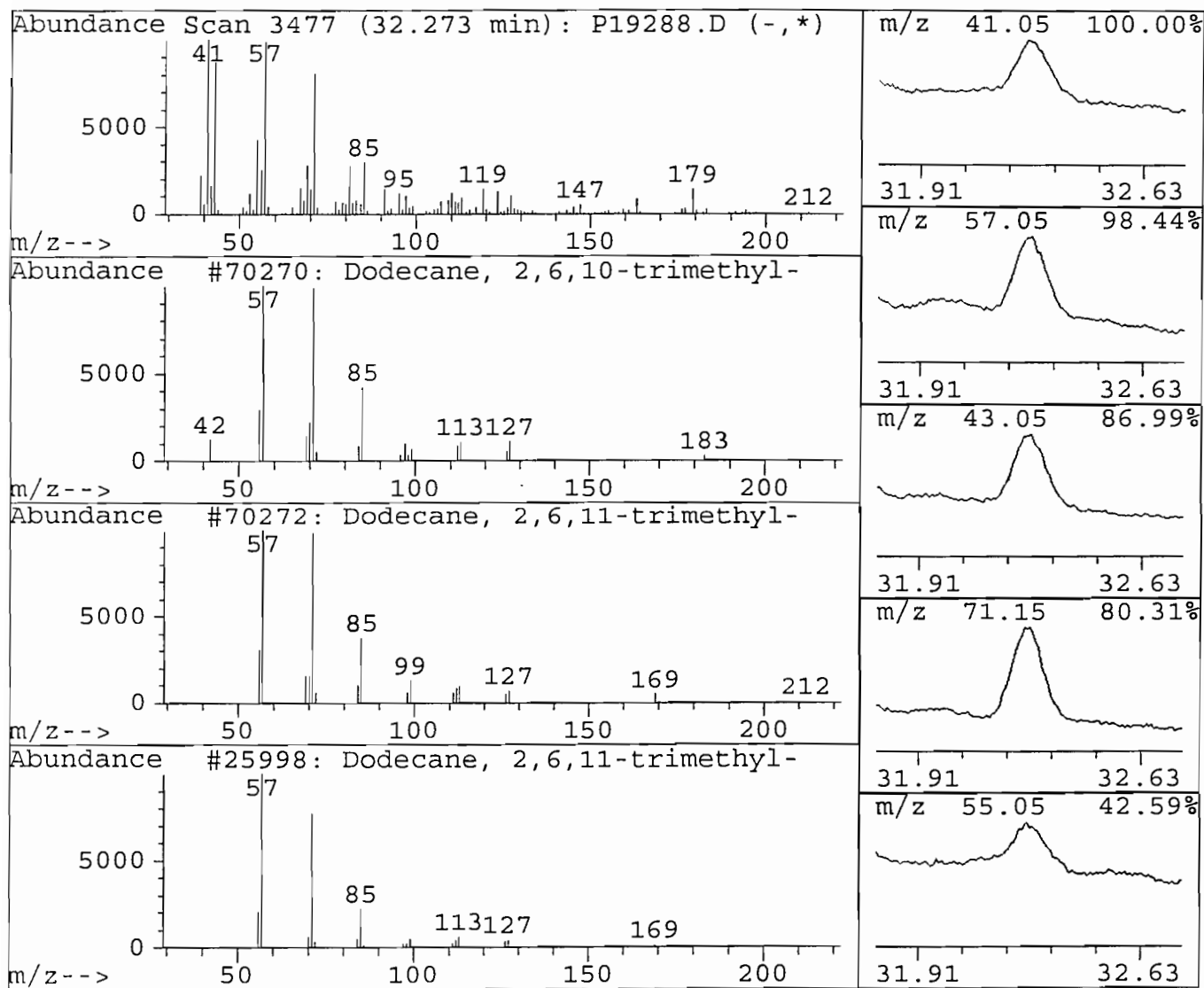
Data File : I:\HPCHEM\1\DATA\V2102199\P19288.D
Acq Time : 22 Oct 99 1:08 pm
Sample : 13827ASP-88008
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.27	76.04 ug/L	9004093	1,4-dichlorobenzene-d4	22.61

Hit#	of 20	Tentative ID	Ref#	CAS#	Qual
1		Dodecane, 2,6,10-trimethyl-	70270	003891-98-3	62
2		Dodecane, 2,6,11-trimethyl-	70272	031295-56-4	53
3		Dodecane, 2,6,11-trimethyl-	25998	031295-56-4	52
4		Dodecane, 2,6,10-trimethyl-	25995	003891-98-3	52
5		Tetradecane, 4-methyl-	25997	025117-24-2	52



000050

SAMPLE NO.

GP-015-SS8

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88009

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19306.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/25/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-015-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88009
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19306.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	17.69	130	J
2.	Unknown	18.35	78	J
3.	Unknown	18.69	70	J
4.	Unknown	19.15	50	J
5.	Unknown	19.40	260	J
6.	Unknown	22.79	52	J
7. 1120-21-4	Undecane	24.08	48	J
8. 112-40-3	Dodecane	27.21	74	J
9. 17301-23-4	Undecane, 2,6-dimethyl-	27.59	30	J
10. 629-50-5	Tridecane	30.07	23	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000052

Quantitation Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
 Acq Time : 25 Oct 99 8:40 pm
 Sample : 13827ASP-88009
 Misc : 5G/5ML
 Quant Time: Oct 26 12:34 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.22	96	570707	50.00	ug/L	-0.04
43) Chlorobenzene-d5	16.30	117	744616	50.00	ug/L	-0.03
58) 1,4-dichlorobenzene-d4	22.56	152	431299	50.00	ug/L	-0.03
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.94	113	558951	58.78	ug/L	117.57%
30) 1,2-Dichlorethane-d4	8.63	65	445903	59.68	ug/L	119.36%
38) Toluene-d8	12.73	98	584732	52.53	ug/L	105.06%
42) 4-Bromofluorobenzene	19.45	95	580728	50.82	ug/L	101.64%
Target Compounds						Qvalue
61) 1,1,2,2-tetrachloroethane	20.12	83	189436	25.65	ug/L	76

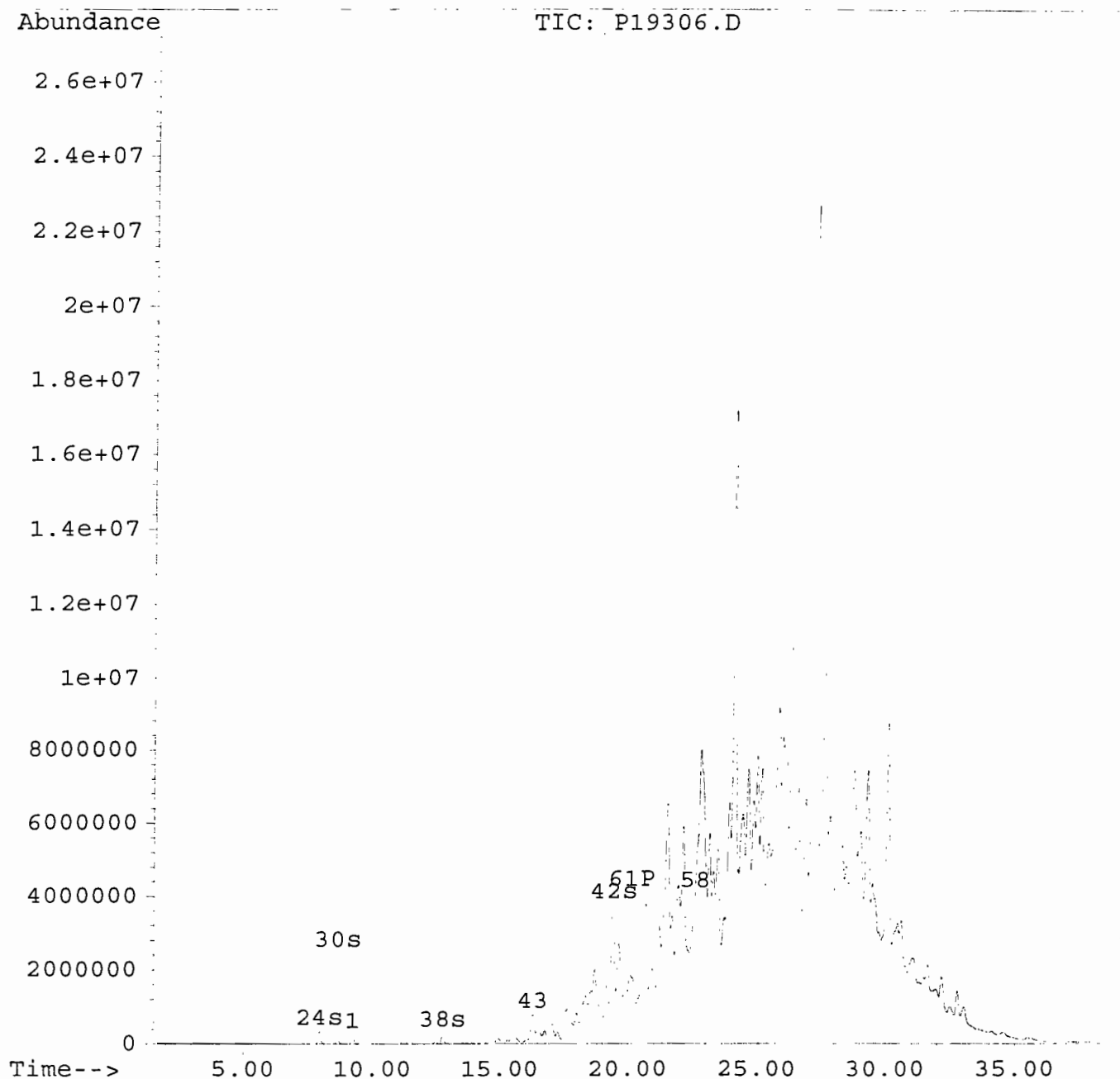
000053

Quantitation Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML
Quant Time: Oct 26 12:34 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000054

AbundanceScan 2066 (20.090 min): P19376.D (#61

1,1,2,2-tetrachloroethane

Concen: 25.65 ug/L

RT: 20.12 min Scan# 2067

Delta R.T. 0.03 min

Lab File: P19306.D

Acq: 25 Oct 99 8:40 pm

Ref 50

m/z--> 50 100 150 200 250
AbundanceScan 2067 (20.120 min): P19306.D (

Raw 50

m/z--> 50 100 150 200 250
AbundanceScan 2067 (20.120 min): P19306.D (

Sub 50

m/z--> 50 100 150 200 250

Tgt Ion	83	Resp	189436
Ion	Ratio	Lower	Upper
83	100		
85	45.1	44.5	82.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceIon 83.00 (82.
Ion 85.00 (84.

60000

40000

20000

0

20.12

Time-->19.85

20.18

000055

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

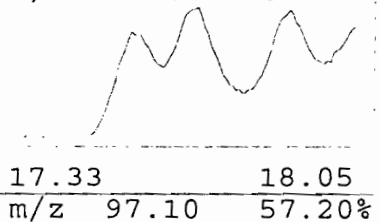
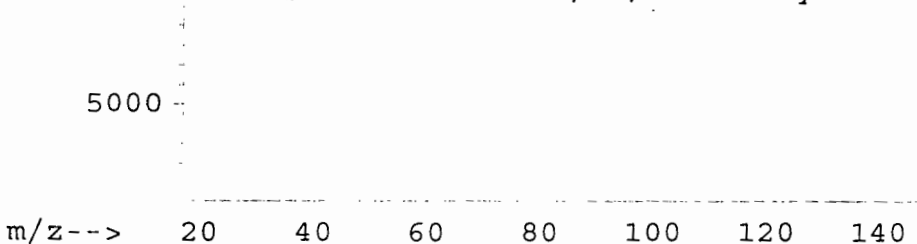
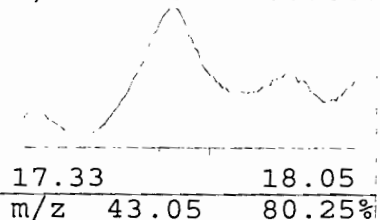
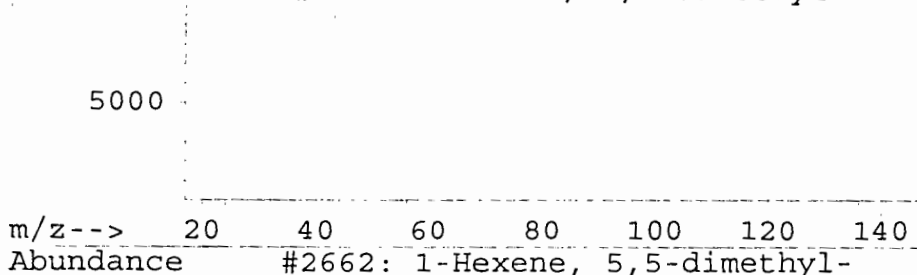
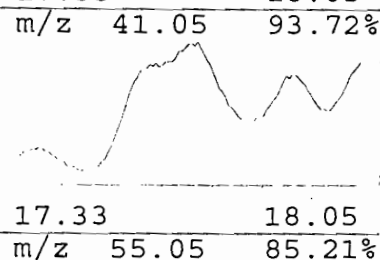
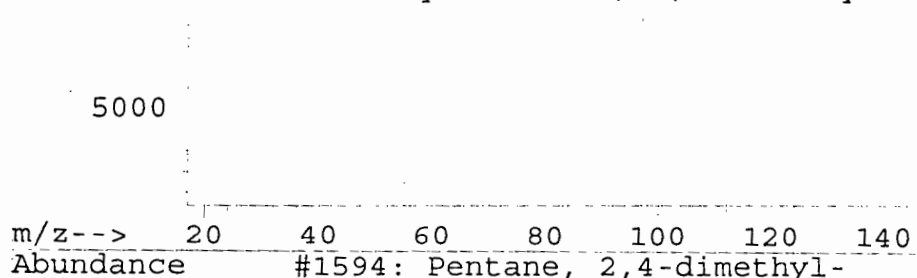
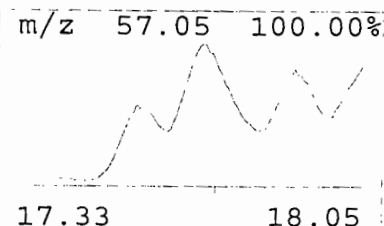
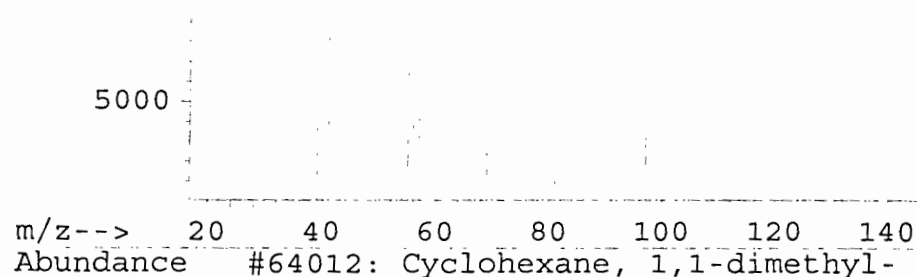
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
17.69	125.25 ug/L	16037915	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1,1-dimethyl-	64012	000590-66-9	58
2	Pentane, 2,4-dimethyl-	1594	000108-08-7	43
3	1-Hexene, 5,5-dimethyl-	2662	007116-86-1	43
4	3,5-Dimethyl-3-heptene	4628	059643-68-4	38
5	trans-1,3-Diethylcyclopentane	4618	000000-00-0	38

Abundance Scan 1796 (17.691 min): P19306.D (-,*)



000056

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

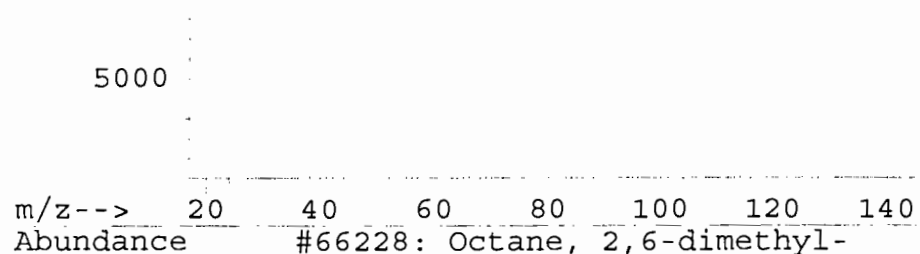
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
18.35	74.79 ug/L	9576649	Chlorobenzene-d5	16.30

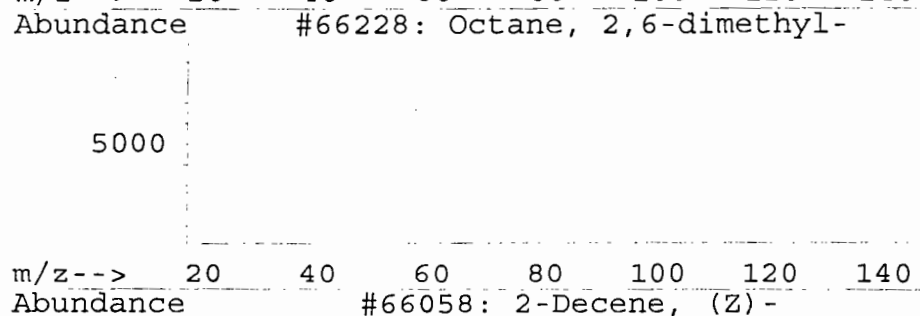
Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane, 2,6-dimethyl-	66228	002051-30-1	64
2	2-Decene, (Z)-	66058	020348-51-0	38
3	2-Decene, (E)-	7597	020063-97-2	38
4	Cyclooctane, 1,4-dimethyl-, trans-	7608	013151-98-9	35
5	4-Decene	7593	019689-18-0	30

Abundance Scan 1869 (18.353 min): P19306.D (-,*)

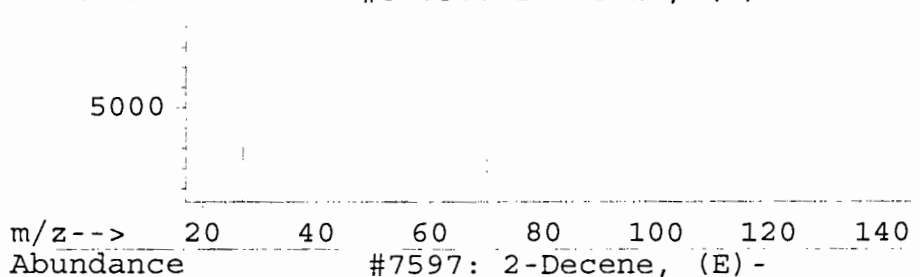


m/z 41.05 100.00%

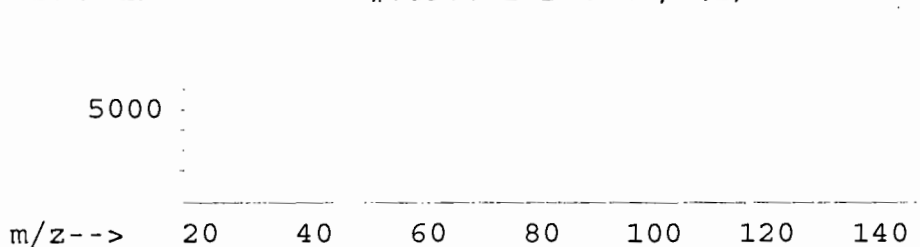
17.99 18.71
m/z 57.05 88.10%



17.99 18.71
m/z 71.05 79.04%



17.99 18.71
m/z 43.05 66.77%



17.99 18.71
m/z 69.05 57.00%

17.99 18.71

000057

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

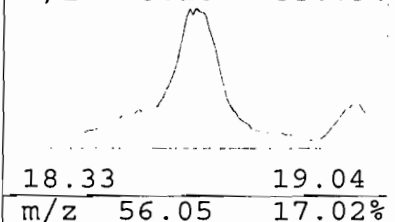
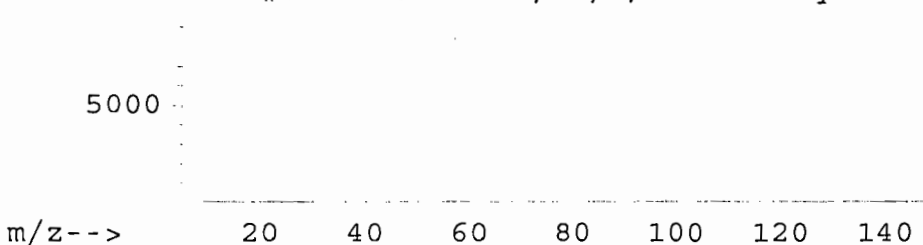
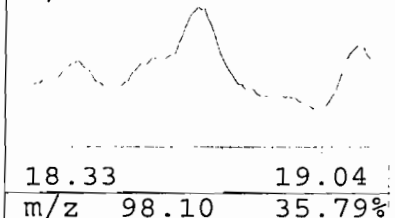
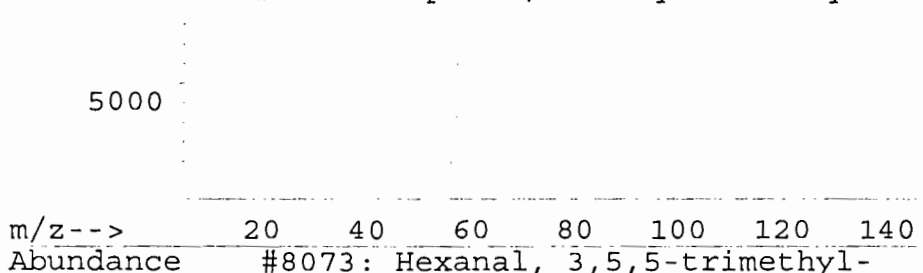
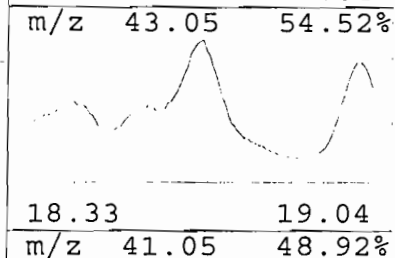
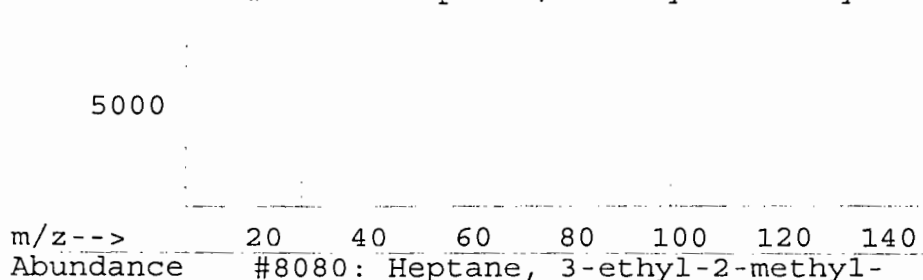
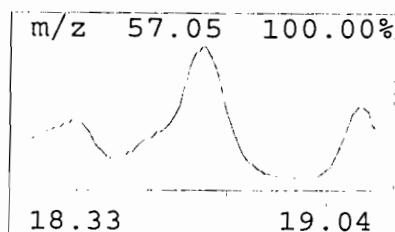
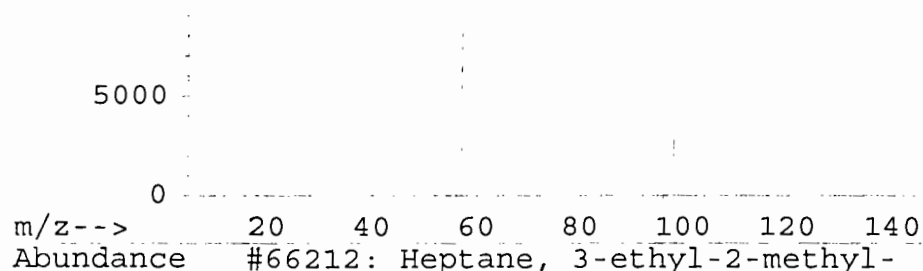
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
18.69	67.63 ug/L	8659545	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 3-ethyl-2-methyl-	66212	014676-29-0	59
2	Heptane, 3-ethyl-2-methyl-	8080	014676-29-0	58
3	Hexanal, 3,5,5-trimethyl-	8073	005435-64-3	53
4	Octane, 2,3-dimethyl-	8085	007146-60-3	50
5	Heptane, 3-ethyl-2-methyl-	66211	014676-29-0	50

Abundance Scan 1906 (18.687 min): P19306.D (-,*)



000058

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

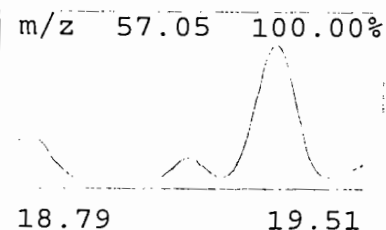
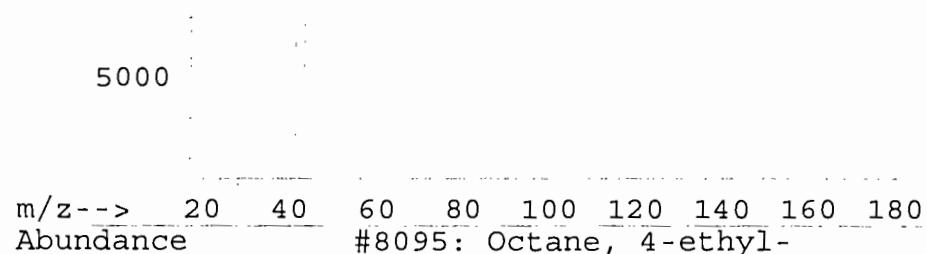
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
19.15	47.58 ug/L	6091981	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane, 4-ethyl-	8095	015869-86-0	64
2	Undecane, 5,6-dimethyl-	19004	017615-91-7	59
3	Octane, 4-ethyl-	66222	015869-86-0	59
4	Decane	66205	000124-18-5	58
5	Decane	66206	000124-18-5	52

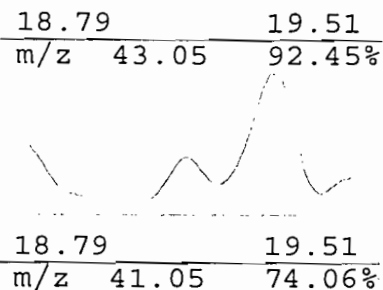
Abundance Scan 1957 (19.148 min): P19306.D (-,*)



m/z--> 20 40 60 80 100 120 140 160 180

Abundance

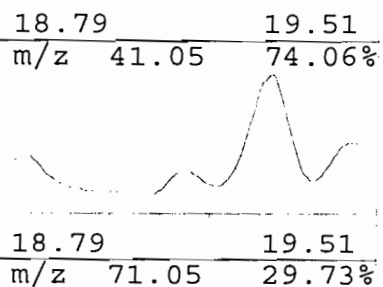
#19004: Undecane, 5,6-dimethyl-



m/z--> 20 40 60 80 100 120 140 160 180

Abundance

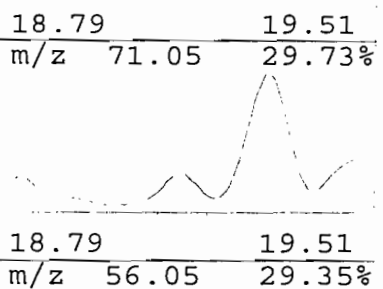
#66222: Octane, 4-ethyl-



m/z--> 20 40 60 80 100 120 140 160 180

Abundance

#66222: Octane, 4-ethyl-



Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D

Acq Time : 25 Oct 99 8:40 pm

Sample : 13827ASP-88009

Misc : 5G/5ML

Operator: AV

Inst : voa2

Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M

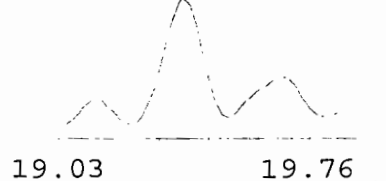
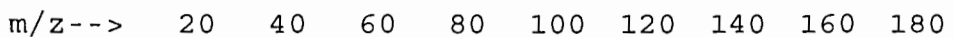
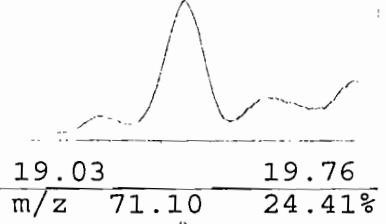
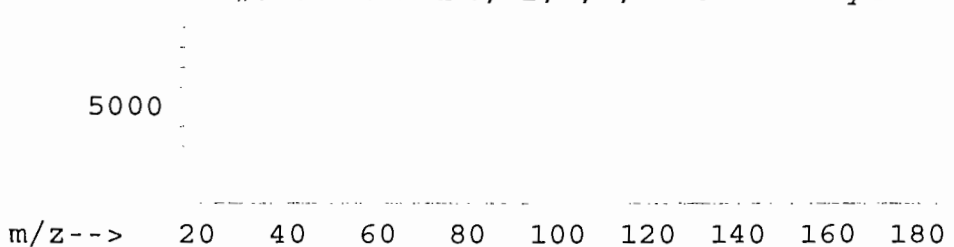
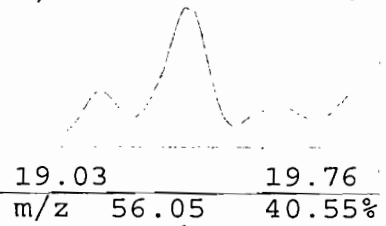
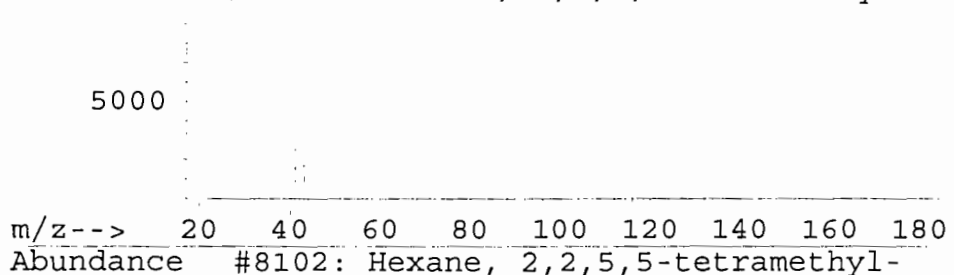
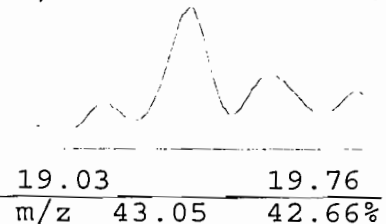
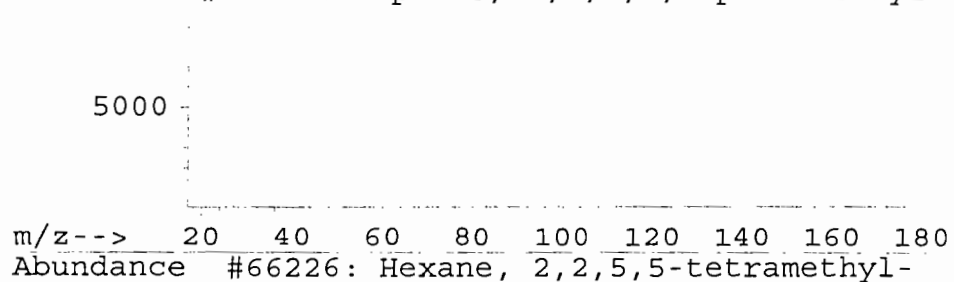
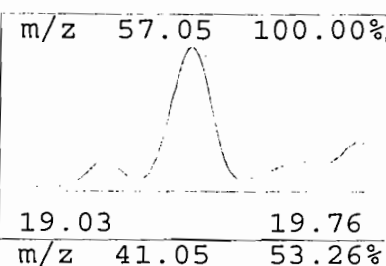
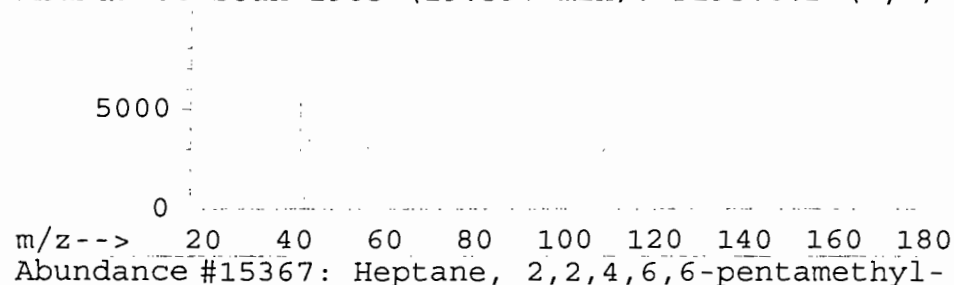
Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
19.40	252.73 ug/L	32361636	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 2,2,4,6,6-pentamethyl-	15367	013475-82-6	59
2	Hexane, 2,2,5,5-tetramethyl-	66226	001071-81-4	53
3	Hexane, 2,2,5,5-tetramethyl-	8102	001071-81-4	53
4	Pentane, 2,2,3,4-tetramethyl-	65146	001186-53-4	53
5	Heptane, 2,2-dimethyl-	65135	001071-26-7	53

Abundance Scan 1985 (19.397 min): P19306.D (-,*)



Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

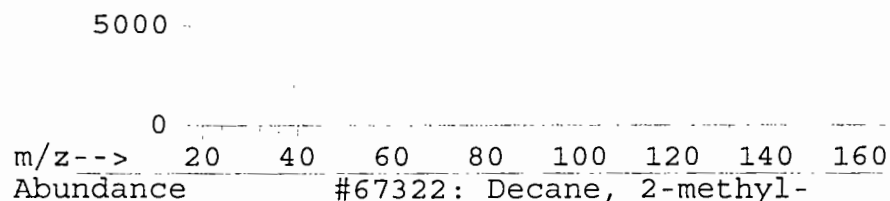
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

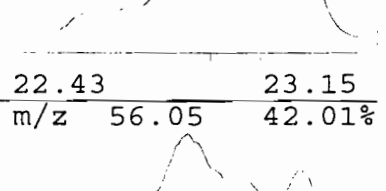
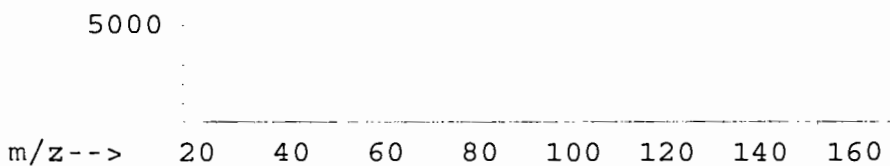
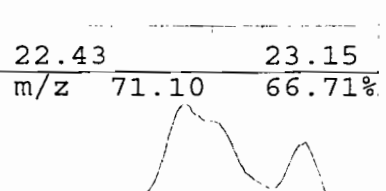
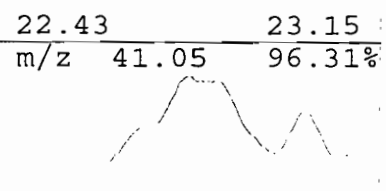
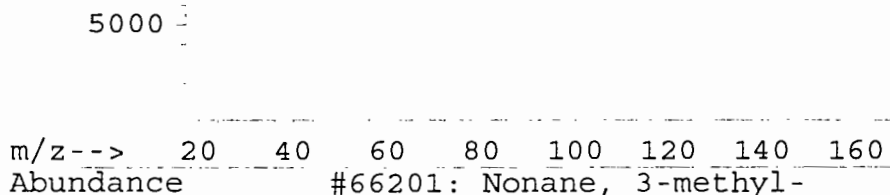
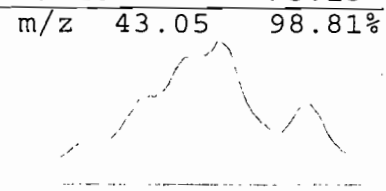
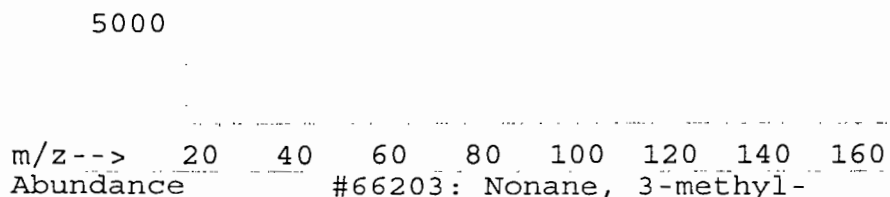
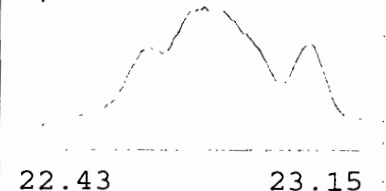
R.T.	Conc	Area	Relative to ISTD	R.T.
22.79	50.00 ug/L	109454187	1,4-dichlorobenzene-d4	22.56

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Decane, 2-methyl-	67322	006975-98-0	68
2	Nonane, 3-methyl-	66203	005911-04-6	64
3	Nonane, 3-methyl-	66201	005911-04-6	64
4	Decane, 4-methyl-	67324	002847-72-5	64
5	Octane, 2,6-dimethyl-	66228	002051-30-1	59

Abundance Scan 2375 (22.788 min): P19306.D (-,*)



m/z 57.05 100.00%



Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

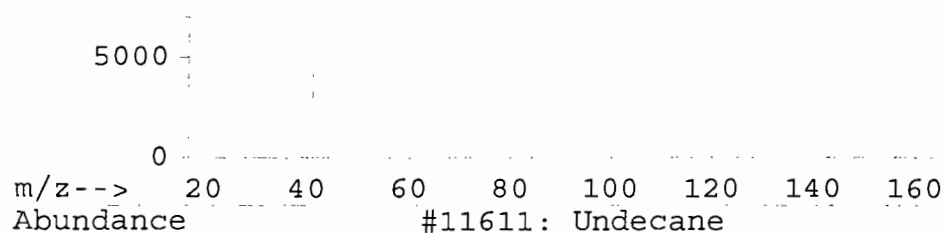
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

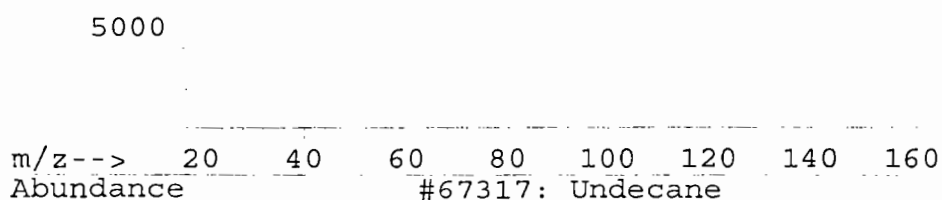
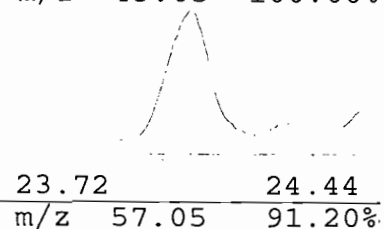
R.T.	Conc	Area	Relative to ISTD	R.T.
24.08	46.34 ug/L	101442533	1,4-dichlorobenzene-d4	22.56

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane	11611	001120-21-4	97
2	Undecane	67317	001120-21-4	90
3	Undecane	67318	001120-21-4	90
4	Tridecane	69019	000629-50-5	80
5	Dodecane	68249	000112-40-3	80

Abundance Scan 2526 (24.081 min): P19306.D (-,*)

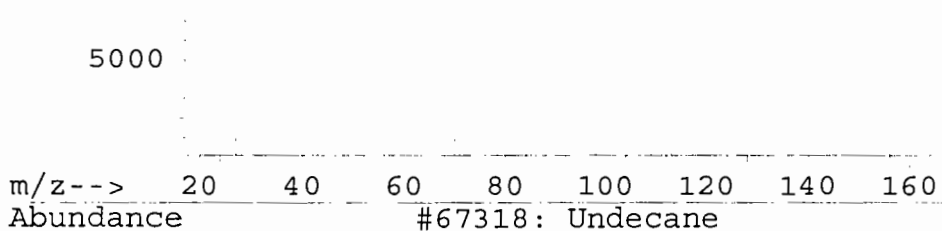


m/z 43.05 100.00%



23.72 24.44

m/z 41.05 84.27%



23.72 24.44

m/z 71.15 45.84%



23.72 24.44

m/z 85.10 26.68%

000062

Library Search Compound Report

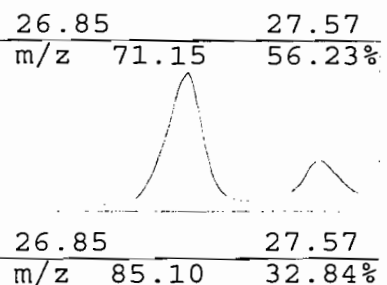
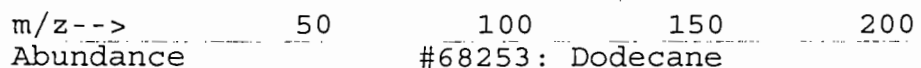
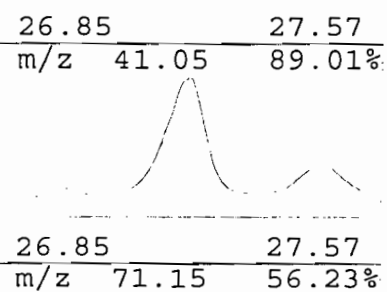
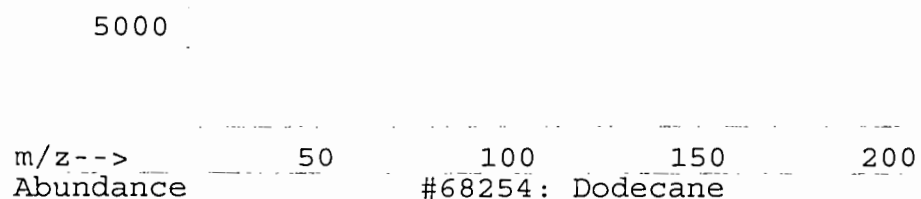
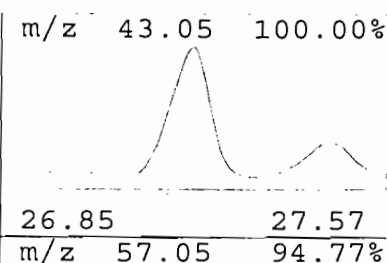
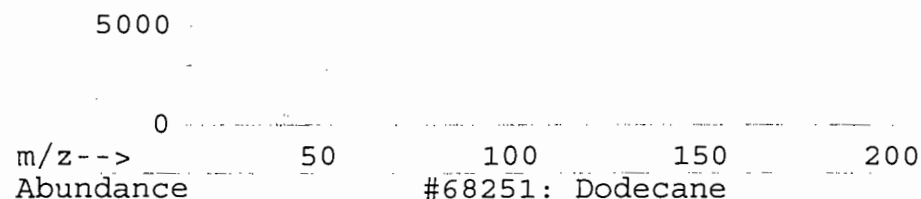
Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.21	70.60 ug/L	154541634	1,4-dichlorobenzene-d4	22.56	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		68251	000112-40-3	94
2	Dodecane		68254	000112-40-3	94
3	Dodecane		68253	000112-40-3	93
4	Dodecane		68249	000112-40-3	87
5	Tridecane		69019	000629-50-5	80

Abundance Scan 2891 (27.212 min): P19306.D (-,*)



Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

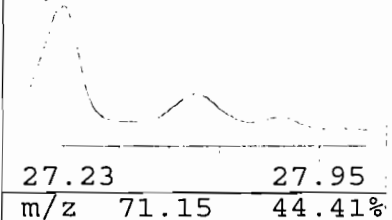
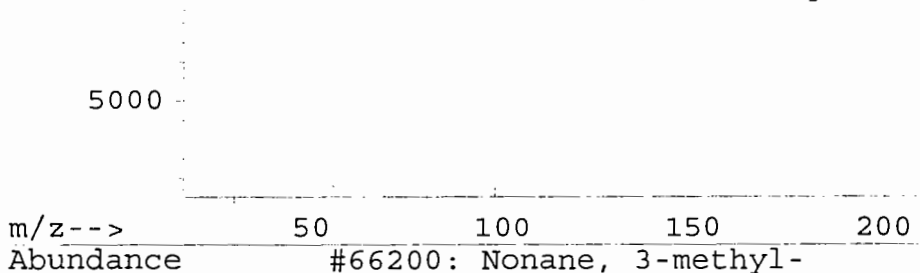
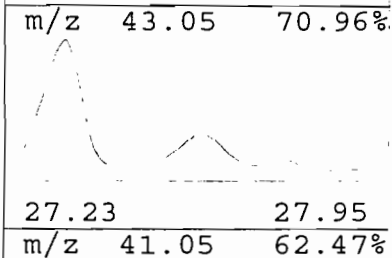
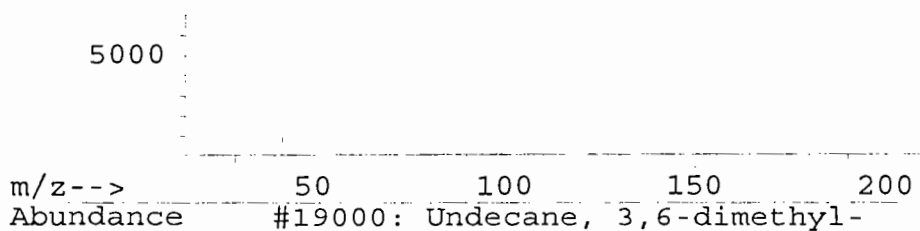
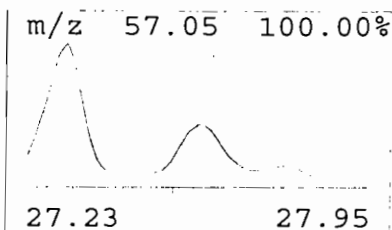
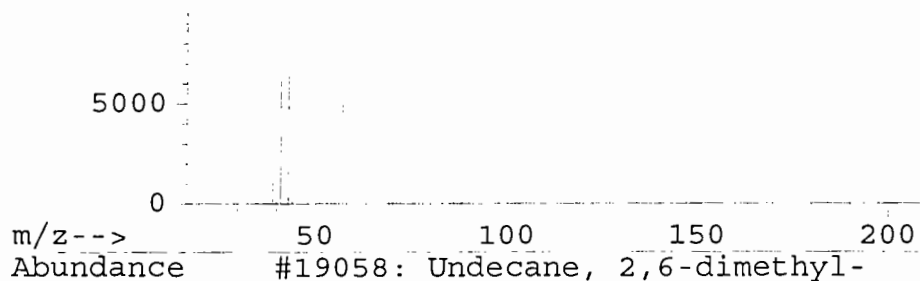
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.59	28.62 ug/L	62660531	1,4-dichlorobenzene-d4	22.56

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane, 2,6-dimethyl-	19058	017301-23-4	90
2	Undecane, 3,6-dimethyl-	19000	017301-28-9	87
3	Nonane, 3-methyl-	66200	005911-04-6	59
4	Tridecane	69019	000629-50-5	58
5	Undecane, 2,6-dimethyl-	69032	017301-23-4	58

Abundance Scan 2935 (27.590 min): P19306.D (-,*)



Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102599\P19306.D
Acq Time : 25 Oct 99 8:40 pm
Sample : 13827ASP-88009
Misc : 5G/5ML

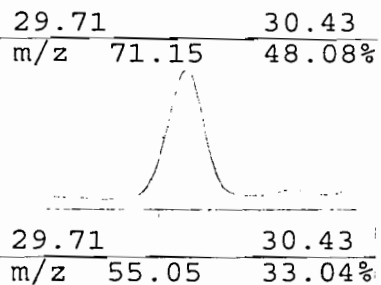
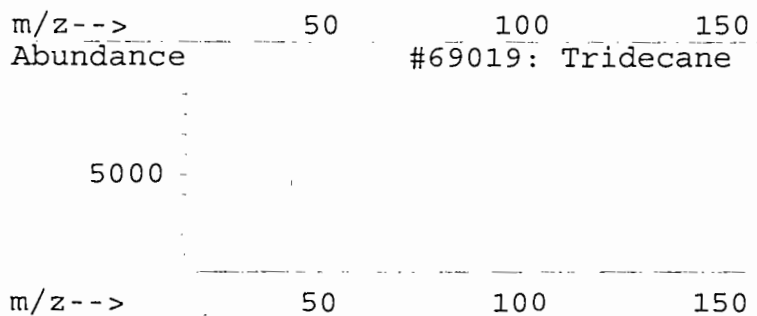
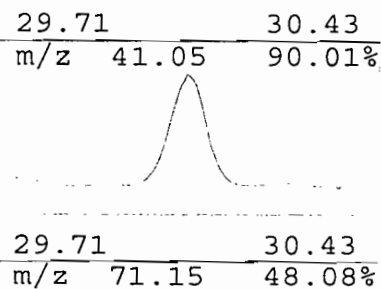
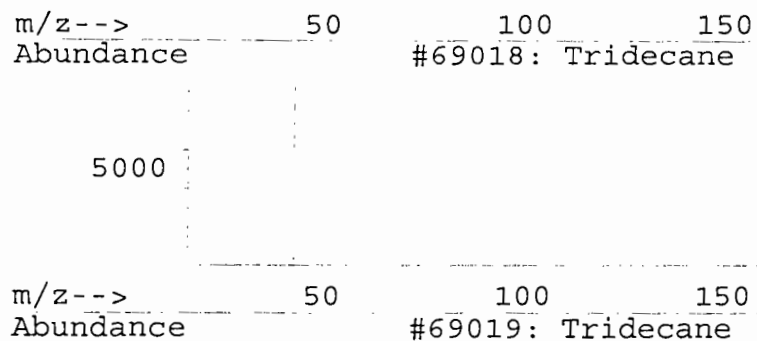
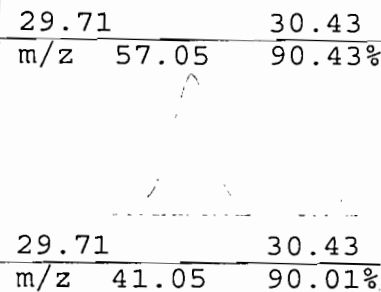
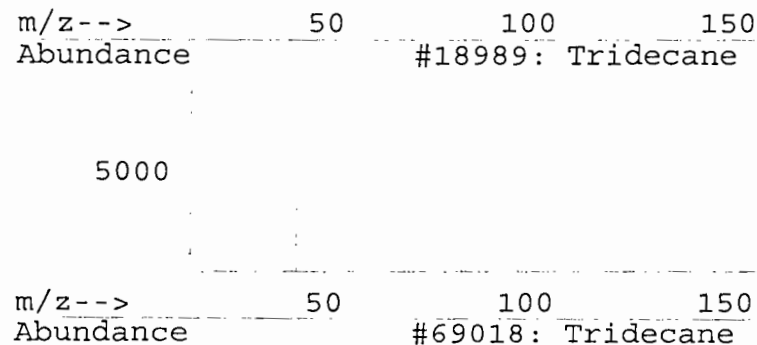
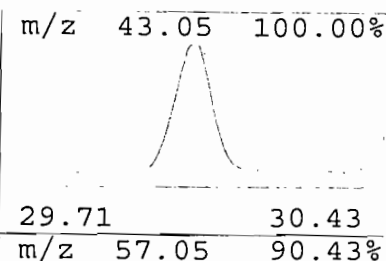
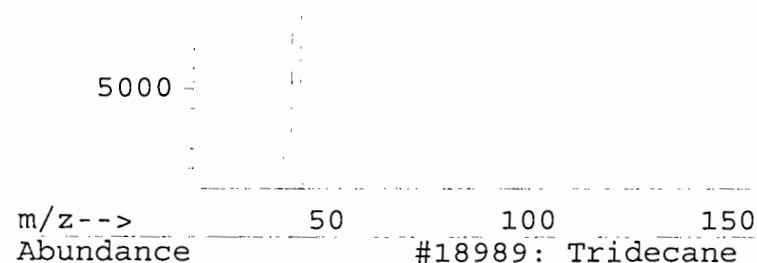
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.07	21.71 ug/L	47522974	1,4-dichlorobenzene-d4	22.56

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	18989	000629-50-5	93
2	Tridecane	69018	000629-50-5	93
3	Tridecane	69019	000629-50-5	91
4	Undecane	11611	001120-21-4	90
5	Dodecane	68254	000112-40-3	86

Abundance Scan 3223 (30.065 min): P19306.D (-,*)



000065

SAMPLE NO.

GP-015-SS12

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88010

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13338.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/25/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.

Compound

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-015-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88010
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13338.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	21.86	3300	J
2. 1074-43-7	Benzene, 1-methyl-3-propyl-	25.44	2600	J
3. 1758-88-9	Benzene, 2-ethyl-1,4-dimethy	26.15	1900	J
4. 99-87-6	Benzene, 1-methyl-4-(1-methy	26.23	2200	J
5. 933-98-2	Benzene, 1-ethyl-2,3-dimethy	26.39	3700	J
6. 527-53-7	Benzene, 1,2,3,5-tetramethyl	27.20	3200	J
7. 874-41-9	Benzene, 1-ethyl-2,4-dimethy	27.38	3900	J
8.	Unknown	28.26	2800	J
9. 95-93-2	Benzene, 1,2,4,5-tetramethyl	28.45	2900	J
10. 2039-89-6	Benzene, 2-ethenyl-1,4-dimet	28.72	1900	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
 Acq Time : 25 Oct 99 1:21 pm
 Sample : 13827ASP-88010
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 25 15:16 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.11	96	1914469	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.46	117	1721024	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.20	152	753921	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.40	113	651608	54.72	ug/L	109.44%
30) 1,2-Dichlorethane-d4	13.45	65	723547	53.91	ug/L	107.82%
38) Toluene-d8	17.36	98	2094782	56.16	ug/L	112.33%
42) 4-Bromofluorobenzene	22.95	95	906472	57.49	ug/L	114.97%
Target Compounds						Qvalue
55) o-xylene	21.67	91	224835	5.20	ug/L	96
64) 2-chlorotoluene	23.61	126	83796	7.33	ug/L	91
65) 4-chlorotoluene	23.61	126	83796	7.06	ug/L	99
66) 1,3,5-trimethylbenzene	23.52	105	2227011	54.15	ug/L	99
68) 1,2,4-trimethylbenzene	24.27	105	292207	7.41	ug/L	97
71) 4-isopropyltoluene	24.74	119	341913	7.59	ug/L	96

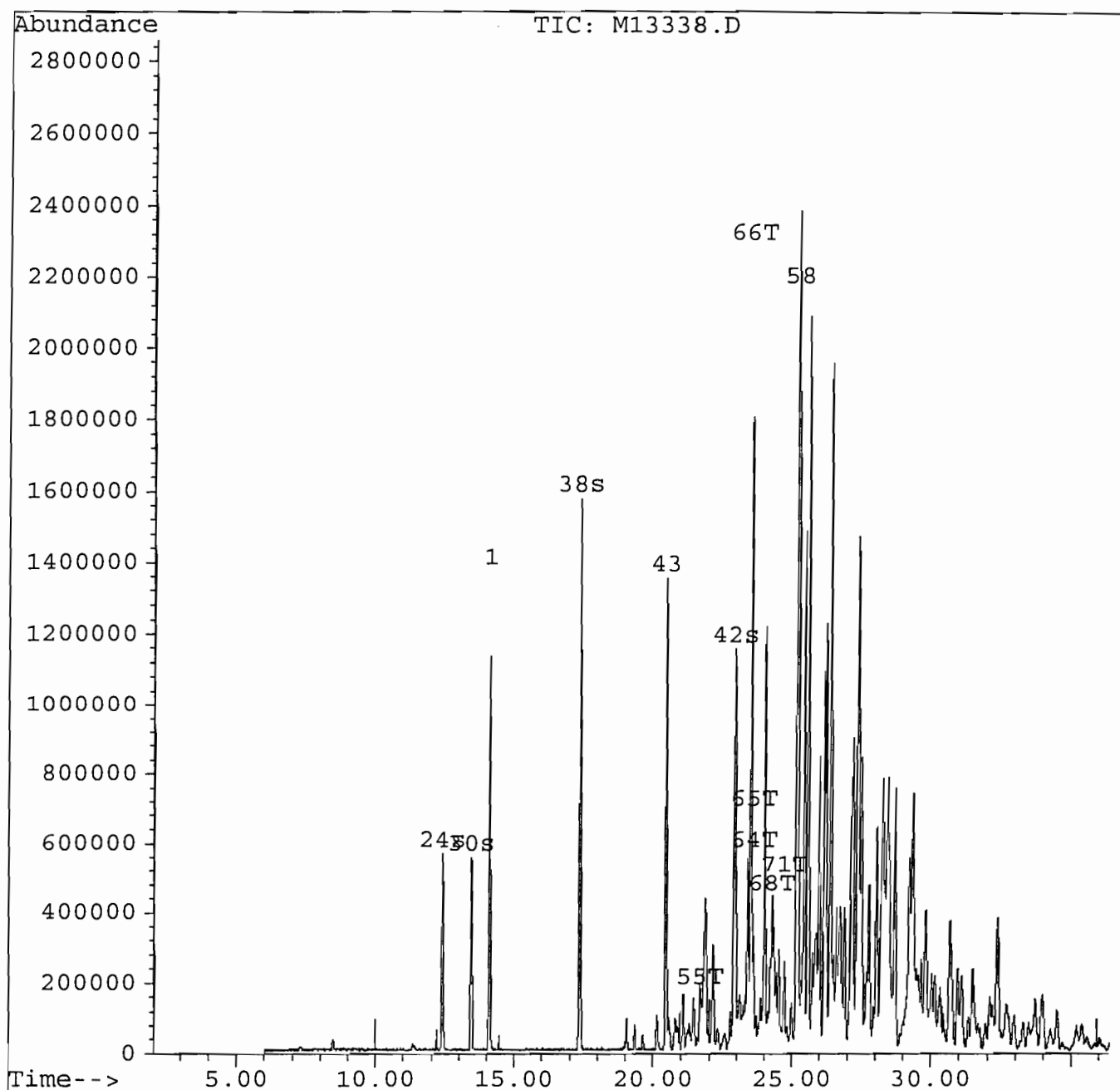
000068

Quantitation Report

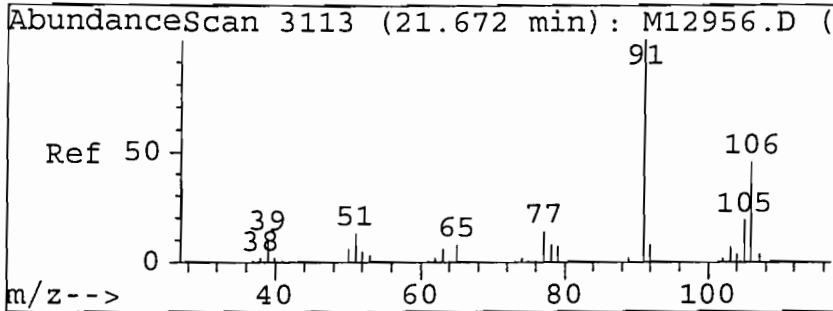
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 25 15:16 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration

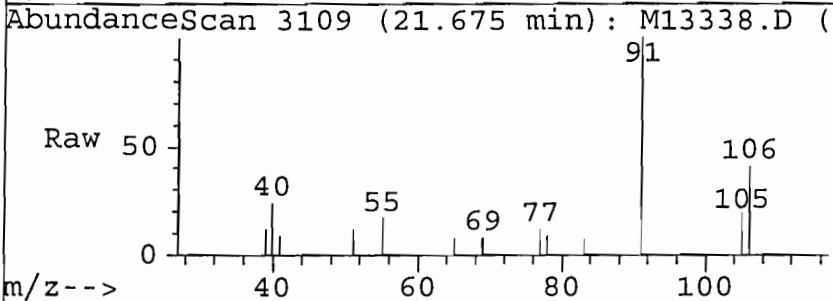


000063

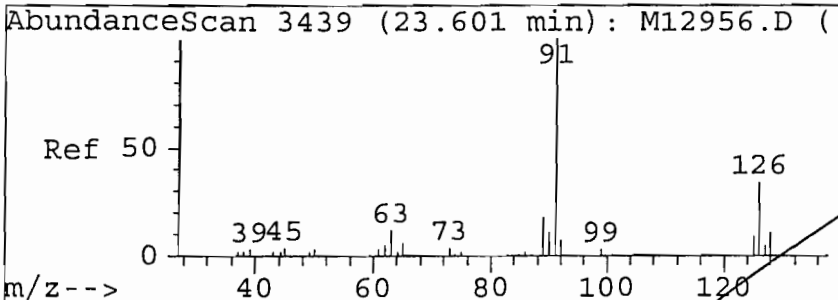
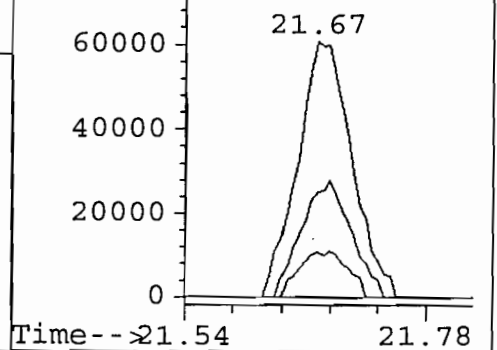
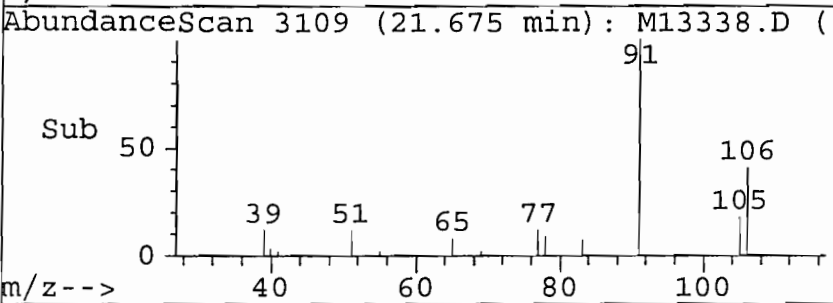


#55
o-xylene
Concen: 5.20 ug/L
RT: 21.67 min Scan# 3109
Delta R.T. 0.00 min
Lab File: M13338.D
Acq: 25 Oct 99 1:21 pm

Tgt Ion:	91	Resp:	224835
Ion	Ratio	Lower	Upper
91	100		
106	41.2	31.3	58.1
105	18.0	12.9	24.0
0	0.0	0.0	0.0

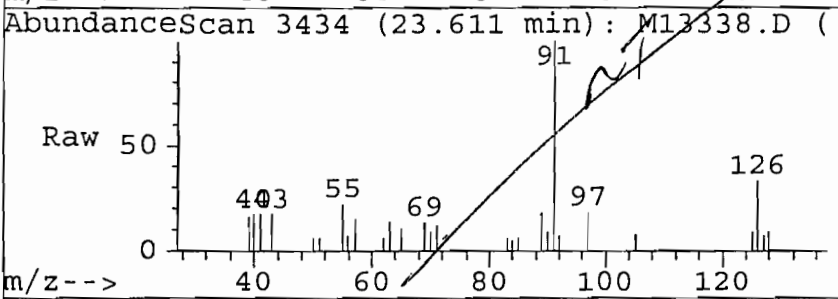


Abundance	Ion	91.00 (90.
80000	Ion	106.00 (105
	Ion	105.00 (104

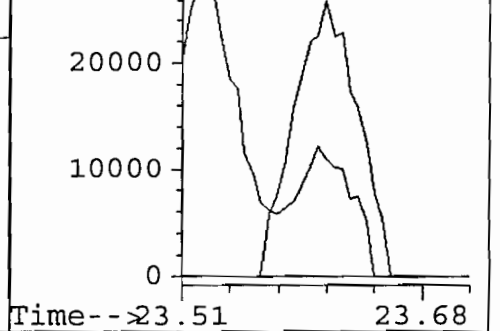
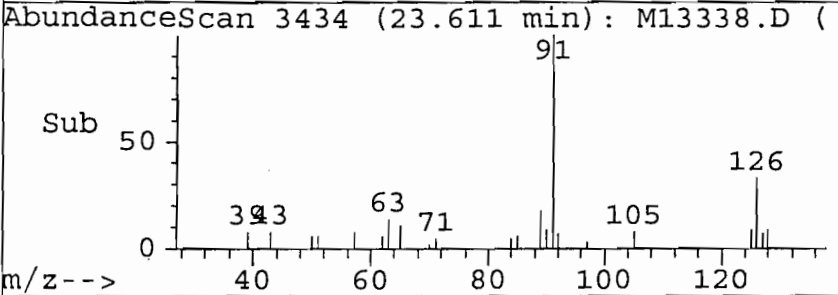


#64
2-chlorotoluene
Concen: 7.33 ug/L
RT: 23.61 min Scan# 3434
Delta R.T. 0.01 min
Lab File: M13338.D
Acq: 25 Oct 99 1:21 pm

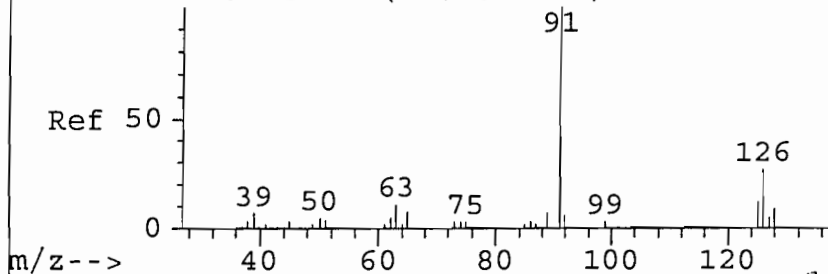
Tgt Ion:	126	Resp:	83796
Ion	Ratio	Lower	Upper
126	100		
63	42.7	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Abundance	Ion	126.00 (125
30000	Ion	63.00 (62.



AbundanceScan 3453 (23.682 min): M12956.D (



#65

4-chlorotoluene

Concen: 7.06 ug/L

RT: 23.61 min Scan# 3434

Delta R.T. -0.07 min

Lab File: M13338.D

Acq: 25 Oct 99 1:21 pm

Tgt Ion:126 Resp: 83796

Ion Ratio Lower Upper

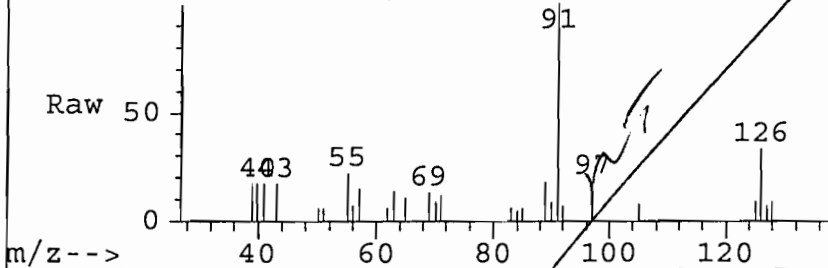
126 100

63 42.7 29.3 54.5

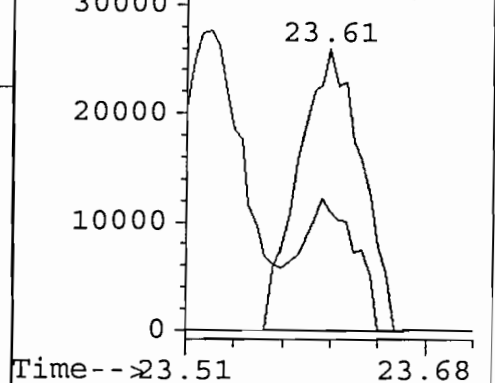
0 0.0 0.0 0.0

0 0.0 0.0 0.0

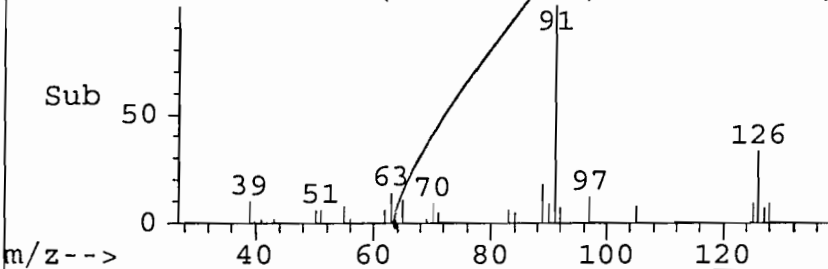
AbundanceScan 3434 (23.611 min): M13338.D (



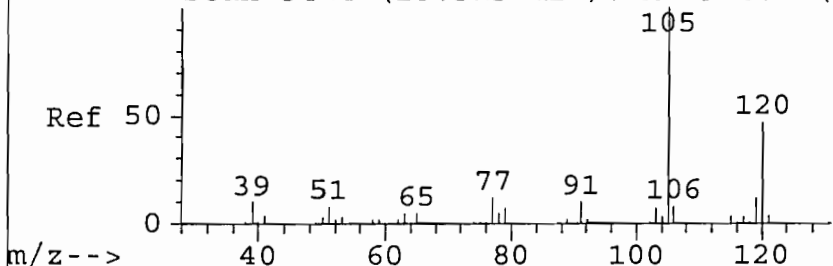
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3434 (23.611 min): M13338.D (



AbundanceScan 3424 (23.513 min): M12956.D (



#66

1,3,5-trimethylbenzene

Concen: 54.15 ug/L

RT: 23.52 min Scan# 3419

Delta R.T. 0.01 min

Lab File: M13338.D

Acq: 25 Oct 99 1:21 pm

Tgt Ion:105 Resp: 2227011

Ion Ratio Lower Upper

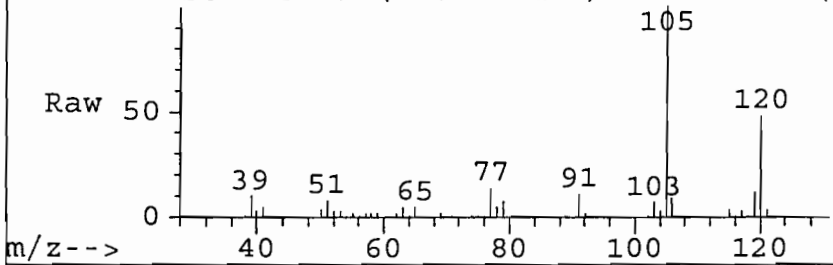
105 100

120 48.2 33.2 61.7

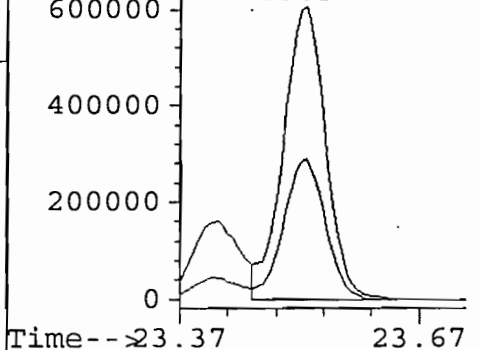
0 0.0 0.0 0.0

0 0.0 0.0 0.0

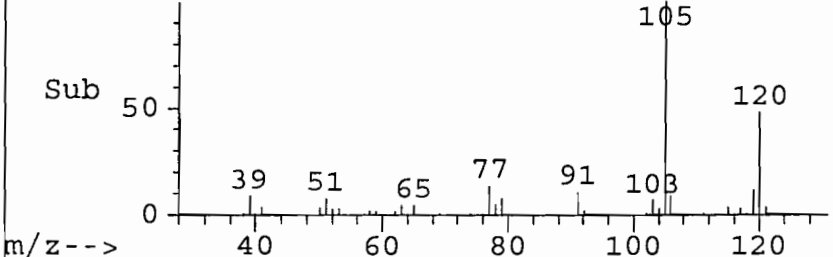
AbundanceScan 3419 (23.523 min): M13338.D (



AbundanceIon 105.00 (104
Ion 120.00 (119
23.52

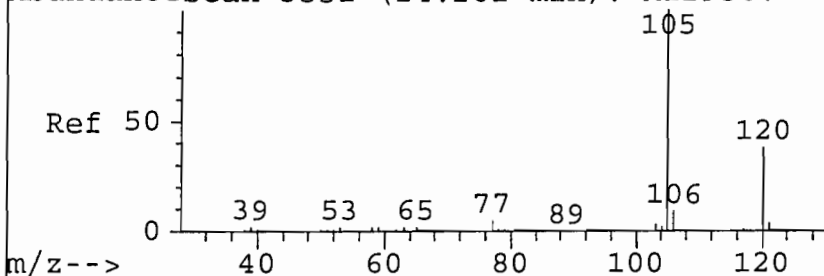


AbundanceScan 3419 (23.523 min): M13338.D (



000071

AbundanceScan 3551 (24.261 min): M12956.D (



#68

1,2,4-trimethylbenzene

Concen: 7.41 ug/L

RT: 24.27 min Scan# 3545

Delta R.T. 0.01 min

Lab File: M13338.D

Acq: 25 Oct 99 1:21 pm

Tgt Ion:105 Resp: 292207

Ion Ratio Lower Upper

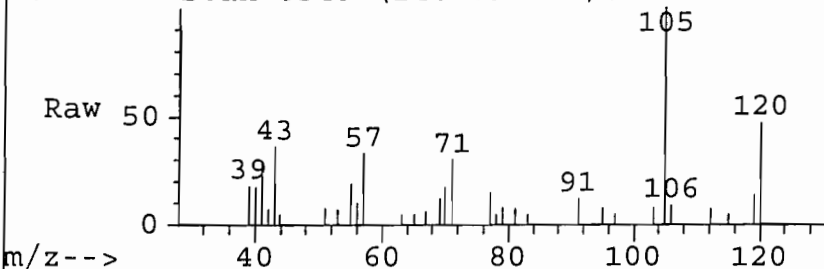
105 100

120 46.7 31.2 58.0

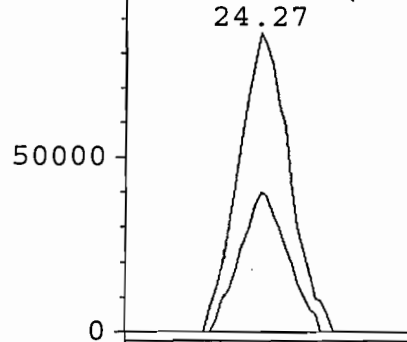
0 0.0 0.0 0.0

0 0.0 0.0 0.0

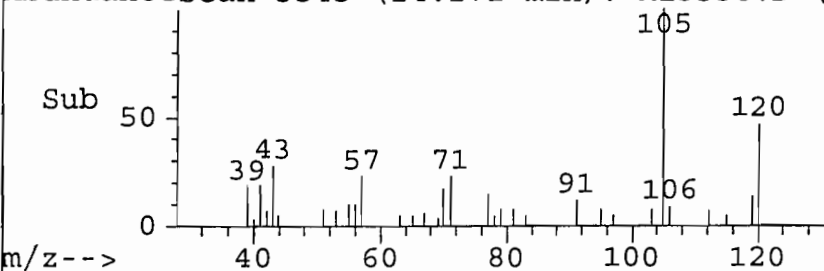
AbundanceScan 3545 (24.271 min): M13338.D (



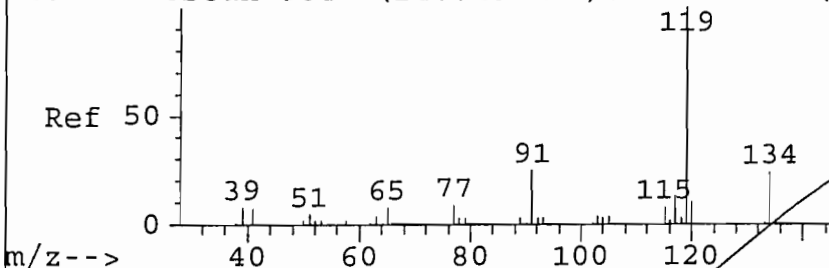
AbundanceIon 105.00 (104
100000 Ion 120.00 (119
24.27



AbundanceScan 3545 (24.271 min): M13338.D (



AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 7.59 ug/L

RT: 24.74 min Scan# 3623

Delta R.T. -0.07 min

Lab File: M13338.D

Acq: 25 Oct 99 1:21 pm

Tgt Ion:119 Resp: 341913

Ion Ratio Lower Upper

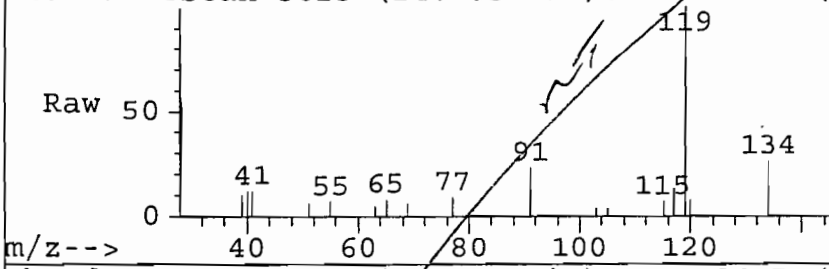
119 100

134 25.5 16.7 31.1

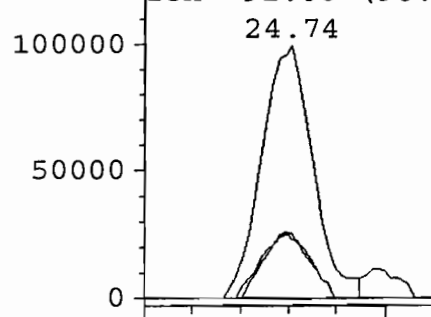
91 22.8 17.2 32.0

0 0.0 0.0 0.0

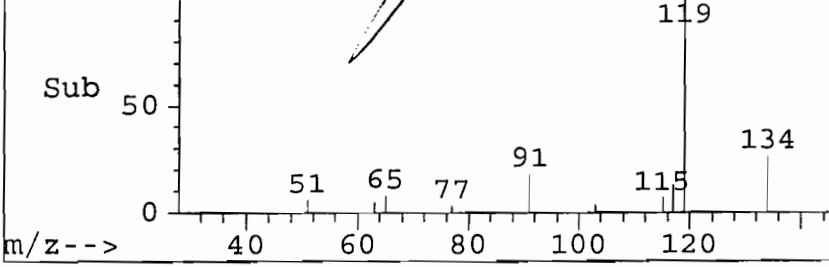
AbundanceScan 3623 (24.735 min): M13338.D (



AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3623 (24.735 min): M13338.D (



000072

Library Search Compound Report

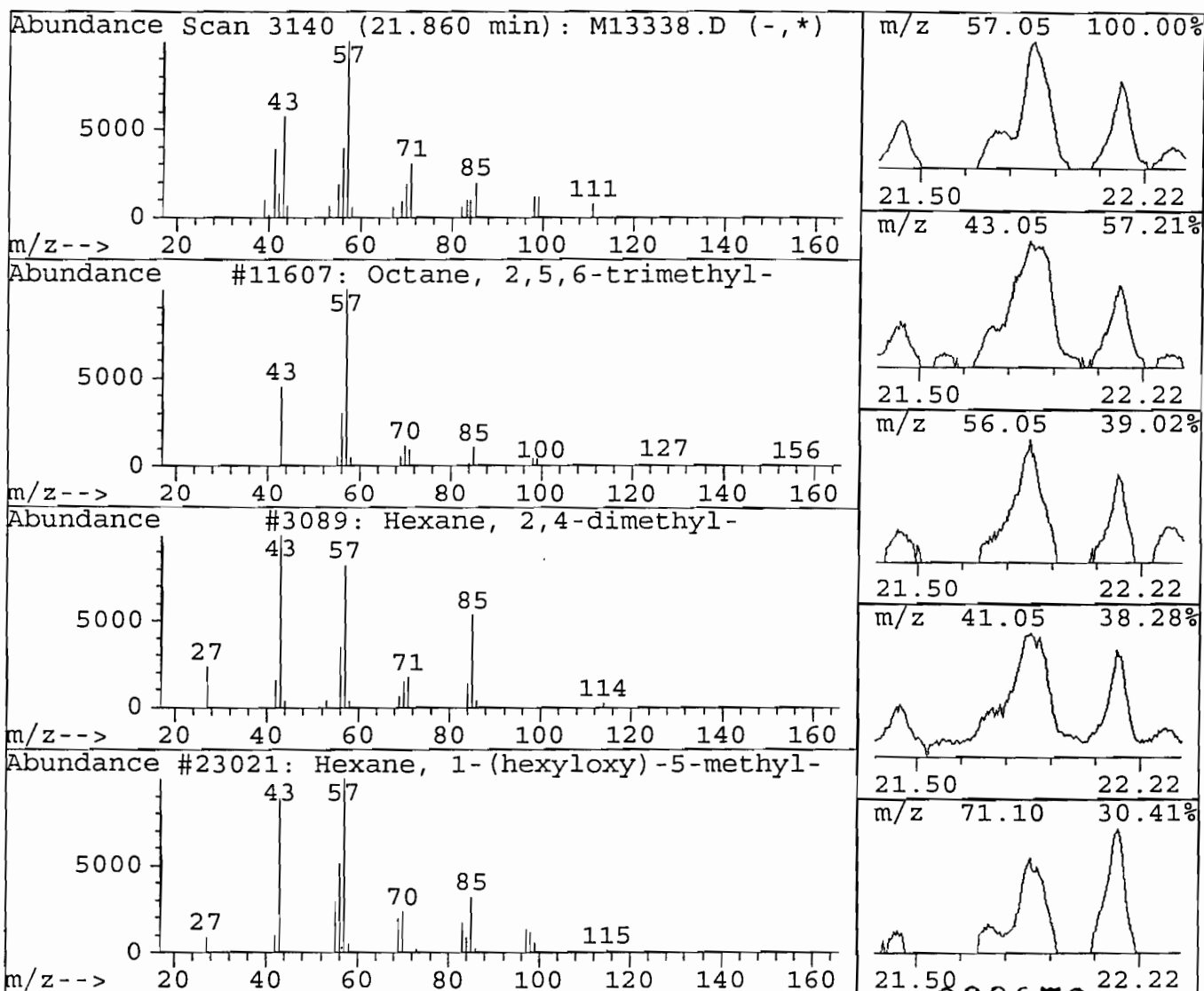
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.86	25.50 ug/L	2579634	Chlorobenzene-d5	20.46

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane, 2,5,6-trimethyl-	11607	062016-14-2	64
2	Hexane, 2,4-dimethyl-	3089	000589-43-5	58
3	Hexane, 1-(hexyloxy)-5-methyl-	23021	074421-19-5	53
4	Hexane, 2,4-dimethyl-	64212	000589-43-5	53
5	1-Octanol, 2-butyl-	69110	003913-02-8	45



000073

Library Search Compound Report

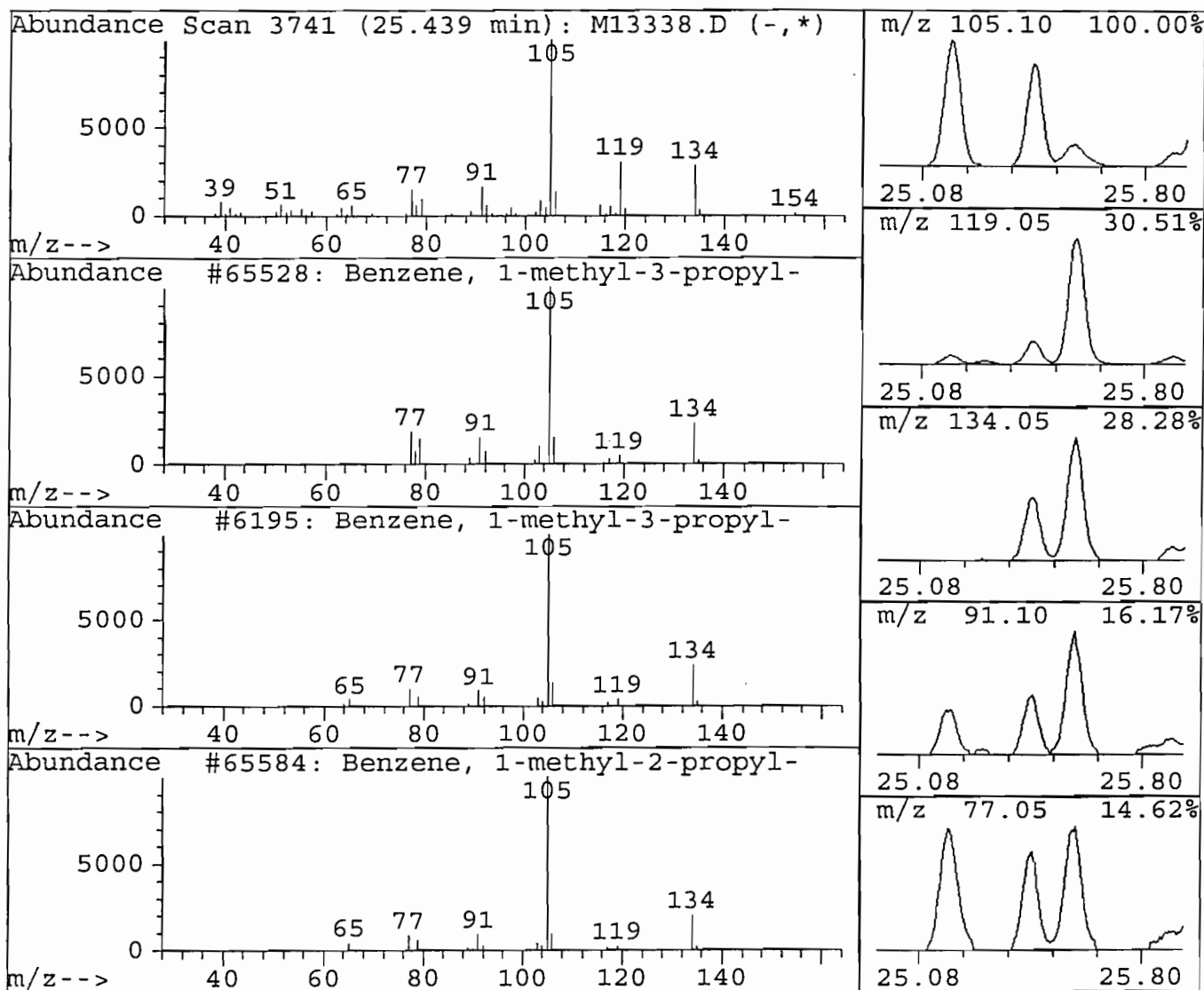
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.44	19.90 ug/L	5224153	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	86
2	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	70
3	Benzene, 1-methyl-2-propyl-	65584	001074-17-5	70
4	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	70
5	Benzene, 1,2-diethyl-	65562	000135-01-3	64



Library Search Compound Report

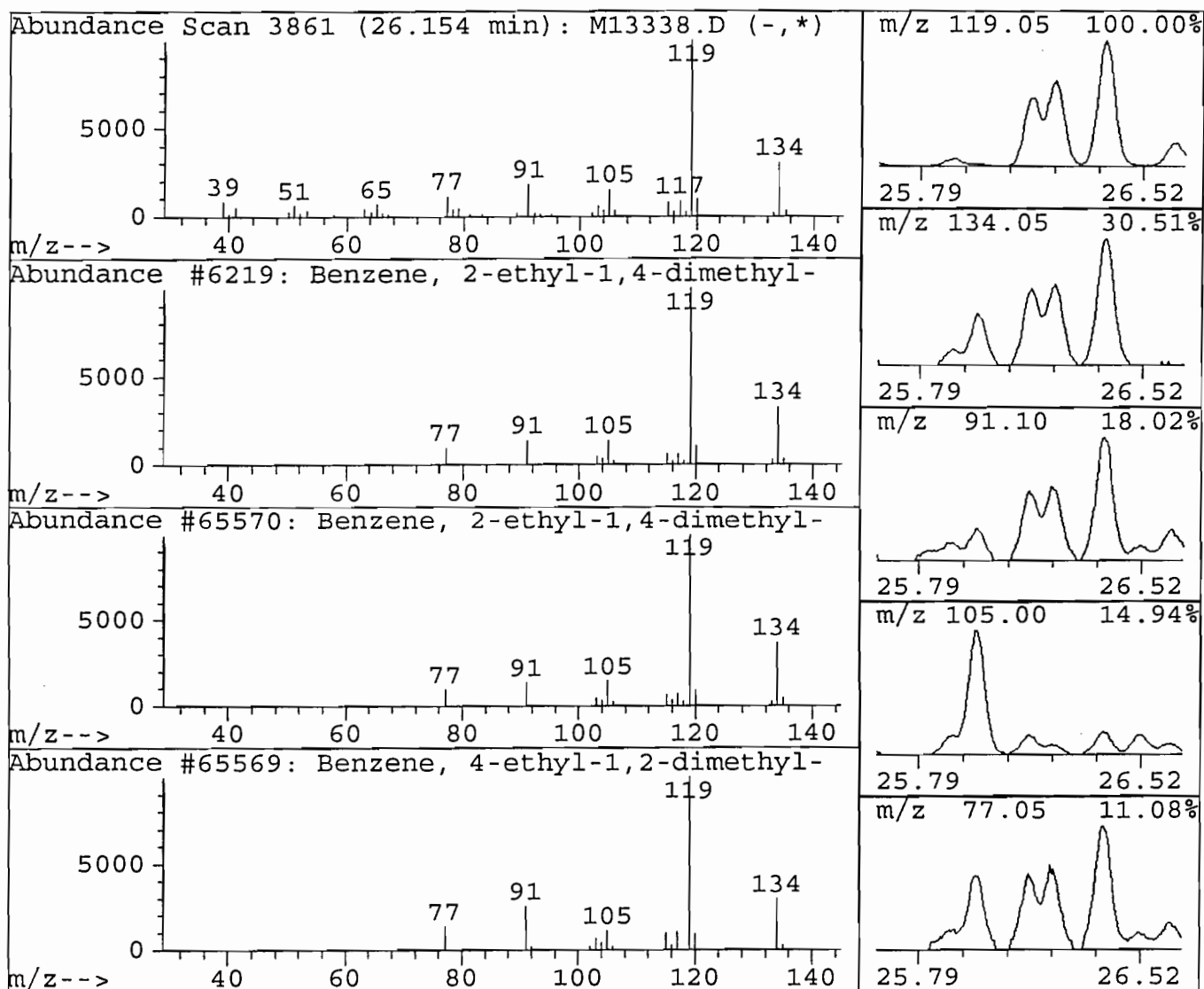
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.15	14.25 ug/L	3741767	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	6219	001758-88-9	97
2	Benzene, 2-ethyl-1,4-dimethyl-	65570	001758-88-9	96
3	Benzene, 4-ethyl-1,2-dimethyl-	65569	000934-80-5	96
4	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	95
5	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	95



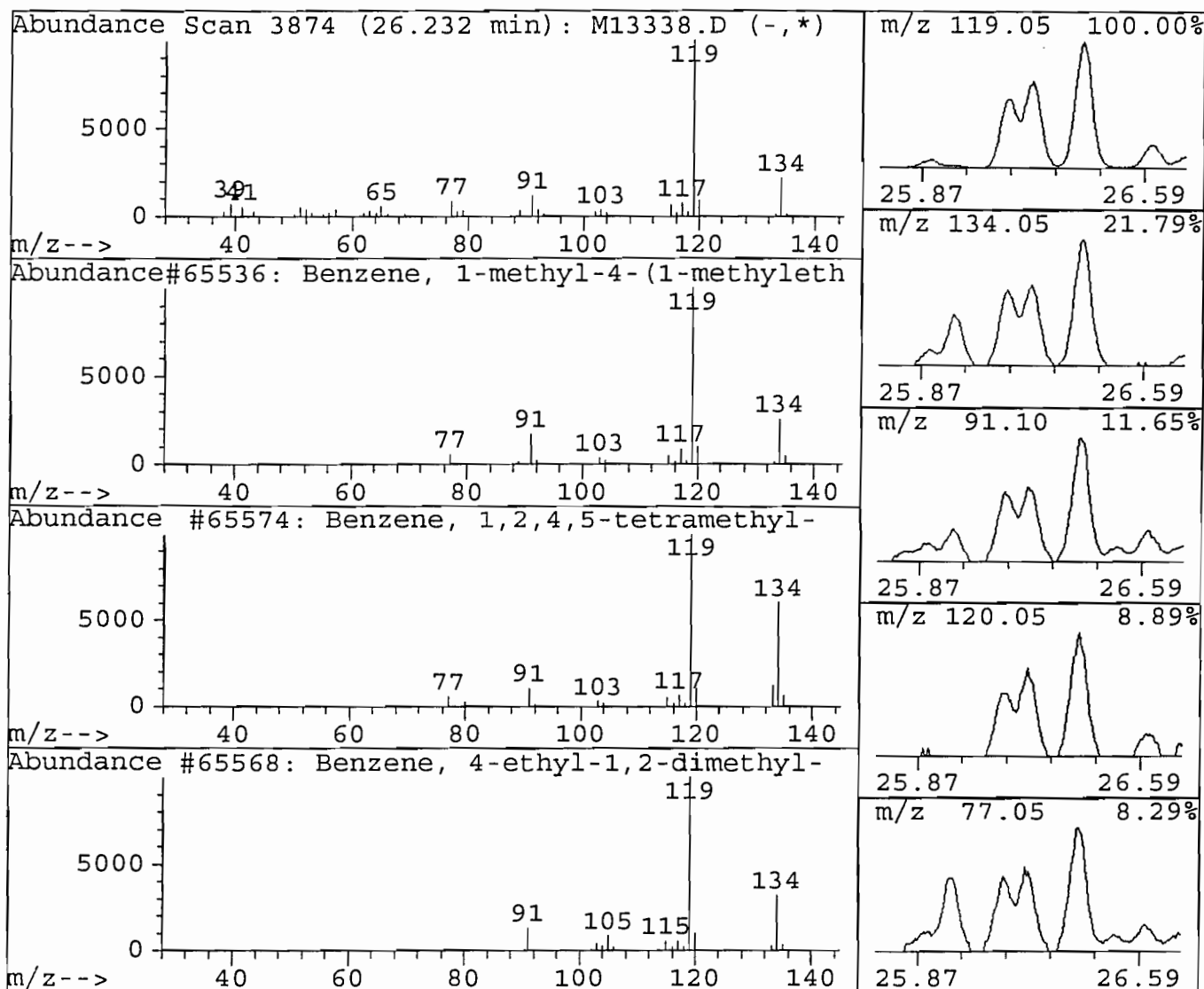
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
26.23	17.19 ug/L	4514230	1,4-dichlorobenzene-d4	25.20	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)		65536	000099-87-6	91
2	Benzene, 1,2,4,5-tetramethyl-		65574	000095-93-2	91
3	Benzene, 4-ethyl-1,2-dimethyl-		65568	000934-80-5	91
4	Benzene, 1-ethyl-2,4-dimethyl-		6221	000874-41-9	91
5	Benzene, 1,2,3,5-tetramethyl-		6220	000527-53-7	91



000076

Library Search Compound Report

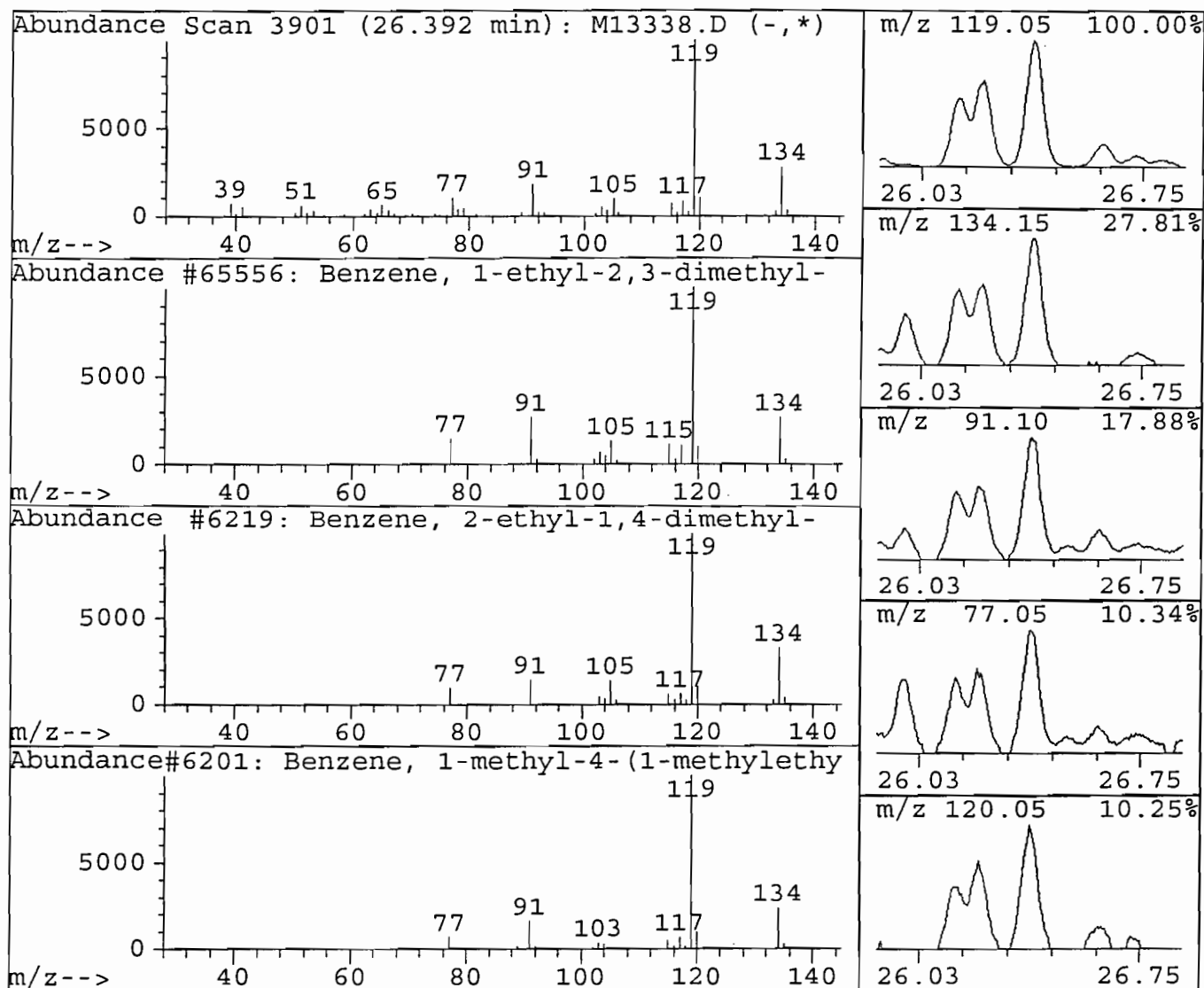
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.39	28.40 ug/L	7456796	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	65556	000933-98-2	96
2	Benzene, 2-ethyl-1,4-dimethyl-	6219	001758-88-9	95
3	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	95
4	Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	95
5	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	95



000077

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D

Acq Time : 25 Oct 99 1:21 pm

Sample : 13827ASP-88010

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

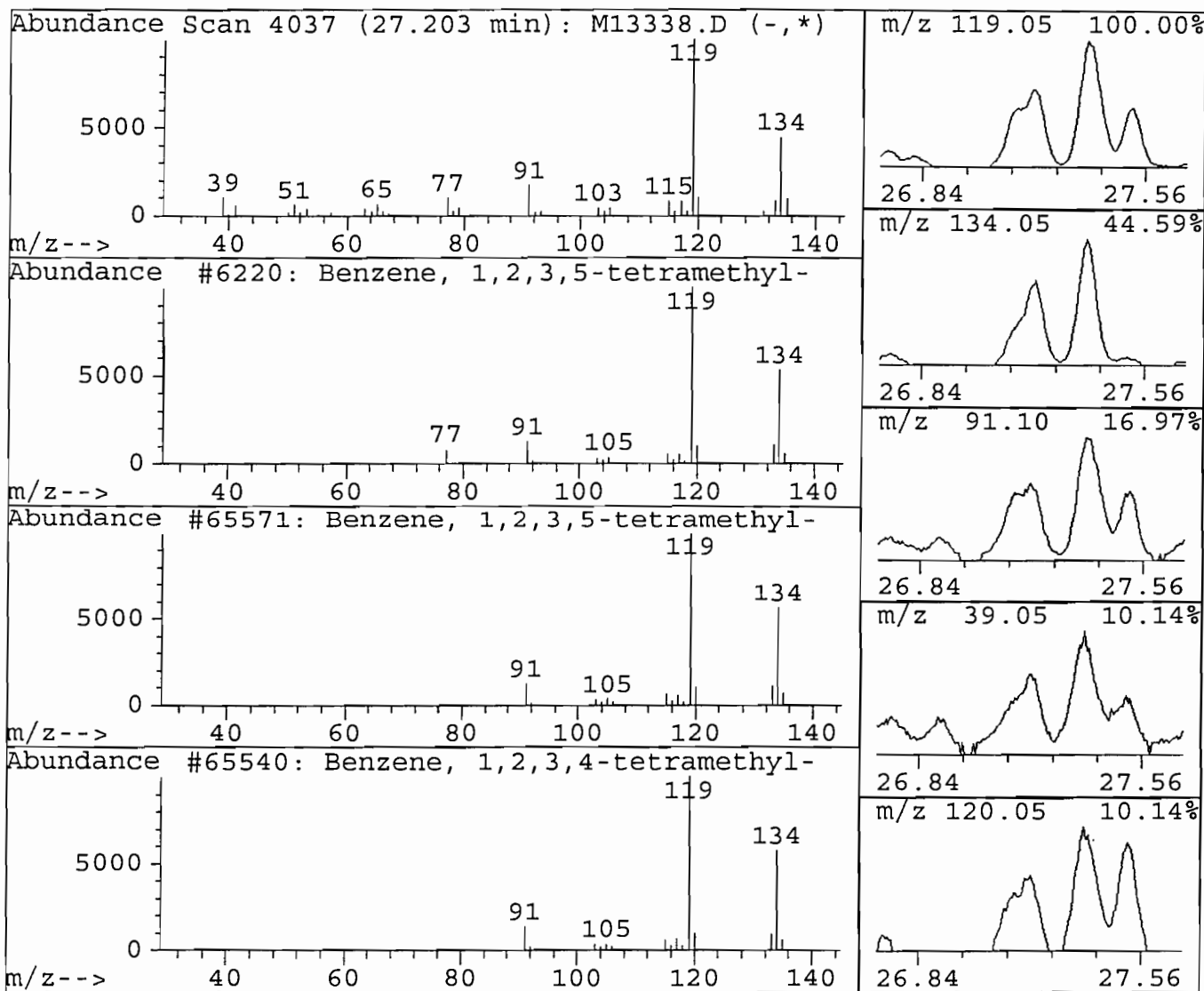
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.20	24.21 ug/L	6355456	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-	6220	000527-53-7	95
2	Benzene, 1,2,3,5-tetramethyl-	65571	000527-53-7	93
3	Benzene, 1,2,3,4-tetramethyl-	65540	000488-23-3	93
4	Benzene, 1-ethyl-2,3-dimethyl-	65555	000933-98-2	91
5	Benzene, methyl(1-methylethyl)-	6208	025155-15-1	91



000078

Library Search Compound Report

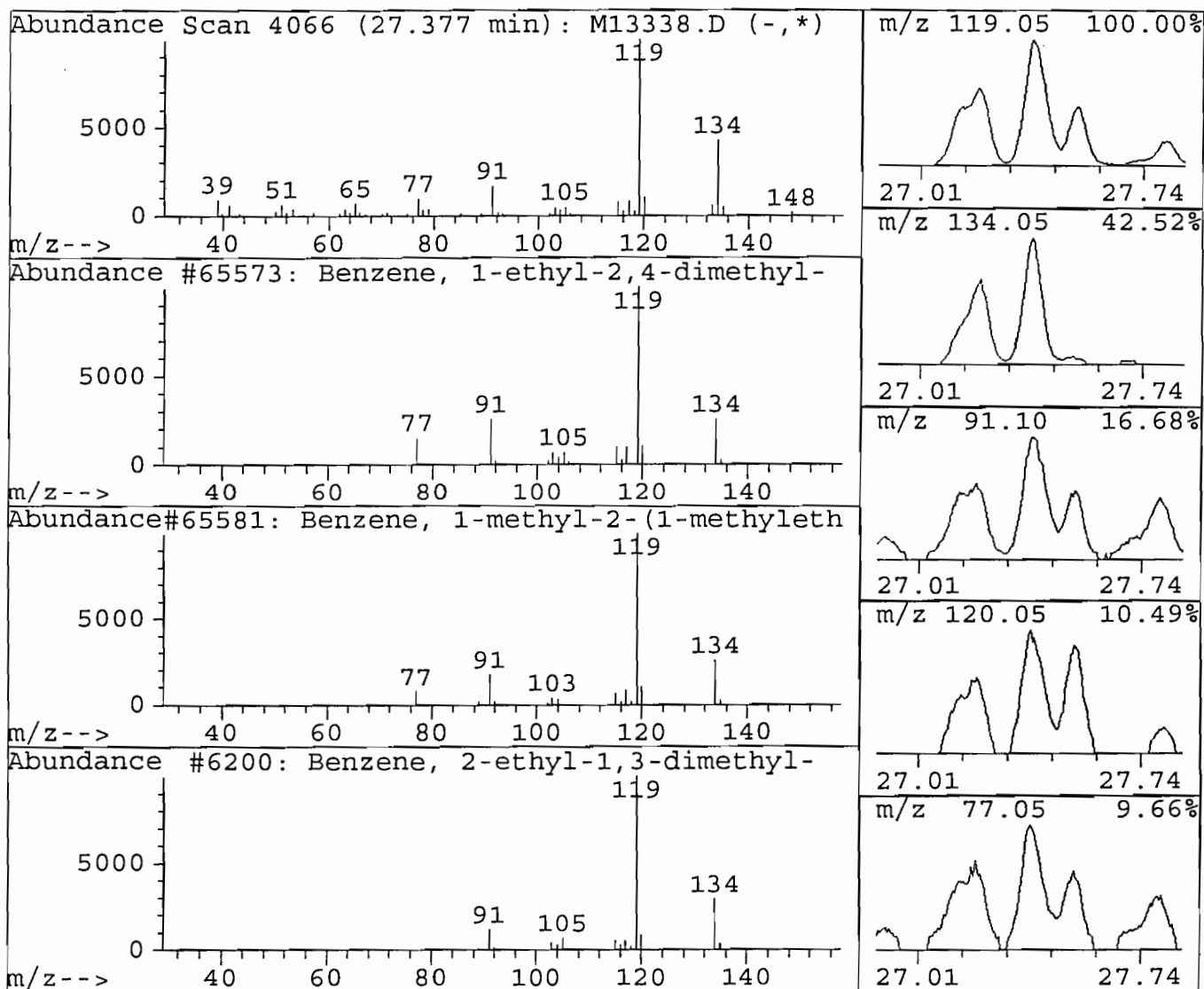
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.38	30.04 ug/L	7887078	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	65573	000874-41-9	96
2	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	95
3	Benzene, 2-ethyl-1,3-dimethyl-	6200	002870-04-4	94
4	Benzene, 1-ethyl-2,4-dimethyl-	65572	000874-41-9	94
5	Benzene, 1,2,4,5-tetramethyl-	65574	000095-93-2	94



Library Search Compound Report

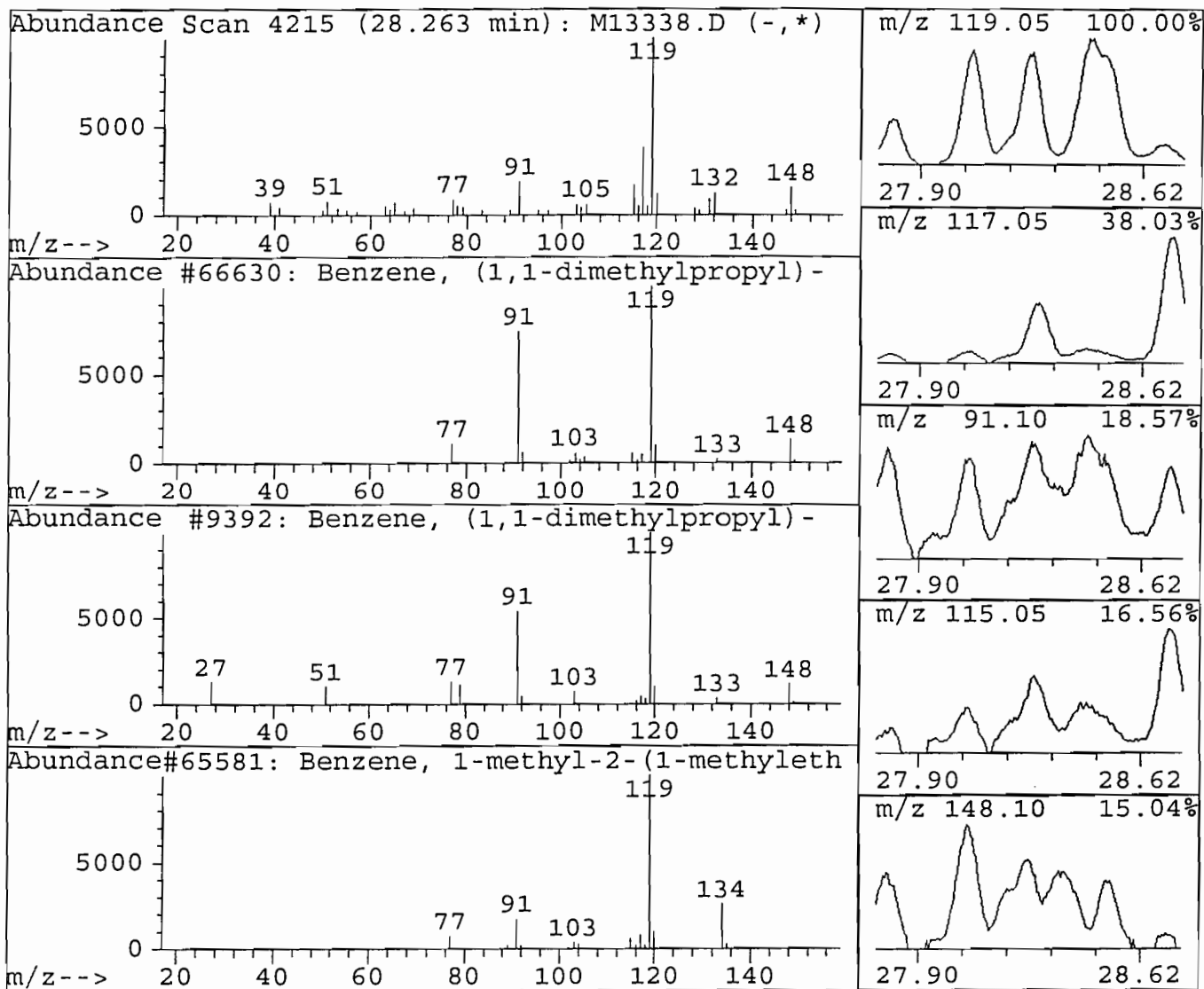
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.26	21.79 ug/L	5720037	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, (1,1-dimethylpropyl)-	66630	002049-95-8	53
2	Benzene, (1,1-dimethylpropyl)-	9392	002049-95-8	53
3	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	50
4	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	50
5	Benzene, 1-methyl-4-(1-methylethyl)	65534	000099-87-6	50



000080

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D

Acq Time : 25 Oct 99 1:21 pm

Sample : 13827ASP-88010

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

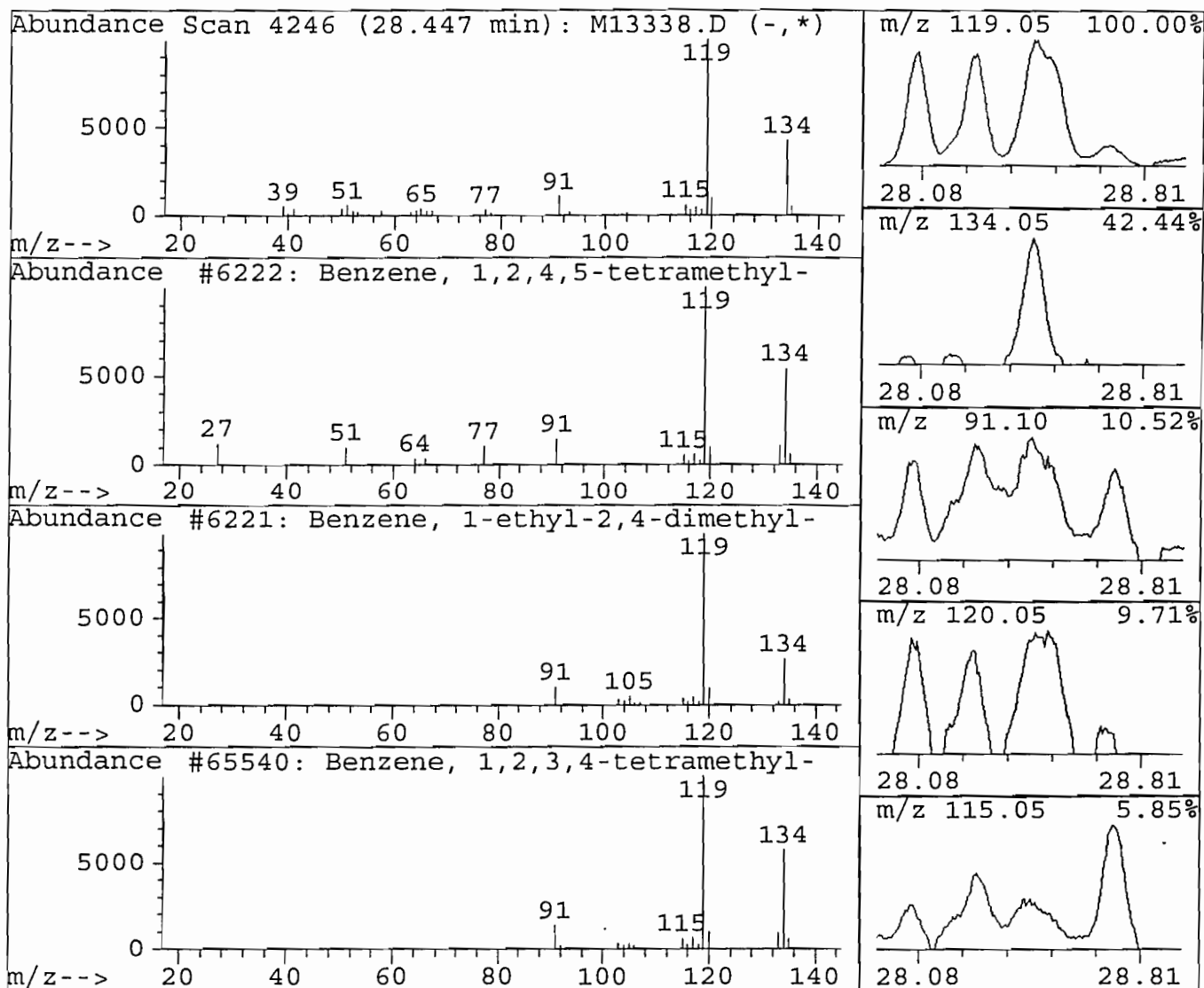
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.45	22.50 ug/L	5907290	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	6222	000095-93-2	91
2	Benzene, 1-ethyl-2,4-dimethyl-	6221	000874-41-9	91
3	Benzene, 1,2,3,4-tetramethyl-	65540	000488-23-3	91
4	Benzene, 1,2,3,4-tetramethyl-	6202	000488-23-3	91
5	Benzene, 1,2,4,5-tetramethyl-	65575	000095-93-2	91



Library Search Compound Report

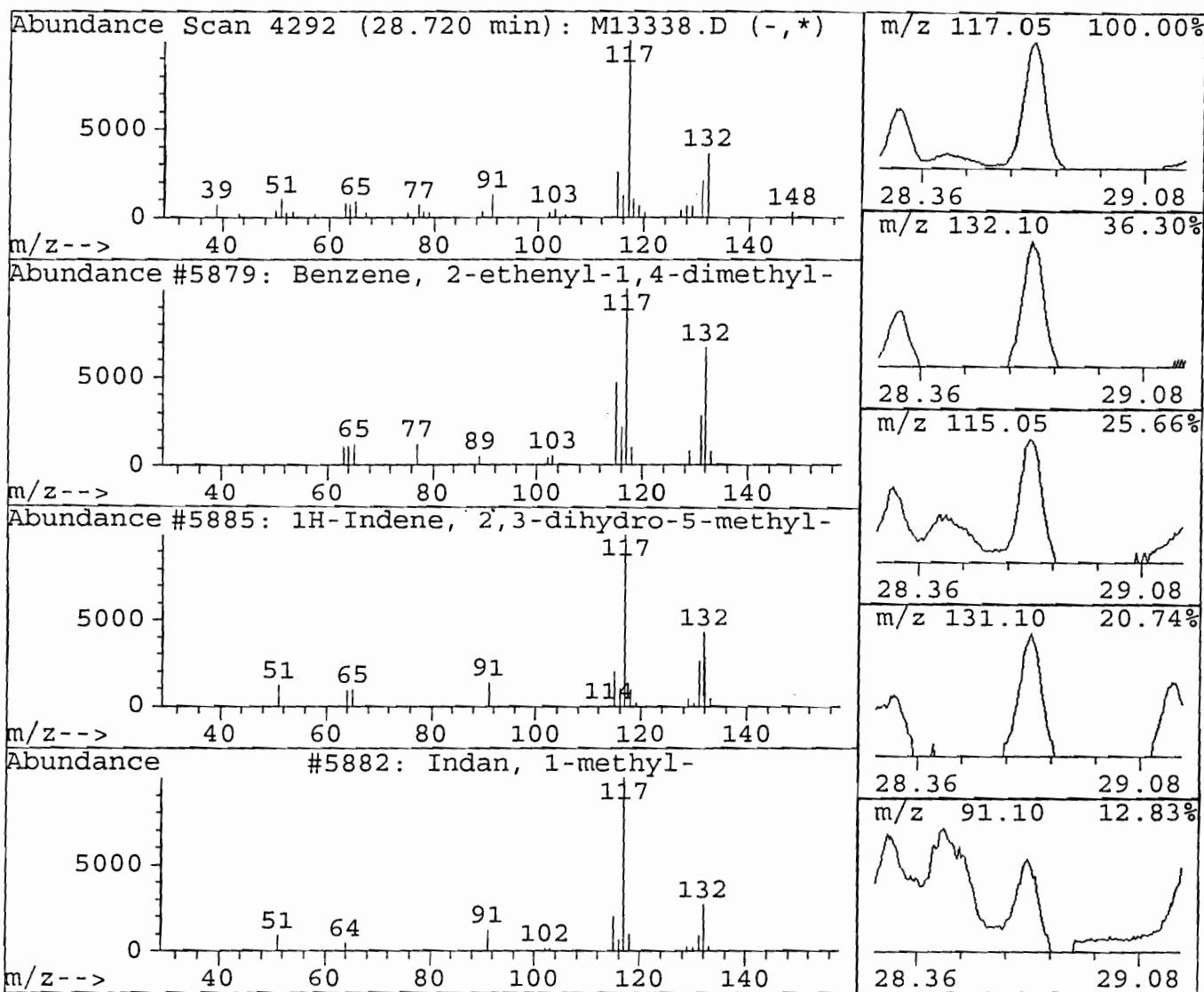
Data File : D:\HPCHEM\3\DATA\V3102599\M13338.D
Acq Time : 25 Oct 99 1:21 pm
Sample : 13827ASP-88010
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.72	14.52 ug/L	3812691	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 2-ethenyl-1,4-dimethyl-	5879	002039-89-6	95
2	1H-Indene, 2,3-dihydro-5-methyl-	5885	000874-35-1	87
3	Indan, 1-methyl-	5882	000767-58-8	87
4	1H-Indene, 2,3-dihydro-4-methyl-	5893	000824-22-6	87
5	2,3-Dihydro-1-methylindene	5901	027133-93-3	81



000082

SAMPLE NO.

GP-016-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: O88011

Lab File ID: M13339.D

Date Received: 10/18/99

Date Analyzed: 10/25/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

(ug/L or ug/Kg)

ug/Kg

Q

FORM I VOA

000083

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-016-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88011
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13339.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 10 Concentration Units:
 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	19.07	1500	J
2. 111-84-2	Nonane	20.15	1500	J
3.	Unknown	21.86	2500	J
4. 611-14-3	Benzene, 1-ethyl-2-methyl-	24.03	2400	J
5. 1074-43-7	Benzene, 1-methyl-3-propyl-	25.44	2500	J
6. 99-87-6	Benzene, 1-methyl-4-(1-methy	26.40	2600	J
7. 933-98-2	Benzene, 1-ethyl-2,3-dimethy	27.20	2400	J
8. 874-41-9	Benzene, 1-ethyl-2,4-dimethy	27.38	2700	J
9.	Unknown	28.28	1600	J
10. 767-58-8	Indan, 1-methyl-	28.72	1600	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
 Acq Time : 25 Oct 99 2:06 pm
 Sample : 13827ASP-88011
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 25 15:17 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

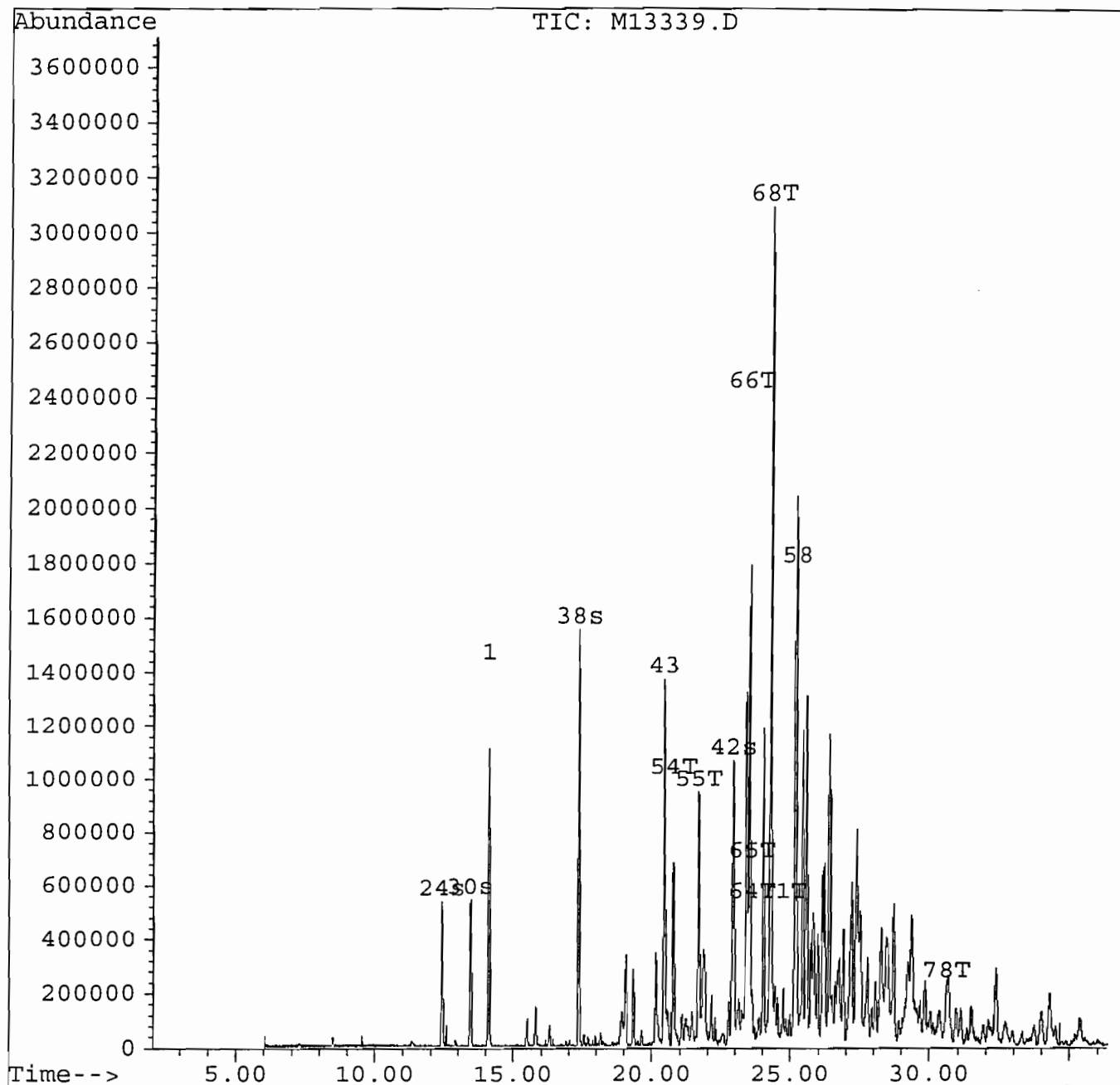
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	14.11	96	1906236	50.00	ug/L	0.01
43) Chlorobenzene-d5	20.46	117	1703407	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.21	152	750838	50.00	ug/L	0.03
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.41	113	630237	53.15	ug/L	106.31%
30) 1,2-Dichlorethane-d4	13.45	65	710855	53.19	ug/L	106.39%
38) Toluene-d8	17.36	98	2005118	53.99	ug/L	107.99%
42) 4-Bromofluorobenzene	22.94	95	866372	55.18	ug/L	110.36%
Target Compounds						Qvalue
54) m&p-xylenes	20.78	106	399724	21.61	ug/L	99
55) o-xylene	21.69	91	1271623	29.73	ug/L	93
64) 2-chlorotoluene	23.61	126	47808	4.20	ug/L	91
65) 4-chlorotoluene	23.61	126	47808	4.05	ug/L	99
66) 1,3,5-trimethylbenzene	23.52	105	2162403	52.79	ug/L	100
68) 1,2,4-trimethylbenzene	24.27	105	3704004	94.27	ug/L	99
71) 4-isopropyltoluene	24.73	119	260041	5.79	ug/L	99
78) naphthalene	30.59	128	506061	16.12	ug/L	96

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 25 15:17 1999

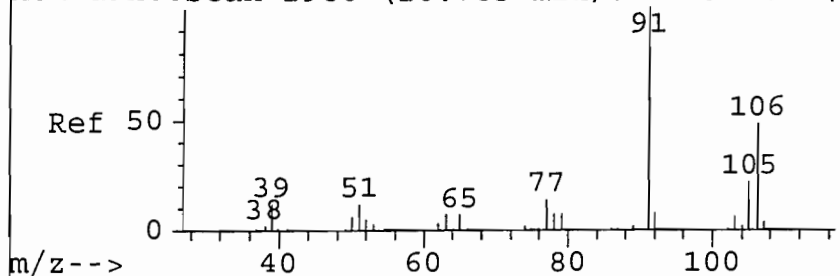
Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000086

AbundanceScan 2960 (20.765 min): M12956.D (



#54

m&p-xylenes

Concen: 21.61 ug/L

RT: 20.78 min Scan# 2963

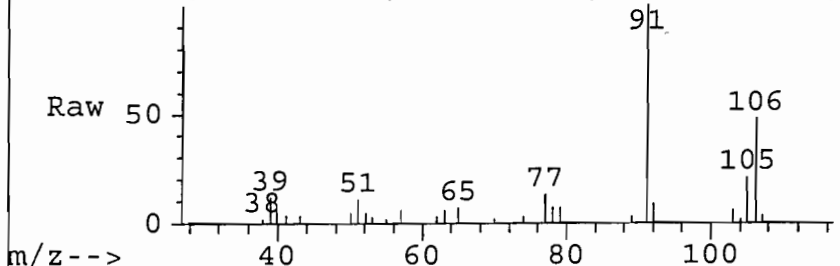
Delta R.T. 0.01 min

Lab File: M13339.D

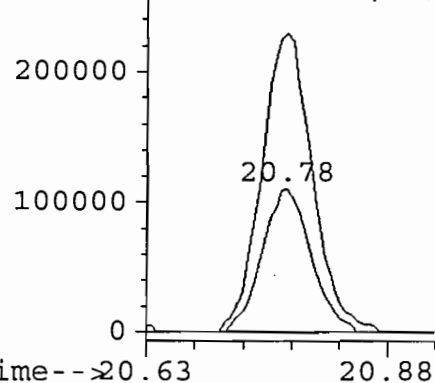
Acq: 25 Oct 99 2:06 pm

Tgt Ion:	106	Resp:	399724
Ion	Ratio	Lower	Upper
106	100		
91	207.9	146.7	272.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

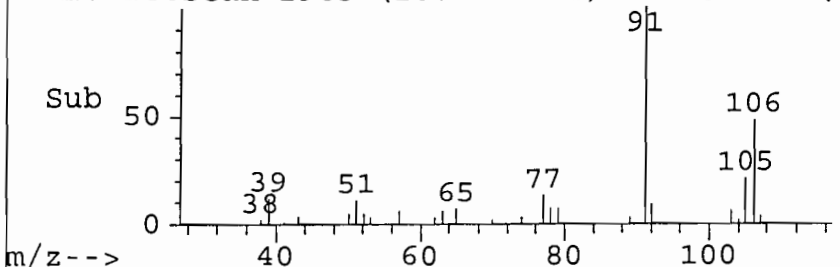
AbundanceScan 2963 (20.777 min): M13339.D (



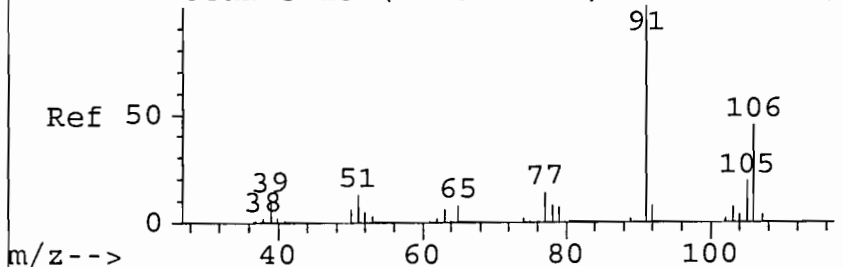
AbundanceIon 106.00 (105
Ion 91.00 (90.



AbundanceScan 2963 (20.777 min): M13339.D (



AbundanceScan 3113 (21.672 min): M12956.D (



#55

o-xylene

Concen: 29.73 ug/L

RT: 21.69 min Scan# 3117

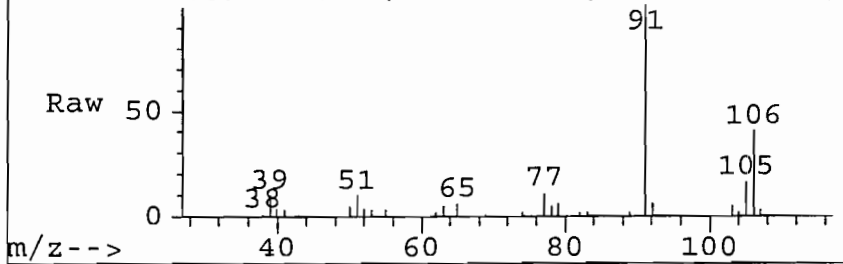
Delta R.T. 0.02 min

Lab File: M13339.D

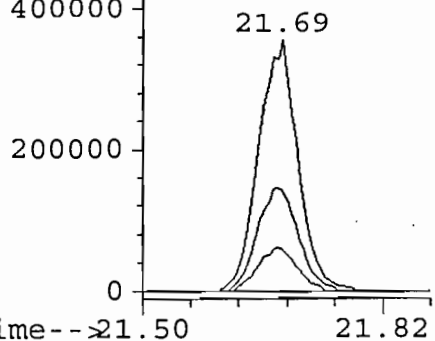
Acq: 25 Oct 99 2:06 pm

Tgt Ion:	91	Resp:	1271623
Ion	Ratio	Lower	Upper
91	100		
106	39.7	31.3	58.1
105	16.2	12.9	24.0
0	0.0	0.0	0.0

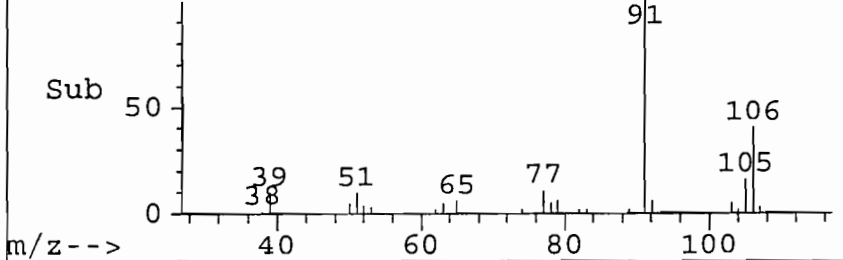
AbundanceScan 3117 (21.689 min): M13339.D (



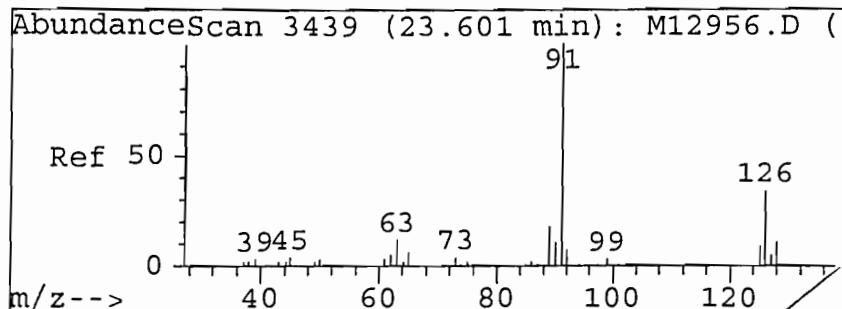
AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



AbundanceScan 3117 (21.689 min): M13339.D (

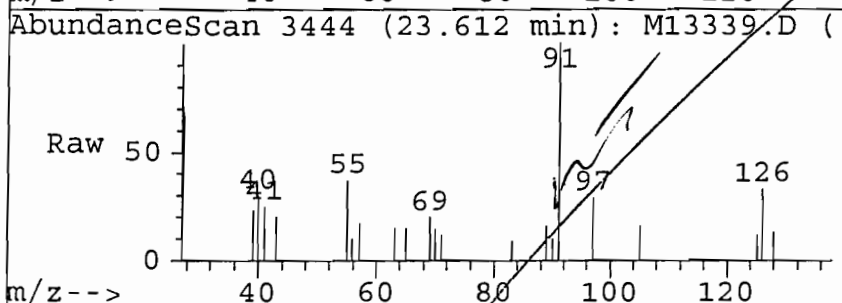


000087

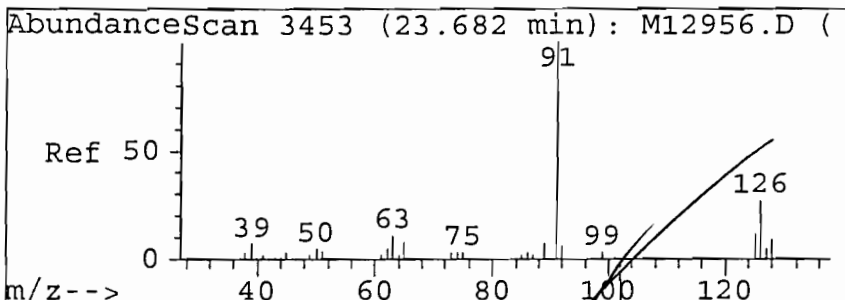
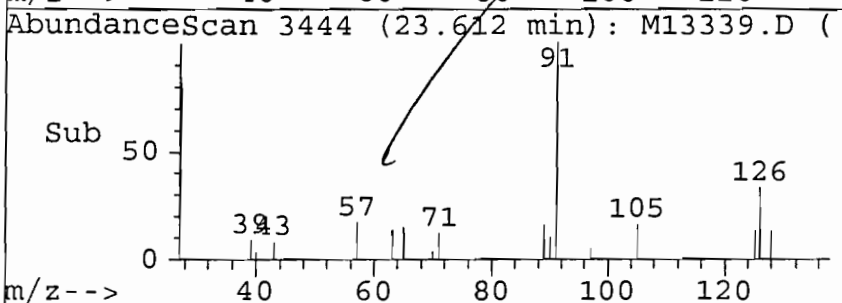
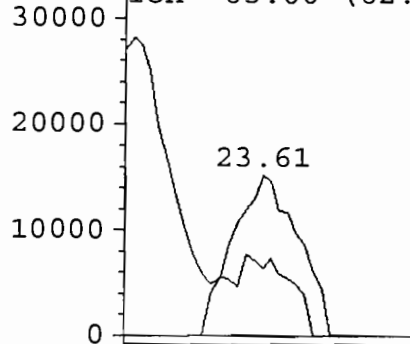


#64
2-chlorotoluene
Concen: 4.20 ug/L
RT: 23.61 min Scan# 3444
Delta R.T. 0.01 min
Lab File: M13339.D
Acq: 25 Oct 99 2:06 pm

Tgt Ion:	126	Resp:	47808
Ion Ratio	Lower	Upper	
126	100		
63	42.3	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

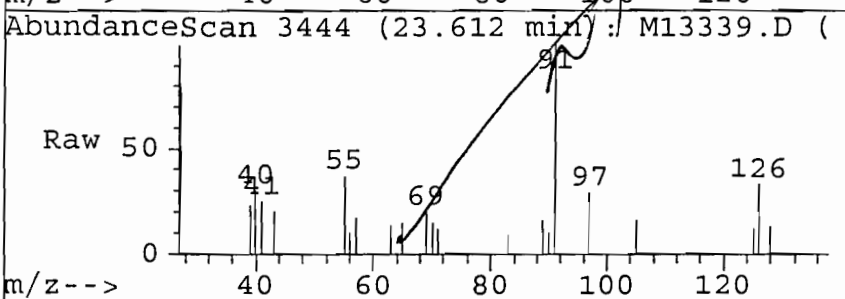


AbundanceIon 126.00 (125
Ion 63.00 (62.

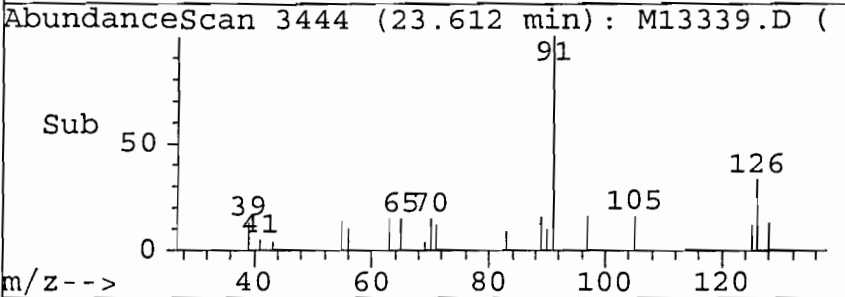
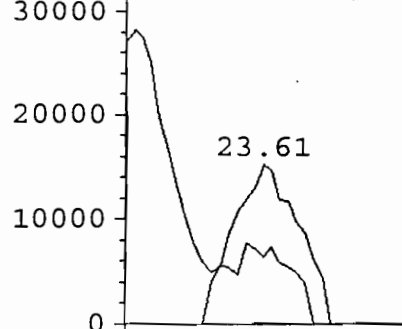


#65
4-chlorotoluene
Concen: 4.05 ug/L
RT: 23.61 min Scan# 3444
Delta R.T. -0.07 min
Lab File: M13339.D
Acq: 25 Oct 99 2:06 pm

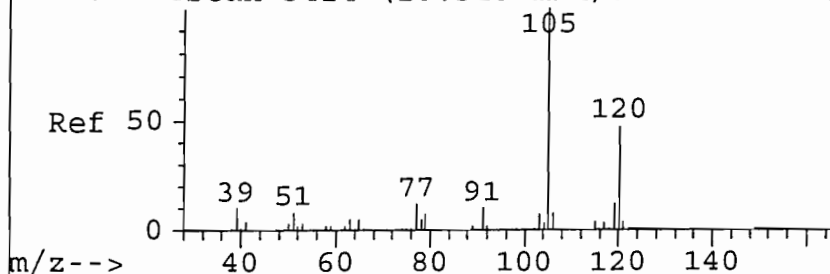
Tgt Ion:	126	Resp:	47808
Ion Ratio	Lower	Upper	
126	100		
63	42.3	29.3	54.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0



AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3424 (23.513 min): M12956.D (



#66

1,3,5-trimethylbenzene

Concen: 52.79 ug/L

RT: 23.52 min Scan# 3429

Delta R.T. 0.01 min

Lab File: M13339.D

Acq: 25 Oct 99 2:06 pm

Tgt Ion:105 Resp: 2162403

Ion Ratio Lower Upper

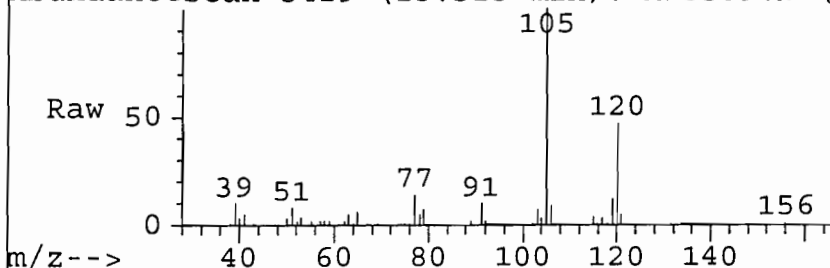
105 100

120 47.5 33.2 61.7

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 3429 (23.523 min): M13339.D (



AbundanceIon 105.00 (104

Ion 120.00 (119

23.52

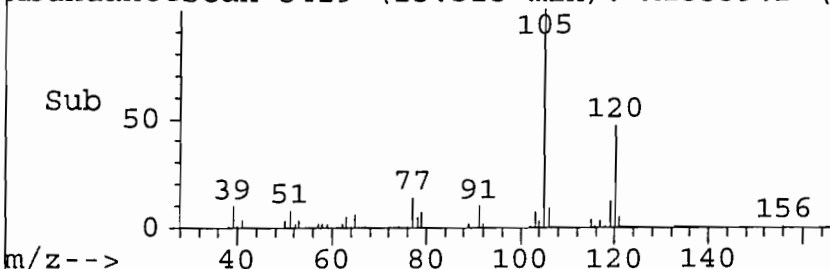
600000

400000

200000

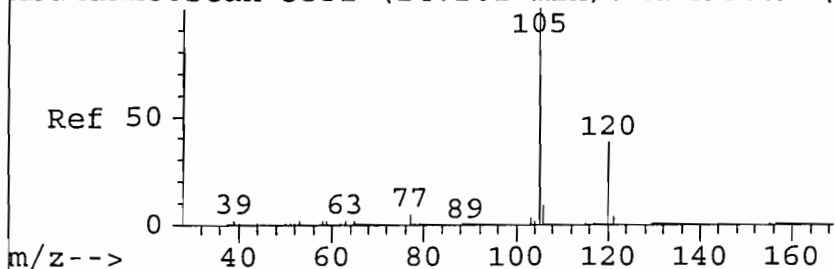
0

AbundanceScan 3429 (23.523 min): M13339.D (



Time-->23.38 23.69

AbundanceScan 3551 (24.261 min): M12956.D (



#68

1,2,4-trimethylbenzene

Concen: 94.27 ug/L

RT: 24.27 min Scan# 3557

Delta R.T. 0.01 min

Lab File: M13339.D

Acq: 25 Oct 99 2:06 pm

Tgt Ion:105 Resp: 3704004

Ion Ratio Lower Upper

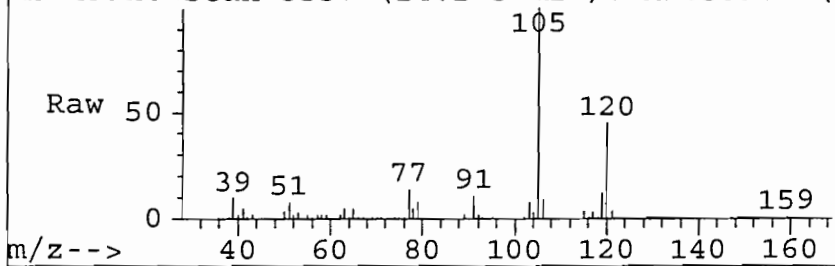
105 100

120 45.0 31.2 58.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 3557 (24.273 min): M13339.D (



AbundanceIon 105.00 (104

Ion 120.00 (119

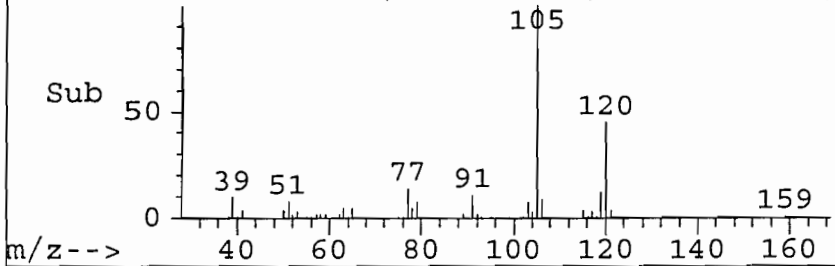
24.27

1000000

500000

0

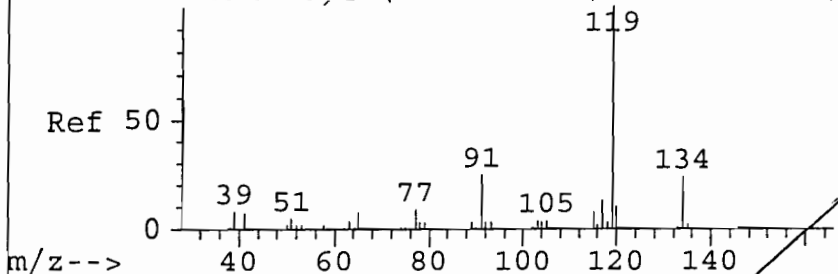
AbundanceScan 3557 (24.273 min): M13339.D (



Time-->24.09 24.43

000089

AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 5.79 ug/L

RT: 24.73 min Scan# 3635

Delta R.T. -0.08 min

Lab File: M13339.D

Acq: 25 Oct 99 2:06 pm

Tgt Ion:119 Resp: 260041

Ion Ratio Lower Upper

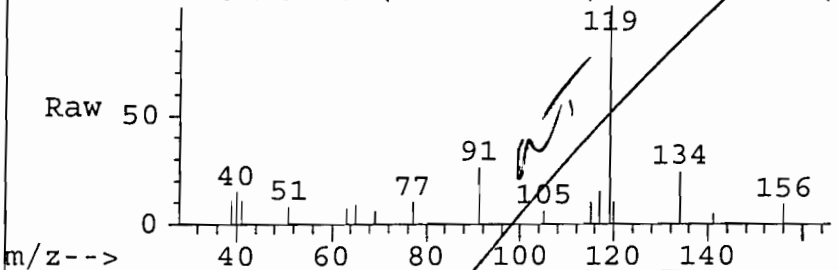
119 100

134 23.5 16.7 31.1

91 25.6 17.2 32.0

0 0.0 0.0 0.0

AbundanceScan 3635 (24.732 min): M13339.D (



AbundanceIon 119.00 (118

100000 Ion 134.00 (133

Ion 91.00 (90.

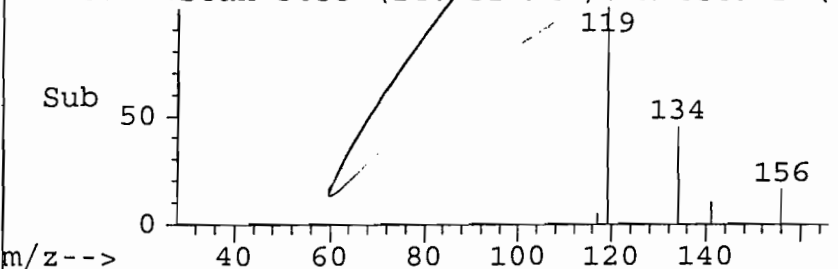
24.73

50000

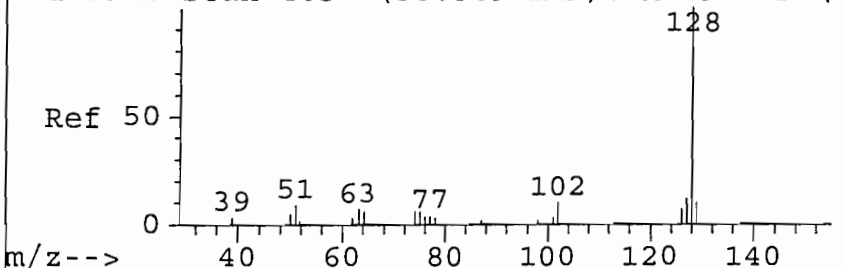
0

Time-->24.61 24.81

AbundanceScan 3635 (24.732 min): M13339.D (



AbundanceScan 4637 (30.569 min): M12956.D (



#78

naphthalene

Concen: 16.12 ug/L

RT: 30.59 min Scan# 4643

Delta R.T. 0.02 min

Lab File: M13339.D

Acq: 25 Oct 99 2:06 pm

Tgt Ion:128 Resp: 506061

Ion Ratio Lower Upper

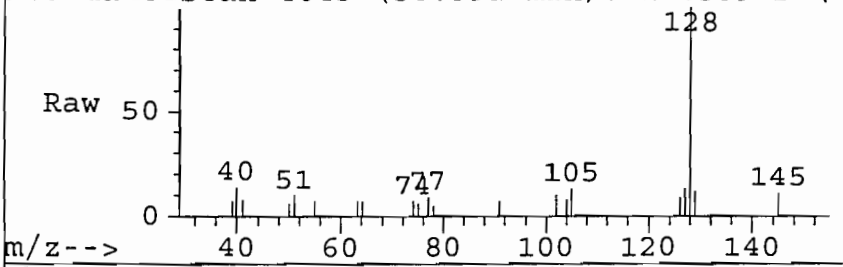
128 100

127 13.4 8.6 16.0

129 12.1 7.0 13.0

0 0.0 0.0 0.0

AbundanceScan 4643 (30.591 min): M13339.D (



AbundanceIon 128.00 (127

100000 Ion 127.00 (126

Ion 129.00 (128

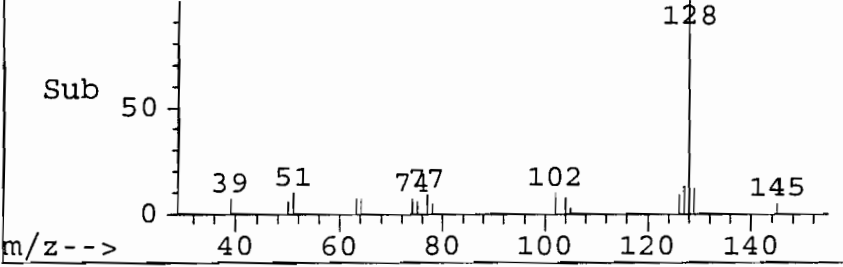
30.59

50000

0

Time-->30.34 30.79

AbundanceScan 4643 (30.591 min): M13339.D (



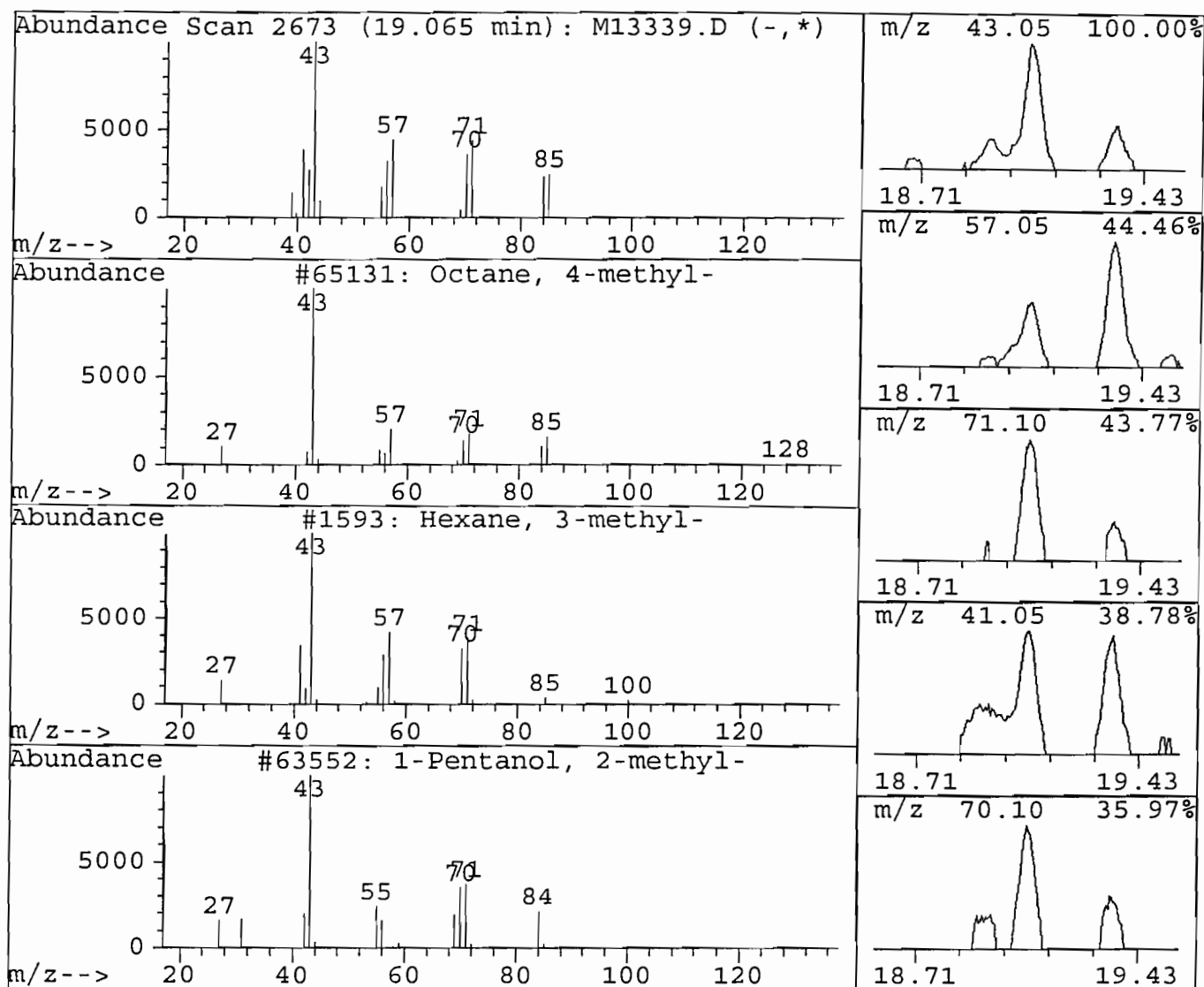
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
19.07	11.52 ug/L	1225123	Chlorobenzene-d5	20.46
Hit# of 7	Tentative ID	Ref#	CAS#	Qual
1	Octane, 4-methyl-	65131	002216-34-4	64
2	Hexane, 3-methyl-	1593	000589-34-4	40
3	1-Pentanol, 2-methyl-	63552	000105-30-6	38
4	Octane, 3,4-dimethyl-	8107	015869-92-8	37
5	Hexane, 3-ethyl-	64222	000619-99-8	33



Library Search Compound Report

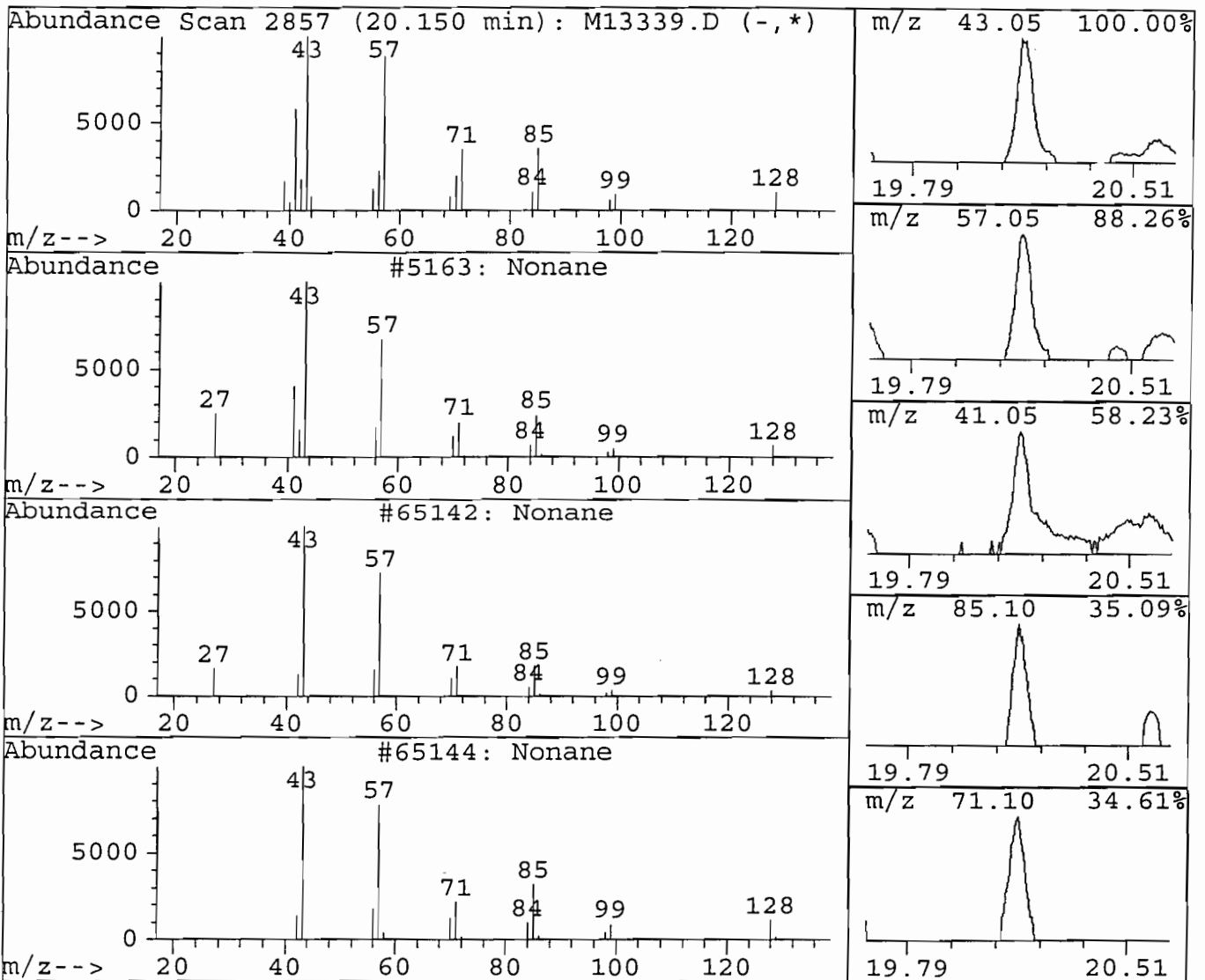
Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
 Acq Time : 25 Oct 99 2:06 pm
 Sample : 13827ASP-88011
 Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
20.15	11.63 ug/L	1237658	Chlorobenzene-d5	20.46

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane	5163	000111-84-2	91
2	Nonane	65142	000111-84-2	91
3	Nonane	65144	000111-84-2	91
4	Nonane	65143	000111-84-2	90
5	Nonane	65145	000111-84-2	90



Library Search Compound Report

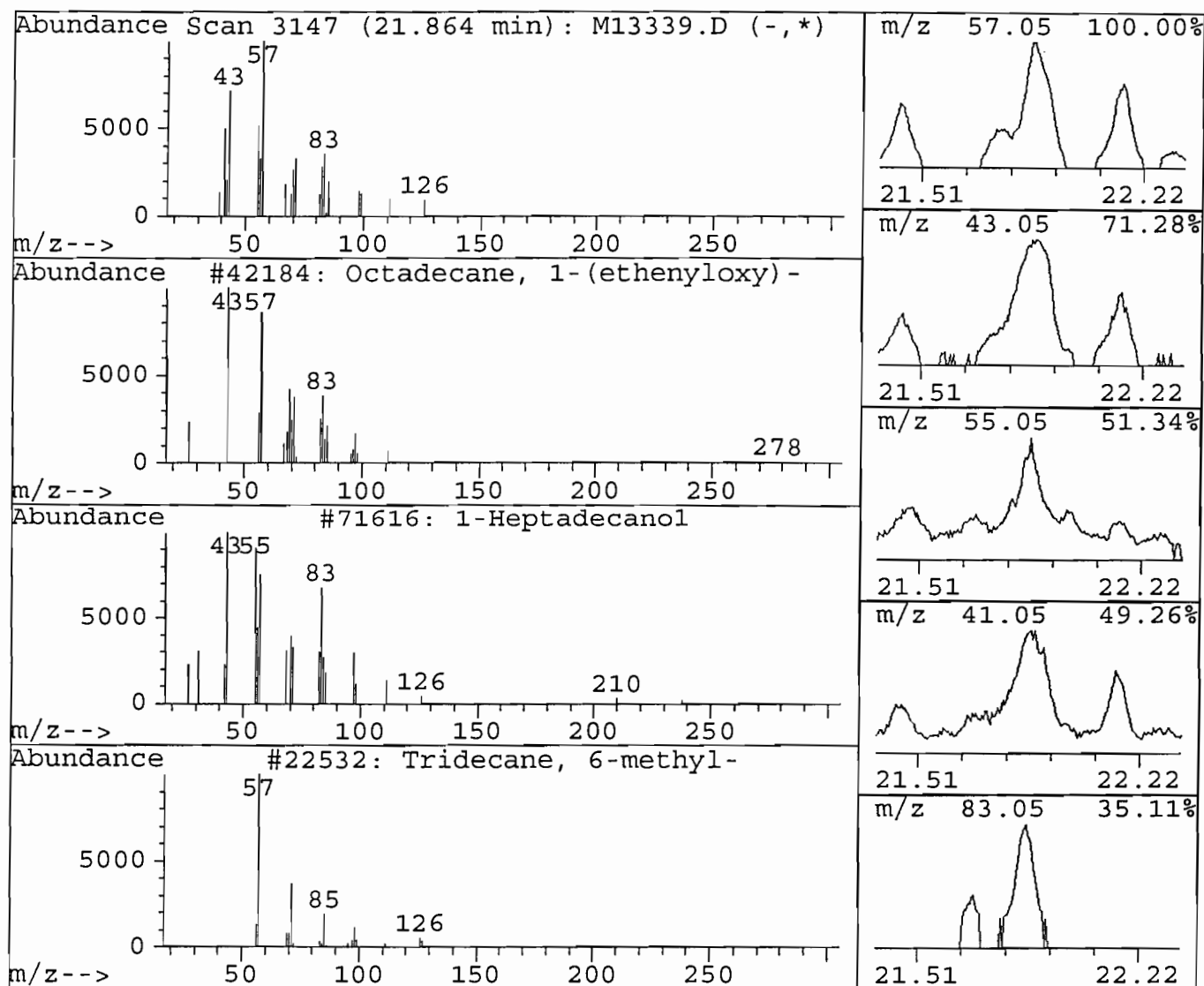
Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.86	19.06 ug/L	2027166	Chlorobenzene-d5	20.46

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octadecane, 1-(ethenyloxy)-	42184	000930-02-9	72
2	1-Heptadecanol	71616	001454-85-9	47
3	Tridecane, 6-methyl-	22532	013287-21-3	47
4	1-Octanol, 2-butyl-	69110	003913-02-8	40
5	Cyclooctanone	4608	000502-49-8	38



Library Search Compound Report

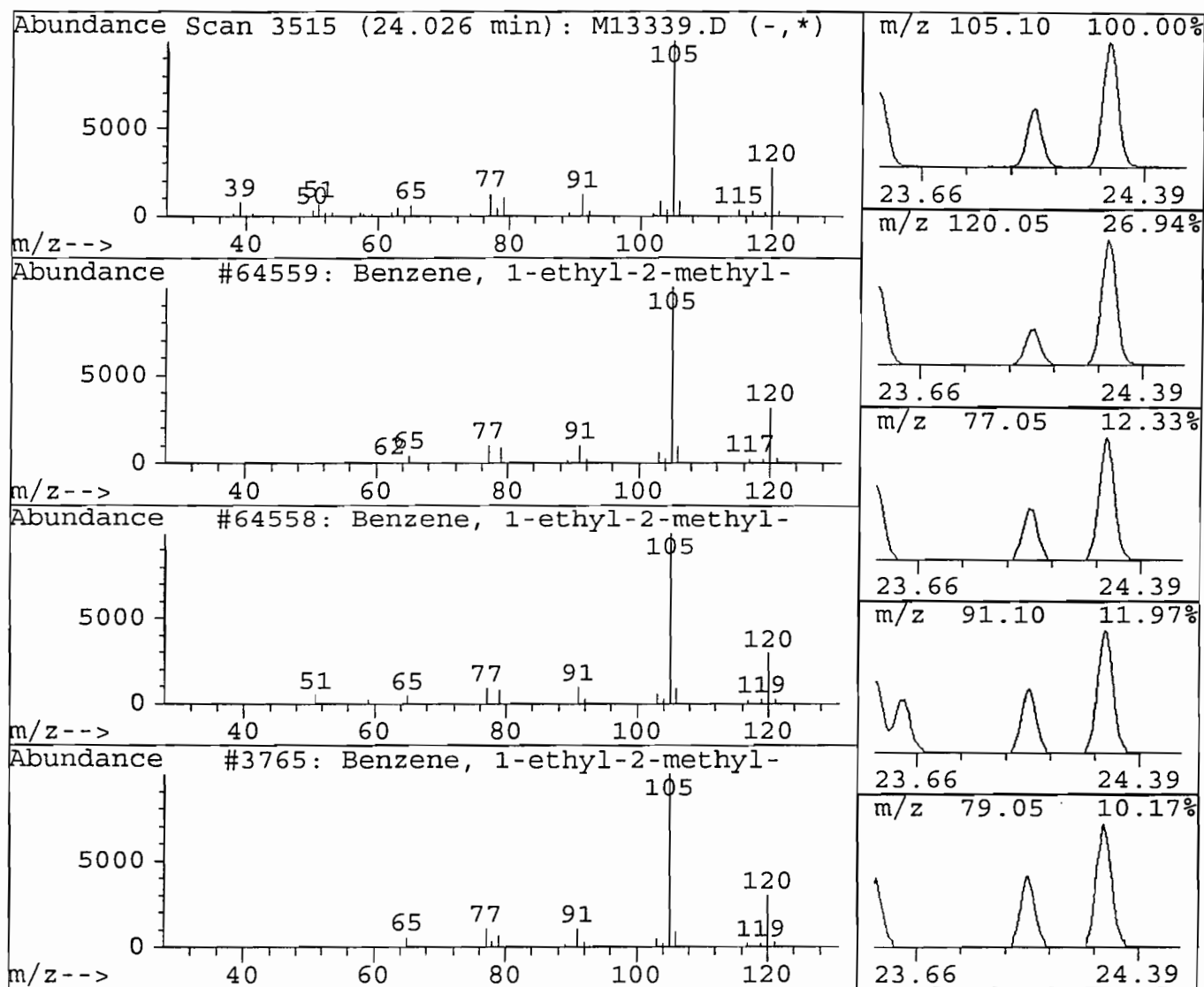
Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.03	18.56 ug/L	3908990	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	64559	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	64558	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	3765	000611-14-3	95
4	Benzene, 1-ethyl-2-methyl-	64557	000611-14-3	95
5	Benzene, 1-ethyl-4-methyl-	3770	000622-96-8	94



Library Search Compound Report

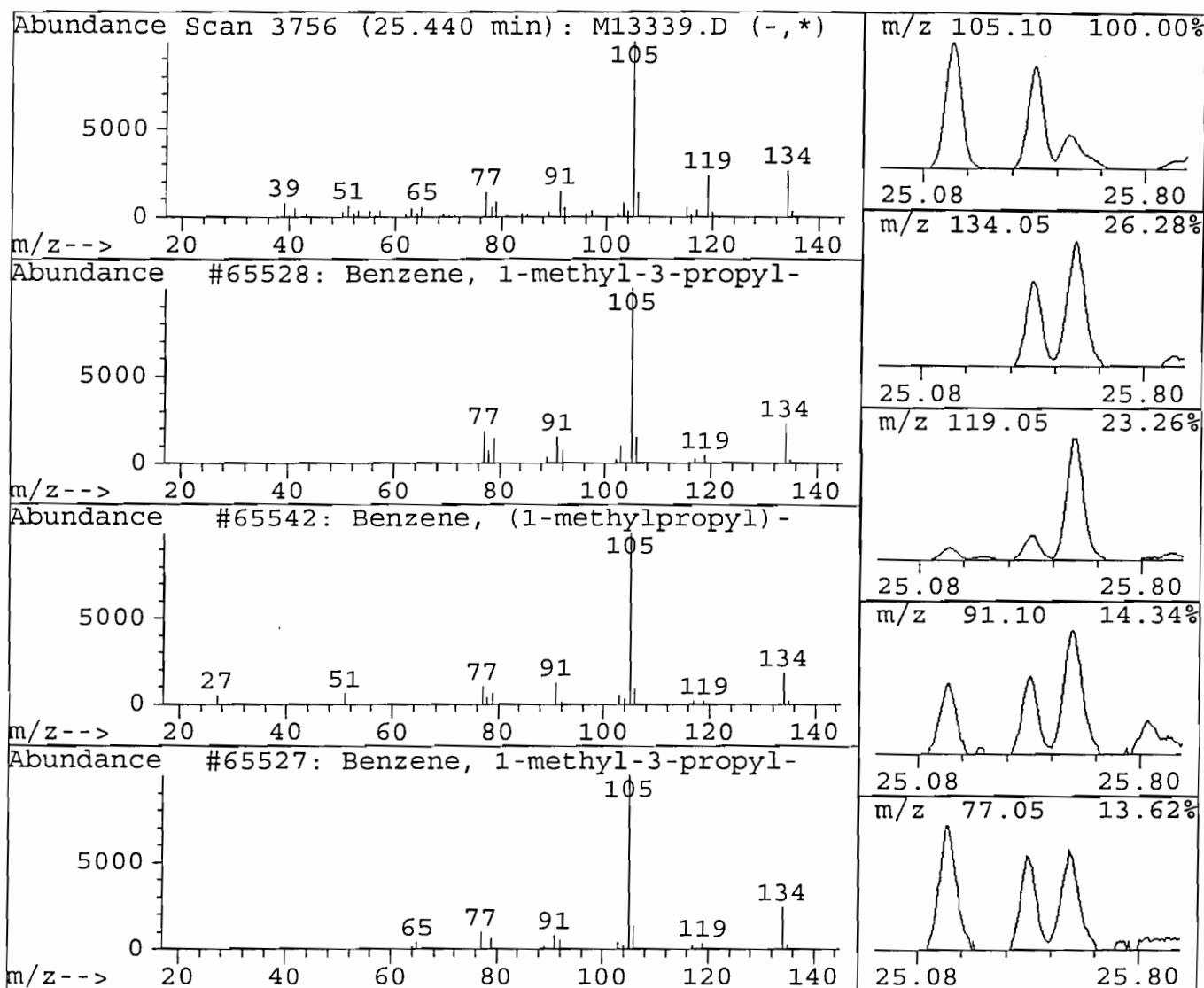
Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.44	19.02 ug/L	4005919	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	87
2	Benzene, (1-methylpropyl)-	65542	000135-98-8	81
3	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	81
4	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	81
5	Benzene, (1-methylpropyl)-	65544	000135-98-8	81



000095

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D

Acq Time : 25 Oct 99 2:06 pm

Sample : 13827ASP-88011

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

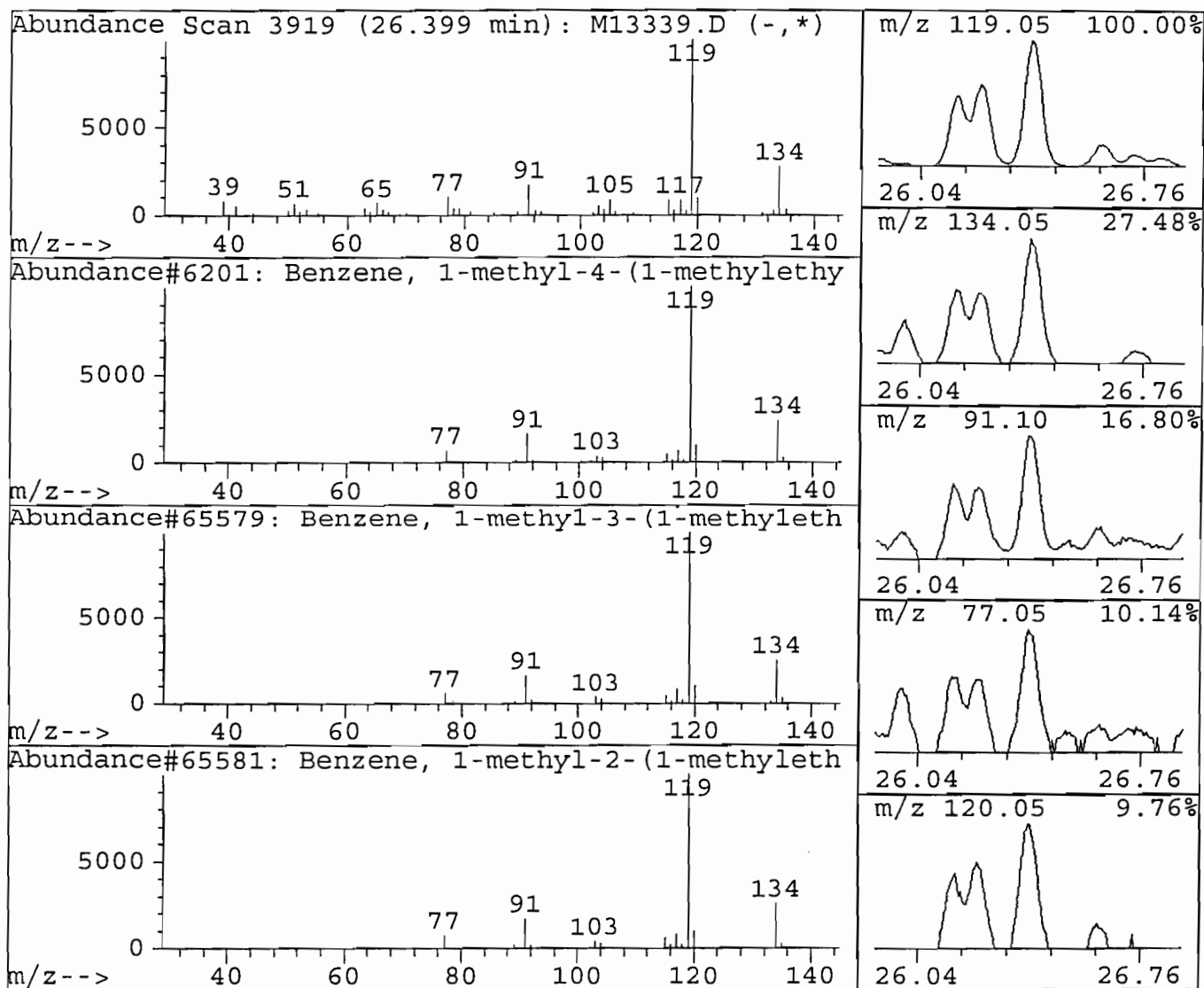
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.40	20.26 ug/L	4266691	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	97
2	Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	97
3	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	97
4	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	97
5	Benzene, 1-ethyl-2,3-dimethyl-	65556	000933-98-2	96



Library Search Compound Report

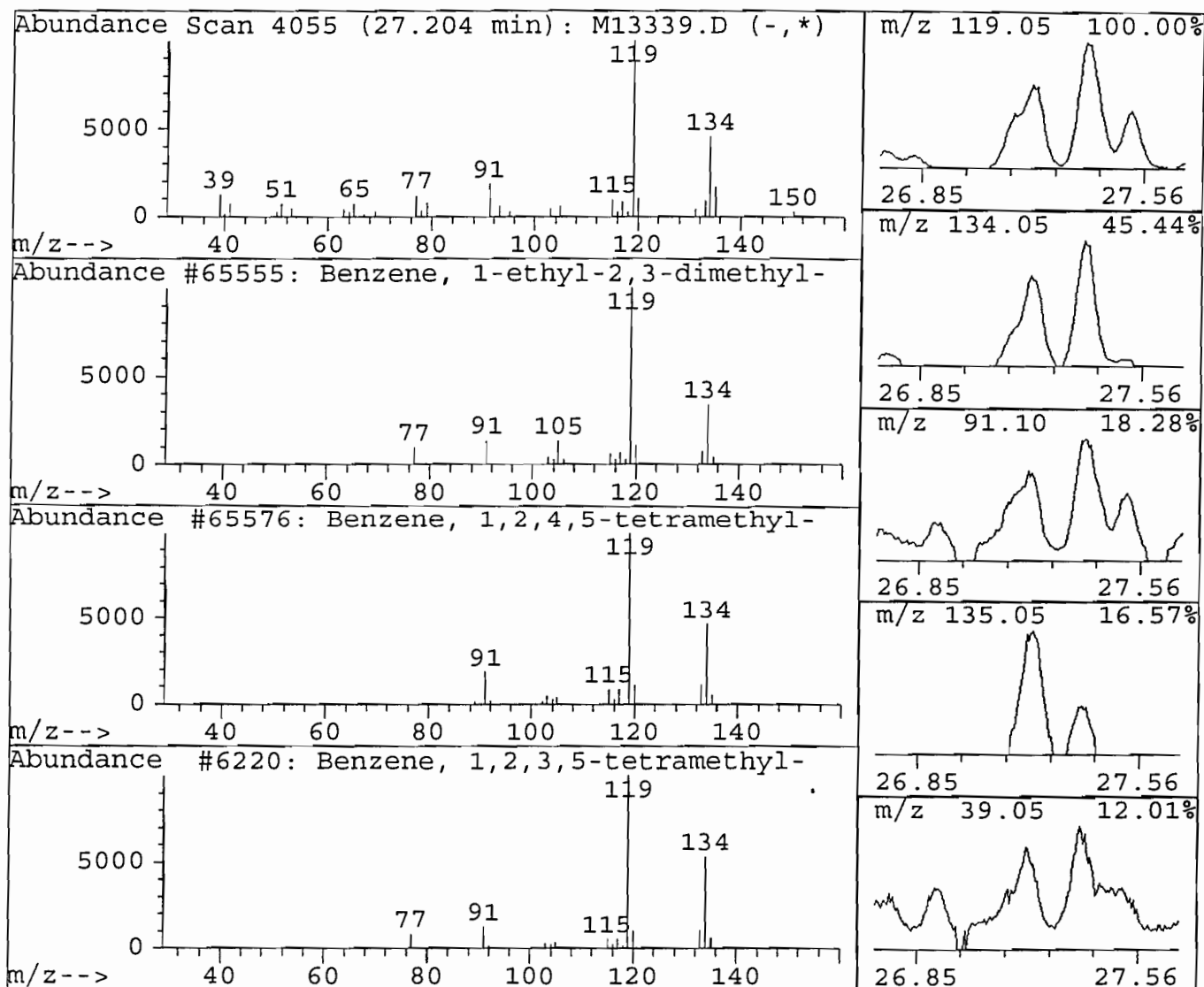
Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.20	18.71 ug/L	3941016	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	65555	000933-98-2	91
2	Benzene, 1,2,4,5-tetramethyl-	65576	000095-93-2	91
3	Benzene, 1,2,3,5-tetramethyl-	6220	000527-53-7	91
4	Benzene, 1,2,3,5-tetramethyl-	65571	000527-53-7	91
5	Benzene, 1,2,4,5-tetramethyl-	65574	000095-93-2	91



000097

Library Search Compound Report

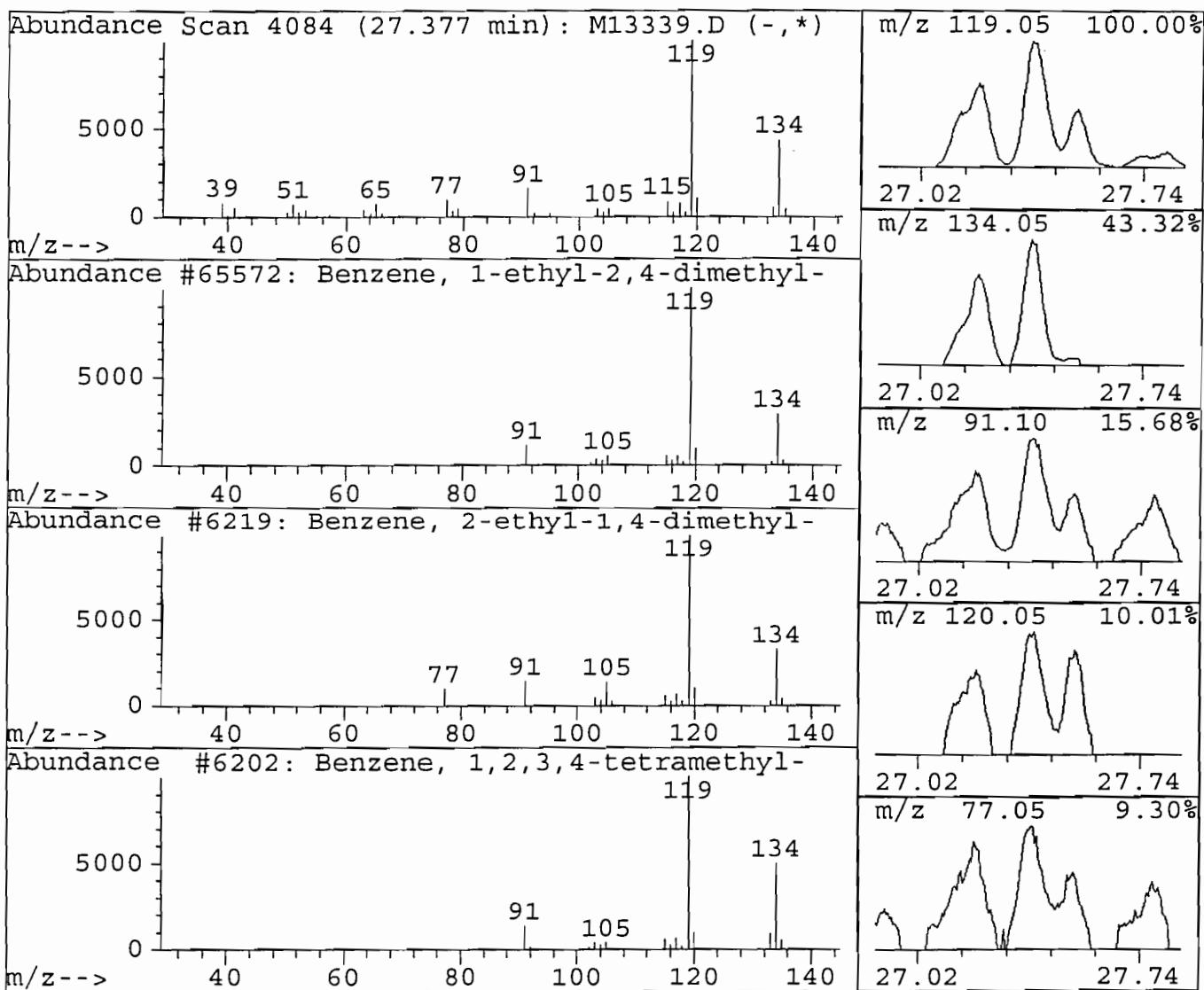
Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.38	20.61 ug/L	4341484	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	65572	000874-41-9	94
2	Benzene, 2-ethyl-1,4-dimethyl-	6219	001758-88-9	94
3	Benzene, 1,2,3,4-tetramethyl-	6202	000488-23-3	93
4	Benzene, 1-ethyl-3,5-dimethyl-	65553	000934-74-7	91
5	Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	91



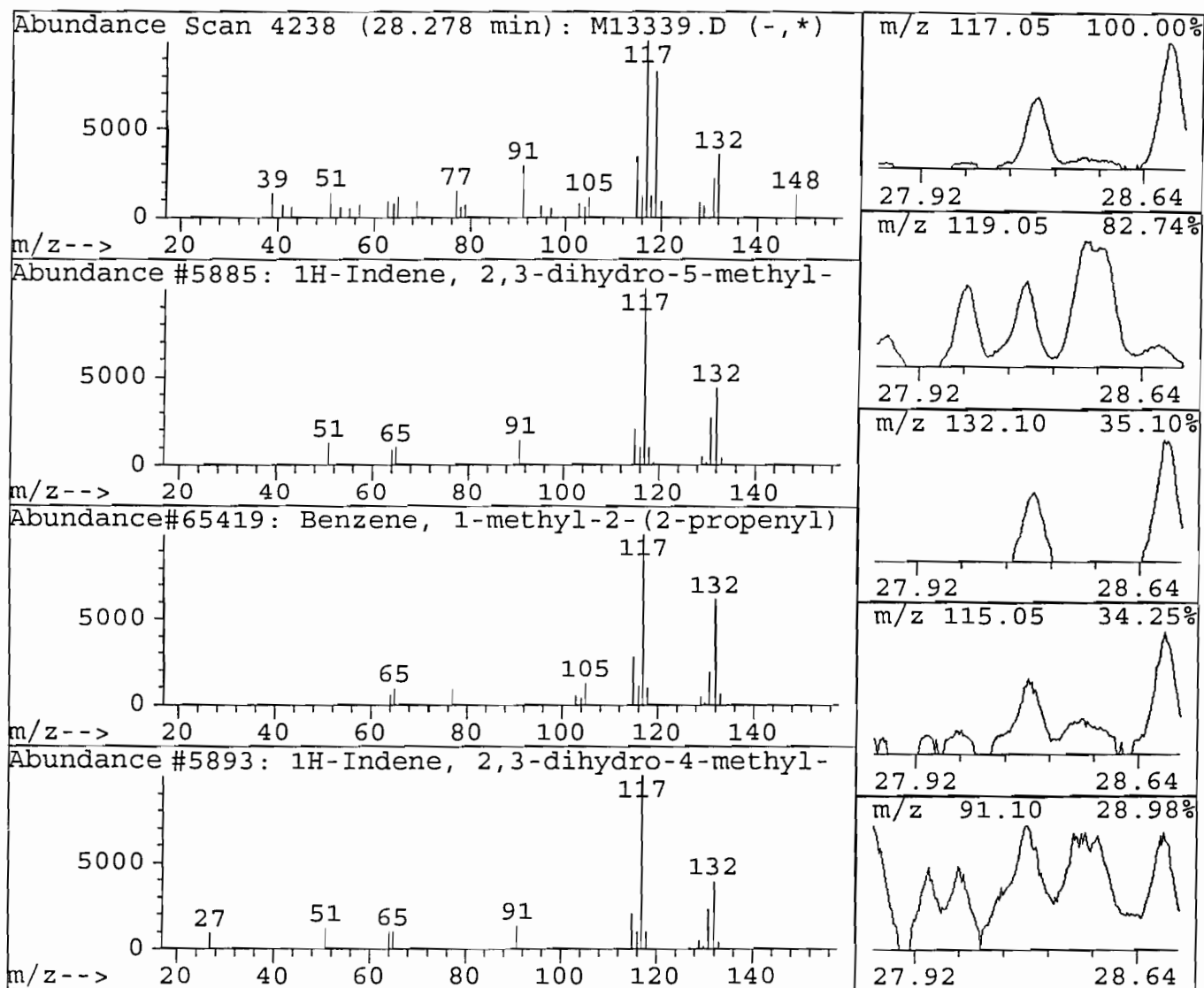
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
28.28	12.31 ug/L	2593558	1,4-dichlorobenzene-d4	25.21	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	1H-Indene, 2,3-dihydro-5-methyl-		5885	000874-35-1	60
2	Benzene, 1-methyl-2-(2-propenyl)-		65419	001587-04-8	55
3	1H-Indene, 2,3-dihydro-4-methyl-		5893	000824-22-6	55
4	Benzene, (1-methyl-1-propenyl)-, (Z		5904	000767-99-7	55
5	(E)-1-Phenyl-1-butene		5878	001005-64-7	49



Library Search Compound Report

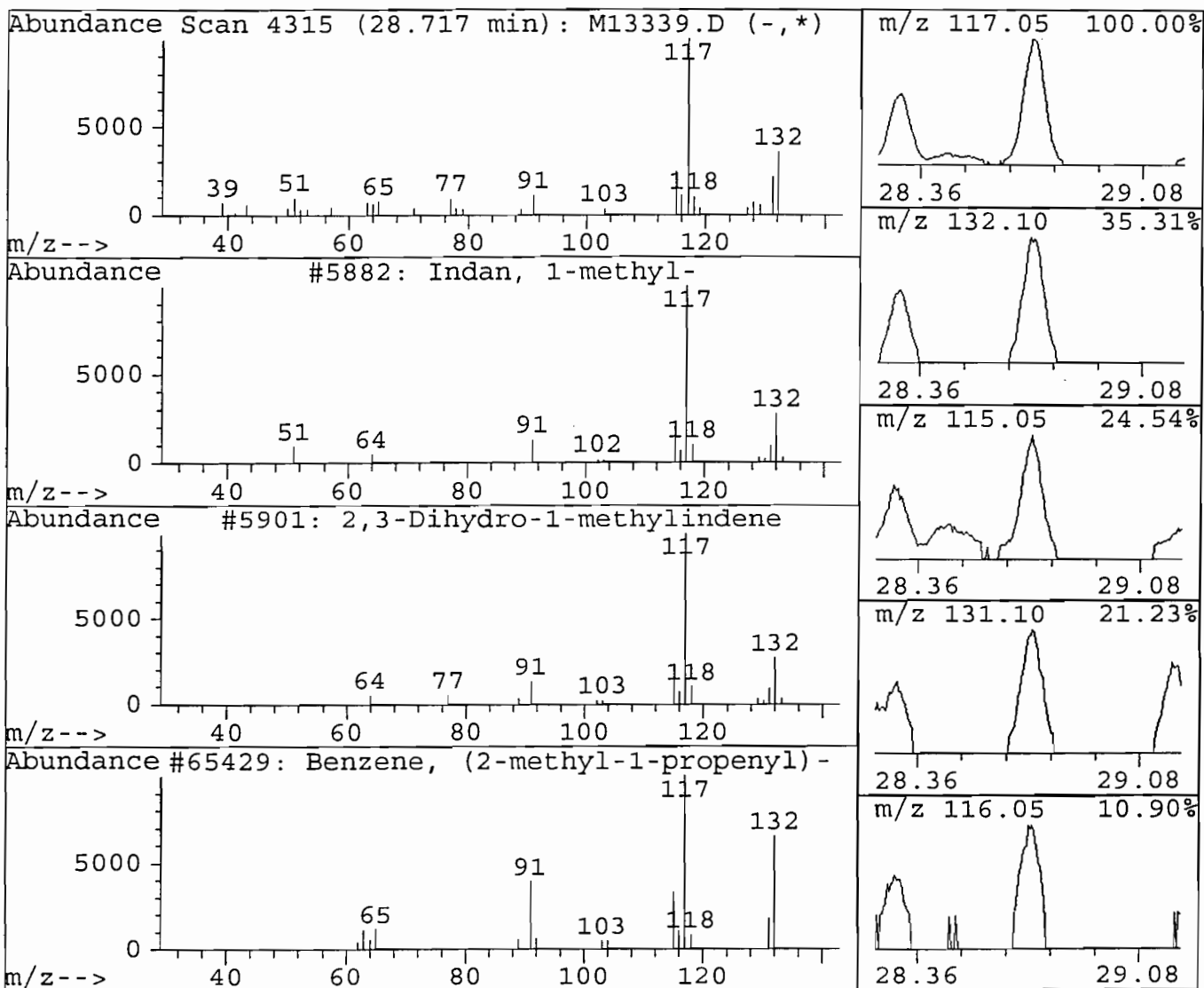
Data File : D:\HPCHEM\3\DATA\V3102599\M13339.D
Acq Time : 25 Oct 99 2:06 pm
Sample : 13827ASP-88011
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.72	12.42 ug/L	2616200	1,4-dichlorobenzene-d4	25.21

Hit# of 15	Tentative ID	Ref#	CAS#	Qual
1	Indan, 1-methyl-	5882	000767-58-8	83
2	2,3-Dihydro-1-methylindene	5901	027133-93-3	81
3	Benzene, (2-methyl-1-propenyl)-	65429	000768-49-0	64
4	Indan, 1-methyl-	65418	000767-58-8	64
5	Benzene, 1-isocyano-4-methyl-	3432	007175-47-5	43



1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-016-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88012
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13340.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	18.93	1900	J
2.	Unknown	19.07	3700	J
3.	Unknown	19.34	3000	J
4.	111-84-2 Nonane	20.15	4000	J
5.	Unknown	21.87	4200	J
6.	611-14-3 Benzene, 1-ethyl-2-methyl-	24.03	3200	J
7.	1074-43-7 Benzene, 1-methyl-3-propyl-	25.44	3200	J
8.	99-87-6 Benzene, 1-methyl-4-(1-methy	26.40	2100	J
9.	95-93-2 Benzene, 1,2,4,5-tetramethyl	27.21	1700	J
10.	933-98-2 Benzene, 1-ethyl-2,3-dimethy	27.38	2100	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
 Acq Time : 25 Oct 99 2:53 pm
 Sample : 13827ASP-88012
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 25 15:33 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.11	96	1884194	50.00	ug/L	0.01
43) Chlorobenzene-d5	20.47	117	1629859	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	25.20	152	712882	50.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.41	113	618819	52.80	ug/L	105.60%
30) 1,2-Dichlorethane-d4	13.45	65	684364	51.81	ug/L	103.62%
38) Toluene-d8	17.37	98	1977895	53.88	ug/L	107.77%
42) 4-Bromofluorobenzene	22.95	95	834530	53.77	ug/L	107.55%

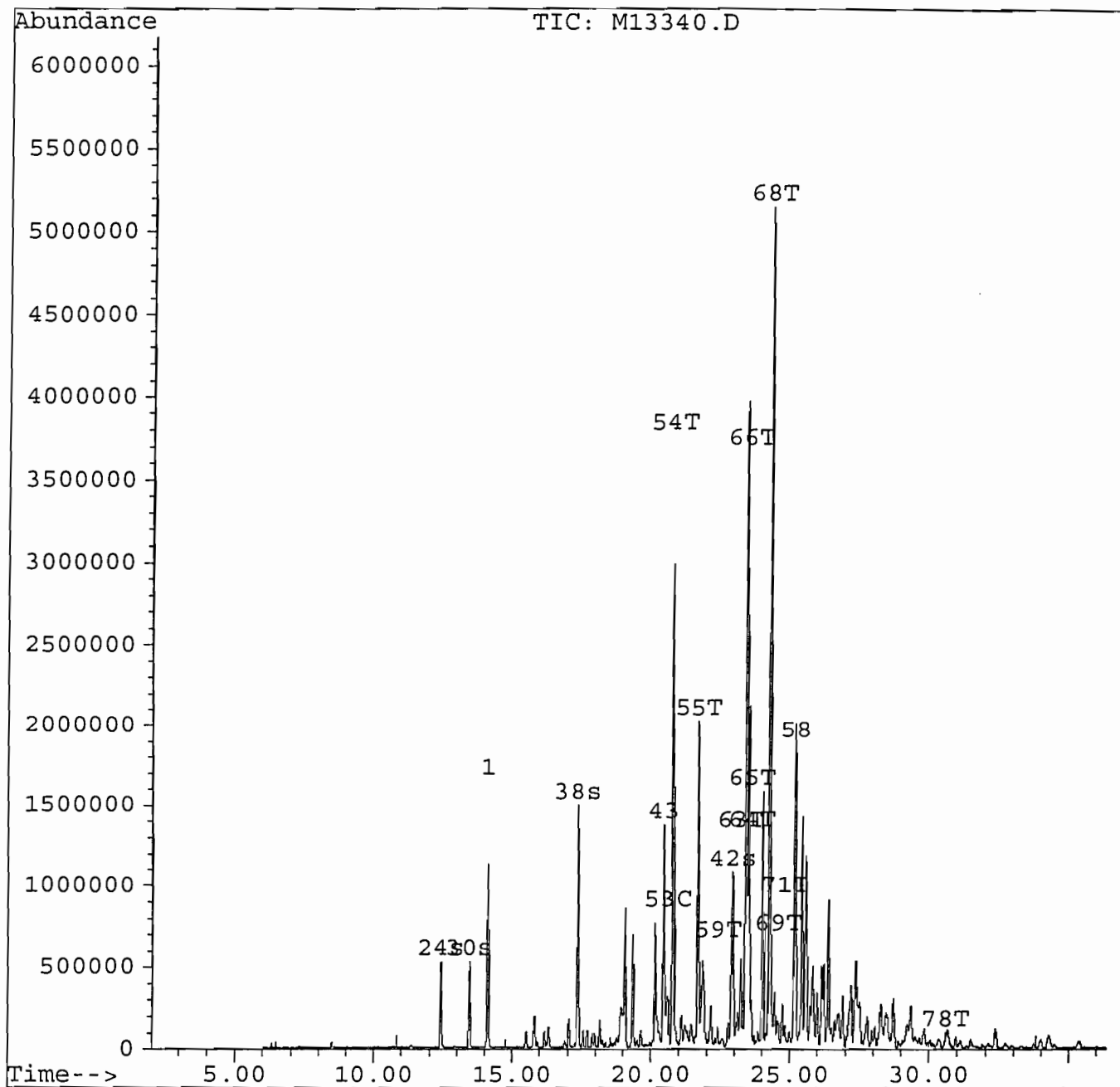
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
53) ethylbenzene	20.62	91	332135	6.38	ug/L	100
54) m&p-xylenes	20.78	106	1808375	102.20	ug/L	98
55) o-xylene	21.68	91	2780827	67.94	ug/L	100
59) isopropylbenzene	22.40	105	172619	3.57	ug/L	95
63) n-propylbenzene	23.23	120	151522	12.96	ug/L	92
64) 2-chlorotoluene	23.62	126	75322	6.97	ug/L	100
65) 4-chlorotoluene	23.62	126	75322	6.71	ug/L	90
66) 1,3,5-trimethylbenzene	23.52	105	2417414	62.16	ug/L	99
68) 1,2,4-trimethylbenzene	24.28	105	5946763	159.40	ug/L	98
69) sec-butylbenzene	24.59	105	212915	4.43	ug/L	96
71) 4-isopropyltoluene	24.82	119	126575	2.97	ug/L	96
78) naphthalene	30.59	128	261692	8.78	ug/L	96

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 25 15:33 1999

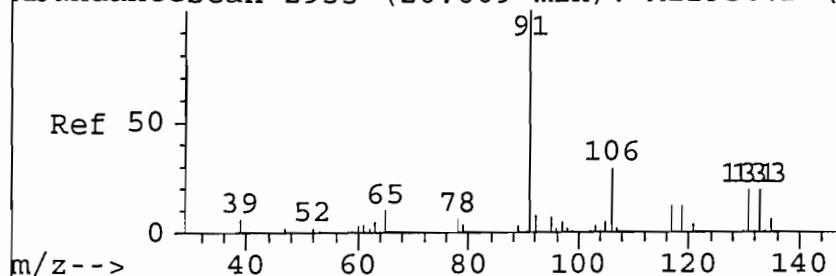
Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000104

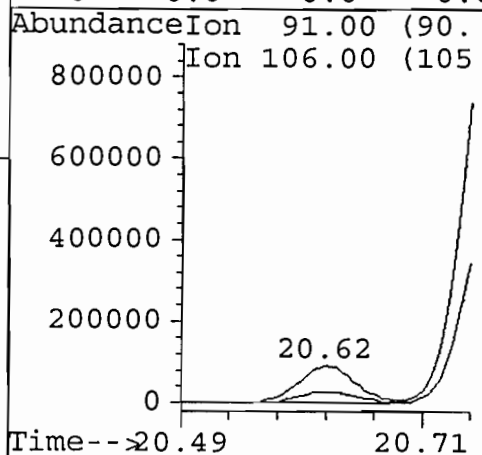
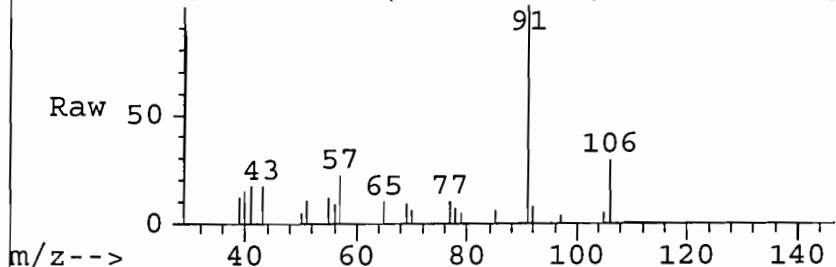
AbundanceScan 2933 (20.609 min): M12956.D (



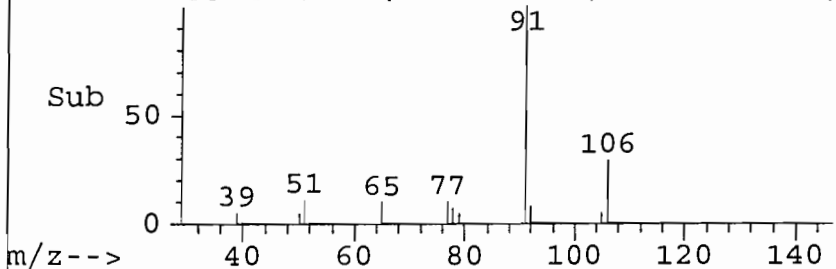
#53
ethylbenzene
Concen: 6.38 ug/L
RT: 20.62 min Scan# 2941
Delta R.T. 0.01 min
Lab File: M13340.D
Acq: 25 Oct 99 2:53 pm

Tgt Ion:91	Resp: 332135
Ion Ratio	Lower Upper
91 100	
106 28.7	20.0 37.2
0 0.0	0.0 0.0
0 0.0	0.0 0.0

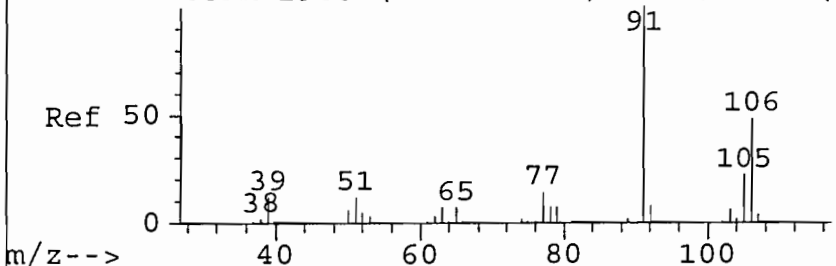
AbundanceScan 2941 (20.622 min): M13340.D (



AbundanceScan 2941 (20.622 min): M13340.D (



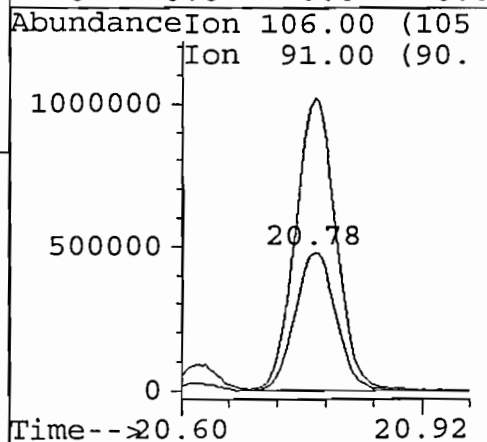
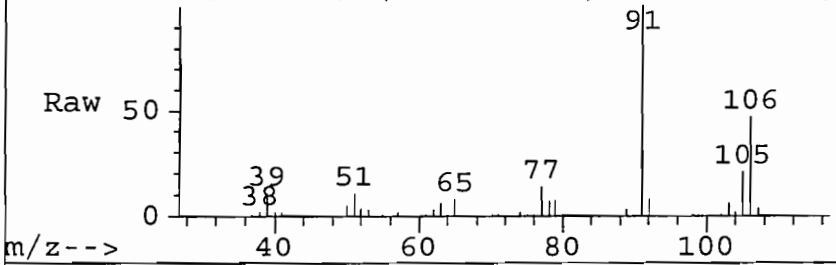
AbundanceScan 2960 (20.765 min): M12956.D (



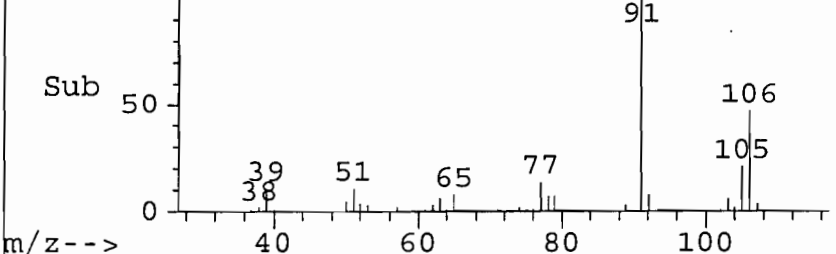
#54
m&p-xylenes
Concen: 102.20 ug/L
RT: 20.78 min Scan# 2969
Delta R.T. 0.01 min
Lab File: M13340.D
Acq: 25 Oct 99 2:53 pm

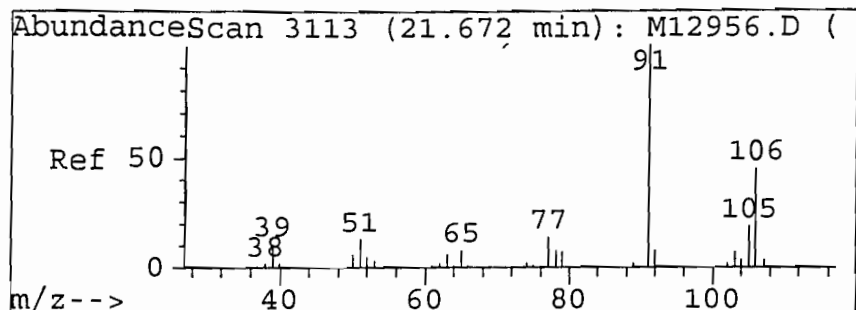
Tgt Ion:106	Resp: 1808375
Ion Ratio	Lower Upper
106 100	
91 212.9	146.7 272.4
0 0.0	0.0 0.0
0 0.0	0.0 0.0

AbundanceScan 2969 (20.776 min): M13340.D (



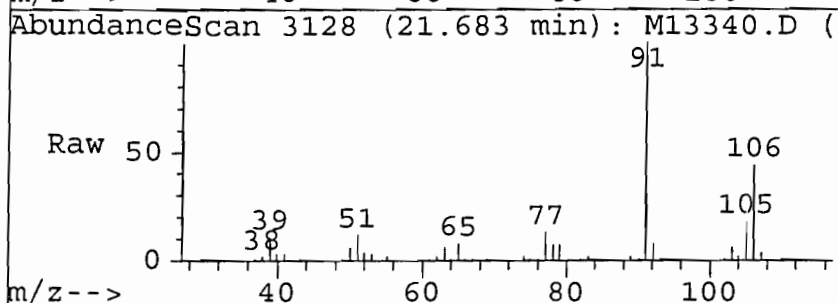
AbundanceScan 2969 (20.776 min): M13340.D (



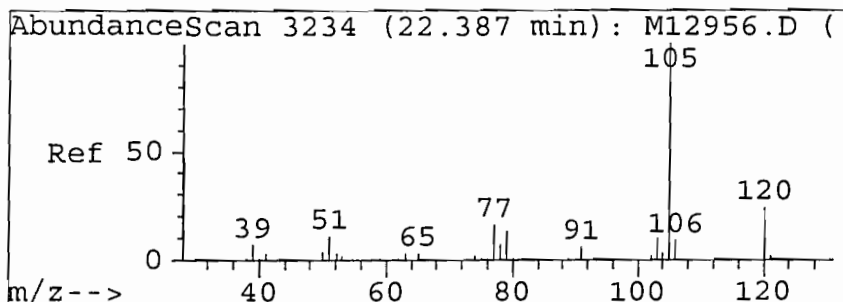
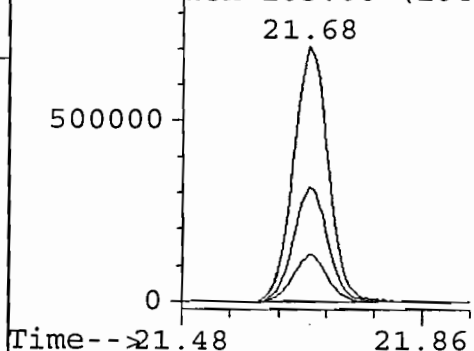
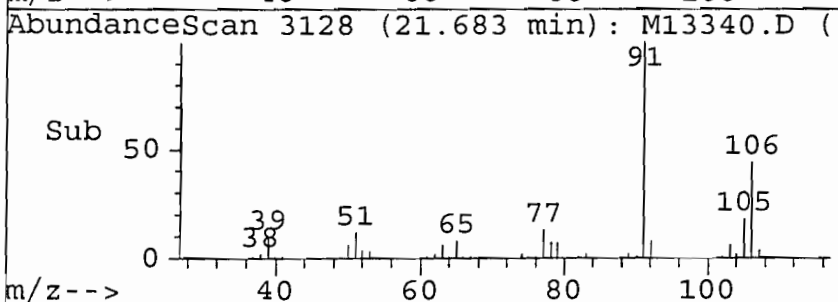


#55
o-xylene
Concen: 67.94 ug/L
RT: 21.68 min Scan# 3128
Delta R.T. 0.01 min
Lab File: M13340.D
Acq: 25 Oct 99 2:53 pm

Tgt	Ion:91	Resp: 2780827	
Ion	Ratio	Lower	Upper
91	100		
106	44.5	31.3	58.1
105	18.2	12.9	24.0
0	0.0	0.0	0.0

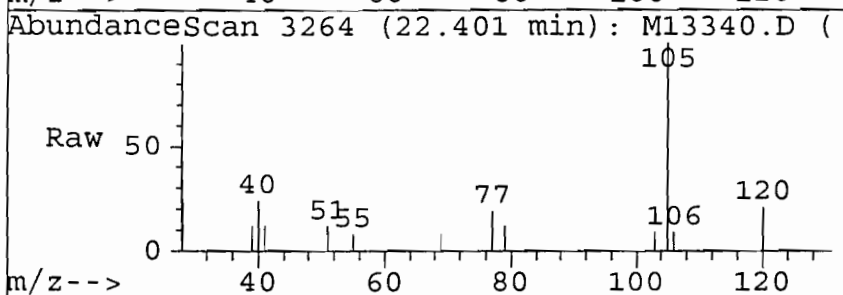


AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104

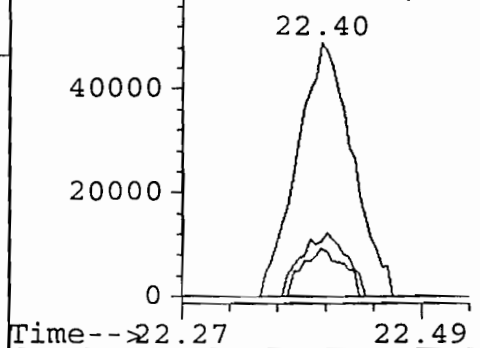
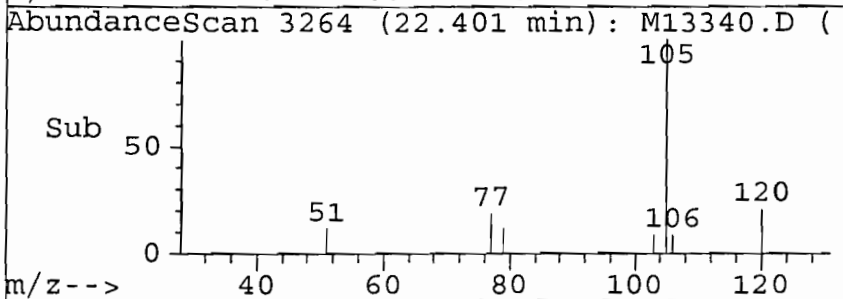


#59
isopropylbenzene
Concen: 3.57 ug/L
RT: 22.40 min Scan# 3264
Delta R.T. 0.01 min
Lab File: M13340.D
Acq: 25 Oct 99 2:53 pm

Tgt	Ion:105	Resp:	172619
Ion	Ratio	Lower	Upper
105	100		
120	21.5	16.6	30.8
77	18.8	11.3	20.9
0	0.0	0.0	0.0

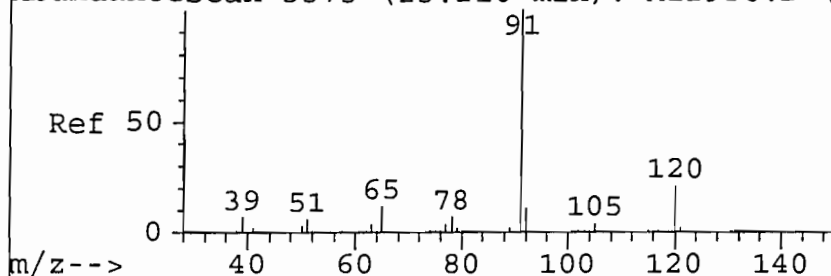


AbundanceIon 105.00 (104
Ion 120.00 (119
Ion 77.00 (76.



000106

AbundanceScan 3373 (23.210 min): M12956.D (



#63

n-propylbenzene

Concen: 12.96 ug/L

RT: 23.23 min Scan# 3427

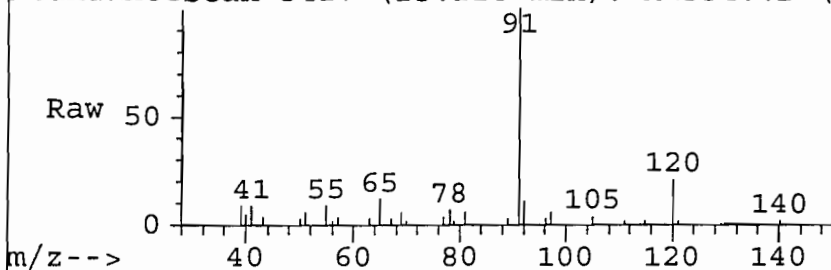
Delta R.T. 0.02 min

Lab File: M13340.D

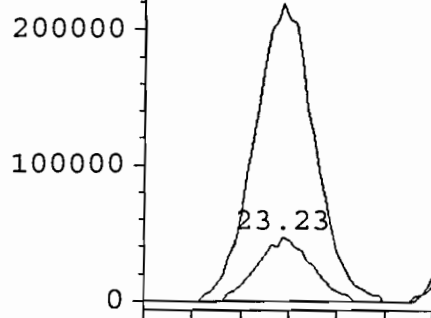
Acq: 25 Oct 99 2:53 pm

Tgt Ion:	120	Resp:	151522
Ion	Ratio	Lower	Upper
120	100		
91	465.7	340.6	632.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

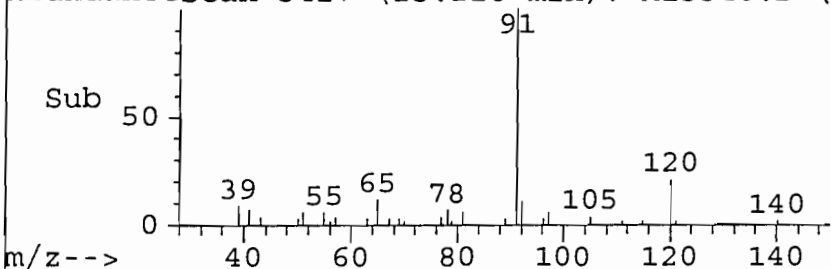
AbundanceScan 3427 (23.228 min): M13340.D (



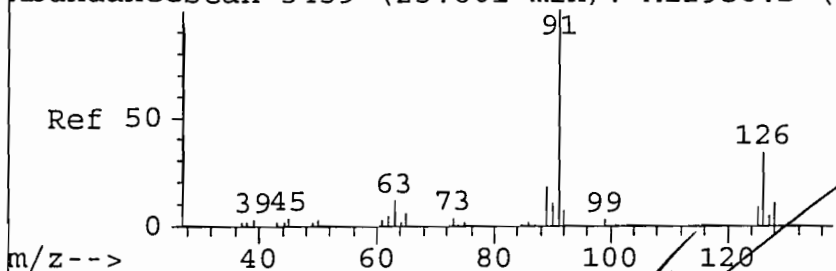
AbundanceIon 120.00 (119
Ion 91.00 (90.



AbundanceScan 3427 (23.228 min): M13340.D (



AbundanceScan 3439 (23.601 min): M12956.D (



#64

2-chlorotoluene

Concen: 6.97 ug/L

RT: 23.62 min Scan# 3503

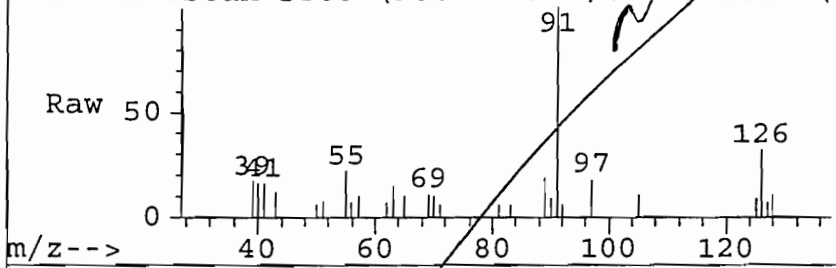
Delta R.T. 0.01 min

Lab File: M13340.D

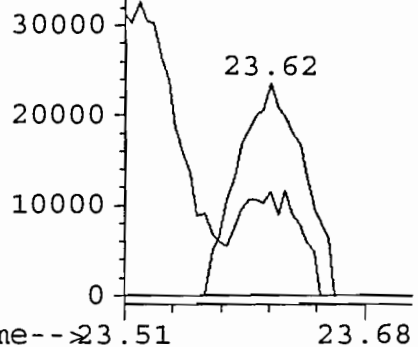
Acq: 25 Oct 99 2:53 pm

Tgt Ion:	126	Resp:	75322
Ion	Ratio	Lower	Upper
126	100		
63	48.4	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

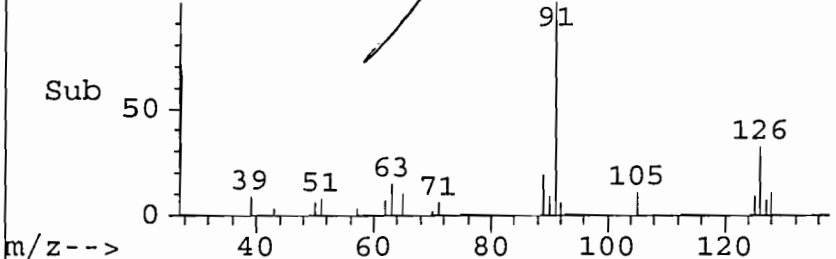
AbundanceScan 3503 (23.616 min): M13340.D (



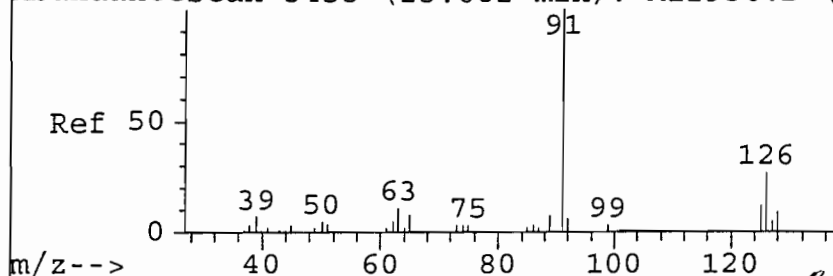
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3503 (23.616 min): M13340.D (



AbundanceScan 3453 (23.682 min): M12956.D (



#65

4-chlorotoluene

Concen: 6.71 ug/L

RT: 23.62 min Scan# 3503

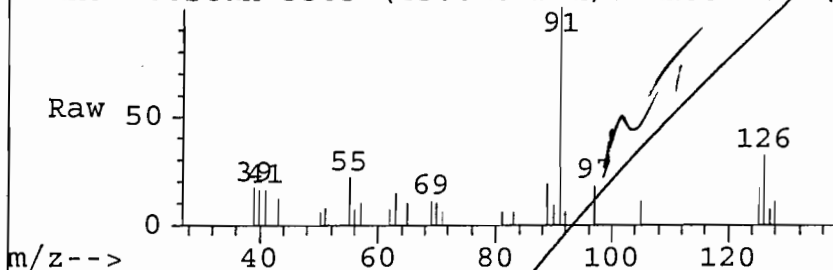
Delta R.T. -0.07 min

Lab File: M13340.D

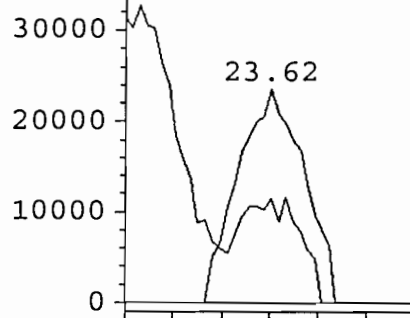
Acq: 25 Oct 99 2:53 pm

Tgt Ion:126	Resp:	75322
Ion Ratio	Lower	Upper
126 100		
63 48.4	29.3	54.5
0 0.0	0.0	0.0
0 0.0	0.0	0.0

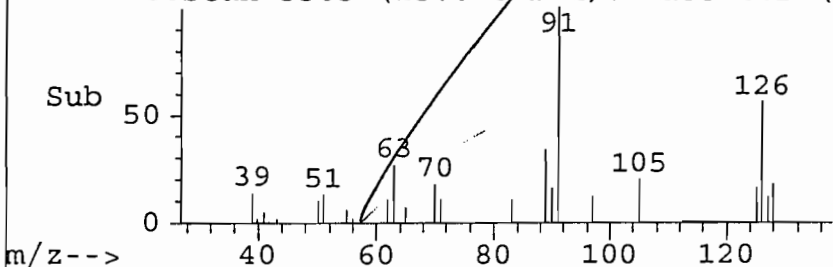
AbundanceScan 3503 (23.616 min): M13340.D (



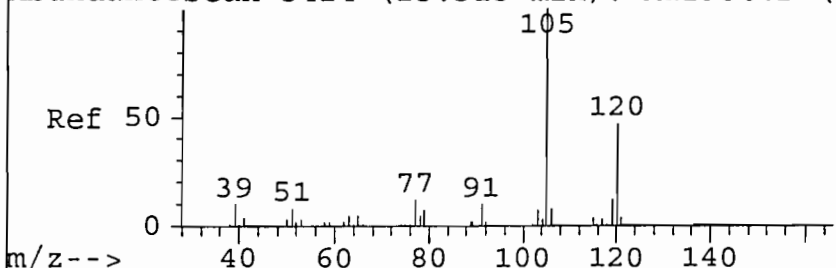
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3503 (23.616 min): M13340.D (



AbundanceScan 3424 (23.513 min): M12956.D (



#66

1,3,5-trimethylbenzene

Concen: 62.16 ug/L

RT: 23.52 min Scan# 3485

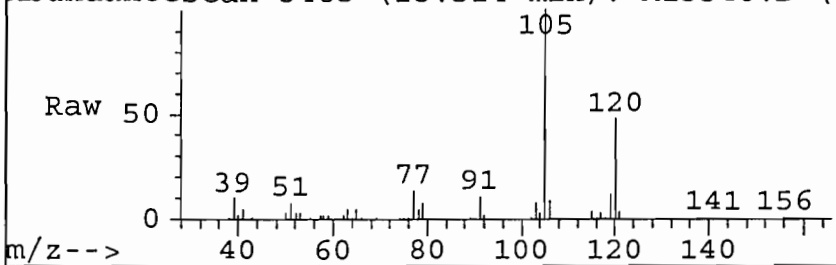
Delta R.T. 0.01 min

Lab File: M13340.D

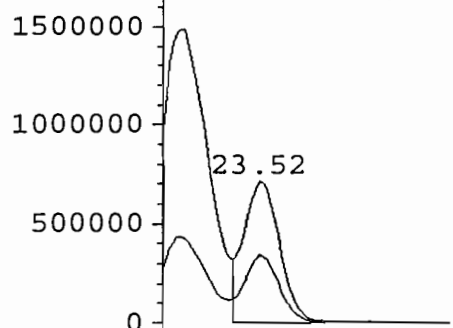
Acq: 25 Oct 99 2:53 pm

Tgt Ion:105	Resp:	2417414
Ion Ratio	Lower	Upper
105 100		
120 48.0	33.2	61.7
0 0.0	0.0	0.0
0 0.0	0.0	0.0

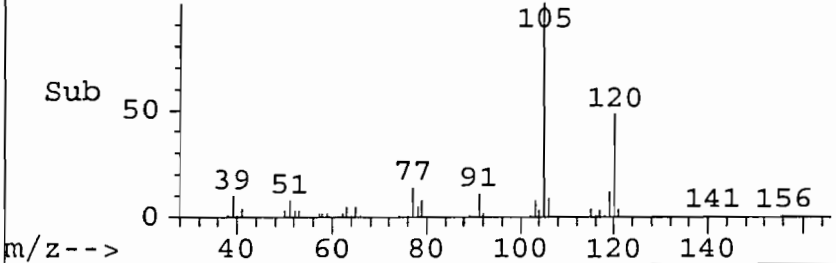
AbundanceScan 3485 (23.524 min): M13340.D (

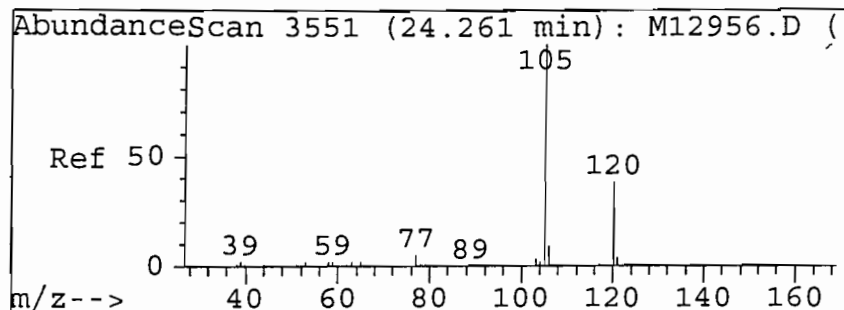


AbundanceIon 105.00 (104
Ion 120.00 (119



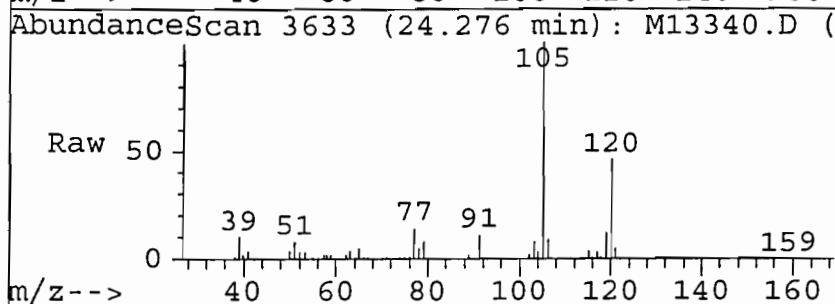
AbundanceScan 3485 (23.524 min): M13340.D (



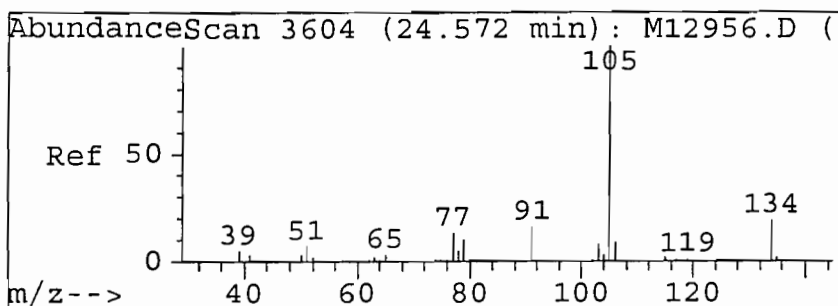
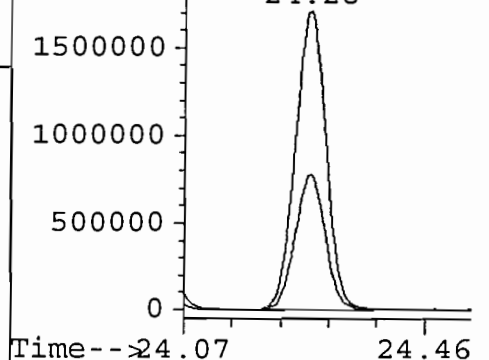
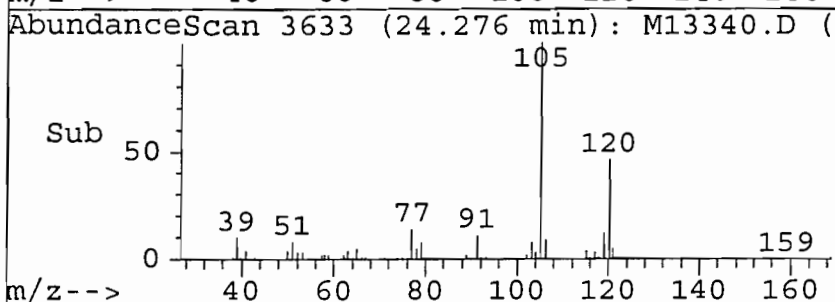


#68
1,2,4-trimethylbenzene
Concen: 159.40 ug/L
RT: 24.28 min Scan# 3633
Delta R.T. 0.02 min
Lab File: M13340.D
Acq: 25 Oct 99 2:53 pm

Tgt Ion:	105	Resp:	5946763
Ion	Ratio	Lower	Upper
105	100		
120	45.7	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

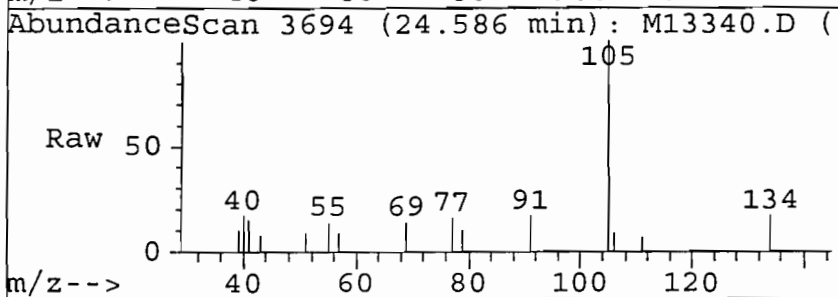


AbundanceIon 105.00 (104
2000000 Ion 120.00 (119
24.28

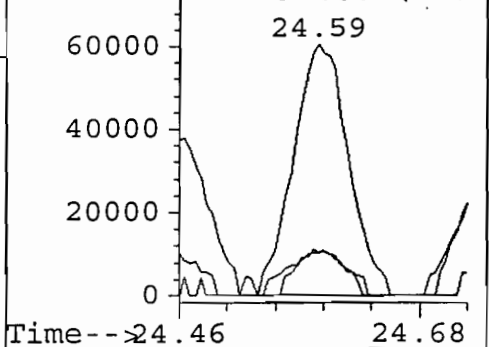
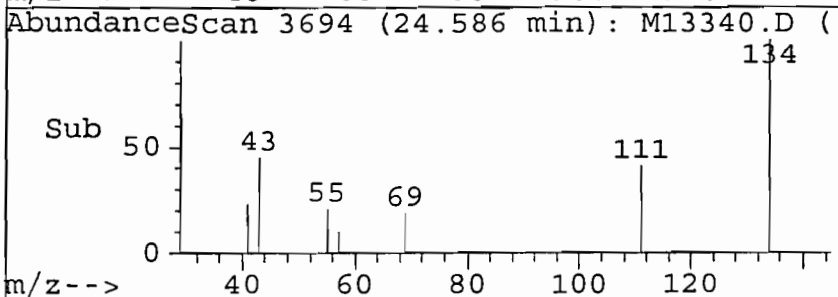


#69
sec-butylbenzene
Concen: 4.43 ug/L
RT: 24.59 min Scan# 3694
Delta R.T. 0.01 min
Lab File: M13340.D
Acq: 25 Oct 99 2:53 pm

Tgt Ion:	105	Resp:	212915
Ion	Ratio	Lower	Upper
105	100		
134	16.7	13.4	25.0
91	17.1	11.1	20.5
0	0.0	0.0	0.0

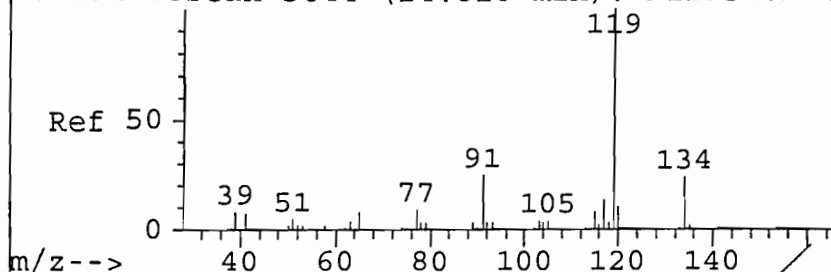


AbundanceIon 105.00 (104
80000 Ion 134.00 (133
Ion 91.00 (90.
24.59



000109

AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 2.97 ug/L

RT: 24.82 min Scan# 3741

Delta R.T. 0.01 min

Lab File: M13340.D

Acq: 25 Oct 99 2:53 pm

Tgt Ion:119 Resp: 126575

Ion Ratio Lower Upper

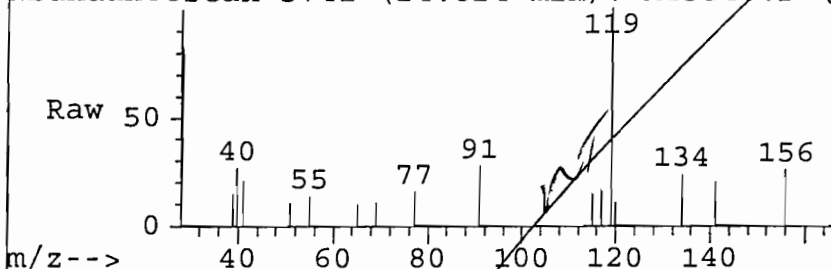
119 100

134 23.5 16.7 31.1

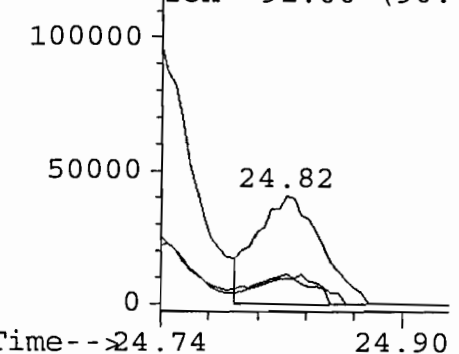
91 28.5 17.2 32.0

0 0.0 0.0 0.0

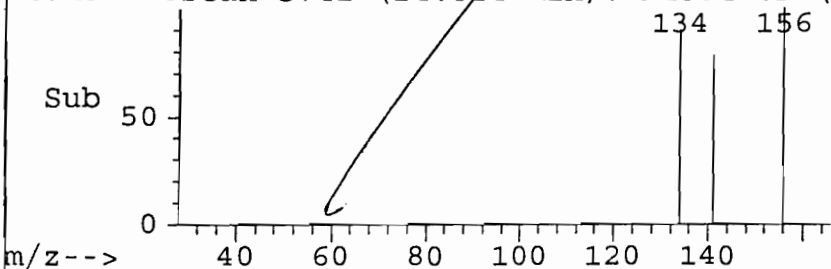
AbundanceScan 3741 (24.824 min): M13340.D (



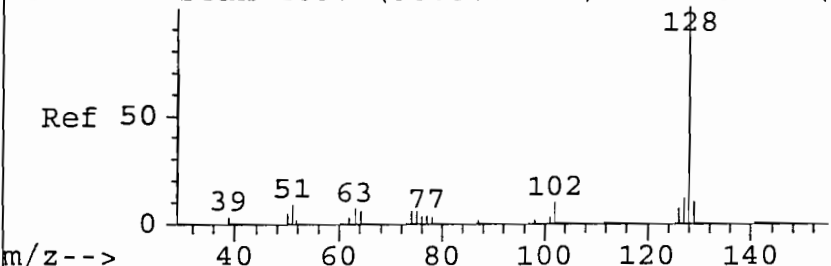
AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3741 (24.824 min): M13340.D (



AbundanceScan 4637 (30.569 min): M12956.D (



#78

naphthalene

Concen: 8.78 ug/L

RT: 30.59 min Scan# 4743

Delta R.T. 0.02 min

Lab File: M13340.D

Acq: 25 Oct 99 2:53 pm

Tgt Ion:128 Resp: 261692

Ion Ratio Lower Upper

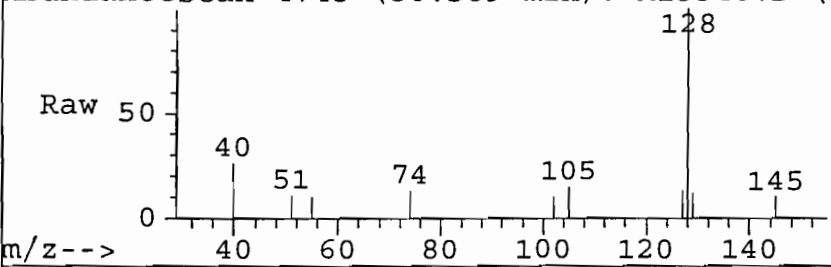
128 100

127 13.2 8.6 16.0

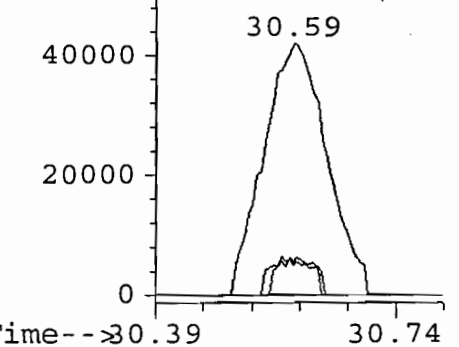
129 12.0 7.0 13.0

0 0.0 0.0 0.0

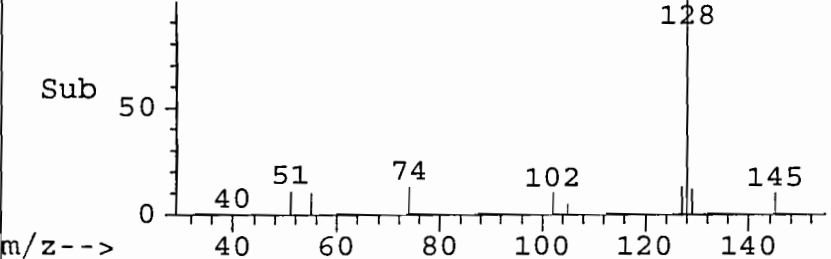
AbundanceScan 4743 (30.589 min): M13340.D (



AbundanceIon 128.00 (127
Ion 127.00 (126
Ion 129.00 (128



AbundanceScan 4743 (30.589 min): M13340.D (



Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D

Acq Time : 25 Oct 99 2:53 pm

Sample : 13827ASP-88012

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

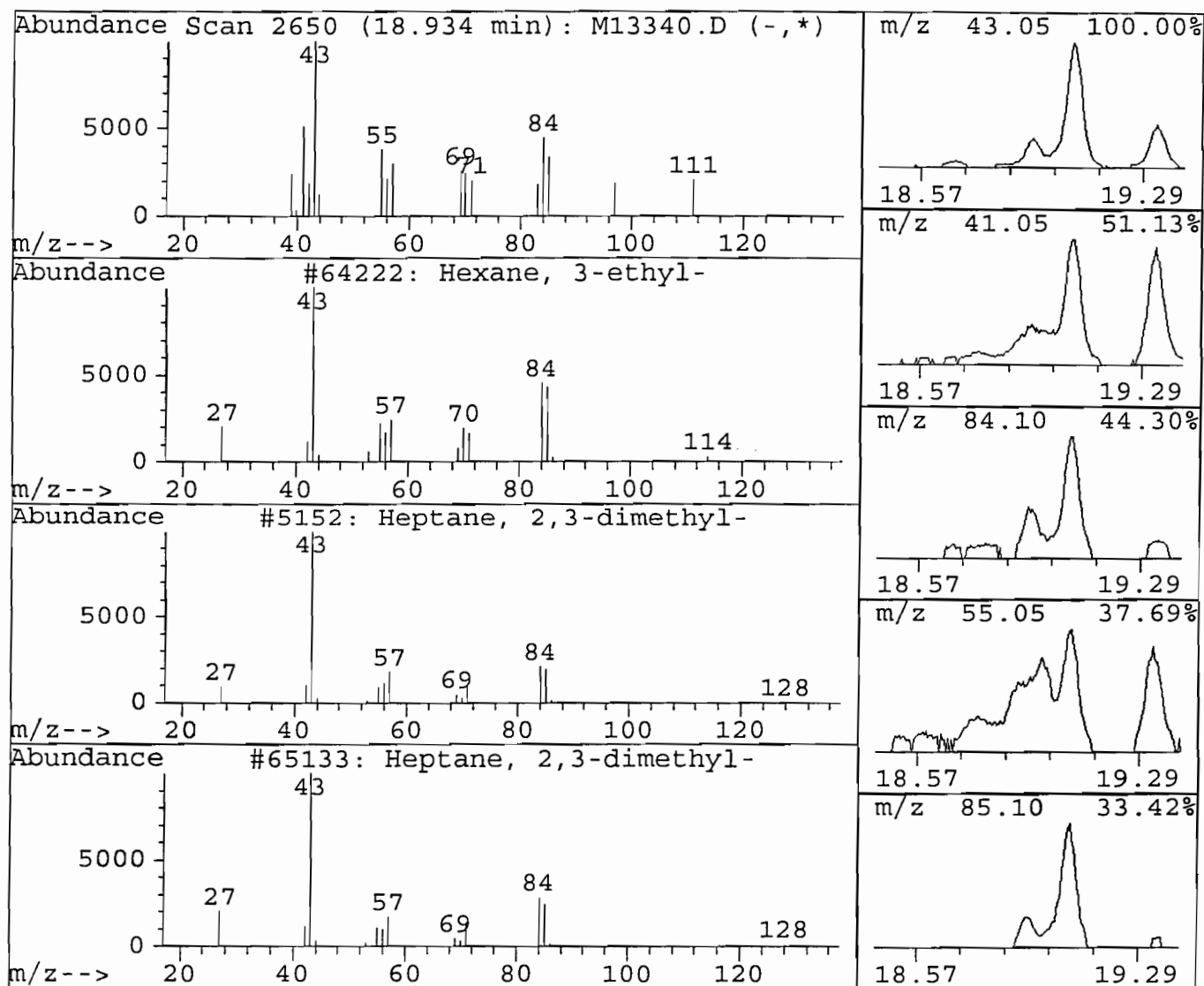
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
18.93	14.65 ug/L	1605101	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Hexane, 3-ethyl-	64222	000619-99-8	59
2	Heptane, 2,3-dimethyl-	5152	003074-71-3	50
3	Heptane, 2,3-dimethyl-	65133	003074-71-3	38
4	2,4,6,8-Tetramethyl-1-undecene	25485	059920-26-2	27
5	Heptane, 3,4,5-trimethyl-	8086	020278-89-1	23



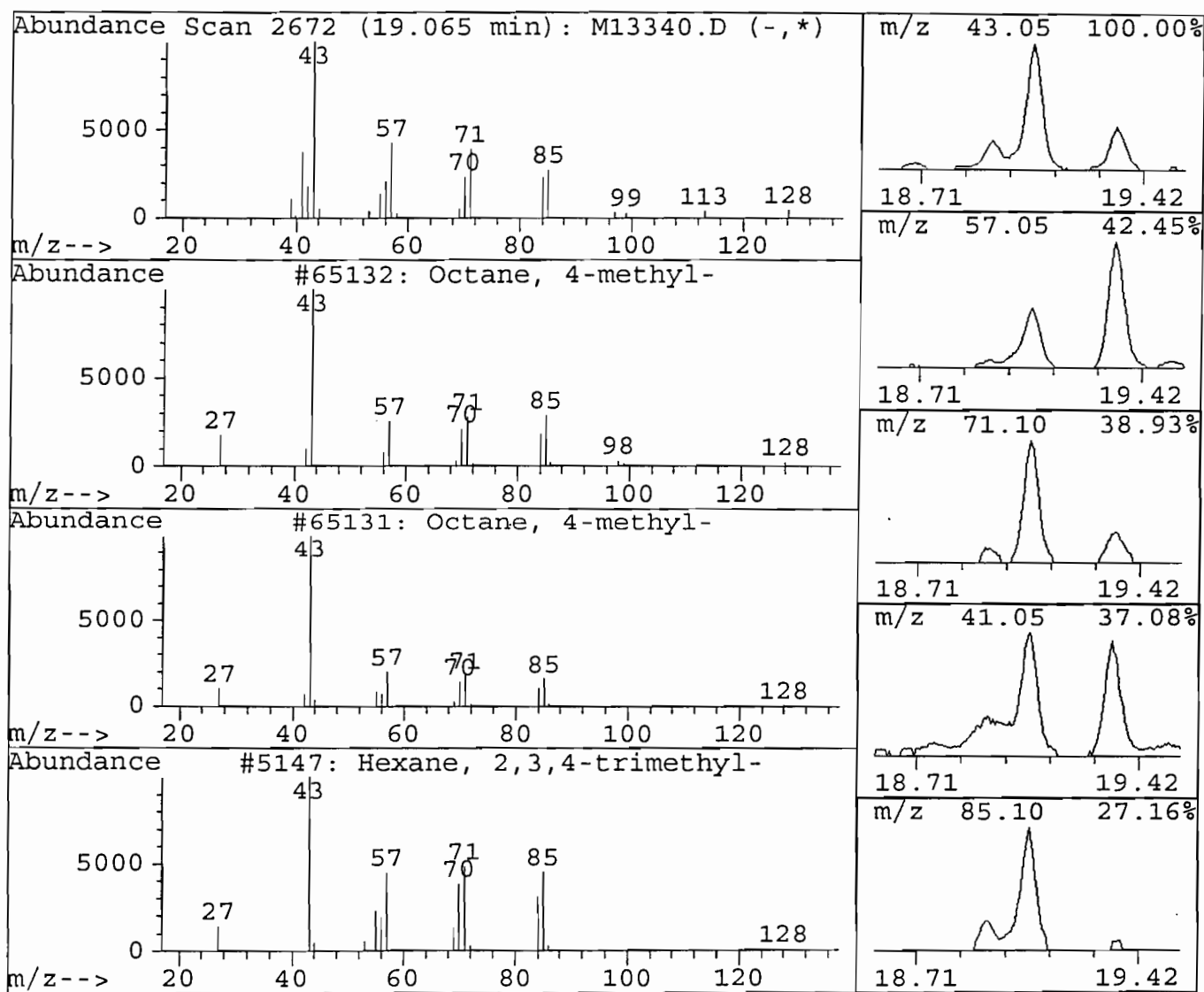
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
19.07	28.63 ug/L	3137343	Chlorobenzene-d5	20.47	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Octane, 4-methyl-		65132	002216-34-4	80
2	Octane, 4-methyl-		65131	002216-34-4	64
3	Hexane, 2,3,4-trimethyl-		5147	000921-47-1	59
4	Heptane, 2,4-dimethyl-		5145	002213-23-2	59
5	Hexane, 2,3,4-trimethyl-		65123	000921-47-1	59



Library Search Compound Report

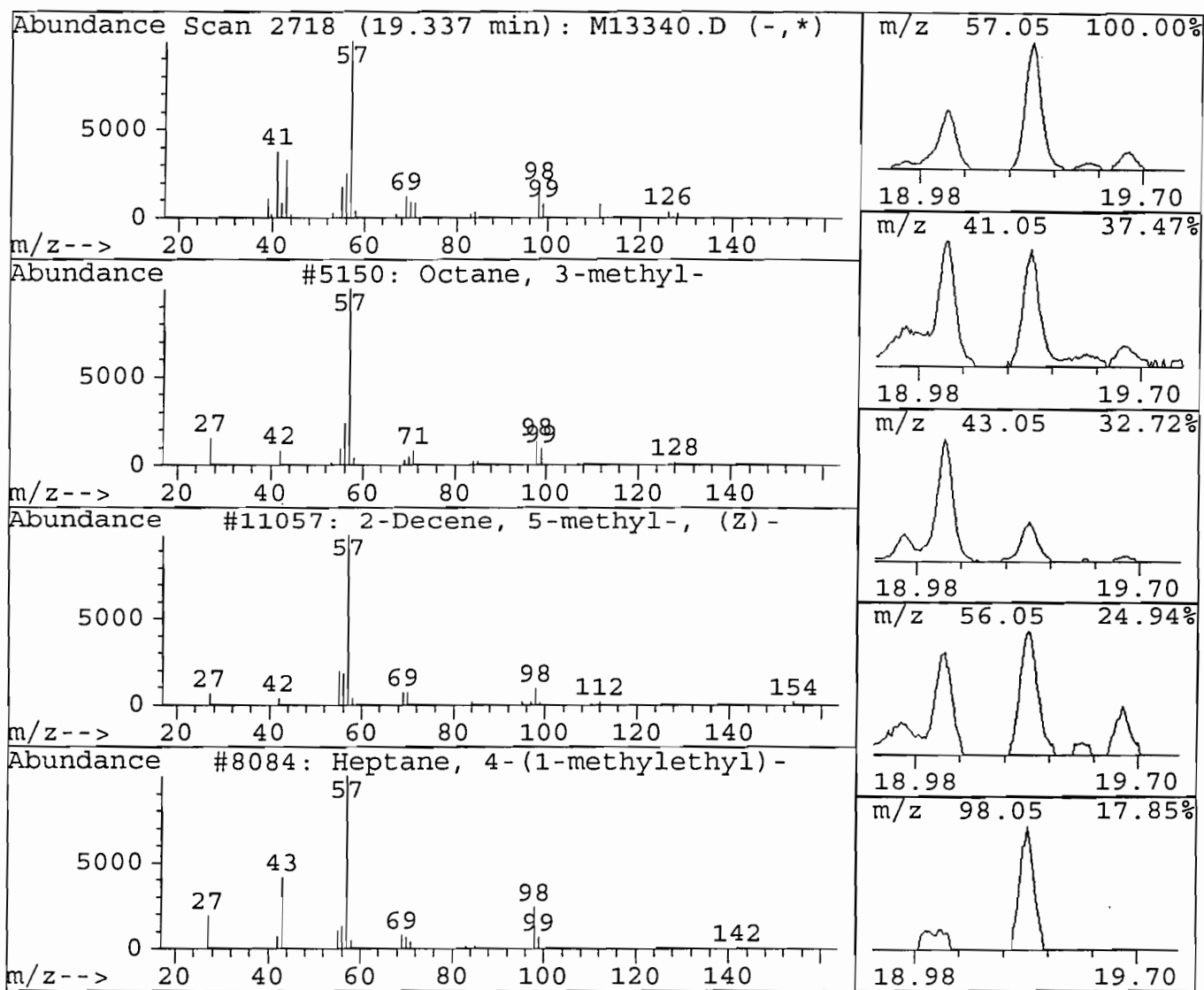
Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
19.34	23.46 ug/L	2571409	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane, 3-methyl-	5150	002216-33-3	72
2	2-Decene, 5-methyl-, (Z)-	11057	074645-86-6	72
3	Heptane, 4-(1-methylethyl)-	8084	052896-87-4	59
4	Heptane, 3-ethyl-2-methyl-	66212	014676-29-0	59
5	Octane, 3-methyl-	65130	002216-33-3	59



Library Search Compound Report

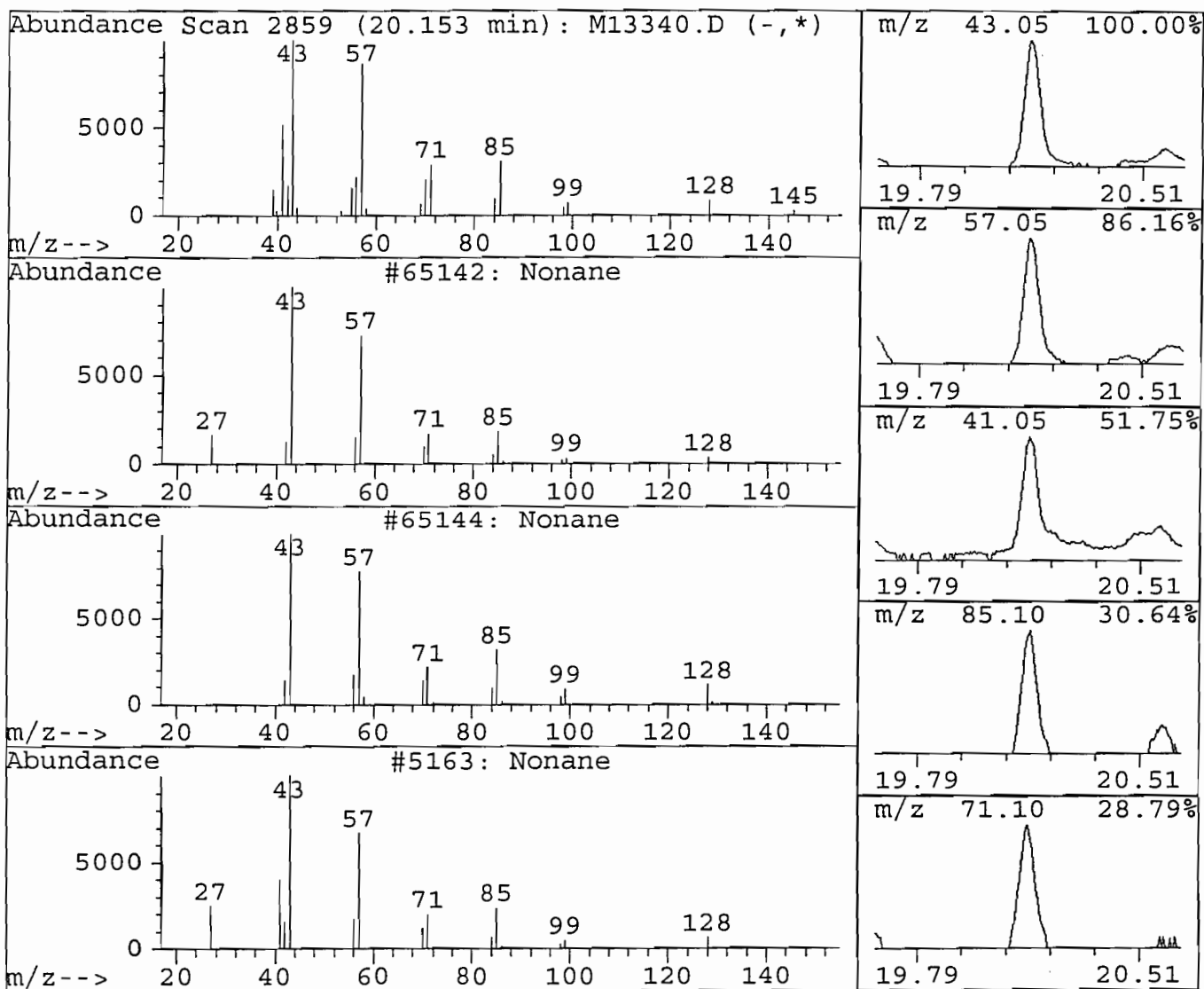
Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
20.15	31.24 ug/L	3423442	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane	65142	000111-84-2	91
2	Nonane	65144	000111-84-2	90
3	Nonane	5163	000111-84-2	90
4	Nonane	65145	000111-84-2	87
5	Decane	66204	000124-18-5	78



Library Search Compound Report

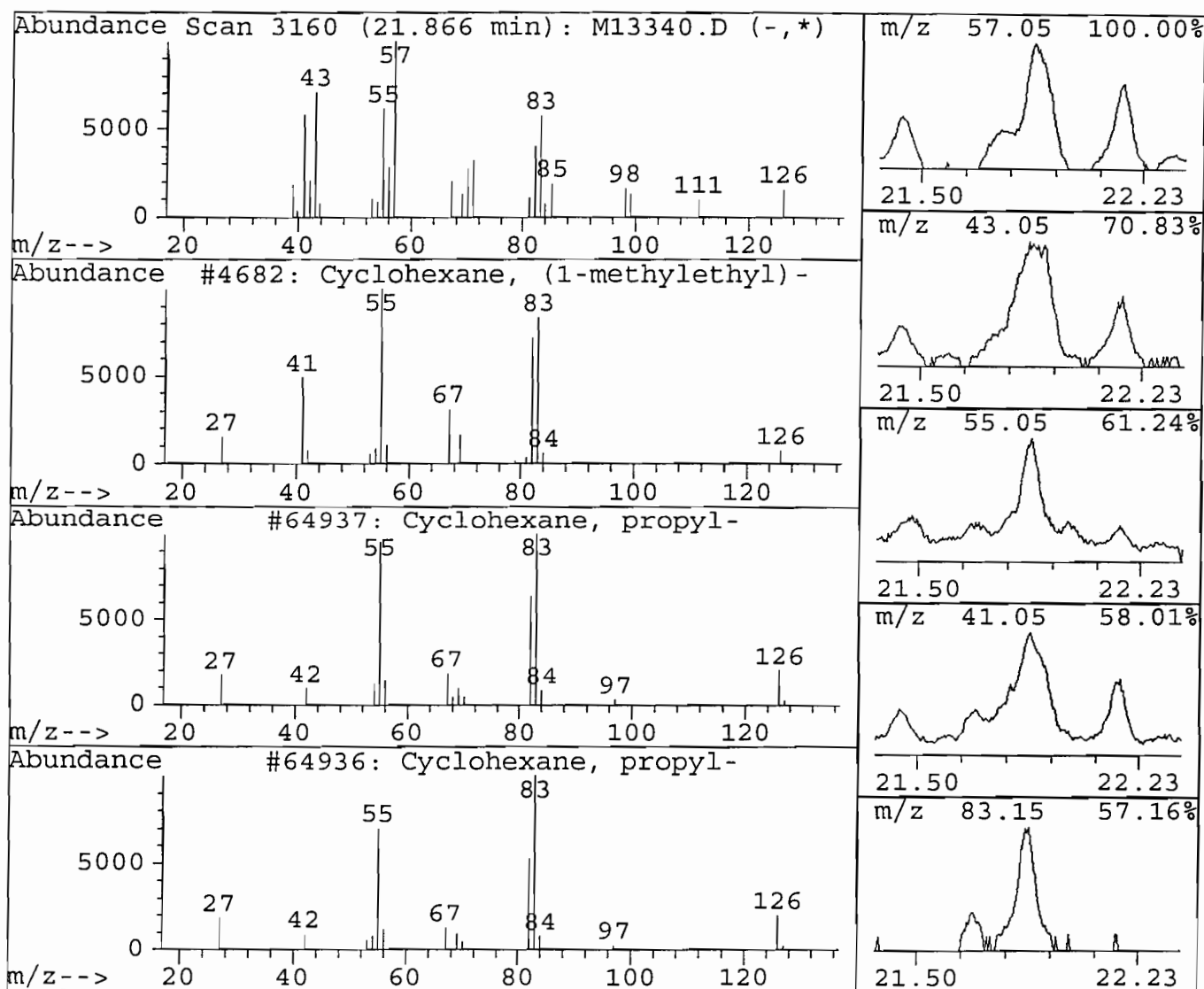
Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.87	32.21 ug/L	3530470	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, (1-methylethyl)-	4682	000696-29-7	46
2	Cyclohexane, propyl-	64937	001678-92-8	43
3	Cyclohexane, propyl-	64936	001678-92-8	38
4	3,7-Decadiene, 2,9-dimethyl-	14176	074630-13-0	38
5	Cyclohexane, hexyl-	68123	004292-75-5	38



Library Search Compound Report

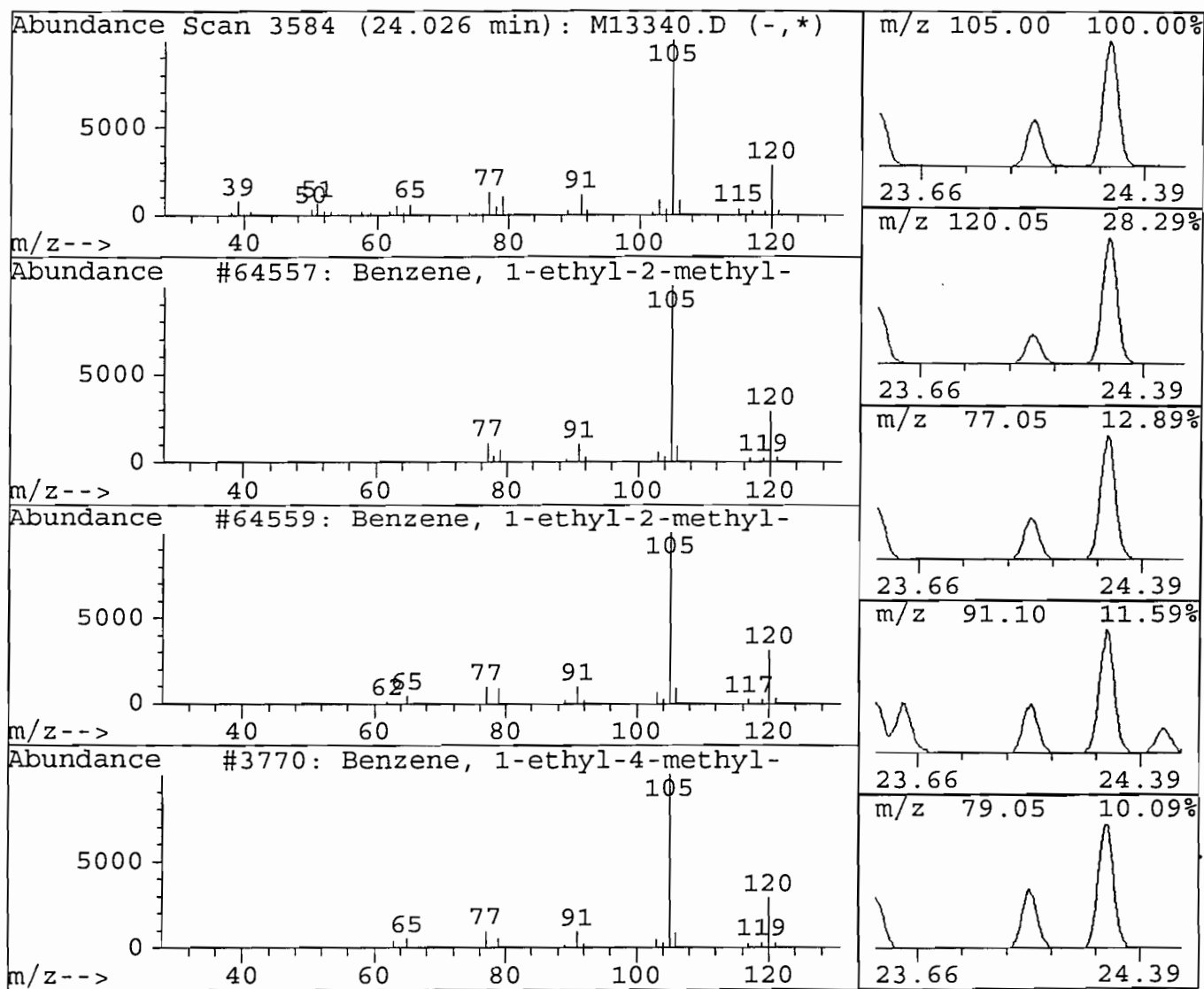
Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.03	24.96 ug/L	5145102	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	64557	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	64559	000611-14-3	95
3	Benzene, 1-ethyl-4-methyl-	3770	000622-96-8	94
4	Benzene, 1-ethyl-2-methyl-	64558	000611-14-3	91
5	Benzene, 1-ethyl-3-methyl-	64562	000620-14-4	91



Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D

Acq Time : 25 Oct 99 2:53 pm

Sample : 13827ASP-88012

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

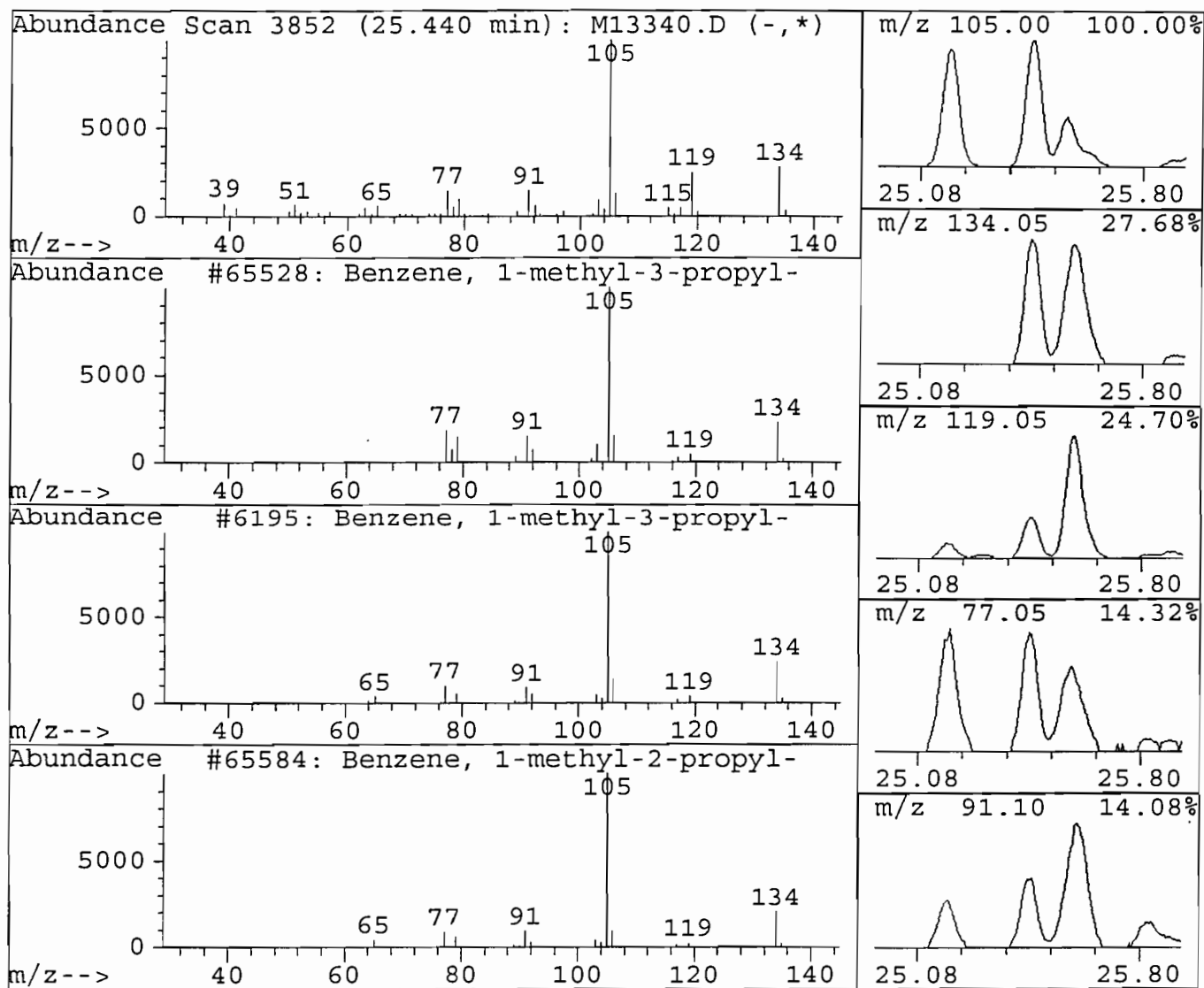
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.44	24.98 ug/L	5149136	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	90
2	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	87
3	Benzene, 1-methyl-2-propyl-	65584	001074-17-5	81
4	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	81
5	Benzene, (1-methylpropyl)-	65544	000135-98-8	76



Library Search Compound Report

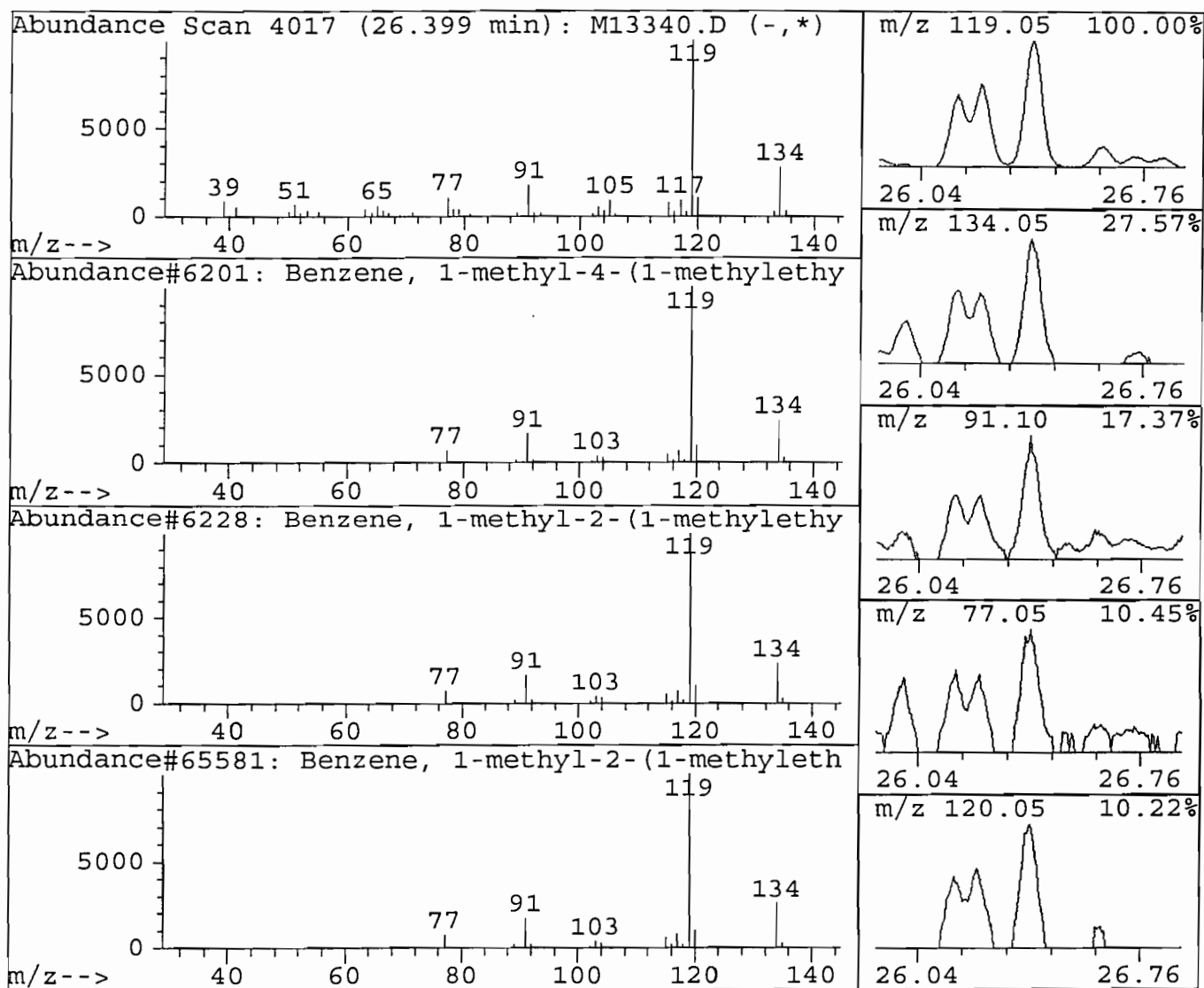
Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.40	16.63 ug/L	3428359	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	97
2	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	97
3	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	97
4	Benzene, 1-ethyl-2,3-dimethyl-	65556	000933-98-2	96
5	Benzene, 4-ethyl-1,2-dimethyl-	65569	000934-80-5	96



000119

Library Search Compound Report

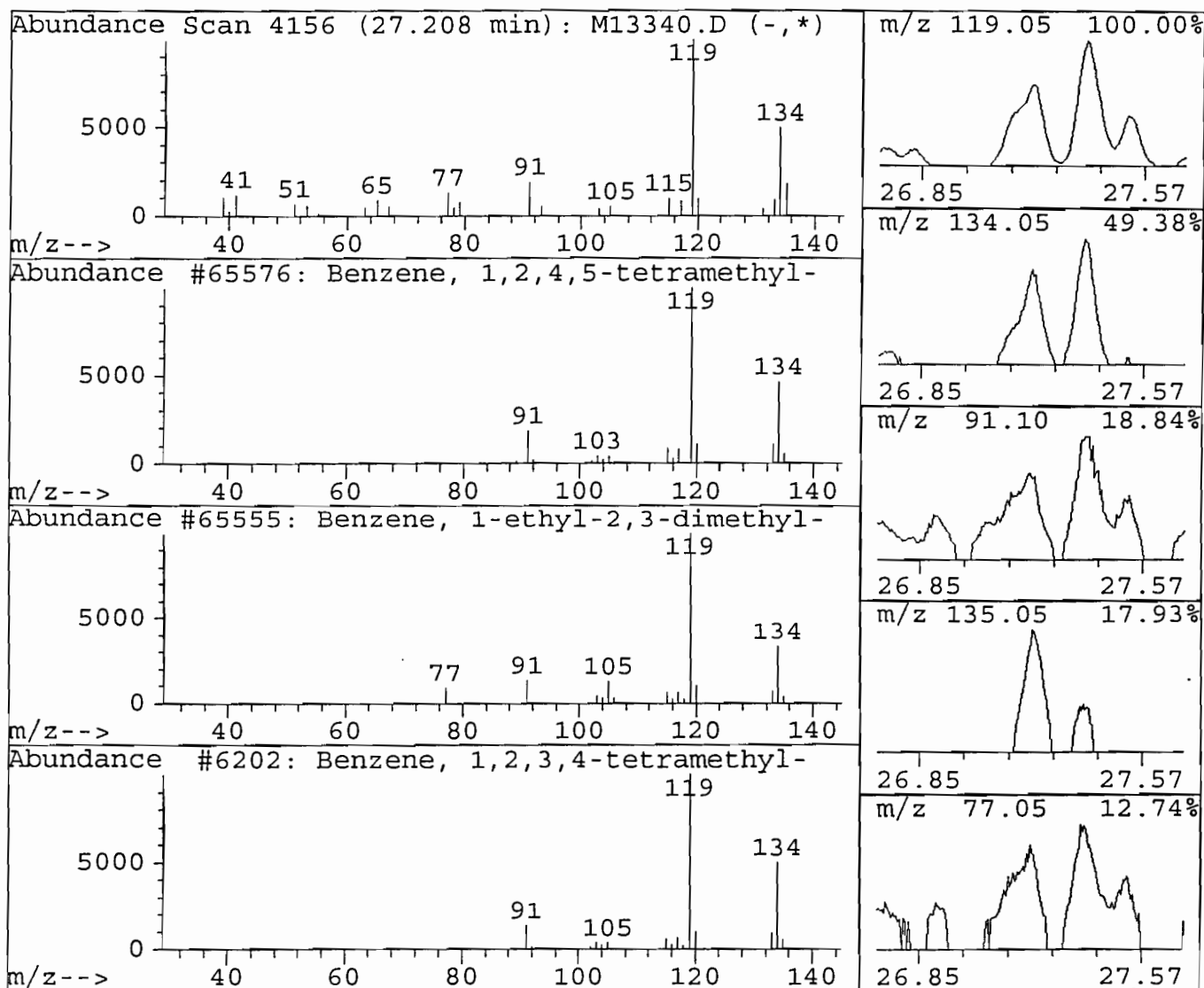
Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D
Acq Time : 25 Oct 99 2:53 pm
Sample : 13827ASP-88012
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.21	12.86 ug/L	2651329	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	65576	000095-93-2	91
2	Benzene, 1-ethyl-2,3-dimethyl-	65555	000933-98-2	91
3	Benzene, 1,2,3,4-tetramethyl-	6202	000488-23-3	91
4	Benzene, 1,2,3,5-tetramethyl-	6220	000527-53-7	91
5	Benzene, 1-ethyl-2,4-dimethyl-	65573	000874-41-9	90



Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13340.D

Acq Time : 25 Oct 99 2:53 pm

Sample : 13827ASP-88012

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

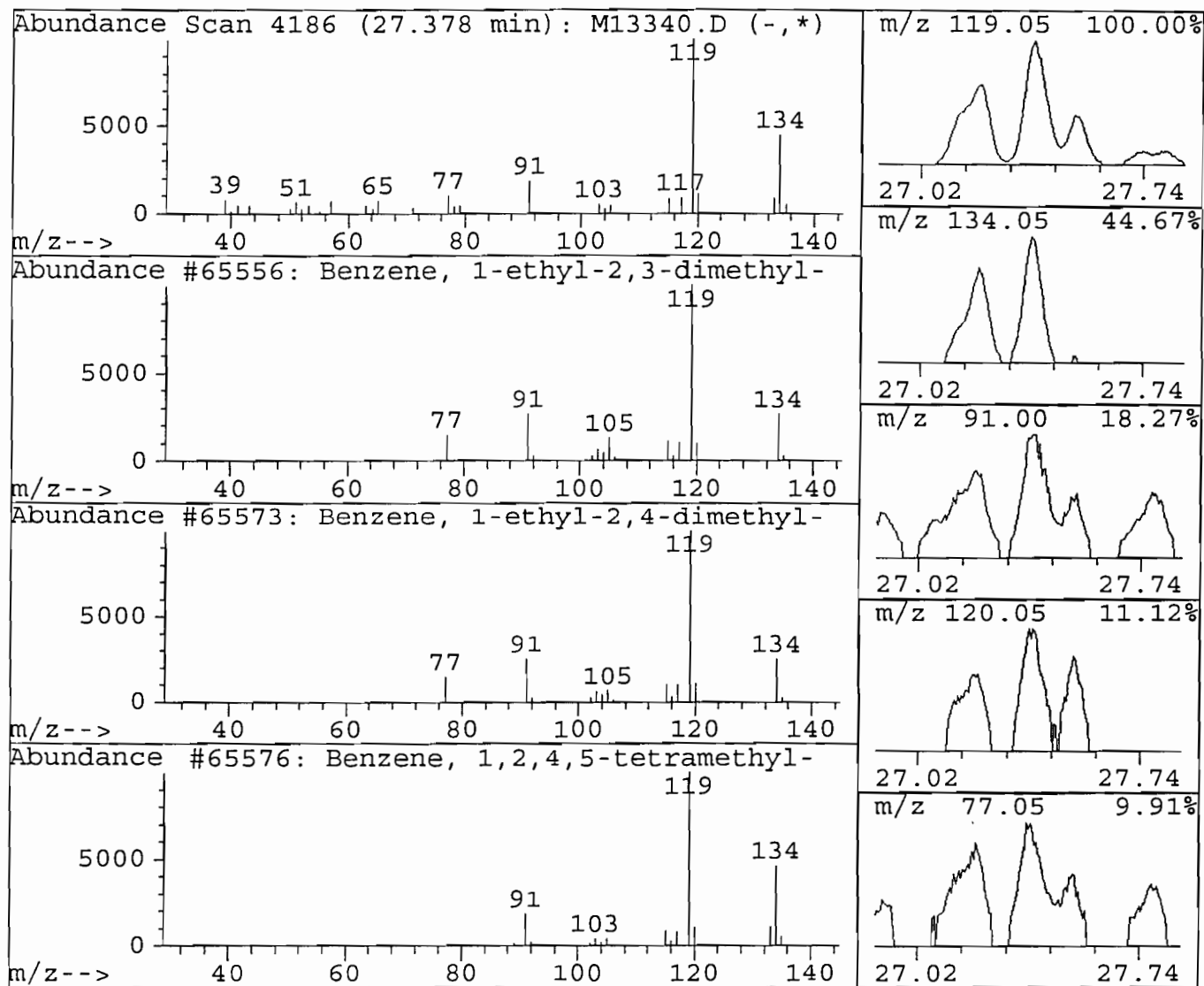
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.38	16.54 ug/L	3409001	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,3-dimethyl-	65556	000933-98-2	91
2	Benzene, 1-ethyl-2,4-dimethyl-	65573	000874-41-9	91
3	Benzene, 1,2,4,5-tetramethyl-	65576	000095-93-2	91
4	Benzene, 1,2,3,5-tetramethyl-	65571	000527-53-7	91
5	Benzene, 1,2,4,5-tetramethyl-	65575	000095-93-2	91



000120

SAMPLE NO.

GP-017-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: O88013

Lab File ID: P19293.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

ug/Kg

Q

FORM I VOA

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-017-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88013
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19293.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 3073-66-3	Cyclohexane, 1,1,3-trimethyl	14.94	55	J
2. 1795-26-2	Cyclohexane, 1,3,5-trimethyl	15.53	54	J
3.	Unknown	17.72	250	J
4. 2051-30-1	Octane, 2,6-dimethyl-	18.40	180	J
5.	Unknown	18.59	57	J
6.	Unknown	18.73	98	J
7.	Unknown	19.20	93	J
8.	Unknown	19.42	170	J
9. 1120-21-4	Undecane	24.12	76	J
10. 112-40-3	Dodecane	27.24	110	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
 Acq Time : 22 Oct 99 4:52 pm
 Sample : 13827ASP-88013
 Misc : 5G/5ML
 Quant Time: Oct 23 14:30 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	700601	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	644757	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.62	152	239735	50.00	ug/L	0.03
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	630653	54.03	ug/L	108.06%
30) 1,2-Dichlorethane-d4	8.67	65	516232	56.28	ug/L	112.57%
38) Toluene-d8	12.77	98	570982	41.79	ug/L	83.57%
42) 4-Bromofluorobenzene	19.50	95	748257	53.34	ug/L	106.68%
Target Compounds						Qvalue
~~RT 13)~~ methylene chloride	4.58	84	17108	5.20	ug/L	85
39) toluene	12.92	91	350738	25.45	ug/L	96
~~RT 45)~~ tetrachloroethene	14.16	166	94613	14.57	ug/L	88
54) m&p-xylenes	17.01	106	1197468	198.53	ug/L	95
55) o-xylene	18.03	91	5210267	298.95	ug/L	98
~~RT 64)~~ 2-chlorotoluene	20.35	126	608889	238.39	ug/L	76
66) 1,3,5-trimethylbenzene	20.69	105	3541113	373.81	ug/L	91
68) 1,2,4-trimethylbenzene	21.67	105	3189218	323.46	ug/L	95
~~RT 71)~~ 4-isopropyltoluene	22.44	119	2426598	214.94	ug/L	89

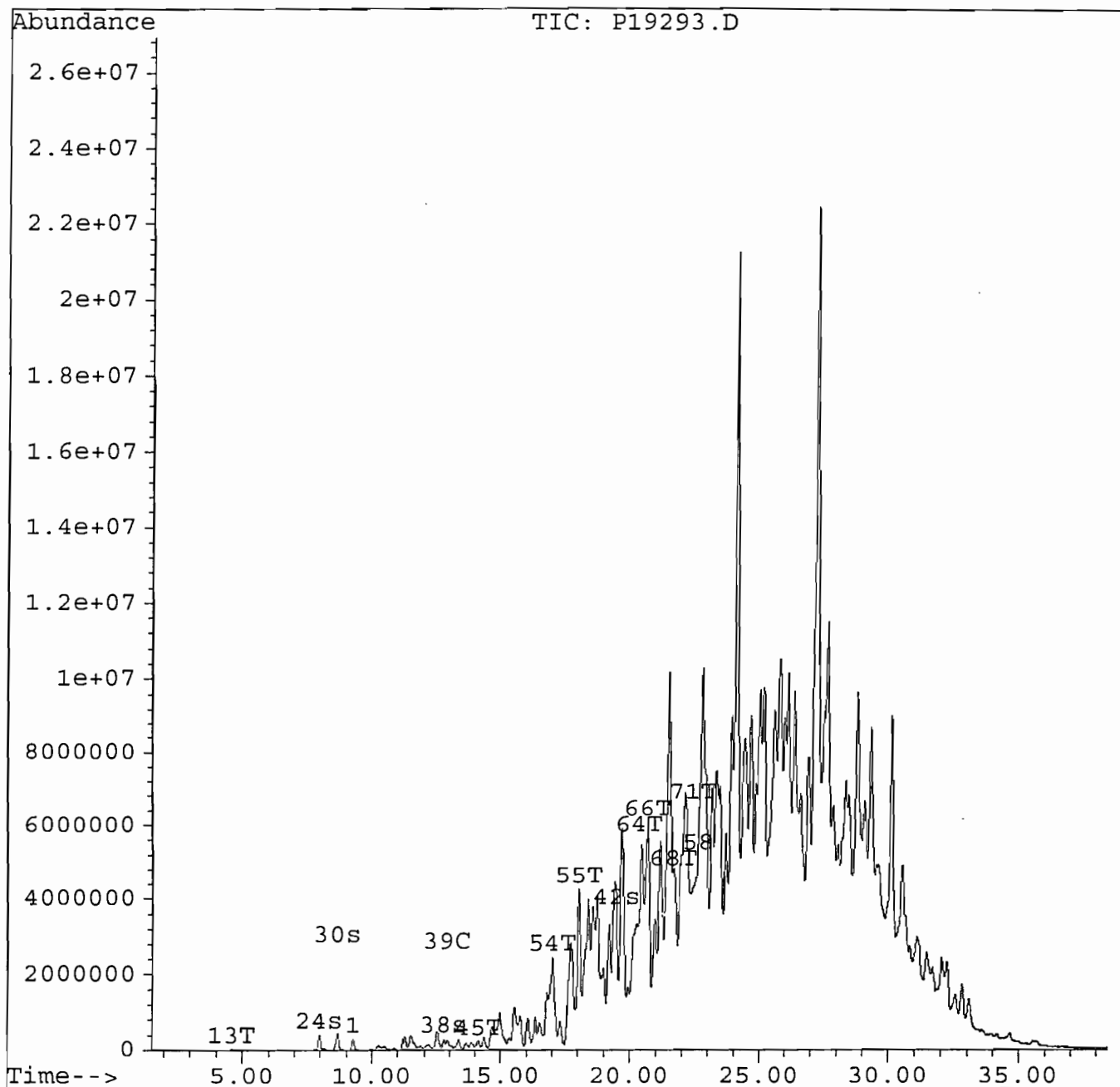
000123

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML
Quant Time: Oct 23 14:30 1999

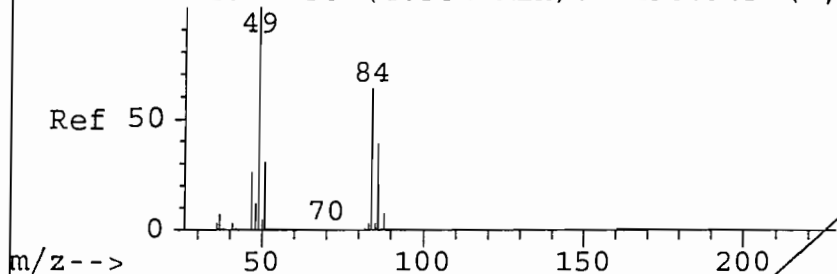
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000124

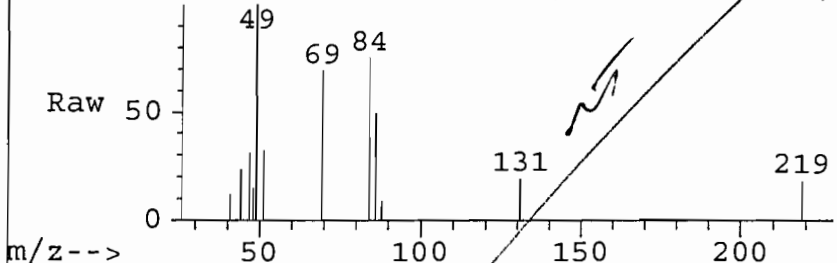
AbundanceScan 350 (4.582 min): P19049.D (-,



#13
methylene chloride
Concen: 5.20 ug/L
RT: 4.58 min Scan# 350
Delta R.T. -0.00 min
Lab File: P19293.D
Acq: 22 Oct 99 4:52 pm

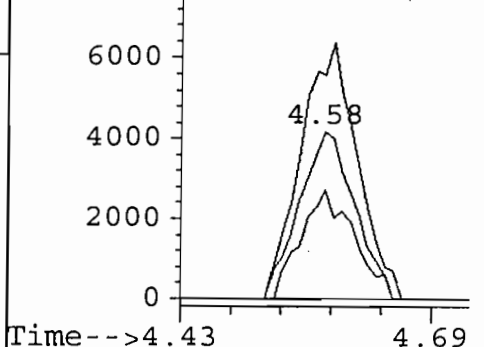
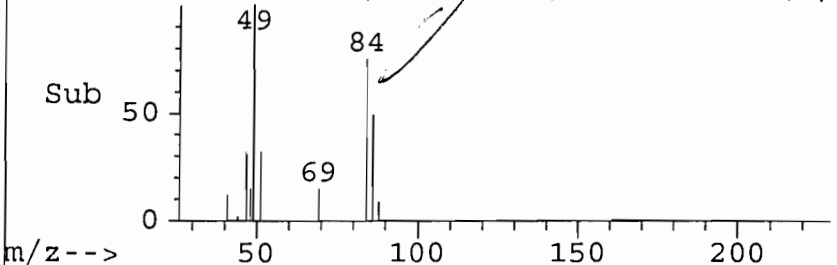
Tgt Ion:84	Resp:	17108
Ion	Ratio	Lower Upper
84	100	
86	65.1	43.3 80.3
49	133.1	110.4 205.0
0	0.0	0.0 0.0

AbundanceScan 350 (4.580 min): P19293.D (*)

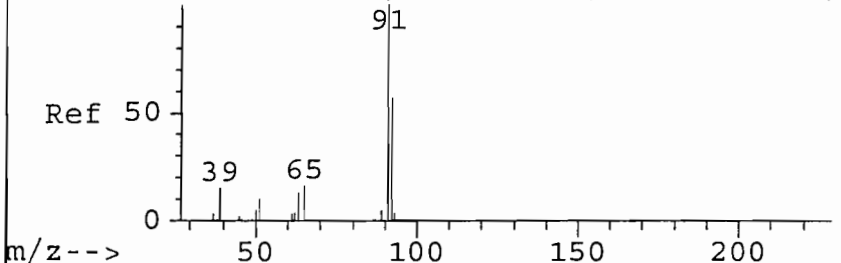


Abundance	Ion	84.00 (83.
8000	Ion	86.00 (85.
	Ion	49.00 (48.

AbundanceScan 350 (4.580 min): P19293.D (-,



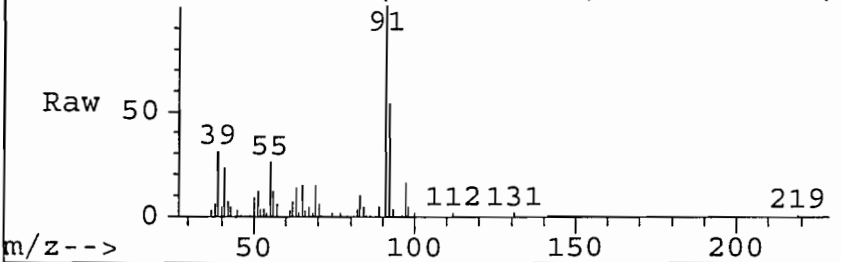
AbundanceScan 1270 (12.928 min): P19049.D (



#39
toluene
Concen: 25.45 ug/L
RT: 12.92 min Scan# 1270
Delta R.T. -0.00 min
Lab File: P19293.D
Acq: 22 Oct 99 4:52 pm

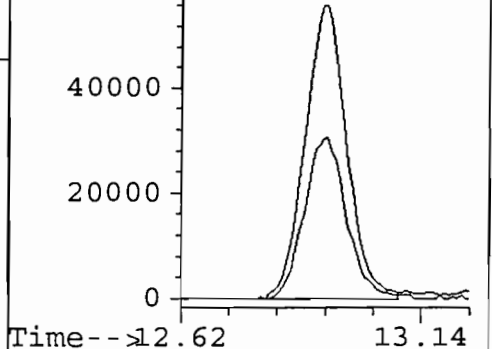
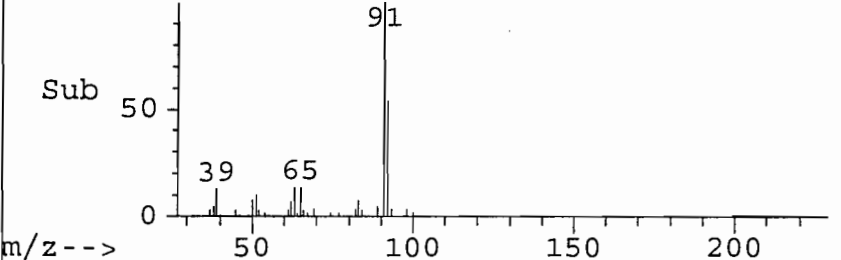
Tgt Ion:91	Resp:	350738
Ion	Ratio	Lower Upper
91	100	
92	54.3	40.2 74.6
0	0.0	0.0 0.0
0	0.0	0.0 0.0

AbundanceScan 1270 (12.924 min): P19293.D (

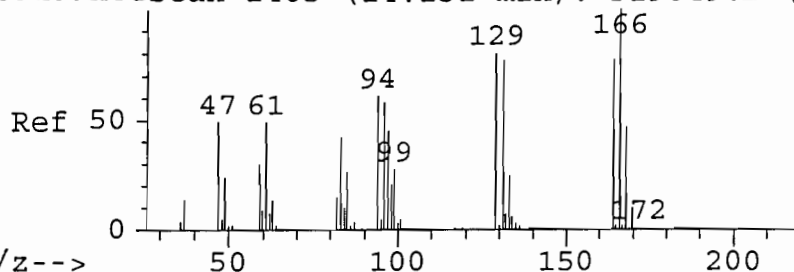


Abundance	Ion	91.00 (90.
60000	Ion	92.00 (91.
		12.92

AbundanceScan 1270 (12.924 min): P19293.D (



AbundanceScan 1405 (14.151 min): P19049.D (



#45

tetrachloroethene

Concen: 14.57 ug/L

RT: 14.16 min Scan# 1406

Delta R.T. 0.00 min

Lab File: P19293.D

Acq: 22 Oct 99 4:52 pm

Tgt Ion:166 Resp: 94613

Ion Ratio Lower Upper

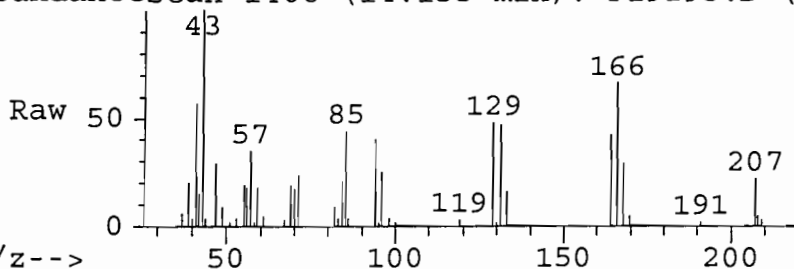
166 100

164 63.5 53.8 100.0

168 43.6 33.0 61.4

0 0.0 0.0 0.0

AbundanceScan 1406 (14.155 min): P19293.D (



AbundanceIon 166.00 (165

Ion 163.60 (163

Ion 168.00 (167

20000

15000

10000

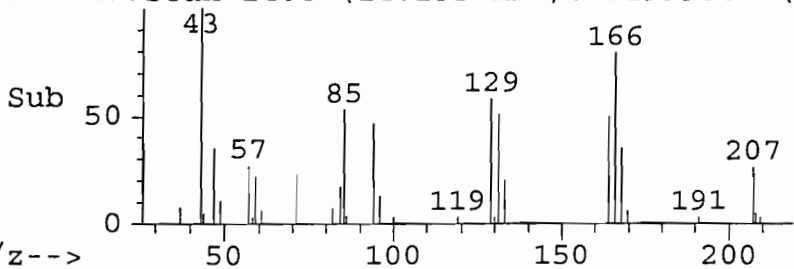
5000

0

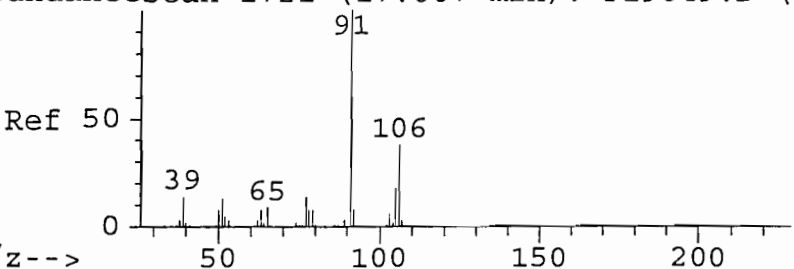
14.16

Time-->13.91 14.34

AbundanceScan 1406 (14.155 min): P19293.D (



AbundanceScan 1721 (17.007 min): P19049.D (



#54

m&p-xylenes

Concen: 198.53 ug/L

RT: 17.01 min Scan# 1723

Delta R.T. 0.00 min

Lab File: P19293.D

Acq: 22 Oct 99 4:52 pm

Tgt Ion:106 Resp: 1197468

Ion Ratio Lower Upper

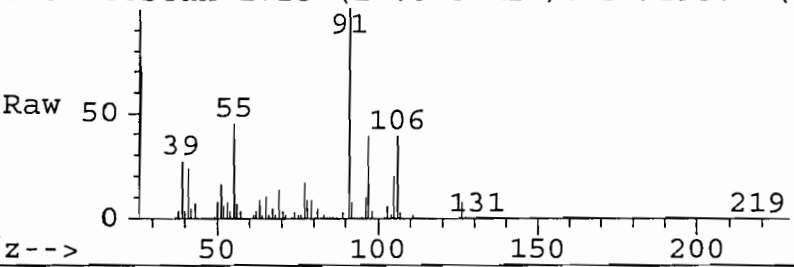
106 100

91 253.2 183.6 341.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 1723 (17.008 min): P19293.D (



AbundanceIon 106.00 (105

Ion 91.00 (90.

400000

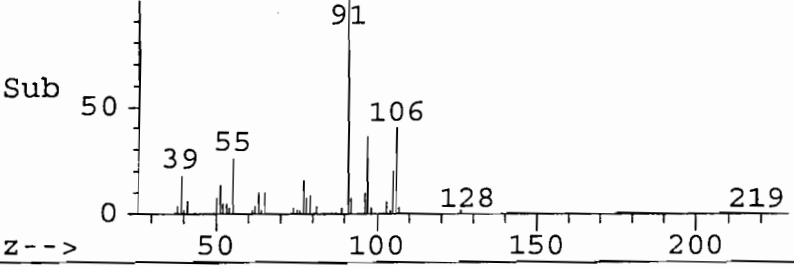
200000

17.01

0

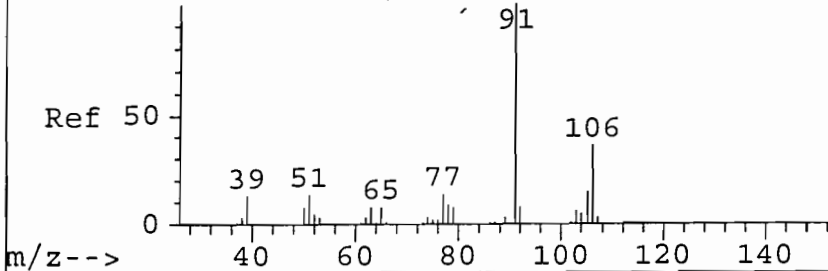
Time-->16.63 17.40

AbundanceScan 1723 (17.008 min): P19293.D (



000126

AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 298.95 ug/L

RT: 18.03 min Scan# 1838

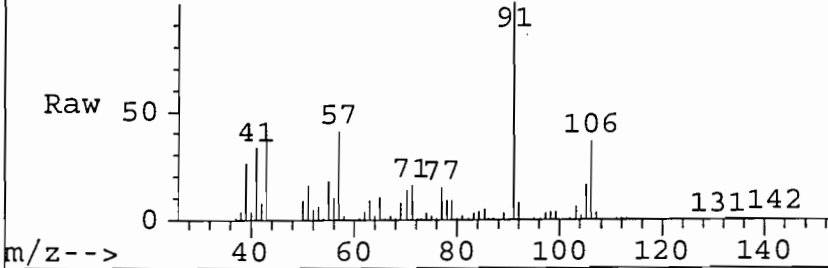
Delta R.T. 0.02 min

Lab File: P19293.D

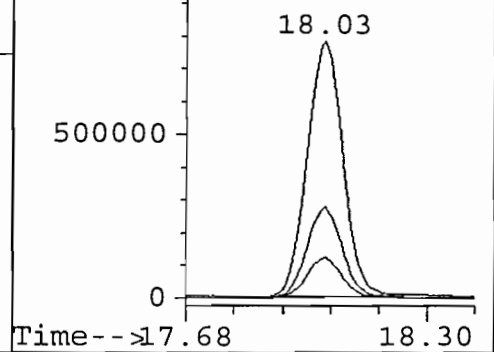
Acq: 22 Oct 99 4:52 pm

Tgt Ion:	91	Resp:	5210267
Ion	Ratio	Lower	Upper
91	100		
106	35.7	25.4	47.2
105	15.8	10.1	18.8
0	0.0	0.0	0.0

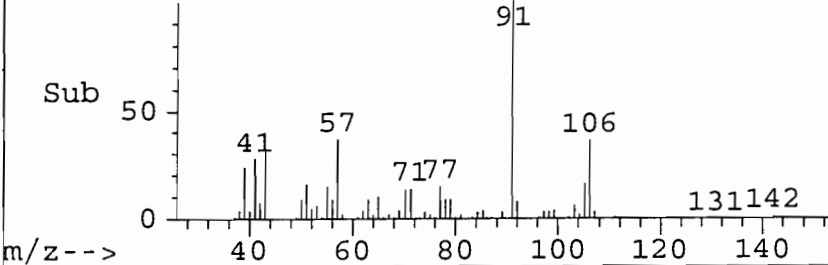
AbundanceScan 1838 (18.032 min): P19293.D (



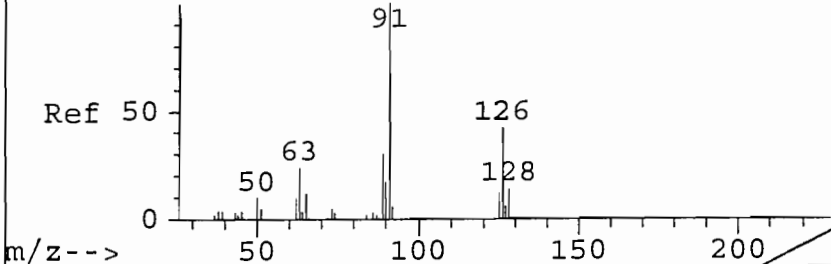
AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



AbundanceScan 1838 (18.032 min): P19293.D (



AbundanceScan 2087 (20.310 min): P19049.D (



#64

2-chlorotoluene

Concen: 238.39 ug/L

RT: 20.35 min Scan# 2101

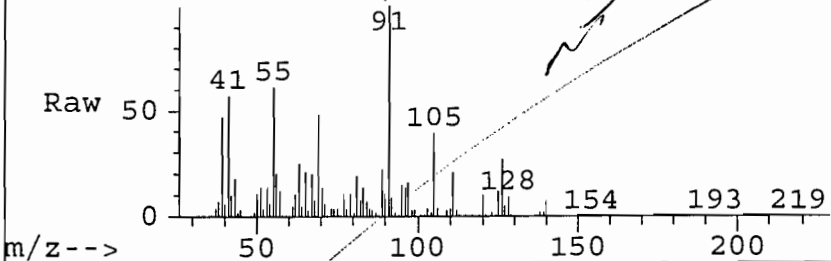
Delta R.T. 0.04 min

Lab File: P19293.D

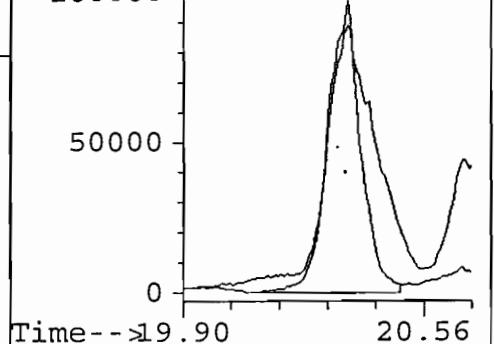
Acq: 22 Oct 99 4:52 pm

Tgt Ion:	126	Resp:	608889
Ion	Ratio	Lower	Upper
126	100		
63	91.7	25.0	117.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

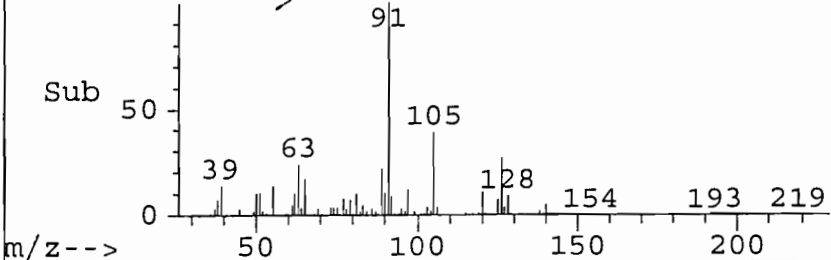
AbundanceScan 2101 (20.347 min): P19293.D (



AbundanceIon 126.00 (125
Ion 63.00 (62.
20.35

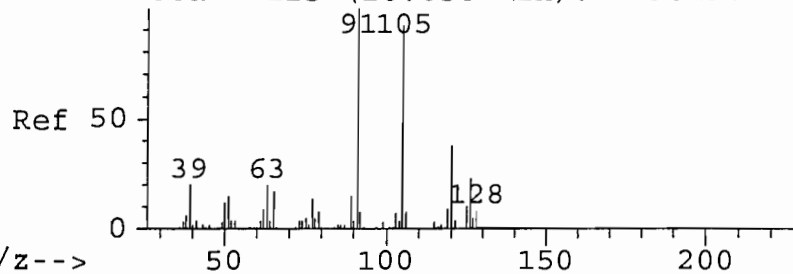


AbundanceScan 2101 (20.347 min): P19293.D (

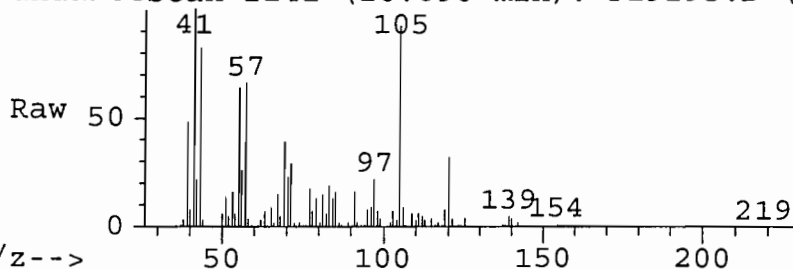


000127

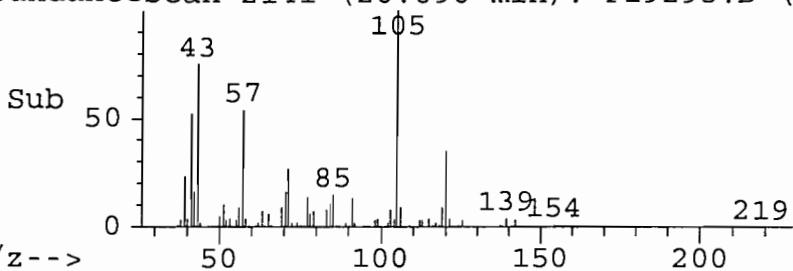
AbundanceScan 2125 (20.658 min): P19049.D (



AbundanceScan 2141 (20.690 min): P19293.D (



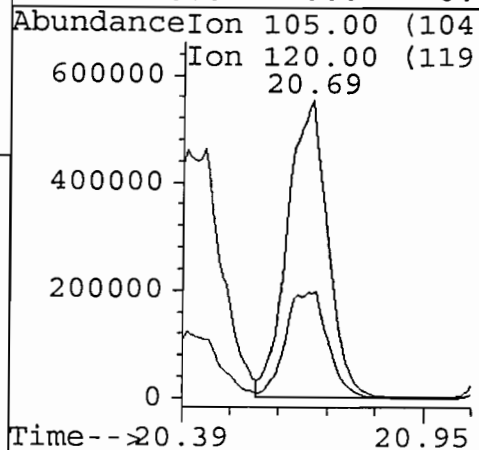
AbundanceScan 2141 (20.690 min): P19293.D (



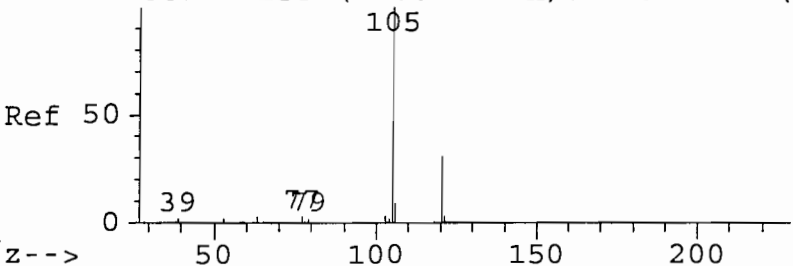
#66

1,3,5-trimethylbenzene
Concen: 373.81 ug/L
RT: 20.69 min Scan# 2141
Delta R.T. 0.03 min
Lab File: P19293.D
Acq: 22 Oct 99 4:52 pm

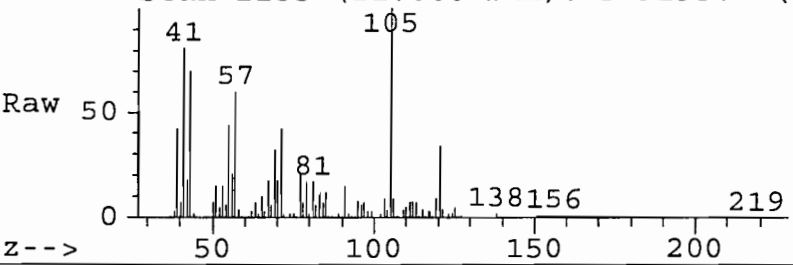
Tgt Ion	105	120	0	0
Ratio	100	35.1	0.0	0.0
Lower		28.6	0.0	0.0
Upper		53.0	0.0	0.0



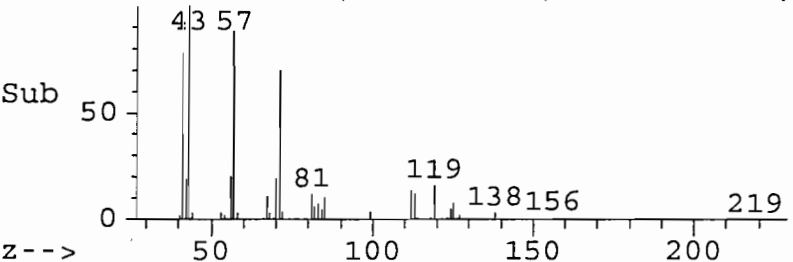
AbundanceScan 2233 (21.642 min): P19049.D (



AbundanceScan 2255 (21.666 min): P19293.D (



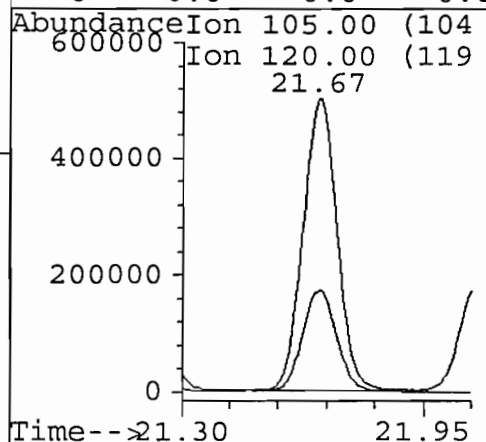
AbundanceScan 2255 (21.666 min): P19293.D (



#68

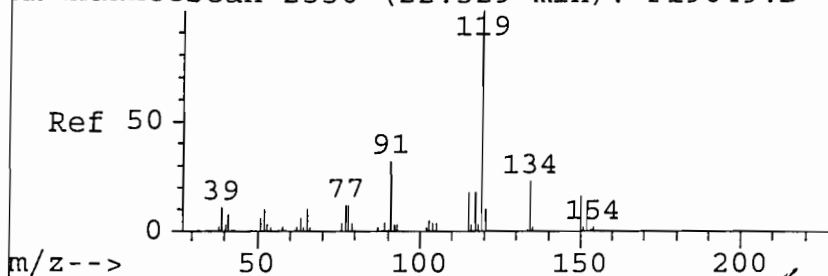
1,2,4-trimethylbenzene
Concen: 323.46 ug/L
RT: 21.67 min Scan# 2255
Delta R.T. 0.02 min
Lab File: P19293.D
Acq: 22 Oct 99 4:52 pm

Tgt Ion	105	120	0	0
Ratio	100	34.4	0.0	0.0
Lower		26.0	0.0	0.0
Upper		48.2	0.0	0.0



000128

AbundanceScan 2330 (22.529 min): P19049.D (



#71

4-isopropyltoluene

Concen: 214.94 ug/L

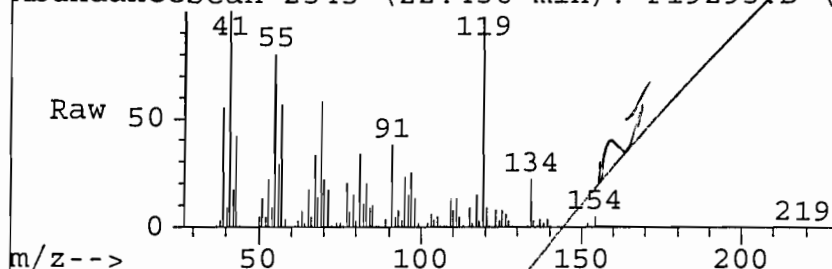
RT: 22.44 min Scan# 2345

Delta R.T. -0.09 min

Lab File: P19293.D

Acq: 22 Oct 99 4:52 pm

AbundanceScan 2345 (22.436 min): P19293.D (



Tgt Ion:119 Resp: 2426598

Ion Ratio Lower Upper

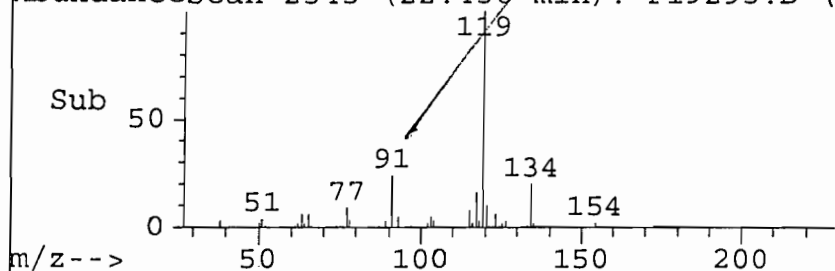
119 100

134 23.9 15.9 29.5

91 41.6 22.6 42.0

0 0.0 0.0 0.0

AbundanceScan 2345 (22.436 min): P19293.D (



AbundanceIon 119.00 (118

Ion 134.00 (133

Ion 91.00 (90.

400000

300000

200000

100000

0

Time-->22.12 22.58

000129

Library Search Compound Report

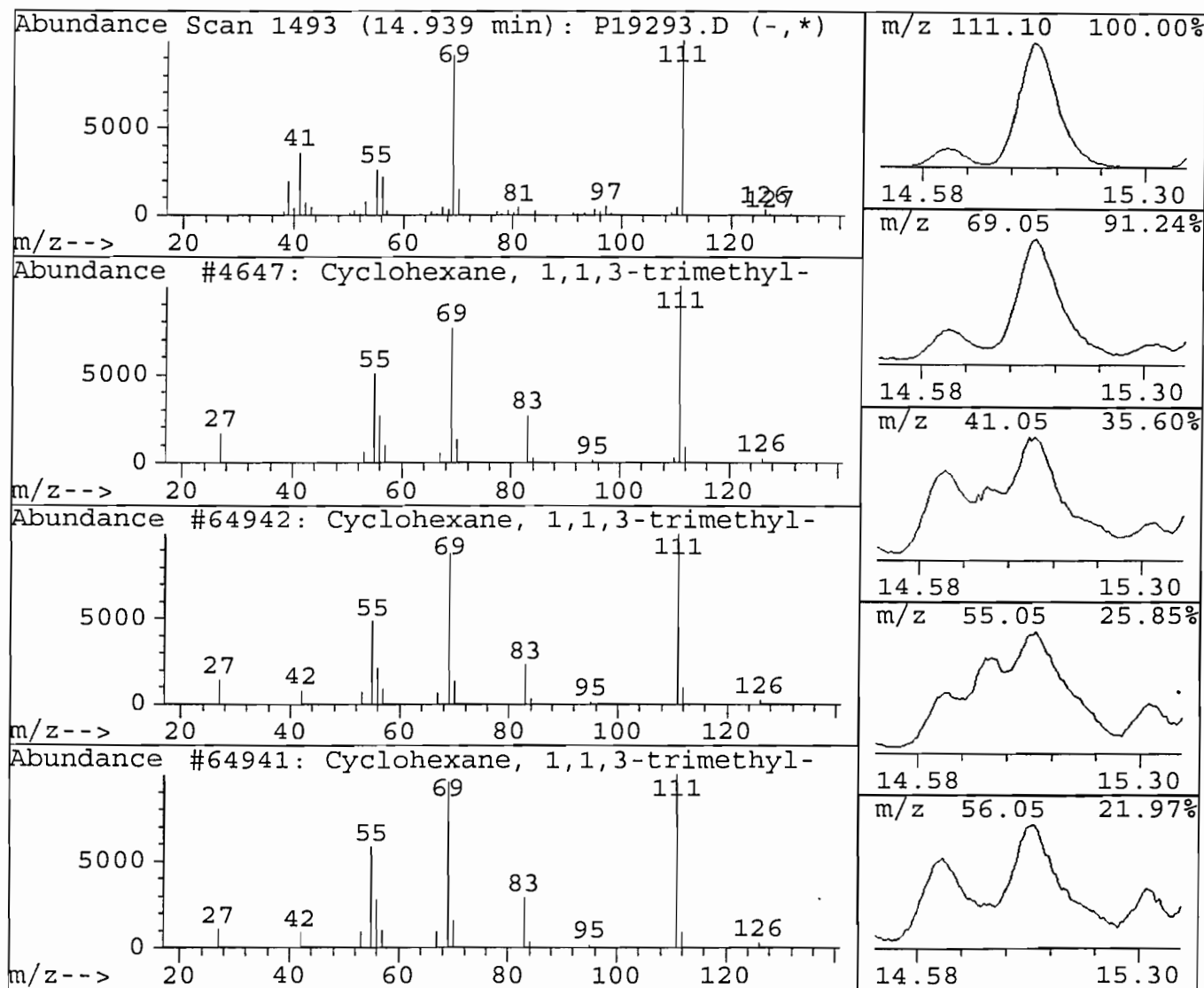
Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
14.94	53.53 ug/L	8195216	Chlorobenzene-d5	16.34

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1,1,3-trimethyl-	4647	003073-66-3	90
2	Cyclohexane, 1,1,3-trimethyl-	64942	003073-66-3	86
3	Cyclohexane, 1,1,3-trimethyl-	64941	003073-66-3	78
4	Cyclohexane, 1,2,4-trimethyl-, (1.a	4656	007667-60-9	74
5	Cyclohexane, 1,3,5-trimethyl-, (1.a	64952	001795-26-2	43



Library Search Compound Report

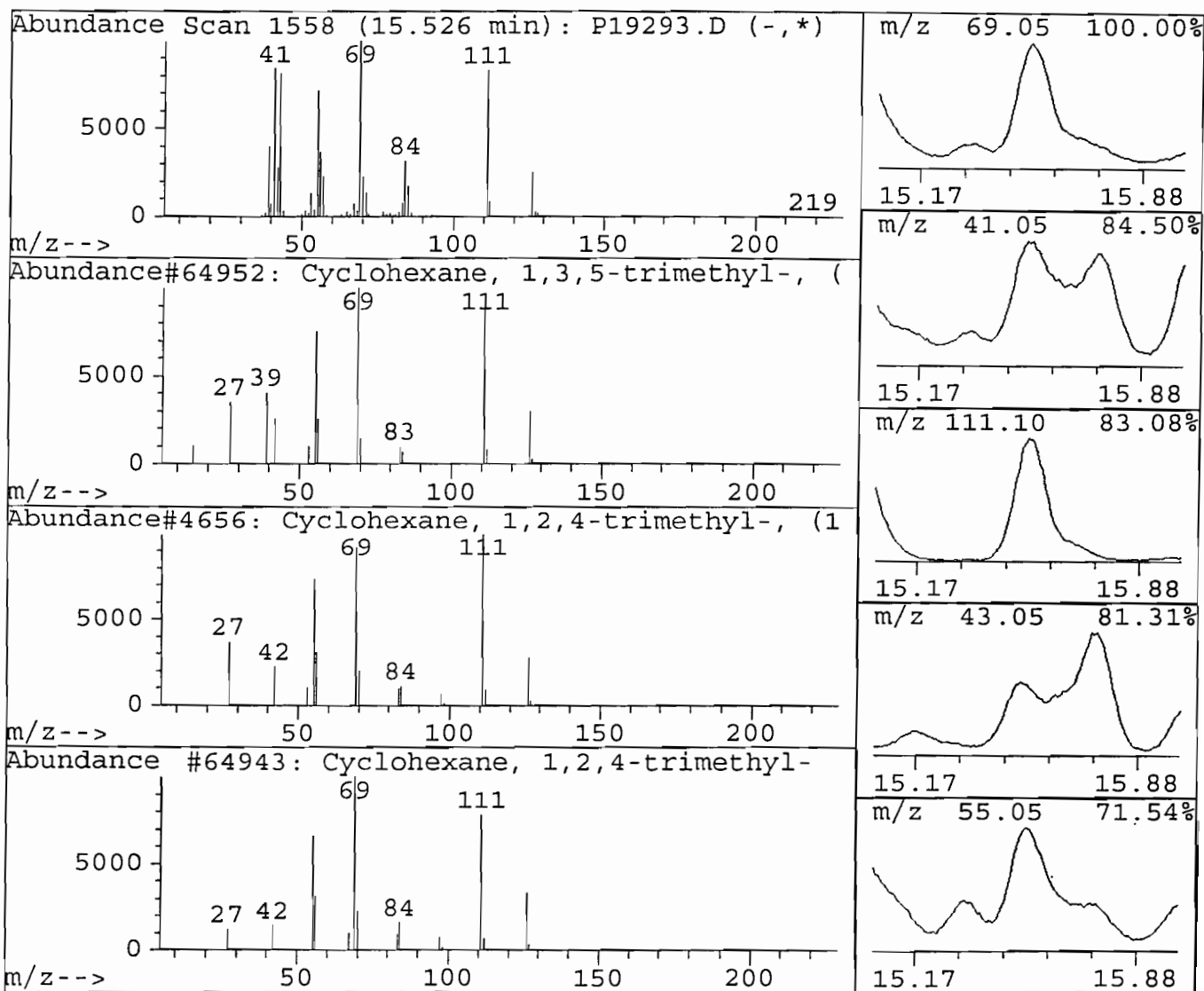
Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
15.53	52.04 ug/L	7966362	Chlorobenzene-d5	16.34

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1,3,5-trimethyl-, (1.a	64952	001795-26-2	87
2	Cyclohexane, 1,2,4-trimethyl-, (1.a	4656	007667-60-9	76
3	Cyclohexane, 1,2,4-trimethyl-	64943	002234-75-5	68
4	Cyclohexane, 1,2,4-trimethyl-, (1.a	64947	007667-60-9	64
5	Cyclohexane, 1,3,5-trimethyl-	4621	001839-63-0	58



Library Search Compound Report

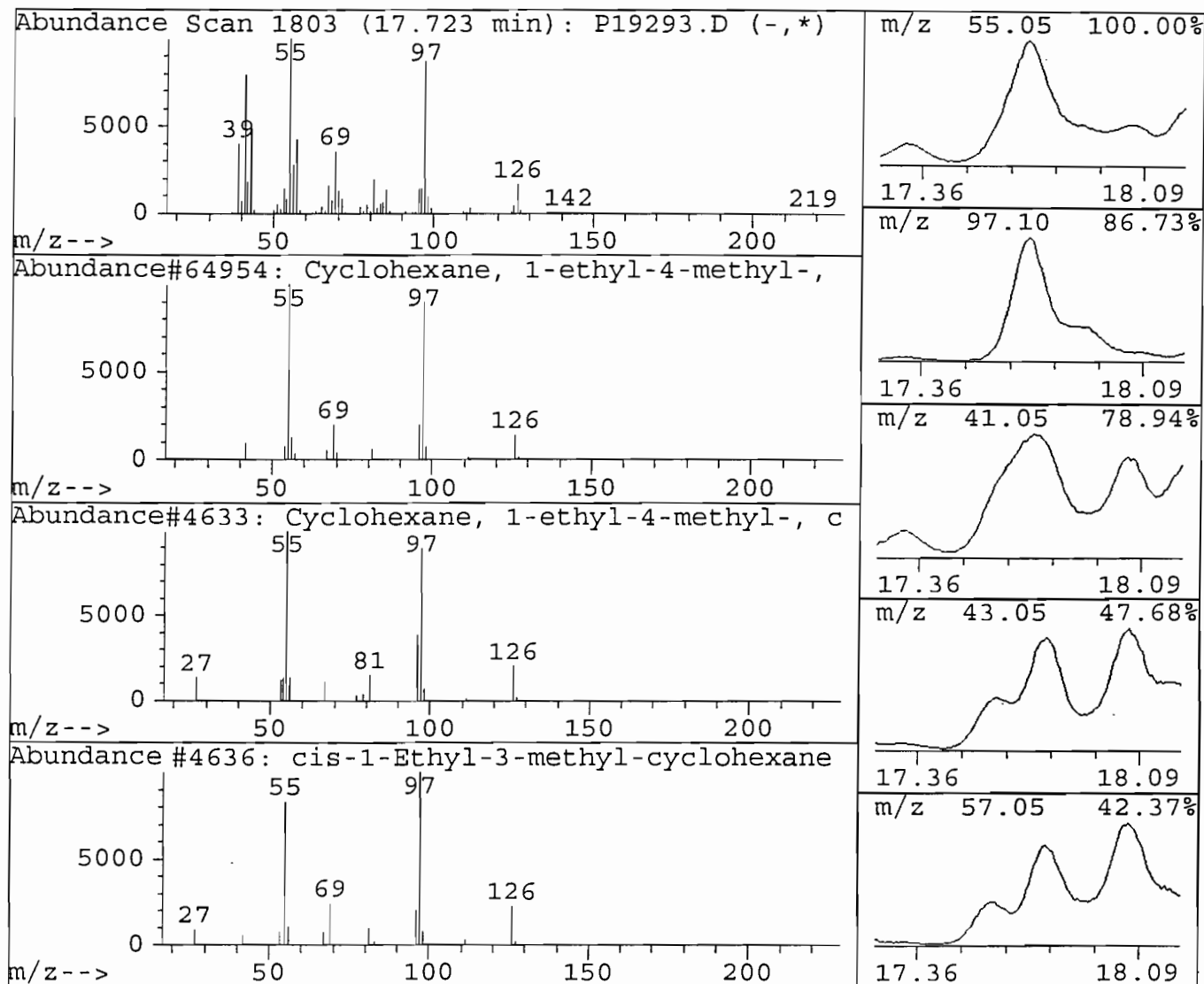
Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
17.72	247.16 ug/L	37837324	Chlorobenzene-d5	16.34

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1-ethyl-4-methyl-, tra	64954	006236-88-0	59
2	Cyclohexane, 1-ethyl-4-methyl-, cis	4633	004926-78-7	53
3	cis-1-Ethyl-3-methyl-cyclohexane	4636	019489-10-2	50
4	Cyclohexane, 1,4-dimethyl-	2672	000589-90-2	50
5	3,5-Dimethyl-3-heptene	4628	059643-68-4	49



000132

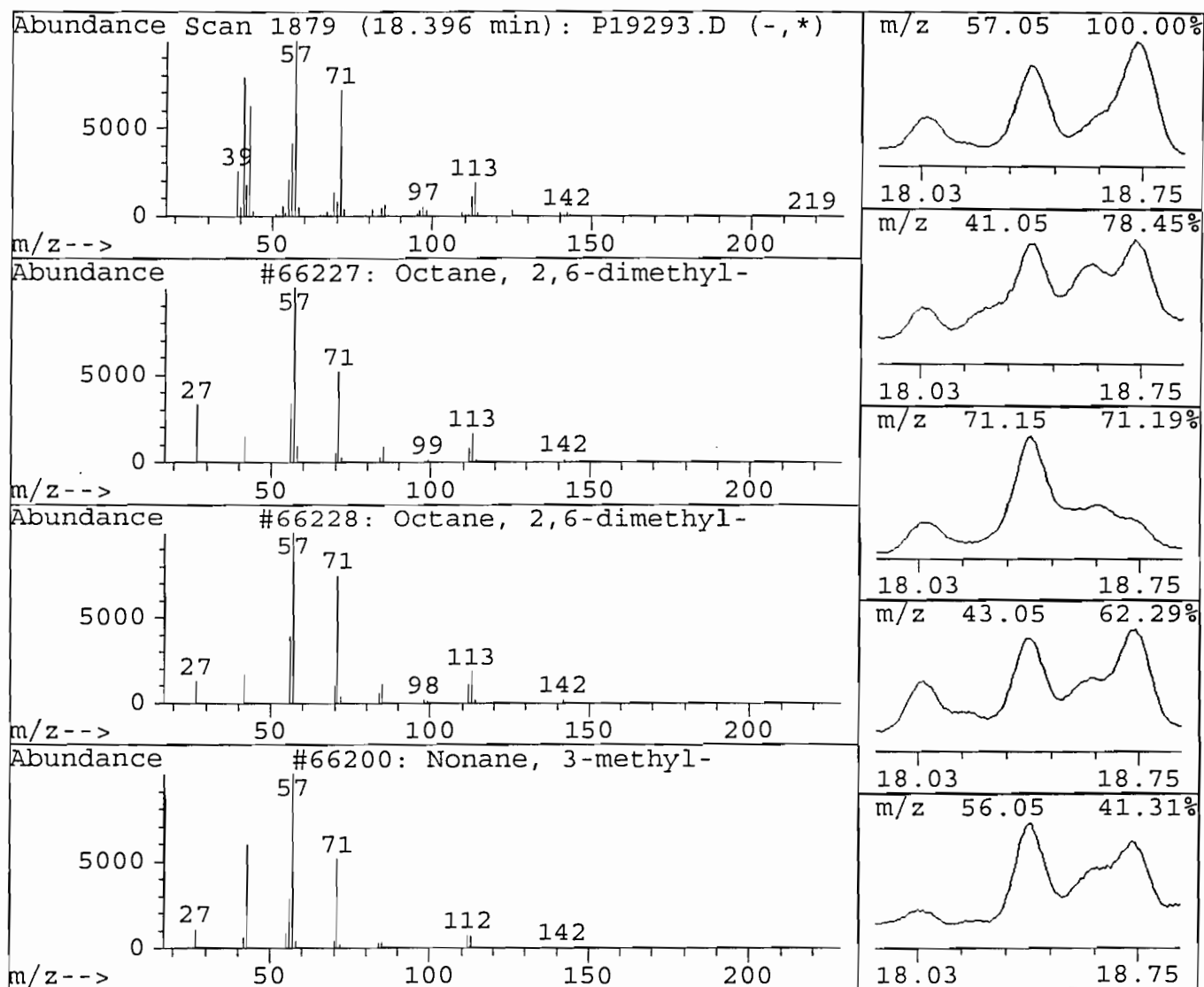
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
18.40	169.96 ug/L	26018352	Chlorobenzene-d5	16.34	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Octane, 2,6-dimethyl-		66227	002051-30-1	90
2	Octane, 2,6-dimethyl-		66228	002051-30-1	87
3	Nonane, 3-methyl-		66200	005911-04-6	83
4	Nonane, 3-methyl-		66202	005911-04-6	83
5	Octane, 2,6-dimethyl-		8103	002051-30-1	78



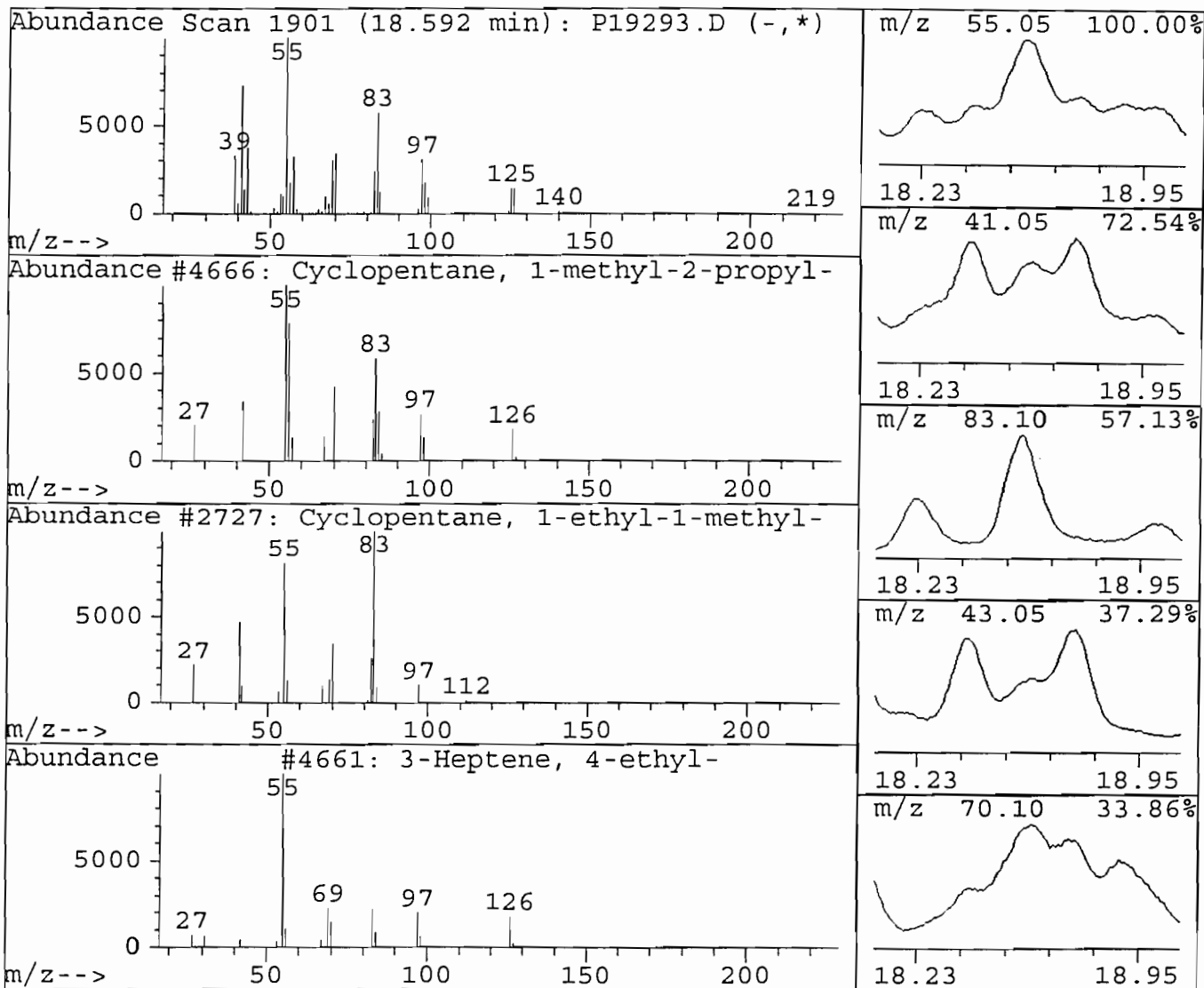
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
18.59	55.77 ug/L	8538346	Chlorobenzene-d5	16.34	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Cyclopentane, 1-methyl-2-propyl-		4666	003728-57-2	59
2	Cyclopentane, 1-ethyl-1-methyl-		2727	016747-50-5	43
3	3-Heptene, 4-ethyl-		4661	033933-74-3	43
4	n-C4H9C(CH3)=C(CH3)2		4638	003074-64-4	38
5	Cyclohexane, methyl-		63235	000108-87-2	35



000134

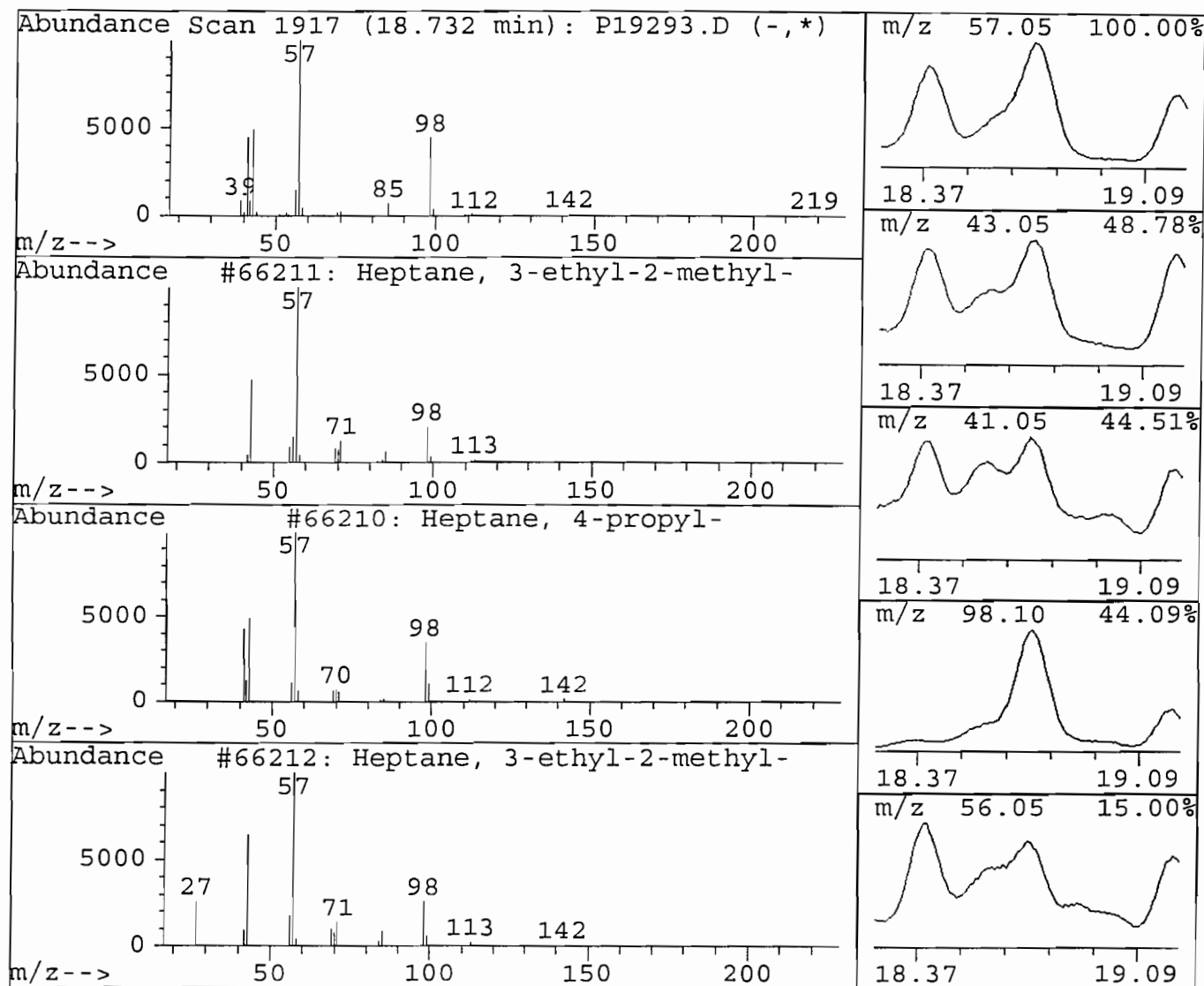
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
18.73	95.36 ug/L	14597820	Chlorobenzene-d5	16.34	
Hit# of 13	Tentative ID		Ref#	CAS#	Qual
1	Heptane, 3-ethyl-2-methyl-		66211	014676-29-0	42
2	Heptane, 4-propyl-		66210	003178-29-8	39
3	Heptane, 3-ethyl-2-methyl-		66212	014676-29-0	38
4	Butane, 2,2,3-trimethyl-		63436	000464-06-2	35
5	Heptane, 4-(1-methylethyl)-		8084	052896-87-4	33



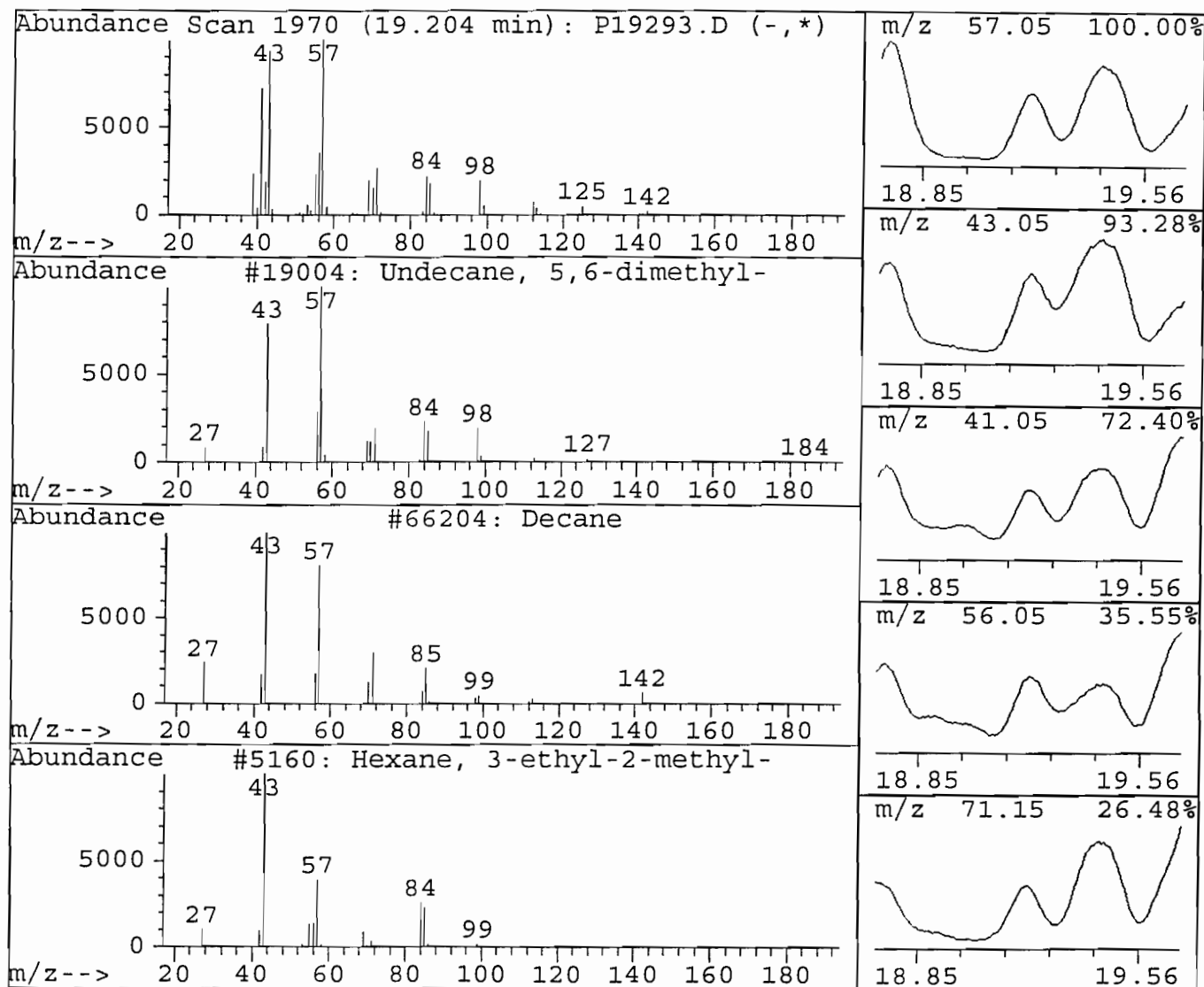
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
19.20	89.75 ug/L	13738941	Chlorobenzene-d5	16.34	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Undecane, 5,6-dimethyl-		19004	017615-91-7	86
2	Decane		66204	000124-18-5	47
3	Hexane, 3-ethyl-2-methyl-		5160	016789-46-1	46
4	Decane		66206	000124-18-5	46
5	Heptane, 3-ethyl-2-methyl-		8080	014676-29-0	46



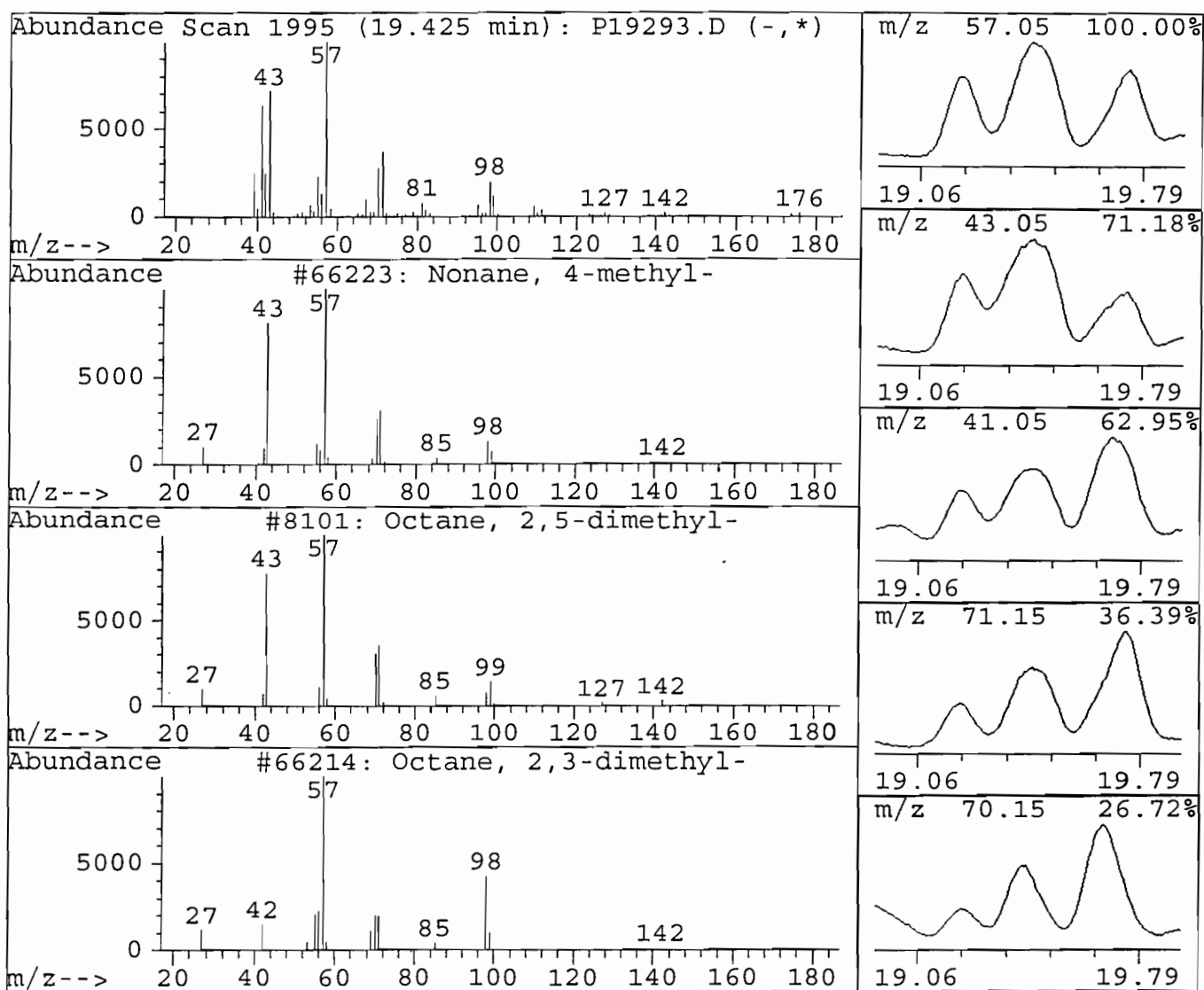
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
19.42	167.30 ug/L	25612026	Chlorobenzene-d5	16.34	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Nonane, 4-methyl-		66223	017301-94-9	64
2	Octane, 2,5-dimethyl-		8101	015869-89-3	49
3	Octane, 2,3-dimethyl-		66214	007146-60-3	47
4	Heptane, 2-methyl-		64218	000592-27-8	47
5	Octane, 2,5-dimethyl-		66225	015869-89-3	47



Library Search Compound Report

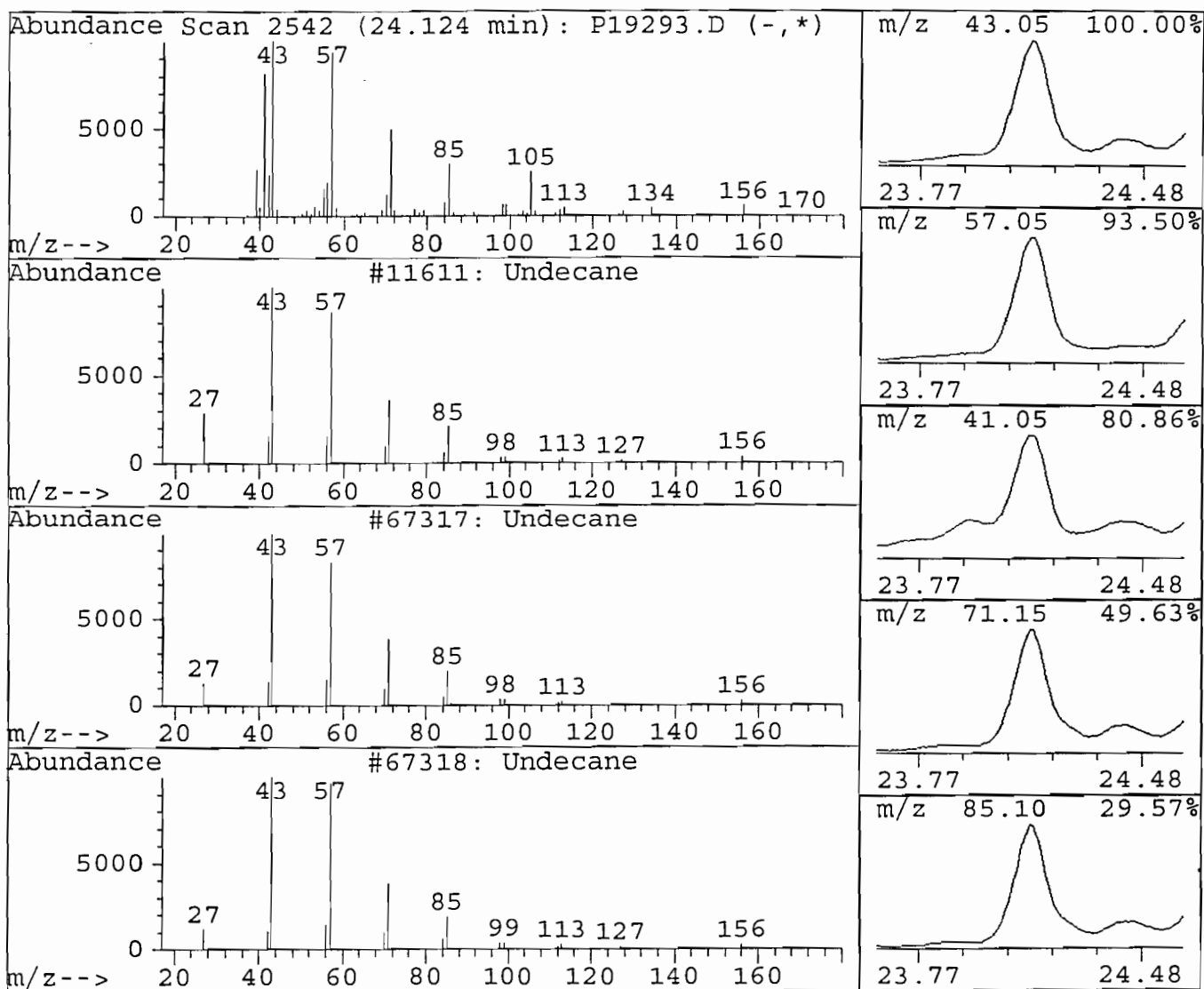
Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.12	73.28 ug/L	134688796	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane	11611	001120-21-4	95
2	Undecane	67317	001120-21-4	76
3	Undecane	67318	001120-21-4	70
4	Undecane	67319	001120-21-4	64
5	Tridecane	69020	000629-50-5	64



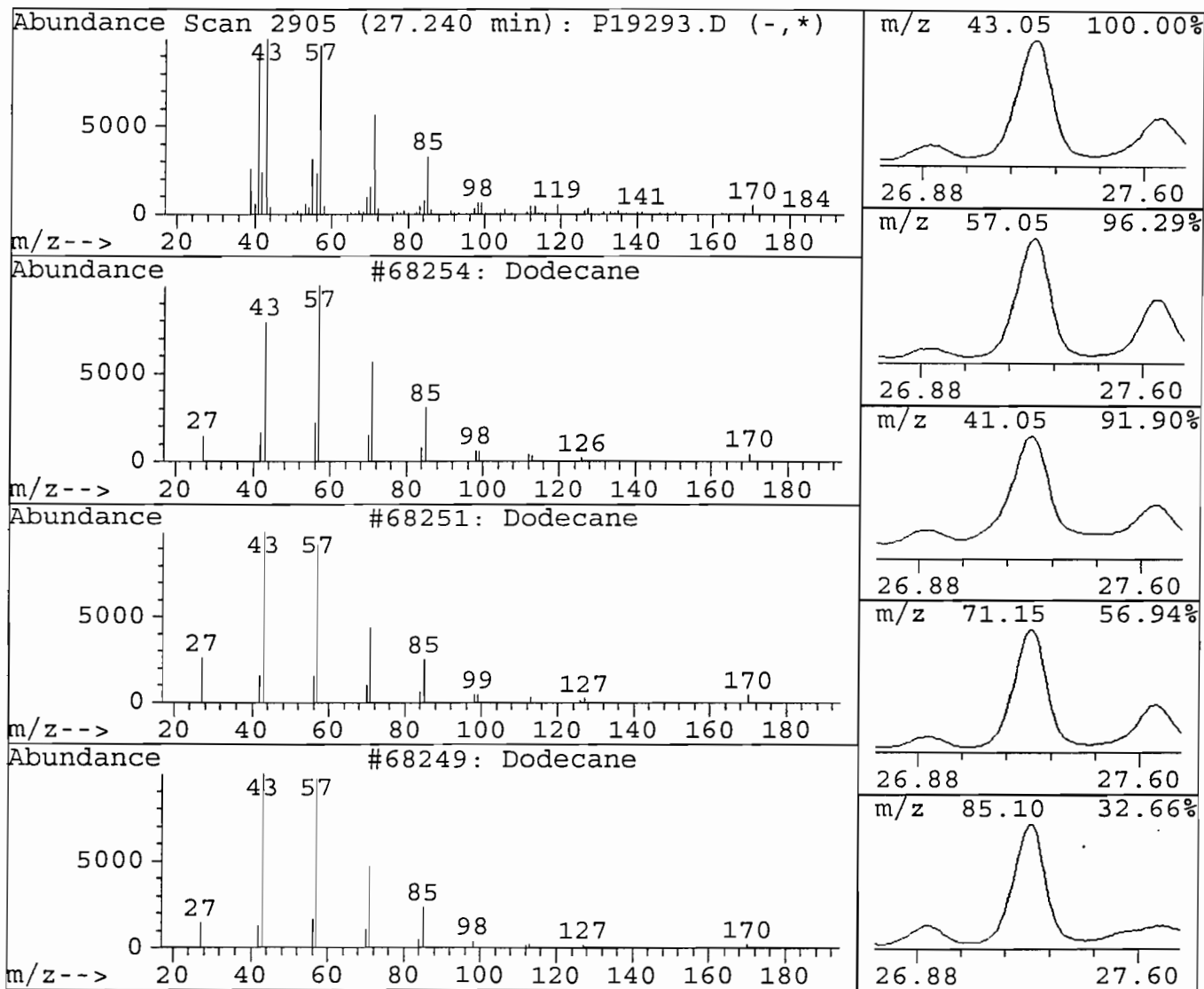
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19293.D
Acq Time : 22 Oct 99 4:52 pm
Sample : 13827ASP-88013
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.24	107.72 ug/L	197981858	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		68254	000112-40-3	94
2	Dodecane		68251	000112-40-3	94
3	Dodecane		68249	000112-40-3	87
4	Dodecane		68253	000112-40-3	81
5	Tridecane		69019	000629-50-5	80



1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-017-SS8DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88013DL
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19307.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 10.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	17.67	1500	J
2. 2051-30-1	Octane, 2,6-dimethyl-	18.33	1100	J
3.	Unknown	18.51	610	J
4.	Unknown	18.67	610	J
5.	Unknown	19.14	560	J
6.	Unknown	22.73	520	J
7. 1120-21-4	Undecane	24.04	610	J
8. 112-40-3	Dodecane	27.16	1100	J
9. 17301-23-4	Undecane, 2,6-dimethyl-	27.56	540	J
10. 629-50-5	Tridecane	30.06	710	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
 Acq Time : 25 Oct 99 9:25 pm
 Sample : 13827ASP-88013 1:10 DIL
 Misc : 5G/5ML
 Quant Time: Oct 26 12:37 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	849610	50.00	ug/L	-0.03
43) Chlorobenzene-d5	16.30	117	897999	50.00	ug/L	-0.03
58) 1,4-dichlorobenzene-d4	22.55	152	473083	50.00	ug/L	-0.04

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.94	113	690732	48.80	ug/L	97.59%
30) 1,2-Dichlorethane-d4	8.64	65	546886	49.17	ug/L	98.34%
38) Toluene-d8	12.73	98	809265	48.84	ug/L	97.67%
42) 4-Bromofluorobenzene	19.43	95	910615	53.53	ug/L	107.06%

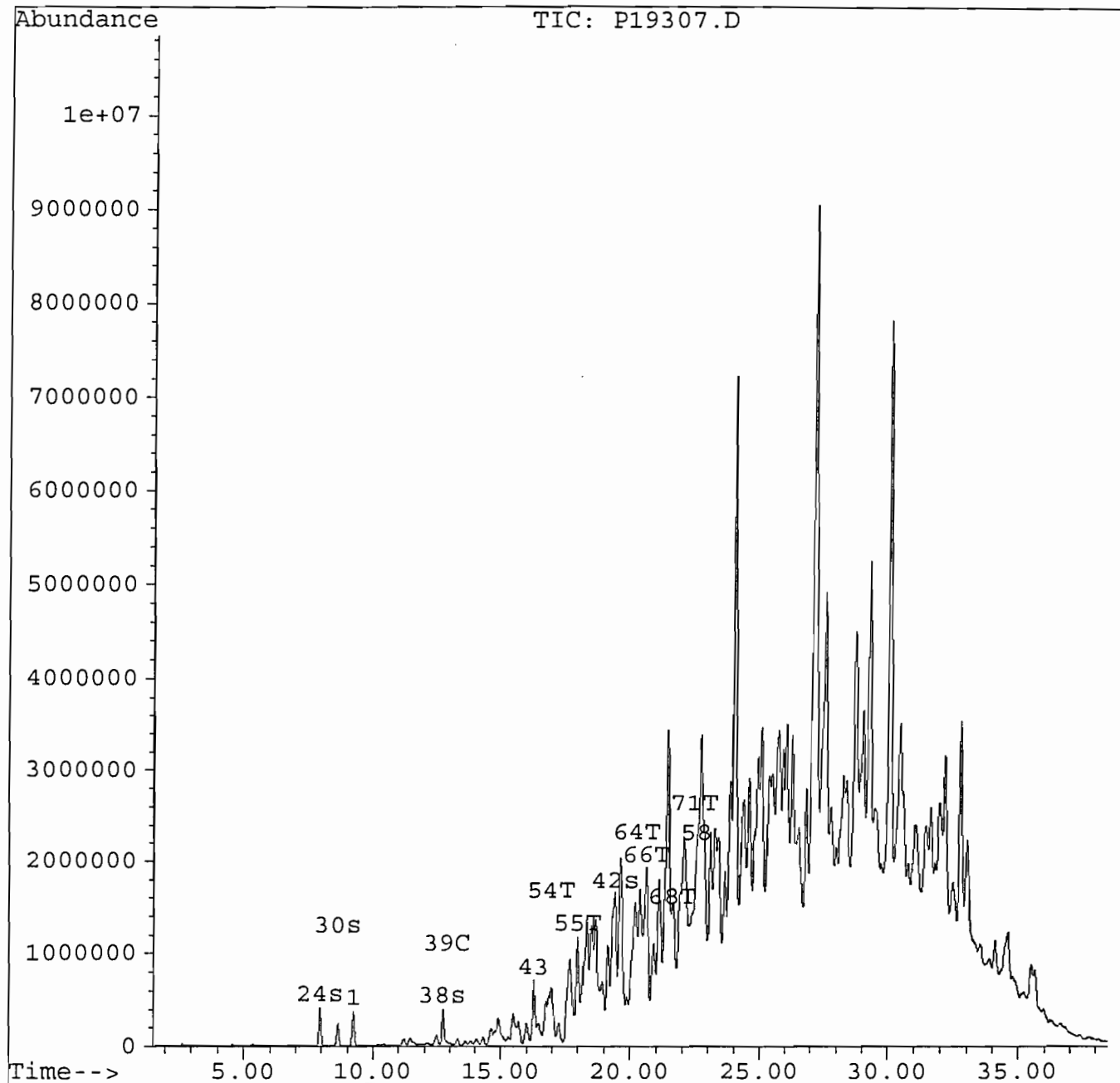
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
39) toluene	12.89	91	47225	2.83	ug/L	90
54) m&p-xylenes	16.97	106	246463	29.34	ug/L	99
55) o-xylene	17.98	91	1151087	47.42	ug/L	98
64) 2-chlorotoluene	20.27	126	173162	34.36	ug/L	77
66) 1,3,5-trimethylbenzene	20.62	105	1113210	59.55	ug/L	91
68) 1,2,4-trimethylbenzene	21.60	105	920489	47.31	ug/L	98
71) 4-isopropyltoluene	22.47	119	357559	16.05	ug/L	93

Quantitation Report

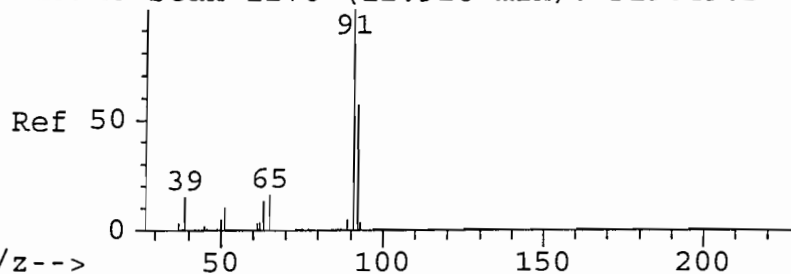
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML
Quant Time: Oct 26 12:37 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



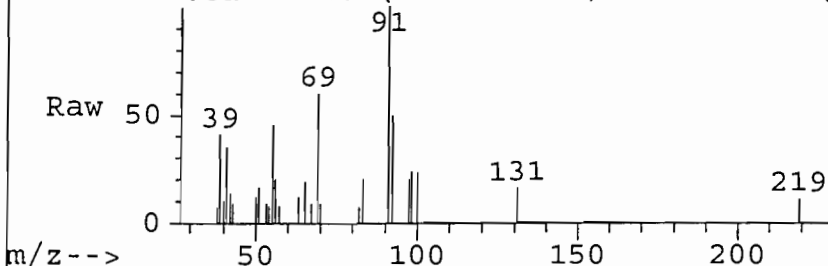
AbundanceScan 1270 (12.928 min): P19049.D (



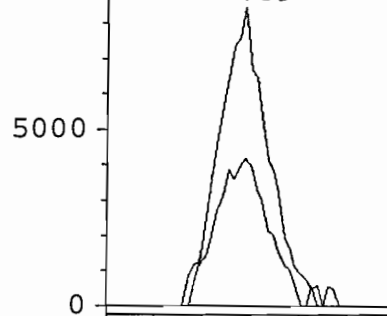
#39
toluene
Concen: 2.83 ug/L
RT: 12.89 min Scan# 1266
Delta R.T. -0.04 min
Lab File: P19307.D
Acq: 25 Oct 99 9:25 pm

Tgt	Ion:91	Resp:	47225
Ion	Ratio	Lower	Upper
91	100		
92	49.7	40.2	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

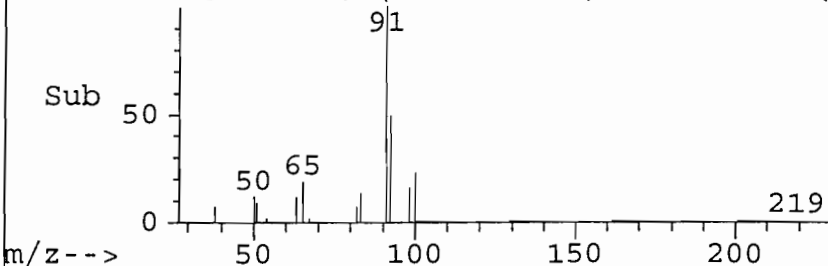
AbundanceScan 1266 (12.890 min): P19307.D (



AbundanceIon 91.00 (90.
10000 Ion 92.00 (91.
12.89

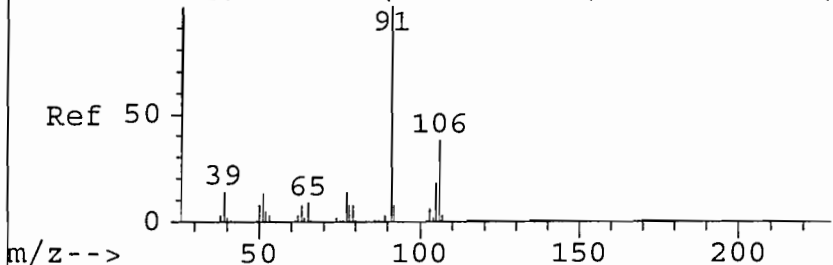


AbundanceScan 1266 (12.890 min): P19307.D (



Time-->12.66 13.06

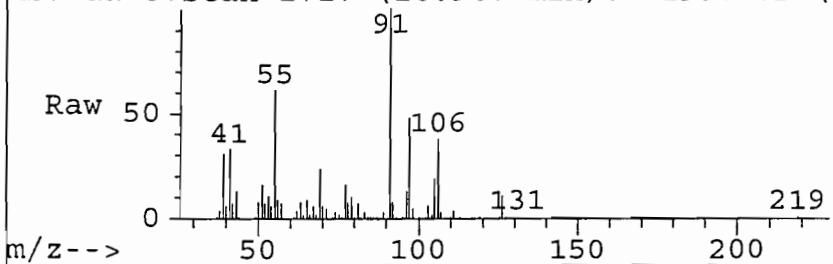
AbundanceScan 1721 (17.007 min): P19049.D (



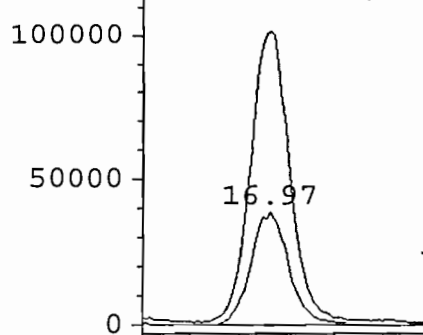
#54
m&p-xylenes
Concen: 29.34 ug/L
RT: 16.97 min Scan# 1717
Delta R.T. -0.04 min
Lab File: P19307.D
Acq: 25 Oct 99 9:25 pm

Tgt	Ion:106	Resp:	246463
Ion	Ratio	Lower	Upper
106	100		
91	261.3	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

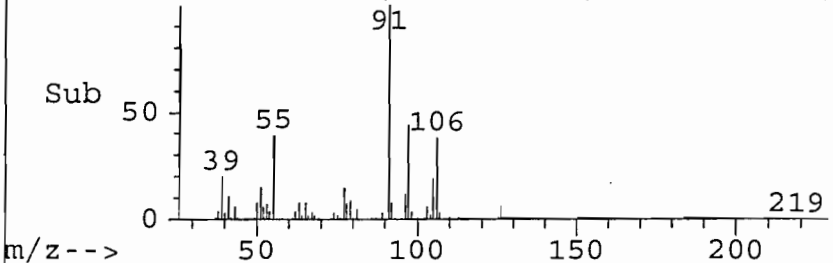
AbundanceScan 1717 (16.967 min): P19307.D (



AbundanceIon 106.00 (105
100000 Ion 91.00 (90.

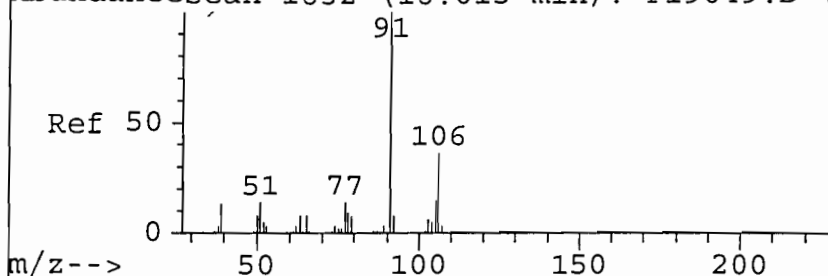


AbundanceScan 1717 (16.967 min): P19307.D (



Time-->16.67 17.23

AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 47.42 ug/L

RT: 17.98 min Scan# 1831

Delta R.T. -0.04 min

Lab File: P19307.D

Acq: 25 Oct 99 9:25 pm

Tgt Ion:91 Resp: 1151087

Ion Ratio Lower Upper

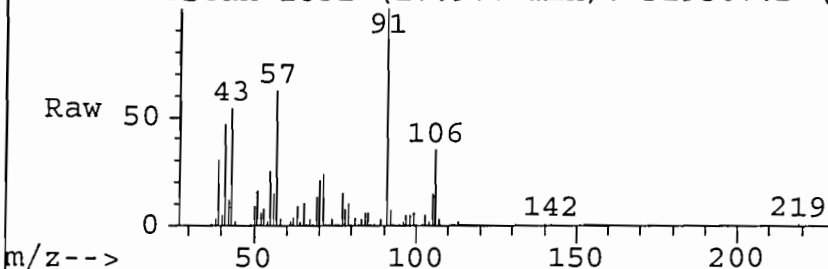
91 100

106 35.3 25.4 47.2

105 15.4 10.1 18.8

0 0.0 0.0 0.0

AbundanceScan 1831 (17.977 min): P19307.D (



AbundanceIon 91.00 (90.

Ion 106.00 (105

Ion 105.00 (104

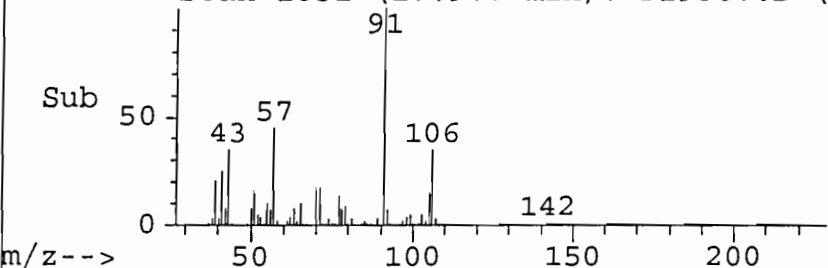
200000

17.98

100000

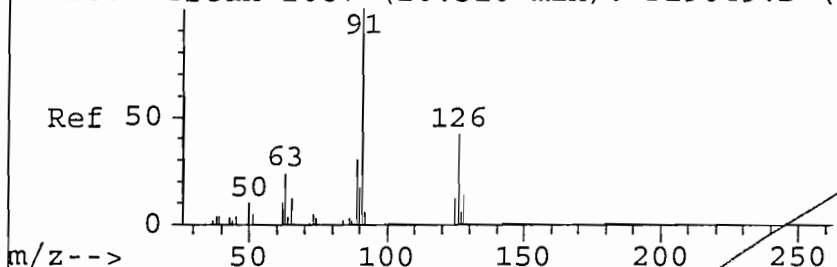
0

AbundanceScan 1831 (17.977 min): P19307.D (



Time-->17.66 18.23

AbundanceScan 2087 (20.310 min): P19049.D (



#64

2-chlorotoluene

Concen: 34.36 ug/L

RT: 20.27 min Scan# 2091

Delta R.T. -0.04 min

Lab File: P19307.D

Acq: 25 Oct 99 9:25 pm

Tgt Ion:126 Resp: 173162

Ion Ratio Lower Upper

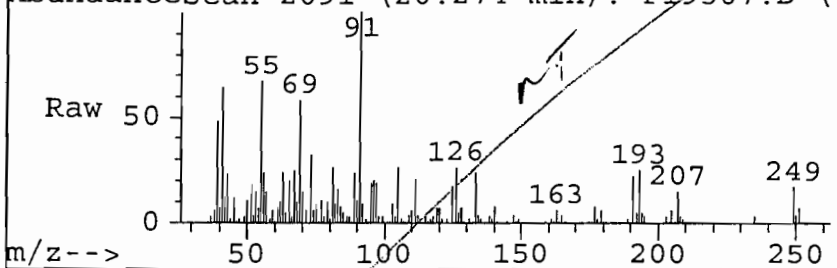
126 100

63 90.7 25.0 117.8

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2091 (20.274 min): P19307.D (



AbundanceIon 126.00 (125

Ion 63.00 (62.

20.27

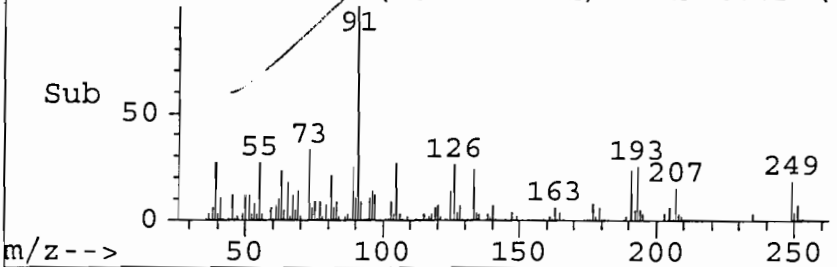
30000

20000

10000

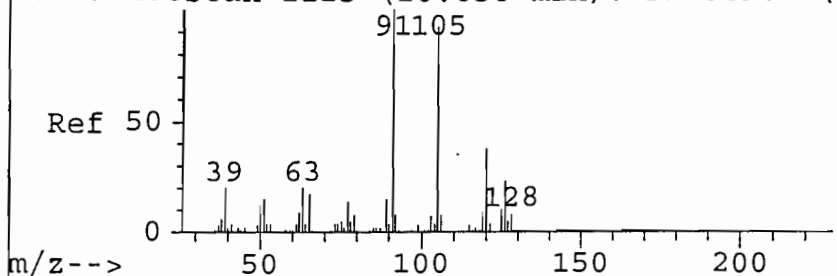
0

AbundanceScan 2091 (20.274 min): P19307.D (



Time-->19.97 20.49

AbundanceScan 2125 (20.658 min): P19049.D (

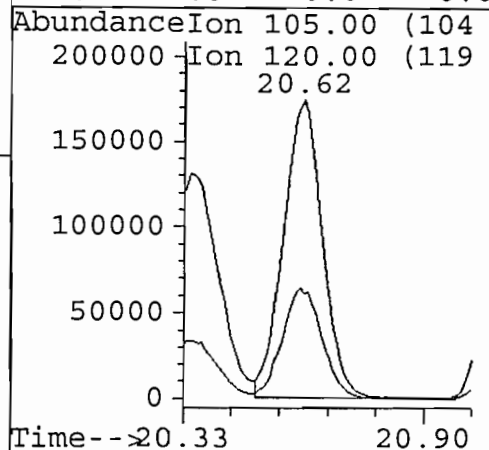
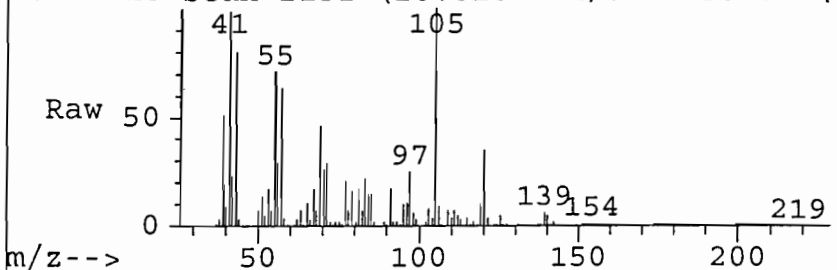


#66

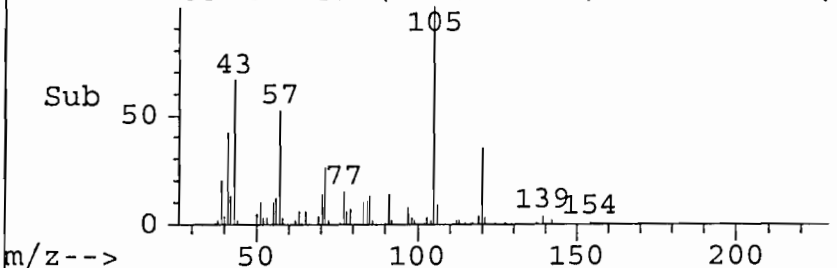
1,3,5-trimethylbenzene
Concen: 59.55 ug/L
RT: 20.62 min Scan# 2131
Delta R.T. -0.04 min
Lab File: P19307.D
Acq: 25 Oct 99 9:25 pm

Tgt Ion:105	Resp: 1113210
Ion Ratio	Lower Upper
105 100	
120 35.4	28.6 53.0
0 0.0	0.0 0.0
0 0.0	0.0 0.0

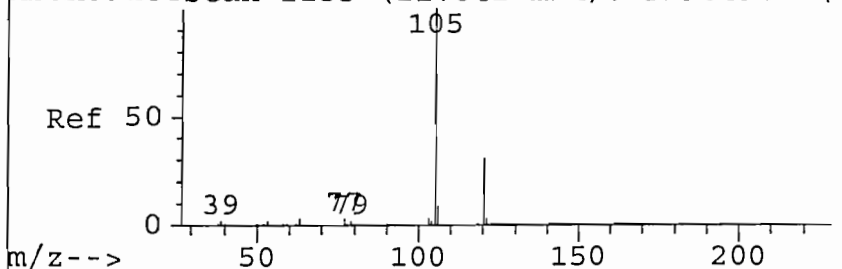
AbundanceScan 2131 (20.616 min): P19307.D (



AbundanceScan 2131 (20.616 min): P19307.D (



AbundanceScan 2233 (21.642 min): P19049.D (

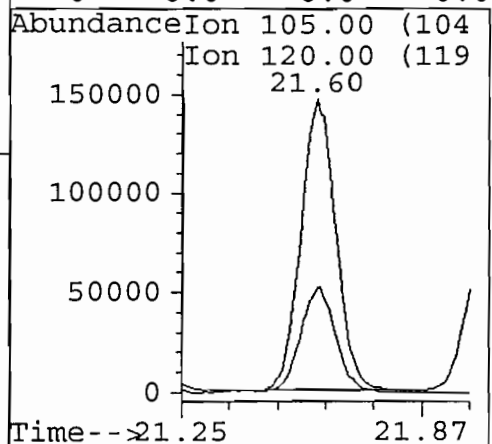
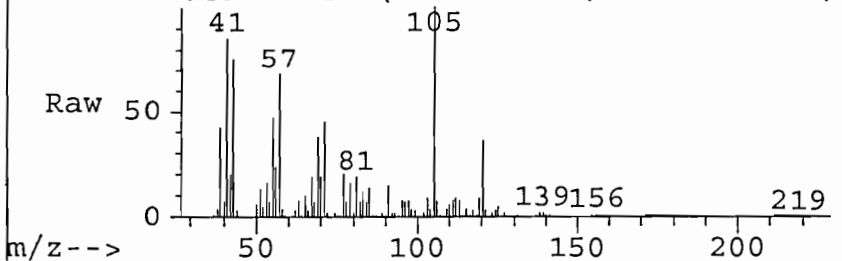


#68

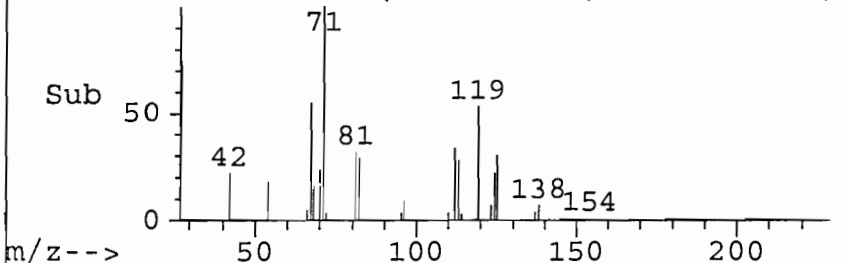
1,2,4-trimethylbenzene
Concen: 47.31 ug/L
RT: 21.60 min Scan# 2244
Delta R.T. -0.04 min
Lab File: P19307.D
Acq: 25 Oct 99 9:25 pm

Tgt Ion:105	Resp: 920489
Ion Ratio	Lower Upper
105 100	
120 35.8	26.0 48.2
0 0.0	0.0 0.0
0 0.0	0.0 0.0

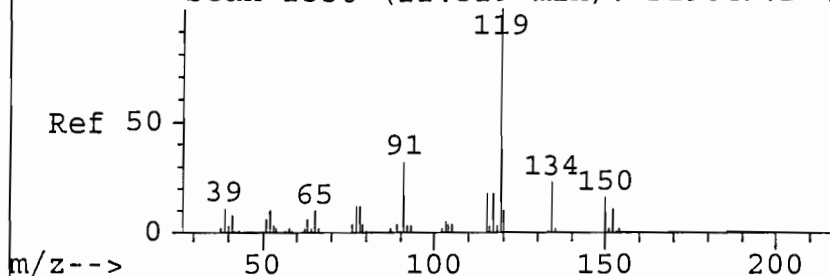
AbundanceScan 2244 (21.600 min): P19307.D (



AbundanceScan 2244 (21.600 min): P19307.D (



AbundanceScan 2330 (22.529 min): P19049.D (



#71

4-isopropyltoluene

Concen: 16.05 ug/L

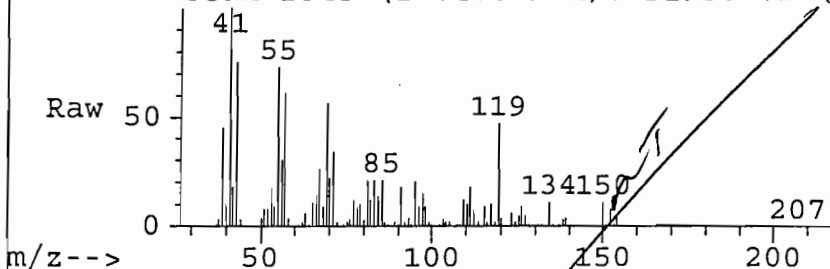
RT: 22.47 min Scan# 2345

Delta R.T. -0.06 min

Lab File: P19307.D

Acq: 25 Oct 99 9:25 pm

AbundanceScan 2345 (22.470 min): P19307.D (



Tgt Ion:119 Resp: 357559

Ion Ratio Lower Upper

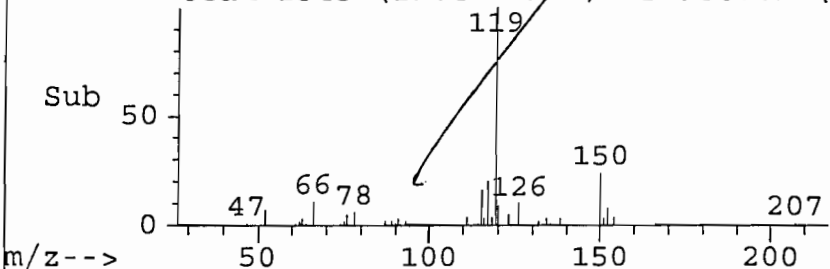
119 100

134 23.2 15.9 29.5

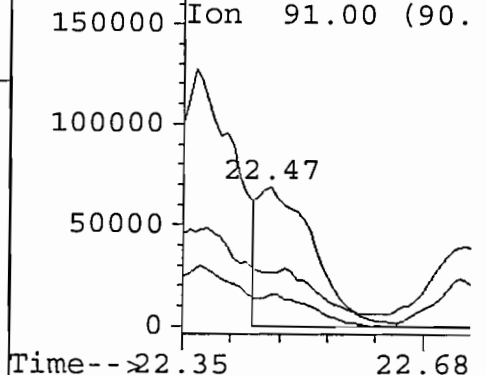
91 38.9 22.6 42.0

0 0.0 0.0 0.0

AbundanceScan 2345 (22.470 min): P19307.D (



AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.



Library Search Compound Report

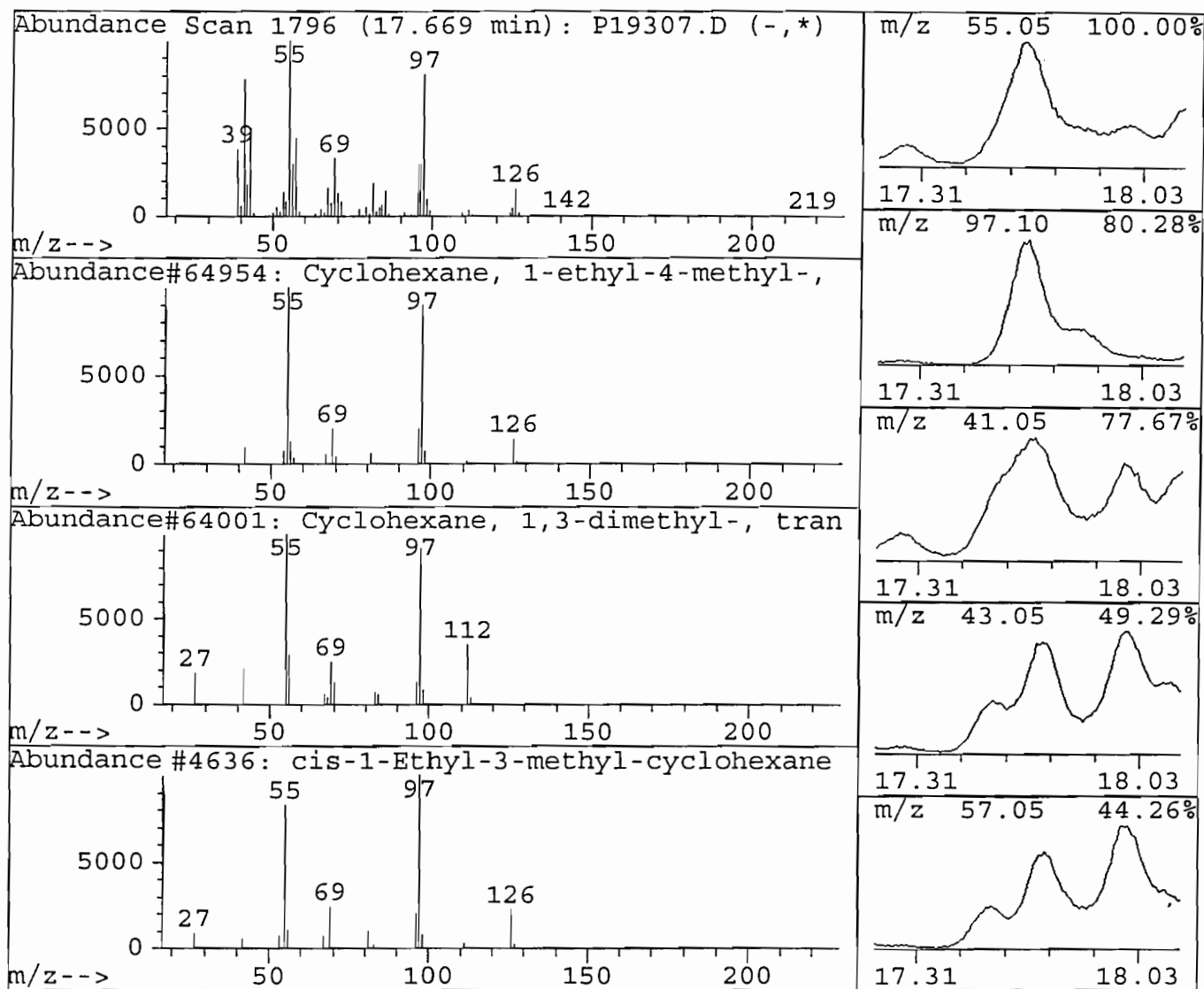
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
17.67	141.71 ug/L	12016888	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1-ethyl-4-methyl-, tra	64954	006236-88-0	64
2	Cyclohexane, 1,3-dimethyl-, trans-	64001	002207-03-6	50
3	cis-1-Ethyl-3-methyl-cyclohexane	4636	019489-10-2	50
4	Cyclohexane, 1,4-dimethyl-	2672	000589-90-2	50
5	Cyclopentane, 1,2-dimethyl-3-(1-met	7606	000489-20-3	50



Library Search Compound Report

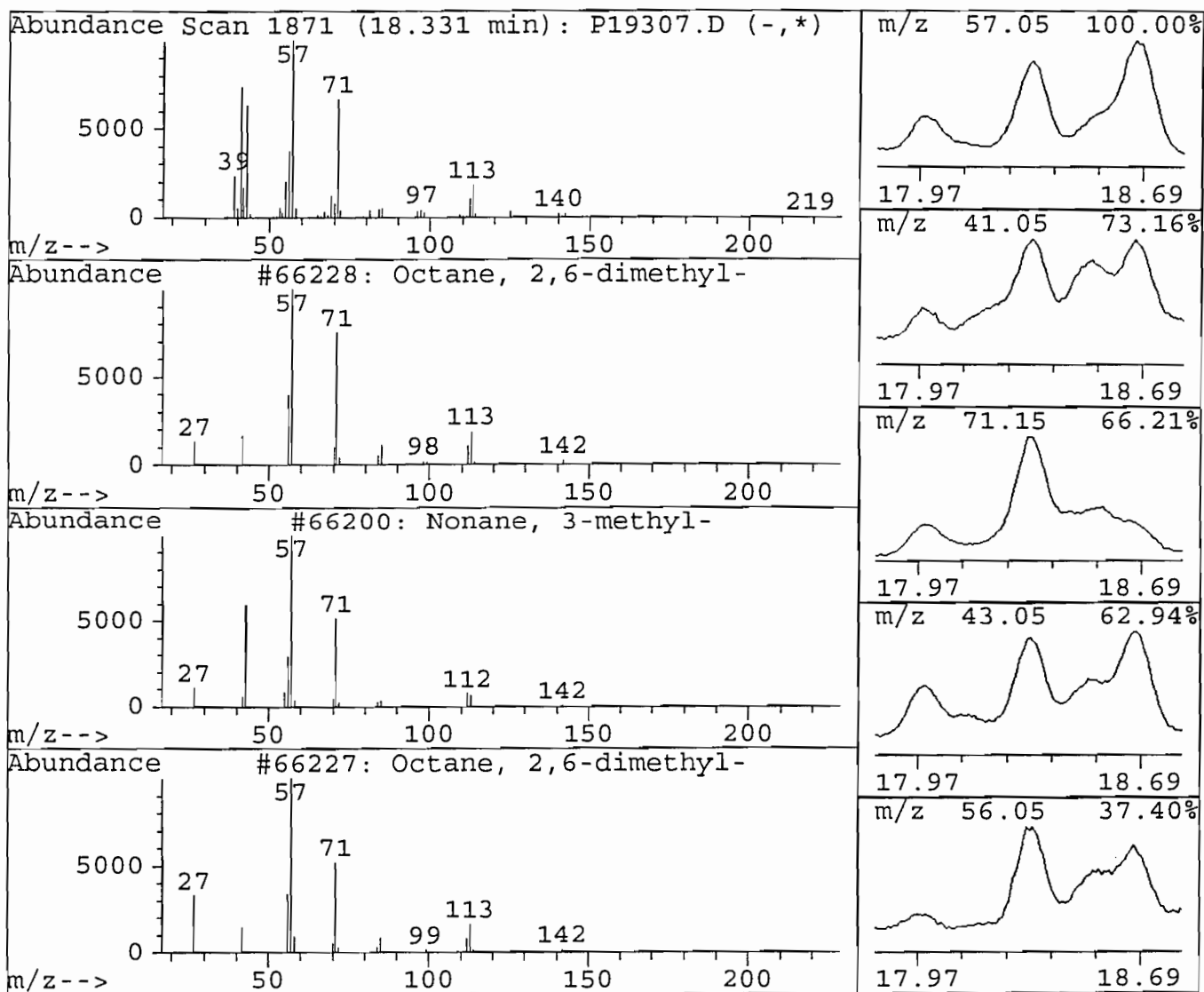
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
18.33	106.11 ug/L	8998441	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane, 2,6-dimethyl-	66228	002051-30-1	93
2	Nonane, 3-methyl-	66200	005911-04-6	90
3	Octane, 2,6-dimethyl-	66227	002051-30-1	90
4	Nonane, 3-methyl-	8075	005911-04-6	87
5	Octane, 3,6-dimethyl-	8109	015869-94-0	86



Library Search Compound Report

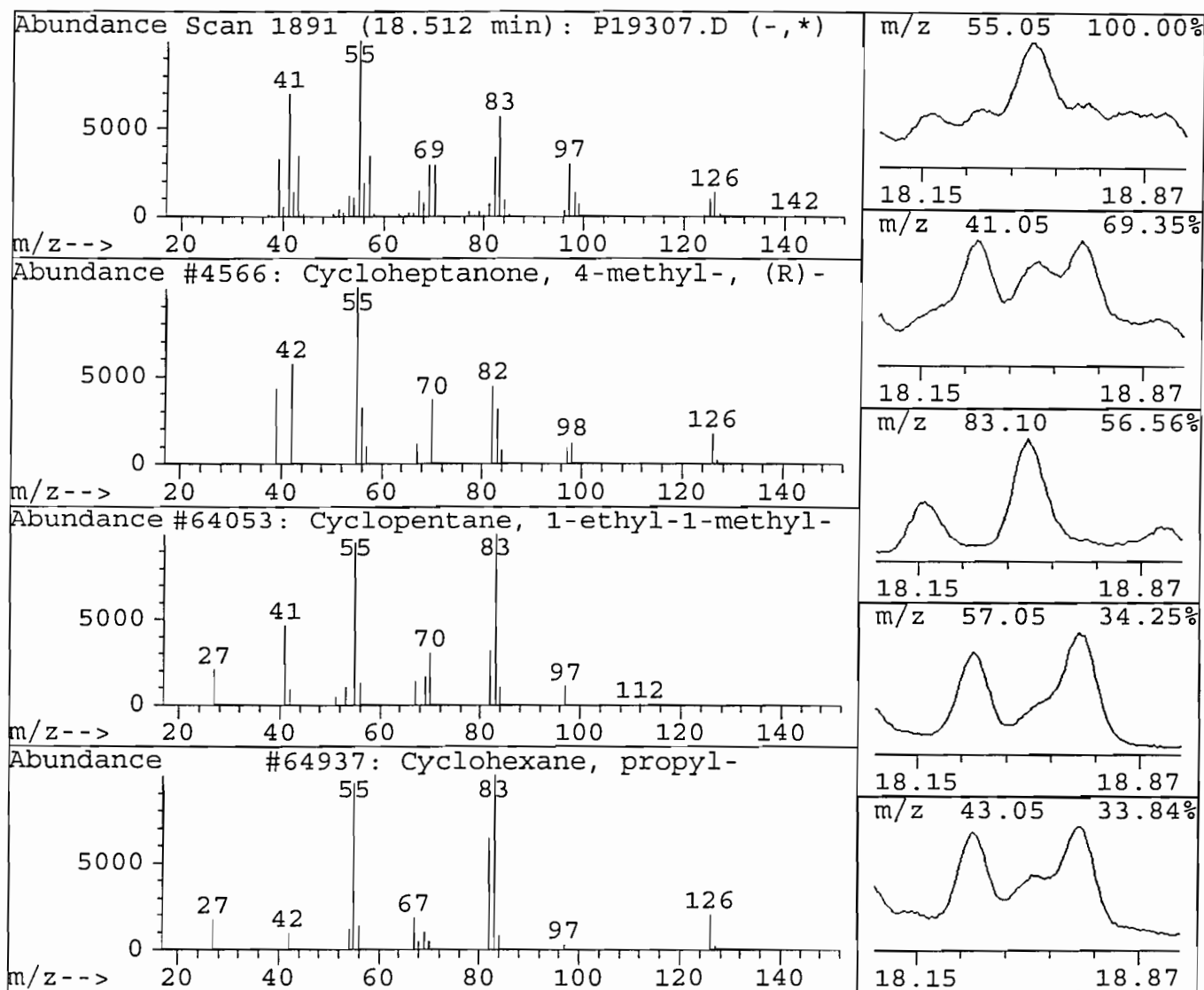
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
18.51	58.94 ug/L	4998162	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cycloheptanone, 4-methyl-, (R)-	4566	013609-59-1	58
2	Cyclopentane, 1-ethyl-1-methyl-	64053	016747-50-5	47
3	Cyclohexane, propyl-	64937	001678-92-8	43
4	Cyclopropane, 1,1,2,2-tetramethyl-	1363	004127-47-3	38
5	1-Pentene, 3-ethyl-3-methyl-	2692	006196-60-7	35



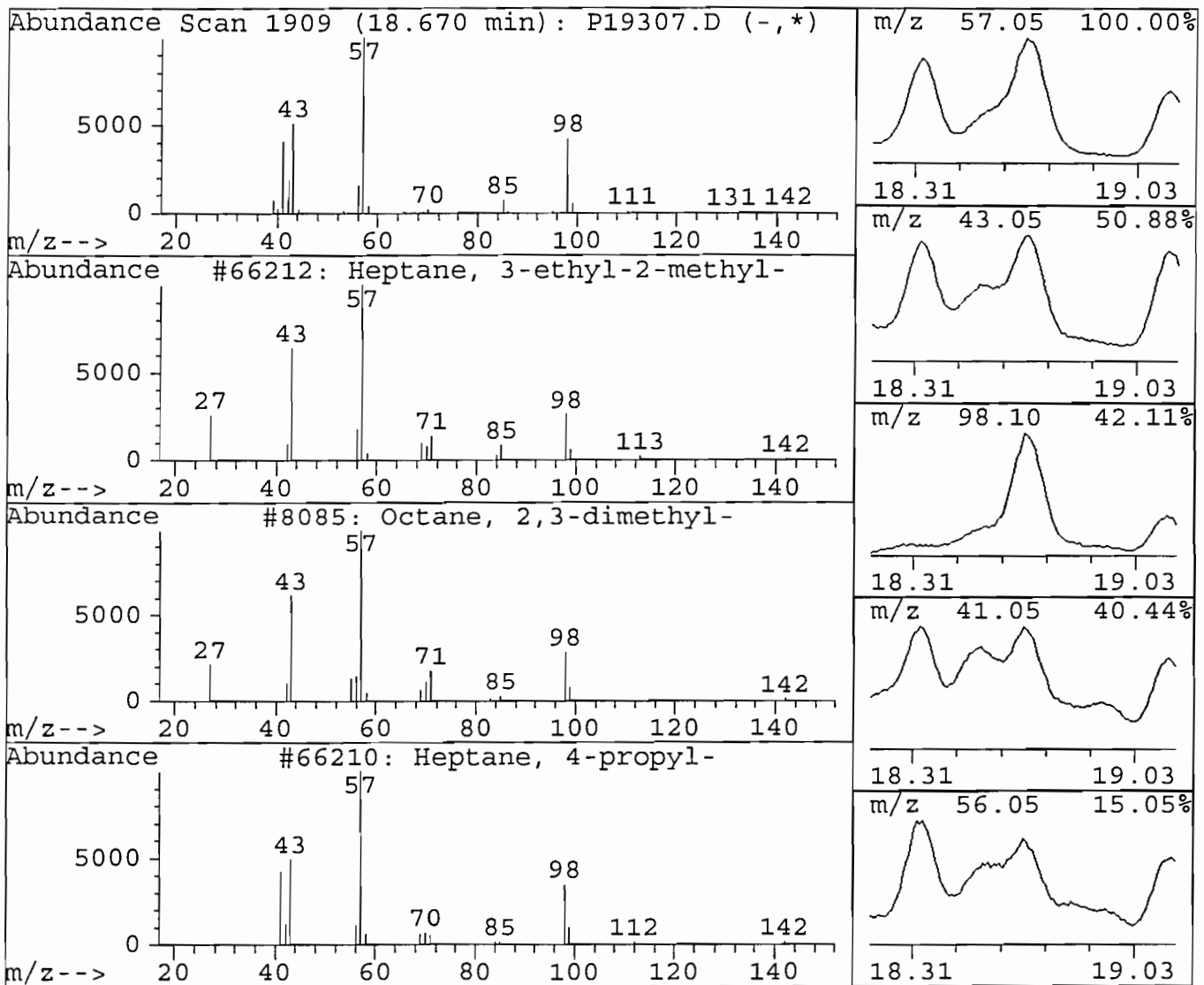
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
18.67	59.21 ug/L	5021041	Chlorobenzene-d5	16.30	
Hit# of 10	Tentative ID		Ref#	CAS#	Qual
1	Heptane, 3-ethyl-2-methyl-		66212	014676-29-0	58
2	Octane, 2,3-dimethyl-		8085	007146-60-3	50
3	Heptane, 4-propyl-		66210	003178-29-8	40
4	Heptane, 3-ethyl-2-methyl-		66211	014676-29-0	39
5	Heptane, 4-(1-methylethyl)-		8084	052896-87-4	37



Library Search Compound Report

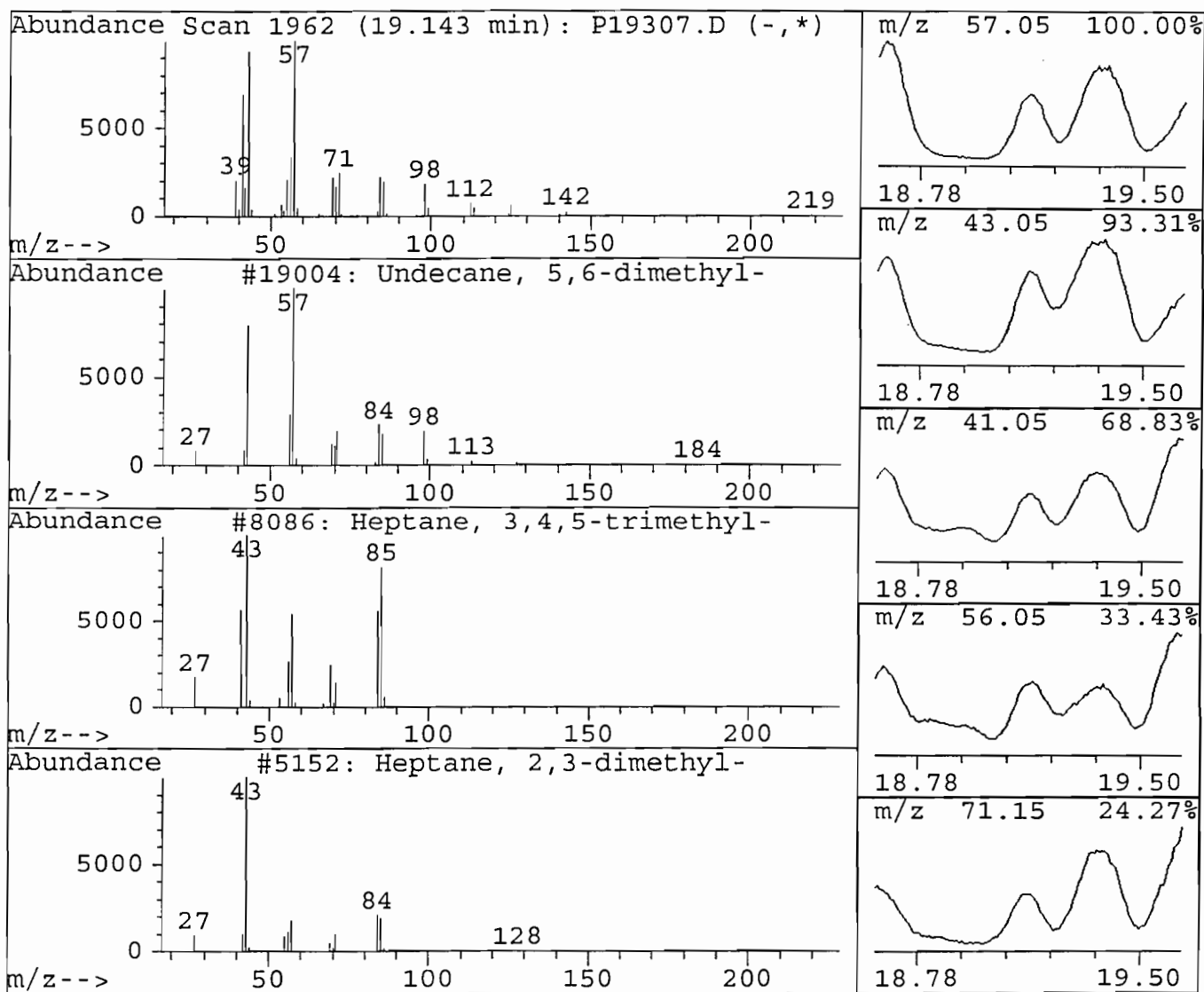
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
19.14	54.42 ug/L	4615278	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane, 5,6-dimethyl-	19004	017615-91-7	78
2	Heptane, 3,4,5-trimethyl-	8086	020278-89-1	53
3	Heptane, 2,3-dimethyl-	5152	003074-71-3	53
4	Decane, 2,5,6-trimethyl-	19019	062108-23-0	53
5	Hexane, 2,4-dimethyl-	3089	000589-43-5	46



Library Search Compound Report

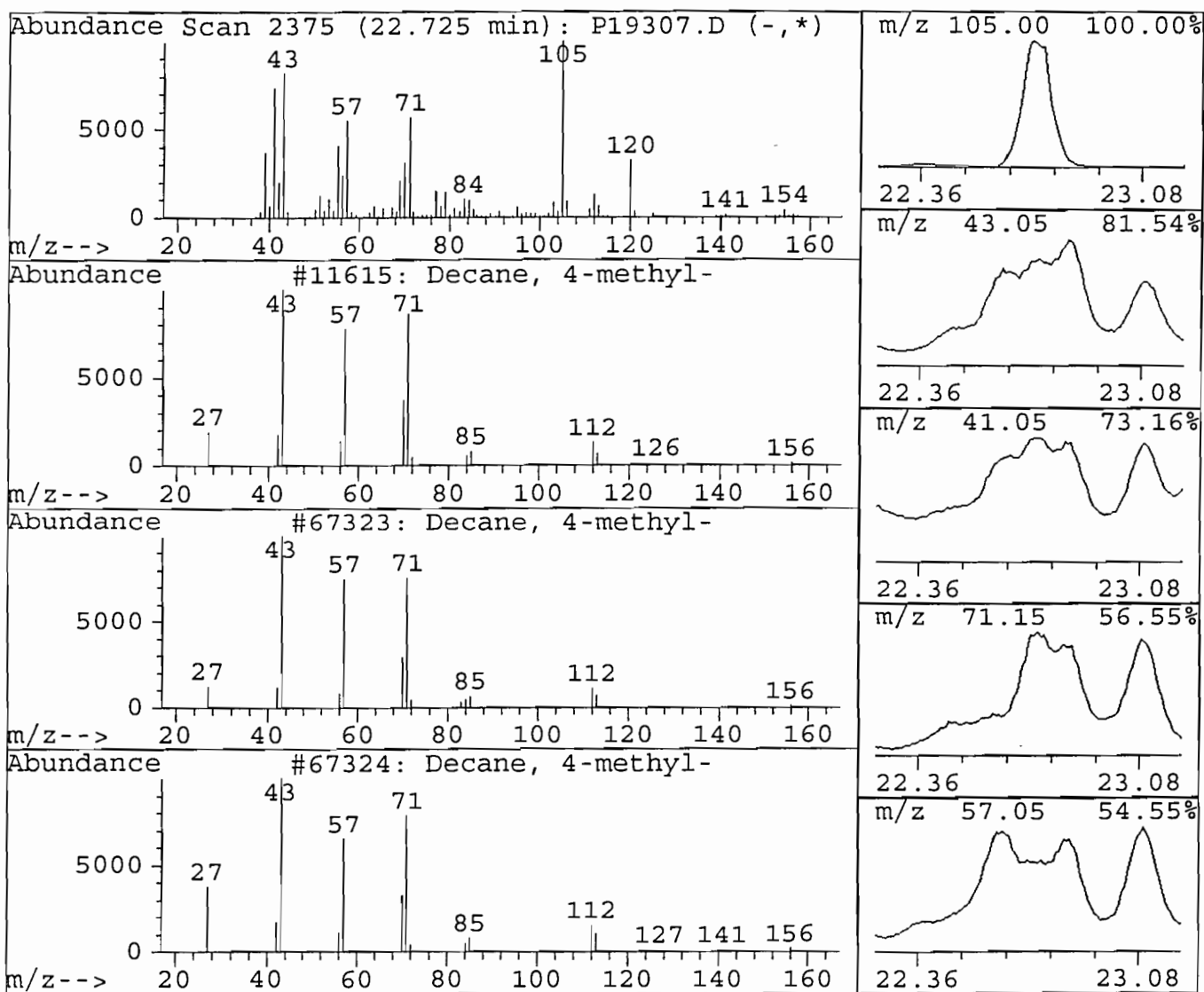
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.73	50.00 ug/L	34214206	1,4-dichlorobenzene-d4	22.55

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Decane, 4-methyl-	11615	002847-72-5	45
2	Decane, 4-methyl-	67323	002847-72-5	43
3	Decane, 4-methyl-	67324	002847-72-5	41
4	Benzene, (1-methylethyl)-	64553	000098-82-8	25
5	Benzene, (1-methylethyl)-	64552	000098-82-8	25



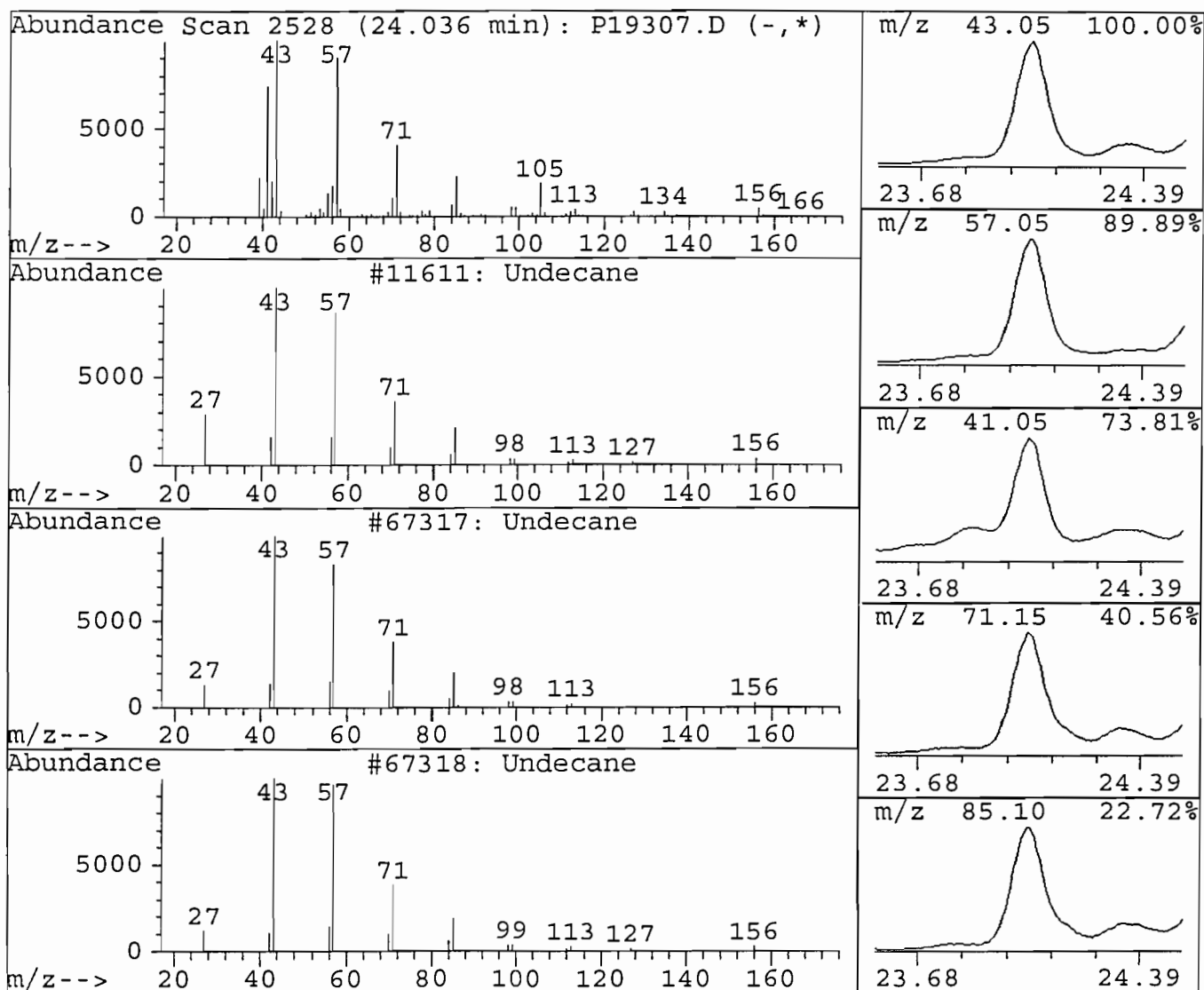
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.04	59.43 ug/L	40663922	1,4-dichlorobenzene-d4	22.55	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Undecane		11611	001120-21-4	95
2	Undecane		67317	001120-21-4	94
3	Undecane		67318	001120-21-4	93
4	Undecane		67319	001120-21-4	74
5	Decane		66205	000124-18-5	72



Library Search Compound Report

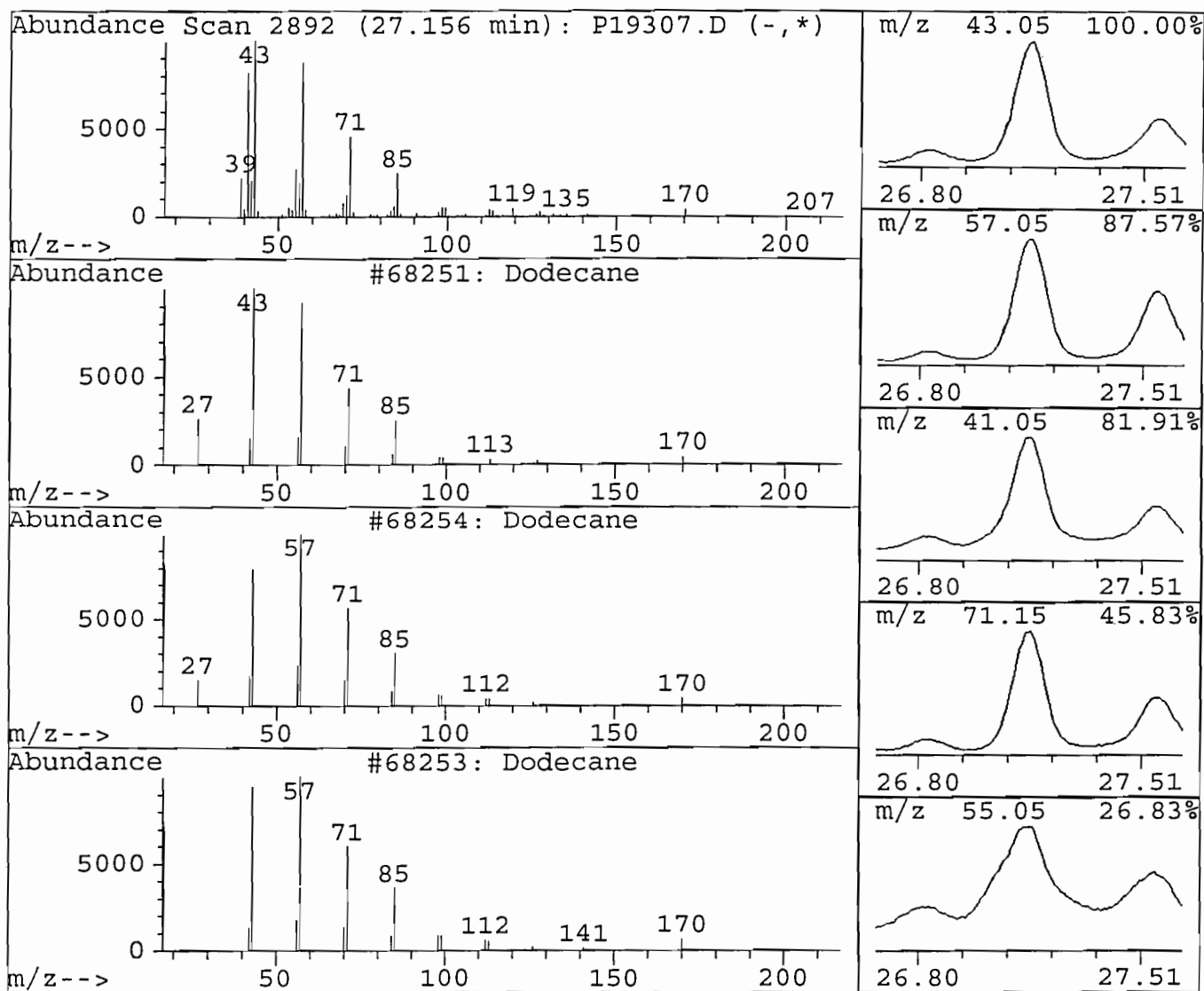
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.16	109.99 ug/L	75267192	1,4-dichlorobenzene-d4	22.55

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	68251	000112-40-3	95
2	Dodecane	68254	000112-40-3	93
3	Dodecane	68253	000112-40-3	93
4	Dodecane	68249	000112-40-3	87
5	Undecane	11611	001120-21-4	86



Library Search Compound Report

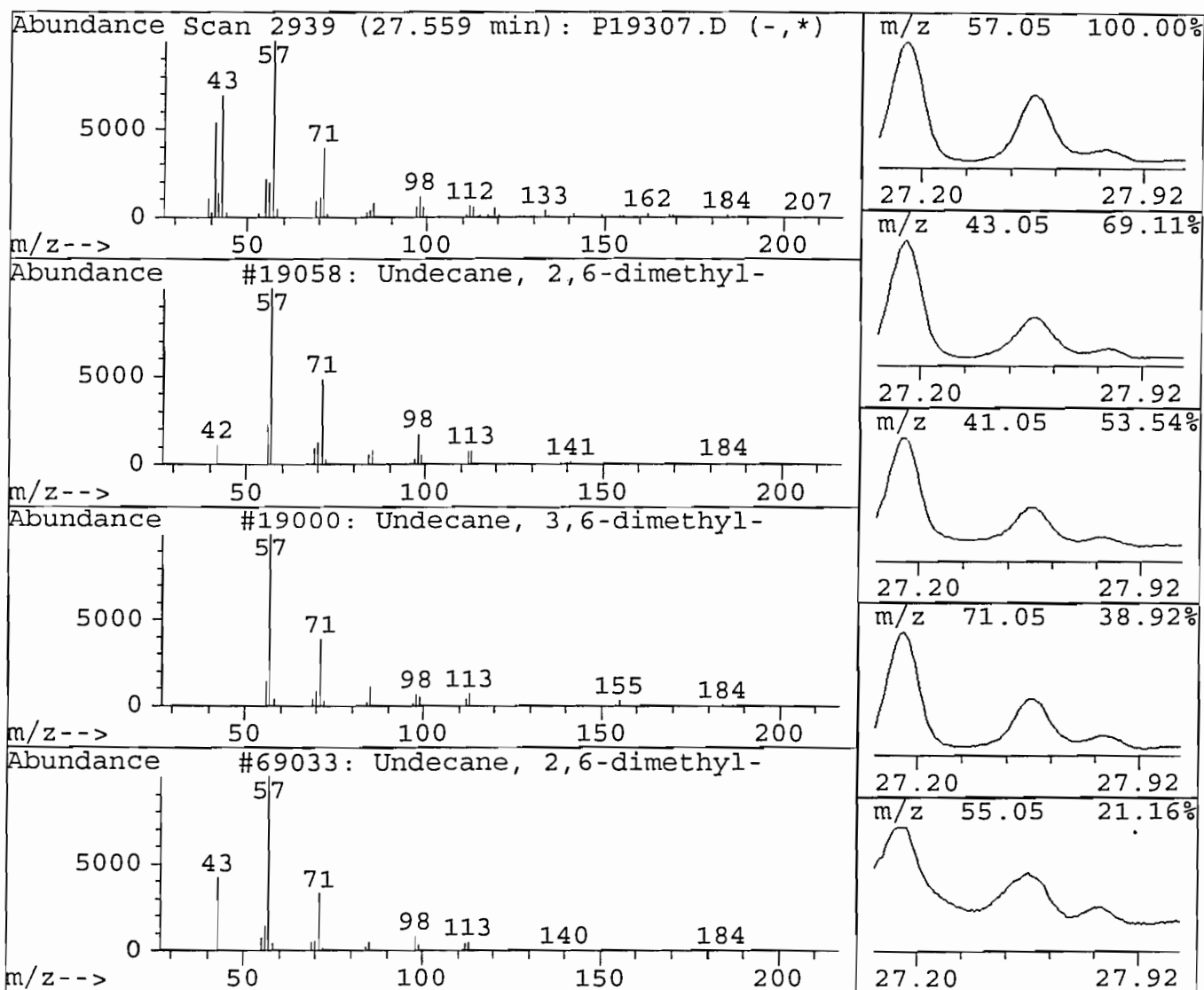
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.56	52.33 ug/L	35807501	1,4-dichlorobenzene-d4	22.55

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane, 2,6-dimethyl-	19058	017301-23-4	94
2	Undecane, 3,6-dimethyl-	19000	017301-28-9	83
3	Undecane, 2,6-dimethyl-	69033	017301-23-4	80
4	Undecane, 2,6-dimethyl-	69032	017301-23-4	76
5	Dodecane, 2,7,10-trimethyl-	26005	074645-98-0	53



Library Search Compound Report

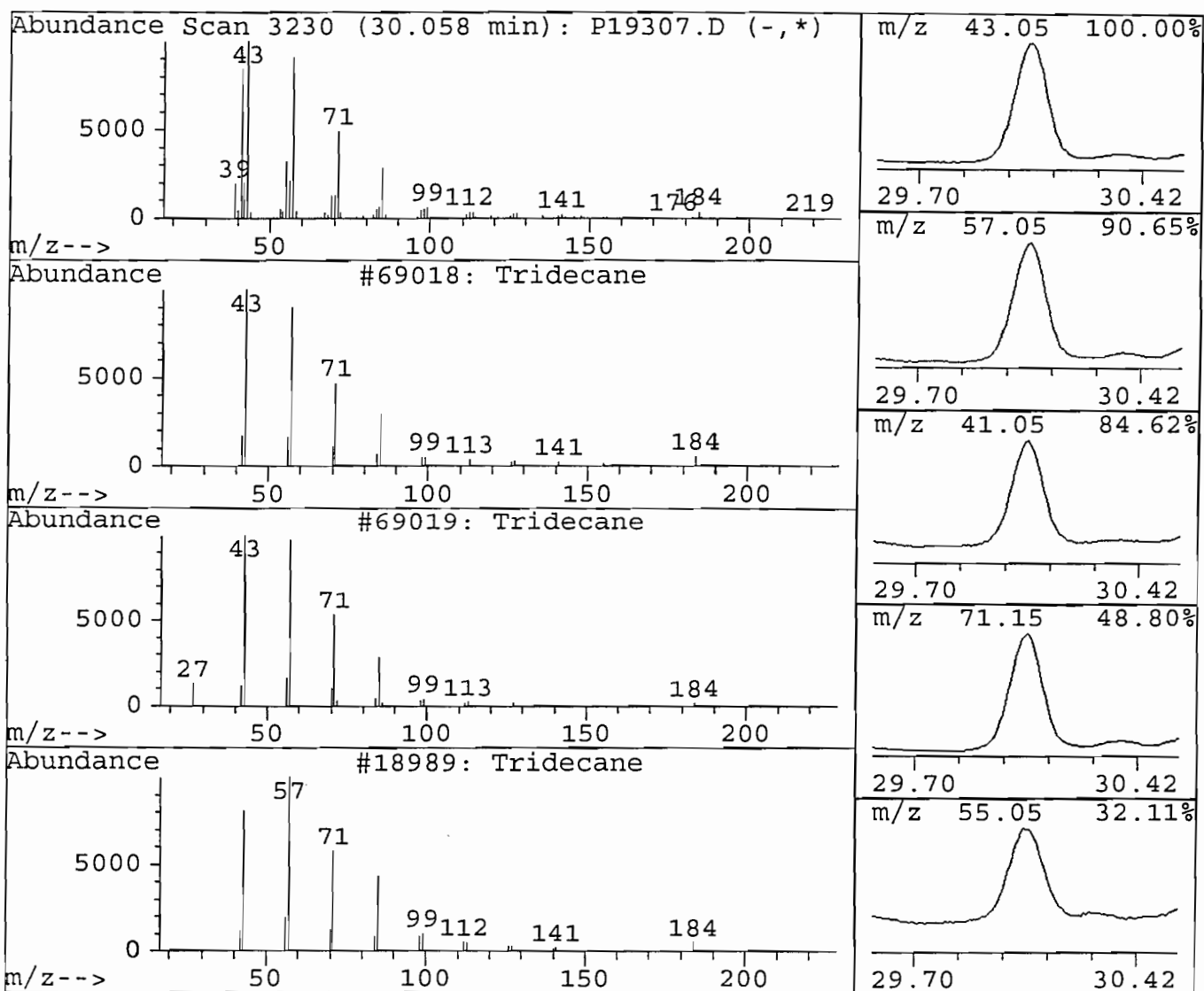
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.06	68.45 ug/L	46835894	1,4-dichlorobenzene-d4	22.55

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	69018	000629-50-5	96
2	Tridecane	69019	000629-50-5	95
3	Tridecane	18989	000629-50-5	92
4	Tridecane	69016	000629-50-5	91
5	Undecane	11611	001120-21-4	90



SAMPLE NO.

GP-017-SS12

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88014

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13341.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 2

Date Analyzed: 10/25/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-017-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88014
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13341.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 2 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	21.45	2300	J
2.	Unknown	21.87	7400	J
3.	Unknown	25.45	3100	J
4.	Unknown	26.40	2000	J
5. 112-40-3	Dodecane	27.35	3500	J
6.	Unknown	28.27	2600	J
7. 824-22-6	1H-Indene, 2,3-dihydro-4-met	28.72	1900	J
8.	Unknown	29.36	2200	J
9. 629-50-5	Tridecane	29.78	3100	J
10. 629-59-4	Tetradecane	32.79	1900	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
 Acq Time : 25 Oct 99 3:40 pm
 Sample : 13827ASP-88014
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 25 17:20 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

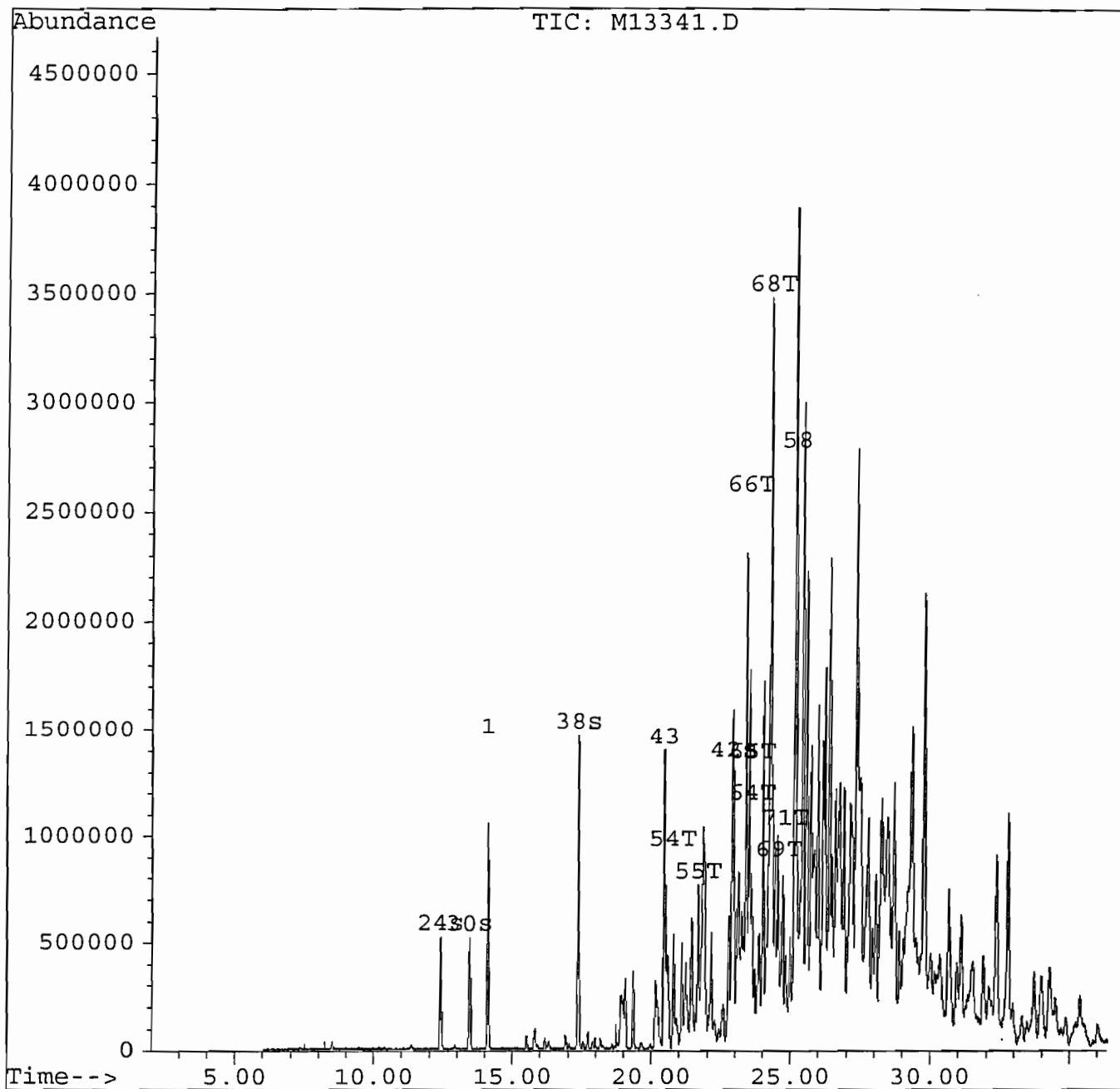
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.12	96	1812835	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.46	117	1568194	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	25.20	152	655556	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.42	113	619736	54.96	ug/L	109.92%
30) 1,2-Dichlorethane-d4	13.46	65	695238	54.71	ug/L	109.41%
38) Toluene-d8	17.37	98	1911053	54.11	ug/L	108.22%
42) 4-Bromofluorobenzene	22.95	95	892619	59.78	ug/L	119.56%
Target Compounds						Qvalue
54) m&p-xylenes	20.78	106	278452	16.36	ug/L	95
55) o-xylene	21.69	91	768510	19.51	ug/L	98
64) 2-chlorotoluene	23.61	126	91942	9.25	ug/L	92
65) 4-chlorotoluene	23.61	126	91942	8.91	ug/L	98
66) 1,3,5-trimethylbenzene	23.53	105	1855253	51.88	ug/L	99
68) 1,2,4-trimethylbenzene	24.28	105	3424495	99.82	ug/L	99
69) sec-butylbenzene	24.59	105	248882	5.64	ug/L	98
71) 4-isopropyltoluene	24.82	119	322361	8.23	ug/L	99

Quantitation Report

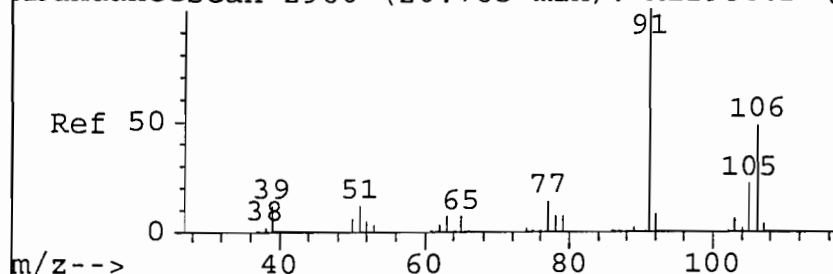
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 25 17:20 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



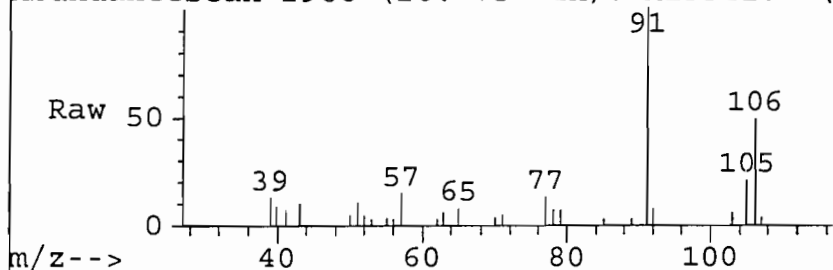
AbundanceScan 2960 (20.765 min): M12956.D (



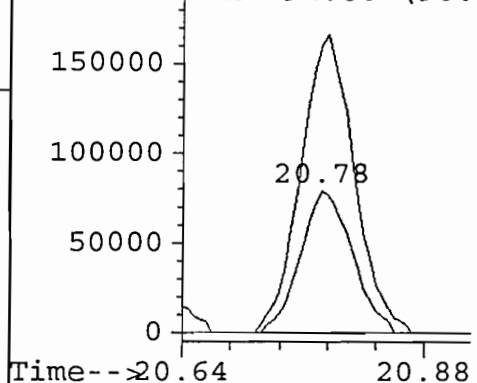
#54
m&p-xylenes
Concen: 16.36 ug/L
RT: 20.78 min Scan# 2966
Delta R.T. 0.01 min
Lab File: M13341.D
Acq: 25 Oct 99 3:40 pm

Tgt Ion	Ratio	Lower	Upper
106	100		
91	202.4	146.7	272.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

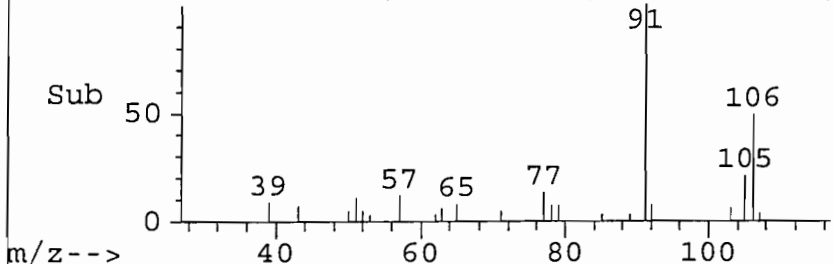
AbundanceScan 2966 (20.775 min): M13341.D (



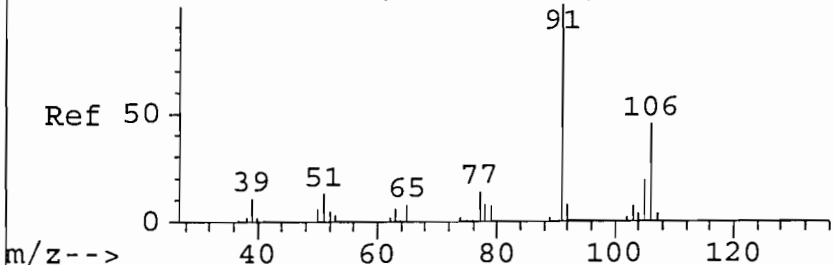
AbundanceIon 106.00 (105
Ion 91.00 (90.



AbundanceScan 2966 (20.775 min): M13341.D (



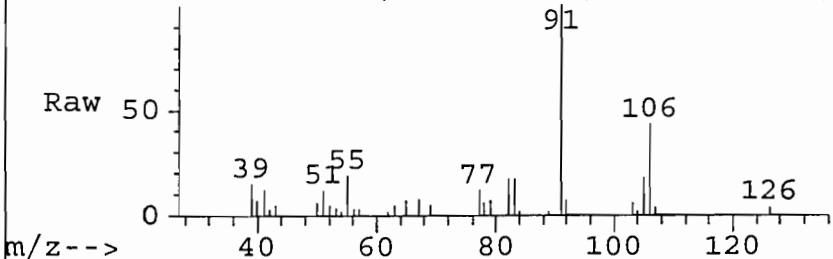
AbundanceScan 3113 (21.672 min): M12956.D (



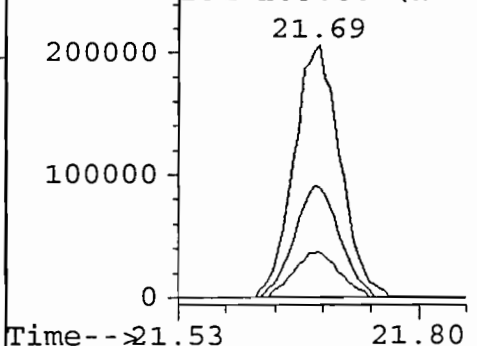
#55
o-xylene
Concen: 19.51 ug/L
RT: 21.69 min Scan# 3120
Delta R.T. 0.02 min
Lab File: M13341.D
Acq: 25 Oct 99 3:40 pm

Tgt Ion	Ratio	Lower	Upper
91	100		
106	43.3	31.3	58.1
105	18.1	12.9	24.0
0	0.0	0.0	0.0

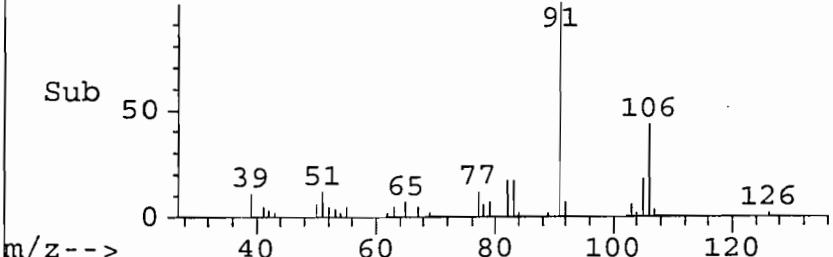
AbundanceScan 3120 (21.689 min): M13341.D (



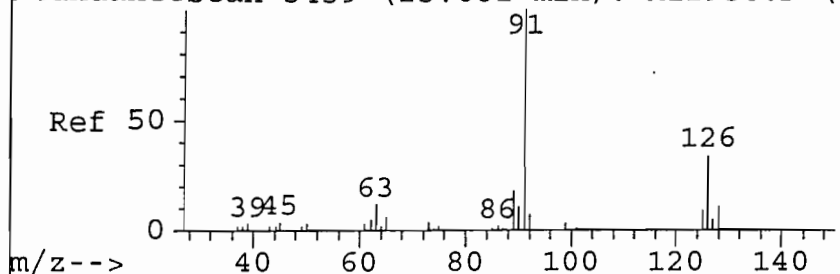
AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



AbundanceScan 3120 (21.689 min): M13341.D (



AbundanceScan 3439 (23.601 min): M12956.D (



#64

2-chlorotoluene

Concen: 9.25 ug/L

RT: 23.61 min Scan# 3449

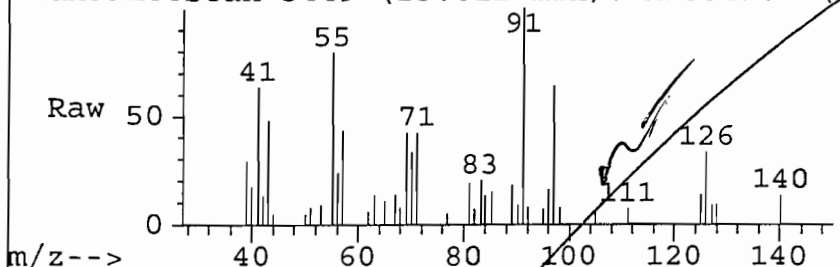
Delta R.T. 0.01 min

Lab File: M13341.D

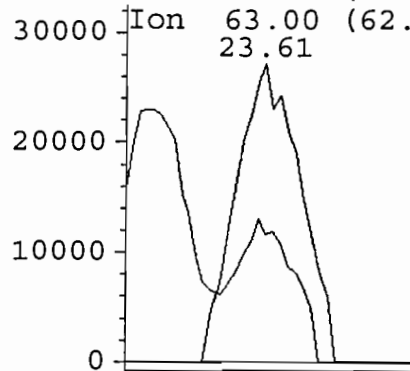
Acq: 25 Oct 99 3:40 pm

Tgt Ion:	126	Resp:	91942
Ion Ratio	Lower	Upper	
126	100		
63	43.0	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

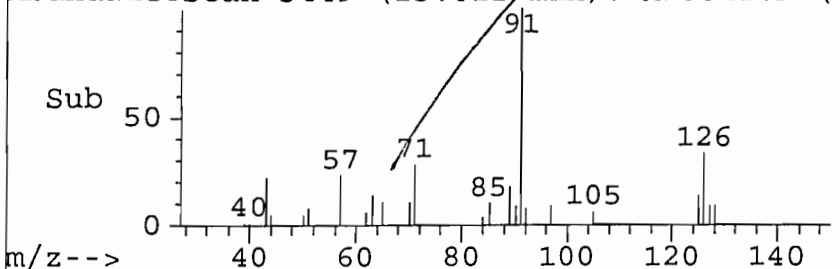
AbundanceScan 3449 (23.612 min): M13341.D (



AbundanceIon 126.00 (125
Ion 63.00 (62.
23.61

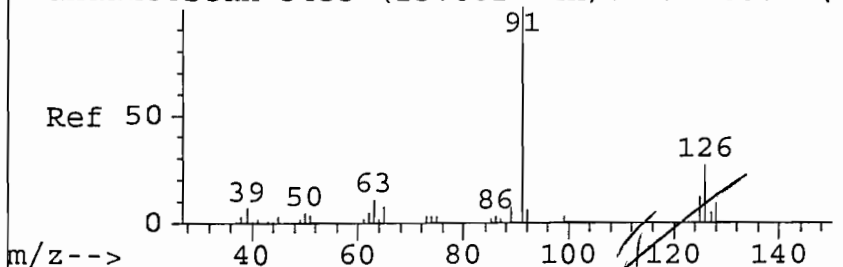


AbundanceScan 3449 (23.612 min): M13341.D (



Time--23.51 23.69

AbundanceScan 3453 (23.682 min): M12956.D (



#65

4-chlorotoluene

Concen: 8.91 ug/L

RT: 23.61 min Scan# 3449

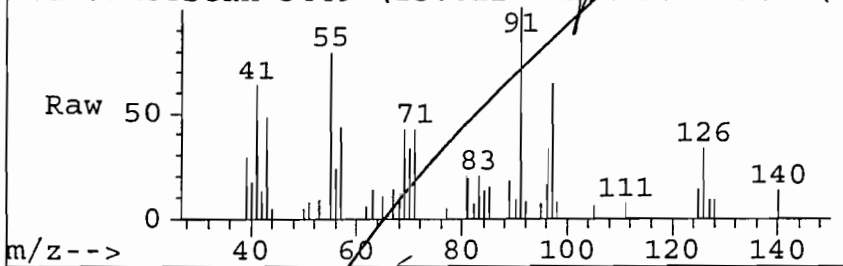
Delta R.T. -0.07 min

Lab File: M13341.D

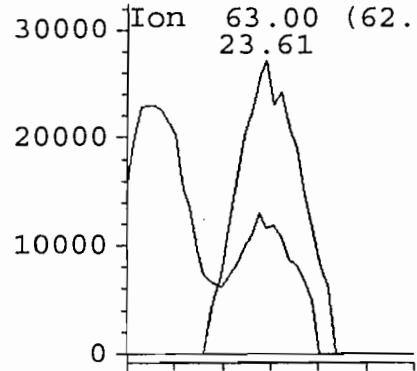
Acq: 25 Oct 99 3:40 pm

Tgt Ion:	126	Resp:	91942
Ion Ratio	Lower	Upper	
126	100		
63	43.0	29.3	54.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

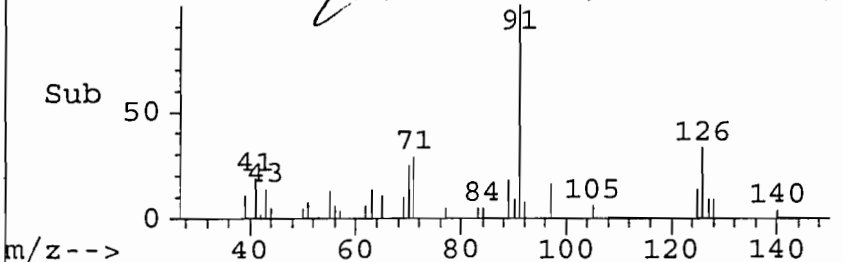
AbundanceScan 3449 (23.612 min): M13341.D (



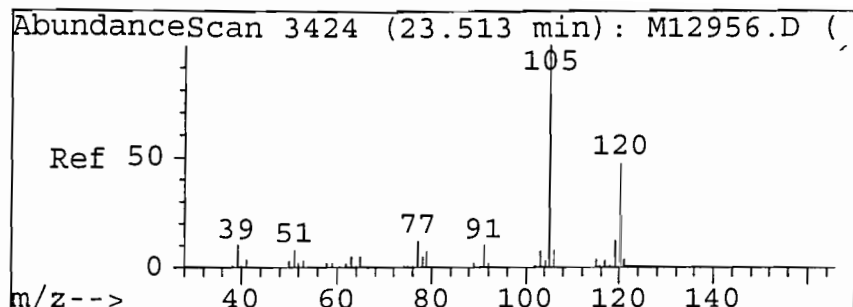
AbundanceIon 126.00 (125
Ion 63.00 (62.
23.61



AbundanceScan 3449 (23.612 min): M13341.D (

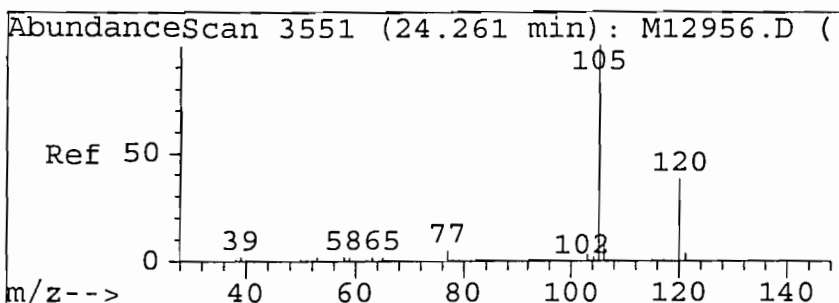
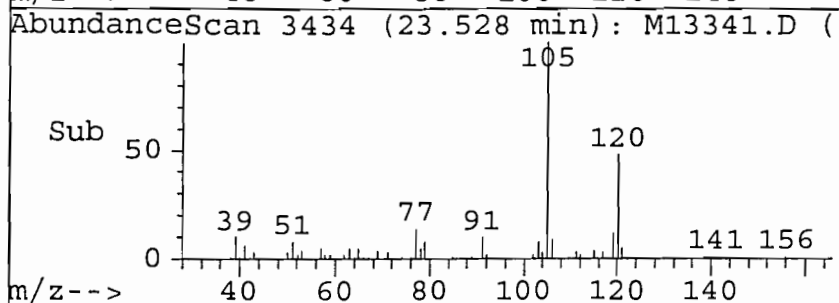
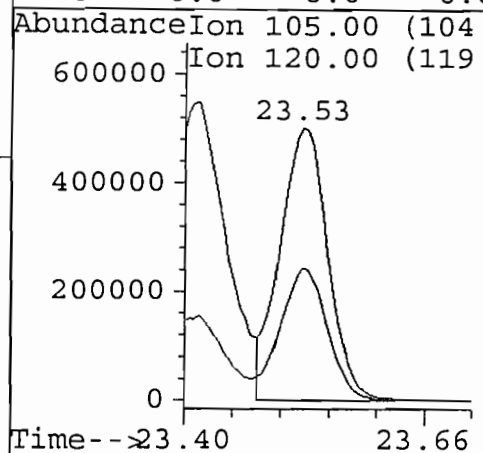
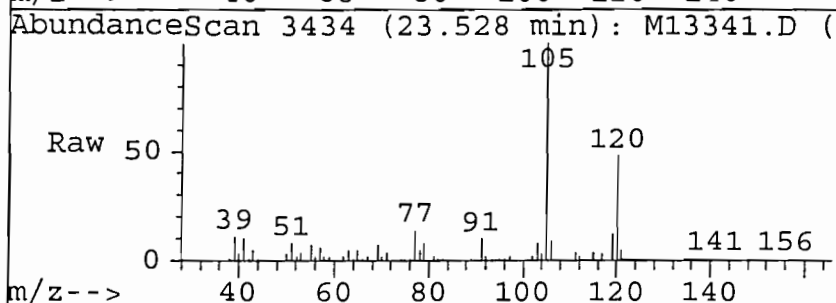


Time--23.51 23.69



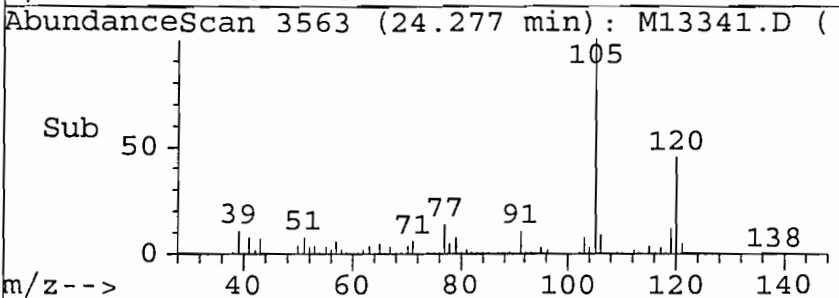
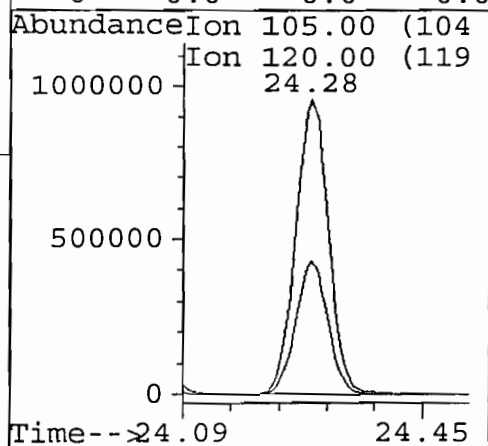
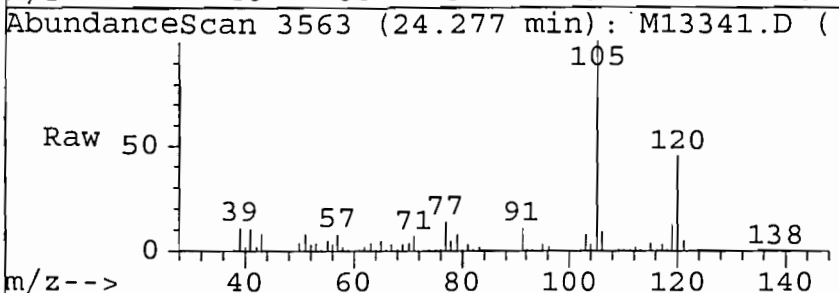
#66
 1,3,5-trimethylbenzene
 Concen: 51.88 ug/L
 RT: 23.53 min Scan# 3434
 Delta R.T. 0.01 min
 Lab File: M13341.D
 Acq: 25 Oct 99 3:40 pm

Tgt Ion:	105	Resp:	1855253
Ion	Ratio	Lower	Upper
105	100		
120	48.0	33.2	61.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

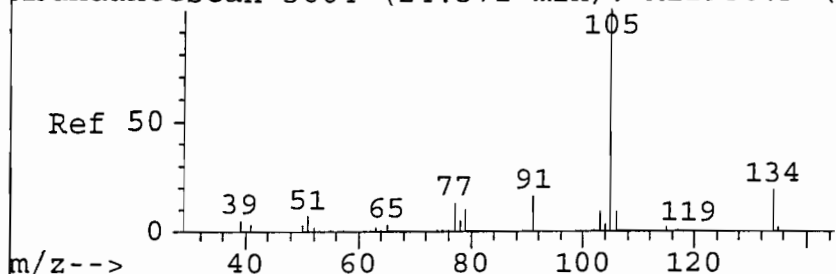


#68
 1,2,4-trimethylbenzene
 Concen: 99.82 ug/L
 RT: 24.28 min Scan# 3563
 Delta R.T. 0.02 min
 Lab File: M13341.D
 Acq: 25 Oct 99 3:40 pm

Tgt Ion:	105	Resp:	3424495
Ion	Ratio	Lower	Upper
105	100		
120	45.1	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



AbundanceScan 3604 (24.572 min): M12956.D (



#69

sec-butylbenzene

Concen: 5.64 ug/L

RT: 24.59 min Scan# 3617

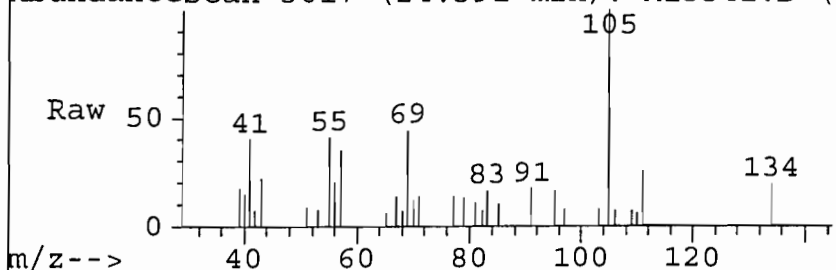
Delta R.T. 0.02 min

Lab File: M13341.D

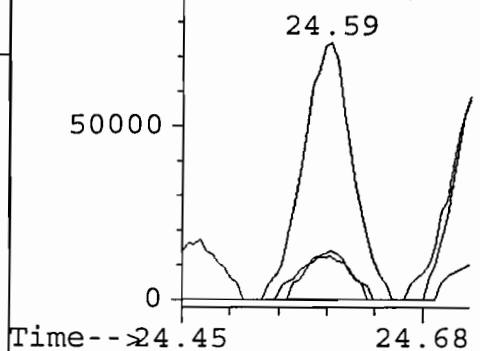
Acq: 25 Oct 99 3:40 pm

Tgt Ion:	105	Resp:	248882
Ion	Ratio	Lower	Upper
105	100		
134	18.7	13.4	25.0
91	17.1	11.1	20.5
0	0.0	0.0	0.0

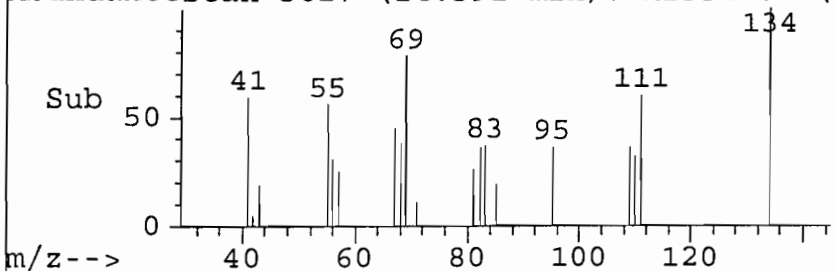
AbundanceScan 3617 (24.591 min): M13341.D (



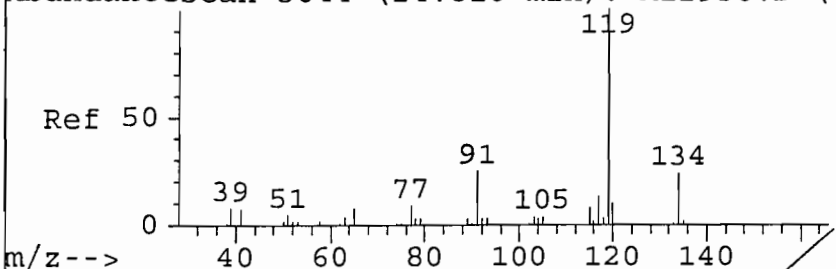
AbundanceIon 105.00 (104
100000 Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3617 (24.591 min): M13341.D (



AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 8.23 ug/L

RT: 24.82 min Scan# 3656

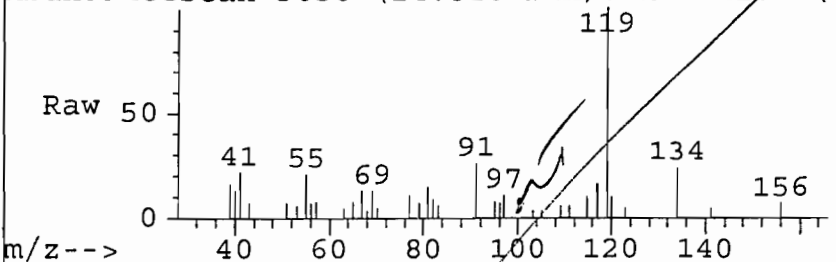
Delta R.T. 0.01 min

Lab File: M13341.D

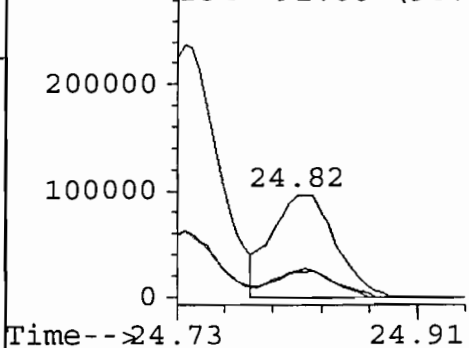
Acq: 25 Oct 99 3:40 pm

Tgt Ion:	119	Resp:	322361
Ion	Ratio	Lower	Upper
119	100		
134	23.9	16.7	31.1
91	25.7	17.2	32.0
0	0.0	0.0	0.0

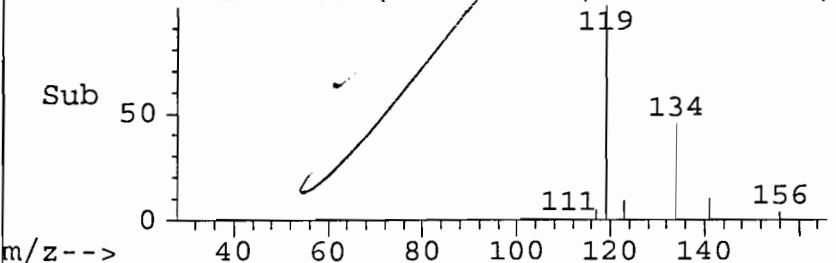
AbundanceScan 3656 (24.820 min): M13341.D (



AbundanceIon 119.00 (118
300000 Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3656 (24.820 min): M13341.D (



Library Search Compound Report

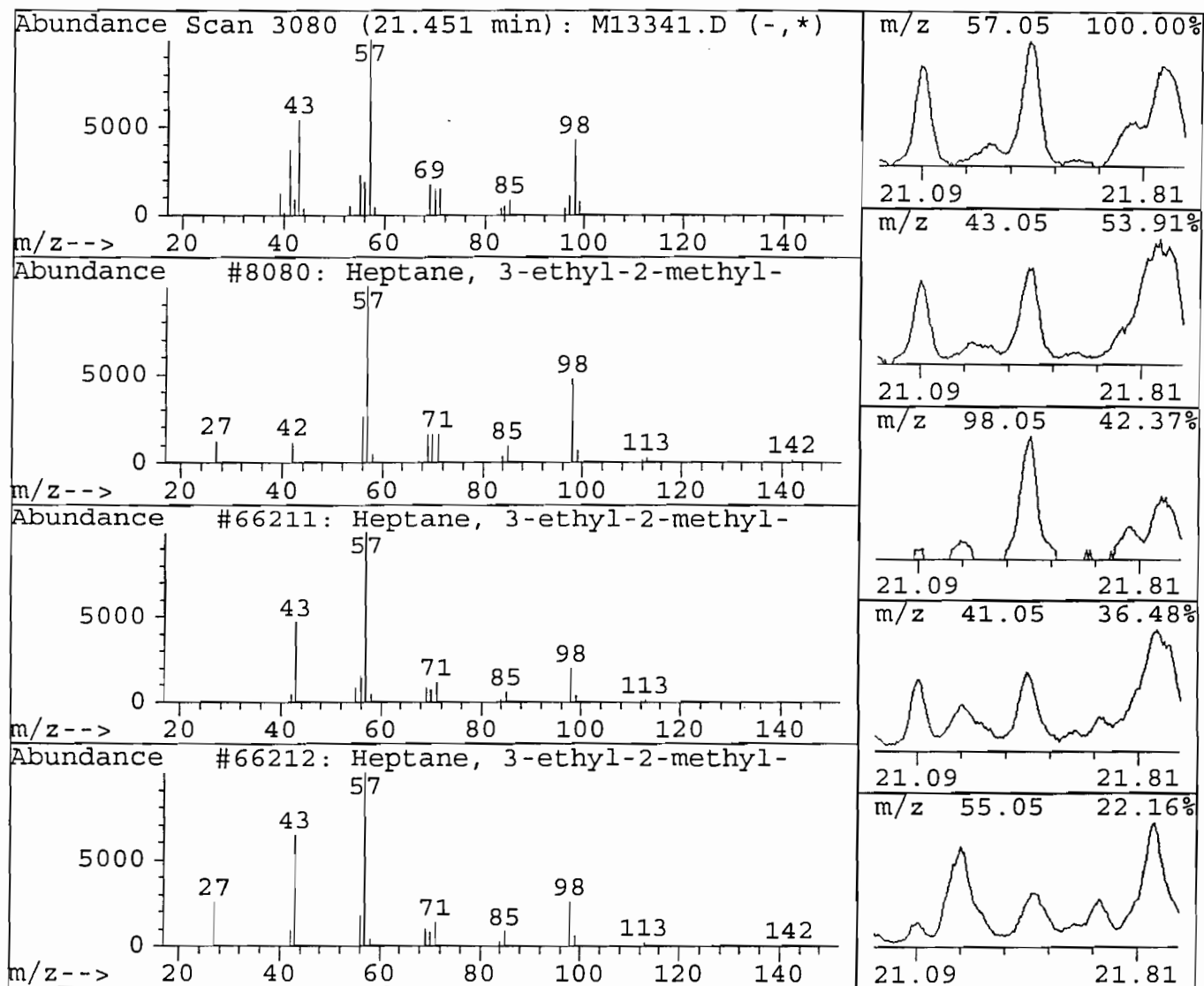
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.45	17.76 ug/L	2309434	Chlorobenzene-d5	20.46

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 3-ethyl-2-methyl-	8080	014676-29-0	80
2	Heptane, 3-ethyl-2-methyl-	66211	014676-29-0	72
3	Heptane, 3-ethyl-2-methyl-	66212	014676-29-0	53
4	Heptane, 4-(1-methylethyl)-	8084	052896-87-4	47
5	Heptane, 4-propyl-	8079	003178-29-8	45



Library Search Compound Report

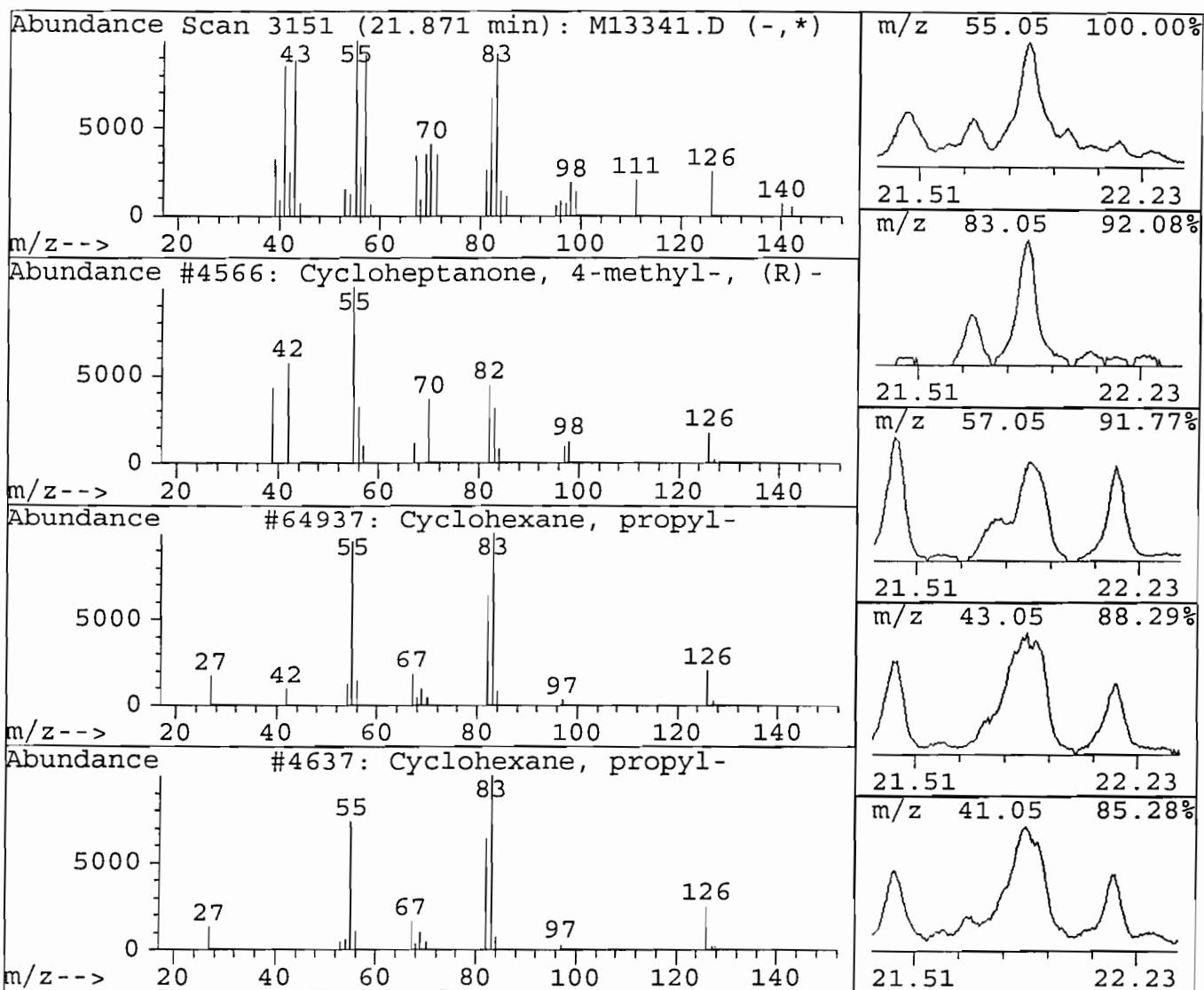
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.87	58.07 ug/L	7552243	Chlorobenzene-d5	20.46

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cycloheptanone, 4-methyl-, (R)-	4566	013609-59-1	49
2	Cyclohexane, propyl-	64937	001678-92-8	49
3	Cyclohexane, propyl-	4637	001678-92-8	49
4	Cyclohexane, propyl-	64936	001678-92-8	47
5	Cyclohexanone, 2,3-dimethyl-	4544	013395-76-1	47



Library Search Compound Report

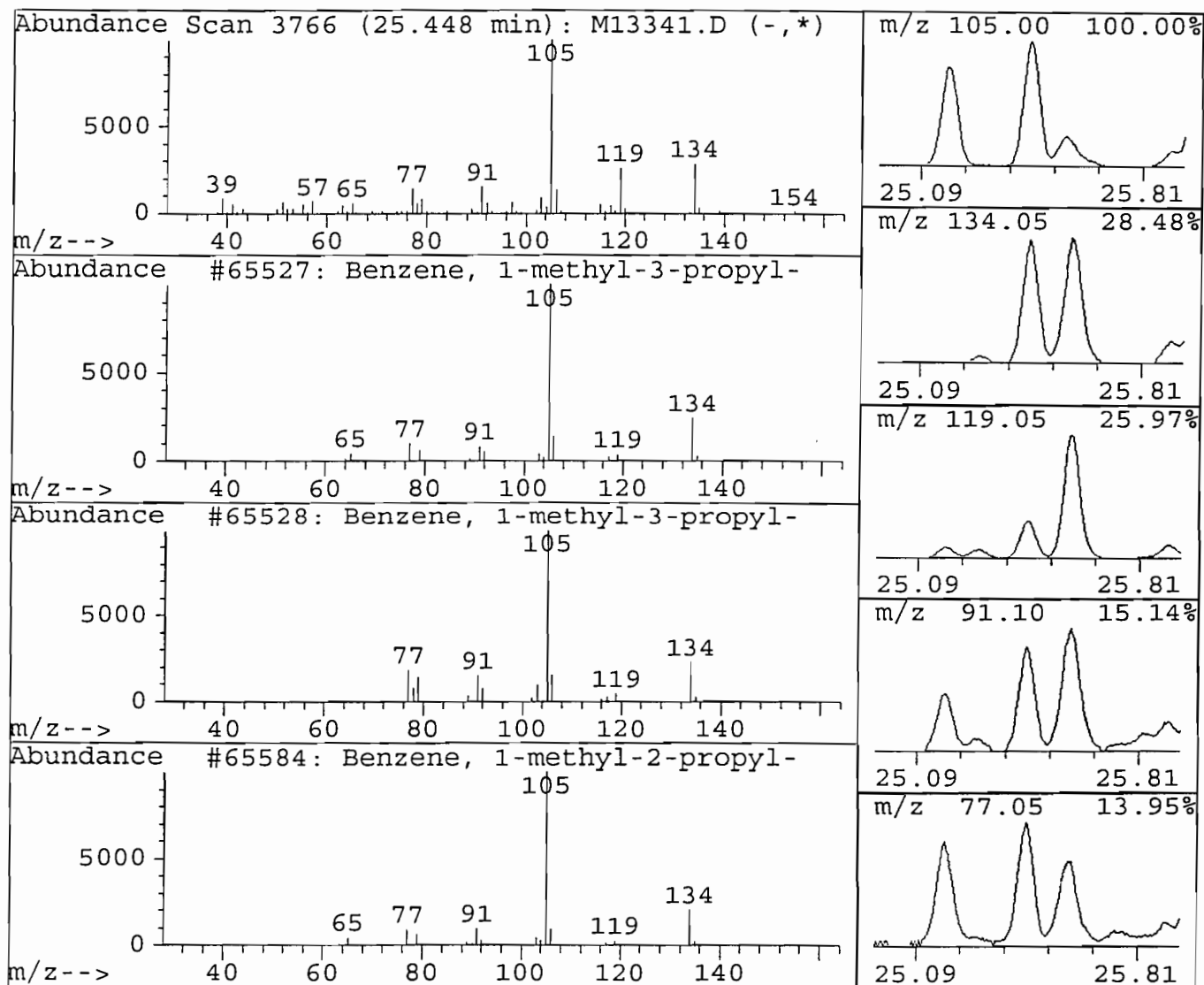
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.45	24.39 ug/L	9787840	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	76
2	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	76
3	Benzene, 1-methyl-2-propyl-	65584	001074-17-5	76
4	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	76
5	Benzeneacetaldehyde, .alpha.-methyl	6164	000093-53-8	70



Library Search Compound Report

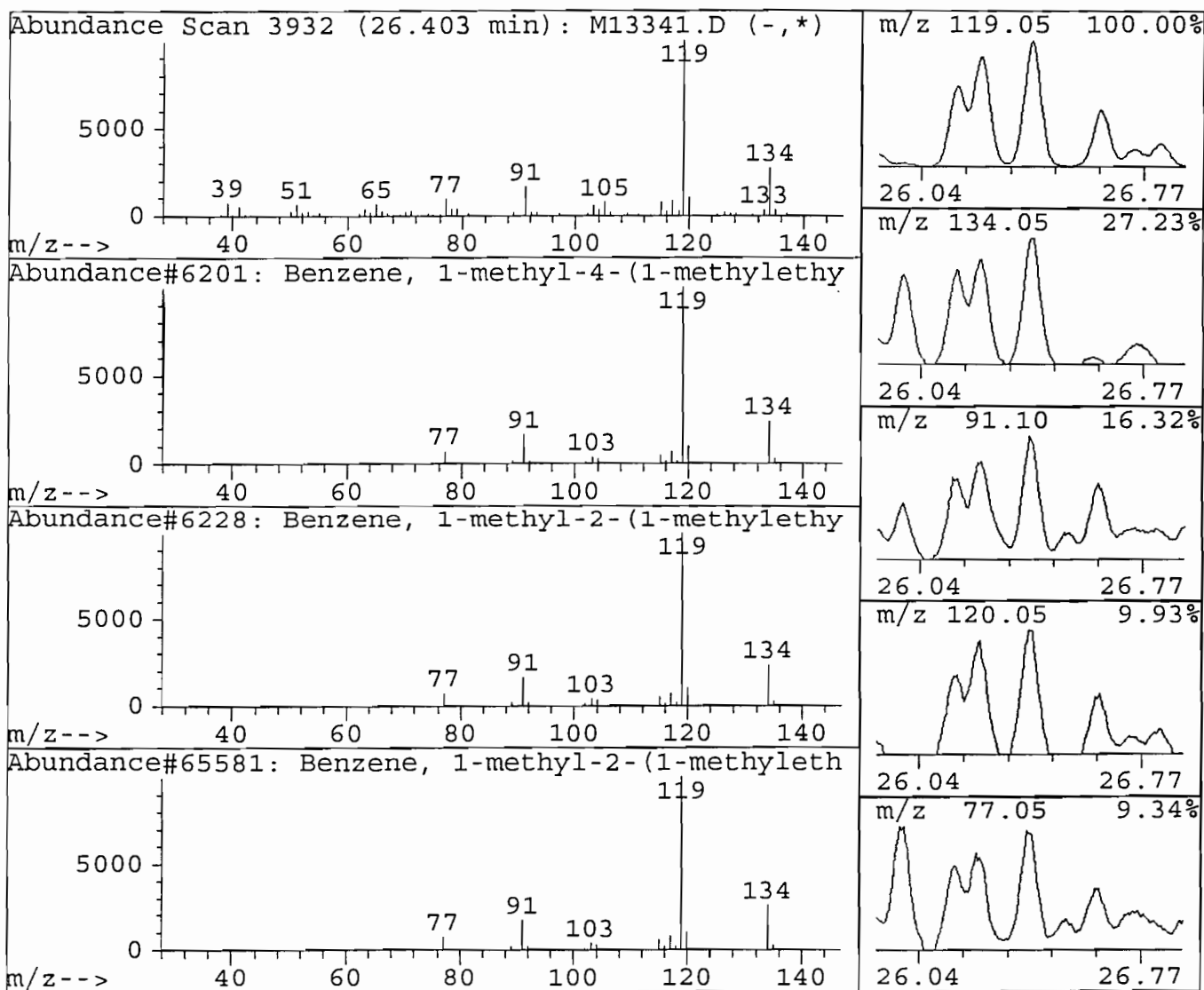
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.40	16.04 ug/L	6437594	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	97
2	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	97
3	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	97
4	Benzene, 1-methyl-4-(1-methylethyl)	65535	000099-87-6	95
5	Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	95



Library Search Compound Report

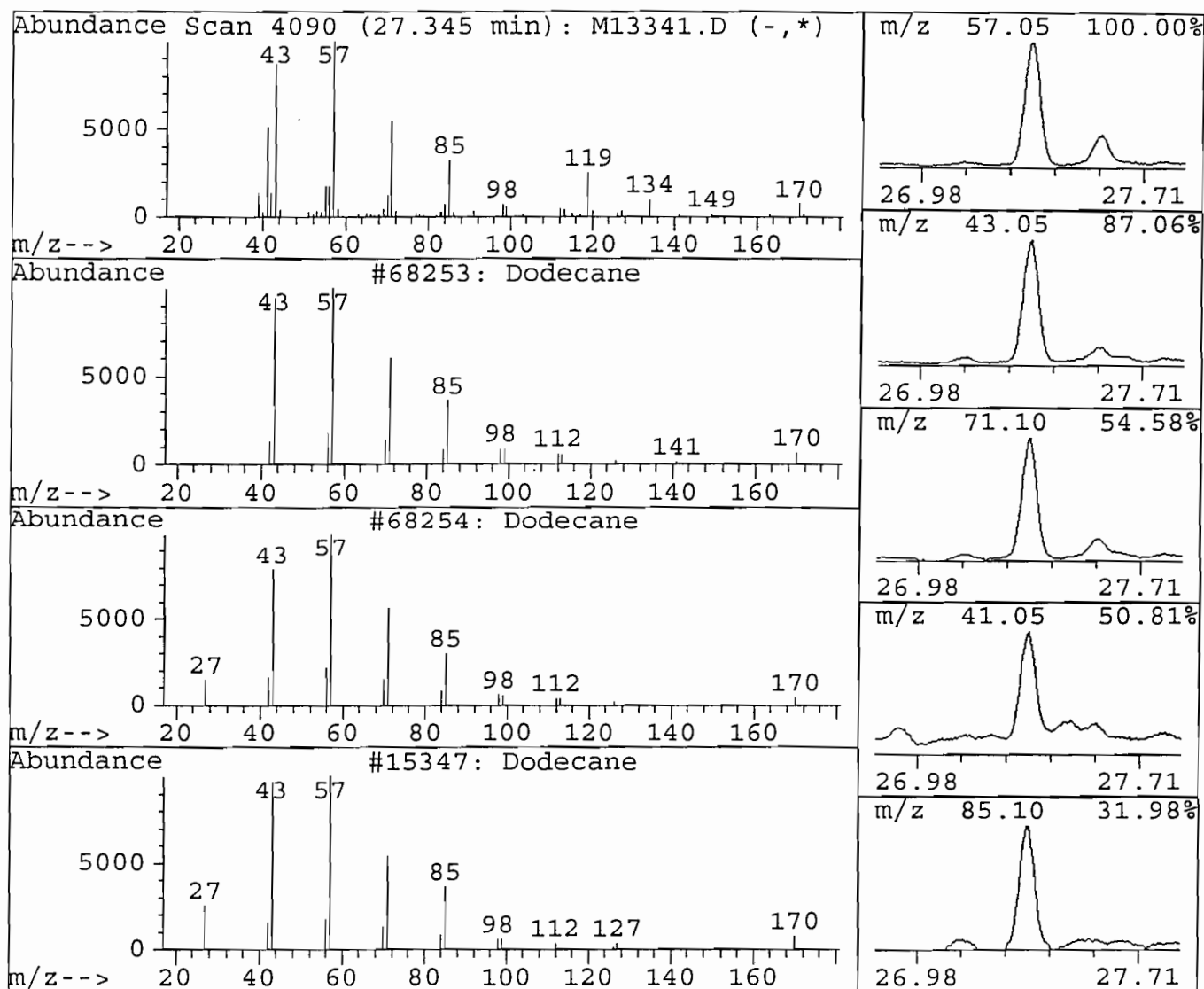
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.34	27.72 ug/L	11126577	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	68253	000112-40-3	96
2	Dodecane	68254	000112-40-3	96
3	Dodecane	15347	000112-40-3	96
4	Dodecane	68251	000112-40-3	95
5	Dodecane	68252	000112-40-3	89



Library Search Compound Report

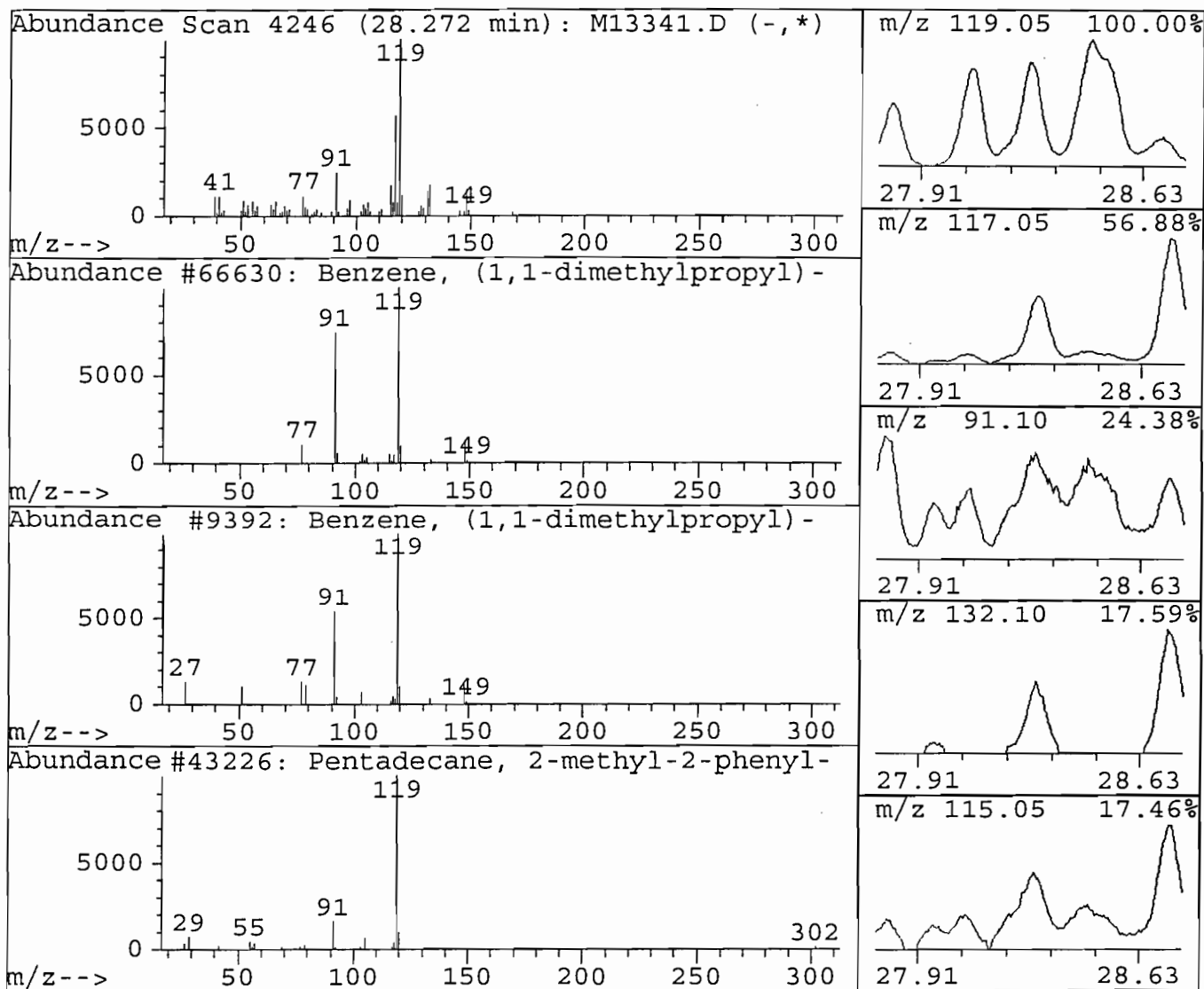
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.27	20.00 ug/L	8025987	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, (1,1-dimethylpropyl)-	66630	002049-95-8	49
2	Benzene, (1,1-dimethylpropyl)-	9392	002049-95-8	47
3	Pentadecane, 2-methyl-2-phenyl-	43226	029138-94-1	43
4	Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	43
5	Benzene, (1,1-dimethylnonyl)-	30399	055191-25-8	43



Library Search Compound Report

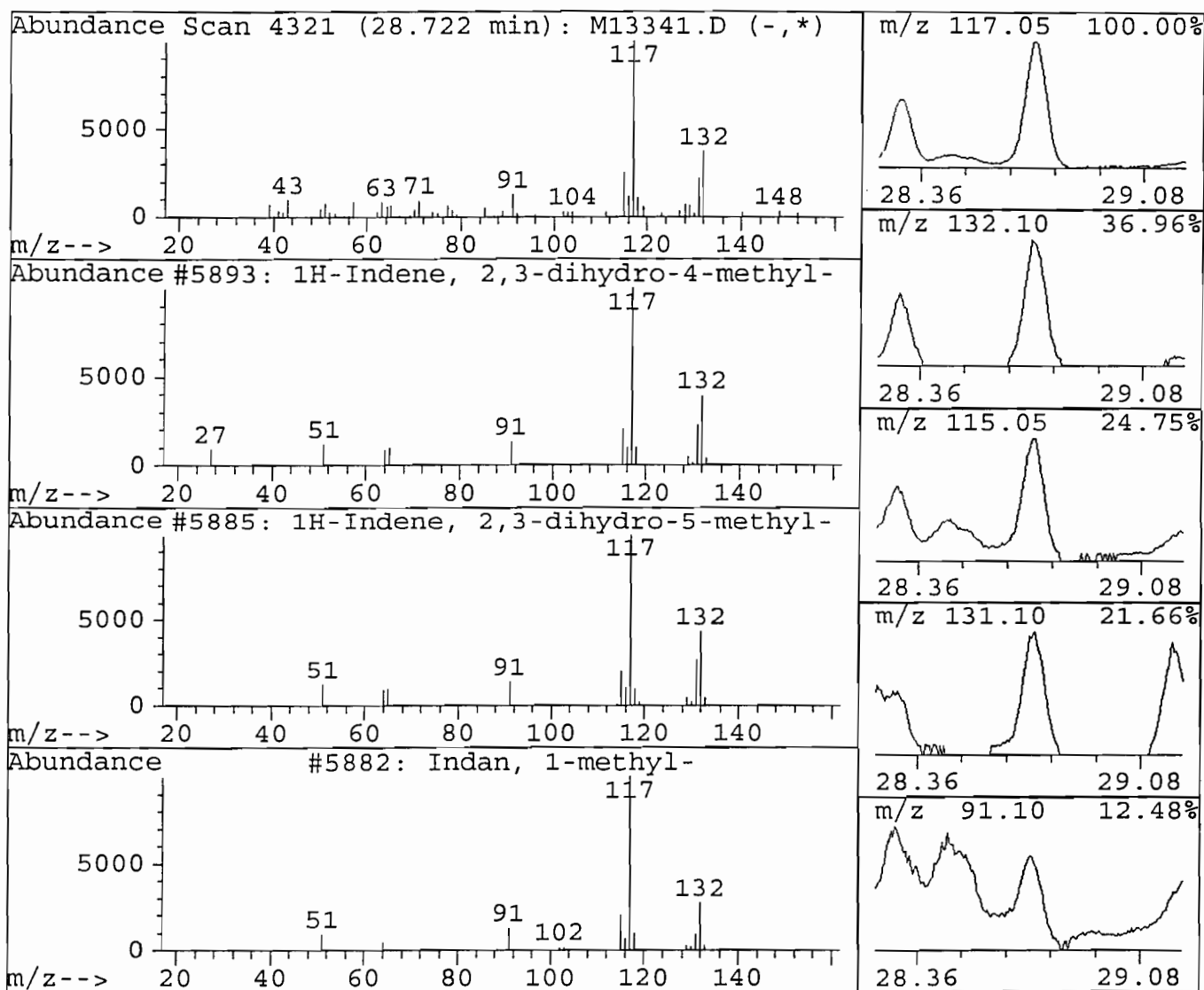
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.72	15.28 ug/L	6133326	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4-methyl-	5893	000824-22-6	91
2	1H-Indene, 2,3-dihydro-5-methyl-	5885	000874-35-1	91
3	Indan, 1-methyl-	5882	000767-58-8	87
4	2,3-Dihydro-1-methylindene	5901	027133-93-3	81
5	Indan, 1-methyl-	65418	000767-58-8	72



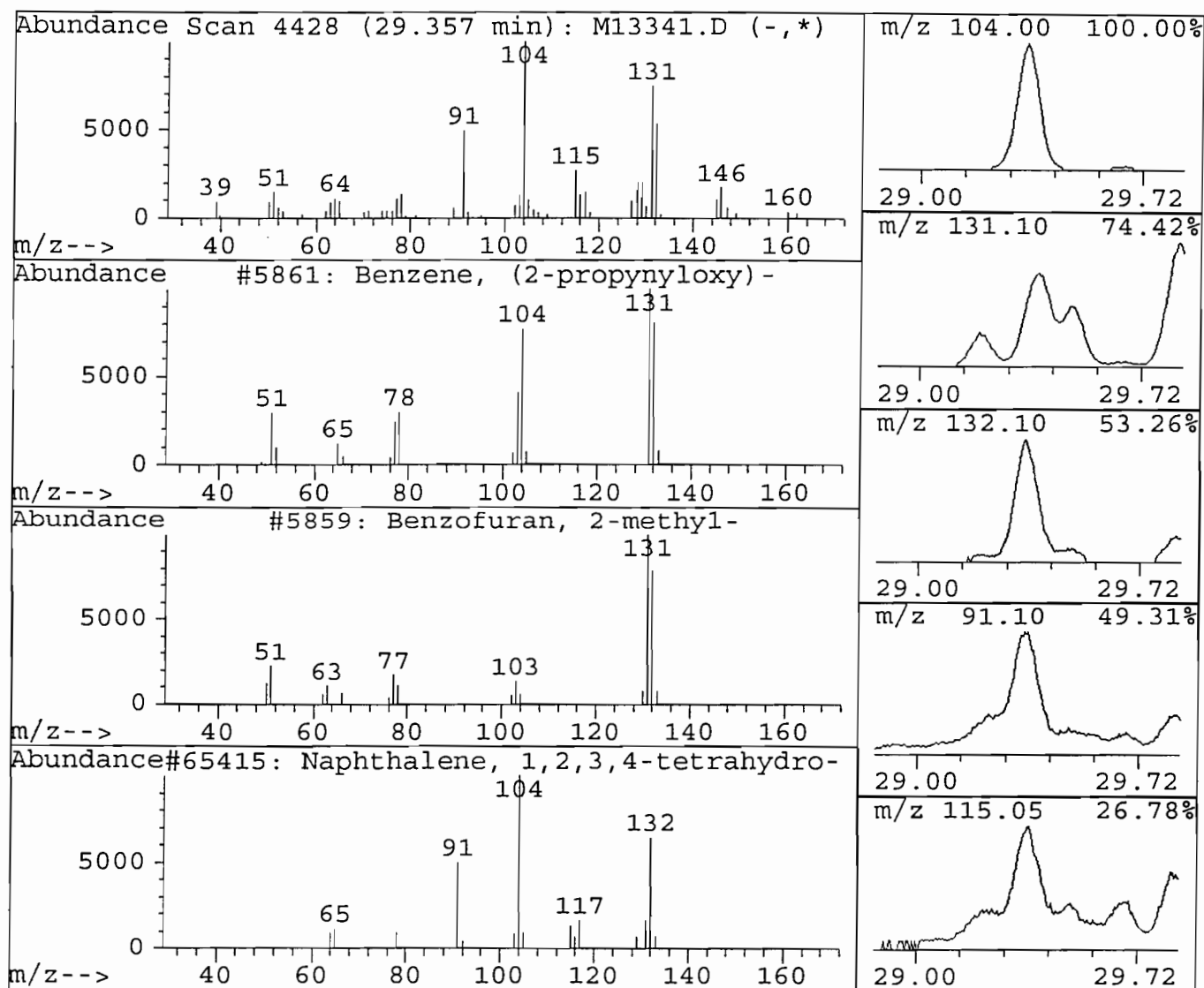
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.36	17.00 ug/L	6821902	1,4-dichlorobenzene-d4	25.20	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, (2-propynyloxy)-		5861	013610-02-1	64
2	Benzofuran, 2-methyl-		5859	004265-25-2	62
3	Naphthalene, 1,2,3,4-tetrahydro-		65415	000119-64-2	55
4	Naphthalene, 1,2,3,4-tetrahydro-		5880	000119-64-2	55
5	Naphthalene, 1,2,3,4-tetrahydro-		65417	000119-64-2	50



Library Search Compound Report

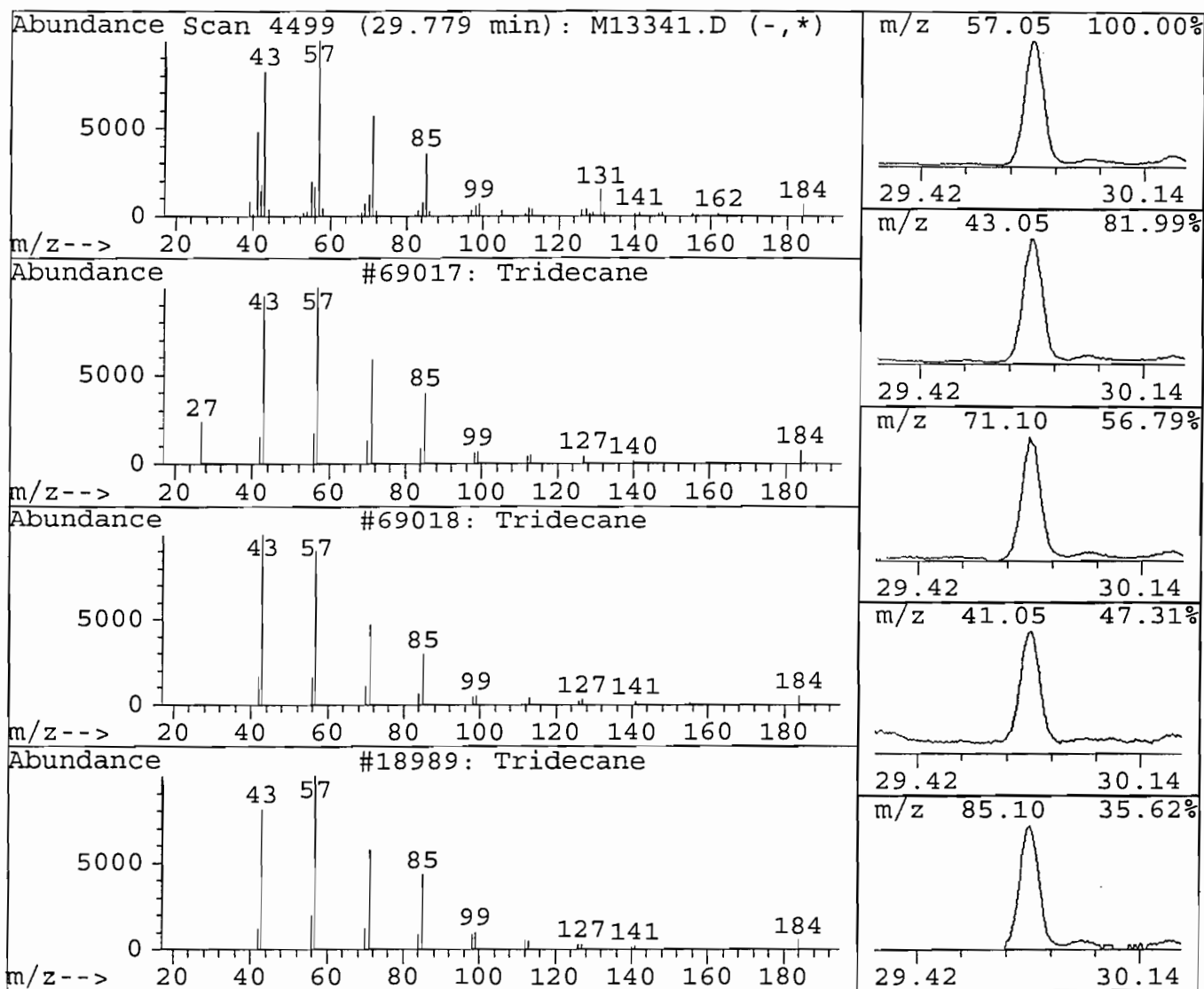
Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.78	24.60 ug/L	9871251	1,4-dichlorobenzene-d4	25.20

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	69017	000629-50-5	96
2	Tridecane	69018	000629-50-5	96
3	Tridecane	18989	000629-50-5	96
4	Tridecane	69021	000629-50-5	93
5	Tridecane	69016	000629-50-5	91



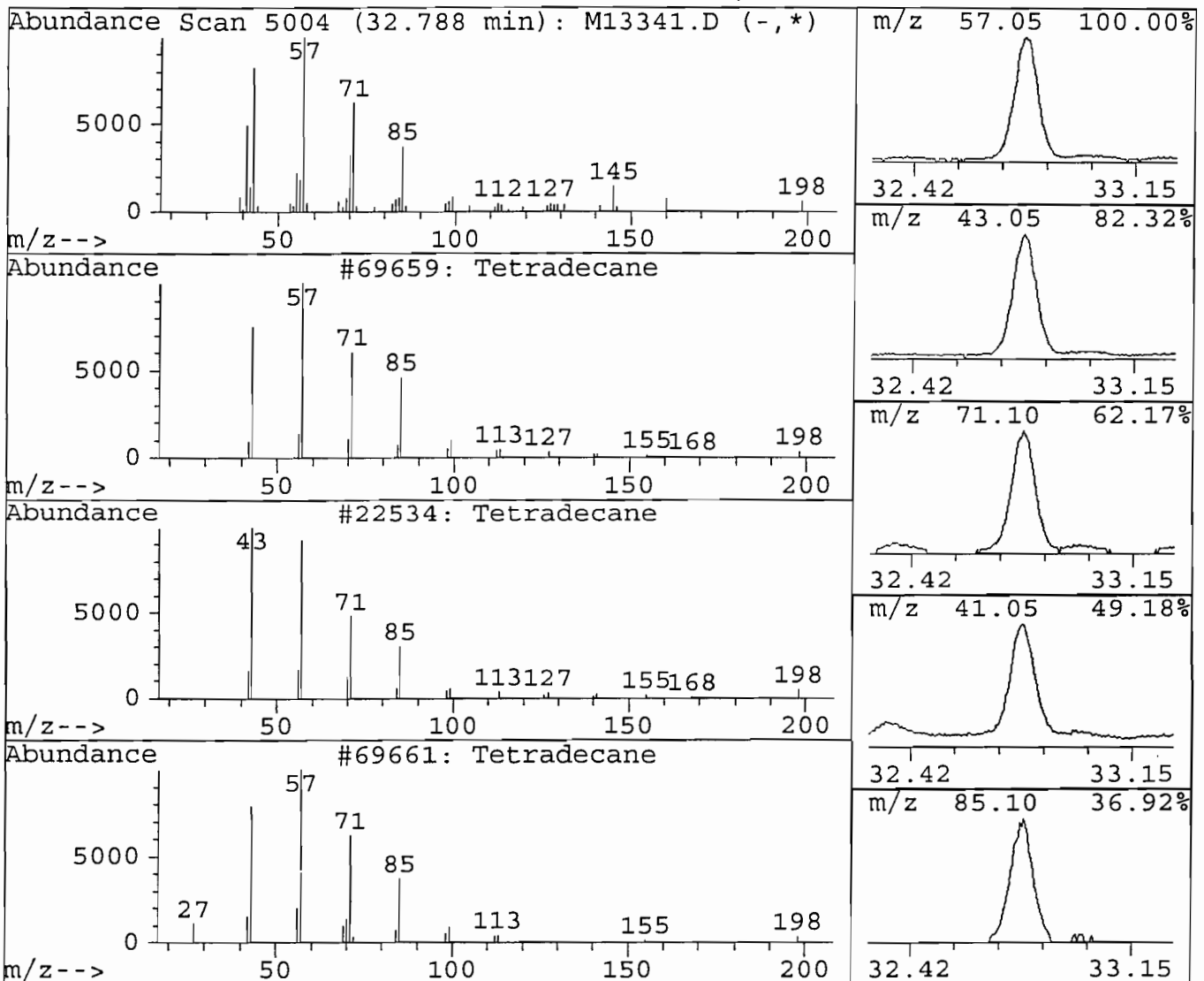
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13341.D
Acq Time : 25 Oct 99 3:40 pm
Sample : 13827ASP-88014
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
32.79	14.99 ug/L	6015857	1,4-dichlorobenzene-d4	25.20	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tetradecane		69659	000629-59-4	95
2	Tetradecane		22534	000629-59-4	94
3	Tetradecane		69661	000629-59-4	93
4	Tetradecane		69660	000629-59-4	89
5	Tetradecane		69662	000629-59-4	83



SAMPLE NO.

GP-018-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: O88015

Lab File ID: M13342.D

Date Received: 10/18/99

Date Analyzed: 10/25/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

(ug/L or ug/Kg)

 $\mu\text{g/Kg}$

Q

FORM I VOA

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-018-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88015
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13342.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	22.78	3200	J
2. 493-02-7	Naphthalene, decahydro-, tra	25.74	3300	J
3. 934-80-5	Benzene, 4-ethyl-1,2-dimethy	27.15	4100	J
4. 112-40-3	Dodecane	27.35	4900	J
5.	Unknown	27.53	5300	J
6.	Unknown	28.27	3800	J
7. 27133-93-3	2,3-Dihydro-1-methylindene	28.73	3600	J
8. 629-50-5	Tridecane	29.79	7800	J
9.	Unknown	30.67	4100	J
10. 629-59-4	Tetradecane	32.79	5200	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
 Acq Time : 25 Oct 99 4:25 pm
 Sample : 13827ASP-88015
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 25 17:33 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

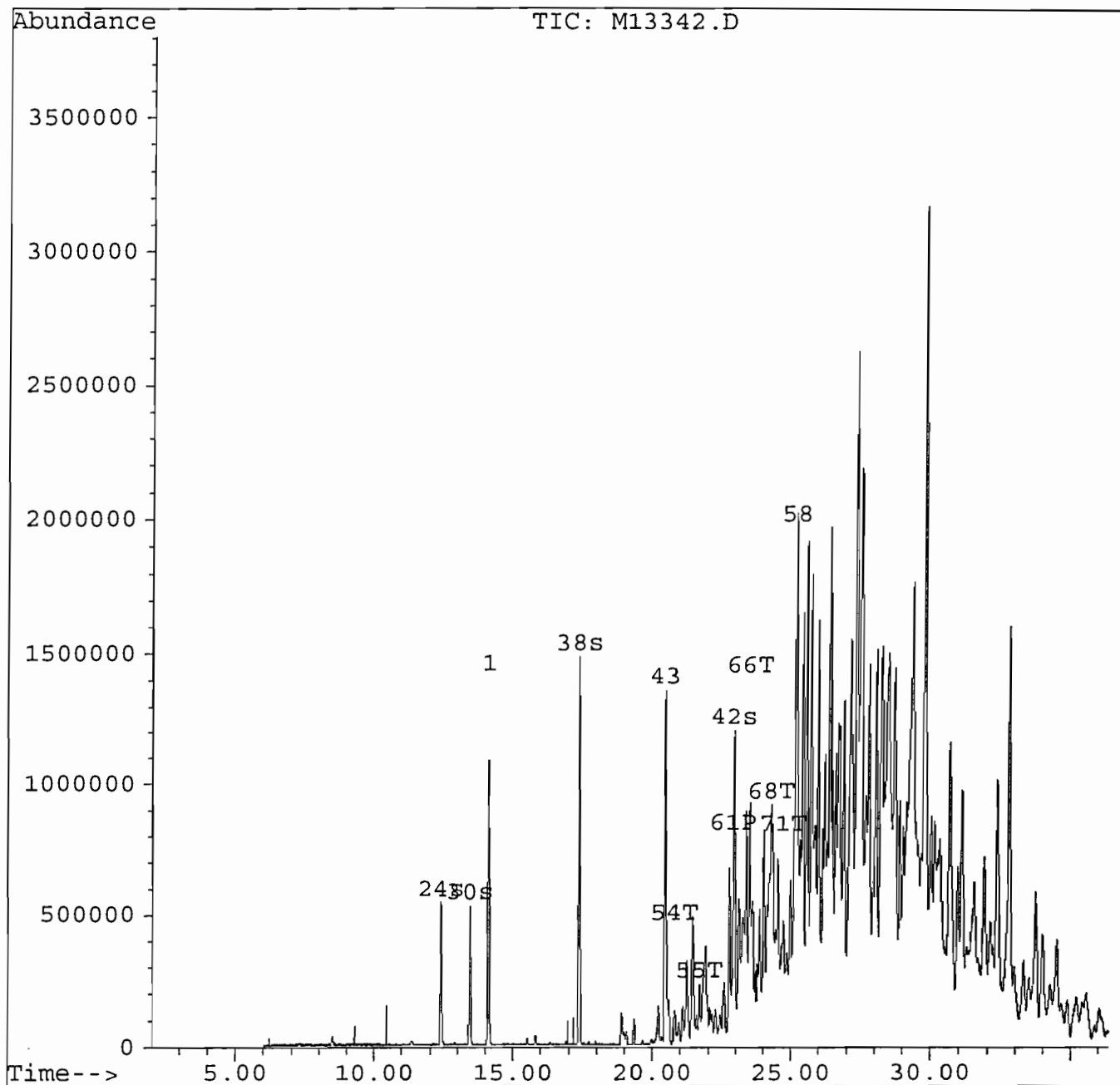
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.12	96	1808159	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.47	117	1644078	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	25.21	152	736197	50.00	ug/L	0.03
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.42	113	581796	51.73	ug/L	103.46%
30) 1,2-Dichlorethane-d4	13.46	65	700342	55.25	ug/L	110.50%
38) Toluene-d8	17.37	98	1944225	55.19	ug/L	110.39%
42) 4-Bromofluorobenzene	22.95	95	880198	59.10	ug/L	118.20%
Target Compounds						Qvalue
54) m&p-xylenes	20.78	106	63850	3.58	ug/L	90
55) o-xylene	21.69	91	184796	4.48	ug/L	96
61) 1,1,2,2-tetrachloroethane	22.90	83	31769	2.17	ug/L	81
66) 1,3,5-trimethylbenzene	23.53	105	753488	18.76	ug/L	100
68) 1,2,4-trimethylbenzene	24.28	105	365621	9.49	ug/L	97
71) 4-isopropyltoluene	24.74	119	359673	8.17	ug/L	97

Quantitation Report

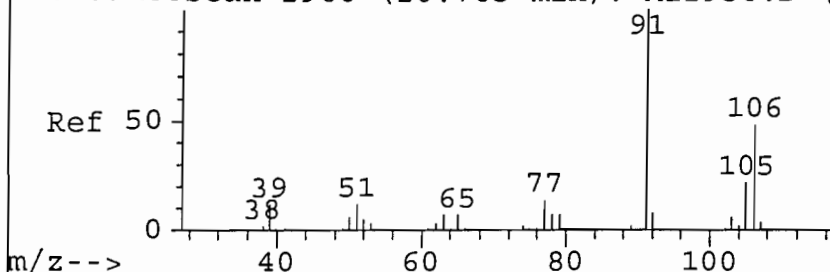
Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 25 17:33 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



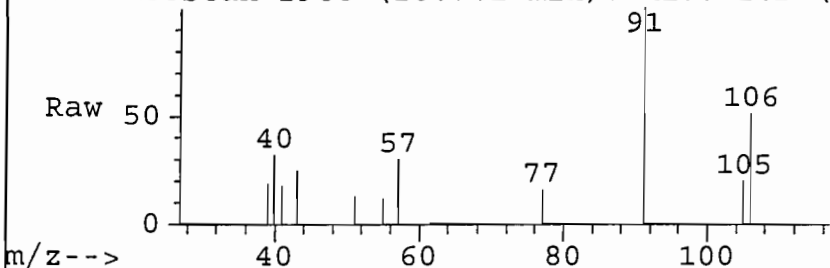
AbundanceScan 2960 (20.765 min): M12956.D (



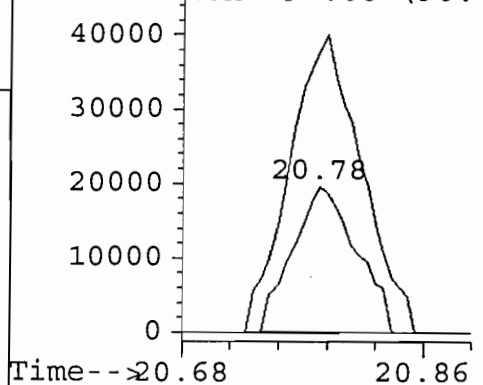
#54
m&p-xylenes
Concen: 3.58 ug/L
RT: 20.78 min Scan# 2966
Delta R.T. 0.02 min
Lab File: M13342.D
Acq: 25 Oct 99 4:25 pm

Tgt Ion:106	Resp:	63850
Ion Ratio	Lower	Upper
106 100		
91 194.5	146.7	272.4
0 0.0	0.0	0.0
0 0.0	0.0	0.0

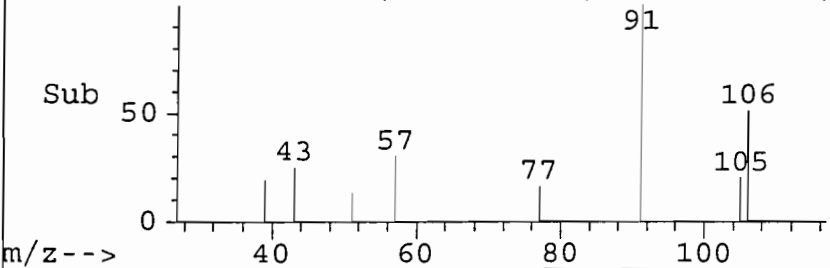
AbundanceScan 2966 (20.781 min): M13342.D (



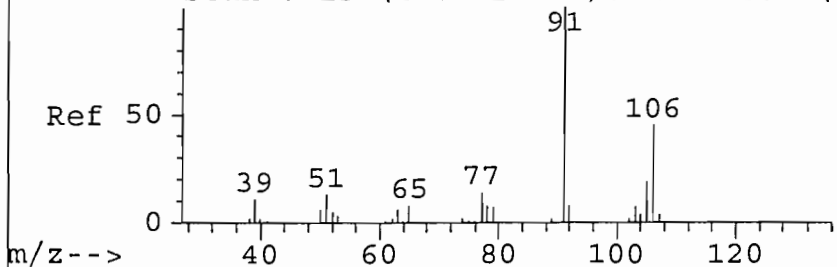
AbundanceIon 106.00 (105
Ion 91.00 (90.



AbundanceScan 2966 (20.781 min): M13342.D (



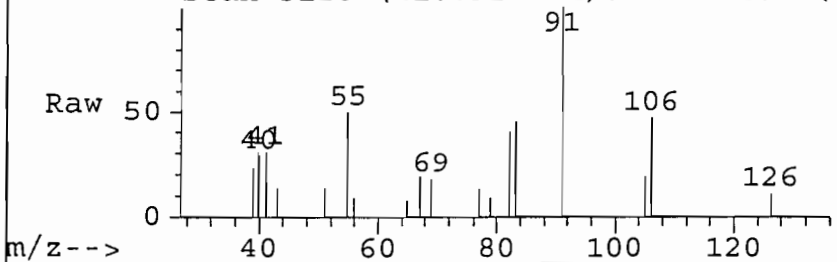
AbundanceScan 3113 (21.672 min): M12956.D (



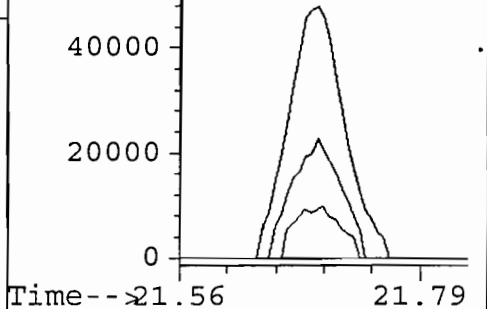
#55
o-xylene
Concen: 4.48 ug/L
RT: 21.69 min Scan# 3120
Delta R.T. 0.02 min
Lab File: M13342.D
Acq: 25 Oct 99 4:25 pm

Tgt Ion:91	Resp:	184796
Ion Ratio	Lower	Upper
91 100		
106 47.4	31.3	58.1
105 19.4	12.9	24.0
0 0.0	0.0	0.0

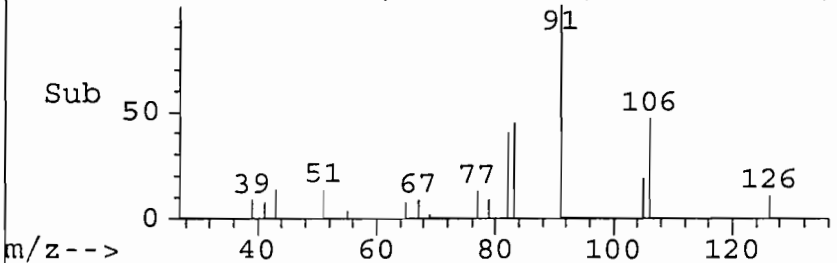
AbundanceScan 3120 (21.692 min): M13342.D (



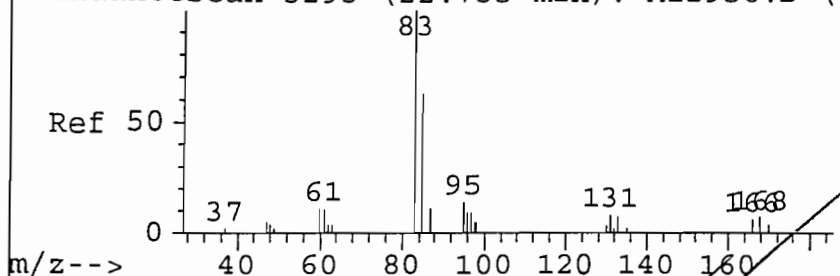
AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



AbundanceScan 3120 (21.692 min): M13342.D (



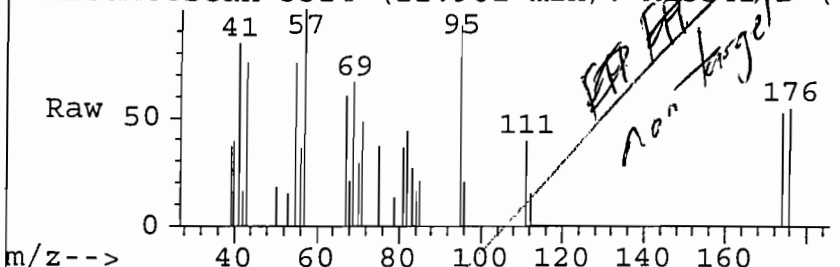
AbundanceScan 3293 (22.735 min): M12956.D (



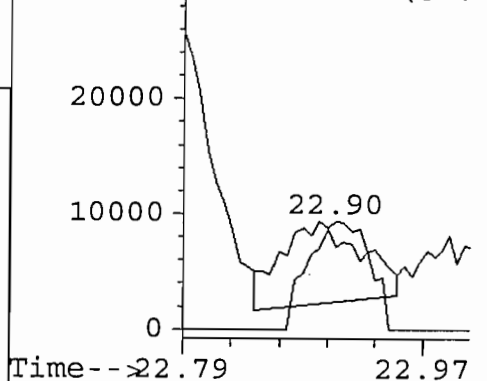
#61
1,1,2,2-tetrachloroethane
Concen: 2.17 ug/L
RT: 22.90 min Scan# 3324
Delta R.T. 0.17 min
Lab File: M13342.D
Acq: 25 Oct 99 4:25 pm

Tgt Ion:83	Resp:	31769
Ion Ratio	Lower	Upper
83 100		
85 76.2	43.1	80.1
0 0.0	0.0	0.0
0 0.0	0.0	0.0

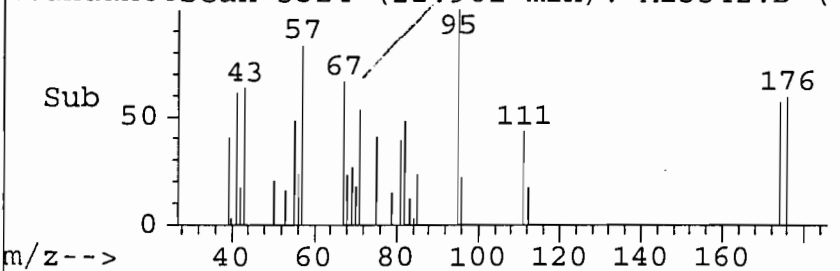
AbundanceScan 3324 (22.901 min): M13342.D (



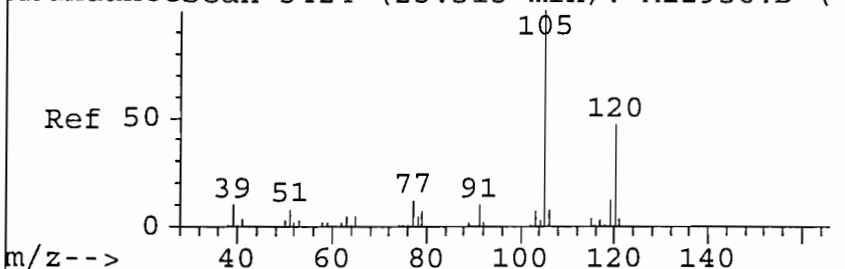
AbundanceIon 83.00 (82.
30000 Ion 85.00 (84.



AbundanceScan 3324 (22.901 min): M13342.D (



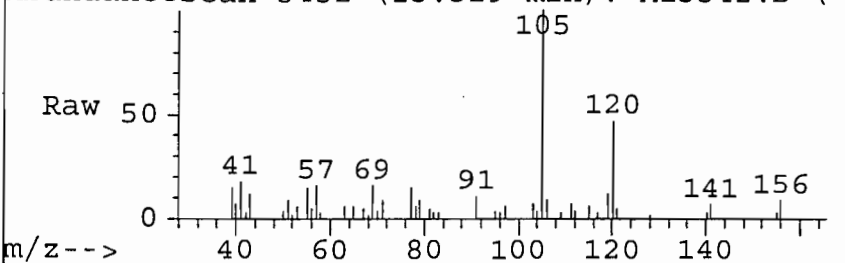
AbundanceScan 3424 (23.513 min): M12956.D (



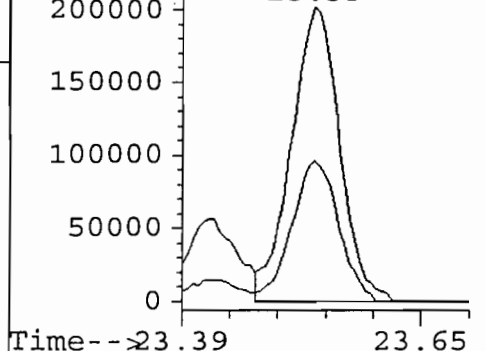
#66
1,3,5-trimethylbenzene
Concen: 18.76 ug/L
RT: 23.53 min Scan# 3432
Delta R.T. 0.02 min
Lab File: M13342.D
Acq: 25 Oct 99 4:25 pm

Tgt Ion:105	Resp:	753488
Ion Ratio	Lower	Upper
105 100		
120 47.4	33.2	61.7
0 0.0	0.0	0.0
0 0.0	0.0	0.0

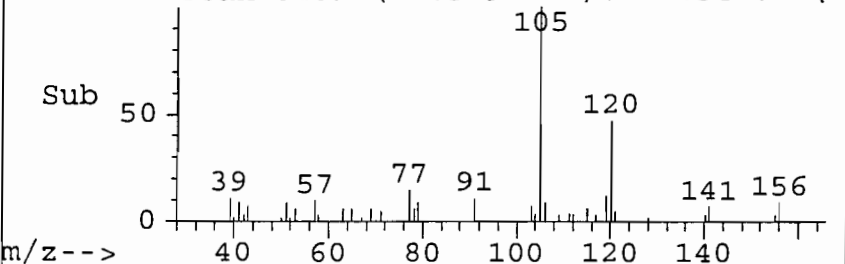
AbundanceScan 3432 (23.529 min): M13342.D (



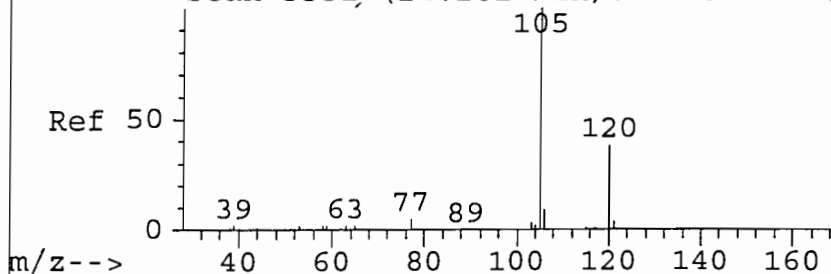
AbundanceIon 105.00 (104
Ion 120.00 (119
23.53



AbundanceScan 3432 (23.529 min): M13342.D (



AbundanceScan 3551 (24.261 min): M12956.D (

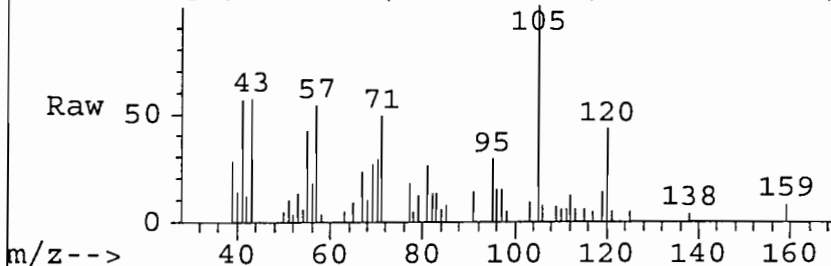


#68

1,2,4-trimethylbenzene
Concen: 9.49 ug/L
RT: 24.28 min Scan# 3561
Delta R.T. 0.02 min
Lab File: M13342.D
Acq: 25 Oct 99 4:25 pm

Tgt Ion:	105	Resp:	365621
Ion Ratio	Lower	Upper	
105	100		
120	42.7	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 3561 (24.284 min): M13342.D (



AbundanceIon 105.00 (104

Ion 120.00 (119

24.28

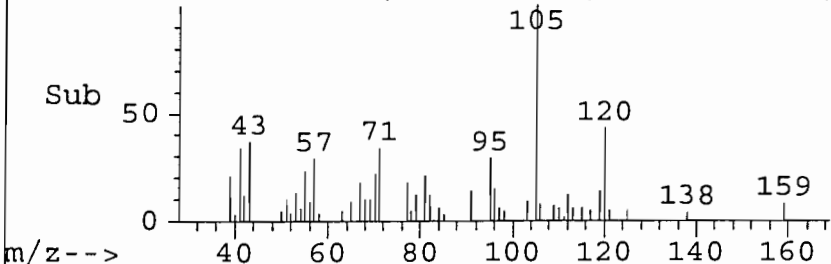
100000

50000

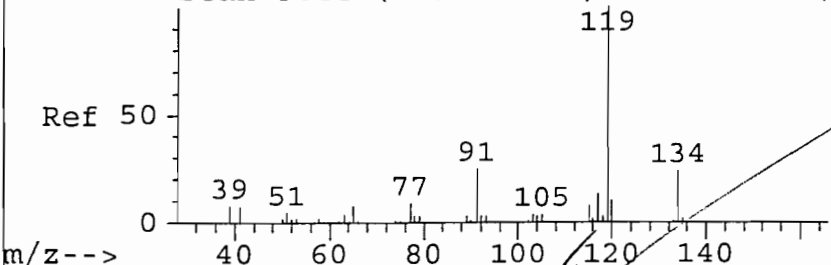
0

Time-->24.14 24.39

AbundanceScan 3561 (24.284 min): M13342.D (



AbundanceScan 3644 (24.810 min): M12956.D (

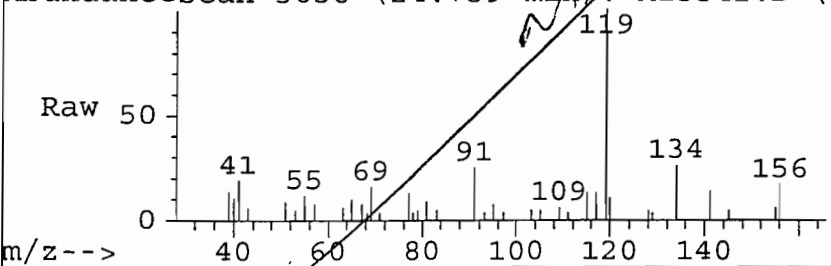


#71

4-isopropyltoluene
Concen: 8.17 ug/L
RT: 24.74 min Scan# 3638
Delta R.T. -0.07 min
Lab File: M13342.D
Acq: 25 Oct 99 4:25 pm

Tgt Ion:	119	Resp:	359673
Ion Ratio	Lower	Upper	
119	100		
134	25.8	16.7	31.1
91	25.4	17.2	32.0
0	0.0	0.0	0.0

AbundanceScan 3638 (24.739 min): M13342.D (



AbundanceIon 119.00 (118

Ion 134.00 (133

Ion 91.00 (90.

24.74

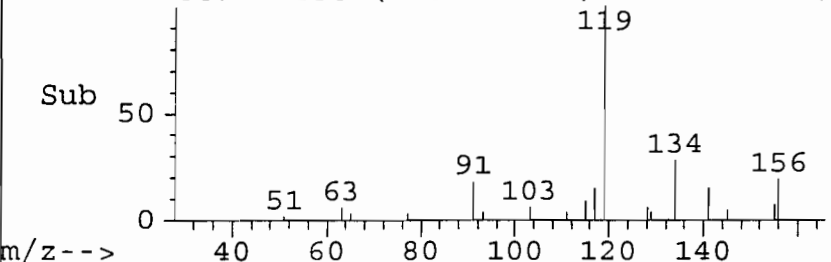
100000

50000

0

Time-->24.60 24.83

AbundanceScan 3638 (24.739 min): M13342.D (



Library Search Compound Report

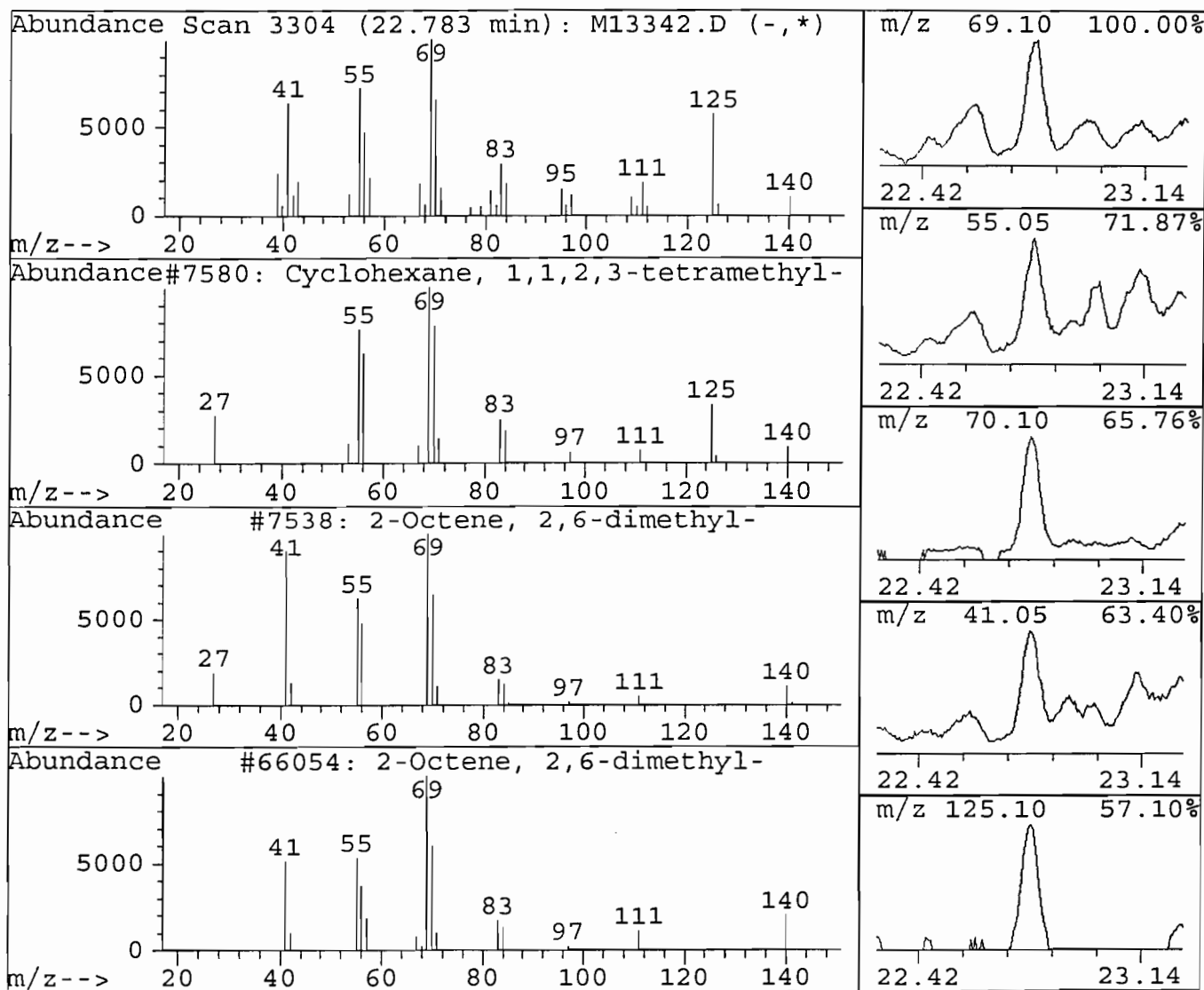
Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.78	24.95 ug/L	2788530	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1,1,2,3-tetramethyl-	7580	006783-92-2	81
2	2-Octene, 2,6-dimethyl-	7538	004057-42-5	62
3	2-Octene, 2,6-dimethyl-	66054	004057-42-5	58
4	3-Octene, 2,6-dimethyl-	7579	006874-28-8	58
5	Cyclohexane, 1,2,3-trimethyl-	64939	001678-97-3	52



Library Search Compound Report

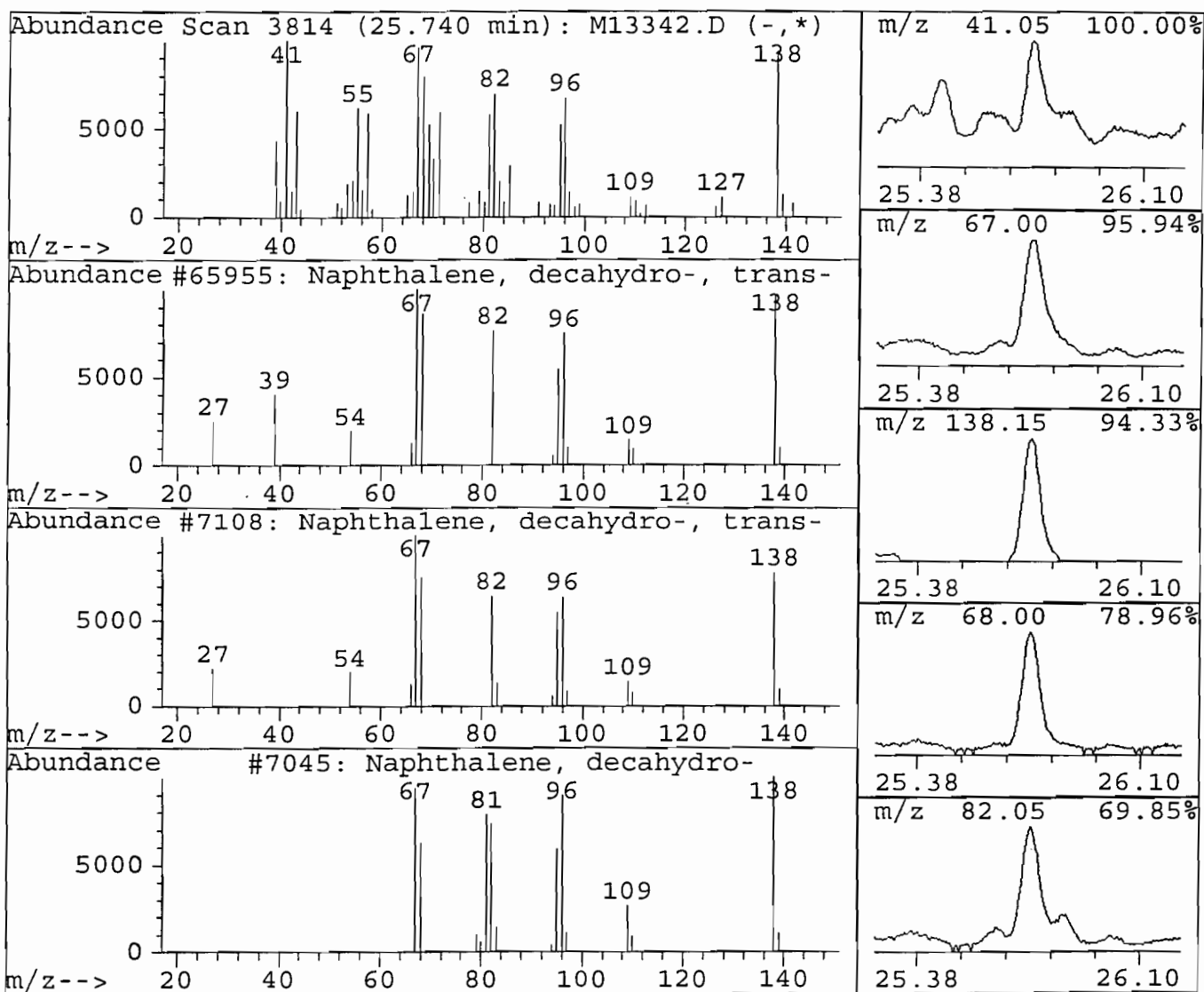
Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.74	25.81 ug/L	6026580	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, decahydro-, trans-	65955	000493-02-7	98
2	Naphthalene, decahydro-, trans-	7108	000493-02-7	93
3	Naphthalene, decahydro-	7045	000091-17-8	93
4	Naphthalene, decahydro-	65933	000091-17-8	89
5	Naphthalene, decahydro-, trans-	65956	000493-02-7	89



Library Search Compound Report

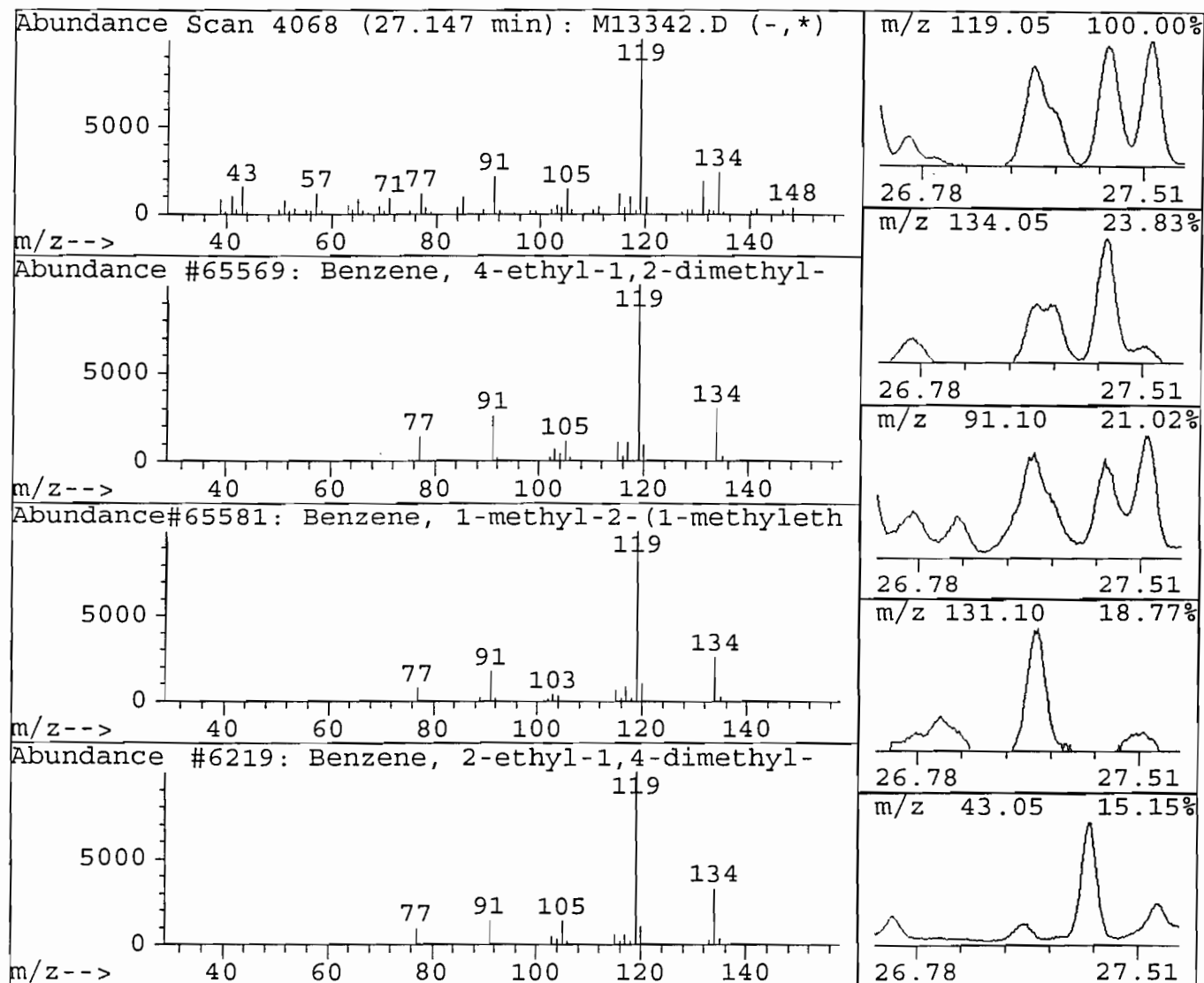
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Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.15	31.85 ug/L	7437025	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	65569	000934-80-5	95
2	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	93
3	Benzene, 2-ethyl-1,4-dimethyl-	6219	001758-88-9	89
4	Benzene, 1-ethyl-2,3-dimethyl-	65555	000933-98-2	81
5	Benzene, 2-ethyl-1,4-dimethyl-	65570	001758-88-9	81



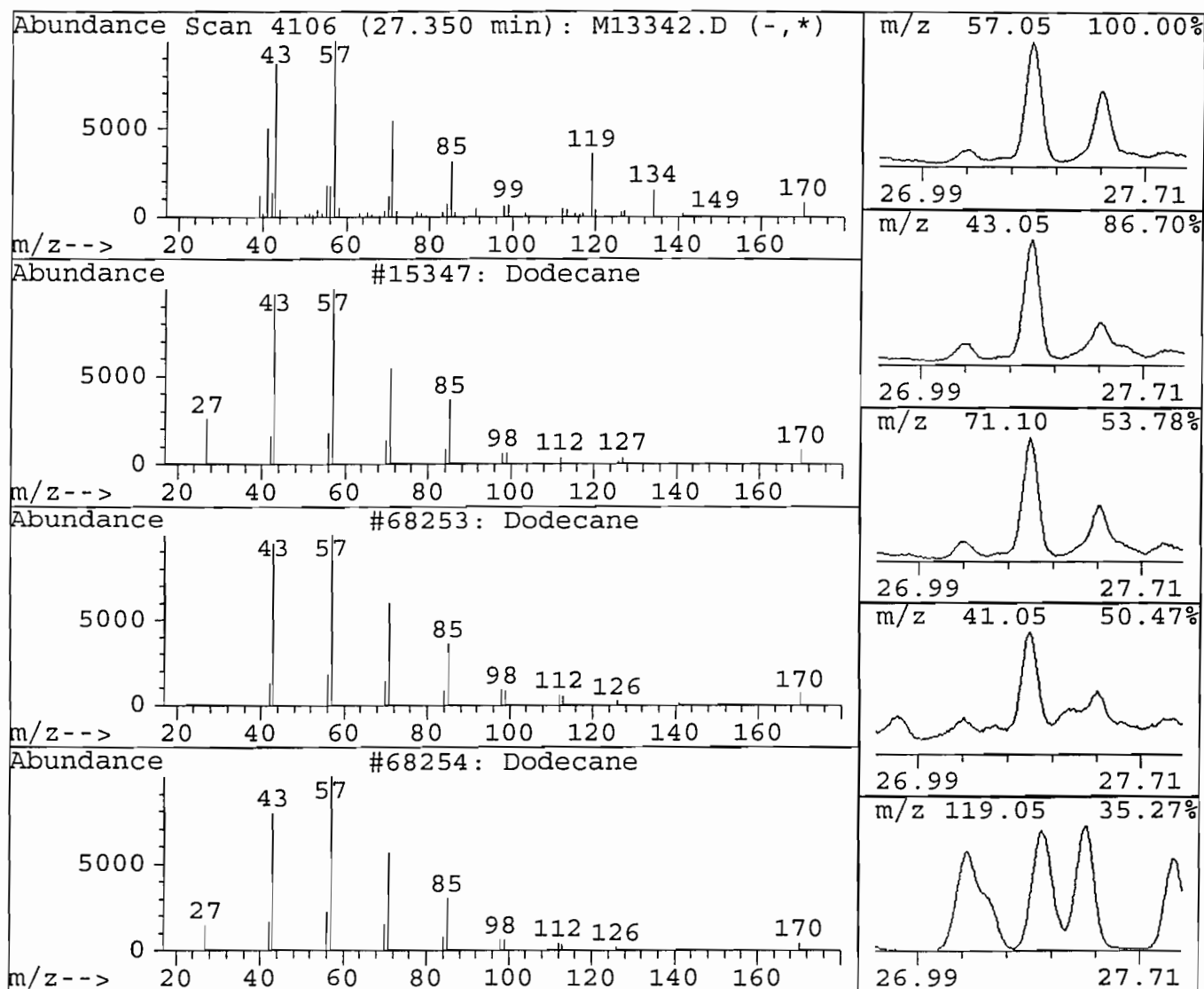
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.35	38.18 ug/L	8913314	1,4-dichlorobenzene-d4	25.21	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		15347	000112-40-3	96
2	Dodecane		68253	000112-40-3	96
3	Dodecane		68254	000112-40-3	95
4	Dodecane		68251	000112-40-3	93
5	Dodecane		68252	000112-40-3	86



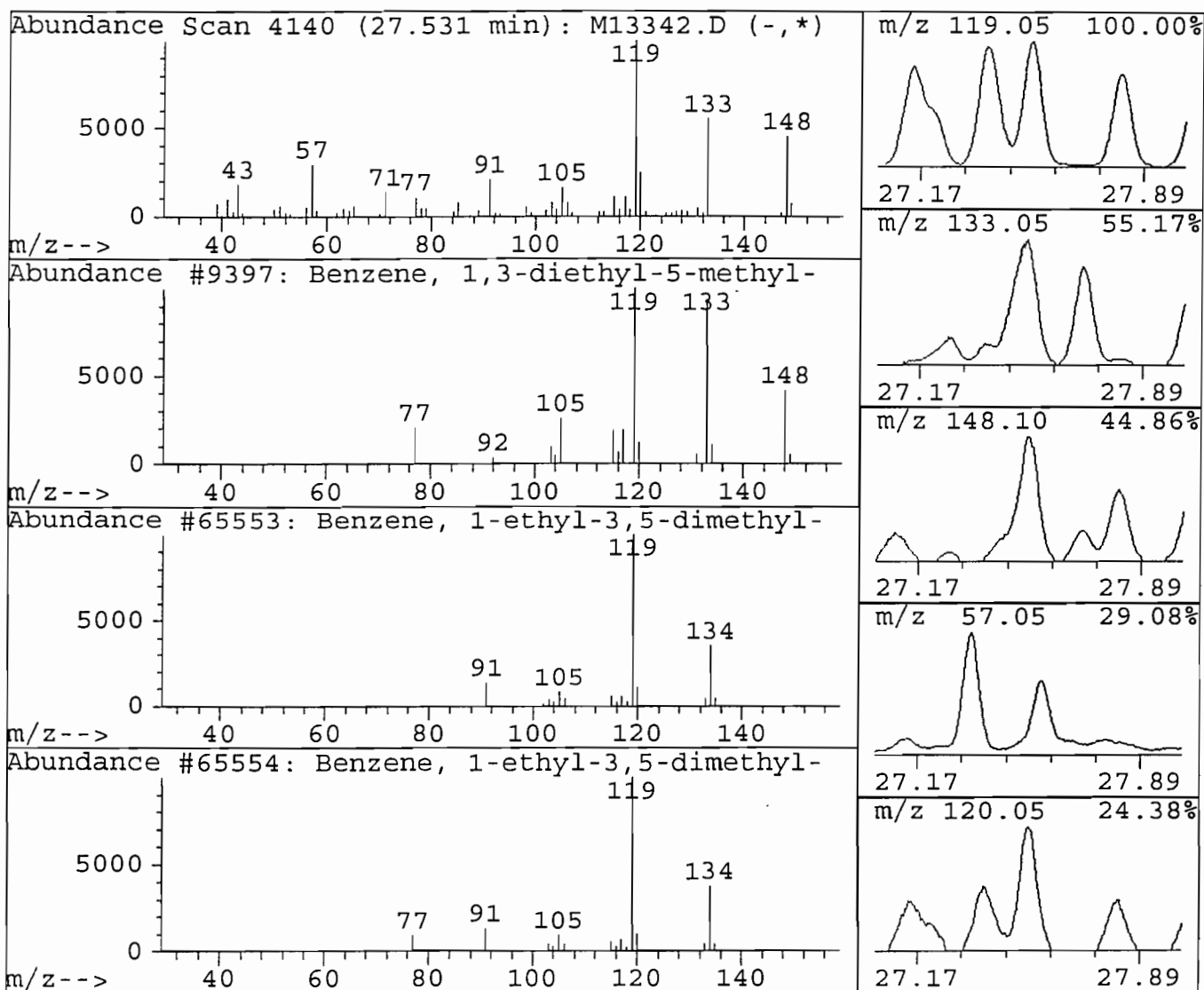
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.53	41.18 ug/L	9613736	1,4-dichlorobenzene-d4	25.21	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1,3-diethyl-5-methyl-		9397	002050-24-0	47
2	Benzene, 1-ethyl-3,5-dimethyl-		65553	000934-74-7	43
3	Benzene, 1-ethyl-3,5-dimethyl-		65554	000934-74-7	43
4	Benzene, 1-ethyl-2,3-dimethyl-		6211	000933-98-2	43
5	Benzene, 2-ethyl-1,4-dimethyl-		6219	001758-88-9	43



Library Search Compound Report

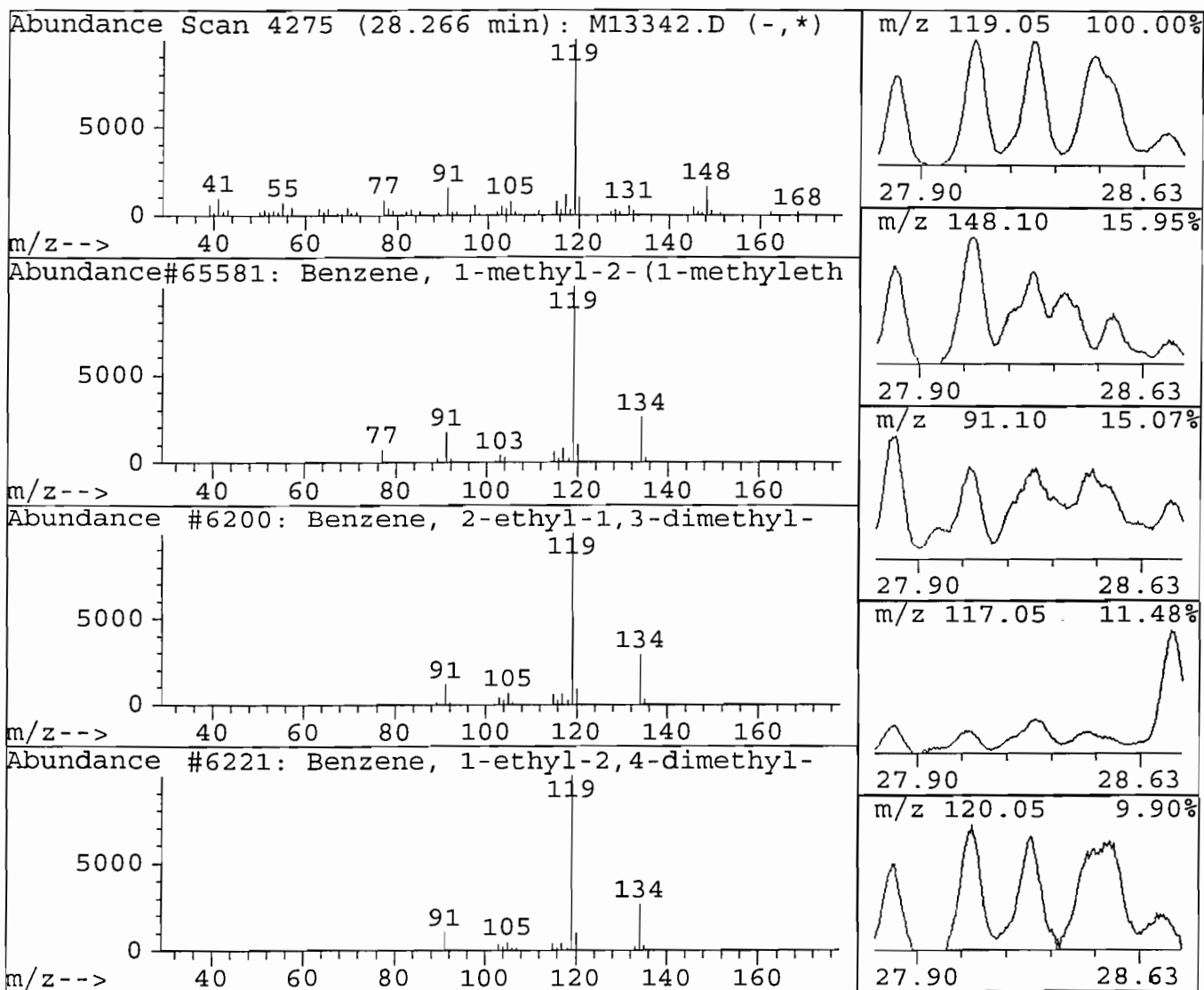
Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct '99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.27	29.36 ug/L	6853482	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	72
2	Benzene, 2-ethyl-1,3-dimethyl-	6200	002870-04-4	72
3	Benzene, 1-ethyl-2,4-dimethyl-	6221	000874-41-9	64
4	Benzene, 1-methyl-3-(1-methylethyl)	6225	000535-77-3	64
5	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	64



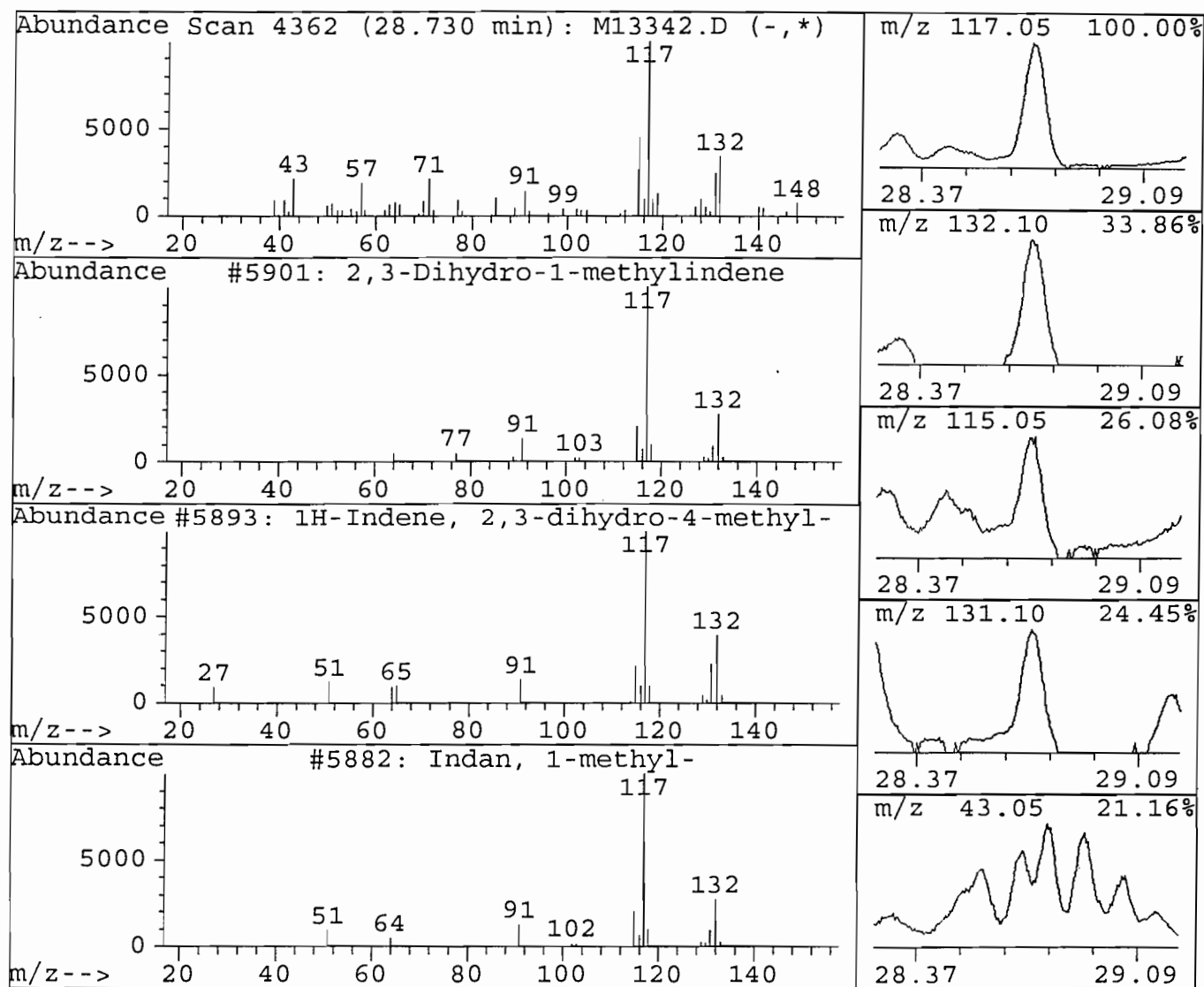
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
28.73	28.08 ug/L	6554891	1,4-dichlorobenzene-d4	25.21	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	2,3-Dihydro-1-methylindene		5901	027133-93-3	92
2	1H-Indene, 2,3-dihydro-4-methyl-		5893	000824-22-6	76
3	Indan, 1-methyl-		5882	000767-58-8	70
4	Indan, 1-methyl-		65418	000767-58-8	64
5	Benzene, 1-methyl-2-(2-propenyl)-		65419	001587-04-8	62



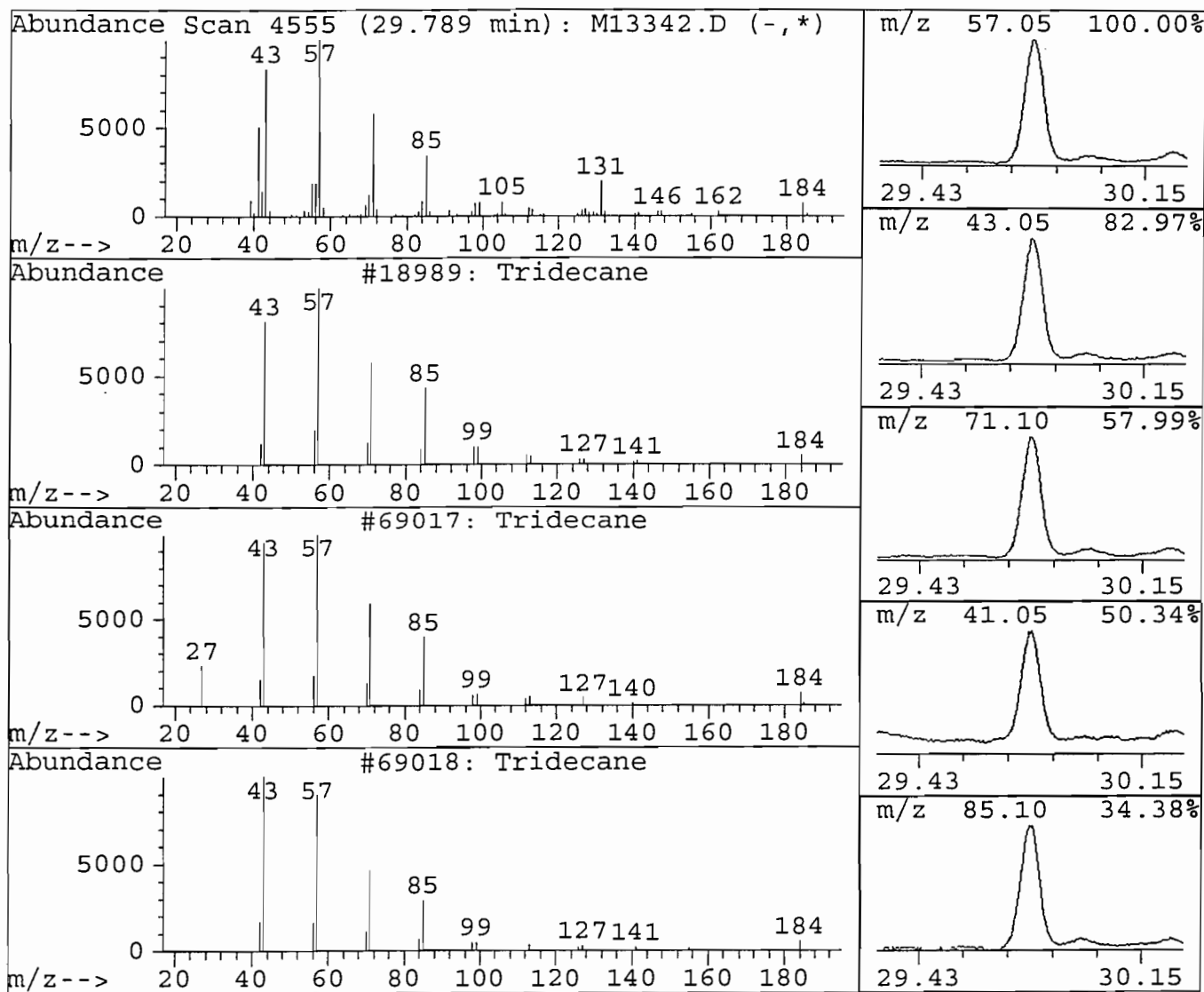
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.79	60.47 ug/L	14117629	1,4-dichlorobenzene-d4	25.21	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tridecane		18989	000629-50-5	98
2	Tridecane		69017	000629-50-5	97
3	Tridecane		69018	000629-50-5	96
4	Tridecane		69021	000629-50-5	94
5	Tridecane		69020	000629-50-5	93



Library Search Compound Report

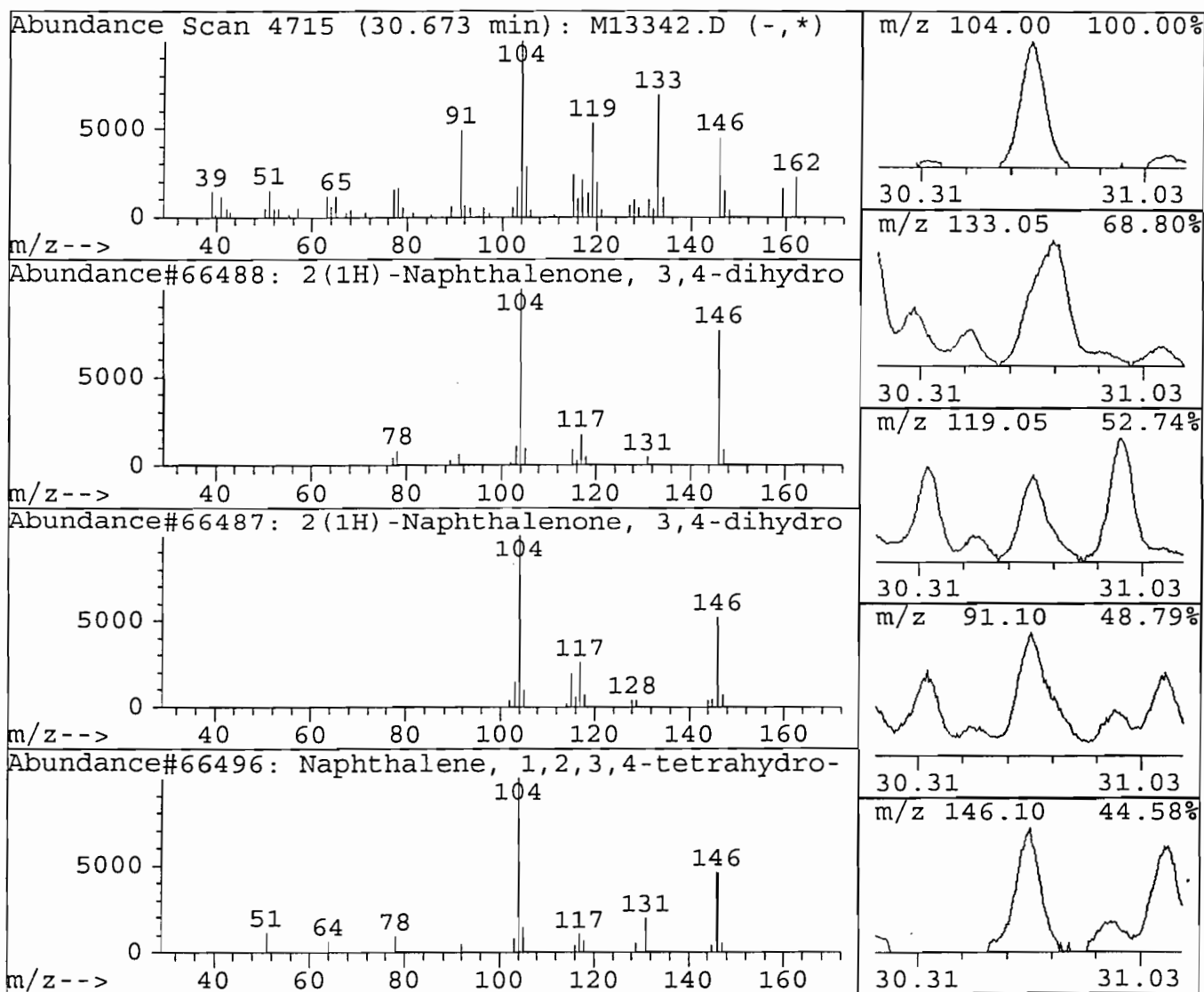
Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.67	32.11 ug/L	7496659	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2(1H)-Naphthalenone, 3,4-dihydro-	66488	000530-93-8	43
2	2(1H)-Naphthalenone, 3,4-dihydro-	66487	000530-93-8	43
3	Naphthalene, 1,2,3,4-tetrahydro-2-m	66496	003877-19-8	41
4	7-Azabicyclo[4.2.2]deca-2,4,9-trien	9087	017198-06-0	38
5	2(1H)-Naphthalenone, 3,4-dihydro-	8940	000530-93-8	38



Library Search Compound Report

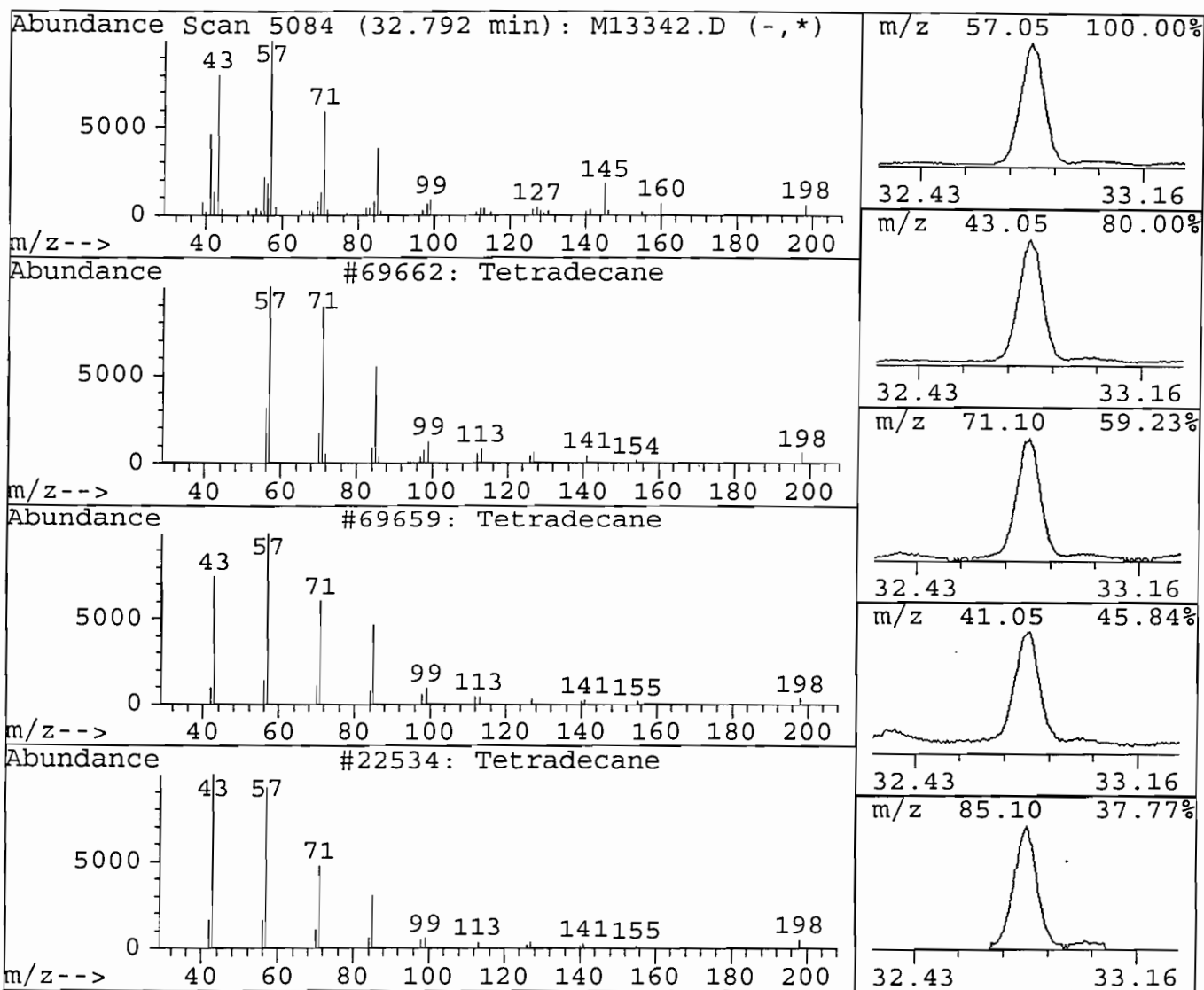
Data File : D:\HPCHEM\3\DATA\V3102599\M13342.D
Acq Time : 25 Oct 99 4:25 pm
Sample : 13827ASP-88015
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.79	40.67 ug/L	9495447	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tetradecane	69662	000629-59-4	97
2	Tetradecane	69659	000629-59-4	96
3	Tetradecane	22534	000629-59-4	95
4	Tetradecane	69661	000629-59-4	95
5	Tetradecane	69657	000629-59-4	94



SAMPLE NO.

GP-018-SS12

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: O88016

Lab File ID: M13343.D

Date Received: 10/18/99

Date Analyzed: 10/25/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

(ug/L or ug/Kg)

ug/Kg

Q

FORM I VOA

000192

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-018-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88016
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13343.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	21.24	2600	J
2.	Unknown	21.45	3300	J
3.	Unknown	21.87	8800	J
4. 5911-04-6	Nonane, 3-methyl-	22.16	2300	J
5.	Ujknown	25.45	2700	J
6. 112-40-3	Dodecane	27.36	5100	J
7.	Unknown	28.27	2300	J
8. 119-64-2	Naphthalene, 1,2,3,4-tetrahy	29.36	2600	J
9. 629-50-5	Tridecane	29.79	3700	J
10. 629-59-4	Tetradecane	32.79	2300	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
 Acq Time : 25 Oct 99 5:11 pm
 Sample : 13827ASP-88016
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 25 18:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

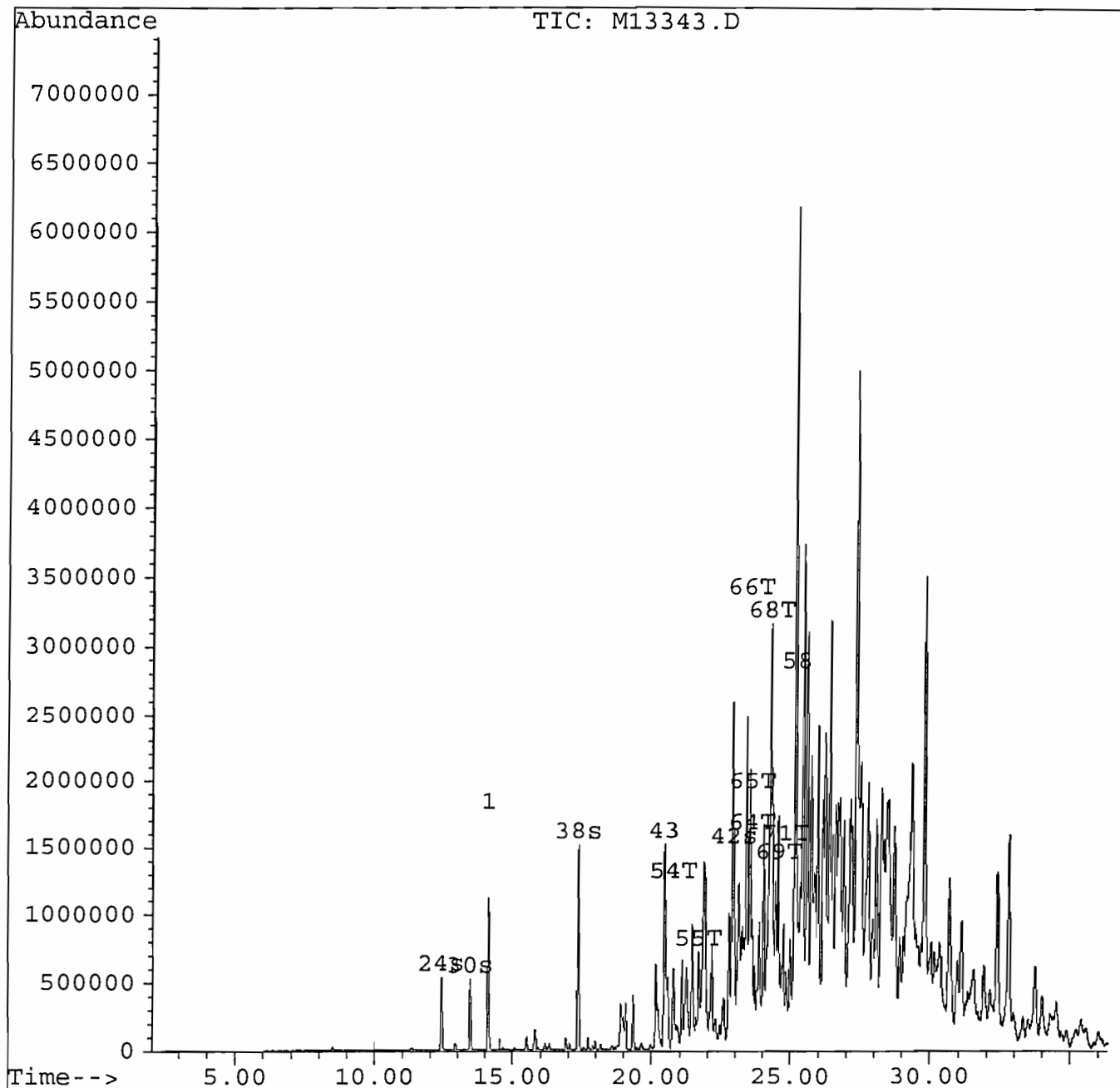
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.12	96	1862516	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.47	117	1668061	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	25.21	152	663424	50.00	ug/L	0.03
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.42	113	629282	54.32	ug/L	108.64%
30) 1,2-Dichlorethane-d4	13.46	65	688988	52.77	ug/L	105.54%
38) Toluene-d8	17.37	98	1938647	53.43	ug/L	106.86%
42) 4-Bromofluorobenzene	22.96	95	875791	57.09	ug/L	114.18%
Target Compounds						Qvalue
54) m&p-xylenes	20.78	106	271657	15.00	ug/L	99
55) o-xylene	21.69	91	606680	14.48	ug/L	98
64) 2-chlorotoluene	23.62	126	59198	5.89	ug/L	95
65) 4-chlorotoluene	23.62	126	59198	5.67	ug/L	95
66) 1,3,5-trimethylbenzene	23.53	105	1973909	54.54	ug/L	99
68) 1,2,4-trimethylbenzene	24.29	105	2330052	67.11	ug/L	99
69) sec-butylbenzene	24.59	105	183271	4.10	ug/L	94
71) 4-isopropyltoluene	24.83	119	296434	7.48	ug/L	98

Quantitation Report

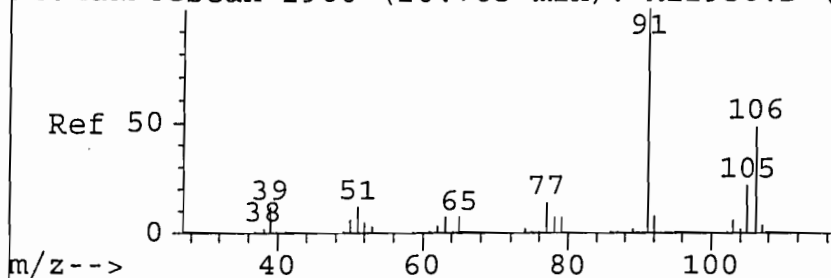
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 25 18:08 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



AbundanceScan 2960 (20.765 min): M12956.D (



#54

m&p-xylenes

Concen: 15.00 ug/L

RT: 20.78 min Scan# 3058

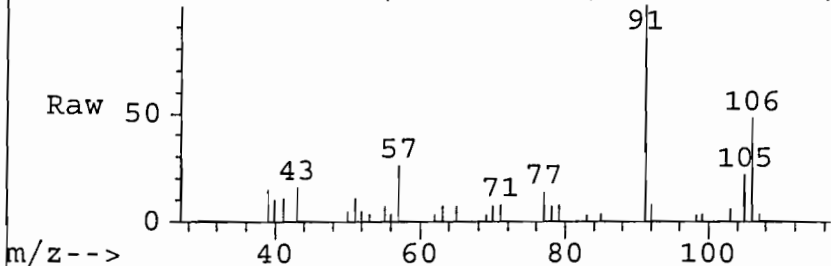
Delta R.T. 0.02 min

Lab File: M13343.D

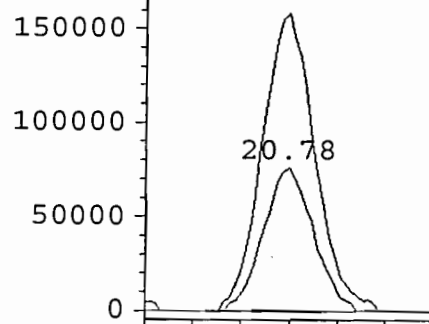
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	106	Resp:	271657
Ion	Ratio	Lower	Upper
106	100		
91	207.4	146.7	272.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

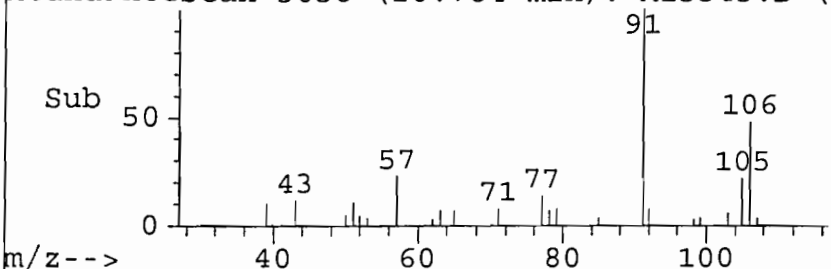
AbundanceScan 3058 (20.784 min): M13343.D (



AbundanceIon 106.00 (105
Ion 91.00 (90.

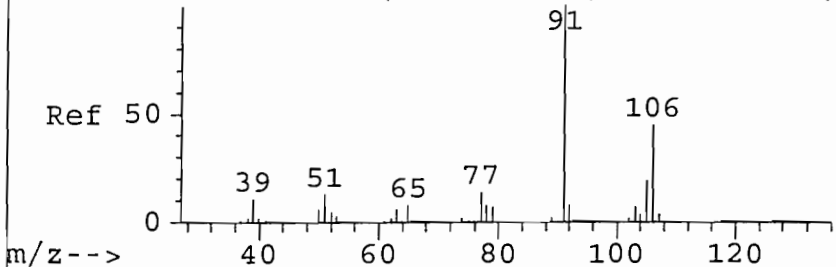


AbundanceScan 3058 (20.784 min): M13343.D (



Time-->20.64 20.88

AbundanceScan 3113 (21.672 min): M12956.D (



#55

o-xylene

Concen: 14.48 ug/L

RT: 21.69 min Scan# 3213

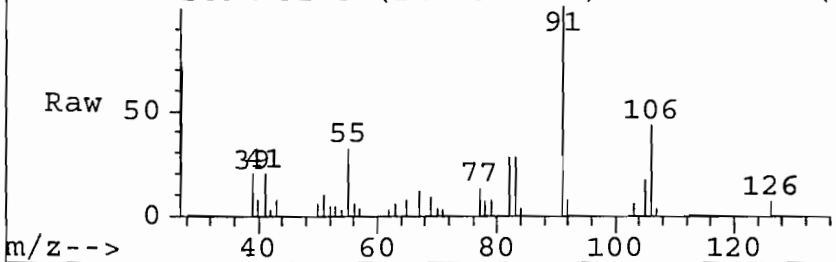
Delta R.T. 0.01 min

Lab File: M13343.D

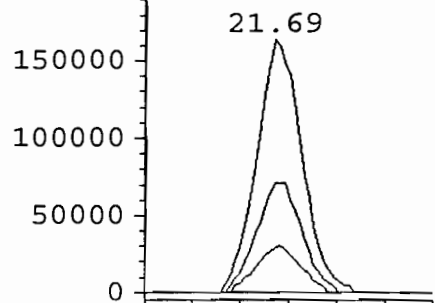
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	91	Resp:	606680
Ion	Ratio	Lower	Upper
91	100		
106	43.4	31.3	58.1
105	17.5	12.9	24.0
0	0.0	0.0	0.0

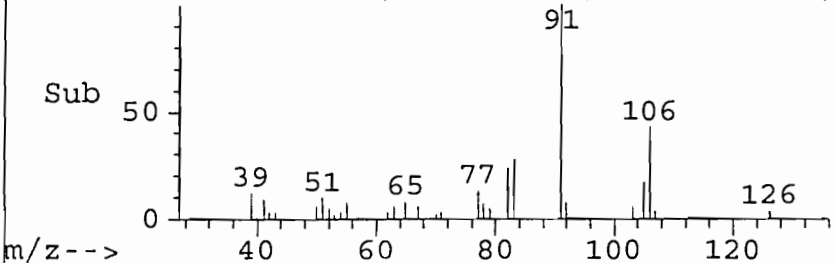
AbundanceScan 3213 (21.685 min): M13343.D (



AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104

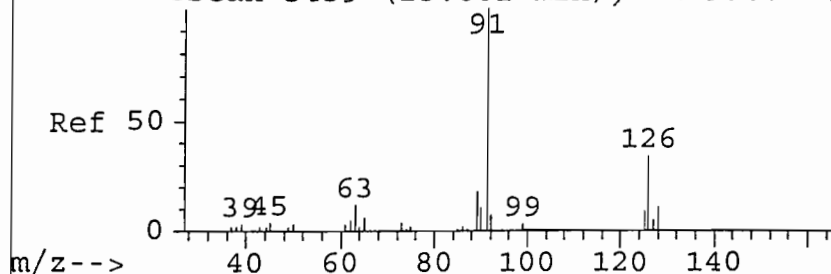


AbundanceScan 3213 (21.685 min): M13343.D (



Time-->21.53 21.81

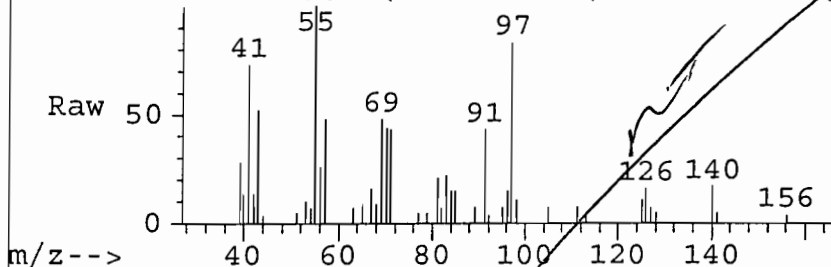
AbundanceScan 3439 (23.601 min); M12956.D (



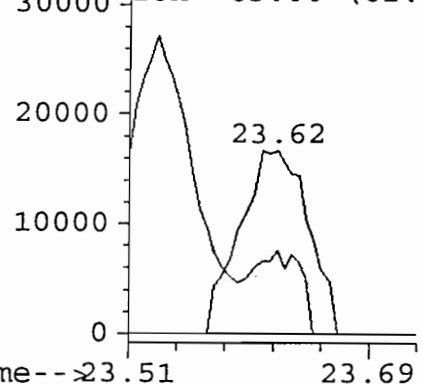
#64
2-chlorotoluene
Concen: 5.89 ug/L
RT: 23.62 min Scan# 3562
Delta R.T. 0.02 min
Lab File: M13343.D
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	126	Resp:	59198
Ion Ratio	Lower	Upper	
126	100		
63	45.1	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

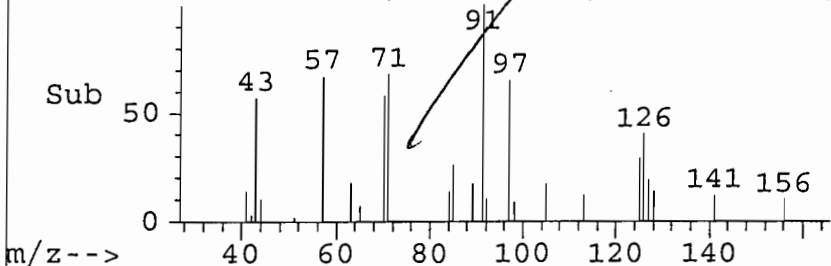
AbundanceScan 3562 (23.621 min): M13343.D (



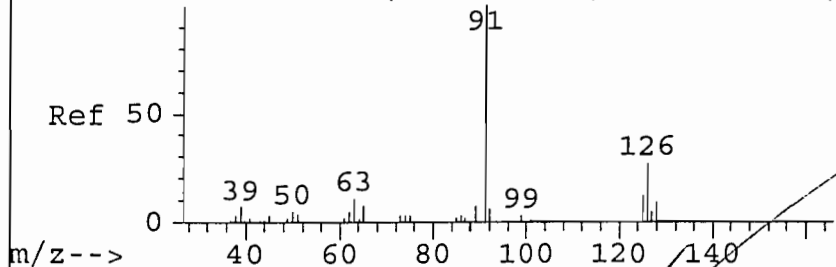
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3562 (23.621 min): M13343.D (



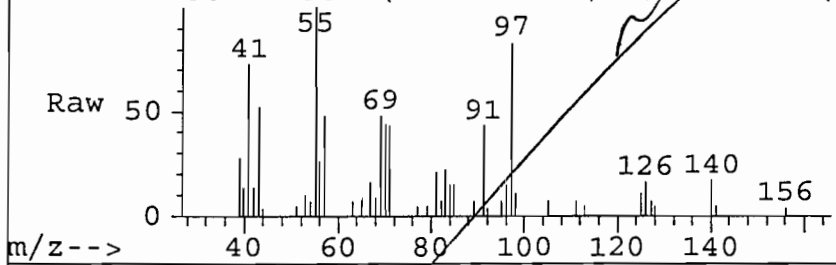
AbundanceScan 3453 (23.682 min): M12956.D (



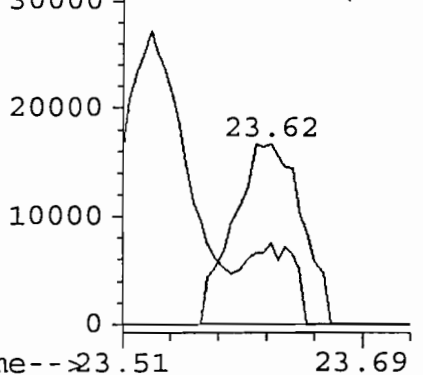
#65
4-chlorotoluene
Concen: 5.67 ug/L
RT: 23.62 min Scan# 3562
Delta R.T. -0.06 min
Lab File: M13343.D
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	126	Resp:	59198
Ion Ratio	Lower	Upper	
126	100		
63	45.1	29.3	54.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

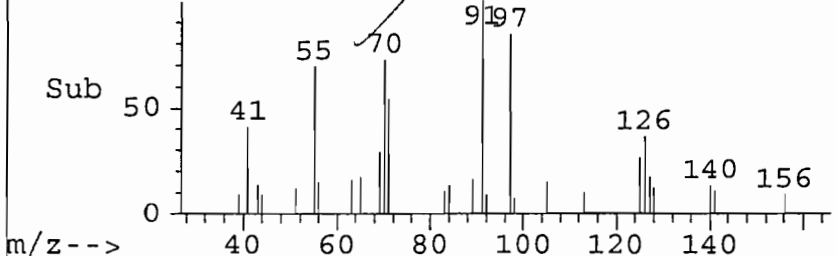
AbundanceScan 3562 (23.621 min): M13343.D (



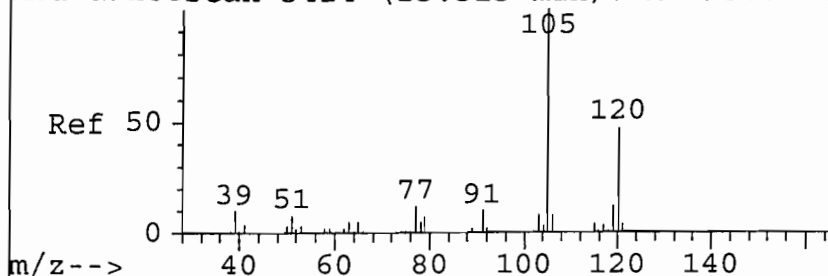
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3562 (23.621 min): M13343.D (



AbundanceScan 3424 (23.513 min): M12956.D (

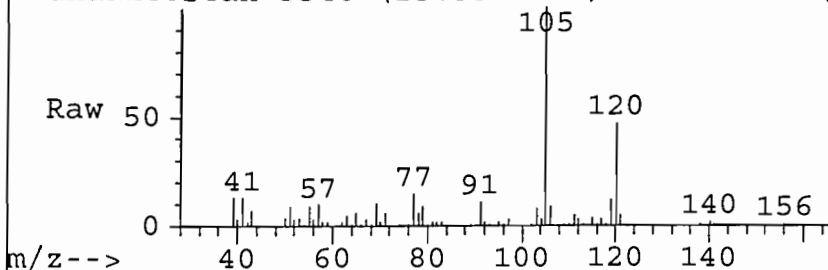


#66

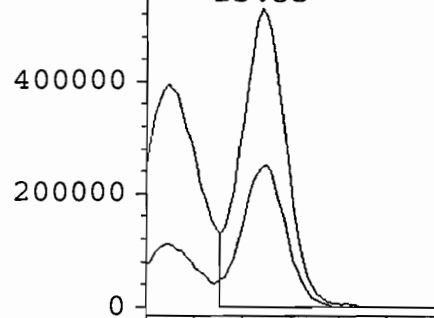
1,3,5-trimethylbenzene
Concen: 54.54 ug/L
RT: 23.53 min Scan# 3546
Delta R.T. 0.02 min
Lab File: M13343.D
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	105	Resp:	1973909
Ion	Ratio	Lower	Upper
105	100		
120	46.7	33.2	61.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

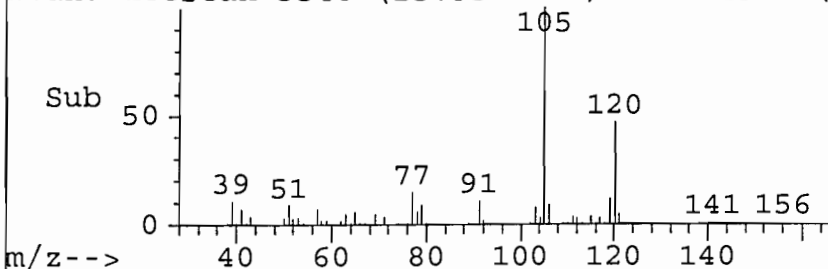
AbundanceScan 3546 (23.531 min): M13343.D (



AbundanceIon 105.00 (104
600000 Ion 120.00 (119
23.53

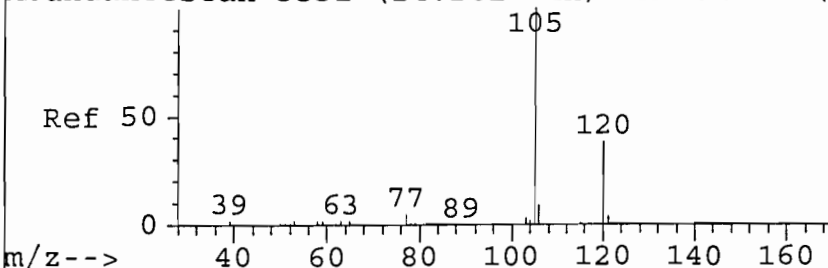


AbundanceScan 3546 (23.531 min): M13343.D (



Time-->23.40 23.68

AbundanceScan 3551 (24.261 min): M12956.D (

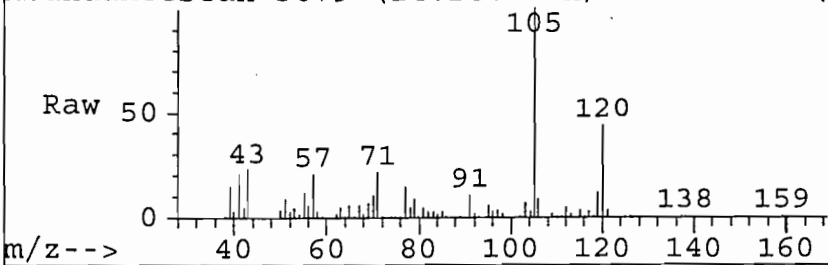


#68

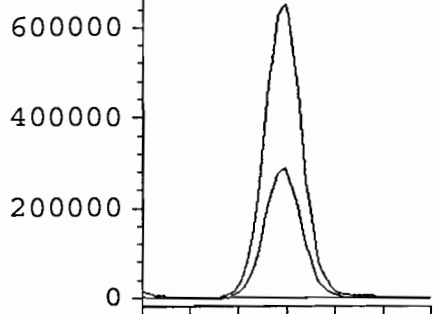
1,2,4-trimethylbenzene
Concen: 67.11 ug/L
RT: 24.29 min Scan# 3679
Delta R.T. 0.03 min
Lab File: M13343.D
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	105	Resp:	2330052
Ion	Ratio	Lower	Upper
105	100		
120	44.2	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

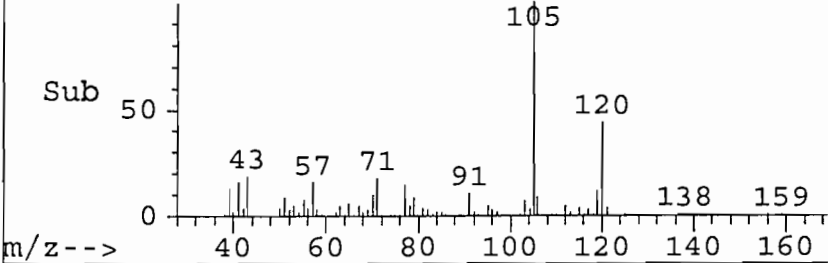
AbundanceScan 3679 (24.286 min): M13343.D (



AbundanceIon 105.00 (104
600000 Ion 120.00 (119
24.29

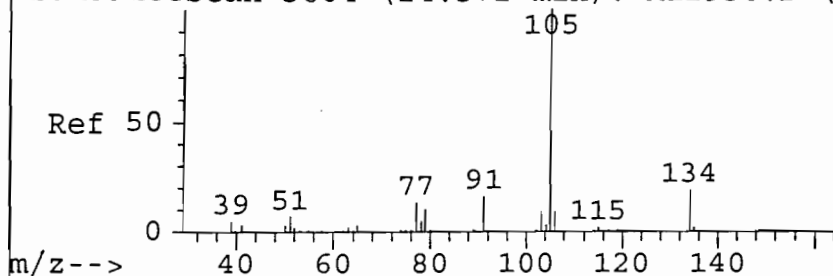


AbundanceScan 3679 (24.286 min): M13343.D (



Time-->24.10 24.42

AbundanceScan 3604 (24.572 min): M12956.D (



#69

sec-butylbenzene

Concen: 4.10 ug/L

RT: 24.59 min Scan# 3734

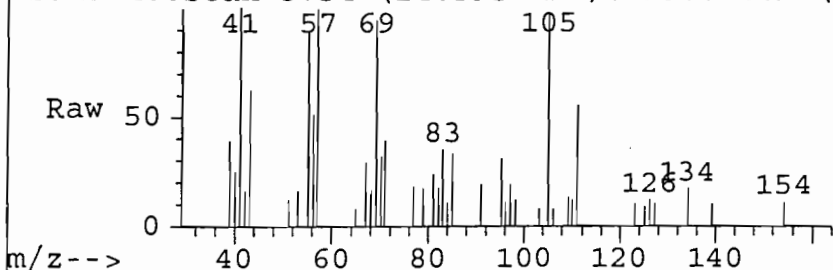
Delta R.T. 0.02 min

Lab File: M13343.D

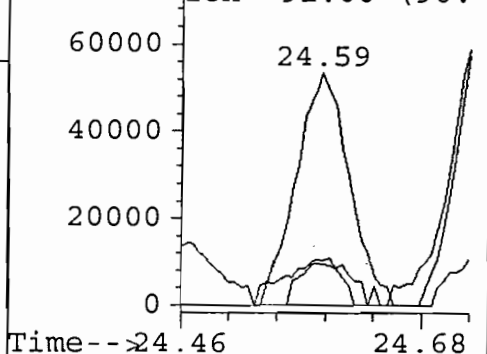
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	105	Resp:	183271
Ion	Ratio	Lower	Upper
105	100		
134	17.6	13.4	25.0
91	19.4	11.1	20.5
0	0.0	0.0	0.0

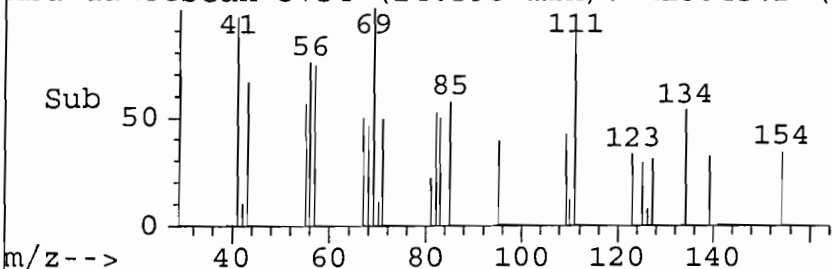
AbundanceScan 3734 (24.593 min): M13343.D (



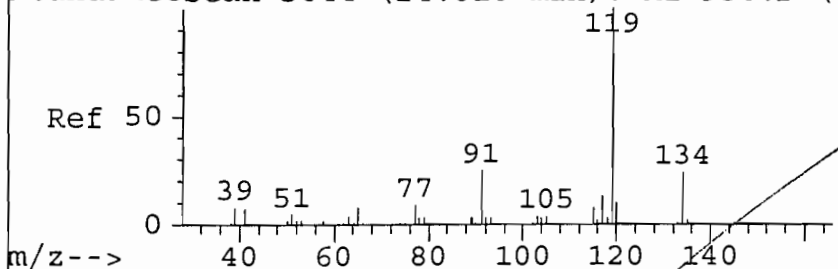
AbundanceIon 105.00 (104
80000 Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3734 (24.593 min): M13343.D (



AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 7.48 ug/L

RT: 24.83 min Scan# 3774

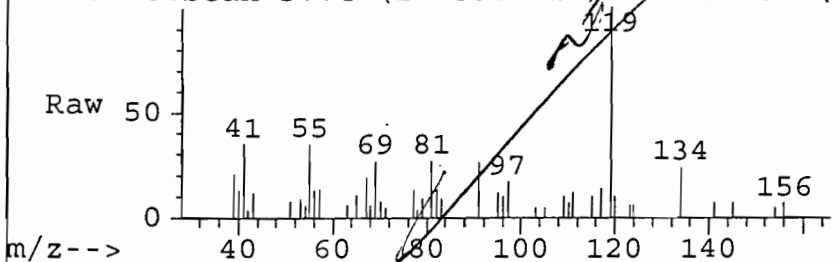
Delta R.T. 0.02 min

Lab File: M13343.D

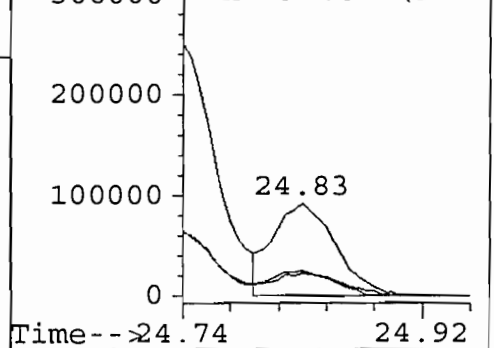
Acq: 25 Oct 99 5:11 pm

Tgt Ion:	119	Resp:	296434
Ion	Ratio	Lower	Upper
119	100		
134	23.9	16.7	31.1
91	26.2	17.2	32.0
0	0.0	0.0	0.0

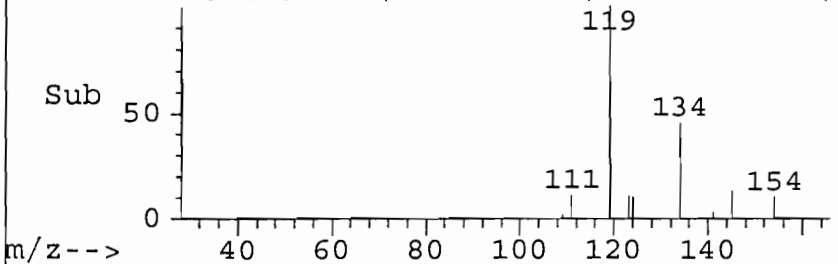
AbundanceScan 3774 (24.830 min): M13343.D (



AbundanceIon 119.00 (118
300000 Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3774 (24.830 min): M13343.D (



Library Search Compound Report

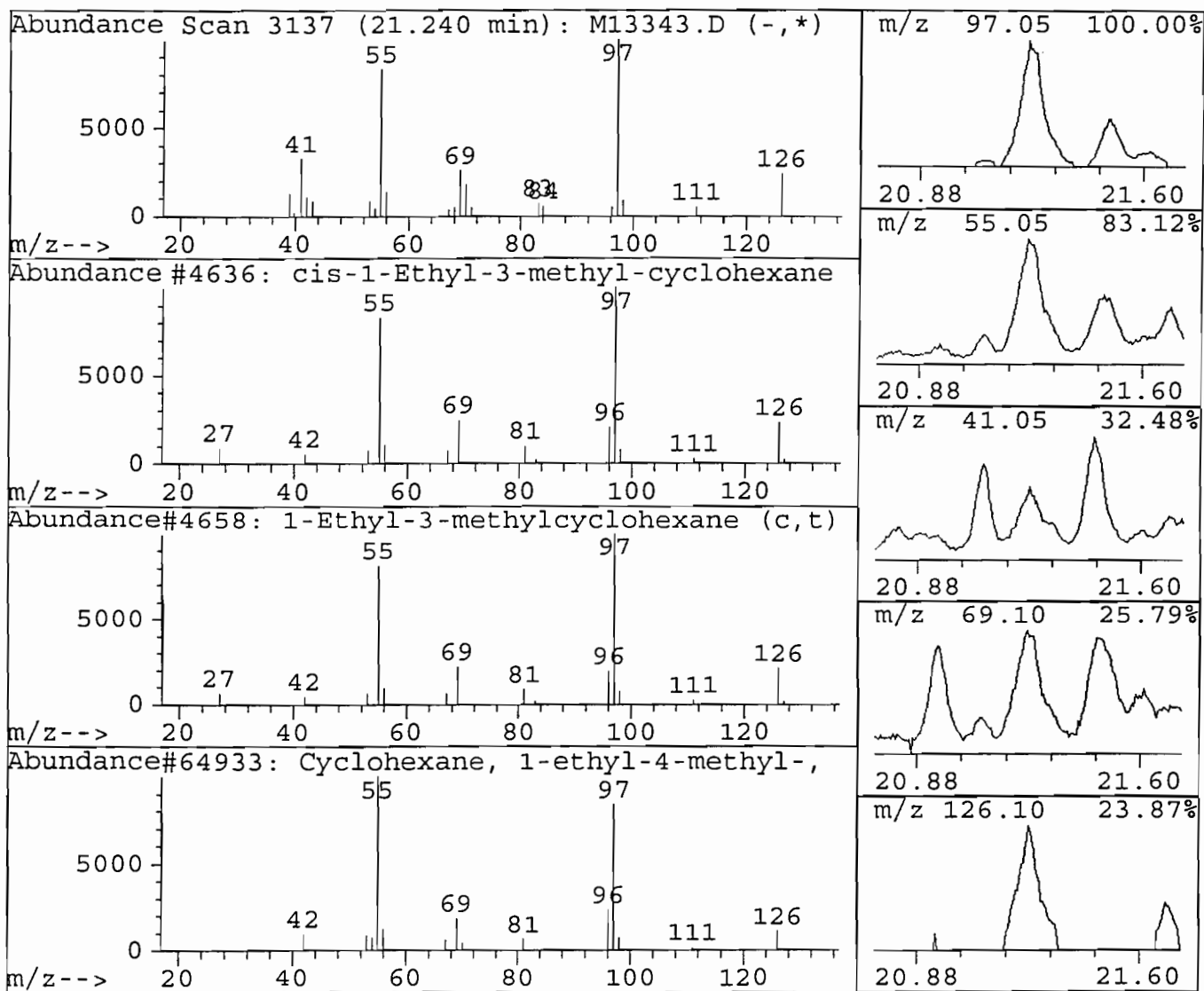
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.24	20.06 ug/L	2905993	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	cis-1-Ethyl-3-methyl-cyclohexane	4636	019489-10-2	83
2	1-Ethyl-3-methylcyclohexane (c,t)	4658	003728-55-0	80
3	Cyclohexane, 1-ethyl-4-methyl-, cis	64933	004926-78-7	78
4	Cyclohexane, 1-ethyl-2-methyl-, tra	4650	004923-78-8	72
5	Cyclohexane, 1-ethyl-4-methyl-, tra	64954	006236-88-0	72



Library Search Compound Report

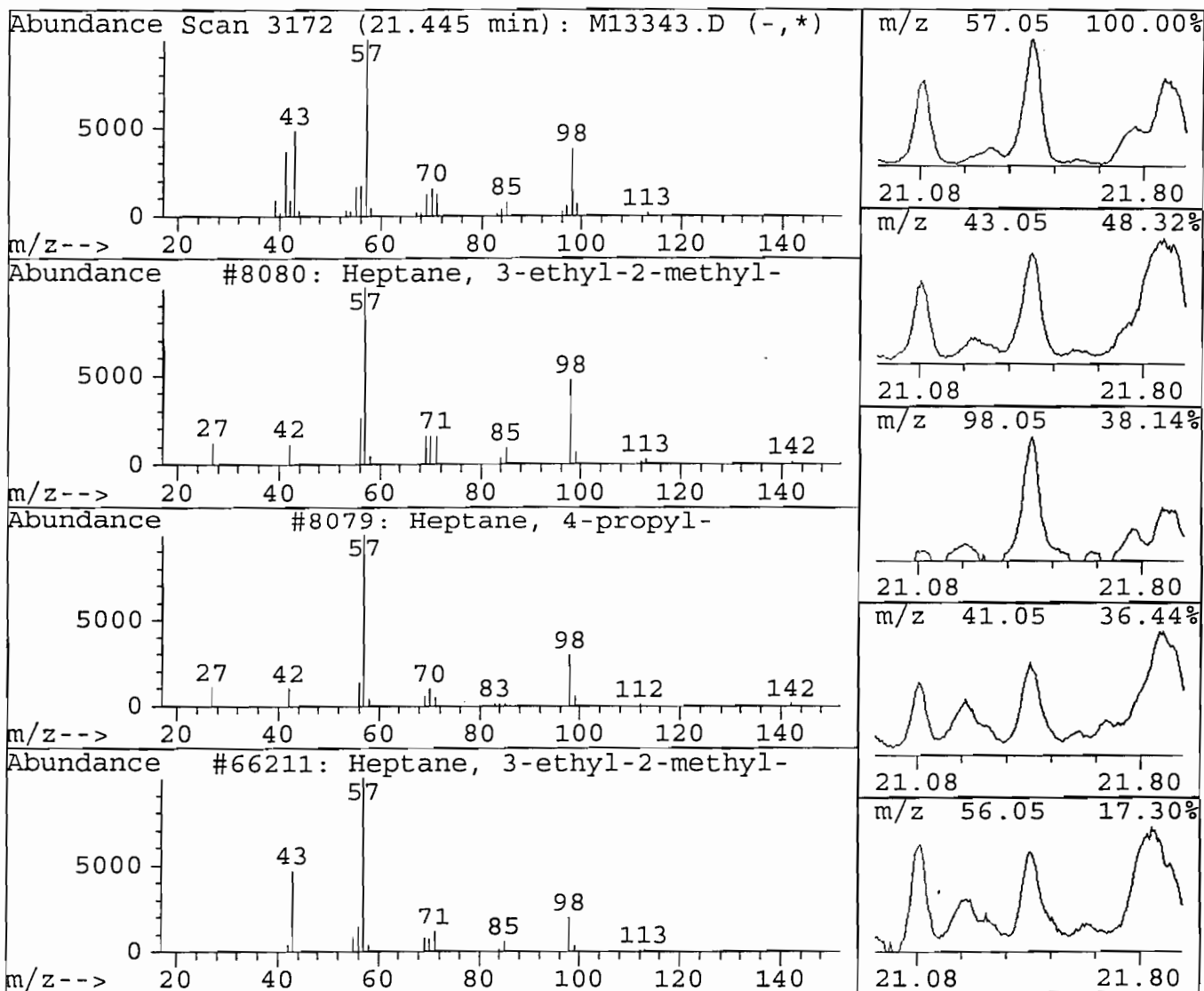
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.45	25.37 ug/L	3675149	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 3-ethyl-2-methyl-	8080	014676-29-0	83
2	Heptane, 4-propyl-	8079	003178-29-8	78
3	Heptane, 3-ethyl-2-methyl-	66211	014676-29-0	78
4	Heptane, 3-ethyl-2-methyl-	66212	014676-29-0	59
5	Octane, 2,3-dimethyl-	66214	007146-60-3	50



Library Search Compound Report

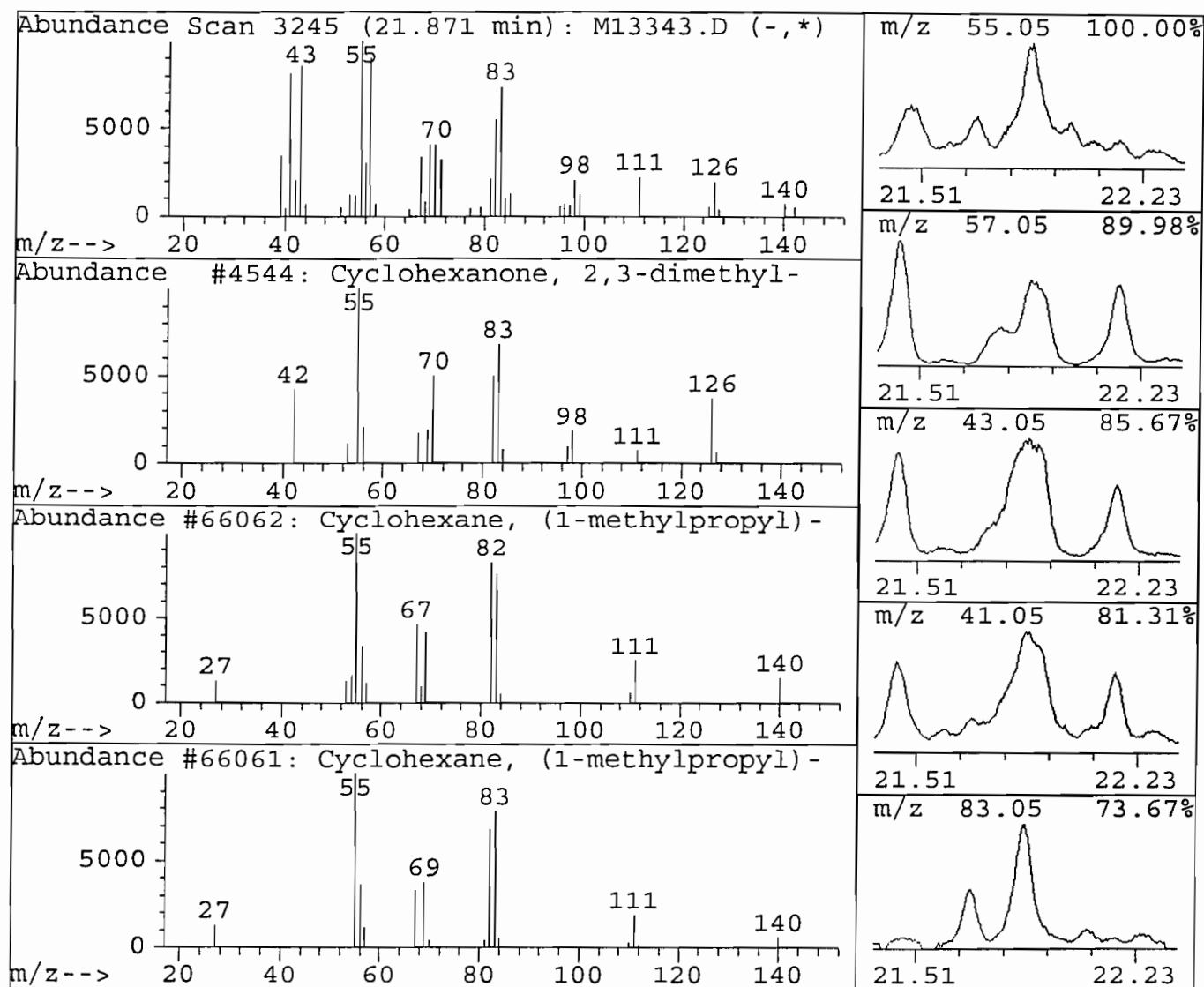
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.87	67.30 ug/L	9750493	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexanone, 2,3-dimethyl-	4544	013395-76-1	64
2	Cyclohexane, (1-methylpropyl)-	66062	007058-01-7	50
3	Cyclohexane, (1-methylpropyl)-	66061	007058-01-7	49
4	Cyclohexane, propyl-	64937	001678-92-8	46
5	Cyclohexane, propyl-	64936	001678-92-8	43



Library Search Compound Report

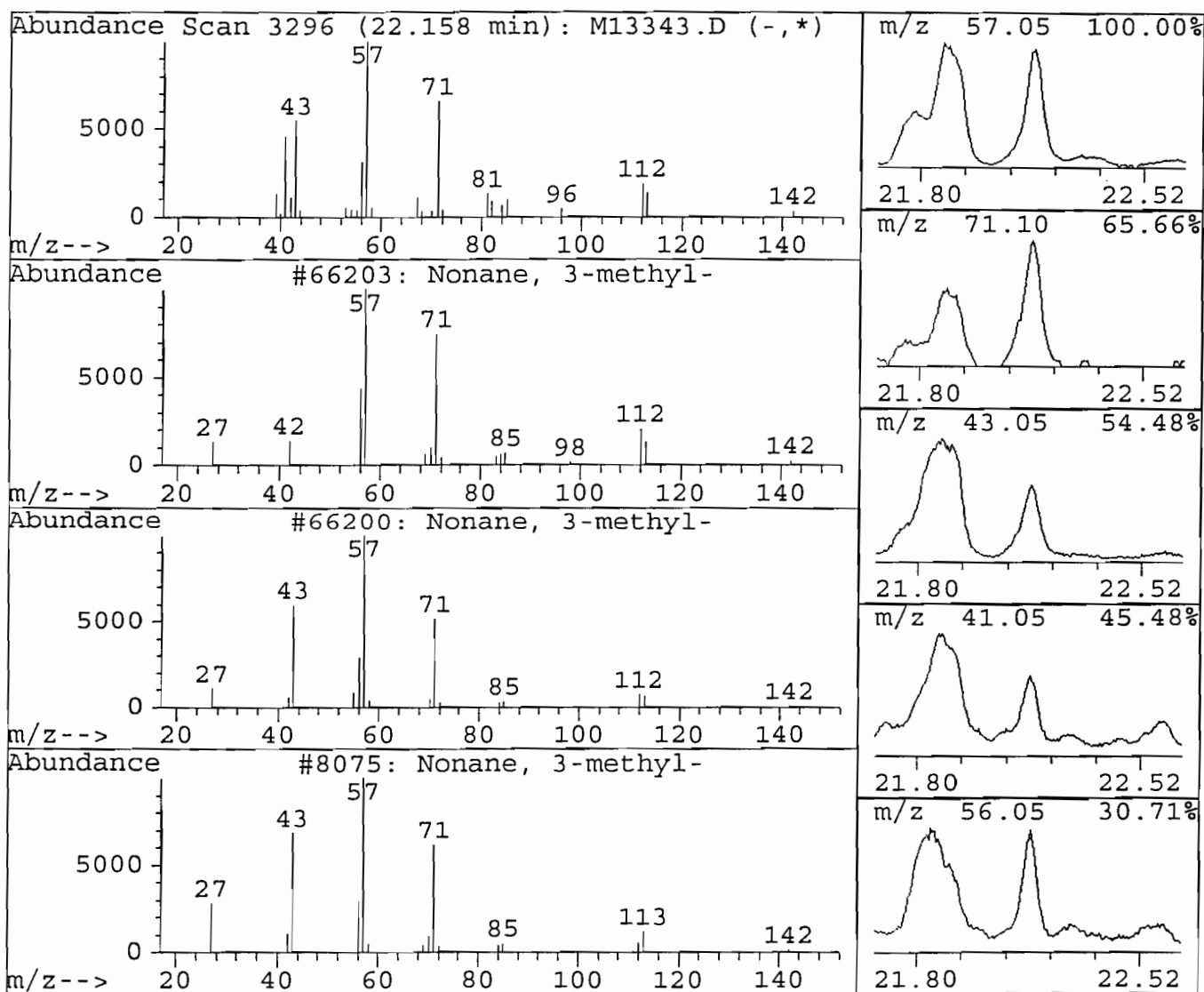
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Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.16	17.46 ug/L	2529047	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane, 3-methyl-	66203	005911-04-6	87
2	Nonane, 3-methyl-	66200	005911-04-6	83
3	Nonane, 3-methyl-	8075	005911-04-6	72
4	Nonane, 3-methyl-	66201	005911-04-6	72
5	Octane, 2,6-dimethyl-	66228	002051-30-1	64



Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D

Acq Time : 25 Oct 99 5:11 pm

Sample : 13827ASP-88016

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

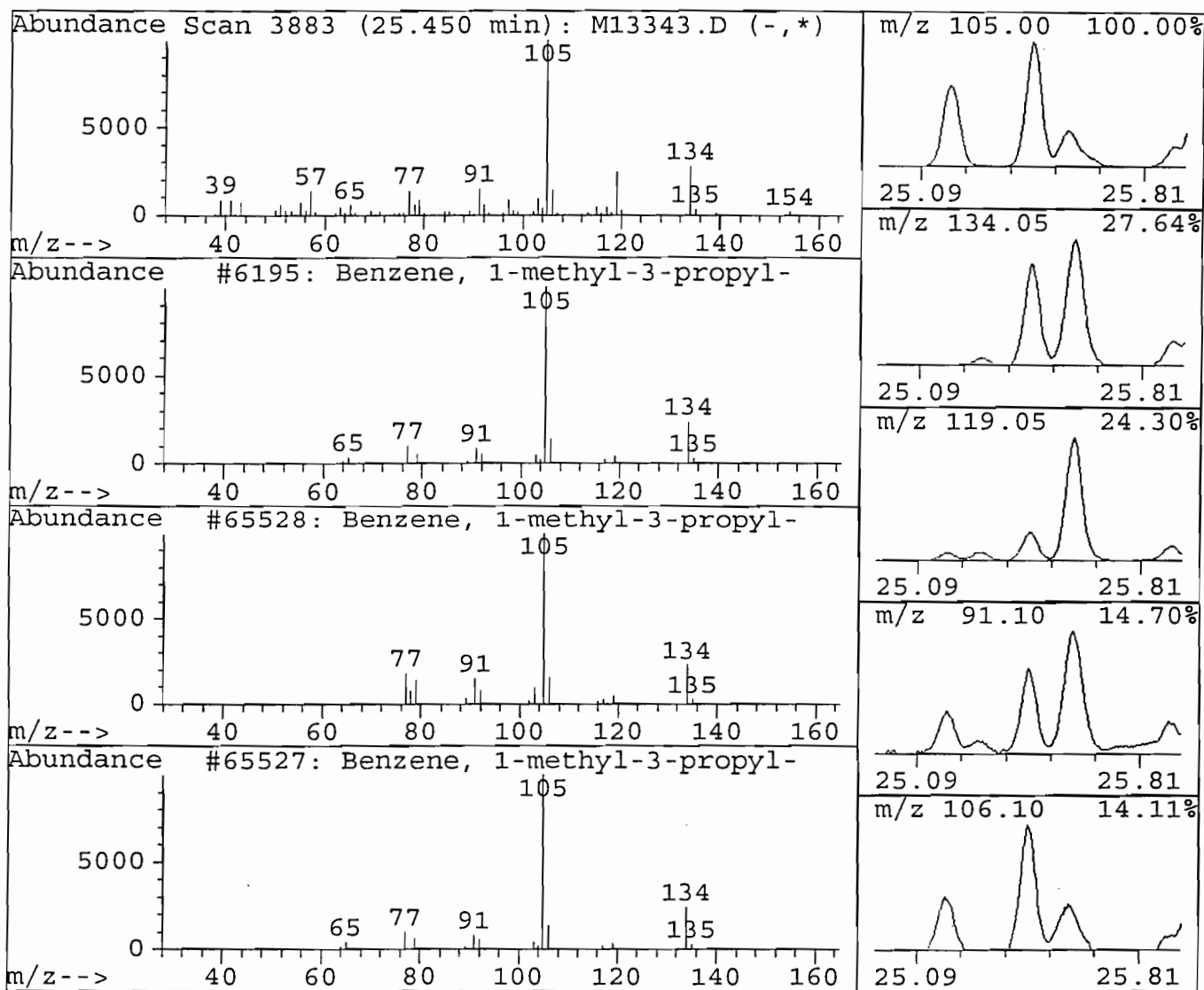
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.45	20.83 ug/L	11033537	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	76
2	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	76
3	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	76
4	Benzene, (1-methylpropyl)-	65544	000135-98-8	70
5	Benzeneacetaldehyde, .alpha.-methyl	6164	000093-53-8	70



Library Search Compound Report

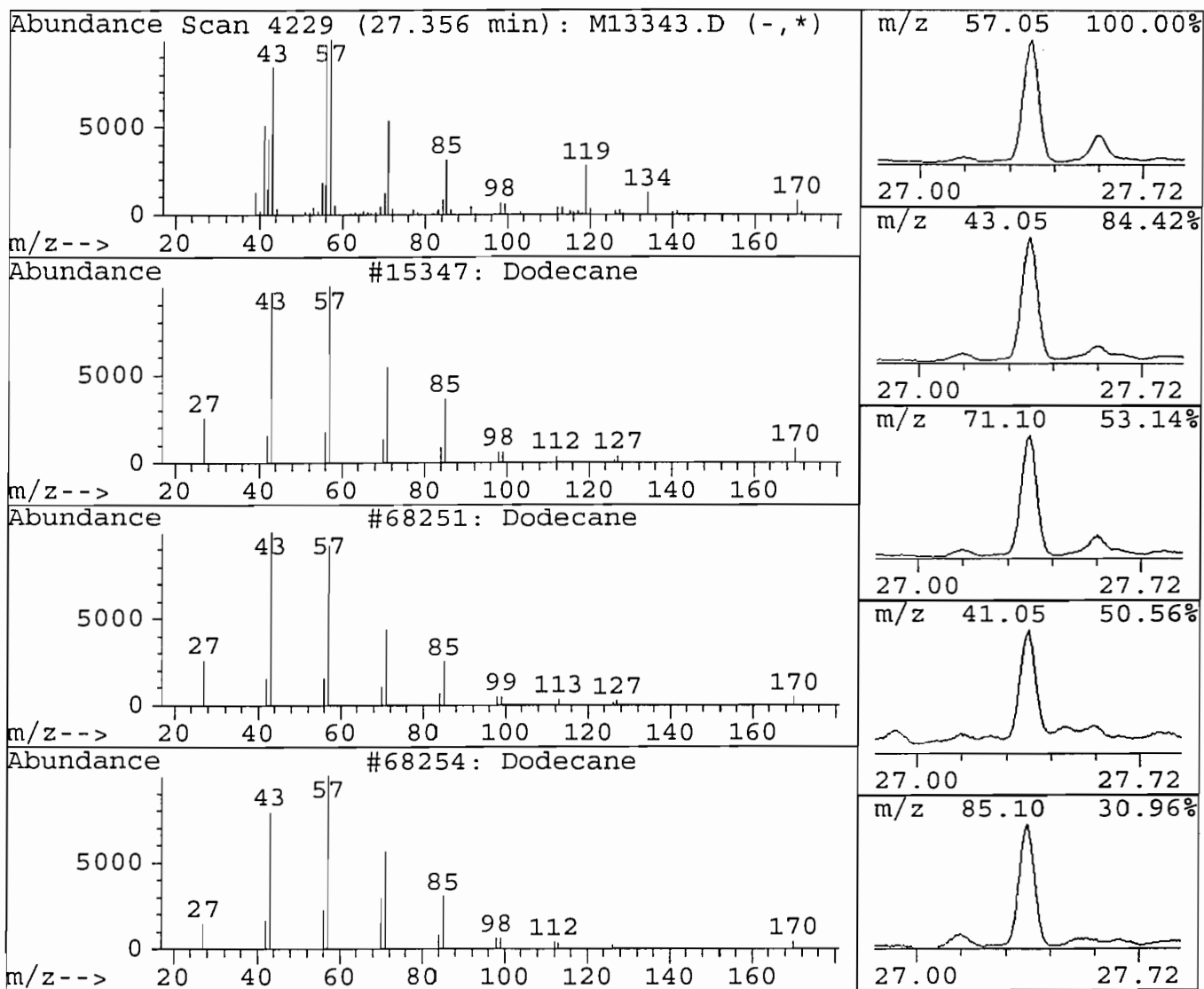
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.36	39.31 ug/L	20823313	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	15347	000112-40-3	96
2	Dodecane	68251	000112-40-3	95
3	Dodecane	68254	000112-40-3	95
4	Dodecane	68253	000112-40-3	95
5	Dodecane	68250	000112-40-3	76



Library Search Compound Report

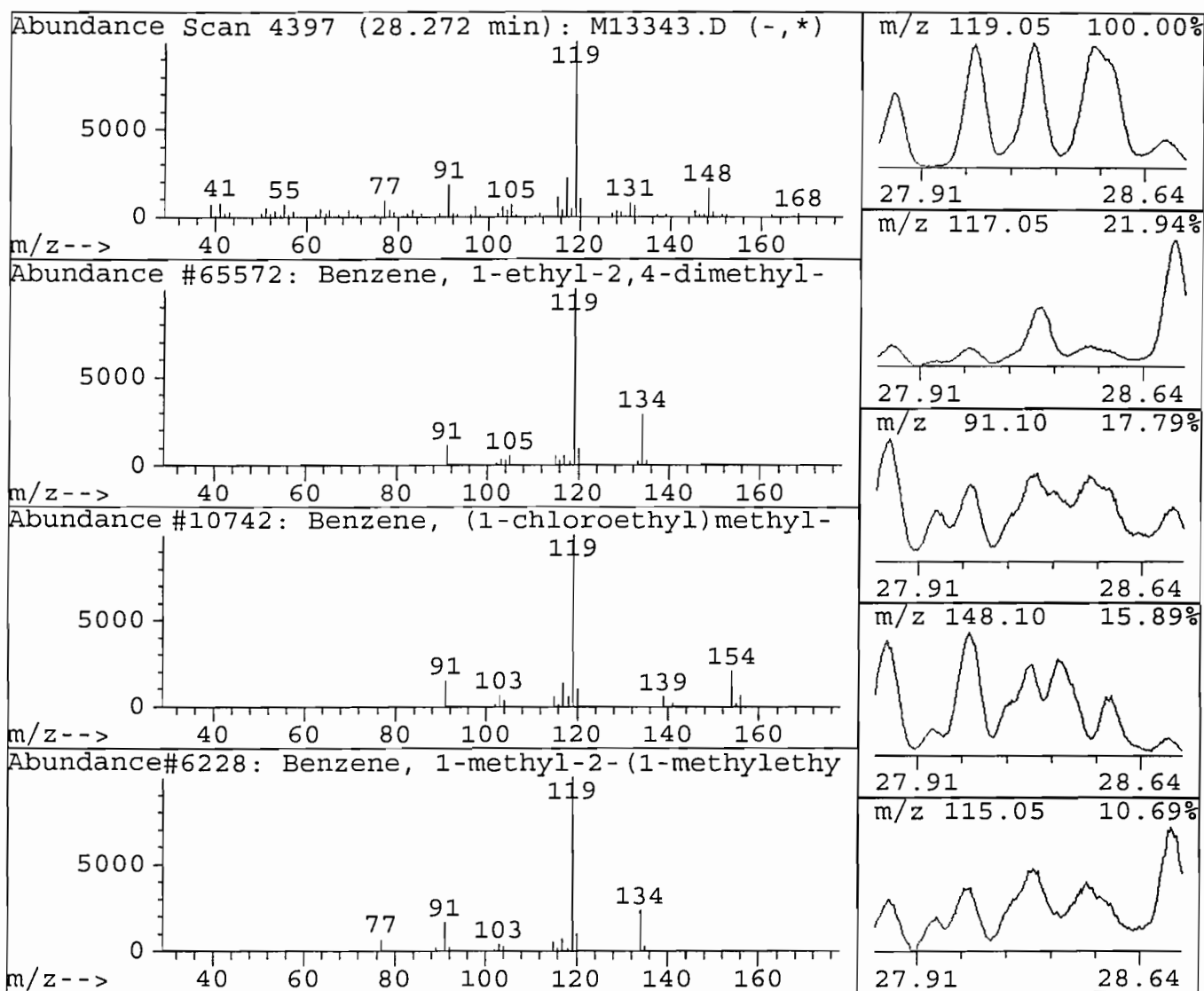
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.27	17.41 ug/L	9223999	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	65572	000874-41-9	64
2	Benzene, (1-chloroethyl)methyl-	10742	072403-15-7	59
3	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	59
4	Benzene, 2-ethyl-1,3-dimethyl-	6200	002870-04-4	59
5	Benzene, 1-methyl-4-(1-methylethyl)	65538	000099-87-6	59



Library Search Compound Report

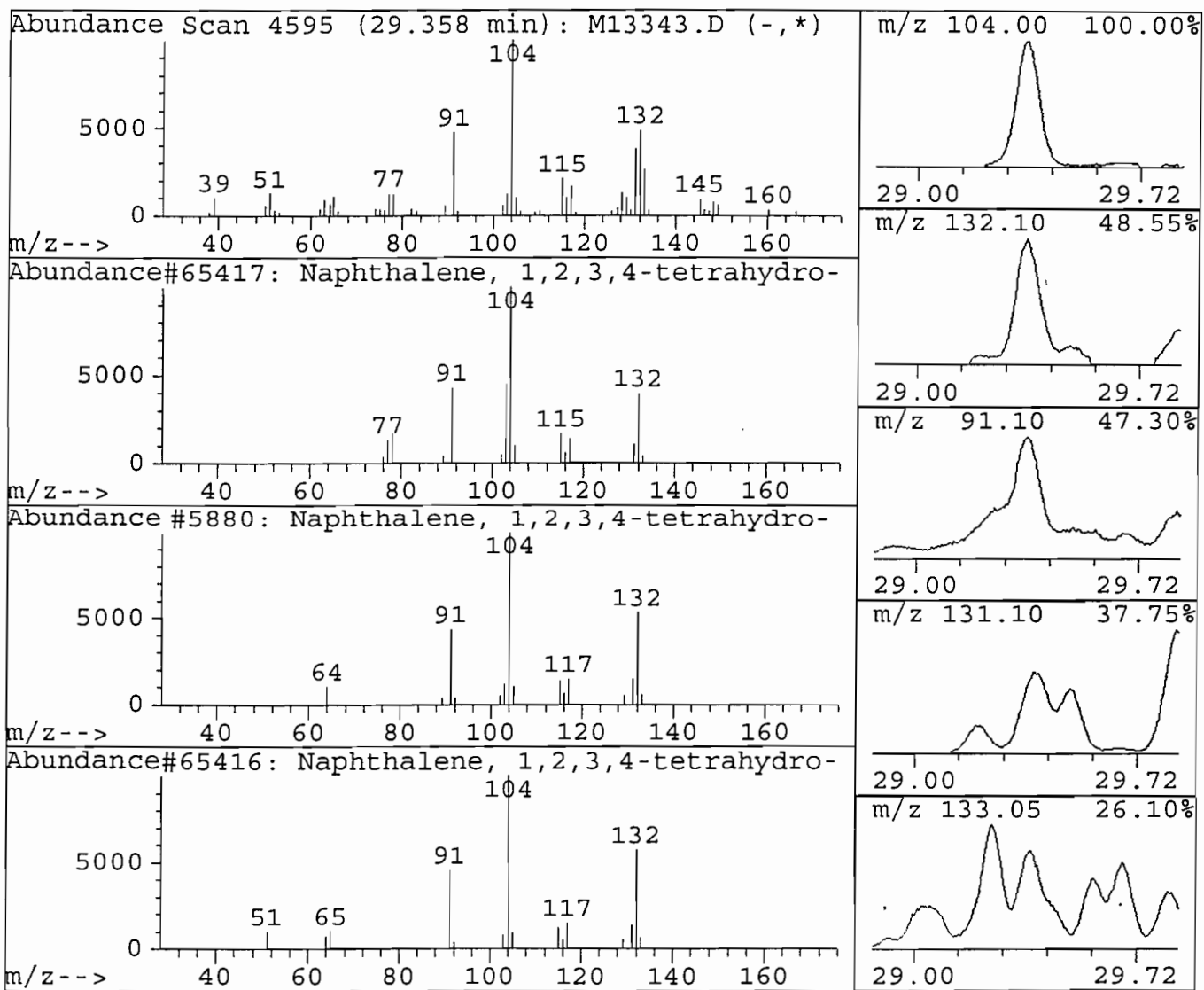
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.36	19.99 ug/L	10590956	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-	65417	000119-64-2	89
2	Naphthalene, 1,2,3,4-tetrahydro-	5880	000119-64-2	76
3	Naphthalene, 1,2,3,4-tetrahydro-	65416	000119-64-2	70
4	Naphthalene, 1,2,3,4-tetrahydro-	65414	000119-64-2	70
5	Naphthalene, 1,2,3,4-tetrahydro-	65415	000119-64-2	70



Library Search Compound Report

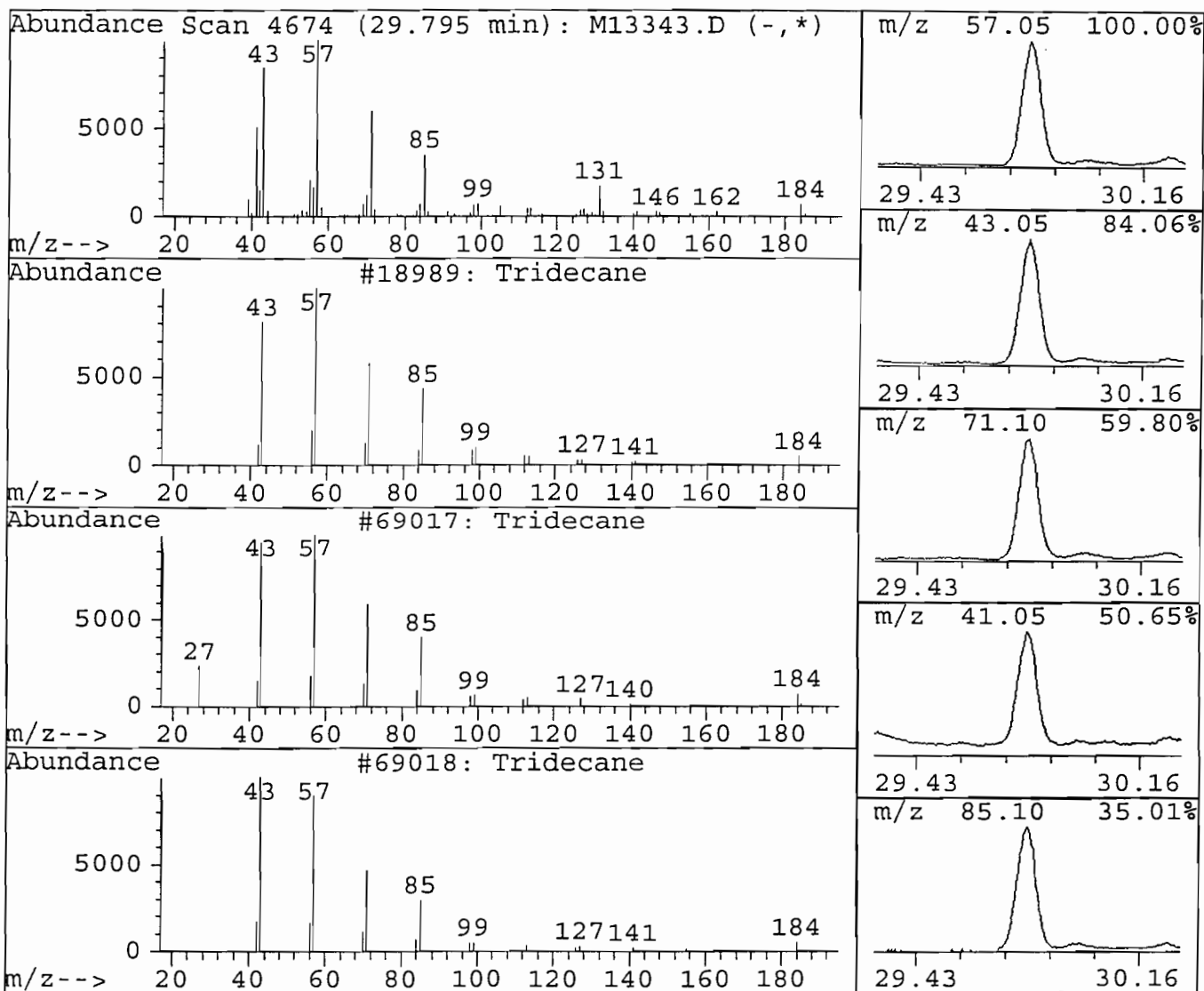
Data File : D:\HPCHEM\3\DATA\V3102599\M13343.D
Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.79	28.32 ug/L	15004488	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	18989	000629-50-5	98
2	Tridecane	69017	000629-50-5	97
3	Tridecane	69018	000629-50-5	96
4	Tridecane	69020	000629-50-5	94
5	Tridecane	69021	000629-50-5	94



Library Search Compound Report

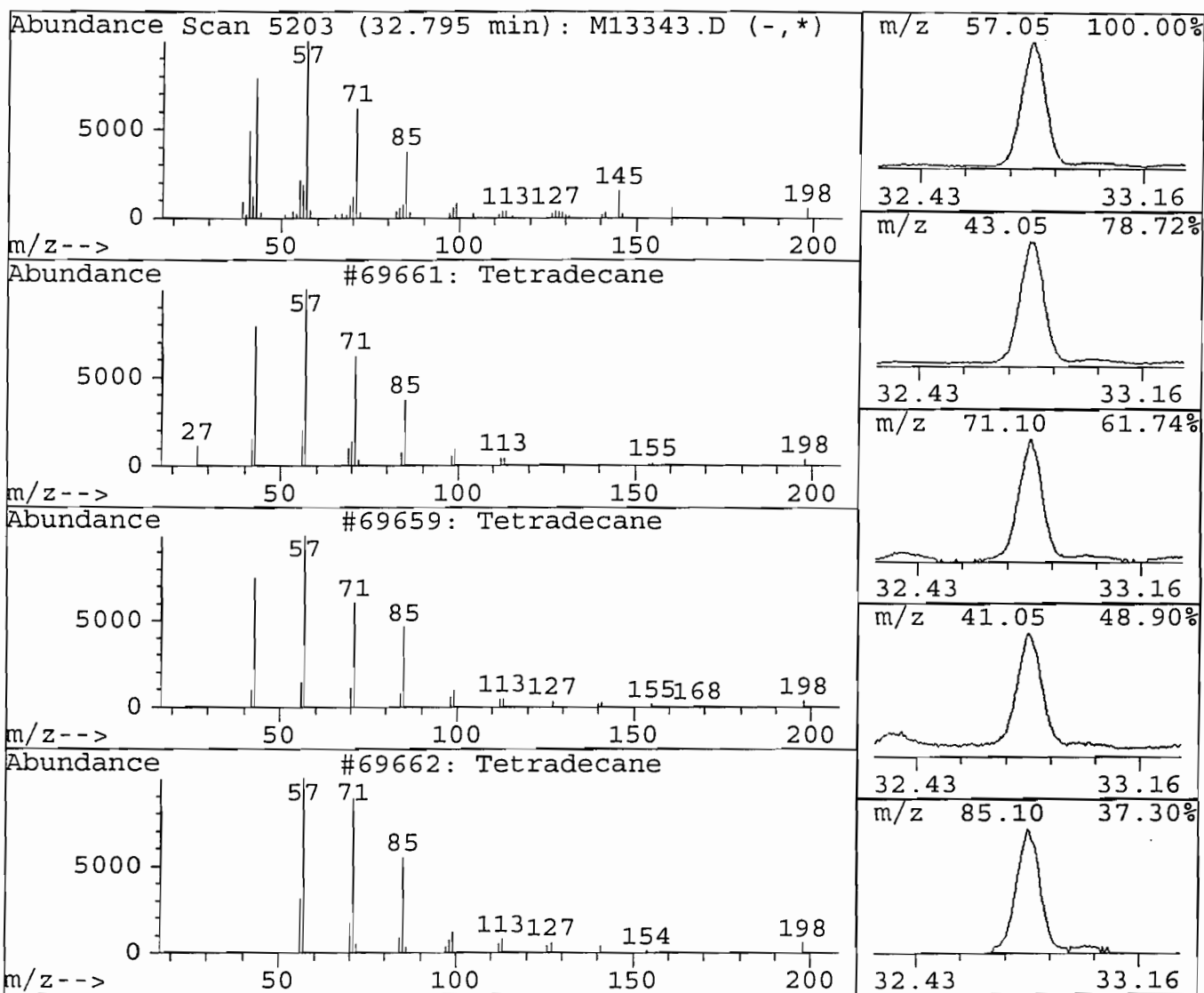
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Acq Time : 25 Oct 99 5:11 pm
Sample : 13827ASP-88016
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.79	17.64 ug/L	9346319	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tetradecane	69661	000629-59-4	96
2	Tetradecane	69659	000629-59-4	96
3	Tetradecane	69662	000629-59-4	95
4	Tetradecane	69657	000629-59-4	94
5	Tetradecane	22534	000629-59-4	91



1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-019-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88017
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19297.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 2 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 1120-21-4	Undecane	24.08	99	J
2.	Unknown	25.81	67	J
3. 112-40-3	Dodecane	27.21	200	J
4. 17301-23-4	Undecane, 2,6-dimethyl-	27.63	120	J
5.	Unknown	28.78	100	J
6.	Unknown	29.08	70	J
7. 2051-30-1	Octane, 2,6-dimethyl-	29.33	130	J
8. 629-50-5	Tridecane	30.12	140	J
9.	Unknown	32.26	86	J
10.	Unknown	33.10	69	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
 Acq Time : 22 Oct 99 7:53 pm
 Sample : 13827ASP-88017
 Misc : 5G/5ML
 Quant Time: Oct 23 14:32 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

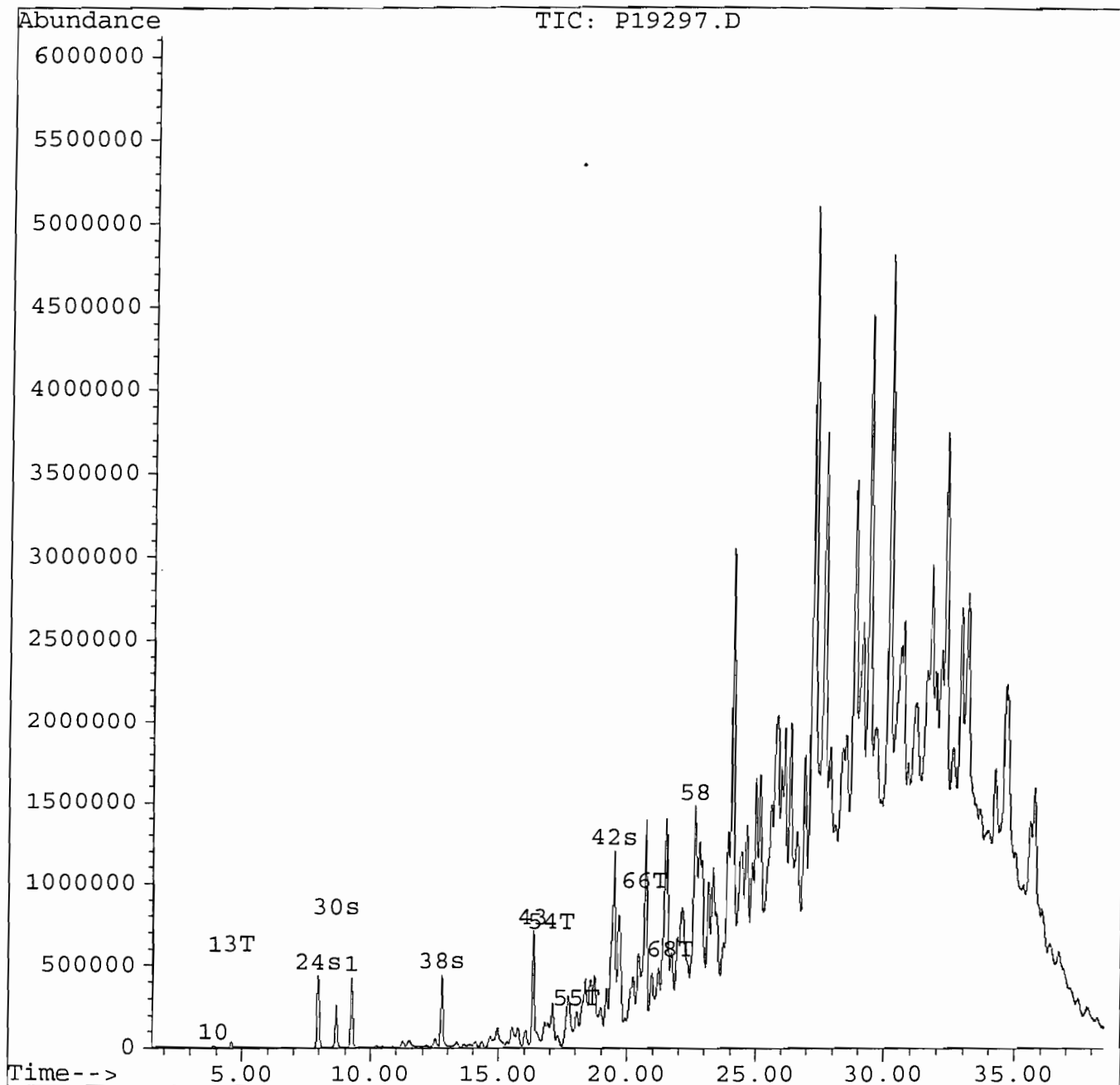
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.27	96	979631	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	1063344	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	22.61	152	676873	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	728346	44.62	ug/L	89.25%
30) 1,2-Dichlorethane-d4	8.67	65	586535	45.73	ug/L	91.47%
38) Toluene-d8	12.78	98	916829	47.98	ug/L	95.97%
42) 4-Bromofluorobenzene	19.49	95	1042501	53.15	ug/L	106.30%
Target Compounds						Qvalue
10) Acetone	3.89	43	23034	13.12	ug/L	86
13) methylene chloride	4.59	84	29641	6.44	ug/L	97
54) m&p-xylenes	17.03	106	26103	2.62	ug/L	82
55) o-xylene	18.03	91	58918	2.05	ug/L	93
66) 1,3,5-trimethylbenzene	20.66	105	86397	3.23	ug/L	97
68) 1,2,4-trimethylbenzene	21.67	105	157718	5.67	ug/L	99

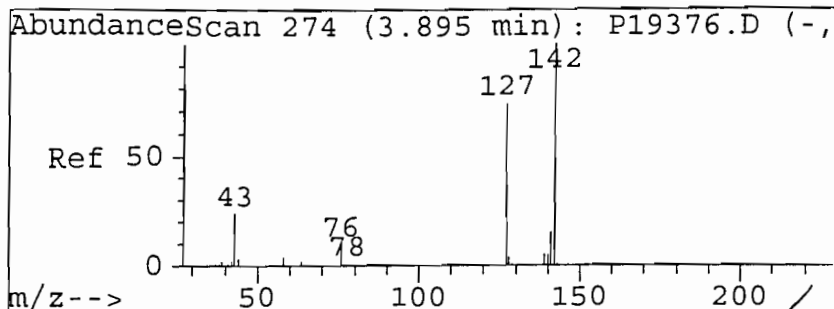
Quantitation Report

Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML
Quant Time: Oct 23 14:32 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

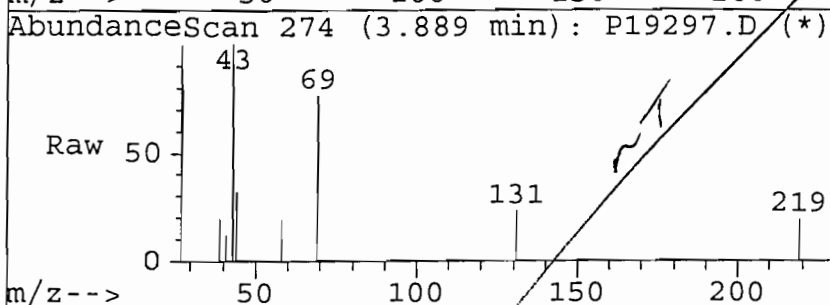
Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



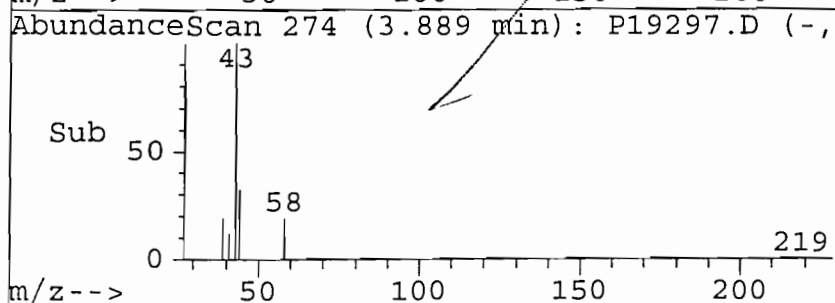
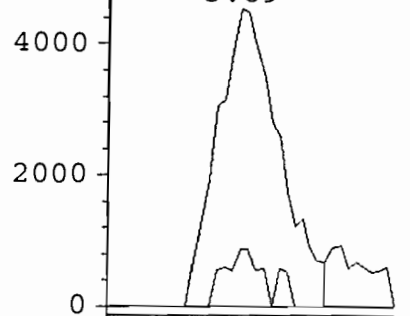


#10
Acetone
Concen: 13.12 ug/L
RT: 3.89 min Scan# 274
Delta R.T. -0.01 min
Lab File: P19297.D
Acq: 22 Oct 99 7:53 pm

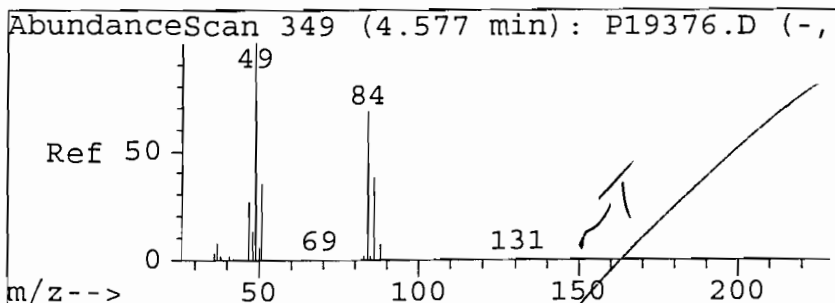
Tgt Ion:	43	Resp:	23034
Ion	Ratio	Lower	Upper
43	100		
58	10.9	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



AbundanceIon 43.00 (42.
Ion 58.00 (57.
3.89

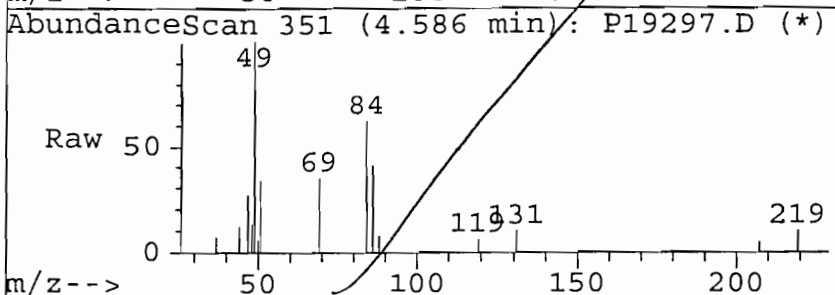


Time-->3.73 4.02

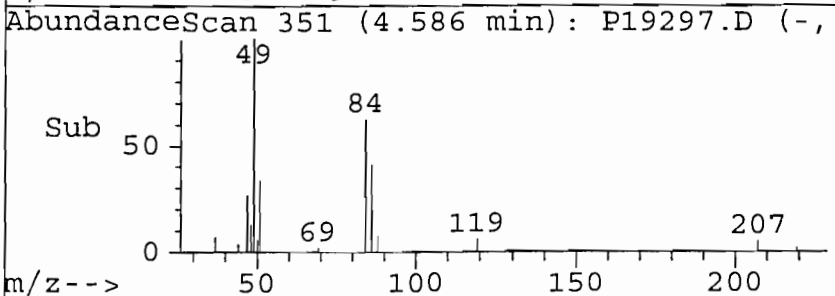
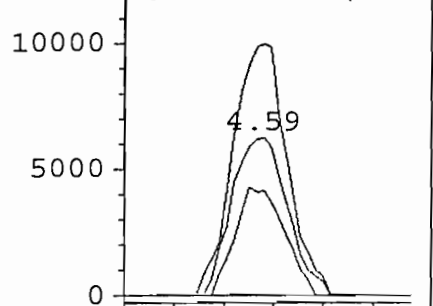


#13
methylene chloride
Concen: 6.44 ug/L
RT: 4.59 min Scan# 351
Delta R.T. 0.00 min
Lab File: P19297.D
Acq: 22 Oct 99 7:53 pm

Tgt Ion:	84	Resp:	29641
Ion	Ratio	Lower	Upper
84	100		
86	66.0	43.3	80.3
49	160.0	110.4	205.0
0	0.0	0.0	0.0

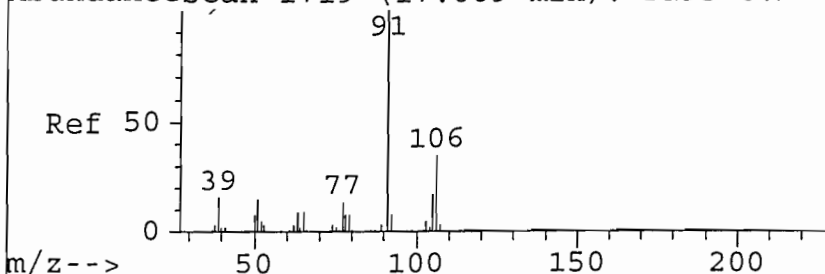


AbundanceIon 84.00 (83.
Ion 86.00 (85.
Ion 49.00 (48.



Time-->4.41 4.72

AbundanceScan 1719 (17.009 min): P19376.D (



#54

m&p-xylenes

Concen: 2.62 ug/L

RT: 17.03 min Scan# 1722

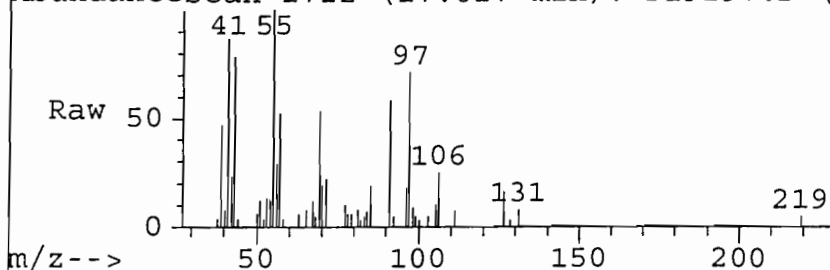
Delta R.T. 0.02 min

Lab File: P19297.D

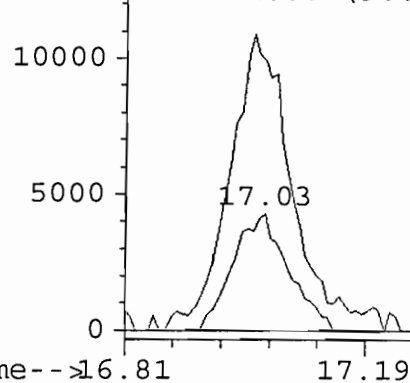
Acq: 22 Oct 99 7:53 pm

Tgt Ion:	106	Resp:	26103
Ion Ratio	Lower	Upper	
106	100		
91	230.0	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

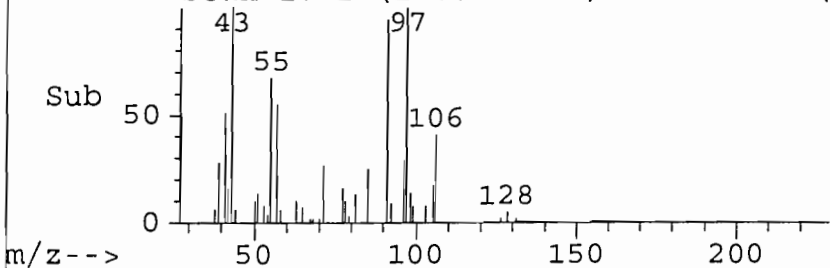
AbundanceScan 1722 (17.027 min): P19297.D (



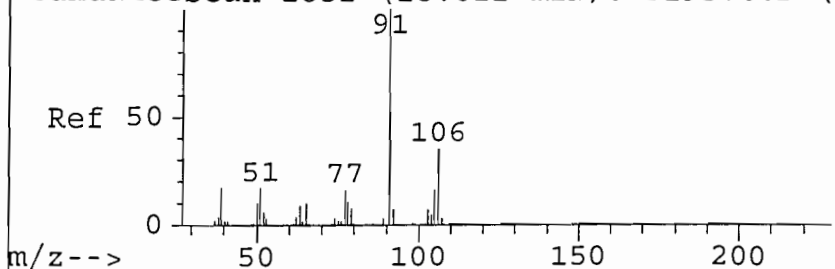
AbundanceIon 106.00 (105
Ion 91.00 (90.



AbundanceScan 1722 (17.027 min): P19297.D (



AbundanceScan 1832 (18.022 min): P19376.D (



#55

o-xylene

Concen: 2.05 ug/L

RT: 18.03 min Scan# 1832

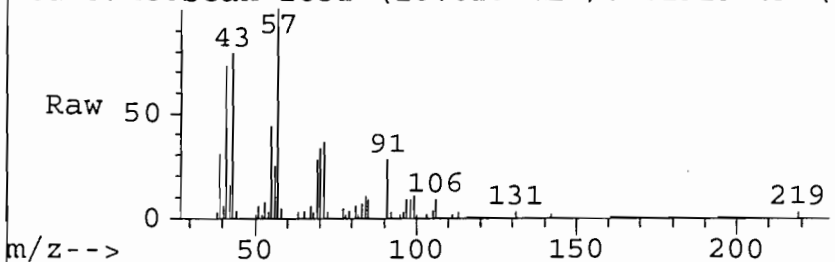
Delta R.T. 0.01 min

Lab File: P19297.D

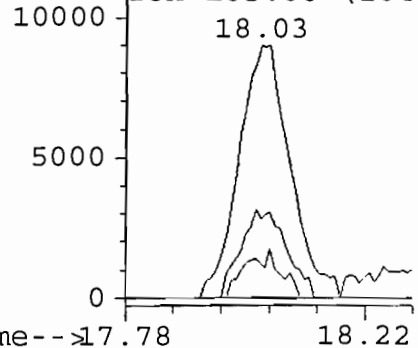
Acq: 22 Oct 99 7:53 pm

Tgt Ion:	91	Resp:	58918
Ion Ratio	Lower	Upper	
91	100		
106	31.3	25.4	47.2
105	13.4	10.1	18.8
0	0.0	0.0	0.0

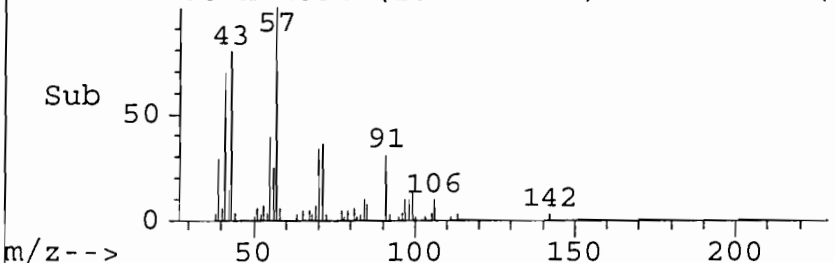
AbundanceScan 1832 (18.029 min): P19297.D (



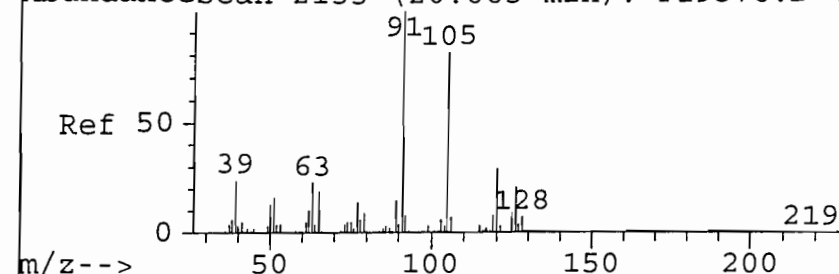
AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



AbundanceScan 1832 (18.029 min): P19297.D (



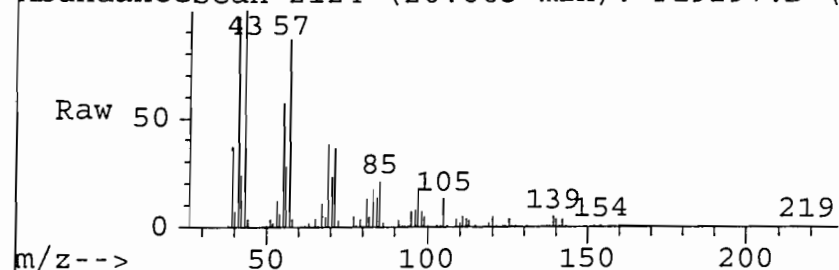
AbundanceScan 2133 (20.663 min): P19376.D (



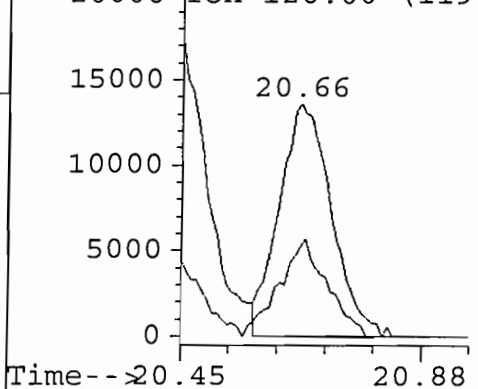
#66
1,3,5-trimethylbenzene
Concen: 3.23 ug/L
RT: 20.66 min Scan# 2124
Delta R.T. 0.01 min
Lab File: P19297.D
Acq: 22 Oct 99 7:53 pm

Tgt Ion:105	Resp:	86397
Ion Ratio	Lower	Upper
105 100		
120 38.8	28.6	53.0
0 0.0	0.0	0.0
0 0.0	0.0	0.0

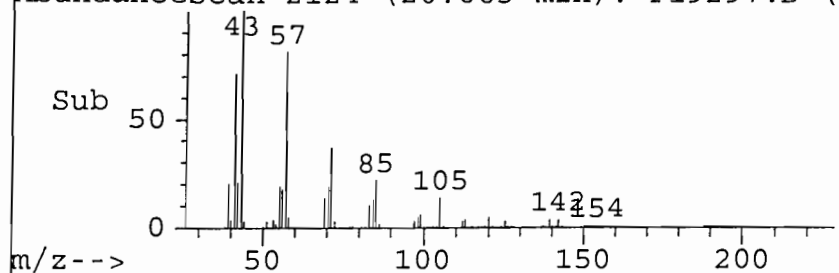
AbundanceScan 2124 (20.663 min): P19297.D (



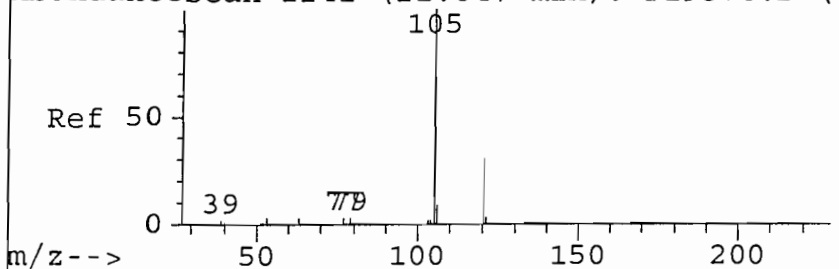
AbundanceIon 105.00 (104
20000 Ion 120.00 (119



AbundanceScan 2124 (20.663 min): P19297.D (



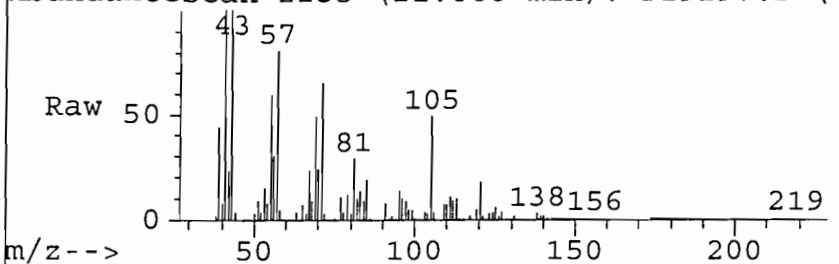
AbundanceScan 2241 (21.647 min): P19376.D (



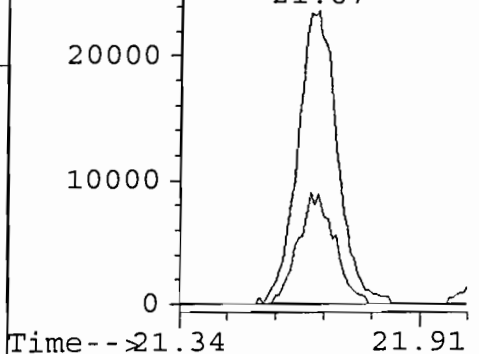
#68
1,2,4-trimethylbenzene
Concen: 5.67 ug/L
RT: 21.67 min Scan# 2235
Delta R.T. 0.03 min
Lab File: P19297.D
Acq: 22 Oct 99 7:53 pm

Tgt Ion:105	Resp:	157718
Ion Ratio	Lower	Upper
105 100		
120 37.8	26.0	48.2
0 0.0	0.0	0.0
0 0.0	0.0	0.0

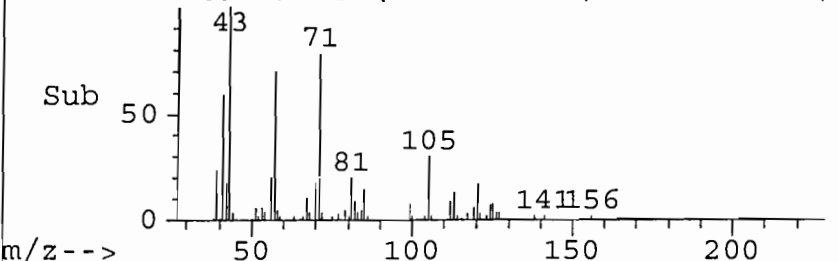
AbundanceScan 2235 (21.668 min): P19297.D (



AbundanceIon 105.00 (104
Ion 120.00 (119
21.67



AbundanceScan 2235 (21.668 min): P19297.D (



Library Search Compound Report

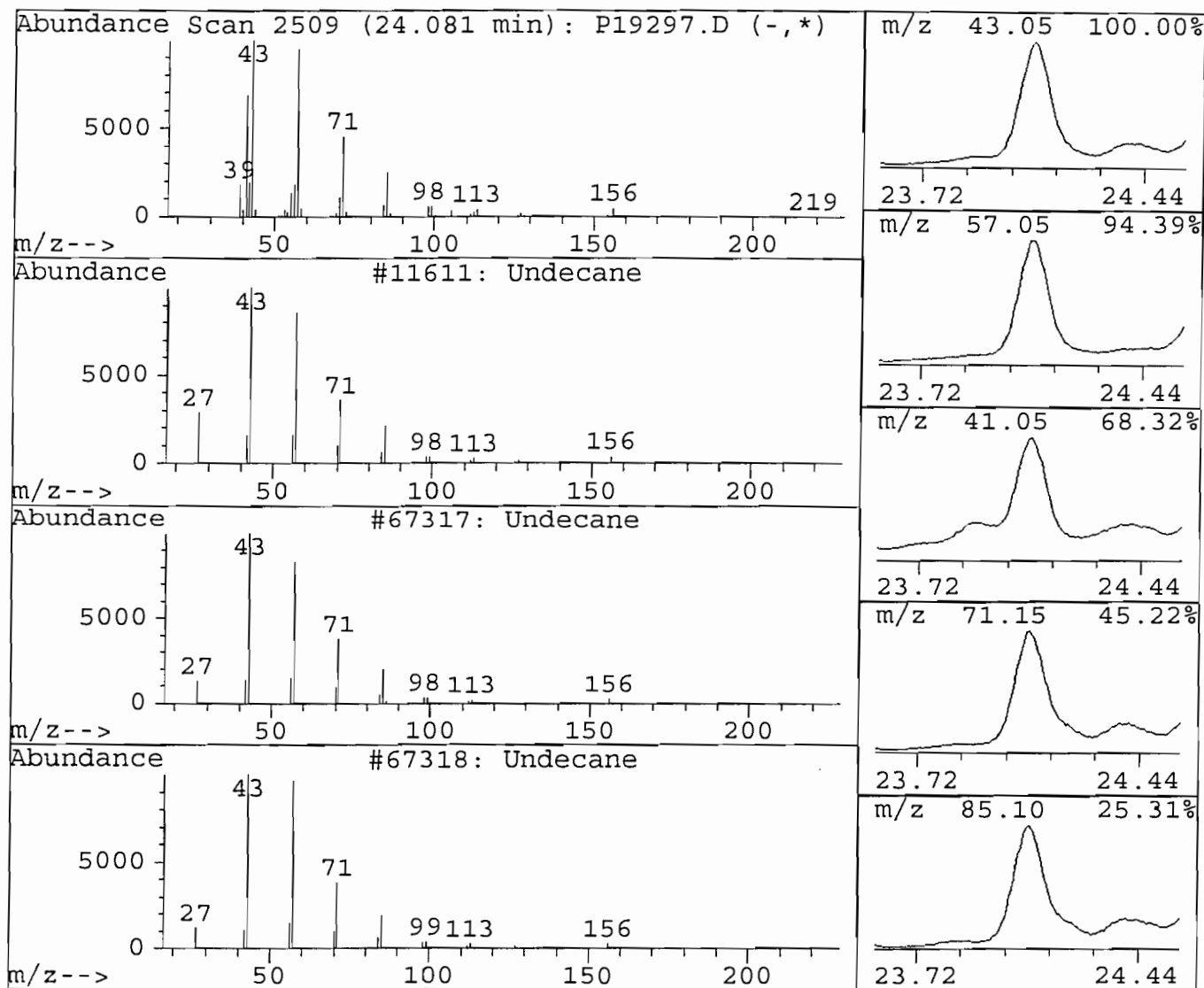
Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.08	96.99 ug/L	19361566	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane	11611	001120-21-4	97
2	Undecane	67317	001120-21-4	94
3	Undecane	67318	001120-21-4	93
4	Tridecane	69020	000629-50-5	90
5	Eicosane	72323	000112-95-8	83



Library Search Compound Report

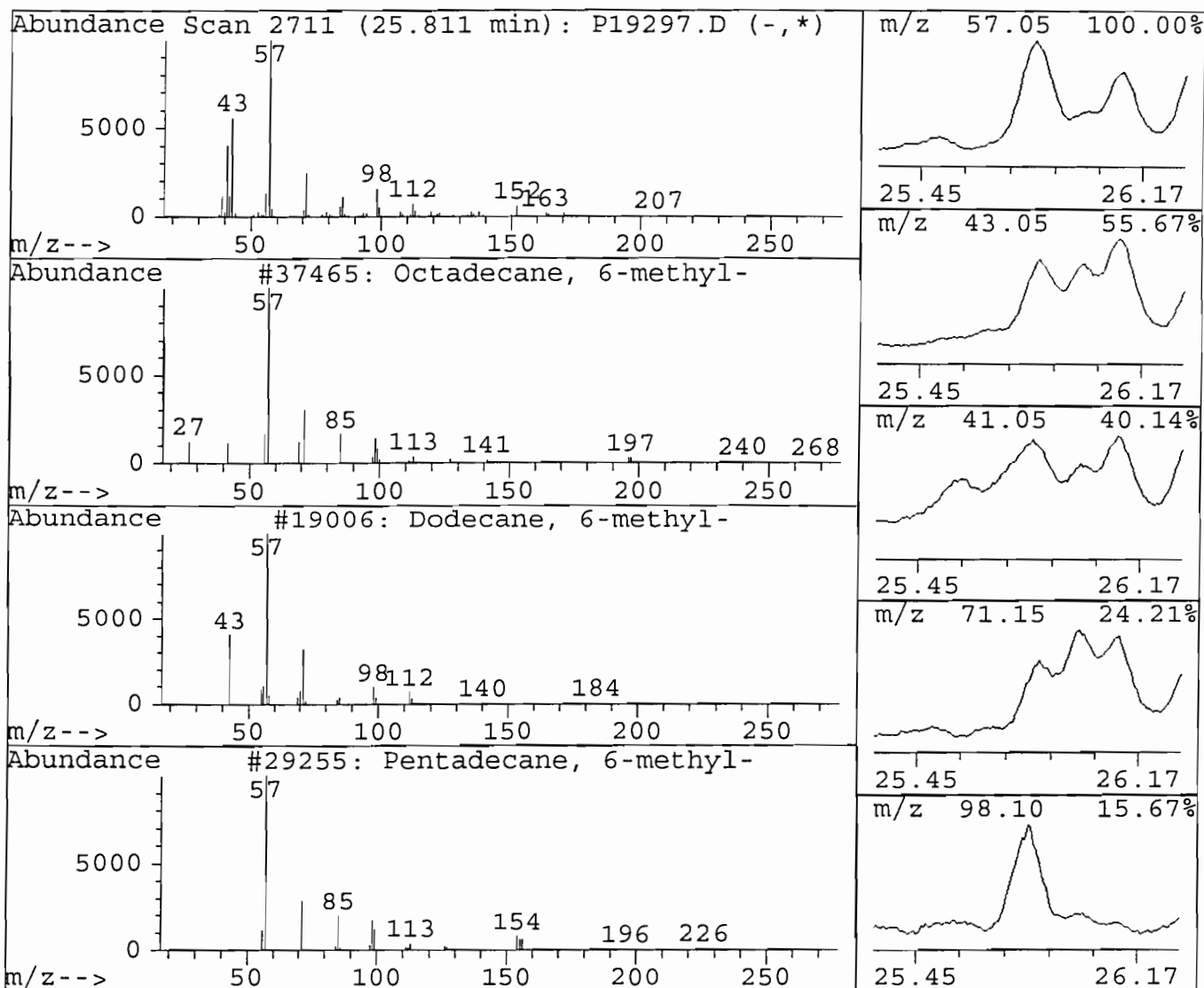
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Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.81	65.40 ug/L	13054585	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octadecane, 6-methyl-	37465	010544-96-4	64
2	Dodecane, 6-methyl-	19006	006044-71-9	59
3	Pentadecane, 6-methyl-	29255	010105-38-1	59
4	Octane, 4-ethyl-	66222	015869-86-0	53
5	Heptane, 3-ethyl-2-methyl-	66212	014676-29-0	50



Library Search Compound Report

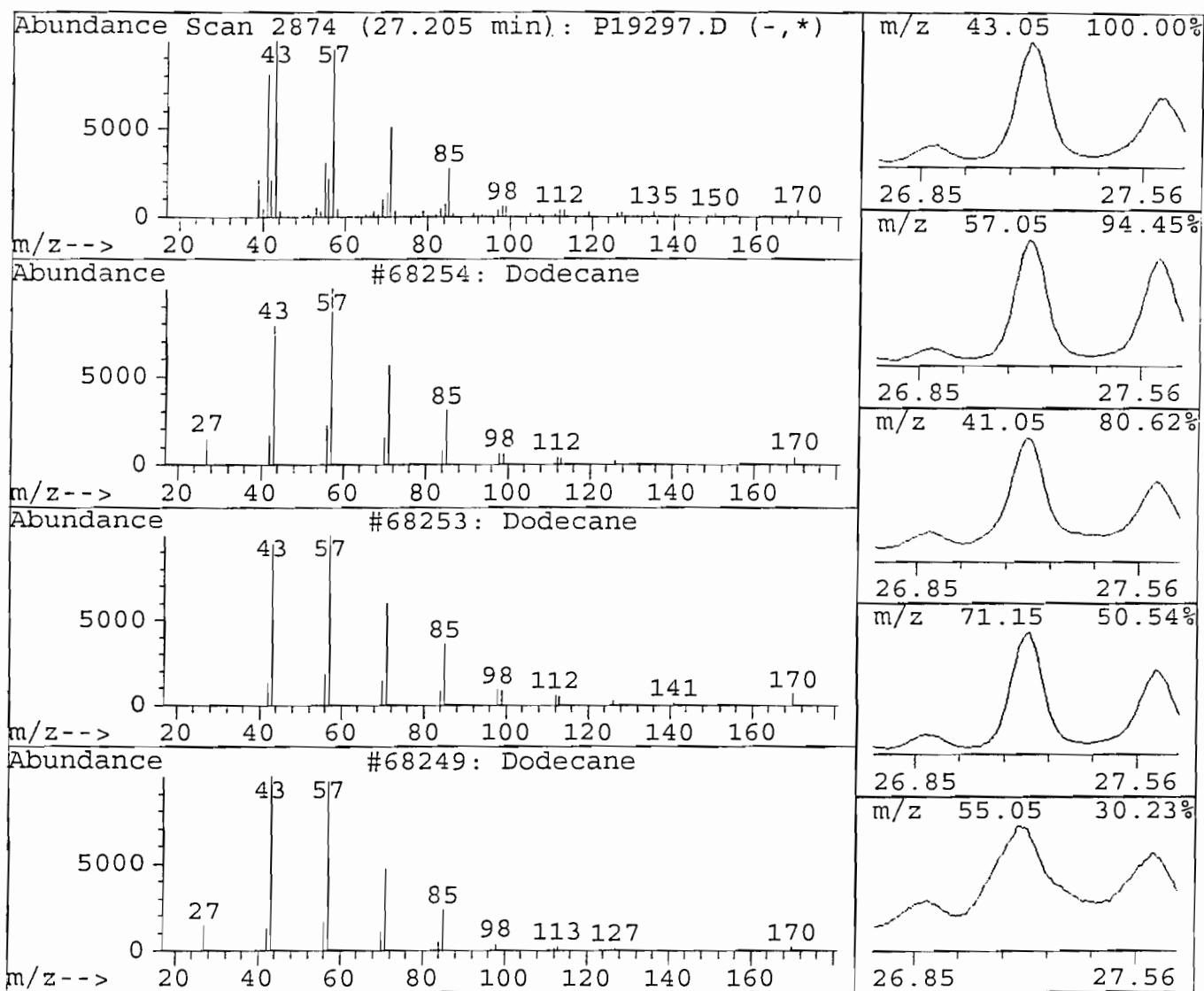
Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.21	194.18 ug/L	38762159	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	68254	000112-40-3	96
2	Dodecane	68253	000112-40-3	93
3	Dodecane	68249	000112-40-3	90
4	Undecane	11611	001120-21-4	90
5	Dodecane	68252	000112-40-3	87



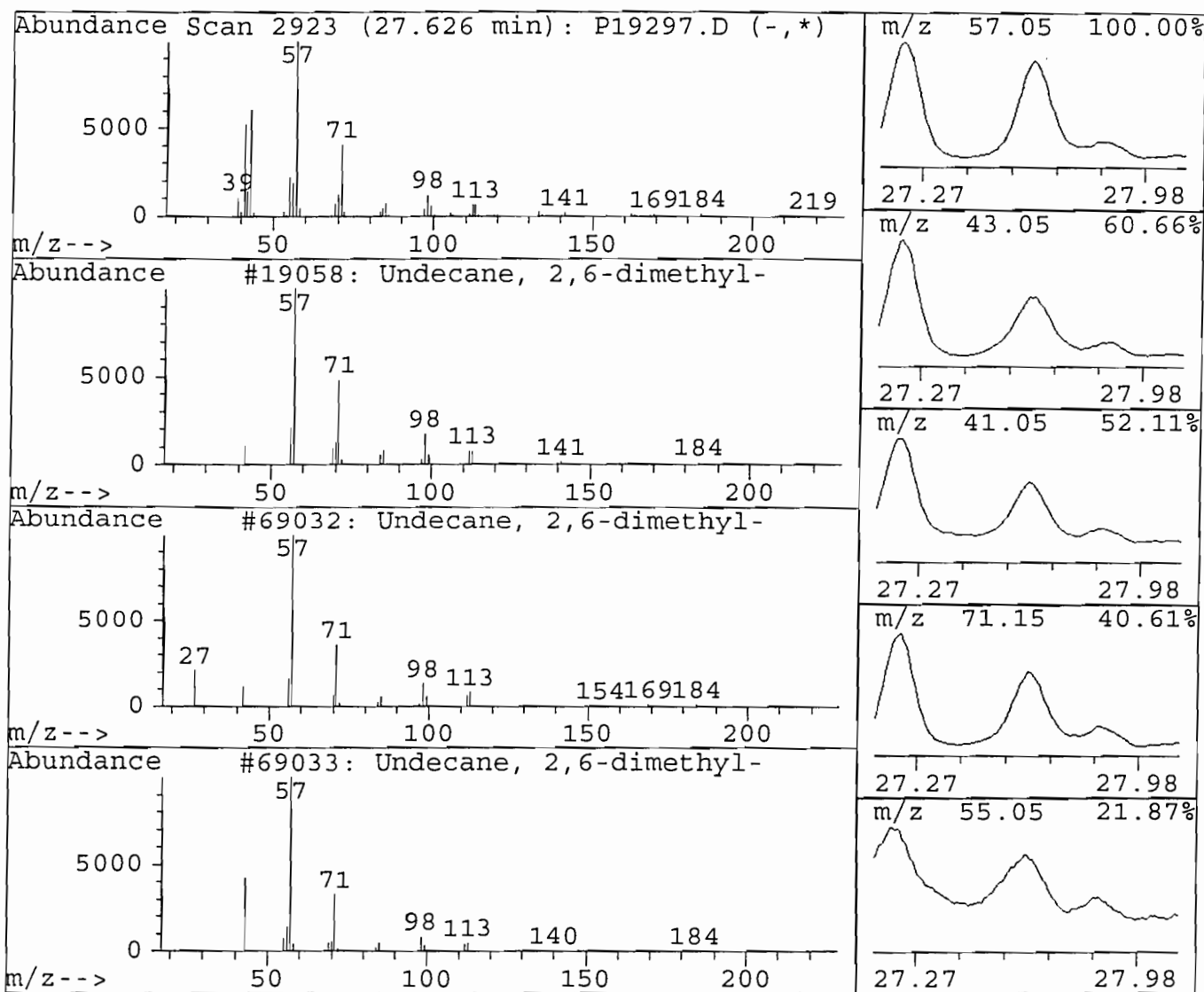
Library Search Compound Report

Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.63	113.45 ug/L	22647122	1,4-dichlorobenzene-d4	22.61	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Undecane, 2,6-dimethyl-		19058	017301-23-4	96
2	Undecane, 2,6-dimethyl-		69032	017301-23-4	93
3	Undecane, 2,6-dimethyl-		69033	017301-23-4	86
4	Dodecane, 6-methyl-		19006	006044-71-9	86
5	Eicosane		72323	000112-95-8	64



Library Search Compound Report

Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D

Acq Time : 22 Oct 99 7:53 pm

Sample : 13827ASP-88017

Misc : 5G/5ML

Operator: AV

Inst : voa2

Multiplr: 1.00

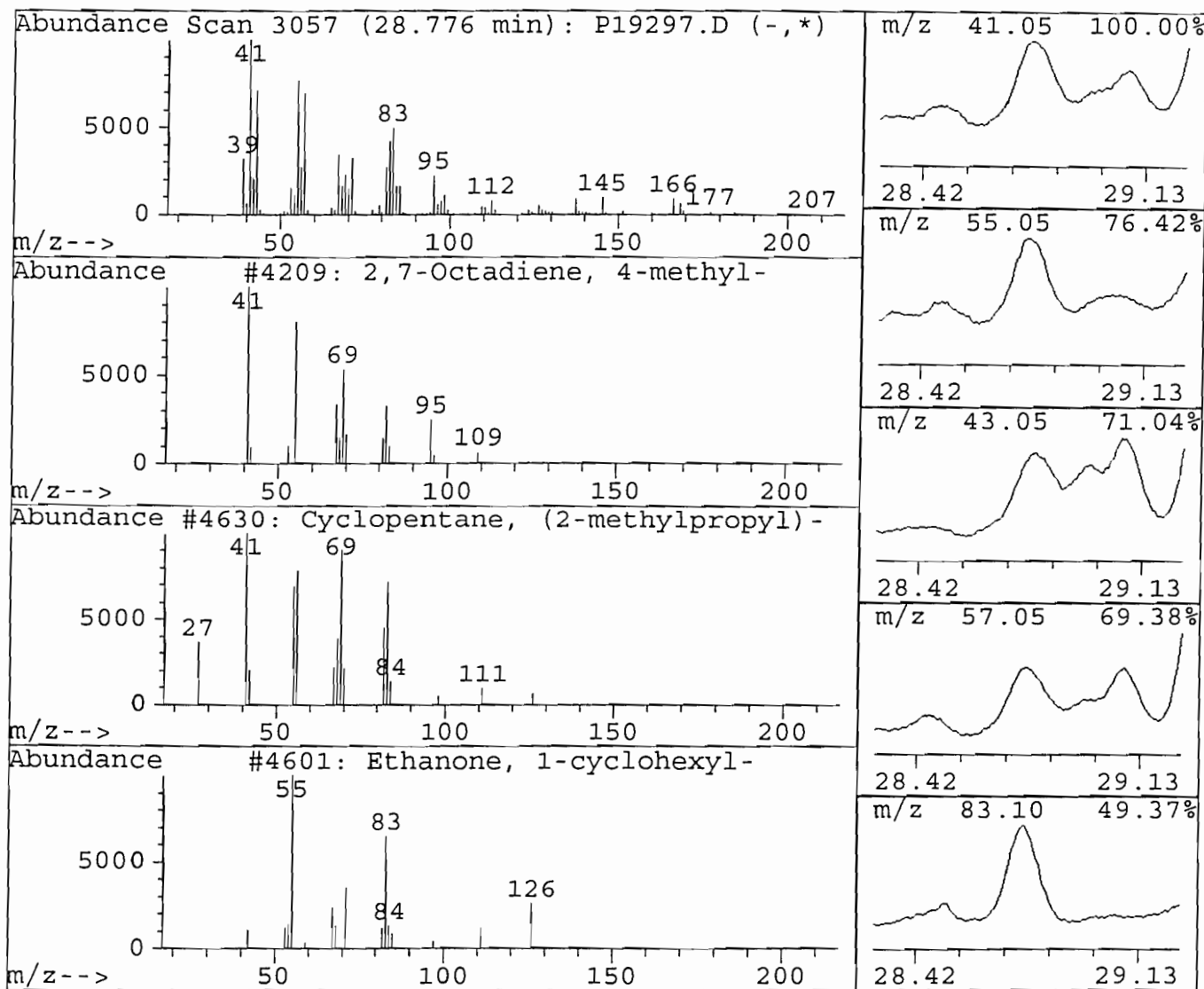
Method : F:\HPCHEM\1\METHODS\V21006CS.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.78	99.39 ug/L	19841120	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2,7-Octadiene, 4-methyl-	4209	000000-00-0	42
2	Cyclopentane, (2-methylpropyl)-	4630	003788-32-7	38
3	Ethanone, 1-cyclohexyl-	4601	000823-76-7	35
4	Cyclopentane, 1-ethyl-3-methyl-, tr	2698	002613-65-2	30
5	Cyclopentane, 1-methyl-2-(2-propeny	4255	050746-53-7	30



Library Search Compound Report

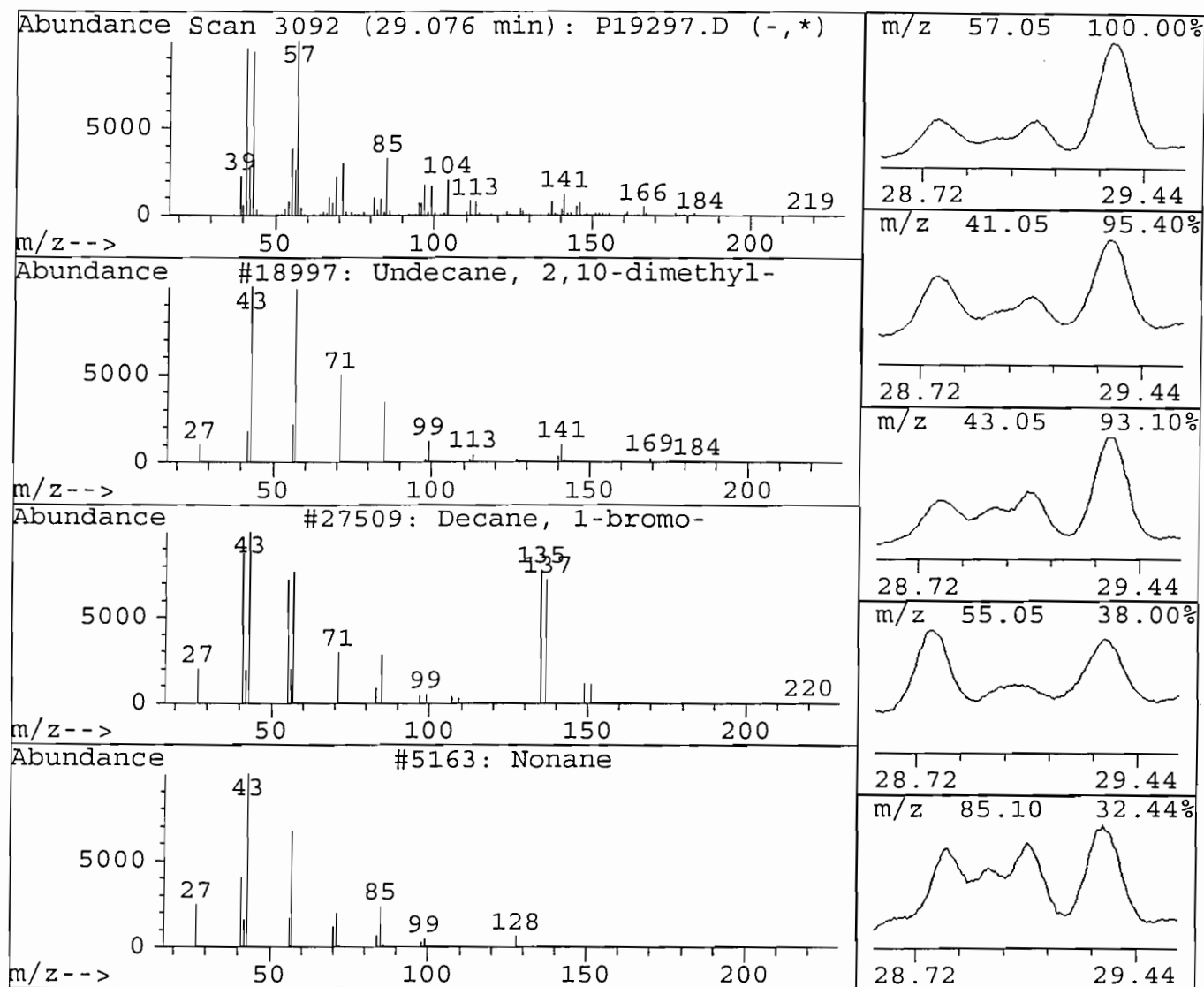
Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.08	68.61 ug/L	13696744	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane, 2,10-dimethyl-	18997	017301-27-8	55
2	Decane, 1-bromo-	27509	000112-29-8	53
3	Nonane	5163	000111-84-2	47
4	Decane, 3,8-dimethyl-	15351	017312-55-9	47
5	Octane, 2,7-dimethyl-	8078	001072-16-8	43



Library Search Compound Report

Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D

Acq Time : 22 Oct 99 7:53 pm

Sample : 13827ASP-88017

Misc : 5G/5ML

Operator: AV

Inst : voa2

Multiplr: 1.00

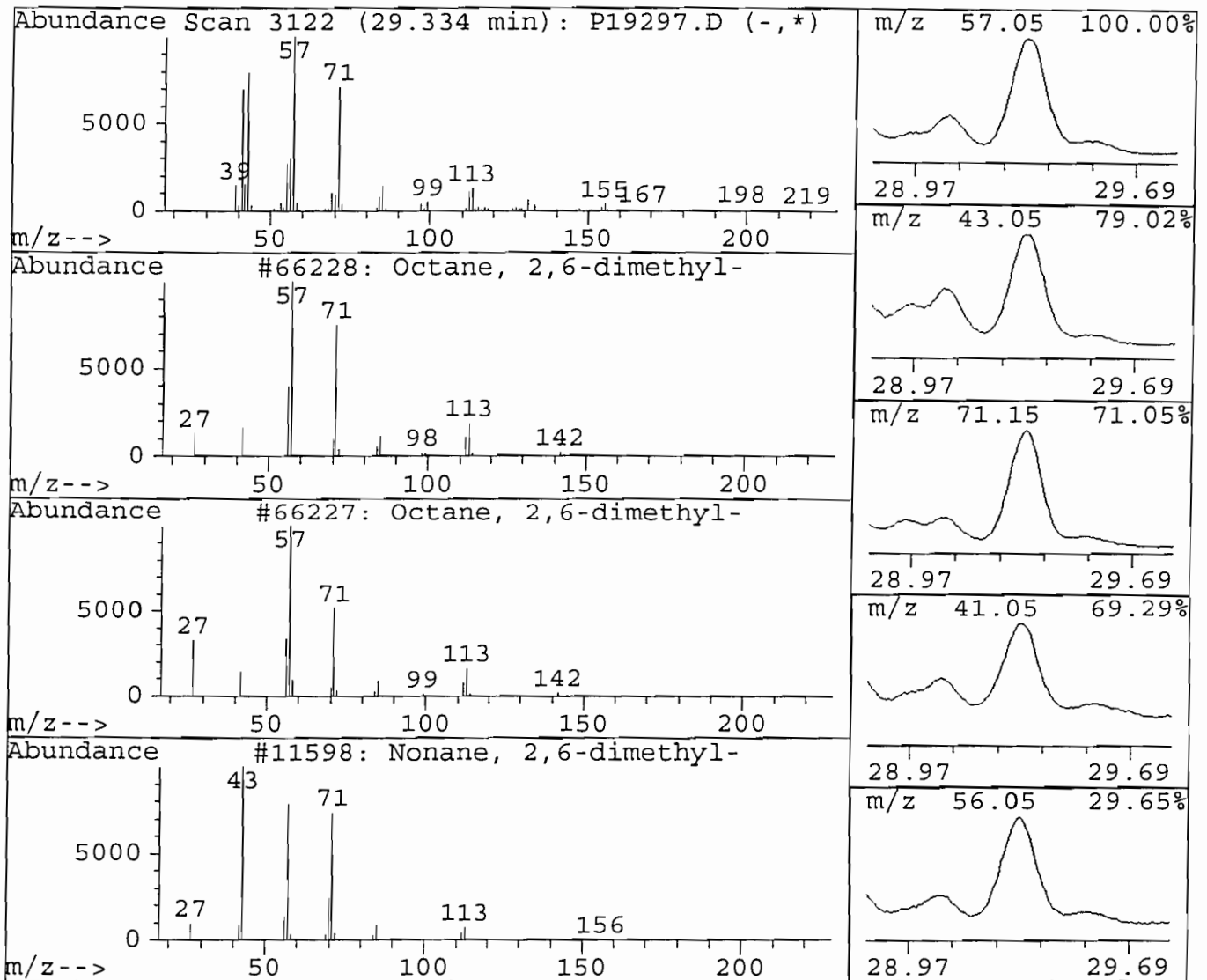
Method : F:\HPCHEM\1\METHODS\V21006CS.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.33	131.94 ug/L	26338595	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane, 2,6-dimethyl-	66228	002051-30-1	87
2	Octane, 2,6-dimethyl-	66227	002051-30-1	86
3	Nonane, 2,6-dimethyl-	11598	017302-28-2	59
4	Nonane, 3-methyl-	8075	005911-04-6	59
5	Nonane, 3-methyl-	66201	005911-04-6	59



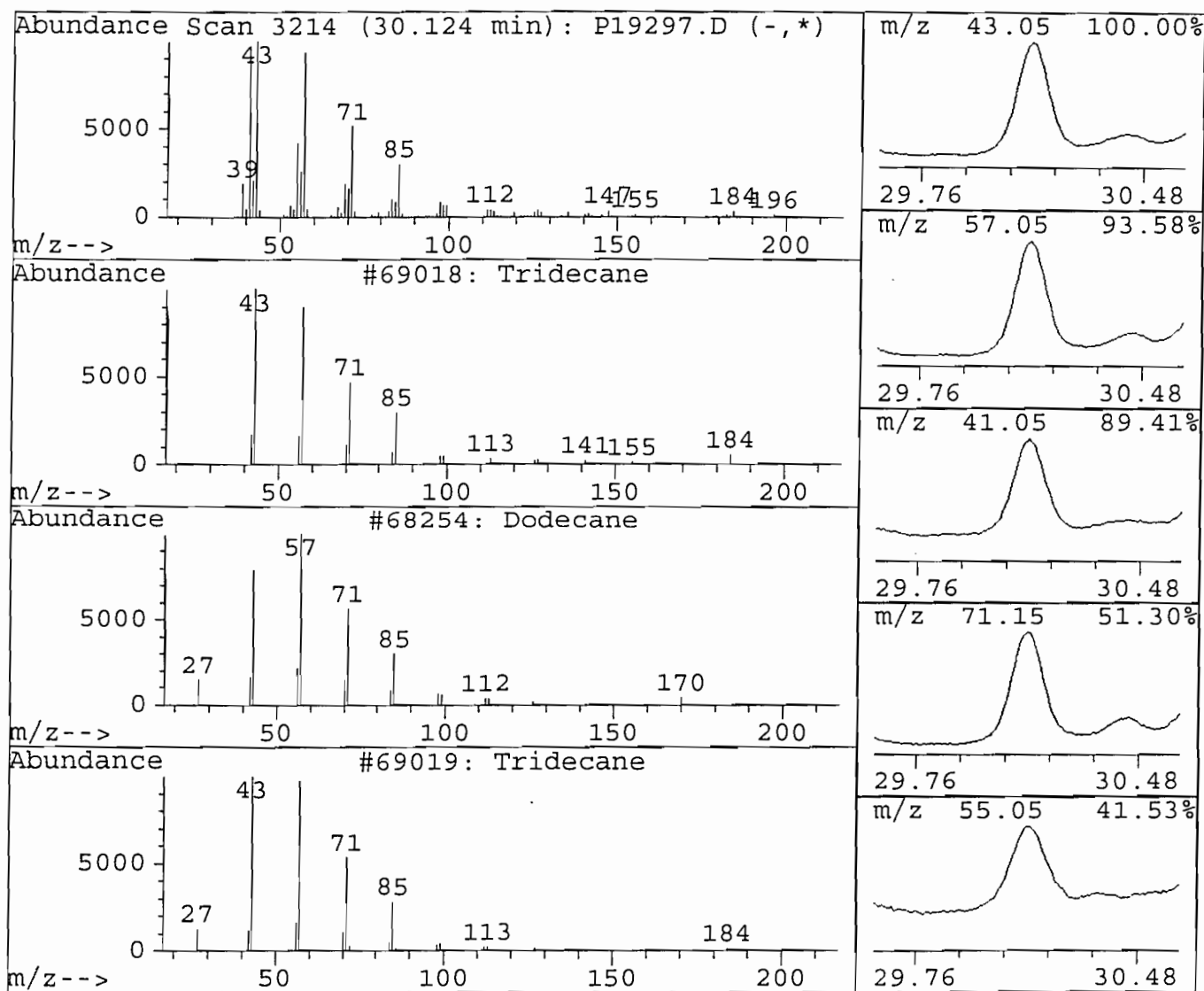
Library Search Compound Report

Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.12	137.83 ug/L	27514331	1,4-dichlorobenzene-d4	22.61	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tridecane		69018	000629-50-5	87
2	Dodecane		68254	000112-40-3	86
3	Tridecane		69019	000629-50-5	76
4	Tridecane		18989	000629-50-5	70
5	Undecane, 2,3-dimethyl-		18990	017312-77-5	59



Library Search Compound Report

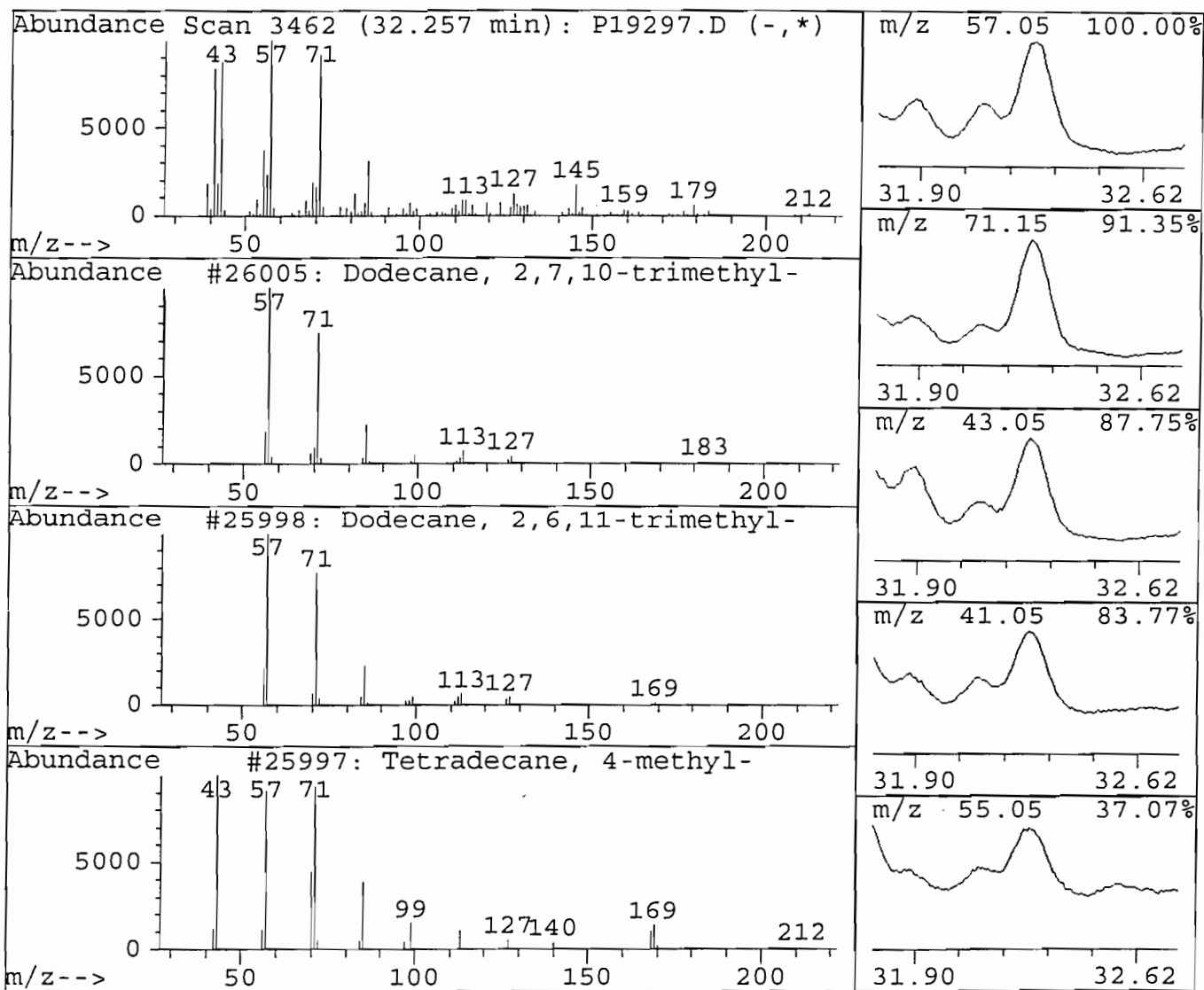
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Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.26	84.11 ug/L	16790529	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane, 2,7,10-trimethyl-	26005	074645-98-0	72
2	Dodecane, 2,6,11-trimethyl-	25998	031295-56-4	72
3	Tetradecane, 4-methyl-	25997	025117-24-2	64
4	Pentadecane	26001	000629-62-9	62
5	Dodecane, 2,6,10-trimethyl-	25995	003891-98-3	58



Library Search Compound Report

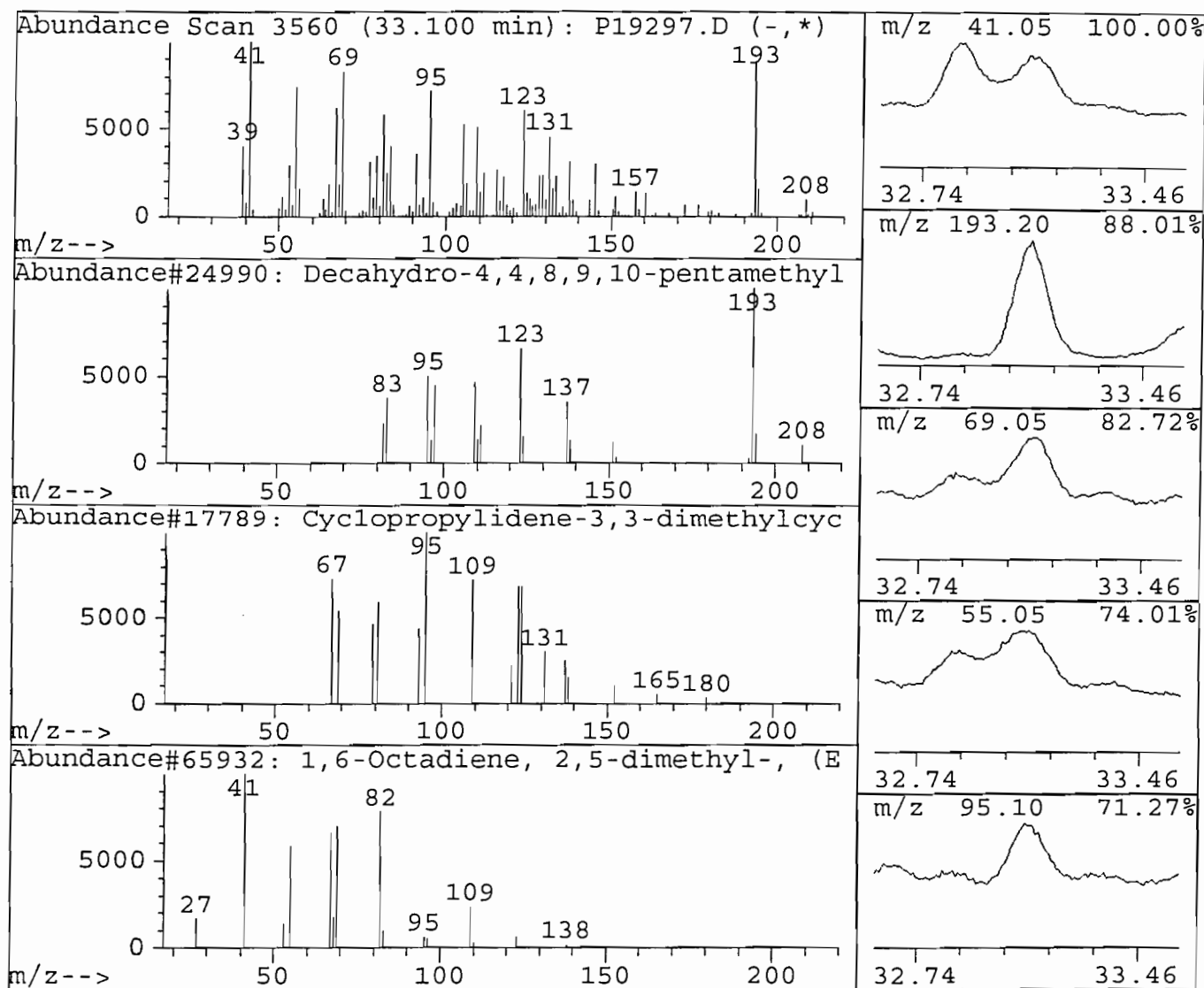
Data File : F:\HPCHEM\1\DATA\V2102199\P19297.D
Acq Time : 22 Oct 99 7:53 pm
Sample : 13827ASP-88017
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
33.10	67.83 ug/L	13541135	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Decahydro-4,4,8,9,10-pentamethylnap	24990	000000-00-0	60
2	Cyclopropylidene-3,3-dimethylcycloh	17789	000000-00-0	22
3	1,6-Octadiene, 2,5-dimethyl-, (E)-	65932	068702-25-0	22
4	Cyclopropane, 1,1-dimethyl-2-(2-met	4251	069147-03-1	22
5	1H-Indene, octahydro-2,2,4,4,7,7-he	25012	054832-83-6	22



SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-019-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88018
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13344.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 111-84-2	Nonane	20.16	6500	J
2.	Unknown	21.87	7500	J
3. 526-73-8	Benzene, 1,2,3-trimethyl-	25.16	6400	J
4.	Unknown	25.45	3700	J
5. 99-87-6	Benzene, 1-methyl-4-(1-methy	26.41	2600	J
6.	Unknown	27.36	4400	J
7.	Unknown	28.27	2700	J
8. 488-23-3	Benzene, 1,2,3,4-tetramethyl	28.46	2800	J
9.	Unknown	29.36	3100	J
10.	Unknown	30.66	2800	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
 Acq Time : 25 Oct 99 5:56 pm
 Sample : 13827ASP-88018
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 25 18:34 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.12	96	1685878	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.47	117	1445238	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	25.21	152	640664	50.00	ug/L	0.03

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.42	113	590394	56.30	ug/L	112.60%
30) 1,2-Dichlorethane-d4	13.46	65	659119	55.77	ug/L	111.54%
38) Toluene-d8	17.37	98	1781693	54.25	ug/L	108.49%
42) 4-Bromofluorobenzene	22.95	95	808203	58.20	ug/L	116.41%

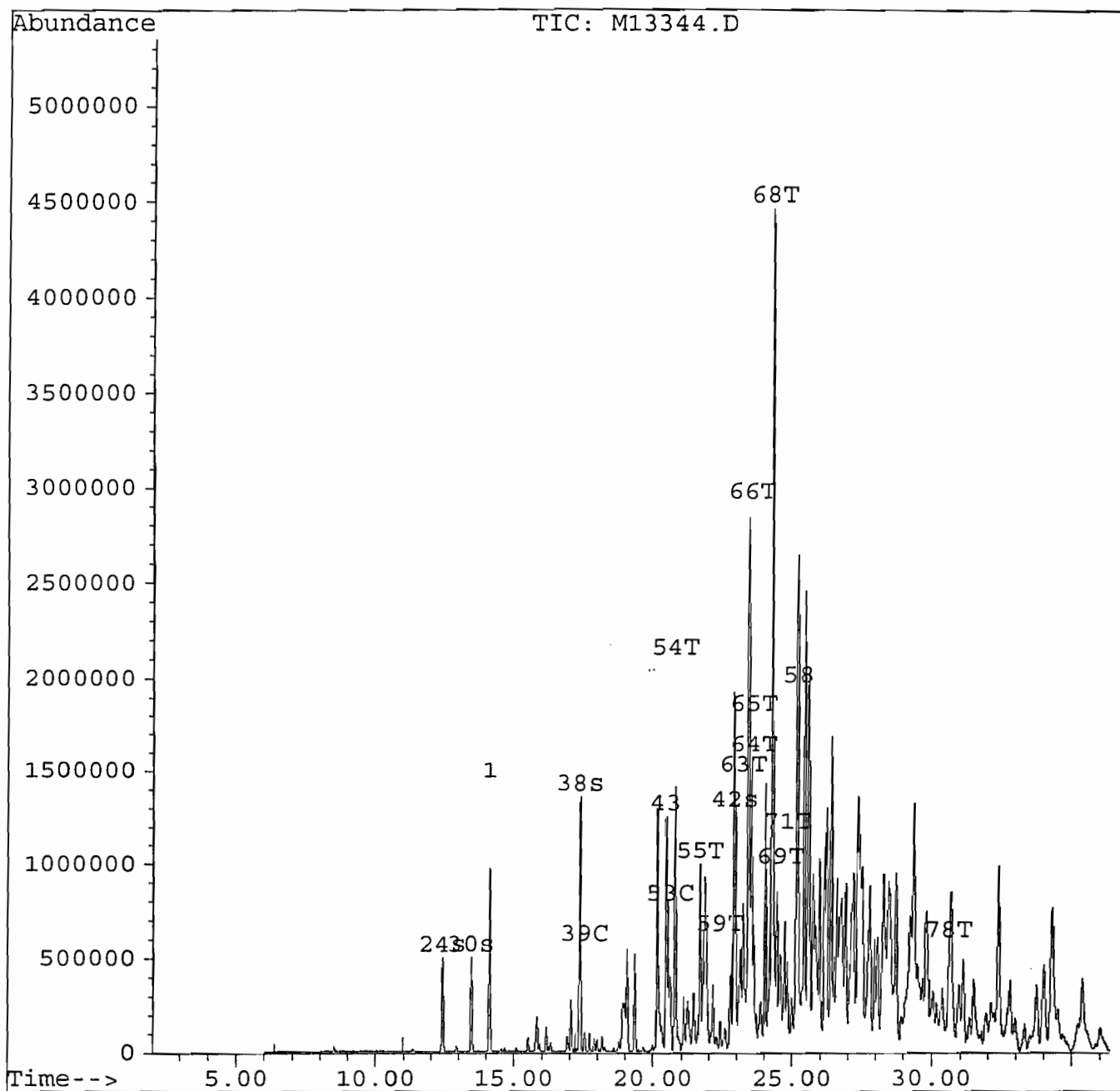
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
39) toluene	17.54	91	162118	3.99	ug/L	89
53) ethylbenzene	20.63	91	334137	7.23	ug/L	98
54) m&p-xylenes	20.78	106	825778	52.63	ug/L	99
55) o-xylene	21.69	91	1189373	32.77	ug/L	98
59) isopropylbenzene	22.41	105	204623	4.71	ug/L	98
63) n-propylbenzene	23.24	120	148798	14.16	ug/L	96
64) 2-chlorotoluene	23.62	126	149801	15.42	ug/L	96
65) 4-chlorotoluene	23.62	126	149801	14.86	ug/L	94
66) 1,3,5-trimethylbenzene	23.53	105	1722580	49.29	ug/L	99
68) 1,2,4-trimethylbenzene	24.28	105	5173479	154.31	ug/L	98
69) sec-butylbenzene	24.59	105	583506	13.52	ug/L	99
71) 4-isopropyltoluene	24.83	119	403952	10.55	ug/L	97
78) naphthalene	30.59	128	1126679	42.05	ug/L	94

Quantitation Report

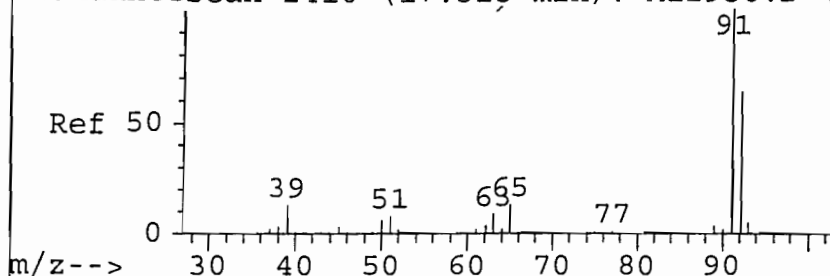
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 25 18:34 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



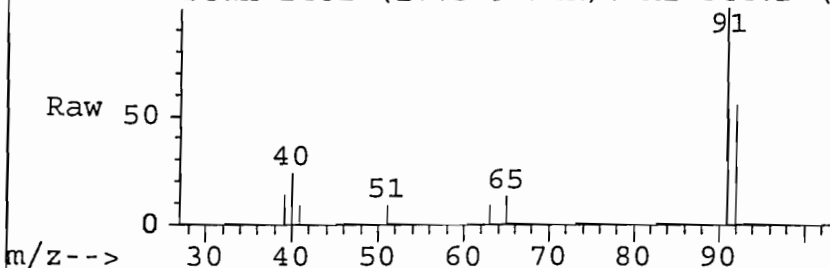
AbundanceScan 2410 (17.515 min): M12956.D (



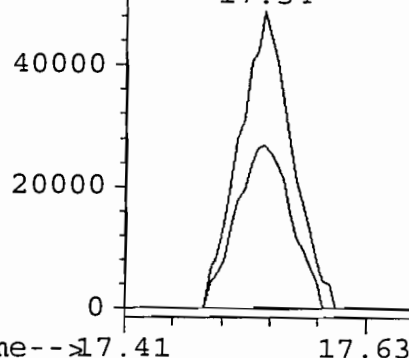
#39
toluene
Concen: 3.99 ug/L
RT: 17.54 min Scan# 2481
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	91	Resp:	162118
Ion	Ratio	Lower	Upper
91	100		
92	55.1	44.3	82.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

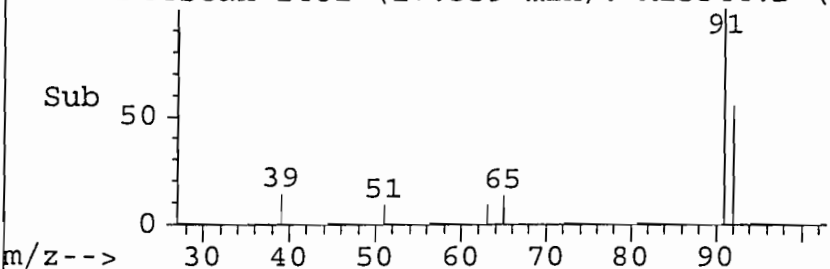
AbundanceScan 2481 (17.539 min): M13344.D (



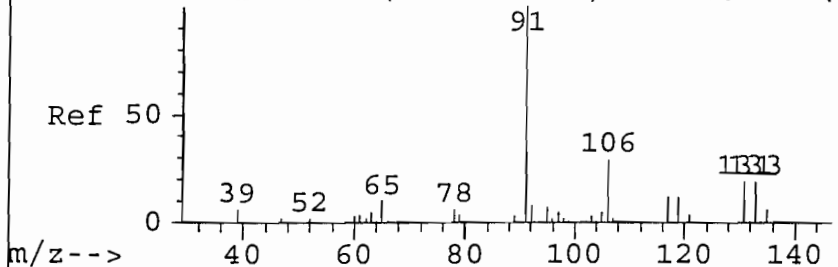
AbundanceIon 91.00 (90.
Ion 92.00 (91.
17.54



AbundanceScan 2481 (17.539 min): M13344.D (



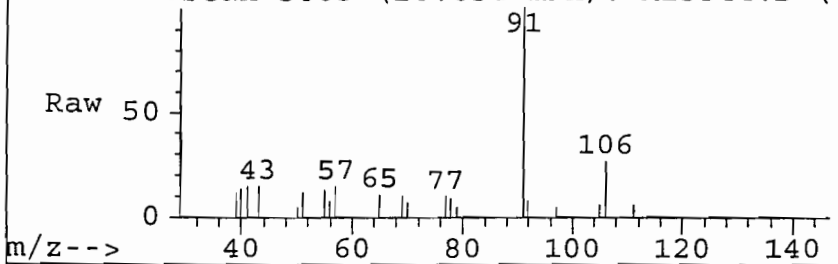
AbundanceScan 2933 (20.609 min): M12956.D (



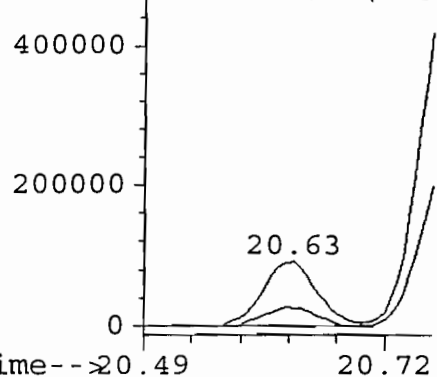
#53
ethylbenzene
Concen: 7.23 ug/L
RT: 20.63 min Scan# 3005
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	91	Resp:	334137
Ion	Ratio	Lower	Upper
91	100		
106	27.3	20.0	37.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

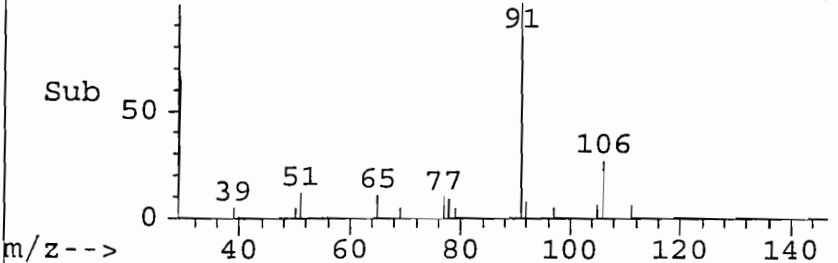
AbundanceScan 3005 (20.634 min): M13344.D (



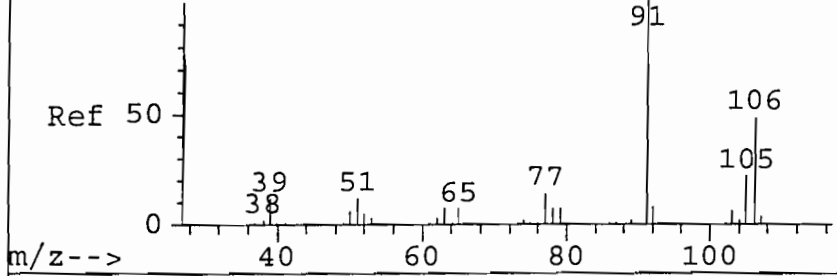
AbundanceIon 91.00 (90.
Ion 106.00 (105



AbundanceScan 3005 (20.634 min): M13344.D (



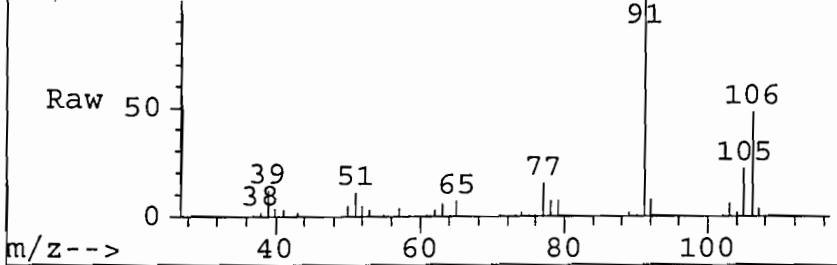
AbundanceScan 2960 (20.765 min): M12956.D (



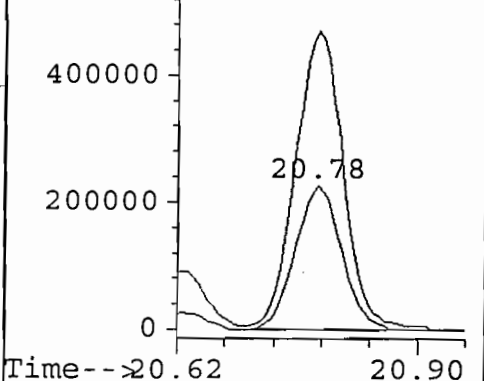
#54
m&p-xylenes
Concen: 52.63 ug/L
RT: 20.78 min Scan# 3030
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	106	Resp:	825778
Ion	Ratio	Lower	Upper
106	100		
91	207.8	146.7	272.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

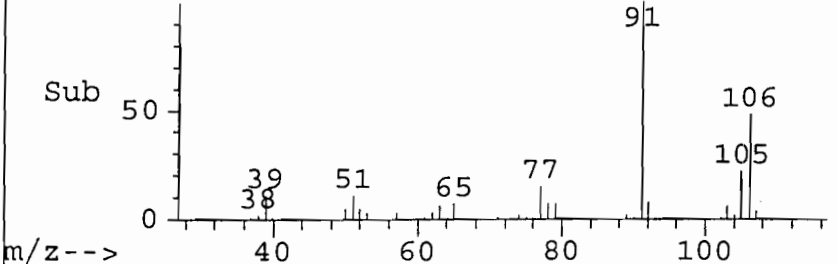
AbundanceScan 3030 (20.783 min): M13344.D (



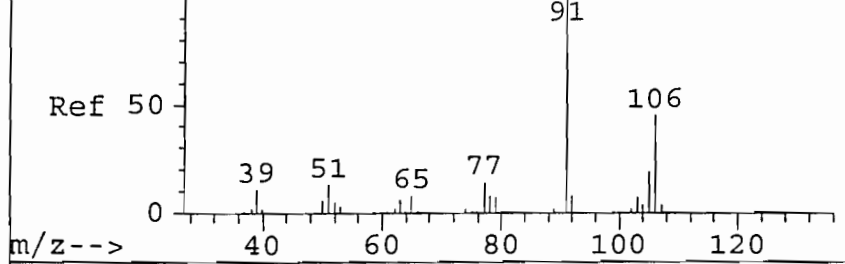
AbundanceIon 106.00 (105
Ion 91.00 (90.



AbundanceScan 3030 (20.783 min): M13344.D (



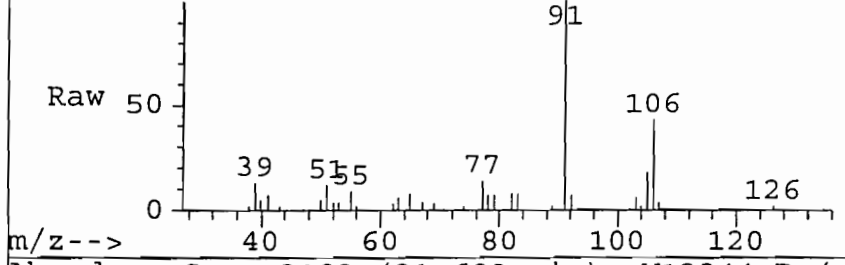
AbundanceScan 3113 (21.672 min): M12956.D (



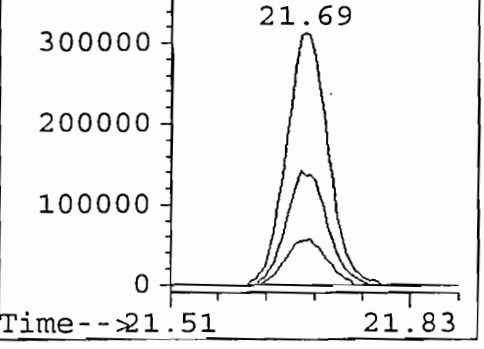
#55
o-xylene
Concen: 32.77 ug/L
RT: 21.69 min Scan# 3183
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	91	Resp:	1189373
Ion	Ratio	Lower	Upper
91	100		
106	43.5	31.3	58.1
105	17.9	12.9	24.0
0	0.0	0.0	0.0

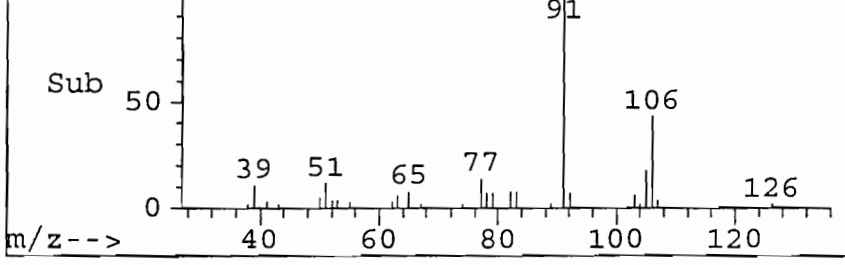
AbundanceScan 3183 (21.689 min): M13344.D (



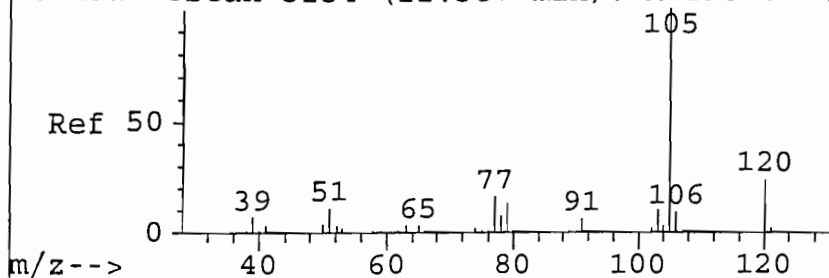
AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



AbundanceScan 3183 (21.689 min): M13344.D (



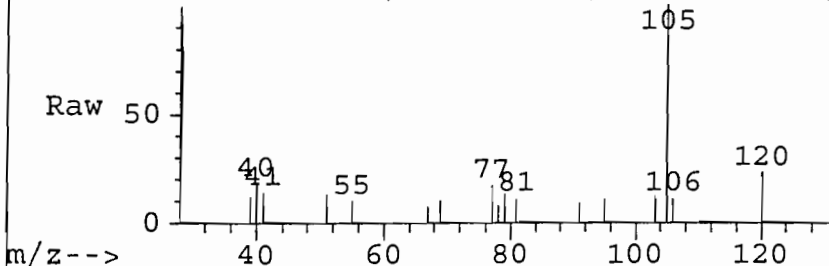
AbundanceScan 3234 (22.387 min): M12956.D (



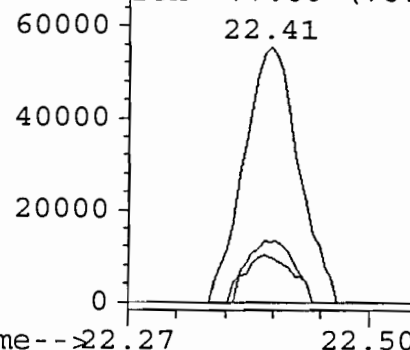
#59
isopropylbenzene
Concen: 4.71 ug/L
RT: 22.41 min Scan# 3304
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	105	Resp:	204623
Ion Ratio	Lower	Upper	
105	100		
120	23.4	16.6	30.8
77	17.5	11.3	20.9
0	0.0	0.0	0.0

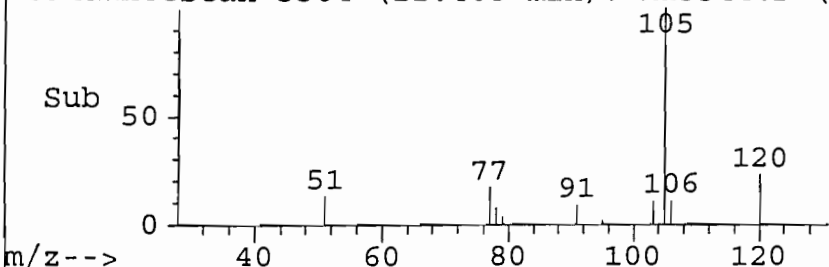
AbundanceScan 3304 (22.408 min): M13344.D (



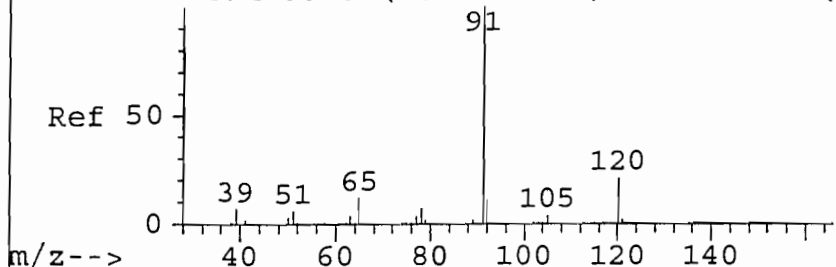
AbundanceIon 105.00 (104
Ion 120.00 (119
Ion 77.00 (76.
22.41



AbundanceScan 3304 (22.408 min): M13344.D (



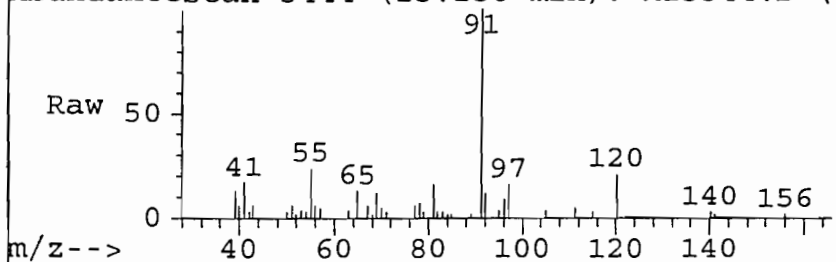
AbundanceScan 3373 (23.210 min): M12956.D (



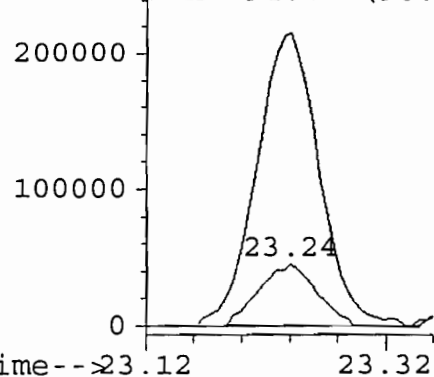
#63
n-propylbenzene
Concen: 14.16 ug/L
RT: 23.24 min Scan# 3444
Delta R.T. 0.03 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	120	Resp:	148798
Ion Ratio	Lower	Upper	
120	100		
91	476.0	340.6	632.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

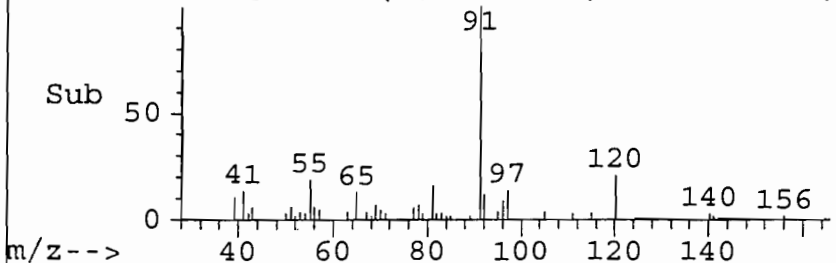
AbundanceScan 3444 (23.236 min): M13344.D (



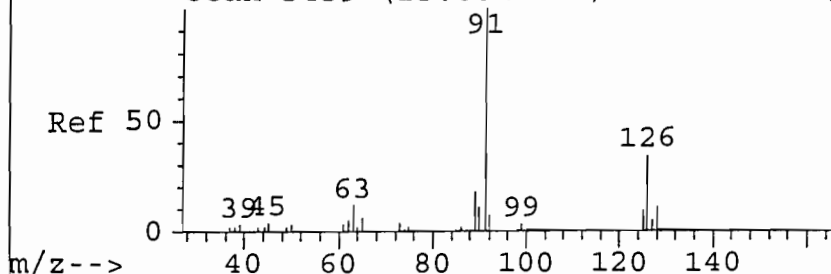
AbundanceIon 120.00 (119
Ion 91.00 (90.



AbundanceScan 3444 (23.236 min): M13344.D (



AbundanceScan 3439 (23.601 min): M12956.D (



#64

2-chlorotoluene

Concen: 15.42 ug/L

RT: 23.62 min Scan# 3512

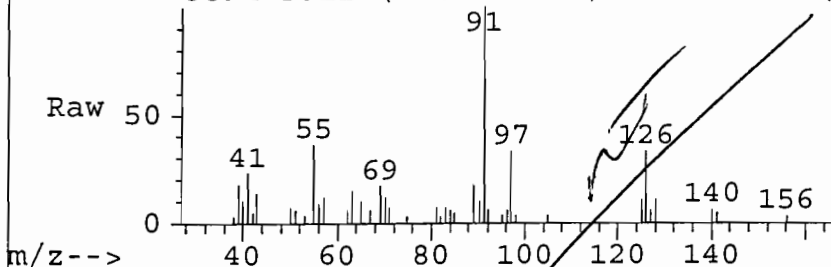
Delta R.T. 0.02 min

Lab File: M13344.D

Acq: 25 Oct 99 5:56 pm

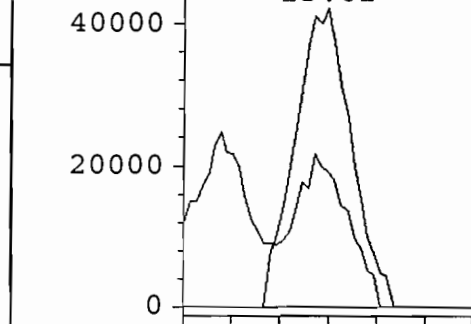
Tgt Ion:	126	Resp:	149801
Ion Ratio	Lower	Upper	
126	100		
63	45.5	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 3512 (23.625 min): M13344.D (

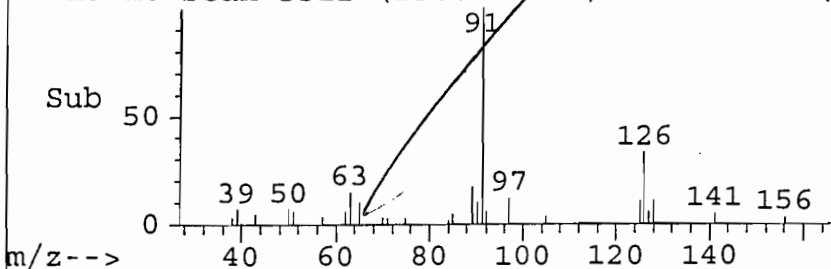


AbundanceIon 126.00 (125

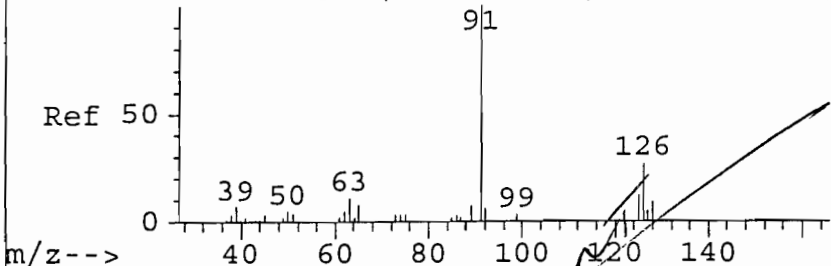
Ion 63.00 (62.



AbundanceScan 3512 (23.625 min): M13344.D (



AbundanceScan 3453 (23.682 min): M12956.D (



#65

4-chlorotoluene

Concen: 14.86 ug/L

RT: 23.62 min Scan# 3512

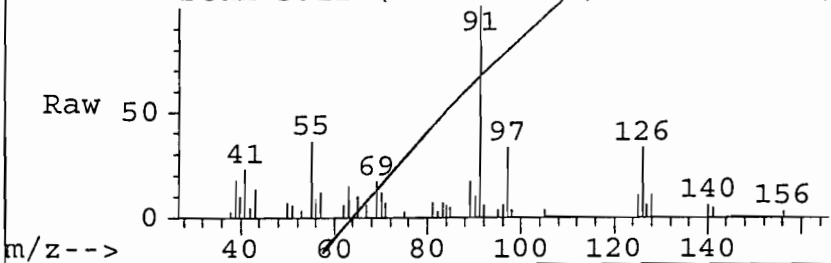
Delta R.T. -0.06 min

Lab File: M13344.D

Acq: 25 Oct 99 5:56 pm

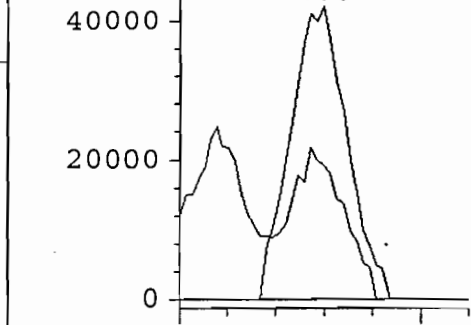
Tgt Ion:	126	Resp:	149801
Ion Ratio	Lower	Upper	
126	100		
63	45.5	29.3	54.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 3512 (23.625 min): M13344.D (

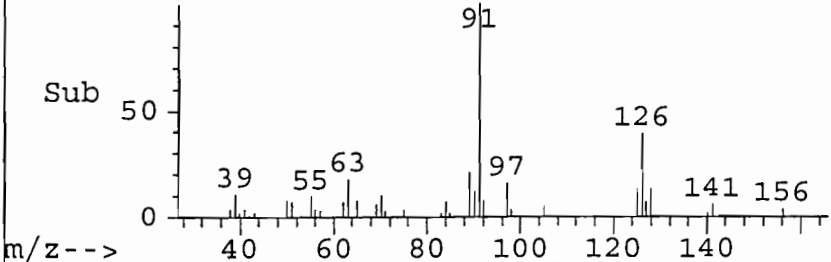


AbundanceIon 126.00 (125

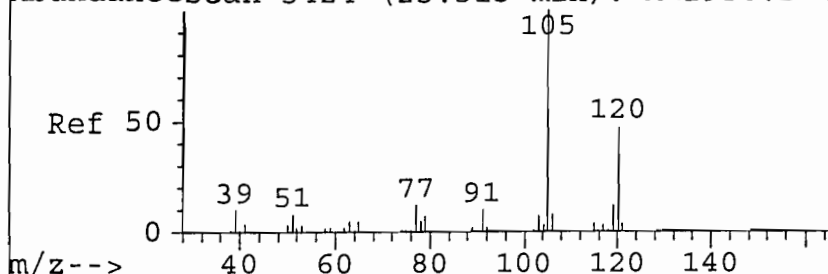
Ion 63.00 (62.



AbundanceScan 3512 (23.625 min): M13344.D (



AbundanceScan 3424 (23.513 min): M12956.D (

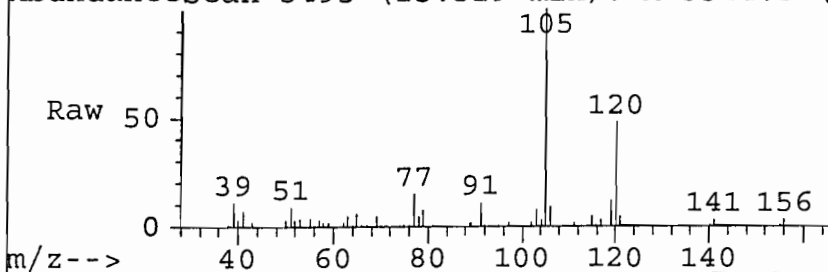


#66

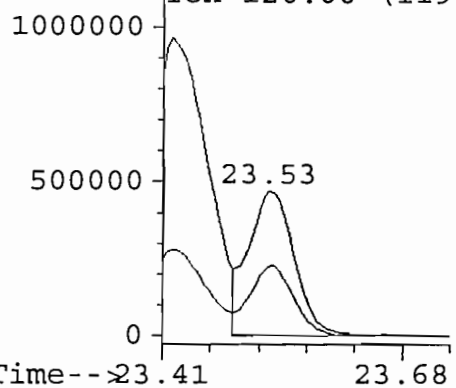
1,3,5-trimethylbenzene
Concen: 49.29 ug/L
RT: 23.53 min Scan# 3495
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	105	Resp:	1722580
Ion Ratio	Lower	Upper	
105	100		
120	48.0	33.2	61.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

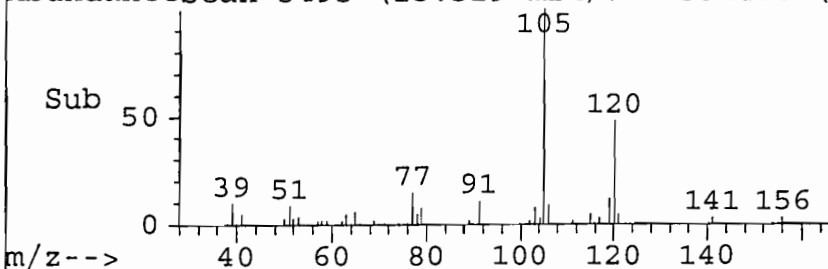
AbundanceScan 3495 (23.529 min): M13344.D (



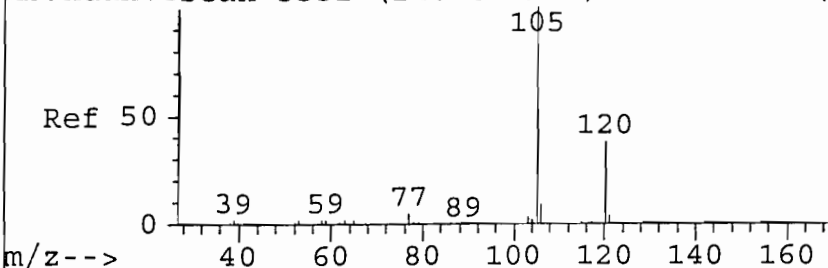
AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 3495 (23.529 min): M13344.D (



AbundanceScan 3551 (24.261 min): M12956.D (

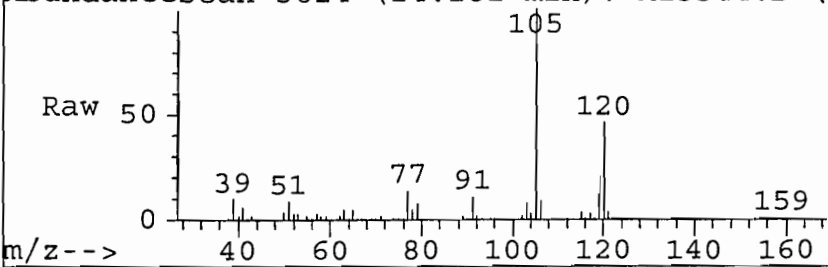


#68

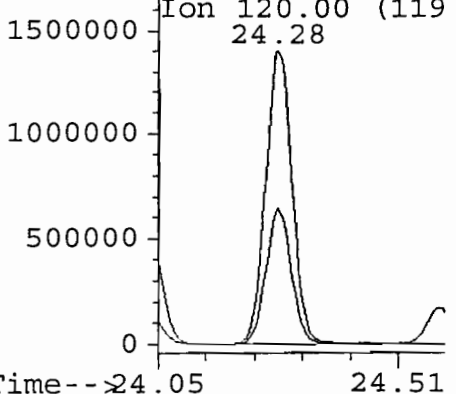
1,2,4-trimethylbenzene
Concen: 154.31 ug/L
RT: 24.28 min Scan# 3624
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

Tgt Ion:	105	Resp:	5173479
Ion Ratio	Lower	Upper	
105	100		
120	45.7	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

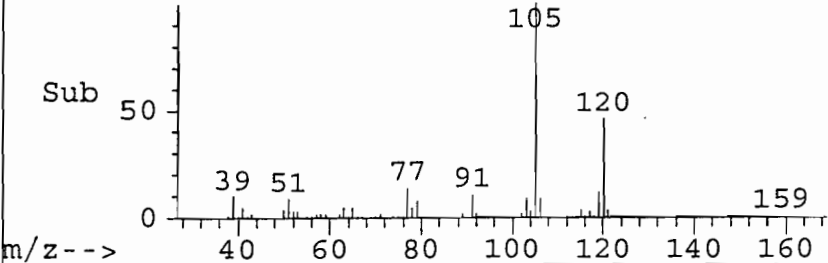
AbundanceScan 3624 (24.281 min): M13344.D (



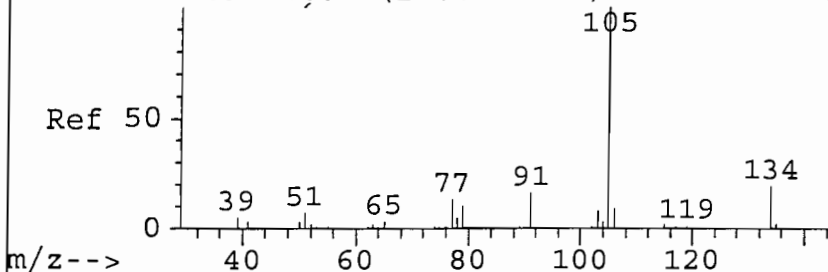
AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 3624 (24.281 min): M13344.D (



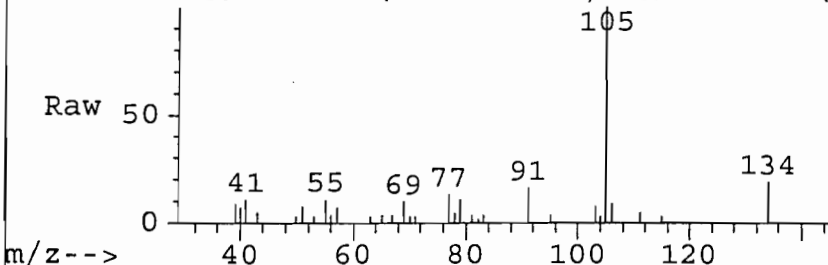
AbundanceScan 3604 (24.572 min): M12956.D (



#69
sec-butylbenzene
Concen: 13.52 ug/L
RT: 24.59 min Scan# 3677
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

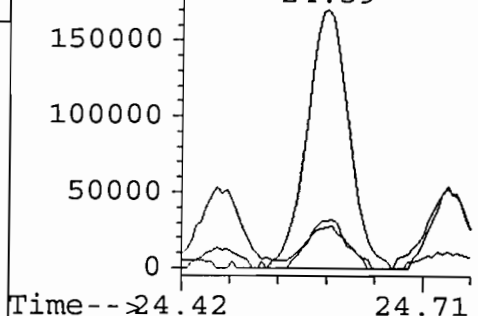
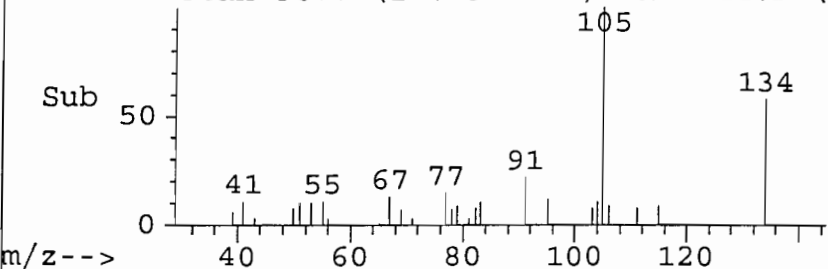
Tgt Ion:105	Resp: 583506
Ion Ratio Lower Upper	
105 100	
134 18.5	13.4 25.0
91 16.1	11.1 20.5
0 0.0	0.0 0.0

AbundanceScan 3677 (24.592 min): M13344.D (

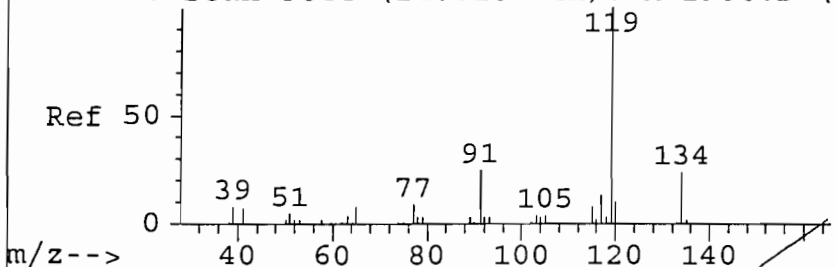


AbundanceIon 105.00 (104
Ion 134.00 (133
Ion 91.00 (90.
24.59

AbundanceScan 3677 (24.592 min): M13344.D (



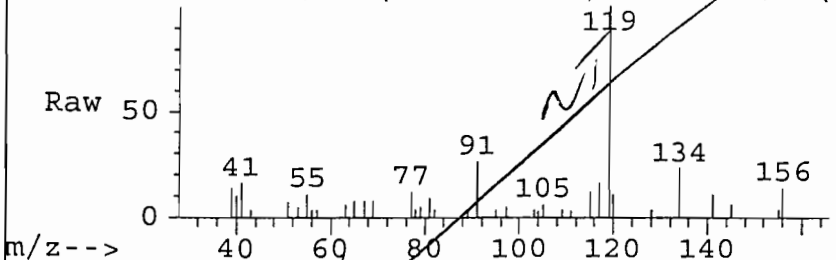
AbundanceScan 3644 (24.810 min): M12956.D (



#71
4-isopropyltoluene
Concen: 10.55 ug/L
RT: 24.83 min Scan# 3717
Delta R.T. 0.02 min
Lab File: M13344.D
Acq: 25 Oct 99 5:56 pm

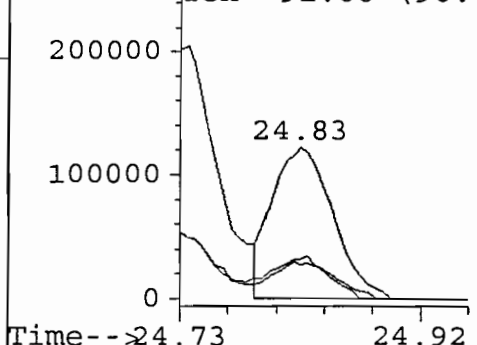
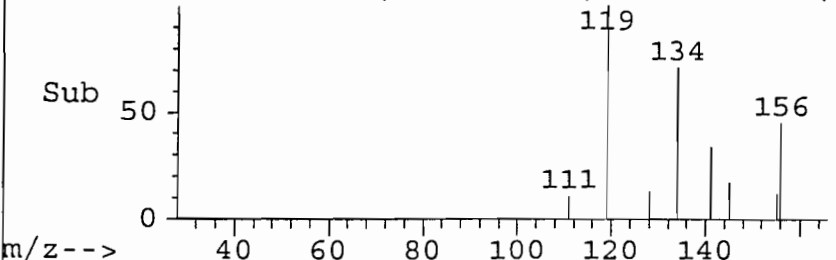
Tgt Ion:119	Resp: 403952
Ion Ratio Lower Upper	
119 100	
134 22.7	16.7 31.1
91 26.1	17.2 32.0
0 0.0	0.0 0.0

AbundanceScan 3717 (24.828 min): M13344.D (

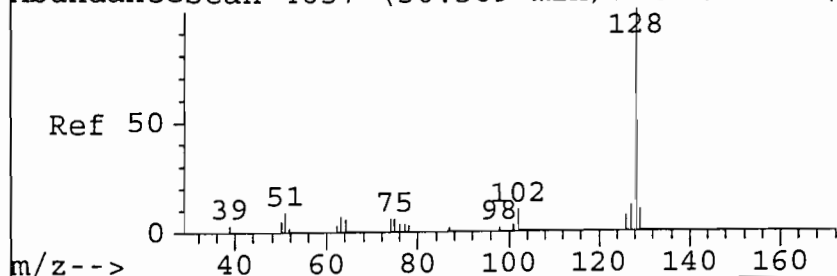


AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.

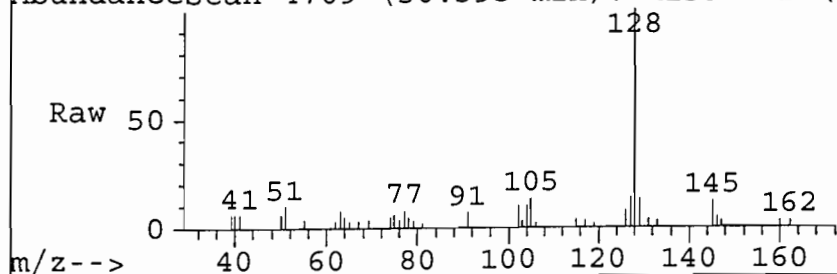
AbundanceScan 3717 (24.828 min): M13344.D (



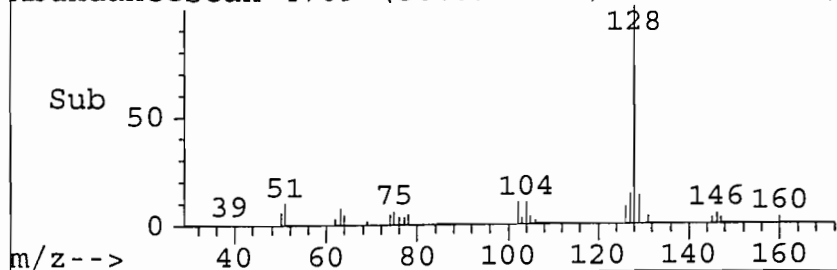
AbundanceScan 4637 (30.569 min): M12956.D (



AbundanceScan 4709 (30.593 min): M13344.D (



AbundanceScan 4709 (30.593 min): M13344.D (



#78

naphthalene

Concen: 42.05 ug/L

RT: 30.59 min Scan# 4709

Delta R.T. 0.02 min

Lab File: M13344.D

Acq: 25 Oct 99 5:56 pm

Tgt Ion:128 Resp: 1126679

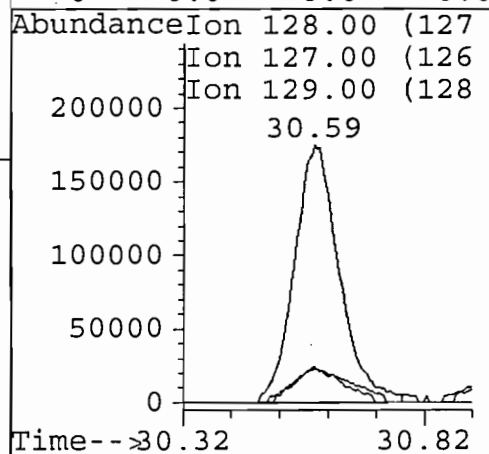
Ion Ratio Lower Upper

128 100

127 14.0 8.6 16.0

129 12.8 7.0 13.0

0 0.0 0.0 0.0



Library Search Compound Report

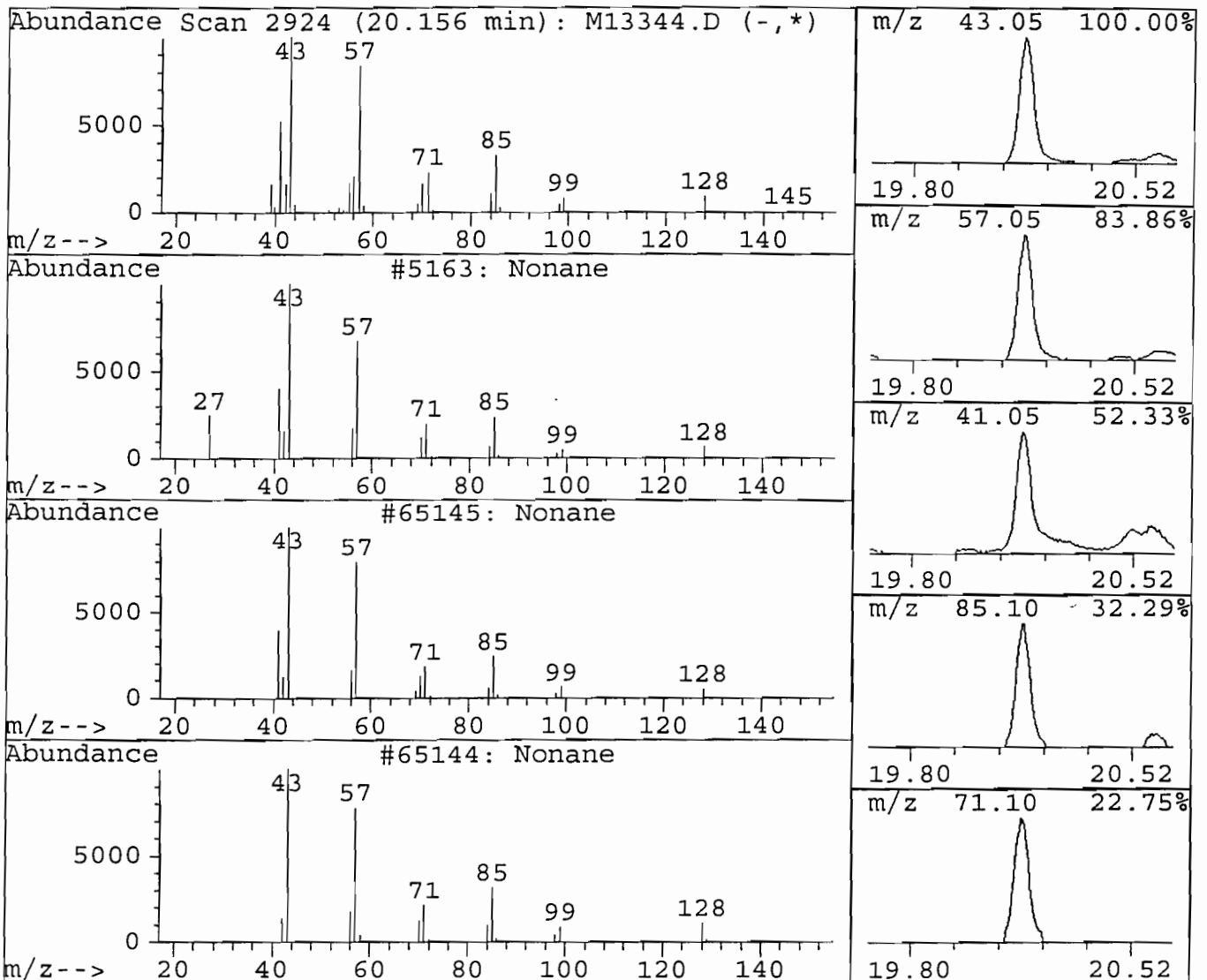
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
 Acq Time : 25 Oct 99 5:56 pm
 Sample : 13827ASP-88018
 Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
20.16	50.70 ug/L	5547892	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane	5163	000111-84-2	97
2	Nonane	65145	000111-84-2	96
3	Nonane	65144	000111-84-2	95
4	Nonane	65143	000111-84-2	94
5	Nonane	65142	000111-84-2	91



Library Search Compound Report

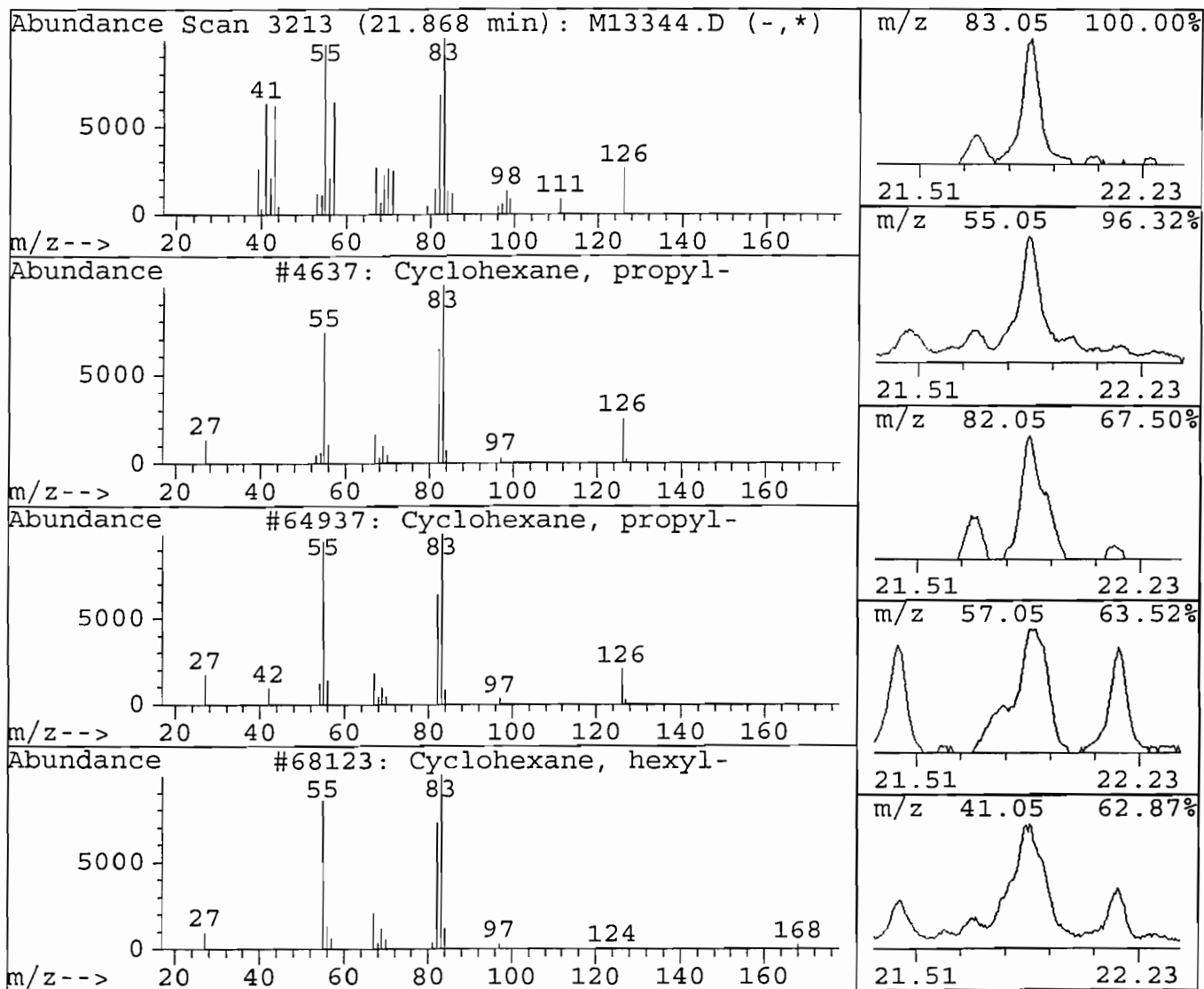
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.87	58.30 ug/L	6379852	Chlorobenzene-d5	20.47

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, propyl-	4637	001678-92-8	58
2	Cyclohexane, propyl-	64937	001678-92-8	58
3	Cyclohexane, hexyl-	68123	004292-75-5	53
4	Cyclohexane, octyl-	21971	001795-15-9	50
5	Cyclohexane, 2-propenyl-	64813	002114-42-3	47



Library Search Compound Report

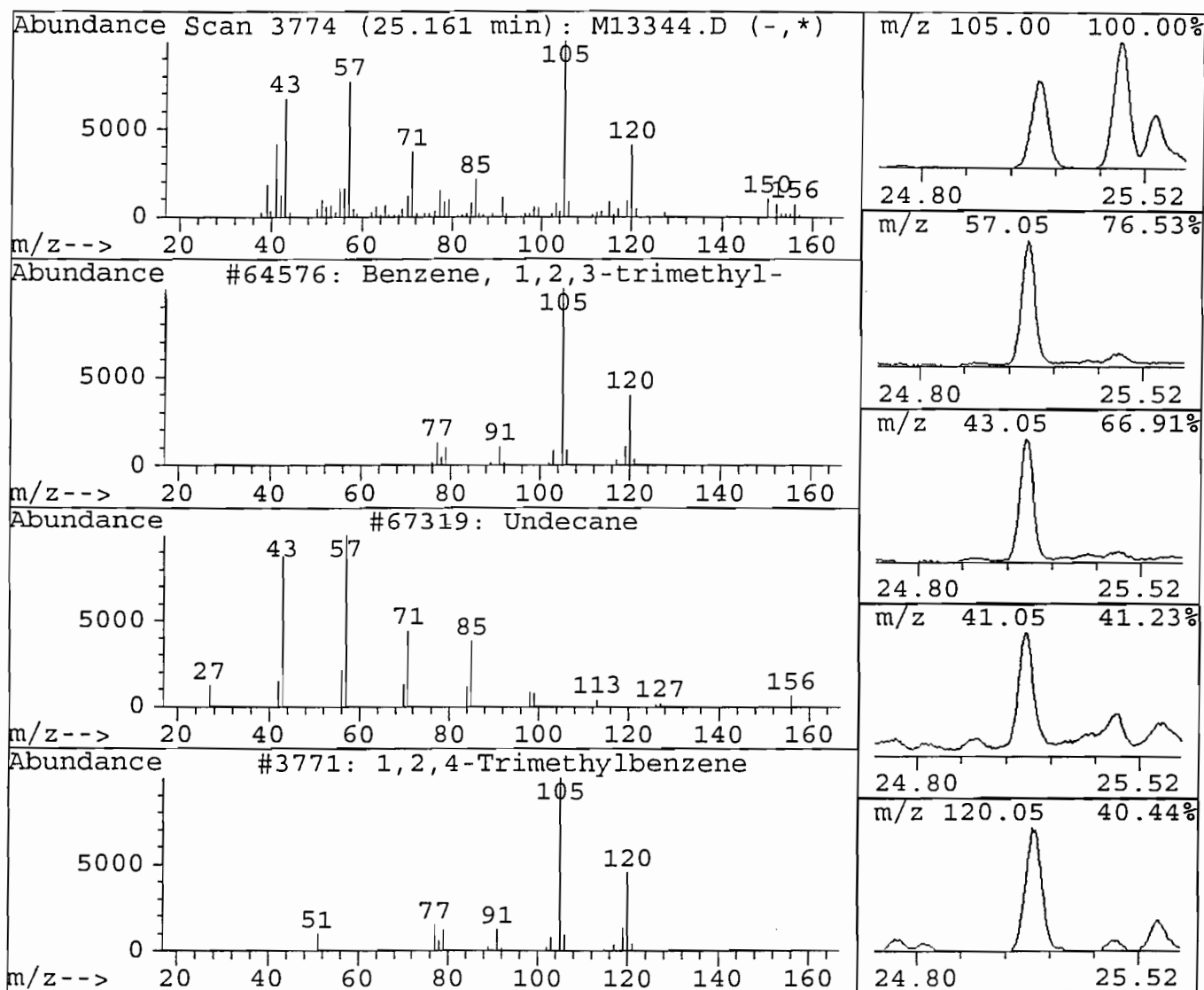
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.16	50.00 ug/L	16013507	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	64576	000526-73-8	86
2	Undecane	67319	001120-21-4	83
3	1,2,4-Trimethylbenzene	3771	000095-36-3	83
4	Benzene, 1,2,3-trimethyl-	3773	000526-73-8	80
5	Benzene, 1-ethyl-3-methyl-	64563	000620-14-4	60



Library Search Compound Report

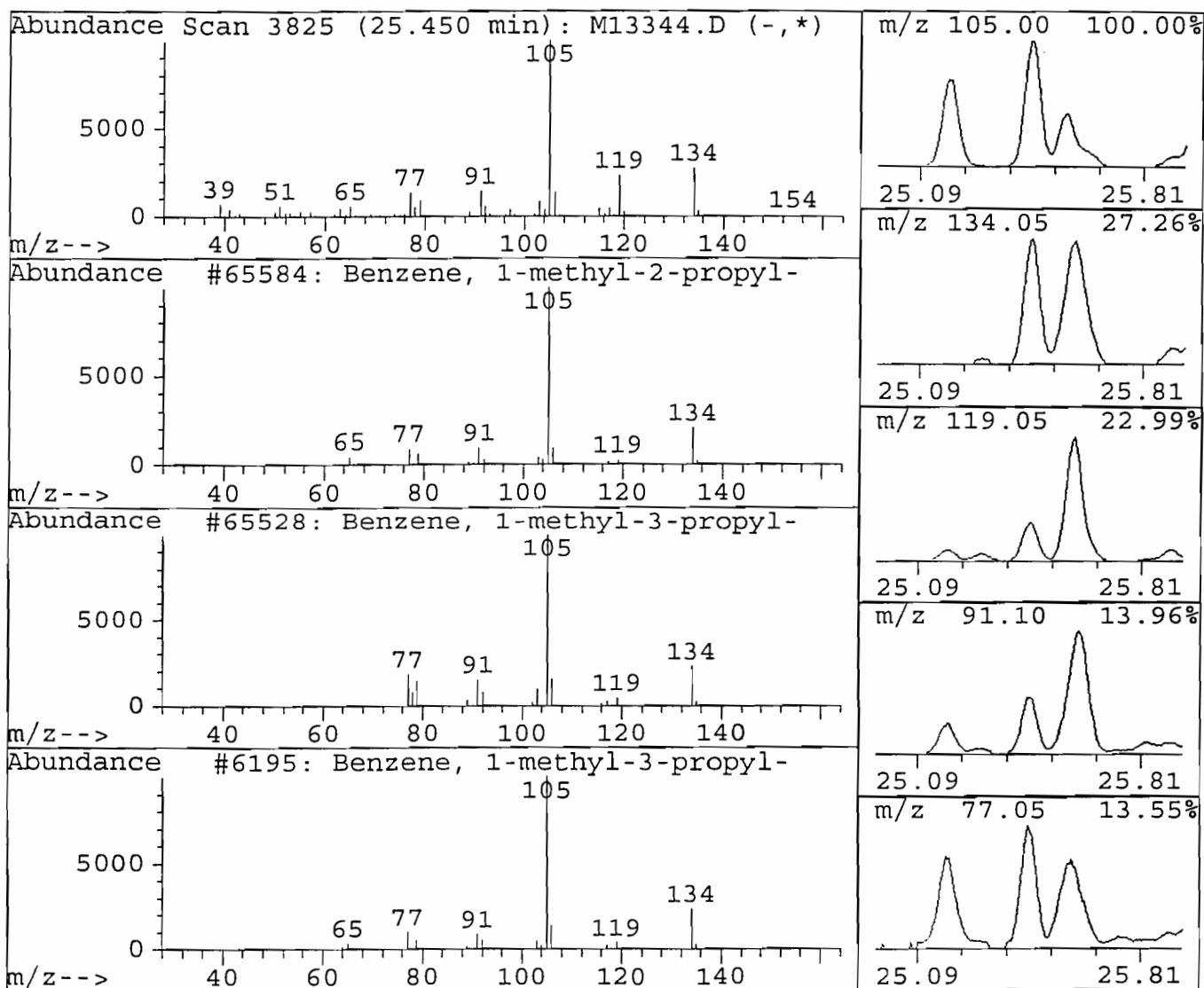
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.45	28.37 ug/L	9085578	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-2-propyl-	65584	001074-17-5	76
2	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	76
3	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	76
4	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	76
5	Benzene, (1-methylpropyl)-	65544	000135-98-8	70



Library Search Compound Report

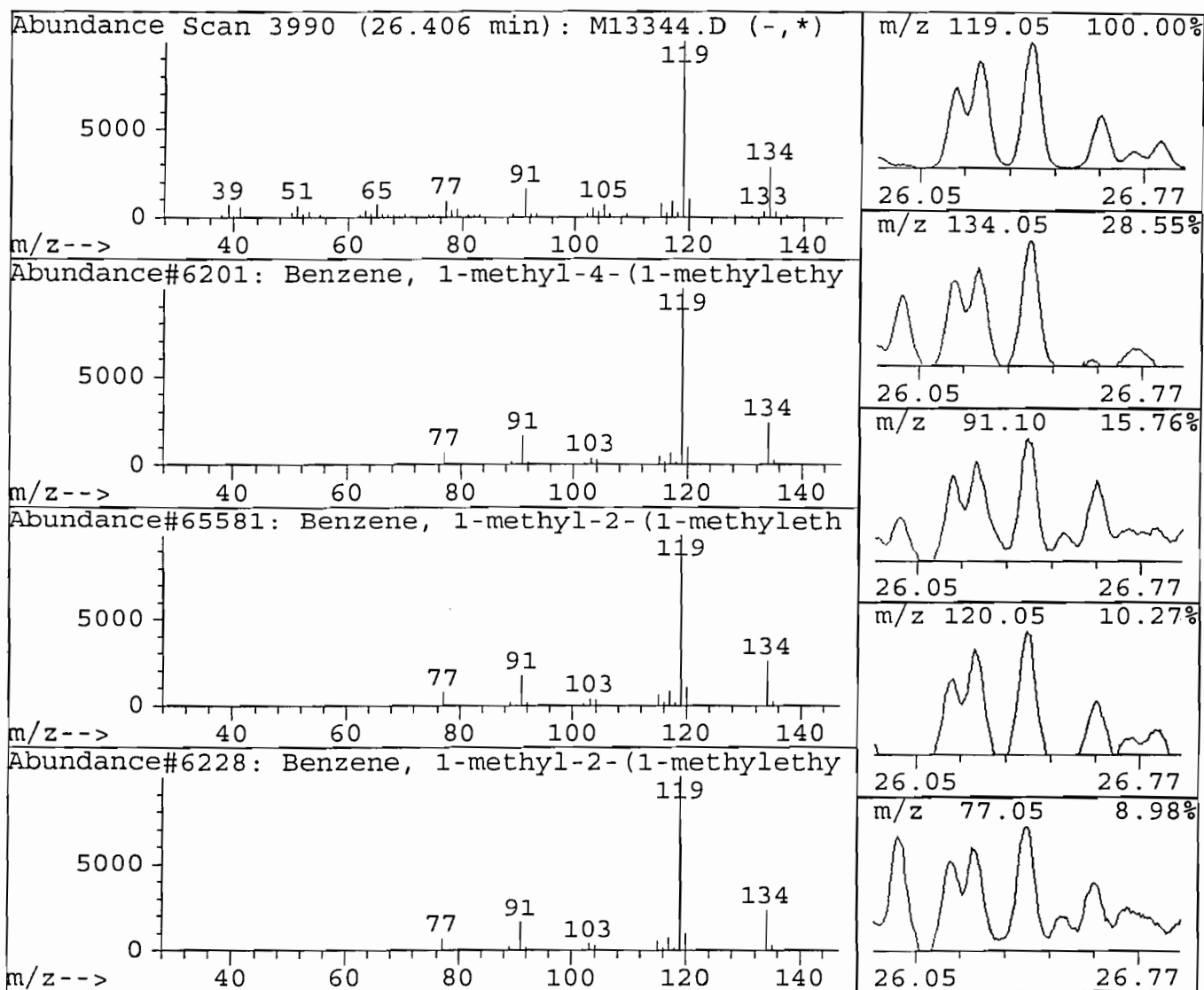
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.41	20.11 ug/L	6440089	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	97
2	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	97
3	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	97
4	Benzene, 1-methyl-4-(1-methylethyl)	65534	000099-87-6	95
5	Benzene, 4-ethyl-1,2-dimethyl-	6218	000934-80-5	95



Library Search Compound Report

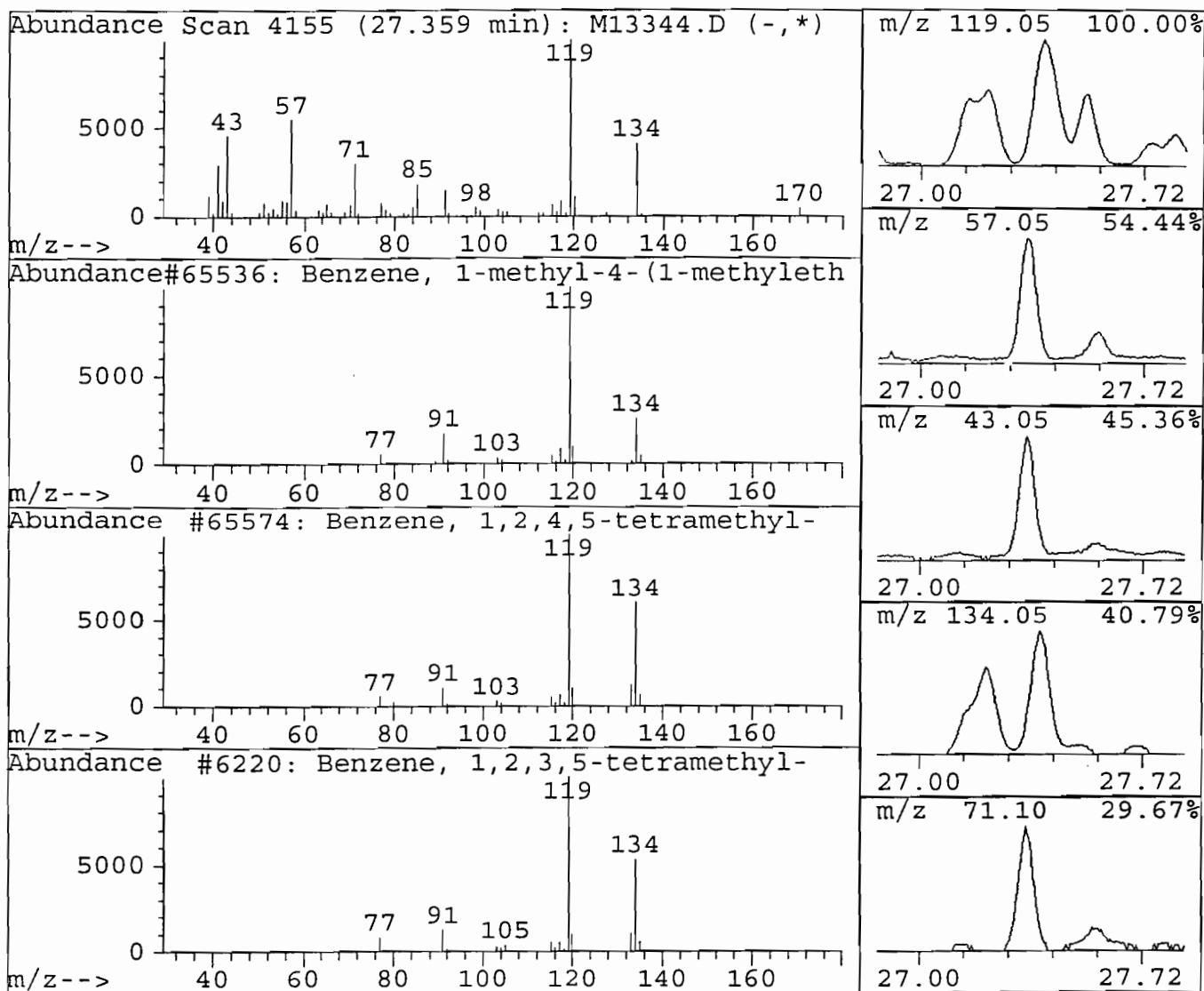
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

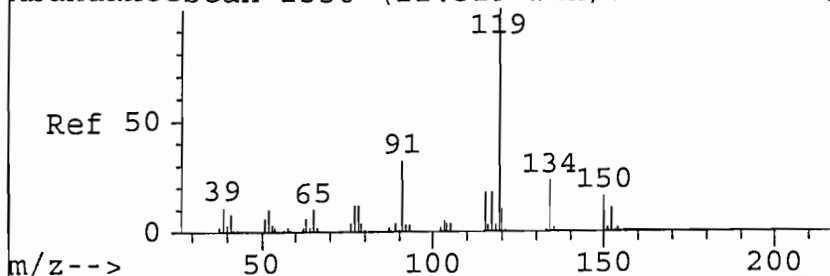
Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.36	34.36 ug/L	11005954	1,4-dichlorobenzene-d4	25.21

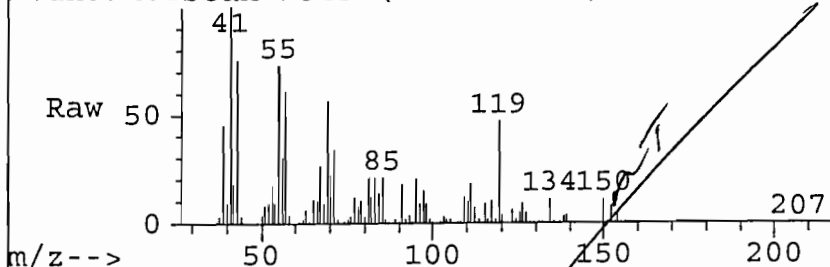
Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	65536	000099-87-6	76
2	Benzene, 1,2,4,5-tetramethyl-	65574	000095-93-2	76
3	Benzene, 1,2,3,5-tetramethyl-	6220	000527-53-7	76
4	Benzene, 1-methyl-4-(1-methylethyl)	65538	000099-87-6	76
5	Benzene, 1-methyl-4-(1-methylethyl)	65534	000099-87-6	76



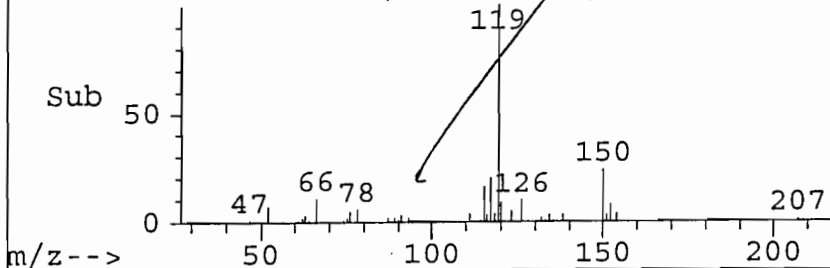
AbundanceScan 2330 (22.529 min): P19049.D (



AbundanceScan 2345 (22.470 min): P19307.D (



AbundanceScan 2345 (22.470 min): P19307.D (



#71

4-isopropyltoluene

Concen: 16.05 ug/L

RT: 22.47 min Scan# 2345

Delta R.T. -0.06 min

Lab File: P19307.D

Acq: 25 Oct 99 9:25 pm

Tgt Ion:119 Resp: 357559

Ion Ratio Lower Upper

119 100

134 23.2 15.9 29.5

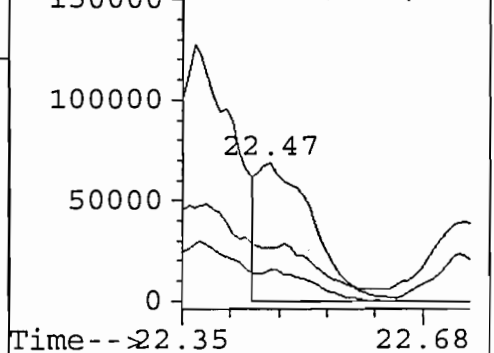
91 38.9 22.6 42.0

0 0.0 0.0 0.0

AbundanceIon 119.00 (118

Ion 134.00 (133

Ion 91.00 (90.



Library Search Compound Report

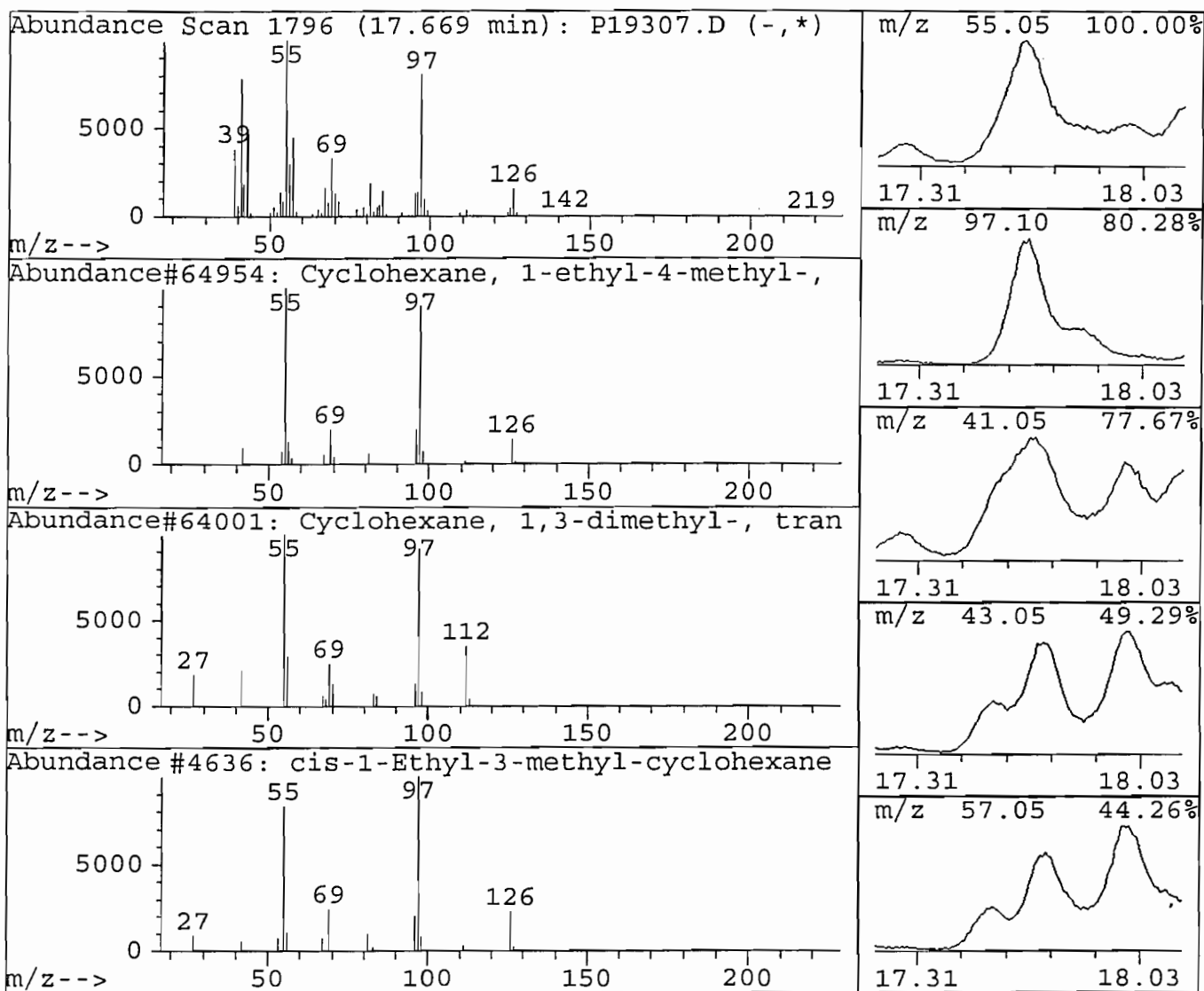
Data File : I:\HPCHEM\1\DATA\V2102599\P19307.D
Acq Time : 25 Oct 99 9:25 pm
Sample : 13827ASP-88013 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
17.67	141.71 ug/L	12016888	Chlorobenzene-d5	16.30

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1-ethyl-4-methyl-, tra	64954	006236-88-0	64
2	Cyclohexane, 1,3-dimethyl-, trans-	64001	002207-03-6	50
3	cis-1-Ethyl-3-methyl-cyclohexane	4636	019489-10-2	50
4	Cyclohexane, 1,4-dimethyl-	2672	000589-90-2	50
5	Cyclopentane, 1,2-dimethyl-3-(1-met	7606	000489-20-3	50



Library Search Compound Report

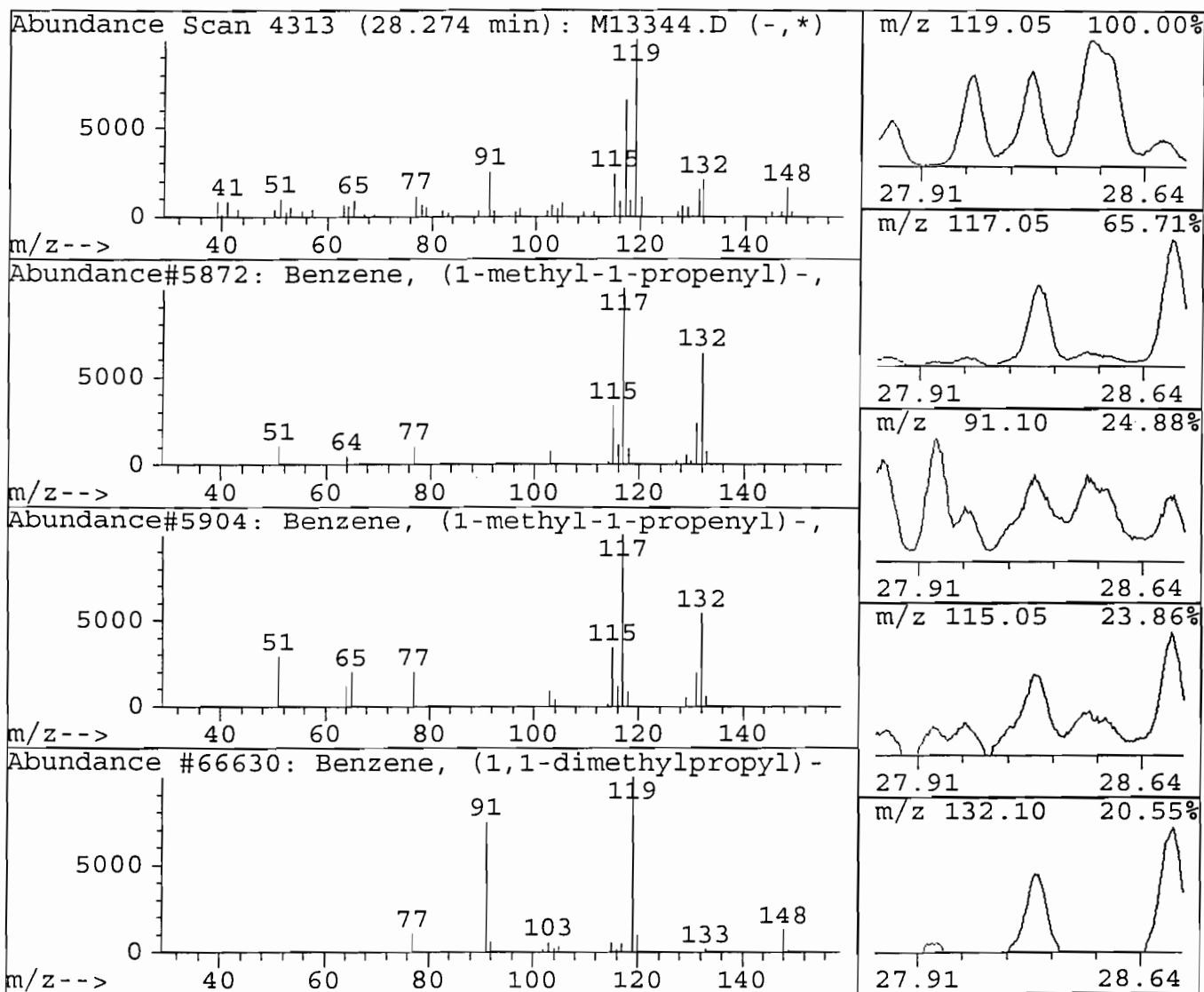
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.27	20.59 ug/L	6594132	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, (1-methyl-1-propenyl)-, (E	5872	000768-00-3	46
2	Benzene, (1-methyl-1-propenyl)-, (Z	5904	000767-99-7	46
3	Benzene, (1,1-dimethylpropyl)-	66630	002049-95-8	43
4	1H-Indene, 2,3-dihydro-4-methyl-	5893	000824-22-6	42
5	Benzene, 1-methyl-4-(2-propenyl)-	5873	003333-13-9	41



Library Search Compound Report

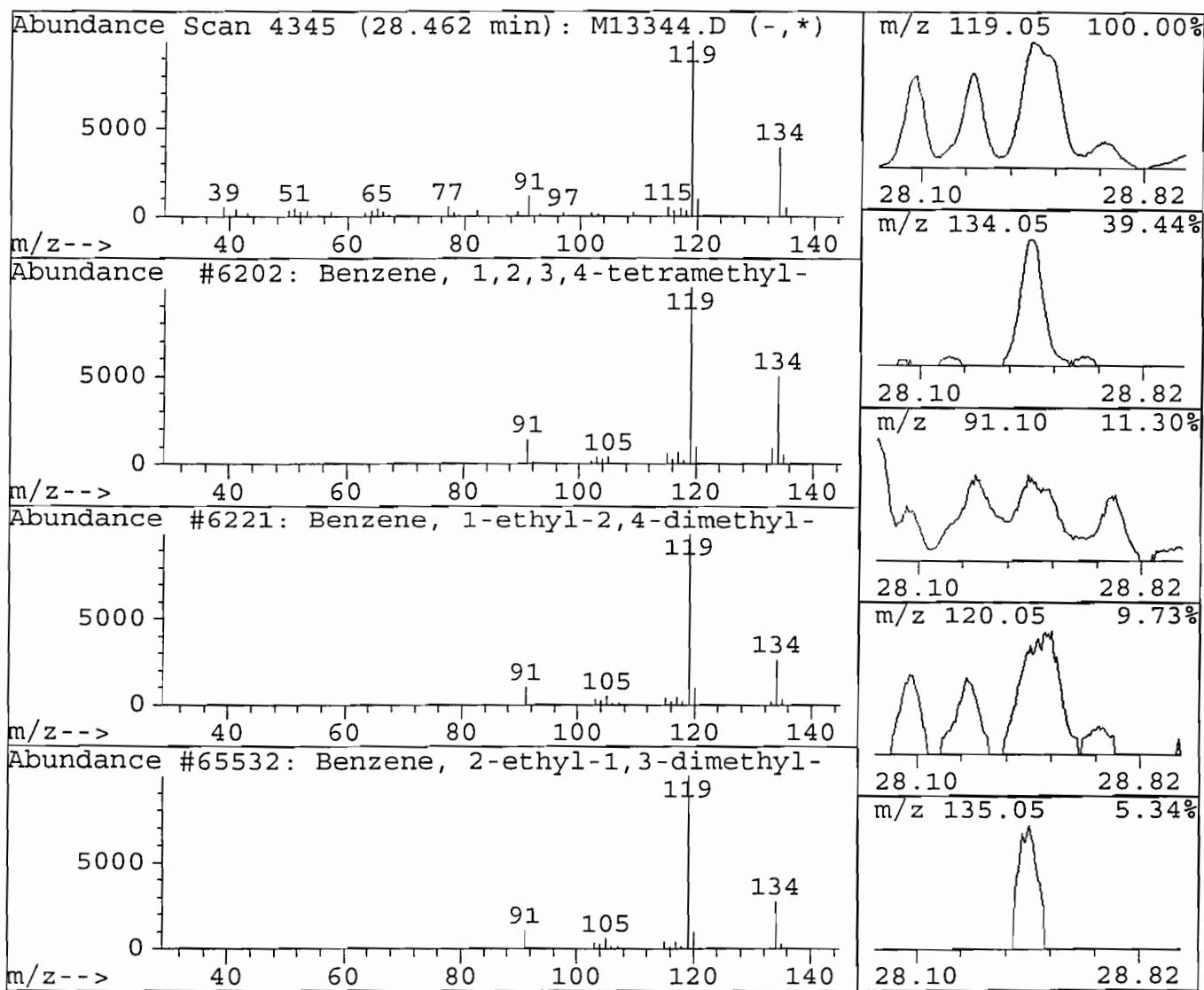
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
28.46	21.71 ug/L	6953063	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	6202	000488-23-3	91
2	Benzene, 1-ethyl-2,4-dimethyl-	6221	000874-41-9	91
3	Benzene, 2-ethyl-1,3-dimethyl-	65532	002870-04-4	90
4	Benzene, 2-ethyl-1,3-dimethyl-	6200	002870-04-4	90
5	Benzene, 4-ethyl-1,2-dimethyl-	65568	000934-80-5	90



Library Search Compound Report

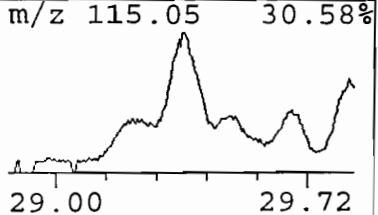
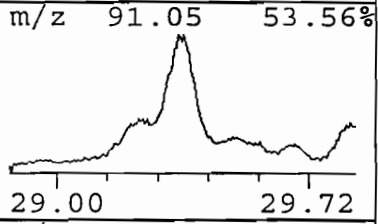
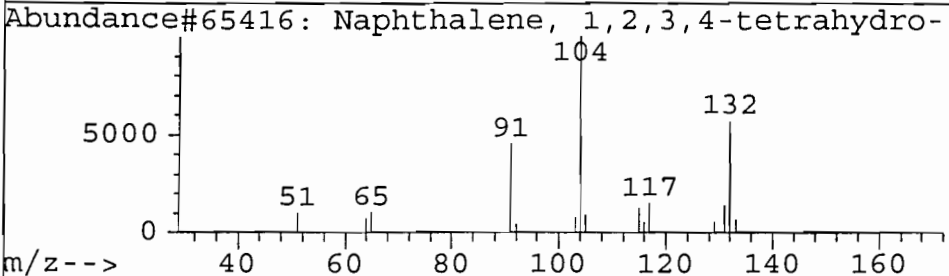
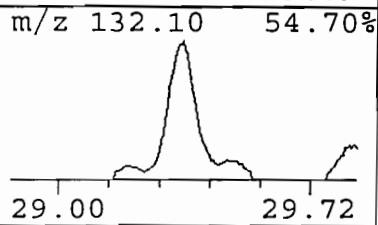
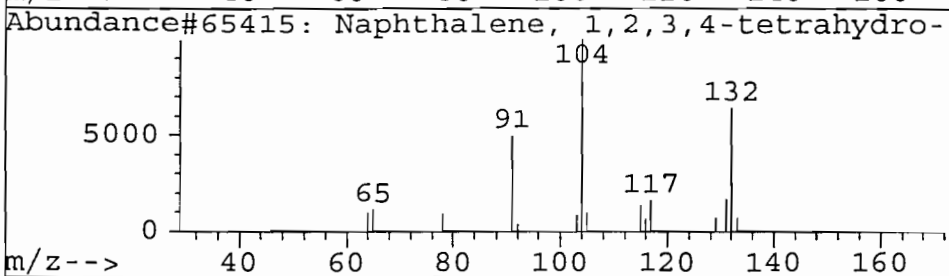
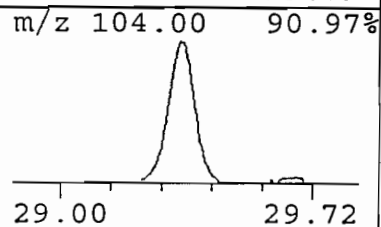
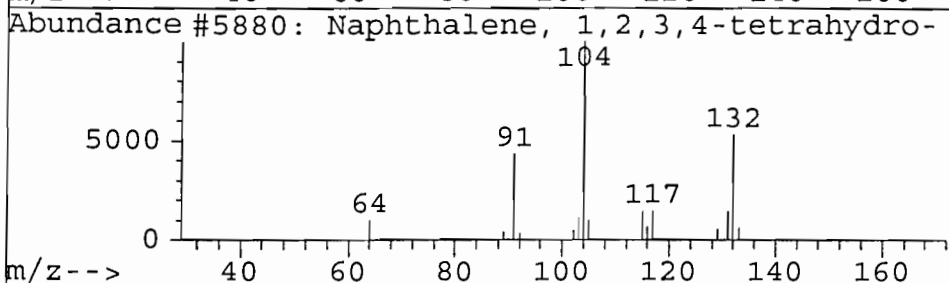
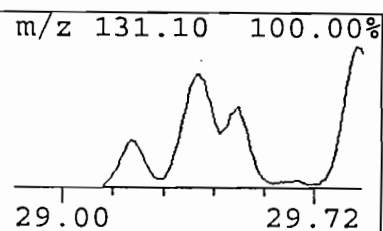
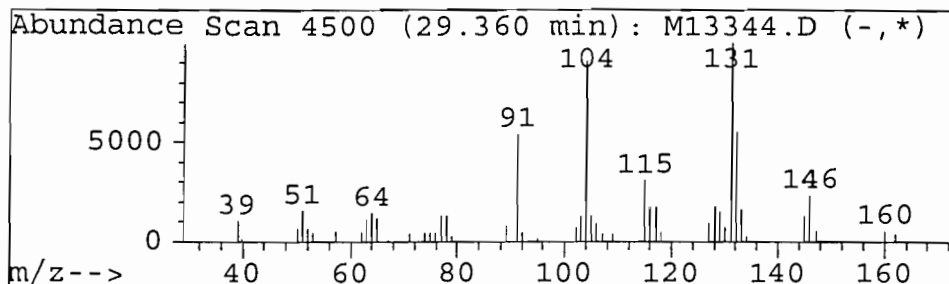
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.36	24.18 ug/L	7745681	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-	5880	000119-64-2	50
2	Naphthalene, 1,2,3,4-tetrahydro-	65415	000119-64-2	50
3	Naphthalene, 1,2,3,4-tetrahydro-	65416	000119-64-2	50
4	1H-Indene, 2,3-dihydro-4,7-dimethyl	66497	006682-71-9	50
5	Naphthalene, 1,2,3,4-tetrahydro-1-m	8942	001559-81-5	46



000245

Library Search Compound Report

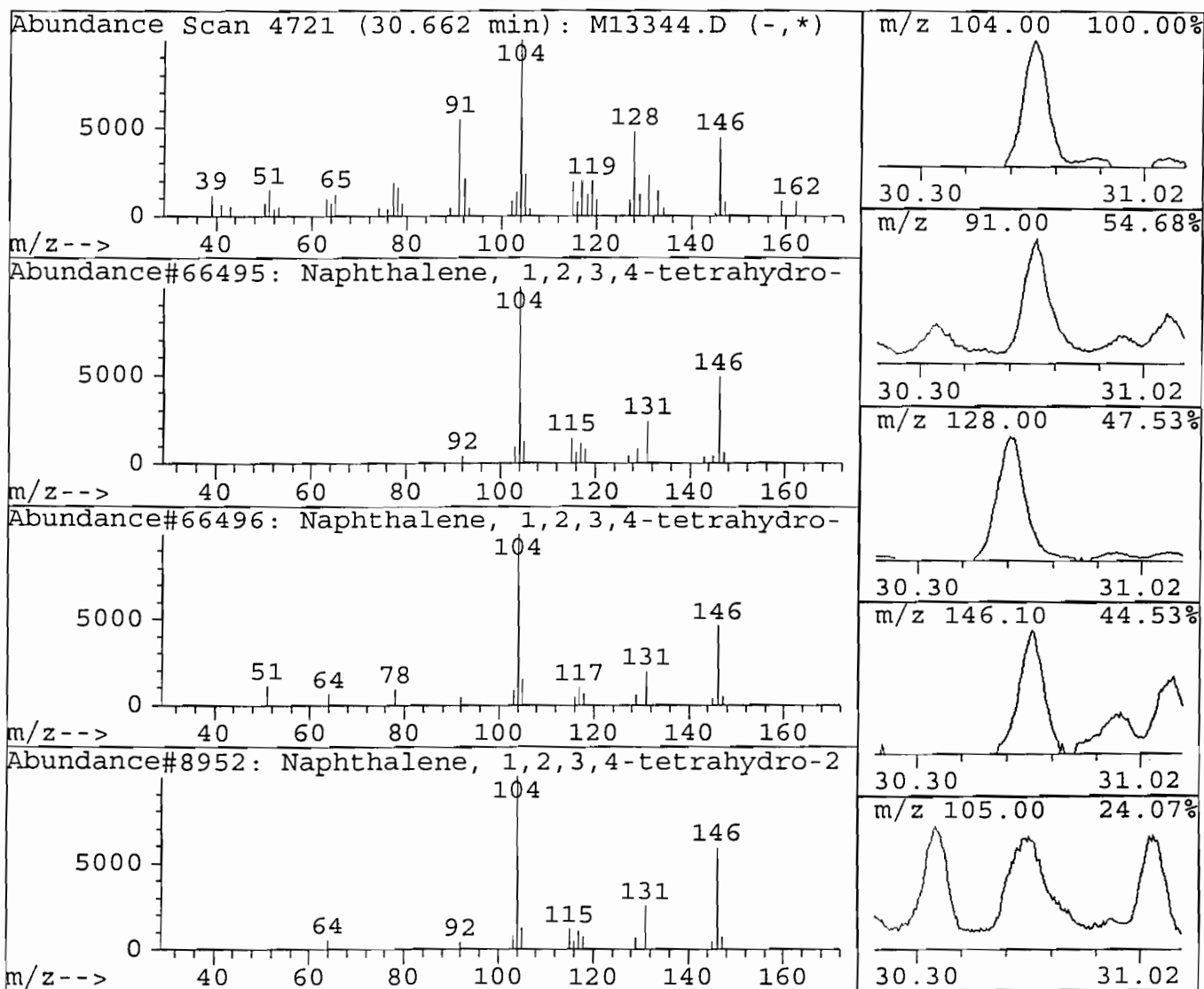
Data File : D:\HPCHEM\3\DATA\V3102599\M13344.D
Acq Time : 25 Oct 99 5:56 pm
Sample : 13827ASP-88018
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.66	21.94 ug/L	7028129	1,4-dichlorobenzene-d4	25.21

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-2-m	66495	003877-19-8	60
2	Naphthalene, 1,2,3,4-tetrahydro-2-m	66496	003877-19-8	60
3	Naphthalene, 1,2,3,4-tetrahydro-2-m	8952	003877-19-8	49
4	Pyrazolo[1,5-a]pyridine, 2,3-dimeth	8921	028537-56-6	47
5	2(1H)-Naphthalenone, 3,4-dihydro-	8940	000530-93-8	43



SAMPLE NO.

GP-020-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: O88019

Lab File ID: P19299.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

ug/Kg

Q

FORM I VOA

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-020-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88019
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19299.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 2 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 112-40-3	Dodecane	27.19	28	J
2.	Unknown	29.34	11	J
3. 629-50-5	Tridecane	30.11	33	J
4.	Unknown	30.53	24	J
5. 91-57-6	Naphthalene, 2-methyl-	32.06	23	J
6.	Unknown	32.24	11	J
7. 629-59-4	Tetradecane	32.85	23	J
8.	Unknown	34.58	10	J
9. 581-40-8	Naphthalene, 2,3-dimethyl-	35.22	12	J
10. 581-42-0	Naphthalene, 2,6-dimethyl-	35.60	29	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
 Acq Time : 22 Oct 99 9:22 pm
 Sample : 13827ASP-88019
 Misc : 5G/5ML
 Quant Time: Oct 23 14:32 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

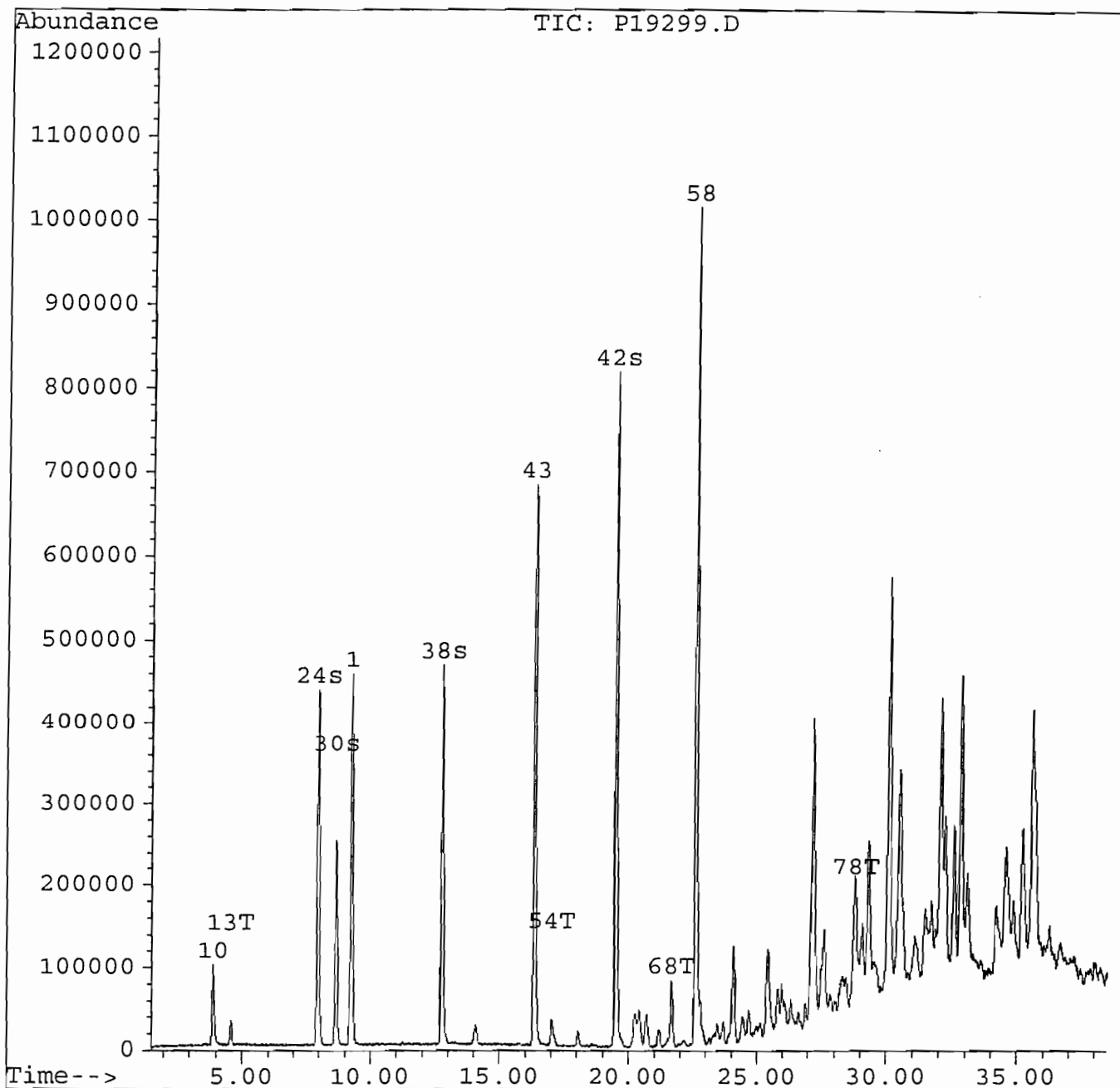
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1052585	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	1093873	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	22.62	152	855293	50.00	ug/L	0.03
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	742309	42.33	ug/L	84.66%
30) 1,2-Dichlorethane-d4	8.67	65	604977	43.90	ug/L	87.80%
38) Toluene-d8	12.77	98	961129	46.82	ug/L	93.63%
42) 4-Bromofluorobenzene	19.50	95	1007889	47.82	ug/L	95.65%
Target Compounds						Qvalue
✓ 10) Acetone	3.89	43	354432	187.90	ug/L	97
✓ 13) methylene chloride	4.58	84	26414	5.35	ug/L	94
✓ 54) m&p-xylenes	17.02	106	29155	2.85	ug/L	98
68) 1,2,4-trimethylbenzene	21.67	105	175679	4.99	ug/L	100
78) naphthalene	28.84	128	206511	7.50	ug/L	96

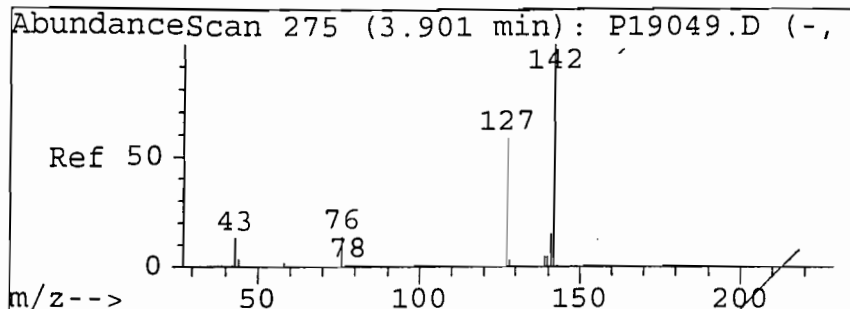
Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML
Quant Time: Oct 23 14:32 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

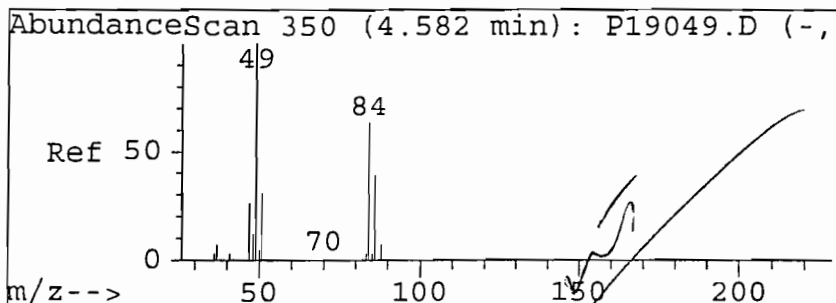
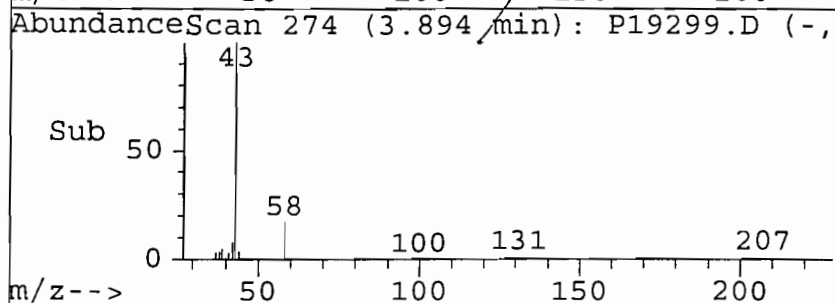
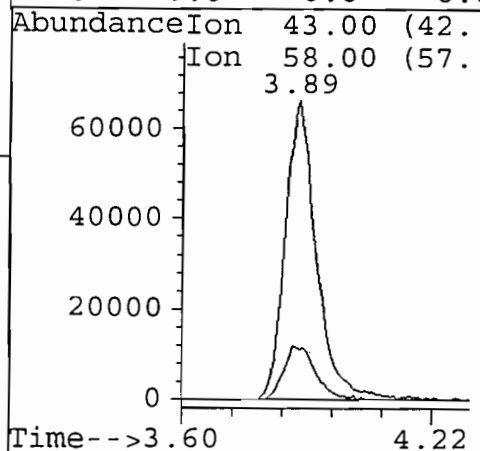
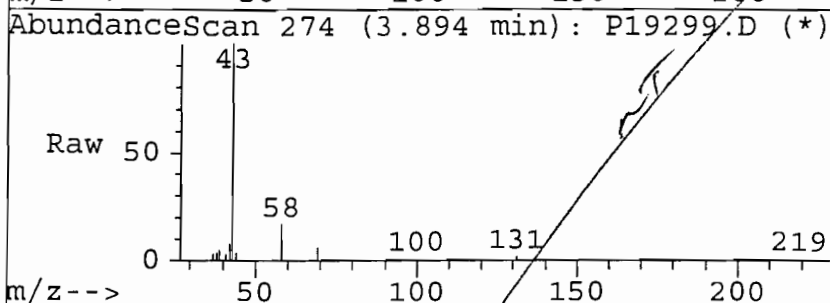
Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration





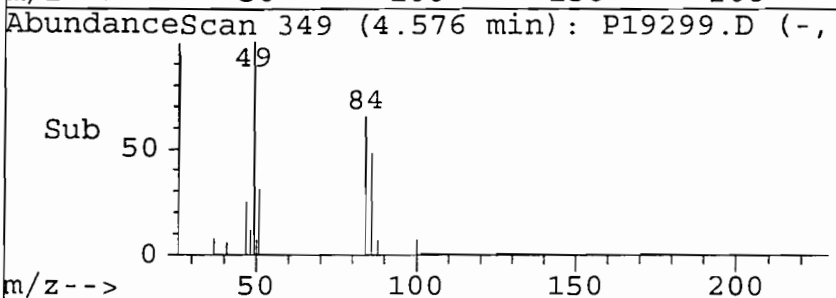
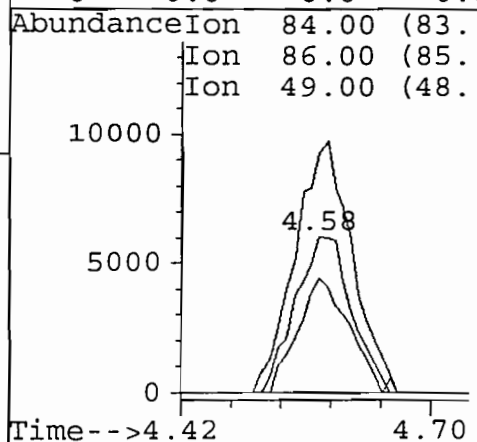
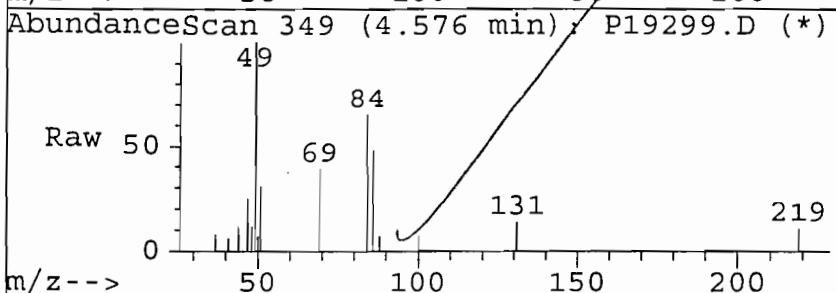
#10
Acetone
Concen: 187.90 ug/L
RT: 3.89 min Scan# 274
Delta R.T. -0.01 min
Lab File: P19299.D
Acq: 22 Oct 99 9:22 pm

Tgt Ion:	43	Resp:	354432
Ion Ratio	Lower	Upper	
43	100		
58	18.4	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

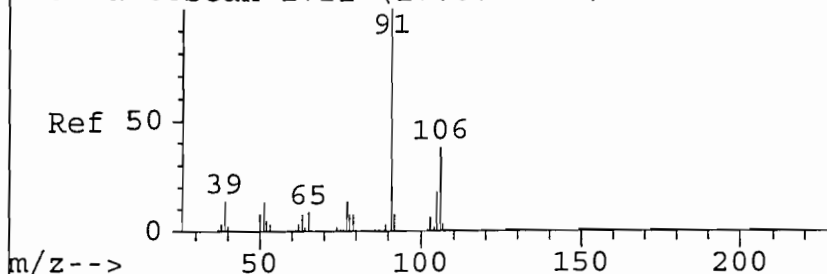


#13
methylene chloride
Concen: 5.35 ug/L
RT: 4.58 min Scan# 349
Delta R.T. -0.01 min
Lab File: P19299.D
Acq: 22 Oct 99 9:22 pm

Tgt Ion:	84	Resp:	26414
Ion Ratio	Lower	Upper	
84	100		
86	73.7	43.3	80.3
49	154.8	110.4	205.0
0	0.0	0.0	0.0



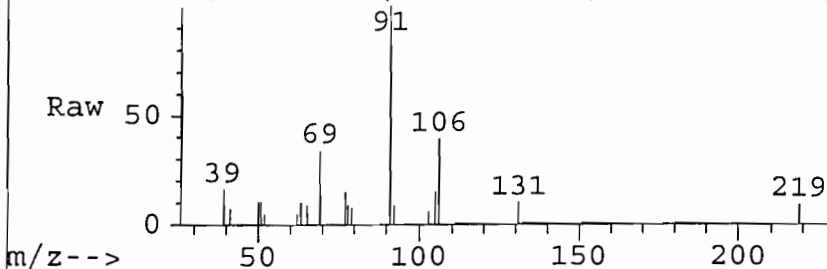
AbundanceScan 1721 (17.007 min): P19049.D (



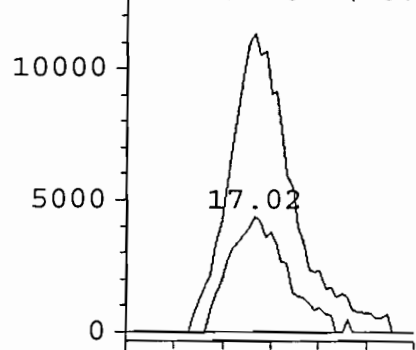
#54
m&p-xylenes
Concen: 2.85 ug/L
RT: 17.02 min Scan# 1721
Delta R.T. 0.01 min
Lab File: P19299.D
Acq: 22 Oct 99 9:22 pm

Tgt Ion:	106	Resp:	29155
Ion Ratio	Lower	Upper	
106	100		
91	258.7	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

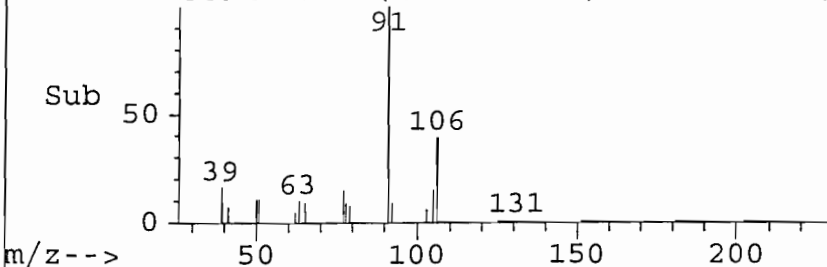
AbundanceScan 1721 (17.017 min): P19299.D (



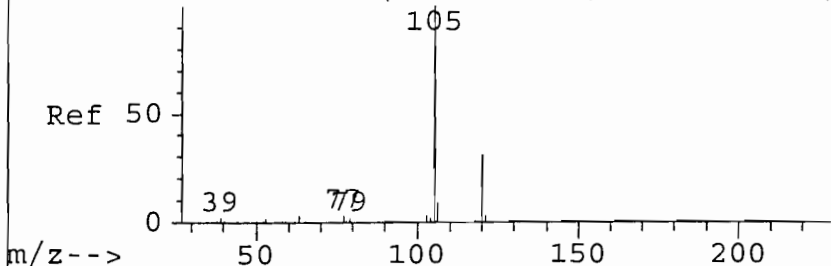
AbundanceIon 106.00 (105
Ion 91.00 (90.



AbundanceScan 1721 (17.017 min): P19299.D (



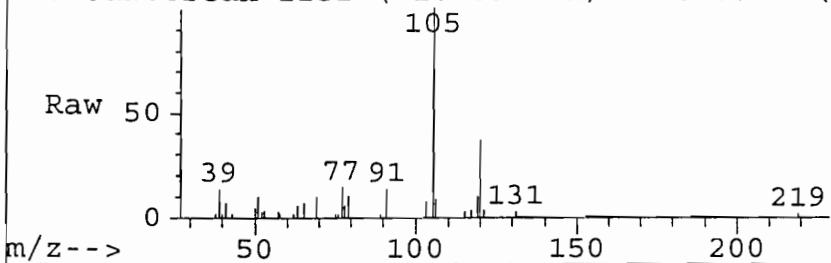
AbundanceScan 2233 (21.642 min): P19049.D (



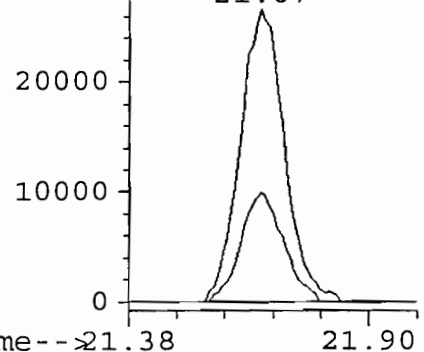
#68
1,2,4-trimethylbenzene
Concen: 4.99 ug/L
RT: 21.67 min Scan# 2232
Delta R.T. 0.02 min
Lab File: P19299.D
Acq: 22 Oct 99 9:22 pm

Tgt Ion:	105	Resp:	175679
Ion Ratio	Lower	Upper	
105	100		
120	37.3	26.0	48.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

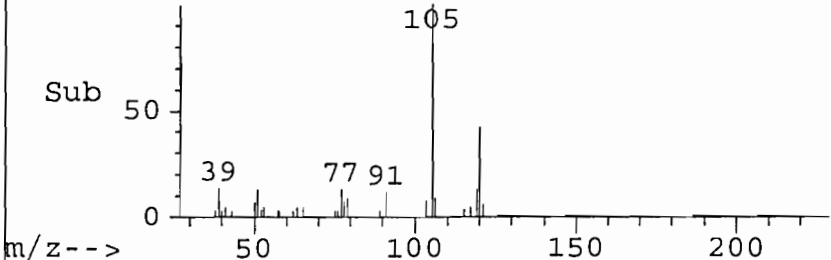
AbundanceScan 2232 (21.665 min): P19299.D (



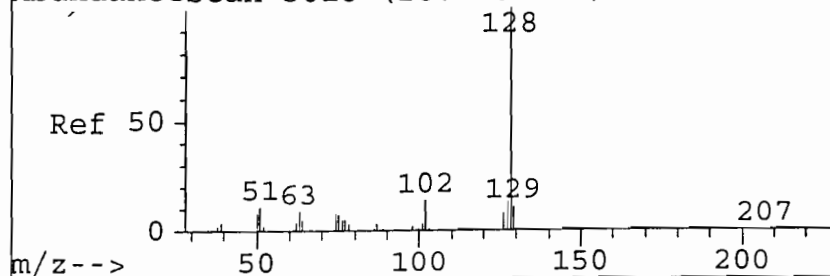
AbundanceIon 105.00 (104
Ion 120.00 (119
21.67



AbundanceScan 2232 (21.665 min): P19299.D (



AbundanceScan 3018 (28.798 min): P19049.D (



#78

naphthalene

Concen: 7.50 ug/L

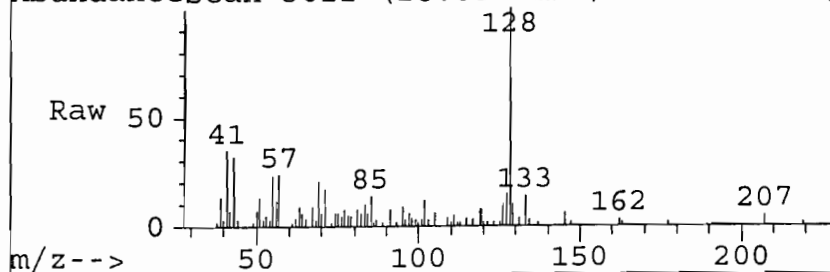
RT: 28.84 min Scan# 3022

Delta R.T. 0.04 min

Lab File: P19299.D

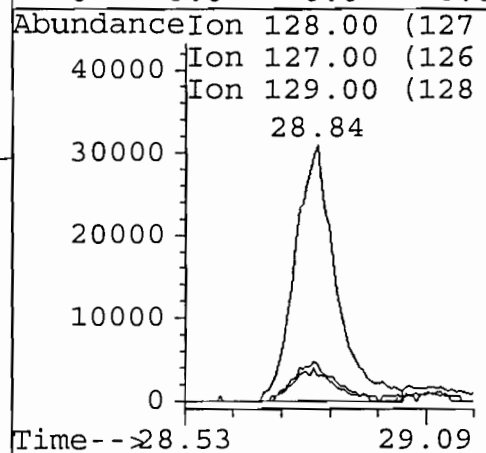
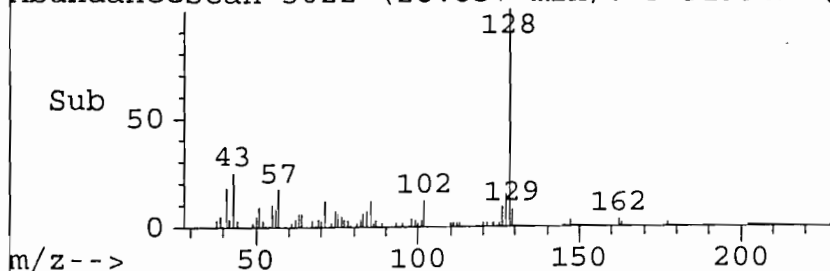
Acq: 22 Oct 99 9:22 pm

AbundanceScan 3022 (28.837 min): P19299.D (



Tgt Ion:	128	Resp:	206511
Ion	Ratio	Lower	Upper
128	100		
127	14.5	9.4	17.4
129	9.8	8.1	15.1
0	0.0	0.0	0.0

AbundanceScan 3022 (28.837 min): P19299.D (



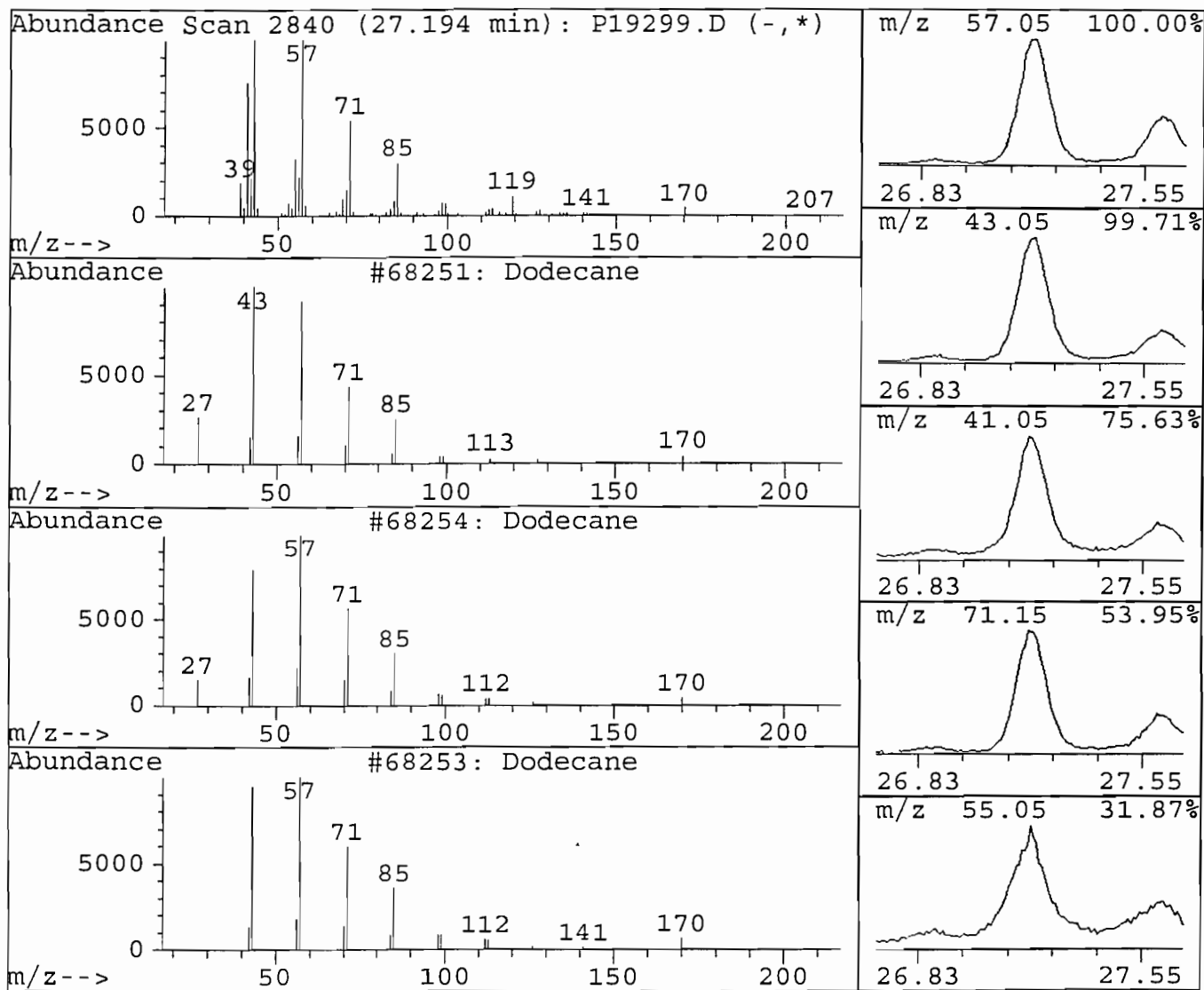
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.19	27.51 ug/L	3426233	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		68251	000112-40-3	95
2	Dodecane		68254	000112-40-3	94
3	Dodecane		68253	000112-40-3	87
4	Dodecane		68249	000112-40-3	81
5	Dodecane		68252	000112-40-3	81



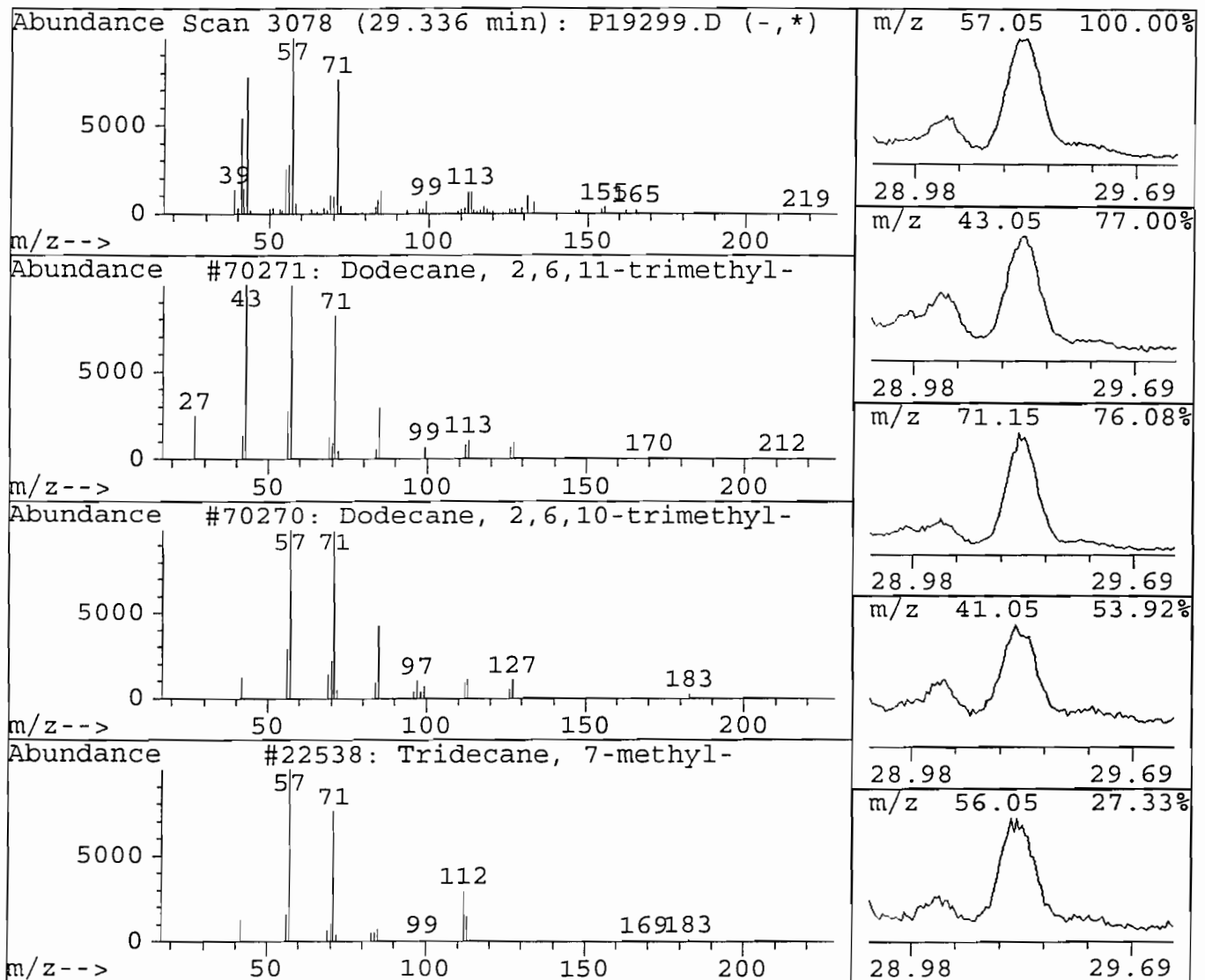
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.34	10.34 ug/L	1287824	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane, 2,6,11-trimethyl-		70271	031295-56-4	72
2	Dodecane, 2,6,10-trimethyl-		70270	003891-98-3	64
3	Tridecane, 7-methyl-		22538	026730-14-3	59
4	Octane, 2,3,7-trimethyl-		11603	062016-34-6	59
5	Decane, 4-methyl-		67323	002847-72-5	59



200254 ft

Library Search Compound Report

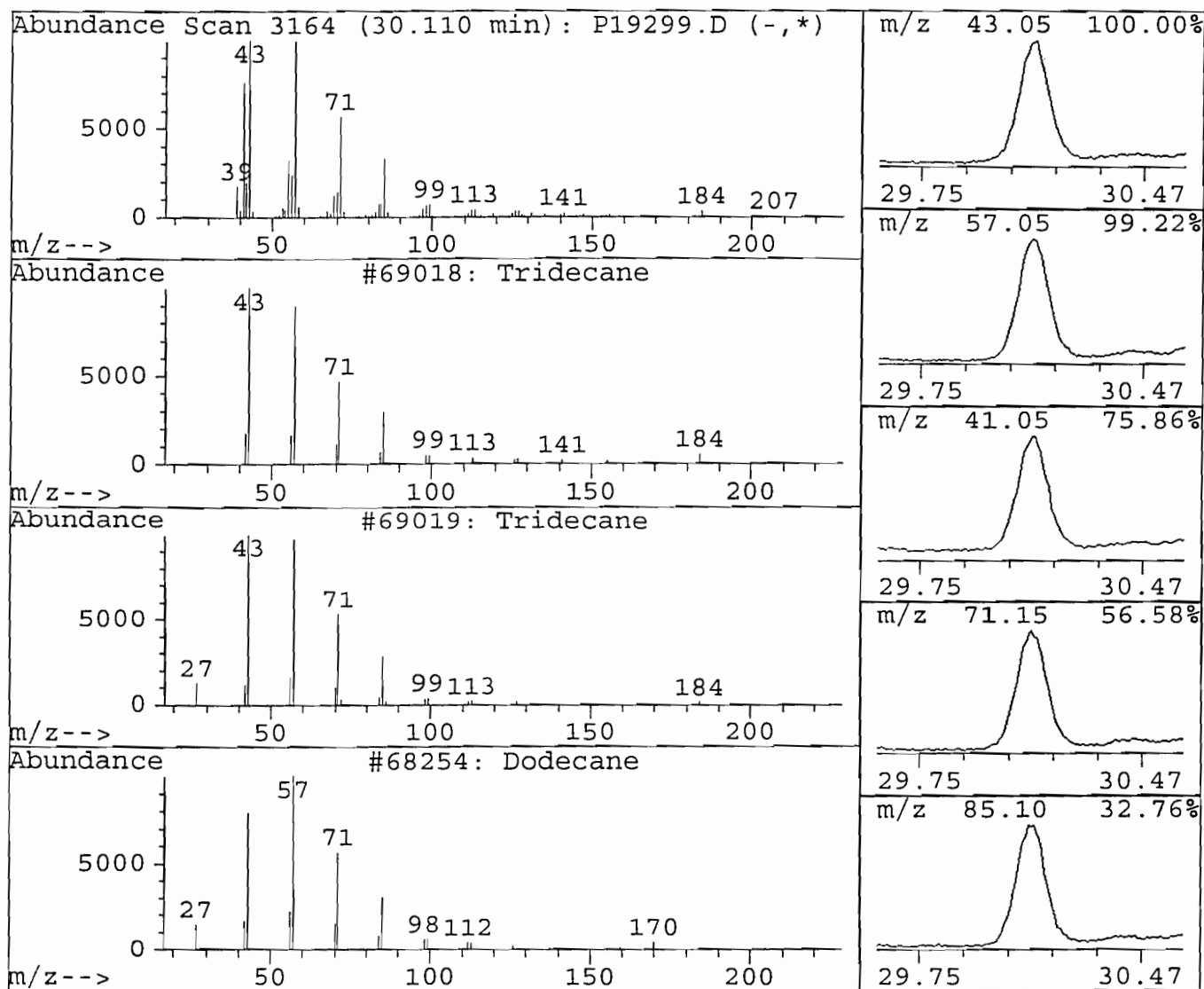
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.11	31.91 ug/L	3974449	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	69018	000629-50-5	95
2	Tridecane	69019	000629-50-5	95
3	Dodecane	68254	000112-40-3	90
4	Tetradecane	69658	000629-59-4	90
5	Tridecane	69020	000629-50-5	87



Library Search Compound Report

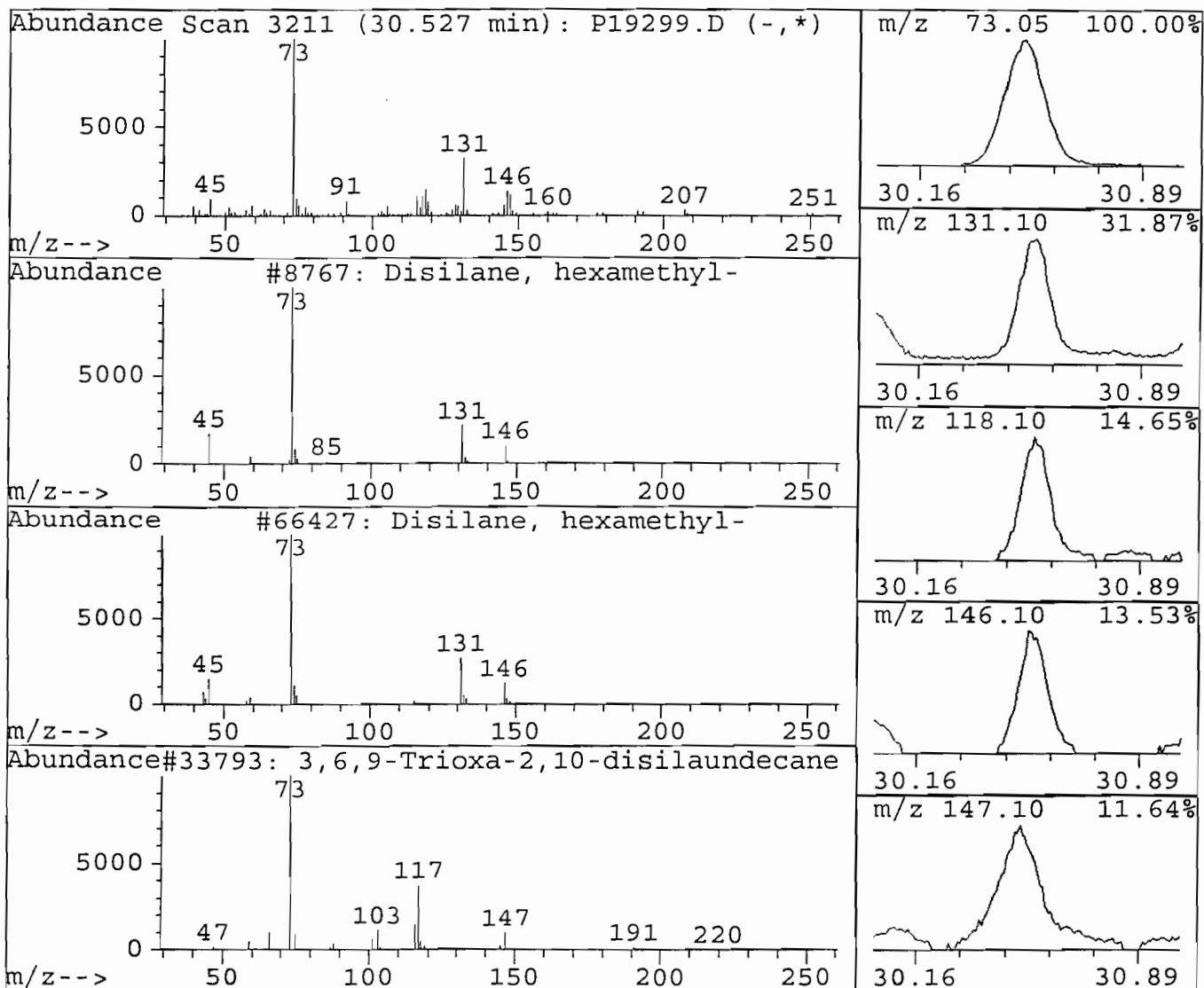
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.53	23.86 ug/L	2971574	1,4-dichlorobenzene-d4	22.62

Hit# of 17	Tentative ID	Ref#	CAS#	Qual
1	Disilane, hexamethyl-	8767	001450-14-2	43
2	Disilane, hexamethyl-	66427	001450-14-2	25
3	3,6,9-Trioxa-2,10-disilaundecane, 2	33793	016654-74-3	25
4	2-Methyl-1,2-bis(trimethylsilyloxy)	33401	000000-00-0	12
5	Butanoic acid, 2-[bis(trimethylsilyl	45478	055649-90-6	12



000256

Library Search Compound Report

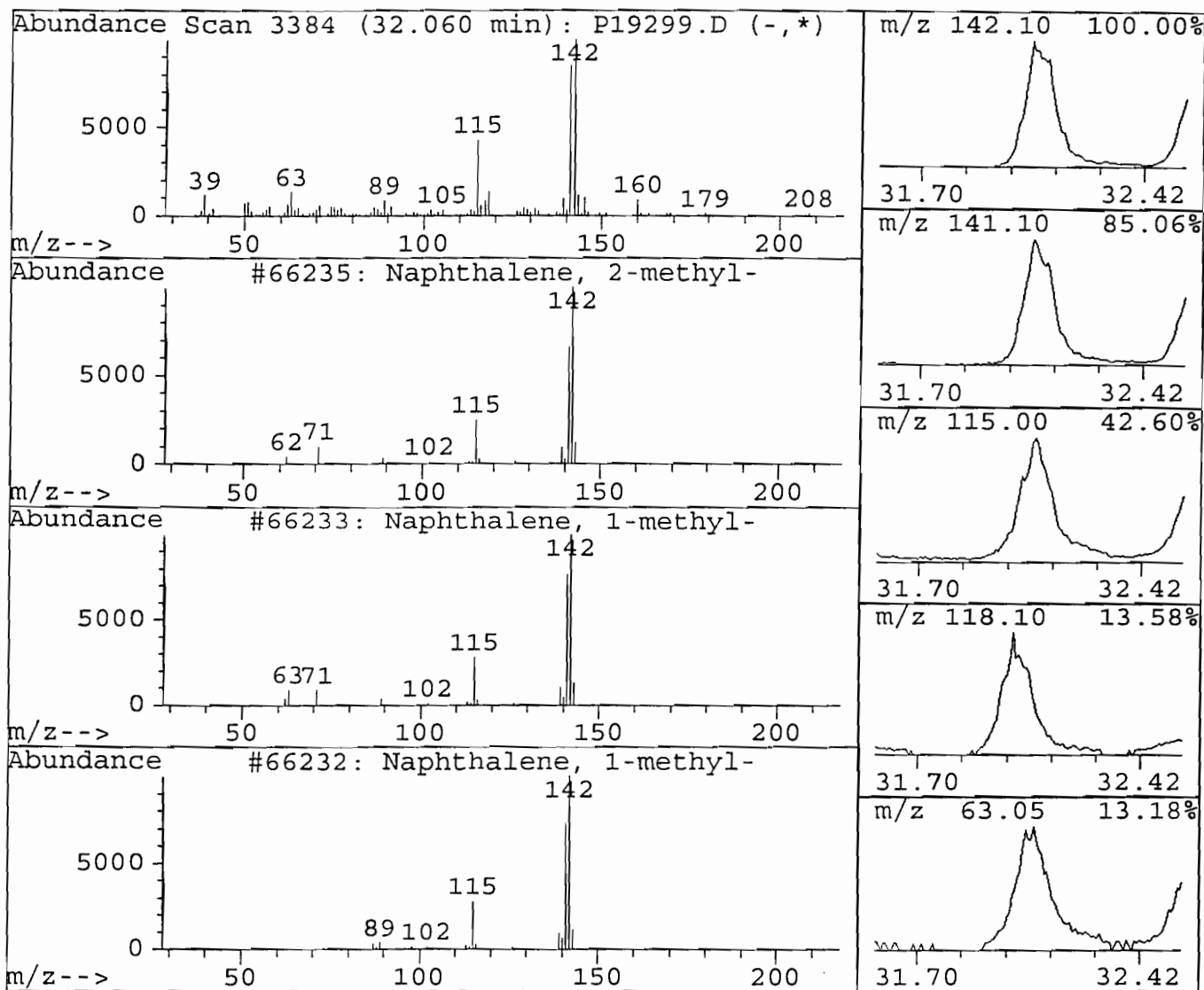
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.06	22.74 ug/L	2831935	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2-methyl-	66235	000091-57-6	93
2	Naphthalene, 1-methyl-	66233	000090-12-0	91
3	Naphthalene, 1-methyl-	66232	000090-12-0	91
4	Naphthalene, 1-methyl-	66231	000090-12-0	91
5	Benzocycloheptatriene	8114	000264-09-5	90



Library Search Compound Report

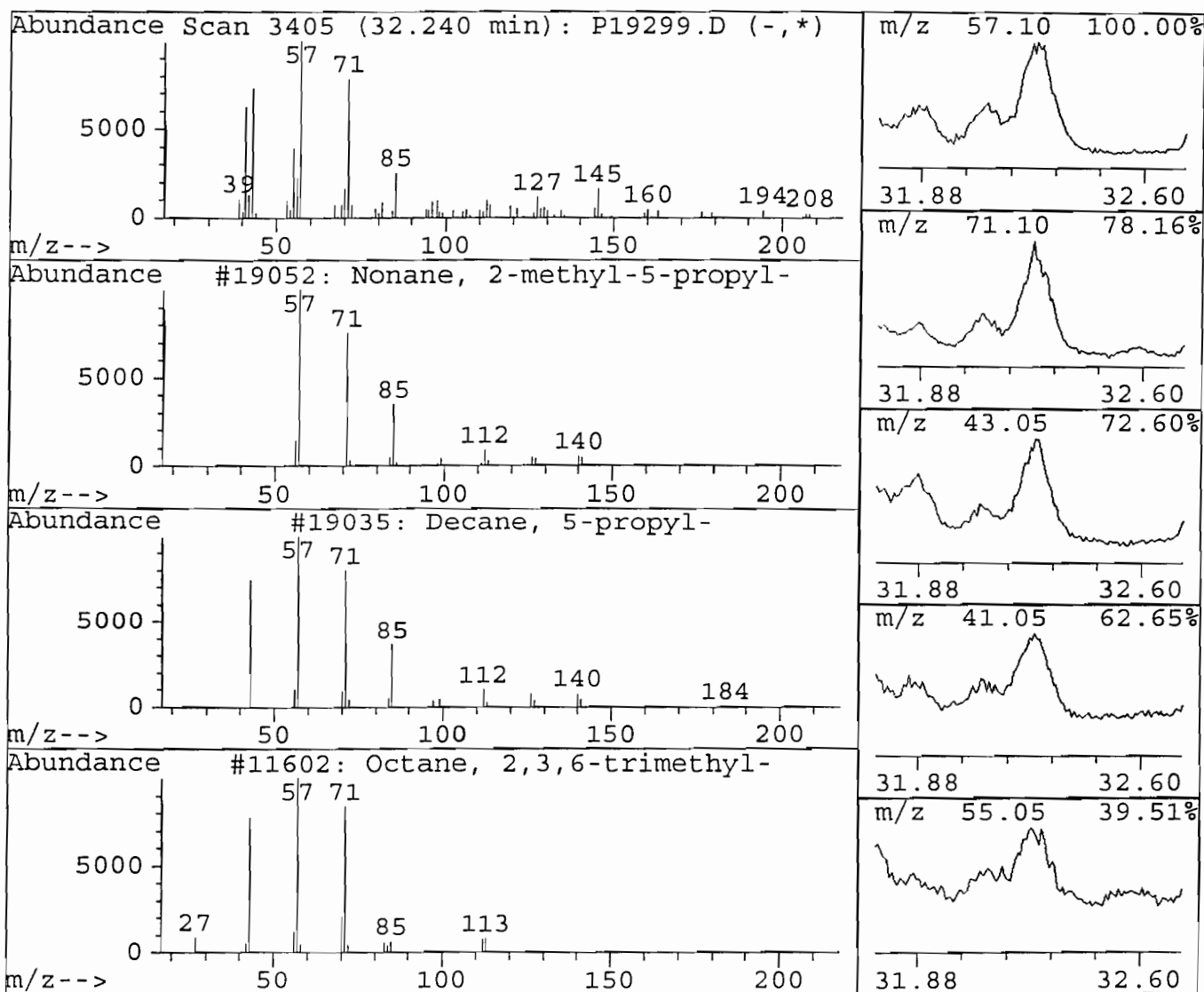
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.24	10.65 ug/L	1325845	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane, 2-methyl-5-propyl-	19052	031081-17-1	59
2	Decane, 5-propyl-	19035	017312-62-8	53
3	Octane, 2,3,6-trimethyl-	11602	062016-33-5	50
4	Octane, 2-iodo-	31839	000557-36-8	47
5	Heptane, 3-ethyl-5-methyl-	8092	052896-90-9	47



Library Search Compound Report

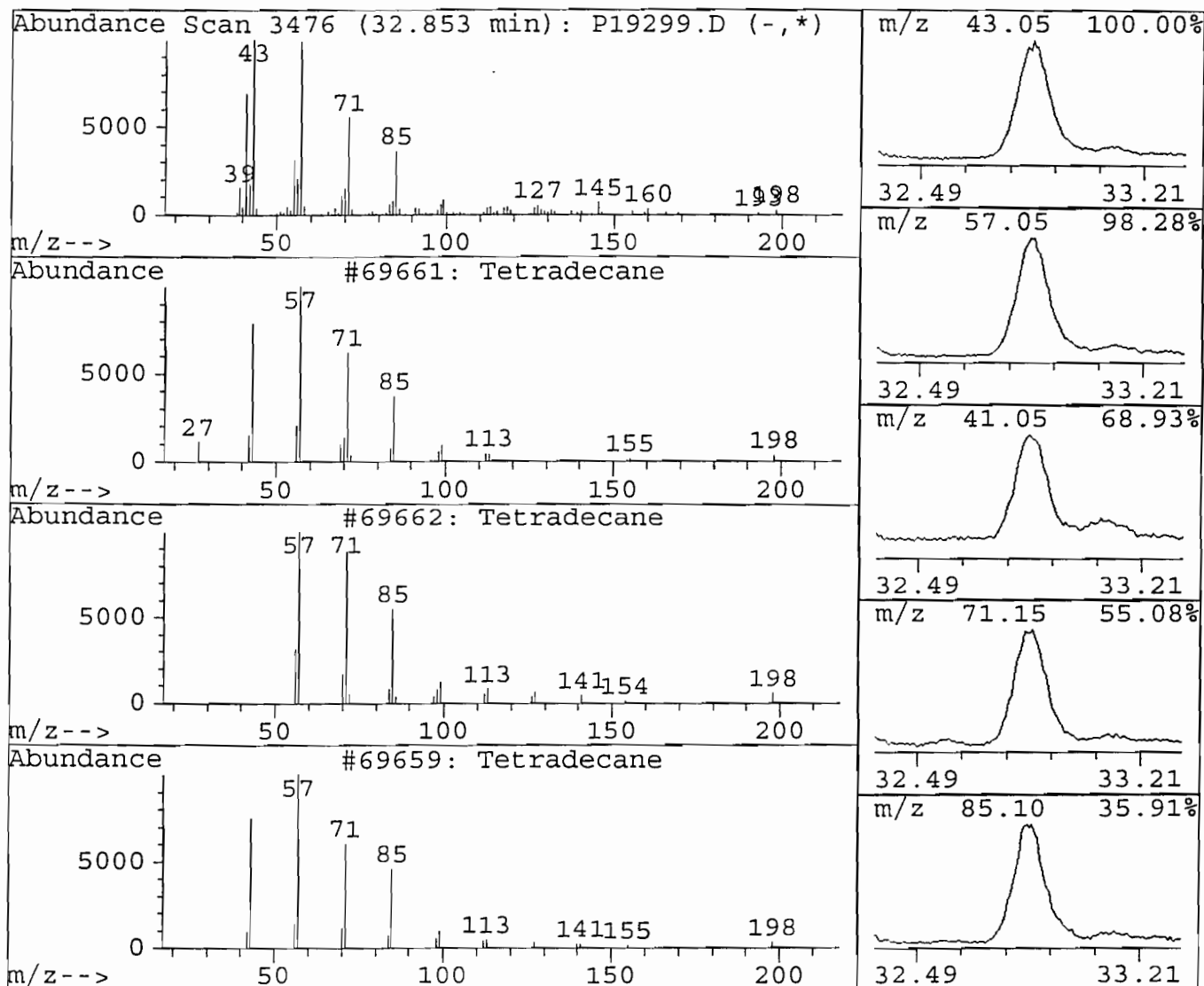
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.85	22.36 ug/L	2784352	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tetradecane	69661	000629-59-4	96
2	Tetradecane	69662	000629-59-4	94
3	Tetradecane	69659	000629-59-4	94
4	Tetradecane	22534	000629-59-4	93
5	Tetradecane	69658	000629-59-4	87



Library Search Compound Report

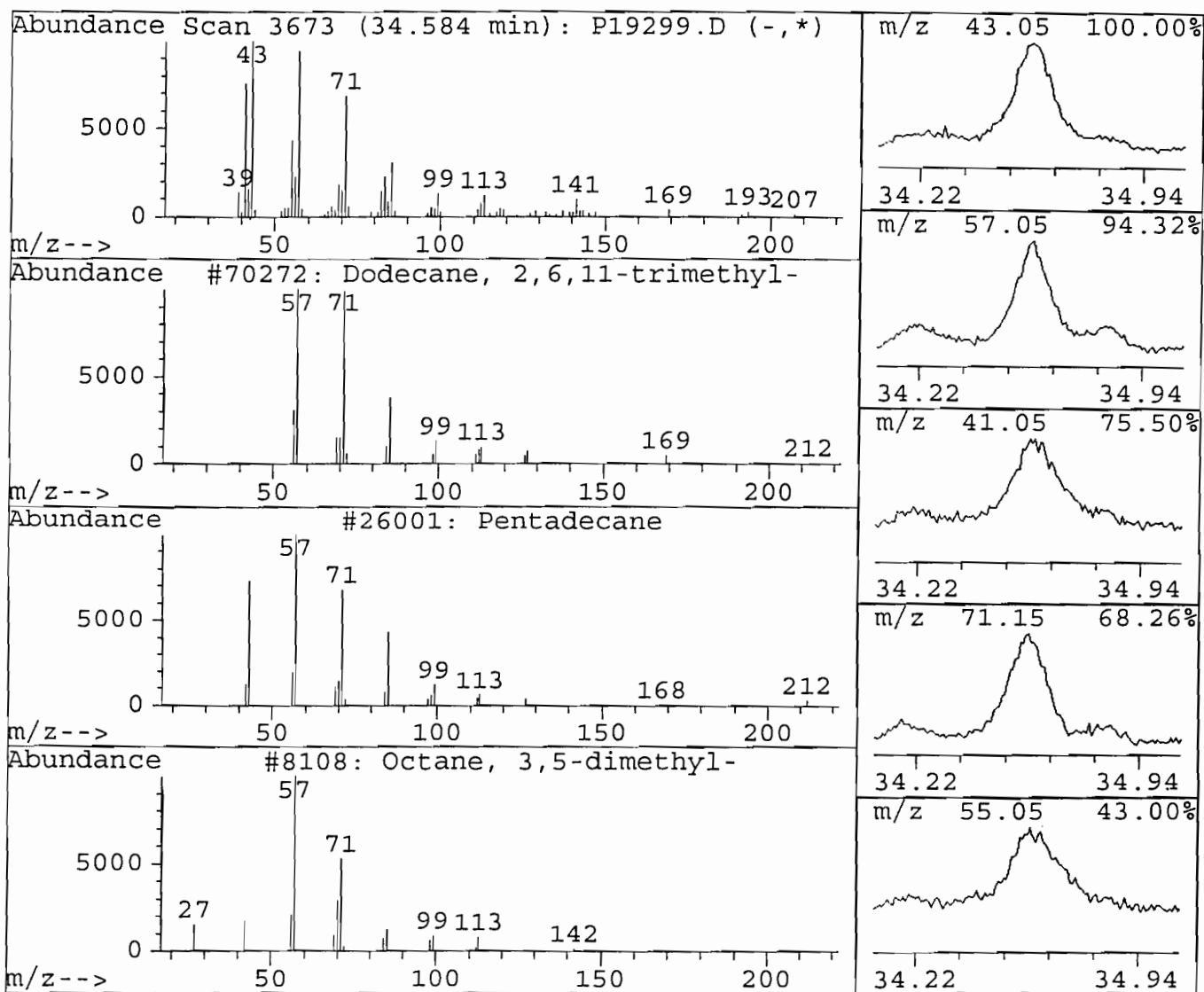
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
34.58	10.21 ug/L	1271555	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane, 2,6,11-trimethyl-	70272	031295-56-4	64
2	Pentadecane	26001	000629-62-9	58
3	Octane, 3,5-dimethyl-	8108	015869-93-9	58
4	Eicosane	72323	000112-95-8	58
5	Dodecane, 2,6,11-trimethyl-	70271	031295-56-4	53



Library Search Compound Report

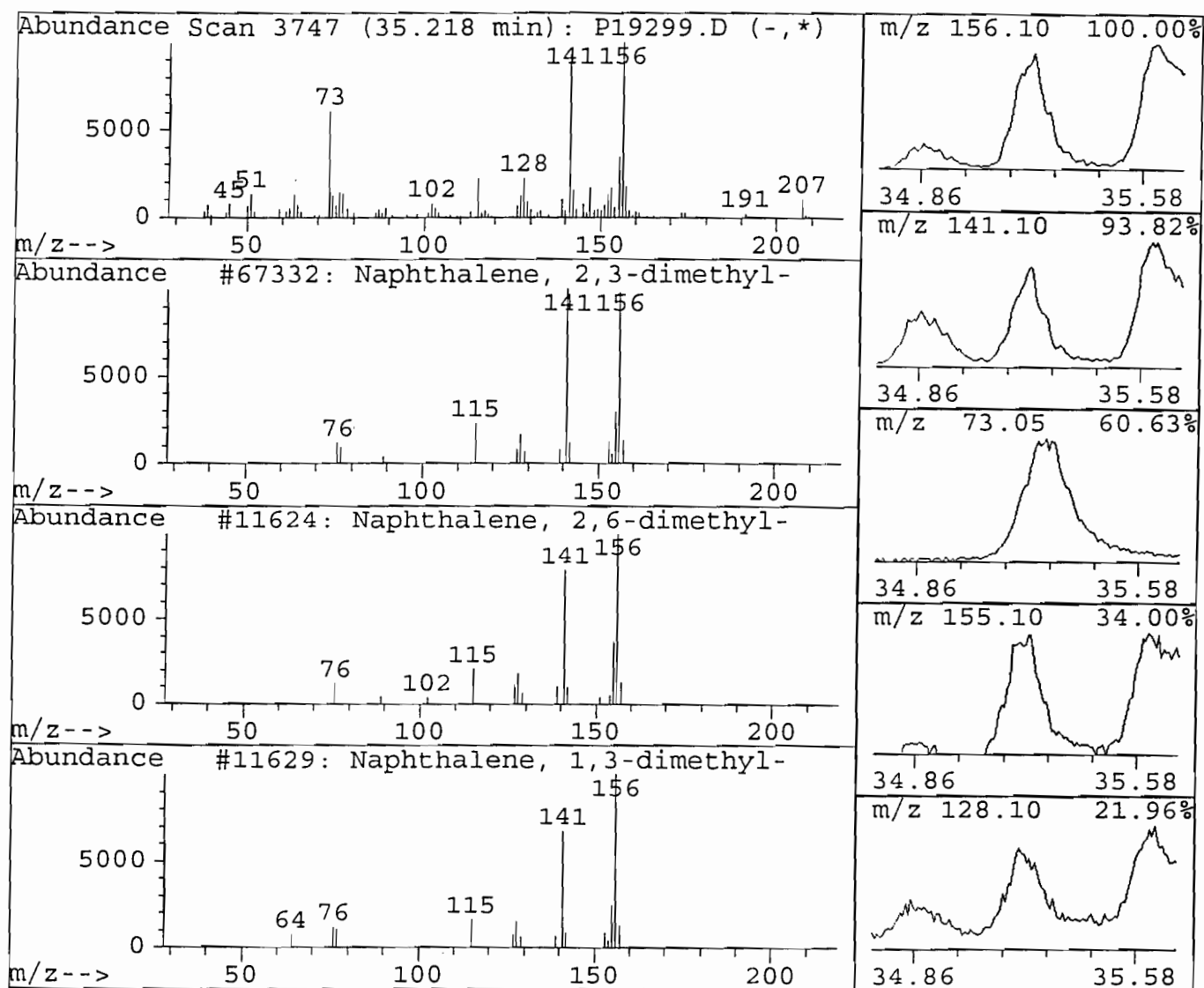
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.22	11.59 ug/L	1443722	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2,3-dimethyl-	67332	000581-40-8	98
2	Naphthalene, 2,6-dimethyl-	11624	000581-42-0	97
3	Naphthalene, 1,3-dimethyl-	11629	000575-41-7	96
4	Naphthalene, 1,8-dimethyl-	67339	000569-41-5	96
5	Naphthalene, 1,7-dimethyl-	67343	000575-37-1	96



Library Search Compound Report

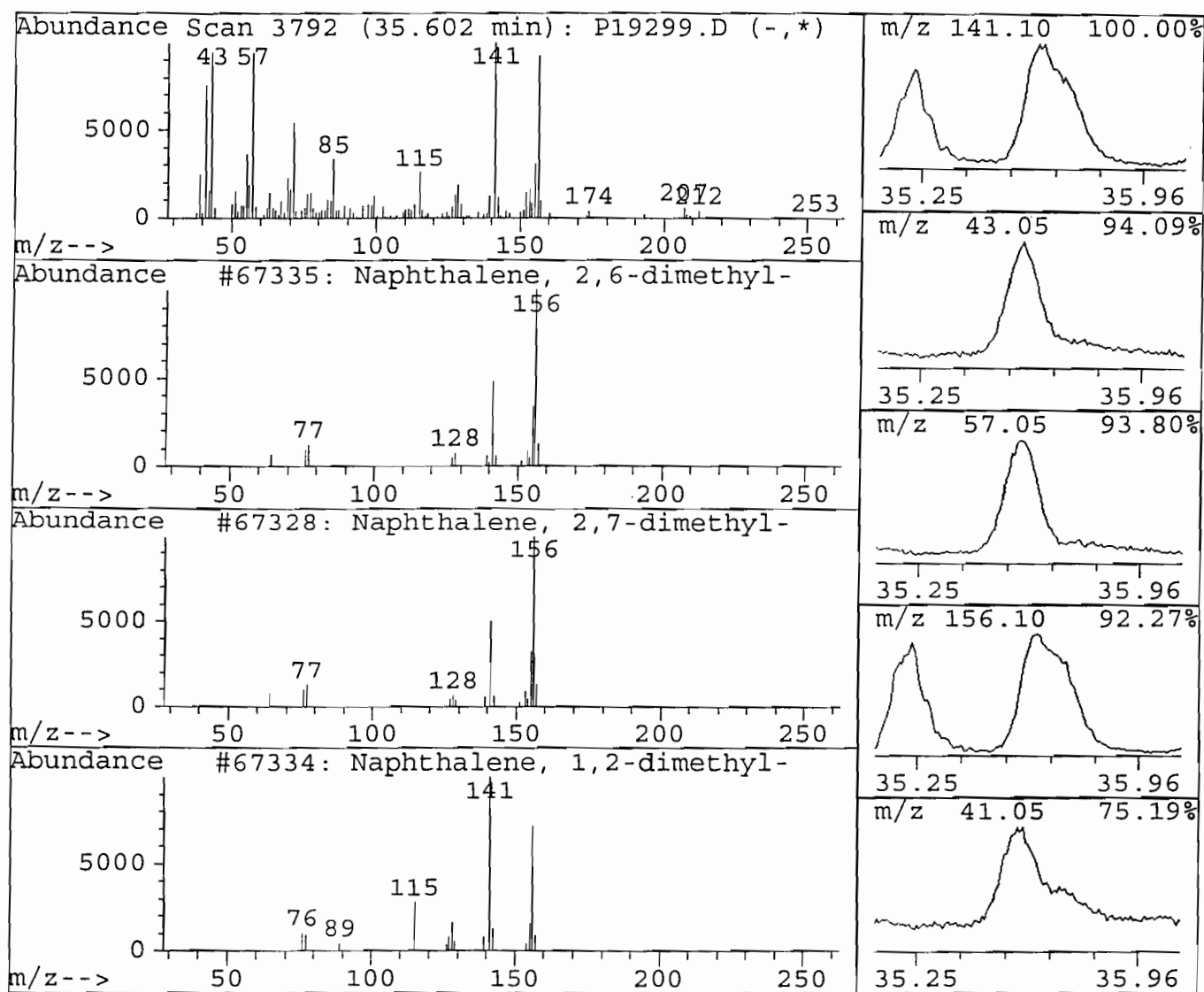
Data File : I:\HPCHEM\1\DATA\V2102199\P19299.D
Acq Time : 22 Oct 99 9:22 pm
Sample : 13827ASP-88019
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.60	28.47 ug/L	3546311	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2,6-dimethyl-	67335	000581-42-0	97
2	Naphthalene, 2,7-dimethyl-	67328	000582-16-1	97
3	Naphthalene, 1,2-dimethyl-	67334	000573-98-8	96
4	Naphthalene, 1,6-dimethyl-	11632	000575-43-9	96
5	Naphthalene, 1,4-dimethyl-	11630	000571-58-4	96



SAMPLE NO.

GP-020-SS12

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: O88020

Lab File ID: P19300.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Q

FORM I VOA

000263 3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-020-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88020
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19300.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 2 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 124-18-5	Decane	20.73	690	J
2. 611-14-3	Benzene, 1-ethyl-2-methyl-	21.18	310	J
3. 98-82-8	Benzene, (1-methylethyl)-	22.81	720	J
4. 1120-21-4	Undecane	24.12	1000	J
5. 874-41-9	Benzene, 1-ethyl-2,4-dimethy	25.55	360	J
6. 95-93-2	Benzene, 1,2,4,5-tetramethyl	25.84	290	J
7. 112-40-3	Dodecane	27.23	1600	J
8. 629-50-5	Tridecane	30.13	760	J
9. 1680-51-9	Naphthalene, 1,2,3,4-tetrahy	30.56	550	J
10. 264-09-5	Benzocycloheptatriene	32.07	330	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
 Acq Time : 22 Oct 99 10:07 pm
 Sample : 13827ASP-88020
 Misc : 5G/5ML
 Quant Time: Oct 23 14:33 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	580872	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	648524	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	22.62	152	304766	50.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.97	113	480694	49.67	ug/L	99.34%
30) 1,2-Dichlorethane-d4	8.67	65	385458	50.69	ug/L	101.38%
38) Toluene-d8	12.78	98	524416	46.29	ug/L	92.58%
42) 4-Bromofluorobenzene	19.50	95	653767	56.21	ug/L	112.42%

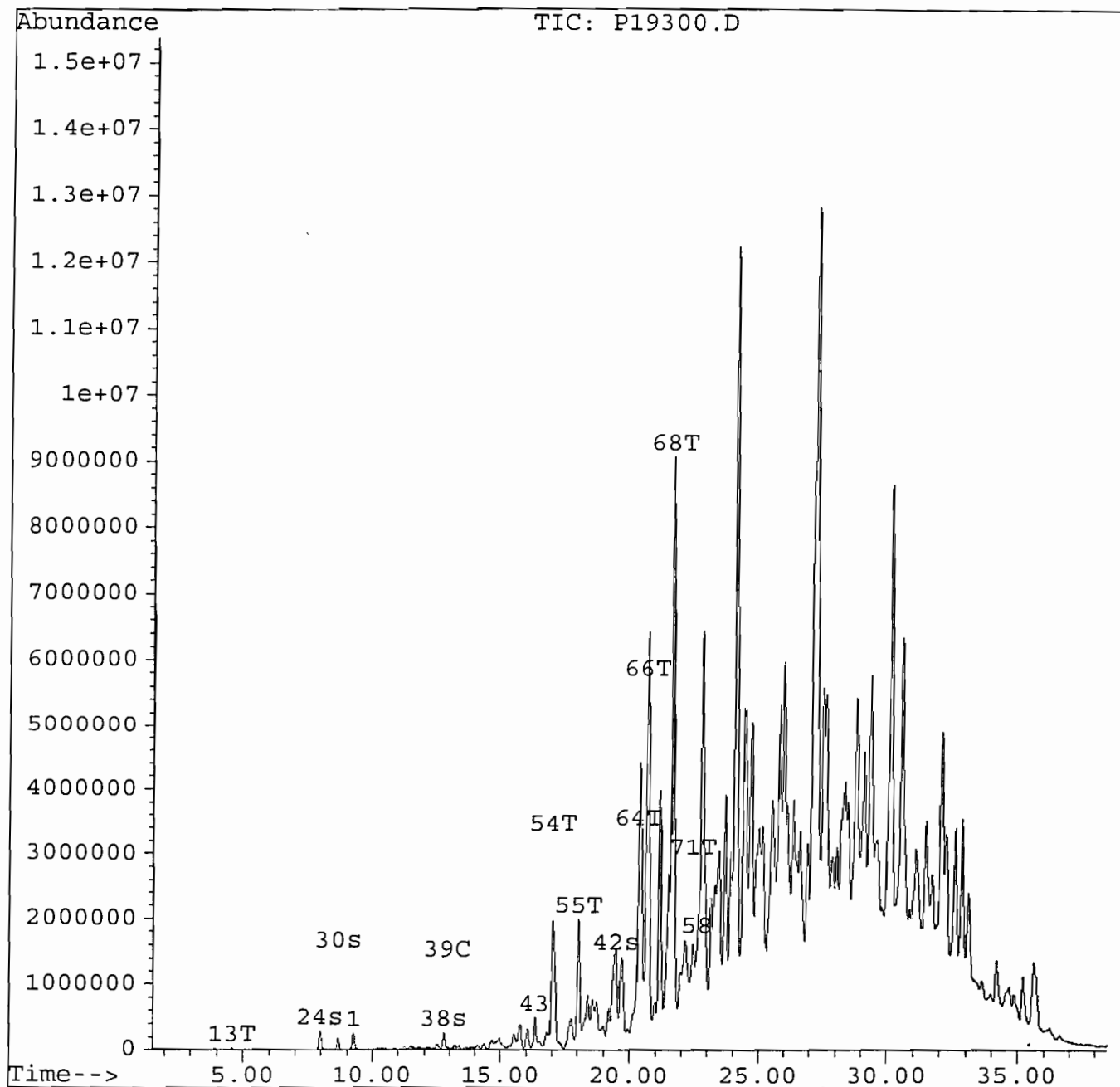
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
13) methylene chloride	4.58	84	20551	7.54	ug/L	97
39) toluene	12.93	91	36976	3.24	ug/L	95
54) m&p-xylenes	17.02	106	1359854	224.14	ug/L	100
55) o-xylene	18.04	91	3685569	210.24	ug/L	98
64) 2-chlorotoluene	20.33	126	440610	135.70	ug/L	66
66) 1,3,5-trimethylbenzene	20.68	105	6574490	545.94	ug/L	94
68) 1,2,4-trimethylbenzene	21.67	105	16962721	1353.33	ug/L	97
71) 4-isopropyltoluene	22.45	119	2254210	157.07	ug/L	95

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML
Quant Time: Oct 23 14:33 1999

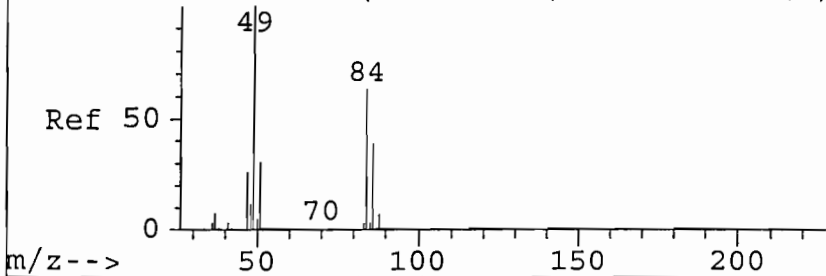
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000266

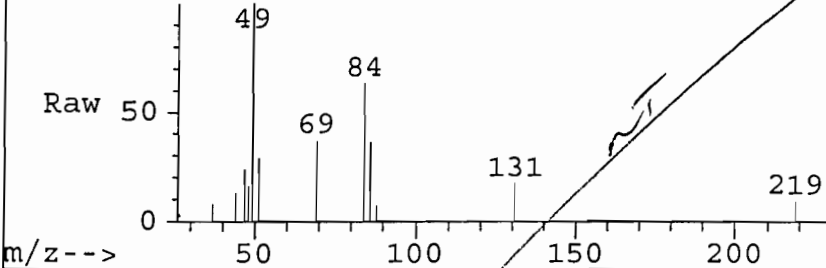
AbundanceScan 350 (4.582 min): P19049.D (-,



#13
methylene chloride
Concen: 7.54 ug/L
RT: 4.58 min Scan# 350
Delta R.T. -0.00 min
Lab File: P19300.D
Acq: 22 Oct 99 10:07 pm

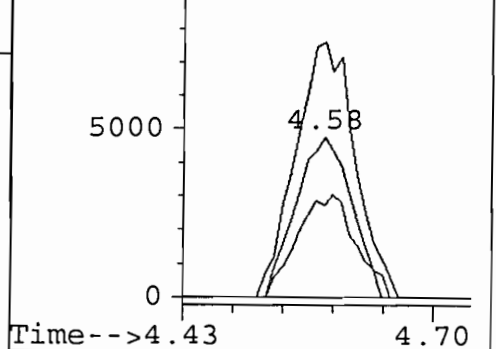
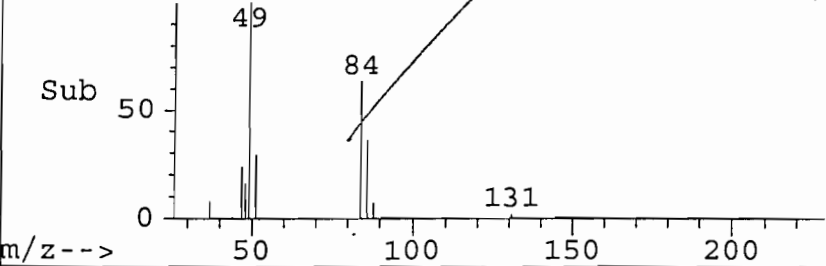
Tgt Ion:	84	Resp:	20551
Ion	Ratio	Lower	Upper
84	100		
86	57.3	43.3	80.3
49	159.9	110.4	205.0
0	0.0	0.0	0.0

AbundanceScan 350 (4.581 min): P19300.D (*

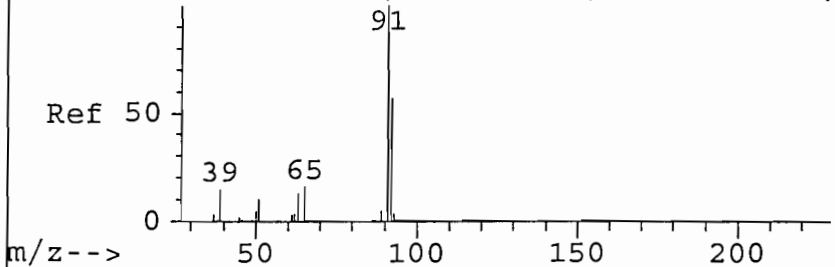


Abundance	Ion	84.00	(83.
10000	Ion	86.00	(85.
	Ion	49.00	(48.

AbundanceScan 350 (4.581 min): P19300.D (-,



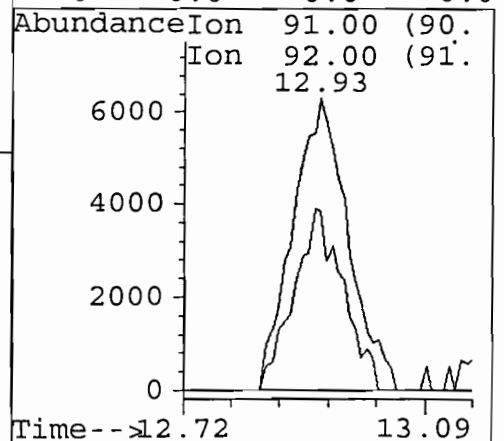
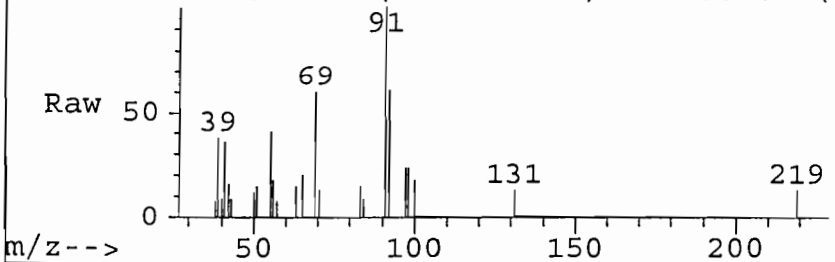
AbundanceScan 1270 (12.928 min): P19049.D (



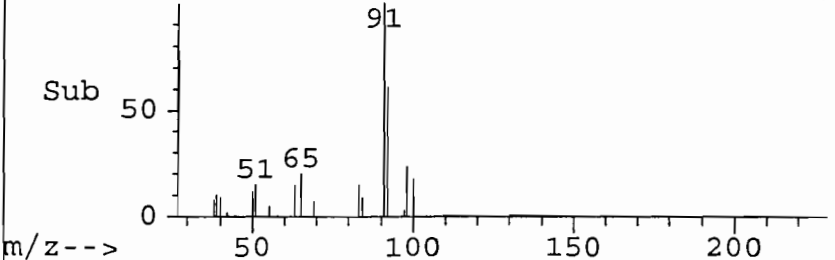
#39
toluene
Concen: 3.24 ug/L
RT: 12.93 min Scan# 1270
Delta R.T. 0.00 min
Lab File: P19300.D
Acq: 22 Oct 99 10:07 pm

Tgt Ion:	91	Resp:	36976
Ion	Ratio	Lower	Upper
91	100		
92	61.2	40.2	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 1270 (12.930 min): P19300.D (

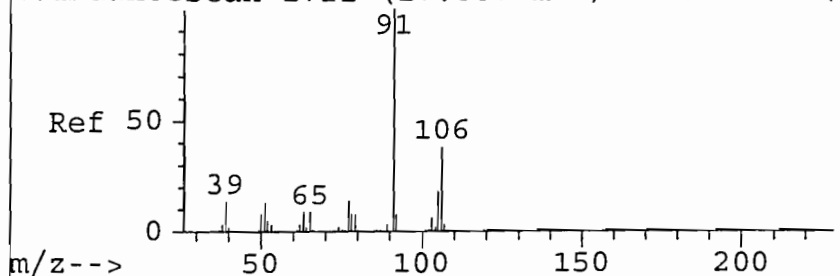


AbundanceScan 1270 (12.930 min): P19300.D (



000267

AbundanceScan 1721 (17.007 min): P19049.D (



#54

m&p-xylenes

Concen: 224.14 ug/L

RT: 17.02 min Scan# 1720

Delta R.T. 0.01 min

Lab File: P19300.D

Acq: 22 Oct 99 10:07 pm

Tgt Ion:106 Resp: 1359854

Ion Ratio Lower Upper

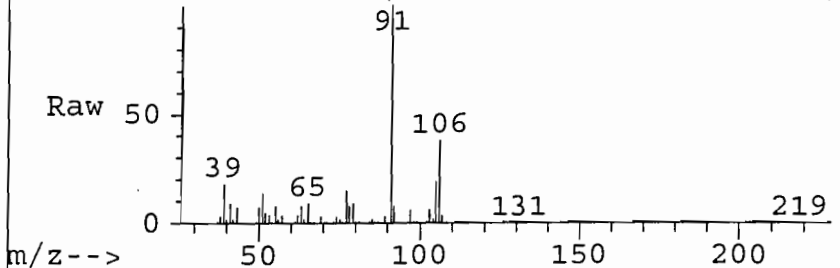
106 100

91 263.0 183.6 341.0

0 0.0 0.0 0.0

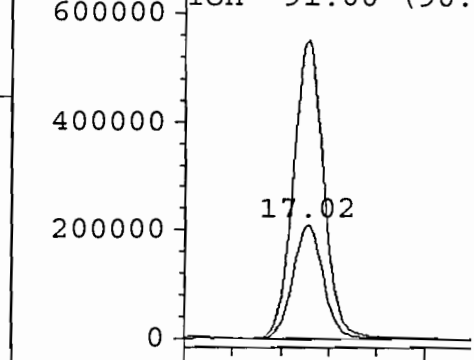
0 0.0 0.0 0.0

AbundanceScan 1720 (17.018 min): P19300.D (

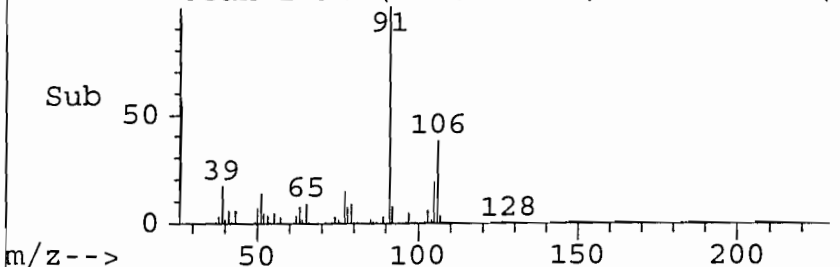


AbundanceIon 106.00 (105

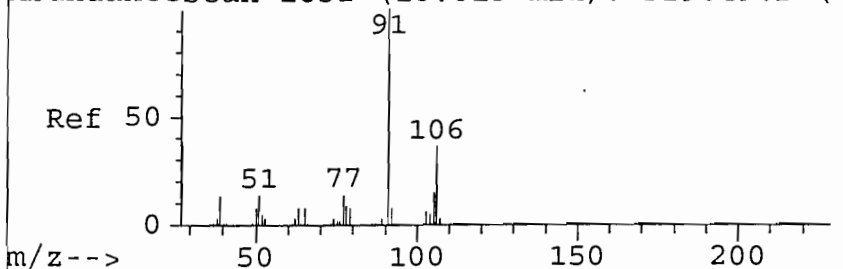
Ion 91.00 (90.



AbundanceScan 1720 (17.018 min): P19300.D (



AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 210.24 ug/L

RT: 18.04 min Scan# 1832

Delta R.T. 0.02 min

Lab File: P19300.D

Acq: 22 Oct 99 10:07 pm

Tgt Ion:91 Resp: 3685569

Ion Ratio Lower Upper

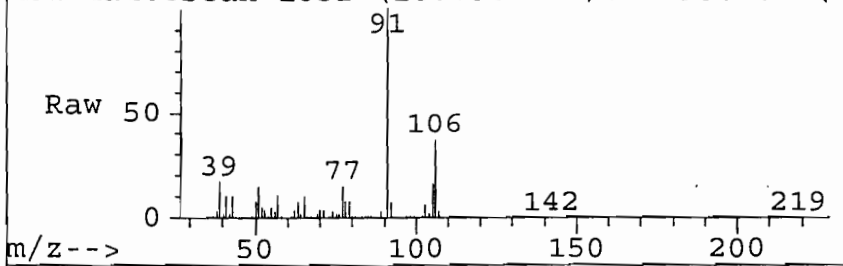
91 100

106 36.7 25.4 47.2

105 16.0 10.1 18.8

0 0.0 0.0 0.0

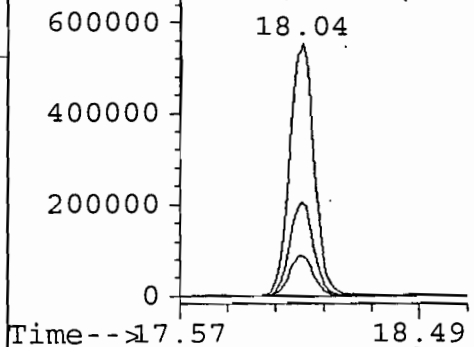
AbundanceScan 1832 (18.036 min): P19300.D (



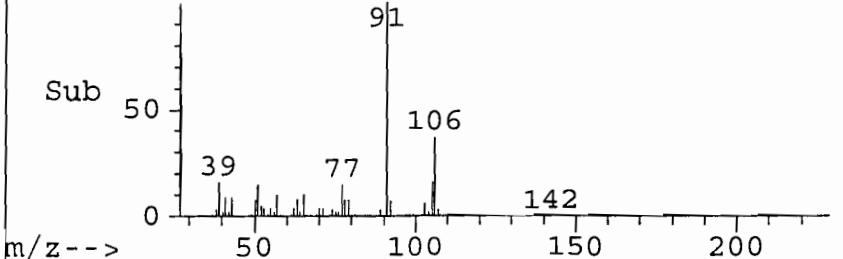
AbundanceIon 91.00 (90.

Ion 106.00 (105

Ion 105.00 (104

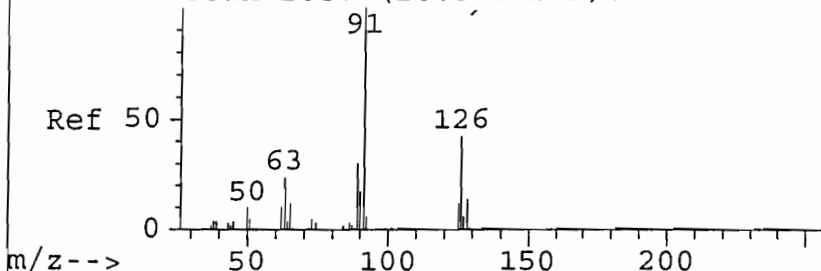


AbundanceScan 1832 (18.036 min): P19300.D (



000268

AbundanceScan 2087 (20.310 min): P19049.D (



#64

2-chlorotoluene

Concen: 135.70 ug/L

RT: 20.33 min Scan# 2087

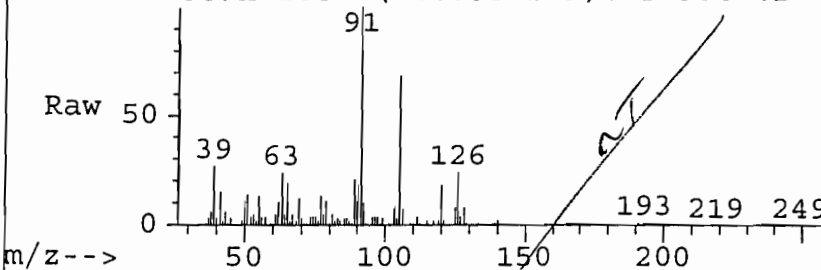
Delta R.T. 0.02 min

Lab File: P19300.D

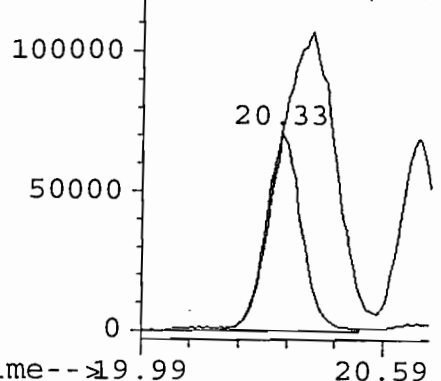
Acq: 22 Oct 99 10:07 pm

Tgt Ion:	126	Resp:	440610
Ion	Ratio	Lower	Upper
126	100		
63	99.7	25.0	117.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

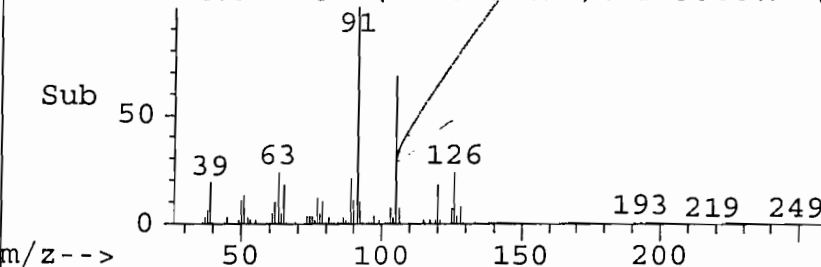
AbundanceScan 2087 (20.333 min): P19300.D (



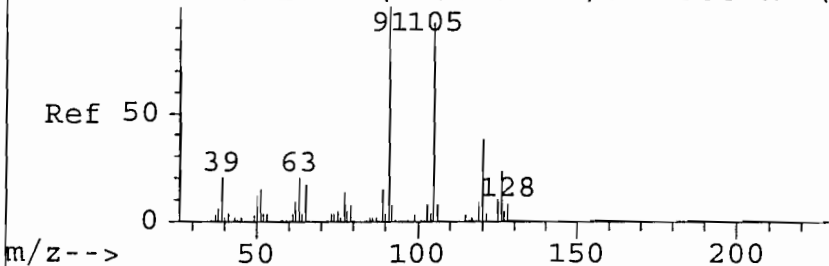
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 2087 (20.333 min): P19300.D (



AbundanceScan 2125 (20.658 min): P19049.D (



#66

1,3,5-trimethylbenzene

Concen: 545.94 ug/L

RT: 20.68 min Scan# 2127

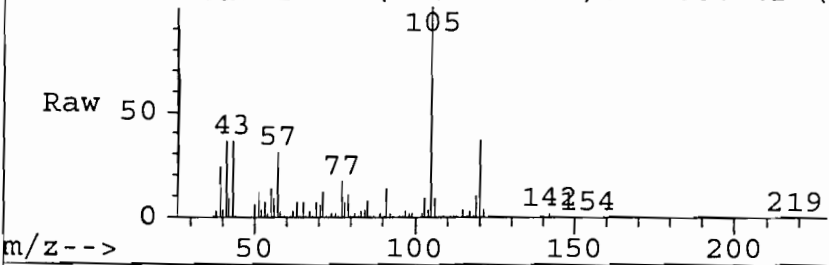
Delta R.T. 0.02 min

Lab File: P19300.D

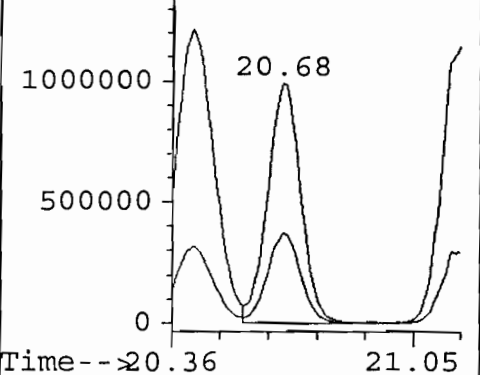
Acq: 22 Oct 99 10:07 pm

Tgt Ion:	105	Resp:	6574490
Ion	Ratio	Lower	Upper
105	100		
120	37.3	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

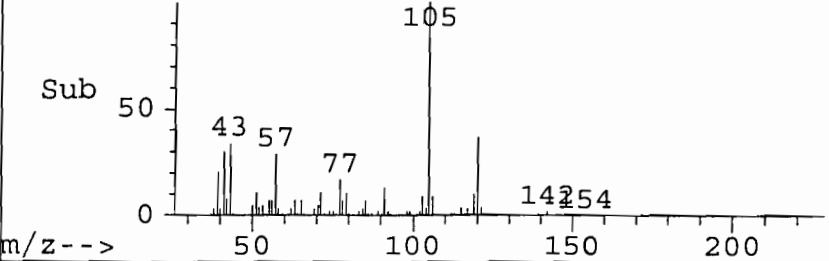
AbundanceScan 2127 (20.675 min): P19300.D (



AbundanceIon 105.00 (104
Ion 120.00 (119

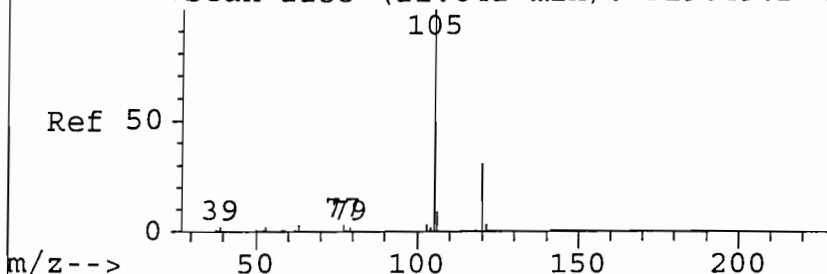


AbundanceScan 2127 (20.675 min): P19300.D (



000269

AbundanceScan 2233 (21.642 min): P19049.D (

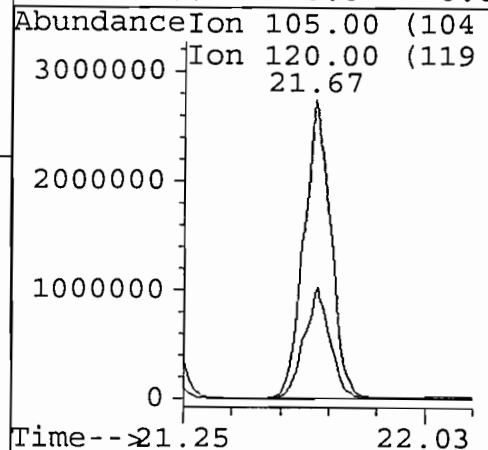
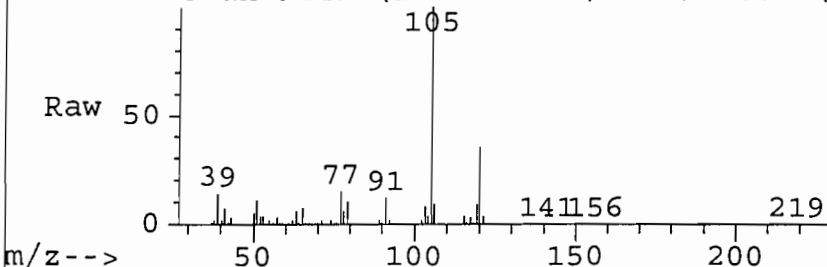


#68

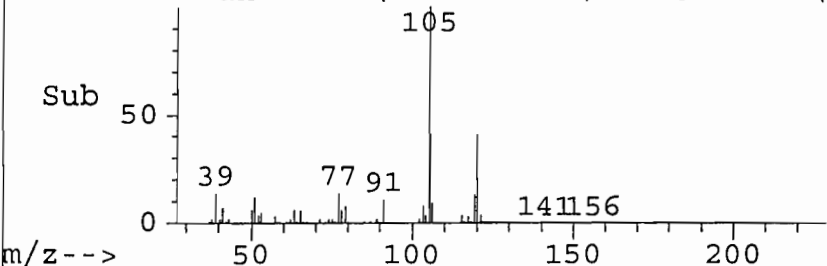
1,2,4-trimethylbenzene
Concen: 1353.33 ug/L
RT: 21.67 min Scan# 2241
Delta R.T. 0.03 min
Lab File: P19300.D
Acq: 22 Oct 99 10:07 pm

Tgt Ion:	105	Resp:	16962721
Ion	Ratio	Lower	Upper
105	100		
120	35.4	26.0	48.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

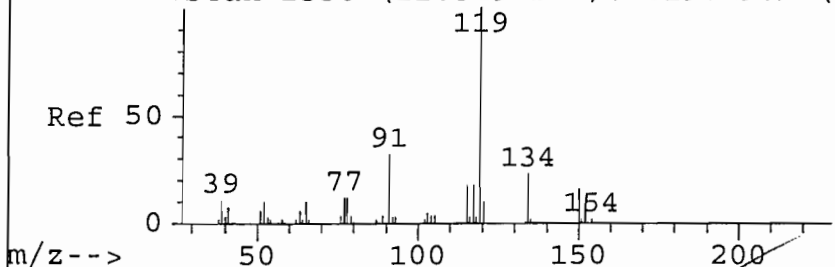
AbundanceScan 2241 (21.673 min): P19300.D (



AbundanceScan 2241 (21.673 min): P19300.D (



AbundanceScan 2330 (22.529 min): P19049.D (

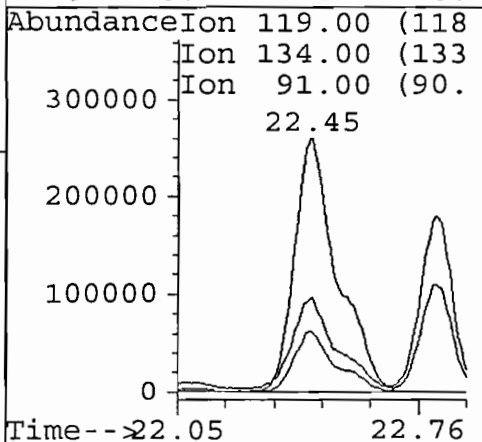
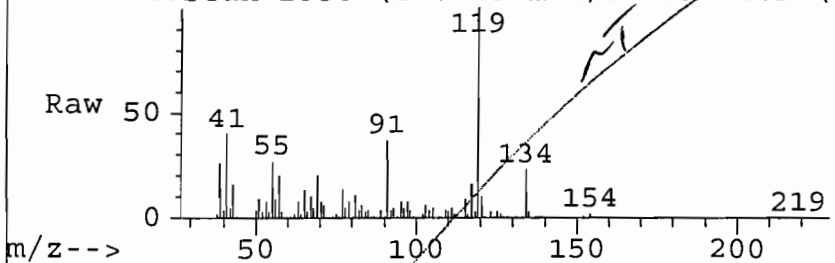


#71

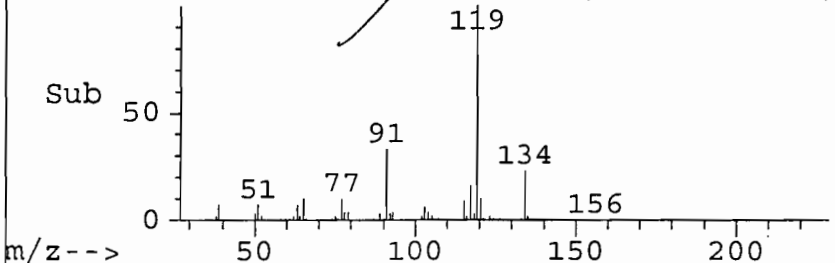
4-isopropyltoluene
Concen: 157.07 ug/L
RT: 22.45 min Scan# 2330
Delta R.T. -0.08 min
Lab File: P19300.D
Acq: 22 Oct 99 10:07 pm

Tgt Ion:	119	Resp:	2254210
Ion	Ratio	Lower	Upper
119	100		
134	23.5	15.9	29.5
91	36.9	22.6	42.0
0	0.0	0.0	0.0

AbundanceScan 2330 (22.445 min): P19300.D (



AbundanceScan 2330 (22.445 min): P19300.D (



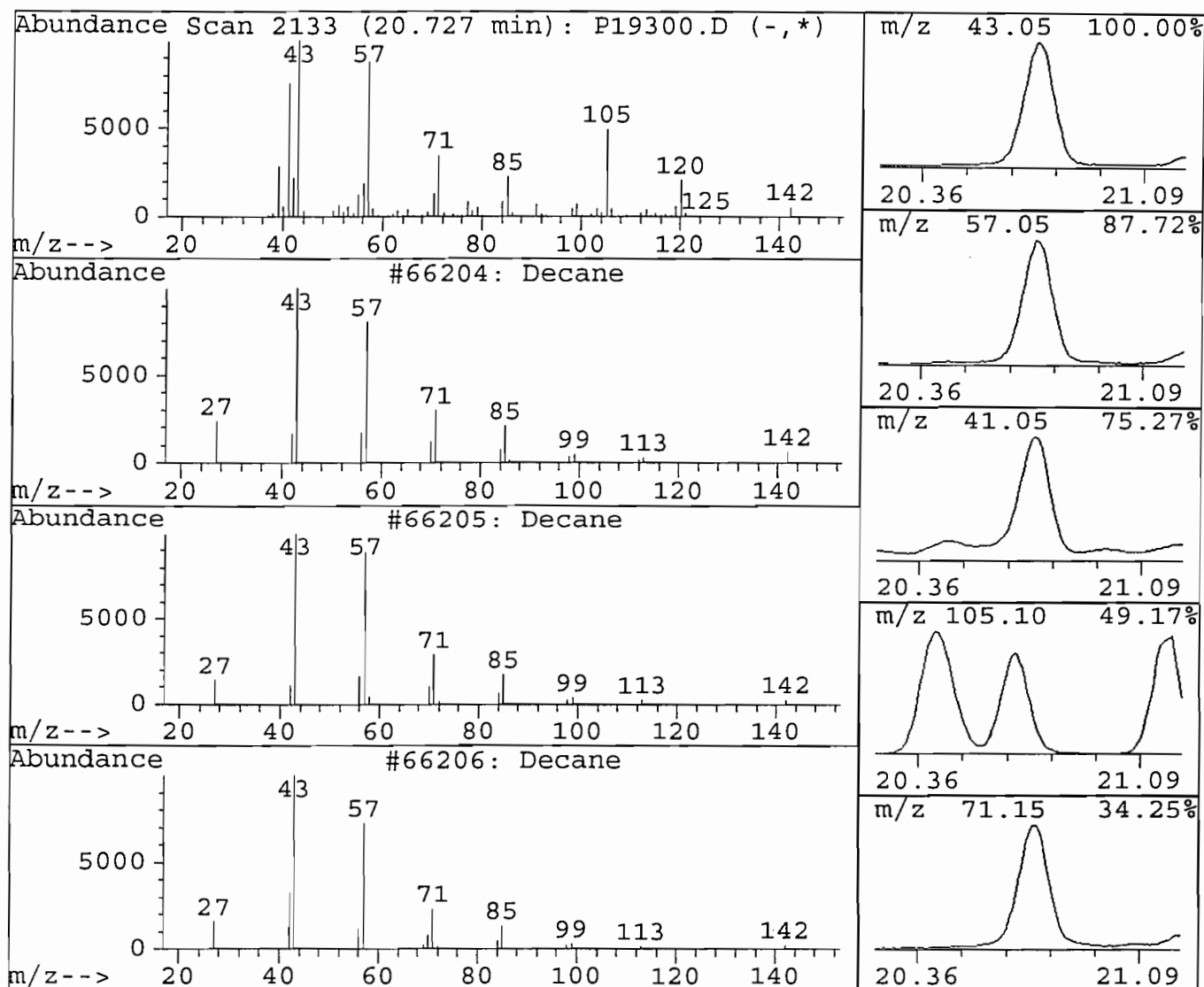
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
20.73	676.48 ug/L	52925479	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Decane		66204	000124-18-5	90
2	Decane		66205	000124-18-5	90
3	Decane		66206	000124-18-5	60
4	Decane		66208	000124-18-5	60
5	Decane		8077	000124-18-5	60



000271

Library Search Compound Report

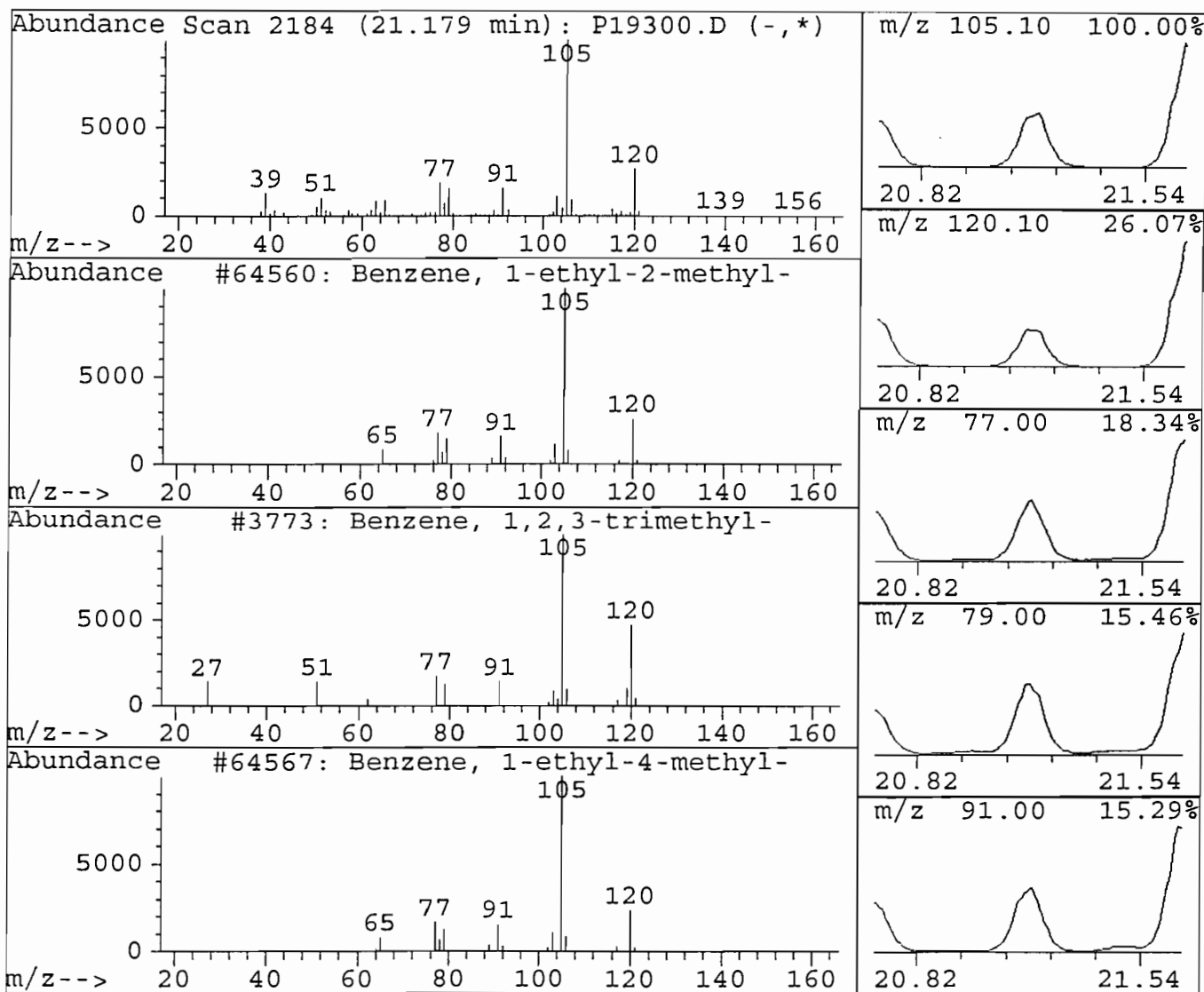
Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.18	300.87 ug/L	23538977	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	64560	000611-14-3	95
2	Benzene, 1,2,3-trimethyl-	3773	000526-73-8	94
3	Benzene, 1-ethyl-4-methyl-	64567	000622-96-8	93
4	Benzene, 1-ethyl-2-methyl-	64559	000611-14-3	93
5	Benzene, 1,3,5-trimethyl-	64570	000108-67-8	93



000272

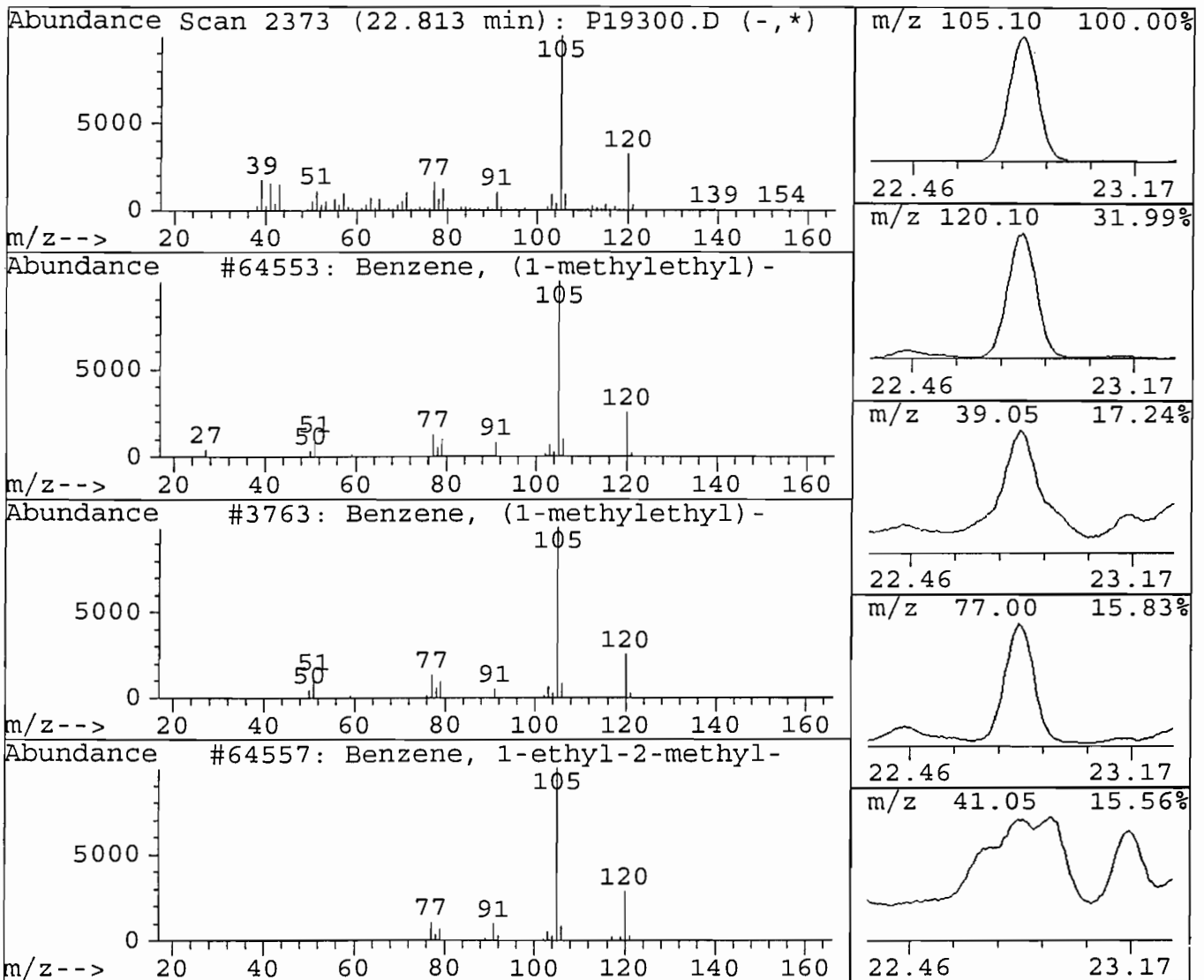
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
22.81	703.97 ug/L	55076323	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, (1-methylethyl)-		64553	000098-82-8	94
2	Benzene, (1-methylethyl)-		3763	000098-82-8	93
3	Benzene, 1-ethyl-2-methyl-		64557	000611-14-3	81
4	Benzene, (1-methylethyl)-		64552	000098-82-8	81
5	Benzene, (1-methylethyl)-		64555	000098-82-8	81



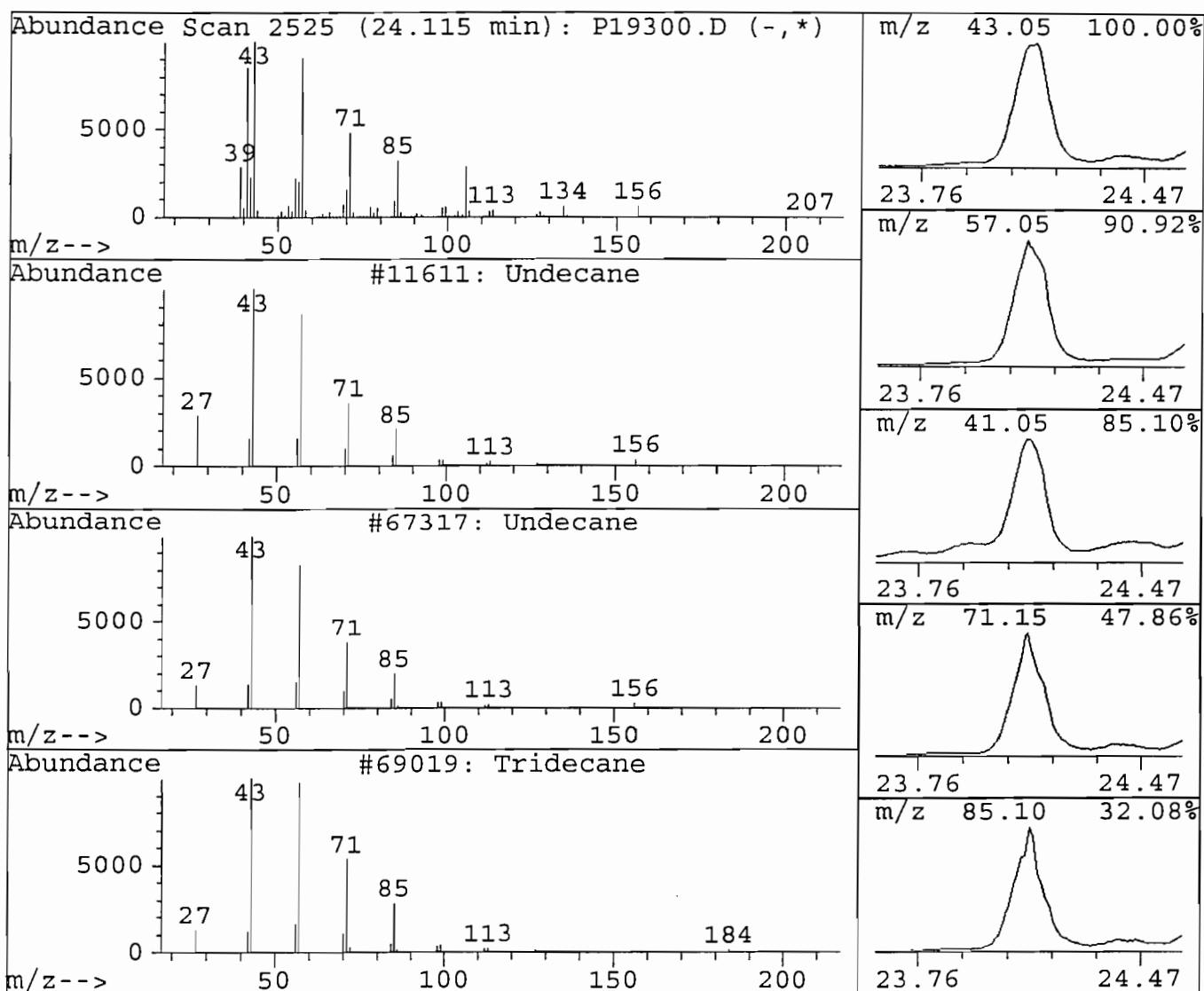
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.12	1021.75 ug/L	79938270	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Undecane		11611	001120-21-4	87
2	Undecane		67317	001120-21-4	76
3	Tridecane		69019	000629-50-5	64
4	Undecane		67319	001120-21-4	58
5	Heptane, 2,6-dimethyl-		5156	001072-05-5	58



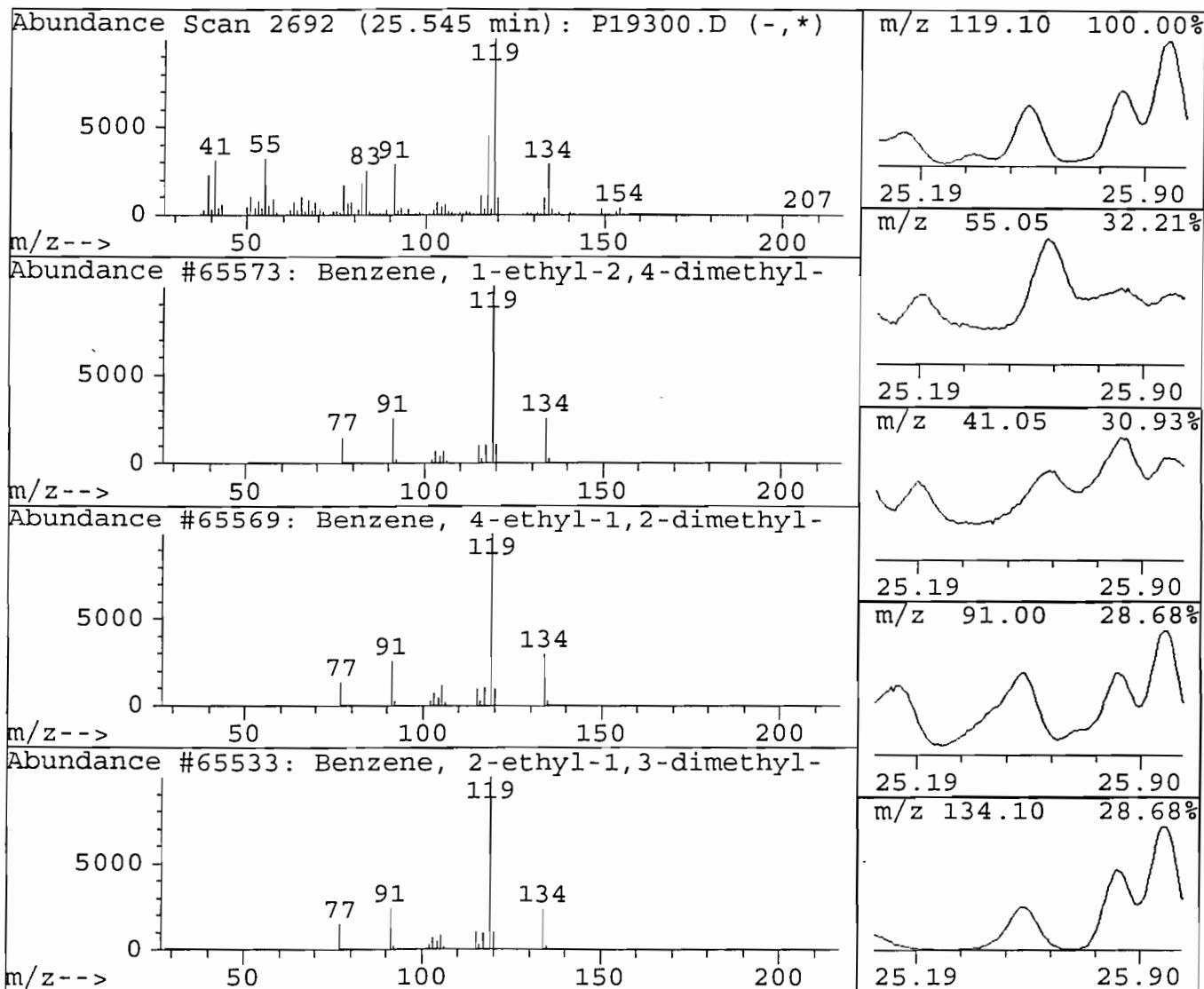
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.55	350.91 ug/L	27453880	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-		65573	000874-41-9	95
2	Benzene, 4-ethyl-1,2-dimethyl-		65569	000934-80-5	94
3	Benzene, 2-ethyl-1,3-dimethyl-		65533	002870-04-4	94
4	Benzene, 1,2,3,5-tetramethyl-		6220	000527-53-7	94
5	Benzene, 1-methyl-2-(1-methylethyl)		65581	000527-84-4	94



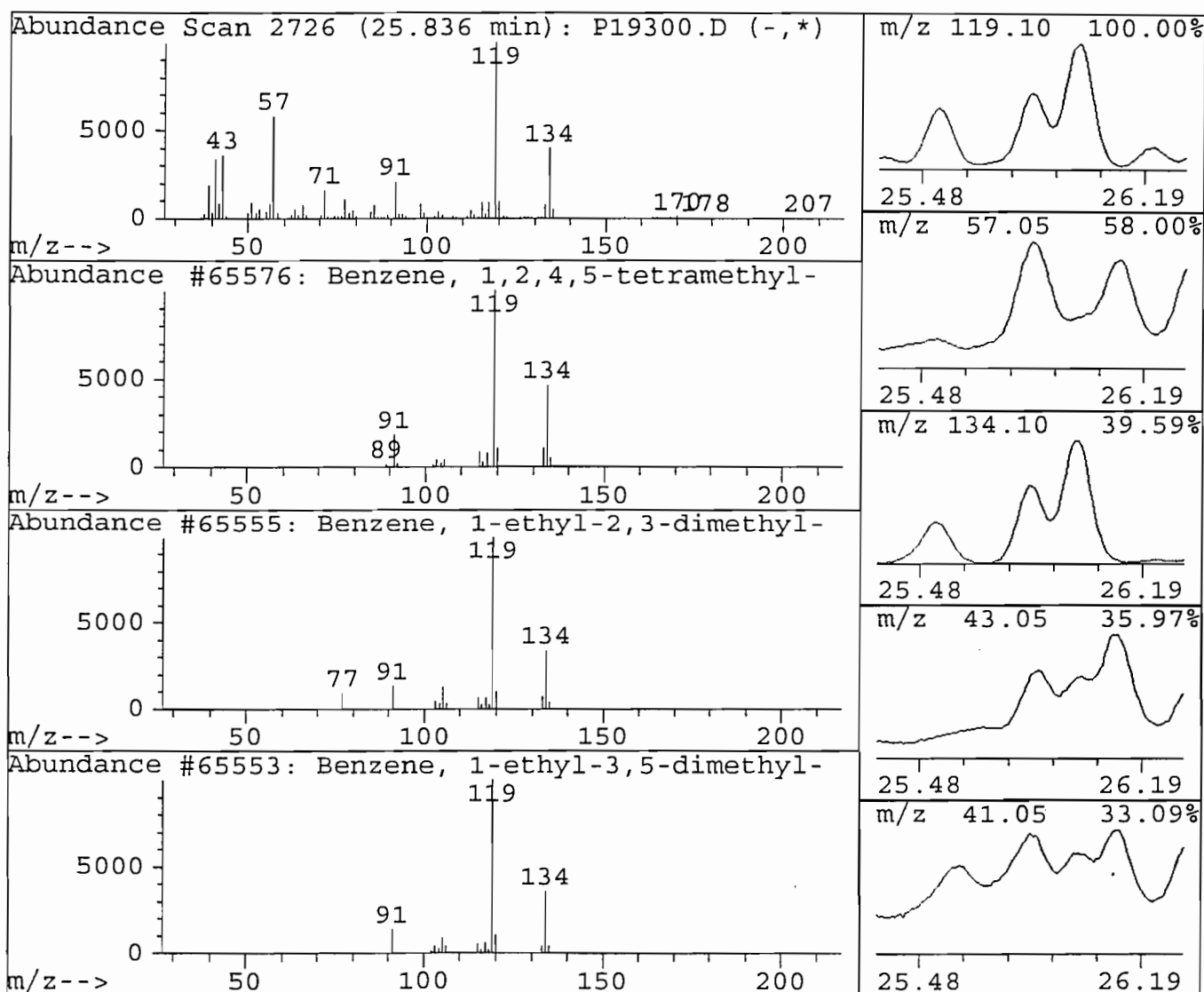
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.84	288.29 ug/L	22554611	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-		65576	000095-93-2	93
2	Benzene, 1-ethyl-2,3-dimethyl-		65555	000933-98-2	90
3	Benzene, 1-ethyl-3,5-dimethyl-		65553	000934-74-7	90
4	Benzene, 1,2,4,5-tetramethyl-		65574	000095-93-2	90
5	Benzene, 1-methyl-3-(1-methylethyl)		65579	000535-77-3	90



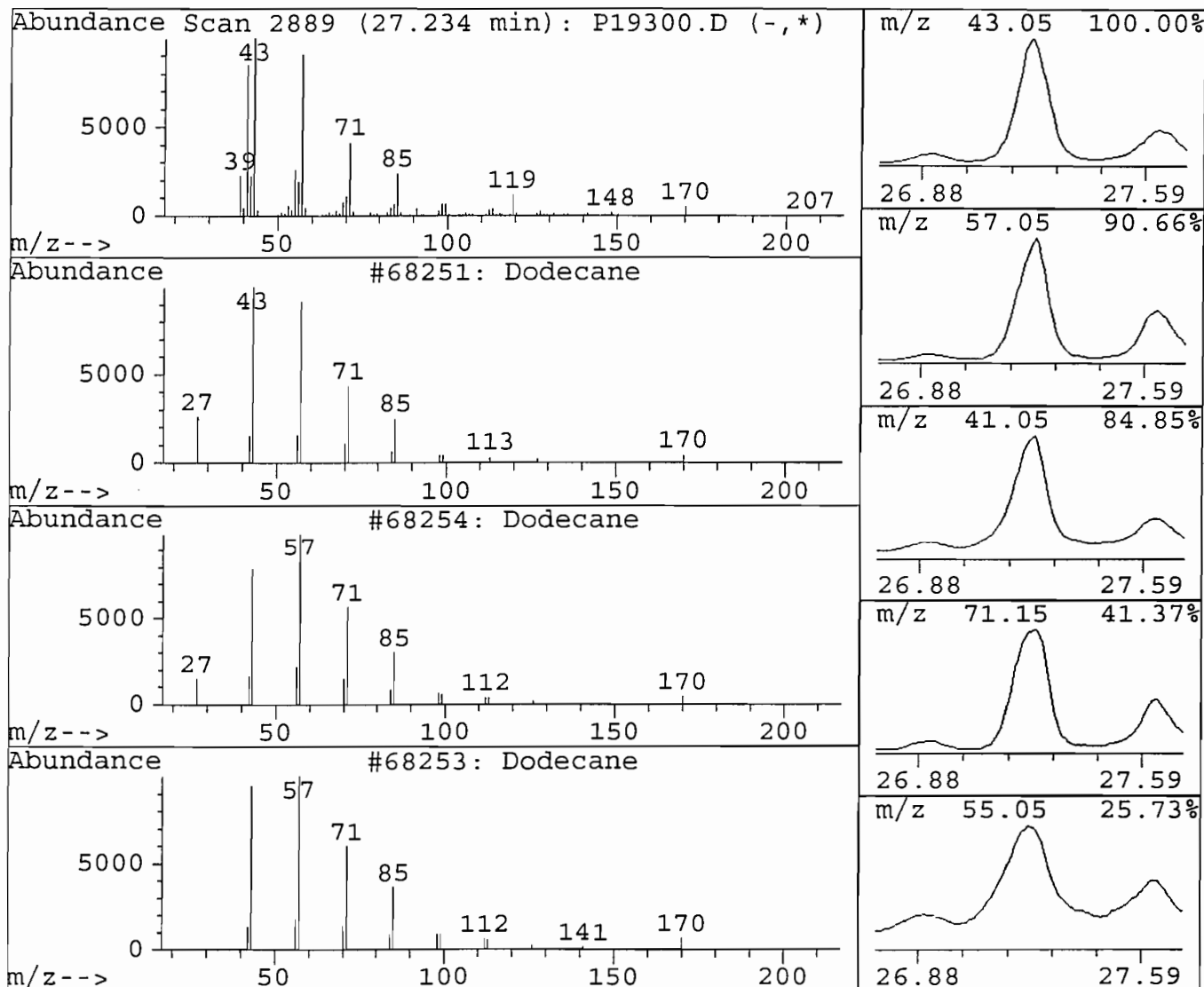
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.23	1575.84 ug/L	123287943	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		68251	000112-40-3	94
2	Dodecane		68254	000112-40-3	93
3	Dodecane		68253	000112-40-3	87
4	Undecane		11611	001120-21-4	86
5	Dodecane		15347	000112-40-3	76



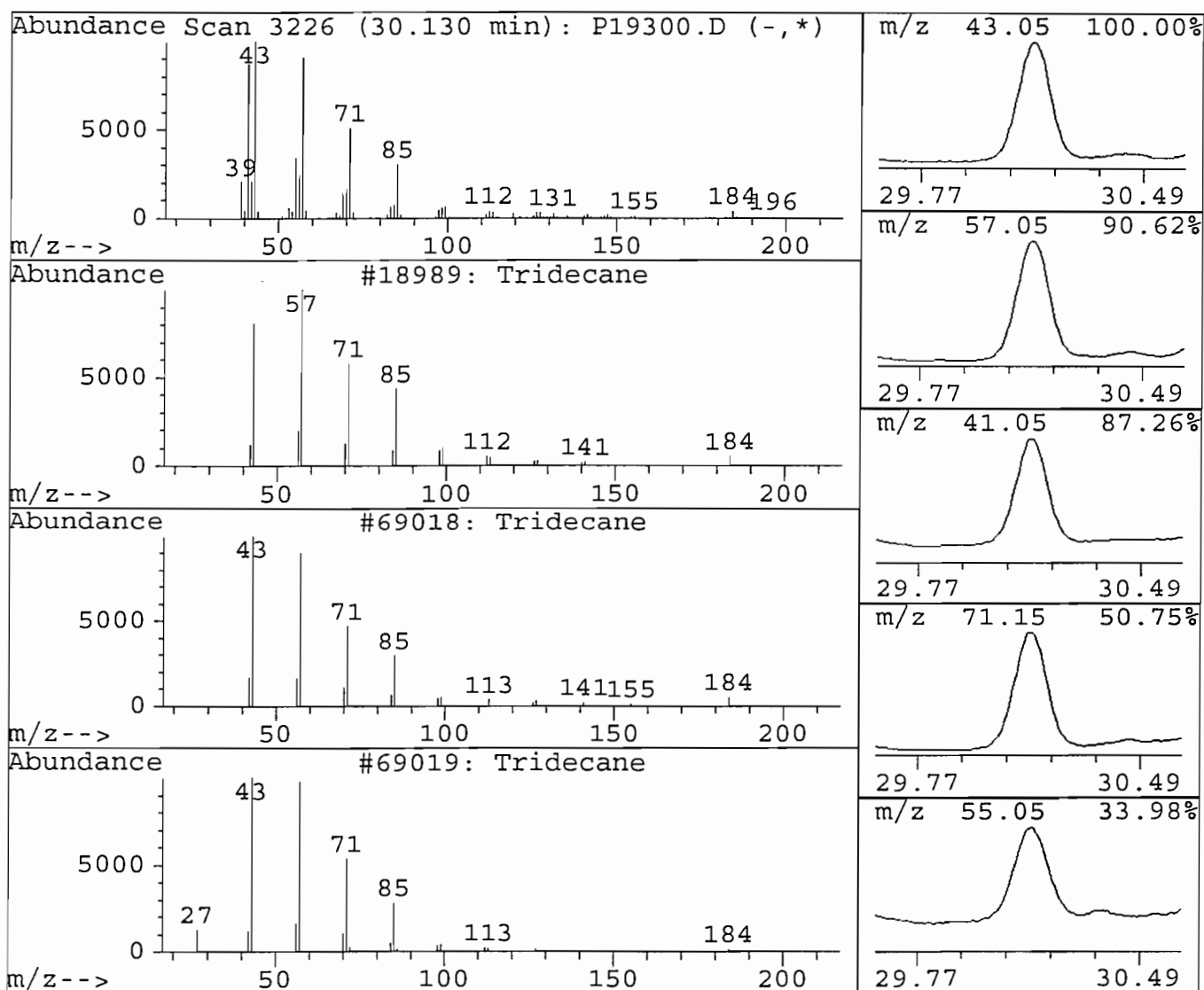
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.13	745.17 ug/L	58299724	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tridecane		18989	000629-50-5	95
2	Tridecane		69018	000629-50-5	94
3	Tridecane		69019	000629-50-5	93
4	Dodecane		68251	000112-40-3	86
5	Dodecane		68254	000112-40-3	86



Library Search Compound Report

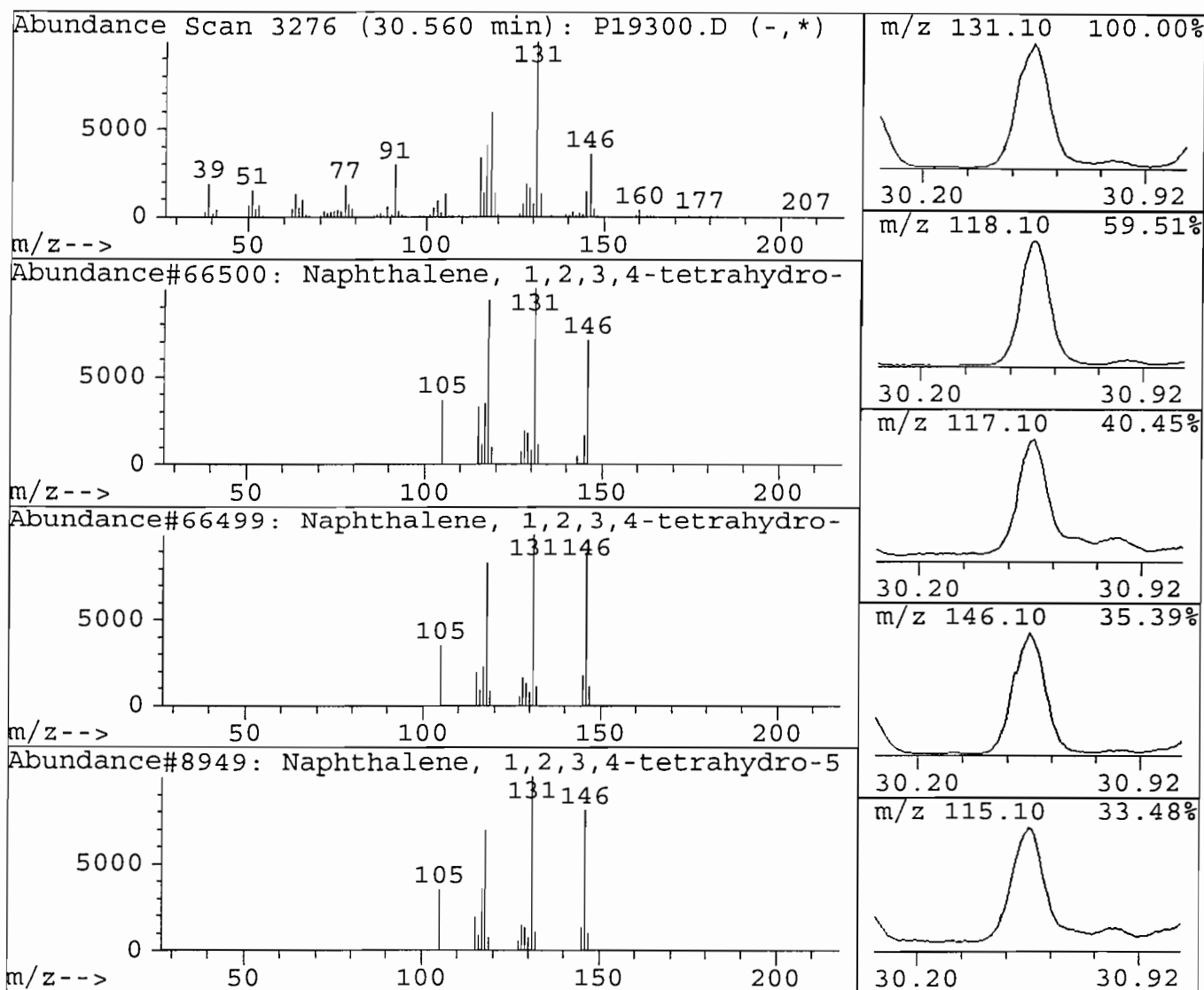
Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.56	540.28 ug/L	42269672	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-6-m	66500	001680-51-9	89
2	Naphthalene, 1,2,3,4-tetrahydro-6-m	66499	001680-51-9	87
3	Naphthalene, 1,2,3,4-tetrahydro-5-m	8949	002809-64-5	81
4	Naphthalene, 6-ethyl-1,2,3,4-tetra	12559	022531-20-0	70
5	1H-Indene, 2,3-dihydro-1,2-dimethyl	8947	017057-82-8	64



Library Search Compound Report

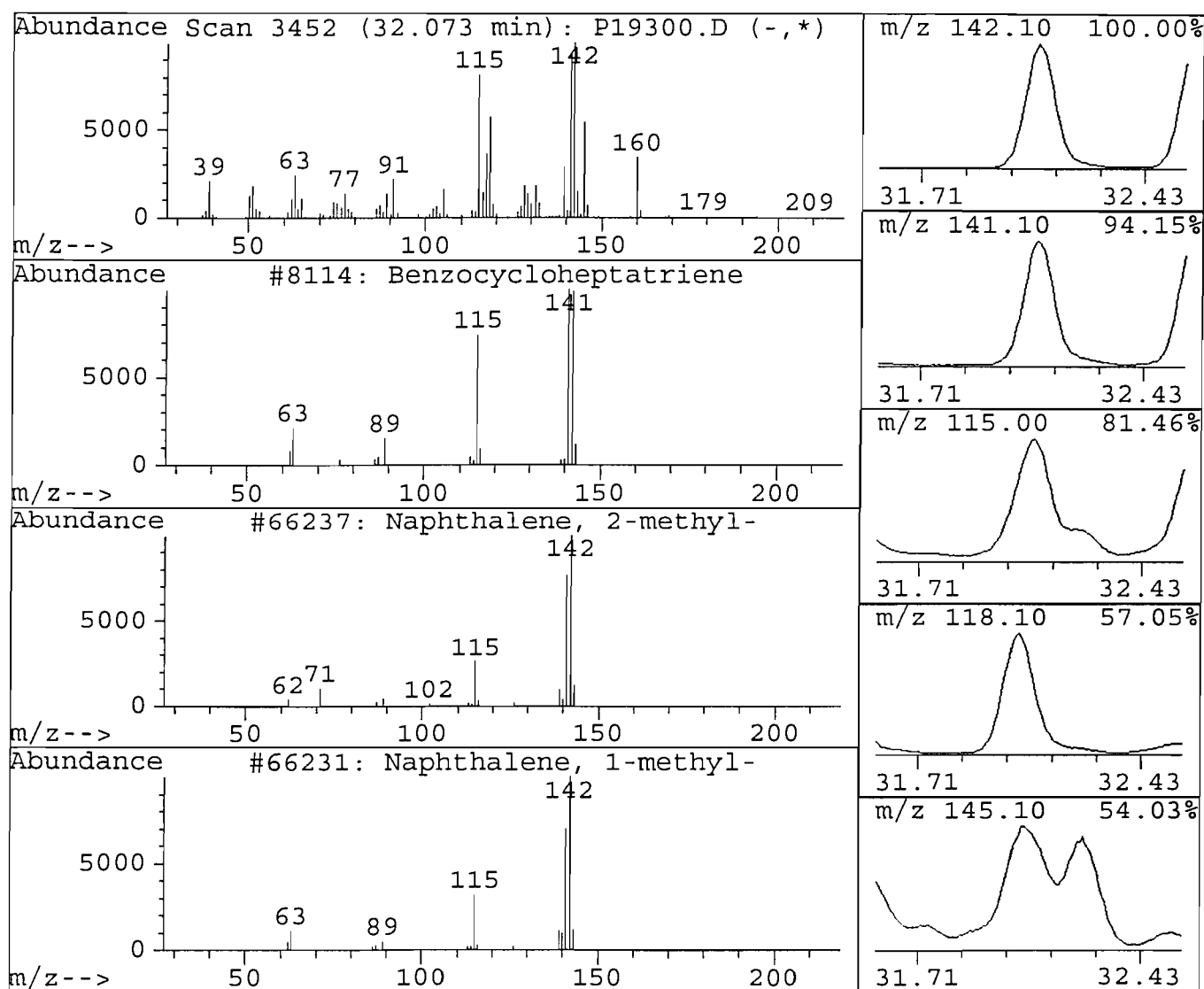
Data File : I:\HPCHEM\1\DATA\V2102199\P19300.D
Acq Time : 22 Oct 99 10:07 pm
Sample : 13827ASP-88020
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.07	327.67 ug/L	25635743	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzocycloheptatriene	8114	000264-09-5	96
2	Naphthalene, 2-methyl-	66237	000091-57-6	91
3	Naphthalene, 1-methyl-	66231	000090-12-0	60
4	Naphthalene, 2-methyl-	8115	000091-57-6	60
5	Naphthalene, 2-methyl-	66236	000091-57-6	60



SAMPLE NO.

GP-020-SS12DL

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: O88020DL

Lab File ID: P19308.D

Date Received: 10/18/99

Date Analyzed: 10/25/99

Dilution Factor: 10.0

Soil Aliquot Volume: (uL)

Q

FORM I VOA

000281

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-020-SS12DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88020DL
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19308.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 2 Date Analyzed: 10/25/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 10.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 526-73-8	Benzene, 1,2,3-trimethyl-	22.73	1200	J
2. 1120-21-4	Undecane	24.02	2500	J
3. 99-87-6	Benzene, 1-methyl-4-(1-methy	24.40	1300	J
4. 112-40-3	Dodecane	27.13	3900	J
5.	Unknown	28.24	1100	J
6.	Unknown	29.26	1100	J
7. 629-50-5	Tridecane	30.04	2000	J
8.	Unknown	30.47	1600	J
9. 629-59-4	Tetradecane	32.77	1200	J
10. 571-61-9	Naphthalene, 1,5-dimethyl-	35.52	1300	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
 Acq Time : 25 Oct 99 10:10 pm
 Sample : 13827ASP-88020 1:10 DIL
 Misc : 5G/5ML
 Quant Time: Oct 26 12:39 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.23	96	882415	50.00	ug/L	-0.03
43) Chlorobenzene-d5	16.29	117	913955	50.00	ug/L	-0.05
58) 1,4-dichlorobenzene-d4	22.53	152	567920	50.00	ug/L	-0.06
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.94	113	695263	47.29	ug/L	94.58%
30) 1,2-Dichlorethane-d4	8.65	65	554387	47.99	ug/L	95.98%
38) Toluene-d8	12.73	98	801491	46.57	ug/L	93.14%
42) 4-Bromofluorobenzene	19.44	95	883891	50.03	ug/L	100.06%
Target Compounds						Qvalue
54) m&p-xylenes	16.96	106	152145	17.79	ug/L	98
55) o-xylene	17.97	91	473897	19.18	ug/L	98
64) 2-chlorotoluene	20.26	126	85187	14.08	ug/L	59
66) 1,3,5-trimethylbenzene	20.61	105	1853686	82.60	ug/L	95
68) 1,2,4-trimethylbenzene	21.60	105	5075435	217.30	ug/L m	97
71) 4-isopropyltoluene	22.36	119	809216	30.26	ug/L	92

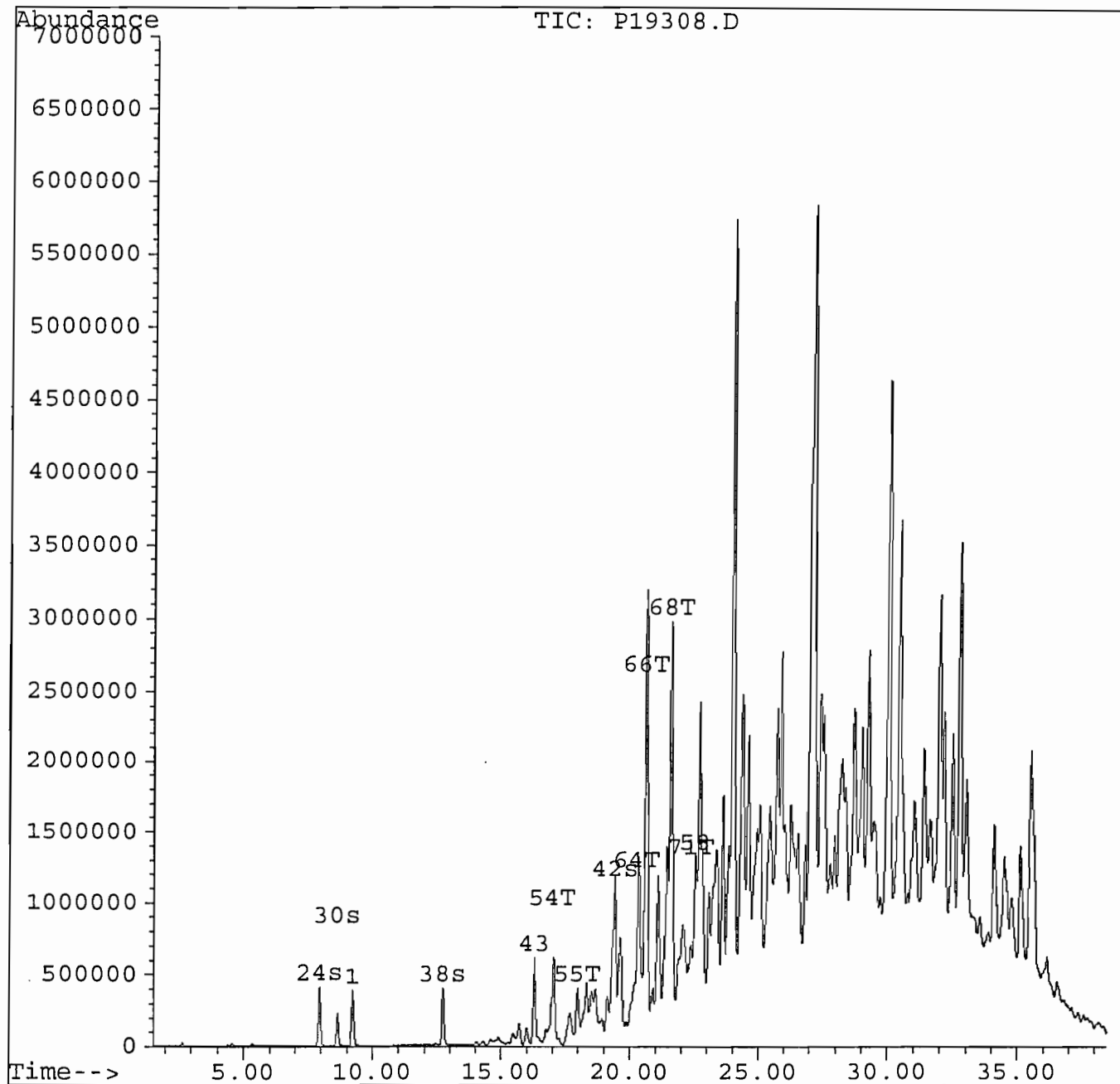
000283

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML
Quant Time: Oct 26 12:39 1999

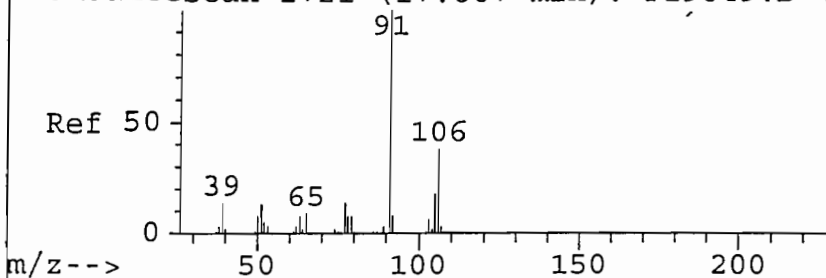
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000284

AbundanceScan 1721 (17.007 min): P19049.D (



#54

m&p-xylenes

Concen: 17.79 ug/L

RT: 16.96 min Scan# 1714

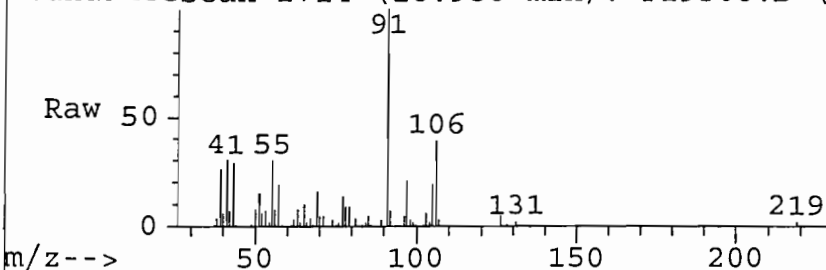
Delta R.T. -0.05 min

Lab File: P19308.D

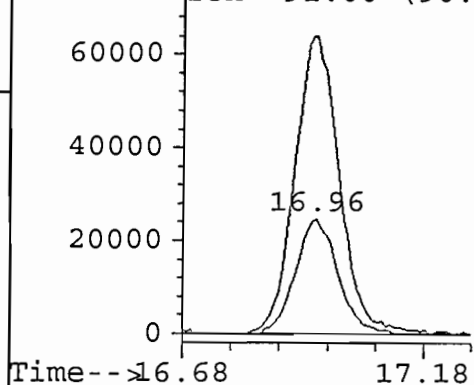
Acq: 25 Oct 99 10:10 pm

Tgt Ion:	106	Resp:	152145
Ion	Ratio	Lower	Upper
106	100		
91	258.0	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

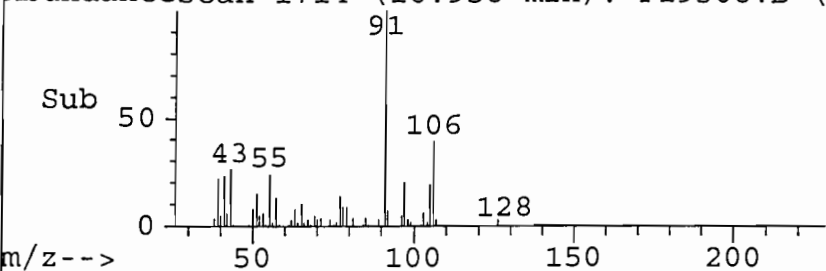
AbundanceScan 1714 (16.958 min): P19308.D (



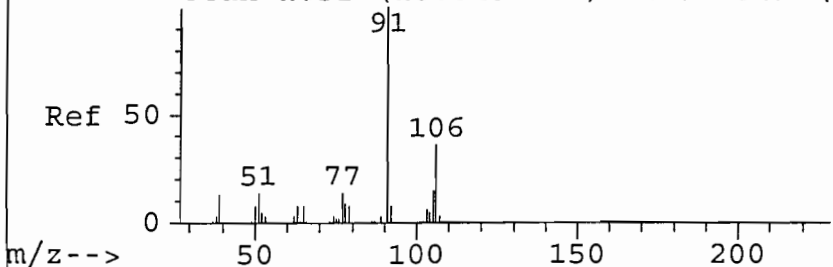
AbundanceIon 106.00 (105
Ion 91.00 (90.



AbundanceScan 1714 (16.958 min): P19308.D (



AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 19.18 ug/L

RT: 17.97 min Scan# 1825

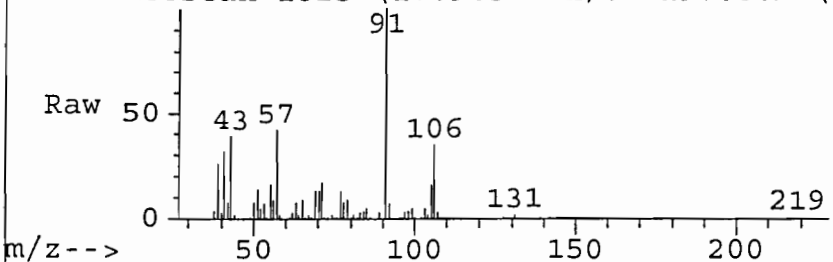
Delta R.T. -0.05 min

Lab File: P19308.D

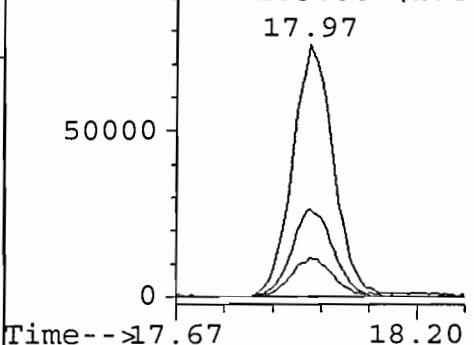
Acq: 25 Oct 99 10:10 pm

Tgt Ion:	91	Resp:	473897
Ion	Ratio	Lower	Upper
91	100		
106	35.0	25.4	47.2
105	15.6	10.1	18.8
0	0.0	0.0	0.0

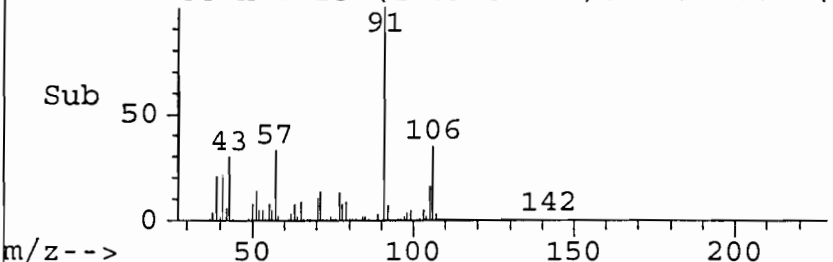
AbundanceScan 1825 (17.965 min): P19308.D (



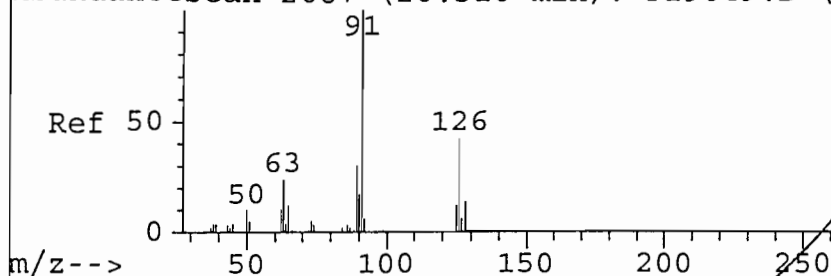
AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



AbundanceScan 1825 (17.965 min): P19308.D (



AbundanceScan 2087 (20.310 min): P19049.D (



#64

2-chlorotoluene

Concen: 14.08 ug/L

RT: 20.26 min Scan# 2080

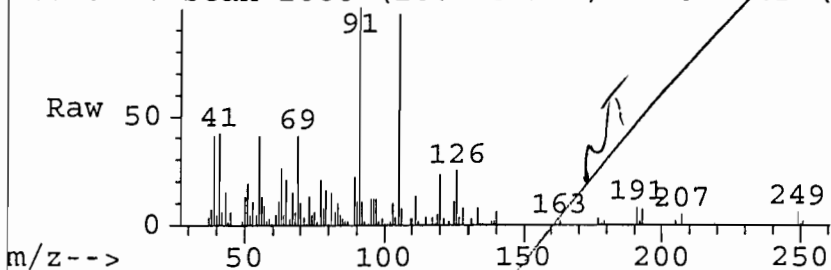
Delta R.T. -0.05 min

Lab File: P19308.D

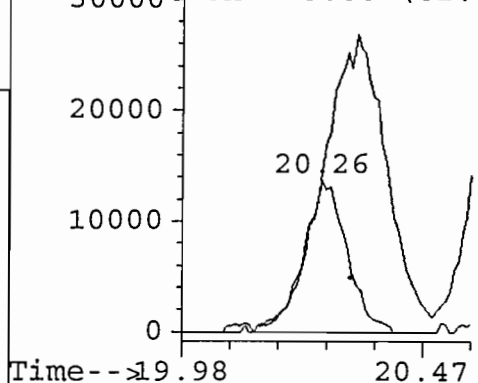
Acq: 25 Oct 99 10:10 pm

Tgt Ion:	126	Resp:	85187
Ion Ratio	Lower	Upper	
126	100		
63	105.6	25.0	117.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

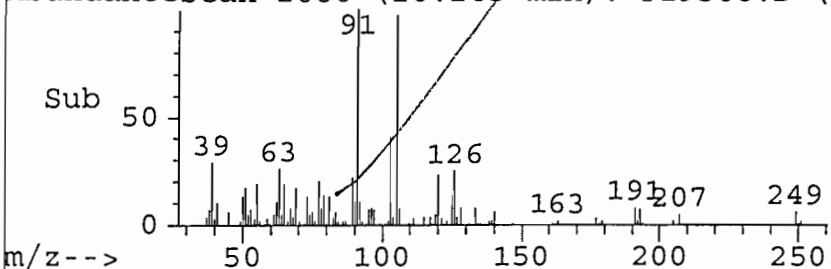
AbundanceScan 2080 (20.263 min): P19308.D (



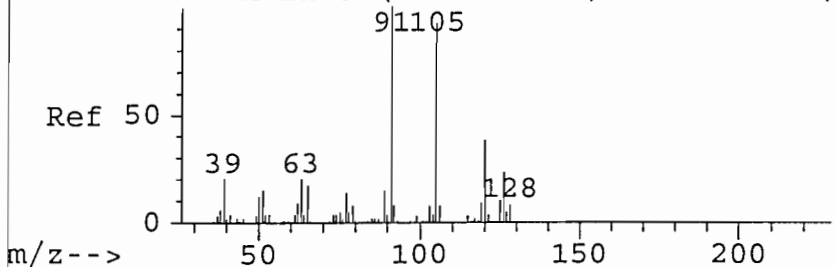
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 2080 (20.263 min): P19308.D (



AbundanceScan 2125 (20.658 min): P19049.D (



#66

1,3,5-trimethylbenzene

Concen: 82.60 ug/L

RT: 20.61 min Scan# 2120

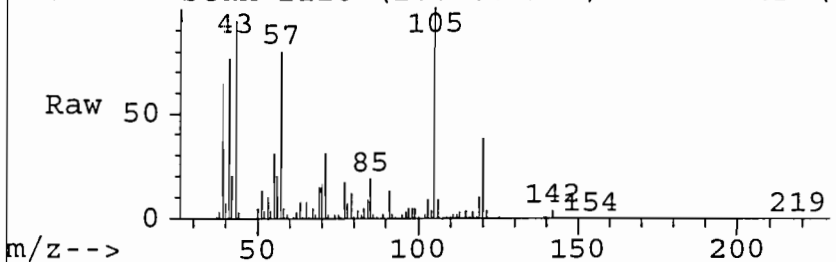
Delta R.T. -0.05 min

Lab File: P19308.D

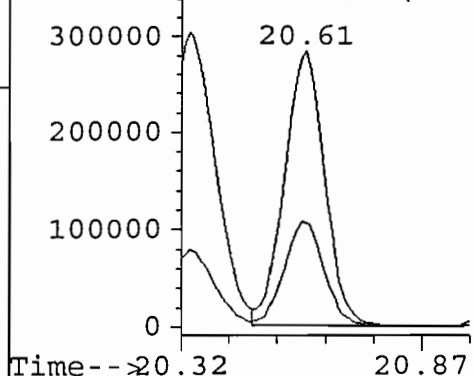
Acq: 25 Oct 99 10:10 pm

Tgt Ion:	105	Resp:	1853686
Ion Ratio	Lower	Upper	
105	100		
120	37.5	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

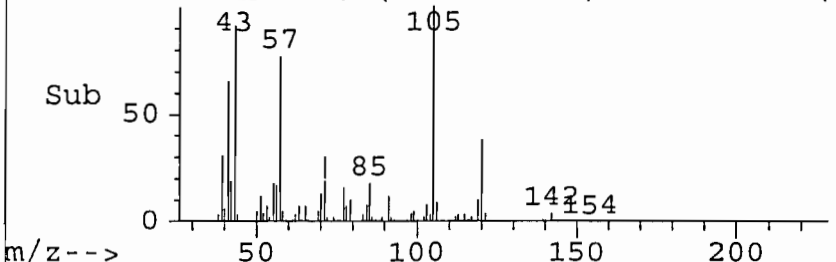
AbundanceScan 2120 (20.607 min): P19308.D (



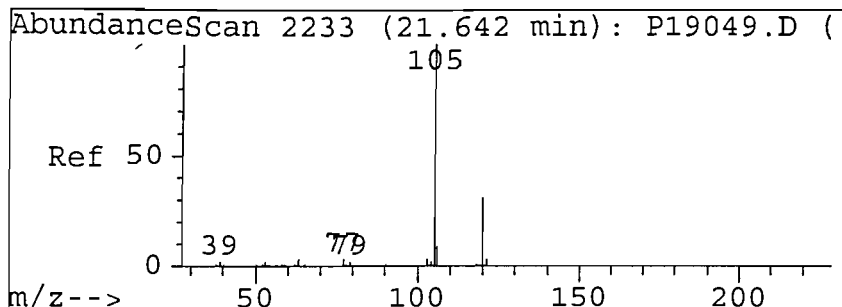
AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 2120 (20.607 min): P19308.D (

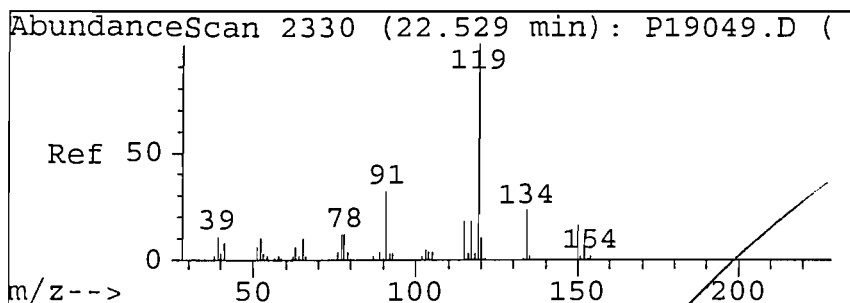
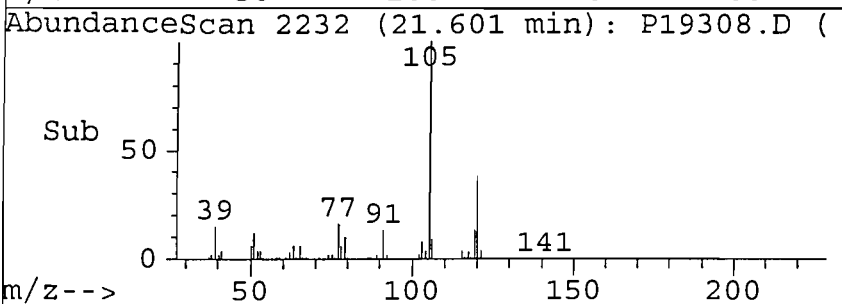
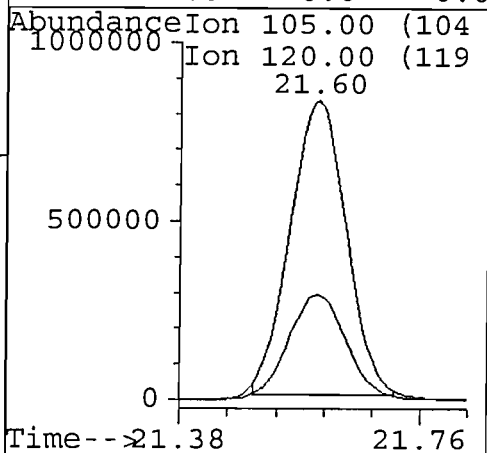
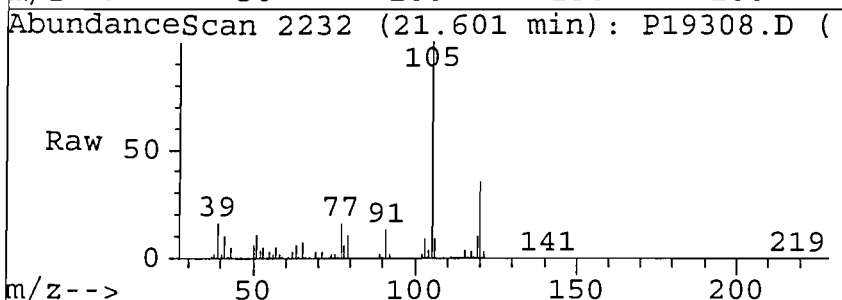


000286



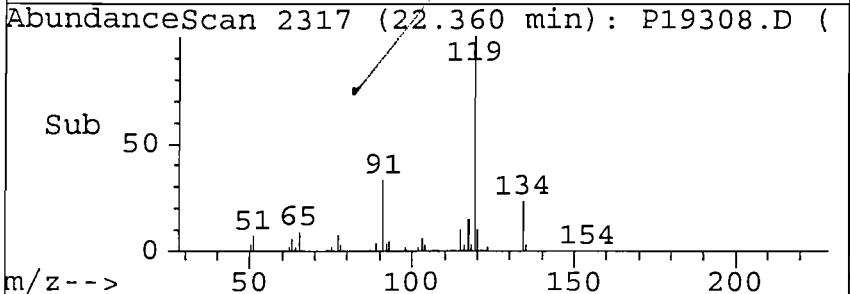
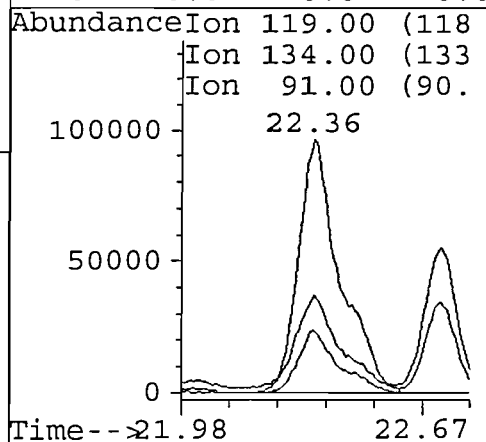
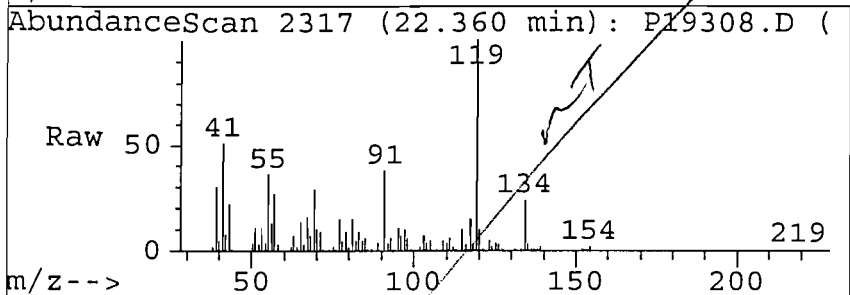
#68
1,2,4-trimethylbenzene
Concen: 217.30 ug/L m
RT: 21.60 min Scan# 2232
Delta R.T. -0.04 min
Lab File: P19308.D
Acq: 25 Oct 99 10:10 pm

Tgt	Ion:105	Resp:	5075435
Ion	Ratio	Lower	Upper
105	100		
120	35.3	26.0	48.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#71
4-isopropyltoluene
Concen: 30.26 ug/L
RT: 22.36 min Scan# 2317
Delta R.T. -0.17 min
Lab File: P19308.D
Acq: 25 Oct 99 10:10 pm

Tgt Ion:119	Resp: 809216
Ion Ratio	Lower Upper
119 100	
134 24.3	15.9 29.5
91 38.2	22.6 42.0
0 0.0	0.0 0.0



000287

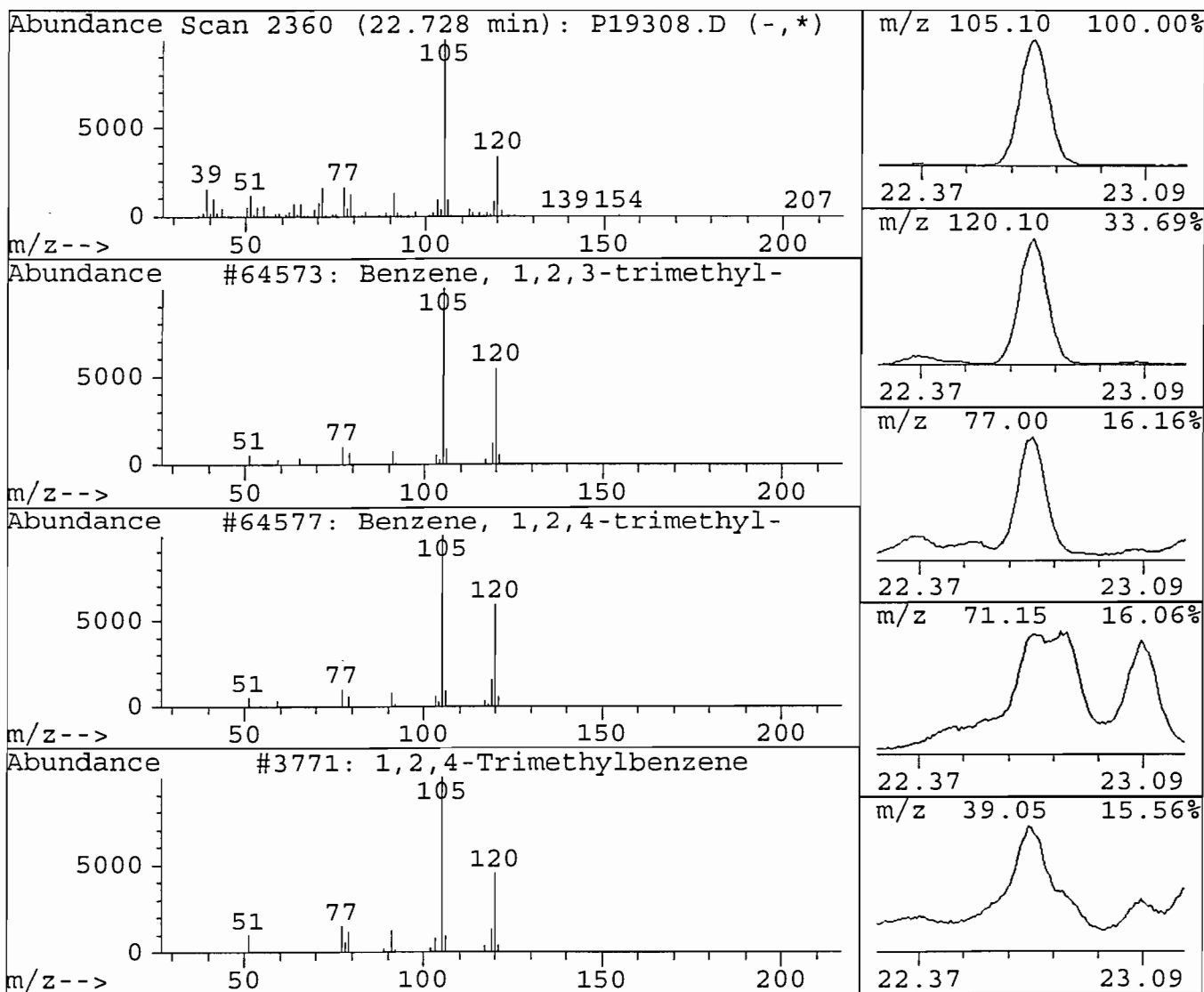
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
22.73	121.07 ug/L	20278454	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-		64573	000526-73-8	94
2	Benzene, 1,2,4-trimethyl-		64577	000095-63-6	94
3	1,2,4-Trimethylbenzene		3771	000095-36-3	93
4	Benzene, 1,2,3-trimethyl-		3773	000526-73-8	93
5	Benzene, (1-methylethyl)-		64556	000098-82-8	93



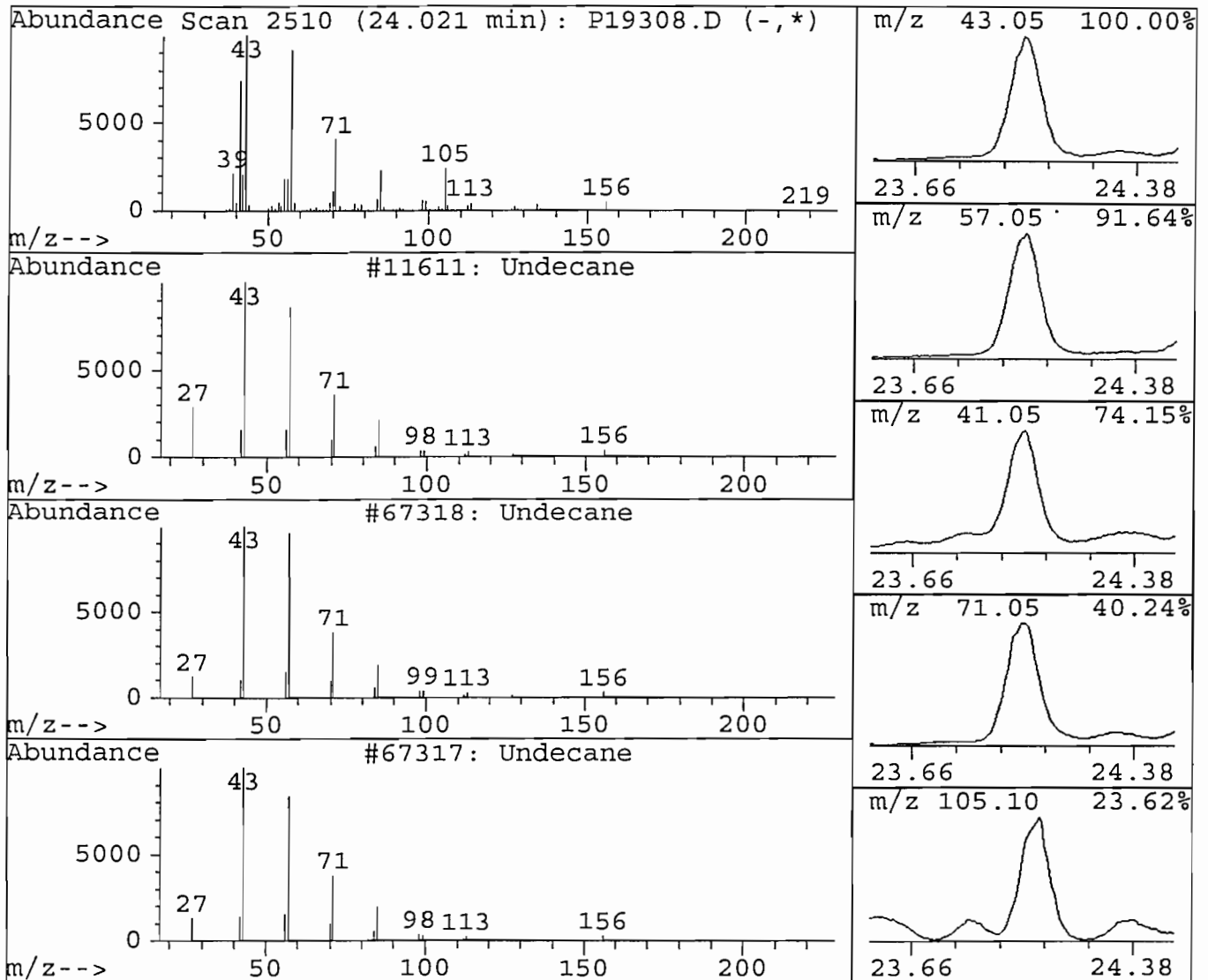
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
 Acq Time : 25 Oct 99 10:10 pm
 Sample : 13827ASP-88020 1:10 DIL
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.02	240.49 ug/L	40280860	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Undecane		11611	001120-21-4	95
2	Undecane		67318	001120-21-4	93
3	Undecane		67317	001120-21-4	81
4	Undecane		67319	001120-21-4	68
5	Decane		66205	000124-18-5	64



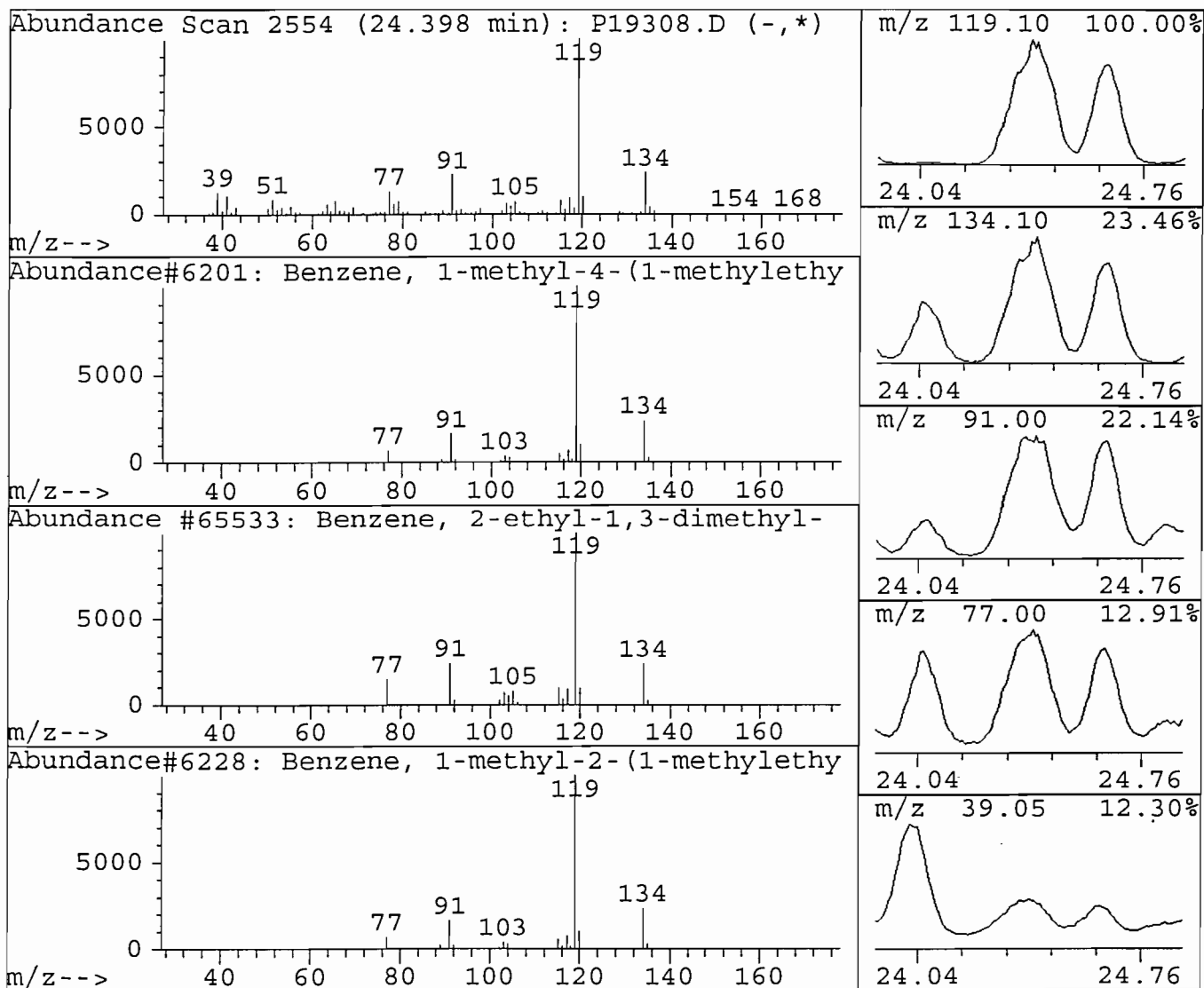
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.40	129.26 ug/L	21649811	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)		6201	000099-87-6	97
2	Benzene, 2-ethyl-1,3-dimethyl-		65533	002870-04-4	97
3	Benzene, 1-methyl-2-(1-methylethyl)		6228	000527-84-4	97
4	Benzene, 1-ethyl-2,4-dimethyl-		65573	000874-41-9	97
5	Benzene, 1-methyl-3-(1-methylethyl)		6225	000535-77-3	97



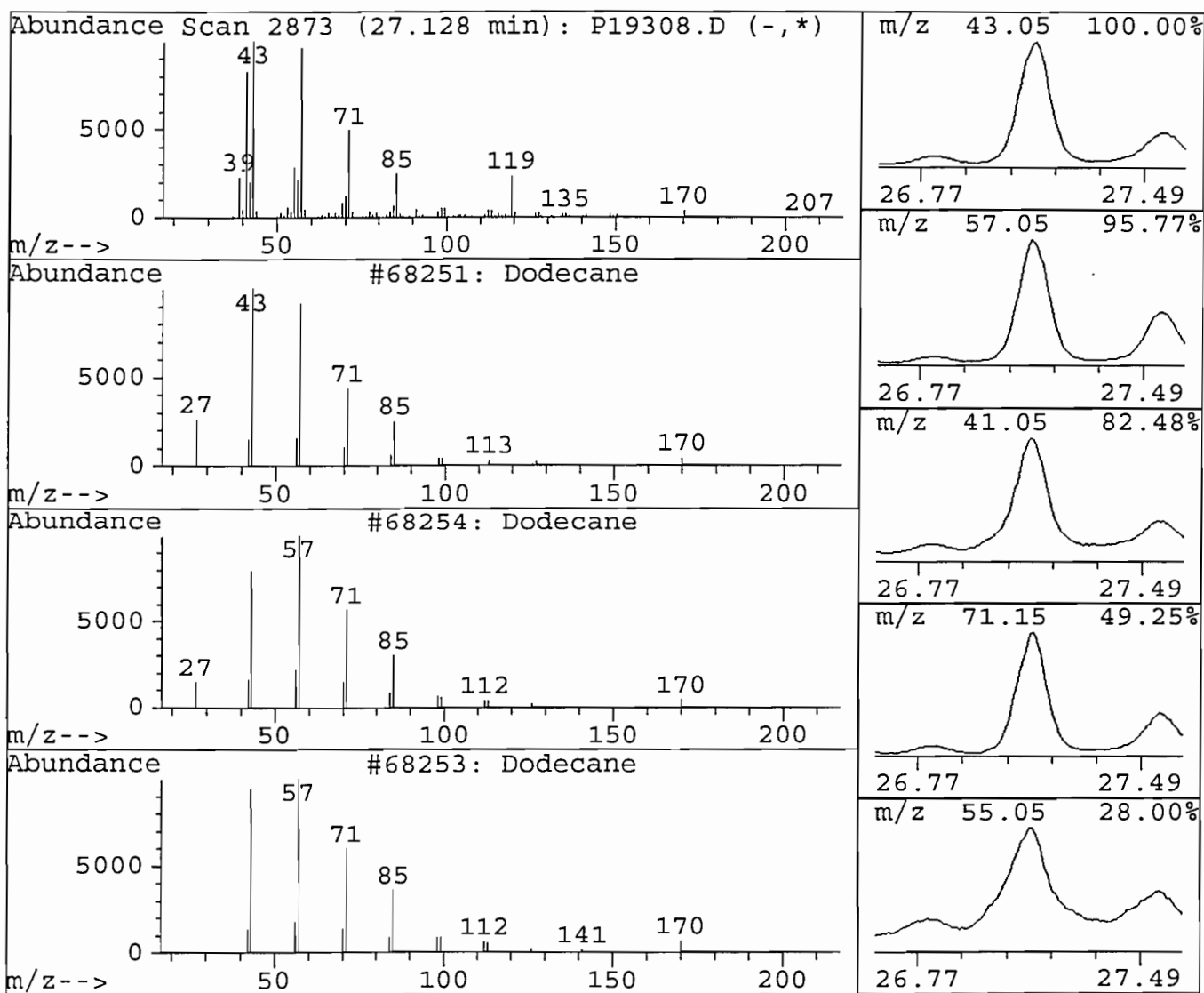
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.13	386.95 ug/L	64811838	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		68251	000112-40-3	94
2	Dodecane		68254	000112-40-3	93
3	Dodecane		68253	000112-40-3	81
4	Dodecane		68249	000112-40-3	76
5	Dodecane		68252	000112-40-3	76



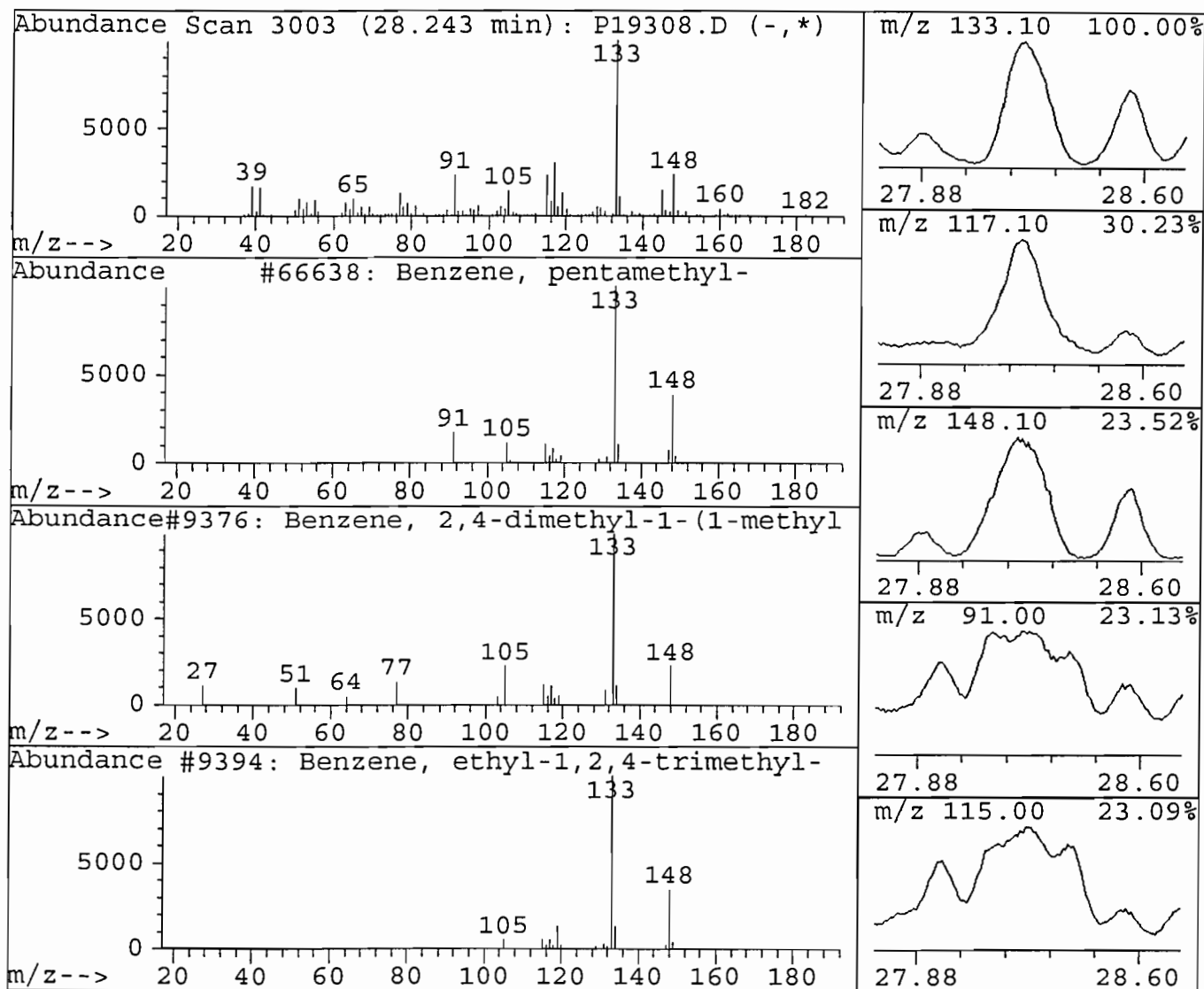
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
28.24	103.57 ug/L	17347250	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, pentamethyl-		66638	000700-12-9	64
2	Benzene, 2,4-dimethyl-1-(1-methylet		9376	004706-89-2	58
3	Benzene, ethyl-1,2,4-trimethyl-		9394	054120-62-6	58
4	Benzene, 1,4-dimethyl-2-(1-methylet		9382	004132-72-3	52
5	Benzene, 1-(1,1-dimethylethyl)-3-me		66632	001075-38-3	52



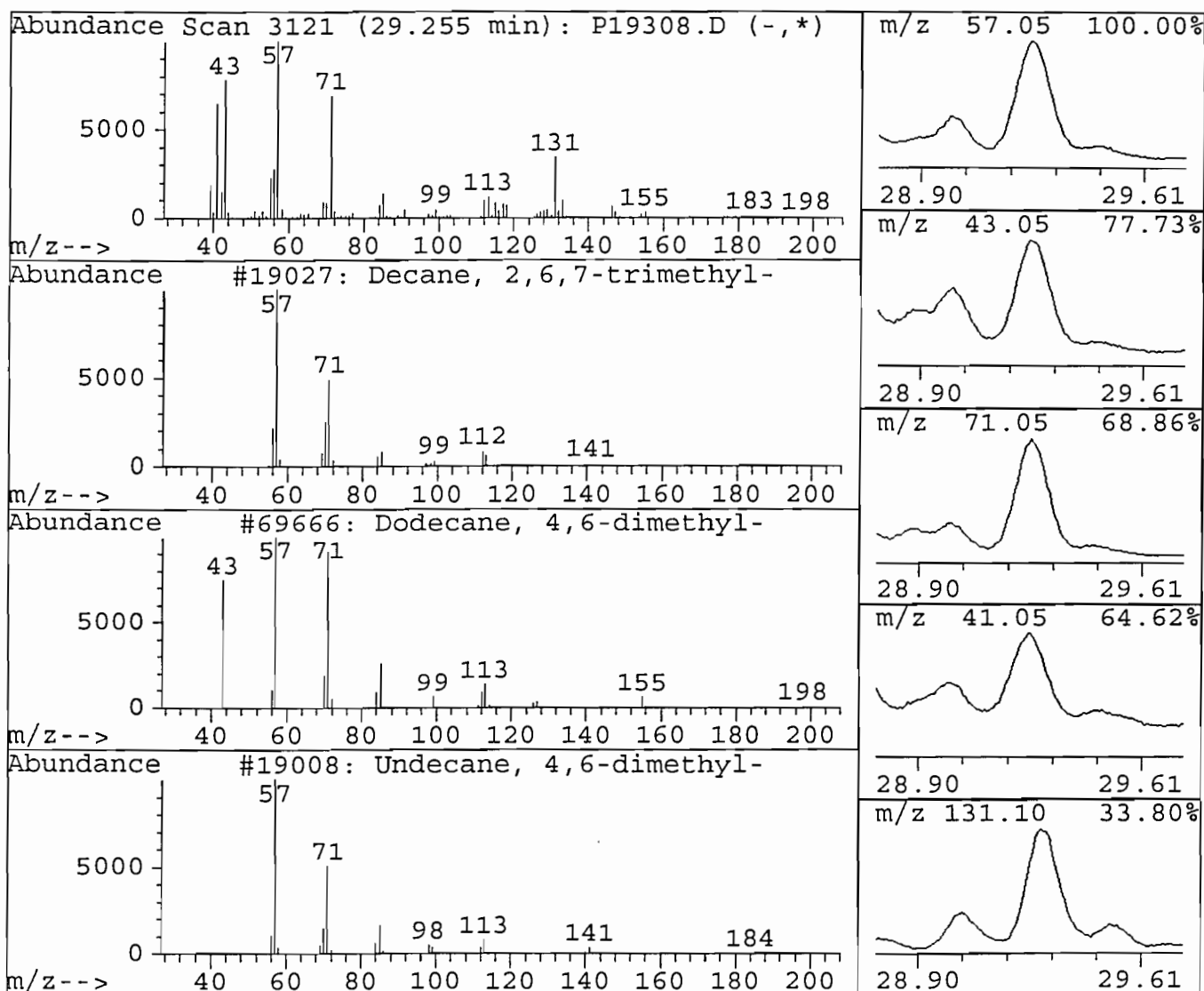
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.26	106.86 ug/L	17898030	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Decane, 2,6,7-trimethyl-		19027	062108-25-2	53
2	Dodecane, 4,6-dimethyl-		69666	061141-72-8	49
3	Undecane, 4,6-dimethyl-		19008	017312-82-2	49
4	Heptane, 2,6-dimethyl-		5156	001072-05-5	49
5	Decane, 5-propyl-		19035	017312-62-8	45



000293

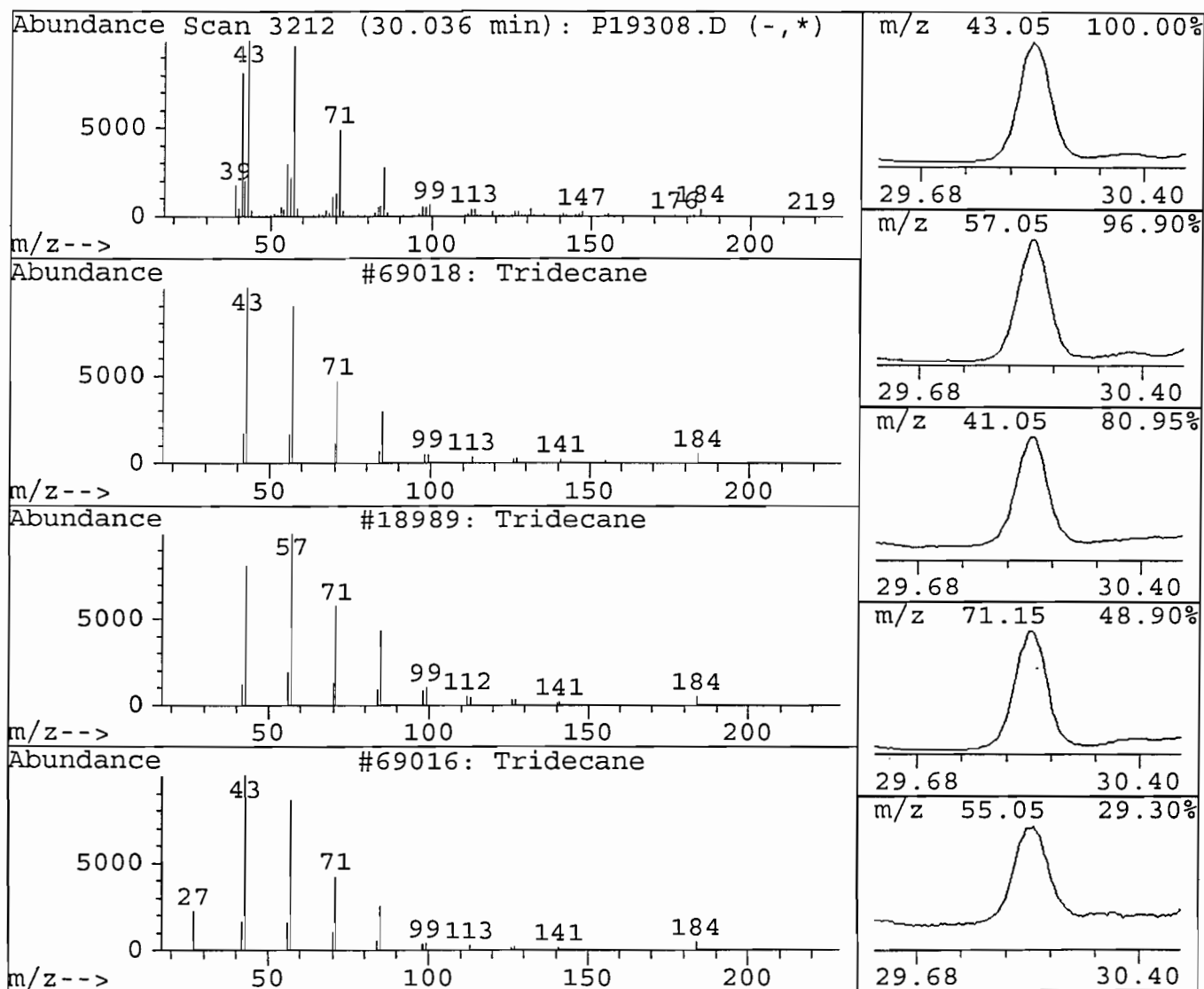
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.04	196.40 ug/L	32895196	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tridecane		69018	000629-50-5	95
2	Tridecane		18989	000629-50-5	94
3	Tridecane		69016	000629-50-5	93
4	Undecane		67317	001120-21-4	86
5	Undecane		11611	001120-21-4	86



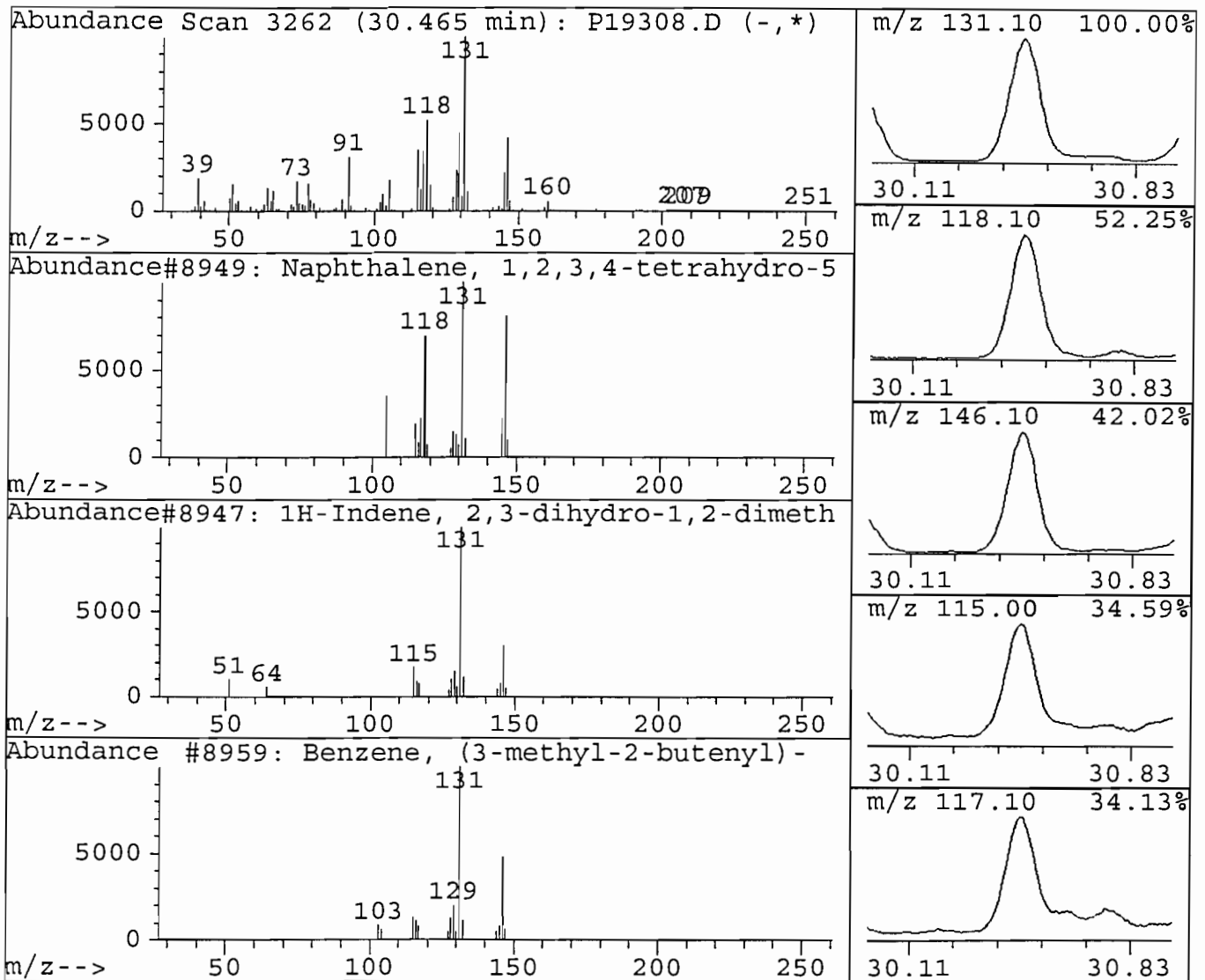
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.47	156.06 ug/L	26139600	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-5-m		8949	002809-64-5	72
2	1H-Indene, 2,3-dihydro-1,2-dimethyl		8947	017057-82-8	64
3	Benzene, (3-methyl-2-butenyl)-		8959	004489-84-3	64
4	1H-Indene, 2,3-dihydro-4,7-dimethyl		66497	006682-71-9	53
5	1H-Indene, 2,3-dihydro-5,6-dimethyl		8944	001075-22-5	52



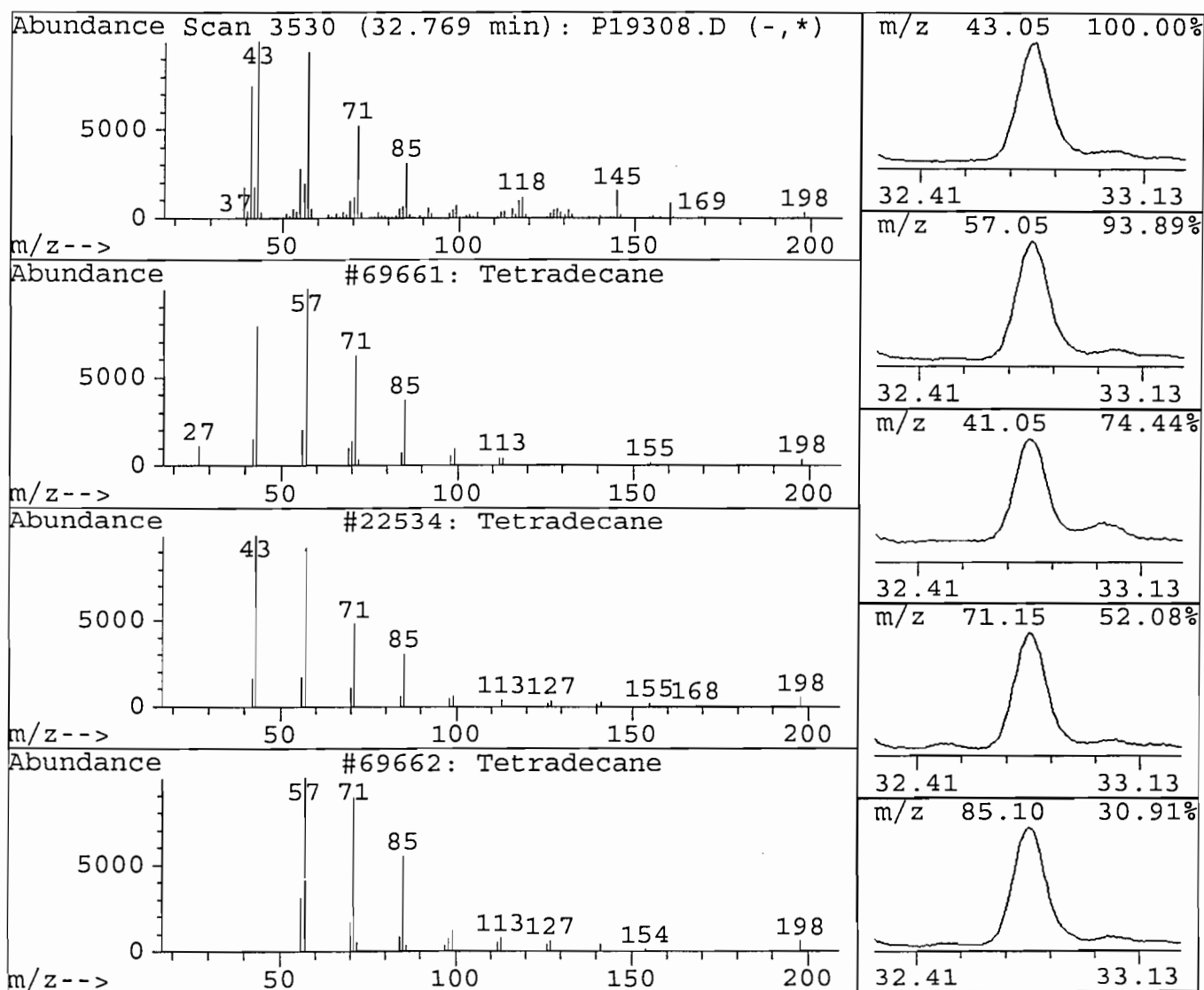
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
32.77	118.67 ug/L	19875889	1,4-dichlorobenzene-d4	22.53	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tetradecane		69661	000629-59-4	96
2	Tetradecane		22534	000629-59-4	94
3	Tetradecane		69662	000629-59-4	93
4	Tetradecane		69659	000629-59-4	92
5	Tetradecane		69660	000629-59-4	91



Library Search Compound Report

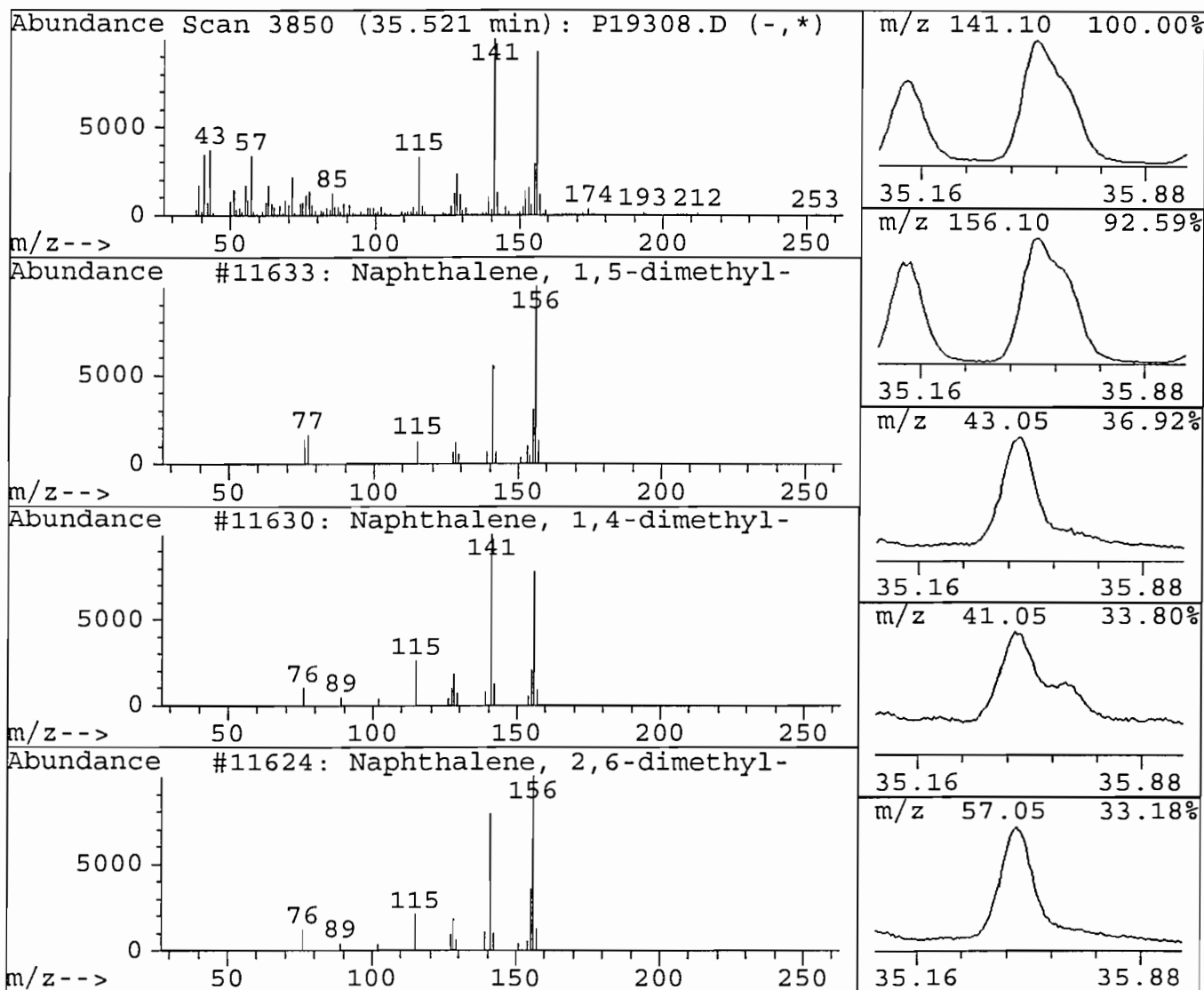
Data File : I:\HPCHEM\1\DATA\V2102599\P19308.D
Acq Time : 25 Oct 99 10:10 pm
Sample : 13827ASP-88020 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.52	129.33 ug/L	21662166	1,4-dichlorobenzene-d4	22.53

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,5-dimethyl-	11633	000571-61-9	98
2	Naphthalene, 1,4-dimethyl-	11630	000571-58-4	98
3	Naphthalene, 2,6-dimethyl-	11624	000581-42-0	97
4	Naphthalene, 1,6-dimethyl-	67351	000575-43-9	97
5	Naphthalene, 1,3-dimethyl-	11629	000575-41-7	97



000297

CHEMTECH CONSULTING GROUP

VOLATILES

CALIBRATION DATA

000298

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Calibration Date(s): '10/6/99 '10/6/99

Calibration Times: 1753 2135

ID: 0.53 (mm)

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Response Factor Report voa2

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Initial Calibration

Calibration Files

50 =P19049.D 200 =P19051.D 100 =P19052.D
 20 =P19053.D 5 =P19054.D

Compound		50	200	100	20	5	Avg	%RSD
-----		-----ISTD-----						
1)	Fluorobenzene	0.390	0.410	0.421	0.473	0.454	0.430	7.83
2) T	dichlorodifluoromethane	0.198	0.222	0.227	0.267	0.236	0.230	10.92#
3) P	chloromethane	0.196	0.224	0.225	0.232	0.218	0.219	6.44
4) C	vinyl chloride	0.210	0.225	0.240	0.285	0.277	0.247	13.32
5) T	bromomethane	0.097	0.100	0.104	0.133	0.129	0.113	15.25
6) T	chloroethane	0.012	0.012	0.013	0.013	0.012	0.012	5.37
7)	Acrolein	0.985	0.833	1.088	1.222	1.197	1.065	15.05
8) T	trichlorofluoromethane	0.503	0.484	0.549	0.574	0.535	0.529	6.81
9) C	1,1-dichloroethene	0.120	0.074	0.065	0.082	0.107	0.090	25.79
10)	Acetone	0.553	0.511	0.582	0.578	0.511	0.547	6.34
11)	Carbon Disulfide	0.754	0.731	0.806	0.819	0.693	0.761	6.89
12)	Iodo Methane	0.220	0.212	0.235	0.243	0.264	0.235	8.58
13) T	methylene chloride	0.453	0.412	0.477	0.482	0.422	0.449	7.03
14) T	trans-1,2-dichloroethene	0.030	0.032	0.032	0.033	0.038	0.033	9.33
15)	TBA	0.897	0.807	0.918	0.909	0.816	0.869	6.14
16)	MTBE	0.034	0.032	0.036	0.036	0.032	0.034	6.26
17)	Acrylonitrile	0.684	0.679	0.736	0.811	0.740	0.730	7.30#
18) P	1,1-dichloroethane	0.740	0.649	0.766	0.854	0.758	0.753	9.73
19) T	2,2-dichloropropane	0.597	0.546	0.633	0.691	0.635	0.621	8.62
20) T	cis-1,2-dichloroethene	0.373	0.354	0.392	0.429	0.383	0.386	7.19
21) T	bromochloromethane	0.947	0.894	1.019	1.128	0.997	0.997	8.80
22) C	chloroform	1.025	0.989	1.086	1.149	0.981	1.046	6.78
23) T	1,1,1-trichloroethane	0.794	0.764	0.860	0.929	0.818	0.833	7.72
24) S	Dibromofluoromethane	0.720	0.686	0.785	0.786	0.670	0.730	7.44
25)	Vinyl Acetate	0.148	0.120	0.116	0.115	0.132	0.126	11.05
26)	2-Butanone	0.561	0.540	0.623	0.636	0.542	0.580	7.91
27) T	carbon tetrachloride	0.562	0.534	0.605	0.634	0.547	0.576	7.25
28) T	1,1-dichloropropene	0.788	0.733	0.812	0.833	0.791	0.792	4.70
29) T	benzene	0.623	0.612	0.658	0.744	0.635	0.655	8.10
30) S	1,2-Dichlorethane-d4	0.660	0.645	0.732	0.815	0.732	0.717	9.51
31) T	1,2-dichloroethane	0.466	0.449	0.497	0.501	0.432	0.469	6.40
32) T	trichloroethene	0.342	0.365	0.391	0.381	0.322	0.360	7.81
33) C	1,2-dichloropropane	0.377	0.361	0.395	0.431	0.359	0.384	7.69
34) T	dibromomethane	0.898	0.979	1.027	1.010	0.802	0.943	9.89
35) T	bromodichloromethane	0.123	0.112	0.130	0.133	0.135	0.127	7.61
36)	2-Chloroethyl Vinyl Ether	0.530	0.549	0.596	0.609	0.485	0.554	9.12
37) T	cis-1,3-dichloropropene	0.956	0.864	0.991	1.053	1.012	0.975	7.34
38) S	Toluene-d8	0.959	0.845	0.987	1.069	1.059	0.984	9.20
39) C	toluene	0.510	0.540	0.579	0.582	0.471	0.536	8.73
40) T	trans-1,3-dichloropropene	0.297	0.278	0.312	0.295	0.281	0.293	4.76
41) T	1,1,2-trichloroethane	0.916	0.907	0.970	1.188	1.024	1.001	11.43
42) S	4-Bromofluorobenzene	-----ISTD-----						
43)	Chlorobenzene-d5	-----						

000300

(#) = Out of Range
 V21006CS.M

Thu Oct 07 12:19:16 1999

VOA3

Page 1

Response Factor Report vqa2

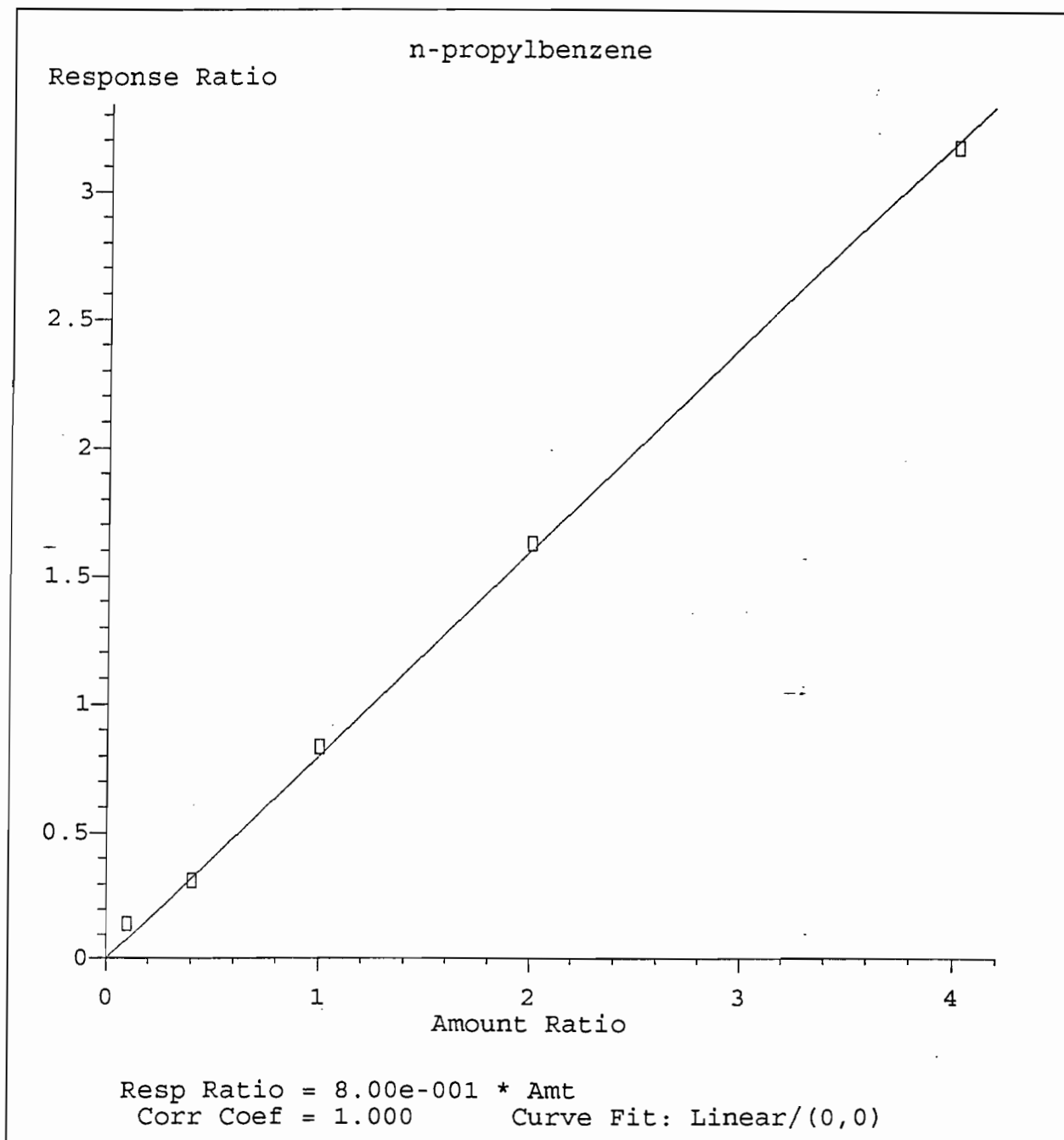
Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Initial Calibration

Calibration Files

50 =P19049.D 200 =P19051.D 100 =P19052.D
 20 =P19053.D 5 =P19054.D

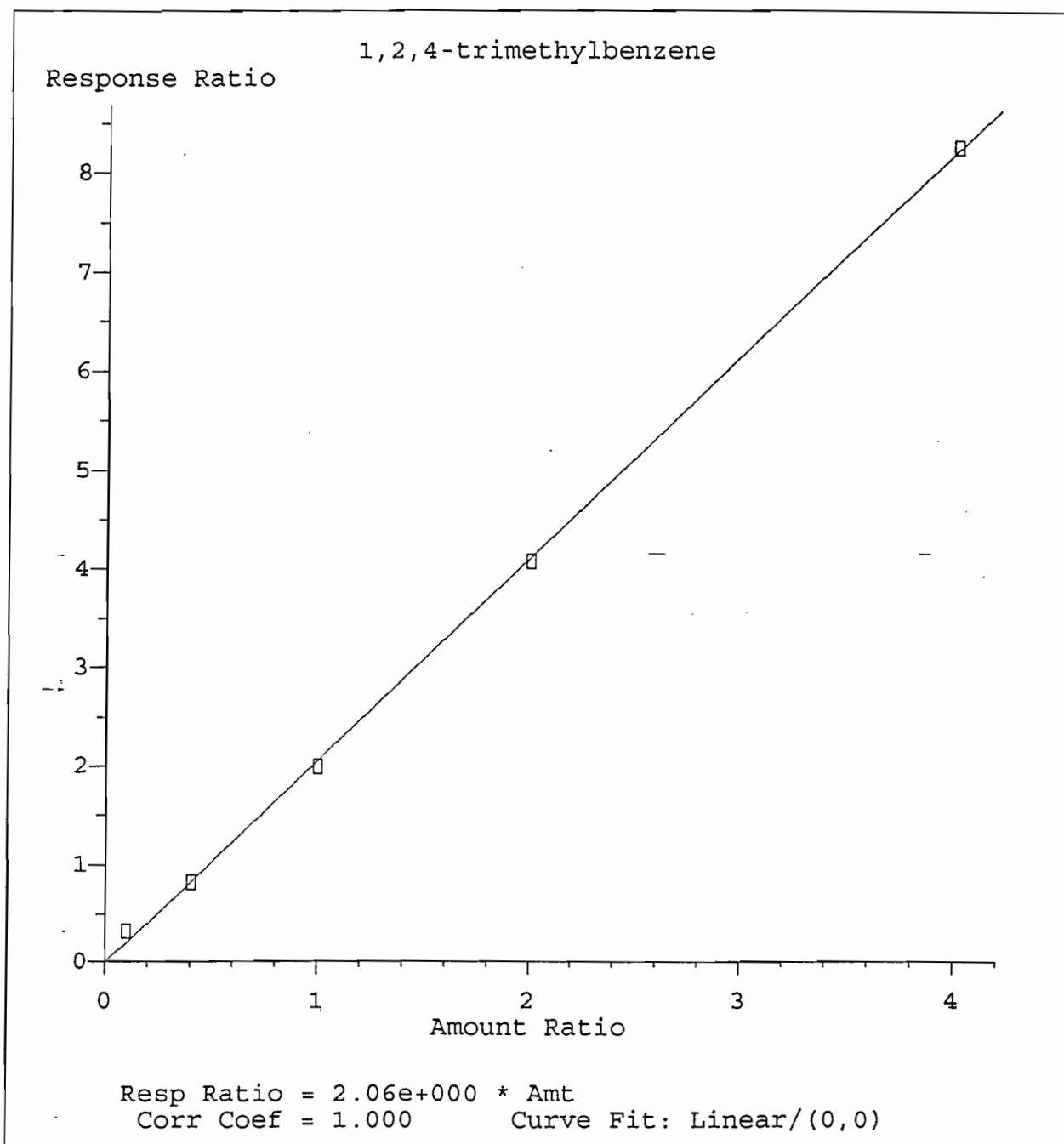
	Compound	50	200	100	20	5	Avg	%RSD
44)	4-Methyl-2-Pentanone	0.252	0.243	0.262	0.242	0.351	0.270	17.07
45) T	tetrachloroethene	0.533	0.447	0.536	0.507	0.496	0.504	7.17
46) T	1,3-dichloropropane	0.470	0.497	0.521	0.481	0.451	0.484	5.50
47) T	dibromochloromethane	0.656	0.706	0.734	0.583	0.758	0.687	10.14
48) T	1,2-dibromoethane	0.504	0.537	0.559	0.535	0.479	0.523	5.99
49)	2-Hexanone	0.217	0.212	0.197	0.156	0.171	0.191	13.76
50) P	chlorobenzene	0.784	0.731	0.805	0.867	0.864	0.810	7.07#
51)	1-Chlorohexane	0.456	0.417	0.466	0.475	0.460	0.455	4.85
52) T	1,1,1,2-tetrachloroethane	0.489	0.466	0.511	0.425	0.402	0.459	9.87
53) C	ethylbenzene	1.334	1.245	1.362	1.436	1.450	1.365	6.08
54) T	m&p-xylenes	0.438	0.423	0.480	0.502	0.495	0.468	7.52
55) T	o-xylene	1.235	1.251	1.327	1.462	1.483	1.352	8.58
56) T	styrene	0.728	0.754	0.824	0.856	0.731	0.778	7.47
57) P	bromoform	0.561	0.612	0.616	0.523	0.396	0.542	16.62#
58)	1,4-dichlorobenzene-d4	-----ISTD-----						
59) T	isopropylbenzene	2.168	2.174	2.181	2.110	2.149	2.156	1.31
60) T	bromobenzene	1.498	1.437	1.487	1.450	1.530	1.481	2.55
61) P	1,1,2,2-tetrachloroethane	0.884	0.851	0.892	0.806	0.848	0.856	4.01#
62)	1,2,3-trichloropropane	0.631	0.640	0.657	0.591	0.681	0.640	5.22
63) T	n-propylbenzene	0.836	0.794	0.813	0.777	1.430	0.930	30.16
64) T	2-chlorotoluene	0.541	0.517	0.541	0.535	0.529	0.533	1.87
65) T	4-chlorotoluene	0.547	0.540	0.562	0.540	0.542	0.546	1.68
66) T	1,3,5-trimethylbenzene	2.053	2.060	2.037	1.961	1.768	1.976	6.21
67) T	tert-butylbenzene	1.896	1.933	1.887	1.867	1.953	1.907	1.84
68) T	1,2,4-trimethylbenzene	1.990	2.064	2.038	2.045	3.268	2.281	24.21
69) T	sec-butylbenzene	2.509	2.524	2.643	2.568	2.547	2.558	2.05
70) T	1,3-dichlorobenzene	1.289	1.250	1.283	1.301	1.361	1.297	3.14
71) T	4-isopropyltoluene	2.315	2.263	2.311	2.319	2.564	2.355	5.06
72) T	1,4-dichlorobenzene	1.270	1.263	1.305	1.386	1.351	1.315	4.02
73) T	1,2-dichlorobenzene	1.241	1.227	1.265	1.242	1.247	1.244	1.08
74) T	n-butylbenzene	2.233	2.259	2.304	2.200	2.904	2.380	12.41
75) T	1,2-dibromo-3-chloropropa	0.301	0.360	0.341	0.281	0.276	0.312	11.94
76) T	1,2,4-trichlorobenzene	1.054	1.152	1.125	1.008	1.069	1.082	5.27
77) T	hexachlorobutadiene	0.871	0.904	0.891	0.894	0.827	0.877	3.46
78) T	naphthalene	1.493	1.613	1.573	1.517	1.852	1.610	8.91
79) T	1,2,3-trichlorobenzene	0.946	1.020	0.943	0.942	0.975	0.965	3.48

000301



Method Name: I:\HPCHEM\1\METHODS\V21006CS.M
Calibration Table Last Updated: Thu Oct 07 12:17:46 1999

000302



Method Name: I:\HPCHEM\1\METHODS\V21006CS.M
Calibration Table Last Updated: Thu Oct 07 12:18:32 1999

000303

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19049.D
 Acq Time : 6 Oct 99 5:53 pm
 Sample : 50PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 11:56 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1148289	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	1165750	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	798958	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.97	113	912061	50.00	ug/L	100.00%
30) 1,2-Dichlorethane-d4	8.67	65	715315	50.00	ug/L	100.00%
38) Toluene-d8	12.76	98	1097980	50.00	ug/L	100.00%
42) 4-Bromofluorobenzene	19.48	95	1052170	50.00	ug/L	100.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.73	85	447926	50.00	ug/L	100
3) chloromethane	1.95	50	227311	50.00	ug/L	100
4) vinyl chloride	2.07	62	224498	50.00	ug/L	100
5) bromomethane	2.47	94	240595	50.00	ug/L	100
6) chloroethane	2.60	64	110867	50.00	ug/L	100
7) Acrolein	3.64	56	140677	500.00	ug/L	100
8) trichlorofluoromethane	2.90	101	1130865	50.00	ug/L	100
9) 1,1-dichloroethene	3.66	61	577581	50.00	ug/L	100
10) Acetone	3.90	43	137649	50.00	ug/L	100
11) Carbon Disulfide	3.95	76	635258	50.00	ug/L	100
12) Iodo Methane	3.91	142	865693	50.00	ug/L	100
13) methylene chloride	4.58	84	252701	50.00	ug/L	100
14) trans-1,2-dichloroethene	4.97	61	520029	50.00	ug/L	100
15) TBA	4.96	59	345045	500.00	ug/L	100
16) MTBE	5.01	73	1030296	50.00	ug/L	100
17) Acrylonitrile	5.16	53	387805	500.00	ug/L	100
18) 1,1-dichloroethane	5.83	63	785448	50.00	ug/L	100
19) 2,2-dichloropropane	6.89	77	849624	50.00	ug/L	100
20) cis-1,2-dichloroethene	6.98	61	685832	50.00	ug/L	100
21) bromochloromethane	7.45	49	428603	50.00	ug/L	100
22) chloroform	7.64	83	1087118	50.00	ug/L	100
23) 1,1,1-trichloroethane	7.86	97	1176692	50.00	ug/L	100
25) Vinyl Acetate	5.97	43	826581	50.00	ug/L	100
26) 2-Butanone	7.10	43	170015	50.00	ug/L	100
27) carbon tetrachloride	8.10	117	644091	50.00	ug/L	100
28) 1,1-dichloropropene	8.18	75	644885	50.00	ug/L	100
29) benzene	8.60	78	904978	50.00	ug/L	100
31) 1,2-dichloroethane	8.82	62	758278	50.00	ug/L	100
32) trichloroethene	10.03	130	534952	50.00	ug/L	100
33) 1,2-dichloropropane	10.60	63	392751	50.00	ug/L	100
34) dibromomethane	10.86	174	432824	50.00	ug/L	100
35) bromodichloromethane	11.25	83	1031054	50.00	ug/L	100
36) 2-Chloroethyl Vinyl Ether	12.92	63	140712	50.00	ug/L	100

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19049.D
Acq Time : 6 Oct 99 5:53 pm
Sample : 50PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 11:56 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.30	75	609135	50.00	ug/L	100
39) toluene	12.93	91	1101041	50.00	ug/L	100
40) trans-1,3-dichloropropene	13.72	75	585865	50.00	ug/L	100
41) 1,1,2-trichloroethane	14.12	97	341453	50.00	ug/L	100
44) 4-Methyl-2-Pentanone	12.73	43	293883	50.00	ug/L	100
45) tetrachloroethene	14.15	166	620928	50.00	ug/L	100
46) 1,3-dichloropropane	14.51	76	548001	50.00	ug/L	100
47) dibromochloromethane	14.96	129	764865	50.00	ug/L	100
48) 1,2-dibromoethane	15.19	107	588044	50.00	ug/L	100
49) 2-Hexanone	14.78	43	253299	50.00	ug/L	100
50) chlorobenzene	16.40	112	913644	50.00	ug/L	100
51) 1-Chlorohexane	16.46	91	532074	50.00	ug/L	100
52) 1,1,1,2-tetrachloroethane	16.69	133	570609	50.00	ug/L	100
53) ethylbenzene	16.67	91	1554847	50.00	ug/L	100
54) m&p-xylenes	17.01	106	1021816	100.00	ug/L	100
55) o-xylene	18.02	91	1439526	50.00	ug/L	100
56) styrene	18.11	104	848124	50.00	ug/L	100
57) bromoform	18.57	173	653423	50.00	ug/L	100
59) isopropylbenzene	19.00	105	1732273	50.00	ug/L	100
60) bromobenzene	19.77	77	1197229	50.00	ug/L	100
61) 1,1,2,2-tetrachloroethane	20.09	83	706560	50.00	ug/L	100
62) 1,2,3-trichloropropane	20.14	75	504175	50.00	ug/L	100
63) n-propylbenzene	20.65	120	667764	50.00	ug/L	100
64) 2-chlorotoluene	20.31	126	432178	50.00	ug/L	100
65) 4-chlorotoluene	20.66	126	436963	50.00	ug/L	100
66) 1,3,5-trimethylbenzene	20.66	105	1640050	50.00	ug/L	100
67) tert-butylbenzene	21.47	119	1514444	50.00	ug/L	100
68) 1,2,4-trimethylbenzene	21.64	105	1589882	50.00	ug/L	100
69) sec-butylbenzene	22.08	105	2004513	50.00	ug/L	100
70) 1,3-dichlorobenzene	22.37	146	1029529	50.00	ug/L	100
71) 4-isopropyltoluene	22.53	119	1849785	50.00	ug/L	100
72) 1,4-dichlorobenzene	22.66	146	1015048	50.00	ug/L	100
73) 1,2-dichlorobenzene	23.66	146	991849	50.00	ug/L	100
74) n-butylbenzene	23.66	91	1783911	50.00	ug/L	100
75) 1,2-dibromo-3-chloropropan	25.93	75	240278	50.00	ug/L	100
76) 1,2,4-trichlorobenzene	28.15	180	842149	50.00	ug/L	100
77) hexachlorobutadiene	28.61	225	695536	50.00	ug/L	100
78) naphthalene	28.80	128	1193149	50.00	ug/L	100
79) 1,2,3-trichlorobenzene	29.53	180	755518	50.00	ug/L	100

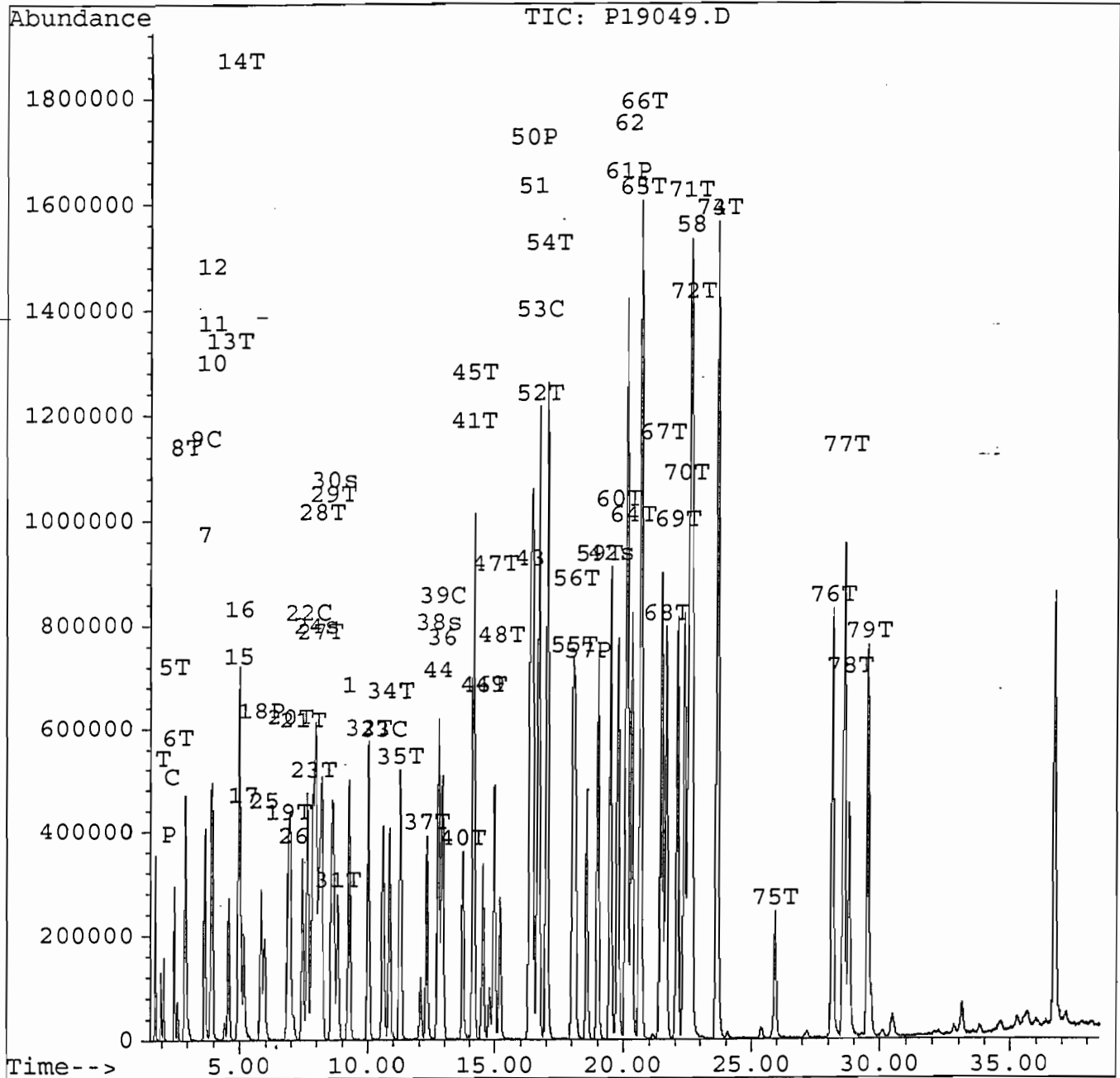
000305

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19049.D
Acq Time : 6 Oct 99 5:53 pm
Sample : 50PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 11:56 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Single Level Calibration



000306

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19051.D
 Acq Time : 6 Oct 99 7:23 pm
 Sample : 200PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:14 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	988101	50.00	ug/L	-0.02
43) Chlorobenzene-d5	16.32	117	973341	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	660407	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	754830	48.09	ug/L	96.18%
30) 1,2-Dichloroethane-d4	8.65	65	604779	49.13	ug/L	98.25%
38) Toluene-d8	12.75	98	853418	45.16	ug/L	90.33%
42) 4-Bromofluorobenzene	19.47	95	896299	49.50	ug/L	99.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.72	85	1618728	209.98	ug/L m	99
3) chloromethane	1.94	50	876033	223.93	ug/L m	100
4) vinyl chloride	2.07	62	883463	228.66	ug/L m	98
5) bromomethane	2.47	94	887357	214.30	ug/L m	74
6) chloroethane	2.59	64	396791	207.96	ug/L m	96
7) Acrolein	3.66	56	458002	1891.75	ug/L m	100
8) trichlorofluoromethane	2.88	101	3293258	169.21	ug/L m	96
9) 1,1-dichloroethene	3.64	61	1912784	192.43	ug/L m	98
10) Acetone	3.94	43	290816	122.76	ug/L m	98
11) Carbon Disulfide	3.92	76	2020066	184.77	ug/L m	99
12) Iodo Methane	3.89	142	2889332	193.93	ug/L m	97
13) methylene chloride	4.56	84	839022	192.92	ug/L m	98
14) trans-1,2-dichloroethene	4.96	61	1628736	181.99	ug/L m	98
15) TBA	5.05	59	1277686	2151.63	ug/L m	95
16) MTBE	5.00	73	3190721	179.95	ug/L m	95
17) Acrylonitrile	5.19	53	1247606	1869.32	ug/L m	96
18) 1,1-dichloroethane	5.83	63	2684912	198.62	ug/L m	96
19) 2,2-dichloropropane	6.88	77	2563316	175.31	ug/L m	94
20) cis-1,2-dichloroethene	6.97	61	2158845	182.90	ug/L m	98
21) bromochloromethane	7.43	49	1399667	189.75	ug/L m	97
22) chloroform	7.63	83	3535348	188.96	ug/L m	97
23) 1,1,1-trichloroethane	7.85	97	3909417	193.05	ug/L m	97
25) Vinyl Acetate	5.97	43	2711383	190.60	ug/L m	100
26) 2-Butanone	7.12	43	473252	161.74	ug/L m	99
27) carbon tetrachloride	8.09	117	2134317	192.54	ug/L m	97
28) 1,1-dichloropropene	8.19	75	2110029	190.12	ug/L m	94
29) benzene	8.58	78	2898564	186.11	ug/L m	99
31) 1,2-dichloroethane	8.82	62	2547365	195.20	ug/L m	100
32) trichloroethene	10.01	130	1775120	192.81	ug/L m	97
33) 1,2-dichloropropane	10.59	63	1443058	213.49	ug/L m	99
34) dibromomethane	10.85	174	1425216	191.33	ug/L m	95
35) bromodichloromethane	11.25	83	3870512	218.13	ug/L m	98
36) 2-Chloroethyl Vinyl Ether	12.90	63	441272	182.22	ug/L m	89

(#) = qualifier out of range (m) = manual integration
 P19051.D V21006CS.M Thu Oct 07 12:30:14 1999

VOA3

Page 1

000307

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19051.D
 Acq Time : 6 Oct 99 7:23 pm
 Sample : 200PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:14 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.28	75	2169868	206.99	ug/L m	95
39) toluene	12.90	91	3339792	176.25	ug/L m	98
40) trans-1,3-dichloropropene	13.71	75	2133233	211.57	ug/L m	98
41) 1,1,2-trichloroethane	14.11	97	1096991	186.68	ug/L m	97
44) 4-Methyl-2-Pentanone	12.71	43	945054	192.57	ug/L	97
45) tetrachloroethene	14.14	166	1738566	167.67	ug/L	97
46) 1,3-dichloropropane	14.51	76	1935547	211.51	ug/L	99
47) dibromochloromethane	14.95	129	2747951	215.15	ug/L	92
48) 1,2-dibromoethane	15.19	107	2090776	212.92	ug/L	97
49) 2-Hexanone	14.77	43	823530	194.70	ug/L	99
50) chlorobenzene	16.39	112	2847411	186.63	ug/L	98
51) 1-Chlorohexane	16.45	91	1625290	182.92	ug/L	100
52) 1,1,1,2-tetrachloroethane	16.68	133	1814479	190.42	ug/L	99
53) ethylbenzene	16.67	91	4846740	186.67	ug/L	100
54) m&p-xylenes	17.00	106	3295317	386.25	ug/L	98
55) o-xylene	18.01	91	4871819	202.67	ug/L	97
56) styrene	18.10	104	2934540	207.20	ug/L	92
57) bromoform	18.56	173	2383379	218.43	ug/L	97
59) isopropylbenzene	19.00	105	5742834	200.54	ug/L	99
60) bromobenzene	19.76	77	3794833	191.73	ug/L	99
61) 1,1,2,2-tetrachloroethane	20.08	83	2248415	192.49	ug/L	95
62) 1,2,3-trichloropropane	20.13	75	1690253	202.79	ug/L	99
63) n-propylbenzene	20.65	120	2097660	190.02	ug/L	69
64) 2-chlorotoluene	20.31	126	1366757	191.30	ug/L	91
65) 4-chlorotoluene	20.65	126	1427219	197.57	ug/L	92
66) 1,3,5-trimethylbenzene	20.64	105	5442508	200.74	ug/L	96
67) tert-butylbenzene	21.45	119	5106569	203.97	ug/L m	91
68) 1,2,4-trimethylbenzene	21.64	105	5453231	207.48	ug/L	97
69) sec-butylbenzene	22.07	105	6667300	201.20	ug/L	99
70) 1,3-dichlorobenzene	22.36	146	3301007	193.95	ug/L	97
71) 4-isopropyltoluene	22.53	119	5979204	195.53	ug/L	97
72) 1,4-dichlorobenzene	22.65	146	3336806	198.85	ug/L	97
73) 1,2-dichlorobenzene	23.64	146	3242491	197.75	ug/L	94
74) n-butylbenzene	23.66	91	5967774	202.36	ug/L	99
75) 1,2-dibromo-3-chloropropan	25.92	75	950971	239.41	ug/L	94
76) 1,2,4-trichlorobenzene	28.15	180	3042121	218.51	ug/L	99
77) hexachlorobutadiene	28.61	225	2387480	207.64	ug/L	99
78) naphthalene	28.79	128	4261429	216.04	ug/L	98
79) 1,2,3-trichlorobenzene	29.51	180	2694376	215.72	ug/L	98

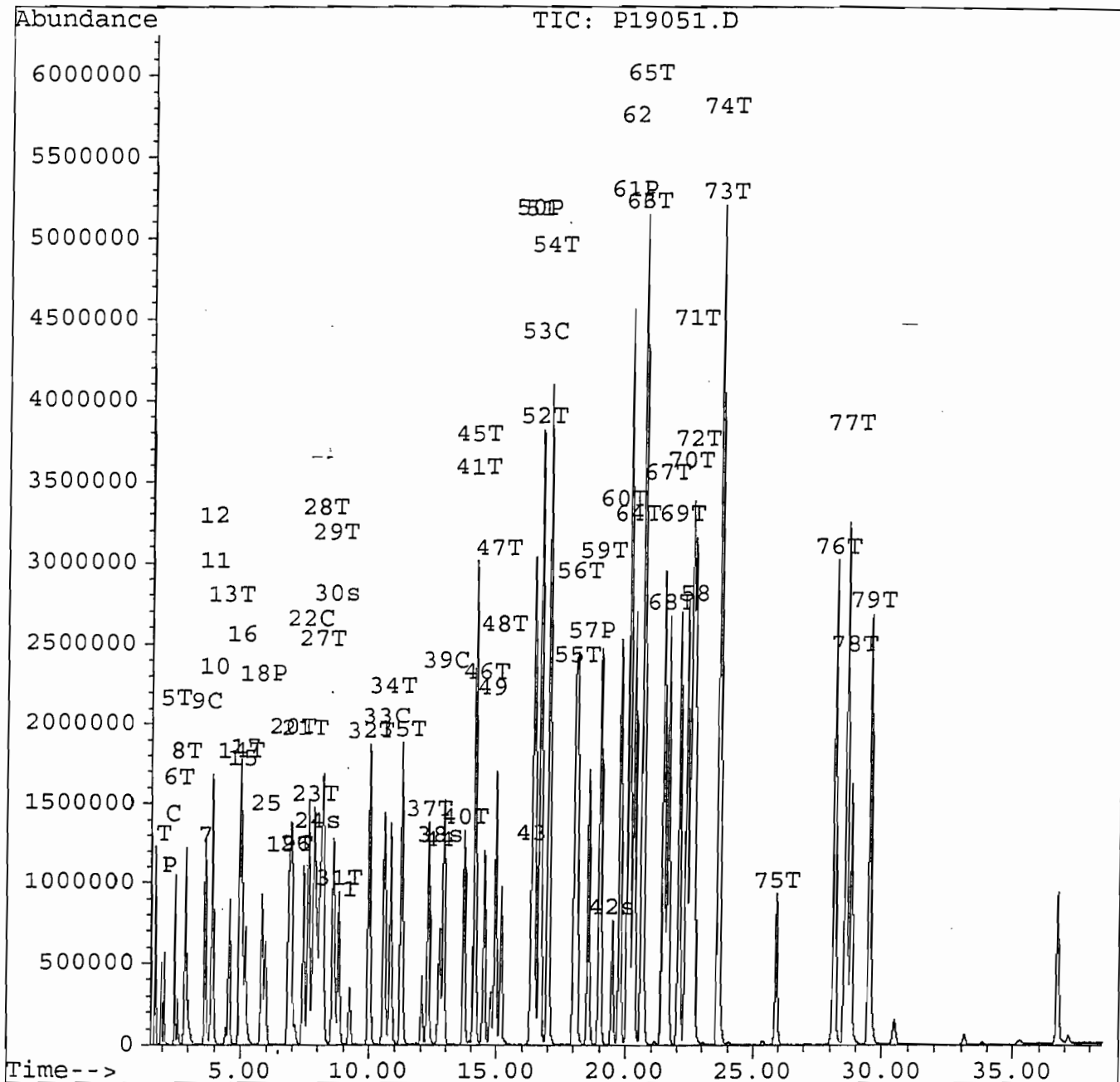
000308

Quantitation Report

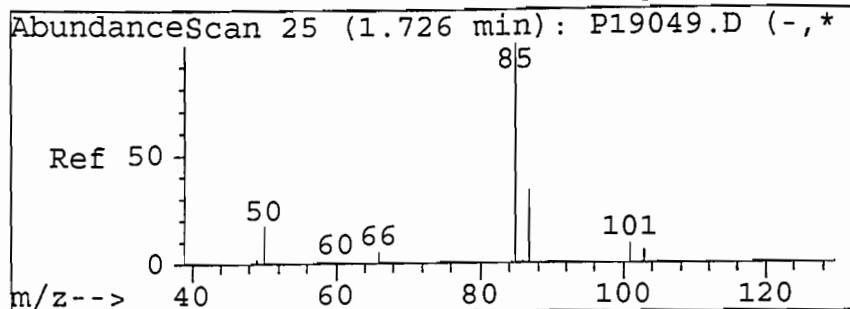
Data File : I:\HPCHEM\1\DATA\V2100699\P19051.D
 Acq Time : 6 Oct 99 7:23 pm
 Sample : 200PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:14 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration



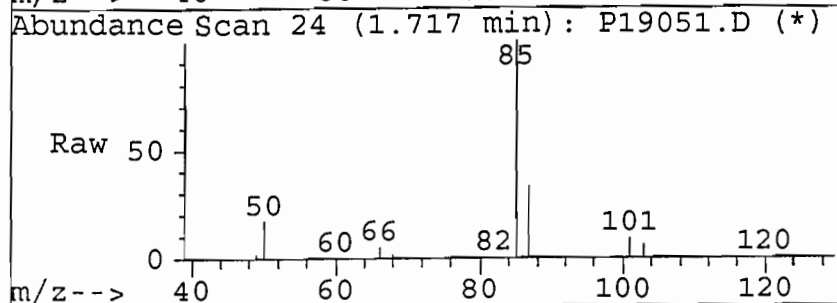
000309



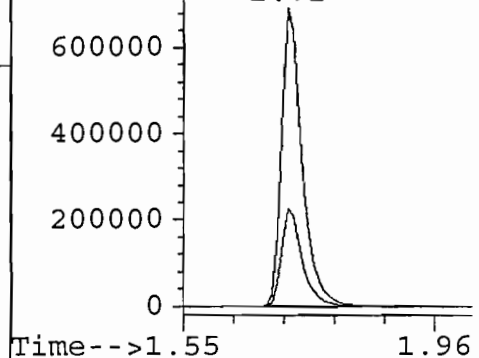
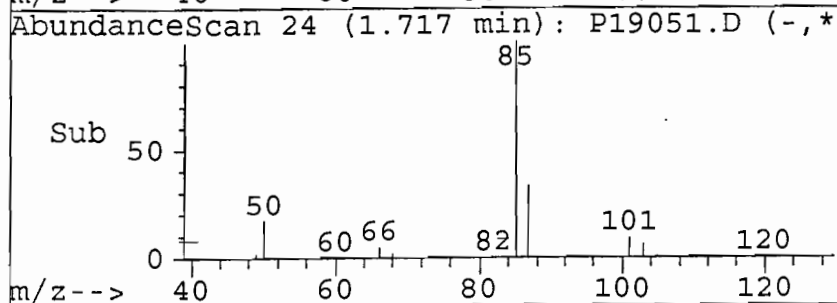
#2
 dichlorodifluoromethane
 Concen: 209.98 ug/L m
 RT: 1.72 min Scan# 24
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion:85 Resp: 1618728

Ion	Ratio	Lower	Upper
85	100		
87	32.8	23.5	43.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

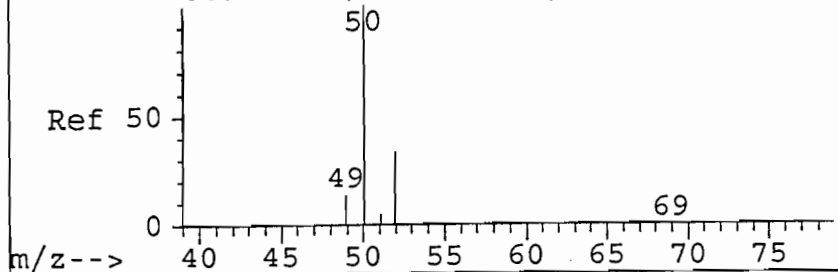


AbundanceIon 85.00 (84.
 800000 Ion 87.00 (86.
 1.72

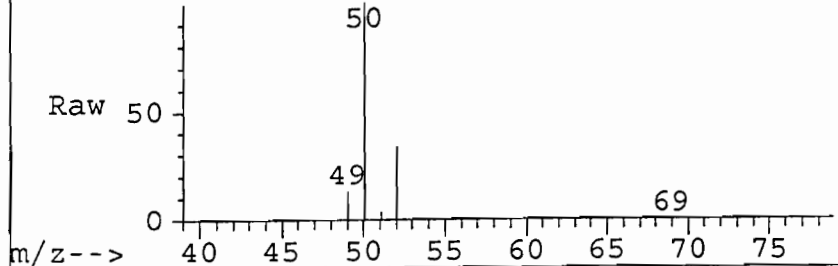


000310

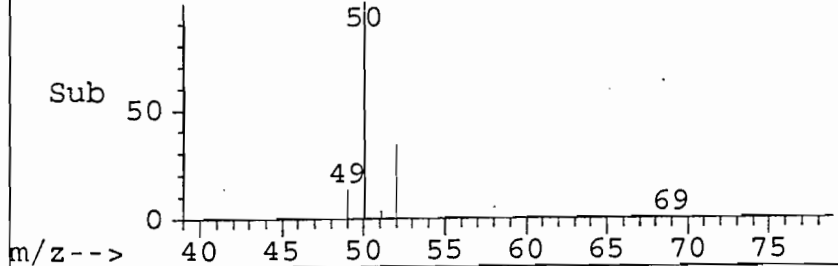
AbundanceScan 51 (1.949 min); P19049.D (-,*



AbundanceScan 50 (1.941 min): P19051.D (*)



AbundanceScan 50 (1.941 min): P19051.D (-,*



#3

chloromethane

Concen: 223.93 ug/L m

RT: 1.94 min Scan# 50

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:50 Resp: 876033

Ion Ratio Lower Upper

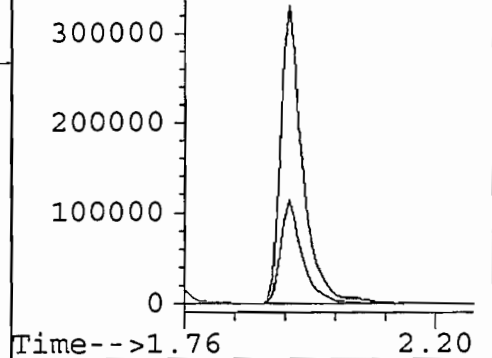
50 100

52 34.3 23.9 44.5

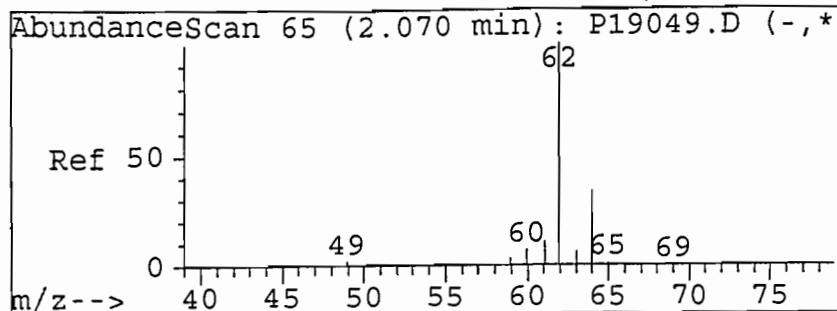
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 50.00 (49.
Ion 52.00 (51.
1.94

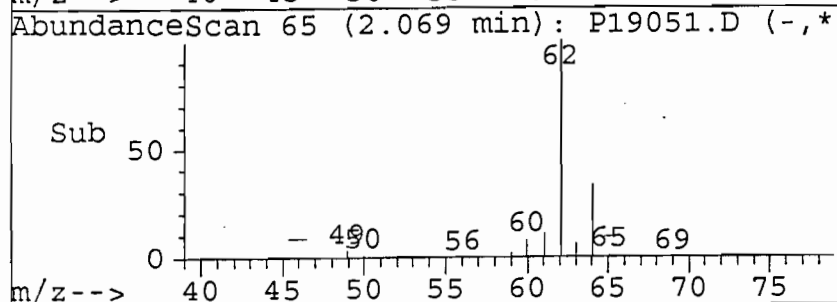
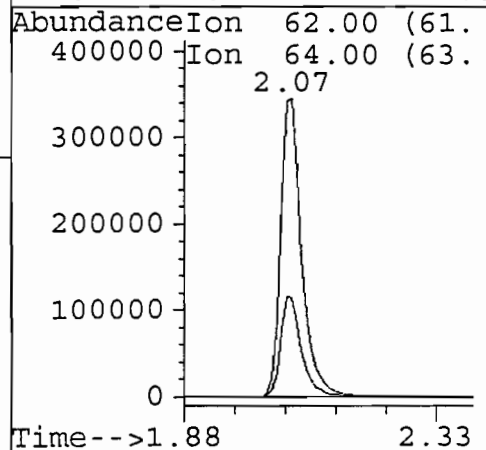
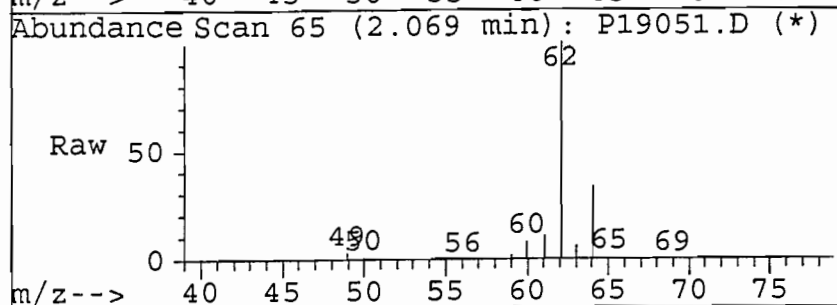


000311

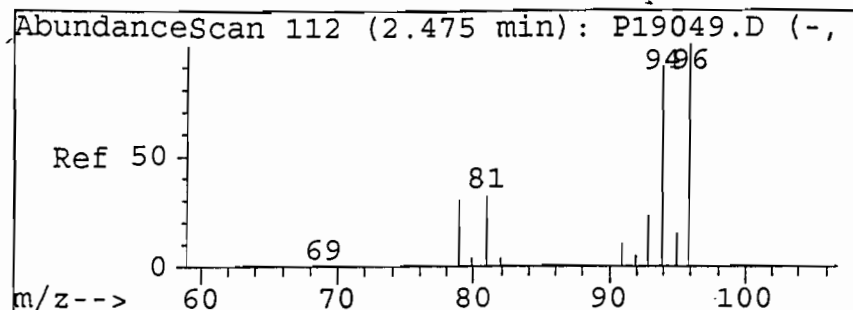


#4
vinyl chloride
Concen: 228.66 ug/L m
RT: 2.07 min Scan# 65
Delta R.T. -0.00 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

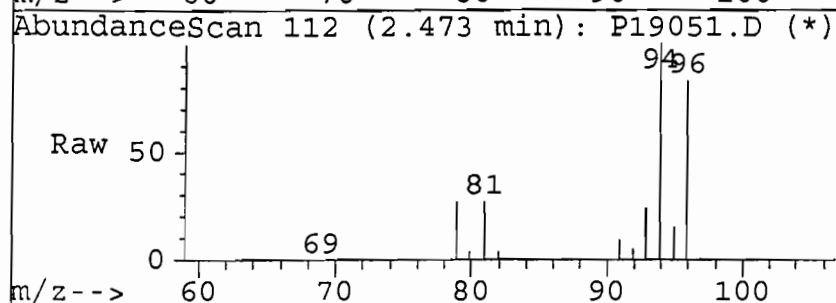
Tgt Ion	Ratio	Lower	Upper
62	100		
64	33.1	23.8	44.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



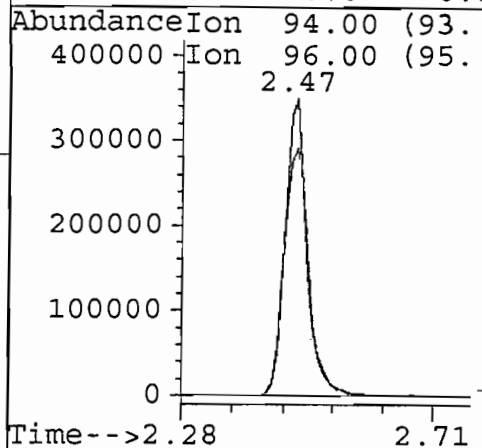
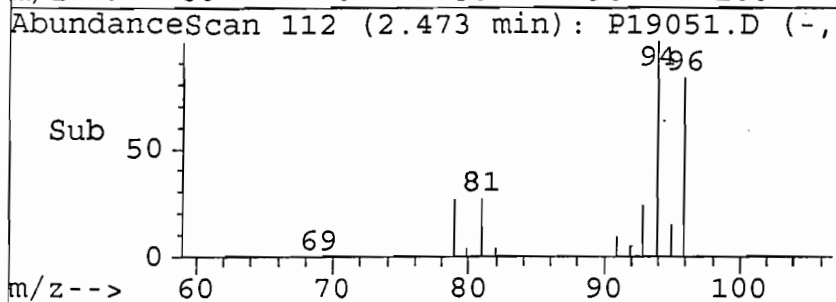
000312



#5
bromomethane
Concen: 214.30 ug/L m
RT: 2.47 min Scan# 112
Delta R.T. -0.00 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

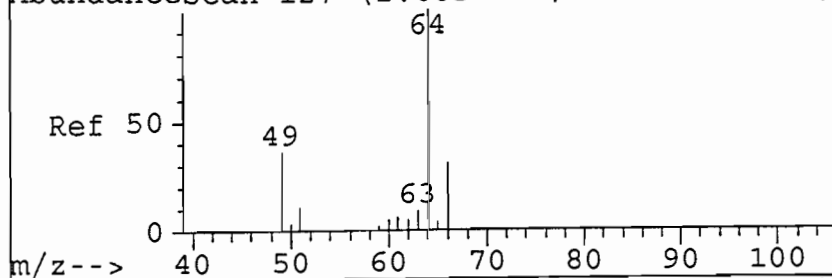


Tgt Ion:94 Resp: 887357
Ion Ratio Lower Upper
94 100
96 83.2 77.8 144.6
0 0.0 0.0 0.0
0 0.0 0.0 0.0



000313

AbundanceScan 127 (2.605 min): P19049.D (-,



#6

chloroethane

Concen: 207.96 ug/L m

RT: 2.59 min Scan# 126

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:64 Resp: 396791

Ion Ratio Lower Upper

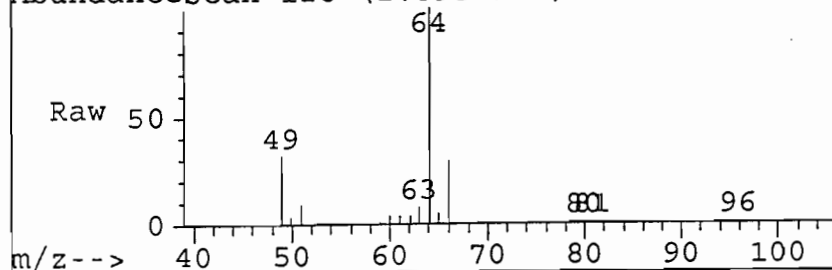
64 100

66 28.6 21.6 40.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 126 (2.593 min): P19051.D (*)



AbundanceIon 64.00 (63.

150000 Ion 66.00 (65.

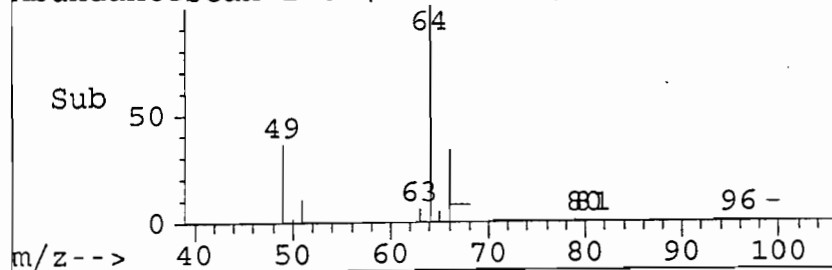
2.59

100000

50000

0

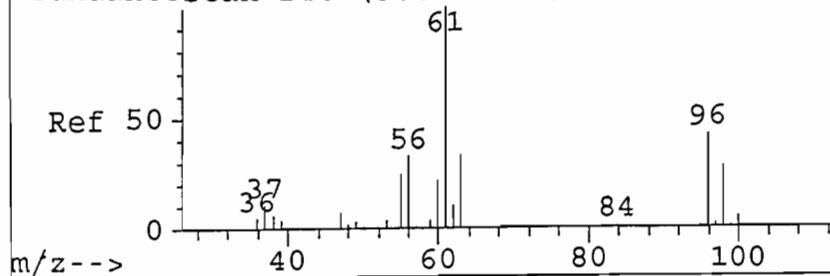
AbundanceScan 126 (2.593 min): P19051.D (-,



Time-->2.42 2.77

000314

AbundanceScan 246 (3.637 min): P19049.D (-,



#7

Acrolein

Concen: 1891.75 ug/L m

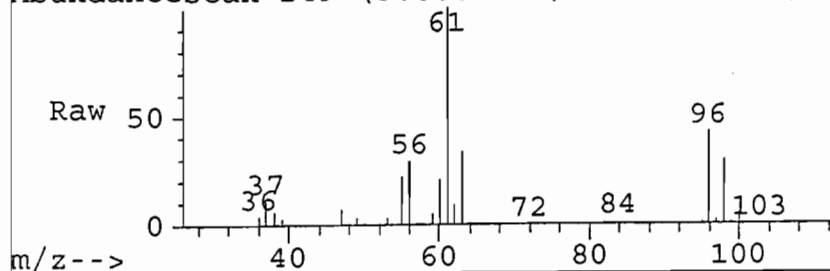
RT: 3.66 min Scan# 249

Delta R.T. 0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 249 (3.660 min): P19051.D (*)



Tgt Ion:56 Resp: 458002

Ion Ratio Lower Upper

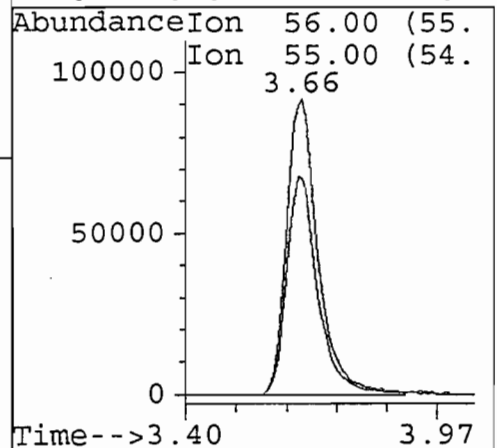
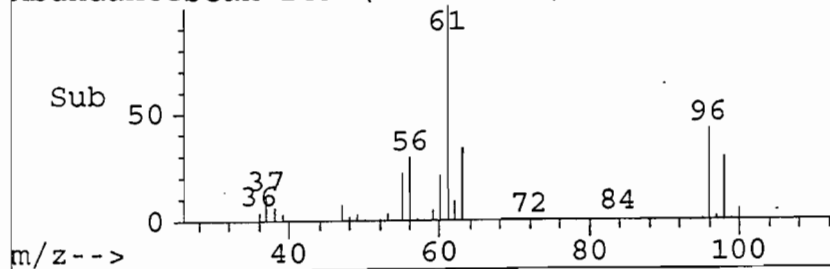
56 100

55 72.7 36.5 109.5

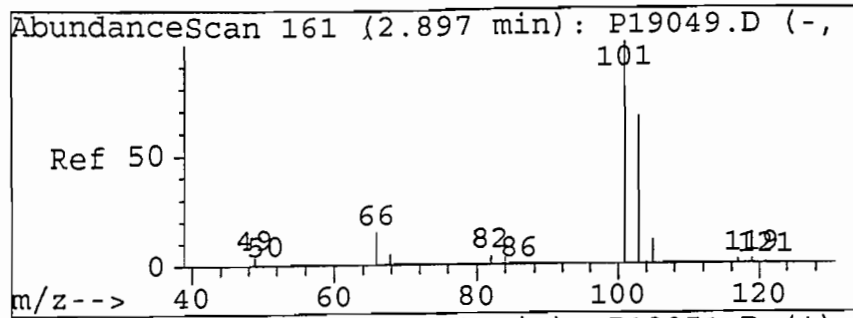
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 249 (3.660 min): P19051.D (-,



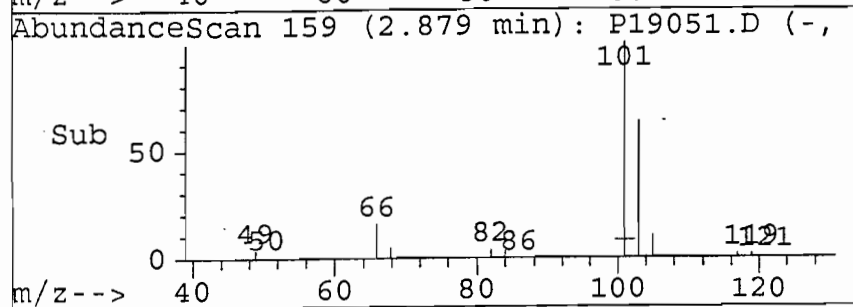
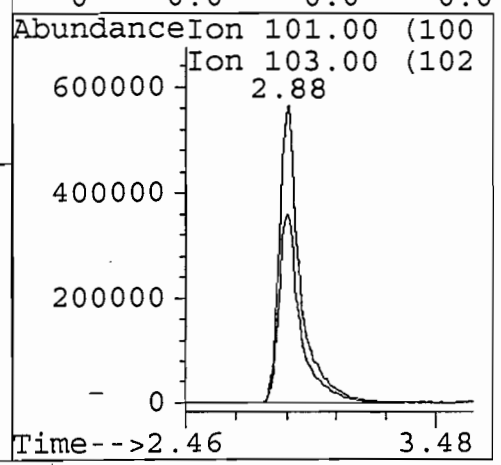
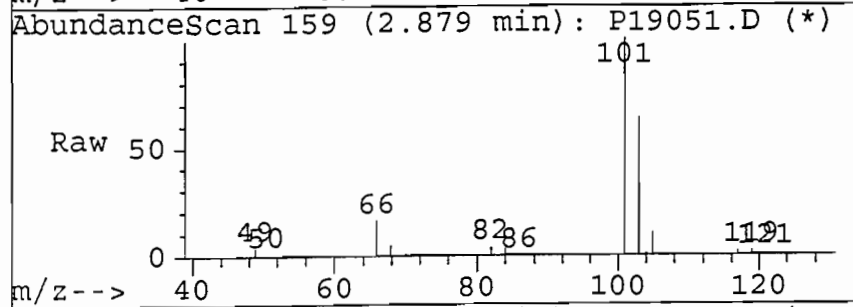
000315



#8
 trichlorofluoromethane
 Concen: 169.21 ug/L m
 RT: 2.88 min Scan# 159
 Delta R.T. -0.02 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

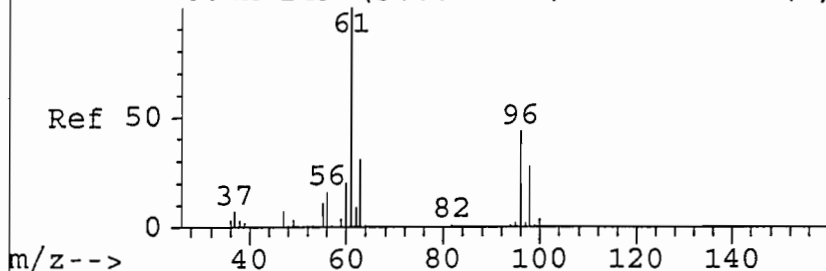
Tgt Ion:101 Resp: 3293258

Ion	Ratio	Lower	Upper
101	100		
103	62.9	46.3	85.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0



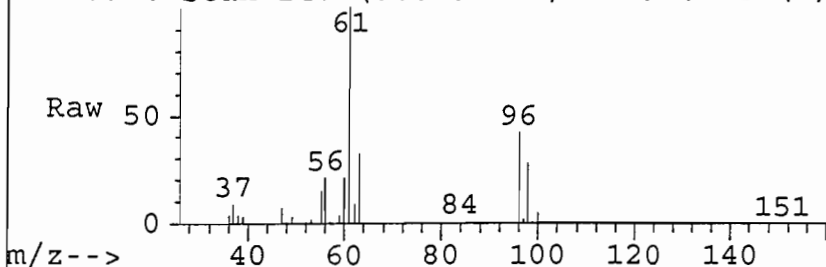
000316

AbundanceScan 249 (3.664 min): P19049.D (-,



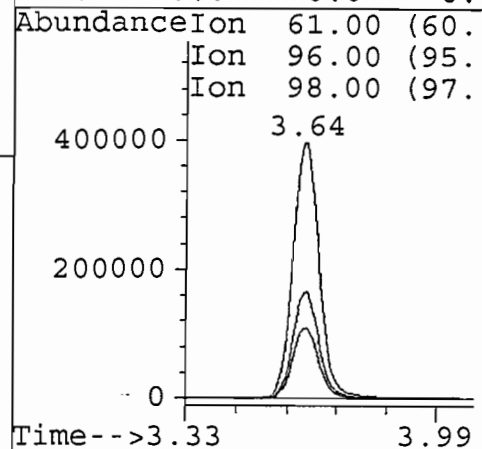
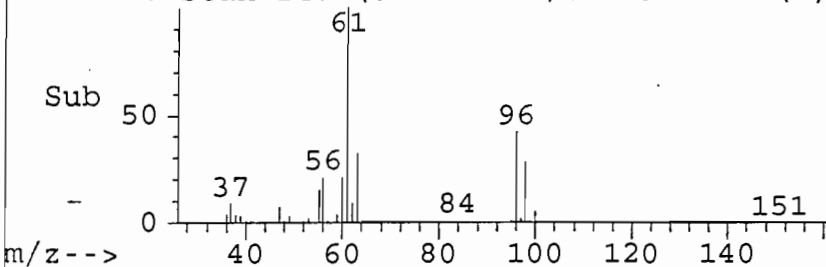
#9
1,1-dichloroethene
Concen: 192.43 ug/L m
RT: 3.64 min Scan# 247
Delta R.T. -0.02 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

AbundanceScan 247 (3.643 min): P19051.D (*)

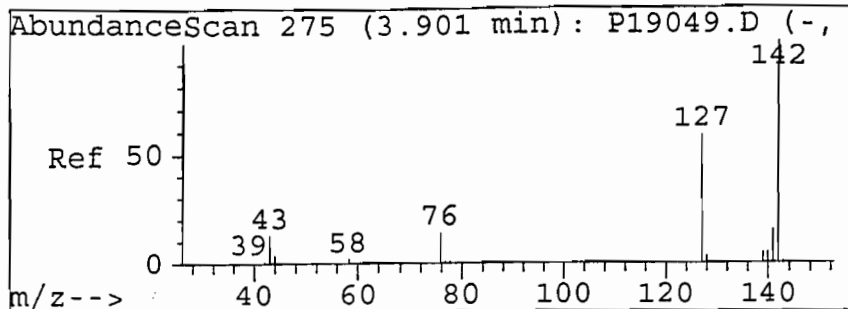


Tgt Ion	Ratio	Lower	Upper
61	100		
96	41.7	30.1	55.9
98	27.5	19.8	36.8
0	0.0	0.0	0.0

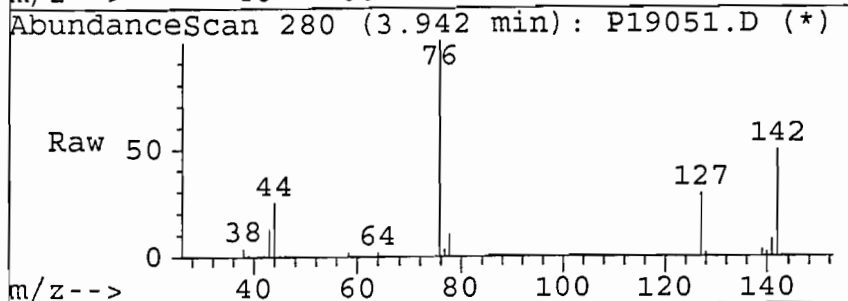
AbundanceScan 247 (3.643 min): P19051.D (-,



000317

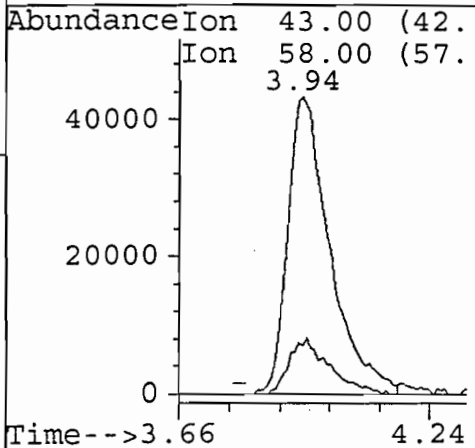
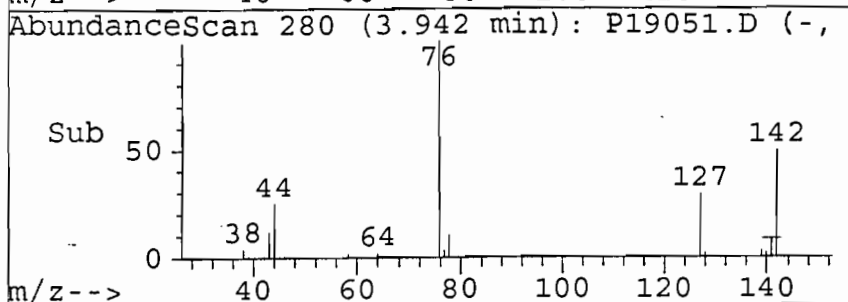


#10
 Acetone
 Concen: 122.76 ug/L m
 RT: 3.94 min Scan# 280
 Delta R.T. 0.04 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm



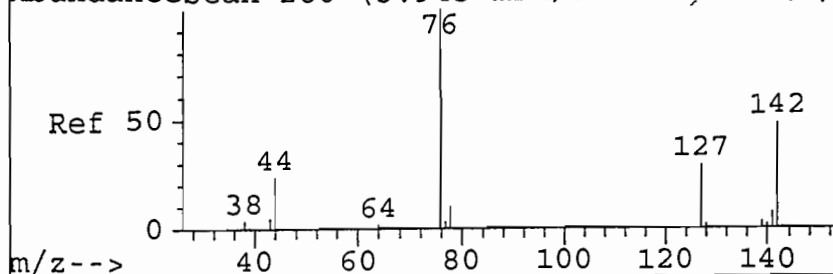
Tgt Ion:43 Resp: 290816

Ion	Ratio	Lower	Upper
43	100		
58	17.7	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000318

AbundanceScan 280 (3.945 min): P19049.D (-,



#11

Carbon Disulfide

Concen: 184.77 ug/L m

RT: 3.92 min Scan# 278

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:76 Resp: 2020066

Ion Ratio Lower Upper

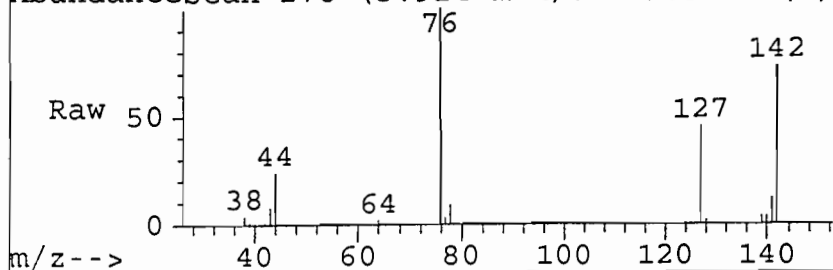
76 100

44 24.6 12.0 36.1

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 278 (3.924 min): P19051.D (*)



AbundanceIon 76.00 (75.

Ion 44.00 (43.

3.92

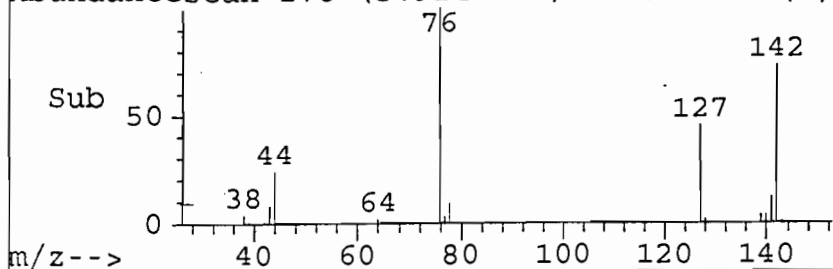
400000

200000

0

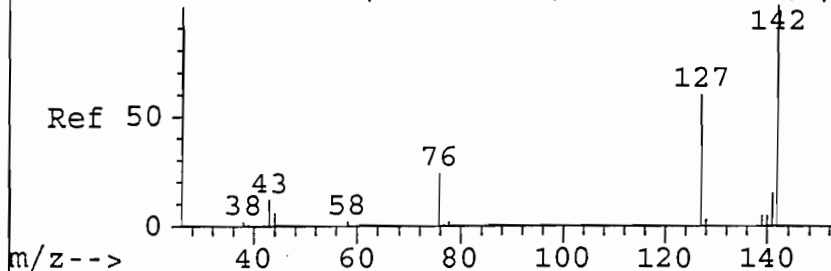
Time-->3.62 4.26

AbundanceScan 278 (3.924 min): P19051.D (-,



000319

AbundanceScan 276 (3.910 min): P19049.D (-,



#12

Iodo Methane

Concen: 193.93 ug/L m

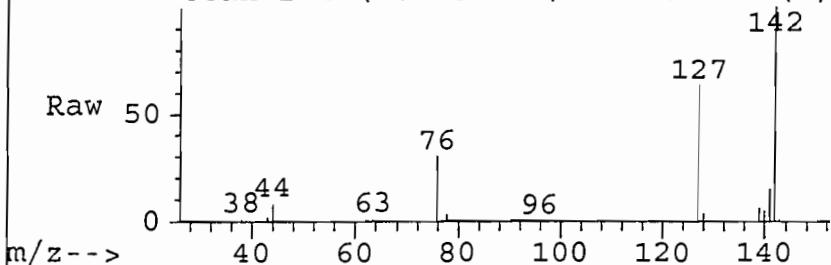
RT: 3.89 min Scan# 274

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 274 (3.888 min): P19051.D (*)



Tgt Ion:142 Resp: 2889332

Ion Ratio Lower Upper

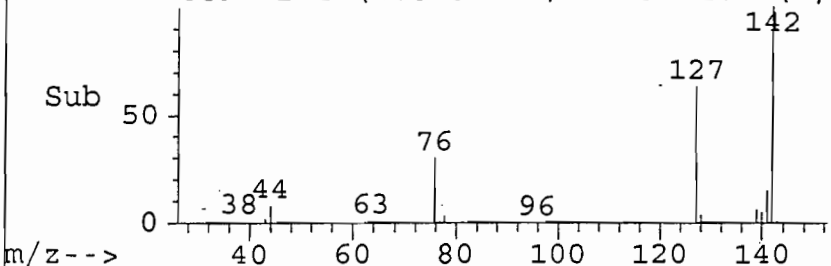
142 100

127 62.2 29.5 88.6

141 15.3 12.2 18.2

0 0.0 0.0 0.0

AbundanceScan 274 (3.888 min): P19051.D (-,



AbundanceIon 142.00 (141

800000 Ion 127.00 (126

Ion 141.00 (140

3.89

600000

400000

200000

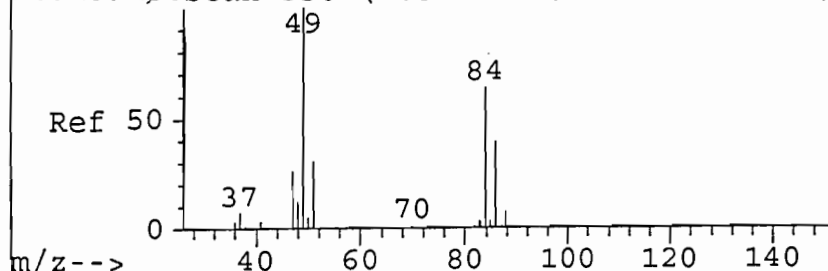
0

Time-->3.58

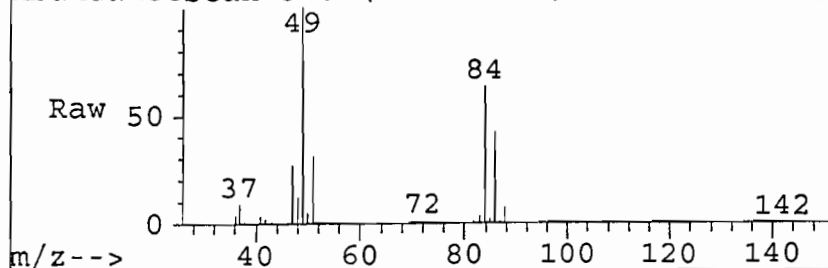
4.24

000320

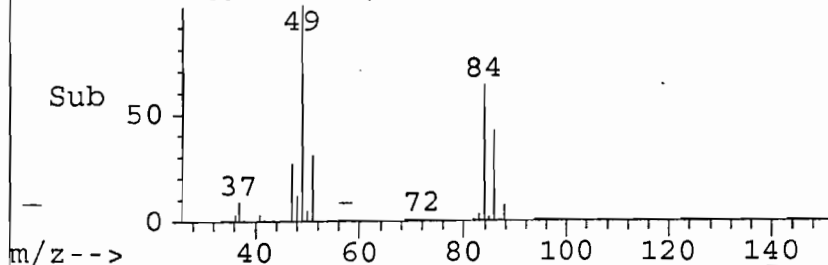
AbundanceScan 350 (4.582 min): P19049.D (-,



AbundanceScan 348 (4.561 min): P19051.D (*)



AbundanceScan 348 (4.561 min): P19051.D (-,



#13

methylene chloride

Concen: 192.92 ug/L m

RT: 4.56 min Scan# 348

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:84 Resp: 839022

Ion Ratio Lower Upper

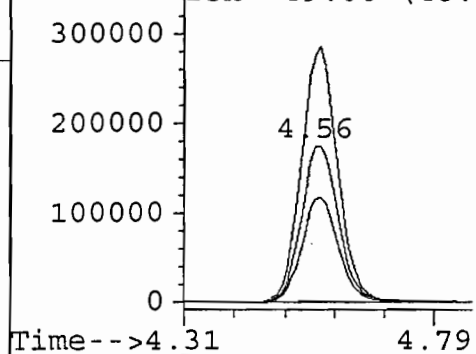
84 100

86 66.4 43.3 80.3

49 158.1 110.4 205.0

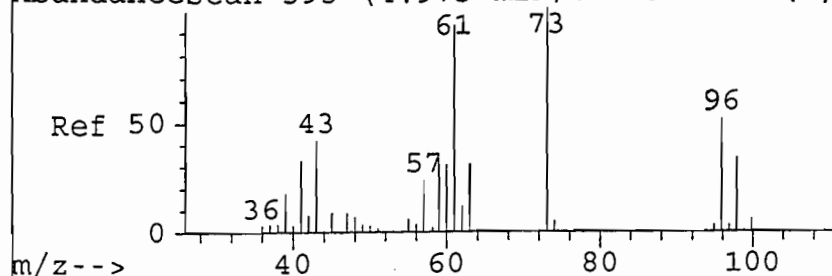
0 0.0 0.0 0.0

AbundanceIon 84.00 (83.
Ion 86.00 (85.
Ion 49.00 (48.

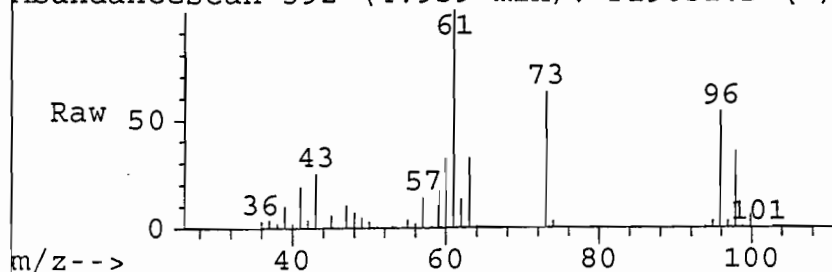


000321

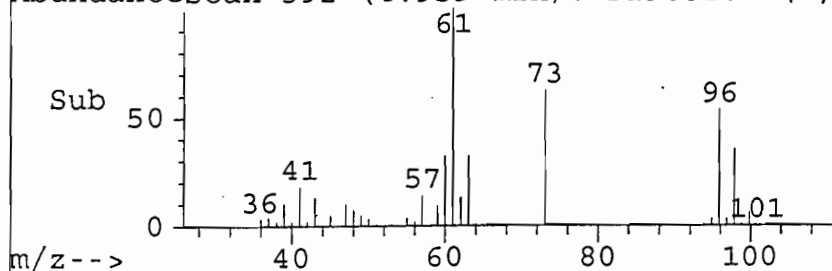
AbundanceScan 393 (4.973 min): P19049.D (-,



AbundanceScan 392 (4.959 min): P19051.D (*)



AbundanceScan 392 (4.959 min): P19051.D (-,



#14

trans-1,2-dichloroethene

Concen: 181.99 ug/L m

RT: 4.96 min Scan# 392

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:61 Resp: 1628736

Ion Ratio Lower Upper

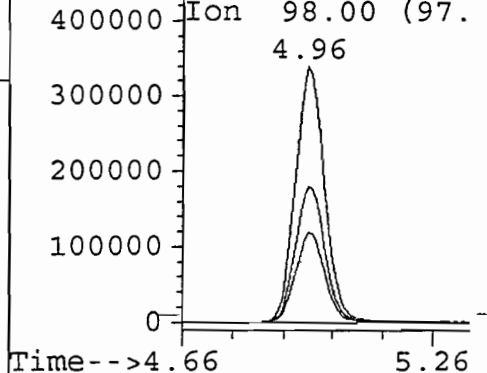
61 100

96 53.0 38.4 71.4

98 34.7 25.2 46.8

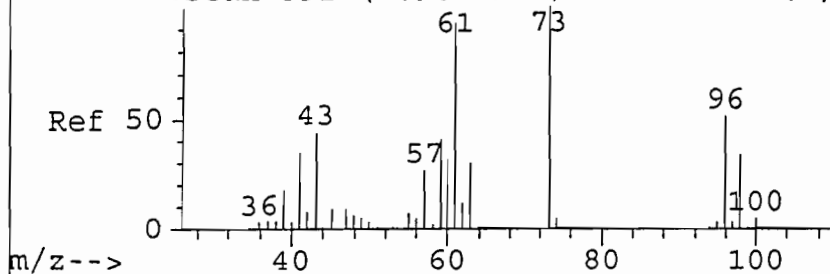
0 0.0 0.0 0.0

AbundanceIon 61.00 (60.
Ion 96.00 (95.
Ion 98.00 (97.

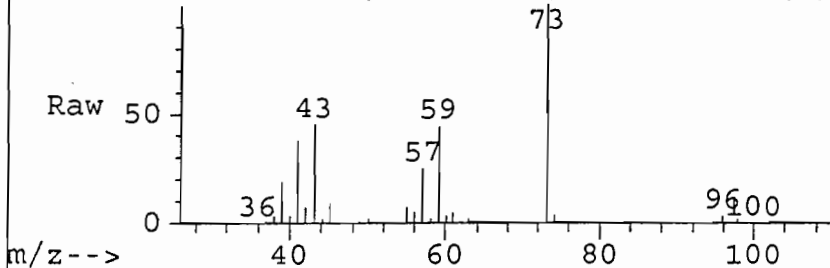


000322

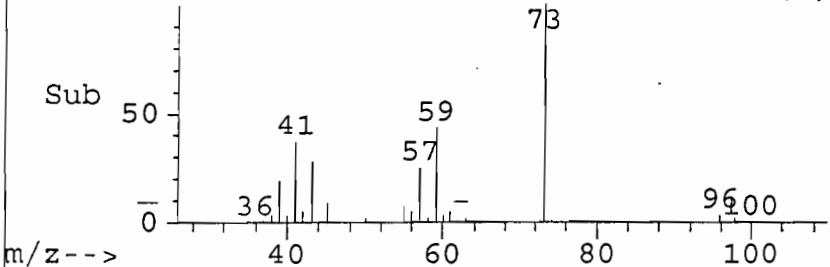
AbundanceScan 392 (4.964 min): P19049.D (-,



AbundanceScan 402 (5.051 min): P19051.D (*)



AbundanceScan 402 (5.051 min): P19051.D (-,



#15

TBA

Concen: 2151.63 ug/L m

RT: 5.05 min Scan# 402

Delta R.T. 0.09 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:59 Resp: 1277686

Ion Ratio Lower Upper

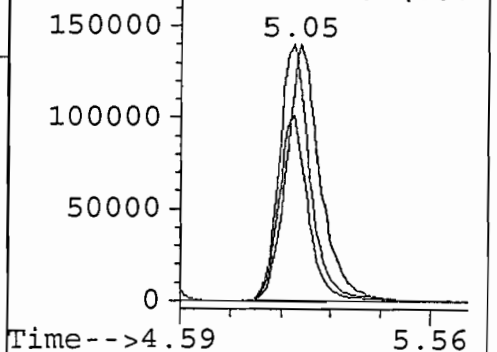
59 100

57 56.6 45.1 83.7

41 84.5 59.6 110.8

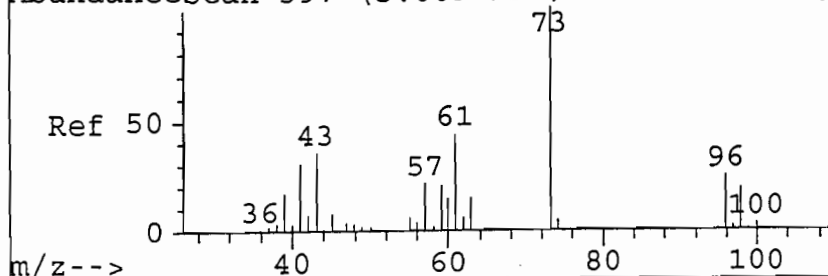
0 0.0 0.0 0.0

AbundanceIon 59.00 (58.
Ion 57.00 (56.
Ion 41.00 (40.

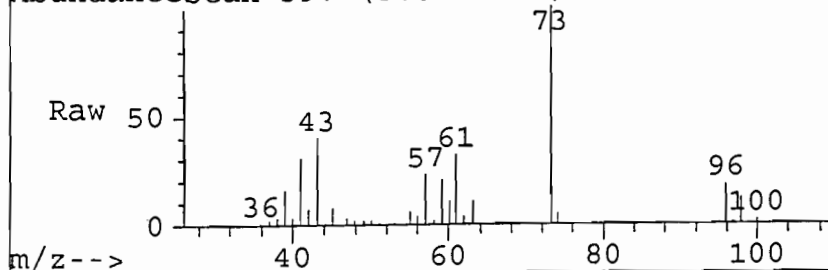


000323

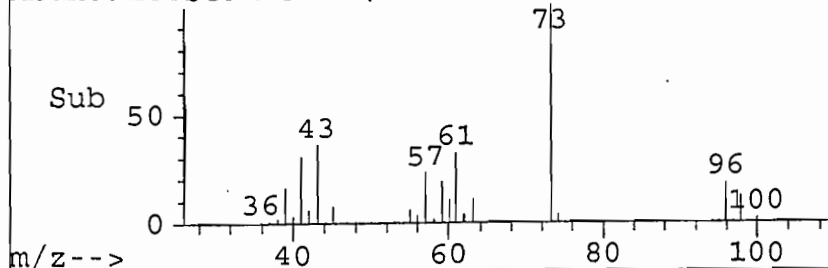
AbundanceScan 397 (5.009 min): P19049.D (-,



AbundanceScan 397 (5.005 min): P19051.D (*,



AbundanceScan 397 (5.005 min): P19051.D (-,



#16

MTBE

Concen: 179.95 ug/L m

RT: 5.00 min Scan# 397

Delta R.T. -0.00 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:73 Resp: 3190721

Ion Ratio Lower Upper

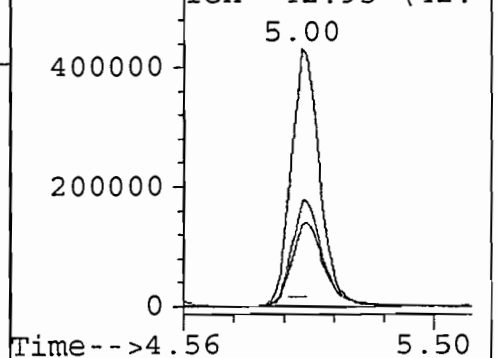
73 100

41 36.4 16.9 50.6

43 44.0 20.2 60.6

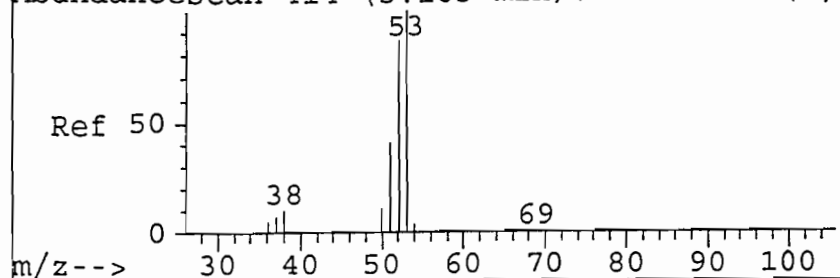
0 0.0 0.0 0.0

AbundanceIon 73.00 (72.
Ion 40.95 (40.
Ion 42.95 (42.



000324

AbundanceScan 414 (5.163 min): P19049.D (-,



#17

Acrylonitrile

Concen: 1869.32 ug/L m

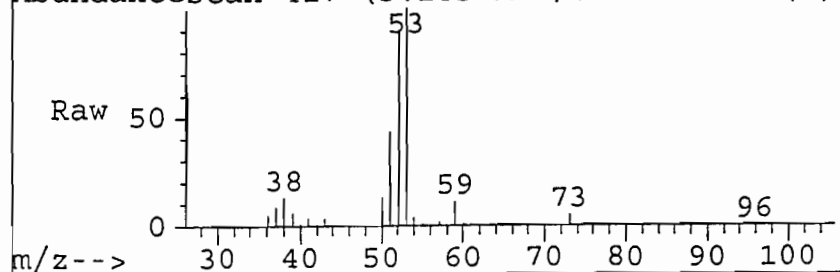
RT: 5.19 min Scan# 417

Delta R.T. 0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 417 (5.185 min): P19051.D (*)



Tgt Ion:53 Resp: 1247606

Ion Ratio Lower Upper

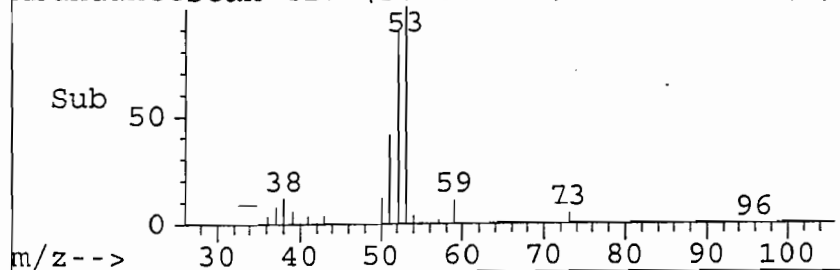
53 100

52 93.7 44.8 134.3

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 417 (5.185 min): P19051.D (-,



AbundanceIon 53.00 (52.
Ion 52.00 (51.
5.19

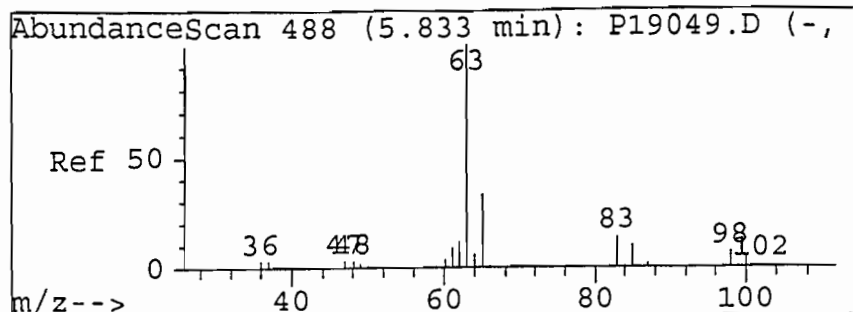
200000

100000

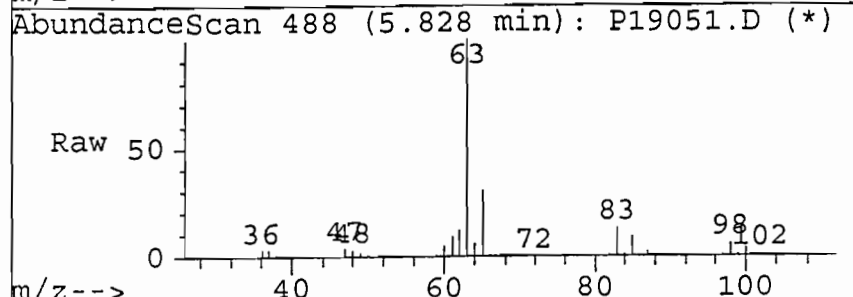
0

Time-->4.90 5.47

000325

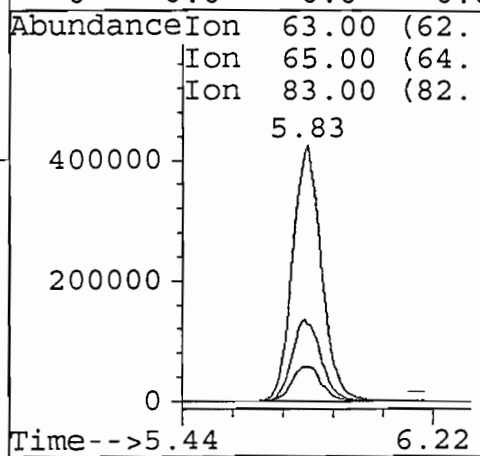
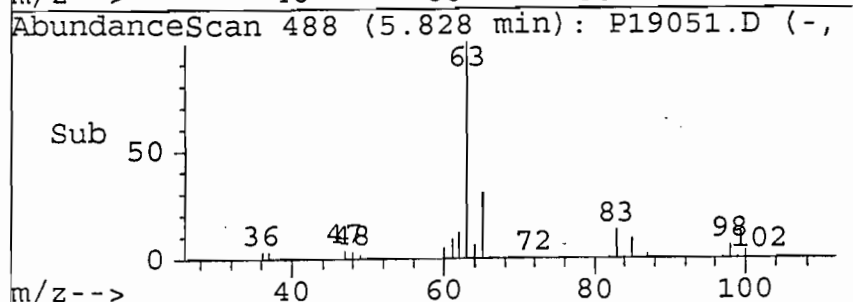


#18
 1,1-dichloroethane
 Concen: 198.62 ug/L m
 RT: 5.83 min Scan# 488
 Delta R.T. -0.00 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

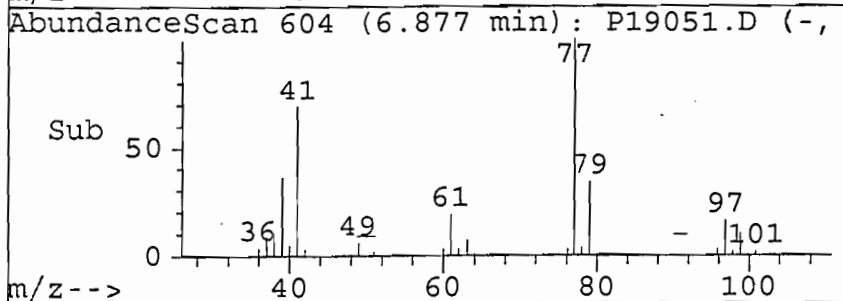
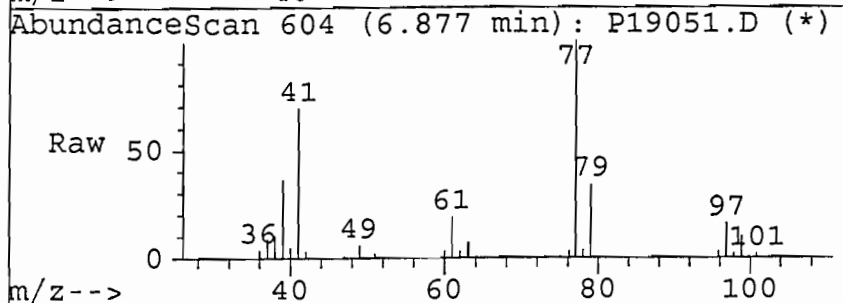
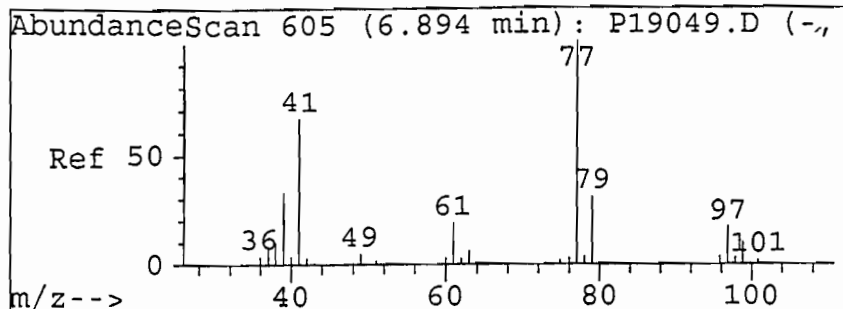


Tgt Ion:63 Resp: 2684912

Ion	Ratio	Lower	Upper
63	100		
65	30.1	23.0	42.8
83	13.2	9.9	18.3
0	0.0	0.0	0.0

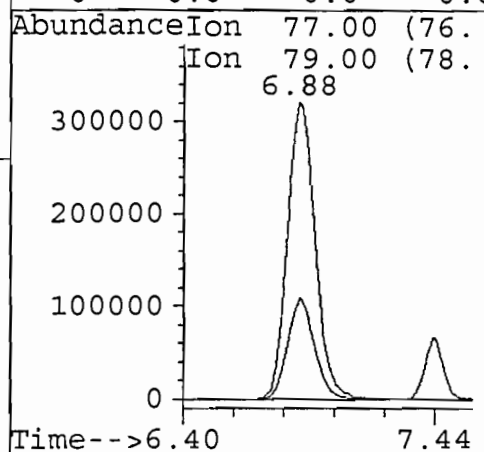


000326



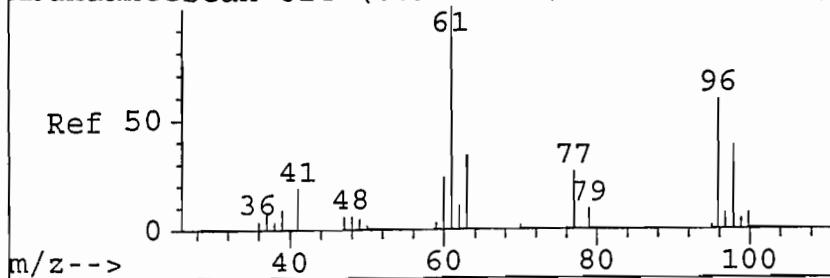
#19
 2,2-dichloropropane
 Concen: 175.31 ug/L m
 RT: 6.88 min Scan# 604
 Delta R.T. -0.02 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion:	77	Resp:	2563316
Ion	Ratio	Lower	Upper
77	100		
79	33.9	21.5	39.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000327

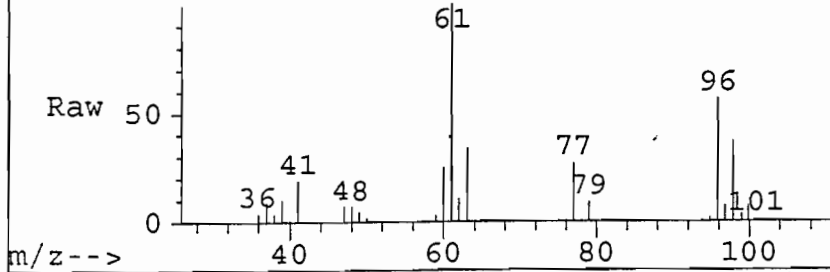
AbundanceScan 614 (6.976 min): P19049.D (-,



#20

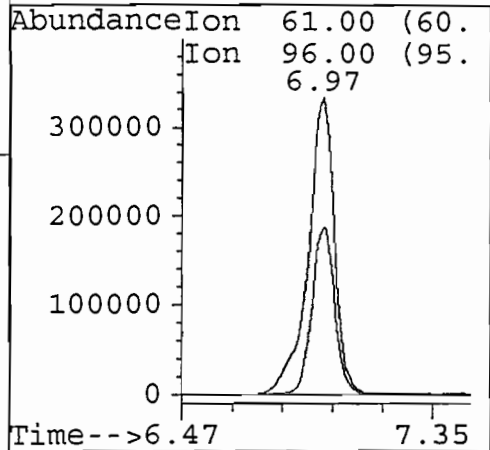
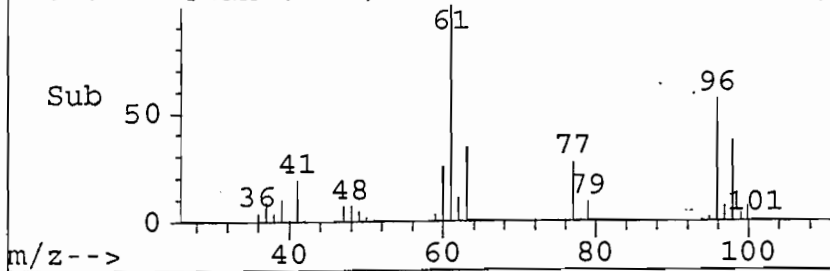
cis-1,2-dichloroethene
Concen: 182.90 ug/L m
RT: 6.97 min Scan# 614
Delta R.T. -0.01 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

AbundanceScan 614 (6.965 min): P19051.D (*)



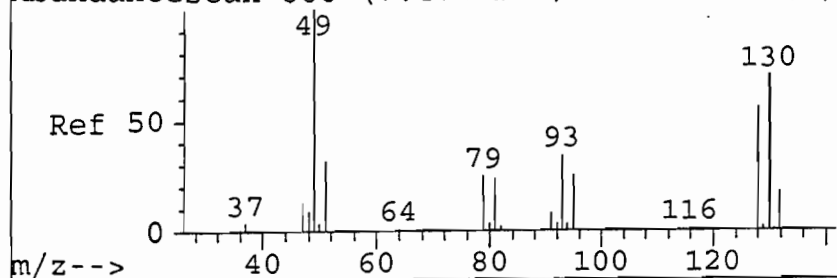
Tgt Ion:	61	Resp:	2158845
Ion	Ratio	Lower	Upper
61	100		
96	56.3	40.2	74.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 614 (6.965 min): P19051.D (-,

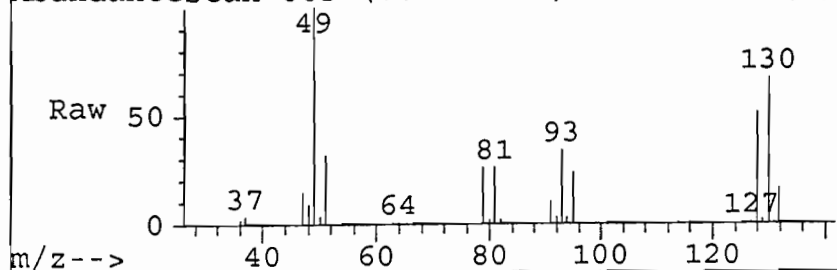


000328

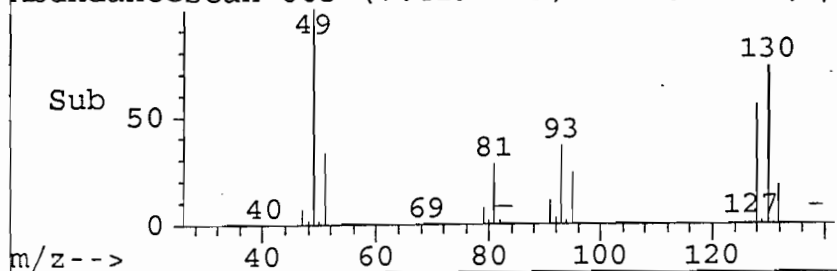
AbundanceScan 666 (7.446 min): P19049.D (-,



AbundanceScan 665 (7.429 min): P19051.D (*)



AbundanceScan 665 (7.429 min): P19051.D (-,



#21

bromochloromethane

Concen: 189.75 ug/L m

RT: 7.43 min Scan# 665

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:49 Resp: 1399667

Ion Ratio Lower Upper

49 100

128 50.9 38.4 71.4

130 67.2 48.0 89.2

0 0.0 0.0 0.0

AbundanceIon 49.00 (48.

Ion 127.65 (127

Ion 129.75 (129

300000 7.43

200000

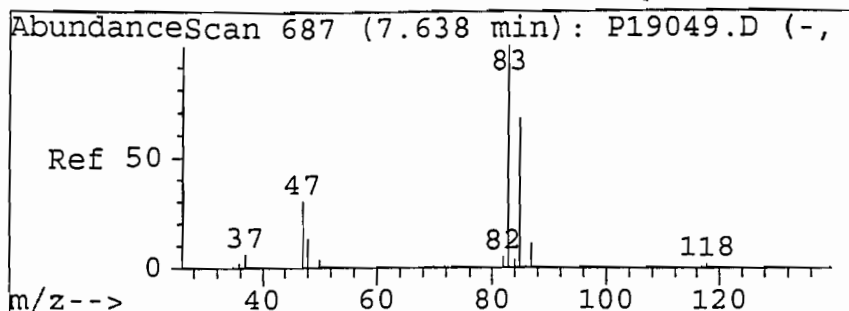
100000

0

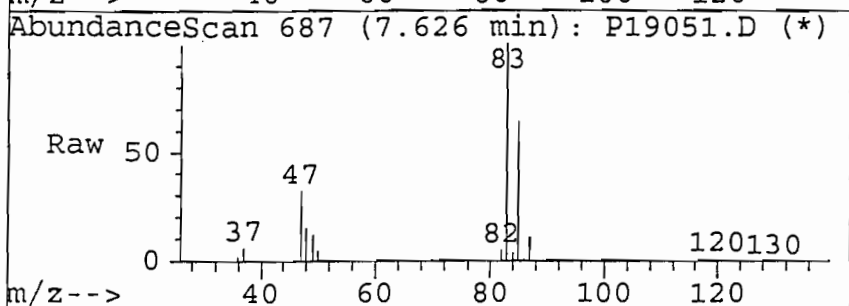
Time-->7.16

7.60

000329

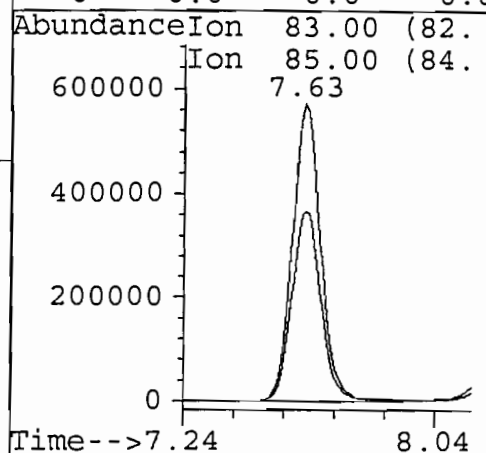
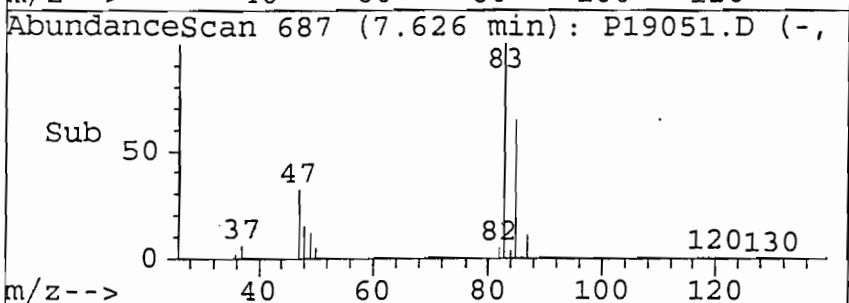


#22
 chloroform
 Concen: 188.96 ug/L m
 RT: 7.63 min Scan# 687
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

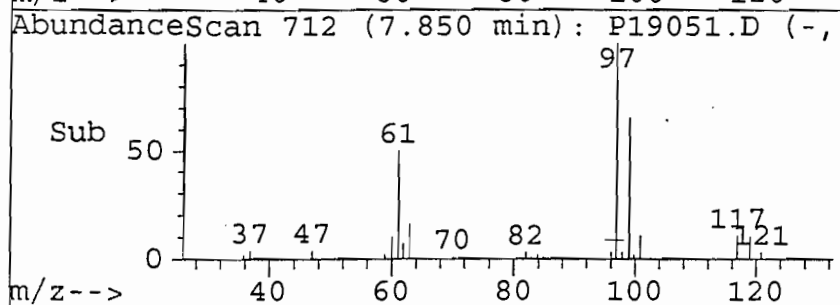
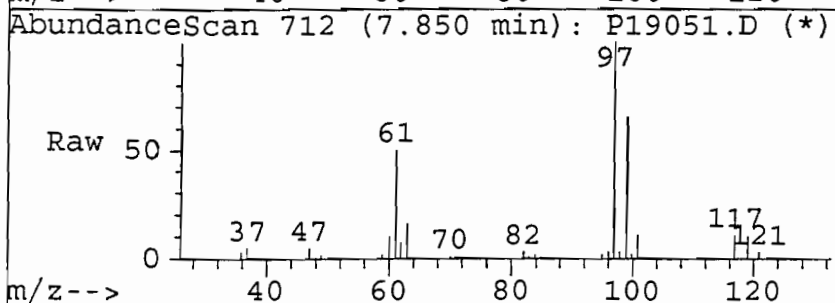
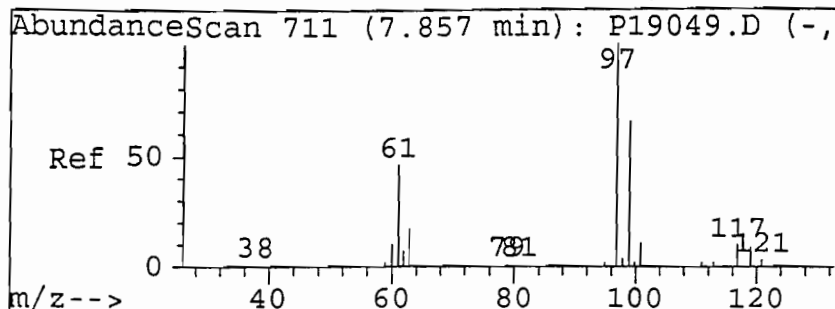


Tgt Ion:83 Resp: 3535348

Ion	Ratio	Lower	Upper
83	100		
85	64.0	46.6	86.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

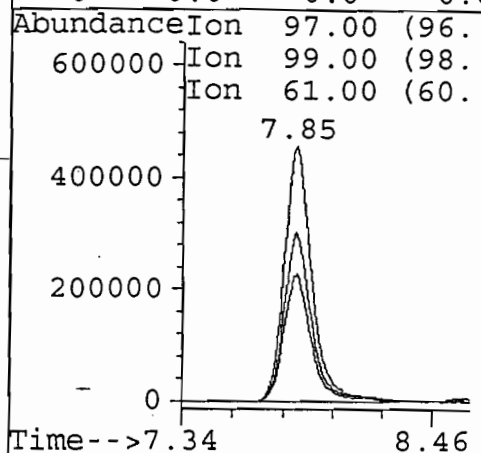


000330

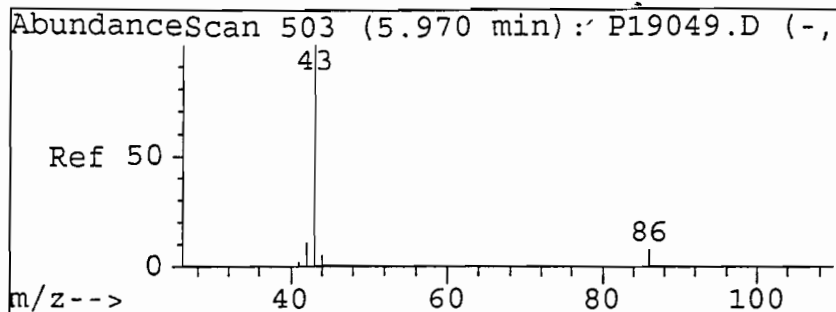


#23
 1,1,1-trichloroethane
 Concen: 193.05 ug/L m
 RT: 7.85 min Scan# 712
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

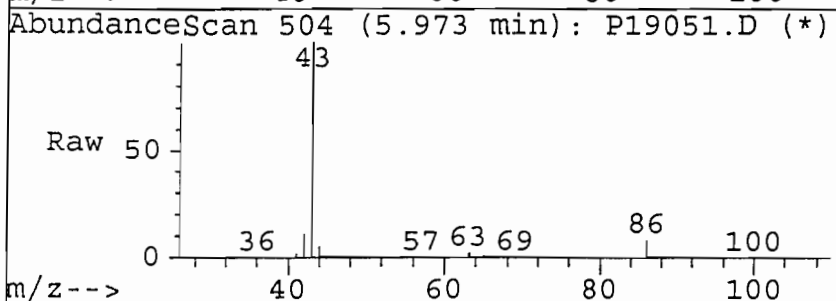
Tgt	Ion:97	Resp: 3909417	
Ion	Ratio	Lower	Upper
97	100		
99	64.8	45.3	84.1
61	50.1	32.4	60.2
0	0.0	0.0	0.0



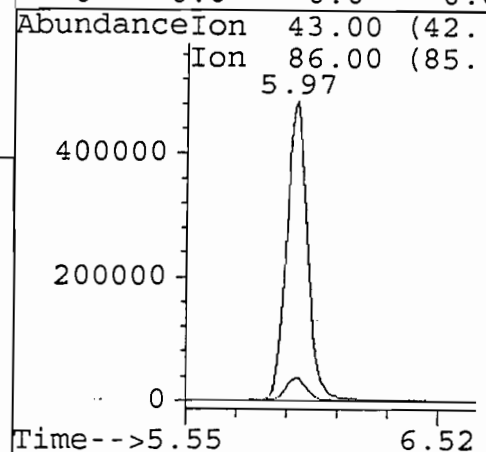
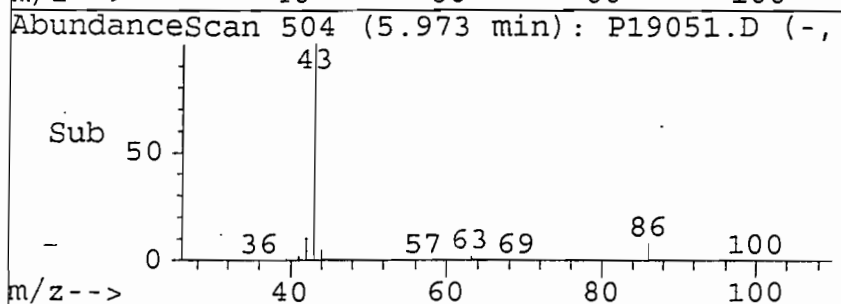
000331



#25
 Vinyl Acetate
 Concen: 190.60 ug/L m
 RT: 5.97 min Scan# 504
 Delta R.T. 0.00 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

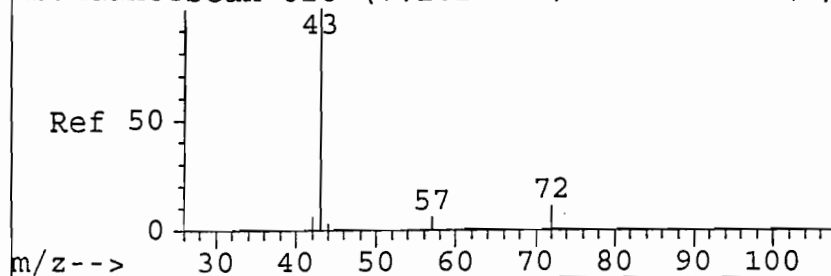


Tgt Ion:43 Resp: 2711383
 Ion Ratio Lower Upper
 43 100
 86 7.8 4.0 11.9
 0 0.0 0.0 0.0
 0 0.0 0.0 0.0



000332

AbundanceScan 628 (7.102 min): P19049.D (-,



#26

2-Butanone

Concen: 161.74 ug/L m

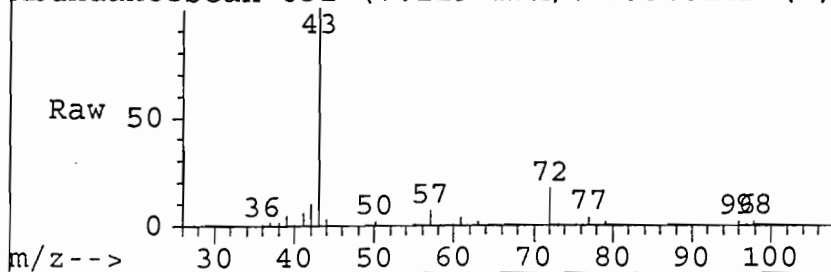
RT: 7.12 min Scan# 631

Delta R.T. 0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 631 (7.119 min): P19051.D (*)



Tgt Ion:43 Resp: 473252

Ion Ratio Lower Upper

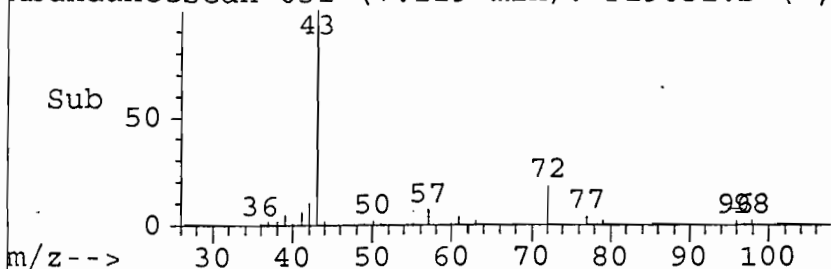
43 100

72 16.8 8.2 24.5

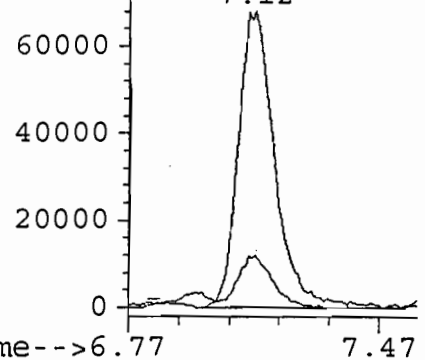
0 0.0 0.0 0.0

0 0.0 0.0 0.0

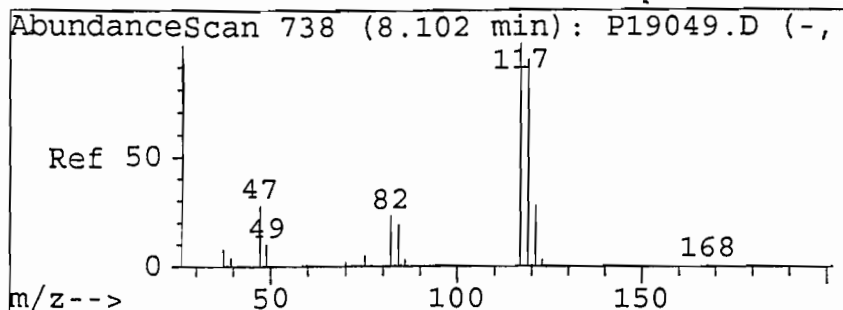
AbundanceScan 631 (7.119 min): P19051.D (-,



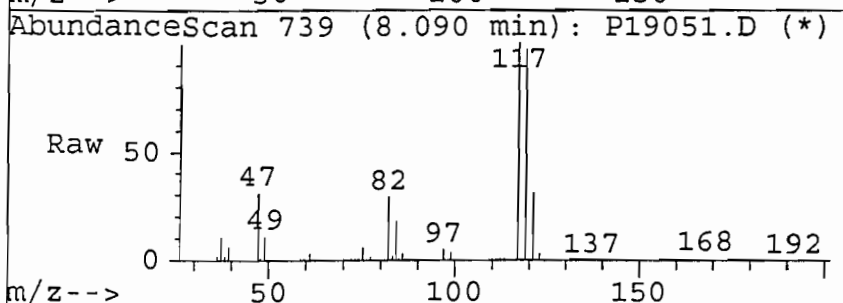
AbundanceIon 43.00 (42.
80000 Ion 72.00 (71.
7.12



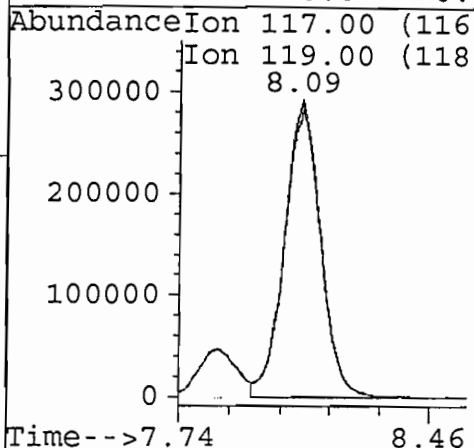
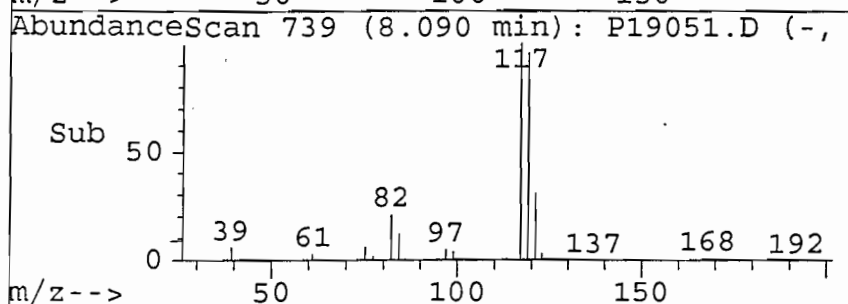
000333

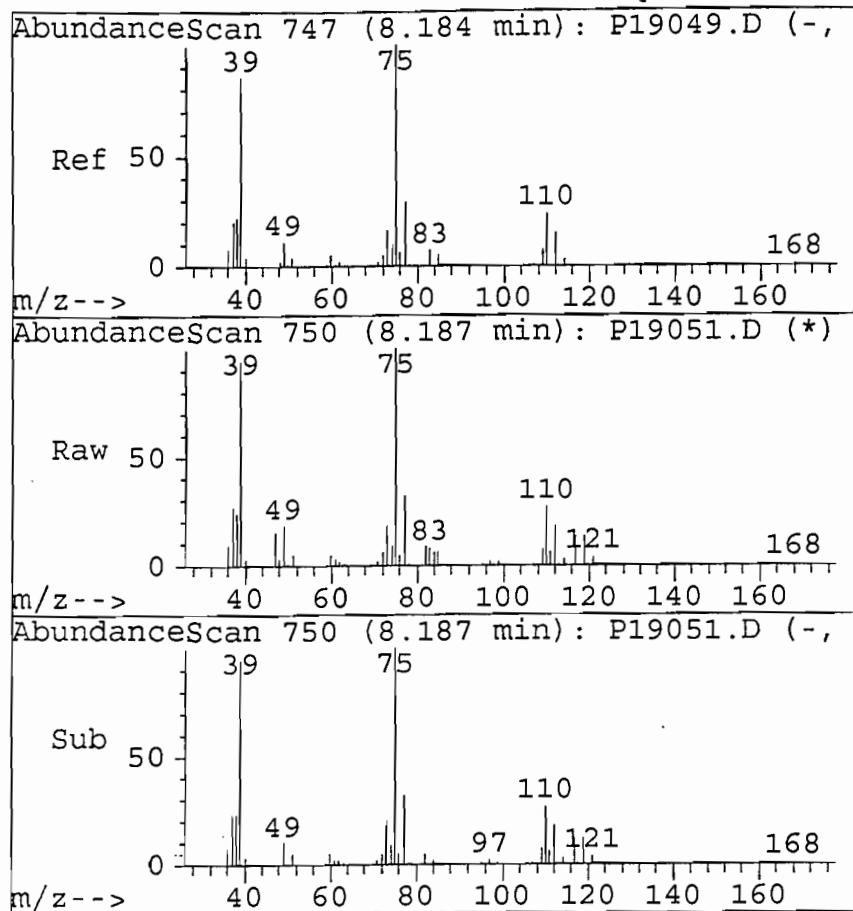


#27
carbon tetrachloride
Concen: 192.54 ug/L m
RT: 8.09 min Scan# 739
Delta R.T. -0.01 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm



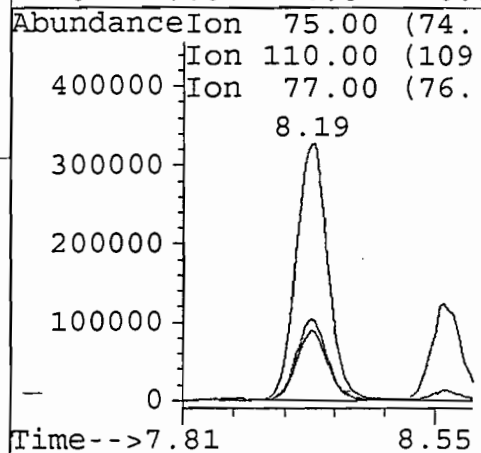
Tgt Ion:	117	Resp:	2134317
Ion	Ratio	Lower	Upper
117	100		
119	96.5	65.6	121.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0





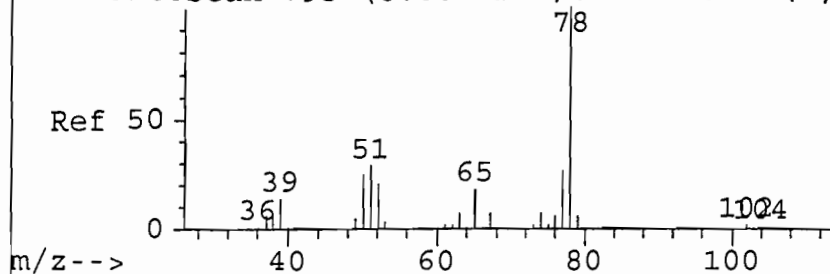
#28
 1,1-dichloropropene
 Concen: 190.12 ug/L m
 RT: 8.19 min Scan# 750
 Delta R.T. 0.00 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion:75 Resp: 2110029
 Ion Ratio Lower Upper
 75 100
 110 27.3 16.8 31.2
 77 31.9 20.0 37.2
 0 0.0 0.0 0.0



000335

AbundanceScan 793 (8.602 min): P19049.D (-,



#29

benzene

Concen: 186.11 ug/L m

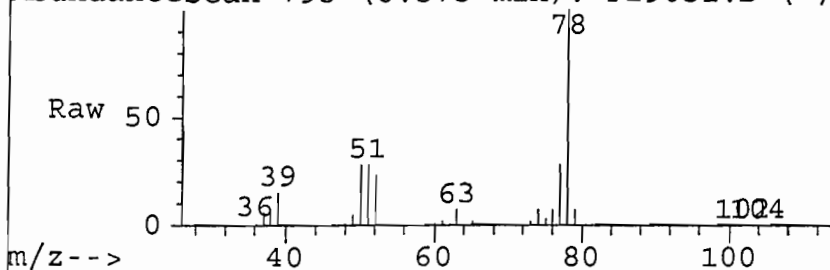
RT: 8.58 min Scan# 793

Delta R.T. -0.03 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 793 (8.575 min): P19051.D (*)



Tgt Ion:78 Resp: 2898564

Ion Ratio Lower Upper

78 100

77 27.8 19.2 35.6

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 78.00 (77.

Ion 77.00 (76.

8.58

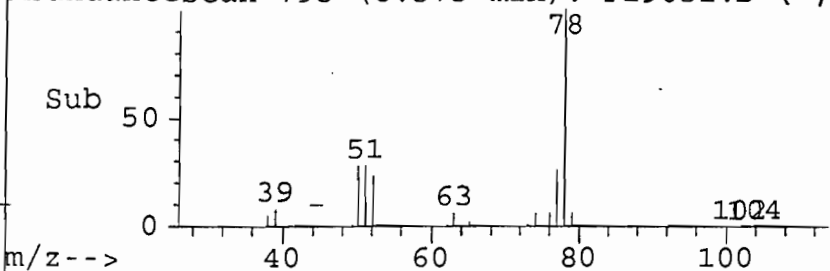
400000

200000

0

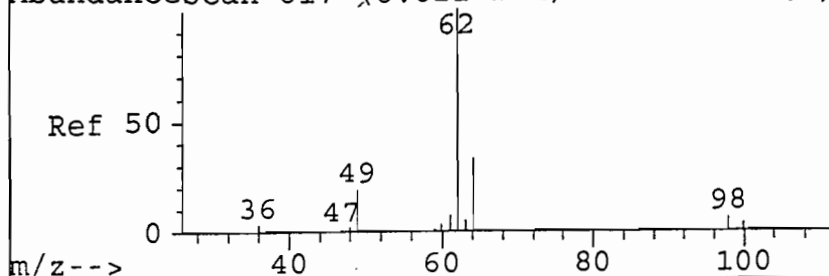
Time-->8.23 8.90

AbundanceScan 793 (8.575 min): P19051.D (-,



000336

AbundanceScan 817 (8.821 min): P19049.D (-,



#31

1,2-dichloroethane

Concen: 195.20 ug/L m

RT: 8.82 min Scan# 820

Delta R.T. -0.00 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:62 Resp: 2547365

Ion Ratio Lower Upper

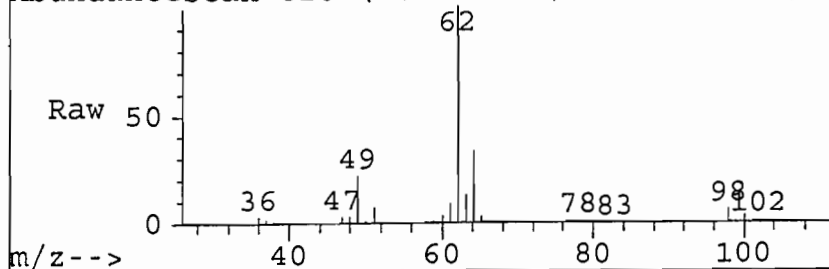
62 100

64 32.8 23.0 42.8

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 820 (8.818 min): P19051.D (*)



AbundanceIon 62.00 (61.

Ion 64.00 (63.

8.82

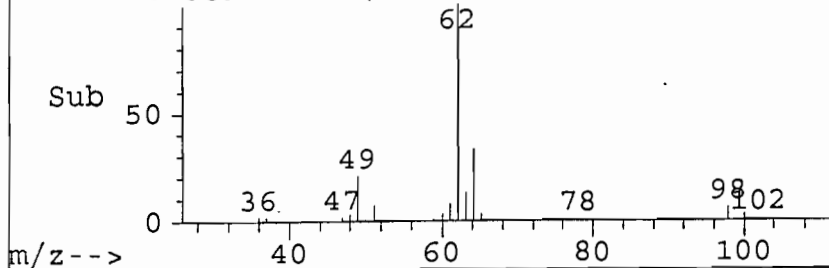
400000

200000

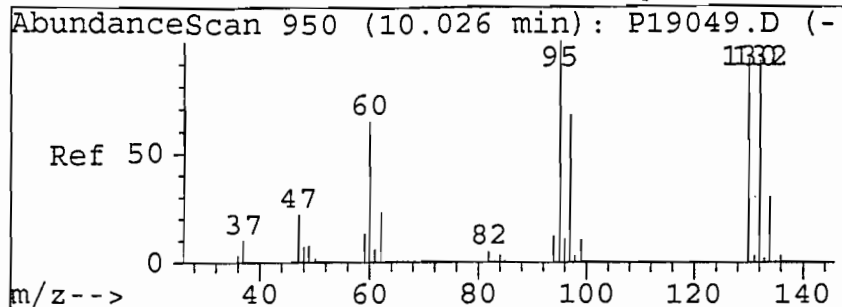
0

Time-->8.46 9.21

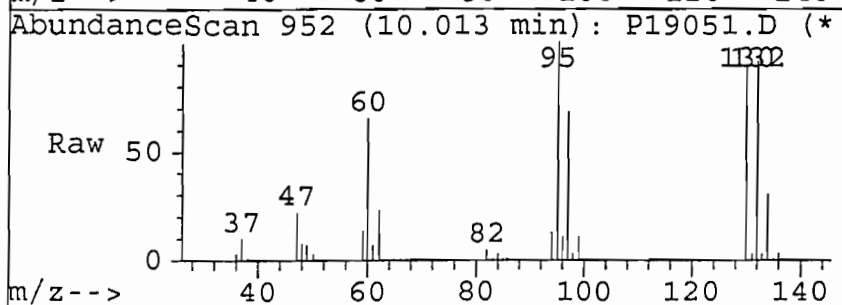
AbundanceScan 820 (8.818 min): P19051.D (-,



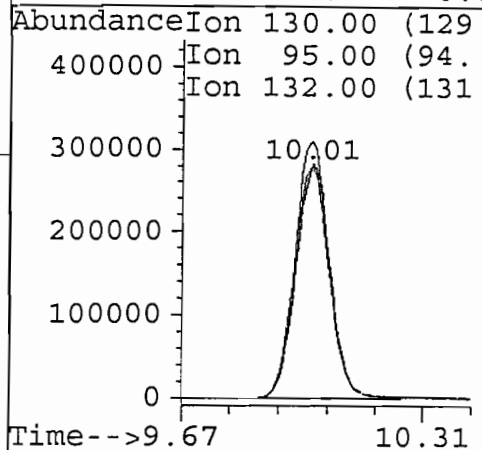
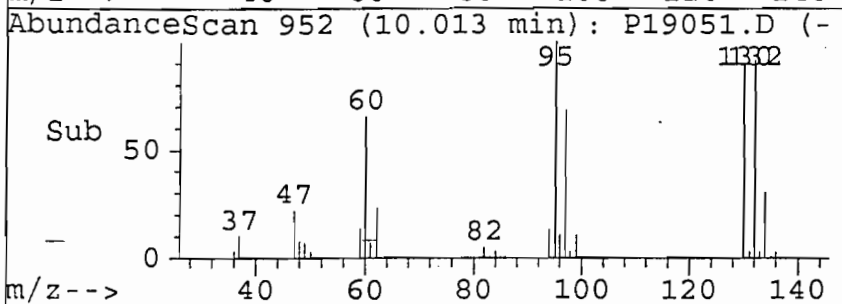
000337



#32
 trichloroethene
 Concen: 192.81 ug/L m
 RT: 10.01 min Scan# 952
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

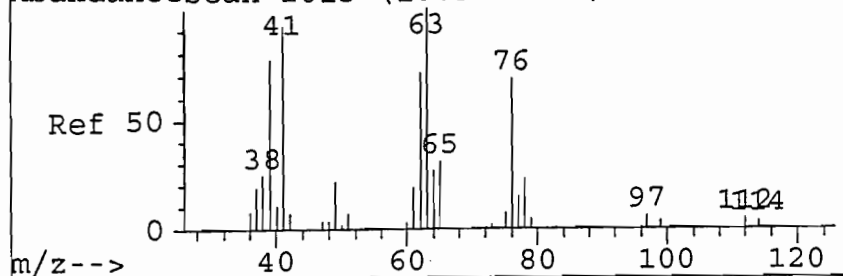


Tgt Ion:	130	Resp:	1775120
Ion	Ratio	Lower	Upper
130	100		
95	110.8	75.7	140.7
132	101.4	68.9	127.9
0	0.0	0.0	0.0

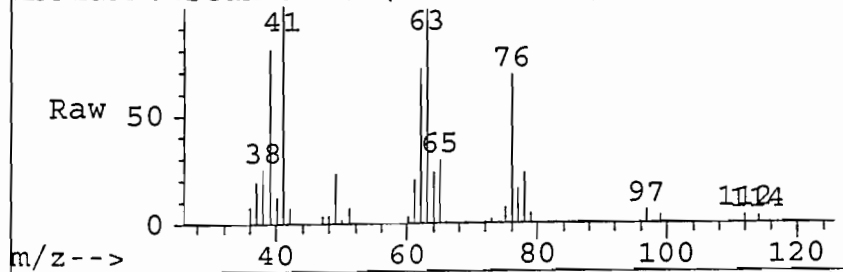


000338

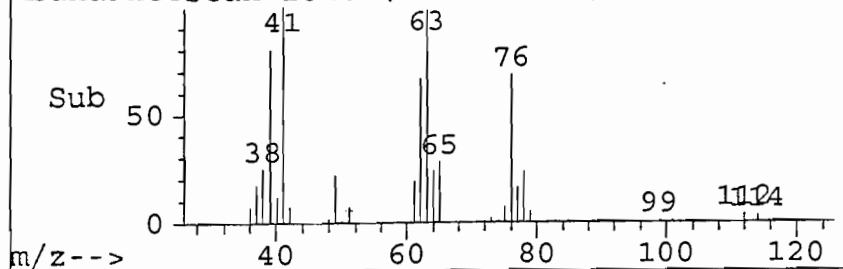
AbundanceScan 1013 (10.597 min): P19049.D (



AbundanceScan 1016 (10.594 min): P19051.D (



AbundanceScan 1016 (10.594 min): P19051.D (



#33

1,2-dichloropropane

Concen: 213.49 ug/L m

RT: 10.59 min Scan# 1016

Delta R.T. -0.00 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:63 Resp: 1443058

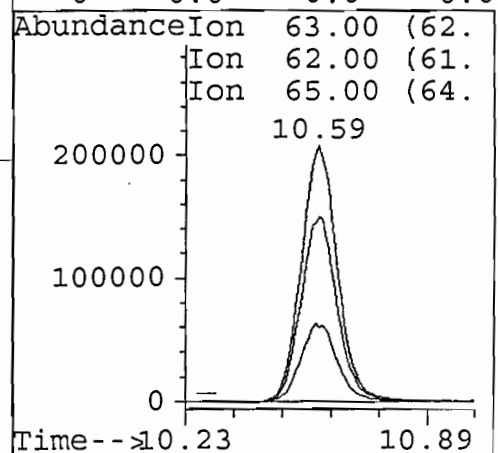
Ion Ratio Lower Upper

63 100

62 71.8 50.0 92.8

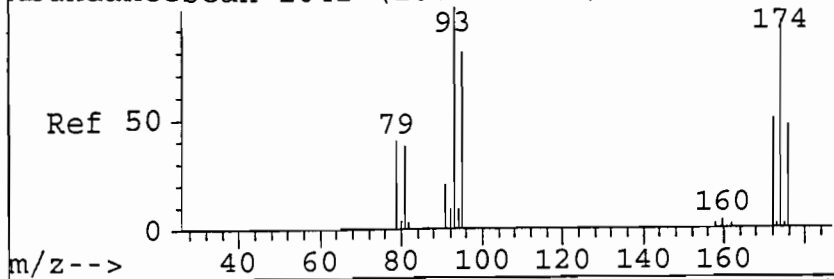
65 29.1 21.6 40.2

0 0.0 0.0 0.0



000339

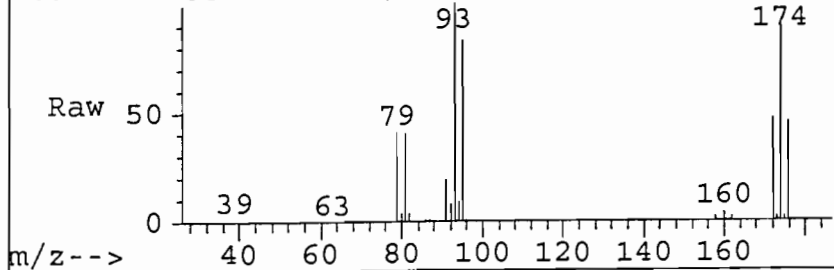
AbundanceScan 1042 (10.859 min): P19049.D (



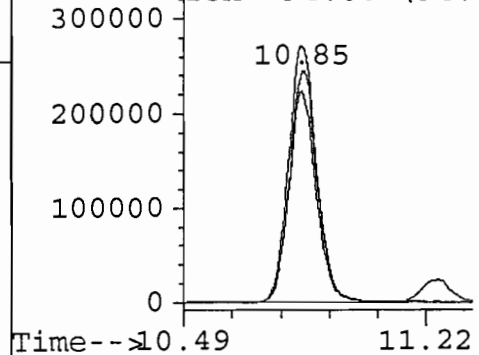
#34
dibromomethane
Concen: 191.33 ug/L m
RT: 10.85 min Scan# 1044
Delta R.T. -0.01 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

Tgt Ion:173.6 Resp: 1425216
Ion Ratio Lower Upper
174 100
93 110.5 75.1 139.5
95 91.7 59.5 110.5
0 0.0 0.0 0.0

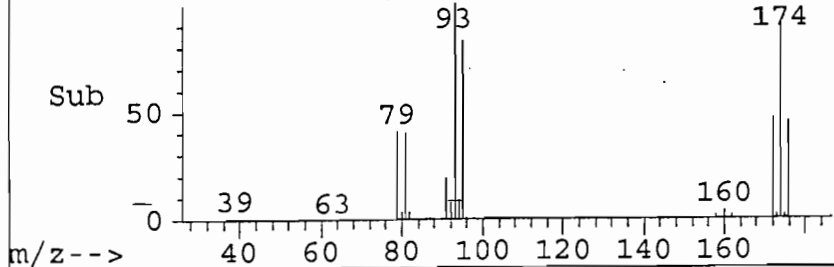
AbundanceScan 1044 (10.846 min): P19051.D (



AbundanceIon 173.60 (173
Ion 92.70 (92.
Ion 94.80 (94.

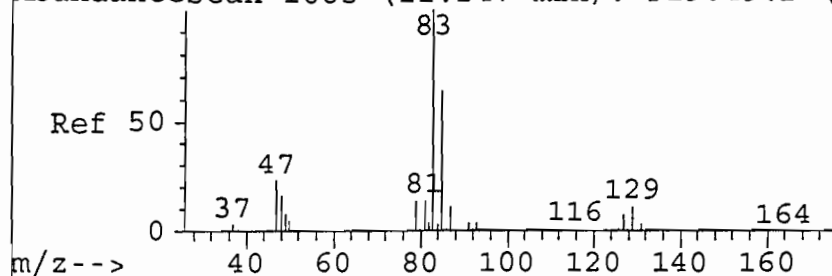


AbundanceScan 1044 (10.846 min): P19051.D (



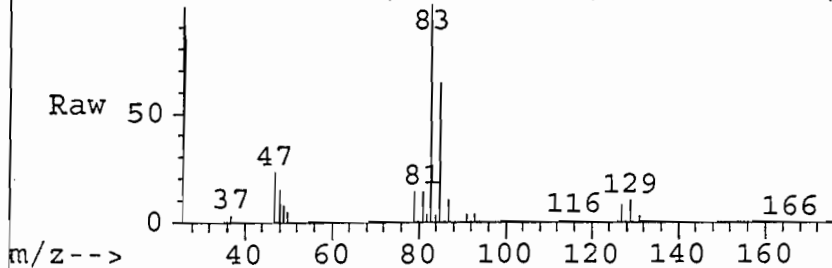
000340

AbundanceScan 1085 (11.247 min): P19049.D (



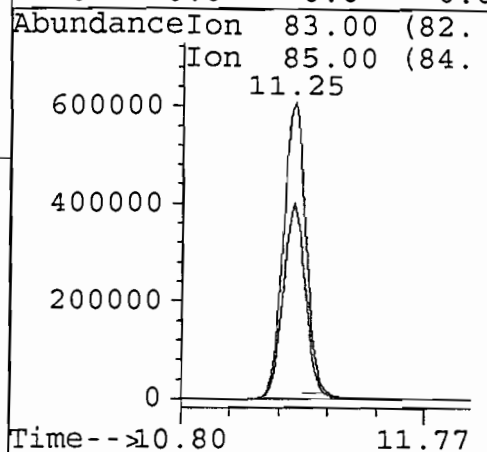
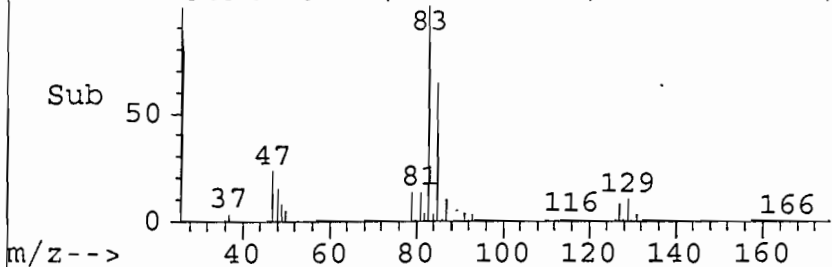
#35
bromodichloromethane
Concen: 218.13 ug/L m
RT: 11.25 min Scan# 1089
Delta R.T. 0.00 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

AbundanceScan 1089 (11.251 min): P19051.D (

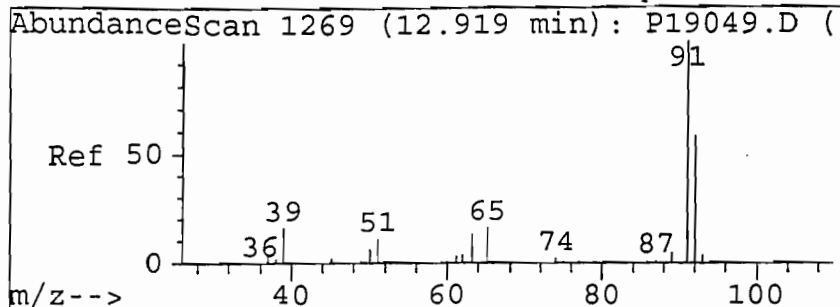


Tgt Ion:83 Resp: 3870512
Ion Ratio Lower Upper
83 100
85 64.0 43.8 81.4
0 0.0 0.0 0.0
0 0.0 0.0 0.0

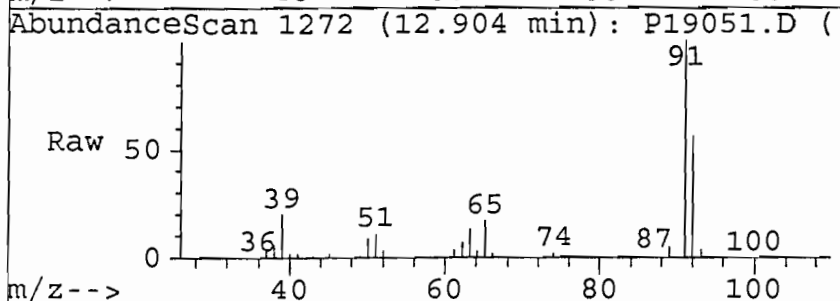
AbundanceScan 1089 (11.251 min): P19051.D (



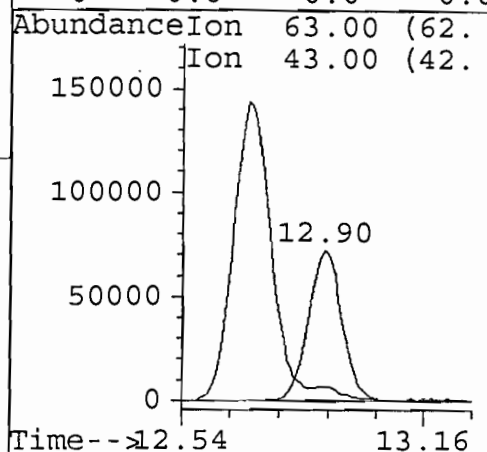
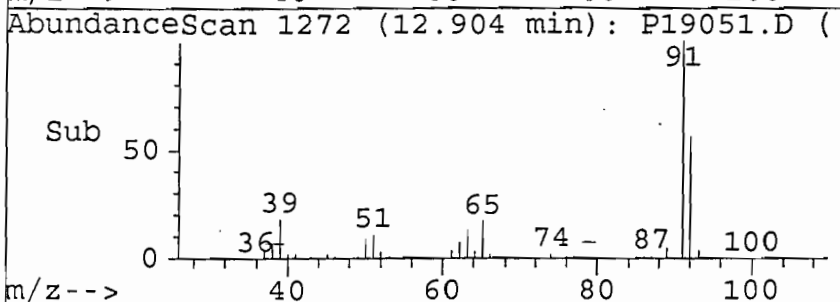
000341



#36
 2-Chloroethyl Vinyl Ether
 Concen: 182.22 ug/L m
 RT: 12.90 min Scan# 1272
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

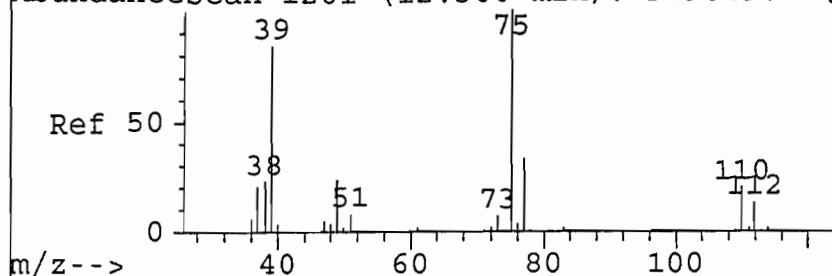


Tgt Ion	Ratio	Resp	Lower	Upper
63	100			
43	8.6		2.5	7.5#
0	0.0		0.0	0.0
0	0.0		0.0	0.0

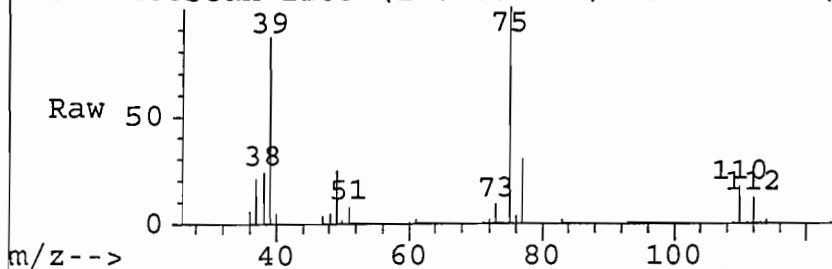


000342

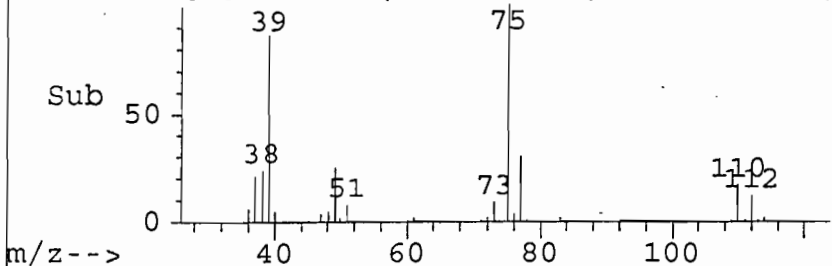
AbundanceScan 1201 (12.300 min): P19049.D (



AbundanceScan 1203 (12.283 min): P19051.D (



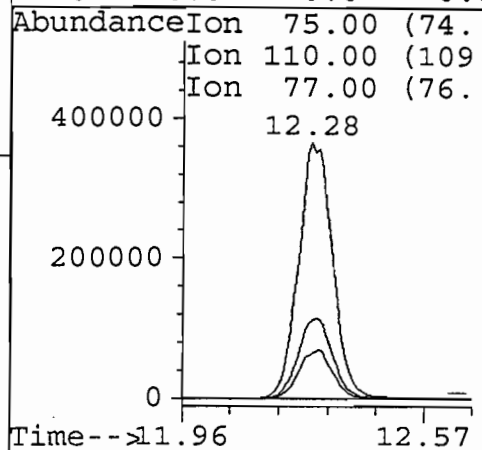
AbundanceScan 1203 (12.283 min): P19051.D (



#37

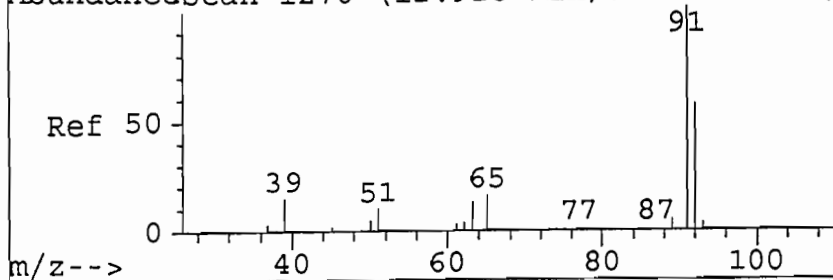
cis-1,3-dichloropropene
Concen: 206.99 ug/L m
RT: 12.28 min Scan# 1203
Delta R.T. -0.02 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

Tgt Ion:	75	Resp:	2169868
Ion	Ratio	Lower	Upper
75	100		
110	17.5	14.3	26.6
77	30.3	22.9	42.5
0	0.0	0.0	0.0



000343

AbundanceScan 1270 (12.928 min): P19049.D (



#39

toluene

Concen: 176.25 ug/L m

RT: 12.90 min Scan# 1272

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:91 Resp: 3339792

Ion Ratio Lower Upper

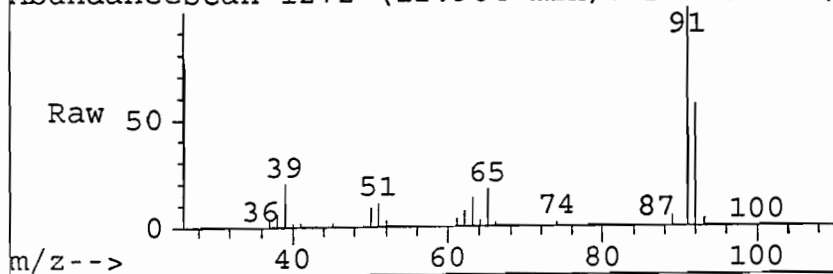
91 100

92 55.9 40.2 74.6

0 0.0 0.0 0.0

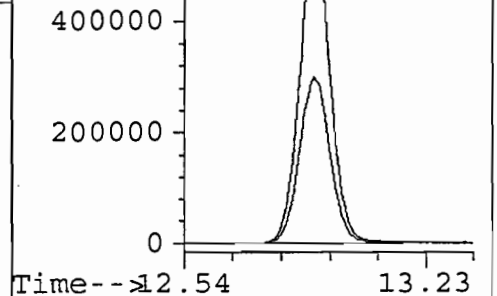
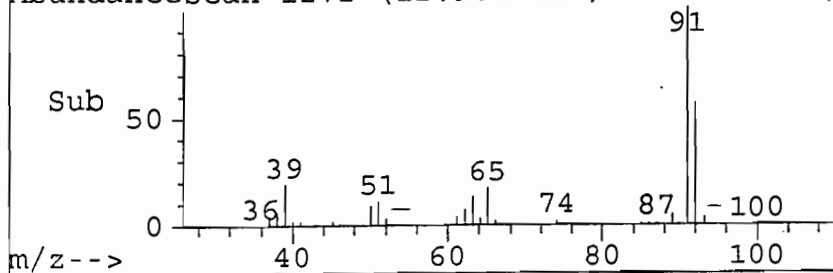
0 0.0 0.0 0.0

AbundanceScan 1272 (12.904 min): P19051.D (

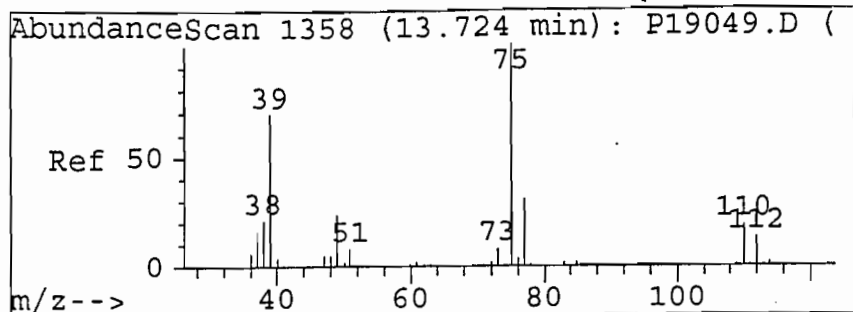


AbundanceIon 91.00 (90.
600000 Ion 92.00 (91.
12.90

AbundanceScan 1272 (12.904 min): P19051.D (



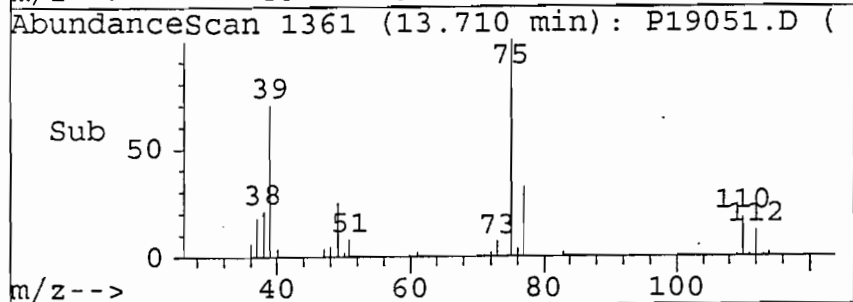
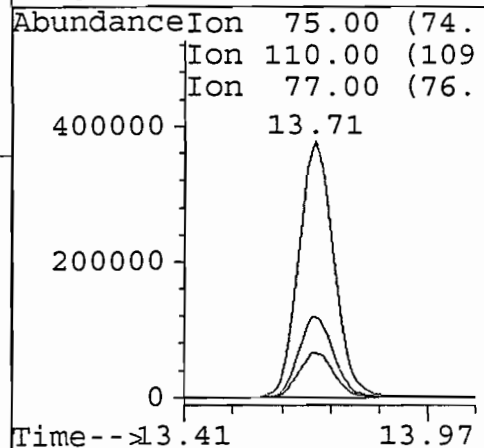
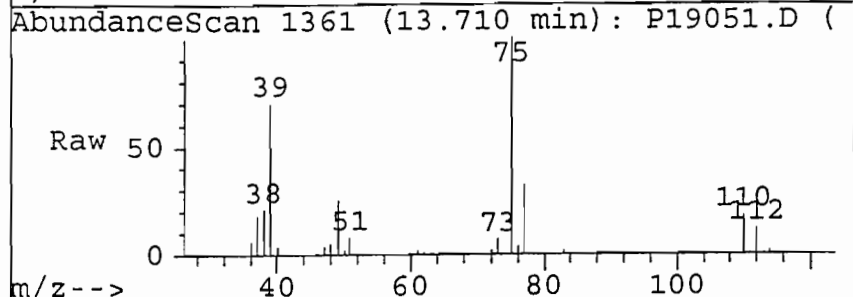
000344



#40
 trans-1,3-dichloropropene
 Concen: 211.57 ug/L m
 RT: 13.71 min Scan# 1361
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

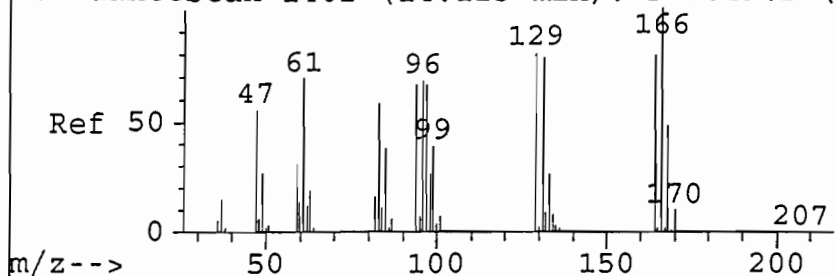
Tgt Ion:75 Resp: 2133233

Ion	Ratio	Lower	Upper
75	100		
110	17.5	13.2	24.4
77	31.5	21.7	40.3
0	0.0	0.0	0.0

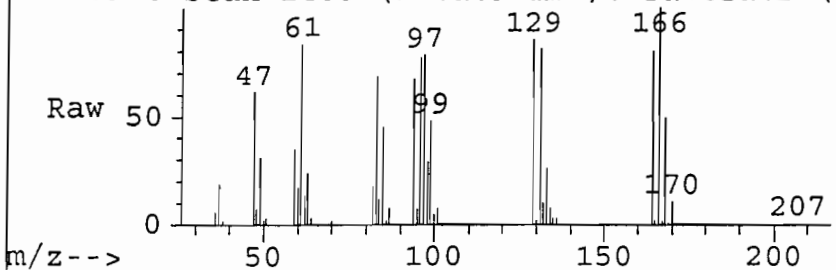


000345

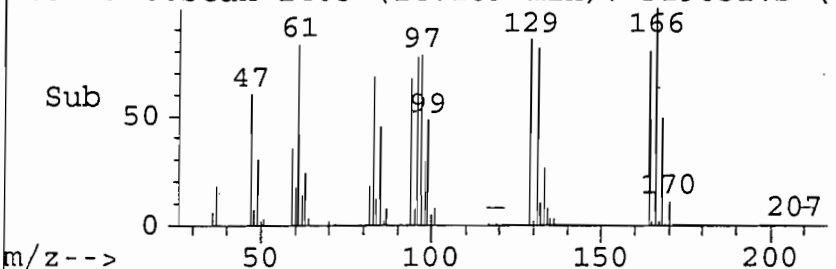
AbundanceScan 1402 (14.123 min): P19049.D (



AbundanceScan 1405 (14.109 min): P19051.D (

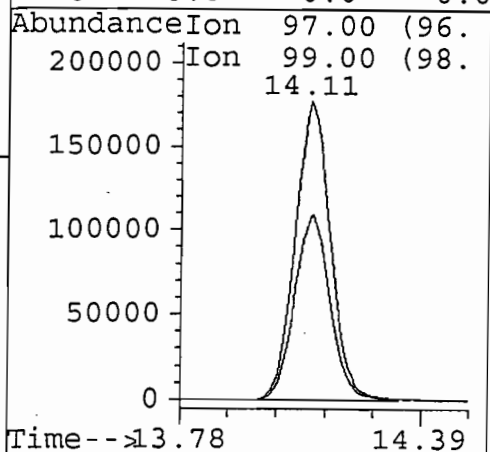


AbundanceScan 1405 (14.109 min): P19051.D (



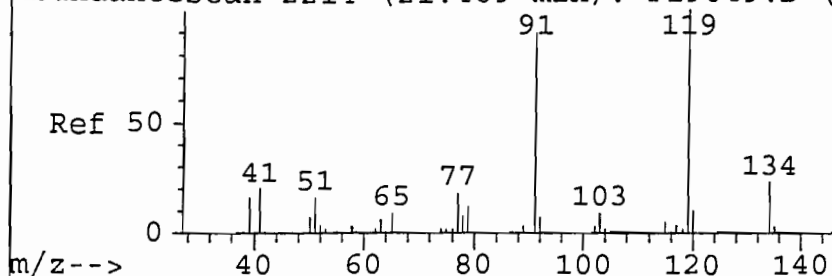
#41
1,1,2-trichloroethane
Concen: 186.68 ug/L m
RT: 14.11 min Scan# 1405
Delta R.T. -0.01 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

Tgt Ion	Ratio	Lower	Upper
97	100		
99	61.1	41.4	77.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

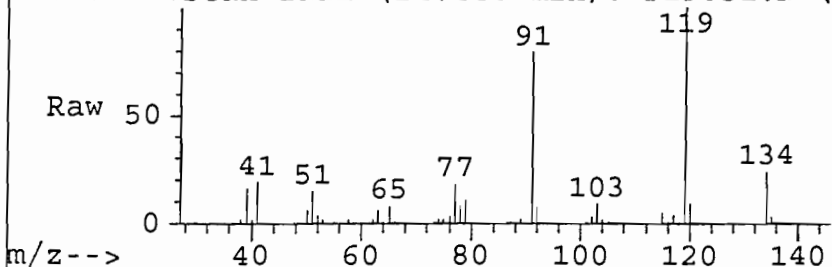


000346

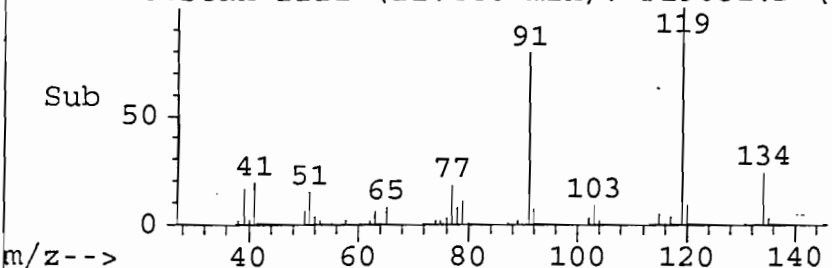
AbundanceScan 2214 (21.469 min): P19049.D (



AbundanceScan 2221 (21.446 min): P19051.D (



AbundanceScan 2221 (21.446 min): P19051.D (



#67

tert-butylbenzene

Concen: 203.97 ug/L m

RT: 21.45 min Scan# 2221

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:119 Resp: 5106569

Ion Ratio Lower Upper

119 100

91 79.0 62.2 115.4

134 24.0 16.4 30.4

0 0.0 0.0 0.0

AbundanceIon 119.00 (118

1000000 Ion 91.00 (90.

Ion 134.00 (133

21.45

500000

0

Time--21.19 21.61

000347

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19052.D
 Acq Time : 6 Oct 99 8:07 pm
 Sample : 100PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:02 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	1012065	50.00	ug/L	-0.02
43) Chlorobenzene-d5	16.32	117	1021234	50.00	ug/L	-0.01
58) 1,4-dichlorobenzene-d4	22.58	152	732833	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	870329	54.13	ug/L	108.27%
30) 1,2-Dichlorethane-d4	8.65	65	666179	52.83	ug/L	105.67%
38) Toluene-d8	12.75	98	1002685	51.81	ug/L	103.61%
42) 4-Bromofluorobenzene	19.47	95	982140	52.95	ug/L	105.91%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	852647	107.99	ug/L	99
3) chloromethane	1.94	50	459691	114.73	ug/L	95
4) vinyl chloride	2.07	62	456274	115.30	ug/L	100
5) bromomethane	2.47	94	485991	114.59	ug/L	88
6) chloroethane	2.59	64	209579	107.24	ug/L	91
7) Acrolein	3.63	56	262303	1057.77	ug/L	99
8) trichlorofluoromethane	2.88	101	2202471	110.49	ug/L	100
9) 1,1-dichloroethene	3.65	61	1111300	109.15	ug/L	98
10) Acetone	3.91	43	131622	54.25	ug/L	97
11) Carbon Disulfide	3.94	76	1177701	105.17	ug/L	100
12) Iodo Methane	3.90	142	1631132	106.89	ug/L	97
13) methylene chloride	4.58	84	474831	106.60	ug/L	94
14) trans-1,2-dichloroethene	4.97	61	966129	105.40	ug/L	94
15) TBA	4.98	59	642064	1055.64	ug/L	94
16) MTBE	4.98	73	1858251	102.32	ug/L	98
17) Acrylonitrile	5.17	53	724917	1060.44	ug/L	97
18) 1,1-dichloroethane	5.83	63	1490317	107.64	ug/L	99
19) 2,2-dichloropropane	6.88	77	1550321	103.52	ug/L	97
20) cis-1,2-dichloroethene	6.96	61	1282242	106.06	ug/L	94
21) bromochloromethane	7.43	49	794371	105.14	ug/L	98
22) chloroform	7.63	83	2062443	107.63	ug/L	98
23) 1,1,1-trichloroethane	7.85	97	2197681	105.95	ug/L	97
25) Vinyl Acetate	5.96	43	1588621	109.03	ug/L	99
26) 2-Butanone	7.10	43	234075	78.11	ug/L	100
27) carbon tetrachloride	8.08	117	1261566	111.12	ug/L	98
28) 1,1-dichloropropene	8.19	75	1224253	107.70	ug/L	92
29) benzene	8.59	78	1644383	103.08	ug/L	99
31) 1,2-dichloroethane	8.82	62	1481621	110.85	ug/L	99
32) trichloroethene	10.01	130	1005489	106.63	ug/L	98
33) 1,2-dichloropropane	10.59	63	791258	114.29	ug/L	100
34) dibromomethane	10.86	174	798846	104.70	ug/L	96
35) bromodichloromethane	11.25	83	2078504	114.36	ug/L	100
36) 2-Chloroethyl Vinyl Ether	12.90	63	263691	106.31	ug/L	93

(#) = qualifier out of range (m) = manual integration
 P19052.D V21006CS.M Thu Oct 07 12:31:22 1999

VOA3

Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19052.D
 Acq Time : 6 Oct 99 8:07 pm
 Sample : 100PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:02 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.29	75	1207291	112.44	ug/L	99
39) toluene	12.91	91	1997408	102.91	ug/L	97
40) trans-1,3-dichloropropene	13.70	75	1171678	113.45	ug/L	97
41) 1,1,2-trichloroethane	14.13	97	632427	105.07	ug/L	96
44) 4-Methyl-2-Pentanone	12.72	43	534557	103.82	ug/L	97
45) tetrachloroethene	14.14	166	1094509	100.61	ug/L	90
46) 1,3-dichloropropane	14.51	76	1063471	110.76	ug/L	95
47) dibromochloromethane	14.95	129	1499309	111.88	ug/L	95
48) 1,2-dibromoethane	15.19	107	1140978	110.74	ug/L	95
49) 2-Hexanone	14.76	43	401938	90.57	ug/L	98
50) chlorobenzene	16.39	112	1644097	102.71	ug/L	99
51) 1-Chlorohexane	16.44	91	952493	102.17	ug/L	100
52) 1,1,1,2-tetrachloroethane	16.68	133	1044466	104.47	ug/L	97
53) ethylbenzene	16.67	91	2781521	102.10	ug/L	99
54) m&p-xylenes	16.99	106	1960420	219.01	ug/L	93
55) o-xylene	18.01	91	2709872	107.44	ug/L	99
56) styrene	18.10	104	1682969	113.26	ug/L	94
57) bromoform	18.56	173	1258711	109.95	ug/L	98
59) isopropylbenzene	18.99	105	3196167	100.58	ug/L	99
60) bromobenzene	19.75	77	2180052	99.26	ug/L	97
61) 1,1,2,2-tetrachloroethane	20.09	83	1307643	100.89	ug/L	98
62) 1,2,3-trichloropropane	20.13	75	963376	104.16	ug/L	97
63) n-propylbenzene	20.63	120	1191669	97.28	ug/L m	96
64) 2-chlorotoluene	20.31	126	793623	100.10	ug/L	98
65) 4-chlorotoluene	20.64	126	823541	102.74	ug/L	95
66) 1,3,5-trimethylbenzene	20.66	105	2985109	99.22	ug/L m	92
67) tert-butylbenzene	21.46	119	2765990	99.56	ug/L	98
68) 1,2,4-trimethylbenzene	21.64	105	2987562	102.43	ug/L	96
69) sec-butylbenzene	22.07	105	3873570	105.34	ug/L	98
70) 1,3-dichlorobenzene	22.36	146	1879857	99.53	ug/L	98
71) 4-isopropyltoluene	22.52	119	3387514	99.83	ug/L	98
72) 1,4-dichlorobenzene	22.64	146	1912157	102.69	ug/L	98
73) 1,2-dichlorobenzene	23.64	146	1853336	101.86	ug/L	91
74) n-butylbenzene	23.64	91	3376795	103.19	ug/L	92
75) 1,2-dibromo-3-chloropropan	25.91	75	500523	113.55	ug/L	91
76) 1,2,4-trichlorobenzene	28.15	180	1648357	106.70	ug/L	97
77) hexachlorobutadiene	28.59	225	1306154	102.37	ug/L	97
78) naphthalene	28.79	128	2305612	105.34	ug/L	99
79) 1,2,3-trichlorobenzene	29.51	180	1382158	99.72	ug/L	89

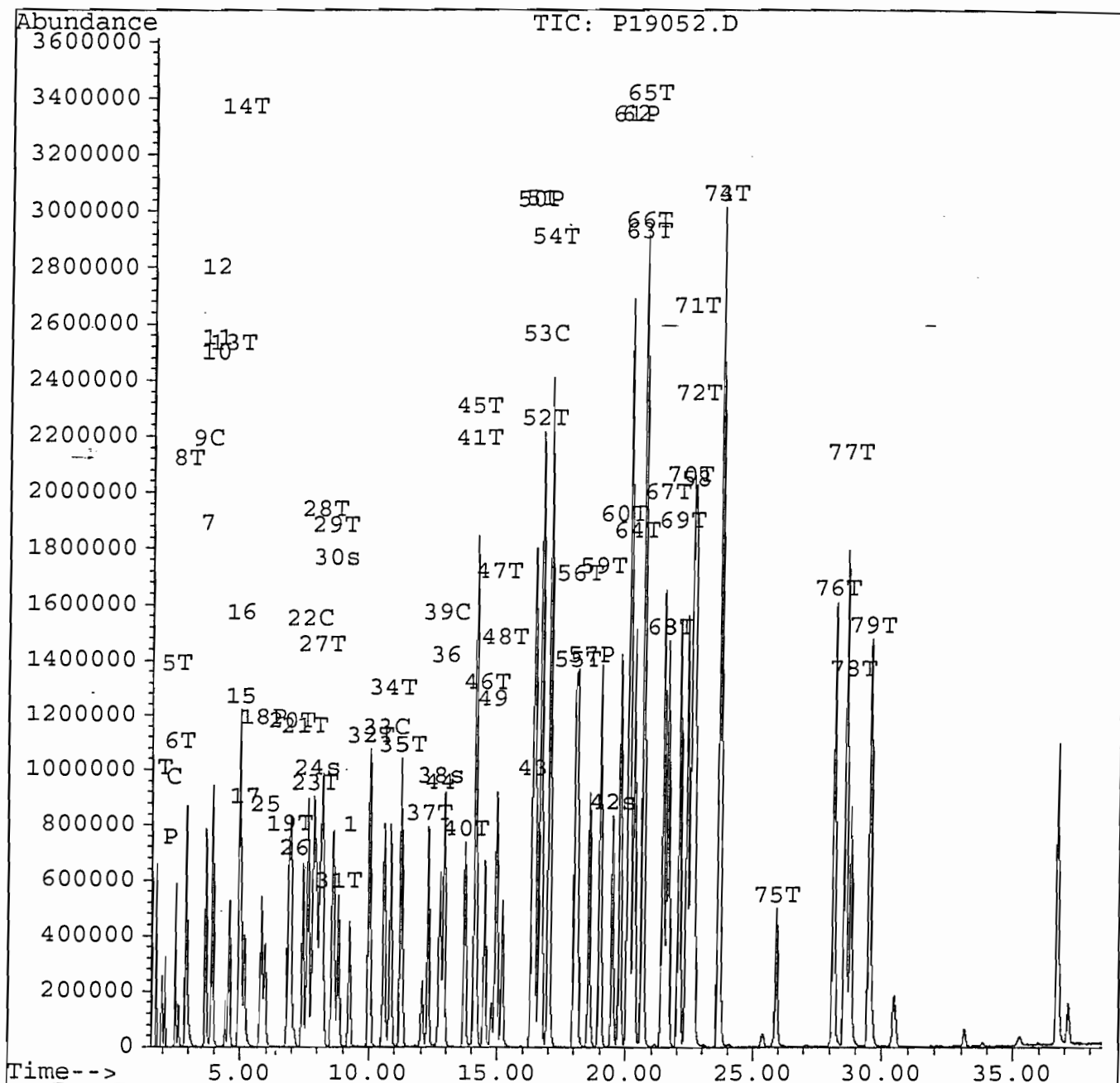
000349

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19052.D
 Acq Time : 6 Oct 99 8:07 pm
 Sample : 100PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:02 1999

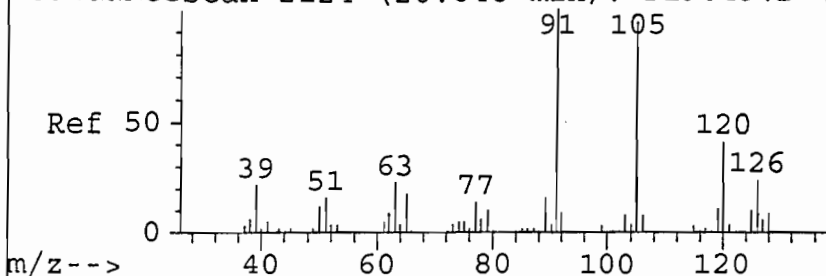
Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

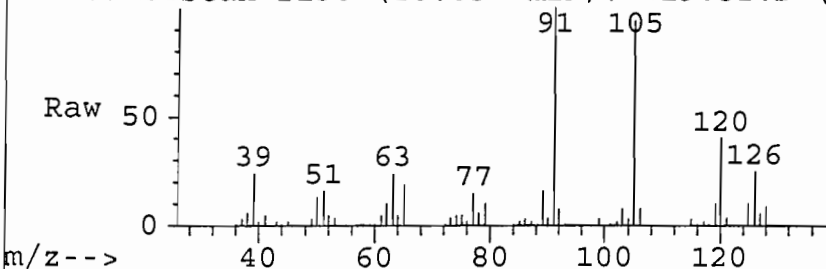


000350

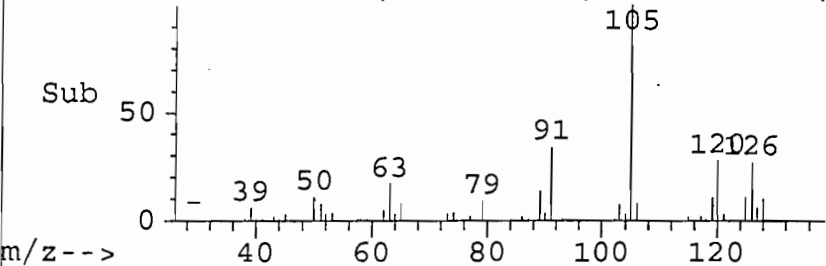
AbundanceScan 2124 (20.648 min): P19049.D (



AbundanceScan 2130 (20.631 min): P19052.D (



AbundanceScan 2130 (20.631 min): P19052.D (



#63

n-propylbenzene

Concen: 97.28 ug/L m

RT: 20.63 min Scan# 2130

Delta R.T. -0.02 min

Lab File: P19052.D

Acq: 6 Oct 99 8:07 pm

Tgt Ion:120 Resp: 1191669

Ion Ratio Lower Upper

120 100

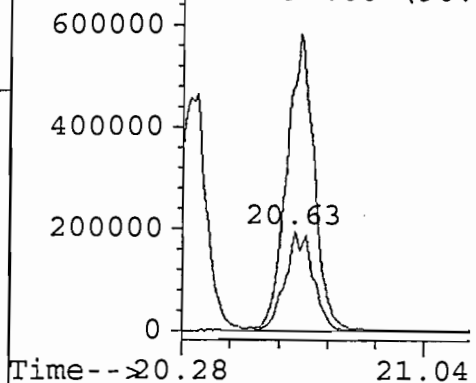
91 249.2 170.7 316.9

0 0.0 0.0 0.0

0 0.0 0.0 0.0

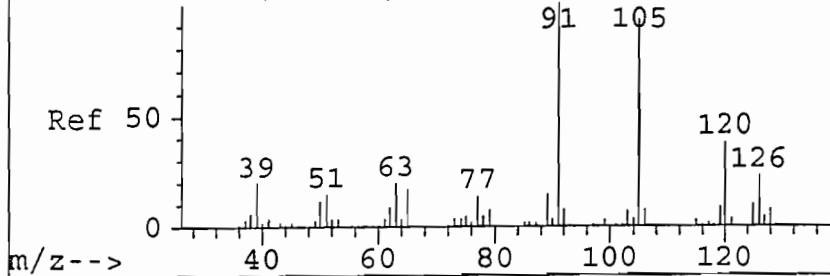
AbundanceIon 120.00 (119

Ion 91.00 (90.

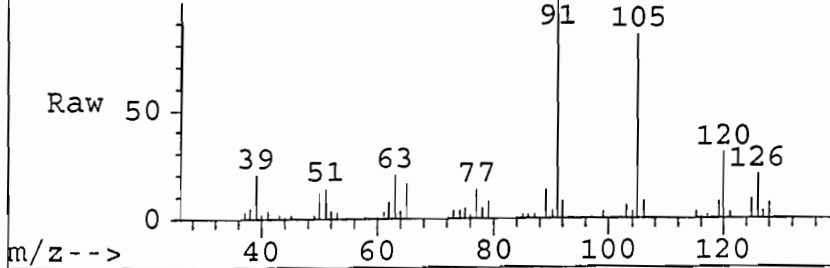


000351

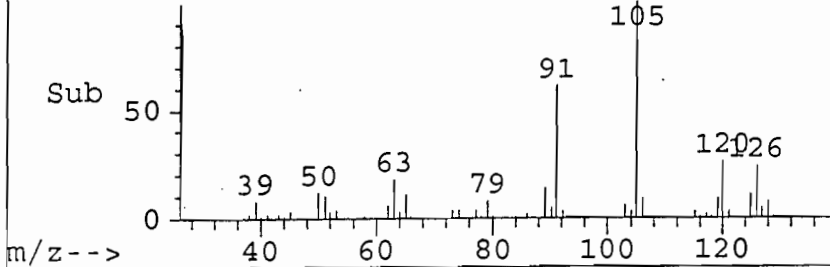
AbundanceScan 2125 (20.658 min): P19049.D (



AbundanceScan 2133 (20.657 min): P19052.D (



AbundanceScan 2133 (20.657 min): P19052.D (



#66

1,3,5-trimethylbenzene

Concen: 99.22 ug/L m

RT: 20.66 min Scan# 2133

Delta R.T. -0.00 min

Lab File: P19052.D

Acq: 6 Oct 99 8:07 pm

Tgt Ion:105 Resp: 2985109

Ion Ratio Lower Upper

105 100

120 35.5 28.6 53.0

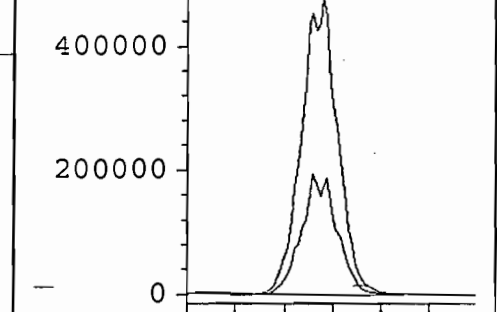
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 105.00 (104

Ion 120.00 (119

20.66



Time-->20.33 20.92

000352

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19053.D
 Acq Time : 6 Oct 99 8:51 pm
 Sample : 20PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:01 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	826982	50.00	ug/L	-0.03
43) Chlorobenzene-d5	16.34	117	920924	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.57	152	767847	50.00	ug/L	-0.02

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.95	113	768632	58.51	ug/L	117.02%
30) 1,2-Dichlorethane-d4	8.65	65	615500	59.74	ug/L	119.48%
38) Toluene-d8	12.75	98	871046	55.08	ug/L	110.15%
42) 4-Bromofluorobenzene	19.47	95	982457	64.83	ug/L	129.65%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	156473	24.25	ug/L	100
3) chloromethane	1.94	50	88365	26.99	ug/L	100
4) vinyl chloride	2.07	62	76891	23.78	ug/L	97
5) bromomethane	2.47	94	94426	27.25	ug/L	88
6) chloroethane	2.60	64	44116	27.63	ug/L	90
7) Acrolein	3.63	56	44052	217.40	ug/L	99
8) trichlorofluoromethane	2.90	101	404307	24.82	ug/L	97
9) 1,1-dichloroethene	3.65	61	189981	22.84	ug/L	97
10) Acetone	3.88	43	27257	13.75	ug/L	85
11) Carbon Disulfide	3.93	76	191190	20.89	ug/L	97
12) Iodo Methane	3.92	142	271039	21.74	ug/L	98
13) methylene chloride	4.56	84	80436	22.10	ug/L	98
14) trans-1,2-dichloroethene	4.96	61	159460	21.29	ug/L	97
15) TBA	4.93	59	109396	220.12	ug/L m	75
16) MTBE	4.98	73	300577	20.25	ug/L	96
17) Acrylonitrile	5.15	53	119846	214.55	ug/L	99
18) 1,1-dichloroethane	5.82	63	268259	23.71	ug/L	98
19) 2,2-dichloropropane	6.88	77	282488	23.08	ug/L	98
20) cis-1,2-dichloroethene	6.96	61	228696	23.15	ug/L	96
21) bromochloromethane	7.42	49	141932	22.99	ug/L	91
22) chloroform	7.63	83	373265	23.84	ug/L	100
23) 1,1,1-trichloroethane	7.84	97	380076	22.43	ug/L	95
25) Vinyl Acetate	5.95	43	260145	21.85	ug/L	97
26) 2-Butanone	7.09	43	38201	15.60	ug/L	92
27) carbon tetrachloride	8.10	117	210377	22.68	ug/L	96
28) 1,1-dichloropropene	8.19	75	209648	22.57	ug/L	95
29) benzene	8.58	78	275530	21.14	ug/L	98
31) 1,2-dichloroethane	8.82	62	269704	24.69	ug/L	97
32) trichloroethene	10.02	130	165748	21.51	ug/L	94
33) 1,2-dichloropropane	10.59	63	125993	22.27	ug/L	91
34) dibromomethane	10.85	174	142412	22.84	ug/L	90
35) bromodichloromethane	11.25	83	334026	22.49	ug/L	97
36) 2-Chloroethyl Vinyl Ether	12.91	63	43943	21.68	ug/L m	87

(#) = qualifier out of range (m) = manual integration
 P19053.D V21006CS.M Thu Oct 07 12:32:24 1999

VOA3

Page 1

000353

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19053.D
Acq Time : 6 Oct 99 8:51 pm
Sample : 20PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 12:01 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.29	75	201523	22.97	ug/L	98
39) toluene	12.91	91	353619	22.30	ug/L	95
40) trans-1,3-dichloropropene	13.72	75	192402	22.80	ug/L	98
41) 1,1,2-trichloroethane	14.12	97	97452	19.81	ug/L	94
44) 4-Methyl-2-Pentanone	12.71	43	89095	19.19	ug/L	86
45) tetrachloroethene	14.14	166	186813	19.04	ug/L	97
46) 1,3-dichloropropane	14.50	76	177273	20.47	ug/L	100
47) dibromochloromethane	14.95	129	214678	17.76	ug/L	99
48) 1,2-dibromoethane	15.18	107	197136	21.22	ug/L	94
49) 2-Hexanone	14.78	43	57573	14.39	ug/L	69
50) chlorobenzene	16.39	112	319391	22.13	ug/L	97
51) 1-Chlorohexane	16.45	91	174798	20.79	ug/L	-96
52) 1,1,1,2-tetrachloroethane	16.67	133	156458	17.35	ug/L	89
53) ethylbenzene	16.66	91	528813	21.53	ug/L	95
54) m&p-xylenes	17.01	106	370002	45.84	ug/L	87
55) o-xylene	18.00	91	538397	23.67	ug/L	98
56) styrene	18.10	104	315320	23.53	ug/L	91
57) bromoform	18.56	173	192756	18.67	ug/L	99
59) isopropylbenzene	18.99	105	648156	19.47	ug/L	99
60) bromobenzene	19.76	77	445357	19.35	ug/L	94
61) 1,1,2,2-tetrachloroethane	20.08	83	247532	18.23	ug/L	81
62) 1,2,3-trichloropropane	20.13	75	181576	18.74	ug/L	97
63) n-propylbenzene	20.65	120	238605	18.59	ug/L	67
64) 2-chlorotoluene	20.32	126	164259	19.77	ug/L	98
65) 4-chlorotoluene	20.65	126	165793	19.74	ug/L	96
66) 1,3,5-trimethylbenzene	20.64	105	602273	19.11	ug/L	95
67) tert-butylbenzene	21.45	119	573320	19.70	ug/L	98
68) 1,2,4-trimethylbenzene	21.64	105	628112	20.55	ug/L	99
69) sec-butylbenzene	22.06	105	788664	20.47	ug/L	99
70) 1,3-dichlorobenzene	22.36	146	399625	20.19	ug/L	98
71) 4-isopropyltoluene	22.53	119	712351	20.04	ug/L	96
72) 1,4-dichlorobenzene	22.65	146	425798	21.82	ug/L	92
73) 1,2-dichlorobenzene	23.64	146	381316	20.00	ug/L	92
74) n-butylbenzene	23.65	91	675835	19.71	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.92	75	86408	18.71	ug/L	89
76) 1,2,4-trichlorobenzene	28.15	180	309747	19.14	ug/L	98
77) hexachlorobutadiene	28.60	225	274446	20.53	ug/L	97
78) naphthalene	28.80	128	466056	20.32	ug/L	98
79) 1,2,3-trichlorobenzene	29.51	180	289280	19.92	ug/L	100

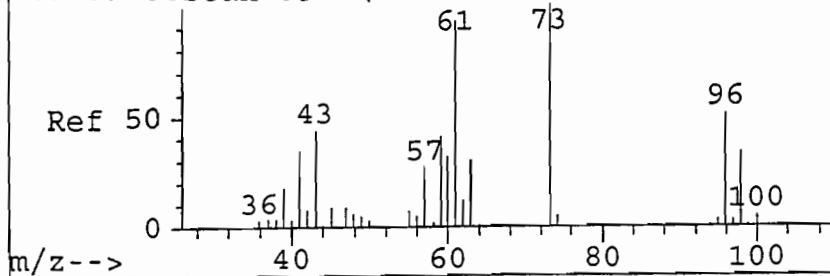
000354

Data File : I:\HPCHEM\1\DATA\V2100699\P19053.D
Acq Time : 6 Oct 99 8:51 pm
Sample : 20PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 12:01 1999

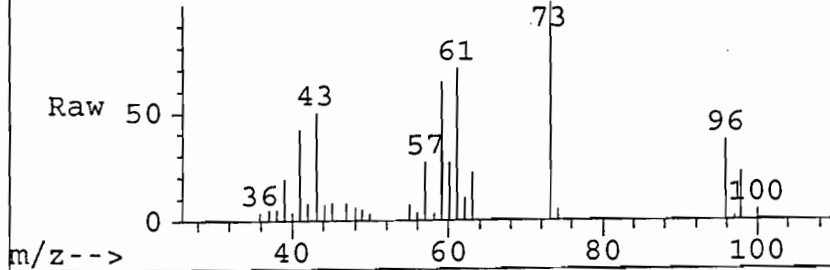
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Operator: AV
Inst      : voa2
Multiplr: 1.00
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000355

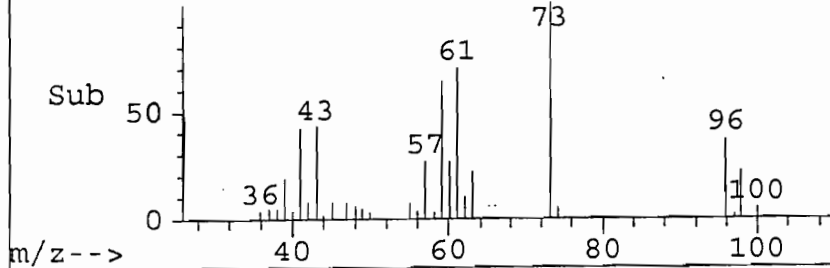
AbundanceScan 392 (4.964 min): P19049.D (-,



AbundanceScan 389 (4.930 min): P19053.D (*)



AbundanceScan 389 (4.930 min): P19053.D (-,



#15

TBA

Concen: 220.12 ug/L m

RT: 4.93 min Scan# 389

Delta R.T. -0.03 min

Lab File: P19053.D

Acq: 6 Oct 99 8:51 pm

Tgt Ion:59 Resp: 109396

Ion Ratio Lower Upper

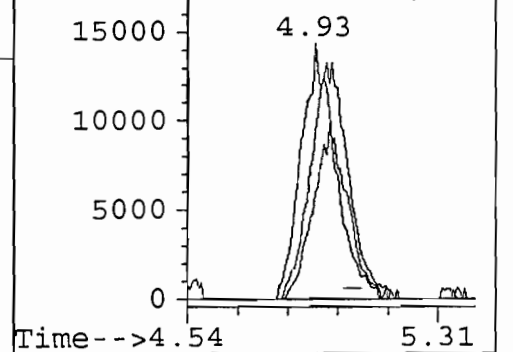
59 100

57 42.0 45.1 83.7#

41 65.3 59.6 110.8

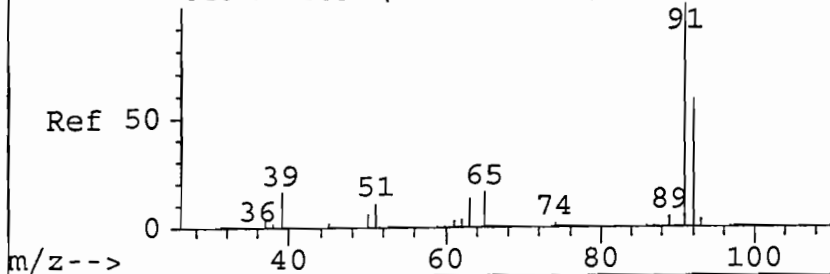
0 0.0 0.0 0.0

AbundanceIon 59.00 (58.
20000 Ion 57.00 (56.
Ion 41.00 (40.



000356

AbundanceScan 1269 (12.919 min): P19049.D (



#36

2-Chloroethyl Vinyl Ether

Concen: 21.68 ug/L m

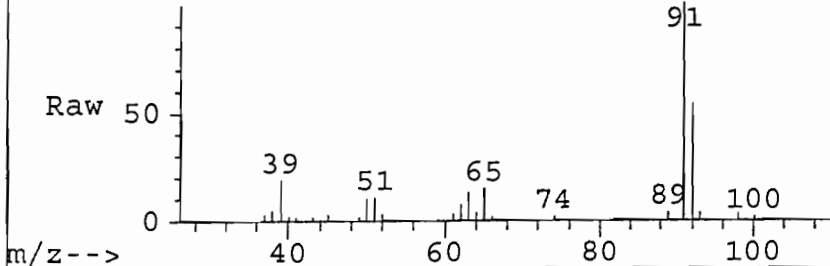
RT: 12.91 min Scan# 1271

Delta R.T. -0.01 min

Lab File: P19053.D

Acq: 6 Oct 99 8:51 pm

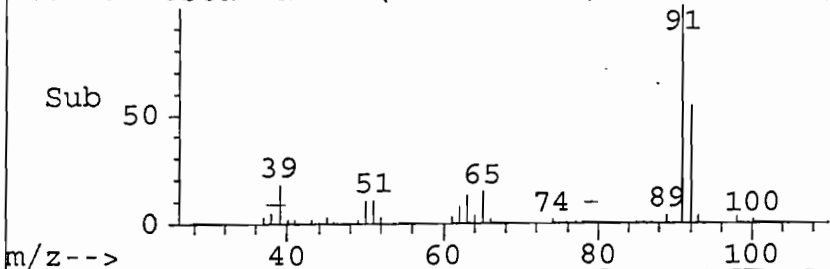
AbundanceScan 1271 (12.910 min): P19053.D (



Tgt Ion:63 Resp: 43943

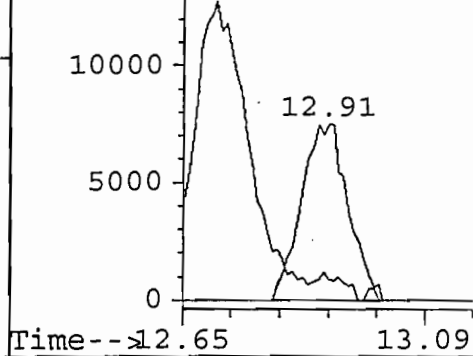
Ion	Ratio	Lower	Upper
63	100		
43	11.8	2.5	7.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 1271 (12.910 min): P19053.D (



AbundanceIon 63.00 (62.15000)

Ion 43.00 (42.15000)



000357

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19054.D
 Acq Time : 6 Oct 99 9:35 pm
 Sample : 5PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:13 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	953518	50.00	ug/L	-0.01
43) Chlorobenzene-d5	16.30	117	1033013	50.00	ug/L	-0.03
58) 1,4-dichlorobenzene-d4	22.58	152	762249	50.00	ug/L	-0.01

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	779680	51.47	ug/L	102.95%
30) 1,2-Dichlorethane-d4	8.65	65	605872	51.00	ug/L	102.00%
38) Toluene-d8	12.75	98	965112	52.93	ug/L	105.85%
42) 4-Bromofluorobenzene	19.47	95	976181	55.86	ug/L	111.73%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	43304	5.82	ug/L	99
3) chloromethane	1.95	50	22534	5.97	ug/L	92
4) vinyl chloride	2.07	62	20808	5.58	ug/L	99
5) bromomethane	2.48	94	26422	6.61	ug/L	85
6) chloroethane	2.61	64	12268	6.66	ug/L	97
7) Acrolein	3.64	56	11756	50.32	ug/L	97
8) trichlorofluoromethane	2.91	101	114122	6.08	ug/L	94
9) 1,1-dichloroethene	3.65	61	51013	5.32	ug/L	95
10) Acetone	3.88	43	10215	4.47	ug/L m	61
11) Carbon Disulfide	3.94	76	48705	4.62	ug/L	88
12) Iodo Methane	3.90	142	66075	4.60	ug/L	98
13) methylene chloride	4.57	84	25136	5.99	ug/L	97
14) trans-1,2-dichloroethene	4.97	61	40263	4.66	ug/L	93
15) TBA	4.92	59	36448	63.60	ug/L m	62
16) MTBE	4.98	73	77794	4.55	ug/L m	81
17) Acrylonitrile	5.17	53	30559	47.45	ug/L	99
18) 1,1-dichloroethane	5.82	63	70534	5.41	ug/L	99
19) 2,2-dichloropropane	6.89	77	72238	5.12	ug/L	91
20) cis-1,2-dichloroethene	6.97	61	60502	5.31	ug/L	89
21) bromochloromethane	7.44	49	36475	5.12	ug/L	97
22) chloroform	7.61	83	95105	5.27	ug/L	100
23) 1,1,1-trichloroethane	7.85	97	93521	4.79	ug/L	92
25) Vinyl Acetate	5.96	43	63925	4.66	ug/L m	92
26) 2-Butanone	7.10	43	12567	4.45	ug/L m	62
27) carbon tetrachloride	8.09	117	51665	4.83	ug/L	100
28) 1,1-dichloropropene	8.20	75	52179	4.87	ug/L	96
29) benzene	8.58	78	75409	5.02	ug/L	91
31) 1,2-dichloroethane	8.81	62	69777	5.54	ug/L	100
32) trichloroethene	10.00	130	41152	4.63	ug/L	95
33) 1,2-dichloropropane	10.60	63	30726	4.71	ug/L	93
34) dibromomethane	10.85	174	34242	4.76	ug/L	93
35) bromodichloromethane	11.24	83	76453	4.46	ug/L	100
36) 2-Chloroethyl Vinyl Ether	12.89	63	12917	5.53	ug/L	87

(#) = qualifier out of range (m) = manual integration
 P19054.D V21006CS.M Thu Oct 07 12:33:26 1999

VOA3

Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19054.D
 Acq Time : 6 Oct 99 9:35 pm
 Sample : 5PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:13 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.29	75	46235	4.57	ug/L	95
39) toluene	12.91	91	100931	5.52	ug/L	98
40) trans-1,3-dichloropropene	13.73	75	44953	4.62	ug/L	98
41) 1,1,2-trichloroethane	14.13	97	26810	4.73	ug/L	98
44) 4-Methyl-2-Pentanone	12.71	43	36261	6.96	ug/L m	55
45) tetrachloroethene	14.13	166	51246	4.66	ug/L	93
46) 1,3-dichloropropane	14.51	76	46547	4.79	ug/L	99
47) dibromochloromethane	14.93	129	78302	5.78	ug/L m	99
48) 1,2-dibromoethane	15.19	107	49449	4.74	ug/L	99
49) 2-Hexanone	14.78	43	17657	3.93	ug/L	73
50) chlorobenzene	16.38	112	89300	5.51	ug/L	95
51) 1-Chlorohexane	16.43	91	47507	5.04	ug/L	79
52) 1,1,1,2-tetrachloroethane	16.68	133	41479	4.10	ug/L	95
53) ethylbenzene	16.67	91	149770	5.44	ug/L	100
54) m&p-xylenes	17.00	106	102309	11.30	ug/L	97
55) o-xylene	18.02	91	153238	6.01	ug/L	97
56) styrene	18.09	104	75511	5.02	ug/L	88
57) bromoform	18.57	173	40912	3.53	ug/L	92
59) isopropylbenzene	18.98	105	163827	4.96	ug/L	96
60) bromobenzene	19.76	77	116655	5.11	ug/L	97
61) 1,1,2,2-tetrachloroethane	20.08	83	64624	4.79	ug/L	100
62) 1,2,3-trichloropropane	20.14	75	51926	5.40	ug/L	95
63) n-propylbenzene	20.64	120	109016	8.56	ug/L m	66
64) 2-chlorotoluene	20.30	126	40319	4.89	ug/L	95
65) 4-chlorotoluene	20.65	126	41336	4.96	ug/L	92
66) 1,3,5-trimethylbenzene	20.40	105	134758	4.31	ug/L m	96
67) tert-butylbenzene	21.47	119	148837	5.15	ug/L	97
68) 1,2,4-trimethylbenzene	21.63	105	249093	8.21	ug/L m	100
69) sec-butylbenzene	22.09	105	194126	5.08	ug/L	96
70) 1,3-dichlorobenzene	22.37	146	103747	5.28	ug/L	94
71) 4-isopropyltoluene	22.52	119	195423	5.54	ug/L	94
72) 1,4-dichlorobenzene	22.64	146	103003	5.32	ug/L	96
73) 1,2-dichlorobenzene	23.64	146	95075	5.02	ug/L	91
74) n-butylbenzene	23.65	91	221376	6.50	ug/L m	82
75) 1,2-dibromo-3-chloropropan	25.94	75	21024	4.59	ug/L m	69
76) 1,2,4-trichlorobenzene	28.14	180	81498	5.07	ug/L m	75
77) hexachlorobutadiene	28.60	225	63069	4.75	ug/L	90
78) naphthalene	28.79	128	141195	6.20	ug/L m	98
79) 1,2,3-trichlorobenzene	29.52	180	74328	5.16	ug/L	93

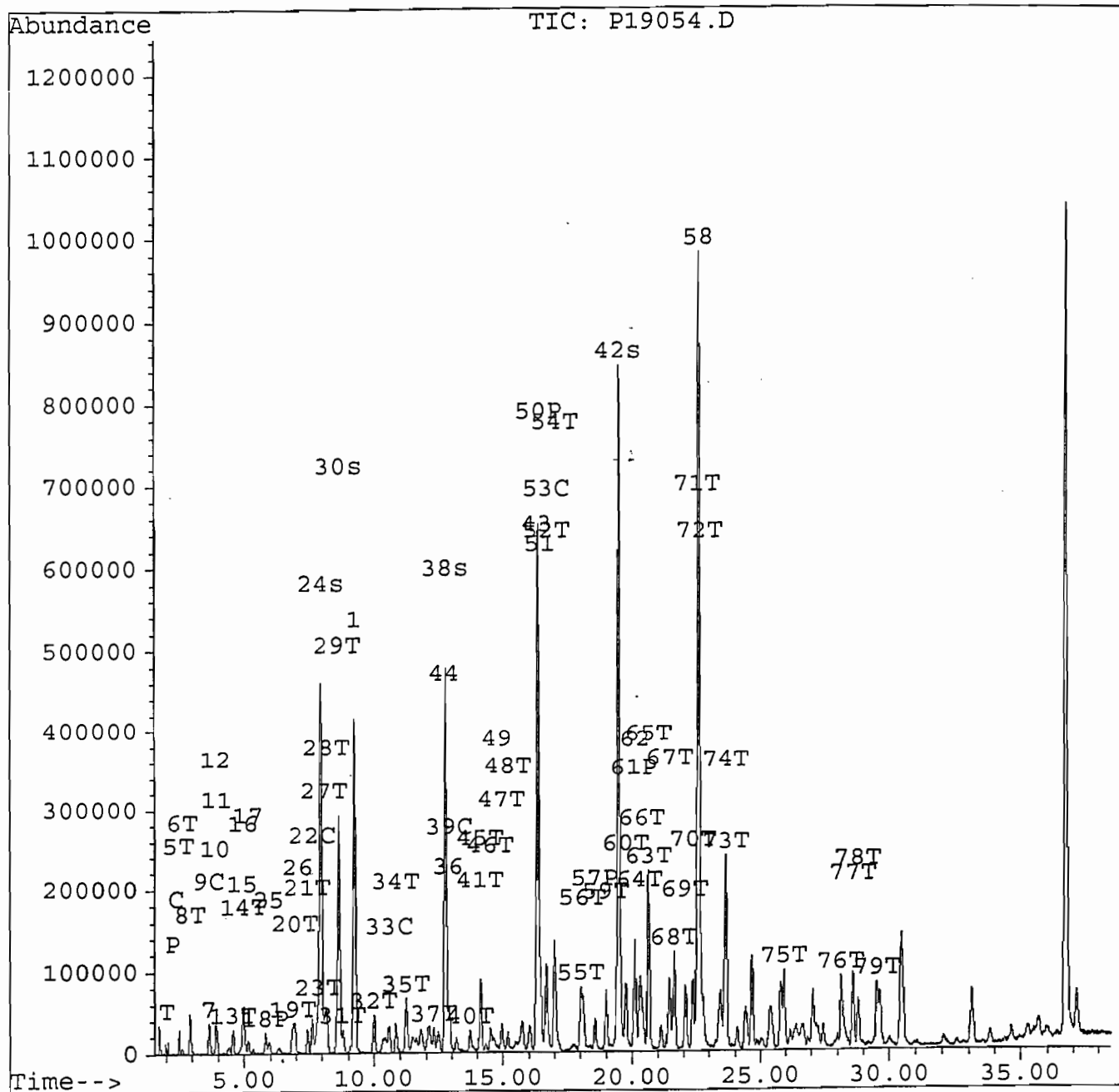
000359

Quantitation Report

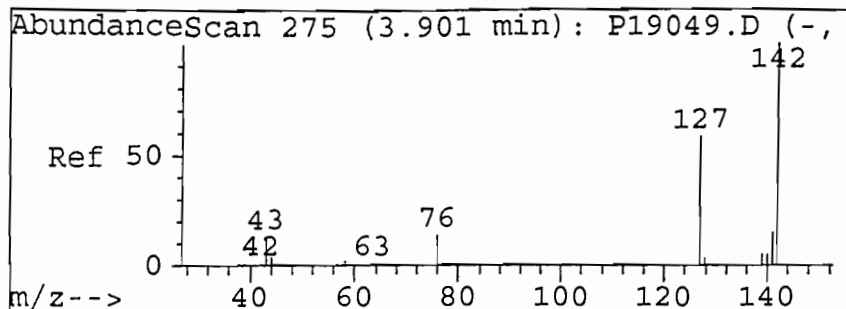
Data File : I:\HPCHEM\1\DATA\V2100699\P19054.D
 Acq Time : 6 Oct 99 9:35 pm
 Sample : 5PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:13 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

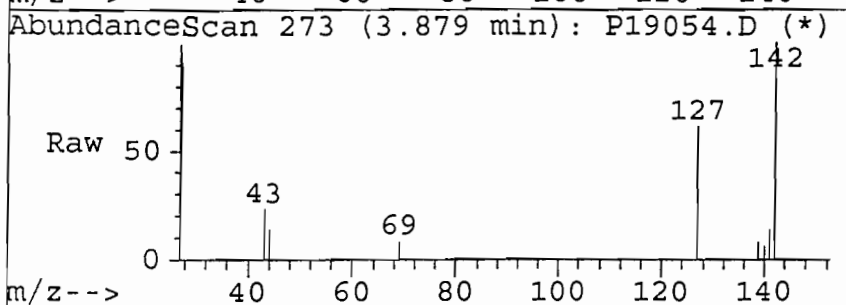
Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration



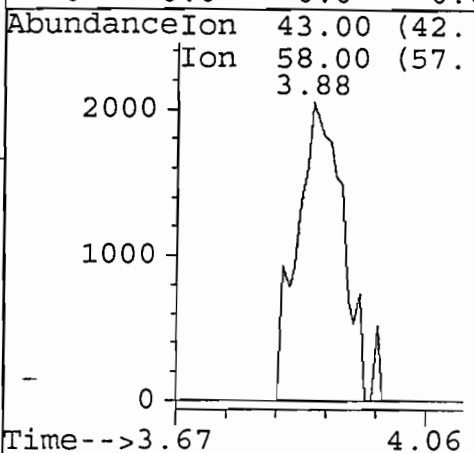
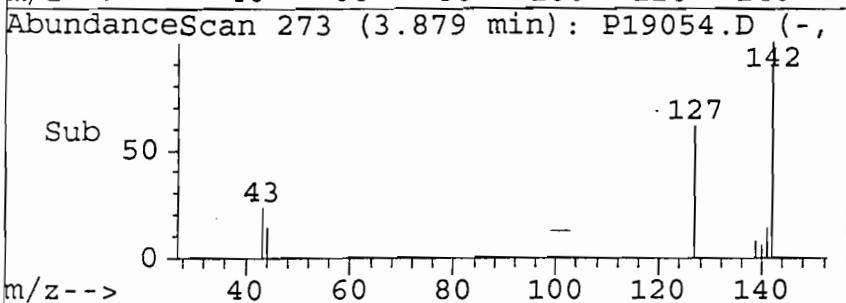
000360



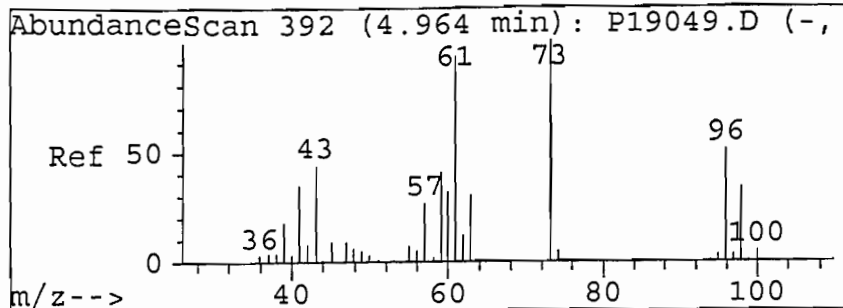
#10
 Acetone
 Concen: 4.47 ug/L m
 RT: 3.88 min Scan# 273
 Delta R.T. -0.02 min
 Lab File: P19054.D
 Acq: 6 Oct 99 9:35 pm



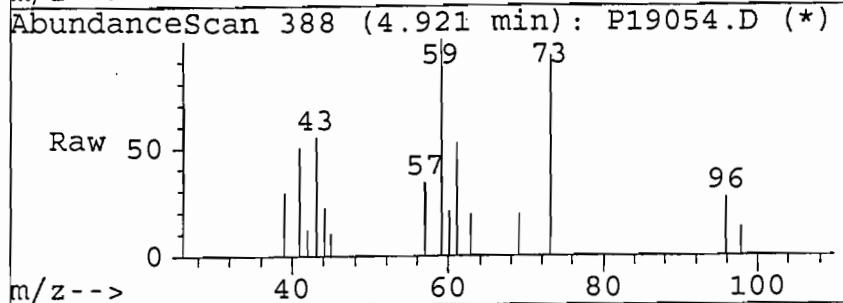
Tgt Ion	Ratio	Lower	Upper
43	100		
58	0.0	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



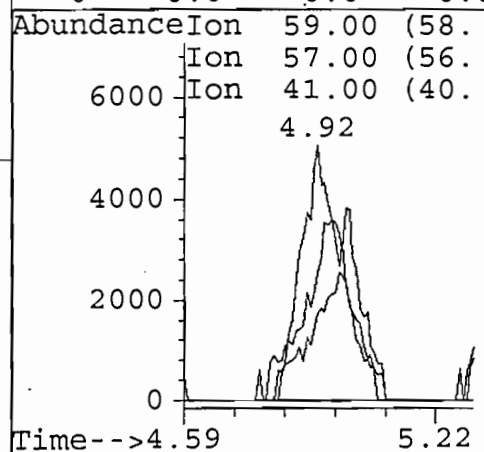
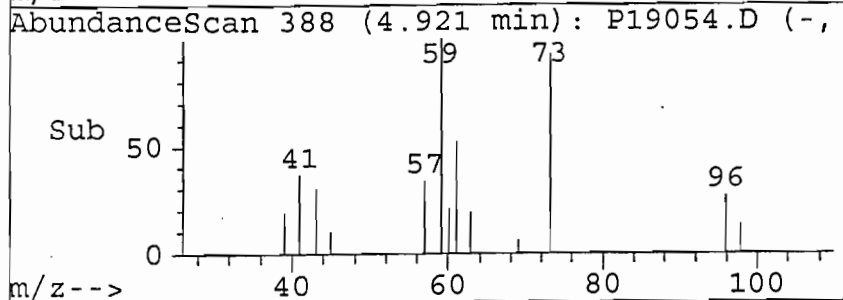
000361



#15
TBA
Concen: 63.60 ug/L m
RT: 4.92 min Scan# 388
Delta R.T. -0.04 min
Lab File: P19054.D
Acq: 6 Oct 99 9:35 pm

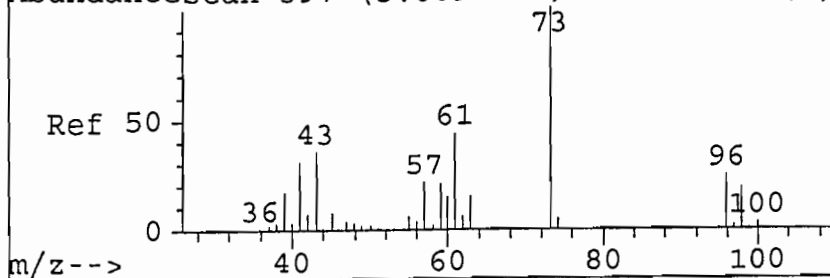


Tgt Ion	Ratio	Lower	Upper
59	100		
57	34.3	45.1	83.7#
41	50.5	59.6	110.8#
0	0.0	0.0	0.0

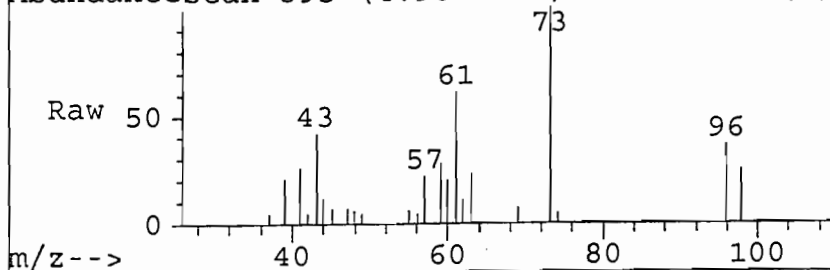


000362

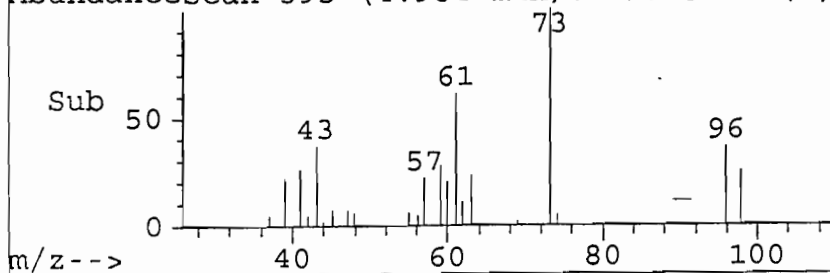
AbundanceScan 397 (5.009 min): P19049.D (-,



AbundanceScan 395 (4.984 min): P19054.D (*)



AbundanceScan 395 (4.984 min): P19054.D (-,



#16

MTBE

Concen: 4.55 ug/L m

RT: 4.98 min Scan# 395

Delta R.T. -0.03 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:73 Resp: 77794

Ion Ratio Lower Upper

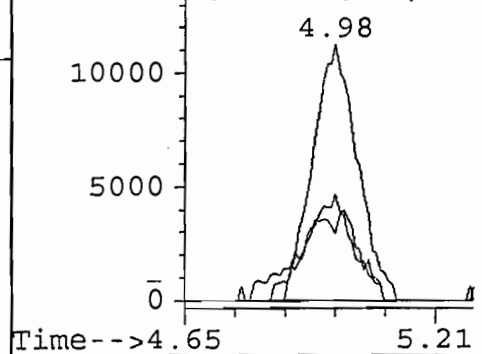
73 100

41 26.5 16.9 50.6

43 41.5 20.2 60.6

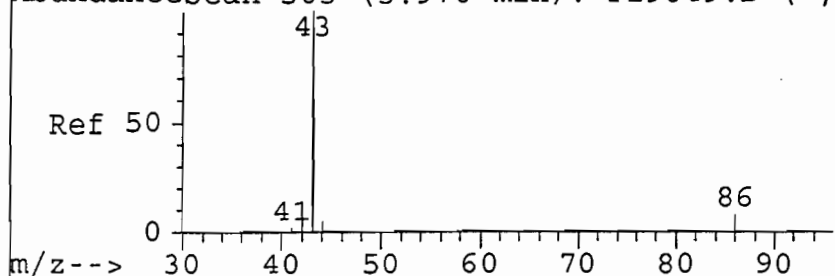
0 0.0 0.0 0.0

AbundanceIon 73.00 (72.
15000 Ion 40.95 (40.
Ion 42.95 (42.



000363

AbundanceScan 503 (5.970 min): P19049.D (-,



#25

Vinyl Acetate

Concen: 4.66 ug/L m

RT: 5.96 min Scan# 503

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:43 Resp: 63925

Ion Ratio Lower Upper

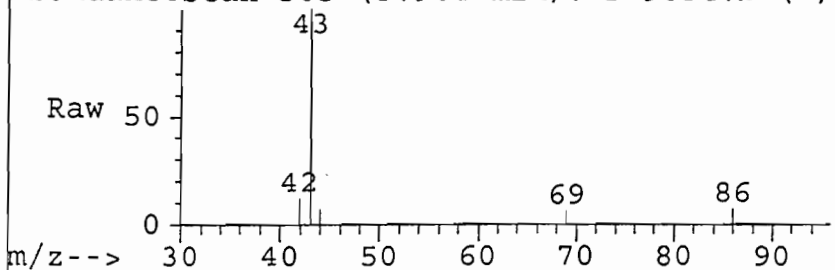
43 100

86 7.5 4.0 11.9

0 0.0 0.0 0.0

0 0.0 0.0 0.0

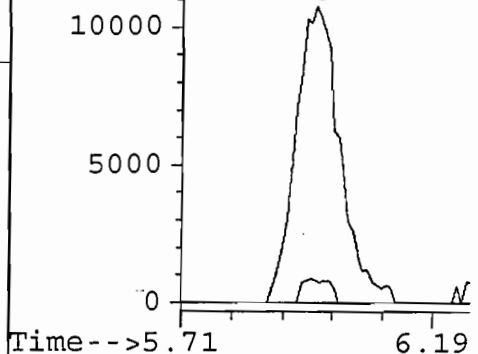
AbundanceScan 503 (5.964 min): P19054.D (*)



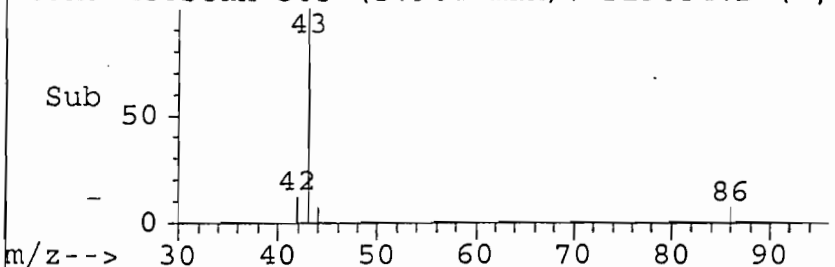
AbundanceIon 43.00 (42.

Ion 86.00 (85.

5.96

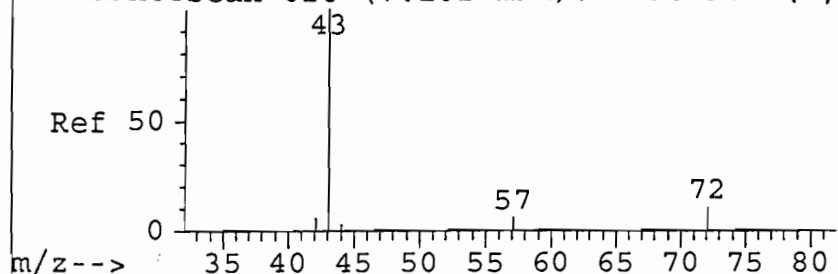


AbundanceScan 503 (5.964 min): P19054.D (-,



000364

AbundanceScan 628 (7.102 min): P19049.D (-,



#26

2-Butanone

Concen: 4.45 ug/L m

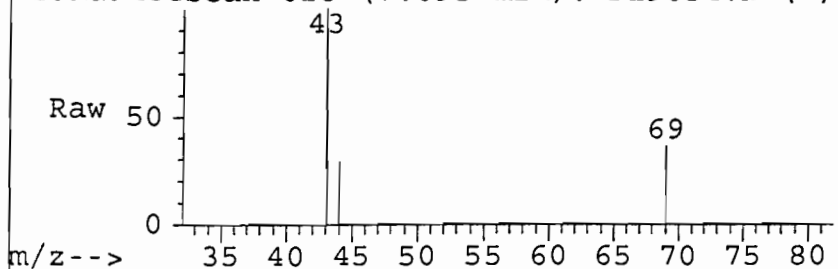
RT: 7.10 min Scan# 628

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 628 (7.095 min): P19054.D (*)



Tgt Ion:43 Resp: 12567

Ion Ratio Lower Upper

43 100

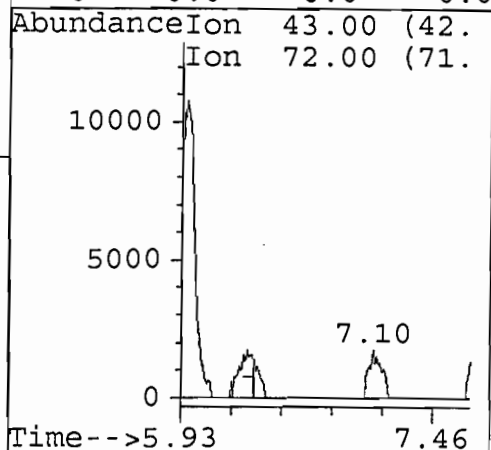
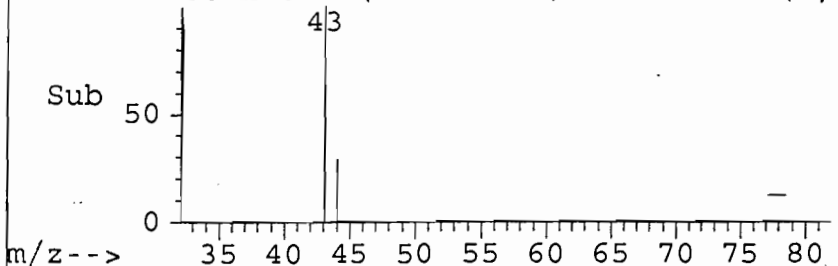
72 0.0 8.2 24.5#

0 0.0 0.0 0.0

0 0.0 0.0 0.0

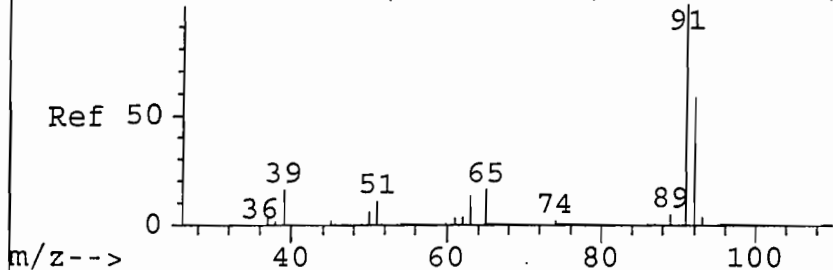
AbundanceIon 43.00 (42.
Ion 72.00 (71.

AbundanceScan 628 (7.095 min): P19054.D (-,



000365

AbundanceScan 1269 (12.919 min): P19049.D (



#36

2-Chloroethyl Vinyl Ether

Concen: 5.53 ug/L m

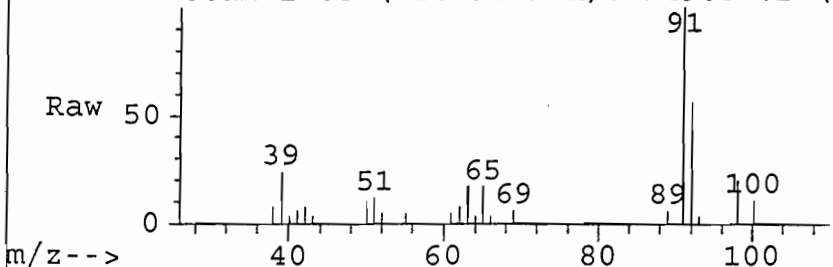
RT: 12.89 min Scan# 1268

Delta R.T. -0.02 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 1268 (12.893 min): P19054.D (



Tgt Ion:63 Resp: 12917

Ion Ratio Lower Upper

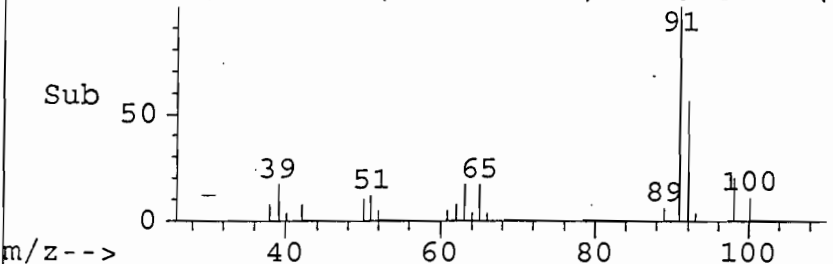
63 100

43 22.6 2.5 7.5#

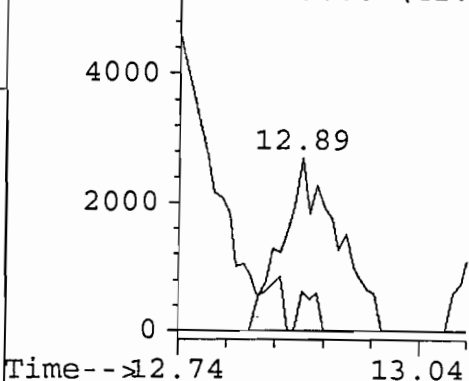
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 1268 (12.893 min): P19054.D (

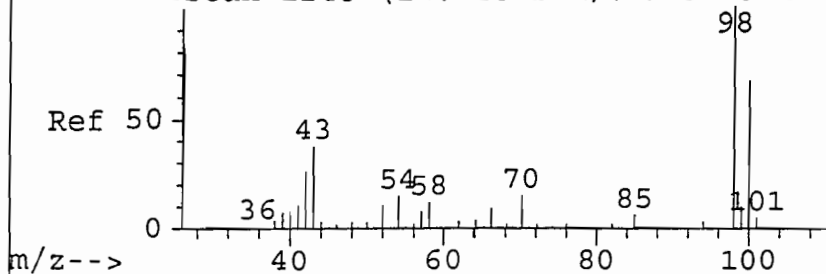


AbundanceIon 63.00 (62.
Ion 43.00 (42.



000366

AbundanceScan 1248 (12.728 min): P19049.D (



#44

4-Methyl-2-Pentanone

Concen: 6.96 ug/L m

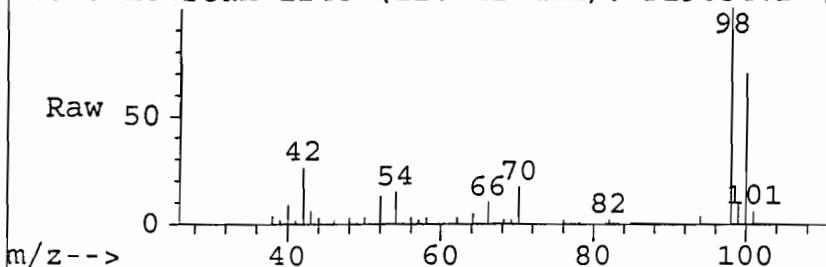
RT: 12.71 min Scan# 1248

Delta R.T. -0.02 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 1248 (12.712 min): P19054.D (



Tgt Ion:43 Resp: 36261

Ion Ratio Lower Upper

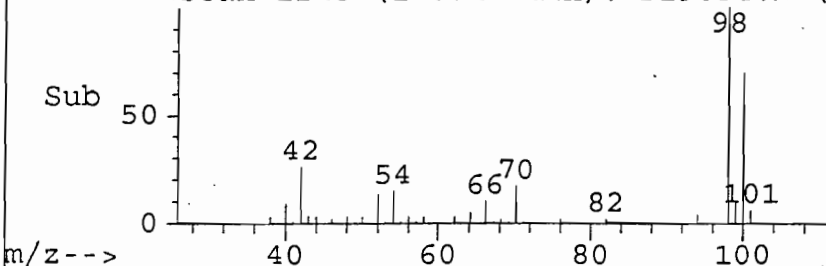
43 100

58 43.4 17.0 50.9

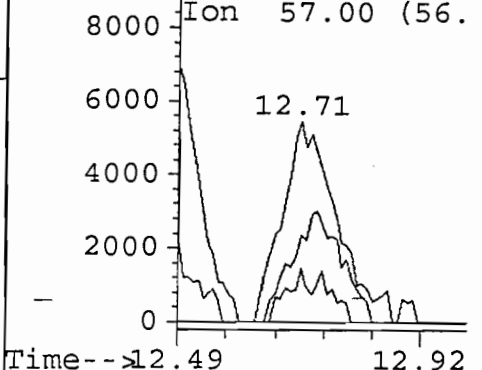
57 26.8 11.2 33.5

0 0.0 0.0 0.0

AbundanceScan 1248 (12.712 min): P19054.D (

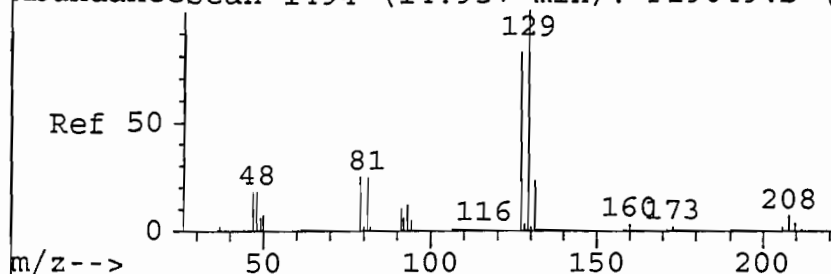


AbundanceIon 43.00 (42.
Ion 58.00 (57.
Ion 57.00 (56.



000367

AbundanceScan 1494 (14.957 min): P19049.D (



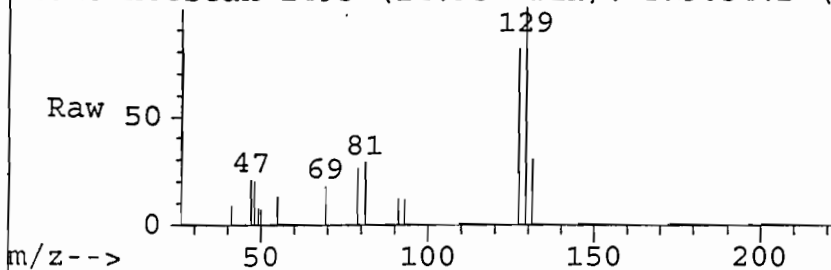
#47
 dibromochloromethane
 Concen: 5.78 ug/L m
 RT: 14.93 min Scan# 1493
 Delta R.T. -0.02 min
 Lab File: P19054.D
 Acq: 6 Oct 99 9:35 pm

Tgt Ion:128.75 Resp: 78302

Ion Ratio Lower Upper

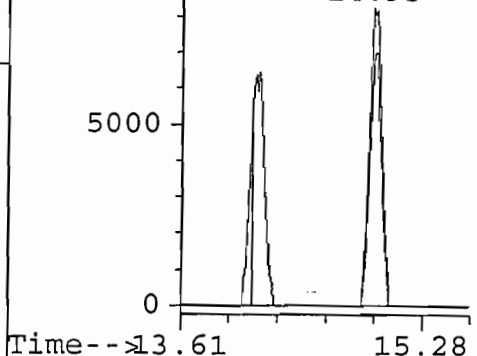
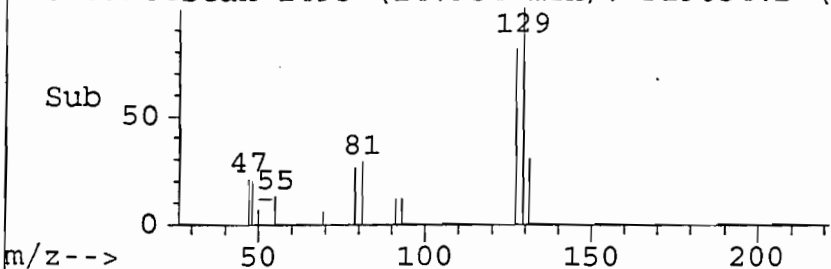
129	100		
127	81.3	56.4	104.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 1493 (14.934 min): P19054.D (



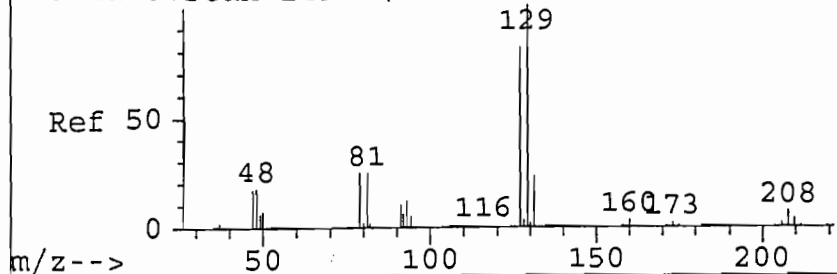
AbundanceIon 128.75 (128
 Ion 126.70 (126
 14.93

AbundanceScan 1493 (14.934 min): P19054.D (



000368

AbundanceScan 1494 (14.957 min): P19049.D (



#47

dibromochloromethane

Concen: 5.78 ug/L m

RT: 14.93 min Scan# 1493

Delta R.T. -0.02 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:128.75 Resp: 78302

Ion Ratio Lower Upper

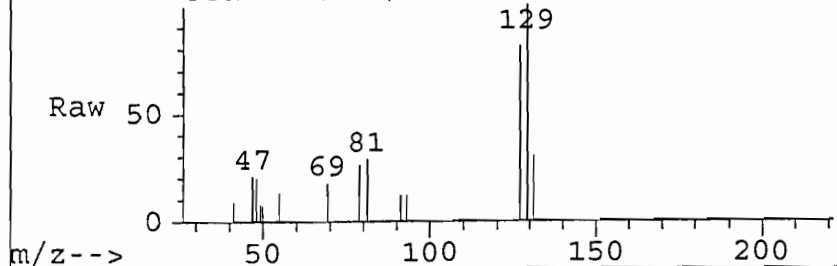
129 100

127 81.3 56.4 104.7

0 0.0 0.0 0.0

0 0.0 0.0 0.0

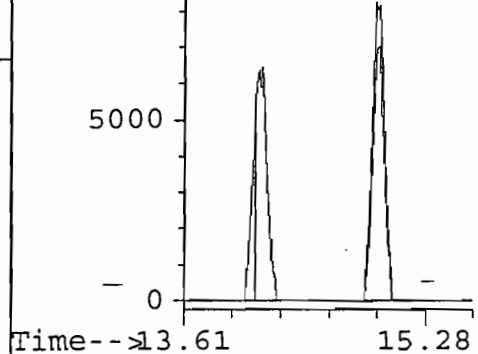
AbundanceScan 1493 (14.934 min): P19054.D (



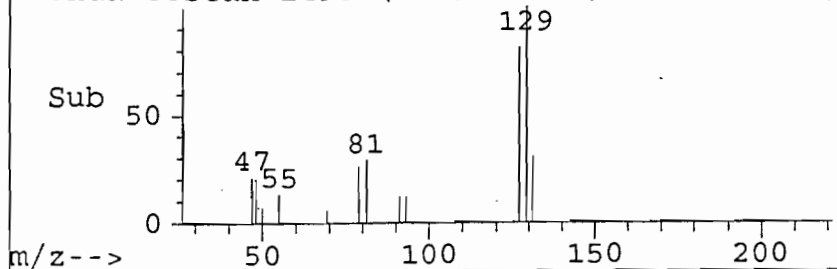
AbundanceIon 128.75 (128

Ion 126.70 (126

14.93

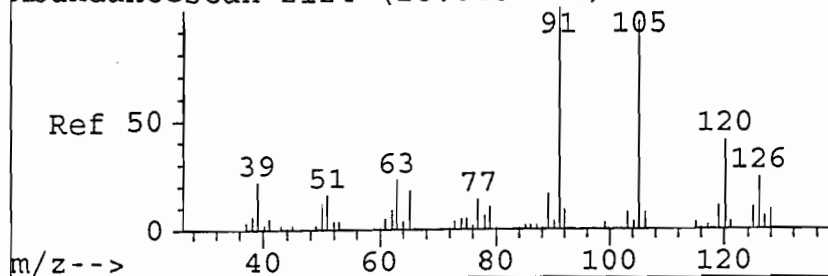


AbundanceScan 1493 (14.934 min): P19054.D (

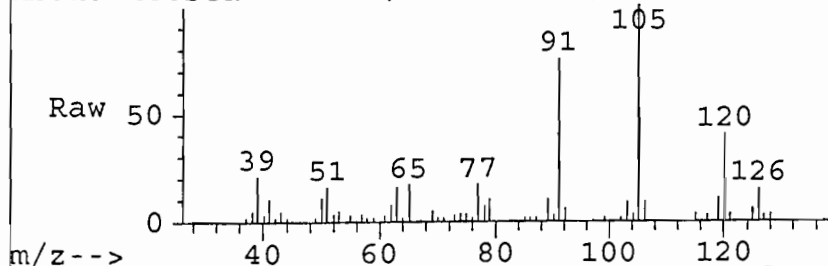


000369

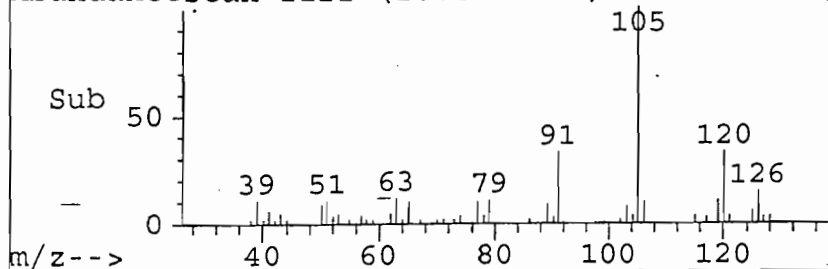
AbundanceScan 2124 (20.648 min): P19049.D (



AbundanceScan 2122 (20.641 min): P19054.D (



AbundanceScan 2122 (20.641 min): P19054.D (



#63

n-propylbenzene

Concen: 8.56 ug/L m

RT: 20.64 min Scan# 2122

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:120 Resp: 109016

Ion Ratio Lower Upper

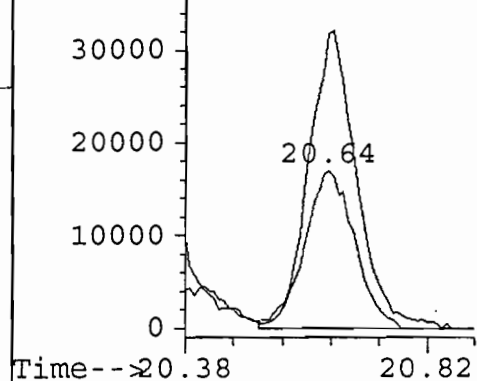
120 100

91 241.0 170.7 316.9

0 0.0 0.0 0.0

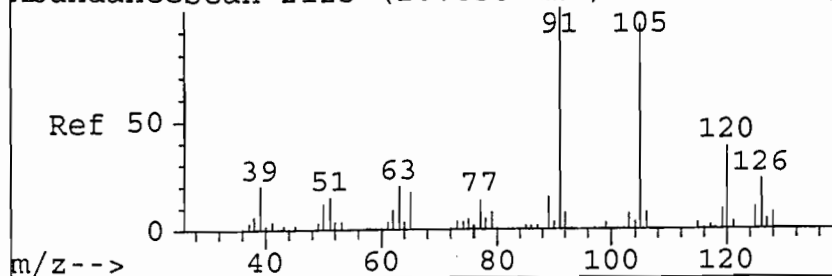
0 0.0 0.0 0.0

AbundanceIon 120.00 (119
Ion 91.00 (90.

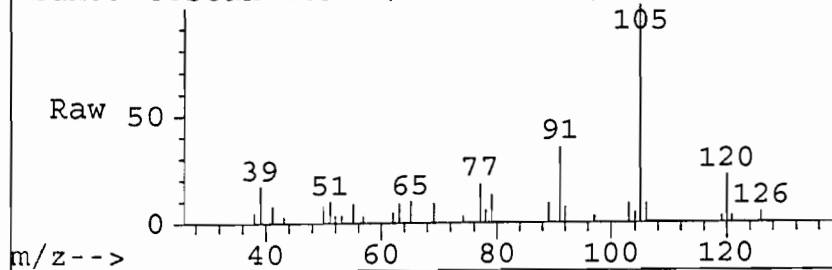


000370

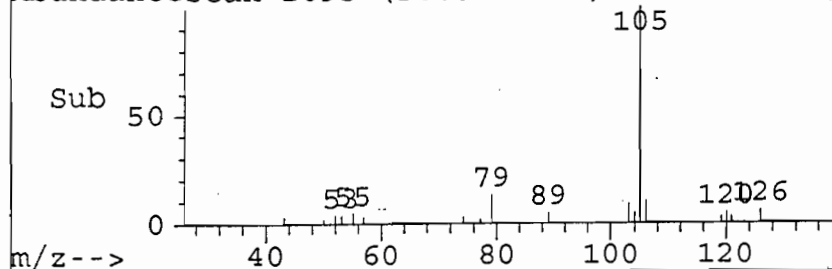
AbundanceScan 2125 (20.658 min): P19049.D (



AbundanceScan 2095 (20.395 min): P19054.D (



AbundanceScan 2095 (20.395 min): P19054.D (



#66

1,3,5-trimethylbenzene

Concen: 4.31 ug/L m

RT: 20.40 min Scan# 2095

Delta R.T. -0.26 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:105 Resp: 134758

Ion Ratio Lower Upper

105 100

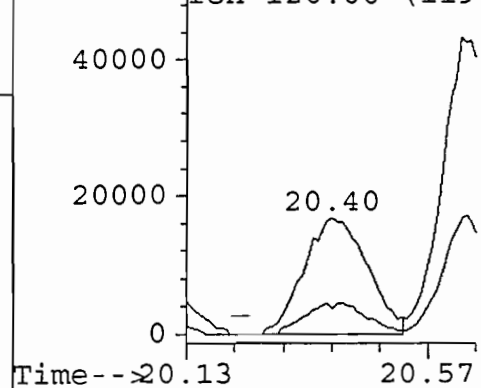
120 40.9 28.6 53.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

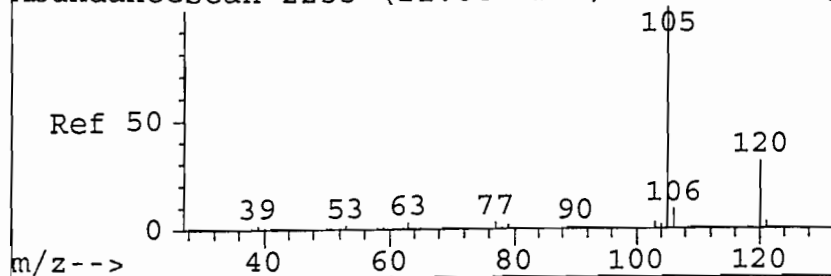
AbundanceIon 105.00 (104

Ion 120.00 (119

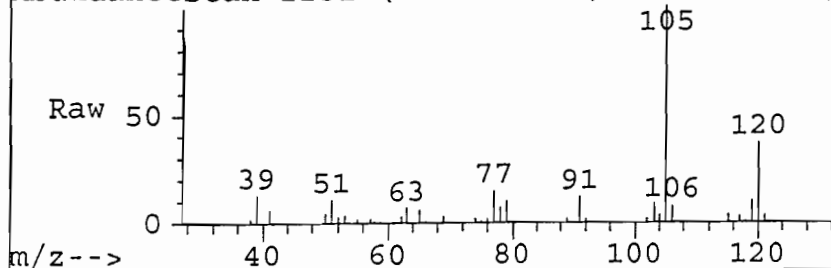


000371

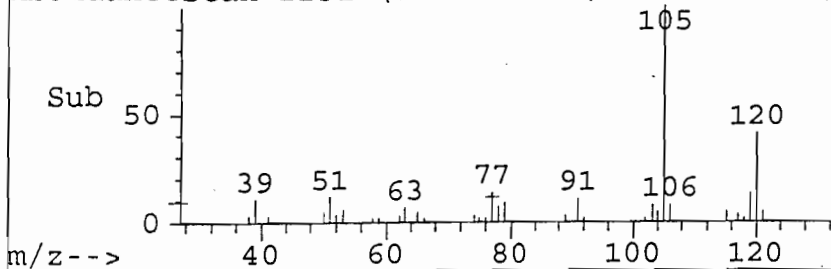
AbundanceScan 2233 (21.642 min): P19049.D (



AbundanceScan 2231 (21.630 min): P19054.D (



AbundanceScan 2231 (21.630 min): P19054.D (



#68

1,2,4-trimethylbenzene

Concen: 8.21 ug/L m

RT: 21.63 min Scan# 2231

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:105 Resp: 249093

Ion Ratio Lower Upper

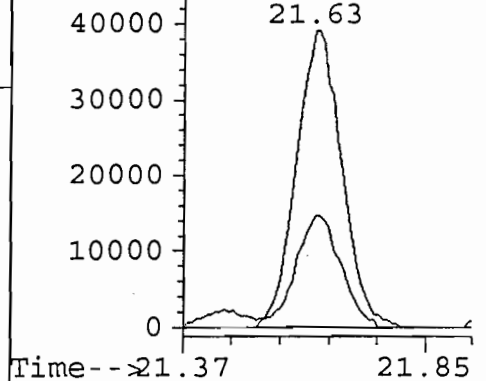
105 100

120 30.8 26.0 48.2

0 0.0 0.0 0.0

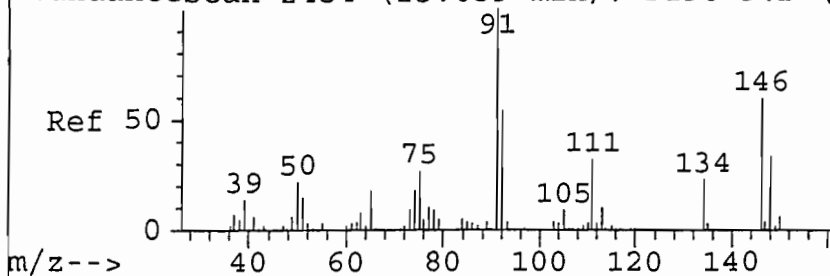
0 0.0 0.0 0.0

AbundanceIon 105.00 (104)
Ion 120.00 (119)
21.63



000372

AbundanceScan 2454 (23.659 min): P19049.D (



#74

n-butylbenzene

Concen: 6.50 ug/L m

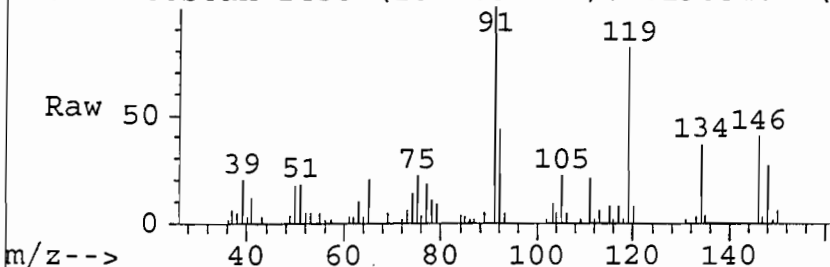
RT: 23.65 min Scan# 2455

Delta R.T. -0.00 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 2455 (23.655 min): P19054.D (



Tgt Ion:91 Resp: 221376

Ion Ratio Lower Upper

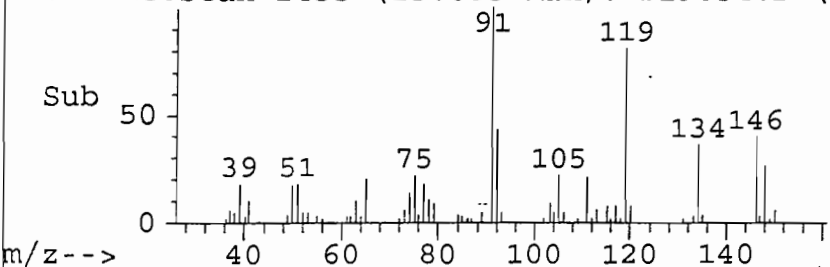
91 100

92 43.4 37.5 69.7

134 36.5 16.2 30.0#

0 0.0 0.0 0.0

AbundanceScan 2455 (23.655 min): P19054.D (



AbundanceIon 91.00 (90.

Ion 92.00 (91.

40000 Ion 134.00 (133

23.65

30000

20000

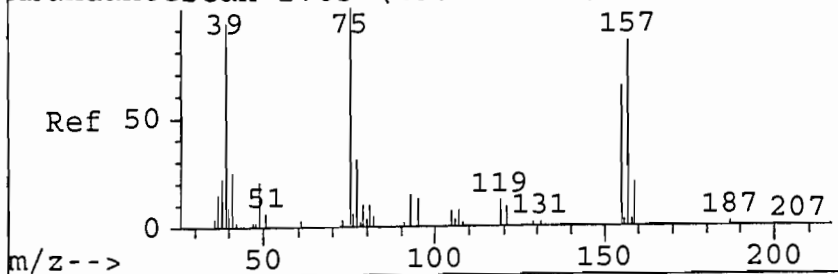
10000

0

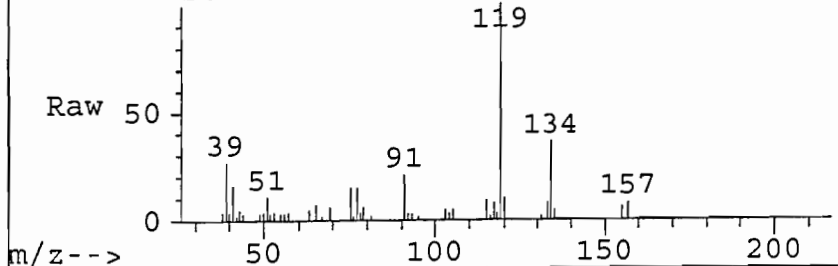
Time--23.42 23.84

000373

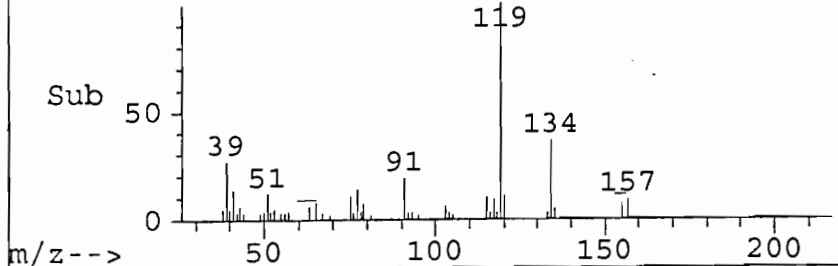
AbundanceScan 2703 (25.927 min): P19049.D (



AbundanceScan 2706 (25.937 min): P19054.D (



AbundanceScan 2706 (25.937 min): P19054.D (



#75

1,2-dibromo-3-chloropropane

Concen: 4.59 ug/L m

RT: 25.94 min Scan# 2706

Delta R.T. 0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:75 Resp: 21024

Ion Ratio Lower Upper

75 100

155 39.9 44.3 82.3#

157 55.2 59.0 109.6#

0 0.0 0.0 0.0

AbundanceIon 75.00 (74.

Ion 155.00 (154

Ion 157.00 (156

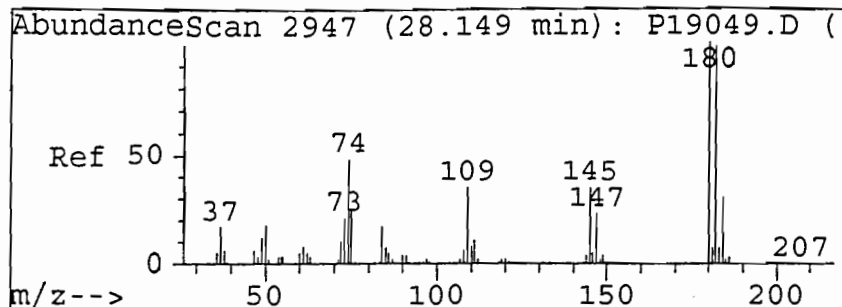
4000 25.94

2000

0

Time-->25.62 26.15

000374



#76

1,2,4-trichlorobenzene

Concen: 5.07 ug/L m

RT: 28.14 min Scan# 2948

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:179.7 Resp: 81498

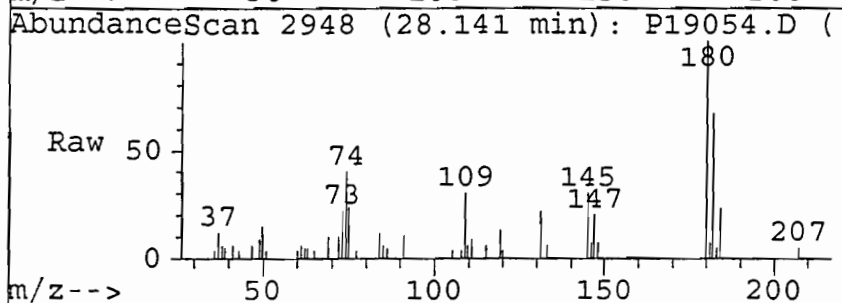
Ion Ratio Lower Upper

180 100

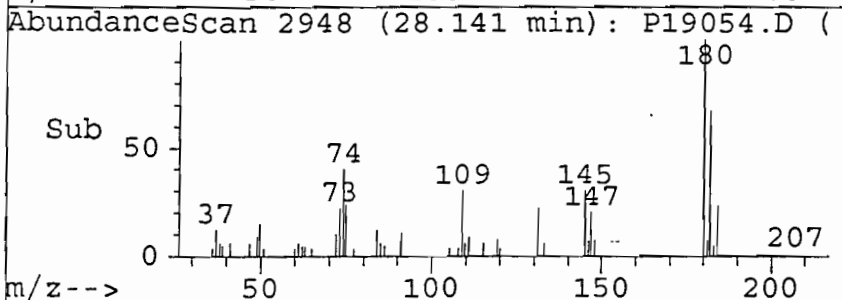
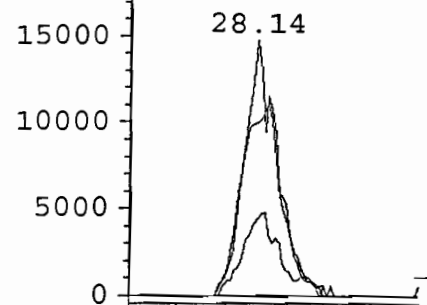
182 67.4 68.5 127.3#

145 29.6 24.3 45.1

0 0.0 0.0 0.0



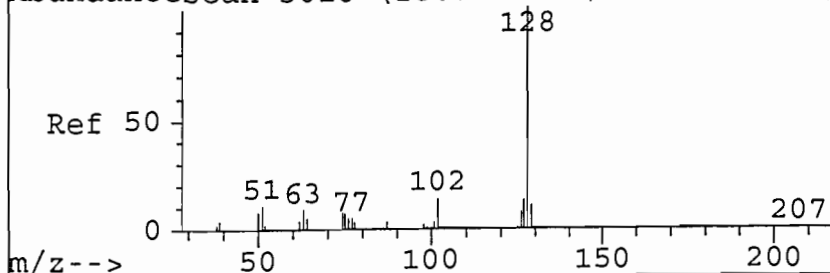
AbundanceIon 179.70 (179
20000 Ion 181.80 (181
Ion 144.70 (144



Time--> 27.83 28.42

000375

AbundanceScan 3018 (28.798 min): P19049.D (



#78

naphthalene

Concen: 6.20 ug/L m

RT: 28.79 min Scan# 3020

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:128 Resp: 141195

Ion Ratio Lower Upper

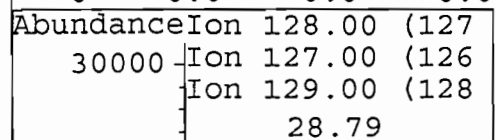
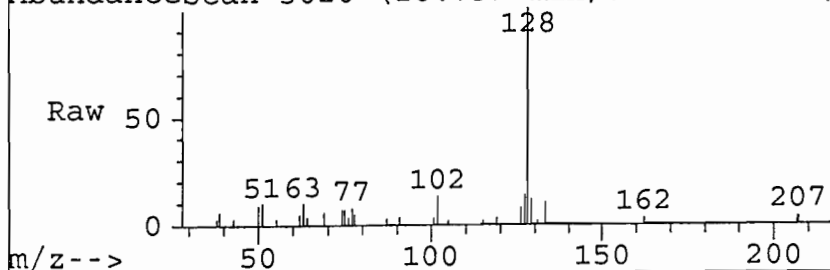
128 100

127 14.2 9.4 17.4

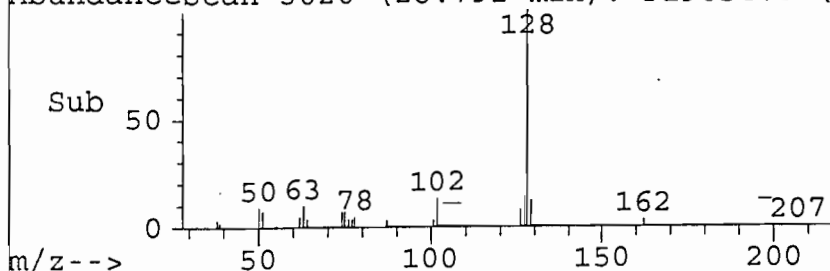
129 12.0 8.1 15.1

0 0.0 0.0 0.0

AbundanceScan 3020 (28.792 min): P19054.D (



AbundanceScan 3020 (28.792 min): P19054.D (



Time--28.54 28.95

000376

VOLATILE CONTINUING CALIBRATION CHECK

ID: 0.53 (mm)

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 11:24 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1104200	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	1019715	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	762688	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.97	113	869179	47.25	ug/L	94.49%
30) 1,2-Dichlorethane-d4	8.66	65	667588	46.18	ug/L	92.36%
38) Toluene-d8	12.77	98	957576	44.46	ug/L	88.93%
42) 4-Bromofluorobenzene	19.47	95	905508	40.96	ug/L	81.91%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.73	85	446852	47.10	ug/L	98
3) chloromethane	1.95	50	248815	48.98	ug/L	98
4) vinyl chloride	2.07	62	232069	47.98	ug/L	100
5) bromomethane	2.48	94	246257	45.08	ug/L	86
6) chloroethane	2.60	64	112417	45.25	ug/L	93
7) Acrolein	3.64	56	149609	542.45	ug/L	100
8) trichlorofluoromethane	2.90	101	1164331	49.50	ug/L	100
9) 1,1-dichloroethene	3.66	61	626054	53.58	ug/L	99
10) Acetone	3.91	43	145857	73.71	ug/L	99
11) Carbon Disulfide	3.95	76	711481	58.90	ug/L	96
12) Iodo Methane	3.91	142	914301	54.43	ug/L	97
13) methylene chloride	4.58	84	259926	50.14	ug/L	96
14) trans-1,2-dichloroethene	4.98	61	555987	56.03	ug/L	98
15) TBA	4.96	59	305729	418.52	ug/L	93
16) MTBE	5.01	73	944917	49.21	ug/L	99
17) Acrylonitrile	5.17	53	381677	510.03	ug/L	98
18) 1,1-dichloroethane	5.83	63	835378	51.81	ug/L	99
19) 2,2-dichloropropane	6.88	77	894541	53.78	ug/L	97
20) cis-1,2-dichloroethene	6.97	61	728483	53.16	ug/L	98
21) bromochloromethane	7.45	49	437988	51.34	ug/L	99
22) chloroform	7.64	83	1127671	51.21	ug/L	99
23) 1,1,1-trichloroethane	7.86	97	1107222	47.94	ug/L	99
25) Vinyl Acetate	5.98	43	772283	47.94	ug/L	99
26) 2-Butanone	7.11	43	157800	56.65	ug/L	98
27) carbon tetrachloride	8.11	117	700632	54.66	ug/L	95
28) 1,1-dichloropropene	8.20	75	646482	50.80	ug/L	96
29) benzene	8.59	78	886940	50.74	ug/L	99
31) 1,2-dichloroethane	8.83	62	758145	47.89	ug/L	98
32) trichloroethene	10.02	130	520637	50.28	ug/L	97
33) 1,2-dichloropropane	10.60	63	374551	47.08	ug/L	92
34) dibromomethane	10.85	174	405460	47.77	ug/L	95
35) bromodichloromethane	11.25	83	1013962	48.68	ug/L	94
36) 2-Chloroethyl Vinyl Ether	12.91	63	141643	50.68	ug/L m	92

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
Acq Time : 21 Oct 99 10:23 pm
Sample : 50PPB CCC
Misc : 5G/5ML
Quant Time: Oct 22 11:24 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.30	75	585881	47.89	ug/L	98
39) toluene	12.91	91	1107882	51.00	ug/L	100
40) trans-1,3-dichloropropene	13.71	75	535494	45.21	ug/L	99
41) 1,1,2-trichloroethane	14.12	97	303482	46.96	ug/L	98
44) 4-Methyl-2-Pentanone	12.72	43	227074	41.25	ug/L	98
45) tetrachloroethene	14.13	166	544020	52.96	ug/L	97
46) 1,3-dichloropropane	14.50	76	499884	50.65	ug/L	99
47) dibromochloromethane	14.95	129	688050	49.08	ug/L	95
48) 1,2-dibromoethane	15.17	107	533072	50.00	ug/L	94
49) 2-Hexanone	14.76	43	198517	51.08	ug/L	98
50) chlorobenzene	16.39	112	844597	51.11	ug/L	100
51) 1-Chlorohexane	16.44	91	487190	52.51	ug/L	99
52) 1,1,1,2-tetrachloroethane	16.68	133	485092	51.86	ug/L	99
53) ethylbenzene	16.66	91	1435305	51.55	ug/L	99
54) m&p-xylenes	17.00	106	1025202	107.47	ug/L	99
55) o-xylene	18.01	91	1422228	51.60	ug/L	98
56) styrene	18.10	104	831260	52.36	ug/L	92
57) bromoform	18.56	173	564493	51.10	ug/L	94
59) isopropylbenzene	19.00	105	1706608	51.88	ug/L	97
60) bromobenzene	19.75	77	1112589	49.26	ug/L	97
61) 1,1,2,2-tetrachloroethane	20.09	83	634733	48.60	ug/L	98
62) 1,2,3-trichloropropane	20.12	75	453737	46.47	ug/L	98
63) n-propylbenzene	20.64	120	604912	49.58	ug/L	63
64) 2-chlorotoluene	20.31	126	413800	50.92	ug/L	95
65) 4-chlorotoluene	20.64	126	426762	51.22	ug/L	93
66) 1,3,5-trimethylbenzene	20.64	105	1520340	50.45	ug/L	98
67) tert-butylbenzene	21.46	119	1481465	50.93	ug/L	100
68) 1,2,4-trimethylbenzene	21.63	105	1538855	49.06	ug/L	99
69) sec-butylbenzene	22.06	105	1968409	50.45	ug/L	98
70) 1,3-dichlorobenzene	22.35	146	994137	50.26	ug/L	98
71) 4-isopropyltoluene	22.52	119	1823839	50.78	ug/L	99
72) 1,4-dichlorobenzene	22.65	146	1028439	51.26	ug/L	98
73) 1,2-dichlorobenzene	23.63	146	1017651	53.61	ug/L	93
74) n-butylbenzene	23.65	91	1850192	50.96	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.91	75	220961	46.45	ug/L	96
76) 1,2,4-trichlorobenzene	28.15	180	864873	52.42	ug/L	91
77) hexachlorobutadiene	28.59	225	734867	54.91	ug/L	98
78) naphthalene	28.79	128	1208181	49.20	ug/L	99
79) 1,2,3-trichlorobenzene	29.50	180	802236	54.49	ug/L	96

000379

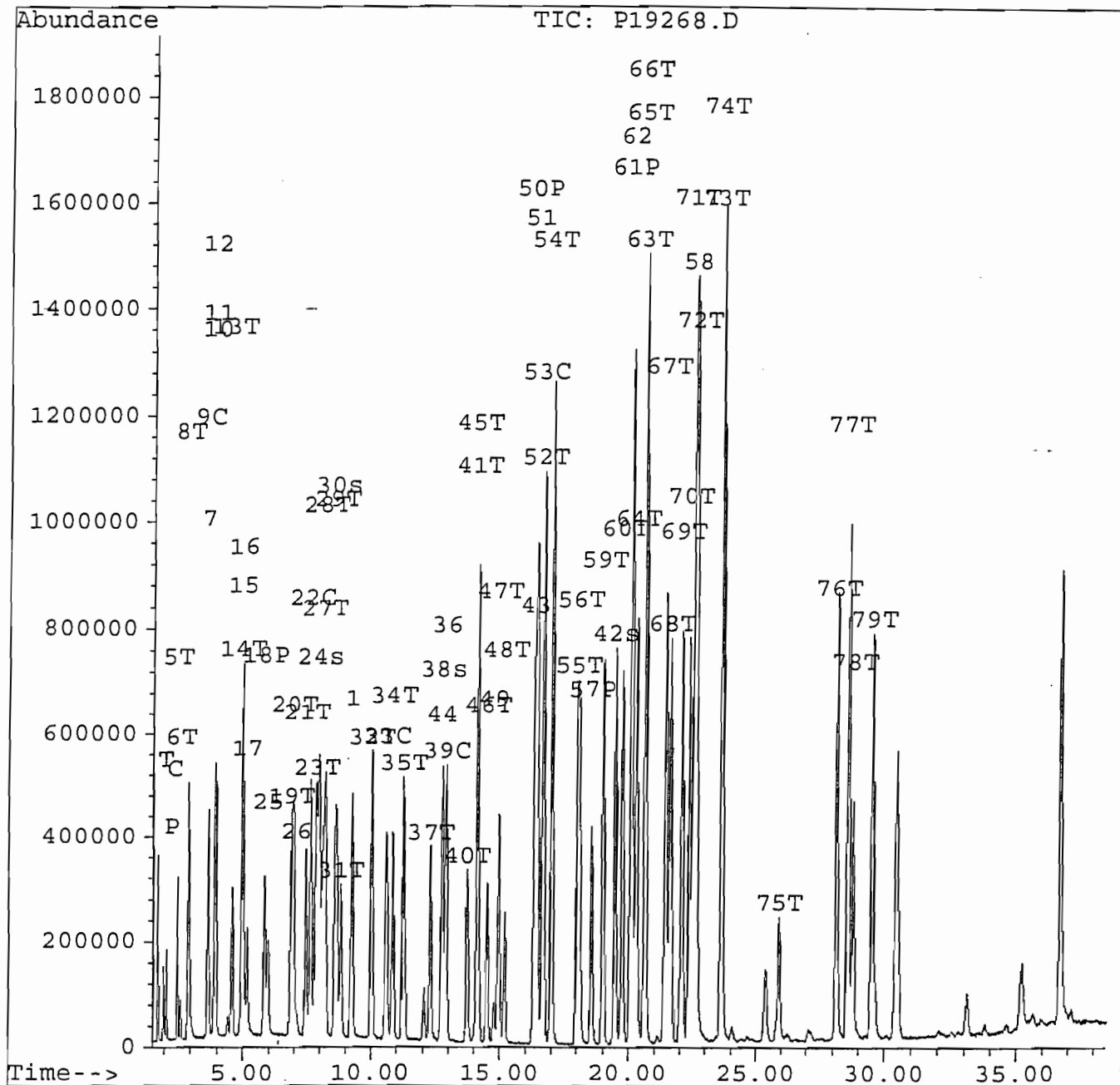
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 11:24 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



000380

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
1	Fluorobenzene	1.000	1.000	0.0	96	0.00
2 T	dichlorodifluoromethane	0.430	0.405	5.8	100	0.00
3 P	chloromethane	0.230	0.225	2.0	109	0.00
4 C	vinyl chloride	0.219	0.210	4.0#	103	0.00
5 T	bromomethane	0.247	0.223	9.8	102	0.00
6 T	chloroethane	0.113	0.102	9.5	101	0.00
7	Acrolein	0.012	0.014	-8.5	106	0.00
8 T	trichlorofluoromethane	1.065	1.054	1.0	103	0.00
9 C	1,1-dichloroethene	0.529	0.567	-7.2#	108	0.00
10	Acetone	0.090	0.132	-47.4#	106	0.00
11	Carbon Disulfide	0.547	0.644	-17.8	112	0.00
12	Iodo Methane	0.761	0.828	-8.9	106	0.00
13 T	methylene chloride	0.235	0.235	-0.3	103	0.00
14 T	trans-1,2-dichloroethene	0.449	0.504	-12.1	107	0.00
15	TBA	0.033	0.028	16.3	89	0.00
16	MTBE	0.869	0.856	1.6	92	0.00
17	Acrylonitrile	0.034	0.035	-2.0	98	0.00
18 P	1,1-dichloroethane	0.730	0.757	-3.6	106	0.00
19 T	2,2-dichloropropane	0.753	0.810	-7.6	105	0.00
20 T	cis-1,2-dichloroethene	0.621	0.660	-6.3	106	0.00
21 T	bromochloromethane	0.386	0.397	-2.7	102	0.00
22 C	chloroform	0.997	1.021	-2.4#	104	0.00
23 T	1,1,1-trichloroethane	1.046	1.003	4.1	94	0.00
24 s	Dibromofluoromethane	0.833	0.787	5.5	95	0.00
25	Vinyl Acetate	0.730	0.699	4.1	93	0.00
26	2-Butanone	0.126	0.143	-13.3	93	0.00
27 T	carbon tetrachloride	0.580	0.635	-9.3	109	0.00
28 T	1,1-dichloropropene	0.576	0.585	-1.6	100	0.02
29 T	benzene	0.792	0.803	-1.5	98	-0.01
30 s	1,2-Dichlorethane-d4	0.655	0.605	7.6	93	0.00
31 T	1,2-dichloroethane	0.717	0.687	4.2	100	0.00
32 T	trichloroethene	0.469	0.472	-0.6	97	0.00
33 C	1,2-dichloropropane	0.360	0.339	5.8#	95	0.00
34 T	dibromomethane	0.384	0.367	4.5	94	0.00
35 T	bromodichloromethane	0.943	0.918	2.6	98	0.00
36	2-Chloroethyl Vinyl Ether	0.127	0.128	-1.4	101	0.00
37 T	cis-1,3-dichloropropene	0.554	0.531	4.2	96	0.00
38 s	Toluene-d8	0.975	0.867	11.1	87	0.00
39 C	toluene	0.984	1.003	-2.0#	101	-0.01
40 T	trans-1,3-dichloropropene	0.536	0.485	9.6	91	-0.01
41 T	1,1,2-trichloroethane	0.293	0.275	6.1	89	0.00
42 s	4-Bromofluorobenzene	1.001	0.820	18.1	86	0.00

(#) = Out of Range

P19268.D V21006CS.M

Fri Oct 22 11:25:14 1999

VOA3

000381

Page

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev (Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	87	0.00
44	4-Methyl-2-Pentanone	0.270	0.223	17.5	77	0.00
45 T	tetrachloroethene	0.504	0.534	-5.9	88	-0.02
46 T	1,3-dichloropropane	0.484	0.490	-1.3	91	-0.01
47 T	dibromochloromethane	0.687	0.675	1.8	90	-0.01
48 T	1,2-dibromoethane	0.523	0.523	0.0	91	-0.02
49	2-Hexanone	0.191	0.195	-2.2	78	-0.02
50 P	chlorobenzene	0.810	0.828	-2.2	92	-0.01
51	1-Chlorohexane	0.455	0.478	-5.0	92	-0.01
52 T	1,1,1,2-tetrachloroethane	0.459	0.476	-3.7	85	-0.01
53 C	ethylbenzene	1.365	1.408	-3.1#	92	-0.01
54 T	m&p-xylenes	0.468	0.503	-7.5	100	-0.01
55 T	o-xylene	1.352	1.395	-3.2	99	0.00
56 T	styrene	0.778	0.815	-4.7	98	0.00
57 P	bromoform	0.542	0.554	-2.2	86	-0.01
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
59 T	isopropylbenzene	2.156	2.238	-3.8	99	0.00
60 T	bromobenzene	1.481	1.459	1.5	93	-0.02
61 P	1,1,2,2-tetrachloroethane	0.856	0.832	2.8	90	0.00
62	1,2,3-trichloropropane	0.640	0.595	7.1	90	-0.02
63 T	n-propylbenzene	0.930	0.793	14.7	91	0.00
64 T	2-chlorotoluene	0.533	0.543	-1.8	96	0.00
65 T	4-chlorotoluene	0.546	0.560	-2.4	98	-0.02
66 T	1,3,5-trimethylbenzene	1.976	1.993	-0.9	93	-0.02
67 T	tert-butylbenzene	1.907	1.942	-1.9	98	-0.01
68 T	1,2,4-trimethylbenzene	2.281	2.018	11.5	97	-0.01
69 T	sec-butylbenzene	2.558	2.581	-0.9	98	-0.02
70 T	1,3-dichlorobenzene	1.297	1.303	-0.5	97	-0.03
71 T	4-isopropyltoluene	2.355	2.391	-1.6	99	-0.01
72 T	1,4-dichlorobenzene	1.315	1.348	-2.5	101	-0.01
73 T	1,2-dichlorobenzene	1.244	1.334	-7.2	103	-0.03
74 T	n-butylbenzene	2.380	2.426	-1.9	104	0.00
75 T	1,2-dibromo-3-chloropropane	0.312	0.290	7.1	92	-0.02
76 T	1,2,4-trichlorobenzene	1.082	1.134	-4.8	103	0.00
77 T	hexachlorobutadiene	0.877	0.964	-9.8	106	-0.02
78 T	naphthalene	1.610	1.584	1.6	101	0.00
79 T	1,2,3-trichlorobenzene	0.965	1.052	-9.0	106	-0.03

000382

VOLATILE CONTINUING CALIBRATION CHECK

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Time: 1055

'10/6/99

Init. Calib. Times: 1753 2135

ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Benzene	0.792	0.864		-9.1	
Toluene	0.984	1.047		-6.4	20.0
Ethylbenzene	1.365	1.455		-6.6	20.0
m&p-xylenes	0.468	0.498		-6.4	
o-xylene	1.352	1.421		-5.1	
isopropylbenzene	2.156	2.386		-10.7	
n-Propylbenzene	0.930	0.840		9.7	
1,3,5-Trimethylbenzene	1.976	2.166		-9.6	
tert-Butylbenzene	1.907	2.132		-11.8	
1,2,4-Trimethylbenzene	2.281	2.195		3.8	
sec-Butylbenzene	2.558	2.831		-10.7	
n-Butylbenzene	2.380	2.227		6.4	
Naphthalene	1.610	1.524		5.3	
MTBE	0.869	0.874		-0.6	
TBA	0.033	0.028		15.2	
Dibromofluoromethane	0.833	0.835		-0.2	
1,2-Dichlorethane-d4	0.655	0.649		0.9	
Toluene-d8	0.975	0.909		6.8	
4-Bromofluorobenzene	1.001	0.901		10.0	

All other compounds must meet a minimum RRF of 0.010.

000383

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19285.D
 Acq Time : 22 Oct 99 10:55 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 12:04 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.28	96	835841	50.00	ug/L	0.02
43) Chlorobenzene-d5	16.36	117	803311	50.00	ug/L	0.03
58) 1,4-dichlorobenzene-d4	22.62	152	566634	50.00	ug/L	0.03

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.97	113	698023	50.12	ug/L	100.25%
30) 1,2-Dichlorethane-d4	8.67	65	542102	49.54	ug/L	99.08%
38) Toluene-d8	12.78	98	759711	46.60	ug/L	93.20%
42) 4-Bromofluorobenzene	19.50	95	753016	45.00	ug/L	89.99%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.74	85	354211	49.32	ug/L	97
3) chloromethane	1.95	50	204019	53.06	ug/L	99
4) vinyl chloride	2.07	62	186586	50.96	ug/L	98
5) bromomethane	2.48	94	192684	46.60	ug/L	84
6) chloroethane	2.61	64	94143	50.06	ug/L	93
7) Acrolein	3.64	56	109074	522.45	ug/L	99
8) trichlorofluoromethane	2.91	101	995598	55.92	ug/L	99
9) 1,1-dichloroethene	3.67	61	542168	61.30	ug/L	94
10) Acetone	3.89	43	67156	44.83	ug/L	95
11) Carbon Disulfide	3.96	76	546991	59.82	ug/L	98
12) Iodo Methane	3.92	142	723431	56.90	ug/L	95
13) methylene chloride	4.59	84	218145	55.59	ug/L	99
14) trans-1,2-dichloroethene	4.99	61	436226	58.08	ug/L	97
15) TBA	4.96	59	236316	427.36	ug/L	91
16) MTBE	5.01	73	730717	50.28	ug/L	96
17) Acrylonitrile	5.17	53	290811	513.38	ug/L	98
18) 1,1-dichloroethane	5.84	63	709392	58.13	ug/L	98
19) 2,2-dichloropropane	6.91	77	717094	56.95	ug/L	98
20) cis-1,2-dichloroethene	6.98	61	604228	58.25	ug/L	89
21) bromochloromethane	7.45	49	369794	57.27	ug/L	93
22) chloroform	7.64	83	948411	56.89	ug/L	99
23) 1,1,1-trichloroethane	7.86	97	961942	55.02	ug/L	95
25) Vinyl Acetate	5.98	43	612442	50.22	ug/L	99
26) 2-Butanone	7.12	43	87162	41.33	ug/L	99
27) carbon tetrachloride	8.12	117	569779	58.73	ug/L	99
28) 1,1-dichloropropene	8.21	75	521603	54.15	ug/L	96
29) benzene	8.61	78	721787	54.55	ug/L	100
31) 1,2-dichloroethane	8.84	62	665373	55.53	ug/L	99
32) trichloroethene	10.03	130	416001	53.07	ug/L	94
33) 1,2-dichloropropane	10.61	63	316194	52.51	ug/L	98
34) dibromomethane	10.88	174	317150	49.36	ug/L	91
35) bromodichloromethane	11.26	83	841266	53.36	ug/L	97
37) cis-1,3-dichloropropene	12.33	75	472883	51.06	ug/L	92

(#) = qualifier out of range (m) = manual integration
 P19285.D V21006CS.M Fri Oct 22 12:08:32 1999

000384

VOA3

Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19285.D
 Acq Time : 22 Oct 99 10:55 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 12:04 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39) toluene	12.92	91	875342	53.23	ug/L	92
40) trans-1,3-dichloropropene	13.74	75	433682	48.37	ug/L	95
41) 1,1,2-trichloroethane	14.15	97	237727	48.60	ug/L	99
44) 4-Methyl-2-Pentanone	12.73	43	181772	41.92	ug/L	98
45) tetrachloroethene	14.16	166	415451	51.34	ug/L	97
46) 1,3-dichloropropane	14.53	76	406895	52.33	ug/L	97
47) dibromochloromethane	14.98	129	544831	49.34	ug/L	96
48) 1,2-dibromoethane	15.20	107	425671	50.68	ug/L	96
49) 2-Hexanone	14.80	43	124723	40.74	ug/L	97
50) chlorobenzene	16.42	112	677674	52.05	ug/L	99
51) 1-Chlorohexane	16.47	91	367168	50.24	ug/L	94
52) 1,1,1,2-tetrachloroethane	16.71	-133	397610	53.96	ug/L	96
53) ethylbenzene	16.70	91	1168555	53.28	ug/L	97
54) m&p-xylenes	17.03	106	799969	106.45	ug/L	94
55) o-xylene	18.03	91	1141158	52.55	ug/L	97
56) styrene	18.12	104	656030	52.45	ug/L	93
57) bromoform	18.61	173	433383	49.80	ug/L	90
59) isopropylbenzene	19.01	105	1352058	55.32	ug/L	97
60) bromobenzene	19.79	77	951912	56.73	ug/L	94
61) 1,1,2,2-tetrachloroethane	20.12	83	499705	51.49	ug/L	98
62) 1,2,3-trichloropropane	20.16	75	361013	49.77	ug/L	99
63) n-propylbenzene	20.66	120	476166	52.53	ug/L	70
64) 2-chlorotoluene	20.35	126	325374	53.90	ug/L	93
65) 4-chlorotoluene	20.67	126	330584	53.40	ug/L	99
66) 1,3,5-trimethylbenzene	20.67	105	1227507	54.82	ug/L	95
67) tert-butylbenzene	21.50	119	1208172	55.90	ug/L	92
68) 1,2,4-trimethylbenzene	21.66	105	1243920	53.38	ug/L	95
69) sec-butylbenzene	22.09	105	1603920	55.33	ug/L	93
70) 1,3-dichlorobenzene	22.37	146	777632	52.92	ug/L	91
71) 4-isopropyltoluene	22.55	119	1362029	51.04	ug/L	96
72) 1,4-dichlorobenzene	22.68	146	743905	49.91	ug/L	98
73) 1,2-dichlorobenzene	23.66	146	715058	50.70	ug/L	94
74) n-butylbenzene	23.69	91	1261853	46.78	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.94	75	169748	48.03	ug/L	90
76) 1,2,4-trichlorobenzene	28.19	180	589119	48.06	ug/L	88
77) hexachlorobutadiene	28.64	225	546294	54.95	ug/L	97
78) naphthalene	28.82	128	863516	47.33	ug/L	99
79) 1,2,3-trichlorobenzene	29.55	180	554083	50.66	ug/L	98

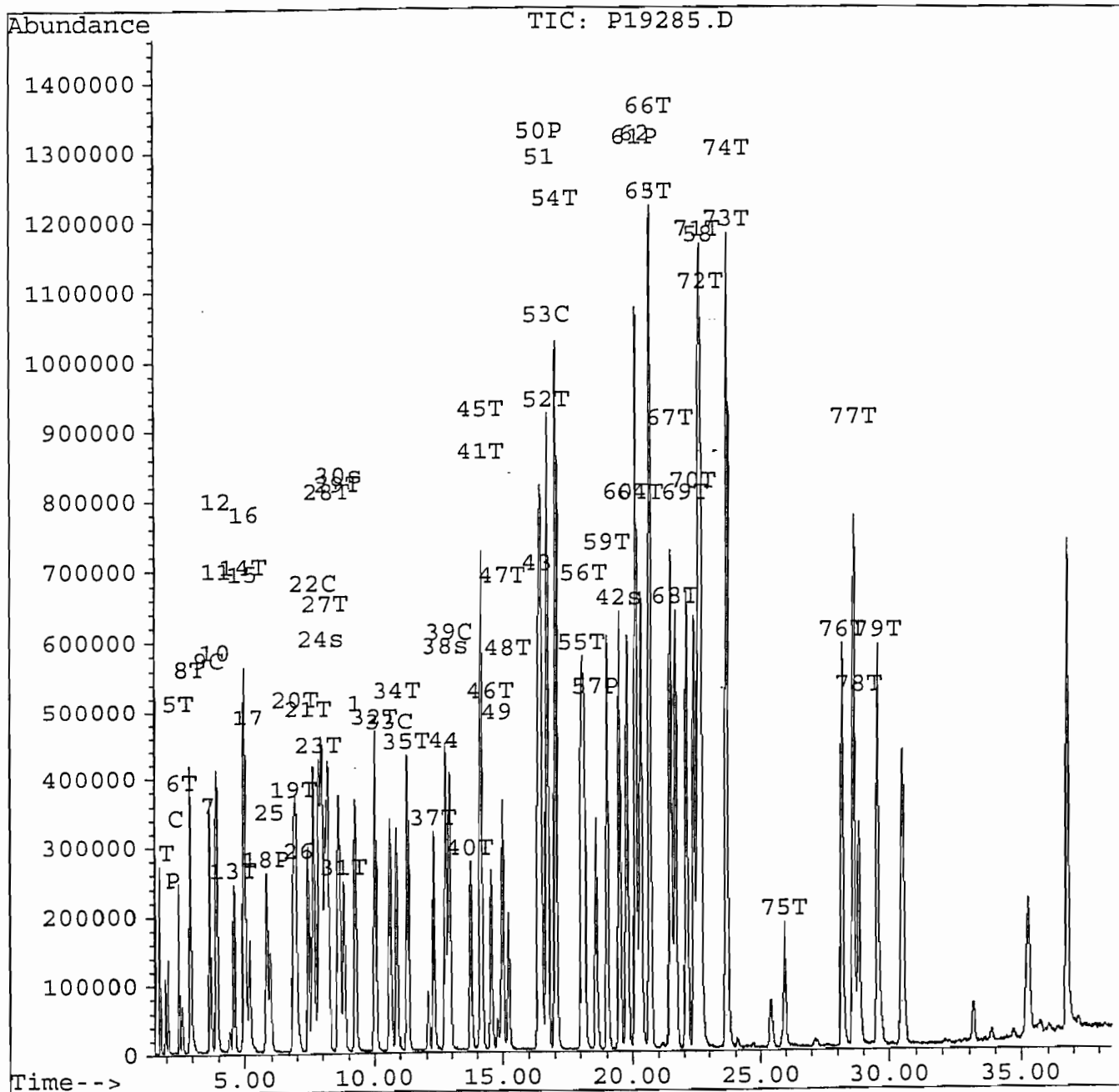
000385

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19285.D
 Acq Time : 22 Oct 99 10:55 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 12:04 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



000386

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19285.D
 Acq Time : 22 Oct 99 10:55 am
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
1	Fluorobenzene	1.000	1.000	0.0	73	0.02
2 T	dichlorodifluoromethane	0.430	0.424	1.4	79	0.00
3 P	chloromethane	0.230	0.244	-6.1	90	0.00
4 C	vinyl chloride	0.219	0.223	-1.9#	83	0.00
5 T	bromomethane	0.247	0.231	6.8	80	0.00
6 T	chloroethane	0.113	0.113	-0.1	85	0.00
7	Acrolein	0.012	0.013	-4.5	78	0.00
8 T	trichlorofluoromethane	1.065	1.191	-11.8	88	0.01
9 C	1,1-dichloroethene	0.529	0.649	-22.6#	94	0.00
10	Acetone	0.090	0.080	10.3	49#	0.00
11	Carbon Disulfide	0.547	0.654	-19.6	86	0.01
12	Iodo Methane	0.761	0.866	-13.8	84	0.01
13 T	methylene chloride	0.235	0.261	-11.2	86	0.00
14 T	trans-1,2-dichloroethene	0.449	0.522	-16.2	84	0.01
15	TBA	0.033	0.028	14.5	68	0.00
16	MTBE	0.869	0.874	-0.6	71	0.00
17	Acrylonitrile	0.034	0.035	-2.7	75	0.01
18 P	1,1-dichloroethane	0.730	0.849	-16.3	90	0.01
19 T	2,2-dichloropropane	0.753	0.858	-13.9	84	0.02
20 T	cis-1,2-dichloroethene	0.621	0.723	-16.5	88	0.00
21 T	bromochloromethane	0.386	0.442	-14.5	86	0.00
22 C	chloroform	0.997	1.135	-13.8#	87	0.00
23 T	1,1,1-trichloroethane	1.046	1.151	-10.0	82	0.00
24 S	Dibromofluoromethane	0.833	0.835	-0.2	77	0.00
25	Vinyl Acetate	0.730	0.733	-0.4	74	0.01
26	2-Butanone	0.126	0.104	17.3	51	0.02
27 T	carbon tetrachloride	0.580	0.682	-17.5	88	0.01
28 T	1,1-dichloropropene	0.576	0.624	-8.3	81	0.02
29 T	benzene	0.792	0.864	-9.1	80	0.00
30 S	1,2-Dichloroethane-d4	0.655	0.649	0.9	76	0.00
31 T	1,2-dichloroethane	0.717	0.796	-11.1	88	0.01
32 T	trichloroethene	0.469	0.498	-6.1	78	0.00
33 C	1,2-dichloropropane	0.360	0.378	-5.0#	81	0.02
34 T	dibromomethane	0.384	0.379	1.3	73	0.02
35 T	bromodichloromethane	0.943	1.006	-6.7	82	0.02
36	2-Chloroethyl Vinyl Ether	0.127	0.142	-12.1	84	0.01
37 T	cis-1,3-dichloropropene	0.554	0.566	-2.1	78	0.03
38 S	Toluene-d8	0.975	0.909	6.8	69	0.02
39 C	toluene	0.984	1.047	-6.5#	80	0.00
40 T	trans-1,3-dichloropropene	0.536	0.519	3.3	74	0.02
41 T	1,1,2-trichloroethane	0.293	0.284	2.8	70	0.03
42 S	4-Bromofluorobenzene	1.001	0.901	10.0	72	0.02

(#) = Out of Range

P19285.D V21006CS.M

Fri Oct 22 12:09:27 1999

VOA3

000387

Page 1

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19285.D
 Acq Time : 22 Oct 99 10:55 am
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	69	0.03
44	4-Methyl-2-Pentanone	0.270	0.226	16.2	62	0.00
45 T	tetrachloroethene	0.504	0.517	-2.7	67	0.01
46 T	1,3-dichloropropane	0.484	0.507	-4.7	74	0.02
47 T	dibromochloromethane	0.687	0.678	1.3	71	0.02
48 T	1,2-dibromoethane	0.523	0.530	-1.4	72	0.01
49	2-Hexanone	0.191	0.155	18.5	49#	0.01
50 P	chlorobenzene	0.810	0.844	-4.1	74	0.02
51	1-Chlorohexane	0.455	0.457	-0.5	69	0.00
52 T	1,1,1,2-tetrachloroethane	0.459	0.495	-7.9	70	0.02
53 C	ethylbenzene	1.365	1.455	-6.6#	75	0.03
54 T	m&p-xylenes	0.468	0.498	-6.4	78	0.02
55 T	o-xylene	1.352	1.421	-5.1	79	0.02
56 T	styrene	0.778	0.817	-4.9	77	0.02
57 P	bromoform	0.542	0.539	0.4	66	0.04
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	71	0.03
59 T	isopropylbenzene	2.156	2.386	-10.6	78	0.00
60 T	bromobenzene	1.481	1.680	-13.5	80	0.02
61 P	1,1,2,2-tetrachloroethane	0.856	0.882	-3.0	71	0.03
62	1,2,3-trichloropropane	0.640	0.637	0.5	72	0.02
63 T	n-propylbenzene	0.930	0.840	9.6	71	0.02
64 T	2-chlorotoluene	0.533	0.574	-7.8	75	0.04
65 T	4-chlorotoluene	0.546	0.583	-6.8	76	0.02
66 T	1,3,5-trimethylbenzene	1.976	2.166	-9.6	75	0.02
67 T	tert-butylbenzene	1.907	2.132	-11.8	80	0.04
68 T	1,2,4-trimethylbenzene	2.281	2.195	3.8	78	0.02
69 T	sec-butylbenzene	2.558	2.831	-10.7	80	0.01
70 T	1,3-dichlorobenzene	1.297	1.372	-5.8	76	0.00
71 T	4-isopropyltoluene	2.355	2.404	-2.1	74	0.02
72 T	1,4-dichlorobenzene	1.315	1.313	0.2	73	0.02
73 T	1,2-dichlorobenzene	1.244	1.262	-1.4	72	0.00
74 T	n-butylbenzene	2.380	2.227	6.4	71	0.03
75 T	1,2-dibromo-3-chloropropane	0.312	0.300	3.9	71	0.01
76 T	1,2,4-trichlorobenzene	1.082	1.040	3.9	70	0.04
77 T	hexachlorobutadiene	0.877	0.964	-9.9	79	0.03
78 T	naphthalene	1.610	1.524	5.3	72	0.02
79 T	1,2,3-trichlorobenzene	0.965	0.978	-1.3	73	0.02

000388

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Time: 1740

Init. Calib. Date(s): '10/6/99 '10/6/99

Init. Calib. Times: 1753 2135

ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Benzene	0.792	0.930		-17.4	
Toluene	0.984	1.114		-13.2	20.0
Ethylbenzene	1.365	1.429		-4.7	20.0
m&p-xylenes	0.468	0.482		-3.0	
o-xylene	1.352	1.330		1.6	
isopropylbenzene	2.156	2.402		-11.4	
n-Propylbenzene	0.930	0.898		3.4	
1,3,5-Trimethylbenzene	1.976	2.262		-14.5	
tert-Butylbenzene	1.907	2.023		-6.1	
1,2,4-Trimethylbenzene	2.281	2.368		-3.8	
sec-Butylbenzene	2.558	2.732		-6.8	
n-Butylbenzene	2.380	2.359		0.9	
Naphthalene	1.610	1.595		0.9	
MTBE	0.869	0.886		-2.0	
TBA	0.033	0.028		15.2	
Dibromofluoromethane	0.833	0.777		6.7	
1,2-Dichlorethane-d4	0.655	0.571		12.8	
Toluene-d8	0.975	0.923		5.3	
4-Bromofluorobenzene	1.001	0.887		11.4	

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19302.D
 Acq Time : 25 Oct 99 5:40 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 25 18:11 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	1132941	50.00	ug/L	-0.02
43) Chlorobenzene-d5	16.29	117	1181098	50.00	ug/L	-0.04
58) 1,4-dichlorobenzene-d4	22.53	152	772348	50.00	ug/L	-0.06

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.94	113	880209	46.63	ug/L	93.26%
30) 1,2-Dichlorethane-d4	8.64	65	647139	43.63	ug/L	87.26%
38) Toluene-d8	12.74	98	1045282	47.30	ug/L	94.61%
42) 4-Bromofluorobenzene	19.45	95	1004751	44.29	ug/L	88.59%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	440454	45.25	ug/L	98
3) chloromethane	1.94	50	227837	43.71	ug/L	97
4) vinyl chloride	2.06	62	232708	46.89	ug/L	98
5) bromomethane	2.47	94	241161	43.03	ug/L	89
6) chloroethane	2.59	64	104160	40.86	ug/L	95
7) Acrolein	3.62	56	140748	497.38	ug/L	100
8) trichlorofluoromethane	2.89	101	1234836	51.17	ug/L	99
9) 1,1-dichloroethene	3.65	61	633621	52.86	ug/L	99
10) Acetone	3.89	43	144179	71.01	ug/L	97
11) Carbon Disulfide	3.94	76	748235	60.37	ug/L	97
12) Iodo Methane	3.90	142	1017597	59.04	ug/L	98
13) methylene chloride	4.55	84	297741	55.98	ug/L	94
14) trans-1,2-dichloroethene	4.95	61	565271	55.52	ug/L	100
15) TBA	4.94	59	312917	417.49	ug/L	97
16) MTBE	4.98	73	1004076	50.97	ug/L	99
17) Acrylonitrile	5.15	53	394966	514.40	ug/L	99
18) 1,1-dichloroethane	5.82	63	907958	54.89	ug/L	99
19) 2,2-dichloropropane	6.87	77	1023006	59.94	ug/L	96
20) cis-1,2-dichloroethene	6.95	61	808884	57.53	ug/L	96
21) bromochloromethane	7.42	49	466445	53.29	ug/L	96
22) chloroform	7.60	83	1236103	54.71	ug/L	98
23) 1,1,1-trichloroethane	7.82	97	1300331	54.87	ug/L	99
25) Vinyl Acetate	5.94	43	834446	50.48	ug/L	98
26) 2-Butanone	7.09	43	173928	60.85	ug/L	98
27) carbon tetrachloride	8.08	117	803953	61.13	ug/L	95
28) 1,1-dichloropropene	8.17	75	691749	52.98	ug/L	94
29) benzene	8.57	78	1053324	58.73	ug/L	99
31) 1,2-dichloroethane	8.81	62	826390	50.88	ug/L	98
32) trichloroethene	9.99	130	632844	59.57	ug/L	94
33) 1,2-dichloropropane	10.56	63	453995	55.62	ug/L	98
34) dibromomethane	10.84	174	478525	54.94	ug/L	87
35) bromodichloromethane	11.22	83	1186990	55.54	ug/L	98
36) 2-Chloroethyl Vinyl Ether	12.88	63	152183	53.07	ug/L	95

(#) = qualifier out of range (m) = manual integration
 P19302.D V21006CS.M Tue Oct 26 12:29:33 1999

000390
 VOA3 Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19302.D
 Acq Time : 25 Oct 99 5:40 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 25 18:11 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.27	75	675215	53.79	ug/L	98
39) toluene	12.88	91	1262448	56.64	ug/L	99
40) trans-1,3-dichloropropene	13.69	75	631165	51.93	ug/L	98
41) 1,1,2-trichloroethane	14.09	97	369206	55.68	ug/L	96
44) 4-Methyl-2-Pentanone	12.70	43	270962	42.50	ug/L	99
45) tetrachloroethene	14.12	166	658733	55.37	ug/L	95
46) 1,3-dichloropropane	14.49	76	589827	51.60	ug/L	100
47) dibromochloromethane	14.93	129	864257	53.23	ug/L	98
48) 1,2-dibromoethane	15.16	107	633670	51.31	ug/L	99
49) 2-Hexanone	14.75	43	227780	50.60	ug/L	97
50) chlorobenzene	16.37	112	1022197	53.40	ug/L	98
51) 1-Chlorohexane	16.42	91	576576	53.65	ug/L	97
52) 1,1,1,2-tetrachloroethane	16.66	133	611583	56.45	ug/L	99
53) ethylbenzene	16.65	91	1688071	52.35	ug/L	99
54) m&p-xylenes	16.97	106	1138771	103.06	ug/L	100
55) o-xylene	17.99	91	1571266	49.21	ug/L	98
56) styrene	18.07	104	942364	51.25	ug/L	91
57) bromoform	18.54	173	694195	54.26	ug/L	97
59) isopropylbenzene	18.96	105	1854860	55.68	ug/L	99
60) bromobenzene	19.73	77	1275370	55.77	ug/L	96
61) 1,1,2,2-tetrachloroethane	20.05	83	691494	52.28	ug/L	98
62) 1,2,3-trichloropropane	20.11	75	515953	52.18	ug/L	98
63) n-propylbenzene	20.62	120	693322	56.12	ug/L	71
64) 2-chlorotoluene	20.28	126	455121	55.31	ug/L	97
65) 4-chlorotoluene	20.62	126	456596	54.11	ug/L	96
66) 1,3,5-trimethylbenzene	20.62	105	1747296	57.25	ug/L	98
67) tert-butylbenzene	21.43	119	1562354	53.04	ug/L	99
68) 1,2,4-trimethylbenzene	21.61	105	1828886	57.58	ug/L	99
69) sec-butylbenzene	22.04	105	2110111	53.40	ug/L	99
70) 1,3-dichlorobenzene	22.33	146	1083746	54.11	ug/L	94
71) 4-isopropyltoluene	22.49	119	1895482	52.11	ug/L	97
72) 1,4-dichlorobenzene	22.63	146	1117316	55.00	ug/L	95
73) 1,2-dichlorobenzene	23.61	146	1033461	53.76	ug/L	94
74) n-butylbenzene	23.63	91	1821729	49.55	ug/L	99
75) 1,2-dibromo-3-chloropropan	25.88	75	224045	46.51	ug/L	95
76) 1,2,4-trichlorobenzene	28.10	180	896630	53.67	ug/L	93
77) hexachlorobutadiene	28.57	225	686458	50.66	ug/L	88
78) naphthalene	28.76	128	1231833	49.54	ug/L	98
79) 1,2,3-trichlorobenzene	29.48	180	768900	51.58	ug/L	99

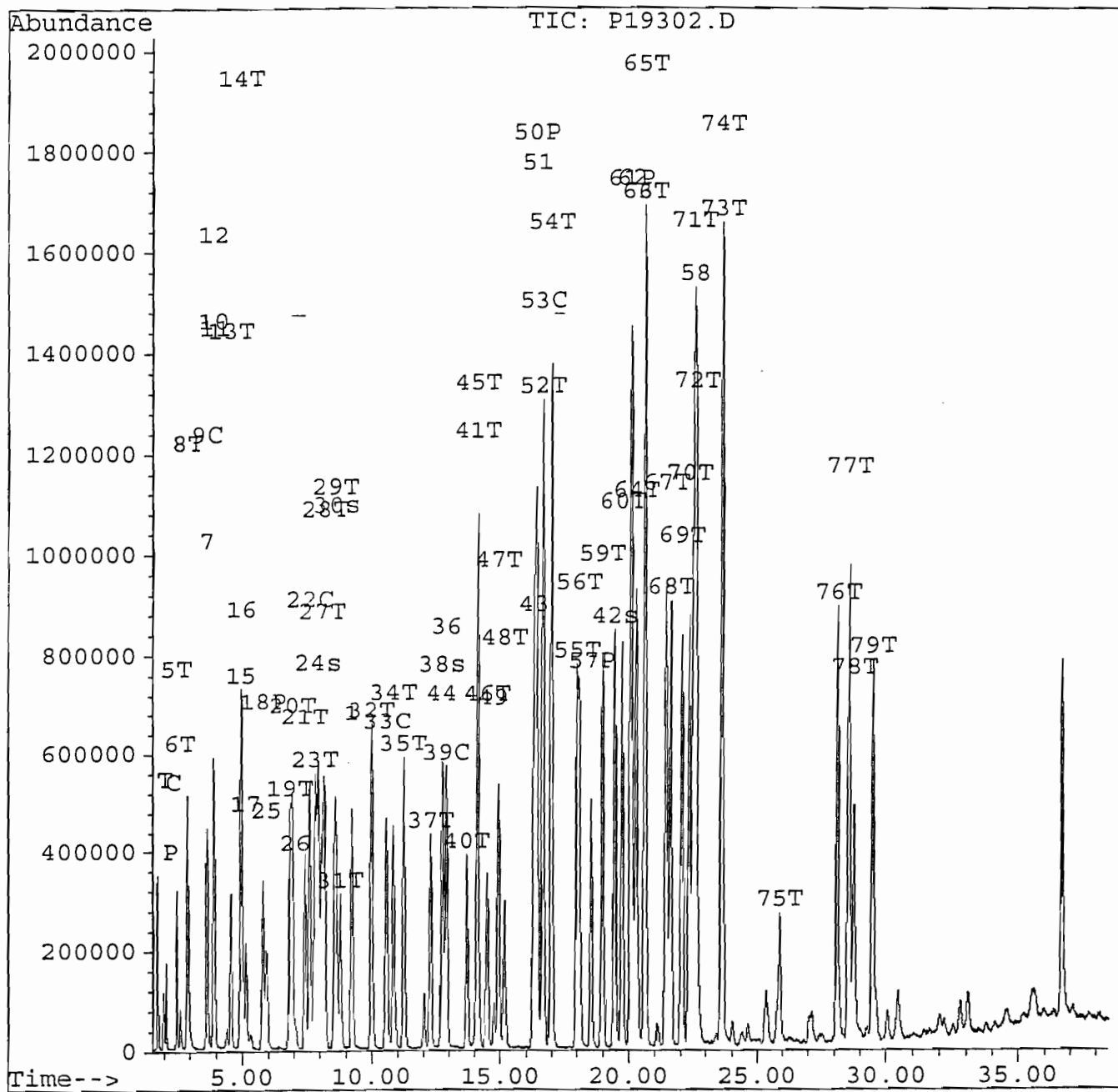
000391

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19302.D
Acq Time : 25 Oct 99 5:40 pm
Sample : 50PPB CCC
Misc : 5G/5ML
Quant Time: Oct 25 18:11 1999

```
Operator:  AV
Inst      :  voa2
Multiplr:  1.00
```

```
Method       : I:\HPCHEM\1\METHODS\V21006CS.M
Title        : VOA
Last Update   : Thu Oct 07 12:18:47 1999
Response via  : Multiple Level Calibration
```



000392

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19302.D
 Acq Time : 25 Oct 99 5:40 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
1	Fluorobenzene	1.000	1.000	0.0	99	-0.02
2 T	dichlorodifluoromethane	0.430	0.389	9.5	98	0.00
3 P	chloromethane	0.230	0.201	12.6	100	0.00
4 C	vinyl chloride	0.219	0.205	6.2#	104	0.00
5 T	bromomethane	0.247	0.213	13.9	100	0.00
6 T	chloroethane	0.113	0.092	18.3	94	-0.02
7	Acrolein	0.012	0.012	0.5	100	-0.02
8 T	trichlorofluoromethane	1.065	1.090	-2.3	109	0.00
9 C	1,1-dichloroethene	0.529	0.559	-5.7#	110	-0.02
10	Acetone	0.090	0.127	-42.0#	105	0.00
11	Carbon Disulfide	0.547	0.660	-20.7#	118	0.00
12	Iodo Methane	0.761	0.898	-18.1	118	0.00
13 T	methylene chloride	0.235	0.263	-12.0	118	-0.03
14 T	trans-1,2-dichloroethene	0.449	0.499	-11.0	109	-0.02
15	TBA	0.033	0.028	16.5	91	-0.02
16	MTBE	0.869	0.886	-1.9	97	-0.03
17	Acrylonitrile	0.034	0.035	-2.9	102	-0.02
18 P	1,1-dichloroethane	0.730	0.801	-9.8	116	-0.02
19 T	2,2-dichloropropane	0.753	0.903	-19.9	120	-0.02
20 T	cis-1,2-dichloroethene	0.621	0.714	-15.1	118	-0.03
21 T	bromochloromethane	0.386	0.412	-6.6	109	-0.02
22 C	chloroform	0.997	1.091	-9.4#	114	-0.03
23 T	1,1,1-trichloroethane	1.046	1.148	-9.7	111	-0.03
24 s	Dibromofluoromethane	0.833	0.777	6.7	97	-0.02
25	Vinyl Acetate	0.730	0.737	-1.0	101	-0.03
26	2-Butanone	0.126	0.154	-21.7#	102	-0.02
27 T	carbon tetrachloride	0.580	0.710	-22.3#	125	-0.03
28 T	1,1-dichloropropene	0.576	0.611	-6.0	107	-0.01
29 T	benzene	0.792	0.930	-17.5	116	-0.03
30 s	1,2-Dichlorethane-d4	0.655	0.571	12.7	90	-0.02
31 T	1,2-dichloroethane	0.717	0.729	-1.8	109	-0.01
32 T	trichloroethene	0.469	0.559	-19.1	118	-0.04
33 C	1,2-dichloropropane	0.360	0.401	-11.2#	116	-0.03
34 T	dibromomethane	0.384	0.422	-9.9	111	-0.01
35 T	bromodichloromethane	0.943	1.048	-11.1	115	-0.02
36	2-Chloroethyl Vinyl Ether	0.127	0.134	-6.1	108	-0.04
37 T	cis-1,3-dichloropropene	0.554	0.596	-7.6	111	-0.03
38 s	Toluene-d8	0.975	0.923	5.4	95	-0.03
39 C	toluene	0.984	1.114	-13.3#	115	-0.05
40 T	trans-1,3-dichloropropene	0.536	0.557	-3.9	108	-0.04
41 T	1,1,2-trichloroethane	0.293	0.326	-11.4	108	-0.04
42 s	4-Bromofluorobenzene	1.001	0.887	11.4	95	-0.03

000393

(#) = Out of Range

P19302.D V21006CS.M

Tue Oct 26 12:29:49 1999

VOA3

Page

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102599\P19302.D
 Acq Time : 25 Oct 99 5:40 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	101	-0.04
44	4-Methyl-2-Pentanone	0.270	0.229	15.0	92	-0.03
45 T	tetrachloroethene	0.504	0.558	-10.7	106	-0.03
46 T	1,3-dichloropropane	0.484	0.499	-3.2	108	-0.02
47 T	dibromochloromethane	0.687	0.732	-6.5	113	-0.03
48 T	1,2-dibromoethane	0.523	0.537	-2.6	108	-0.03
49	2-Hexanone	0.191	0.193	-1.2	90	-0.04
50 P	chlorobenzene	0.810	0.865	-6.8	112	-0.03
51	1-Chlorohexane	0.455	0.488	-7.3	108	-0.04
52 T	1,1,1,2-tetrachloroethane	0.459	0.518	-12.9	107	-0.03
53 C	ethylbenzene	1.365	1.429	-4.7#	109	-0.02
54 T	m&p-xylenes	0.468	0.482	-3.1	111	-0.04
55 T	o-xylene	1.352	1.330	1.6	109	-0.03
56 T	styrene	0.778	0.798	-2.5	111	-0.04
57 P	bromoform	0.542	0.588	-8.5	106	-0.03
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	97	-0.06
59 T	isopropylbenzene	2.156	2.402	-11.4	107	-0.04
60 T	bromobenzene	1.481	1.651	-11.5	107	-0.04
61 P	1,1,2,2-tetrachloroethane	0.856	0.895	-4.6	98	-0.03
62	1,2,3-trichloropropane	0.640	0.668	-4.4	102	-0.03
63 T	n-propylbenzene	0.930	0.898	3.5	104	-0.03
64 T	2-chlorotoluene	0.533	0.589	-10.6	105	-0.03
65 T	4-chlorotoluene	0.546	0.591	-8.2	104	-0.04
66 T	1,3,5-trimethylbenzene	1.976	2.262	-14.5	107	-0.04
67 T	tert-butylbenzene	1.907	2.023	-6.1	103	-0.04
68 T	1,2,4-trimethylbenzene	2.281	2.368	-3.8	115	-0.03
69 T	sec-butylbenzene	2.558	2.732	-6.8	105	-0.04
70 T	1,3-dichlorobenzene	1.297	1.403	-8.2	105	-0.05
71 T	4-isopropyltoluene	2.355	2.454	-4.2	102	-0.04
72 T	1,4-dichlorobenzene	1.315	1.447	-10.0	110	-0.02
73 T	1,2-dichlorobenzene	1.244	1.338	-7.5	104	-0.05
74 T	n-butylbenzene	2.380	2.359	0.9	102	-0.03
75 T	1,2-dibromo-3-chloropropane	0.312	0.290	7.0	93	-0.05
76 T	1,2,4-trichlorobenzene	1.082	1.161	-7.3	106	-0.05
77 T	hexachlorobutadiene	0.877	0.889	-1.3	99	-0.04
78 T	naphthalene	1.610	1.595	0.9	103	-0.04
79 T	1,2,3-trichlorobenzene	0.965	0.996	-3.2	102	-0.04

000394

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Calibration Date(s): '10/9/99 '10/9/99

Calibration Times: 0832 1235

ID: 0.53 (mm)

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Response Factor Report voa3

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:23:48 1999
 Response via : Initial Calibration

Calibration Files

50 =M12956.D 200 =M12954.D 100 =M12955.D
 20 =M12957.D 5 =M12959.D

Compound		50	200	100	20	5	Avg	%RSD
-----ISTD-----								
1)	Fluorobenzene							
2) T	dichlorodifluoromethane	0.287	0.327	0.296	0.272	0.247	0.286	10.31
3) P	chloromethane	0.407	0.465	0.426	0.374	0.342	0.403	11.78#
4) C	vinyl chloride	0.302	0.323	0.307	0.306	0.297	0.307	3.17
5) T	bromomethane	0.238	0.112	0.200	0.253	0.237	0.208	27.37
6) T	chloroethane	0.219	0.117	0.193	0.200	0.197	0.185	21.29
7)	Acrolein	0.040	0.040	0.041	0.039	0.039	0.040	2.41
8) T	trichlorofluoromethane	0.448	0.418	0.415	0.466	0.455	0.441	5.17
9) C	1,1-dichloroethene	0.412	0.433	0.410	0.415	0.393	0.413	3.40
10)	Acetone	0.143	0.164	0.162	0.137	0.278	0.177	32.63
11)	Carbon Disulfide	0.940	0.951	0.947	0.982	0.932	0.950	1.98
12)	Iodo Methane	0.497	0.551	0.511	0.473	0.429	0.492	9.23
13) T	methylene chloride	0.301	0.317	0.317	0.304	0.271	0.302	6.23
14) T	trans-1,2-dichloroethene	0.409	0.424	0.424	0.437	0.400	0.419	3.44
15)	TBA	0.021	0.021	0.022	0.019	0.014	0.019	17.50
16)	MTBE	0.814	0.826	0.824	0.804	0.780	0.810	2.31
17)	Acrylonitrile	0.102	0.101	0.105	0.101	0.098	0.102	2.32
18) P	1,1-dichloroethane	0.550	0.571	0.557	0.593	0.533	0.561	4.02#
19) T	2,2-dichloropropane	0.451	0.482	0.469	0.459	0.443	0.461	3.29
20) T	cis-1,2-dichloroethene	0.457	0.450	0.473	0.478	0.435	0.459	3.76
21) T	bromochloromethane	0.309	0.312	0.316	0.319	0.285	0.308	4.38
22) C	chloroform	0.573	0.594	0.587	0.603	0.557	0.583	3.07
23) T	1,1,1-trichloroethane	0.474	0.487	0.484	0.475	0.436	0.471	4.36
24) s	Dibromofluoromethane	0.328	0.322	0.324	0.316	0.266	0.311	8.20
25)	Vinyl Acetate	0.970	0.989	0.992	1.023	0.945	0.984	2.95
26)	2-Butanone	0.186	0.180	0.197	0.171	0.220	0.191	9.91
27) T	carbon tetrachloride	0.403	0.422	0.411	0.412	0.380	0.405	3.90
28) T	1,1-dichloropropene	0.404	0.410	0.411	0.415	0.390	0.406	2.39
29) T	benzene	1.109	1.021	1.066	1.171	1.131	1.100	5.27
30) s	1,2-Dichloroethane-d4	0.360	0.363	0.365	0.362	0.302	0.351	7.68
31) T	1,2-dichloroethane	0.457	0.457	0.462	0.452	0.434	0.452	2.36
32) T	trichloroethene	0.330	0.332	0.336	0.351	0.305	0.331	5.06
33) C	1,2-dichloropropane	0.318	0.317	0.318	0.332	0.291	0.315	4.78
34) T	dibromomethane	0.234	0.236	0.231	0.227	0.191	0.224	8.23
35) T	bromodichloromethane	0.480	0.485	0.485	0.490	0.459	0.480	2.56
36)	2-Chloroethyl Vinyl Ether	0.188	0.199	0.197	0.176	0.152	0.183	10.57
37) T	cis-1,3-dichloropropene	0.528	0.538	0.539	0.553	0.509	0.533	2.98
38) s	Toluene-d8	1.022	0.966	0.974	1.014	0.895	0.974	5.16
39) C	toluene	1.183	1.126	1.167	1.251	1.291	1.204	5.51
40) T	trans-1,3-dichloropropene	0.484	0.497	0.489	0.484	0.456	0.482	3.20
41) T	1,1,2-trichloroethane	0.277	0.277	0.278	0.282	0.259	0.275	3.28
42) s	4-Bromofluorobenzene	0.431	0.392	0.412	0.442	0.382	0.412	6.17
43)	Chlorobenzene-d5	-----ISTD-----						

000396

Response Factor Report voa3

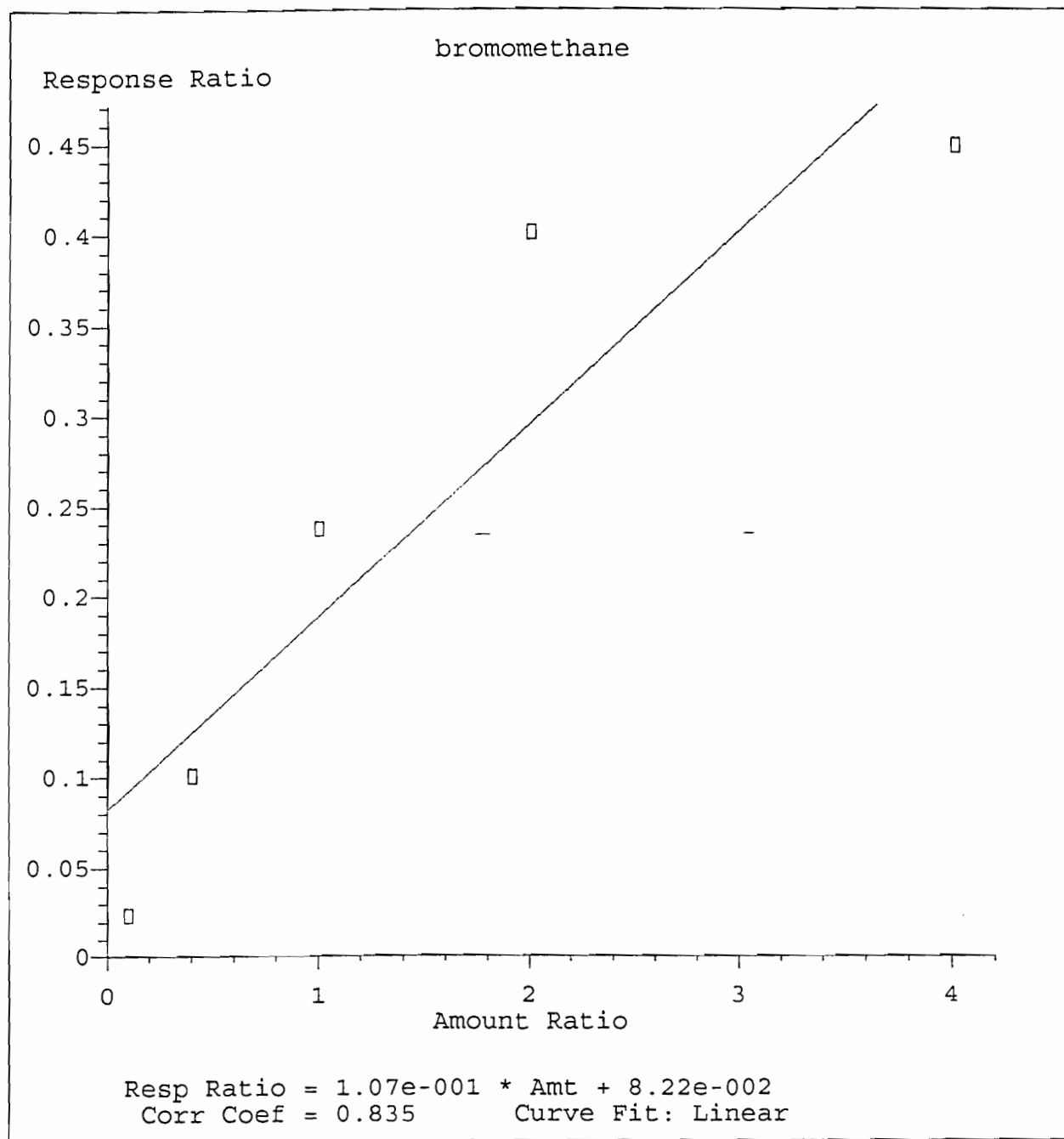
Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:23:48 1999
 Response via : Initial Calibration

Calibration Files

50 =M12956.D 200 =M12954.D 100 =M12955.D
 20 =M12957.D 5 =M12959.D

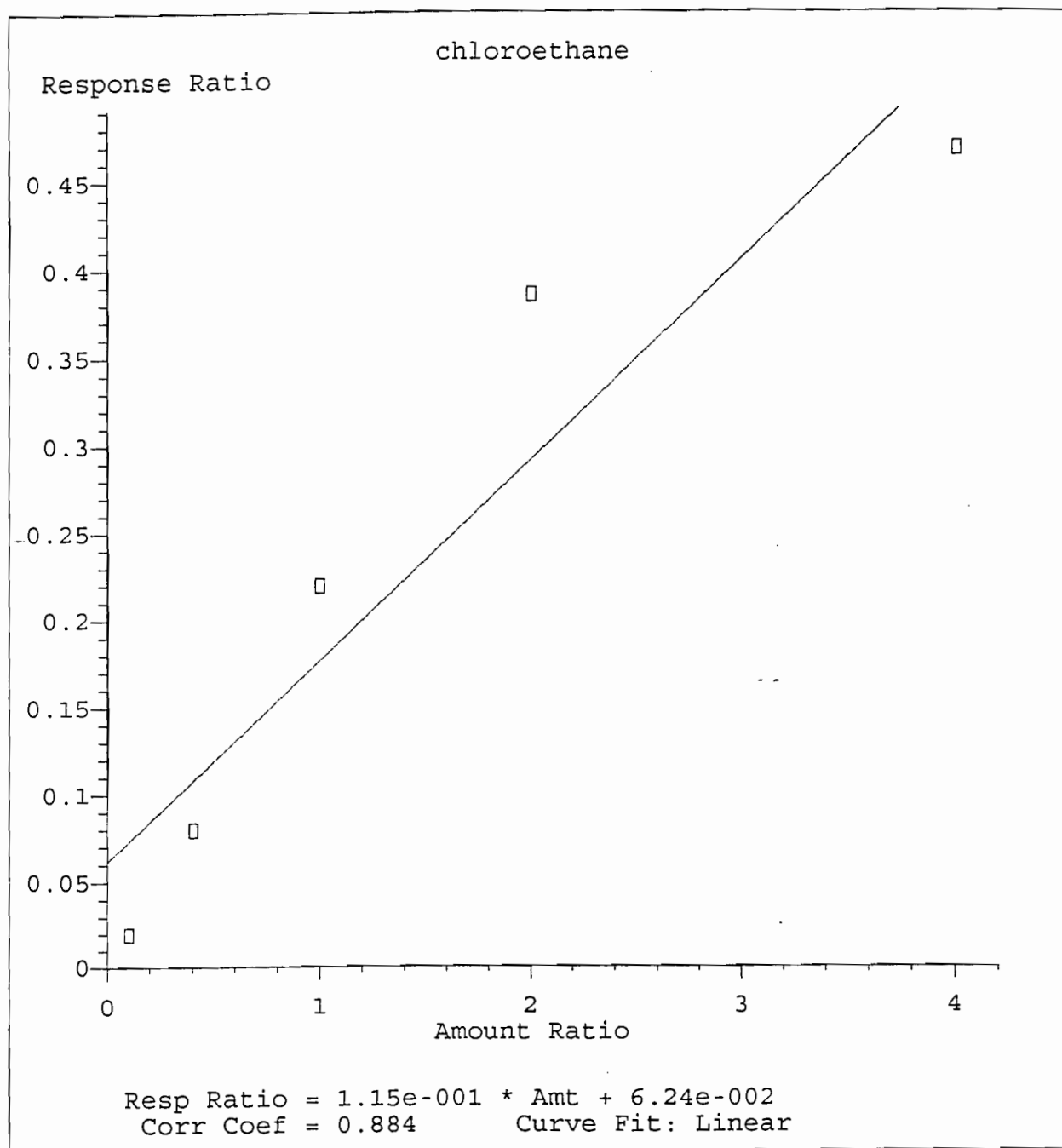
Compound	50	200	100	20	5	Avg	%RSD
44) 4-Methyl-2-Pentanone	0.365	0.289	0.361	0.323	0.303	0.328	10.36
45) T tetrachloroethene	0.381	0.380	0.375	0.394	0.396	0.385	2.44
46) T 1,3-dichloropropane	0.616	0.591	0.596	0.617	0.638	0.612	3.07
47) T dibromochloromethane	0.421	0.426	0.420	0.423	0.411	0.420	1.39
48) T 1,2-dibromoethane	0.372	0.360	0.363	0.367	0.355	0.363	1.81
49) 2-Hexanone	0.266	0.268	0.283	0.203	0.139	0.232	25.95
50) P chlorobenzene	0.905	0.876	0.892	0.925	0.973	0.914	4.09#
51) 1-Chlorohexane	0.605	0.569	0.571	0.627	0.616	0.598	4.42
52) T 1,1,1,2-tetrachloroethane	0.336	0.321	0.308	0.341	0.325	0.326	4.01
53) C ethylbenzene	1.643	1.414	1.451	1.735	1.747	1.598	9.81
54) T m&p-xylenes	0.555	0.488	0.506	0.565	0.601	0.543	8.40
55) T o-xylene	1.255	1.140	1.207	1.309	1.368	1.256	7.04
56) T styrene	1.003	0.904	0.931	0.992	1.024	0.971	5.27
57) P bromoform	0.282	0.261	0.279	0.277	0.266	0.273	3.29#
58) 1,4-dichlorobenzene-d4	-----ISTD-----						
59) T isopropylbenzene	3.381	3.407	3.292	3.483	3.373	3.387	2.03
60) T bromobenzene	1.501	1.416	1.470	1.556	1.534	1.495	3.69
61) P 1,1,2,2-tetrachloroethane	1.027	0.918	1.015	1.015	0.999	0.995	4.44#
62) 1,2,3-trichloropropane	0.728	0.658	0.734	0.733	0.715	0.713	4.49
63) T n-propylbenzene	0.838	0.817	0.829	0.845	0.794	0.825	2.44
64) T 2-chlorotoluene	0.789	0.685	0.732	0.793	0.791	0.758	6.39
65) T 4-chlorotoluene	0.778	0.785	0.776	0.820	0.774	0.787	2.44
66) T 1,3,5-trimethylbenzene	2.672	2.579	2.685	2.841	2.861	2.728	4.40
67) T tert-butylbenzene	2.385	2.559	2.335	2.482	2.769	2.506	6.82
68) T 1,2,4-trimethylbenzene	2.804	2.607	2.600	2.820	2.834	2.733	4.34
69) T sec-butylbenzene	3.407	3.183	3.245	3.495	3.511	3.368	4.39
70) T 1,3-dichlorobenzene	1.576	1.432	1.510	1.622	1.563	1.541	4.71
71) T 4-isopropyltoluene	2.915	2.893	2.853	3.058	3.222	2.988	5.09
72) T 1,4-dichlorobenzene	1.603	1.517	1.580	1.659	1.633	1.598	3.40
73) T 1,2-dichlorobenzene	1.540	1.391	1.457	1.533	1.486	1.482	4.13
74) T n-butylbenzene	2.740	2.693	2.756	2.907	2.968	2.813	4.20
75) T 1,2-dibromo-3-chloropropa	0.157	0.158	0.166	0.132	0.175	0.157	10.14
76) T 1,2,4-trichlorobenzene	1.048	1.165	1.090	1.066	0.958	1.065	7.03
77) T hexachlorobutadiene	0.530	0.563	0.538	0.516	0.467	0.523	6.74
78) T naphthalene	2.092	1.962	2.085	2.264	2.053	2.091	5.24
79) T 1,2,3-trichlorobenzene	0.911	0.956	0.914	0.907	0.856	0.909	3.90

000397



Method Name: D:\HPCHEM\3\METHODS\V31009CW.M
Calibration Table Last Updated: Sat Oct 09 13:27:32 1999

000398



Method Name: D:\HPCHEM\3\METHODS\V31009CW.M
Calibration Table Last Updated: Sat Oct 09 13:25:34 1999

000399

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.09	96	1903300	50.00	ug/L	-0.02
43) Chlorobenzene-d5	20.45	117	1642878	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	691708	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.38	113	2449880	196.49	ug/L	392.99%
30) 1,2-Dichlorethane-d4	13.42	65	2764536	201.47	ug/L	402.94%
38) Toluene-d8	17.35	98	7352218	189.05	ug/L	378.11%
42) 4-Bromofluorobenzene	22.94	95	2981787	181.58	ug/L	363.16%

Target Compounds						Qvalue
2) dichlorodifluoromethane	3.46	85	2491100	228.35	ug/L	98
3) chloromethane	4.01	50	3540749	228.38	ug/L	97
4) vinyl chloride	4.13	62	2457774	213.75	ug/L	99
5) bromomethane	5.00	94	854007	94.41	ug/L	97
6) chloroethane	5.17	64	891670	106.73	ug/L m	96
7) Acrolein	6.97	56	3042013	2006.54	ug/L	100
8) trichlorofluoromethane	5.76	101	3183243	186.62	ug/L	99
9) 1,1-dichloroethene	7.32	61	3294579	209.95	ug/L	94
10) Acetone	7.23	43	1249007	229.44	ug/L	94
11) Carbon Disulfide	8.47	76	7238749	202.27	ug/L	100
12) Iodo Methane	8.05	142	4194438	221.59	ug/L	98
13) methylene chloride	8.53	84	2414305	210.77	ug/L	99
14) trans-1,2-dichloroethene	9.22	61	3229023	207.46	ug/L	99
15) TBA	8.42	59	1633441	2079.38	ug/L m	61
16) MTBE	9.00	73	6288893	202.86	ug/L	99
17) Acrylonitrile	8.92	53	7700273	1979.49	ug/L	100
18) 1,1-dichloroethane	10.21	63	4346828	207.46	ug/L	97
19) 2,2-dichloropropane	11.46	77	3669646	213.88	ug/L	99
20) cis-1,2-dichloroethene	11.56	61	3424642	196.72	ug/L	98
21) bromochloromethane	12.25	49	2378013	202.29	ug/L	98
22) chloroform	11.92	83	4521741	207.22	ug/L	97
23) 1,1,1-trichloroethane	12.75	97	3706008	205.55	ug/L	98
25) Vinyl Acetate	10.27	43	7529314	203.82	ug/L	99
26) 2-Butanone	11.26	43	1373157	194.08	ug/L	98
27) carbon tetrachloride	13.30	117	3212183	209.53	ug/L	97
28) 1,1-dichloropropene	13.08	75	3124866	202.96	ug/L	99
29) benzene	13.65	78	7774178	184.12	ug/L	99
31) 1,2-dichloroethane	13.62	62	3479210	200.09	ug/L	99
32) trichloroethene	14.91	130	2531154	201.48	ug/L	98
33) 1,2-dichloropropane	15.27	63	2416539	199.67	ug/L	98
34) dibromomethane	15.87	174	1797435	202.03	ug/L	98
35) bromodichloromethane	15.75	83	3693010	202.13	ug/L	100
36) 2-Chloroethyl Vinyl Ether	16.34	63	1514029	211.18	ug/L	98

(#) = qualifier out of range (m) = manual integration
 M12954.D V31009CW.M Sat Oct 09 12:06:06 1999

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.84	75	4092696	203.53	ug/L	97
39) toluene	17.51	91	8575587	190.43	ug/L	99
40) trans-1,3-dichloropropene	17.84	75	3780432	205.29	ug/L	99
41) 1,1,2-trichloroethane	18.18	97	2112654	200.67	ug/L	95
44) 4-Methyl-2-Pentanone	16.45	43	1899221	158.55	ug/L	96
45) tetrachloroethene	18.85	166	2496850	199.19	ug/L	99
46) 1,3-dichloropropane	18.69	76	3882371	191.90	ug/L	100
47) dibromochloromethane	19.26	129	2800559	202.44	ug/L	98
48) 1,2-dibromoethane	19.68	107	2366688	193.49	ug/L	95
49) 2-Hexanone	18.24	43	1758592	201.32	ug/L	99
50) chlorobenzene	20.53	112	5756825	193.49	ug/L	98
51) 1-Chlorohexane	19.94	91	3738584	187.92	ug/L	99
52) 1,1,1,2-tetrachloroethane	20.59	133	2109595	191.14	ug/L	99
53) ethylbenzene	20.61	91	9291842	172.15	ug/L	97
54) m&p-xylenes	20.77	106	6413781	351.58	ug/L	95
55) o-xylene	21.67	91	7488867	181.55	ug/L	99
56) styrene	21.74	104	5938683	180.16	ug/L	99
57) bromoform	22.51	173	1717768	185.31	ug/L	100
59) isopropylbenzene	22.39	105	9425809	201.52	ug/L	98
60) bromobenzene	23.36	77	3917834	188.65	ug/L	98
61) 1,1,2,2-tetrachloroethane	22.76	83	2539894	178.71	ug/L	96
62) 1,2,3-trichloropropane	23.06	75	1819389	180.75	ug/L	96
63) n-propylbenzene	23.22	120	2259949	194.85	ug/L	91
64) 2-chlorotoluene	23.61	126	1894925	173.56	ug/L	97
65) 4-chlorotoluene	23.69	126	2172653	201.78	ug/L	96
66) 1,3,5-trimethylbenzene	23.52	105	7135734	193.03	ug/L	97
67) tert-butylbenzene	24.20	119	7080854	214.63	ug/L	99
68) 1,2,4-trimethylbenzene	24.27	105	7212414	185.94	ug/L	98
69) sec-butylbenzene	24.58	105	8807846	186.88	ug/L	98
70) 1,3-dichlorobenzene	25.06	146	3963151	181.75	ug/L	99
71) 4-isopropyltoluene	24.81	119	8005258	198.52	ug/L	98
72) 1,4-dichlorobenzene	25.26	146	4197744	189.29	ug/L	98
73) 1,2-dichlorobenzene	26.01	146	3849046	180.62	ug/L	98
74) n-butylbenzene	25.60	91	7451529	196.57	ug/L	95
75) 1,2-dibromo-3-chloropropan	27.63	75	437146	201.85	ug/L	98
76) 1,2,4-trichlorobenzene	29.79	180	3223039	222.25	ug/L	97
77) hexachlorobutadiene	30.13	225	1556387	212.08	ug/L	97
78) naphthalene	30.57	128	5428522	187.54	ug/L	97
79) 1,2,3-trichlorobenzene	31.29	180	2645573	209.92	ug/L	97

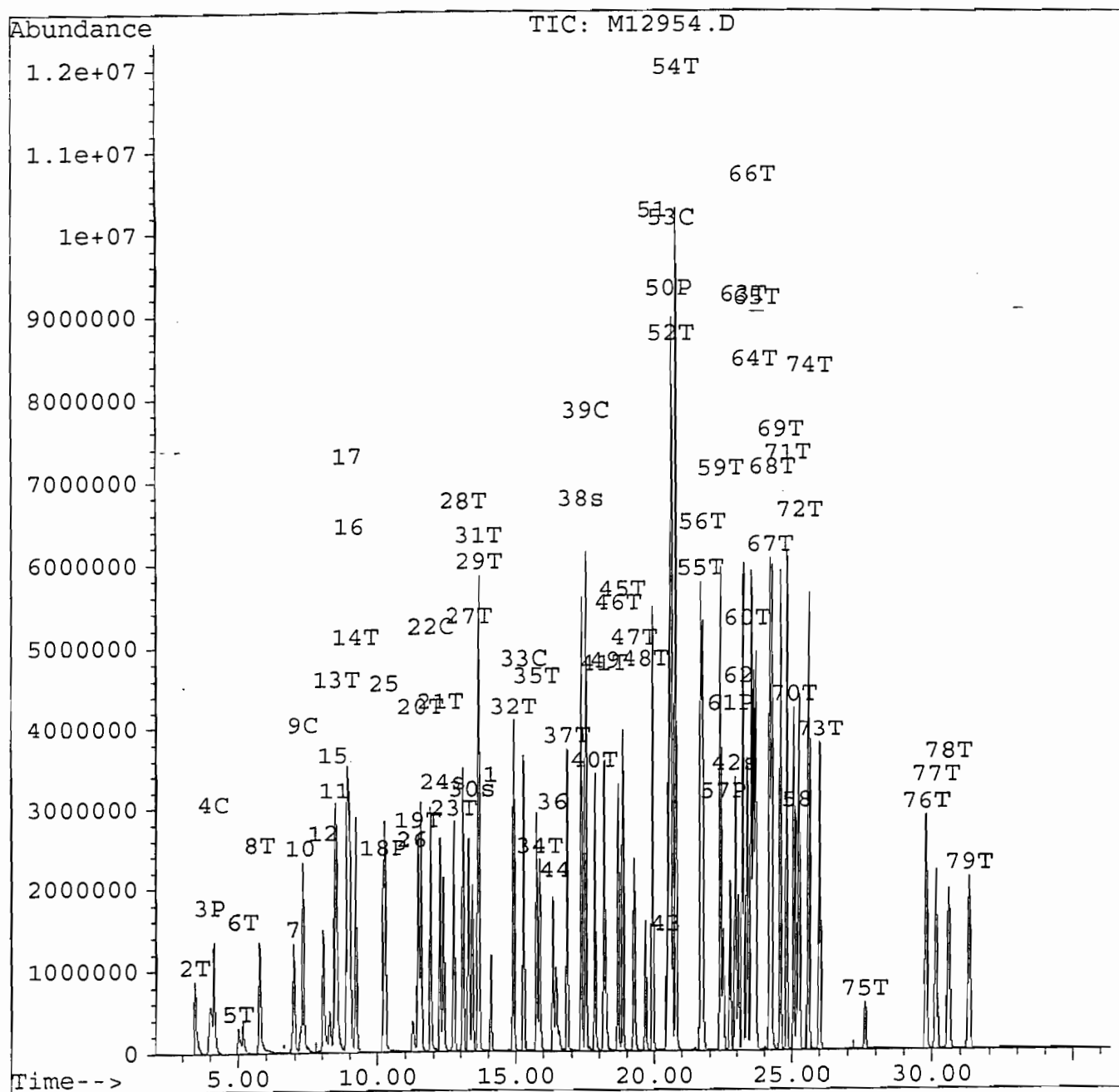
000401

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



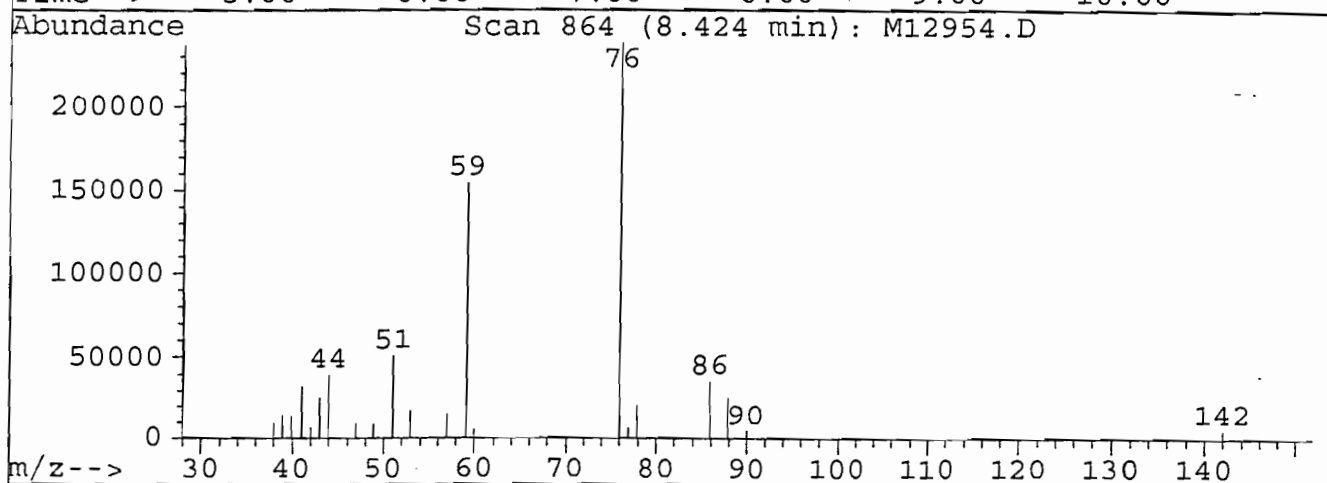
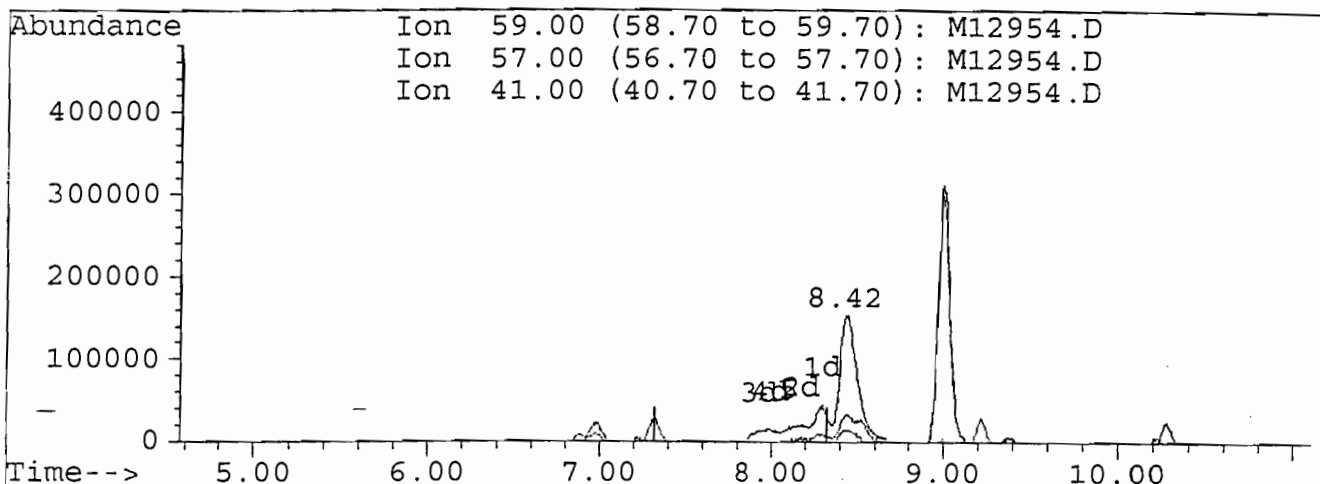
000402

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12954.D

(15) TBA

8.42min 2079.38ug/L m

response 1633441

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	9.20
41.00	20.60	20.70
0.00	0.00	0.00

000403

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.11	96	2034665	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.46	117	1763980	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	750397	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.40	113	1318836	98.95	ug/L	197.90%
30) 1,2-Dichlorethane-d4	13.44	65	1484370	101.19	ug/L	202.39%
38) Toluene-d8	17.36	98	3965441	95.38	ug/L	190.77%
42) 4-Bromofluorobenzene	22.93	95	1678001	95.59	ug/L	191.17%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.50	85	1203188	103.17	ug/L	100
3) chloromethane	4.02	50	1735316	104.70	ug/L	100
4) vinyl chloride	4.17	62	1248604	101.58	ug/L	100
5) bromomethane	5.06	94	815381	84.32	ug/L	99
6) chloroethane	5.25	64	784503	87.84	ug/L	98
7) Acrolein	7.00	56	1663688	1026.53	ug/L	100
8) trichlorofluoromethane	5.86	101	1689106	92.63	ug/L	100
9) 1,1-dichloroethene	7.38	61	1669921	99.55	ug/L	97
10) Acetone	7.22	43	659187	113.27	ug/L	95
11) Carbon Disulfide	8.53	76	3853718	100.73	ug/L	100
12) Iodo Methane	8.10	142	2078220	102.70	ug/L	100
13) methylene chloride	8.57	84	1289321	105.29	ug/L	100
14) trans-1,2-dichloroethene	9.26	61	1725700	103.71	ug/L	98
15) TBA	8.20	59	897239	1068.44	ug/L m	87
16) MTBE	9.00	73	3351522	101.13	ug/L	99
17) Acrylonitrile	8.92	53	4263940	1025.35	ug/L	100
18) 1,1-dichloroethane	10.25	63	2266798	101.20	ug/L	98
19) 2,2-dichloropropane	11.49	77	1907809	104.02	ug/L	98
20) cis-1,2-dichloroethene	11.59	61	1924608	103.42	ug/L	99
21) bromochloromethane	12.28	49	1285335	102.28	ug/L	94
22) chloroform	11.93	83	2387734	102.36	ug/L	97
23) 1,1,1-trichloroethane	12.79	97	1969182	102.17	ug/L	95
25) Vinyl Acetate	10.29	43	4037018	102.23	ug/L	99
26) 2-Butanone	11.26	43	803378	106.22	ug/L	99
27) carbon tetrachloride	13.32	117	1671798	102.01	ug/L	95
28) 1,1-dichloropropene	13.11	75	1670619	101.50	ug/L	98
29) benzene	13.67	78	4339325	96.14	ug/L	100
31) 1,2-dichloroethane	13.63	62	1878652	101.06	ug/L	99
32) trichloroethene	14.92	130	1367319	101.81	ug/L	99
33) 1,2-dichloropropane	15.28	63	1295011	100.10	ug/L	99
34) dibromomethane	15.88	174	939498	98.78	ug/L	99
35) bromodichloromethane	15.76	83	1974386	101.09	ug/L	98
36) 2-Chloroethyl Vinyl Ether	16.35	63	803037	104.78	ug/L	98

000404

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
37)	cis-1,3-dichloropropene	16.85	75	2192721	102.01 ug/L	96
39)	toluene	17.52	91	4750698	98.68 ug/L	97
40)	trans-1,3-dichloropropene	17.85	75	1991220	101.15 ug/L	98
41)	1,1,2-trichloroethane	18.18	97	1133003	100.67 ug/L	96
44)	4-Methyl-2-Pentanone	16.43	43	1274072	99.06 ug/L	97
45)	tetrachloroethene	18.85	166	1321299	98.17 ug/L	97
46)	1,3-dichloropropane	18.69	76	2103790	96.85 ug/L	99
47)	dibromochloromethane	19.26	129	1480879	99.69 ug/L	99
48)	1,2-dibromoethane	19.68	107	1279989	97.46 ug/L	97
49)	2-Hexanone	18.18	43	997845	106.39 ug/L	99
50)	chlorobenzene	20.53	112	3145689	98.47 ug/L	98
51)	1-Chlorohexane	19.94	91	2015464	94.35 ug/L	98
52)	1,1,1,2-tetrachloroethane	20.60	133	1086208	91.66 ug/L	100
53)	ethylbenzene	20.61	91	5120586	88.36 ug/L	99
54)	m&p-xylenes	20.77	106	3569379	182.23 ug/L	99
55)	o-xylene	21.67	91	4257439	96.13 ug/L	100
56)	styrene	21.73	104	3283045	92.76 ug/L	99
57)	bromoform	22.48	173	985589	99.03 ug/L	98
59)	isopropylbenzene	22.39	105	4940762	97.37 ug/L	98
60)	bromobenzene	23.36	77	2205709	97.90 ug/L	100
61)	1,1,2,2-tetrachloroethane	22.74	83	1523552	98.82 ug/L	97
62)	1,2,3-trichloropropane	23.05	75	1101258	100.85 ug/L	97
63)	n-propylbenzene	23.21	120	1243578	98.83 ug/L	96
64)	2-chlorotoluene	23.60	126	1097980	92.70 ug/L	98
65)	4-chlorotoluene	23.68	126	1164365	99.68 ug/L	99
66)	1,3,5-trimethylbenzene	23.52	105	4030072	100.49 ug/L	99
67)	tert-butylbenzene	24.19	119	3503800	97.90 ug/L	99
68)	1,2,4-trimethylbenzene	24.26	105	3902812	92.75 ug/L	99
69)	sec-butylbenzene	24.57	105	4869531	95.24 ug/L	99
70)	1,3-dichlorobenzene	25.05	146	2265702	95.78 ug/L	99
71)	4-isopropyltoluene	24.81	119	4281282	97.87 ug/L	98
72)	1,4-dichlorobenzene	25.25	146	2371219	98.56 ug/L	100
73)	1,2-dichlorobenzene	25.99	146	2186791	94.59 ug/L	98
74)	n-butylbenzene	25.59	91	4136137	100.58 ug/L	100
75)	1,2-dibromo-3-chloropropan	27.63	75	249505	106.20 ug/L	99
76)	1,2,4-trichlorobenzene	29.79	180	1636042	103.99 ug/L	99
77)	hexachlorobutadiene	30.14	225	807222	101.39 ug/L	97
78)	naphthalene	30.57	128	3128419	99.62 ug/L	98
79)	1,2,3-trichlorobenzene	31.29	180	1372093	100.36 ug/L	98

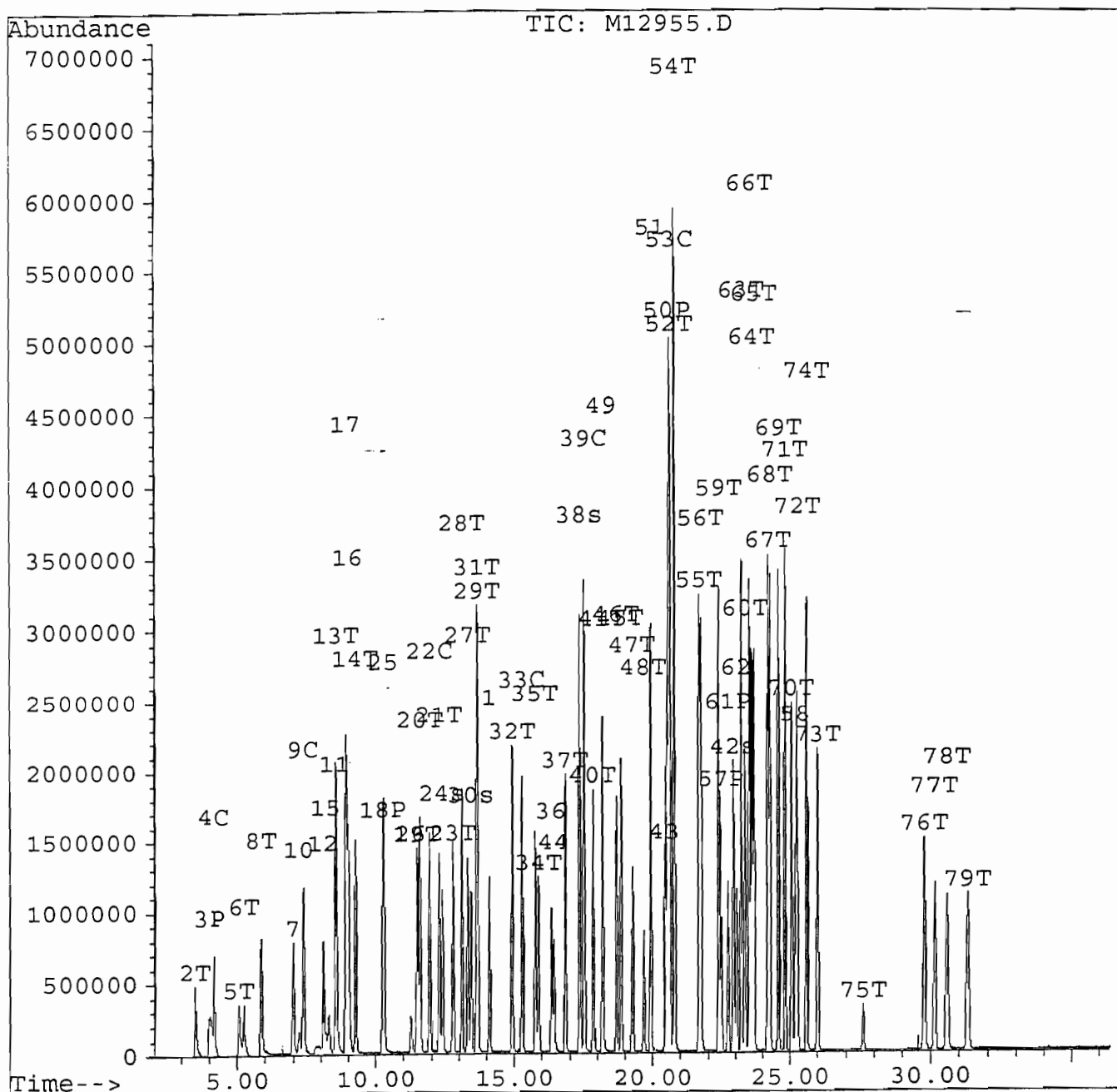
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



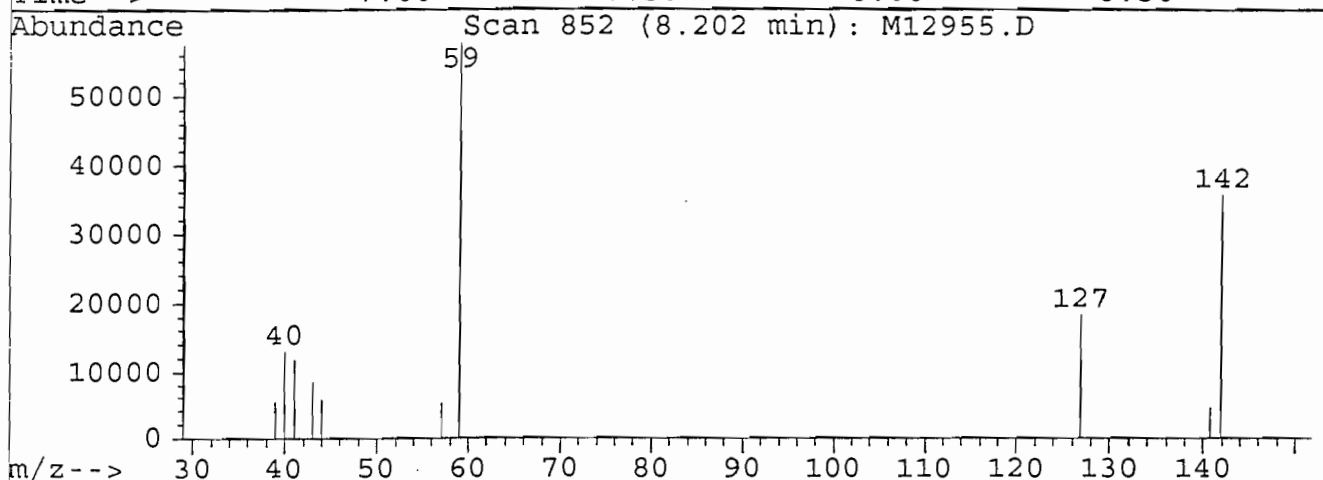
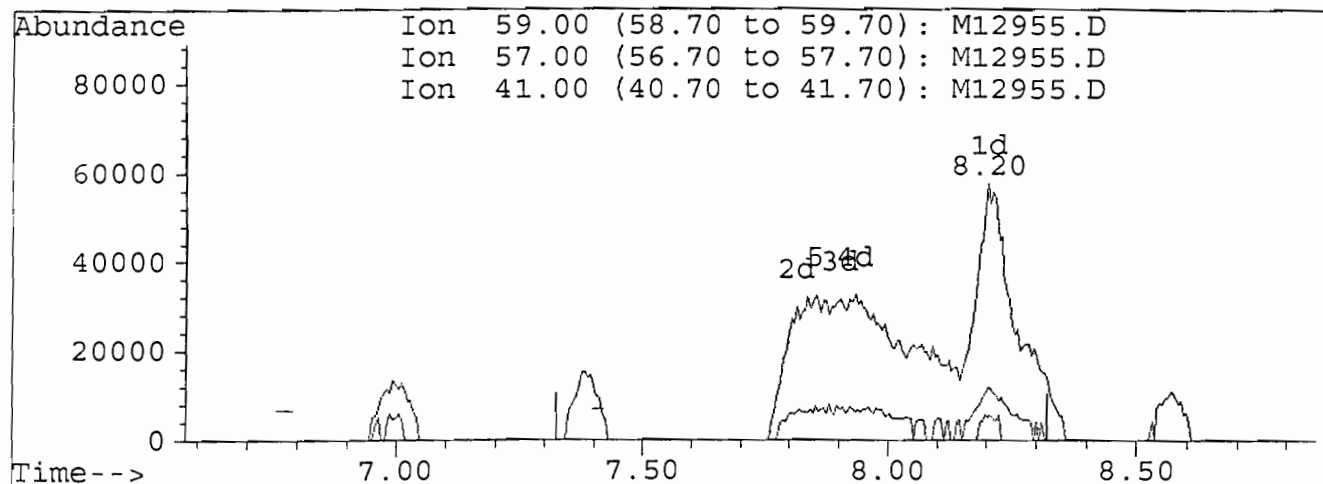
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
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Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12955.D

(15) TBA
 8.20min 1068.44ug/L m
 response 897239

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	9.01
41.00	20.60	20.54
0.00	0.00	0.00

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
 Acq Time : 9 Oct 99 10:02 am
 Sample : 50 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 11:46 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.10	96	2018190	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.45	117	1680493	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.18	152	736615	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.40	113	661026	50.00	ug/L	100.00%
30) 1,2-Dichlorethane-d4	13.44	65	727499	50.00	ug/L	100.00%
38) Toluene-d8	17.36	98	2061848	50.00	ug/L	100.00%
42) 4-Bromofluorobenzene	22.93	95	870630	50.00	ug/L	100.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.50	85	578378	50.00	ug/L	100
3) chloromethane	4.03	50	821965	50.00	ug/L	100
4) vinyl chloride	4.18	62	609612	50.00	ug/L	100
5) bromomethane	5.09	94	479574	50.00	ug/L	100
6) chloroethane	5.27	64	442937	50.00	ug/L	100
7) Acrolein	6.98	56	803781	500.00	ug/L	100
8) trichlorofluoromethane	5.88	101	904364	50.00	ug/L	100
9) 1,1-dichloroethene	7.40	61	831960	50.00	ug/L	100
10) Acetone	7.19	43	288612	50.00	ug/L	100
11) Carbon Disulfide	8.55	76	1897407	50.00	ug/L	100
12) Iodo Methane	8.11	142	1003564	50.00	ug/L	100
13) methylene chloride	8.57	84	607308	50.00	ug/L	100
14) trans-1,2-dichloroethene	9.27	61	825216	50.00	ug/L	100
15) TBA	7.82	59	416421	499.93	ug/L m	61
16) MTBE	9.00	73	1643609	50.00	ug/L	100
17) Acrylonitrile	8.91	53	2062427	500.00	ug/L	100
18) 1,1-dichloroethane	10.25	63	1110847	50.00	ug/L	100
19) 2,2-dichloropropane	11.50	77	909649	50.00	ug/L	100
20) cis-1,2-dichloroethene	11.59	61	922986	50.00	ug/L	100
21) bromochloromethane	12.28	49	623248	50.00	ug/L	100
22) chloroform	11.94	83	1156930	50.00	ug/L	100
23) 1,1,1-trichloroethane	12.78	97	955892	50.00	ug/L	100
25) Vinyl Acetate	10.28	43	1958579	50.00	ug/L	100
26) 2-Butanone	11.25	43	375108	50.00	ug/L	100
27) carbon tetrachloride	13.32	117	812791	50.00	ug/L	100
28) 1,1-dichloropropene	13.11	75	816277	50.00	ug/L	100
29) benzene	13.67	78	2238612	50.00	ug/L	100
31) 1,2-dichloroethane	13.63	62	921906	50.00	ug/L	100
32) trichloroethene	14.93	130	666064	50.00	ug/L	100
33) 1,2-dichloropropane	15.28	63	641648	50.00	ug/L	100
34) dibromomethane	15.88	174	471687	50.00	ug/L	100
35) bromodichloromethane	15.77	83	968677	50.00	ug/L	100
36) 2-Chloroethyl Vinyl Ether	16.35	63	380102	50.00	ug/L	100

(#) = qualifier out of range (m) = manual integration
 M12956.D V31009CW.M Sat Oct 09 11:46:45 1999

VOA3 000403 Page 1

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
 Acq Time : 9 Oct 99 10:02 am
 Sample : 50 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 11:46 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.84	75	1066104	50.00	ug/L	100
39) toluene	17.52	91	2387530	50.00	ug/L	100
40) trans-1,3-dichloropropene	17.85	75	976341	50.00	ug/L	100
41) 1,1,2-trichloroethane	18.18	97	558187	50.00	ug/L	100
44) 4-Methyl-2-Pentanone	16.42	43	612644	50.00	ug/L	100
45) tetrachloroethene	18.86	166	641087	50.00	ug/L	100
46) 1,3-dichloropropane	18.68	76	1034705	50.00	ug/L	100
47) dibromochloromethane	19.26	129	707555	50.00	ug/L	100
48) 1,2-dibromoethane	19.68	107	625595	50.00	ug/L	100
49) 2-Hexanone	18.18	43	446755	50.00	ug/L	100
50) chlorobenzene	20.53	112	1521658	50.00	ug/L	100
51) 1-Chlorohexane-	19.94	91	1017520	50.00	ug/L	100
52) 1,1,1,2-tetrachloroethane	20.59	133	564476	50.00	ug/L	100
53) ethylbenzene	20.61	91	2760535	50.00	ug/L	100
54) m&p-xylenes	20.77	106	1866060	100.00	ug/L	100
55) o-xylene	21.67	91	2109673	50.00	ug/L	100
56) styrene	21.74	104	1685864	50.00	ug/L	100
57) bromoform	22.48	173	474089	50.00	ug/L	100
59) isopropylbenzene	22.39	105	2490466	50.00	ug/L	100
60) bromobenzene	23.36	77	1105790	50.00	ug/L	100
61) 1,1,2,2-tetrachloroethane	22.73	83	756747	50.00	ug/L	100
62) 1,2,3-trichloropropane	23.04	75	535961	50.00	ug/L	100
63) n-propylbenzene	23.21	120	617575	50.00	ug/L	100
64) 2-chlorotoluene	23.60	126	580568	49.93	ug/L	100
65) 4-chlorotoluene	23.68	126	573325	50.00	ug/L	100
66) 1,3,5-trimethylbenzene	23.51	105	1968351	50.00	ug/L	100
67) tert-butylbenzene	24.19	119	1756645	50.00	ug/L	100
68) 1,2,4-trimethylbenzene	24.26	105	2065384	50.00	ug/L	100
69) sec-butylbenzene	24.57	105	2509584	50.00	ug/L	100
70) 1,3-dichlorobenzene	25.05	146	1161072	50.00	ug/L	100
71) 4-isopropyltoluene	24.81	119	2147163	50.00	ug/L	100
72) 1,4-dichlorobenzene	25.25	146	1180830	50.00	ug/L	100
73) 1,2-dichlorobenzene	26.00	146	1134705	50.00	ug/L	100
74) n-butylbenzene	25.60	91	2018461	50.00	ug/L	100
75) 1,2-dibromo-3-chloropropan	27.62	75	115314	50.00	ug/L	100
76) 1,2,4-trichlorobenzene	29.78	180	772176	50.00	ug/L	100
77) hexachlorobutadiene	30.13	225	390749	50.00	ug/L	100
78) naphthalene	30.57	128	1541290	50.00	ug/L	100
79) 1,2,3-trichlorobenzene	31.29	180	671060	50.00	ug/L	100

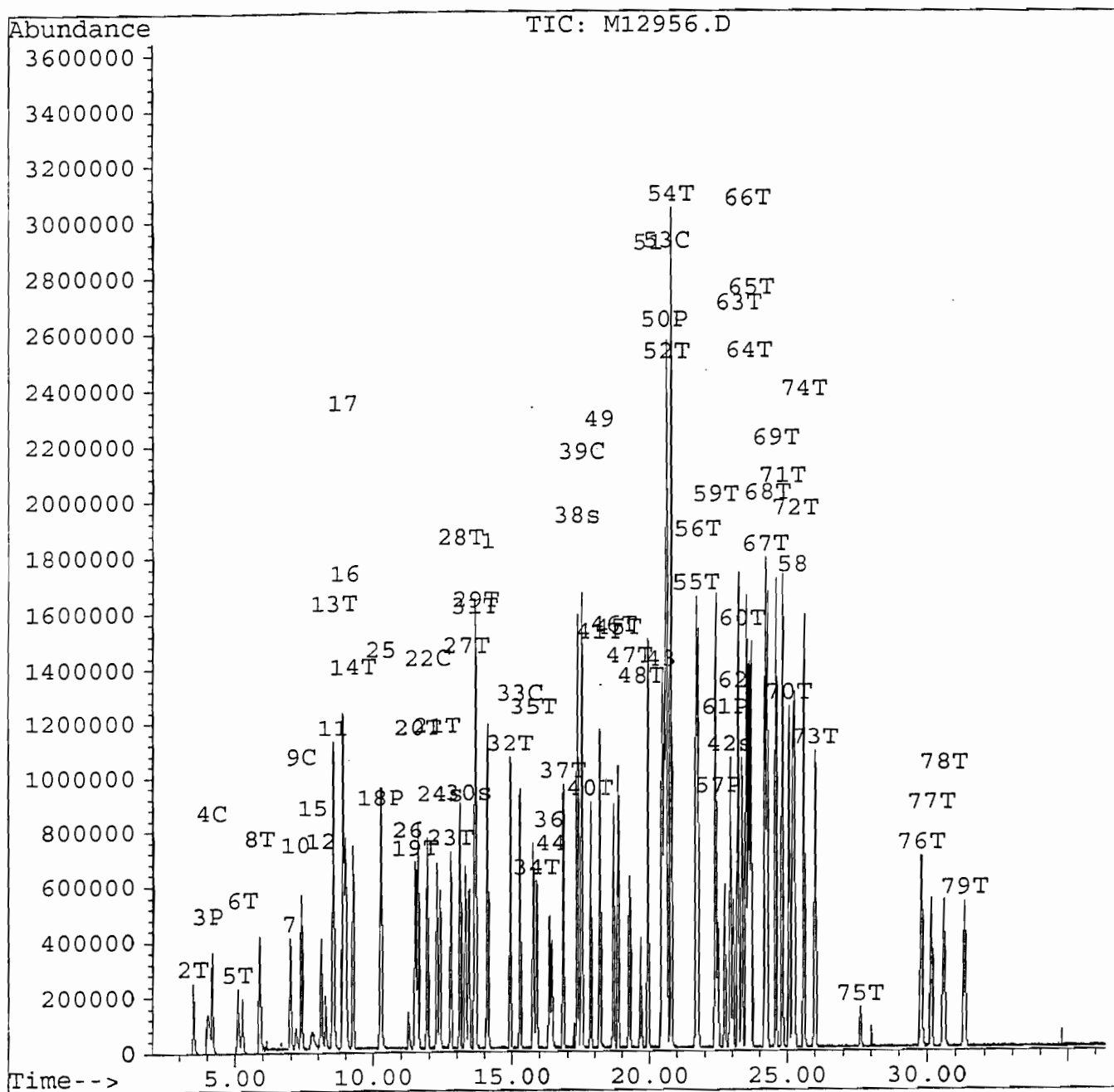
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
 Acq Time : 9 Oct 99 10:02 am
 Sample : 50 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 11:46 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



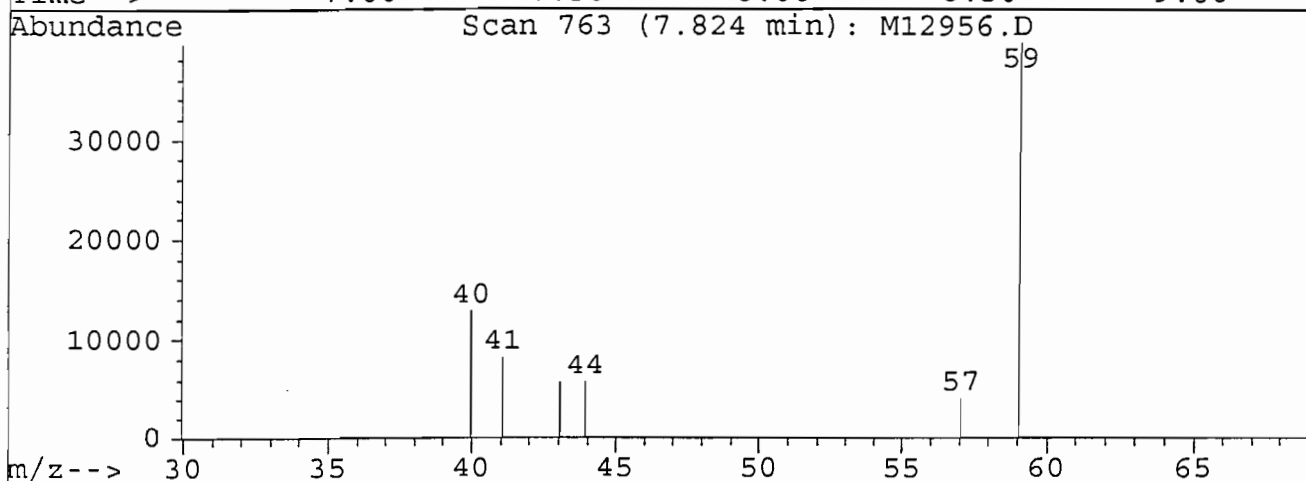
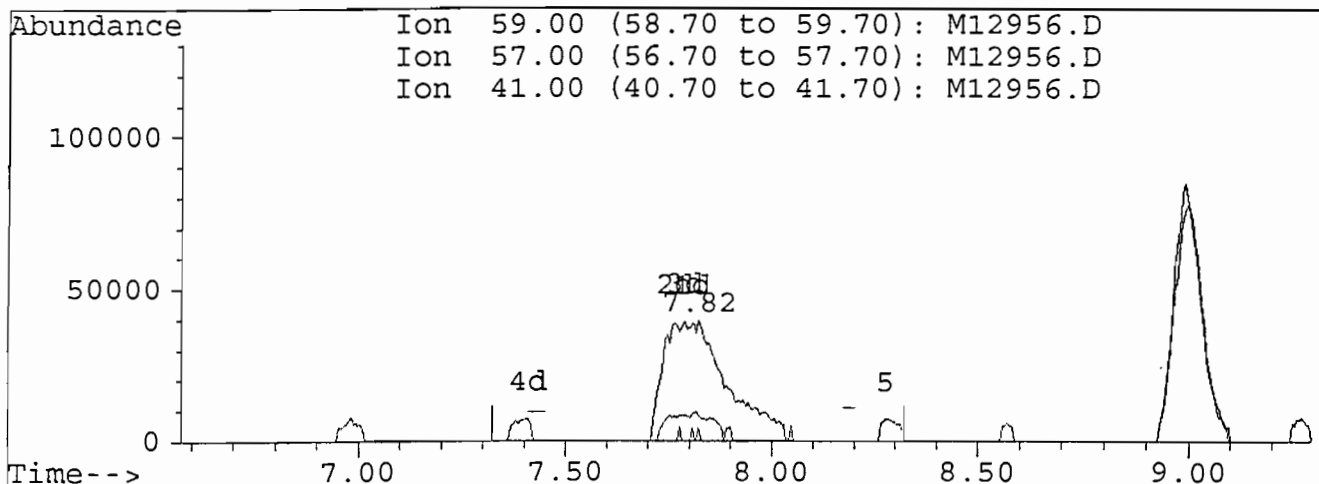
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
 Acq Time : 9 Oct 99 10:02 am
 Sample : 50 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 11:46 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12956.D

(15) TBA
 7.82min 499.93ug/L m
 response 416421

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	10.38
41.00	20.60	20.65
0.00	0.00	0.00

000411

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.10	96	2139904	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.45	117	1788656	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	783692	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.40	113	270072	19.27	ug/L	38.53%
30) 1,2-Dichlorethane-d4	13.44	65	309675	20.07	ug/L	40.15%
38) Toluene-d8	17.36	98	867519	19.84	ug/L	39.68%
42) 4-Bromofluorobenzene	22.92	95	378169	20.48	ug/L	40.97%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.50	85	232757	18.98	ug/L	99
3) chloromethane	4.02	50	320445	18.38	ug/L	95
4) vinyl chloride	4.18	62	261808	20.25	ug/L	98
5) bromomethane	5.11	94	216213	21.26	ug/L	95
6) chloroethane	5.29	64	171152	18.22	ug/L	99
7) Acrolein	6.98	56	332244	194.92	ug/L	99
8) trichlorofluoromethane	5.90	101	398949	20.80	ug/L	98
9) 1,1-dichloroethene	7.40	61	355507	20.15	ug/L	98
10) Acetone	7.18	43	117257	19.16	ug/L	92
11) Carbon Disulfide	8.54	76	840249	20.88	ug/L	98
12) Iodo Methane	8.12	142	404581	19.01	ug/L	99
13) methylene chloride	8.57	84	259864	20.18	ug/L	96
14) trans-1,2-dichloroethene	9.28	61	373916	21.37	ug/L	98
15) TBA	7.74	59	160061	181.23	ug/L m	90
16) MTBE	8.99	73	688317	19.75	ug/L	99
17) Acrylonitrile	8.90	53	868513	198.58	ug/L	97
18) 1,1-dichloroethane	10.26	63	507407	21.54	ug/L	96
19) 2,2-dichloropropane	11.50	77	393264	20.39	ug/L	99
20) cis-1,2-dichloroethene	11.59	61	409054	20.90	ug/L	94
21) bromochloromethane	12.28	49	273367	20.68	ug/L	99
22) chloroform	11.93	83	515906	21.03	ug/L	99
23) 1,1,1-trichloroethane	12.78	97	406244	20.04	ug/L	98
25) Vinyl Acetate	10.29	43	875897	21.09	ug/L	99
26) 2-Butanone	11.26	43	146075	18.36	ug/L	90
27) carbon tetrachloride	13.32	117	352646	20.46	ug/L	91
28) 1,1-dichloropropene	13.11	75	354861	20.50	ug/L	99
29) benzene	13.67	78	1002252	21.11	ug/L	96
31) 1,2-dichloroethane	13.64	62	386513	19.77	ug/L	97
32) trichloroethene	14.93	130	300818	21.30	ug/L	98
33) 1,2-dichloropropane	15.29	63	284270	20.89	ug/L	97
34) dibromomethane	15.88	174	194638	19.46	ug/L	95
35) bromodichloromethane	15.76	83	419798	20.44	ug/L	99
36) 2-Chloroethyl Vinyl Ether	16.35	63	150704	18.70	ug/L	100

(#) = qualifier out of range (m) = manual integration
 M12957.D V31009CW.M Sat Oct 09 12:13:26 1999

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

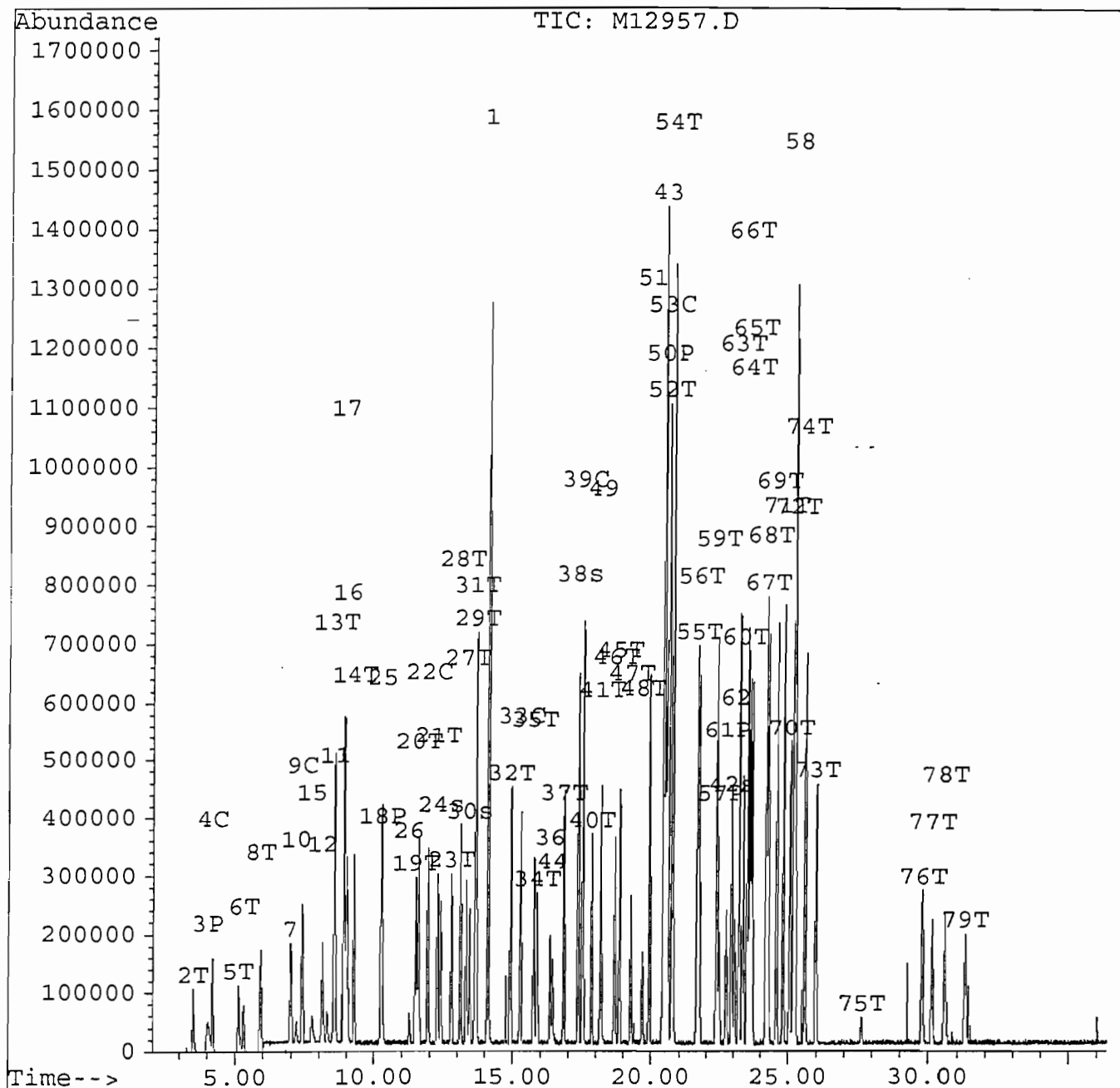
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.84	75	472958	20.92	ug/L	97
39) toluene	17.52	91	1071183	21.16	ug/L	98
40) trans-1,3-dichloropropene	17.84	75	414308	20.01	ug/L	99
41) 1,1,2-trichloroethane	18.18	97	241242	20.38	ug/L	97
44) 4-Methyl-2-Pentanone	16.43	43	231137	17.72	ug/L	94
45) tetrachloroethene	18.85	166	281637	20.64	ug/L	96
46) 1,3-dichloropropane	18.69	76	441536	20.05	ug/L	100
47) dibromochloromethane	19.27	129	302645	20.09	ug/L	99
48) 1,2-dibromoethane	19.69	107	262625	19.72	ug/L	97
49) 2-Hexanone	18.19	43	144926	15.24	ug/L	96
50) chlorobenzene	20.53	112	661535	20.42	ug/L	99
51) 1-Chlorohexane	19.93	91	448846	20.72	ug/L	98
52) 1,1,1,2-tetrachloroethane	20.60	133	244141	20.32	ug/L	99
53) ethylbenzene	20.61	91	1241433	21.13	ug/L	100
54) m&p-xylenes	20.76	106	807790	40.67	ug/L	99
55) o-xylene	21.67	91	936267	20.85	ug/L	99
56) styrene	21.73	104	709639	19.77	ug/L	96
57) bromoform	22.49	173	198227	19.64	ug/L	96
59) isopropylbenzene	22.38	105	1091938	20.61	ug/L	99
60) bromobenzene	23.36	77	487771	20.73	ug/L	99
61) 1,1,2,2-tetrachloroethane	22.73	83	318332	19.77	ug/L	98
62) 1,2,3-trichloropropane	23.03	75	229668	20.14	ug/L	98
63) n-propylbenzene	23.21	120	264986	20.17	ug/L	97
64) 2-chlorotoluene	23.60	126	248658	20.10	ug/L	100
65) 4-chlorotoluene	23.68	126	257125	21.08	ug/L	100
66) 1,3,5-trimethylbenzene	23.51	105	890501	21.26	ug/L	97
67) tert-butylbenzene	24.18	119	778154	20.82	ug/L	96
68) 1,2,4-trimethylbenzene	24.26	105	883992	20.11	ug/L	99
69) sec-butylbenzene	24.57	105	1095541	20.52	ug/L	99
70) 1,3-dichlorobenzene	25.05	146	508510	20.58	ug/L	98
71) 4-isopropyltoluene	24.81	119	958624	20.98	ug/L	99
72) 1,4-dichlorobenzene	25.25	146	520044	20.70	ug/L	98
73) 1,2-dichlorobenzene	25.99	146	480662	19.91	ug/L	98
74) n-butylbenzene	25.59	91	911368	21.22	ug/L	94
75) 1,2-dibromo-3-chloropropan	27.63	75	41362	16.86	ug/L	96
76) 1,2,4-trichlorobenzene	29.79	180	334240	20.34	ug/L	99
77) hexachlorobutadiene	30.13	225	161901	19.47	ug/L	97
78) naphthalene	30.56	128	709742	21.64	ug/L	99
79) 1,2,3-trichlorobenzene	31.29	180	284363	19.91	ug/L m	96

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



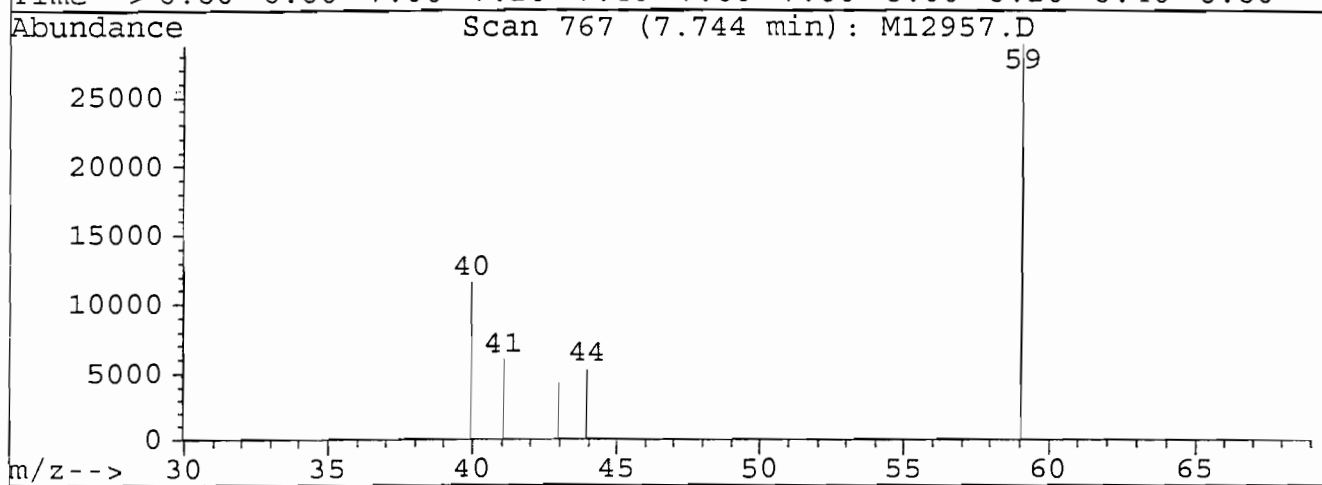
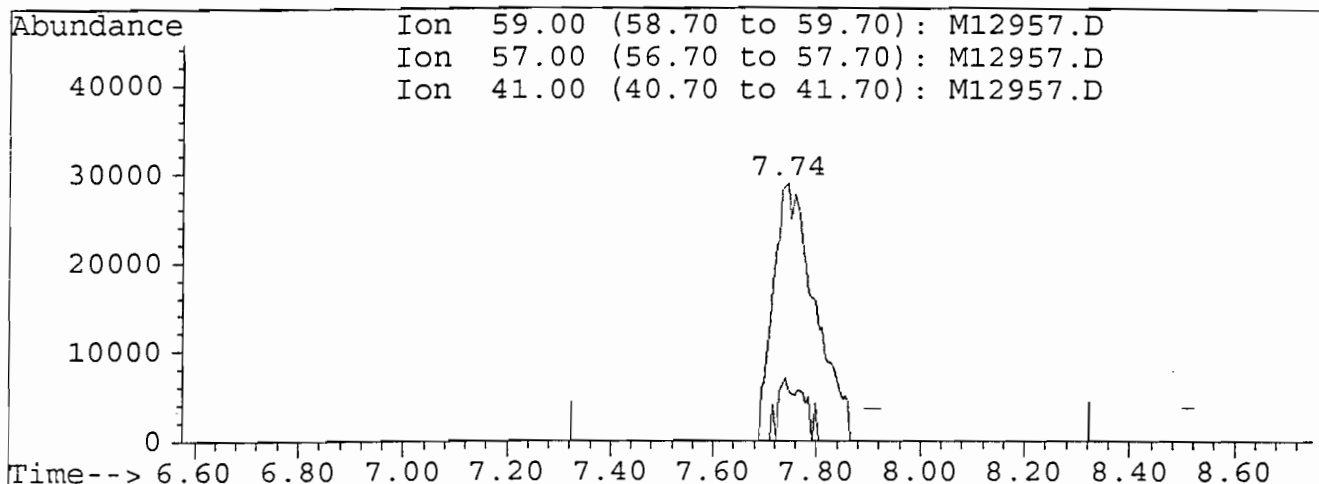
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12957.D

(15) TBA

7.74min 181.23ug/L m

response 160061

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	0.00
41.00	20.60	20.39
0.00	0.00	0.00

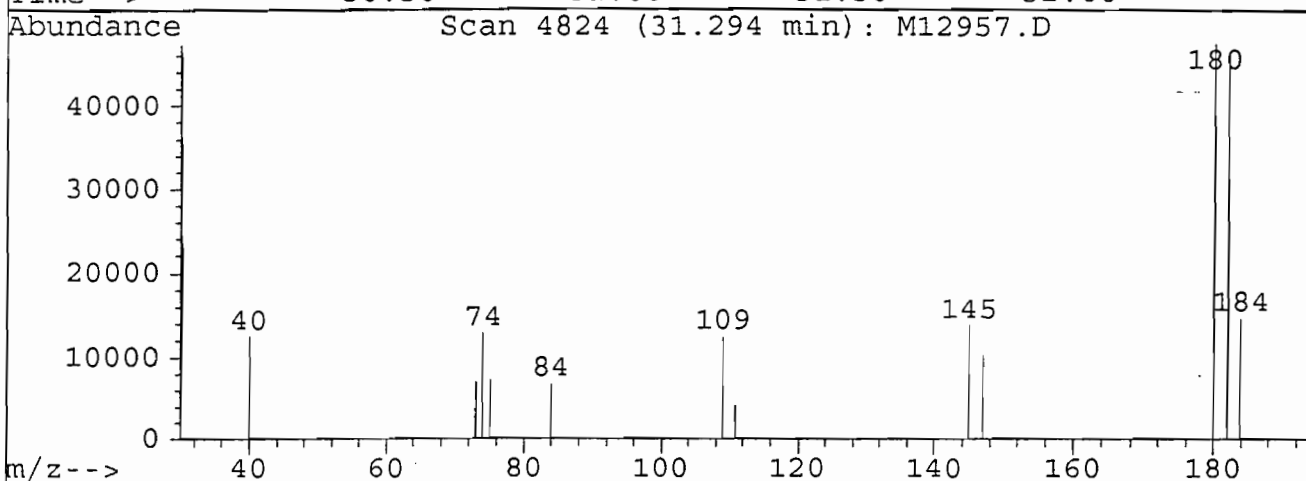
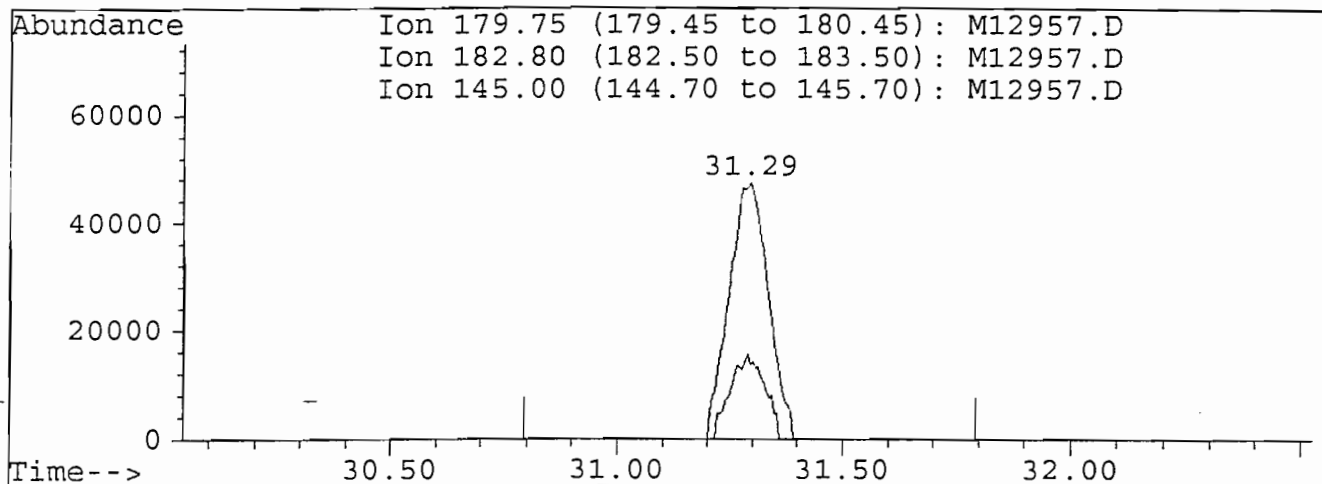
000415

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12957.D

(79) 1,2,3-trichlorobenzene (T)

31.29min 19.91ug/L m

response 284363

Ion	Exp%	Act%
179.75	100	100
182.80	5.60	0.00
145.00	29.90	28.73
0.00	0.00	0.00

000416

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.10	96	2241534	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.44	117	1811208	50.00	ug/L	-0.01
58) 1,4-dichlorobenzene-d4	25.17	152	843471	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.39	113	59639	4.06	ug/L	8.12%
30) 1,2-Dichlorethane-d4	13.44	65	67795	4.20	ug/L	8.39%
38) Toluene-d8	17.35	98	200644	4.38	ug/L	8.76%
42) 4-Bromofluorobenzene	22.92	95	85615	4.43	ug/L	8.85%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.48	85	55470	4.32	ug/L	100
3) chloromethane	3.99	50	76558	4.19	ug/L	99
4) vinyl chloride	4.16	62	66556	4.91	ug/L	96
5) bromomethane	5.10	94	53184	4.99	ug/L	98
6) chloroethane	5.29	64	44100	4.48	ug/L	100
7) Acrolein	6.97	56	86310	48.34	ug/L	98
8) trichlorofluoromethane	5.90	101	102053	5.08	ug/L	96
9) 1,1-dichloroethene	7.39	61	88177	4.77	ug/L	93
10) Acetone	7.17	43	62266	9.71	ug/L m	55
11) Carbon Disulfide	8.54	76	209004	4.96	ug/L	89
12) Iodo Methane	8.10	142	96062	4.31	ug/L m	88
13) methylene chloride	8.57	84	60738	4.50	ug/L	88
14) trans-1,2-dichloroethene	9.26	61	89680	4.89	ug/L	94
15) TBA	7.73	59	30714	33.20	ug/L m	61
16) MTBE	9.00	73	174819	4.79	ug/L	95
17) Acrylonitrile	8.90	53	220106	48.04	ug/L	98
18) 1,1-dichloroethane	10.25	63	119416	4.84	ug/L	97
19) 2,2-dichloropropane	11.49	77	99409	4.92	ug/L	98
20) cis-1,2-dichloroethene	11.59	61	97607	4.76	ug/L	92
21) bromochloromethane	12.27	49	63932	4.62	ug/L	94
22) chloroform	11.93	83	124916	4.86	ug/L	99
23) 1,1,1-trichloroethane	12.78	97	97653	4.60	ug/L	98
25) Vinyl Acetate	10.29	43	211736	4.87	ug/L	89
26) 2-Butanone	11.25	43	49291	5.92	ug/L m	59
27) carbon tetrachloride	13.31	117	85159	4.72	ug/L	87
28) 1,1-dichloropropene	13.11	75	87398	4.82	ug/L	96
29) benzene	13.67	78	253606	5.10	ug/L	97
31) 1,2-dichloroethane	13.63	62	97350	4.75	ug/L	98
32) trichloroethene	14.93	130	68375	4.62	ug/L	89
33) 1,2-dichloropropane	15.28	63	65161	4.57	ug/L	96
34) dibromomethane	15.88	174	42921	4.10	ug/L	90
35) bromodichloromethane	15.76	83	102884	4.78	ug/L	96
36) 2-Chloroethyl Vinyl Ether	16.35	63	34088	4.04	ug/L	97

(#) = qualifier out of range (m) = manual integration
 M12959.D V31009CW.M Sat Oct 09 13:22:16 1999

VOA3

Page 1

000417

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.84	75	114206	4.82	ug/L	96
39) toluene	17.52	91	289385	5.46	ug/L	95
40) trans-1,3-dichloropropene	17.85	75	102212	4.71	ug/L	97
41) 1,1,2-trichloroethane	18.17	97	58048	4.68	ug/L	94
44) 4-Methyl-2-Pentanone	16.44	43	54831	4.15	ug/L m	61
45) tetrachloroethene	18.84	166	71806	5.20	ug/L	94
46) 1,3-dichloropropane	18.68	76	115548	5.18	ug/L	92
47) dibromochloromethane	19.26	129	74373	4.88	ug/L	97
48) 1,2-dibromoethane	19.68	107	64305	4.77	ug/L	96
49) 2-Hexanone	18.21	43	25237	2.62	ug/L m	45
50) chlorobenzene	20.52	112	176188	5.37	ug/L	98
51) 1-Chlorohexane	19.93	91	111515	5.08	ug/L	98
52) 1,1,1,2-tetrachloroethane	20.59	133	58804	4.83	ug/L	97
53) ethylbenzene	20.60	91	316414	5.32	ug/L	95
54) m&p-xylenes	20.75	106	217536	10.82	ug/L	98
55) o-xylene	21.65	91	247787	5.45	ug/L	92
56) styrene	21.72	104	185541	5.11	ug/L	93
57) bromoform	22.47	173	48192	4.72	ug/L	97
59) isopropylbenzene	22.38	105	284543	4.99	ug/L	96
60) bromobenzene	23.34	77	129373	5.11	ug/L	95
61) 1,1,2,2-tetrachloroethane	22.73	83	84294	4.86	ug/L	96
62) 1,2,3-trichloropropane	23.03	75	60350	4.92	ug/L	97
63) n-propylbenzene	23.20	120	66990	4.74	ug/L	92
64) 2-chlorotoluene	23.59	126	66757	5.01	ug/L	94
65) 4-chlorotoluene	23.67	126	65304	4.97	ug/L	90
66) 1,3,5-trimethylbenzene	23.50	105	241336	5.35	ug/L	95
67) tert-butylbenzene	24.17	119	233576	5.81	ug/L	97
68) 1,2,4-trimethylbenzene	24.25	105	239071	5.05	ug/L	97
69) sec-butylbenzene	24.56	105	296131	5.15	ug/L	99
70) 1,3-dichlorobenzene	25.04	146	131818	4.96	ug/L	98
71) 4-isopropyltoluene	24.79	119	271802	5.53	ug/L	98
72) 1,4-dichlorobenzene	25.23	146	137701	5.09	ug/L	93
73) 1,2-dichlorobenzene	25.99	146	125352	4.82	ug/L	97
74) n-butylbenzene	25.57	91	250330	5.42	ug/L	95
75) 1,2-dibromo-3-chloropropan	27.63	75	14719	5.57	ug/L	99
76) 1,2,4-trichlorobenzene	29.76	180	80771	4.57	ug/L	97
77) hexachlorobutadiene	30.11	225	39426	4.41	ug/L	96
78) naphthalene	30.54	128	173141	4.91	ug/L m	71
79) 1,2,3-trichlorobenzene	31.25	180	72238	4.70	ug/L m	51

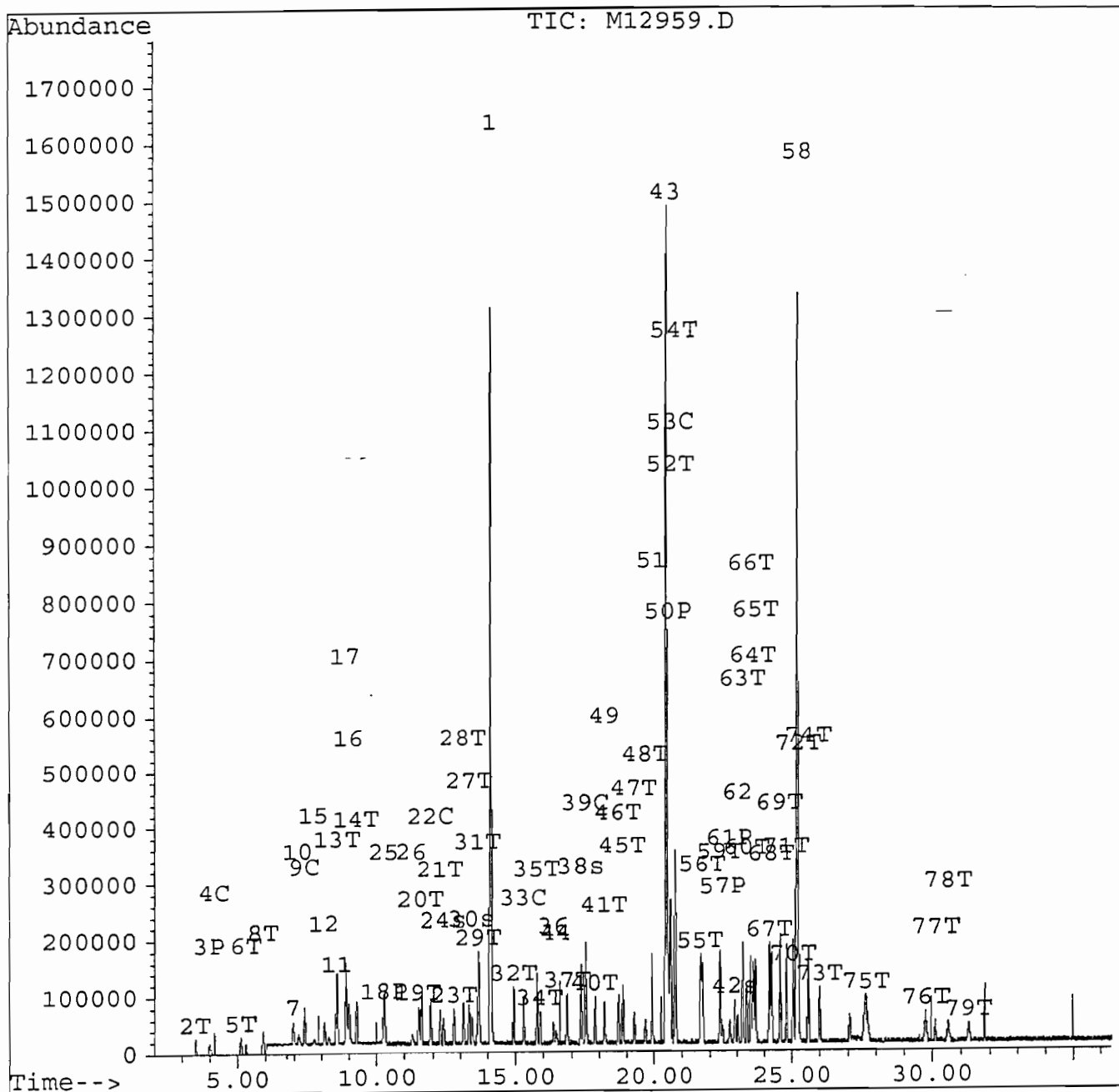
000418

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



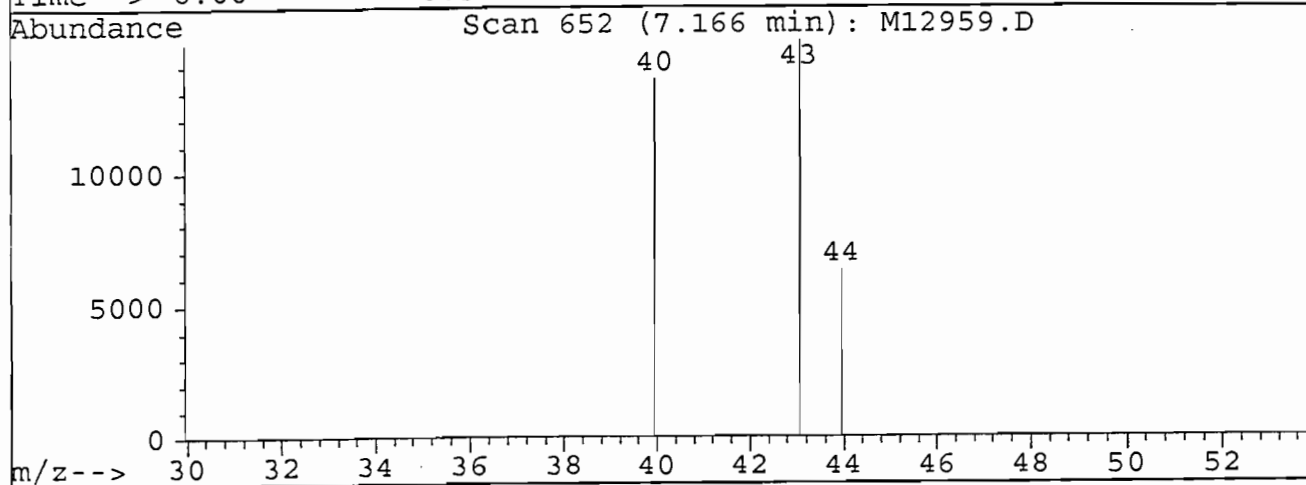
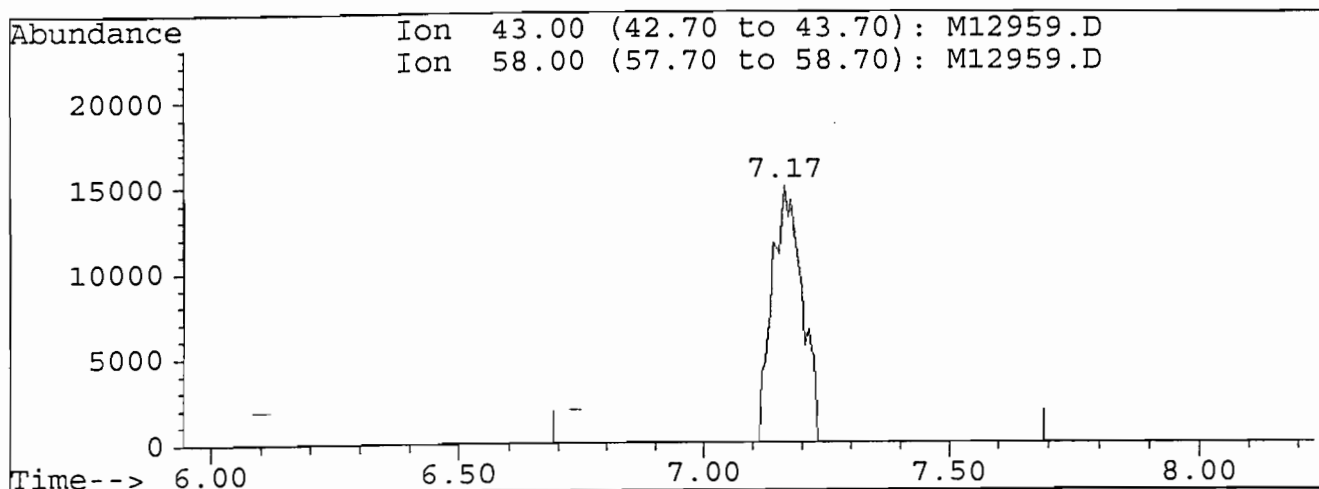
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:19 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(10) Acetone

7.17min 9.71ug/L m

response 62266

Ion	Exp%	Act%
43.00	100	100
58.00	21.20	0.00
0.00	0.00	0.00
0.00	0.00	0.00

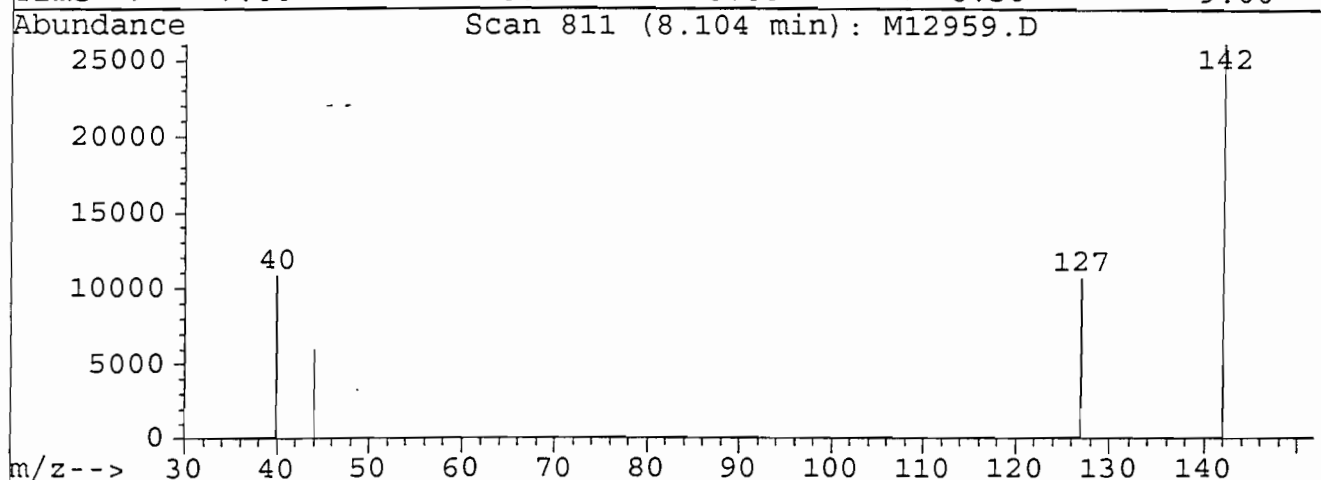
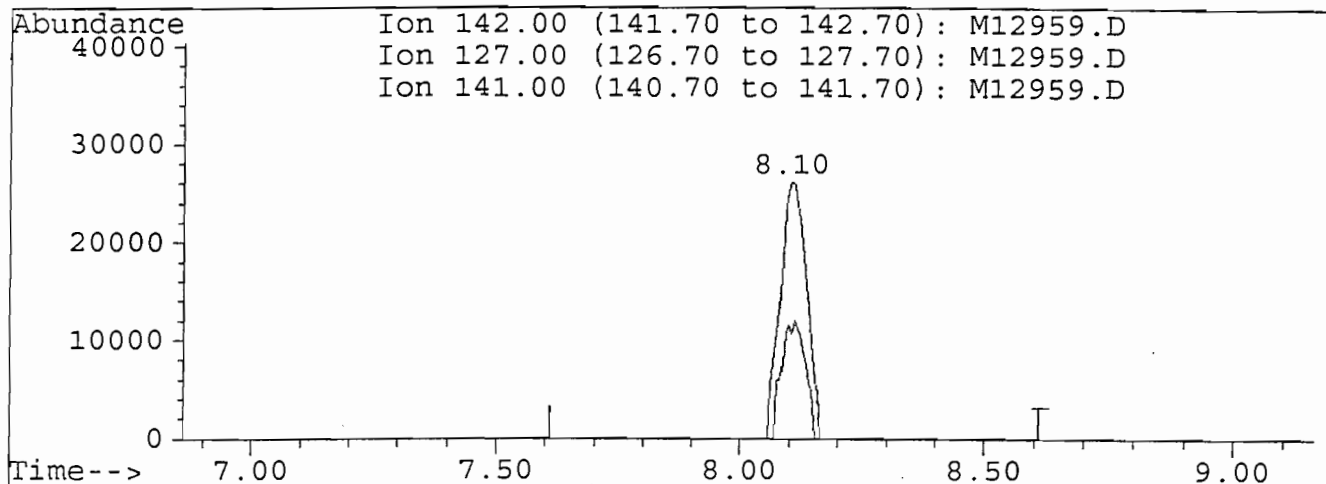
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:19 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(12) Iodo Methane

8.10min 4.31ug/L m

response 96062

Ion	Exp%	Act%
142.00	100	100
127.00	45.70	40.84
141.00	13.20	0.00
0.00	0.00	0.00

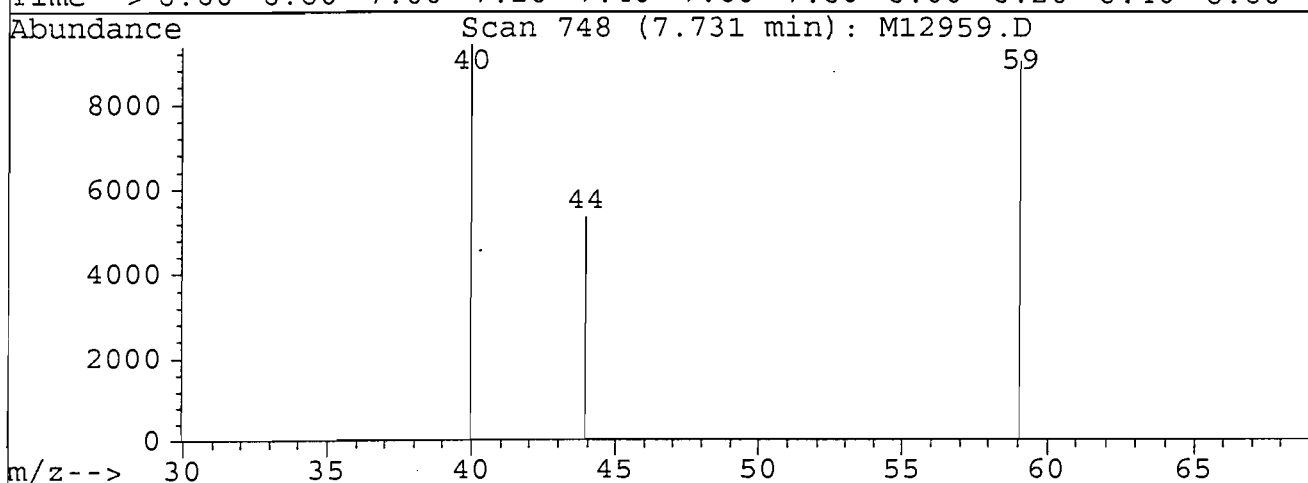
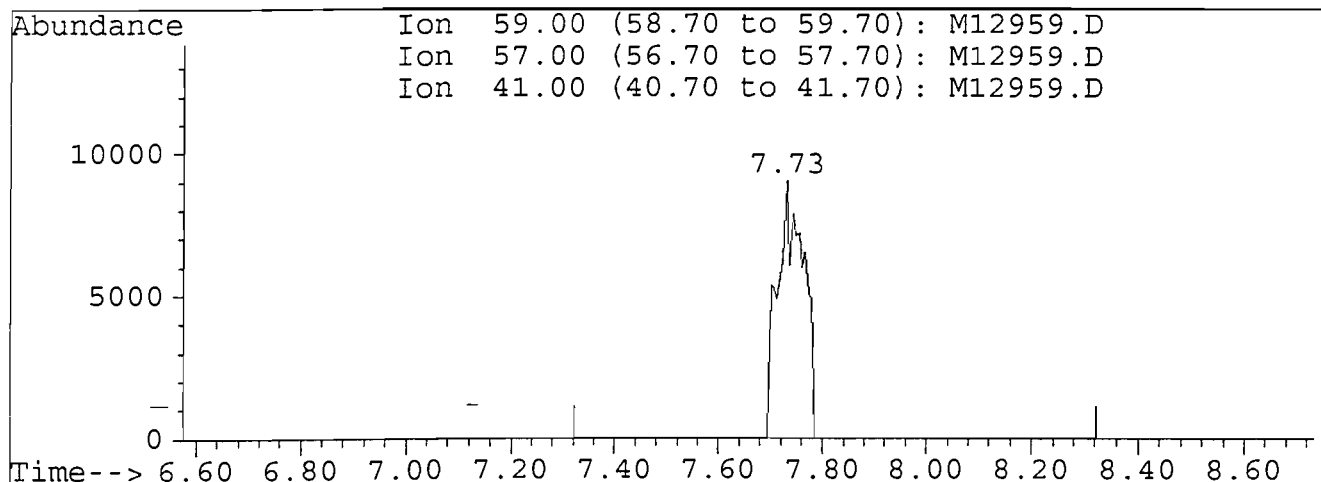
000421

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:19 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(15) TBA
 7.73min 33.20ug/L m
 response 30714

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	0.00
41.00	20.60	0.00
0.00	0.00	0.00

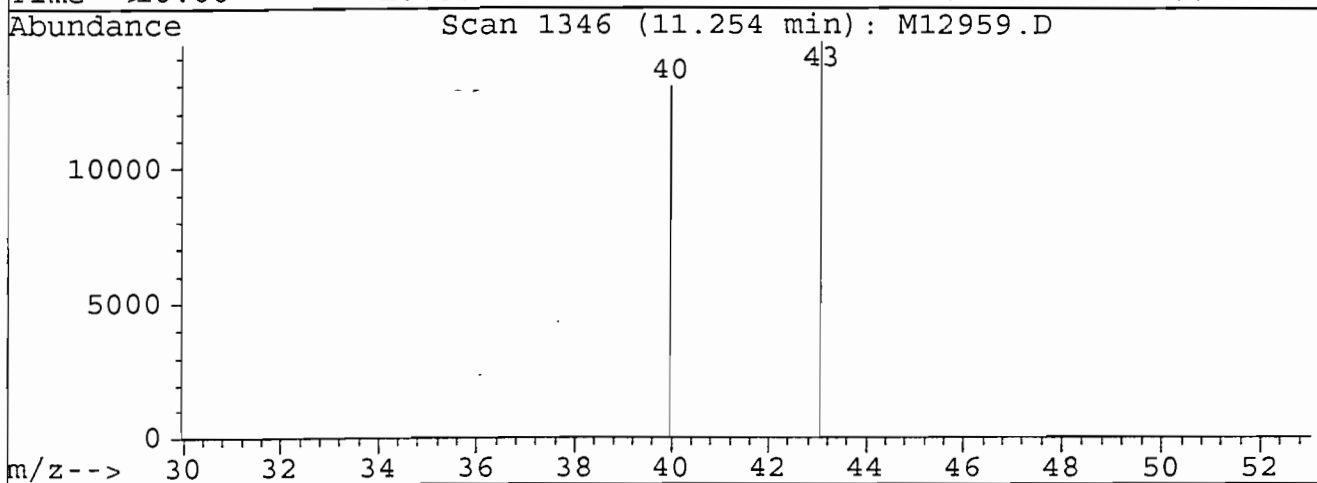
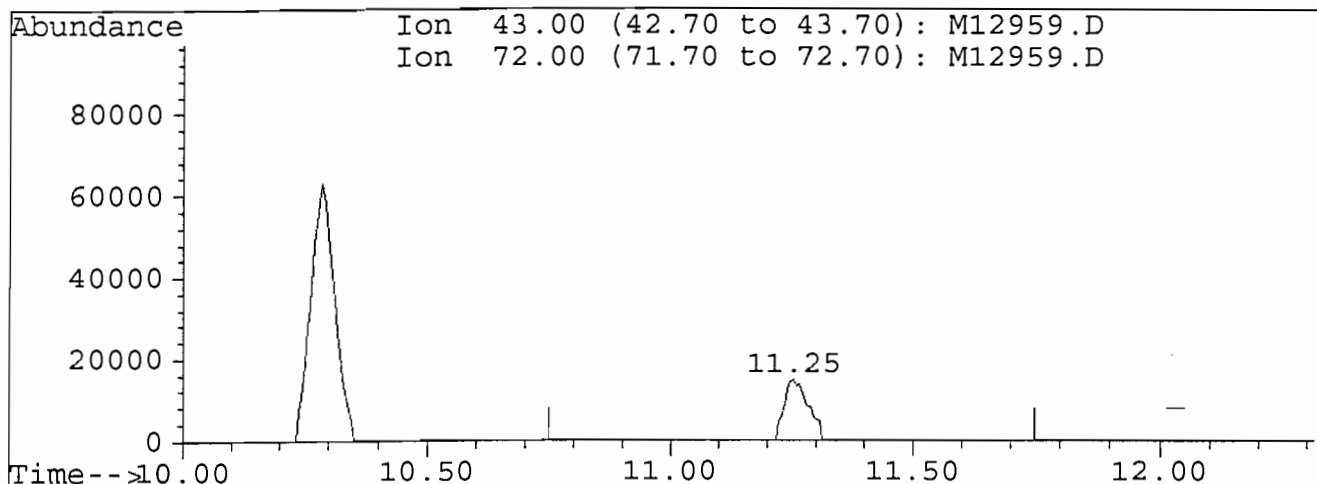
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:20 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(26) 2-Butanone
 11.25min 5.92ug/L m
 response 49291

Ion	Exp%	Act%
43.00	100	100
72.00	18.30	0.00
0.00	0.00	0.00
0.00	0.00	0.00

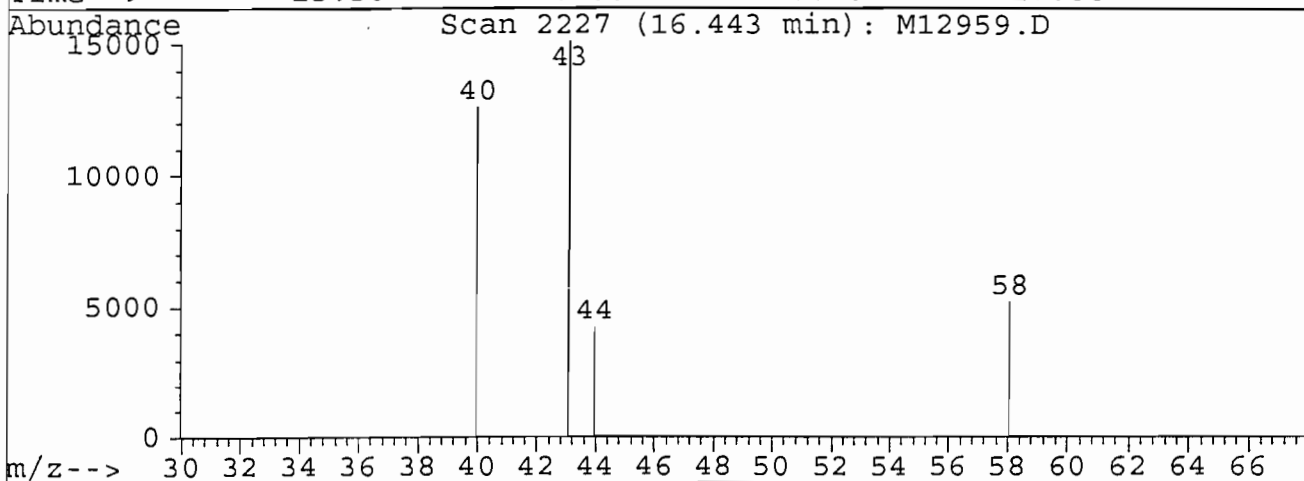
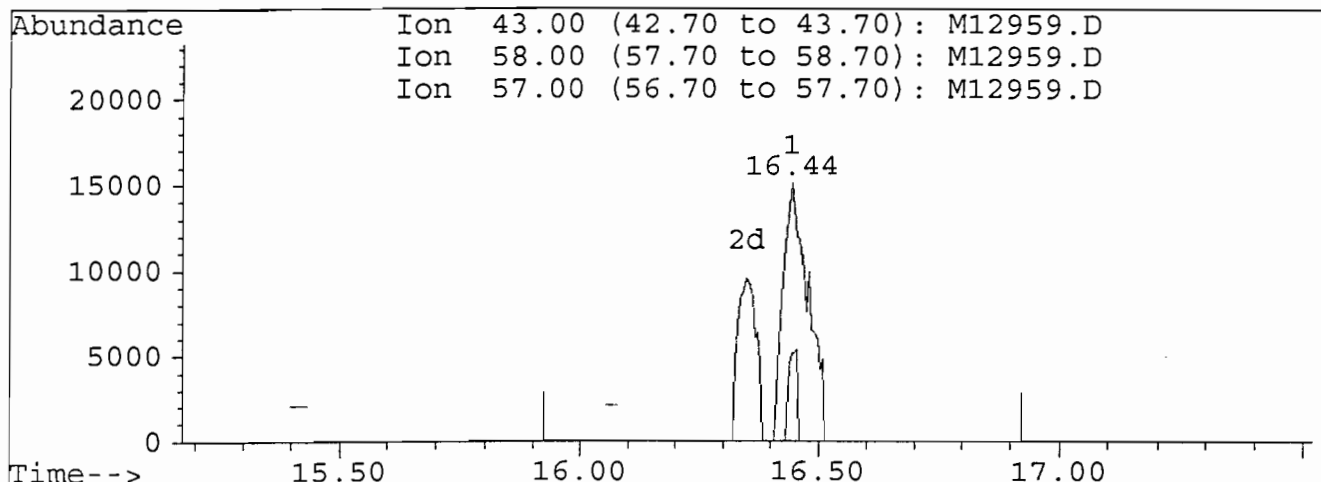
000423

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:20 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(44) 4-Methyl-2-Pentanone

16.44min 4.15ug/L m

response 54831

Ion	Exp%	Act%
43.00	100	100
58.00	33.60	34.24
57.00	20.60	0.00
0.00	0.00	0.00

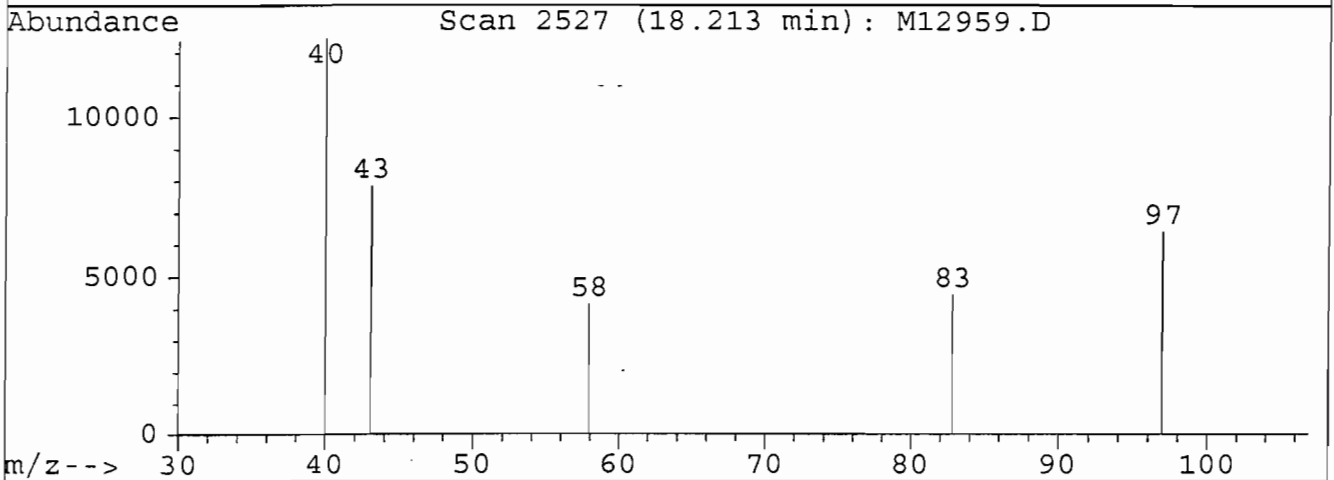
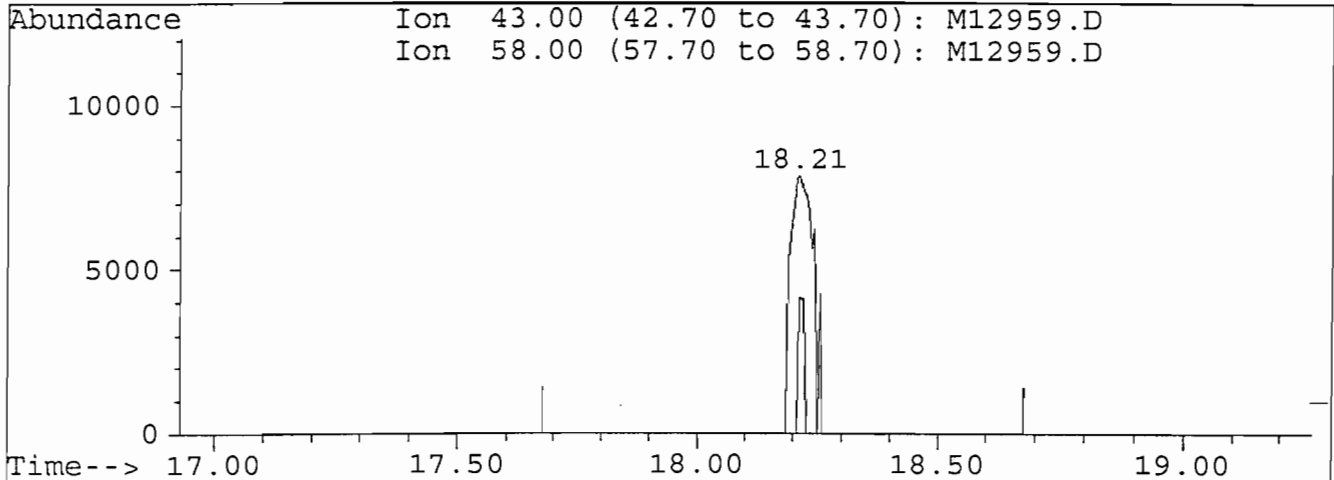
000424

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(49) 2-Hexanone
 18.21min 2.62ug/L m
 response 25237

Ion	Exp%	Act%
43.00	100	100
58.00	48.80	52.65
0.00	0.00	0.00
0.00	0.00	0.00

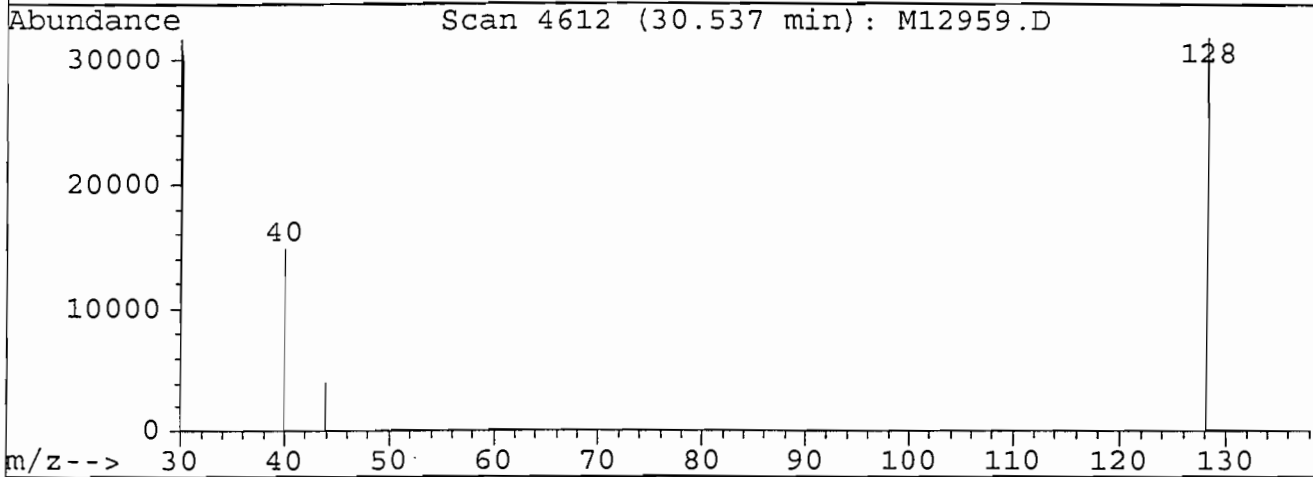
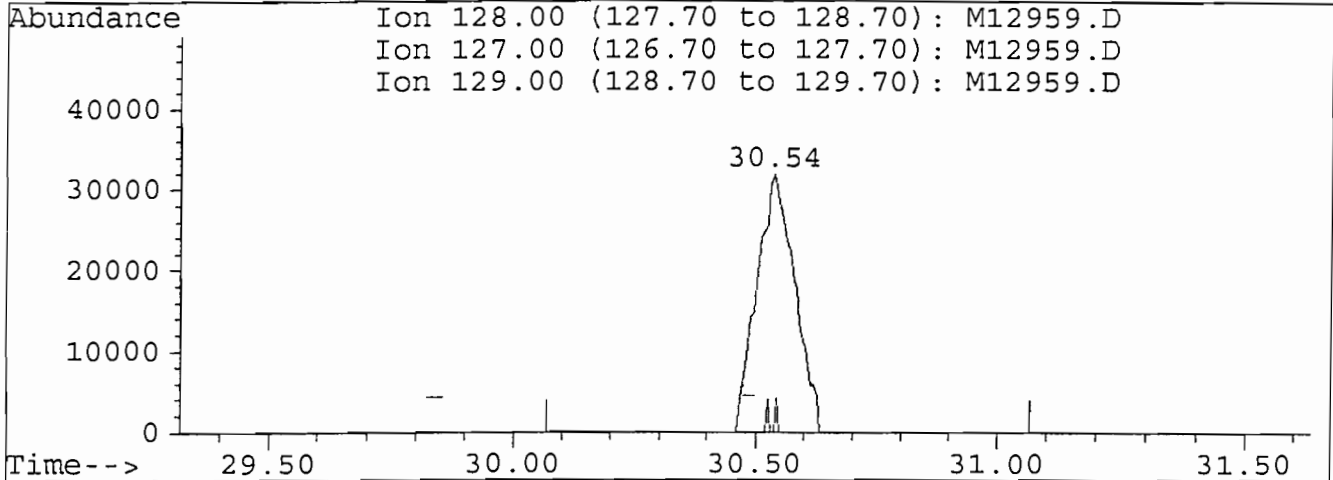
000425

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
Acq Time : 9 Oct 99 12:35 pm
Sample : 5 PPB ICC
Misc : 5MLS
Quant Time: Oct 9 13:21 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 11:41:15 1999
Response via : Single Level Calibration



TIC: M12959.D

(78) naphthalene (T)

30.54min 4.91ug/L m

response 173141

Ion	Exp%	Act%
128.00	100	100
127.00	12.30	0.00
129.00	10.00	0.00
0.00	0.00	0.00

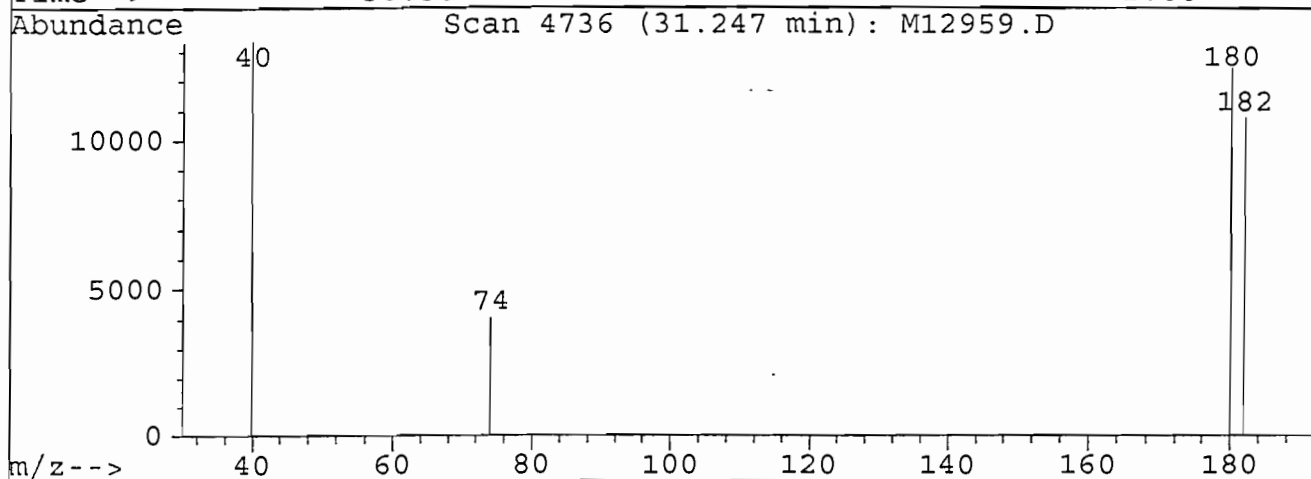
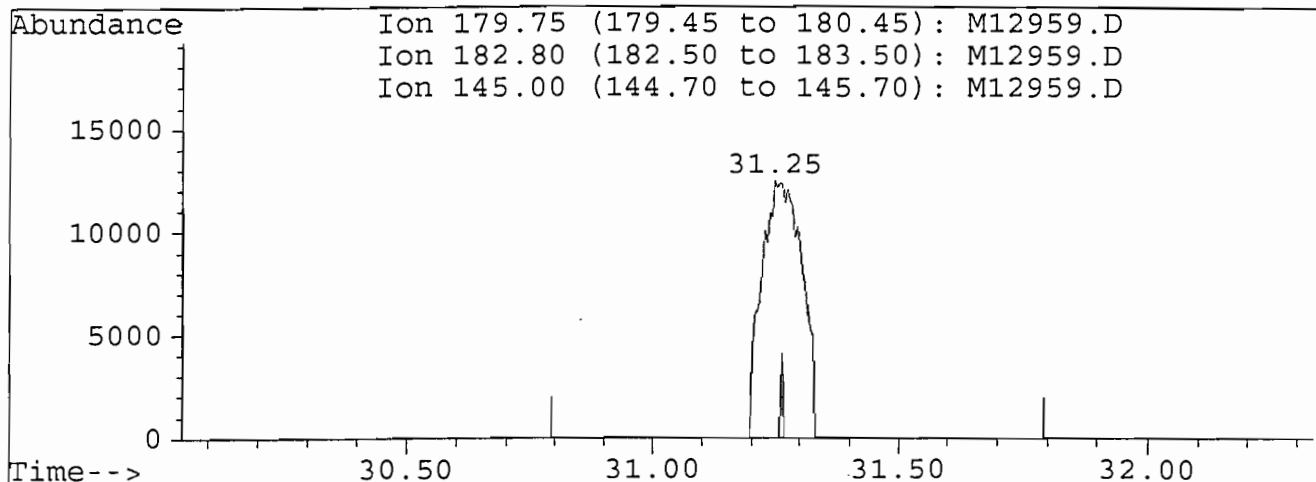
000426

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(79) 1,2,3-trichlorobenzene (T)

31.25min 4.70ug/L m

response 72238

Ion	Exp%	Act%
179.75	100	100
182.80	5.60	0.00
145.00	29.90	0.00
0.00	0.00	0.00

000427

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Time: 0848

Init. Calib. Date(s): '10/9/99 '10/9/99

Init. Calib. Times: 0832 1235

ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Benzene	1.100	1.237		-12.5	
Toluene	1.204	1.325		-10.0	20.0
Ethylbenzene	1.598	1.730		-8.3	20.0
m&p-xylenes	0.543	0.594		-9.4	
o-xylene	1.256	1.406		-11.9	
isopropylbenzene	3.387	3.585		-5.8	
n-Propylbenzene	0.825	0.868		-5.2	
1,3,5-Trimethylbenzene	2.728	2.826		-3.6	
tert-Butylbenzene	2.506	2.694		-7.5	
1,2,4-Trimethylbenzene	2.733	2.838		-3.8	
sec-Butylbenzene	3.368	3.605		-7.0	
n-Butylbenzene	2.813	2.900		-3.1	
Naphthalene	2.091	2.022		3.3	
MTBE	0.810	0.921		-13.7	
TBA	0.019	0.024		-26.3	
Dibromofluoromethane	0.311	0.339		-9.0	
1,2-Dichlorethane-d4	0.351	0.362		-3.1	
Toluene-d8	0.974	1.055		-8.3	
4-Bromofluorobenzene	0.412	0.453		-10.0	

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13333.D
 Acq Time : 25 Oct 99 8:48 am
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 25 9:26 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.12	96	2219784	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.46	117	1955812	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	924790	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.41	113	752754	54.52	ug/L	109.04%
30) 1,2-Dichlorethane-d4	13.45	65	803583	51.64	ug/L	103.28%
38) Toluene-d8	17.37	98	2341632	54.15	ug/L	108.30%
42) 4-Bromofluorobenzene	22.93	95	1004554	54.94	ug/L	109.89%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.53	85	688448	54.26	ug/L	96
3) chloromethane	4.05	50	989486	55.31	ug/L	99
4) vinyl chloride	4.21	62	755072	55.42	ug/L	97
5) bromomethane	5.12	94	473277	61.34	ug/L	93
6) chloroethane	5.30	64	485486	68.06	ug/L	96
7) Acrolein	7.02	56	907666	516.32	ug/L	100
8) trichlorofluoromethane	5.92	101	1031651	52.75	ug/L	99
9) 1,1-dichloroethene	7.42	61	1082239	59.05	ug/L	99
10) Acetone	7.23	43	333177	42.46	ug/L	96
11) Carbon Disulfide	8.57	76	2348505	55.66	ug/L	99
12) Iodo Methane	8.14	142	1271265	58.20	ug/L	100
13) methylene chloride	8.60	84	783932	58.49	ug/L	95
14) trans-1,2-dichloroethene	9.29	61	1076951	57.92	ug/L	100
15) TBA	7.83	59	530300	618.63	ug/L m	61
16) MTBE	9.02	73	2044470	56.88	ug/L	99
17) Acrylonitrile	8.93	53	2561893	568.22	ug/L	100
18) 1,1-dichloroethane	10.26	63	1386846	55.70	ug/L	98
19) 2,2-dichloropropane	11.50	77	1174223	57.39	ug/L	99
20) cis-1,2-dichloroethene	11.61	61	1188621	58.37	ug/L	98
21) bromochloromethane	12.29	49	777653	56.81	ug/L	96
22) chloroform	11.95	83	1503480	58.11	ug/L	99
23) 1,1,1-trichloroethane	12.80	97	1202164	57.50	ug/L	97
25) Vinyl Acetate	10.31	43	2231947	51.10	ug/L	99
26) 2-Butanone	11.27	43	425041	50.17	ug/L	100
27) carbon tetrachloride	13.33	117	1026784	57.04	ug/L	95
28) 1,1-dichloropropene	13.12	75	1055988	58.59	ug/L	98
29) benzene	13.68	78	2746112	56.24	ug/L	100
31) 1,2-dichloroethane	13.64	62	1135843	56.57	ug/L	99
32) trichloroethene	14.94	130	839935	57.16	ug/L	96
33) 1,2-dichloropropane	15.29	63	809441	57.83	ug/L	98
34) dibromomethane	15.89	174	601945	60.55	ug/L	99
35) bromodichloromethane	15.77	83	1229096	57.69	ug/L	97
36) 2-Chloroethyl Vinyl Ether	16.36	63	488749	60.31	ug/L	98

(#) = qualifier out of range (m) = manual integration
 M13333.D V31009CW.M Mon Oct 25 09:26:34 1999

000429

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13333.D
 Acq Time : 25 Oct 99 8:48 am
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 25 9:26 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.85	75	1326209	56.01	ug/L	98
39) toluene	17.52	91	2941471	55.04	ug/L	97
40) trans-1,3-dichloropropene	17.85	75	1297902	60.66	ug/L	98
41) 1,1,2-trichloroethane	18.19	97	710355	58.26	ug/L	99
44) 4-Methyl-2-Pentanone	16.43	43	736416	57.38	ug/L	99
45) tetrachloroethene	18.86	166	813671	54.00	ug/L	99
46) 1,3-dichloropropane	18.69	76	1300057	54.34	ug/L	100
47) dibromochloromethane	19.27	129	912925	55.55	ug/L	98
48) 1,2-dibromoethane	19.68	107	801993	56.41	ug/L	98
49) 2-Hexanone	18.18	43	510041	56.29	ug/L	97
50) chlorobenzene	20.53	112	1973589	55.20	ug/L	97
51) 1-Chlorohexane	19.94	91	1333606	57.04	ug/L	98
52) 1,1,1,2-tetrachloroethane	20.60	133	712982	55.89	ug/L	98
53) ethylbenzene	20.61	91	3383790	54.13	ug/L	100
54) m&p-xylenes	20.77	106	2325246	109.51	ug/L	99
55) o-xylene	21.68	91	2750672	56.00	ug/L	99
56) styrene	21.74	104	2090451	55.05	ug/L	98
57) bromoform	22.49	173	609471	57.03	ug/L	98
59) isopropylbenzene	22.39	105	3315449	52.92	ug/L	98
60) bromobenzene	23.36	77	1370249	49.54	ug/L	97
61) 1,1,2,2-tetrachloroethane	22.74	83	940462	51.10	ug/L	96
62) 1,2,3-trichloropropane	23.04	75	680537	51.57	ug/L	98
63) n-propylbenzene	23.22	120	802393	52.89	ug/L	95
64) 2-chlorotoluene	23.61	126	752739	53.69	ug/L	96
65) 4-chlorotoluene	23.68	126	725012	49.82	ug/L	99
66) 1,3,5-trimethylbenzene	23.52	105	2613294	51.80	ug/L	98
67) tert-butylbenzene	24.19	119	2491725	53.76	ug/L	99
68) 1,2,4-trimethylbenzene	24.26	105	2624560	54.23	ug/L	99
69) sec-butylbenzene	24.57	105	3333766	53.51	ug/L	98
70) 1,3-dichlorobenzene	25.05	146	1472780	51.68	ug/L	100
71) 4-isopropyltoluene	24.81	119	2817714	50.98	ug/L	98
72) 1,4-dichlorobenzene	25.25	146	1528205	51.69	ug/L	99
73) 1,2-dichlorobenzene	26.00	146	1414425	51.61	ug/L	99
74) n-butylbenzene	25.59	91	2681889	51.55	ug/L	96
75) 1,2-dibromo-3-chloropropan	27.62	75	135213	46.43	ug/L	96
76) 1,2,4-trichlorobenzene	29.79	180	990767	50.28	ug/L	98
77) hexachlorobutadiene	30.14	225	534606	55.27	ug/L	98
78) naphthalene	30.57	128	1869514	48.34	ug/L	99
79) 1,2,3-trichlorobenzene	31.29	180	824479	49.04	ug/L	100

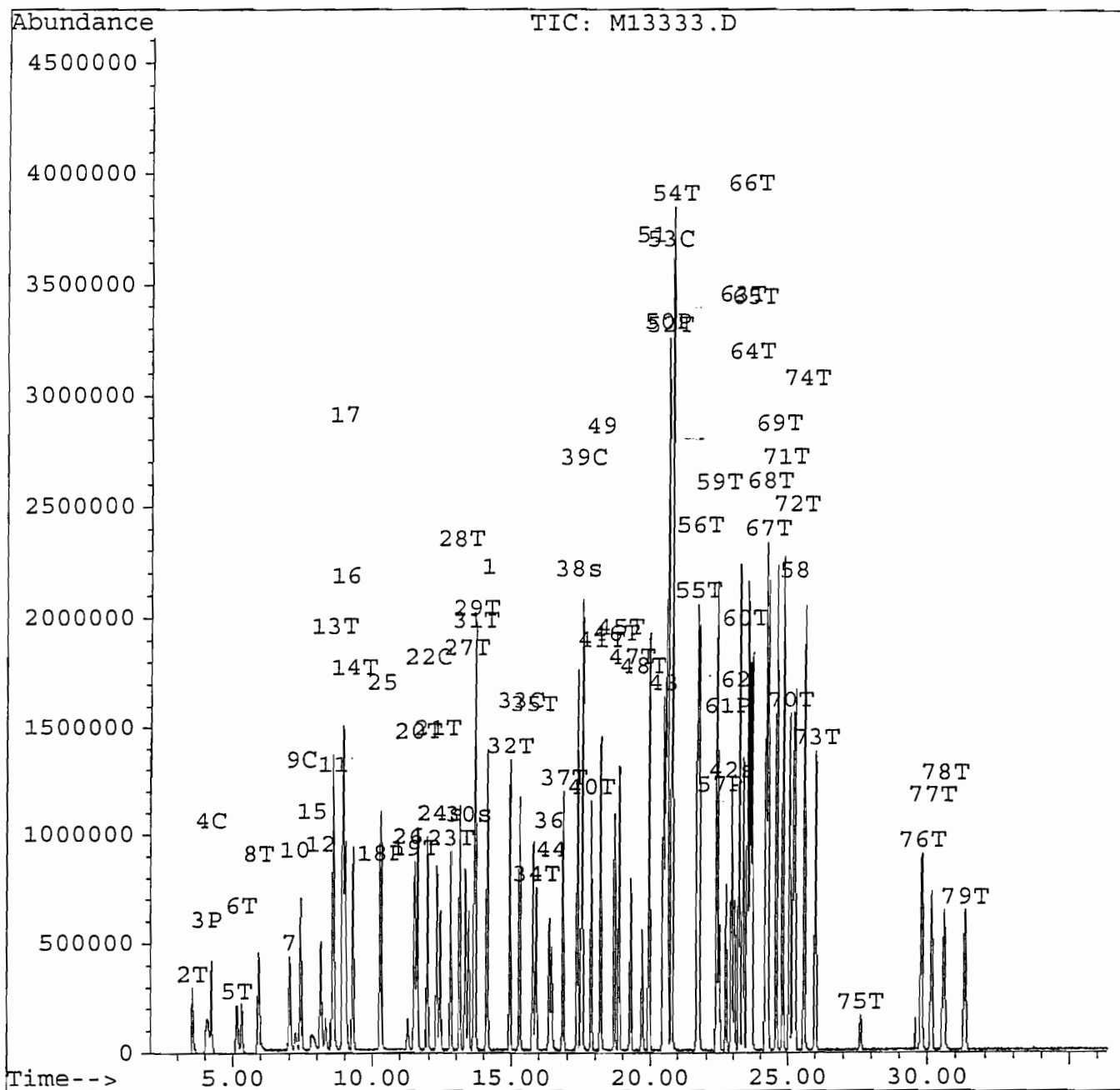
000430

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13333.D
 Acq Time : 25 Oct 99 8:48 am
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 25 9:26 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration



000431

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13333.D
 Acq Time : 25 Oct 99 8:48 am
 Sample : 50 PPB CCC
 Misc : 5MLS

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev (Min)
1	Fluorobenzene	1.000	1.000	0.0	110	0.02
2 T	dichlorodifluoromethane	0.286	0.310	-8.5	119	0.03
3 P	chloromethane	0.403	0.446	-10.6	120	0.02
4 C	vinyl chloride	0.307	0.340	-10.8#	124	0.03
5 T	bromomethane	0.208	0.213	-2.5	99	0.03
6 T	chloroethane	0.185	0.219	-18.1	110	0.03
7	Acrolein	0.040	0.041	-3.3	113	0.04
8 T	trichlorofluoromethane	0.441	0.465	-5.5	114	0.04
9 C	1,1-dichloroethene	0.413	0.488	-18.1#	130	0.03
10	Acetone	-0.177	0.150	15.1	115	0.03
11	Carbon Disulfide	0.950	1.058	-11.3	124	0.02
12	Iodo Methane	0.492	0.573	-16.4	127	0.03
13 T	methylene chloride	0.302	0.353	-17.0	129	0.03
14 T	trans-1,2-dichloroethene	0.419	0.485	-15.8	131	0.02
15	TBA	0.019	0.024	-23.7#	127	0.00
16	MTBE	0.810	0.921	-13.8	124	0.02
17	Acrylonitrile	0.102	0.115	-13.6	124	0.03
18 P	1,1-dichloroethane	0.561	0.625	-11.4	125	0.01
19 T	2,2-dichloropropane	0.461	0.529	-14.8	129	0.00
20 T	cis-1,2-dichloroethene	0.459	0.535	-16.7	129	0.02
21 T	bromochloromethane	0.308	0.350	-13.6	125	0.01
22 C	chloroform	0.583	0.677	-16.2#	130	0.01
23 T	1,1,1-trichloroethane	0.471	0.542	-15.0	126	0.02
24 S	Dibromofluoromethane	0.311	0.339	-9.0	114	0.02
25	Vinyl Acetate	0.984	1.005	-2.2	114	0.03
26	2-Butanone	0.191	0.191	-0.3	113	0.02
27 T	carbon tetrachloride	0.405	0.463	-14.1	126	0.01
28 T	1,1-dichloropropene	0.406	0.476	-17.2	129	0.02
29 T	benzene	1.100	1.237	-12.5	123	0.01
30 S	1,2-Dichlorethane-d4	0.351	0.362	-3.3	110	0.01
31 T	1,2-dichloroethane	0.452	0.512	-13.1	123	0.01
32 T	trichloroethene	0.331	0.378	-14.3	126	0.01
33 C	1,2-dichloropropane	0.315	0.365	-15.7#	126	0.00
34 T	dibromomethane	0.224	0.271	-21.1#	128	0.00
35 T	bromodichloromethane	0.480	0.554	-15.4	127	0.00
36	2-Chloroethyl Vinyl Ether	0.183	0.220	-20.6#	129	0.00
37 T	cis-1,3-dichloropropene	0.533	0.597	-12.0	124	0.00
38 S	Toluene-d8	0.974	1.055	-8.3	114	0.01
39 C	toluene	1.204	1.325	-10.1#	123	0.00
40 T	trans-1,3-dichloropropene	0.482	0.585	-21.3#	133	0.00
41 T	1,1,2-trichloroethane	0.275	0.320	-16.5	127	0.00
42 S	4-Bromofluorobenzene	0.412	0.453	-9.9	115	0.00

(#) = Out of Range

M13333.D V31009CW.M

Mon Oct 25 09:26:55 1999

VOA3

000432

Page 1

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13333.D
 Acq Time : 25 Oct 99 8:48 am
 Sample : 50 PPB CCC
 Misc : 5MLS

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00
44	4-Methyl-2-Pentanone	0.328	0.377	-14.8	120	0.00
45 T	tetrachloroethene	0.385	0.416	-8.0	127	0.00
46 T	1,3-dichloropropane	0.612	0.665	-8.7	126	0.00
47 T	dibromochloromethane	0.420	0.467	-11.1	129	0.01
48 T	1,2-dibromoethane	0.363	0.410	-12.8	128	0.00
49	2-Hexanone	0.232	0.261	-12.6	114	0.00
50 P	chlorobenzene	0.914	1.009	-10.4	130	0.00
51	1-Chlorohexane	0.598	0.682	-14.1	131	0.00
52 T	1,1,1,2-tetrachloroethane -	0.326	0.365	-11.8	126	0.01
53 C	ethylbenzene	1.598	1.730	-8.3#	123	0.00
54 T	m&p-xylenes	0.543	0.594	-9.5	125	0.00
55 T	o-xylene	1.256	1.406	-12.0	130	0.00
56 T	styrene	0.971	1.069	-10.1	124	0.00
57 P	bromoform	0.273	0.312	-14.1	129	0.00
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	126	0.00
59 T	isopropylbenzene	3.387	3.585	-5.8	133	0.00
60 T	bromobenzene	1.495	1.482	0.9	124	0.00
61 P	1,1,2,2-tetrachloroethane	0.995	1.017	-2.2	124	0.00
62	1,2,3-trichloropropane	0.713	0.736	-3.1	127	0.00
63 T	n-propylbenzene	0.825	0.868	-5.2	130	0.01
64 T	2-chlorotoluene	0.758	0.814	-7.4	129	0.00
65 T	4-chlorotoluene	0.787	0.784	0.4	126	0.00
66 T	1,3,5-trimethylbenzene	2.728	2.826	-3.6	133	0.00
67 T	tert-butylbenzene	2.506	2.694	-7.5	142	0.00
68 T	1,2,4-trimethylbenzene	2.733	2.838	-3.8	127	0.00
69 T	sec-butylbenzene	3.368	3.605	-7.0	133	0.00
70 T	1,3-dichlorobenzene	1.541	1.593	-3.4	127	0.00
71 T	4-isopropyltoluene	2.988	3.047	-2.0	131	0.00
72 T	1,4-dichlorobenzene	1.598	1.652	-3.4	129	0.00
73 T	1,2-dichlorobenzene	1.482	1.529	-3.2	125	0.00
74 T	n-butylbenzene	2.813	2.900	-3.1	133	0.00
75 T	1,2-dibromo-3-chloropropane	0.157	0.146	7.1	117	0.00
76 T	1,2,4-trichlorobenzene	1.065	1.071	-0.6	128	0.01
77 T	hexachlorobutadiene	0.523	0.578	-10.5	137	0.00
78 T	naphthalene	2.091	2.022	3.3	121	0.00
79 T	1,2,3-trichlorobenzene	0.909	0.892	1.9	123	0.00

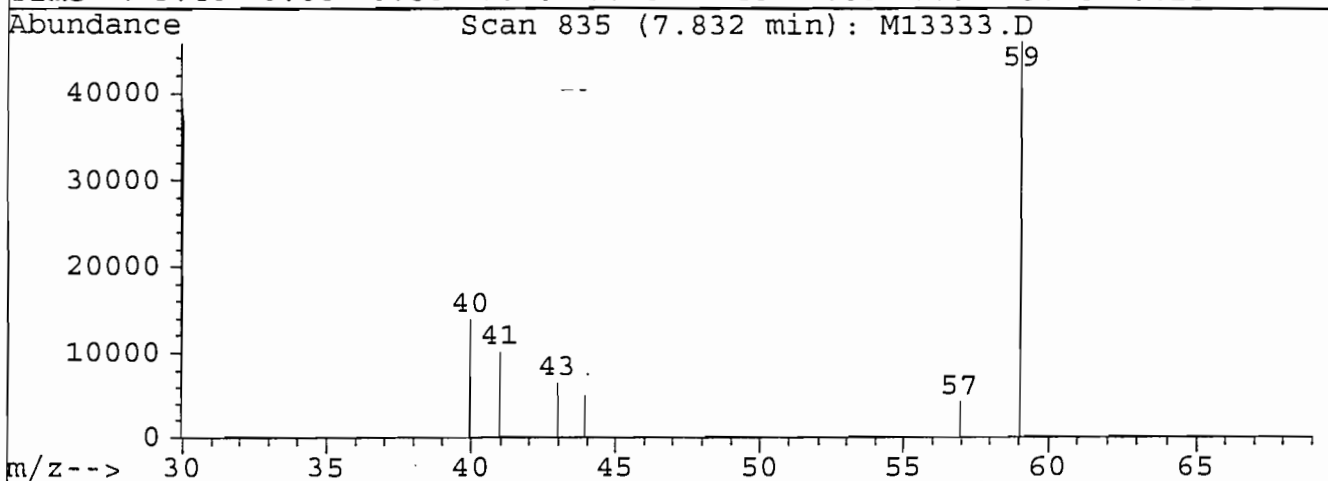
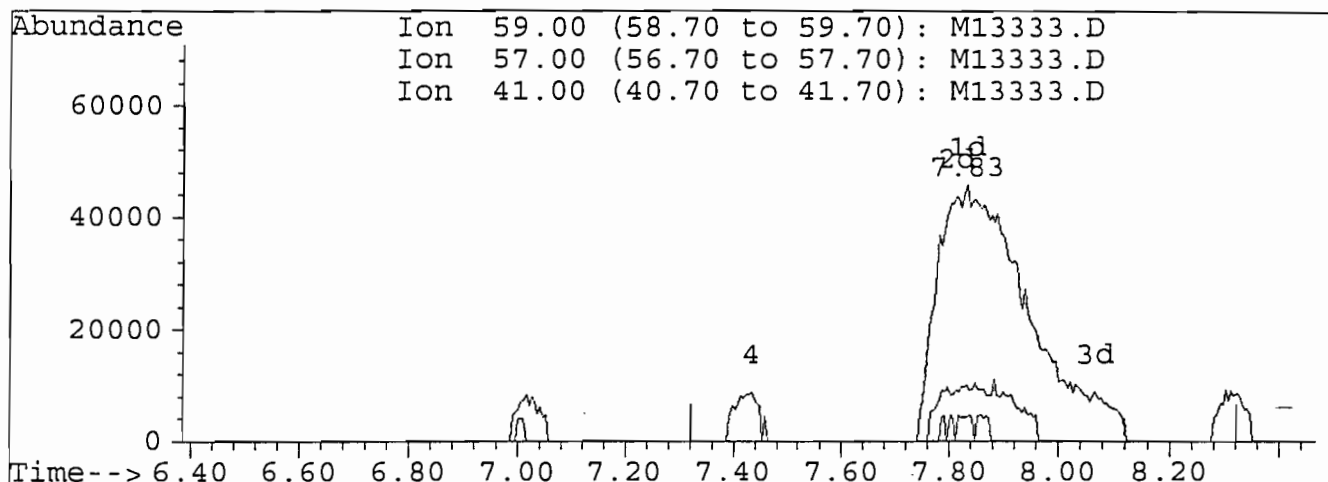
000433

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13333.D
 Acq Time : 25 Oct 99 8:48 am
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 25 9:26 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration



TIC: M13333.D

(15) TBA

7.83min 618.63ug/L m

response 530300

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	9.24
41.00	20.60	21.93
0.00	0.00	0.00

000434

CHEMTECH CONSULTING GROUP

VOLATILES

RAW QC DATA

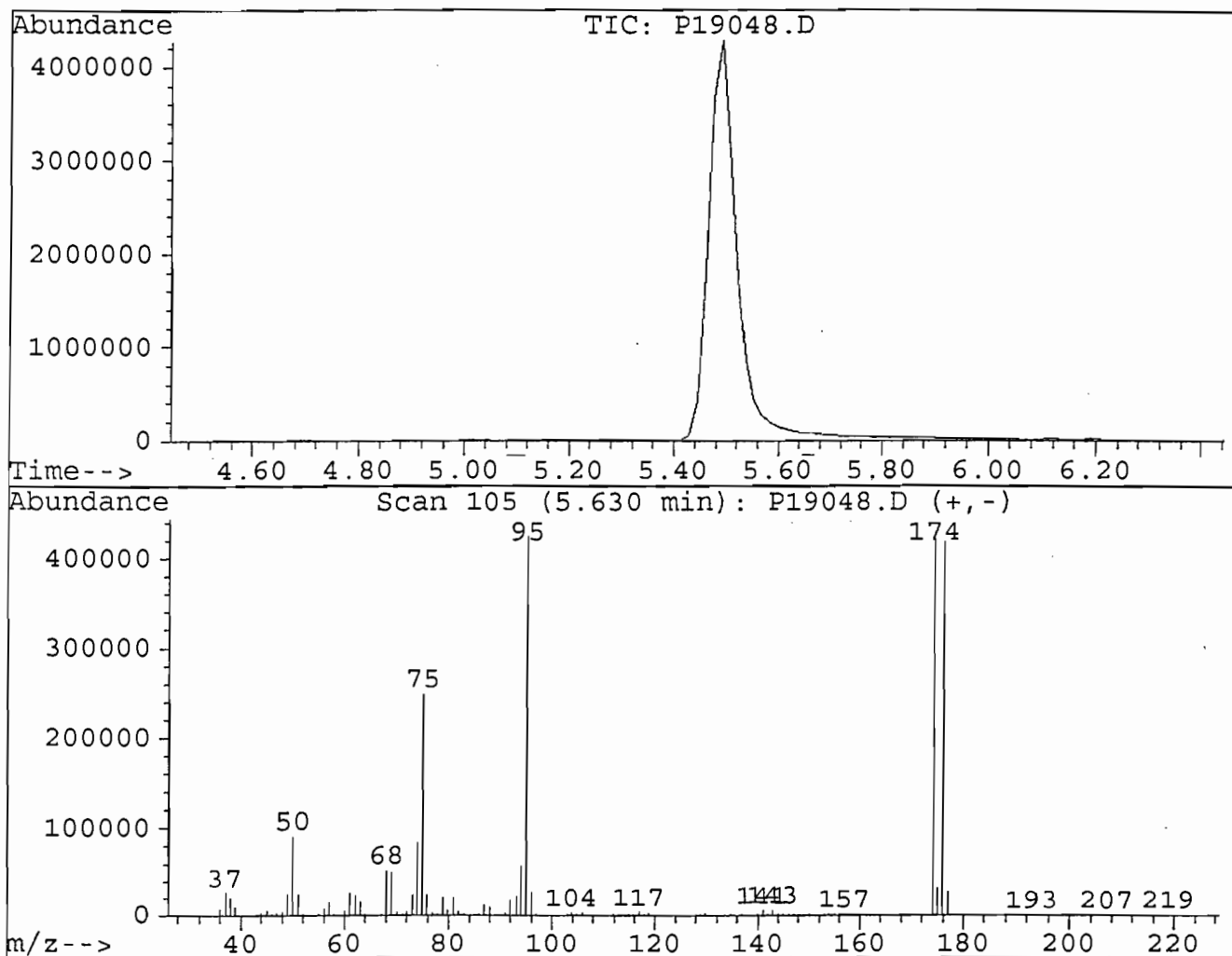
000435

BFB

Data File : I:\HPCHEM\1\DATA\V2100699\P19048.D
 Acq Time : 6 Oct 99 5:15 pm
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA



Peak Apex is scan: 93

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	89648	PASS
75	95	30	60	58.3	247453	PASS
95	95	100	100	100.0	424464	PASS
96	95	5	9	6.3	26812	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	99.4	421933	PASS
175	174	5	9	7.4	31270	PASS
176	174	95	101	99.1	418178	PASS
177	176	5	9	6.5	27174	PASS

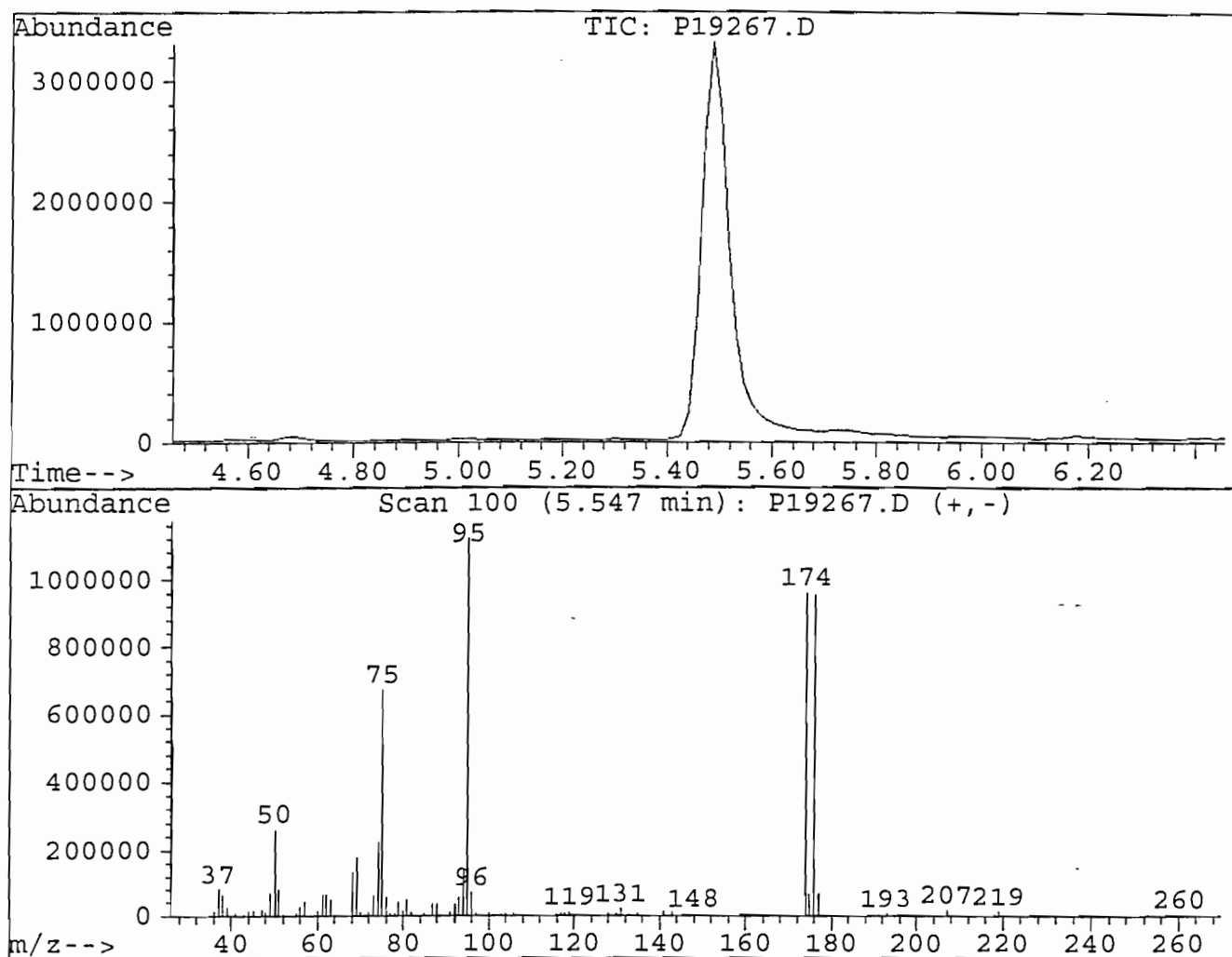
BFB

A. T. V. dy

Data File : I:\HPCHEM\1\DATA\V2102199\P19267.D
Acq Time : 21 Oct 99 9:45 pm
Sample : BFB TUNE CHECK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA



Peak Apex is scan: 94

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.2	260432	PASS
75	95	30	60	59.9	671240	PASS
95	95	100	100	100.0	1120904	PASS
96	95	5	9	6.3	70492	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	85.6	959112	PASS
175	174	5	9	6.9	65872	PASS
176	174	95	101	99.4	953332	PASS
177	176	5	9	6.8	64988	PASS

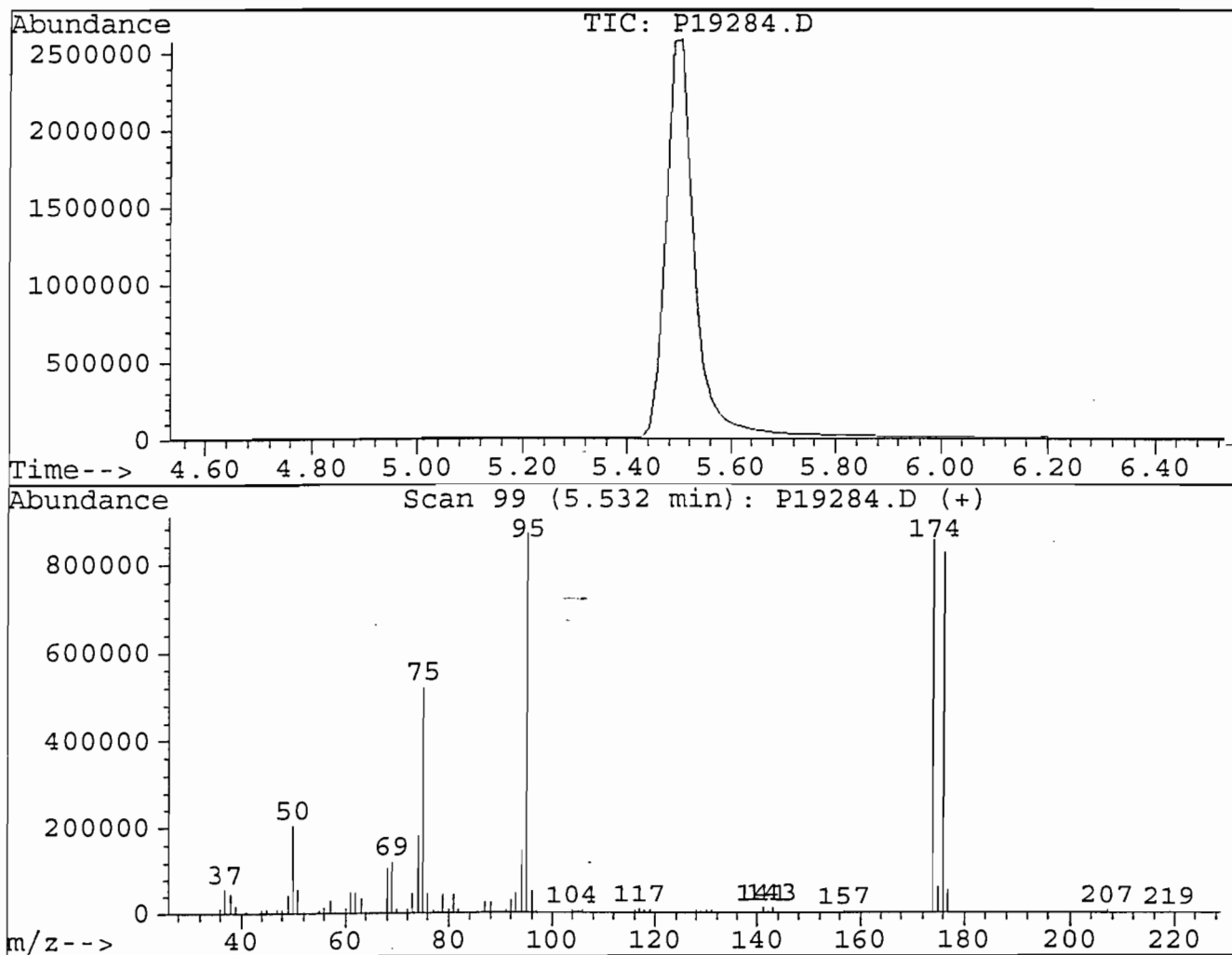
BFB

A. F. V. J. e

Data File : I:\HPCHEM\1\DATA\V2102199\P19284.D
Acq Time : 22 Oct 99 10:17 am
Sample : BFB TUNE CHECK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA



Peak Apex is scan: 99

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.3	202272	PASS
75	95	30	60	59.8	519040	PASS
95	95	100	100	100.0	868328	PASS
96	95	5	9	6.0	52379	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	98.3	853200	PASS
175	174	5	9	7.2	61787	PASS
176	174	95	101	96.7	825432	PASS
177	176	5	9	6.4	53017	PASS

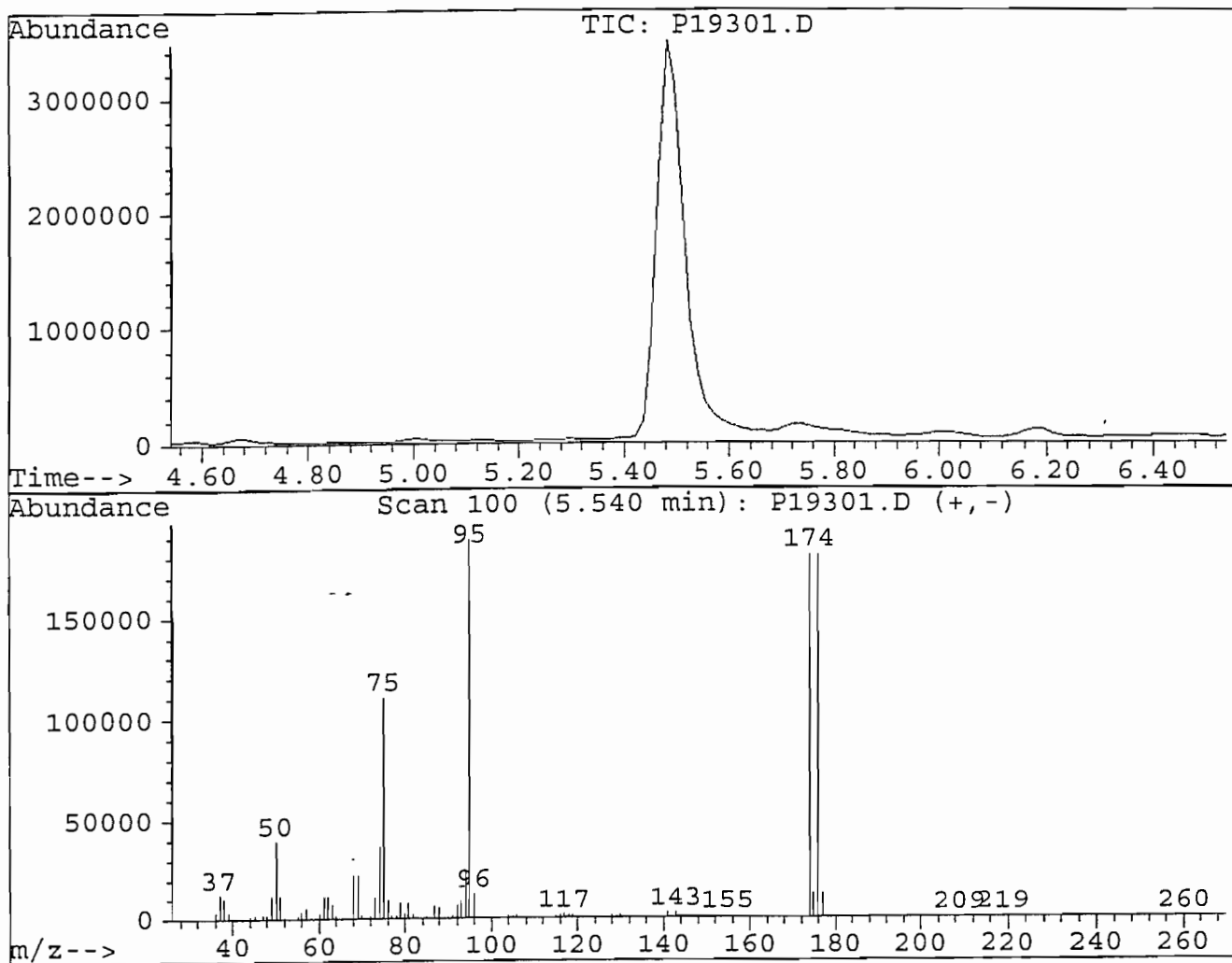
BFB

A. V. V. V.

Data File : I:\HPCHEM\1\DATA\V2102599\P19301.D
 Acq Time : 25 Oct 99 5:02 pm
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA



Peak Apex is scan: 100

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.8	39300	PASS
75	95	30	60	58.4	110296	PASS
95	95	100	100	100.0	188861	PASS
96	95	5	9	6.5	12349	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	95.7	180731	PASS
175	174	5	9	7.0	12570	PASS
176	174	95	101	99.7	180213	PASS
177	176	5	9	6.8	12284	PASS

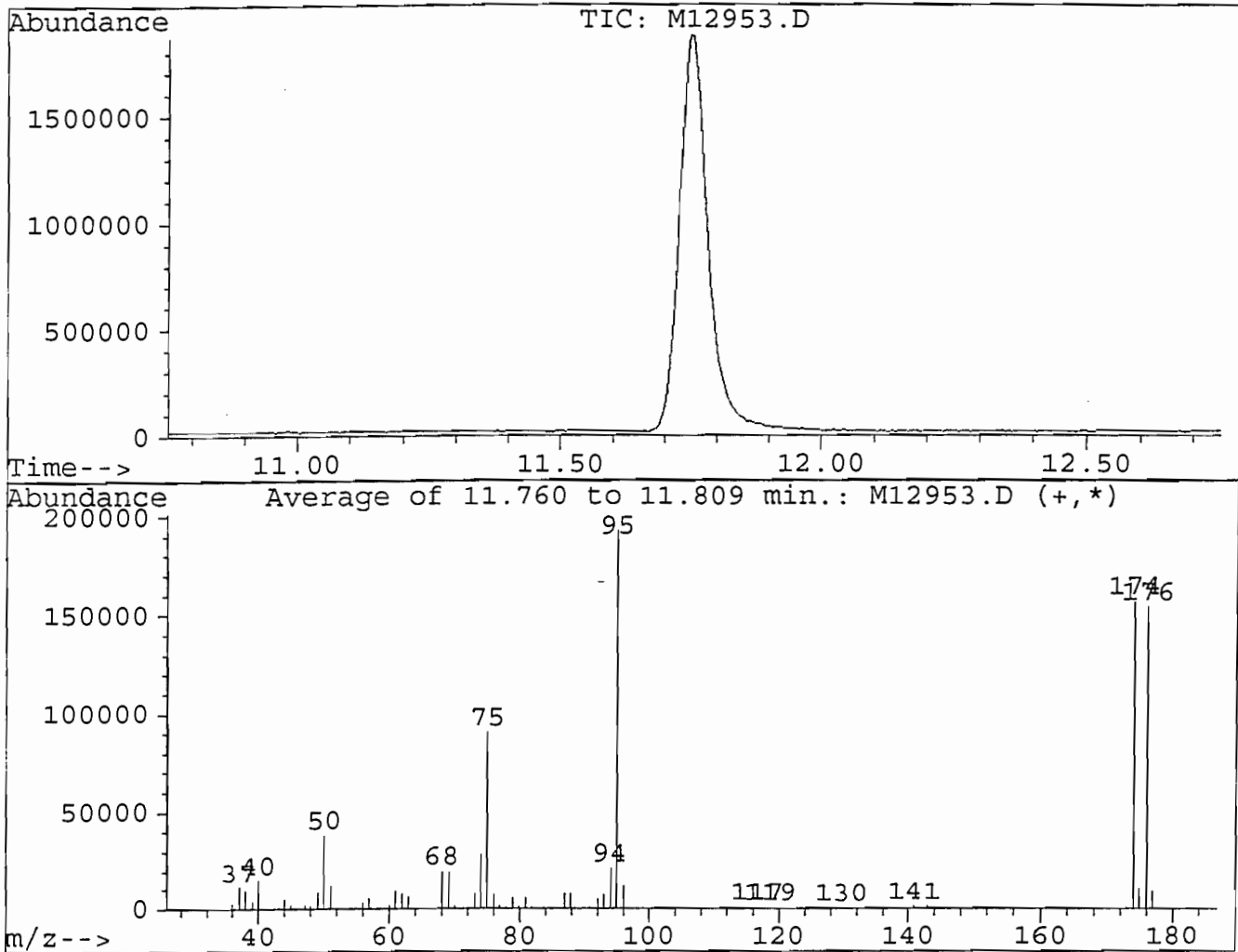
BFB

JJ 10-9-99

Data File : D:\HPCHEM\3\DATA\V3100999\M12953.D
 Acq Time : 9 Oct 99 8:04 am
 Sample : BFB TUNE CHECK
 Misc : 5MLS

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA



Peak Apex is scan: 974

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	37712	PASS
75	95	30	60	46.7	89873	PASS
95	95	100	100	100.0	192474	PASS
96	95	5	9	6.2	12005	PASS
173	174	0	2	0.1	215	PASS
174	95	50	100	81.3	156516	PASS
175	174	5	9	6.9	10770	PASS
176	174	95	101	98.2	153652	PASS
177	176	5	9	6.1	9368	PASS

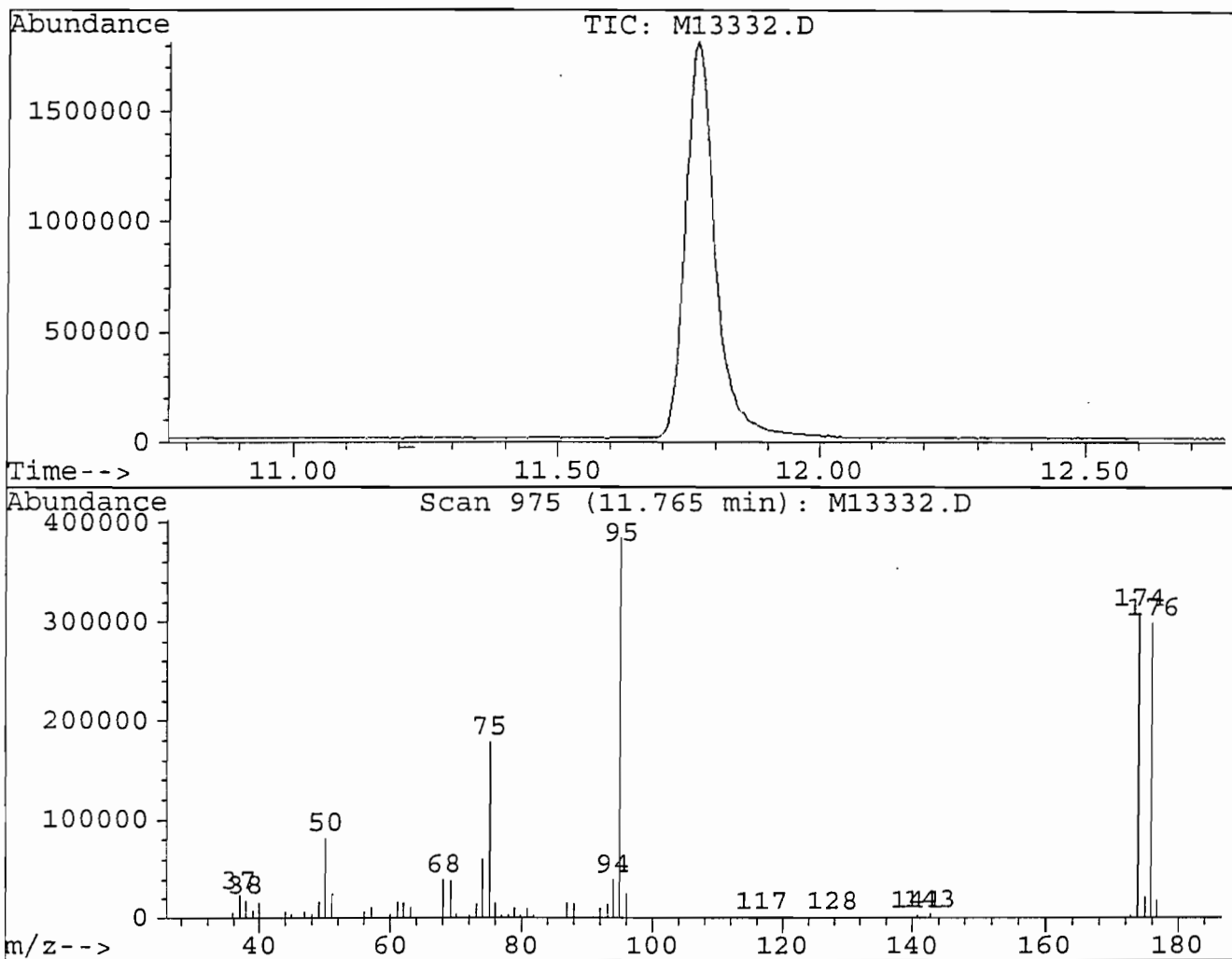
BFB

A + V. Q

Data File : D:\HPCHEM\3\DATA\V3102599\M13332.D
Acq Time : 25 Oct 99 8:20 am
Sample : BFB TUNE CHECK
Misc : 5MLS

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA



Peak Apex is scan: 975

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	81376	PASS
75	95	30	60	46.3	178176	PASS
95	95	100	100	100.0	384640	PASS
96	95	5	9	6.6	25552	PASS
173	174	0	2	0.7	2009	PASS
174	95	50	100	80.3	308864	PASS
175	174	5	9	6.8	20872	PASS
176	174	95	101	96.8	299008	PASS
177	176	5	9	5.9	17768	PASS

SAMPLE NO.

VBLK01

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS

Lab Sample ID: VBLK01

Lab File ID: P19269.D

Date Received:

Date Analyzed: 10/21/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

 $\mu\text{g/Kg}$

Q

FORM I VOA

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBK01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
Matrix: (soil/water) SOIL Lab Sample ID: VBK01
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19269.D
Level: (low/med) LOW Date Received: _____
% Moisture: not dec. 0 Date Analyzed: 10/21/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units:
(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
 Acq Time : 21 Oct 99 11:08 pm
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 22 11:27 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	890527	50.00	ug/L	-0.01
43) Chlorobenzene-d5	16.33	117	1087899	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.58	152	796990	50.00	ug/L	-0.02

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	727099	49.01	ug/L	98.01%
30) 1,2-Dichlorethane-d4	8.66	65	545465	46.79	ug/L	93.57%
38) Toluene-d8	12.75	98	854462	49.19	ug/L	98.39%
42) 4-Bromofluorobenzene	19.48	95	962272	53.97	ug/L	107.94%

Target Compounds	Qvalue

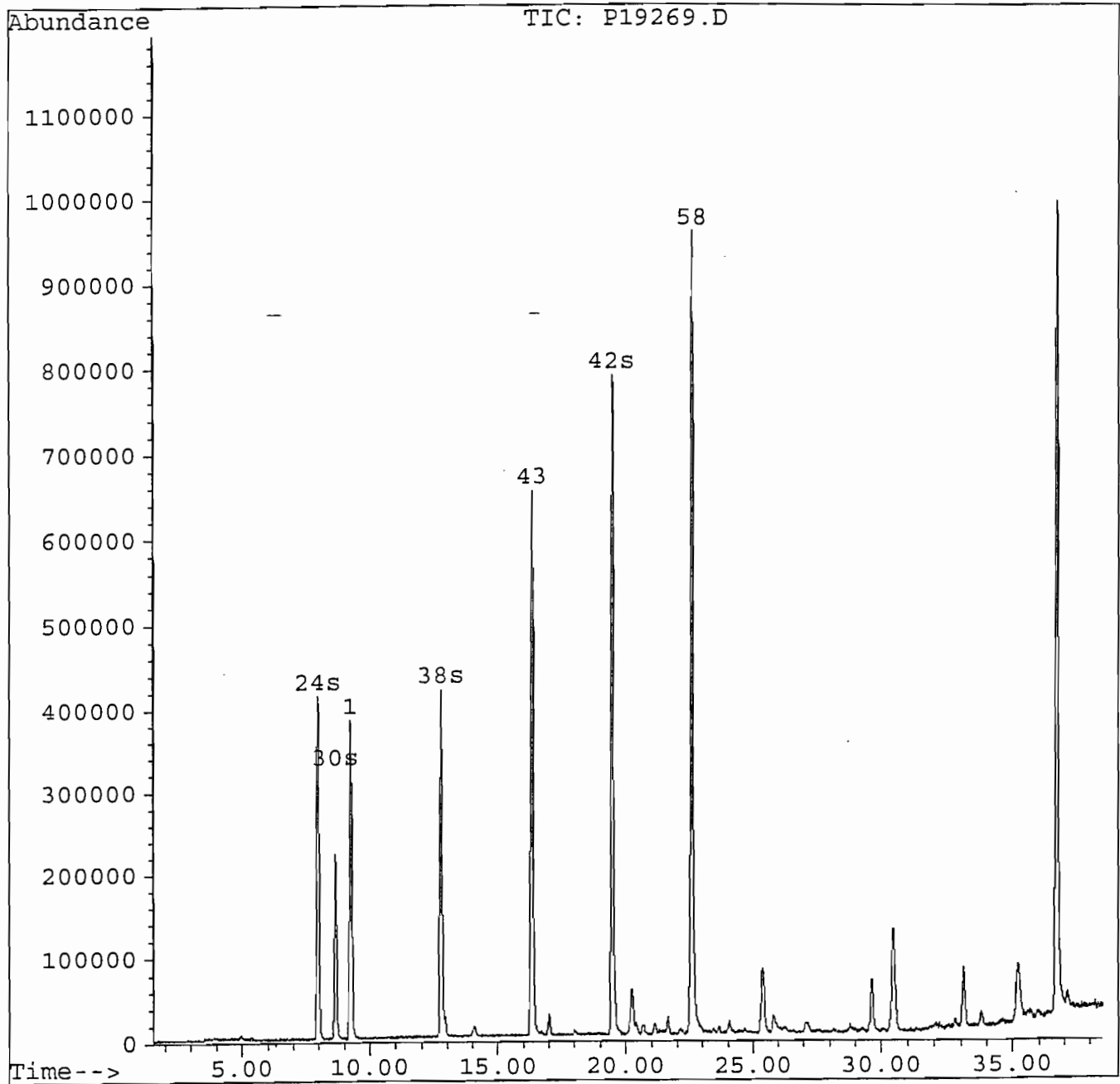
000444

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 22 11:27 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000445

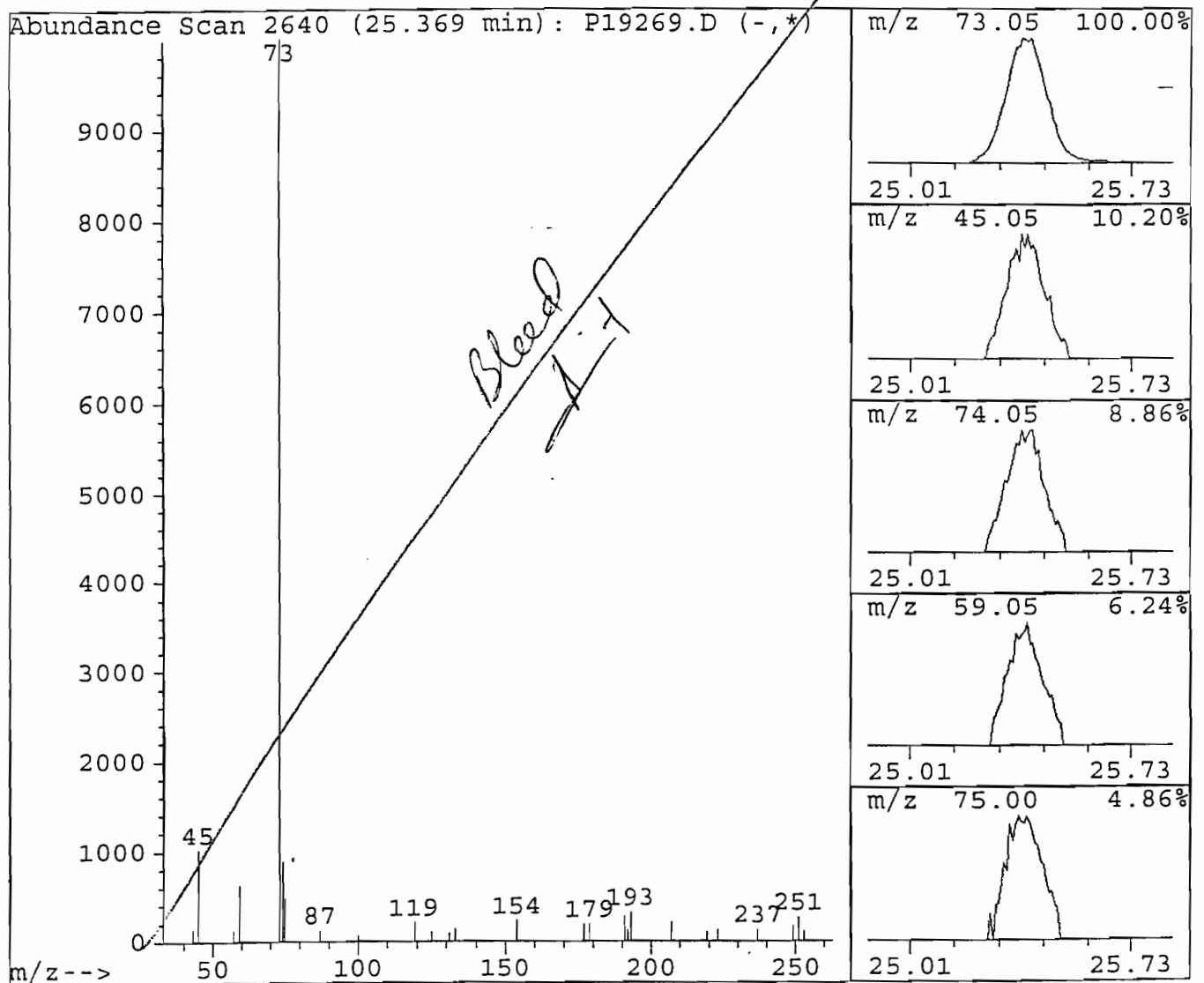
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.37	5.35 ug/L	678472	1,4-dichlorobenzene-d4	22.58	
Hit# of	0	Tentative ID	Ref#	CAS#	Qual
1	Unknown		0	000000-00-0	0



Library Search Compound Report

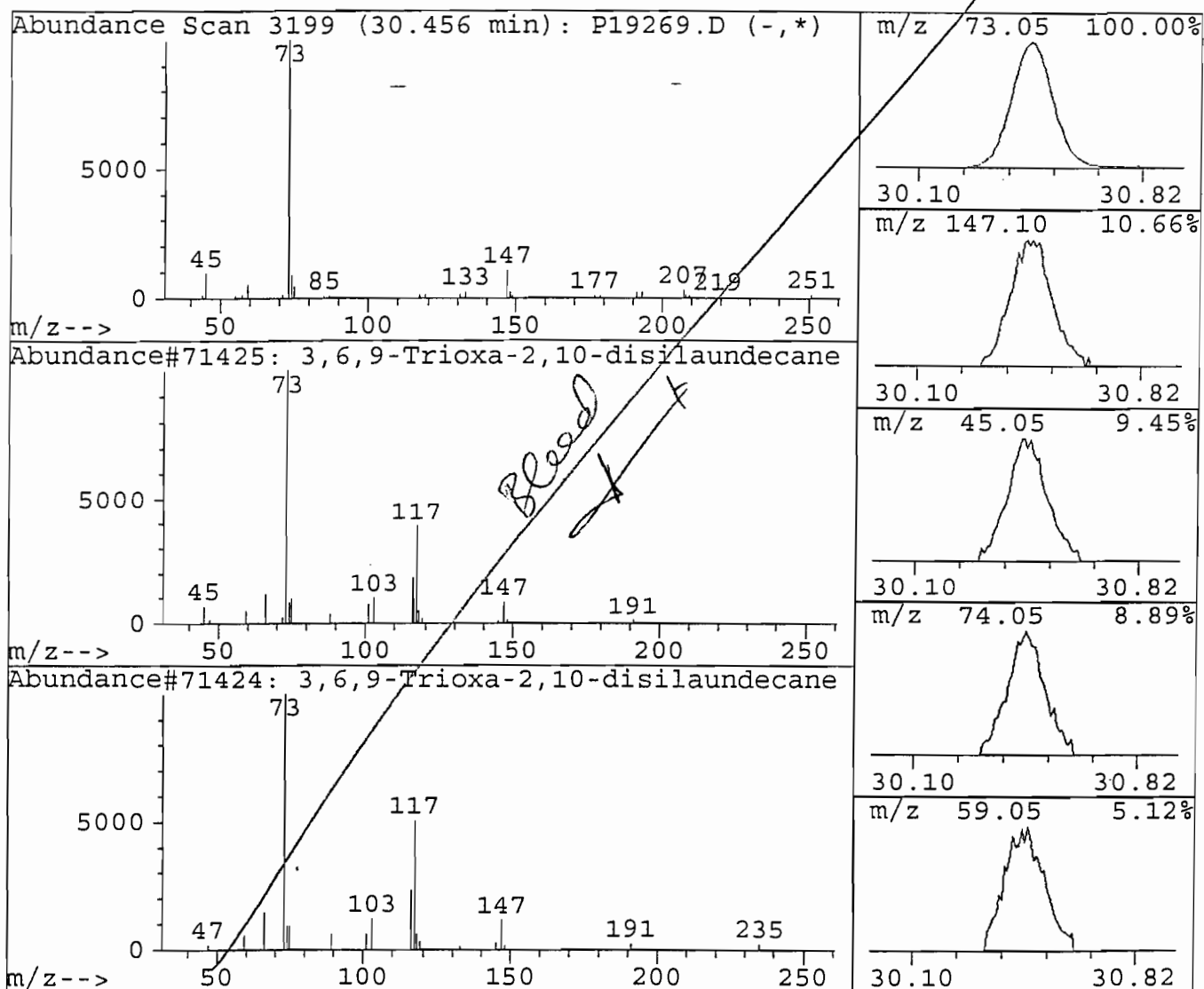
Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.46	9.06 ug/L	1148627	1,4-dichlorobenzene-d4	22.58

Hit#	of	2	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane,	2	71425	016654-74-3	50	
2	3,6,9-Trioxa-2,10-disilaundecane,	2	71424	016654-74-3	33	



000447

Library Search Compound Report

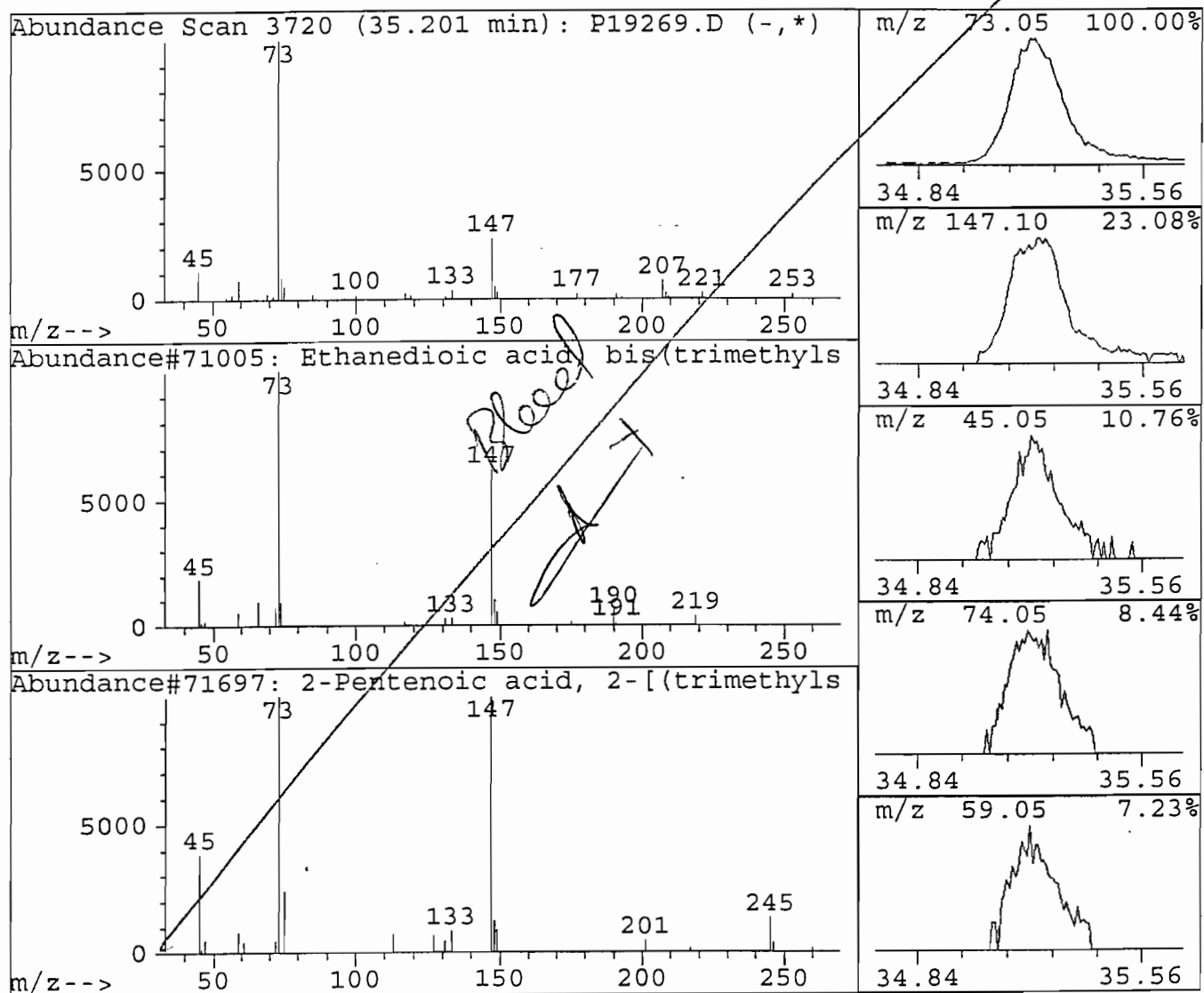
Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.20	6.61 ug/L	838029	1,4-dichlorobenzene-d4	22.58

Hit#	of	2	Tentative ID	Ref#	CAS#	Qual
1			Ethanedioic acid, bis(trimethylsilyl)	71005	018294-04-7	40
2			2-Pentenoic acid, 2-[(trimethylsilyl)	71697	055045-17-5	23



Library Search Compound Report

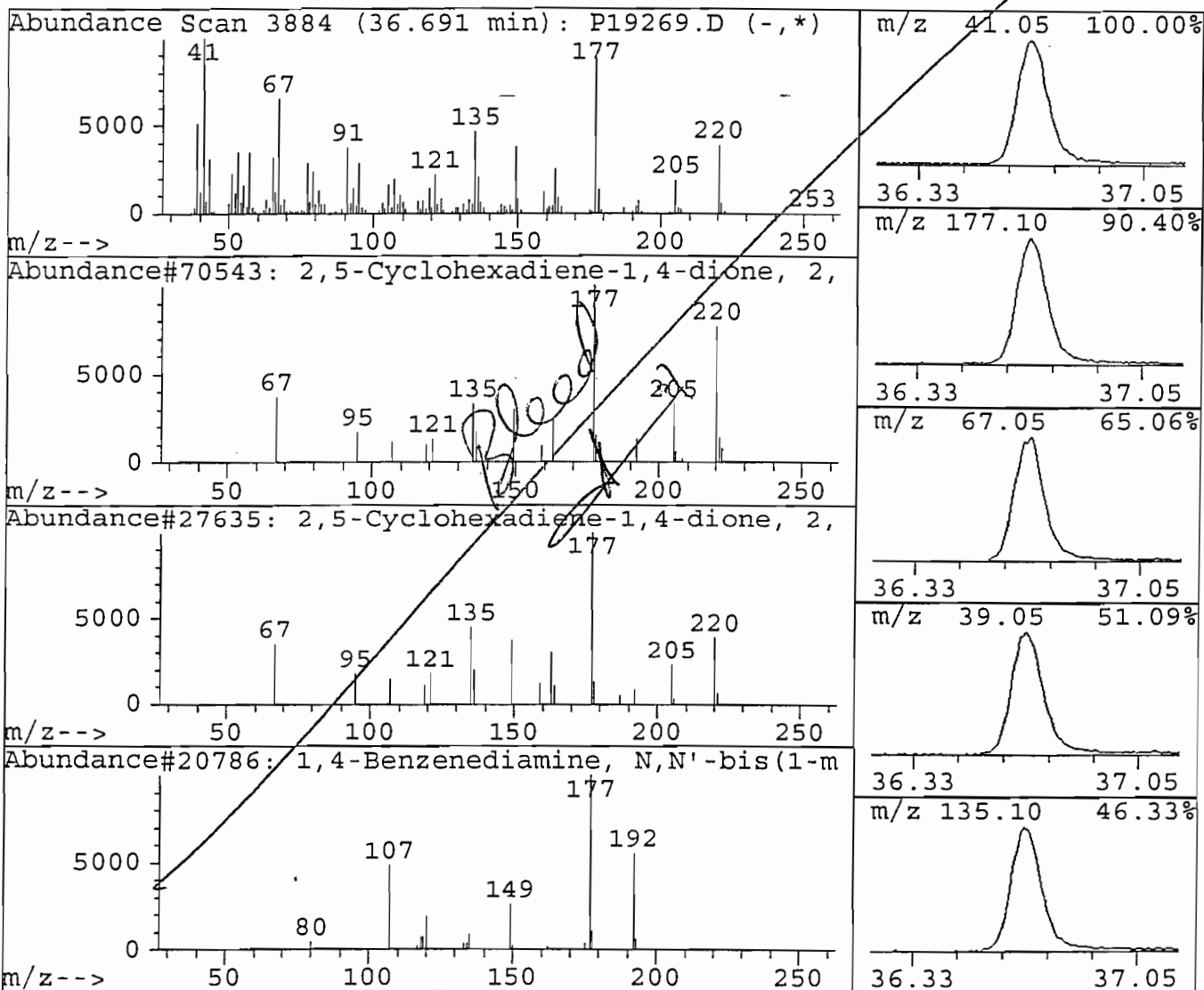
Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
36.69	56.41 ug/L	7153611	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2,5-Cyclohexadiene-1,4-dione, 2,6-b	70543	000719-22-2	96
2	2,5-Cyclohexadiene-1,4-dione, 2,6-b	27635	000719-22-2	81
3	1,4-Benzenediamine, N,N'-bis(1-meth	20786	004251-01-8	27
4	3-Buten-2-one, 4-(2,6,6-trimethyl-1	69317	000079-77-6	25
5	3-Buten-2-one, 4-(2,6,6-trimethyl-1	20817	014901-07-6	25



000449

SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK02

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
Matrix: (soil/water) SOIL Lab Sample ID: VBLK02
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19286.D
Level: (low/med) LOW Date Received: _____
% Moisture: not dec. 0 Date Analyzed: 10/22/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units:
(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19286.D
 Acq Time : 22 Oct 99 11:39 am
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 22 12:10 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	725977	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	833868	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	22.62	152	604678	50.00	ug/L	0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	590295	48.80	ug/L	97.60%
30) 1,2-Dichlorethane-d4	8.67	65	479105	50.41	ug/L	100.82%
38) Toluene-d8	12.77	98	699735	49.42	ug/L	98.84%
42) 4-Bromofluorobenzene	19.50	95	750366	51.62	ug/L	103.24%

Target Compounds Qvalue

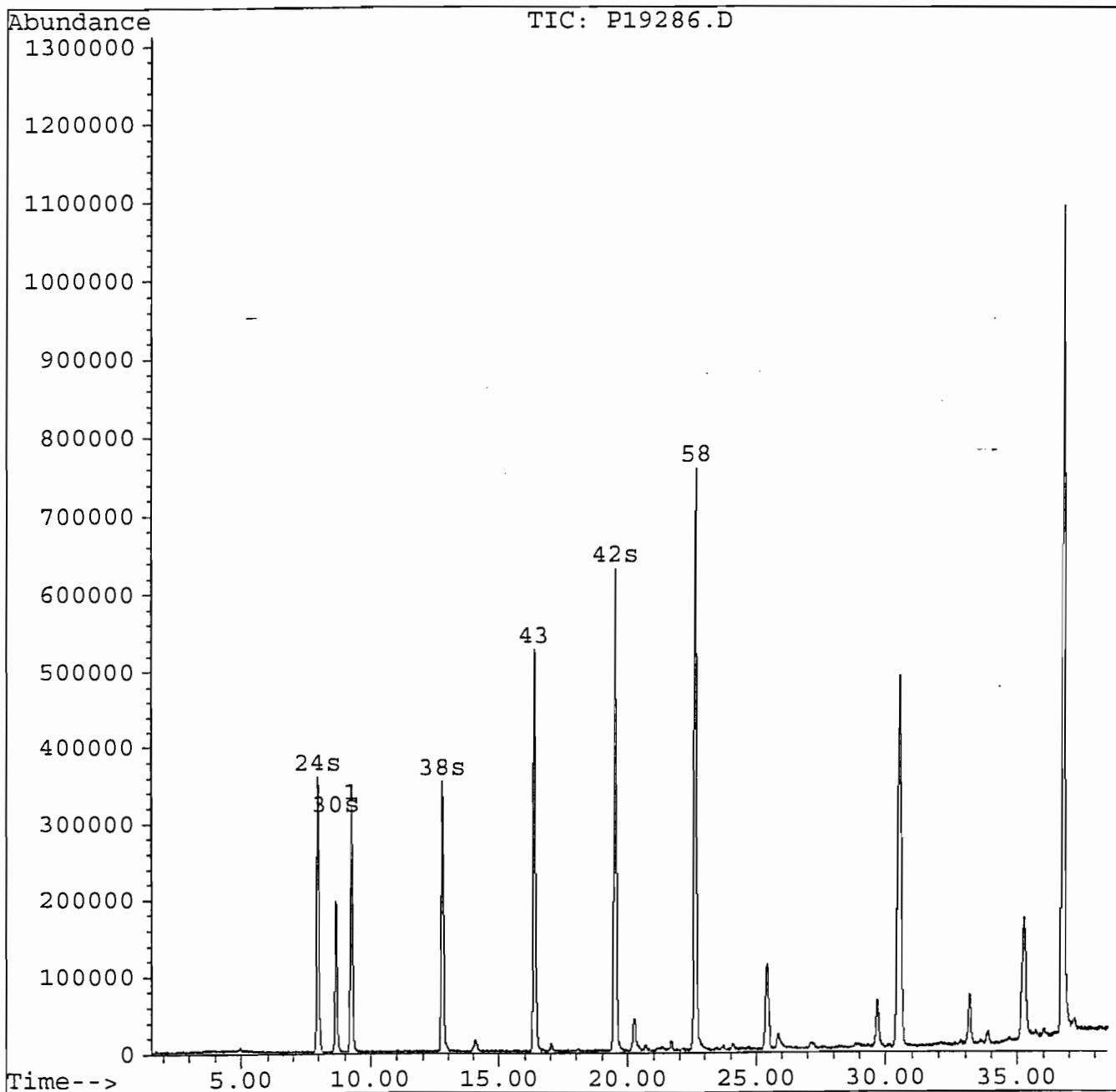
000452

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19286.D
Acq Time : 22 Oct 99 11:39 am
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 22 12:10 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000453

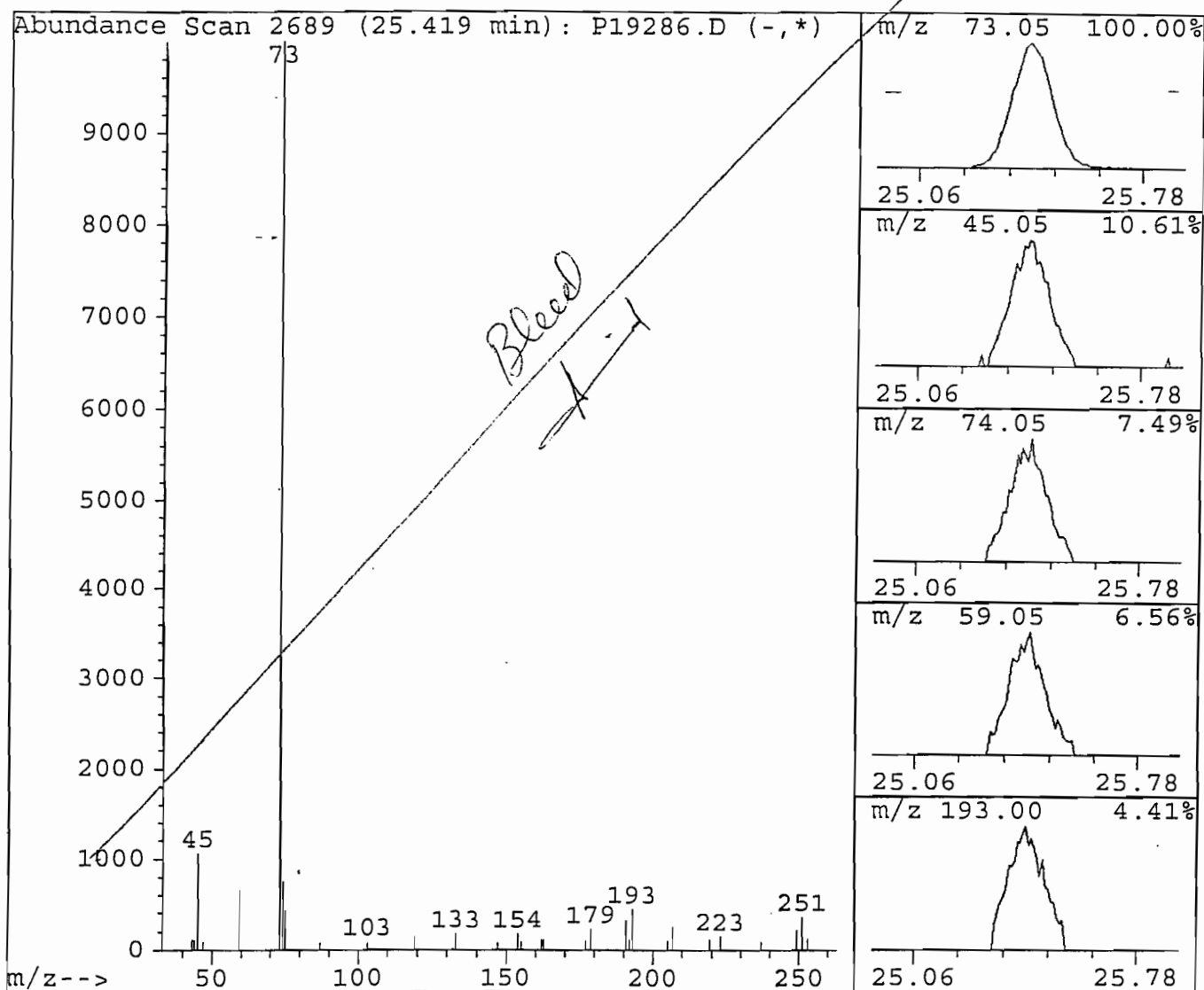
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19286.D
Acq Time : 22 Oct 99 11:39 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.42	10.05 ug/L	984234	1,4-dichlorobenzene-d4	22.62	
Hit# of	0	Tentative ID	Ref#	CAS#	Qual
1	Unknown		0	000000-00-0	0



Library Search Compound Report

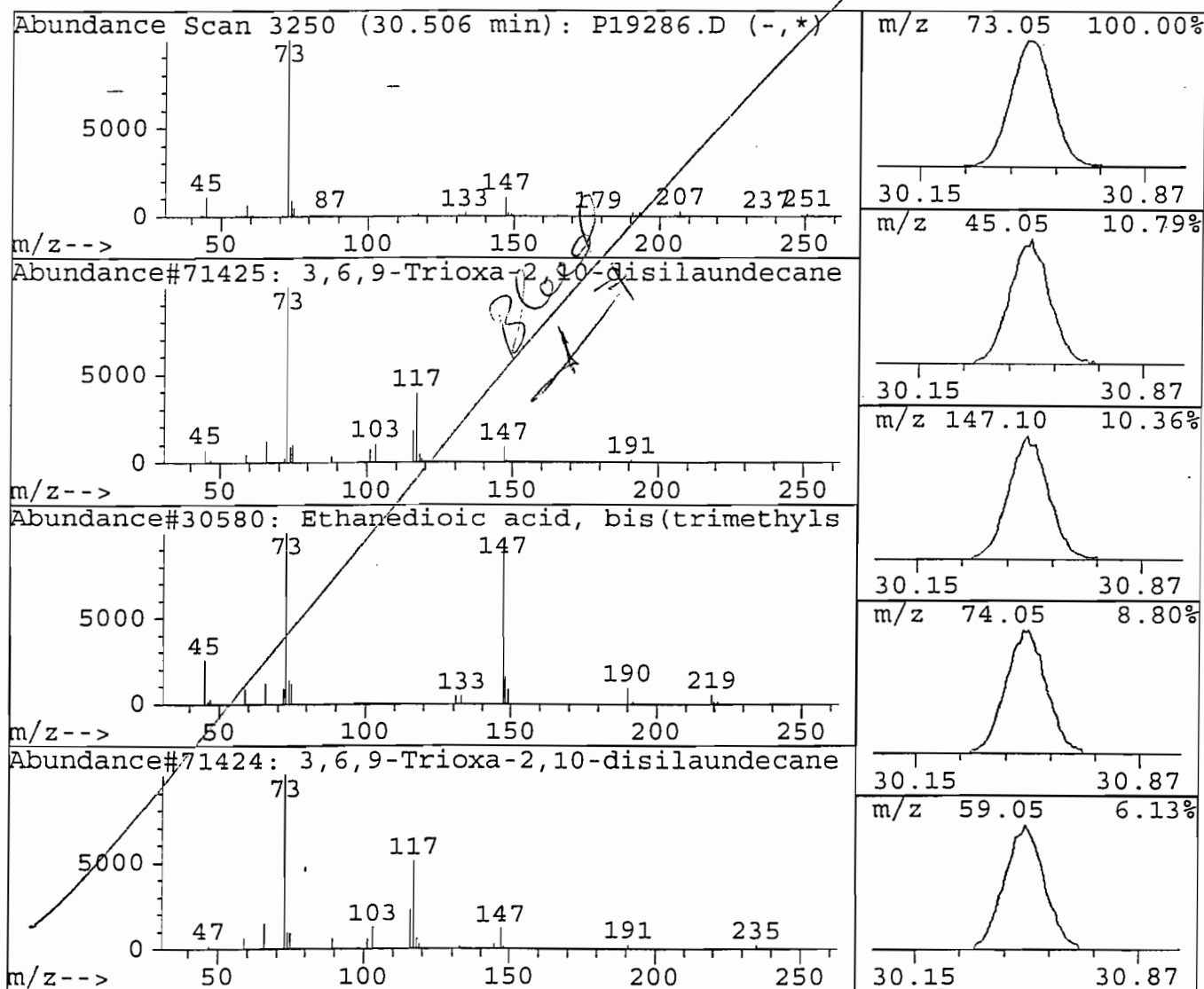
Data File : I:\HPCHEM\1\DATA\V2102199\P19286.D
Acq Time : 22 Oct 99 11:39 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.51	46.51 ug/L	4554803	1,4-dichlorobenzene-d4	22.62

Hit# of	4	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane, 2	71425	016654-74-3	38	
2	Ethanedioic acid, bis(trimethylsilyl)	30580	018294-04-7	37	
3	3,6,9-Trioxa-2,10-disilaundecane, 2	71424	016654-74-3	25	
4	Butanoic acid, 2-methyl-3-[(trimethylsilyl)ethoxy]	36153	055557-17-0	10	



000455

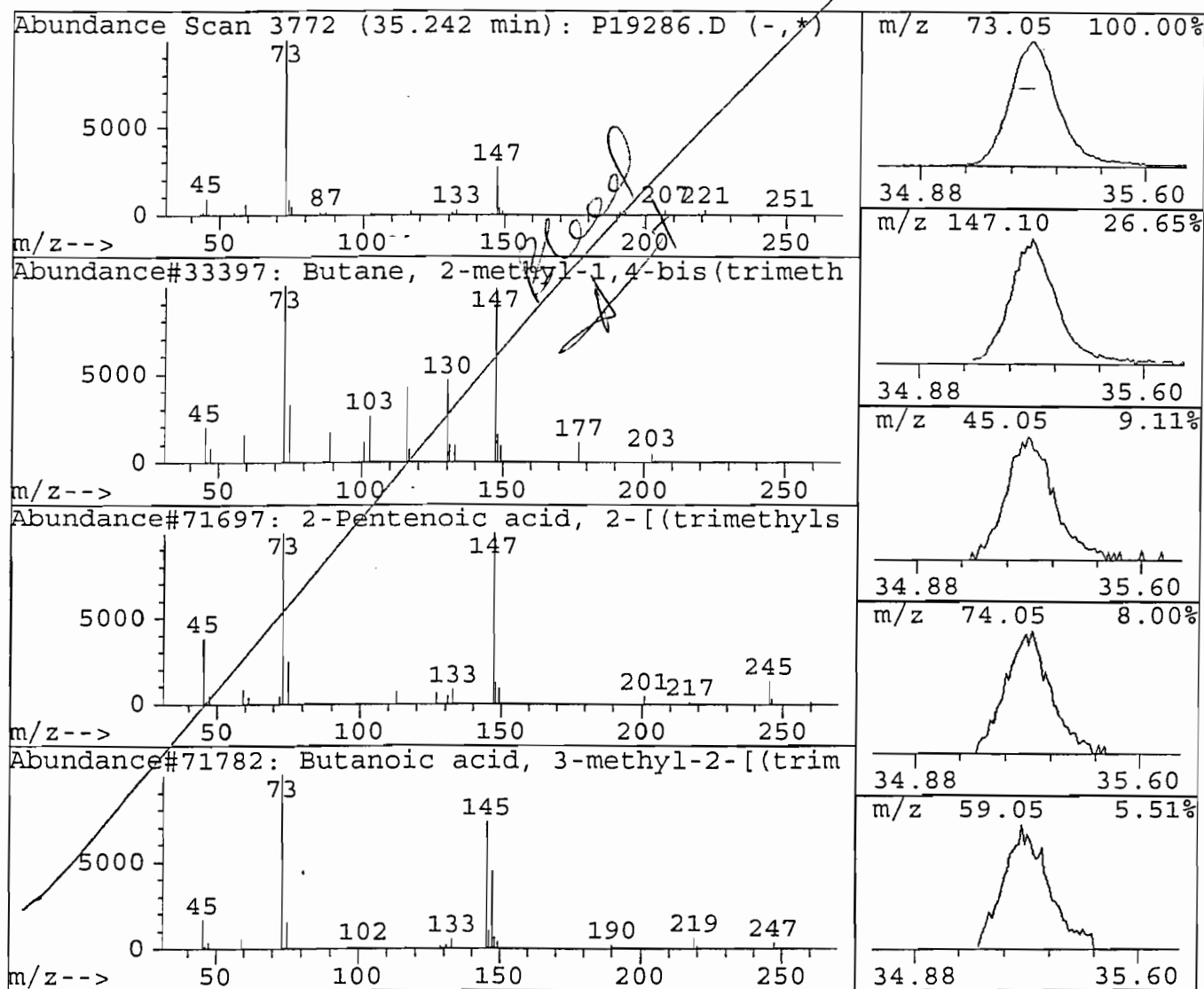
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19286.D
Acq Time : 22 Oct 99 11:39 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
35.24	17.40 ug/L	1704394	1,4-dichlorobenzene-d4	22.62	
Hit# of	5	Tentative ID	Ref#	CAS#	Qual
1		Butane, 2-methyl-1,4-bis(trimethylsilyl)	33397	000000-00-0	39
2		2-Pentenoic acid, 2-[(trimethylsilyl)]	71697	055045-17-5	33
3		Butanoic acid, 3-methyl-2-[(trimethylsilyl)]	71782	055124-92-0	33
4		Ethanedioic acid, bis(trimethylsilyl)	30580	018294-04-7	13
5		Ethanedioic acid, bis(trimethylsilyl)	71005	018294-04-7	7



Library Search Compound Report

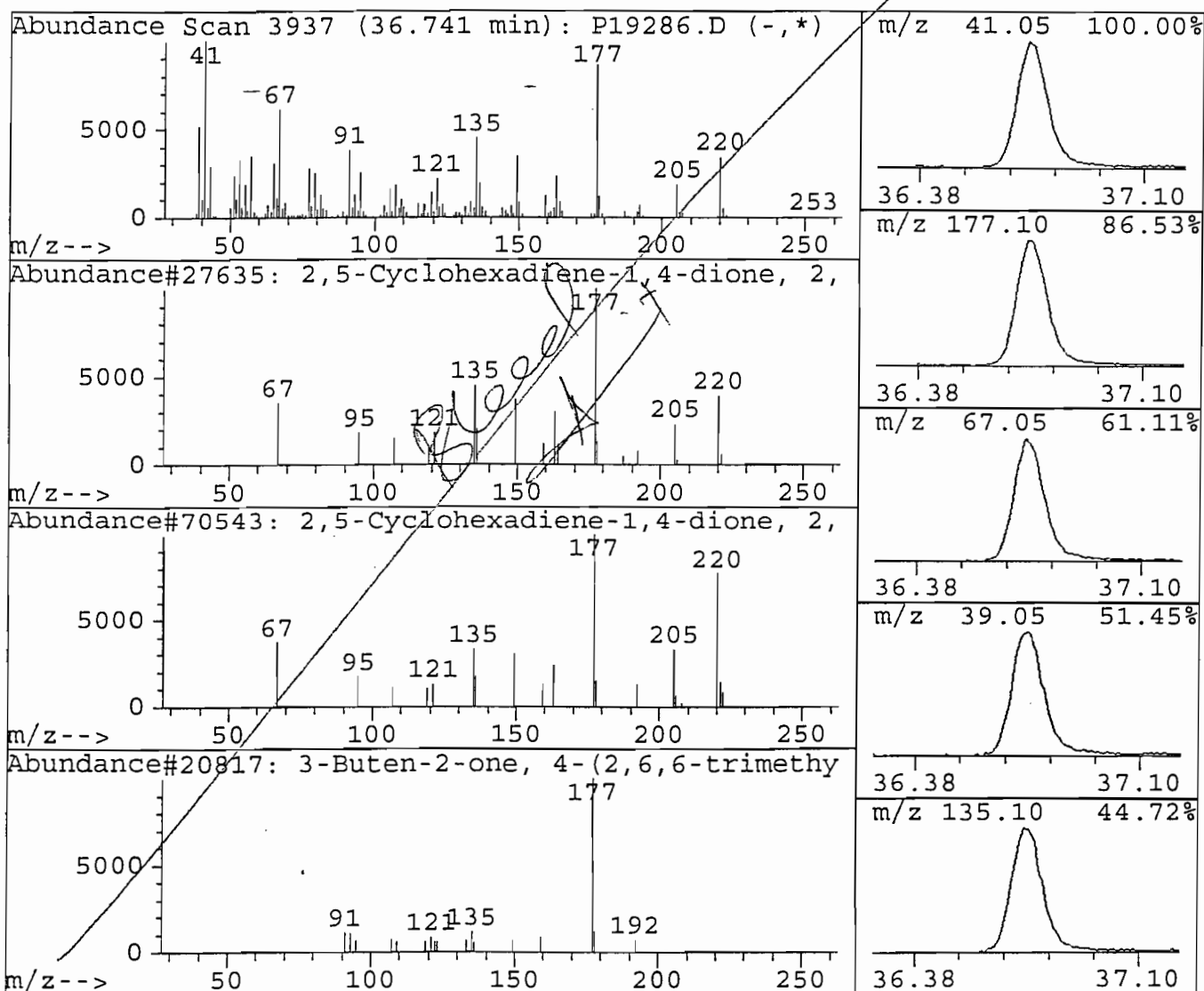
Data File : I:\HPCHEM\1\DATA\V2102199\P19286.D
Acq Time : 22 Oct 99 11:39 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
36.74	80.53 ug/L	7886073	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2,5-Cyclohexadiene-1,4-dione, 2,6-b	27635	000719-22-2	99
2	2,5-Cyclohexadiene-1,4-dione, 2,6-b	70543	000719-22-2	96
3	3-Buten-2-one, 4-(2,6,6-trimethyl-1	20817	014901-07-6	38
4	3-Buten-2-one, 4-(2,6,6-trimethyl-1	69315	014901-07-6	30
5	3-Buten-2-one, 4-(2,6,6-trimethyl-1	69317	000079-77-6	30



000457

SAMPLE NO.

Soil Aliquot Volume: (uL)

Q

3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK03

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
Matrix: (soil/water) SOIL Lab Sample ID: VBLK03
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19304.D
Level: (low/med) LOW Date Received: _____
% Moisture: not dec. 0 Date Analyzed: 10/25/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units:
(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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Quantitation Report

Data File : F:\HPCHEM\1\DATA\V2102599\P19304.D
 Acq Time : 25 Oct 99 7:10 pm
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 27 12:29 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	585896	50.00	ug/L	-0.01
43) Chlorobenzene-d5	16.34	117	636617	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.60	152	405271	50.00	ug/L	0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	466406	47.78	ug/L	95.56%
30) 1,2-Dichlorethane-d4	8.65	65	458268	59.75	ug/L	119.49%
38) Toluene-d8	12.76	98	564569	49.40	ug/L	98.81%
42) 4-Bromofluorobenzene	19.48	95	564635	48.13	ug/L	96.26%

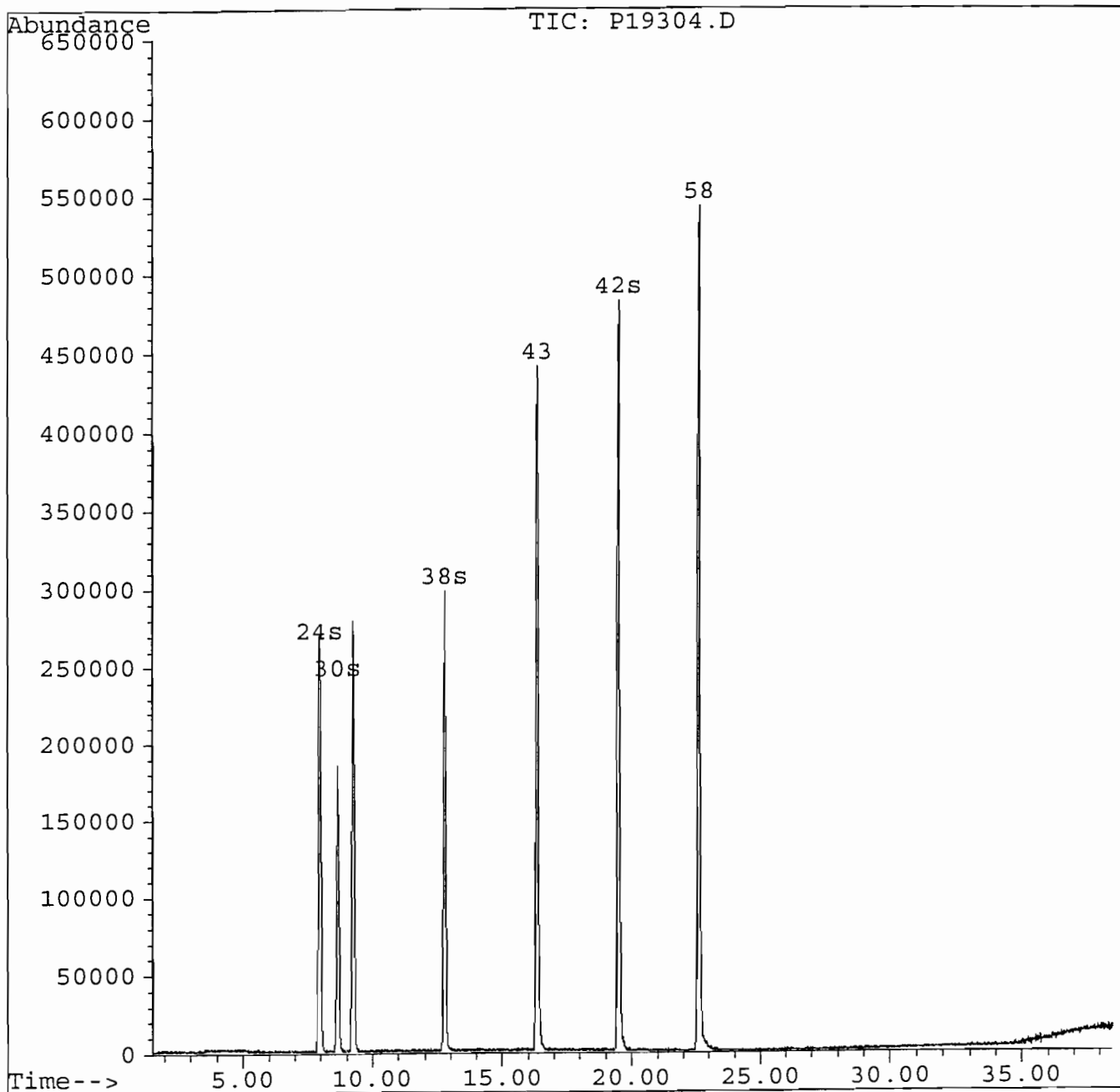
Target Compounds Qvalue

Quantitation Report

Data File : F:\HPCHEM\1\DATA\V2102599\P19304.D
Acq Time : 25 Oct 99 7:10 pm
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 27 12:29 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000461

Library Search Compound Report

Data File : F:\HPCHEM\1\DATA\V2102599\P19304.D
Acq Time : 25 Oct 99 7:10 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : F:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

000462

SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-014-S
Matrix: (soil/water) SOIL Lab Sample ID: VBLK01
Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13334.D
Level: (low/med) MED Date Received: _____
% Moisture: not dec. 0 Date Analyzed: 10/25/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 0 Concentration Units:
(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13334.D
 Acq Time : 25 Oct 99 9:58 am
 Sample : PRO BLK
 Misc : 5MLS
 Quant Time: Oct 25 12:55 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.12	96	1826740	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.46	117	1643968	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	732194	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.42	113	619542	54.53	ug/L	109.05%
30) 1,2-Dichlorethane-d4	13.45	65	670623	52.37	ug/L	104.73%
38) Toluene-d8	17.37	98	1924861	54.09	ug/L	108.17%
42) 4-Bromofluorobenzene	22.94	95	857795	57.01	ug/L	114.02%

Target Compounds	Qvalue

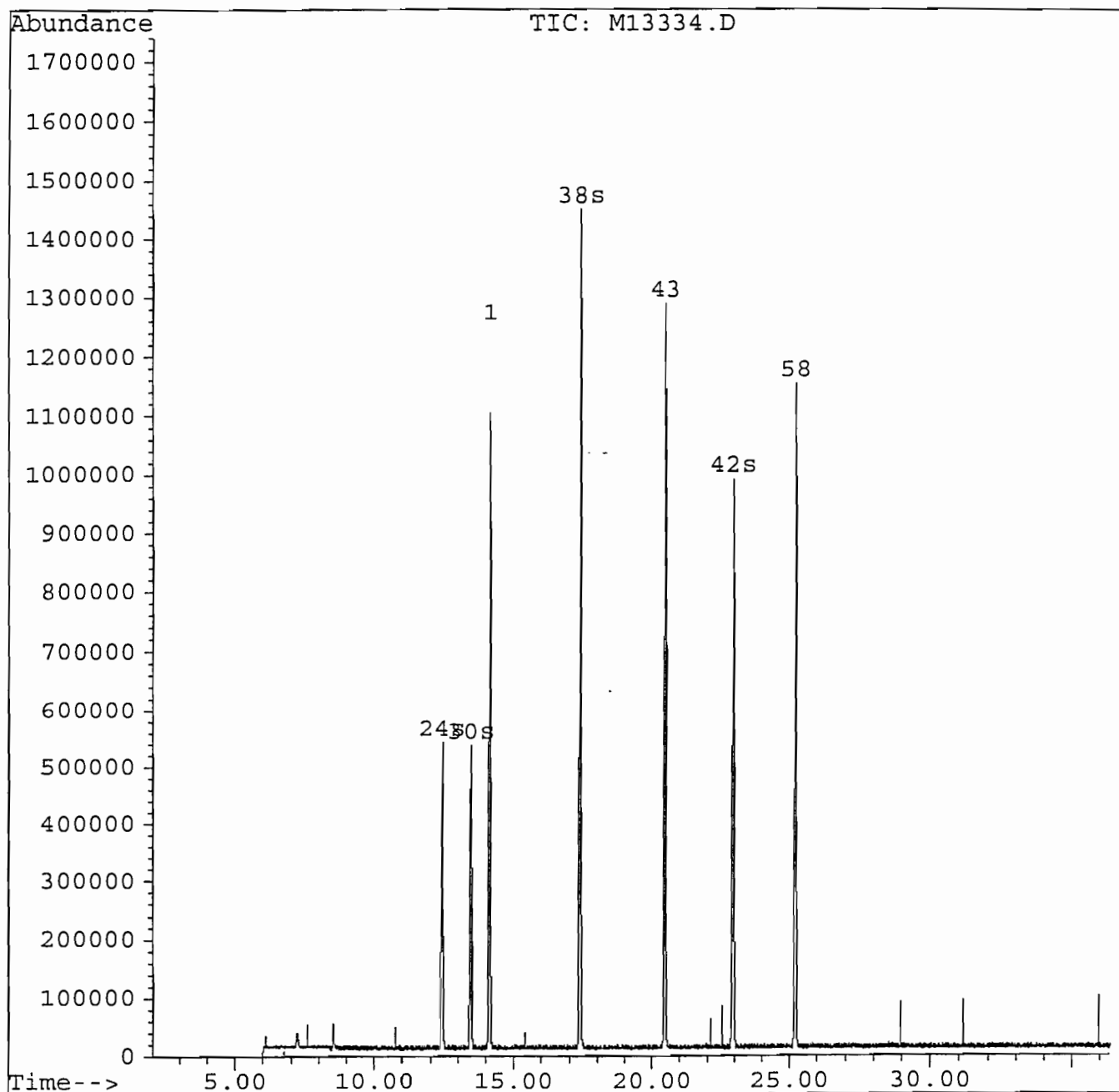
000465

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13334.D
Acq Time : 25 Oct 99 9:58 am
Sample : PRO BLK
Misc : 5MLS
Quant Time: Oct 25 12:55 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000466

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102599\M13334.D
Acq Time : 25 Oct 99 9:58 am
Sample : PRO BLK
Misc : 5MLS

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

BLKSPK

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS

Matrix: (soil/water) SOIL

Lab Sample ID: BLKSPK

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19270.D

Level: (low/med) LOW

Date Received:

% Moisture:	not dec.	0

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19270.D
 Acq Time : 21 Oct 99 11:53 pm
 Sample : BLK SPK
 Misc : 5G/5ML
 Quant Time: Oct 22 11:32 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	967699	50.00	ug/L	-0.02
43) Chlorobenzene-d5	16.32	117	983973	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.58	152	707898	50.00	ug/L	-0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	722347	44.80	ug/L	89.60%
30) 1,2-Dichlorethane-d4	8.67	65	565001	44.60	ug/L	89.20%
38) Toluene-d8	12.75	98	870814	46.14	ug/L	92.28%
42) 4-Bromofluorobenzene	19.46	95	875994	45.21	ug/L	90.42%

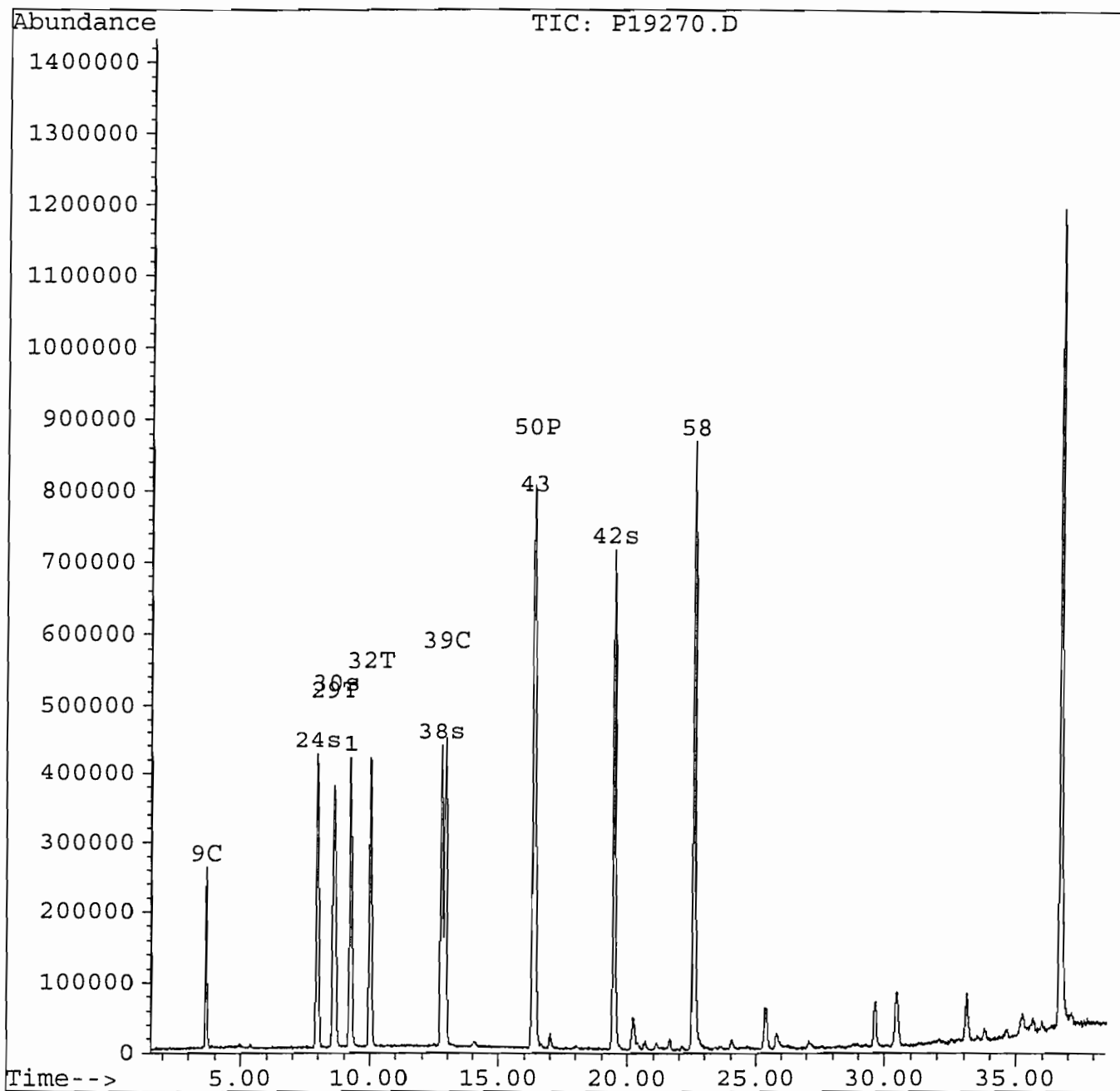
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
9) 1,1-dichloroethene	3.67	61	414856	40.52	ug/L	98
29) benzene	8.59	78	732938	47.84	ug/L	97
32) trichloroethene	10.03	130	375793	41.41	ug/L	97
39) toluene	12.91	91	992756	52.15	ug/L	97
50) chlorobenzene	16.39	112	806817	50.60	ug/L	99

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19270.D
Acq Time : 21 Oct 99 11:53 pm
Sample : BLK SPK
Misc : 5G/5ML
Quant Time: Oct 22 11:32 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000470

CHEMTECH CONSULTING GROUP

MISCELLANEOUS DATA

000471

CHEMTECHDaily Analysis Runlog-For GC #: GCMSVOA 2Start Date: 10/6/99 End Date: 10/6/99 Analyst: A. J. Review By: A. J.

<u>STD. NAME</u>	<u>STD REF. #:</u>	<u>STD NAME</u>	<u>STD REF. #:</u>
CCC	—	Spike Std.	V1091
Surrogate Stds.	V1086	Isd	V1085
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	V1089, V1090	Meth	V21006CS.M

<u>SR.</u> <u>#:</u>	<u>Sample ID</u>	<u>Data File</u> <u>Name</u>	<u>Method</u> <u>#:</u>	<u>Run Information</u>	<u>Comment</u>
1	BFB	P19048			ok
2	50PPB ICC	P19049	8260/s	V21006CS.M	ok
3	50PPB ICC	P19050			not needed
4	200PPB ICC	P19051			ok
5	100PPB ICC	P19052			ok
6	20PPB ICC	P19053			ok
7	5PPB ICC	P19054			ok
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Start Date: 10/21/99 End Date: 10/22/99 Analyst A. J. Review By: A. J.

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1102	Isd	V1103
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	Meth	V31009CLO.M

1104200
1019715
762688

SR #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19267			ok 9:45pm
2	SOPPB CCC	P19268	8260/3	Sg	ok
3	PRO Blank	P19269			ok
4	Blank Spike	P19270			ok
5	13827ASP-87992	P19271		1:10Dil	NG RR MeOH
6	87997	P19272		1:10Dil	ok
7	88001	P19273		Sg	ok
8	88001MS	P19274			ok
9	88001MSD	P19275			ok
10	88002	P19276			ok
11	88003	P19277			ok
12	88004	P19278			ok
13	88005	P19279			ok
14	88006	P19280			Isd Lm RR 1:10
15	13827ASP-88007	P19281			ok
16	88007MS	P19282			OK 106
17	88007MSD	P19283			OK ↓
18					
19					
20					

Start Date: 10/25/99 End Date: 10/26/99 Analyst A. f Review By: A. f

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1102	Iscl	V1103
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	MeH _u	V21006CS.M

1732941
1181098
772348

SR #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19301			ok 5:02pm
2	SOPPB CCC	P19302	8260/s	5g	ok
3	SOPPB CCC	P19303			not needed
4	Pro BLANK	P19304			ok
5	BLANK SPIKE	P19305			ok
6	13827ASP-88009	P19306		1:10D	ok w/ PM25g
7	88013	P19307			ok
8	88020	P19308			ok
9	13835NJ-88550	P19309		5g	
10	88551	P19310			
11	88552	P19311			
12	88553	P19312			
13	88554	P19313			
14	88555	P19314			
15	88556	P19315			
16	88557	P19316			
17	88558	P19317			
18					
19					
20					

Start Date: 10/9/99 End Date: / / Analyst: Review By:

<u>STD. NAME</u>	<u>STD REF. #:</u>	<u>STD NAME</u>	<u>STD REF. #:</u>
CCC	—	Spike Std.	V1091
Surrogate Stds.	V1088	ISD	V1087
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	V1089, V1090	METH	V31009 CW.M

<u>SR. #:</u>	<u>Sample ID</u>	<u>Data File Name</u>	<u>Method #:</u>	<u>Run Information</u>	<u>Comment</u>
1	BFB	M12953			OK 8:04
2	200 PPB ICC	M12954			OK
3	100 PPB ICC	M12955		METH	OK
4	50 PPB ICC	M12956		V31009 CW.M	OK
5	20 PPB ICC	M12957			OK
6	5 PPB ICC	M12958			OK
7	5 PPB ICC	M12959			OK
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Start Date: 10/25/99 End Date: 10/29/99 Analyst Amil Review By: A-1

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1088	1cd	V1087
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	Heh	V31009CW.M

 2219784
1955812
924790

SR #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M13332			ok 8:20am
2	SOPPB CLC	M13333	8260/B		ok
3	PLO BLANK	M13334			ok
4	13849NT-88216	M13335		1:50J	ok
5	88220	M13336		1:10DJ	ok
6	13827ASP-88009	M13337		4g/10ml MeOH 100ul/Sul	ok
7	88010	M13338			ok
8	88011-	M13339			ok
9	88012	M13340			ok
10	88014	M13341			ok
11	88015	M13342			ok
12	88016	M13343			ok
13	88018	M13344			ok
14					
15					
16					
17					
18					
19					
20					

VOA

CASE NARRATIVE SUPPORT DOCUMENTProject No.: 13827ASPDate: 10/26/99Project Name: IMPACT "ENVIRONMENTAL"Analyst: AMIT VAIDYA

Supervisor: _____

Department Head: _____

QC Review by: _____

<u>LAB SAMPLING</u>		<u>COMMENTS</u>
88029	+	Due to the bad matrix of the sample, & low internal standard recovery was observed and therefore reanalyzed as a 10x dilution
88010	}	These samples had to be analyzed as medium level solids due to the bad matrix.
88011		
88012		
88014		
88015		
88016		
88018		
88013	}	Samples had to be analyzed as 10x dilutions
88020		
<u>GENERAL COMMENTS:</u> 8260B <i>A. T. Vaidya</i>		

NOTES:

1. Please report unusual (e.g. different matrix, analytical problems, etc.) items.
2. For no unusual items, please write 'NONE.'
3. Return the completed document to QC Department with the analytical data.

200177

SHIPPING AND RECEIVING DOCUMENTATION

000478



CHAIN OF CUSTODY RECORD

☐ 110 Route 4
Englewood, NJ 07631
(201) 567-6868
Fax (201) 567-1333

☐ 205 Campus Plaza 1
Edison, NJ 08837
(732) 225-4111
Fax (732) 225-4110

☐ 515 Route 9 South
Barnegat, NJ 08005
(609) 698-0199
Fax (609) 698-0910

CHEMTECH JOB NO.:

CHEMTECH QUOTE NO.:

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Impact Environmental

ADDRESS: 1 Village Plaza

CITY: Kings Park STATE: NY ZIP: 11754

ATTENTION: Kevin Kleaka

PHONE: (516) 269-8800 FAX: (516) 269-1599

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *

* TO BE APPROVED BY CHEMTECH

** NORMAL TURNAROUND TIME - 14 DAYS

PROJECT INFORMATION

PROJECT NAME: #1-30-0435

PROJECT NO.: 98-335, Westbury

PROJECT MANAGER: Richard Parrish

LOCATION: 299 Main St., Westbury, NY

PHONE: _____ FAX: _____

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☒ NYS ASP "B"
☐ NJ REDUCED ☐ NYS ASP "A"
☐ NJ CLP ☐ EDD
☐ EDD FORMAT: _____

BILLING INFORMATION

BILL TO: Client PO #:

ADDRESS:

CITY: _____ STATE: _____ ZIP: _____

ATTENTION: _____ PHONE: _____

ANALYSIS

8370 (STRE)									
1	2	3	4	5	6	7	8	9	

CHEMTECH SAMPLE ID	SAMPLE MATRIX	SAMPLE TYPE	SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	S	X	10/14/99	10:18	2	X									
2.	S	X	10/14/99	10:36	2	X									
3.	S	X	10/14/99	10:55	2	X									
4.	S	X	10/14/99	11:05	2	X									
5.	S	X	10/14/99	12:00	2	X									
6.	S	X	10/14/99	12:15	2	X									
7.	S	X	10/14/99	12:01	2	X									
8.	S	X	10/14/99	12:00	2	X									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:	RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. <u>K. Kleaka</u>	10/18/99	1. <u>[Signature]</u>	10/18/99	2. <u>[Signature]</u>	10/18/99	2. <u>[Signature]</u>	10/18/99	3. <u>[Signature]</u>	10/18/99	3. <u>[Signature]</u>	10/18/99
Comments: Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler <u>4°C</u>				Shipment Complete: Yes ☐ No ☐				Page _____ of _____			

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Impact Environmental

ADDRESS: 1 Village Plaza

CITY: Kings Park STATE: NY ZIP: 11754

ATTENTION: Kevin Kleaka

PHONE: (516) 269-8800 FAX: (516) 269-1599

DATA TURNAROUND INFORMATION

FAX: _____ DAYS*
HARD COPY: _____ DAYS*
EED: _____ DAYS*
* TO BE APPROVED BY CHEMTECH
** NORMAL TURNAROUND TIME - 14 DAYS

PROJECT INFORMATION

PROJECT NAME: #1-30-0435

PROJECT NO.: 98-335, Westbury

PROJECT MANAGER: Richard Parrish

LOCATION: 299 Main St., Westbury, NY

PHONE: — FAX: —

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☒ NY'S ASP "B"
☐ NJ REDUCED ☐ NY'S ASP "A"
☐ NJ CLP ☐ EDD
☐ EDD FORMAT: _____

BILLING INFORMATION

BILL TO: Client PO #:

ADDRESS:

CITY: STATE: ZIP:

ATTENTION: PHONE:

ANALYSIS

ANALYSIS	1	2	3	4	5	6	7	8	9
8021 (Grass)									
8370 (Stems)									

CHEMTECH SAMPLE ID

SAMPLE IDENTIFICATION

1.	335-GP-018-SS8
2.	335-GP-018-SS12
3.	335-GP-019-SS8
4.	335-GP-019-SS12
5.	335-GP-020-SS8
6.	335-GP-020-SS12
7.	~~335-GP-020-SS12~~
8.	

SAMPLE TYPE

COMPOS

DATE

TIME

OF BOTTLES

SAMPLE COLLECTION

DATE

TIME

OF BOTTLES

SAMPLE COLLECTION

DATE

TIME

OF BOTTLES

SAMPLE COLLECTION

DATE

TIME

OF BOTTLES

SAMPLE COLLECTION

DATE

TIME

OF BOTTLES

SAMPLE COLLECTION

DATE

TIME

OF BOTTLES

SAMPLE COLLECTION

DATE

TIME

OF BOTTLES

SAMPLE COLLECTION

DATE

TIME

COMMENTS

← Specify Preservatives
A - HCl B - HNO₃
C - H₂SO₄ D - NaOH
E - ICE F - Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY: <u>[Signature]</u>	DATE/TIME: <u>10/15/99</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>10/15/99</u>
RELINQUISHED BY: <u>[Signature]</u>	DATE/TIME: <u>10/15/99</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>10/15/99</u>
RELINQUISHED BY: <u>[Signature]</u>	DATE/TIME: <u>10/15/99</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>10/15/99</u>

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler 4°C
Comments:

Page _____ of _____ Shipment Complete: Yes _____ No _____



ANALAB/ICM DIVISION

205 Campus Plaza 1 • Raritan Center • Edison, NJ • 08837
Tel: 732.225.4111 Fax: 732.225.4110

DATA PACKAGE FOR SEMIVOLATILE ORGANICS PART II

**PROJECT NAME: # 1-30-0435
PROJECT # 98-335, WESTBURY**

**IMPACT ENVIRONMENTAL
1 VILLAGE PLAZA
KING PARK NY 11754
916-269-8800**

**CHEMTECH PROJECT
ATTENTION**

**13827ASP
KEVIN KLEAKA**

**PART I VOLATILE ORGANICS
PART II SEMIVOLATILE ORGANICS**

CASE NARRATIVE-SEMIVOLATILES**Impact Environmental****Project Name: # 1-30-0435****Project # 98-335, Westbury****Chemtech Project # 13827ASP****A. Number of Samples and Date of Receipt**

14 Soil samples were delivered to the laboratory intact on 10/18/99.

B. Parameters

Test requested was Volatile Organics & Semivolatile Organics. This data package contains results for Semivolatile Organics.

C. Analytical Techniques:

The analysis of Semivolatile Organics is based Method 8270. The samples were analyzed on instrument BNA2 using GC Column RTX-5 which is 30 meters, 0.25mm ID, 0.25mm df (crossbond 5% diphenyl-95% dimethyl polysiloxane).

D. QA/ QC Samples:

Surrogate Recoveries were within QC limits. Blank Spike recoveries met QC criteria. MS/MSD recoveries and RPDs met requirements. Holding Times were met. Tuning Checks met requirements. Internal Standard Areas did not meet requirements. Retention Times were acceptable. Calibrations met requirements. Blank analyses did not indicate the presence of contamination.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature

Name: Divyajit Mehta

Date:

11/11/99Title: Lab Manager**100000**



ANALAB/ICM DIVISION

205 Campus Plaza 1 • Raritan Center • Edison, NJ • 08837
Tel: 732.225.4111 Fax: 732.225.4110

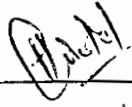
COVER PAGE

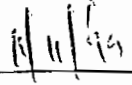
Lab Name: Chemtech Consulting Group
Lab Code: CHEM Project No.: 13827ASP

Client: IMPACT ENVIRONMENTAL

Client Sample No.	Lab Sample ID
GP-014-SS8	88007
GP-014-SS12	88008
GP-015-SS8	88009
GP-015-SS12	88010
GP-016-SS8	88011
GP-016-SS12	88012
GP-017-SS8	88013
GP-017-SS12	88014
GP-018-SS8	88015
GP-018-SS12	88016
GP-019-SS8	88017
GP-019-SS12	88018
GP-020-SS8	88019
GP-020-SS12	88020

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designed, as verified by the following signature.

Signature:  Name: DIVYAJIT MEHTA

Date :  Title: LAB DIRECTOR

000002

DATA REPORTING QUALIFIERS - ORGANIC

For reporting results, the following "Results Qualifiers" are used:

VALUE - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates the compound was analyzed for, but was not detected. Report the minimum detection limit for the sample with the U, ie "10 U". This is not necessarily the instrument detection limit. The figure represents the minimum detection limit attainable for this particular sample based on any concentration or dilution that may have been required.

J - Indicates an estimated value. This flag is used:

- (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed).
- (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit but greater than zero. If the detection limit was 10 ug/L and a concentration of 3 ug/L was calculated, report as "3 J".

B - Indicates the analyte was found in the blank as well as the sample; report as "12 B".

E - Indicates the analyte's concentration exceeds the calibrated range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

P - This flag is used for a Pesticide/Aroclor target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

N - This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.

000003

CHEMTECH CONSULTING GROUP

SEMIVOLATILE ORGANICS DATA

000004

CHEMTECH CONSULTING GROUP

SEMIVOLATILE QC DATA

000005

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No. 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8

Level: (low/med) LOW

	SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 0 #	#	#	#	#	#	TOT OUT
01	GP-019-SS8	58	60	58						
02	GP-020-SS8	55	59	56						
03	GP-015-SS12	60	62	61						
04	GP-015-SS12MS	58	56	58						
05	GP-015-SS12MSD	58	55	58						
06	GP-014-SS8	58	60	59						
07	GP-020-SS12	66	63	61						
08	GP-017-SS8	70	49	62						
09	GP-017-SS12	63	50	61						
10	SBLK01	66	69	72						
11	BLKSPK1	56	60	58						
12	GP-015-SS8	65	61	89						
13	GP-016-SS8	61	62	94						
14	GP-016-SS12	60	62	96						
15	GP-018-SS8	67	49	88						
16	GP-018-SS12	107	47	87						
17	GP-019-SS12	63	52	76						
18	GP-014-SS12	64	65	71						
19	GP-015-SS8RE	67	63	84						
20	GP-016-SS8RE	62	63	101						
21	GP-016-SS12RE	61	64	95						
22	GP-018-SS8RE	74	49	75						
23	GP-018-SS12RE	69	48	74						
24	GP-019-SS12RE	67	52	64						
25										
26										
27										
28										
29										
30										

S1 (NBZ) = Nitrobenzene-d5
S2 (FBP) = 2-Fluorobiphenyl
S3 0 = Terphenyl-d14

QC LIMITS
(23-120)
(30-115)
(18-137)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

000006

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Matrix Spike - Sample No.: GP-015-SS12Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Acenaphthene	3500	0	2300	66	(31-137)
Pyrene	3500	0	2300	66	(35-142)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
Acenaphthene	3500	2300	66	0	19 (31-137)
Pyrene	3500	2400	69	4	36 (35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

Comments: _____

000007

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Matrix Spike - Sample No.: BLANK SPIKELevel: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Acenaphthene	3300	0	2300	70	(31-137)
Pyrene	3300	0	2300	70	(35-142)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

Comments: _____

4B
SEMIVOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

SBLK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS

Lab File ID: S21986.D

Lab Sample ID: SBLK01

Instrument ID: BNA2

Date Extracted: 10/19/99

Matrix: (soil/water) SOIL

Date Analyzed: 11/7/99

Level: (low/med) LOW

Time Analyzed: 1108

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	GP-019-SS8	O88017	S21961.D	11/05/99
02	GP-020-SS8	O88019	S21962.D	11/05/99
03	GP-015-SS12	O88010	S21963.D	11/05/99
04	GP-015-SS12MS	O88010MS	S21964.D	11/05/99
05	GP-015-SS12MSD	O88010SD	S21965.D	11/05/99
06	GP-014-SS8	O88007	S21966.D	11/05/99
07	GP-020-SS12	O88020	S21967.D	11/05/99
08	GP-017-SS8	O88013	S21968.D	11/05/99
09	GP-017-SS12	O88014	S21969.D	11/05/99
10	BLKSPK1	BLKSPK1	S21987.D	11/07/99
11	GP-015-SS8	O88009	S21989.D	11/07/99
12	GP-016-SS8	O88011	S21990.D	11/07/99
13	GP-016-SS12	O88012	S21991.D	11/07/99
14	GP-018-SS8	O88015	S21992.D	11/07/99
15	GP-018-SS12	O88016	S21993.D	11/07/99
16	GP-019-SS12	O88018	S21994.D	11/07/99
17	GP-014-SS12	O88008	S22005.D	11/08/99
18	GP-015-SS8RE	O88009RE	S22006.D	11/08/99
19	GP-016-SS8RE	O88011RE	S22007.D	11/08/99
20	GP-016-SS12RE	O88012RE	S22008.D	11/08/99
21	GP-018-SS8RE	O88015RE	S22009.D	11/08/99
22	GP-018-SS12RE	O88016RE	S22010.D	11/08/99
23	GP-019-SS12RE	O88018RE	S22011.D	11/08/99
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

000009

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13827ASP Site: Location: Group: GP-014-SS8
 Lab File ID: S21886.D DFTPP Injection Date: 10/30/99
 Instrument ID: BNA2 DFTPP Injection Time: 1946

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	36.3
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Mass 69 relative abundance	47.6
70	Less than 2.0% of mass 69	0.2 (0.3)1
127	40.0 - 60.0% of mass 198	48.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	13.5
365	Greater than 1.00% of mass 198	1.1
441	Present, but less than mass 443	6.8
442	Greater than 40.0% of mass 198	51.0
443	17.0 - 23.0% of mass 442	9.6 (18.9)2

1-Value is % mass 69

2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD020	SSTD020	S21887.D	10/30/99	2008
02	SSTD050	SSTD050	S21888.D	10/30/99	2058
03	SSTD080	SSTD080	S21889.D	10/30/99	2148
04	SSTD120	SSTD120	S21890.D	10/30/99	2238
05	SSTD160	SSTD160	S21891.D	10/30/99	2329
06					
07					
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20					
21					
22					

000010

**SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)**

Lab Name : CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID: S21984.DDFTPP Injection Date: 11/7/99Instrument ID: BNA2DFTPP Injection Time: 0954

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.7
68	Less than 2.0% of mass 69	0.1 (0.3)1
69	Mass 69 relative abundance	48.1
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	48.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.3
275	10.0 - 30.0% of mass 198	14.0
365	Greater than 1.00% of mass 198	1.1
441	Present, but less than mass 443	6.9
442	Greater than 40.0% of mass 198	48.4
443	17.0 - 23.0% of mass 442	9.0 (18.5)2

1-Value is % mass 69

2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD080	SSTD0803	S21985.D	11/7/99	1018
02	SBLK01	SBLK01	S21986.D	11/7/99	1108
03	BLKSPK1	BLKSPK1	S21987.D	11/7/99	1158
04	GP-015-SS8	O88009	S21989.D	11/7/99	1339
05	GP-016-SS8	O88011	S21990.D	11/7/99	1429
06	GP-016-SS12	O88012	S21991.D	11/7/99	1519
07	GP-018-SS8	O88015	S21992.D	11/7/99	1609
08	GP-018-SS12	O88016	S21993.D	11/7/99	1659
09	GP-019-SS12	O88018	S21994.D	11/7/99	1749
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

000011

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID: S22000.DDFTPP Injection Date: 11/8/99Instrument ID: BNA2DFTPP Injection Time: 0958

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	50.7
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	48.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	13.7
365	Greater than 1.00% of mass 198	1.0
441	Present, but less than mass 443	7.1
442	Greater than 40.0% of mass 198	45.4
443	17.0 - 23.0% of mass 442	8.6 (18.9)2

1-Value is % mass 69

2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD080	SSTD0804	S22002.D	11/8/99	1118
02	GP-014-SS12	O88008	S22005.D	11/8/99	1405
03	GP-015-SS8RE	O88009RE	S22006.D	11/8/99	1455
04	GP-016-SS8RE	O88011RE	S22007.D	11/8/99	1546
05	GP-016-SS12RE	O88012RE	S22008.D	11/8/99	1637
06	GP-018-SS8RE	O88015RE	S22009.D	11/8/99	1834
07	GP-018-SS12RE	O88016RE	S22010.D	11/8/99	1925
08	GP-019-SS12RE	O88018RE	S22011.D	11/8/99	2015
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

000012

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS

Lab File ID: S21956.D

DFTPP Injection Date: 11/5/99

Instrument ID: BNA2

DFTPP Injection Time: 0924

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	41.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	50.3
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	40.0 - 60.0% of mass 198	49.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	13.4
365	Greater than 1.00% of mass 198	1.1
441	Present, but less than mass 443	6.9
442	Greater than 40.0% of mass 198	45.9
443	17.0 - 23.0% of mass 442	8.3 (18.2)2

1-Value is % mass 69

2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD080	SSTD0802	S21957.D	11/5/99	0946
02	GP-019-SS8	O88017	S21961.D	11/5/99	1310
03	GP-020-SS8	O88019	S21962.D	11/5/99	1401
04	GP-015-SS12	O88010	S21963.D	11/5/99	1451
05	GP-015-SS12MS	O88010MS	S21964.D	11/5/99	1542
06	GP-015-SS12MSD	O88010SD	S21965.D	11/5/99	1633
07	GP-014-SS8	O88007	S21966.D	11/5/99	1723
08	GP-020-SS12	O88020	S21967.D	11/5/99	1814
09	GP-017-SS8	O88013	S21968.D	11/5/99	1904
10	GP-017-SS12	O88014	S21969.D	11/5/99	1955
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

000013

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): S21957.DDate Analyzed: 11/5/99Instrument ID: BNA2Time Analyzed: 0946

	IS1 (DCB) AREA #	RT #	IS2 (NAP) AREA #	RT #	IS3 (ACE) AREA #	RT #
12 HOUR STD	643810	8.44	2528733	12.13	1185172	17.56
UPPER LIMIT	1287620	8.94	5057466	12.63	2370344	18.06
LOWER LIMIT	321905	7.94	1264367	11.63	592586	17.06
SAMPLE NO.						
01 GP-019-SS8	473394	8.44	1806593	12.12	803453	17.56
02 GP-020-SS8	907812	8.48	3489571	12.12	1553493	17.56
03 GP-015-SS12	483084	8.45	1764539	12.17	826155	17.59
04 GP-015-SS12MS	592940	8.48	2134176	12.19	1060296	17.61
05 GP-015-SS12MSD	493199	8.48	1834163	12.17	891499	17.58
06 GP-014-SS8	624485	8.46	2468879	12.12	1129266	17.55
07 GP-020-SS12	565789	8.46	1999662	12.16	846972	17.66
08 GP-017-SS8	502569	8.47	1765168	12.20	815006	17.74
09 GP-017-SS12	503079	8.49	1755845	12.24	878808	17.78
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NAP) = Naphthalene-d8

IS3 (ACE) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

000014

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): S21957.DDate Analyzed: 11/5/99Instrument ID: BNA2Time Analyzed: 0946

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	2162454	22.09	1515416	30.41	1403958	34.55
UPPER LIMIT	4324908	22.59	3030832	30.91	2807916	35.05
LOWER LIMIT	1081227	21.59	757708	29.91	701979	34.05
SAMPLE NO.						
01 GP-019-SS8	1457992	22.10	976805	30.38	896237	34.52
02 GP-020-SS8	2843881	22.09	2006956	30.40	1788194	34.54
03 GP-015-SS12	1524170	22.11	1008111	30.41	812900	34.56
04 GP-015-SS12MS	1857105	22.14	1236599	30.43	958451	34.58
05 GP-015-SS12MSD	1555498	22.13	1007864	30.41	805728	34.56
06 GP-014-SS8	2016044	22.10	1335288	30.40	1029380	34.56
07 GP-020-SS12	1489808	22.22	1131114	30.44	895493	34.57
08 GP-017-SS8	1227278	22.29	992398	30.45	730125	34.58
09 GP-017-SS12	1164405	22.30	972066	30.45	705927	34.57
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

000015

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): S21985.DDate Analyzed: 11/7/99Instrument ID: BNA2Time Analyzed: 1018

	IS1 (DCB)		IS2 (NAP)		IS3 (ACE)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	601149	8.41	2345207	12.11	1079043	17.54
UPPER LIMIT	1202298	8.91	4690414	12.61	2158086	18.04
LOWER LIMIT	300575	7.91	1172604	11.61	539522	17.04
SAMPLE NO.						
01 SBLK01	588840	8.40	2240400	12.09	973740	17.53
02 BLKSPK1	547438	8.42	2197634	12.10	965207	17.53
03 GP-015-SS8	534712	8.42	1878928	12.16	839162	17.59
04 GP-016-SS8	528991	8.42	1843173	12.14	796588	17.62
05 GP-016-SS12	543832	8.43	1968128	12.13	892011	17.58
06 GP-018-SS8	532075	8.45	1775078	12.23	842957	17.70
07 GP-018-SS12	405068	8.46	1519123	12.32	722203	17.76
08 GP-019-SS12	500951	8.46	1739956	12.21	761233	17.71
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NAP) = Naphthalene-d8

IS3 (ACE) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

000516

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): S21985.DDate Analyzed: 11/7/99Instrument ID: BNA2Time Analyzed: 1018

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
12 HOUR STD	1837453	22.07	1222481	30.38	1089106	34.51
UPPER LIMIT	3674906	22.57	2444962	30.88	2178212	35.01
LOWER LIMIT	918727	21.57	611241	29.88	544553	34.01
SAMPLE NO.						
01 SBLK01	1597821	22.05	905154	30.33	703145	34.48
02 BLKSPK1	1654034	22.06	1007875	30.34	808512	34.49
03 GP-015-SS8	1380166	22.12	533415 *	30.41	275349 *	34.56
04 GP-016-SS8	1254992	22.16	374357 *	30.42	149611 *	34.59
05 GP-016-SS12	1361164	22.12	394470 *	30.41	178651 *	34.58
06 GP-018-SS8	1373870	22.17	605854 *	30.40	321447 *	34.52
07 GP-018-SS12	1275134	22.19	548995 *	30.43	289395 *	34.54
08 GP-019-SS12	1159528	22.25	589421 *	30.40	297246 *	34.51
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): S22002.DDate Analyzed: 11/8/99Instrument ID: BNA2Time Analyzed: 1118

	IS1 (DCB) AREA #	RT #	IS2 (NAP) AREA #	RT #	IS3 (ACE) AREA #	RT #
12 HOUR STD	438643	8.38	1738989	12.06	805881	17.48
UPPER LIMIT	877286	8.88	3477978	12.56	1611762	17.98
LOWER LIMIT	219322	7.88	869495	11.56	402941	16.98
SAMPLE NO.						
01 GP-014-SS12	495204	8.40	1829564	12.07	821611	17.51
02 GP-015-SS8RE	539467	8.41	1891498	12.12	870656	17.56
03 GP-016-SS8RE	503241	8.40	1809677	12.11	791929	17.57
04 GP-016-SS12RE	490487	8.40	1800163	12.09	842855	17.52
05 GP-018-SS8RE	461654	8.41	1482839	12.16	709962	17.66
06 GP-018-SS12RE	424410	8.43	1493145	12.24	663581	17.69
07 GP-019-SS12RE	485869	8.43	1655332	12.15	747981	17.66
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4

IS2 (NAP) = Naphthalene-d8

IS3 (ACE) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

000018

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13827ASP

Site: _____

Location: _____

Group: GP-014-SS8Lab File ID (Standard): S22002.DDate Analyzed: 11/8/99Instrument ID: BNA2Time Analyzed: 1118

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1473232	22.01	1032155	30.33	873535	34.46
UPPER LIMIT	2946464	22.51	2064310	30.83	1747070	34.96
LOWER LIMIT	736616	21.51	516078	29.83	436768	33.96
SAMPLE NO.						
01 GP-014-SS12	2797812	22.04	1658445	30.39	827912	34.57
02 GP-015-SS8RE	1595346	22.08	781525	30.39	252735 *	34.53
03 GP-016-SS8RE	1390275	22.11	525972	30.41	152788 *	34.55
04 GP-016-SS12RE	1460776	22.06	590867	30.40	169515 *	34.54
05 GP-018-SS8RE	1295128	22.11	742418	30.36	348994 *	34.49
06 GP-018-SS12RE	1282199	22.13	729715	30.39	302060 *	34.50
07 GP-019-SS12RE	1202506	22.21	815838	30.37	361655 *	34.48
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10

IS5 (CRY) = Chrysene-d12

IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.

* Values outside of QC limits.

000019

CHEMTECH CONSULTING GROUP

SEMIVOLATILE SAMPLE DATA

000020

1B

GP-014-SS8

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-014-SS8

Lab Sample ID: O88007

Lab File ID: S21966.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/5/99

Dilution Factor: 1.0

N

pH:

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

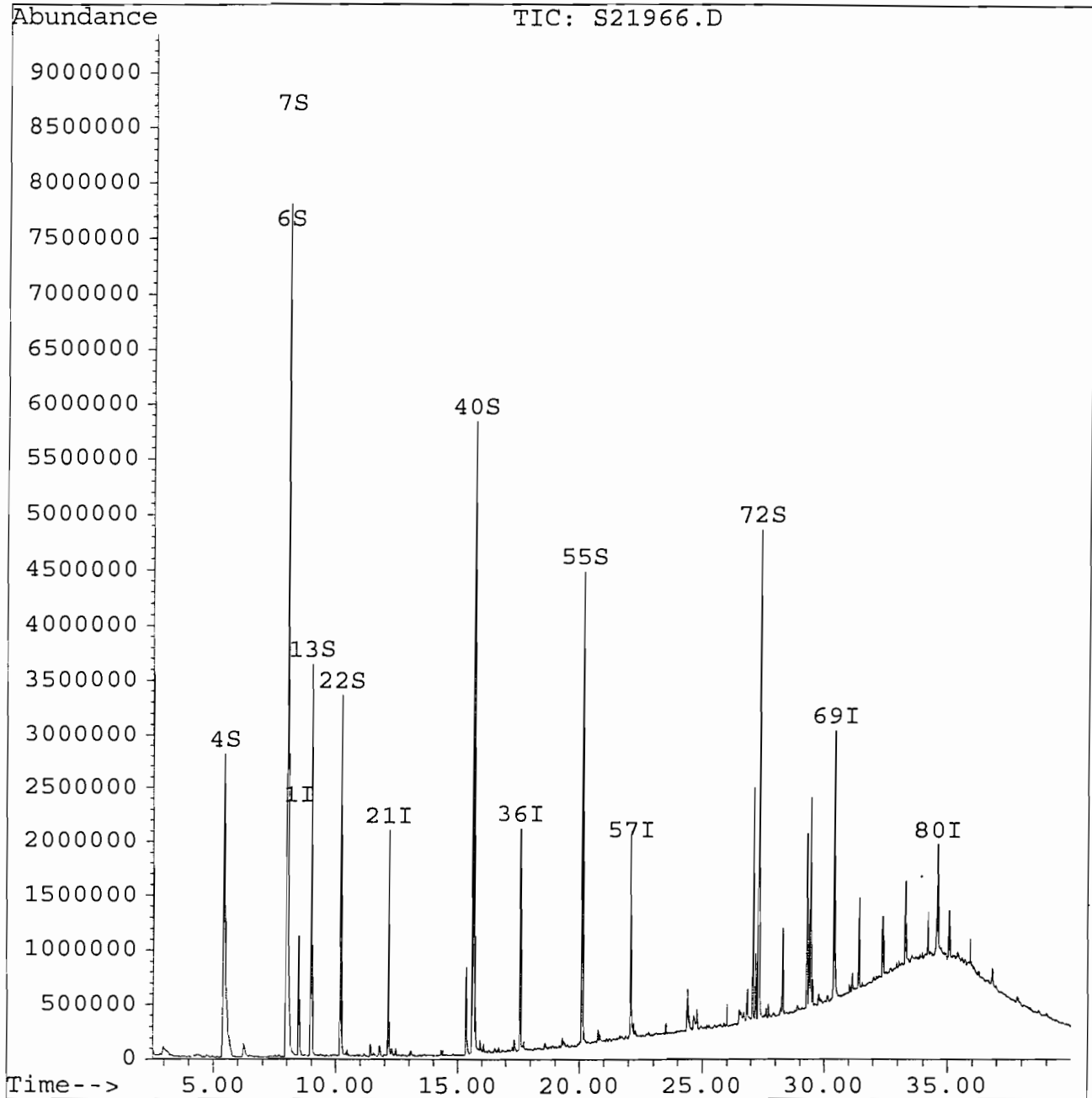
000021

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21966.D
Acq Time : 5 Nov 99 5:23 pm
Sample : 13827ASP-88007-QB506
Misc :
Quant Time: Nov 9 13:30 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Mon Nov 01 08:09:54 1999
Response via : Multiple Level Calibration



000022

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21966.D
 Acq Time : 5 Nov 99 5:23 pm
 Sample : 13827ASP-88007-QB506
 Misc :
 Quant Time: Nov 9 13:30 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Mon Nov 01 08:09:54 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Mi)
1) 1,4-Dichlorobenzene-d4	8.46	152	624485	40.00	ng	-0.0
21) Naphthalene-d8	12.12	136	2468879	40.00	ng	-0.0
36) Acenaphthene-d10	17.55	164	1129266	40.00	ng	-0.0
57) Phenanthrene-d10	22.10	188	2016044	40.00	ng	-0.0
69) Chrysene-d12	30.40	240	1335288	40.00	ng	-0.1
80) Perylene-d12	34.56	264	1029380	40.00	ng	-0.0

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.43	112	5622209	208.25	ng	
6) 2-Chlorophenol-d4	7.99	132	6233371	229.10	ng	
7) Phenol-d5	8.00	99	5744548	196.25	ng	
13) 1,2-Dichlorobenzene-d4	8.96	152	1872998	119.67	ng	
22) Nitrobenzene-d5	10.19	82	2776748	116.22	ng	
40) 2-Fluorobiphenyl	15.64	172	4943845	120.79	ng	
55) 2,4,6-Tribromophenol	20.11	330	1522967	255.14	ng	
72) Terphenyl-d14	27.33	244	4231393	117.68	ng	

Target Compounds

Qvalu

1B

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

GP-014-SS12

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS8

Matrix: (soil/water) SOIL

Lab Sample ID: O88008

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S22005.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: 4 decanted: (Y/N): N

Date Extracted: 10/19/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/8/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N)

N

pH:

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

000024

Quantitation Report

Data File.: D:\HPCHEM\1\DATA\B21108\S22005.D

Acq Time : 8 Nov 99 2:05 pm

Sample : 13827ASP-88008-QB506 RE

Misc :

Quant Time: Nov 10 12:17 1999

Operator: BOB

Inst : bn2

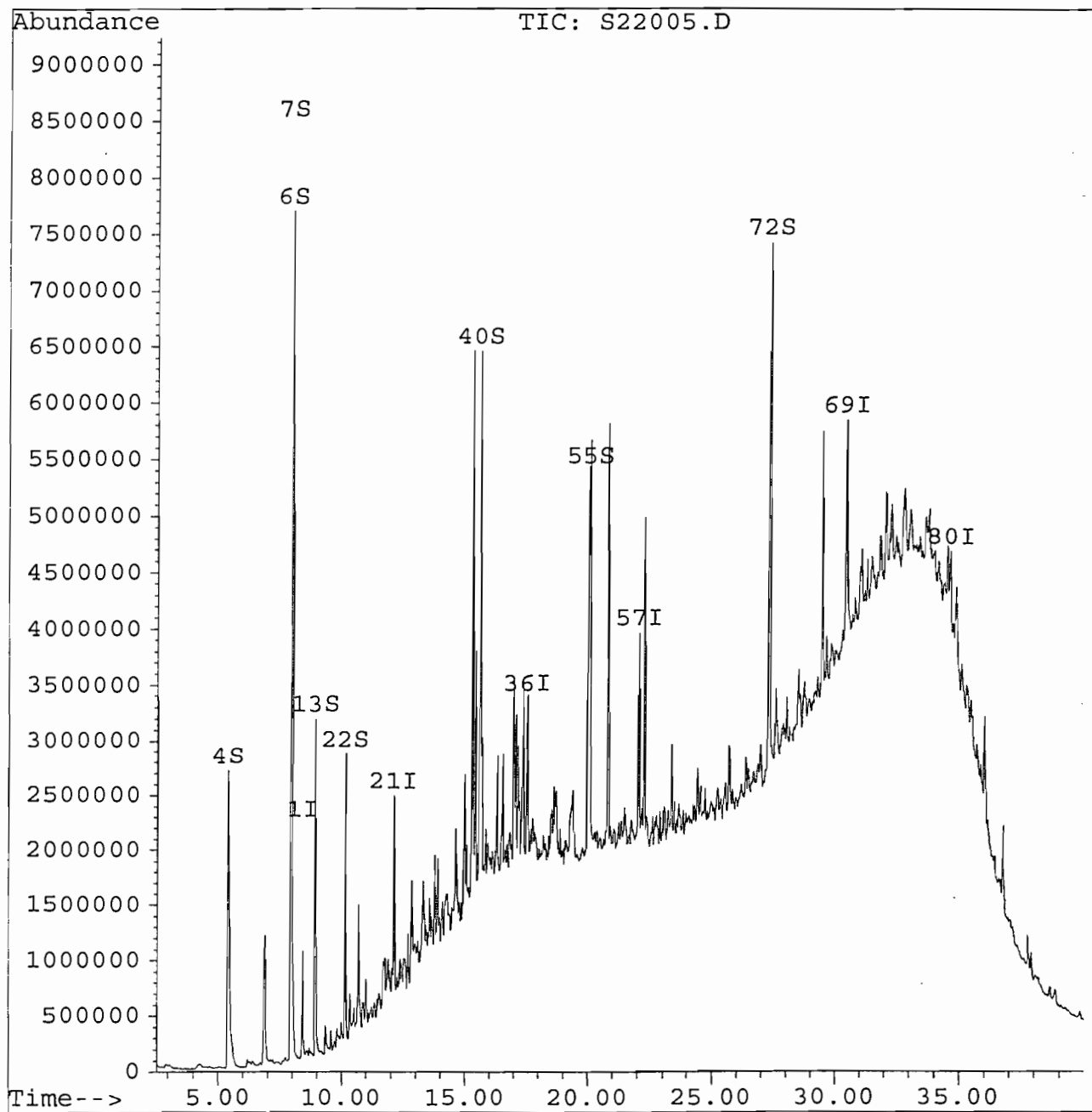
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M

Title : CLP BNA Calibration

Last Update : Wed Nov 10 09:59:44 1999

Response via : Multiple Level Calibration



000025

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22005.D
 Acq Time : 8 Nov 99 2:05 pm
 Sample : 13827ASP-88008-QB506 RE
 Misc :
 Quant Time: Nov 10 12:17 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi)
1) 1,4-Dichlorobenzene-d4	8.40	152	495204	40.00	ng	-0.1
21) Naphthalene-d8	12.07	136	1829564	40.00	ng	-0.1
36) Acenaphthene-d10	17.51	164	821611	40.00	ng	-0.1
57) Phenanthrene-d10	22.04	188	2797812	40.00	ng	-0.1
69) Chrysene-d12	30.39	240	1658445	40.00	ng	-0.1
80) Perylene-d12	34.57	264	827912	40.00	ng	-0.0

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.38	112	4989718	233.08	ng	
6) 2-Chlorophenol-d4	7.94	132	5338593	247.44	ng	
7) Phenol-d5	7.94	99	5165355	222.54	ng	
13) 1,2-Dichlorobenzene-d4	8.91	152	1548353	124.75	ng	
22) Nitrobenzene-d5	10.12	82	2266279	128.00	ng	
40) 2-Fluorobiphenyl	15.59	172	3851808	129.35	ng	
55) 2,4,6-Tribromophenol	20.02	330	1533460	353.09	ng	
72) Terphenyl-d14	27.30	244	6348763	142.16	ng	

Target Compounds Qvalu

000026

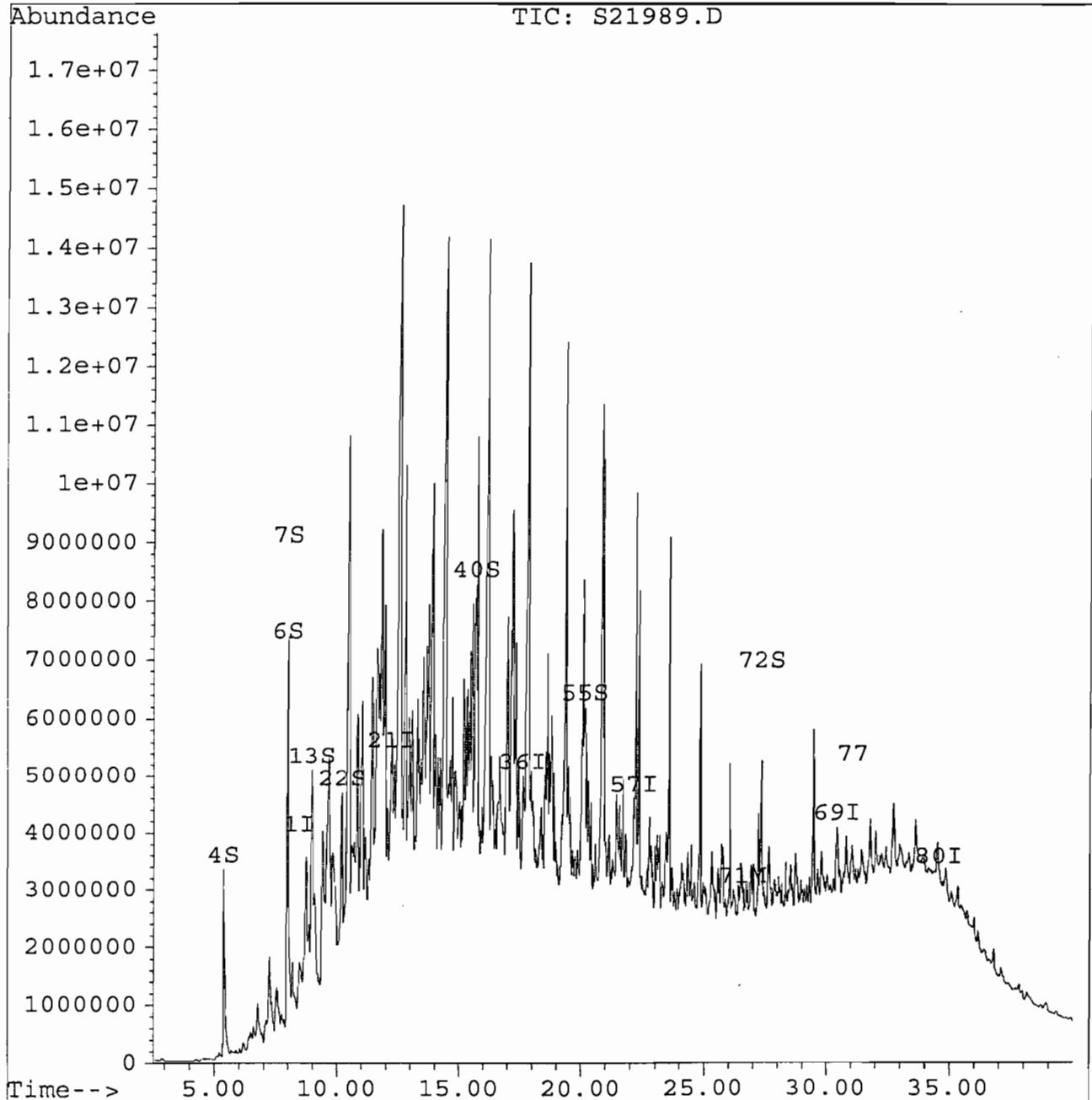
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21989.D
Acq Time : 7 Nov 99 1:39 pm
Sample : 13827ASP-88009-QB506
Misc :
Quant Time: Nov 10 12:32 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000028

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21989.D
 Acq Time : 7 Nov 99 1:39 pm
 Sample : 13827ASP-88009-QB506
 Misc :
 Quant Time: Nov 10 12:32 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

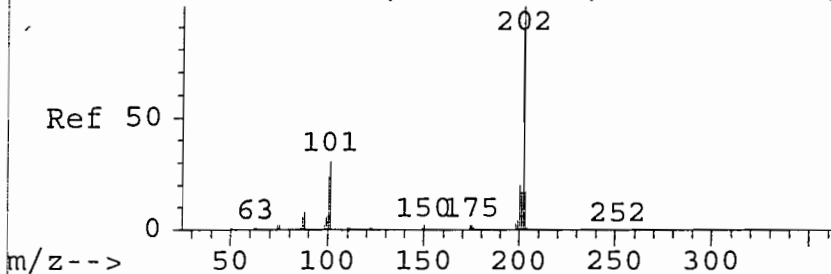
Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.42	152	534712	40.00	ng	-0.1
21) Naphthalene-d8	12.16	136	1878928	40.00	ng	-0.0
36) Acenaphthene-d10	17.59	164	839162	40.00	ng	-0.0
57) Phenanthrene-d10	22.12	188	1380166	40.00	ng	-0.0
69) Chrysene-d12	30.41	240	533415	40.00	ng	-0.1
80) Perylene-d12	34.56	264	275349	40.00	ng	-0.0
System Monitoring Compounds						%Recover
4) 2-Fluorophenol	5.36	112	5288793	228.79	ng	
6) 2-Chlorophenol-d4	7.94	132	5689483	244.22	ng	
7) Phenol-d5	7.96	99	5189719	207.07	ng	
13) 1,2-Dichlorobenzene-d4	8.93	152	1582060	118.05	ng	
22) Nitrobenzene-d5	10.16	82	2348248	129.15	ng	m
40) 2-Fluorobiphenyl	15.67	172	3721934	122.37	ng	
55) 2,4,6-Tribromophenol	20.13	330	1297946	292.61	ng	
72) Terphenyl-d14	27.32	244	2569815	178.90	ng	
Target Compounds						Qvalu
71) Pyrene	26.55	202	159493	7.02	ng	9
77) bis(2-Ethylhexyl)phthalate	31.04	149	192567	8.64	ng	9

N7

000029

AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 7.02 ng

RT: 26.55 min Scan# 1617

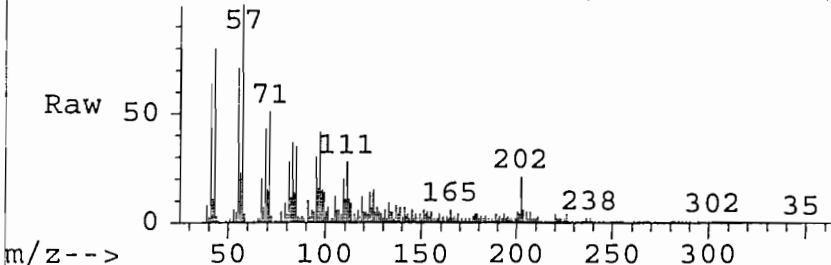
Delta R.T. -0.08 min

Lab File: S21989.D

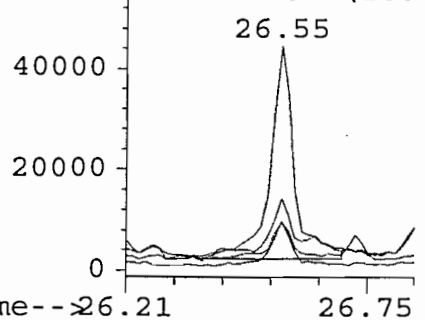
Acq: 7 Nov 99 1:39 pm

Tgt Ion:	202	Resp:	159493
Ion	Ratio	Lower	Upper
202	100		
101	32.1	15.3	45.9
200	22.1	10.1	30.3
201	21.5	8.5	25.4

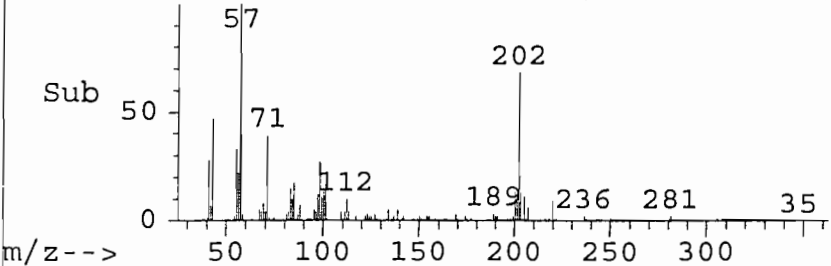
AbundanceScan 1617 (26.553 min): S21989.D (



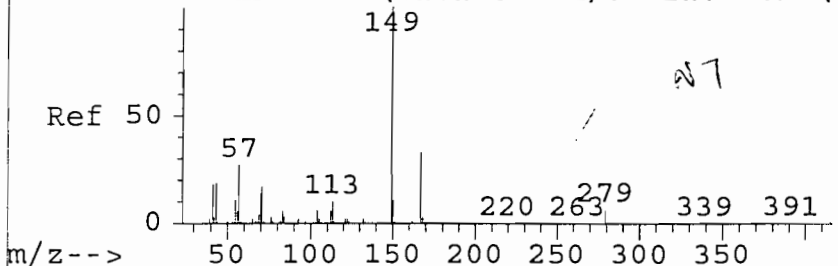
AbundanceIon 202.00 (201
Ion 101.00 (100
Ion 200.00 (199
Ion 201.00 (200



AbundanceScan 1617 (26.553 min): S21989.D (



AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 8.64 ng

RT: 31.04 min Scan# 1915

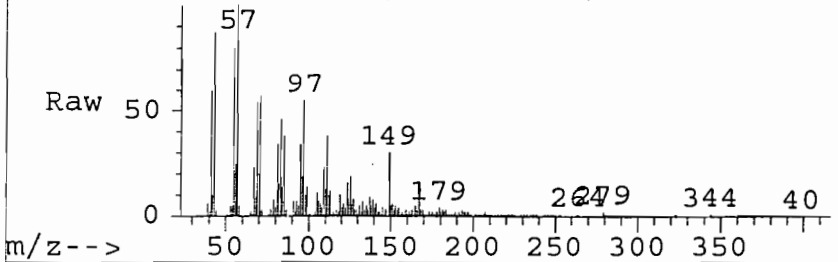
Delta R.T. -0.07 min

Lab File: S21989.D

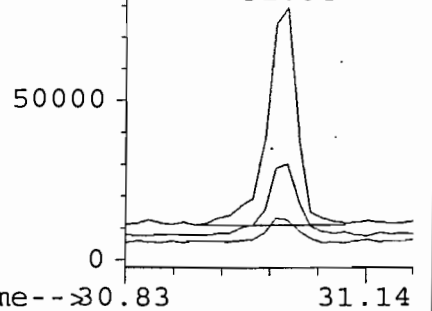
Acq: 7 Nov 99 1:39 pm

Tgt Ion:	149	Resp:	192567
Ion	Ratio	Lower	Upper
149	100		
150	16.1	5.4	16.3
167	37.9	16.5	49.4
0	0.0	0.0	0.0

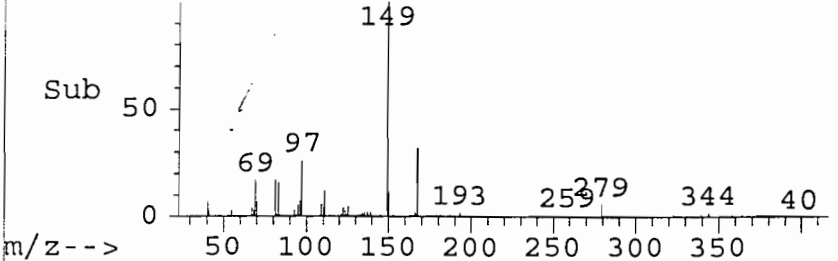
AbundanceScan 1915 (31.038 min): S21989.D (



AbundanceIon 149.00 (148
Ion 150.00 (149
Ion 167.00 (166



AbundanceScan 1915 (31.038 min): S21989.D (



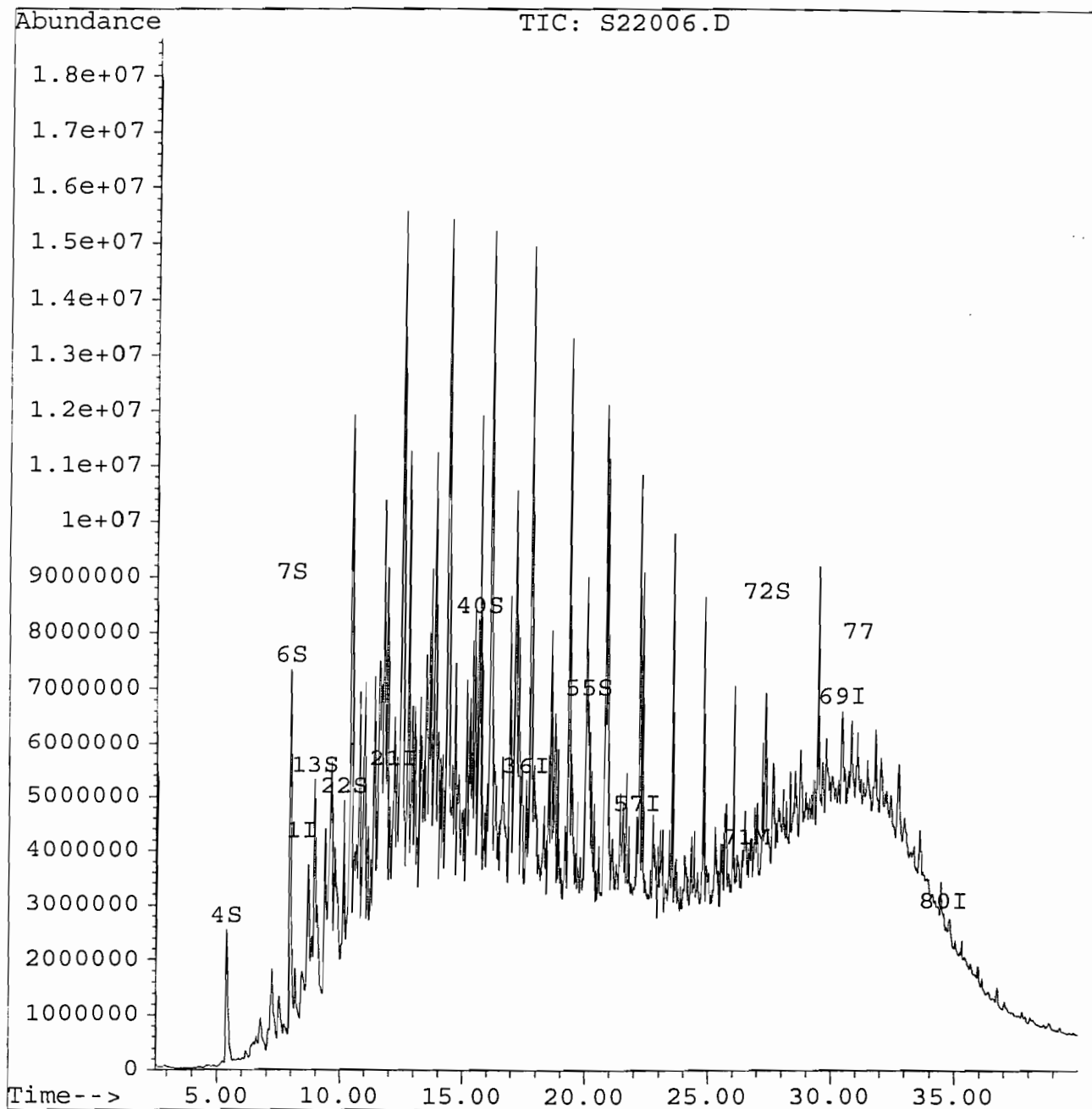
000030

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22006.D
Acq Time : 8 Nov 99 2:55 pm
Sample : 13827ASP-88009-QB506 RE
Misc :
Quant Time: Nov 10 12:20 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000032

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22006.D
Acq Time : 8 Nov 99 2:55 pm
Sample : 13827ASP-88009-QB506 RE
Misc :
Quant Time: Nov 10 12:20 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.41	152	539467	40.00	ng	-0.1
21) Naphthalene-d8	12.12	136	1891498	40.00	ng	-0.0
36) Acenaphthene-d10	17.56	164	870656	40.00	ng	-0.0
57) Phenanthrene-d10	22.08	188	1595346	40.00	ng	-0.0
69) Chrysene-d12	30.39	240	781525	40.00	ng	-0.1
80) Perylene-d12	34.53	264	252735	40.00	ng	-0.1

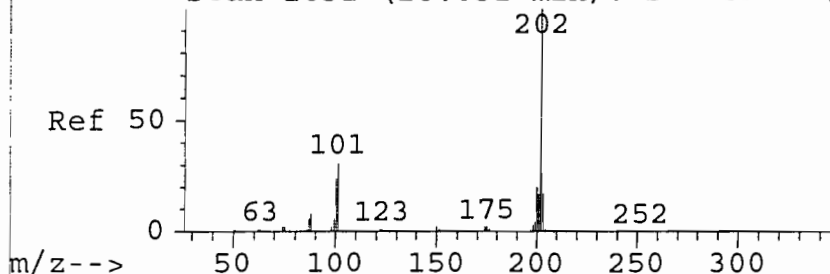
System Monitoring Compounds						%Recover
4) 2-Fluorophenol	5.38	112	5363752	229.99	ng	
6) 2-Chlorophenol-d4	7.93	132	5855232	249.12	ng	
7) Phenol-d5	7.95	99	5475050	216.53	ng	
13) 1,2-Dichlorobenzene-d4	8.93	152	1595061	117.97	ng	
22) Nitrobenzene-d5	10.14	82	2461718	134.49	ng	
40) 2-Fluorobiphenyl	15.62	172	3994035	126.57	ng	
55) 2,4,6-Tribromophenol	20.10	330	1411997	306.81	ng	
72) Terphenyl-d14	27.29	244	3534903	167.96	ng	

Target Compounds						Qvalu
71) Pyrene	26.52	202	174814	5.25	ng	9
77) bis(2-Ethylhexyl)phthalate	31.01	149	320496	9.82	ng	9

NT

000033

AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 5.25 ng

RT: 26.52 min Scan# 1613

Delta R.T. -0.11 min

Lab File: S22006.D

Acq: 8 Nov 99 2:55 pm

Tgt Ion:202 Resp: 174814

Ion Ratio Lower Upper

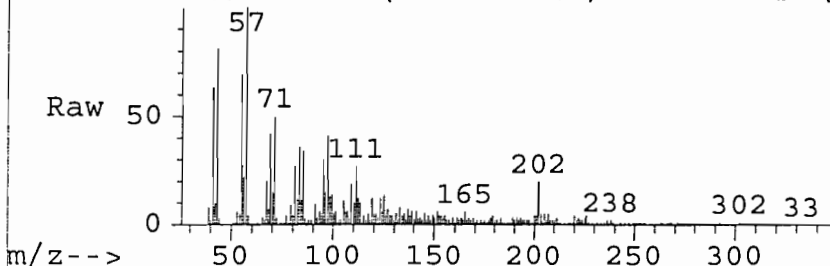
202 100

101 31.4 15.3 45.9

200 20.1 10.1 30.3

201 20.5 8.5 25.4

AbundanceScan 1613 (26.522 min): S22006.D (



AbundanceIon 202.00 (201

Ion 101.00 (100

Ion 200.00 (199

Ion 201.00 (200

80000

60000

40000

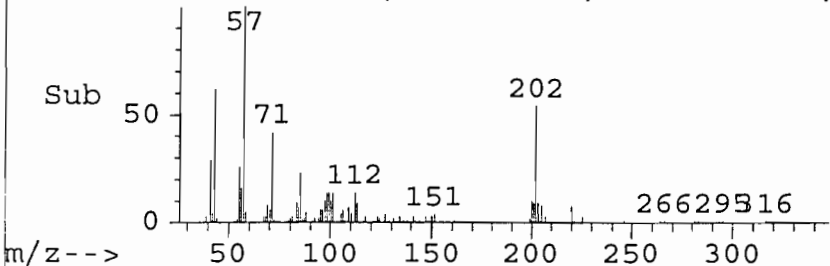
20000

0

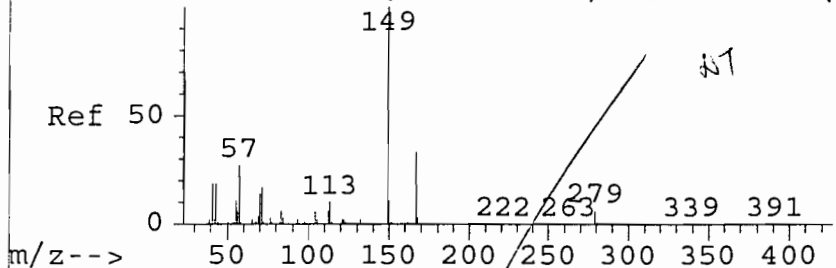
26.52

Time-->26.33 26.70

AbundanceScan 1613 (26.522 min): S22006.D (



AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 9.82 ng

RT: 31.01 min Scan# 1911

Delta R.T. -0.10 min

Lab File: S22006.D

Acq: 8 Nov 99 2:55 pm

Tgt Ion:149 Resp: 320496

Ion Ratio Lower Upper

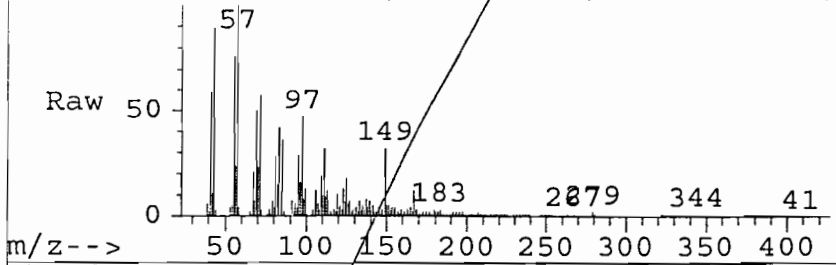
149 100

150 15.7 5.4 16.3

167 36.4 16.5 49.4

0 0.0 0.0 0.0

AbundanceScan 1911 (31.010 min): S22006.D (



AbundanceIon 149.00 (148

200000 Ion 150.00 (149

Ion 167.00 (166

150000

100000

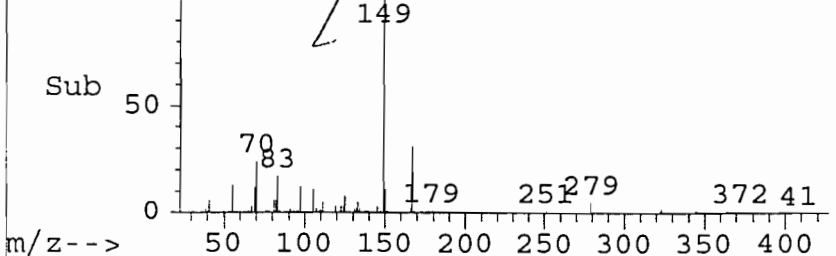
50000

0

31.01

Time-->30.77 31.16

AbundanceScan 1911 (31.010 min): S22006.D (



000034

SAMPLE NO.

GP-015-SS12

Contract: IMPACT ENVIRONMENTAL

Location: Group: GP-014-SS8

Lab Sample ID: O88010

Lab File ID: S21963.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/5/99

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

(ug/L or ug/Kg)	ug/Kg	Q

FORM I SV

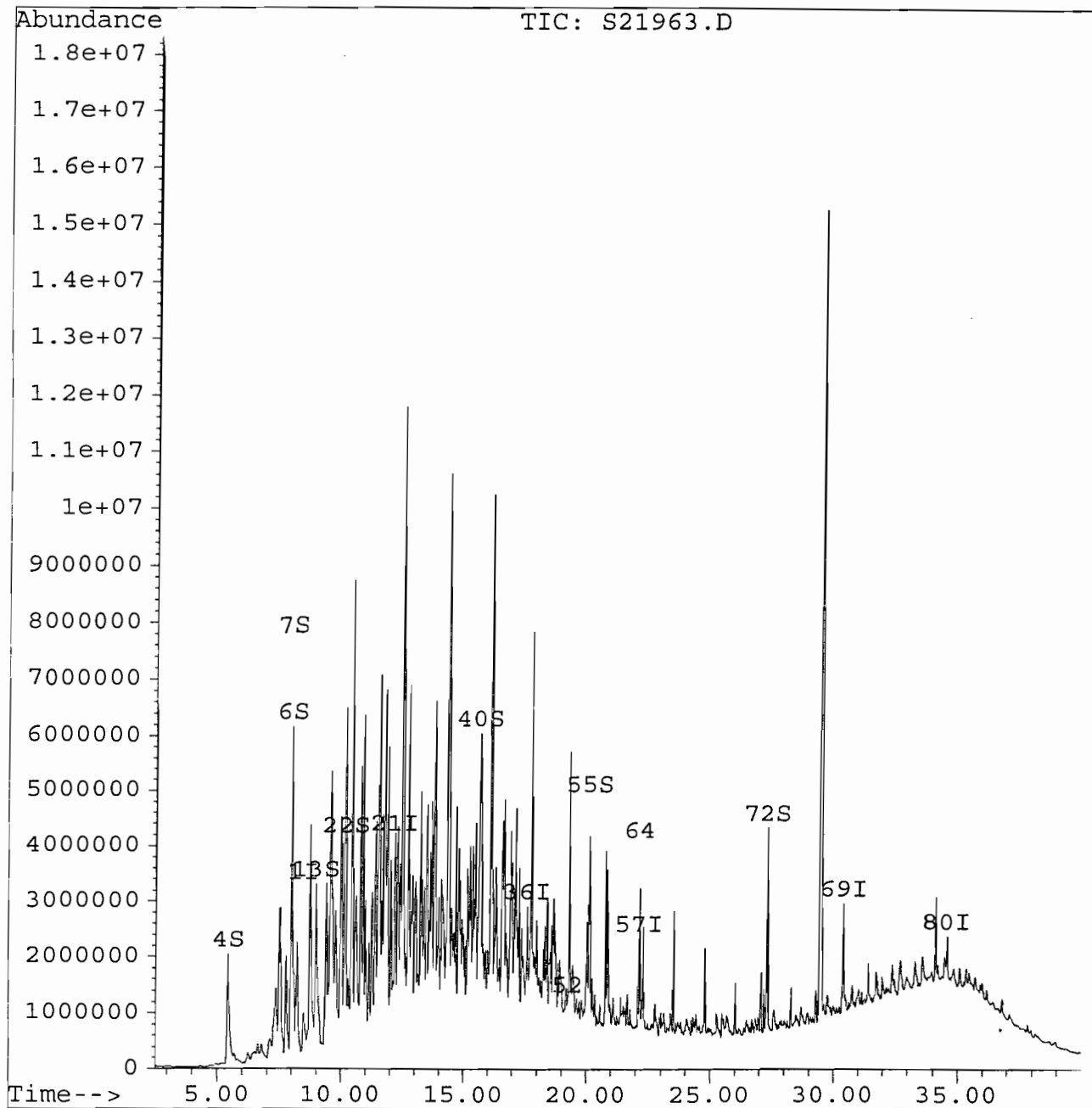
000035

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21963.D
Acq Time : 5 Nov 99 2:51 pm
Sample : 13827ASP-88010-QB506
Misc :
Quant Time: Nov 10 12:22 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000036

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21963.D
 Acq Time : 5 Nov 99 2:51 pm
 Sample : 13827ASP-88010-QB506
 Misc :
 Quant Time: Nov 10 12:22 1999

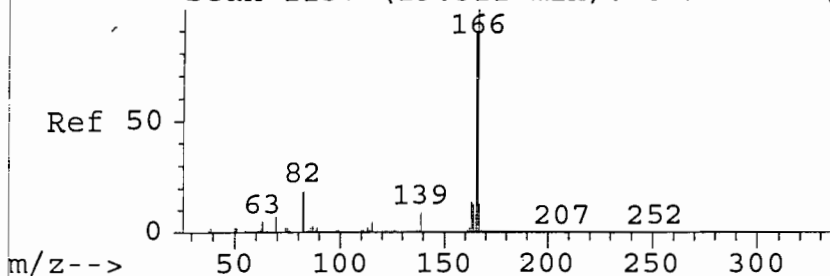
Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.45	152	483084	40.00	ng	-0.0
21) Naphthalene-d8	12.17	136	1764539	40.00	ng	-0.0
36) Acenaphthene-d10	17.59	164	826155	40.00	ng	-0.0
57) Phenanthrene-d10	22.11	188	1524170	40.00	ng	-0.0
69) Chrysene-d12	30.41	240	1008111	40.00	ng	-0.0
80) Perylene-d12	34.56	264	812900	40.00	ng	-0.0
System Monitoring Compounds						%Recover
4) 2-Fluorophenol	5.43	112	4628227	221.62	ng	
6) 2-Chlorophenol-d4	7.99	132	5057635	240.30	ng	
7) Phenol-d5	7.99	99	4792331	211.65	ng	
13) 1,2-Dichlorobenzene-d4	8.97	152	1457206	120.35	ng	
22) Nitrobenzene-d5	10.21	82	2036267	119.25	ng	
40) 2-Fluorobiphenyl	15.66	172	3704638	123.72	ng	
55) 2,4,6-Tribromophenol	20.13	330	1105729	253.20	ng	
72) Terphenyl-d14	27.32	244	3303546	121.69	ng	
Target Compounds						Qvalu
52) Fluorene	19.24	166	133228	4.85	ng	9
64) Phenanthrene	22.17	178	123391	3.26	ng	9

000037

AbundanceScan 1137 (19.311 min): S21889.D (



#52

Fluorene

Concen: 4.85 ng

RT: 19.24 min Scan# 1126

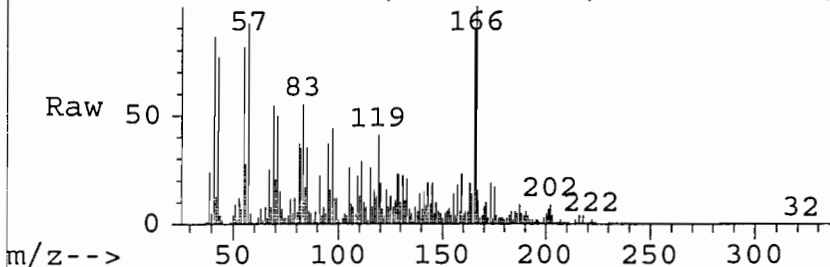
Delta R.T. -0.07 min

Lab File: S21963.D

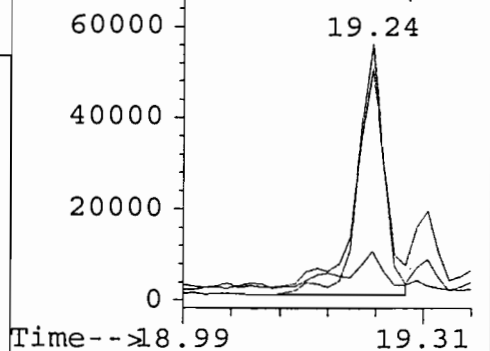
Acq: 5 Nov 99 2:51 pm

Tgt	Ion:166	Resp:	133228
Ion	Ratio	Lower	Upper
166	100		
165	90.2	45.0	135.0
163	19.3	7.1	21.3
0	0.0	0.0	0.0

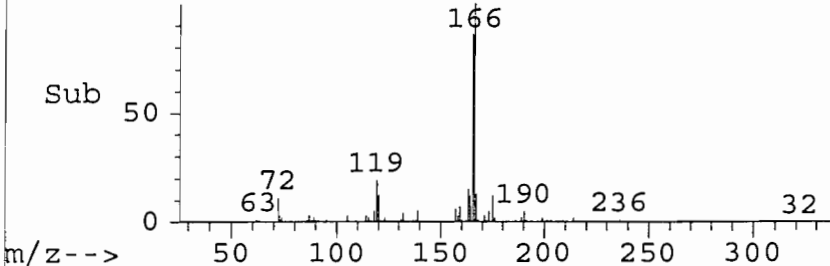
AbundanceScan 1126 (19.242 min): S21963.D (



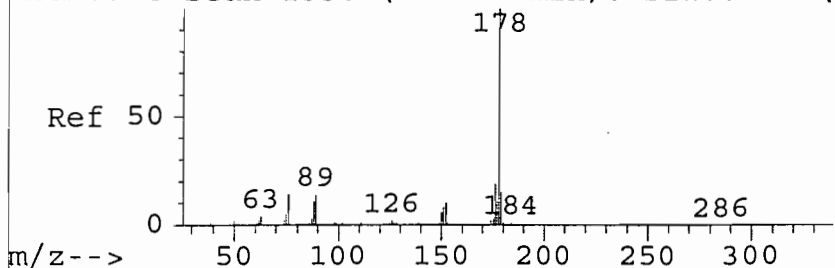
AbundanceIon 166.00 (165
Ion 165.00 (164
Ion 163.00 (162



AbundanceScan 1126 (19.242 min): S21963.D (



AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 3.26 ng

RT: 22.17 min Scan# 1322

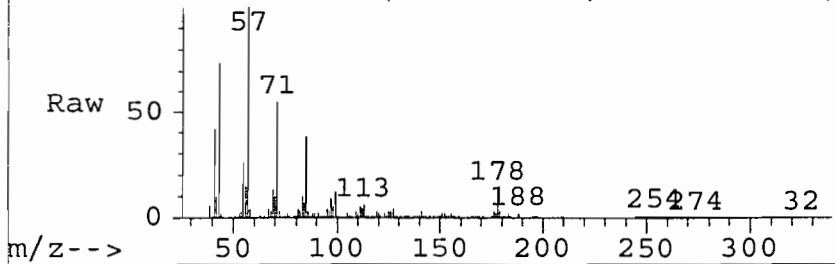
Delta R.T. -0.09 min

Lab File: S21963.D

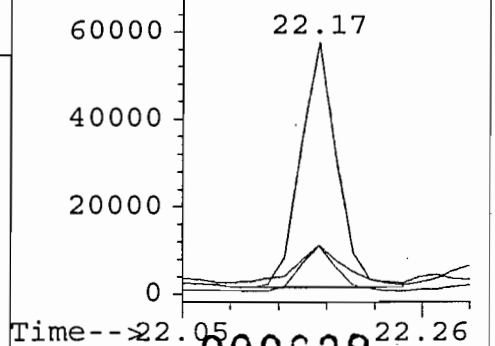
Acq: 5 Nov 99 2:51 pm

Tgt	Ion:178	Resp:	123391
Ion	Ratio	Lower	Upper
178	100		
179	19.5	7.4	22.3
176	19.2	9.3	27.9
0	0.0	0.0	0.0

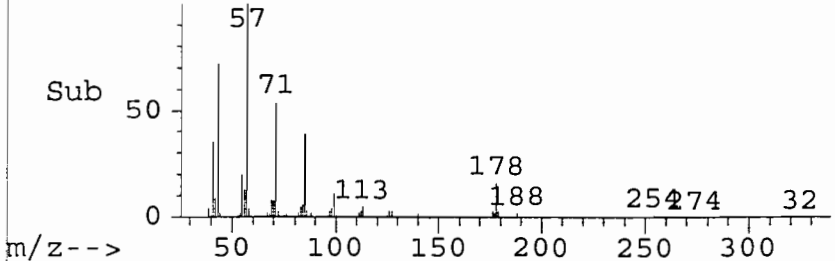
AbundanceScan 1322 (22.167 min): S21963.D (



AbundanceIon 178.00 (177
Ion 179.00 (178
Ion 176.00 (175



AbundanceScan 1322 (22.167 min): S21963.D (



000038

SAMPLE NO.

GP-016-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Lab Sample ID: O88011

Lab File ID: S21990.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/7/99

Dilution Factor: 1.0

pH:

(ug/L or ug/Kg) ug/Kg

Q

FORM I SV

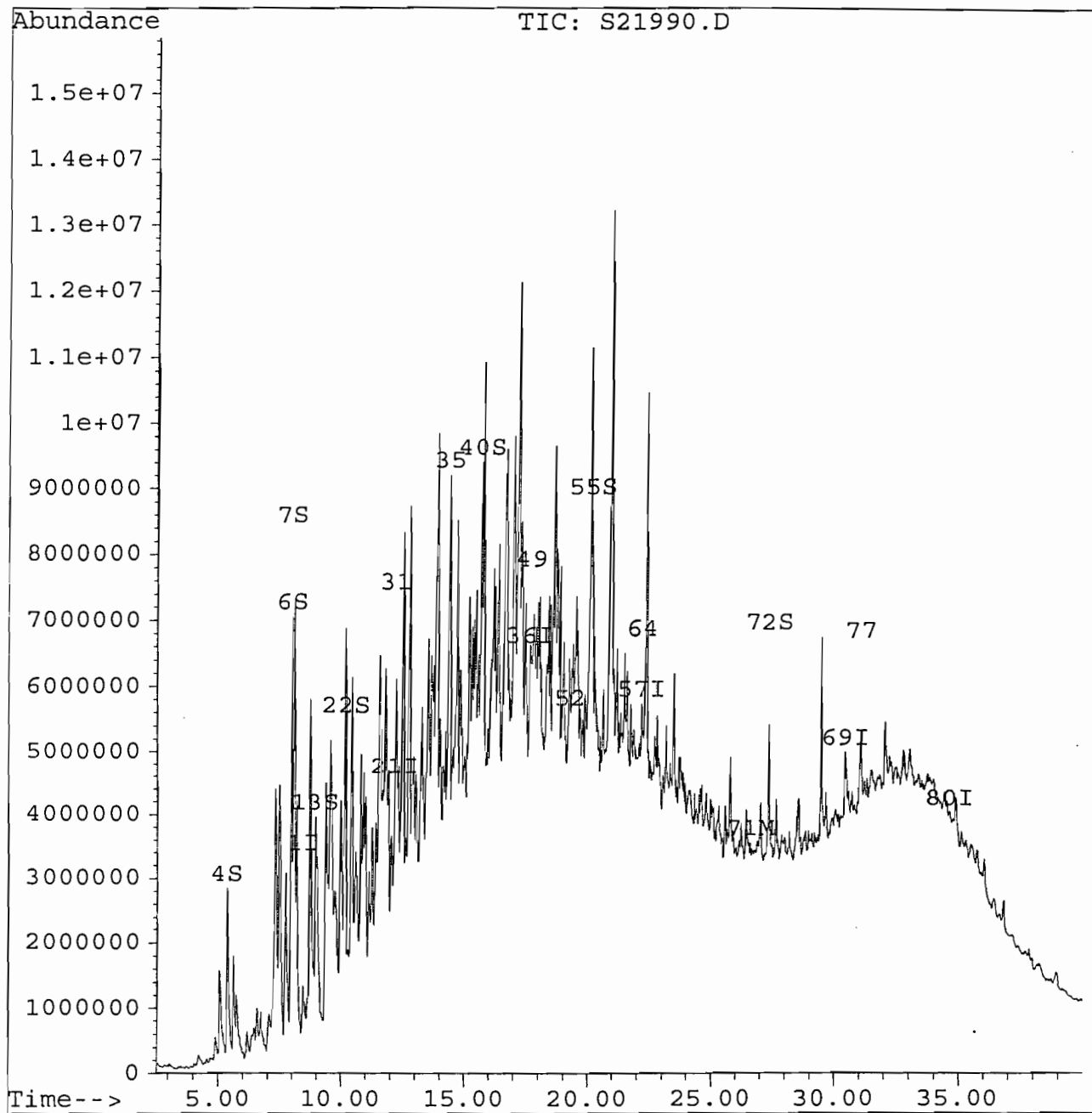
000039

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21990.D
 Acq Time : 7 Nov 99 2:29 pm
 Sample : 13827ASP-88011-QB506
 Misc :
 Quant Time: Nov 10 13:20 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration



000040

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21990.D
 Acq Time : 7 Nov 99 2:29 pm
 Sample : 13827ASP-88011-QB506
 Misc :
 Quant Time: Nov 10 13:20 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

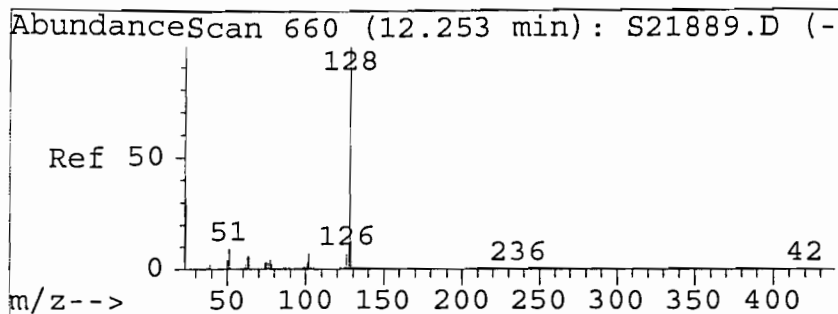
Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.42	152	528991	40.00	ng	-0.0
21) Naphthalene-d8	12.14	136	1843173	40.00	ng	-0.0
36) Acenaphthene-d10	17.62	164	796588	40.00	ng	-0.0
57) Phenanthrene-d10	22.16	188	1254992	40.00	ng	-0.0
69) Chrysene-d12	30.42	240	374357	40.00	ng	-0.0
80) Perylene-d12	34.59	264	149611	40.00	ng	-0.0

System Monitoring Compounds						%Recover
4) 2-Fluorophenol	5.35	112	4937771	215.92	ng	
6) 2-Chlorophenol-d4	7.96	132	5502980	238.77	ng	
7) Phenol-d5	7.96	99	4997311	201.55	ng	
13) 1,2-Dichlorobenzene-d4	8.94	152	1589210	119.87	ng	
22) Nitrobenzene-d5	10.17	82	2172336	121.79	ng	
40) 2-Fluorobiphenyl	15.67	172	3604173	124.84	ng	
55) 2,4,6-Tribromophenol	20.16	330	1143615	271.60	ng	
72) Terphenyl-d14	27.33	244	1902865	188.76	ng	

Target Compounds						Qvalu
31) Naphthalene	12.20	128	4466324	85.02	ng	9
35) 2-Methylnaphthalene N1	14.38	142	4884835	105.40	ng	7
49) Dibenzofuran N1	17.69	168	366339	10.52	ng	8
52) Fluorene	19.28	166	610177	23.06	ng	m 8
64) Phenanthrene	22.22	178	796030	25.53	ng	9
71) Pyrene	26.58	202	158533	9.94	ng	9
77) bis(2-Ethylhexyl)phthalate N1	31.04	149	458610	29.33	ng	9

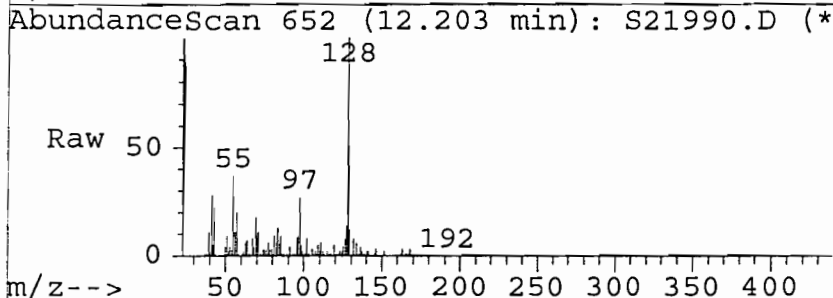
000041



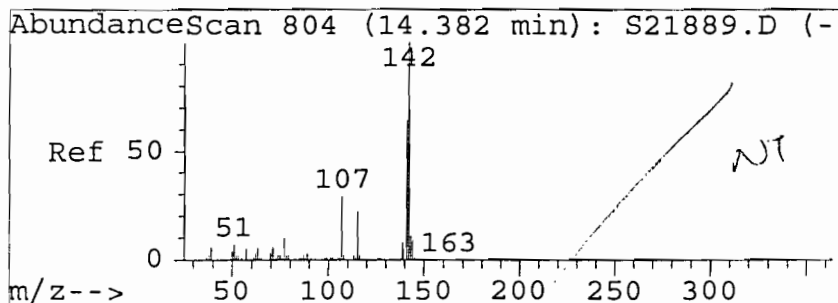
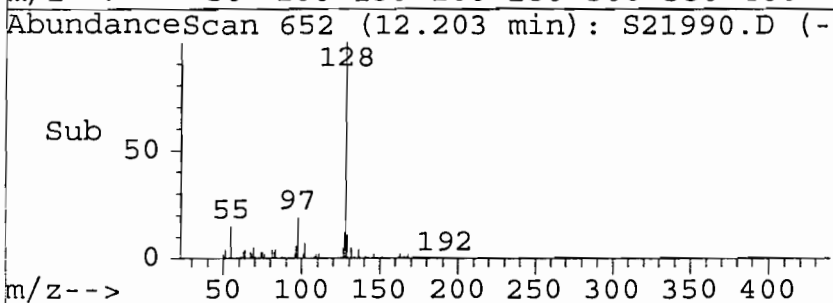
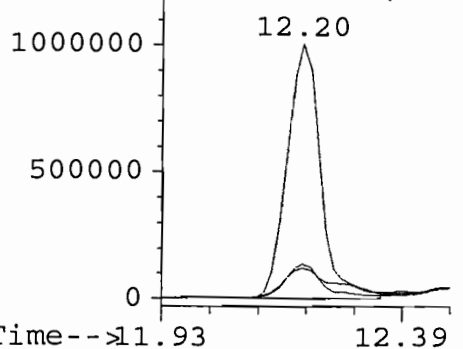
#31
Naphthalene
Concen: 85.02 ng
RT: 12.20 min Scan# 652
Delta R.T. -0.05 min
Lab File: S21990.D
Acq: 7 Nov 99 2:29 pm

Tgt Ion:128 Resp: 4466324

Ion	Ratio	Lower	Upper
128	100		
129	12.3	5.7	17.1
127	13.8	6.5	19.5
0	0.0	0.0	0.0



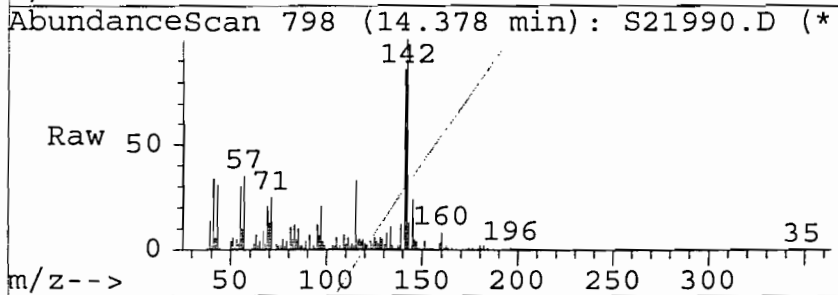
AbundanceIon 128.00 (127
Ion 129.00 (128
Ion 127.00 (126



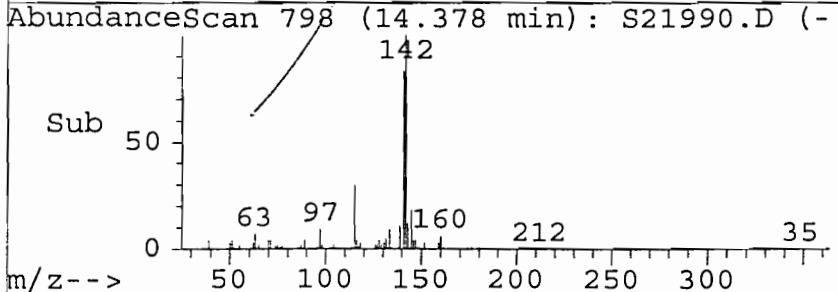
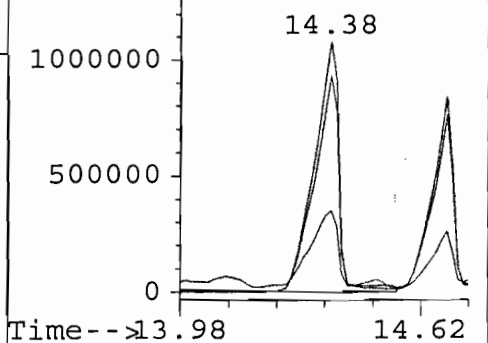
#35
2-Methylnaphthalene
Concen: 105.40 ng
RT: 14.38 min Scan# 798
Delta R.T. -0.00 min
Lab File: S21990.D
Acq: 7 Nov 99 2:29 pm

Tgt Ion:142 Resp: 4884835

Ion	Ratio	Lower	Upper
142	100		
141	86.2	32.2	96.5
115	32.6	10.9	32.7
0	0.0	0.0	0.0

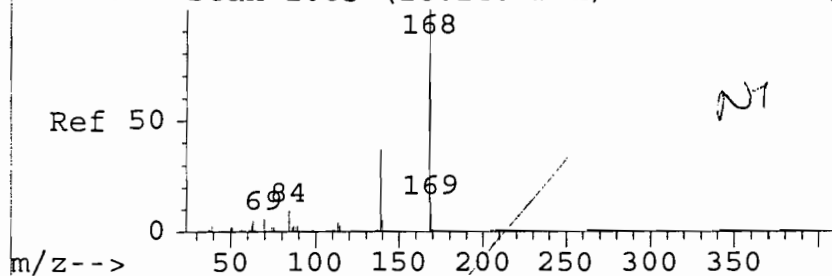


AbundanceIon 142.00 (141
Ion 141.00 (140
Ion 115.00 (114



000042

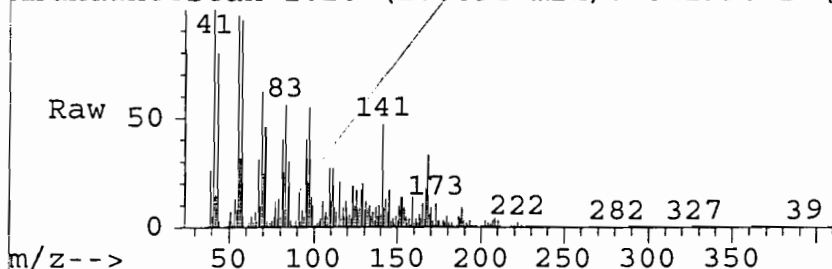
AbundanceScan 1065 (18.245 min): S21889.D (



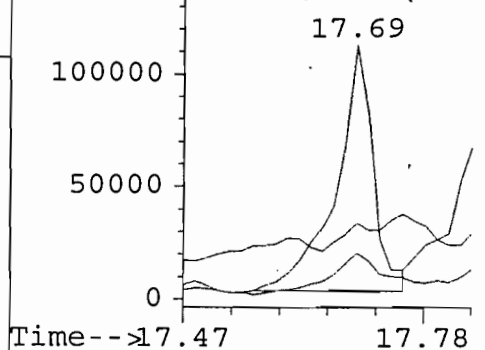
#49
Dibenzofuran
Concen: 10.52 ng
RT: 17.69 min Scan# 1020
Delta R.T. -0.55 min
Lab File: S21990.D
Acq: 7 Nov 99 2:29 pm

Tgt	Ion:168	Resp:	366339
Ion	Ratio	Lower	Upper
168	100		
139	30.0	18.6	55.9
169	18.4	6.4	19.1
0	0.0	0.0	0.0

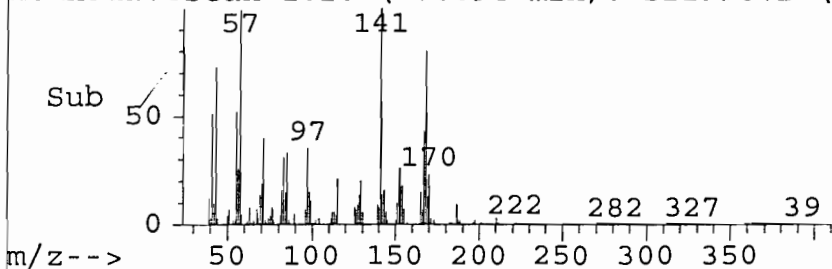
AbundanceScan 1020 (17.694 min): S21990.D (



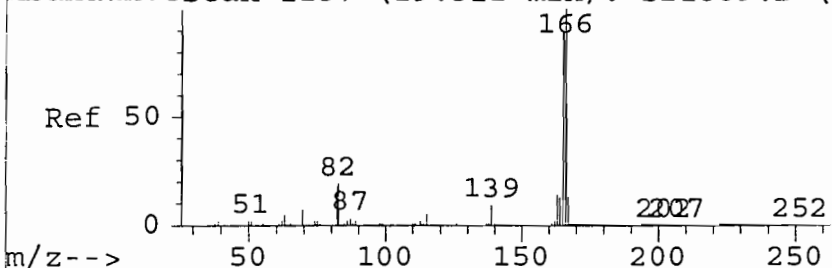
AbundanceIon 168.00 (167
150000 Ion 139.00 (138
Ion 169.00 (168



AbundanceScan 1020 (17.694 min): S21990.D (



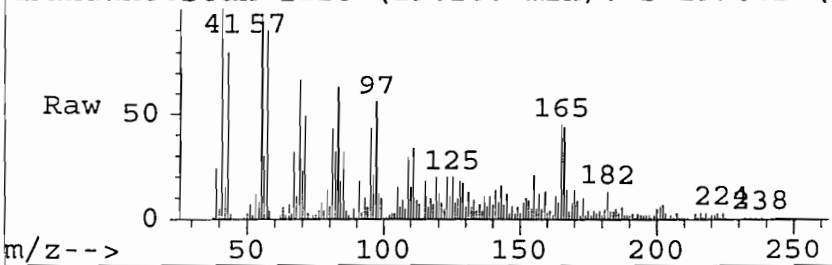
AbundanceScan 1137 (19.311 min): S21889.D (



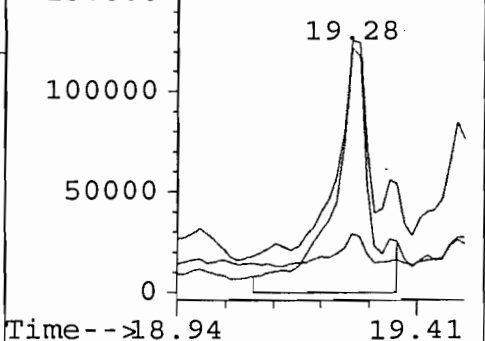
#52
Fluorene
Concen: 23.06 ng m
RT: 19.28 min Scan# 1126
Delta R.T. -0.03 min
Lab File: S21990.D
Acq: 7 Nov 99 2:29 pm

Tgt	Ion:166	Resp:	610177
Ion	Ratio	Lower	Upper
166	100		
165	89.9	45.0	135.0
163	14.2	7.1	21.3
0	0.0	0.0	0.0

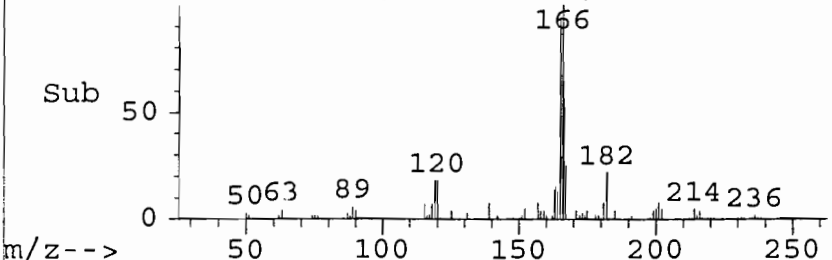
AbundanceScan 1126 (19.280 min): S21990.D (



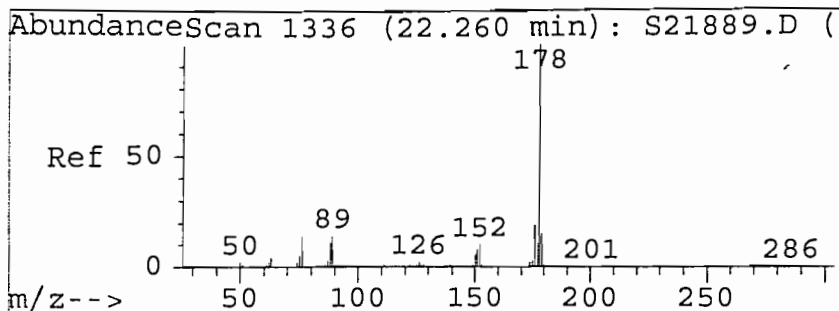
AbundanceIon 166.00 (165
150000 Ion 165.00 (164
Ion 163.00 (162



AbundanceScan 1126 (19.280 min): S21990.D (

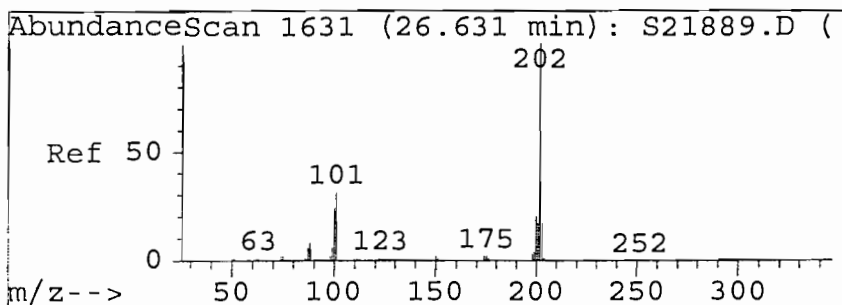
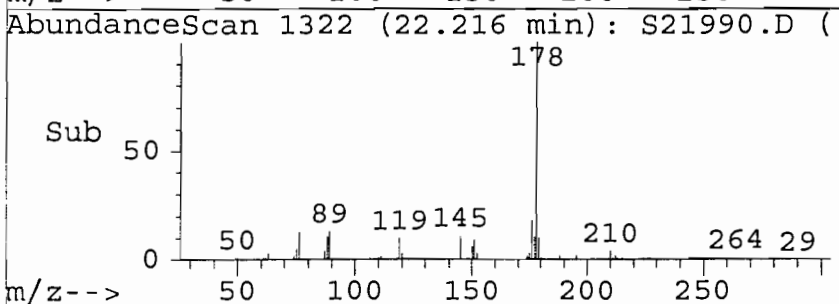
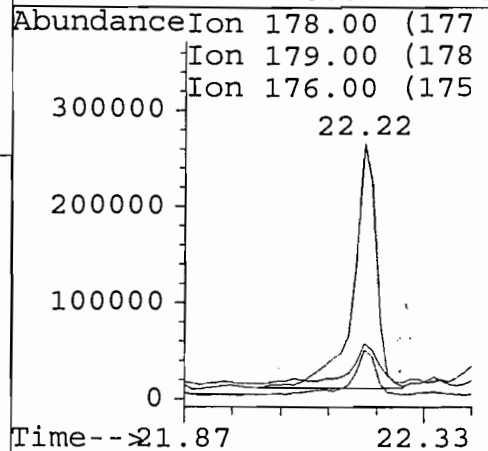
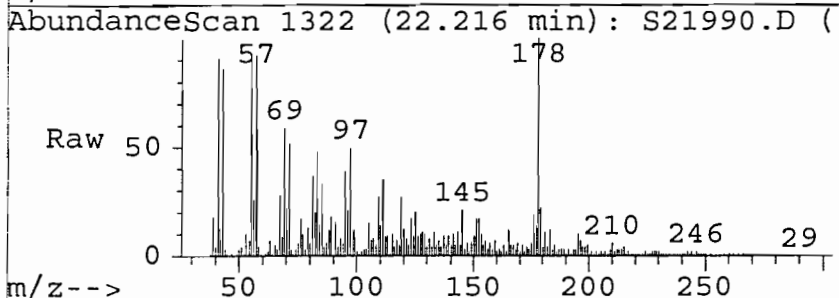


000043



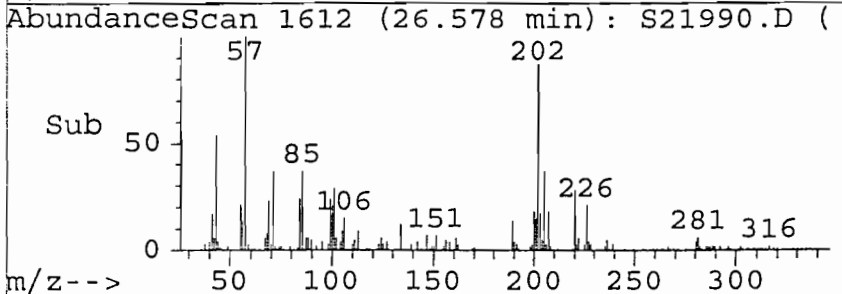
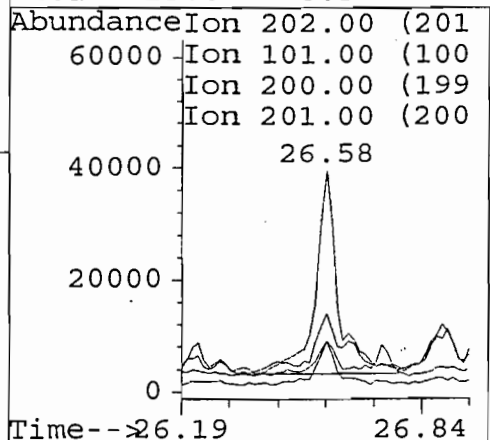
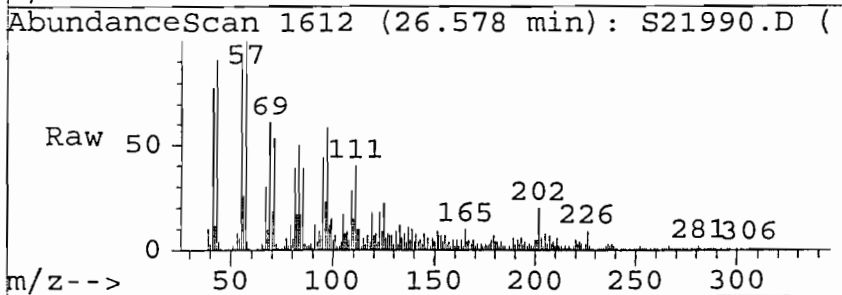
#64
Phenanthrene
Concen: 25.53 ng
RT: 22.22 min Scan# 1322
Delta R.T. -0.04 min
Lab File: S21990.D
Acq: 7 Nov 99 2:29 pm

Tgt Ion	Ratio	Lower	Upper
178	100		
179	21.9	7.4	22.3
176	19.5	9.3	27.9
0	0.0	0.0	0.0



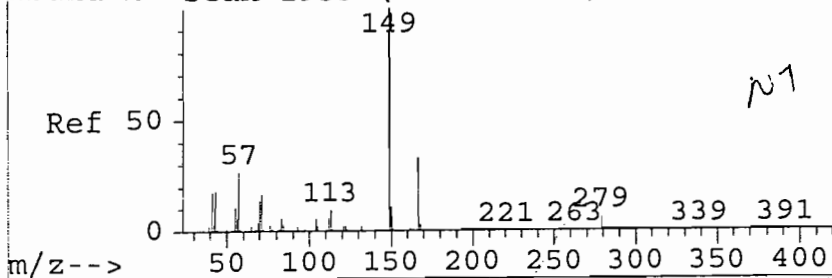
#71
Pyrene
Concen: 9.94 ng
RT: 26.58 min Scan# 1612
Delta R.T. -0.05 min
Lab File: S21990.D
Acq: 7 Nov 99 2:29 pm

Tgt Ion	Ratio	Lower	Upper
202	100		
101	35.5	15.3	45.9
200	22.8	10.1	30.3
201	23.0	8.5	25.4



000044

AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 29.33 ng

RT: 31.04 min Scan# 1908

Delta R.T. -0.07 min

Lab File: S21990.D

Acq: 7 Nov 99 2:29 pm

Tgt Ion:149 Resp: 458610

Ion Ratio Lower Upper

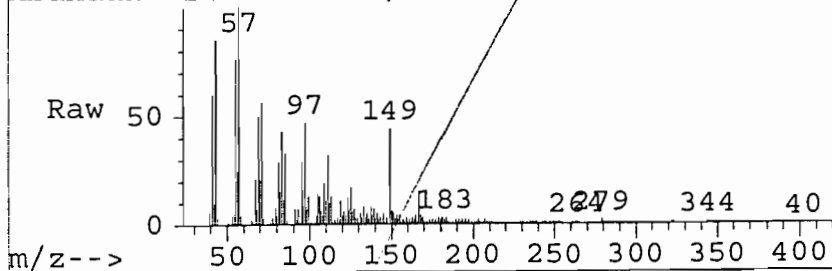
149 100

150 13.9 5.4 16.3

167 33.9 16.5 49.4

0 0.0 0.0 0.0

AbundanceScan 1908 (31.042 min): S21990.D (



AbundanceIon 149.00 (148

Ion 150.00 (149

Ion 167.00 (166

31.04

200000

150000

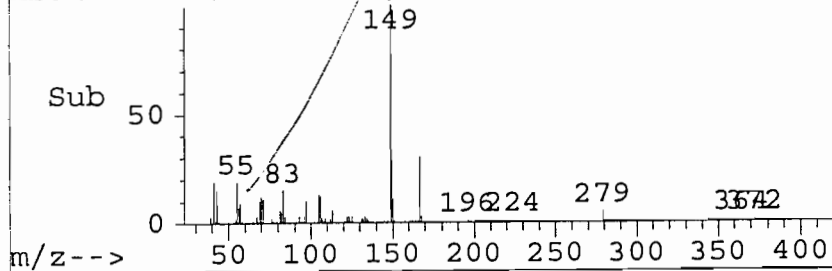
100000

50000

0

Time-->30.77 31.19

AbundanceScan 1908 (31.042 min): S21990.D (



000045

SAMPLE NO.

GP-016-SS8RE

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-014-SS8

Lab Sample ID: O88011RE

Lab File ID: S22007.D

Date Received: 10/18/99

decanted: (Y/N): N

Date Extracted: 10/19/99

Date Analyzed: 11/8/99

Dilution Factor: 1.0

N

pH:

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

FORM I SV

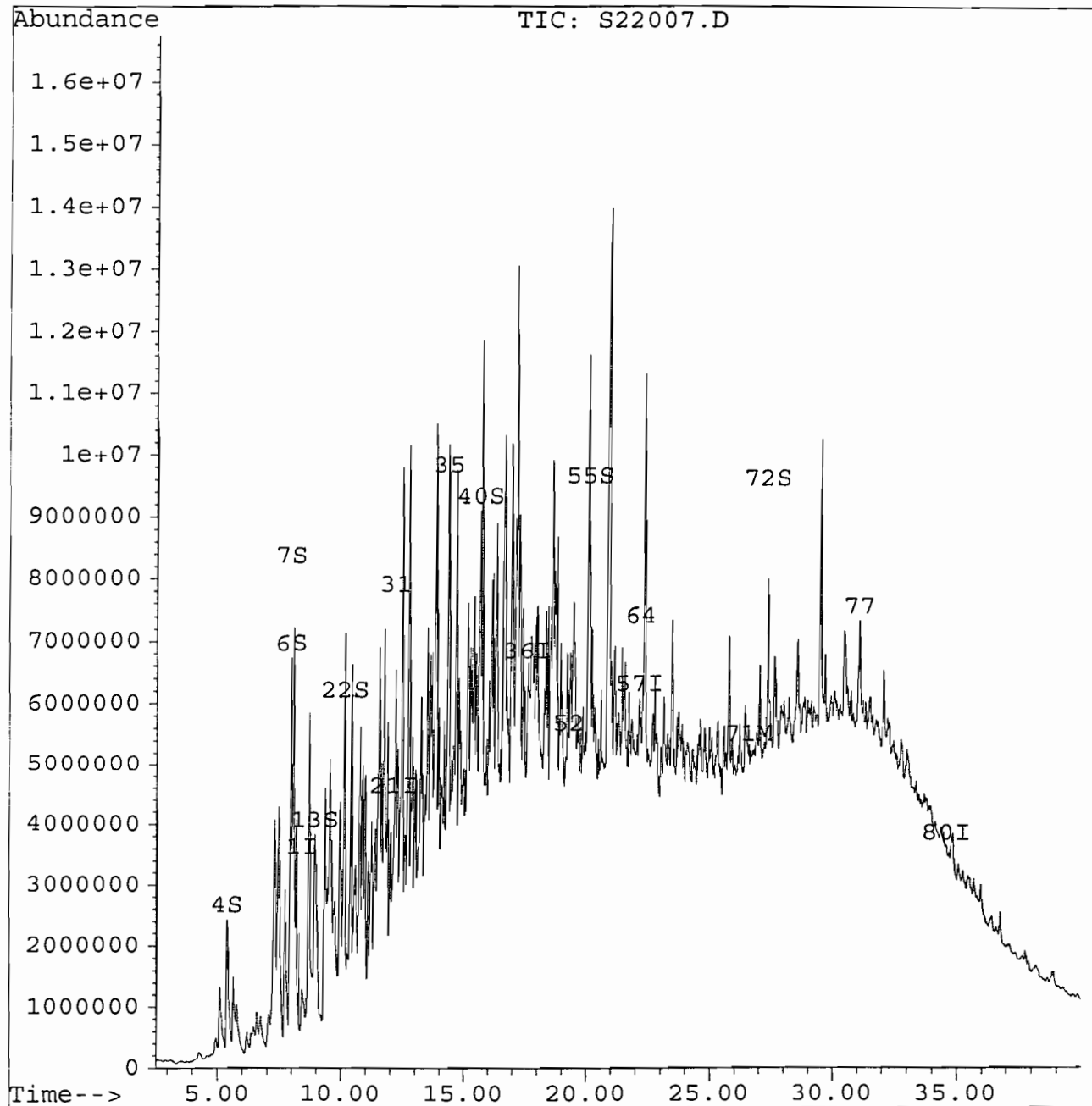
000046

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22007.D
Acq Time : 8 Nov 99 3:46 pm
Sample : 13827ASP-88011-QB506 RE
Misc :
Quant Time: Nov 10 13:21 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000047

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22007.D
 Acq Time : 8 Nov 99 3:46 pm
 Sample : 13827ASP-88011-QB506 RE
 Misc :
 Quant Time: Nov 10 13:21 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

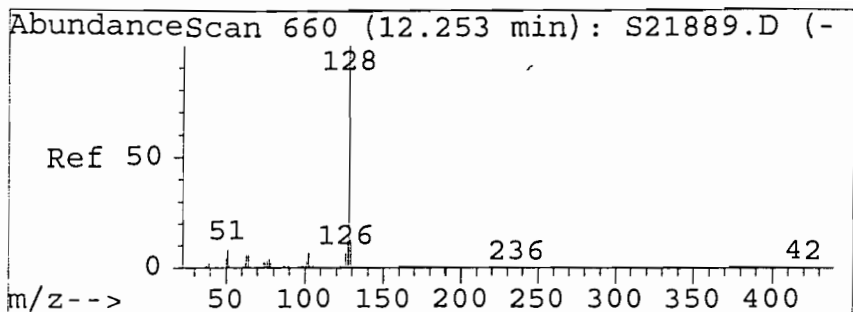
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.40	152	503241	40.00	ng	-0.1
21) Naphthalene-d8	12.11	136	1809677	40.00	ng	-0.0
36) Acenaphthene-d10	17.57	164	791929	40.00	ng	-0.0
57) Phenanthrene-d10	22.11	188	1390275	40.00	ng	-0.0
69) Chrysene-d12	30.41	240	525972	40.00	ng	-0.0
80) Perylene-d12	34.55	264	152788	40.00	ng	-0.0

System Monitoring Compounds						%Recover
4) 2-Fluorophenol	5.38	112	4831116	222.06	ng	
6) 2-Chlorophenol-d4	7.94	132	5290785	241.31	ng	
7) Phenol-d5	7.94	99	5005396	212.20	ng	
13) 1,2-Dichlorobenzene-d4	8.92	152	1501701	119.06	ng	
22) Nitrobenzene-d5	10.14	82	2180678	124.52	ng	
40) 2-Fluorobiphenyl	15.62	172	3595765	125.28	ng	
55) 2,4,6-Tribromophenol	20.12	330	1179440	281.76	ng	
72) Terphenyl-d14	27.31	244	2872840	202.83	ng	

Target Compounds						Qvalu
31) Naphthalene	12.17	128	4280166	82.99	ng	9
35) 2-Methylnaphthalene	14.34	142	4738747	104.14	ng	7
52) Fluorene	19.24	166	437131	16.62	ng	9
64) Phenanthrene	22.18	178	890758	25.79	ng	9
71) Pyrene	26.55	202	228435	10.19	ng	9
77) bis(2-Ethylhexyl)phthalate	31.03	149	738430	33.61	ng	9

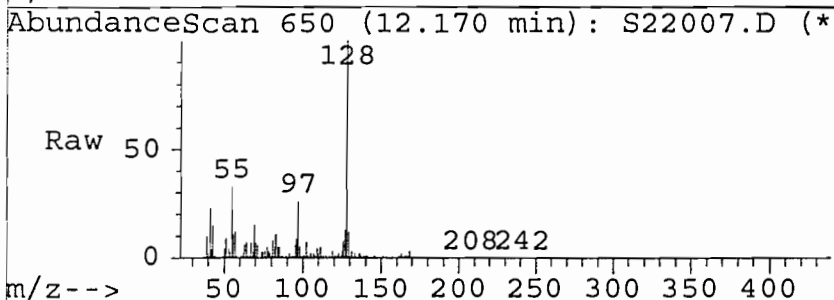
N7

000048

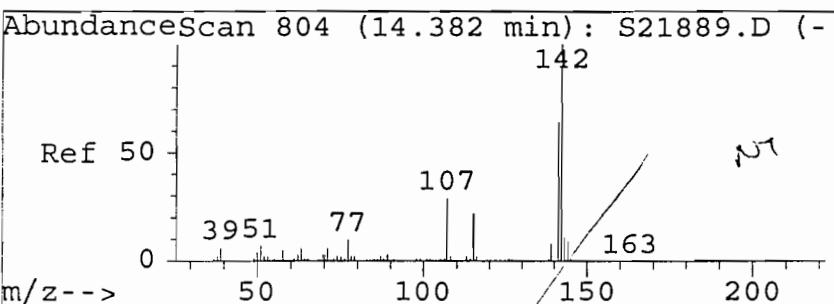
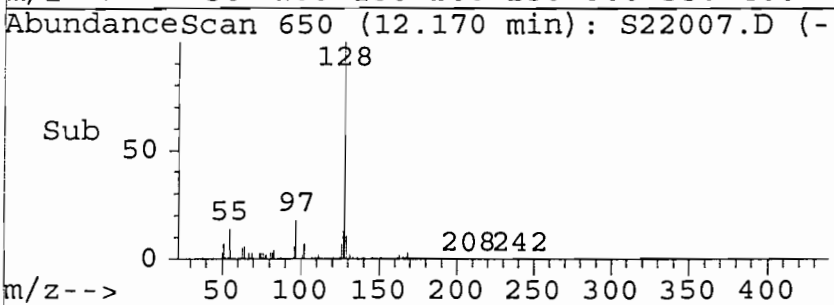
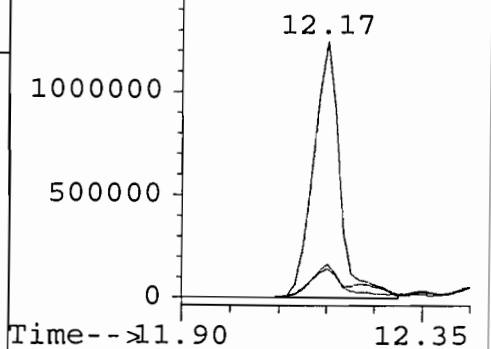


#31
Naphthalene
Concen: 82.99 ng
RT: 12.17 min Scan# 650
Delta R.T. -0.08 min
Lab File: S22007.D
Acq: 8 Nov 99 3:46 pm

Tgt Ion:128 Resp: 4280166
Ion Ratio Lower Upper
128 100
129 11.6 5.7 17.1
127 13.3 6.5 19.5
0 0.0 0.0 0.0

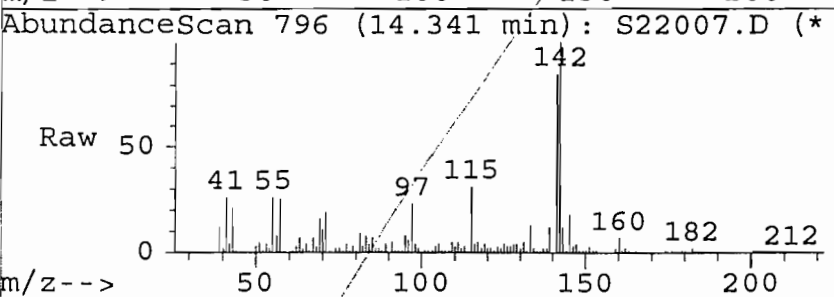


AbundanceIon 128.00 (127
Ion 129.00 (128
Ion 127.00 (126

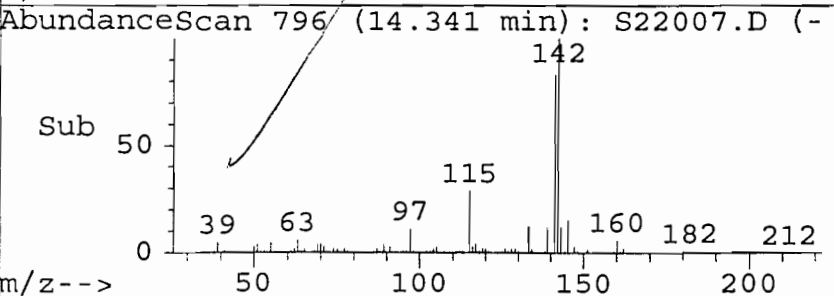
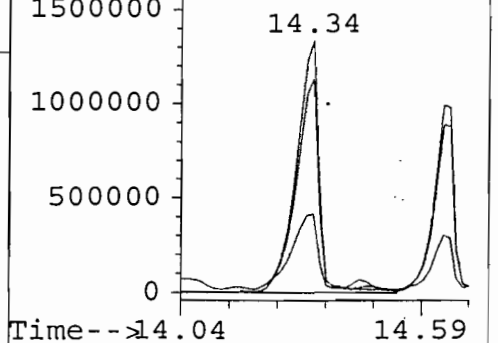


#35
2-Methylnaphthalene
Concen: 104.14 ng
RT: 14.34 min Scan# 796
Delta R.T. -0.04 min
Lab File: S22007.D
Acq: 8 Nov 99 3:46 pm

Tgt Ion:142 Resp: 4738747
Ion Ratio Lower Upper
142 100
141 85.0 32.2 96.5
115 31.4 10.9 32.7
0 0.0 0.0 0.0

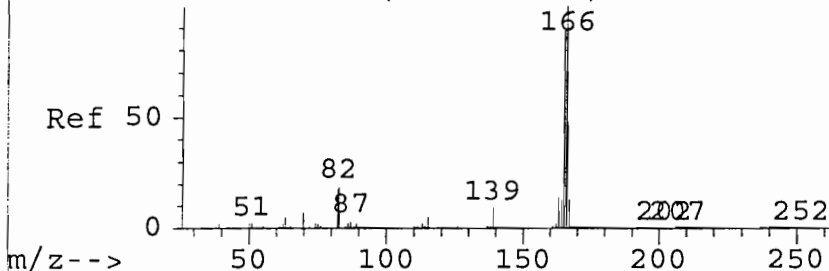


AbundanceIon 142.00 (141
Ion 141.00 (140
Ion 115.00 (114



000049

AbundanceScan 1137 (19.311 min): S21889.D (



#52

Fluorene

Concen: 16.62 ng

RT: 19.24 min Scan# 1125

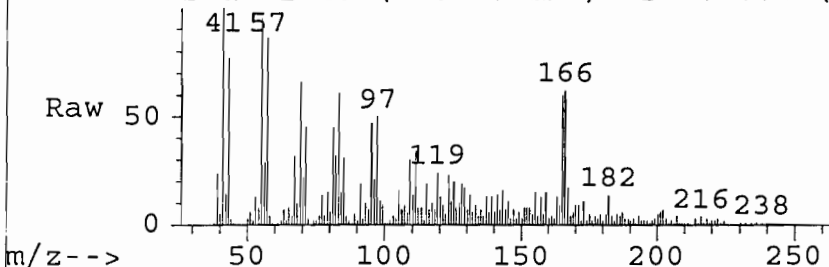
Delta R.T. -0.07 min

Lab File: S22007.D

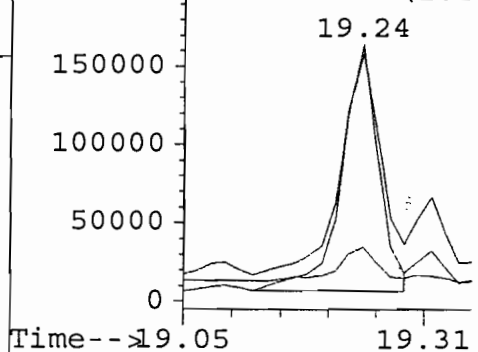
Acq: 8 Nov 99 3:46 pm

Tgt Ion:166	Resp:	437131
Ion Ratio	Lower	Upper
166	100	
165	96.5	45.0 135.0
163	21.3	7.1 21.3
0	0.0	0.0 0.0

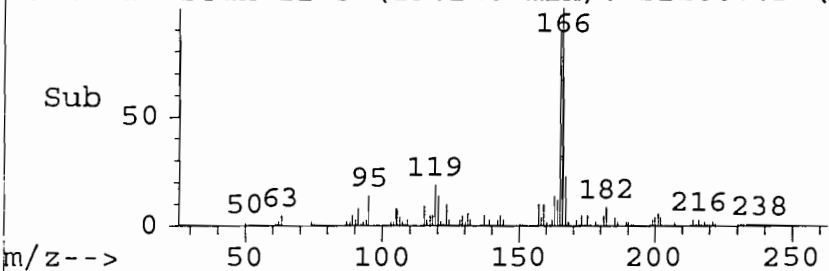
AbundanceScan 1125 (19.240 min): S22007.D (



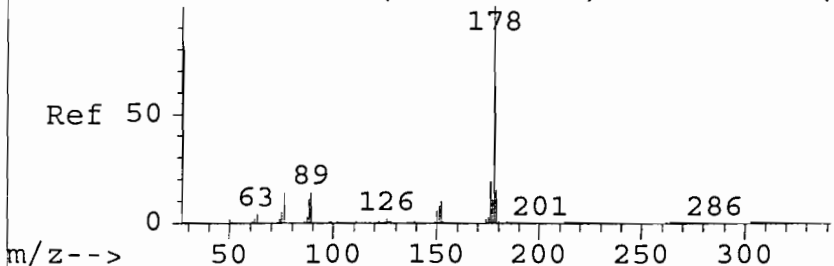
AbundanceIon 166.00 (165
Ion 165.00 (164
Ion 163.00 (162



AbundanceScan 1125 (19.240 min): S22007.D (



AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 25.79 ng

RT: 22.18 min Scan# 1322

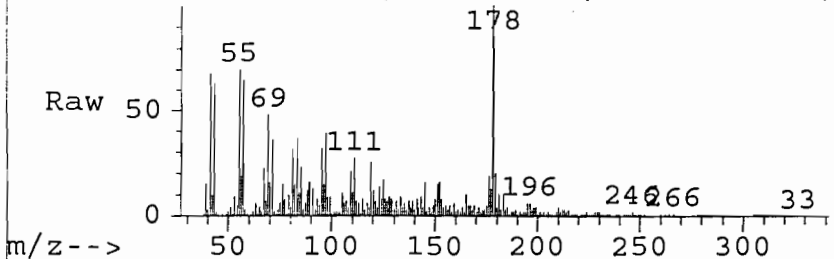
Delta R.T. -0.08 min

Lab File: S22007.D

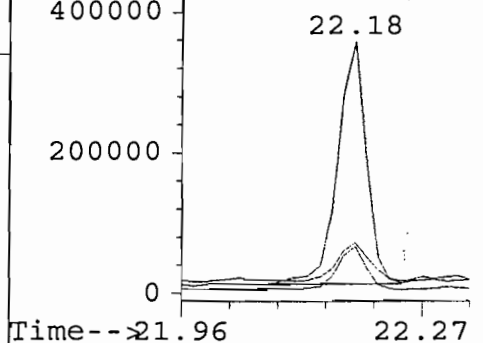
Acq: 8 Nov 99 3:46 pm

Tgt Ion:178	Resp:	890758
Ion Ratio	Lower	Upper
178	100	
179	20.2	7.4 22.3
176	18.8	9.3 27.9
0	0.0	0.0 0.0

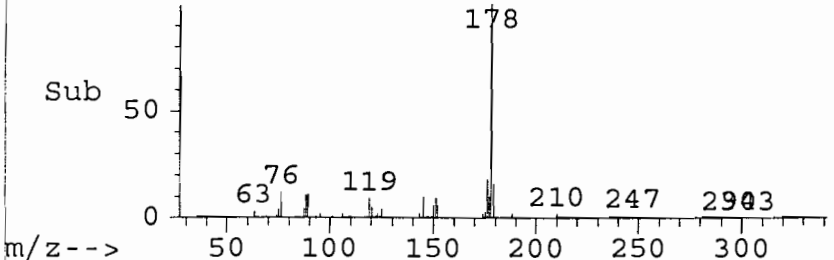
AbundanceScan 1322 (22.183 min): S22007.D (



AbundanceIon 178.00 (177
Ion 179.00 (178
Ion 176.00 (175

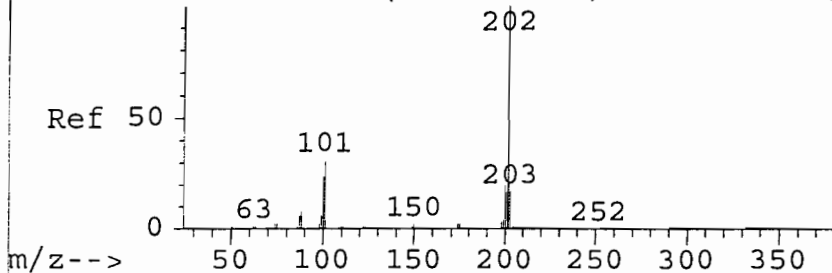


AbundanceScan 1322 (22.183 min): S22007.D (



000050

AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 10.19 ng

RT: 26.55 min Scan# 1614

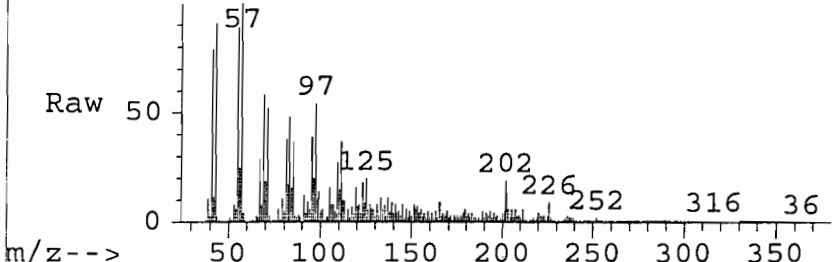
Delta R.T. -0.08 min

Lab File: S22007.D

Acq: 8 Nov 99 3:46 pm

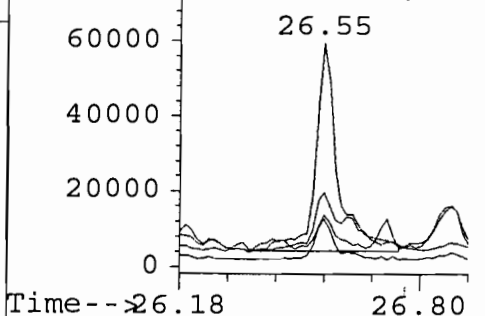
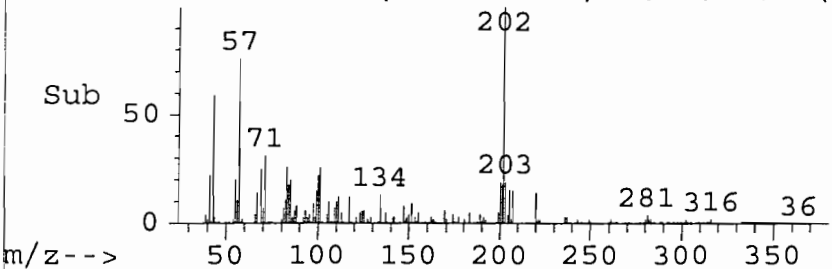
Tgt Ion:	202	Resp:	228435
Ion	Ratio	Lower	Upper
202	100		
101	33.2	15.3	45.9
200	21.4	10.1	30.3
201	23.2	8.5	25.4

AbundanceScan 1614 (26.547 min): S22007.D (

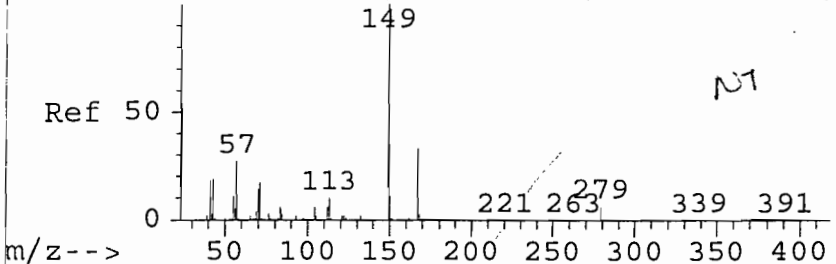


Abundance	Ion	202.00	(201
	Ion	101.00	(100
	Ion	200.00	(199
	Ion	201.00	(200

AbundanceScan 1614 (26.547 min): S22007.D (



AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 33.61 ng

RT: 31.03 min Scan# 1913

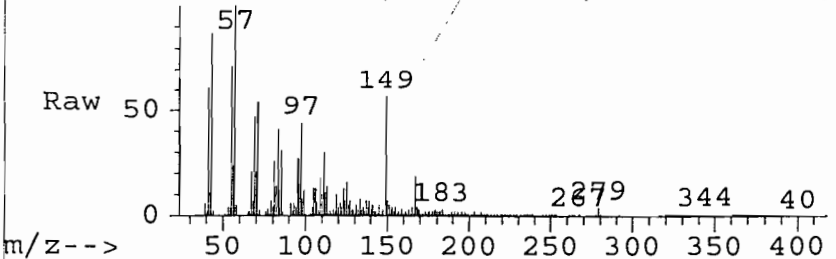
Delta R.T. -0.09 min

Lab File: S22007.D

Acq: 8 Nov 99 3:46 pm

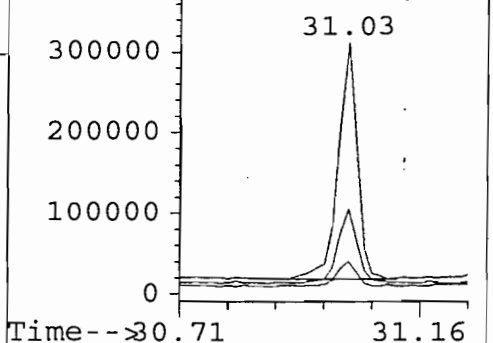
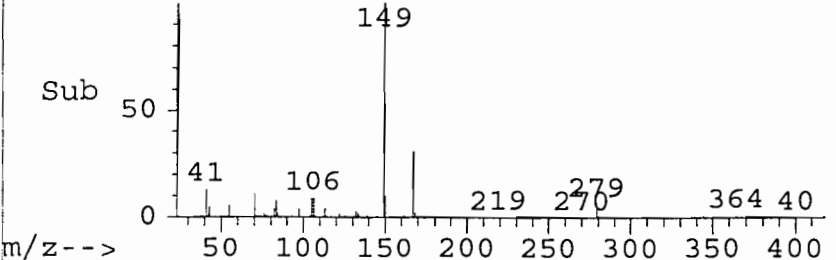
Tgt Ion:	149	Resp:	738430
Ion	Ratio	Lower	Upper
149	100		
150	13.1	5.4	16.3
167	33.7	16.5	49.4
0	0.0	0.0	0.0

AbundanceScan 1913 (31.025 min): S22007.D (



Abundance	Ion	149.00	(148
	Ion	150.00	(149
	Ion	167.00	(166

AbundanceScan 1913 (31.025 min): S22007.D (



000051

1B

GP-016-SS12

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-014-SS8

Lab Sample ID: O88012

Lab File ID: S21991.D

Date Received: 10/18/99

decanted: (Y/N): N

Date Extracted: 10/19/99

Date Analyzed: 11/7/99

Dilution Factor: 1.0

pH: _____

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

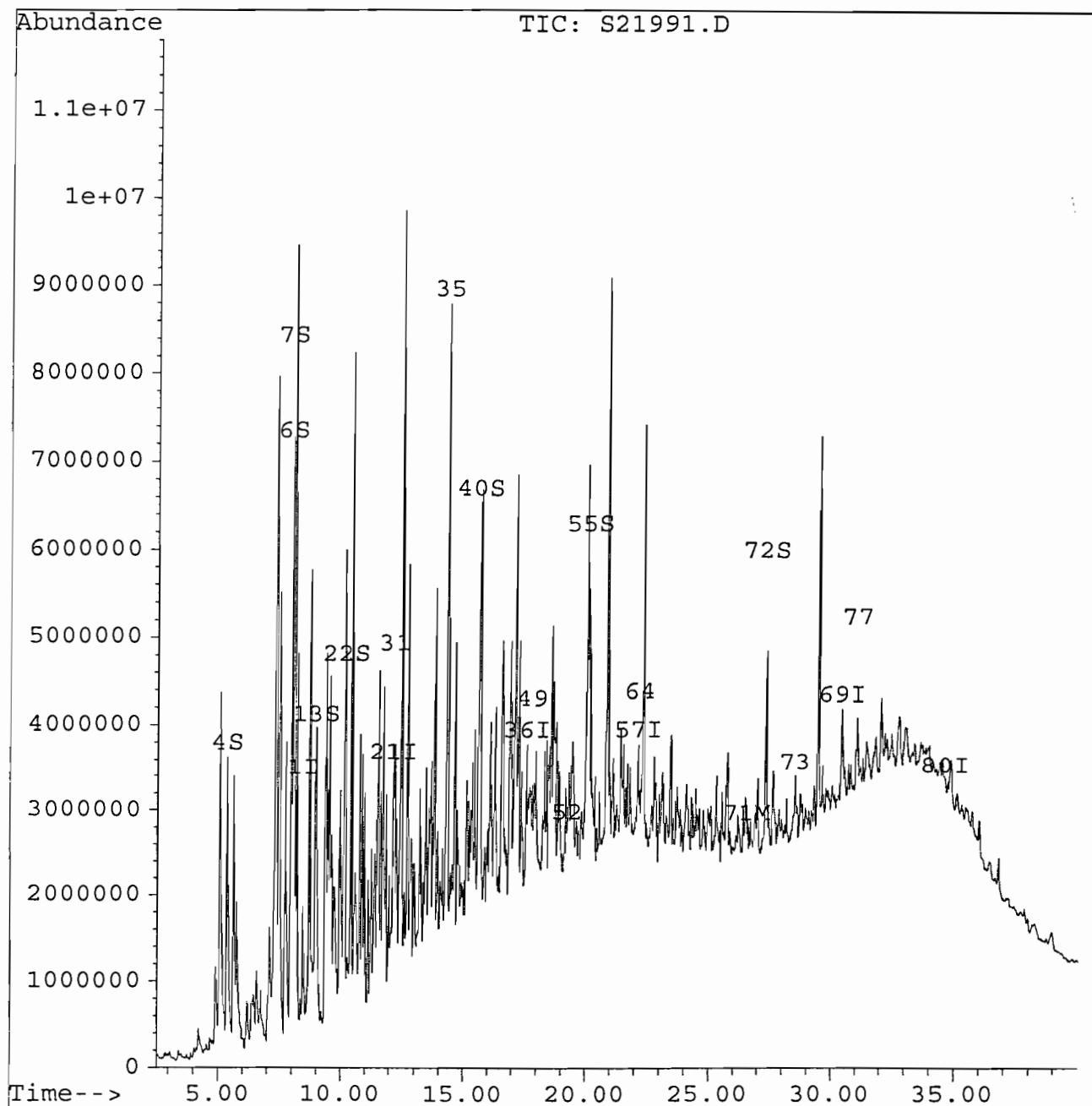
000052

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21991.D
Acq Time : 7 Nov 99 3:19 pm
Sample : 13827ASP-88012-QB506
Misc :
Quant Time: Nov 10 12:28 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000053

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21991.D
 Acq Time : 7 Nov 99 3:19 pm
 Sample : 13827ASP-88012-QB506
 Misc :
 Quant Time: Nov 10 12:28 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

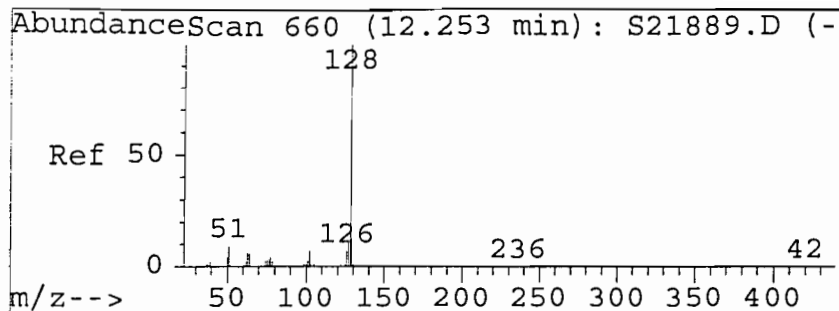
Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.43	152	543832	40.00	ng	-0.0
21) Naphthalene-d8	12.13	136	1968128	40.00	ng	-0.0
36) Acenaphthene-d10	17.58	164	892011	40.00	ng	-0.0
57) Phenanthrene-d10	22.12	188	1361164	40.00	ng	-0.0
69) Chrysene-d12	30.41	240	394470	40.00	ng	-0.0
80) Perylene-d12	34.58	264	178651	40.00	ng	-0.0

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.35	112	4990216	212.26	ng	
6) 2-Chlorophenol-d4	7.96	132	5589975	235.92	ng	
7) Phenol-d5	7.97	99	5098823	200.03	ng	
13) 1,2-Dichlorobenzene-d4	8.95	152	1641293	120.42	ng	
22) Nitrobenzene-d5	10.16	82	2291036	120.29	ng	
40) 2-Fluorobiphenyl	15.64	172	4006948	123.94	ng	
55) 2,4,6-Tribromophenol	20.13	330	1213540	257.38	ng	
72) Terphenyl-d14	27.32	244	2042062	192.24	ng	

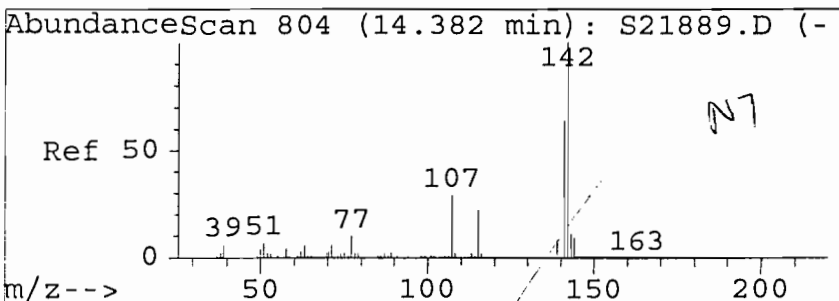
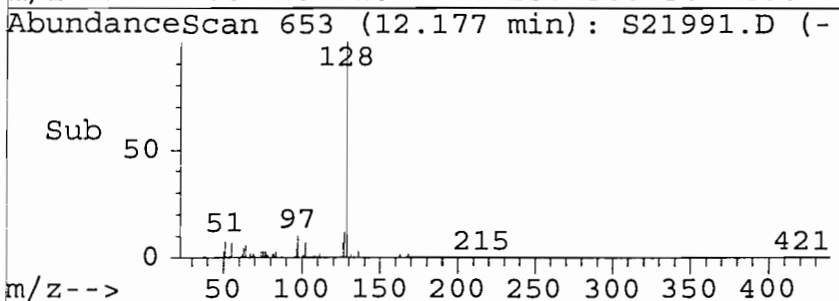
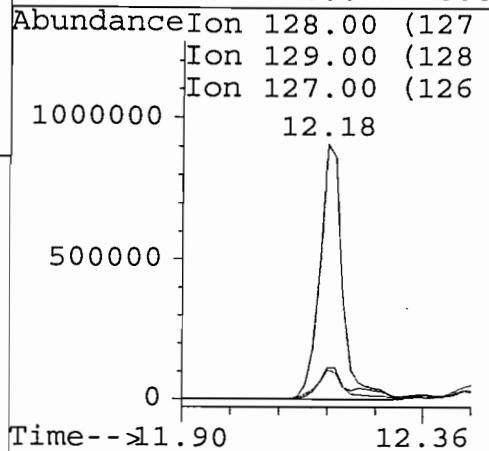
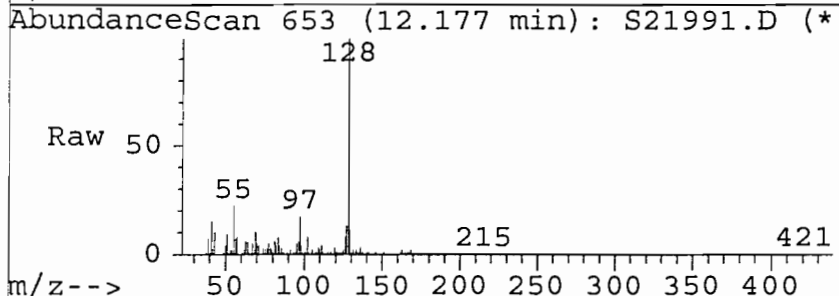
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
31) Naphthalene	12.18	128	2848296	50.78	ng	9
35) 2-Methylnaphthalene N7	14.33	142	2575269	52.04	ng	7
49) Dibenzofuran N7	17.79	168	186220	4.77	ng	7
52) Fluorene	19.24	166	274684	9.27	ng	9
64) Phenanthrene	22.18	178	587755	17.38	ng	9
71) Pyrene	26.56	202	118418	7.04	ng	9
73) Butylbenzylphthalate N7 N7	28.52	149	45228	3.58	ng	9
77) bis(2-Ethylhexyl)phthalate	31.04	149	302270	18.35	ng	9

000054



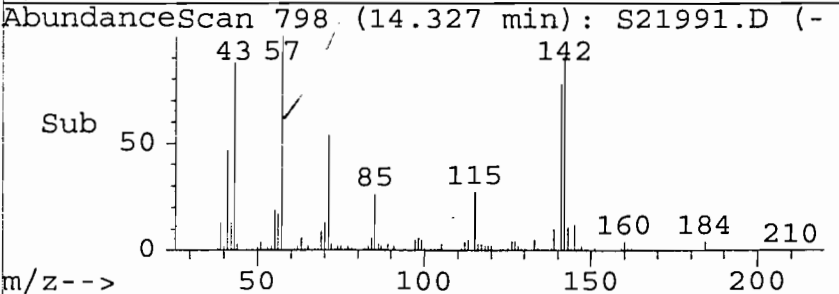
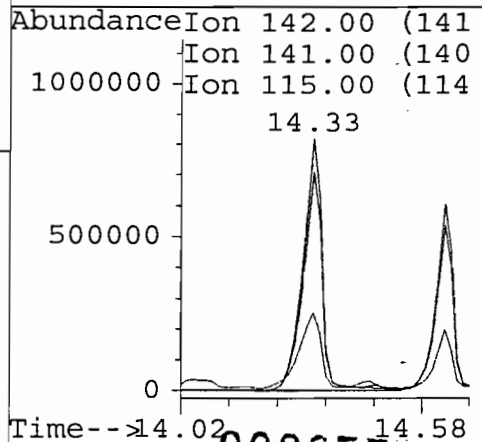
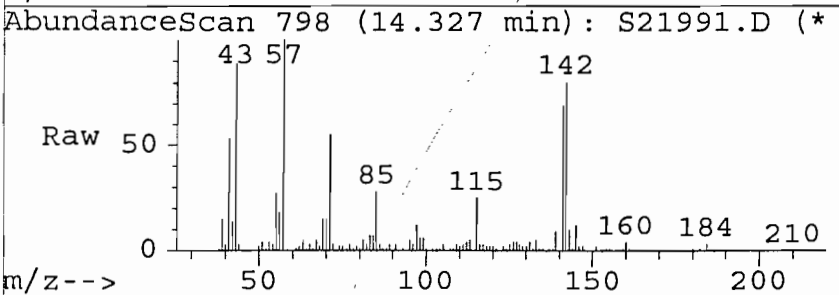
#31
Naphthalene
Concen: 50.78 ng
RT: 12.18 min Scan# 653
Delta R.T. -0.08 min
Lab File: S21991.D
Acq: 7 Nov 99 3:19 pm

Tgt	Ion:128	Resp: 2848296	
Ion	Ratio	Lower	Upper
128	100		
129	11.8	5.7	17.1
127	12.9	6.5	19.5
0	0.0	0.0	0.0

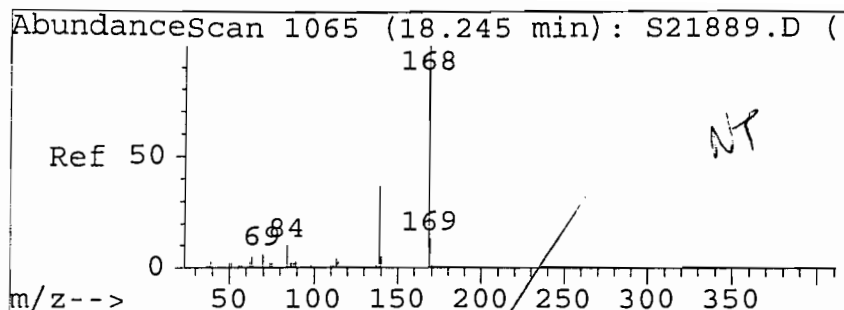


#35
2-Methylnaphthalene
Concen: 52.04 ng
RT: 14.33 min Scan# 798
Delta R.T. -0.05 min
Lab File: S21991.D
Acq: 7 Nov 99 3:19 pm

Tgt	Ion:142	Resp:	2575269
Ion	Ratio	Lower	Upper
142	100		
141	86.9	32.2	96.5
115	31.1	10.9	32.7
0	0.0	0.0	0.0

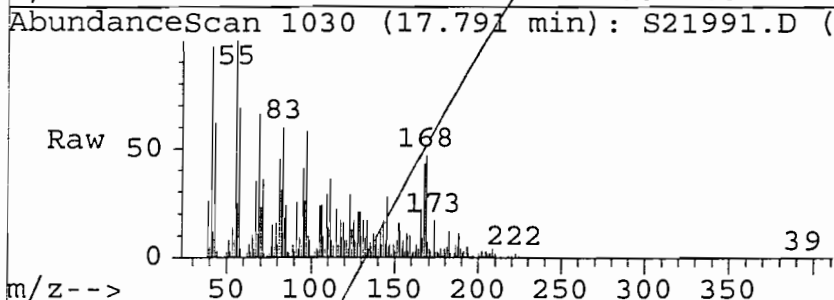


000055

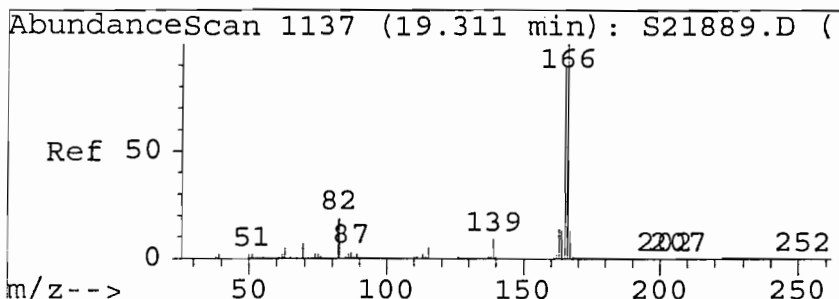
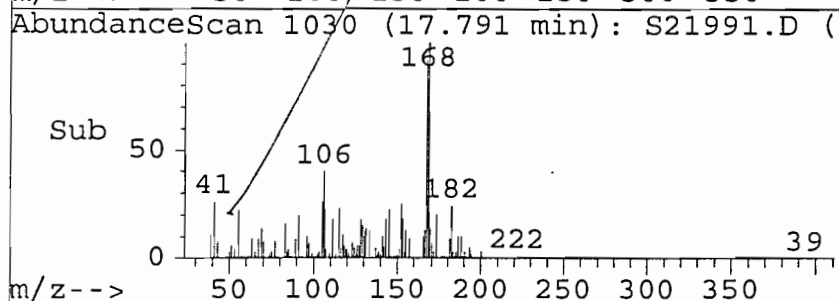
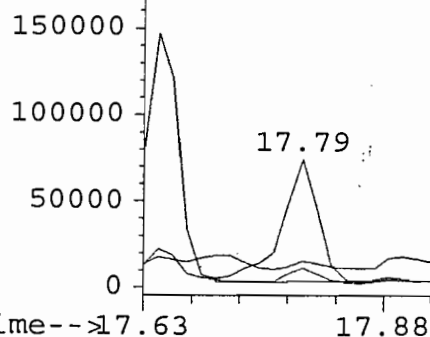


#49
Dibenzenofuran
Concen: 4.77 ng
RT: 17.79 min Scan# 1030
Delta R.T. -0.45 min
Lab File: S21991.D
Acq: 7 Nov 99 3:19 pm

Tgt	Ion:168	Resp:	186220
Ion	Ratio	Lower	Upper
168	100		
139	20.7	18.6	55.9
169	15.7	6.4	19.1
0	0.0	0.0	0.0

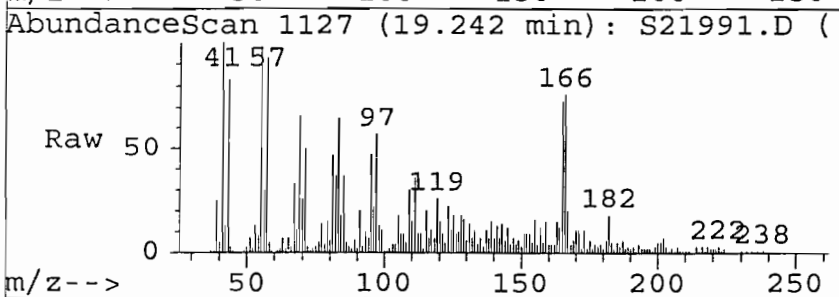


AbundanceIon 168.00 (167
200000 Ion 139.00 (138
Ion 169.00 (168

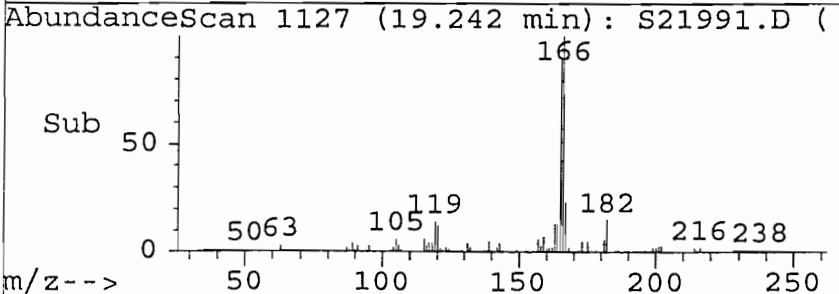
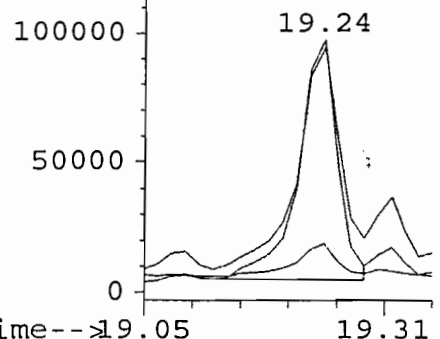


#52
Fluorene
Concen: 9.27 ng
RT: 19.24 min Scan# 1127
Delta R.T. -0.07 min
Lab File: S21991.D
Acq: 7 Nov 99 3:19 pm

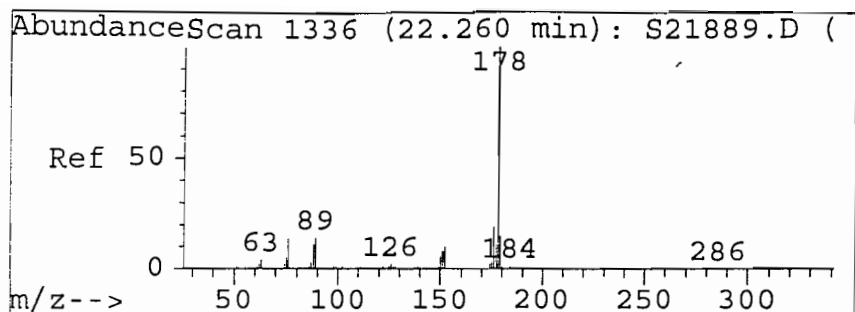
Tgt	Ion:166	Resp:	274684
Ion	Ratio	Lower	Upper
166	100		
165	96.8	45.0	135.0
163	19.6	7.1	21.3
0	0.0	0.0	0.0



AbundanceIon 166.00 (165
Ion 165.00 (164
Ion 163.00 (162

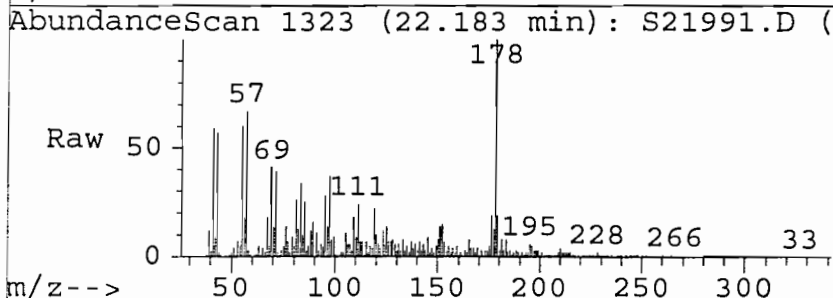


000056

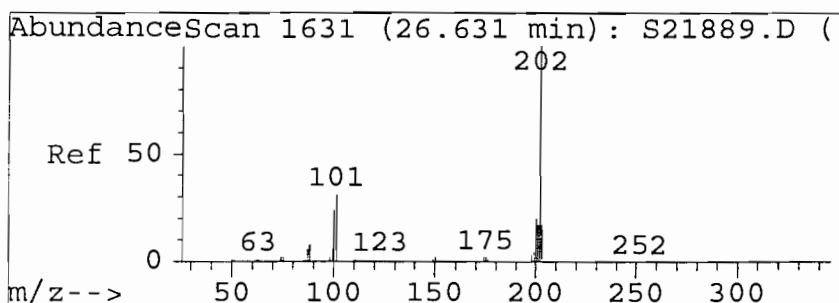
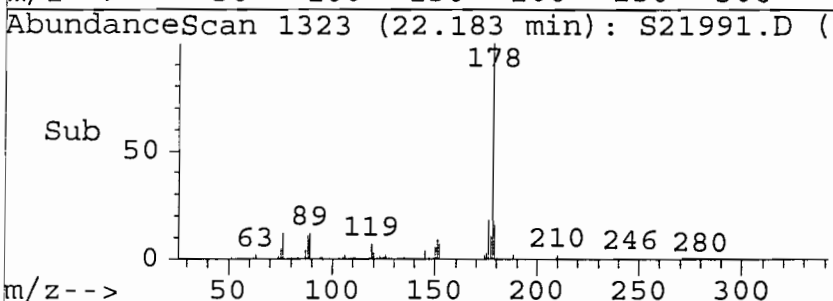
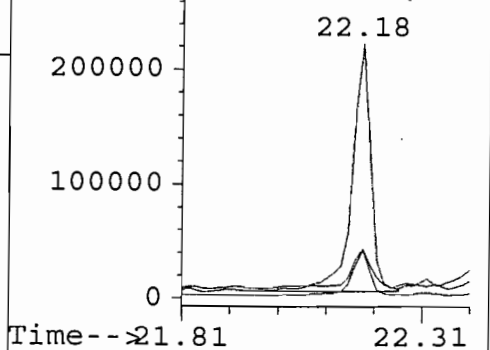


#64
Phenanthrene
Concen: 17.38 ng
RT: 22.18 min Scan# 1323
Delta R.T. -0.08 min
Lab File: S21991.D
Acq: 7 Nov 99 3:19 pm

Tgt Ion:	178	Resp:	587755
Ion	Ratio	Lower	Upper
178	100		
179	19.5	7.4	22.3
176	19.0	9.3	27.9
0	0.0	0.0	0.0

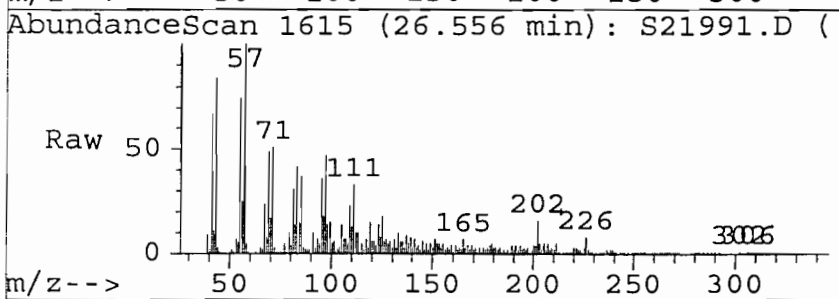


AbundanceIon 178.00 (177
300000 Ion 179.00 (178
Ion 176.00 (175

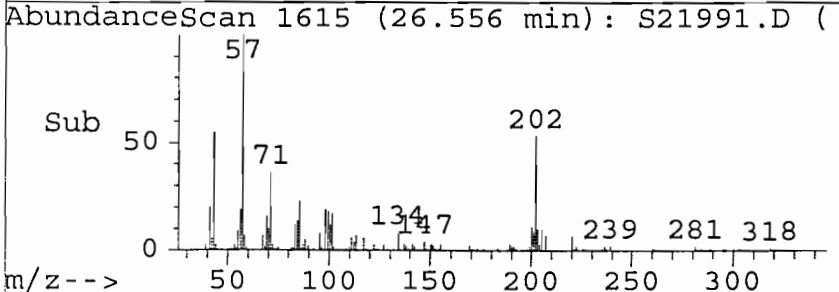
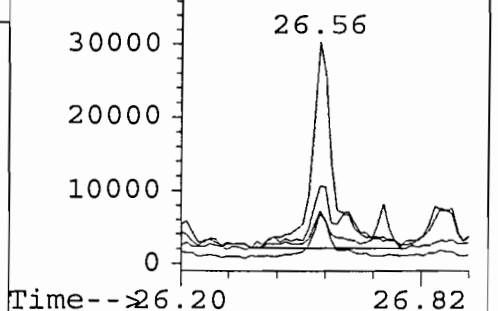


#71
Pyrene
Concen: 7.04 ng
RT: 26.56 min Scan# 1615
Delta R.T. -0.08 min
Lab File: S21991.D
Acq: 7 Nov 99 3:19 pm

Tgt Ion:	202	Resp:	118418
Ion	Ratio	Lower	Upper
202	100		
101	35.2	15.3	45.9
200	22.6	10.1	30.3
201	24.1	8.5	25.4

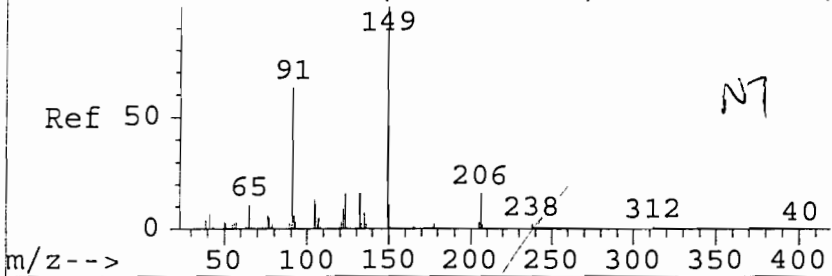


AbundanceIon 202.00 (201
40000 Ion 101.00 (100
Ion 200.00 (199
Ion 201.00 (200



000057

AbundanceScan 1803 (29.181 min): S21889.D (



#73

Butylbenzylphthalate

Concen: 3.58 ng

RT: 28.52 min Scan# 1746

Delta R.T. -0.66 min

Lab File: S21991.D

Acq: 7 Nov 99 3:19 pm

Tgt Ion:149 Resp: 45228

Ion Ratio Lower Upper

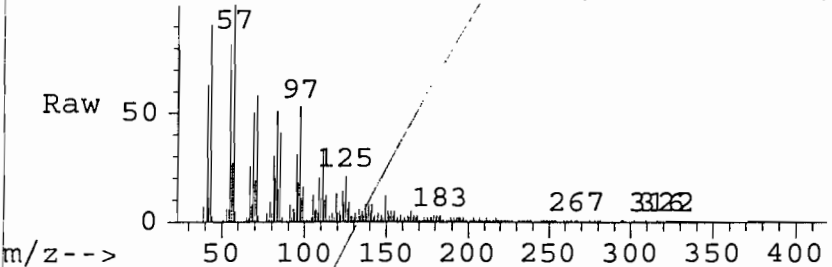
149 100

91 64.1 31.5 94.4

206 8.9 8.2 24.6

0 0.0 0.0 0.0

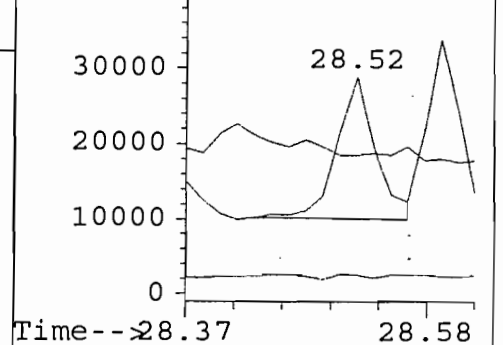
AbundanceScan 1746 (28.519 min): S21991.D (



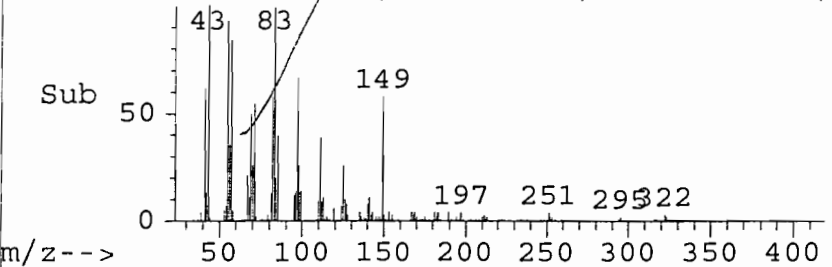
AbundanceIon 149.00 (148

Ion 91.00 (90.

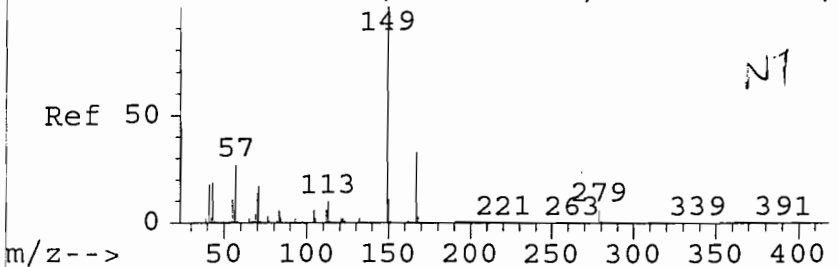
Ion 206.00 (205



AbundanceScan 1746 (28.519 min): S21991.D (



AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 18.35 ng

RT: 31.04 min Scan# 1914

Delta R.T. -0.07 min

Lab File: S21991.D

Acq: 7 Nov 99 3:19 pm

Tgt Ion:149 Resp: 302270

Ion Ratio Lower Upper

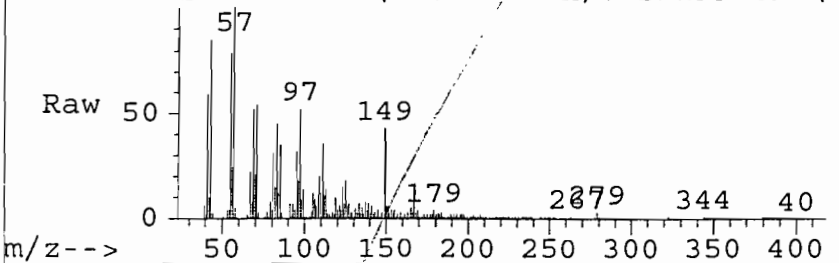
149 100

150 14.4 5.4 16.3

167 35.7 16.5 49.4

0 0.0 0.0 0.0

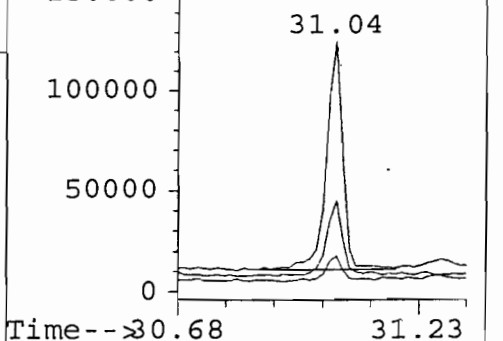
AbundanceScan 1914 (31.042 min): S21991.D (



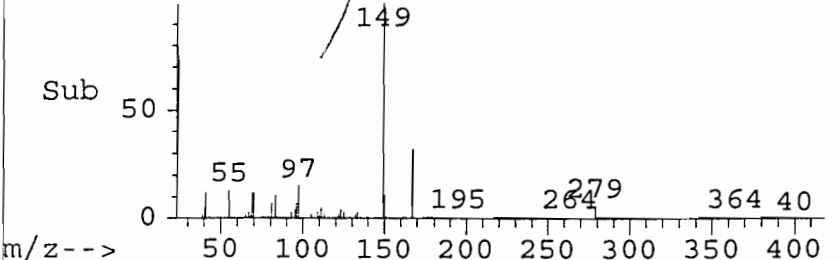
AbundanceIon 149.00 (148

Ion 150.00 (149

Ion 167.00 (166



AbundanceScan 1914 (31.042 min): S21991.D (



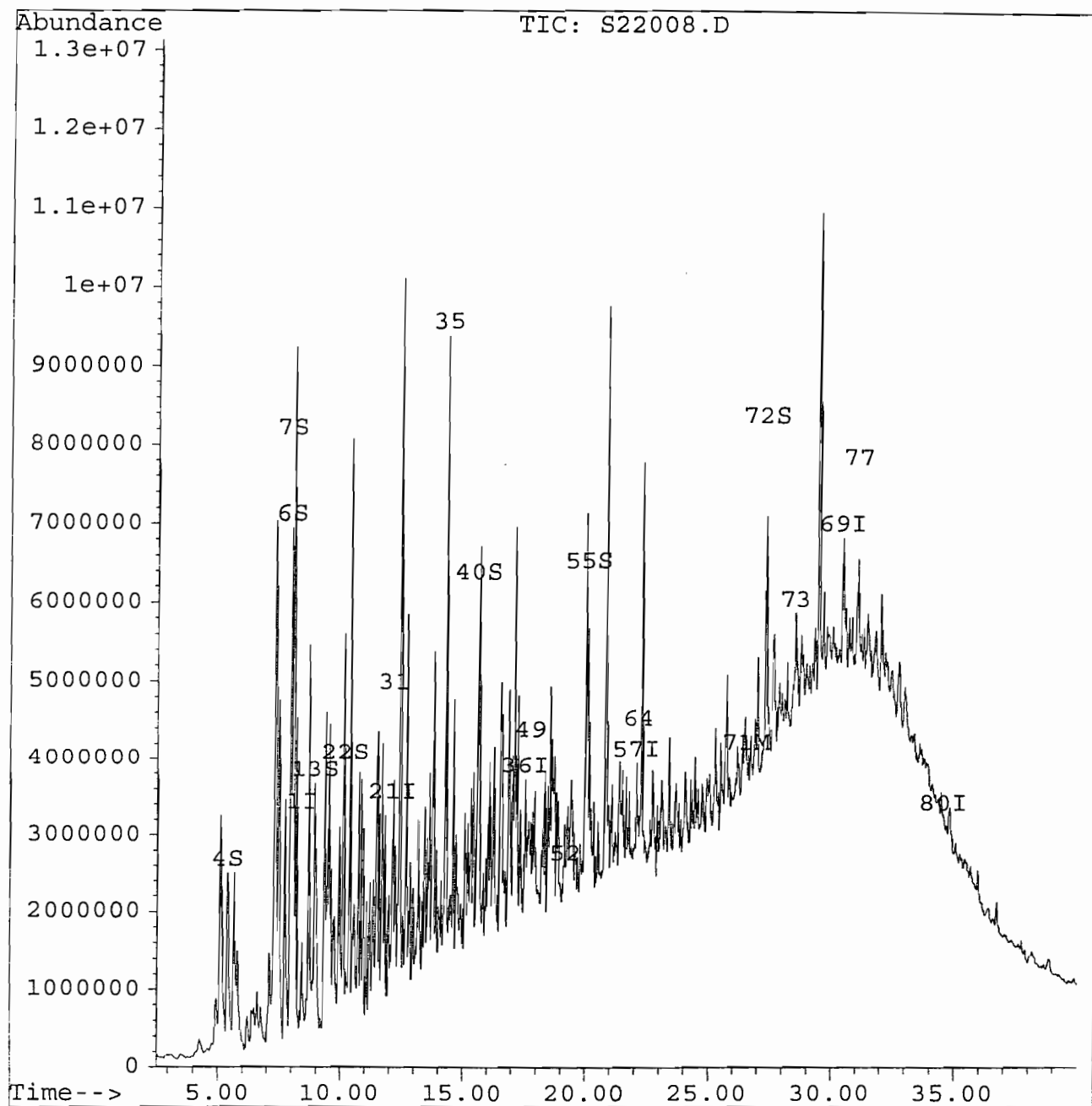
000058

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22008.D
Acq Time : 8 Nov 99 4:37 pm
Sample : 13827ASP-88012-QB506 RE
Misc :
Quant Time: Nov 10 13:42 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22008.D

Acq Time : 8 Nov 99 4:37 pm

Sample : 13827ASP-88012-QB506 RE

Misc :

Quant Time: Nov 10 13:42 1999

Operator: BOB

Inst : bn2

Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M

Title : CLP BNA Calibration

Last Update : Wed Nov 10 09:59:44 1999

Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi)
1) 1,4-Dichlorobenzene-d4	8.40	152	490487	40.00	ng	-0.1
21) Naphthalene-d8	12.09	136	1800163	40.00	ng	-0.1
36) Acenaphthene-d10	17.52	164	842855	40.00	ng	-0.1
57) Phenanthrene-d10	22.06	188	1460776	40.00	ng	-0.1
69) Chrysene-d12	30.40	240	590867	40.00	ng	-0.1
80) Perylene-d12	34.54	264	169515	40.00	ng	-0.1

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.38	112	4601904	217.03	ng	
6) 2-Chlorophenol-d4	7.94	132	5133047	240.20	ng	
7) Phenol-d5	7.94	99	4870949	211.87	ng	
13) 1,2-Dichlorobenzene-d4	8.92	152	1499284	121.96	ng	
22) Nitrobenzene-d5	10.14	82	2114783	121.40	ng	
40) 2-Fluorobiphenyl	15.60	172	3887839	127.27	ng	
55) 2,4,6-Tribromophenol	20.08	330	1216293	273.00	ng	
72) Terphenyl-d14	27.29	244	3016190	189.56	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
31) Naphthalene	12.14	128	2683023	52.30	ng	10
35) 2-Methylnaphthalene NT	14.29	142	2391452	52.83	ng	7
49) Dibenzofuran NT	17.74	168	191774	5.20	ng	7
52) Fluorene	19.18	166	291319	10.41	ng	9
64) Phenanthrene	22.14	178	624600	17.21	ng	9
71) Pyrene	26.52	202	128721	5.11	ng	9
73) Butylbenzylphthalate NT	28.49	149	74935	3.96	ng	9
77) bis(2-Ethylhexyl)phthalate NT	31.02	149	515784	20.90	ng	9

000061

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

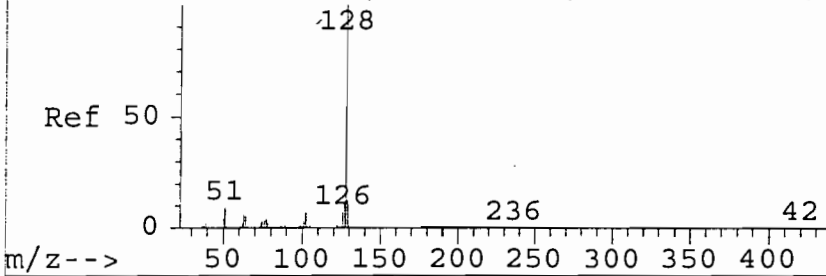
S22008.D B21030C.M

Wed Nov 10 13:43:22 1999

BNA2

Page 1

AbundanceScan 660 (12.253 min): S21889.D (-



#31

Naphthalene

Concen: 52.30 ng

RT: 12.14 min Scan# 647

Delta R.T. -0.12 min

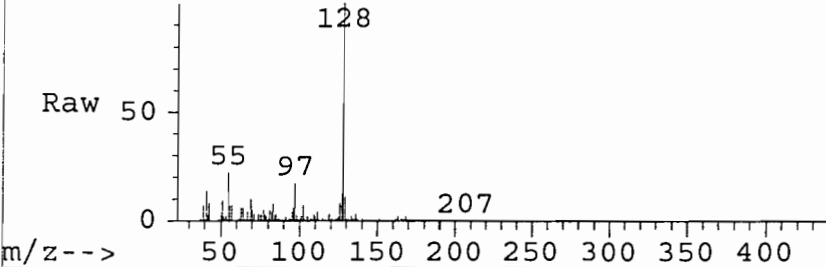
Lab File: S22008.D

Acq: 8 Nov 99 4:37 pm

Tgt Ion:128 Resp: 2683023

Ion	Ratio	Lower	Upper
128	100		
129	11.3	5.7	17.1
127	12.9	6.5	19.5
0	0.0	0.0	0.0

AbundanceScan 647 (12.138 min): S22008.D (*)



AbundanceIon 128.00 (127

Ion 129.00 (128

Ion 127.00 (126

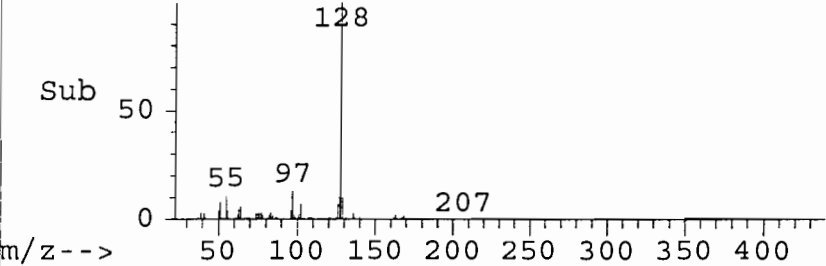
1000000 12.14

500000

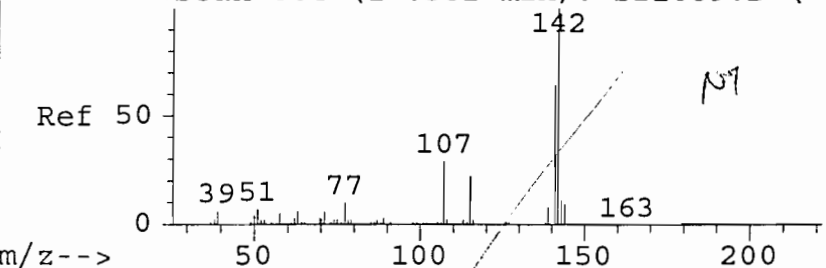
0

Time-->11.87 12.33

AbundanceScan 647 (12.138 min): S22008.D (-



AbundanceScan 804 (14.382 min): S21889.D (-



#35

2-Methylnaphthalene

Concen: 52.83 ng

RT: 14.29 min Scan# 792

Delta R.T. -0.09 min

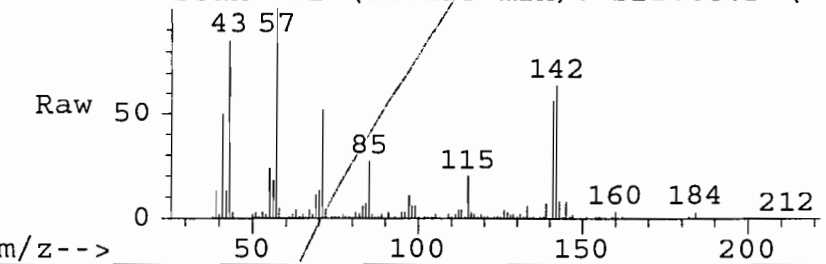
Lab File: S22008.D

Acq: 8 Nov 99 4:37 pm

Tgt Ion:142 Resp: 2391452

Ion	Ratio	Lower	Upper
142	100		
141	87.6	32.2	96.5
115	30.6	10.9	32.7
0	0.0	0.0	0.0

AbundanceScan 792 (14.293 min): S22008.D (*)



AbundanceIon 142.00 (141

Ion 141.00 (140

Ion 115.00 (114

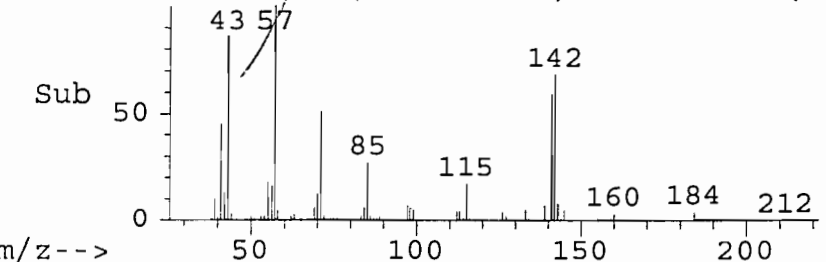
1000000 14.29

500000

0

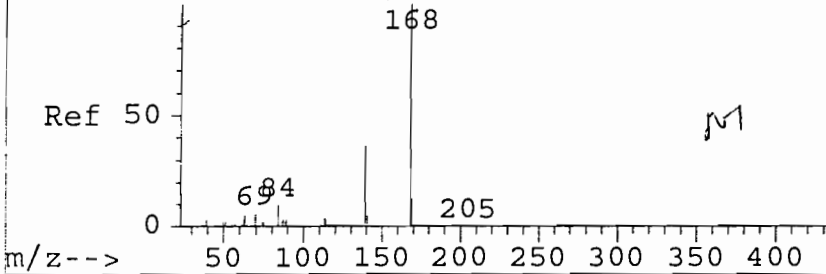
Time-->13.98 14.57

AbundanceScan 792 (14.293 min): S22008.D (-



000062

AbundanceScan 1065 (18.245 min): S21889.D (



#49

Dibenzofuran

Concen: 5.20 ng

RT: 17.74 min Scan# 1024

Delta R.T. -0.50 min

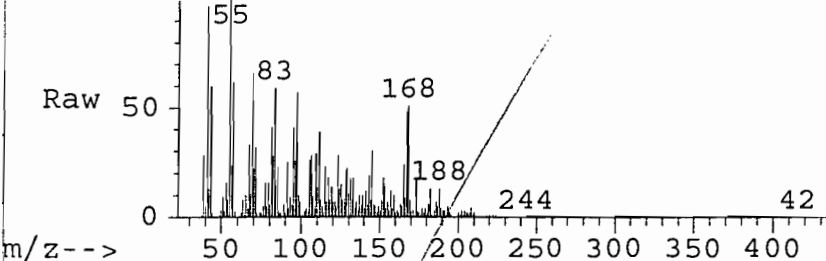
Lab File: S22008.D

Acq: 8 Nov 99 4:37 pm

Tgt Ion:168 Resp: 191774

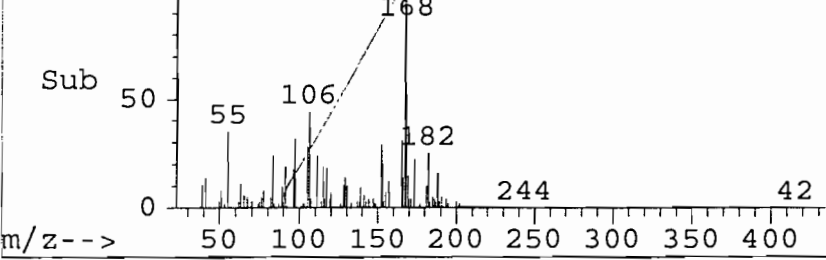
Ion	Ratio	Lower	Upper
168	100		
139	18.8	18.6	55.9
169	16.3	6.4	19.1
0	0.0	0.0	0.0

AbundanceScan 1024 (17.745 min): S22008.D (



m/z-->

AbundanceScan 1024 (17.745 min): S22008.D (



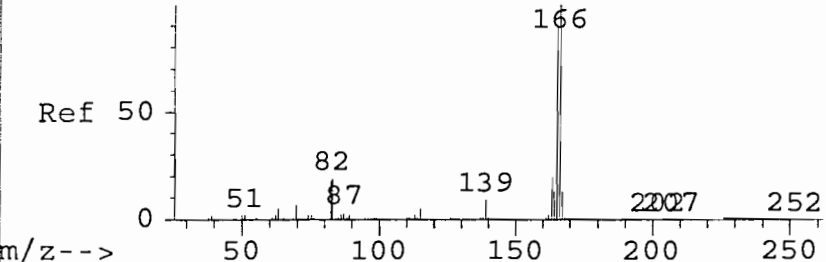
m/z-->

AbundanceIon 168.00 (167

Ion 139.00 (138

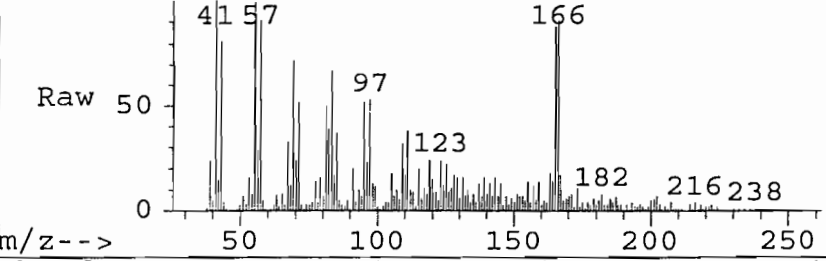
Ion 169.00 (168

AbundanceScan 1137 (19.311 min): S21889.D (



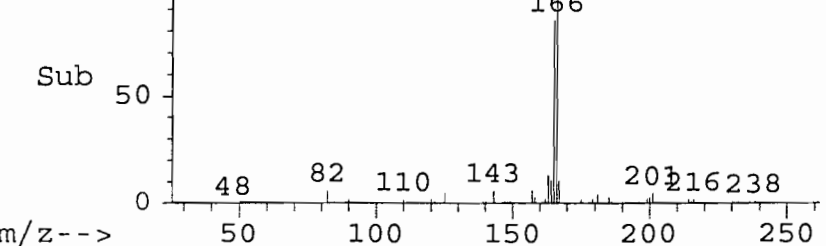
m/z-->

AbundanceScan 1120 (19.181 min): S22008.D (



m/z-->

AbundanceScan 1120 (19.181 min): S22008.D (



m/z-->

#52

Fluorene

Concen: 10.41 ng

RT: 19.18 min Scan# 1120

Delta R.T. -0.13 min

Lab File: S22008.D

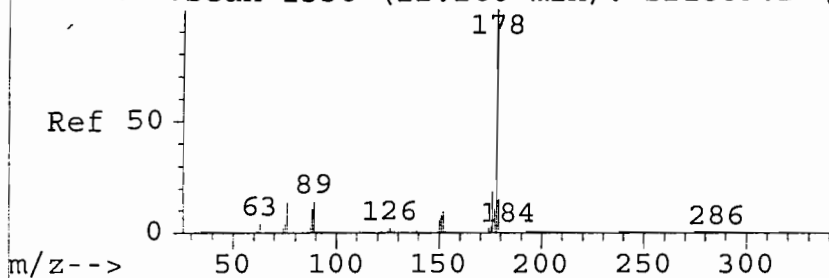
Acq: 8 Nov 99 4:37 pm

Tgt Ion:166 Resp: 291319

Ion	Ratio	Lower	Upper
166	100		
165	96.5	45.0	135.0
163	19.5	7.1	21.3
0	0.0	0.0	0.0

000063

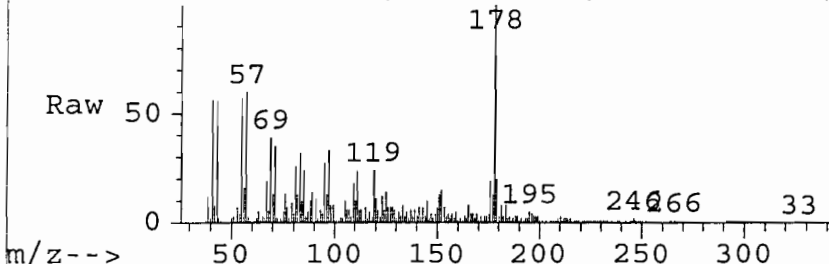
AbundanceScan 1336 (22.260 min): S21889.D (



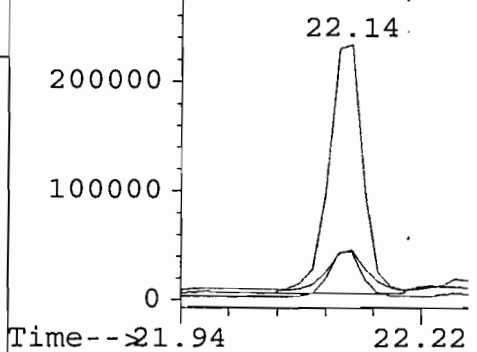
#64
Phenanthrene
Concen: 17.21 ng
RT: 22.14 min Scan# 1318
Delta R.T. -0.12 min
Lab File: S22008.D
Acq: 8 Nov 99 4:37 pm

Tgt Ion:	178	Resp:	624600
Ion	Ratio	Lower	Upper
178	100		
179	19.7	7.4	22.3
176	19.1	9.3	27.9
0	0.0	0.0	0.0

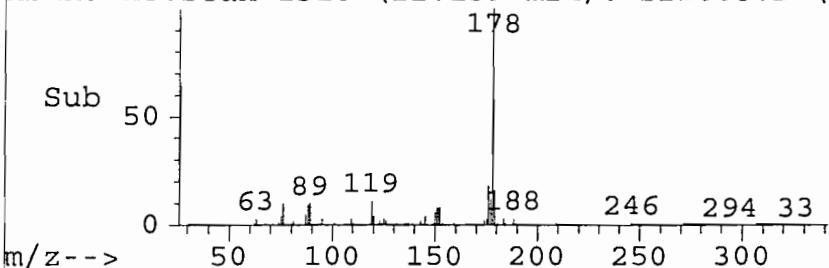
AbundanceScan 1318 (22.139 min): S22008.D (



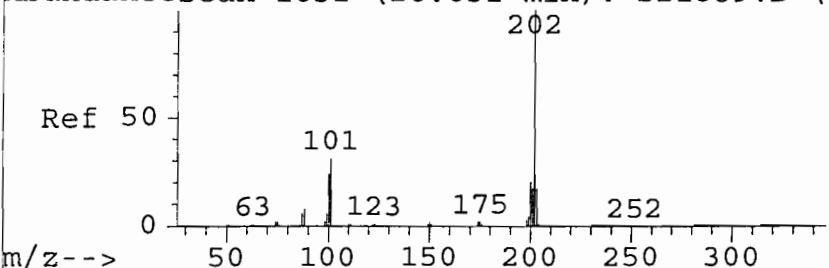
AbundanceIon 178.00 (177)
Ion 179.00 (178)
Ion 176.00 (175)



AbundanceScan 1318 (22.139 min): S22008.D (



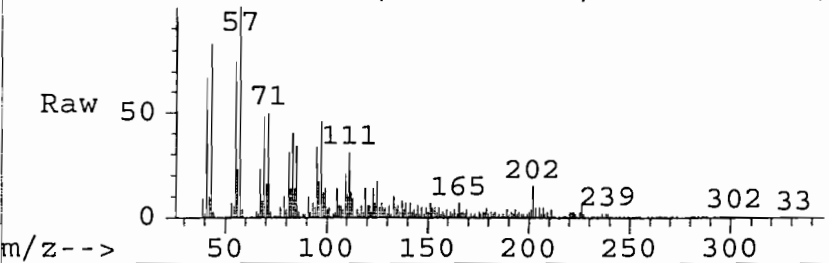
AbundanceScan 1631 (26.631 min): S21889.D (



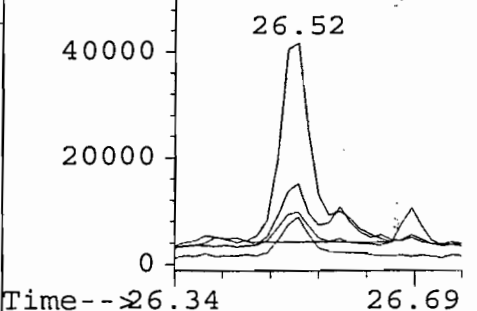
#71
Pyrene
Concen: 5.11 ng
RT: 26.52 min Scan# 1611
Delta R.T. -0.11 min
Lab File: S22008.D
Acq: 8 Nov 99 4:37 pm

Tgt Ion:	202	Resp:	128721
Ion	Ratio	Lower	Upper
202	100		
101	36.4	15.3	45.9
200	21.2	10.1	30.3
201	23.5	8.5	25.4

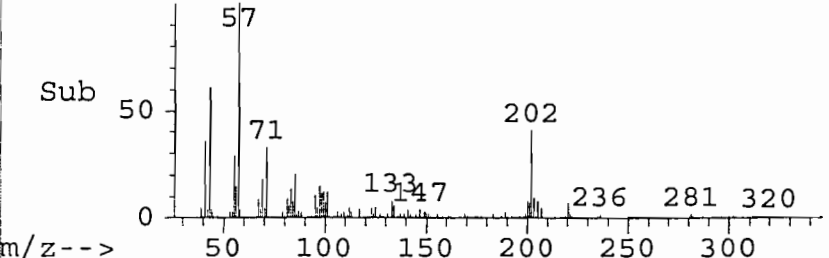
AbundanceScan 1611 (26.523 min): S22008.D (



AbundanceIon 202.00 (201)
Ion 101.00 (100)
Ion 200.00 (199)
Ion 201.00 (200)

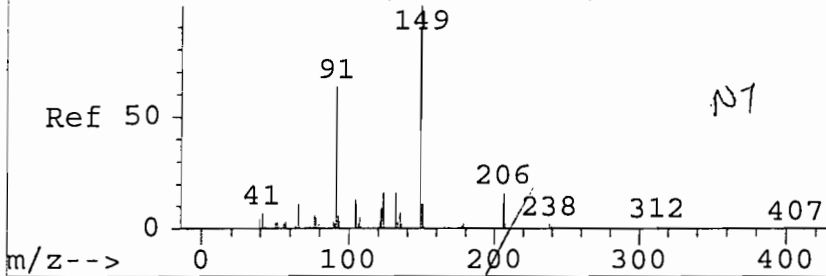


AbundanceScan 1611 (26.523 min): S22008.D (



000064

AbundanceScan 1803 (29.181 min): S21889.D (



#73

Butylbenzylphthalate

Concen: 3.96 ng

RT: 28.49 min Scan# 1742

Delta R.T. -0.69 min

Lab File: S22008.D

Acq: 8 Nov 99 4:37 pm

Tgt Ion:149 Resp: 74935

Ion	Ratio	Lower	Upper

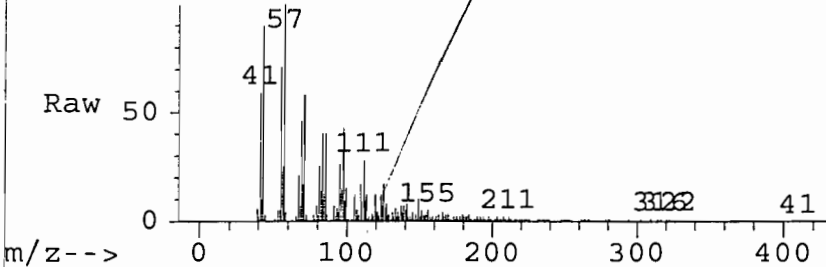
149	100		

91	69.4	31.5	94.4

206	9.4	8.2	24.6

0	0.0	0.0	0.0

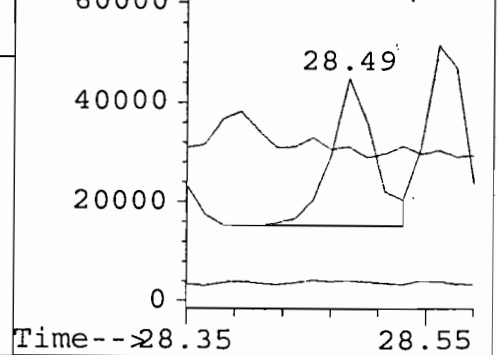
AbundanceScan 1742 (28.487 min): S22008.D (



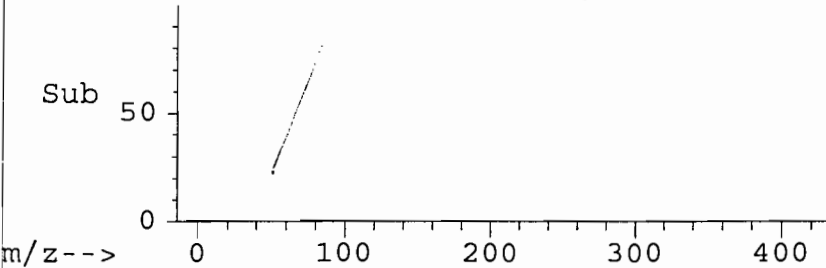
AbundanceIon 149.00 (148

Ion 91.00 (90.

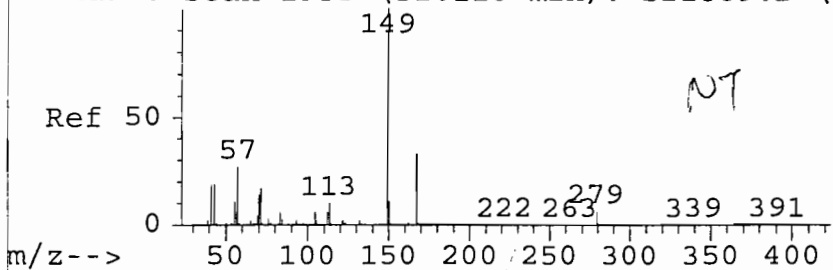
Ion 206.00 (205



AbundanceScan 1742 (28.487 min): S22008.D (



AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 20.90 ng

RT: 31.02 min Scan# 1910

Delta R.T. -0.10 min

Lab File: S22008.D

Acq: 8 Nov 99 4:37 pm

Tgt Ion:149 Resp: 515784

Ion	Ratio	Lower	Upper

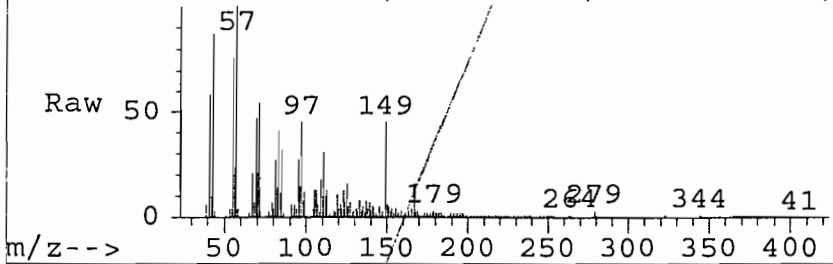
149	100		

150	14.3	5.4	16.3

167	35.2	16.5	49.4

0	0.0	0.0	0.0

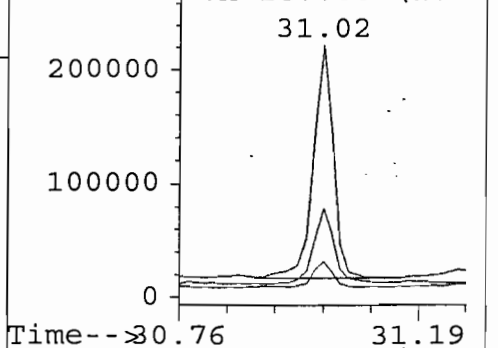
AbundanceScan 1910 (31.015 min): S22008.D (



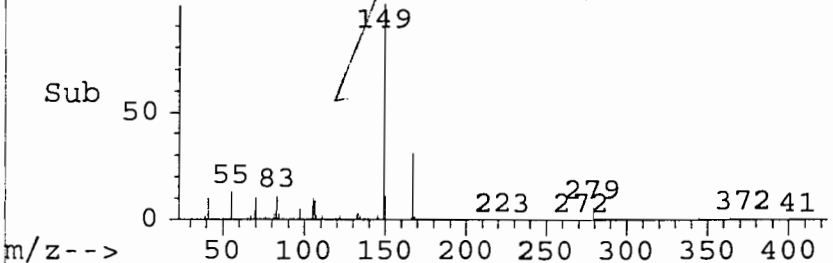
AbundanceIon 149.00 (148

Ion 150.00 (149

Ion 167.00 (166



AbundanceScan 1910 (31.015 min): S22008.D (



000065

SAMPLE NO.

GP-017-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS&

Lab Sample ID: O88013

Lab File ID: S21968.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/5/99

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Concentration Units:

FORM I SV

000066

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21968.D

Acq Time : 5 Nov 99 7:04 pm

Sample : 13827ASP-88013-QB506

Misc :

Quant Time: Nov 10 13:53 1999

Operator: BOB

Inst : bn2

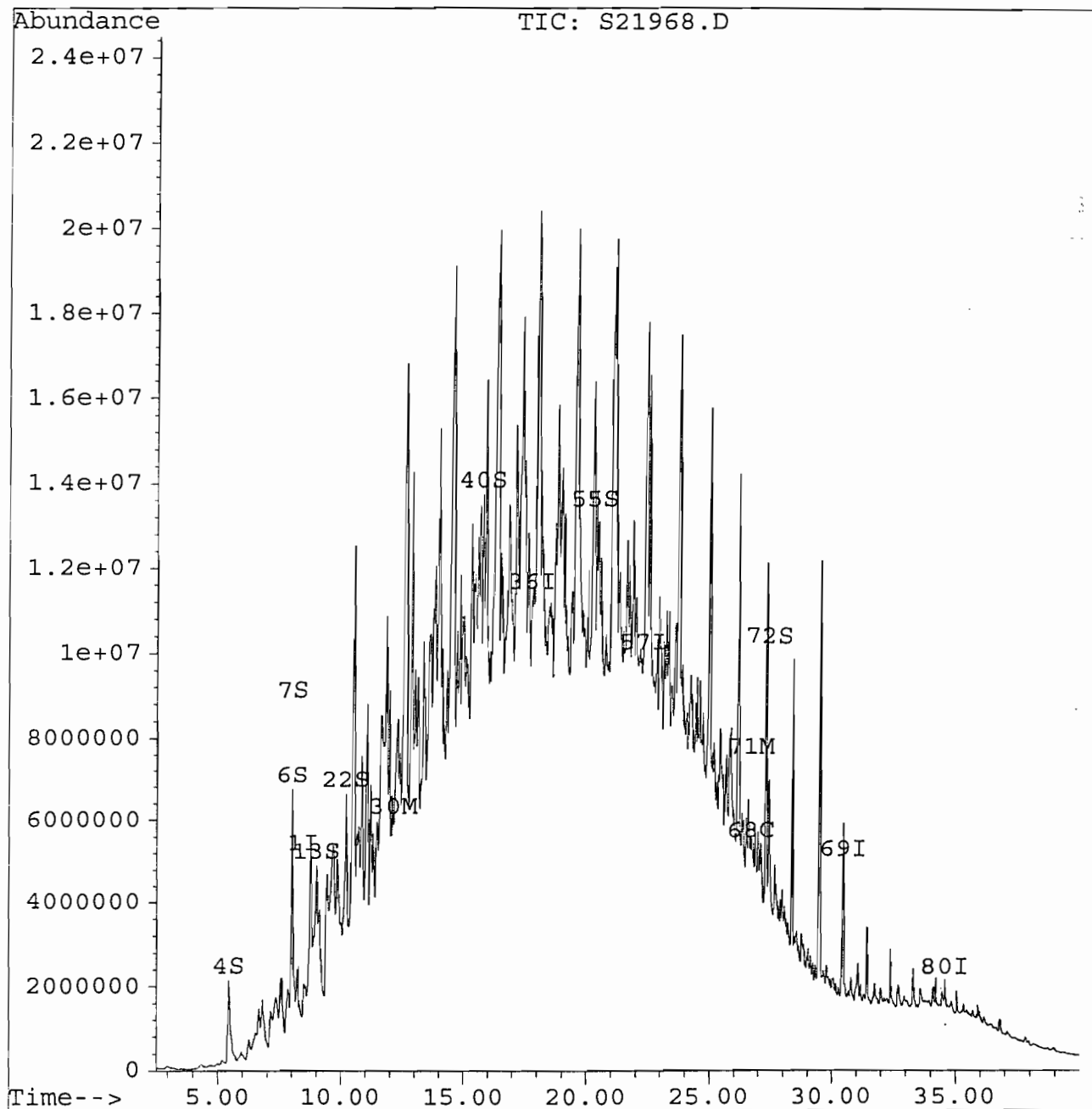
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M

Title : CLP BNA Calibration

Last Update : Wed Nov 10 09:59:44 1999

Response via : Multiple Level Calibration



Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21968.D
 Acq Time : 5 Nov 99 7:04 pm
 Sample : 13827ASP-88013-QB506
 Misc :
 Quant Time: Nov 10 13:53 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

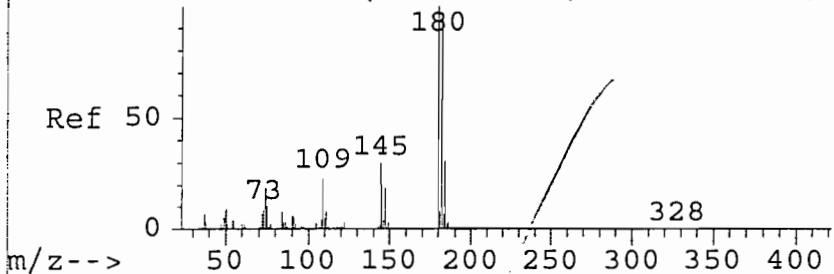
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi)
1) 1,4-Dichlorobenzene-d4	8.47	152	502569	40.00	ng	-0.0
21) Naphthalene-d8	12.20	136	1765168	40.00	ng	0.0
36) Acenaphthene-d10	17.74	164	815006	40.00	ng	0.1
57) Phenanthrene-d10	22.29	188	1227278	40.00	ng	0.1
69) Chrysene-d12	30.45	240	992398	40.00	ng	-0.0
80) Perylene-d12	34.58	264	730125	40.00	ng	-0.0

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.44	112	4582339	210.91	ng	
6) 2-Chlorophenol-d4	7.99	132	5343469	244.03	ng	
7) Phenol-d5	7.99	99	4915028	208.65	ng	
13) 1,2-Dichlorobenzene-d4	8.99	152	1468712	116.60	ng	
22) Nitrobenzene-d5	10.20	82	2392303	140.05	ng	
40) 2-Fluorobiphenyl	15.75	172	2917493	98.77	ng	
55) 2,4,6-Tribromophenol	20.29	330	697156	161.83	ng	
72) Terphenyl-d14	27.42	244	3330490	124.63	ng	

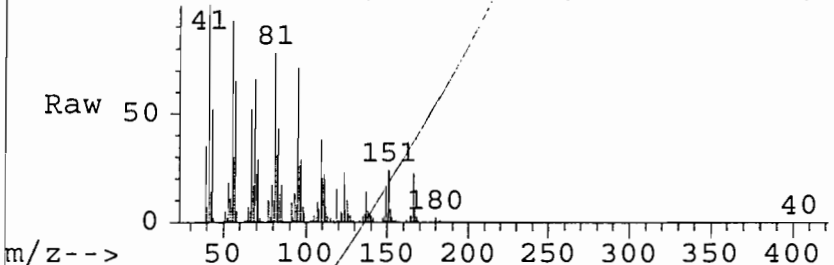
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
30) ~~1,2,4-Trichlorobenzene~~ NT	12.13	180	35976	2.34	ng	8
68) Fluoranthene	26.69	202	521976	16.14	ng	8
71) Pyrene	26.69	202	565121	13.36	ng	9

000068

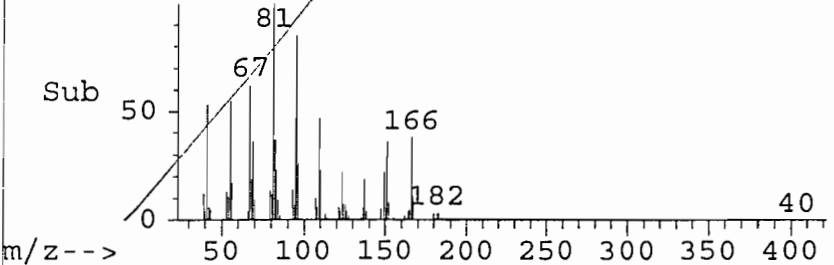
AbundanceScan 651 (12.120 min): S21889.D (-



AbundanceScan 650 (12.127 min): S21968.D (*)



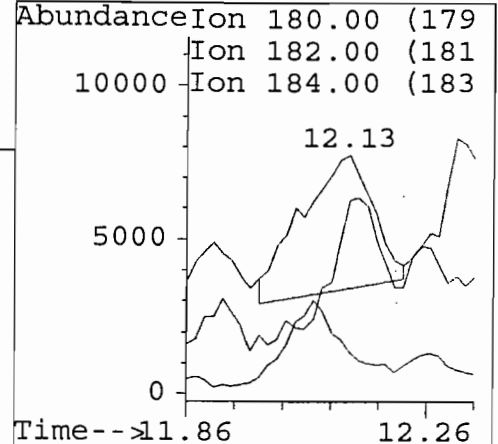
AbundanceScan 650 (12.127 min): S21968.D (-



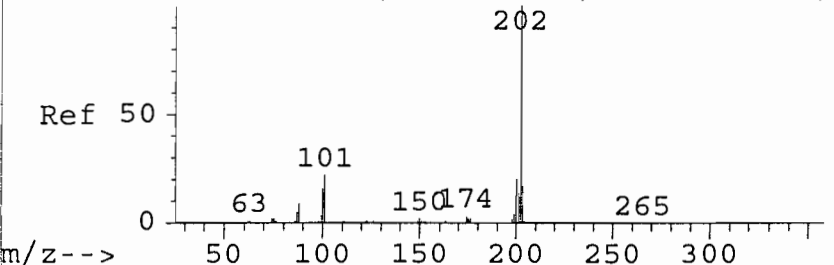
#30

1,2,4-Trichlorobenzene
Concen: 2.34 ng
RT: 12.13 min Scan# 650
Delta R.T. 0.01 min
Lab File: S21968.D
Acq: 5 Nov 99 7:04 pm

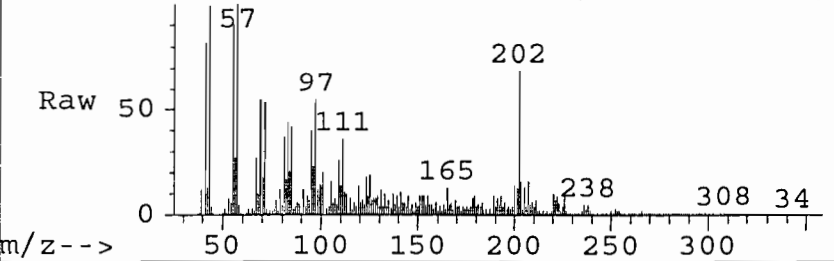
Tgt Ion:180	Resp:	35976
Ion Ratio	Lower	Upper
180	100	
182	81.0	47.6 142.8
184	17.5	15.7 47.0
0	0.0	0.0 0.0



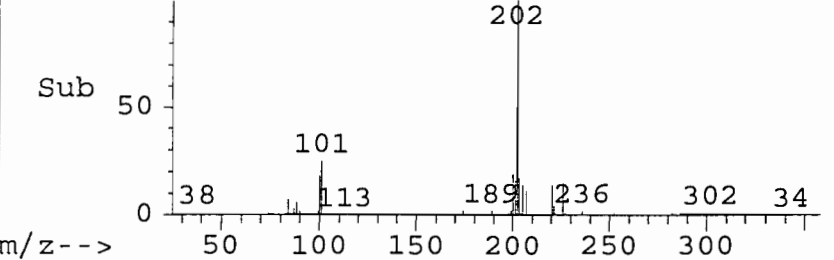
AbundanceScan 1587 (25.979 min): S21889.D (



AbundanceScan 1627 (26.689 min): S21968.D (



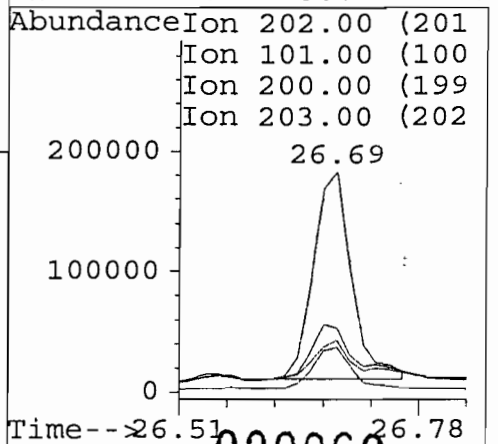
AbundanceScan 1627 (26.689 min): S21968.D (



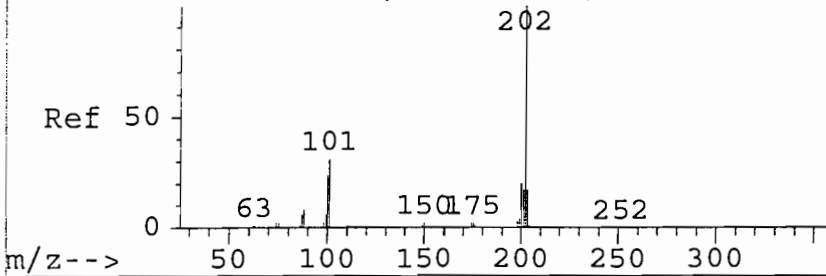
#68

Fluoranthene
Concen: 16.14 ng
RT: 26.69 min Scan# 1627
Delta R.T. 0.71 min
Lab File: S21968.D
Acq: 5 Nov 99 7:04 pm

Tgt Ion:202	Resp:	521976
Ion Ratio	Lower	Upper
202	100	
101	29.1	10.9 32.7
200	20.4	9.9 29.6
203	23.4	8.5 25.4



AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 13.36 ng

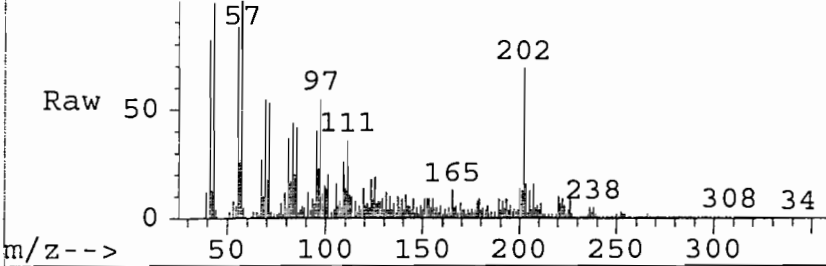
RT: 26.69 min Scan# 1627

Delta R.T. 0.06 min

Lab File: S21968.D

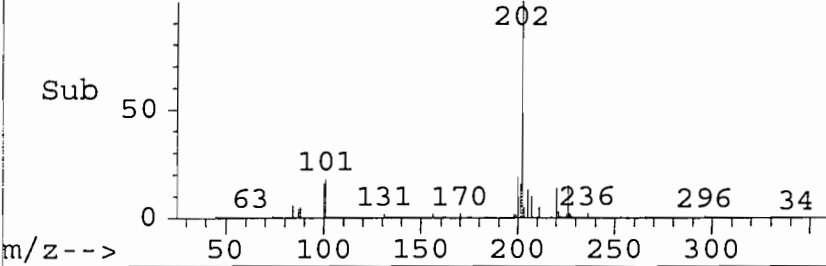
Acq: 5 Nov 99 7:04 pm

AbundanceScan 1627 (26.689 min): S21968.D (

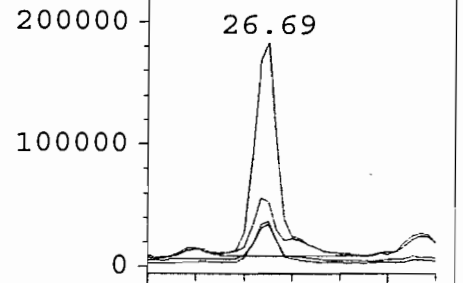


Tgt Ion:	202	Resp:	565121
Ion	Ratio	Lower	Upper
202	100		
101	29.1	15.3	45.9
200	20.4	10.1	30.3
201	19.1	8.5	25.4

AbundanceScan 1627 (26.689 min): S21968.D (



Abundance	Ion	202.00	(201
	Ion	101.00	(100
	Ion	200.00	(199
	Ion	201.00	(200



Time--> 26.46 26.91

SAMPLE NO.

GP-017-SS12

Contract: IMPACT ENVIRONMENTAL

Location: Group: GP-014-SS8

Lab Sample ID: O88014

Lab File ID: S21969.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/5/99

Dilution Factor: 1.0

pH:

(ug/L or ug/Kg) ug/Kg

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q

FORM I SV

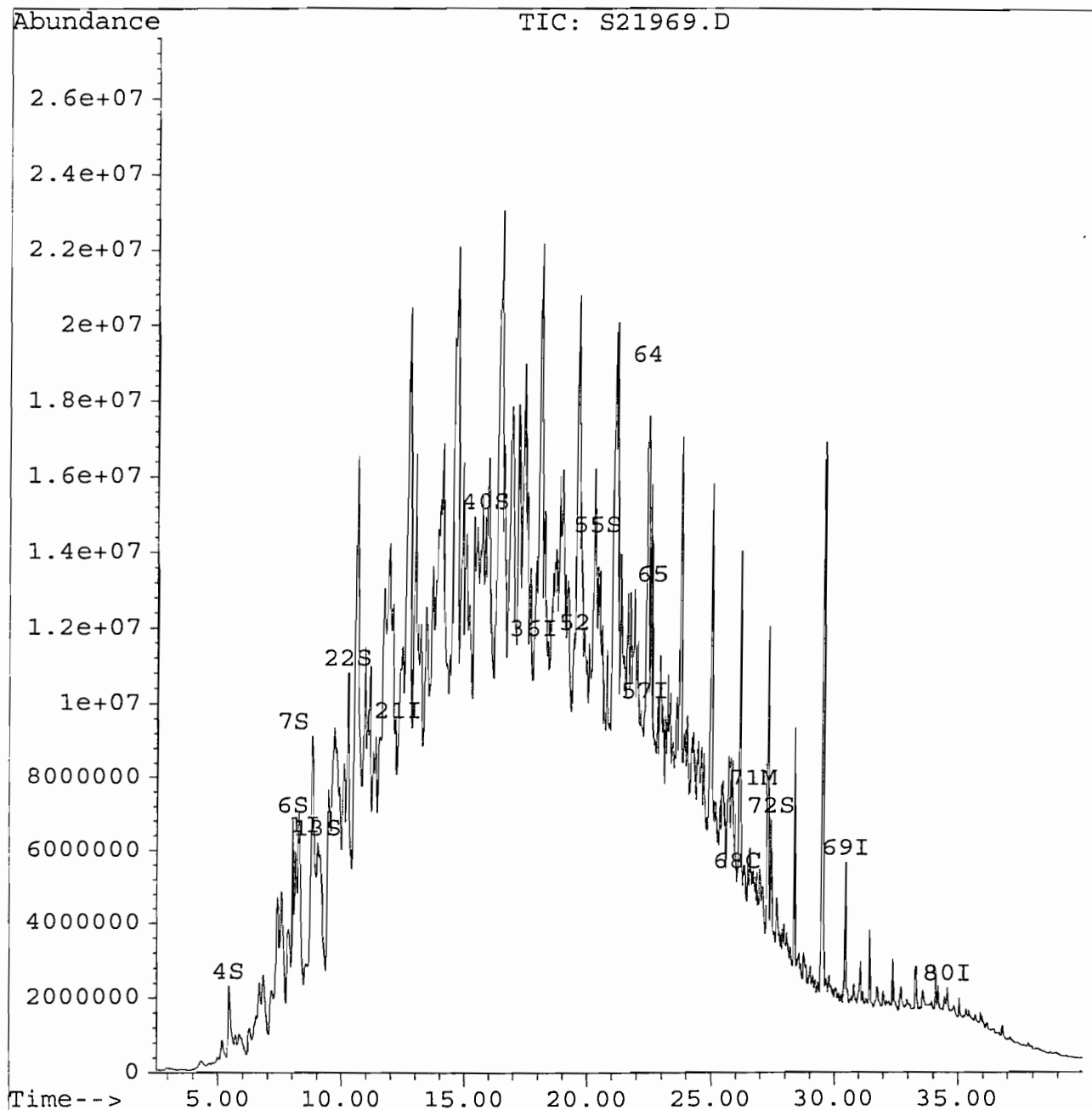
000071

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21969.D
Acq Time : 5 Nov 99 7:55 pm
Sample : 13827ASP-88014-QB506
Misc :
Quant Time: Nov 10 13:59 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000072

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21969.D
 Acq Time : 5 Nov 99 7:55 pm
 Sample : 13827ASP-88014-QB506
 Misc :
 Quant Time: Nov 10 13:59 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

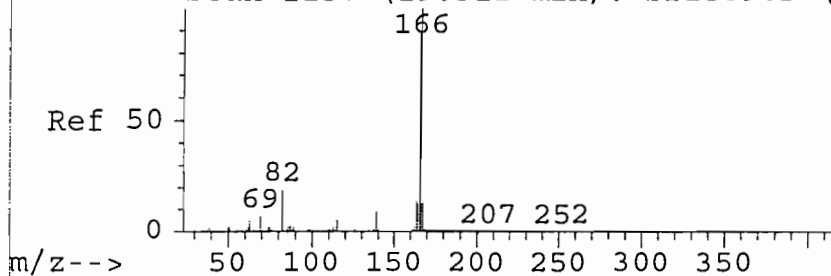
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi)
1) 1,4-Dichlorobenzene-d4	8.49	152	503079	40.00	ng	-0.0
21) Naphthalene-d8	12.24	136	1755845	40.00	ng	0.0
36) Acenaphthene-d10	17.78	164	878808	40.00	ng	0.1
57) Phenanthrene-d10	22.30	188	1164405	40.00	ng	0.1
69) Chrysene-d12	30.45	240	972066	40.00	ng	-0.0
80) Perylene-d12	34.57	264	705927	40.00	ng	-0.0

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.43	112	4721423	217.09	ng	
6) 2-Chlorophenol-d4	8.00	132	5284559	241.10	ng	
7) Phenol-d5	8.00	99	4839395	205.23	ng	
13) 1,2-Dichlorobenzene-d4	9.01	152	1459701	115.77	ng	m
22) Nitrobenzene-d5	10.23	82	2141649	126.04	ng	m
40) 2-Fluorobiphenyl	15.79	172	3187014	100.06	ng	m
55) 2,4,6-Tribromophenol	20.33	330	876175	188.62	ng	
72) Terphenyl-d14	27.42	244	3193658	122.00	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
52) Fluorene	19.45	166	1320990	45.25	ng	8
64) Phenanthrene	22.39	178	2175811	75.21	ng	9
65) Anthracene	22.60	178	349090	11.69	ng	m 9
68) Fluoranthene	26.04	202	280893	9.15	ng	m 8
71) Pyrene	26.69	202	560765	13.54	ng	9

000073

AbundanceScan 1137 (19.311 min): S21889.D (



#52

Fluorene

Concen: 45.25 ng

RT: 19.45 min Scan# 1142

Delta R.T. 0.14 min

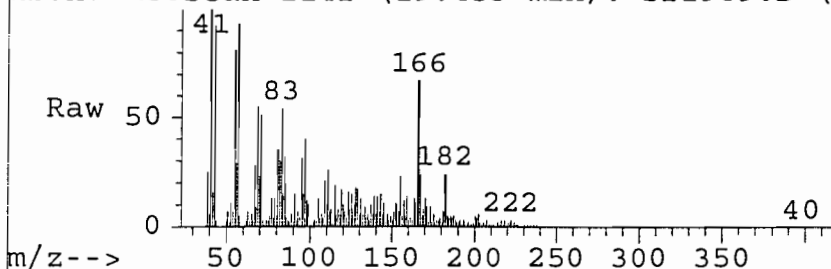
Lab File: S21969.D

Acq: 5 Nov 99 7:55 pm

Tgt Ion:166 Resp: 1320990

Ion	Ratio	Lower	Upper
166	100		
165	101.1	45.0	135.0
163	19.6	7.1	21.3
0	0.0	0.0	0.0

AbundanceScan 1142 (19.453 min): S21969.D (

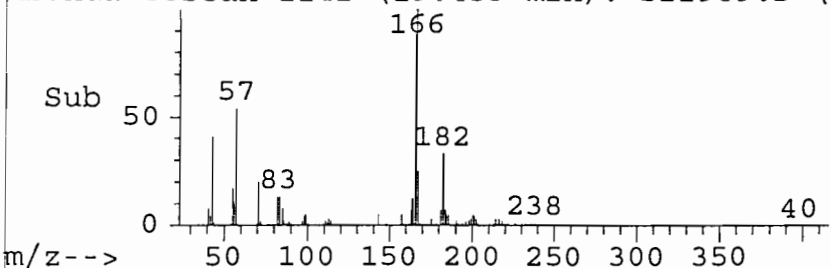


AbundanceIon 166.00 (165

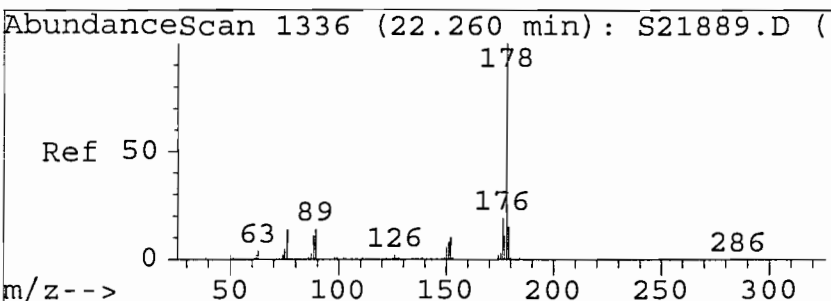
Ion 165.00 (164

Ion 163.00 (162

AbundanceScan 1142 (19.453 min): S21969.D (



AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 75.21 ng

RT: 22.39 min Scan# 1339

Delta R.T. 0.13 min

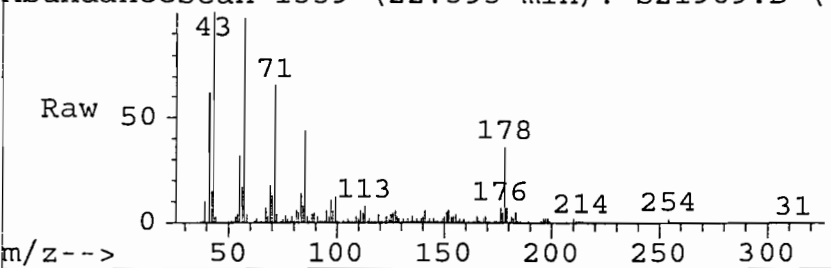
Lab File: S21969.D

Acq: 5 Nov 99 7:55 pm

Tgt Ion:178 Resp: 2175811

Ion	Ratio	Lower	Upper
178	100		
179	19.8	7.4	22.3
176	19.5	9.3	27.9
0	0.0	0.0	0.0

AbundanceScan 1339 (22.393 min): S21969.D (

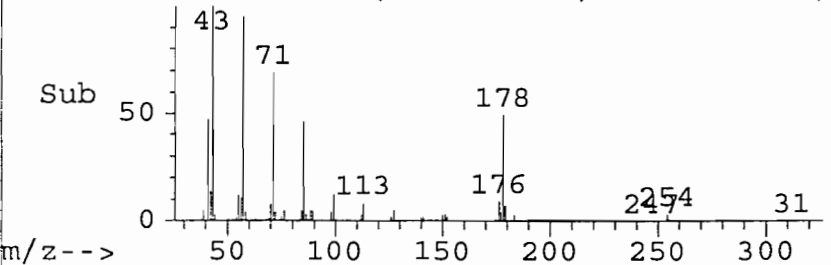


AbundanceIon 178.00 (177

Ion 179.00 (178

Ion 176.00 (175

AbundanceScan 1339 (22.393 min): S21969.D (

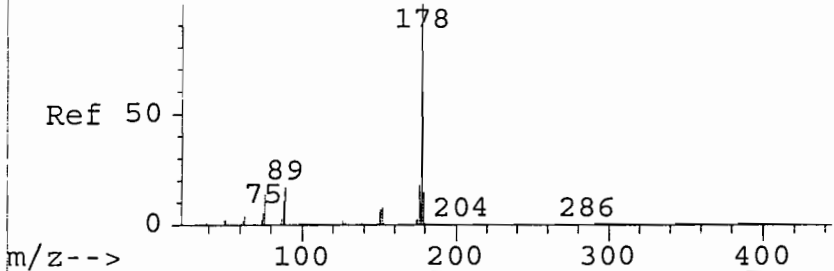


AbundanceScan 1339 (22.393 min): S21969.D (

Time-->22.23 22.48

000074

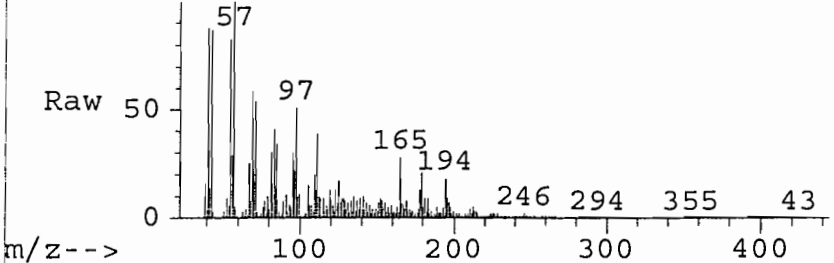
AbundanceScan 1345 (22.394 min): S21889.D (



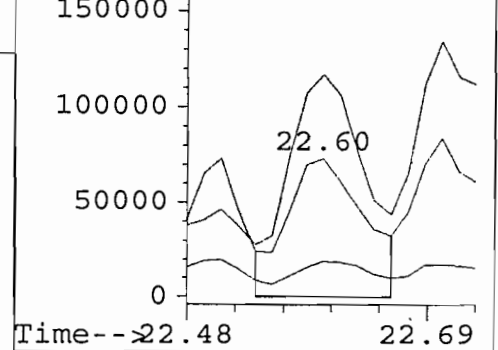
#65
 Anthracene
 Concen: 11.69 ng m
 RT: 22.60 min Scan# 1353
 Delta R.T. 0.21 min
 Lab File: S21969.D
 Acq: 5 Nov 99 7:55 pm

Tgt Ion:178	Resp:	349090
Ion Ratio	Lower	Upper
178	100	
179	15.1	7.5 22.6
176	17.9	8.9 26.8
0	0.0	0.0 0.0

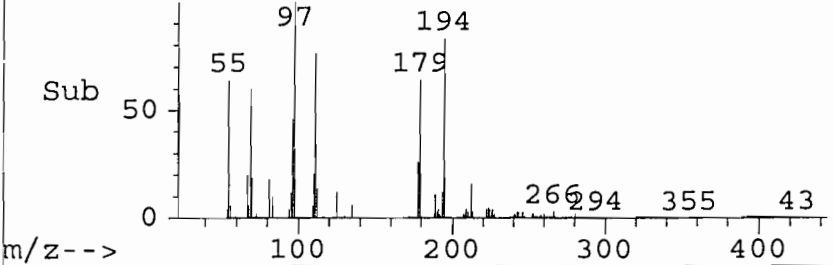
AbundanceScan 1353 (22.602 min): S21969.D (



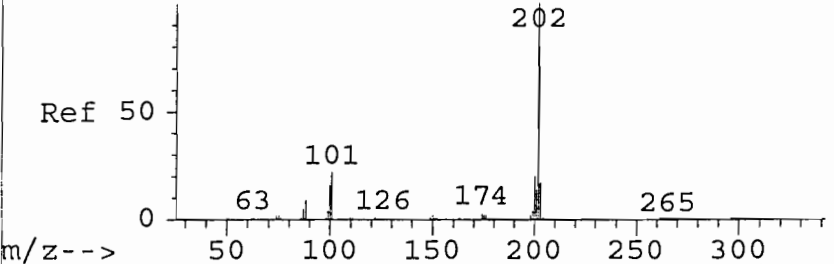
AbundanceIon 178.00 (177
 Ion 179.00 (178
 Ion 176.00 (175



AbundanceScan 1353 (22.602 min): S21969.D (



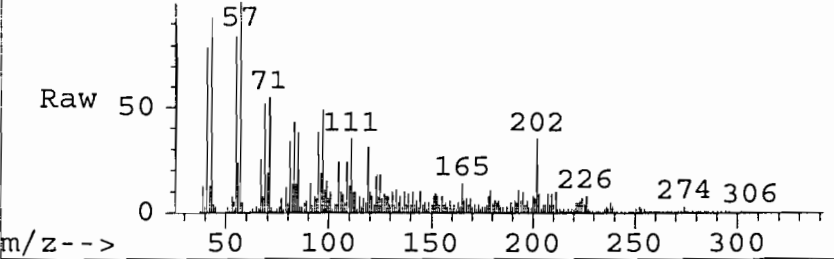
AbundanceScan 1587 (25.979 min): S21889.D (



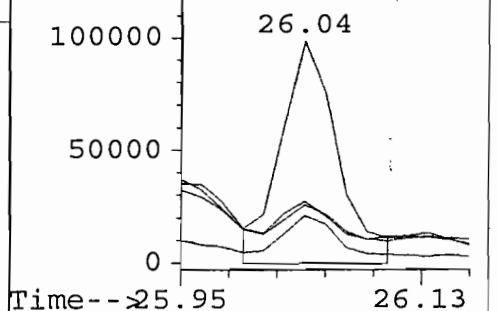
#68
 Fluoranthene
 Concen: 9.15 ng m
 RT: 26.04 min Scan# 1583
 Delta R.T. 0.06 min
 Lab File: S21969.D
 Acq: 5 Nov 99 7:55 pm

Tgt Ion:202	Resp:	280893
Ion Ratio	Lower	Upper
202	100	
101	21.7	10.9 32.7
200	19.7	9.9 29.6
203	16.9	8.5 25.4

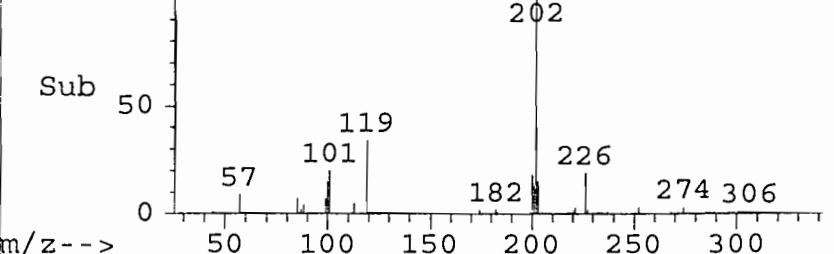
AbundanceScan 1583 (26.043 min): S21969.D (



AbundanceIon 202.00 (201
 Ion 101.00 (100
 Ion 200.00 (199
 Ion 203.00 (202

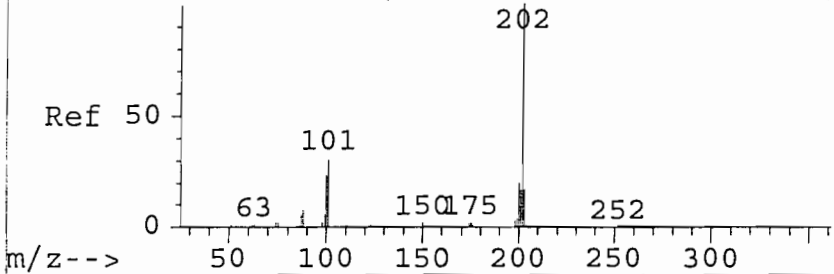


AbundanceScan 1583 (26.043 min): S21969.D (



000075

AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 13.54 ng

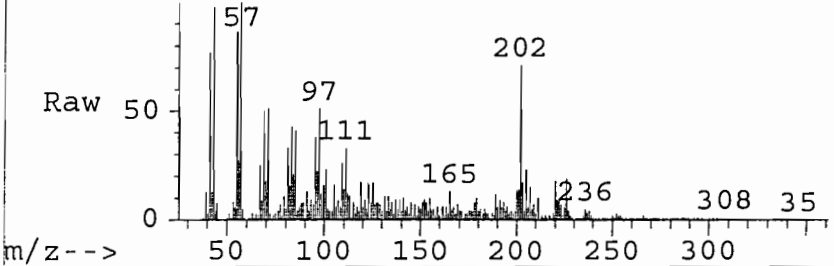
RT: 26.69 min Scan# 1626

Delta R.T. 0.06 min

Lab File: S21969.D

Acq: 5 Nov 99 7:55 pm

AbundanceScan 1626 (26.687 min): S21969.D (



Tgt Ion:202 Resp: 560765

Ion Ratio Lower Upper

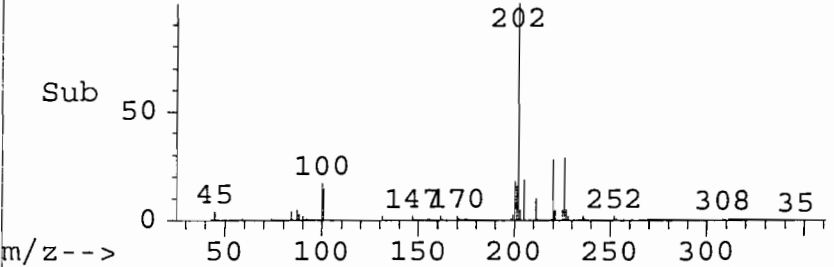
202 100

101 32.4 15.3 45.9

200 20.4 10.1 30.3

201 19.5 8.5 25.4

AbundanceScan 1626 (26.687 min): S21969.D (

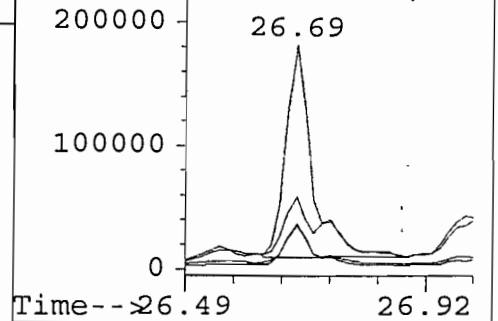


AbundanceIon 202.00 (201

Ion 101.00 (100

Ion 200.00 (199

Ion 201.00 (200



GP-018-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Lab Sample ID: O88015

Lab File ID: S21992.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/7/99

Dilution Factor: 1.0

pH:

(ug/L or ug/Kg)

ug/Kg

Q

FORM I SV

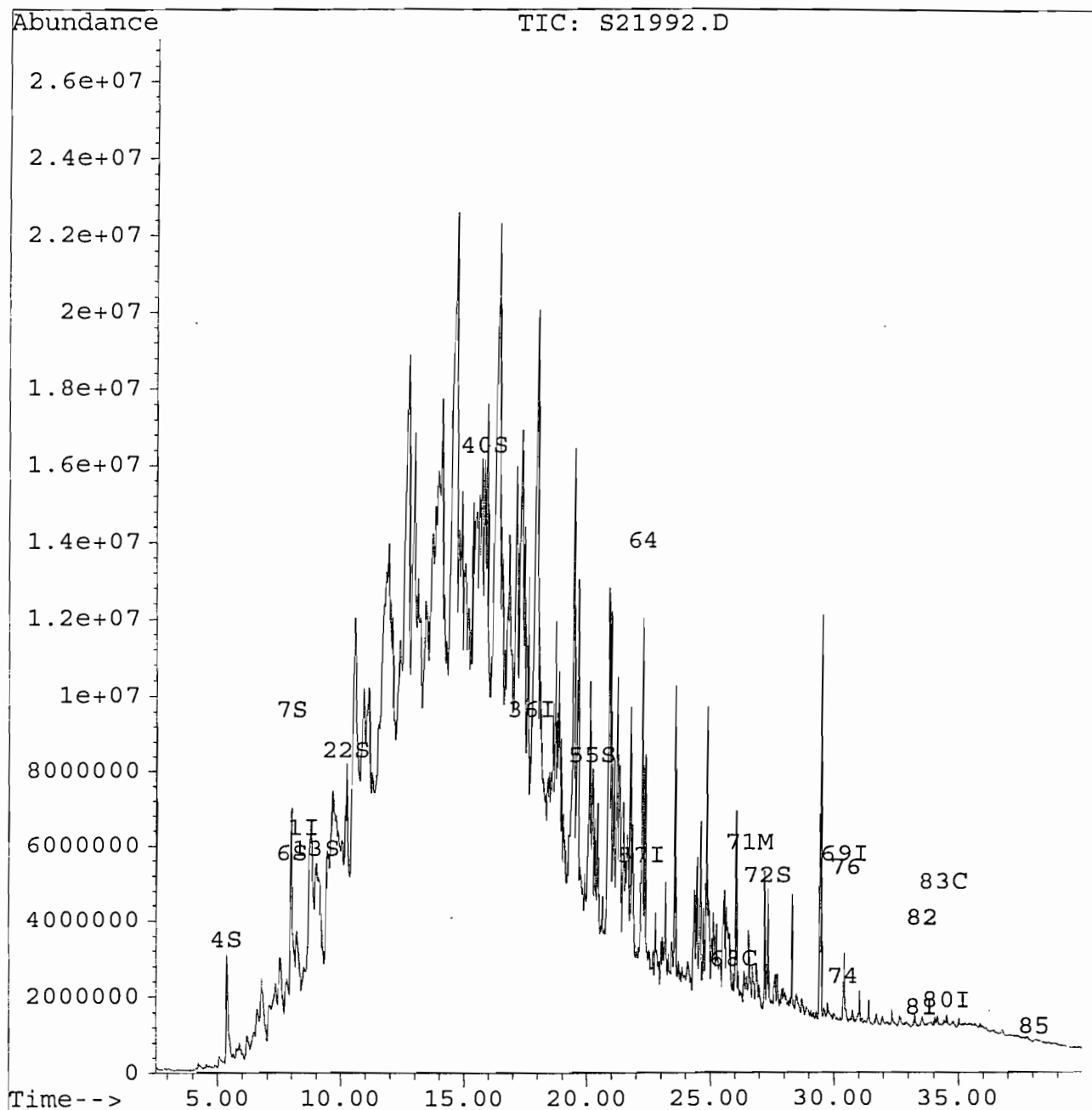
000077

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21992.D
Acq Time : 7 Nov 99 4:09 pm
Sample : 13827ASP-88015-QB506
Misc :
Quant Time: Nov 10 14:04 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000078

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21992.D
 Acq Time : 7 Nov 99 4:09 pm
 Sample : 13827ASP-88015-QB506
 Misc :
 Quant Time: Nov 10 14:04 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

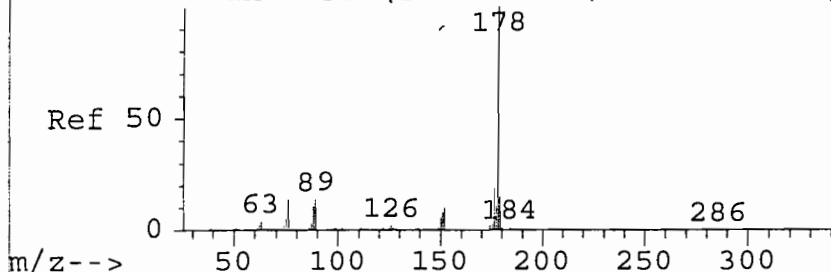
Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.45	152	532075	40.00	ng	-0.0
21) Naphthalene-d8	12.23	136	1775078	40.00	ng	0.0
36) Acenaphthene-d10	17.70	164	842957	40.00	ng	0.0
57) Phenanthrene-d10	22.17	188	1373870	40.00	ng	0.0
69) Chrysene-d12	30.40	240	605854	40.00	ng	-0.1
80) Perylene-d12	34.52	264	321447	40.00	ng	-0.1

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.35	112	5438300	236.43	ng	
6) 2-Chlorophenol-d4	7.98	132	6086225	262.54	ng	
7) Phenol-d5	7.96	99	5521275	221.39	ng	
13) 1,2-Dichlorobenzene-d4	8.97	152	1590432	119.26	ng	
22) Nitrobenzene-d5	10.19	82	2296276	133.68	ng	
40) 2-Fluorobiphenyl	15.77	172	2999824	98.19	ng	
55) 2,4,6-Tribromophenol	20.20	330	1322716	296.86	ng	
72) Terphenyl-d14	27.32	244	2886870	176.95	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
64) Phenanthrene	22.23	178	625916	18.34	ng	9
68) Fluoranthene	25.93	202	744812	20.57	ng	9
71) Pyrene	26.57	202	727943	28.19	ng	9
74) Benzo[a]anthracene	30.35	228	151641	8.72	ng	9
76) Chrysene	30.46	228	154249	9.11	ng	9
81) Benzo[b]fluoranthene	33.52	252	57636	6.01	ng	m 7
82) Benzo[k]fluoranthene	33.56	252	79317	8.26	ng	m 7
83) Benzo[a]pyrene	34.36	252	64047	7.52	ng	m 6
85) Benzo[g,h,i]perylene	38.05	276	20738	3.12	ng	m 7

AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 18.34 ng

RT: 22.23 min Scan# 1326

Delta R.T. -0.03 min

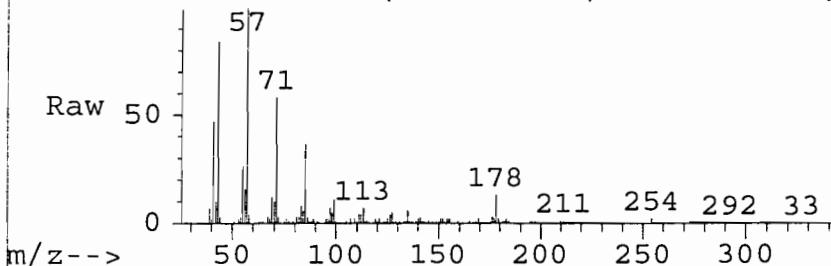
Lab File: S21992.D

Acq: 7 Nov 99 4:09 pm

Tgt Ion:178 Resp: 625916

Ion	Ratio	Lower	Upper
178	100		
179	18.3	7.4	22.3
176	19.8	9.3	27.9
0	0.0	0.0	0.0

AbundanceScan 1326 (22.235 min): S21992.D (



AbundanceIon 178.00 (177

Ion 179.00 (178

Ion 176.00 (175

22.23

300000

200000

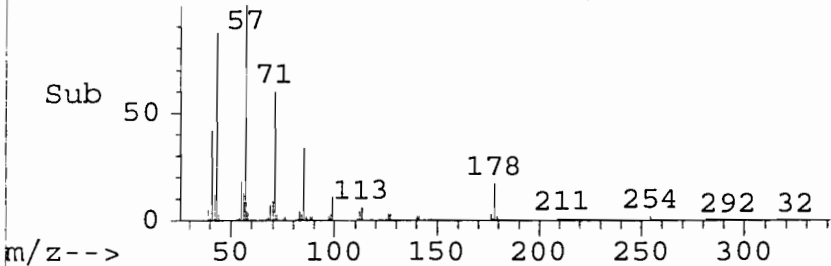
100000

0

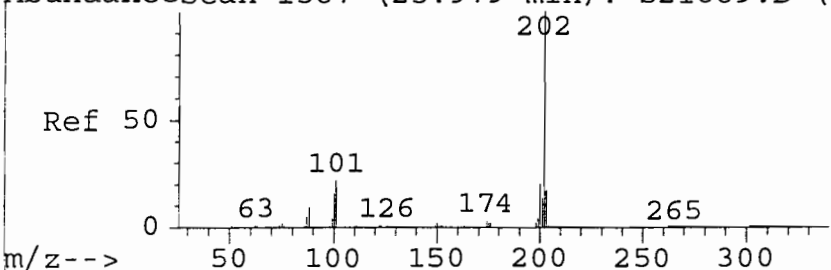
Time-->21.87

22.35

AbundanceScan 1326 (22.235 min): S21992.D (



AbundanceScan 1587 (25.979 min): S21889.D (



#68

Fluoranthene

Concen: 20.57 ng

RT: 25.93 min Scan# 1573

Delta R.T. -0.05 min

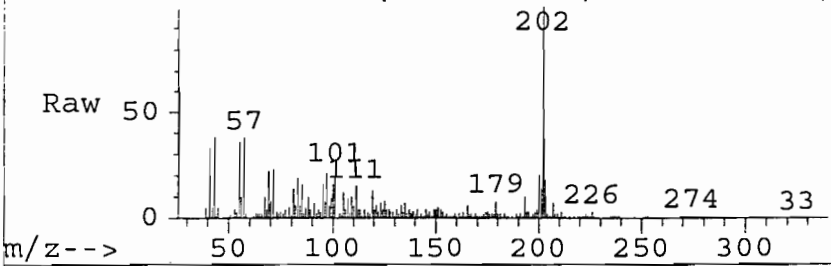
Lab File: S21992.D

Acq: 7 Nov 99 4:09 pm

Tgt Ion:202 Resp: 744812

Ion	Ratio	Lower	Upper
202	100		
101	22.5	10.9	32.7
200	19.5	9.9	29.6
203	17.8	8.5	25.4

AbundanceScan 1573 (25.929 min): S21992.D (



AbundanceIon 202.00 (201

Ion 101.00 (100

Ion 200.00 (199

Ion 203.00 (202

25.93

400000

300000

200000

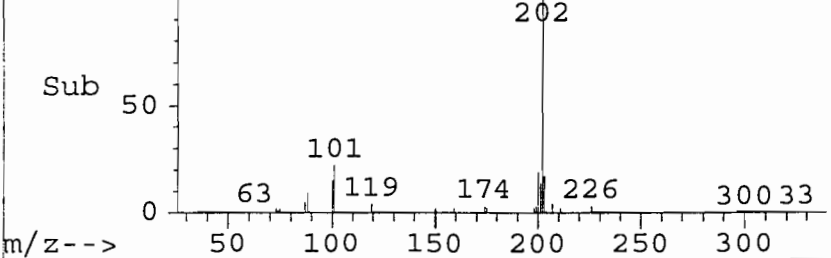
100000

0

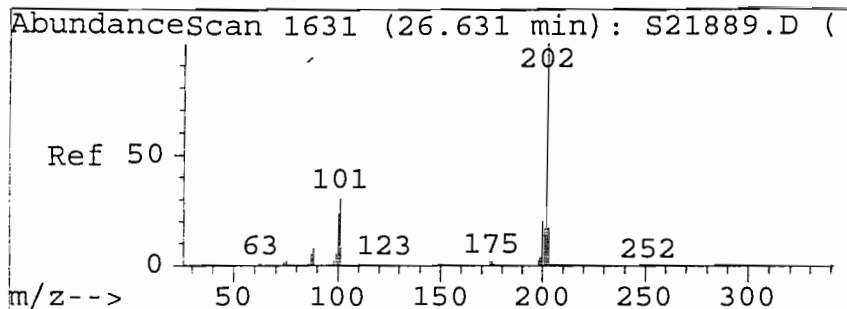
Time-->25.60

26.10

AbundanceScan 1573 (25.929 min): S21992.D (

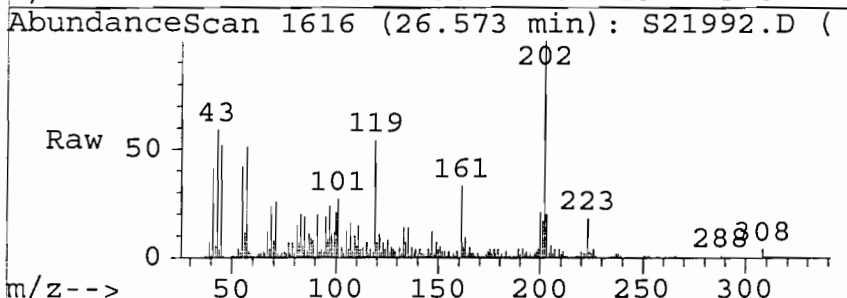


000080

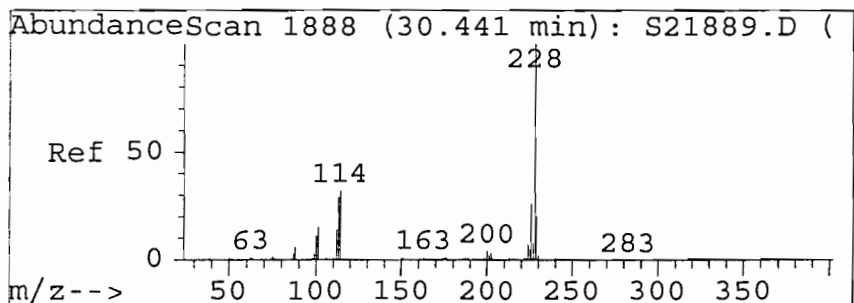
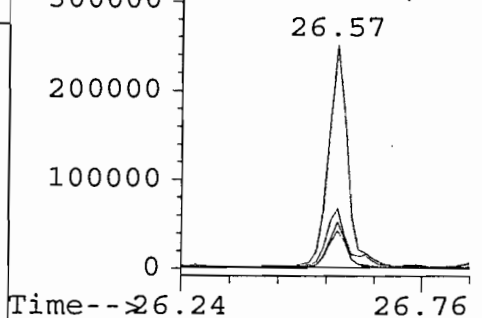
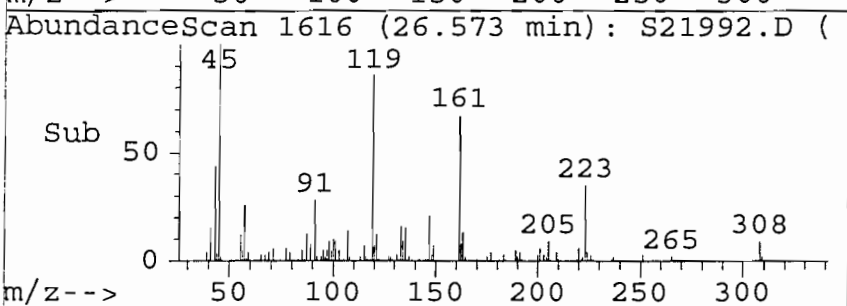


#71
Pyrene
Concen: 28.19 ng
RT: 26.57 min Scan# 1616
Delta R.T. -0.06 min
Lab File: S21992.D
Acq: 7 Nov 99 4:09 pm

Tgt Ion:	202	Resp:	727943
Ion Ratio	Lower	Upper	
202	100		
101	27.1	15.3	45.9
200	21.2	10.1	30.3
201	17.2	8.5	25.4

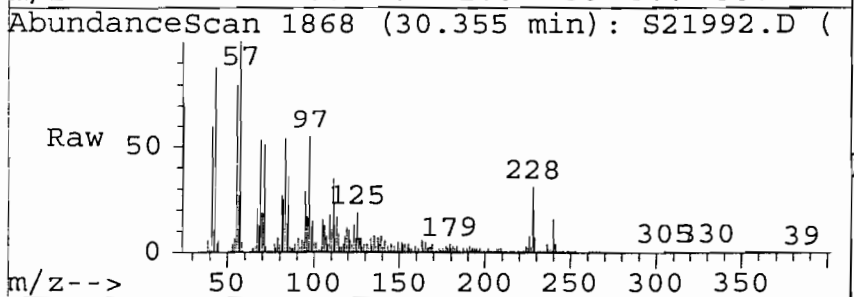


Abundance	Ion	202.00	(201
400000	Ion	101.00	(100
	Ion	200.00	(199
300000	Ion	201.00	(200

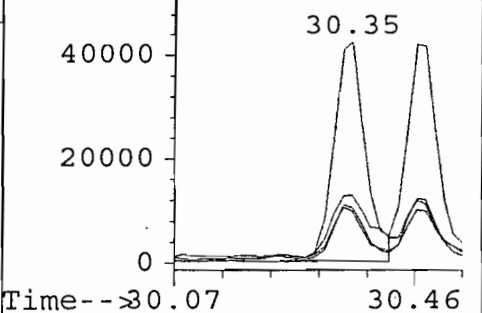
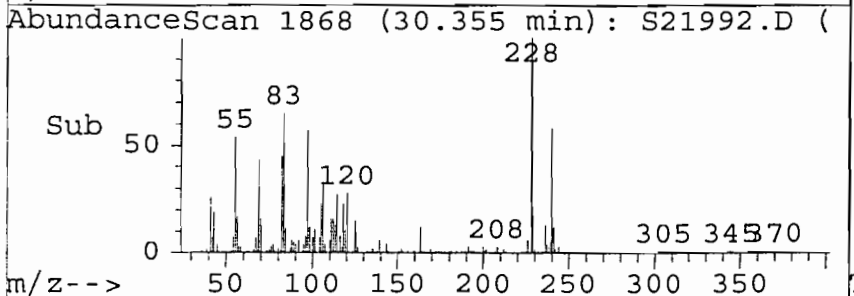


#74
Benzo[a]anthracene
Concen: 8.72 ng
RT: 30.35 min Scan# 1868
Delta R.T. -0.09 min
Lab File: S21992.D
Acq: 7 Nov 99 4:09 pm

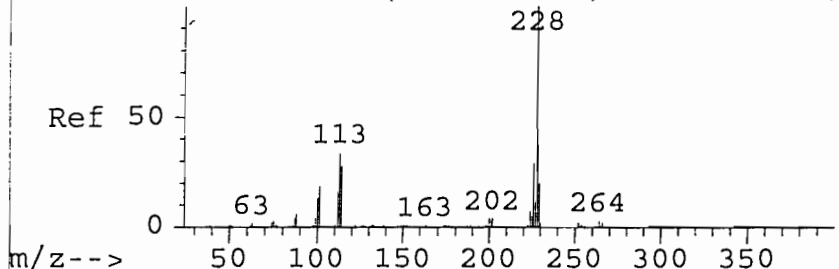
Tgt Ion:	228	Resp:	151641
Ion Ratio	Lower	Upper	
228	100		
229	23.4	9.9	29.6
226	25.3	13.2	39.5
114	30.6	16.0	47.9



Abundance	Ion	228.00	(227
60000	Ion	229.00	(228
	Ion	226.00	(225
	Ion	114.00	(113



AbundanceScan 1897 (30.575 min): S21889.D (



#76

Chrysene

Concen: 9.11 ng

RT: 30.46 min Scan# 1875

Delta R.T. -0.11 min

Lab File: S21992.D

Acq: 7 Nov 99 4:09 pm

Tgt Ion:228 Resp: 154249

Ion Ratio Lower Upper

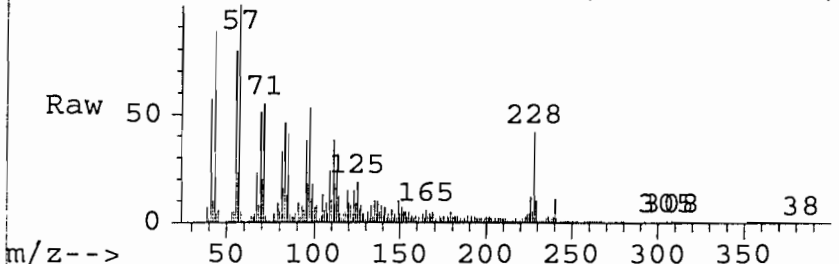
228 100

226 29.3 14.4 43.2

229 24.4 10.0 29.9

0 0.0 0.0 0.0

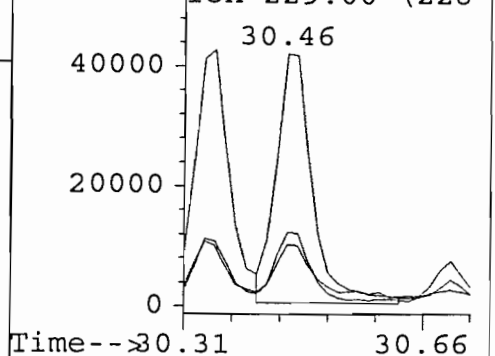
AbundanceScan 1875 (30.460 min): S21992.D (



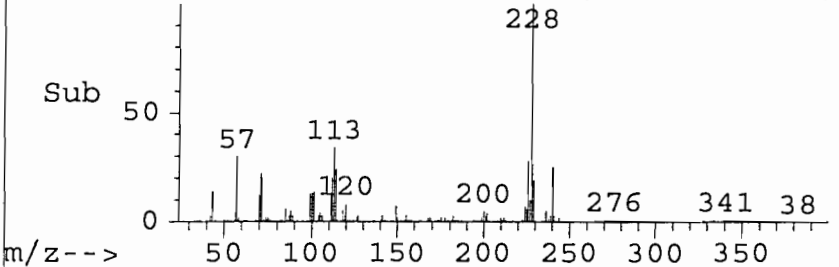
AbundanceIon 228.00 (227

Ion 226.00 (225

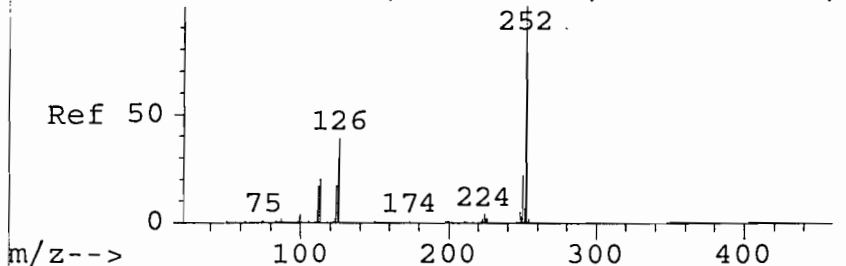
Ion 229.00 (228



AbundanceScan 1875 (30.460 min): S21992.D (



AbundanceScan 2103 (33.635 min): S21889.D (



#81

Benzo[b]fluoranthene

Concen: 6.01 ng m

RT: 33.52 min Scan# 2078

Delta R.T. -0.12 min

Lab File: S21992.D

Acq: 7 Nov 99 4:09 pm

Tgt Ion:252 Resp: 57636

Ion Ratio Lower Upper

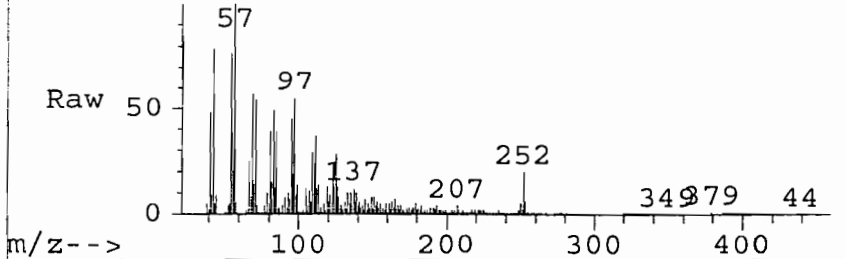
252 100

253 21.2 10.5 31.6

126 39.5 19.8 59.3

0 0.0 0.0 0.0

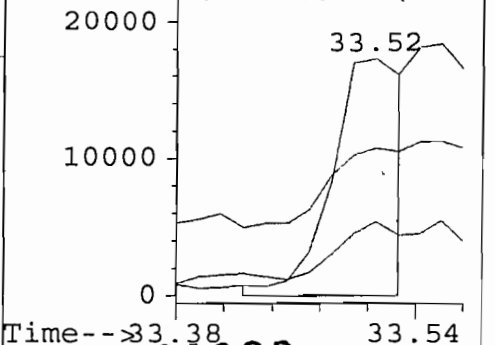
AbundanceScan 2078 (33.516 min): S21992.D (



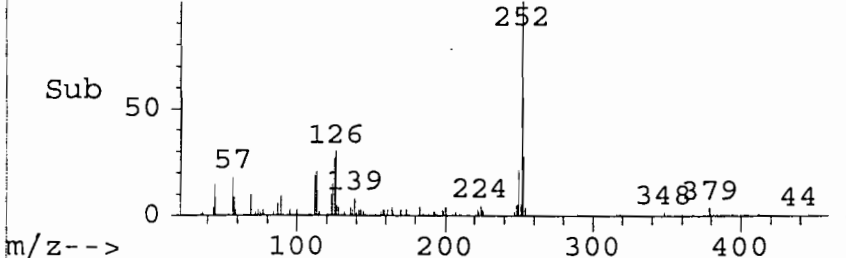
AbundanceIon 252.00 (251

Ion 253.00 (252

Ion 126.00 (125

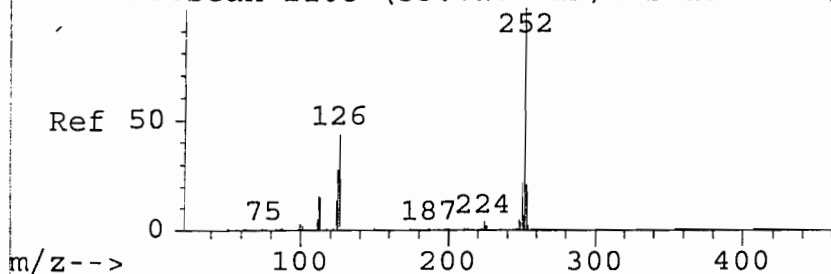


AbundanceScan 2078 (33.516 min): S21992.D (



000082

AbundanceScan 2108 (33.710 min): S21889.D (

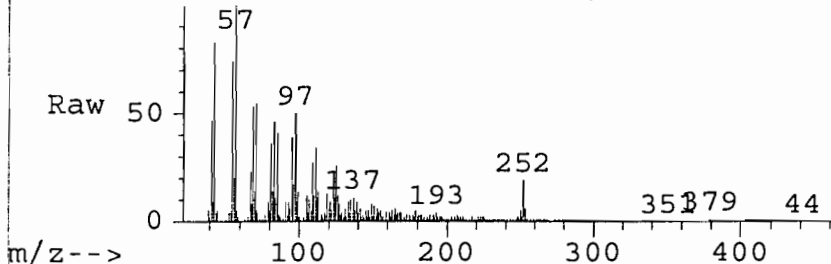


#82

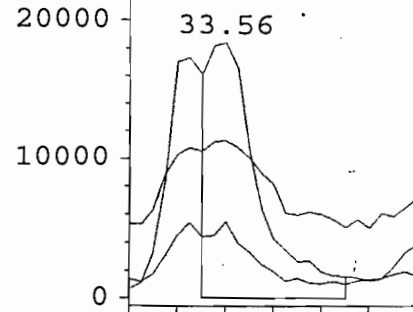
Benzo[k]fluoranthene
Concen: 8.26 ng m
RT: 33.56 min Scan# 2081
Delta R.T. -0.15 min
Lab File: S21992.D
Acq: 7 Nov 99 4:09 pm

Tgt	Ion:252	Resp:	79317
Ion	Ratio	Lower	Upper
252	100		
253	21.1	10.5	31.5
126	43.7	20.6	61.9
0	0.0	0.0	0.0

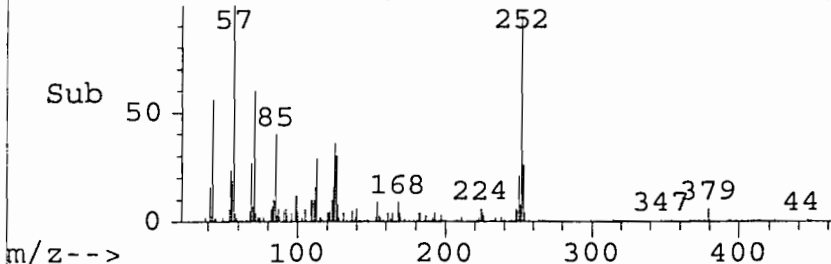
AbundanceScan 2081 (33.561 min): S21992.D (



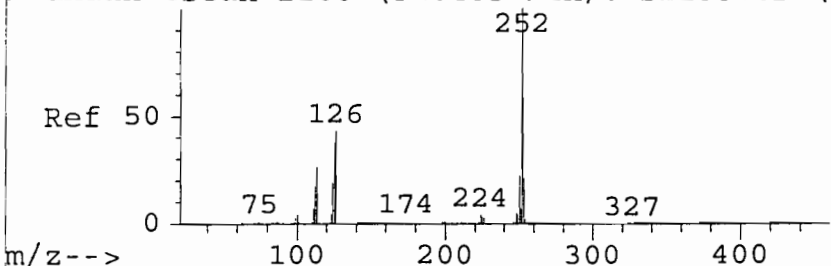
AbundanceIon 252.00 (251
Ion 253.00 (252
Ion 126.00 (125



AbundanceScan 2081 (33.561 min): S21992.D (



AbundanceScan 2160 (34.483 min): S21889.D (

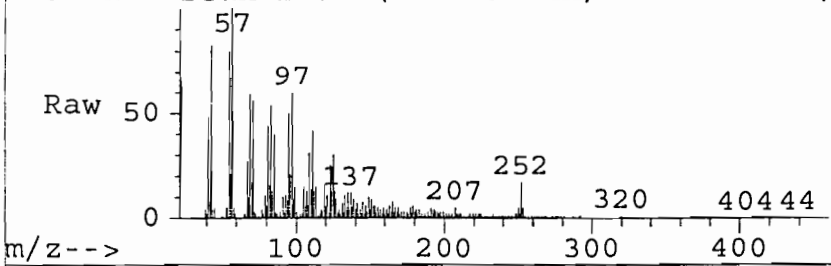


#83

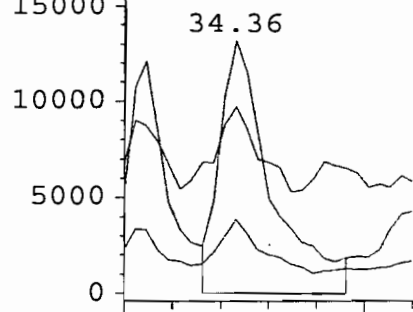
Benzo[a]pyrene
Concen: 7.52 ng m
RT: 34.36 min Scan# 2134
Delta R.T. -0.12 min
Lab File: S21992.D
Acq: 7 Nov 99 4:09 pm

Tgt	Ion:252	Resp:	64047
Ion	Ratio	Lower	Upper
252	100		
253	21.5	10.7	32.1
126	43.3	21.6	64.9
0	0.0	0.0	0.0

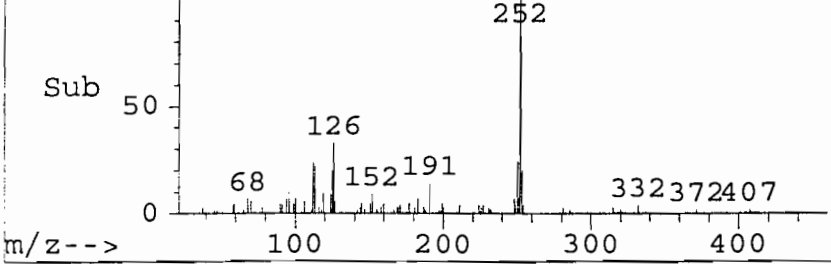
AbundanceScan 2134 (34.359 min): S21992.D (



AbundanceIon 252.00 (251
Ion 253.00 (252
Ion 126.00 (125

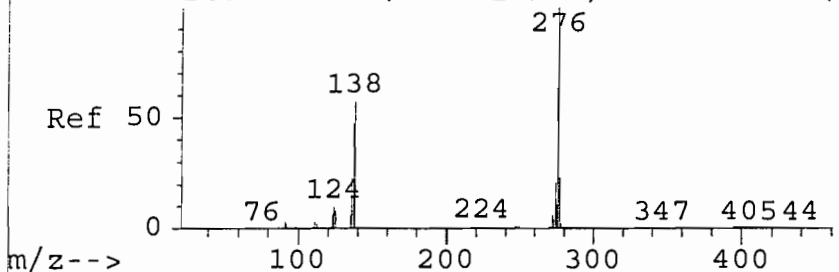


AbundanceScan 2134 (34.359 min): S21992.D (



000083

AbundanceScan 2413 (38.252 min): S21889.D (



#85

Benzo[g,h,i]perylene

Concen: 3.12 ng m

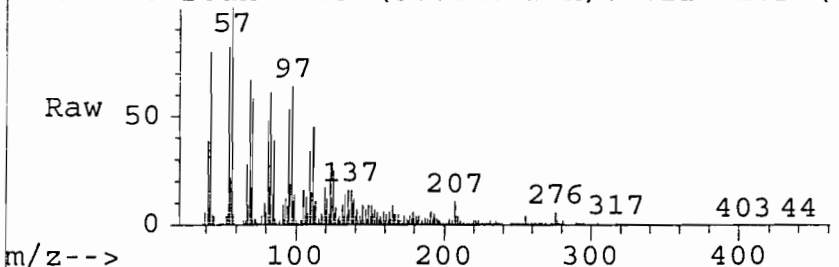
RT: 38.05 min Scan# 2379

Delta R.T. -0.20 min

Lab File: S21992.D

Acq: 7 Nov 99 4:09 pm

AbundanceScan 2379 (38.047 min): S21992.D (



Tgt Ion: 276 Resp: 20738

Ion	Ratio	Lower	Upper
276	100		
274	20.6	10.3	30.9
277	23.3	11.7	35.2
0	0.0	0.0	0.0

AbundanceIon 276.00 (275

Ion 274.00 (273

Ion 277.00 (276

3000 38.05

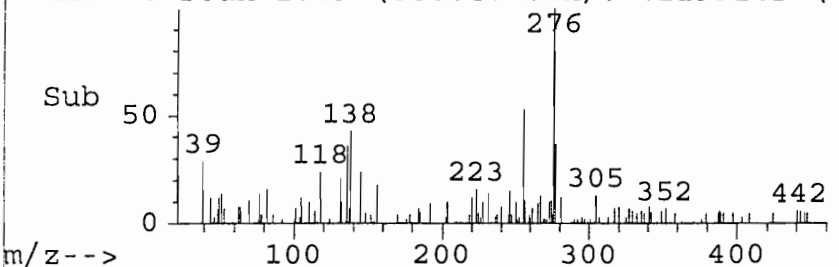
2000

1000

0

Time--> 37.84 38.26

AbundanceScan 2379 (38.047 min): S21992.D (



000084

SAMPLE NO.

GP-018-SS8RE

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Lab Sample ID: O88015RE

Lab File ID: S22009.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/8/99

Dilution Factor: 1.0

pH: _____

(ug/L or ug/Kg)

FORM I SV

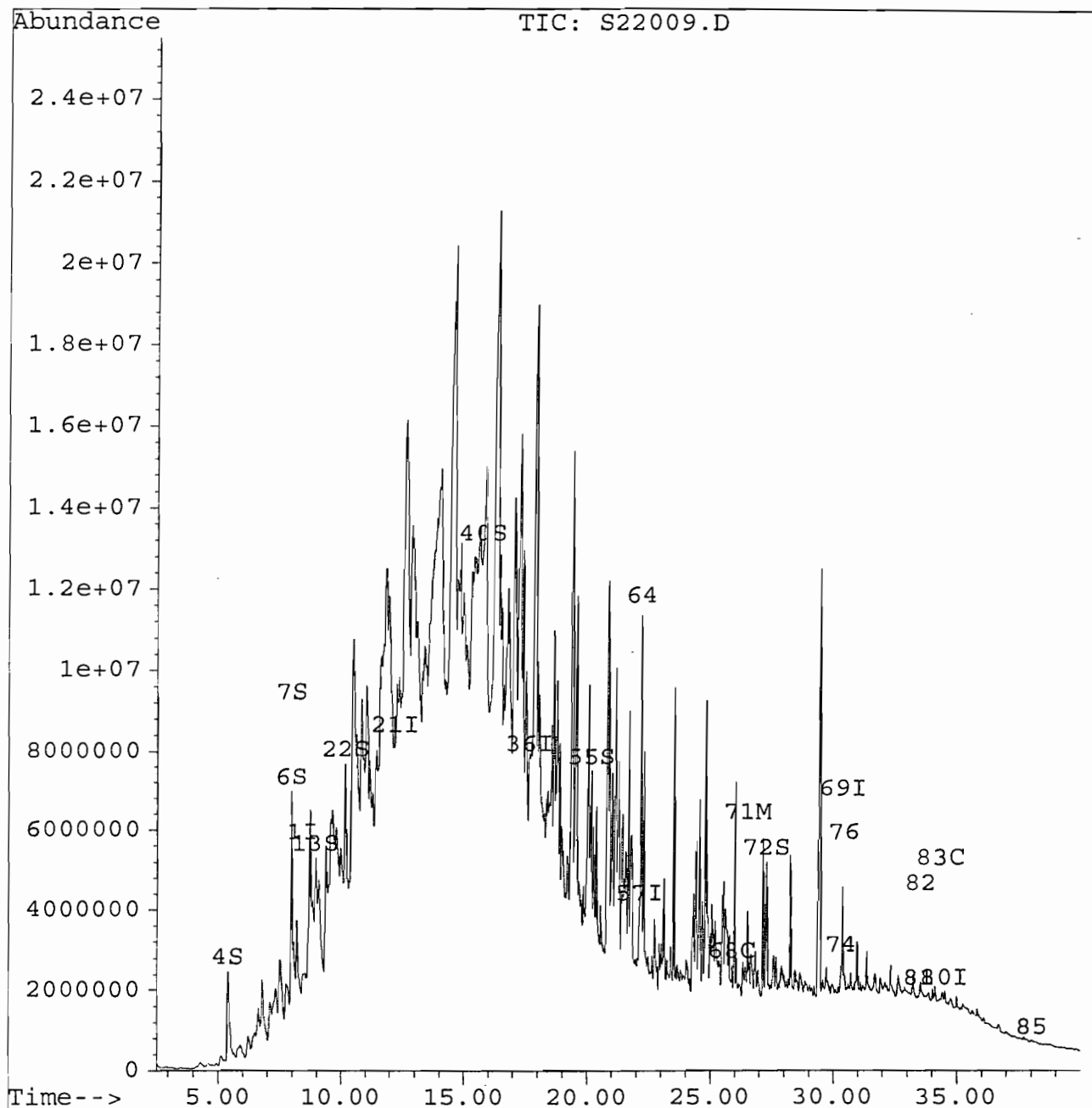
000085

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22009.D
 Acq Time : 8 Nov 99 6:34 pm
 Sample : 13827ASP-88015-QB506 RE
 Misc :
 Quant Time: Nov 10 14:15 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration



000086

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22009.D
 Acq Time : 8 Nov 99 6:34 pm
 Sample : 13827ASP-88015-QB506 RE
 Misc :
 Quant Time: Nov 10 14:15 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

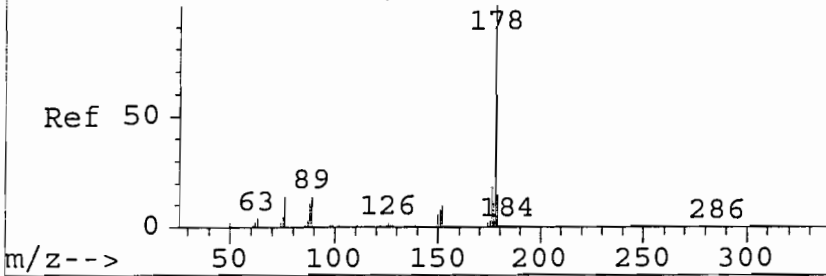
Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Mi)
1) 1,4-Dichlorobenzene-d4	8.41	152	461654	40.00	ng	-0.1
21) Naphthalene-d8	12.16	136	1482839	40.00	ng	-0.0
36) Acenaphthene-d10	17.66	164	709962	40.00	ng	0.0
57) Phenanthrene-d10	22.11	188	1295128	40.00	ng	-0.0
69) Chrysene-d12	30.36	240	742418	40.00	ng	-0.1
80) Perylene-d12	34.49	264	348994	40.00	ng	-0.1

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.38	112	4738938	237.45	ng	
6) 2-Chlorophenol-d4	7.94	132	5098811	253.50	ng	
7) Phenol-d5	7.94	99	4959100	229.18	ng	
13) 1,2-Dichlorobenzene-d4	8.93	152	1326572	114.65	ng	
22) Nitrobenzene-d5	10.14	82	2112190	147.19	ng	m
40) 2-Fluorobiphenyl	15.72	172	2530308	98.33	ng	
55) 2,4,6-Tribromophenol	20.14	330	1136454	302.83	ng	
72) Terphenyl-d14	27.29	244	2988627	149.49	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
64) Phenanthrene	22.17	178	592043	18.40	ng	9
68) Fluoranthene	25.88	202	716712	21.00	ng	9
71) Pyrene	26.52	202	725981	22.95	ng	9
74) Benzo[a]anthracene	30.32	228	183806	8.63	ng	9
76) Chrysene	30.44	228	193105	9.31	ng	9
81) Benzo[b]fluoranthene	33.48	252	62625	6.01	ng	m 6
82) Benzo[k]fluoranthene	33.52	252	105705	10.13	ng	m 6
83) Benzo[a]pyrene	34.32	252	70239	7.60	ng	m 4
85) Benzo[g,h,i]perylene	38.02	276	14739	2.05	ng	m 9

AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 18.40 ng

RT: 22.17 min Scan# 1325

Delta R.T. -0.09 min

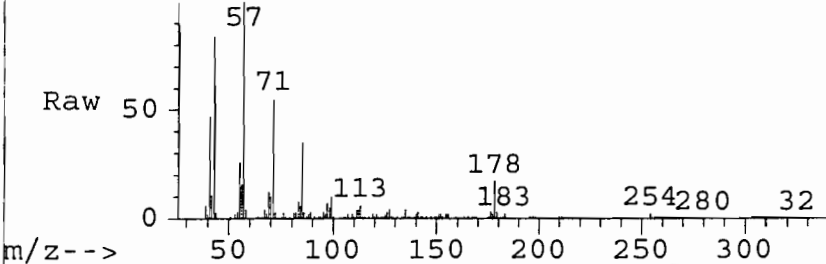
Lab File: S22009.D

Acq: 8 Nov 99 6:34 pm

Tgt Ion:178 Resp: 592043

Ion	Ratio	Lower	Upper
178	100		
179	18.0	7.4	22.3
176	18.0	9.3	27.9
0	0.0	0.0	0.0

AbundanceScan 1325 (22.172 min): S22009.D (



AbundanceIon 178.00 (177

Ion 179.00 (178

Ion 176.00 (175

22.17

300000

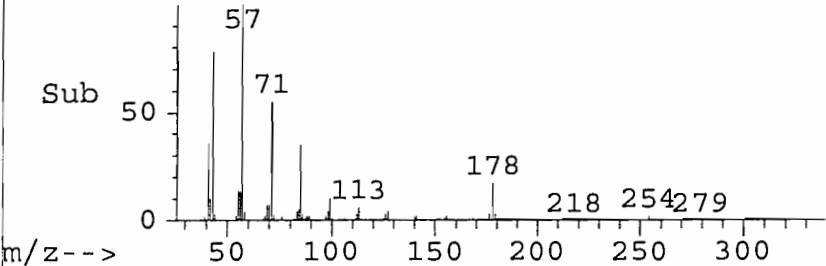
200000

100000

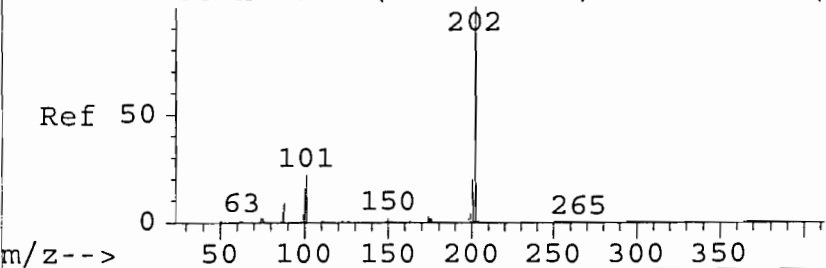
0

Time-->21.99 22.27

AbundanceScan 1325 (22.172 min): S22009.D (



AbundanceScan 1587 (25.979 min): S21889.D (



#68

Fluoranthene

Concen: 21.00 ng

RT: 25.88 min Scan# 1573

Delta R.T. -0.10 min

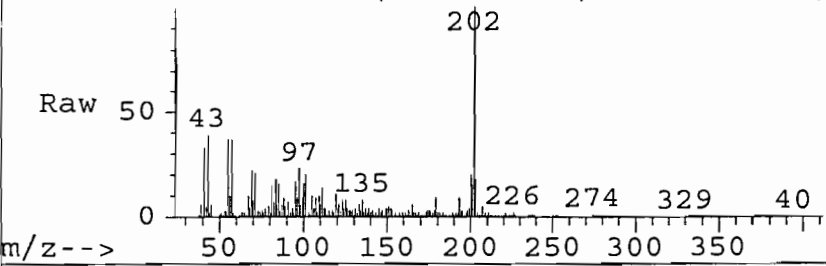
Lab File: S22009.D

Acq: 8 Nov 99 6:34 pm

Tgt Ion:202 Resp: 716712

Ion	Ratio	Lower	Upper
202	100		
101	20.2	10.9	32.7
200	19.7	9.9	29.6
203	17.8	8.5	25.4

AbundanceScan 1573 (25.878 min): S22009.D (



AbundanceIon 202.00 (201

Ion 101.00 (100

Ion 200.00 (199

Ion 203.00 (202

25.88

400000

300000

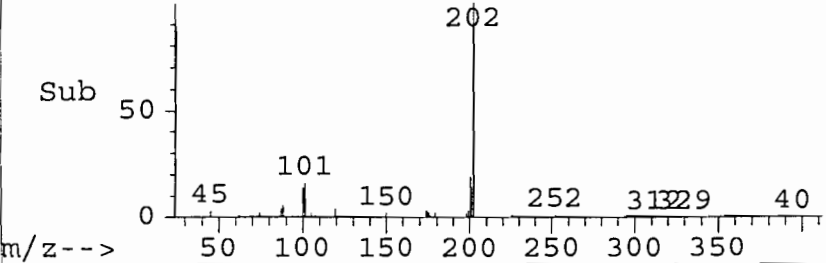
200000

100000

0

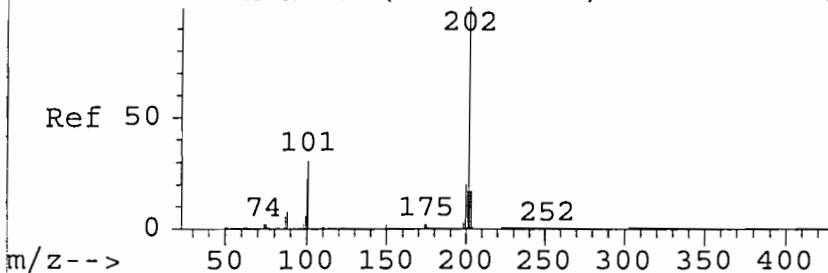
Time-->25.70 26.05

AbundanceScan 1573 (25.878 min): S22009.D (



000088

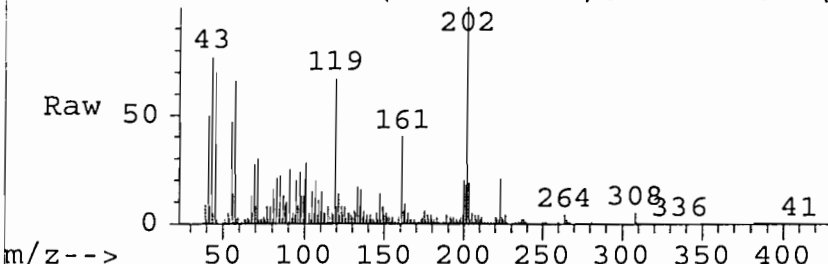
AbundanceScan 1631 (26.631 min): S21889.D (



#71
Pyrene
Concen: 22.95 ng
RT: 26.52 min Scan# 1616
Delta R.T. -0.11 min
Lab File: S22009.D
Acq: 8 Nov 99 6:34 pm

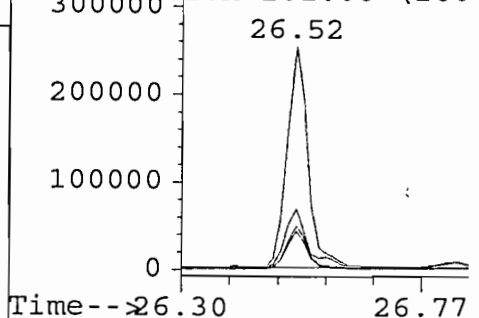
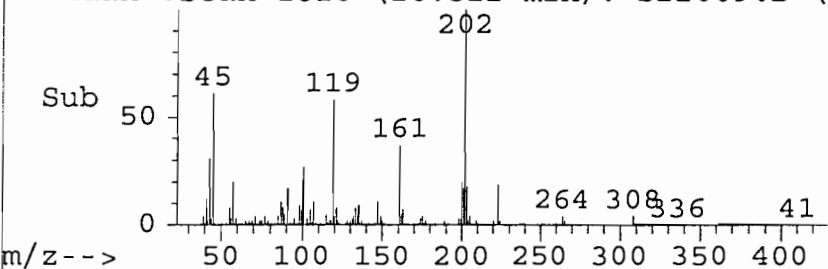
Tgt	Ion:202	Resp:	725981
Ion	Ratio	Lower	Upper
202	100		
101	27.6	15.3	45.9
200	19.7	10.1	30.3
201	17.5	8.5	25.4

AbundanceScan 1616 (26.522 min): S22009.D (

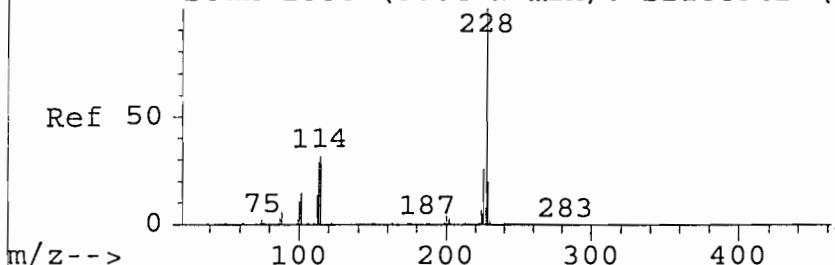


Abundance	Ion	202.00	(201
400000	Ion	101.00	(100
	Ion	200.00	(199
300000	Ion	201.00	(200

AbundanceScan 1616 (26.522 min): S22009.D (



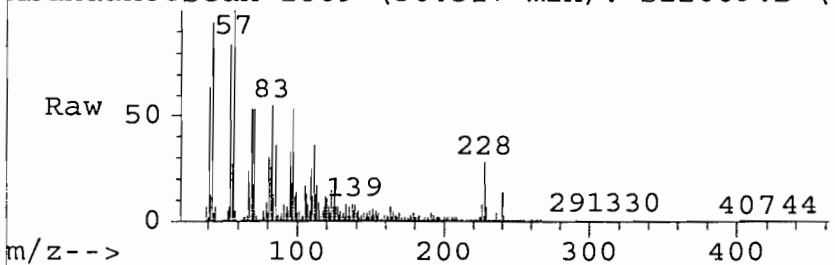
AbundanceScan 1888 (30.441 min): S21889.D (



#74
Benzo[a]anthracene
Concen: 8.63 ng
RT: 30.32 min Scan# 1869
Delta R.T. -0.12 min
Lab File: S22009.D
Acq: 8 Nov 99 6:34 pm

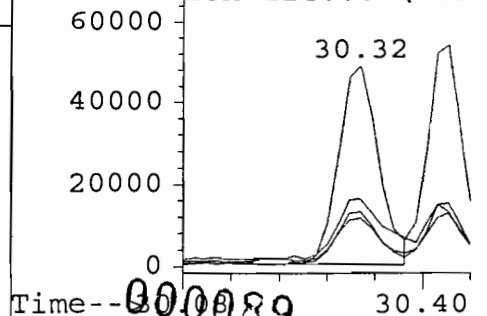
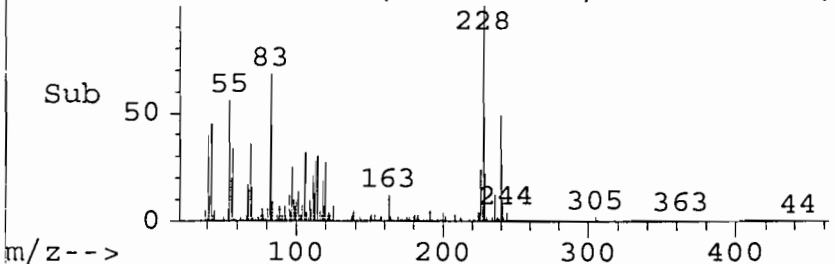
Tgt	Ion:228	Resp:	183806
Ion	Ratio	Lower	Upper
228	100		
229	24.1	9.9	29.6
226	27.4	13.2	39.5
114	33.6	16.0	47.9

AbundanceScan 1869 (30.317 min): S22009.D (

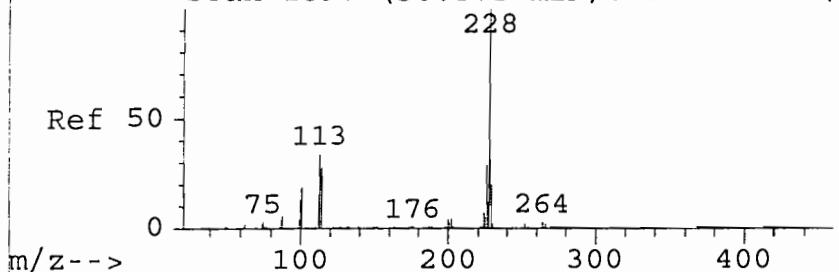


Abundance	Ion	228.00	(227
80000	Ion	229.00	(228
	Ion	226.00	(225
	Ion	114.00	(113

AbundanceScan 1869 (30.317 min): S22009.D (



AbundanceScan 1897 (30.575 min): S21889.D (



#76

Chrysene

Concen: 9.31 ng

RT: 30.44 min Scan# 1877

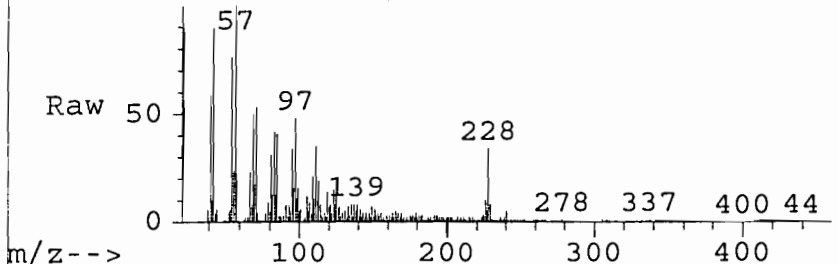
Delta R.T. -0.14 min

Lab File: S22009.D

Acq: 8 Nov 99 6:34 pm

Tgt Ion:	228	Resp:	193105
Ion	Ratio	Lower	Upper
228	100		
226	28.2	14.4	43.2
229	23.8	10.0	29.9
0	0.0	0.0	0.0

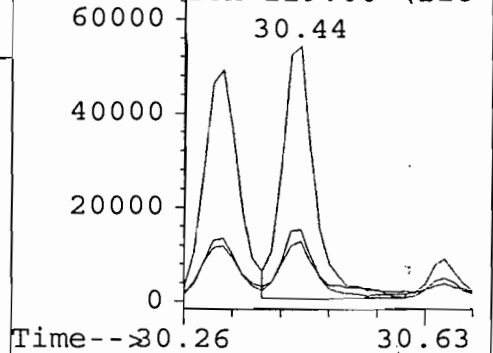
AbundanceScan 1877 (30.437 min): S22009.D (



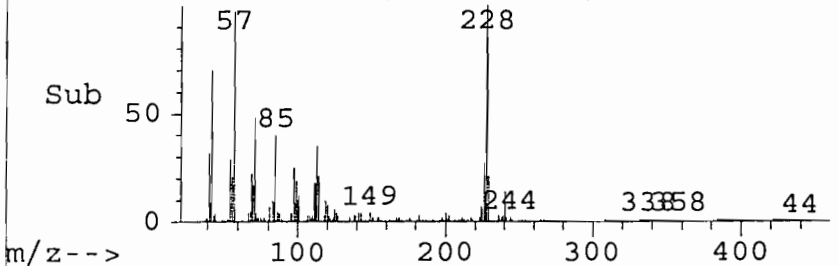
AbundanceIon 228.00 (227

Ion 226.00 (225

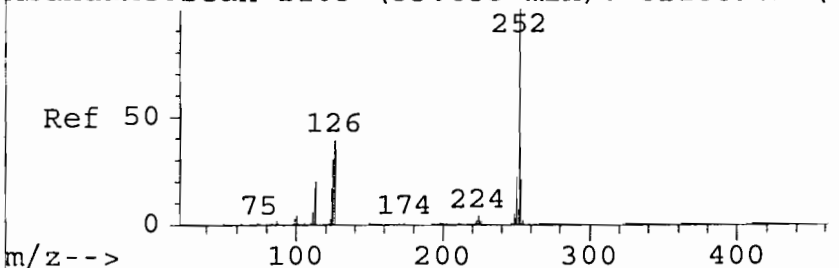
Ion 229.00 (228



AbundanceScan 1877 (30.437 min): S22009.D (



AbundanceScan 2103 (33.635 min): S21889.D (



#81

Benzo[b]fluoranthene

Concen: 6.01 ng m

RT: 33.48 min Scan# 2079

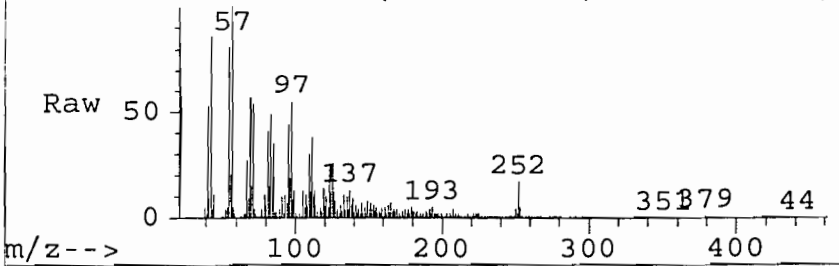
Delta R.T. -0.16 min

Lab File: S22009.D

Acq: 8 Nov 99 6:34 pm

Tgt Ion:	252	Resp:	62625
Ion	Ratio	Lower	Upper
252	100		
253	21.2	10.5	31.6
126	39.5	19.8	59.3
0	0.0	0.0	0.0

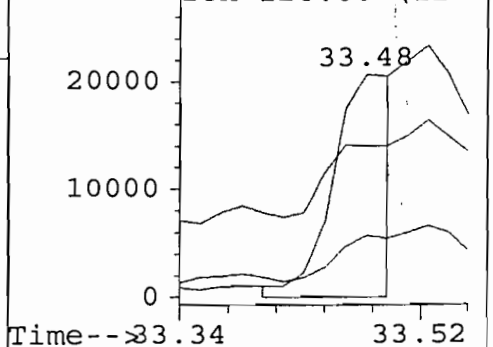
AbundanceScan 2079 (33.477 min): S22009.D (



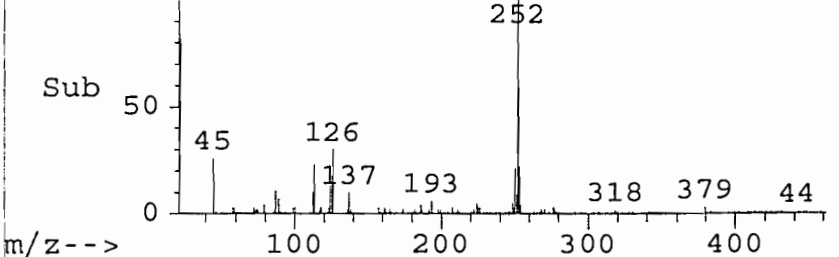
AbundanceIon 252.00 (251

Ion 253.00 (252

Ion 126.00 (125

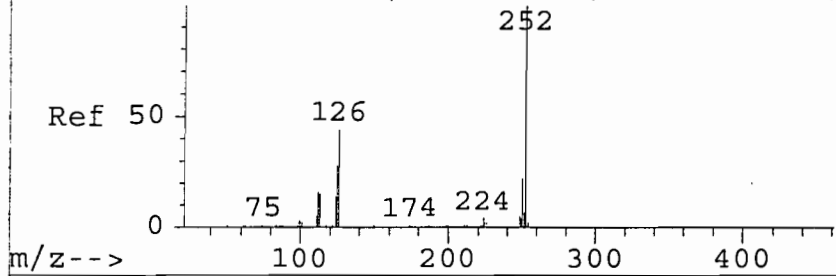


AbundanceScan 2079 (33.477 min): S22009.D (



000090

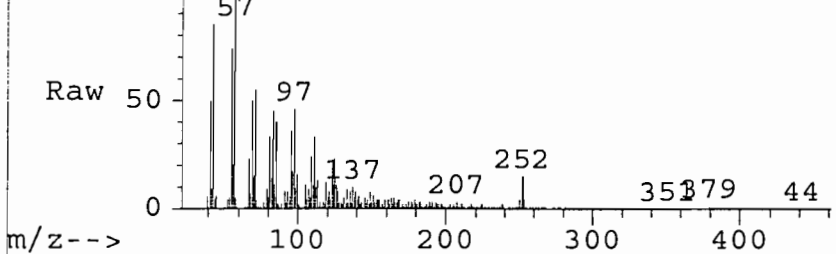
AbundanceScan 2108 (33.710 min): S21889.D (



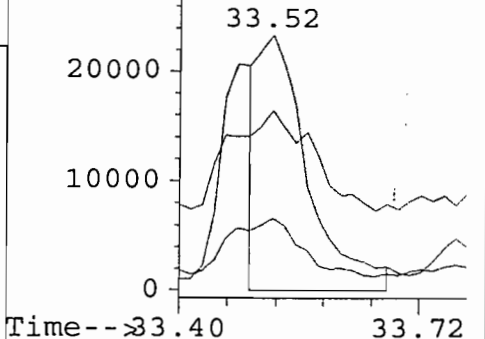
#82
Benzo[k]fluoranthene
Concen: 10.13 ng m
RT: 33.52 min Scan# 2082
Delta R.T. -0.19 min
Lab File: S22009.D
Acq: 8 Nov 99 6:34 pm

Tgt Ion:252	Resp:	105705
Ion Ratio	Lower	Upper
252	100	
253	21.1	10.5 31.5
126	43.7	20.6 61.9
0	0.0	0.0 0.0

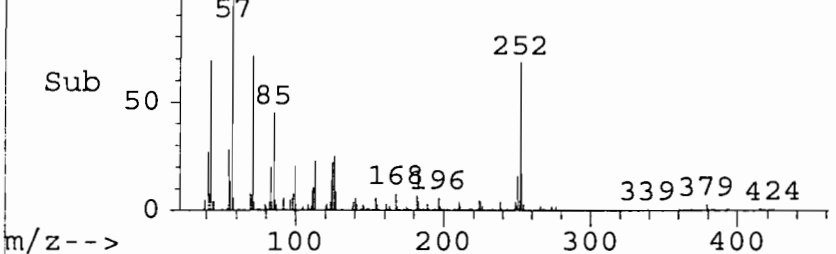
AbundanceScan 2082 (33.523 min): S22009.D (



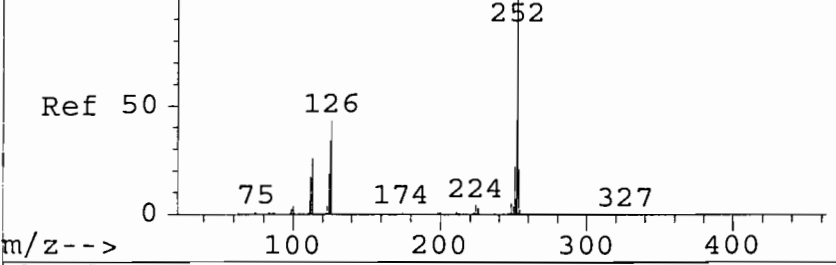
AbundanceIon 252.00 (251
Ion 253.00 (252
Ion 126.00 (125



AbundanceScan 2082 (33.523 min): S22009.D (



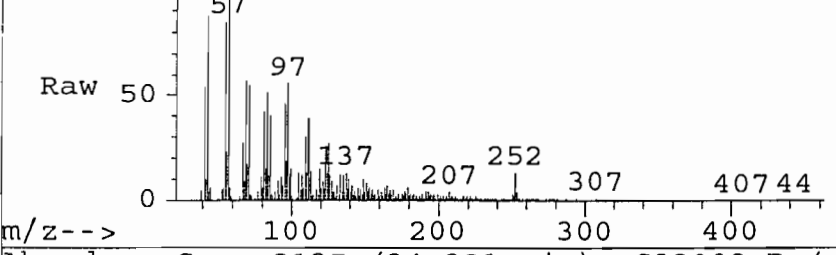
AbundanceScan 2160 (34.483 min): S21889.D (



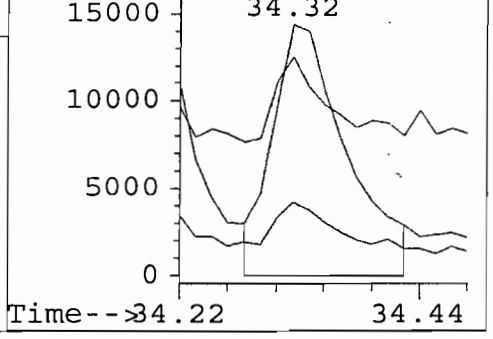
#83
Benzo[a]pyrene
Concen: 7.60 ng m
RT: 34.32 min Scan# 2135
Delta R.T. -0.16 min
Lab File: S22009.D
Acq: 8 Nov 99 6:34 pm

Tgt Ion:252	Resp:	70239
Ion Ratio	Lower	Upper
252	100	
253	21.5	10.7 32.1
126	43.3	21.6 64.9
0	0.0	0.0 0.0

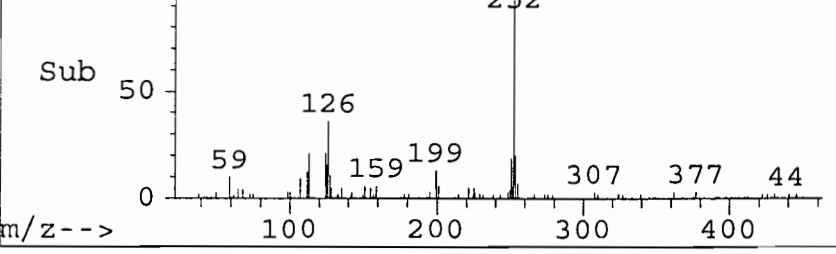
AbundanceScan 2135 (34.321 min): S22009.D (



AbundanceIon 252.00 (251
Ion 253.00 (252
Ion 126.00 (125

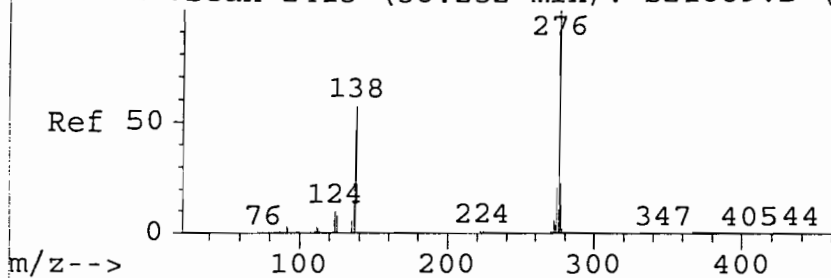


AbundanceScan 2135 (34.321 min): S22009.D (



000091

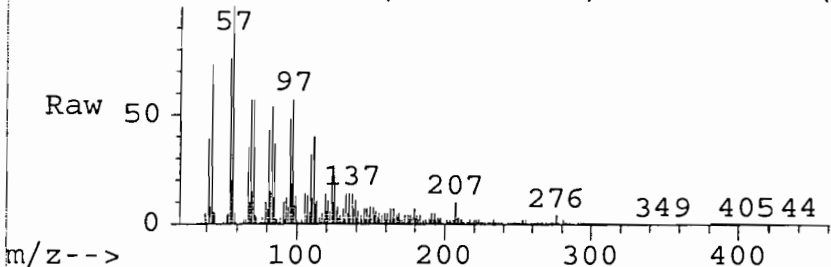
AbundanceScan 2413 (38.252 min): S21889.D (



#85

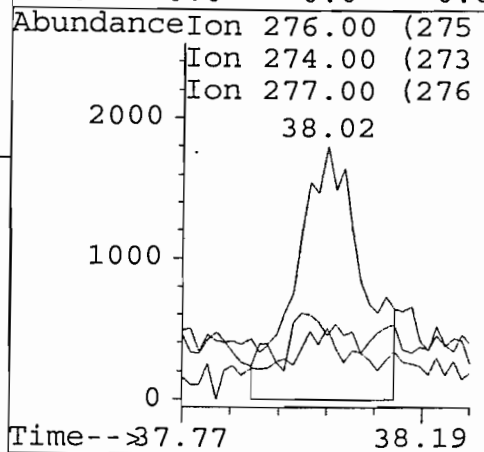
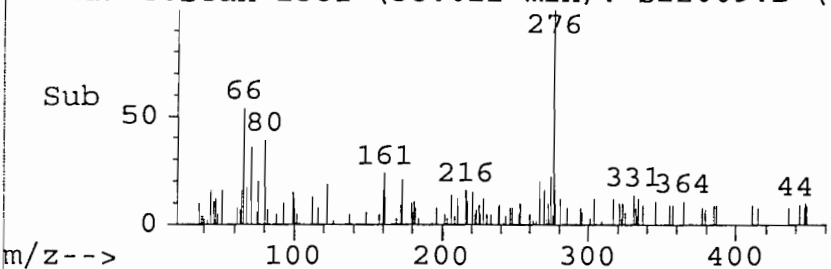
Benzo[g,h,i]perylene
 Concen: 2.05 ng m
 RT: 38.02 min Scan# 2381
 Delta R.T. -0.23 min
 Lab File: S22009.D
 Acq: 8 Nov 99 6:34 pm

AbundanceScan 2381 (38.022 min): S22009.D (



Tgt Ion:	276	Resp:	14739
Ion	Ratio	Lower	Upper
276	100		
274	20.6	10.3	30.9
277	23.3	11.7	35.2
0	0.0	0.0	0.0

AbundanceScan 2381 (38.022 min): S22009.D (



GP-018-SS12

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Lab Sample ID: O88016

Lab File ID: S21993.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/7/99

Dilution Factor: 1.0

pH: _____

(ug/L or ug/Kg)

ug/Kg

Q

FORM I SV

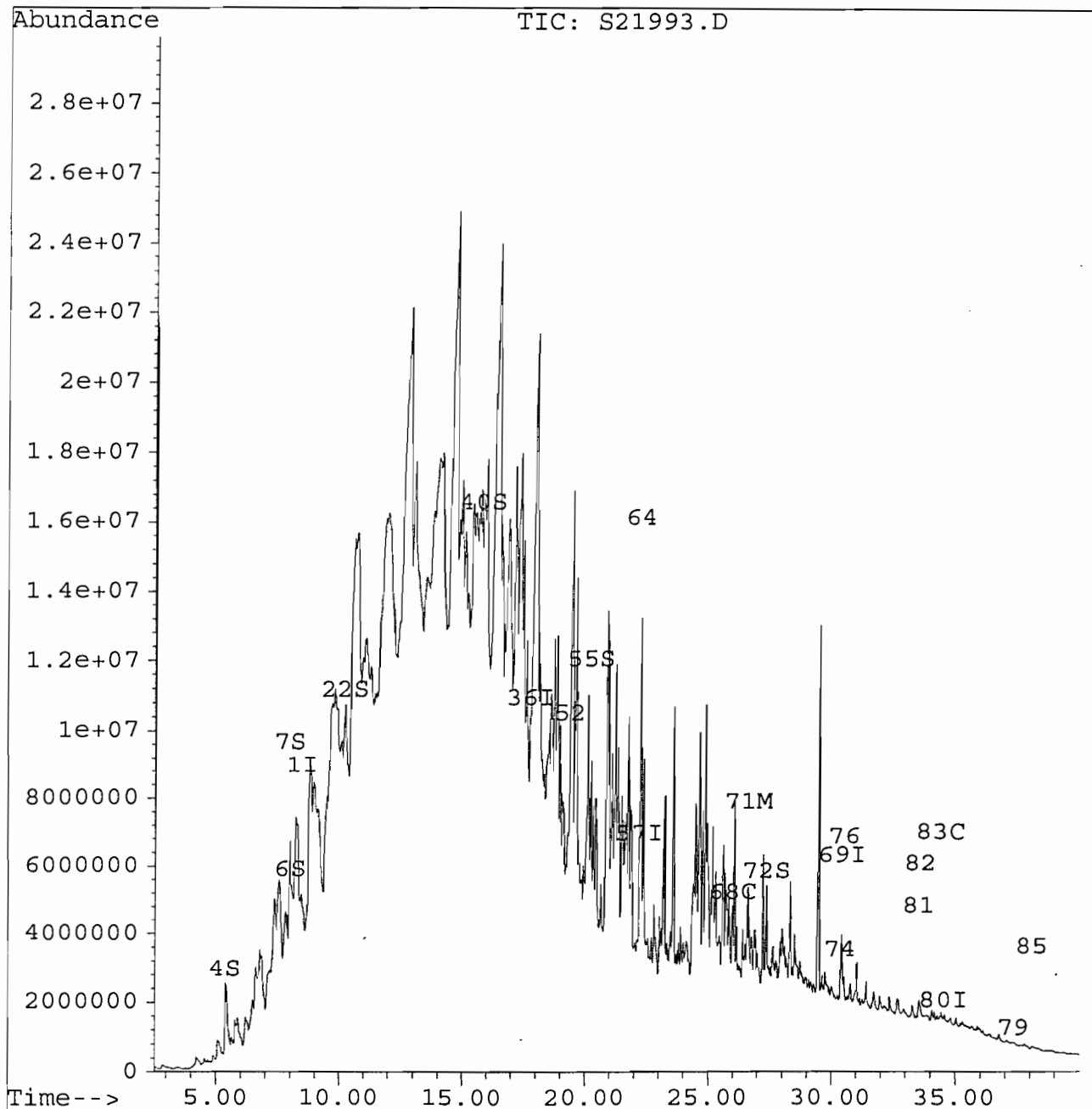
000093

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21993.D
 Acq Time : 7 Nov 99 4:59 pm
 Sample : 13827ASP-88016-QB506
 Misc :
 Quant Time: Nov 10 14:09 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration



000094

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21993.D

Acq Time : 7 Nov 99 4:59 pm

Sample : 13827ASP-88016-QB506

Misc :

Quant Time: Nov 10 14:09 1999

Operator: BOB

Inst : bn2

Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M

Title : CLP BNA Calibration

Last Update : Wed Nov 10 09:59:44 1999

Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi)
1) 1,4-Dichlorobenzene-d4	8.46	152	405068	40.00	ng	-0.0
21) Naphthalene-d8	12.32	136	1519123	40.00	ng	0.1
36) Acenaphthene-d10	17.76	164	722203	40.00	ng	0.1
57) Phenanthrene-d10	22.19	188	1275134	40.00	ng	0.0
69) Chrysene-d12	30.43	240	548995	40.00	ng	-0.0
80) Perylene-d12	34.54	264	289395	40.00	ng	-0.0

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.35	112	4953104	282.85	ng	
6) 2-Chlorophenol-d4	7.99	132	5339167	302.53	ng	
7) Phenol-d5	7.96	99	4999217	263.31	ng	
13) 1,2-Dichlorobenzene-d4	9.00	152	986685	97.19	ng	#
22) Nitrobenzene-d5	10.20	82	3133698	213.16	ng	
40) 2-Fluorobiphenyl	15.82	172	2477574	94.65	ng	
55) 2,4,6-Tribromophenol	20.21	330	1176968	308.31	ng	
72) Terphenyl-d14	27.35	244	2560882	173.22	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
52) Fluorene	19.36	166	676918	28.22	ng	8
64) Phenanthrene	22.26	178	2281666	72.02	ng	9
68) Fluoranthene	25.97	202	2520892	75.01	ng	9
71) Pyrene	26.61	202	2168713	92.70	ng	9
74) Benzo[a]anthracene	30.37	228	514931	32.69	ng	9
76) Chrysene	30.50	228	484188	31.56	ng	9
79) Indeno [1,2,3-cd] pyrene	37.32	276	58556	4.91	ng	9
81) Benzo[b]fluoranthene	33.53	252	200996	23.26	ng	m 9
82) Benzo[k]fluoranthene	33.58	252	229198	26.50	ng	m 9
83) Benzo[a]pyrene	34.38	252	192396	25.10	ng	9
85) Benzo[g,h,i]perylene	38.06	276	51530	8.62	ng	9

000095

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

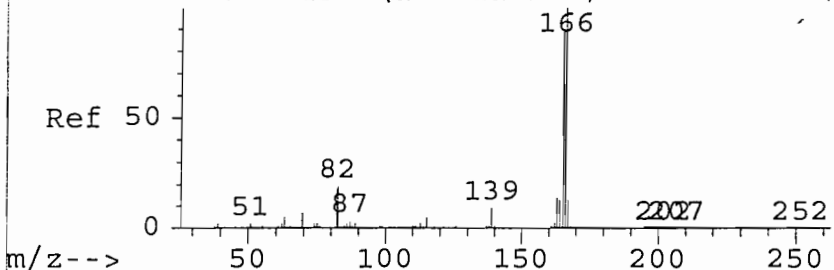
S21993.D B21030C.M

Wed Nov 10 14:10:08 1999

BNA2

Page 1

AbundanceScan 1137 (19.311 min): S21889.D (



#52

Fluorene

Concen: 28.22 ng

RT: 19.36 min Scan# 1134

Delta R.T. 0.05 min

Lab File: S21993.D

Acq: 7 Nov 99 4:59 pm

Tgt Ion:166 Resp: 676918

Ion	Ratio	Lower	Upper
166	100		
165	101.9	45.0	135.0
163	18.1	7.1	21.3
0	0.0	0.0	0.0

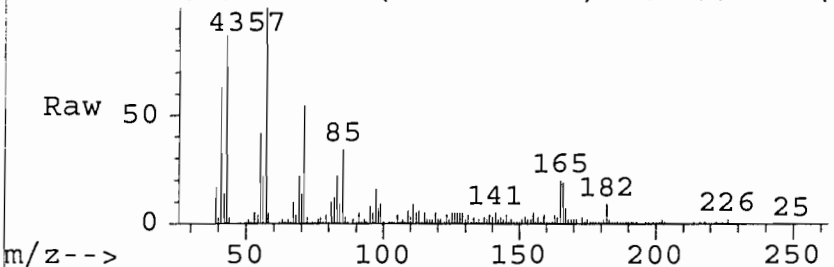
166 100

165 101.9 45.0 135.0

163 18.1 7.1 21.3

0 0.0 0.0 0.0

AbundanceScan 1134 (19.359 min): S21993.D (



AbundanceIon 166.00 (165

300000 Ion 165.00 (164

Ion 163.00 (162

19.36

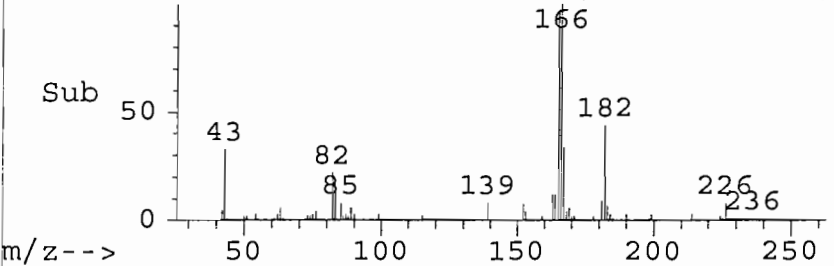
200000

100000

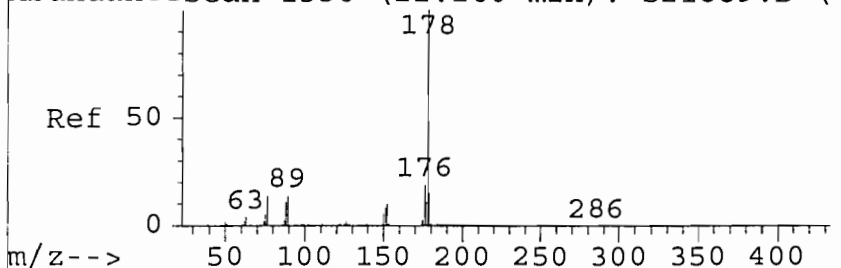
0

Time-->19.10 19.52

AbundanceScan 1134 (19.359 min): S21993.D (



AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 72.02 ng

RT: 22.26 min Scan# 1328

Delta R.T. -0.00 min

Lab File: S21993.D

Acq: 7 Nov 99 4:59 pm

Tgt Ion:178 Resp: 2281666

Ion	Ratio	Lower	Upper
178	100		
179	16.5	7.4	22.3
176	18.7	9.3	27.9
0	0.0	0.0	0.0

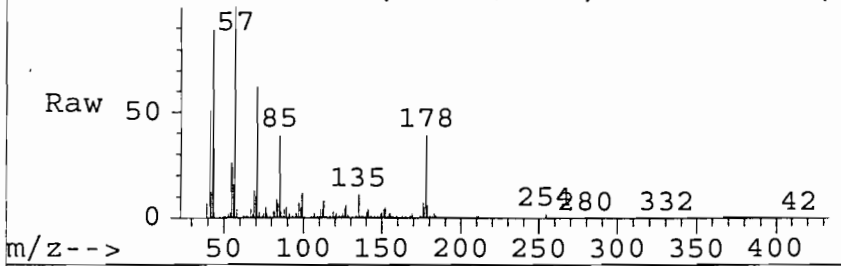
178 100

179 16.5 7.4 22.3

176 18.7 9.3 27.9

0 0.0 0.0 0.0

AbundanceScan 1328 (22.260 min): S21993.D (



AbundanceIon 178.00 (177

Ion 179.00 (178

Ion 176.00 (175

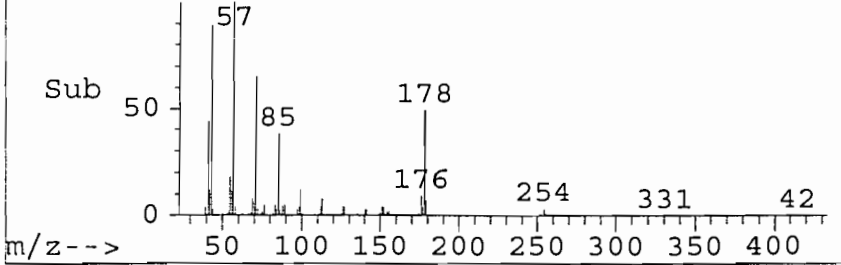
22.26

500000

0

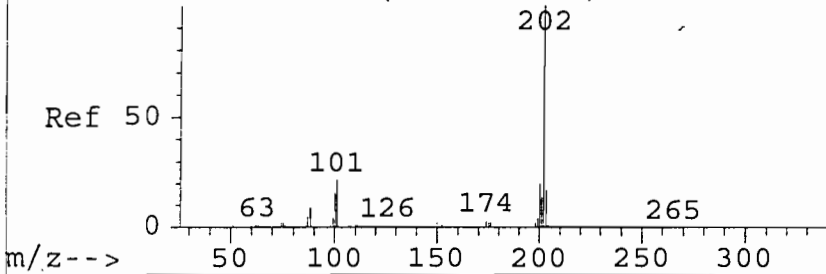
Time-->21.89 22.36

AbundanceScan 1328 (22.260 min): S21993.D (



000096

AbundanceScan 1587 (25.979 min): S21889.D (



#68

Fluoranthene

Concen: 75.01 ng

RT: 25.97 min Scan# 1576

Delta R.T. -0.01 min

Lab File: S21993.D

Acq: 7 Nov 99 4:59 pm

Tgt Ion:202 Resp: 2520892

Ion	Ratio	Lower	Upper

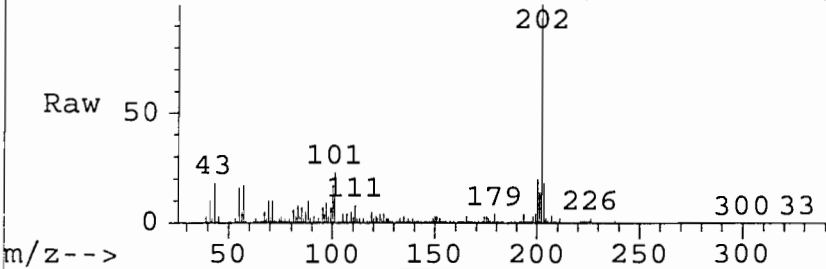
202	100		

101	22.7	10.9	32.7

200	20.0	9.9	29.6

203	17.7	8.5	25.4

AbundanceScan 1576 (25.969 min): S21993.D (



AbundanceIon 202.00 (201

Ion 101.00 (100

Ion 200.00 (199

Ion 203.00 (202

1000000

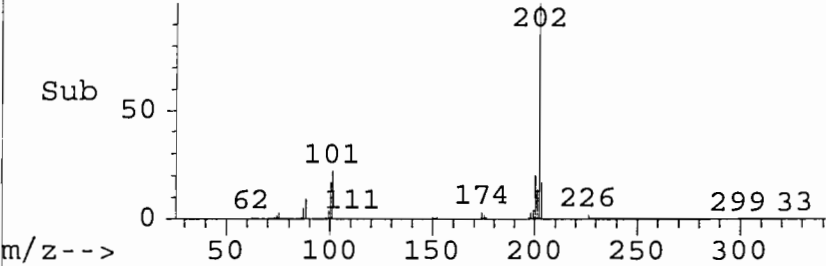
25.97

500000

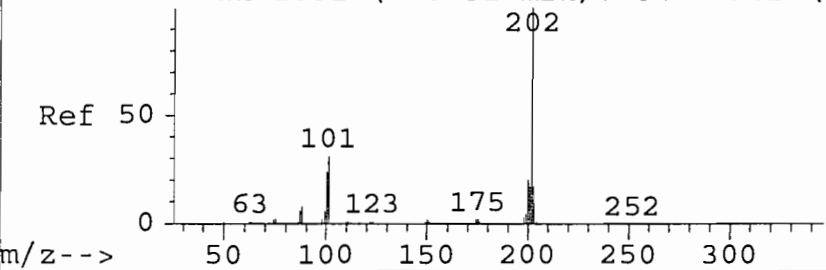
0

Time-->25.61 26.16

AbundanceScan 1576 (25.969 min): S21993.D (



AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 92.70 ng

RT: 26.61 min Scan# 1619

Delta R.T. -0.02 min

Lab File: S21993.D

Acq: 7 Nov 99 4:59 pm

Tgt Ion:202 Resp: 2168713

Ion	Ratio	Lower	Upper

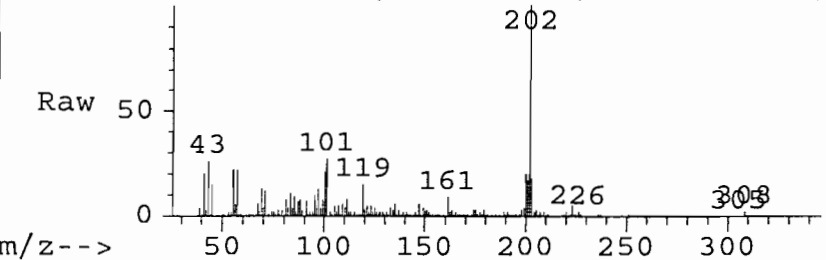
202	100		

101	26.8	15.3	45.9

200	20.2	10.1	30.3

201	17.4	8.5	25.4

AbundanceScan 1619 (26.612 min): S21993.D (



AbundanceIon 202.00 (201

Ion 101.00 (100

Ion 200.00 (199

Ion 201.00 (200

1000000

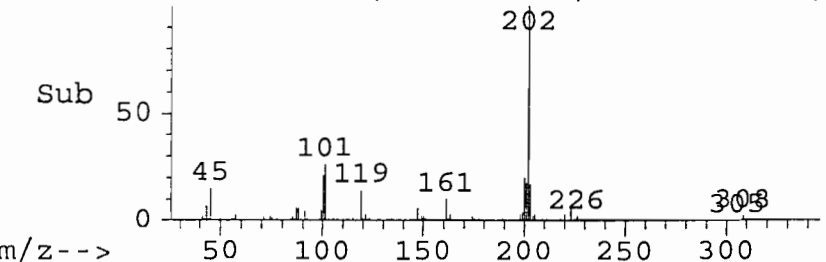
26.61

500000

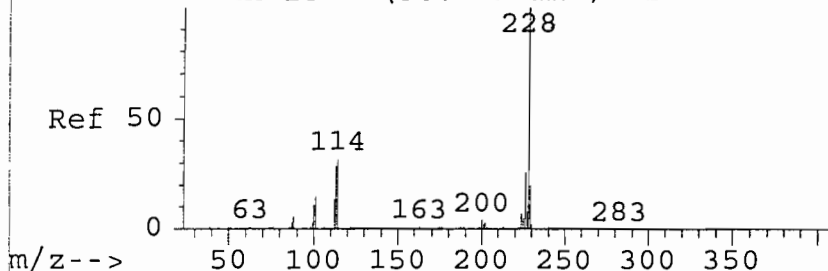
0

Time-->26.19 26.79

AbundanceScan 1619 (26.612 min): S21993.D (



AbundanceScan 1888 (30.441 min): S21889.D (



#74

Benzo[a]anthracene

Concen: 32.69 ng

RT: 30.37 min Scan# 1869

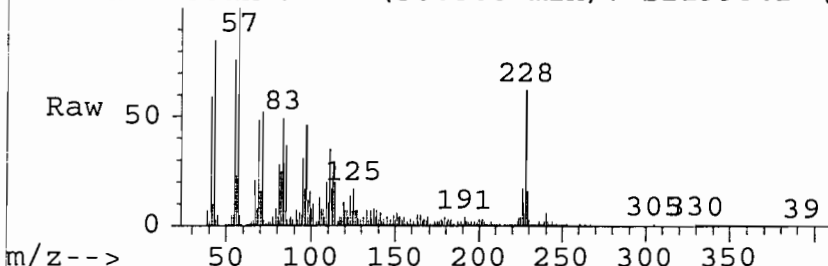
Delta R.T. -0.07 min

Lab File: S21993.D

Acq: 7 Nov 99 4:59 pm

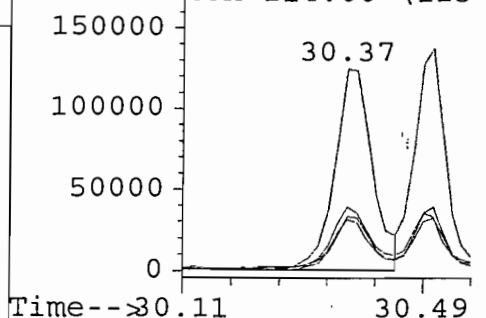
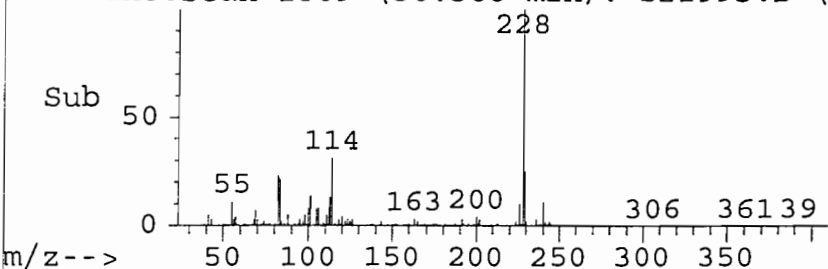
Tgt Ion:	228	Resp:	514931
Ion Ratio	Lower	Upper	
228	100		
229	25.6	9.9	29.6
226	27.0	13.2	39.5
114	31.8	16.0	47.9

AbundanceScan 1869 (30.366 min): S21993.D (

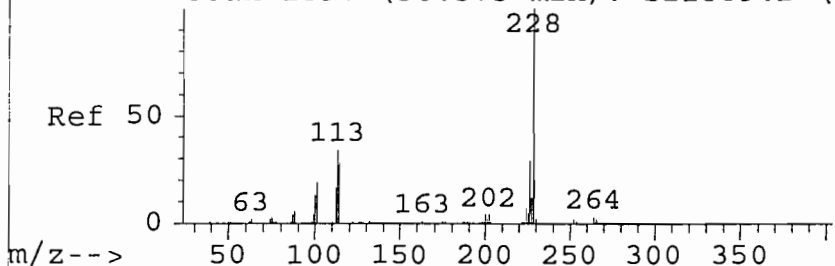


Abundance	Ion	228.00	(227
200000	Ion	229.00	(228
	Ion	226.00	(225
	Ion	114.00	(113

AbundanceScan 1869 (30.366 min): S21993.D (



AbundanceScan 1897 (30.575 min): S21889.D (



#76

Chrysene

Concen: 31.56 ng

RT: 30.50 min Scan# 1878

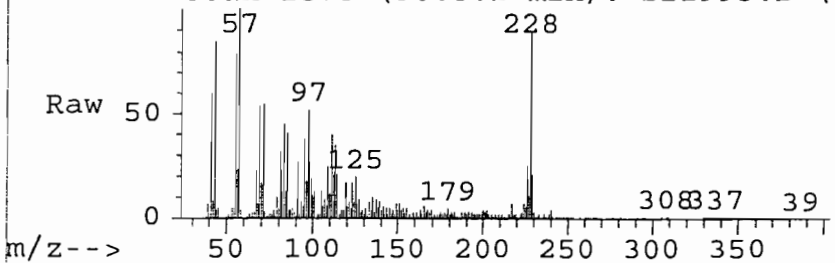
Delta R.T. -0.07 min

Lab File: S21993.D

Acq: 7 Nov 99 4:59 pm

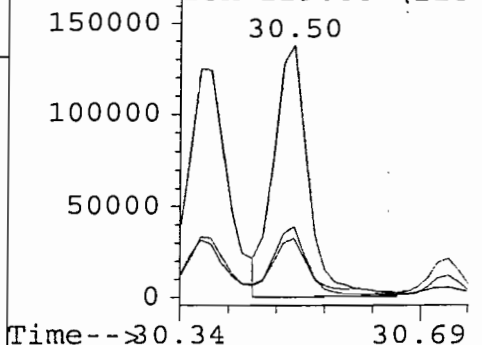
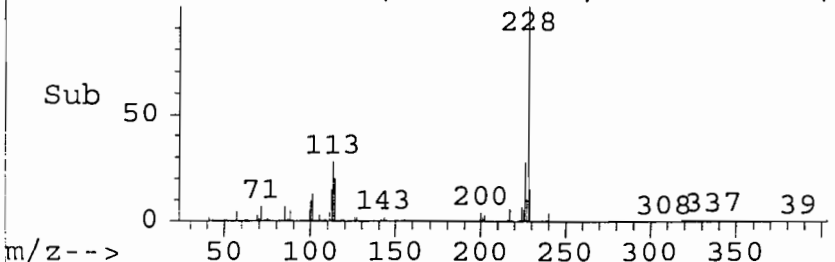
Tgt Ion:	228	Resp:	484188
Ion Ratio	Lower	Upper	
228	100		
226	28.6	14.4	43.2
229	23.7	10.0	29.9
0	0.0	0.0	0.0

AbundanceScan 1878 (30.501 min): S21993.D (

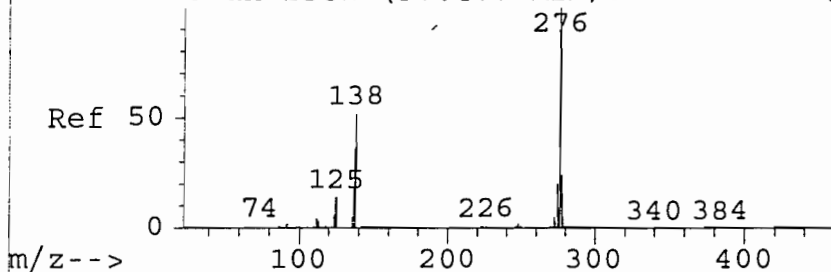


Abundance	Ion	228.00	(227
150000	Ion	226.00	(225
	Ion	229.00	(228

AbundanceScan 1878 (30.501 min): S21993.D (



AbundanceScan 2361 (37.477 min): S21889.D (

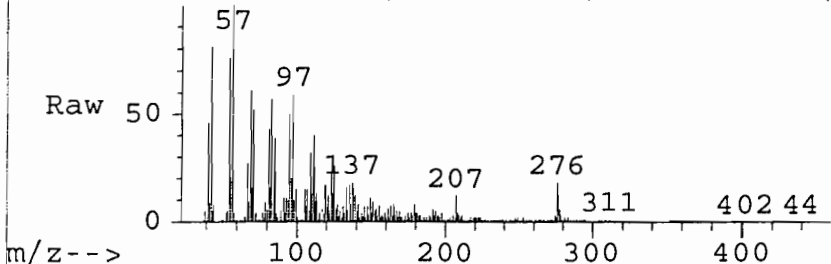


#79

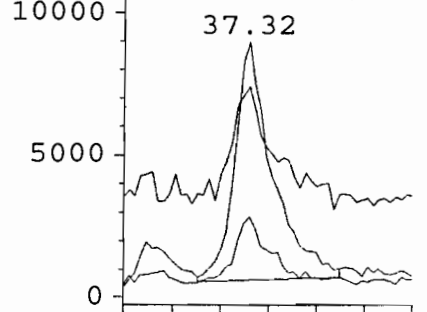
Indeno [1,2,3-cd] pyrene
Concen: 4.91 ng
RT: 37.32 min Scan# 2330
Delta R.T. -0.15 min
Lab File: S21993.D
Acq: 7 Nov 99 4:59 pm

Tgt Ion:	276	Resp:	58556
Ion	Ratio	Lower	Upper
276	100		
138	51.0	21.4	64.2
277	26.4	12.5	37.5
0	0.0	0.0	0.0

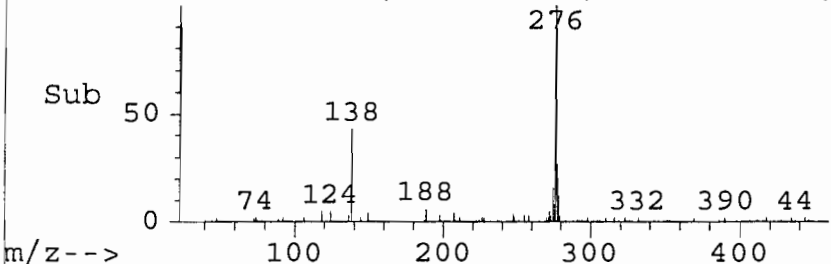
AbundanceScan 2330 (37.322 min): S21993.D (



AbundanceIon 276.00 (275
Ion 138.00 (137
Ion 277.00 (276

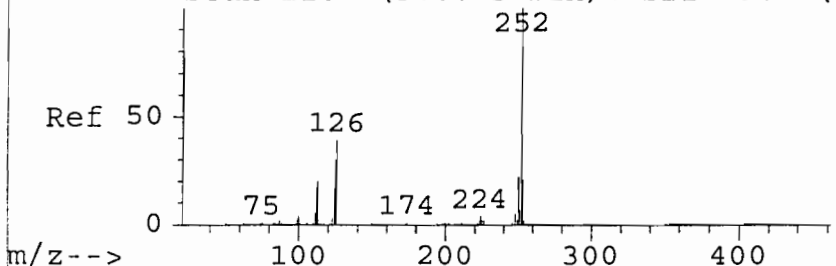


AbundanceScan 2330 (37.322 min): S21993.D (



Time-->36.99 37.63

AbundanceScan 2103 (33.635 min): S21889.D (

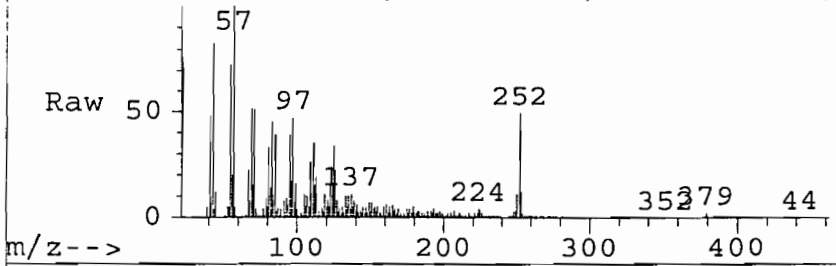


#81

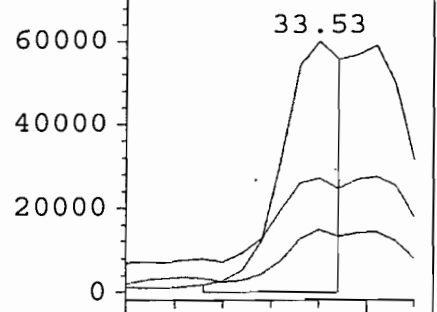
Benzo[b]fluoranthene
Concen: 23.26 ng m
RT: 33.53 min Scan# 2079
Delta R.T. -0.10 min
Lab File: S21993.D
Acq: 7 Nov 99 4:59 pm

Tgt Ion:	252	Resp:	200996
Ion	Ratio	Lower	Upper
252	100		
253	21.2	10.5	31.6
126	39.5	19.8	59.3
0	0.0	0.0	0.0

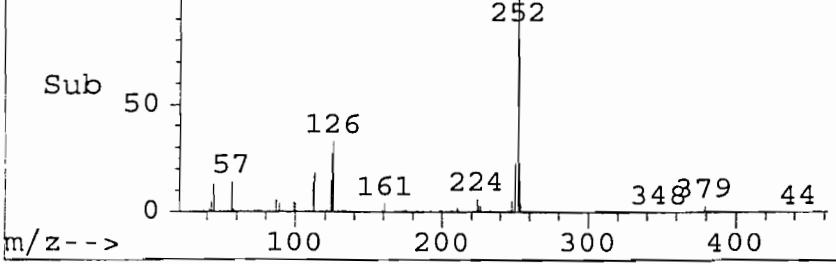
AbundanceScan 2079 (33.532 min): S21993.D (



AbundanceIon 252.00 (251
Ion 253.00 (252
Ion 126.00 (125



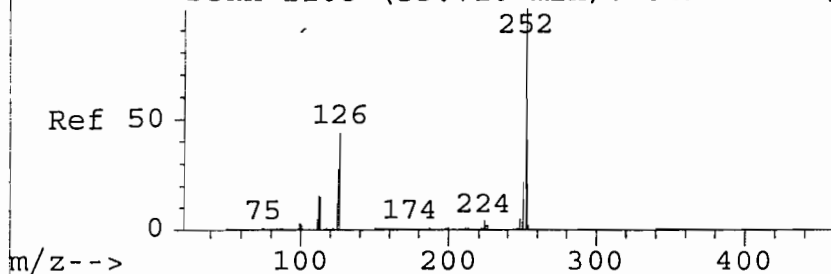
AbundanceScan 2079 (33.532 min): S21993.D (



Time-->33.38 33.57

000099

AbundanceScan 2108 (33.710 min): S21889.D (

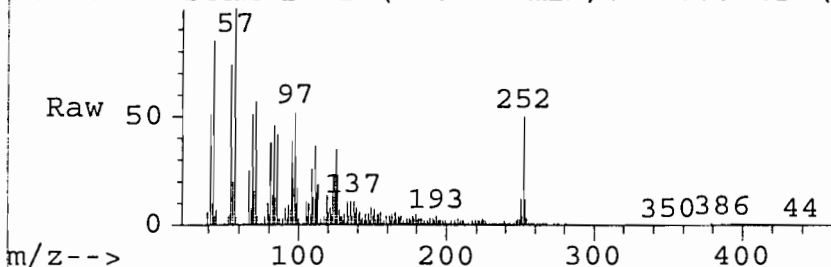


#82

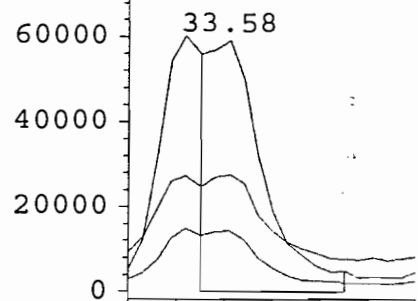
Benzo[k]fluoranthene
Concen: 26.50 ng m
RT: 33.58 min Scan# 2082
Delta R.T. -0.13 min
Lab File: S21993.D
Acq: 7 Nov 99 4:59 pm

Tgt Ion:252	Resp:	229198
Ion Ratio	Lower	Upper
252 100		
253 21.1	10.5	31.5
126 43.7	20.6	61.9
0 0.0	0.0	0.0

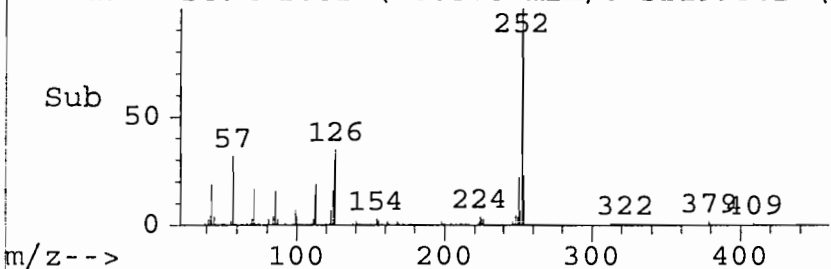
AbundanceScan 2082 (33.578 min): S21993.D (



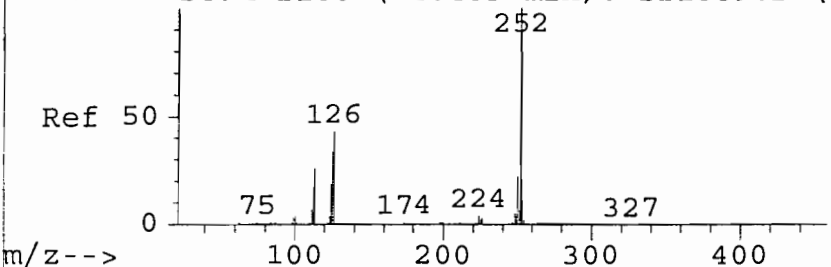
AbundanceIon 252.00 (251
80000 Ion 253.00 (252
Ion 126.00 (125



AbundanceScan 2082 (33.578 min): S21993.D (



AbundanceScan 2160 (34.483 min): S21889.D (

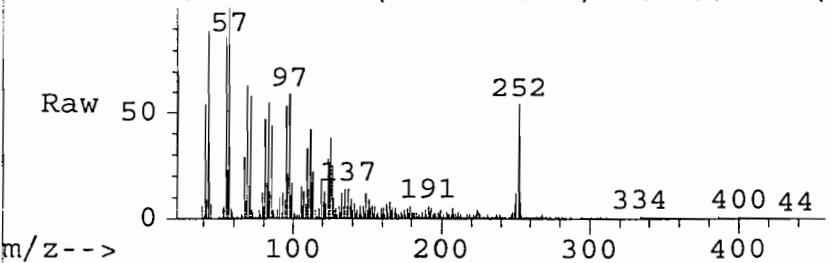


#83

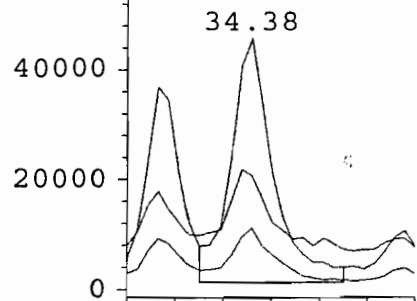
Benzo[a]pyrene
Concen: 25.10 ng
RT: 34.38 min Scan# 2135
Delta R.T. -0.10 min
Lab File: S21993.D
Acq: 7 Nov 99 4:59 pm

Tgt Ion:252	Resp:	192396
Ion Ratio	Lower	Upper
252 100		
253 24.7	10.7	32.1
126 45.6	21.6	64.9
0 0.0	0.0	0.0

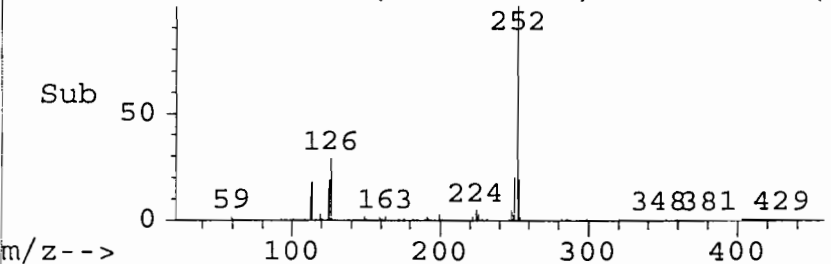
AbundanceScan 2135 (34.379 min): S21993.D (



AbundanceIon 252.00 (251
60000 Ion 253.00 (252
Ion 126.00 (125

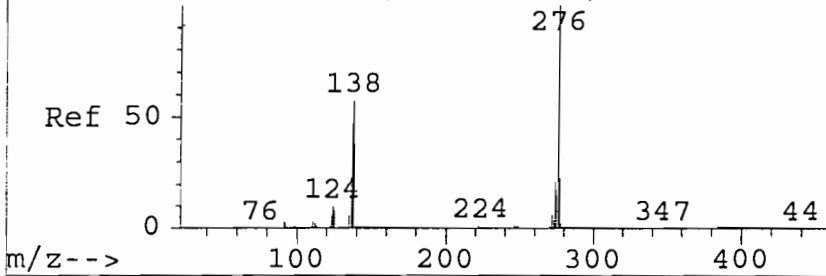


AbundanceScan 2135 (34.379 min): S21993.D (



000100

AbundanceScan 2413 (38.252 min): S21889.D (



#85

Benzo[g,h,i]perylene

Concen: 8.62 ng

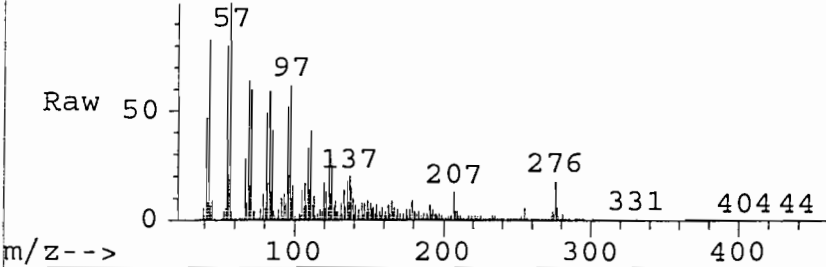
RT: 38.06 min Scan# 2379

Delta R.T. -0.19 min

Lab File: S21993.D

Acq: 7 Nov 99 4:59 pm

AbundanceScan 2379 (38.059 min): S21993.D (



Tgt Ion:276 Resp: 51530

Ion Ratio Lower Upper

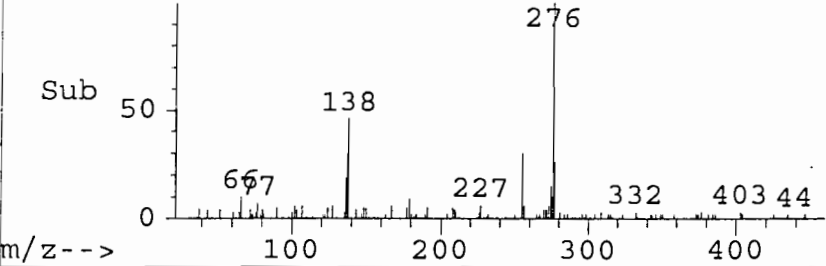
276 100

274 20.7 10.3 30.9

277 31.6 11.7 35.2

0 0.0 0.0 0.0

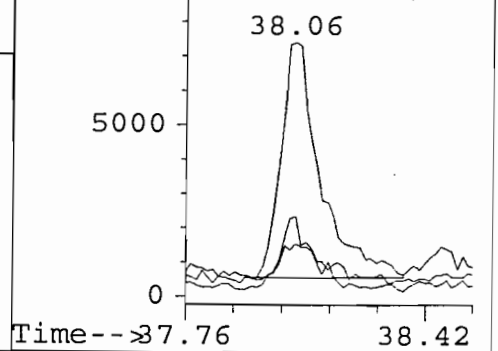
AbundanceScan 2379 (38.059 min): S21993.D (



AbundanceIon 276.00 (275

10000 Ion 274.00 (273

Ion 277.00 (276



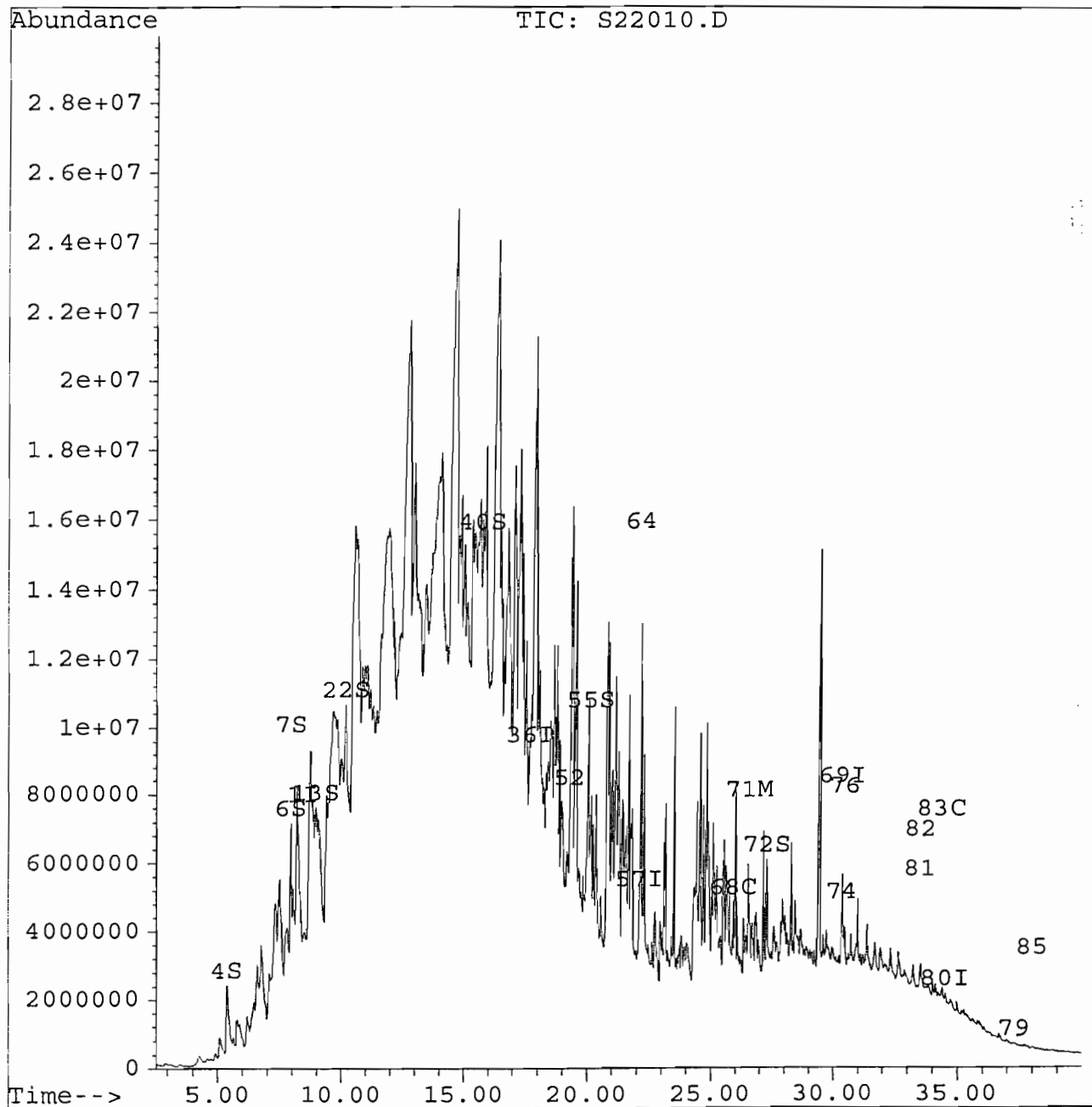
000101

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22010.D
Acq Time : 8 Nov 99 7:25 pm
Sample : 13827ASP-88016-QB506 RE
Misc :
Quant Time: Nov 10 14:12 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000103

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22010.D
 Acq Time : 8 Nov 99 7:25 pm
 Sample : 13827ASP-88016-QB506 RE
 Misc :
 Quant Time: Nov 10 14:12 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

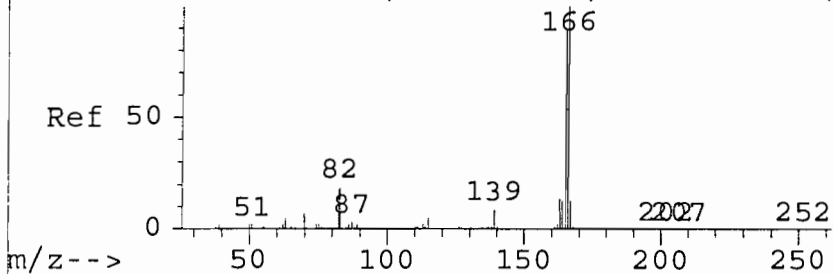
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi)
1) 1,4-Dichlorobenzene-d4	8.43	152	424410	40.00	ng	-0.0
21) Naphthalene-d8	12.24	136	1493145	40.00	ng	0.0
36) Acenaphthene-d10	17.69	164	663581	40.00	ng	0.0
57) Phenanthrene-d10	22.13	188	1282199	40.00	ng	-0.0
69) Chrysene-d12	30.39	240	729715	40.00	ng	-0.1
80) Perylene-d12	34.50	264	302060	40.00	ng	-0.1

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.37	112	4438501	241.91	ng	
6) 2-Chlorophenol-d4	7.94	132	4823277	260.84	ng	
7) Phenol-d5	7.94	99	4525699	227.50	ng	
13) 1,2-Dichlorobenzene-d4	8.95	152	1333511	125.36	ng	m
22) Nitrobenzene-d5	10.16	82	1998555	138.31	ng	
40) 2-Fluorobiphenyl	15.75	172	2316419	96.31	ng	
55) 2,4,6-Tribromophenol	20.15	330	1107508	315.75	ng	
72) Terphenyl-d14	27.30	244	2906662	147.92	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
52) Fluorene	19.30	166	674652	30.61	ng	9
64) Phenanthrene	22.21	178	2177463	68.35	ng	9
68) Fluoranthene	25.91	202	2676560	79.21	ng	9
71) Pyrene	26.57	202	2399964	77.17	ng	9
74) Benzo[a]anthracene	30.35	228	669463	31.97	ng	9
76) Chrysene	30.47	228	665589	32.63	ng	9
79) Indeno [1,2,3-cd] pyrene	37.27	276	40608	2.56	ng	8
81) Benzo[b]fluoranthene	33.51	252	265511	29.44	ng	m 8
82) Benzo[k]fluoranthene	33.55	252	280559	31.08	ng	m 9
83) Benzo[a]pyrene	34.35	252	219428	27.43	ng	9
85) Benzo[g,h,i]perylene	38.01	276	35404	5.68	ng	9

000104

AbundanceScan 1137 (19.311 min): S21889.D (



#52

Fluorene

Concen: 30.61 ng

RT: 19.30 min Scan# 1132

Delta R.T. -0.01 min

Lab File: S22010.D

Acq: 8 Nov 99 7:25 pm

Tgt Ion:166 Resp: 674652

Ion Ratio Lower Upper

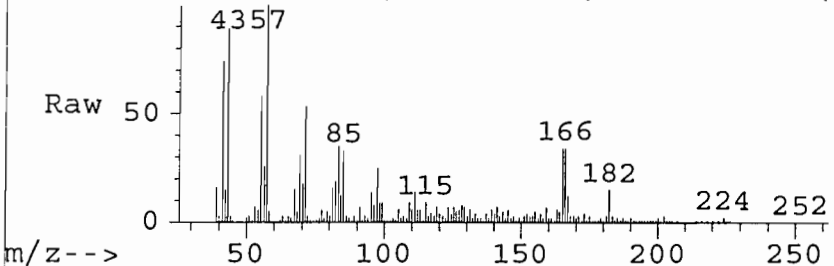
166 100

165 98.6 45.0 135.0

163 18.2 7.1 21.3

0 0.0 0.0 0.0

AbundanceScan 1132 (19.297 min): S22010.D (



AbundanceIon 166.00 (165

300000 Ion 165.00 (164

Ion 163.00 (162

19.30

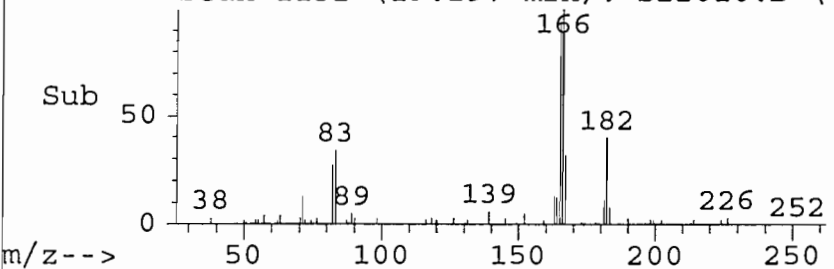
200000

100000

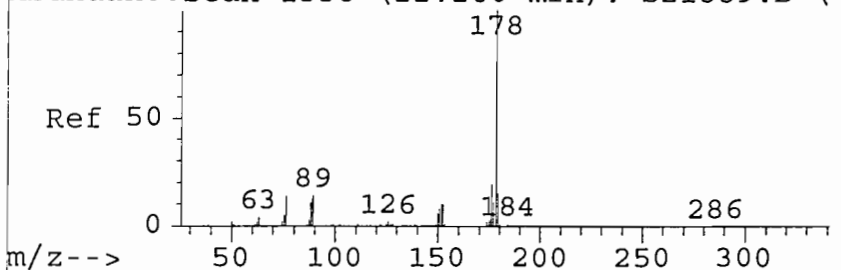
0

Time-->19.09 19.46

AbundanceScan 1132 (19.297 min): S22010.D (



AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 68.35 ng

RT: 22.21 min Scan# 1327

Delta R.T. -0.06 min

Lab File: S22010.D

Acq: 8 Nov 99 7:25 pm

Tgt Ion:178 Resp: 2177463

Ion Ratio Lower Upper

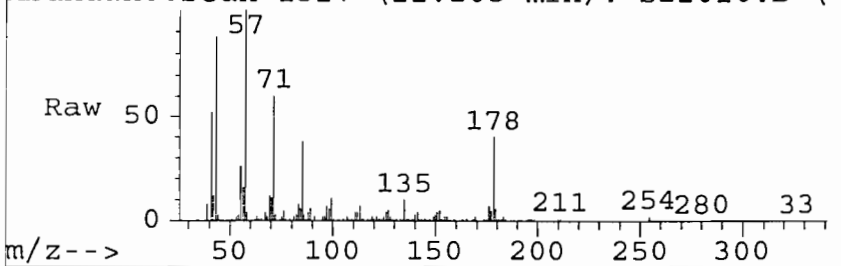
178 100

179 16.2 7.4 22.3

176 18.3 9.3 27.9

0 0.0 0.0 0.0

AbundanceScan 1327 (22.205 min): S22010.D (



AbundanceIon 178.00 (177

1000000 Ion 179.00 (178

Ion 176.00 (175

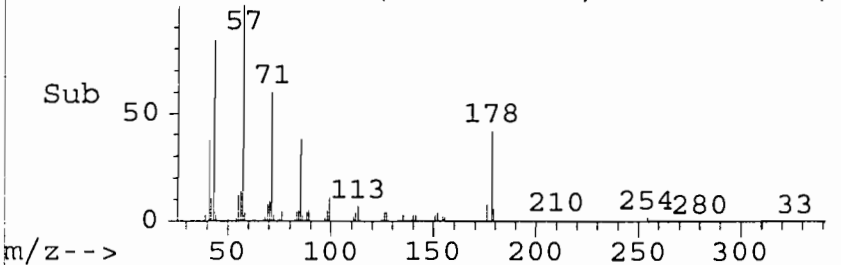
22.21

500000

0

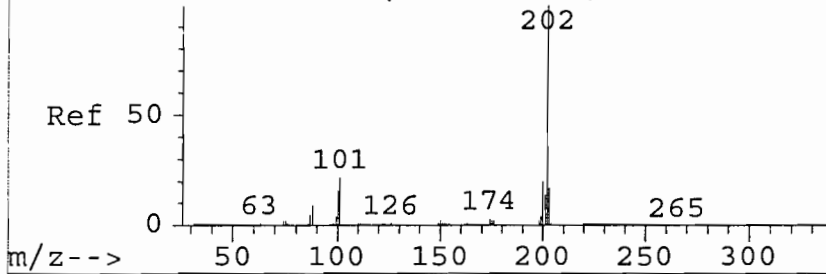
Time-->21.97 22.31

AbundanceScan 1327 (22.205 min): S22010.D (



000105

AbundanceScan 1587 (25.979 min): S21889.D (



#68

Fluoranthene

Concen: 79.21 ng

RT: 25.91 min Scan# 1575

Delta R.T. -0.07 min

Lab File: S22010.D

Acq: 8 Nov 99 7:25 pm

Tgt Ion:202 Resp: 2676560

Ion	Ratio	Lower	Upper

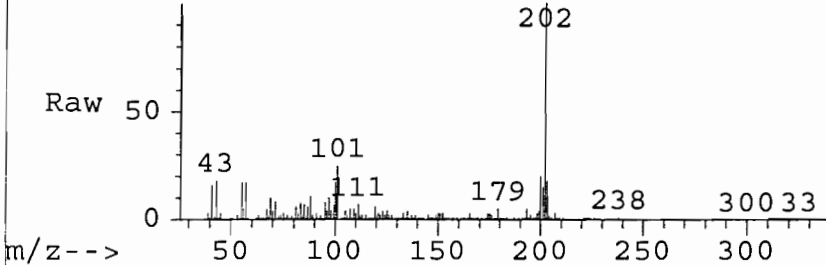
202	100		

101	24.6	10.9	32.7

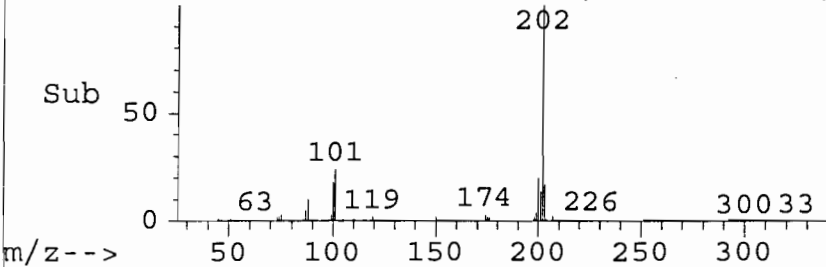
200	19.9	9.9	29.6

203	17.5	8.5	25.4

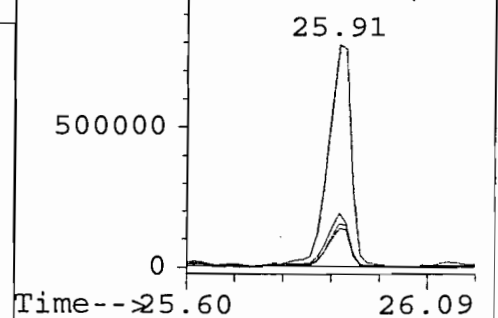
AbundanceScan 1575 (25.911 min): S22010.D (



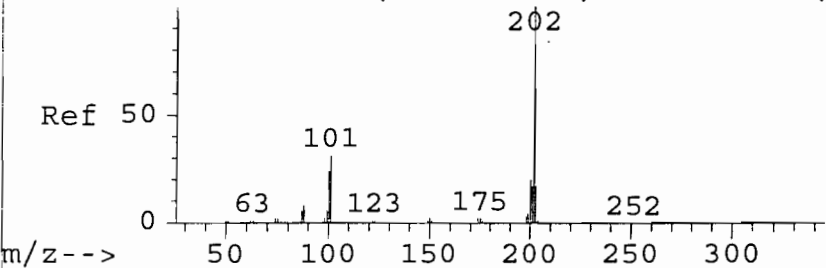
AbundanceScan 1575 (25.911 min): S22010.D (



Abundance	Ion	202.00	(201
	Ion	101.00	(100
	Ion	200.00	(199
	Ion	203.00	(202



AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 77.17 ng

RT: 26.57 min Scan# 1619

Delta R.T. -0.06 min

Lab File: S22010.D

Acq: 8 Nov 99 7:25 pm

Tgt Ion:202 Resp: 2399964

Ion	Ratio	Lower	Upper

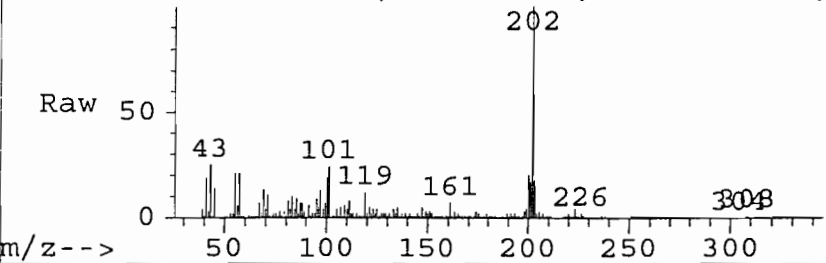
202	100		

101	24.0	15.3	45.9

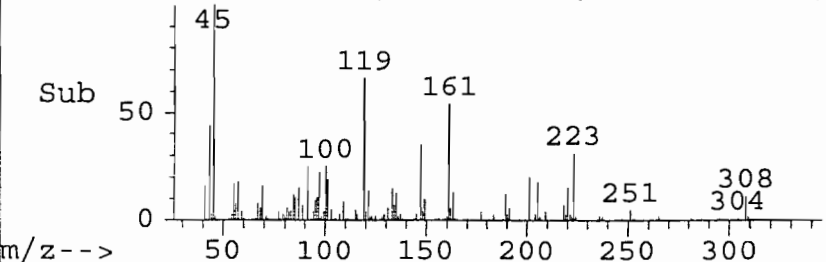
200	20.1	10.1	30.3

201	17.1	8.5	25.4

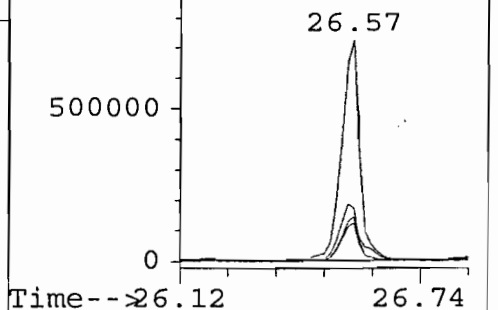
AbundanceScan 1619 (26.569 min): S22010.D (



AbundanceScan 1619 (26.569 min): S22010.D (

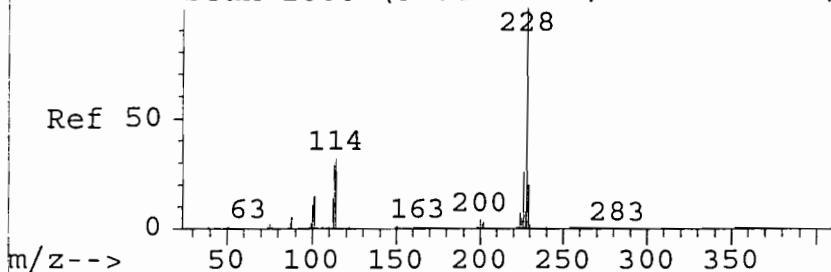


Abundance	Ion	202.00	(201
	Ion	101.00	(100
	Ion	200.00	(199
	Ion	201.00	(200



000106

AbundanceScan 1888 (30.441 min): S21889.D (



#74

Benzo[a]anthracene

Concen: 31.97 ng

RT: 30.35 min Scan# 1871

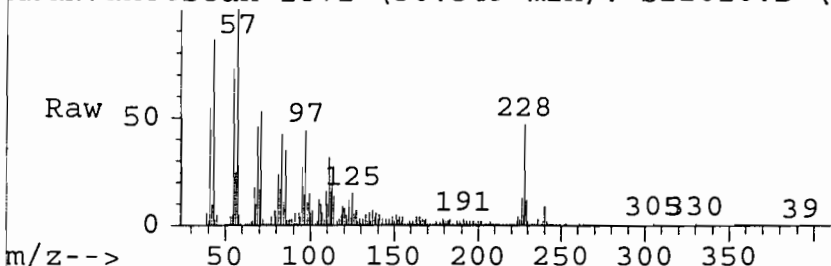
Delta R.T. -0.09 min

Lab File: S22010.D

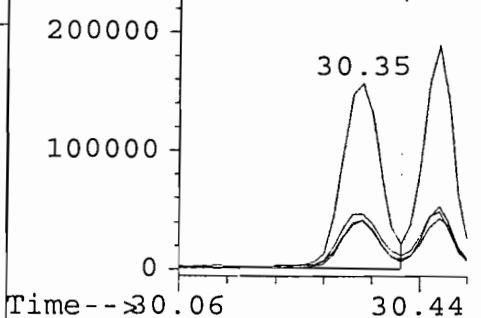
Acq: 8 Nov 99 7:25 pm

Tgt Ion:	228	Resp:	669463
Ion	Ratio	Lower	Upper
228	100		
229	26.4	9.9	29.6
226	27.0	13.2	39.5
114	30.3	16.0	47.9

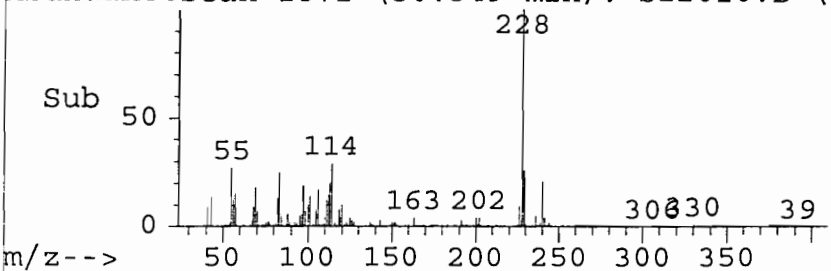
AbundanceScan 1871 (30.349 min): S22010.D (



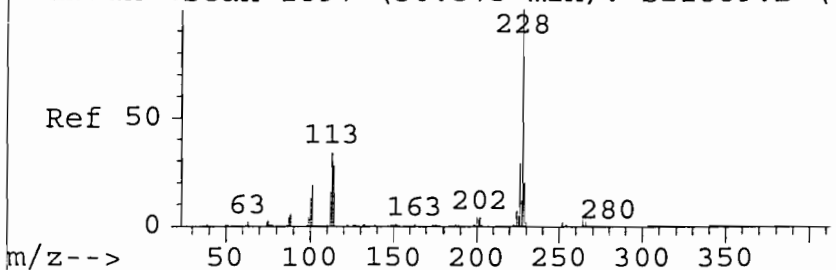
AbundanceIon 228.00 (227
Ion 229.00 (228
Ion 226.00 (225
Ion 114.00 (113



AbundanceScan 1871 (30.349 min): S22010.D (



AbundanceScan 1897 (30.575 min): S21889.D (



#76

Chrysene

Concen: 32.63 ng

RT: 30.47 min Scan# 1879

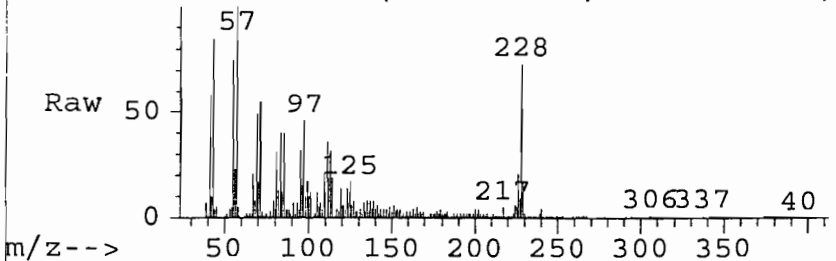
Delta R.T. -0.11 min

Lab File: S22010.D

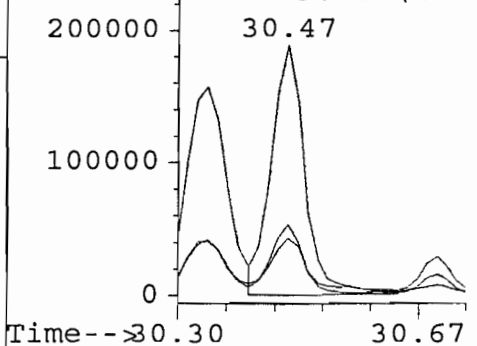
Acq: 8 Nov 99 7:25 pm

Tgt Ion:	228	Resp:	665589
Ion	Ratio	Lower	Upper
228	100		
226	28.5	14.4	43.2
229	23.1	10.0	29.9
0	0.0	0.0	0.0

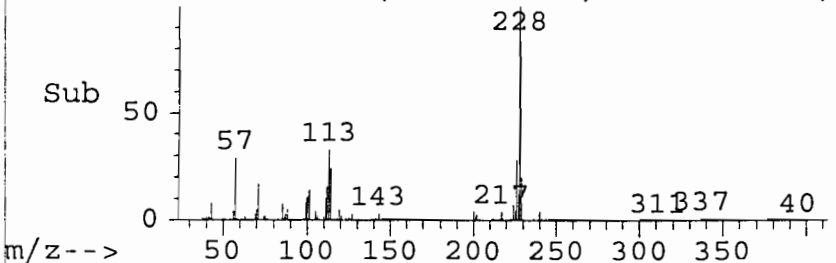
AbundanceScan 1879 (30.470 min): S22010.D (



AbundanceIon 228.00 (227
Ion 226.00 (225
Ion 229.00 (228

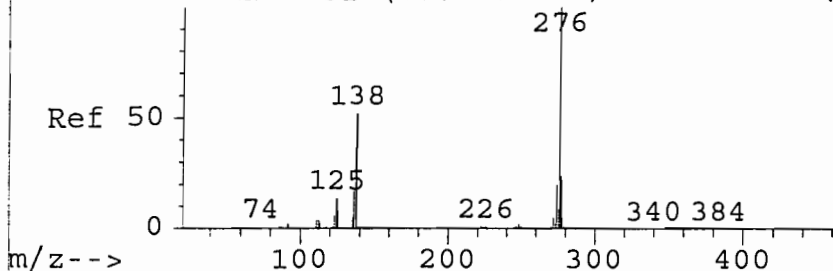


AbundanceScan 1879 (30.470 min): S22010.D (



000107

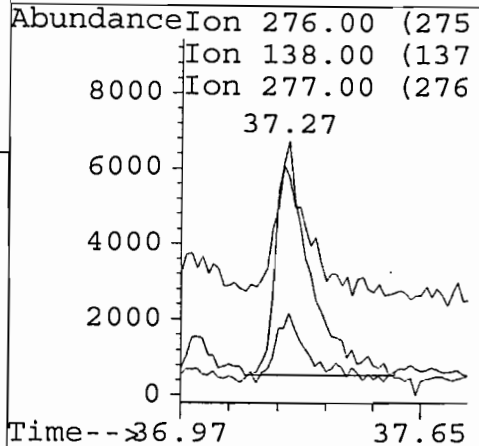
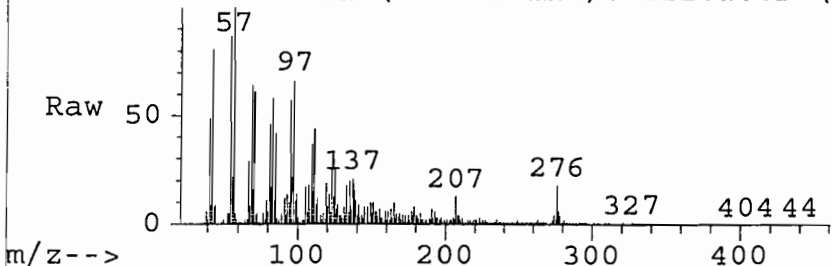
AbundanceScan 2361 (37.477 min): S21889.D (



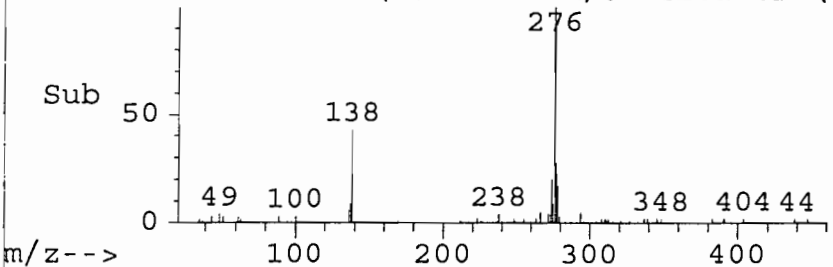
#79
Indeno [1,2,3-cd] pyrene
Concen: 2.56 ng
RT: 37.27 min Scan# 2331
Delta R.T. -0.20 min
Lab File: S22010.D
Acq: 8 Nov 99 7:25 pm

Tgt Ion:276	Resp:	40608
Ion Ratio	Lower	Upper
276	100	
138	54.3	21.4 64.2
277	25.3	12.5 37.5
0	0.0	0.0 0.0

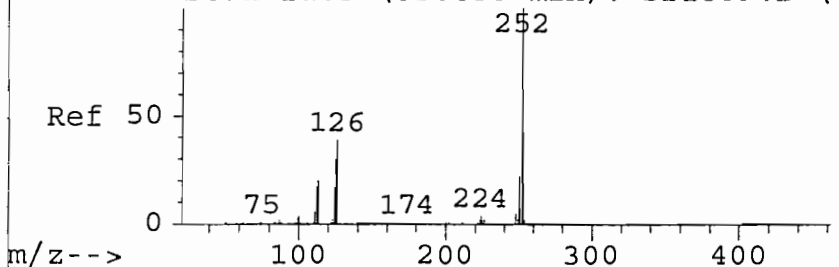
AbundanceScan 2331 (37.273 min): S22010.D (



AbundanceScan 2331 (37.273 min): S22010.D (



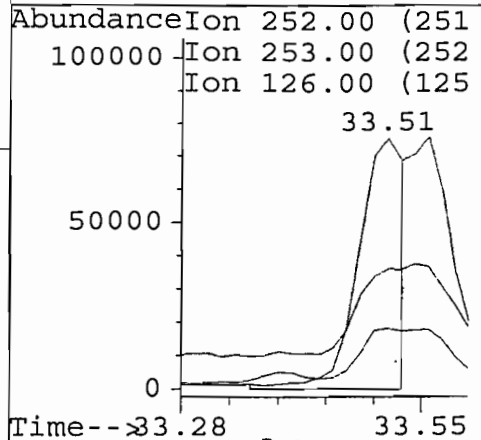
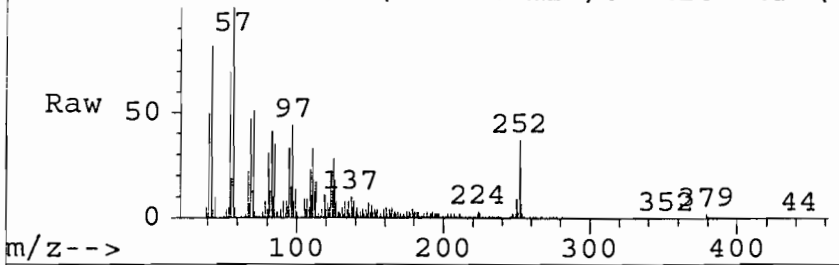
AbundanceScan 2103 (33.635 min): S21889.D (



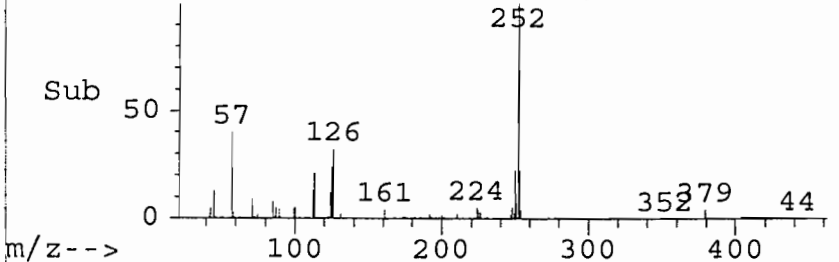
#81
Benzo [b] fluoranthene
Concen: 29.44 ng m
RT: 33.51 min Scan# 2081
Delta R.T. -0.13 min
Lab File: S22010.D
Acq: 8 Nov 99 7:25 pm

Tgt Ion:252	Resp:	265511
Ion Ratio	Lower	Upper
252	100	
253	21.2	10.5 31.6
126	39.5	19.8 59.3
0	0.0	0.0 0.0

AbundanceScan 2081 (33.510 min): S22010.D (

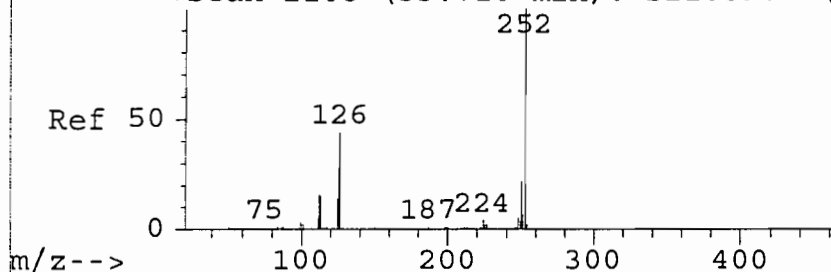


AbundanceScan 2081 (33.510 min): S22010.D (



000108

AbundanceScan 2108 (33.710 min): S21889.D (

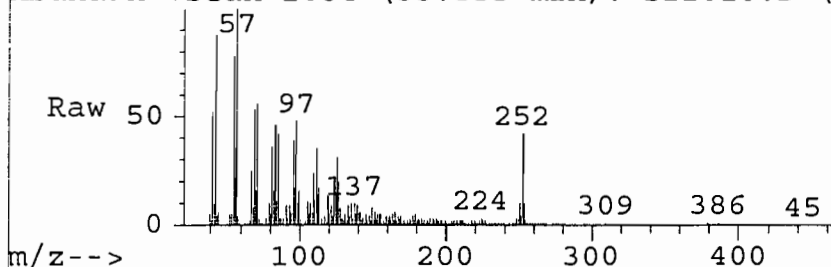


#82

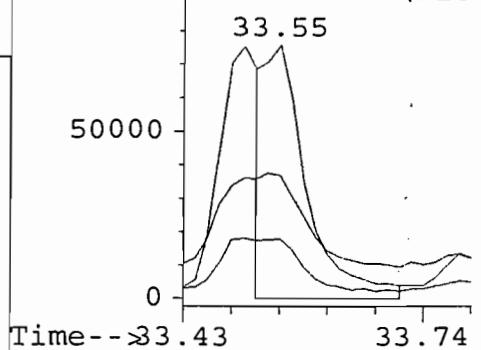
Benzo[k]fluoranthene
Concen: 31.08 ng m
RT: 33.55 min Scan# 2084
Delta R.T. -0.15 min
Lab File: S22010.D
Acq: 8 Nov 99 7:25 pm

Tgt	Ion:252	Resp:	280559
Ion	Ratio	Lower	Upper
252	100		
253	21.1	10.5	31.5
126	43.7	20.6	61.9
0	0.0	0.0	0.0

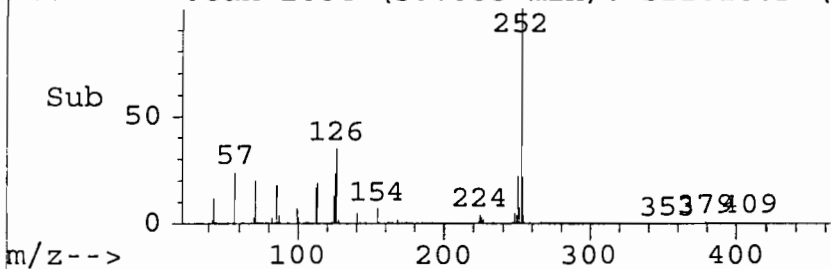
AbundanceScan 2084 (33.555 min): S22010.D (



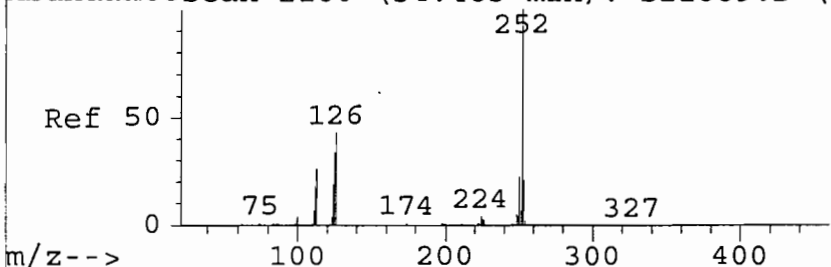
AbundanceIon 252.00 (251
100000 Ion 253.00 (252
Ion 126.00 (125



AbundanceScan 2084 (33.555 min): S22010.D (



AbundanceScan 2160 (34.483 min): S21889.D (

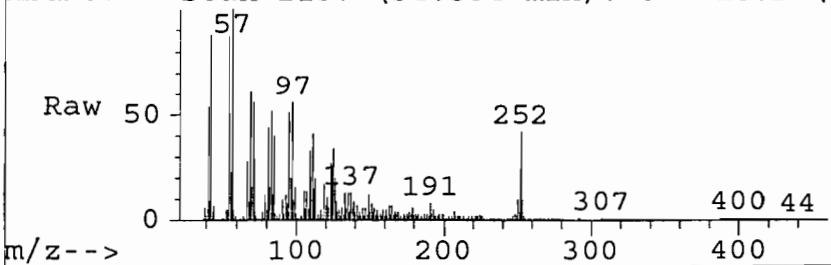


#83

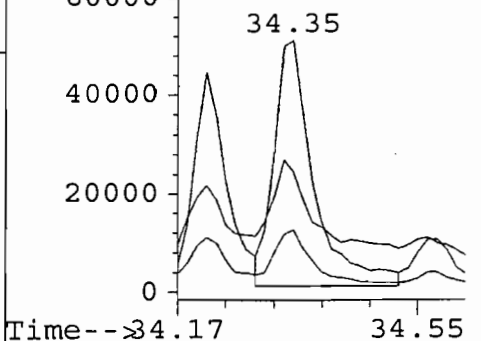
Benzo[a]pyrene
Concen: 27.43 ng
RT: 34.35 min Scan# 2137
Delta R.T. -0.13 min
Lab File: S22010.D
Acq: 8 Nov 99 7:25 pm

Tgt	Ion:252	Resp:	219428
Ion	Ratio	Lower	Upper
252	100		
253	25.1	10.7	32.1
126	48.1	21.6	64.9
0	0.0	0.0	0.0

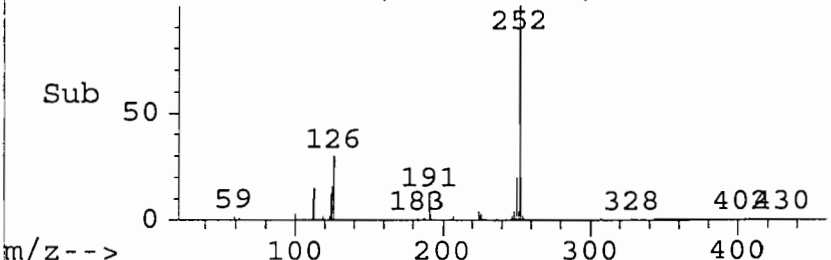
AbundanceScan 2137 (34.354 min): S22010.D (



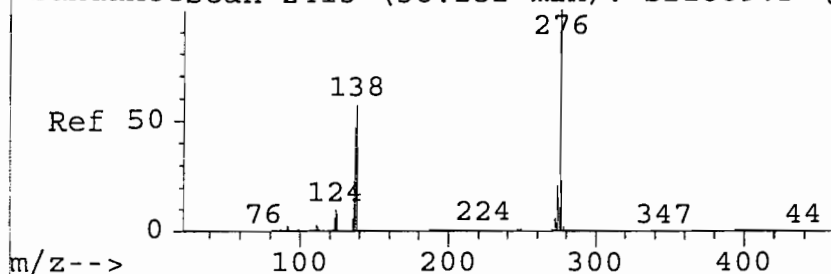
AbundanceIon 252.00 (251
60000 Ion 253.00 (252
Ion 126.00 (125



AbundanceScan 2137 (34.354 min): S22010.D (



AbundanceScan 2413 (38.252 min): S21889.D (



#85

Benzo[g,h,i]perylene

Concen: 5.68 ng

RT: 38.01 min Scan# 2380

Delta R.T. -0.25 min

Lab File: S22010.D

Acq: 8 Nov 99 7:25 pm

Tgt Ion:276 Resp: 35404

Ion Ratio Lower Upper

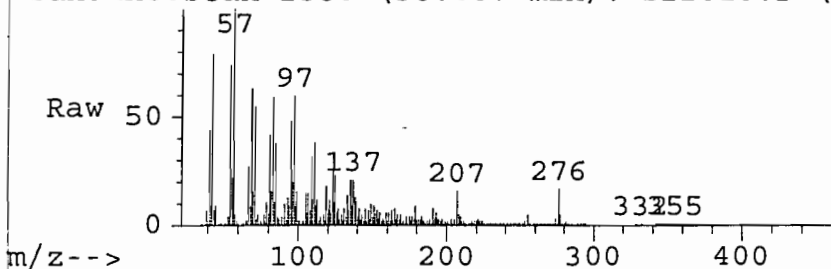
276 100

274 20.1 10.3 30.9

277 30.1 11.7 35.2

0 0.0 0.0 0.0

AbundanceScan 2380 (38.007 min): S22010.D (



AbundanceIon 276.00 (275

Ion 274.00 (273

Ion 277.00 (276

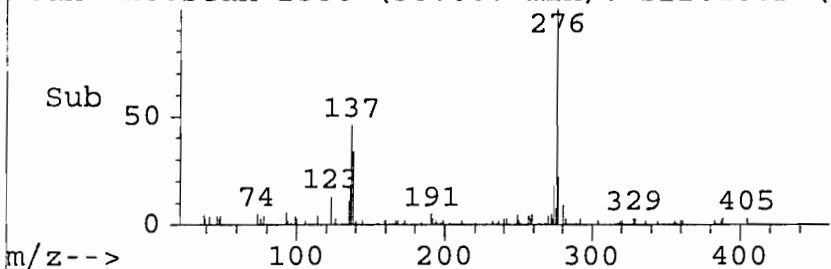
6000 38.01

4000

2000

0

AbundanceScan 2380 (38.007 min): S22010.D (



Time-->37.66 38.31

000110

GP-019-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Lab Sample ID: O88017

Lab File ID: S21961.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/5/99

Dilution Factor: 1.0

pH: _____

ug/Kg

Q

FORM I SV

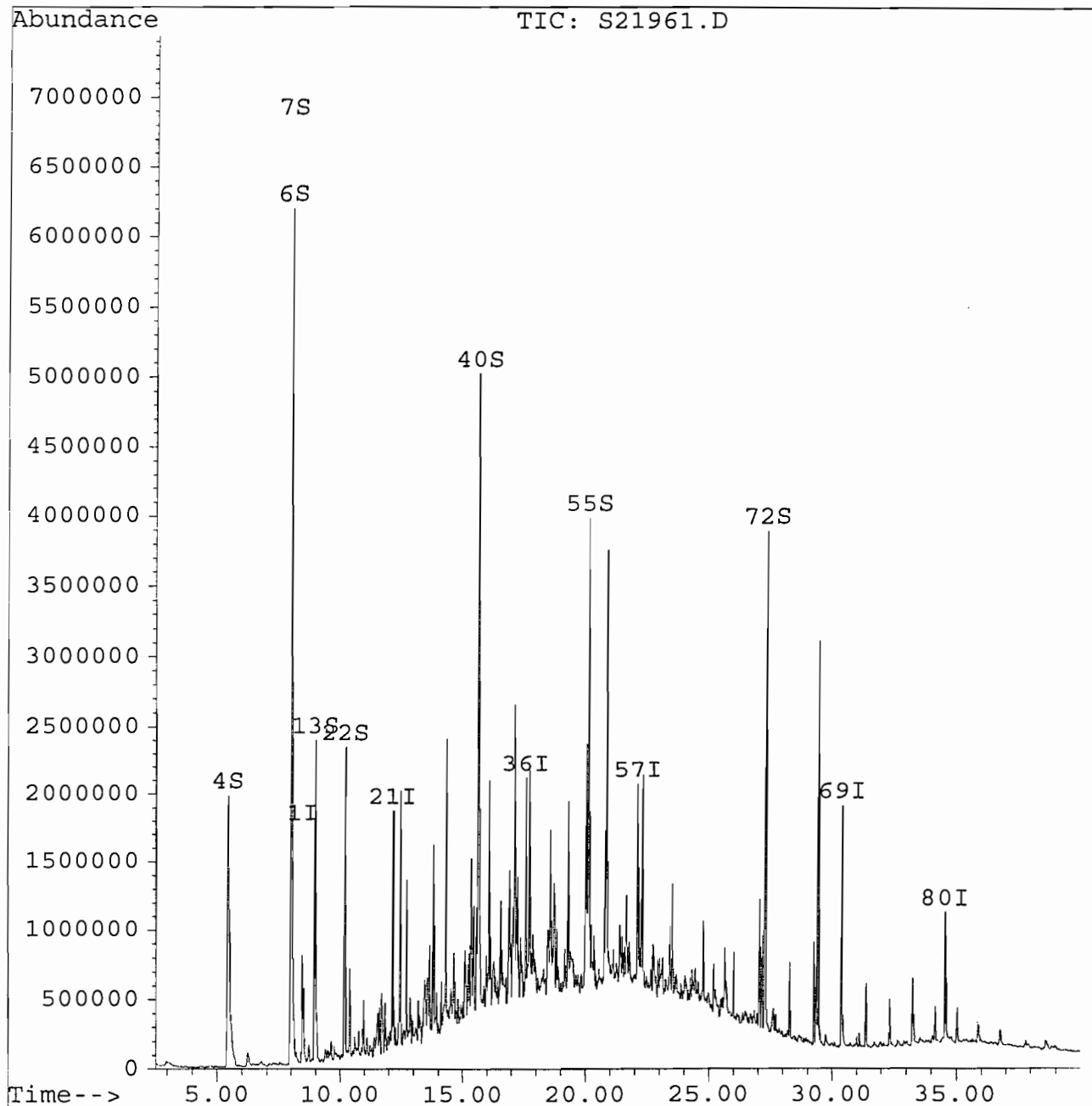
000111

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21961.D
 Acq Time : 5 Nov 99 1:10 pm
 Sample : 13827ASP-88017-QB506
 Misc :
 Quant Time: Nov 9 13:23 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Mon Nov 01 08:09:54 1999
 Response via : Multiple Level Calibration



000112

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21961.D
 Acq Time : 5 Nov 99 1:10 pm
 Sample : 13827ASP-88017-QB506
 Misc :
 Quant Time: Nov 9 13:23 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Mon Nov 01 08:09:54 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi)
1) 1,4-Dichlorobenzene-d4	8.44	152	473394	40.00	ng	-0.0
21) Naphthalene-d8	12.12	136	1806593	40.00	ng	-0.0
36) Acenaphthene-d10	17.56	164	803453	40.00	ng	-0.0
57) Phenanthrene-d10	22.10	188	1457992	40.00	ng	-0.0
69) Chrysene-d12	30.38	240	976805	40.00	ng	-0.1
80) Perylene-d12	34.52	264	896237	40.00	ng	-0.1

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.42	112	4266146	208.46	ng	
6) 2-Chlorophenol-d4	7.98	132	4645751	225.25	ng	
7) Phenol-d5	7.98	99	4523417	203.86	ng	
13) 1,2-Dichlorobenzene-d4	8.96	152	1352881	114.03	ng	
22) Nitrobenzene-d5	10.18	82	2035125	116.41	ng	
40) 2-Fluorobiphenyl	15.63	172	3480259	119.51	ng	
55) 2,4,6-Tribromophenol	20.10	330	1118823	263.44	ng	
72) Terphenyl-d14	27.31	244	3036944	115.45	ng	

Target Compounds Qvalu

000113

SAMPLE NO.

GP-019-SS12

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS8

Matrix: (soil/water) SOIL

Lab Sample ID: O88018

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S21994.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: 3

decanted: (Y/N): N

Date Extracted: 10/19/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/7/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

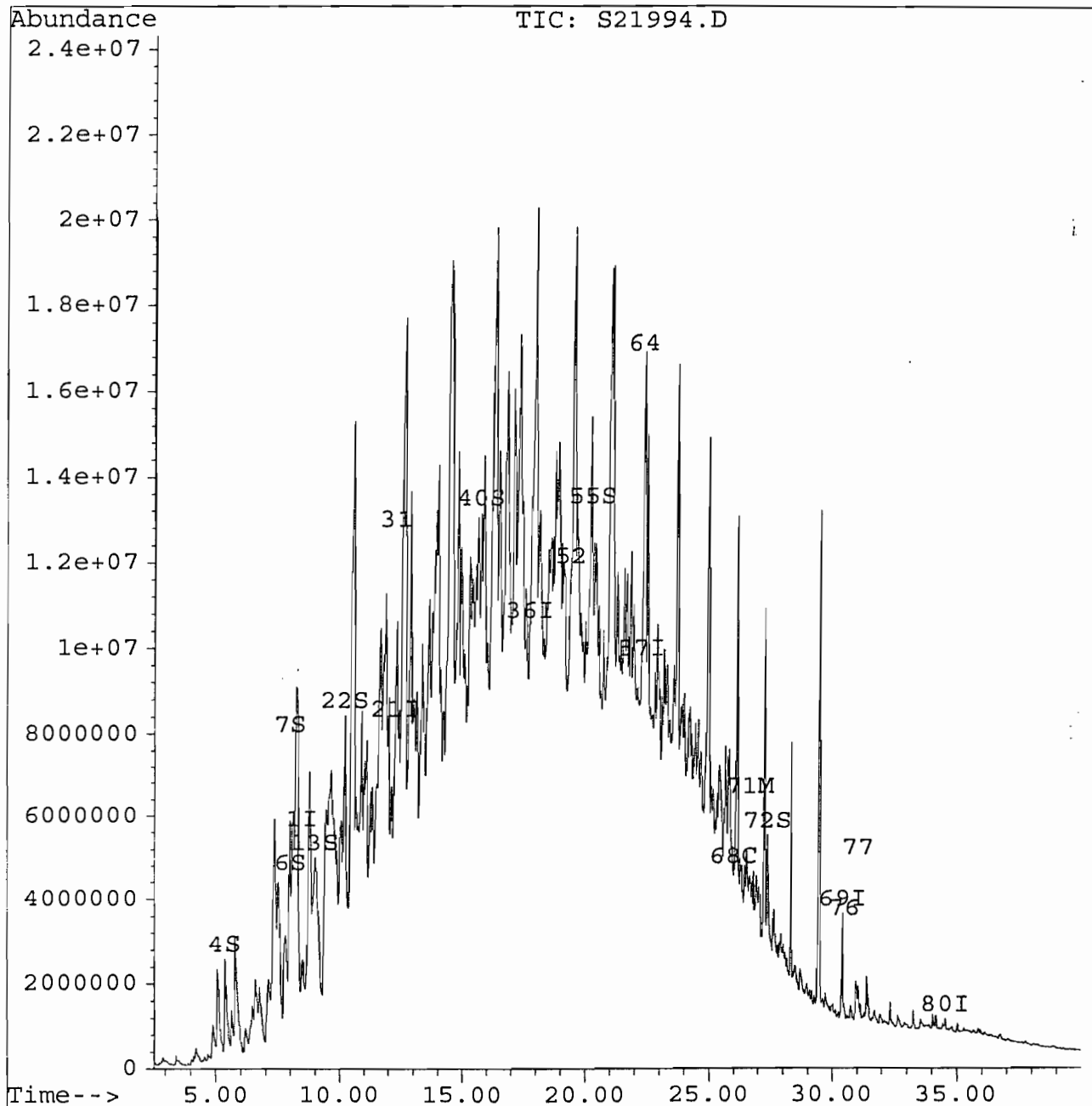
000114

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21994.D
 Acq Time : 7 Nov 99 5:49 pm
 Sample : 13827ASP-88018-QB506
 Misc :
 Quant Time: Nov 10 15:26 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration



000115

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21107\S21994.D
 Acq Time : 7 Nov 99 5:49 pm
 Sample : 13827ASP-88018-QB506
 Misc :
 Quant Time: Nov 10 15:26 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

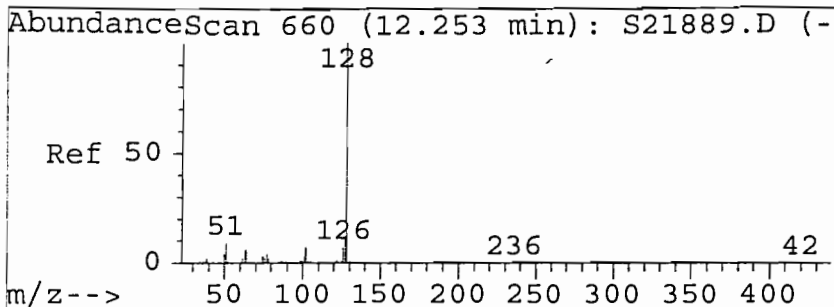
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Mi)
1) 1,4-Dichlorobenzene-d4	8.46	152	500951	40.00	ng	-0.0
21) Naphthalene-d8	12.21	136	1739956	40.00	ng	0.0
36) Acenaphthene-d10	17.71	164	761233	40.00	ng	0.0
57) Phenanthrene-d10	22.25	188	1159528	40.00	ng	0.0
69) Chrysene-d12	30.40	240	589421	40.00	ng	-0.1
80) Perylene-d12	34.51	264	297246	40.00	ng	-0.1

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.35	112	4460490	205.97	ng	
6) 2-Chlorophenol-d4	7.98	132	4909045	224.92	ng	
7) Phenol-d5	7.97	99	4713852	200.75	ng	
13) 1,2-Dichlorobenzene-d4	8.98	152	1399412	111.46	ng	m
22) Nitrobenzene-d5	10.19	82	2120685	125.95	ng	m
40) 2-Fluorobiphenyl	15.73	172	2895804	104.96	ng	
55) 2,4,6-Tribromophenol	20.27	330	814686	202.47	ng	
72) Terphenyl-d14	27.37	244	2412972	152.02	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
31) Naphthalene	12.27	128	7703045	155.34	ng	m 9
52) Fluorene	19.39	166	1348303	53.32	ng	8
64) Phenanthrene	22.33	178	2430819	84.38	ng	9
68) Fluoranthene	25.99	202	207815	6.80	ng	m 8
71) Pyrene	26.64	202	450684	17.94	ng	9
76) Chrysene	30.47	228	43936	2.67	ng	m 8
77) bis-(2-Ethylhexyl)phthalate	31.01	149	272048	11.05	ng	9

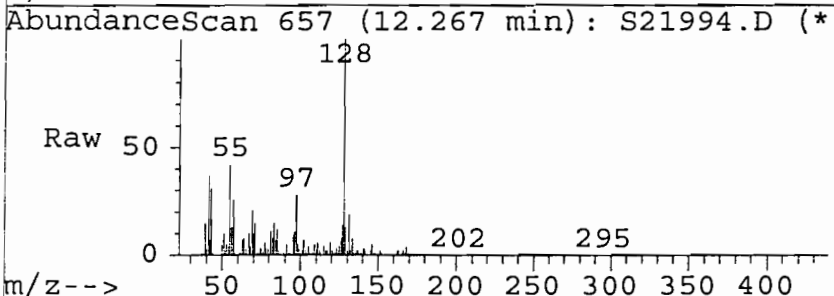
N

000116

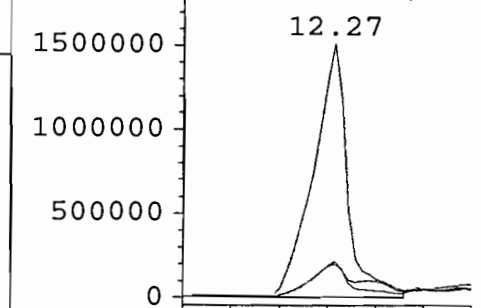


#31
Naphthalene
Concen: 155.34 ng m
RT: 12.27 min Scan# 657
Delta R.T. 0.01 min
Lab File: S21994.D
Acq: 7 Nov 99 5:49 pm

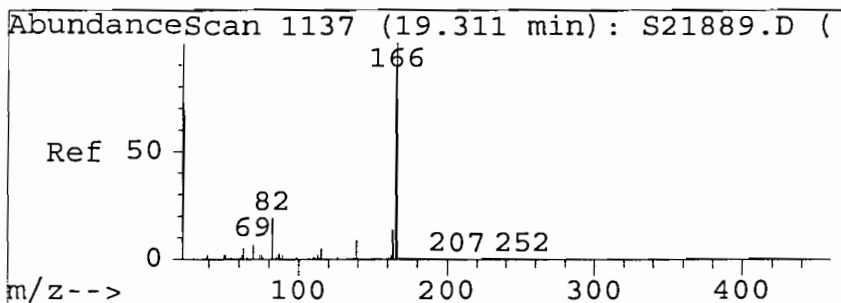
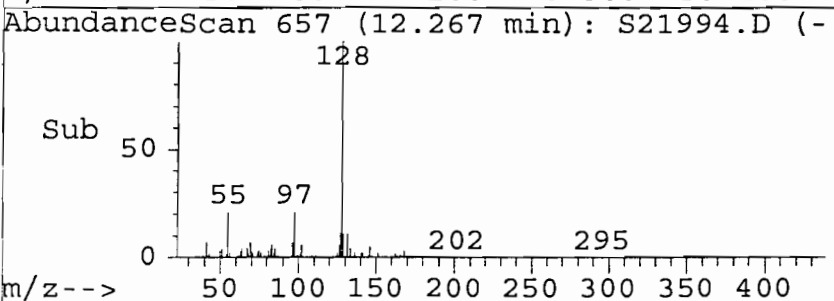
Tgt Ion:128 Resp: 7703045
Ion Ratio Lower Upper
128 100
129 13.4 5.7 17.1
127 14.1 6.5 19.5
0 0.0 0.0 0.0



AbundanceIon 128.00 (127
2000000 Ion 129.00 (128
Ion 127.00 (126

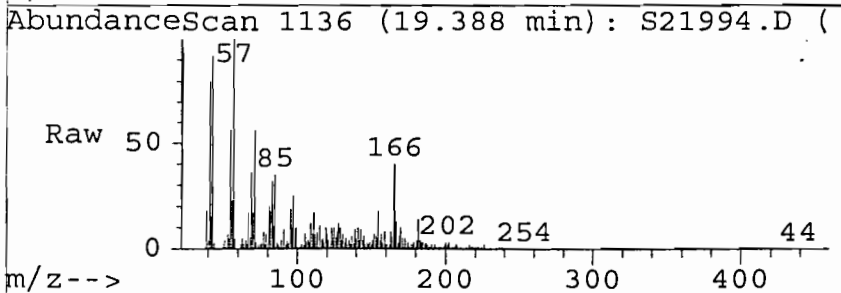


Time-->11.94 12.46

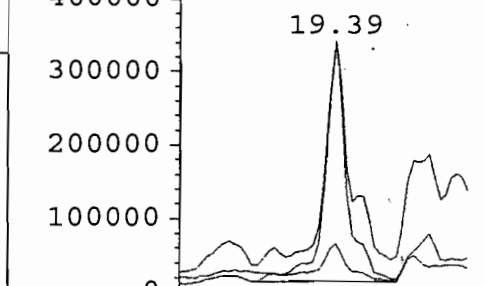


#52
Fluorene
Concen: 53.32 ng
RT: 19.39 min Scan# 1136
Delta R.T. 0.08 min
Lab File: S21994.D
Acq: 7 Nov 99 5:49 pm

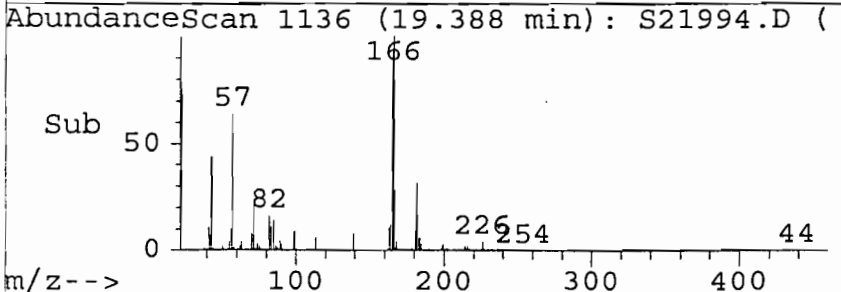
Tgt Ion:166 Resp: 1348303
Ion Ratio Lower Upper
166 100
165 100.3 45.0 135.0
163 19.3 7.1 21.3
0 0.0 0.0 0.0



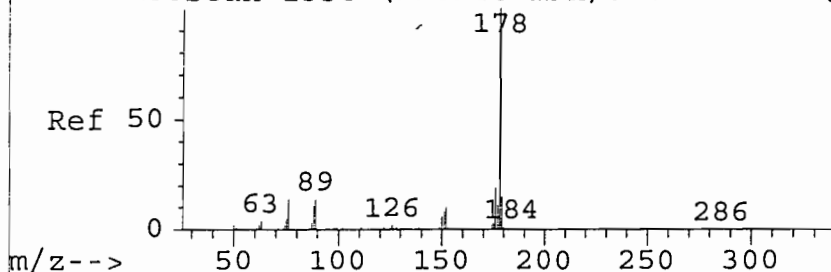
AbundanceIon 166.00 (165
Ion 165.00 (164
Ion 163.00 (162



Time-->18.97 19.62



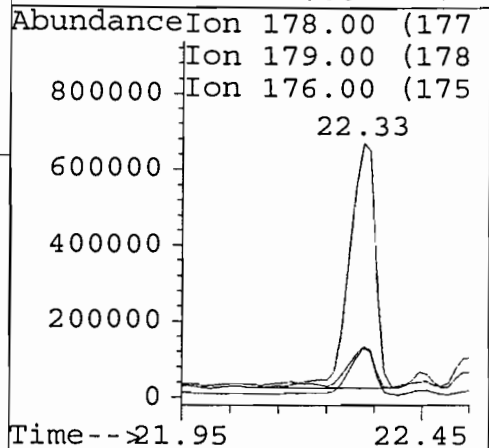
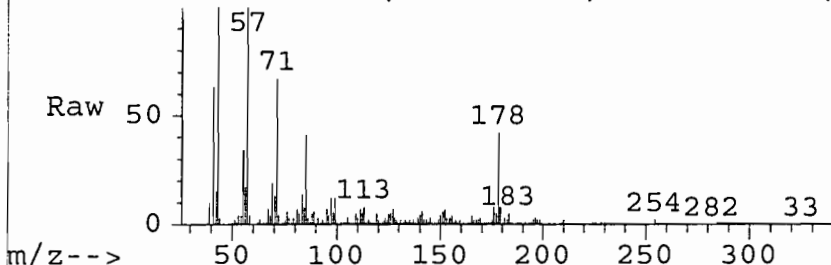
AbundanceScan 1336 (22.260 min): S21889.D (



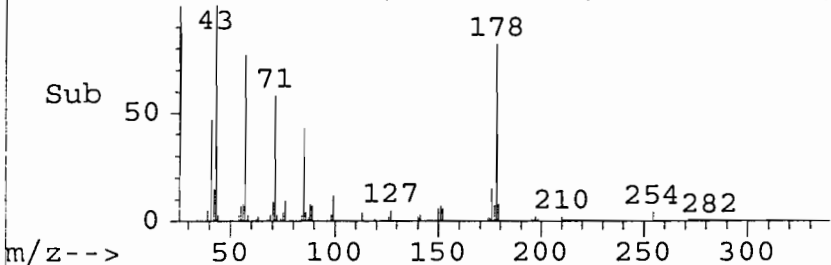
#64
Phenanthrene
Concen: 84.38 ng
RT: 22.33 min Scan# 1333
Delta R.T. 0.07 min
Lab File: S21994.D
Acq: 7 Nov 99 5:49 pm

Tgt	Ion:178	Resp:	2430819
Ion	Ratio	Lower	Upper
178	100		
179	20.1	7.4	22.3
176	19.2	9.3	27.9
0	0.0	0.0	0.0

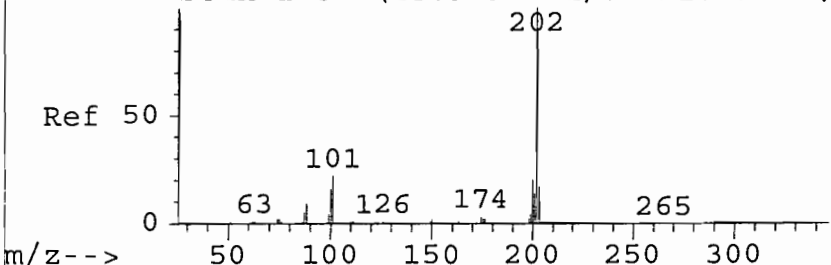
AbundanceScan 1333 (22.328 min): S21994.D (



AbundanceScan 1333 (22.328 min): S21994.D (



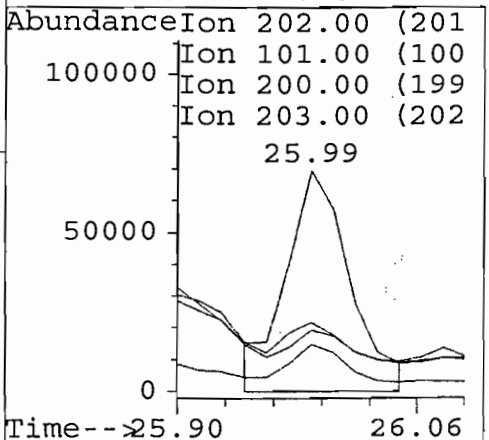
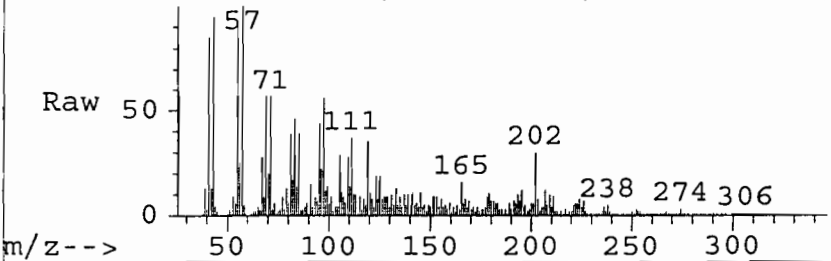
AbundanceScan 1587 (25.979 min): S21889.D (



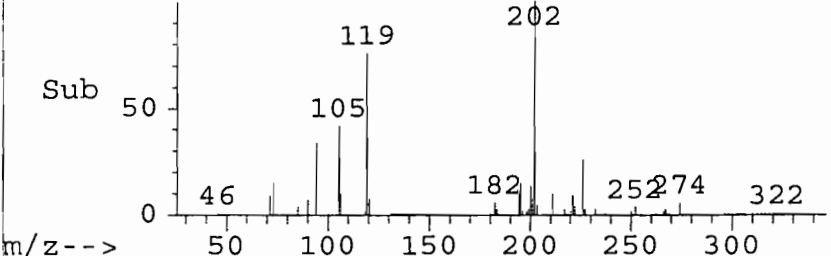
#68
Fluoranthene
Concen: 6.80 ng m
RT: 25.99 min Scan# 1578
Delta R.T. 0.01 min
Lab File: S21994.D
Acq: 7 Nov 99 5:49 pm

Tgt	Ion:202	Resp:	207815
Ion	Ratio	Lower	Upper
202	100		
101	21.7	10.9	32.7
200	19.7	9.9	29.6
203	16.9	8.5	25.4

AbundanceScan 1578 (25.992 min): S21994.D (

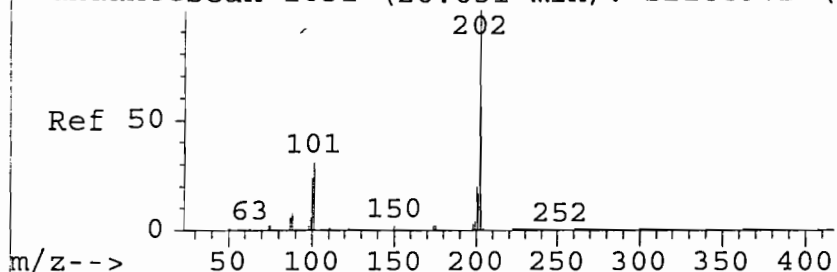


AbundanceScan 1578 (25.992 min): S21994.D (



000118

AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 17.94 ng

RT: 26.64 min Scan# 1621

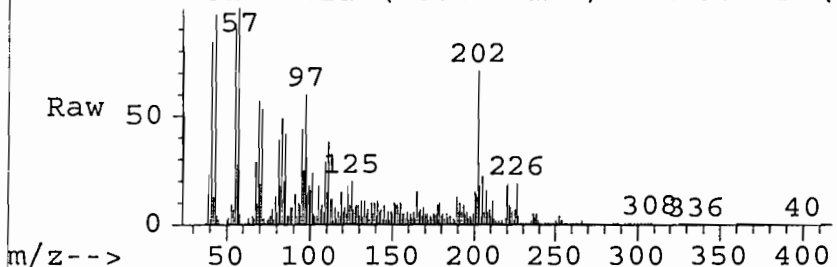
Delta R.T. 0.00 min

Lab File: S21994.D

Acq: 7 Nov 99 5:49 pm

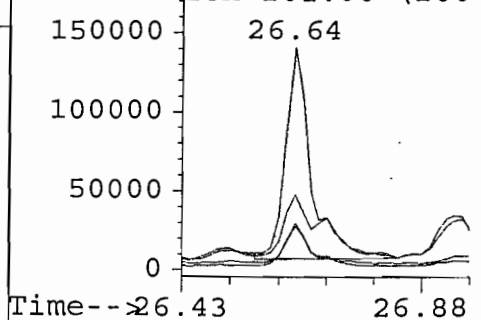
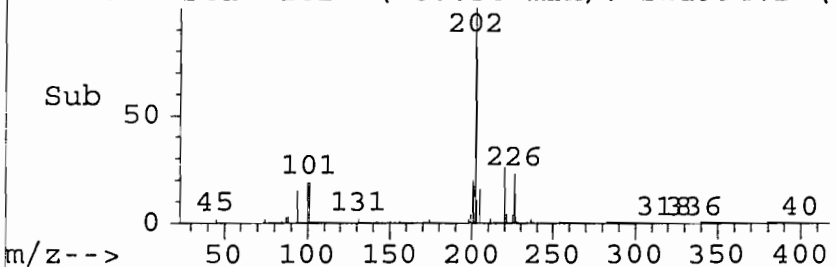
Tgt Ion:202	Resp:	450684
Ion Ratio	Lower	Upper
202 100		
101 33.9	15.3	45.9
200 21.3	10.1	30.3
201 19.9	8.5	25.4

AbundanceScan 1621 (26.636 min): S21994.D (

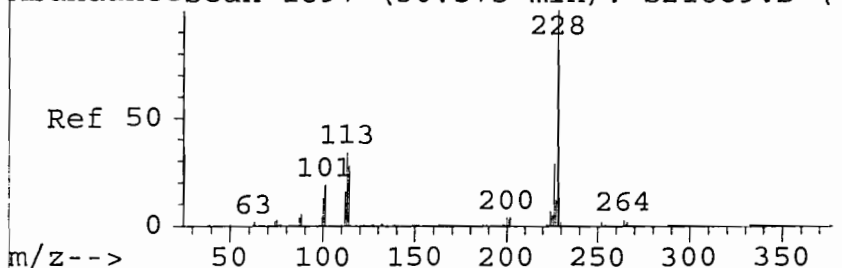


AbundanceIon	202.00	(201
Ion	101.00	(100
Ion	200.00	(199
Ion	201.00	(200

AbundanceScan 1621 (26.636 min): S21994.D (



AbundanceScan 1897 (30.575 min): S21889.D (



#76

Chrysene

Concen: 2.67 ng m

RT: 30.47 min Scan# 1877

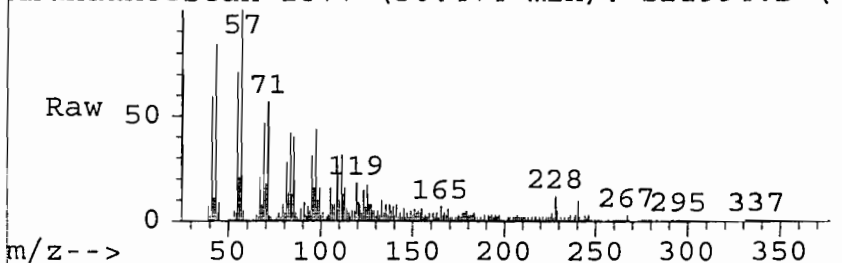
Delta R.T. -0.10 min

Lab File: S21994.D

Acq: 7 Nov 99 5:49 pm

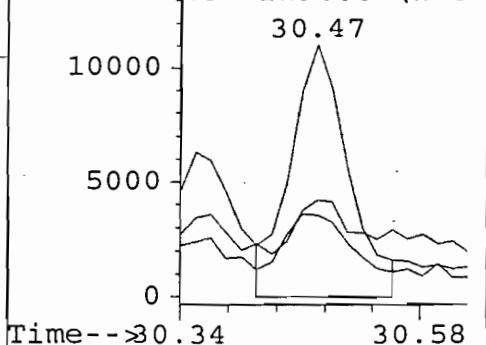
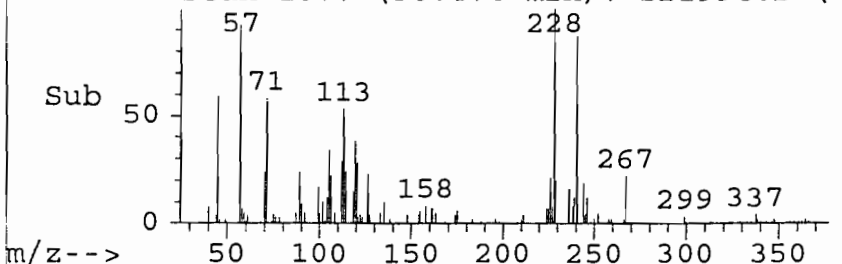
Tgt Ion:228	Resp:	43936
Ion Ratio	Lower	Upper
228 100		
226 29.0	14.4	43.2
229 20.0	10.0	29.9
0 0.0	0.0	0.0

AbundanceScan 1877 (30.474 min): S21994.D (



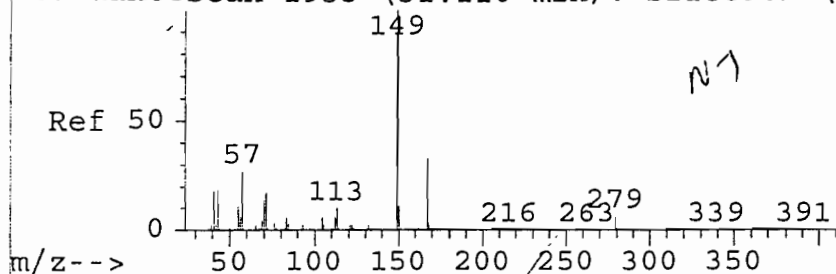
AbundanceIon	228.00	(227
Ion	226.00	(225
Ion	229.00	(228

AbundanceScan 1877 (30.474 min): S21994.D (



000119

AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 11.05 ng

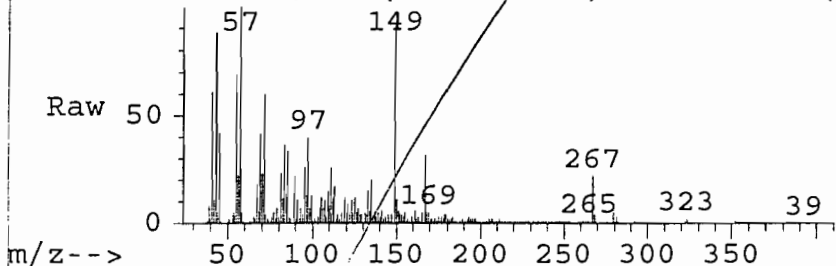
RT: 31.01 min Scan# 1913

Delta R.T. -0.10 min

Lab File: S21994.D

Acq: 7 Nov 99 5:49 pm

AbundanceScan 1913 (31.014 min): S21994.D (



Tgt Ion:149 Resp: 272048

Ion Ratio Lower Upper

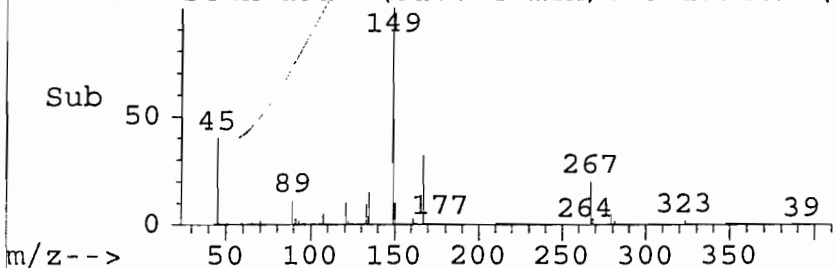
149 100

150 12.1 5.4 16.3

167 34.1 16.5 49.4

0 0.0 0.0 0.0

AbundanceScan 1913 (31.014 min): S21994.D (



AbundanceIon 149.00 (148

150000 Ion 150.00 (149

Ion 167.00 (166

31.01

100000

50000

0

Time-->30.73

31.13

000120

GP-019-SS12RE

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS8

Matrix: (soil/water) SOIL

Lab Sample ID: O88018RE

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S22011.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: 3

decanted: (Y/N): N

Date Extracted: 10/19/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/8/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH: _____

Concentration Units:
(ug/L or ug/Kg)

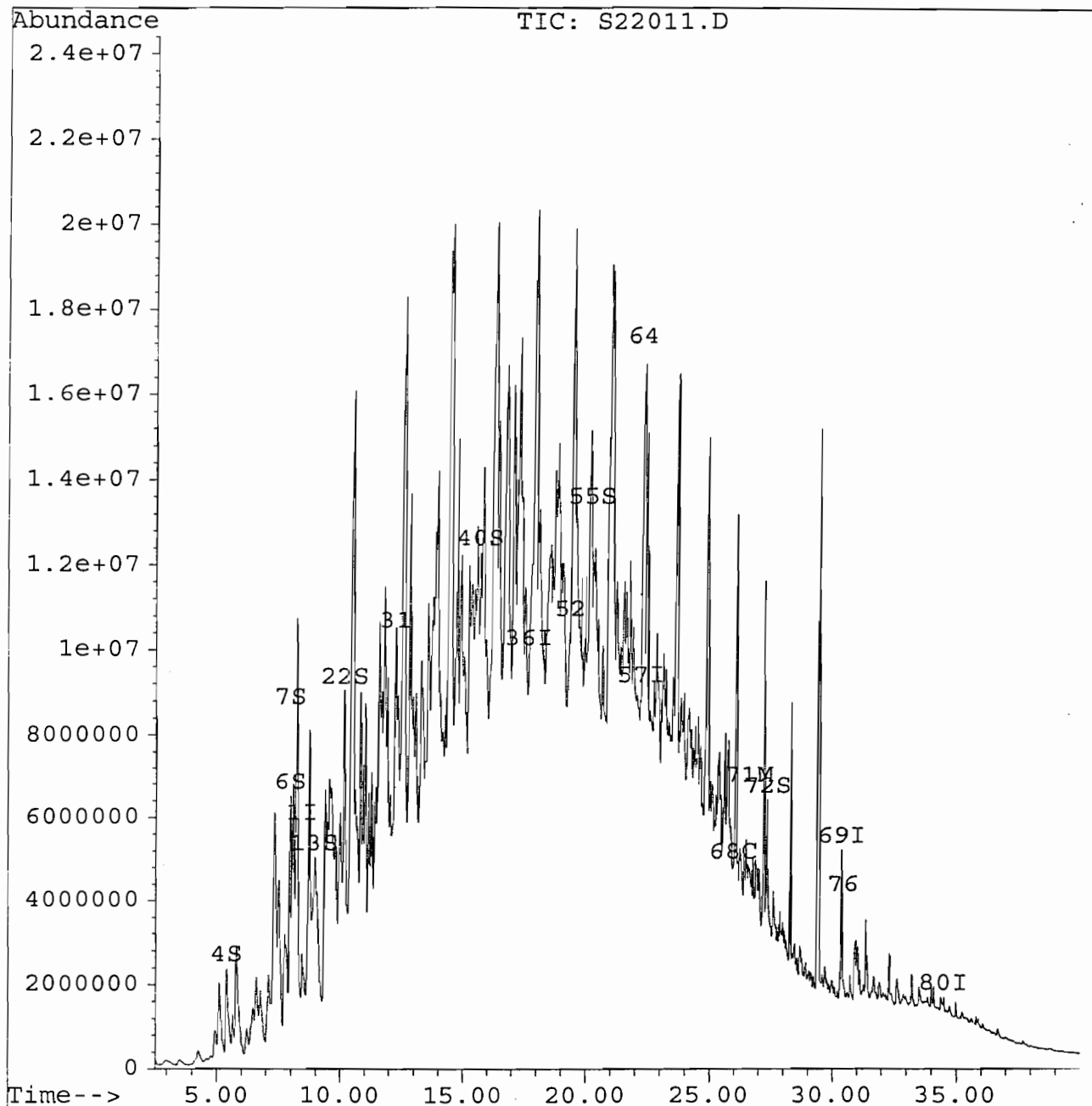
[illegible]

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22011.D
Acq Time : 8 Nov 99 8:15 pm
Sample : 13827ASP-88018-QB506 RE
Misc :
Quant Time: Nov 10 15:29 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Wed Nov 10 09:59:44 1999
Response via : Multiple Level Calibration



000122

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21108\S22011.D
 Acq Time : 8 Nov 99 8:15 pm
 Sample : 13827ASP-88018-QB506 RE
 Misc :
 Quant Time: Nov 10 15:29 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

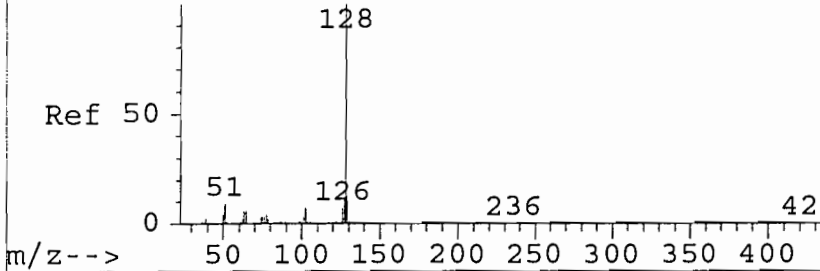
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.43	152	485869	40.00	ng	-0.0
21) Naphthalene-d8	12.15	136	1655332	40.00	ng	-0.0
36) Acenaphthene-d10	17.66	164	747981	40.00	ng	0.0
57) Phenanthrene-d10	22.21	188	1202506	40.00	ng	0.0
69) Chrysene-d12	30.37	240	815838	40.00	ng	-0.1
80) Perylene-d12	34.48	264	361655	40.00	ng	-0.1

System Monitoring Compounds						%Recover
4) 2-Fluorophenol	5.38	112	4242856	202.00	ng	
6) 2-Chlorophenol-d4	7.94	132	4653966	219.85	ng	
7) Phenol-d5	7.94	99	4499887	197.59	ng	
13) 1,2-Dichlorobenzene-d4	8.93	152	1335283	109.65	ng	m
22) Nitrobenzene-d5	10.15	82	2159174	134.79	ng	
40) 2-Fluorobiphenyl	15.67	172	2839818	104.75	ng	
55) 2,4,6-Tribromophenol	20.23	330	837852	211.91	ng	
72) Terphenyl-d14	27.33	244	2832351	128.92	ng	

Target Compounds						Qvalu
31) Naphthalene	12.21	128	7598651	161.07	ng	9
52) Fluorene	19.35	166	1248942	50.27	ng	8
64) Phenanthrene	22.29	178	2515380	84.19	ng	9
68) Fluoranthene	25.95	202	253458	8.00	ng	m 8
71) Pyrene	26.59	202	511105	14.70	ng	9
76) Chrysene	30.45	228	61600	2.70	ng	m 7

000123

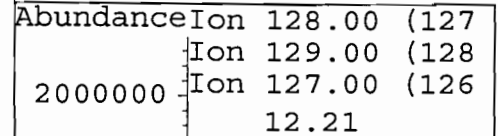
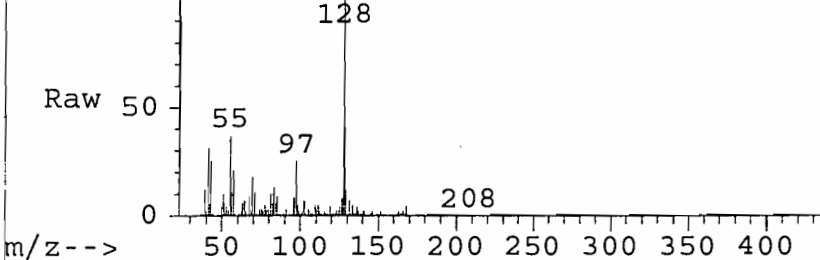
AbundanceScan 660 (12.253 min): S21889.D (-



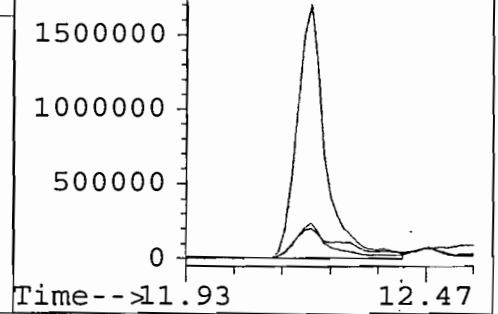
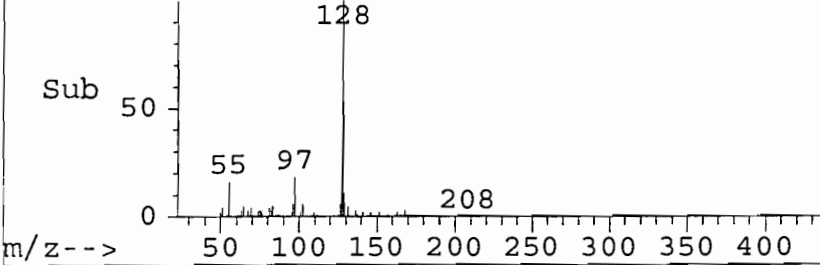
#31
Naphthalene
Concen: 161.07 ng
RT: 12.21 min Scan# 655
Delta R.T. -0.04 min
Lab File: S22011.D
Acq: 8 Nov 99 8:15 pm

Tgt	Ion:128	Resp: 7598651	
Ion	Ratio	Lower	Upper
128	100		
129	12.1	5.7	17.1
127	14.0	6.5	19.5
0	0.0	0.0	0.0

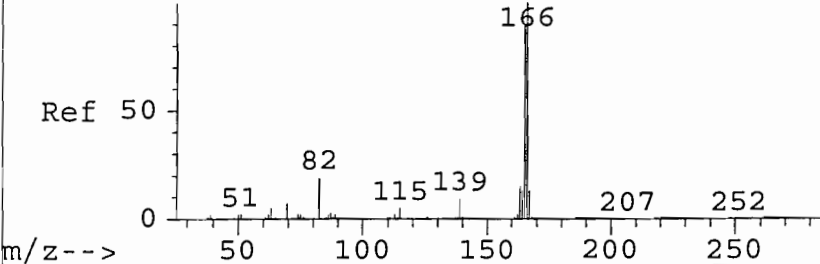
AbundanceScan 655 (12.209 min): S22011.D (*)



AbundanceScan 655 (12.209 min): S22011.D (-



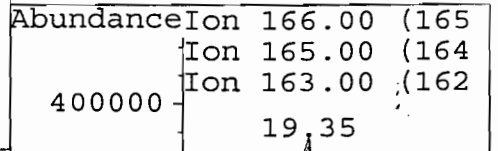
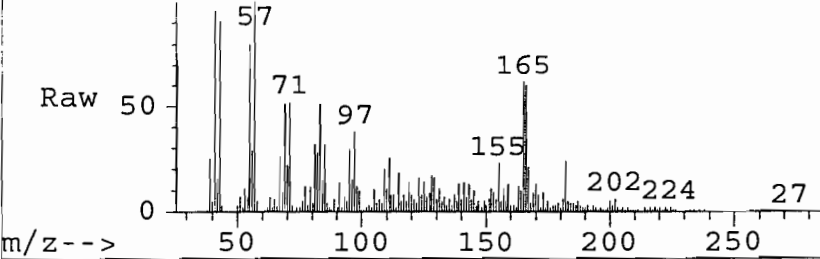
AbundanceScan 1137 (19.311 min): S21889.D (



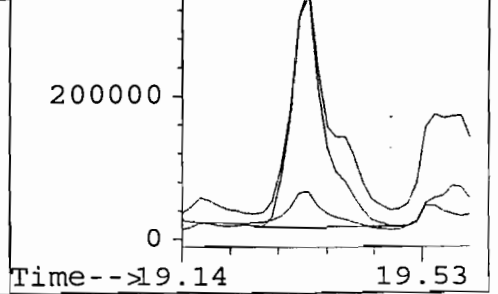
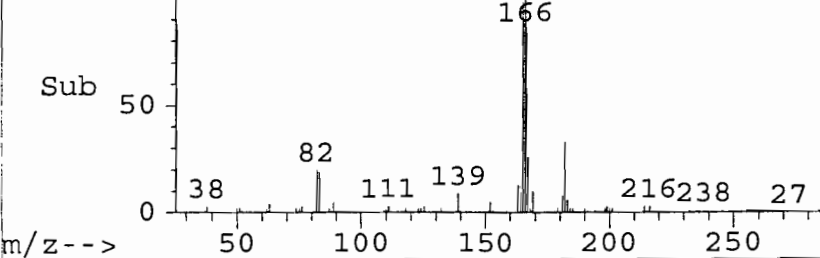
#52
Fluorene
Concen: 50.27 ng
RT: 19.35 min Scan# 1135
Delta R.T. 0.03 min
Lab File: S22011.D
Acq: 8 Nov 99 8:15 pm

Tgt	Ion:166	Resp:	1248942
Ion	Ratio	Lower	Upper
166	100		
165	103.6	45.0	135.0
163	19.7	7.1	21.3
0	0.0	0.0	0.0

AbundanceScan 1135 (19.346 min): S22011.D (

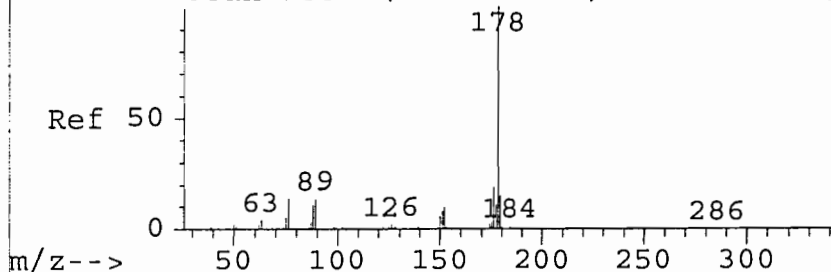


AbundanceScan 1135 (19.346 min): S22011.D (



000124

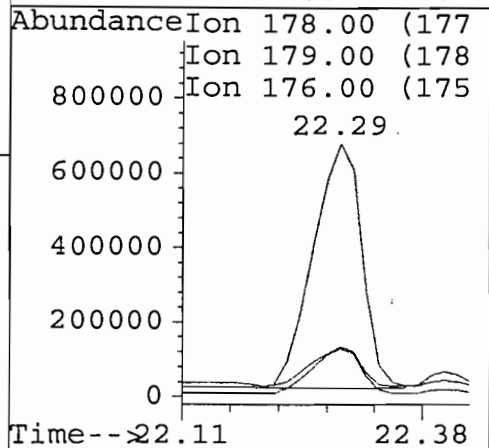
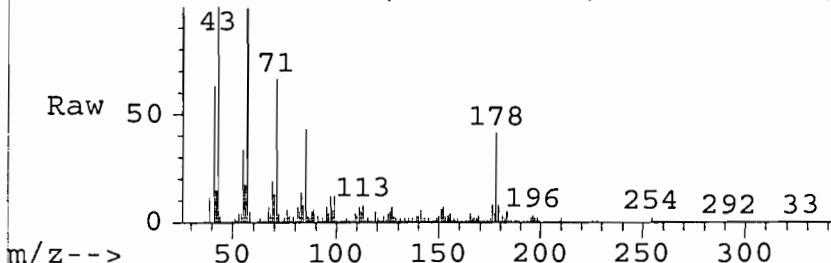
AbundanceScan 1336 (22.260 min): S21889.D (



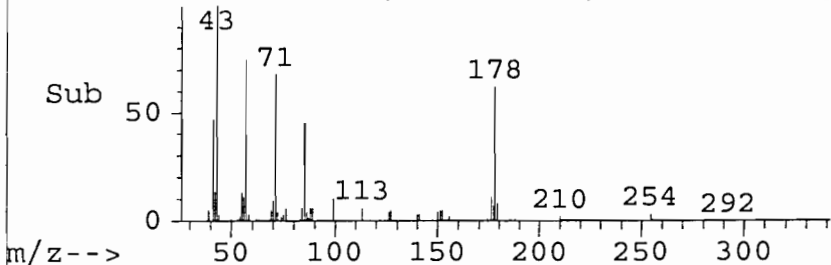
#64
Phenanthrene
Concen: 84.19 ng
RT: 22.29 min Scan# 1332
Delta R.T. 0.02 min
Lab File: S22011.D
Acq: 8 Nov 99 8:15 pm

Tgt	Ion:178	Resp:	2515380
Ion	Ratio	Lower	Upper
178	100		
179	19.4	7.4	22.3
176	18.8	9.3	27.9
0	0.0	0.0	0.0

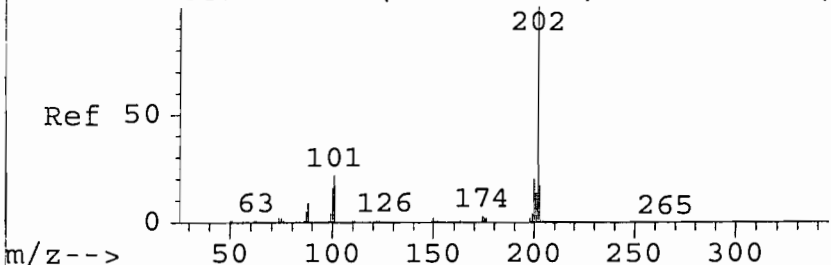
AbundanceScan 1332 (22.285 min): S22011.D (



AbundanceScan 1332 (22.285 min): S22011.D (



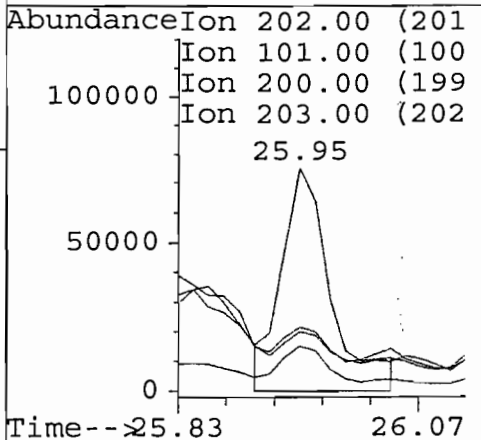
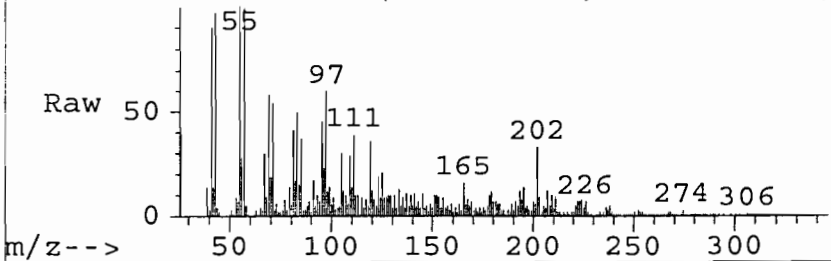
AbundanceScan 1587 (25.979 min): S21889.D (



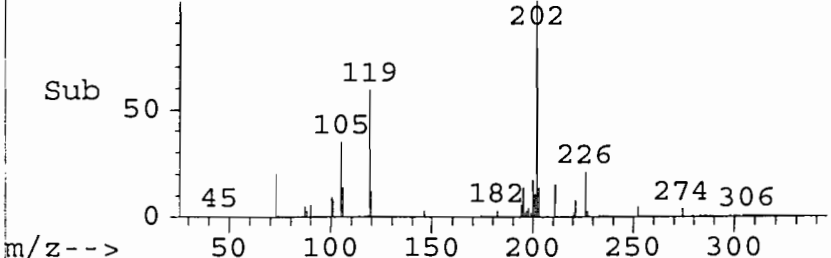
#68
Fluoranthene
Concen: 8.00 ng m
RT: 25.95 min Scan# 1577
Delta R.T. -0.03 min
Lab File: S22011.D
Acq: 8 Nov 99 8:15 pm

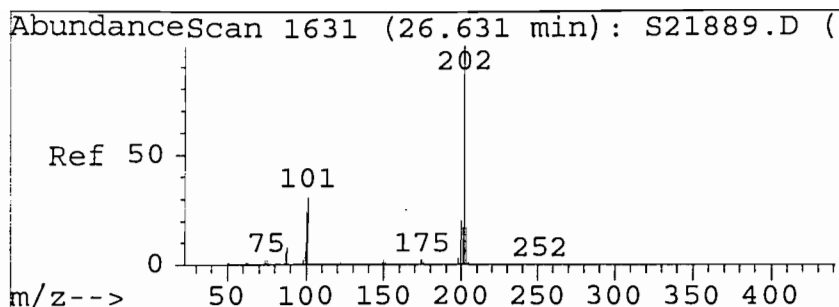
Tgt	Ion:202	Resp:	253458
Ion	Ratio	Lower	Upper
202	100		
101	21.7	10.9	32.7
200	19.7	9.9	29.6
203	16.9	8.5	25.4

AbundanceScan 1577 (25.949 min): S22011.D (



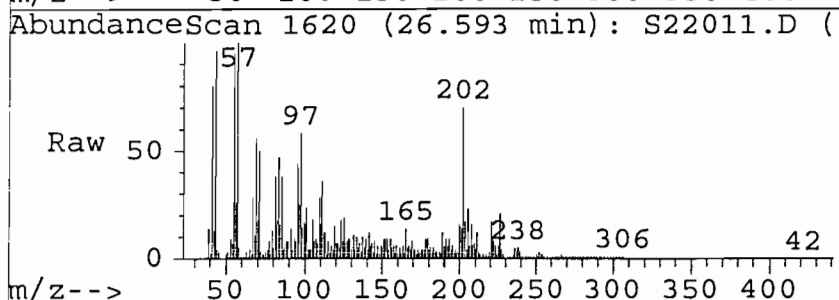
AbundanceScan 1577 (25.949 min): S22011.D (



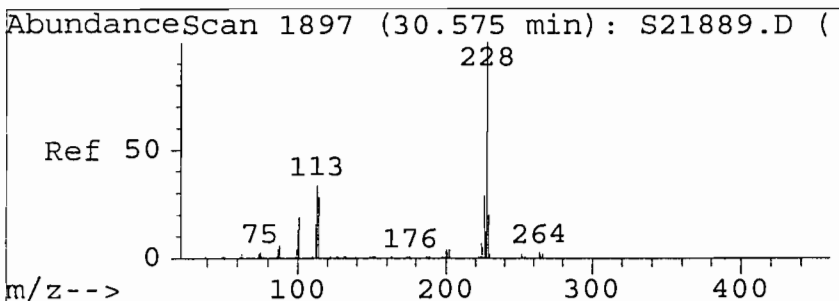
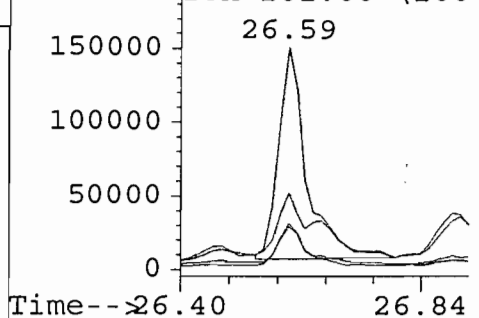
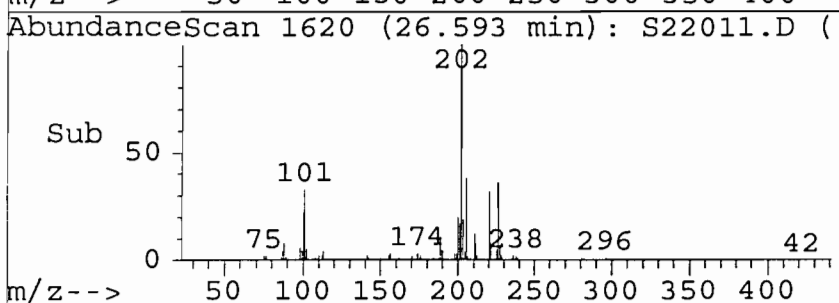


#71
Pyrene
Concen: 14.70 ng
RT: 26.59 min Scan# 1620
Delta R.T. -0.04 min
Lab File: S22011.D
Acq: 8 Nov 99 8:15 pm

Tgt Ion:	202	Resp:	511105
Ion Ratio	Lower	Upper	
202	100		
101	34.8	15.3	45.9
200	21.0	10.1	30.3
201	19.4	8.5	25.4

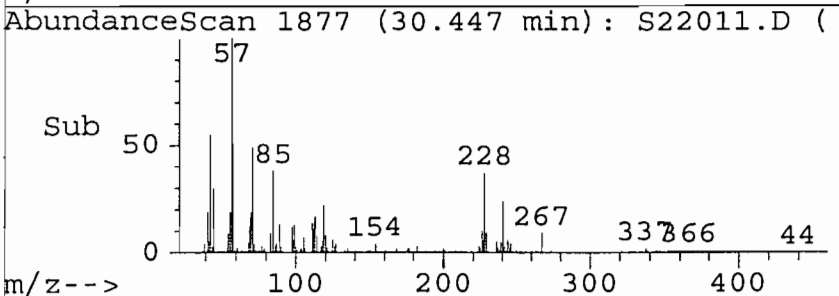
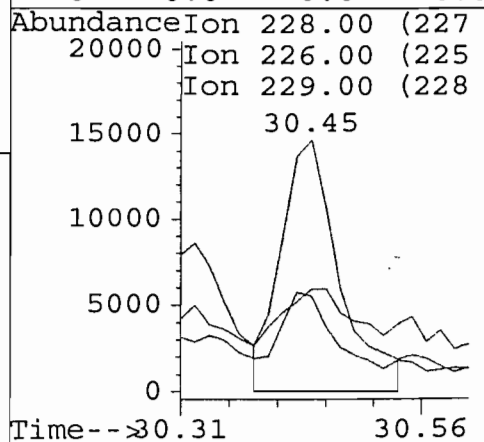
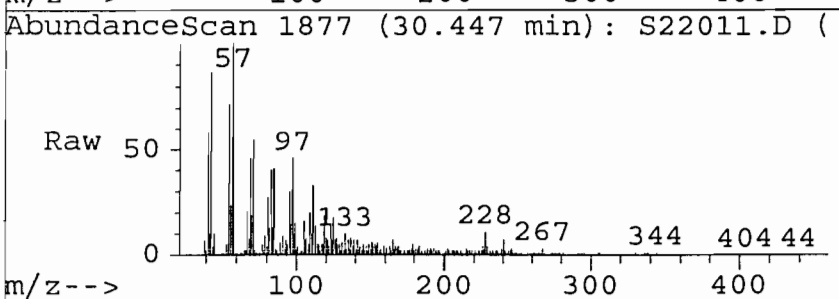


Abundance	Ion	202.00	(201
	Ion	101.00	(100
	Ion	200.00	(199
	Ion	201.00	(200



#76
Chrysene
Concen: 2.70 ng m
RT: 30.45 min Scan# 1877
Delta R.T. -0.13 min
Lab File: S22011.D
Acq: 8 Nov 99 8:15 pm

Tgt Ion:	228	Resp:	61600
Ion Ratio	Lower	Upper	
228	100		
226	29.0	14.4	43.2
229	20.0	10.0	29.9
0	0.0	0.0	0.0



000126

GP-020-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-SS8

Lab Sample ID: O88019

Lab File ID: S21962.D

Date Received: 10/18/99

Date Extracted: 10/19/99

Date Analyzed: 11/5/99

Dilution Factor: 1.0

pH: _____

(ug/L or ug/Kg)

Q

FORM I SV

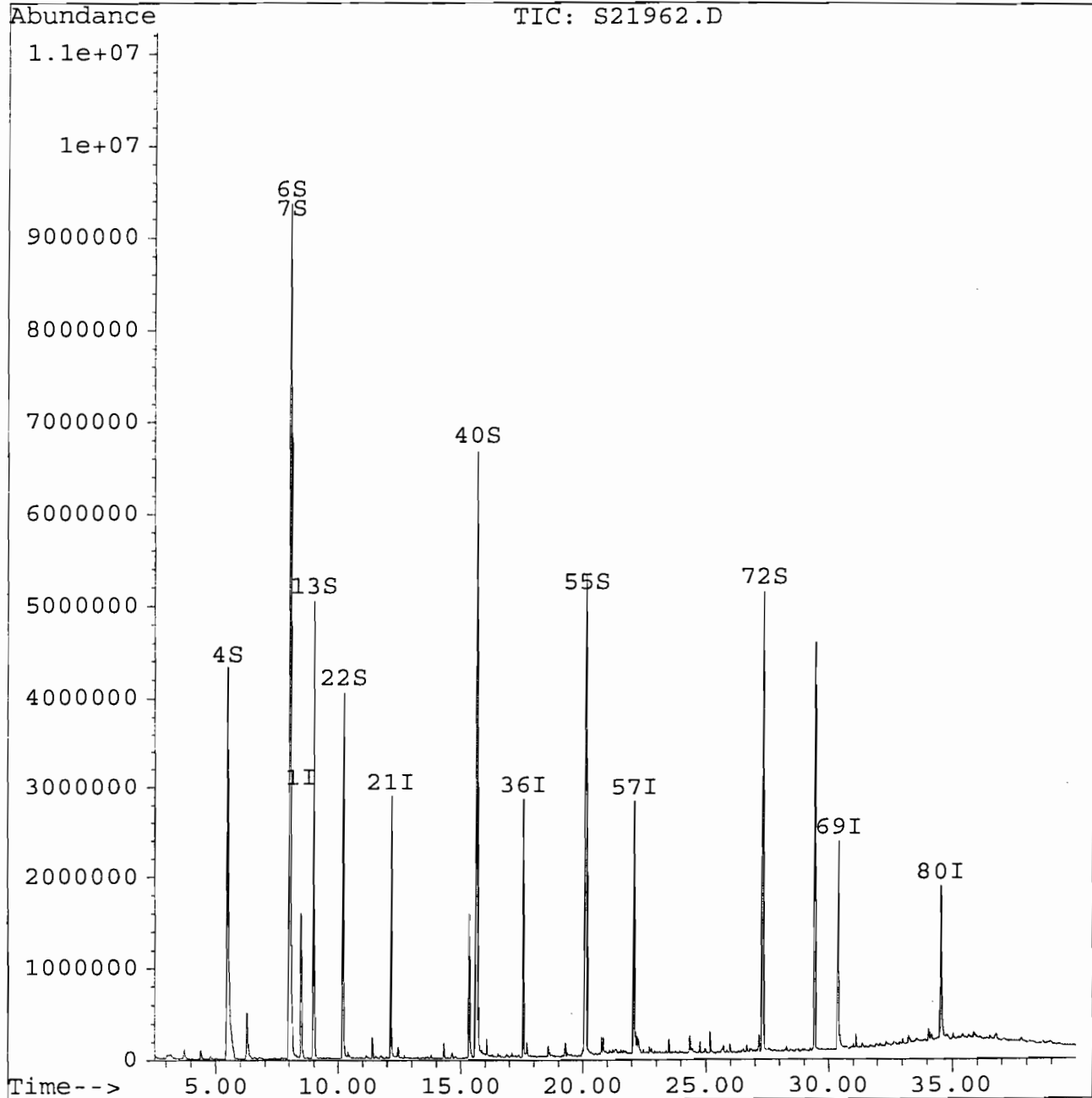
000127

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21962.D
Acq Time : 5 Nov 99 2:01 pm
Sample : 13827ASP-88019-QB506
Misc :
Quant Time: Nov 9 13:26 1999

Operator: BOB
Inst : bn2
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
Title : CLP BNA Calibration
Last Update : Mon Nov 01 08:09:54 1999
Response via : Multiple Level Calibration



000128

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21962.D
 Acq Time : 5 Nov 99 2:01 pm
 Sample : 13827ASP-88019-QB506
 Misc :
 Quant Time: Nov 9 13:26 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Mon Nov 01 08:09:54 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.48	152	907812	40.00	ng	-0.0
21) Naphthalene-d8	12.12	136	3489571	40.00	ng	-0.0
36) Acenaphthene-d10	17.56	164	1553493	40.00	ng	-0.0
57) Phenanthrene-d10	22.09	188	2843881	40.00	ng	-0.0
69) Chrysene-d12	30.40	240	2006956	40.00	ng	-0.1
80) Perylene-d12	34.54	264	1788194	40.00	ng	-0.0

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.48	112	7749380	197.46	ng	
6) 2-Chlorophenol-d4	8.02	132	8135249	205.68	ng	
7) Phenol-d5	8.03	99	7800133	183.31	ng	
13) 1,2-Dichlorobenzene-d4	8.98	152	2421342	106.42	ng	
22) Nitrobenzene-d5	10.20	82	3693552	109.38	ng	
40) 2-Fluorobiphenyl	15.64	172	6664730	118.37	ng	
55) 2,4,6-Tribromophenol	20.13	330	2283566	278.09	ng	
72) Terphenyl-d14	27.33	244	6019129	111.37	ng	

Target Compounds

Qvalu

000129

SAMPLE NO.

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13827ASP

Site:

Location:

Group: GP-014-SS8

Matrix: (soil/water) SOIL

Lab Sample ID: O88020

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: S21967.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: 2 decanted: (Y/N): N

Date Extracted: 10/19/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/5/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

FORM I SV

000130

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21967.D

Acq Time : 5 Nov 99 6:14 pm

Sample : 13827ASP-88020-QB506

Misc :

Quant Time: Nov 10 15:33 1999

Operator: BOB

Inst : bn2

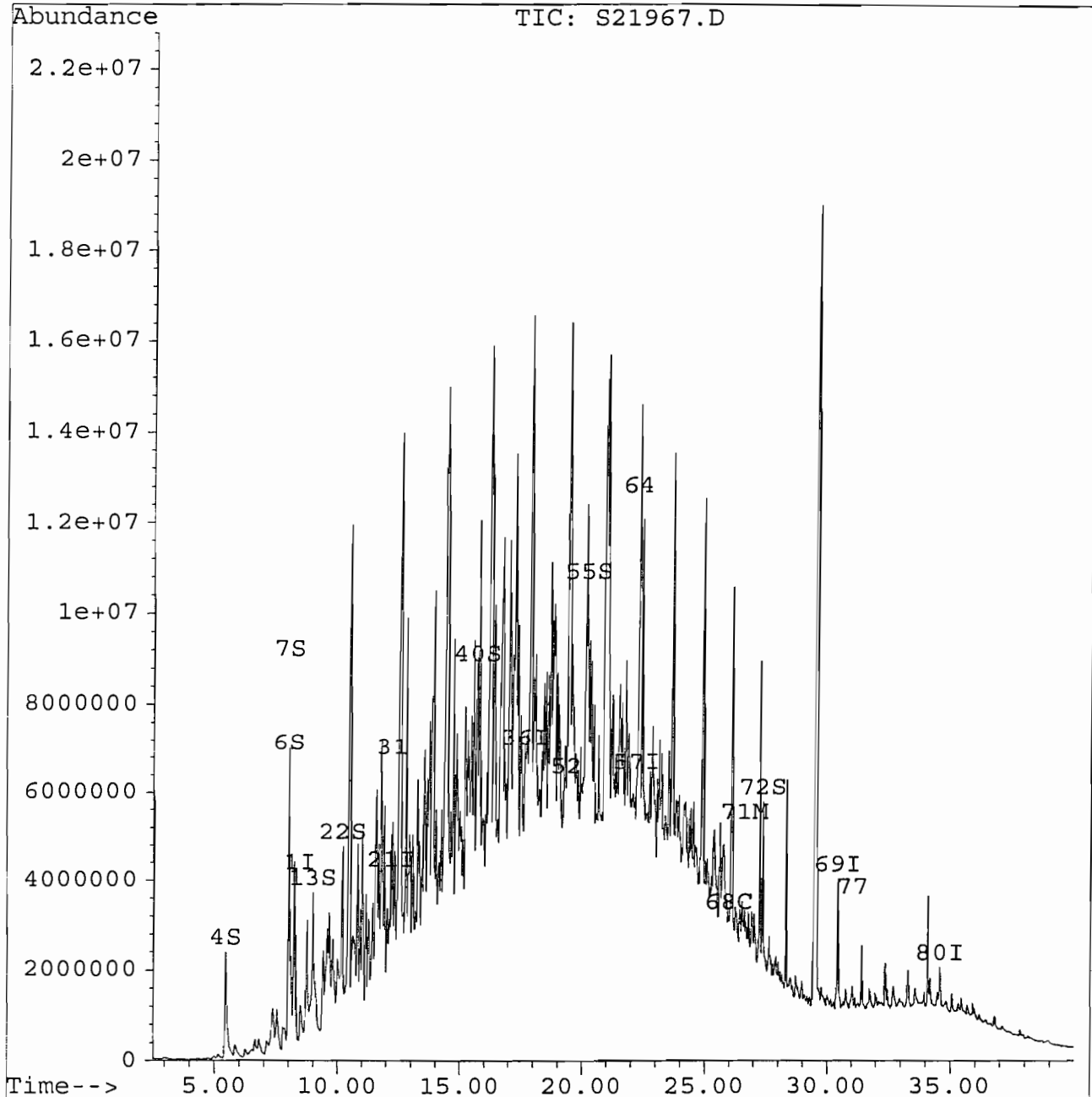
Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M

Title : CLP BNA Calibration

Last Update : Wed Nov 10 09:59:44 1999

Response via : Multiple Level Calibration



000131

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B21105\S21967.D
 Acq Time : 5 Nov 99 6:14 pm
 Sample : 13827ASP-88020-QB506
 Misc :
 Quant Time: Nov 10 15:33 1999

Operator: BOB
 Inst : bn2
 Multiplr: 1.00

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Wed Nov 10 09:59:44 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Mi
1) 1,4-Dichlorobenzene-d4	8.46	152	565789	40.00	ng	-0.0
21) Naphthalene-d8	12.16	136	1999662	40.00	ng	-0.0
36) Acenaphthene-d10	17.66	164	846972	40.00	ng	0.0
57) Phenanthrene-d10	22.22	188	1489808	40.00	ng	0.0
69) Chrysene-d12	30.44	240	1131114	40.00	ng	-0.0
80) Perylene-d12	34.57	264	895493	40.00	ng	-0.0

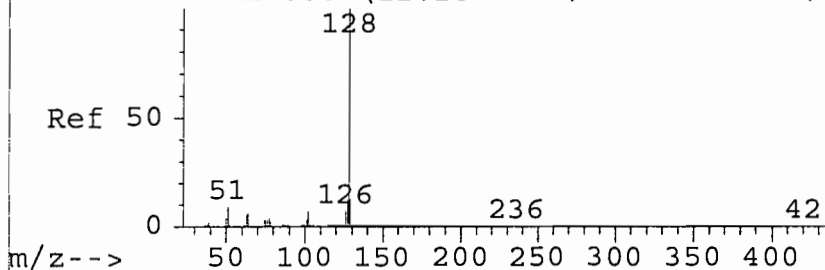
System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recover
4) 2-Fluorophenol	5.43	112	5225092	213.62	ng	
6) 2-Chlorophenol-d4	7.99	132	5836325	236.76	ng	
7) Phenol-d5	8.00	99	5416609	204.25	ng	
13) 1,2-Dichlorobenzene-d4	8.98	152	1677157	118.27	ng	
22) Nitrobenzene-d5	10.19	82	2561148	132.35	ng	
40) 2-Fluorobiphenyl	15.69	172	3863651	125.86	ng	
55) 2,4,6-Tribromophenol	20.22	330	1180378	263.66	ng	
72) Terphenyl-d14	27.38	244	3718011	122.06	ng	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalu
31) Naphthalene	12.22	128	1208867	21.21	ng	9
52) Fluorene	19.34	166	596069	21.19	ng	8
64) Phenanthrene	22.28	178	1338465	36.16	ng	9
68) Fluoranthene	25.97	202	155585	3.96	ng	9
71) Pyrene	26.61	202	342781	7.11	ng	9
77) ~~bis~~ (2-Ethylhexyl)phthalate	31.04	149	222065	4.70	ng	9

NS

000132

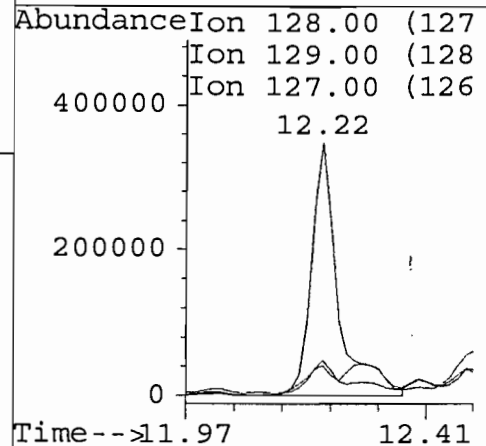
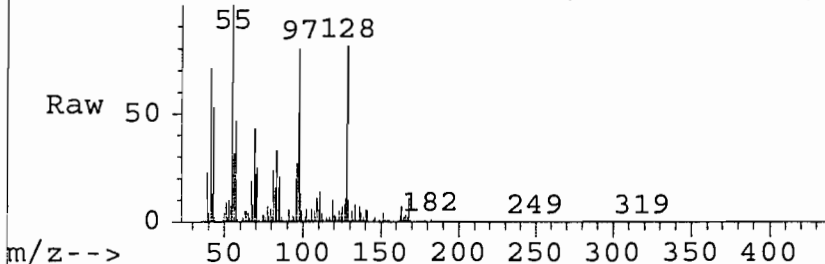
AbundanceScan 660 (12.253 min): S21889.D (-



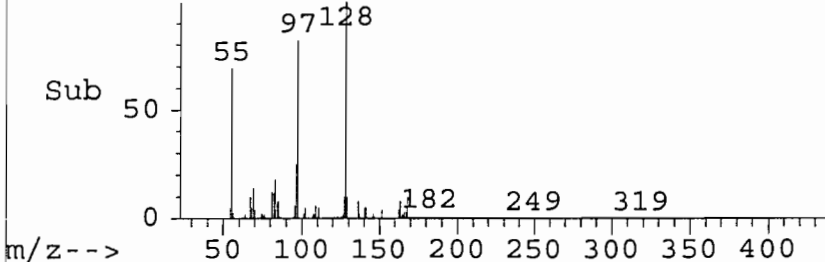
#31
Naphthalene
Concen: 21.21 ng
RT: 12.22 min Scan# 657
Delta R.T. -0.03 min
Lab File: S21967.D
Acq: 5 Nov 99 6:14 pm

Tgt Ion:	128	Resp:	1208867
Ion	Ratio	Lower	Upper
128	100		
129	11.9	5.7	17.1
127	14.1	6.5	19.5
0	0.0	0.0	0.0

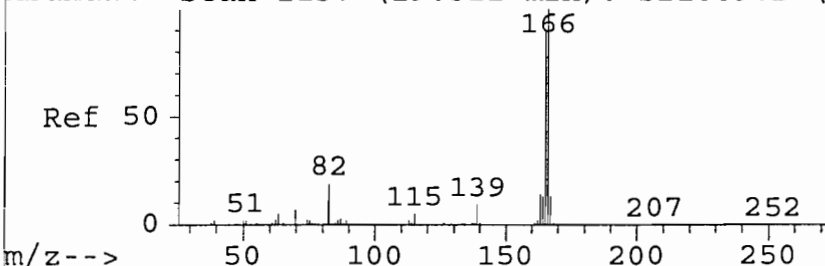
AbundanceScan 657 (12.221 min): S21967.D (*)



AbundanceScan 657 (12.221 min): S21967.D (-



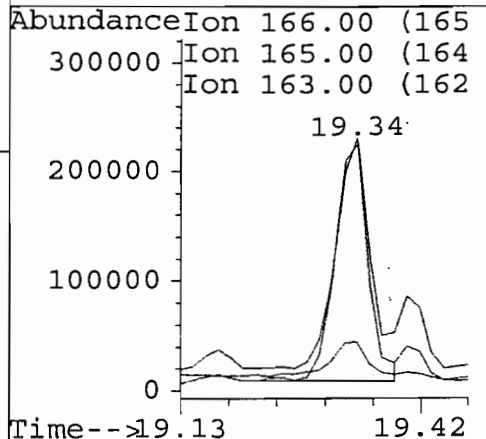
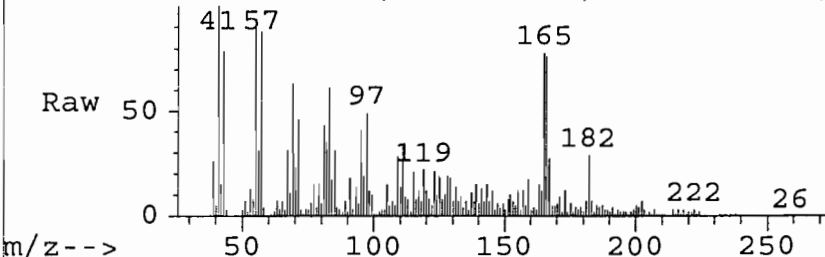
AbundanceScan 1137 (19.311 min): S21889.D (



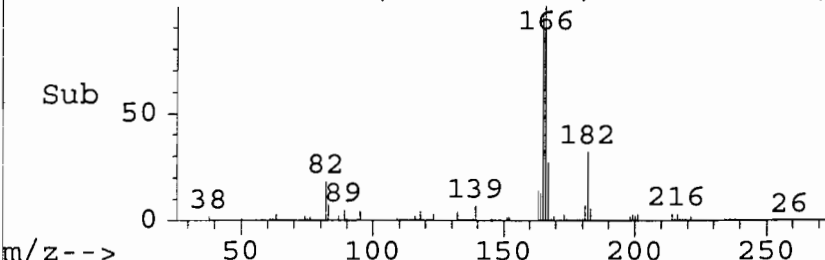
#52
Fluorene
Concen: 21.19 ng
RT: 19.34 min Scan# 1136
Delta R.T. 0.03 min
Lab File: S21967.D
Acq: 5 Nov 99 6:14 pm

Tgt Ion:	166	Resp:	596069
Ion	Ratio	Lower	Upper
166	100		
165	102.2	45.0	135.0
163	19.6	7.1	21.3
0	0.0	0.0	0.0

AbundanceScan 1136 (19.339 min): S21967.D (

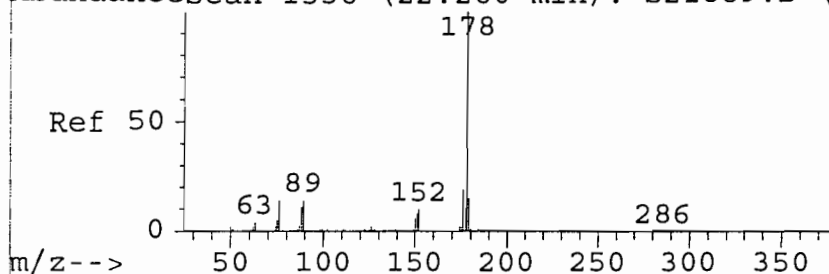


AbundanceScan 1136 (19.339 min): S21967.D (



000133

AbundanceScan 1336 (22.260 min): S21889.D (



#64

Phenanthrene

Concen: 36.16 ng

RT: 22.28 min Scan# 1333

Delta R.T. 0.02 min

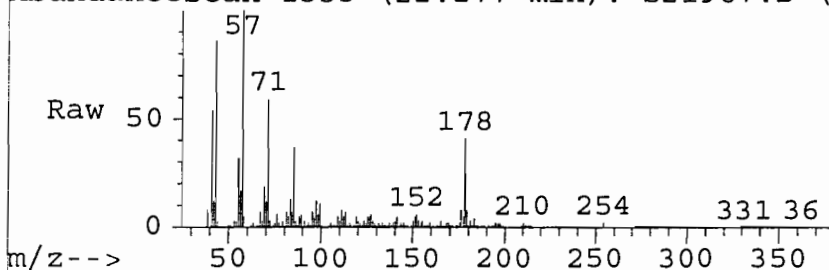
Lab File: S21967.D

Acq: 5 Nov 99 6:14 pm

Tgt Ion:178 Resp: 1338465

Ion	Ratio	Lower	Upper
178	100		
179	18.6	7.4	22.3
176	18.9	9.3	27.9
0	0.0	0.0	0.0

AbundanceScan 1333 (22.277 min): S21967.D (



AbundanceIon 178.00 (177

Ion 179.00 (178

Ion 176.00 (175

22.28

600000

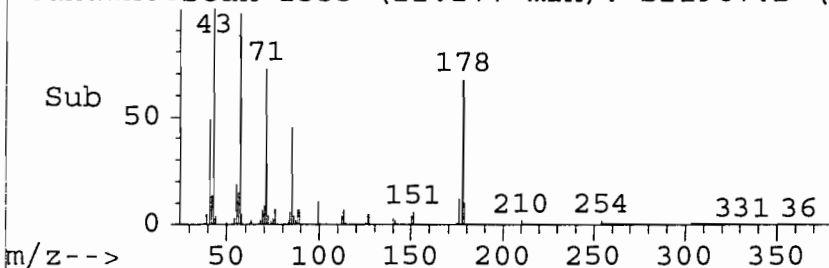
400000

200000

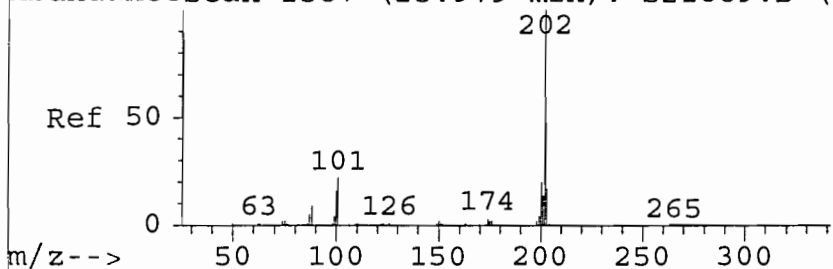
0

Time-->22.13 22.38

AbundanceScan 1333 (22.277 min): S21967.D (



AbundanceScan 1587 (25.979 min): S21889.D (



#68

Fluoranthene

Concen: 3.96 ng

RT: 25.97 min Scan# 1580

Delta R.T. -0.01 min

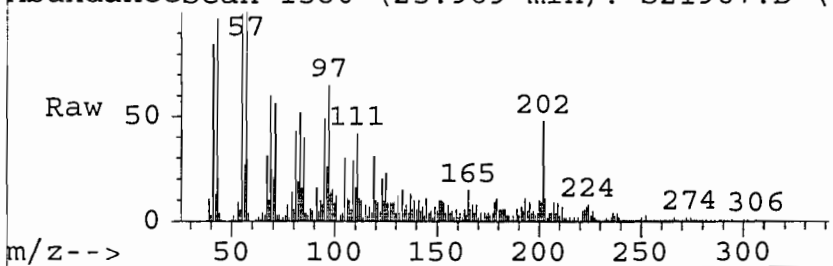
Lab File: S21967.D

Acq: 5 Nov 99 6:14 pm

Tgt Ion:202 Resp: 155585

Ion	Ratio	Lower	Upper
202	100		
101	25.7	10.9	32.7
200	20.7	9.9	29.6
203	23.4	8.5	25.4

AbundanceScan 1580 (25.969 min): S21967.D (



AbundanceIon 202.00 (201

Ion 101.00 (100

Ion 200.00 (199

Ion 203.00 (202

25.97

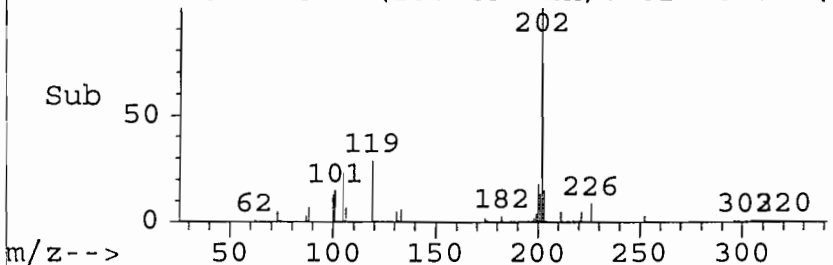
100000

50000

0

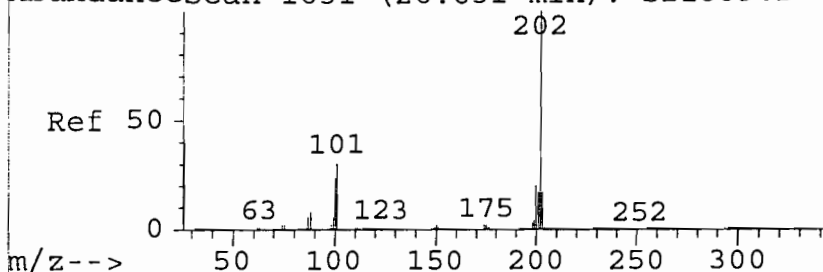
Time-->25.86 26.04

AbundanceScan 1580 (25.969 min): S21967.D (



000134

AbundanceScan 1631 (26.631 min): S21889.D (



#71

Pyrene

Concen: 7.11 ng

RT: 26.61 min Scan# 1623

Delta R.T. -0.02 min

Lab File: S21967.D

Acq: 5 Nov 99 6:14 pm

Tgt Ion:202 Resp: 342781

Ion Ratio Lower Upper

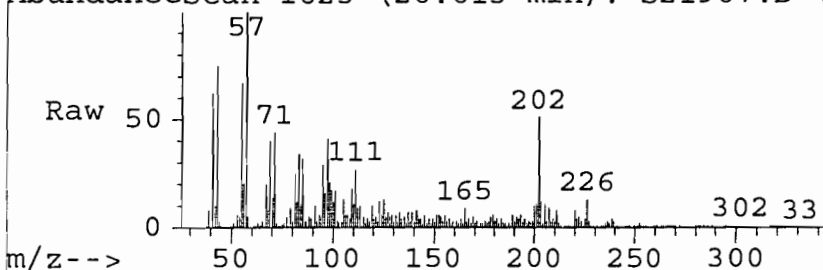
202 100

101 34.1 15.3 45.9

200 19.9 10.1 30.3

201 19.6 8.5 25.4

AbundanceScan 1623 (26.613 min): S21967.D (

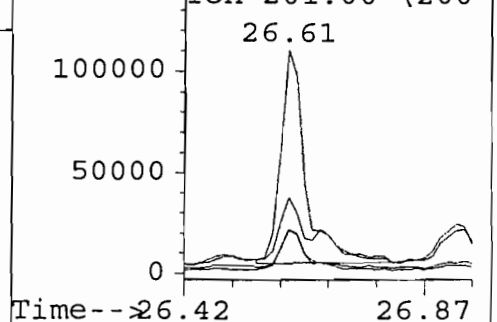


AbundanceIon 202.00 (201

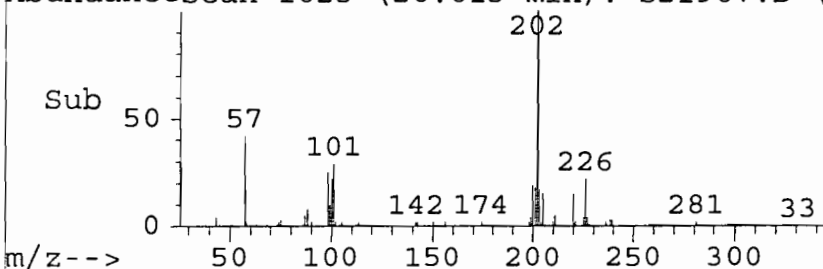
Ion 101.00 (100

Ion 200.00 (199

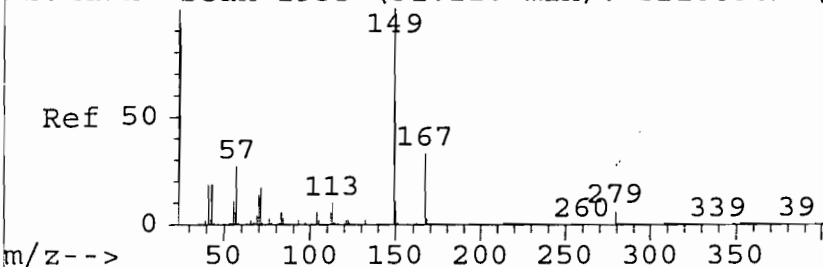
Ion 201.00 (200



AbundanceScan 1623 (26.613 min): S21967.D (



AbundanceScan 1933 (31.110 min): S21889.D (



#77

bis(2-Ethylhexyl)phthalate

Concen: 4.70 ng

RT: 31.04 min Scan# 1918

Delta R.T. -0.08 min

Lab File: S21967.D

Acq: 5 Nov 99 6:14 pm

Tgt Ion:149 Resp: 222065

Ion Ratio Lower Upper

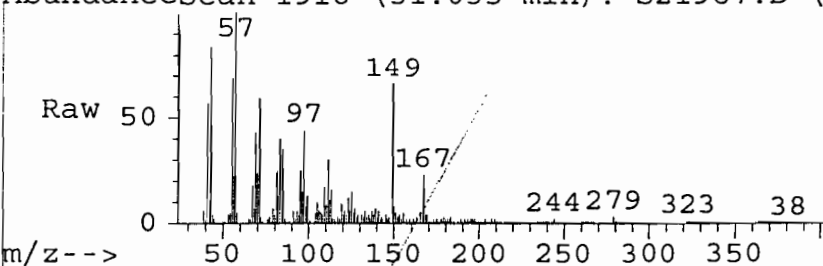
149 100

150 12.9 5.4 16.3

167 34.4 16.5 49.4

0 0.0 0.0 0.0

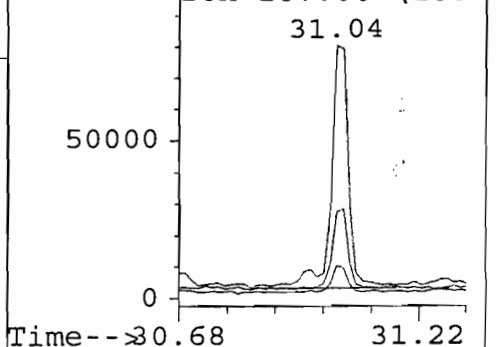
AbundanceScan 1918 (31.035 min): S21967.D (



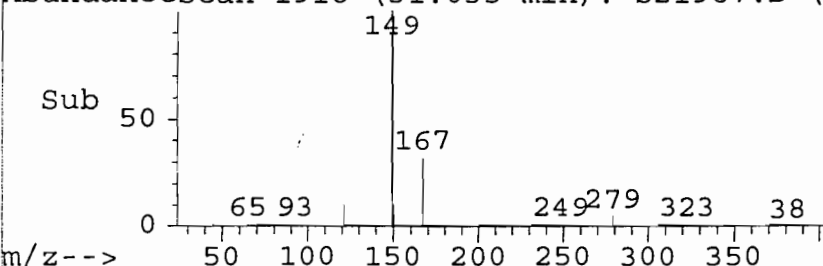
AbundanceIon 149.00 (148

Ion 150.00 (149

Ion 167.00 (166



AbundanceScan 1918 (31.035 min): S21967.D (



000135

CHEMTECH CONSULTING GROUP

SEMIVOLATILE CALIBRATION DATA

000136

Contract: IMPACT ENVIRONMENTAL

Group: GP-014-ε

Calibration Times:	2008	2329

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Response Factor Report bn2

Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
 Last Update : Mon Nov 01 08:09:54 1999
 Response via : Initial Calibration

Calibration Files

80 =S21889.D 20 =S21887.D 50 =S21888.D
 120 =S21890.D 160 =S21891.D

Compound		80	20	50	120	160	Avg	%RSD
-----		-----						
1) I	1,4-Dichlorobenzene-d4	-----ISTD-----						
2)	Pyridine	1.291	1.348	1.255	1.225	1.248	1.273	3.77
3)	N-nitroso-dimethylamine	0.555	0.653	0.575	0.554	0.580	0.584	6.95
4) S	2-Fluorophenol	1.709	1.849	1.701	1.691	1.697	1.729	3.89
5)	Aniline	1.537	1.964	1.514	1.760	1.894	1.734	11.77
6) S	2-Chlorophenol-d4	1.697	1.951	1.772	1.655	1.639	1.743	7.29
7) S	Phenol-d5	1.880	2.160	1.974	1.738	1.622	1.875	11.12
8) CM	Phenol	1.807	2.140	1.952	1.644	1.535	1.816	13.27
9)	bis(2-Chloroethyl)ether	1.669	2.030	1.812	1.550	1.470	1.706	13.02
10) M	2-Chlorophenol	1.686	1.913	1.776	1.605	1.568	1.710	8.12
11)	1,3-Dichlorobenzene	1.689	1.868	1.742	1.655	1.683	1.727	4.90
12) CM	1,4-Dichlorobenzene	1.717	1.904	1.775	1.712	1.685	1.759	5.00
13) S	1,2-Dichlorobenzene-d4	0.976	1.130	1.014	0.956	0.936	1.003	7.69
14)	1,2-Dichlorobenzene	1.630	1.852	1.706	1.581	1.567	1.667	6.99
15)	Benzyl alcohol	1.058	1.083	1.058	1.044	1.050	1.059	1.42
16)	2-Methylphenol	1.458	1.579	1.491	1.422	1.397	1.469	4.82
17)	Bis(2-chloroisopropyl)eth	2.524	2.683	2.582	2.486	2.494	2.554	3.19
18)	Hexachloroethane	0.913	1.056	0.945	0.925	0.917	0.951	6.29
19)	3+4-Methyphenols	1.538	1.727	1.628	1.515	1.449	1.571	6.87
20) PM	N-Nitroso-di-n-propylamin	0.931	1.011	0.948	0.898	0.824	0.922	7.43
-----		-----						
21) I	Naphthalene-d8	-----ISTD-----						
22) S	Nitrobenzene-d5	0.382	0.431	0.402	0.366	0.354	0.387	7.90
23)	Nitrobenzene	0.316	0.374	0.342	0.313	0.304	0.330	8.59
24)	Isophorone	0.750	0.842	0.795	0.726	0.726	0.768	6.49
25) C	2-Nitrophenol	0.223	0.246	0.231	0.236	0.244	0.236	3.90
26)	2,4-Dimethylphenol	0.387	0.427	0.413	0.368	0.368	0.393	6.71
27)	bis(2-Chloroethoxy)methan	0.523	0.581	0.555	0.496	0.484	0.528	7.65
28) C	2,4-Dichlorophenol	0.309	0.352	0.332	0.297	0.288	0.316	8.34
29)	Benzoic Acid	0.259	0.239	0.259	0.262	0.268	0.257	4.24
30) M	1,2,4-Trichlorobenzene	0.341	0.391	0.360	0.326	0.321	0.348	8.24
31)	Naphthalene	1.120	1.279	1.173	1.063	1.065	1.140	7.89
32)	4-Chloroaniline	0.303	0.397	0.300	0.297	0.430	0.345	18.29
33) C	Hexachlorobutadiene	0.180	0.204	0.189	0.173	0.171	0.183	7.46
34) CM	4-Chloro-3-methylphenol	0.338	0.399	0.363	0.309	0.295	0.341	12.24
35)	2-Methylnaphthalene	0.991	1.133	1.058	0.936	0.911	1.006	9.02
-----		-----						
36) I	Acenaphthene-d10	-----ISTD-----						
37) P	Hexachlorocyclopentadiene	0.293	0.321	0.296	0.324	0.323	0.311	4.97
38) C	2,4,6-Trichlorophenol	0.449	0.515	0.470	0.441	0.434	0.462	7.07
39)	2,4,5-Trichlorophenol	0.477	0.522	0.510	0.483	0.470	0.492	4.55
40) S	2-Fluorobiphenyl	1.419	1.636	1.496	1.357	1.341	1.450	8.33
41)	2-Chloronaphthalene	1.264	1.440	1.340	1.223	1.207	1.295	7.42

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Response Factor Report bn2

Method : D:\HPCHEM\1\METHODS\B21030C.M
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Calibration Files

80 =S21889.D 20 =S21887.D 50 =S21888.D
 120 =S21890.D 160 =S21891.D

Compound		80	20	50	120	160	Avg	%RSD
42)	2-Nitroaniline	0.340	0.371	0.347	0.356	0.351	0.353	3.36
43)	Dimethylphthalate	1.413	1.578	1.481	1.381	1.349	1.440	6.33
44)	Acenaphthylene	2.071	2.352	2.181	2.001	1.975	2.116	7.30
45)	2,6-Dinitrotoluene	0.353	0.399	0.364	0.368	0.363	0.369	4.77
46)	3-Nitroaniline	0.584	0.642	0.592	0.614	0.610	0.608	3.69
47) CM	Acenaphthene	1.214	1.400	1.299	1.203	1.143	1.252	7.97
48) P	2,4-Dinitrophenol	0.167	0.162	0.159	0.202	0.212	0.180	13.63
49)	Dibenzofuran	1.717	1.949	1.812	1.648	1.620	1.749	7.67
50) PM	4-Nitrophenol	0.117	0.137	0.120	0.125	0.125	0.125	6.16
51) M	2,4-Dinitrotoluene	0.353	0.399	0.364	0.368	0.363	0.369	4.77
52)	Fluorene	1.285	1.495	1.397	1.266	1.200	1.329	8.82
53)	Diethylphthalate	1.513	1.709	1.621	1.500	1.478	1.564	6.24
54)	4-Chlorophenyl-phenylethe	0.643	0.732	0.682	0.637	0.618	0.663	6.81
55) S	2,4,6-Tribromophenol	0.200	0.230	0.209	0.208	0.210	0.211	5.31
56)	4-Nitroaniline	0.293	0.339	0.259	0.312	0.320	0.305	10.04
57) I	Phenanthrene-d10	-----ISTD-----						
58)	4,6-Dinitro-2-methylpheno	0.131	0.139	0.130	0.147	0.139	0.137	5.17
59) C	N-Nitrosodiphenylamine	0.446	0.540	0.501	0.420	0.395	0.460	12.91
60)	1,2-Diphenylhydrazine	0.914	1.071	1.010	0.879	0.833	0.941	10.34
61)	4-Bromophenyl-phenylether	0.188	0.215	0.199	0.186	0.181	0.194	7.11
62)	Hexachlorobenzene	0.237	0.267	0.258	0.230	0.228	0.244	7.18
63) CM	Pentachlorophenol	0.132	0.149	0.135	0.143	0.142	0.140	4.96
64)	Phenanthrene	0.959	1.109	1.055	0.943	0.903	0.994	8.59
65)	Anthracene	0.991	1.166	1.080	0.962	0.930	1.026	9.37
66)	Carbazole	0.582	1.059	0.796	0.579	0.620	0.727	28.29
67)	Di-n-butylphthalate	1.669	1.920	1.802	1.637	1.608	1.727	7.57
68) C	Fluoranthene	1.019	1.181	1.094	0.998	0.979	1.054	7.90
69) I	Chrysene-d12	-----ISTD-----						
70)	Benzidine	0.006	0.007	0.006	0.006	0.006	0.006#	8.49
71) M	Pyrene	1.702	1.808	1.823	1.611	1.579	1.705	6.51
72) S	Terphenyl-d14	1.072	1.145	1.141	1.028	0.999	1.077	6.09
73)	Butylbenzylphthalate	1.283	1.343	1.367	1.214	1.204	1.282	5.76
74)	Benzo[a]anthracene	1.140	1.229	1.193	1.090	1.086	1.148	5.47
75)	3,3'-Dichlorobenzidine	0.159	0.270	0.181	0.174	0.198	0.197	22.17
76)	Chrysene	1.117	1.216	1.128	1.082	1.047	1.118	5.66
77)	bis(2-Ethylhexyl)phthalat	1.671	1.779	1.798	1.567	1.539	1.671	7.09
78)	Di-n-octylphthalate	2.944	3.236	3.143	2.799	2.721	2.969	7.39
79)	Indeno [1,2,3-cd] pyrene	0.838	0.966	0.894	0.835	0.814	0.869	7.10
80) I	Perylene-d12	-----ISTD-----						
81)	Benzo[b]fluoranthene	1.125	1.083	1.169	1.250	1.344	1.194	8.72
82)	Benzo[k]fluoranthene	1.210	1.330	1.243	1.060	1.135	1.196	8.63

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Response Factor Report bn2

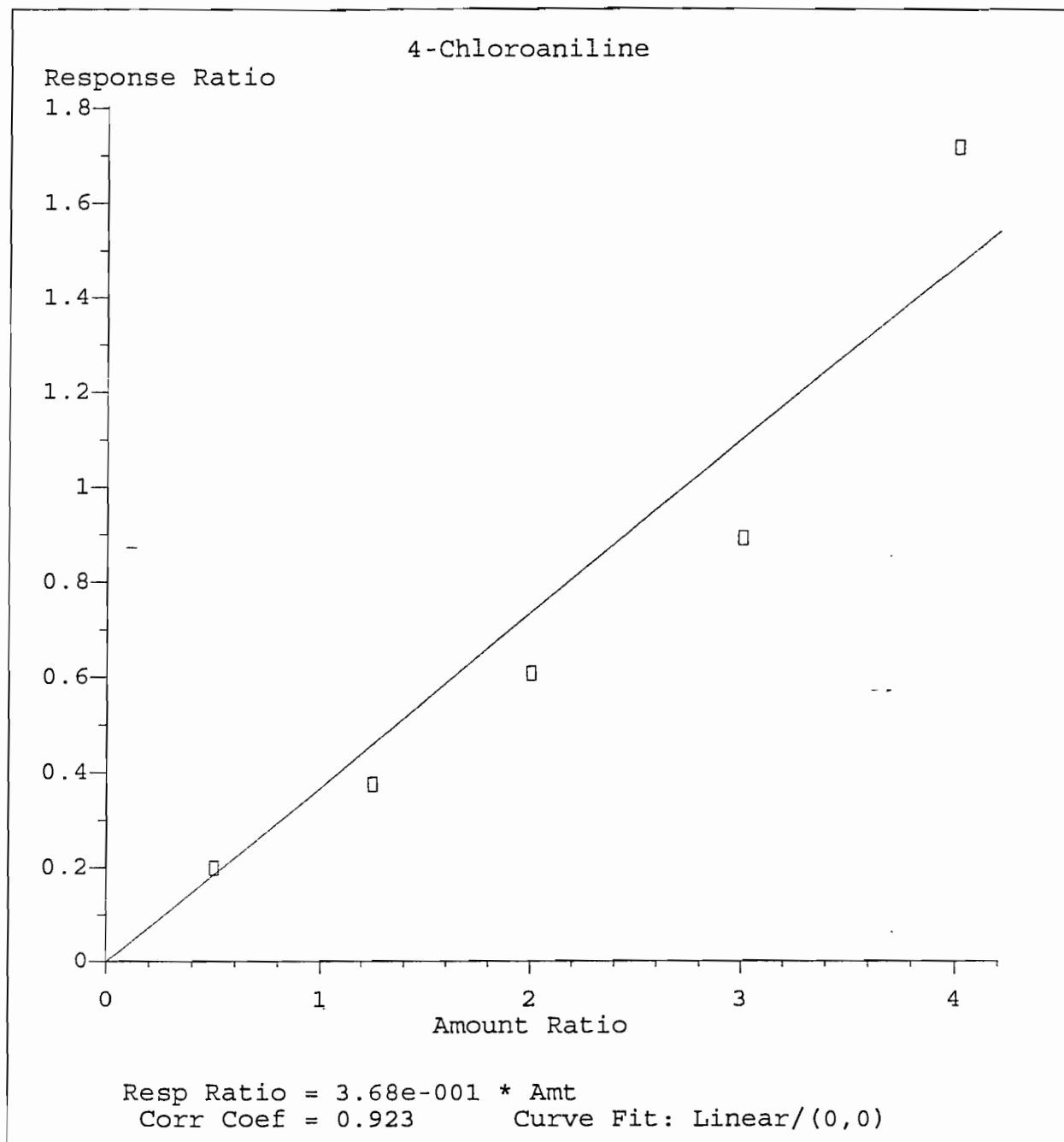
Method : D:\HPCHEM\1\METHODS\B21030C.M
 Title : CLP BNA Calibration
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Calibration Files

80 =S21889.D 20 =S21887.D 50 =S21888.D
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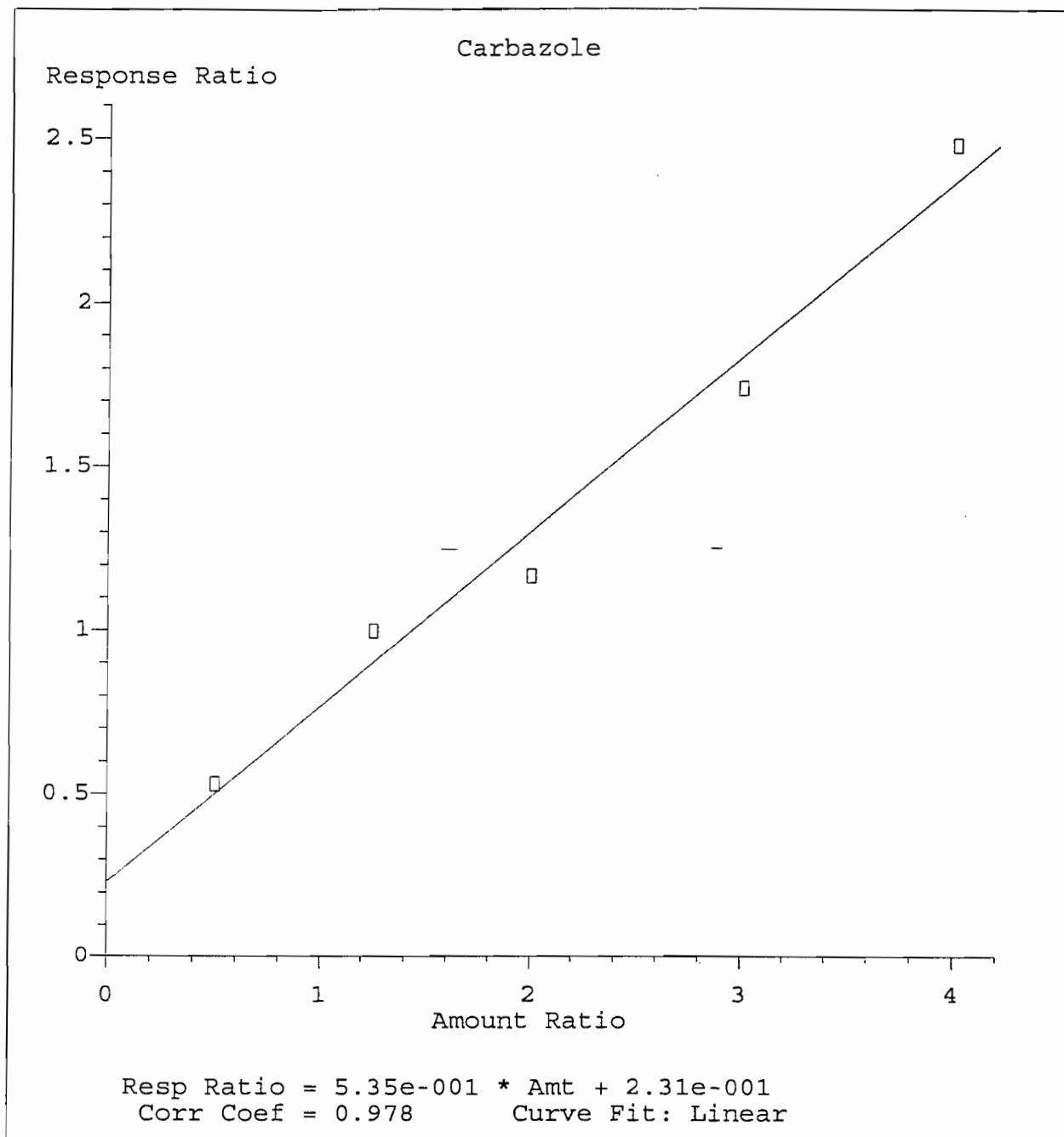
Compound		80	20	50	120	160	Avg	%RSD
83) C	Benzo[a]pyrene	1.050	1.114	1.071	1.037	1.026	1.059	3.28
84)	Dibenz[a,h]anthracene	0.827	0.902	0.875	0.812	0.796	0.843	5.26
85)	Benzo[g,h,i]perylene	0.814	0.896	0.847	0.798	0.775	0.826	5.73

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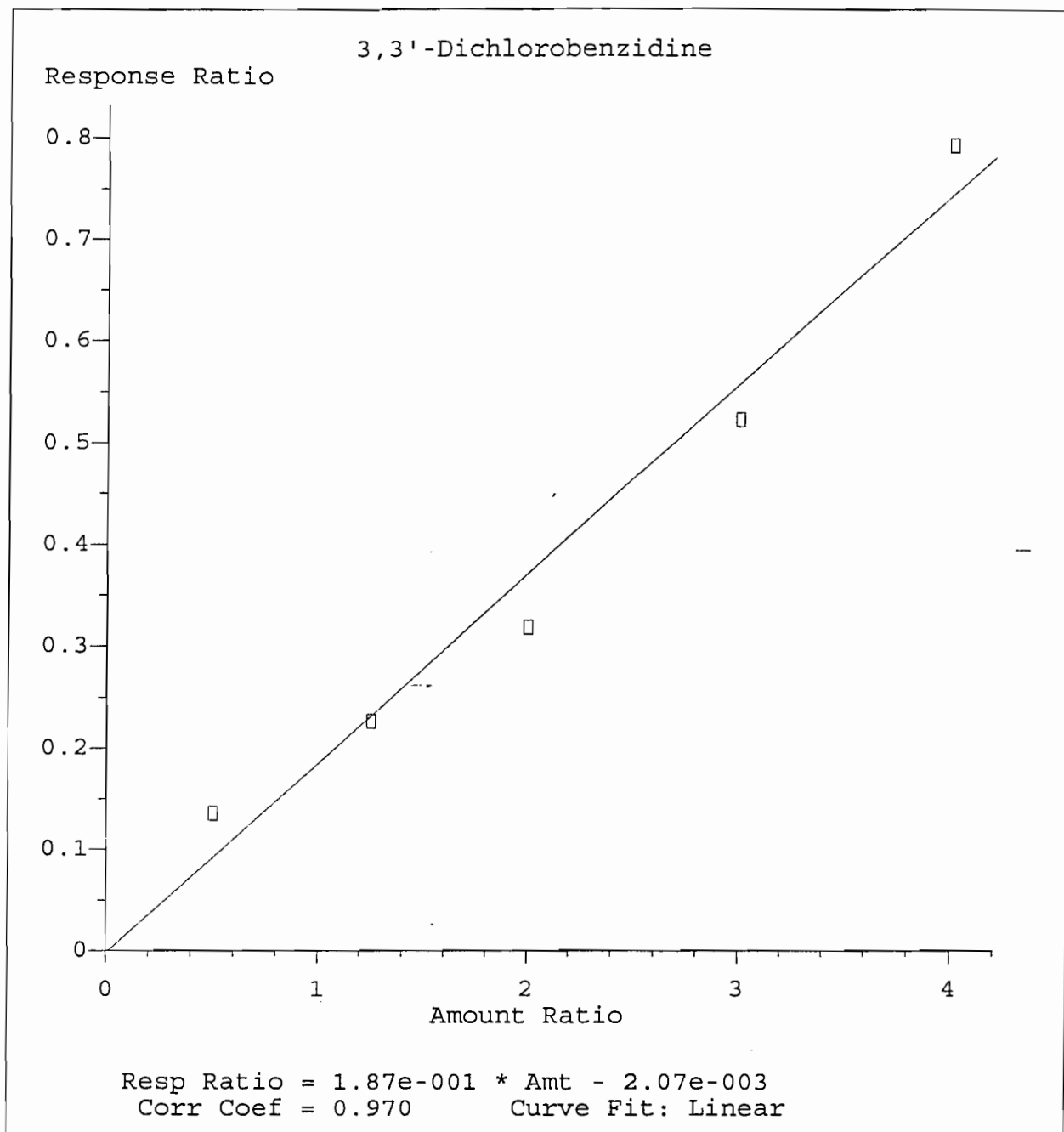
Method Name: D:\HPCHEM\1\METHODS\B21030C.M
Calibration Table Last Updated: Mon Nov 01 08:06:07 1999

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Method Name: D:\HPCHEM\1\METHODS\B21030C.M
Calibration Table Last Updated: Mon Nov 01 08:08:34 1999

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Method Name: D:\HPCHEM\1\METHODS\B21030C.M
Calibration Table Last Updated: Mon Nov 01 08:08:34 1999

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