SITE INSPECTION REPORT
ORBIS PRODUCTS CORPORATION
55 VIRGINIA STREET
NEWARK, ESSEX COUNTY, NEW JERSEY

CERCLIS ID No.: NJD010910099

VOLUME VIII OF VIII

EPA Contract No.: 68-W-00-121
W.O. No.: 20103.001.001.1061.00
Document Control No.: SAT.20103.1061.353

August 2003

Prepared for:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Prepared by:
Region II Site Assessment Team
Weston Solutions, Inc.
Edison, New Jersey 08837

253175

REFERENCE 15 (continued)

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: 2093 CLIENT: ENVIROTECH Inc.

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

CHAIN OF CUSTODY: COMPLETE / INCOMPLETE Comments:

		Comments:
Sample Bottles Intact:	✓	
Sample Labels Intact/ Correct:	✓	
Sufficient Sample Volume:	✓	
Correct bottles/ preservative:	✓	
Samples received in holding time/ prep time:	✓	
Headspace/ bubbles in voa samples:	X	
Samples to be subcontracted:	(✓)	
Preserved Sample pH checked: (Excluding voa samples)	✓	

KEY
✓ = YES
X = NO
(✓) = N/A

ADDITIONAL COMMENTS: see the chain

SAMPLE(S) VERIFIED BY: INITIAL BD DATE 4/5

CORRECTIVE ACTION REQUIRED: YES ✓ (SEE BELOW) NO

CLIENT NOTIFIED: YES Date/ Time: NO ✓

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS: Wrong matrix listed on COC.

VERIFIED/TAKEN BY: INITIAL ES DATE 4/4/01

000153

REV 10/00

3860

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E01-2093
Client : Envirotactics Inc.
Project : ORBIS - NEWARK - 444

			EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
	GC/MS V							
VO+15, PP LIST	2093-001	A		—		4/4+4/18		[illegible]
	GC EX							
Pesticides	2093-001	A	4/5	900	EDM2	4.5	800	[illegible]
PCB	2093-001	A		↓		4.5	400	[illegible]
	GC/MS X							
BNA + 25	2093-001	A	4/6	700 - 300	DL	4/6		[illegible]
	METALS							
PP Metals -LOW	2093-001	A	4/5/01	[illegible]	[illegible]	4/6	1200	[illegible]
	WETCHEM							
Cyanide, Total	2093-001	A	4/5		[illegible]	4/6		[illegible]
Phenols	2093-001	A	4/4	900	DM	4/5	1300	DM
	AIR							
Electronic Del.	2093-001	A		—			—	

REVIEW & APPROVAL: [illegible]
REMARKS :

3861

000160

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-008
Client ID: MW-3
Date Received: 04/04/2001
Date Analyzed: 04/05/2001
Date File: G9543.D

GC/MS Column: DB-624
Sample wt/vol: 0.0025mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 2000
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

000023

3662

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 04/04/2001
Date Analyzed: 04/05/2001
Data file: G9533.D

GC/MS Column: DB-624
Sample wt/vol: 0.01mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 500
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		450
Vinyl Chloride	ND		555
Bromomethane	ND		465
Chloroethane	ND		735
Trichlorofluoromethane	ND		855
Acrolein	ND		6520
1,1-Dichloroethene	ND		495
Methylene Chloride	ND		965
Acrylonitrile	ND		1120
trans-1,2-Dichloroethene	ND		170
1,1-Dichloroethane	ND		155
Chloroform	416		185
1,1,1-Trichloroethane	ND		115
Carbon Tetrachloride	ND		185
1,2-Dichloroethane(EDC)	ND		210
Benzene	7070		140
Trichloroethene	ND		295
1,2-Dichloropropane	ND		140
Bromodichloromethane	ND		140
2-Chloroethylvinyl Ether	ND		170
cis-1,3-Dichloropropene	ND		115
Toluene	35600		170
trans-1,3-Dichloropropene	ND		70
1,1,2-Trichloroethane	ND		195
Tetrachloroethene	2420		155
Dibromochloromethane	ND		115
Chlorobenzene	ND		185
Ethylbenzene	132		100
Total Xylenes	675		395
Bromoform	ND		125
1,1,2,2-Tetrachloroethane	ND		195
1,3-Dichlorobenzene	ND		125
1,4-Dichlorobenzene	ND		125
1,2-Dichlorobenzene	223		195

Total Target Compounds: 46536

000020

39663

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 04/04/2001
Date Analyzed: 04/05/2001
Date File: G9533.D

GC/MS Column: DB-624
Sample wt/vol: 0.01mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 500
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	4650	12.87
	Unknown	3350	13.68
	Unknown	1950	15.03

Total TICs = 9950

000039

3864

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-001
Client ID: FB
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9206.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	ND		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

000031

3665

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-001
Client ID: FB
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9206.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 0

000032

3966

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-001
Client ID: FB
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9206.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

000033

35667

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-003
Client ID: MW-1
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9207.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	ND		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

000031

3666

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-003
Client ID: MW-1
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9207.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 0

000035

3669

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-003
Client ID: MW-1
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Date File: C9207.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	18.6	4.35
	Substituted benzene	4.3	4.38
	Unknown	19.7	8.17
	Unknown	19.4	8.33
	Unknown	7.3	9.08
	Unknown	10.4	9.17
	Substituted benzene	6.7	9.84

Total TICs = 86.4

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-004
Client ID: MW-2
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9208.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	2.68		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

000037

3407

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-004
Client ID: MW-2
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9208.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 2.68

000038

34672

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-004
Client ID: MW-2
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Date File: C9208.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	118	3.42
	Substituted benzene	28.4	3.47

Total TICs = 146.4

000039

3473

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-005
Client ID: MW-7
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9209.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	2.61		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

000010

3824

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-005
Client ID: MW-7
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9209.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 2.61

000011

3475

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-005
Client ID: MW-7
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Date File: C9209.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	111	3.42
	Substituted benzene	25.9	3.47
	Unknown alkane	8	3.52
	Substituted benzene	6	5.58
	Unknown	12.4	6.39
	Unknown	6.4	7.80
	Unknown	68.5	8.17
	Unknown	7.5	8.33
	Unknown	9.4	8.35
	Unknown	30.3	8.73
	Substituted benzene	31.9	8.75
	Unknown	6.7	8.81
	Unknown	6.4	8.93
	Unknown	8.9	8.96
	Unknown	531	9.29
	Unknown aromatic	10.4	9.51
	Unknown	48.5	9.73
	Unknown	11	9.80
	Unknown	7.3	9.86
	Unknown	17.8	10.06
	Unknown	15.9	10.27
	Unknown	19.5	11.24
	Unknown	13.6	11.42
	Unknown	14.9	11.67
	Unknown	11.9	11.70
	Total TICs =	1041.1	

000042

3676

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-006
Client ID: MW-6
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9210.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	1.32		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	42.7		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	21.4		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

000043

3677

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-006
Client ID: MW-6
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9210.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 65.42

3676

000011

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-006
Client ID: MW-6
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Date File: C9210.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown alkane	8.7	2.98
	Substituted benzene	56.6	3.42
	Substituted benzene	12.6	3.47
	Substituted benzene	37	4.62
	Substituted benzene	7.7	4.64
	Substituted benzene	49.4	4.89
	Substituted benzene	12.7	5.24
	Substituted benzene	24.5	5.57
	Substituted benzene	98.4	5.73
	Substituted benzene	88.9	5.84
	Substituted benzene	83.5	6.26
	Substituted benzene	50.9	6.41
	Substituted benzene	14.1	6.46
	Substituted benzene	22.9	6.49
	Substituted benzene	50.7	6.54
	Substituted benzene	9.4	6.70
	Substituted benzene	8.3	6.73
	Substituted benzene	8.4	6.94
	Substituted benzene	20	7.03
	Substituted benzene	26.4	7.06
	Substituted benzene	5.8	7.14
	Substituted benzene	15.7	7.24
	Substituted benzene	38	7.30
	Substituted benzene	12.7	7.96
	Substituted naphthalene	9.4	8.37
	Total TICs =	772.7	

3679

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-007
Client ID: MW-8
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9200.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		3.5
Phenol	2130	E	3.3
Aniline	ND		3.7
bis(2-Chloroethyl)ether	ND		3.6
2-Chlorophenol	ND		3.6
1,3-Dichlorobenzene	ND		3.7
1,4-Dichlorobenzene	ND		2.9
Benzyl alcohol	ND		4.6
1,2-Dichlorobenzene	71.4		3.1
2-Methylphenol	ND		3.9
bis(2-chloroisopropyl)ether	ND		4.5
4-Methylphenol	16900	E	3.3
N-Nitroso-di-n-propylamine	ND		5
Hexachloroethane	ND		4.8
Nitrobenzene	ND		3.3
Isophorone	ND		1
2-Nitrophenol	ND		3.6
2,4-Dimethylphenol	ND		3.2
bis(2-Chloroethoxy)methane	ND		3.6
Benzoic acid	ND		4.9
2,4-Dichlorophenol	ND		4.8
1,2,4-Trichlorobenzene	ND		2.2
Naphthalene	ND		1.4
4-Chloroaniline	ND		9
Hexachlorobutadiene	ND		4.2
4-Chloro-3-methylphenol	ND		2.5
2-Methylnaphthalene	ND		1.8
Hexachlorocyclopentadiene	ND		4.7
2,4,6-Trichlorophenol	ND		6.4
2,4,5-Trichlorophenol	ND		5.1
2-Chloronaphthalene	ND		2.3
2-Nitroaniline	ND		3.3
Dimethylphthalate	ND		1.7
2,6-Dinitrotoluene	ND		3.6
Acenaphthylene	ND		1.5

000016

3880

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-007
Client ID: MW-8
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9200.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		5.2
Acenaphthene	ND		2.1
2,4-Dinitrophenol	ND		6
4-Nitrophenol	ND		8.7
2,4-Dinitrotoluene	ND		2.9
Dibenzofuran	ND		1.3
Diethylphthalate	ND		1.6
Fluorene	ND		1.8
4-Chlorophenyl-phenylether	ND		2.3
4-Nitroaniline	ND		6.6
4,6-Dinitro-2-methylphenol	ND		4.5
N-Nitrosodiphenylamine	ND		3.2
1,2-Diphenylhydrazine/Azobenzene	ND		3.1
4-Bromophenyl-phenylether	ND		3.1
Hexachlorobenzene	ND		2.9
Pentachlorophenol	ND		5.9
Phenanthrene	ND		2.6
Anthracene	ND		3.1
Carbazole	ND		2.1
Di-n-butylphthalate	ND		2.3
Fluoranthene	ND		1.8
Benzidine	ND		3.5
Pyrene	ND		1.6
3,3'-Dimethylbenzidine	ND		8.1
Butylbenzylphthalate	ND		4.1
3,3'-Dichlorobenzidine	ND		2.9
Benzo[a]anthracene	ND		1.5
Chrysene	ND		2.5
bis(2-Ethylhexyl)phthalate	ND		2.6
Di-n-octylphthalate	ND		1.9
Benzo[b]fluoranthene	ND		3.4
Benzo[k]fluoranthene	ND		2.5
Benzo[a]pyrene	ND		1.5
Indeno[1,2,3-cd]pyrene	ND		5.9
Dibenz[a,h]anthracene	ND		4.8
Benzo[g,h,i]perylene	ND		6.9

Total Target Compounds: 19101.4 E

000047

3801

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-007DIL
Client ID: MW-8
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9204.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 200
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		70
Phenol	1640		66
Aniline	ND		74
bis(2-Chloroethyl)ether	ND		72
2-Chlorophenol	ND		72
1,3-Dichlorobenzene	ND		74
1,4-Dichlorobenzene	ND		58
Benzyl alcohol	ND		92
1,2-Dichlorobenzene	ND		62
2-Methylphenol	ND		78
bis(2-chloroisopropyl)ether	ND		90
4-Methylphenol	12000		66
N-Nitroso-di-n-propylamine	ND		100
Hexachloroethane	ND		96
Nitrobenzene	ND		66
Isophorone	ND		20
2-Nitrophenol	ND		72
2,4-Dimethylphenol	ND		64
bis(2-Chloroethoxy)methane	ND		72
Benzoic acid	ND		98
2,4-Dichlorophenol	ND		96
1,2,4-Trichlorobenzene	ND		44
Naphthalene	ND		28
4-Chloroaniline	ND		180
Hexachlorobutadiene	ND		84
4-Chloro-3-methylphenol	ND		50
2-Methylnaphthalene	ND		36
Hexachlorocyclopentadiene	ND		94
2,4,6-Trichlorophenol	ND		128
2,4,5-Trichlorophenol	ND		102
2-Chloronaphthalene	ND		46
2-Nitroaniline	ND		66
Dimethylphthalate	ND		34
2,6-Dinitrotoluene	ND		72
Acenaphthylene	ND		30

3882

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-007DIL
Client ID: MW-8
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9204.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 200
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		104
Acenaphthene	ND		42
2,4-Dinitrophenol	ND		120
4-Nitrophenol	ND		174
2,4-Dinitrotoluene	ND		58
Dibenzofuran	ND		26
Diethylphthalate	ND		32
Fluorene	ND		36
4-Chlorophenyl-phenylether	ND		46
4-Nitroaniline	ND		132
4,6-Dinitro-2-methylphenol	ND		90
N-Nitrosodiphenylamine	ND		64
1,2-Diphenylhydrazine/Azobenzene	ND		62
4-Bromophenyl-phenylether	ND		62
Hexachlorobenzene	ND		58
Pentachlorophenol	ND		118
Phenanthrene	ND		52
Anthracene	ND		62
Carbazole	ND		42
Di-n-butylphthalate	ND		46
Fluoranthene	ND		36
Benzidine	ND		70
Pyrene	ND		32
3,3'-Dimethylbenzidine	ND		162
Butylbenzylphthalate	ND		82
3,3'-Dichlorobenzidine	ND		58
Benzo[a]anthracene	ND		30
Chrysene	ND		50
bis(2-Ethylhexyl)phthalate	ND		52
Di-n-octylphthalate	ND		38
Benzo[b]fluoranthene	ND		68
Benzo[k]fluoranthene	ND		50
Benzo[a]pyrene	ND		30
Indeno[1,2,3-cd]pyrene	ND		118
Dibenz[a,h]anthracene	ND		96
Benzo[g,h,i]perylene	ND		138

Total Target Compounds: 13640

000019

34663

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-007
Client ID: MW-8
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Date File: C9200.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	1780	3.43
000140-29-4	Benzeneacetonitrile	138	7.18
	Unknown	570	7.33
	Substituted phenol	982	7.90
	Substituted benzene	191	8.10
	Substituted phenol	146	8.14
	Unknown	400	11.23

Total TICs = 4207

000050

3884

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-008
Client ID: MW-3
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9201.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	3.28		0.33
Aniline	2.18		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	1.09		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	3.64		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	ND		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

3885

000051

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-008
Client ID: MW-3
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9201.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 10.19

3886

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-008
Client ID: MW-3
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Date File: C9201.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	1120	3.43
	Substituted benzene	176	3.47
	Substituted benzene	302	4.36
	Substituted benzene	60.1	4.39
	Substituted benzene	47	5.24
	Substituted benzene	100	5.58
	Substituted benzene	1430	6.29
000138-86-3	Limonene	99.8	6.32

Total TICs = 3334.9

3867

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9203.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		3.5
Phenol	102		3.3
Aniline	12200	E	3.7
bis(2-Chloroethyl)ether	ND		3.6
2-Chlorophenol	ND		3.6
1,3-Dichlorobenzene	ND		3.7
1,4-Dichlorobenzene	ND		2.9
Benzyl alcohol	ND		4.6
1,2-Dichlorobenzene	83.6		3.1
2-Methylphenol	ND		3.9
bis(2-chloroisopropyl)ether	ND		4.5
4-Methylphenol	86.8		3.3
N-Nitroso-di-n-propylamine	ND		5
Hexachloroethane	ND		4.8
Nitrobenzene	ND		3.3
Isophorone	ND		1
2-Nitrophenol	ND		3.6
2,4-Dimethylphenol	ND		3.2
bis(2-Chloroethoxy)methane	ND		3.6
Benzoic acid	ND		4.9
2,4-Dichlorophenol	ND		4.8
1,2,4-Trichlorobenzene	ND		2.2
Naphthalene	ND		1.4
4-Chloroaniline	ND		9
Hexachlorobutadiene	ND		4.2
4-Chloro-3-methylphenol	ND		2.5
2-Methylnaphthalene	ND		1.8
Hexachlorocyclopentadiene	ND		4.7
2,4,6-Trichlorophenol	ND		6.4
2,4,5-Trichlorophenol	ND		5.1
2-Chloronaphthalene	ND		2.3
2-Nitroaniline	ND		3.3
Dimethylphthalate	ND		1.7
2,6-Dinitrotoluene	ND		3.6
Acenaphthylene	ND		1.5

000051

36468

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9203.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		5.2
Acenaphthene	ND		2.1
2,4-Dinitrophenol	ND		6
4-Nitrophenol	ND		8.7
2,4-Dinitrotoluene	ND		2.9
Dibenzofuran	ND		1.3
Diethylphthalate	ND		1.6
Fluorene	ND		1.8
4-Chlorophenyl-phenylether	ND		2.3
4-Nitroaniline	ND		6.6
4,6-Dinitro-2-methylphenol	ND		4.5
N-Nitrosodiphenylamine	ND		3.2
1,2-Diphenylhydrazine/Azobenzene	ND		3.1
4-Bromophenyl-phenylether	ND		3.1
Hexachlorobenzene	ND		2.9
Pentachlorophenol	ND		5.9
Phenanthrene	ND		2.6
Anthracene	ND		3.1
Carbazole	ND		2.1
Di-n-butylphthalate	ND		2.3
Fluoranthene	ND		1.8
Benzidine	ND		3.5
Pyrene	ND		1.6
3,3'-Dimethylbenzidine	ND		8.1
Butylbenzylphthalate	ND		4.1
3,3'-Dichlorobenzidine	ND		2.9
Benzo[a]anthracene	ND		1.5
Chrysene	ND		2.5
bis(2-Ethylhexyl)phthalate	ND		2.6
Di-n-octylphthalate	ND		1.9
Benzo[b]fluoranthene	ND		3.4
Benzo[k]fluoranthene	ND		2.5
Benzo[a]pyrene	ND		1.5
Indeno[1,2,3-cd]pyrene	ND		5.9
Dibenz[a,h]anthracene	ND		4.8
Benzo[g,h,i]perylene	ND		6.9

Total Target Compounds: 12472.4 E

000055

3689

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-009DIL
Client ID: MW-5
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9205.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 200
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		70
Phenol	ND		66
Aniline	8580		74
bis(2-Chloroethyl)ether	ND		72
2-Chlorophenol	ND		72
1,3-Dichlorobenzene	ND		74
1,4-Dichlorobenzene	ND		58
Benzyl alcohol	ND		92
1,2-Dichlorobenzene	ND		62
2-Methylphenol	ND		78
bis(2-chloroisopropyl)ether	ND		90
4-Methylphenol	ND		66
N-Nitroso-di-n-propylamine	ND		100
Hexachloroethane	ND		96
Nitrobenzene	ND		66
Isophorone	ND		20
2-Nitrophenol	ND		72
2,4-Dimethylphenol	ND		64
bis(2-Chloroethoxy)methane	ND		72
Benzoic acid	ND		98
2,4-Dichlorophenol	ND		96
1,2,4-Trichlorobenzene	ND		44
Naphthalene	ND		28
4-Chloroaniline	ND		180
Hexachlorobutadiene	ND		84
4-Chloro-3-methylphenol	ND		50
2-Methylnaphthalene	ND		36
Hexachlorocyclopentadiene	ND		94
2,4,6-Trichlorophenol	ND		128
2,4,5-Trichlorophenol	ND		102
2-Chloronaphthalene	ND		46
2-Nitroaniline	ND		66
Dimethylphthalate	ND		34
2,6-Dinitrotoluene	ND		72
Acenaphthylene	ND		30

000056

3890

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-009DIL
Client ID: MW-5
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9205.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 200
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		104
Acenaphthene	ND		42
2,4-Dinitrophenol	ND		120
4-Nitrophenol	ND		174
2,4-Dinitrotoluene	ND		58
Dibenzofuran	ND		26
Diethylphthalate	ND		32
Fluorene	ND		36
4-Chlorophenyl-phenylether	ND		46
4-Nitroaniline	ND		132
4,6-Dinitro-2-methylphenol	ND		90
N-Nitrosodiphenylamine	ND		64
1,2-Diphenylhydrazine/Azobenzene	ND		62
4-Bromophenyl-phenylether	ND		62
Hexachlorobenzene	ND		58
Pentachlorophenol	ND		118
Phenanthrene	ND		52
Anthracene	ND		62
Carbazole	ND		42
Di-n-butylphthalate	ND		46
Fluoranthene	ND		36
Benzidine	ND		70
Pyrene	ND		32
3,3'-Dimethylbenzidine	ND		162
Butylbenzylphthalate	ND		82
3,3'-Dichlorobenzidine	ND		58
Benzo[a]anthracene	ND		30
Chrysene	ND		50
bis(2-Ethylhexyl)phthalate	ND		52
Di-n-octylphthalate	ND		38
Benzo[b]fluoranthene	ND		68
Benzo[k]fluoranthene	ND		50
Benzo[a]pyrene	ND		30
Indeno[1,2,3-cd]pyrene	ND		118
Dibenz[a,h]anthracene	ND		96
Benzo[g,h,i]perylene	ND		138

Total Target Compounds: 8580

000057

3891

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 04/04/2001
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Date File: C9203.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	10700	3.44
	Substituted benzene	1070	3.47
000127-18-4	Tetrachloroethylene	414	3.86
	Substituted benzene	279	4.61
	Substituted benzene	990	6.27
000140-29-4	Benzeneacetonitrile	886	7.21
	Unknown	117	7.29
	Unknown	311	7.34
	Unknown	115	7.41
	Unknown	123	7.46
	Unknown	758	7.88
	Substituted phenol	2180	7.91
	Unknown aromatic	182	8.08
	Substituted phenol	398	8.15
	Unknown	127	8.18
	Unknown aromatic	243	8.35
	Substituted benzene	193	8.43
	Unknown	261	8.75
	Unknown	343	9.76
	Substituted benzene	251	10.68

Total TICs = 19941

000053

3497

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-001
Client ID: FB
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4961.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

000059

3693

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-003
Client ID: MW-1
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4962.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

38594

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-004
Client ID: MW-2
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4963.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

3695

PAGE LEFT INTENTIONALLY BLANK

3696

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-005
Client ID: MW-7
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4964.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

000083

3897

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-006
Client ID: MW-6
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4965.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

38956

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-007
Client ID: MW-8
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4966.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

000065

3699

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-008
Client ID: MW-3
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4967.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

000066

3900

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4968.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

000087

3901

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-001
Client ID: FB
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5734.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.002
beta-BHC	ND		0.002
gamma-BHC	ND		0.002
delta-BHC	ND		0.002
Heptachlor	ND		0.002
Aldrin	ND		0.002
Heptachlor epoxide	ND		0.002
Endosulfan I	ND		0.002
4,4'-DDE	ND		0.002
Dieldrin	ND		0.002
Endrin	ND		0.002
Endosulfan II	ND		0.002
4,4'-DDD	ND		0.002
Endrin aldehyde	ND		0.002
Endosulfan sulfate	ND		0.002
4,4'-DDT	ND		0.002
Chlordane	ND		0.015
Toxaphene	ND		0.015

000083

3902

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-003
Client ID: MW-1
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5735.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-004
Client ID: MW-2
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5736.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

000070

3904

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-005
Client ID: MW-7
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5737.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

3905

000071

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-006
Client ID: MW-6
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5738.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

0000772

3906

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-007
Client ID: MW-8
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5739.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	0.342		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	0.821		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-008
Client ID: MW-3
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5740.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

000074

3906

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS-NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 04/04/2001
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5741.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

000075

3909

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-001
Client ID: FB
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	ND		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	ND		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-003
Client ID: MW-1
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.00415		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	ND		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-004
Client ID: MW-2
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	ND		1	0.004
Beryllium	ND		1	0.004
Cadmium	0.000812		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.529		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-005
Client ID: MW-7
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	ND		1	0.004
Beryllium	ND		1	0.004
Cadmium	0.00177		1	0.0006
Chromium	ND		1	0.020
Copper	0.0411		1	0.040
Lead	0.00638		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.0568		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-006
Client ID: MW-6
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	ND		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	ND		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-007
Client ID: MW-8
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.00879		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	0.0389		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	ND		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-008
Client ID: MW-3
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	ND		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.0237		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2094-009
Client ID: MW-5
Date Received: 4/4/01
Date Analyzed: 4/6/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.0305		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	0.00906		1	0.004
Mercury	ND		1	0.0005
Nickel	0.166		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.351		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CYANIDE, TOTAL

Client/Project: ENVTACT/ORBIS - NEWARK

Date Received: 4/4/01

Lab ID	Client ID	Result	Q	DF	Matrix-Units	MDL	% Moist	Date Analyzed
2094-001	FB	ND		1	Aqueous-mg/L	0.020	100	4/6/01
2094-003	MW-1	ND		1	Aqueous-mg/L	0.020	100	4/6/01
2094-004	MW-2	ND		1	Aqueous-mg/L	0.020	100	4/6/01
2094-005	MW-7	ND		1	Aqueous-mg/L	0.020	100	4/6/01
2094-006	MW-6	ND		1	Aqueous-mg/L	0.020	100	4/6/01
2094-007	MW-8	ND		1	Aqueous-mg/L	0.020	100	4/6/01
2094-008	MW-3	ND		1	Aqueous-mg/L	0.020	100	4/6/01
2094-009	MW-5	ND		1	Aqueous-mg/L	0.020	100	4/6/01

INTEGRATED ANALYTICAL LABORATORIES, LLC.

PHENOL

Client/Project: ENVTACT/ORBIS - NEWARK

Date Received: 4/4/01

Lab ID	Client ID	Result	Q	DF	Matrix-Units	MDL	% Moist	Date Analyzed
2094-001	FB	ND		1	Aqueous-mg/L	0.050	100	4/5/01
2094-003	MW-1	ND		1	Aqueous-mg/L	0.050	100	4/5/01
2094-004	MW-2	ND		1	Aqueous-mg/L	0.050	100	4/5/01
2094-005	MW-7	ND		1	Aqueous-mg/L	0.050	100	4/5/01
2094-006	MW-6	0.0563		1	Aqueous-mg/L	0.050	100	4/5/01
2094-007	MW-8	34.3		100	Aqueous-mg/L	0.050	100	4/5/01
2094-008	MW-3	0.09		1	Aqueous-mg/L	0.050	100	4/5/01
2094-009	MW-5	25.5		100	Aqueous-mg/L	0.050	100	4/5/01

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METHODOLOGY SUMMARY

Analytical Parameter	Aqueous Samples Method #	Soil/Other Samples Method #
Volatiles	EPA 624	NA
Semivolatiles - BNA + 25	EPA 625	NA
PCB's	EPA 8082	NA
Pesticides	EPA 8081A	NA
P.P. Metals	EPA 200.8	NA
Metals (Mercury)	EPA 245.2	NA
Cyanide, Total	EPA 335.2	NA
Phenols	EPA 420.2	NA

000086

3920

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G9454.D

BFB Injection Date: 04/04/2001

Inst ID: MSD_G

BFB Injection Time: 0:29

m/z	Ion Abudance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	20.9
75	30.0 - 60.0% of mass 95	48.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	74.2
175	5.0 - 9.0% of mass 174	5.4 (7.3)1
176	95.0 - 101.0% of mass 174	72.6 (97.9)1
177	5.0 - 9.0% of mass 176	5.1 (7.0)2
	1-Value is % mass 174	2-Value is % mass 176

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20PPB	STD-20PPB	G9456.D	04/04/2001	1:35
100PPB	STD-100PPB	G9457.D	04/04/2001	2:00
5PPB	STD-5PPB	G9459.D	04/04/2001	3:57
TVH_STD	TVH_1PPM	G9460.D	04/04/2001	4:26
N/A	METHOD-BLK	G9462.D	04/04/2001	5:41
MW-1	1965-001	G9464.D	04/04/2001	6:32
MS	1965-003MS	G9465.D	04/04/2001	6:57
MSD	1965-003MSD	G9466.D	04/04/2001	7:22
MW-2	1965-002	G9468.D	04/04/2001	8:12
MW-3	1965-003	G9471.D	04/04/2001	9:28
MW-4	1965-004	G9472.D	04/04/2001	9:53
MW-1	1991-001	G9473.D	04/04/2001	10:17
MW-4	1991-003	G9475.D	04/04/2001	11:07
MW-5	1991-004	G9476.D	04/04/2001	11:32
FB	1991-005	G9477.D	04/04/2001	11:57
TB	1991-006	G9478.D	04/04/2001	12:22
MW-2	1991-002	G9479.D	04/04/2001	12:46
PW-1	1986-002	G9481.D	04/04/2001	13:36
RW-17D	1986-004	G9483.D	04/04/2001	14:25

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G9503.D

BFB Injection Date: 04/05/2001

Inst ID: MSD_G

BFB Injection Time: 0:42

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	18.9			
75	30.0 - 60.0% of mass 95	44.5			
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	0.9	(	1.1	)1
174	Great than 50.0% of mass 95	85.4			
175	5.0 - 9.0% of mass 174	6.2	(	7.3	)1
176	95.0 - 101.0% of mass 174	83.1	(	97.3	)1
177	5.0 - 9.0% of mass 176	4.5	(	5.4	)2
	1-Value is % mass 174	2-Value is % mass 176			

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20PPB	STD-20PPB	G9504.D	04/05/2001	1:07
N/A	METHOD-BLK	G9506.D	04/05/2001	2:13
PW-2	1986-001	G9507.D	04/05/2001	2:39
RW-10	1986-003	G9510.D	04/05/2001	5:06
MS	2066-005MS	G9511.D	04/05/2001	5:32
MSD	2066-005MSD	G9512.D	04/05/2001	5:57
LFB	LFB	G9513.D	04/05/2001	6:22
RW-18D	1986-006	G9516.D	04/05/2001	7:38
RW-14MPZ-2	1986-007	G9517.D	04/05/2001	8:04
TRIP_BLANK	2066-001	G9518.D	04/05/2001	8:29
FIELD_BLANK	2066-002	G9519.D	04/05/2001	8:54
RW-1	2066-003	G9520.D	04/05/2001	9:19
MW-1	2094-003	G9525.D	04/05/2001	11:24
MW-2	2094-004	G9526.D	04/05/2001	11:49
MW-7	2094-005	G9527.D	04/05/2001	12:14
MW-6	2094-006	G9529.D	04/05/2001	13:04
MW-8	2094-007	G9531.D	04/05/2001	13:53
MW-5	2094-009	G9533.D	04/05/2001	14:43
TB	2094-002	G9534.D	04/05/2001	15:08
03	2076-003	G9535.D	04/05/2001	15:32

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: G9503.D

BFB Injection Date : 04/05/200

Inst ID: MSD_G

BFB Injection Time: 0:42

m/z	Ion Abudance Criteria	%Relative Abundance		
50	15 - 40.0% of mass 95	18.9		
75	30.0 - 60.0% of mass 95	44.5		
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	0.9	(1.1	)1
174	Great than 50.0% of mass 95	85.4		
175	5.0 - 9.0% of mass 174	6.2	(7.3	)1
176	95.0 - 101.0% of mass 174	83.1	(97.3	)1
177	5.0 - 9.0% of mass 176	4.5	(5.4	)2

1-Value is % mass 174 2-Value is % mass 176

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
05	2076-005	G9538.D	04/05/2001	16:47
FB	2094-001	G9541.D	04/05/2001	21:19
MW-7	2094-005DIL	G9542.D	04/05/2001	21:54
MW-3	2094-008	G9543.D	04/05/2001	23:14

000089

3923

VOLATILE METHOD BLANK SUMMARY

Lab File ID: G9506.D

Instrument ID: MSD_G

Date Analyzed: 04/05/2001

Time Analyzed: 02:13

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
PW-2	1986-001	04/05/2001	2:39
RW-10	1986-003	04/05/2001	5:06
MS	2066-005MS	04/05/2001	5:32
MSD	2066-005MSD	04/05/2001	5:57
LFB	LFB	04/05/2001	6:22
RW-18D	1986-006	04/05/2001	7:38
RW-14MPZ-2	1986-007	04/05/2001	8:04
TRIP_BLANK	2066-001	04/05/2001	8:29
FIELD_BLANK	2066-002	04/05/2001	8:54
RW-1	2066-003	04/05/2001	9:19
MW-1	2094-003	04/05/2001	11:24
MW-2	2094-004	04/05/2001	11:49
MW-7	2094-005	04/05/2001	12:14
MW-6	2094-006	04/05/2001	13:04
MW-8	2094-007	04/05/2001	13:53
MW-5	2094-009	04/05/2001	14:43
TB	2094-002	04/05/2001	15:08
03	2076-003	04/05/2001	15:32
05	2076-005	04/05/2001	16:47
FB	2094-001	04/05/2001	21:19
MW-7	2094-005DIL	04/05/2001	21:54
MW-3	2094-008	04/05/2001	23:14

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: N/A
Date Received: NA
Date Analyzed: 04/05/2001
Data file: G9506.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.9
Vinyl Chloride	ND		1.11
Bromomethane	ND		0.93
Chloroethane	ND		1.47
Trichlorofluoromethane	ND		1.71
Acrolein	ND		13
1,1-Dichloroethene	ND		0.99
Methylene Chloride	ND		1.93
Acrylonitrile	ND		2.23
trans-1,2-Dichloroethene	ND		0.34
1,1-Dichloroethane	ND		0.31
Chloroform	ND		0.37
1,1,1-Trichloroethane	ND		0.23
Carbon Tetrachloride	ND		0.37
1,2-Dichloroethane(EDC)	ND		0.42
Benzene	ND		0.28
Trichloroethene	ND		0.59
1,2-Dichloropropane	ND		0.28
Bromodichloromethane	ND		0.28
2-Chloroethylvinyl Ether	ND		0.34
cis-1,3-Dichloropropene	ND		0.23
Toluene	ND		0.34
trans-1,3-Dichloropropene	ND		0.14
1,1,2-Trichloroethane	ND		0.39
Tetrachloroethene	ND		0.31
Dibromochloromethane	ND		0.23
Chlorobenzene	ND		0.37
Ethylbenzene	ND		0.2
Total Xylenes	ND		0.79
Bromoform	ND		0.25
1,1,2,2-Tetrachloroethane	ND		0.39
1,3-Dichlorobenzene	ND		0.25
1,4-Dichlorobenzene	ND		0.25
1,2-Dichlorobenzene	ND		0.39

Total Target Compounds: 0

000001

3925

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: N/A
Date Received: NA
Date Analyzed: 04/05/2001
Data file: G9506.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

000032

Response Factor Report 5970 - In

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration

Calibration Files
20 =G9456.D 5 =G9459.D 100 =G9457.D

		Compound	20	5	100	Avg	%RSD
			ISTD				
1)	I	Pentafluorobenzene					
2)	T	Dichlorodifluorometha	0.304	0.226	0.267	0.266	14.70
3)	P	Chloromethane	0.419	0.336	0.367	0.374	11.24
4)	C	Vinyl Chloride	0.274	0.213	0.268	0.252	13.24
5)	T	Bromomethane	0.160	0.134	0.097	0.130	24.35
6)	T	Chloroethane	0.127	0.114	0.098	0.113	12.44
7)	T	Trichlorofluoromethan	0.258	0.190	0.310	0.253	23.82
8)	T	Acrolein	0.019	0.015	0.022	0.019	18.18
9)	MC	1,1-Dichloroethene	0.218	0.175	0.226	0.206	13.30
10)	T	Acetone	0.078	0.091	0.085	0.085	7.52
11)	T	Carbon Disulfide	0.739	0.498	0.780	0.672	22.63
12)	T	Vinyl Acetate	1.886	1.826	1.985	1.899	4.24
13)	T	Methylene Chloride	0.326	0.265	0.294	0.295	10.42
14)	T	Acrylonitrile	0.082	0.076	0.091	0.083	9.11
15)	T	t-Butyl Alcohol(TBA)	0.018	0.018	0.024	0.020	17.83
16)	T	trans-1,2-Dichloroeth	0.288	0.262	0.290	0.280	5.58
17)	T	Methyl-t-Butyl Ether(	0.798	0.666	0.779	0.748	9.54
18)	P	1,1-Dichloroethane	0.753	0.686	0.742	0.727	4.94
19)	T	Diisopropyl Ether(DIP	2.057	1.868	2.049	1.991	5.38
20)	T	cis-1,2-Dichloroethen	0.531	0.454	0.530	0.505	8.80
21)	T	2,2-Dichloropropane	0.568	0.466	0.597	0.543	12.68
22)	T	2-Butanone(MEK)	0.277	0.277	0.255	0.270	4.71
23)	T	Bromochloromethane	0.308	0.282	0.316	0.302	5.86
25)	C	Chloroform	0.962	0.896	0.986	0.948	4.95
26)	T	1,1,1-Trichloroethane	0.705	0.588	0.785	0.693	14.27
27)	T	Carbon Tetrachloride	0.623	0.529	0.716	0.623	14.94
28)	T	1,1-Dichloropropene	0.616	0.521	0.640	0.592	10.60
29)	T	1,2-Dichloroethane(ED	0.858	0.765	0.814	0.813	5.72
30)	S	1,2-Dichloroethane-d4	0.559	0.574	0.548	0.560	2.34
			ISTD				
31)	I	1,4-Difluorobenzene					
32)	M	Benzene	1.524	1.446	1.493	1.488	2.63
33)	M	Trichloroethene	0.432	0.406	0.487	0.442	9.26
34)	C	1,2-Dichloropropane	0.435	0.431	0.464	0.443	3.99
35)	T	Dibromomethane	0.302	0.269	0.334	0.302	10.76
36)	T	1,4-Dioxane	0.046	0.045	0.051	0.047	6.40
37)	T	Bromodichloromethane	0.599	0.470	0.671	0.580	17.50
38)	T	2-Chloroethylvinyl Et	0.277	0.223	0.324	0.275	18.31
39)	T	cis-1,3-Dichloroprope	0.681	0.554	0.788	0.674	17.36
40)	T	4-Methyl-2-pentanone(	0.475	0.445	0.565	0.495	12.71
41)	S	Toluene-d8	1.182	1.188	1.194	1.188	0.51
42)	MC	Toluene	1.027	0.990	1.096	1.038	5.16
43)	T	trans-1,3-Dichloropro	0.613	0.498	0.721	0.611	18.22
44)	T	1,1,2-Trichloroethane	0.334	0.312	0.371	0.339	8.80
45)	T	Tetrachloroethene	0.544	0.502	0.568	0.538	6.19
46)	T	1,3-Dichloropropane	0.724	0.656	0.728	0.703	5.80
47)	T	2-Hexanone	0.337	0.313	0.420	0.357	15.73
48)	T	Dibromochloromethane	0.499	0.364	0.607	0.490	24.88
49)	T	1,2-Dibromoethane(EDB	0.439	0.386	0.494	0.440	12.28

			ISTD				
50)	I	Chlorobenzene-d5				1.509	2.70
51)	MP	Chlorobenzene	1.507	1.469	1.551	0.577	8.78
52)	T	1,1,1,2-Tetrachloroet	0.573	0.529	0.630	2.515	5.72
[illegible]	C	Ethylbenzene	2.575	2.350	2.619	0.880	4.68
[illegible]	T	m,p-Xylene	0.903	0.833	0.905	0.836	10.80
55)	T	o-Xylene	0.887	0.732	0.890	1.450	12.98
56)	T	Styrene	1.507	1.240	1.604	0.441	27.00
57)	P	Bromoform	0.443	0.322	0.560	2.198	17.23
58)	T	Isopropylbenzene	2.262	1.791	2.540	0.643	3.97
59)	S	Bromofluorobenzene	0.618	0.642	0.669	0.653	6.24
60)	P	1,1,2,2-Tetrachloroet	0.626	0.633	0.700	0.771	4.30
61)	T	Bromobenzene	0.748	0.756	0.809	0.580	3.96
62)	T	1,2,3-Trichloropropan	0.571	0.564	0.607	3.016	7.42
63)	T	n-Propylbenzene	3.088	2.765	3.195	2.021	7.99
64)	T	2-Chlorotoluene	1.992	1.876	2.195	2.174	14.30
65)	T	1,3,5-Trimethylbenzen	2.146	1.878	2.498	2.322	13.79
66)	T	4-Chlorotoluene	2.431	1.961	2.574	1.834	14.23
67)	T	tert-Butylbenzene	1.858	1.562	2.082	2.325	11.13
68)	T	1,2,4-Trimethylbenzen	2.380	2.043	2.552	2.507	13.32
69)	T	sec-Butylbenzene	2.534	2.160	2.826	1.529	3.33
70)	T	1,3-Dichlorobenzene	1.566	1.471	1.550	2.193	12.25
71)	T	4-Isopropyltoluene	2.204	1.919	2.456	1.565	6.39
72)	T	1,4-Dichlorobenzene	1.560	1.467	1.667	2.099	18.39
73)	T	n-Butylbenzene	2.112	1.706	2.478	1.537	5.43
74)	T	1,2-Dichlorobenzene	1.548	1.449	1.614	0.108	23.84
75)	T	1,2-Dibromo-3-chlorop	0.107	0.083	0.134	1.113	14.30
76)	T	1,2,4-Trichlorobenzen	1.121	0.951	1.269	0.408	7.75
77)	T	Hexachlorobutadiene	0.408	0.377	0.440	1.896	23.18
78)	T	Naphthalene	1.872	1.469	2.348	1.030	7.33
[illegible]9)	T	1,2,3-Trichlorobenzen	0.985	0.987	1.117	0.230	2.05
[illegible])	T	Ethane, 1,1,2-trichlo	0.235	0.229	0.225	0.282	3.25
[illegible]1)	T	Methyl Acetate	0.292	0.276	0.277	0.398	0.20
82)	T	Cyclohexane	0.397	0.398	0.398	0.583	6.75
83)	T	Methyl Cyclohexane	0.619	0.541	0.588		

(#) = Out of Range

VG040401.M Thu Apr 05 13:20:50 2001 MSD-G

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9504.D
Acq On : 5 Apr 2001 1:07
Sample : 20PPB,STD-20PPB,A,5mL,100
Misc : NA,NA,NA
MS Integration Params: LSCINT.P

Vial: 2
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	106	0.00
2	T	Dichlorodifluoromethane	0.266	0.290	-9.0	101	0.01
3	P	Chloromethane	0.374	0.316	15.5	80	0.00
4	C	Vinyl Chloride	0.252	0.239	5.2	93	-0.01
5	T	Bromomethane	0.130	0.116	10.8	77	0.00
6	T	Chloroethane	0.113	0.108	4.4	91	0.00
7	T	Trichlorofluoromethane	0.253	0.276	-9.1	113	-0.01
8	T	Acrolein	0.019	0.018	5.3	101	0.00
9	MC	1,1-Dichloroethene	0.206	0.203	1.5	99	0.00
10	T	Acetone	0.085	0.085	0.0	115	0.00
11	T	Carbon Disulfide	0.672	0.678	-0.9	97	0.00
12	T	Vinyl Acetate	1.899	1.881	0.9	106	0.00
13	T	Methylene Chloride	0.295	0.283	4.1	92	0.00
14	T	Acrylonitrile	0.083	0.081	2.4	105	0.00
15	T	t-Butyl Alcohol(TBA)	0.020	0.019	5.0	117	-0.01
16	T	trans-1,2-Dichloroethene	0.280	0.277	1.1	102	0.00
17	T	Methyl-t-Butyl Ether(MTBE)	0.748	0.772	-3.2	102	0.00
18	P	1,1-Dichloroethane	0.727	0.698	4.0	98	0.00
19	T	Diisopropyl Ether(DIPE)	1.991	1.948	2.2	100	0.00
20	T	cis-1,2-Dichloroethene	0.505	0.513	-1.6	102	0.00
21	T	2,2-Dichloropropane	0.543	0.584	-7.6	109	0.00
22	T	2-Butanone(MEK)	0.270	0.313	-15.9	120	0.00
23	T	Bromochloromethane	0.302	0.297	1.7	102	-0.01
25	C	Chloroform	0.948	0.909	4.1	100	-0.01
26	T	1,1,1-Trichloroethane	0.693	0.720	-3.9	108	-0.01
27	T	Carbon Tetrachloride	0.623	0.646	-3.7	110	0.00
28	T	1,1-Dichloropropene	0.592	0.621	-4.9	107	-0.01
29	T	1,2-Dichloroethane(EDC)	0.813	0.828	-1.8	102	-0.01
30	S	1,2-Dichloroethane-d4	0.560	0.561	-0.2	106	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	101	-0.01
32	M	Benzene	1.488	1.570	-5.5	104	0.00
33	M	Trichloroethene	0.442	0.447	-1.1	104	0.00
34	C	1,2-Dichloropropane	0.443	0.449	-1.4	104	0.00
35	T	Dibromomethane	0.302	0.314	-4.0	105	0.00
37	T	Bromodichloromethane	0.580	0.595	-2.6	100	0.00
38	T	2-Chloroethylvinyl Ether	0.275	0.312	-13.5	114	0.00
39	T	cis-1,3-Dichloropropene	0.674	0.645	4.3	95	0.00
40	T	4-Methyl-2-pentanone(MIBK)	0.495	0.551	-11.3	117	0.00
41	S	Toluene-d8	1.188	1.178	0.8	100	0.00
42	MC	Toluene	1.038	1.118	-7.7	110	0.00
43	T	trans-1,3-Dichloropropene	0.611	0.608	0.5	100	0.00
44	T	1,1,2-Trichloroethane	0.339	0.335	1.2	101	0.00
45	T	Tetrachloroethene	0.538	0.555	-3.2	103	0.00
46	T	1,3-Dichloropropane	0.703	0.710	-1.0	99	0.00

47	T	2-Hexanone	0.357	0.393	-10.1	118	0.00
48	T	Dibromochloromethane	0.490	0.492	-0.4	99	0.00
49	T	1,2-Dibromoethane(EDB)	0.440	0.455	-3.4	104	0.00
[illegible]	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00
[illegible]	MP	Chlorobenzene	1.509	1.562	-3.5	103	0.00
[illegible]	T	1,1,1,2-Tetrachloroethane	0.577	0.573	0.7	99	0.00
[illegible]	C	Ethylbenzene	2.515	2.719	-8.1	105	0.00
54	T	m,p-Xylene	0.880	0.898	-2.0	98	-0.01
55	T	o-Xylene	0.836	0.915	-9.4	102	0.00
56	T	Styrene	1.450	1.669	-15.1	110	0.00
57	P	Bromoform	0.441	0.486	-10.2	109	0.00
58	T	Isopropylbenzene	2.198	2.518	-14.6	110	0.00
59	S	Bromofluorobenzene	0.643	0.702	-9.2	112	0.00
60	P	1,1,2,2-Tetrachloroethane	0.653	0.702	-7.5	111	0.00
61	T	Bromobenzene	0.771	0.890	-15.4	118	0.00
62	T	1,2,3-Trichloropropane	0.580	0.667	-15.0	116	-0.01
63	T	n-Propylbenzene	3.016	3.617	-19.9	116	0.00
64	T	2-Chlorotoluene	2.021	2.293	-13.5	114	0.00
65	T	1,3,5-Trimethylbenzene	2.174	2.495	-14.8	115	0.00
66	T	4-Chlorotoluene	2.322	2.679	-15.4	109	0.00
67	T	tert-Butylbenzene	1.834	2.116	-15.4	113	0.00
68	T	1,2,4-Trimethylbenzene	2.325	2.691	-15.7	112	0.00
69	T	sec-Butylbenzene	2.507	2.870	-14.5	112	0.00
70	T	1,3-Dichlorobenzene	1.529	1.722	-12.6	109	0.00
71	T	4-Isopropyltoluene	2.193	2.574	-17.4	116	0.00
72	T	1,4-Dichlorobenzene	1.565	1.720	-9.9	109	-0.01
73	T	n-Butylbenzene	2.099	2.419	-15.2	113	0.00
74	T	1,2-Dichlorobenzene	1.537	1.683	-9.5	108	0.00
75	T	1,2-Dibromo-3-chloropropane	0.108	0.127	-17.6	117	-0.01
76	T	1,2,4-Trichlorobenzene	1.113	1.256	-12.8	111	0.00
[illegible]	T	Hexachlorobutadiene	0.408	0.418	-2.5	102	0.00
[illegible]	T	Naphthalene	1.896	2.241	-18.2	119	0.00
[illegible]	T	1,2,3-Trichlorobenzene	1.030	1.155	-12.1	116	-0.01
80	T	Ethane, 1,1,2-trichloro-1,2	0.230	0.251	-9.1	106	0.00
81	T	Methyl Acetate	0.282	0.298	-5.7	101	0.00
82	T	Cyclohexane	0.398	0.448	-12.6	112	-0.01
83	T	Methyl Cyclohexane	0.583	0.694	-19.0	111	0.00

(#) = Out of Range
G9456.D VG040401.M Fri Apr 06 14:34:21 2001 MSD-G

000006

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/05/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	AQUEOUS	G9506.D	110	98	99
1986-001	AQUEOUS	G9507.D	108	113	88
1986-003	AQUEOUS	G9510.D	104	98	104
2066-005MS	AQUEOUS	G9511.D	99	101	99
2066-005MSD	AQUEOUS	G9512.D	111	101	102
LFB	AQUEOUS	G9513.D	100	98	104
1986-006	AQUEOUS	G9516.D	106	102	98
1986-007	AQUEOUS	G9517.D	111	103	95
2066-001	AQUEOUS	G9518.D	112	102	101
2066-002	AQUEOUS	G9519.D	115	101	104
2066-003	AQUEOUS	G9520.D	106	100	102
2094-003	AQUEOUS	G9525.D	89	97	96
2094-004	AQUEOUS	G9526.D	96	94	98
2094-005	AQUEOUS	G9527.D	93	95	100
2094-006	AQUEOUS	G9529.D	89	95	99
2094-007	AQUEOUS	G9531.D	95	94	88
2094-009	AQUEOUS	G9533.D	96	97	97
2094-002	AQUEOUS	G9534.D	94	97	92
2076-003	AQUEOUS	G9535.D	97	97	96
2076-005	AQUEOUS	G9538.D	97	94	88
2094-001	AQUEOUS	G9541.D	96	90	88
2094-005DIL	AQUEOUS	G9542.D	103	97	90
2094-008	AQUEOUS	G9543.D	109	95	86

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	77-126
SMC2 = Toluene-d8	30 ppb	82-118
SMC3 = Bromofluorobenzene	30 ppb	82-113

Column to be used to flag recovery values

AQUEOUS VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 2066-005

Batch No.: GA0049

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.0	0.0	17.1	86	48 - 172
Benzene	20.0	0.0	20.7	104	61 - 135
Trichloroethene	20.0	0.0	21.4	107	64 - 161
Toluene	20.0	0.0	20.7	104	55 - 140
Chlorobenzene	20.0	0.0	20.9	105	63 - 127

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	#	MSD % REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	0.0	18.9		95	10	21	48 - 172
Benzene	0.0	18.9		95	9	12	61 - 135
Trichloroethene	0.0	19.6		98	9	16	64 - 161
Toluene	0.0	18.6		93	11	14	55 - 140
Chlorobenzene	0.0	19.1		96	9	11	63 - 127

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __5__ outside limits

Spike Recovery: __0___ out of __10__ outside limits

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 2066-005MS
Client ID: MS
Date Received: NA
Date Analyzed: 04/05/2001
Data file: G9511.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
Chloromethane	20.0	0.0	14.9	75	0.0	15.8	79
Vinyl Chloride	20.0	0.0	22.5	112	0.0	22.1	111
Bromomethane	20.0	0.0	21.2	106	0.0	19.3	96
Chloroethane	20.0	0.0	18.0	90	0.0	18.9	94
Trichlorofluoromethane	20.0	0.0	22.7	113	0.0	23.4	117
Acrolein	20.0	0.0	156.0	780	0.0	142.0	710
1,1-Dichloroethene	20.0	0.0	17.1	85	0.0	18.9	94
Methylene Chloride	20.0	0.0	17.1	86	0.0	16.6	83
Acrylonitrile	20.0	0.0	111.7	559	0.0	114.8	574
trans-1,2-Dichloroethene	20.0	0.0	18.2	91	0.0	16.8	84
1,1-Dichloroethane	20.0	0.0	17.2	86	0.0	19.7	98
Chloroform	20.0	0.0	19.2	96	0.0	19.2	96
1,1,1-Trichloroethane	20.0	0.0	21.7	109	0.0	21.2	106
Carbon Tetrachloride	20.0	0.0	23.7	118	0.0	22.6	113
1,2-Dichloroethane(EDC)	20.0	0.0	20.9	105	0.0	20.6	103
Benzene	20.0	0.0	20.7	103	0.0	18.9	94
Trichloroethene	20.0	0.0	21.4	107	0.0	19.6	98
1,2-Dichloropropane	20.0	0.0	20.4	102	0.0	19.2	96
Bromodichloromethane	20.0	0.0	20.2	101	0.0	18.2	91
2-Chloroethylvinyl Ether	20.0	0.0	21.6	108	0.0	19.8	99
cis-1,3-Dichloropropene	20.0	0.0	19.9	99	0.0	18.9	94
Toluene	20.0	0.0	20.7	104	0.0	18.6	93
trans-1,3-Dichloropropene	20.0	0.0	22.1	110	0.0	19.9	100
1,1,2-Trichloroethane	20.0	0.0	21.9	109	0.0	21.6	108
Tetrachloroethene	20.0	0.0	21.6	108	0.0	20.3	102
Dibromochloromethane	20.0	0.0	20.0	100	0.0	19.5	97
Chlorobenzene	20.0	0.0	20.9	104	0.0	19.1	95
Ethylbenzene	20.0	0.0	21.6	108	0.0	19.2	96
total-Xylenes	60.0	0.0	63.6	106	0.0	59.5	99
Bromoform	20.0	0.0	19.3	97	0.0	18.8	94
1,1,2,2-Tetrachloroethane	20.0	0.0	21.6	108	0.0	20.4	102
1,3-Dichlorobenzene	20.0	0.0	21.0	105	0.0	18.8	94
1,4-Dichlorobenzene	20.0	0.0	21.5	108	0.0	19.2	96
1,2-Dichlorobenzene	20.0	0.0	20.5	103	0.0	18.2	91

000099

3933

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G9456.D

Date Analyzed: 04/04/2001

Instrument ID: MSD_G

Time Analyzed: 1:35

	30UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	1282246		6.03		1662417		6.83		1453947		10.11	
	UPPER LIMIT	2564492		6.53		3324834		7.33		2907894		10.61	
	LOWER LIMIT	641123		5.53		831208.5		6.33		726973.5		9.61	
	LAB SAMPLE ID												
01	STD-100PPB	1311542		6.03		1608994		6.82		1492896		10.12	
02	STD-5PPB	1418041		6.04		1748927		6.82		1506658		10.11	
03	TVH_1PPM	1309229		6.04		1636246		6.82		1396658		10.11	
04	METHOD-BLK	1209924		6.04		1576492		6.82		1339257		10.10	
05	1965-001	1224344		6.04		1589361		6.82		1366669		10.11	
06	1965-003MS	1290744		6.04		1635192		6.82		1478989		10.12	
07	1965-003MSD	1389726		6.03		1700005		6.83		1413036		10.11	
08	1965-002	1342064		6.03		1662835		6.82		1494929		10.11	
09	1965-003	1196562		6.03		1527169		6.81		1348503		10.10	
10	1965-004	1165184		6.04		1490034		6.82		1298883		10.11	
11	1991-001	1164196		6.03		1527078		6.83		1375864		10.11	
12	1991-003	1200998		6.03		1572467		6.82		1299577		10.10	
13	1991-004	1196949		6.04		1471688		6.82		1227683		10.10	
14	1991-005	1207858		6.05		1512058		6.82		1278852		10.10	
15	1991-006	1236826		6.03		1525787		6.82		1341088		10.11	
16	1991-002	1269223		6.04		1709226		6.82		1480672		10.10	
17	1986-002	1338742		6.04		1696890		6.82		1515316		10.10	
18	1986-004	1323250		6.05		1725375		6.83		1560856		10.10	
21	1986-005	1488133		6.04		1930402		6.82		1731899		10.11	
22	1986-007	1546846		6.04		1854310		6.83		1647997		10.10	

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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.

FORM 8

000199

3934

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): G9504.D

Date Analyzed: 04/05/2001

Instrument ID: MSD_G

Time Analyzed: 1:07

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	1358771	6.03	1675298	6.81	1439364	10.11
	UPPER LIMIT	2717542	6.53	3350596	7.31	2878728	10.61
	LOWER LIMIT	679385.5	5.53	837649	6.31	719682	9.61
	LAB SAMPLE ID						
01	METHOD-BLK	1238941	6.04	1538883	6.82	1272667	10.11
02	1986-001	1297554	6.04	1751709	6.82	1578399	10.11
03	1986-003	1166047	6.03	1552093	6.83	1304060	10.11
04	2066-005MS	1361476	6.04	1647393	6.83	1432205	10.11
05	2066-005MSD	1286344	6.05	1651790	6.83	1446664	10.11
06	LFB	1379089	6.05	1793404	6.83	1485437	10.11
07	1986-006	1236445	6.04	1479719	6.83	1320249	10.11
08	1986-007	1253092	6.05	1530770	6.83	1318231	10.12
09	2066-001	1227453	6.05	1541998	6.83	1326238	10.11
10	2066-002	1190879	6.03	1548493	6.83	1249332	10.11
11	2066-003	1253361	6.04	1528541	6.82	1384338	10.11
12	2094-003	1375167	6.03	1646556	6.82	1476022	10.12
13	2094-004	1348599	6.05	1663559	6.83	1441848	10.12
14	2094-005	1395143	6.04	1698771	6.82	1462901	10.11
15	2094-006	1490408	6.04	1742454	6.84	1448292	10.12
16	2094-007	1418440	6.05	1722639	6.83	1549180	10.12
17	2094-009	1423269	6.05	1714607	6.83	1524343	10.12
18	2094-002	1451326	6.05	1725303	6.83	1497422	10.11
19	2076-003	1447442	6.04	1747185	6.83	1539333	10.12
20	2076-005	1440154	6.06	1741122	6.84	1549242	10.12
21	2094-001	1341740	6.06	1600368	6.83	1341404	10.12
22	2094-005DIL	1096226	6.05	1394424	6.84	1206068	10.13

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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 File ID (Standard): G9504.D

Date Analyzed: 04/05/2001

Instrument ID: MSD_G

ime Analyzed: 1:07

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	1358771	6.03	1675298	6.81	1439364	10.11
	UPPER LIMIT	2717542	6.53	3350596	7.31	2878728	10.61
	LOWER LIMIT	679385.5	5.53	837649	6.31	719682	9.61
	LAB SAMPLE ID						
23	2094-008	1037940	6.06	1340081	6.84	1201446	10.12
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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.

FORM 8

000102

3936

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9541.D Vial: 13
Acq On : 5 Apr 2001 21:19 Operator: BARBARA
Sample : FB,2094-001,A,5mL,100 Inst : 5970 - In
Misc : ENVTACT/ORBIS - NEWARK,4/03/01,4/04/01 Multiplr: 1.00
S Integration Params: LSCINT.P
Quant Time: Apr 6 9:54 2001 Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.06	168	1341740	30.00	UG	0.03
31) 1,4-Difluorobenzene	6.83	114	1600368	30.00	UG	0.00
50) Chlorobenzene-d5	10.12	117	1341404	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.38	65	723125	28.87	UG	0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.23%			
41) Toluene-d8	8.45	98	1706121	26.92	UG	0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 89.73%			
59) Bromofluorobenzene	11.52	95	762713	26.54	UG	0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 88.47%			

Target Compounds Qvalue

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

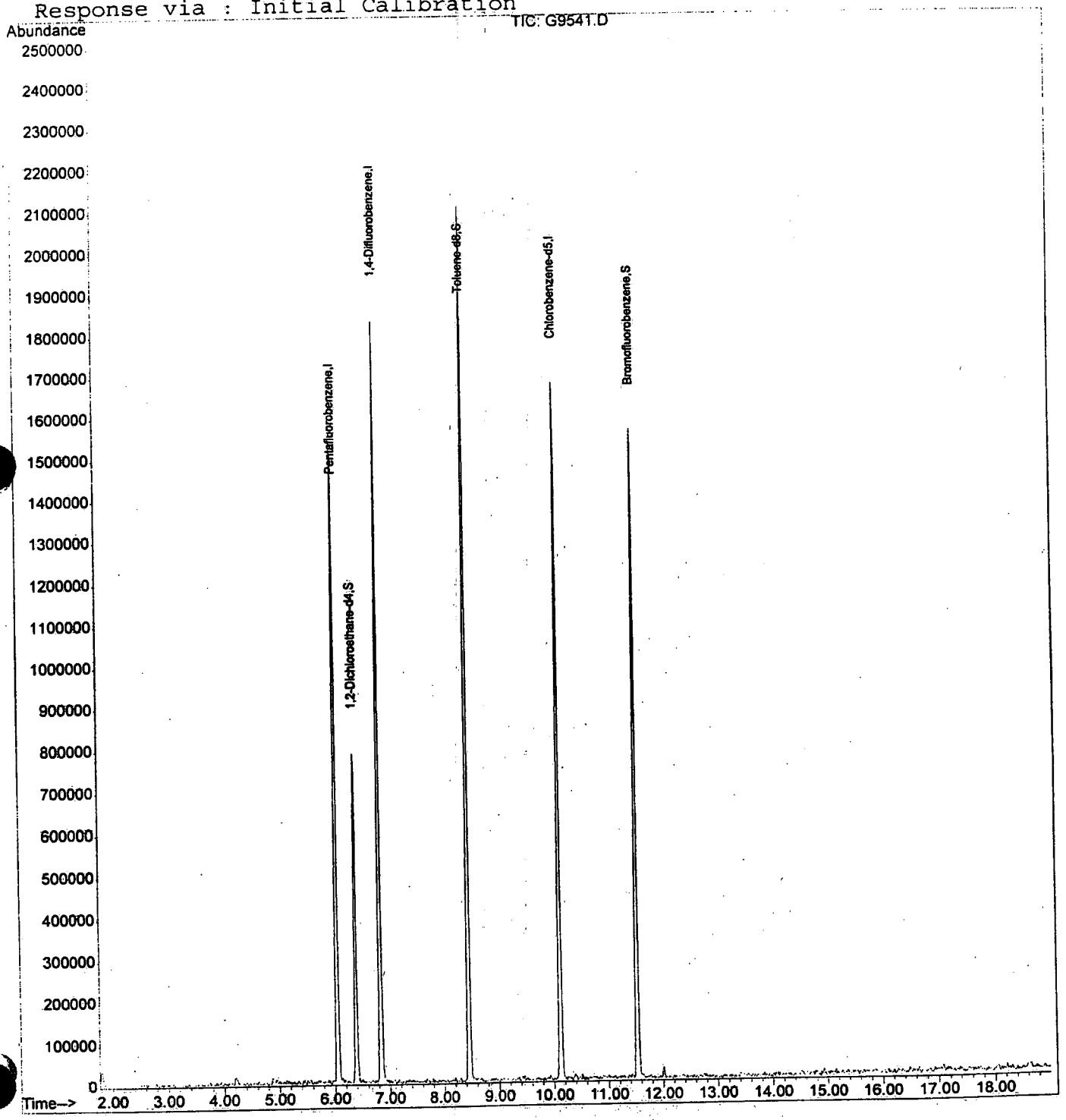
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9541.D
Acq On : 5 Apr 2001 21:19
Sample : FB,2094-001,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 9:54 2001

Vial: 13
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



000101

3938

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9541.D
Acq On : 5 Apr 2001 21:19
Sample : FB,2094-001,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 13
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.207	163	165	170	rBV2	17931	57959	1.17%	0.260%
2	6.042	286	289	294	rVV	1552780	3650028	73.85%	16.377%
3	6.380	307	312	317	rBV	785761	1949640	39.45%	8.747%
4	6.834	339	343	347	rBV	1826129	3857887	78.05%	17.309%
5	8.446	450	453	458	rBV	2099469	4942610	100.00%	22.176%
6	10.116	563	567	573	rVV	1676710	4020990	81.35%	18.041%
7	11.523	659	663	668	rBV	1558043	3754213	75.96%	16.844%
8	12.007	693	696	698	rVB2	27069	54755	1.11%	0.246%

Sum of corrected areas: 22288082

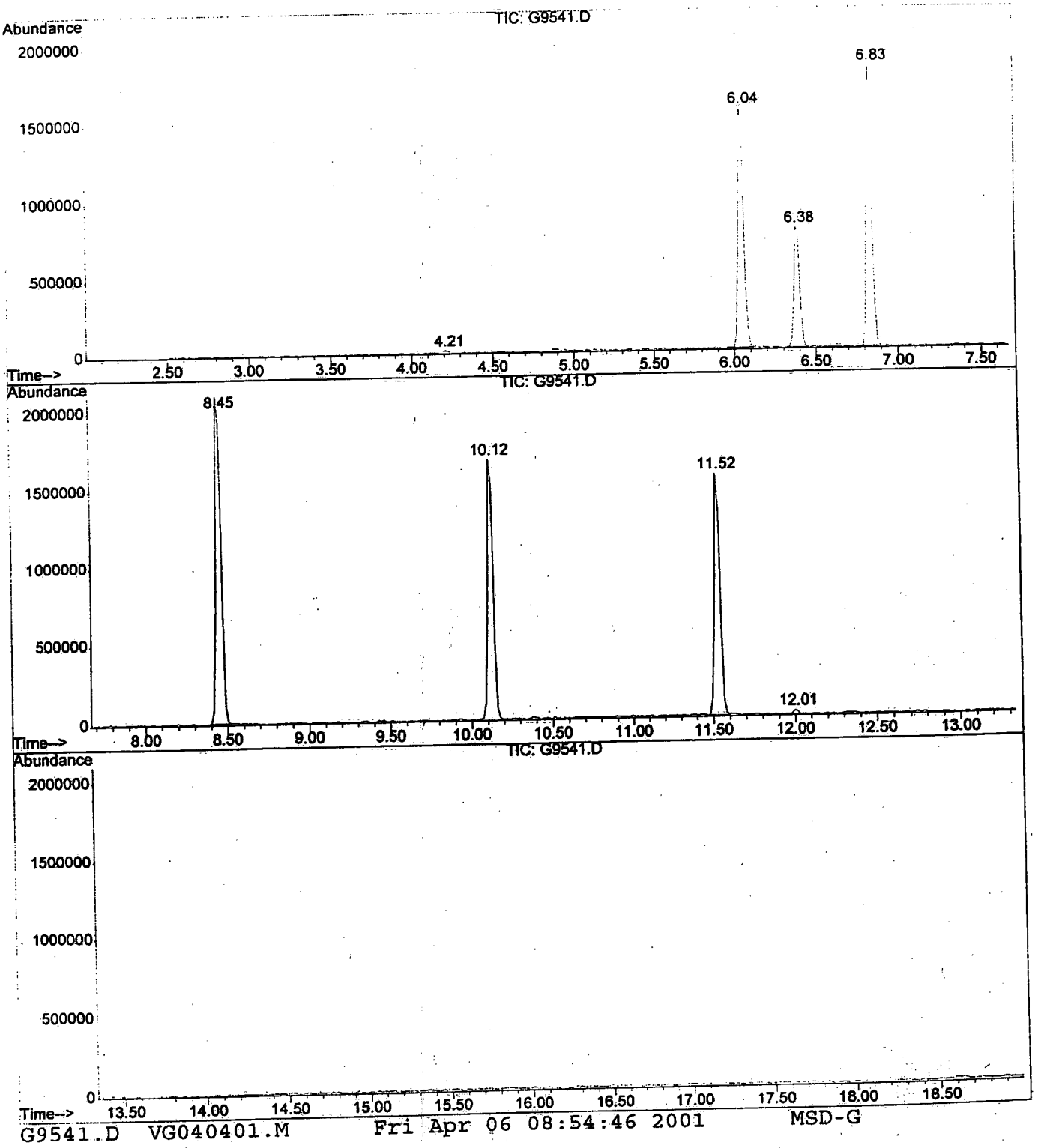
G9541.D VG040401.M Fri Apr 06 08:54:46 2001 MSD-G

000105

3939

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9541.D
Operator : BARBARA
Acquired : 5 Apr 2001 21:19 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: FB,2094-001,A,5mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 13
Quant File :VG040401.RES (RTE Integrator)



G9541.D VG040401.M Fri Apr 06 08:54:46 2001 MSD-G

3940

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9534.D
Acq On : 5 Apr 2001 15:08
Sample : TB,2094-002,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/02/01,4/04/01
S Integration Params: LSCINT.P
Quant Time: Apr 6 10:11 2001

Vial: 42
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.05	168	1451326	30.00	UG	0.02
31) 1,4-Difluorobenzene	6.83	114	1725303	30.00	UG	0.00
50) Chlorobenzene-d5	10.11	117	1497422	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.39	65	761077	28.09	UG	0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 93.63%			
41) Toluene-d8	8.45	98	1983366	29.02	UG	0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.73%			
59) Bromofluorobenzene	11.53	95	889606	27.73	UG	0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 92.43%			

Target Compounds Qvalue

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

000107

3941

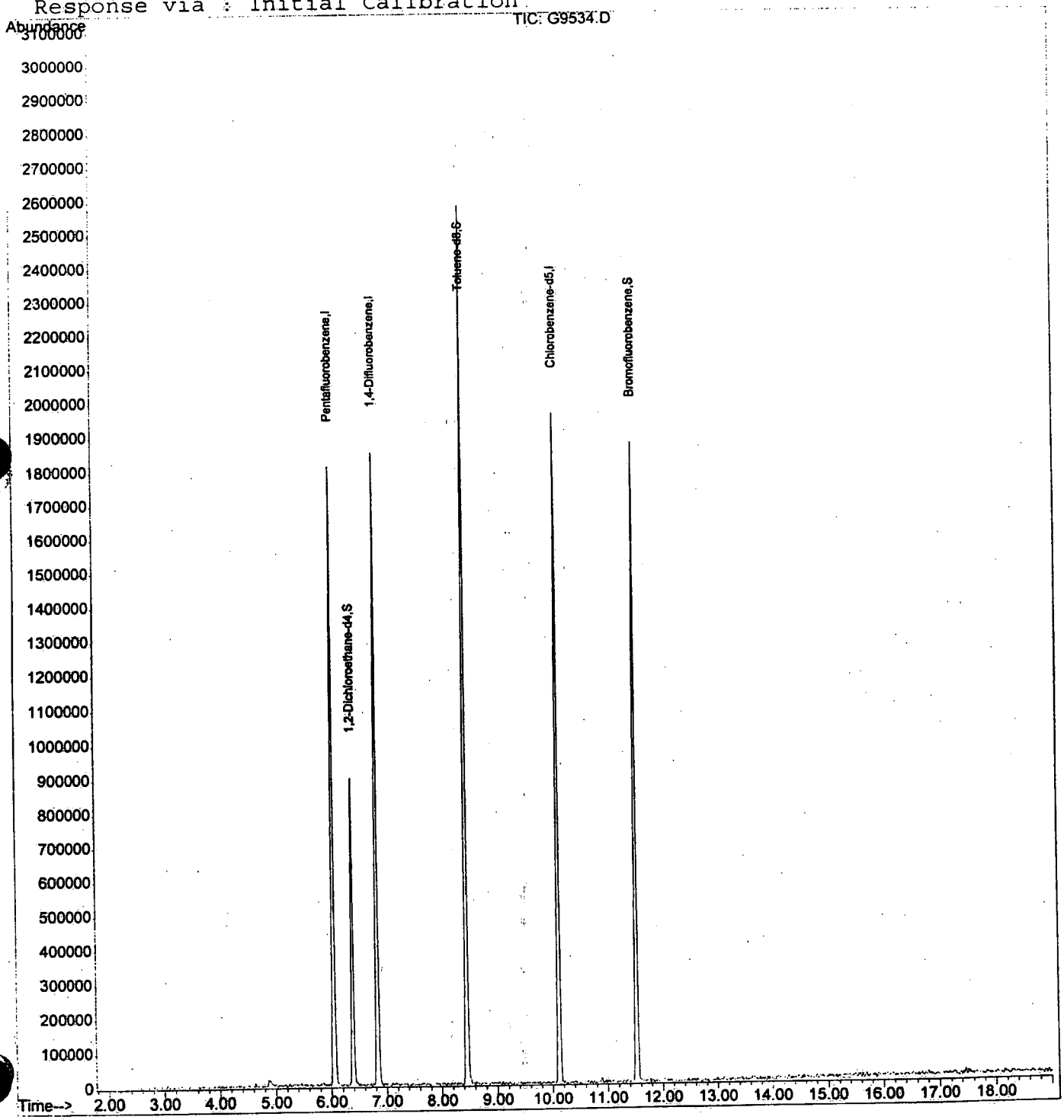
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9534.D
Acq On : 5 Apr 2001 15:08
Sample : TB,2094-002,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/02/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 10:11 2001

Vial: 42
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



000103

3942

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9534.D
Acq On : 5 Apr 2001 15:08
Sample : TB,2094-002,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/02/01,4/04/01
S Integration Params: LSCINT.P

Vial: 42
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.866	209	210	216	rBV	19060	64929	1.16%	0.262%
2	6.048	286	290	295	rBV	1808906	4025104	71.75%	16.245%
3	6.387	309	313	317	rBV	895850	1997082	35.60%	8.060%
4	6.829	339	343	350	rVB	1852115	4163771	74.23%	16.804%
5	8.451	449	453	457	rBV	2578976	5609544	100.00%	22.639%
6	10.114	562	566	570	rBV	1959297	4596439	81.94%	18.551%
7	11.527	658	662	666	rBV	1864852	4320919	77.03%	17.439%

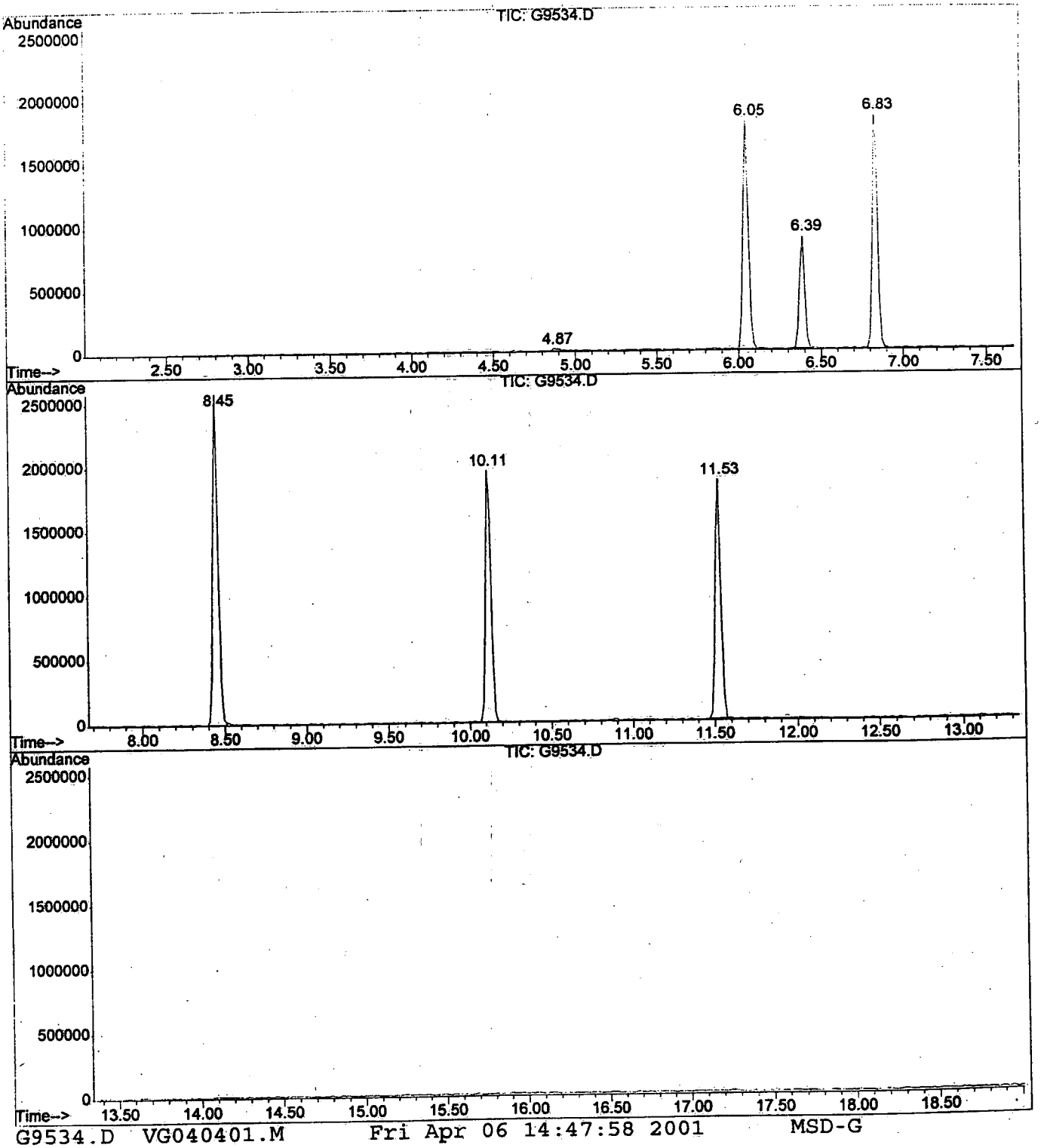
Sum of corrected areas: 24777788

G9534.D VG040401.M Fri Apr 06 14:47:58 2001 MSD-G

000109

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9534.D
Operator : BARBARA
Acquired : 5 Apr 2001 15:08 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: TB,2094-002,A,5mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/02/01,4/04/01
Vial Number: 42
Quant File :VG040401.RES (RTE Integrator)



G9534.D VG040401.M Fri Apr 06 14:47:58 2001 MSD-G

000119

3944

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9525.D
Acq On : 5 Apr 2001 11:24
Sample : MW-1,2094-003,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P
Quant Time: Apr 6 9:58 2001

Vial: 37
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00
Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.03	168	1375167	30.00	UG		0.00
31) 1,4-Difluorobenzene	6.82	114	1646556	30.00	UG		0.00
50) Chlorobenzene-d5	10.12	117	1476022	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.37	65	686633	26.74	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 89.13%				
41) Toluene-d8	8.44	98	1890056	28.98	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.60%				
59) Bromofluorobenzene	11.52	95	914202	28.91	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.37%				
Target Compounds							Qvalue
25) Chloroform	5.84	83	43390	1.00	UG		97
32) Benzene	6.45	78	841106	10.30	UG		99
51) Chlorobenzene	10.15	112	5671146	76.39	UG	#	100
74) 1,2-Dichlorobenzene	13.41	146	40621	0.54	UG	#	93

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

000111

3945

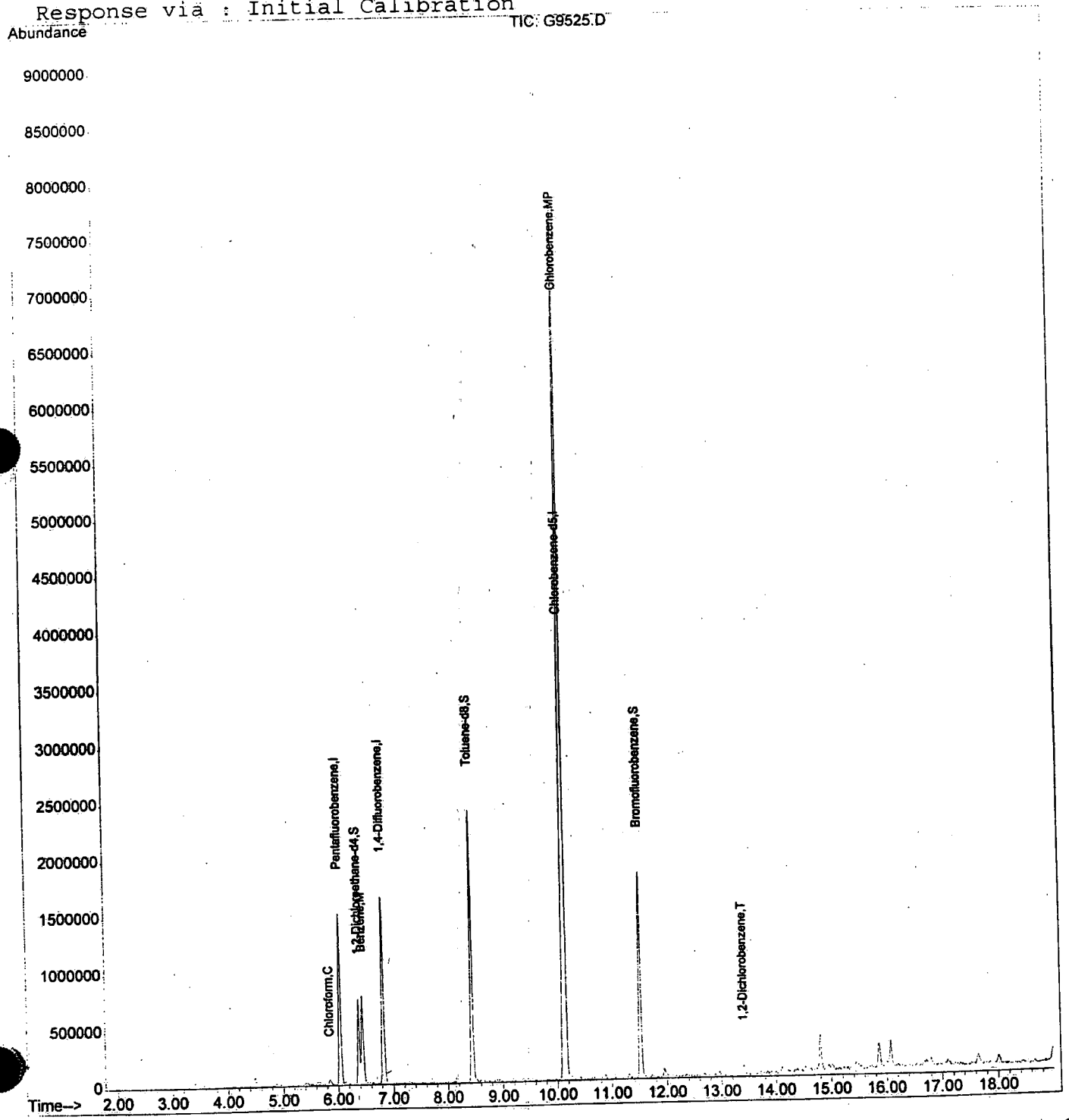
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9525.D
Acq On : 5 Apr 2001 11:24
Sample : MW-1,2094-003,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 9:58 2001

Vial: 37
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



000112

3946

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9525.D
Acq On : 5 Apr 2001 11:24
Sample : MW-1,2094-003,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 37
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.035	285	289	294	rBV	1516509	3761522	16.20%	7.933%
2	6.374	308	312	314	rBV	750433	1789794	7.71%	3.775%
3	6.449	314	317	324	rVB	771845	1999550	8.61%	4.217%
4	6.817	339	342	348	rVB	1651584	3949835	17.01%	8.330%
5	8.440	448	452	456	rBV	2402491	5388248	23.20%	11.363%
6	10.150	561	568	572	rBV2	7758788	23223731	100.00%	48.977%
7	11.522	657	661	666	rBV	1822813	4535490	19.53%	9.565%
8	14.807	880	884	888	rVB	313445	837675	3.61%	1.767%
9	15.855	951	955	960	rBV2	224271	688744	2.97%	1.453%
10	16.077	966	970	975	rVB3	238498	666124	2.87%	1.405%
11	16.712	1008	1013	1016	rBV5	53527	234982	1.01%	0.496%
12	17.640	1073	1076	1082	rVB6	93134	341661	1.47%	0.721%

Sum of corrected areas: 47417356

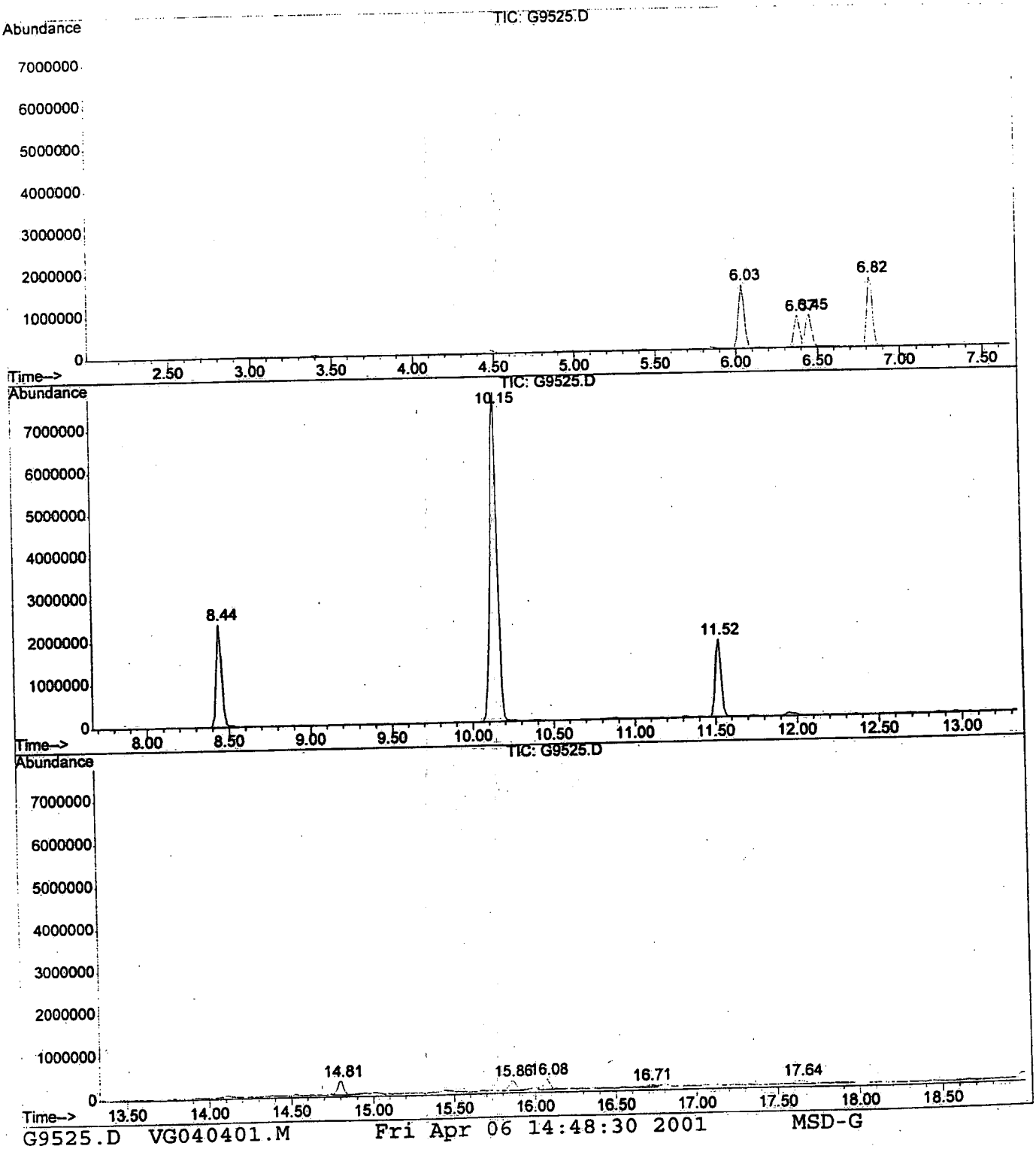
G9525.D VG040401.M Fri Apr 06 14:48:29 2001 MSD-G

000213

3947

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9525.D
Operator : BARBARA
Acquired : 5 Apr 2001 11:24 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: MW-1,2094-003,A,5mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 37
Quant File :VG040401.RES (RTE Integrator)



G9525.D VG040401.M Fri Apr 06 14:48:30 2001 MSD-G

3948

000111

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9526.D
Acq On : 5 Apr 2001 11:49
Sample : MW-2,2094-004,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Integration Params: LSCINT.P
Quant Time: Apr 6 10:00 2001

Vial: 38
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.05	168	1348599	30.00	UG	0.02
31) 1,4-Difluorobenzene	6.83	114	1663559	30.00	UG	0.00
50) Chlorobenzene-d5	10.12	117	1441848	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.37	65	724588	28.78	UG	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.93%			
41) Toluene-d8	8.44	98	1864882	28.30	UG	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.33%			
59) Bromofluorobenzene	11.51	95	904669	29.29	UG	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 97.63%			
Target Compounds						Qvalue
25) Chloroform	5.86	83	20592	0.48	UG	99
32) Benzene	6.45	78	29442	0.36	UG	99

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

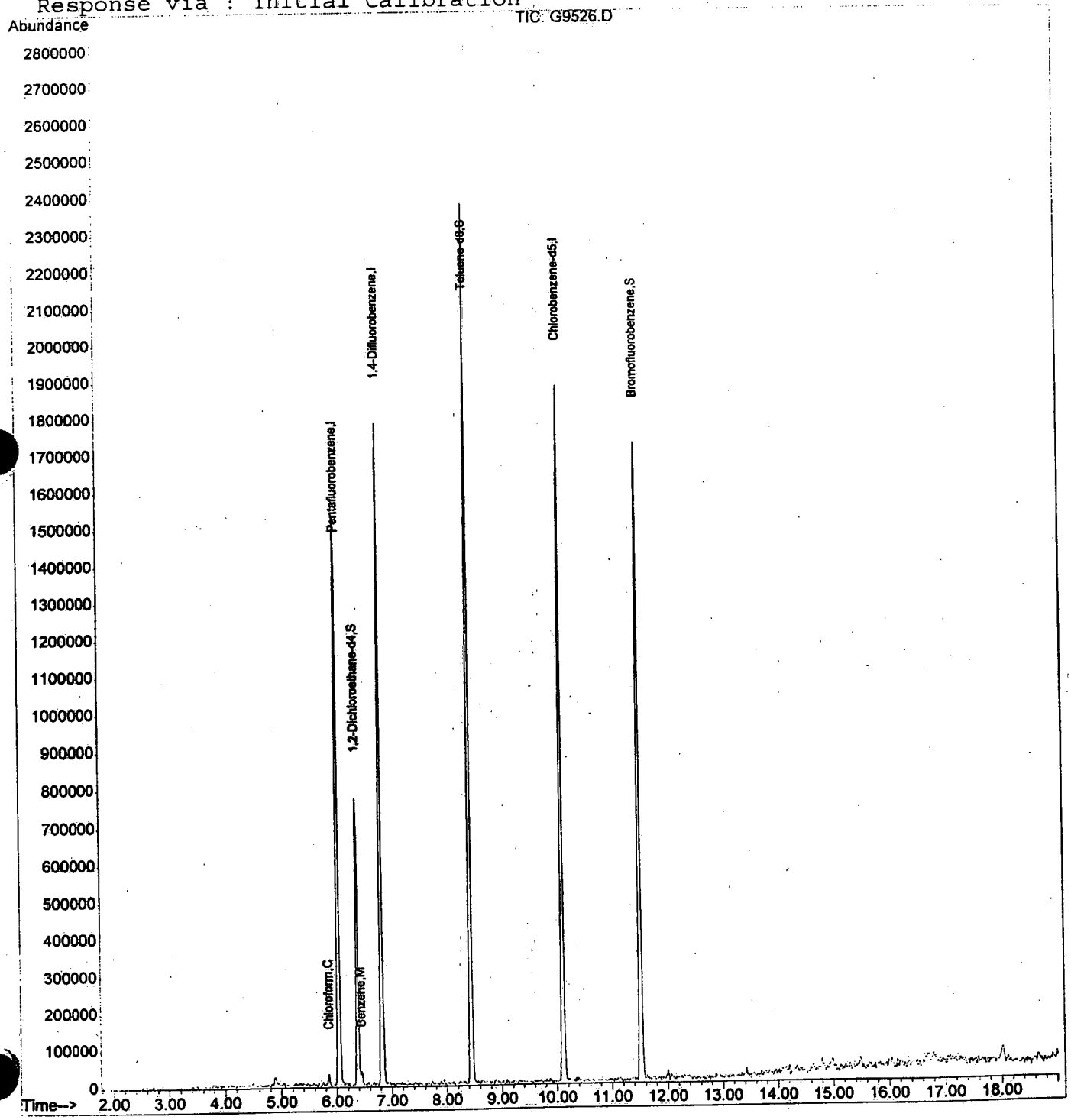
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9526.D
Acq On : 5 Apr 2001 11:49
Sample : MW-2,2094-004,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 10:00 2001

Vial: 38
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



000116

3950

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9526.D
Acq On : 5 Apr 2001 11:49
Sample : MW-2,2094-004,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial: 38
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00
S Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Filtering: 5
Sampling : 1
Min Area: 1 % of largest Peak
Start Thrs: 0.2
Max Peaks: 100
Stop Thrs : 0
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.887	209	212	217	rVV2	21750	68509	1.28%	0.272%
2	5.857	274	278	281	rVB	31966	74692	1.39%	0.296%
3	6.033	286	290	295	rVV	1529282	3795496	70.78%	15.056%
4	6.372	309	313	317	rBV	768744	1875904	34.98%	7.441%
5	6.445	317	318	321	rVB2	35689	62972	1.17%	0.250%
6	6.827	340	344	349	rVB	1777954	3904178	72.80%	15.487%
7	8.444	450	454	458	rBV	2378382	5362692	100.00%	21.273%
8	10.118	564	568	572	rBV	1876813	4505716	84.02%	17.874%
9	11.514	659	663	668	rBV	1716834	4404978	82.14%	17.474%
10	11.999	692	696	698	rVB2	27724	55868	1.04%	0.222%
11	14.073	834	837	839	rBV3	17457	54991	1.03%	0.218%
12	14.337	849	855	858	rVV3	20887	85292	1.59%	0.338%
13	14.793	884	886	891	rVB6	32518	88402	1.65%	0.351%
14	14.984	894	899	901	rBV5	24764	97160	1.81%	0.385%
15	15.483	931	933	935	rVB3	30645	64482	1.20%	0.256%
16	16.041	969	971	974	rVB3	26457	65533	1.22%	0.260%
17	16.187	980	981	986	rVB5	15697	57001	1.06%	0.226%
18	16.672	1010	1014	1018	rVV6	30311	142091	2.65%	0.564%
19	16.789	1019	1022	1026	rVV4	27239	92691	1.73%	0.368%
20	18.022	1101	1106	1109	rVB4	43982	171139	3.19%	0.679%
21	18.595	1140	1145	1147	rBV5	22274	109054	2.03%	0.433%
22	18.654	1147	1149	1152	rVV4	23447	70025	1.31%	0.278%

Sum of corrected areas: 25208866

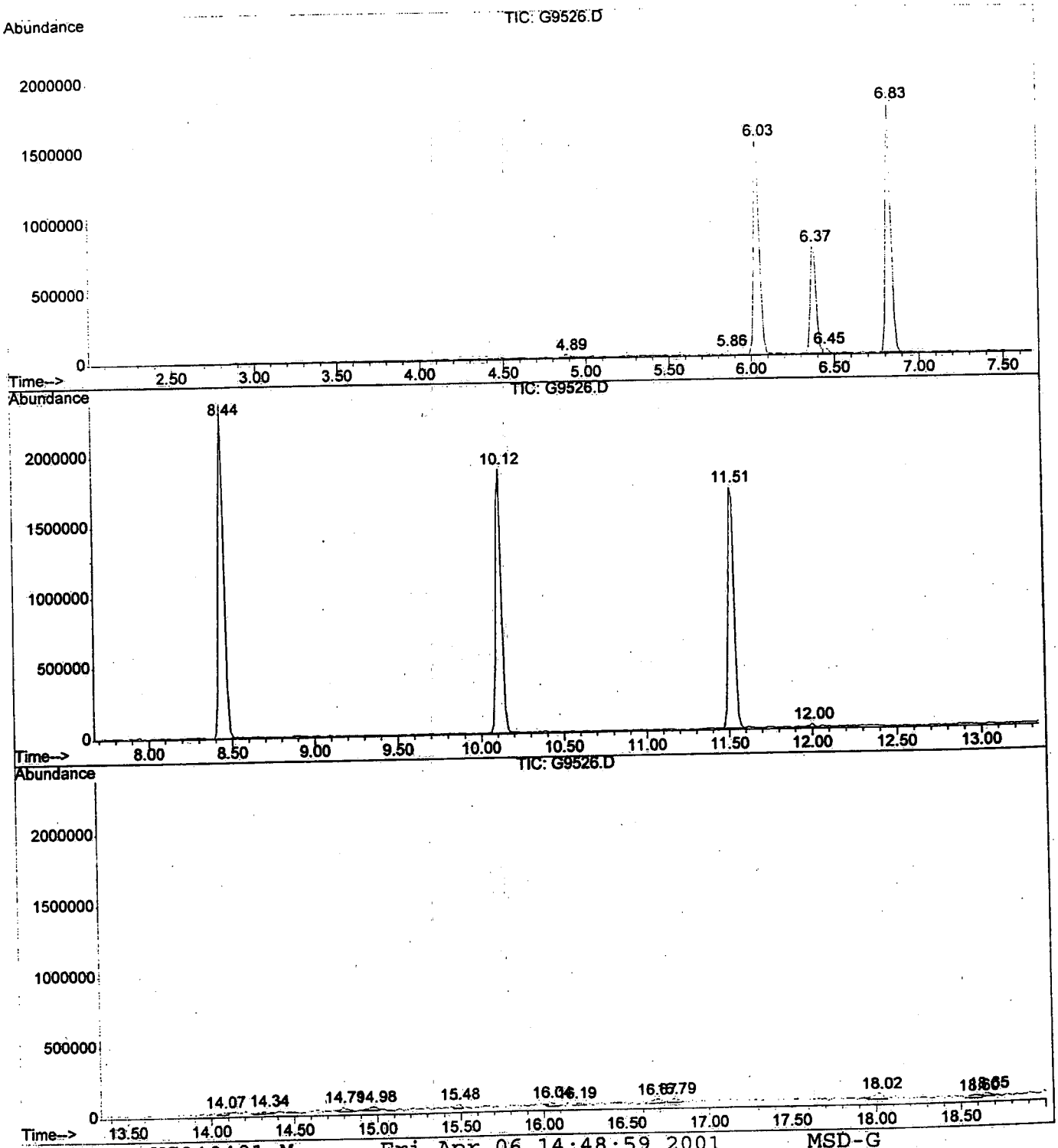
G9526.D VG040401.M Fri Apr 06 14:48:59 2001 MSD-G

000117

3951

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9526.D
Operator : BARBARA
Acquired : 5 Apr 2001 11:49 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: MW-2,2094-004,A,5mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 38
Quant File :VG040401.RES (RTE Integrator)



G9526.D VG040401.M Fri Apr 06 14:48:59 2001 MSD-G

000113

3952

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D Vial: 39
Acq On : 5 Apr 2001 12:14 Operator: BARBARA
Sample : MW-7,2094-005,A,5mL,100 Inst : 5970 - In
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01 Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Apr 6 16:30 2001 Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.04	168	1395143	30.00	UG		0.01
31) 1,4-Difluorobenzene	6.82	114	1698771	30.00	UG		0.00
50) Chlorobenzene-d5	10.11	117	1462901	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.38	65	726214	27.88	UG		0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 92.93%				
41) Toluene-d8	8.45	98	1917052	28.49	UG		0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.97%				
59) Bromofluorobenzene	11.52	95	943135	30.09	UG		0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 100.30%				
Target Compounds							Qvalue
25) Chloroform	5.85	83	20874303	473.47	UG		96
32) Benzene	6.44	78	4649357	55.19	UG		99
42) Toluene	8.52	92	940644	16.01	UG		93
44) 1,1,2-Trichloroethane	8.96	83	283373	14.77	UG		95
45) Tetrachloroethene	9.15	166	266681	8.75	UG	#	99
51) Chlorobenzene	10.16	112	174330	2.37	UG	#	99
53) Ethylbenzene	10.26	91	261501	2.13	UG		100
54) m,p-Xylene	10.39	106	45499	1.06	UG	#	100
74) 1,2-Dichlorobenzene	13.41	146	74640	1.00	UG	#	99

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

000119

3953

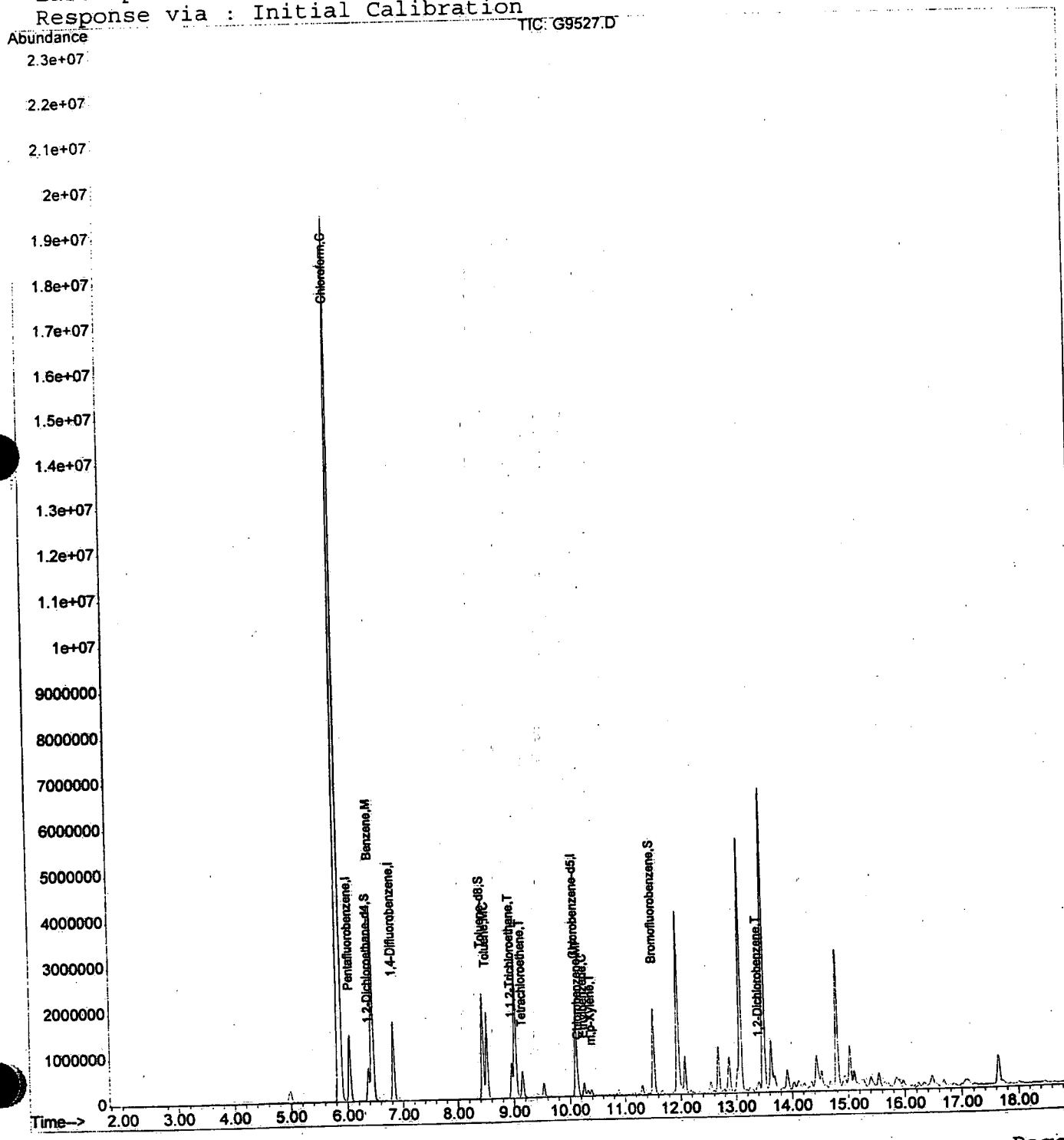
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 16:30 2001

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



39954

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.982	212	217	226	rVB	259385	969421	1.69%	0.524%
2	5.852	272	276	285	rVV	19438943	57255743	100.00%	30.947%
3	6.042	285	289	294	rVB	1461772	3848299	6.72%	2.080%
4	6.380	308	312	313	rBV	728951	1722588	3.01%	0.931%
5	6.439	313	316	322	rVB	4266698	11471585	20.04%	6.201%
6	6.822	338	342	348	rVB	1748318	4040451	7.06%	2.184%
7	8.445	448	452	454	rBV	2320062	5368756	9.38%	2.902%
8	8.519	454	457	464	rVB	1903210	4220597	7.37%	2.281%
[illegible]	8.962	483	487	489	rBV	771875	2148462	3.75%	1.161%
[illegible]	9.021	489	491	497	rVV	3111548	7274709	12.71%	3.932%
11	9.154	497	500	505	rVB	578693	1420651	2.48%	0.768%
12	9.538	522	526	529	rBV	308720	746805	1.30%	0.404%
13	10.111	561	565	571	rBV	2037939	5250614	9.17%	2.838%
14	10.258	571	575	577	rBV	288593	631942	1.10%	0.342%
15	11.524	657	661	665	rBV	1879620	4569262	7.98%	2.470%
16	11.951	686	690	696	rBV	3958172	9596139	16.76%	5.187%
17	12.083	696	699	702	rVB	822555	1880953	3.29%	1.017%
18	12.540	723	730	733	rBV3	252377	837651	1.46%	0.453%
19	12.687	736	740	743	rVV	1006235	2565534	4.48%	1.387%
20	12.878	748	753	757	rBV3	761348	2011909	3.51%	1.087%
21	13.084	760	767	771	rBV	5518197	13337275	23.29%	7.209%
22	13.408	783	789	791	rVV5	206516	666757	1.16%	0.360%
23	13.496	791	795	799	rVV	6608538	15407072	26.91%	8.328%
24	13.629	799	804	807	rVV2	1099472	3139466	5.48%	1.697%
25	13.688	807	808	815	rVB2	317951	680834	1.19%	0.368%
26	13.910	820	823	828	rVB2	432007	1171819	2.05%	0.633%
27	14.117	834	837	841	rVV3	175356	588706	1.03%	0.318%
28	14.441	855	859	863	rVV	723057	2567954	4.49%	1.388%
29	14.530	863	865	870	rVV3	369700	926851	1.62%	0.501%
[illegible]	14.795	879	883	888	rBV	3021528	7538728	13.17%	4.075%
31	14.943	888	893	895	rVV3	233453	858438	1.50%	0.464%

000121

3955

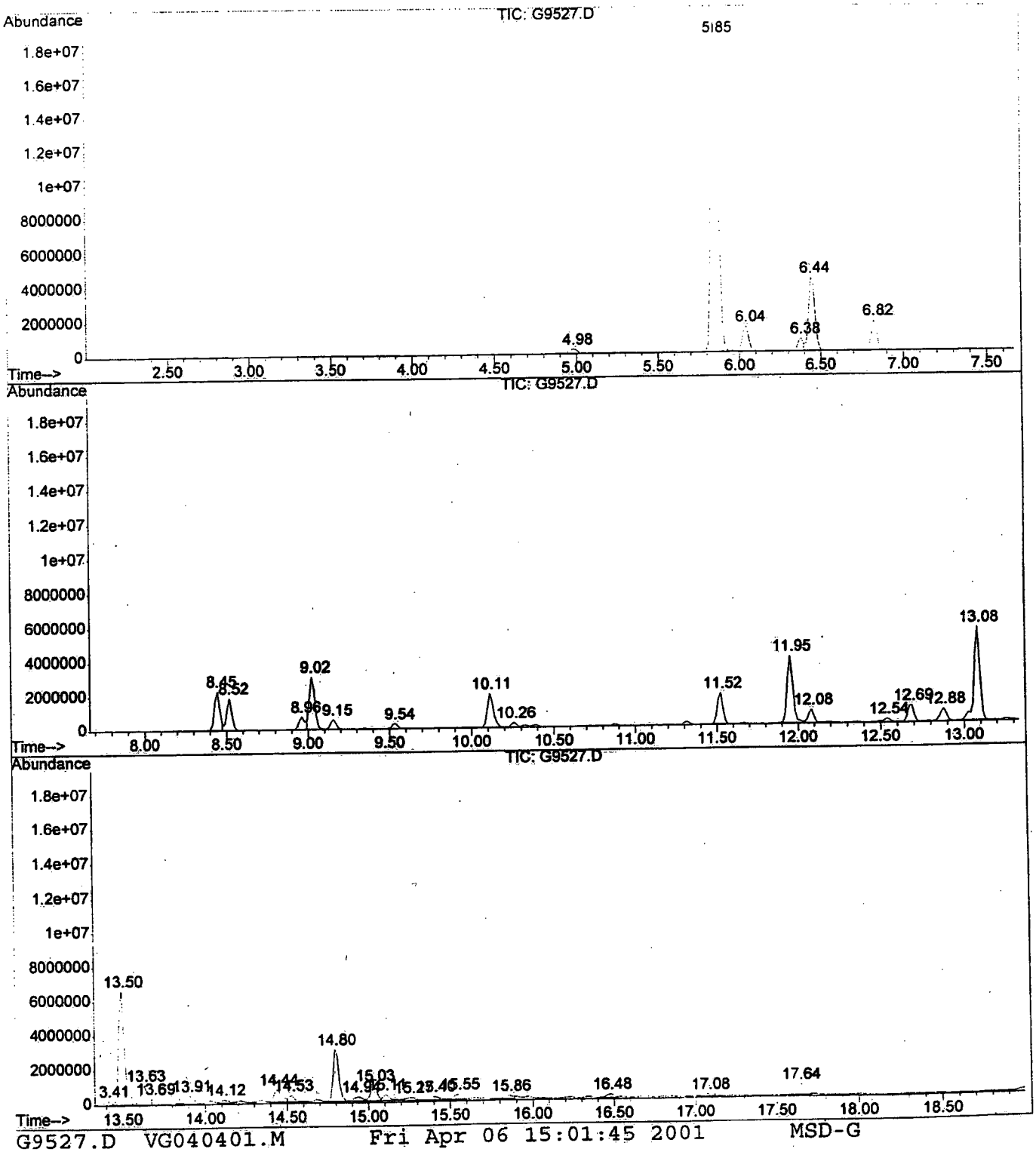
32	15.031	895	899	902	rVV2	894925	2499096	4.36%	1.351%
33	15.105	902	904	910	rVV4	339293	993794	1.74%	0.537%
34	15.267	910	915	921	rVB5	162947	746813	1.30%	0.404%
35	15.401	921	924	931	rBV5	215603	796789	1.39%	0.431%
	15.548	931	934	937	rVB4	308571	815851	1.42%	0.441%
	15.858	950	955	957	rBV4	197970	724715	1.27%	0.392%
38	16.476	992	997	1000	rBV2	222227	777755	1.36%	0.420%
39	17.079	1033	1038	1044	rVB9	131454	676841	1.18%	0.366%
40	17.639	1071	1076	1081	rBV	634620	2261974	3.95%	1.223%

Sum of corrected areas: 185009599

G9527.D VG040401.M Fri Apr 06 15:01:44 2001 MSD-G

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Operator : BARBARA
Acquired : 5 Apr 2001 12:14 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: MW-7,2094-005,A,5mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 39
Quant File :VG040401.RES (RTE Integrator)



G9527.D VG040401.M Fri Apr 06 15:01:45 2001 MSD-G

000133

3957

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
ALS Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

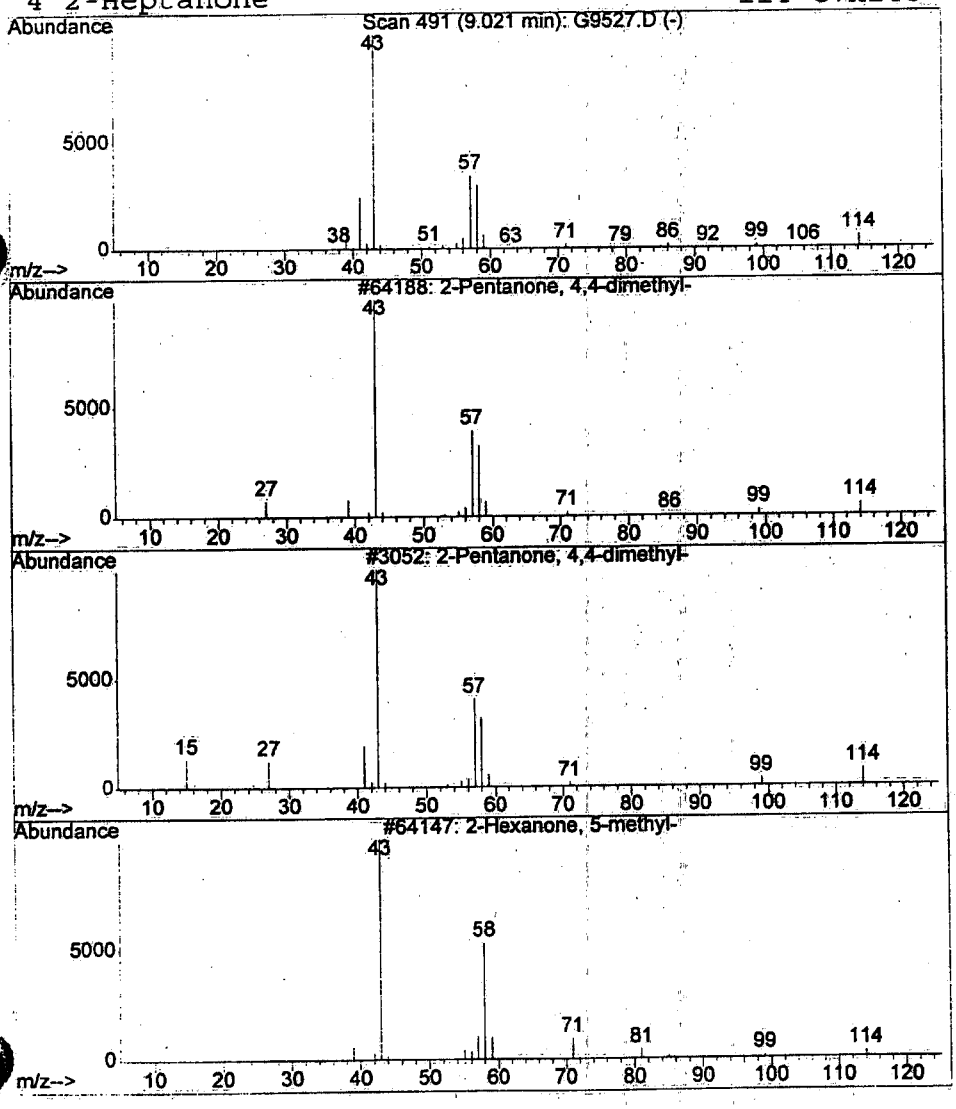
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

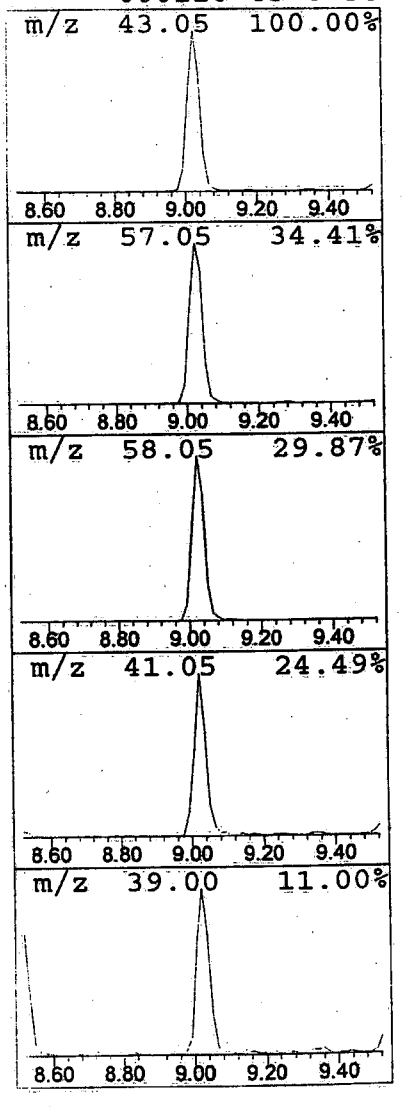
****

Peak Number 1 Unknown — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.02	41.56 UG	7274710	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4,4-dimethyl-	114	C7H14O	000590-50-1	83
2	2-Pentanone, 4,4-dimethyl-	114	C7H14O	000590-50-1	80
3	2-Hexanone, 5-methyl-	114	C7H14O	000110-12-3	72
4	2-Heptanone	114	C7H14O	000110-43-0	50





000121

3958

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

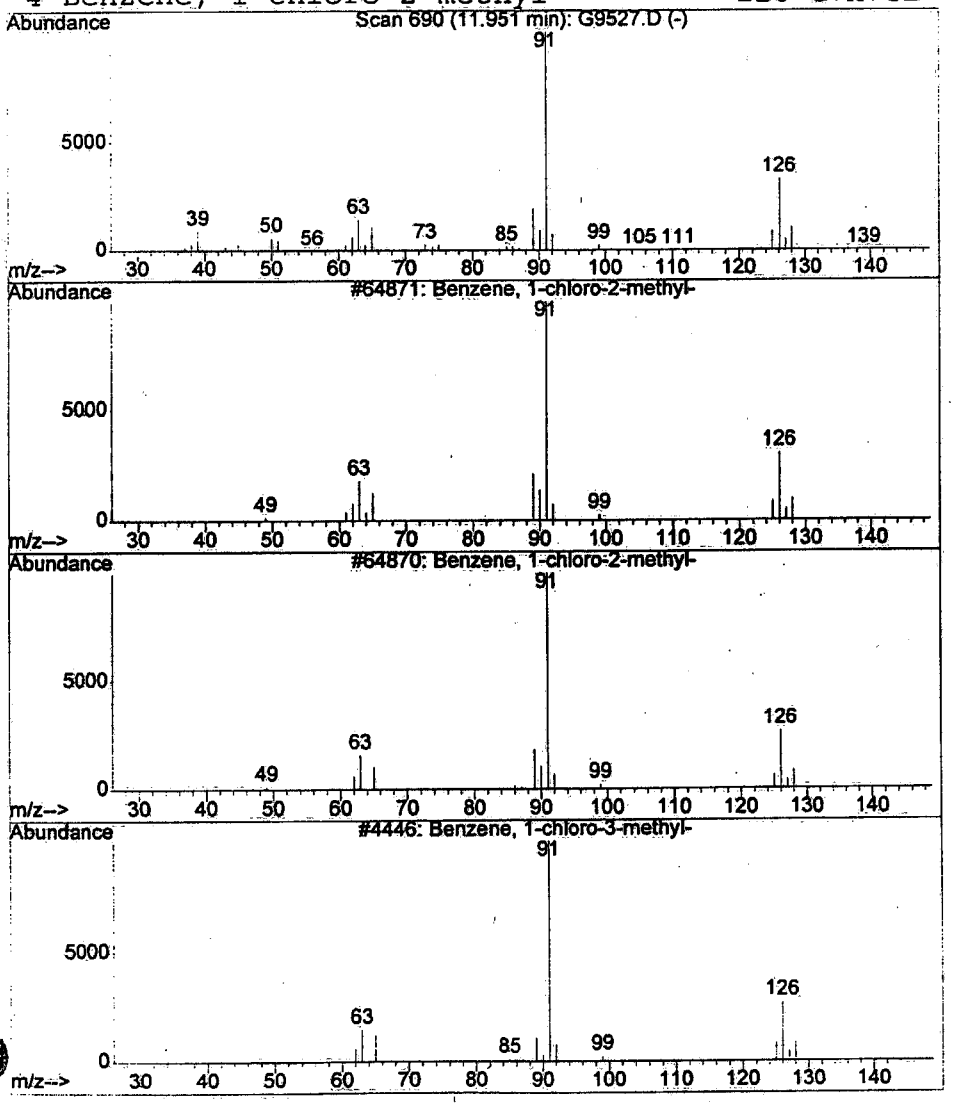
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

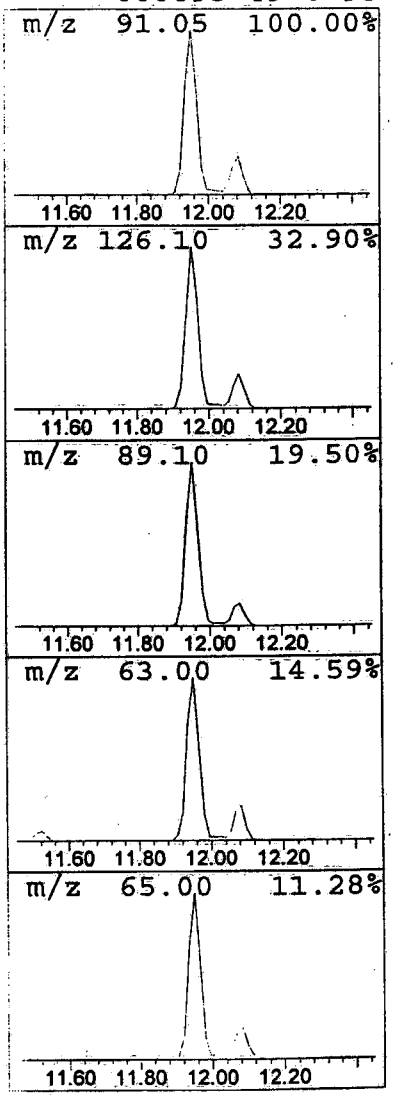
****

Peak Number 2 Benzene, 1-chloro-2-methyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.95	54.83 UG	9596140	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	97
2	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	96
3	Benzene, 1-chloro-3-methyl-	126	C7H7Cl	000108-41-8	93
4	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	93





3959

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D Vial: 39
Acq On : 5 Apr 2001 12:14 Operator: BARBARA
Sample : MW-7,2094-005,A,5mL,100 Inst : 5970 - In
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01 Multiplr: 1.00
MS Integration Params: LSCINT.P

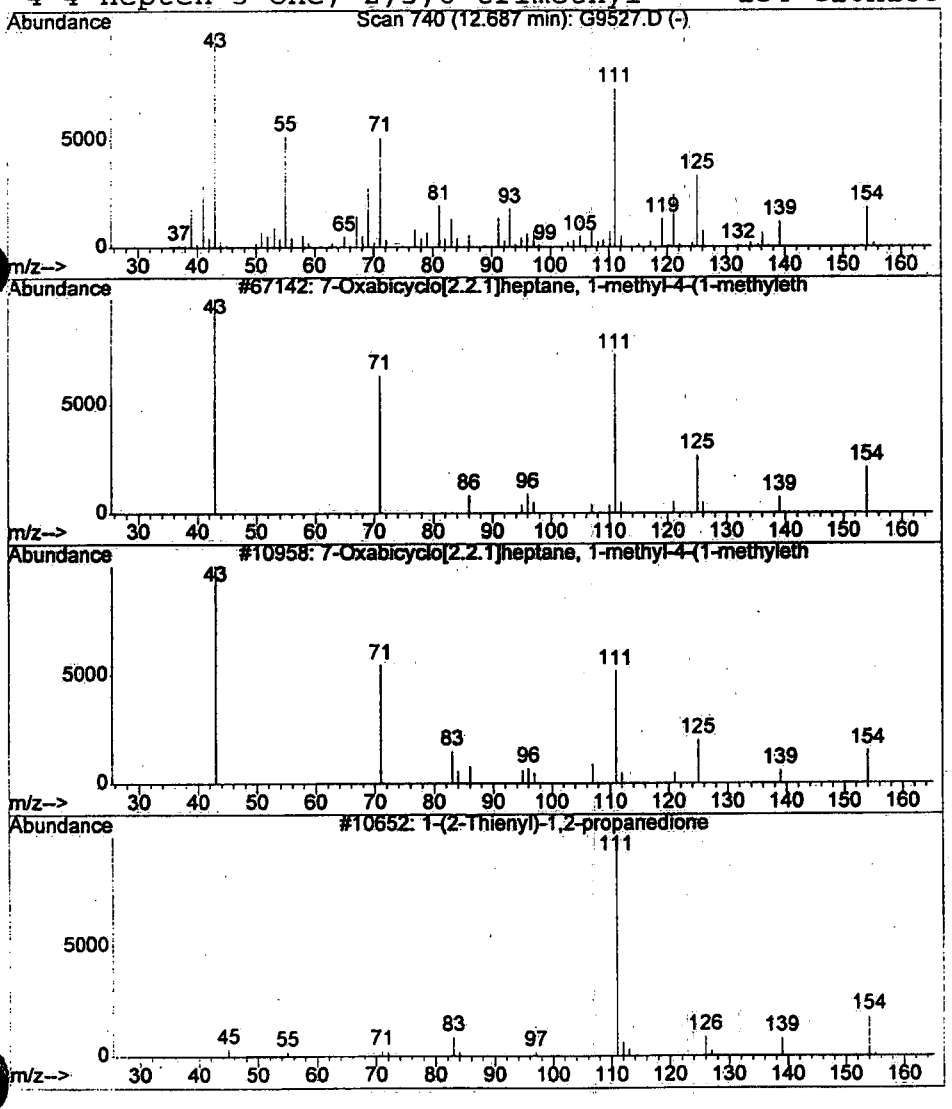
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

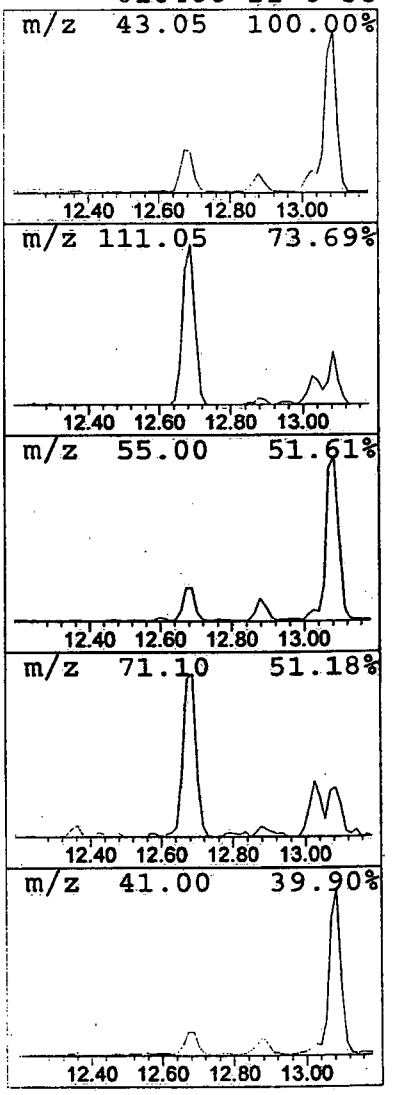
****

Peak Number 3 Unknown Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.69	14.66 UG	2565530	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	7-Oxabicyclo[2.2.1]heptane, 1-me...	154	C10H18O	000470-67-7	87
2	7-Oxabicyclo[2.2.1]heptane, 1-me...	154	C10H18O	000470-67-7	64
3	1-(2-Thienyl)-1,2-propanedione	154	C7H6O2S	000000-00-0	46
4	4-Hepten-3-one, 2,5,6-trimethyl-	154	C10H18O	016466-21-0	38





3960

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D Vial: 39
Acq On : 5 Apr 2001 12:14 Operator: BARBARA
Sample : MW-7,2094-005,A,5mL,100 Inst : 5970 - In
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01 Multiplr: 1.00
IS Integration Params: LSCINT.P

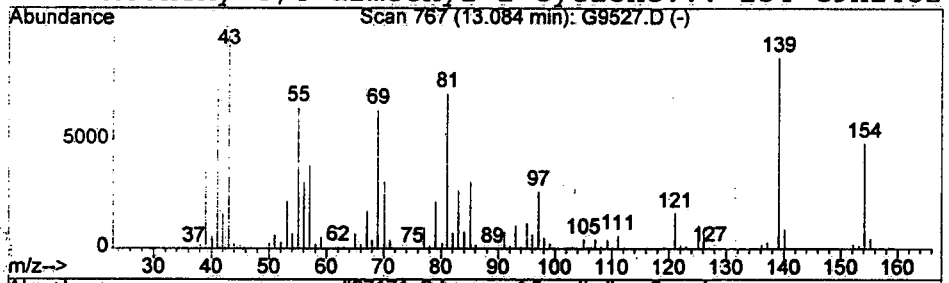
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

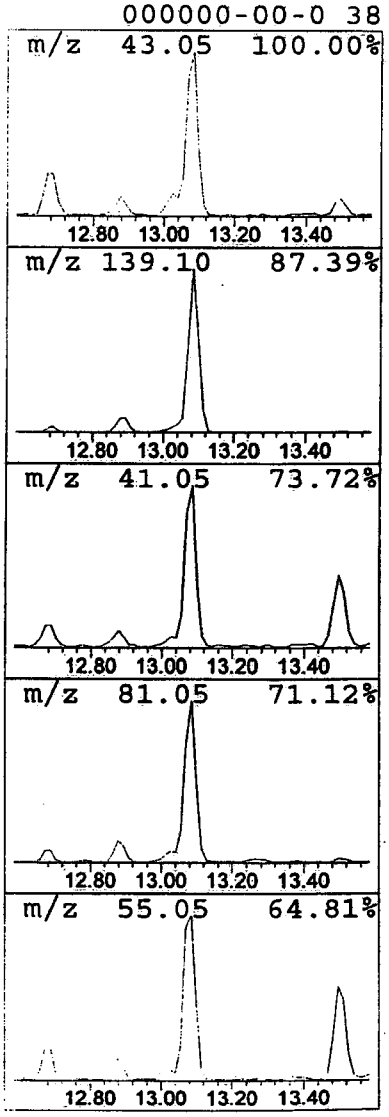
****

Peak Number 4 Unknown Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.08	76.20 UG	13337300	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Isopropyl-5-methylhex-2-enal	154	C10H18O	035158-25-9	53
2	5-Fluoro-2-hydroxyacetophenone	154	C8H7FO2	000394-32-1	50
3	2-Isopropyl-4-methylhex-2-enal	154	C10H18O	072668-37-2	43
4	2-Methoxy-4,4-dimethyl-2-cyclohe...	154	C9H14O2	000000-00-0	38





3961

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
LS Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

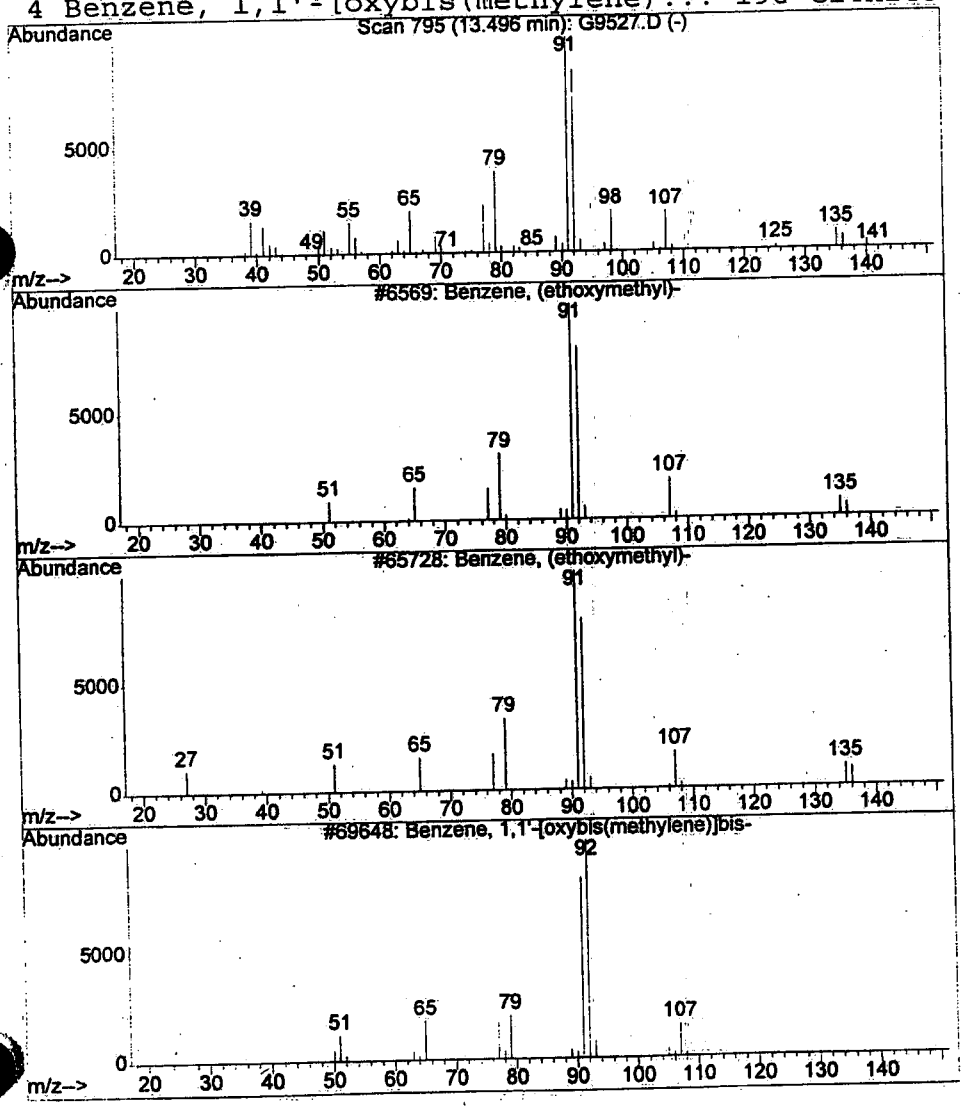
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

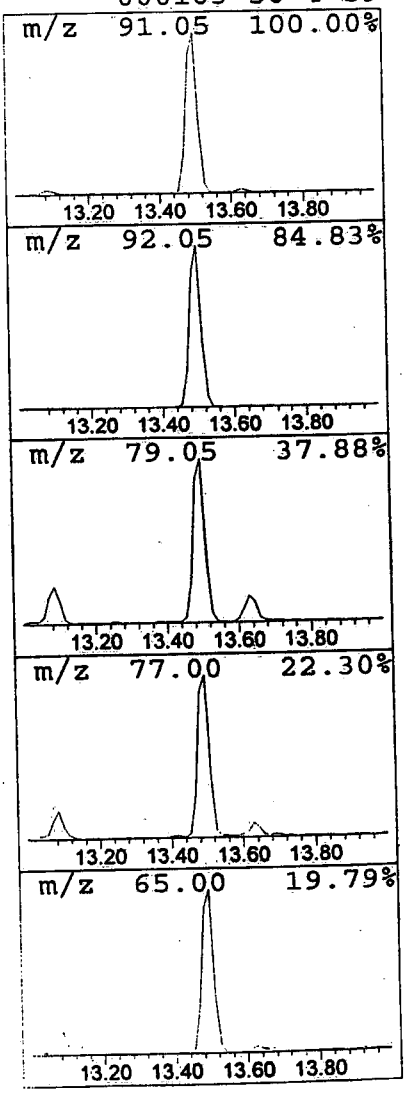
****

Peak Number 5 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.50	88.03 UG	15407100	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (ethoxymethyl)-	136	C9H12O	000539-30-0	95
2	Benzene, (ethoxymethyl)-	136	C9H12O	000539-30-0	90
3	Benzene, 1,1'-[oxybis(methylene)...	198	C14H14O	000103-50-4	64
4	Benzene, 1,1'-[oxybis(methylene)...	198	C14H14O	000103-50-4	59





000123

3962

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
3 Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

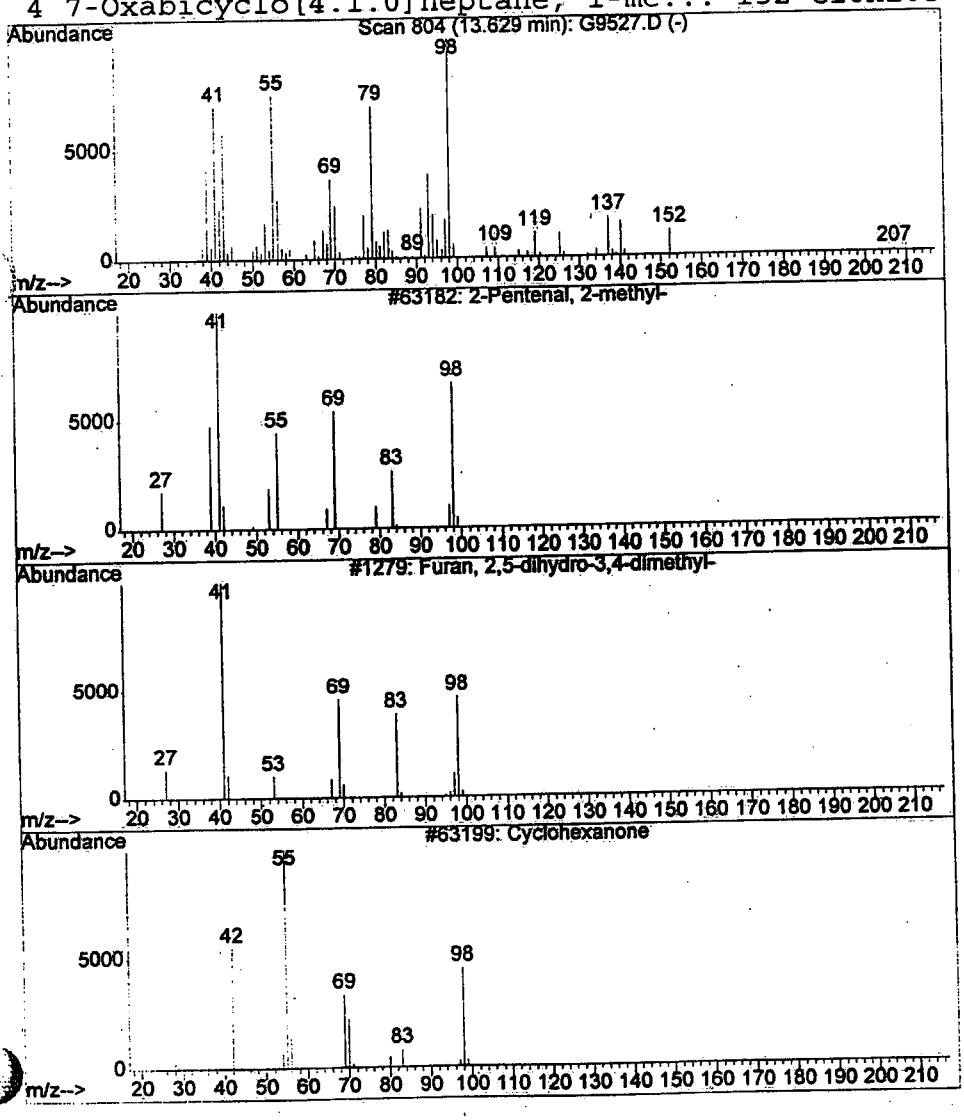
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

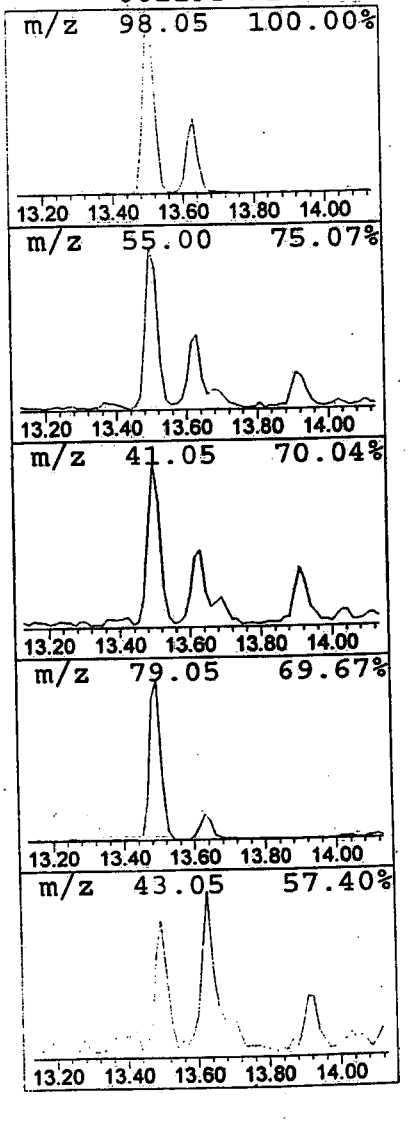
****

Peak Number 6 Unknown — Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.63	17.94 UG	3139470	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentenal, 2-methyl-	98	C6H10O	000623-36-9	27
2	Furan, 2,5-dihydro-3,4-dimethyl-	98	C6H10O	053720-72-2	25
3	Cyclohexanone	98	C6H10O	000108-94-1	25
4	7-Oxabicyclo[4.1.0]heptane, 1-me...	152	C10H16O	001195-92-2	25





3963

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
B Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

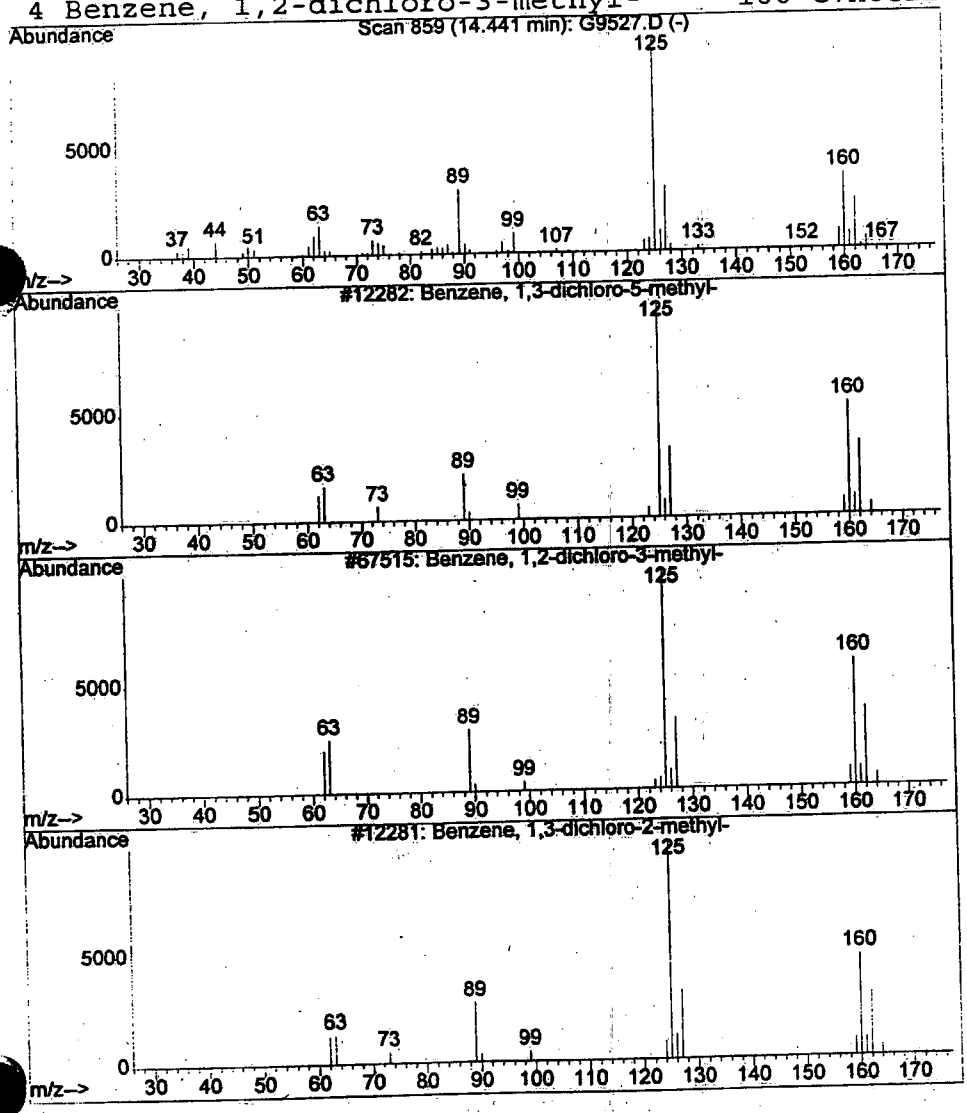
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

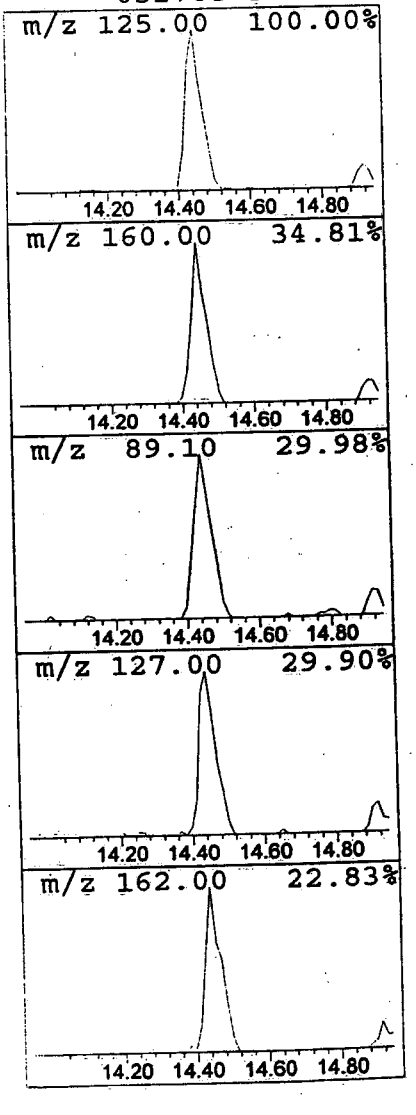
****

Peak Number 7 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.44	14.67 UG	2567950	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-dichloro-5-methyl-	160	C7H6Cl2	025186-47-4	96
2	Benzene, 1,2-dichloro-3-methyl-	160	C7H6Cl2	032768-54-0	96
3	Benzene, 1,3-dichloro-2-methyl-	160	C7H6Cl2	000118-69-4	96
4	Benzene, 1,2-dichloro-3-methyl-	160	C7H6Cl2	032768-54-0	95





000135

3964

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

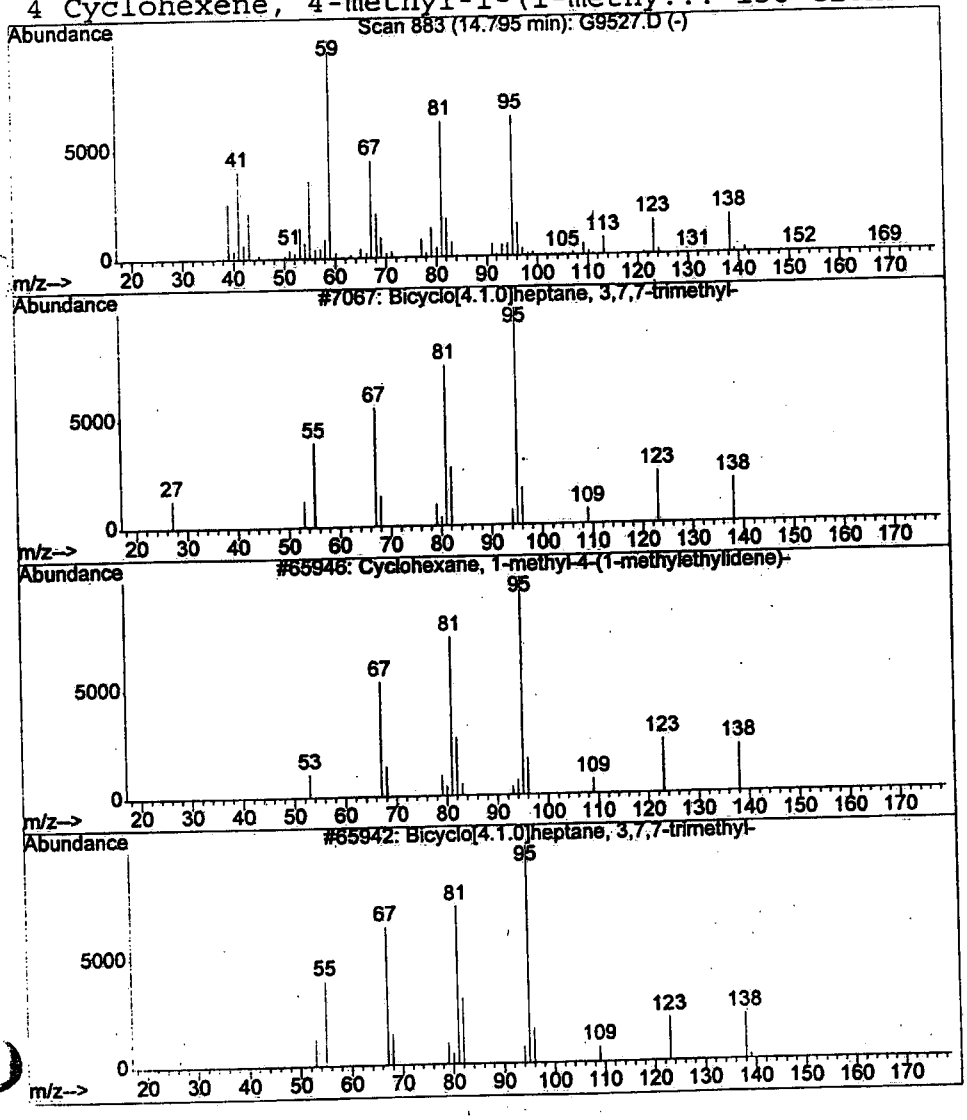
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

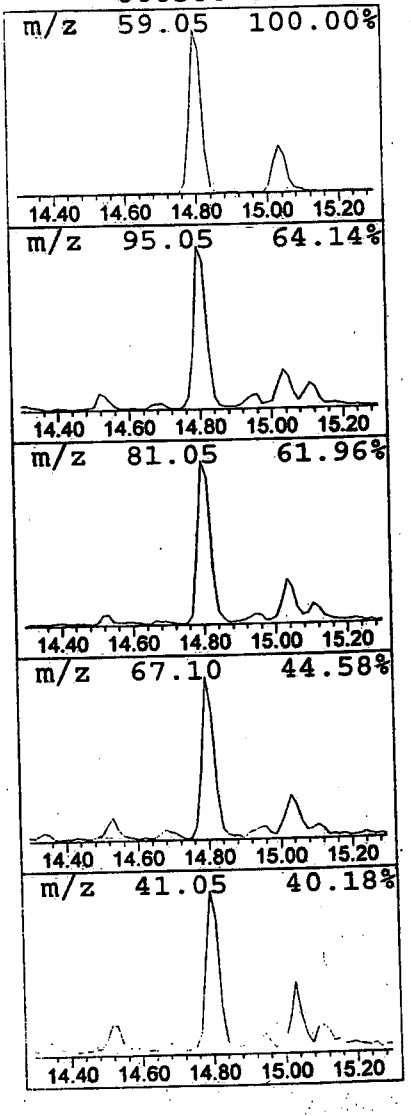
****

Peak Number 8 Unknown — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.80	43.07 UG	7538730	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.1.0]heptane, 3,7,7-tri...	138	C10H18	000554-59-6	95
2	Cyclohexane, 1-methyl-4-(1-methy...	138	C10H18	001124-27-2	95
3	Bicyclo[4.1.0]heptane, 3,7,7-tri...	138	C10H18	000554-59-6	86
4	Cyclohexene, 4-methyl-1-(1-methy...	138	C10H18	000500-00-5	80





3965

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

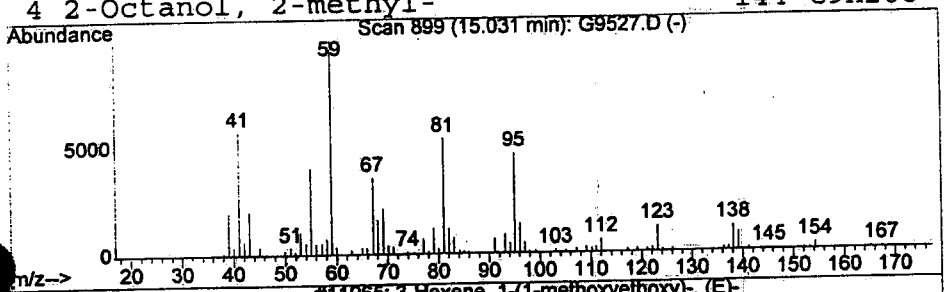
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

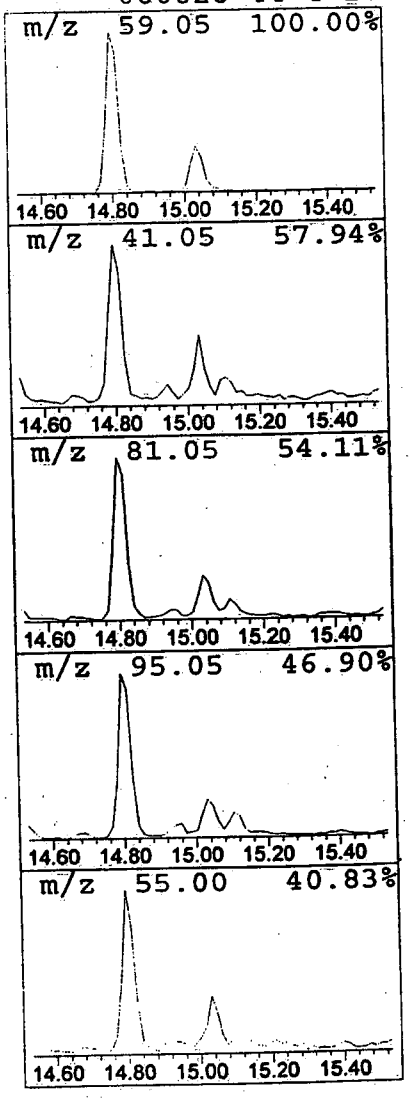
****

Peak Number 9 Unknown — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.03	14.28 UG	2499100	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Hexene, 1-(1-methoxyethoxy)-, ...	158	C9H18O2	054340-97-5	35
2	2-Propanone, 1-cyclohexyl-	140	C9H16O	000103-78-6	32
3	Cyclohexanol, 1-ethynyl-	124	C8H12O	000078-27-3	30
4	2-Octanol, 2-methyl-	144	C9H20O	000628-44-4	27





3966

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9527.D
Acq On : 5 Apr 2001 12:14
Sample : MW-7,2094-005,A,5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

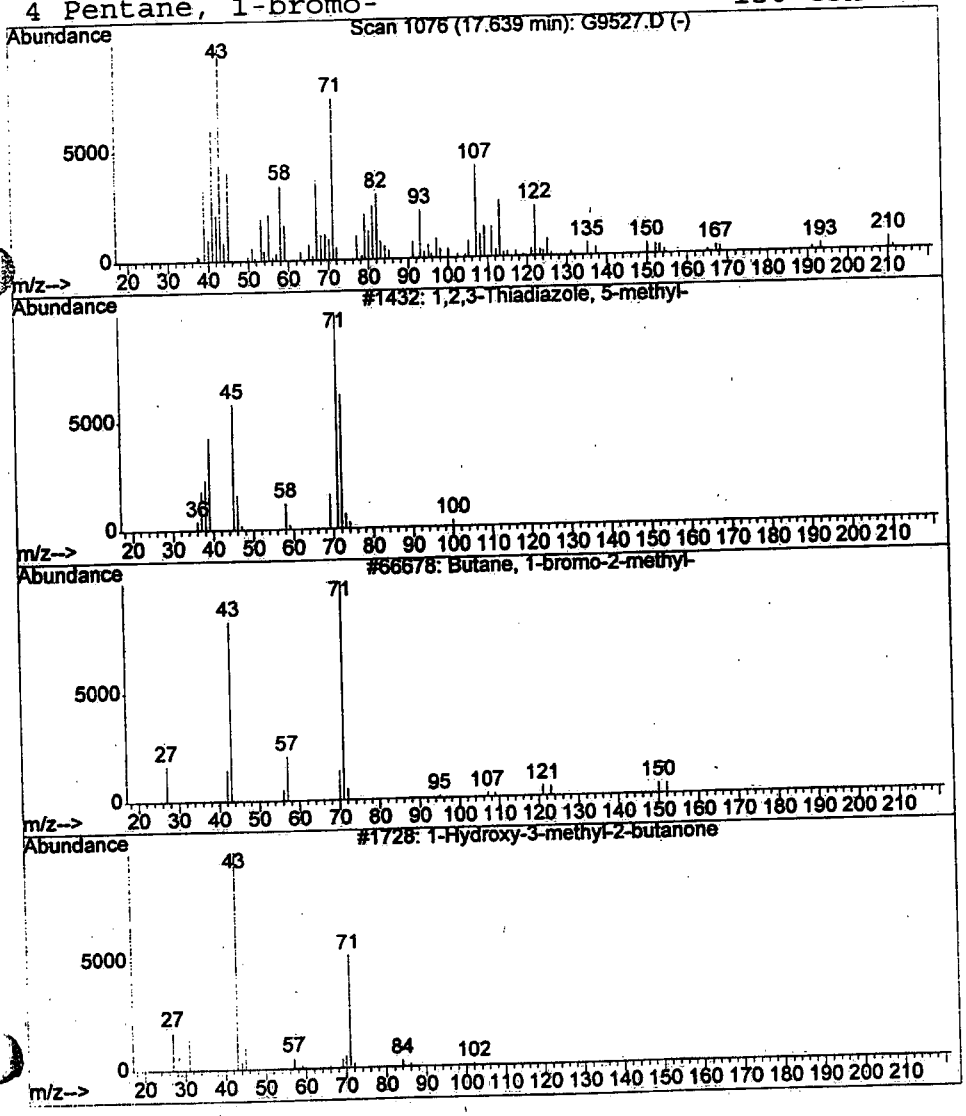
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

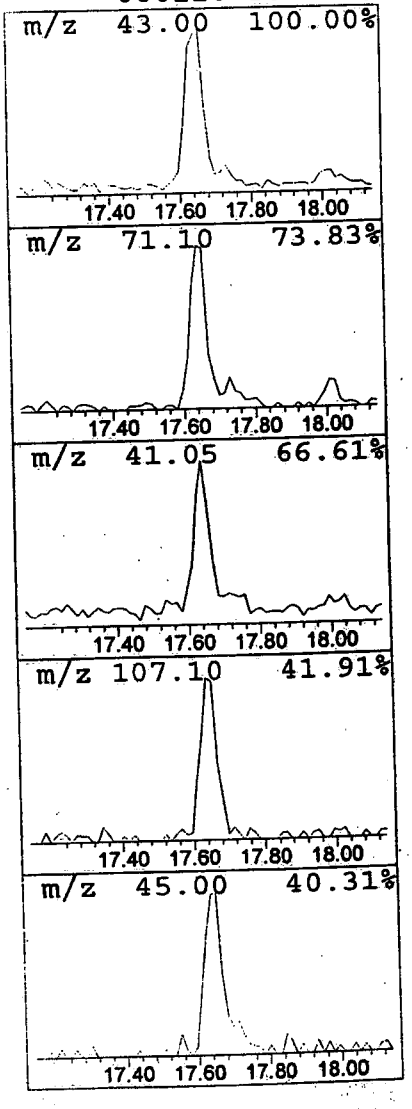
****

Peak Number 10 Unknown — Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
17.64	12.92 UG	2261970	Chlorobenzene-d5	10.11

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,2,3-Thiadiazole, 5-methyl-	100	C3H4N2S	050406-54-7	25
2	Butane, 1-bromo-2-methyl-	150	C5H11Br	010422-35-2	25
3	1-Hydroxy-3-methyl-2-butanone	102	C5H10O2	036960-22-2	22
4	Pentane, 1-bromo-	150	C5H11Br	000110-53-2	22





3967

000133

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9542.D
Acq On : 5 Apr 2001 21:54
Sample : MW-7,2094-005DIL,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
LS Integration Params: LSCINT.P
Quant Time: Apr 6 16:23 2001

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00
Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.05	168	1096226	30.00	UG		0.02
31) 1,4-Difluorobenzene	6.84	114	1394424	30.00	UG		0.01
50) Chlorobenzene-d5	10.13	117	1206068	30.00	UG		0.02
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.38	65	631025	30.83	UG		0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 102.77%				
41) Toluene-d8	8.46	98	1603924	29.04	UG		0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.80%				
59) Bromofluorobenzene	11.53	95	698038	27.02	UG		0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 90.07%				
Target Compounds							Qvalue
25) Chloroform	5.87	83	2315962	66.85	UG		99
32) Benzene	6.46	78	373376	5.40	UG		100
42) Toluene	8.53	92	64534	1.34	UG		93
44) 1,1,2-Trichloroethane	8.97	83	16700	1.06	UG	#	86
45) Tetrachloroethene	9.17	166	15943	0.64	UG	#	99

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

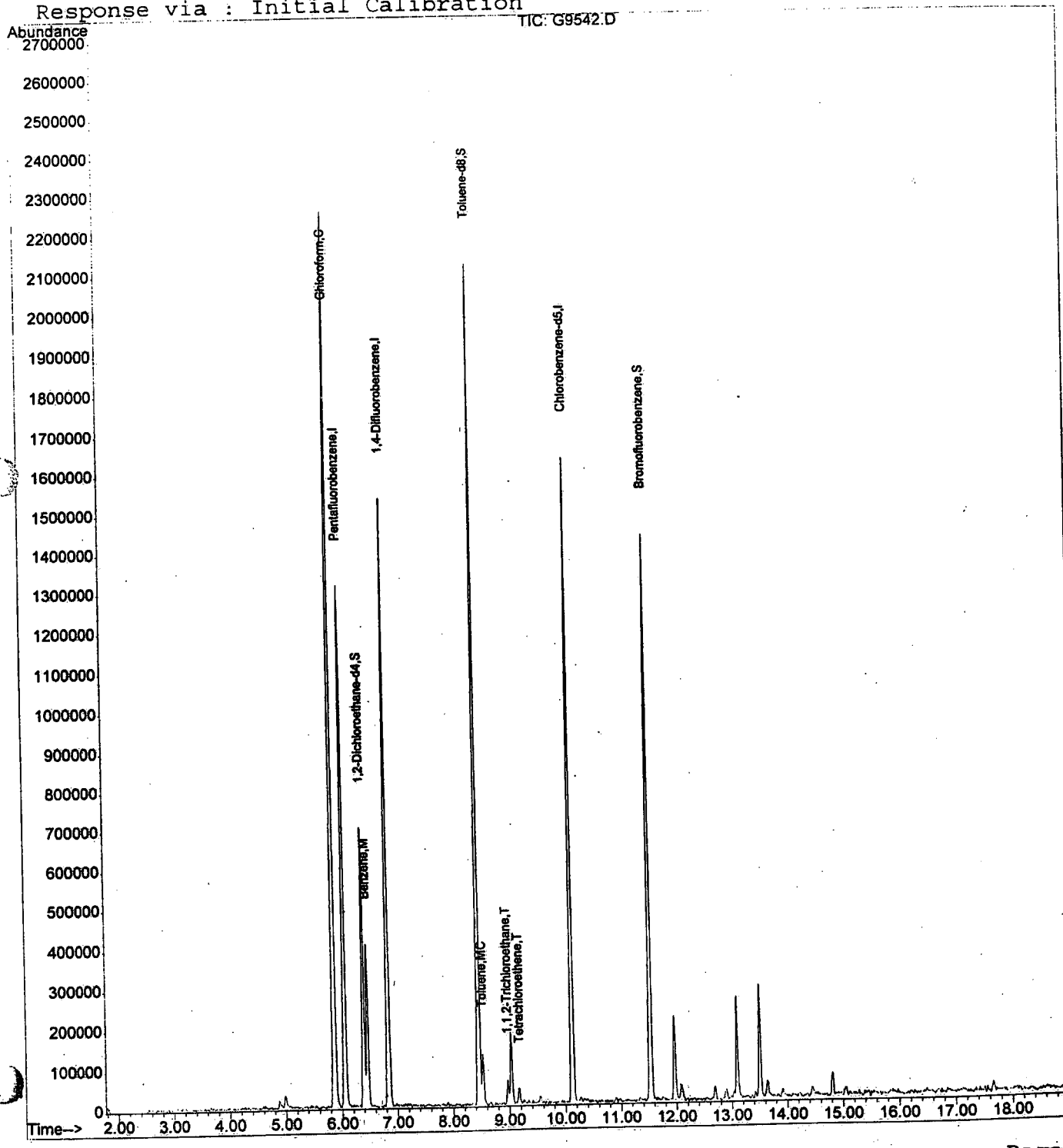
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9542.D
Acq On : 5 Apr 2001 21:54
Sample : MW-7,2094-005DIL,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 16:23 2001

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



3969

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
LSC Integration Params: LSCINT.P
Quant Time: Apr 6 16:28 2001

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00
Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.04	168	1490408	30.00	UG		0.00
31) 1,4-Difluorobenzene	6.84	114	1742454	30.00	UG		0.01
50) Chlorobenzene-d5	10.12	117	1448292	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.38	65	742421	26.68	UG		0.01
Spiked Amount 30.000	Range 80 - 120		Recovery = 88.93%				
41) Toluene-d8	8.44	98	1975074	28.62	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.40%				
59) Bromofluorobenzene	11.52	95	918422	29.60	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.67%				
Target Compounds							Qvalue
25) Chloroform	5.85	83	294060	6.24	UG		99
27) Carbon Tetrachloride	6.23	117	18028	0.58	UG		95
33) Trichloroethene	7.13	95	248196	9.68	UG		95
42) Toluene	8.53	92	268963	4.46	UG		98
45) Tetrachloroethene	9.16	166	13568	0.43	UG	#	81
53) Ethylbenzene	10.25	91	6453877	53.16	UG		99
54) m,p-Xylene	10.40	106	2970488	69.88	UG	#	100
55) o-Xylene	10.87	106	631088	15.63	UG		85

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

3970

000136

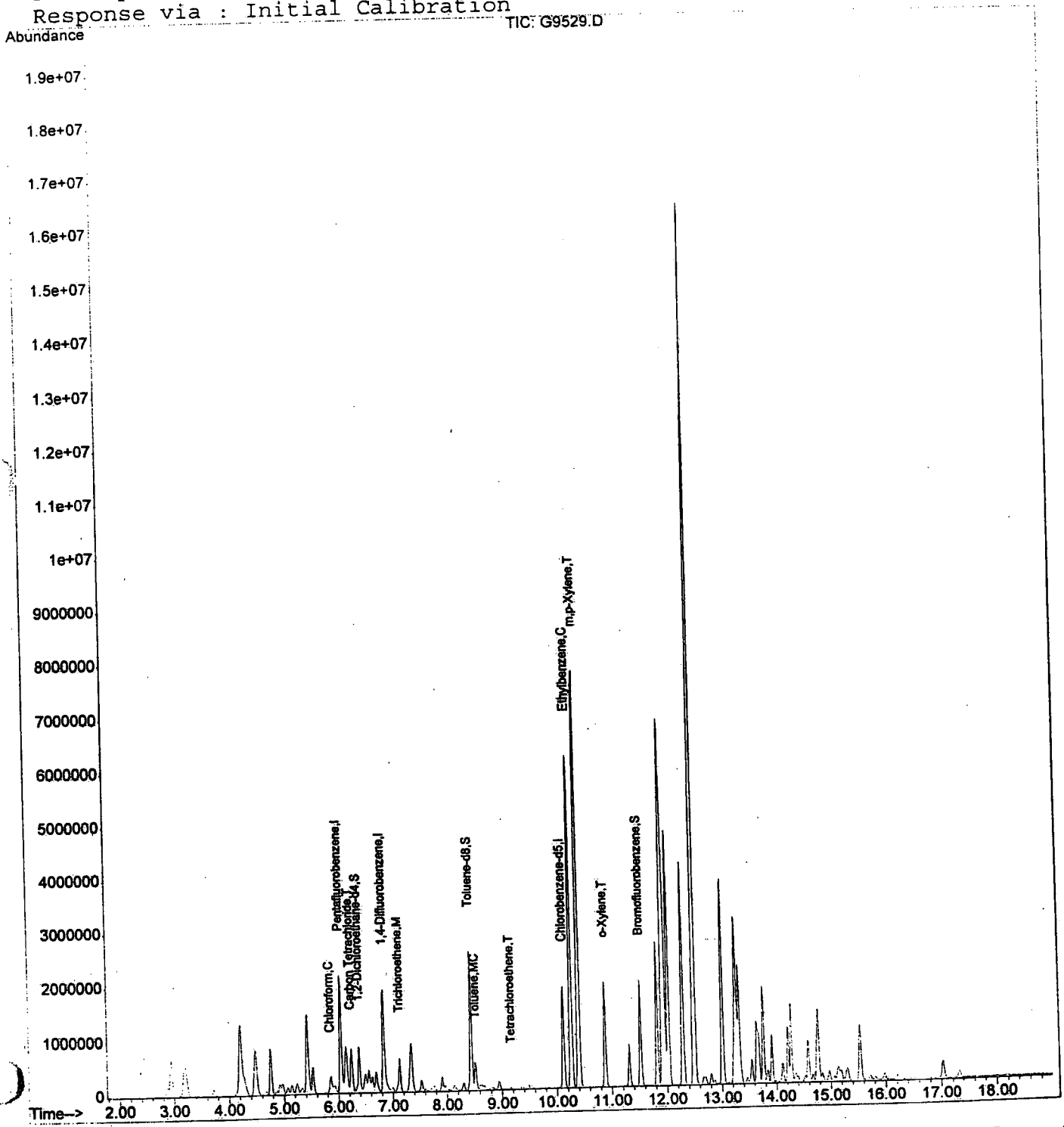
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 16:28 2001

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



000137

3971

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.867	68	76	77	rBV	173853	503120	1.35%	0.198%
2	2.942	77	81	92	rVV	681568	2528196	6.78%	0.993%
3	3.209	92	99	105	rVB2	542281	2659779	7.13%	1.045%
4	3.721	128	133	138	rBV2	123372	410322	1.10%	0.161%
5	4.214	159	166	179	rVB	1305500	6107730	16.37%	2.399%
6	4.483	179	184	192	rBV	839247	3214665	8.62%	1.263%
7	4.751	199	202	207	rVV	865367	2312905	6.20%	0.909%
[redacted]	4.931	211	214	215	rVV	189980	500354	1.34%	0.197%
[redacted]	4.975	215	217	220	rVV	200925	494809	1.33%	0.194%
[redacted]	5.064	220	223	226	rVV2	135107	387328	1.04%	0.152%
11	5.137	226	228	231	rVV3	176599	461923	1.24%	0.181%
12	5.240	231	235	238	rVV3	198087	651747	1.75%	0.256%
13	5.432	244	248	252	rVV	1461537	4588694	12.30%	1.802%
14	5.536	252	255	260	rVB	498406	1240650	3.32%	0.487%
15	5.861	273	277	279	rBV	312124	887772	2.38%	0.349%
16	5.920	279	281	286	rVV3	130651	420131	1.13%	0.165%
17	6.038	286	289	293	rVV2	2155058	5648792	15.14%	2.219%
18	6.142	293	296	300	rVV2	852351	2826990	7.58%	1.110%
19	6.245	300	303	307	rVV	814154	2093334	5.61%	0.822%
20	6.379	307	312	316	rVV	842084	2151907	5.77%	0.845%
21	6.497	316	320	322	rVV3	335435	1095481	2.94%	0.430%
22	6.555	322	324	327	rVV	406759	1188106	3.18%	0.467%
23	6.629	327	329	331	rVV	275087	649597	1.74%	0.255%
24	6.702	331	334	339	rVB	376921	1087748	2.92%	0.427%
25	6.836	339	343	352	rBV	1883513	5370399	14.39%	2.110%
26	7.130	357	363	367	rBV3	638233	1707921	4.58%	0.671%
27	7.351	371	378	385	rBV2	893282	3126470	8.38%	1.228%
28	7.529	387	390	394	rBV	207878	522803	1.40%	0.205%
29	7.750	400	405	411	rVB5	91925	424869	1.14%	0.167%
30	7.912	413	416	418	rBV	269679	617596	1.66%	0.243%
[redacted]	8.442	446	452	455	rBV	2549593	5955363	15.96%	2.339%

000133

3972

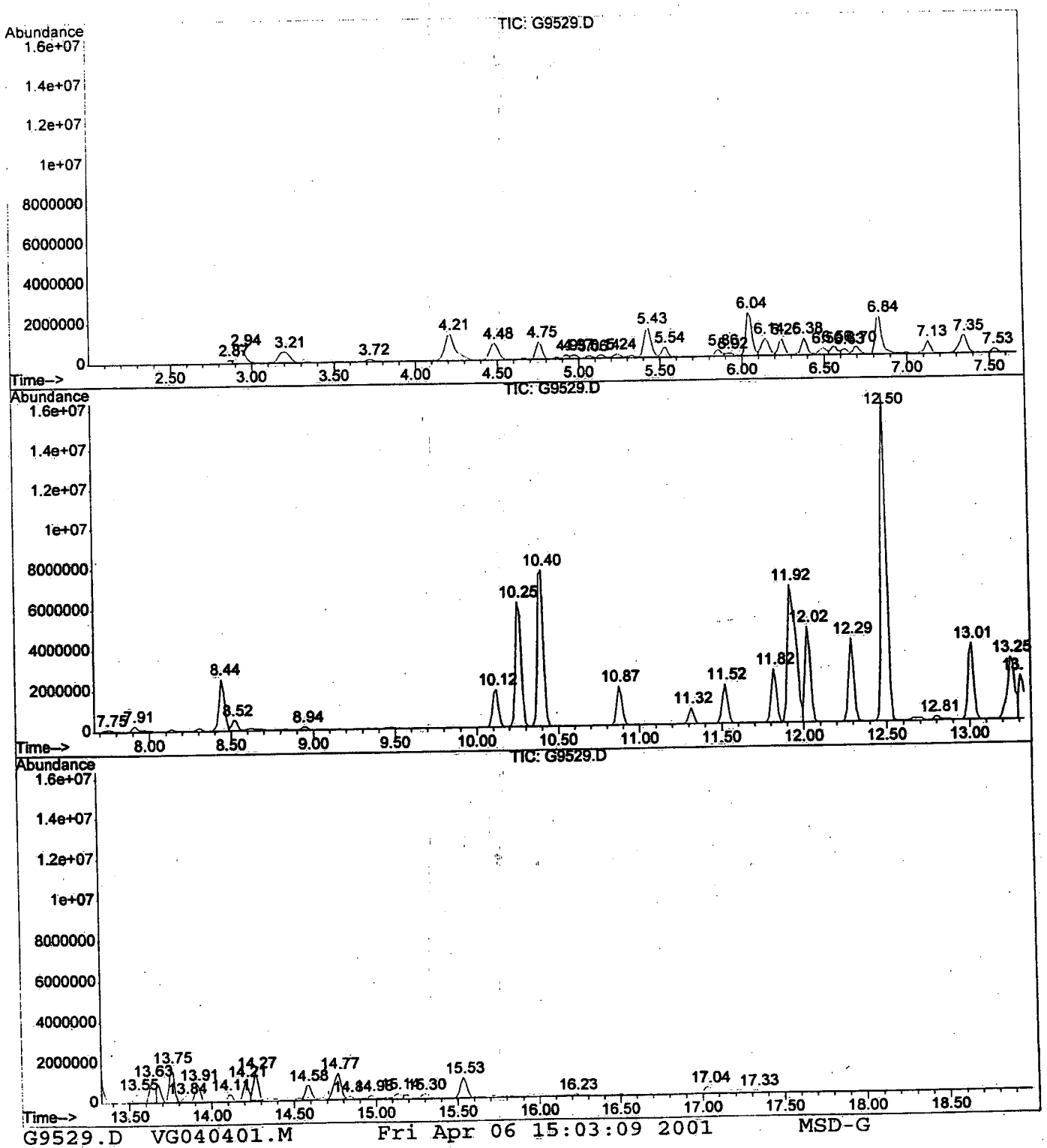
32	8.516	455	457	461	rVB	490054	1176613	3.15%	0.462%
33	8.942	482	486	490	rVB	157956	431192	1.16%	0.169%
34	10.121	562	566	570	rVB	1863564	4632075	12.41%	1.820%
35	10.253	571	575	579	rVV	6159346	14619747	39.18%	5.743%
36	10.401	580	585	589	rBV	7722172	19539303	52.37%	7.675%
	10.874	613	617	621	rBV	1925455	4489504	12.03%	1.764%
	11.316	643	647	651	rBV	788985	1671899	4.48%	0.657%
39	11.522	657	661	665	rBV	1945716	4515495	12.10%	1.774%
40	11.818	677	681	684	rBV	2642755	5860908	15.71%	2.302%
41	11.921	684	688	693	rVV	6795311	24434937	65.49%	9.598%
42	12.024	693	695	699	rVB	4717381	10364811	27.78%	4.071%
43	12.290	709	713	717	rBV	4125092	9413693	25.23%	3.698%
44	12.497	723	727	731	rBV	16361942	37313498	100.00%	14.657%
45	12.807	744	748	750	rBV	192014	476837	1.28%	0.187%
46	13.014	758	762	767	rVB	3797030	8919883	23.91%	3.504%
47	13.250	772	778	781	rBV2	3079207	10308930	27.63%	4.049%
48	13.309	781	782	789	rVB	2179797	4579205	12.27%	1.799%
49	13.546	794	798	801	rVV	439429	1037488	2.78%	0.408%
50	13.634	801	804	806	rVV	1122637	3251770	8.71%	1.277%
51	13.752	809	812	815	rVV	1764758	3972861	10.65%	1.561%
52	13.841	815	818	820	rVV2	215759	510243	1.37%	0.200%
53	13.915	820	823	827	rVB	880659	1949516	5.22%	0.766%
54	14.106	832	836	839	rBV	341498	823217	2.21%	0.323%
55	14.209	839	843	845	rBV	997187	2238364	6.00%	0.879%
56	14.268	845	847	850	rVB	1392945	2827000	7.58%	1.110%
57	14.578	866	868	872	rVV	752460	1954156	5.24%	0.768%
58	14.769	876	881	884	rVV3	1329299	4113688	11.02%	1.616%
	14.843	884	886	890	rVB2	154145	385159	1.03%	0.151%
60	14.975	890	895	898	rBV3	186786	483681	1.30%	0.190%
61	15.137	902	906	908	rVV2	261526	914716	2.45%	0.359%
62	15.299	912	917	921	rVB3	224789	802647	2.15%	0.315%
63	15.534	928	933	938	rBV	1013944	2796705	7.50%	1.099%
64	16.226	974	980	985	rVB4	90073	382257	1.02%	0.150%
65	17.036	1030	1035	1041	rVB	322044	1078084	2.89%	0.423%
66	17.330	1050	1055	1061	rVB	128895	470423	1.26%	0.185%

Sum of corrected areas: 254578006

G9529.D VG040401.M Fri Apr 06 15:03:09 2001 MSD-G

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Operator : BARBARA
Acquired : 5 Apr 2001 13:04 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: MW-6,2094-006,A,0.5mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 39
Quant File :VG040401.RES (RTE Integrator)



G9529.D VG040401.M Fri Apr 06 15:03:09 2001 MSD-G

000110

3974

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
3 Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

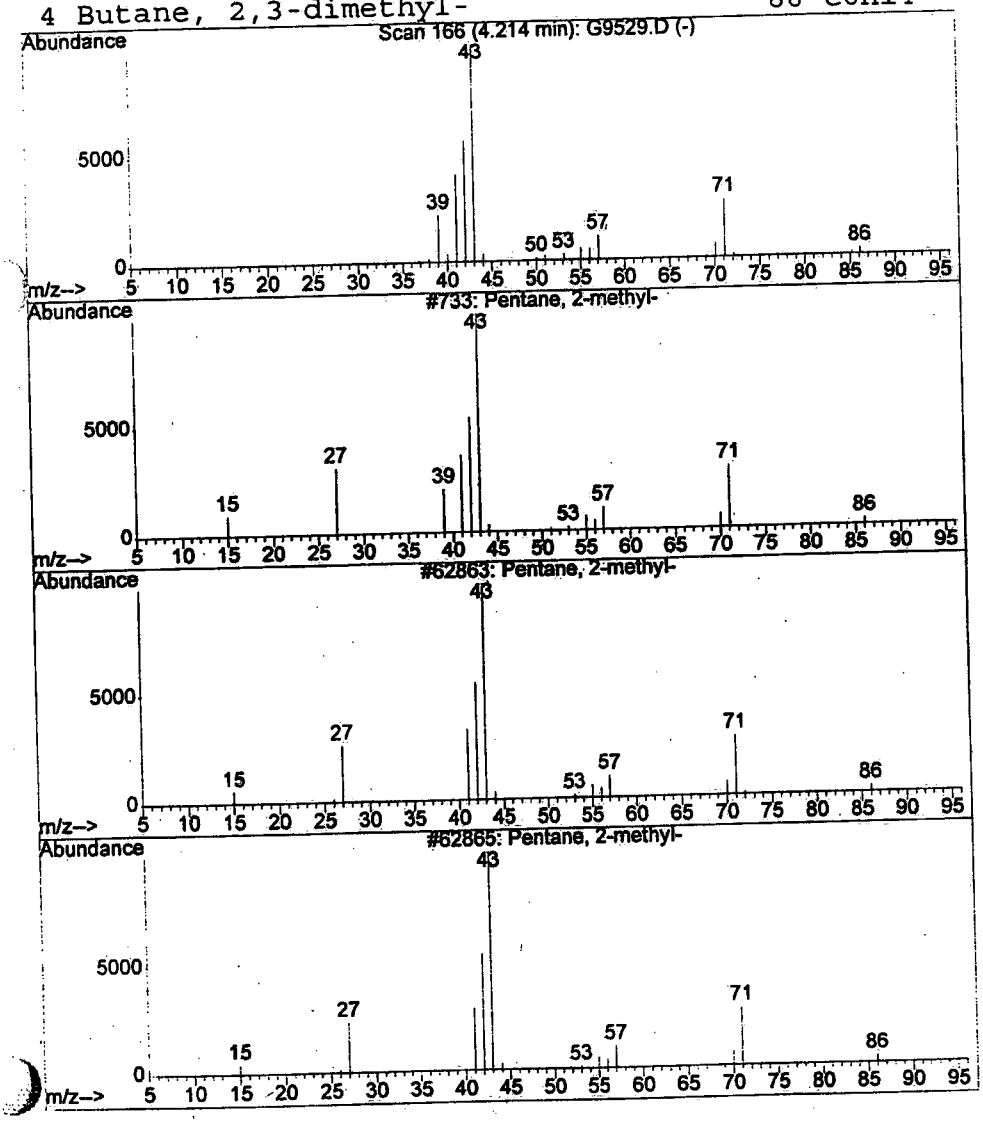
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

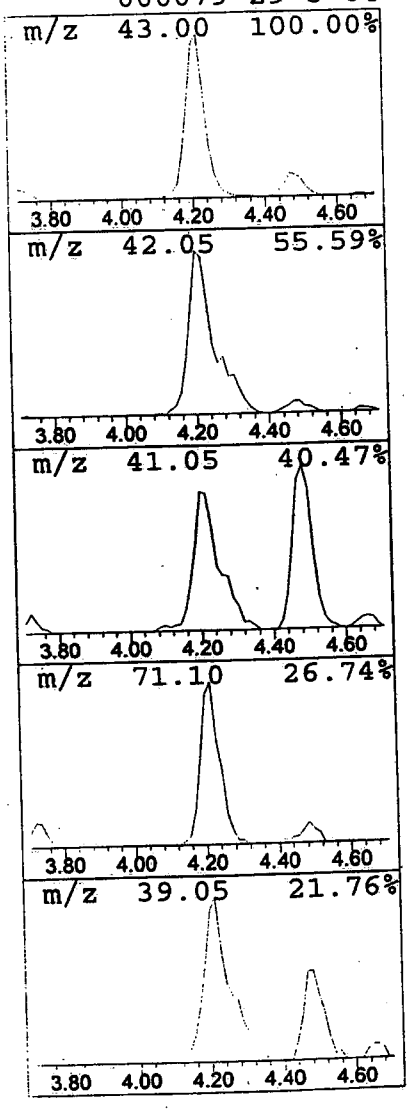
****

Peak Number 1 Unknown alkane — Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.21	32.44 UG	6107730	Pentafluorobenzene	6.04

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
2	Pentane, 2-methyl-	86	C6H14	000107-83-5	91
3	Pentane, 2-methyl-	86	C6H14	000107-83-5	90
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	64





3975

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

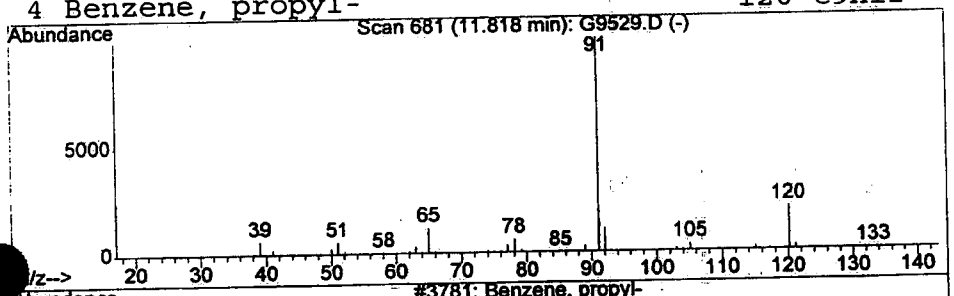
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

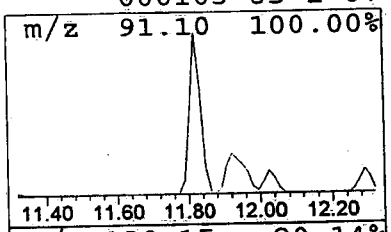
****

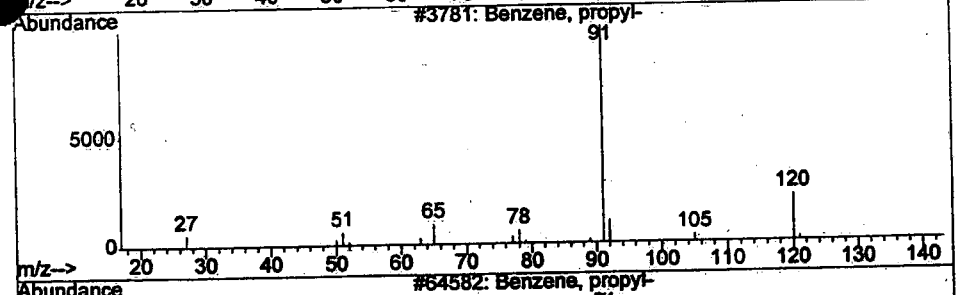
Peak Number 2 Benzene, propyl- Concentration Rank 7

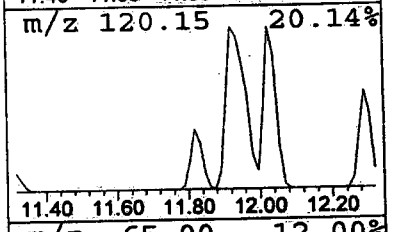
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.82	37.96 UG	5860910	Chlorobenzene-d5	10.12

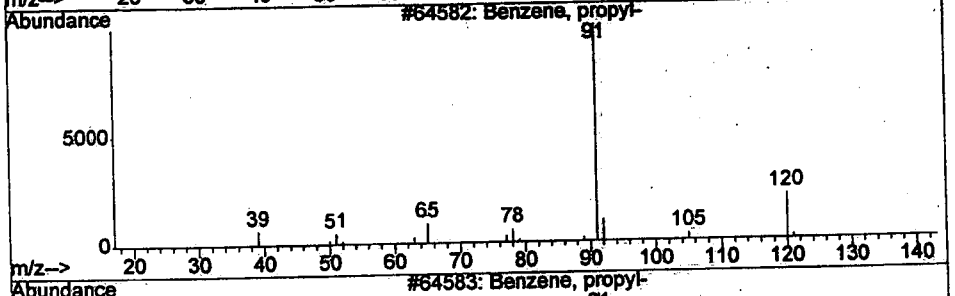
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	Benzene, propyl-	120	C9H12	000103-65-1	91
4	Benzene, propyl-	120	C9H12	000103-65-1	87

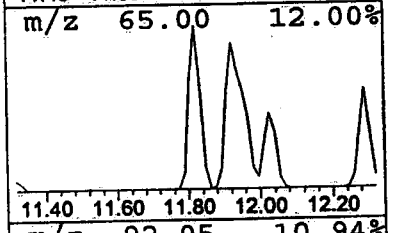


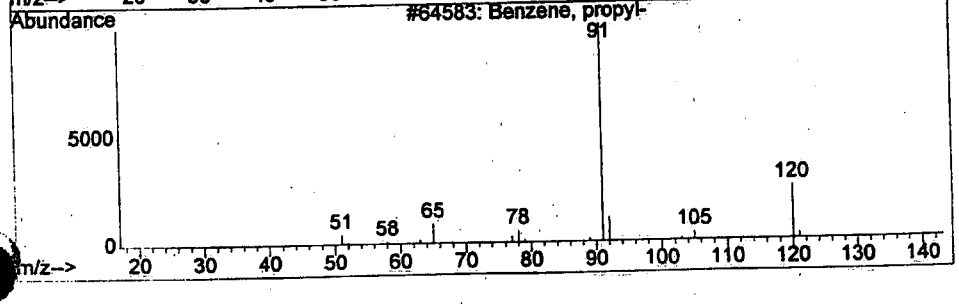


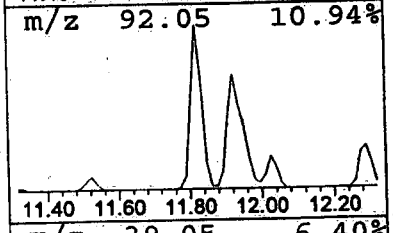


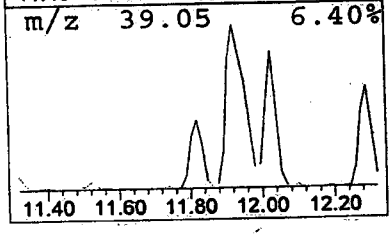












3976

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS - NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

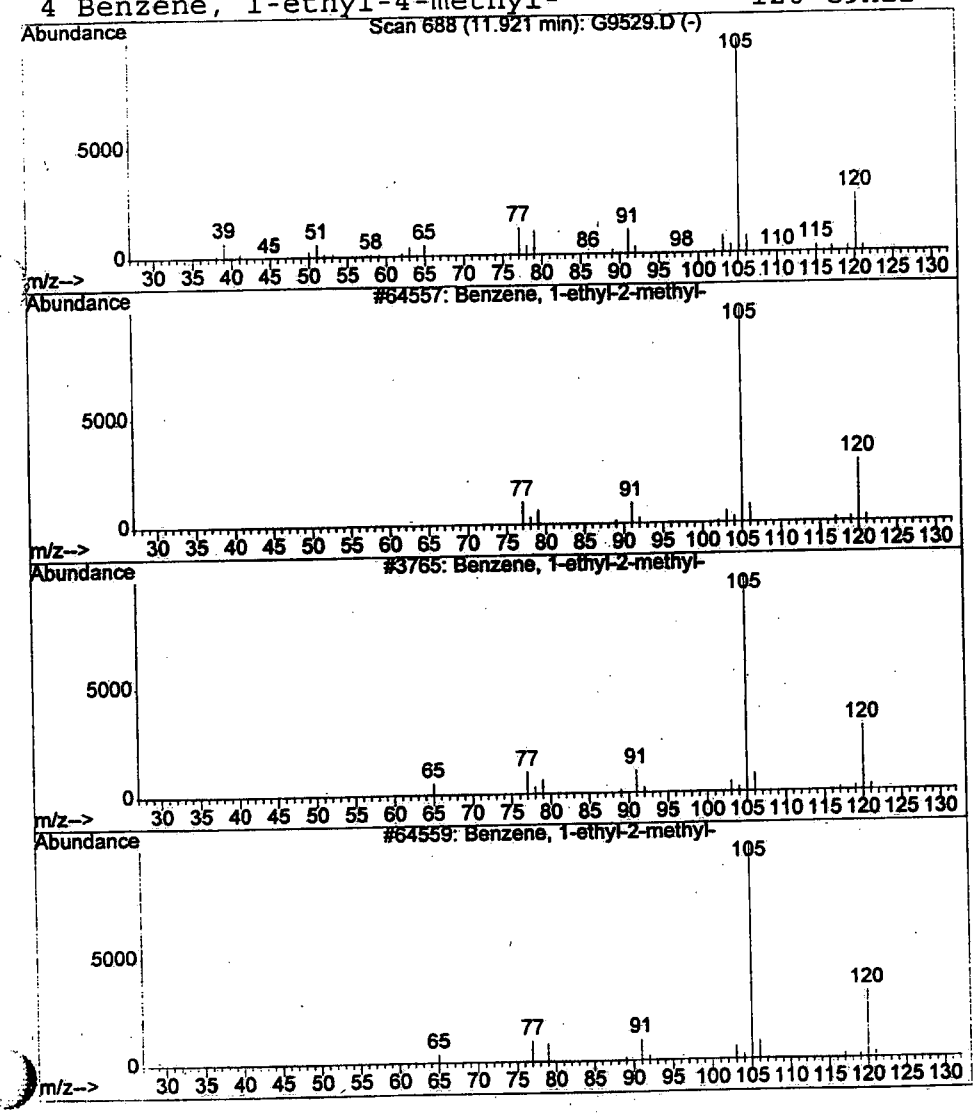
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

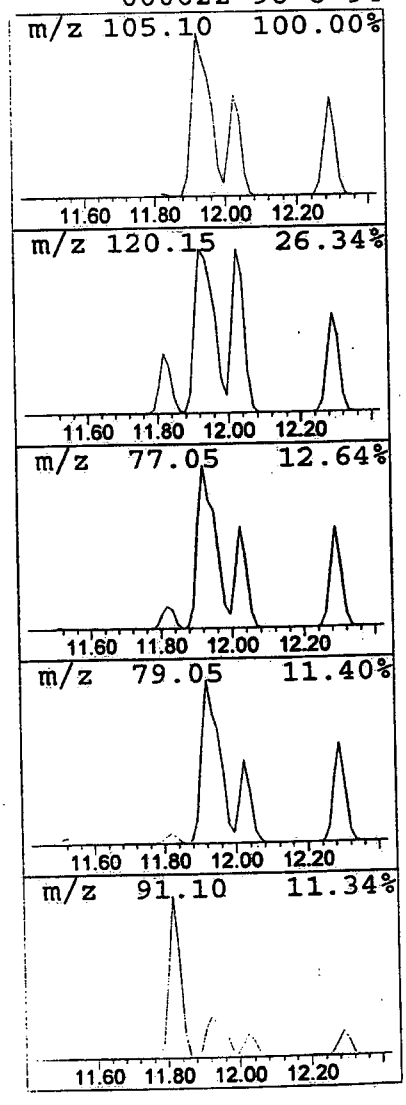
****

Peak Number 3 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.92	158.26 UG	24434900	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
4	Benzene, 1-ethyl-4-methyl-	120	C9H12	000622-96-8	94





3977

000163

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
[redacted] : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

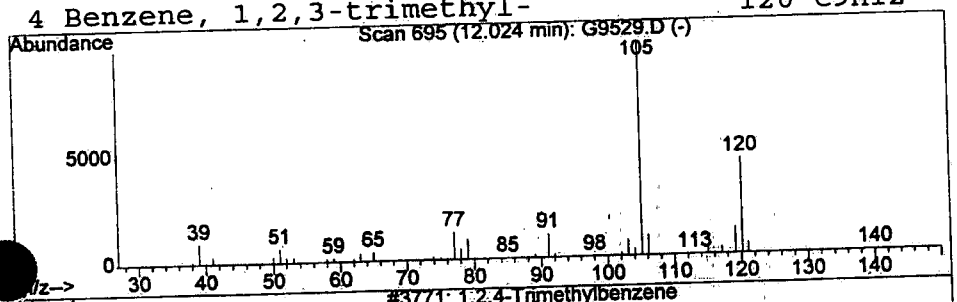
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

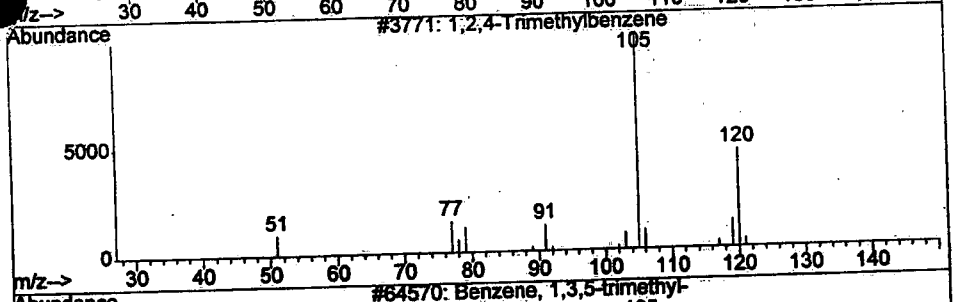
****

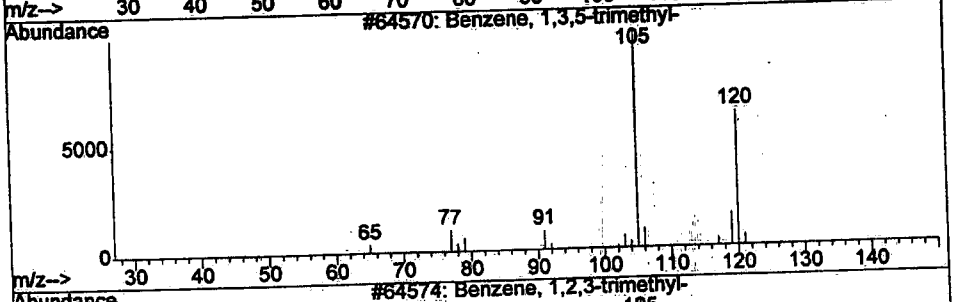
Peak Number 4 Substituted benzene — Concentration Rank 3

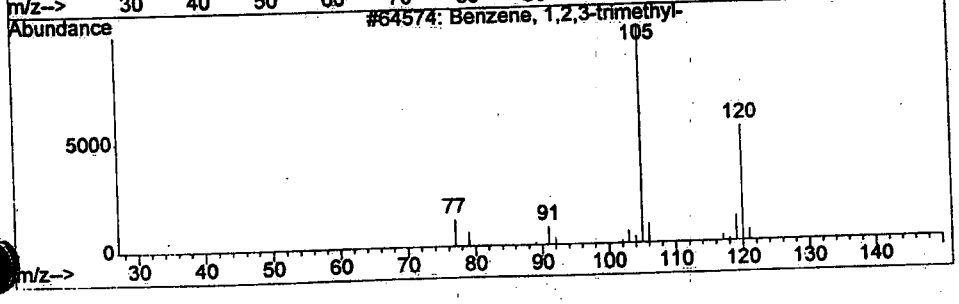
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.02	67.13 UG	10364800	Chlorobenzene-d5	10.12

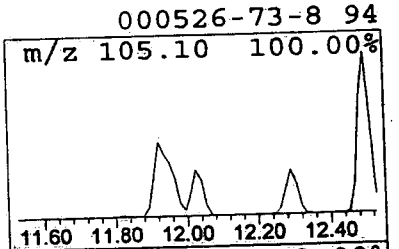
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,2,4-Trimethylbenzene	120	C9H12	000095-36-3	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	94

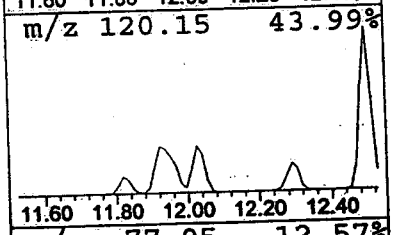


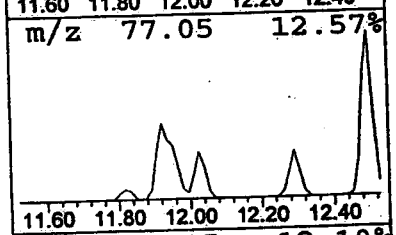


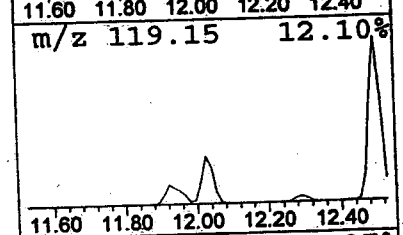


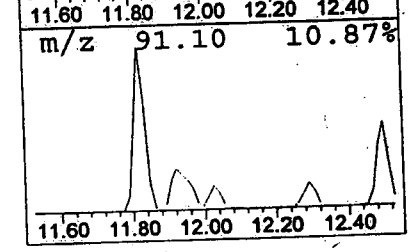












000111

3778

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
'S Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

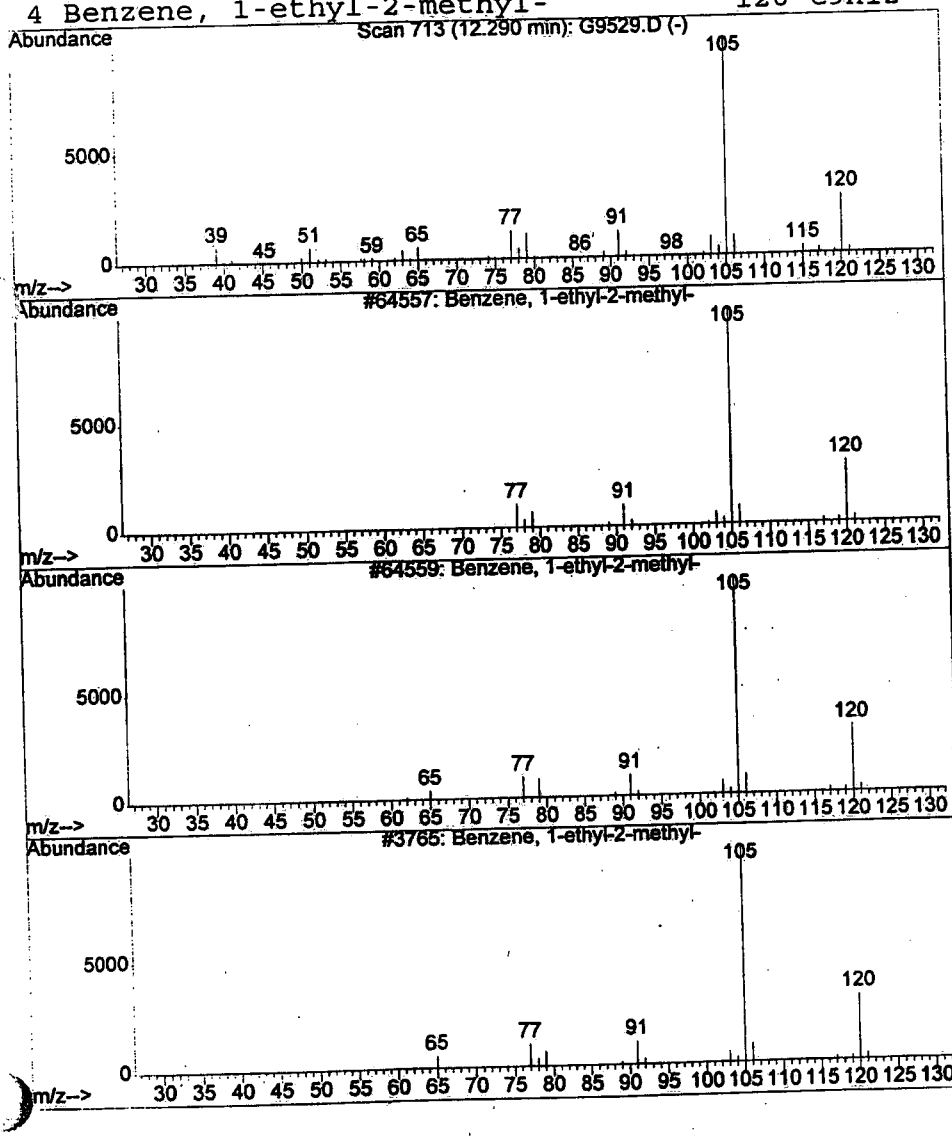
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

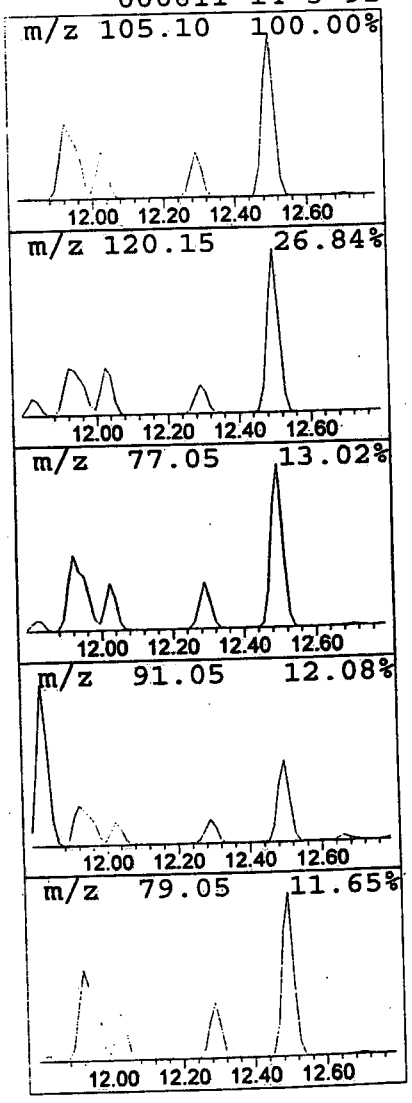
****

Peak Number 5 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.29	60.97 UG	9413690	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91





000145

3979

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

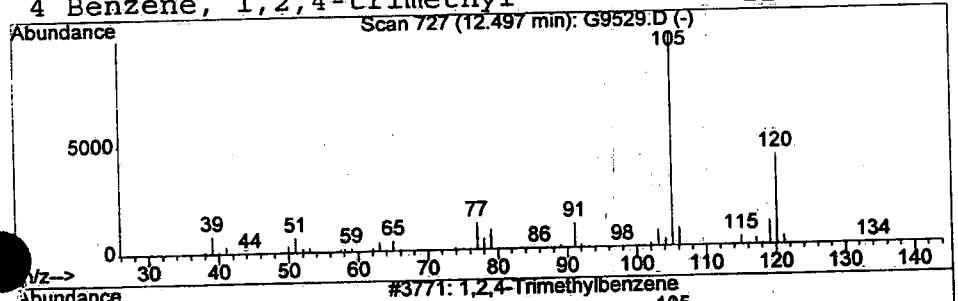
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

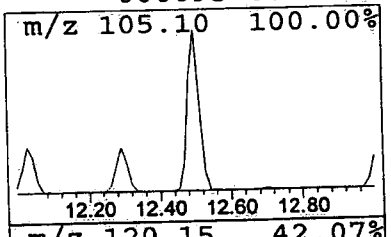
****

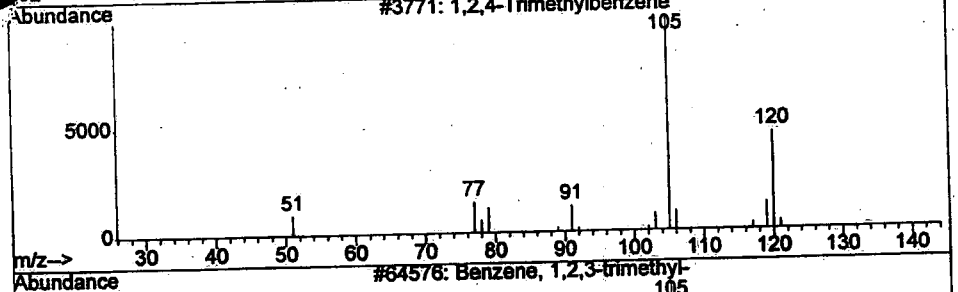
Peak Number 6 Substituted benzene Concentration Rank 1

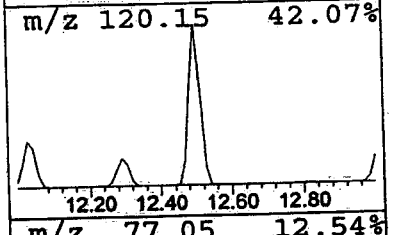
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.50	241.66 UG	37313500	Chlorobenzene-d5	10.12

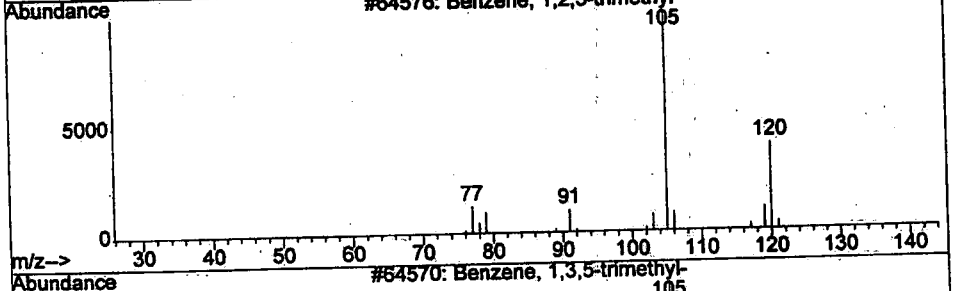
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,2,4-Trimethylbenzene	120	C9H12	000095-36-3	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
4	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94

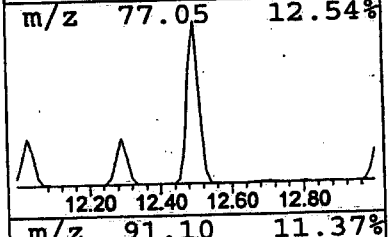


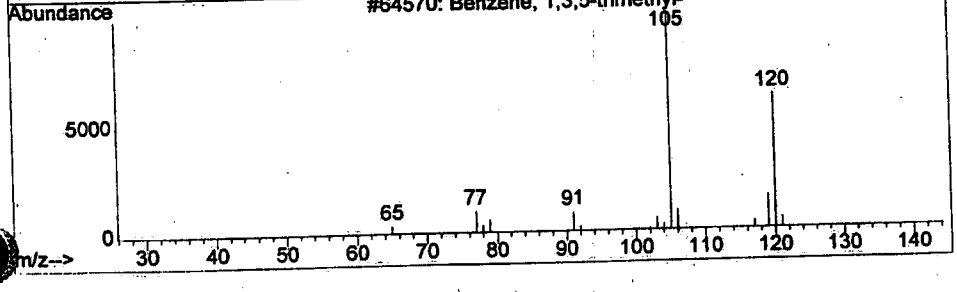


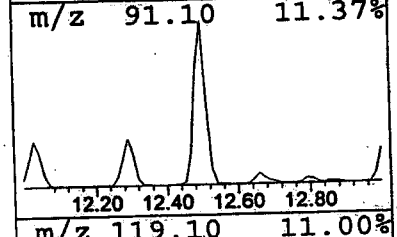


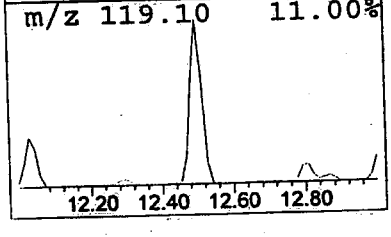












Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

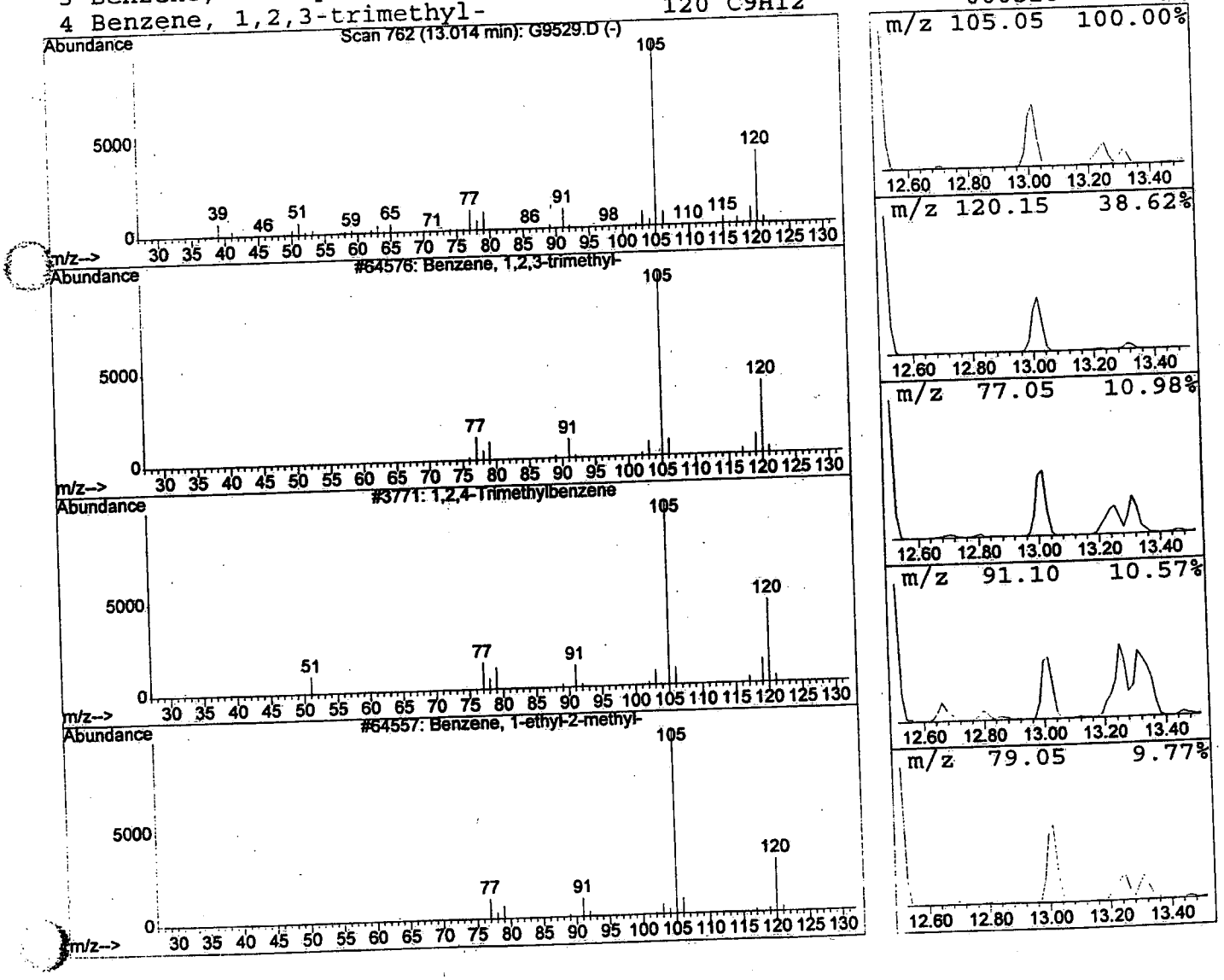
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Substituted benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.01	57.77 UG	8919880	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	97
2	1,2,4-Trimethylbenzene	120	C9H12	000095-36-3	94
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	91
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	91



000117

3948

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
; Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

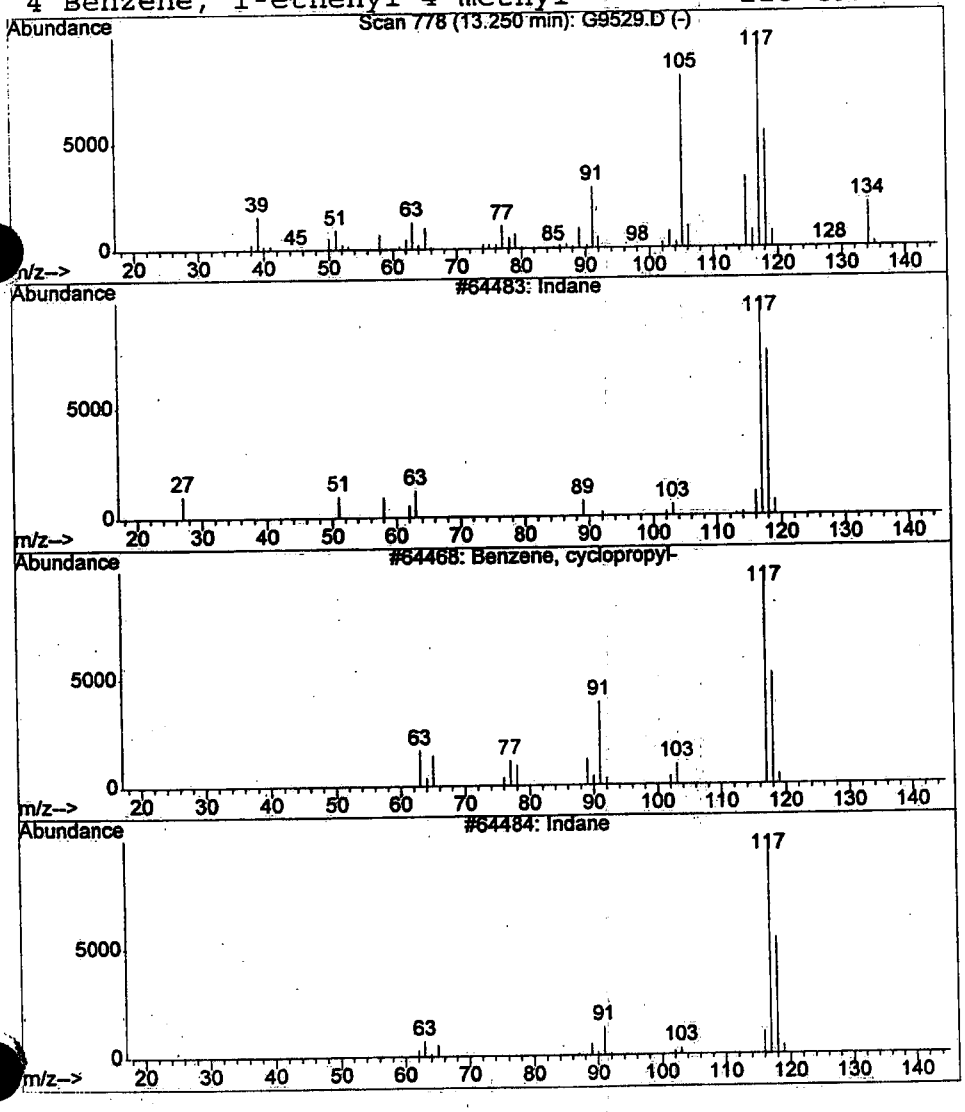
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

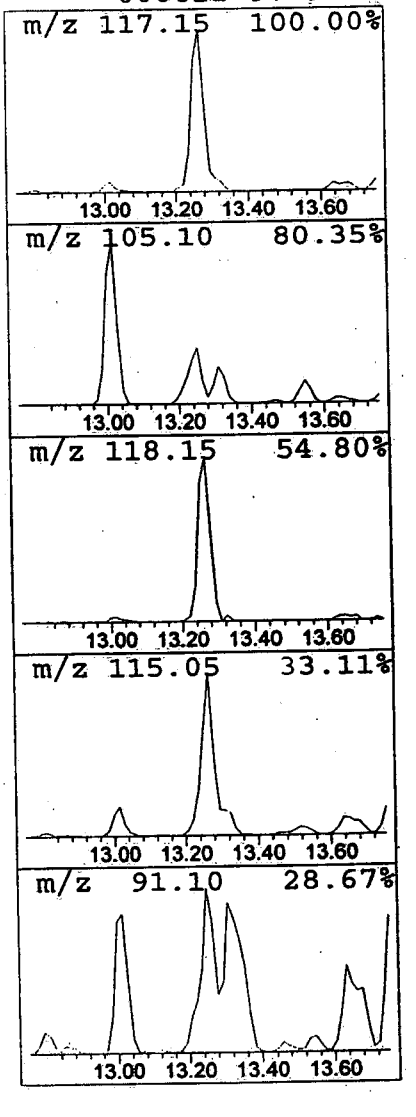
****

Peak Number 8 Unknown — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.25	66.77 UG	10308900	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	91
2	Benzene, cyclopropyl-	118	C9H10	000873-49-4	64
3	Indane	118	C9H10	000496-11-7	64
4	Benzene, 1-ethenyl-4-methyl-	118	C9H10	000622-97-9	64





000148

3982

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

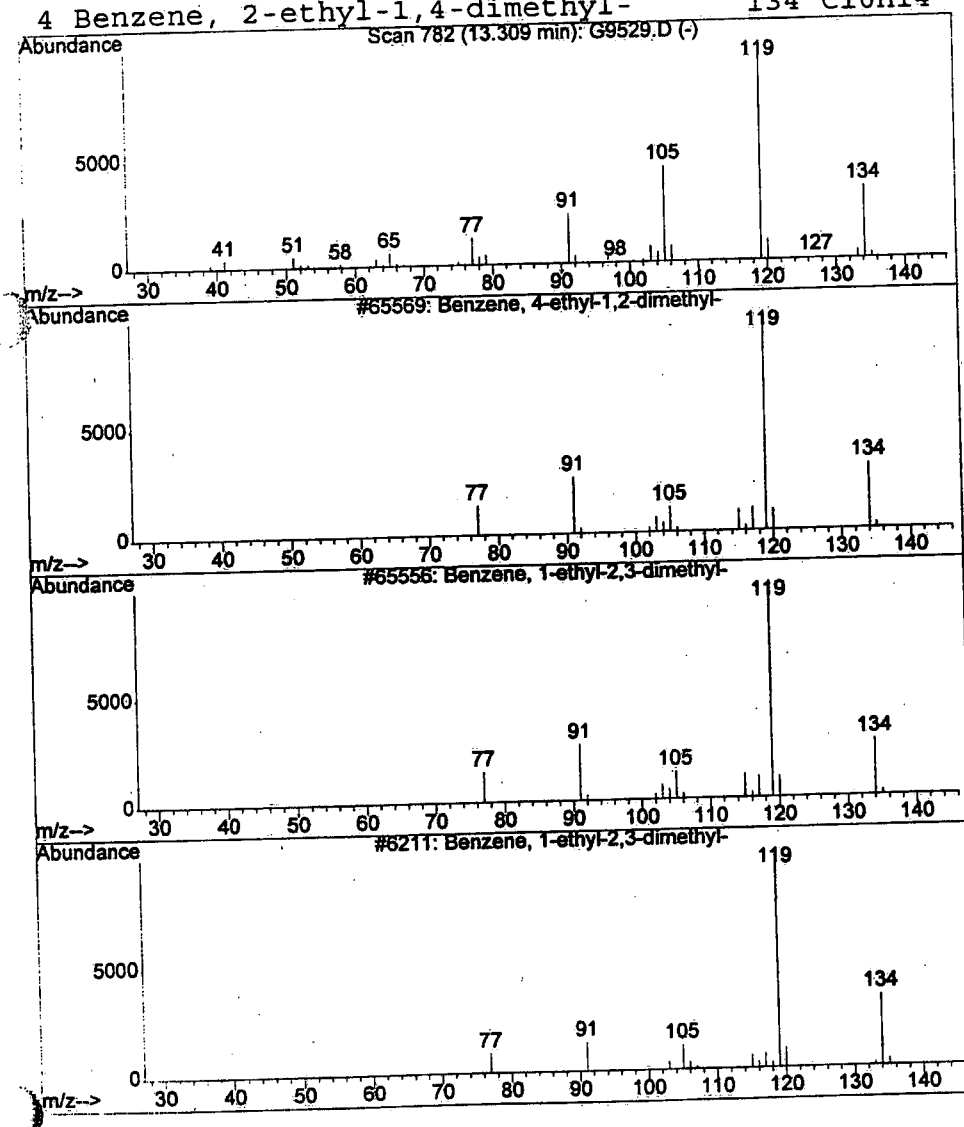
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

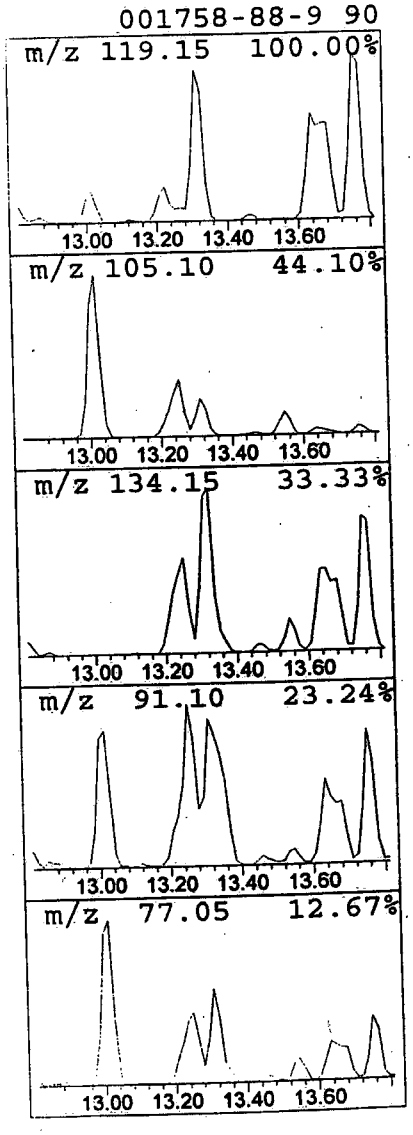
****

Peak Number 9 Substituted benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.31	29.66 UG	4579210	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	91
2	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	91
3	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	90
4	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	90





0001219

3963

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9529.D
Acq On : 5 Apr 2001 13:04
Sample : MW-6,2094-006,A,0.5mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
; Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

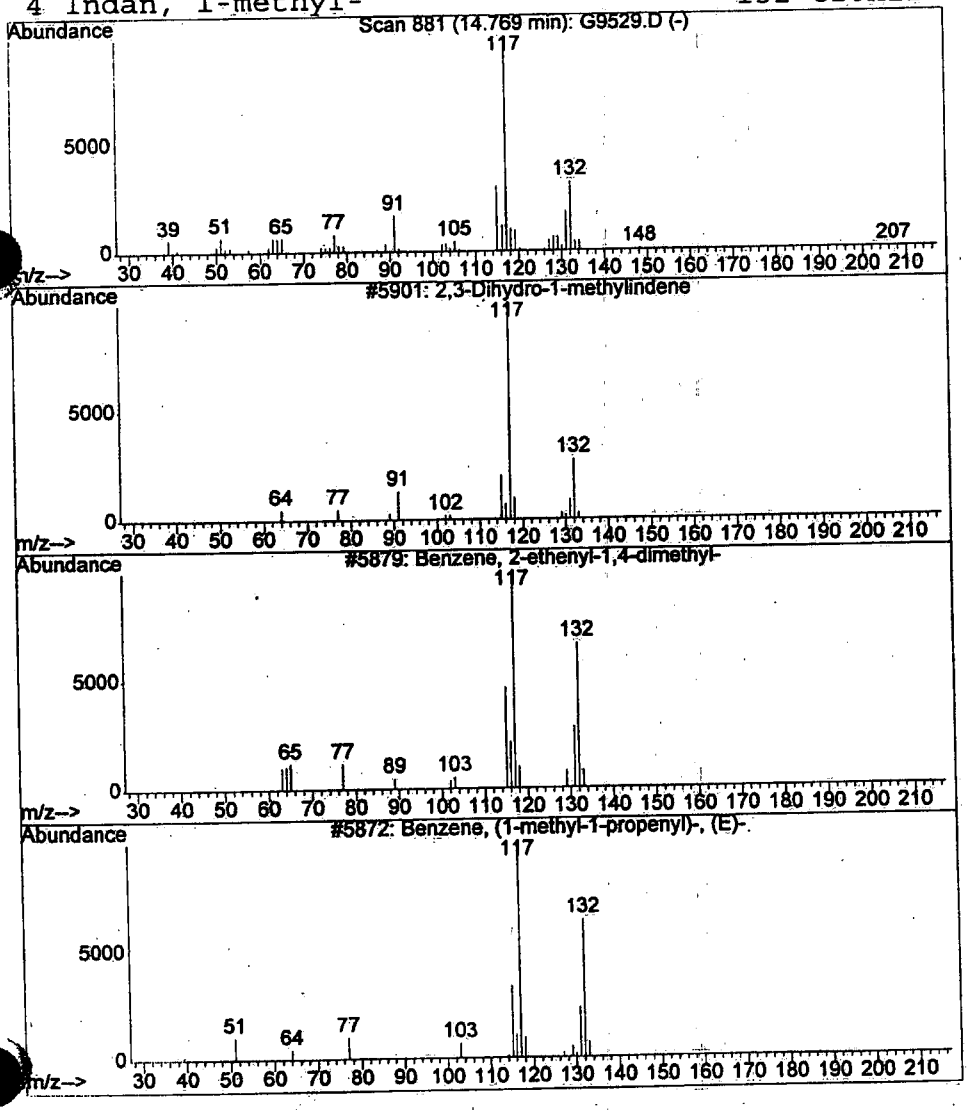
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

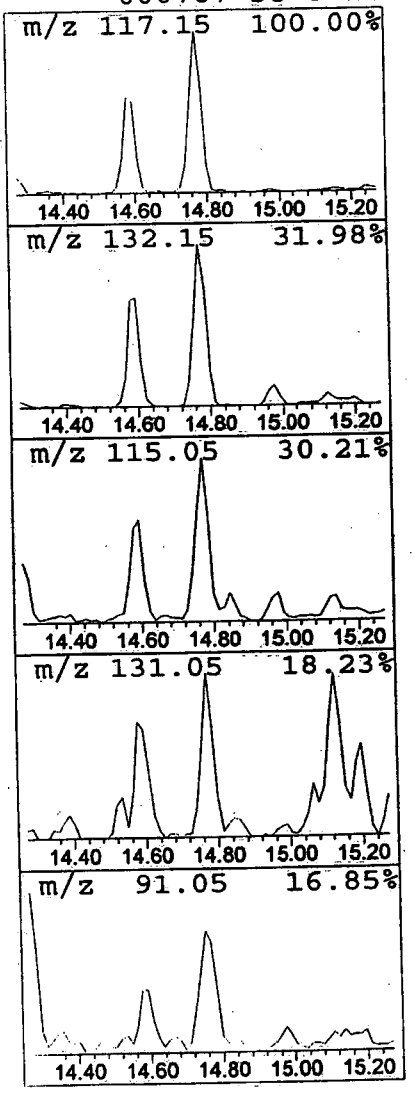
****

Peak Number 10 Unknown aromatic — Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.77	26.64 UG	4113690	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,3-Dihydro-1-methylindene	132	C10H12	027133-93-3	93
2	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	91
3	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	90
4	Indan, 1-methyl-	132	C10H12	000767-58-8	90





39804

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9531.D
Acq On : 5 Apr 2001 13:53
Sample : MW-8,2094-007,A,0.001mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Integration Params: LSCINT.P
Quant Time: Apr 6 10:08 2001

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00
Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.05	168	1418440	30.00	UG	0.02
31) 1,4-Difluorobenzene	6.83	114	1722639	30.00	UG	0.00
50) Chlorobenzene-d5	10.12	117	1549180	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.39	65	754575	28.49	UG	0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.97%			
41) Toluene-d8	8.45	98	1930882	28.30	UG	0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.33%			
59) Bromofluorobenzene	11.52	95	878769	26.48	UG	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 88.27%			
Target Compounds						Qvalue
29) 1,2-Dichloroethane(EDC)	6.46	62	56067	1.46	UG	100
32) Benzene	6.45	78	5806283	67.97	UG	100
42) Toluene	8.53	92	3027278	50.81	UG	94

(#) = qualifier out of range (m) = manual integration
G9531.D VG040401.M Fri Apr 06 09:47:10 2001 MSD-G Page 1

3985

000151

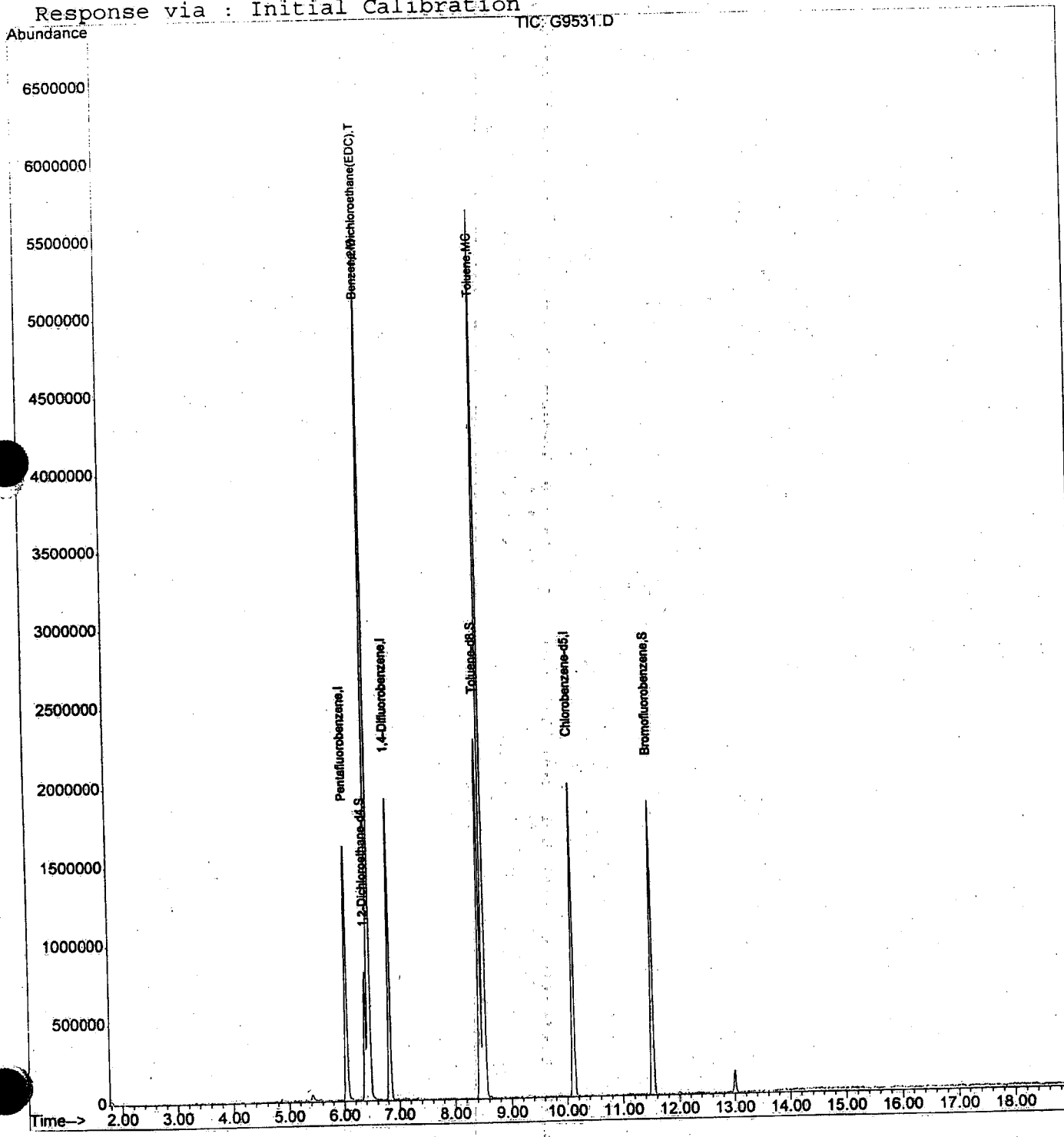
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9531.D
Acq On : 5 Apr 2001 13:53
Sample : MW-8,2094-007,A,0.001mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 10:08 2001

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



3986

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9531.D
Acq On : 5 Apr 2001 13:53
Sample : MW-8,2094-007,A,0.001mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Integration Params: LSCINT.P

Vial: 39
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.419	243	248	254	rBV	43132	151017	1.10%	0.290%
2	6.051	287	291	296	rBV	1617981	4001635	29.22%	7.682%
3	6.389	310	314	315	rBV	810616	1880257	13.73%	3.609%
4	6.448	315	318	323	rVB	5619374	13696155	100.00%	26.292%
5	6.831	340	344	349	rBV	1918286	4155378	30.34%	7.977%
6	8.454	450	454	456	rBV	2276168	5640156	41.18%	10.827%
7	8.528	456	459	464	rVB	5671325	13222170	96.54%	25.382%
8	10.117	563	567	571	rBV	1991189	4638636	33.87%	8.904%
9	11.519	658	662	667	rBV	1866313	4372447	31.92%	8.393%
10	13.008	759	763	767	rVB	144232	335581	2.45%	0.644%

Sum of corrected areas: 52093432

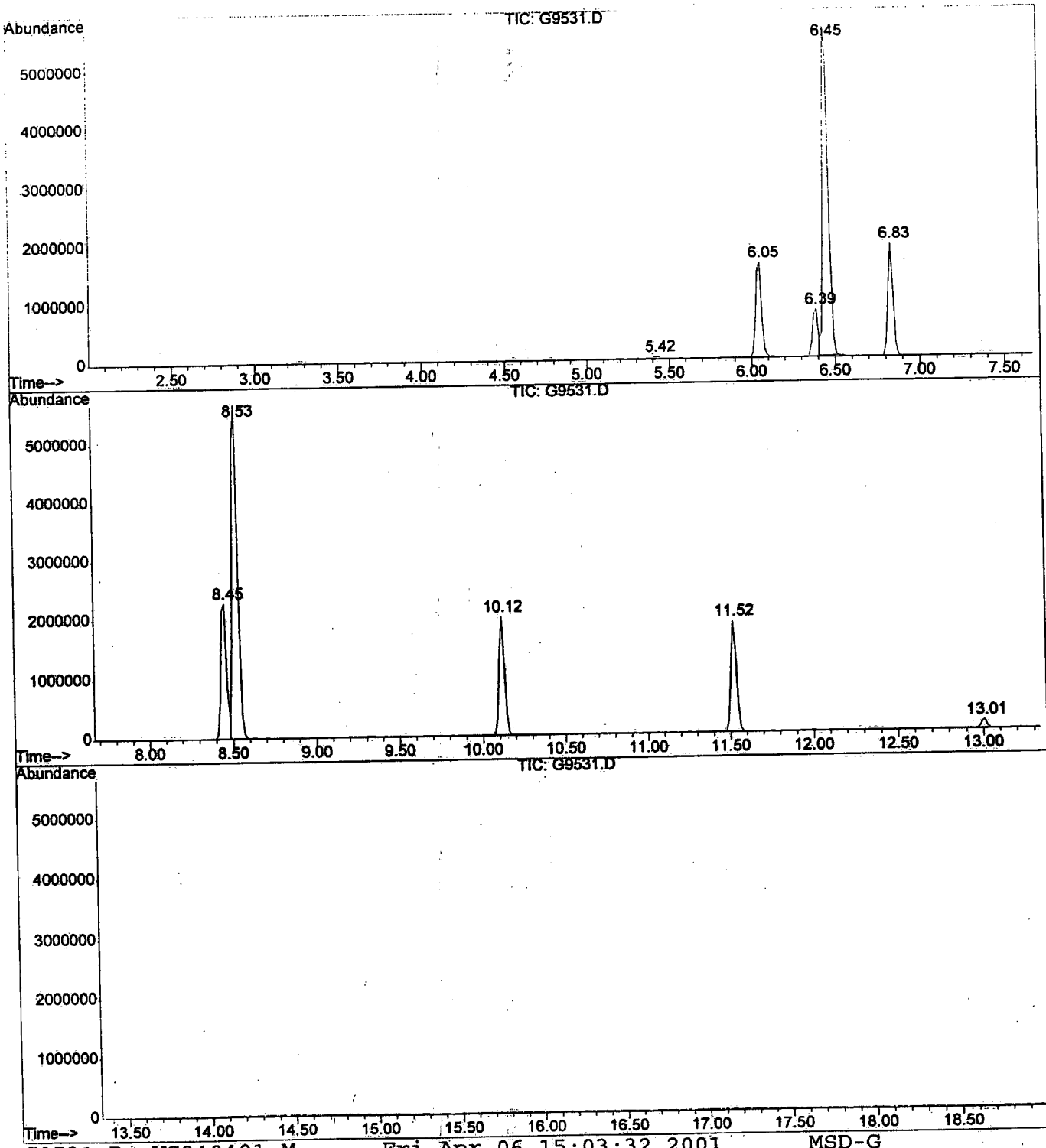
G9531.D VG040401.M Fri Apr 06 15:03:32 2001 MSD-G

3987

000153

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9531.D
Operator : BARBARA
Acquired : 5 Apr 2001 13:53 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: MW-8,2094-007,A,0.001mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 39
Quant File :VG040401.RES (RTE Integrator)



G9531.D VG040401.M Fri Apr 06 15:03:32 2001 MSD-G

39646

000151

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9543.D
Acq On : 5 Apr 2001 23:14
Sample : MW-3,2094-008,A,0.0025mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial: 40
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00
3 Integration Params: LSCINT.P
Quant Time: Apr 6 12:06 2001
Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.06	168	1037940	30.00	UG		0.03
31) 1,4-Difluorobenzene	6.84	114	1340081	30.00	UG		0.01
50) Chlorobenzene-d5	10.12	117	1201446	30.00	UG		0.01
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.40	65	635061	32.77	UG		0.03
Spiked Amount 30.000	Range 80 - 120		Recovery = 109.23%				
41) Toluene-d8	8.47	98	1511505	28.48	UG		0.03
Spiked Amount 30.000	Range 80 - 120		Recovery = 94.93%				
59) Bromofluorobenzene	11.53	95	667721	25.94	UG		0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 86.47%				
Target Compounds							Qvalue
32) Benzene	6.46	78	4152148	62.48	UG		99
42) Toluene	8.54	92	77654	1.68	UG		95
51) Chlorobenzene	10.15	112	35513	0.59	UG	#	86

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

000155

3969

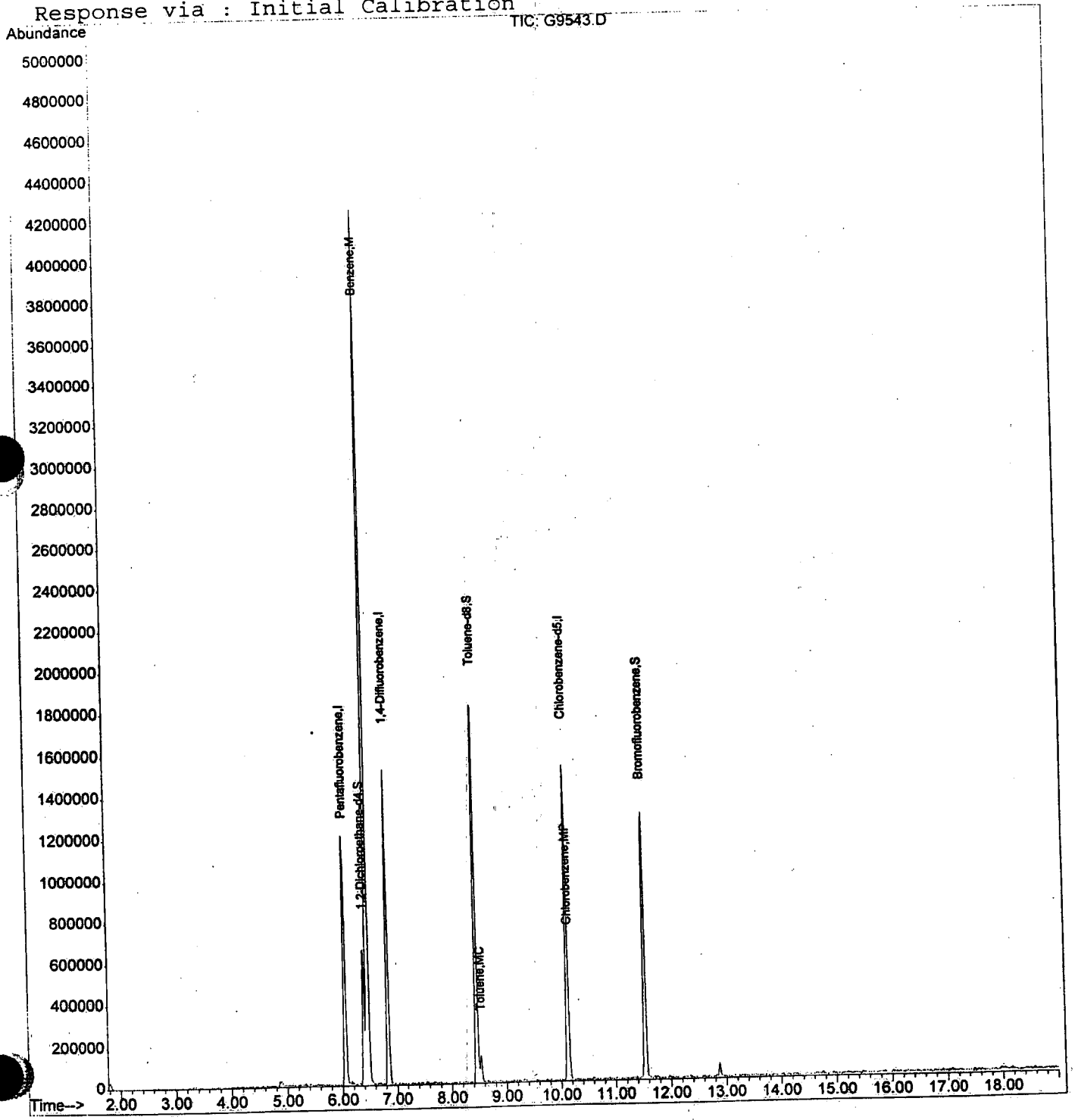
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9543.D
Acq On : 5 Apr 2001 23:14
Sample : MW-3,2094-008,A,0.0025mL,100
Misc : ENVTACT/ORBIS - NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 12:06 2001

Vial: 40
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



000156

3990

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9543.D
Acq On : 5 Apr 2001 23:14
Sample : MW-3,2094-008,A,0.0025mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 40
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.048	288	292	299	rBV	1205832	2895296	28.94%	9.829%
2	6.385	312	315	317	rBV	650163	1592265	15.92%	5.406%
3	6.458	317	320	325	rVB	4238674	10003844	100.00%	33.963%
4	6.839	342	346	350	rBV	1517596	3180605	31.79%	10.798%
5	8.451	453	456	460	rBV	1818531	4426237	44.25%	15.027%
6	8.539	460	462	465	rVB	128247	262578	2.62%	0.891%
7	10.121	566	570	576	rBV	1521849	3755791	37.54%	12.751%
8	11.543	662	667	671	rBV	1277288	3187495	31.86%	10.821%
9	12.876	756	758	764	rVB2	67206	151362	1.51%	0.514%

Sum of corrected areas: 29455473

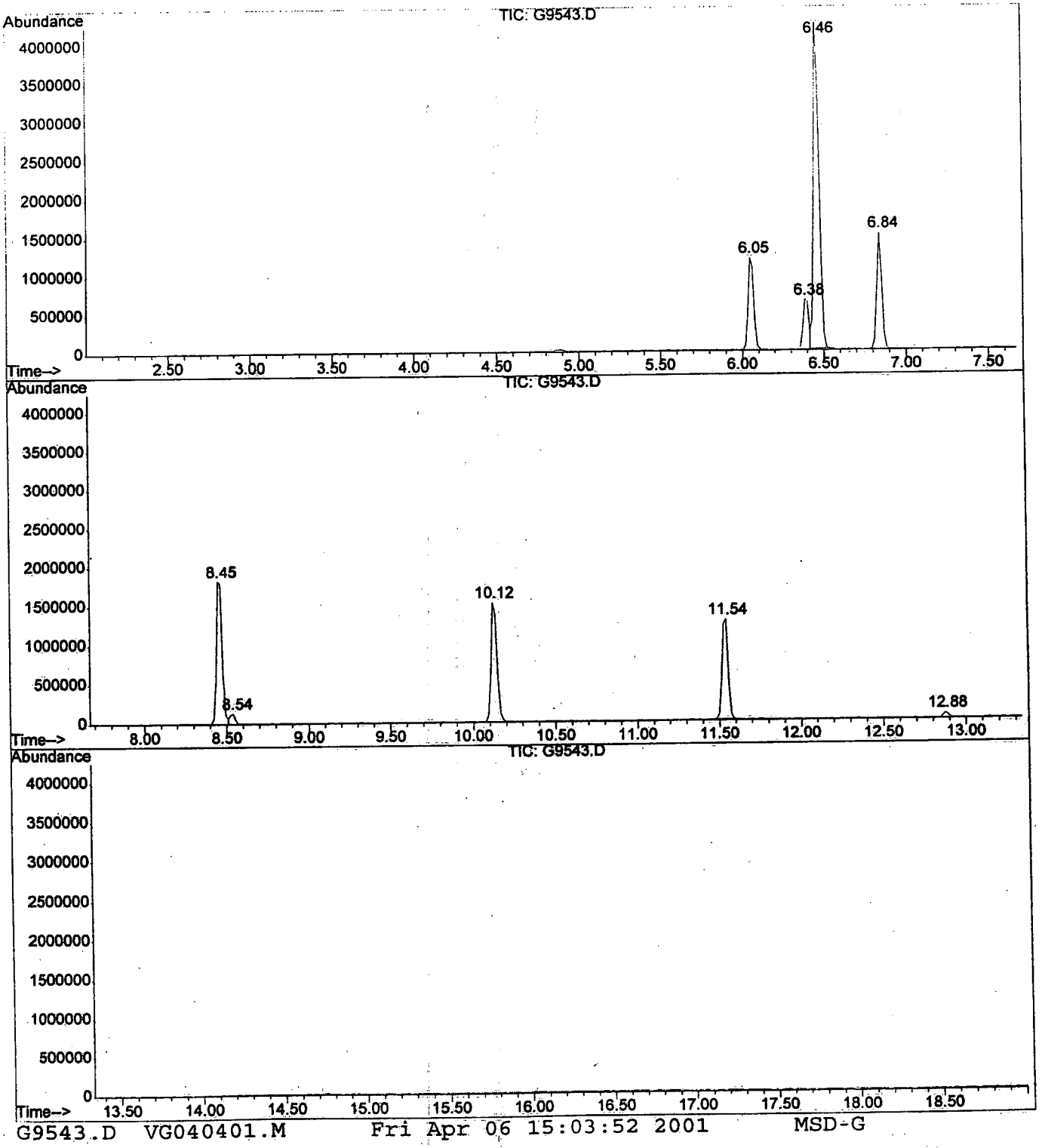
G9543.D VG040401.M Fri Apr 06 15:03:51 2001 MSD-G

000157

3991

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9543.D
Operator : BARBARA
Acquired : 5 Apr 2001 23:14 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: MW-3,2094-008,A,0.0025mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 40
Quant File :VG040401.RES (RTE Integrator)



G9543.D VG040401.M Fri Apr 06 15:03:52 2001 MSD-G

000153

3992

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-05-01\G9533.D
Acq On : 5 Apr 2001 14:43
Sample : MW-5,2094-009,A,0.01mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P
Quant Time: Apr 6 13:55 2001

Vial: 41
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00
Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.05	168	1423269	30.00	UG		0.02
31) 1,4-Difluorobenzene	6.83	114	1714607	30.00	UG		0.00
50) Chlorobenzene-d5	10.12	117	1524343	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.39	65	761414	28.65	UG		0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 95.50%				
41) Toluene-d8	8.45	98	1978889	29.14	UG		0.02
Spiked Amount 30.000	Range 80 - 120		Recovery = 97.13%				
59) Bromofluorobenzene	11.52	95	948582	29.05	UG		0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 96.83%				
Target Compounds							Qvalue
25) Chloroform	5.86	83	37420	0.83	UG		99
32) Benzene	6.46	78	1202542	14.14	UG	#	91
42) Toluene	8.52	92	4217106	71.11	UG		94
45) Tetrachloroethene	9.16	166	148905	4.84	UG	#	100
53) Ethylbenzene	10.26	91	33690	0.26	UG		100
54) m,p-Xylene	10.40	106	60426	1.35	UG	#	100
74) 1,2-Dichlorobenzene	13.41	146	34873	0.45	UG	#	94

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

000153

3993

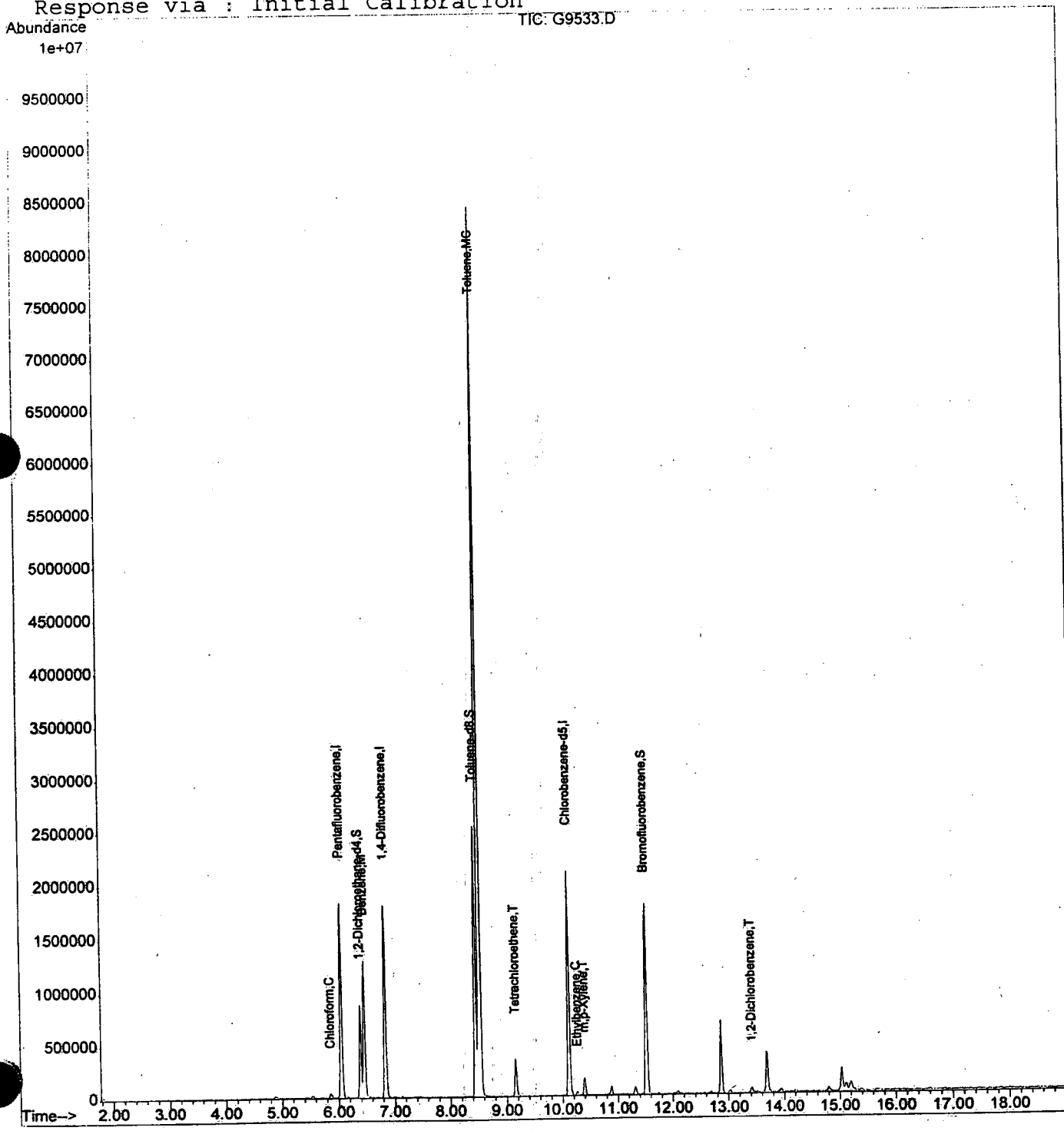
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9533.D
Acq On : 5 Apr 2001 14:43
Sample : MW-5,2094-009,A,0.01mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 6 13:55 2001

Vial: 41
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration



000160

3994

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9533.D
Acq On : 5 Apr 2001 14:43
Sample : MW-5,2094-009,A,0.01mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 41
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.048	286	290	294	rBV	1826145	3964589	21.68%	7.831%
2	6.387	309	313	315	rBV	872357	1977630	10.82%	3.906%
3	6.460	315	318	322	rVB	1274650	2949264	16.13%	5.825%
4	6.828	340	343	349	rVB	1803114	4122656	22.55%	8.143%
5	8.450	449	453	455	rBV	2538631	5540173	30.30%	10.943%
6	8.523	455	458	462	rVB	8403770	18283516	100.00%	36.112%
7	9.158	497	501	508	rVB	354458	804305	4.40%	1.589%
8	10.117	562	566	573	rBV	2107848	4655115	25.46%	9.194%
9	10.397	581	585	589	rBV	162311	396788	2.17%	0.784%
10	11.325	643	648	651	rBV	72101	188498	1.03%	0.372%
11	11.530	658	662	666	rBV	1784781	4422490	24.19%	8.735%
12	12.871	749	753	757	rVB	691892	1443938	7.90%	2.852%
13	13.680	803	808	815	rBV	387205	1033527	5.65%	2.041%
14	15.035	895	900	903	rBV	221857	612176	3.35%	1.209%
15	15.197	908	911	915	rVB4	70418	235137	1.29%	0.464%

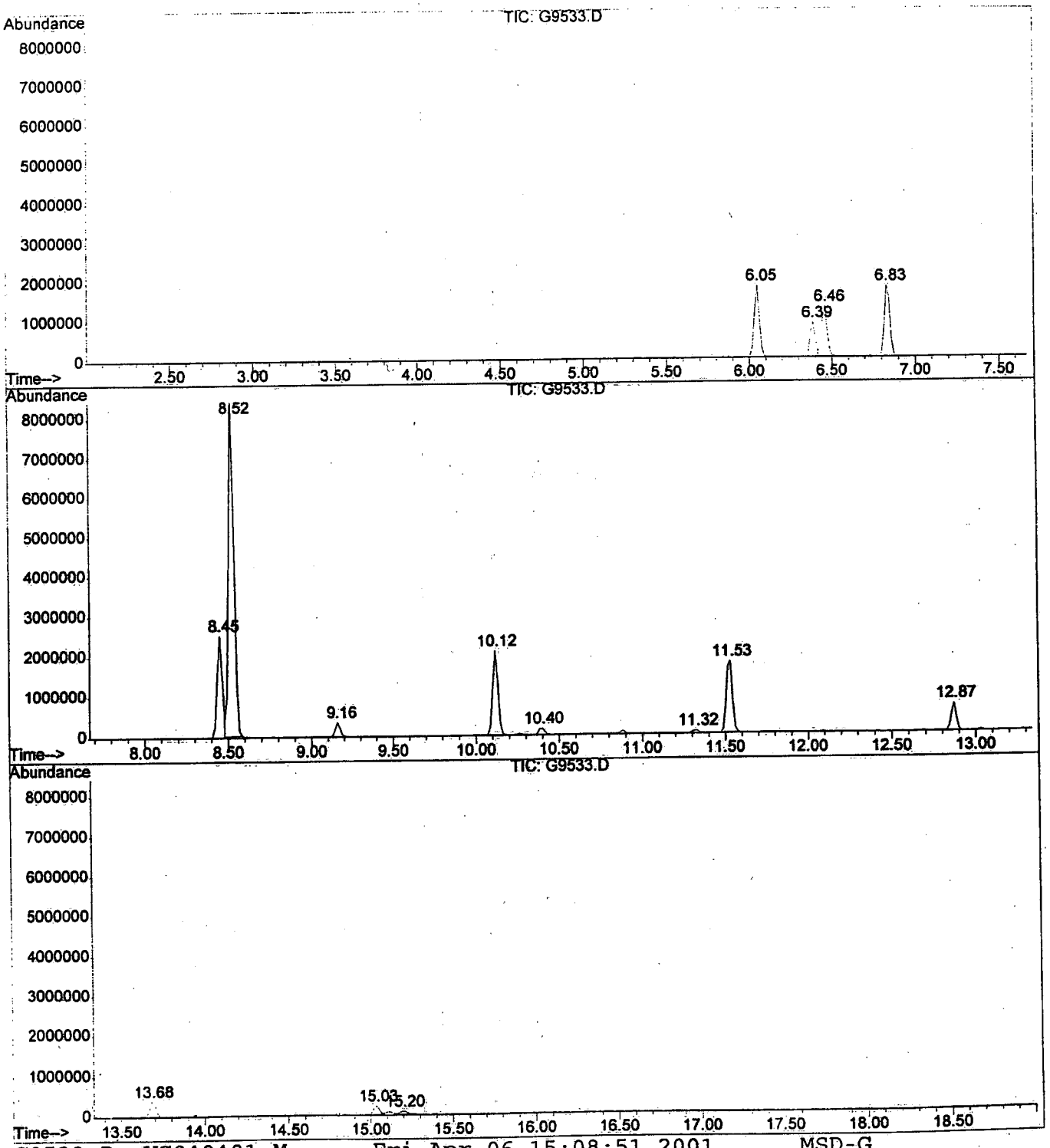
Sum of corrected areas: 50629802

G9533.D VG040401.M Fri Apr 06 15:08:51 2001 MSD-G

3995

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9533.D
Operator : BARBARA
Acquired : 5 Apr 2001 14:43 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: MW-5,2094-009,A,0.01mL,100
Misc Info : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
Vial Number: 41
Quant File :VG040401.RES (RTE Integrator)



G9533.D VG040401.M Fri Apr 06 15:08:51 2001 MSD-G

000102

3996

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9533.D
Acq On : 5 Apr 2001 14:43
Sample : MW-5,2094-009,A,0.01mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 41
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

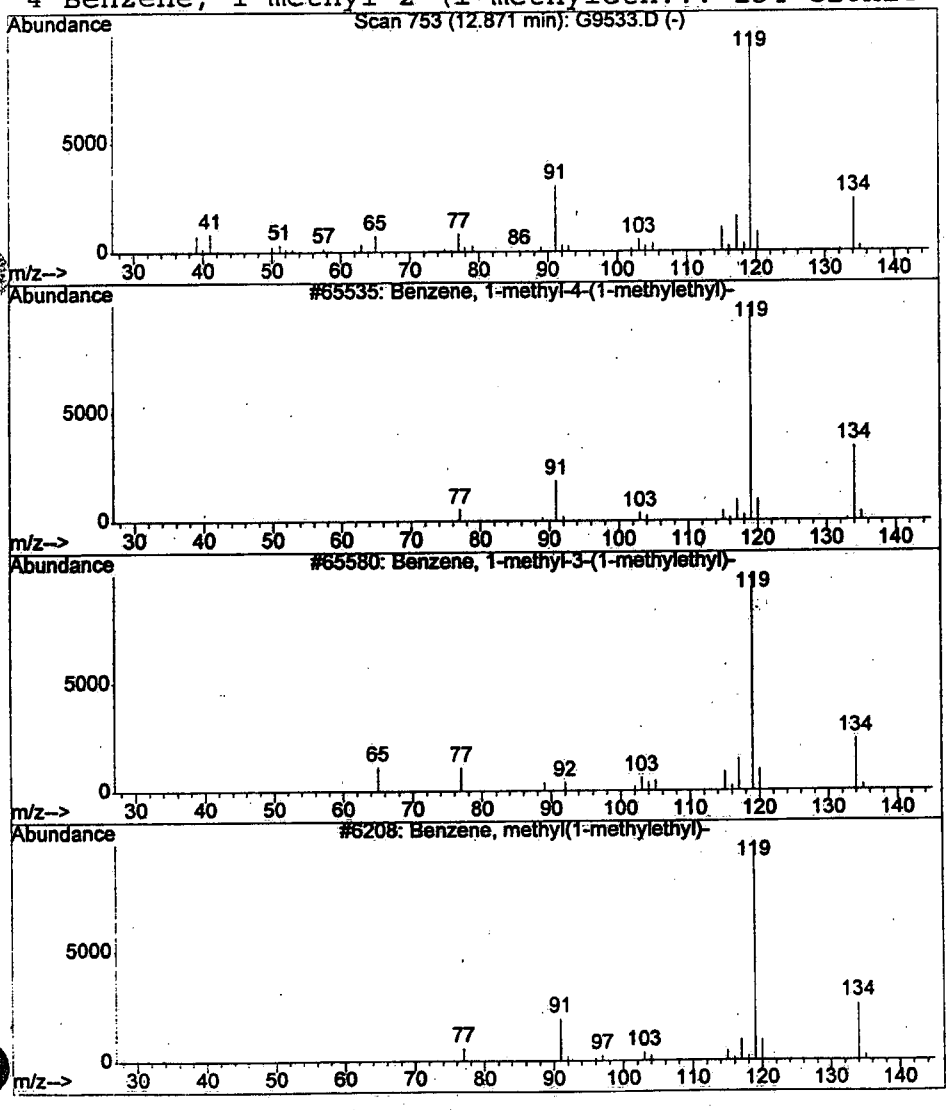
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

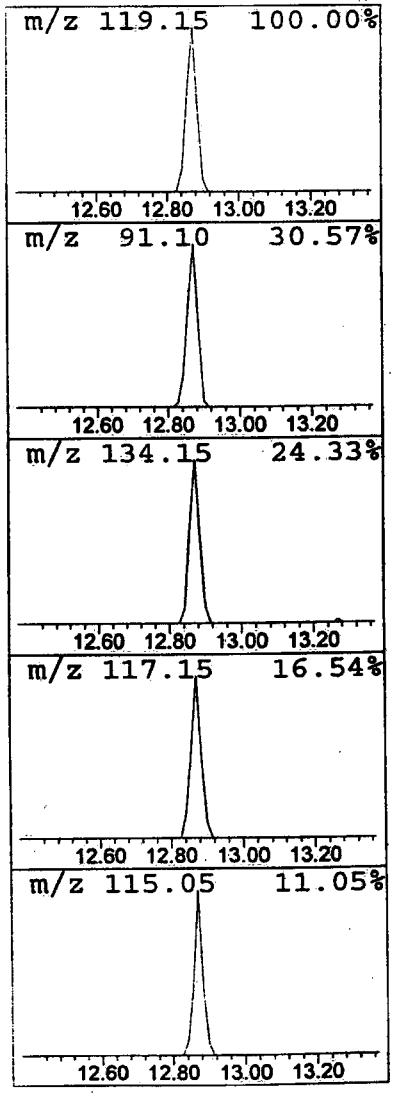
****

Peak Number 1 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.87	9.31 UG	1443940	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methyleth...	134	C10H14	000099-87-6	91
2	Benzene, 1-methyl-3-(1-methyleth...	134	C10H14	000535-77-3	91
3	Benzene, methyl(1-methylethyl)-	134	C10H14	025155-15-1	91
4	Benzene, 1-methyl-2-(1-methyleth...	134	C10H14	000527-84-4	91





3997

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9533.D
Acq On : 5 Apr 2001 14:43
Sample : MW-5,2094-009,A,0.01mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
ALS Integration Params: LSCINT.P

Vial: 41
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

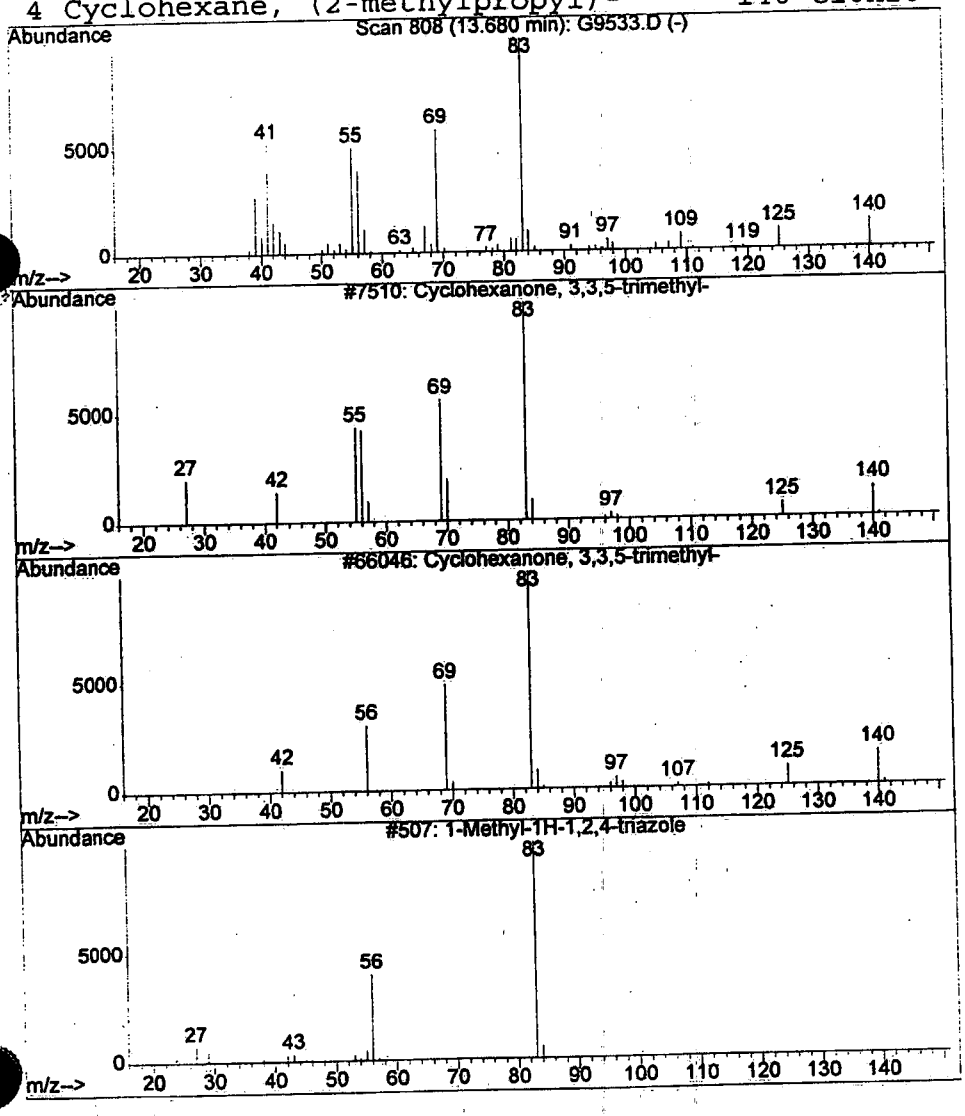
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

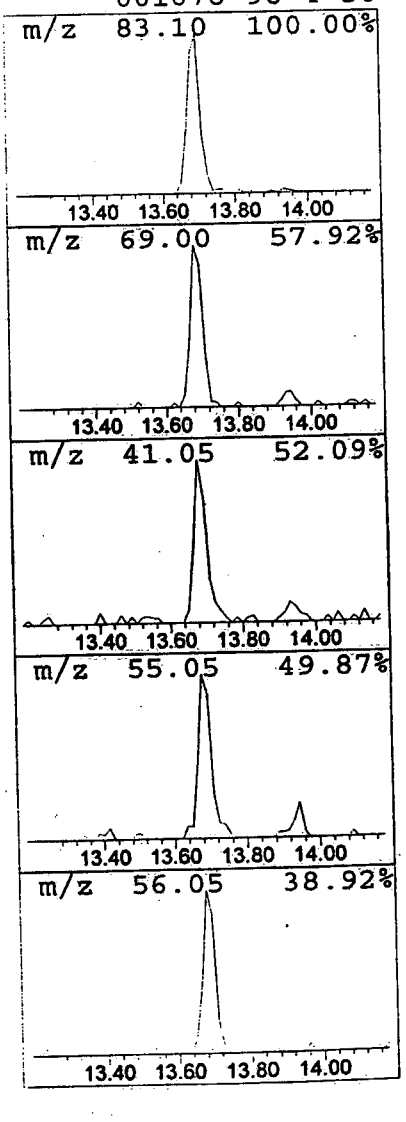
****

Peak Number 2 Unknown — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.68	6.66 UG	1033530	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	90
2	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	87
3	1-Methyl-1H-1,2,4-triazole	83	C3H5N3	006086-21-1	53
4	Cyclohexane, (2-methylpropyl)-	140	C10H20	001678-98-4	50





39958

000161

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9533.D
Acq On : 5 Apr 2001 14:43
Sample : MW-5,2094-009,A,0.01mL,100
Misc : ENVTACT/ORBIS_-_NEWARK,4/03/01,4/04/01
S Integration Params: LSCINT.P

Vial: 41
Operator: BARBARA
Inst : 5970 - In
Multiplr: 1.00

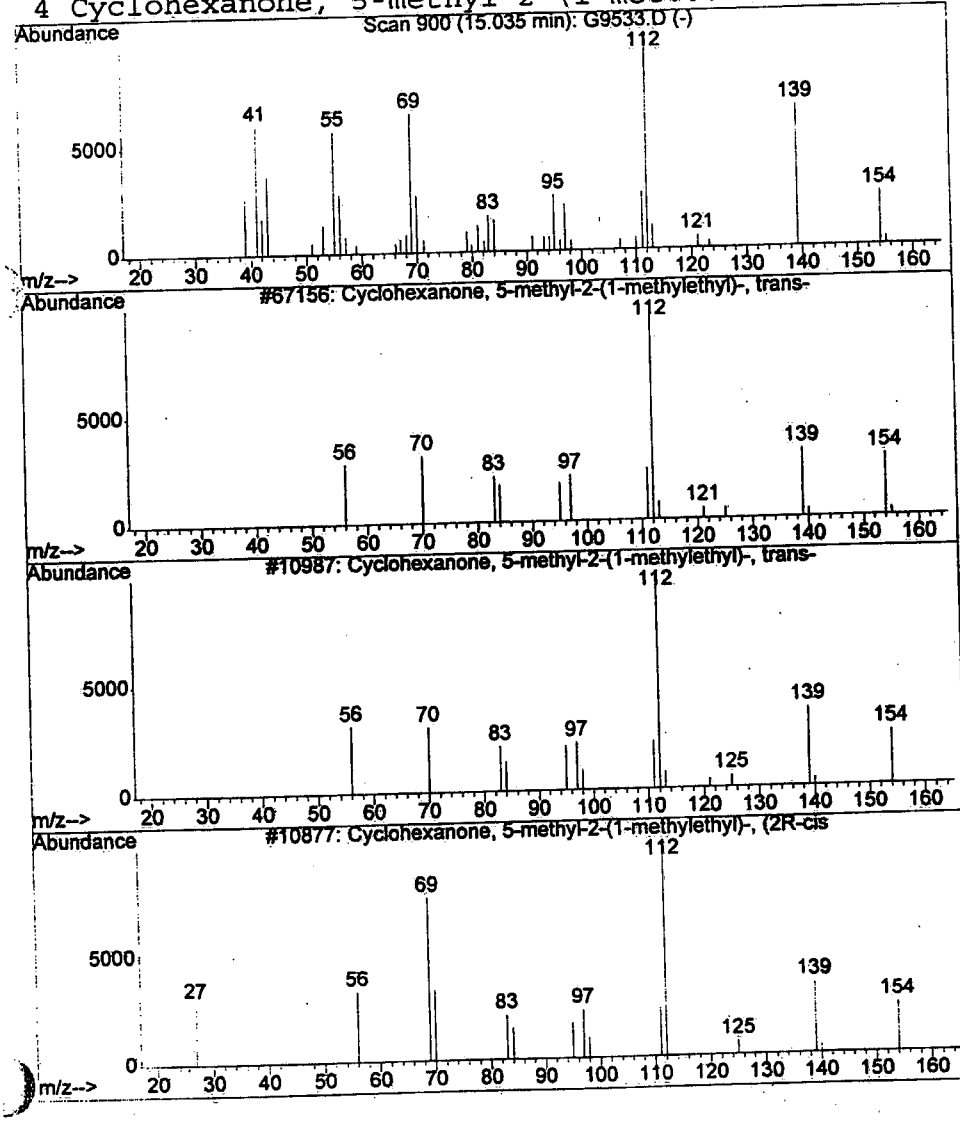
Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

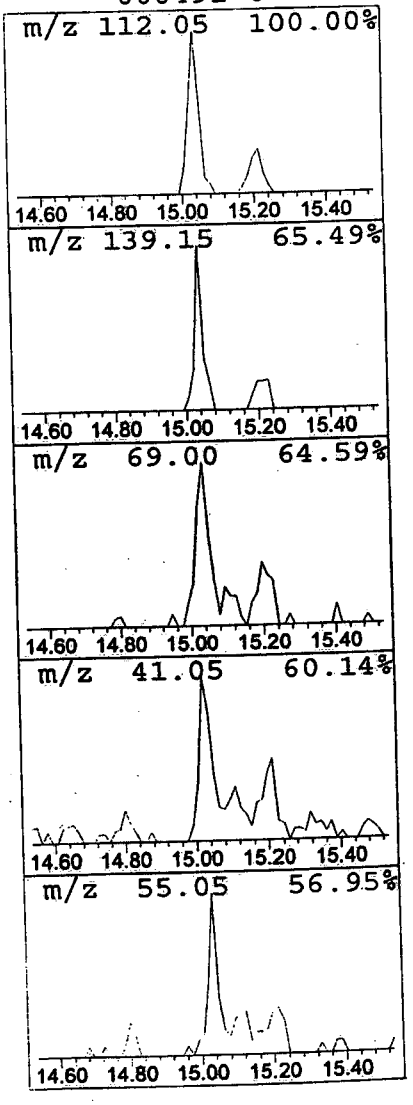
****

Peak Number 3 Unknown — Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.03	3.95 UG	612176	Chlorobenzene-d5	10.12

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 5-methyl-2-(1-met...	154	C10H18O	000089-80-5	94
2	Cyclohexanone, 5-methyl-2-(1-met...	154	C10H18O	000089-80-5	87
3	Cyclohexanone, 5-methyl-2-(1-met...	154	C10H18O	001196-31-2	87
4	Cyclohexanone, 5-methyl-2-(1-met...	154	C10H18O	000491-07-6	87





3999

000105

Quantitation Report (QT Reviewed)

File : \HPCHEM\1\DATA\04-05-01\G9506.D
Acq On : 5 Apr 2001 2:13
Sample : N/A METHOD-BLK,A,5mL,100
Misc : [illegible]

Vial: 4
Operator: BARBARA
Inst : 5970 - 1n
Multiplr: 1.00

Integration Params: LSCINT.P
Quant Time: Apr 6 10:38 2001

Quant Results File: VG040401.RES

Quant Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration
DataAcq Meth : VOA_SPT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.04	168	1238941	30.00	UG	0.01
31) 1,4-Difluorobenzene	6.82	114	1538883	30.00	UG	0.00
50) Chlorobenzene-d5	10.11	117	1272667	30.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.37	65	760566	32.88	UG	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 109.60%			
41) Toluene-d8	8.44	98	1783285	29.26	UG	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 97.53%			
59) Bromofluorobenzene	11.51	95	807534	29.62	UG	0.00
Spiked Amount 30.000	Range 80 - 120		Recovery = 98.73%			

Target Compounds Qvalue

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

000186

4000

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-05-01\G9506.D — Vial: 4
Acq On : 5 Apr 2001 2:13 — Operator: BARBARA
Sample : N/A,METHOD-BLK,A,5mL,100 — Inst : 5970 - In
Misc : ...,RA — Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Apr 6 10:38 2001 — Quant Results File: VG040401.RES

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Wed Apr 04 15:55:00 2001
Response via : Initial Calibration

4001

LSC Area Percent Report

Data Path : C:\HPCHEM\1\DATA\04-05-01\G9506.D
Acq On : 6 Apr 2001 2:13
Sample : N/A,METHOD-BLK,A,5mL,100

Vial: 4
Operator: BARBARA
Inst : 5970 - Tu

Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\VG040401.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Filtering: 5
Sampling : 1
Min Area: 1 % of largest Peak
Start Thrs: 0.2
Max Peaks: 100
Stop Thrs : 0
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.867	209	211	215	rBV	51317	102028	2.01%	0.453%
2	6.027	286	290	295	rBV	1428457	3363415	66.37%	14.938%
3	6.366	310	313	318	rVB	815061	1897080	37.43%	8.426%
4	6.821	340	344	348	rBV	1749839	3732362	73.65%	16.577%
5	8.440	450	454	458	rVB	2362817	5067783	100.00%	22.508%
6	10.111	564	568	577	rVB	1655857	4026025	79.44%	17.881%
7	11.347	649	652	659	rVB	8439	52088	1.03%	0.231%
8	11.508	659	663	669	rBV	1756259	3985015	78.63%	17.699%
9	11.684	674	675	681	rVB2	14179	54990	1.09%	0.244%
10	13.492	796	798	805	rVB2	11653	54394	1.07%	0.242%
11	16.386	988	995	996	rVB3	15169	59533	1.17%	0.264%
12	16.915	1029	1031	1036	rVV2	12816	54540	1.08%	0.242%
13	17.093	1039	1043	1046	rBV3	15634	66060	1.30%	0.293%

Sum of corrected areas: 22515313

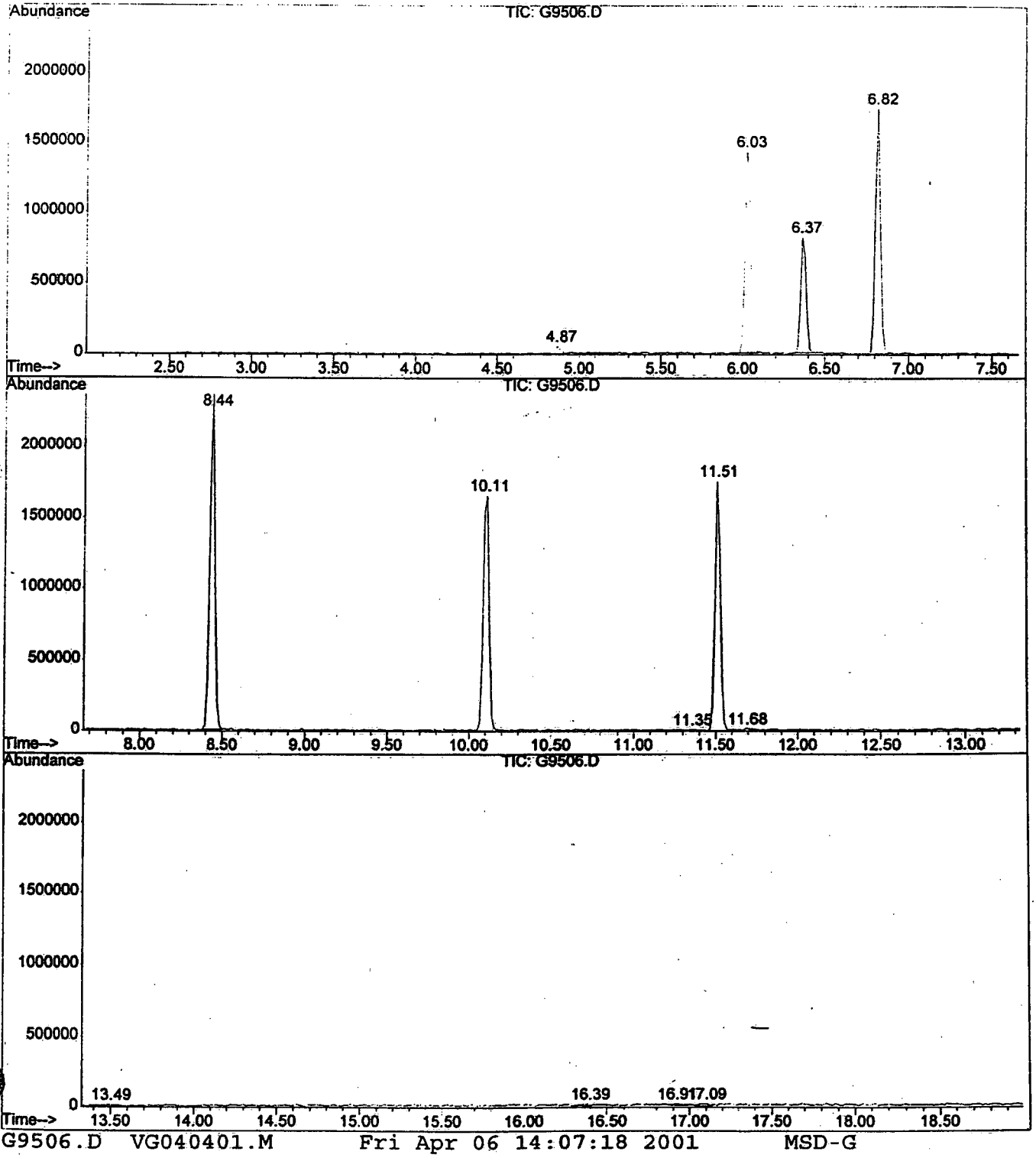
G9506.D VG040401.M Fri Apr 06 14:07:18 2001 MSD-G

000103

4002

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-05-01\G9506.D
Acquired : 5 Apr 2001 2:13 using AcqMethod VOA_SPT
Instrument : 5970 - In
Sample Name: N/A,METHOD-BLK,A,5mL,100
Misc Info : NA,NA,NA
Vial Number: 4
Quant File :VG040401.RES (RTE Integrator)



G9506.D VG040401.M Fri Apr 06 14:07:18 2001 MSD-G

000189

4003

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C9153.D DFTPP Injection Date : 04/05/2001

Inst ID: MSDC DFTPP Injection Time: 12:18

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	47.7			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	37.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	40.3			
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	8.5			
275	10.0 - 30.0% of mass 198	25.6			
365	Greater than 1.0% of mass 198	3.6			
441	Present, but less than mass 443	13.60	(	79.7	)3
442	40.0 - 100.0% of mass 198	80.9			
443	17.0 - 23.0% of mass 442	17.1	(	21.1	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C9154.D	04/05/2001	14:16
.	5-PPB-INJ-FOR-0	C9155.D	04/05/2001	14:41
.	80-PPB-INJ-FOR-	C9156.D	04/05/2001	15:06
.	10-PPB-INJ-FOR-	C9157.D	04/05/2001	15:31
.	50-PPB-INJ-FOR-	C9158.D	04/05/2001	15:56
.	Method-Blank	C9159.D	04/05/2001	16:43
.	DI-MS	C9160.D	04/05/2001	17:08
.	DI-MSD	C9161.D	04/05/2001	17:34
PS4-4-3A	2049-001	C9162.D	04/05/2001	17:59
FB1-4-3A	2049-003	C9163.D	04/05/2001	18:24
A1	2022-001	C9164.D	04/05/2001	18:50
INF-30	2025-001	C9165.D	04/05/2001	19:15
EFF-30	2025-002	C9166.D	04/05/2001	19:41
MW-1	2031-001	C9167.D	04/05/2001	20:06
MW-2	2031-002	C9168.D	04/05/2001	20:31
MW-3	2031-003	C9169.D	04/05/2001	20:57
MW-4	2031-004	C9170.D	04/05/2001	21:22
MW-5	2031-005	C9171.D	04/05/2001	21:47
MW-1B	2033-001	C9172.D	04/05/2001	22:12
FIELD-BLANK	2033-002	C9173.D	04/05/2001	22:37
A2	2023-001	C9174.D	04/05/2001	23:03
.	Method-Blank	C9175.D	04/05/2001	23:28
.	DI-MS	C9176.D	04/05/2001	23:53

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C9153.D DFTPP Injection Date : 04/05/2001

Inst ID: MSDC DFTPP Injection Time: 12:18

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	47.7			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	37.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	40.3			
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	8.5			
275	10.0 - 30.0% of mass 198	25.6			
365	Greater than 1.0% of mass 198	3.6			
441	Present, but less than mass 443	13.6	(	79.7	)3
442	40.0 - 100.0% of mass 198	80.9			
443	17.0 - 23.0% of mass 442	17.1	(	21.1	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
O.S.#1	2051-001	C9178.D	04/06/2001	00:43
FIELD-BLANK	2051-002	C9179.D	04/06/2001	01:08
KGW-2	2052-001	C9180.D	04/06/2001	01:33
FIELD-BLANK	2066-002	C9181.D	04/06/2001	01:58
K-01	2066-004	C9182.D	04/06/2001	02:23
K-02	2066-005	C9183.D	04/06/2001	02:48
FIELD-BLANK	2067-002	C9184.D	04/06/2001	03:13
PW-1	2067-003	C9185.D	04/06/2001	03:38
DW-1	2108-001	C9186.D	04/06/2001	04:03
WW-1	2108-002	C9187.D	04/06/2001	04:28
MHR-1	2108-003	C9188.D	04/06/2001	04:53
RW-1	2066-003	C9190.D	04/06/2001	06:31
	DI-MSD	C9191.D	04/06/2001	09:18
DETERGENT	2087-001	C9193.D	04/06/2001	10:21

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C9194.D DFTPP Injection Date : 04/06/2001

Inst ID: MSDC DFTPP Injection Time: 11:46

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	37.1			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	41.3			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	46.6			
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	7.2			
275	10.0 - 30.0% of mass 198	27.8			
365	Greater than 1.0% of mass 198	6.9			
441	Present, but less than mass 443	5.78	(	32.8	)3
442	40.0 - 100.0% of mass 198	86.4			
443	17.0 - 23.0% of mass 442	17.6	(	20.4	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C9195.D	04/06/2001	12:28
.	Method-Blank	C9196.D	04/06/2001	13:18
.	DI-MS	C9197.D	04/06/2001	13:44
.	DI-MSD	C9198.D	04/06/2001	14:09
MW-8	2094-007	C9200.D	04/06/2001	15:00
MW-3	2094-008	C9201.D	04/06/2001	15:26
MW-5	2094-009	C9203.D	04/06/2001	16:16
MW-8	2094-007DIL	C9204.D	04/06/2001	16:41
MW-5	2094-009DIL	C9205.D	04/06/2001	17:06
FB	2094-001	C9206.D	04/06/2001	17:31
MW-1	2094-003	C9207.D	04/06/2001	17:57
MW-2	2094-004	C9208.D	04/06/2001	18:22
MW-7	2094-005	C9209.D	04/06/2001	18:47
MW-6	2094-006	C9210.D	04/06/2001	19:12
MW-4	2093-001	C9211.D	04/06/2001	19:37
04	2076-004	C9212.D	04/06/2001	20:02
04	2076-004	C9213.D	04/06/2001	20:27
.	DI-MS	C9215.D	04/06/2001	21:16
.	DI-MSD	C9216.D	04/06/2001	21:41
MW-34	2115-001	C9217.D	04/06/2001	22:06
MW-35	2115-002	C9218.D	04/06/2001	22:31
MW-19	2115-003	C9219.D	04/06/2001	22:56
MW-27	2115-004	C9220.D	04/06/2001	23:21

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C9194.D DFTPP Injection Date : 04/06/2001

Inst ID: MSDC DFTPP Injection Time: 11:46

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	37.1			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	41.3			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	46.6			
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	7.2			
275	10.0 - 30.0% of mass 198	27.8			
365	Greater than 1.0% of mass 198	6.9			
441	Present, but less than mass 443	5.8	(	32.8	)3
442	40.0 - 100.0% of mass 198	86.4			
443	17.0 - 23.0% of mass 442	17.6	(	20.4	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
MW-20	2115-005	C9221.D	04/06/2001	23:46
MW-16	2115-006	C9222.D	04/07/2001	00:11
MW-30	2115-007	C9223.D	04/07/2001	00:36
MW-15D	2115-008	C9224.D	04/07/2001	01:01
SW-2	2114-001	C9226.D	04/07/2001	01:51
SUMP-3	2114-002	C9227.D	04/07/2001	02:16
PHENOL-POOL	2114-003	C9228.D	04/07/2001	02:41
SUMP-1	2114-004	C9229.D	04/07/2001	03:06

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C9196.D

Instrument ID: MSDA

Date Extracted: 04/06/01

Matrix: AQUEOUS

Date Analyzed: 04/06/2001

Time Analyzed: 13:18

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	DI-MS	04/06/2001	13:44
.	DI-MSD	04/06/2001	14:09
MW-8	2094-007	04/06/2001	15:00
MW-3	2094-008	04/06/2001	15:26
MW-5	2094-009	04/06/2001	16:16
MW-8	2094-007DIL	04/06/2001	16:41
MW-5	2094-009DIL	04/06/2001	17:06
FB	2094-001	04/06/2001	17:31
MW-1	2094-003	04/06/2001	17:57
MW-2	2094-004	04/06/2001	18:22
MW-7	2094-005	04/06/2001	18:47
MW-6	2094-006	04/06/2001	19:12
MW-4	2093-001	04/06/2001	19:37
04	2076-004	04/06/2001	20:02
04	2076-004	04/06/2001	20:27
SW-2	2114-001	04/07/2001	01:51
SUMP-3	2114-002	04/07/2001	02:16
PHENOL-POOL	2114-003	04/07/2001	02:41
SUMP-1	2114-004	04/07/2001	03:06

FORM IV SV

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9196.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	ND		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

H009

000175

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9196.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 0

4010

0001776

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9196.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

Response Factor Report MSD-C

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Thu Apr 05 15:19:01 2001
Response via : Initial Calibration

Calibration Files
5 =C9155.D 20 =C9154.D 50 =C9158.D
80 =C9156.D 10 =C9157.D

		Compound	5	20	50	80	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	N-Nitrosodimethylamin	0.853	0.805	0.743	0.778	0.764	0.788	5.38
3)	T	Pyridine	1.068	0.776	0.918	0.942	0.921	0.925	11.21
4)	S	2-Fluorophenol	1.209	1.113	1.087	1.064	1.155	1.125	5.13
5)	T	Benzaldehyde	0.485	0.205	0.360	0.322	0.355	0.346	29.02
6)	S	Phenol-d5	1.214	1.066	1.057	1.019	1.125	1.096	6.92
7)	MC	Phenol	1.364	0.995	0.964	0.972	1.121	1.083	15.63
8)	T	Aniline	1.470	1.165	1.207	1.240	1.272	1.271	9.29
9)	T	bis(2-Chloroethyl)eth	0.995	0.782	0.788	0.822	0.883	0.854	10.36
10)	M	2-Chlorophenol	1.311	1.019	1.036	1.048	1.128	1.108	10.88
11)	T	1,3-Dichlorobenzene	1.682	1.320	1.392	1.468	1.475	1.468	9.23
12)	MC	1,4-Dichlorobenzene	1.717	1.347	1.410	1.494	1.477	1.489	9.42
13)	T	Benzyl alcohol	0.456	0.403	0.413	0.427	0.403	0.420	5.27
14)	T	1,2-Dichlorobenzene	1.616	1.204	1.220	1.315	1.343	1.340	12.35
15)	T	2-Methylphenol	0.907	0.684	0.662	0.669	0.790	0.742	14.19
16)	T	bis(2-chloroisopropyl	1.231	0.947	0.944	0.970	1.054	1.029	11.80
17)	T	4-Methylphenol	0.823	0.647	0.647	0.661	0.713	0.698	10.74
18)	MP	N-Nitroso-di-n-propyl	0.505	0.401	0.410	0.440	0.414	0.434	9.73
19)	T	Acetophenone	1.080	0.923	0.892	0.956	0.982	0.967	7.46
20)	T	2-Aminotoluene +4-Ami	2.614	2.051	2.097	1.999	2.203	2.193	11.28
21)	T	Hexachloroethane	0.592	0.494	0.506	0.531	0.537	0.532	7.12
22)	I	Naphthalene-d8	----------ISTD----------						
23)	S	Nitrobenzene-d5	0.293	0.257	0.287	0.258	0.286	0.276	6.18
24)	T	Nitrobenzene	0.380	0.273	0.286	0.280	0.319	0.307	14.29
25)	T	Isophorone	0.396	0.359	0.382	0.412	0.357	0.381	6.29
26)	TC	2-Nitrophenol	0.149	0.137	0.172	0.184	0.138	0.156	13.38
27)	T	2,4-Dimethylphenol	0.328	0.263	0.288	0.283	0.291	0.291	8.13
28)	T	bis(2-Chloroethoxy)me	0.306	0.256	0.267	0.276	0.284	0.278	6.89
29)	T	Benzoic acid	0.044	0.042	0.043	0.035	0.042	0.041	8.51
30)	T	2,4-Dimethylaniline	0.455	0.427	0.430	0.340	0.429	0.416	10.53
31)	TC	2,4-Dichlorophenol	0.294	0.237	0.257	0.265	0.275	0.266	7.93
32)	M	1,2,4-Trichlorobenzen	0.452	0.360	0.389	0.403	0.400	0.401	8.29
33)	T	Naphthalene	1.048	0.864	0.941	0.870	0.985	0.942	8.30
34)	T	4-Chloroaniline	0.312	0.262	0.256	0.180	0.283	0.259	19.01
35)	TC	Hexachlorobutadiene	0.307	0.273	0.296	0.302	0.292	0.294	4.41
36)	T	Caprolactam	0.023	0.033	0.034	0.038	0.025	0.031	20.97
37)	MC	4-Chloro-3-methylphen	0.168	0.150	0.165	0.162	0.154	0.160	4.78
38)	T	2-Methylnaphthalene	0.644	0.520	0.571	0.584	0.547	0.573	8.11
39)	I	Acenaphthene-d10	----------ISTD----------						
40)	TP	Hexachlorocyclopentad	0.691	1.092	0.727	0.625	0.695	0.766	24.29
41)	TC	2,4,6-Trichlorophenol	0.331	0.338	0.367	0.381	0.348	0.353	5.96
42)	T	2,4,5-Trichlorophenol	0.375	0.344	0.350	0.358	0.312	0.348	6.73
43)	S	2-Fluorobiphenyl	1.459	1.354	1.415	1.323	1.411	1.392	3.86
44)	T	1-1'-Biphenyl	1.600	1.426	1.406	1.458	1.449	1.468	5.22
45)	T	2-Chloronaphthalene	1.453	1.108	1.184	1.183	1.200	1.226	10.78
46)	T	2-Nitroaniline	0.118	0.148	0.171	0.173	0.125	0.147	17.19
47)	T	Dimethylphthalate	0.908	0.875	0.925	0.953	0.863	0.905	4.04

48)	T	2,6-Dinitrotoluene	0.131	0.155	0.187	0.200	0.123	0.159	21.16
49)	T	Acenaphthylene	1.641	1.478	1.638	1.503	1.469	1.546	5.60
50)	T	3-Nitroaniline	0.108	0.112	0.124	0.090	0.100	0.107	12.08
51)	MC	Acenaphthene	1.153	0.915	0.990	0.929	1.044	1.006	9.61
52)	TP	2,4-Dinitrophenol	0.082	0.089	0.106	0.097	0.087	0.092	10.42
3)	MP	4-Nitrophenol	0.041	0.046	0.058	0.066	0.048	0.052	19.03
54)	M	2,4-Dinitrotoluene	0.102	0.148	0.184	0.151	0.108	0.138	24.61
55)	T	Dibenzofuran	1.531	1.250	1.325	1.326	1.271	1.340	8.33
56)	T	Diethylphthalate	0.668	0.694	0.784	0.815	0.704	0.733	8.59
57)	T	Fluorene	1.007	0.908	0.991	0.954	0.978	0.967	3.99
58)	T	4-Chlorophenyl-phenyl	0.602	0.515	0.526	0.543	0.527	0.542	6.40
59)	T	4-Nitroaniline	0.108	0.112	0.124	0.090	0.100	0.107	12.08
60)	I	Phenanthrene-d10	----------ISTD----------						
61)	T	4,6-Dinitro-2-methylp	0.041	0.044	0.039	0.050	0.043	0.043	9.67
62)	TC	N-Nitrosodiphenylamin	0.442	0.376	0.409	0.424	0.403	0.411	5.99
63)	T	1,2-Diphenylhydrazine	0.620	0.578	0.624	0.653	0.583	0.612	5.14
64)	S	2,4,6-Tribromophenol	0.128	0.141	0.140	0.153	0.121	0.137	9.07
65)	T	4-Bromophenyl-phenyle	0.294	0.243	0.261	0.277	0.276	0.270	7.05
66)	T	Hexachlorobenzene	0.427	0.306	0.318	0.341	0.364	0.351	13.58
67)	T	Atrazine	0.113	0.120	0.091	0.117	0.110	0.110	10.41
68)	MC	Pentachlorophenol	0.071	0.079	0.071	0.087	0.070	0.076	9.44
69)	T	Phenanthrene	1.033	0.816	0.882	0.822	0.949	0.900	10.18
70)	T	Anthracene	0.832	0.734	0.830	0.809	0.794	0.800	5.01
71)	T	Carbazole	0.542	0.471	0.467	0.464	0.538	0.497	7.98
72)	T	Di-n-butylphthalate	0.496	0.589	0.702	0.739	0.525	0.610	17.55
73)	TC	Fluoranthene	0.696	0.634	0.733	0.690	0.705	0.692	5.23
74)	T	Benzidine	0.099	0.084	0.070	0.052	0.097	0.080	24.62
75)	I	Chrysene-d12	----------ISTD----------						
76)	M	Pyrene	1.533	1.165	1.290	1.172	1.345	1.301	11.60
77)	S	Terphenyl-d14	1.151	0.996	1.107	0.989	1.097	1.068	6.71
78)	T	3,3'-Dimethylbenzidin	0.338	0.225	0.220	0.211	0.292	0.257	21.58
79)	T	Butylbenzylphthalate	0.223	0.267	0.328	0.341	0.218	0.275	20.92
80)	T	3,3'-Dichlorobenzidin	0.260	0.227	0.232	0.190	0.245	0.231	11.38
81)	T	Benzo[a]anthracene	1.030	0.837	0.938	0.853	0.971	0.926	8.77
82)	T	Chrysene	1.067	0.861	0.904	0.822	0.979	0.927	10.55
83)	T	bis(2-Ethylhexyl)phth	0.400	0.357	0.442	0.495	0.312	0.401	17.77
84)	I	Perylene-d12	----------ISTD----------						
85)	TC	Di-n-octylphthalate	0.569	0.537	0.663	0.723	0.519	0.602	14.49
86)	T	Benzo[b]fluoranthene	1.177	0.995	1.092	0.955	1.077	1.059	8.21
87)	T	Benzo[k]fluoranthene	1.143	1.018	0.969	0.831	0.817	0.956	14.23
88)	TC	Benzo[a]pyrene	0.916	0.797	0.872	0.820	0.807	0.842	5.94
89)	T	Indeno[1,2,3-cd]pyren	1.018	0.910	0.978	0.927	0.952	0.957	4.48
90)	T	Dibenz[a,h]anthracene	0.830	0.835	0.735	0.715	0.719	0.767	7.89
91)	T	Benzo[g,h,i]perylene	1.040	0.789	0.842	0.796	0.886	0.870	11.78

(#) = Out of Range

CW0501.M Thu Apr 05 15:19:13 2001 MSD-C

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9195.D Vial: 2
Acq On : 6 Apr 2001 12:28 Operator: DP
Sample : .,20-PPB-INJ-FOR-04/06/01 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Multiple Level Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	110	0.00
2	T	N-Nitrosodimethylamine	0.788	0.674	14.5	92	0.00
3	T	Pyridine	0.925	0.882	4.6	125	0.00
4	S	2-Fluorophenol	1.125	1.060	5.8	105	0.00
5	T	Benzaldehyde	0.346	0.355	-2.6	191	-0.12
6	S	Phenol-d5	1.096	1.097	-0.1	113	0.00
7	MC	Phenol	1.083	0.976	9.9	108	0.00
8	T	Aniline	1.271	1.242	2.3	118	0.00
9	T	bis(2-Chloroethyl)ether	0.854	0.802	6.1	113	0.00
10	M	2-Chlorophenol	1.108	0.992	10.5	107	0.00
11	T	1,3-Dichlorobenzene	1.468	1.322	9.9	110	0.00
12	MC	1,4-Dichlorobenzene	1.489	1.326	10.9	109	0.00
13	T	Benzyl alcohol	0.420	0.456	-8.6	124	0.00
14	T	1,2-Dichlorobenzene	1.340	1.202	10.3	110	0.00
15	T	2-Methylphenol	0.742	0.749	-0.9	121	0.00
16	T	bis(2-chloroisopropyl)ether	1.029	1.021	0.8	119	0.00
17	T	4-Methylphenol	0.698	0.693	0.7	118	0.00
18	MP	N-Nitroso-di-n-propylamine	0.434	0.473	-9.0	130	0.00
19	T	Acetophenone	0.967	1.045	-8.1	125	0.00
20	T	2-Aminotoluene +4-Aminotolu	2.193	2.285	-4.2	123	-0.01
21	T	Hexachloroethane	0.532	0.488	8.3	109	0.00
22	I	Naphthalene-d8	1.000	1.000	0.0	122	0.00
23	S	Nitrobenzene-d5	0.276	0.268	2.9	127	0.00
24	T	Nitrobenzene	0.307	0.274	10.7	122	0.00
25	T	Isophorone	0.381	0.409	-7.3	139	0.00
26	TC	2-Nitrophenol	0.156	0.145	7.1	128	0.00
27	T	2,4-Dimethylphenol	0.291	0.276	5.2	128	0.00
28	T	bis(2-Chloroethoxy)methane	0.278	0.260	6.5	124	0.00
29	T	Benzoic acid	0.041	0.041	0.0	121	0.00
30	T	2,4-Dimethylaniline	0.416	0.432	-3.8	123	0.00
31	TC	2,4-Dichlorophenol	0.266	0.247	7.1	127	0.00
32	M	1,2,4-Trichlorobenzene	0.401	0.356	11.2	121	0.00
33	T	Naphthalene	0.942	0.861	8.6	122	0.00
34	T	4-Chloroaniline	0.259	0.271	-4.6	126	0.00
35	TC	Hexachlorobutadiene	0.294	0.260	11.6	116	0.00
36	T	Caprolactam	0.031	0.036	-16.1	135	0.00
37	MC	4-Chloro-3-methylphenol	0.160	0.160	0.0	130	0.00
38	T	2-Methylnaphthalene	0.573	0.557	2.8	131	0.00
39	I	Acenaphthene-d10	1.000	1.000	0.0	145	0.00
40	TP	Hexachlorocyclopentadiene	0.766	0.898	-17.2	119	0.00
41	TC	2,4,6-Trichlorophenol	0.353	0.346	2.0	149	0.00
42	T	2,4,5-Trichlorophenol	0.348	0.345	0.9	145	0.00
43	S	2-Fluorobiphenyl	1.392	1.284	7.8	138	0.00
44	T	1-1'-Biphenyl	1.468	1.333	9.2	136	0.00

45	T	2-Chloronaphthalene	1.226	1.038	15.3	136	0.00
46	T	2-Nitroaniline	0.147	0.155	-5.4	153	0.00
47	T	Dimethylphthalate	0.905	0.889	1.8	147	0.00
48	T	2,6-Dinitrotoluene	0.159	0.171	-7.5	160	0.00
49	T	Acenaphthylene	1.546	1.411	8.7	138	0.00
0	T	3-Nitroaniline	0.107	0.126	-17.8	164	0.00
51	MC	Acenaphthene	1.006	0.877	12.8	139	0.00
52	TP	2,4-Dinitrophenol	0.092	0.089	3.3	145	0.00
53	MP	4-Nitrophenol	0.052	0.056	-7.7	176	0.00
54	M	2,4-Dinitrotoluene	0.138	0.158	-14.5	155	0.00
55	T	Dibenzofuran	1.340	1.228	8.4	143	0.00
56	T	Diethylphthalate	0.733	0.746	-1.8	156	0.00
57	T	Fluorene	0.967	0.936	3.2	149	0.00
58	T	4-Chlorophenyl-phenylether	0.542	0.495	8.7	140	0.00
59	T	4-Nitroaniline	0.107	0.126	-17.8	164	0.00
60	I	Phenanthrene-d10	1.000	1.000	0.0	151	0.00
61	T	4,6-Dinitro-2-methylphenol	0.043	0.039	9.3	137	0.00
62	TC	N-Nitrosodiphenylamine	0.411	0.410	0.2	165	0.00
63	T	1,2-Diphenylhydrazine/Azobe	0.612	0.591	3.4	154	0.00
64	S	2,4,6-Tribromophenol	0.137	0.161	-17.5	173	0.00
65	T	4-Bromophenyl-phenylether	0.270	0.248	8.1	154	0.00
66	T	Hexachlorobenzene	0.351	0.293	16.5	144	0.00
67	T	Atrazine	0.110	0.119	-8.2	150	0.00
68	MC	Pentachlorophenol	0.076	0.069	9.2	132	0.00
69	T	Phenanthrene	0.900	0.821	8.8	152	0.00
70	T	Anthracene	0.800	0.781	2.4	161	0.00
71	T	Carbazole	0.497	0.486	2.2	156	0.00
72	T	Di-n-butylphthalate	0.610	0.605	0.8	155	0.00
73	TC	Fluoranthene	0.692	0.630	9.0	150	0.00
74	T	Benzidine	0.080	0.072	10.0	130	0.00
75	I	Chrysene-d12	1.000	1.000	0.0	113	0.00
76	M	Pyrene	1.301	1.468	-12.8	142	0.00
77	S	Terphenyl-d14	1.068	1.270	-18.9	144	0.00
78	T	3,3'-Dimethylbenzidine	0.257	0.225	12.5	113	0.00
79	T	Butylbenzylphthalate	0.275	0.308	-12.0	130	0.00
80	T	3,3'-Dichlorobenzidine	0.231	0.206	10.8	102	0.00
81	T	Benzo[a]anthracene	0.926	0.888	4.1	120	0.00
82	T	Chrysene	0.927	0.854	7.9	112	0.00
83	T	bis(2-Ethylhexyl)phthalate	0.401	0.376	6.2	119	0.00
84	I	Perylene-d12	1.000	1.000	0.0	77	0.00
85	TC	Di-n-octylphthalate	0.602	0.631	-4.8	91	0.00
86	T	Benzo[b]fluoranthene	1.059	1.142	-7.8	89	0.00
87	T	Benzo[k]fluoranthene	0.956	1.120	-17.2	85	0.00
88	TC	Benzo[a]pyrene	0.842	0.838	0.5	81	0.00
89	T	Indeno[1,2,3-cd]pyrene	0.957	0.896	6.4	76	0.00
90	T	Dibenz[a,h]anthracene	0.767	0.839	-9.4	78	0.00
91	T	Benzo[g,h,i]perylene	0.870	0.741	14.8	73	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

C9154.D CW0501.M Fri Apr 06 12:22:06 2001 MSD-C

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/06/2001

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
Method-Blank	AQUEOUS	C9196.D	55	70	71	63	74	120
DI-MS	AQUEOUS	C9197.D	46	59	55	56	89	99
DI-MSD	AQUEOUS	C9198.D	49	61	55	59	85	99
2094-007	AQUEOUS	C9200.D	45	61	66	59	68	100
2094-008	AQUEOUS	C9201.D	60	74	64	66	88	111
2094-009	AQUEOUS	C9203.D	56	63	77	61	59	106
2094-007DIL	AQUEOUS	C9204.D	N/A	N/A	N/A	N/A	N/A	N/A
2094-009DIL	AQUEOUS	C9205.D	N/A	N/A	N/A	N/A	N/A	N/A
2094-001	AQUEOUS	C9206.D	56	64	56	60	63	97
2094-003	AQUEOUS	C9207.D	52	60	56	58	77	111
2094-004	AQUEOUS	C9208.D	49	59	53	56	57	116
2094-005	AQUEOUS	C9209.D	49	75	56	60	83	100
2094-006	AQUEOUS	C9210.D	51	62	61	63	82	111
2093-001	AQUEOUS	C9211.D	49	61	52	57	95	95
2076-004	AQUEOUS	C9212.D	N/A	N/A	64	68	N/A	87
2076-004	AQUEOUS	C9213.D	55	59	N/A	N/A	79	N/A
DI-MS	AQUEOUS	C9215.D	49	61	55	60	83	90
DI-MSD	AQUEOUS	C9216.D	48	59	57	59	81	103
2115-001	AQUEOUS	C9217.D	63	74	N/A	N/A	75	N/A
2115-002	AQUEOUS	C9218.D	62	68	N/A	N/A	63	N/A
2115-003	AQUEOUS	C9219.D	56	64	N/A	N/A	60	N/A
2115-004	AQUEOUS	C9220.D	61	67	N/A	N/A	72	N/A
2115-005	AQUEOUS	C9221.D	58	66	N/A	N/A	59	N/A

EPA CLP QC LIMITS FOR:	Soil	Aqueous
S1 (2FP) = 2-Fluorophenol	36-93	42-83
S2 (PHL) = Phenol-d5	40-101	63-101
S3 (NBZ) = Nitrobenzene-d5	45-98	47-120
S4 (FBP) = 2-Fluorobiphenyl	48-104	55-112
S5 (TBP) = 2,4,6-Tribromophenol	54-135	52-151
S6 (TPH) = Terphenyl-d14	58-147	63-132

* Column to be used to flag recovery values

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/06/2001

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
2115-006	AQUEOUS	C9222.D	57	66	N/A	N/A	61	N/A
2115-007	AQUEOUS	C9223.D	60	71	N/A	N/A	77	N/A
2115-008	AQUEOUS	C9224.D	60	70	N/A	N/A	65	N/A
2114-001	AQUEOUS	C9226.D	57	66	N/A	N/A	57	N/A
2114-002	AQUEOUS	C9227.D	57	66	N/A	N/A	63	N/A
2114-003	AQUEOUS	C9228.D	50	60	N/A	N/A	63	N/A
2114-004	AQUEOUS	C9229.D	54	59	N/A	N/A	60	N/A

EPA CLP QC LIMITS FOR:	Soil	Aqueous
S1 (2FP) = 2-Fluorophenol	36-93	42-95
S2 (PHL) = Phenol-d5	40-101	59-97
S3 (NBZ) = Nitrobenzene-d5	45-98	49-105
S4 (FBP) = 2-Fluorobiphenyl	48-104	54-110
S5 (TBP) = 2,4,6-Tribromophenol	54-135	48-126
S6 (TPH) = Terphenyl-d14	58-147	53-123

* Column to be used to flag recovery values

AQUEOUS SEMIVOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: Method-B Batch No.: 040601W

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	30.0	0.0	19.0	63	48 - 95
2-Chlorophenol	30.0	0.0	18.2	61	46 - 90
1,4-Dichlorobenzene	30.0	0.0	15.7	52	49 - 84
N-Nitroso-di-n-propylamine	30.0	0.0	23.3	78	53 - 96
1,2,4-Trichlorobenzene	30.0	0.0	16.4	55	46 - 92
4-Chloro-3-methylphenol	30.0	0.0	27.3	91	41 - 113
Acenaphthene	30.0	0.0	20.1	67	59 - 98
4-Nitrophenol	30.0	0.0	26.8	89	30 - 139
2,4-Dinitrotoluene	30.0	0.0	33.3	111	31 - 138
Pentachlorophenol	30.0	0.0	21.7	72	25 - 105
Pyrene	30.0	0.0	32.1	107	49 - 110

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD #	MSD % REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	0.0	19.1		64	2	8	48 - 95
2-Chlorophenol	0.0	18.2		61	0	7	46 - 90
1,4-Dichlorobenzene	0.0	16.0		53	2	6	49 - 84
N-Nitroso-di-n-propylamine	0.0	22.5		75	4	7	53 - 96
1,2,4-Trichlorobenzene	0.0	17.0		57	4	8	46 - 92
4-Chloro-3-methylphenol	0.0	25.6		85	7	12	41 - 113
Acenaphthene	0.0	21.3		71	6	7	59 - 98
4-Nitrophenol	0.0	27.8		93	4	22	30 - 139
2,4-Dinitrotoluene	0.0	32.8		109	2	18	31 - 138
Pentachlorophenol	0.0	19.5		65	10	15	25 - 105
Pyrene	0.0	32.1		107	0	10	49 - 110

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __11__ outside limits

Spike Recovery: __0___ out of __22__ outside limits

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9196.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
N-Nitrosodimethylamine	30.0	0.0	11.6	39	0.0	11.2	37
Benzaldehyde	30.0	0.0	0.0	0	0.0	0.0	0
Phenol	30.0	0.0	19.0	63	0.0	19.1	64
Aniline	30.0	0.0	21.8	73	0.0	21.5	72
bis(2-Chloroethyl)ether	30.0	0.0	17.3	58	0.0	17.6	59
2-Chlorophenol	30.0	0.0	18.2	61	0.0	18.2	61
1,3-Dichlorobenzene	30.0	0.0	16.2	54	0.0	16.7	56
1,4-Dichlorobenzene	30.0	0.0	15.7	52	0.0	16.0	53
Benzyl alcohol	30.0	0.0	23.9	80	0.0	23.0	77
1,2-Dichlorobenzene	30.0	0.0	16.3	54	0.0	16.7	56
2-Methylphenol	30.0	0.0	20.2	67	0.0	19.9	66
bis(2-chloroisopropyl)ether	30.0	0.0	18.9	63	0.0	18.9	63
4-Methylphenol	30.0	0.0	22.6	75	0.0	22.3	74
N-Nitroso-di-n-propylamine	30.0	0.0	23.3	78	0.0	22.5	75
Acetophenone	30.0	0.0	1.3	4	0.0	1.1	4
2-Aminotoluene +4-Aminotoluene	30.0	0.0	41.7	139	0.0	39.8	133
Hexachloroethane	30.0	0.0	15.4	51	0.0	16.9	56
Nitrobenzene	30.0	0.0	17.1	57	0.0	17.4	58
Isophorone	30.0	0.0	21.5	72	0.0	20.7	69
2-Nitrophenol	30.0	0.0	18.7	62	0.0	18.6	62
2,4-Dimethylphenol	30.0	0.0	21.5	72	0.0	20.7	69
bis(2-Chloroethoxy)methane	30.0	0.0	19.5	65	0.0	18.8	63
Benzoic acid	30.0	0.0	20.0	67	0.0	20.5	68
2,4-Dimethylaniline	30.0	0.0	21.1	70	0.0	21.0	70
2,4-Dichlorophenol	30.0	0.0	19.8	66	0.0	20.2	67
1,2,4-Trichlorobenzene	30.0	0.0	16.4	55	0.0	17.0	57
Naphthalene	30.0	0.0	17.7	59	0.0	18.1	60
4-Chloroaniline	30.0	0.0	23.0	77	0.0	22.9	76
Hexachlorobutadiene	30.0	0.0	16.1	54	0.0	17.1	57
Caprolactam	30.0	0.0	0.0	0	0.0	0.0	0
4-Chloro-3-methylphenol	30.0	0.0	27.3	91	0.0	25.6	85
2-Methylnaphthalene	30.0	0.0	19.8	66	0.0	18.9	63
Hexachlorocyclopentadiene	30.0	0.0	7.7	26	0.0	7.6	25
2,4,6-Trichlorophenol	30.0	0.0	23.1	77	0.0	23.1	77
2,4,5-Trichlorophenol	30.0	0.0	23.6	79	0.0	24.2	81
1-1'-Biphenyl	30.0	0.0	1.2	4	0.0	1.2	4
2-Chloronaphthalene	30.0	0.0	18.5	62	0.0	19.5	65
2-Nitroaniline	30.0	0.0	20.8	69	0.0	20.8	69
Dimethylphthalate	30.0	0.0	20.8	69	0.0	20.8	69
2,6-Dinitrotoluene	30.0	0.0	20.8	69	0.0	20.8	69
Acenaphthylene	30.0	0.0	20.8	69	0.0	20.8	69

000135

4089

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/06/2001
Date Analyzed: 04/06/2001
Data file: C9196.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add			%Rec. MS			%Rec. MSD
3-Nitroaniline	30.0	0.0	31.5	105	0.0	30.4	101
Acenaphthene	30.0	0.0	20.1	67	0.0	21.3	71
2,4-Dinitrophenol	30.0	0.0	22.0	73	0.0	23.2	77
4-Nitrophenol	30.0	0.0	26.8	89	0.0	27.8	93
2,4-Dinitrotoluene	30.0	0.0	33.3	111	0.0	32.8	109
Dibenzofuran	30.0	0.0	21.6	72	0.0	22.2	74
Diethylphthalate	30.0	0.0	27.8	93	0.0	27.9	93
Fluorene	30.0	0.0	22.4	75	0.0	23.1	77
4-Chlorophenyl-phenylether	30.0	0.0	23.1	77	0.0	23.0	77
4-Nitroaniline	30.0	0.0	31.5	105	0.0	30.4	101
4,6-Dinitro-2-methylphenol	30.0	0.0	17.0	57	0.0	15.4	51
N-Nitrosodiphenylamine	30.0	0.0	27.5	92	0.0	27.9	93
1,2-Diphenylhydrazine/Azobenzene	30.0	0.0	23.4	78	0.0	23.1	77
4-Bromophenyl-phenylether	30.0	0.0	24.3	81	0.0	23.9	80
Hexachlorobenzene	30.0	0.0	22.8	76	0.0	22.3	74
Atrazine	30.0	0.0	0.0	0	0.0	0.0	0
Pentachlorophenol	30.0	0.0	21.7	72	0.0	19.5	65
Phenanthrene	30.0	0.0	24.1	80	0.0	24.7	82
Anthracene	30.0	0.0	25.4	85	0.0	26.0	87
Carbazole	30.0	0.0	29.9	100	0.0	30.5	102
Di-n-butylphthalate	30.0	0.0	27.6	92	0.0	29.1	97
Fluoranthene	30.0	0.0	25.4	85	0.0	27.8	93
Benzidine	30.0	0.0	27.9	93	0.0	34.0	113
Pyrene	30.0	0.0	32.1	107	0.0	32.1	107
3,3'-Dimethylbenzidine	30.0	0.0	31.2	104	0.0	33.9	113
Butylbenzylphthalate	30.0	0.0	32.3	108	0.0	33.2	111
3,3'-Dichlorobenzidine	30.0	0.0	30.5	102	0.0	27.0	90
Benzo[a]anthracene	30.0	0.0	27.2	91	0.0	27.0	90
Chrysene	30.0	0.0	25.4	85	0.0	25.7	86
bis(2-Ethylhexyl)phthalate	30.0	0.0	25.3	84	0.0	24.5	82
Di-n-octylphthalate	30.0	0.0	29.9	100	0.0	29.3	98
Benzo[b]fluoranthene	30.0	0.0	31.8	106	0.0	29.2	97
Benzo[k]fluoranthene	30.0	0.0	24.7	82	0.0	24.7	82
Benzo[a]pyrene	30.0	0.0	22.7	76	0.0	22.7	76
Indeno[1,2,3-cd]pyrene	30.0	0.0	27.6	92	0.0	27.6	92
Dibenz[a,h]anthracene	30.0	0.0	33.0	110	0.0	33.0	110
Benzo[g,h,i]perylene	30.0	0.0	33.0	110	0.0	33.0	110

000186

4020

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D

Date Analyzed: 04/05/2001

Instrument ID: MSDC

Time Analyzed: 14:16

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	116961	6.21	305012	7.59	116166	9.24
	UPPER LIMIT	233922	6.71	610024	8.09	232332	9.74
	LOWER LIMIT	58481	5.71	152506	7.09	58083	8.74
	LAB SAMPLE ID						
01	5-PPB-INJ-FOR-04/05	128770	6.21	348809	7.59	131206	9.24
02	80-PPB-INJ-FOR-04/0	100725	6.20	263622	7.59	106938	9.24
03	10-PPB-INJ-FOR-04/0	111035	6.21	291441	7.58	110650	9.24
04	50-PPB-INJ-FOR-04/0	113446	6.21	283424	7.59	112595	9.24
05	Method-Blank	139071	6.20	369286	7.59	128181	9.24
06	DI-MS	115728	6.21	296025	7.59	109920	9.24
07	DI-MSD	115644	6.21	303502	7.59	116553	9.24
08	2049-001	126701	6.21	323002	7.59	113505	9.24
09	2049-003	149835	6.21	391079	7.59	138836	9.24
10	2022-001	121840	6.21	311879	7.59	114395	9.24
11	2025-001	133913	6.21	361550	7.59	141011	9.24
12	2025-002	121035	6.21	312712	7.59	113371	9.24
13	2031-001	117115	6.21	287341	7.59	103736	9.24
14	2031-002	148331	6.20	370182	7.59	132284	9.24
15	2031-003	120902	6.21	304346	7.59	116481	9.24
16	2031-004	119567	6.21	307560	7.59	108728	9.24
17	2031-005	121293	6.21	300066	7.59	105391	9.24
18	2033-001	129899	6.21	319445	7.59	123218	9.24
19	2033-002	144788	6.21	358721	7.59	128138	9.24
20	2023-001	138834	6.21	330399	7.59	110369	9.24
21	Method-Blank	100553	6.21	254123	7.59	86935	9.24
22	DI-MS	93814	6.21	228167	7.59	83282	9.24

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D Date Analyzed: 04/05/2001

Instrument ID: MSDC Time Analyzed: 14:16

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	116961	6.21	305012	7.59	116166	9.24
	UPPER LIMIT	233922	6.71	610024	8.09	232332	9.74
	LOWER LIMIT	58481	5.71	152506	7.09	58083	8.74
	LAB SAMPLE ID						
01	2051-001	102208	6.21	262434	7.59	97352	9.24
02	2051-002	103465	6.21	258488	7.59	91703	9.24
03	2052-001	123932	6.21	312388	7.59	114422	9.24
04	2066-002	103380	6.21	257786	7.59	86667	9.24
05	2066-004	125903	6.2	310946	7.59	103997	9.24
06	2066-005	99860	6.2	253131	7.59	91074	9.24
07	2067-002	97261	6.21	244087	7.59	85353	9.24
08	2067-003	98308	6.21	245072	7.58	85213	9.24
09	2108-001	93364	6.21	241557	7.58	89131	9.24
10	2108-002	84777	6.2	236320	7.59	83540	9.24
11	2108-003	98347	6.2	241397	7.59	85913	9.24
12	2066-003	90858	6.2	244942	7.59	105980	9.25
13	DI-MSD	101089	6.2	239721	7.59	86178	9.24
14	2087-001	96372	6.2	247885	7.59	100214	9.24
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D

Date Analyzed: 04/05/2001

Instrument ID: MSDC

Time Analyzed: 14:16

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	134474	10.55	78486	12.98	66824	15.16
	UPPER LIMIT	268948	11.05	156972	13.48	133648	15.66
	LOWER LIMIT	67237	10.05	39243	12.48	33412	14.66
	LAB SAMPLE ID						
01	5-PPB-INJ-FOR-04/05	129199	10.55	65533	12.97	57060	15.15
02	80-PPB-INJ-FOR-04/0	126765	10.55	78020	12.97	68824	15.14
03	10-PPB-INJ-FOR-04/0	118039	10.54	69089	12.96	56040	15.14
04	50-PPB-INJ-FOR-04/0	134023	10.55	79580	12.97	66868	15.14
05	Method-Blank	114924	10.55	71989	12.96	59404	15.14
06	DI-MS	116582	10.55	67307	12.97	51487	15.14
07	DI-MSD	127801	10.55	76129	12.96	57742	15.14
08	2049-001	109338	10.55	58391	12.96	49914	15.13
09	2049-003	146784	10.55	77479	12.96	63838	15.14
10	2022-001	114659	10.54	63039	12.96	50941	15.13
11	2025-001	151627	10.55	78431	12.96	67146	15.14
12	2025-002	115120	10.55	63060	12.97	48402	15.14
13	2031-001	110786	10.55	66527	12.96	53066	15.13
14	2031-002	132576	10.55	73235	12.96	61914	15.13
15	2031-003	119724	10.54	65942	12.96	49898	15.13
16	2031-004	110416	10.55	62230	12.96	47292	15.13
17	2031-005	109397	10.55	61464	12.96	44690	15.13
18	2033-001	132042	10.55	82210	12.96	67113	15.13
19	2033-002	119650	10.55	63847	12.96	54948	15.13
20	2023-001	108046	10.54	68362	12.96	56747	15.13
21	Method-Blank	85460	10.55	50049	12.96	37745	15.13
22	DI-MS	89022	10.55	57233	12.96	47363	15.13

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D

Date Analyzed: 04/05/2001

Instrument ID: MSDC

Time Analyzed: 14:16

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	134474	10.55	78486	12.98	66824	15.16
	UPPER LIMIT	268948	11.05	156972	13.48	133648	15.66
	LOWER LIMIT	67237	10.05	39243	12.48	33412	14.66
	LAB SAMPLE ID						
01	2051-001	100842	10.55	55604	12.96	40158	15.13
02	2051-002	92233	10.55	48636	12.96	36406	15.13
03	2052-001	116042	10.54	59772	12.96	49010	15.13
04	2066-002	84620	10.55	45315	12.96	35036	15.13
05	2066-004	104014	10.55	59264	12.96	48502	15.13
06	2066-005	89448	10.55	48031	12.96	33868	15.13
07	2067-002	87775	10.54	52505	12.96	37914	15.13
08	2067-003	86241	10.54	48715	12.96	37619	15.13
09	2108-001	95460	10.54	52378	12.96	41003	15.13
10	2108-002	90240	10.55	52748	12.96	46114	15.13
11	2108-003	94554	10.54	54002	12.96	43905	15.13
12	2066-003	146907	10.56	107334	12.99	68210	15.18
13	DI-MSD	100117	10.55	63186	13.00	51076	15.18
14	2087-001	115101	10.55	67909	12.98	49289	15.16
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9195.D

Date Analyzed: 04/06/2001

Instrument ID: MSDC

Time Analyzed: 12:28

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	128875	6.20	371866	7.58	168425	9.24
	UPPER LIMIT	257750	6.70	743732	8.08	336850	9.74
	LOWER LIMIT	64438	5.70	185933	7.08	84213	8.74
	LAB SAMPLE ID						
01	Method-Blank	151557	6.20	390527	7.58	178698	9.24
02	DI-MS	159577	6.20	477756	7.59	220952	9.24
03	DI-MSD	138233	6.20	395702	7.59	169015	9.24
04	2094-007	157820	6.20	612788	7.59	212724	9.24
05	2094-008	142080	6.20	444629	7.59	206877	9.24
06	2094-009	145680	6.20	637057	7.59	212991	9.24
07	2094-007DIL	189329	6.20	493214	7.59	223125	9.24
08	2094-009DIL	181724	6.20	547143	7.59	229891	9.24
09	2094-001	163918	6.20	475888	7.59	205143	9.24
10	2094-003	147219	6.20	438625	7.58	202256	9.24
11	2094-004	151795	6.20	476836	7.59	203174	9.24
12	2094-005	135837	6.20	388456	7.58	178102	9.24
13	2094-006	155207	6.20	454359	7.59	197016	9.24
14	2093-001	154818	6.20	464977	7.59	202747	9.24
15	2076-004	128140	6.20	328012	7.58	132255	9.24
16	2076-004	119002	6.20	308094	7.58	118448	9.24
17	DI-MS	153694	6.20	442878	7.59	182951	9.24
18	DI-MSD	161990	6.20	475558	7.59	208023	9.24
19	2115-001	163590	6.20	493376	7.59	211575	9.24
20	2115-002	143948	6.20	411969	7.59	163036	9.24
21	2115-003	144844	6.20	416848	7.58	176791	9.24
22	2115-004	152214	6.20	429438	7.59	175369	9.24

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9195.D

Date Analyzed: 04/06/2001

Instrument ID: MSDC

Time Analyzed: 12:28

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	128875	6.20	371866	7.58	168425	9.24
	UPPER LIMIT	257750	6.70	743732	8.08	336850	9.74
	LOWER LIMIT	64438	5.70	185933	7.08	84213	8.74
	LAB SAMPLE ID						
01	2115-005	145043	6.20	439887	7.58	188989	9.24
02	2115-006	146326	6.2	445016	7.58	188106	9.24
03	2115-007	154337	6.2	470960	7.59	217997	9.24
04	2115-008	146656	6.2	436836	7.58	188607	9.24
05	2114-001	147964	6.2	431415	7.59	179402	9.24
06	2114-002	142175	6.2	437283	7.58	196483	9.24
07	2114-003	151250	6.2	440486	7.58	195680	9.24
08	2114-004	129505	6.2	357652	7.59	145771	9.24
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9195.D

Date Analyzed: 04/06/2001

Instrument ID: MSDC

Time Analyzed: 12:28

	40UG/L	IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	24 HOUR STD	203058		10.54		88428		12.97		51612		15.14	
	UPPER LIMIT	406116		11.04		176856		13.47		103224		15.64	
	LOWER LIMIT	101529		10.04		44214		12.47		25806		14.64	
	LAB SAMPLE ID												
01	Method-Blank	212615		10.54		80599		12.97		38788		15.15	
02	DI-MS	259913		10.55		107261		12.97		61140		15.14	
03	DI-MSD	207761		10.55		96375		12.97		54733		15.15	
04	2094-007	258825		10.55		100999		12.97		60769		15.14	
05	2094-008	245836		10.55		90916		12.97		52927		15.14	
06	2094-009	278604		10.55		107626		12.96		62962		15.13	
07	2094-007DIL	277463		10.55		108883		12.96		53701		15.13	
08	2094-009DIL	242004		10.55		99086		12.96		61613		15.13	
09	2094-001	261984		10.55		138230		12.96		66420		15.12	
10	2094-003	241822		10.54		92440		12.96		53860		15.12	
11	2094-004	227244		10.55		83034		12.96		46670		15.12	
12	2094-005	209473		10.54		99928		12.95		65201		15.12	
13	2094-006	222087		10.54		89716		12.96		52652		15.12	
14	2093-001	237274		10.55		99451		12.95		64823		15.12	
15	2076-004	155440		10.54		78024		12.95		64587		15.12	
16	2076-004	134260		10.54		63061		12.96		54082		15.13	
17	DI-MS	202150		10.54		101703		12.95		67658		15.12	
18	DI-MSD	249251		10.54		99827		12.95		59748		15.12	
19	2115-001	228444		10.54		82386		12.95		51473		15.12	
20	2115-002	193065		10.54		73422		12.95		45056		15.12	
21	2115-003	205576		10.55		77232		12.95		42415		15.12	
22	2115-004	178562		10.54		68965		12.95		44663		15.12	

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9195.D

Date Analyzed: 04/06/2001

Instrument ID: MSDC

Time Analyzed: 12:28

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	203058	10.54	88428	12.97	51612	15.14
	UPPER LIMIT	406116	11.04	176856	13.47	103224	15.64
	LOWER LIMIT	101529	10.04	44214	12.47	25806	14.64
	LAB SAMPLE ID						
01	2115-005	216778	10.54	84276	12.95	45117	15.12
02	2115-006	213741	10.54	74141	12.96	39823	15.12
03	2115-007	239025	10.55	73560	12.95	42535	15.12
04	2115-008	215713	10.54	70987	12.95	39158	15.12
05	2114-001	188784	10.54	77767	12.95	46688	15.12
06	2114-002	250928	10.54	97125	12.95	51035	15.12
07	2114-003	216036	10.54	77710	12.95	45143	15.12
08	2114-004	159205	10.54	69890	12.95	40232	15.12
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9206.D Vial: 9
Acq On : 6 Apr 2001 17:31 Operator: DP
Sample : FB,2094-001,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
S Integration Params: RTEINT.P
Quant Time: Apr 9 9:34 2001 Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	163918	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	475888	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	205143	40.00	UG	0.00
60) Phenanthrene-d10	10.55	188	261984	40.00	UG	0.00
75) Chrysene-d12	12.96	240	138230	40.00	UG	-0.01
84) Perylene-d12	15.12	264	66420	40.00	UG	-0.02

System Monitoring Compounds						
4) 2-Fluorophenol	4.55	112	257678	55.87	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 55.87%			
6) Phenol-d5	5.68	99	287246	63.95	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 63.95%			
23) Nitrobenzene-d5	6.82	82	91520	27.85	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 55.70%			
43) 2-Fluorobiphenyl	8.60	172	213424	29.89	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 59.78%			
64) 2,4,6-Tribromophenol	9.93	330	56328	62.95	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 62.95%			
77) Terphenyl-d14	11.86	244	179061	48.52	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 97.04%			

Target Compounds Qvalue

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

000135

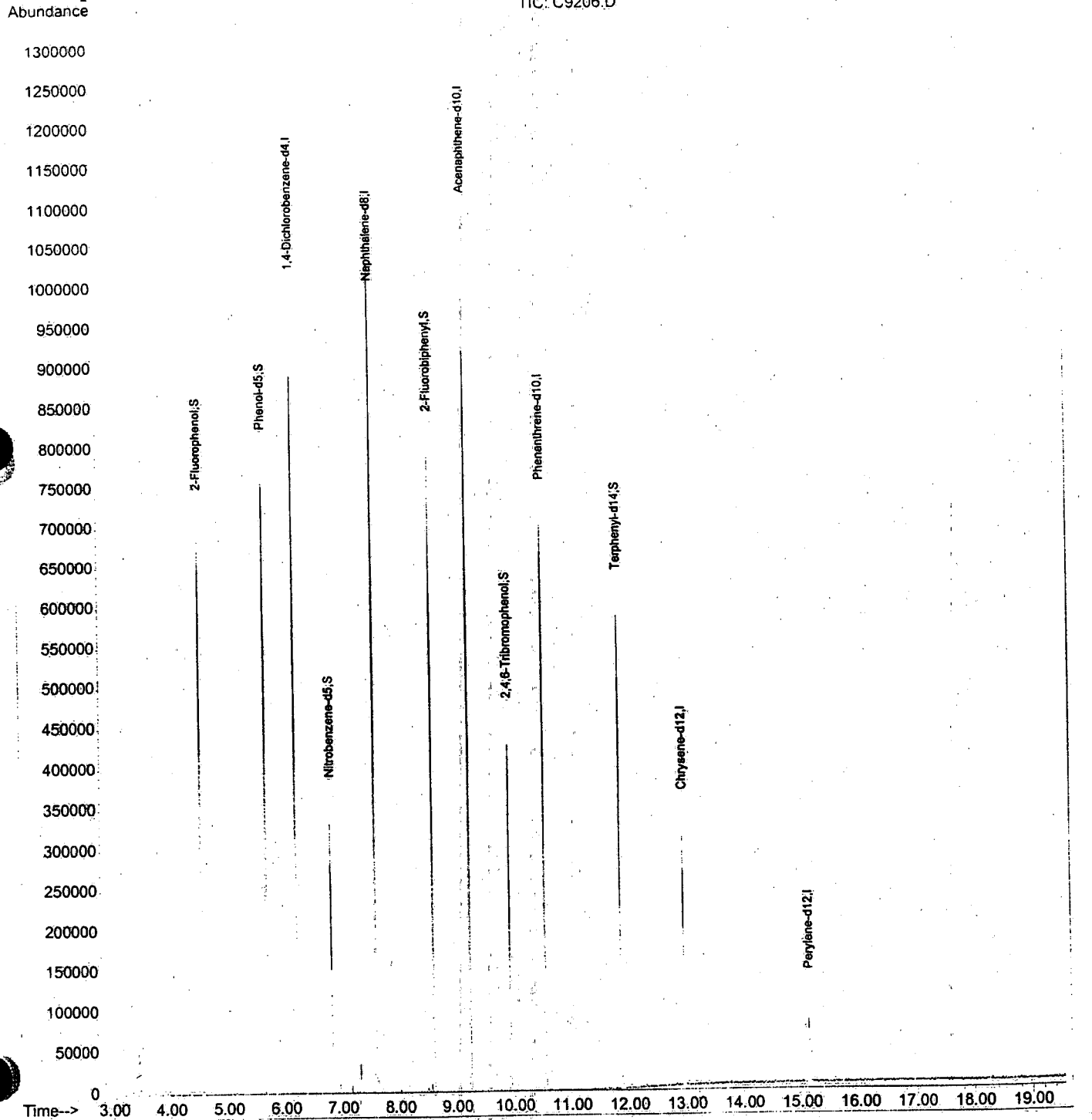
4029

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9206.D
Acq On : 6 Apr 2001 17:31
Sample : FB,2094-001,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: RTEINT.P
Quant Time: Apr 9 9:34 2001

Vial: 9
Operator: DP
Inst : MSD-C
Multiplr: 1.00
Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration



000136

4030

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9206.D
Acq On : 6 Apr 2001 17:31
Sample : FB,2094-001,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
'S Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

Vial: 9
Operator: DP
Inst : MSD-C
Multiplr: 1.00

No Library Search Compounds Detected

****
C9206.D CW0501.M Mon Apr 09 09:35:03 2001 MSD-C

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
RTE Integration Params: RTEINT.P
Quant Time: Apr 9 9:36 2001

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00
Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	147219	40.00	UG	0.00
22) Naphthalene-d8	7.58	136	438625	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	202256	40.00	UG	0.00
60) Phenanthrene-d10	10.54	188	241822	40.00	UG	0.00
75) Chrysene-d12	12.96	240	92440	40.00	UG	-0.01
84) Perylene-d12	15.12	264	53860	40.00	UG	-0.02

System Monitoring Compounds						
4) 2-Fluorophenol	4.54	112	214875	51.87	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 51.87%			
6) Phenol-d5	5.68	99	242142	60.02	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 60.02%			
23) Nitrobenzene-d5	6.81	82	84260	27.82	UG	-0.01
Spiked Amount 50.000	Range 49 - 105		Recovery = 55.64%			
43) 2-Fluorobiphenyl	8.60	172	202780	28.80	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 57.60%			
64) 2,4,6-Tribromophenol	9.93	330	63392	76.75	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 76.75%			
77) Terphenyl-d14	11.86	244	136913	55.47	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 110.94%			

Target Compounds Qvalue

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

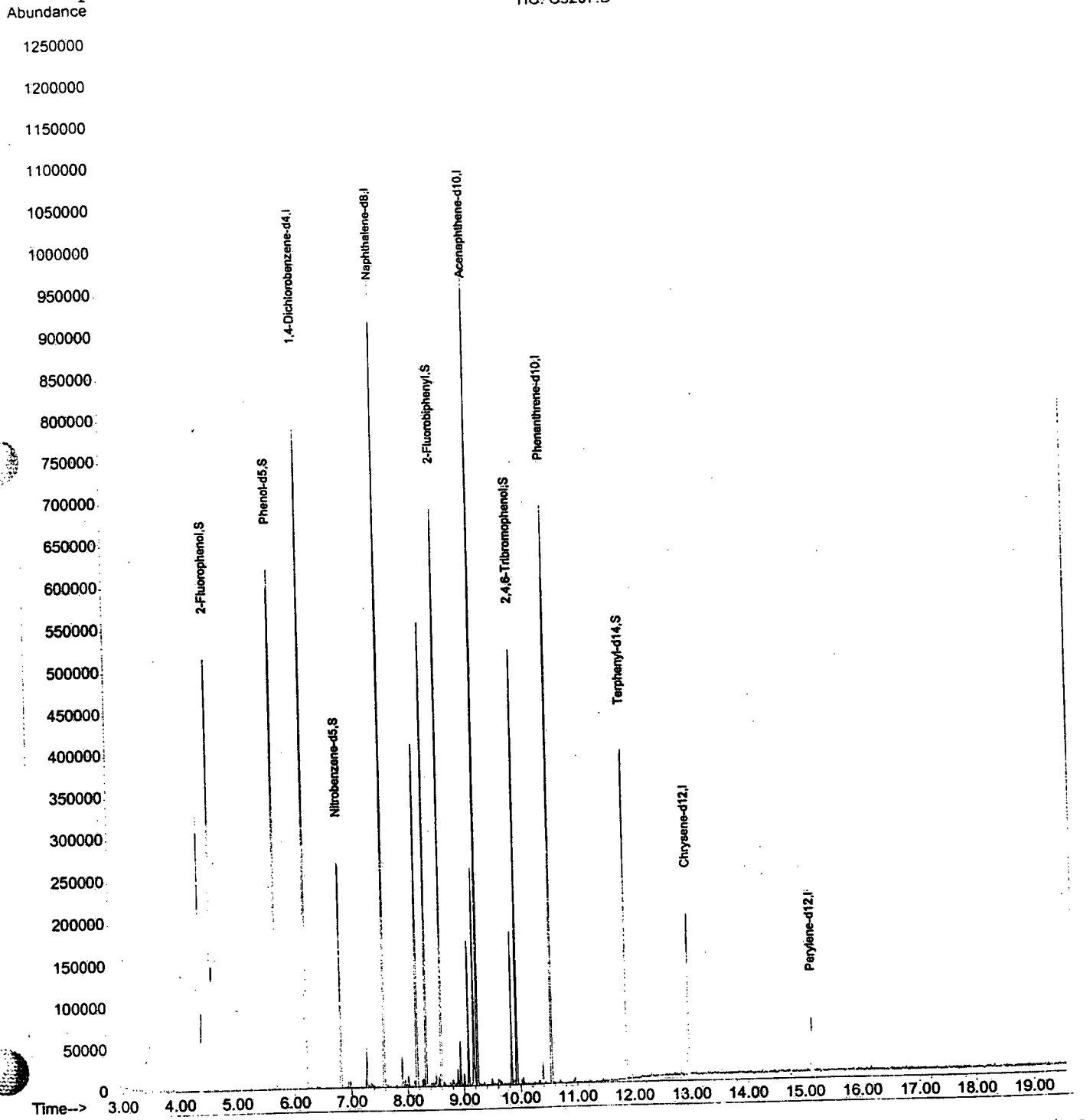
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: RTEINT.P
Quant Time: Apr 9 9:36 2001

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration



4033

030199

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
IS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 1.2
Stop Thrs : 1.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.421	114	118	124	rVB2	11898	15613	1.75%	0.181%
2	4.351	286	292	296	rBV	327414	413342	46.29%	4.805%
3	4.383	296	298	303	rVB	101372	95273	10.67%	1.107%
4	4.543	323	328	331	rBV	515370	590015	66.08%	6.859%
5	4.570	331	333	341	rVB	152113	152829	17.12%	1.777%
6	5.681	536	541	551	rVB	619796	730025	81.76%	8.486%
7	6.199	634	638	644	rBV	834734	890785	99.77%	10.355%
8	6.814	749	753	759	rVB	269996	265118	29.69%	3.082%
9	7.278	837	840	843	rVB	48054	37889	4.24%	0.440%
10	7.583	893	897	907	rVB	1069104	892879	100.00%	10.379%
11	7.898	953	956	959	rBB	37113	28449	3.19%	0.331%
12	8.010	975	977	982	rVB	14237	10622	1.19%	0.123%
13	8.165	1000	1006	1010	rVB2	408308	439874	49.26%	5.113%
14	8.325	1032	1036	1041	rVB	552995	433617	48.56%	5.041%
15	8.598	1083	1087	1090	rBV	686823	572873	64.16%	6.659%
16	8.806	1122	1126	1131	rBV3	7958	10589	1.19%	0.123%
17	8.892	1138	1142	1147	rVB2	19675	16466	1.84%	0.191%
18	8.940	1147	1151	1154	rVB	53635	43415	4.86%	0.505%
19	9.004	1161	1163	1168	rVB	15090	13180	1.48%	0.153%
20	9.079	1174	1177	1182	rBV	174088	147075	16.47%	1.710%
21	9.175	1191	1195	1198	rBV	256289	208983	23.41%	2.429%
22	9.196	1198	1199	1203	rVB	24680	13185	1.48%	0.153%
23	9.239	1203	1207	1211	rBV	1016967	800746	89.68%	9.308%
24	9.837	1316	1319	1323	rBV	183088	133891	15.00%	1.556%
25	9.928	1332	1336	1340	rBV	519482	413172	46.27%	4.803%
26	10.393	1420	1423	1426	rVB	28099	21519	2.41%	0.250%
27	10.542	1447	1451	1456	rBV	689021	553767	62.02%	6.437%
28	11.862	1694	1698	1701	rVB	392853	327291	36.66%	3.805%
29	12.957	1896	1903	1909	rBV	192479	217626	24.37%	2.530%
30	15.121	2301	2308	2315	rBV	66468	112446	12.59%	1.307%

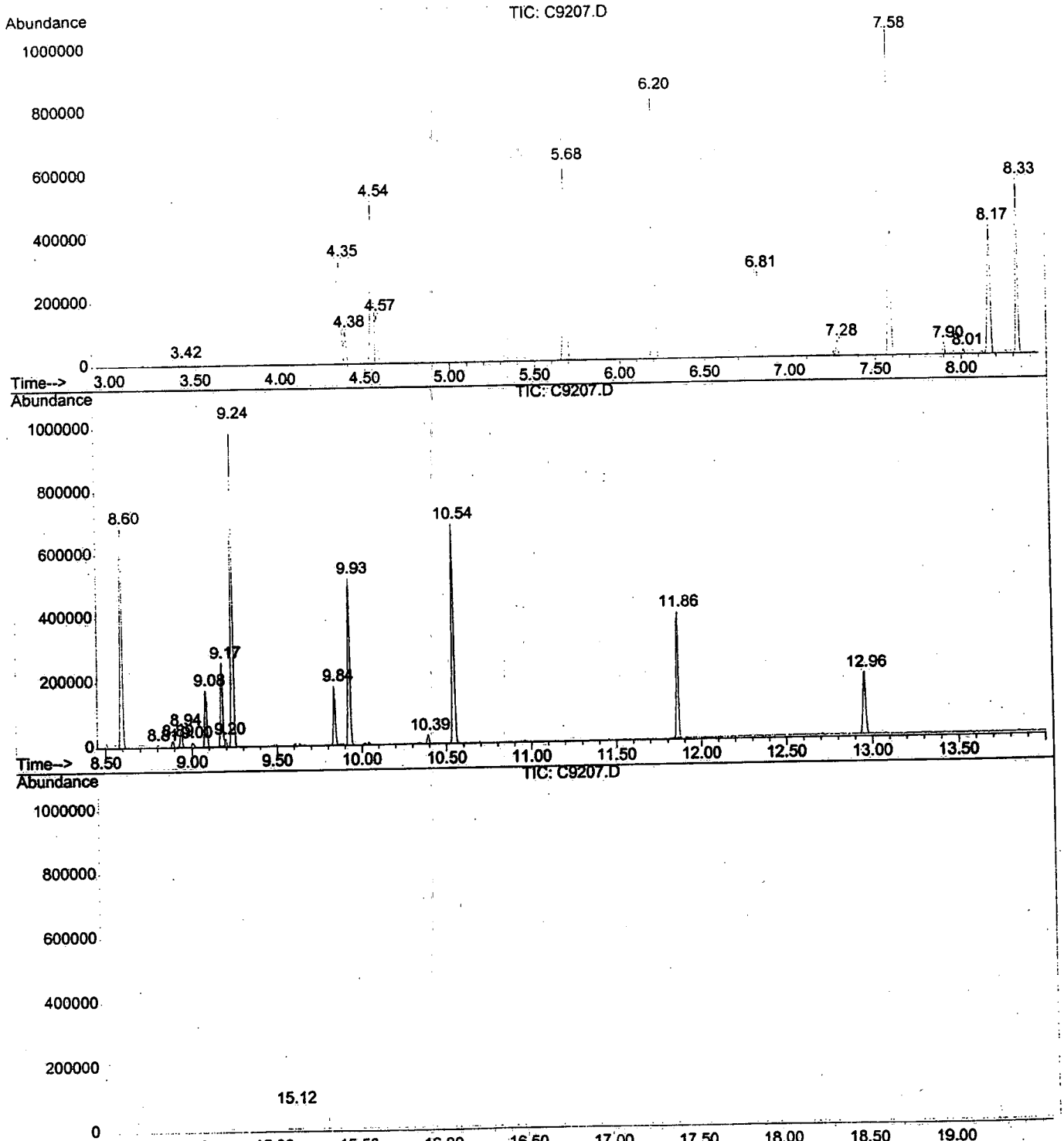
41034

Sum of corrected areas: 8602554

C9207.D CW0501.M Mon Apr 09 09:37:33 2001 MSD-C

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Operator : DP
Acquired : 6 Apr 2001 17:57 using AcqMethod CW0501
Instrument : MSD-C
Sample Name: MW-1,2094-003,A,1000mL,100,04/06/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Vial Number: 10
Quant File :CW0501.RES (RTE Integrator)



C9207.D CW0501.M Mon Apr 09 09:37:34 2001 MSD-C

4036

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D Vial: 10
Acq On : 6 Apr 2001 17:57 Operator: DP
Sample : MW-1,2094-003,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

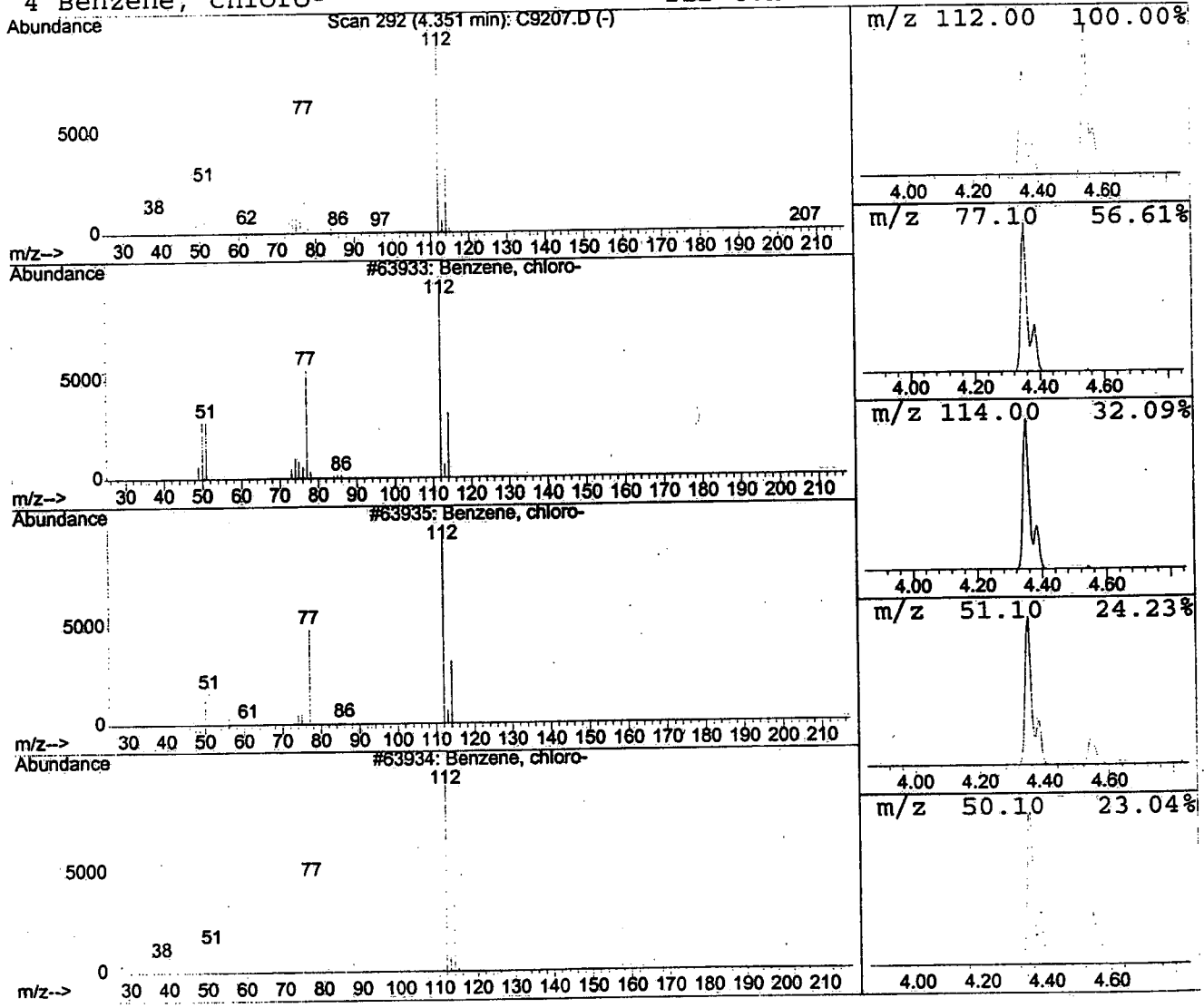
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.35	18.56 UG	413342	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, chloro-	112	C6H5Cl	000108-90-7	96
2	Benzene, chloro-	112	C6H5Cl	000108-90-7	95
3	Benzene, chloro-	112	C6H5Cl	000108-90-7	91
4	Benzene, chloro-	112	C6H5Cl	000108-90-7	90



000203

4037

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

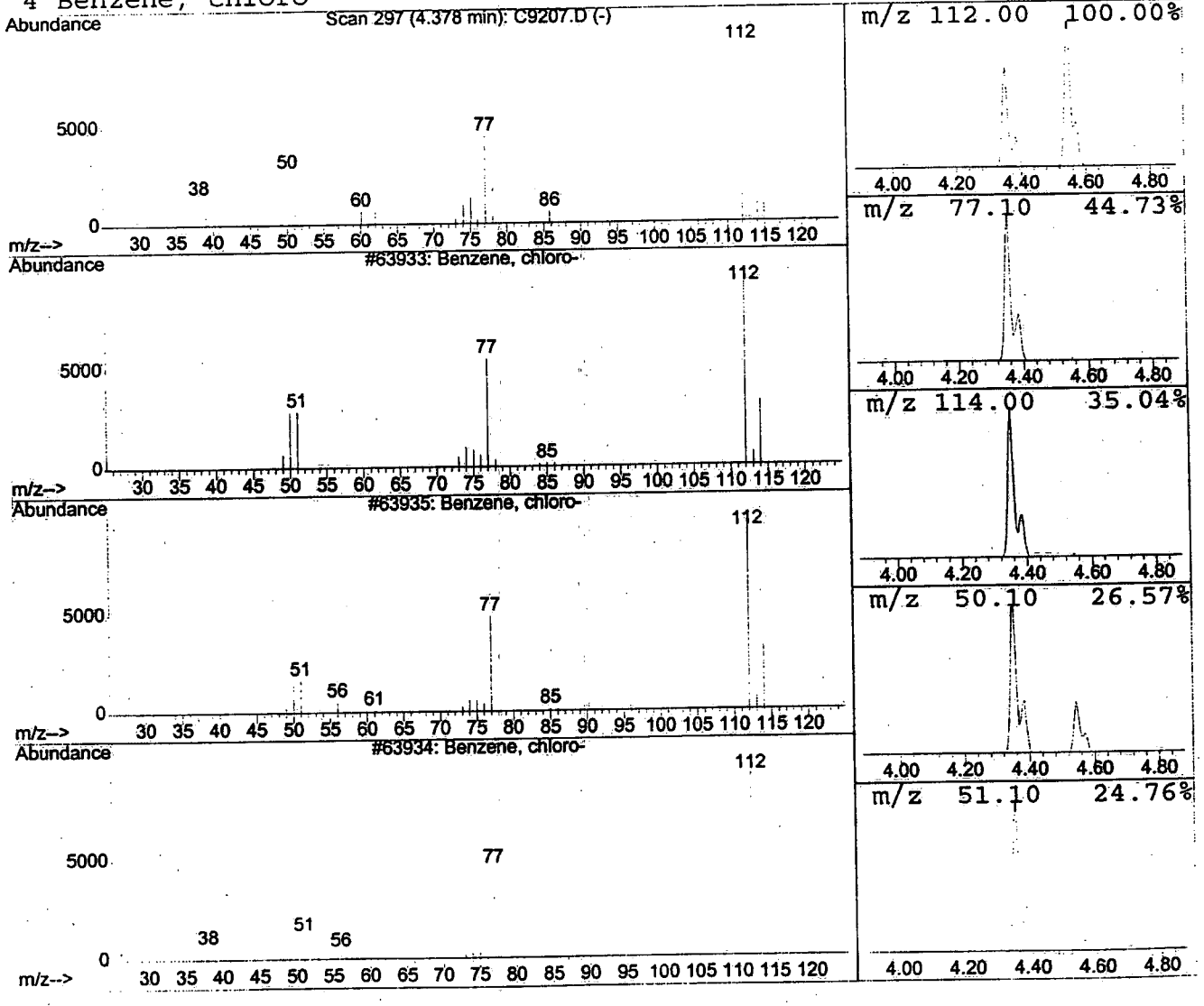
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.38	4.28 UG	95273	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, chloro-	112	C6H5Cl	000108-90-7	91
2	Benzene, chloro-	112	C6H5Cl	000108-90-7	86
3	Benzene, chloro-	112	C6H5Cl	000108-90-7	72
4	Benzene, chloro-	112	C6H5Cl	000108-90-7	38



030201

4038

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

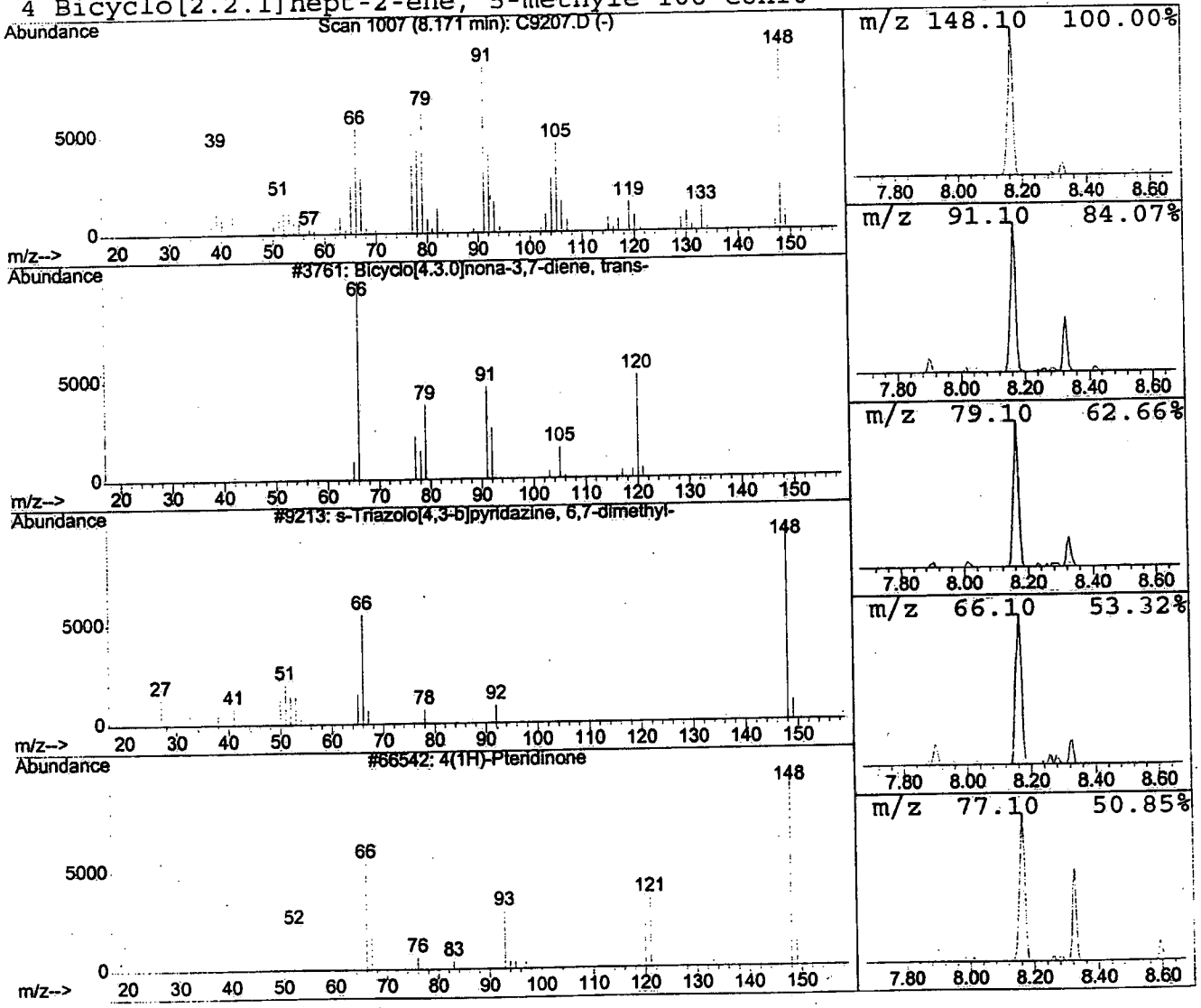
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.17	19.71 UG	439874	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.3.0]nona-3,7-diene, trans	120	C9H12	000000-00-0	52
2	s-Triazolo[4,3-b]pyridazine, 6,7-di	148	C7H8N4	023069-78-5	43
3	4(1H)-Pteridinone	148	C6H4N4O	000700-47-0	38
4	Bicyclo[2.2.1]hept-2-ene, 5-methyle	106	C8H10	000694-91-7	38



4039

000205

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

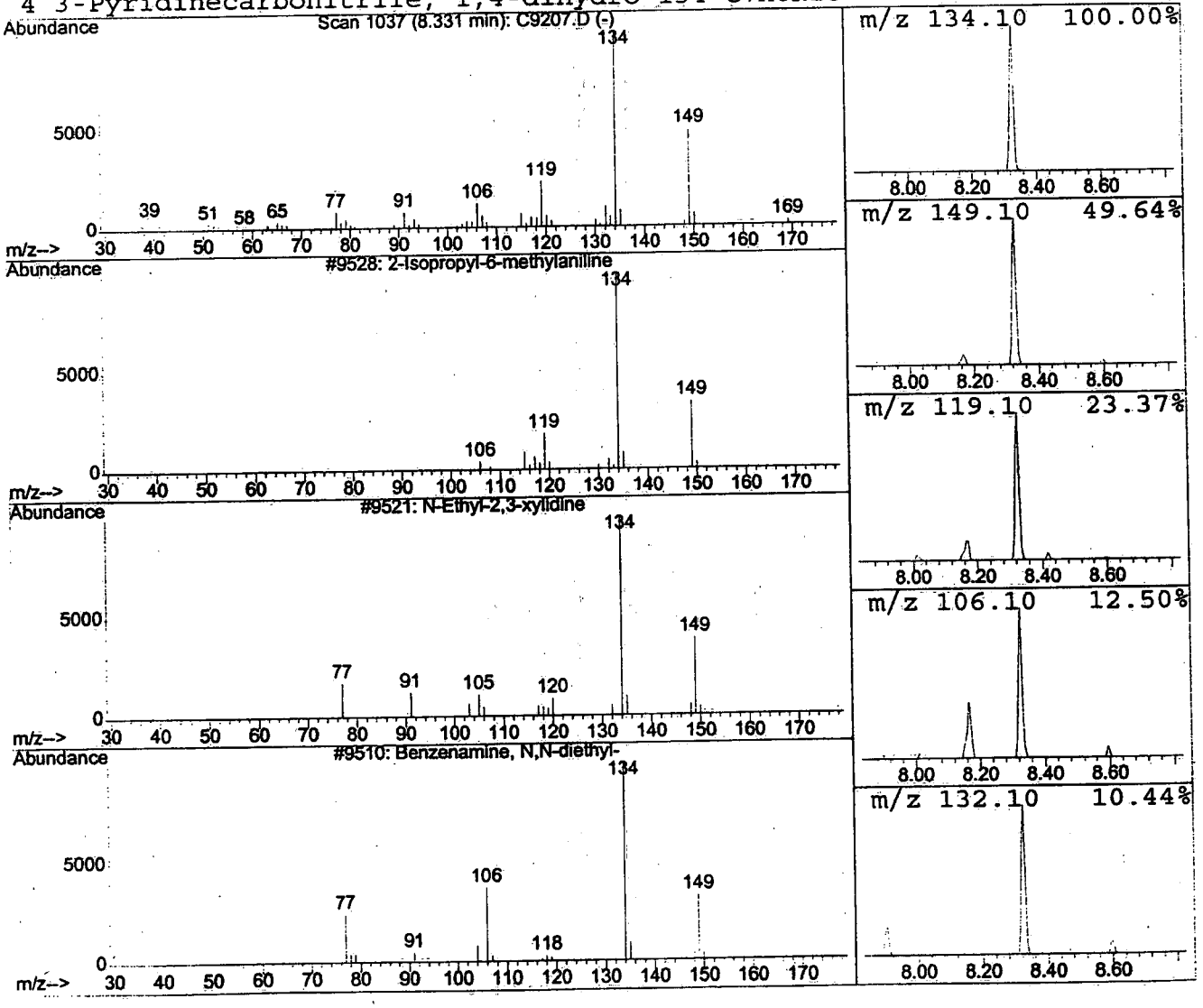
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.33	19.43 UG	433617	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Isopropyl-6-methylaniline	149	C10H15N	005266-85-3	91
2	N-Ethyl-2,3-xylidine	149	C10H15N	041115-23-5	80
3	Benzenamine, N,N-diethyl-	149	C10H15N	000091-66-7	59
4	3-Pyridinecarbonitrile, 1,4-dihydro	134	C7H6N2O	000767-98-6	46



000206

4040

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

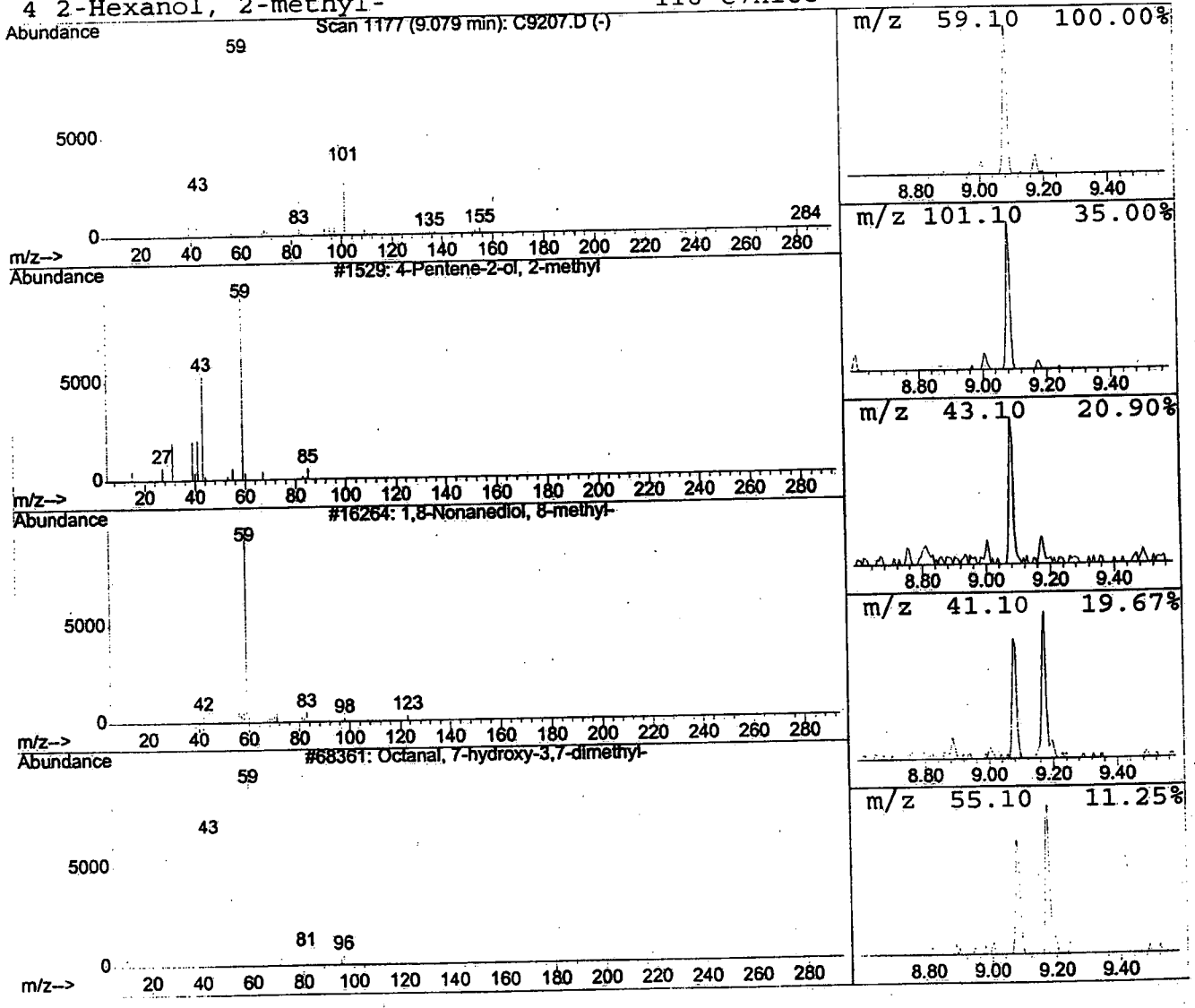
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.08	7.35 UG	147075	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-Pentene-2-ol, 2-methyl	100	C6H12O	000624-97-5	50
2	1,8-Nonanediol, 8-methyl-	174	C10H22O2	054725-73-4	50
3	Octanal, 7-hydroxy-3,7-dimethyl-	172	C10H20O2	000107-75-5	42
4	2-Hexanol, 2-methyl-	116	C7H16O	000625-23-0	39



4041

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D Vial: 10
Acq On : 6 Apr 2001 17:57 Operator: DP
Sample : MW-1,2094-003,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

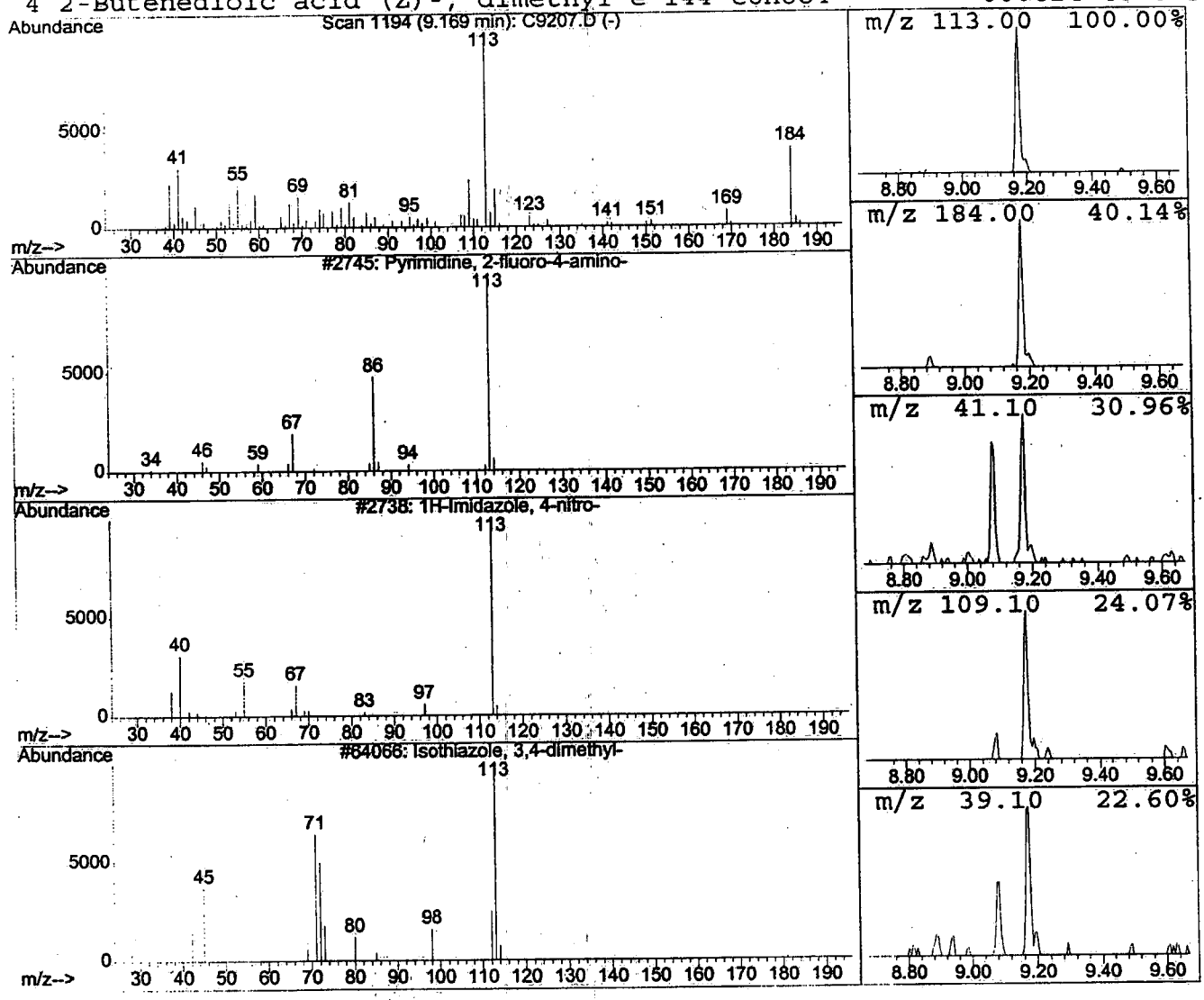
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Unknown Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.17	10.44 UG	208983	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pyrimidine, 2-fluoro-4-amino-	113	C4H4FN3	096548-91-3	38
2	1H-Imidazole, 4-nitro-	113	C3H3N3O2	003034-38-6	35
3	Isothiazole, 3,4-dimethyl-	113	C5H7NS	027330-46-7	35
4	2-Butenedioic acid (Z)-, dimethyl e	144	C6H8O4	000624-48-6	32



4042

Data File : C:\HPCHEM\1\DATA\04-06-01\C9207.D
Acq On : 6 Apr 2001 17:57
Sample : MW-1,2094-003,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

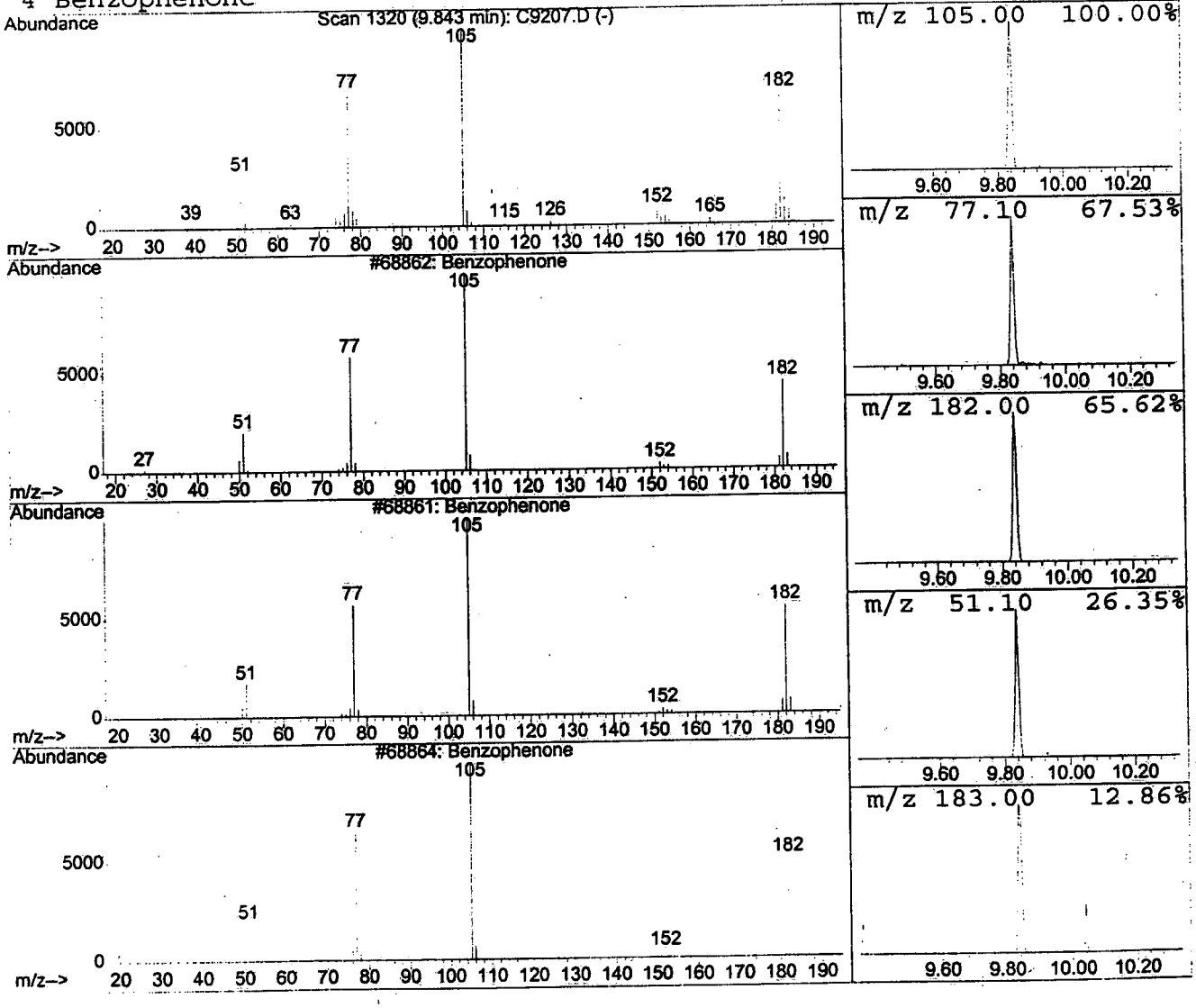
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Substituted benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.84	6.69 UG	133891	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzophenone	182	C13H10O	000119-61-9	91
2	Benzophenone	182	C13H10O	000119-61-9	91
3	Benzophenone	182	C13H10O	000119-61-9	91
4	Benzophenone	182	C13H10O	000119-61-9	91



4043

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9208.D Vial: 11
Acq On : 6 Apr 2001 18:22 Operator: DP
Sample : MW-2,2094-004,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
Integration Params: RTEINT.P
Quant Time: Apr 9 13:44 2001 Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

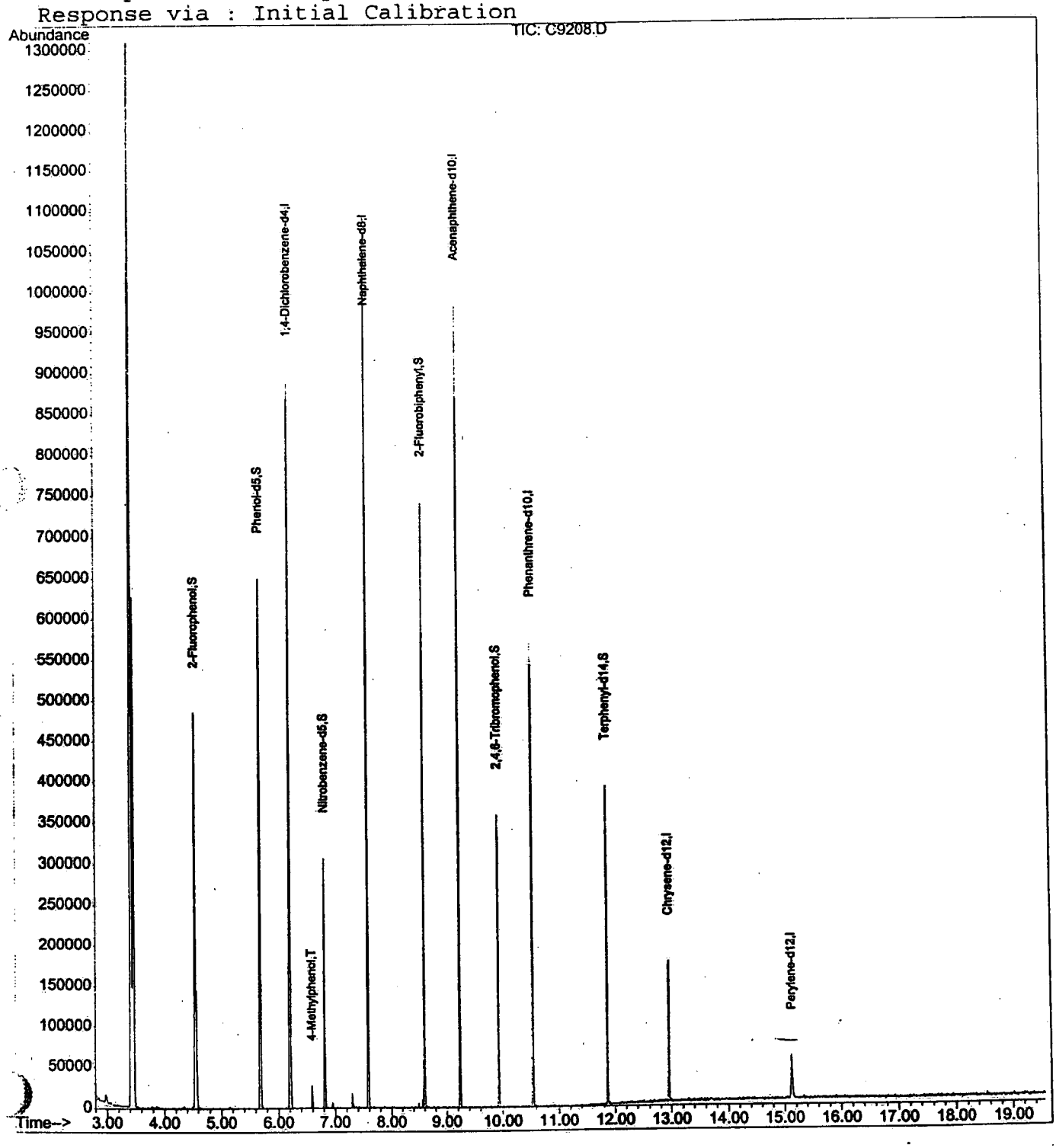
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	151795	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	476836	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	203174	40.00	UG	0.00
60) Phenanthrene-d10	10.55	188	227244	40.00	UG	0.00
75) Chrysene-d12	12.96	240	83034	40.00	UG	-0.01
84) Perylene-d12	15.12	264	46670	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.54	112	211084	49.42	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 49.42%			
6) Phenol-d5	5.68	99	247451	59.49	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 59.49%			
23) Nitrobenzene-d5	6.82	82	86483	26.26	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 52.52%			
43) 2-Fluorobiphenyl	8.60	172	198994	28.14	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 56.28%			
64) 2,4,6-Tribromophenol	9.93	330	44420	57.23	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 57.23%			
77) Terphenyl-d14	11.86	244	128771	58.08	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 116.16%			
Target Compounds						Qvalue
17) 4-Methylphenol	6.59	108	7092	2.68	UG	89

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9208.D Vial: 11
Acq On : 6 Apr 2001 18:22 Operator: DP
Sample : MW-2,2094-004,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 9 13:44 2001 Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Initial Calibration



4045

000211

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9208.D
Acq On : 6 Apr 2001 18:22
Sample : MW-2,2094-004,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Integration Params: LSCINT.P

Vial: 11
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 1.2
Stop Thrs : 1.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.419	112	118	124	rBV	2362929	3022496	100.00%	29.457%
2	3.468	124	127	134	rVB	626207	728213	24.09%	7.097%
3	4.541	323	328	332	rBV	484555	608996	20.15%	5.935%
4	4.568	332	333	339	rVB	144230	113920	3.77%	1.110%
5	5.679	536	541	549	rBV	649401	740435	24.50%	7.216%
6	6.203	634	639	646	rVB	890244	1025798	33.94%	9.997%
7	6.817	749	754	758	rBV	307171	281404	9.31%	2.743%
8	7.586	893	898	903	rBV	1092058	973672	32.21%	9.489%
9	8.596	1083	1087	1091	rBV	741656	558425	18.48%	5.442%
10	9.237	1203	1207	1211	rBV	982248	812587	26.88%	7.919%
11	9.926	1333	1336	1344	rVB	358638	294870	9.76%	2.874%
12	10.546	1448	1452	1456	rBV	570051	504085	16.68%	4.913%
13	11.860	1694	1698	1702	rBV	391110	302766	10.02%	2.951%
14	12.955	1898	1903	1908	rBV	174980	197048	6.52%	1.920%
15	15.124	2302	2309	2315	rBV	53265	95956	3.17%	0.935%

Sum of corrected areas: 10260671

C9208.D CW0501.M Mon Apr 09 09:39:46 2001 MSD-C

4046

000212

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9208.D
Acq On : 6 Apr 2001 18:22
Sample : MW-2,2094-004,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 11
Operator: DP
Inst : MSD-C
Multiplr: 1.00

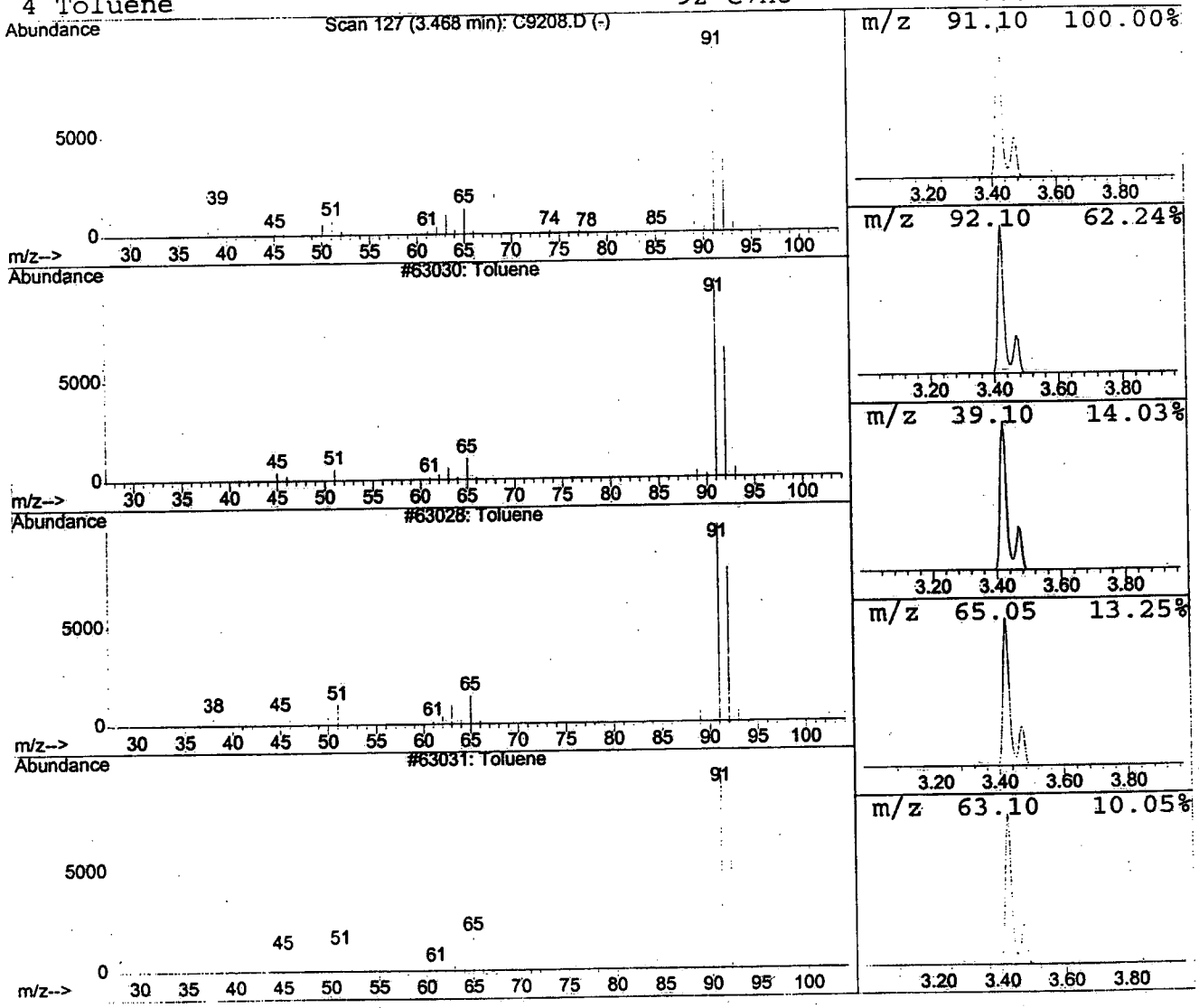
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.47	28.40 UG	728213	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	91
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	90



4049

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D Vial: 12
Acq On : 6 Apr 2001 18:47 Operator: DP
Sample : MW-7,2094-005,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
ALS Integration Params: RTEINT.P
Quant Time: Apr 9 13:45 2001 Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

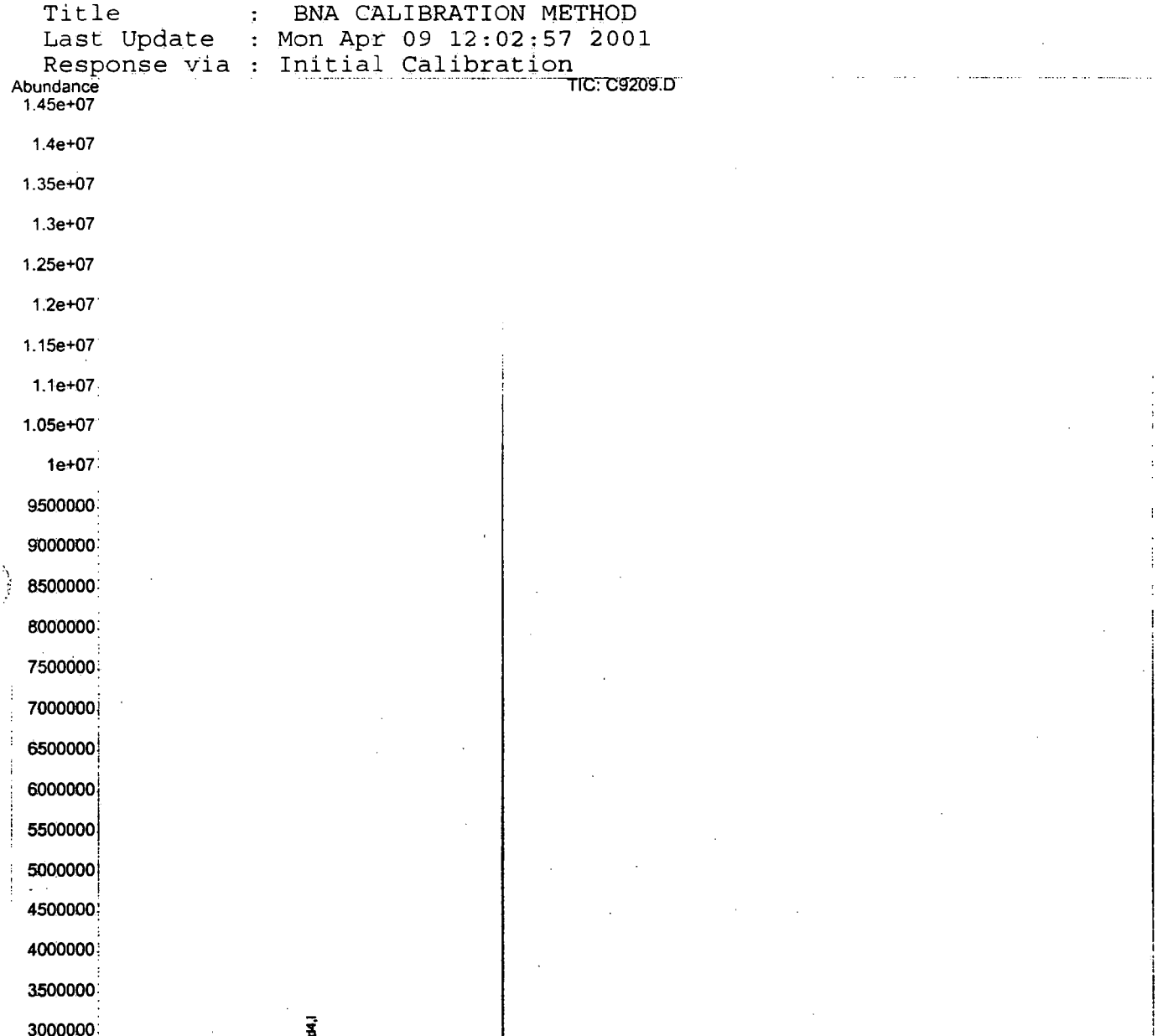
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	135837	40.00	UG	0.00
22) Naphthalene-d8	7.58	136	388456	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	178102	40.00	UG	0.00
60) Phenanthrene-d10	10.54	188	209473	40.00	UG	0.00
75) Chrysene-d12	12.95	240	99928	40.00	UG	-0.01
84) Perylene-d12	15.12	264	65201	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.55	112	185535	48.54	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 48.54%			
6) Phenol-d5	5.68	99	279505m	75.09	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 75.09%			
23) Nitrobenzene-d5	6.82	82	75172	28.02	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 56.04%			
43) 2-Fluorobiphenyl	8.59	172	187070	30.18	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 60.36%			
64) 2,4,6-Tribromophenol	9.93	330	59354	82.96	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 82.96%			
77) Terphenyl-d14	11.86	244	133887	50.18	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 100.36%			
Target Compounds						Qvalue
17) 4-Methylphenol	6.59	108	6181	2.61	UG	88

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D Vial: 12
Acq On : 6 Apr 2001 18:47 Operator: DP
Sample : MW-7,2094-005,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 9 13:45 2001 Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Initial Calibration



40051

000217

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D Vial: 12
Acq On : 6 Apr 2001 18:47 Operator: DP
Sample : MW-7,2094-005,A,1000mL,100,04/06/01 Inst : MSD-C
[redacted]isc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
S Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 1.2 Max Peaks: 100
Stop Thrs : 1.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.418	113	118	124	rBV	1810419	2393108	22.78%	8.388%
2	3.472	124	128	132	rVV	472537	556528	5.30%	1.951%
3	3.525	132	138	142	rVV	147399	171957	1.64%	0.603%
4	4.545	324	329	332	rBV	421806	511559	4.87%	1.793%
5	4.572	332	334	341	rVB	128943	121837	1.16%	0.427%
6	5.576	518	522	529	rBB	97351	128156	1.22%	0.449%
7	5.678	537	541	549	rVB	483741	628380	5.98%	2.203%
[redacted]	6.201	634	639	646	rBV	765342	860831	8.20%	3.017%
[redacted]	6.394	671	675	679	rBV	294684	266842	2.54%	0.935%
10	6.543	696	703	707	rBV	1048821	967368	9.21%	3.391%
11	6.816	748	754	760	rBV	276996	277882	2.65%	0.974%
12	7.537	885	889	893	rBV	124986	125001	1.19%	0.438%
13	7.585	893	898	902	rVV	939406	813288	7.74%	2.851%
14	7.804	934	939	943	rBV3	114260	130718	1.24%	0.458%
15	8.167	1002	1007	1013	rVB2	1174512	1393450	13.27%	4.884%
16	8.328	1034	1037	1039	rBV2	149982	153425	1.46%	0.538%
17	8.349	1039	1041	1044	rVB	257843	190785	1.82%	0.669%
18	8.595	1083	1087	1093	rBV	715287	684224	6.51%	2.398%
19	8.734	1107	1113	1115	rBV	552459	599419	5.71%	2.101%
20	8.755	1115	1117	1120	rVV	866481	631176	6.01%	2.212%
21	8.814	1124	1128	1135	rVB4	94761	133545	1.27%	0.468%
22	8.931	1144	1150	1152	rBV5	77768	126038	1.20%	0.442%
23	8.958	1152	1155	1158	rVB	229661	175686	1.67%	0.616%
24	9.241	1203	1208	1211	rBV	845838	791666	7.54%	2.775%
25	9.294	1211	1218	1221	rBV	12159990	10503137	100.00%	36.816%
26	9.513	1257	1259	1264	rVB2	224211	206616	1.97%	0.724%
27	9.727	1295	1299	1303	rBV	1291951	959449	9.13%	3.363%
28	9.797	1305	1312	1315	rBV2	198459	218668	2.08%	0.766%
29	9.861	1317	1324	1327	rBV3	115720	145044	1.38%	0.508%
[redacted]	9.898	1327	1331	1334	rVB	870633	673439	6.41%	2.361%
31	9.930	1334	1337	1342	rBV	484260	416771	3.97%	1.461%

4052

000218

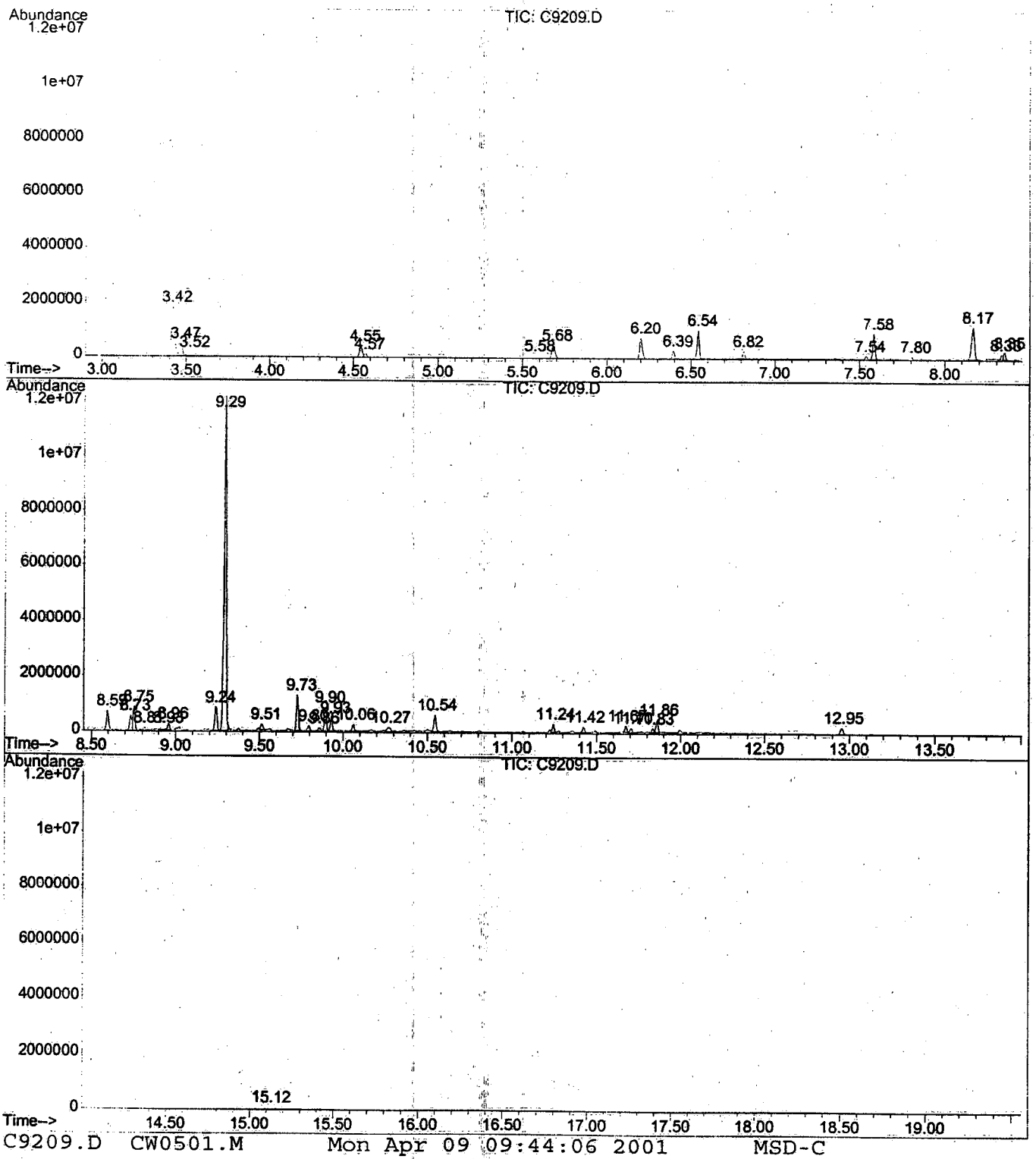
32	10.064	1356	1362	1364	rBV	249919	228240	2.17%	0.800%
33	10.272	1397	1401	1405	rVB3	144426	203927	1.94%	0.715%
34	10.545	1448	1452	1458	rVB	595978	513190	4.89%	1.799%
35	11.244	1580	1583	1586	rVB	304201	250023	2.38%	0.876%
36	11.421	1613	1616	1621	rVB	210407	174511	1.66%	0.612%
	11.672	1660	1663	1666	rBV	220849	191012	1.82%	0.670%
38	11.704	1666	1669	1674	rVB3	164803	153298	1.46%	0.537%
39	11.832	1689	1693	1695	rBV3	130786	125321	1.19%	0.439%
40	11.859	1695	1698	1701	rVB	451527	336761	3.21%	1.180%
41	12.954	1899	1903	1908	rBV	229753	255167	2.43%	0.894%
42	15.117	2301	2308	2317	rVB	77352	141229	1.34%	0.495%

Sum of corrected areas: 28528672

C9209.D CW0501.M Mon Apr 09 09:44:06 2001 MSD-C

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Operator : DP
Acquired : 6 Apr 2001 18:47 using AcqMethod CW0501
Instrument : MSD-C
Sample Name: MW-7,2094-005,A,1000mL,100,04/06/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Vial Number: 12
Quant File :CW0501.RES (RTE Integrator)



C9209.D CW0501.M Mon Apr 09 09:44:06 2001 MSD-C

4054

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D Vial: 12
Acq On : 6 Apr 2001 18:47 Operator: DP
Sample : MW-7,2094-005,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

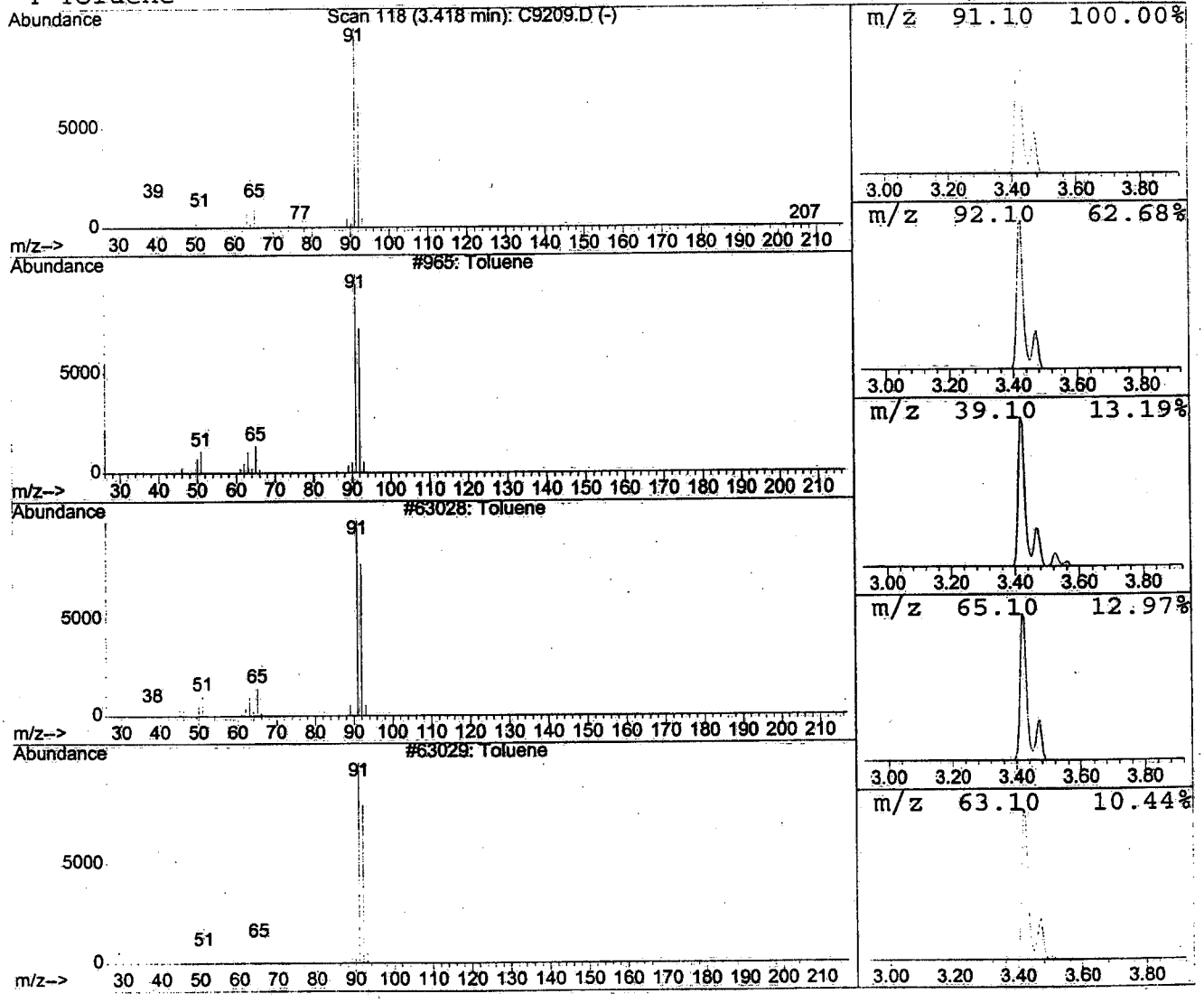
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.42	111.20 UG	2393110	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	94
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	91



4055

000221

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D Vial: 12
Acq On : 6 Apr 2001 18:47 Operator: DP
Sample : MW-7,2094-005,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

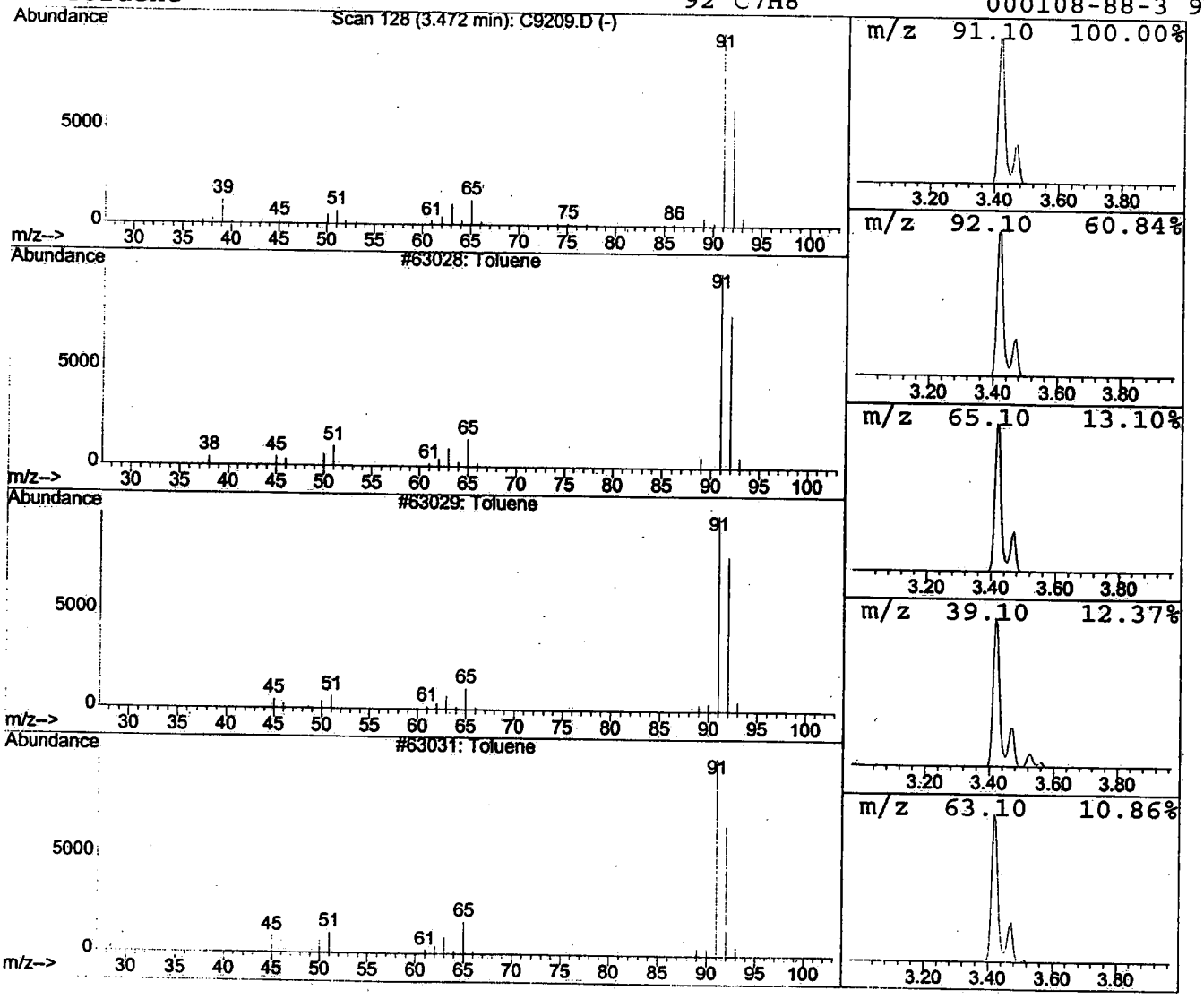
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.47	25.86 UG	556528	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	91
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	91



4056

000223

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

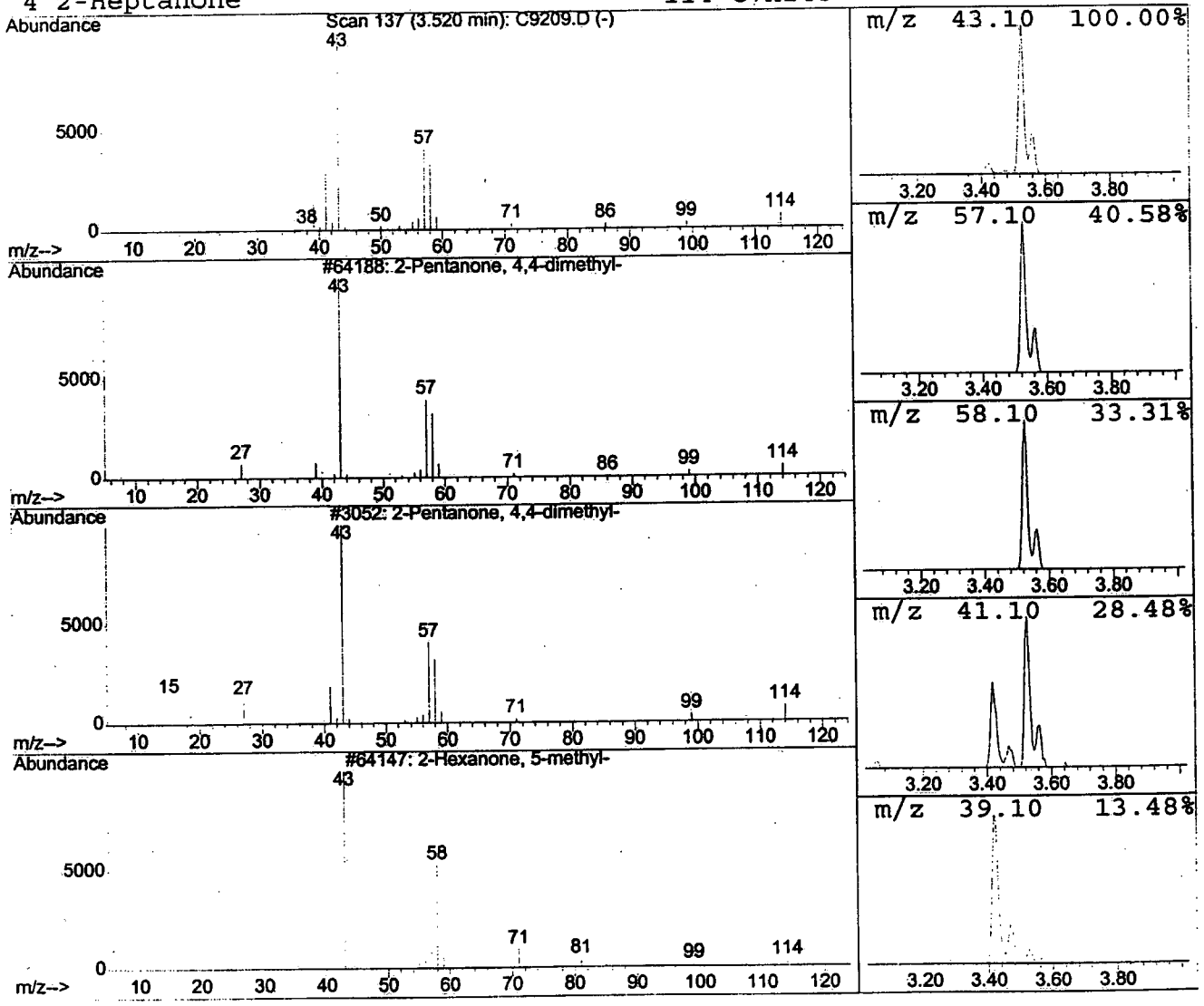
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown alkane Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.52	7.99 UG	171957	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4,4-dimethyl-	114	C7H14O	000590-50-1	87
2	2-Pentanone, 4,4-dimethyl-	114	C7H14O	000590-50-1	86
3	2-Hexanone, 5-methyl-	114	C7H14O	000110-12-3	80
4	2-Heptanone	114	C7H14O	000110-43-0	59



4057

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D Vial: 12
Acq On : 6 Apr 2001 18:47 Operator: DP
Sample : MW-7,2094-005,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

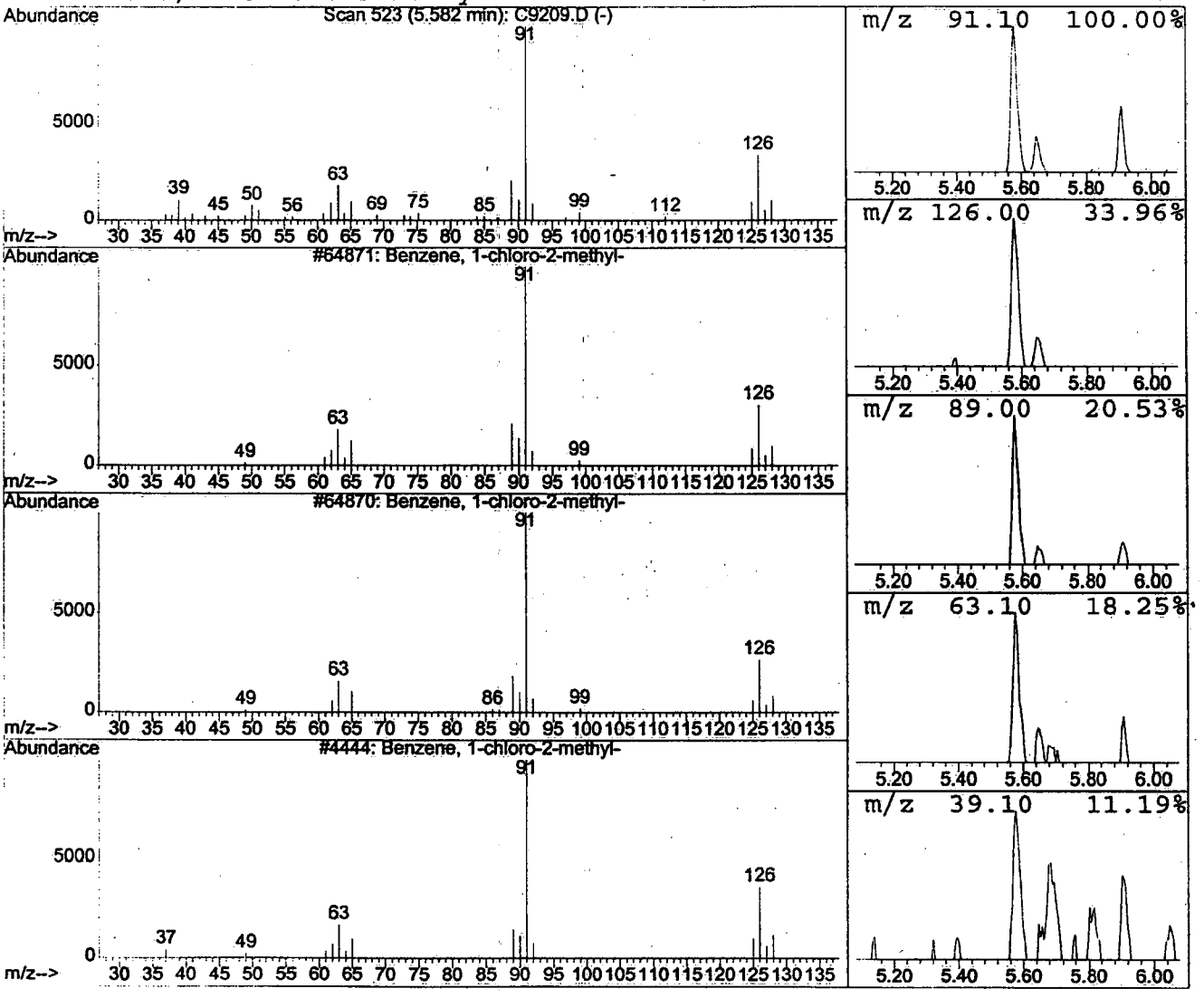
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.58	5.95 UG	128156	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	96
2	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	95
3	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	91
4	Benzene, 1-chloro-3-methyl-	126	C7H7Cl	000108-41-8	90



40556

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

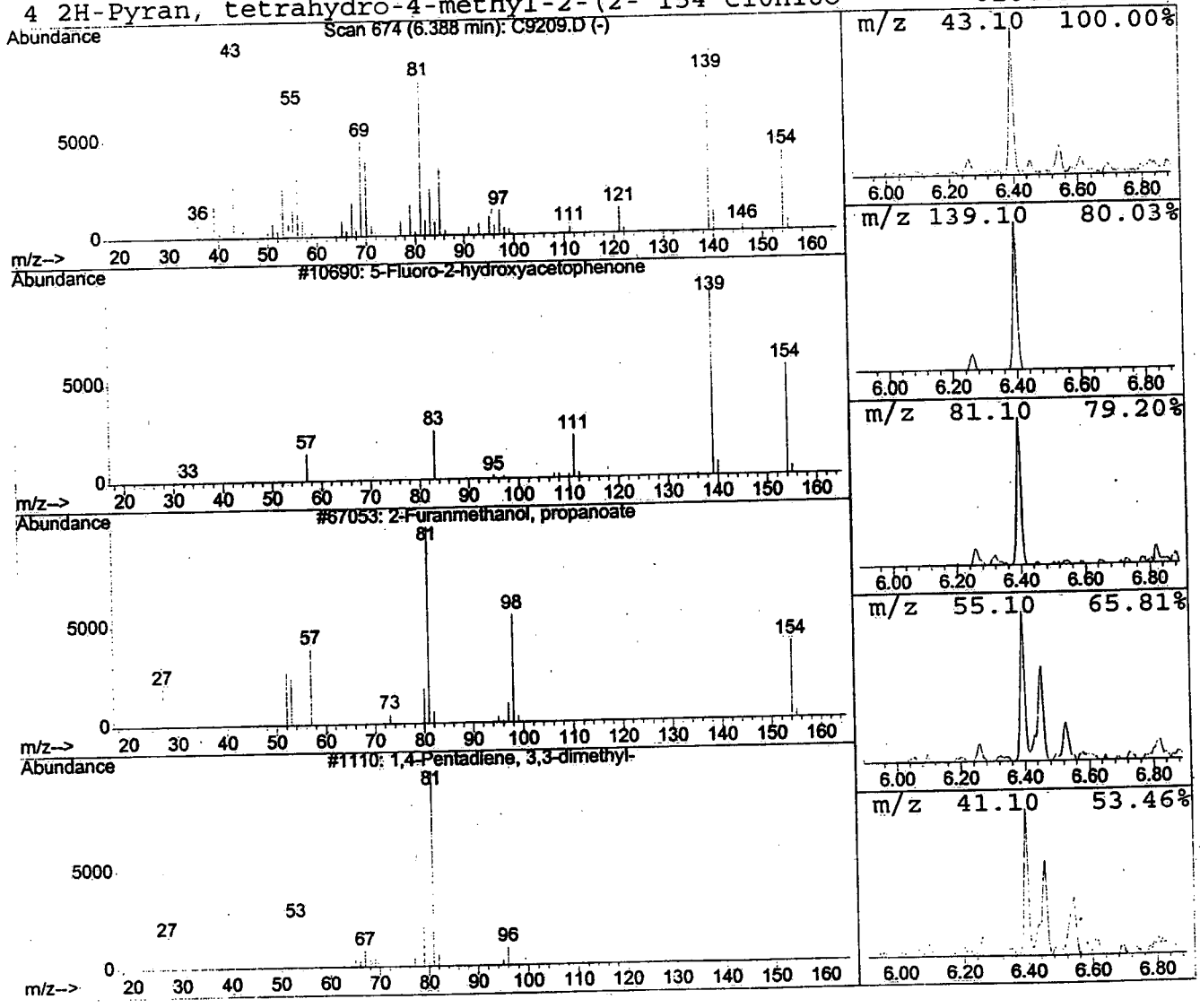
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown — Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.39	12.40 UG	266842	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	5-Fluoro-2-hydroxyacetophenone	154	C8H7FO2	000394-32-1	38
2	2-Furanmethanol, propanoate	154	C8H10O3	000623-19-8	35
3	1,4-Pentadiene, 3,3-dimethyl-	96	C7H12	001112-35-2	30
4	2H-Pyran, tetrahydro-4-methyl-2-(2-	154	C10H18O	016409-43-1	27



4059

000825

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

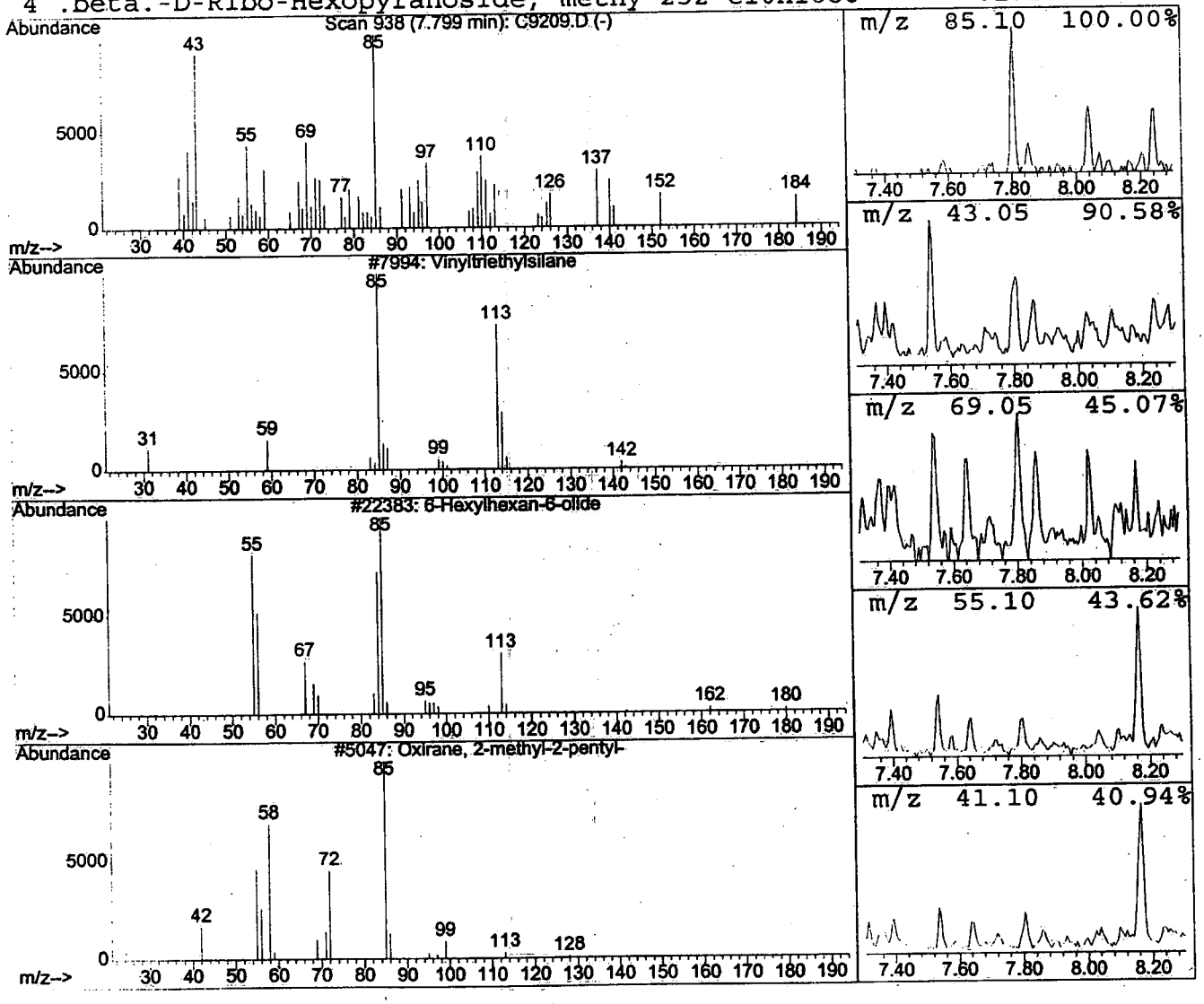
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Unknown — Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.80	6.43 UG	130718	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Vinyltriethylsilane	142	C8H18Si	000000-00-0	35
2	6-Hexylhexan-6-olide	198	C12H22O2	000000-00-0	27
3	Oxirane, 2-methyl-2-pentyl-	128	C8H16O	053907-75-8	17
4	.beta.-D-Ribo-Hexopyranoside, methy	232	C10H16O6	017184-26-8	16



4060

000228

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

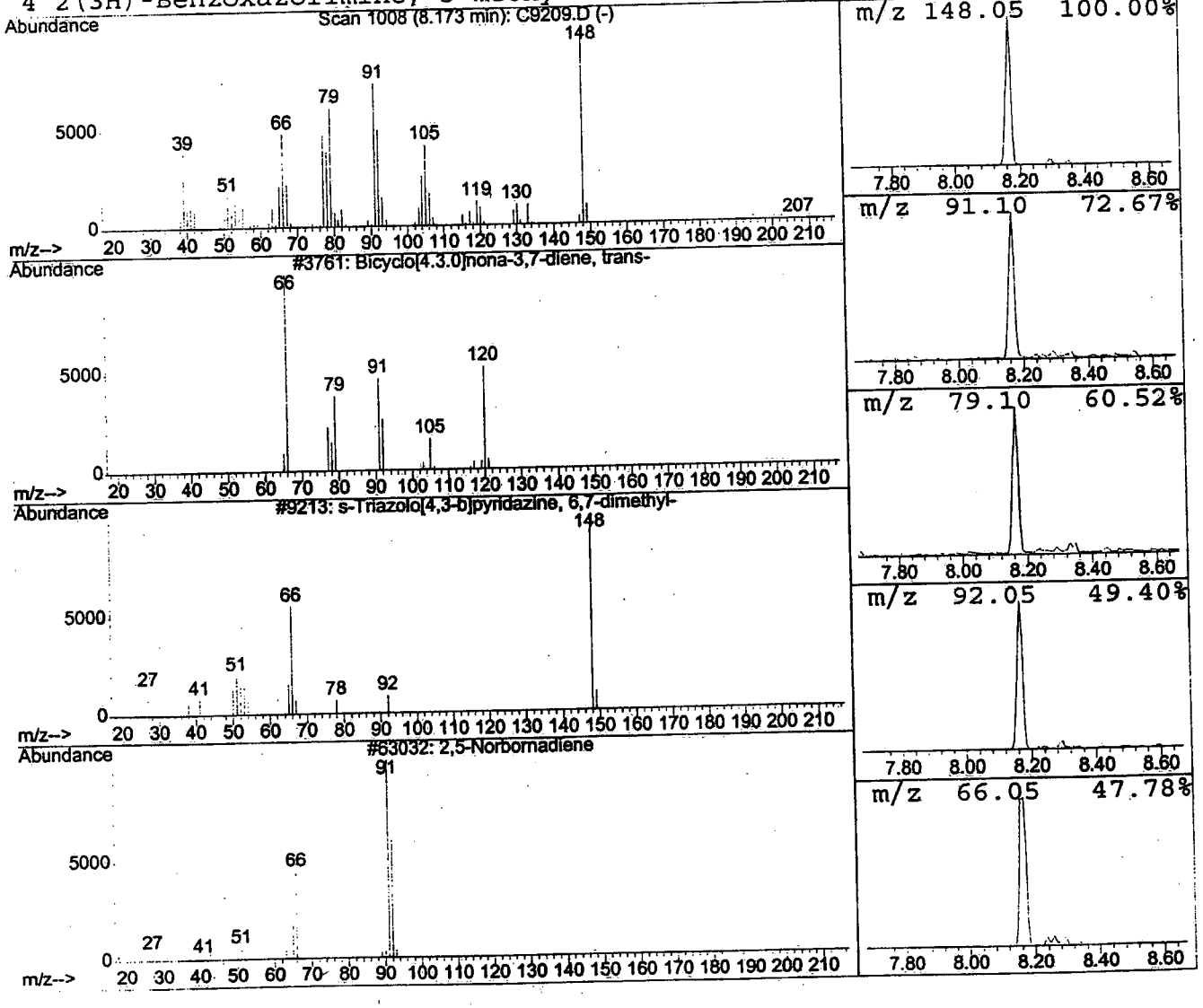
****

Peak Number 7 Unknown

Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.17	68.53 UG	1393450	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.3.0]nona-3,7-diene, trans	120	C9H12	000000-00-0	49
2	s-Triazolo[4,3-b]pyridazine, 6,7-di	148	C7H8N4	023069-78-5	43
3	2,5-Norbornadiene	92	C7H8	000121-46-0	35
4	2(3H)-Benzoxazolimine, 3-methyl-	148	C8H8N2O	018034-93-0	25



000227

4061

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D Vial: 12
Acq On : 6 Apr 2001 18:47 Operator: DP
Sample : MW-7,2094-005,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

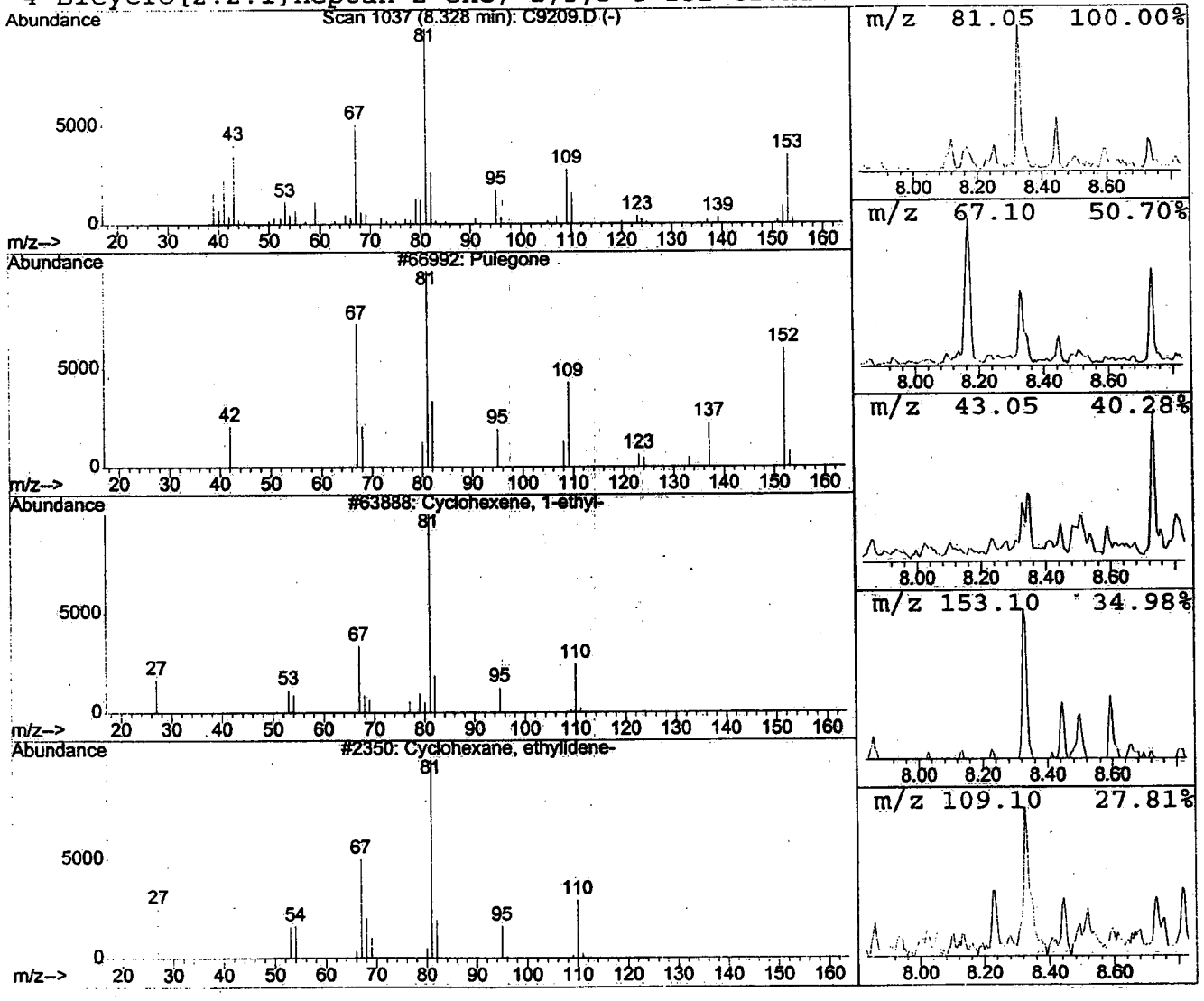
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.33	7.55 UG	153425	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pulegone	152	C10H16O	000089-82-7	72
2	Cyclohexene, 1-ethyl-	110	C8H14	001453-24-3	52
3	Cyclohexane, ethylidene-	110	C8H14	001003-64-1	50
4	Bicyclo[2.2.1]heptan-2-one, 1,3,3-t	152	C10H16O	004695-62-9	38



000223

4062

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

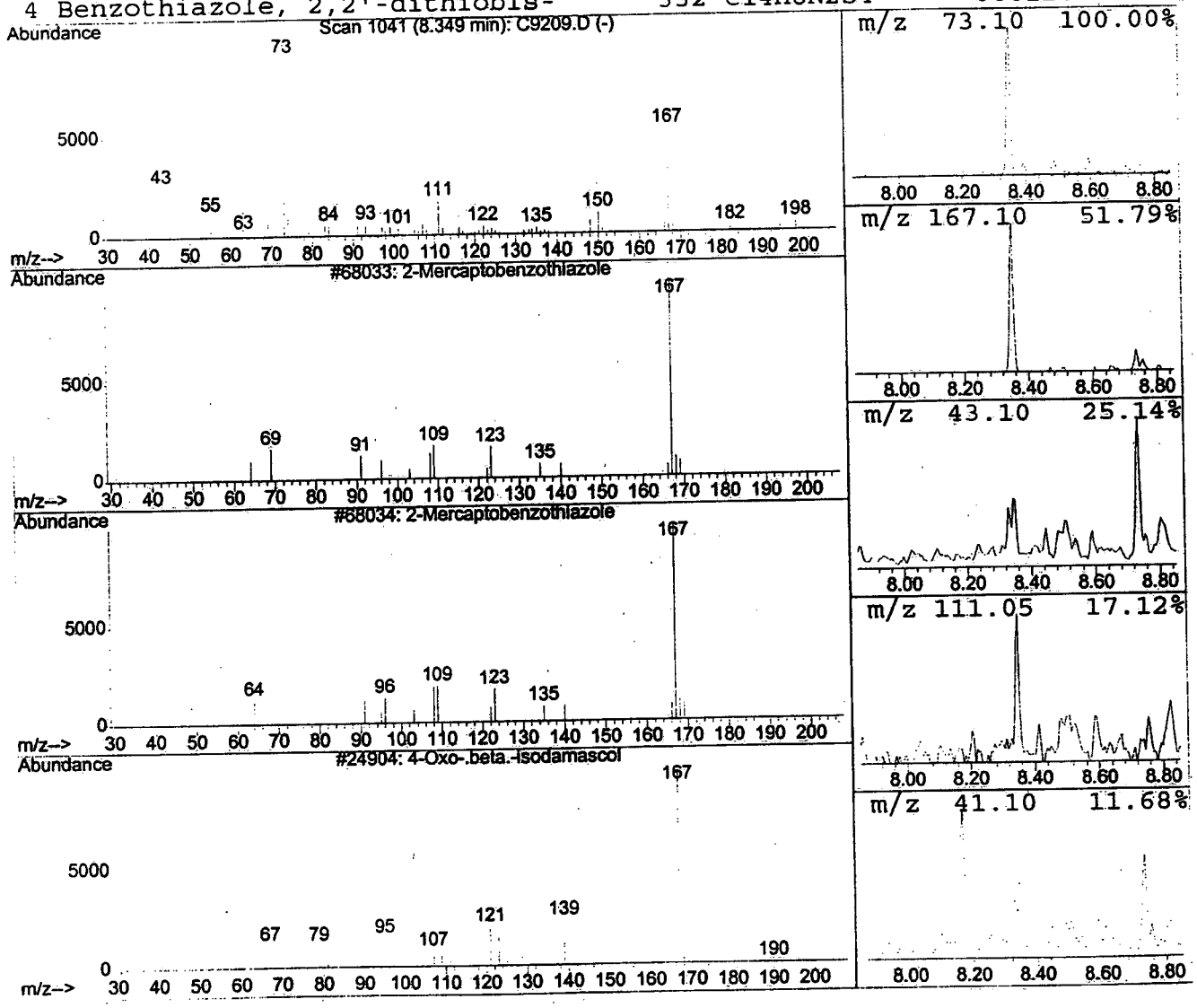
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 Unknown — Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.35	9.38 UG	190785	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Mercaptobenzothiazole	167	C7H5NS2	000149-30-4	32
2	2-Mercaptobenzothiazole	167	C7H5NS2	000149-30-4	23
3	4-Oxo-.beta.-isodamascol	208	C13H20O2	000000-00-0	17
4	Benzothiazole, 2,2'-dithiobis-	332	C14H8N2S4	000120-78-5	17



000229

4063

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

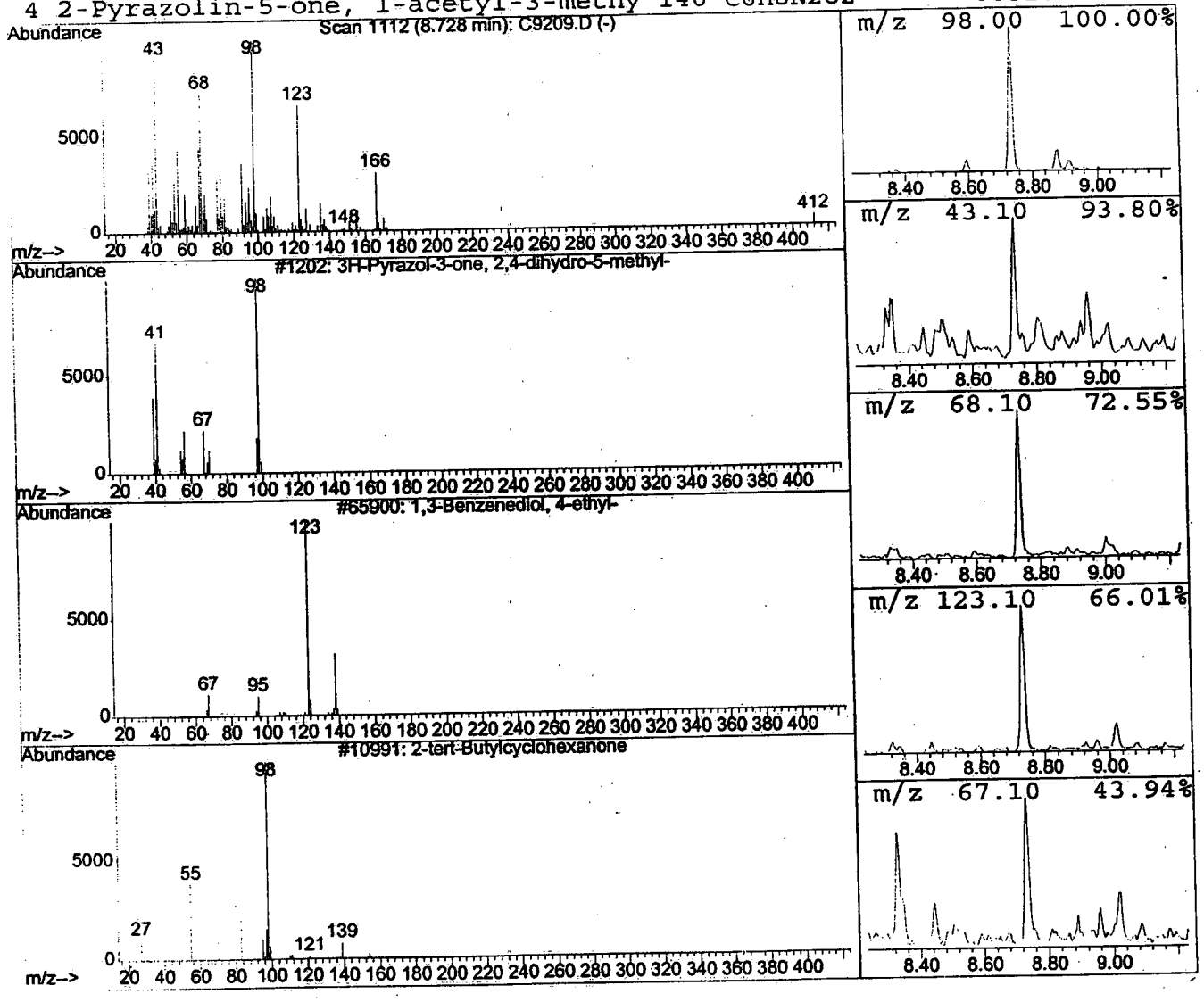
****

Peak Number 10 Unknown

Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.73	30.29 UG	599419	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3H-Pyrazol-3-one, 2,4-dihydro-5-met	98	C4H6N2O	000108-26-9	27
2	1,3-Benzenediol, 4-ethyl-	138	C8H10O2	002896-60-8	22
3	2-tert-Butylcyclohexanone	154	C10H18O	001728-46-7	22
4	2-Pyrazolin-5-one, 1-acetyl-3-methy	140	C6H8N2O2	005203-92-9	22



4064

000230

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

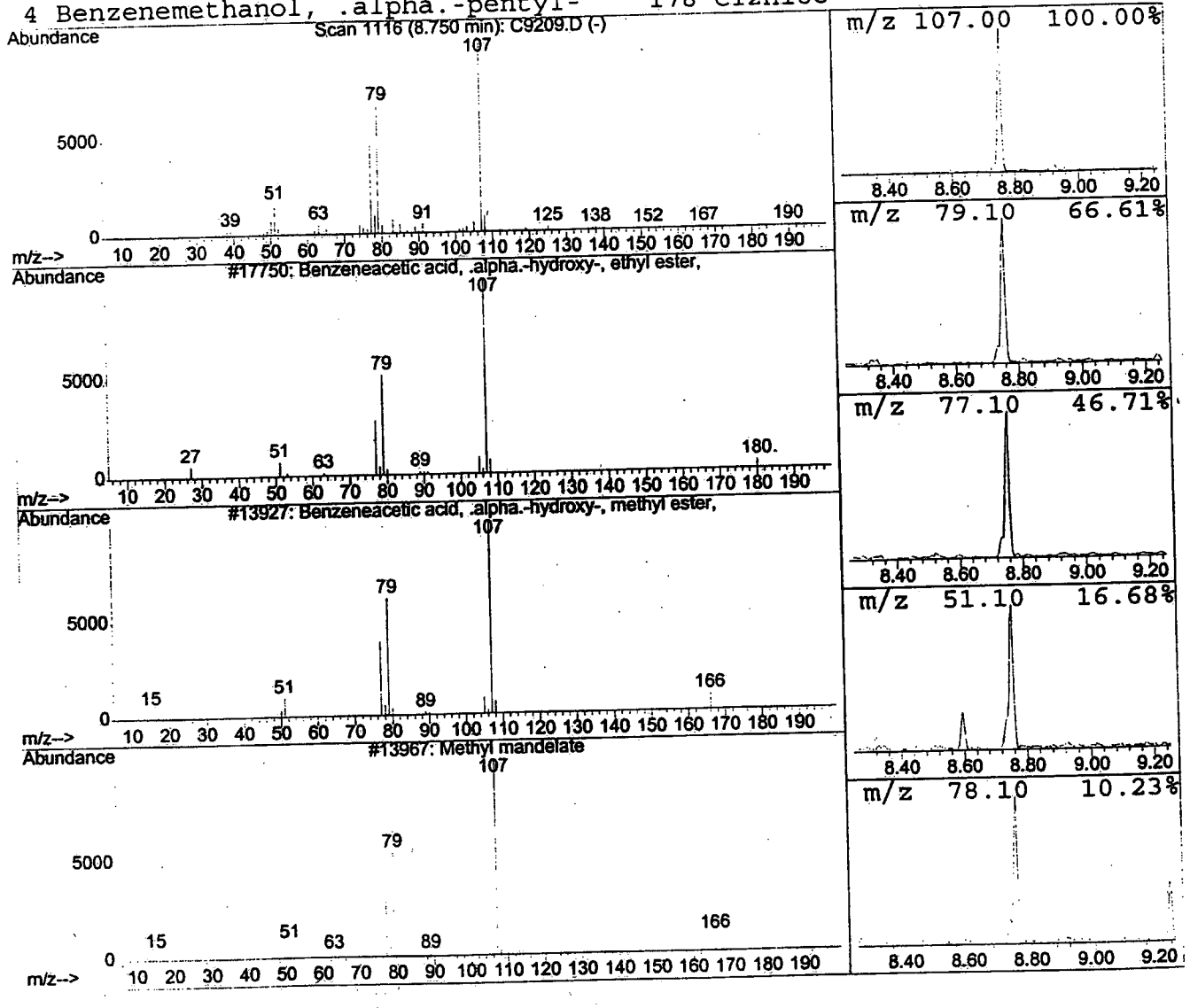
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 11 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.75	31.89 UG	631176	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzeneacetic acid, .alpha.-hydroxy	180	C10H12O3	010606-72-1	83
2	Benzeneacetic acid, .alpha.-hydroxy	166	C9H10O3	021210-43-5	83
3	Methyl mandelate	166	C9H10O3	004358-87-6	83
4	Benzenemethanol, .alpha.-pentyl-	178	C12H18O	004471-05-0	78



4065

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

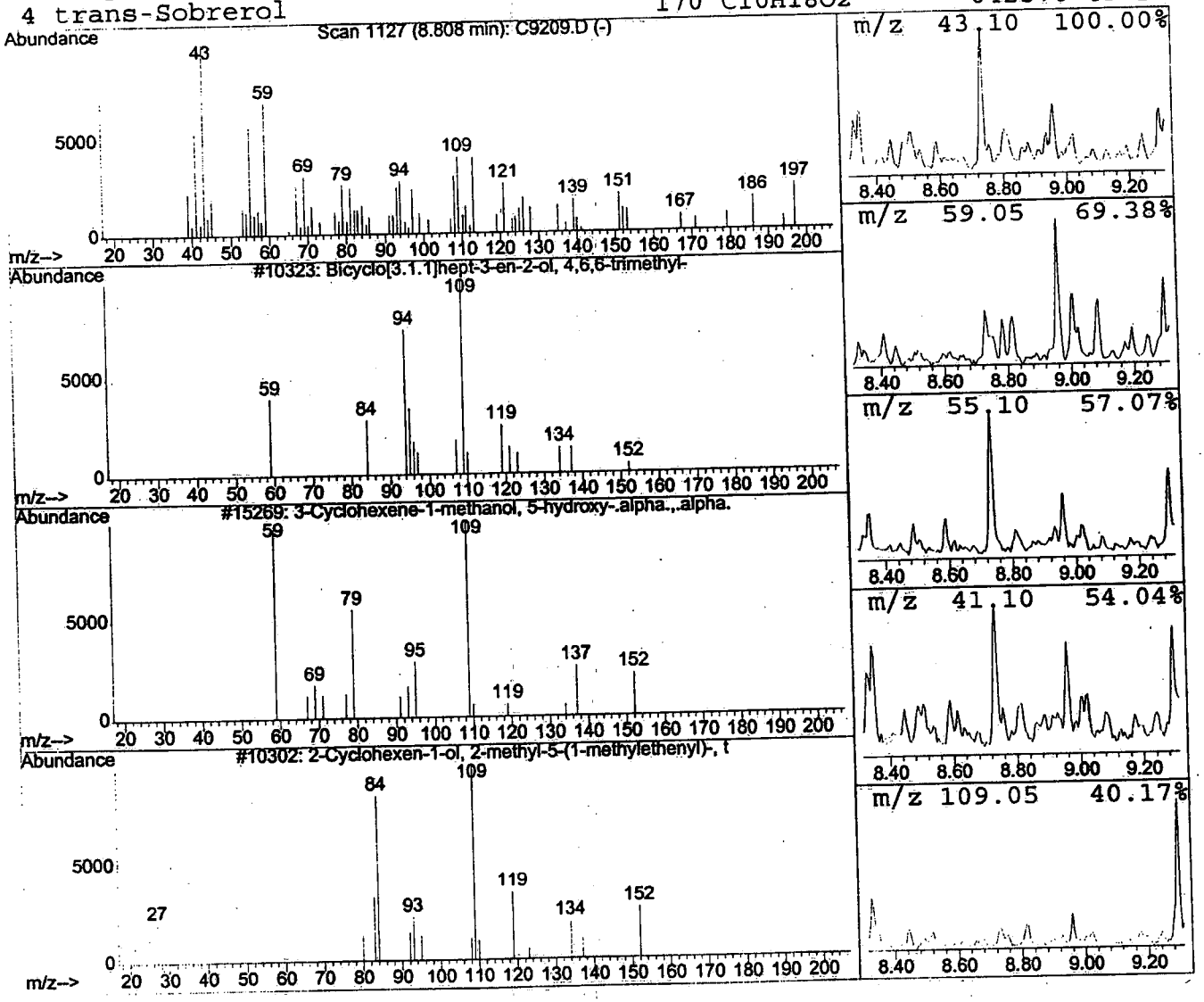
****

Peak Number 12 Unknown

Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.81	6.75 UG	133545	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.1]hept-3-en-2-ol, 4,6,6	152	C10H16O	000473-67-6	46
2	3-Cyclohexene-1-methanol, 5-hydroxy	170	C10H18O2	032226-54-3	35
3	2-Cyclohexen-1-ol, 2-methyl-5-(1-me	152	C10H16O	001197-07-5	25
4	trans-Sobrerol	170	C10H18O2	042370-41-2	25



4066

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

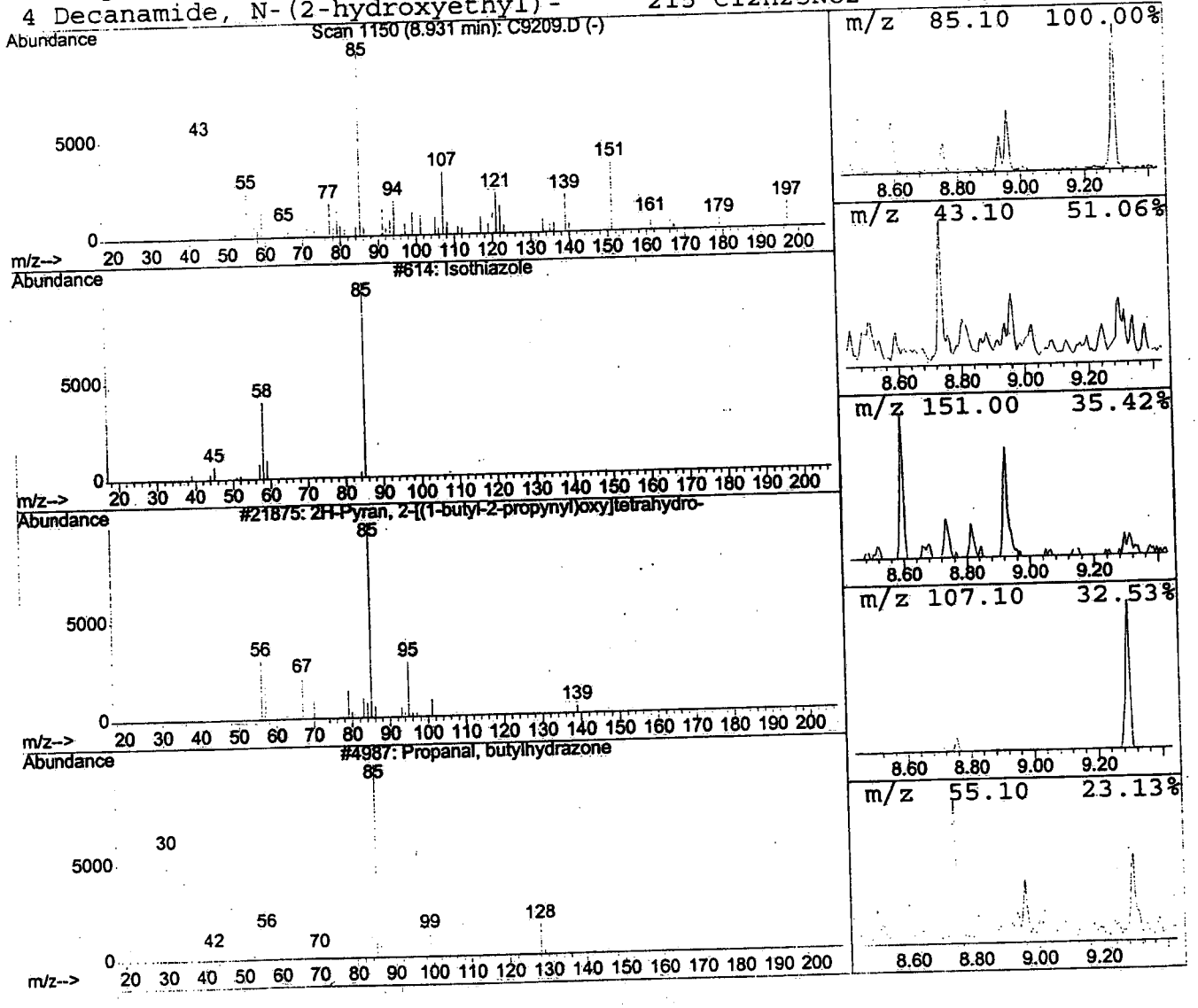
****

Peak Number 13 Unknown

Concentration Rank 24

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.93	6.37 UG	126038	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Isothiazole	85	C3H3NS	000288-16-4	27
2	2H-Pyran, 2-[(1-butyl-2-propynyl)ox	196	C12H20O2	000831-83-4	17
3	Propanal, butylhydrazone	128	C7H16N2	020607-75-4	17
4	Decanamide, N-(2-hydroxyethyl)-	215	C12H25NO2	007726-08-1	16



4067

000233

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

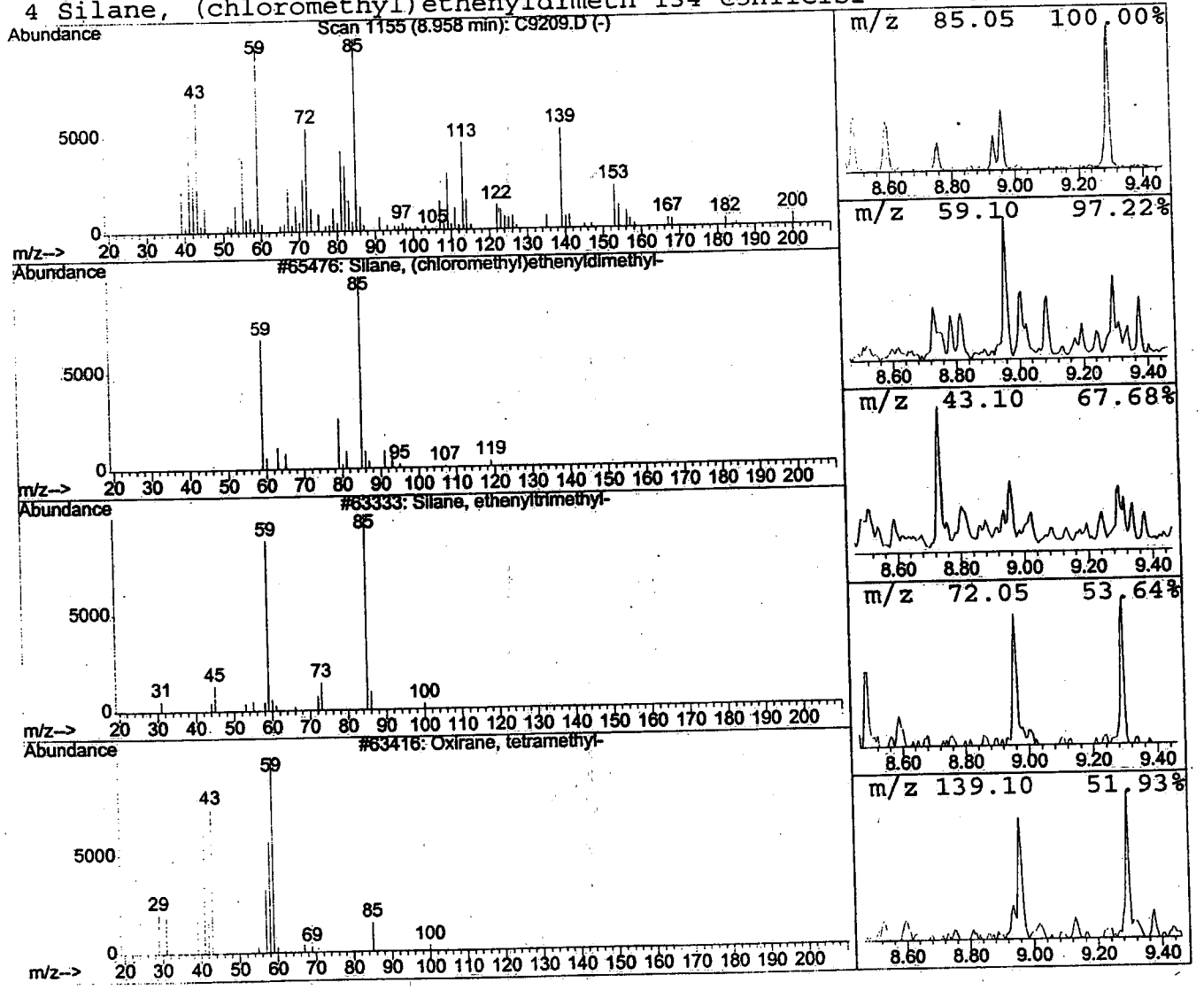
****

Peak Number 14 Unknown

Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.96	8.88 UG	175686	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Silane, (chloromethyl)ethenyldimeth	134	C5H11ClSi	016709-86-7	25
2	Silane, ethenyltrimethyl-	100	C5H12Si	000754-05-2	25
3	Oxirane, tetramethyl-	100	C6H12O	005076-20-0	25
4	Silane, (chloromethyl)ethenyldimeth	134	C5H11ClSi	016709-86-7	25



4068

000231

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

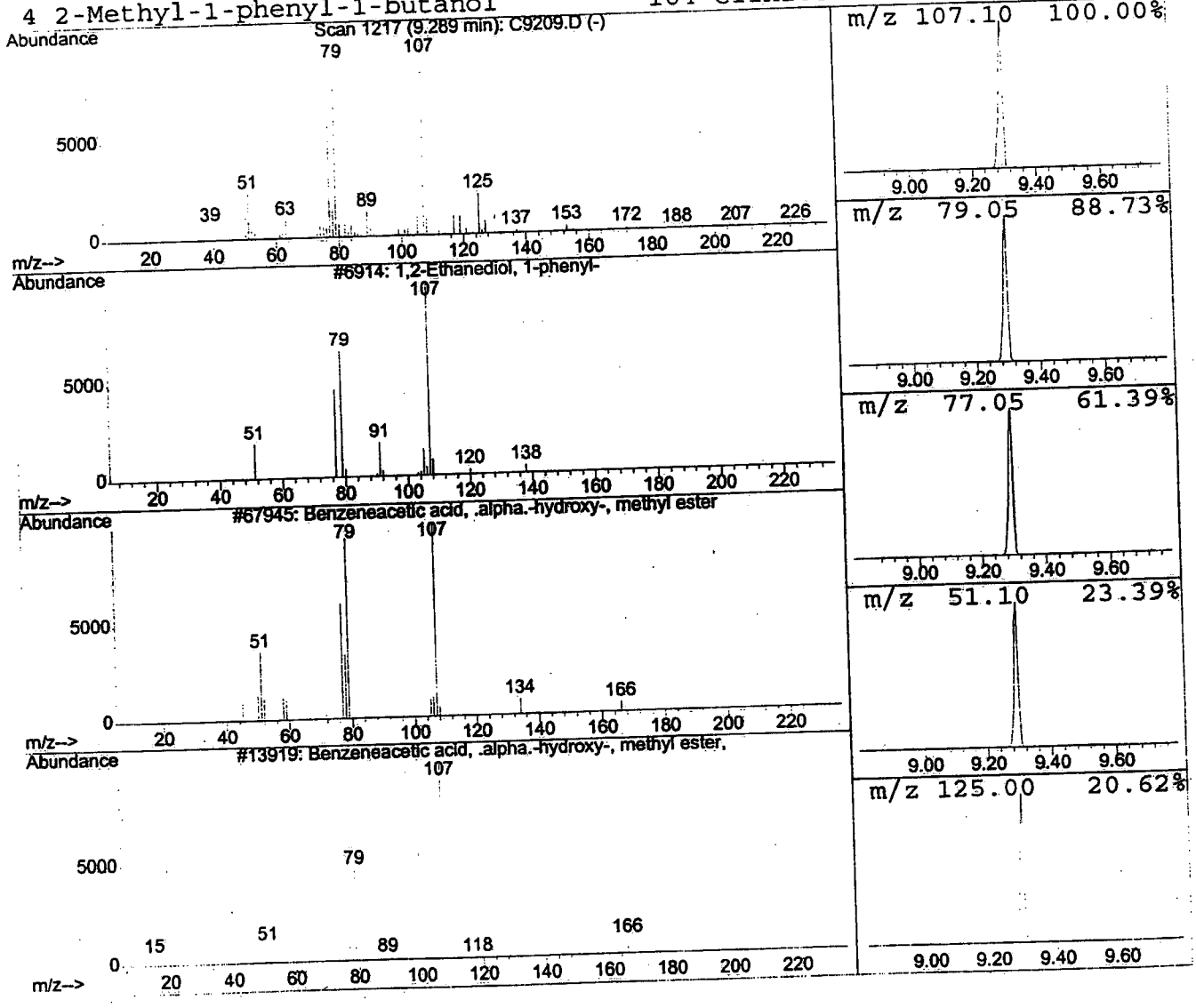
****

Peak Number 15 Unknown

Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.29	530.68 UG	10503100	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,2-Ethanediol, 1-phenyl-	138	C8H10O2	000093-56-1	72
2	Benzeneacetic acid, .alpha.-hydroxy	166	C9H10O3	000771-90-4	72
3	Benzeneacetic acid, .alpha.-hydroxy	166	C9H10O3	020698-91-3	72
4	2-Methyl-1-phenyl-1-butanol	164	C11H16O	003968-86-3	72



4069

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

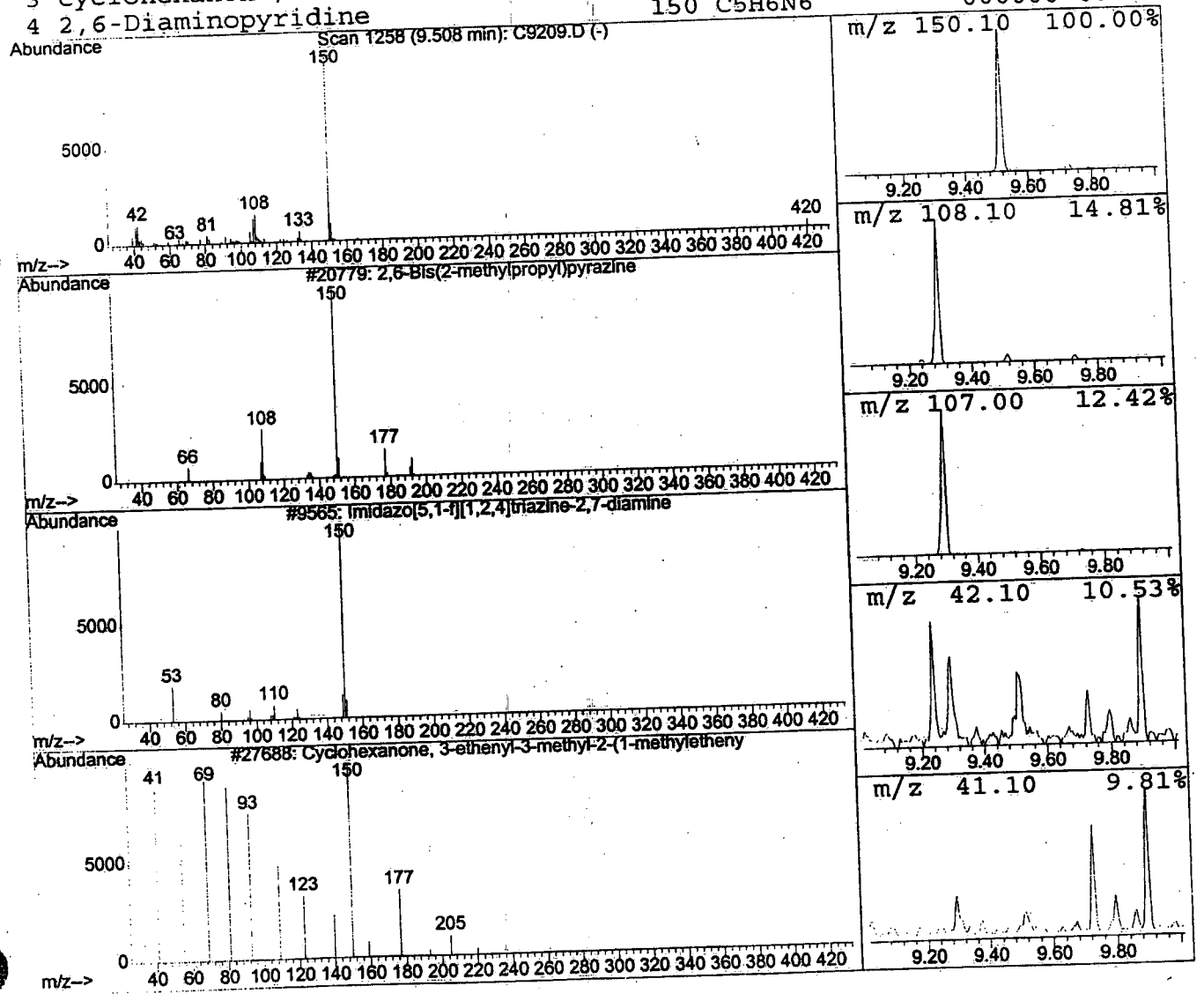
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 16 Unknown aromatic — Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.51	10.44 UG	206616	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,6-Bis(2-methylpropyl)pyrazine	192	C12H20N2	000000-00-0	56
2	Imidazo[5,1-f][1,2,4]triazine-2,7-d	150	C5H6N6	051292-20-7	53
3	Cyclohexanone, 3-ethenyl-3-methyl-2	220	C15H24O	058437-66-4	47
4	2,6-Diaminopyridine	150	C5H6N6	000000-00-0	45



000233

4070

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

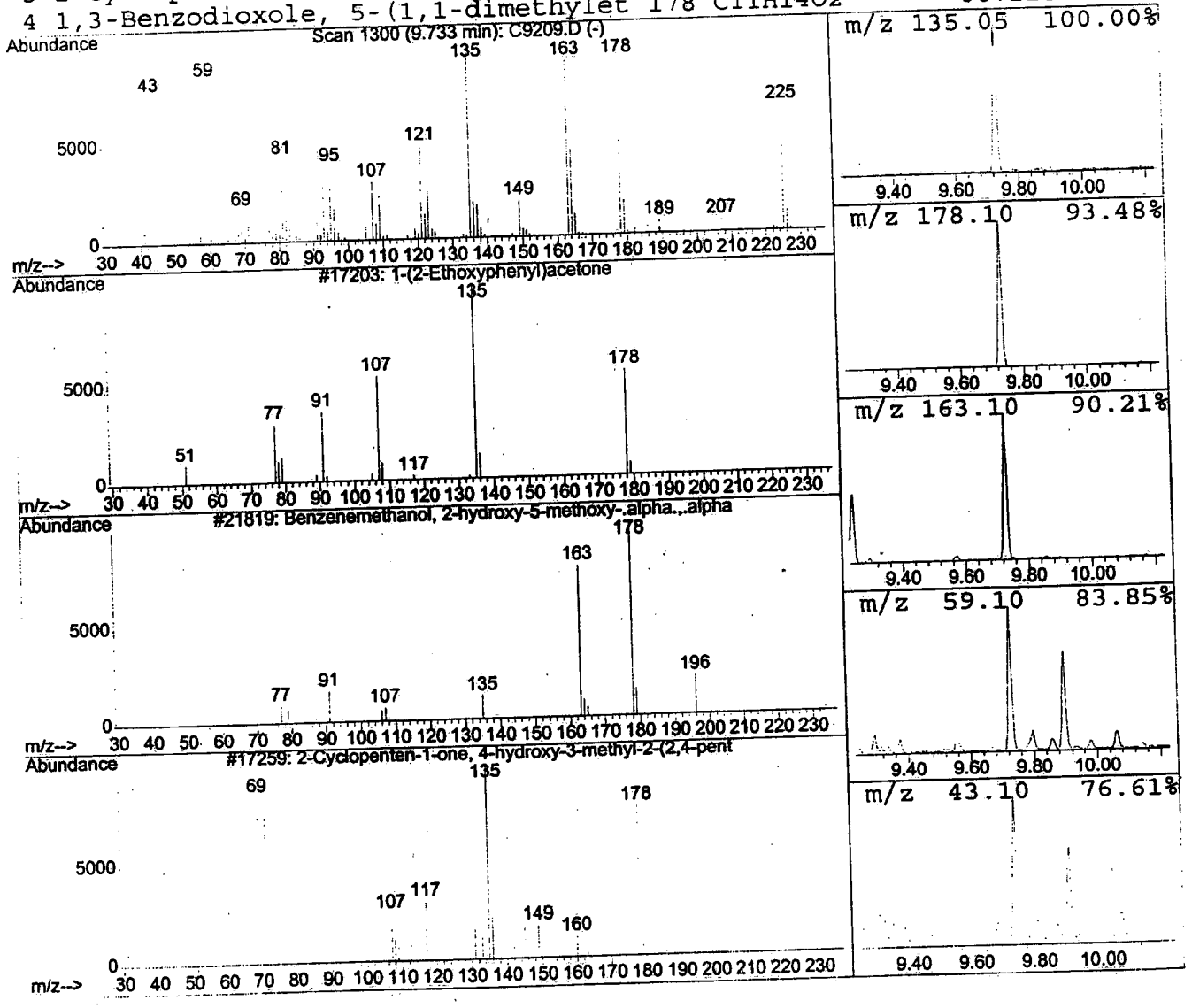
****

Peak Number 17 Unknown

Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.73	48.48 UG	959449	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-(2-Ethoxyphenyl)acetone	178	C11H14O2	000000-00-0	30
2	Benzenemethanol, 2-hydroxy-5-methox	196	C11H16O3	038102-55-5	25
3	2-Cyclopenten-1-one, 4-hydroxy-3-me	178	C11H14O2	000487-67-2	22
4	1,3-Benzodioxole, 5-(1,1-dimethylet	178	C11H14O2	007228-36-6	14



000237

4071

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

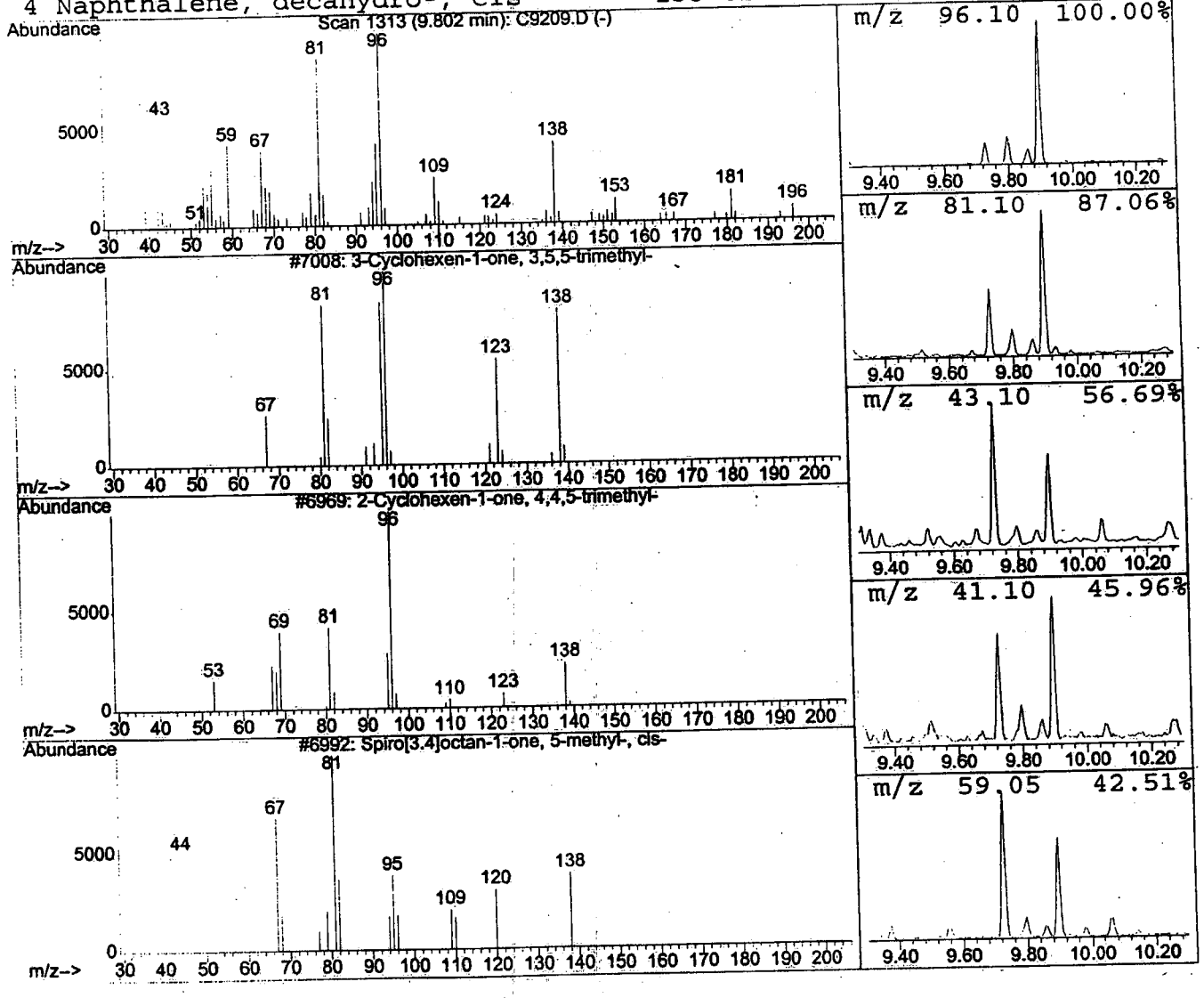
****

Peak Number 18 Unknown

Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.80	11.05 UG	218668	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Cyclohexen-1-one, 3,5,5-trimethyl	138	C9H14O	000471-01-2	49
2	2-Cyclohexen-1-one, 4,4,5-trimethyl	138	C9H14O	017429-29-7	46
3	Spiro[3.4]octan-1-one, 5-methyl-, c	138	C9H14O	065147-55-9	43
4	Naphthalene, decahydro-, cis-	138	C10H18	000493-01-6	43



4072

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

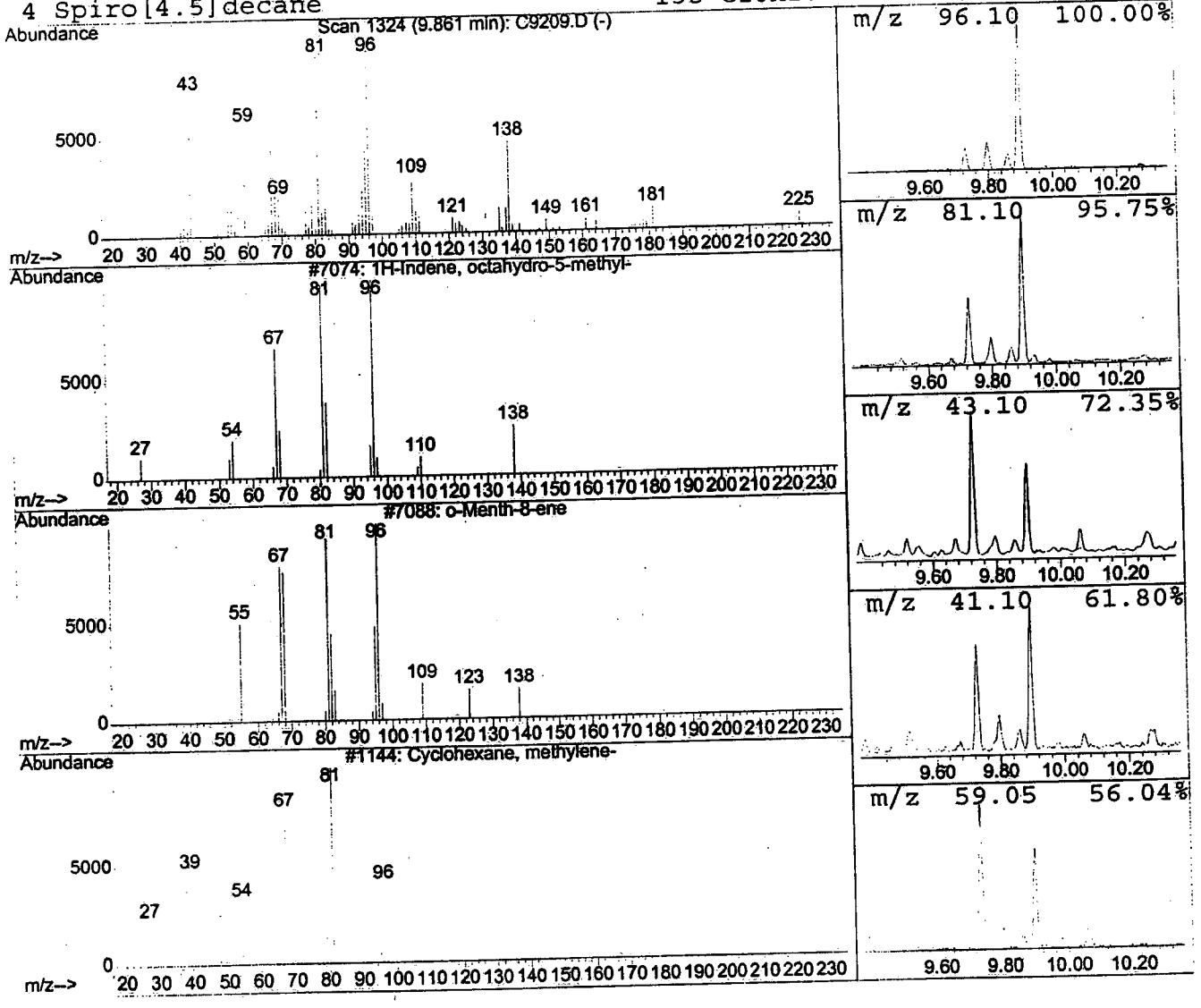
****

Peak Number 19 Unknown

Concentration Rank 21

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.86	7.33 UG	145044	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Indene, octahydro-5-methyl-	138	C10H18	019744-64-0	58
2	o-Menth-8-ene	138	C10H18	015193-25-6	47
3	Cyclohexane, methylene-	96	C7H12	001192-37-6	46
4	Spiro[4.5]decane	138	C10H18	000176-63-6	45



4073

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

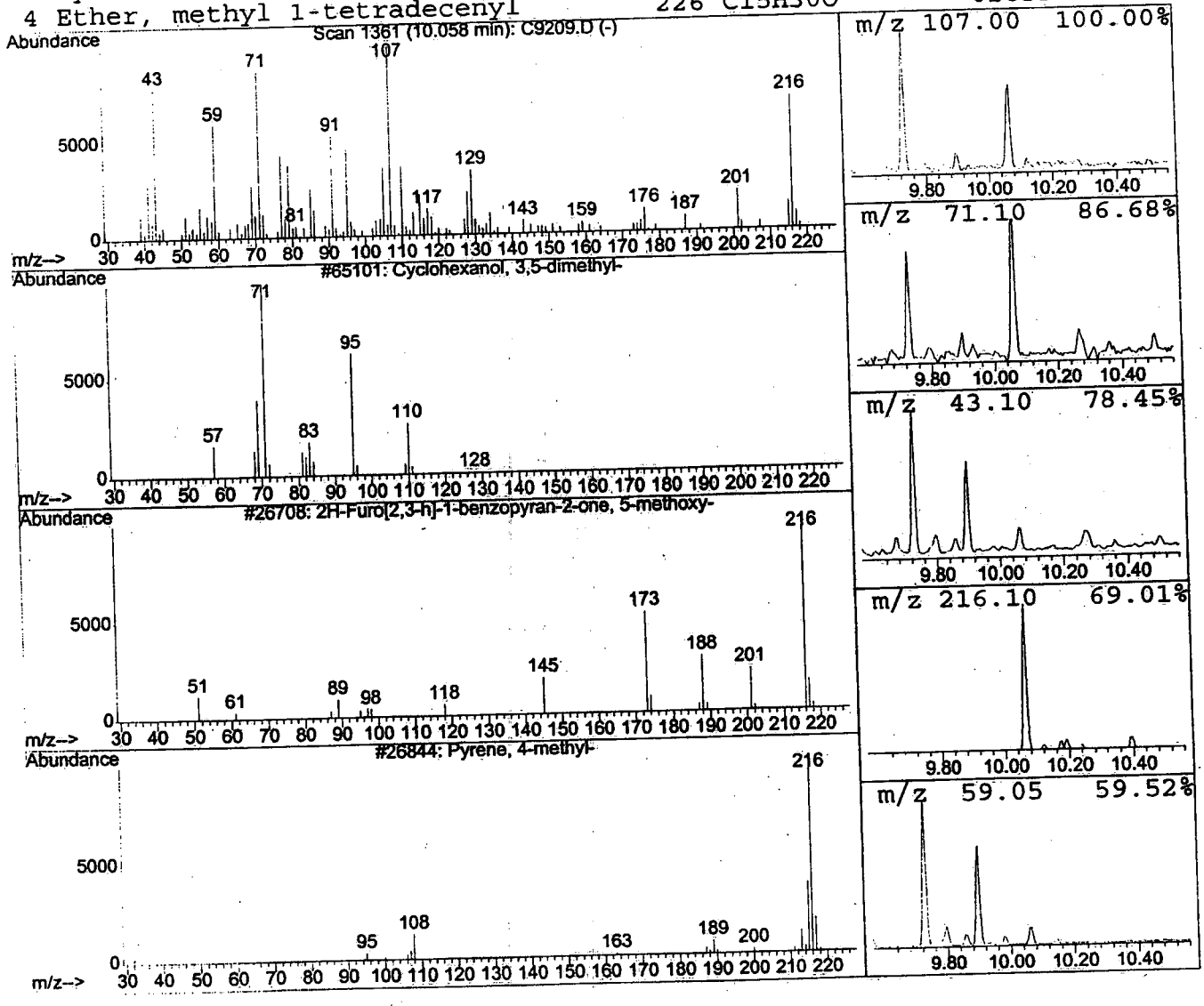
****

Peak Number 20 Unknown

Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.06	17.79 UG	228240	Phenanthrene-d10	10.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanol, 3,5-dimethyl-	128	C8H16O	005441-52-1	12
2	2H-Furo[2,3-h]-1-benzopyran-2-one,	216	C12H8O4	000482-48-4	11
3	Pyrene, 4-methyl-	216	C17H12	003353-12-6	11
4	Ether, methyl 1-tetradecenyl	226	C15H30O	026537-05-3	10



4074

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

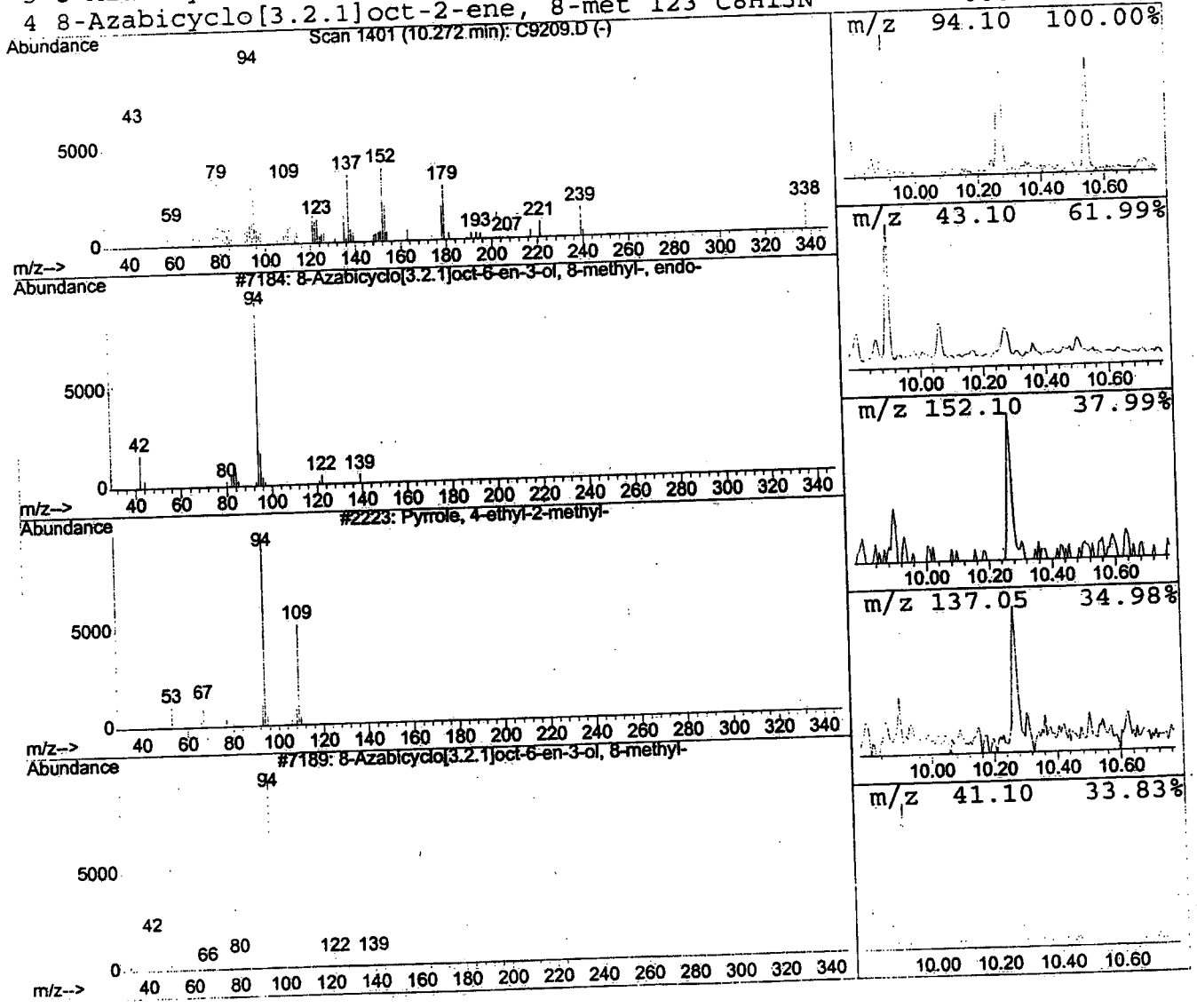
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 21 Unknown — Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.27	15.89 UG	203927	Phenanthrene-d10	10.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	8-Azabicyclo[3.2.1]oct-6-en-3-ol, 8	139	C8H13NO	020513-09-1	38
2	Pyrrole, 4-ethyl-2-methyl-	109	C7H11N	005690-96-0	35
3	8-Azabicyclo[3.2.1]oct-6-en-3-ol, 8	139	C8H13NO	054725-49-4	35
4	8-Azabicyclo[3.2.1]oct-2-ene, 8-met	123	C8H13N	000529-18-0	27



4075

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

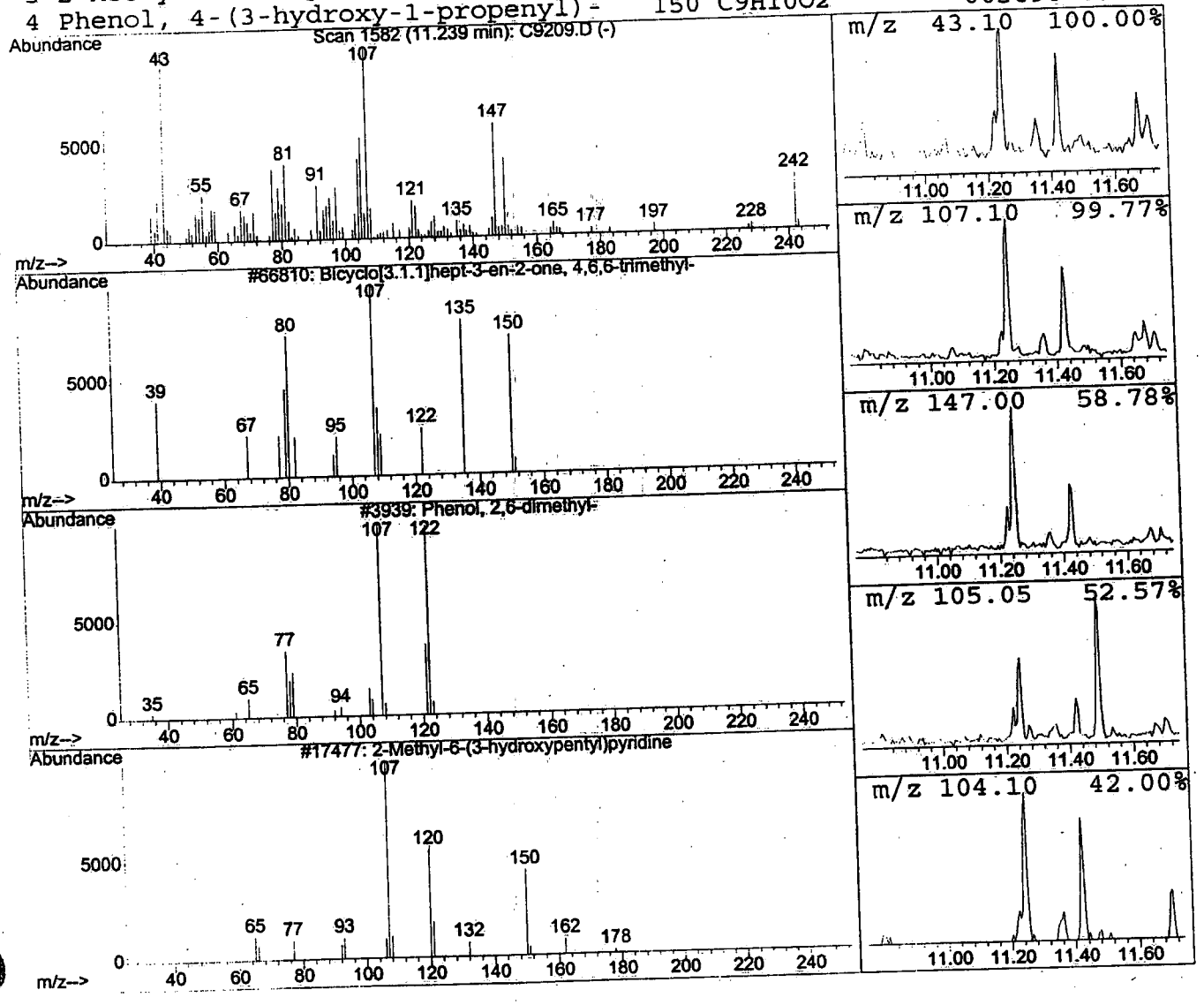
****

Peak Number 22 Unknown

Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.24	19.49 UG	250023	Phenanthrene-d10	10.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[3.1.1]hept-3-en-2-one, 4,6,	150	C10H14O	000080-57-9	38
2	Phenol, 2,6-dimethyl-	122	C8H10O	000576-26-1	35
3	2-Methyl-6-(3-hydroxypentyl)pyridin	179	C11H17NO	000000-00-0	30
4	Phenol, 4-(3-hydroxy-1-propenyl)-	150	C9H10O2	003690-05-9	27



000242

4076

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

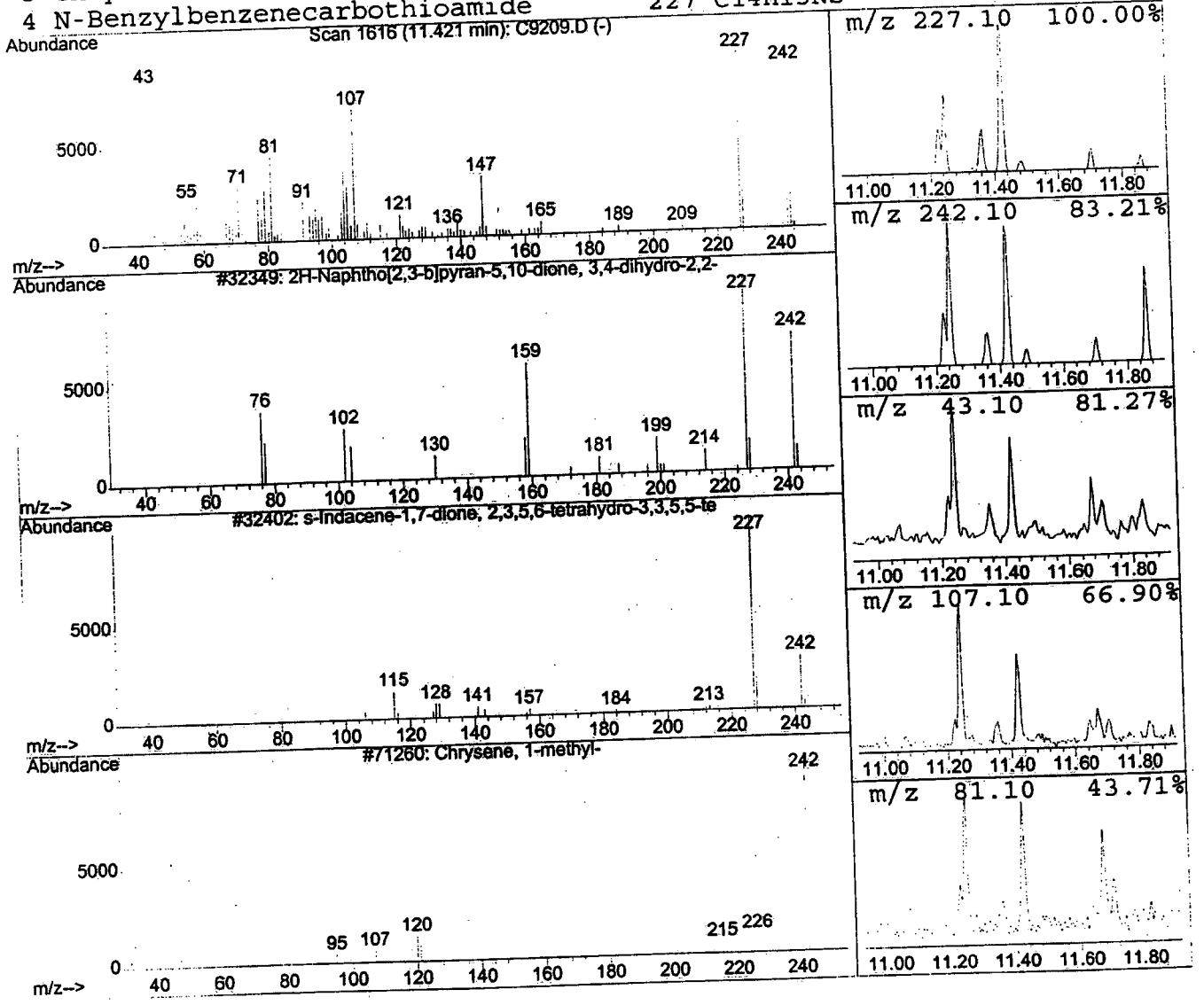
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 23 Unknown — Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.42	13.60 UG	174511	Phenanthrene-d10	10.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2H-Naphtho[2,3-b]pyran-5,10-dione,	242	C15H14O3	004707-33-9	38
2	s-Indacene-1,7-dione, 2,3,5,6-tetra	242	C16H18O2	055591-17-8	37
3	Chrysene, 1-methyl-	242	C19H14	003351-28-8	22
4	N-Benzylbenzenecarbothioamide	227	C14H13NS	014309-89-8	22



000243

4077

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

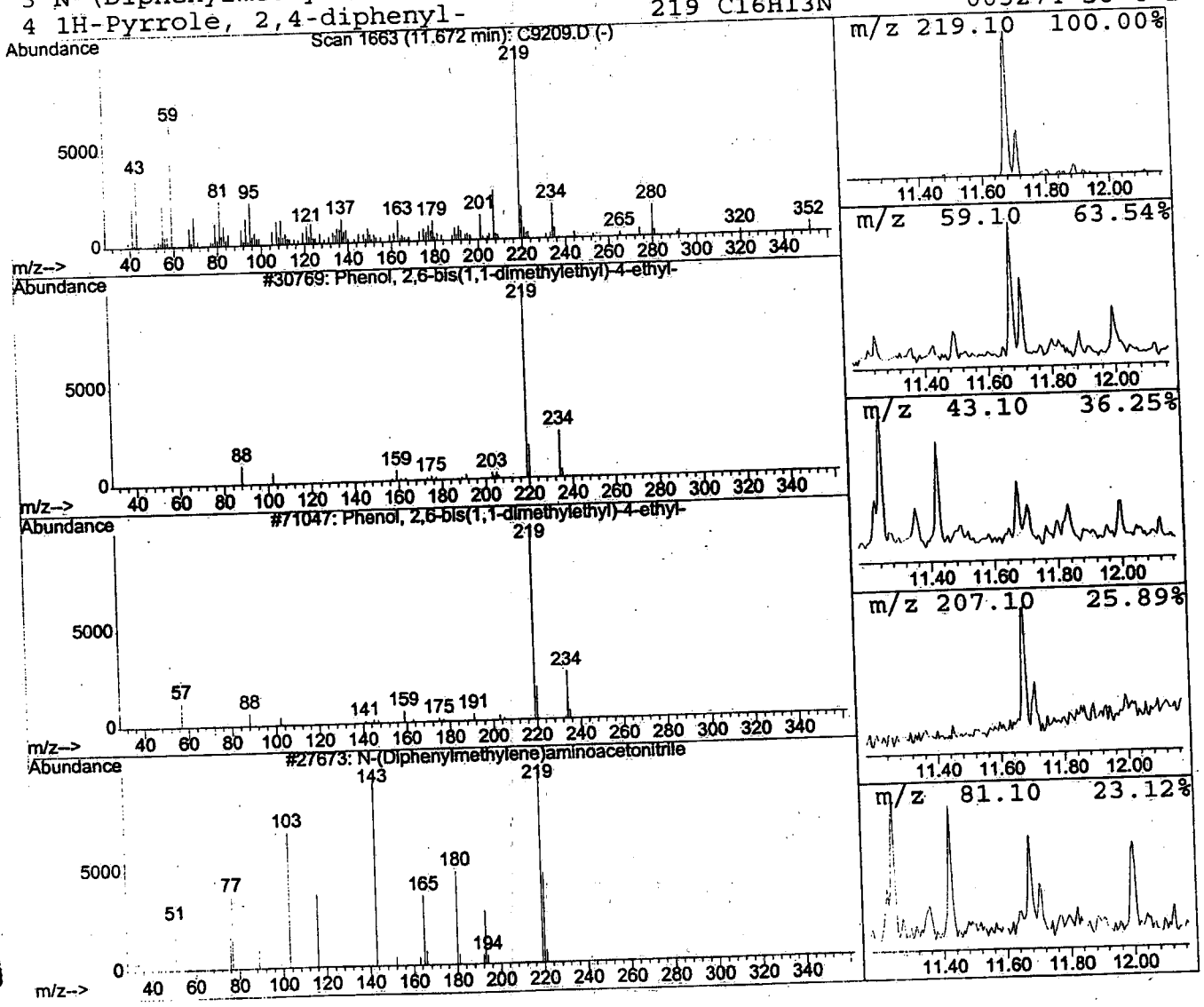
****

Peak Number 24 Unknown

Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.67	14.89 UG	191012	Phenanthrene-d10	10.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2,6-bis(1,1-dimethylethyl)-	234	C16H26O	004130-42-1	32
2	Phenol, 2,6-bis(1,1-dimethylethyl)-	234	C16H26O	004130-42-1	32
3	N-(Diphenylmethylene)aminoacetonitr	220	C15H12N2	070591-20-7	30
4	1H-Pyrrole, 2,4-diphenyl-	219	C16H13N	003274-56-4	27



000244

4078

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9209.D
Acq On : 6 Apr 2001 18:47
Sample : MW-7,2094-005,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 12
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

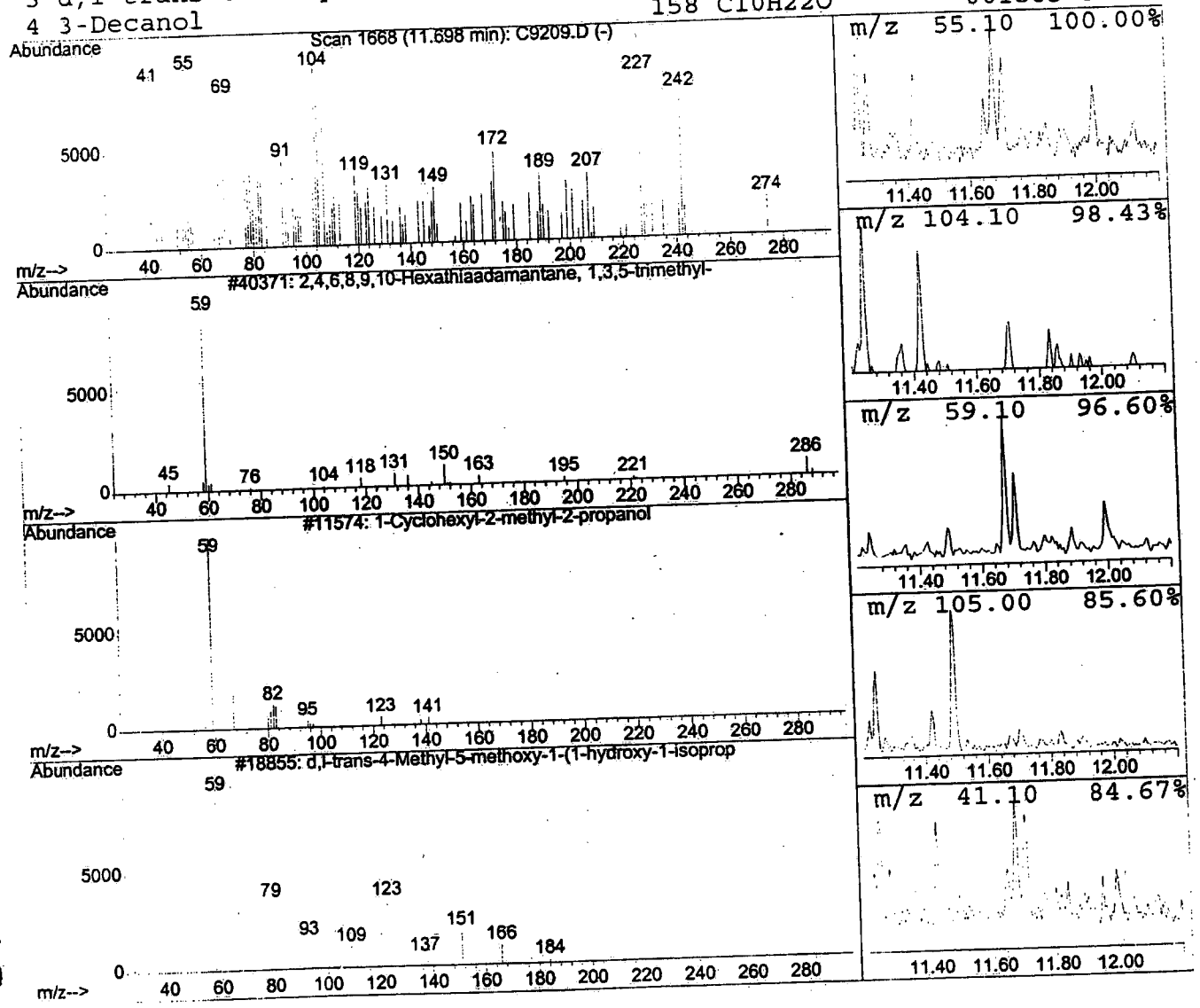
****

Peak Number 25 Unknown

Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.70	11.95 UG	153298	Phenanthrene-d10	10.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,4,6,8,9,10-Hexathiaadamantane, 1,	286	C7H10S6	014870-38-3	22
2	1-Cyclohexyl-2-methyl-2-propanol	156	C10H20O	005531-30-6	22
3	d,l-trans-4-Methyl-5-methoxy-1-(1-h	184	C11H20O2	000000-00-0	22
4	3-Decanol	158	C10H22O	001565-81-7	12



4079

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
[redacted] : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Integration Params: RTEINT.P
Quant Time: Apr 9 9:45 2001

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00
Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	155207	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	454359	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	197016	40.00	UG	0.00
60) Phenanthrene-d10	10.54	188	222087	40.00	UG	0.00
75) Chrysene-d12	12.96	240	89716	40.00	UG	-0.01
84) Perylene-d12	15.12	264	52652	40.00	UG	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.55	112	222185	50.88	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 50.88%			
6) Phenol-d5	5.68	99	265603	62.45	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 62.45%			
23) Nitrobenzene-d5	6.82	82	95619	30.47	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 60.94%			
43) 2-Fluorobiphenyl	8.60	172	216513	31.57	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 63.14%			
64) 2,4,6-Tribromophenol	9.93	330	62373	82.22	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 82.22%			
77) Terphenyl-d14	11.86	244	132568	55.34	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 110.68%			
Target Compounds						Qvalue
17) 4-Methylphenol	6.59	108	3570	1.32	UG	83
33) Naphthalene	7.61	128	456290	42.66	UG	97
38) 2-Methylnaphthalene	8.28	142	139557	21.44	UG	99

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

4080

Quantitation Report

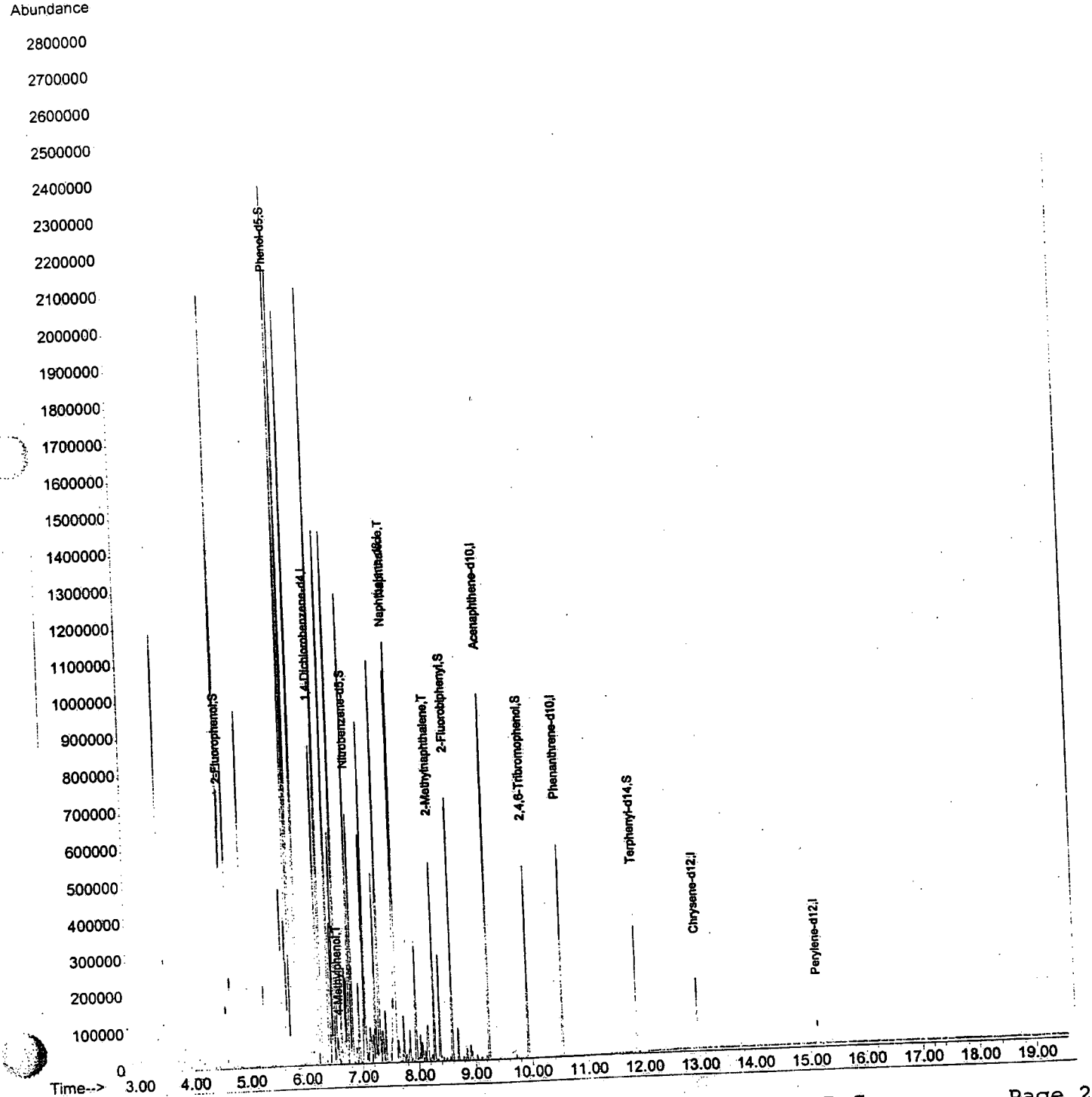
Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: RTEINT.P
Quant Time: Apr 9 9:45 2001

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration

TIC: C9210.D



H0801

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
[redacted] : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 1.2
Stop Thrs : 1.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

Peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.978	26	35	46	rVB4	103361	240501	7.57%	0.592%
2	3.058	46	50	58	rVB2	56204	93353	2.94%	0.230%
3	3.138	58	65	71	rBV7	26954	65029	2.05%	0.160%
4	3.218	73	80	86	rBV	77754	132173	4.16%	0.325%
5	3.282	89	92	97	rVB3	42164	55146	1.74%	0.136%
6	3.330	97	101	108	rVB6	21053	39707	1.25%	0.098%
7	3.421	108	118	124	rBV	1181457	1567340	49.32%	3.858%
[redacted]	3.469	124	127	132	rVB	304686	348799	10.98%	0.859%
[redacted]	3.560	137	144	147	rBV6	24124	51689	1.63%	0.127%
10	3.672	157	165	172	rBV3	44672	84351	2.65%	0.208%
11	3.726	172	175	183	rVB7	23164	45131	1.42%	0.111%
12	3.832	191	195	198	rVV	53451	74819	2.35%	0.184%
13	3.865	198	201	208	rVB6	35808	64499	2.03%	0.159%
14	4.051	230	236	239	rBV3	21502	33738	1.06%	0.083%
15	4.506	313	321	324	rBV	2196522	2779946	87.48%	6.843%
16	4.532	324	326	332	rVV2	758915	1262223	39.72%	3.107%
17	4.570	332	333	338	rVV	172310	150198	4.73%	0.370%
18	4.623	338	343	346	rVV	856982	1025056	32.26%	2.523%
19	4.644	346	347	356	rVB	249688	213499	6.72%	0.526%
20	4.890	386	393	402	rBV	966980	1368065	43.05%	3.368%
21	5.237	452	458	470	rBV	239881	352785	11.10%	0.868%
22	5.574	516	521	530	rBV	549554	677467	21.32%	1.668%
23	5.643	530	534	537	rVV	423375	516939	16.27%	1.272%
24	5.686	537	542	547	rVV	2394066	3177677	100.00%	7.822%
25	5.734	547	551	557	rVB	2175604	2724793	85.75%	6.707%
26	5.841	565	571	577	rBV	2081158	2462503	77.49%	6.061%
27	6.119	619	623	625	rBV	41794	49460	1.56%	0.122%
28	6.204	634	639	645	rBV2	868828	1107703	34.86%	2.727%
29	6.263	645	650	655	rBV	2245735	2311911	72.75%	5.691%
[redacted]	6.413	673	678	683	rBV	1452770	1409943	44.37%	3.471%
31	6.461	683	687	689	rVV	394515	391819	12.33%	0.964%

H082

2	6.488	689	692	697	rVV	634972	634962	19.98%	1.563%
3	6.536	697	701	705	rVV	1448999	1404663	44.20%	3.458%
4	6.568	705	707	710	rVV	73190	66125	2.08%	0.163%
5	6.626	714	718	724	rVB	296357	276943	8.72%	0.682%
6	6.701	727	732	734	rBV	259430	260955	8.21%	0.642%
	6.728	734	737	742	rVV	240728	228916	7.20%	0.563%
	6.776	742	746	751	rVV	1278534	1199347	37.74%	2.952%
39	6.824	751	755	760	rVB2	679792	739322	23.27%	1.820%
40	6.894	764	768	773	rVB4	45351	57621	1.81%	0.142%
41	6.942	773	777	784	rBV	233502	243485	7.66%	0.599%
42	7.032	789	794	796	rBV	620533	575669	18.12%	1.417%
43	7.059	796	799	803	rVB	918095	762217	23.99%	1.876%
44	7.145	808	815	817	rVV4	99021	167927	5.28%	0.413%
45	7.161	817	818	821	rVV	73083	42887	1.35%	0.106%
46	7.198	821	825	828	rVV3	79200	99326	3.13%	0.244%
47	7.235	828	832	835	rVV	520140	454049	14.29%	1.118%
48	7.262	835	837	841	rVV2	51350	65848	2.07%	0.162%
49	7.305	841	845	851	rVV	1094193	1095582	34.48%	2.697%
50	7.369	851	857	863	rVV4	88520	164774	5.19%	0.406%
51	7.417	863	866	871	rVB2	143727	142980	4.50%	0.352%
52	7.503	876	882	884	rBV3	28091	32837	1.03%	0.081%
53	7.556	884	892	894	rBV	172023	305107	9.60%	0.751%
54	7.583	894	897	900	rVV	1031673	1153766	36.31%	2.840%
55	7.609	900	902	906	rVB	1132606	893127	28.11%	2.198%
56	7.641	906	908	910	rBV	51888	42856	1.35%	0.105%
57	7.738	923	926	930	rVB	124810	109166	3.44%	0.269%
58	7.844	943	946	951	rVB	87752	83149	2.62%	0.205%
	7.957	961	967	971	rBV2	341480	365492	11.50%	0.900%
60	8.031	978	981	984	rBV	66301	55764	1.75%	0.137%
61	8.063	984	987	992	rVB3	51503	59107	1.86%	0.145%
62	8.154	1000	1004	1005	rBV3	96556	107050	3.37%	0.264%
63	8.277	1023	1027	1032	rVB	547032	475288	14.96%	1.170%
64	8.368	1039	1044	1048	rBV	291794	271832	8.55%	0.669%
65	8.598	1083	1087	1092	rBV	715404	612034	19.26%	1.507%
66	8.694	1102	1105	1108	rBV	91913	76374	2.40%	0.188%
67	8.849	1129	1134	1138	rVB2	33327	39746	1.25%	0.098%
68	8.918	1143	1147	1149	rBV	43172	41980	1.32%	0.103%
69	9.239	1203	1207	1211	rBV	990785	786930	24.76%	1.937%
70	9.928	1332	1336	1340	rBV2	526542	407550	12.83%	1.003%
71	10.542	1447	1451	1455	rBV	578257	496465	15.62%	1.222%
72	11.862	1694	1698	1702	rVB	391508	314044	9.88%	0.773%
73	12.957	1898	1903	1910	rVB	194248	214717	6.76%	0.529%
74	15.120	2300	2308	2317	rBV	66923	119223	3.75%	0.293%

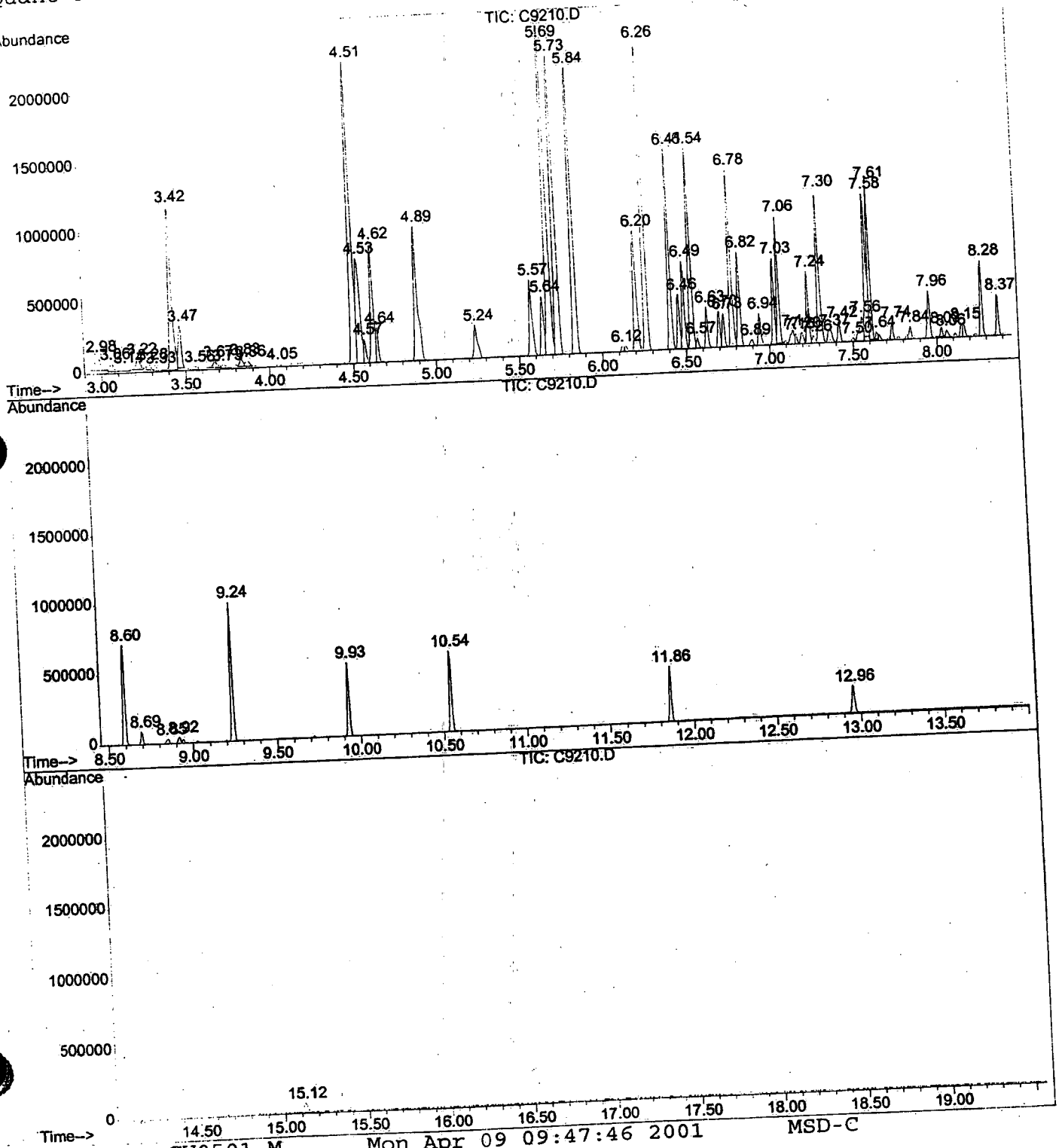
Sum of corrected areas: 40625464

C9210.D CW0501.M Mon Apr 09 09:47:45 2001 MSD-C

000219

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Operator : DP
Acquired : 6 Apr 2001 19:12 using AcqMethod CW0501
Instrument : MSD-C
Sample Name: MW-6,2094-006,A,1000mL,100,04/06/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Vial Number: 13
Quant File :CW0501.RES (RTE Integrator)



C9210.D CW0501.M Mon Apr 09 09:47:46 2001 MSD-C

000259

4084

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

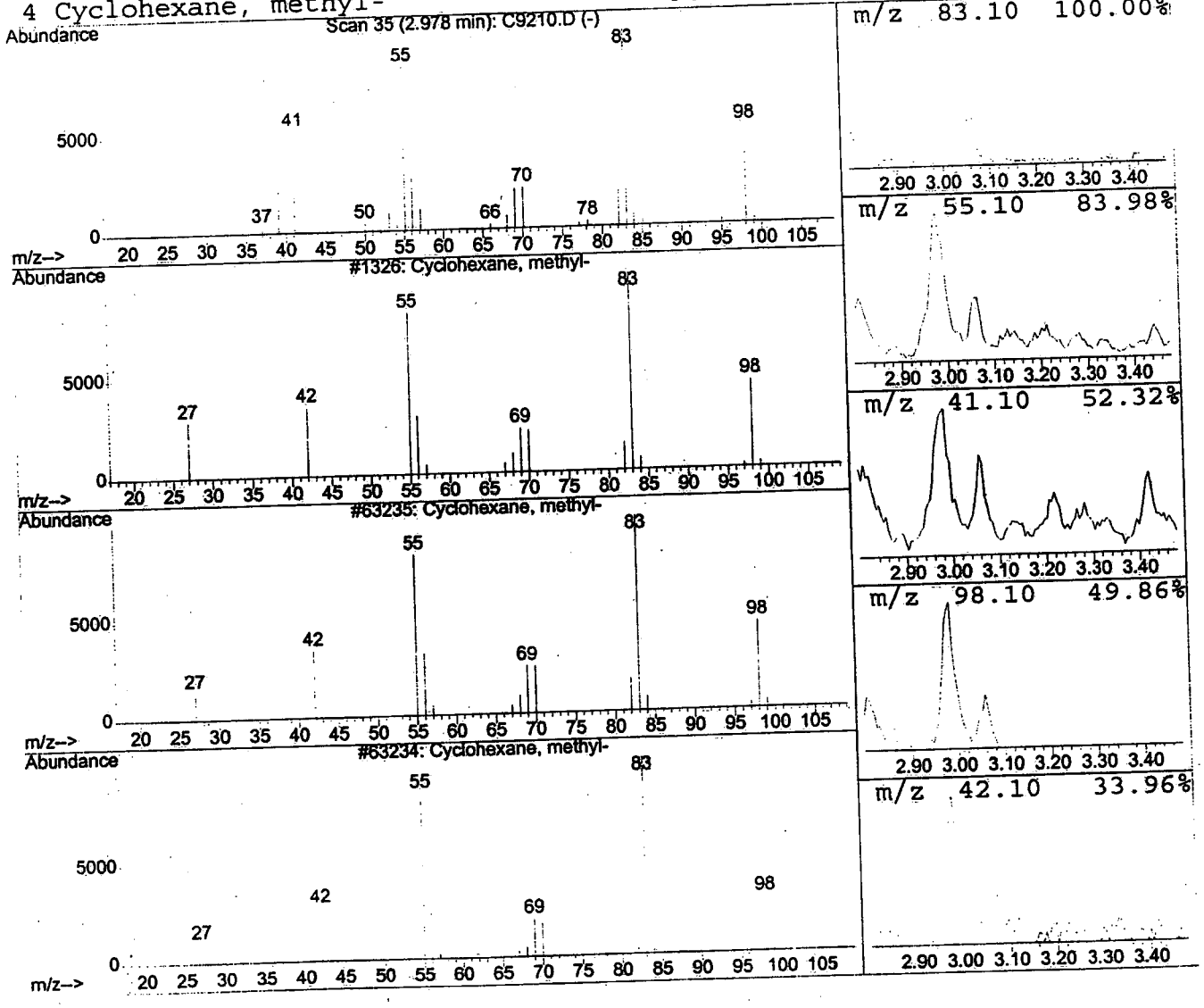
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown alkane — Concentration Rank 21

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.98	8.68 UG	240501	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	83



4085

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D Vial: 13
Acq On : 6 Apr 2001 19:12 Operator: DP
Sample : MW-6,2094-006,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

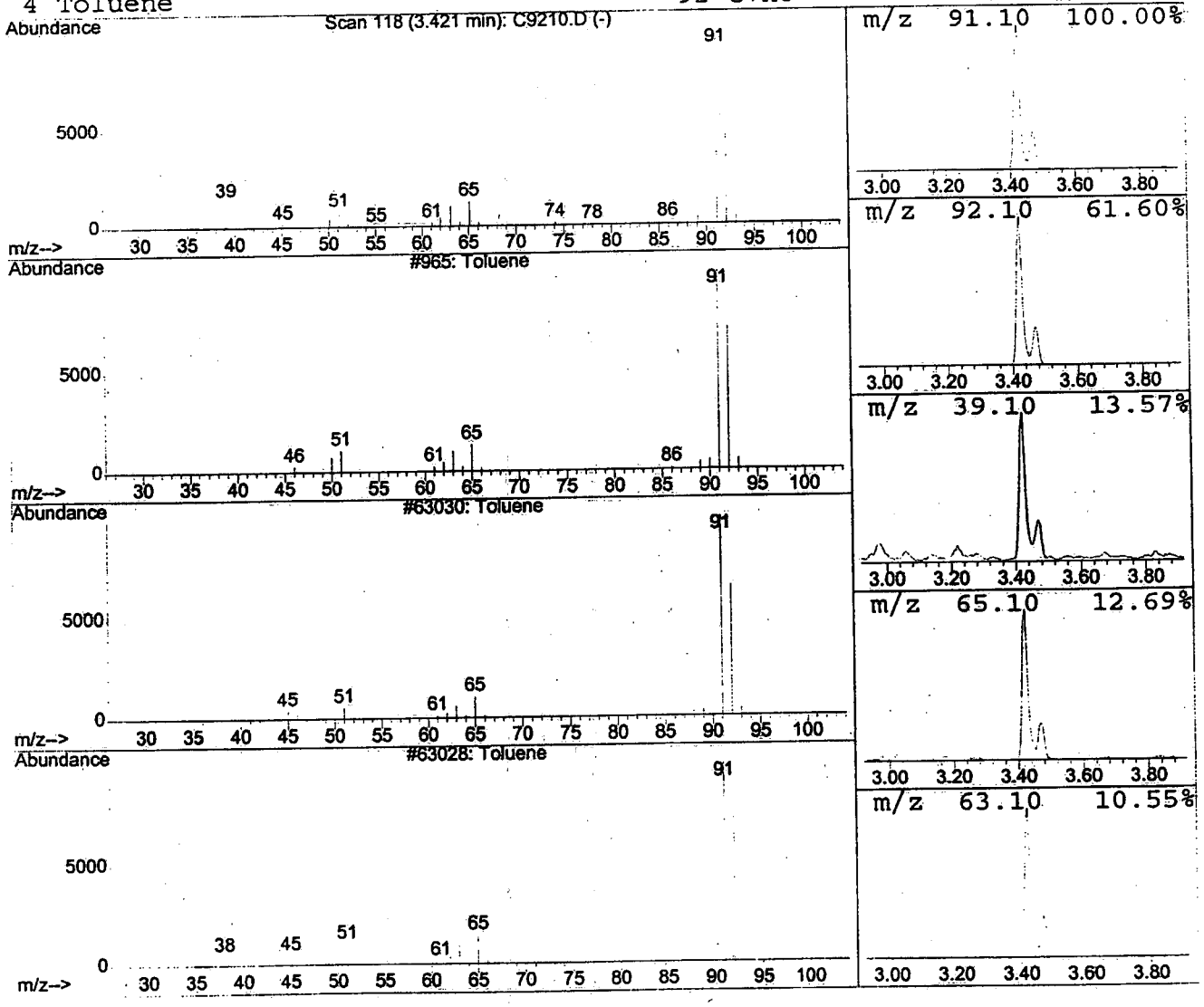
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.42	56.60 UG	1567340	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	94
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	87



000252

4066

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

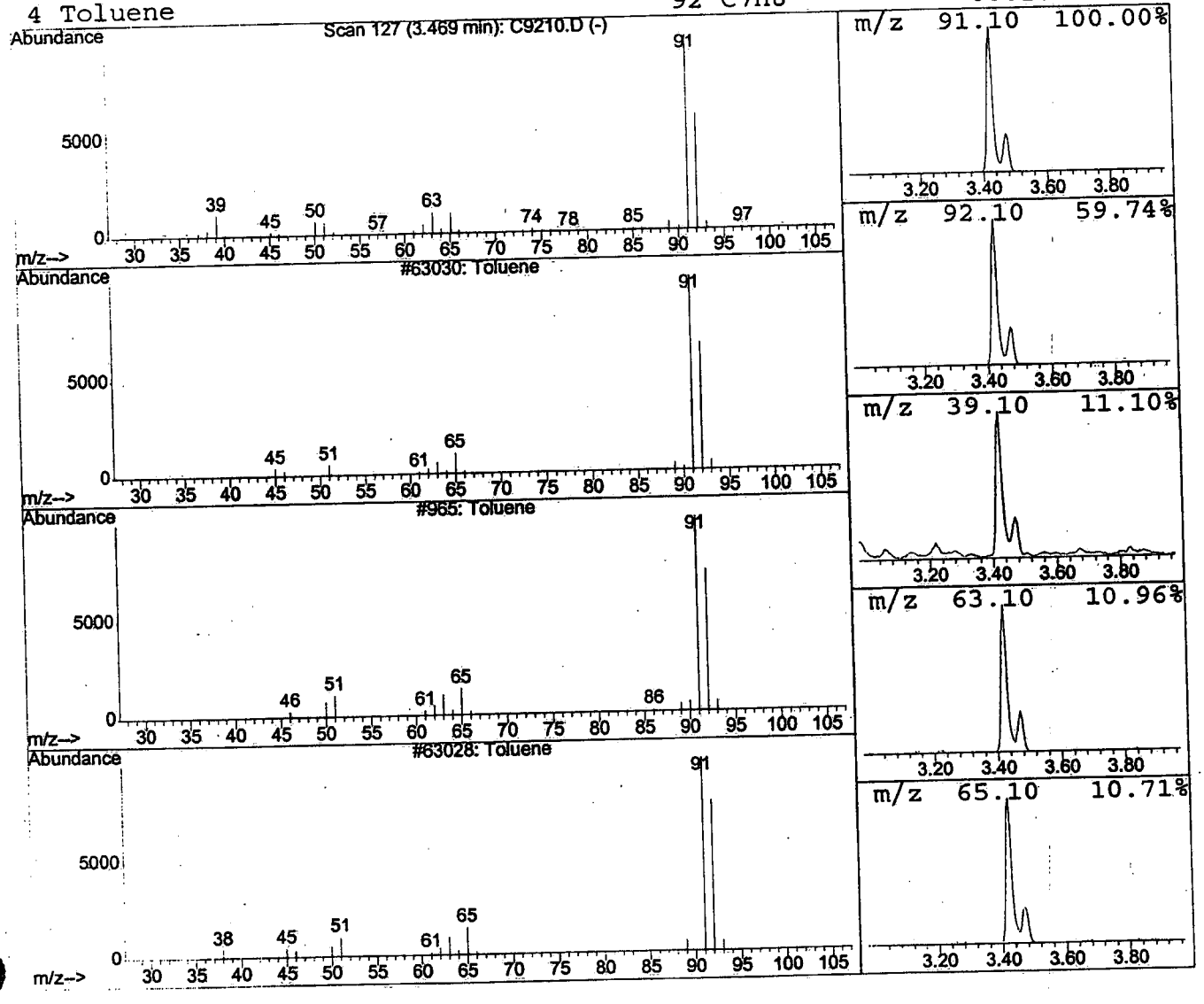
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Substituted benzene Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.47	12.60 UG	348799	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	94
2	Toluene	92	C7H8	000108-88-3	87
3	Toluene	92	C7H8	000108-88-3	87
4	Toluene	92	C7H8	000108-88-3	86



000253

4087

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

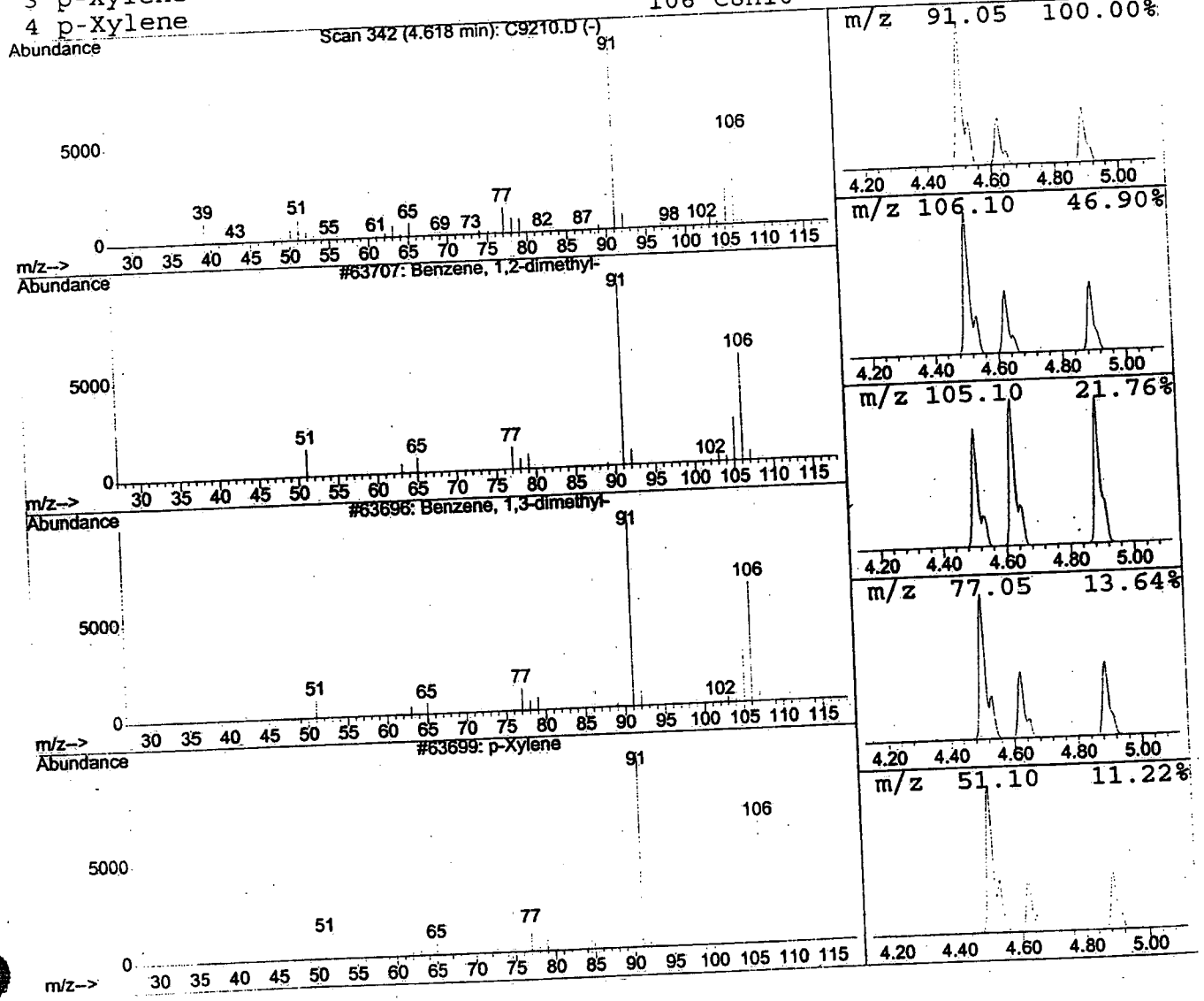
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.62	37.02 UG	1025060	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-dimethyl-	106	C8H10	000095-47-6	95
2	Benzene, 1,3-dimethyl-	106	C8H10	000108-38-3	95
3	p-Xylene	106	C8H10	000106-42-3	95
4	p-Xylene	106	C8H10	000106-42-3	95



000251

4088

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

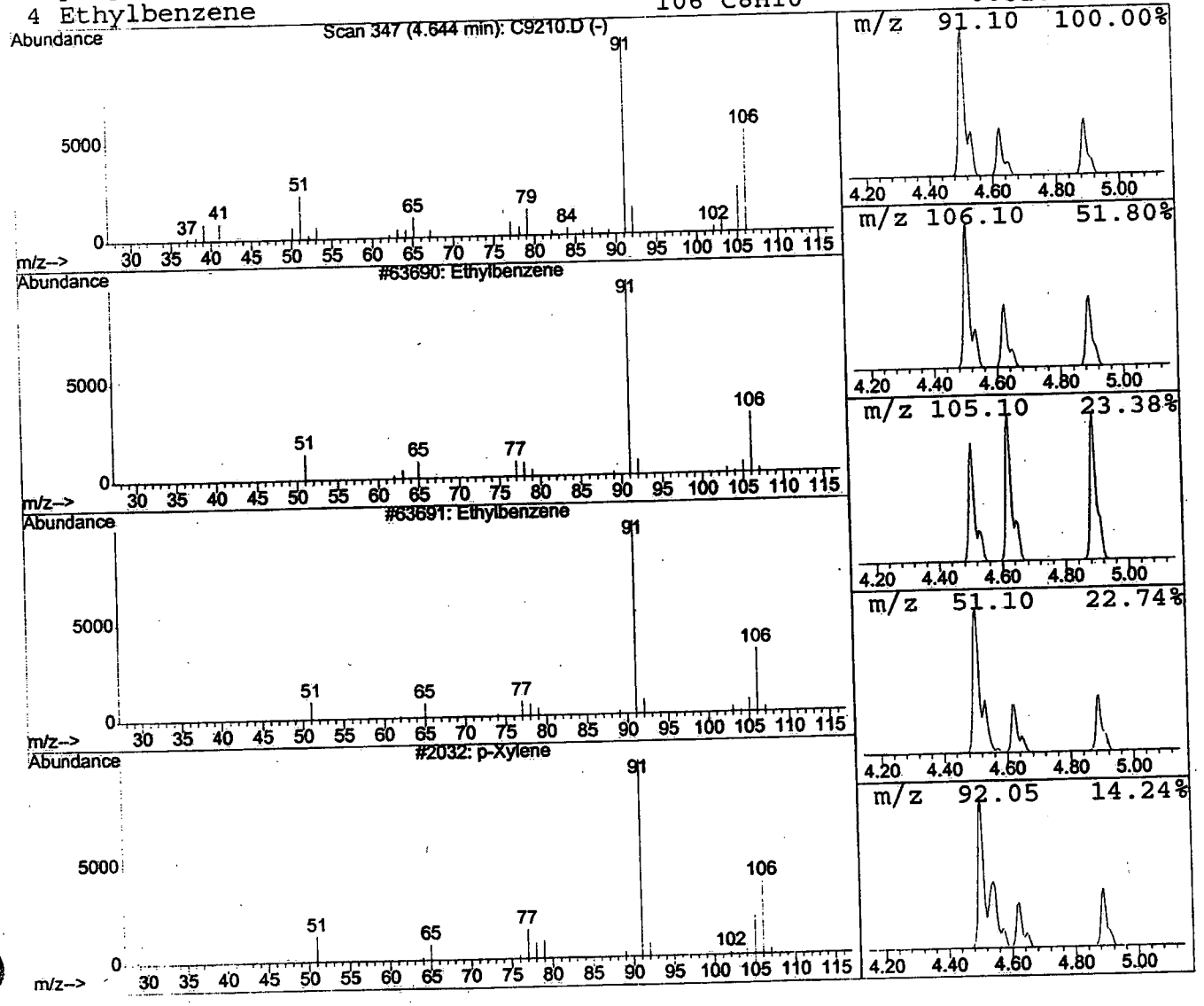
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 ~~Ethylbenzene~~ Substituted Benzene Concentration Rank 24

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.64	7.71 UG	213499	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethylbenzene	106	C8H10	000100-41-4	72
2	Ethylbenzene	106	C8H10	000100-41-4	72
3	p-Xylene	106	C8H10	000106-42-3	72
4	Ethylbenzene	106	C8H10	000100-41-4	72



000255

4089

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

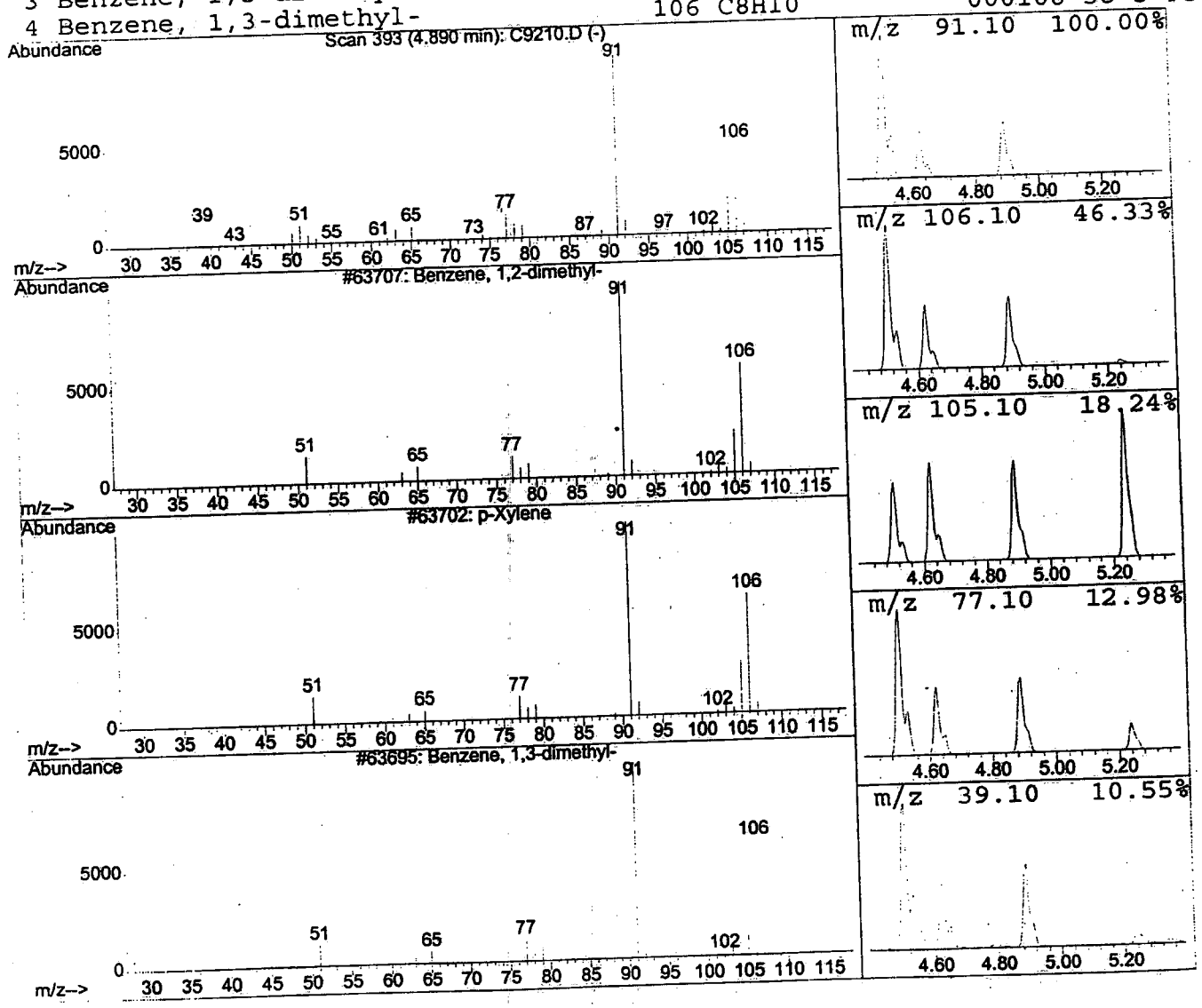
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 ~~Benzene, 1,2-dimethyl-~~ Substituted Benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.89	49.40 UG	1368070	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-dimethyl-	106	C8H10	000095-47-6	95
2	p-Xylene	106	C8H10	000106-42-3	95
3	Benzene, 1,3-dimethyl-	106	C8H10	000108-38-3	95
4	Benzene, 1,3-dimethyl-	106	C8H10	000108-38-3	95



000256

4090

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

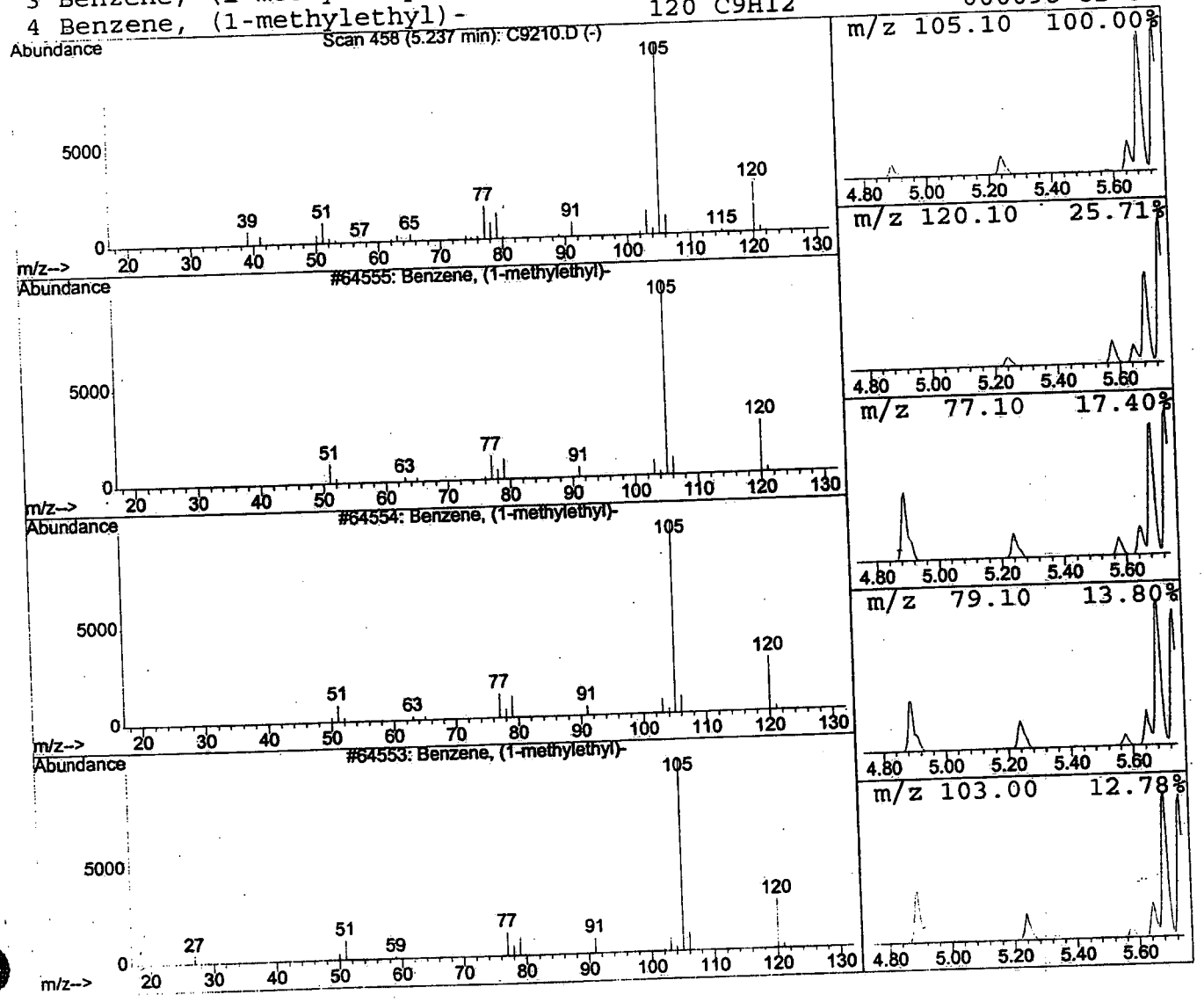
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 ~~Benzene, (1-methylethyl)-~~ Substituted Benzene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.24	12.74 UG	352785	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	95
2	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	94
3	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	94
4	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91



4091

000057

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

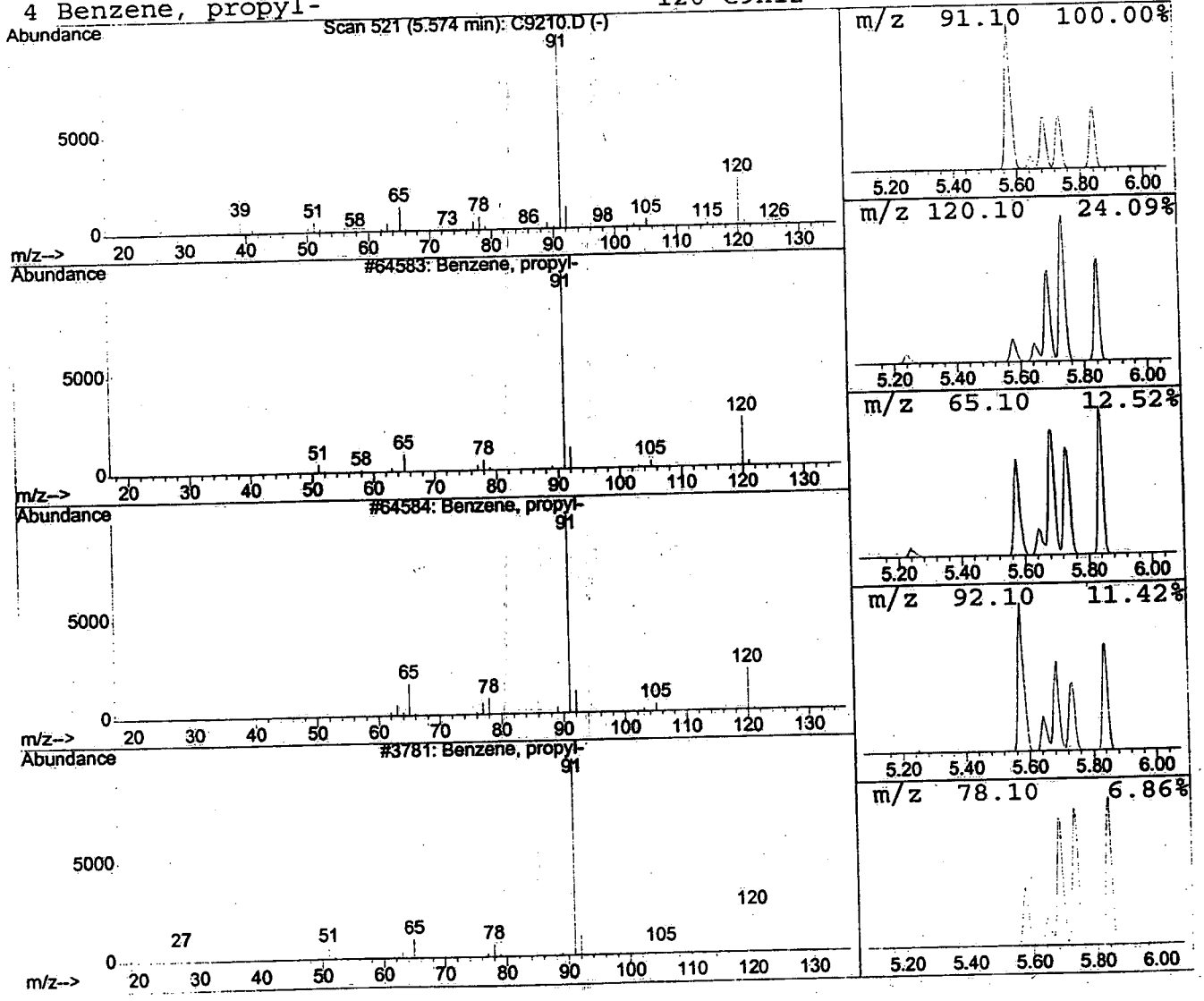
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 ~~Benzene, propyl-~~ Substituted Benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.57	24.46 UG	677467	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	91
3	Benzene, propyl-	120	C9H12	000103-65-1	90
4	Benzene, propyl-	120	C9H12	000103-65-1	90



4092

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

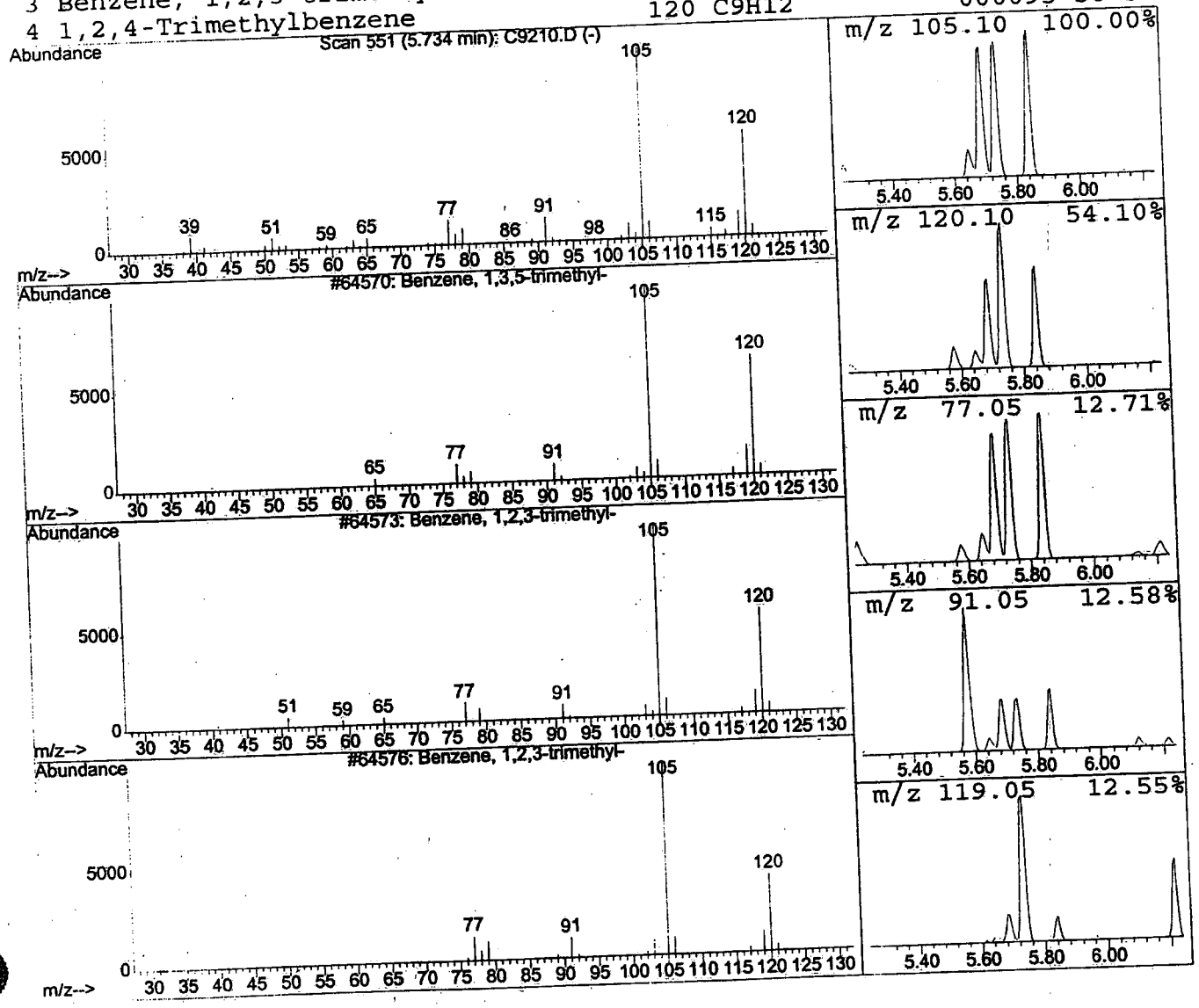
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 ~~Benzene, 1,3,5-trimethyl-~~ Substituted Benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.73	98.39 UG	2724790	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
2	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
3	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
4	1,2,4-Trimethylbenzene	120	C9H12	000095-36-3	95



4093

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

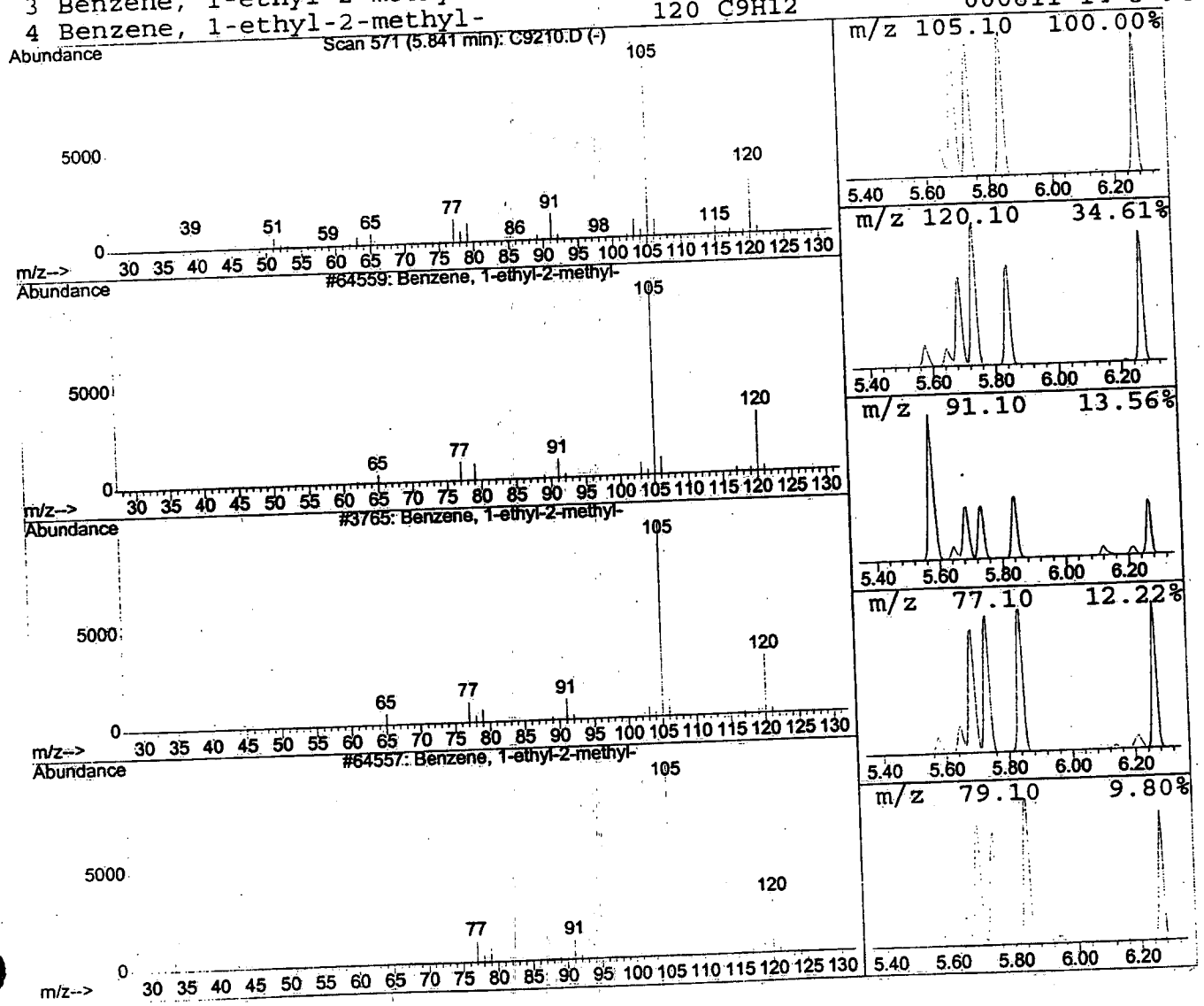
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 10 ~~Benzene, 1-ethyl-2-methyl-~~ Substituted Benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.84	88.92 UG	2462500	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	95
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	94



4094

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

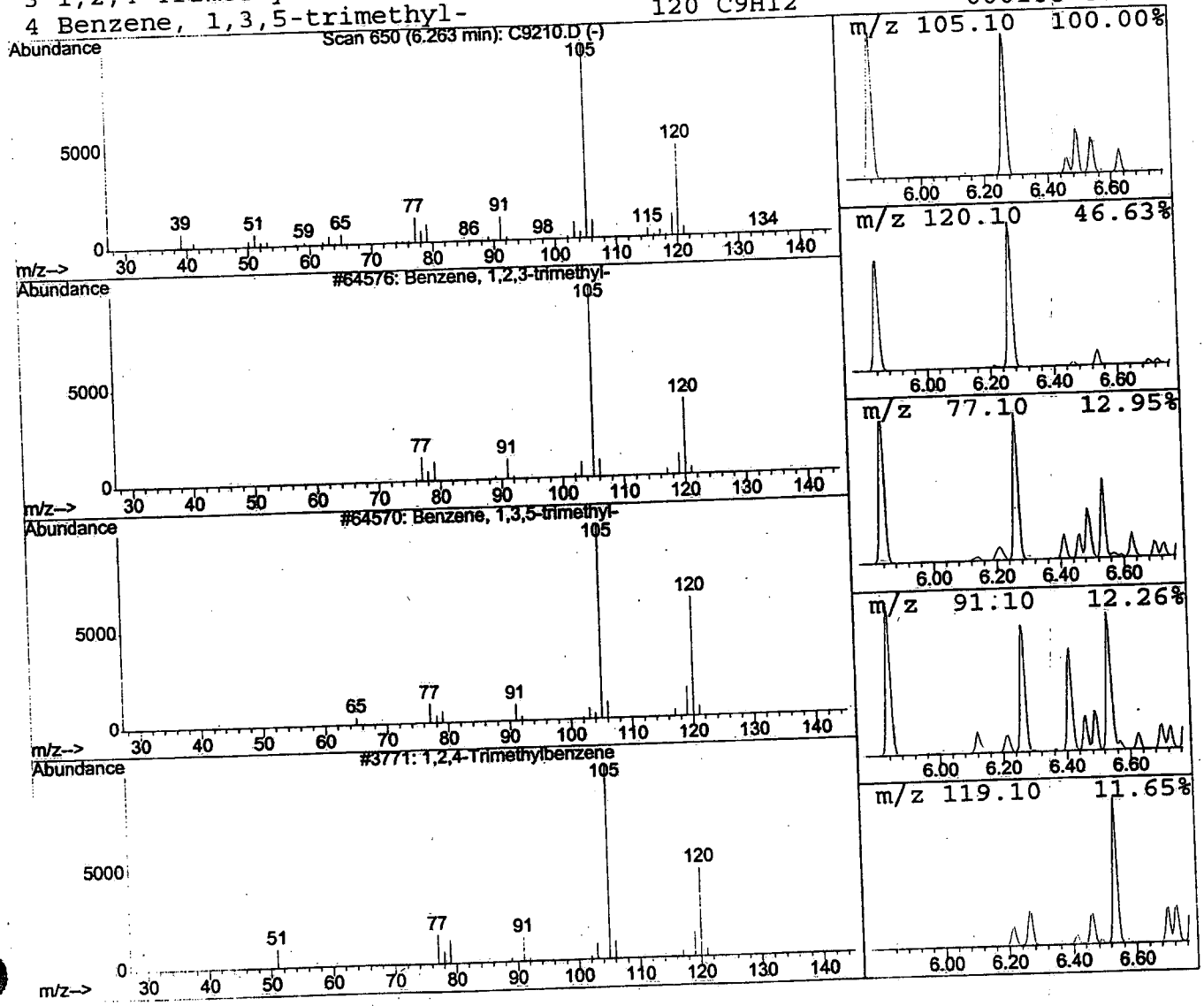
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 11 ~~Benzene, 1,2,3-trimethyl-~~ Substituted Benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.26	83.48 UG	2311910	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	95
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	1,2,4-Trimethylbenzene	120	C9H12	000095-36-3	95
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	94



4095

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

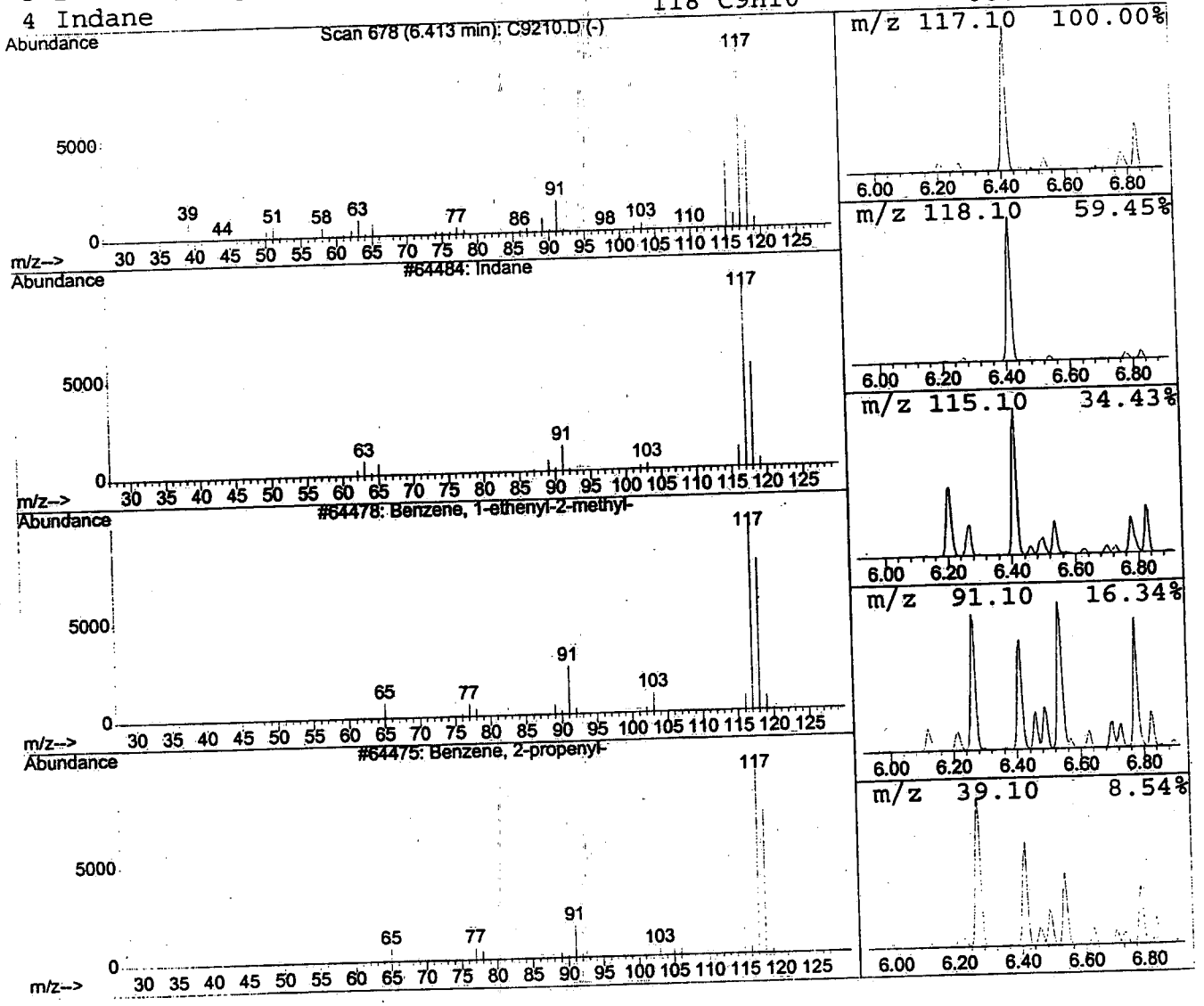
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 12 ~~Indane~~ Substituted Benzene — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.41	50.91 UG	1409940	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	91
2	Benzene, 1-ethenyl-2-methyl-	118	C9H10	000611-15-4	81
3	Benzene, 2-propenyl-	118	C9H10	000300-57-2	72
4	Indane	118	C9H10	000496-11-7	59



000202

4096

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

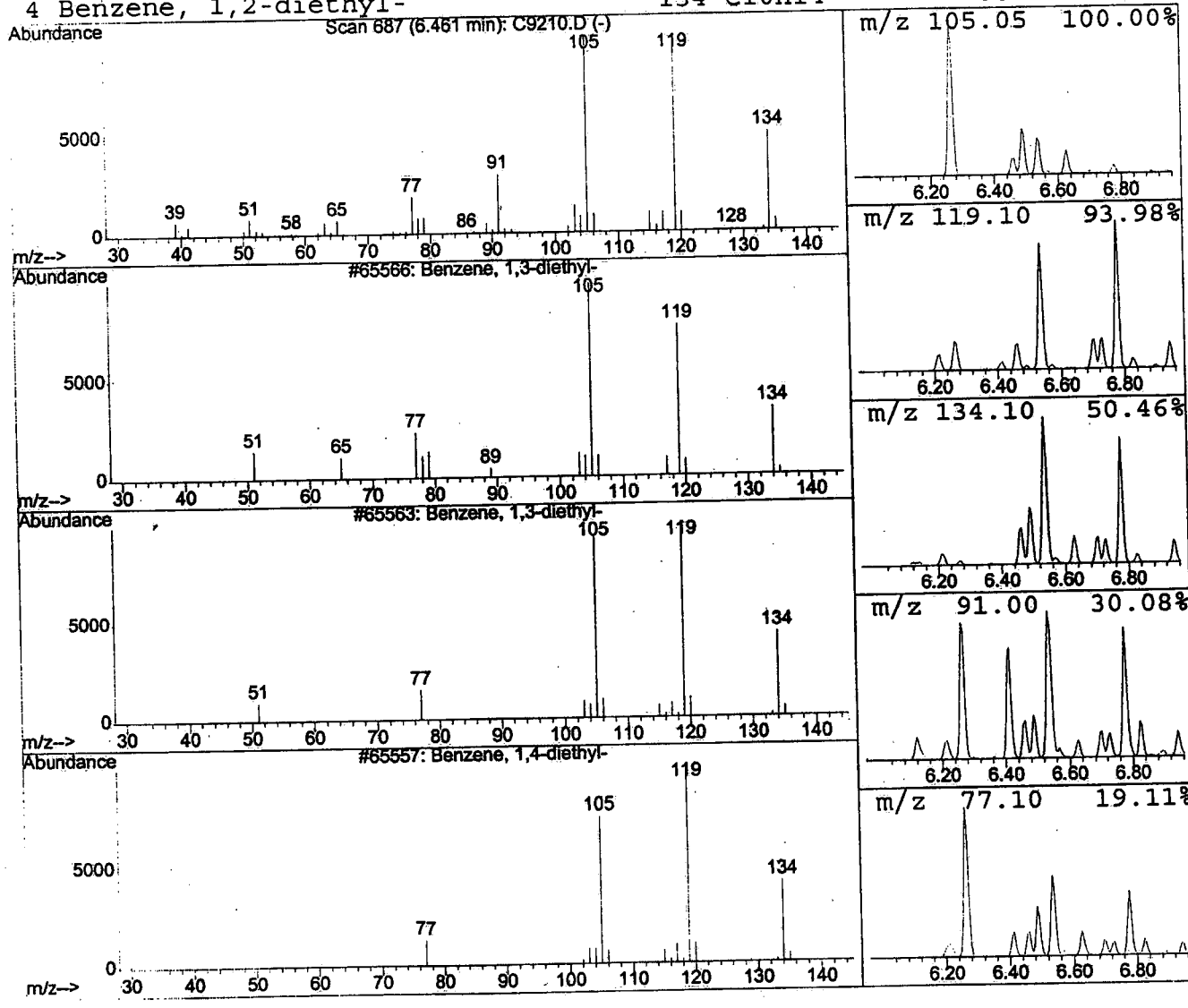
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 13 ~~Benzene, 1,3-diethyl-~~ Substituted Benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.46	14.15 UG	391819	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	97
2	Benzene, 1,3-diethyl-	134	C10H14	000141-93-5	96
3	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	95
4	Benzene, 1,2-diethyl-	134	C10H14	000135-01-3	94



000283

4097

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

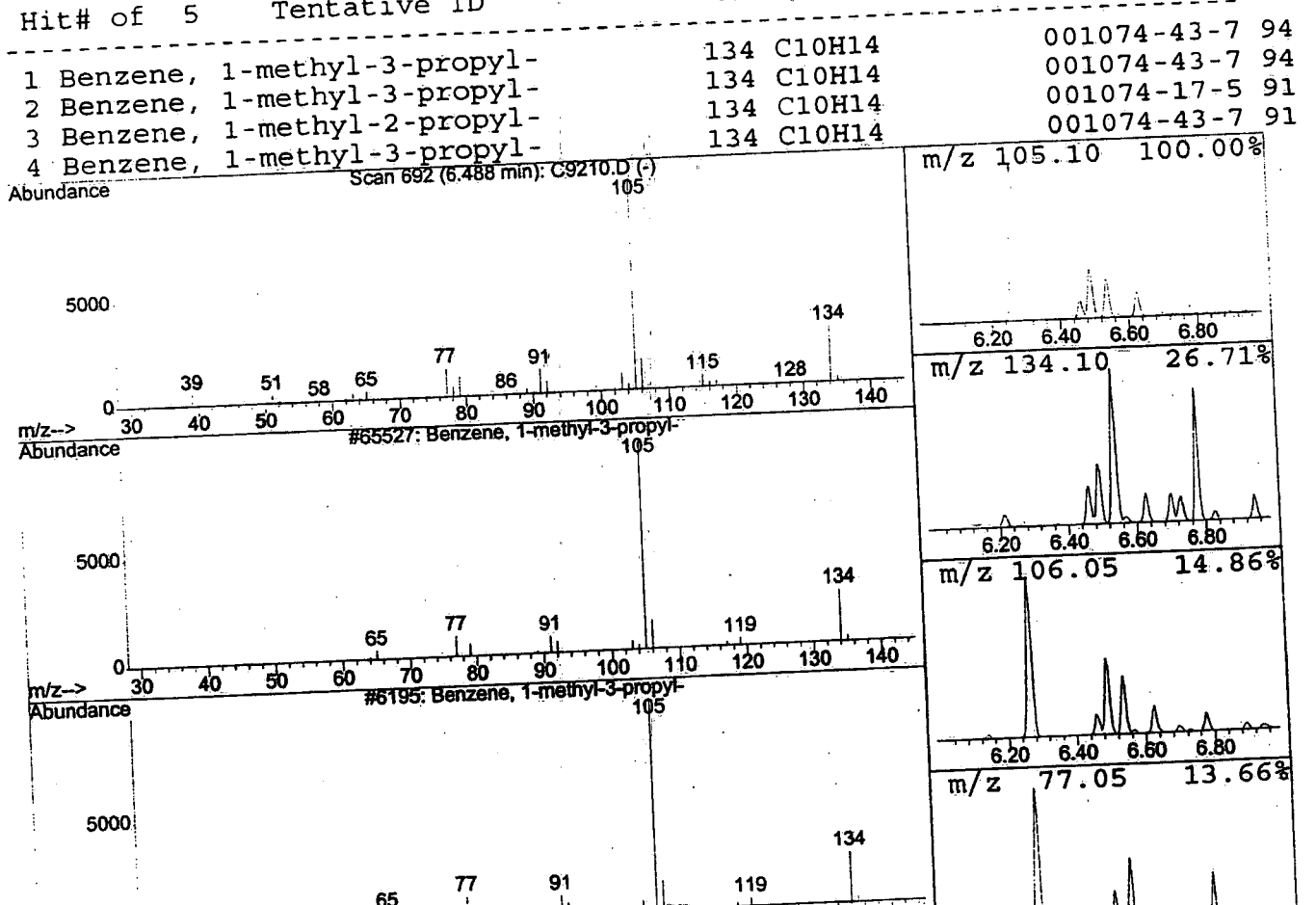
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 14 ~~Benzene, 1-methyl-3-propyl-~~ Substituted Benzene Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.49	22.93 UG	634962	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	134	C10H14	001074-43-7	94
2	Benzene, 1-methyl-3-propyl-	134	C10H14	001074-43-7	94
3	Benzene, 1-methyl-2-propyl-	134	C10H14	001074-17-5	91
4	Benzene, 1-methyl-3-propyl-	134	C10H14	001074-43-7	91



4098

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

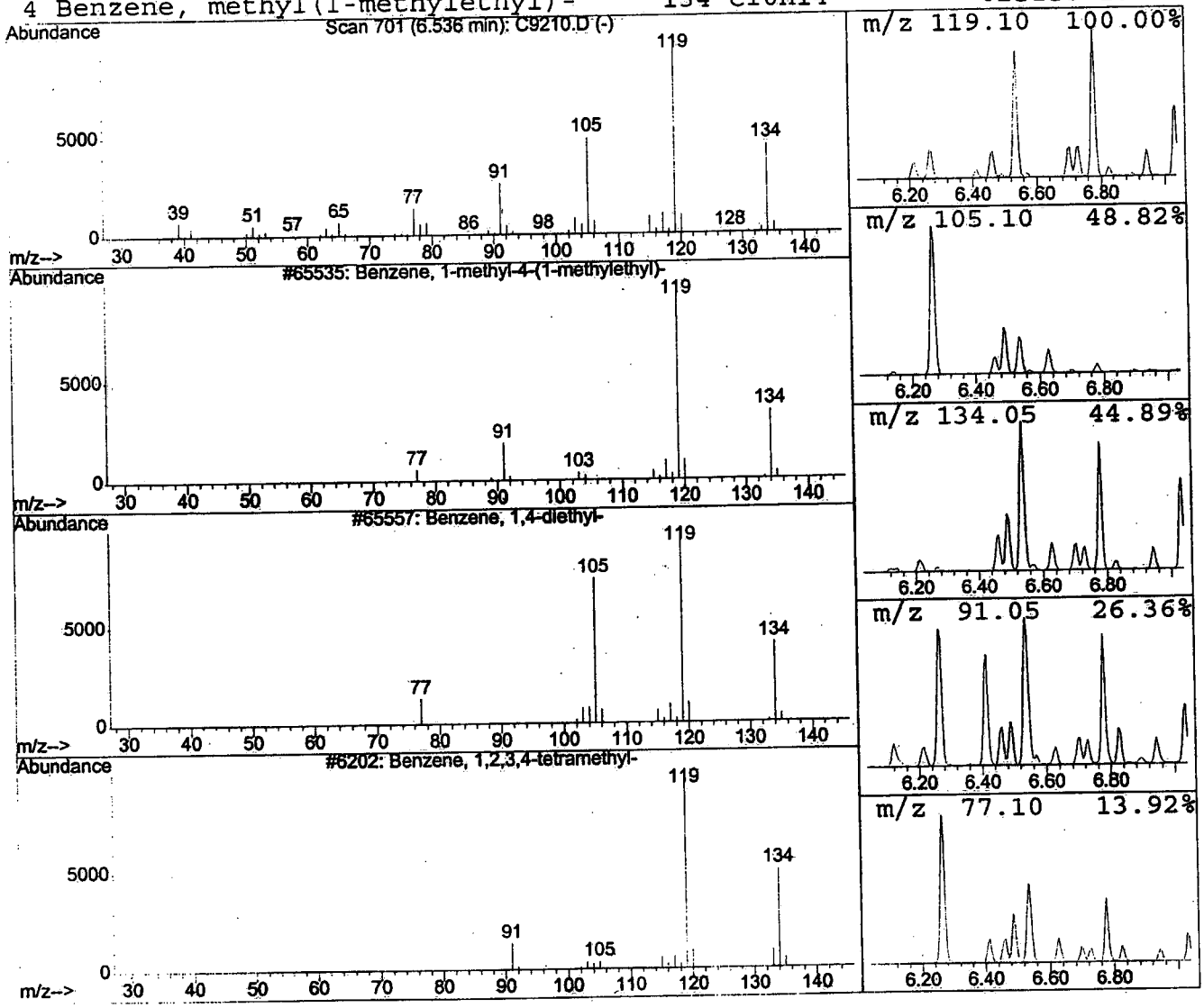
****

Peak Number 15 ~~Benzene, 1-methyl-4-(1-methyle~~ Concentration Rank 6

Ewb

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.54	50.72 UG	1404660	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	95
2	Benzene, 1,4-diethyl-	134	C10H14	000105-05-5	95
3	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94
4	Benzene, methyl(1-methylethyl)-	134	C10H14	025155-15-1	93



H099

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

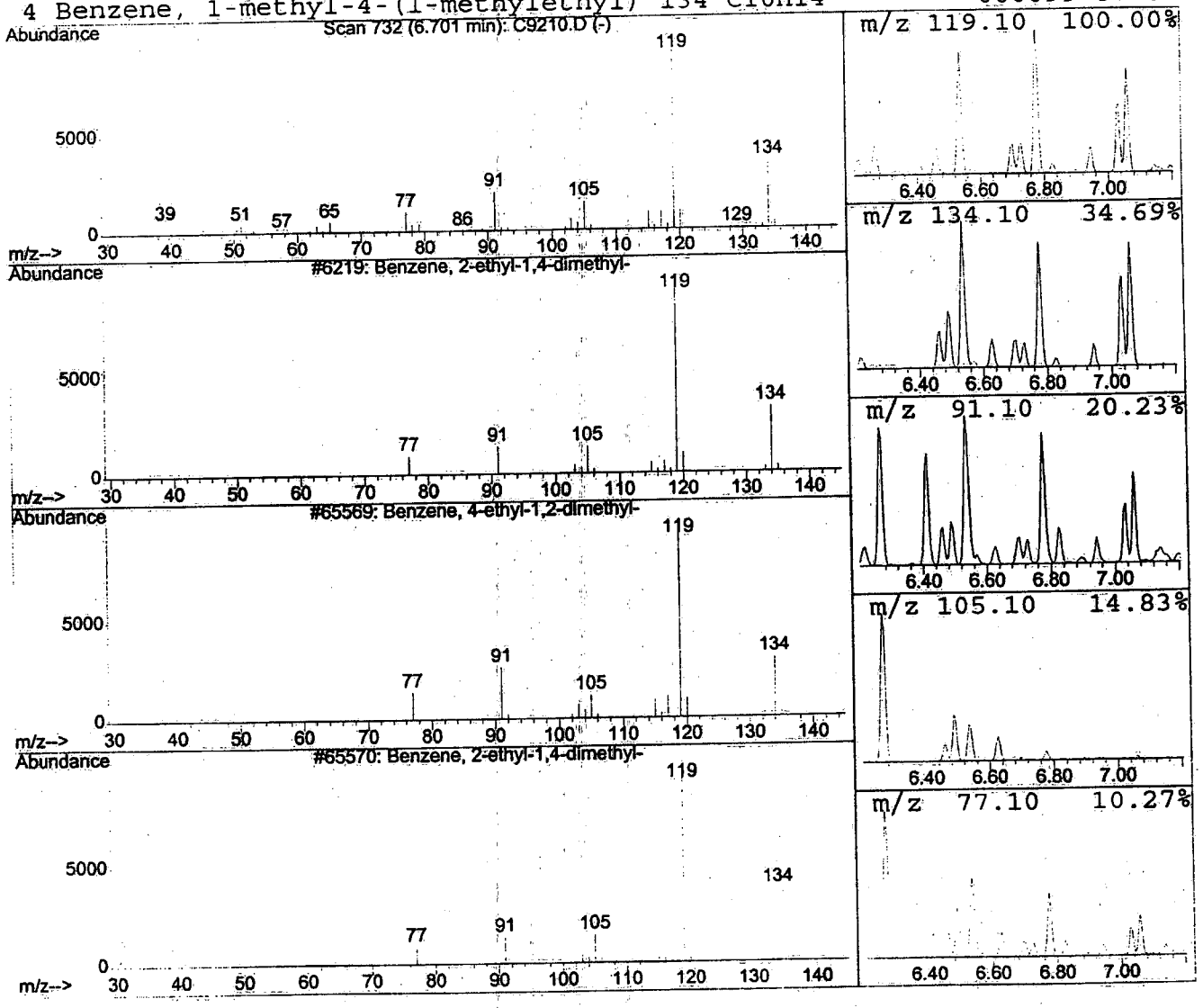
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 16 ~~Benzene, 2-ethyl-1,4-dimethyl-~~ Substituted Benzene Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.70	9.42 UG	260955	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	97
2	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	96
3	Benzene, 2-ethyl-1,4-dimethyl-	134	C10H14	001758-88-9	95
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	95



4100

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

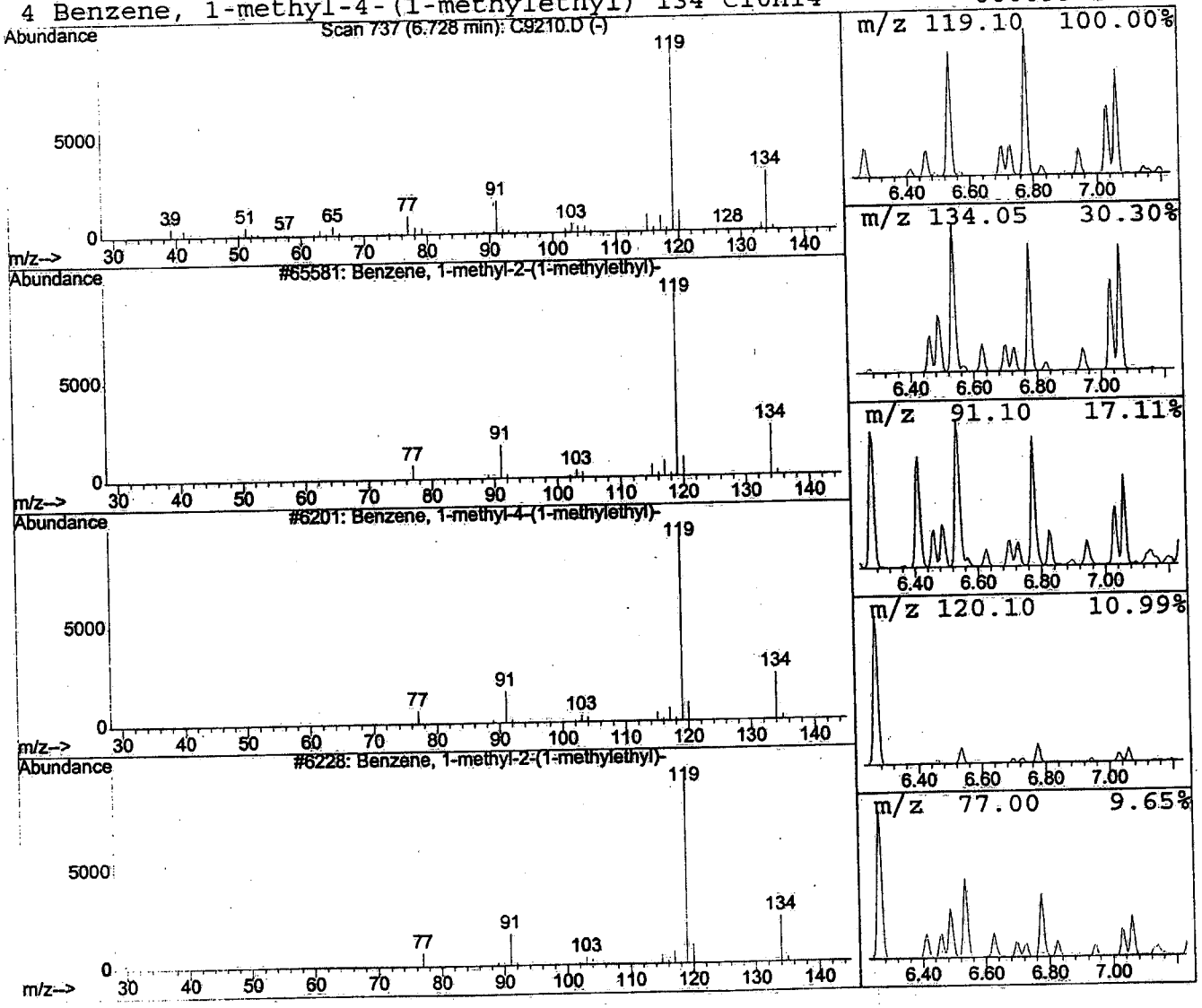
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 17 ~~Benzene, 1-methyl-2-(1-methyle~~ Concentration Rank 23
Substituted Benzene

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.73	8.27 UG	228916	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	94
2	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	94
3	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	94
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	91



000207

4101

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

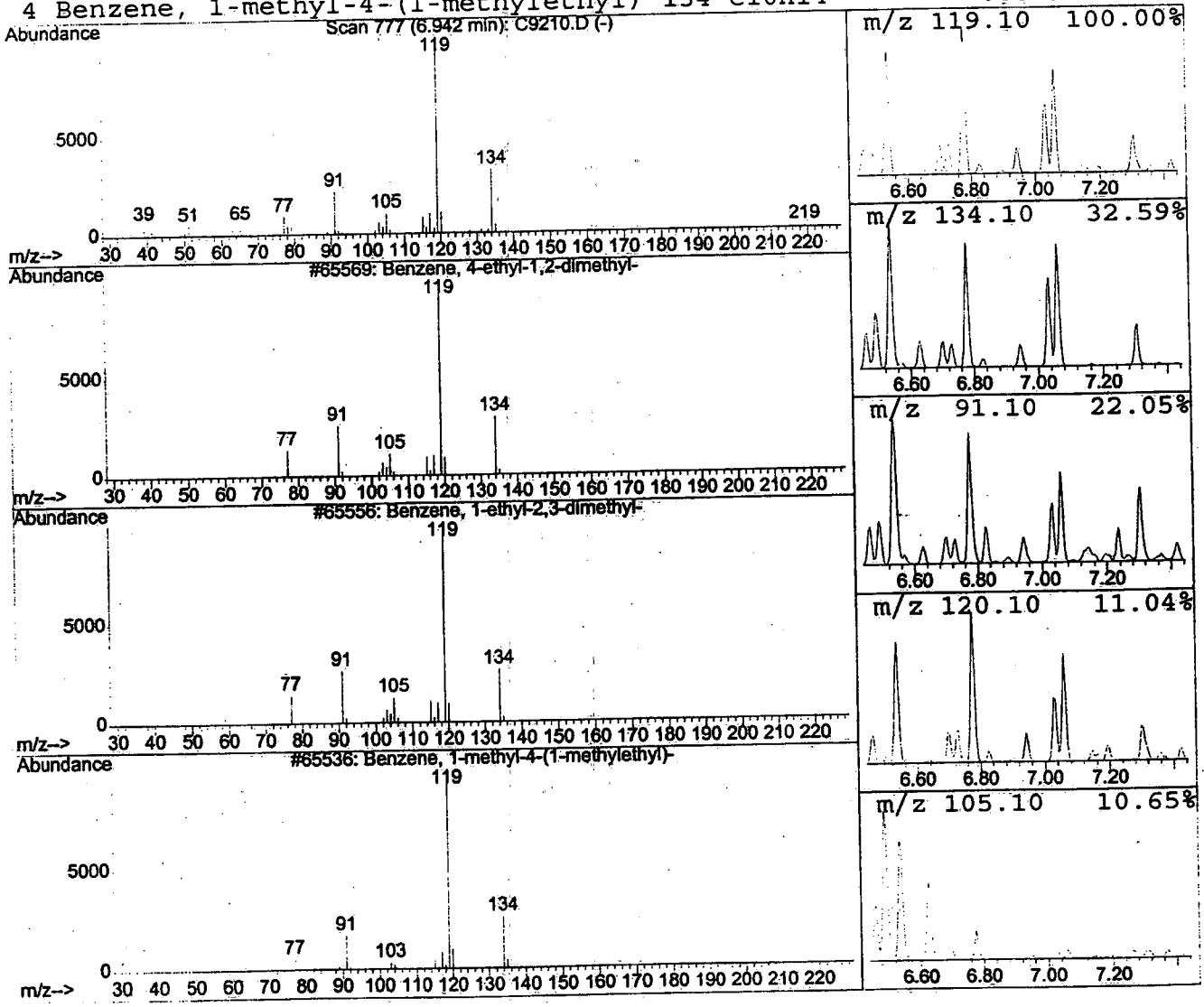
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 18 ~~Benzene, 4-ethyl-1,2-dimethyl-~~ Substituted Benzene Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.94	8.44 UG	243485	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	95
2	Benzene, 1-ethyl-2,3-dimethyl-	134	C10H14	000933-98-2	95
3	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	94
4	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	94



4102

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D Vial: 13
Acq On : 6 Apr 2001 19:12 Operator: DP
Sample : MW-6,2094-006,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

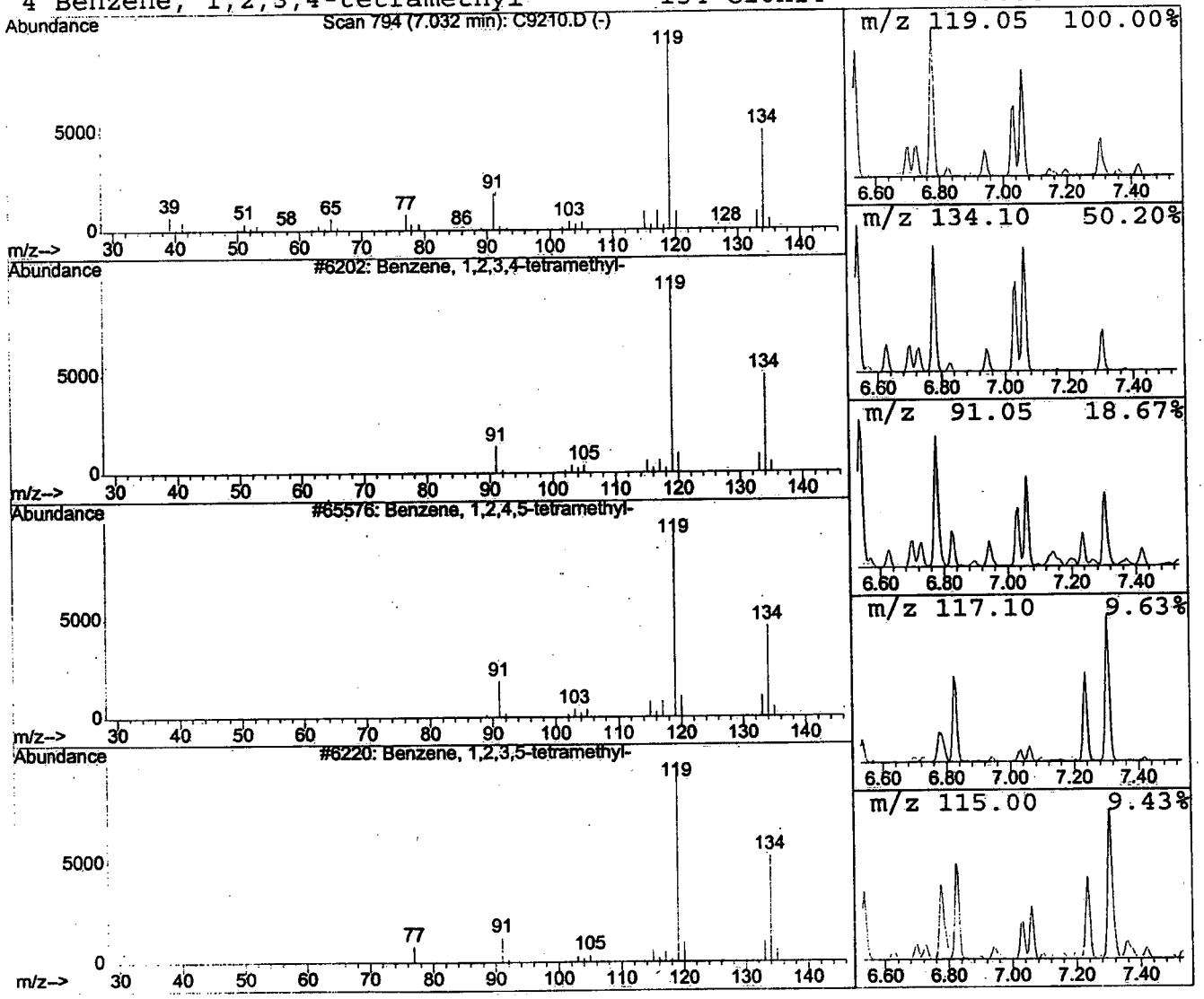
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 19 ~~Benzene, 1,2,3,4-tetramethyl-~~ Substituted Benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.03	19.96 UG	575669	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	97
2	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	96
3	Benzene, 1,2,3,5-tetramethyl-	134	C10H14	000527-53-7	95
4	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94



H103

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

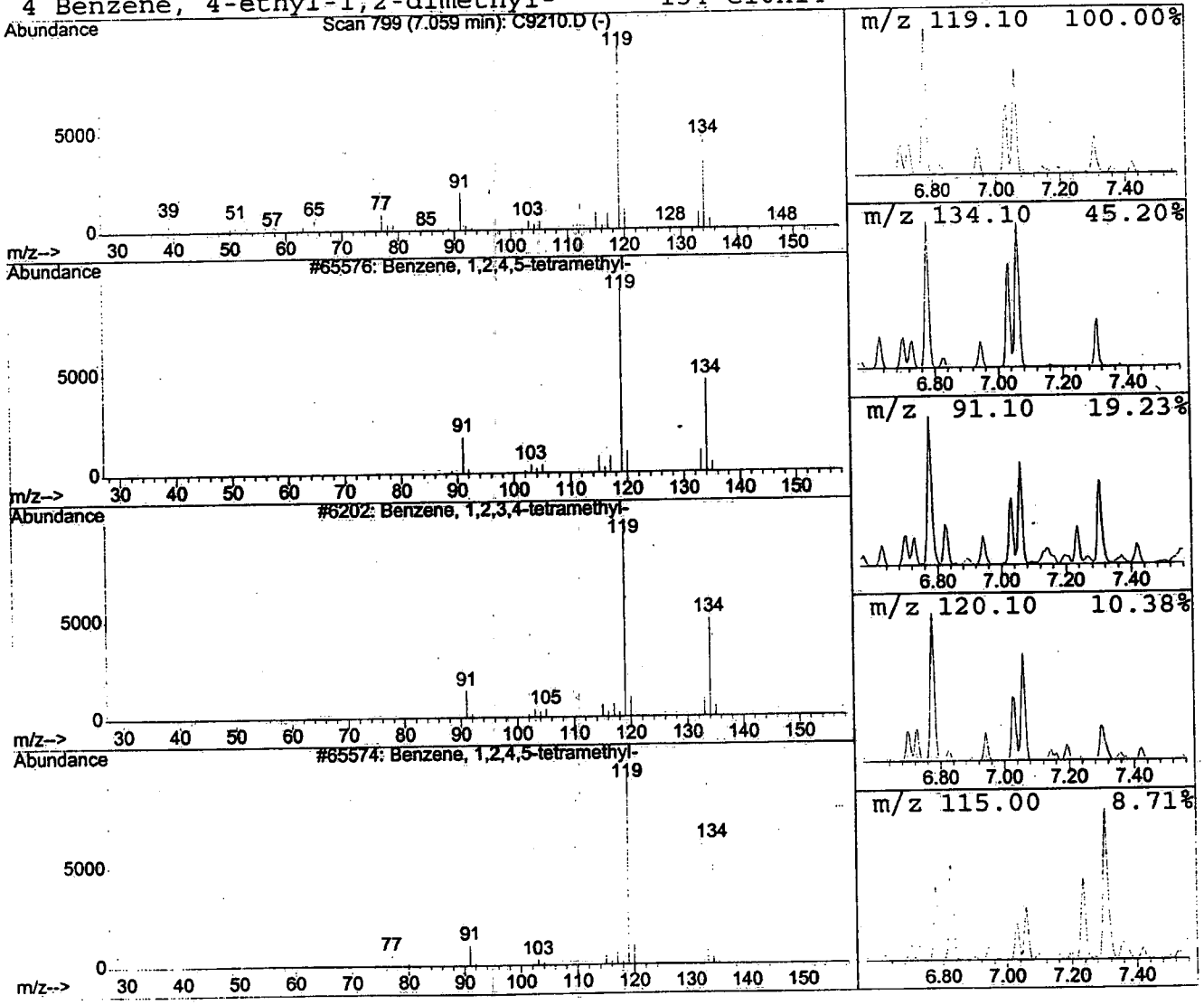
****

Peak Number 20 ~~Benzene, 1,2,4,5-tetramethyl-~~ Concentration Rank 10

Substituted Benzene

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.06	26.43 UG	762217	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	97
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	94
3	Benzene, 1,2,4,5-tetramethyl-	134	C10H14	000095-93-2	94
4	Benzene, 4-ethyl-1,2-dimethyl-	134	C10H14	000934-80-5	91



4/104

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D Vial: 13
Acq On : 6 Apr 2001 19:12 Operator: DP
Sample : MW-6,2094-006,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

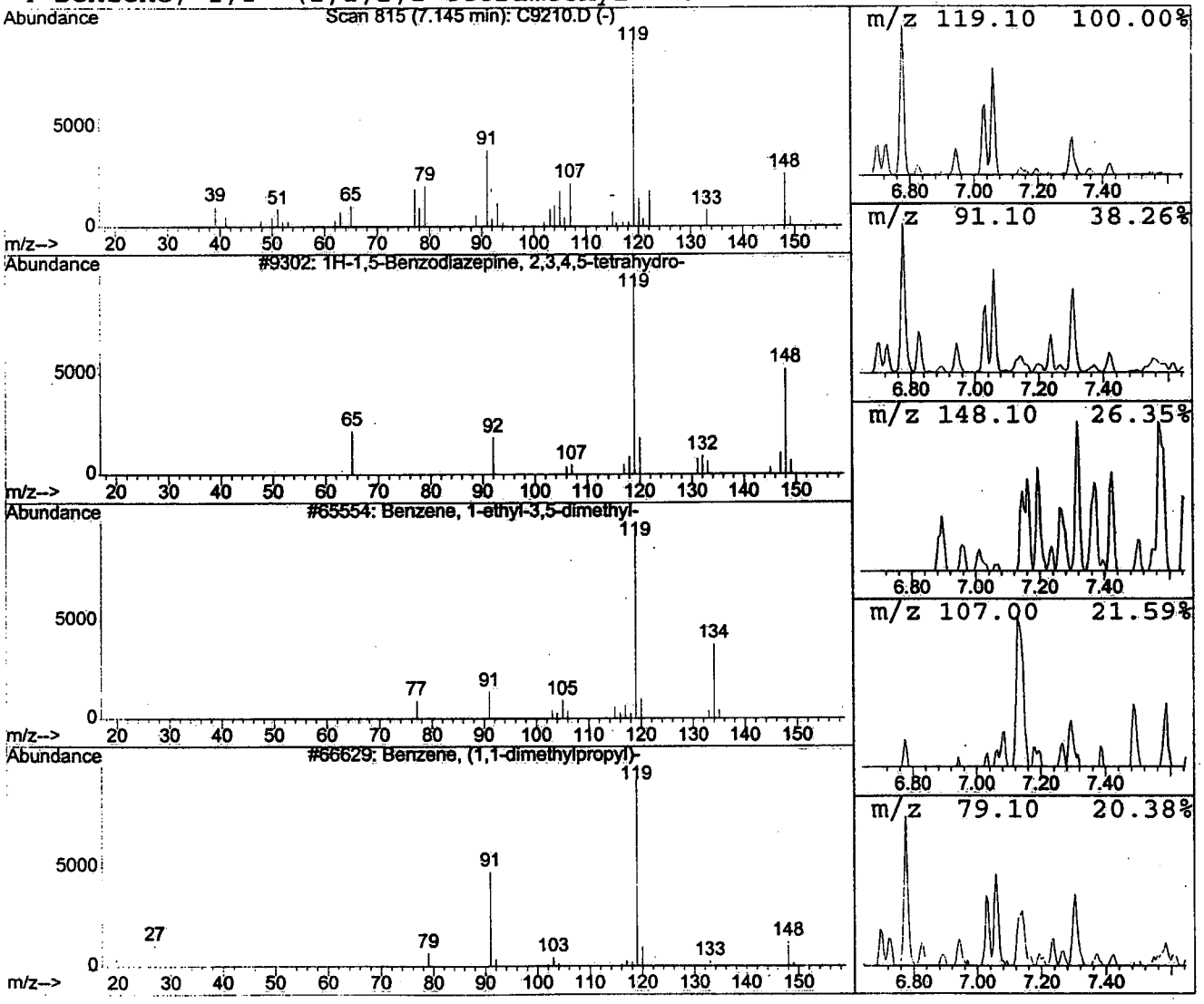
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 21 ~~1H-1,5-Benzodiazepine~~, 2,3,4,5 Concentration Rank 25
Substituted Benzene

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.14	5.82 UG	167927	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-1,5-Benzodiazepine, 2,3,4,5-tetr	148	C9H12N2	006516-89-8	47
2	Benzene, 1-ethyl-3,5-dimethyl-	134	C10H14	000934-74-7	43
3	Benzene, (1,1-dimethylpropyl)-	148	C11H16	002049-95-8	43
4	Benzene, 1,1'-(1,1,2,2-tetramethyl-	238	C18H22	001889-67-4	43



4105

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

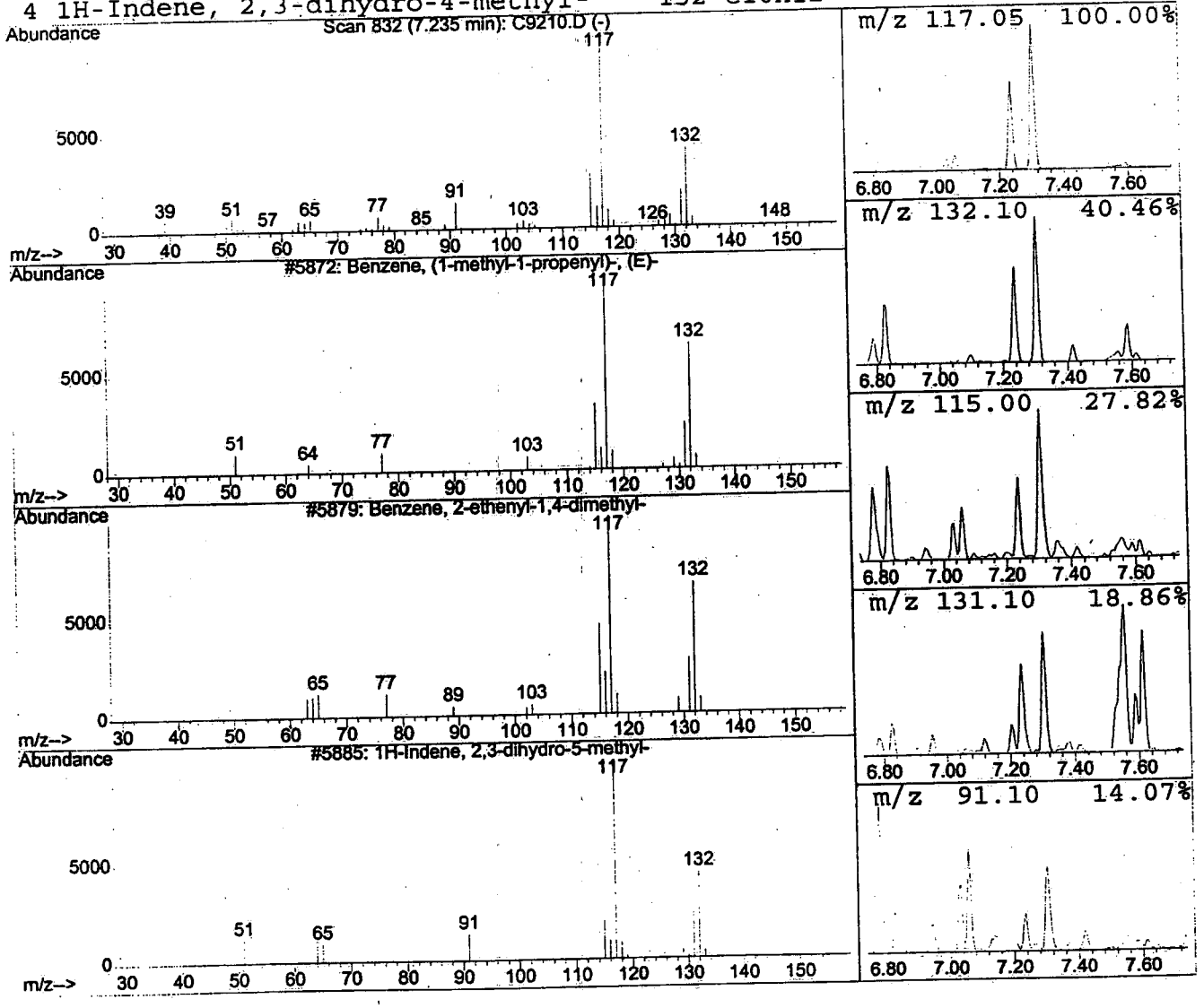
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 22 ~~Benzene, (1-methyl-1-propenyl)~~ Substituted Benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.24	15.74 UG	454049	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methyl-1-propenyl)-, (E	132	C10H12	000768-00-3	92
2	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	92
3	1H-Indene, 2,3-dihydro-5-methyl-	132	C10H12	000874-35-1	90
4	1H-Indene, 2,3-dihydro-4-methyl-	132	C10H12	000824-22-6	90



4106

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

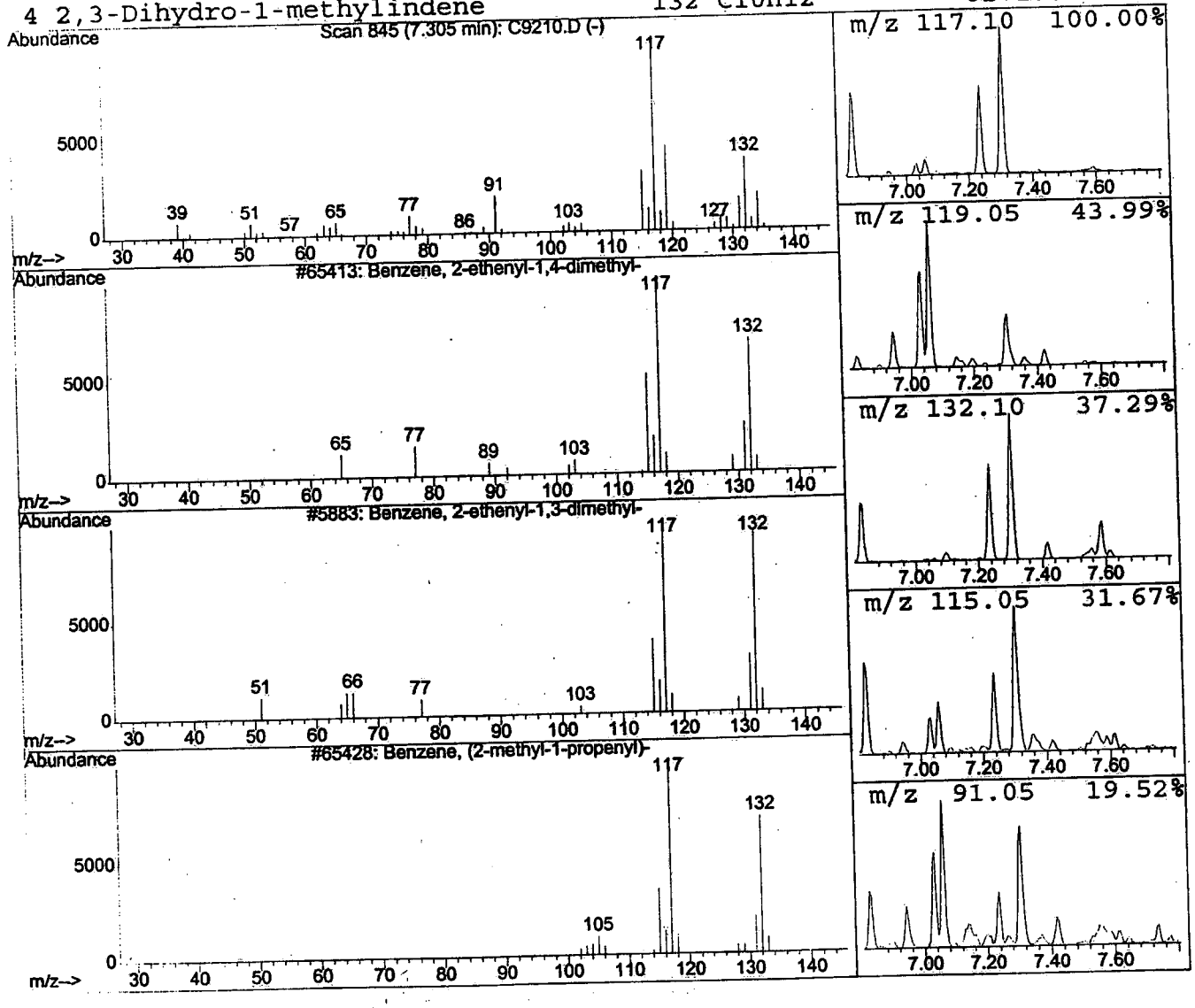
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 23 ~~Benzene, 2-ethenyl-1,4-dimethy~~ Substituted Benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.30	37.98 UG	1095580	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	91
2	Benzene, 2-ethenyl-1,3-dimethyl-	132	C10H12	002039-90-9	76
3	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	76
4	2,3-Dihydro-1-methylindene	132	C10H12	027133-93-3	76



4107

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

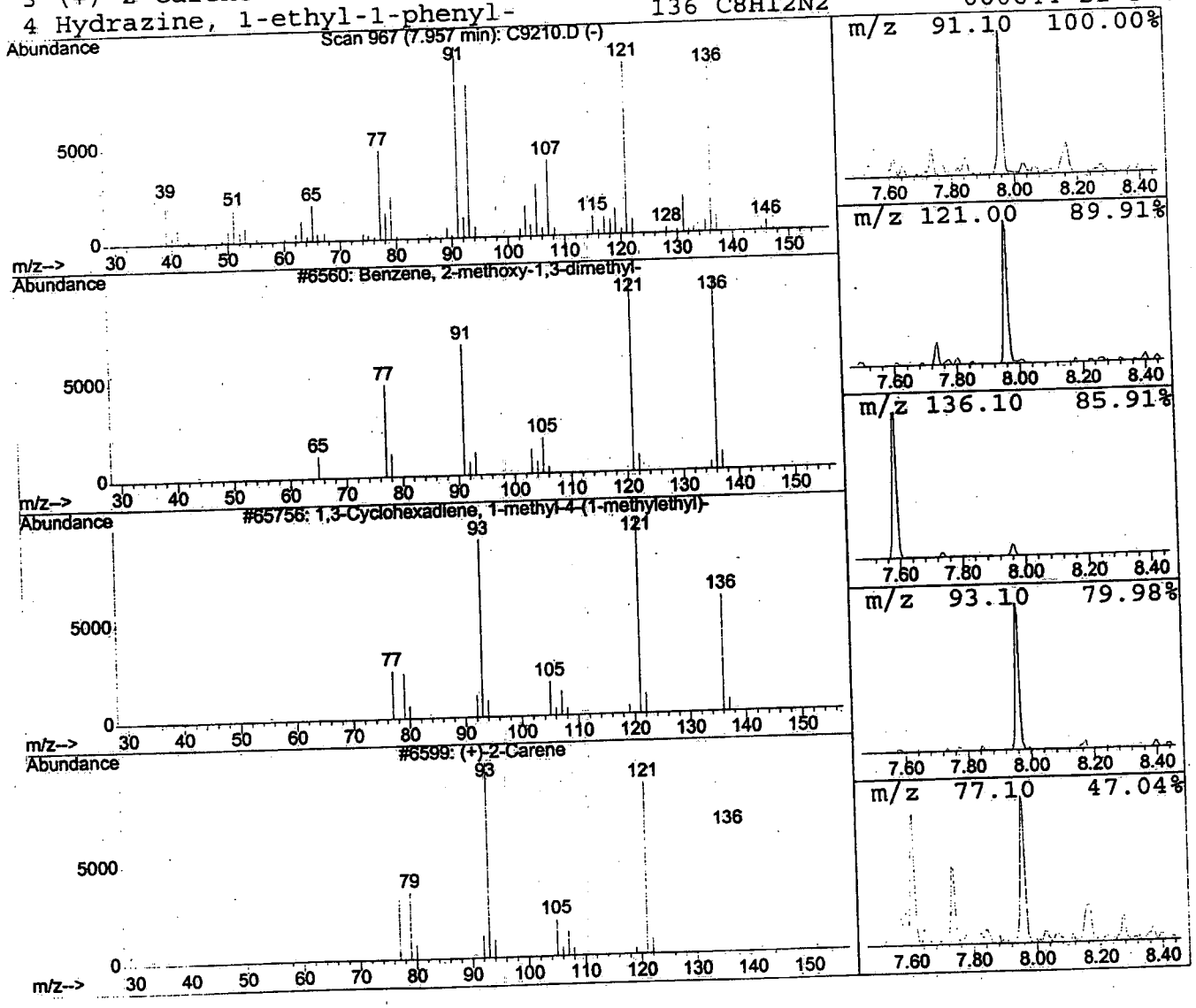
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 24 ~~Benzene, 2-methoxy-1,3-dimethy~~ Substituted Benzene Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.96	12.67 UG	365492	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-methoxy-1,3-dimethyl-	136	C9H12O	001004-66-6	87
2	1,3-Cyclohexadiene, 1-methyl-4-(1-m	136	C10H16	000099-86-5	70
3	(+)-2-Carene	136	C10H16	000000-00-0	70
4	Hydrazine, 1-ethyl-1-phenyl-	136	C8H12N2	000644-21-3	64



000271

41058

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9210.D
Acq On : 6 Apr 2001 19:12
Sample : MW-6,2094-006,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 13
Operator: DP
Inst : MSD-C
Multiplr: 1.00

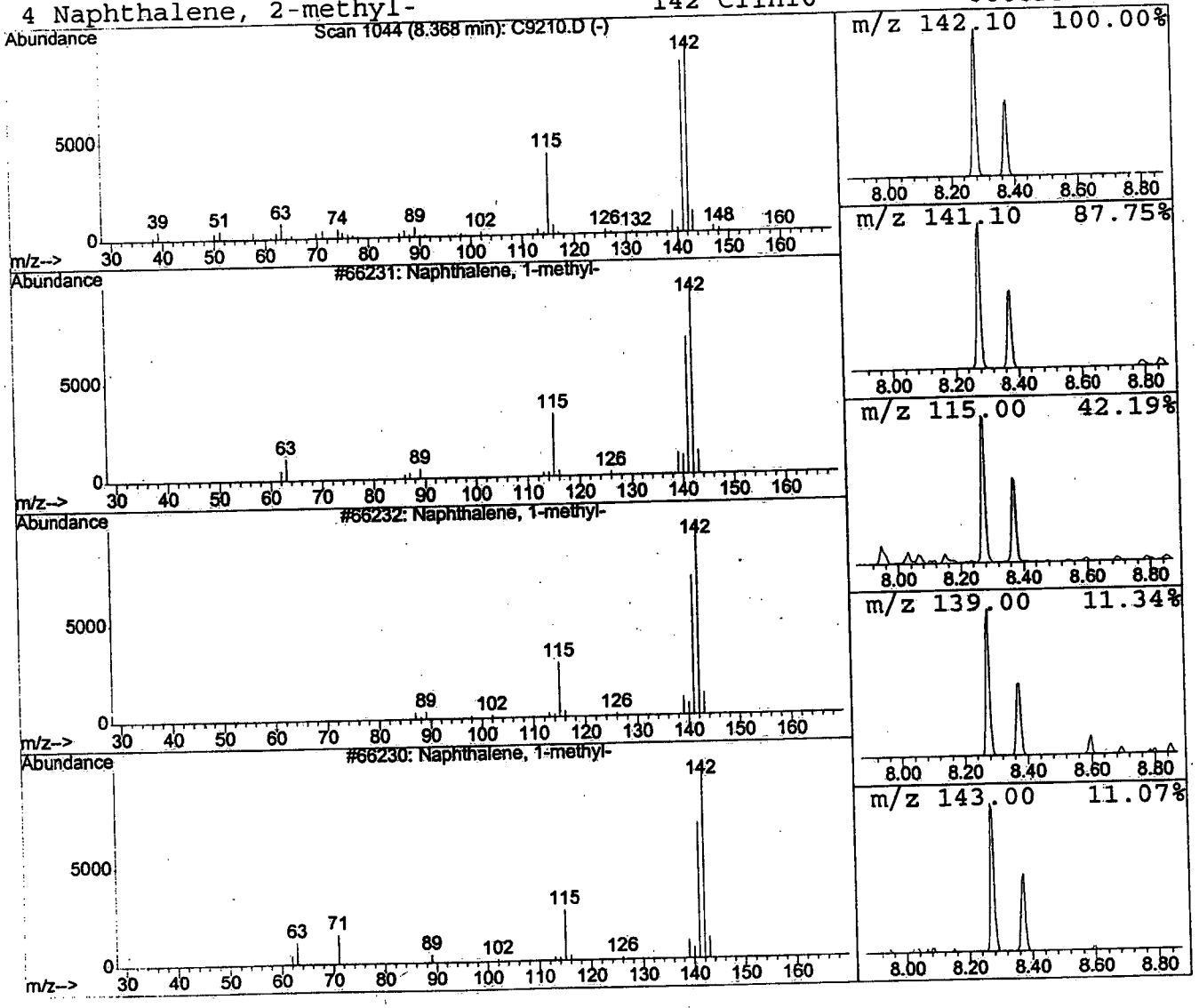
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 25 ~~Naphthalene, 1-methyl-~~ Substituted Naphthalene Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.37	9.42 UG	271832	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	94
2	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	93
3	Naphthalene, 1-methyl-	142	C11H10	000090-12-0	91
4	Naphthalene, 2-methyl-	142	C11H10	000091-57-6	91



4109

Quantitation Report (LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
C : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Integration Params: RTEINT.P
Quant Time: Apr 6 17:08 2001

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00
Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	157820	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	612788	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	212724	40.00	UG	0.00
60) Phenanthrene-d10	10.55	188	258825	40.00	UG	0.00
75) Chrysene-d12	12.97	240	100999	40.00	UG	0.00
84) Perylene-d12	15.14	264	60769	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.55	112	20159	4.54	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 4.54%#			
6) Phenol-d5	5.69	99	26387	6.10	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 6.10%#			
23) Nitrobenzene-d5	6.83	82	13863m	3.28	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 6.56%#			
43) 2-Fluorobiphenyl	8.60	172	22001	2.97	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 5.94%#			
64) 2,4,6-Tribromophenol	9.93	330	5975	6.76	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 6.76%#			
77) Terphenyl-d14	11.87	244	13440	4.98	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 9.96%#			
Target Compounds						Qvalue
7) Phenol	5.71	94	911994	213.37	UG	# 77
14) 1,2-Dichlorobenzene	6.40	146	37757	7.14	UG	99
17) 4-Methylphenol	6.63	108	4654630	1689.24	UG	86
44) 1-1'-Biphenyl	8.70	154	8883	1.14	UG	93

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

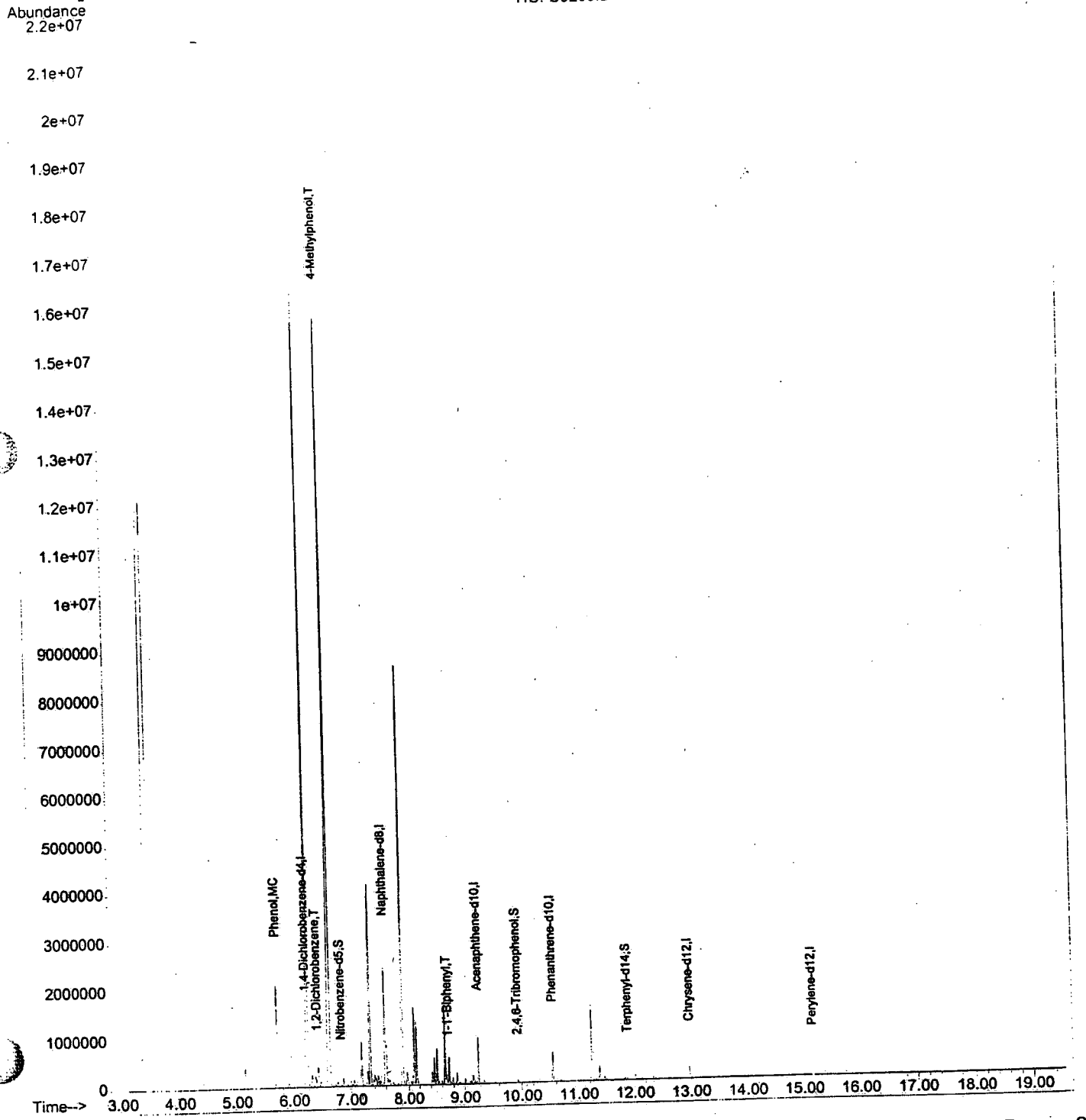
4110

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D Vial: 6
Acq On : 6 Apr 2001 15:00 Operator: DP
Sample : MW-8,2094-007,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 17:08 2001 Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration

TIC: C9200.D



000277

4111

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 1.2
Stop Thrs : 1.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.435	112	121	134	rBV	21358612	78253413	100.00%	54.613%
2	5.705	538	546	560	rVB	2182131	2874808	3.67%	2.006%
3	6.239	631	646	649	rBV	18464280	17637160	22.54%	12.309%
4	6.629	705	719	722	rBV	17750193	22584841	28.86%	15.762%
5	7.185	816	823	827	rBV	926318	1043092	1.33%	0.728%
6	7.329	845	850	854	rVB	4159083	4303028	5.50%	3.003%
7	7.586	889	898	902	rBV	2554250	3020908	3.86%	2.108%
8	7.895	950	956	965	rVB	8631521	7417447	9.48%	5.177%
9	8.098	991	994	998	rVB	1589914	1439109	1.84%	1.004%
10	8.141	998	1002	1010	rVB	1299940	1103661	1.41%	0.770%
11	8.649	1093	1097	1100	rBV	1755436	1429265	1.83%	0.997%
12	9.242	1203	1208	1212	rBV	984898	873644	1.12%	0.610%
13	11.229	1576	1580	1583	rBV	1623792	1306405	1.67%	0.912%

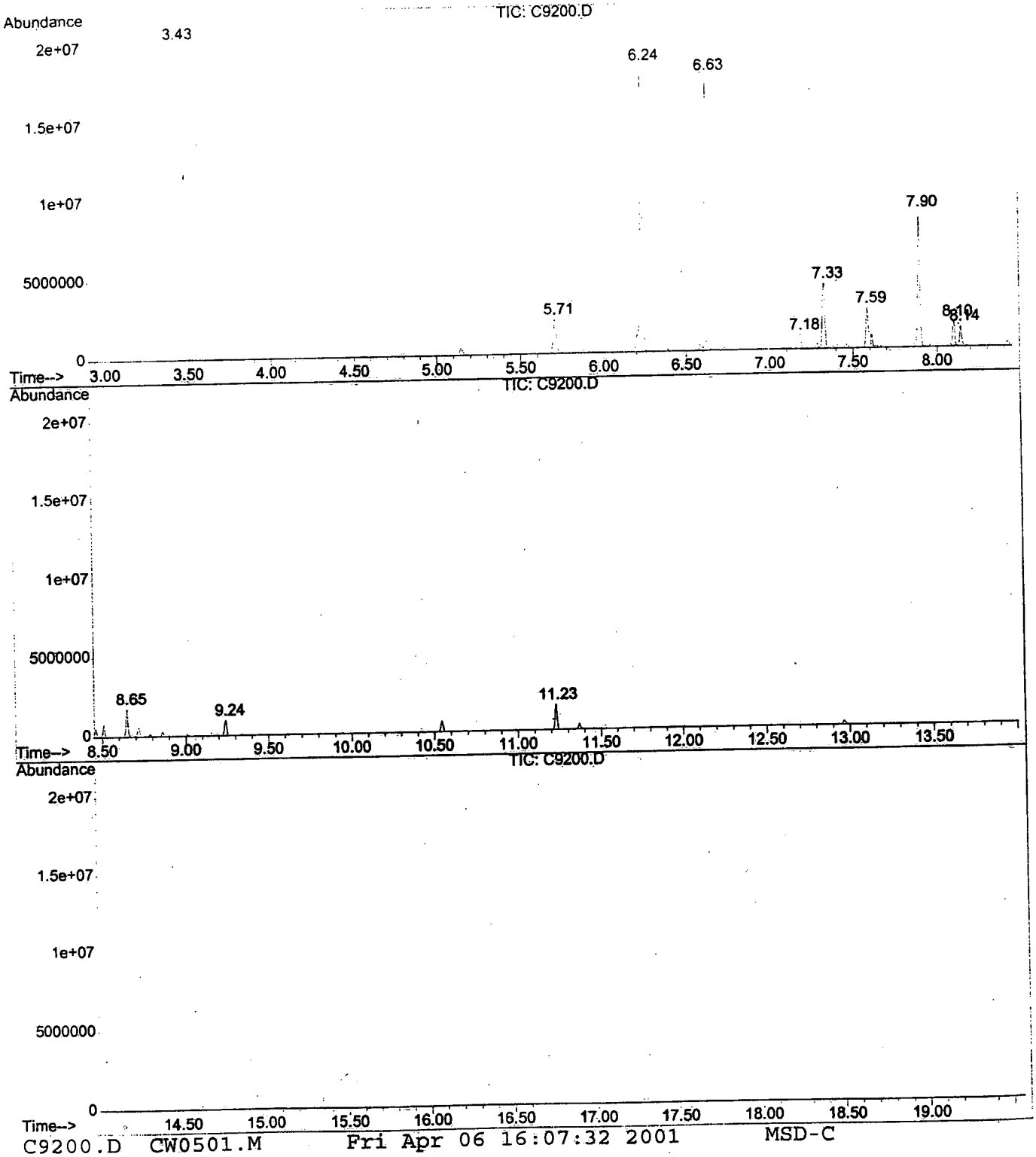
Sum of corrected areas: 143286781

C9200.D CW0501.M Fri Apr 06 16:07:32 2001 MSD-C

000273

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Operator : DP
Acquired : 6 Apr 2001 15:00 using AcqMethod CW0501
Instrument : MSD-C
Sample Name: MW-8,2094-007,A,1000mL,100,04/06/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,10
Vial Number: 6
Quant File :CW0501.RES (RTE Integrator)



C9200.D CW0501.M Fri Apr 06 16:07:32 2001 MSD-C

4113

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

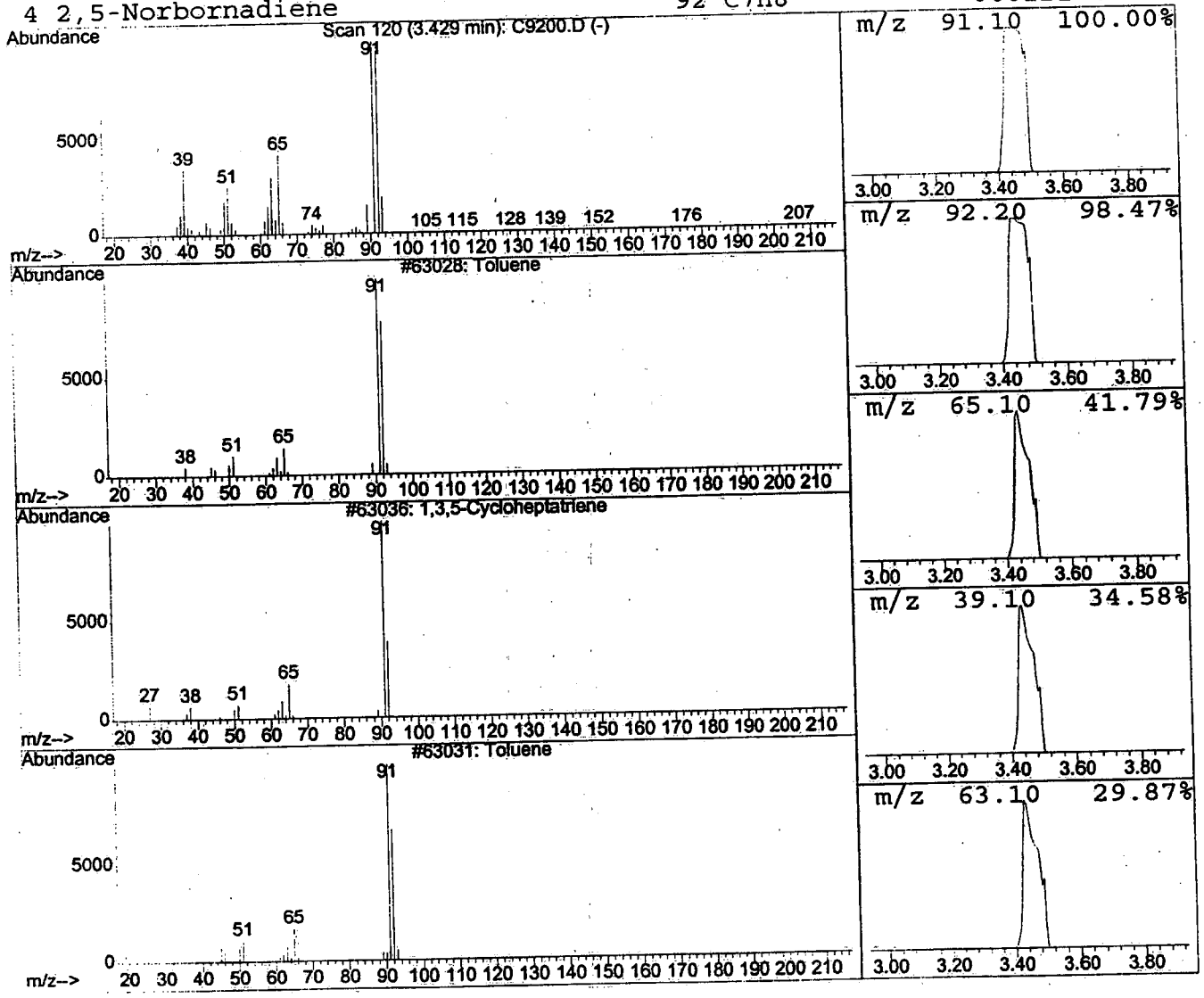
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.43	177.47 UG	78253400	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	90
2	1,3,5-Cycloheptatriene	92	C7H8	000544-25-2	90
3	Toluene	92	C7H8	000108-88-3	83
4	2,5-Norbornadiene	92	C7H8	000121-46-0	80



000253

4114

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

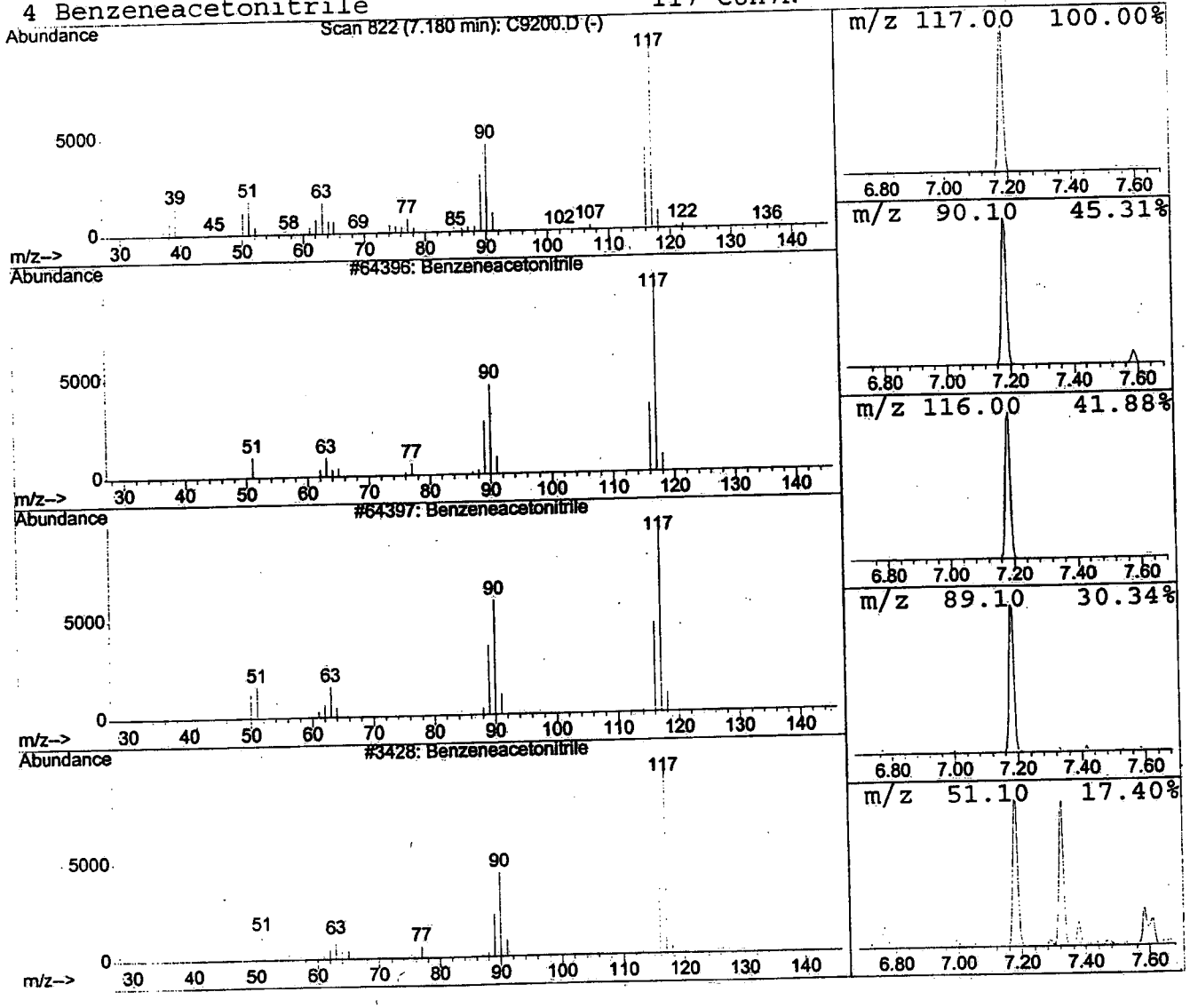
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Benzeneacetonitrile Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.18	13.81 UG	1043090	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzeneacetonitrile	117	C8H7N	000140-29-4	97
2	Benzeneacetonitrile	117	C8H7N	000140-29-4	96
3	Benzeneacetonitrile	117	C8H7N	000140-29-4	95
4	Benzeneacetonitrile	117	C8H7N	000140-29-4	94



4115

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

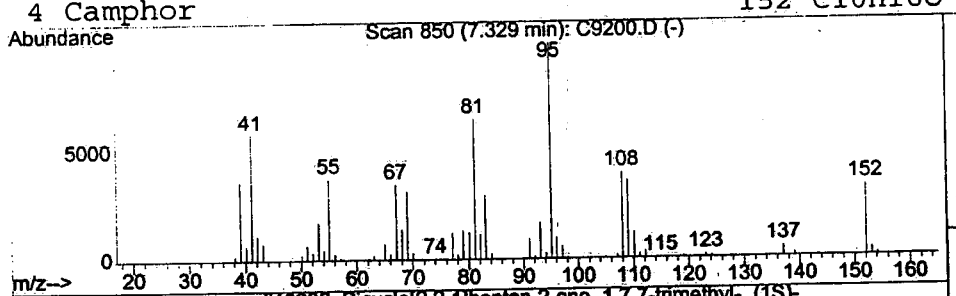
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

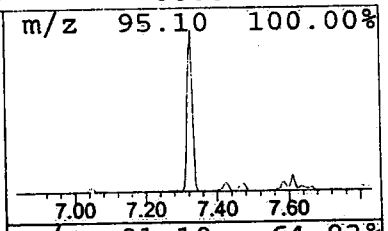
****

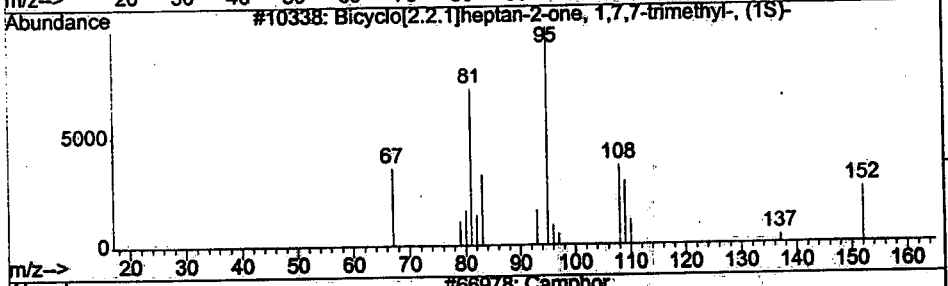
Peak Number 3 Unknown — Concentration Rank 3

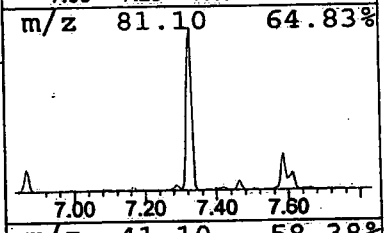
R.T.	EstConc	Area	Relative to ISTD	R.T.
7.33	56.98 UG	4303030	Naphthalene-d8	7.59

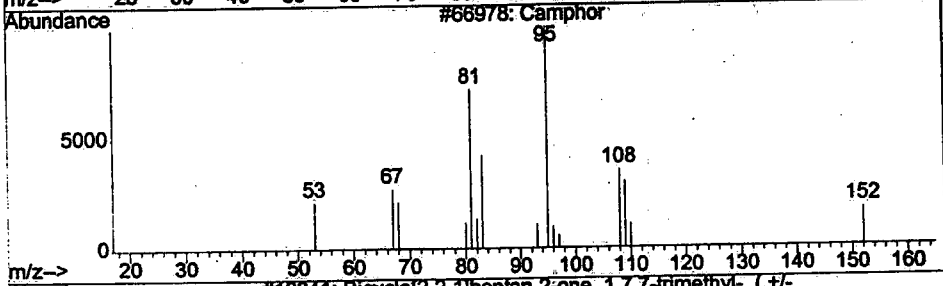
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	97
2	Camphor	152	C10H16O	000076-22-2	95
3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	021368-68-3	95
4	Camphor	152	C10H16O	000076-22-2	95

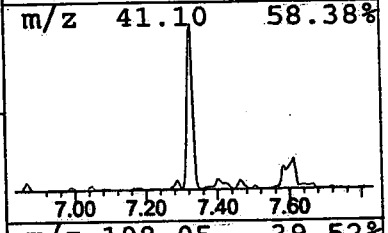


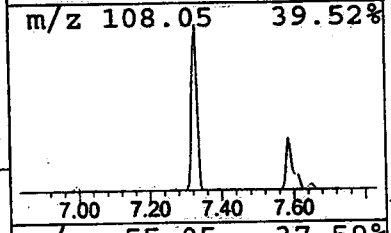


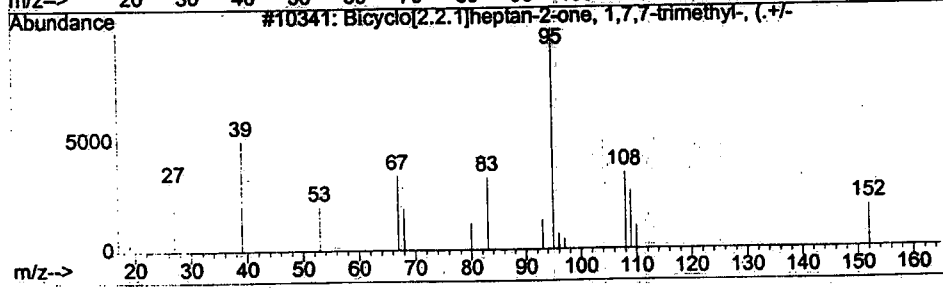


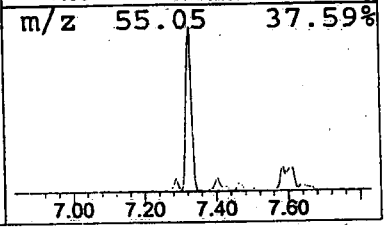












4116

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

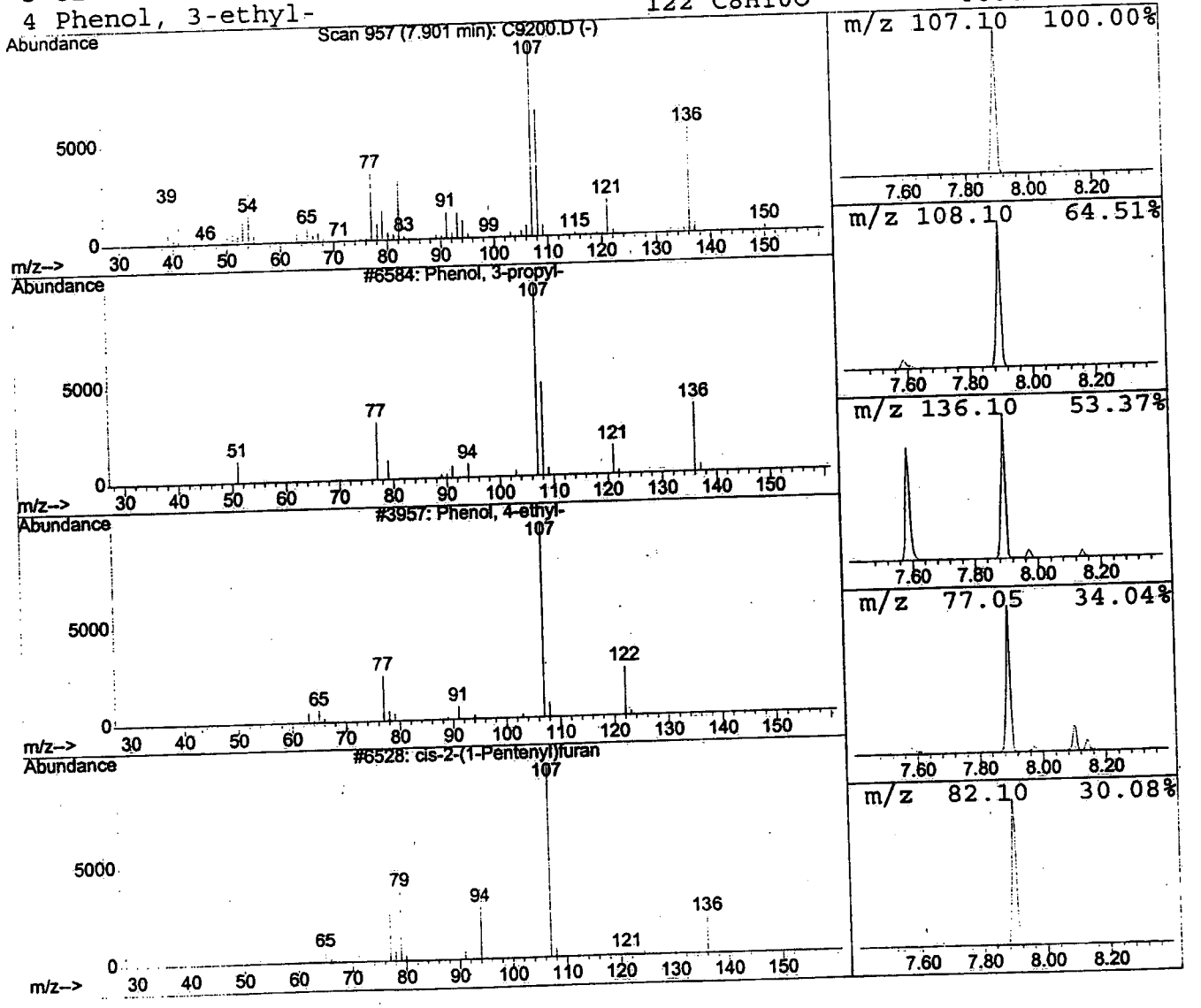
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted phenol — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.90	98.21 UG	7417450	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 3-propyl-	136	C9H12O	000621-27-2	91
2	Phenol, 4-ethyl-	122	C8H10O	000123-07-9	49
3	cis-2-(1-Pentenyl)furan	136	C9H12O	000000-00-0	49
4	Phenol, 3-ethyl-	122	C8H10O	000620-17-7	47



000233

4117

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

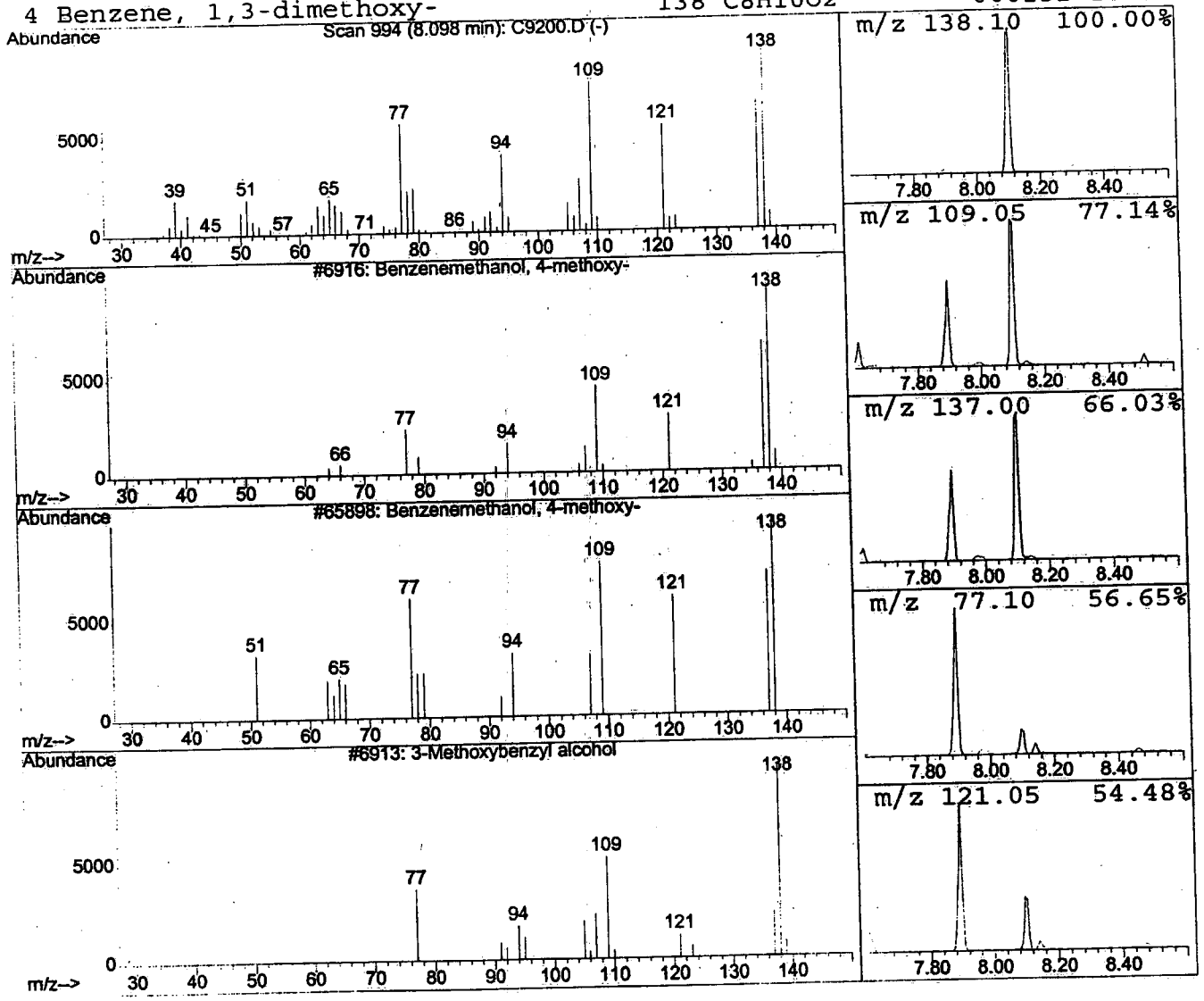
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.10	19.06 UG	1439110	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzenemethanol, 4-methoxy-	138	C8H10O2	000105-13-5	96
2	Benzenemethanol, 4-methoxy-	138	C8H10O2	000105-13-5	96
3	3-Methoxybenzyl alcohol	138	C8H10O2	006971-51-3	43
4	Benzene, 1,3-dimethoxy-	138	C8H10O2	000151-10-0	43



4116

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

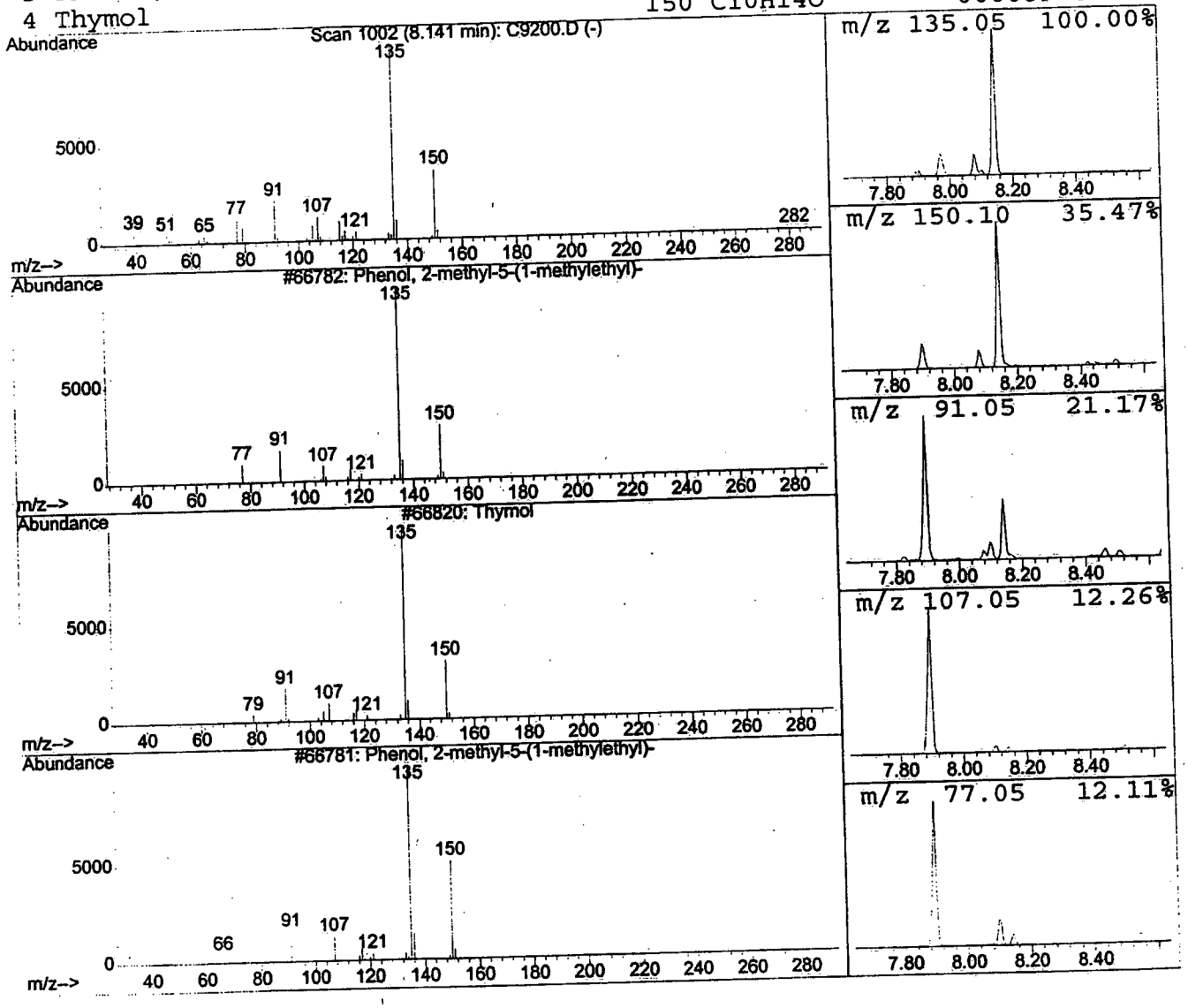
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Substituted phenol Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.14	14.61 UG	1103660	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	95
2	Thymol	150	C10H14O	000089-83-8	91
3	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	91
4	Thymol	150	C10H14O	000089-83-8	87



4119

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9200.D
Acq On : 6 Apr 2001 15:00
Sample : MW-8,2094-007,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

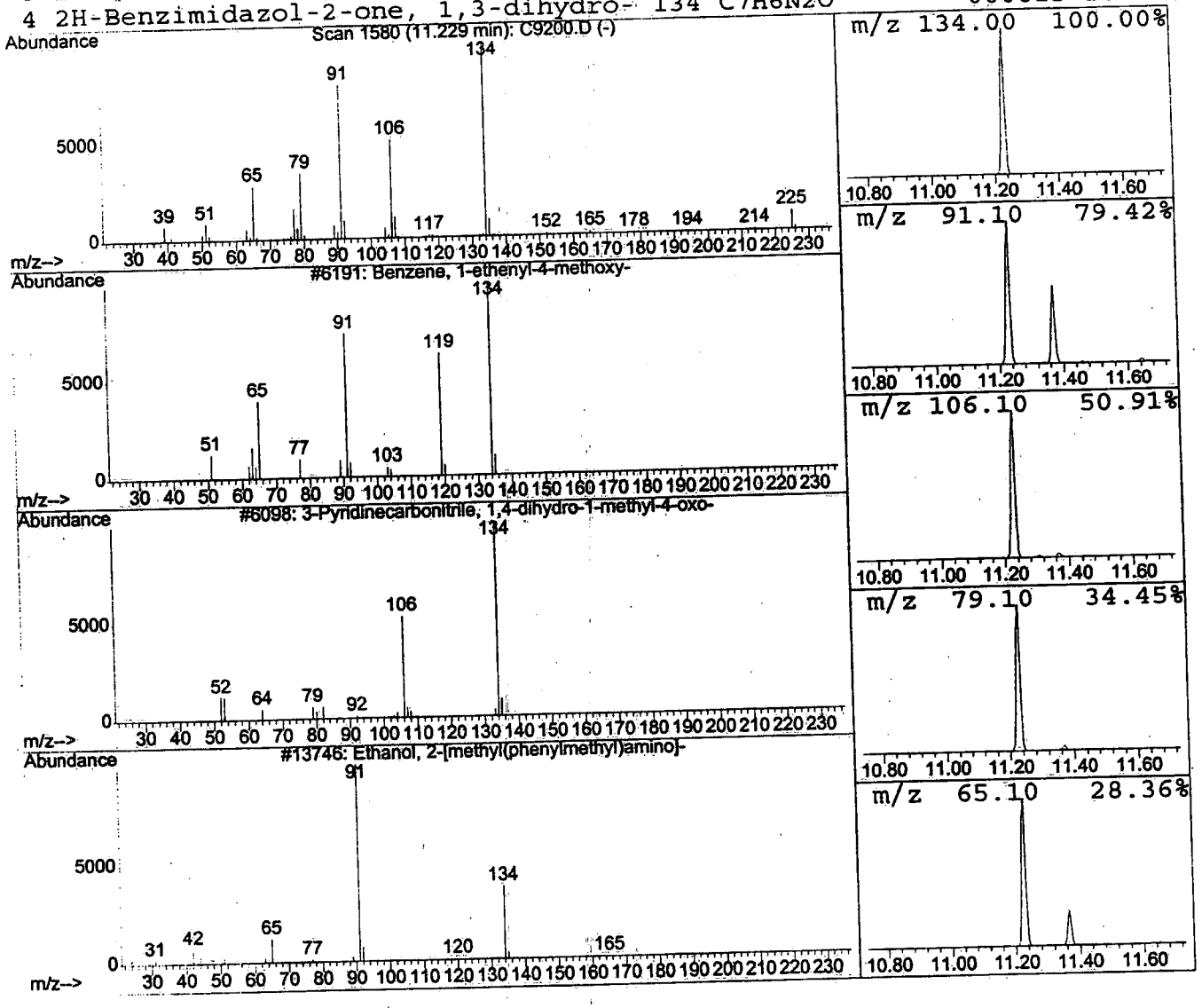
****

Peak Number 7 Unknown

Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.23	40.00 UG	1306410	Phenanthrene-d10	10.55

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-ethenyl-4-methoxy-	134	C9H10O	000637-69-4	58
2	3-Pyridinecarbonitrile, 1,4-dihydro	134	C7H6N2O	000767-98-6	50
3	Ethanol, 2-[methyl(phenylmethyl)ami	165	C10H15NO	000101-98-4	46
4	2H-Benzimidazol-2-one, 1,3-dihydro-	134	C7H6N2O	000615-16-7	43



000236

4120

Quantitation Report (QT Reviewed)

ata File : C:\HPCHEM\1\DATA\04-06-01\C9204.D
cq On : 6 Apr 2001 16:41
ample : MW-8,2094-007DIL,A,1000mL,100,04/06/01
isc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,2
Integration Params: RTEINT.P
uant Time: Apr 6 17:04 2001

Vial: 6
Operator: DP
Inst : MSD-C
Multiplr: 1.00
Quant Results File: CW0501.RES

uant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
itle : BNA CALIBRATION METHOD
ast Update : Fri Apr 06 12:18:58 2001
esponse via : Initial Calibration
ataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	189329	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	493214	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	223125	40.00	UG	0.00
60) Phenanthrene-d10	10.55	188	277463	40.00	UG	0.00
75) Chrysene-d12	12.96	240	108883	40.00	UG	0.00
84) Perylene-d12	15.13	264	53701	40.00	UG	-0.01

System Monitoring Compounds					
4) 2-Fluorophenol	0.00	112	0d	0.00	UG
Spiked Amount 100.000	Range 42 - 95		Recovery =	0.00%	#
6) Phenol-d5	0.00	99	0d	0.00	UG
Spiked Amount 100.000	Range 59 - 97		Recovery =	0.00%	#
23) Nitrobenzene-d5	0.00	82	0d	0.00	UG
Spiked Amount 50.000	Range 49 - 105		Recovery =	0.00%	#
43) 2-Fluorobiphenyl	0.00	172	0d	0.00	UG
Spiked Amount 50.000	Range 54 - 110		Recovery =	0.00%	#
64) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG
Spiked Amount 100.000	Range 48 - 126		Recovery =	0.00%	#
77) Terphenyl-d14	0.00	244	0d	0.00	UG
Spiked Amount 50.000	Range 53 - 123		Recovery =	0.00%	#

Target Compounds						Qvalue
7) Phenol	5.69	94	42076	8.21	UG	# 84
17) 4-Methylphenol	6.59	108	197663	59.80	UG	99

(#) = qualifier out of range (m) = manual integration
C9204.D CW0501.M Mon Apr 09 13:06:35 2001 MSD-C

4121

000287

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D Vial: 7
Acq On : 6 Apr 2001 15:26 Operator: DP
Sample : MW-3,2094-008,A,1000mL,100,04/06/01 Inst : MSD-C
[redacted] : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
Integration Params: RTEINT.P
Quant Time: Apr 9 14:18 2001 Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	142080	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	444629	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	206877	40.00	UG	0.00
60) Phenanthrene-d10	10.55	188	245836	40.00	UG	0.00
75) Chrysene-d12	12.97	240	90916	40.00	UG	0.00
84) Perylene-d12	15.14	264	52927	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.55	112	238948	59.77	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 59.77%			
6) Phenol-d5	5.68	99	286813	73.66	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 73.66%			
23) Nitrobenzene-d5	6.82	82	98301	32.01	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 64.02%			
[redacted]) 2-Fluorobiphenyl	8.60	172	236429	32.83	UG	0.00
[redacted]piked Amount 50.000	Range 54 - 110		Recovery = 65.66%			
64) 2,4,6-Tribromophenol	9.93	330	74227	88.40	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 88.40%			
77) Terphenyl-d14	11.87	244	134393m	55.36	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 110.72%			
Target Compounds						Qvalue
7) Phenol	5.70	94	12633	3.28	UG	# 1
8) Aniline	5.80	93	9818	2.18	UG	# 85
12) 1,4-Dichlorobenzene	6.22	146	5743	1.09	UG	# 63
14) 1,2-Dichlorobenzene	6.40	146	17343	3.64	UG	94

(#) = qualifier out of range (m) = manual integration
C9201.D CW0501.M Mon Apr 09 14:19:06 2001 MSD-C

000283

4122

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
S Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 1.2
Stop Thrs : 1.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.435	113	121	125	rBV	20400376	25027402	78.06%	30.544%
2	3.472	125	128	133	rVB	3269413	3939114	12.29%	4.807%
3	4.359	287	294	297	rBV	5227375	6769272	21.11%	8.261%
4	4.386	297	299	306	rVB	1456700	1347705	4.20%	1.645%
5	4.546	324	329	332	rBV	571243	649193	2.02%	0.792%
6	5.240	454	459	467	rVB	819017	1054080	3.29%	1.286%
7	5.582	517	523	531	rBV	1669899	2250456	7.02%	2.747%
8	5.652	531	536	539	rVV	835513	1031295	3.22%	1.259%
9	5.684	539	542	551	rVB	725621	860177	2.68%	1.050%
10	6.202	634	639	647	rBV	793474	896388	2.80%	1.094%
11	6.287	647	655	659	rBV	23698791	32061882	100.00%	39.129%
12	6.325	659	662	666	rVB	2566116	2236997	6.98%	2.730%
13	7.586	893	898	907	rBV	1043762	928396	2.90%	1.133%
14	8.595	1083	1087	1091	rBV	844971	658945	2.06%	0.804%
15	9.236	1204	1207	1211	rBV	988915	832687	2.60%	1.016%
16	9.931	1333	1337	1343	rBV	592643	482436	1.50%	0.589%
17	10.545	1448	1452	1456	rBV	688031	547960	1.71%	0.669%
18	11.870	1696	1700	1704	rBV	483978	363902	1.13%	0.444%

Sum of corrected areas: 81938287

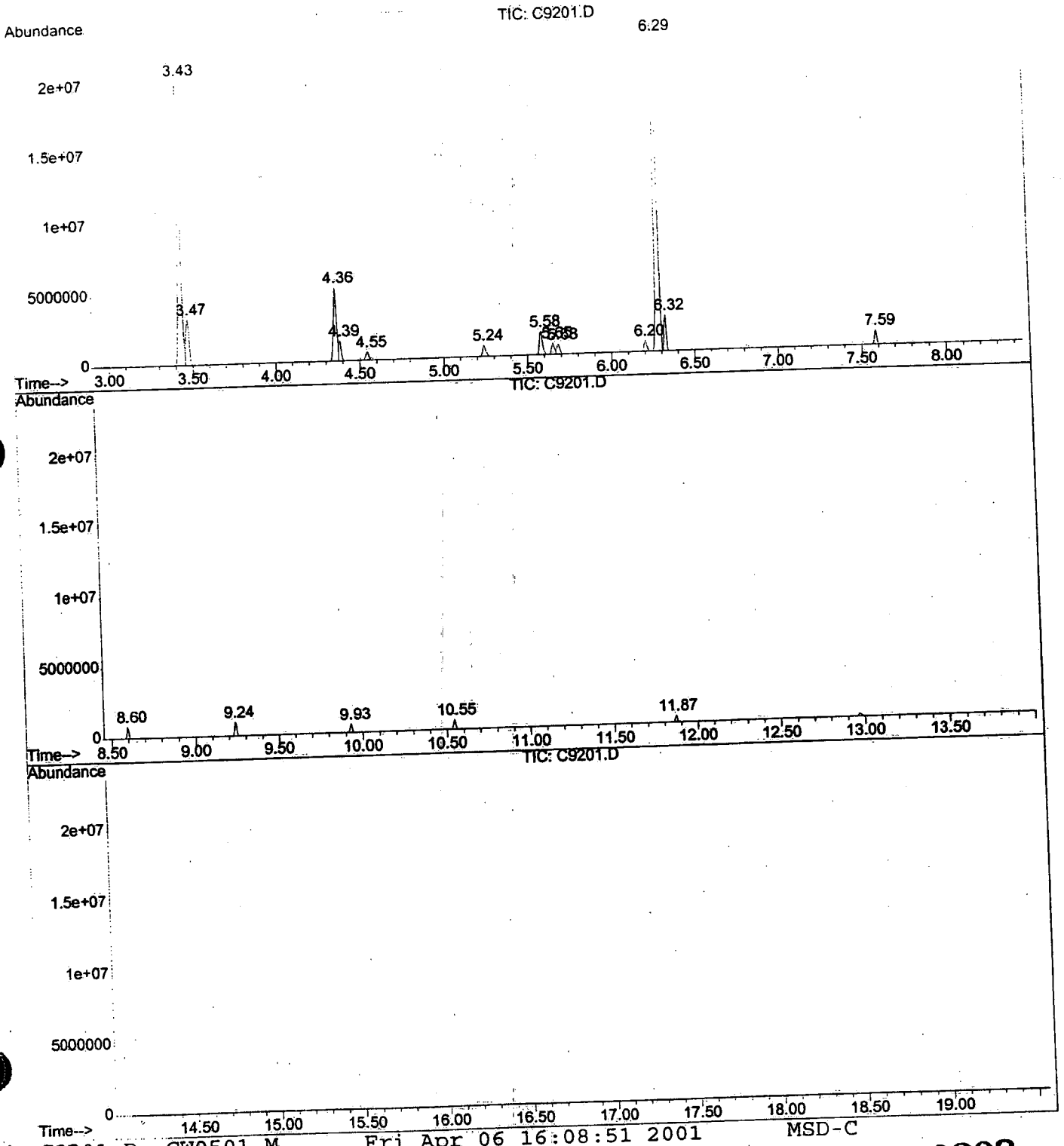
C9201.D CW0501.M Fri Apr 06 16:08:50 2001 MSD-C

000231

4123

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Operator : DP
Acquired : 6 Apr 2001 15:26 using AcqMethod CW0501
Instrument : MSD-C
Sample Name: MW-3,2094-008,A,1000mL,100,04/06/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Vial Number: 7
Quant File :CW0501.RES (RTE Integrator)



C9201.D CW0501.M Fri Apr 06 16:08:51 2001 MSD-C

000202

4124

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

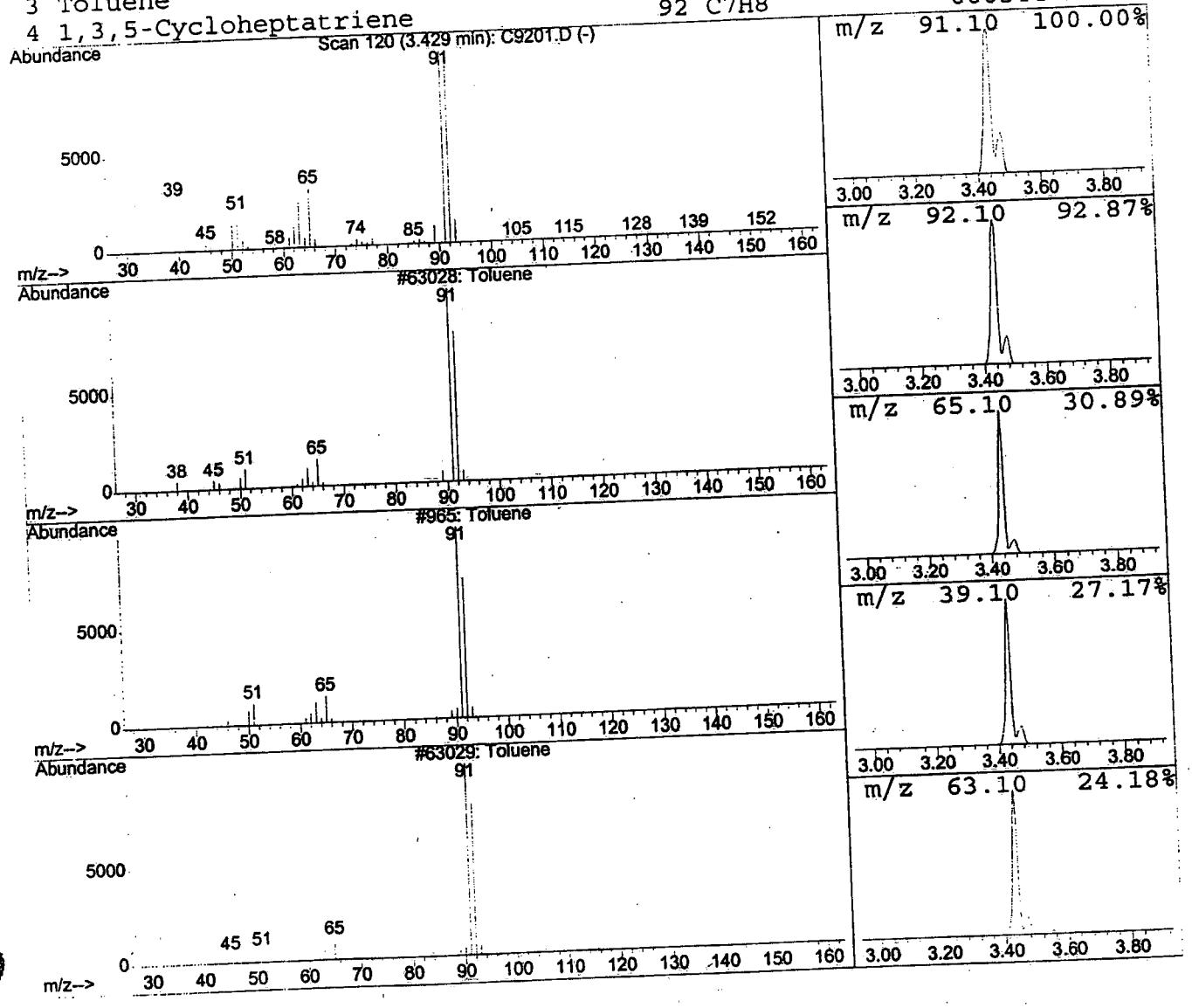
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.43	1116.81 UG	25027400	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	91
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	1,3,5-Cycloheptatriene	92	C7H8	000544-25-2	87



000293

4125

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

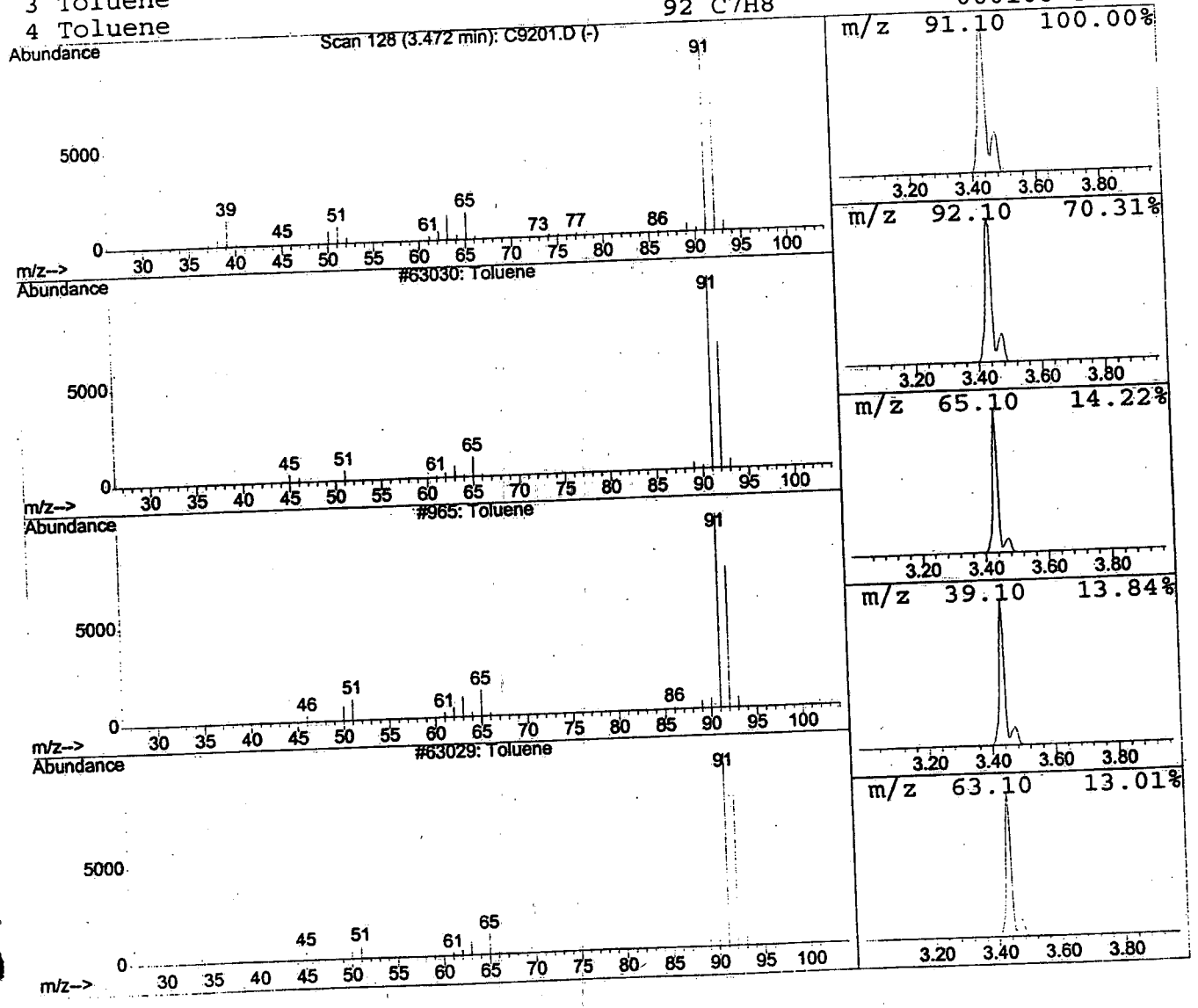
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.47	175.78 UG	3939110	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	91
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	91



HRG

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

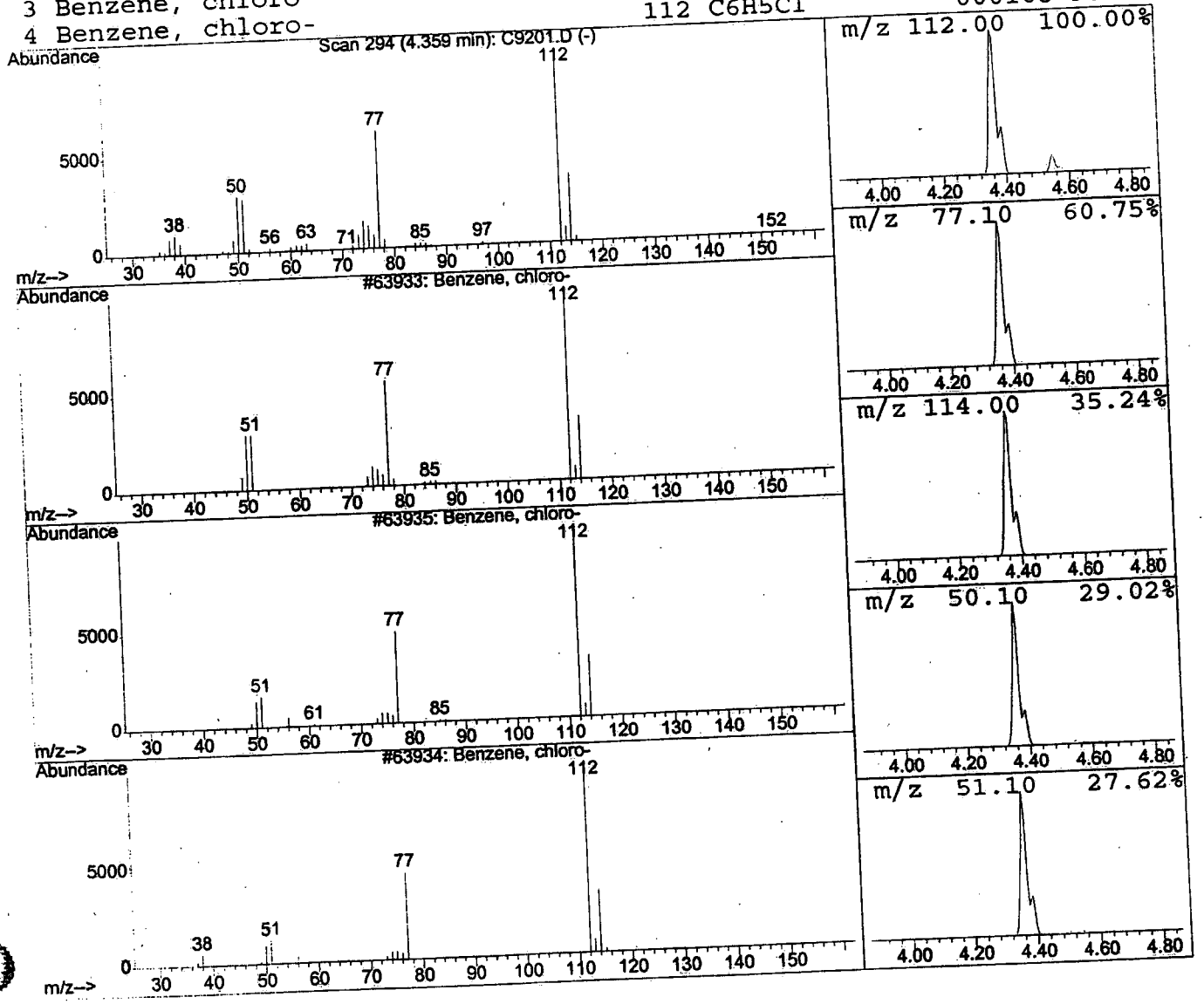
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.36	302.07 UG	6769270	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, chloro-	112	C6H5Cl	000108-90-7	96
2	Benzene, chloro-	112	C6H5Cl	000108-90-7	95
3	Benzene, chloro-	112	C6H5Cl	000108-90-7	91
4	Benzene, chloro-	112	C6H5Cl	000108-90-7	90



000295

4127

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

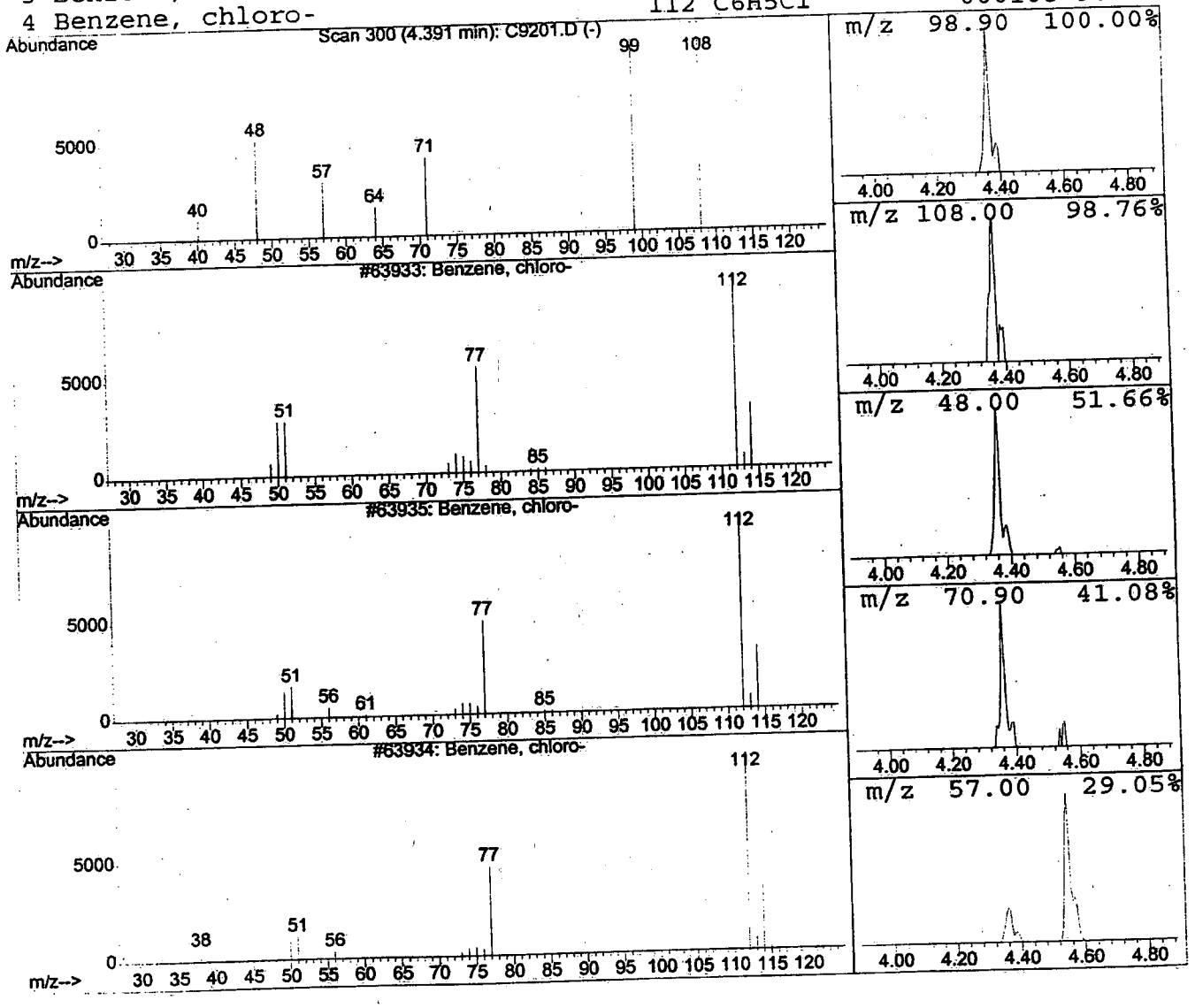
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene — Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.39	60.14 UG	1347710	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, chloro-	112	C6H5Cl	000108-90-7	96
2	Benzene, chloro-	112	C6H5Cl	000108-90-7	90
3	Benzene, chloro-	112	C6H5Cl	000108-90-7	80
4	Benzene, chloro-	112	C6H5Cl	000108-90-7	74



41126

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

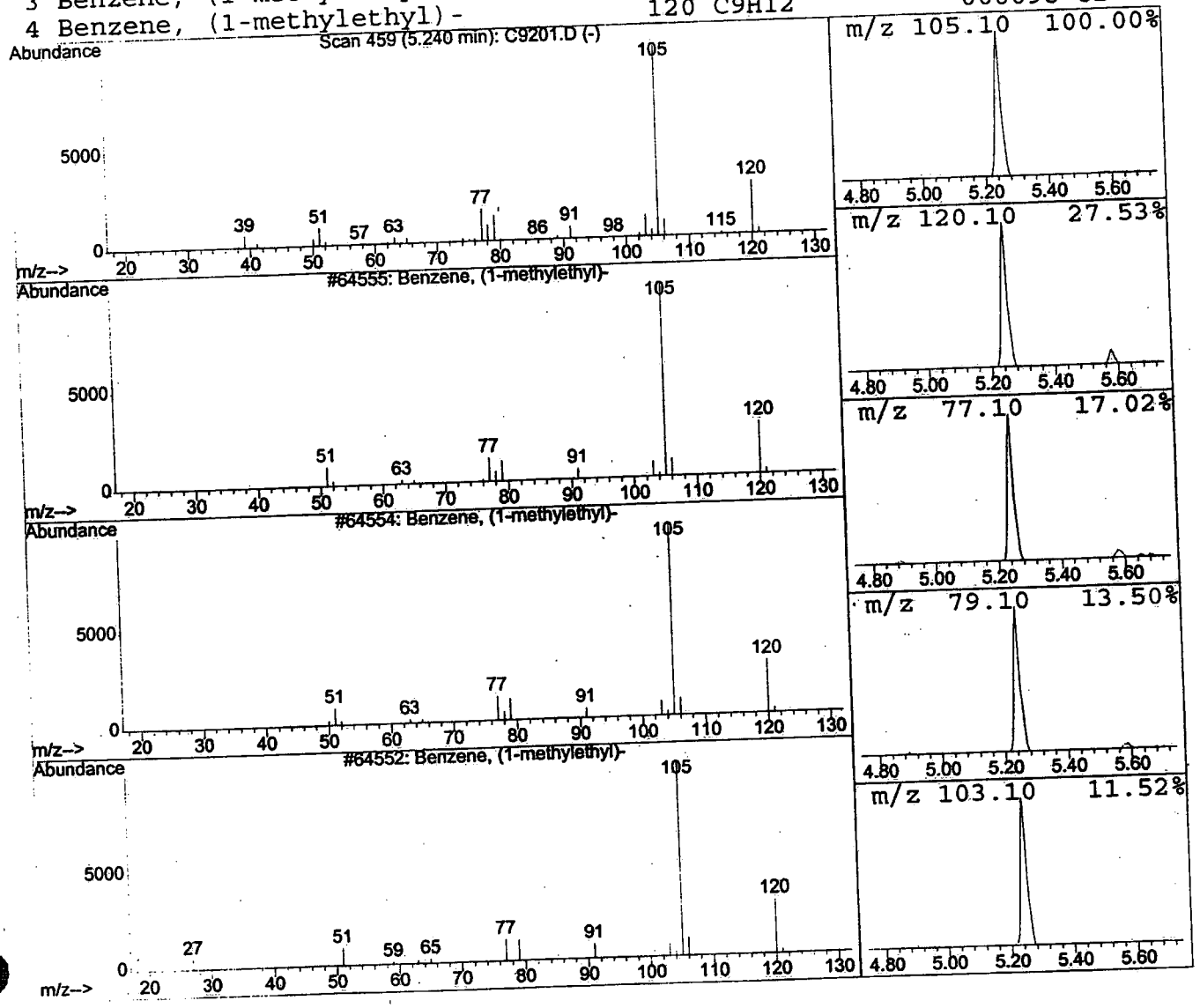
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Substituted benzene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.24	47.04 UG	1054080	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	95
2	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	94
3	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91
4	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91



4129

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

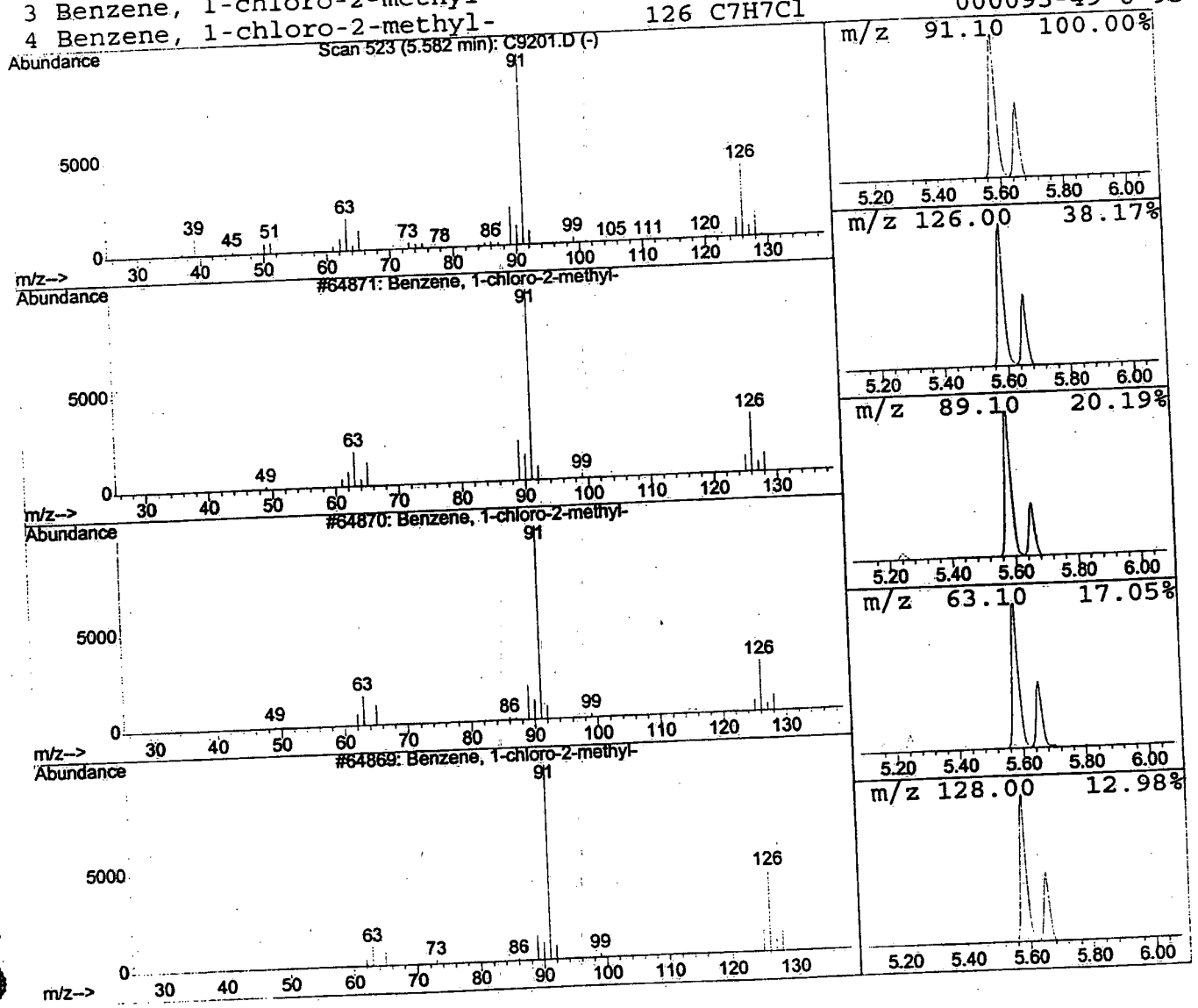
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.58	100.42 UG	2250460	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	97
2	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	96
3	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	94
4	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	93



4/30

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

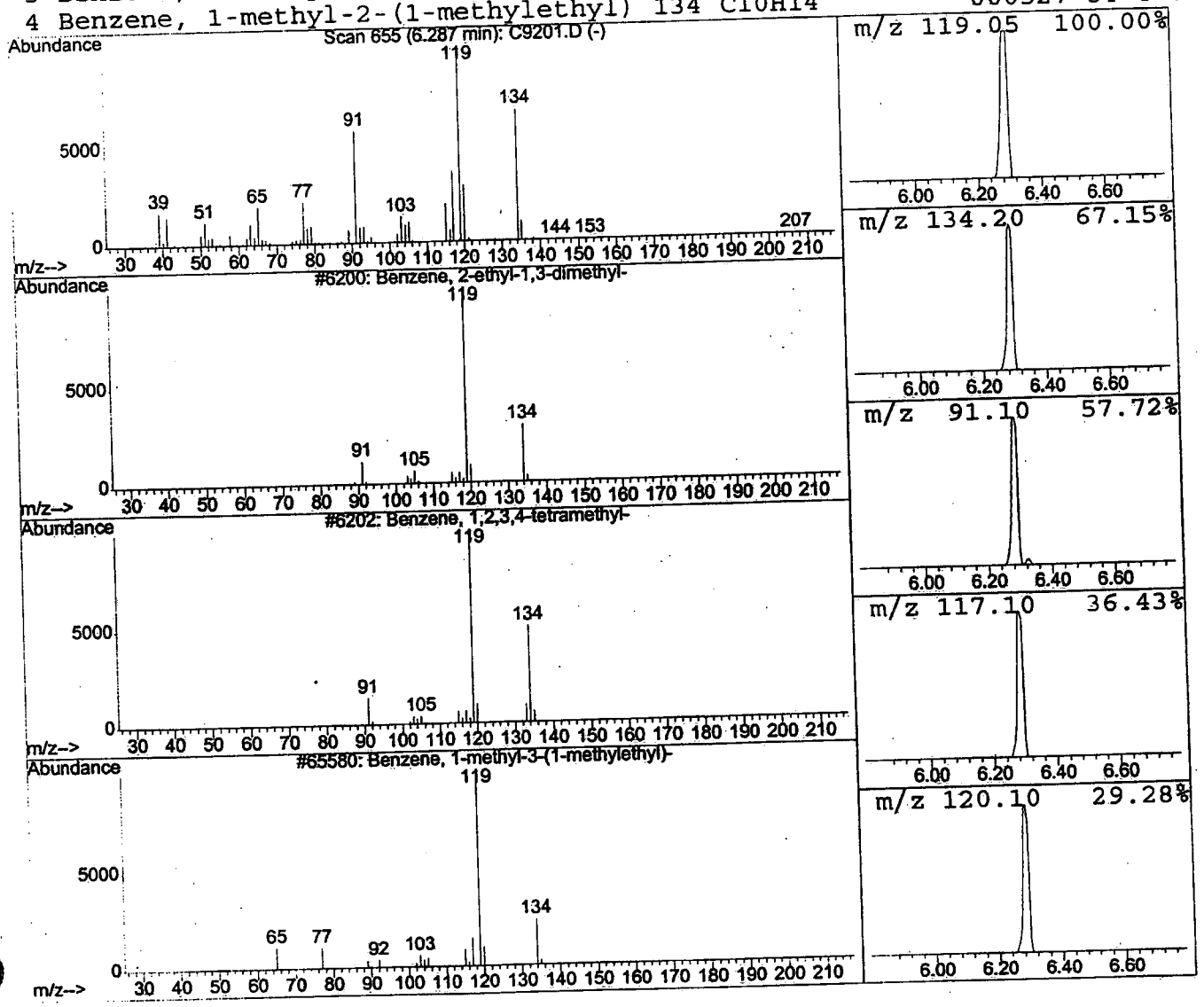
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.29	1430.71 UG	32061900	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethyl-1,3-dimethyl-	134	C10H14	002870-04-4	64
2	Benzene, 1,2,3,4-tetramethyl-	134	C10H14	000488-23-3	64
3	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	60
4	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	60



4131

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9201.D
Acq On : 6 Apr 2001 15:26
Sample : MW-3,2094-008,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 7
Operator: DP
Inst : MSD-C
Multiplr: 1.00

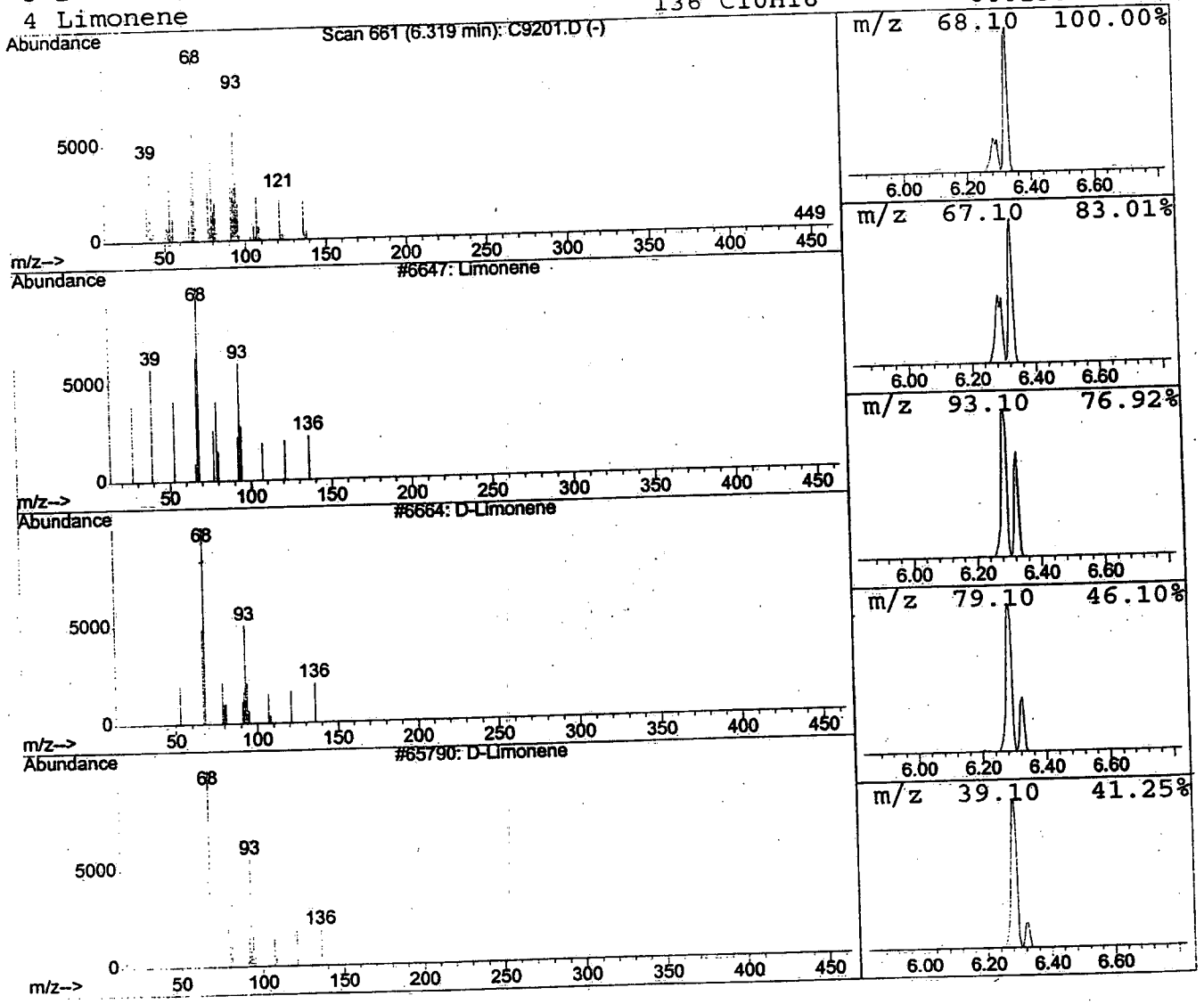
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Limonene — Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.32	99.82 UG	2237000	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Limonene	136	C10H16	000138-86-3	93
2	D-Limonene	136	C10H16	005989-27-5	89
3	D-Limonene	136	C10H16	005989-27-5	86
4	Limonene	136	C10H16	000138-86-3	81



4132

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D Vial: 8
Acq On : 6 Apr 2001 16:16 Operator: DP
Sample : MW-5,2094-009,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
Integration Params: RTEINT.P
Quant Time: Apr 6 16:41 2001 Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	145680	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	637057	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	212991	40.00	UG	0.00
60) Phenanthrene-d10	10.55	188	278604	40.00	UG	0.00
75) Chrysene-d12	12.96	240	107626	40.00	UG	0.00
84) Perylene-d12	15.13	264	62962	40.00	UG	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	4.55	112	22994	5.61	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 5.61%#			
6) Phenol-d5	5.72	99	25175	6.31	UG	0.03
Spiked Amount 100.000	Range 59 - 97		Recovery = 6.31%#			
23) Nitrobenzene-d5	6.82	82	16859m	3.83	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 7.66%#			
43) 2-Fluorobiphenyl	8.60	172	22736	3.07	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 6.14%#			
64) 2,4,6-Tribromophenol	9.93	330	5608	5.89	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 5.89%#			
77) Terphenyl-d14	11.87	244	15266	5.31	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 10.62%#			
Target Compounds						Qvalue
7) Phenol	5.73	94	40207	10.19	UG	# 24
8) Aniline	5.84	93	5640810	1218.94	UG	95
14) 1,2-Dichlorobenzene	6.40	146	40785	8.36	UG	98
17) 4-Methylphenol	6.60	108	22075	8.68	UG	89

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

000001

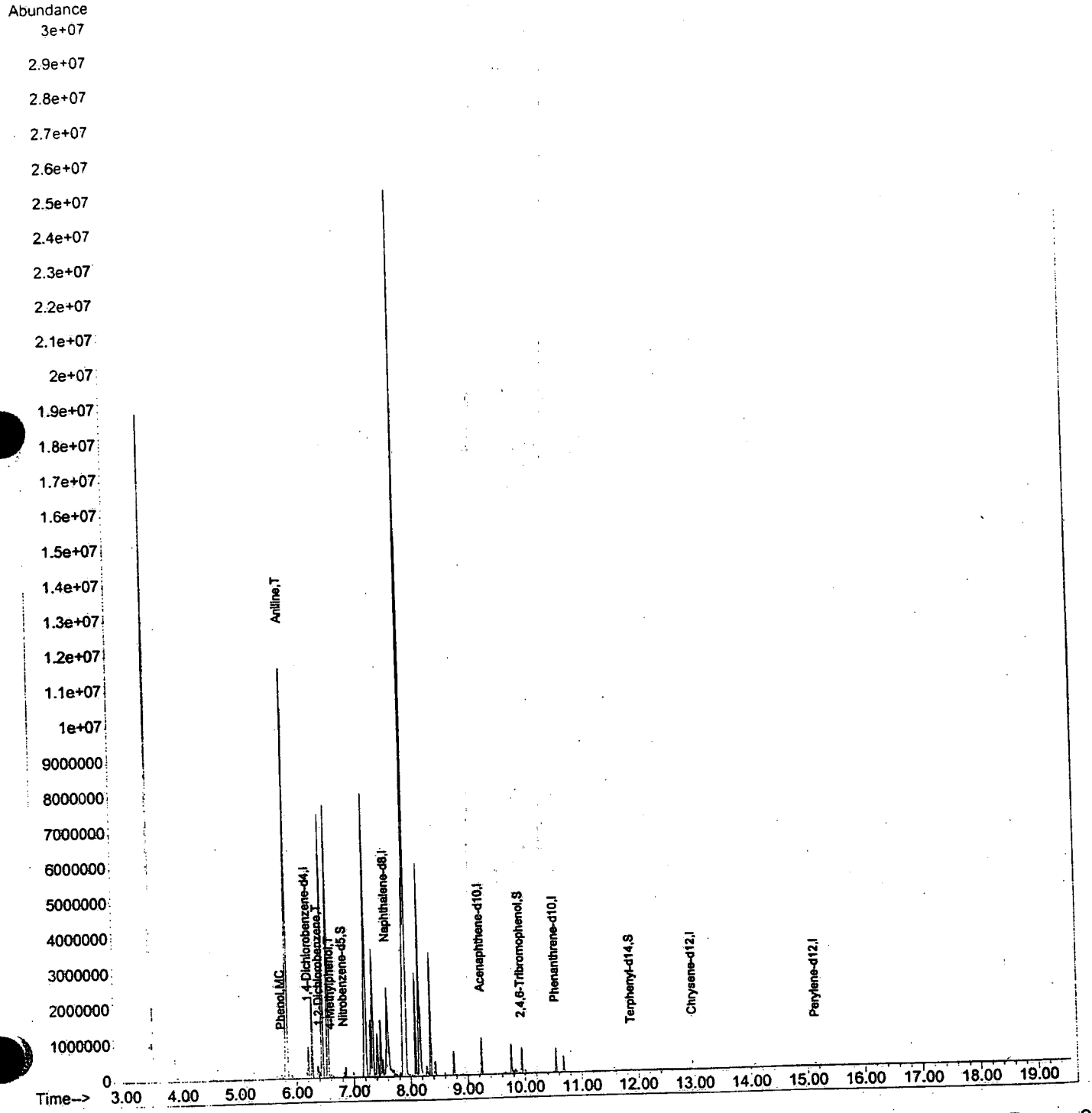
4133

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D Vial: 8
Acq On : 6 Apr 2001 16:16 Operator: DP
Sample : MW-5,2094-009,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 16:41 2001 Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration

TIC: C9203.D



H134

000002

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 1.2
Stop Thrs : 1.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.437	112	121	125	rBV	19205379	24205560	79.72%	15.993%
2	3.474	125	128	133	rVB	2190837	2425275	7.99%	1.602%
3	3.864	195	201	207	rBV	662148	937652	3.09%	0.620%
4	4.607	334	340	352	rVB	328194	630202	2.08%	0.416%
5	5.836	558	570	574	rBV	11593548	16798204	55.33%	11.099%
6	6.204	636	639	646	rVB	898626	905071	2.98%	0.598%
7	6.268	646	651	657	rVB	2278286	2240872	7.38%	1.481%
8	6.370	665	670	673	rBV	353167	355678	1.17%	0.235%
9	6.450	679	685	693	rVB	7448995	8452855	27.84%	5.585%
10	6.551	696	704	707	rBV	7719207	8448867	27.83%	5.582%
11	7.214	815	828	831	rBV	8024447	12341121	40.65%	8.154%
12	7.294	837	843	846	rBV	1606979	1623757	5.35%	1.073%
13	7.337	846	851	855	rVB2	3582148	4331273	14.27%	2.862%
14	7.406	859	864	871	rVB3	1198285	1606306	5.29%	1.061%
15	7.465	871	875	880	rBV	1593502	1709835	5.63%	1.130%
16	7.508	880	883	886	rVB	453762	394900	1.30%	0.261%
17	7.588	888	898	908	rBV3	2464049	5572235	18.35%	3.682%
18	7.882	942	953	955	rBV2	5574484	10562838	34.79%	6.979%
19	7.914	955	959	963	rVB	25221757	30362059	100.00%	20.061%
20	8.085	987	991	994	rBV	2897753	2529537	8.33%	1.671%
21	8.154	999	1004	1006	rVV	5951569	5539640	18.25%	3.660%
22	8.175	1006	1008	1020	rVB	1967772	1764650	5.81%	1.166%
23	8.352	1036	1041	1044	rBV	3502520	3378404	11.13%	2.232%
24	8.426	1051	1055	1061	rBV	424138	408413	1.35%	0.270%
25	8.752	1112	1116	1120	rBV	682970	552941	1.82%	0.365%
26	9.238	1203	1207	1211	rBV	1045152	846734	2.79%	0.559%
27	9.757	1300	1304	1308	rBV	845166	726081	2.39%	0.480%
28	9.944	1331	1339	1343	rBV	716816	680934	2.24%	0.450%
29	10.547	1448	1452	1456	rVB	691918	624403	2.06%	0.413%
30	10.681	1473	1477	1481	rBV	458046	392254	1.29%	0.259%

Sum of corrected areas: 151348551

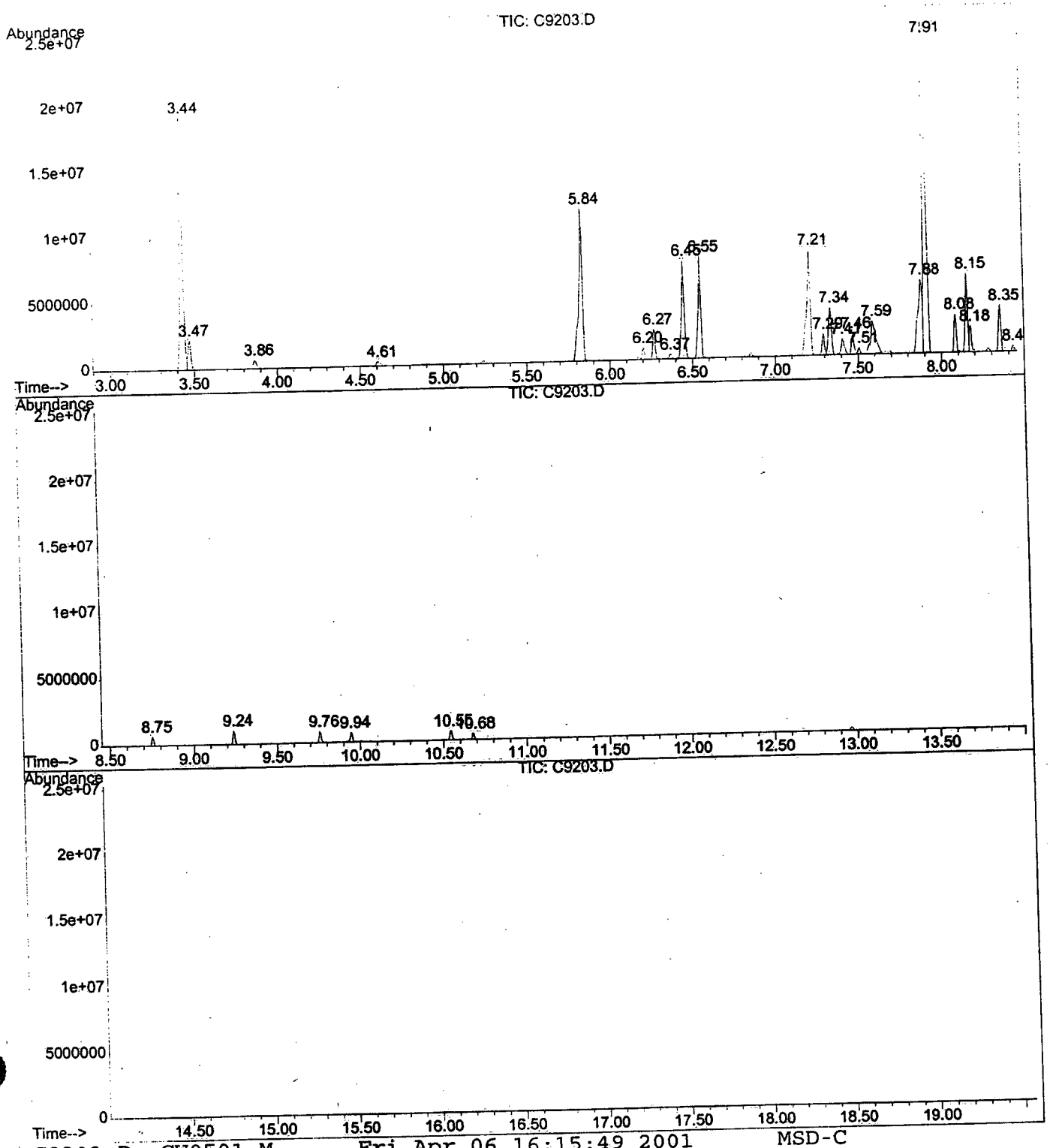
C9203.D CW0501.M Fri Apr 06 16:15:48 2001 MSD-C

000301

4136

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Operator : DP
Acquired : 6 Apr 2001 16:16 using AcqMethod CW0501
Instrument : MSD-C
Sample Name: MW-5,2094-009,A,1000mL,100,04/06/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,10
Vial Number: 8
Quant File :CW0501.RES (RTE Integrator)



4137

000305

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

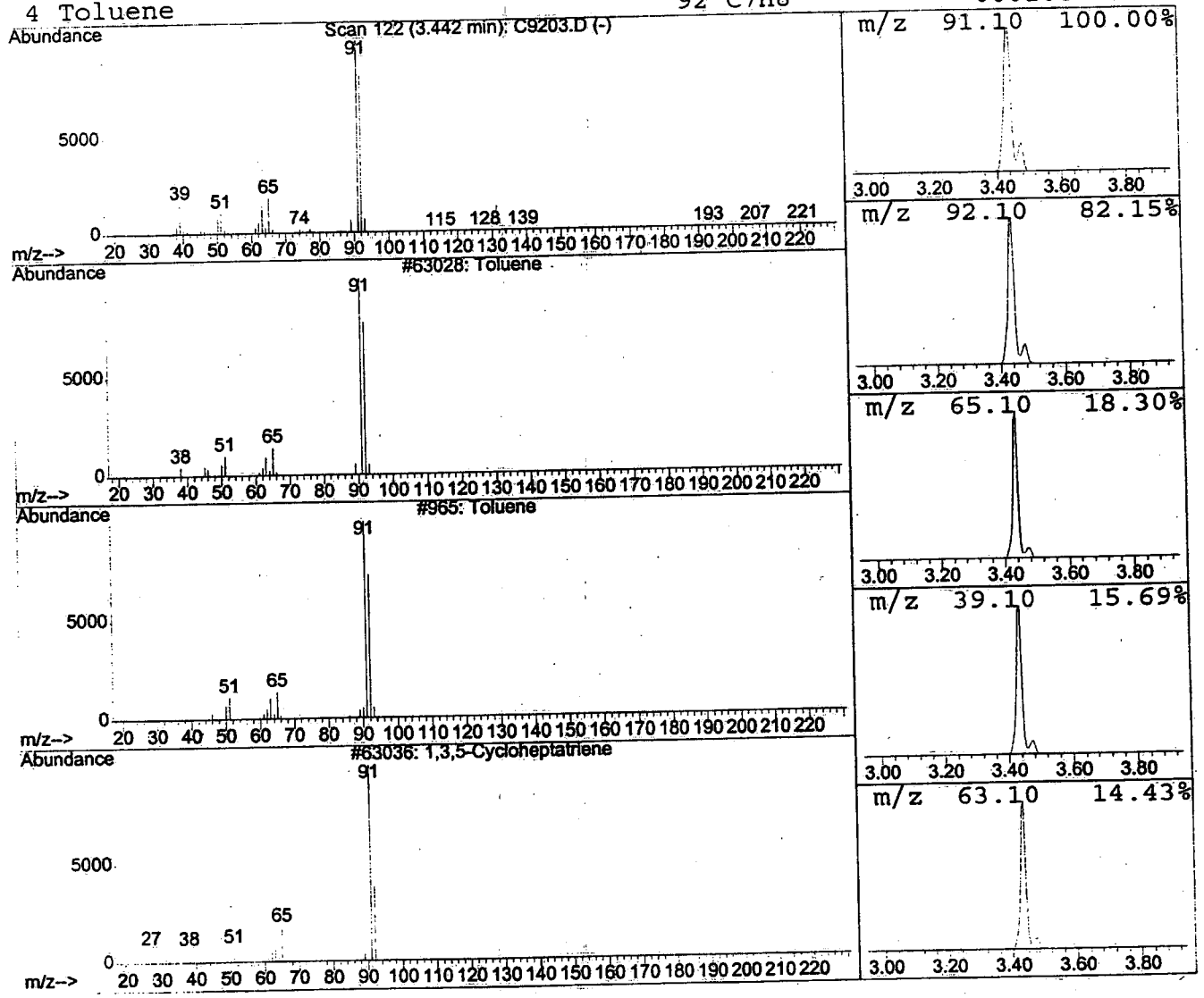
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.44	1069.78 UG	24205600	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	91
2	Toluene	92	C7H8	000108-88-3	91
3	1,3,5-Cycloheptatriene	92	C7H8	000544-25-2	80
4	Toluene	92	C7H8	000108-88-3	80



4138

000306

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

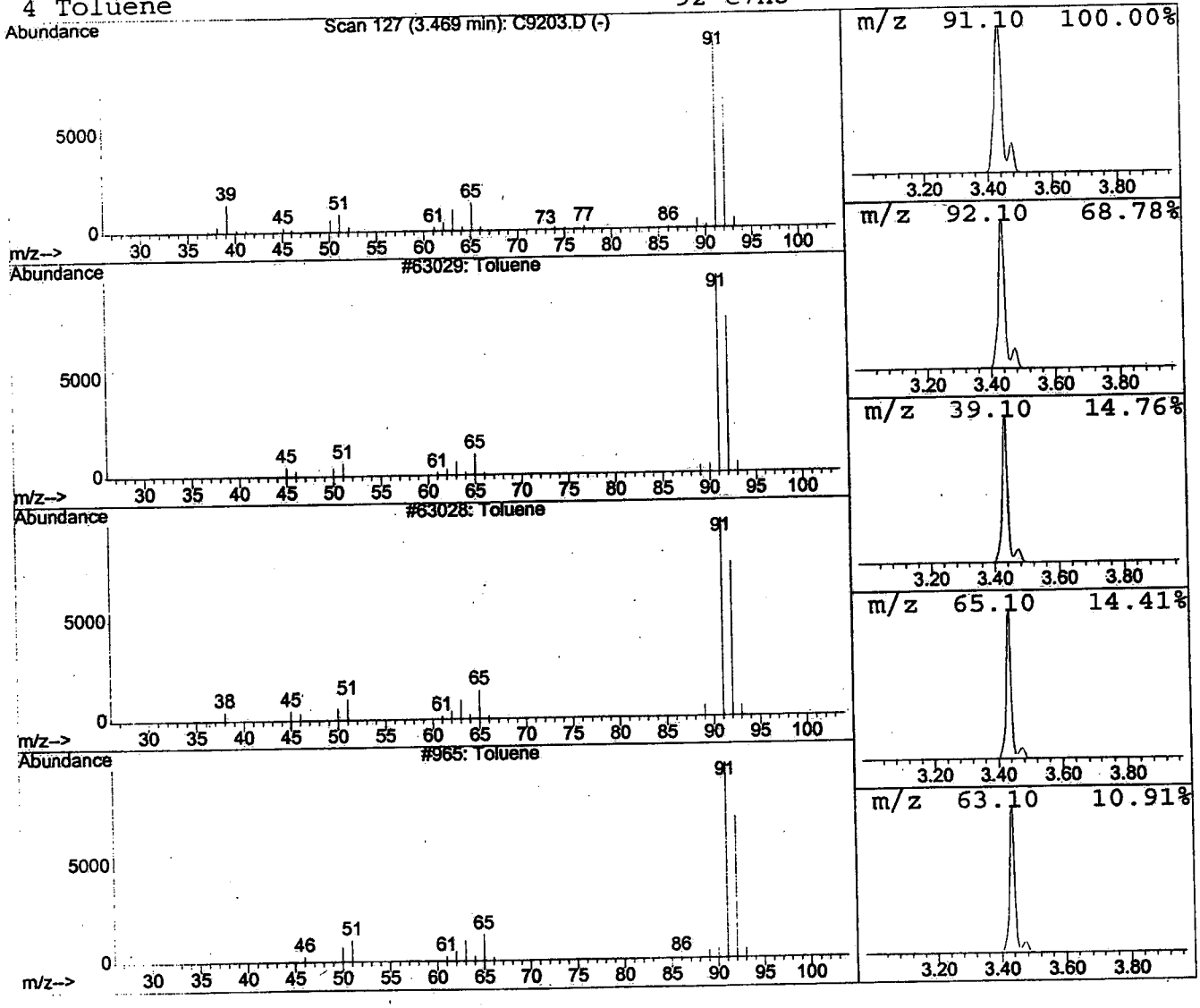
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.47	107.19 UG	2425280	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	94
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	91



000307

4139

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

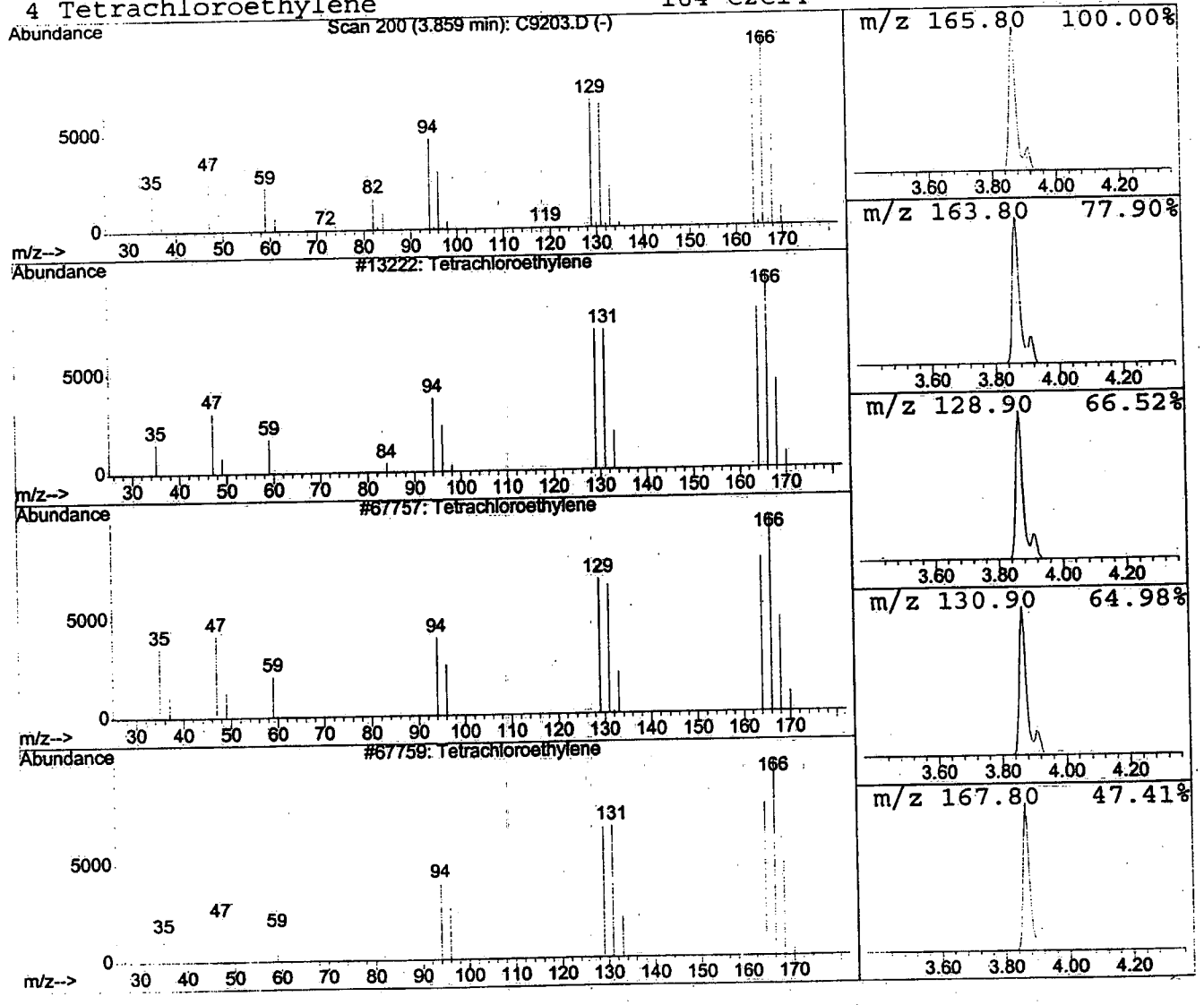
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Tetrachloroethylene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.86	41.44 UG	937652	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetrachloroethylene	164	C2Cl4	000127-18-4	99
2	Tetrachloroethylene	164	C2Cl4	000127-18-4	98
3	Tetrachloroethylene	164	C2Cl4	000127-18-4	98
4	Tetrachloroethylene	164	C2Cl4	000127-18-4	97



4140

000203

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

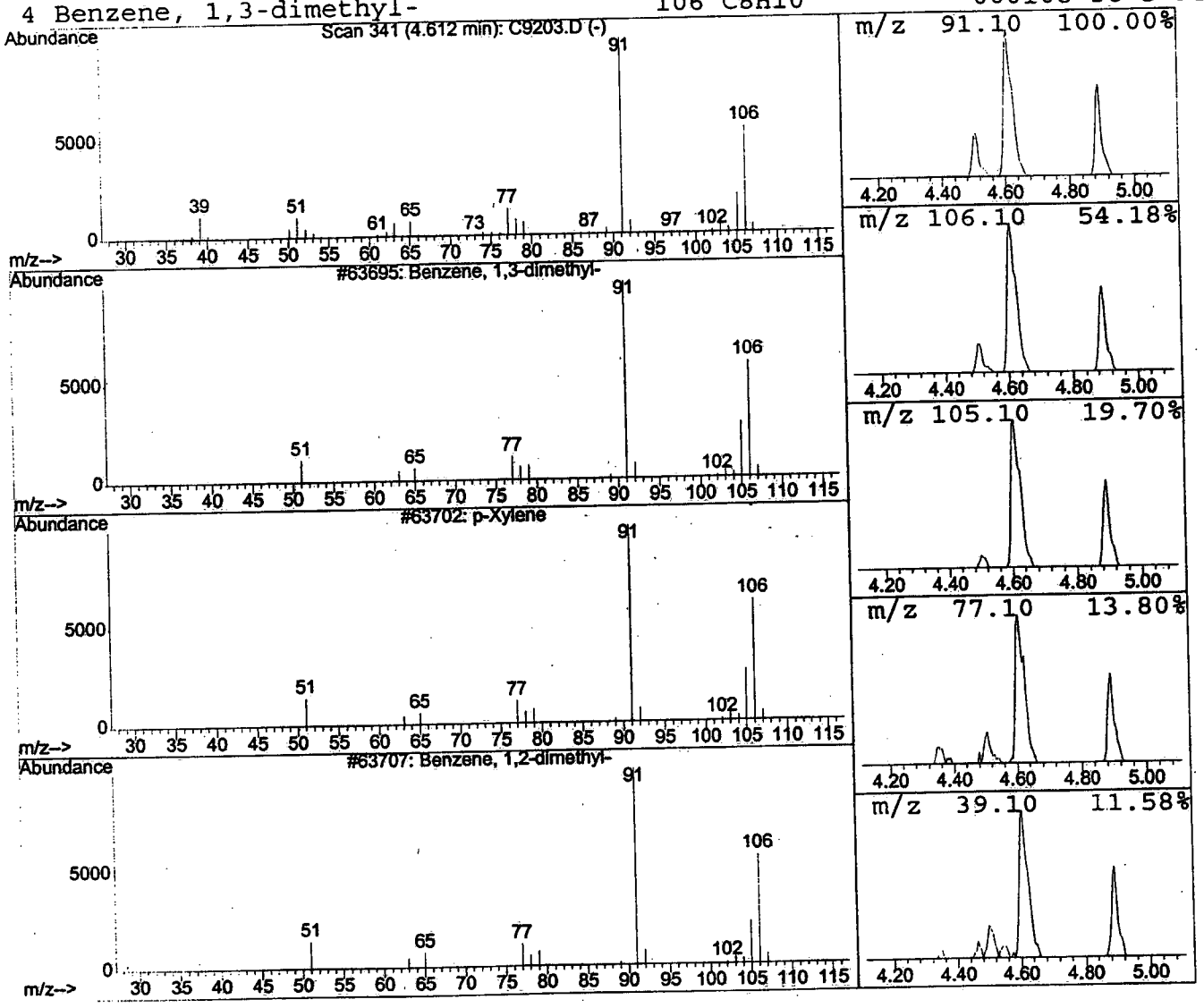
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.61	27.85 UG	630202	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3-dimethyl-	106	C8H10	000108-38-3	97
2	p-Xylene	106	C8H10	000106-42-3	95
3	Benzene, 1,2-dimethyl-	106	C8H10	000095-47-6	95
4	Benzene, 1,3-dimethyl-	106	C8H10	000108-38-3	95



4141

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

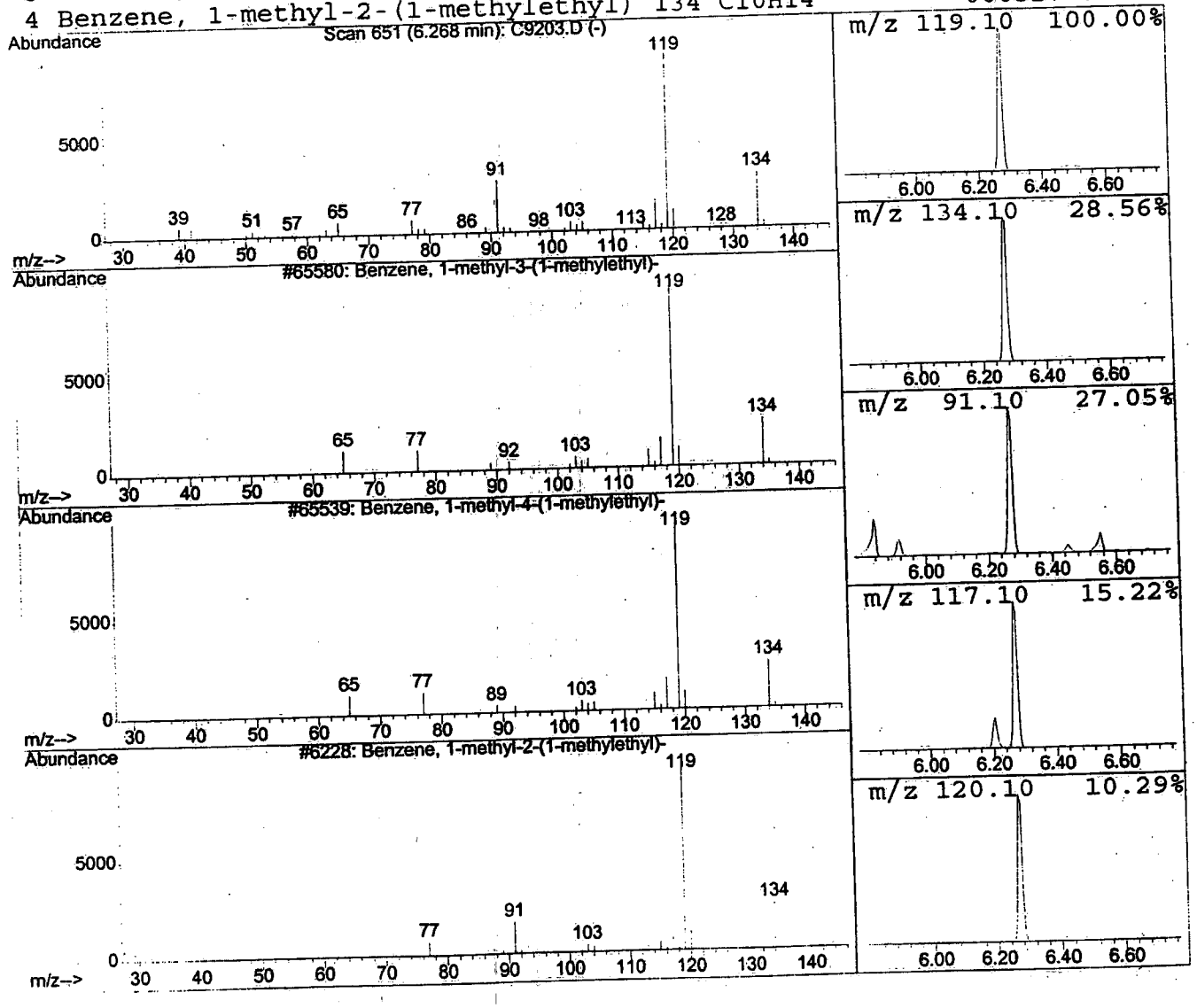
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Substituted benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.27	99.04 UG	2240870	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-3-(1-methylethyl)	134	C10H14	000535-77-3	95
2	Benzene, 1-methyl-4-(1-methylethyl)	134	C10H14	000099-87-6	95
3	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	94
4	Benzene, 1-methyl-2-(1-methylethyl)	134	C10H14	000527-84-4	94



4142

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

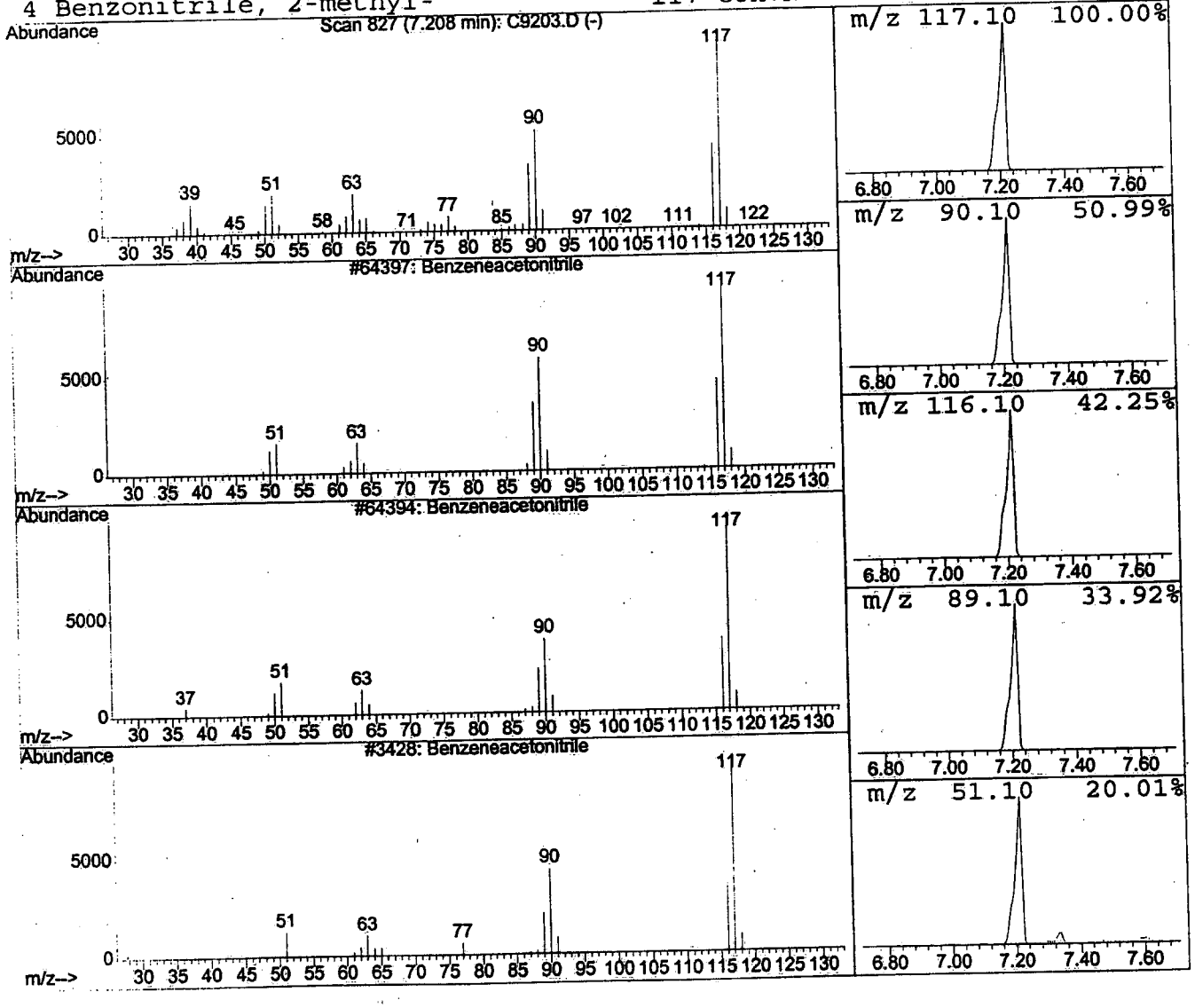
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Benzeneacetonitrile Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.21	88.59 UG	12341100	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzeneacetonitrile	117	C8H7N	000140-29-4	98
2	Benzeneacetonitrile	117	C8H7N	000140-29-4	96
3	Benzeneacetonitrile	117	C8H7N	000140-29-4	96
4	Benzonitrile, 2-methyl-	117	C8H7N	000529-19-1	95



000311

4143

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

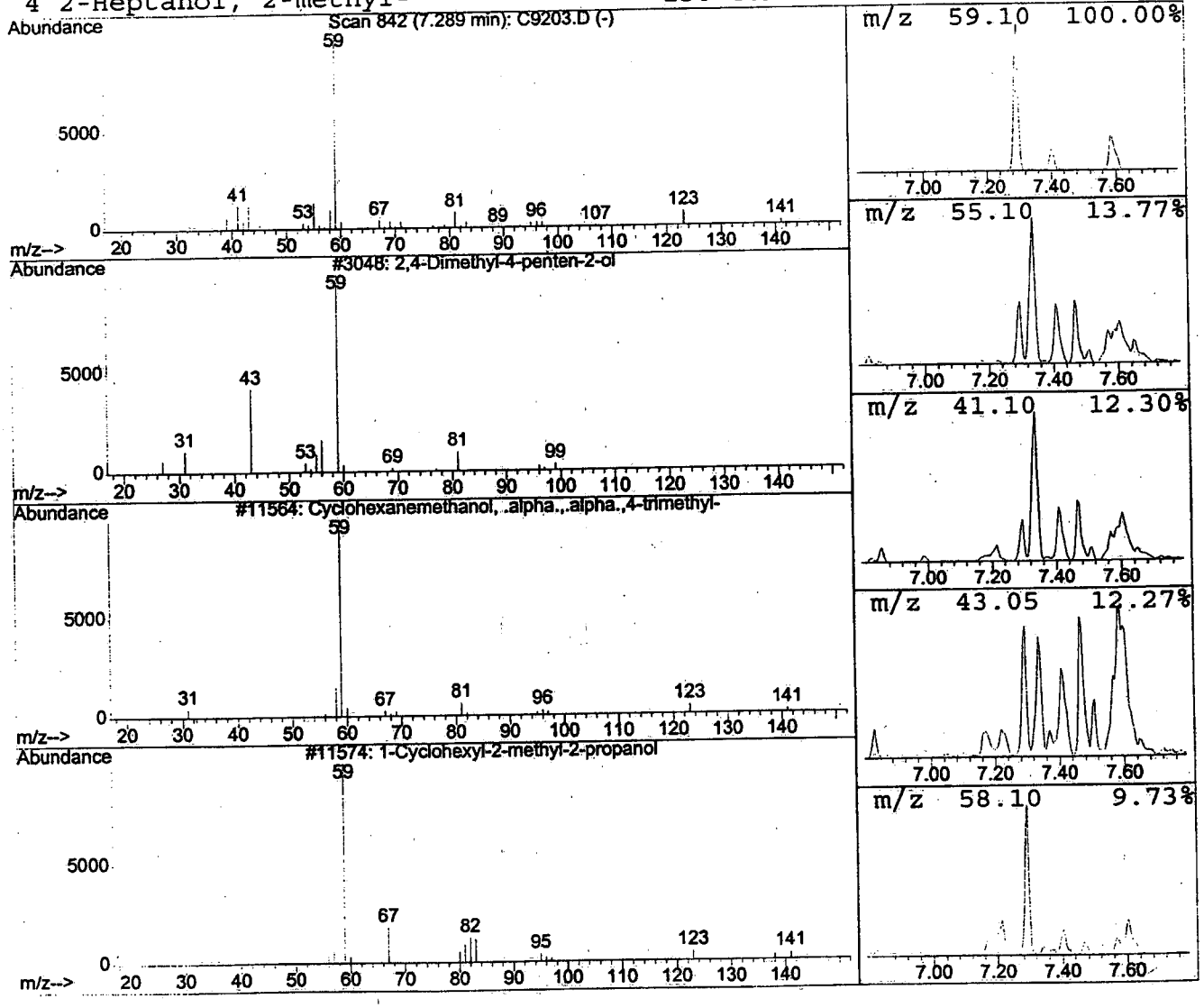
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Unknown — Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.29	11.66 UG	1623760	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,4-Dimethyl-4-penten-2-ol	114	C7H14O	019781-53-4	64
2	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	50
3	1-Cyclohexyl-2-methyl-2-propanol	156	C10H20O	005531-30-6	40
4	2-Heptanol, 2-methyl-	130	C8H18O	000625-25-2	39



4144

000342

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D Vial: 8
Acq On : 6 Apr 2001 16:16 Operator: DP
Sample : MW-5,2094-009,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

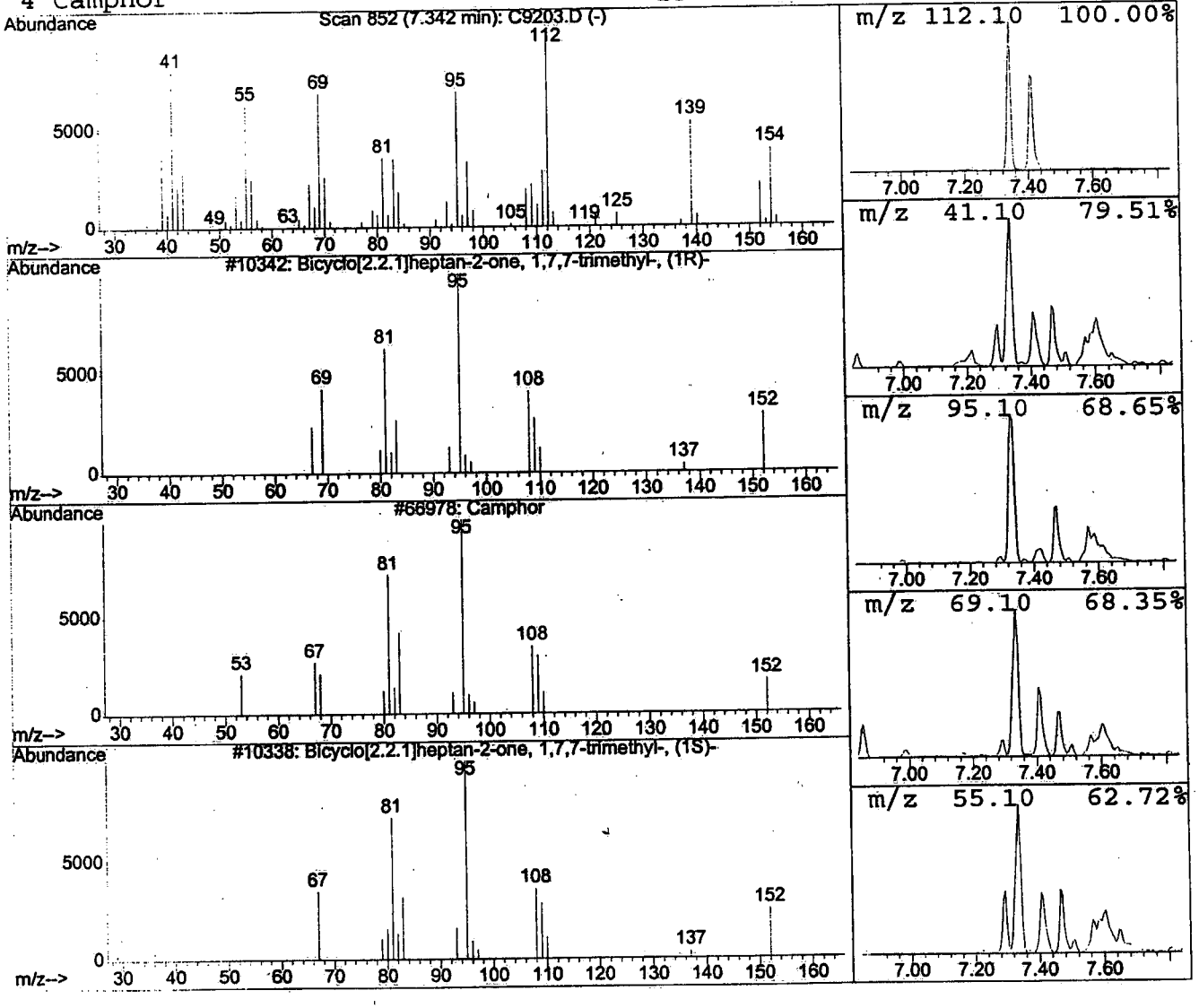
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.34	31.09 UG	4331270	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-49-3	96
2	Camphor	152	C10H16O	000076-22-2	96
3	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	96
4	Camphor	152	C10H16O	000076-22-2	96



4145

000343

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

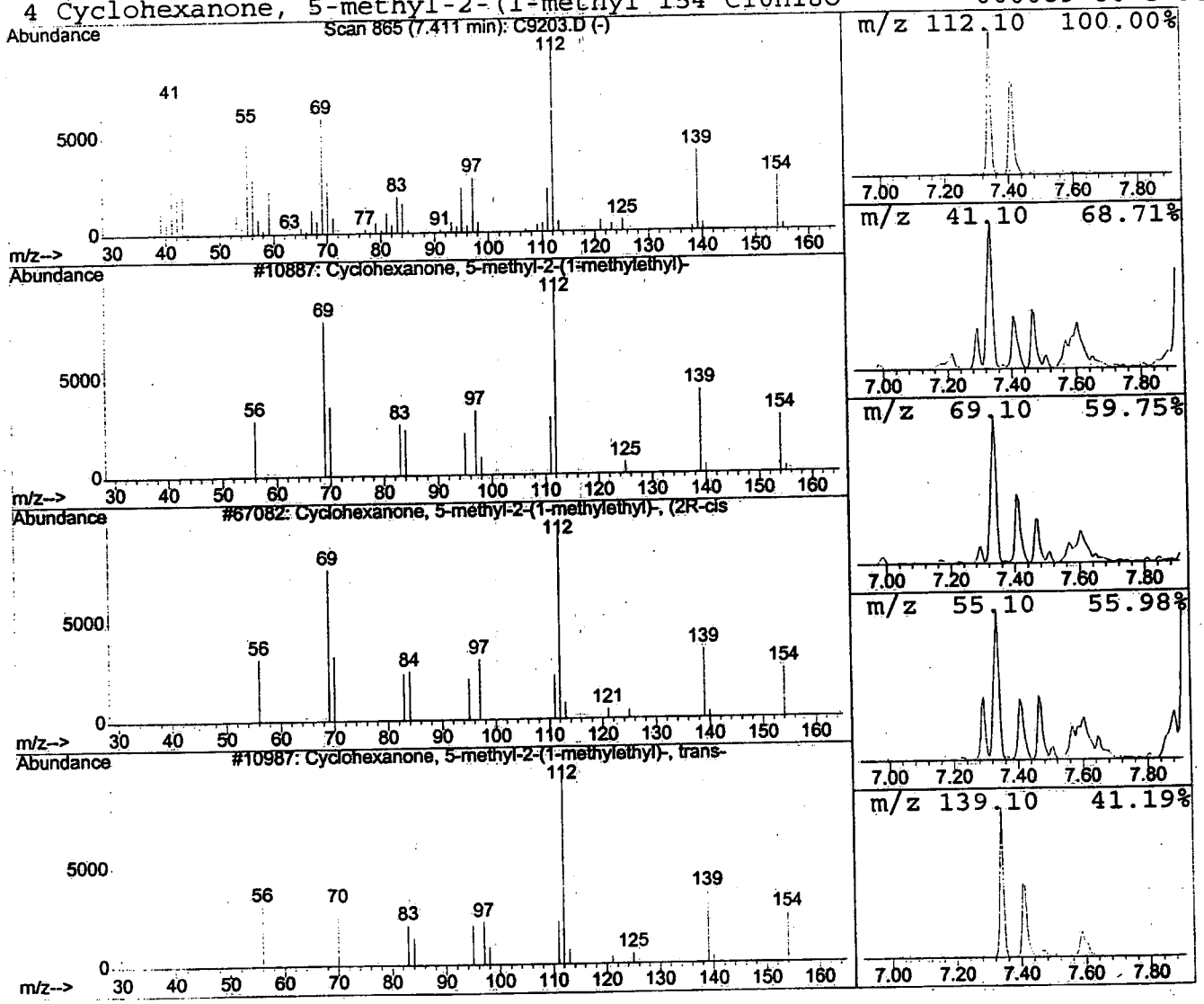
****

Peak Number 9 Unknown

Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.41	11.53 UG	1606310	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 5-methyl-2-(1-methyl	154	C10H18O	010458-14-7	98
2	Cyclohexanone, 5-methyl-2-(1-methyl	154	C10H18O	001196-31-2	95
3	Cyclohexanone, 5-methyl-2-(1-methyl	154	C10H18O	000089-80-5	95
4	Cyclohexanone, 5-methyl-2-(1-methyl	154	C10H18O	000089-80-5	95



000311

4146

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

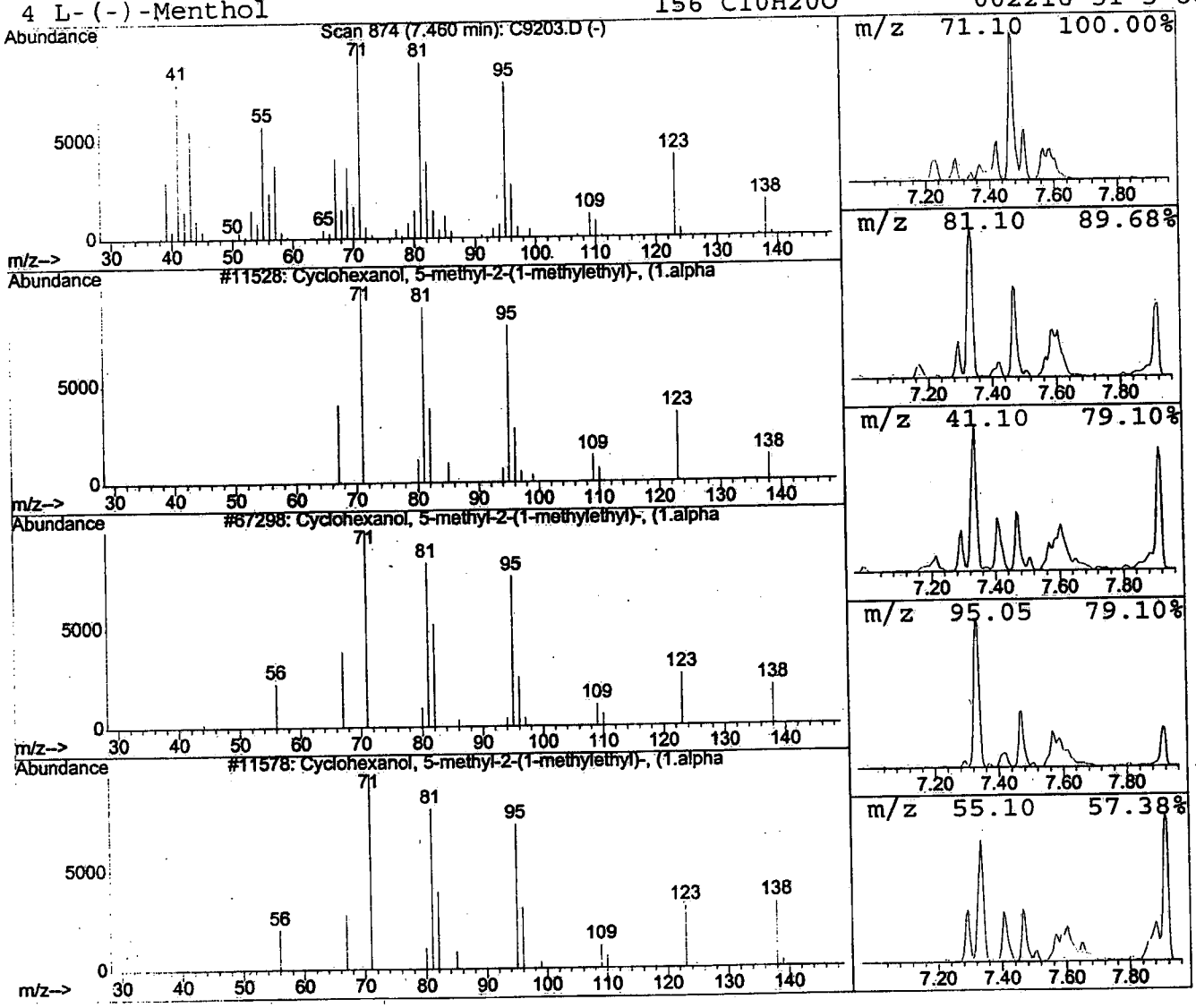
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 10 Unknown — Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.46	12.27 UG	1709840	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanol, 5-methyl-2-(1-methyle	156	C10H20O	015356-70-4	91
2	Cyclohexanol, 5-methyl-2-(1-methyle	156	C10H20O	000089-78-1	91
3	Cyclohexanol, 5-methyl-2-(1-methyle	156	C10H20O	000089-78-1	87
4	L-(-)-Menthol	156	C10H20O	002216-51-5	86



4147

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

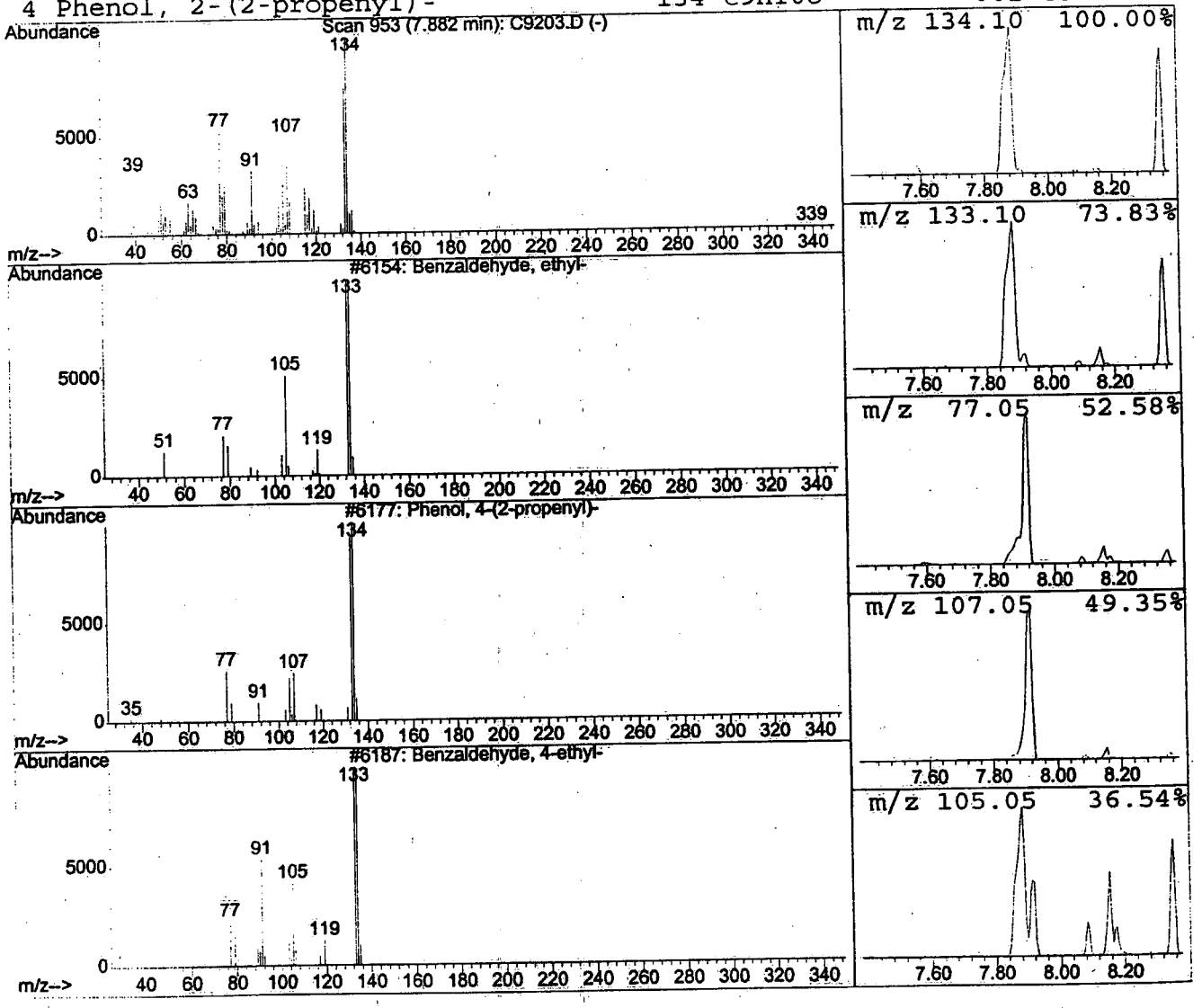
****

Peak Number 11 Unknown

Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.88	75.82 UG	10562800	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzaldehyde, ethyl-	134	C9H10O	053951-50-1	60
2	Phenol, 4-(2-propenyl)-	134	C9H10O	000501-92-8	59
3	Benzaldehyde, 4-ethyl-	134	C9H10O	004748-78-1	49
4	Phenol, 2-(2-propenyl)-	134	C9H10O	001745-81-9	43



4/148

000316

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

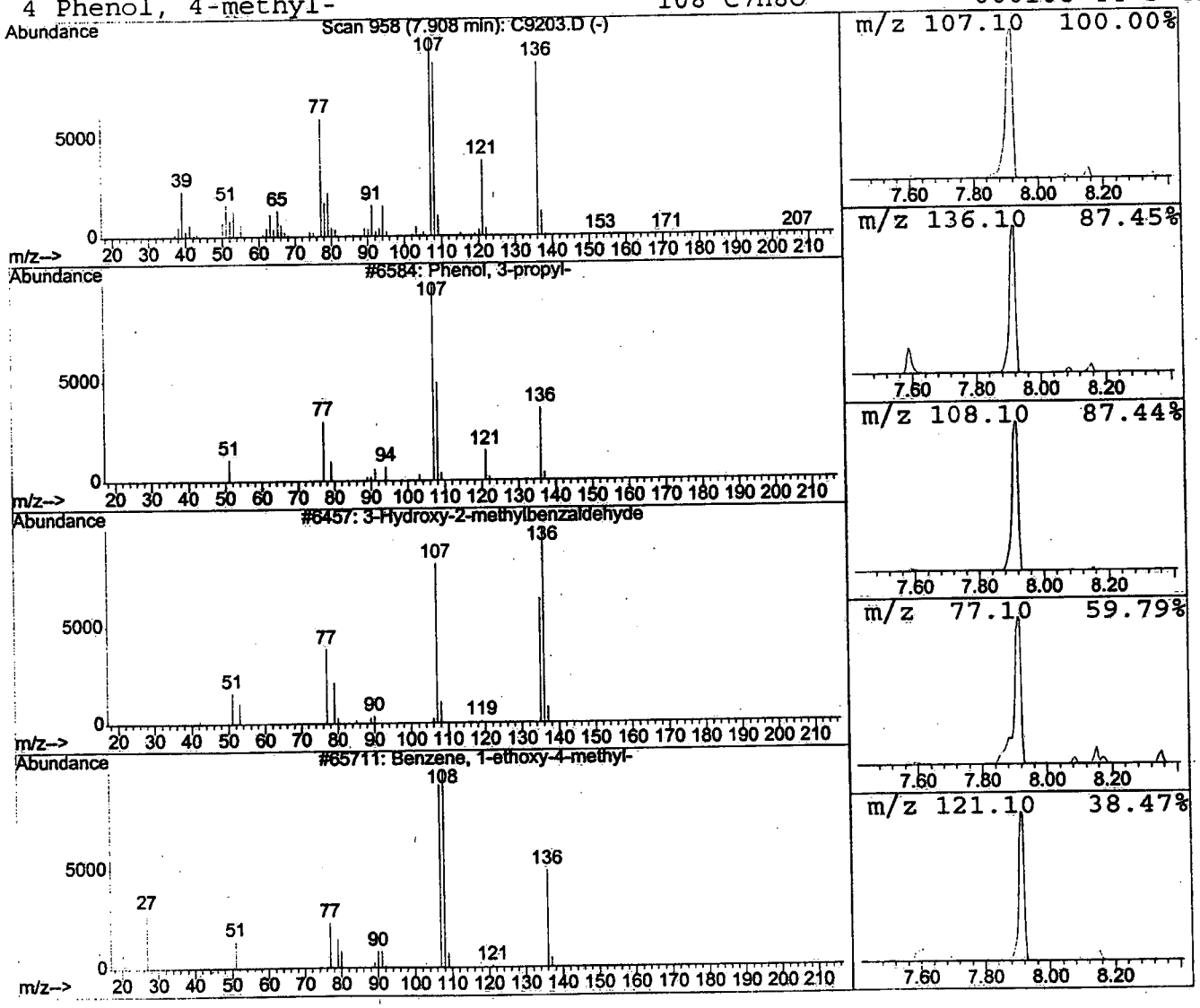
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 12 Substituted phenol Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.91	217.95 UG	30362100	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 3-propyl-	136	C9H12O	000621-27-2	76
2	3-Hydroxy-2-methylbenzaldehyde	136	C8H8O2	000000-00-0	60
3	Benzene, 1-ethoxy-4-methyl-	136	C9H12O	000622-60-6	59
4	Phenol, 4-methyl-	108	C7H8O	000106-44-5	49



4149

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

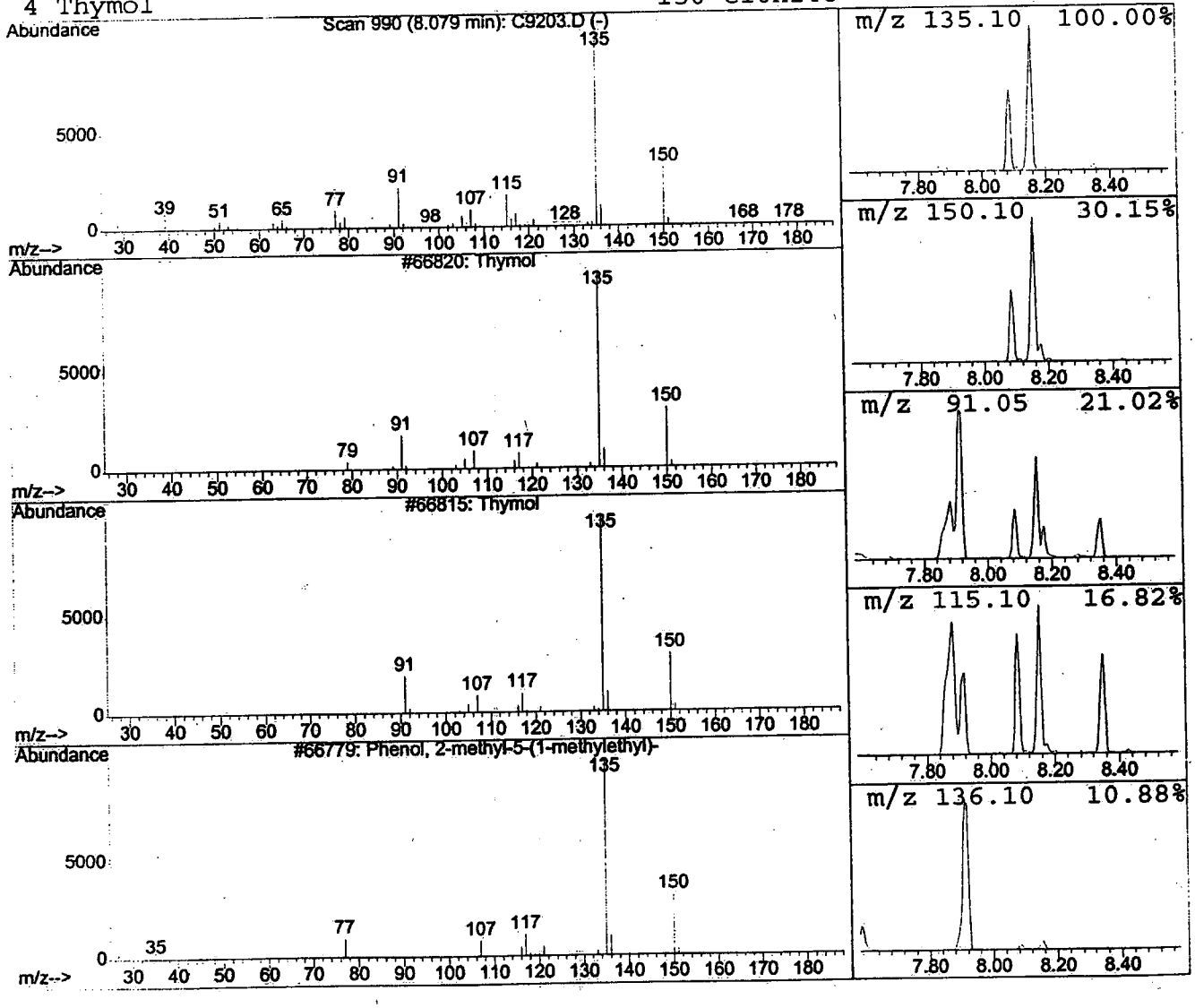
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 13 Unknown aromatic — Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.08	18.16 UG	2529540	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Thymol	150	C10H14O	000089-83-8	94
2	Thymol	150	C10H14O	000089-83-8	93
3	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	90
4	Thymol	150	C10H14O	000089-83-8	90



4150

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

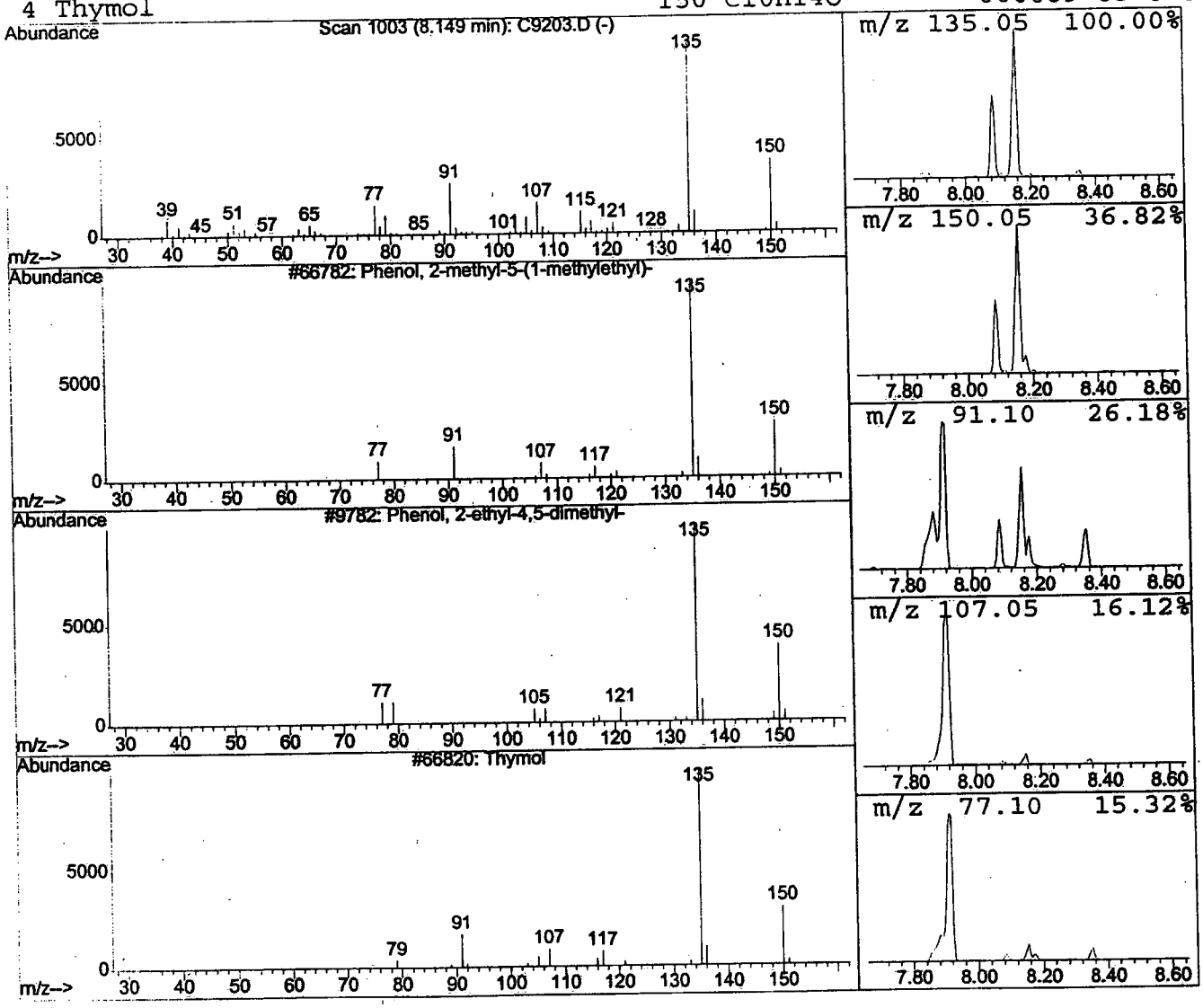
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 14 Substituted phenol Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.15	39.77 UG	5539640	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	93
2	Phenol, 2-ethyl-4,5-dimethyl-	150	C10H14O	002219-78-5	87
3	Thymol	150	C10H14O	000089-83-8	87
4	Thymol	150	C10H14O	000089-83-8	87



4151

000213

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

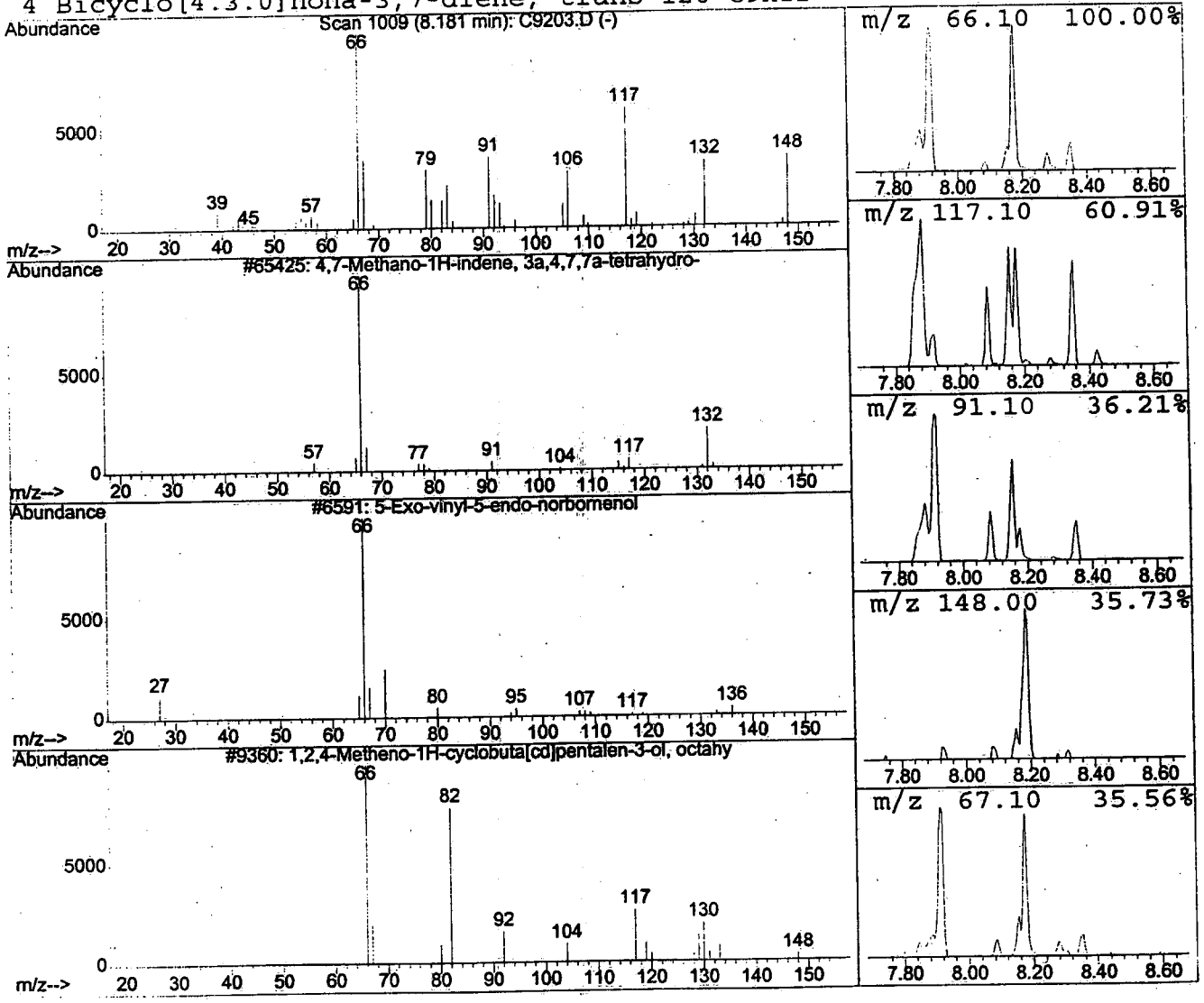
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 15 Unknown — Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.18	12.67 UG	1764650	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4,7-Methano-1H-indene, 3a,4,7,7a-te	132	C10H12	000077-73-6	80
2	5-Exo-vinyl-5-endo-norbornenol	136	C9H12O	037165-54-1	50
3	1,2,4-Metheno-1H-cyclobuta[cd]penta	148	C10H12O	013351-15-0	42
4	Bicyclo[4.3.0]nona-3,7-diene, trans	120	C9H12	000000-00-0	42



000320

4152

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D Vial: 8
Acq On : 6 Apr 2001 16:16 Operator: DP
Sample : MW-5,2094-009,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

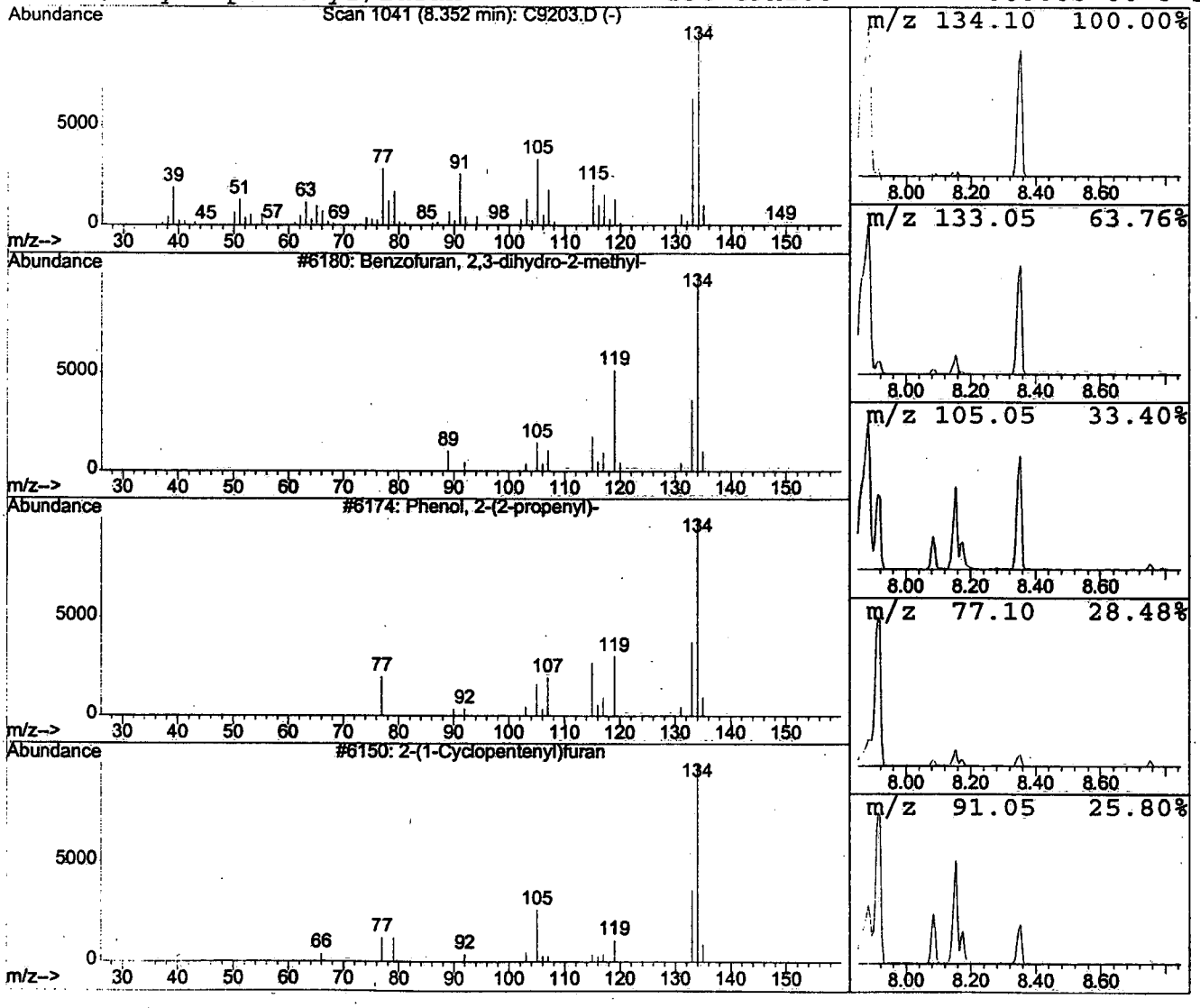
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 16 Unknown aromatic Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.35	24.25 UG	3378400	Naphthalene-d8	7.59

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzofuran, 2,3-dihydro-2-methyl-	134	C9H10O	001746-11-8	64
2	Phenol, 2-(2-propenyl)-	134	C9H10O	001745-81-9	58
3	2-(1-Cyclopentenyl)furan	134	C9H10O	000000-00-0	58
4	3-(1-Cyclopentenyl)furan	134	C9H10O	000000-00-0	52



4153

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D Vial: 8
Acq On : 6 Apr 2001 16:16 Operator: DP
Sample : MW-5,2094-009,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

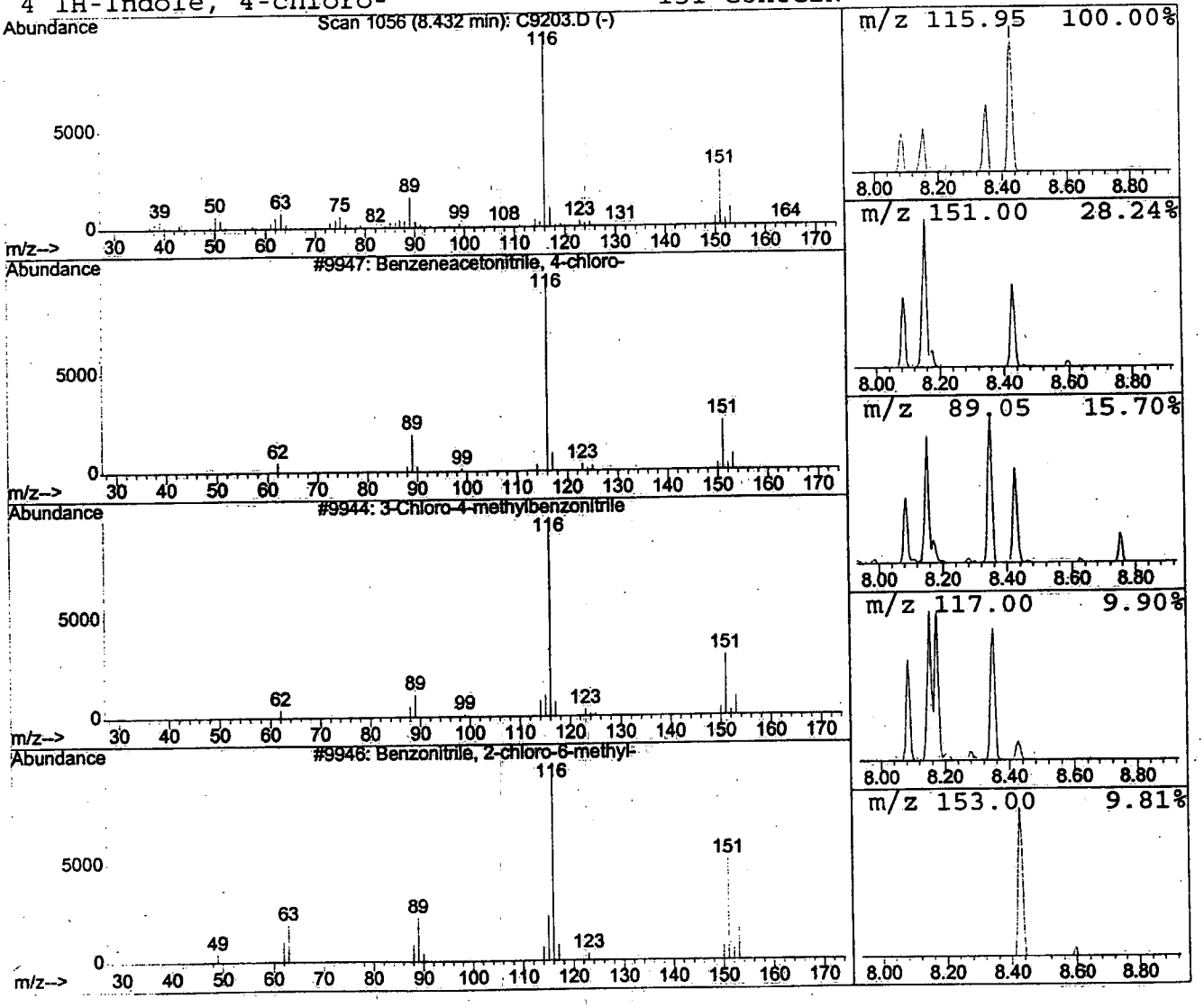
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 17 Substituted benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.43	19.29 UG	408413	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzeneacetonitrile, 4-chloro-	151	C8H6ClN	000140-53-4	96
2	3-Chloro-4-methylbenzonitrile	151	C8H6ClN	021423-81-4	90
3	Benzonitrile, 2-chloro-6-methyl-	151	C8H6ClN	006575-09-3	87
4	1H-Indole, 4-chloro-	151	C8H6ClN	025235-85-2	86



4154

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

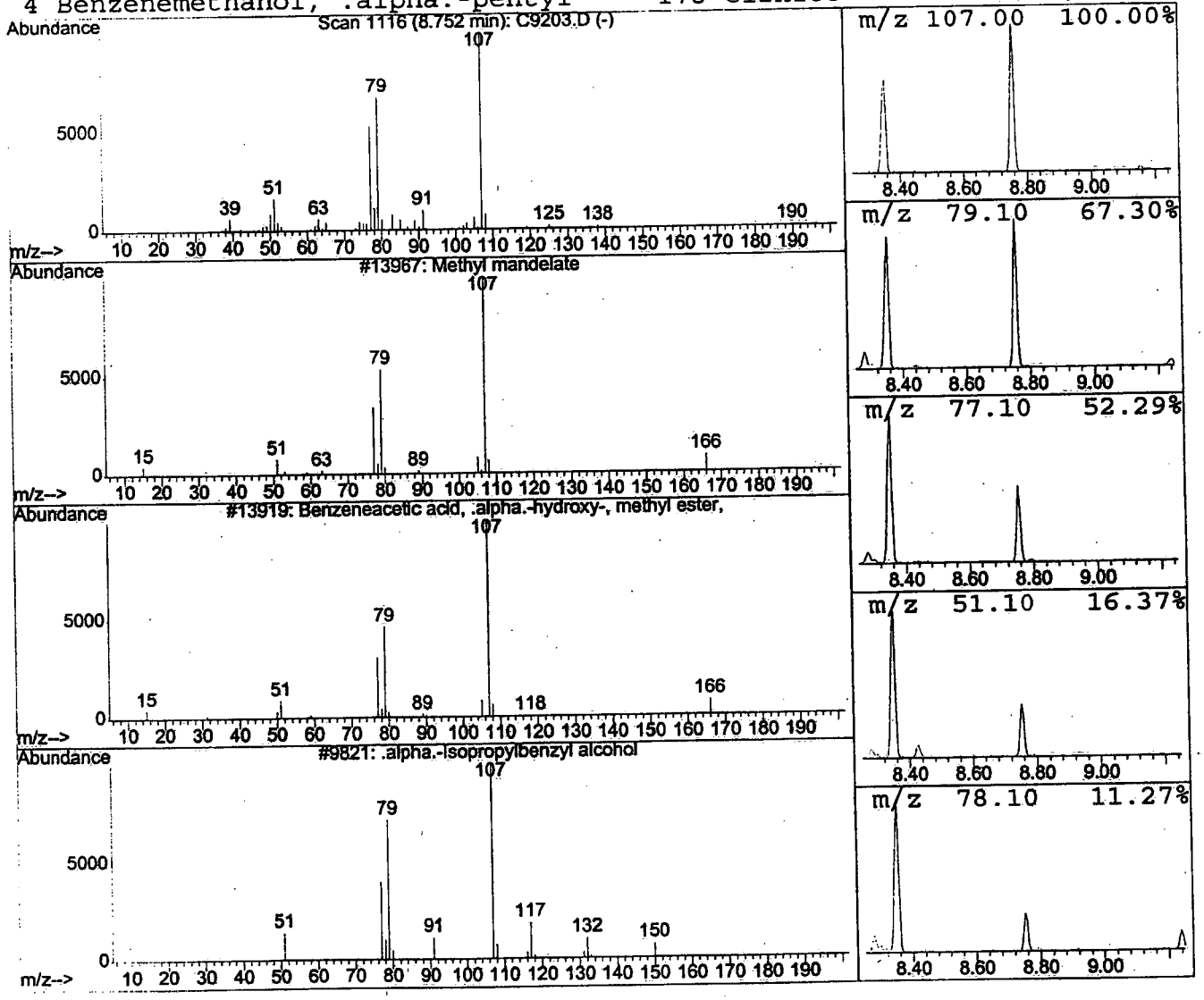
****

Peak Number 18 Unknown

Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.75	26.12 UG	552941	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Methyl mandelate	166	C9H10O3	004358-87-6	78
2	Benzeneacetic acid, .alpha.-hydroxy	166	C9H10O3	020698-91-3	78
3	.alpha.-Isopropylbenzyl alcohol	150	C10H14O	000611-69-8	78
4	Benzenemethanol, .alpha.-pentyl-	178	C12H18O	004471-05-0	78



4155

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

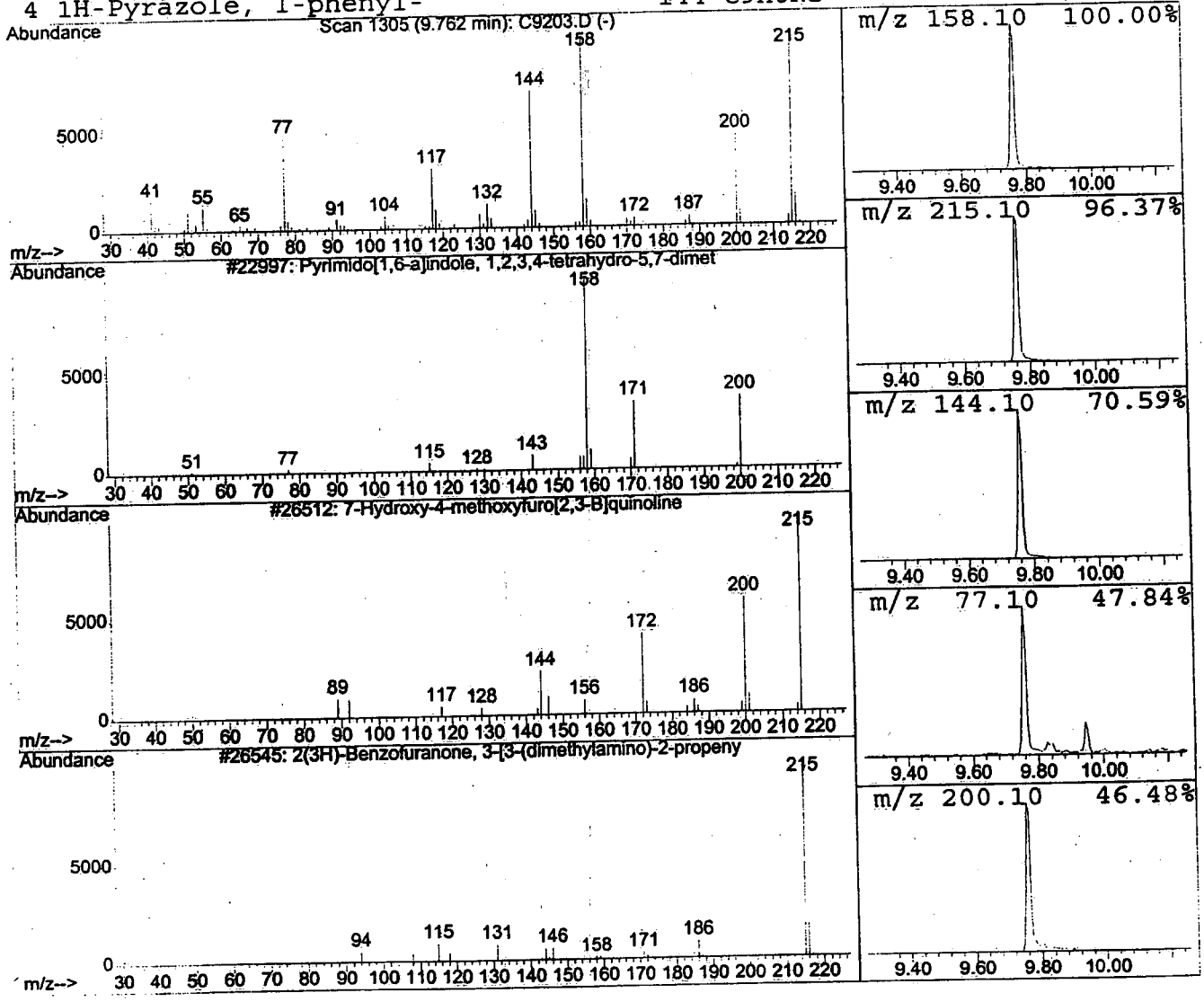
****

Peak Number 19 Unknown

Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	34.30 UG	726081	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pyrimido[1,6-a]indole, 1,2,3,4-tetr	200	C13H16N2	038349-07-4	16
2	7-Hydroxy-4-methoxyfuro[2,3-B]quino	215	C12H9NO3	020643-71-4	16
3	2(3H)-Benzofuranone, 3-[3-(dimethyl	215	C13H13NO2	056771-83-6	14
4	1H-Pyrazole, 1-phenyl-	144	C9H8N2	001126-00-7	14



4156

000221

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9203.D
Acq On : 6 Apr 2001 16:16
Sample : MW-5,2094-009,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1
MS Integration Params: LSCINT.P

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

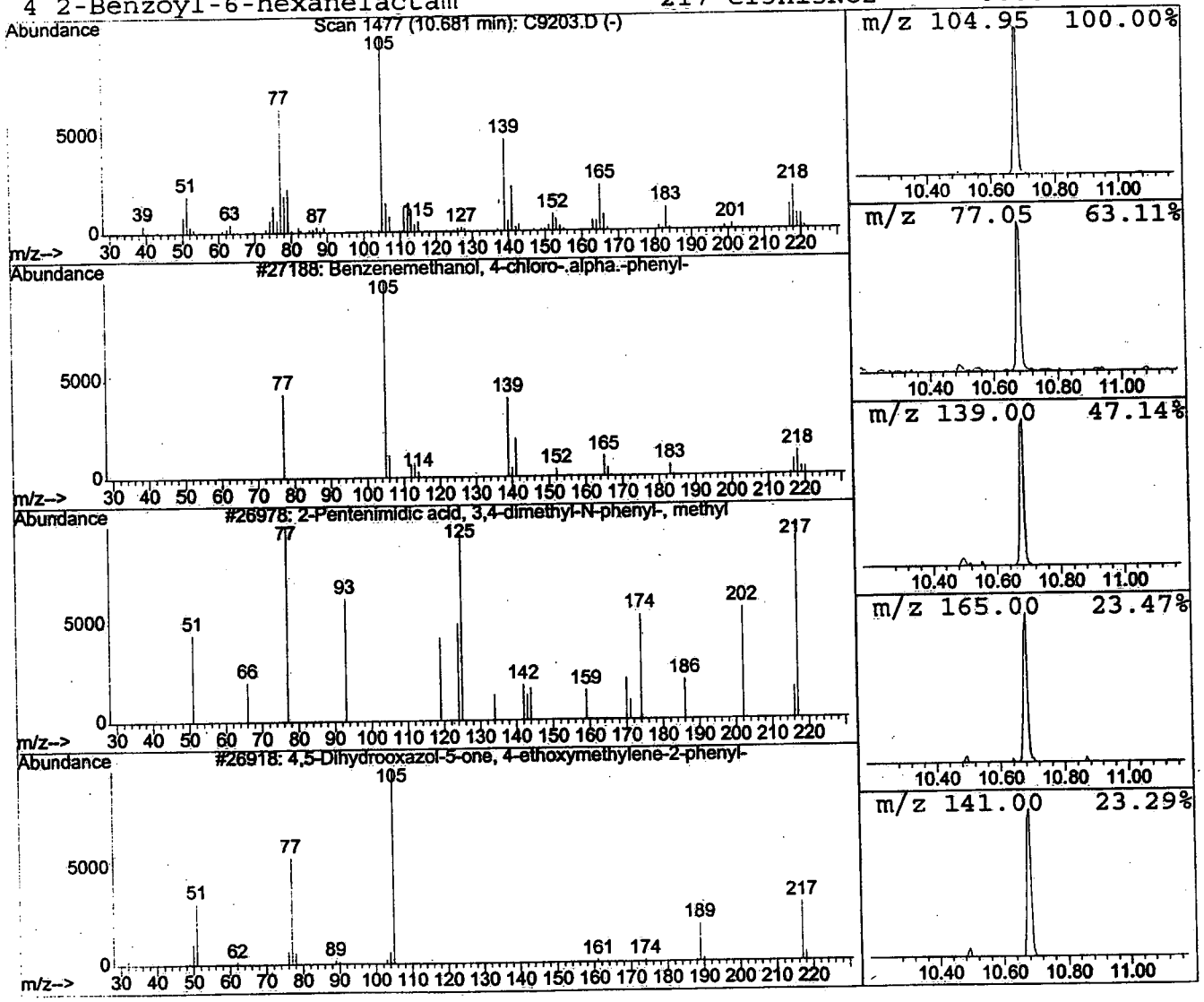
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 20 Substituted benzene Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.68	25.13 UG	392254	Phenanthrene-d10	10.55

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzenemethanol, 4-chloro-.alpha.-p	218	C13H11ClO	000119-56-2	97
2	2-Pentenimidic acid, 3,4-dimethyl-N	217	C14H19NO	056830-11-6	25
3	4,5-Dihydrooxazol-5-one, 4-ethoxyme	217	C12H11NO3	000000-00-0	14
4	2-Benzoyl-6-hexanelactam	217	C13H15NO2	000000-00-0	14



4157

000325

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9205.D
Acq On : 6 Apr 2001 17:06
Sample : MW-5,2094-009DIL,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,2
Integration Params: RTEINT.P
Quant Time: Apr 6 17:29 2001

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00
Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	181724	40.00	UG	0.00
22) Naphthalene-d8	7.59	136	547143	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	229891	40.00	UG	0.00
60) Phenanthrene-d10	10.55	188	242004	40.00	UG	0.00
75) Chrysene-d12	12.96	240	99086	40.00	UG	0.00
84) Perylene-d12	15.13	264	61613	40.00	UG	-0.01

System Monitoring Compounds					
4) 2-Fluorophenol	0.00	112	0d	0.00	UG
Spiked Amount 100.000	Range 42 - 95		Recovery =	0.00%#	
6) Phenol-d5	0.00	99	0d	0.00	UG
Spiked Amount 100.000	Range 59 - 97		Recovery =	0.00%#	
23) Nitrobenzene-d5	0.00	82	0d	0.00	UG
Spiked Amount 50.000	Range 49 - 105		Recovery =	0.00%#	
43) 2-Fluorobiphenyl	0.00	172	0d	0.00	UG
Spiked Amount 50.000	Range 54 - 110		Recovery =	0.00%#	
64) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG
Spiked Amount 100.000	Range 48 - 126		Recovery =	0.00%#	
77) Terphenyl-d14	0.00	244	0	0.00	UG
Spiked Amount 50.000	Range 53 - 123		Recovery =	0.00%#	

Target Compounds						Qvalue
8) Aniline	5.80	93	247558	42.88	UG	100

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

4158

000326

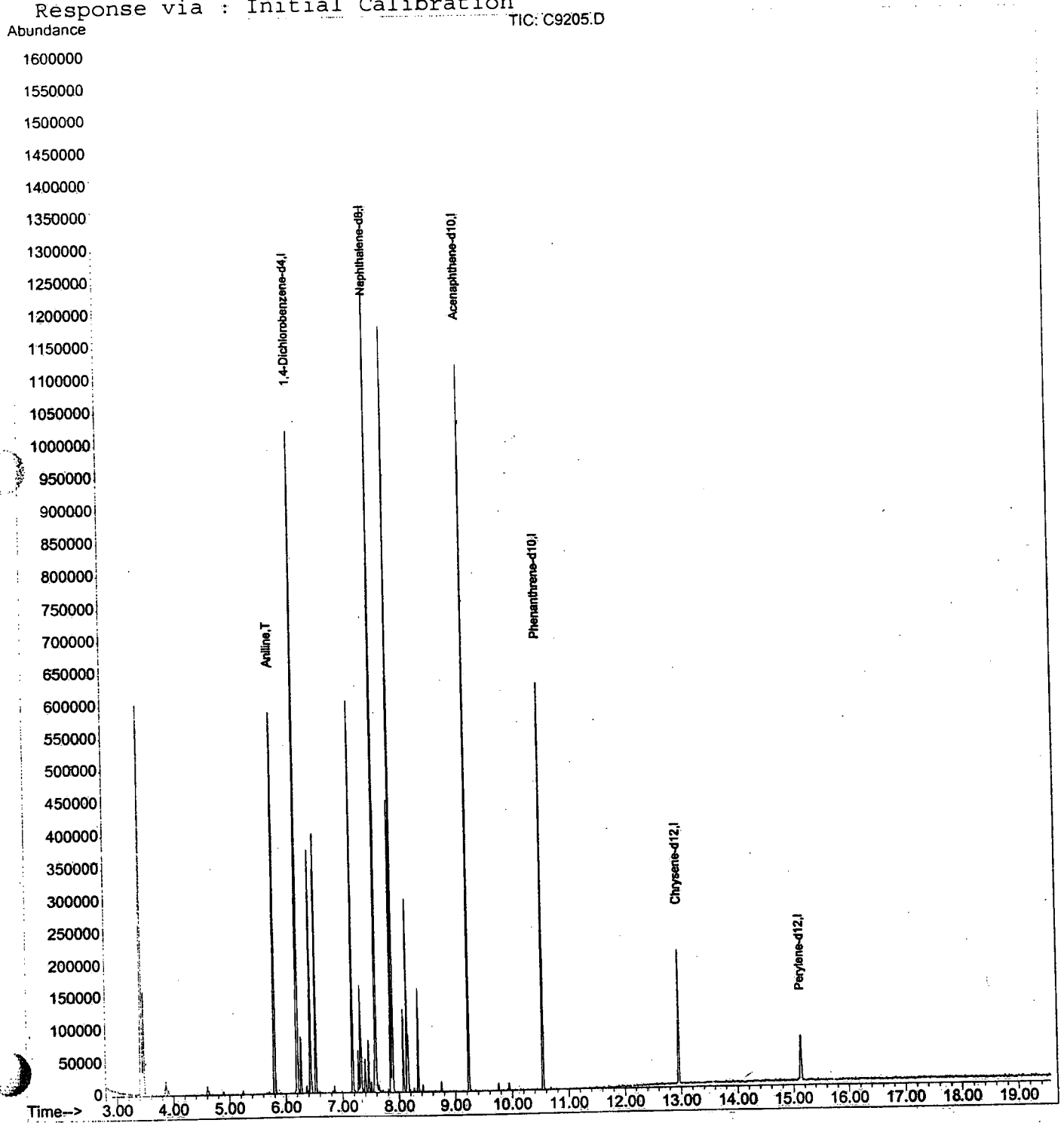
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9205.D
Acq On : 6 Apr 2001 17:06
Sample : MW-5,2094-009DIL,A,1000mL,100,04/06/01
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,2
MS Integration Params: RTEINT.P
Quant Time: Apr 6 17:29 2001

Vial: 8
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Initial Calibration



4159

000327

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-06-01\C9196.D
Acq On : 6 Apr 2001 13:18
Sample : .,Method-Blank,A,1000mL,100,04/06/01
Misc : N/A,N/A,N/A,1
ALS Integration Params: RTEINT.P
Quant Time: Apr 6 13:50 2001

Vial: 3
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	151557	40.00	UG	0.00
22) Naphthalene-d8	7.58	136	390527	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	178698	40.00	UG	0.00
60) Phenanthrene-d10	10.54	188	212615	40.00	UG	0.00
75) Chrysene-d12	12.97	240	80599	40.00	UG	0.00
84) Perylene-d12	15.15	264	38788	40.00	UG	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.54	112	234651	55.03	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 55.03%			
6) Phenol-d5	5.68	99	289884	69.80	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 69.80%			
23) Nitrobenzene-d5	6.81	82	95414	35.38	UG	-0.01
Spiked Amount 50.000	Range 49 - 105		Recovery = 70.76%			
43) 2-Fluorobiphenyl	8.60	172	194542	31.28	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 62.56%			
64) 2,4,6-Tribromophenol	9.93	330	53788	74.07	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 74.07%			
77) Terphenyl-d14	11.87	244	129461m	60.16	UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 120.32%			

Target Compounds Qvalue

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

0000223

4160

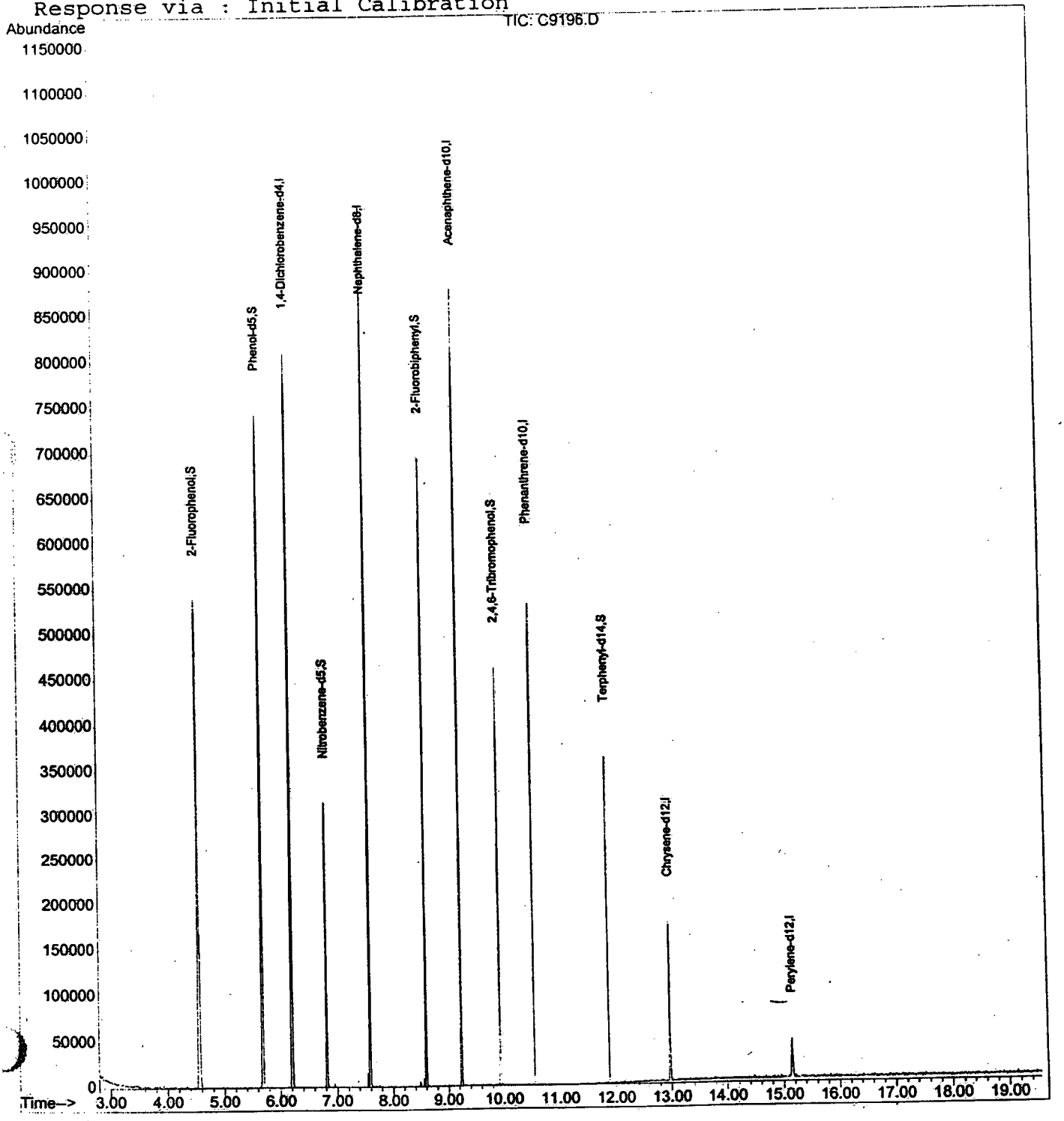
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9196.D
Acq On : 6 Apr 2001 13:18
Sample : .,Method-Blank,A,1000mL,100,04/06/01
Misc : N/A,N/A,N/A,1
MS Integration Params: RTEINT.P
Quant Time: Apr 6 13:50 2001

Vial: 3
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Fri Apr 06 12:18:58 2001
Response via : Initial Calibration



000329

4161

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-06-01\C9196.D Vial: 3
Acq On : 6 Apr 2001 13:18 Operator: DP
Sample : .,Method-Blank,A,1000mL,100,04/06/01 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

****
C9196.D CW0501.M Fri Apr 06 12:49:29 2001 MSD-C

4162

000330

PCB METHOD BLANK SUMMARY

Lab File ID: V4941.D

Instrument ID: GC-V

Date Extracted: 04/04/2001

Matrix: AQUEOUS

Date Analyzed: 04/04/2001

Time Analyzed: 20:30

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
PS4-4-3A	2049-001	04/04/2001	21:00
FB1-4-3A	2049-003	04/04/2001	21:31
PCB	2049-001-MSD2	04/04/2001	22:33
PCB	PBW0404-MS2	04/04/2001	23:03
PS4-4-3S	2049-002	04/05/2001	09:34
PCB	2049-001-MS2	04/05/2001	10:05

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 0404-BLK2
Client ID: (2049)
Date Received: NA
Date Extracted: 04/04/2001
Date Analyzed: 04/04/2001
Data file: V4941.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

4164

000032

PCB METHOD BLANK SUMMARY

Lab File ID: V4957.D

Instrument ID: GC-V

Date Extracted: 04/05/2001

Matrix: AQUEOUS

Date Analyzed: 04/05/2001

Time Analyzed: 15:21

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
DW-1	2108-001	04/05/2001	15:52
WW-1	2108-002	04/05/2001	16:23
MHR-1	2108-003	04/05/2001	16:53
FB	2094-001	04/05/2001	17:24
MW-1	2094-003	04/05/2001	17:55
MW-2	2094-004	04/05/2001	18:26
MW-7	2094-005	04/05/2001	18:56
MW-6	2094-006	04/05/2001	19:27
MW-8	2094-007	04/05/2001	19:58
MW-3	2094-008	04/05/2001	20:29
MW-5	2094-009	04/05/2001	20:59
PCB	PBW0405-MS2	04/05/2001	22:01
MW-4	2093-001	04/06/2001	09:48

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 0405-BLK2
Client ID: (2093.2108)
Date Received: NA
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: V4957.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001

Instrument ID: Varian 3400

GC Column (1st): DB-5

Data File: V4879.D V4880.D V4881.D V4882.D V4883.D

Compound	RT OF STANDARDS 200	500	1000	2000	4000	MEAN RT	RT WINDOW FROM	TO
Aroclor-1016	5.80	5.80	5.80	5.80	5.80	5.80	5.73	5.87
Aroclor-1016 {2}	6.89	6.89	6.89	6.89	6.89	6.89	6.82	6.96
Aroclor-1016 {3}	7.33	7.33	7.33	7.33	7.33	7.33	7.26	7.40
Aroclor-1016 {4}	9.20	9.20	9.20	9.20	9.20	9.20	9.13	9.27
Aroclor-1016 {5}	9.68	9.68	9.68	9.68	9.68	9.68	9.61	9.75
Aroclor-1221			3.83				3.76	3.90
Aroclor-1221 {2}			5.44				5.37	5.51
Aroclor-1221 {3}			5.67				5.60	5.74
Aroclor-1221 {4}			5.80				5.73	5.87
Aroclor-1221 {5}			6.90				6.83	6.97
Aroclor-1232			5.80				5.73	5.87
Aroclor-1232 {2}			6.83				6.76	6.90
Aroclor-1232 {3}			8.35				8.28	8.42
Aroclor-1232 {4}			9.20				9.13	9.27
Aroclor-1232 {5}			10.05				9.98	10.12
Aroclor-1242			7.33				7.26	7.40
Aroclor-1242 {2}			9.20				9.13	9.27
Aroclor-1242 {3}			9.78				9.71	9.85
Aroclor-1242 {4}			10.99				10.92	11.06
Aroclor-1242 {5}			11.51				11.44	11.58
Aroclor-1248			8.07				8.00	8.14
Aroclor-1248 {2}			9.19				9.12	9.26
Aroclor-1248 {3}			9.77				9.70	9.84
Aroclor-1248 {4}			10.98				10.91	11.05
Aroclor-1248 {5}			11.49				11.42	11.56
Aroclor-1254			11.74				11.67	11.81
Aroclor-1254 {2}			12.56				12.49	12.63
Aroclor-1254 {3}			13.72				13.65	13.79
Aroclor-1254 {4}			14.46				14.39	14.53
Aroclor-1254 {5}			15.33				15.26	15.40
Aroclor-1260	15.33	15.33	15.33	15.33	15.33	15.33	15.26	15.40
Aroclor-1260 {2}	15.89	15.89	15.89	15.89	15.89	15.89	15.82	15.96
Aroclor-1260 {3}	17.54	17.53	17.54	17.54	17.53	17.53	17.46	17.60
Aroclor-1260 {4}	18.46	18.46	18.46	18.46	18.46	18.46	18.39	18.53
Aroclor-1260 {5}	20.51	20.51	20.51	20.51	20.51	20.51	20.44	20.58

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001

Instrument ID: Varian 3400

GC Column (1st): DB-5

Data File: V4879.D V4880.D V4881.D V4882.D V4883.D

Compound	CALIBRATION FACTORS 200	500	1000	2000	4000	MEAN	%RSD
Aroclor-1016	6227	6407	6117	6380	5357	6098	7.06
Aroclor-1016 {2}	4874	5091	4819	5117	4301	4840	6.79
Aroclor-1016 {3}	8659	8707	8314	8610	7218	8302	7.52
Aroclor-1016 {4}	5050	5220	5024	5286	4392	4994	7.10
Aroclor-1016 {5}	7280	7405	7017	7300	6087	7018	7.69
Aroclor-1221			2100				
Aroclor-1221 {2}			3561				
Aroclor-1221 {3}			3370				
Aroclor-1221 {4}			8799				
Aroclor-1221 {5}			1175				
Aroclor-1232			5822				
Aroclor-1232 {2}			2891				
Aroclor-1232 {3}			4281				
Aroclor-1232 {4}			2035				
Aroclor-1232 {5}			4343				
Aroclor-1242			5779				
Aroclor-1242 {2}			3374				
Aroclor-1242 {3}			4066				
Aroclor-1242 {4}			7465				
Aroclor-1242 {5}			7715				
Aroclor-1248			11196				
Aroclor-1248 {2}			5874				
Aroclor-1248 {3}			5151				
Aroclor-1248 {4}			15157				
Aroclor-1248 {5}			15014				
Aroclor-1254			14779				
Aroclor-1254 {2}			13098				
Aroclor-1254 {3}			20763				
Aroclor-1254 {4}			13828				
Aroclor-1254 {5}			23989				
Aroclor-1260	26817	26595	24956	26238	22357	25393	7.26
Aroclor-1260 {2}	23479	23313	22286	23486	19993	22511	6.63
Aroclor-1260 {3}	53488	53166	50012	55452	51067	52637	4.06
Aroclor-1260 {4}	24143	24378	23286	24540	21175	23504	5.91
Aroclor-1260 {5}	13746	13823	13823	14518	12773	13737	4.54
					Average %RSD		6.46

000336

4168

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001

Instrument ID: Varian 3400

GC Column (2nd): DB-1701P

Data File: V4879.C V4880.C V4881.C V4882.C V4883.C

Compound	RT OF STANDARDS 200	500	1000	2000	4000	MEAN RT	RT WINDOW FROM	TO
Aroclor-1016	6.37	6.37	6.37	6.37	6.37	6.37	6.30	6.44
Aroclor-1016 {2}	7.44	7.44	7.44	7.44	7.44	7.44	7.37	7.51
Aroclor-1016 {3}	8.80	8.80	8.80	8.80	8.80	8.80	8.73	8.87
Aroclor-1016 {4}	9.19	9.19	9.19	9.19	9.19	9.19	9.12	9.26
Aroclor-1016 {5}	9.51	9.51	9.51	9.51	9.51	9.51	9.44	9.58
Aroclor-1221			4.11				4.04	4.18
Aroclor-1221 {2}			5.81				5.74	5.88
Aroclor-1221 {3}			6.23				6.16	6.30
Aroclor-1221 {4}			6.39				6.32	6.46
Aroclor-1221 {5}			7.46				7.39	7.53
Aroclor-1232			6.37				6.30	6.44
Aroclor-1232 {2}			7.44				7.37	7.51
Aroclor-1232 {3}			8.80				8.73	8.87
Aroclor-1232 {4}			9.51				9.44	9.58
Aroclor-1232 {5}			10.62				10.55	10.69
Aroclor-1242			8.14				8.07	8.21
Aroclor-1242 {2}			9.51				9.44	9.58
Aroclor-1242 {3}			10.96				10.89	11.03
Aroclor-1242 {4}			11.95				11.88	12.02
Aroclor-1242 {5}			12.69				12.62	12.76
Aroclor-1248			8.79				8.72	8.86
Aroclor-1248 {2}			9.89				9.82	9.96
Aroclor-1248 {3}			10.61				10.54	10.68
Aroclor-1248 {4}			10.90				10.83	10.97
Aroclor-1248 {5}			11.55				11.48	11.62
Aroclor-1254			12.49				12.42	12.56
Aroclor-1254 {2}			13.60				13.53	13.67
Aroclor-1254 {3}			14.77				14.70	14.84
Aroclor-1254 {4}			15.21				15.14	15.28
Aroclor-1254 {5}			16.34				16.27	16.41
Aroclor-1260	15.21	15.21	15.21	15.21	15.21	15.21	15.14	15.28
Aroclor-1260 {2}	16.47	16.47	16.47	16.47	16.47	16.47	16.40	16.54
Aroclor-1260 {3}	17.48	17.48	17.48	17.48	17.48	17.48	17.41	17.55
Aroclor-1260 {4}	18.45	18.45	18.45	18.45	18.45	18.45	18.38	18.52
Aroclor-1260 {5}	20.74	20.74	20.73	20.74	20.73	20.74	20.67	20.81

030337

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001

Instrument ID: Varian 3400

GC Column (2nd): DB-1701P

Data File: V4879.C V4880.C V4881.C V4882.C V4883.C

Compound	CALIBRATION FACTORS 200	500	1000	2000	4000	MEAN	%RSD
Aroclor-1016	7118	7192	6869	7111	5969	6852	7.42
Aroclor-1016 {2}	13249	13189	12403	12915	10800	12511	8.10
Aroclor-1016 {3}	31360	30917	29095	30687	26753	29762	6.34
Aroclor-1016 {4}	10575	10712	10190	10632	8893	10200	7.43
Aroclor-1016 {5}	10858	10867	10407	10885	9077	10419	7.45
Aroclor-1221			2407				
Aroclor-1221 {2}			4276				
Aroclor-1221 {3}			2616				
Aroclor-1221 {4}			9610				
Aroclor-1221 {5}			814				
Aroclor-1232			6285				
Aroclor-1232 {2}			4891				
Aroclor-1232 {3}			11395				
Aroclor-1232 {4}			4013				
Aroclor-1232 {5}			5432				
Aroclor-1242			3856				
Aroclor-1242 {2}			7021				
Aroclor-1242 {3}			1402				
Aroclor-1242 {4}			7636				
Aroclor-1242 {5}			5413				
Aroclor-1248			18813				
Aroclor-1248 {2}			12765				
Aroclor-1248 {3}			14673				
Aroclor-1248 {4}			14201				
Aroclor-1248 {5}			8924				
Aroclor-1254			15038				
Aroclor-1254 {2}			13092				
Aroclor-1254 {3}			18915				
Aroclor-1254 {4}			11076				
Aroclor-1254 {5}			23553				
Aroclor-1260	22062	21873	20369	21104	17700	20621	8.56
Aroclor-1260 {2}	17535	17596	16506	17108	14273	16603	8.27
Aroclor-1260 {3}	19980	19847	18510	19225	16217	18756	8.18
Aroclor-1260 {4}	47968	48199	45069	48097	42661	46399	5.31
Aroclor-1260 {5}	5472	5619	5418	5793	5071	5475	4.90
					Average %RSD		7.20

000333

4170

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 04/05/2001 **Instrument ID:** Varian 3400

Data File: V4956.D **GC Column (1st):** DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	5.80	5.73	5.87	6098	5887	3.46
Aroclor-1016 {2}	6.89	6.82	6.96	4840	4609	4.79
Aroclor-1016 {3}	7.33	7.26	7.40	8302	7919	4.60
Aroclor-1016 {4}	9.20	9.13	9.27	4994	4802	3.85
Aroclor-1016 {5}	9.68	9.61	9.75	7018	6748	3.84
Aroclor-1260	15.33	15.26	15.40	25393	24867	2.07
Aroclor-1260 {2}	15.89	15.82	15.96	22511	22030	2.14
Aroclor-1260 {3}	17.53	17.46	17.60	52637	50733	3.62
Aroclor-1260 {4}	18.46	18.39	18.53	23504	23297	0.88
Aroclor-1260 {5}	20.50	20.43	20.57	13737	13806	0.51
					Average %D	2.98

Data File: V4956.C **GC Column (2nd):** DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	6.36	6.29	6.43	6852	6193	9.62
Aroclor-1016 {2}	7.43	7.36	7.50	12511	11280	9.84
Aroclor-1016 {3}	8.79	8.72	8.86	29762	26311	11.60
Aroclor-1016 {4}	9.18	9.11	9.25	10200	9352	8.32
Aroclor-1016 {5}	9.50	9.43	9.57	10419	9482	8.99
Aroclor-1260	15.19	15.12	15.26	20621	18895	8.37
Aroclor-1260 {2}	16.45	16.38	16.52	16603	15420	7.13
Aroclor-1260 {3}	17.47	17.40	17.54	18756	17391	7.28
Aroclor-1260 {4}	18.43	18.36	18.50	46399	42246	8.95
Aroclor-1260 {5}	20.72	20.65	20.79	5475	5309	3.03
					Average %D	8.31

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 04/05/2001 Instrument ID: Varian 3400

Data File: V4971.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	5.80	5.73	5.87	6098	5515	9.55
Aroclor-1016 {2}	6.88	6.81	6.95	4840	4289	11.39
Aroclor-1016 {3}	7.32	7.25	7.39	8302	7412	10.72
Aroclor-1016 {4}	9.19	9.12	9.26	4994	4508	9.75
Aroclor-1016 {5}	9.67	9.60	9.74	7018	6349	9.53
Aroclor-1260	15.32	15.25	15.39	25393	23760	6.43
Aroclor-1260 {2}	15.88	15.81	15.95	22511	20969	6.85
Aroclor-1260 {3}	17.53	17.46	17.60	52637	48710	7.46
Aroclor-1260 {4}	18.45	18.38	18.52	23504	22352	4.90
Aroclor-1260 {5}	20.50	20.43	20.57	13737	13326	2.99
					Average %D	7.96

Data File: V4971.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	6.36	6.29	6.43	6852	6190	9.65
Aroclor-1016 {2}	7.43	7.36	7.50	12511	11355	9.24
Aroclor-1016 {3}	8.79	8.72	8.86	29762	26554	10.78
Aroclor-1016 {4}	9.17	9.10	9.24	10200	9419	7.66
Aroclor-1016 {5}	9.49	9.42	9.56	10419	9576	8.09
Aroclor-1260	15.18	15.11	15.25	20621	19347	6.18
Aroclor-1260 {2}	16.44	16.37	16.51	16603	15738	5.21
Aroclor-1260 {3}	17.45	17.38	17.52	18756	17823	4.97
Aroclor-1260 {4}	18.42	18.35	18.49	46399	43633	5.96
Aroclor-1260 {5}	20.71	20.64	20.78	5475	5390	1.54
					Average %D	6.93

4172

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/05/2001

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(2093.2108)	0405-BLK2	AQUEOUS	101		87		98		86	
DW-1	2108-001	AQUEOUS	94		85		94		85	
WW-1	2108-002	AQUEOUS	79		75		83		79	
MHR-1	2108-003	AQUEOUS	84		83		86		84	
FB	2094-001	AQUEOUS	88		78		89		78	
MW-1	2094-003	AQUEOUS	84		89		85		89	
MW-2	2094-004	AQUEOUS	78		79		78		79	
MW-7	2094-005	AQUEOUS	84		69		83		69	
MW-6	2094-006	AQUEOUS	92		88		94		89	
MW-8	2094-007	AQUEOUS	109		85		106		90	
MW-3	2094-008	AQUEOUS	90		86		87		91	
MW-5	2094-009	AQUEOUS	100		84		99		87	
PCB	PBW0405-MS2	AQUEOUS	95		82		98		87	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59-147	59-151
DCB = Decachlorobiphenyl	63-179	60-150

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

AQUEOUS PCB MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 2049-001-MSD2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	11.3	113	35 - 161
Aroclor-1260	10.0	0.0	10.8	108	53 - 192

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	0.0	11.2	112	1	21	35 - 161
Aroclor-1260	0.0	10.7	107	1	23	53 - 192

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
NC Non calculable

RPD: __0___ out of __2__ outside limits

Spike Recovery: __0___ out of __4__ outside limits

AQUEOUS PCB BLANK SPIKE RECOVERY

Matrix spike Lab sample ID: PBW0405-MS2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	11.2	112	35 - 161
Aroclor-1260	10.0	0.0	10.6	106	53 - 192

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

* Values outside of QC limits

NC Non calculable

Spike Recovery: __0___ out of __2__ outside limits

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-V **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 4.97 DCB 1 22.63 TCMX 2 4.85 DCB 2 22.82

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
(2093.2108)	0405-BLK2	04/05/2001	15:21	4.97		22.63		4.85		22.82	
DW-1	2108-001	04/05/2001	15:52	4.97		22.63		4.85		22.82	
WW-1	2108-002	04/05/2001	16:23	4.97		22.63		4.85		22.82	
MHR-1	2108-003	04/05/2001	16:53	4.96		22.62		4.84		22.81	
FB	2094-001	04/05/2001	17:24	4.97		22.63		4.85		22.83	
MW-1	2094-003	04/05/2001	17:55	4.97		22.63		4.85		22.82	
MW-2	2094-004	04/05/2001	18:26	4.97		22.63		4.85		22.83	
MW-7	2094-005	04/05/2001	18:56	4.97		22.63		4.85		22.82	
MW-6	2094-006	04/05/2001	19:27	4.97		22.62		4.85		22.81	
MW-8	2094-007	04/05/2001	19:58	4.97		22.62		4.84		22.81	
MW-3	2094-008	04/05/2001	20:29	4.97		22.63		4.85		22.82	
MW-5	2094-009	04/05/2001	20:59	4.97		22.63		4.85		22.82	
PCB	PBW0405-MS2	04/05/2001	22:01	4.97		22.62		4.85		22.82	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene (± 0.05 Minutes)

DCB = Decachlorobiphenyl (_ 0.05 Minutes)

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4961.D\ADC1A.CH Vial: 7
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4961.D\ADC1B.CH
Acq On : 5 Apr 2001 17:24 Operator:
Sample : FB,2094-001,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:19 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	76486839	82077708	88.353	89.448
Spiked Amount 100.000			Recovery =		88.35%	89.45%
2) S DCB	22.63	22.83	68334936	66410458	77.681	78.256
Spiked Amount 100.000			Recovery =		77.68%	78.26%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4961.D VPCB0329.M Fri Apr 06 09:34:55 2001 V3400 Page 1

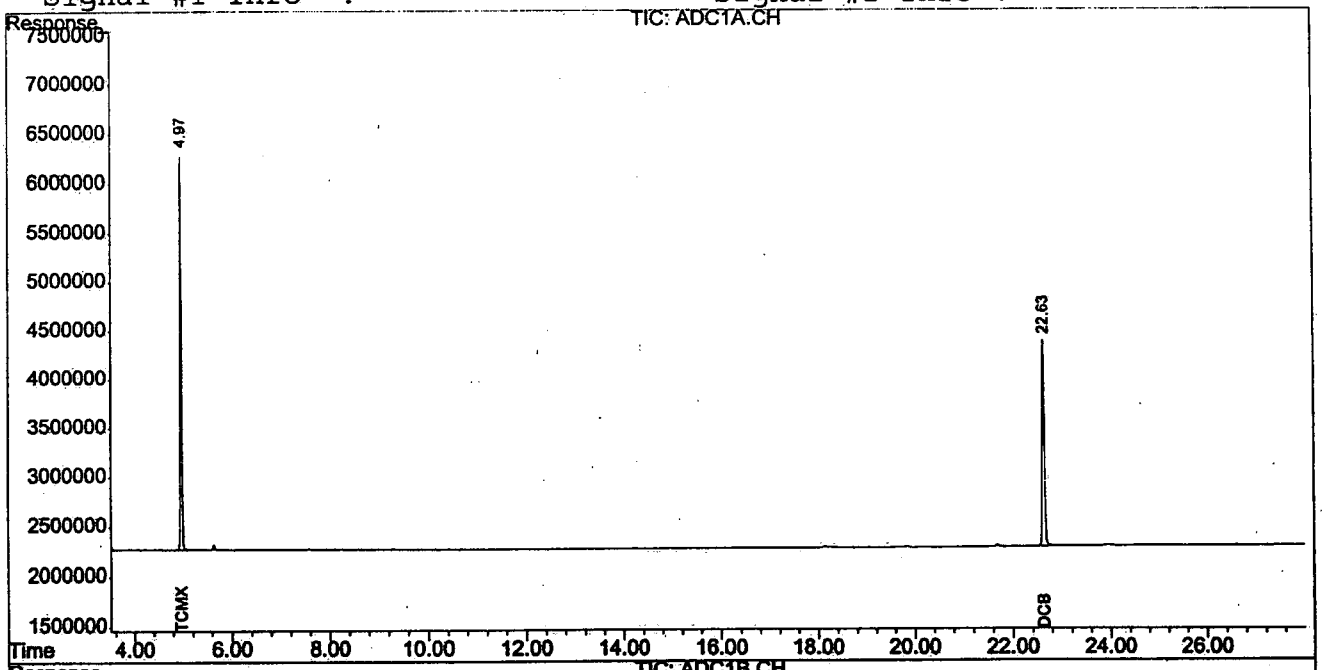
4177

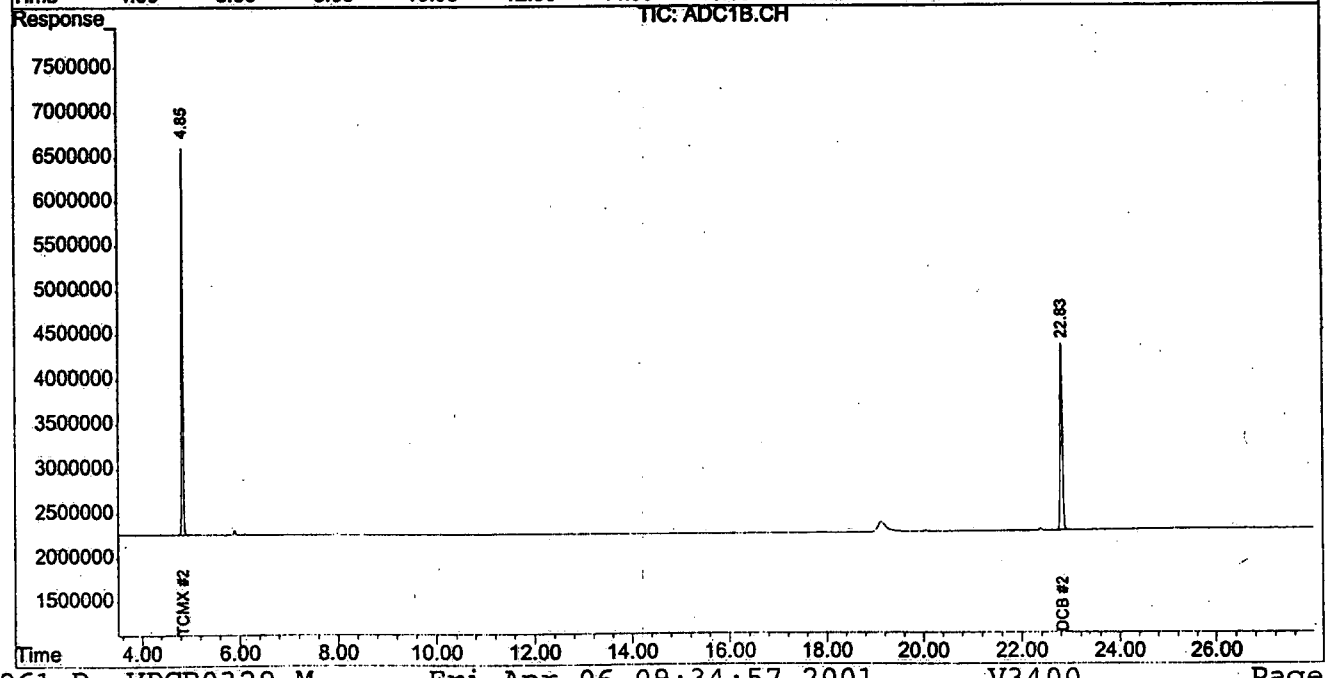
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4961.D\ADC1A.CH Vial: 7
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4961.D\ADC1B.CH
Acq On : 5 Apr 2001 17:24 Operator:
Sample : FB,2094-001,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:05 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4178

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4962.D\ADC1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4962.D\ADC1B.CH
Acq On : 5 Apr 2001 17:55 Operator:
Sample : MW-1,2094-003,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:24 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	72388361	77886287	83.618	84.880
Spiked Amount 100.000			Recovery	=	83.62%	84.88%
2) S DCB	22.63	22.82	78125778	75783219	88.811	89.301
Spiked Amount 100.000			Recovery	=	88.81%	89.30%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4962.D VPCB0329.M Fri Apr 06 09:35:01 2001 V3400 Page 1

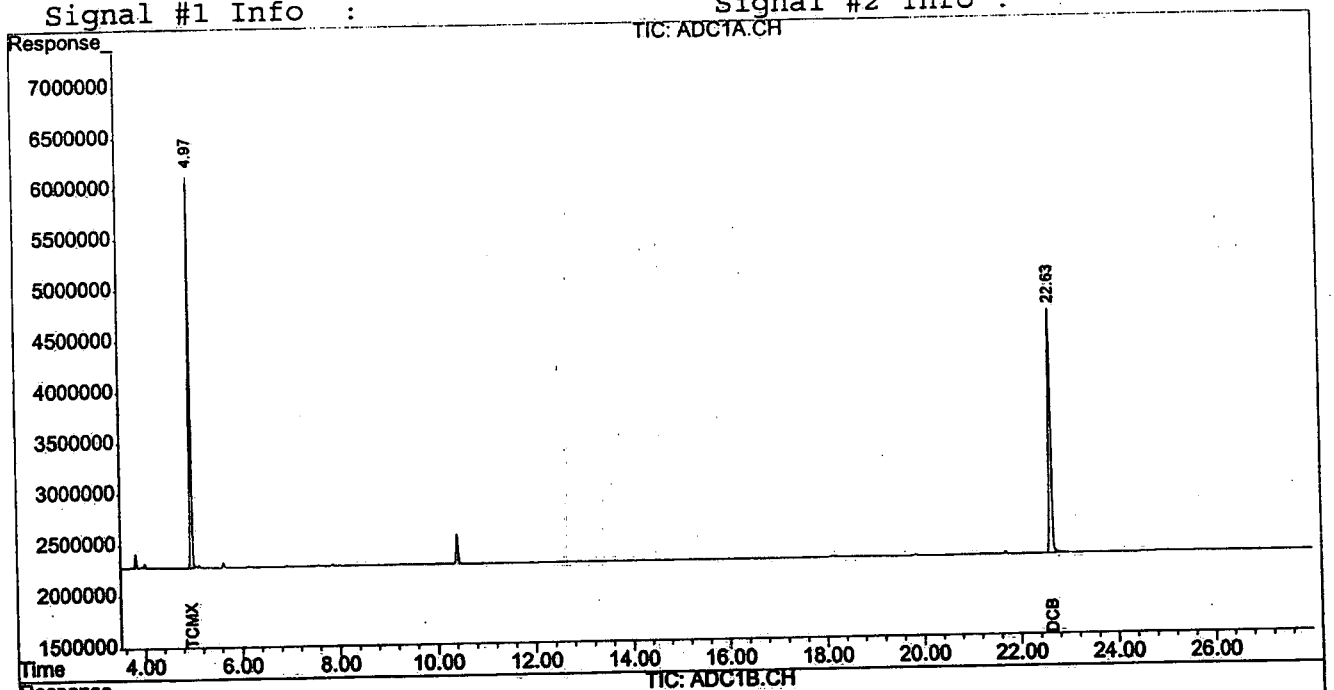
4179

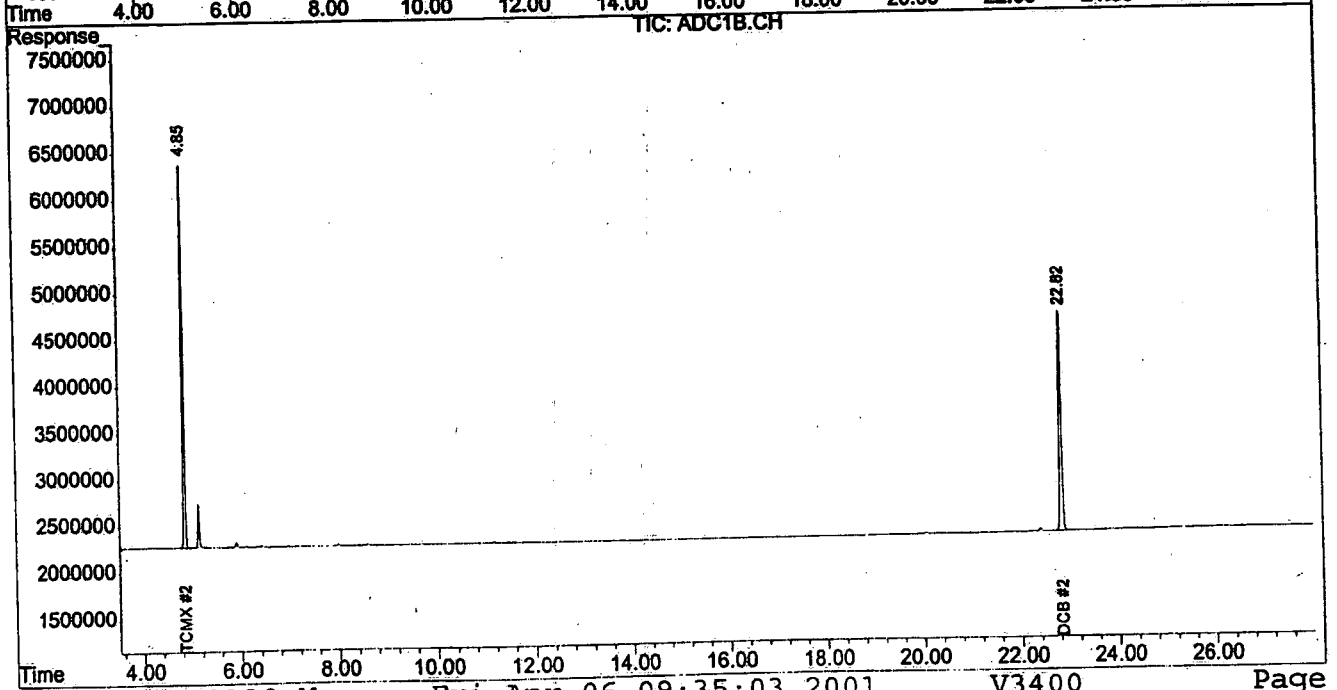
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4962.D\ADC1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4962.D\ADC1B.CH
Acq On : 5 Apr 2001 17:55 Operator:
Sample : MW-1,2094-003,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:06 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000213

4180

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4963.D\ADC1A.CH Vial: 9
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4963.D\ADC1B.CH
Acq On : 5 Apr 2001 18:26 Operator:
Sample : MW-2,2094-004,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:30 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	67053144	71942799	77.455	78.403
Spiked Amount 100.000			Recovery =		77.45%	78.40%
2) S DCB	22.63	22.83	69026043	67355094	78.466	79.369
Spiked Amount 100.000			Recovery =		78.47%	79.37%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4963.D VPCB0329.M Fri Apr 06 09:35:08 2001 V3400 Page 1

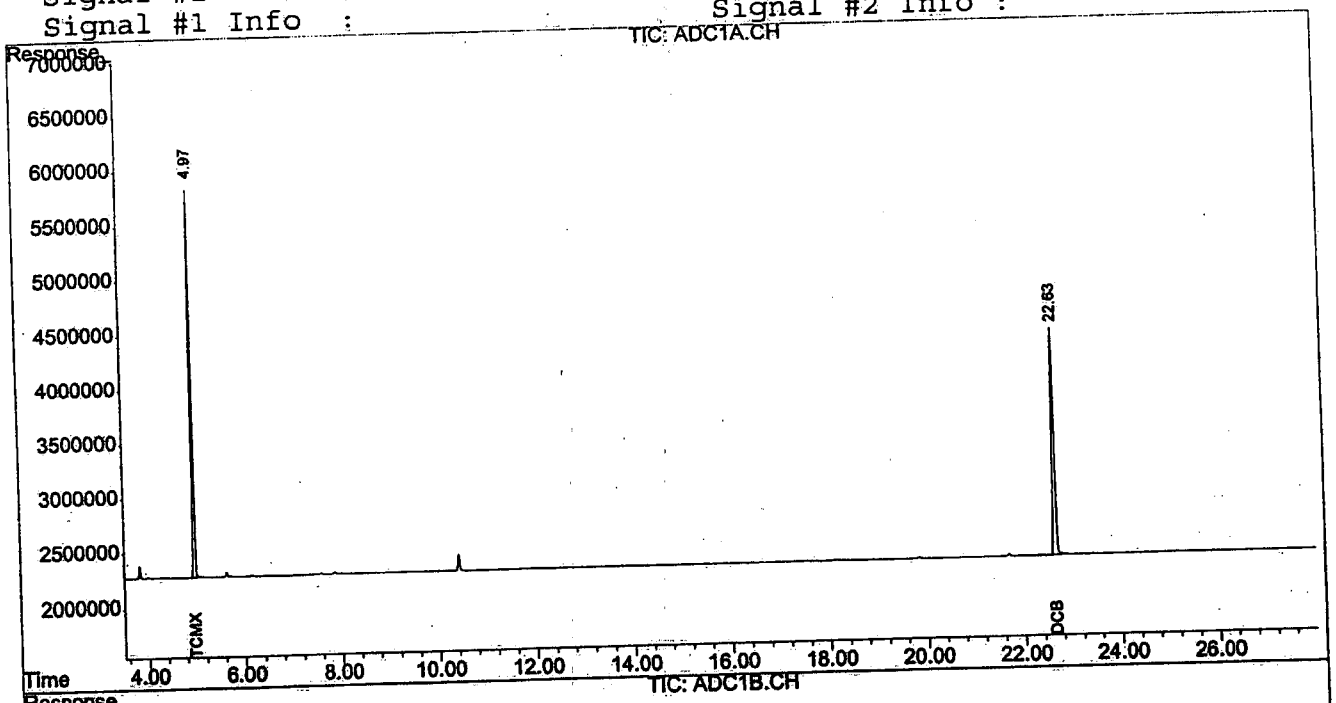
4181

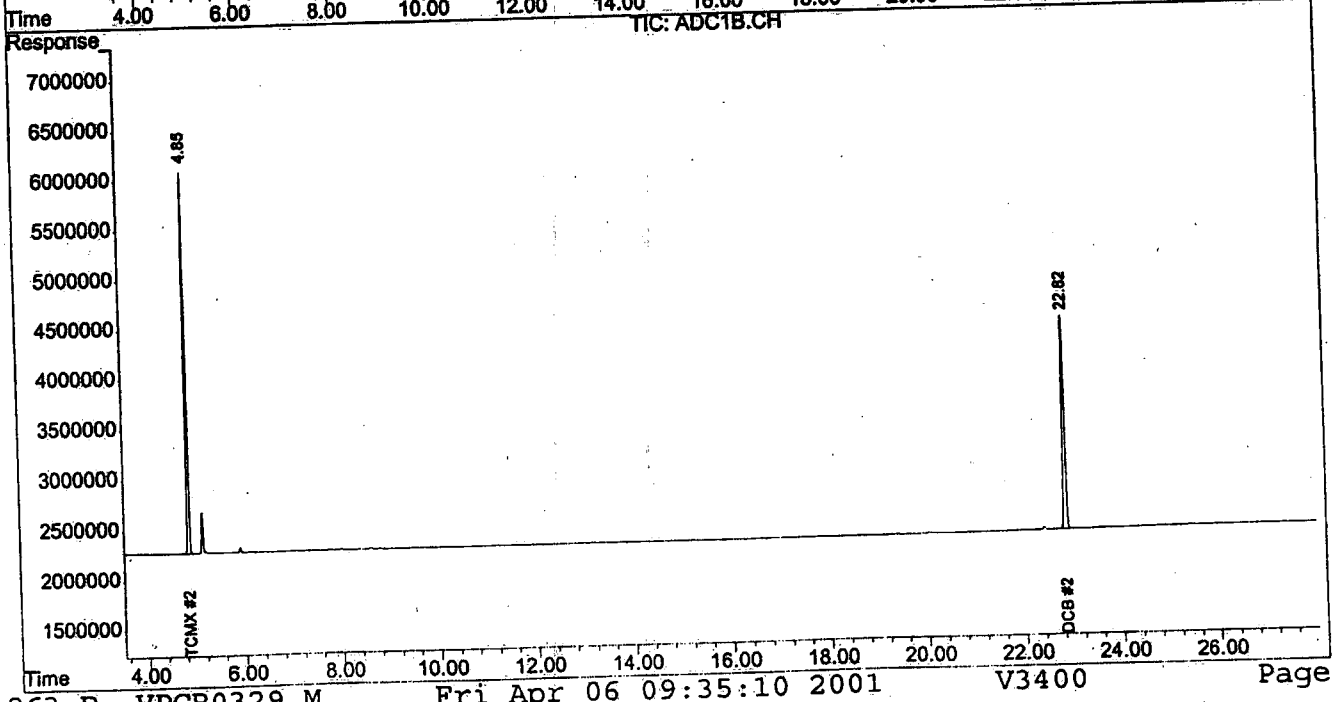
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4963.D\ADC1A.CH Vial: 9
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4963.D\ADC1B.CH
Acq On : 5 Apr 2001 18:26 Operator:
Sample : MW-2,2094-004,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:06 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





H182

000059

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4964.D\ADC1A.CH Vial: 10
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4964.D\ADC1B.CH
Acq On : 5 Apr 2001 18:56 Operator:
Sample : MW-7,2094-005,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:36 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	72432239	75801267	83.669	82.608
Spiked Amount 100.000			Recovery	=	83.67%	82.61%
2) S DCB	22.63	22.82	60489215	58835936	68.762	69.331
Spiked Amount 100.000			Recovery	=	68.76%	69.33%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4964.D VPCB0329.M Fri Apr 06 09:35:14 2001 V3400 Page 1

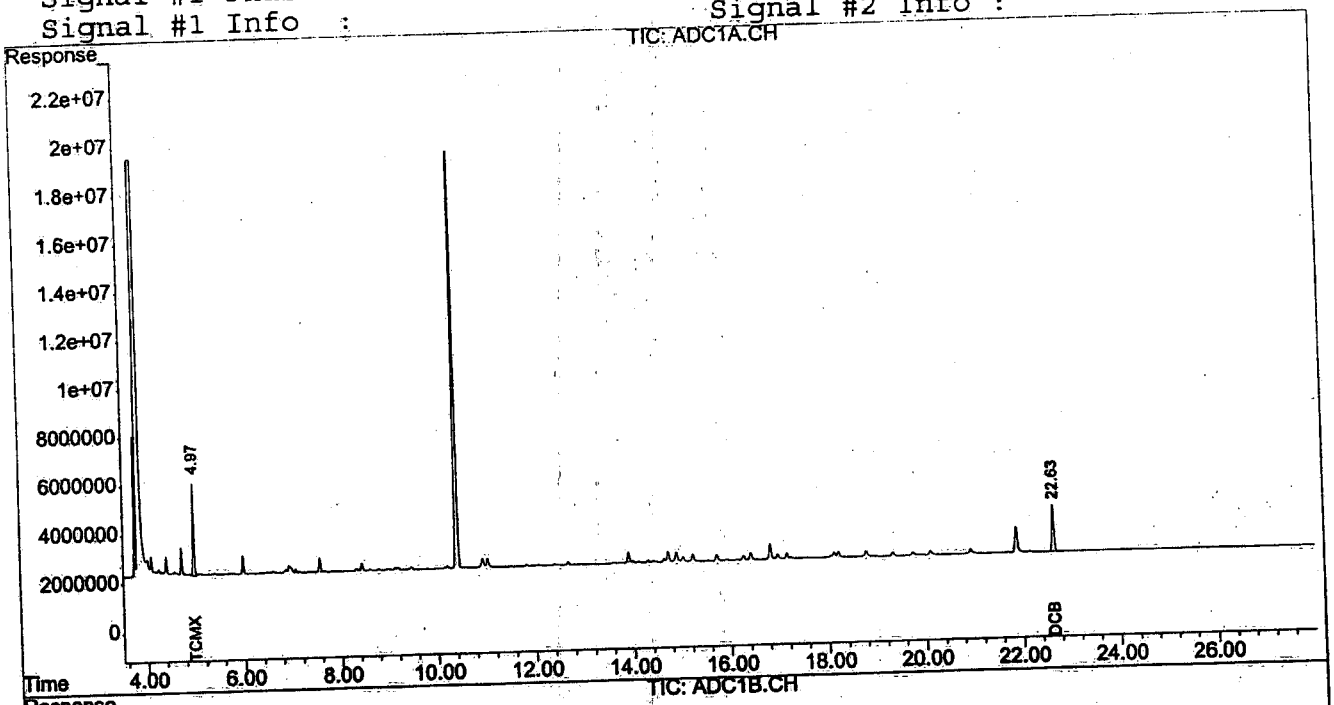
H183

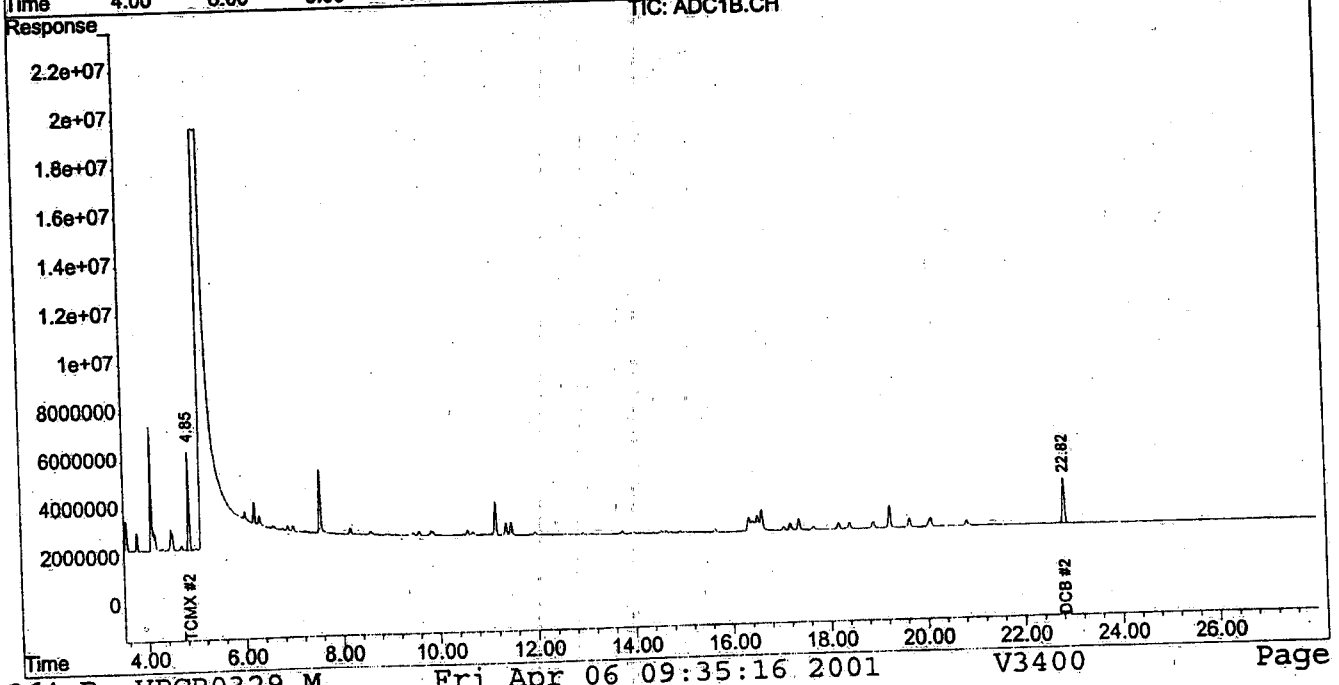
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4964.D\ADC1A.CH Vial: 10
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4964.D\ADC1B.CH
Acq On : 5 Apr 2001 18:56 Operator:
Sample : MW-7,2094-005,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 9:17 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





4164

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4965.D\ADC1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4965.D\ADC1B.CH
Acq On : 5 Apr 2001 19:27 Operator:
Sample : MW-6,2094-006,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:42 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	79654303	86322663	92.011	94.074
Spiked Amount 100.000			Recovery =		92.01%	94.07%
2) S DCB	22.62	22.81	77289317	75864808	87.860	89.397
Spiked Amount 100.000			Recovery =		87.86%	89.40%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4965.D VPCB0329.M Fri Apr 06 09:35:20 2001 V3400 Page 1

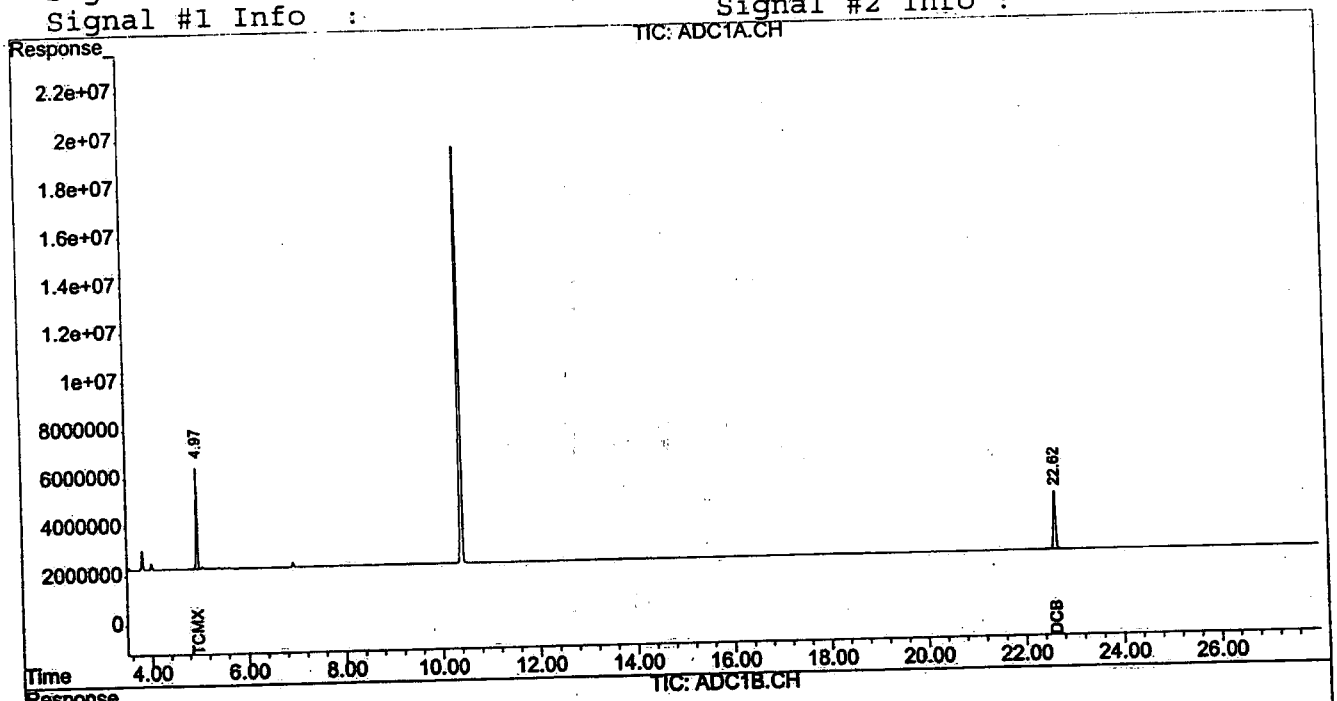
4105

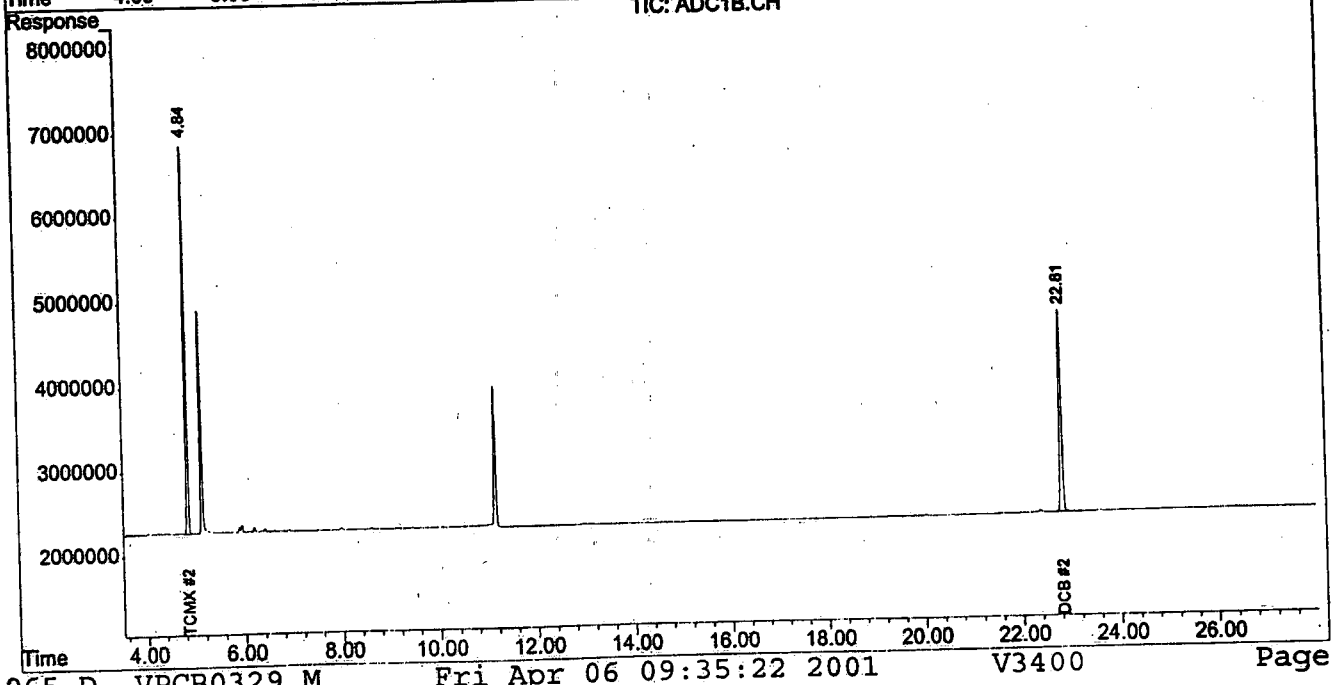
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4965.D\ADC1A.CH Vial: 11
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4965.D\ADC1B.CH
Acq On : 5 Apr 2001 19:27 Operator:
Sample : MW-6,2094-006,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:08 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





4186

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4966.D\ADC1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4966.D\ADC1B.CH
Acq On : 5 Apr 2001 19:58 Operator:
Sample : MW-8,2094-007,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:48 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.84	94523806	97435151	109.188	106.185
Spiked Amount 100.000			Recovery	=	109.19%	106.19%
2) S DCB	22.62	22.81	74436299	76138269	84.617	89.719
Spiked Amount 100.000			Recovery	=	84.62%	89.72%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4966.D VPCB0329.M Fri Apr 06 09:35:26 2001 V3400 Page 1

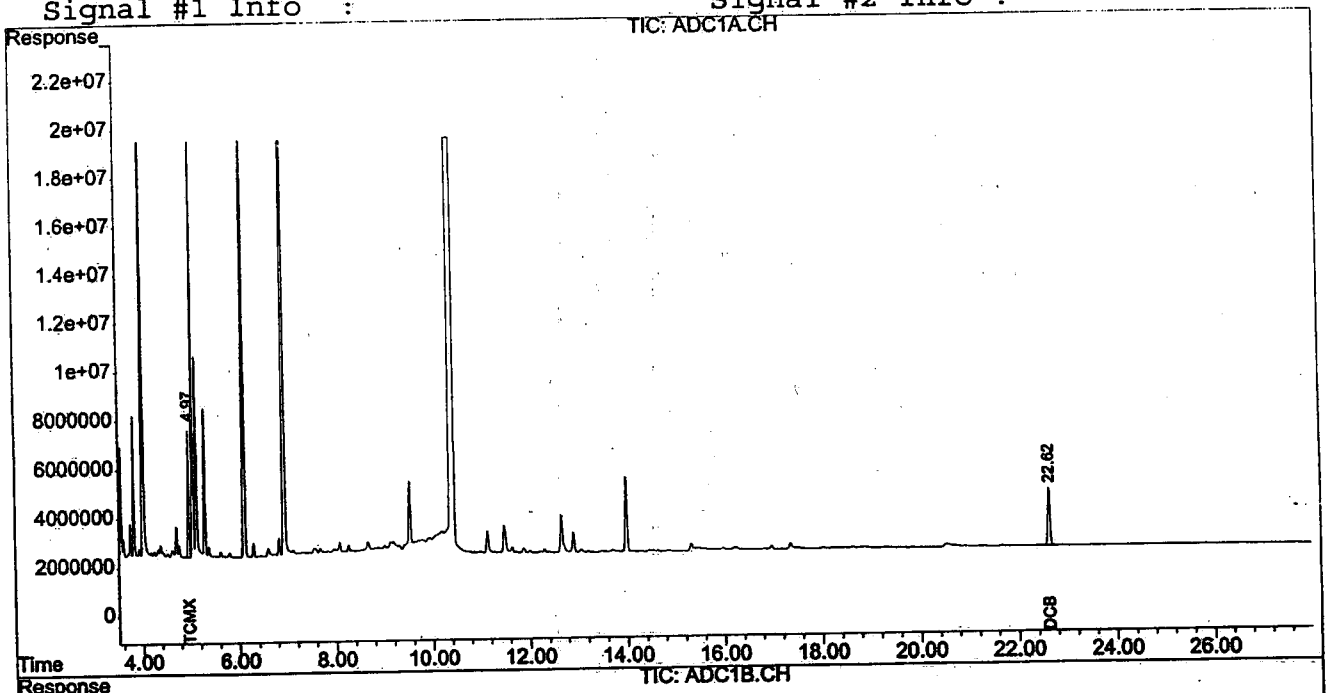
H150

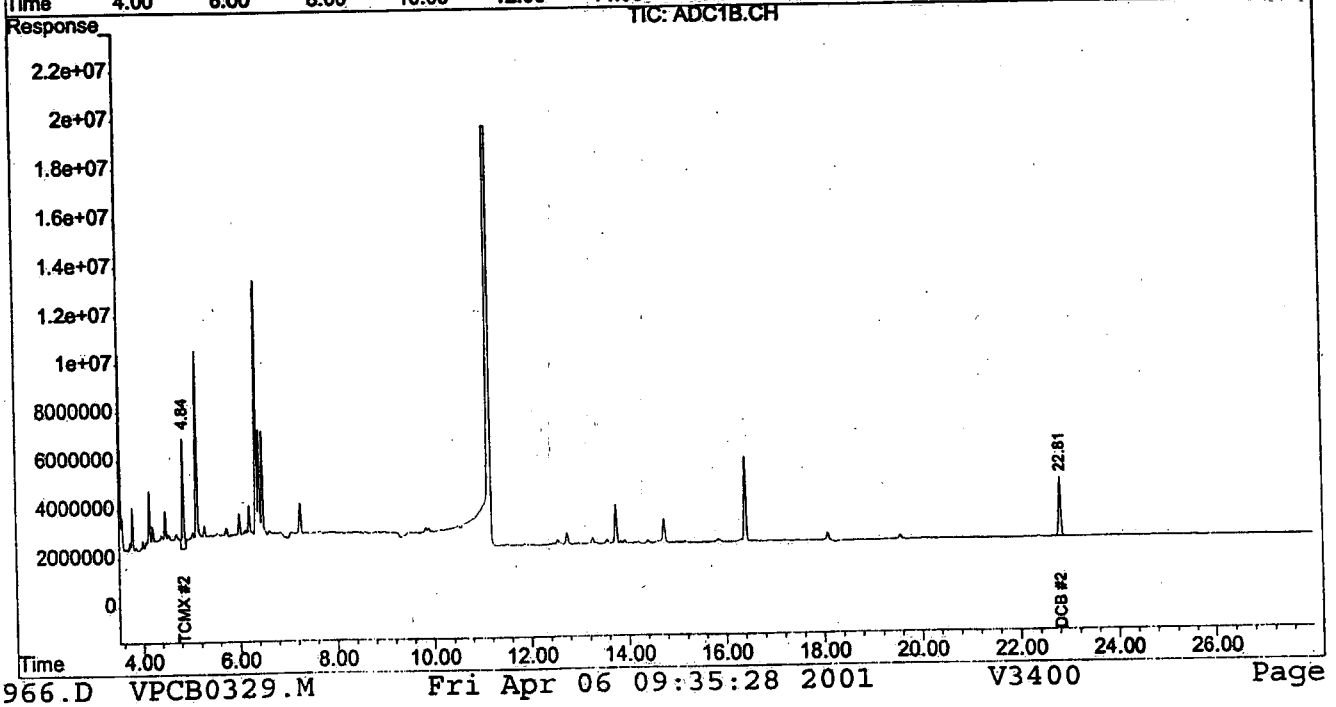
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4966.D\ADC1A.CH Vial: 12
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4966.D\ADC1B.CH
Acq On : 5 Apr 2001 19:58 Operator:
Sample : MW-8,2094-007,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 9:28 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





H1464

000353

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4967.D\ADC1A.CH Vial: 13
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4967.D\ADC1B.CH
Acq On : 5 Apr 2001 20:29 Operator:
Sample : MW-3,2094-008,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:53 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	77951051	80157528	90.044	87.355
Spiked Amount 100.000			Recovery	=	90.04%	87.36%
2) S DCB	22.63	22.82	75639435	77040130	85.984	90.782
Spiked Amount 100.000			Recovery	=	85.98%	90.78%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4967.D VPCB0329.M Fri Apr 06 09:35:33 2001 V3400 Page 1

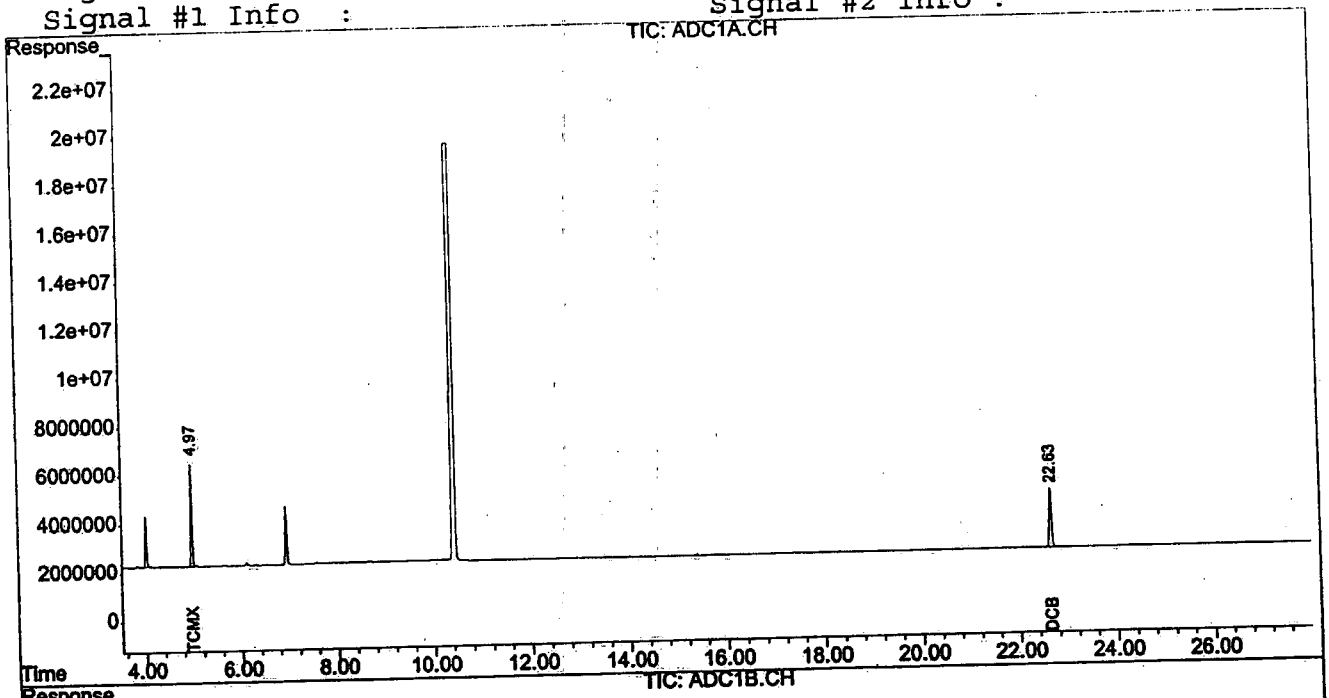
41489

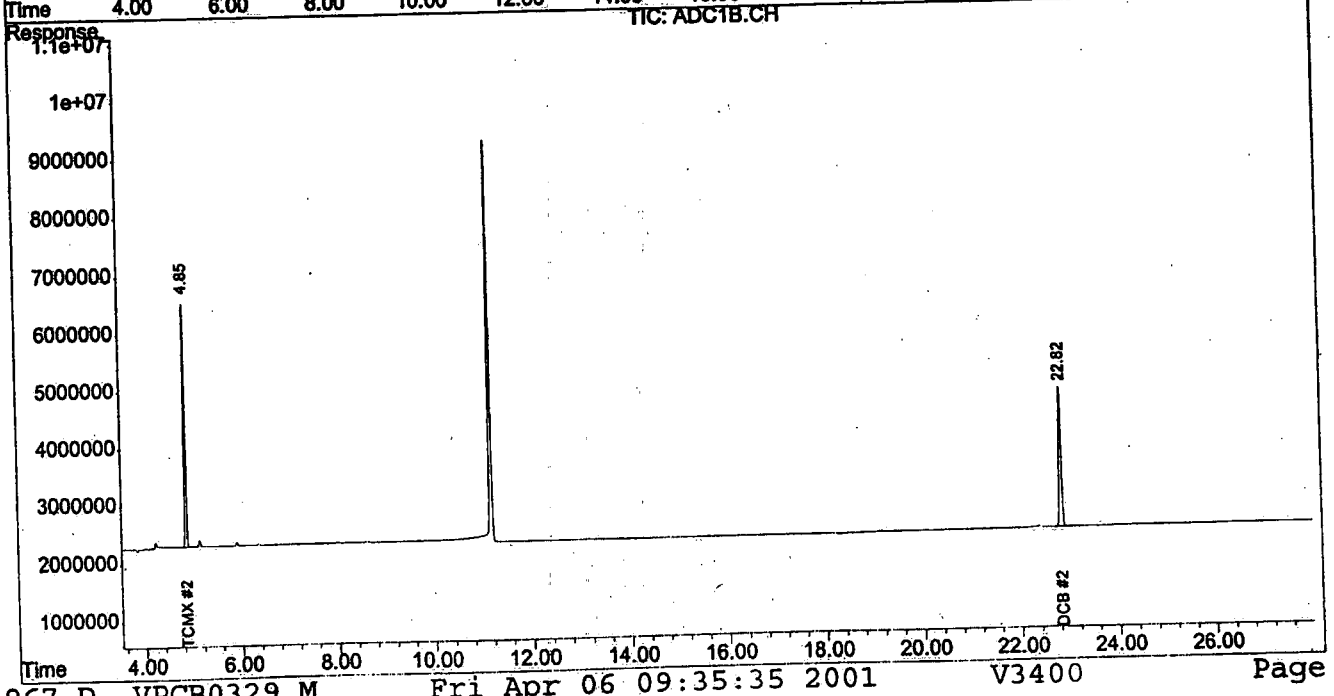
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4967.D\ADC1A.CH Vial: 13
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4967.D\ADC1B.CH
Acq On : 5 Apr 2001 20:29 Operator:
Sample : MW-3,2094-008,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:08 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





000358

4190

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4968.D\ADC1A.CH Vial: 14
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4968.D\ADC1B.CH
Acq On : 5 Apr 2001 20:59 Operator:
Sample : MW-5,2094-009,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:58:59 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	86417762	90661120	99.824	98.802
Spiked Amount 100.000			Recovery	=	99.82%	98.80%
2) S DCB	22.63	22.82	73501608	74066827	83.554	87.278
Spiked Amount 100.000			Recovery	=	83.55%	87.28%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V4968.D VPCB0329.M Fri Apr 06 09:35:40 2001 V3400 Page 1

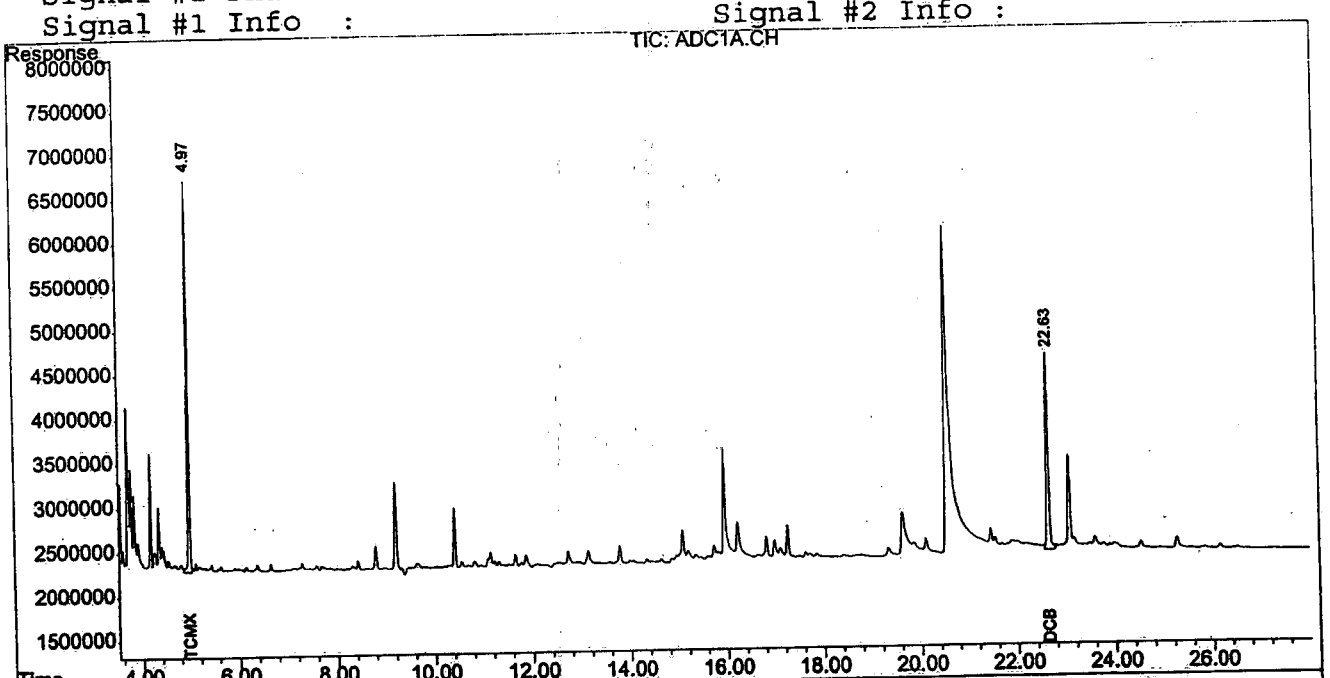
4191

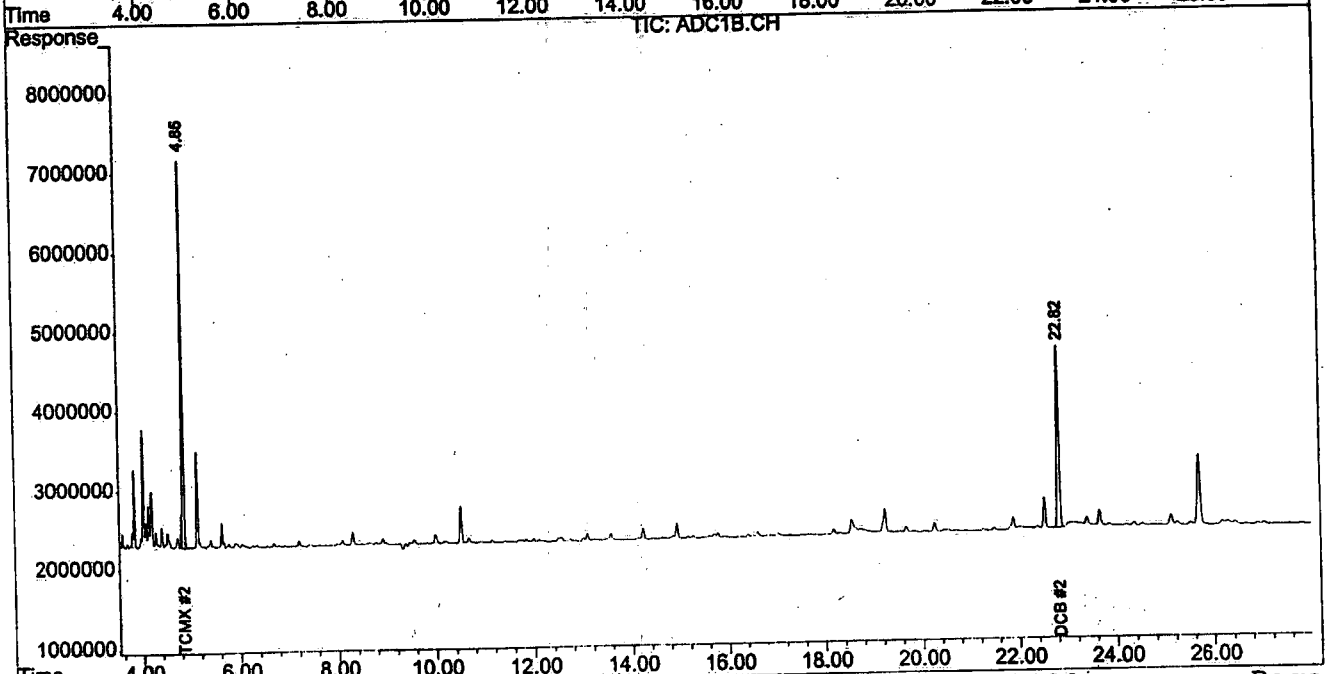
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4968.D\ADC1A.CH Vial: 14
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4968.D\ADC1B.CH
Acq On : 5 Apr 2001 20:59 Operator:
Sample : MW-5,2094-009,A,1000mL,100,04/05/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/03/01,04/04/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:10 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000000

4192

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4957.D\ADC1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4957.D\ADC1B.CH
Acq On : 5 Apr 2001 15:21 Operator:
Sample : (2093.2108),0405-PBLCK,1,1000ml,100,04/05 Inst : V_5400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:57:56 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

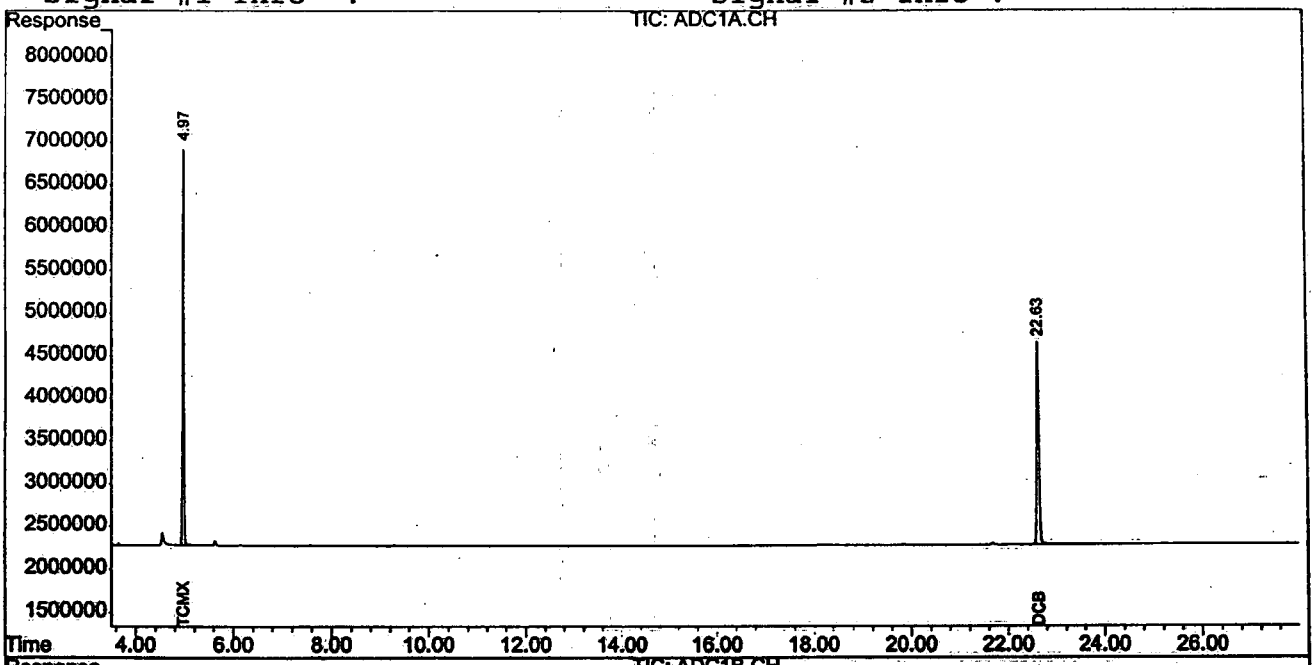
Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	86985421	89808744	100.480	97.873
Spiked Amount 100.000			Recovery	=	100.48%	97.87%
2) S DCB	22.63	22.82	76371796	72535047	86.817	85.473
Spiked Amount 100.000			Recovery	=	86.82%	85.47%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

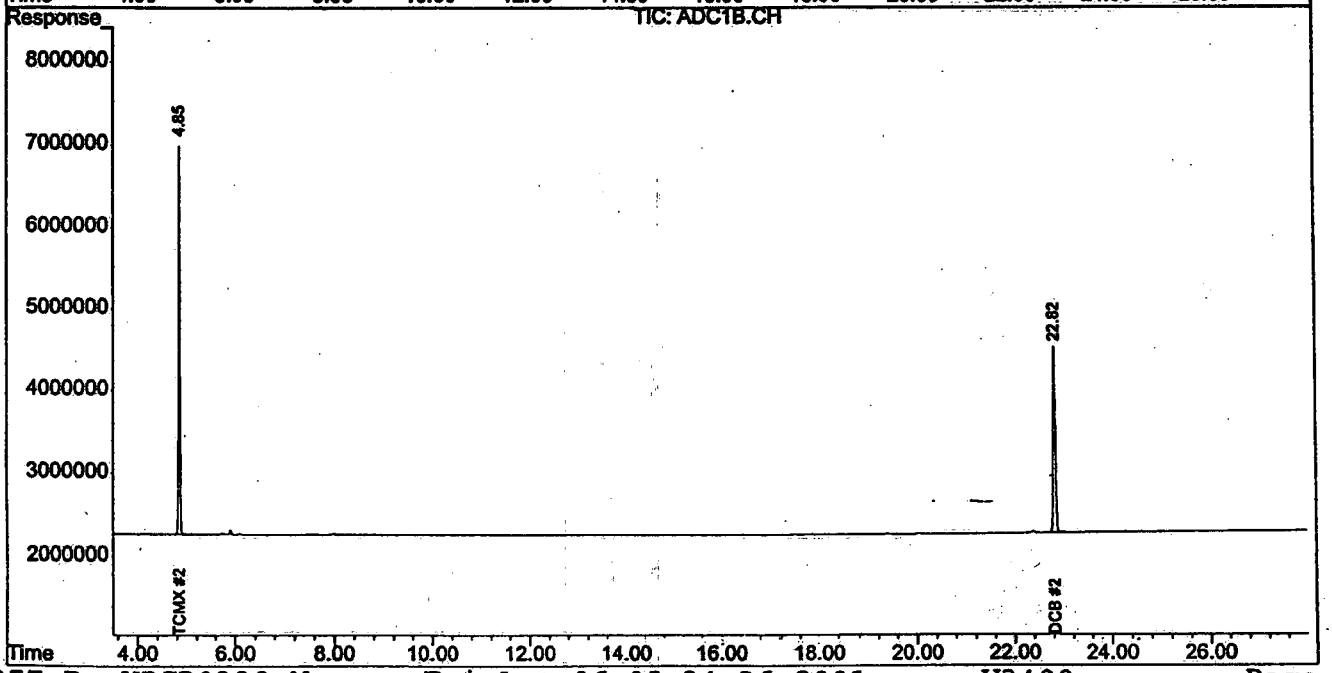
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4957.D\ADC1A.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4957.D\ADC1B.CH
Acq On : 5 Apr 2001 15:21 Operator:
Sample : (2093.2108),0405-LLK2,A,1000mL,100,04/05 Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:01 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4194

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4956.D\ADC1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4956.D\ADC1B.CH
Acq On : 5 Apr 2001 14:50 Operator:
Sample : 8082_C_TAS1432,1_PLM Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:57:50 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		4.97	4.84	77807699	79147973	89.878	86.255
Spiked Amount 100.000				Recovery =		89.88%	86.25%
2) S DCB		22.63	22.82	80943318	76008413	92.014	89.566
Spiked Amount 100.000				Recovery =		92.01%	89.57%
Target Compounds							
3) L2 Aroclor-1016		5.80	6.36	5886670	6192659	965.389	903.825
L2 Aroclor-1016	{2}	6.89	7.43	4608596	11279629	952.118	901.566
L2 Aroclor-1016	{3}	7.33	8.79	7919449	26311230	953.950	884.041
6) L2 Aroclor-1016	{4}	9.20	9.18	4802108	9351584	961.490	916.793
7) L2 Aroclor-1016	{5}	9.68	9.50	6748119	9482413	961.592	910.127
Sum Aroclor-1016				29964942	62617515	4794.540	4516.352
Average Aroclor-1016						958.908	903.270
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		15.33	15.19	24866907	18895475	979.297	916.306
34) L8 Aroclor-1260	{2}	15.89	16.45	22029873	15420092	978.613	928.729
35) L8 Aroclor-1260	{3}	17.53	17.47	50732631	17391022	963.824	927.235
36) L8 Aroclor-1260	{4}	18.46	18.43	23297039	42246464	991.182	910.510
37) L8 Aroclor-1260	{5}	20.50	20.72	13806063	5308938	1005.061	969.719
Sum Aroclor-1260				134.7E6	99261991	4917.976	4652.500
Average Aroclor-1260						983.595	930.500

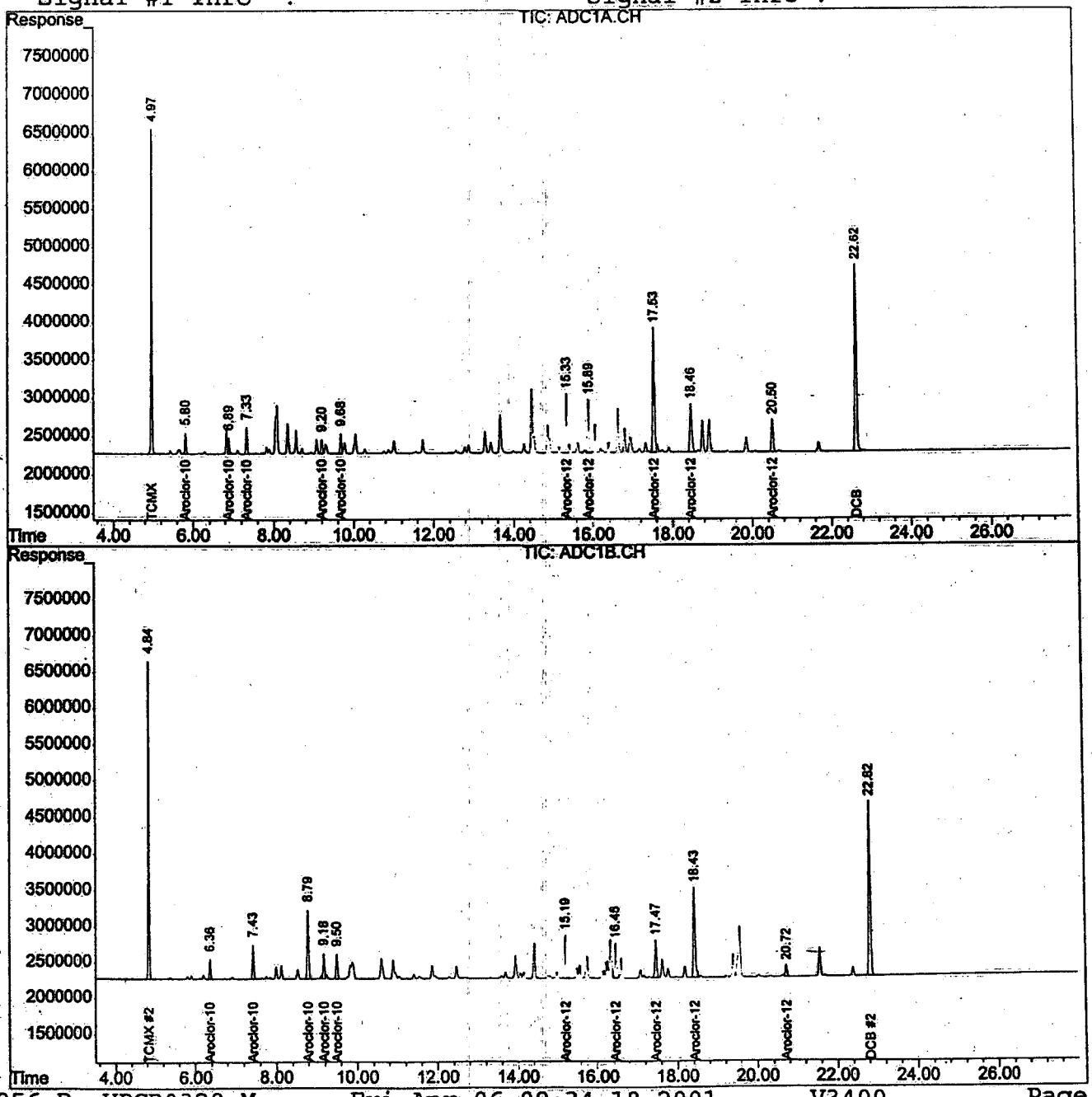
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4956.D\ADC1A.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4956.D\ADC1B.CH
Acq On : 5 Apr 2001 14:50 Operator:
Sample : 0002_C_1AS1432,1_1PM Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:01 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



4196

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4971.D\ADC1A.CH Vial: 17
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4971.D\ADC1B.CH
Acq On : 5 Apr 2001 22:32 Operator:
Sample : [illegible]_C_[illegible] Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 06 05:59:17 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		4.96	4.84	72485553	80134794	83.731	87.331
Spiked Amount	100.000			Recovery	=	83.73%	87.33%
2) S DCB		22.62	22.81	77490723	79132276	88.089	93.247
Spiked Amount	100.000			Recovery	=	88.09%	93.25%
Target Compounds							
3) L2 Aroclor-1016		5.80	6.36	5515484	6190447	904.516	903.502
L2 Aroclor-1016	{2}	6.88	7.43	4289279	11354694	886.149	907.566
L2 Aroclor-1016	{3}	7.32	8.79	7412150	26554056	892.843	892.199
6) L2 Aroclor-1016	{4}	9.19	9.17	4507655	9418870	902.534	923.389
7) L2 Aroclor-1016	{5}	9.67	9.49	6348625	9575582	904.665	919.069
Sum Aroclor-1016				28073193	63093648	4490.706	4545.726
Average Aroclor-1016						898.141	909.145
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		15.32	15.18	23759630	19346758	935.691	938.191
34) L8 Aroclor-1260	{2}	15.88	16.44	20968563	15737822	931.467	947.866
35) L8 Aroclor-1260	{3}	17.53	17.45	48709728	17823487	925.392	950.292
36) L8 Aroclor-1260	{4}	18.45	18.42	22351885	43632607	950.970	940.385
3[illegible] L8 Aroclor-1260	{5}	20.50	20.71	13325825	5390433	970.101	984.605
Sum Aroclor-1260				129.1E6	101.9E6	4713.621	4761.338
Average Aroclor-1260						942.724	952.268

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

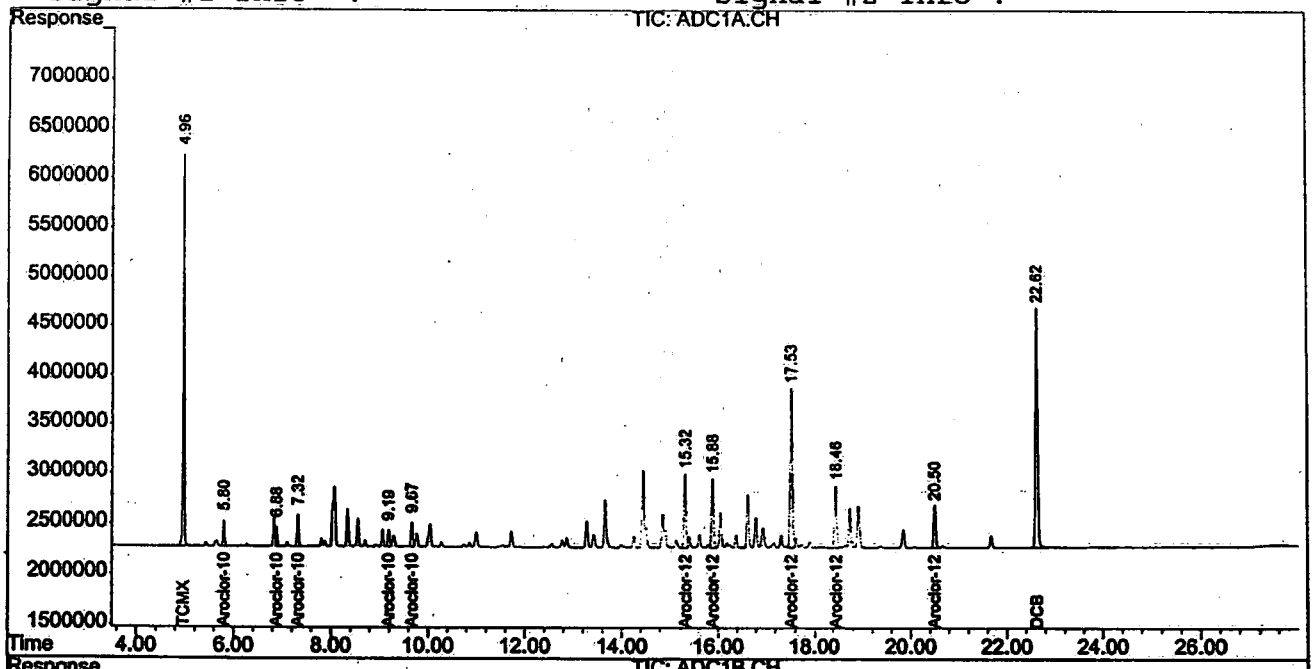
4197

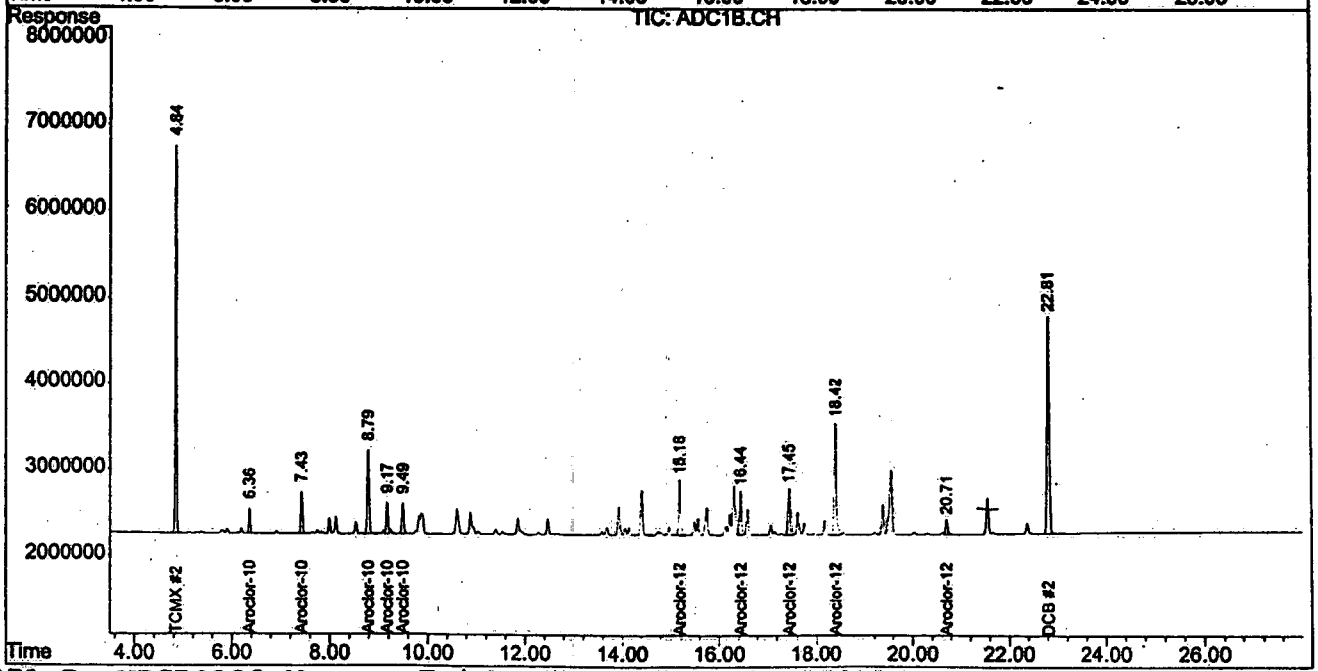
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-05-01\V4971.D\ADC1A.CH Vial: 17
Signal #2 : C:\MSDCHEM\1\DATA\04-05-01\V4971.D\ADC1B.CH
Acq On : 5 Apr 2001 22:32 Operator:
Sample : 2002_C_1AS1422,1_PPM Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 7:13 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





41958

PESTICIDE METHOD BLANK SUMMARY

Lab File ID: W5730.D

Instrument ID: GC-W

Date Extracted: 04/05/2001

Matrix: AQUEOUS

Date Analyzed: 04/05/2001

Time Analyzed: 15:21

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
DW-1	2108-001	04/05/2001	15:47
WW-1	2108-002	04/05/2001	16:12
MHR-1	2108-003	04/05/2001	16:37
FB	2094-001	04/05/2001	17:02
MW-1	2094-003	04/05/2001	17:26
MW-2	2094-004	04/05/2001	17:51
MW-7	2094-005	04/05/2001	18:16
MW-6	2094-006	04/05/2001	18:41
MW-8	2094-007	04/05/2001	19:06
MW-3	2094-008	04/05/2001	19:31
MW-5	2094-009	04/05/2001	19:56
MW-4	2093-001	04/05/2001	20:21
PEST	2094-001-MS2	04/05/2001	20:46
PEST	2094-001-MSD2	04/05/2001	21:11
PEST	PBA0405-MS2	04/05/2001	21:36

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: NA

Lab ID: 0405-BK2
Client ID: (2093.2108)
Date Received: NA
Date Extracted: 04/05/2001
Date Analyzed: 04/05/2001
Data file: W5730.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.002
beta-BHC	ND		0.002
gamma-BHC	ND		0.002
delta-BHC	ND		0.002
Heptachlor	ND		0.002
Aldrin	ND		0.002
Heptachlor epoxide	ND		0.002
Endosulfan I	ND		0.002
4,4'-DDE	ND		0.002
Dieldrin	ND		0.002
Endrin	ND		0.002
Endosulfan II	ND		0.002
4,4'-DDD	ND		0.002
Endrin aldehyde	ND		0.002
Endosulfan sulfate	ND		0.002
4,4'-DDT	ND		0.002
Chlordane	ND		0.015
Toxaphene	ND		0.015

4200

000333

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001

Instrument ID: GC-W

GC Column (1st): DB-5

Data File: W5678.D W5677.D W5676.D W5675.D W5674.D

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	10	50	100	200	300	RT	FROM	TO
alpha-BHC	4.54	4.55	4.55	4.54	4.54	4.54	4.47	4.61
beta-BHC	5.03	5.04	5.04	5.04	5.03	5.03	4.96	5.10
gamma-BHC	5.16	5.17	5.17	5.17	5.16	5.17	5.10	5.24
delta-BHC	5.63	5.64	5.64	5.64	5.64	5.64	5.57	5.71
Heptachlor	6.74	6.74	6.74	6.74	6.74	6.74	6.67	6.81
Aldrin	7.55	7.56	7.55	7.55	7.55	7.55	7.48	7.62
Heptachlor epoxide	8.56	8.56	8.56	8.56	8.56	8.56	8.49	8.63
Endosulfan I	9.48	9.48	9.48	9.48	9.48	9.48	9.41	9.55
4,4'-DDE	10.24	10.24	10.24	10.24	10.24	10.24	10.17	10.31
Dieldrin	10.17	10.17	10.17	10.17	10.17	10.17	10.10	10.24
Endrin	10.72	10.72	10.72	10.72	10.72	10.72	10.65	10.79
Endosulfan II	10.97	10.98	10.98	10.98	10.97	10.98	10.91	11.05
4,4'-DDD	11.36	11.36	11.36	11.36	11.36	11.36	11.29	11.43
Endrin aldehyde	11.50	11.50	11.50	11.50	11.50	11.50	11.43	11.57
Endosulfan sulfate	12.15	12.15	12.15	12.15	12.15	12.15	12.08	12.22
4,4'-DDT	12.38	12.38	12.38	12.38	12.38	12.38	12.31	12.45
Endrin ketone	13.36	13.36	13.36	13.36	13.36	13.36	13.29	13.43
Methoxychlor	14.06	14.06	14.06	14.06	14.06	14.06	13.99	14.13
alpha-Chlordane	9.58	9.58	9.58	9.58	9.58	9.58	9.51	9.65
gamma-Chlordane	9.17	9.18	9.17	9.18	9.17	9.17	9.10	9.24
Chlordane 500 ppb			9.17				9.10	9.24
Chlordane {2}			9.37				9.30	9.44
Chlordane {3}			9.58				9.51	9.65
Chlordane {4}			9.73				9.66	9.80
Chlordane {5}			11.57				11.50	11.64
Toxaphene 500 ppb			13.17				13.10	13.24
Toxaphene {2}			13.30				13.23	13.37
Toxaphene {3}			13.58				13.51	13.65
Toxaphene {4}			14.04				13.97	14.11
Toxaphene {5}			14.55				14.48	14.62

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001 **Instrument ID:** GC-W

GC Column (1st): DB-5

Data File: W5678.D W5677.D W5676.D W5675.D W5674.D

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	43496018	51170957	49291118	47524273	47662802	47829033	5.93
beta-BHC	18379609	19277612	18501314	17677343	17555823	18278340	3.81
gamma-BHC	40045540	45325231	43082664	40199962	39527082	41636096	5.97
delta-BHC	40914451	48513538	47243350	45719049	45763654	45630808	6.31
Heptachlor	34644486	39338425	38059323	36218756	35623323	36776863	5.16
Aldrin	38758408	44513217	42707366	40124672	39339496	41088632	5.93
Heptachlor epoxide	36135554	40003569	37832970	35121001	34216539	36661926	6.27
Endosulfan I	34135461	37496038	35435124	32853490	32002469	34384516	6.32
4,4'-DDE	34724674	39844061	38069279	35332573	34323622	36458842	6.56
Dieldrin	35895317	40429747	38456802	35942974	35003112	37145590	6.04
Endrin	30458379	34225195	33620271	32100741	31808532	32442624	4.63
Endosulfan II	32609352	34728562	32929131	30749858	30017892	32206959	5.80
4,4'-DDD	29633107	33219385	31721240	29744902	28793473	30622422	5.90
Endrin aldehyde	26777455	25431810	22822188	20072796	18946470	22810144	14.71
Endosulfan sulfate	30412382	31815282	30166743	28239588	27760800	29678959	5.61
4,4'-DDT	22004160	25643431	25690156	25182990	25266456	24757439	6.28
Endrin ketone	38876117	39251084	36105496	33001829	31789758	35804857	9.41
Methoxychlor	12205036	12527666	12023670	11346612	11057470	11832091	5.17
alpha-Chlordane	36258643	39925308	38229893	35913807	35107802	37087090	5.28
gamma-Chlordane	36790210	41895938	40307468	37944294	37106290	38808840	5.69
Chlordane 500 ppb			4097171				
Chlordane {2}			749336				
Chlordane {3}			3905814				
Chlordane {4}			1816015				
Chlordane {5}			1251816				
Toxaphene 500 ppb			743270				
Toxaphene {2}			582289				
Toxaphene {3}			434018				
Toxaphene {4}			509494				
Toxaphene {5}			747359				

000370

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001 **Instrument ID:** GC-W

GC Column (2nd): DB-1701P

Data File: W5678.C W5677.C W5676.C W5675.C W5674.C

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	10	50	100	200	300	RT	FROM	TO
alpha-BHC	5.59	5.60	5.59	5.59	5.60	5.60	5.53	5.67
beta-BHC	8.65	8.65	8.65	8.65	8.66	8.65	8.58	8.72
gamma-BHC	6.54	6.55	6.55	6.55	6.56	6.55	6.48	6.62
delta-BHC	9.21	9.22	9.21	9.22	9.22	9.22	9.15	9.29
Heptachlor	7.02	7.03	7.03	7.03	7.04	7.03	6.96	7.10
Aldrin	7.69	7.70	7.70	7.70	7.71	7.70	7.63	7.77
Heptachlor epoxide	9.54	9.54	9.54	9.54	9.55	9.54	9.47	9.61
Endosulfan I	10.22	10.22	10.22	10.23	10.23	10.23	10.16	10.30
4,4'-DDE	10.99	11.00	11.00	11.00	11.00	11.00	10.93	11.07
Dieldrin	11.26	11.26	11.26	11.26	11.27	11.26	11.19	11.33
Endrin	11.78	11.79	11.78	11.79	11.79	11.79	11.72	11.86
Endosulfan II	13.23	13.23	13.23	13.23	13.24	13.23	13.16	13.30
4,4'-DDD	13.23	13.23	13.23	13.23	13.24	13.23	13.16	13.30
Endrin aldehyde	14.37	14.37	14.37	14.37	14.38	14.37	14.30	14.44
Endosulfan sulfate	15.27	15.27	15.27	15.27	15.28	15.27	15.20	15.34
4,4'-DDT	13.68	13.68	13.68	13.68	13.69	13.68	13.61	13.75
Endrin ketone	16.30	16.30	16.30	16.30	16.30	16.30	16.23	16.37
Methoxychlor	15.54	15.54	15.55	15.54	15.55	15.55	15.48	15.62
alpha-Chlordane	10.61	10.62	10.62	10.62	10.62	10.62	10.55	10.69
gamma-Chlordane	10.46	10.46	10.46	10.46	10.47	10.46	10.39	10.53
Chlordane 500 ppb			8.38				8.31	8.45
Chlordane {2}			10.06				9.99	10.13
Chlordane {3}			10.46				10.39	10.53
Chlordane {4}			10.62				10.55	10.69
Chlordane {5}			10.67				10.60	10.74
Toxaphene 500 ppb			14.02				13.95	14.09
Toxaphene {2}			14.74				14.67	14.81
Toxaphene {3}			15.01				14.94	15.08
Toxaphene {4}			15.21				15.14	15.28
Toxaphene {5}			15.65				15.58	15.72

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/05/2001 Instrument ID: GC-W

Data File: W5724.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
alpha-BHC	4.53	4.46	4.60	47829033	45997237	3.83
beta-BHC	5.03	4.96	5.10	18278340	17002014	6.98
gamma-BHC	5.16	5.09	5.23	41636096	39786723	4.44
delta-BHC	5.63	5.56	5.70	45630808	43411960	4.86
Heptachlor	6.73	6.66	6.80	36776863	37407989	1.72
Aldrin	7.55	7.48	7.62	41088632	38808244	5.55
Heptachlor epoxide	8.56	8.49	8.63	36661926	35079442	4.32
Endosulfan I	9.48	9.41	9.55	34384516	32706339	4.88
4,4'-DDE	10.24	10.17	10.31	36458842	34242111	6.08
Dieldrin	10.17	10.10	10.24	37145590	35879555	3.41
Endrin	10.72	10.65	10.79	32442624	33954566	4.66
Endosulfan II	10.98	10.91	11.05	32206959	30323531	5.85
4,4'-DDD	11.36	11.29	11.43	30622422	29898465	2.36
Endrin aldehyde	11.50	11.43	11.57	22810144	21402217	6.17
Endosulfan sulfate	12.15	12.08	12.22	29678959	27835747	6.21
4,4'-DDT	12.38	12.31	12.45	24757439	24932047	0.71
Endrin ketone	13.36	13.29	13.43	35804857	33137345	7.45
Methoxychlor	14.06	13.99	14.13	11832091	11939987	0.91
alpha-Chlordane	9.58	9.51	9.65	37087090	35181553	5.14
gamma-Chlordane	9.17	9.10	9.24	38808840	36993427	4.68
					Average %D	4.51
Chlordane 500 ppb	9.17	9.10	9.24	4097171	3776639	7.82
Chlordane {2}	9.37	9.30	9.44	749336	703451	6.12
Chlordane {3}	9.58	9.51	9.65	3905814	3510204	10.13
Chlordane {4}	9.72	9.65	9.79	1816015	1668085	8.15
Chlordane {5}	11.57	11.50	11.64	1251816	1166549	6.81
Toxaphene 500 ppb	13.17	13.10	13.24	743270	699493	5.89
Toxaphene {2}	13.30	13.23	13.37	582289	547730	5.94
Toxaphene {3}	13.58	13.51	13.65	434018	438313	0.99
Toxaphene {4}	14.04	13.97	14.11	509494	497572	2.34
Toxaphene {5}	14.55	14.48	14.62	747359	731468	2.13
					Average %D	5.63

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001 **Instrument ID:** GC-W

GC Column (2nd): DB-1701P

Data File: W5678.C W5677.C W5676.C W5675.C W5674.C

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	16266826	19149062	18605696	17564240	17287592	17774683	6.37
beta-BHC	7942657	7943298	7481243	7090968	6987221	7489077	6.05
gamma-BHC	15127810	17497955	16945614	16091904	15851957	16303048	5.71
delta-BHC	15165845	17371079	16750362	15788933	15524212	16120086	5.67
Heptachlor	12357525	13909417	13588439	13014982	12871445	13148362	4.65
Aldrin	14391927	16085789	15479618	14526297	14189048	14934536	5.44
Heptachlor epoxide	13725987	14718751	14083021	13211469	12913067	13730459	5.20
Endosulfan I	12951743	13873605	13269538	12431470	12108840	12927039	5.37
4,4'-DDE	12883890	14586842	14144720	13369646	13079023	13612824	5.33
Dieldrin	13589397	14989333	14500314	13704447	13406520	14038002	4.82
Endrin	11722912	12941585	12894910	12428421	12325063	12462578	3.98
Endosulfan II	24292009	25559807	24109684	22199289	21560826	23544323	6.94
4,4'-DDD	24292009	25559807	24109684	22199289	21560826	23544323	6.94
Endrin aldehyde	10606465	10053544	9325317	8654912	8451933	9418434	9.70
Endosulfan sulfate	11463120	11771686	11324902	10775192	10588835	11184747	4.39
4,4'-DDT	6489752	8524503	8881304	9006263	9224500	8425265	13.19
Endrin ketone	13781060	14056856	13201403	12347065	11963048	13069887	6.89
Methoxychlor	4378096	4723661	4666903	4601910	4626684	4599451	2.87
alpha-Chlordane	13792467	14746277	14184308	13334259	13009350	13813332	4.97
gamma-Chlordane	13785876	15099925	14592419	13785917	13490456	14150919	4.74
Chlordane 500 ppb			293988				
Chlordane {2}			337784				
Chlordane {3}			1484430				
Chlordane {4}			1348231				
Chlordane {5}			653044				
Toxaphene 500 ppb			280637				
Toxaphene {2}			243713				
Toxaphene {3}			193089				
Toxaphene {4}			149865				
Toxaphene {5}			217517				

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/05/2001 Instrument ID: GC-W

Data File: W5724.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
alpha-BHC	5.59	5.52	5.66	17774683	17370066	2.28
beta-BHC	8.65	8.58	8.72	7489077	6944657	7.27
gamma-BHC	6.54	6.47	6.61	16303048	15877099	2.61
delta-BHC	9.21	9.14	9.28	16120086	15603121	3.21
Heptachlor	7.02	6.95	7.09	13148362	13257243	0.83
Aldrin	7.69	7.62	7.76	14934536	14313631	4.16
Heptachlor epoxide	9.54	9.47	9.61	13730459	13188608	3.95
Endosulfan I	10.22	10.15	10.29	12927039	12348853	4.47
4,4'-DDE	11.00	10.93	11.07	13612824	12980071	4.65
Dieldrin	11.26	11.19	11.33	14038002	13559538	3.41
Endrin	11.79	11.72	11.86	12462578	12967072	4.05
Endosulfan II	13.23	13.16	13.30	23544323	22807649	3.13
4,4'-DDD	13.23	13.16	13.30	23544323	22807649	3.13
Endrin aldehyde	14.37	14.30	14.44	9418434	8273106	12.16
Endosulfan sulfate	15.27	15.20	15.34	11184747	10409725	6.93
4,4'-DDT	13.68	13.61	13.75	8425265	8033273	4.65
Endrin ketone	16.30	16.23	16.37	13069887	11914868	8.84
Methoxychlor	15.55	15.48	15.62	4599451	4330920	5.84
alpha-Chlordane	10.62	10.55	10.69	13813332	13149906	4.80
gamma-Chlordane	10.46	10.39	10.53	14150919	13549085	4.25
					Average %D	4.73
Chlordane 500 ppb	8.38	8.31	8.45	293988	271683	7.59
Chlordane {2}	10.06	9.99	10.13	337784	302089	10.57
Chlordane {3}	10.46	10.39	10.53	1484430	1377036	7.23
Chlordane {4}	10.62	10.55	10.69	1348231	1258079	6.69
Chlordane {5}	10.67	10.60	10.74	653044	590759	9.54
Toxaphene 500 ppb	14.02	13.95	14.09	280637	254136	9.44
Toxaphene {2}	14.75	14.68	14.82	243713	216652	11.10
Toxaphene {3}	15.02	14.95	15.09	193089	167802	13.10
Toxaphene {4}	15.21	15.14	15.28	149865	130694	12.79
Toxaphene {5}	15.66	15.59	15.73	217517	191503	11.96
					Average %D	10.00

41206

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/05/2001 Instrument ID: GC-W

Data File: W5746.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
alpha-BHC	4.53	4.46	4.60	47829033	46543839	2.69
beta-BHC	5.03	4.96	5.10	18278340	17317139	5.26
gamma-BHC	5.16	5.09	5.23	41636096	40268616	3.28
delta-BHC	5.63	5.56	5.70	45630808	44515144	2.44
Heptachlor	6.73	6.66	6.80	36776863	36432762	0.94
Aldrin	7.55	7.48	7.62	41088632	39906402	2.88
Heptachlor epoxide	8.56	8.49	8.63	36661926	35527854	3.09
Endosulfan I	9.48	9.41	9.55	34384516	33313203	3.12
4,4'-DDE	10.24	10.17	10.31	36458842	35731203	2.00
Dieldrin	10.17	10.10	10.24	37145590	36730586	1.12
Endrin	10.72	10.65	10.79	32442624	34692284	6.93
Endosulfan II	10.98	10.91	11.05	32206959	31331147	2.72
4,4'-DDD	11.36	11.29	11.43	30622422	31647631	3.35
Endrin aldehyde	11.50	11.43	11.57	22810144	22185049	2.74
Endosulfan sulfate	12.15	12.08	12.22	29678959	29047058	2.13
4,4'-DDT	12.38	12.31	12.45	24757439	24684019	0.30
Endrin ketone	13.36	13.29	13.43	35804857	34464606	3.74
Methoxychlor	14.06	13.99	14.13	11832091	11933059	0.85
alpha-Chlordane	9.58	9.51	9.65	37087090	36068879	2.75
gamma-Chlordane	9.17	9.10	9.24	38808840	37864988	2.43
					Average %D	2.74

000375

4207

PCB CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/05/2001 Instrument ID: GC-W

Data File: W5746.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	5.58	5.51	5.65	17774683	17518196	1.44
beta-BHC	8.64	8.57	8.71	7489077	7003044	6.49
gamma-BHC	6.54	6.47	6.61	16303048	15991257	1.91
delta-BHC	9.21	9.14	9.28	16120086	15895939	1.39
Heptachlor	7.02	6.95	7.09	13148362	12885076	2.00
Aldrin	7.69	7.62	7.76	14934536	14506725	2.86
Heptachlor epoxide	9.54	9.47	9.61	13730459	13273989	3.32
Endosulfan I	10.22	10.15	10.29	12927039	12439596	3.77
4,4'-DDE	11.00	10.93	11.07	13612824	13271021	2.51
Dieldrin	11.26	11.19	11.33	14038002	13710942	2.33
Endrin	11.78	11.71	11.85	12462578	13112377	5.21
Endosulfan II	13.23	13.16	13.30	23544323	23362732	0.77
4,4'-DDD	13.23	13.16	13.30	23544323	23362732	0.77
Endrin aldehyde	14.37	14.30	14.44	9418434	8622648	8.45
Endosulfan sulfate	15.27	15.20	15.34	11184747	10715214	4.20
4,4'-DDT	13.68	13.61	13.75	8425265	7916213	6.04
Endrin ketone	16.30	16.23	16.37	13069887	12317447	5.76
Methoxychlor	15.54	15.47	15.61	4599451	4357758	5.25
alpha-Chlordane	10.61	10.54	10.68	13813332	13304610	3.68
gamma-Chlordane	10.46	10.39	10.53	14150919	13712796	3.10
					Average %D	3.56

PESTICIDE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/05/2001

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(2044.2061)	0404-BK1	SOIL	94		90		89		90	
AC-27_10.5-11'	2044-001	SOIL	65		90		65		100	
(2093.2108)	0405-BK2	AQUEOUS	89		87		85		86	
DW-1	2108-001	AQUEOUS	66		85		75		92	
WW-1	2108-002	AQUEOUS	53	*	67		61		77	
MHR-1	2108-003	AQUEOUS	61		79		68		80	
FB	2094-001	AQUEOUS	80		74		76		75	
MW-1	2094-003	AQUEOUS	58	*	79		63		83	
MW-2	2094-004	AQUEOUS	60		76		59		78	
MW-7	2094-005	AQUEOUS	51	*	75		82		77	
MW-6	2094-006	AQUEOUS	73		90		75		94	
MW-8	2094-007	AQUEOUS	76		108		60		96	
MW-3	2094-008	AQUEOUS	74		84		62		90	
MW-5	2094-009	AQUEOUS	59		73		M		87	
MW-4	2093-001	AQUEOUS	74		77		68		87	
PEST	2094-001-MS2	AQUEOUS	87		82		80		83	
PEST	2094-001-MSD2	AQUEOUS	87		85		80		84	
PEST	PBA0405-MS2	AQUEOUS	90		88		82		86	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59-147	59-151
DCB = Decachlorobiphenyl	63-179	60-150

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

000377

4209

AQUEOUS PESTICIDES MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 2094-001-MSD2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	98.4	98	30 - 138
Heptachlor	100.0	0.0	88.5	89	42 - 137
Aldrin	100.0	0.0	91.9	92	32 - 147
Dieldrin	100.0	0.0	91.1	91	26 - 134
Endrin	100.0	0.0	99.2	99	22 - 164
4,4'-DDT	100.0	0.0	90.3	90	22 - 150

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC	0.0	106.9	107	9	14	30 - 138
Heptachlor	0.0	97.6	98	10	14	42 - 137
Aldrin	0.0	99.7	100	8	14	32 - 147
Dieldrin	0.0	99.2	99	8	14	26 - 134
Endrin	0.0	107.4	107	8	13	22 - 164
4,4'-DDT	0.0	99.9	100	11	16	22 - 150

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

*** Values outside of QC limits**

NC Non calculable

RPD: __0___ out of __6__ outside limits

Spike Recovery: __0___ out of __12__ outside limits

AQUEOUS PESTICIDES BLANK SPIKE RECOVERY

Matrix spike Lab sample ID: PBA0405-MS2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	104.7	105	30 - 138
Heptachlor	100.0	0.0	96.7	97	42 - 137
Aldrin	100.0	0.0	97.6	98	32 - 147
Dieldrin	100.0	0.0	97.2	97	26 - 134
Endrin	100.0	0.0	105.1	105	22 - 164
4,4'-DDT	100.0	0.0	99.6	100	22 - 150

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

* Values outside of QC limits

NC Non calculable

Spike Recovery: __0___ out of __6__ outside limits

PESTICIDE RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-W Column: DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.86 DCB 1 18.68 TCMX 2 3.70 DCB 2 18.64

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
(2044.2061)	0404-BK1	04/05/2001	13:51	3.86		18.68		3.70		18.64	
AC-27_10.5-11'	2044-001	04/05/2001	14:16	3.86		18.68		3.69		18.64	
(2093.2108)	0405-BK2	04/05/2001	15:21	3.85		18.68		3.70		18.65	
DW-1	2108-001	04/05/2001	15:47	3.86		18.69		3.70		18.64	
WW-1	2108-002	04/05/2001	16:12	3.86		18.68		3.69		18.64	
MHR-1	2108-003	04/05/2001	16:37	3.86		18.68		3.70		18.64	
FB	2094-001	04/05/2001	17:02	3.86		18.68		3.69		18.64	
MW-1	2094-003	04/05/2001	17:26	3.85		18.68		3.69		18.64	
MW-2	2094-004	04/05/2001	17:51	3.86		18.68		3.70		18.64	
MW-7	2094-005	04/05/2001	18:16	3.85		18.68		3.69		18.64	
MW-6	2094-006	04/05/2001	18:41	3.86		18.68		3.69		18.64	
MW-8	2094-007	04/05/2001	19:06	3.87		18.68		3.70		18.64	
MW-3	2094-008	04/05/2001	19:31	3.86		18.68		3.69		18.64	
MW-5	2094-009	04/05/2001	19:56	3.86		18.68		3.70		18.64	
MW-4	2093-001	04/05/2001	20:21	3.85		18.68		3.69		18.64	
PEST	2094-001-MS2	04/05/2001	20:46	3.86		18.68		3.69		18.64	
PEST	2094-001-MSD2	04/05/2001	21:11	3.86		18.68		3.69		18.64	
PEST	PBA0405-MS2	04/05/2001	21:36	3.86		18.69		3.69		18.64	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene (± 0.05 Minutes)

DCB = Decachlorobiphenyl (_ 0.05 Minutes)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

000330

4212

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5734.D\ECD1B.CH Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5734.D\ECD2A.CH
Acq On : 4-5-01 17:02:02 Operator:
Sample : FB,2094-001,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:49 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.69	3760.4E6	1456.6E6	79.957	76.152
Spiked Amount 100.000			Recovery =		79.96%	76.15%
2) S DCB	18.68	18.64	3321.5E6	1185.1E6	74.199	74.911
Spiked Amount 100.000			Recovery =		74.20%	74.91%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

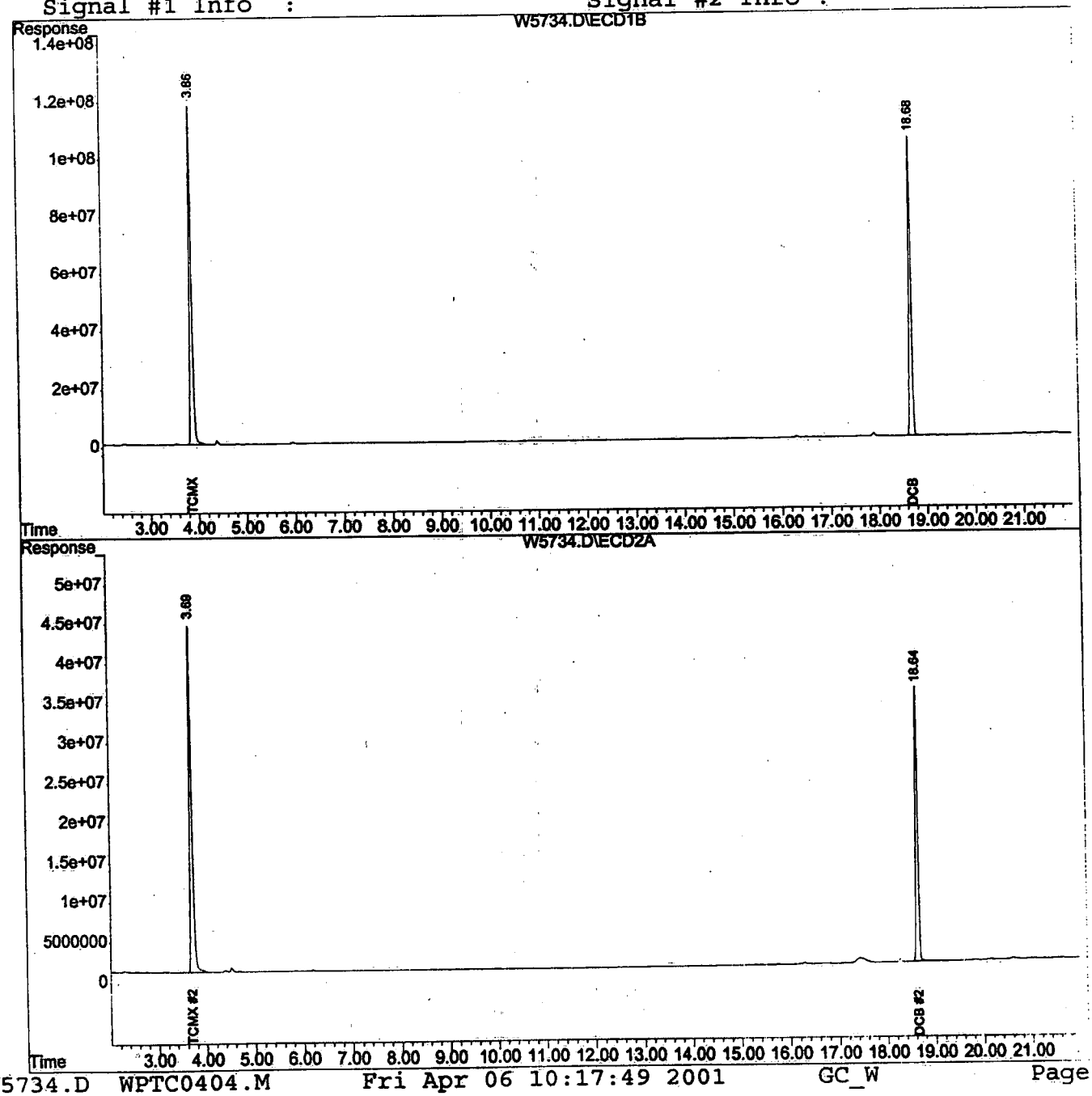
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5734.D\ECD1B.CH Vial: 12
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5734.D\ECD2A.CH
Acq On : 4-5-01 17:02:02 Operator:
Sample : FB,2094-001,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:49 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



000032

4214

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5735.D\ECD1B.CH Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5735.D\ECD2A.CH
Acq On : 4-5-01 17:26:55 Operator:
Sample : MW-1,2094-003,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:52 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.69	542.7E6	238.2E6	11.539m	12.451
Spiked Amount 100.000			Recovery	=	11.54%	12.45%
2) S DCB	18.68	18.64	702.0E6	262.8E6	15.681	16.610
Spiked Amount 100.000			Recovery	=	15.68%	16.61%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5735.D WPTC0404.M Fri Apr 06 10:17:54 2001 GC_W

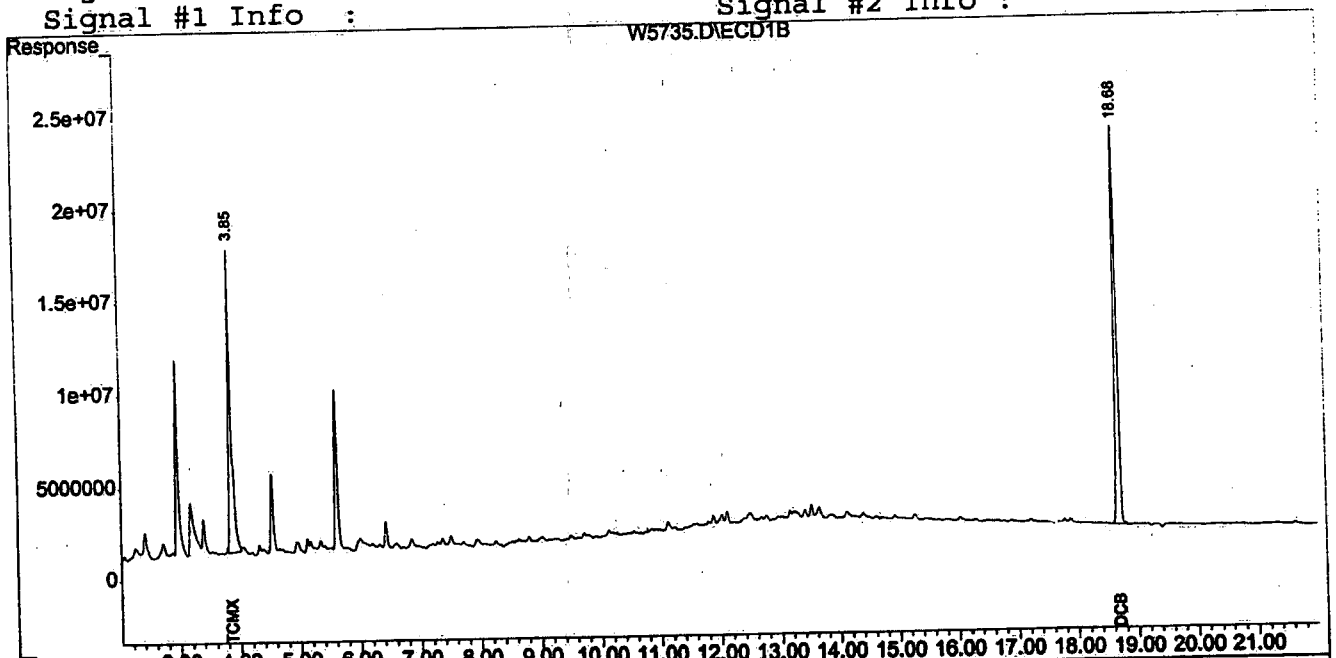
000033

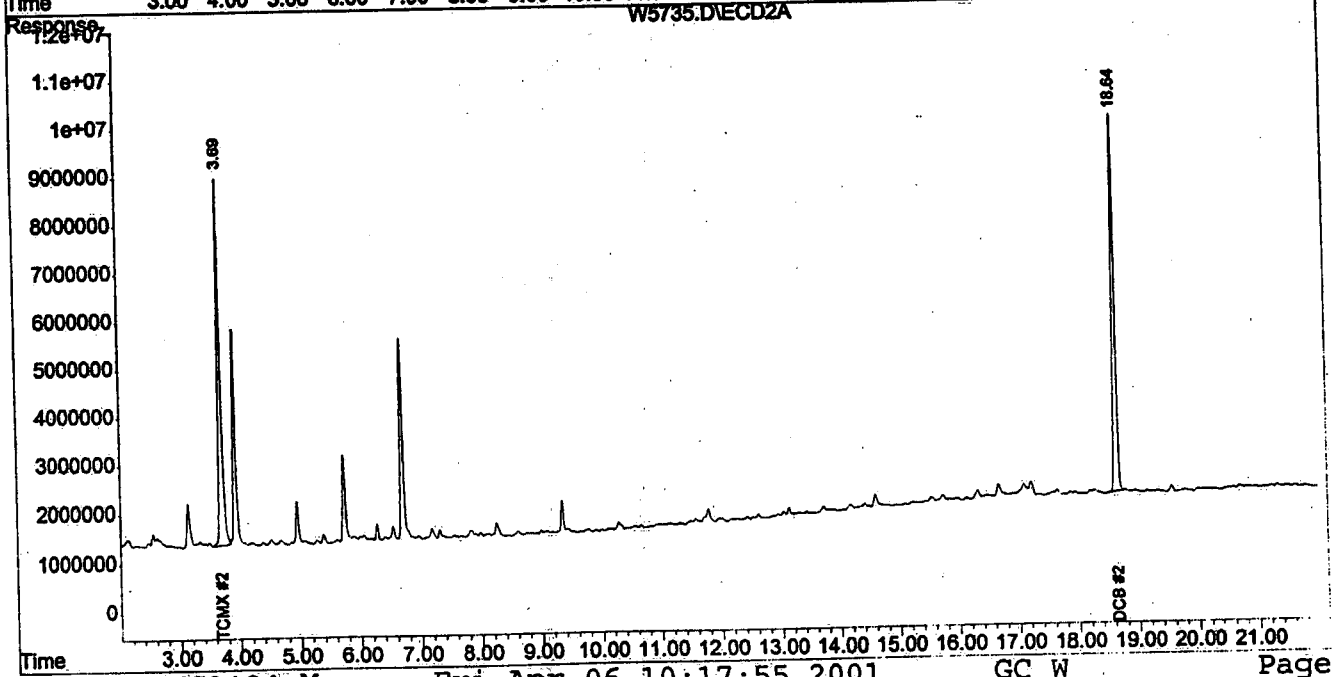
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5735.D\ECD1B.CH Vial: 13
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5735.D\ECD2A.CH
Acq On : 4-5-01 17:26:55 Operator:
Sample : MW-1,2094-003,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:52 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000091

H216

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5736.D\ECD1B.CH Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5736.D\ECD2A.CH
Acq On : 4-5-01 17:51:55 Operator:
Sample : MW-2,2094-004,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:52 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.70	558.0E6	226.7E6	11.864	11.850
Spiked Amount 100.000			Recovery =		11.86%	11.85%
2) S DCB	18.68	18.64	680.1E6	247.2E6	15.192	15.628
Spiked Amount 100.000			Recovery =		15.19%	15.63%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5736.D WPTC0404.M Fri Apr 06 10:18:00 2001 GC_W Page 1

000333

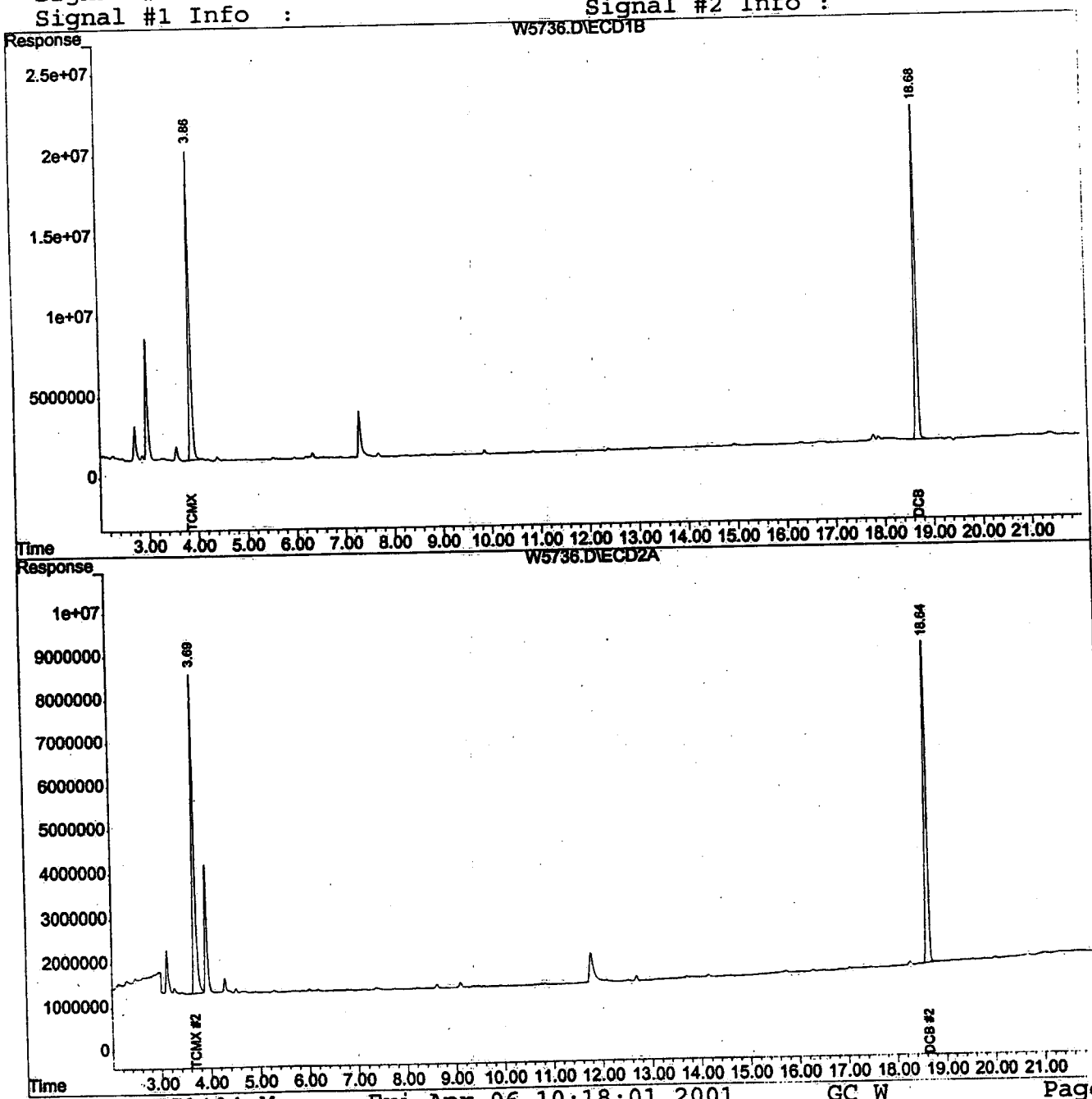
4217

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5736.D\ECD1B.CH Vial: 14
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5736.D\ECD2A.CH
Acq On : 4-5-01 17:51:55 Operator:
Sample : MW-2,2094-004,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:52 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



000030

42148

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5737.D\ECD1B.CH Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5737.D\ECD2A.CH
Acq On : 4-5-01 18:16:45 Operator:
Sample : MW-7,2094-005,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:10 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.69	479.1E6	313.3E6	10.187m	16.377m#
Spiked Amount 100.000			Recovery =		10.19%	16.38%
2) S DCB	18.68	18.64	671.7E6	241.7E6	15.005	15.276m
Spiked Amount 100.000			Recovery =		15.01%	15.28%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5737.D WPTC0404.M Fri Apr 06 10:18:06 2001 GC_W

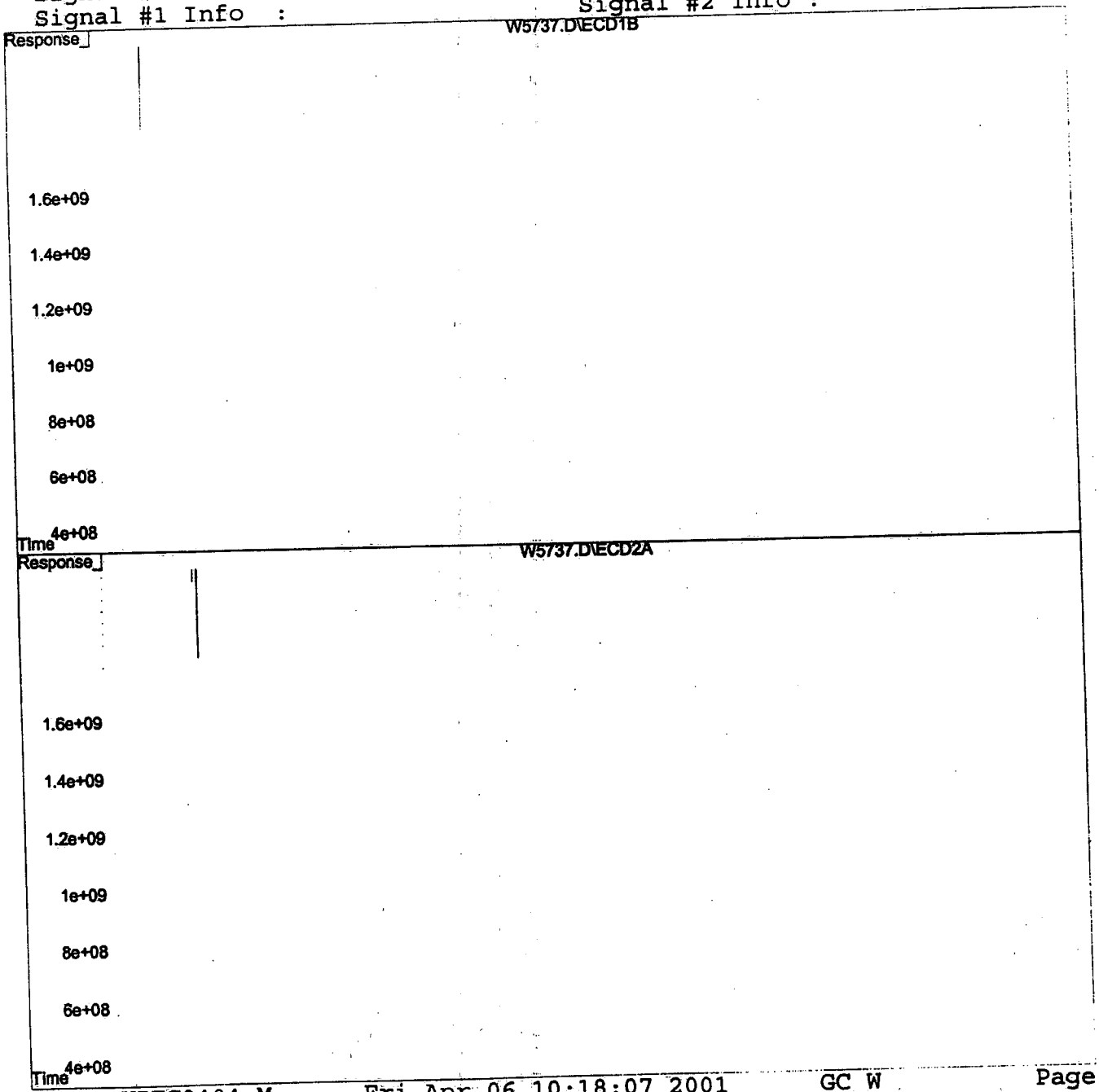
000397

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5737.D\ECD1B.CH Vial: 15
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5737.D\ECD2A.CH
Acq On : 4-5-01 18:16:45 Operator:
Sample : MW-7,2094-005,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:10 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

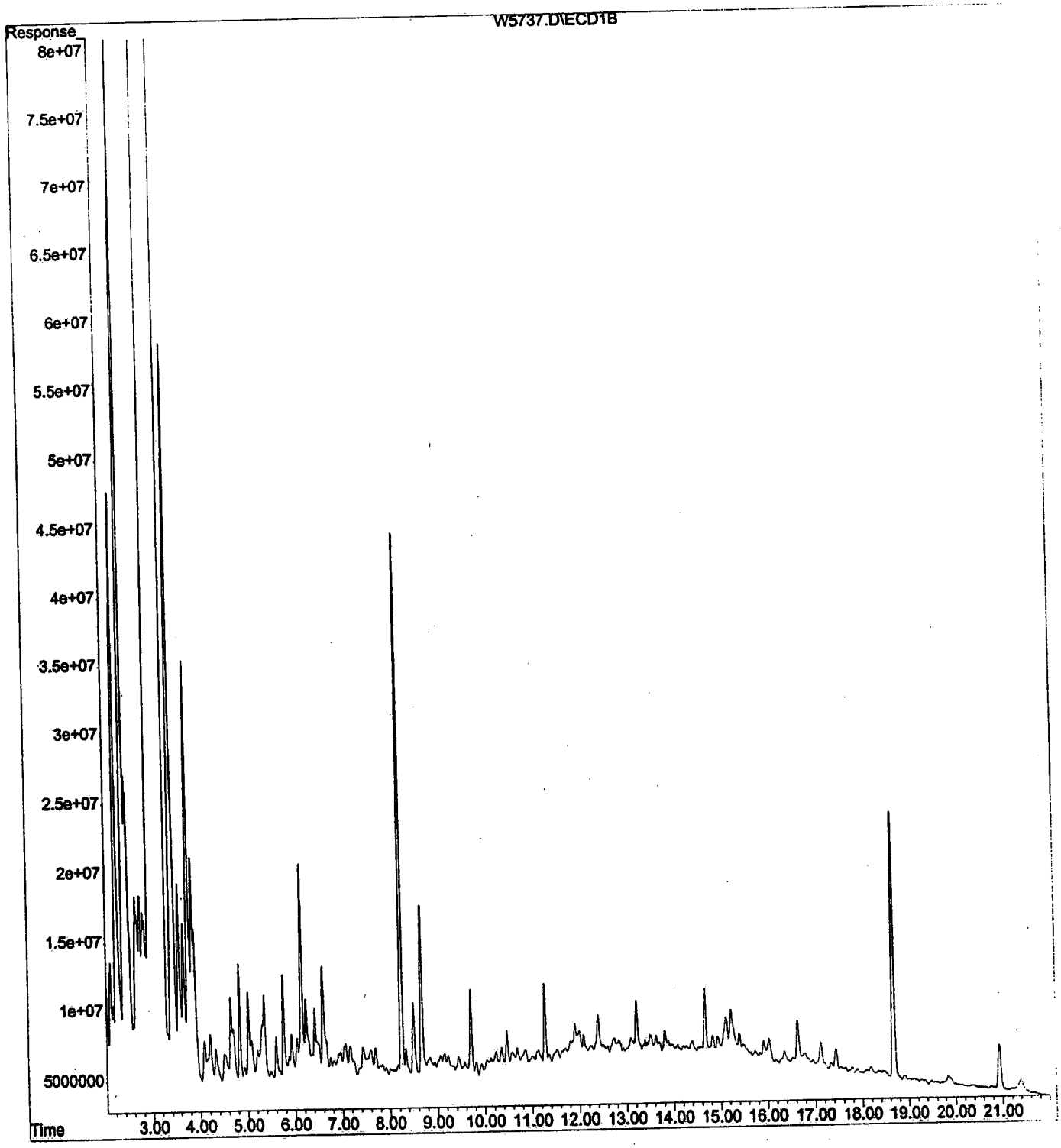
Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



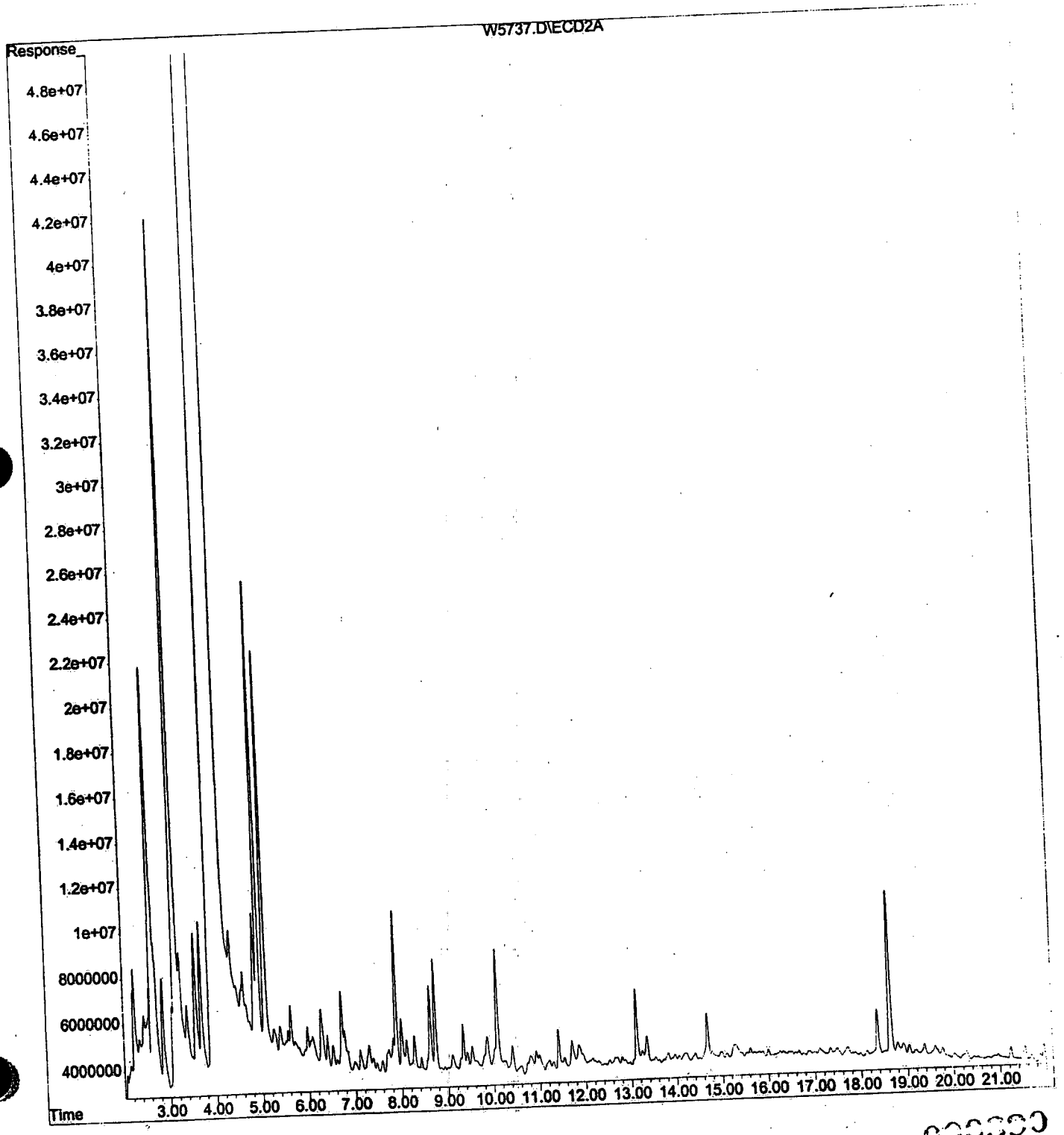
000333

H220

File : C:\HPCHEM\1\DATA\04-05-01\W5737.D
Operator :
Acquired : 4-5-01 18:16:45 using AcqMethod WPTC0404.M
Instrument : GC_W
Sample Name: MW-7,2094-005,A,1000mL,100,04/05/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5
Vial Number: 15



File : C:\HPCHEM\1\DATA\04-05-01\W5737.D
Operator :
Acquired : 4-5-01 18:16:45 using AcqMethod WPTC0404.M
Instrument : GC_W
Sample Name: MW-7,2094-005,A,1000mL,100,04/05/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5
Vial Number: 15



000390

4222

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5738.D\ECD1B.CH Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5738.D\ECD2A.CH
Acq On : 4-5-01 18:41:39 Operator:
Sample : MW-6,2094-006,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:59 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.69	688.3E6	285.7E6	14.636	14.934
Spiked Amount 100.000			Recovery =		14.64%	14.93%
2) S DCB	18.68	18.64	807.0E6	295.1E6	18.027m	18.652
Spiked Amount 100.000			Recovery =		18.03%	18.65%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

000391

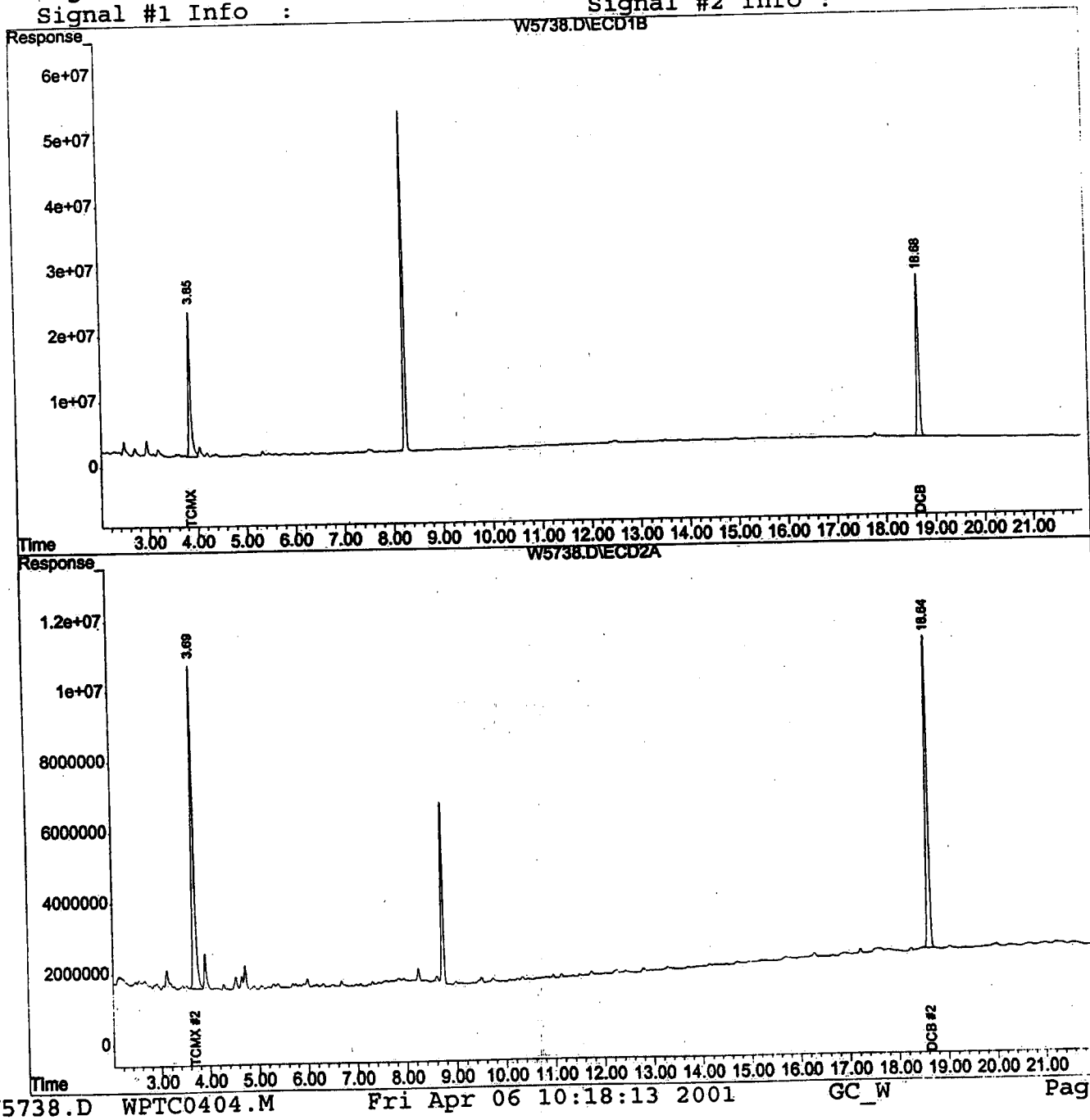
4223

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5738.D\ECD1B.CH Vial: 16
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5738.D\ECD2A.CH
Acq On : 4-5-01 18:41:39 Operator:
Sample : MW-6,2094-006,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:59 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



4724

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5739.D\ECD1B.CH Vial: 17
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5739.D\ECD2A.CH
Acq On : 4-5-01 19:06:34 Operator:
Sample : MW-8,2094-007,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:01 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

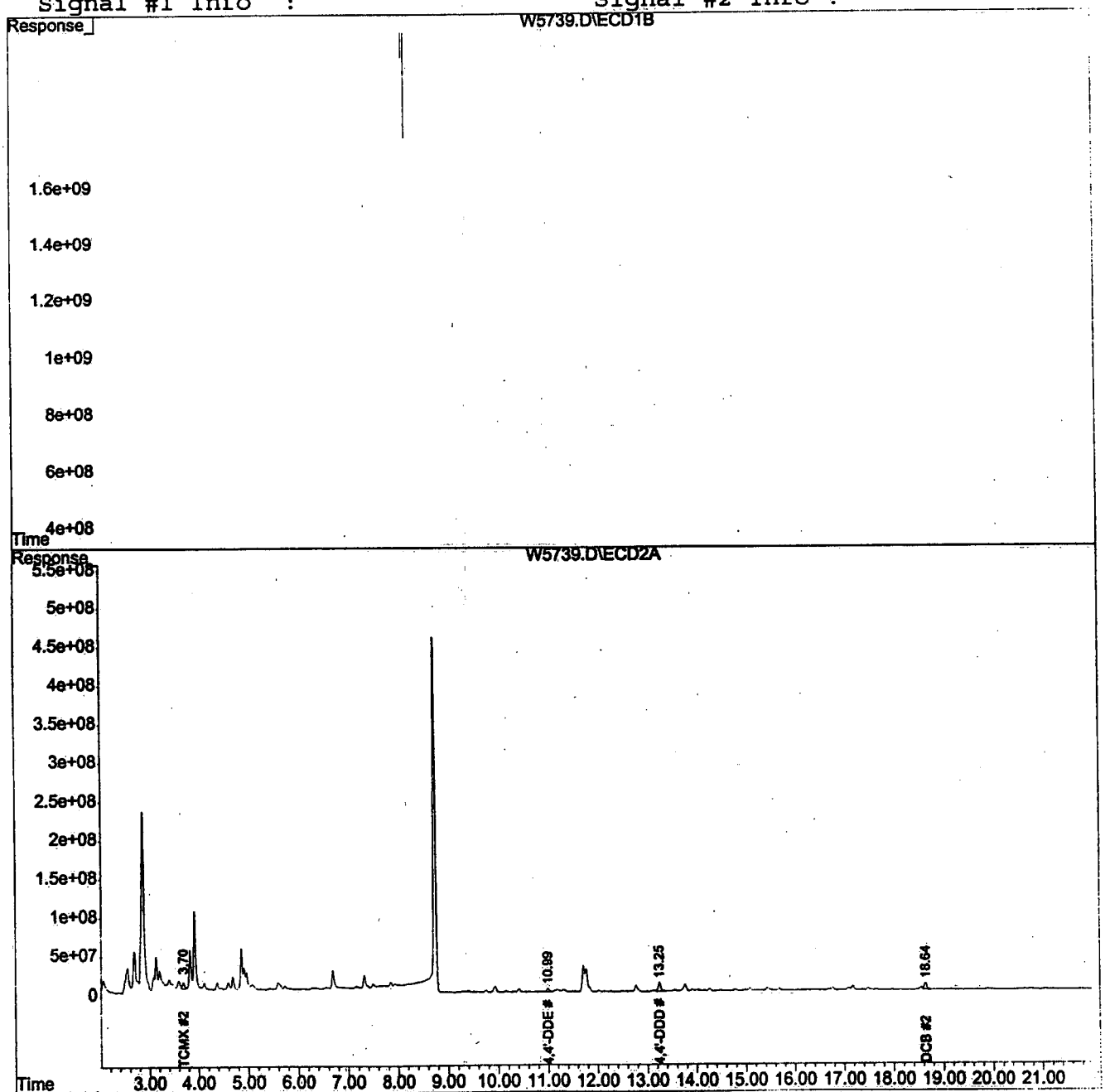
Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.87	3.70	710.2E6	229.8E6	15.102m	12.013m
Spiked Amount 100.000			Recovery =		15.10%	12.01%
2) S DCB	18.68	18.64	964.4E6	303.7E6	21.545m	19.195
Spiked Amount 100.000			Recovery =		21.55%	19.20%
Target Compounds						
11) T 4,4'-DDE	10.25	11.00	498.7E6	166.5E6	13.679m	12.229
15) T 4,4'-DDD	11.36	13.25	782.6E6	386.8E6	25.555m	32.854m#
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5739.D\ECD1B.CH Vial: 17
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5739.D\ECD2A.CH
Acq On : 4-5-01 19:06:34 Operator:
Sample : MW-8,2094-007,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:01 2001 Quant Results File: WPTC0404.RES

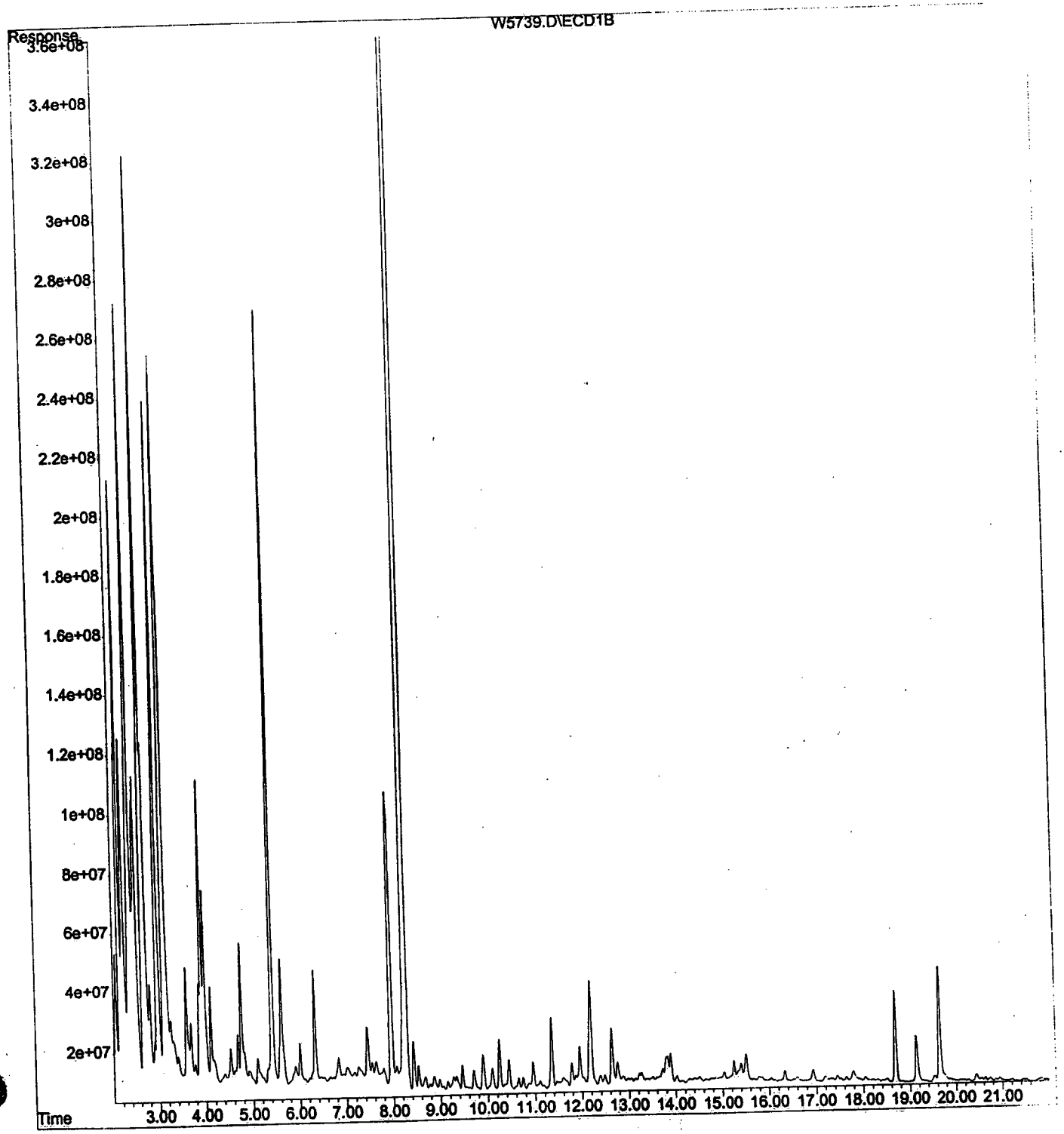
Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



4226

File : C:\HPCHEM\1\DATA\04-05-01\W5739.D
Operator :
Acquired : 4-5-01 19:06:34 using AcqMethod WPTC0404.M
Instrument : GC_W
Sample Name: MW-8,2094-007,A,1000mL,100,04/05/01
Misc Info : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5
Vial Number: 17



Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5740.D\ECD1B.CH Vial: 18
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5740.D\ECD2A.CH
Acq On : 4-5-01 19:31:29 Operator:
Sample : MW-3,2094-008,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:02 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.69	691.6E6	235.2E6	14.705	12.295m
Spiked Amount 100.000			Recovery	=	14.71%	12.30%
2) S DCB	18.68	18.64	747.1E6	282.9E6	16.689	17.884
Spiked Amount 100.000			Recovery	=	16.69%	17.88%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5740.D WPTC0404.M Fri Apr 06 10:18:24 2001 GC_W

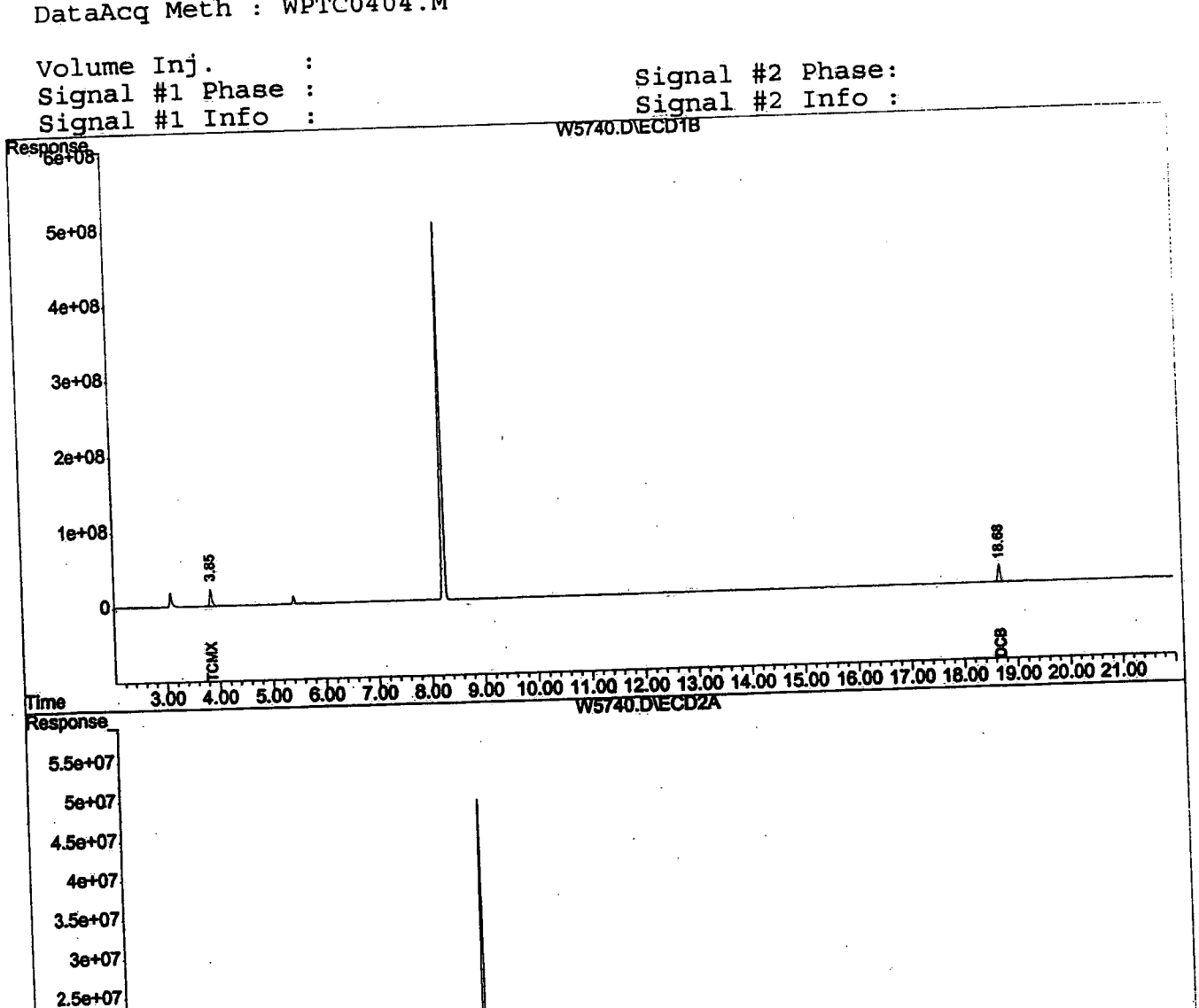
4226

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5740.D\ECD1B.CH Vial: 18
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5740.D\ECD2A.CH
Acq On : 4-5-01 19:31:29 Operator:
Sample : MW-3,2094-008,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:02 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :



H229

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5741.D\ECD1B.CH Vial: 19
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5741.D\ECD2A.CH
Acq On : 4-5-01 19:56:21 Operator:
Sample : MW-5,2094-009,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:10 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.70	553.4E6	822.8E6	11.767m	43.017m#
Spiked Amount 100.000			Recovery =		11.77%	43.02%
2) S DCB	18.68	18.64	651.7E6	274.6E6	14.558m	17.358m
Spiked Amount 100.000			Recovery =		14.56%	17.36%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5741.D WPTC0404.M Fri Apr 06 10:18:30 2001 GC_W Page 1

000333

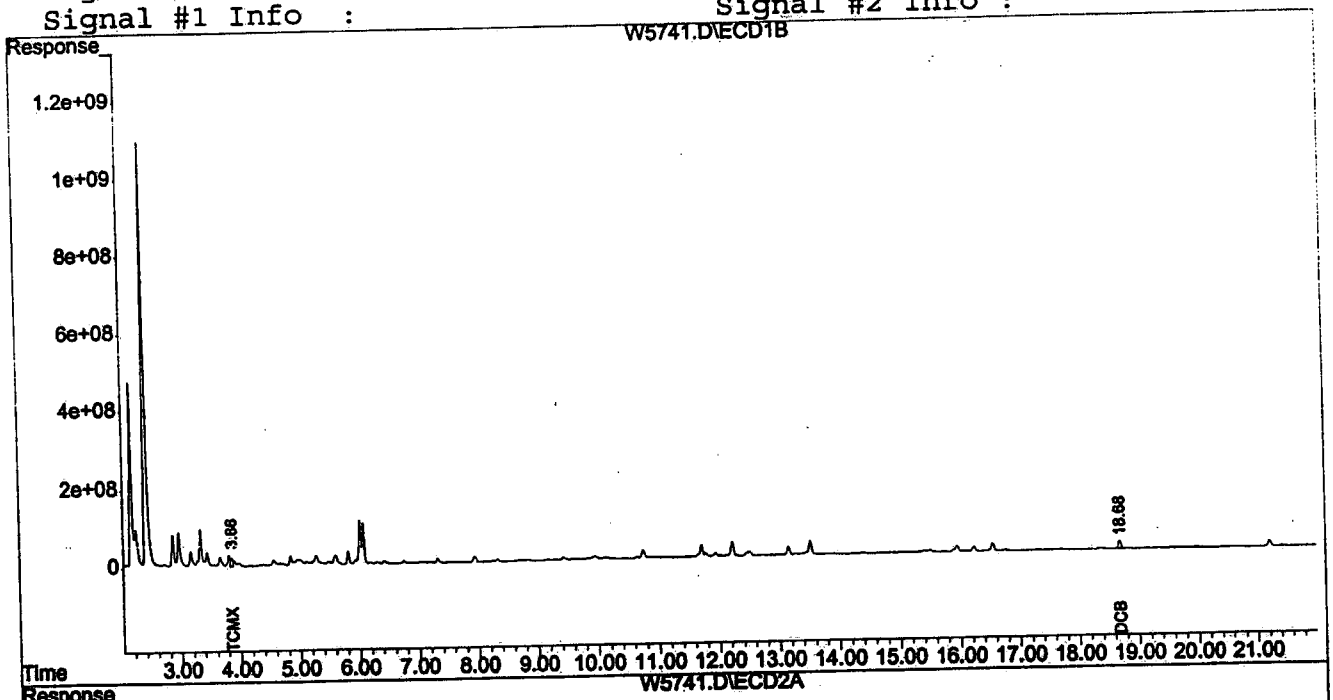
4230

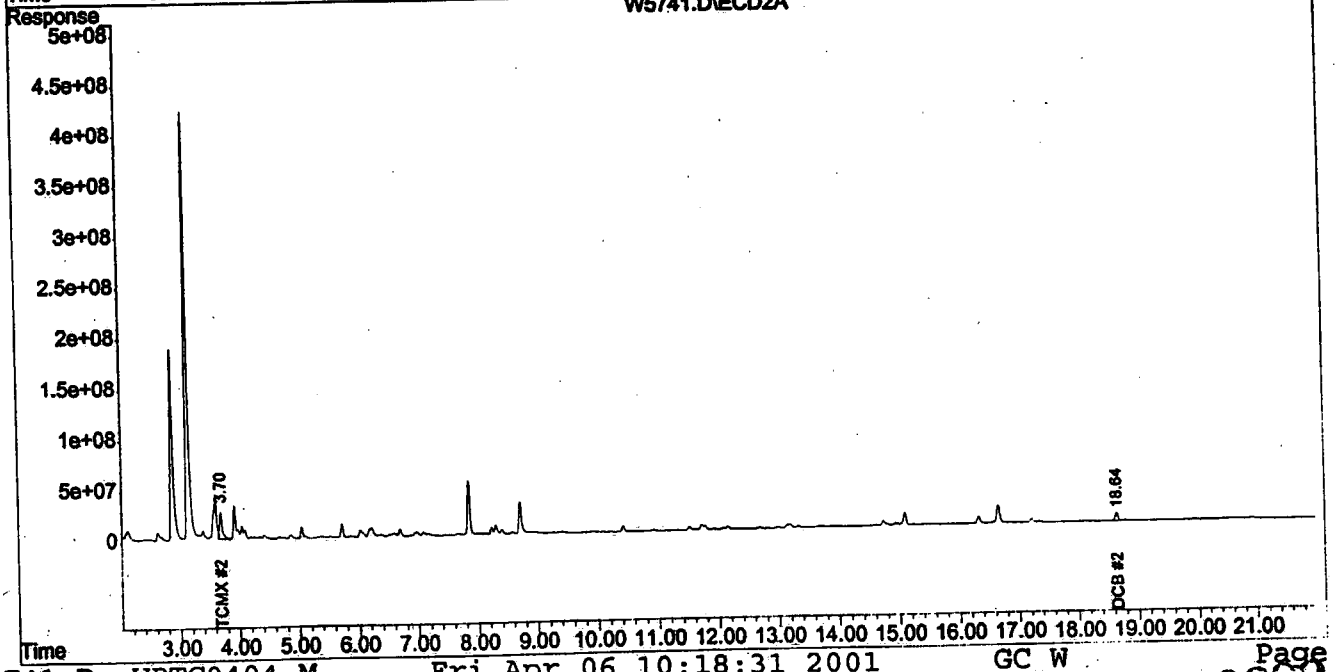
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5741.D\ECD1B.CH Vial: 19
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5741.D\ECD2A.CH
Acq On : 4-5-01 19:56:21 Operator:
Sample : MW-5,2094-009,A,1000mL,100,04/05/01 Inst : GC_W
Misc : ENVTACT/ORBIS-NEWARK,04/03/01,04/04/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 11:10 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000333

4231

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5730.D\ECD1B.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5730.D\ECD2A.CH
Acq On : 4-5-01 15:21:29 Operator:
Sample : [illegible] Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:17 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.70	4183.6E6	1619.3E6	88.955	84.658
Spiked Amount 100.000			Recovery =		88.95%	84.66%
2) S DCB	18.68	18.65	3883.6E6	1366.7E6	86.754	86.395
Spiked Amount 100.000			Recovery =		86.75%	86.39%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5730.D WPTC0404.M Fri Apr 06 09:41:11 2001 GC_W Page 1

000400

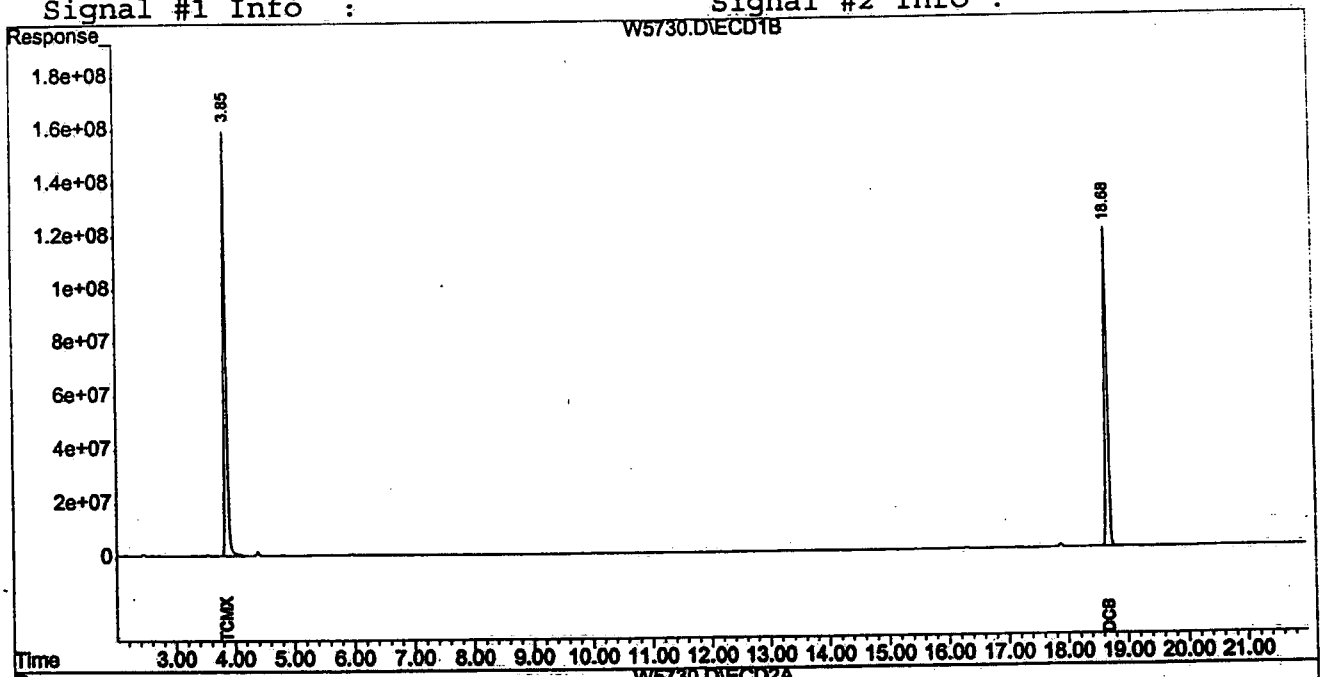
4737

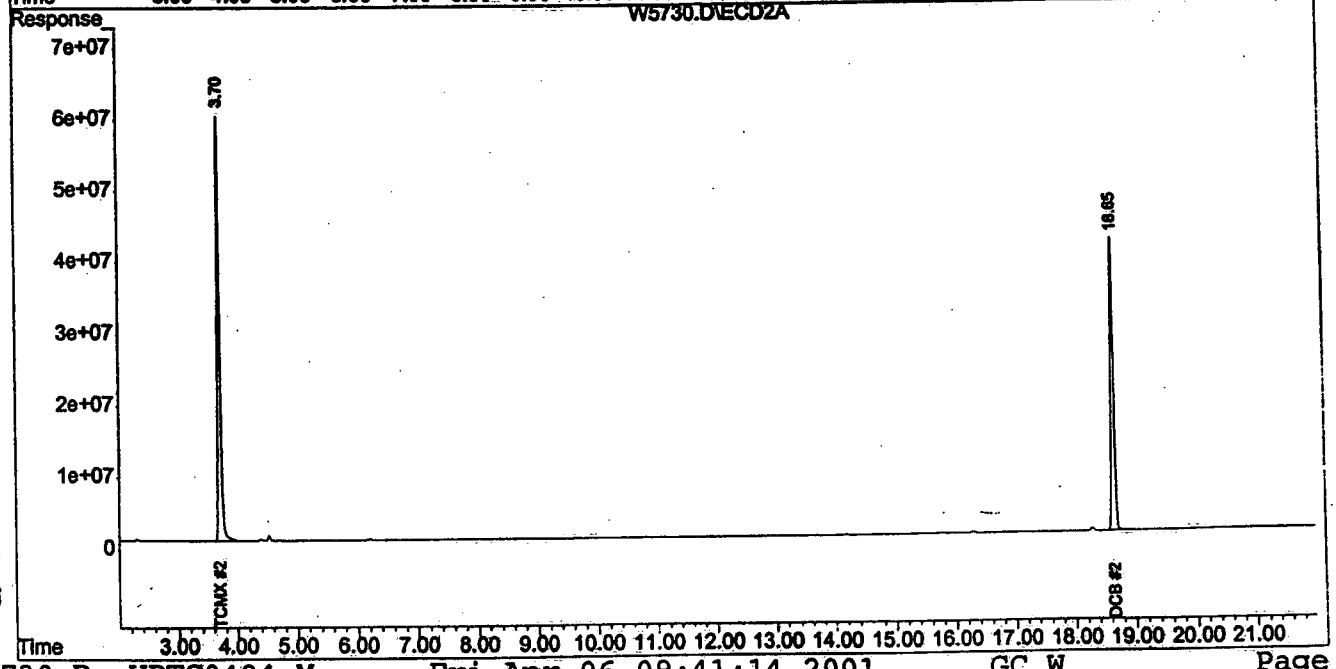
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5730.D\ECD1B.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5730.D\ECD2A.CH
Acq On : 4-5-01 15:21:29 Operator:
Sample : [illegible] Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:17 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





090101

4233

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5724.D\ECD1B.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5724.D\ECD2A.CH
Acq On : 4-5-01 12:22:35 Operator:
Sample : PEST C TAS 1441,100 PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 5 13:41 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0402.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2	
	System Monitoring Compounds							
1) S	TCMX	3.86	3.70	4349.7E6	1722.0E6	92.487	90.029	
Spiked Amount	100.000			Recovery	=	92.49%	90.03%	
2) S	DCB	18.68	18.64	4038.6E6	1476.2E6	90.217	93.314	
Spiked Amount	100.000			Recovery	=	90.22%	93.31%	
	Target Compounds							
3) T	alpha-BHC	4.53	5.59	4599.7E6	1737.0E6	96.170	97.724	
4) T	beta-BHC	5.03	8.65	1700.2E6	694.5E6	93.017	92.730	
5) T	gamma-BHC	5.16	6.54	3978.7E6	1587.7E6	95.558	97.387	
6) T	delta-BHC	5.63	9.21	4341.2E6	1560.3E6	95.137	96.793	
7) T	Heptachlor	6.73	7.02	3740.8E6	1325.7E6	101.716	100.828	
8) T	Aldrin	7.55	7.69	3880.8E6	1431.4E6	94.450	95.842	
9) T	Heptachlor epoxi	8.56	9.54	3507.9E6	1318.9E6	95.684	96.054	
10) T	Endosulfan I	9.48	10.22	3270.6E6	1234.9E6	95.119	95.527	
11) T	4,4'-DDE	10.24	11.00	3424.2E6	1298.0E6	93.920	95.352	
12) T	Dieldrin	10.17	11.26	3588.0E6	1356.0E6	96.592	96.592	
13) T	Endrin	10.72	11.79	3395.5E6	1296.7E6	104.660	104.048	
14) T	Endosulfan II	10.98	13.23	3032.4E6	2280.8E6	94.152	193.742	#
15) T	4,4'-DDD	11.36	13.23	2989.8E6	2280.8E6	97.636	193.742	#
16) T	Endrin aldehyde	11.50	14.37	2140.2E6	827.3E6	93.828	87.840	
17) T	Endosulfan sulfa	12.15	15.27	2783.6E6	1041.0E6	93.789	93.071	
18) T	4,4'-DDT	12.38	13.68	2493.2E6	803.3E6	100.705	95.347	
19) T	Endrin ketone	13.36	16.30	3313.7E6	1191.5E6	92.550	91.163	
20) T	Methoxychlor	14.06	15.55	1194.0E6	433.1E6	100.912	94.162	
21) T	alpha-Chlordane	9.58	10.62	3518.2E6	1315.0E6	94.862	95.197	
22) T	gamma-Chlordane	9.17	10.46	3699.3E6	1354.9E6	95.322	95.747	
Sum Chlordane				0	0	N.D.	N.D.	
Average Chlordane						0.000	0.000	
Sum Toxaphene				0	0	N.D.	N.D.	
Average Toxaphene						0.000	0.000	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

000152

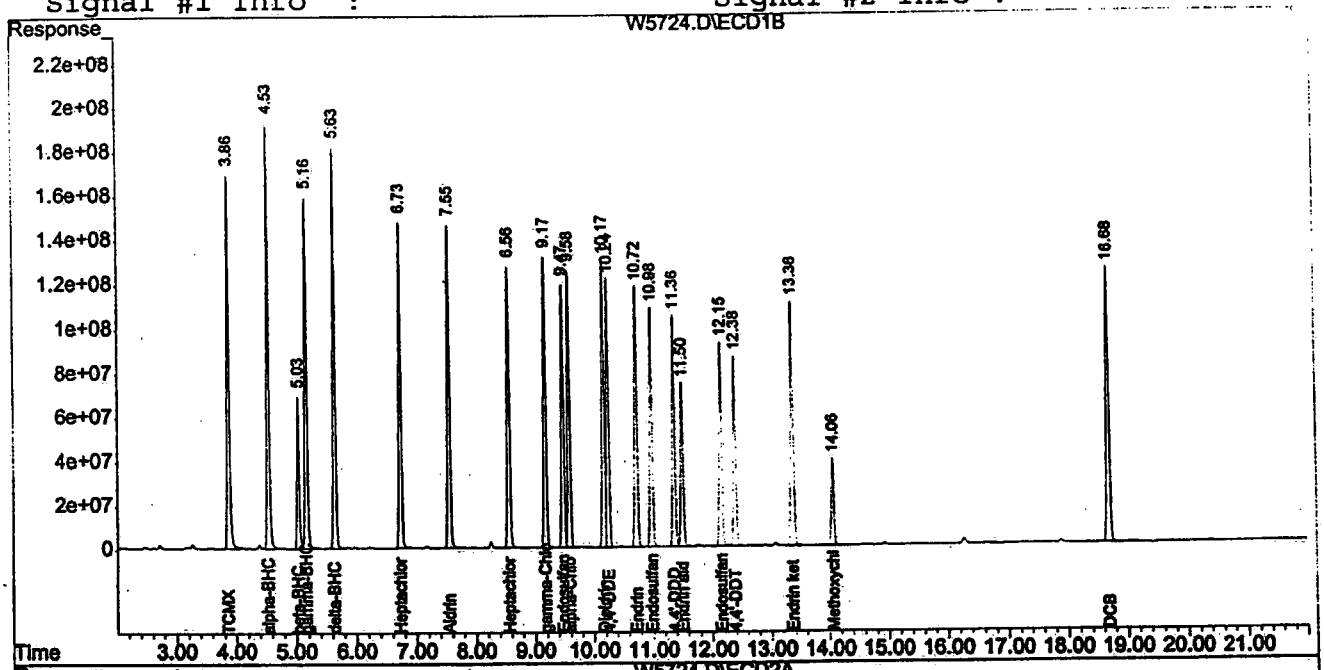
42324

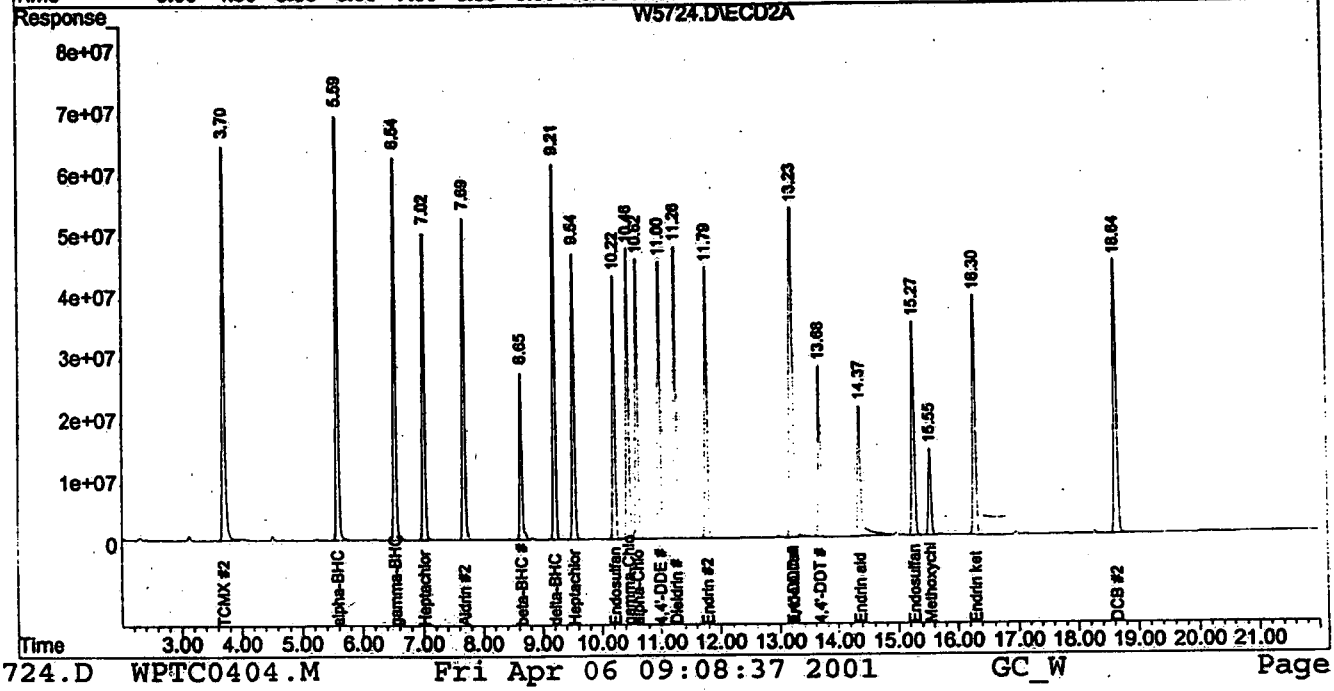
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5724.D\ECD1B.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5724.D\ECD2A.CH
Acq On : 4-5-01 12:22:35 Operator:
Sample : [illegible] Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 5 13:41 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0402.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000103

4235

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5746.D\ECD1B.CH Vial: 24
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5746.D\ECD2A.CH
Acq On : 4-5-01 22:00:52 Operator:
Sample : PEST_C_IAS_3441,100_PPB Inst :
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 9:26 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2	
	System Monitoring Compounds							
1) S	TCMX	3.86	3.70	4434.5E6	1729.1E6	94.290	90.399	
Spiked Amount	100.000			Recovery	=	94.29%	90.40%	
2) S	DCB	18.68	18.64	4343.7E6	1522.0E6	97.034	96.210	
Spiked Amount	100.000			Recovery	=	97.03%	96.21%	
	Target Compounds							
3) T	alpha-BHC	4.53	5.58	4654.4E6	1751.8E6	97.313	98.557	
4) T	beta-BHC	5.03	8.64	1731.7E6	700.3E6	94.741	93.510	
5) T	gamma-BHC	5.16	6.54	4026.9E6	1599.1E6	96.716	98.088	
6) T	delta-BHC	5.63	9.21	4451.5E6	1589.6E6	97.555	98.610	
7) T	Heptachlor	6.73	7.02	3643.3E6	1288.5E6	99.064	97.998	
8) T	Aldrin	7.55	7.69	3990.6E6	1450.7E6	97.123	97.135	
9) T	Heptachlor epoxi	8.56	9.54	3552.8E6	1327.4E6	96.907	96.675	
10) T	Endosulfan I	9.48	10.22	3331.3E6	1244.0E6	96.884	96.229	
11) T	4,4'-DDE	10.24	11.00	3573.1E6	1327.1E6	98.004	97.489	
12) T	Dieldrin	10.17	11.26	3673.1E6	1371.1E6	98.883	97.670	
13) T	Endrin	10.72	11.78	3469.2E6	1311.2E6	106.934	105.214	
14) T	Endosulfan II	10.98	13.23	3133.1E6	2336.3E6	97.281	198.457	#
15) T	4,4'-DDD	11.36	13.23	3164.8E6	2336.3E6	103.348	198.457	#
16) T	Endrin aldehyde	11.50	14.37	2218.5E6	862.3E6	97.260	91.551	
17) T	Endosulfan sulfa	12.15	15.27	2904.7E6	1071.5E6	97.871	95.802	
18) T	4,4'-DDT	12.38	13.68	2468.4E6	791.6E6	99.703	93.958	
19) T	Endrin ketone	13.36	16.30	3446.5E6	1231.7E6	96.257	94.243	
20) T	Methoxychlor	14.06	15.54	1193.3E6	435.8E6	100.853	94.745	
21) T	alpha-Chlordane	9.58	10.61	3606.9E6	1330.5E6	97.255	96.317	
22) T	gamma-Chlordane	9.17	10.46	3786.5E6	1371.3E6	97.568	96.904	
	Sum Chlordane			0	0	N.D.	N.D.	
Average	Chlordane					0.000	0.000	
	Sum Toxaphene			0	0	N.D.	N.D.	
Average	Toxaphene					0.000	0.000	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

000101

4326

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5725.D\ECD1B.CH Vial: 3
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5725.D\ECD2A.CH
Acq On : 4-5-01 12:55:58 Operator:
Sample : TOX C DAS 1436,0.5 PPM Inst : GC_W
Misc : NA,NA,NA,1 Multipir: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 5 13:40 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0402.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

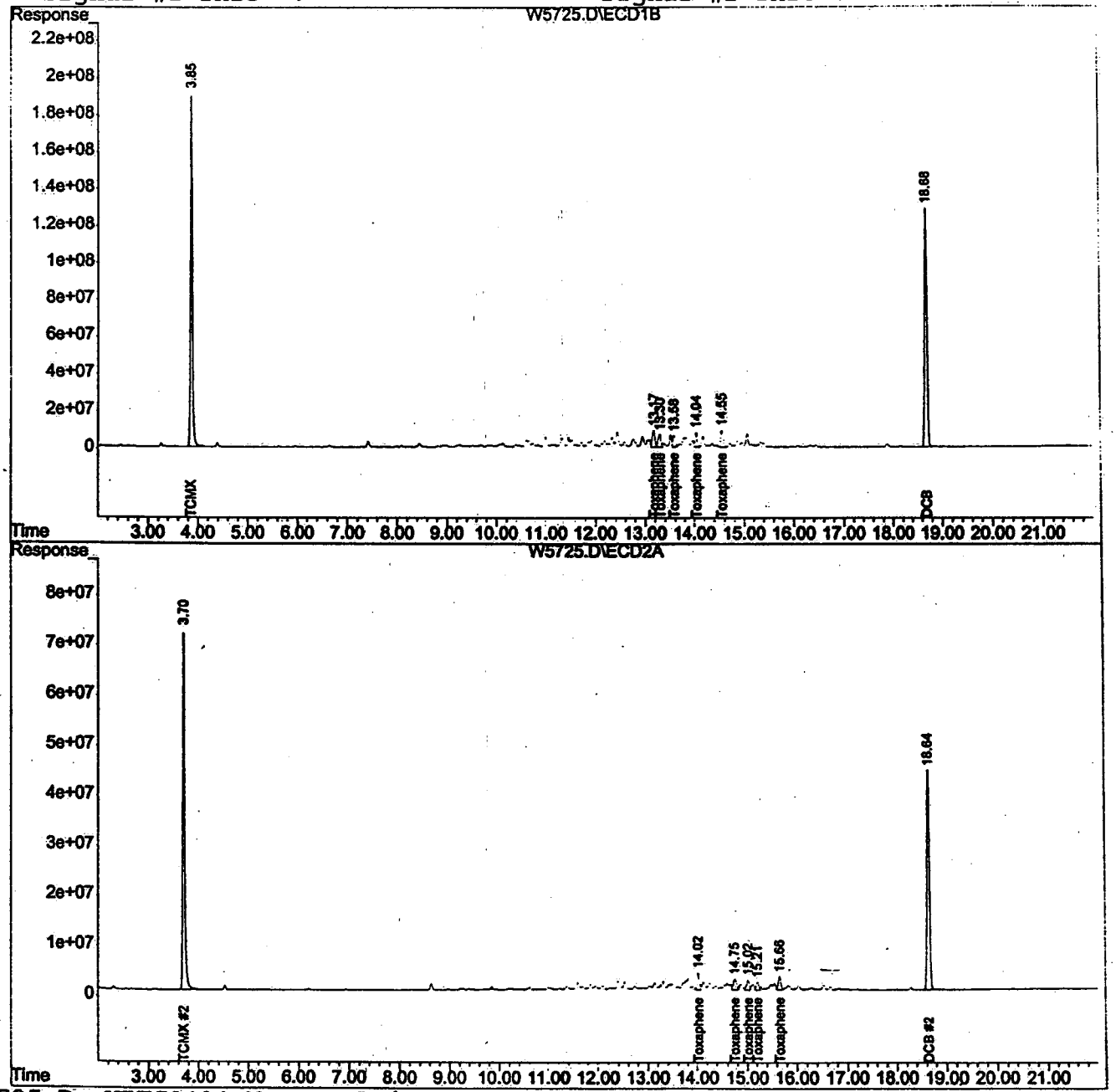
Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.70	4639.5E6	1820.6E6	98.648	95.182
Spiked Amount 100.000			Recovery	=	98.65%	95.18%
2) S DCB	18.68	18.65	4119.1E6	1497.4E6	92.016	94.652
Spiked Amount 100.000			Recovery	=	92.02%	94.65%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
28) L2 Toxaphene	13.17	14.02	349.7E6	127.1E6	470.551	452.783m
29) L2 Toxaphene {2}	13.30	14.75	273.9E6	108.3E6	470.324	444.482m
30) L2 Toxaphene {3}	13.58	15.02	219.2E6	83900780	504.948	434.519m
31) L2 Toxaphene {4}	14.04	15.21	248.8E6	65346786	488.300	428.098m
32) L2 Toxaphene {5}	14.55	15.66	365.7E6	95751726	489.368	440.204m
Sum Toxaphene			1457.3E6	480.4E6	2423.491	2200.086
Average Toxaphene					484.698	440.017

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5725.D WPTC0404.M Fri Apr 06 09:08:43 2001 GC_W Page 1

Signal : C:\HPCHEM\1\DATA\04-05-01\W5725.D\ECD1B.CH Vial: 3
Signal # : C:\HPCHEM\1\DATA\04-05-01\W5725.D\ECD2A.CH
Acq On : 4-5-01 12:55:58 Operator:
Sample : CV_C_TAS_1430_0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 5 13:40 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0402.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



000107

4239

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5726.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5726.D\ECD2A.CH
Acq On : 4-5-01 13:21:00 Operator:
Sample : CHLOR_C_DAS_1427,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:09 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0402.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.70	4164.4E6	1680.0E6	88.548	87.833
Spiked Amount 100.000			Recovery =		88.55%	87.83%
2) S DCB	18.68	18.64	3818.3E6	1372.0E6	85.295	86.727
Spiked Amount 100.000			Recovery =		85.30%	86.73%
Target Compounds						
23) L1 Chlordane	9.17	8.38	1888.3E6	135.8E6	460.884	462.065
24) L1 Chlordane {2}	9.37	10.06	351.7E6	151.0E6	469.383	447.163
25) L1 Chlordane {3}	9.58	10.46	1755.1E6	688.5E6	449.356	463.826
26) L1 Chlordane {4}	9.72	10.62	834.0E6	629.0E6	459.271	466.566
27) L1 Chlordane {5}	11.57	10.67	583.3E6	295.4E6	465.943	452.312
Sum Chlordane			5412.5E6	1899.8E6	2304.837	2291.933
Average Chlordane					460.967	458.387
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

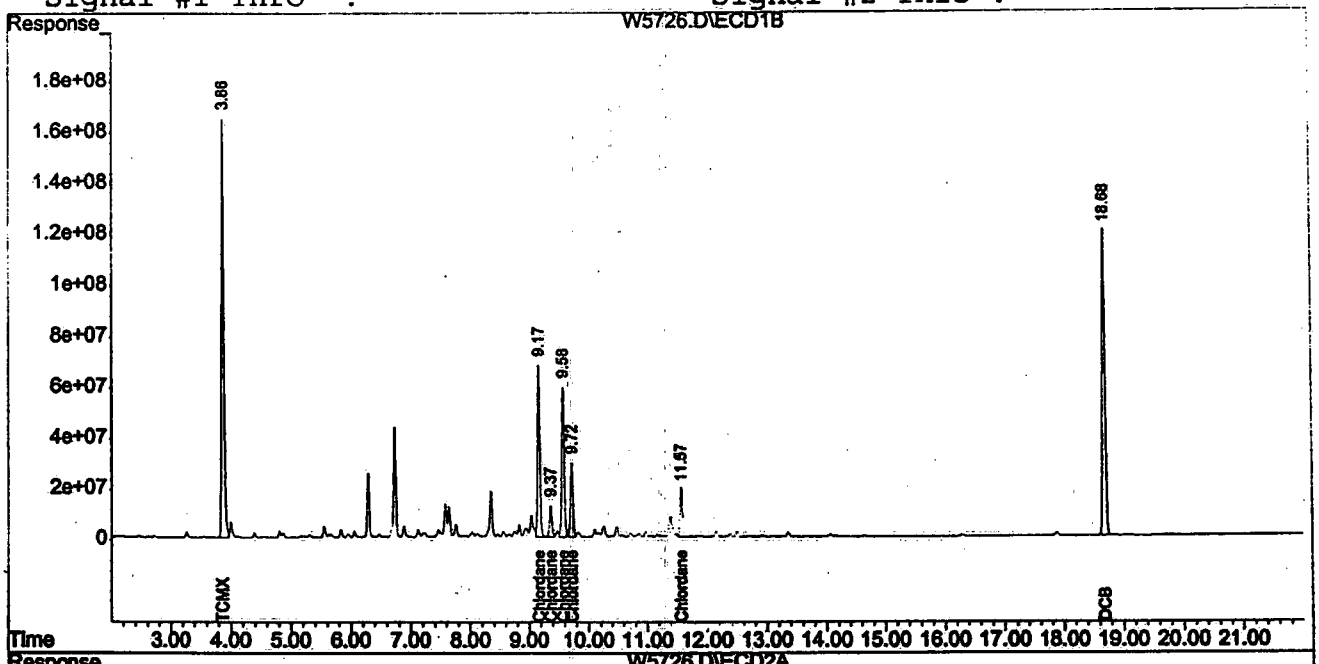
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

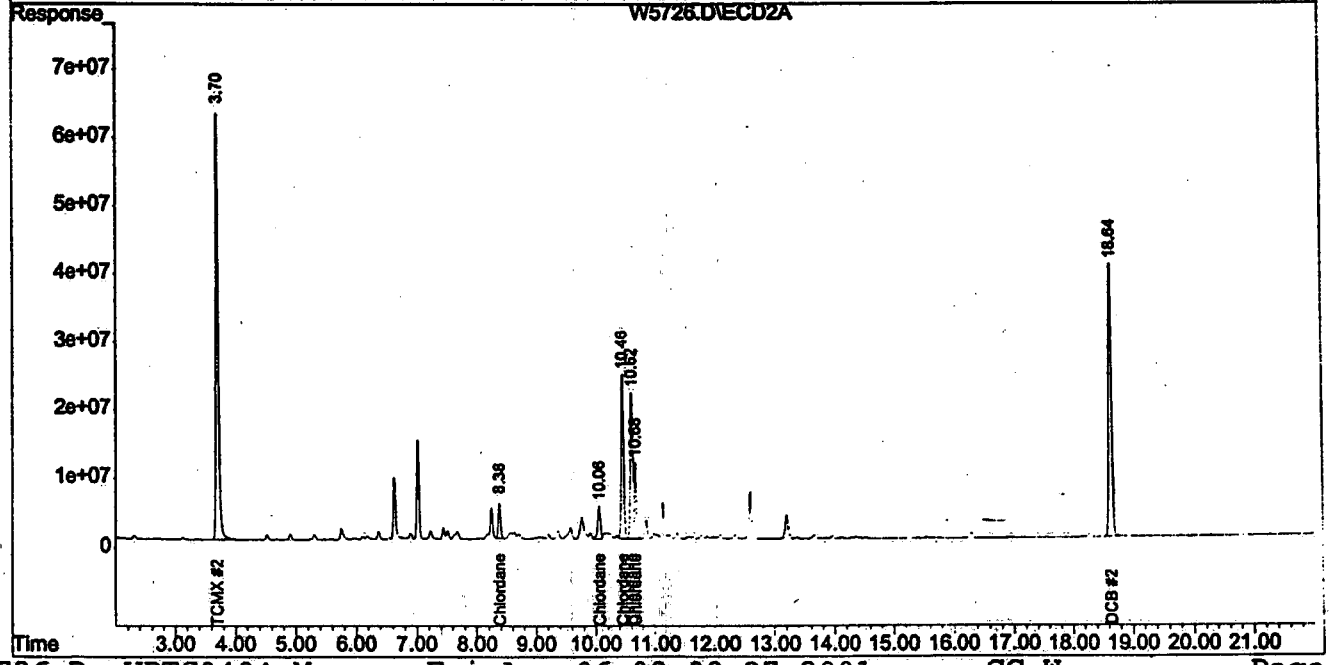
4240

Signal #1 : C:\HPCHEM\1\DATA\04-05-01\W5726.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\04-05-01\W5726.D\ECD2A.CH
Acq On : 4-5-01 13:21:00 Operator:
Sample : PEER C 180 3437,0.5 PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 6 10:09 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0402.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000103

4241

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

BLANK RESULTS SUMMARY

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION	CONTINUING CALIBRATION 1	CONTINUING CALIBRATION 2	INST. MDL	REAGENT BLANK	MDL	IDL
Aluminum	ND	ND	ND	50.0	ND	100	
Antimony	ND	ND	ND	4.00	ND	8.00	
Arsenic	ND	ND	ND	2.00	ND	4.00	
Barium	ND	ND	ND	10.0	ND	20.0	
Beryllium	ND	ND	ND	2.00	ND	4.00	
Cadmium	ND	ND	ND	0.300	ND	0.600	
Calcium	ND	ND	ND	400	ND	800	
Chromium	ND	ND	ND	10.0	ND	20.0	
Cobalt	ND	ND	ND	20.0	ND	40.0	
Copper	ND	ND	ND	20.0	ND	40.0	
Iron	ND	ND	ND	50.0	ND	100	
Lead	ND	ND	ND	2.00	ND	4.00	
Magnesium	ND	ND	ND	100	ND	200	
Manganese	ND	ND	ND	5.00	ND	10.0	
Mercury	ND	ND	ND	0.250	ND	0.500	
Nickel	ND	ND	ND	10.0	ND	20.0	
Potassium	ND	ND	ND	100	ND	200	
Selenium	ND	ND	ND	4.00	ND	8.00	
Silver	ND	ND	ND	0.200	ND	0.400	
Sodium	ND	ND	ND	1000	ND	2000	
Thallium	ND	ND	ND	4.00	ND	8.00	
Vanadium	ND	ND	ND	15.0	ND	30.0	
Zinc	ND	ND	ND	10.0	ND	20.0	

This QC Blank applies to the following samples:

2093-001; 2094-001,003~009; 2106-008~011;
2108-001~003; 2112-007; 2118-005~007; 2124-001;
2133-001,003,005,007,010; 2134-001~005

000123

4242

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION			CONTINUING CALIBRATION					MDL	IDL
	TRUE	FOUND	%R (1)	TRUE	FOUND	%R (1)	FOUND	%R (1)		
Aluminum	400	401	100	400	394	98.5	408	102	50.0	
Antimony	120	126	105	120	120	100	118	98.3	4.00	
Arsenic	20.0	19.4	97.0	20.0	19.4	97.0	19.6	98.0	2.00	
Barium	400	410	103	400	409	102	413	103	10.0	
Beryllium	10.0	10.6	106	10.0	10.1	101	10.3	103	2.00	
Cadmium	10.0	9.44	94.4	10.0	9.17	91.7	9.76	97.6	0.300	
Calcium	250000	250000	100	250000	248000	99.2	242000	96.8	400	
Chromium	20.0	19.5	97.5	20.0	19.0	95.0	19.1	95.5	10.0	
Cobalt	100	99.2	99.2	100	99.5	99.5	100	100	20.0	
Copper	50.0	50.6	101	50.0	50.2	100	50.8	102	20.0	
Iron	5000	4920	98.4	5000	4930	98.6	4960	99.2	50.0	
Lead	10.0	10.2	102	10.0	10.2	102	10.3	103	2.00	
Magnesium	250000	241000	96.4	250000	246000	98.4	238000	95.2	100	
Manganese	30.0	29.5	98.3	30.0	29.1	97.0	29.3	97.7	5.00	
Mercury	5.00	5.02	100	5.00	4.99	99.8	4.99	99.8	0.250	
Nickel	80.0	49.8	62.3	80.0	77.1	96.4	78.0	97.5	10.0	
Potassium	10000	9930	99.3	10000	9580	95.8	9490	94.9	100	
Selenium	10.0	10.1	101	10.0	10.1	101	10.1	101	4.00	
Silver	20.0	19.8	99.0	20.0	19.5	97.5	20.0	100	0.200	
Sodium	250000	270000	108	250000	271000	108	259000	104	1000	
Thallium	20.0	20.8	104	20.0	20.8	104	20.8	104	4.00	
Vanadium	100	101	101	100	98.1	98.1	97.2	97.2	15.0	
Zinc	40.0	42.3	106	40.0	42.1	105	43.3	108	10.0	

(1) Control Limits: Mercury 80-120, Other Metals 90-110

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SSR1	SR1	%R1	SA1	SSR2	SR2	%R2	SA2	CONTROL LIMIT %R
Aluminum	649	268	95.3	400					75-125
Antimony	407	ND	102	400	406	ND	102	400	75-125
Arsenic	464	47.0	104	400	417	ND	104	400	75-125
Barium	433	23.0	103	400					75-125
Beryllium	414	ND	104	400	414	ND	104	400	75-125
Cadmium	378	ND	94.5	400	384	0.800	95.8	400	75-125
Calcium	39400	34800	NC	8000					75-125
Chromium	382	ND	95.5	400	383	ND	95.8	400	75-125
Cobalt	393	ND	98.3	400					75-125
Copper	410000	ND	103000	400	411	ND	103	400	75-125
Iron	9360	1130	103	8000					75-125
Lead	420	10.0	103	400	404	ND	101	400	75-125
Magnesium	12500	4720	97.3	8000					75-125
Manganese	452	68.0	96.0	400					75-125
Mercury	10.2	ND	102	10.0					75-125
Nickel	385	ND	96.3	400	401	ND	100	400	75-125
Potassium	13600	6330	90.9	8000					75-125
Selenium	422	ND	106	400	429	ND	107	400	75-125
Silver	396	ND	99.0	400	404	ND	101	400	75-125
Sodium	60400	57000	NC	8000					75-125
Thallium	412	ND	103	400	409	ND	102	400	75-125
Vanadium	385	ND	96.3	400					75-125
Zinc	558	149	102	400	952	529	106	400	75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 1 2108-001

QC Sample 1 for following samples:
2093-001; 2094-001,003~009; 2106-008~011;
2108-001~003; 2112-007; 2118-005~007; 2124-001;
2133-001,003,005,007,010; 2134-001~005

QC Sample 2 2094-004

QC Sample 2 for following samples:
2093-001; 2094-001,003~009; 2106-008~011;
2108-001~003; 2112-007; 2118-005~007; 2124-001;
2133-001,003,005,007,010; 2134-001~005

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SSR3	SR3	%R3	SA3	SSR4	SR4	%R4	SA4	CONTROL LIMIT %R
Arsenic	445	19.0	107	400					75-125
Lead	401	ND	100	400		ND		400	75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 3 2106-009

QC Sample 3 for following samples:
2093-001; 2094-001,003~009; 2106-008~011; 2108-001~003; 2112-007; 2118-005~007; 2124-001; 2133-001,003,005,007,010; 2134-001~005

QC Sample 4 2124-001

QC Sample 4 for following samples:
2093-001; 2094-001,003~009; 2106-008~011; 2108-001~003; 2112-007; 2118-005~007; 2124-001; 2133-001,003,005,007,010; 2134-001~005

000113

4245

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 1	S1	D1	RPD1	CONTROL LIMIT 2	S2	D2	RPD2
Aluminum	20	268	255	4.97				
Antimony	NA	ND	ND	NC	NA	ND	ND	NC
Arsenic	20	47.0	46.0	2.15	NA	ND	ND	NC
Barium	20	23.0	22.0	4.44				
Beryllium	NA	ND	ND	NC	NA	ND	ND	NC
Cadmium	NA	ND	ND	NC	20	0.800	0.800	0
Calcium	20	34800	33700	3.21				
Chromium	NA	ND	ND	NC	NA	ND	ND	NC
Cobalt	NA	ND	ND	NC				
Copper	NA	ND	ND	NC	NA	ND	ND	NC
Iron	20	1130	1110	1.79				
Lead	20	10.0	11.0	9.52	NA	ND	ND	NC
Magnesium	20	4720	4700	0.425				
Manganese	20	68.0	66.0	2.99				
Mercury	NA	ND	ND	NC				
Nickel	NA	ND	ND	NC	NA	ND	ND	NC
Potassium	20	6330	6160	2.72				
Selenium	NA	ND	ND	NC	NA	ND	ND	NC
Silver	NA	ND	ND	NC	NA	ND	ND	NC
Sodium	20	57000	56000	1.77				
Thallium	NA	ND	ND	NC	NA	ND	ND	NC
Vanadium	NA	ND	ND	NC				
Zinc	20	149	142	4.81	20	529	531	0.377

S1 = Sample 1
D1 = Duplicate 1

S2 = Sample 2
D2 = Duplicate 2

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 1 2108-001

QC Sample 1 for following samples:
2093-001; 2094-001,003 ~ 009; 2106-008 ~ 011;
2108-001 ~ 003; 2112-007; 2118-005 ~ 007; 2124-001;
2133-001,003,005,007,010; 2134-001 ~ 005

QC Sample 2 2094-004

QC Sample 2 for following samples:
2093-001; 2094-001,003 ~ 009; 2106-008 ~ 011;
2108-001 ~ 003; 2112-007; 2118-005 ~ 007; 2124-001;
2133-001,003,005,007,010; 2134-001 ~ 005

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 3	S3	D3	RPD3	CONTROL LIMIT 4	S4	D4	RPD4
Arsenic	20	19.0	19.0	0				
Lead	NA	ND	ND	NC	NA	ND	ND	NC

S3 = Sample 3
D3 = Duplicate 3

S4 = Sample 4
D4 = Duplicate 4

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 3 2106-009

QC Sample 3 for following samples:
2093-001: 2094-001,003 ~ 009; 2106-008 ~ 011;
2108-001 ~ 003; 2112-007; 2118-005 ~ 007; 2124-001;
2133-001,003,005,007,010; 2134-001 ~ 005

QC Sample 4 2124-001

QC Sample 4 for following samples:
2093-001; 2094-001,003 ~ 009; 2106-008 ~ 011;
2108-001 ~ 003; 2112-007; 2118-005 ~ 007; 2124-001;
2133-001,003,005,007,010; 2134-001 ~ 005

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

ANALYTE	AQUEOUS (ug/L)			SOLID (mg/kg)			
	TRUE	FOUND	%R(1)	TRUE	FOUND	LIMITS	%R(2)
Aluminum	400	408	102				
Antimony	400	383	95.8				
Arsenic	400	408	102				
Barium	400	417	104				
Beryllium	400	433	108				
Cadmium	400	380	95.0				
Calcium	8000	8310	104				
Chromium	400	389	97.3				
Cobalt	400	406	102				
Copper	400	407	102				
Iron	8000	9040	113				
Lead	400	405	101				
Magnesium	8000	8960	112				
Manganese	400	396	99.0				
Mercury	10.0	10.8	108				
Nickel	400	396	99.0				
Potassium	8000	7410	92.6				
Selenium	400	409	102				
Silver	400	404	101				
Sodium	8000	9180	115				
Thallium	400	407	102				
Vanadium	400	384	96.0				
Zinc	400	417	104				

(1) Control Limits = 85-115%
(2)Manufacture's Recomended Limits

Aqueous LCS Source: MV Laboratories

Solid LCS Source: Environmental Resource Associates: PriorityPollutnT/CLP Inorganics Soils

000113

A248

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SERIAL DILUTIONS & POST SPIKES

Lab Case Number: E01- 2093, 2094, 2106, 2108, 2112, 2118, 2124, 2133, 2134

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SERIAL DILUTION		%	POST SPIKE		%
	SR	SDR	Difference	SPR	SA	Recovery
Aluminum	268			658	400	97.5
Antimony	ND			416	400	104
Arsenic	47.0			462	400	104.0
Barium	23.0			437	400	103.0
Beryllium	ND			428	400	107
Cadmium	ND			370	400	92.5
Calcium	34800	34200	1.74			
Chromium	ND			380	400	95.0
Cobalt	ND			394	400	98.5
Copper	ND			421	400	105
Iron	1130	1240	9.28			
Lead	10.0			420	400	102.0
Magnesium	4720	4790	1.47			
Manganese	68.0	68.0	0			
Mercury	ND			10.6	10.0	106
Nickel	ND			383	400	95.8
Potassium	6330	6130	3.21			
Selenium	ND			420	400	105
Silver	ND			412	400	103
Sodium	57000	59600	4.46			
Thallium	ND			412	400	103
Vanadium	ND			380	400	95.0
Zinc	149	150	0.669			

SR = Sample Result
SDR = Sample Dilution Result

SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 85 - 115% Recovery

QC Sample : 2108-001

QC Sample for following samples:
2093-001; 2094-001,003~009; 2106-008~011;
2108-001~003; 2112-007; 2118-005~007; 2124-001;
2133-001,003,005,007,010; 2134-001~005

4249

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
4/6/01

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

General Chemistry Quality Control

Matrix: Aqueous
Units: A-mg/L

Batch ID: AP013-0017

Blank

Parameter	Method Blank	MDL	Analysis Date
Total Cyanide	ND	0.020	04/06/01

Duplicate Recovery

Parameter	QC Sample	Result	Duplicate Result	RPD	RPD Limits
Total Cyanide	2108-001S	0.208	0.206	1	20

Spike Recovery

Parameter	QC Sample	Result	Spike Added	Spike Result	%Spike Recovery	%Rec. Limits
Total Cyanide	2108-001	ND	0.250	0.208	83.2	75 - 125

The above blank result applies to the follow samples E01-

2108-001	2097-001
2108-001S	2094-001
2108-001SD	2094-003
2108-002	2094-004
2108-003	2094-005
2076-001	2094-006
2076-003	2094-007
2088-002	2094-008
2093-001	2094-009
	2116-005

++ = No Flash - Sample boiled at 100C
NA = Not Applicable
ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
No = Does Not Ignite
Yes = Sample Ignites

©2000 IAL Inc.
All rights reserved

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
4/5/01

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

General Chemistry Quality Control

Matrix: Aqueous **Batch ID:** AP024-0020
Units: A-mg/L

Blank

Parameter	Method Blank	MDL	Analysis Date
Total Recoverable Phenols	ND	0.050	04/05/01

Duplicate Recovery

Parameter	QC Sample	Result	Duplicate Result	RPD	RPD Limits
Total Recoverable Phenols	2040-001S	0.357	0.349	2	20

Spike Recovery

Parameter	QC Sample	Result	Spike Added	Spike Result	%Spike Recovery	%Rec. Limits
Total Recoverable Phenols	2040-001	0.127	.250	0.357	92	75 - 125

The above blank result applies to the follow samples E01-

2040-001
2040-001S
2040-001SD
2080-002
2094-003
2094-004
2094-005
2094-006
2094-001
2094-007
2094-008
2094-009
2088-001
2093-001

++ = No Flash - Sample boiled at 100C
NA = Not Applicable
ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
No = Does Not Ignite
Yes = Sample Ignites

©2000 IAL Inc.
All rights reserved

4251

Phone # (973) 361-42[illegible]
Fax # (973) 989-5288

INTEGRATED ANALYTICAL LABORATORIES
CHAIN OF CUSTODY

[illegible] Franklin Rd
[illegible]ph, NJ 07869

CLIENT & PROJECT

Company Name:	Environtechics
Address:	2517 Highway 35
	Bldg. D, Suite 202
	Manasquan, NJ 08736
Telephone #:	(732) 292-0100
Fax #:	(732)
Project Name:	Orbis - Newark
Project Manager:	Chris Neuffer
Reference ID#:	PO#: 444

REPORTING

Fax to:	
Fax #:	
Report to:	
Address:	
Invoice to:	
Address:	

Turnaround Time

Conditional / TPHC
24 hr* 48 hr 72 hr 1 wk NA Other:

Verbal/Fax
24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other:

Hard Copy
72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format

Results Only
Reduced
Regulatory
SRP Disk**: dbf or wkl
Other:

ANALYTICAL PARAMETERS / PRESERVATIVES

** Circle format required

Preservatives
1. HCL 3. HNO_3
2. NaOH 4. H_2SO_4
5. MeOH 6: Other

COOLER TEMP 5 °C

SAMPLE MATRIX
W - Waste SL - Sludge A - Aqueous
O - Oil X - Other S - Soil
GW - Groundwater SOL - Solid

SAMPLE INFORMATION

Sample ID	Sample Description	Sampling Date	Sampling Time	am	pm	Matrix	# of Containers	Lab ID	PP+40	VOA+10									Comments
									1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	
FB	Field Blank	4/3/01	7:20	X		A	8	01	X										
TB	Trip Blank	3/30/01				A	2	2		X									
MW-1		4/3/01	9:50	X		GW	8	3	X										
MW-2		4/3/01	10:15	X		GW	8	4	X										
MW-7		4/3/01	11:50	X		GW	8	5	X										
MW-6		4/3/01	13:55		X	GW	8	6	X										
MW-8		4/3/01	15:45		X	GW	8	7	X										
MW-3		4/3/01	17:10		X	GW	8	8	X										
MW-5		4/3/01	17:50		X	GW	8	9	X										

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Concentrations Expected
LOW MED HIGH

Known Hazard: yes no
Describe

CUSTODY LOG

	Signature	Date	Time	Signature
Relinquished by:	[signature]	4/4/01	16:02	Received by: [signature]
Relinquished by:	[signature]	4/4/01	1300	Received by: [signature]
Relinquished by:				Received by:
Relinquished by:				Received by:
Relinquished by:				Received by:

Comments:

Lab Case # 2094

PAGE: 1 OF 1

LAB COPIES - WHITE; YELLOW; CLIENT COPY - PINK

7252H

CHAIN OF CUSTODY

Case No.: E01-2094
Project : ORBIS - NEWARK - 444
Client/Project: ENVTACT/ORBIS - NEWARK
P.O. #: _____

Client Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan, NJ 08736
Date Received: 04/04/01
Time Received: 13:00
Report Format: Reduced

Billing Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 20
Manasquan, NJ 08736
Verbal Due: Apr 18
Report Due: Apr 25

# of Containers	8	2	8	8	8	8
IAL ID #	2094-001	2094-002	2094-003	2094-004	2094-005	2094-006
Client ID #	FB	TB	MW-1	MW-2	MW-7	MW-6
Matrix	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
Sample Date	04/03/01	04/02/01	04/03/01	04/03/01	04/03/01	04/03/01
Sample Time	07:20	:	09:50	10:15	11:50	13:35
VO+15, PP LIST	√		√	√	√	√
VO+10, PP LIST		√				
Pesticides	√		√	√	√	√
PCB	√		√	√	√	√
BNA + 25	√		√	√	√	√
PP Metals -LOW	√		√	√	√	√
Cyanide, Total	√		√	√	√	√
Phenols	√		√	√	√	√
Electronic Del.	√					

Comments: NOTE 1: PLEASE MEET GROUNDWATER LIMITS FOR METALS.
NOTE 2: PER JIM H., EXPECT HIGH CONCENTRATIONS IN SAMPLE #7 (PRODUCT IN WELL). dgk

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: 2094 CLIENT: ENVIRO TACTICS

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

CHAIN OF CUSTODY: COMPLETE / INCOMPLETE Comments:

		Comments:
Sample Bottles Intact:	✓	
Sample Labels Intact/ Correct:	✓	
Sufficient Sample Volume:	✓	
Correct bottles/ preservative:	✓	
Samples received in holding time/ prep time:	✓	
Headspace/ bubbles in voa samples:	✗	
Samples to be subcontracted:	(✓)	
Preserved Sample pH checked: (Excluding voa samples)	✓	

KEY
✓ = YES
✗ = NO
(✓) = N/A

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL BP DATE 4/5

CORRECTIVE ACTION REQUIRED: YES [ ] (SEE BELOW) NO [✓]

CLIENT NOTIFIED: YES [ ] Date/ Time: _____ NO [ ]

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS: TRIP BLANK DATE SHOULD BE 4/2/01.

VERIFIED/TAKEN BY: INITIAL BNL DATE

000123

REV 10/00

42354

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E01-2094
Client : Envirotactics Inc.
Project : ORBIS - NEWARK - 444

	GC/MS V		EXTRACT DATE	EXTRACT TIME	EXTRACT INITIAL	ANALYSIS DATE	ANALYSIS TIME	ANALYSIS INITIAL
VO+15, PP LIST	2094-001	A				4/4 - 4/18		DM
	2094-003	A						
	2094-004	A						
	2094-005	A						
	2094-006	A						
	2094-007	A						
	2094-008	A						
	2094-009	A						
VO+10, PP LIST	2094-002	A						
	GC EX							
Pesticides	2094-001	A	4/5			4/5		
	2094-003	A						
	2094-004	A						
	2094-005	A						
	2094-006	A						
	2094-007	A						
	2094-008	A						
	2094-009	A						
PCB	2094-001	A				4.5		
	2094-003	A						
	2094-004	A						
	2094-005	A						
	2094-006	A						
	2094-007	A						
	2094-008	A						
	2094-009	A						
	GC/MS X							
BNA + 25	2094-001	A	4/6			4/6		
	2094-003	A						
	2094-004	A						
	2094-005	A						
	2094-006	A						
	2094-007	A						
	2094-008	A						
	2094-009	A						
	METALS							
PP Metals -LOW	2094-001	A	4/5/01			4/6		
	2094-003	A						
	2094-004	A						
	2094-005	A						
	2094-006	A						
	2094-007	A						
	2094-008	A						
	2094-009	A						

4255

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E01-2094
Client : Envirotactics Inc.
Project : ORBIS - NEWARK - 444

	WETCHEM		EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
Cyanide, Total	2094-001	A	4/5		SM	4/6		SM
	2094-003	A						
	2094-004	A						
	2094-005	A						
	2094-006	A						
	2094-007	A						
	2094-008	A						
	2094-009	A						
Phenols	2094-001	A	4/4	900	DM	4/5	1300	DM
	2094-003	A						
	2094-004	A						
	2094-005	A						
	2094-006	A						
	2094-007	A						
	2094-008	A						
	2094-009	A						
	AIR							
Electronic Del.	2094-001	A	—			—		

REVIEW & APPROVAL: [signature]
REMARKS :

Integrated Analytical Labs

Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

for

Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan,NJ 08736

Project: ORBIS - NEWARK - 444
Lab Case Number: E01-2153
Date Report Prepared: April 16, 2001

CLIENT SAMPLE ID	LABORATORY SAMPLE ID
TW-1	2153-001

All required protocols were followed during analyses. These data have been reviewed and accepted by

Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

	Page
ualifiers	1
onformance / NonConformance Summary	2
aboratory Deliverables Check List	3
C/MS NonConformance Summary	4
C NonConformance Summary	5
letal NonConformance Summary	6
ummary Report	7
nalytical Results	
Volatiles + 15	10
Semivolatiles - BNA + 25	12
PCB's	15
Pesticides	16
PP Metals	17
eneral Analytical	
Cyanide, Total	18
Phenols	
Methodology Summary	19
Quality Control	
Volatiles + 15	20
Tuning Results Summary	
thod Blank Results Summary	
alibration Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Internal Standard Summary	
Chromatograms	
Semivolatiles - BNA + 25	45
Tuning Results Summary	
Method Blank Results Summary	
Calibration Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Internal Standard Summary	
Chromatograms	
PCB's	87
Method Blank Results Summary	
Standards Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Retention Time Shift Summary	
Chromatograms	
Pesticides	108
Method Blank Results Summary	
ndards Summary	
rrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Retention Time Shift Summary	
Chromatograms	

Continued on next page.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

A - Indicates the sample is an Aqueous matrix.

O - Indicates the sample is an Oil matrix.

S - Indicates the sample is a Soil, Sludge or Sediment matrix.

X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.

C - Common Laboratory Contaminant.

D - The compound was reported from the Diluted analysis.

D.F. - Dilution Factor.

E - Estimated concentration, reported results are outside the calibrated range of the instrument.

J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.

MDL - Method Detection Limit.

MI - Indicates compound concentration could not be determined due to Matrix Interferences.

NA - Not Applicable.

ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received one (1) aqueous sample(s) from Envirotactics Inc. (Project: ORBIS - NEWARK - 444) on April 5, 2001 for the analysis of:

(1) Volatiles + 15
(1) Semivolatiles - BNA + 25
(1) PCB's
(1) Pesticides
(1) PP Metals
(1) Cyanide, Total
(1) Phenols

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

4/20/01
Date

INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E01-2153

		Check If Complete
1.	Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	✓
2.	Table of Contents.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	✓
4.	Summary Table cross-referencing Field ID's vs. Lab ID's.	✓
5.	Document bound, paginated and legible.	✓
6.	Chain of Custody.	✓
7.	Methodology Summary.	✓
8.	Laboratory Chronicle and Holding Time Check.	✓
9.	Results submitted on a dry weight basis (if applicable).	✓
10.	Method Detection Limits.	✓
11.	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	✓
12.	NonConformance Summary.	✓

[signature]
QC Reviewed by

4/20/01
Date

000003

4261

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS VOLATILE ANALYSIS

Lab Case Number: E01 - 2153

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. BFB Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series and 8 hours for 500 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series, 12 hours for 8000 series		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds		NA
b. System Performance Check Compounds		NA
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)		✓
If not met, were the calculations checked and the results qualified as "estimated"?		na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		NA
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed		✓

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other
✓			

13. Comments:

Organics Manager

4/10/07
Date

rev 12/00

000004

4262

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS SEMIVOLATILE ANALYSIS

Lab Case Number: E01- 2153

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. DFTPP Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series.		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds b. System Performance Check Compounds	 	✓ ✓
6. Blank Contamination - If yes, list compounds and concentrations in each blank: a. B/N Fraction _____ b. Acid Fraction _____	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range) a. B/N Fraction _____ b. Acid Fraction _____ If not met, were the calculations checked and the results qualified as "estimated"?		✓ na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) a. B/N Fraction _____ b. Acid Fraction _____		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		✓
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed	✓	

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other

13. Comments:

_____

_____

_____ Organics Manager

4/10/01 Date

rev 01/01

4263

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC ANALYSIS - PCB'S, PESTICIDES, HERBICIDES

Lab Case Number: E01 - 2153

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2.	Standards Summary submitted.		✓
3.	Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hrs of the sample analysis.		✓
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
5.	Surrogate Recoveries meet criteria (if applicable). If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
6.	Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
7.	Retention Time Shift Meet Criteria (if applicable).		✓
8.	Extraction Holding Time Met. If not met, list number of days exceeded for each sample:		✓
9.	Analysis Holding Time Met. If not met, list number of days exceeded for each sample:		✓

Comments:

Organic Manager

04.10.2001
Date

000006

rev 01/01

42624

INTEGRATED ANALYTICAL LABORATORIES

METAL ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E01 - 2153

	No	Yes
1. Calibration Summary Meet Criteria.		✓
2. ICP Interference Check Sample Results Meets Criteria (if applicable)		NA
3. Serial Dilution Summary Submitted (if applicable) / Meets Criteria		✓
4. Internal Standards Meet Criteria (if applicable)		✓
5. Laboratory Control Sample Summary Submitted (if applicable)/Meets Criteria		✓
6. Blank Contamination: If yes, list compounds and concentrations in each blank:	✓	
7. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria. (If not, list those compounds and their recoveries which fall outside the acceptable range).		✓
8. Extraction Holding Time Met. If not, list number of days exceeded for each sample:		✓
9. Analysis Holding Time Met. If not, list number of days exceeded for each sample:		✓

Additional Comments:

K. Falck-Lorenzen
Inorganics Manager

04/12/01
Date

rev 01/01

000007

4175

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - NEWARK - 444
Lab Case No.: E01-2153

	Lab ID:	2153-001	
	Client ID:	TW-1	
	Matrix:	Aqueous	
	Sampled Date:	4/4/2001	
PARAMETER(Units)	Conc	Q	MDL
Volatiles (ppb)			
Benzene	466		6
TOTAL VO's:	466		
TOTAL TIC's:	ND		
TOTAL VO's & TIC's:	466		
Semivolatiles - BNA (ppb)			
2,4-Dimethylphenol	0.665		0.32
4-Chloro-3-methylphenol	3.84		0.25
TOTAL BNA'S:	4.505		
TOTAL TIC's:	331.1		
TOTAL BNA'S & TIC's:	335.605		
PCB's (ppb)	ND		0.2
Pesticides (ppb)			
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

ND = Analyzed for but Not Detected at the MDL

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS - NEWARK - 444
Lab Case No.: E01-2153

	Lab ID:	2153-001	
	Client ID:	TW-1	
	Matrix:	Aqueous	
	Sampled Date:	4/4/2001	
PARAMETER(Units)	Conc	Q	MDL
Metals (ppm)			
Antimony	ND		0.008
Arsenic	0.00699		0.004
Beryllium	ND		0.004
Cadmium	ND		0.0006
Chromium	ND		0.020
Copper	ND		0.040
Lead	ND		0.004
Mercury	ND		0.0005
Nickel	ND		0.020
Selenium	0.00823		0.008
Silver	ND		0.0004
Thallium	ND		0.008
Zinc	0.0233		0.020
General Analytical			
Cyanide, Total (ppm)	ND		0.020
Phenol (ppm)	0.175		0.050

ND = Analyzed for but Not Detected at the MDL

4267

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 04/04/2001
Date Analyzed: 04/10/2001
Data file: E8108.D

GC/MS Column: DB-624
Sample wt/vol: 0.25mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 20
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		12.2
Vinyl Chloride	ND		6.6
Bromomethane	ND		9.4
Chloroethane	ND		13
Trichlorofluoromethane	ND		7.6
Acrolein	ND		119
1,1-Dichloroethene	ND		10
Methylene Chloride	ND		38.2
Acrylonitrile	ND		25.4
trans-1,2-Dichloroethene	ND		7.8
1,1-Dichloroethane	ND		6.6
Chloroform	ND		6.2
1,1,1-Trichloroethane	ND		7.6
Carbon Tetrachloride	ND		7.8
1,2-Dichloroethane(EDC)	ND		7
Benzene	466		6
Trichloroethene	ND		7.2
1,2-Dichloropropane	ND		5
Bromodichloromethane	ND		5
2-Chloroethylvinyl Ether	ND		5
cis-1,3-Dichloropropene	ND		3.8
Toluene	ND		6.6
trans-1,3-Dichloropropene	ND		5.4
1,1,2-Trichloroethane	ND		6.2
Tetrachloroethene	ND		7.6
Dibromochloromethane	ND		6.2
Chlorobenzene	ND		5.6
Ethylbenzene	ND		6
Total Xylenes	ND		18
Bromoform	ND		5.6
1,1,2,2-Tetrachloroethane	ND		5.4
1,3-Dichlorobenzene	ND		4.4
1,4-Dichlorobenzene	ND		4.4
1,2-Dichlorobenzene	ND		3.8

Total Target Compounds: 466

H268

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 04/04/2001
Date Analyzed: 04/10/2001
Data file: E8108.D

GC/MS Column: DB-624
Sample wt/vol: 0.25mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 20
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

41269

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 04/05/2001
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: C9239.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	ND		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	0.665		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	3.84		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

000012

4220

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 04/05/2001
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: C9239.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 4.505

C00013

4271

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 04/05/2001
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Date File: C9239.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown cyclic hydrocarbon	29.7	6.43
	Unknown cyclic hydrocarbon	17.4	6.53
	Unknown cyclic hydrocarbon	44.7	7.28
	Unknown cyclic hydrocarbon	4.3	7.31
	Unknown	11	7.39
	Unknown	28.1	8.16
	Unknown	10.5	8.65
	Unknown aromatic	63	8.94
	Substituted naphthalene	20.5	9.34
	Unknown	4.5	9.45
	Unknown	4.4	9.67
	Substituted benzene	81.5	9.84
	Unknown	11.5	10.44

Total TICs = 331.1

000014

4272

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS - NEWARK

Lab ID: 2153-001
Client ID: TW-1
Date Received: 04/05/2001
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: V5003.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

000015

4273

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 04/05/2001
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: W5829.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.075
Chlordane	ND		0.075
Toxaphene	ND		

000016

4274

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 4/5/01
Date Analyzed: 4/11/01
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.00699		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	0.00823		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.0233		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

GENERAL ANALYTICAL

Client/Project: ENVTACT/ORBIS

Lab ID: 2153-001
Client ID: TW-1
Date Received: 4/5/01
% Moisture: 100

Compound	Result	Q	Matrix Unit	DF	MDL	Date Analyzed
Cyanide, Total	ND		Aqueous-mg/L	1	0.020	4/11/01
Phenol	0.175		Aqueous-mg/L	1	0.050	4/10/01

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METHODOLOGY SUMMARY

Analytical Parameter	Aqueous Samples Method #	Soil/Other Samples Method #
Volatiles + 15	EPA 624	NA
Semivolatiles - BNA + 25	EPA 625	NA
PCB's	EPA 8082	NA
Pesticides	EPA 8081A	NA
P.P. Metals	EPA 200.8	NA
Metals (Mercury)	EPA 245.2	NA
Cyanide, Total	EPA 335.2	NA
Phenols	EPA 420.2	NA

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E8031.D

BFB Injection Date: 04/06/2001

Inst ID: MSD_E

BFB Injection Time: 11:33

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	18.7			
75	30.0 - 60.0% of mass 95	57.6			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.9			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	78.7			
175	5.0 - 9.0% of mass 174	4.3	(	5.5	)1
176	95.0 - 101.0% of mass 174	77.5	(	98.5	)1
177	5.0 - 9.0% of mass 176	5.2	(	6.7	)2
	1-Value is % mass 174	2-Value is % mass 176			

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20-PPB-STD	20-PPB-STD	E8032.D	04/06/2001	12:09
5-PPB-STD	5-PPB-STD	E8033.D	04/06/2001	12:34
100-PPB-STD	100-PPB-STD	E8034.D	04/06/2001	12:58
METHOD-BLK	METHOD-BLK	E8036.D	04/06/2001	2:39
1	2097-001DIL	E8037.D	04/06/2001	3:03
MS	2114-001MS	E8038.D	04/06/2001	3:28
MSD	2114-001MSD	E8039.D	04/06/2001	3:53
TCLPMS	TCLPMS	E8040.D	04/06/2001	4:18
DW-1	2108-001	E8042.D	04/06/2001	5:07
MHR-1	2108-003	E8043.D	04/06/2001	5:32
WW-1	2108-002	E8044.D	04/06/2001	5:57
SW-2	2114-001	E8046.D	04/06/2001	6:46
SUMP_3	2114-002	E8047.D	04/06/2001	7:11
PHENOL_POOL	2114-003	E8048.D	04/06/2001	7:36
SUMP_1	2114-004	E8049.D	04/06/2001	8:00
MW-34	2115-001	E8050.D	04/06/2001	8:25
MW-35	2115-002	E8051.D	04/06/2001	8:50
MW-19	2115-003	E8052.D	04/06/2001	9:15
MW-27	2115-004	E8053.D	04/06/2001	9:39
MW-20	2115-005	E8054.D	04/06/2001	10:04

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E8068.D

Inst ID: MSD_E

BFB Injection Date: 04/09/2001

BFB Injection Time: 4:39

m/z	Ion Abudance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	19.7
75	30.0 - 60.0% of mass 95	58.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	81.9
175	5.0 - 9.0% of mass 174	5.7 (7.0)1
176	95.0 - 101.0% of mass 174	80.1 (97.8)1
177	5.0 - 9.0% of mass 176	4.1 (5.1)2

1-Value is % mass 174 2-Value is % mass 176

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20-PPB-STD	20-PPB-STD	E8069.D	04/09/2001	5:12
METHOD-BLK	METHOD-BLK	E8074.D	04/09/2001	7:49
PHENOL_POOL	2114-003	E8075.D	04/09/2001	8:14
2166-001MS	2166-001MS	E8076.D	04/09/2001	8:38
2166-001MSD	2166-001MSD	E8077.D	04/09/2001	9:03
TCLPMS	TCLPMS	E8078.D	04/09/2001	9:28
OS-6D_475'	2181-001	E8081.D	04/09/2001	10:42
OS-6D_425'	2181-002	E8082.D	04/09/2001	11:07
OS-6D_375'	2181-003	E8083.D	04/09/2001	11:32
OS-6D_325'	2194-001	E8084.D	04/09/2001	11:57
OS-6D_275'	2194-002	E8085.D	04/10/2001	12:21
GW-1B	2168-001	E8086.D	04/10/2001	12:46
TCLPMB040901	METHOD-BLK	E8089.D	04/10/2001	2:01
CC-UST-01	2161-001	E8090.D	04/10/2001	2:25
RB040501	2161-003	E8091.D	04/10/2001	2:50
LEAD_CARBON	2166-001	E8092.D	04/10/2001	3:15
SUMP	2207-001	E8093.D	04/10/2001	3:40
SUMP	2144-001	E8094.D	04/10/2001	4:05
SUMP	2145-001	E8095.D	04/10/2001	4:29
A2	2156-001	E8097.D	04/10/2001	5:19

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E8068.D

Inst ID: MSD_E

BFB Injection Date : 04/09/200

BFB Injection Time: 4:39

m/z	Ion Abudance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	19.7
75	30.0 - 60.0% of mass 95	58.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	81.9
175	5.0 - 9.0% of mass 174	5.7 (7.0)1
176	95.0 - 101.0% of mass 174	80.1 (97.8)1
177	5.0 - 9.0% of mass 176	4.1 (5.1)2
	1-Value is % mass 174	2-Value is % mass 176

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
A1	2157-001	E8098.D	04/10/2001	5:44
BEFF040401	2124-001	E8099.D	04/10/2001	6:08
MW-1	2133-002	E8100.D	04/10/2001	6:33
MW-2	2133-004	E8101.D	04/10/2001	6:58
MW-3	2133-006	E8102.D	04/10/2001	7:23
MW-4	2133-008	E8103.D	04/10/2001	7:48
TRIP	2133-009	E8104.D	04/10/2001	8:12
FIELD	2133-010	E8105.D	04/10/2001	8:36
WP-1	2112-007	E8106.D	04/10/2001	9:01
WP-2	2112-008	E8107.D	04/10/2001	9:26
TW-1	2153-001	E8108.D	04/10/2001	9:51
2207-001MS	2207-001MS	E8109.D	04/10/2001	10:15
2207-001MSD	2207-001MSD	E8110.D	04/10/2001	10:40

VOLATILE METHOD BLANK SUMMARY

Lab File ID: E8074.D

Instrument ID: MSD_E

Date Analyzed: 04/09/2001

Time Analyzed: 07:49

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
PHENOL_POOL	2114-003	04/09/2001	8:14
2166-001MS	2166-001MS	04/09/2001	8:38
2166-001MSD	2166-001MSD	04/09/2001	9:03
TCLPMS	TCLPMS	04/09/2001	9:28
OS-6D_475'	2181-001	04/09/2001	10:42
OS-6D_425'	2181-002	04/09/2001	11:07
OS-6D_375'	2181-003	04/09/2001	11:32
OS-6D_325'	2194-001	04/09/2001	11:57
OS-6D_275'	2194-002	04/10/2001	12:21
GW-1B	2168-001	04/10/2001	12:46
TCLPMB040901	METHOD-BLK	04/10/2001	2:01
CC-UST-01	2161-001	04/10/2001	2:25
RB040501	2161-003	04/10/2001	2:50
LEAD_CARBON	2166-001	04/10/2001	3:15
SUMP	2207-001	04/10/2001	3:40
SUMP	2144-001	04/10/2001	4:05
SUMP	2145-001	04/10/2001	4:29
A2	2156-001	04/10/2001	5:19
A1	2157-001	04/10/2001	5:44
BEFF040401	2124-001	04/10/2001	6:08
MW-1	2133-002	04/10/2001	6:33
MW-2	2133-004	04/10/2001	6:58
MW-3	2133-006	04/10/2001	7:23
MW-4	2133-008	04/10/2001	7:48
TRIP	2133-009	04/10/2001	8:12
FIELD	2133-010	04/10/2001	8:36
WP-1	2112-007	04/10/2001	9:01
WP-2	2112-008	04/10/2001	9:26
TW-1	2153-001	04/10/2001	9:51
2207-001MS	2207-001MS	04/10/2001	10:15
2207-001MSD	2207-001MSD	04/10/2001	10:40

FORM 4

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: METHOD-BLK
Date Received: NA
Date Analyzed: 04/09/2001
Data file: E8074.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.61
Vinyl Chloride	ND		0.33
Bromomethane	ND		0.47
Chloroethane	ND		0.65
Trichlorofluoromethane	ND		0.38
Acrolein	ND		5.94
1,1-Dichloroethene	ND		0.5
Methylene Chloride	ND		1.91
Acrylonitrile	ND		1.27
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.33
Chloroform	ND		0.31
1,1,1-Trichloroethane	ND		0.38
Carbon Tetrachloride	ND		0.39
1,2-Dichloroethane(EDC)	ND		0.35
Benzene	ND		0.3
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.25
2-Chloroethylvinyl Ether	ND		0.25
cis-1,3-Dichloropropene	ND		0.19
Toluene	ND		0.33
trans-1,3-Dichloropropene	ND		0.27
1,1,2-Trichloroethane	ND		0.31
Tetrachloroethene	ND		0.38
Dibromochloromethane	ND		0.31
Chlorobenzene	ND		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.9
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.27
1,3-Dichlorobenzene	ND		0.22
1,4-Dichlorobenzene	ND		0.22
1,2-Dichlorobenzene	ND		0.19

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: METHOD-BLK
Date Received: NA
Date Analyzed: 04/09/2001
Data file: E8074.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

4283

Response Factor Report MSD_E2

Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Fri Apr 06 12:20:34 2001
Response via : Initial Calibration

Calibration Files
20 =E8032.D 5 =E8033.D 100 =E8034.D
= =

		Compound	20	5	100	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------				
2)	T	Dichlorodifluorometha	0.340	0.346	0.385	0.357	6.85
3)	P	Chloromethane	0.639	0.667	0.641	0.649	2.45
4)	C	Vinyl Chloride	0.515	0.575	0.588	0.559	7.00
5)	T	Bromomethane	0.337	0.384	0.293	0.338	13.40
6)	T	Chloroethane	0.343	0.351	0.331	0.342	2.96
7)	T	Trichlorofluoromethan	0.725	0.734	0.746	0.735	1.42
8)	T	Acrolein	0.034	0.036	0.036	0.035	2.18
9)	MC	1,1-Dichloroethene	0.327	0.316	0.367	0.336	7.94
10)	T	Acetone	0.132	0.158	0.124	0.138	12.82
11)	T	Carbon Disulfide	1.182	1.206	1.325	1.238	6.19
12)	T	Vinyl Acetate	1.661	1.488	1.471	1.540	6.83
13)	T	Methylene Chloride	0.475	0.524	0.488	0.496	5.12
14)	T	Acrylonitrile	0.125	0.125	0.125	0.125	0.07
15)	T	t-Butyl Alcohol(TBA)	0.045	0.048	0.045	0.046	3.21
16)	T	trans-1,2-Dichloroeth	0.443	0.413	0.481	0.446	7.60
17)	T	Methyl-t-Butyl Ether(	1.503	1.499	1.509	1.504	0.35
18)	P	1,1-Dichloroethane	1.092	1.056	1.120	1.089	2.96
19)	T	Diisopropyl Ether(DIP	2.067	1.877	2.033	1.992	5.08
20)	T	cis-1,2-Dichloroethen	0.484	0.455	0.520	0.486	6.67
21)	T	2,2-Dichloropropane	0.656	0.650	0.754	0.687	8.49
22)	T	2-Butanone(MEK)	0.221	0.208	0.205	0.211	4.13
23)	T	Bromochloromethane	0.219	0.218	0.211	0.216	2.21
24)	T	Tetrahydrofuran	0.003	0.005	0.003	0.004	27.38
25)	C	Chloroform	1.048	1.048	1.049	1.048	0.06
26)	T	1,1,1-Trichloroethane	0.796	0.768	0.897	0.820	8.29
27)	T	Carbon Tetrachloride	0.651	0.638	0.755	0.681	9.41
28)	T	1,1-Dichloropropene	0.639	0.592	0.747	0.659	11.99
29)	T	1,2-Dichloroethane(ED	1.025	1.045	0.988	1.020	2.83
30)	S	1,2-Dichloroethane-d4	0.821	0.873	0.823	0.839	3.52
31)	I	1,4-Difluorobenzene	----------ISTD----------				
32)	M	Benzene	1.557	1.512	1.498	1.522	2.02
33)	M	Trichloroethene	0.360	0.354	0.400	0.372	6.75
34)	C	1,2-Dichloropropane	0.472	0.457	0.444	0.457	3.05
35)	T	Dibromomethane	0.226	0.220	0.214	0.220	2.68
36)	T	1,4-Dioxane	0.003	0.003	0.003	0.003	1.81
37)	T	Bromodichloromethane	0.584	0.559	0.585	0.576	2.55
38)	T	2-Chloroethylvinyl Et	0.201	0.151	0.235	0.196	21.68
39)	T	cis-1,3-Dichloroprope	0.675	0.582	0.713	0.657	10.29
40)	T	4-Methyl-2-pentanone(	0.291	0.225	0.316	0.277	17.02
41)	S	Toluene-d8	1.367	1.341	1.386	1.365	1.64
42)	MC	Toluene	0.973	0.921	0.981	0.959	3.43
43)	T	trans-1,3-Dichloropro	0.631	0.546	0.688	0.622	11.49
44)	T	1,1,2-Trichloroethane	0.264	0.250	0.259	0.258	2.74
45)	T	Tetrachloroethene	0.333	0.310	0.349	0.331	5.88
46)	T	1,3-Dichloropropane	0.637	0.585	0.614	0.612	4.22
47)	T	2-Hexanone	0.202	0.146	0.234	0.194	22.83
48)	T	Dibromochloromethane	0.328	0.295	0.356	0.326	9.37

49)	T	1,2-Dibromoethane(EDB	0.289	0.263	0.299	0.284	6.52
50)	I	Chlorobenzene-d5	----------ISTD----------				
51)	MP	Chlorobenzene	1.260	1.234	1.189	1.227	2.92
52)	T	1,1,1,2-Tetrachloroet	0.465	0.454	0.453	0.457	1.45
53)	C	Ethylbenzene	2.348	2.085	2.395	2.276	7.34
54)	T	m,p-Xylene	0.858	0.809	0.839	0.835	2.94
55)	T	o-Xylene	0.852	0.733	0.831	0.805	7.91
56)	T	Styrene	1.450	1.282	1.420	1.384	6.48
57)	P	Bromoform	0.222	0.203	0.240	0.222	8.39
58)	T	Isopropylbenzene	2.034	1.620	2.276	1.977	16.77
59)	S	Bromofluorobenzene	0.706	0.713	0.731	0.717	1.83
60)	P	1,1,2,2-Tetrachloroet	0.445	0.428	0.425	0.433	2.49
61)	T	Bromobenzene	0.527	0.500	0.510	0.512	2.67
62)	T	1,2,3-Trichloropropan	0.526	0.517	0.503	0.515	2.33
63)	T	n-Propylbenzene	2.816	2.440	2.997	2.751	10.33
64)	T	2-Chlorotoluene	1.870	1.724	1.916	1.837	5.44
65)	T	1,3,5-Trimethylbenzen	2.091	1.863	2.207	2.054	8.54
66)	T	4-Chlorotoluene	2.310	2.227	2.328	2.288	2.37
67)	T	tert-Butylbenzene	1.569	1.305	1.777	1.551	15.26
68)	T	1,2,4-Trimethylbenzen	2.249	2.047	2.311	2.202	6.27
69)	T	sec-Butylbenzene	2.278	1.945	2.598	2.274	14.36
70)	T	1,3-Dichlorobenzene	1.074	1.024	1.062	1.053	2.46
71)	T	4-Isopropyltoluene	2.014	1.767	2.231	2.004	11.58
72)	T	1,4-Dichlorobenzene	1.096	1.055	1.122	1.091	3.08
73)	T	n-Butylbenzene	1.945	1.585	2.274	1.935	17.81
74)	T	1,2-Dichlorobenzene	1.023	1.026	1.011	1.020	0.80
75)	T	1,2-Dibromo-3-chlorop	0.079	0.069	0.091	0.080	13.93
76)	T	1,2,4-Trichlorobenzen	0.540	0.417	0.681	0.546	24.22
77)	T	Hexachlorobutadiene	0.349	0.380	0.407	0.379	7.67
78)	T	Naphthalene	0.810	0.589	1.129	0.843	32.24
79)	T	1,2,3-Trichlorobenzen	0.445	0.426	0.553	0.474	14.52
80)	T	Ethane,1,1,2-trichlor	0.263	0.252	0.305	0.273	10.21
81)	T	Methyl Acetate	0.267	0.289	0.227	0.261	12.10
82)	T	Cyclohexane	0.365	0.376	0.428	0.390	8.68
83)	T	Methyl Cyclohexane	0.539	0.440	0.632	0.537	17.85

(#) = Out of Range

EA040601.M Fri Apr 06 12:28:15 2001 MSD_E2

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\04-09-01\E8069.D
Acq On : 9 Apr 2001 5:12 pm
Sample : 20-PPB-STD,20-PPB-STD,A,5mL,100
Misc : NA,NA,NA
Integration Params: LSCINT.P

Vial: 4
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Fri Apr 06 12:20:34 2001
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	80	0.00
2	T	Dichlorodifluoromethane	0.357	0.312	12.6	74	0.00
3	P	Chloromethane	0.649	0.724	-11.6	91	0.00
4	C	Vinyl Chloride	0.559	0.657	-17.5	102	0.00
5	T	Bromomethane	0.338	0.348	-3.0	83	0.00
6	T	Chloroethane	0.342	0.362	-5.8	85	0.00
7	T	Trichlorofluoromethane	0.735	0.879	-19.6	97	0.00
8	T	Acrolein	0.035	0.034	2.9	80	0.00
9	MC	1,1-Dichloroethene	0.336	0.399	-18.8	98	0.00
10	T	Acetone	0.138	0.170	-23.2	104	0.00
11	T	Carbon Disulfide	1.238	1.577	-27.4	107	0.00
12	T	Vinyl Acetate	1.540	1.551	-0.7	75	0.00
13	T	Methylene Chloride	0.496	0.597	-20.4	101	0.00
[illegible]	T	Acrylonitrile	0.125	0.148	-18.4	96	0.00
[illegible]	T	t-Butyl Alcohol(TBA)	0.046	0.058	-26.1	104	0.00
16	T	trans-1,2-Dichloroethene	0.446	0.560	-25.6	101	0.00
17	T	Methyl-t-Butyl Ether(MTBE)	1.504	1.894	-25.9	101	0.00
18	P	1,1-Dichloroethane	1.089	1.337	-22.8	98	0.00
19	T	Diisopropyl Ether(DIPE)	1.992	2.271	-14.0	88	0.00
20	T	cis-1,2-Dichloroethene	0.486	0.567	-16.7	94	0.00
21	T	2,2-Dichloropropane	0.687	0.852	-24.0	104	0.00
22	T	2-Butanone(MEK)	0.211	0.245	-16.1	89	0.00
23	T	Bromochloromethane	0.216	0.248	-14.8	91	0.00
25	C	Chloroform	1.048	1.269	-21.1	97	0.00
26	T	1,1,1-Trichloroethane	0.820	1.017	-24.0	103	0.00
27	T	Carbon Tetrachloride	0.681	0.849	-24.7	105	0.00
28	T	1,1-Dichloropropene	0.659	0.816	-23.8	102	0.00
29	T	1,2-Dichloroethane(EDC)	1.020	1.271	-24.6	99	0.00
30	S	1,2-Dichloroethane-d4	0.839	0.933	-11.2	91	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	82	0.00
32	M	Benzene	1.522	1.799	-18.2	94	0.00
33	M	Trichloroethene	0.372	0.485	-30.4	110	0.00
34	C	1,2-Dichloropropane	0.457	0.531	-16.2	92	0.00
35	T	Dibromomethane	0.220	0.263	-19.5	95	0.00
36	T	1,4-Dioxane	0.003	0.003	0.0	80	0.00
37	T	Bromodichloromethane	0.576	0.685	-18.9	96	0.00
38	T	2-Chloroethylvinyl Ether	0.196	0.236	-20.4	96	0.00
39	T	cis-1,3-Dichloropropene	0.657	0.781	-18.9	95	0.00
[illegible]	T	4-Methyl-2-pentanone(MIBK)	0.277	0.325	-17.3	92	0.00
[illegible]	S	Toluene-d8	1.365	1.394	-2.1	83	0.00
42	MC	Toluene	0.959	1.131	-17.9	95	0.00
43	T	trans-1,3-Dichloropropene	0.622	0.750	-20.6	97	0.00
44	T	1,1,2-Trichloroethane	0.258	0.300	-16.3	93	0.00
45	T	Tetrachloroethene	0.331	0.404	-22.1	99	0.00

008028

4206

6 T	1,3-Dichloropropane	0.612	0.735	-20.1	94	0.00
7 T	2-Hexanone	0.194	0.234	-20.6	95	0.00
8 T	Dibromochloromethane	0.326	0.389	-19.3	97	0.00
9 T	1,2-Dibromoethane(EDB)	0.284	0.329	-15.8	93	0.00
[redacted]	Chlorobenzene-d5	1.000	1.000	0.0	83	0.00
MP	Chlorobenzene	1.227	1.422	-15.9	93	0.00
T	1,1,1,2-Tetrachloroethane	0.457	0.536	-17.3	95	0.00
53 C	Ethylbenzene	2.276	2.840	-24.8	100	0.00
54 T	m,p-Xylene	0.835	1.018	-21.9	98	0.00
55 T	o-Xylene	0.805	0.992	-23.2	96	0.00
56 T	Styrene	1.384	1.682	-21.5	96	0.00
57 P	Bromoform	0.222	0.264	-18.9	98	0.00
58 T	Isopropylbenzene	1.977	2.540	-28.5	103	0.00
59 S	Bromofluorobenzene	0.717	0.750	-4.6	88	0.00
60 P	1,1,2,2-Tetrachloroethane	0.433	0.446	-3.0	83	0.00
61 T	Bromobenzene	0.512	0.613	-19.7	96	0.00
62 T	1,2,3-Trichloropropane	0.515	0.626	-21.6	98	0.00
63 T	n-Propylbenzene	2.751	3.460	-25.8	101	0.00
64 T	2-Chlorotoluene	1.837	2.258	-22.9	100	0.00
65 T	1,3,5-Trimethylbenzene	2.054	2.591	-26.1	102	0.00
66 T	4-Chlorotoluene	2.288	2.799	-22.3	100	0.00
67 T	tert-Butylbenzene	1.551	1.967	-26.8	103	0.00
68 T	1,2,4-Trimethylbenzene	2.202	2.719	-23.5	100	0.00
69 T	sec-Butylbenzene	2.274	2.926	-28.7	106	0.00
70 T	1,3-Dichlorobenzene	1.053	1.258	-19.5	97	0.00
71 T	4-Isopropyltoluene	2.004	2.585	-29.0	106	0.00
72 T	1,4-Dichlorobenzene	1.091	1.286	-17.9	97	0.00
73 T	n-Butylbenzene	1.935	2.520	-30.2	107	0.00
74 T	1,2-Dichlorobenzene	1.020	1.202	-17.8	97	0.00
75 T	1,2-Dibromo-3-chloropropane	0.080	0.102	-27.5	106	0.00
[redacted] T	1,2,4-Trichlorobenzene	0.546	0.671	-22.9	102	0.00
[redacted] T	Hexachlorobutadiene	0.379	0.464	-22.4	110	0.00
78 T	Naphthalene	0.843	1.045	-24.0	106	0.00
79 T	1,2,3-Trichlorobenzene	0.474	0.551	-16.2	102	0.00
80 T	Ethane,1,1,2-trichloro-1,2,	0.273	0.317	-16.1	99	0.00
81 T	Methyl Acetate	0.261	0.301	-15.3	93	0.00
82 T	Cyclohexane	0.390	0.453	-16.2	102	0.00
83 T	Methyl Cyclohexane	0.537	0.646	-20.3	99	0.00

(#) = Out of Range
E8032.D EA040601.M Mon Apr 09 17:35:44 2001 MSD_E2

1787

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/09/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	AQUEOUS	E8074.D	116	93	88
2114-003	AQUEOUS	E8075.D	116	94	89
2166-001MS	AQUEOUS	E8076.D	108	102	105
2166-001MSD	AQUEOUS	E8077.D	104	100	102
TCLPMS	AQUEOUS	E8078.D	102	100	102
2181-001	AQUEOUS	E8081.D	111	94	88
2181-002	AQUEOUS	E8082.D	114	93	88
2181-003	AQUEOUS	E8083.D	114	93	88
2194-001	AQUEOUS	E8084.D	114	94	90
2194-002	AQUEOUS	E8085.D	114	94	89
2168-001	AQUEOUS	E8086.D	113	94	97
METHOD-BLK	AQUEOUS	E8089.D	92	92	83
2161-001	AQUEOUS	E8090.D	98	91	89
2161-003	AQUEOUS	E8091.D	103	91	89
2166-001	AQUEOUS	E8092.D	111	93	89
2207-001	AQUEOUS	E8093.D	114	93	89
2144-001	AQUEOUS	E8094.D	115	92	91
2145-001	AQUEOUS	E8095.D	113	94	95
2156-001	AQUEOUS	E8097.D	109	93	90
2157-001	AQUEOUS	E8098.D	109	93	90
2124-001	AQUEOUS	E8099.D	104	93	89
2133-002	AQUEOUS	E8100.D	114	93	98
2133-004	AQUEOUS	E8101.D	112	92	89
2133-006	AQUEOUS	E8102.D	114	90	88

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	83-142
SMC2 = Toluene-d8	30 ppb	82-109
SMC3 = Bromofluorobenzene	30 ppb	80-115

Column to be used to flag recovery values

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/09/2001

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
2133-008	AQUEOUS	E8103.D	106	95	98
2133-009	AQUEOUS	E8104.D	112	94	90
2133-010	AQUEOUS	E8105.D	113	93	91
2112-007	AQUEOUS	E8106.D	112	95	100
2112-008	AQUEOUS	E8107.D	112	94	90
2153-001	AQUEOUS	E8108.D	117	92	90
2207-001MS	AQUEOUS	E8109.D	110	101	106
2207-001MSD	AQUEOUS	E8110.D	108	101	106

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	83-142
SMC2 = Toluene-d8	30 ppb	82-109
SMC3 = Bromofluorobenzene	30 ppb	80-115

Column to be used to flag recovery values

AQUEOUS VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 2166-001

Batch No.: EA0115

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.0	0.0	22.9	115	49 - 168
Benzene	20.0	0.0	21.3	107	58 - 145
Trichloroethene	20.0	0.0	26.0	130	50 - 158
Toluene	20.0	0.0	21.0	105	58 - 147
Chlorobenzene	20.0	0.0	21.2	106	58 - 145

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	0.0	21.6	108	6	20	49 - 168
Benzene	0.0	20.8	104	3	14	58 - 145
Trichloroethene	0.0	26.4	132	2	18	50 - 158
Toluene	0.0	20.6	103	2	15	58 - 147
Chlorobenzene	0.0	20.9	105	1	14	58 - 145

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __5__ outside limits

Spike Recovery: __0___ out of __10__ outside limits

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 2166-001MSD
Client ID: 2166-001MSD
Date Received: NA
Date Analyzed: 04/09/2001
Data file: E8077.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
Chloromethane	20.0	0.0	19.8	99	0.0	20.0	100
Vinyl Chloride	20.0	0.0	22.8	114	0.0	24.5	123
Bromomethane	20.0	0.0	18.2	91	0.0	17.9	90
Chloroethane	20.0	0.0	18.9	95	0.0	19.8	99
Trichlorofluoromethane	20.0	0.0	22.5	112	0.0	21.0	105
Acrolein	20.0	0.0	239.0	1195	0.0	241.0	1205
1,1-Dichloroethene	20.0	0.0	22.9	115	0.0	21.6	108
Methylene Chloride	20.0	0.0	21.7	109	0.0	20.1	101
Acrylonitrile	20.0	0.0	229.8	1149	0.0	227.0	1135
trans-1,2-Dichloroethene	20.0	0.0	20.8	104	0.0	21.3	107
1,1-Dichloroethane	20.0	0.0	21.1	106	0.0	20.0	100
Chloroform	20.0	0.0	22.3	112	0.0	21.5	107
1,1,1-Trichloroethane	20.0	0.0	23.6	118	0.0	22.9	114
Carbon Tetrachloride	20.0	0.0	23.3	116	0.0	23.1	116
1,2-Dichloroethane(EDC)	20.0	0.0	23.0	115	0.0	21.7	108
Benzene	20.0	0.0	21.3	107	0.0	20.8	104
Trichloroethene	20.0	0.0	26.0	130	0.0	26.4	132
1,2-Dichloropropane	20.0	0.0	21.5	107	0.0	20.8	104
Bromodichloromethane	20.0	0.0	22.1	110	0.0	21.3	107
2-Chloroethylvinyl Ether	20.0	0.0	19.9	99	0.0	19.6	98
cis-1,3-Dichloropropene	20.0	0.0	20.9	105	0.0	21.0	105
Toluene	20.0	0.0	21.0	105	0.0	20.6	103
trans-1,3-Dichloropropene	20.0	0.0	21.5	108	0.0	21.5	108
1,1,2-Trichloroethane	20.0	0.0	21.9	110	0.0	21.4	107
Tetrachloroethene	20.0	0.0	22.2	111	0.0	21.6	108
Dibromochloromethane	20.0	0.0	21.3	107	0.0	21.3	107
Chlorobenzene	20.0	0.0	21.2	106	0.0	20.9	104
Ethylbenzene	20.0	0.0	22.4	112	0.0	22.1	110
total-Xylenes	60.0	0.0	66.1	110	0.0	64.9	108
Bromoform	20.0	0.0	20.9	105	0.0	21.2	106
1,1,2,2-Tetrachloroethane	20.0	0.0	17.1	85	0.0	16.4	82
1,3-Dichlorobenzene	20.0	0.0	21.9	109	0.0	21.3	106
1,4-Dichlorobenzene	20.0	0.0	21.9	110	0.0	21.1	105
1,2-Dichlorobenzene	20.0	0.0	21.5	107	0.0	21.0	105

000033

4791

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): E8032.D

Date Analyzed: 04/06/2001

Instrument ID: MSD_E

Time Analyzed: 12:09

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	273232	6.58	378703	7.41	314863	10.76
	UPPER LIMIT	546464	7.08	757406	7.91	629726	11.26
	LOWER LIMIT	136616	6.08	189351.5	6.91	157431.5	10.26
	LAB SAMPLE ID						
01	5-PPB-STD	257271	6.58	364157	7.42	295915	10.76
02	100-PPB-STD	271041	6.58	391949	7.41	336819	10.76
03	METHOD-BLK	247403	6.58	357361	7.42	283600	10.76
04	2097-001DIL	263622	6.59	353078	7.42	279401	10.77
05	2114-001MS	253723	6.59	353898	7.41	291399	10.76
06	2114-001MSD	260909	6.58	371284	7.42	305305	10.76
07	TCLPMS	260537	6.58	363042	7.42	298973	10.76
08	2108-001	270876	6.59	370642	7.41	286443	10.76
09	2108-003	241386	6.58	347100	7.42	272323	10.76
10	2108-002	248752	6.58	348315	7.42	272818	10.76
11	2114-001	237791	6.58	344603	7.42	269554	10.76
12	2114-002	232243	6.58	334066	7.42	260437	10.76
13	2114-003	222152	6.59	324353	7.41	252745	10.77
14	2114-004	225626	6.59	326808	7.41	258196	10.76
15	2115-001	222582	6.59	324480	7.41	254922	10.76
16	2115-002	220090	6.59	321499	7.41	252151	10.76
17	2115-003	214291	6.59	313971	7.41	246775	10.76
18	2115-004	216956	6.59	318015	7.41	249522	10.77
19	2115-005	213950	6.58	312317	7.42	248034	10.76
20	2115-006	211415	6.59	311851	7.42	245394	10.76
21	2115-007	211451	6.59	317674	7.41	248429	10.77
22	2115-008	211119	6.59	314246	7.41	245983	10.76

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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 File ID (Standard): E8069.D

Date Analyzed: 04/09/2001

Instrument ID: MSD_E

Time Analyzed: 5:12

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	219251	6.58	309453	7.41	259805	10.76
	UPPER LIMIT	438502	7.08	618906	7.91	519610	11.26
	LOWER LIMIT	109625.5	6.08	154726.5	6.91	129902.5	10.26
	LAB SAMPLE ID						
01	METHOD-BLK	217895	6.59	319622	7.42	249470	10.77
02	2114-003	202761	6.59	299250	7.42	242104	10.77
03	2166-001MS	218599	6.59	309575	7.42	260348	10.77
04	2166-001MSD	233671	6.59	327723	7.42	271863	10.77
05	TCLPMS	253005	6.59	350223	7.41	287608	10.77
06	2181-001	208351	6.59	298346	7.42	246019	10.77
07	2181-002	207793	6.59	300249	7.42	244824	10.77
08	2181-003	205510	6.59	298010	7.42	244328	10.77
09	2194-001	208452	6.59	300887	7.42	238922	10.77
10	2194-002	202502	6.59	293053	7.42	244295	10.76
11	2168-001	208124	6.59	299306	7.42	238607	10.77
12	METHOD-BLK	317658	6.59	461194	7.42	370914	10.76
13	2161-001	280449	6.59	412628	7.42	326178	10.77
14	2161-003	251329	6.59	366182	7.42	280466	10.76
15	2166-001	227480	6.59	327644	7.42	256089	10.77
16	2207-001	211689	6.59	308827	7.42	242659	10.77
17	2144-001	205897	6.59	299047	7.42	235636	10.77
18	2145-001	206444	6.59	296359	7.42	240765	10.77
19	2156-001	220792	6.59	312709	7.41	243982	10.77
20	2157-001	216430	6.59	305245	7.42	239918	10.77
21	2124-001	227695	6.58	301935	7.42	235633	10.76
22	2133-002	202614	6.59	297632	7.41	232476	10.77

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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 File ID (Standard): E8069.D

Date Analyzed: 04/09/2001

Instrument ID: MSD_E

ime Analyzed: 5:12

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	219251	6.58	309453	7.41	259805	10.76
	UPPER LIMIT	438502	7.08	618906	7.91	519610	11.26
	LOWER LIMIT	109625.5	6.08	154726.5	6.91	129902.5	10.26
	LAB SAMPLE ID						
23	2133-004	206883	6.59	297623	7.42	236736	10.76
24	2133-006	213944	6.59	309916	7.41	241868	10.77
25	2133-008	219457	6.59	305299	7.42	237132	10.76
26	2133-009	210098	6.59	299819	7.42	235534	10.77
27	2133-010	209056	6.59	297752	7.41	234261	10.76
28	2112-007	206152	6.59	298969	7.42	236373	10.76
29	2112-008	209398	6.59	301883	7.41	236835	10.77
30	2153-001	199139	6.59	297851	7.41	230659	10.77
31	2207-001MS	213650	6.59	299969	7.42	248419	10.76
32	2207-001MSD	215753	6.59	303836	7.42	251964	10.76
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-09-01\E8108.D Vial: 39
Acq On : 10 Apr 2001 9:51 am Operator: AMY
Sample : TW-1,2153-001,A,0.25mL,100 Inst : MSD_E2
Misc : ENVTACT/ORBIS,04/04/01,04/04/01 Multiplr: 1.00
IS Integration Params: LSCINT.P
Quant Time: Apr 10 10:13 2001 Quant Results File: EA040601.RES

Quant Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Fri Apr 06 12:20:34 2001
Response via : Initial Calibration
DataAcq Meth : EA032601

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.59	168	199139	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.41	114	297851	30.00	UG	0.00
50) Chlorobenzene-d5	10.77	117	230659	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.93	65	194998	35.02	UG	0.01
Spiked Amount 30.000	Range 90 - 142		Recovery = 116.73%			
41) Toluene-d8	9.09	98	374782	27.66	UG	0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 92.20%			
59) Bromofluorobenzene	12.17	95	149397	27.11	UG	0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 90.37%			
Target Compounds						Qvalue
32) Benzene	7.00	78	352131	23.30	UG	100

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

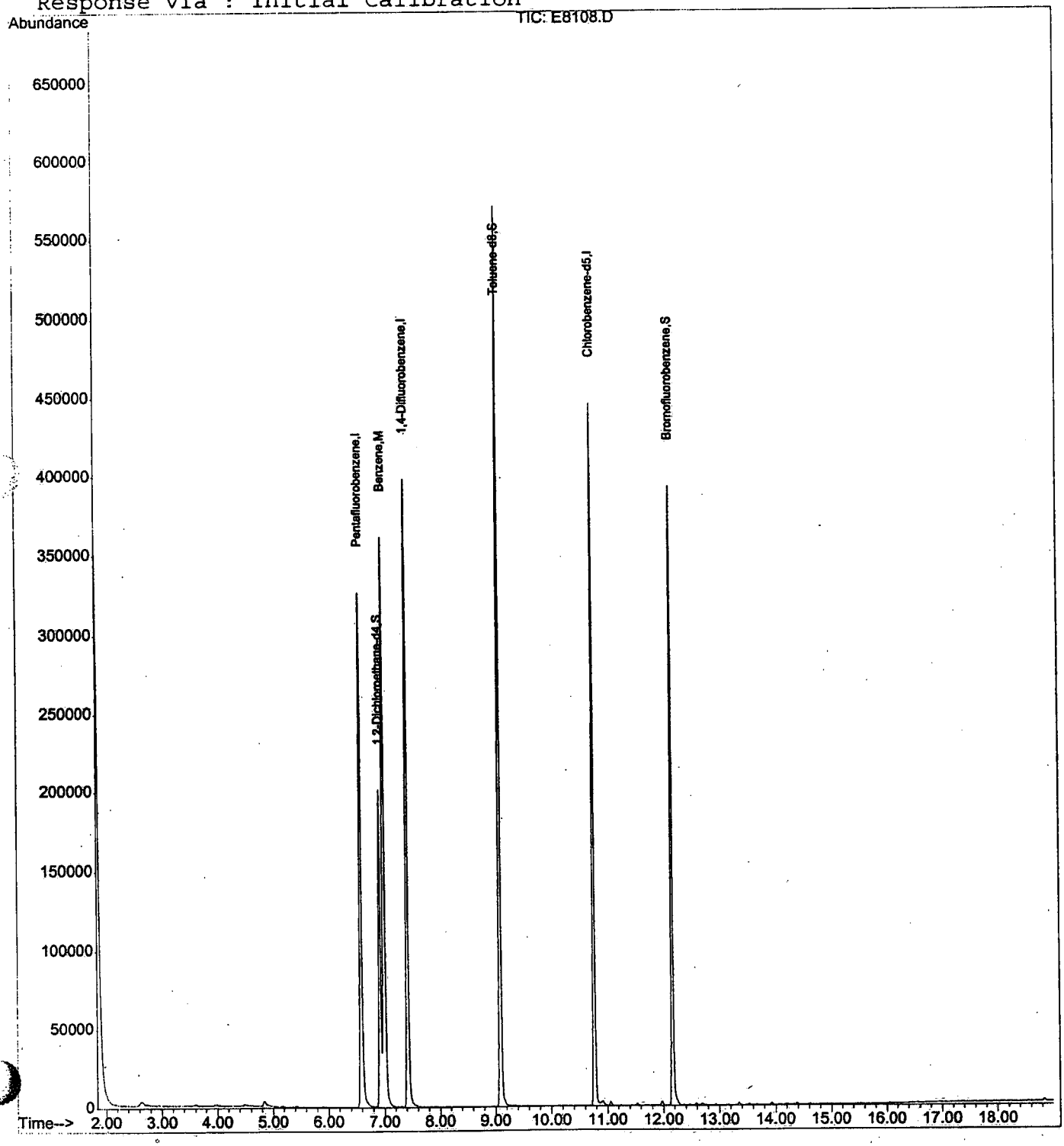
Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-09-01\E8108.D
Acq On : 10 Apr 2001 9:51 am
Sample : TW-1,2153-001,A,0.25mL,100
Misc : ENVTACT/ORBIS,04/04/01,04/04/01
MS Integration Params: LSCINT.P
Quant Time: Apr 10 10:13 2001

Vial: 39
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA040601.RES

Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Fri Apr 06 12:20:34 2001
Response via : Initial Calibration



000038

4296

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-09-01\E8108.D
Acq On : 10 Apr 2001 9:51 am
Sample : TW-1,2153-001,A,0.25mL,100
Misc : ENVTACT/ORBIS,04/04/01,04/04/01
Integration Params: LSCINT.P

Vial: 39
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.835	564	573	586	rBV4	3468	12766	1.13%	0.227%
2	6.587	896	908	946	rBV	326607	752108	66.77%	13.369%
3	6.927	961	973	980	rBV	201099	455546	40.44%	8.098%
4	7.000	980	987	1018	rVB	360983	846084	75.12%	15.040%
5	7.413	1056	1066	1091	rBV	398117	864629	76.76%	15.370%
6	9.087	1376	1386	1414	rBV	570930	1126351	100.00%	20.022%
7	10.766	1695	1707	1724	rBV	445866	847913	75.28%	15.073%
8	12.167	1965	1975	2001	rBV	392963	720157	63.94%	12.802%

Sum of corrected areas: 5625554

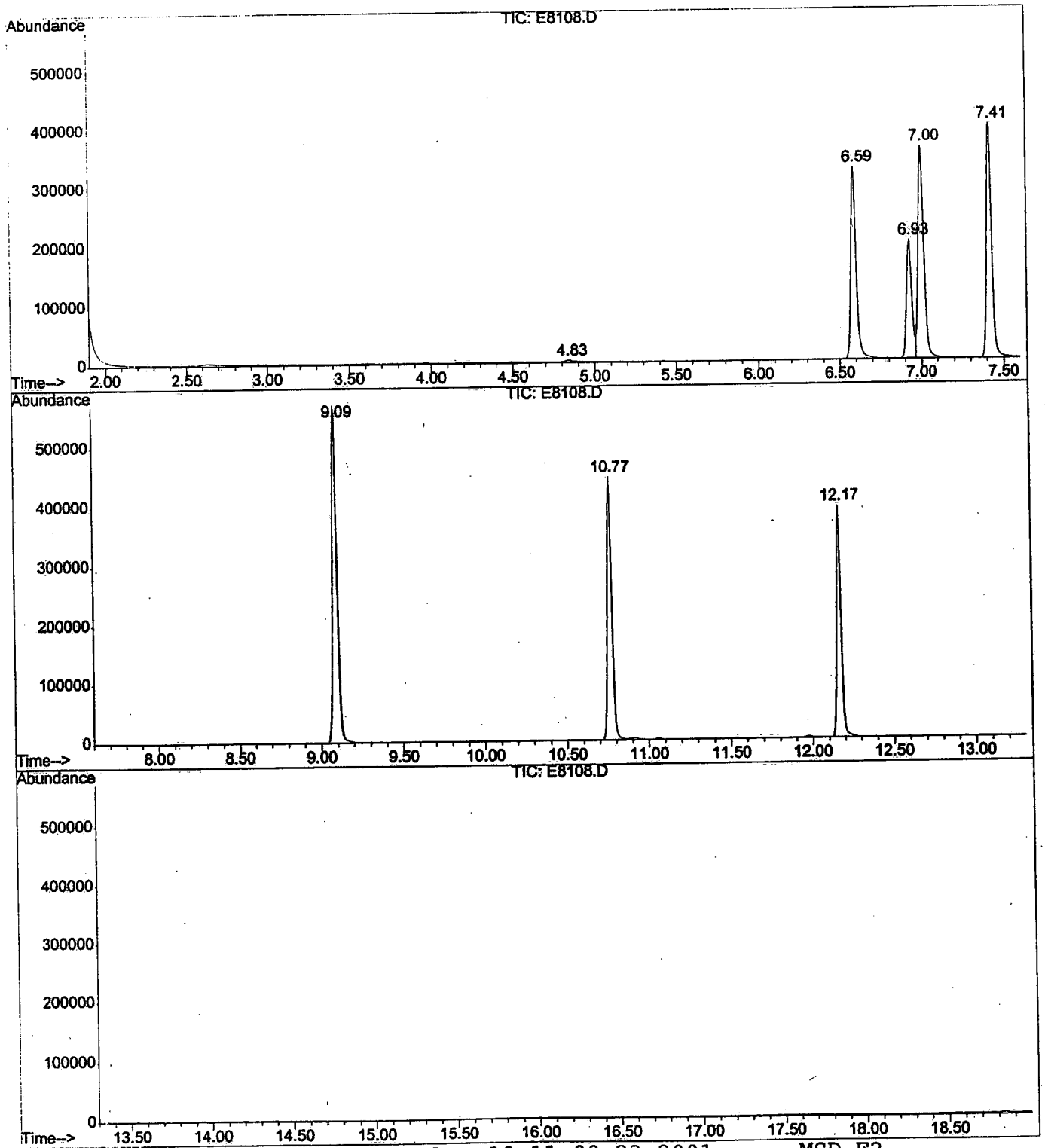
E8108.D EA040601.M Tue Apr 10 11:08:22 2001 MSD_E2

000039

41797

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-09-01\E8108.D
Operator : AMY
Acquired : 10 Apr 2001 9:51 am using AcqMethod EA032601
Instrument : MSD_E2
Sample Name: TW-1,2153-001,A,0.25mL,100
Misc Info : ENVTACT/ORBIS,04/04/01,04/04/01
Vial Number: 39
Quant File :EA040601.RES (RTE Integrator)



E8108.D EA040601.M Tue Apr 10 11:08:23 2001 MSD_E2

000040

42948

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-09-01\E8074.D Vial: 5
Acq On : 9 Apr 2001 7:49 pm Operator: AMY
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100 Inst : MSD_E2
Misc : NA,NA,NA Multiplr: 1.00
Integration Params: LSCINT.P
Quant Time: Apr 10 9:04 2001 Quant Results File: EA040601.RES

Quant Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Fri Apr 06 12:20:34 2001
Response via : Initial Calibration
DataAcq Meth : EA032601

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.59	168	217895	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.42	114	319622	30.00	UG	0.01
50) Chlorobenzene-d5	10.77	117	249470	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.93	65	211411	34.70	UG	0.01
Spiked Amount 30.000	Range 90 - 142		Recovery = 115.67%			
41) Toluene-d8	9.09	98	407364	28.02	UG	0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 93.40%			
59) Bromofluorobenzene	12.17	95	156923	26.33	UG	0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 87.77%			

Target Compounds Qvalue

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

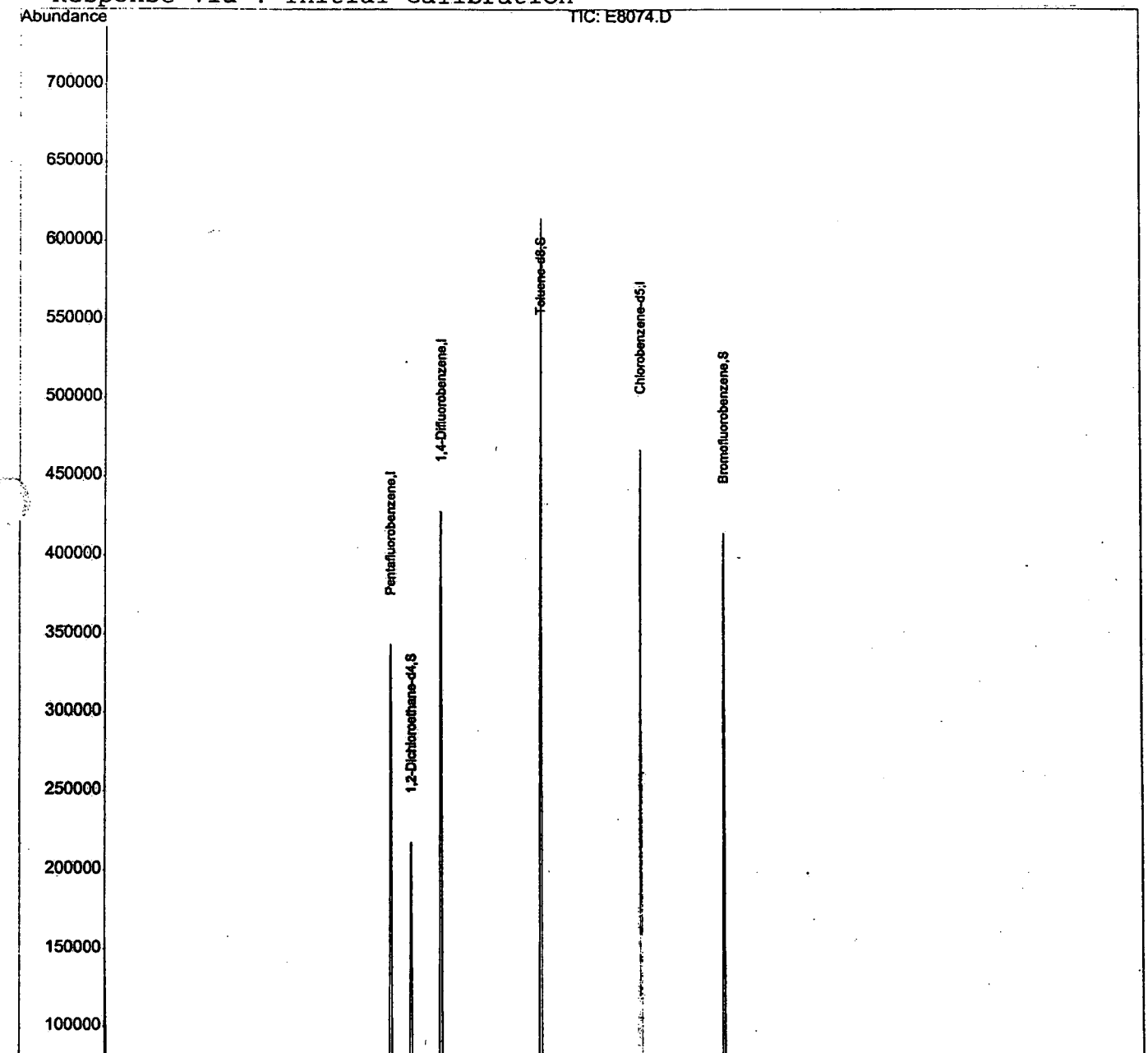
000041

4/299

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-09-01\E8074.D Vial: 5
Acq On : 9 Apr 2001 7:49 pm Operator: AMY
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100 Inst : MSD_E2
Misc : NA,NA,NA Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Apr 10 9:04 2001 Quant Results File: EA040601.RES

Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Fri Apr 06 12:20:34 2001
Response via : Initial Calibration



4300

000042

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-09-01\E8074.D Vial: 5
Acq On : 9 Apr 2001 7:49 pm Operator: AMY
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100 Inst : MSD_E2
Misc : NA,NA,NA Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\EA040601.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

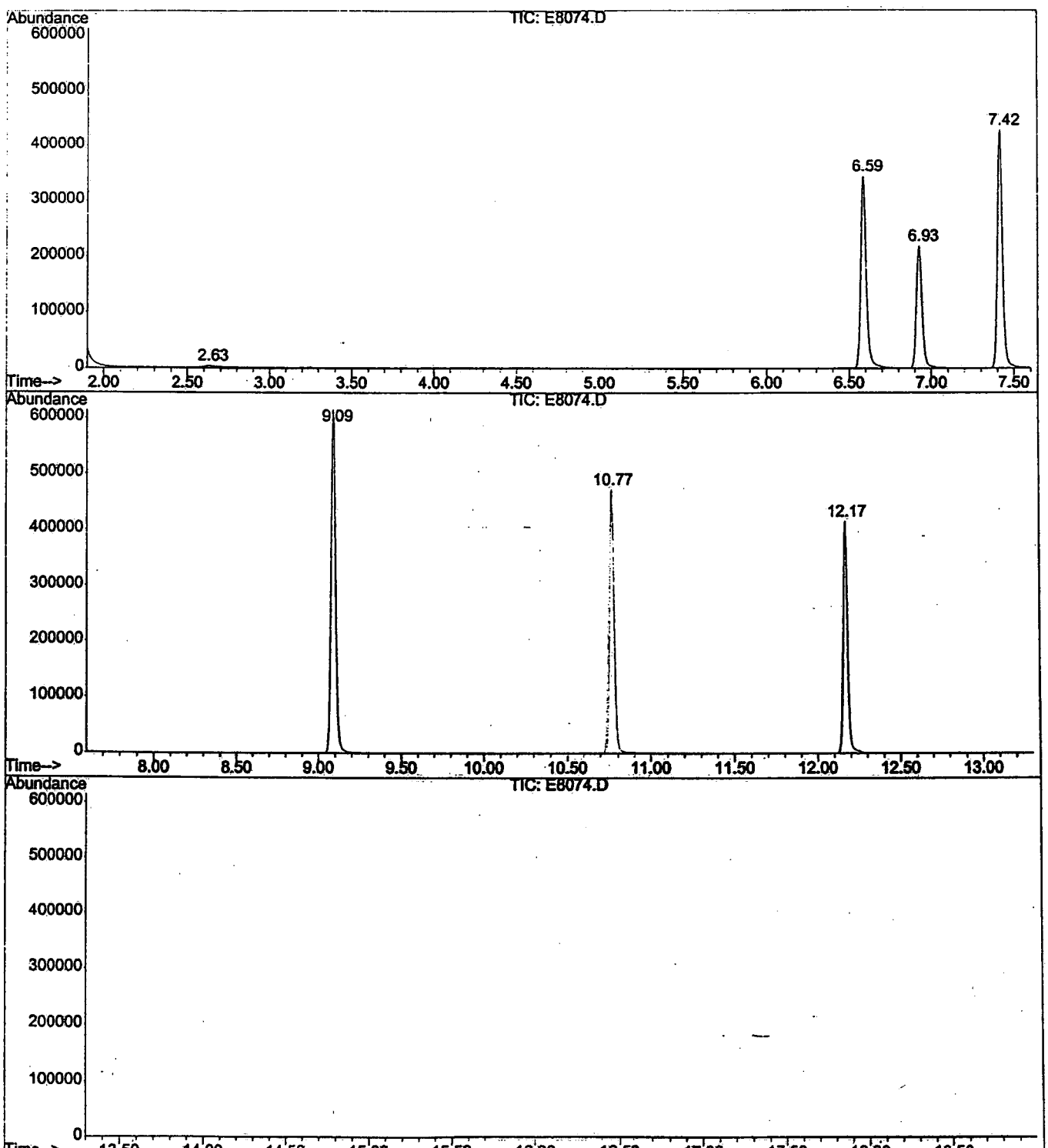
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.628	139	151	163	rBV	3551	15144	1.24%	0.295%
2	6.587	896	908	942	rBV	344536	802496	65.88%	15.626%
3	6.927	962	973	997	rBV	217978	508687	41.76%	9.905%
4	7.419	1055	1067	1092	rBV	428551	924565	75.90%	18.002%
5	9.087	1372	1386	1414	rBV	614857	1218200	100.00%	23.720%
6	10.766	1693	1707	1726	rBV	471890	907803	74.52%	17.676%
7	12.168	1965	1975	2002	rBV	415206	758882	62.30%	14.776%

Sum of corrected areas: 5135777

E8074.D EA040601.M Tue Apr 10 09:04:42 2001 MSD_E2

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-09-01\E8074.D
Operator : AMY
Acquired : 9 Apr 2001 7:49 pm using AcqMethod EA032601
Instrument : MSD_E2
Sample Name: METHOD-BLK,METHOD-BLK,A,5mL,100
Misc Info : NA,NA,NA
Vial Number: 5
Quant File :EA040601.RES (RTE Integrator)



E8074.D EA040601.M Tue Apr 10 09:04:43 2001 MSD_E2

000044

43607

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C9153.D DFTPP Injection Date : 04/05/2001

Inst ID: MSDC DFTPP Injection Time: 12:18

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	47.7			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	37.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	40.3			
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	8.5			
275	10.0 - 30.0% of mass 198	25.6			
365	Greater than 1.0% of mass 198	3.6			
441	Present, but less than mass 443	13.60	(	79.7	)3
442	40.0 - 100.0% of mass 198	80.9			
443	17.0 - 23.0% of mass 442	17.1	(	21.1	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C9154.D	04/05/2001	14:16
.	5-PPB-INJ-FOR-0	C9155.D	04/05/2001	14:41
.	80-PPB-INJ-FOR-	C9156.D	04/05/2001	15:06
.	10-PPB-INJ-FOR-	C9157.D	04/05/2001	15:31
.	50-PPB-INJ-FOR-	C9158.D	04/05/2001	15:56
.	Method-Blank	C9159.D	04/05/2001	16:43
.	DI-MS	C9160.D	04/05/2001	17:08
.	DI-MSD	C9161.D	04/05/2001	17:34
PS4-4-3A	2049-001	C9162.D	04/05/2001	17:59
FB1-4-3A	2049-003	C9163.D	04/05/2001	18:24
A1	2022-001	C9164.D	04/05/2001	18:50
INF-30	2025-001	C9165.D	04/05/2001	19:15
EFF-30	2025-002	C9166.D	04/05/2001	19:41
MW-1	2031-001	C9167.D	04/05/2001	20:06
MW-2	2031-002	C9168.D	04/05/2001	20:31
MW-3	2031-003	C9169.D	04/05/2001	20:57
MW-4	2031-004	C9170.D	04/05/2001	21:22
MW-5	2031-005	C9171.D	04/05/2001	21:47
MW-1B	2033-001	C9172.D	04/05/2001	22:12
FIELD-BLANK	2033-002	C9173.D	04/05/2001	22:37
A2	2023-001	C9174.D	04/05/2001	23:03
.	Method-Blank	C9175.D	04/05/2001	23:28
.	DI-MS	C9176.D	04/05/2001	23:53

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C9153.D

DFTPP Injection Date : 04/05/2001

Inst ID: MSDC

DFTPP Injection Time: 12:18

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	47.7			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	37.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	40.3			
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	8.5			
275	10.0 - 30.0% of mass 198	25.6			
365	Greater than 1.0% of mass 198	3.6			
441	Present, but less than mass 443	13.6	(	79.7	)3
442	40.0 - 100.0% of mass 198	80.9			
443	17.0 - 23.0% of mass 442	17.1	(	21.1	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
O.S.#1	2051-001	C9178.D	04/06/2001	00:43
FIELD-BLANK	2051-002	C9179.D	04/06/2001	01:08
KGW-2	2052-001	C9180.D	04/06/2001	01:33
FIELD-BLANK	2066-002	C9181.D	04/06/2001	01:58
K-01	2066-004	C9182.D	04/06/2001	02:23
K-02	2066-005	C9183.D	04/06/2001	02:48
FIELD-BLANK	2067-002	C9184.D	04/06/2001	03:13
PW-1	2067-003	C9185.D	04/06/2001	03:38
DW-1	2108-001	C9186.D	04/06/2001	04:03
WW-1	2108-002	C9187.D	04/06/2001	04:28
MHR-1	2108-003	C9188.D	04/06/2001	04:53
RW-1	2066-003	C9190.D	04/06/2001	06:31
	DI-MSD	C9191.D	04/06/2001	09:18
DETERGENT	2087-001	C9193.D	04/06/2001	10:21

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C9230.D

DFTPP Injection Date : 04/09/2001

Inst ID: MSDC

DFTPP Injection Time: 11:10

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	35.3			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	32.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	46.0			
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	7.0			
275	10.0 - 30.0% of mass 198	29.5			
365	Greater than 1.0% of mass 198	4.6			
441	Present, but less than mass 443	18.49	(	83.2	)3
442	40.0 - 100.0% of mass 198	96.6			
443	17.0 - 23.0% of mass 442	22.2	(	23.0	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C9231.D	04/09/2001	11:45
.	Method-Blank	C9232.D	04/09/2001	12:34
MW-15	2115-009	C9233.D	04/09/2001	13:31
.	Method-Blank	C9234.D	04/09/2001	13:56
.	DI-MS	C9235.D	04/09/2001	14:47
.	DI-MSD	C9236.D	04/09/2001	15:12
SUMP	2144-001	C9237.D	04/09/2001	15:39
SUMP	2145-001	C9238.D	04/09/2001	16:05
TW-1	2153-001	C9239.D	04/09/2001	16:30
BEFF040401	2124-001	C9240.D	04/09/2001	17:22
MW-1	2128-001	C9241.D	04/09/2001	17:48
FIELD	2128-002	C9242.D	04/09/2001	18:13
MW-4	2133-008	C9243.D	04/09/2001	18:39
FIELD	2133-010	C9244.D	04/09/2001	19:04
A2	2156-001	C9245.D	04/09/2001	19:29
A1	2157-001	C9246.D	04/09/2001	19:55

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C9234.D

Instrument ID: MSDA

Date Extracted: 04/09/01

Matrix: AQUEOUS

Date Analyzed: 04/09/2001

Time Analyzed: 13:56

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	DI-MS	04/09/2001	14:47
.	DI-MSD	04/09/2001	15:12
SUMP	2144-001	04/09/2001	15:39
SUMP	2145-001	04/09/2001	16:05
TW-1	2153-001	04/09/2001	16:30
BEFF040401	2124-001	04/09/2001	17:22
MW-1	2128-001	04/09/2001	17:48
FIELD	2128-002	04/09/2001	18:13
MW-4	2133-008	04/09/2001	18:39
FIELD	2133-010	04/09/2001	19:04
A2	2156-001	04/09/2001	19:29
A1	2157-001	04/09/2001	19:55

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: C9234.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.35
Phenol	ND		0.33
Aniline	ND		0.37
bis(2-Chloroethyl)ether	ND		0.36
2-Chlorophenol	ND		0.36
1,3-Dichlorobenzene	ND		0.37
1,4-Dichlorobenzene	ND		0.29
Benzyl alcohol	ND		0.46
1,2-Dichlorobenzene	ND		0.31
2-Methylphenol	ND		0.39
bis(2-chloroisopropyl)ether	ND		0.45
4-Methylphenol	ND		0.33
N-Nitroso-di-n-propylamine	ND		0.5
Hexachloroethane	ND		0.48
Nitrobenzene	ND		0.33
Isophorone	ND		0.1
2-Nitrophenol	ND		0.36
2,4-Dimethylphenol	ND		0.32
bis(2-Chloroethoxy)methane	ND		0.36
Benzoic acid	ND		0.49
2,4-Dichlorophenol	ND		0.48
1,2,4-Trichlorobenzene	ND		0.22
Naphthalene	ND		0.14
4-Chloroaniline	ND		0.9
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.25
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.47
2,4,6-Trichlorophenol	ND		0.64
2,4,5-Trichlorophenol	ND		0.51
2-Chloronaphthalene	ND		0.23
2-Nitroaniline	ND		0.33
Dimethylphthalate	ND		0.17
2,6-Dinitrotoluene	ND		0.36
Acenaphthylene	ND		0.15

000043

4307

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: C9234.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.52
Acenaphthene	ND		0.21
2,4-Dinitrophenol	ND		0.6
4-Nitrophenol	ND		0.87
2,4-Dinitrotoluene	ND		0.29
Dibenzofuran	ND		0.13
Diethylphthalate	ND		0.16
Fluorene	ND		0.18
4-Chlorophenyl-phenylether	ND		0.23
4-Nitroaniline	ND		0.66
4,6-Dinitro-2-methylphenol	ND		0.45
N-Nitrosodiphenylamine	ND		0.32
1,2-Diphenylhydrazine/Azobenzene	ND		0.31
4-Bromophenyl-phenylether	ND		0.31
Hexachlorobenzene	ND		0.29
Pentachlorophenol	ND		0.59
Phenanthrene	ND		0.26
Anthracene	ND		0.31
Carbazole	ND		0.21
Di-n-butylphthalate	ND		0.23
Fluoranthene	ND		0.18
Benzidine	ND		0.35
Pyrene	ND		0.16
3,3'-Dimethylbenzidine	ND		0.81
Butylbenzylphthalate	ND		0.41
3,3'-Dichlorobenzidine	ND		0.29
Benzo[a]anthracene	ND		0.15
Chrysene	ND		0.25
bis(2-Ethylhexyl)phthalate	ND		0.26
Di-n-octylphthalate	ND		0.19
Benzo[b]fluoranthene	ND		0.34
Benzo[k]fluoranthene	ND		0.25
Benzo[a]pyrene	ND		0.15
Indeno[1,2,3-cd]pyrene	ND		0.59
Dibenz[a,h]anthracene	ND		0.48
Benzo[g,h,i]perylene	ND		0.69

Total Target Compounds: 0

C00050

43048

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: C9234.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

Response Factor Report MSD-C

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Thu Apr 05 15:19:01 2001
Response via : Initial Calibration

Calibration Files
5 =C9155.D 20 =C9154.D 50 =C9158.D
80 =C9156.D 10 =C9157.D

		Compound	5	20	50	80	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	N-Nitrosodimethylamin	0.853	0.805	0.743	0.778	0.764	0.788	5.38
3)	T	Pyridine	1.068	0.776	0.918	0.942	0.921	0.925	11.21
4)	S	2-Fluorophenol	1.209	1.113	1.087	1.064	1.155	1.125	5.13
5)	T	Benzaldehyde	0.485	0.205	0.360	0.322	0.355	0.346	29.02
6)	S	Phenol-d5	1.214	1.066	1.057	1.019	1.125	1.096	6.92
7)	MC	Phenol	1.364	0.995	0.964	0.972	1.121	1.083	15.63
8)	T	Aniline	1.470	1.165	1.207	1.240	1.272	1.271	9.29
9)	T	bis(2-Chloroethyl)eth	0.995	0.782	0.788	0.822	0.883	0.854	10.36
10)	M	2-Chlorophenol	1.311	1.019	1.036	1.048	1.128	1.108	10.88
11)	T	1,3-Dichlorobenzene	1.682	1.320	1.392	1.468	1.475	1.468	9.23
12)	MC	1,4-Dichlorobenzene	1.717	1.347	1.410	1.494	1.477	1.489	9.42
13)	T	Benzyl alcohol	0.456	0.403	0.413	0.427	0.403	0.420	5.27
14)	T	1,2-Dichlorobenzene	1.616	1.204	1.220	1.315	1.343	1.340	12.35
15)	T	2-Methylphenol	0.907	0.684	0.662	0.669	0.790	0.742	14.19
16)	T	bis(2-chloroisopropyl	1.231	0.947	0.944	0.970	1.054	1.029	11.80
17)	T	4-Methylphenol	0.823	0.647	0.647	0.661	0.713	0.698	10.74
)	MP	N-Nitroso-di-n-propyl	0.505	0.401	0.410	0.440	0.414	0.434	9.73
)	T	Acetophenone	1.080	0.923	0.892	0.956	0.982	0.967	7.46
20)	T	2-Aminotoluene +4-Ami	2.614	2.051	2.097	1.999	2.203	2.193	11.28
21)	T	Hexachloroethane	0.592	0.494	0.506	0.531	0.537	0.532	7.12
22)	I	Naphthalene-d8	----------ISTD----------						
23)	S	Nitrobenzene-d5	0.293	0.257	0.287	0.258	0.286	0.276	6.18
24)	T	Nitrobenzene	0.380	0.273	0.286	0.280	0.319	0.307	14.29
25)	T	Isophorone	0.396	0.359	0.382	0.412	0.357	0.381	6.29
26)	TC	2-Nitrophenol	0.149	0.137	0.172	0.184	0.138	0.156	13.38
27)	T	2,4-Dimethylphenol	0.328	0.263	0.288	0.283	0.291	0.291	8.13
28)	T	bis(2-Chloroethoxy)me	0.306	0.256	0.267	0.276	0.284	0.278	6.89
29)	T	Benzoic acid	0.044	0.042	0.043	0.035	0.042	0.041	8.51
30)	T	2,4-Dimethylaniline	0.455	0.427	0.430	0.340	0.429	0.416	10.53
31)	TC	2,4-Dichlorophenol	0.294	0.237	0.257	0.265	0.275	0.266	7.93
32)	M	1,2,4-Trichlorobenzen	0.452	0.360	0.389	0.403	0.400	0.401	8.29
33)	T	Naphthalene	1.048	0.864	0.941	0.870	0.985	0.942	8.30
34)	T	4-Chloroaniline	0.312	0.262	0.256	0.180	0.283	0.259	19.01
35)	TC	Hexachlorobutadiene	0.307	0.273	0.296	0.302	0.292	0.294	4.41
36)	T	Caprolactam	0.023	0.033	0.034	0.038	0.025	0.031	20.97
37)	MC	4-Chloro-3-methylphen	0.168	0.150	0.165	0.162	0.154	0.160	4.78
38)	T	2-Methylnaphthalene	0.644	0.520	0.571	0.584	0.547	0.573	8.11
39)	I	Acenaphthene-d10	----------ISTD----------						
40)	TP	Hexachlorocyclopentad	0.691	1.092	0.727	0.625	0.695	0.766	24.29
41)	TC	2,4,6-Trichlorophenol	0.331	0.338	0.367	0.381	0.348	0.353	5.96
)	T	2,4,5-Trichlorophenol	0.375	0.344	0.350	0.358	0.312	0.348	6.73
)	S	2-Fluorobiphenyl	1.459	1.354	1.415	1.323	1.411	1.392	3.86
44)	T	1-1'-Biphenyl	1.600	1.426	1.406	1.458	1.449	1.468	5.22
45)	T	2-Chloronaphthalene	1.453	1.108	1.184	1.183	1.200	1.226	10.78
46)	T	2-Nitroaniline	0.118	0.148	0.171	0.173	0.125	0.147	17.19
47)	T	Dimethylphthalate	0.908	0.875	0.925	0.953	0.863	0.905	4.04

008
AR0052

4310

48)	T	2,6-Dinitrotoluene	0.131	0.155	0.187	0.200	0.123	0.159	21.16
49)	T	Acenaphthylene	1.641	1.478	1.638	1.503	1.469	1.546	5.60
50)	T	3-Nitroaniline	0.108	0.112	0.124	0.090	0.100	0.107	12.08
51)	MC	Acenaphthene	1.153	0.915	0.990	0.929	1.044	1.006	9.61
[illegible])	TP	2,4-Dinitrophenol	0.082	0.089	0.106	0.097	0.087	0.092	10.42
[illegible])	MP	4-Nitrophenol	0.041	0.046	0.058	0.066	0.048	0.052	19.03
[illegible])	M	2,4-Dinitrotoluene	0.102	0.148	0.184	0.151	0.108	0.138	24.61
55)	T	Dibenzofuran	1.531	1.250	1.325	1.326	1.271	1.340	8.33
56)	T	Diethylphthalate	0.668	0.694	0.784	0.815	0.704	0.733	8.59
57)	T	Fluorene	1.007	0.908	0.991	0.954	0.978	0.967	3.99
58)	T	4-Chlorophenyl-phenyl	0.602	0.515	0.526	0.543	0.527	0.542	6.40
59)	T	4-Nitroaniline	0.108	0.112	0.124	0.090	0.100	0.107	12.08
60)	I	Phenanthrene-d10	----------ISTD----------						
61)	T	4,6-Dinitro-2-methylp	0.041	0.044	0.039	0.050	0.043	0.043	9.67
62)	TC	N-Nitrosodiphenylamin	0.442	0.376	0.409	0.424	0.403	0.411	5.99
63)	T	1,2-Diphenylhydrazine	0.620	0.578	0.624	0.653	0.583	0.612	5.14
64)	S	2,4,6-Tribromophenol	0.128	0.141	0.140	0.153	0.121	0.137	9.07
65)	T	4-Bromophenyl-phenyle	0.294	0.243	0.261	0.277	0.276	0.270	7.05
66)	T	Hexachlorobenzene	0.427	0.306	0.318	0.341	0.364	0.351	13.58
67)	T	Atrazine	0.113	0.120	0.091	0.117	0.110	0.110	10.41
68)	MC	Pentachlorophenol	0.071	0.079	0.071	0.087	0.070	0.076	9.44
69)	T	Phenanthrene	1.033	0.816	0.882	0.822	0.949	0.900	10.18
70)	T	Anthracene	0.832	0.734	0.830	0.809	0.794	0.800	5.01
71)	T	Carbazole	0.542	0.471	0.467	0.464	0.538	0.497	7.98
72)	T	Di-n-butylphthalate	0.496	0.589	0.702	0.739	0.525	0.610	17.55
73)	TC	Fluoranthene	0.696	0.634	0.733	0.690	0.705	0.692	5.23
74)	T	Benzidine	0.099	0.084	0.070	0.052	0.097	0.080	24.62
75)	I	Chrysene-d12	----------ISTD----------						
76)	M	Pyrene	1.533	1.165	1.290	1.172	1.345	1.301	11.60
[illegible])	S	Terphenyl-d14	1.151	0.996	1.107	0.989	1.097	1.068	6.71
[illegible])	T	3,3'-Dimethylbenzidin	0.338	0.225	0.220	0.211	0.292	0.257	21.58
79)	T	Butylbenzylphthalate	0.223	0.267	0.328	0.341	0.218	0.275	20.92
80)	T	3,3'-Dichlorobenzidin	0.260	0.227	0.232	0.190	0.245	0.231	11.38
81)	T	Benzo[a]anthracene	1.030	0.837	0.938	0.853	0.971	0.926	8.77
82)	T	Chrysene	1.067	0.861	0.904	0.822	0.979	0.927	10.55
83)	T	bis(2-Ethylhexyl)phth	0.400	0.357	0.442	0.495	0.312	0.401	17.77
84)	I	Perylene-d12	----------ISTD----------						
85)	TC	Di-n-octylphthalate	0.569	0.537	0.663	0.723	0.519	0.602	14.49
86)	T	Benzo[b]fluoranthene	1.177	0.995	1.092	0.955	1.077	1.059	8.21
87)	T	Benzo[k]fluoranthene	1.143	1.018	0.969	0.831	0.817	0.956	14.23
88)	TC	Benzo[a]pyrene	0.916	0.797	0.872	0.820	0.807	0.842	5.94
89)	T	Indeno[1,2,3-cd]pyren	1.018	0.910	0.978	0.927	0.952	0.957	4.48
90)	T	Dibenz[a,h]anthracene	0.830	0.835	0.735	0.715	0.719	0.767	7.89
91)	T	Benzo[g,h,i]perylene	1.040	0.789	0.842	0.796	0.886	0.870	11.78

(#) = Out of Range

CW0501.M Thu Apr 05 15:19:13 2001 MSD-C

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9231.D
Acq On : 9 Apr 2001 11:45
Sample : .,20-PPB-INJ-FOR-04/09/01
Misc : N/A,N/A,N/A,1
MS Integration Params: RTEINT.P

Vial: 2
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Multiple Level Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	83	0.00
2	T	N-Nitrosodimethylamine	0.788	0.669	15.1	69	0.00
3	T	Pyridine	0.925	0.805	13.0	86	0.00
4	S	2-Fluorophenol	1.125	1.071	4.8	80	0.00
5	T	Benzaldehyde	0.346	0.298	13.9	121	-0.13
6	S	Phenol-d5	1.096	1.123	-2.5	87	0.00
7	MC	Phenol	1.083	1.018	6.0	85	0.00
8	T	Aniline	1.271	1.232	3.1	88	0.00
9	T	bis(2-Chloroethyl)ether	0.854	0.815	4.6	86	0.00
10	M	2-Chlorophenol	1.108	0.988	10.8	80	0.00
11	T	1,3-Dichlorobenzene	1.468	1.312	10.6	82	0.00
12	MC	1,4-Dichlorobenzene	1.489	1.377	7.5	85	0.00
13	T	Benzyl alcohol	0.420	0.440	-4.8	91	0.00
14	T	1,2-Dichlorobenzene	1.340	1.248	6.9	86	0.00
15	T	2-Methylphenol	0.742	0.721	2.8	87	0.00
16	T	bis(2-chloroisopropyl)ether	1.029	1.060	-3.0	93	0.00
17	T	4-Methylphenol	0.698	0.684	2.0	88	0.00
18	MP	N-Nitroso-di-n-propylamine	0.434	0.472	-8.8	98	0.00
19	T	Acetophenone	0.967	1.016	-5.1	91	0.00
20	T	2-Aminotoluene +4-Aminotolu	2.193	2.247	-2.5	91	0.00
21	T	Hexachloroethane	0.532	0.470	11.7	79	0.00
22	I	Naphthalene-d8	1.000	1.000	0.0	91	0.00
23	S	Nitrobenzene-d5	0.276	0.265	4.0	94	0.00
24	T	Nitrobenzene	0.307	0.280	8.8	93	0.00
25	T	Isophorone	0.381	0.397	-4.2	101	0.00
26	TC	2-Nitrophenol	0.156	0.148	5.1	98	0.00
27	T	2,4-Dimethylphenol	0.291	0.261	10.3	90	0.00
28	T	bis(2-Chloroethoxy)methane	0.278	0.280	-0.7	100	0.00
29	T	Benzoic acid	0.041	0.041	0.0	89	0.00
30	T	2,4-Dimethylaniline	0.416	0.405	2.6	86	0.00
31	TC	2,4-Dichlorophenol	0.266	0.234	12.0	90	0.00
32	M	1,2,4-Trichlorobenzene	0.401	0.343	14.5	87	0.00
33	T	Naphthalene	0.942	0.839	10.9	88	0.00
34	T	4-Chloroaniline	0.259	0.272	-5.0	94	0.00
35	TC	Hexachlorobutadiene	0.294	0.264	10.2	88	0.00
36	T	Caprolactam	0.031	0.036	-16.1	99	-0.01
37	MC	4-Chloro-3-methylphenol	0.160	0.144	10.0	87	0.00
38	T	2-Methylnaphthalene	0.573	0.504	-12.0	88	0.00
39	I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00
40	TP	Hexachlorocyclopentadiene	0.766	0.896	-17.0	86	0.00
41	TC	2,4,6-Trichlorophenol	0.353	0.283	19.8	88	0.00
42	T	2,4,5-Trichlorophenol	0.348	0.283	18.7	87	0.00
43	S	2-Fluorobiphenyl	1.392	1.247	10.4	97	0.00
44	T	1-1'-Biphenyl	1.468	1.337	8.9	99	0.00

45	T	2-Chloronaphthalene	1.226	1.027	16.2	98	0.00
46	T	2-Nitroaniline	0.147	0.149	-1.4	106	0.00
47	T	Dimethylphthalate	0.905	0.903	0.2	109	0.00
48	T	2,6-Dinitrotoluene	0.159	0.166	-4.4	113	0.00
[illegible]	T	Acenaphthylene	1.546	1.366	11.6	97	0.00
[illegible]	T	3-Nitroaniline	0.107	0.115	-7.5	109	0.00
[illegible]	MC	Acenaphthene	1.006	0.870	13.5	100	0.00
52	TP	2,4-Dinitrophenol	0.092	0.075	18.5	89	0.00
53	MP	4-Nitrophenol	0.052	0.047	9.6	108	0.00
54	M	2,4-Dinitrotoluene	0.138	0.145	-5.1	103	0.00
55	T	Dibenzofuran	1.340	1.204	10.1	101	0.00
56	T	Diethylphthalate	0.733	0.706	3.7	107	0.00
57	T	Fluorene	0.967	0.880	9.0	102	0.00
58	T	4-Chlorophenyl-phenylether	0.542	0.486	10.3	99	0.00
59	T	4-Nitroaniline	0.107	0.115	-7.5	109	0.00
60	I	Phenanthrene-d10	1.000	1.000	0.0	107	0.00
61	T	4,6-Dinitro-2-methylphenol	0.043	0.041	4.7	101	0.00
62	TC	N-Nitrosodiphenylamine	0.411	0.408	0.7	116	0.00
63	T	1,2-Diphenylhydrazine/Azobe	0.612	0.567	7.4	105	0.00
64	S	2,4,6-Tribromophenol	0.137	0.143	-4.4	109	0.00
65	T	4-Bromophenyl-phenylether	0.270	0.245	9.3	108	0.00
66	T	Hexachlorobenzene	0.351	0.306	12.8	107	0.00
67	T	Atrazine	0.110	0.120	-9.1	107	0.00
68	MC	Pentachlorophenol	0.076	0.063	17.1	86	0.00
69	T	Phenanthrene	0.900	0.794	11.8	104	0.00
70	T	Anthracene	0.800	0.742	7.3	108	0.00
71	T	Carbazole	0.497	0.471	5.2	107	0.00
72	T	Di-n-butylphthalate	0.610	0.559	8.4	102	0.00
73	TC	Fluoranthene	0.692	0.603	12.9	102	0.00
74	T	Benzidine	0.080	0.076	5.0	96	0.00
[illegible]	I	Chrysene-d12	1.000	1.000	0.0	89	0.02
76	M	Pyrene	1.301	1.333	-2.5	101	0.00
77	S	Terphenyl-d14	1.068	1.157	-8.3	103	0.01
78	T	3,3'-Dimethylbenzidine	0.257	0.206	19.8	81	0.02
79	T	Butylbenzylphthalate	0.275	0.270	1.8	90	0.02
80	T	3,3'-Dichlorobenzidine	0.231	0.194	16.0	76	0.02
81	T	Benzo[a]anthracene	0.926	0.850	8.2	90	0.02
82	T	Chrysene	0.927	0.834	10.0	86	0.02
83	T	bis(2-Ethylhexyl)phthalate	0.401	0.326	18.7	81	0.02
84	I	Perylene-d12	1.000	1.000	0.0	64	0.02
85	TC	Di-n-octylphthalate	0.602	0.561	6.8	66	0.03
86	T	Benzo[b]fluoranthene	1.059	1.129	-6.6	72	0.02
87	T	Benzo[k]fluoranthene	0.956	0.875	8.5	55	0.00
88	TC	Benzo[a]pyrene	0.842	0.785	6.8	63	0.03
89	T	Indeno[1,2,3-cd]pyrene	0.957	0.865	9.6	60	0.02
90	T	Dibenz[a,h]anthracene	0.767	0.777	-1.3	59	0.02
91	T	Benzo[g,h,i]perylene	0.870	0.705	19.0	57	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

C9154.D CW0501.M Mon Apr 09 12:16:59 2001 MSD-C

000055

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/09/2001

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
Method-Blank	AQUEOUS	C9232.D	49	61	53	55	55	110
2115-009	AQUEOUS	C9233.D	61	75	N/A	N/A	50	N/A
Method-Blank	AQUEOUS	C9234.D	60	74	64	72	61	122
DI-MS	AQUEOUS	C9235.D	50	60	58	64	83	98
DI-MSD	AQUEOUS	C9236.D	50	60	58	64	82	107
2144-001	AQUEOUS	C9237.D	N/A	N/A	57	61	N/A	119
2145-001	AQUEOUS	C9238.D	N/A	N/A	60	66	N/A	121
2153-001	AQUEOUS	C9239.D	55	62	58	60	97	103
2124-001	AQUEOUS	C9240.D	N/A	N/A	65	69	N/A	117
2128-001	AQUEOUS	C9241.D	N/A	N/A	58	59	N/A	114
2128-002	AQUEOUS	C9242.D	N/A	N/A	58	62	N/A	106
2133-008	AQUEOUS	C9243.D	N/A	N/A	59	60	N/A	115
2133-010	AQUEOUS	C9244.D	N/A	N/A	59	64	N/A	112
2156-001	AQUEOUS	C9245.D	N/A	N/A	60	63	N/A	120
2157-001	AQUEOUS	C9246.D	N/A	N/A	57	60	N/A	111

EPA CLP QC LIMITS FOR:	Soil	Aqueous
S1 (2FP) = 2-Fluorophenol	36-93	42-95
S2 (PHL) = Phenol-d5	40-101	59-97
S3 (NBZ) = Nitrobenzene-d5	45-98	49-105
S4 (FBP) = 2-Fluorobiphenyl	48-104	54-110
S5 (TBP) = 2,4,6-Tribromophenol	54-135	48-126
S6 (TPH) = Terphenyl-d14	58-147	53-123

* Column to be used to flag recovery values

AQUEOUS SEMIVOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: Method-B Batch No.: 040901W

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	30.0	0.0	18.9	63	48 - 95
2-Chlorophenol	30.0	0.0	18.0	60	46 - 90
1,4-Dichlorobenzene	30.0	0.0	16.5	55	49 - 84
N-Nitroso-di-n-propylamine	30.0	0.0	22.7	76	53 - 96
1,2,4-Trichlorobenzene	30.0	0.0	17.6	59	46 - 92
4-Chloro-3-methylphenol	30.0	0.0	24.5	82	41 - 113
Acenaphthene	30.0	0.0	21.3	71	59 - 98
4-Nitrophenol	30.0	0.0	23.1	77	30 - 139
2,4-Dinitrotoluene	30.0	0.0	34.2	114	31 - 138
Pentachlorophenol	30.0	0.0	18.7	62	25 - 105
Pyrene	30.0	0.0	30.4	101	49 - 110

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	0.0	19.1	64	2	8	48 - 95
2-Chlorophenol	0.0	17.4	58	3	7	46 - 90
1,4-Dichlorobenzene	0.0	16.6	55	0	6	49 - 84
N-Nitroso-di-n-propylamine	0.0	22.7	76	0	7	53 - 96
1,2,4-Trichlorobenzene	0.0	17.3	58	2	8	46 - 92
4-Chloro-3-methylphenol	0.0	25.0	83	1	12	41 - 113
Acenaphthene	0.0	22.0	73	3	7	59 - 98
4-Nitrophenol	0.0	26.2	87	12	22	30 - 139
2,4-Dinitrotoluene	0.0	38.4	128	12	18	31 - 138
Pentachlorophenol	0.0	19.2	64	3	15	25 - 105
Pyrene	0.0	31.6	105	4	10	49 - 110

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __11__ outside limits

Spike Recovery: __0___ out of __22__ outside limits

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: C9234.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
N-Nitrosodimethylamine	30.0	0.0	12.4	41	0.0	12.3	41
Benzaldehyde	30.0	0.0	0.0	0	0.0	0.0	0
Phenol	30.0	0.0	18.9	63	0.0	19.1	64
Aniline	30.0	0.0	18.7	62	0.0	18.5	62
bis(2-Chloroethyl)ether	30.0	0.0	18.4	61	0.0	17.7	59
2-Chlorophenol	30.0	0.0	18.0	60	0.0	17.4	58
1,3-Dichlorobenzene	30.0	0.0	17.5	58	0.0	17.0	57
1,4-Dichlorobenzene	30.0	0.0	16.5	55	0.0	16.6	55
Benzyl alcohol	30.0	0.0	23.1	77	0.0	22.8	76
1,2-Dichlorobenzene	30.0	0.0	16.9	56	0.0	17.6	59
2-Methylphenol	30.0	0.0	20.7	69	0.0	20.8	69
bis(2-chloroisopropyl)ether	30.0	0.0	19.3	64	0.0	20.0	67
4-Methylphenol	30.0	0.0	21.6	72	0.0	21.6	72
N-Nitroso-di-n-propylamine	30.0	0.0	22.7	76	0.0	22.7	76
Acetophenone	30.0	0.0	1.0	3	0.0	1.2	4
2-Aminotoluene +4-Aminotoluene	30.0	0.0	40.8	136	0.0	40.5	135
Hexachloroethane	30.0	0.0	16.6	55	0.0	17.2	57
Nitrobenzene	30.0	0.0	17.6	59	0.0	16.8	56
Isophorone	30.0	0.0	21.1	70	0.0	21.6	72
2-Nitrophenol	30.0	0.0	18.9	63	0.0	18.6	62
2,4-Dimethylphenol	30.0	0.0	20.8	69	0.0	21.0	70
bis(2-Chloroethoxy)methane	30.0	0.0	20.0	67	0.0	19.1	64
Benzoic acid	30.0	0.0	19.4	65	0.0	20.7	69
2,4-Dimethylaniline	30.0	0.0	21.2	71	0.0	21.1	70
2,4-Dichlorophenol	30.0	0.0	20.4	68	0.0	19.3	64
1,2,4-Trichlorobenzene	30.0	0.0	17.6	59	0.0	17.3	58
Naphthalene	30.0	0.0	18.7	62	0.0	18.0	60
4-Chloroaniline	30.0	0.0	22.1	74	0.0	21.6	72
Hexachlorobutadiene	30.0	0.0	17.9	60	0.0	17.6	59
Caprolactam	30.0	0.0	0.0	0	0.0	0.0	0
4-Chloro-3-methylphenol	30.0	0.0	24.5	82	0.0	25.0	83
2-Methylnaphthalene	30.0	0.0	19.5	65	0.0	18.9	63
Hexachlorocyclopentadiene	30.0	0.0	7.9	26	0.0	7.1	24
2,4,6-Trichlorophenol	30.0	0.0	23.8	79	0.0	21.7	72
2,4,5-Trichlorophenol	30.0	0.0	23.2	77	0.0	23.3	78
1-1'-Biphenyl	30.0	0.0	1.2	4	0.0	1.2	4
2-Chloronaphthalene	30.0	0.0	19.8	66	0.0	19.5	65
2-Nitroaniline	30.0	0.0	20.8	69	0.0	20.8	69
Dimethylphthalate	30.0	0.0	20.8	69	0.0	20.8	69
2,6-Dinitrotoluene	30.0	0.0	20.8	69	0.0	20.8	69
Acenaphthylene	30.0	0.0	20.8	69	0.0	20.8	69

000058

4316

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: C9234.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add			%Rec. MS			%Rec. MSD
3-Nitroaniline	30.0	0.0	30.7	102	0.0	32.2	107
Acenaphthene	30.0	0.0	21.3	71	0.0	22.0	73
2,4-Dinitrophenol	30.0	0.0	20.8	69	0.0	23.3	78
4-Nitrophenol	30.0	0.0	23.1	77	0.0	26.2	87
2,4-Dinitrotoluene	30.0	0.0	34.2	114	0.0	38.4	128
Dibenzofuran	30.0	0.0	22.3	74	0.0	22.8	76
Diethylphthalate	30.0	0.0	28.9	96	0.0	31.3	104
Fluorene	30.0	0.0	23.4	78	0.0	25.0	83
4-Chlorophenyl-phenylether	30.0	0.0	24.0	80	0.0	24.4	81
4-Nitroaniline	30.0	0.0	30.7	102	0.0	32.2	107
4,6-Dinitro-2-methylphenol	30.0	0.0	8.9	30	0.0	9.5	32
N-Nitrosodiphenylamine	30.0	0.0	28.8	96	0.0	27.4	91
1,2-Diphenylhydrazine/Azobenzene	30.0	0.0	24.1	80	0.0	22.1	74
4-Bromophenyl-phenylether	30.0	0.0	25.9	86	0.0	24.8	83
Hexachlorobenzene	30.0	0.0	26.0	87	0.0	24.5	82
Atrazine	30.0	0.0	1.6	5	0.0	0.0	0
Pentachlorophenol	30.0	0.0	18.7	62	0.0	19.2	64
Phenanthrene	30.0	0.0	25.1	84	0.0	25.1	84
Anthracene	30.0	0.0	26.3	88	0.0	27.4	91
Carbazole	30.0	0.0	28.4	95	0.0	33.1	110
Di-n-butylphthalate	30.0	0.0	28.5	95	0.0	34.6	115
Fluoranthene	30.0	0.0	27.0	90	0.0	32.6	109
Benzidine	30.0	0.0	25.8	86	0.0	35.2	117
Pyrene	30.0	0.0	30.4	101	0.0	31.6	105
3,3'-Dimethylbenzidine	30.0	0.0	28.5	95	0.0	33.7	112
Butylbenzylphthalate	30.0	0.0	30.5	102	0.0	34.6	115
3,3'-Dichlorobenzidine	30.0	0.0	27.8	93	0.0	30.3	101
Benzo[a]anthracene	30.0	0.0	27.3	91	0.0	28.0	93
Chrysene	30.0	0.0	26.0	87	0.0	26.3	88
bis(2-Ethylhexyl)phthalate	30.0	0.0	25.1	84	0.0	28.7	96
Di-n-octylphthalate	30.0	0.0	28.4	95	0.0	34.5	115
Benzo[b]fluoranthene	30.0	0.0	29.5	98	0.0	32.0	107
Benzo[k]fluoranthene	30.0	0.0	24.7	82	0.0	24.7	82
Benzo[a]pyrene	30.0	0.0	22.7	76	0.0	22.7	76
Indeno[1,2,3-cd]pyrene	30.0	0.0	27.6	92	0.0	27.6	92
Dibenz[a,h]anthracene	30.0	0.0	33.0	110	0.0	33.0	110
Benzo[g,h,i]perylene	30.0	0.0	33.0	110	0.0	33.0	110

000059

4317

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D

Date Analyzed: 04/05/2001

Instrument ID: MSDC

Time Analyzed: 14:16

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	116961	6.21	305012	7.59	116166	9.24
	UPPER LIMIT	233922	6.71	610024	8.09	232332	9.74
	LOWER LIMIT	58481	5.71	152506	7.09	58083	8.74
	LAB SAMPLE ID						
01	5-PPB-INJ-FOR-04/05	128770	6.21	348809	7.59	131206	9.24
02	80-PPB-INJ-FOR-04/0	100725	6.20	263622	7.59	106938	9.24
03	10-PPB-INJ-FOR-04/0	111035	6.21	291441	7.58	110650	9.24
04	50-PPB-INJ-FOR-04/0	113446	6.21	283424	7.59	112595	9.24
05	Method-Blank	139071	6.20	369286	7.59	128181	9.24
06	DI-MS	115728	6.21	296025	7.59	109920	9.24
07	DI-MSD	115644	6.21	303502	7.59	116553	9.24
08	2049-001	126701	6.21	323002	7.59	113505	9.24
09	2049-003	149835	6.21	391079	7.59	138836	9.24
10	2022-001	121840	6.21	311879	7.59	114395	9.24
11	2025-001	133913	6.21	361550	7.59	141011	9.24
12	2025-002	121035	6.21	312712	7.59	113371	9.24
13	2031-001	117115	6.21	287341	7.59	103736	9.24
14	2031-002	148331	6.20	370182	7.59	132284	9.24
15	2031-003	120902	6.21	304346	7.59	116481	9.24
16	2031-004	119567	6.21	307560	7.59	108728	9.24
17	2031-005	121293	6.21	300066	7.59	105391	9.24
18	2033-001	129899	6.21	319445	7.59	123218	9.24
19	2033-002	144788	6.21	358721	7.59	128138	9.24
20	2023-001	138834	6.21	330399	7.59	110369	9.24
21	Method-Blank	100553	6.21	254123	7.59	86935	9.24
22	DI-MS	93814	6.21	228167	7.59	83282	9.24

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D

Date Analyzed: 04/05/2001

Instrument ID: MSDC

Time Analyzed: 14:16

	40UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	116961		6.21		305012		7.59		116166		9.24	
	UPPER LIMIT	233922		6.71		610024		8.09		232332		9.74	
	LOWER LIMIT	58481		5.71		152506		7.09		58083		8.74	
	LAB SAMPLE ID												
01	2051-001	102208		6.21		262434		7.59		97352		9.24	
02	2051-002	103465		6.21		258488		7.59		91703		9.24	
03	2052-001	123932		6.21		312388		7.59		114422		9.24	
04	2066-002	103380		6.21		257786		7.59		86667		9.24	
05	2066-004	125903		6.2		310946		7.59		103997		9.24	
06	2066-005	99860		6.2		253131		7.59		91074		9.24	
07	2067-002	97261		6.21		244087		7.59		85353		9.24	
08	2067-003	98308		6.21		245072		7.58		85213		9.24	
09	2108-001	93364		6.21		241557		7.58		89131		9.24	
10	2108-002	84777		6.2		236320		7.59		83540		9.24	
11	2108-003	98347		6.2		241397		7.59		85913		9.24	
12	2066-003	90858		6.2		244942		7.59		105980		9.25	
13	DI-MSD	101089		6.2		239721		7.59		86178		9.24	
14	2087-001	96372		6.2		247885		7.59		100214		9.24	
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = 1,4-Dichlorobenzene-d4

IS2 = Naphthalene-d8

IS3 = 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 values outside QC limits with an asterisk

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D

Date Analyzed: 04/05/2001

Instrument ID: MSDC

Time Analyzed: 14:16

	40UG/L	IS4 AREA #	IS4 RT #	IS5 AREA #	IS5 RT #	IS6 AREA #	IS6 RT #
	24 HOUR STD	134474	10.55	78486	12.98	66824	15.16
	UPPER LIMIT	268948	11.05	156972	13.48	133648	15.66
	LOWER LIMIT	67237	10.05	39243	12.48	33412	14.66
	LAB SAMPLE ID						
01	5-PPB-INJ-FOR-04/05	129199	10.55	65533	12.97	57060	15.15
02	80-PPB-INJ-FOR-04/0	126765	10.55	78020	12.97	68824	15.14
03	10-PPB-INJ-FOR-04/0	118039	10.54	69089	12.96	56040	15.14
04	50-PPB-INJ-FOR-04/0	134023	10.55	79580	12.97	66868	15.14
05	Method-Blank	114924	10.55	71989	12.96	59404	15.14
06	DI-MS	116582	10.55	67307	12.97	51487	15.14
07	DI-MSD	127801	10.55	76129	12.96	57742	15.14
08	2049-001	109338	10.55	58391	12.96	49914	15.13
09	2049-003	146784	10.55	77479	12.96	63838	15.14
10	2022-001	114659	10.54	63039	12.96	50941	15.13
11	2025-001	151627	10.55	78431	12.96	67146	15.14
12	2025-002	115120	10.55	63060	12.97	48402	15.14
13	2031-001	110786	10.55	66527	12.96	53066	15.13
14	2031-002	132576	10.55	73235	12.96	61914	15.13
15	2031-003	119724	10.54	65942	12.96	49898	15.13
16	2031-004	110416	10.55	62230	12.96	47292	15.13
17	2031-005	109397	10.55	61464	12.96	44690	15.13
18	2033-001	132042	10.55	82210	12.96	67113	15.13
19	2033-002	119650	10.55	63847	12.96	54948	15.13
20	2023-001	108046	10.54	68362	12.96	56747	15.13
21	Method-Blank	85460	10.55	50049	12.96	37745	15.13
22	DI-MS	89022	10.55	57233	12.96	47363	15.13

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9154.D

Date Analyzed: 04/05/2001

Instrument ID: MSDC

Time Analyzed: 14:16

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	134474	10.55	78486	12.98	66824	15.16
	UPPER LIMIT	268948	11.05	156972	13.48	133648	15.66
	LOWER LIMIT	67237	10.05	39243	12.48	33412	14.66
	LAB SAMPLE ID						
01	2051-001	100842	10.55	55604	12.96	40158	15.13
02	2051-002	92233	10.55	48636	12.96	36406	15.13
03	2052-001	116042	10.54	59772	12.96	49010	15.13
04	2066-002	84620	10.55	45315	12.96	35036	15.13
05	2066-004	104014	10.55	59264	12.96	48502	15.13
06	2066-005	89448	10.55	48031	12.96	33868	15.13
07	2067-002	87775	10.54	52505	12.96	37914	15.13
08	2067-003	86241	10.54	48715	12.96	37619	15.13
09	2108-001	95460	10.54	52378	12.96	41003	15.13
10	2108-002	90240	10.55	52748	12.96	46114	15.13
11	2108-003	94554	10.54	54002	12.96	43905	15.13
12	2066-003	146907	10.56	107334	12.99	68210	15.18
13	DI-MSD	100117	10.55	63186	13.00	51076	15.18
14	2087-001	115101	10.55	67909	12.98	49289	15.16
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9231.D

Date Analyzed: 04/09/2001

Instrument ID: MSDC

Time Analyzed: 11:45

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	97028	6.20	277345	7.59	122305	9.24
	UPPER LIMIT	194056	6.70	554690	8.09	244610	9.74
	LOWER LIMIT	48514	5.70	138673	7.09	61153	8.74
	LAB SAMPLE ID						
01	Method-Blank	129241	6.20	383801	7.59	168776	9.24
02	2115-009	113020	6.20	321785	7.58	141371	9.24
03	Method-Blank	102512	6.20	299366	7.58	124517	9.24
04	DI-MS	117693	6.20	333305	7.58	141105	9.24
05	DI-MSD	112739	6.20	322913	7.58	139007	9.24
06	2144-001	128618	6.20	390620	7.59	176825	9.24
07	2145-001	124145	6.20	371069	7.59	169077	9.24
08	2153-001	107625	6.20	311171	7.58	145121	9.24
09	2124-001	115033	6.20	324640	7.58	135969	9.24
10	2128-001	121417	6.20	358370	7.58	171444	9.24
11	2128-002	129797	6.20	360237	7.59	155389	9.24
12	2133-008	137101	6.20	391148	7.58	168865	9.24
13	2133-010	141426	6.20	406173	7.58	170257	9.24
14	2156-001	136535	6.20	399448	7.58	173844	9.24
15	2157-001	131953	6.20	381982	7.58	163691	9.24
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C9231.D Date Analyzed: 04/09/2001

Instrument ID: MSDC Time Analyzed: 11:45

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	143707	10.55	69614	12.99	42461	15.16
	UPPER LIMIT	287414	11.05	139228	13.49	84922	15.66
	LOWER LIMIT	71854	10.05	34807	12.49	21231	14.66
	LAB SAMPLE ID						
01	Method-Blank	213699	10.55	88698	13.04	45939	15.24
02	2115-009	125187	10.55	62548	13.04	36026	15.23
03	Method-Blank	147998	10.54	63834	13.01	38817	15.19
04	DI-MS	164405	10.55	77436	13.02	48729	15.21
05	DI-MSD	185703	10.54	100601	12.99	54320	15.17
06	2144-001	208626	10.55	74564	12.98	40739	15.16
07	2145-001	210451	10.55	73077	12.97	44095	15.15
08	2153-001	168363	10.55	76324	12.97	49870	15.14
09	2124-001	153281	10.55	55312	12.97	32389	15.15
10	2128-001	219830	10.55	86085	12.96	47062	15.12
11	2128-002	171083	10.55	62777	12.96	37309	15.13
12	2133-008	195212	10.54	74289	12.96	44398	15.13
13	2133-010	197549	10.54	80199	12.96	43324	15.13
14	2156-001	199462	10.54	64910	12.98	37717	15.15
15	2157-001	188424	10.54	65275	12.96	36214	15.13
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
Integration Params: RTEINT.P
Quant Time: Apr 9 17:02 2001

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	107625	40.00 UG	0.00
22) Naphthalene-d8	7.58	136	311171	40.00 UG	0.00
39) Acenaphthene-d10	9.24	164	145121	40.00 UG	0.00
60) Phenanthrene-d10	10.55	188	168363	40.00 UG	0.00
75) Chrysene-d12	12.97	240	76324	40.00 UG	0.00
84) Perylene-d12	15.14	264	49870	40.00 UG	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.54	112	166592	55.01 UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 55.01%		
6) Phenol-d5	5.68	99	181903	61.68 UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 61.68%		
23) Nitrobenzene-d5	6.82	82	62254	28.97 UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 57.94%		
43) 2-Fluorobiphenyl	8.60	172	150639	29.82 UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 59.64%		
64) 2,4,6-Tribromophenol	9.93	330	55851	97.12 UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 97.12%		
77) Terphenyl-d14	11.87	244	105137	51.59 UG	0.00
Spiked Amount 50.000	Range 53 - 123		Recovery = 103.18%		
Target Compounds					Qvalue
27) 2,4-Dimethylphenol	7.18	107	1503	0.66 UG	# 79
37) 4-Chloro-3-methylphenol	7.97	107	4784	3.84 UG	90

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

Quantitation Report

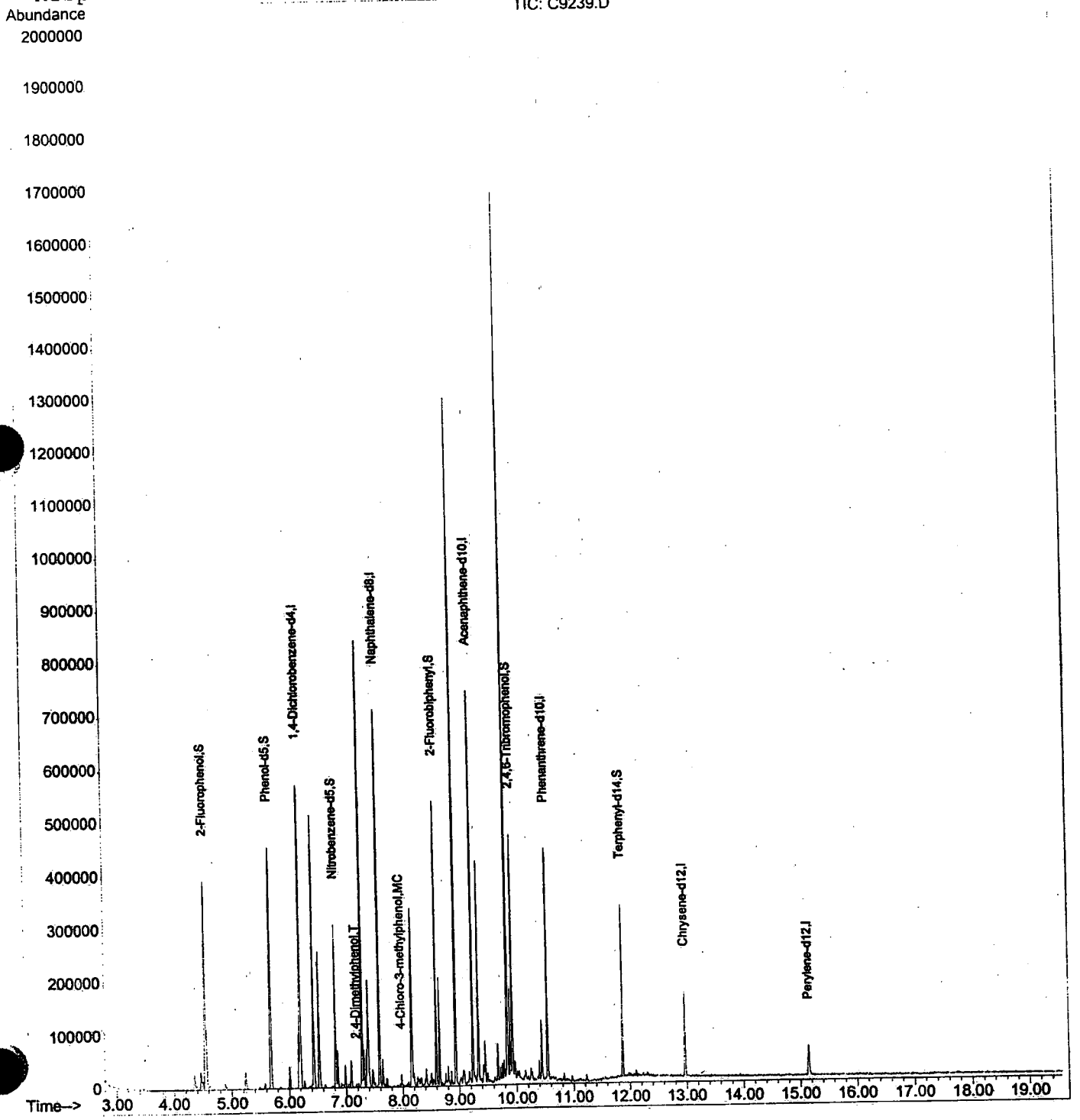
Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: RTEINT.P
Quant Time: Apr 9 17:02 2001

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Initial Calibration

TIC: C9239.D



000067

4325

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.349	288	292	296	rBV	28713	35432	2.83%	0.308%
2	4.461	308	313	317	rBV2	34123	38514	3.07%	0.335%
3	4.498	317	320	324	rVB2	15559	18163	1.45%	0.158%
4	4.541	324	328	332	rBV	391508	478440	38.16%	4.163%
5	4.568	332	333	338	rVB	112864	90887	7.25%	0.791%
6	5.236	454	458	465	rBB	32983	42144	3.36%	0.367%
7	5.679	536	541	550	rVB	455103	568341	45.33%	4.945%
8	6.010	599	603	607	rBB	42834	44363	3.54%	0.386%
9	6.171	629	633	635	rBV	103733	99291	7.92%	0.864%
10	6.197	635	638	646	rVB	570661	656208	52.34%	5.709%
11	6.432	678	682	689	rVB	513966	487081	38.85%	4.238%
12	6.528	696	700	706	rBV2	258615	284822	22.72%	2.478%
13	6.817	749	754	758	rBV	308374	286146	22.82%	2.490%
14	6.849	758	760	765	rVB	72091	62811	5.01%	0.546%
15	6.983	781	785	789	rVB2	43132	39321	3.14%	0.342%
16	7.089	800	805	809	rBV2	51097	56096	4.47%	0.488%
17	7.276	832	840	844	rBV	838615	711151	56.72%	6.187%
18	7.314	844	847	851	rVB3	70078	69204	5.52%	0.602%
19	7.389	858	861	865	rVB	178059	174903	13.95%	1.522%
20	7.469	871	876	880	rBV2	33722	42469	3.39%	0.369%
21	7.581	893	897	901	rBV	705740	636894	50.80%	5.541%
22	7.645	905	909	914	rVB2	52250	54998	4.39%	0.478%
23	7.720	918	923	930	rVB3	17290	18518	1.48%	0.161%
24	7.971	967	970	975	rVB3	23685	21702	1.73%	0.189%
25	8.163	998	1006	1010	rBV2	335913	447231	35.67%	3.891%
26	8.190	1010	1011	1018	rVB4	25576	24467	1.95%	0.213%
27	8.414	1051	1053	1062	rVB	32829	33314	2.66%	0.290%
28	8.542	1074	1077	1083	rBV3	12198	18286	1.46%	0.159%
29	8.596	1083	1087	1091	rVV	534004	422474	33.69%	3.676%
30	8.655	1094	1098	1103	rVB	203424	162320	12.95%	1.412%
31	8.756	1115	1117	1120	rBV	21032	17114	1.36%	0.149%

000068

4326

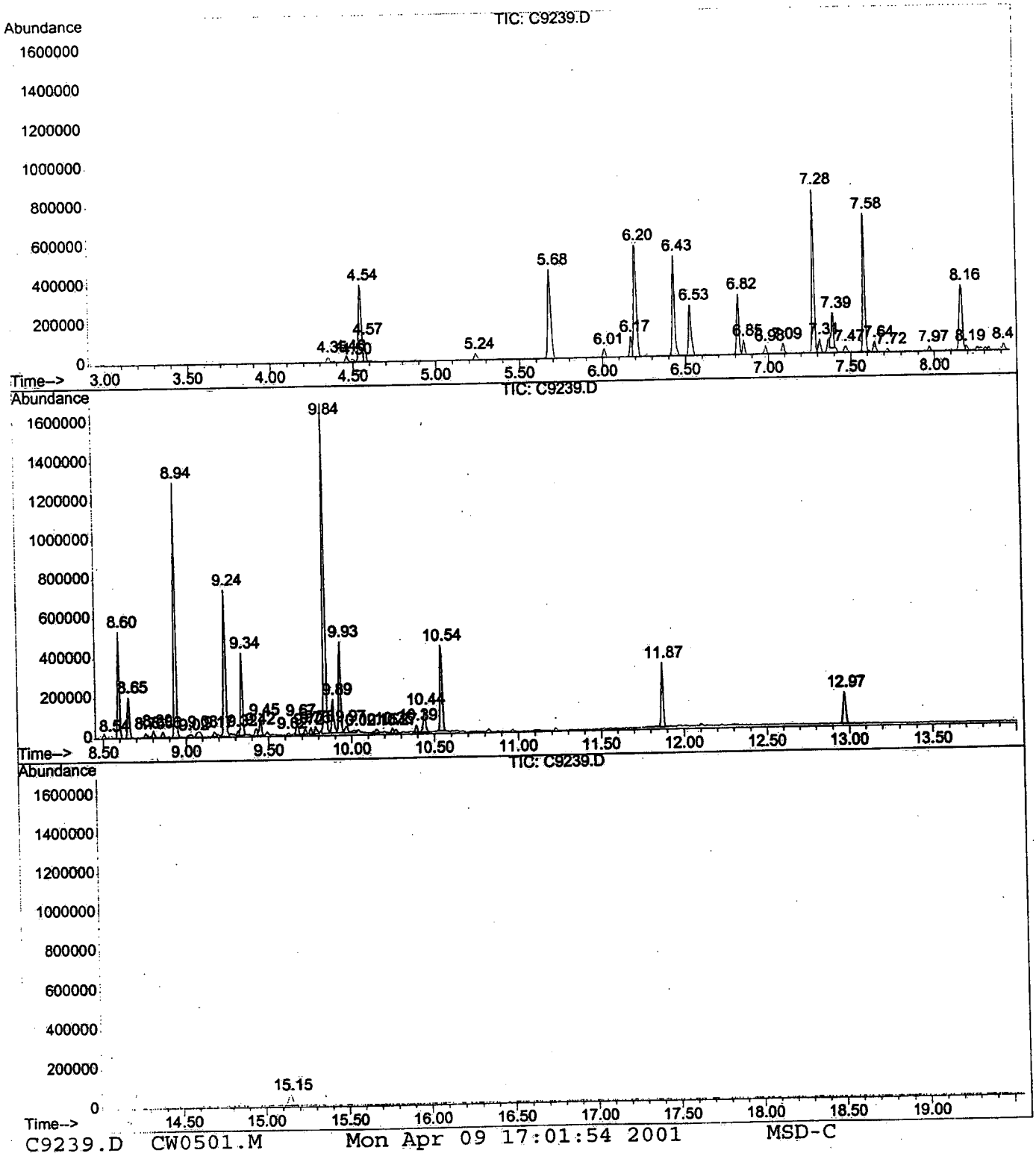
32	8.804	1123	1126	1133	rVB2	36329	34905	2.78%	0.304%
33	8.858	1133	1136	1141	rBV	26685	25528	2.04%	0.222%
34	8.938	1147	1151	1160	rVB	1295599	970052	77.37%	8.440%
35	9.023	1162	1167	1171	rVV5	13425	25268	2.02%	0.220%
	9.077	1171	1177	1182	rVB4	27778	51882	4.14%	0.451%
	9.173	1192	1195	1198	rBV	20771	20407	1.63%	0.178%
	9.237	1202	1207	1212	rBV	737391	615691	49.10%	5.357%
39	9.317	1219	1222	1223	rBV	24768	19250	1.54%	0.167%
40	9.338	1223	1226	1230	rVB	414364	315071	25.13%	2.741%
41	9.424	1238	1242	1244	rBV2	34670	37648	3.00%	0.328%
42	9.451	1244	1247	1250	rVB	79096	68933	5.50%	0.600%
43	9.616	1272	1278	1283	rBV5	11977	18170	1.45%	0.158%
44	9.670	1286	1288	1293	rVV	73564	66994	5.34%	0.583%
45	9.718	1293	1297	1300	rVV3	26522	28029	2.24%	0.244%
46	9.755	1301	1304	1306	rVV2	33579	26834	2.14%	0.233%
47	9.782	1306	1309	1313	rVV	37786	38632	3.08%	0.336%
48	9.841	1316	1320	1325	rVV	1679344	1253836	100.00%	10.909%
49	9.889	1325	1329	1333	rVV	169770	157141	12.53%	1.367%
50	9.931	1333	1337	1341	rVV	458176	385135	30.72%	3.351%
51	9.969	1341	1344	1349	rVB4	33700	41136	3.28%	0.358%
52	10.017	1349	1353	1355	rBV5	13379	17528	1.40%	0.152%
53	10.150	1372	1378	1382	rBV6	18148	27857	2.22%	0.242%
54	10.247	1392	1396	1398	rBV4	24066	23490	1.87%	0.204%
55	10.268	1398	1400	1406	rVB3	18529	18206	1.45%	0.158%
56	10.391	1420	1423	1427	rVB	36370	28263	2.25%	0.246%
57	10.439	1427	1432	1438	rVB	115348	109874	8.76%	0.956%
	10.540	1448	1451	1456	rVB	432162	382387	30.50%	3.327%
	11.871	1696	1700	1704	rBV	325782	261489	20.86%	2.275%
60	12.971	1901	1906	1914	rVB	159892	175379	13.99%	1.526%
61	15.145	2306	2313	2321	rBV	58179	105738	8.43%	0.920%

Sum of corrected areas: 11493858

C9239.D CW0501.M Mon Apr 09 17:01:53 2001 MSD-C

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Operator : DP
Acquired : 9 Apr 2001 16:30 using AcqMethod CW0501
Instrument : MSD-C
Sample Name: TW-1,2153-001,A,1000mL,100,04/09/01
Misc Info : ENVTACT/ORBIS,04/04/01,04/05/01,1
Vial Number: 10
Quant File :CW0501.RES (RTE Integrator)



C9239.D CW0501.M Mon Apr 09 17:01:54 2001 MSD-C

000070

43278

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

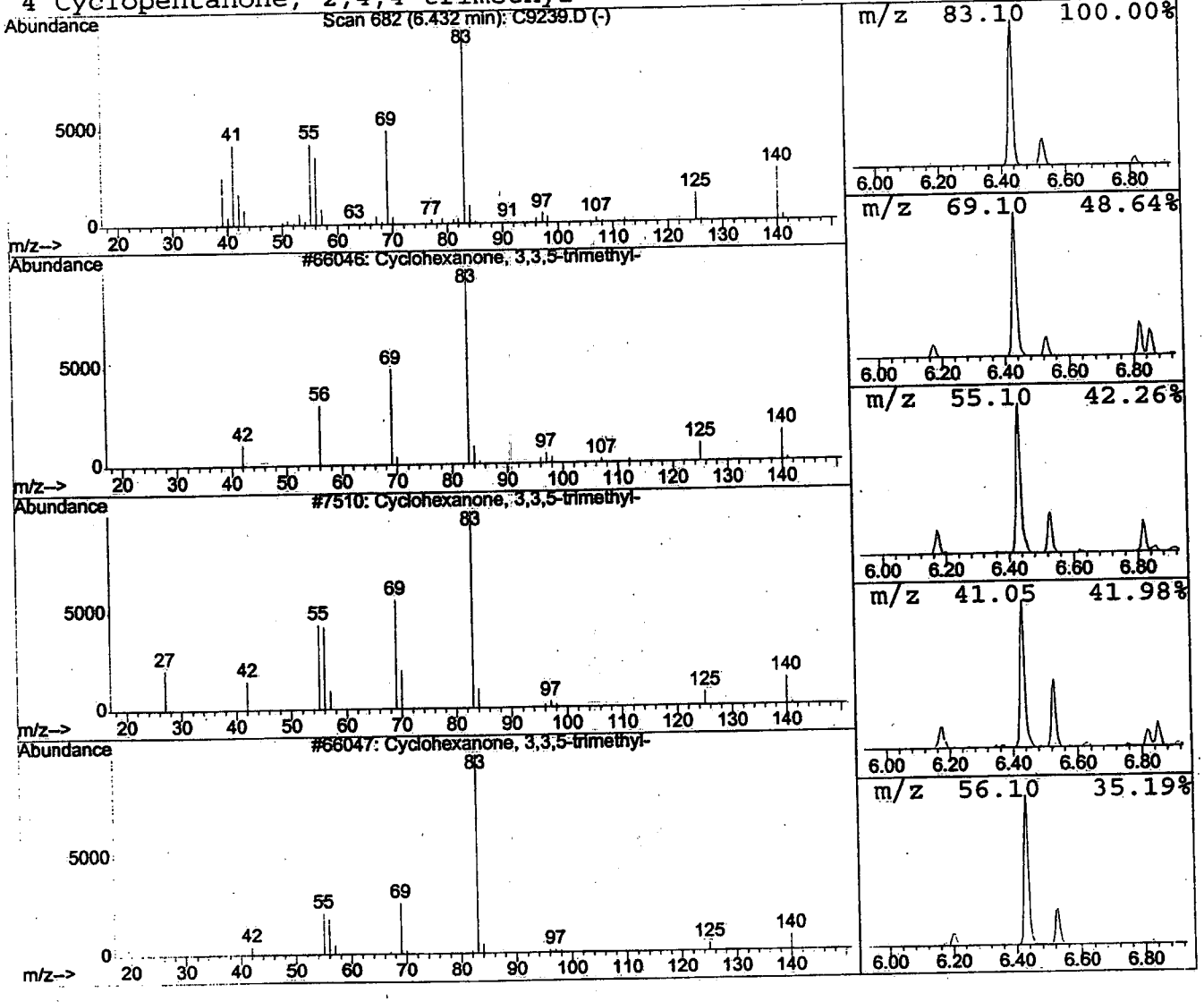
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown cyclic hydrocarbon Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.43	29.69 UG	487081	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	96
2	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	91
3	Cyclohexanone, 3,3,5-trimethyl-	140	C9H16O	000873-94-9	90
4	Cyclopentanone, 2,4,4-trimethyl-	126	C8H14O	004694-12-6	53



000071

4329

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

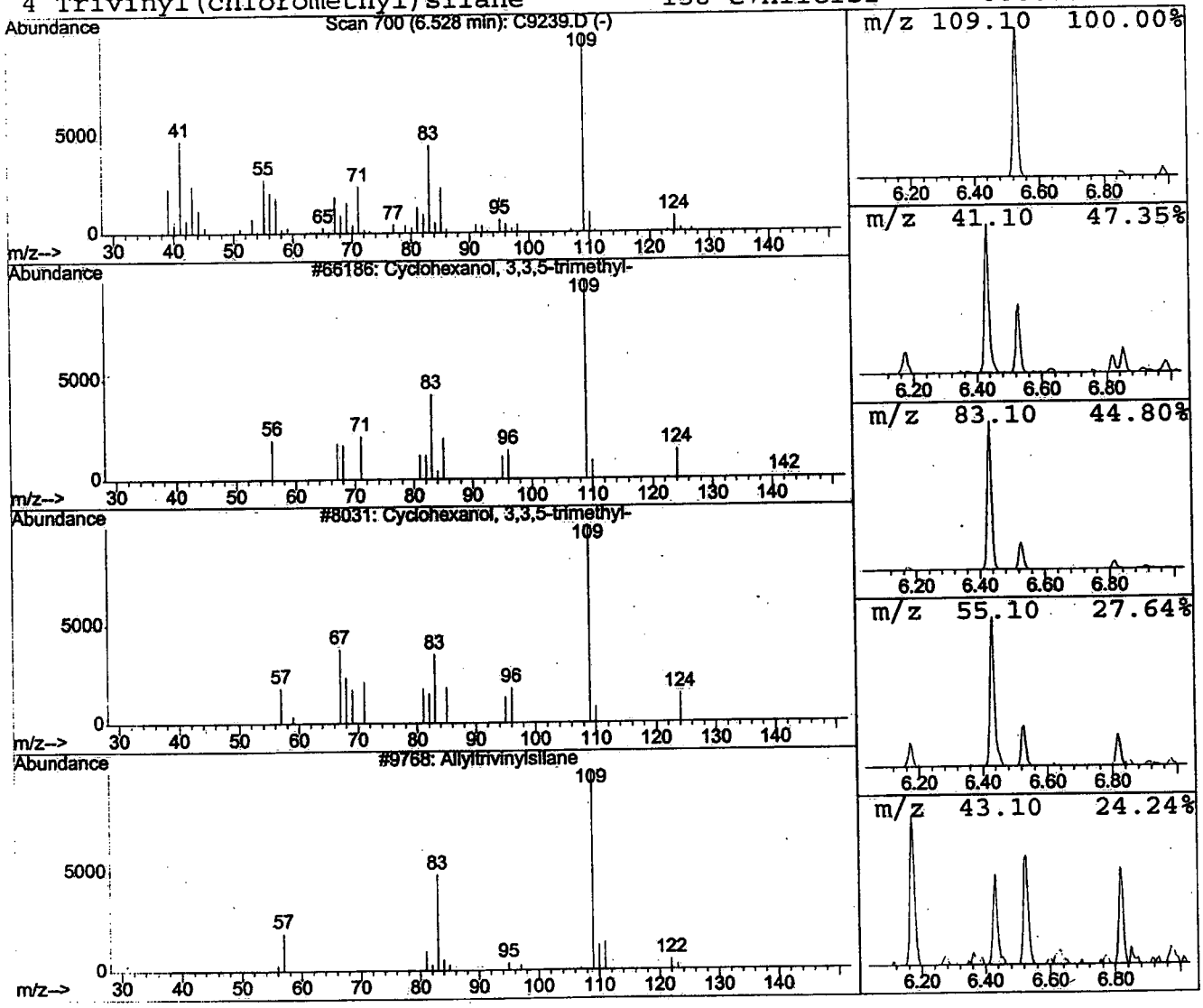
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown cyclic hydrocarbon Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.53	17.36 UG	284822	1,4-Dichlorobenzene-d4	6.20

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanol, 3,3,5-trimethyl-	142	C9H18O	000116-02-9	78
2	Cyclohexanol, 3,3,5-trimethyl-	142	C9H18O	000116-02-9	50
3	Allyltrivinylsilane	150	C9H14Si	000000-00-0	50
4	Trivinyl(chloromethyl)silane	158	C7H11ClSi	000000-00-0	43



000072

4330

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

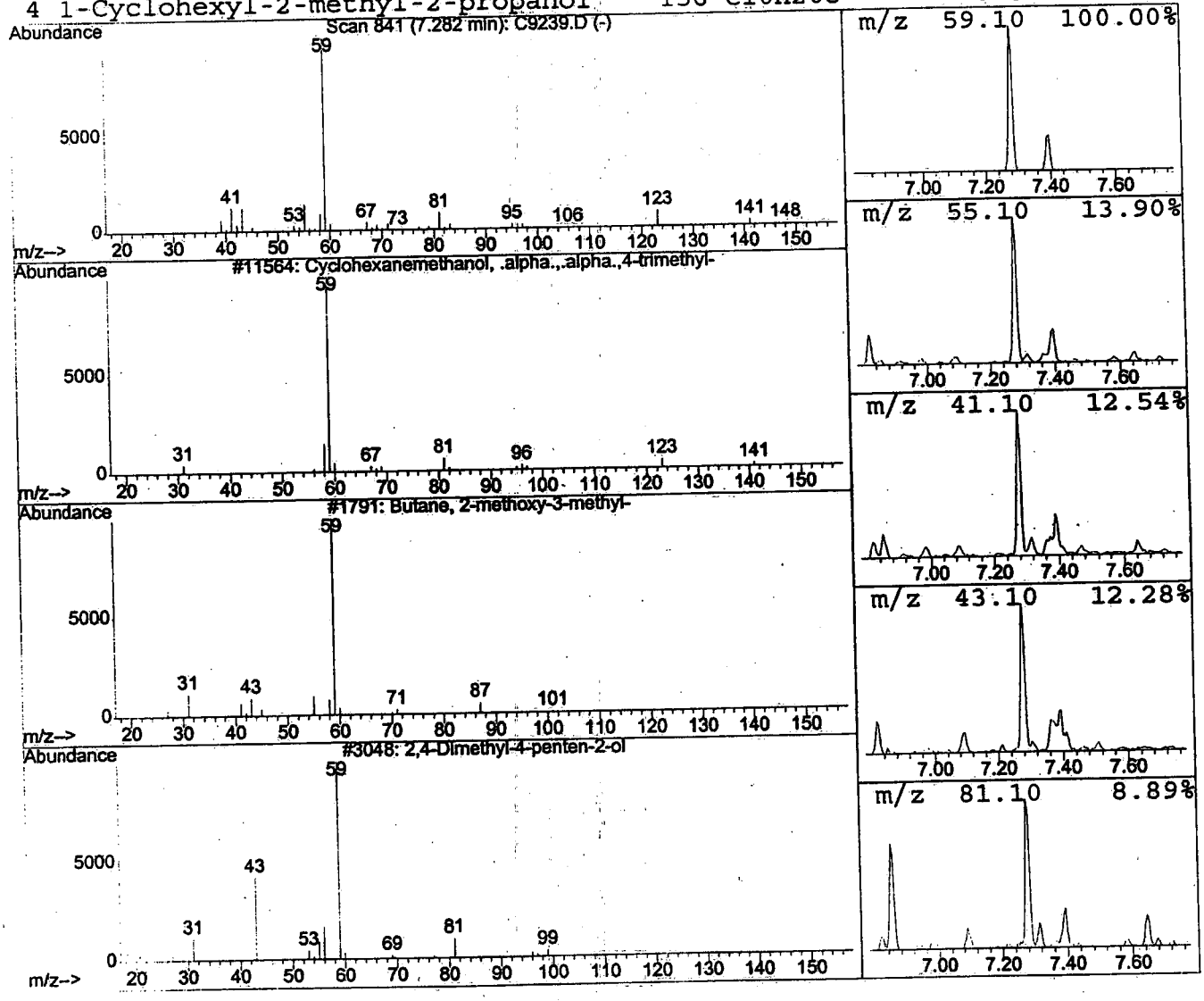
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown cyclic hydrocarbon Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.28	44.66 UG	711151	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	64
2	Butane, 2-methoxy-3-methyl-	102	C6H14O	062016-49-3	50
3	2,4-Dimethyl-4-penten-2-ol	114	C7H14O	019781-53-4	45
4	1-Cyclohexyl-2-methyl-2-propanol	156	C10H20O	005531-30-6	40



000073

4331

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

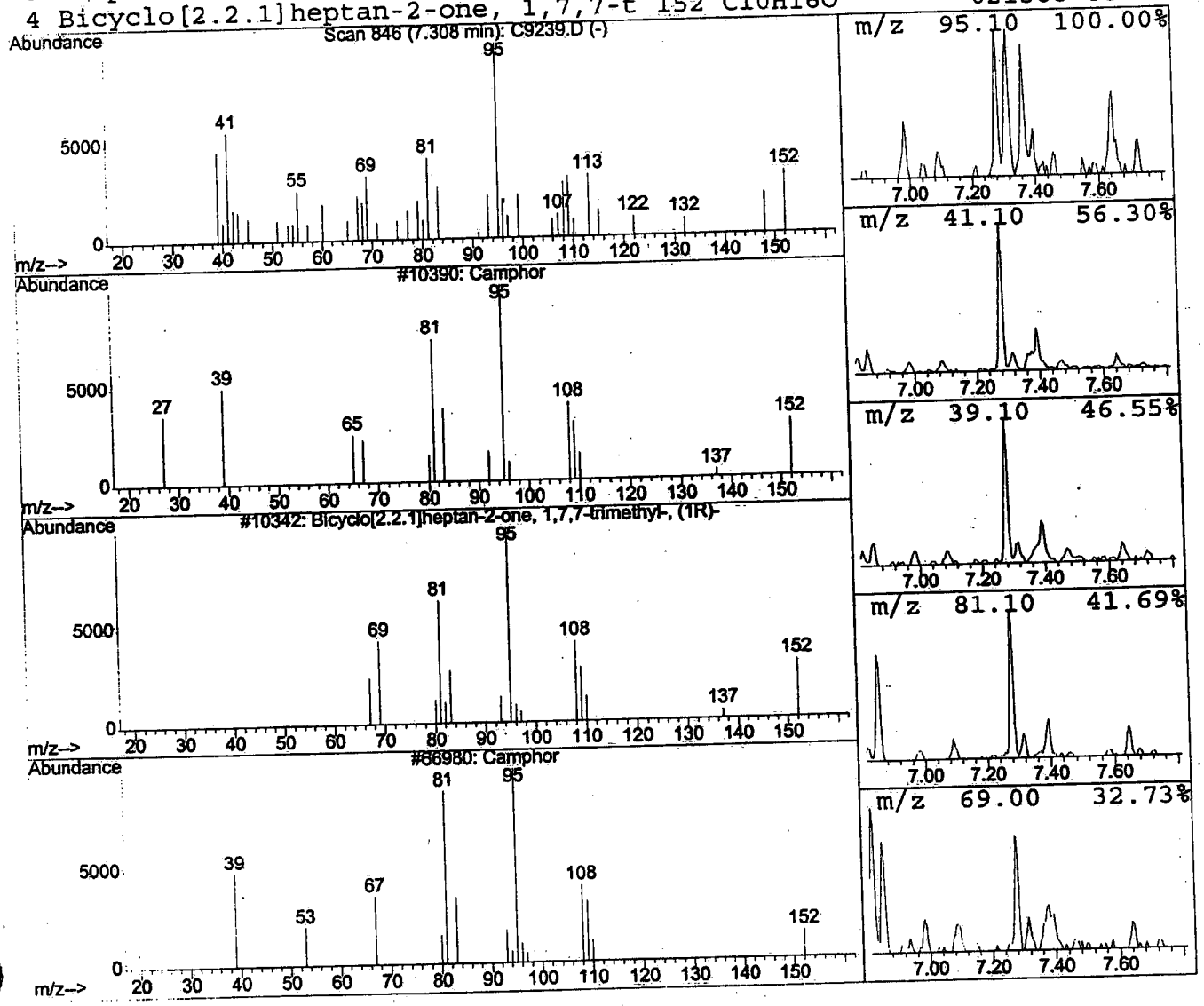
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown cyclic hydrocarbon Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.31	4.35 UG	69204	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Camphor	152	C10H16O	000076-22-2	92
2	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-49-3	91
3	Camphor	152	C10H16O	000076-22-2	83
4	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	021368-68-3	64



4332

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

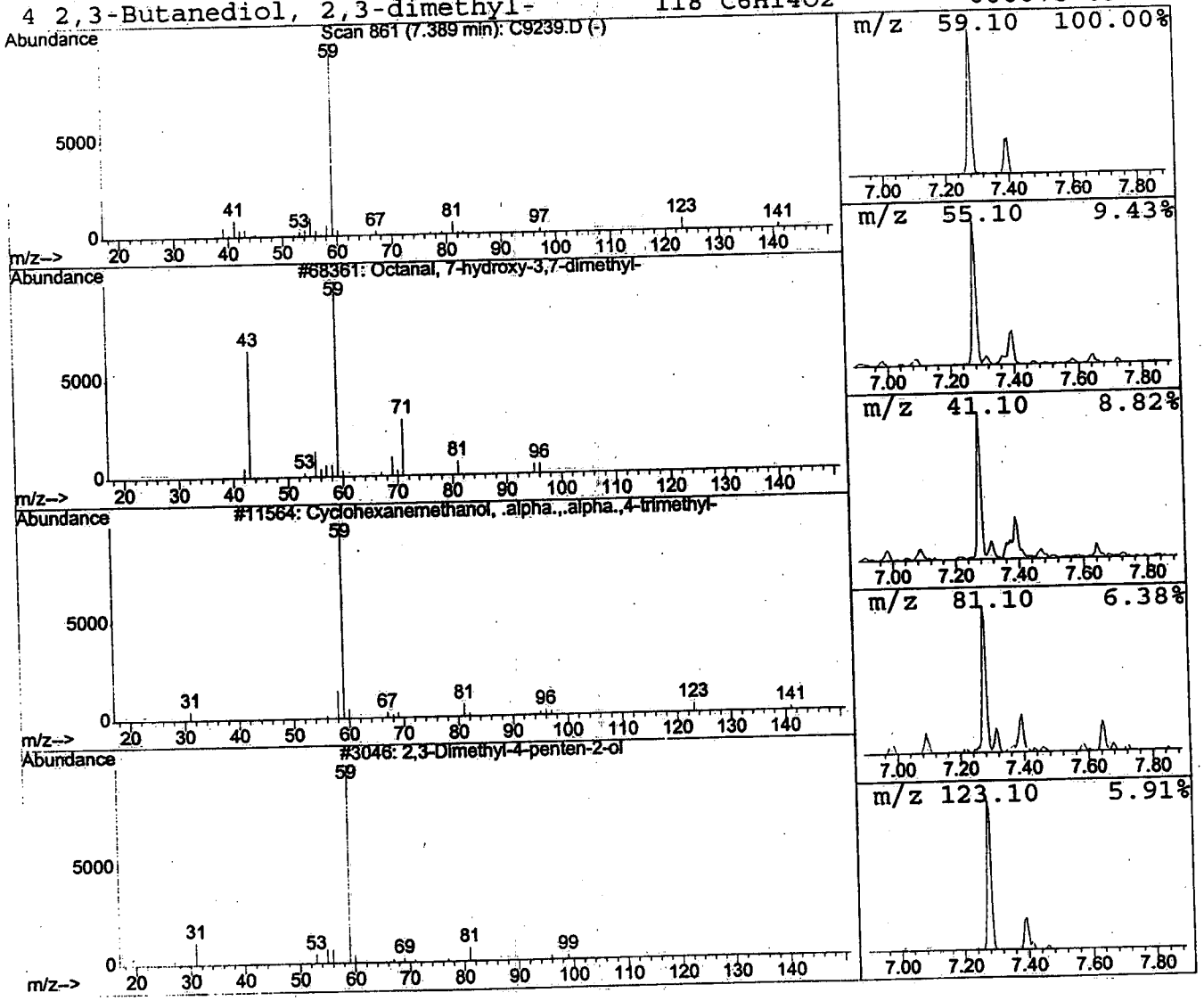
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.39	10.98 UG	174903	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octanal, 7-hydroxy-3,7-dimethyl-	172	C10H20O2	000107-75-5	72
2	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	40
3	2,3-Dimethyl-4-penten-2-ol	114	C7H14O	019781-52-3	9
4	2,3-Butanediol, 2,3-dimethyl-	118	C6H14O2	000076-09-5	9



C00075

4333

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

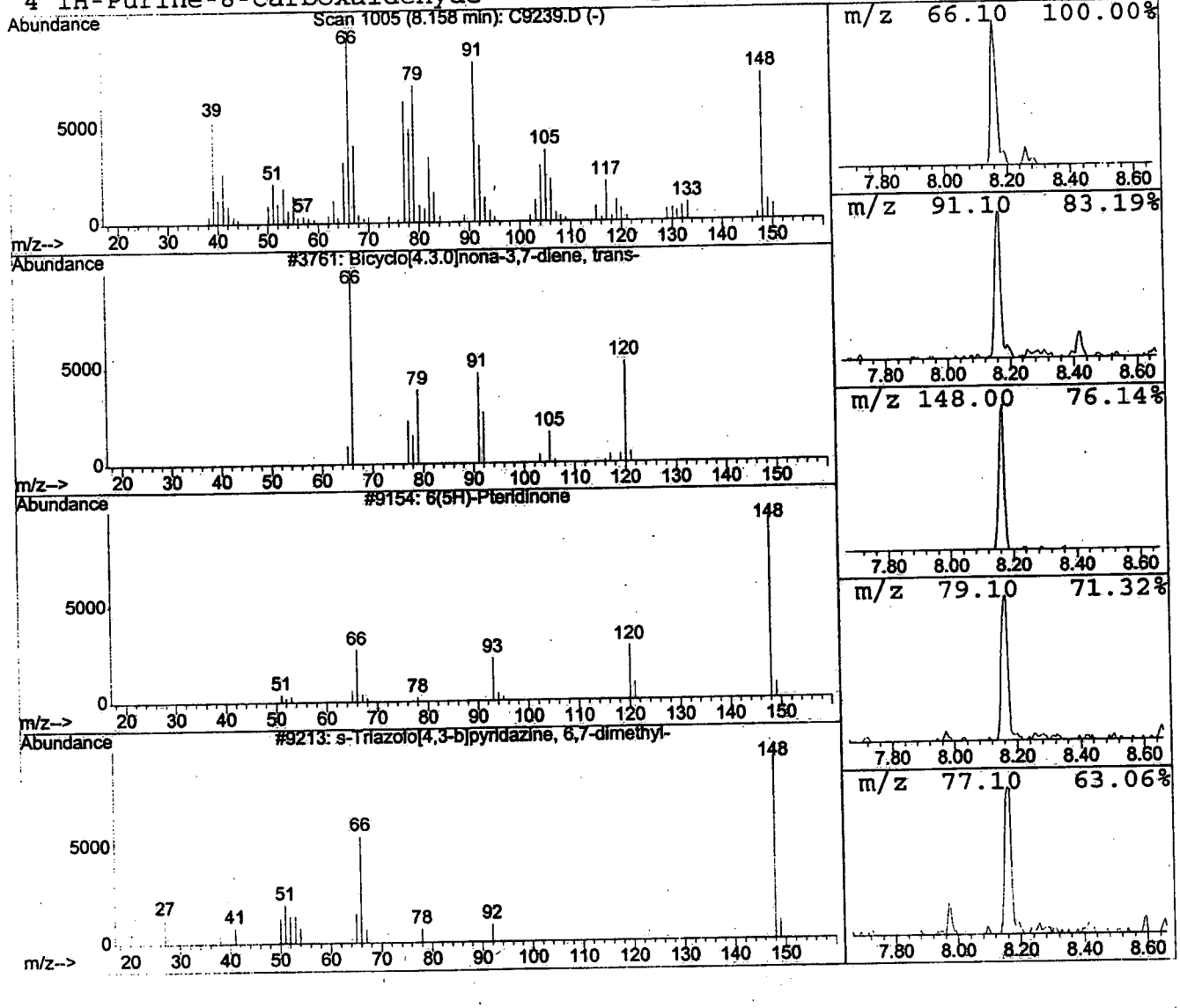
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Unknown — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.16	28.09 UG	447231	Naphthalene-d8	7.58

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.3.0]nona-3,7-diene, trans	120	C9H12	000000-00-0	47
2	6(5H)-Pteridinone	148	C6H4N4O	002432-26-0	46
3	s-Triazolo[4,3-b]pyridazine, 6,7-di	148	C7H8N4	023069-78-5	46
4	1H-Purine-8-carboxaldehyde	148	C6H4N4O	056805-26-6	43



000076

43324

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

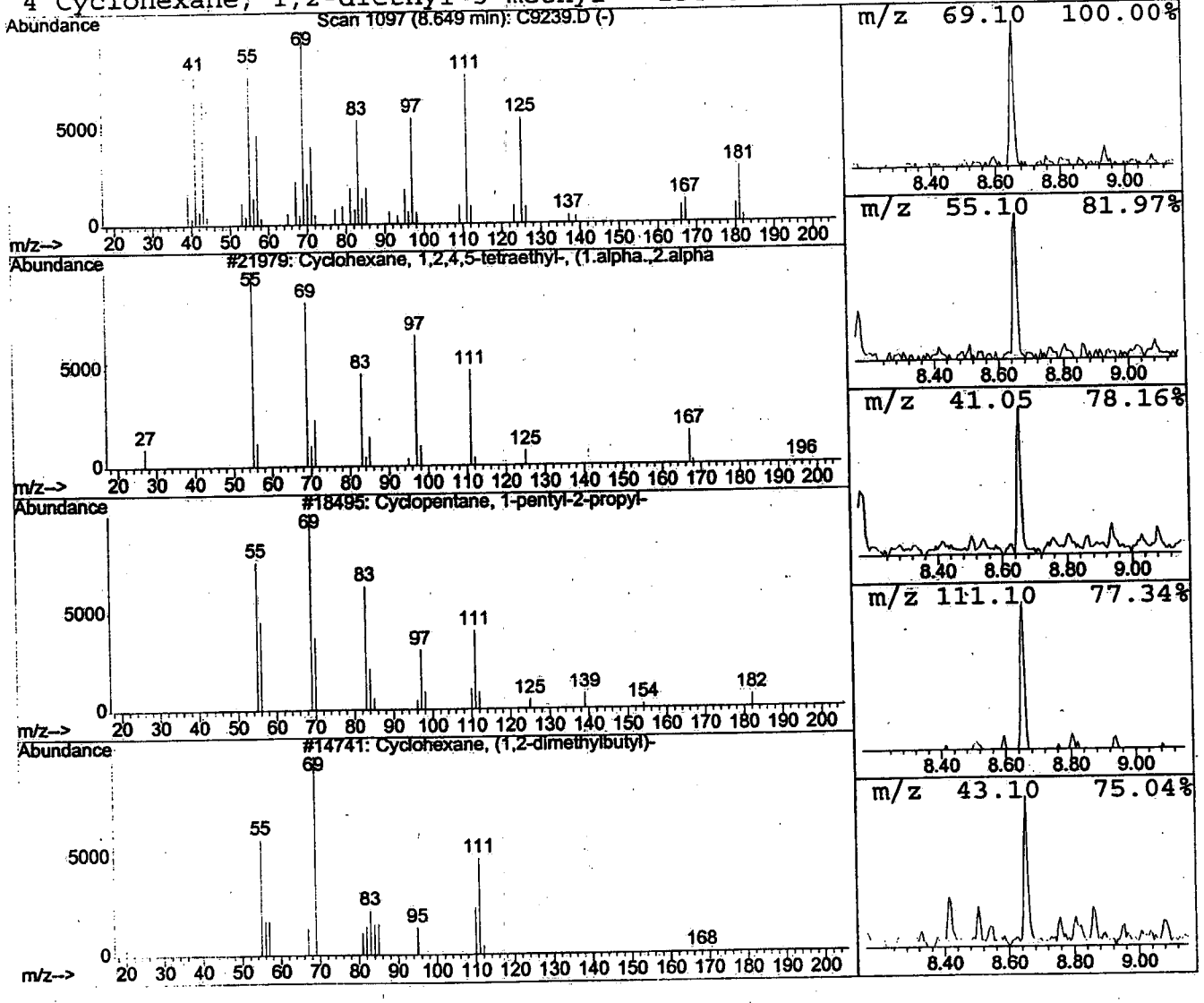
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Unknown — Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.65	10.55 UG	162320	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2,4,5-tetraethyl-, (	196	C14H28	061142-24-3	59
2	Cyclopentane, 1-pentyl-2-propyl-	182	C13H26	062199-51-3	46
3	Cyclohexane, (1,2-dimethylbutyl)-	168	C12H24	061142-37-8	45
4	Cyclohexane, 1,2-diethyl-3-methyl-	154	C11H22	061141-80-8	43



4335

000077

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

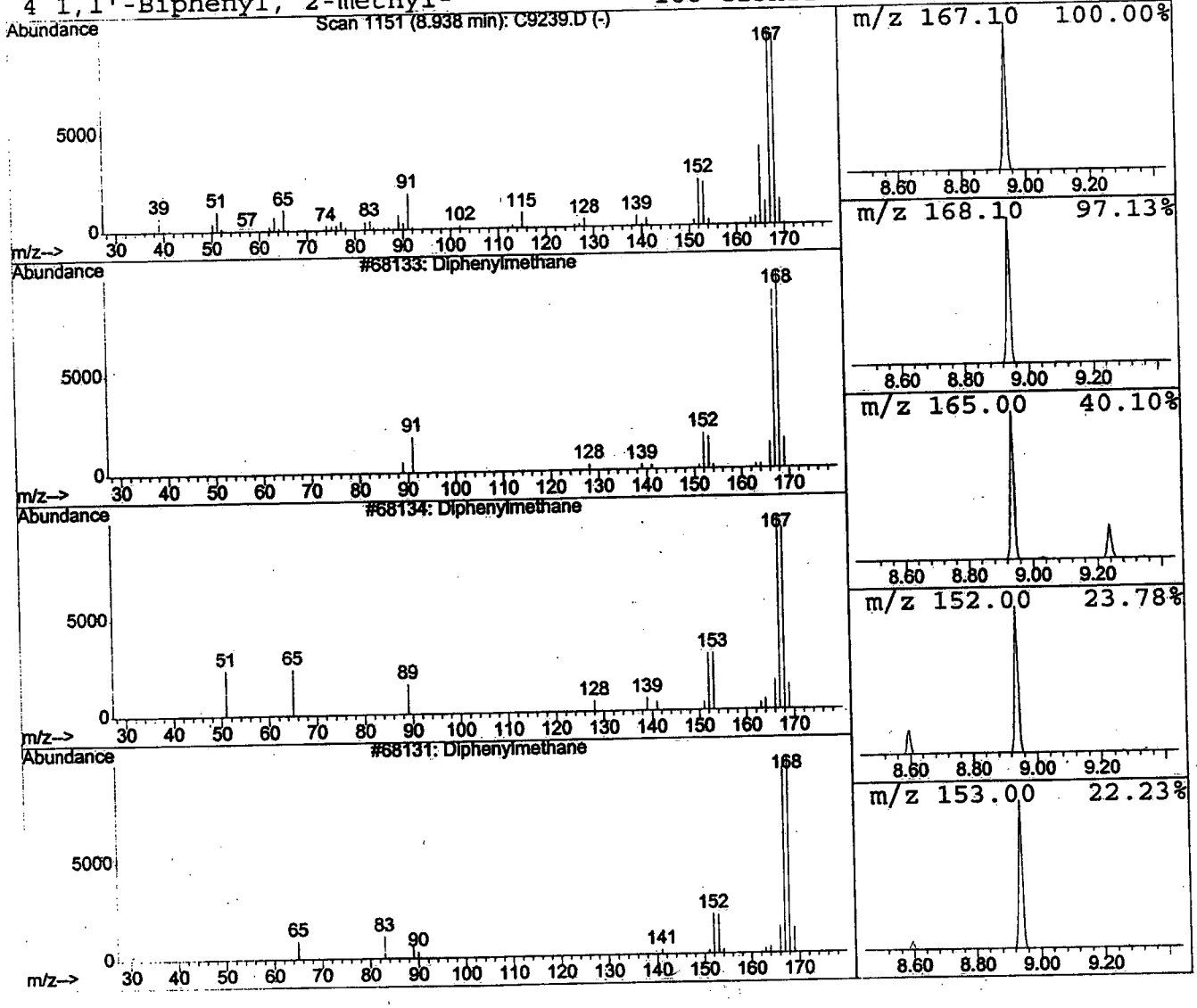
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown aromatic Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.94	63.02 UG	970052	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Diphenylmethane	168	C13H12	000101-81-5	96
2	Diphenylmethane	168	C13H12	000101-81-5	95
3	Diphenylmethane	168	C13H12	000101-81-5	93
4	1,1'-Biphenyl, 2-methyl-	168	C13H12	000643-58-3	91



000073

4336

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

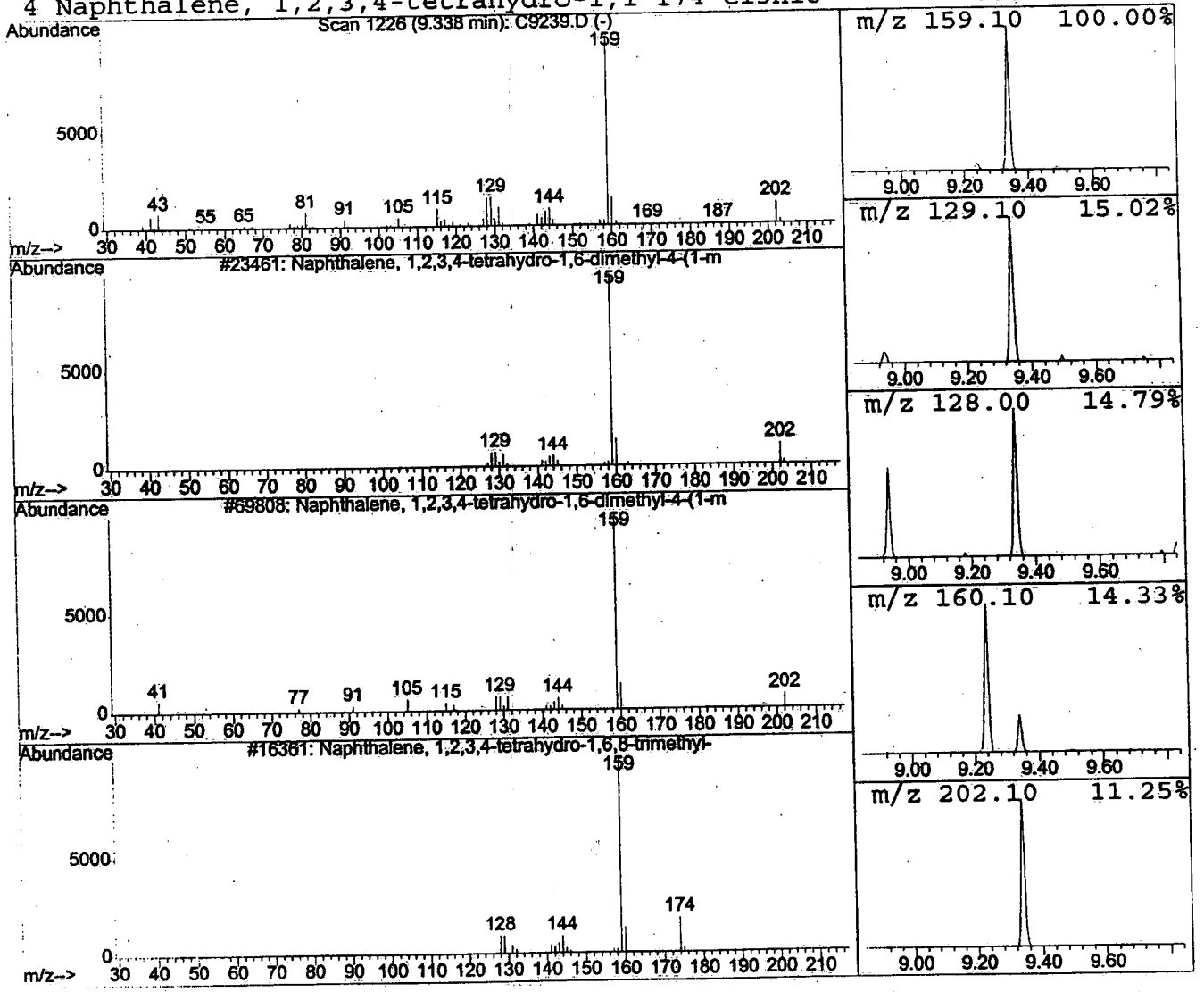
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 Substituted naphthalene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.34	20.47 UG	315071	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	96
2	Naphthalene, 1,2,3,4-tetrahydro-1,6	202	C15H22	000483-77-2	95
3	Naphthalene, 1,2,3,4-tetrahydro-1,6	174	C13H18	030316-36-0	86
4	Naphthalene, 1,2,3,4-tetrahydro-1,1	174	C13H18	000475-03-6	86



4337

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

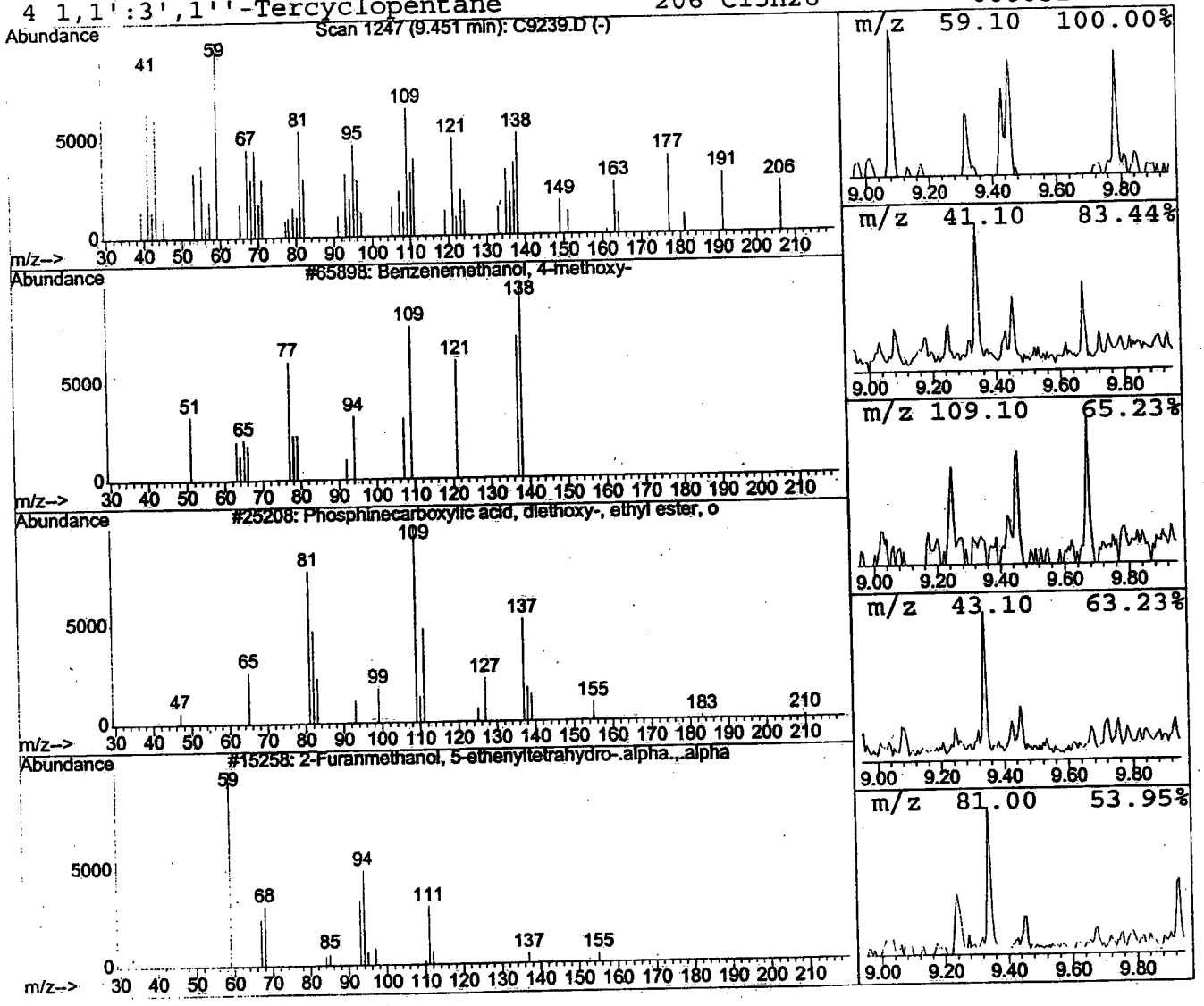
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 10 Unknown — Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.45	4.48 UG	68933	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzenemethanol, 4-methoxy-	138	C8H10O2	000105-13-5	15
2	Phosphinecarboxylic acid, diethoxy-	210	C7H15O5P	001474-78-8	14
3	2-Furanmethanol, 5-ethenyltetrahydr	170	C10H18O2	005989-33-3	12
4	1,1':3',1''-Tercyclopentane	206	C15H26	006051-40-7	10



4336

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

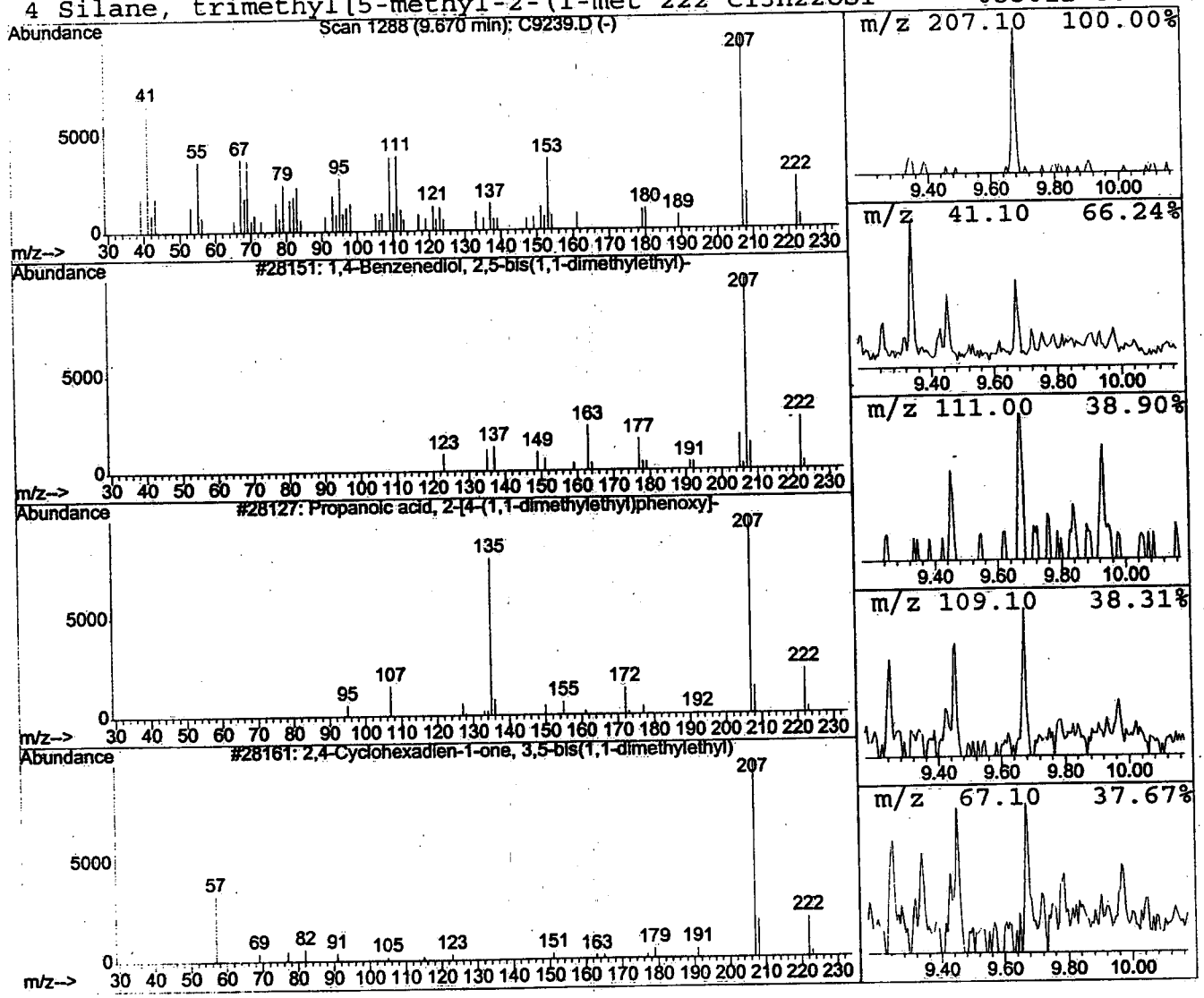
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 11 Unknown — Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.67	4.35 UG	66994	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,4-Benzenediol, 2,5-bis(1,1-dimeth	222	C14H22O2	000088-58-4	38
2	Propanoic acid, 2-[4-(1,1-dimethyle	222	C13H18O3	006941-12-4	35
3	2,4-Cyclohexadien-1-one, 3,5-bis(1,	222	C14H22O2	054965-43-4	35
4	Silane, trimethyl[5-methyl-2-(1-met	222	C13H22OSi	055012-80-1	35



4339

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

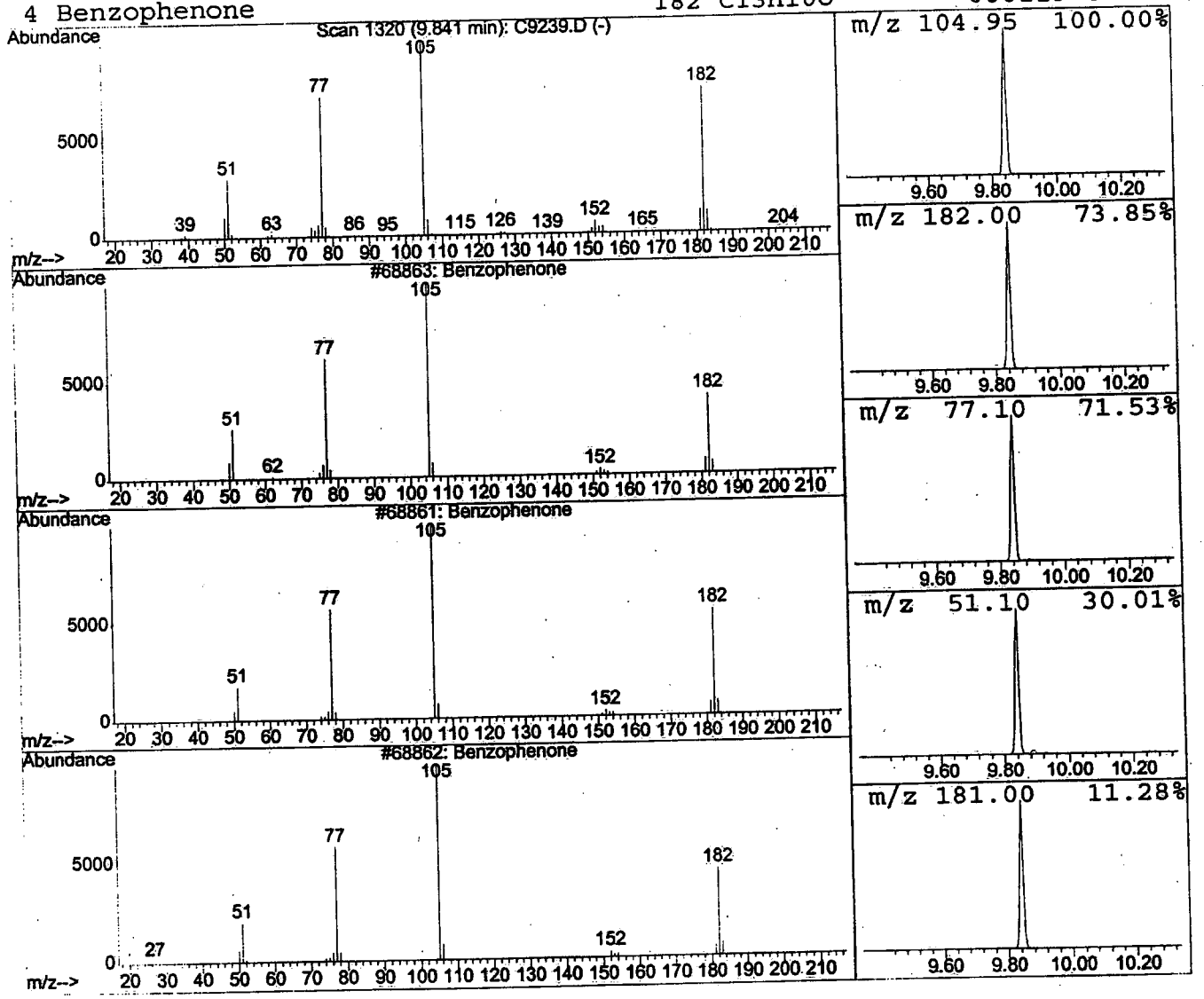
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 12 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.84	81.46 UG	1253840	Acenaphthene-d10	9.24

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzophenone	182	C13H10O	000119-61-9	95
2	Benzophenone	182	C13H10O	000119-61-9	95
3	Benzophenone	182	C13H10O	000119-61-9	95
4	Benzophenone	182	C13H10O	000119-61-9	95



000082

4340

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9239.D
Acq On : 9 Apr 2001 16:30
Sample : TW-1,2153-001,A,1000mL,100,04/09/01
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,1
MS Integration Params: LSCINT.P

Vial: 10
Operator: DP
Inst : MSD-C
Multiplr: 1.00

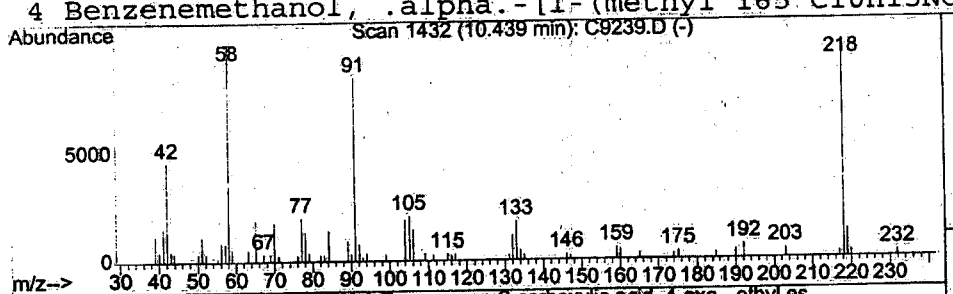
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

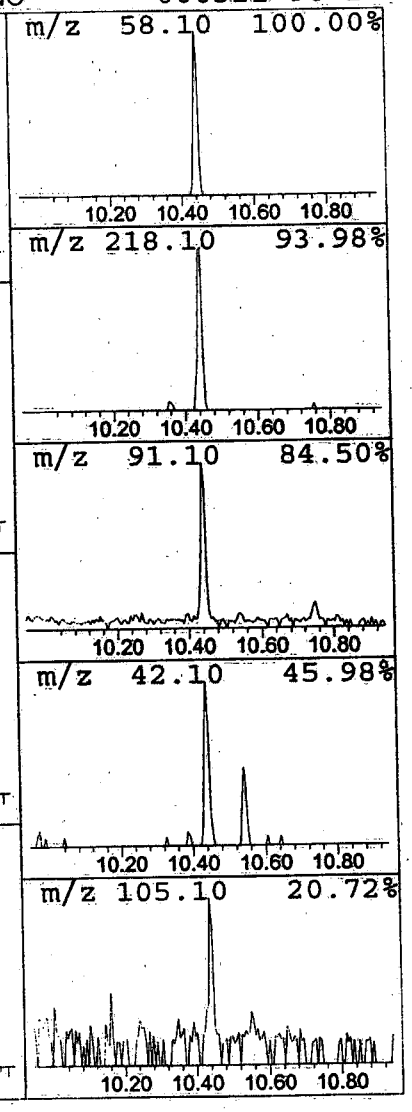
****

Peak Number 13 Unknown — Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.44	11.49 UG	109874	Phenanthrene-d10	10.55

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4H-1-Benzopyran-2-carboxylic acid,	218	C12H10O4	014736-31-3	47
2	1,1'-Biphenyl, 4-chloro-4'-methoxy-	218	C13H11ClO	058970-19-7	43
3	Ethyl N-isopropyl-3-phenylpropanimi	219	C14H21NO	000000-00-0	32
4	Benzenemethanol, .alpha.-[1-(methyl	165	C10H15NO	000321-98-2	27





4341

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-09-01\C9234.D Vial: 5
Acq On : 9 Apr 2001 13:56 Operator: DP
Sample : .,Method-Blank,A,1000mL,100,04/09/01 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
IS Integration Params: RTEINT.P
Quant Time: Apr 9 15:37 2001 Quant Results File: CW0501.RES

Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Initial Calibration
DataAcq Meth : CW0501

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.20	152	102512	40.00	UG	0.00
22) Naphthalene-d8	7.58	136	299366	40.00	UG	0.00
39) Acenaphthene-d10	9.24	164	124517	40.00	UG	0.00
60) Phenanthrene-d10	10.54	188	147998	40.00	UG	0.00
75) Chrysene-d12	13.01	240	63834	40.00	UG	0.04
84) Perylene-d12	15.19	264	38817	40.00	UG	0.04
System Monitoring Compounds						
4) 2-Fluorophenol	4.54	112	173301	60.08	UG	0.00
Spiked Amount 100.000	Range 42 - 95		Recovery = 60.08%			
6) Phenol-d5	5.68	99	207852	73.99	UG	0.00
Spiked Amount 100.000	Range 59 - 97		Recovery = 73.99%			
23) Nitrobenzene-d5	6.82	82	66461	32.15	UG	0.00
Spiked Amount 50.000	Range 49 - 105		Recovery = 64.30%			
43) 2-Fluorobiphenyl	8.59	172	156045	36.01	UG	0.00
Spiked Amount 50.000	Range 54 - 110		Recovery = 72.02%			
64) 2,4,6-Tribromophenol	9.93	330	30847	61.02	UG	0.00
Spiked Amount 100.000	Range 48 - 126		Recovery = 61.02%			
77) Terphenyl-d14	11.89	244	104383	61.24	UG	0.02
Spiked Amount 50.000	Range 53 - 123		Recovery = 122.48%			

Target Compounds Qvalue

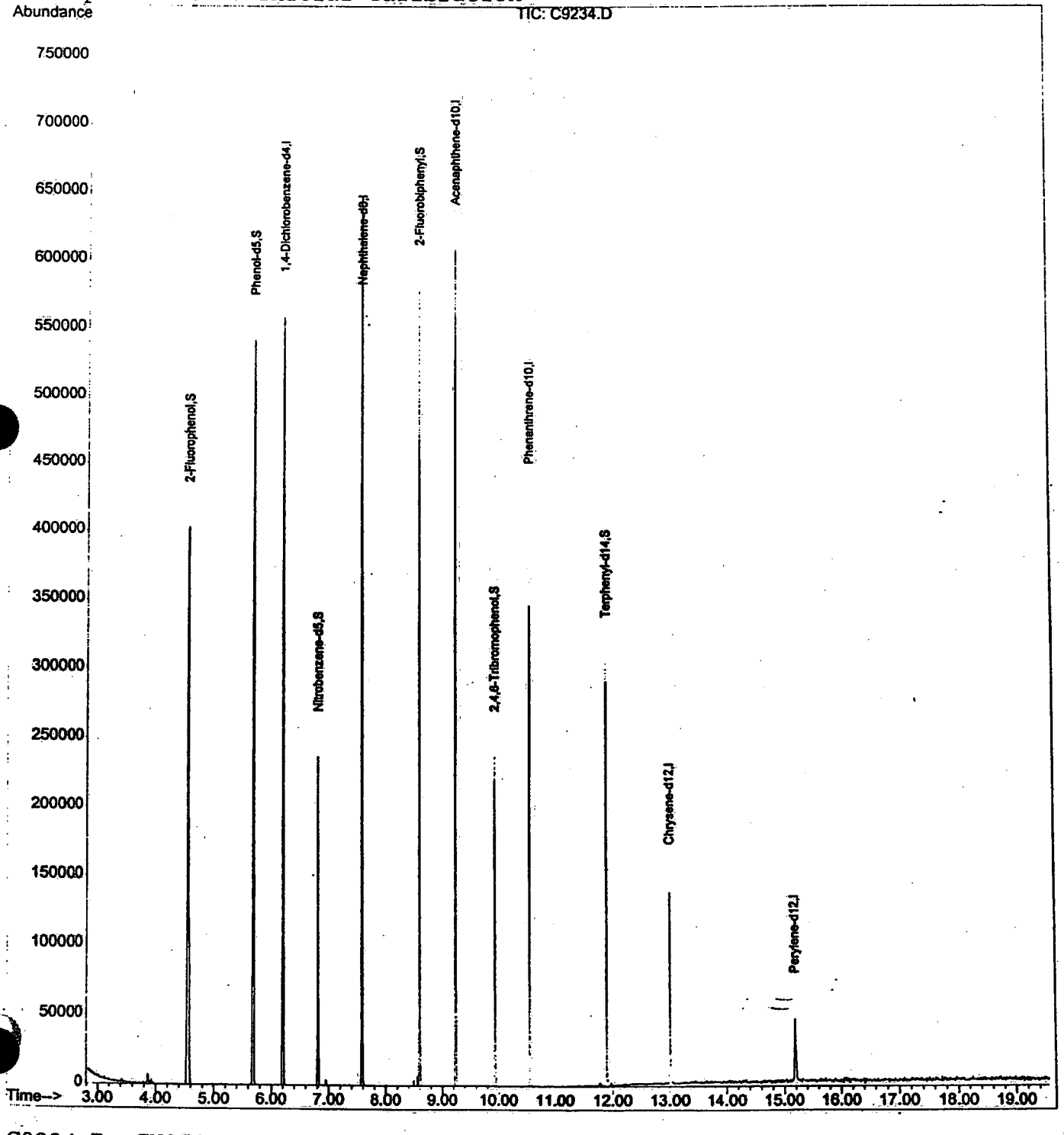
(#) = qualifier out of range (m) = manual integration

4342

Quantitation Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9234.D Vial: 5
Acq On : 9 Apr 2001 13:56 Operator: DP
Sample : .,Method-Blank,A,1000mL,100,04/09/01 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 9 15:37 2001 Quant Results File: CW0501.RES

Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Mon Apr 09 12:02:57 2001
Response via : Initial Calibration



HB243

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\04-09-01\C9234.D Vial: 5
Acq On : 9 Apr 2001 13:56 Operator: DP
Sample : .,Method-Blank,A,1000mL,100,04/09/01 Inst : MSD-C
isc : N/A,N/A,N/A,1 Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\CW0501.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

****
C9234.D CW0501.M Mon Apr 09 15:37:24 2001 MSD-C

000086

43344

PCB METHOD BLANK SUMMARY

Lab File ID: V4941.D

Instrument ID: GC-V

Date Extracted: 04/04/2001

Matrix: AQUEOUS

Date Analyzed: 04/04/2001

Time Analyzed: 20:30

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
PS4-4-3A	2049-001	04/04/2001	21:00
FB1-4-3A	2049-003	04/04/2001	21:31
PCB	2049-001-MSD2	04/04/2001	22:33
PCB	PBW0404-MS2	04/04/2001	23:03
PS4-4-3S	2049-002	04/05/2001	09:34
PCB	2049-001-MS2	04/05/2001	10:05

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 0404-BLK2
Client ID: (2049)
Date Received: NA
Date Extracted: 04/04/2001
Date Analyzed: 04/04/2001
Data file: V4941.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

4346

000088

PCB METHOD BLANK SUMMARY

Lab File ID: V5002.D

Instrument ID: GC-V

Date Extracted: 04/09/2001

Matrix: AQUEOUS

Date Analyzed: 04/09/2001

Time Analyzed: 13:39

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
TW-1	2153-001	04/09/2001	14:10
PCB	PBW0409-MS2	04/09/2001	14:41

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 0409-BLK2
Client ID: (2153)
Date Received: NA
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: V5002.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

43248

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001

Instrument ID: Varian 3400

GC Column (1st): DB-5

Data File: V4879.D V4880.D V4881.D V4882.D V4883.D

Compound	RT OF STANDARDS					MEAN	RT WI NDOW	
	200	500	1000	2000	4000	RT	FROM	TO
Aroclor-1016	5.80	5.80	5.80	5.80	5.80	5.80	5.73	5.87
Aroclor-1016 {2}	6.89	6.89	6.89	6.89	6.89	6.89	6.82	6.96
Aroclor-1016 {3}	7.33	7.33	7.33	7.33	7.33	7.33	7.26	7.40
Aroclor-1016 {4}	9.20	9.20	9.20	9.20	9.20	9.20	9.13	9.27
Aroclor-1016 {5}	9.68	9.68	9.68	9.68	9.68	9.68	9.61	9.75
Aroclor-1221			3.83				3.76	3.90
Aroclor-1221 {2}			5.44				5.37	5.51
Aroclor-1221 {3}			5.67				5.60	5.74
Aroclor-1221 {4}			5.80				5.73	5.87
Aroclor-1221 {5}			6.90				6.83	6.97
Aroclor-1232			5.80				5.73	5.87
Aroclor-1232 {2}			6.83				6.76	6.90
Aroclor-1232 {3}			8.35				8.28	8.42
Aroclor-1232 {4}			9.20				9.13	9.27
Aroclor-1232 {5}			10.05				9.98	10.12
Aroclor-1242			7.33				7.26	7.40
Aroclor-1242 {2}			9.20				9.13	9.27
Aroclor-1242 {3}			9.78				9.71	9.85
Aroclor-1242 {4}			10.99				10.92	11.06
Aroclor-1242 {5}			11.51				11.44	11.58
Aroclor-1248			8.07				8.00	8.14
Aroclor-1248 {2}			9.19				9.12	9.26
Aroclor-1248 {3}			9.77				9.70	9.84
Aroclor-1248 {4}			10.98				10.91	11.05
Aroclor-1248 {5}			11.49				11.42	11.56
Aroclor-1254			11.74				11.67	11.81
Aroclor-1254 {2}			12.56				12.49	12.63
Aroclor-1254 {3}			13.72				13.65	13.79
Aroclor-1254 {4}			14.46				14.39	14.53
Aroclor-1254 {5}			15.33				15.26	15.40
Aroclor-1260	15.33	15.33	15.33	15.33	15.33	15.33	15.26	15.40
Aroclor-1260 {2}	15.89	15.89	15.89	15.89	15.89	15.89	15.82	15.96
Aroclor-1260 {3}	17.54	17.53	17.54	17.54	17.53	17.53	17.46	17.60
Aroclor-1260 {4}	18.46	18.46	18.46	18.46	18.46	18.46	18.39	18.53
Aroclor-1260 {5}	20.51	20.51	20.51	20.51	20.51	20.51	20.44	20.58

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001 Instrument ID: Varian 3400

GC Column (1st): DB-5

Data File: V4879.D V4880.D V4881.D V4882.D V4883.D

Compound	CALIBRATION FACTORS 200	500	1000	2000	4000	MEAN	%RSD
Aroclor-1016	6227	6407	6117	6380	5357	6098	7.06
Aroclor-1016 {2}	4874	5091	4819	5117	4301	4840	6.79
Aroclor-1016 {3}	8659	8707	8314	8610	7218	8302	7.52
Aroclor-1016 {4}	5050	5220	5024	5286	4392	4994	7.10
Aroclor-1016 {5}	7280	7405	7017	7300	6087	7018	7.69
Aroclor-1221			2100				
Aroclor-1221 {2}			3561				
Aroclor-1221 {3}			3370				
Aroclor-1221 {4}			8799				
Aroclor-1221 {5}			1175				
Aroclor-1232			5822				
Aroclor-1232 {2}			2891				
Aroclor-1232 {3}			4281				
Aroclor-1232 {4}			2035				
Aroclor-1232 {5}			4343				
Aroclor-1242			5779				
Aroclor-1242 {2}			3374				
Aroclor-1242 {3}			4066				
Aroclor-1242 {4}			7465				
Aroclor-1242 {5}			7715				
Aroclor-1248			11196				
Aroclor-1248 {2}			5874				
Aroclor-1248 {3}			5151				
Aroclor-1248 {4}			15157				
Aroclor-1248 {5}			15014				
Aroclor-1254			14779				
Aroclor-1254 {2}			13098				
Aroclor-1254 {3}			20763				
Aroclor-1254 {4}			13828				
Aroclor-1254 {5}			23989				
Aroclor-1260	26817	26595	24956	26238	22357	25393	7.26
Aroclor-1260 {2}	23479	23313	22286	23486	19993	22511	6.63
Aroclor-1260 {3}	53488	53166	50012	55452	51067	52637	4.06
Aroclor-1260 {4}	24143	24378	23286	24540	21175	23504	5.91
Aroclor-1260 {5}	13746	13823	13823	14518	12773	13737	4.54
					Average %RSD		6.46

4350

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001

Instrument ID: Varian 3400

GC Column (2nd): DB-1701P

Data File: V4879.C V4880.C V4881.C V4882.C V4883.C

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	200	500	1000	2000	4000	RT	FROM	TO
Aroclor-1016	6.37	6.37	6.37	6.37	6.37	6.37	6.30	6.44
Aroclor-1016 {2}	7.44	7.44	7.44	7.44	7.44	7.44	7.37	7.51
Aroclor-1016 {3}	8.80	8.80	8.80	8.80	8.80	8.80	8.73	8.87
Aroclor-1016 {4}	9.19	9.19	9.19	9.19	9.19	9.19	9.12	9.26
Aroclor-1016 {5}	9.51	9.51	9.51	9.51	9.51	9.51	9.44	9.58
Aroclor-1221			4.11				4.04	4.18
Aroclor-1221 {2}			5.81				5.74	5.88
Aroclor-1221 {3}			6.23				6.16	6.30
Aroclor-1221 {4}			6.39				6.32	6.46
Aroclor-1221 {5}			7.46				7.39	7.53
Aroclor-1232			6.37				6.30	6.44
Aroclor-1232 {2}			7.44				7.37	7.51
Aroclor-1232 {3}			8.80				8.73	8.87
Aroclor-1232 {4}			9.51				9.44	9.58
Aroclor-1232 {5}			10.62				10.55	10.69
Aroclor-1242			8.14				8.07	8.21
Aroclor-1242 {2}			9.51				9.44	9.58
Aroclor-1242 {3}			10.96				10.89	11.03
Aroclor-1242 {4}			11.95				11.88	12.02
Aroclor-1242 {5}			12.69				12.62	12.76
Aroclor-1248			8.79				8.72	8.86
Aroclor-1248 {2}			9.89				9.82	9.96
Aroclor-1248 {3}			10.61				10.54	10.68
Aroclor-1248 {4}			10.90				10.83	10.97
Aroclor-1248 {5}			11.55				11.48	11.62
Aroclor-1254			12.49				12.42	12.56
Aroclor-1254 {2}			13.60				13.53	13.67
Aroclor-1254 {3}			14.77				14.70	14.84
Aroclor-1254 {4}			15.21				15.14	15.28
Aroclor-1254 {5}			16.34				16.27	16.41
Aroclor-1260	15.21	15.21	15.21	15.21	15.21	15.21	15.14	15.28
Aroclor-1260 {2}	16.47	16.47	16.47	16.47	16.47	16.47	16.40	16.54
Aroclor-1260 {3}	17.48	17.48	17.48	17.48	17.48	17.48	17.41	17.55
Aroclor-1260 {4}	18.45	18.45	18.45	18.45	18.45	18.45	18.38	18.52
Aroclor-1260 {5}	20.74	20.74	20.73	20.74	20.73	20.74	20.67	20.81

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 03/29/2001

Instrument ID: Varian 3400

GC Column (2nd): DB-1701P

Data File: V4879.C V4880.C V4881.C V4882.C V4883.C

Compound	CALIBRATION FACTORS 200	500	1000	2000	4000	MEAN	%RSD
Aroclor-1016	7118	7192	6869	7111	5969	6852	7.42
Aroclor-1016 {2}	13249	13189	12403	12915	10800	12511	8.10
Aroclor-1016 {3}	31360	30917	29095	30687	26753	29762	6.34
Aroclor-1016 {4}	10575	10712	10190	10632	8893	10200	7.43
Aroclor-1016 {5}	10858	10867	10407	10885	9077	10419	7.45
Aroclor-1221			2407				
Aroclor-1221 {2}			4276				
Aroclor-1221 {3}			2616				
Aroclor-1221 {4}			9610				
Aroclor-1221 {5}			814				
Aroclor-1232			6285				
Aroclor-1232 {2}			4891				
Aroclor-1232 {3}			11395				
Aroclor-1232 {4}			4013				
Aroclor-1232 {5}			5432				
Aroclor-1242			3856				
Aroclor-1242 {2}			7021				
Aroclor-1242 {3}			1402				
Aroclor-1242 {4}			7636				
Aroclor-1242 {5}			5413				
Aroclor-1248			18813				
Aroclor-1248 {2}			12765				
Aroclor-1248 {3}			14673				
Aroclor-1248 {4}			14201				
Aroclor-1248 {5}			8924				
Aroclor-1254			15038				
Aroclor-1254 {2}			13092				
Aroclor-1254 {3}			18915				
Aroclor-1254 {4}			11076				
Aroclor-1254 {5}			23553				
Aroclor-1260	22062	21873	20369	21104	17700	20621	8.56
Aroclor-1260 {2}	17535	17596	16506	17108	14273	16603	8.27
Aroclor-1260 {3}	19980	19847	18510	19225	16217	18756	8.18
Aroclor-1260 {4}	47968	48199	45069	48097	42661	46399	5.31
Aroclor-1260 {5}	5472	5619	5418	5793	5071	5475	4.90
					Average %RSD		7.20

C00094

4352

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 04/09/2001 Instrument ID: Varian 3400

Data File: V5005.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
Aroclor-1016	5.81	5.74	5.88	6098	6857	12.46
Aroclor-1016 {2}	6.91	6.84	6.98	4840	5452	12.64
Aroclor-1016 {3}	7.35	7.28	7.42	8302	9353	12.67
Aroclor-1016 {4}	9.22	9.15	9.29	4994	5654	13.21
Aroclor-1016 {5}	9.70	9.63	9.77	7018	7946	13.22
Aroclor-1260	15.35	15.28	15.42	25393	28860	13.65
Aroclor-1260 {2}	15.91	15.84	15.98	22511	25658	13.98
Aroclor-1260 {3}	17.56	17.49	17.63	52637	58385	10.92
Aroclor-1260 {4}	18.48	18.41	18.55	23504	26767	13.88
Aroclor-1260 {5}	20.53	20.46	20.60	13737	15765	14.77
					Average %D	13.14

Data File: V5005.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
Aroclor-1016	6.37	6.30	6.44	6852	7061	3.05
Aroclor-1016 {2}	7.44	7.37	7.51	12511	12815	2.43
Aroclor-1016 {3}	8.80	8.73	8.87	29762	29903	0.47
Aroclor-1016 {4}	9.19	9.12	9.26	10200	10537	3.30
Aroclor-1016 {5}	9.51	9.44	9.58	10419	10720	2.89
Aroclor-1260	15.21	15.14	15.28	20621	21290	3.24
Aroclor-1260 {2}	16.47	16.40	16.54	16603	17252	3.91
Aroclor-1260 {3}	17.48	17.41	17.55	18756	19582	4.40
Aroclor-1260 {4}	18.45	18.38	18.52	46399	47042	1.39
Aroclor-1260 {5}	20.73	20.66	20.80	5475	5847	6.80
					Average %D	3.19

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/09/2001

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(2153)	0409-BLK2	AQUEOUS	108		89		98		83	
TW-1	2153-001	AQUEOUS	106		101		98		94	
PCB	PBW0409-MS2	AQUEOUS	109		90		99		85	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59-147	59-151
DCB = Decachlorobiphenyl	63-179	60-150

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

AQUEOUS PCB MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 2049-001-MSD2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	11.3	113	35 - 161
Aroclor-1260	10.0	0.0	10.8	108	53 - 192

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	0.0	11.2	112	1	21	35 - 161
Aroclor-1260	0.0	10.7	107	1	23	53 - 192

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __2__ outside limits

Spike Recovery: __0___ out of __4__ outside limits

AQUEOUS PCB BLANK SPIKE RECOVERY

Matrix spike Lab sample ID: PBW0409-MS2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	12.7	127	52 - 141
Aroclor-1260	10.0	0.0	11.6	116	49 - 162

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

* Values outside of QC limits

NC Non calculable

Spike Recovery: __0___ out of __2__ outside limits

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-V **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 4.97 DCB 1 22.64 TCMX 2 4.85 DCB 2 22.83

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
(2153)	0409-BLK2	04/09/2001	13:39	4.97		22.64		4.85		22.83	
TW-1	2153-001	04/09/2001	14:10	4.98		22.65		4.86		22.84	
PCB	PBW0409-MS2	04/09/2001	14:41	4.98		22.65		4.86		22.84	

Surrogate QC Limits (± 0.05 Minutes)

TCMX = Tetrachloro-m-xylene

DCB = Decachlorobiphenyl (_ 0.05 Minutes)

\# Column to be used to flag recovery values

* Values outside of QC limits

D Surrogate diluted out

M Matrix interference

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5003.D\ADC1A.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5003.D\ADC1B.CH
Acq On : 9 Apr 2001 14:10 Operator:
Sample : TW-1,2153-001,A,1000mL,100,04/09/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/04/01,04/05/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 07:33:53 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.98	4.86	91942826	89450248	106.206	97.483
Spiked Amount 100.000			Recovery =		106.21%	97.48%
2) S DCB	22.65	22.84	88570002	79797282	100.683	94.031
Spiked Amount 100.000			Recovery =		100.68%	94.03%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V5003.D VPCB0329.M Tue Apr 10 09:28:58 2001 V3400 Page 1

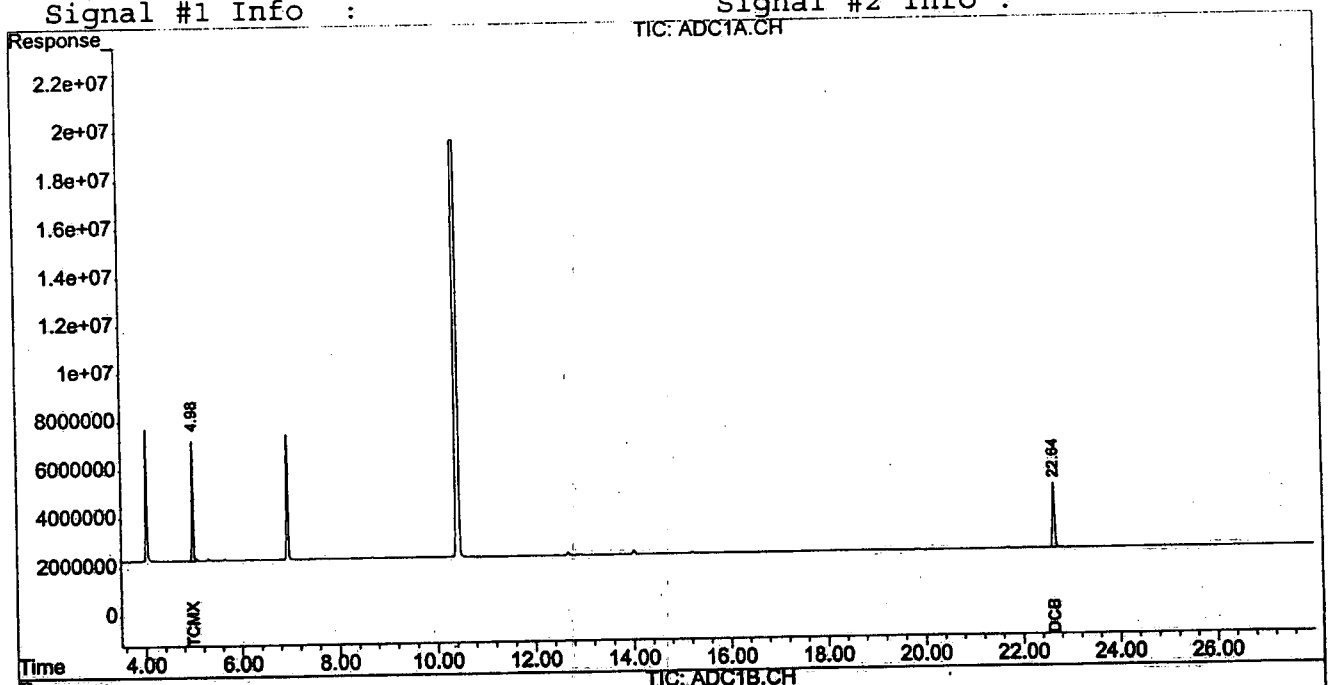
4356

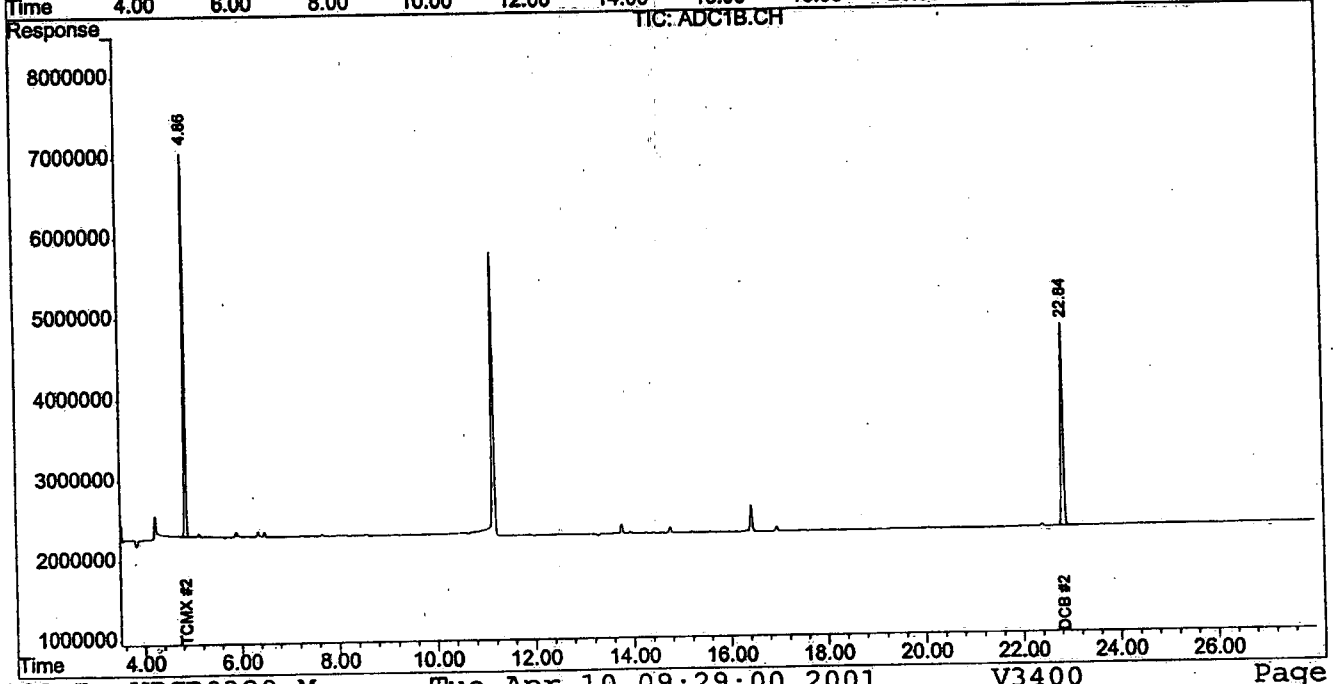
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5003.D\ADC1A.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5003.D\ADC1B.CH
Acq On : 9 Apr 2001 14:10 Operator:
Sample : TW-1,2153-001,A,1000mL,100,04/09/01 Inst : V_3400
Misc : ENVTACT/ORBIS_-_NEWARK,04/04/01,04/05/01 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 7:42 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





4359

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5002.D\ADC1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5002.D\ADC1B.CH
Acq On : 9 Apr 2001 13:39 Operator:
Sample : (2153),0409-BLK2,A,1000mL,100,04/09/01 Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 07:33:45 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	4.97	4.85	93079084	89908437	107.519	97.982
Spiked Amount 100.000			Recovery	=	107.52%	97.98%
2) S DCB	22.64	22.83	78120424	70285273	88.805	82.822
Spiked Amount 100.000			Recovery	=	88.81%	82.82%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
V5002.D VPCB0329.M Tue Apr 10 09:28:50 2001 V3400 Page 1

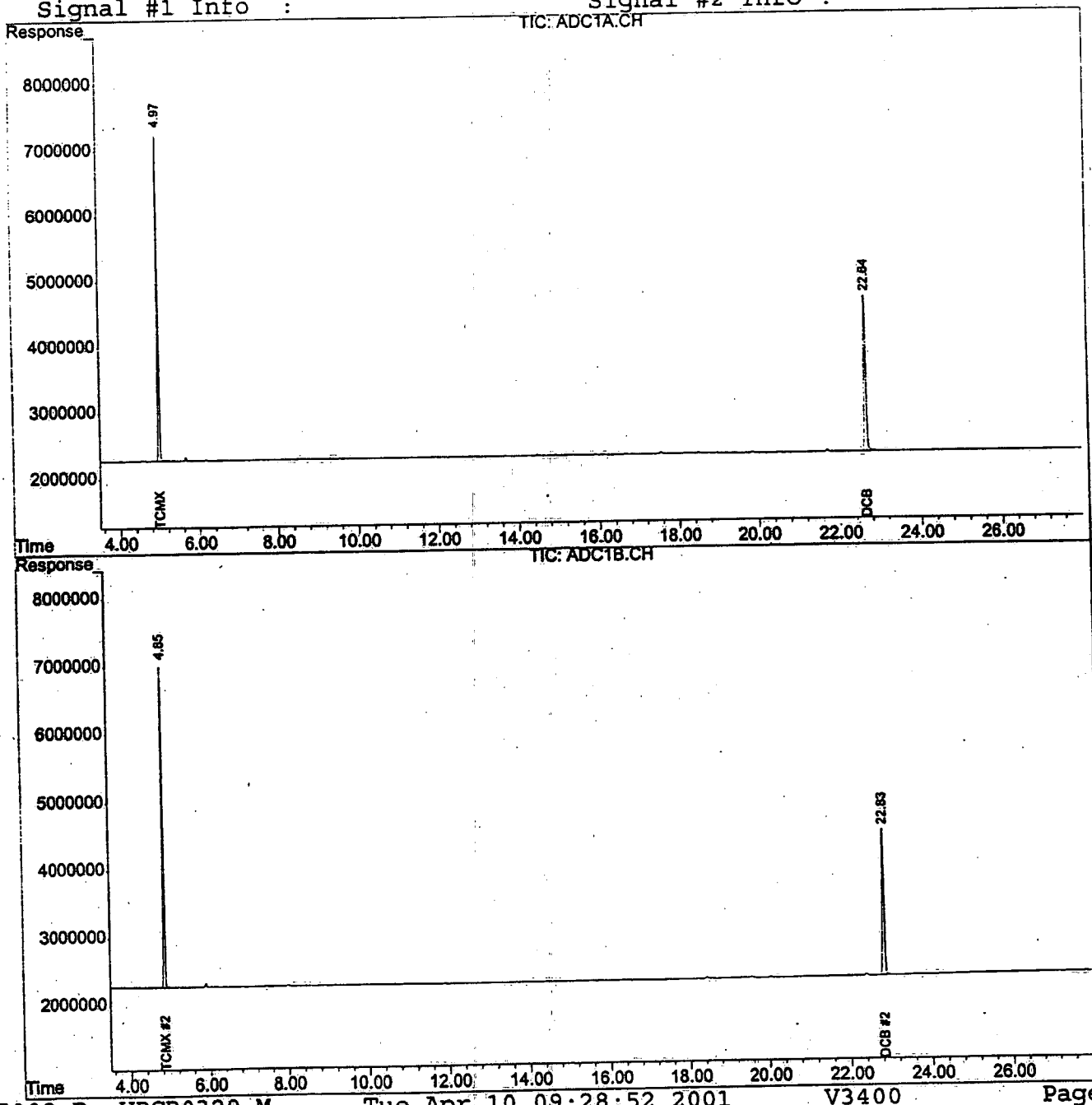
4360

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5002.D\ADC1A.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5002.D\ADC1B.CH
Acq On : 9 Apr 2001 13:39 Operator:
Sample : (2153),0409-BLK2,A,1000mL,100,04/09/01 Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 7:41 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



000103

4361

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5001.D\ADC1A.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5001.D\ADC1B.CH
Acq On : 9 Apr 2001 13:09 Operator:
Sample : 8082_C_IAS1432,1_PPM Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 09 13:35:14 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		4.98	4.85	92539630	88323976	106.896	96.255
				Recovery	=	106.90%	96.25%
Spiked Amount 100.000							
2) S DCB		22.65	22.84	91926281	82208078	104.499	96.872
				Recovery	=	104.50%	96.87%
Spiked Amount 100.000							
Target Compounds							
3) L2 Aroclor-1016		5.81	6.37	6698495	6773364	1098.525	988.579
4) L2 Aroclor-1016	(2)	6.90	7.44	5306697	12460957	1096.343	995.988
5) L2 Aroclor-1016	(3)	7.34	8.80	9093464	28687324	1095.368	963.876
6) L2 Aroclor-1016	(4)	9.22	9.19	5431489	10125552	1087.506	992.670
7) L2 Aroclor-1016	(5)	9.69	9.51	7640372	10307705	1088.736	989.339
Sum Aroclor-1016				34170516	68354902	5466.478	4930.452
Average Aroclor-1016						1093.296	986.090
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		15.34	15.21	27875276	20523800	1097.771	995.269
34) L8 Aroclor-1260	(2)	15.91	16.47	25026728	16732879	1111.739	1007.796
35) L8 Aroclor-1260	(3)	17.55	17.48	56632861	18834727	1075.917	1004.208
36) L8 Aroclor-1260	(4)	18.48	18.44	25892925	45467492	1101.625	979.931
37) L8 Aroclor-1260	(5)	20.53	20.73	15319042	5628698	1115.204	1028.126
Sum Aroclor-1260				150.7E6	107.2E6	5502.256	5015.331
Average Aroclor-1260						1100.451	1003.066

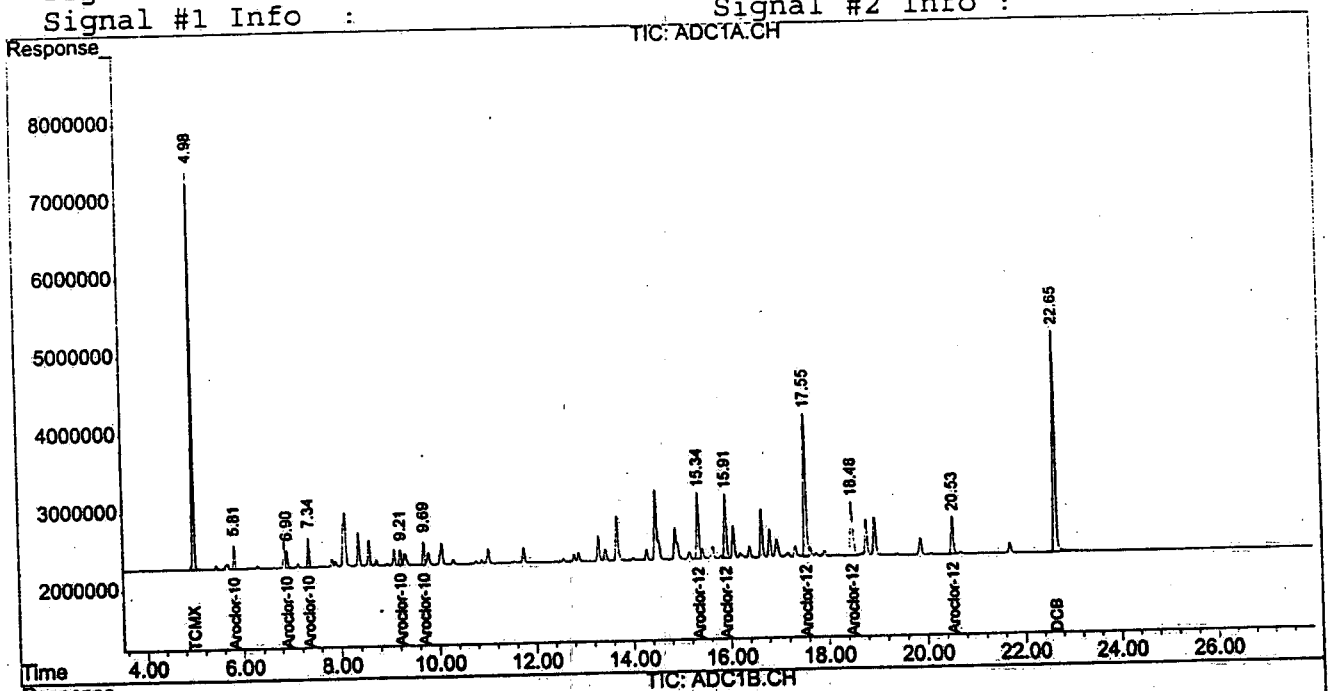
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

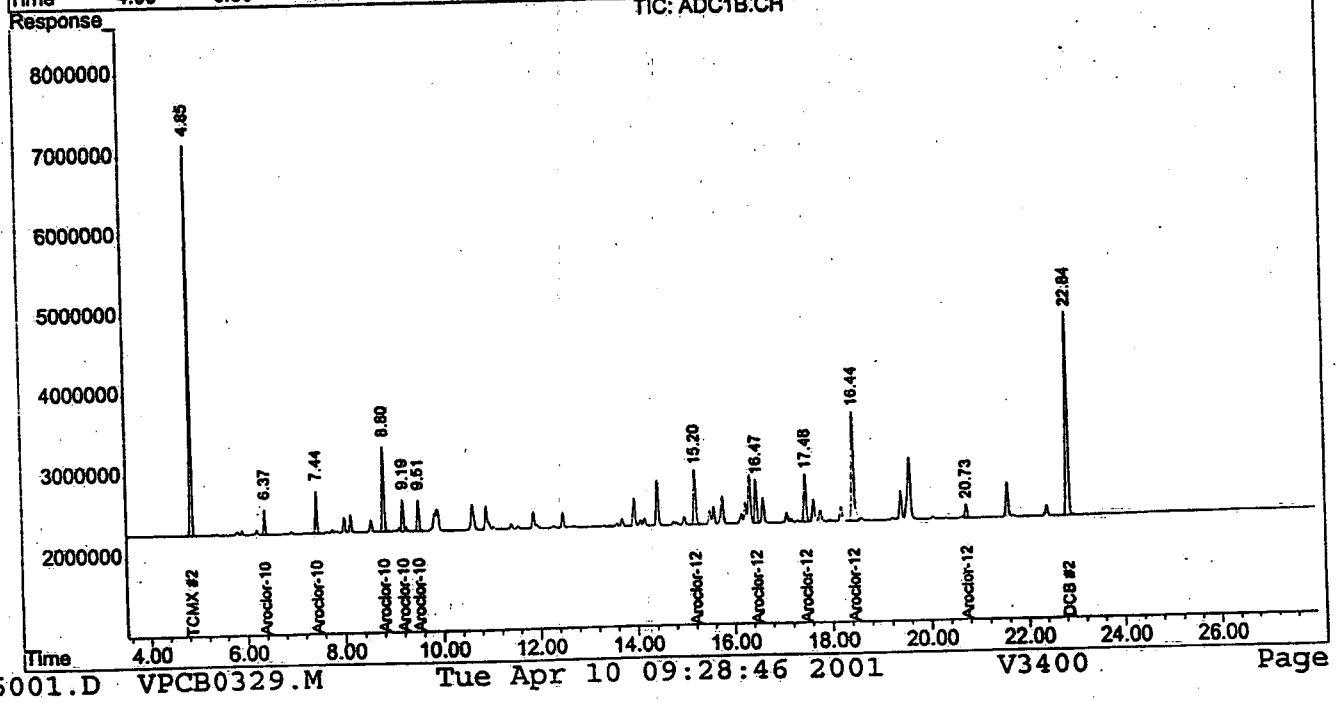
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5001.D\ADC1A.CH Vial: 4
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5001.D\ADC1B.CH
Acq On : 9 Apr 2001 13:09 Operator:
Sample : 8082_C_IAS1432,1_PPM Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 9 13:35 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000105

4363

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5005.D\ADC1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5005.D\ADC1B.CH
Acq On : 9 Apr 2001 15:12 Operator:
Sample : 8082_C_IAS1432,1_PPM Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 07:34:05 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Initial Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		4.98	4.86	95312073	92238072	110.098	100.521
Spiked Amount 100.000				Recovery	=	110.10%	100.52%
2) S DCB		22.65	22.84	92689661	83448786	105.366	98.334
Spiked Amount 100.000				Recovery	=	105.37%	98.33%
Target Compounds							
3) L2 Aroclor-1016		5.81	6.37	6857292	7060524	1124.567	1030.491
4) L2 Aroclor-1016	(2)	6.91	7.44	5452341	12814744	1126.433	1024.266
5) L2 Aroclor-1016	(3)	7.35	8.80	9353390	29903117	1126.678	1004.726
6) L2 Aroclor-1016	(4)	9.22	9.19	5654302	10536618	1132.119	1032.969
7) L2 Aroclor-1016	(5)	9.70	9.51	7945646	10719749	1132.237	1028.887
Sum Aroclor-1016				35262972	71034752	5642.033	5121.339
Average Aroclor-1016						1128.407	1024.268
Sum Aroclor-1221				0	0	N.D.	N.D.
Average Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
Average Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
Average Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
Average Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
Average Aroclor-1254						0.000	0.000
33) L8 Aroclor-1260		15.35	15.21	28859933	21289698	1136.548	1032.410
34) L8 Aroclor-1260	(2)	15.91	16.47	25658282	17252025	1139.794	1039.064
35) L8 Aroclor-1260	(3)	17.56	17.48	58385457	19581618	1109.213	1044.030
36) L8 Aroclor-1260	(4)	18.48	18.45	26766714	47042172	1138.801	1013.869
37) L8 Aroclor-1260	(5)	20.53	20.73	15765069	5846874	1147.674	1067.978
Sum Aroclor-1260				155.4E6	111.0E6	5672.030	5197.351
Average Aroclor-1260						1134.406	1039.470

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

000106

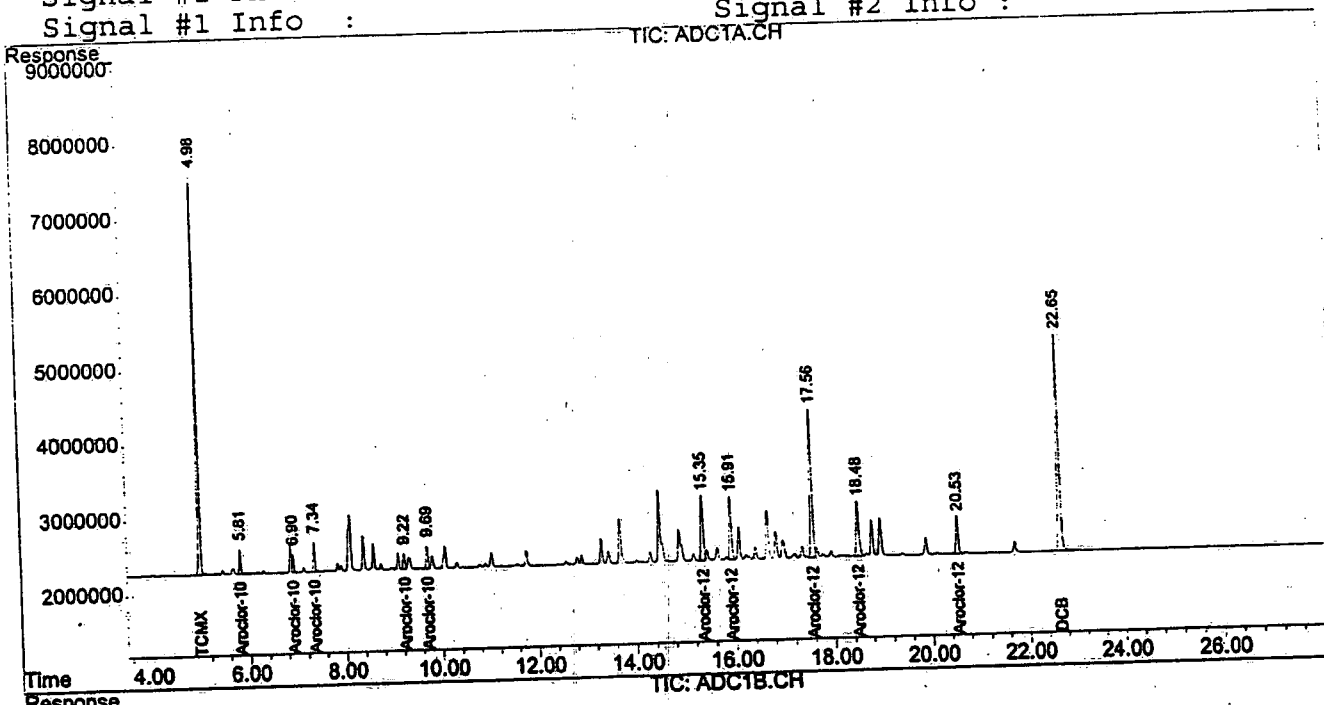
43624

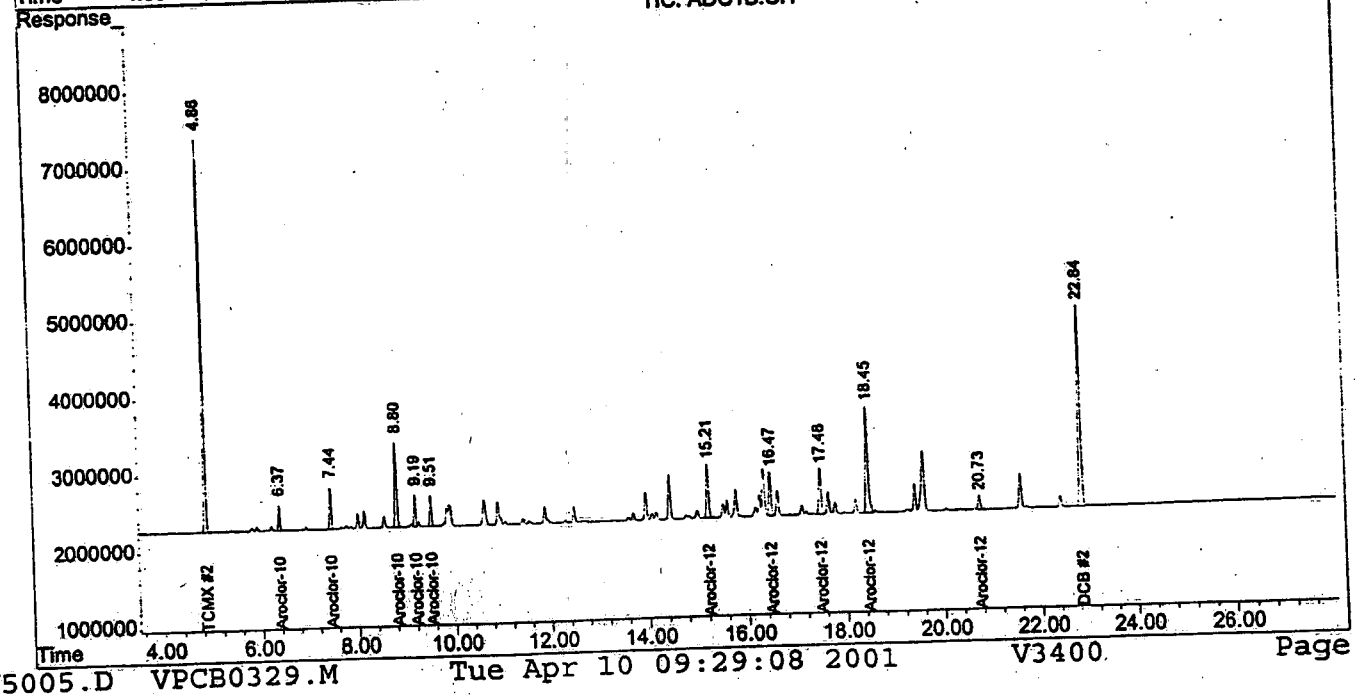
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\04-09-01\V5005.D\ADC1A.CH Vial: 8
Signal #2 : C:\MSDCHEM\1\DATA\04-09-01\V5005.D\ADC1B.CH
Acq On : 9 Apr 2001 15:12 Operator:
Sample : 8082_C_IAS1432,1_PPM Inst : V_3400
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 7:44 2001 Quant Results File: VPCB0329.RES

Quant Method : C:\MSDCHEM\1\METHODS\VPCB0329.M (Chemstation Integrator)
Title :
Last Update : Fri Mar 30 10:12:22 2001
Response via : Multiple Level Calibration
DataAcq Meth : VPCB0329.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





4365

PESTICIDE METHOD BLANK SUMMARY

Lab File ID: W5526.D

Instrument ID: GC-W

Date Extracted: 03/29/2001

Matrix: AQUEOUS

Date Analyzed: 03/29/2001

Time Analyzed: 20:51

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
CC-GW-PST_TR_2	1919-001	03/29/2001	21:16
RB032801	1919-002	03/29/2001	21:41
DMW-2	1926-001	03/29/2001	22:06
MW-31	1926-002	03/29/2001	22:31
DMW-1	1926-003	03/29/2001	22:56
FIELD	1926-004	03/29/2001	23:21
FB-SOIL	1899-016	03/29/2001	23:46
03-02-W1	1899-019	03/30/2001	00:10
02-10-W1	1899-020	03/30/2001	00:35
02-10-W2	1899-021	03/30/2001	01:00
FB-AQ	1899-022	03/30/2001	01:25
PEST	1899-022-MS2	03/30/2001	01:50
PEST	1899-022-MSD2	03/30/2001	02:15
PEST	PBA0329-MS2	03/30/2001	02:40

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: NA

Lab ID: 0329-BK2
Client ID: (1899.1926)
Date Received: NA
Date Extracted: 03/29/2001
Date Analyzed: 03/29/2001
Data file: W5526.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.002
beta-BHC	ND		0.002
gamma-BHC	ND		0.002
delta-BHC	ND		0.002
Heptachlor	ND		0.002
Aldrin	ND		0.002
Heptachlor epoxide	ND		0.002
Endosulfan I	ND		0.002
4,4'-DDE	ND		0.002
Dieldrin	ND		0.002
Endrin	ND		0.002
Endosulfan II	ND		0.002
4,4'-DDD	ND		0.002
Endrin aldehyde	ND		0.002
Endosulfan sulfate	ND		0.002
4,4'-DDT	ND		0.002
Chlordane	ND		0.015
Toxaphene	ND		0.015

H367

PESTICIDE METHOD BLANK SUMMARY

Lab File ID: W5828.D

Instrument ID: GC-W

Date Extracted: 04/09/2001

Matrix: AQUEOUS

Date Analyzed: 04/09/2001

Time Analyzed: 14:55

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
TW-1	2153-001	04/09/2001	15:20
GRIT&SCREENING	2091-001	04/09/2001	15:45
WATER	2125-001	04/09/2001	16:10
PEST	PBA0409-MS2	04/09/2001	16:35

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: NA

Lab ID: 0409-BK2
Client ID: (2091.2153)
Date Received: NA
Date Extracted: 04/09/2001
Date Analyzed: 04/09/2001
Data file: W5828.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.002
beta-BHC	ND		0.002
gamma-BHC	ND		0.002
delta-BHC	ND		0.002
Heptachlor	ND		0.002
Aldrin	ND		0.002
Heptachlor epoxide	ND		0.002
Endosulfan I	ND		0.002
4,4'-DDE	ND		0.002
Dieldrin	ND		0.002
Endrin	ND		0.002
Endosulfan II	ND		0.002
4,4'-DDD	ND		0.002
Endrin aldehyde	ND		0.002
Endosulfan sulfate	ND		0.002
4,4'-DDT	ND		0.002
Chlordane	ND		0.015
Toxaphene	ND		0.015

000111

4369

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001

Instrument ID: GC-W

GC Column (1st): DB-5

Data File: W5678.D W5677.D W5676.D W5675.D W5674.D

Compound	RT OF STANDARDS 10	50	100	200	300	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.54	4.55	4.55	4.54	4.54	4.54	4.47	4.61
beta-BHC	5.03	5.04	5.04	5.04	5.03	5.03	4.96	5.10
gamma-BHC	5.16	5.17	5.17	5.17	5.16	5.17	5.10	5.24
delta-BHC	5.63	5.64	5.64	5.64	5.64	5.64	5.57	5.71
Heptachlor	6.74	6.74	6.74	6.74	6.74	6.74	6.67	6.81
Aldrin	7.55	7.56	7.55	7.55	7.55	7.55	7.48	7.62
Heptachlor epoxide	8.56	8.56	8.56	8.56	8.56	8.56	8.49	8.63
Endosulfan I	9.48	9.48	9.48	9.48	9.48	9.48	9.41	9.55
4,4'-DDE	10.24	10.24	10.24	10.24	10.24	10.24	10.17	10.31
Dieldrin	10.17	10.17	10.17	10.17	10.17	10.17	10.10	10.24
Endrin	10.72	10.72	10.72	10.72	10.72	10.72	10.65	10.79
Endosulfan II	10.97	10.98	10.98	10.98	10.97	10.98	10.91	11.05
4,4'-DDD	11.36	11.36	11.36	11.36	11.36	11.36	11.29	11.43
Endrin aldehyde	11.50	11.50	11.50	11.50	11.50	11.50	11.43	11.57
Endosulfan sulfate	12.15	12.15	12.15	12.15	12.15	12.15	12.08	12.22
4,4'-DDT	12.38	12.38	12.38	12.38	12.38	12.38	12.31	12.45
Endrin ketone	13.36	13.36	13.36	13.36	13.36	13.36	13.29	13.43
Methoxychlor	14.06	14.06	14.06	14.06	14.06	14.06	13.99	14.13
alpha-Chlordane	9.58	9.58	9.58	9.58	9.58	9.58	9.51	9.65
gamma-Chlordane	9.17	9.18	9.17	9.18	9.17	9.17	9.10	9.24
Chlordane 500 ppb			9.17				9.10	9.24
Chlordane {2}			9.37				9.30	9.44
Chlordane {3}			9.58				9.51	9.65
Chlordane {4}			9.73				9.66	9.80
Chlordane {5}			11.57				11.50	11.64
Toxaphene 500 ppb			13.17				13.10	13.24
Toxaphene {2}			13.30				13.23	13.37
Toxaphene {3}			13.58				13.51	13.65
Toxaphene {4}			14.04				13.97	14.11
Toxaphene {5}			14.55				14.48	14.62

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001

Instrument ID: GC-W

GC Column (1st): DB-5

Data File: W5678.D W5677.D W5676.D W5675.D W5674.D

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	43496018	51170957	49291118	47524273	47662802	47829033	5.93
beta-BHC	18379609	19277612	18501314	17677343	17555823	18278340	3.81
gamma-BHC	40045540	45325231	43082664	40199962	39527082	41636096	5.97
delta-BHC	40914451	48513538	47243350	45719049	45763654	45630808	6.31
Heptachlor	34644486	39338425	38059323	36218756	35623323	36776863	5.16
Aldrin	38758408	44513217	42707366	40124672	39339496	41088632	5.93
Heptachlor epoxide	36135554	40003569	37832970	35121001	34216539	36661926	6.27
Endosulfan I	34135461	37496038	35435124	32853490	32002469	34384516	6.32
4,4'-DDE	34724674	39844061	38069279	35332573	34323622	36458842	6.56
Dieldrin	35895317	40429747	38456802	35942974	35003112	37145590	6.04
Endrin	30458379	34225195	33620271	32100741	31808532	32442624	4.63
Endosulfan II	32609352	34728562	32929131	30749858	30017892	32206959	5.80
4,4'-DDD	29633107	33219385	31721240	29744902	28793473	30622422	5.90
Endrin aldehyde	26777455	25431810	22822188	20072796	18946470	22810144	14.71
Endosulfan sulfate	30412382	31815282	30166743	28239588	27760800	29678959	5.61
4,4'-DDT	22004160	25643431	25690156	25182990	25266456	24757439	6.28
Endrin ketone	38876117	39251084	36105496	33001829	31789758	35804857	9.41
Methoxychlor	12205036	12527666	12023670	11346612	11057470	11832091	5.17
alpha-Chlordane	36258643	39925308	38229893	35913807	35107802	37087090	5.28
gamma-Chlordane	36790210	41895938	40307468	37944294	37106290	38808840	5.69
Chlordane 500 ppb			4097171				
Chlordane {2}			749336				
Chlordane {3}			3905814				
Chlordane {4}			1816015				
Chlordane {5}			1251816				
Toxaphene 500 ppb			743270				
Toxaphene {2}			582289				
Toxaphene {3}			434018				
Toxaphene {4}			509494				
Toxaphene {5}			747359				

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001

Instrument ID: GC-W

GC Column (2nd): DB-1701P

Data File: W5678.C W5677.C W5676.C W5675.C W5674.C

Compound	RT OF STANDARDS 10	50	100	200	300	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	5.59	5.60	5.59	5.59	5.60	5.60	5.53	5.67
beta-BHC	8.65	8.65	8.65	8.65	8.66	8.65	8.58	8.72
gamma-BHC	6.54	6.55	6.55	6.55	6.56	6.55	6.48	6.62
delta-BHC	9.21	9.22	9.21	9.22	9.22	9.22	9.15	9.29
Heptachlor	7.02	7.03	7.03	7.03	7.04	7.03	6.96	7.10
Aldrin	7.69	7.70	7.70	7.70	7.71	7.70	7.63	7.77
Heptachlor epoxide	9.54	9.54	9.54	9.54	9.55	9.54	9.47	9.61
Endosulfan I	10.22	10.22	10.22	10.23	10.23	10.23	10.16	10.30
4,4'-DDE	10.99	11.00	11.00	11.00	11.00	11.00	10.93	11.07
Dieldrin	11.26	11.26	11.26	11.26	11.27	11.26	11.19	11.33
Endrin	11.78	11.79	11.78	11.79	11.79	11.79	11.72	11.86
Endosulfan II	13.23	13.23	13.23	13.23	13.24	13.23	13.16	13.30
4,4'-DDD	13.23	13.23	13.23	13.23	13.24	13.23	13.16	13.30
Endrin aldehyde	14.37	14.37	14.37	14.37	14.38	14.37	14.30	14.44
Endosulfan sulfate	15.27	15.27	15.27	15.27	15.28	15.27	15.20	15.34
4,4'-DDT	13.68	13.68	13.68	13.68	13.69	13.68	13.61	13.75
Endrin ketone	16.30	16.30	16.30	16.30	16.30	16.30	16.23	16.37
Methoxychlor	15.54	15.54	15.55	15.54	15.55	15.55	15.48	15.62
alpha-Chlordane	10.61	10.62	10.62	10.62	10.62	10.62	10.55	10.69
gamma-Chlordane	10.46	10.46	10.46	10.46	10.47	10.46	10.39	10.53
Chlordane 500 ppb			8.38				8.31	8.45
Chlordane {2}			10.06				9.99	10.13
Chlordane {3}			10.46				10.39	10.53
Chlordane {4}			10.62				10.55	10.69
Chlordane {5}			10.67				10.60	10.74
Toxaphene 500 ppb			14.02				13.95	14.09
Toxaphene {2}			14.74				14.67	14.81
Toxaphene {3}			15.01				14.94	15.08
Toxaphene {4}			15.21				15.14	15.28
Toxaphene {5}			15.65				15.58	15.72

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 04/04/2001

Instrument ID: GC-W

GC Column (2nd): DB-1701P

Data File: W5678.C W5677.C W5676.C W5675.C W5674.C

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	16266826	19149062	18605696	17564240	17287592	17774683	6.37
beta-BHC	7942657	7943298	7481243	7090968	6987221	7489077	6.05
gamma-BHC	15127810	17497955	16945614	16091904	15851957	16303048	5.71
delta-BHC	15165845	17371079	16750362	15788933	15524212	16120086	5.67
Heptachlor	12357525	13909417	13588439	13014982	12871445	13148362	4.65
Aldrin	14391927	16085789	15479618	14526297	14189048	14934536	5.44
Heptachlor epoxide	13725987	14718751	14083021	13211469	12913067	13730459	5.20
Endosulfan I	12951743	13873605	13269538	12431470	12108840	12927039	5.37
4,4'-DDE	12883890	14586842	14144720	13369646	13079023	13612824	5.33
Dieldrin	13589397	14989333	14500314	13704447	13406520	14038002	4.82
Endrin	11722912	12941585	12894910	12428421	12325063	12462578	3.98
Endosulfan II	24292009	25559807	24109684	22199289	21560826	23544323	6.94
4,4'-DDD	24292009	25559807	24109684	22199289	21560826	23544323	6.94
Endrin aldehyde	10606465	10053544	9325317	8654912	8451933	9418434	9.70
Endosulfan sulfate	11463120	11771686	11324902	10775192	10588835	11184747	4.39
4,4'-DDT	6489752	8524503	8881304	9006263	9224500	8425265	13.19
Endrin ketone	13781060	14056856	13201403	12347065	11963048	13069887	6.89
Methoxychlor	4378096	4723661	4666903	4601910	4626684	4599451	2.87
alpha-Chlordane	13792467	14746277	14184308	13334259	13009350	13813332	4.97
gamma-Chlordane	13785876	15099925	14592419	13785917	13490456	14150919	4.74
Chlordane 500 ppb			293988				
Chlordane {2}			337784				
Chlordane {3}			1484430				
Chlordane {4}			1348231				
Chlordane {5}			653044				
Toxaphene 500 ppb			280637				
Toxaphene {2}			243713				
Toxaphene {3}			193089				
Toxaphene {4}			149865				
Toxaphene {5}			217517				

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/09/2001 **Instrument ID:** GC-W

Data File: W5825.D **GC Column (1st):** DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	4.53	4.46	4.60	47829033	50279712	5.12
beta-BHC	5.02	4.95	5.09	18278340	18155113	0.67
gamma-BHC	5.16	5.09	5.23	41636096	43083255	3.48
delta-BHC	5.63	5.56	5.70	45630808	46487121	1.88
Heptachlor	6.73	6.66	6.80	36776863	37650575	2.38
Aldrin	7.55	7.48	7.62	41088632	40563204	1.28
Heptachlor epoxide	8.55	8.48	8.62	36661926	36663683	0.00
Endosulfan I	9.47	9.40	9.54	34384516	33657999	2.11
4,4'-DDE	10.24	10.17	10.31	36458842	35409160	2.88
Dieldrin	10.17	10.10	10.24	37145590	36933815	0.57
Endrin	10.72	10.65	10.79	32442624	35302572	8.82
Endosulfan II	10.97	10.90	11.04	32206959	31843441	1.13
4,4'-DDD	11.36	11.29	11.43	30622422	30415153	0.68
Endrin aldehyde	11.50	11.43	11.57	22810144	22462968	1.52
Endosulfan sulfate	12.15	12.08	12.22	29678959	29819652	0.47
4,4'-DDT	12.38	12.31	12.45	24757439	26777131	8.16
Endrin ketone	13.36	13.29	13.43	35804857	35008601	2.22
Methoxychlor	14.06	13.99	14.13	11832091	13063240	10.41
alpha-Chlordane	9.58	9.51	9.65	37087090	36241546	2.28
gamma-Chlordane	9.17	9.10	9.24	38808840	38538182	0.70
					Average %D	2.84
Chlordane 500 ppb	9.17	9.10	9.24	4097171	4117158	0.49
Chlordane {2}	9.37	9.30	9.44	749336	771374	2.94
Chlordane {3}	9.58	9.51	9.65	3905814	3824404	2.08
Chlordane {4}	9.72	9.65	9.79	1816015	1908387	5.09
Chlordane {5}	11.57	11.50	11.64	1251816	1256769	0.40
Toxaphene 500 ppb	13.17	13.10	13.24	743270	771540	3.80
Toxaphene {2}	13.30	13.23	13.37	582289	599510	2.96
Toxaphene {3}	13.58	13.51	13.65	434018	510454	17.61
Toxaphene {4}	14.04	13.97	14.11	509494	573781	12.62
Toxaphene {5}	14.55	14.48	14.62	747359	830183	11.08
					Average %D	5.91

43724

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/09/2001 Instrument ID: GC-W

Data File: W5825.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
alpha-BHC	5.60	5.53	5.67	17774683	17286419	2.75
beta-BHC	8.66	8.59	8.73	7489077	6920855	7.59
gamma-BHC	6.55	6.48	6.62	16303048	15789546	3.15
delta-BHC	9.22	9.15	9.29	16120086	15467727	4.05
Heptachlor	7.03	6.96	7.10	13148362	12698186	3.42
Aldrin	7.71	7.64	7.78	14934536	14203835	4.89
Heptachlor epoxide	9.55	9.48	9.62	13730459	12998535	5.33
Endosulfan I	10.23	10.16	10.30	12927039	12191797	5.69
4,4'-DDE	11.01	10.94	11.08	13612824	12804003	5.94
Dieldrin	11.27	11.20	11.34	14038002	13380795	4.68
Endrin	11.79	11.72	11.86	12462578	12711463	2.00
Endosulfan II	13.24	13.17	13.31	23544323	21925188	6.88
4,4'-DDD	13.24	13.17	13.31	23544323	21925188	6.88
Endrin aldehyde	14.38	14.31	14.45	9418434	8327137	11.59
Endosulfan sulfate	15.28	15.21	15.35	11184747	10324657	7.69
4,4'-DDT	13.69	13.62	13.76	8425265	8435576	0.12
Endrin ketone	16.31	16.24	16.38	13069887	11760823	10.02
Methoxychlor	15.55	15.48	15.62	4599451	4461234	3.01
alpha-Chlordane	10.63	10.56	10.70	13813332	13080816	5.30
gamma-Chlordane	10.47	10.40	10.54	14150919	13480856	4.74
					Average %D	5.28
Chlordane 500 ppb	8.39	8.32	8.46	293988	262820	10.60
Chlordane {2}	10.07	10.00	10.14	337784	307227	9.05
Chlordane {3}	10.47	10.40	10.54	1484430	1358106	8.51
Chlordane {4}	10.62	10.55	10.69	1348231	1244549	7.69
Chlordane {5}	10.68	10.61	10.75	653044	577462	11.57
Toxaphene 500 ppb	14.02	13.95	14.09	280637	247824	11.69
Toxaphene {2}	14.75	14.68	14.82	243713	220242	9.63
Toxaphene {3}	15.02	14.95	15.09	193089	170001	11.96
Toxaphene {4}	15.21	15.14	15.28	149865	133504	10.92
Toxaphene {5}	15.66	15.59	15.73	217517	196792	9.53
					Average %D	10.11

000117

4375

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/09/2001 Instrument ID: GC-W

Data File: W5833.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	4.53	4.46	4.60	47829033	55700991	16.46
beta-BHC	5.03	4.96	5.10	18278340	20445150	11.85
gamma-BHC	5.16	5.09	5.23	41636096	47653068	14.45
delta-BHC	5.63	5.56	5.70	45630808	52826941	15.77
Heptachlor	6.73	6.66	6.80	36776863	37961932	3.22
Aldrin	7.55	7.48	7.62	41088632	46944939	14.25
Heptachlor epoxide	8.56	8.49	8.63	36661926	41347140	12.78
Endosulfan I	9.47	9.40	9.54	34384516	38762211	12.73
4,4'-DDE	10.24	10.17	10.31	36458842	41884687	14.88
Dieldrin	10.17	10.10	10.24	37145590	42486683	14.38
Endrin	10.72	10.65	10.79	32442624	39217548	20.88
Endosulfan II	10.97	10.90	11.04	32206959	36439347	13.14
4,4'-DDD	11.36	11.29	11.43	30622422	35490926	15.90
Endrin aldehyde	11.50	11.43	11.57	22810144	25684403	12.60
Endosulfan sulfate	12.15	12.08	12.22	29678959	34123056	14.97
4,4'-DDT	12.38	12.31	12.45	24757439	29293020	18.32
Endrin ketone	13.36	13.29	13.43	35804857	39971037	11.64
Methoxychlor	14.06	13.99	14.13	11832091	13685701	15.67
alpha-Chlordane	9.58	9.51	9.65	37087090	42873343	15.60
gamma-Chlordane	9.17	9.10	9.24	38808840	45275854	16.66
					Average %D	14.31

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date Analyzed: 04/09/2001 Instrument ID: GC-W

Data File: W5833.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
alpha-BHC	5.59	5.52	5.66	17774683	17553784	1.24
beta-BHC	8.65	8.58	8.72	7489077	7047550	5.90
gamma-BHC	6.55	6.48	6.62	16303048	16033702	1.65
delta-BHC	9.22	9.15	9.29	16120086	15883315	1.47
Heptachlor	7.02	6.95	7.09	13148362	12112815	7.88
Aldrin	7.70	7.63	7.77	14934536	14486634	3.00
Heptachlor epoxide	9.54	9.47	9.61	13730459	13182969	3.99
Endosulfan I	10.22	10.15	10.29	12927039	12420975	3.91
4,4'-DDE	11.00	10.93	11.07	13612824	13264768	2.56
Dieldrin	11.26	11.19	11.33	14038002	13646843	2.79
Endrin	11.79	11.72	11.86	12462578	12832467	2.97
Endosulfan II	13.23	13.16	13.30	23544323	22818506	3.08
4,4'-DDD	13.23	13.16	13.30	23544323	22818506	3.08
Endrin aldehyde	14.38	14.31	14.45	9418434	8803214	6.53
Endosulfan sulfate	15.28	15.21	15.35	11184747	10760083	3.80
4,4'-DDT	13.68	13.61	13.75	8425265	8589786	1.95
Endrin ketone	16.30	16.23	16.37	13069887	12621604	3.43
Methoxychlor	15.55	15.48	15.62	4599451	4512465	1.89
alpha-Chlordane	10.62	10.55	10.69	13813332	13425777	2.81
gamma-Chlordane	10.46	10.39	10.53	14150919	13841163	2.19
					Average %D	3.31

000119

4377

PESTICIDE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 04/09/2001

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(2091.2153)	0409-BK2	AQUEOUS	100		99		84		84	
TW-1	2153-001	AQUEOUS	68		97		70		93	
GRIT&SCREENING	2091-001	AQUEOUS	74		80		68		80	
WATER	2125-001	AQUEOUS	77		106		65		92	
PEST	PBA0409-MS2	AQUEOUS	101		101		83		85	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59-147	59-151
DCB = Decachlorobiphenyl	63-179	60-150

Column to be used to flag recovery values
***** Values outside of QC limits
D Surrogate diluted out
M Matrix interference

43778

AQUEOUS PESTICIDES MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 1899-022-MSD2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	90.0	90	30 - 138
Heptachlor	100.0	0.0	80.4	80	42 - 137
Aldrin	100.0	0.0	84.8	85	32 - 147
Dieldrin	100.0	0.0	83.7	84	26 - 134
Endrin	100.0	0.0	81.1	81	22 - 164
4,4'-DDT	100.0	0.0	76.9	77	22 - 150

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC	0.0	90.5	91	1	14	30 - 138
Heptachlor	0.0	80.1	80	0	14	42 - 137
Aldrin	0.0	84.5	85	0	14	32 - 147
Dieldrin	0.0	83.1	83	1	14	26 - 134
Endrin	0.0	79.7	80	1	13	22 - 164
4,4'-DDT	0.0	79.5	80	4	16	22 - 150

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

*** Values outside of QC limits**

NC Non calculable

RPD: __0___ out of __6__ outside limits

Spike Recovery: __0___ out of __12__ outside limits

000121

4379

AQUEOUS PESTICIDES BLANK SPIKE RECOVERY

Matrix spike Lab sample ID: PBA0409-MS2

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	110.4	110	30 - 138
Heptachlor	100.0	0.0	86.9	87	42 - 137
Aldrin	100.0	0.0	103.8	104	32 - 147
Dieldrin	100.0	0.0	101.0	101	26 - 134
Endrin	100.0	0.0	105.1	105	22 - 164
4,4'-DDT	100.0	0.0	98.9	99	22 - 150

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

* Values outside of QC limits

NC Non calculable

Spike Recovery: __0___ out of __6__ outside limits

PESTICIDE RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-W **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.85 DCB 1 18.68 TCMX 2 3.70 DCB 2 18.65

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
(2091.2153)	0409-BK2	04/09/2001	14:55	3.85		18.68		3.70		18.65	
TW-1	2153-001	04/09/2001	15:20	3.85		18.68		3.69		18.64	
GRIT&SCREENING	2091-001	04/09/2001	15:45	3.85		18.68		3.69		18.64	
WATER	2125-001	04/09/2001	16:10	3.85		18.69		3.69		18.64	
PEST	PBA0409-MS2	04/09/2001	16:35	3.85		18.68		3.69		18.64	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene (± 0.05 Minutes)

DCB = Decachlorobiphenyl (_ 0.05 Minutes)

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5829.D\ECD1B.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5829.D\ECD2A.CH
Acq On : 4-9-01 15:20:36 Operator:
Sample : TW-1,2153-001,A,1000mL,100,04/09/01 Inst : GC_W
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 11:53 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.69	640.8E6	265.4E6	13.625	13.875
Spiked Amount 100.000			Recovery	=	13.63%	13.88%
2) S DCB	18.68	18.64	867.2E6	292.8E6	19.372	18.507
Spiked Amount 100.000			Recovery	=	19.37%	18.51%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5829.D WPTC0404.M Tue Apr 10 11:55:37 2001 GC_W

000134

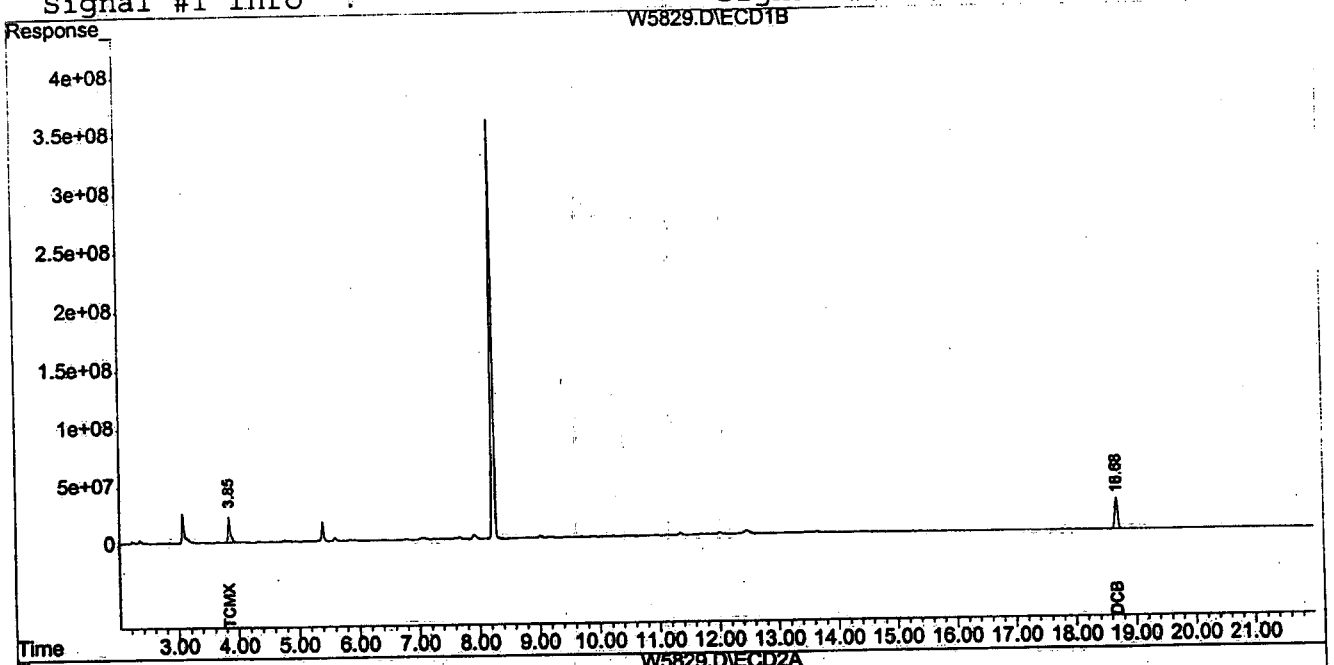
4362

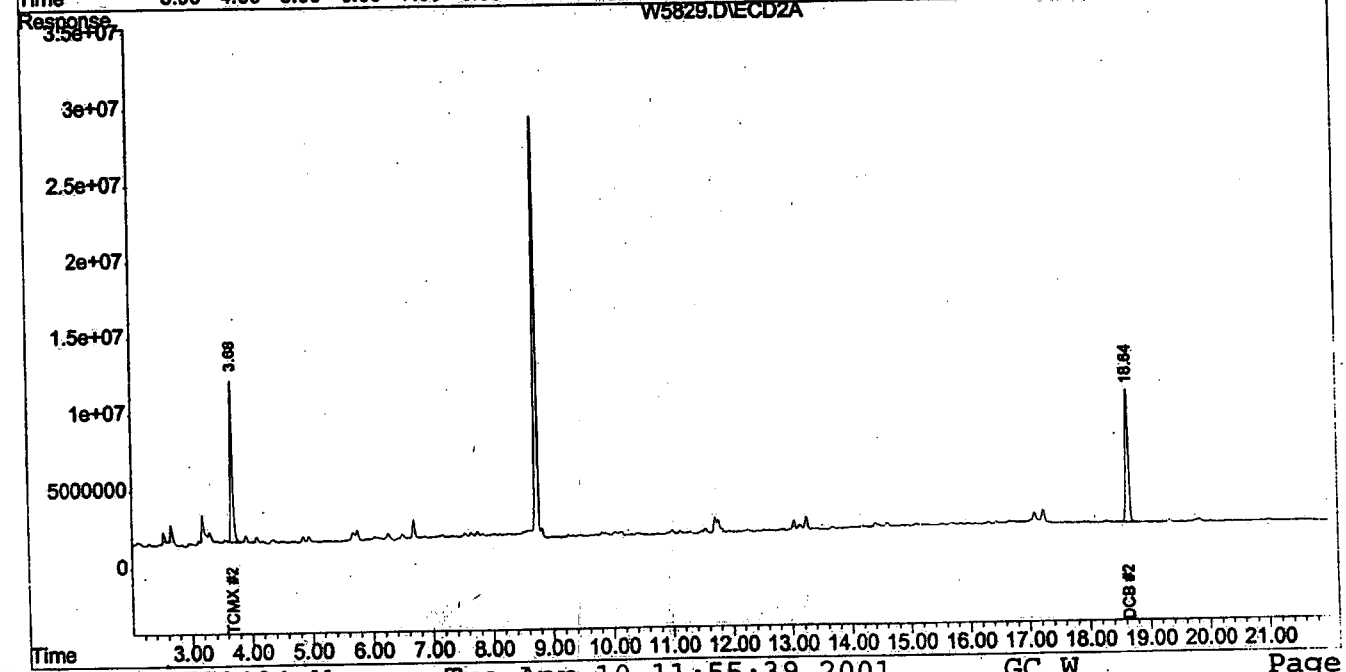
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5829.D\ECD1B.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5829.D\ECD2A.CH
Acq On : 4-9-01 15:20:36 Operator:
Sample : TW-1,2153-001,A,1000mL,100,04/09/01 Inst : GC_W
Misc : ENVTACT/ORBIS,04/04/01,04/05/01,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 11:53 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000125

2363

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5828.D\ECD1B.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5828.D\ECD2A.CH
Acq On : 4-9-01 14:55:42 Operator:
Sample : (2091.2153),0409-BK2,A,1000mL,100,04/09/ Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 11:51 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.85	3.70	4710.7E6	1605.9E6	100.162	83.958
Spiked Amount 100.000			Recovery	=	100.16%	83.96%
2) S DCB	18.68	18.65	4407.7E6	1333.0E6	98.463	84.260
Spiked Amount 100.000			Recovery	=	98.46%	84.26%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W5828.D WPTC0404.M Tue Apr 10 12:24:54 2001 GC_W Page 1

C00126

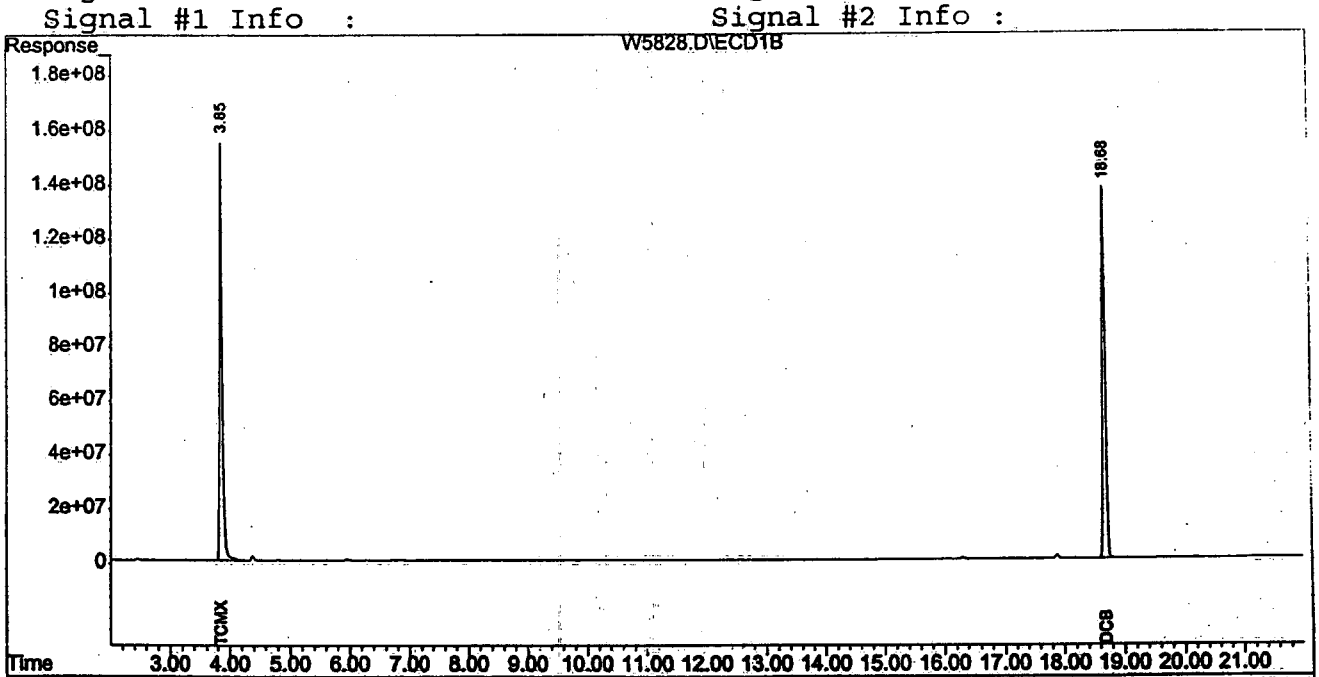
U2464

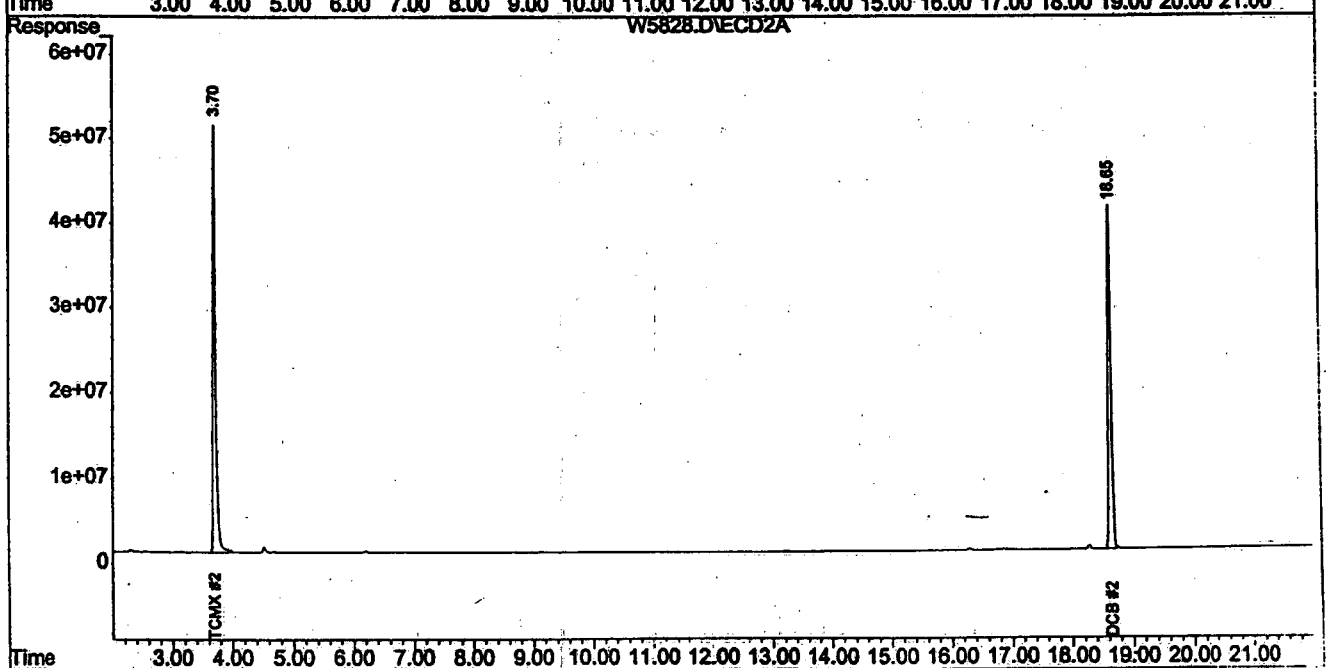
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5828.D\ECD1B.CH Vial: 5
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5828.D\ECD2A.CH
Acq On : 4-9-01 14:55:42 Operator:
Sample : (2091.2153),0409-BK2,A,1000mL,100,04/09/ Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 11:51 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





000127

4385

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5825.D\ECD1B.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5825.D\ECD2A.CH
Acq On : 4-9-01 13:24:28 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 9 13:47 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2	
	System Monitoring Compounds							
1) S	TCMX	3.86	3.71	4815.0E6	1729.7E6	102.381	90.430	
Spiked Amount	100.000			Recovery	=	102.38%	90.43%	
2) S	DCB	18.69	18.65	4400.0E6	1466.8E6	98.291	92.720	
Spiked Amount	100.000			Recovery	=	98.29%	92.72%	
	Target Compounds							
3) T	alpha-BHC	4.53	5.60	5028.0E6	1728.6E6	105.124	97.253	
4) T	beta-BHC	5.02	8.66	1815.5E6	692.1E6	99.326	92.413	
5) T	gamma-BHC	5.16	6.55	4308.3E6	1579.0E6	103.476	96.850	
6) T	delta-BHC	5.63	9.22	4648.7E6	1546.8E6	101.877	95.953	
7) T	Heptachlor	6.73	7.03	3765.1E6	1269.8E6	102.376	96.576	
8) T	Aldrin	7.55	7.71	4056.3E6	1420.4E6	98.721	95.107	
9) T	Heptachlor epoxi	8.55	9.55	3666.4E6	1299.9E6	100.005	94.669	
10) T	Endosulfan I	9.47	10.23	3365.8E6	1219.2E6	97.887	94.312	
11) T	4,4'-DDE	10.24	11.01	3540.9E6	1280.4E6	97.121	94.058	
12) T	Dieldrin	10.17	11.27	3693.4E6	1338.1E6	99.430	95.318	
13) T	Endrin	10.72	11.79	3530.3E6	1271.1E6	108.815	101.997	
14) T	Endosulfan II	10.97	13.24	3184.3E6	2192.5E6	98.871	186.246	#
15) T	4,4'-DDD	11.36	13.24	3041.5E6	2192.5E6	99.323	186.246	#
16) T	Endrin aldehyde	11.50	14.38	2246.3E6	832.7E6	98.478	88.413	
17) T	Endosulfan sulfa	12.15	15.28	2982.0E6	1032.5E6	100.474	92.310	
18) T	4,4'-DDT	12.38	13.69	2677.7E6	843.6E6	108.158	100.122	
19) T	Endrin ketone	13.36	16.31	3500.9E6	1176.1E6	97.776	89.984	
20) T	Methoxychlor	14.06	15.55	1306.3E6	446.1E6	110.405	96.995	
21) T	alpha-Chlordane	9.58	10.63	3624.2E6	1308.1E6	97.720	94.697	
22) T	gamma-Chlordane	9.17	10.47	3853.8E6	1348.1E6	99.303	95.265	
Sum	Chlordane			0	0	N.D.	N.D.	
Average	Chlordane					0.000	0.000	
Sum	Toxaphene			0	0	N.D.	N.D.	
Average	Toxaphene					0.000	0.000	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

C00128

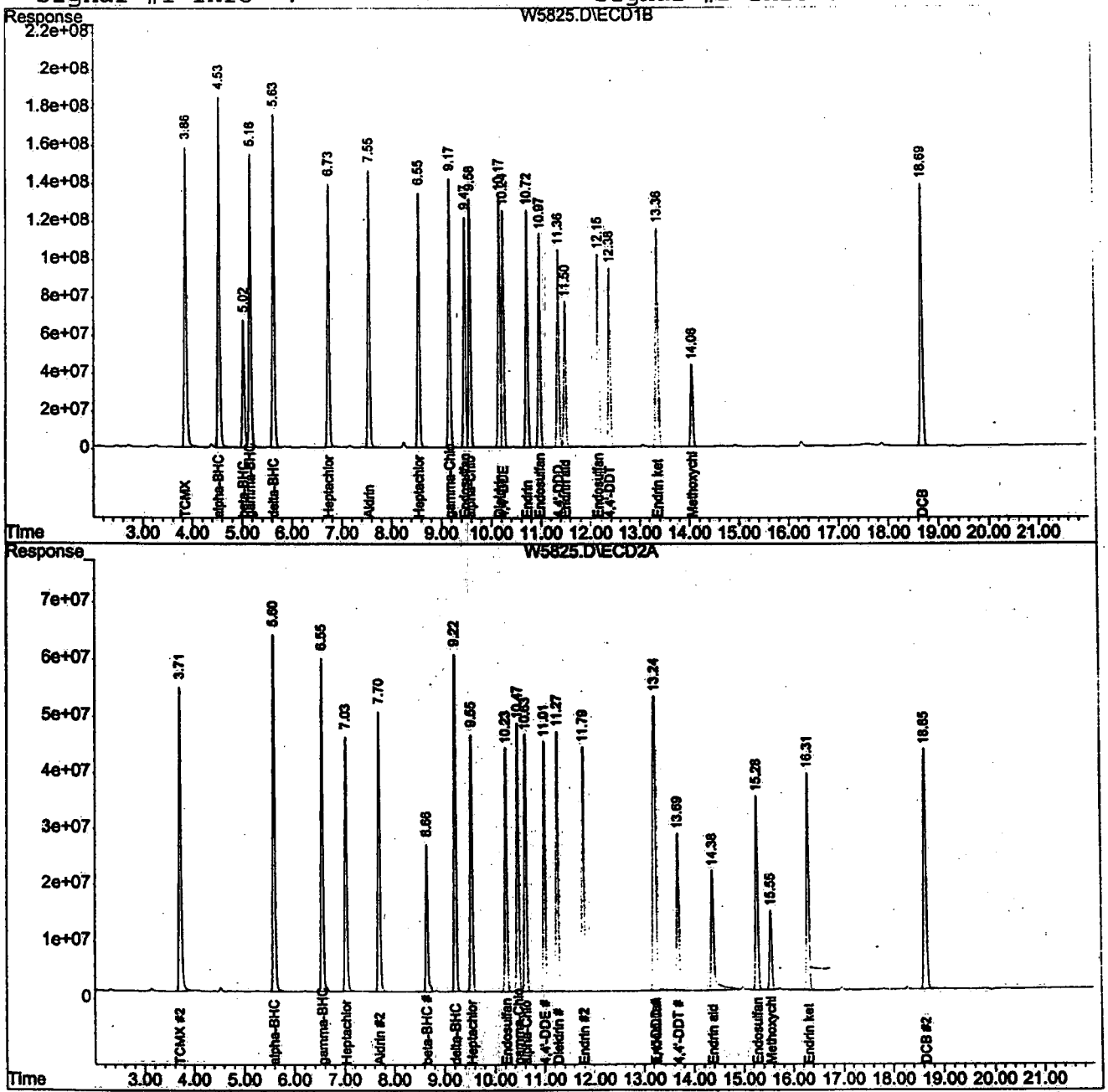
4386

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5825.D\ECD1B.CH Vial: 2
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5825.D\ECD2A.CH
Acq On : 4-9-01 13:24:28 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 9 13:47 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



000129

4367

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5833.D\ECD1B.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5833.D\ECD2A.CH
Acq On : 4-9-01 17:27:06 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 9:21 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2	
	System Monitoring Compounds							
1) S	TCMX	3.86	3.70	5301.6E6	1750.1E6	112.727	91.498	
Spiked Amount	100.000			Recovery	=	112.73%	91.50%	
2) S	DCB	18.69	18.65	5313.3E6	1565.0E6	118.693	98.927	
Spiked Amount	100.000			Recovery	=	118.69%	98.93%	
	Target Compounds							
3) T	alpha-BHC	4.53	5.59	5570.1E6	1755.4E6	116.459	98.757	
4) T	beta-BHC	5.03	8.65	2044.5E6	704.8E6	111.855	94.104	
5) T	gamma-BHC	5.16	6.55	4765.3E6	1603.4E6	114.451	98.348	
6) T	delta-BHC	5.63	9.22	5282.7E6	1588.3E6	115.770	98.531	
7) T	Heptachlor	6.73	7.02	3796.2E6	1211.3E6	103.222	92.124	
8) T	Aldrin	7.55	7.70	4694.5E6	1448.7E6	114.253	97.001	
9) T	Heptachlor epoxi	8.56	9.54	4134.7E6	1318.3E6	112.780	96.013	
10) T	Endosulfan I	9.47	10.22	3876.2E6	1242.1E6	112.732	96.085	
11) T	4,4'-DDE	10.24	11.00	4188.5E6	1326.5E6	114.882	97.443	
12) T	Dieldrin	10.17	11.26	4248.7E6	1364.7E6	114.379	97.214	
13) T	Endrin	10.72	11.79	3921.8E6	1283.2E6	120.883	102.968	
14) T	Endosulfan II	10.97	13.23	3643.9E6	2281.9E6	113.141	193.834	#
15) T	4,4'-DDD	11.36	13.23	3549.1E6	2281.9E6	115.898	193.834	#
16) T	Endrin aldehyde	11.50	14.38	2568.4E6	880.3E6	112.601	93.468	
17) T	Endosulfan sulfa	12.15	15.28	3412.3E6	1076.0E6	114.974	96.203	
18) T	4,4'-DDT	12.38	13.68	2929.3E6	859.0E6	118.320	101.953	
19) T	Endrin ketone	13.36	16.30	3997.1E6	1262.2E6	111.636	96.570	
20) T	Methoxychlor	14.06	15.55	1368.6E6	451.2E6	115.666	98.109	
21) T	alpha-Chlordane	9.58	10.62	4287.3E6	1342.6E6	115.602	97.194	
22) T	gamma-Chlordane	9.17	10.46	4527.6E6	1384.1E6	116.664	97.811	
Sum	Chlordane			0	0	N.D.	N.D.	
Average	Chlordane					0.000	0.000	
Sum	Toxaphene			0	0	N.D.	N.D.	
Average	Toxaphene					0.000	0.000	

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

000130

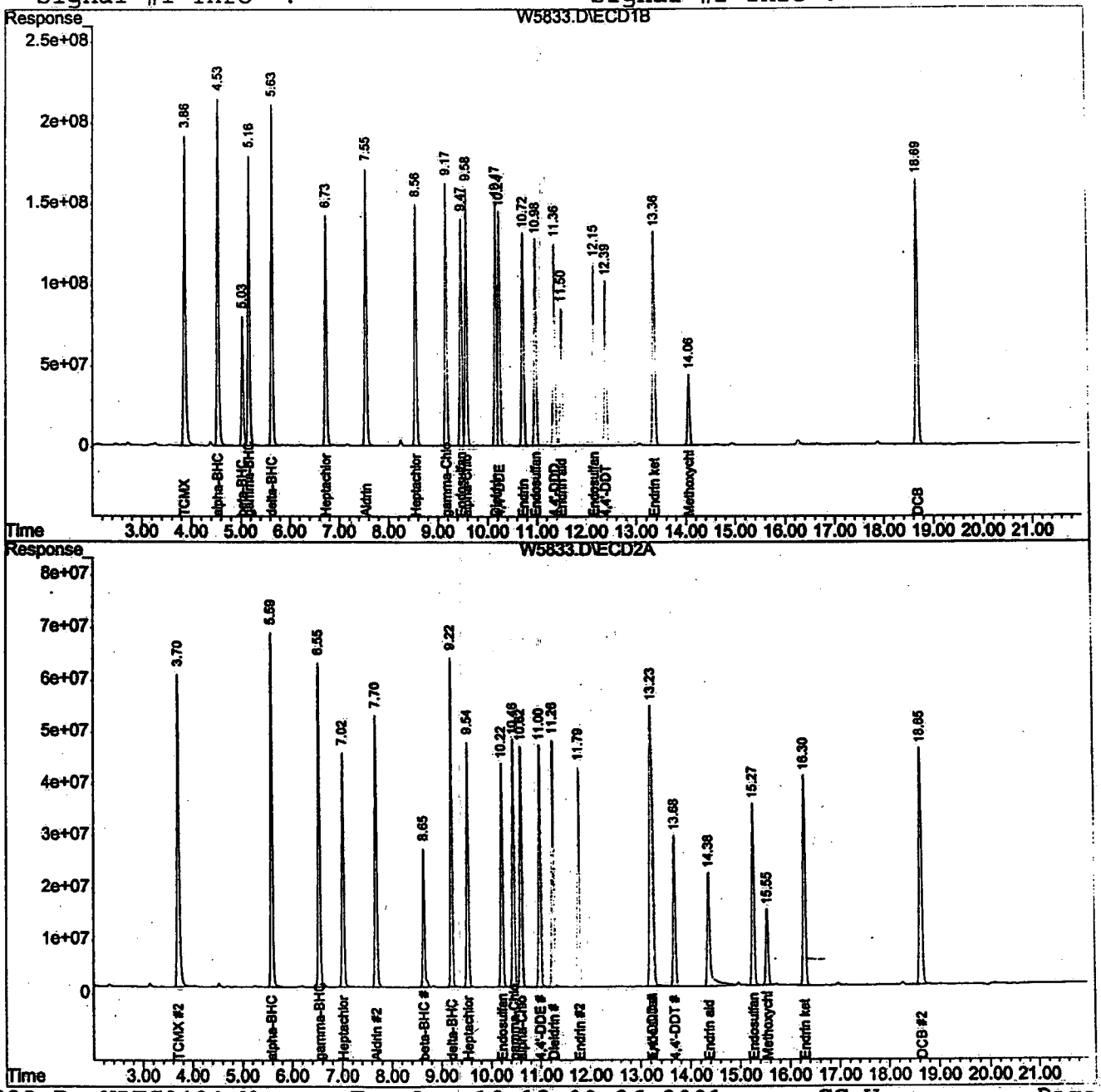
4388

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5833.D\ECD1B.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5833.D\ECD2A.CH
Acq On : 4-9-01 17:27:06 Operator:
Sample : PEST_C_IAS_1441,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 9:21 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



C00131

43589

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-09-01\W5826.D\ECD1B.CH Vial: 3
Acq On : 4-9-01 13:51:23 Operator:
Sample : TOX_C_IAS_1436,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile : events.e

Data File : C:\HPCHEM\1\DATA\04-09-01\W5826.D\ECD2A.CH Vial: 3
Acq On : 4-9-01 13:51:25 Operator:
Sample : TOX_C_IAS_1436,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile : events2.e
Quant Time: Apr 9 14:20 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.70	5086.8E6	1817.1E6	108.159	95.001
Spiked Amount 100.000			Recovery	=	108.16%	95.00%
2) S DCB	18.69	18.65	4576.2E6	1490.9E6	102.227	94.243
Spiked Amount 100.000			Recovery	=	102.23%	94.24%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
28) L2 Toxaphene	13.17	14.02	385.8E6	123.9E6	519.017	441.538
29) L2 Toxaphene {2}	13.30	14.75	299.8E6	110.1E6	514.787	451.846
30) L2 Toxaphene {3}	13.58	15.02	255.2E6	85000544	588.056m	440.215 #
31) L2 Toxaphene {4}	14.04	15.21	286.9E6	66751841	563.089	437.303m
32) L2 Toxaphene {5}	14.55	15.66	415.1E6	98395937	555.411	452.360
Sum Toxaphene			1642.7E6	484.2E6	2740.360	2223.262
Average Toxaphene					548.072	444.652

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

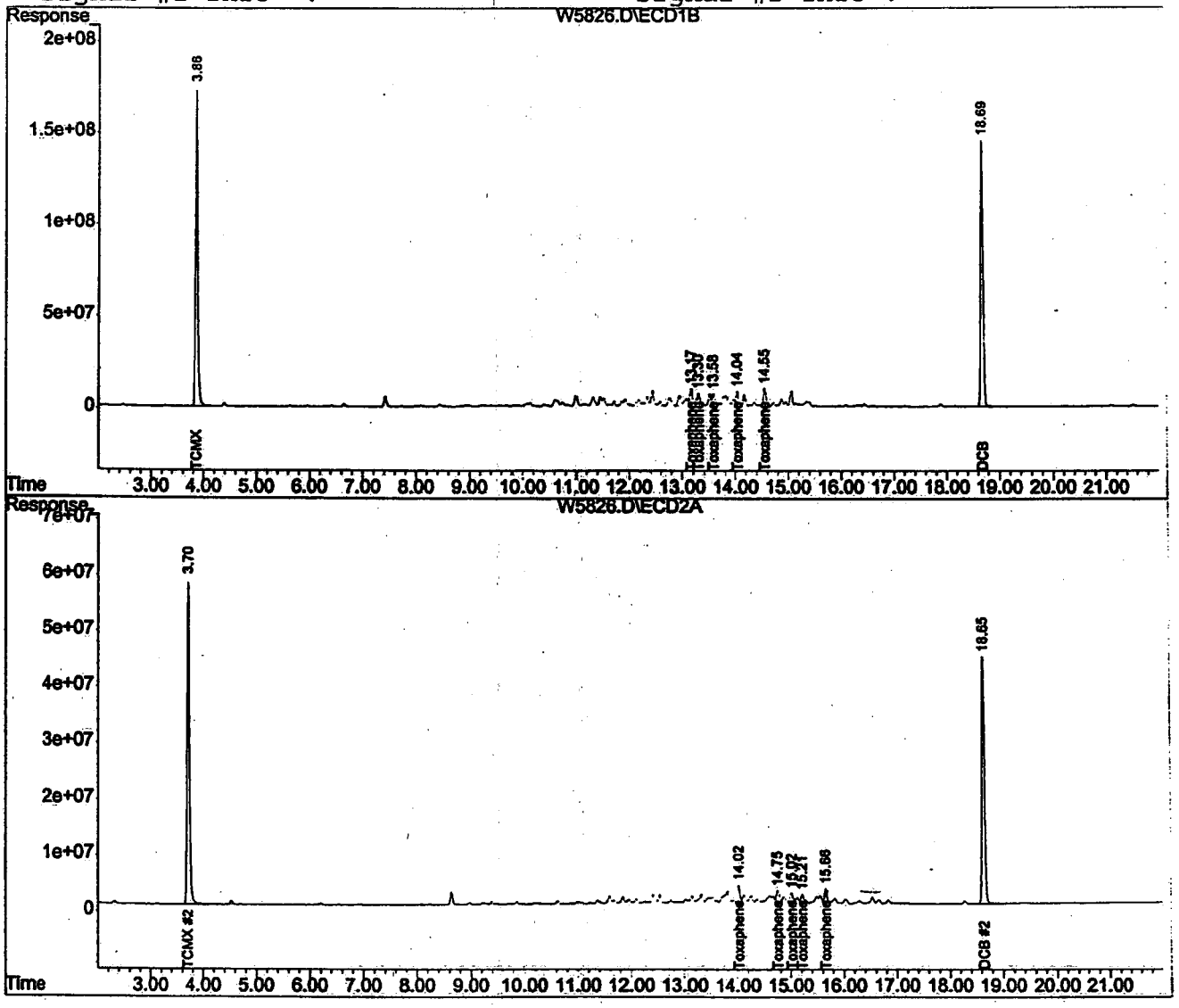
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\04-09-01\W5826.D\ECD1B.CH Vial: 3
Acq On : 4-9-01 13:51:23 Operator:
Sample : TOX_C_IAS_1436,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile : events.e

Data File : C:\HPCHEM\1\DATA\04-09-01\W5826.D\ECD2A.CH Vial: 3
Acq On : 4-9-01 13:51:25 Operator:
Sample : TOX_C_IAS_1436,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile : events2.e
Quant Time: Apr 9 14:20 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



4391

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5827.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5827.D\ECD2A.CH
Acq On : 4-9-01 14:21:35 Operator:
Sample : CHLOR_C_IAS_1437,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 11:50 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Initial Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.86	3.71	4665.8E6	1664.8E6	99.208	87.040
Spiked Amount 100.000			Recovery	=	99.21%	87.04%
2) S DCB	18.68	18.65	4355.6E6	1410.6E6	97.298	89.167
Spiked Amount 100.000			Recovery	=	97.30%	89.17%
Target Compounds						
23) L1 Chlordane	9.17	8.39	2058.6E6	131.4E6	502.439	446.991
24) L1 Chlordane {2}	9.37	10.07	385.7E6	153.6E6	514.705	454.769
L1 Chlordane {3}	9.58	10.47	1912.2E6	679.1E6	489.578	457.450
L1 Chlordane {4}	9.72	10.62	954.2E6	622.3E6	525.433	461.549
27) L1 Chlordane {5}	11.57	10.68	628.4E6	288.7E6	501.978	442.131
Sum Chlordane			5939.0E6	1875.1E6	2534.133	2262.889
Average Chlordane					506.827	452.578
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

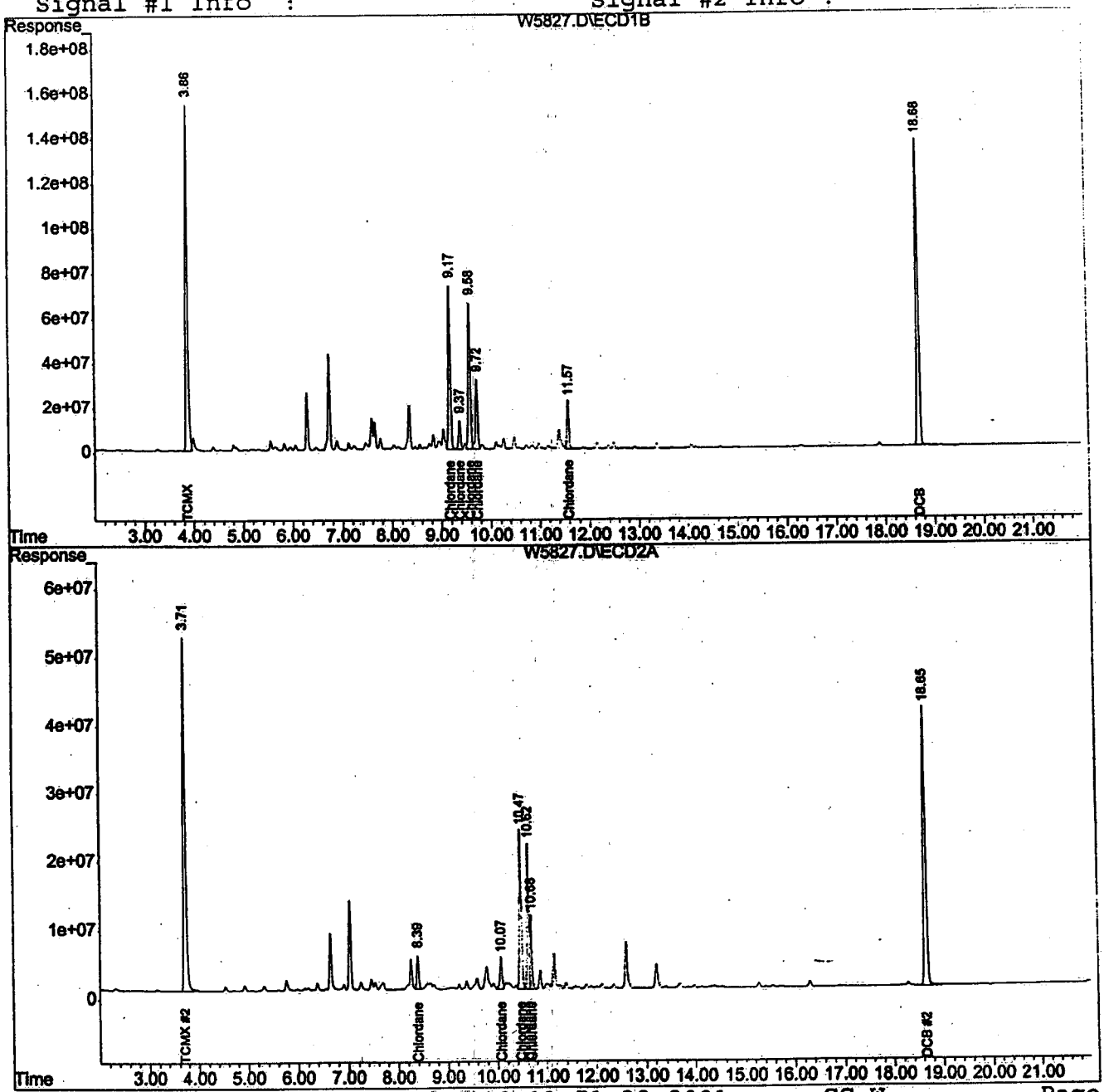
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\04-09-01\W5827.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\04-09-01\W5827.D\ECD2A.CH
Acq On : 4-9-01 14:21:35 Operator:
Sample : CHLOR_C_IAS_1437,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Apr 10 11:50 2001 Quant Results File: WPTC0404.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC0404.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 04 12:42:19 2001
Response via : Multiple Level Calibration
DataAcq Meth : WPTC0404.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



000125

4393

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

BLANK RESULTS SUMMARY

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION	CONTINUING CALIBRATION 1	CONTINUING CALIBRATION 2	INST. MDL	REAGENT BLANK	MDL	IDL
Aluminum	ND	ND	ND	50.0	ND	100	
Antimony	ND	ND	ND	4.00	ND	8.00	
Arsenic	ND	ND	ND	2.00	ND	4.00	
Barium	ND	ND	ND	10.0	ND	20.0	
Beryllium	ND	ND	ND	2.00	ND	4.00	
Cadmium	ND	ND	ND	0.300	ND	0.600	
Calcium	ND	ND	ND	400	ND	800	
Chromium	ND	ND	ND	10.0	ND	20.0	
Cobalt	ND	ND	ND	20.0	ND	40.0	
Copper	ND	ND	ND	20.0	ND	40.0	
Iron	ND	ND	ND	50.0	ND	100	
Lead	ND	ND	ND	2.00	ND	4.00	
Magnesium	ND	ND	ND	100	ND	200	
Manganese	ND	ND	ND	5.00	ND	10.0	
Mercury	ND	ND	ND	0.250	ND	0.500	
Nickel	ND	ND	ND	10.0	ND	20.0	
Potassium	ND	ND	ND	100	ND	200	
Selenium	ND	ND	ND	4.00	ND	8.00	
Silver	ND	ND	ND	0.200	ND	0.400	
Sodium	ND	ND	ND	1000	ND	2000	
Thallium	ND	ND	ND	4.00	ND	8.00	
Vanadium	ND	ND	ND	15.0	ND	30.0	
Zinc	ND	ND	ND	10.0	ND	20.0	

This QC Blank applies to the following samples:

2153-01; 2162-08,010,011; 2186-01; 2199-012~021;
2203-02,04; 2206-02,03; 2209-01; 2210-01~07;
2221-01,02; 2241-01; 2242-02,04,06~09; 2266-01~04

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION			CONTINUING CALIBRATION					MDL	IDL
	TRUE	FOUND	%R (1)	TRUE	FOUND	%R (1)	FOUND	%R (1)		
Aluminum	400	404	101	400	425	106	431	108	50.0	
Antimony	120	126	105	120	125	104	121	101	4.00	
Arsenic	20.0	20.8	104	20.0	20.8	104	20.0	100	2.00	
Barium	400	404	101	400	402	101	405	101	10.0	
Beryllium	10.0	10.9	109	10.0	11.0	110	9.84	98.4	2.00	
Cadmium	10.0	10.1	101	10.0	10.6	106	9.71	97.1	0.300	
Calcium	250000	246000	98.4	250000	243000	97.2	237000	94.8	400	
Chromium	20.0	20.5	103	20.0	20.7	104	20.4	102	10.0	
Cobalt	100	101	101	100	103	103	94.6	94.6	20.0	
Copper	50.0	50.3	101	50.0	50.1	100	48.4	96.8	20.0	
Iron	5000	4790	95.8	5000	4780	95.6	4580	91.6	50.0	
Lead	10.0	10.3	103	10.0	10.3	103	9.77	97.7	2.00	
Magnesium	250000	239000	95.6	250000	229000	91.6	225000	90.0	100	
Manganese	30.0	30.5	102	30.0	30.9	103	29.7	99.0	5.00	
Mercury	5.00	4.78	95.6	5.00	5.02	100	5.06	101	0.250	
Nickel	80.0	80.6	101	80.0	82.2	103	75.7	94.6	10.0	
Potassium	10000	10000	100	10000	9780	97.8	9400	94.0	100	
Selenium	10.0	10.5	105	10.0	10.7	107	10.8	108	4.00	
Silver	20.0	19.4	97.0	20.0	19.7	98.5	19.1	95.5	0.200	
Sodium	250000	271000	108	250000	263000	105	262000	105	100	
Thallium	20.0	20.7	104	20.0	20.5	103	19.6	98.0	4.00	
Vanadium	100	106	106	100	106	106	107	107	15.0	
Zinc	40.0	43.3	108	40.0	43.7	109	40.7	102	10.0	

(1) Control Limits: Mercury 80-120, Other Metals 90-110

001137

43955

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SSR1	SR1	%R1	SA1	SSR2	SR2	%R2	SA2	CONTROL LIMIT %R
Aluminum	1130	747	95.8	400					75-125
Antimony	396	ND	99.0	400	372	ND	93.0	400	75-125
Arsenic	436	ND	109	400	412	ND	103	400	75-125
Barium	1540	1100	110	400					75-125
Beryllium	427	ND	107	400	376	ND	94.0	400	75-125
Cadmium	432	ND	108	400	440	ND	110	400	75-125
Calcium	119000	114000	NC	8000					75-125
Chromium	421	ND	105	400	408	ND	102	400	75-125
Cobalt	416	ND	104	400					75-125
Copper	396	ND	99.0	400	385	ND	96.3	400	75-125
Iron	9390	830	107	8000	8020	273	96.8	8000	75-125
Lead	417	9.40	102	400	370	ND	92.5	400	75-125
Magnesium	23700	16600	88.8	8000					75-125
Manganese	666	238	107	400					75-125
Mercury	9.00	ND	90.0	10.0	9.40	ND	94.0	10.0	75-125
Nickel	416	ND	104	400	399	ND	99.8	400	75-125
Potassium	9700	2030	95.9	8000					75-125
Selenium	454	ND	114	400	446	ND	112	400	75-125
Silver	392	ND	98.0	400	376	ND	94.0	400	75-125
Sodium	29400	22900	81.3	8000					75-125
Thallium	408	ND	102	400	372	ND	93.0	400	75-125
Vanadium	425	ND	106	400					75-125
Zinc	438	ND	110	400	432	ND	108	400	75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 1 2162-011

QC Sample 1 for following samples:
2153-01; 2162-08,010,011; 2186-01; 2199-012-021; 2203-02,04; 2206-02,03; 2209-01; 2210-01-07; 2221-01,02; 2241-01; 2242-02,04,06-09; 2266-01-04

QC Sample 2 2242-002

QC Sample 2 for following samples:
2153-01; 2162-08,010,011; 2186-01; 2199-012-021; 2203-02,04; 2206-02,03; 2209-01; 2210-01-07; 2221-01,02; 2241-01; 2242-02,04,06-09; 2266-01-04

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

ANALYTE	AQUEOUS (ug/L)			SOLID (mg/kg)			
	TRUE	FOUND	%R(1)	TRUE	FOUND	LIMITS	%R(2)
Aluminum	400	369	92.3				
Antimony	400	364	91.0				
Arsenic	400	409	102				
Barium	400	394	98.5				
Beryllium	400	397	99.3				
Cadmium	400	410	103				
Calcium	8000	8390	105				
Chromium	400	396	99.0				
Cobalt	400	404	101				
Copper	400	396	99.0				
Iron	8000	8120	102				
Lead	400	388	97.0				
Magnesium	8000	8440	106				
Manganese	400	405	101				
Mercury	10.0	10.1	101				
Nickel	400	407	102				
Potassium	8000	7440	93.0				
Selenium	400	418	105				
Silver	400	396	99.0				
Sodium	8000	8430	105				
Thallium	400	389	97.3				
Vanadium	400	394	98.5				
Zinc	400	424	106				

(1) Control Limits = 90-110%
(2)Manufacture's Recomended Limits

Aqueous LCS Source: MV Laboratories

Solid LCS Source: Environmental Resource Associates: PriorityPollutnT/CLP Inorganics Soils

METALS QUALITY CONTROL

SERIAL DILUTIONS & POST SPIKES

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SERIAL DILUTION		%	POST SPIKE		%
	SR	SDR	Difference	SPR	SA	Recovery
Aluminum	747			1130	400	95.7
Antimony	ND			369	400	92.3
Arsenic	ND			430	400	108
Barium	1100	1180	7.02			
Beryllium	ND			387	400	96.8
Cadmium	ND			440	400	110
Calcium	114000	120000	5.13			
Chromium	ND			426	400	107
Cobalt	ND			411	400	103
Copper	ND			394	400	98.5
Iron	830			9350	8000	107.0
Lead	9.40			407	400	99.4
Magnesium	16600	17600	5.85			
Manganese	238	244	2.49			
Mercury	ND			10.3	10.0	103
Nickel	ND			409	400	102
Potassium	2030	1920	5.57			
Selenium	ND			453	400	113
Silver	ND			386	400	96.5
Sodium	22900			29300	8000	80.0
Thallium	ND			398	400	99.5
Vanadium	ND			428	400	107
Zinc	ND			438	400	110

SR = Sample Result
SDR = Sample Dilution Result

SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 75 - 125% Recovery

QC Sample : 2162-011

QC Sample for following samples:
2153-01; 2162-08,010,011; 2186-01; 2199-012~021;
2203-02,04; 2206-02,03; 2209-01; 2210-01~07;
2221-01,02; 2241-01; 2242-02,04,06~09; 2266-01~04

4358

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 3	S3	D3	RPD3	CONTROL LIMIT 4	S4	D4	RPD4
Antimony	NA	ND	ND	NC				
Arsenic	NA	ND	ND	NC				
Beryllium	NA	ND	ND	NC				
Cadmium	NA	ND	ND	NC				
Chromium	NA	ND	ND	NC	NA	ND	ND	NC
Copper	NA	ND	ND	NC				
Lead	NA	ND	ND	NC	NA	ND	ND	NC
Nickel	NA	ND	ND	NC				
Selenium	NA	ND	ND	NC				
Silver	NA	ND	ND	NC				
Thallium	NA	ND	ND	NC				
Zinc	20	24.0	23.0	4.26				

S3 = Sample 3
D3 = Duplicate 3

S4 = Sample 4
D4 = Duplicate 4

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 3 2202-004

QC Sample 3 for following samples:
2153-01; 2162-08,010,011; 2186-01; 2199-012~021;
2203-02,04; 2206-02,03; 2209-01; 2210-01~07;
2221-01,02; 2241-01; 2242-02,04,06~09; 2266-01~04

QC Sample 4 2210-001

QC Sample 4 for following samples:
2153-01; 2162-08,010,011; 2186-01; 2199-012~021;
2203-02,04; 2206-02,03; 2209-01; 2210-01~07;
2221-01,02; 2241-01; 2242-02,04,06~09; 2266-01~04

4299

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

ANALYTE	AQUEOUS (ug/L)			SOLID (mg/kg)			
	TRUE	FOUND	%R(1)	TRUE	FOUND	LIMITS	%R(2)
Aluminum	400	369	92.3				
Antimony	400	364	91.0				
Arsenic	400	409	102				
Barium	400	394	98.5				
Beryllium	400	397	99.3				
Cadmium	400	410	103				
Calcium	8000	8390	105				
Chromium	400	396	99.0				
Cobalt	400	404	101				
Copper	400	396	99.0				
Iron	8000	8120	102				
Lead	400	388	97.0				
Magnesium	8000	8440	106				
Manganese	400	405	101				
Mercury	10.0	10.1	101				
Nickel	400	407	102				
Potassium	8000	7440	93.0				
Selenium	400	418	105				
Silver	400	396	99.0				
Sodium	8000	8430	105				
Thallium	400	389	97.3				
Vanadium	400	394	98.5				
Zinc	400	424	106				

(1) Control Limits = 90-110%
(2)Manufacture's Recomended Limits

Aqueous LCS Source: MV Laboratories

Solid LCS Source: Environmental Resource Associates: PriorityPollutnT/CLP Inorganics Soils

000142

4400

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SERIAL DILUTIONS & POST SPIKES

Lab Case Number: E01- 2153, 2162, 2186, 2199, 2202, 2206, 2209, 2210, 2221, 2241, 2242, 2266

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SERIAL DILUTION		%	POST SPIKE		%
	SR	SDR	Difference	SPR	SA	Recovery
Aluminum	747			1130	400	95.7
Antimony	ND			369	400	92.3
Arsenic	ND			430	400	108
Barium	1100	1180	7.02			
Beryllium	ND			387	400	96.8
Cadmium	ND			440	400	110
Calcium	114000	120000	5.13			
Chromium	ND			426	400	107
Cobalt	ND			411	400	103
Copper	ND			394	400	98.5
Iron	830			9350	8000	107.0
Lead	9.40			407	400	99.4
Magnesium	16600	17600	5.85			
Manganese	238	244	2.49			
Mercury	ND			10.3	10.0	103
Nickel	ND			409	400	102
Potassium	2030	1920	5.57			
Selenium	ND			453	400	113
Silver	ND			386	400	96.5
Sodium	22900			29300	8000	80.0
Thallium	ND			398	400	99.5
Vanadium	ND			428	400	107
Zinc	ND			438	400	110

SR = Sample Result
SDR = Sample Dilution Result

SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 75 - 125% Recovery

QC Sample : 2162-011

QC Sample for following samples:
2153-01; 2162-08,010,011; 2186-01; 2199-012~021;
2203-02,04; 2206-02,03; 2209-01; 2210-01~07;
2221-01,02; 2241-01; 2242-02,04,06~09; 2266-01~04

000143

4401

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
4/12/01

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

General Chemistry Quality Control

Matrix: Aqueous
Units: A-mg/L

Batch ID: AP024-0025

Blank

Parameter	Method Blank	MDL	Analysis Date
Total Recoverable Phenol	ND	0.050	04/10/01

Duplicate Recovery

Parameter	QC Sample	Result	Duplicate Result	RPD	RPD Limits
Total Recoverable Phenol	2188-002S	0.217	0.214	1	20

Spike Recovery

Parameter	QC Sample	Result	Spike Added	Spike Result	%Spike Recovery	%Rec. Limits
Total Recoverable Phenol	2188-002	ND	.250	0.217	86.8	75 - 125

The above blank result applies to the follow samples E01-

2188-002	2199-017
2188-002S	2199-018
2188-002SD	2199-019
2153-001	2199-013
2202-005	2199-015
2199-012	2199-020
2199-014	2199-021
2199-016	2199-005

++ = No Flash - Sample boiled at 100C
NA = Not Applicable
ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
No = Does Not Ignite
Yes = Sample Ignites

©2000 IAL Inc.
All rights reserved

4407

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
4/12/01

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

General Chemistry Quality Control

Matrix: Aqueous
Units: A-mg/L

Batch ID: AP013-0019

Blank

Parameter	Method Blank	MDL	Analysis Date
Total Cyanide	ND	0.020	04/11/01

Duplicate Recovery

Parameter	QC Sample	Result	Duplicate Result	RPD	RPD Limits
Total Cyanide	2153-001S	0.265	0.264	0	20

Spike Recovery

Parameter	QC Sample	Result	Spike Added	Spike Result	%Spike Recovery	%Rec. Limits
Total Cyanide	2153-001	ND	0.250	0.265	106	75 - 125

The above blank result applies to the follow samples E01-

2153-001	2162-001
2153-001S	2162-002
2153-001SD	2162-003
2074-001	2162-004
2075-001	2162-005
2075-003	2162-006
2077-001	2162-007
2079-001	2162-008
2080-001	2171-001
2172-001	2173-001

++ = No Flash - Sample boiled at 100C
NA = Not Applicable
ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
No = Does Not Ignite
Yes = Sample Ignites

©2000 IAL Inc.
All rights reserved

Phone # (973) 361-425
Fax # (973) 989-5288

INTEGRATED ANALYTICAL LABORATORIES
CHAIN OF CUSTODY

Franklin Rd
a, NJ 07869

CLIENT & PROJECT

Company Name:	ENVIROTACTICS
Address:	2517 HWY 35
	BUILDING D
	SUITE 202
	MANASQUAN NJ
Telephone #:	732-292-0100
Fax #:	732-292-0100
Project Name:	ORBIS
Project Manager:	CHRIS NEUFFER
Reference ID#:	444 PO#:

REPORTING

Fax to:	
Fax #:	
Report to:	
Address:	
Invoice to:	
Address:	

Turnaround Time

Conditional / TPHC
24 hr* 48 hr (72 hr) 1 wk NA Other:

Verbal/Fax
24 hr* 48 hr* 72 hr* 1 wk* (2 wk) Other:

Hard Copy
72 hr* 1 wk* 2 wk* (3 wk) Other:

*Prior to sample arrival, Lab notification is required.

Report Format

Results Only
(Reduced)
Regulatory
(SRP Disk**: dbf or wpd)
Other:

** Circle format required

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE MATRIX
W - Waste SL - Sludge A - Aqueous
O - Oil X - Other S - Soil
GW - Groundwater SOL - Solid

Preservatives
1. HCL 3. HNO_3
2. NaOH 4. H_2SO_4
5. MeOH 6. Other

COOLER TEMP. 10 °C

SAMPLE INFORMATION

Sample ID	Sample Description	Sampling Date	Sampling Time	am	pm	Matrix	# of Containers	Lab ID	PP+40	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	Comments
TW-1	TEMP WELL	4/4/01	11:10	X		GW	8	01	X											

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Concentrations Expected
LOW MED HIGH

Known Hazard yes no
Describe:

CUSTODY LOG

	Signature	Date	Time		Signature
Relinquished by:	[signature]	4/5/01	1400	Received by:	Jim Lowell
Relinquished by:	Jim Lowell	4/5/01	1800	Received by:	Paul Cornista
Relinquished by:				Received by:	
Relinquished by:				Received by:	
Relinquished by:				Received by:	

Comments:

Lab Case #
2153

PAGE: 1 OF 1

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

HUH

000146

CHAIN OF CUSTODY

Case No.: E01-2153
Project : ORBIS - NEWARK - 444
Client/Project: ENVTACT/ORBIS
Client Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan, NJ 08736
Date Received: 04/05/2001
Time Received: 18:00
Report Format: Reduced

P.O. #: _____

Billing Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 20
Manasquan, NJ 08736
Verbal Due: Apr 20
Report Due: Apr 27

# of Containers	8
IAL ID #	2153-001
Client ID #	TW-1
Matrix	Aqueous
Sample Date	04/04/2001
Sample Time	11:10
VO+15, PP LIST	√
Pesticides	√
PCB	√
BNA + 25	√
PP Metals -LOW	√
Cyanide, Total	√
Phenols	√
Electronic Del.	√

Comments: NOTE 1: PLEASE MEET GROUNDWATER LIMITS FOR METALS.

WHOC

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: 2153 CLIENT: ENVIRO TACTICS

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

CHAIN OF CUSTODY: COMPLETE / INCOMPLETE Comments:

		Comments:
Sample Bottles Intact:	✓	
Sample Labels Intact/ Correct:	✓	
Sufficient Sample Volume:	✓	
Correct bottles/ preservative:	✓	
Samples received in holding time/ prep time:	✓	
Headspace/ bubbles in voa samples:	✗	
Samples to be subcontracted:	(✓)	
Preserved Sample pH checked: (Excluding voa samples)	✓	

KEY
✓ = YES
✗ = NO
(✓) = N/A

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL [initials] DATE 4-5-01

CORRECTIVE ACTION REQUIRED: YES [ ] (SEE BELOW) NO [ ]

CLIENT NOTIFIED: YES [ ] Date/ Time: _____ NO [ ]

PROJECT CONTACT: _____

SUBCONTRACTED LAB: _____

DATE SHIPPED: _____

ADDITIONAL COMMENTS: _____

VERIFIED/TAKEN BY: INITIAL [initials] DATE _____

REV 10/00

000148

4406

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E01-2153
Client : Envirotactics Inc.
Project : ORBIS - NEWARK - 444

			EXTRACT			ANALYSIS		
			DATE	TIME	INITIAL	DATE	TIME	INITIAL
	GC/MS V							
VO+15, PP LIST	2153-001	A		—		4/5-4/19		DSD
	GC EX							
Pesticides	2153-001	A	4/9	900	EDM2	4.9	300	LG
PCB	2153-001	A		↓		4.9	400	U
	GC/MS X							
BNA + 25	2153-001	A	4/9	700-300	DL	4/9		DPm
	METALS							
PP Metals -LOW	2153-001	A	4/10/01	[illegible]	[illegible]	4/11	1200	[illegible]
	WETCHEM							
Cyanide, Total	2153-001	A	4/8		[illegible]	4/9		[illegible]
Phenols	2153-001	A	4/8	1400	DM	4/12	1300	DM
	AIR							
Electronic Del.	2153-001	A		—			—	

REVIEW & APPROVAL: [illegible]
REMARKS :

000149

4407

PAR/SIR/RIW

Orbis Products Corporation
55 Virginia Street
Newark, Essex County, NJ
Case #86-11-17-0100 Ref 15
Attachment 11
Groundwater Laboratory Reports
(3 of 3)

Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

Phone: 973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

for

Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan,NJ 08736

Project: ORBIS
Lab Case Number: E00-6486
Date Report Prepared: October 30, 2000

CLIENT SAMPLE ID	LABORATORY SAMPLE ID
GW-1	6486-001
GW-2	6486-002

All required protocols were followed during analyses. These data have been reviewed and accepted by

Michael H. Lefkin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

	Page
Qualifiers	1
Conformance / NonConformance Summary	2
Laboratory Deliverables Check List	3
GC/MS NonConformance Summary	4
GC NonConformance Summary	5
Metal NonConformance Summary	6
Summary Report	7
Analytical Results	
Volatiles + 15	11
Semivolatiles - BNA + 25	15
PCB's	21
Pesticides	23
PP Metals	25
General Analytical	
Cyanide, Total	27
Phenols	28
Methodology Summary	29
Quality Control	
Volatiles + 15	30
Tuning Results Summary	
Method Blank Results Summary	
Calibration Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Internal Standard Summary	
Chromatograms	
Semivolatiles - BNA + 25	69
Tuning Results Summary	
Method Blank Results Summary	
Calibration Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Internal Standard Summary	
Chromatograms	
PCB's	114
Method Blank Results Summary	
Standards Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Retention Time Shift Summary	
Chromatograms	

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

	Page
Quality Control Cont.	
Pesticides	137
Method Blank Results Summary	
Standards Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Retention Time Shift Summary	
Chromatograms	
PP Metals	162
Method Blank Results Summary	
Calibration Summary	
Spike Sample Results Summary	
Duplicate Sample Results Summary	
General Analytical	172
Blank Results Summary	
Spike Sample Results Summary	
Duplicate Sample Results Summary	
Sample Tracking	
Chains of Custody	174
Laboratory Chronicle	177

INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

A - Indicates the sample is an Aqueous matrix.

O - Indicates the sample is an Oil matrix.

S - Indicates the sample is a Soil, Sludge or Sediment matrix.

X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.

C - Common Laboratory Contaminant.

D - The compound was reported from the Diluted analysis.

D.F. - Dilution Factor.

E - Estimated concentration, reported results are outside the calibrated range of the instrument.

J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.

MDL - Method Detection Limit.

MI - Indicates compound concentration could not be determined due to Matrix Interferences.

NA - Not Applicable.

ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

4412

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received two (2) aqueous sample(s) from Envirotactics Inc. (Project: ORBIS) on October 16, 2000 for the analysis of:

(2) Volatiles + 15
(2) Semivolatiles - BNA + 25
(2) PCB's
(2) Pesticides
(2) PP Metals
(2) Cyanide, Total
(2) Phenols

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

R Ramsey
Reviewed by

10/30/00
Date

4413

INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E00-6486

		Check If Complete
1.	Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	✓
2.	Table of Contents.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	✓
4.	Summary Table cross-referencing Field ID's vs. Lab ID's.	✓
5.	Document bound, paginated and legible.	✓
6.	Chain of Custody.	✓
7.	Methodology Summary.	✓
8.	Laboratory Chronicle and Holding Time Check.	✓
9.	Results submitted on a dry weight basis (if applicable).	✓
10.	Method Detection Limits.	✓
11.	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	✓
12.	NonConformance Summary.	✓

RRamsay
QC Reviewed by

10/30/00
Date

4414

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS VOLATILE ANALYSIS

Lab Case Number: E00 - 6486

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. BFB Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series and 8 hours for 500 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series, 12 hours for 8000 series		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds		NA
b. System Performance Check Compounds		NA
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)		✓
If not met, were the calculations checked and the results qualified as "estimated"?		na
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)		X
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		NA
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed	X	

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other

13. Comments:

Organics Manager

10/19/00
Date

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS SEMIVOLATILE ANALYSIS

Lab Case Number: E00 - 6486

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. DFTPP Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series.		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds b. System Performance Check Compounds	 	 ✓ ✓
6. Blank Contamination - If yes, list compounds and concentrations in each blank: a. B/N Fraction _____ b. Acid Fraction _____	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range) a. B/N Fraction _____ b. Acid Fraction _____ If not met, were the calculations checked and the results qualified as "estimated"?		✓ NA
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) a. B/N Fraction _____ b. Acid Fraction _____		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample: _____ _____		✓
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample: _____ _____		✓
12. Sample Dilution Performed	✓	

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other

13. Comments:

_____
_____

_____ Organics Manager

10/20/00 Date

rev 06/00

4416

INTEGRATED ANALYTICAL LABORATORIES

GC ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E00 - 5496

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2.	Standards Summary submitted.		✓
3.	Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hrs of the sample analysis.		✓
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
5.	Surrogate Recoveries meet criteria (if applicable). If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
6.	Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
7.	Retention Time Shift Meet Criteria (if applicable).		✓
8.	Extraction Holding Time Met. If not met, list number of days exceeded for each sample:		✓
9.	Analysis Holding Time Met. If not met, list number of days exceeded for each sample:		✓

Comments:

Organic Manager

10.18.2000
Date

rev 01/00

4417

INTEGRATED ANALYTICAL LABORATORIES

GC ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E00 - 6486

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2.	Standards Summary submitted.		✓
3.	Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hrs of the sample analysis.		✓
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
5.	Surrogate Recoveries meet criteria (if applicable). If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
6.	Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
7.	Retention Time Shift Meet Criteria (if applicable).		✓
8.	Extraction Holding Time Met. If not met, list number of days exceeded for each sample:		✓
9.	Analysis Holding Time Met. If not met, list number of days exceeded for each sample:		✓

Comments:

Organic Manager

10.18.00
Date

rev 01/00

4418

INTEGRATED ANALYTICAL LABORATORIES

METAL ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E00- 6486

	No	Yes
1. Calibration Summary Meet Criteria.		✓
2. ICP Interference Check Sample Results Meets Criteria (if applicable)		NA
3. Serial Dilution Summary Submitted (if applicable) / Meets Criteria		✓
4. Internal Standards Meet Criteria (if applicable)		✓
5. Laboratory Control Sample Summary Submitted (if applicable)/Meets Criteria		✓
6. Blank Contamination: If yes, list compounds and concentrations in each blank:	✓	
7. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria. (If not, list those compounds and their recoveries which fall outside the acceptable range).		✓
8. Extraction Holding Time Met. If not, list number of days exceeded for each sample:		✓
9. Analysis Holding Time Met. If not, list number of days exceeded for each sample:		✓

Additional Comments:

H. Falke-Jorgensen
Inorganics Manager

10/23-00
Date

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: Envirotactics Inc.
Project: ORBIS
Lab Case No.: E00-6486

	Lab ID:	6486-001	6486-002
	Client ID:	GW-1	GW-2
	Matrix:	Aqueous	Aqueous
	Sampled Date:	10/12/2000	10/12/2000
PARAMETER(Units)			
Volatiles (ppb)			
Vinyl Chloride		ND	2.61
Benzene		8.4	90.8
Toluene		2.95	0.939
Chlorobenzene		1.61	15.5
Ethylbenzene		1.54	1.16
Total Xylenes		5.69	ND
1,4-Dichlorobenzene		0.413	ND
1,2-Dichlorobenzene		6.73	0.406
TOTAL VO's:		27.333	111.415
TOTAL TIC's:		127.8	3.5
TOTAL VO's & TIC's:		155.133	114.915
Semivolatiles - BNA (ppb)			
1,2-Dichlorobenzene		2.34	ND
Diethylphthalate		ND	3.75
Fluorene		4.05	ND
TOTAL BNA'S:		6.39	3.75
TOTAL TIC's:		100.1	95
TOTAL BNA'S & TIC's:		106.49	98.75
PCB's (ppb)			
Aroclor-1016		ND	ND
Aroclor-1221		ND	ND
Aroclor-1232		ND	ND
Aroclor-1242		ND	ND
Aroclor-1248		ND	ND
Aroclor-1254		ND	0.253
Aroclor-1260		ND	ND

ND = Analyzed for but Not Detected at the MDL
Continued on next page.

4420

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: Envirotactics Inc.
Project: ORBIS
Lab Case No.: E00-6486

	Lab ID:	6486-001	6486-002
	Client ID:	GW-1	GW-2
	Matrix:	Aqueous	Aqueous
	Sampled Date:	10/12/2000	10/12/2000
PARAMETER(Units)			
Pesticides (ppb)		ND	ND
alpha-BHC		ND	ND
beta-BHC		ND	ND
gamma-BHC		ND	ND
delta-BHC		ND	ND
Heptachlor		ND	ND
Aldrin		ND	ND
Heptachlor epoxide		ND	ND
Endosulfan I		ND	ND
4,4'-DDE		ND	0.0128
Dieldrin		ND	ND
Endrin		ND	ND
Endosulfan II		ND	ND
4,4'-DDD		ND	0.0313
Endrin aldehyde		ND	ND
Endosulfan sulfate		ND	ND
4,4'-DDT		ND	ND
Chlordane		ND	ND
Toxaphene		ND	ND
Metals (ppm)			
Antimony		ND	ND
Arsenic		0.0101	0.0127
Beryllium		ND	0.00532
Cadmium		ND	0.00518
Chromium		0.0209	0.0404
Copper		0.0931	0.240
Lead		0.0121	0.0422
Mercury		ND	ND
Nickel		0.365	0.0628
Selenium		ND	ND
Silver		ND	ND
Thallium		ND	ND
Zinc		0.151	0.173
General Analytical			
Cyanide, Total (ppm)		ND	ND
Phenol (ppm)		ND	ND

ND = Analyzed for but Not Detected at the MDL

4421

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/2000
Date Analyzed: 10/17/2000
Data file: E3666.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.36
Vinyl Chloride	ND		0.39
Bromomethane	ND		0.41
Chloroethane	ND		0.36
Trichlorofluoromethane	ND		0.44
Acrolein	ND		2.01
1,1-Dichloroethene	ND		0.47
Methylene Chloride	ND		1.91
Acrylonitrile	ND		2.87
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.3
Chloroform	ND		0.28
1,1,1-Trichloroethane	ND		0.36
Carbon Tetrachloride	ND		0.33
1,2-Dichloroethane(EDC)	ND		0.36
Benzene	8.4		0.25
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.22
2-Chloroethylvinyl Ether	ND		0.22
cis-1,3-Dichloropropene	ND		0.22
Toluene	2.95		0.3
trans-1,3-Dichloropropene	ND		0.22
1,1,2-Trichloroethane	ND		0.3
Tetrachloroethene	ND		0.39
Dibromochloromethane	ND		0.3
Chlorobenzene	1.61		0.28
Ethylbenzene	1.54		0.3
Total Xylenes	5.69		0.88
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.25
1,3-Dichlorobenzene	ND		0.3
1,4-Dichlorobenzene	0.413		0.3
1,2-Dichlorobenzene	6.73		0.28

Total Target Compounds: 27.333

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/2000
Date Analyzed: 10/17/2000
Date File: E3666.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown hydrocarbon	3	6.38
	Unknown cyclic hydrocarbon	4.6	6.74
	Unknown cyclic hydrocarbon	3.7	6.80
	Substituted benzene	26.3	11.63
	Unknown aromatic	62.5	12.24
	Unknown aromatic	14.1	12.37
	Substituted benzene	4.8	12.81
	Unknown aromatic	8.8	14.82

Total TICs = 127.8

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/2000
Date Analyzed: 10/17/2000
Data file: E3667.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.36
Vinyl Chloride	2.61		0.39
Bromomethane	ND		0.41
Chloroethane	ND		0.36
Trichlorofluoromethane	ND		0.44
Acrolein	ND		2.01
1,1-Dichloroethene	ND		0.47
Methylene Chloride	ND		1.91
Acrylonitrile	ND		2.87
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.3
Chloroform	ND		0.28
1,1,1-Trichloroethane	ND		0.36
Carbon Tetrachloride	ND		0.33
1,2-Dichloroethane(EDC)	ND		0.36
Benzene	90.8		0.25
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.22
2-Chloroethylvinyl Ether	ND		0.22
cis-1,3-Dichloropropene	ND		0.22
Toluene	0.939		0.3
trans-1,3-Dichloropropene	ND		0.22
1,1,2-Trichloroethane	ND		0.3
Tetrachloroethene	ND		0.39
Dibromochloromethane	ND		0.3
Chlorobenzene	15.5		0.28
Ethylbenzene	1.16		0.3
Total Xylenes	ND		0.88
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.25
1,3-Dichlorobenzene	ND		0.3
1,4-Dichlorobenzene	ND		0.3
1,2-Dichlorobenzene	0.406		0.28

Total Target Compounds: 111.415

4424

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/2000
Date Analyzed: 10/17/2000
Date File: E3667.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown aromatic	3.5	18.40

Total TICs = 3.5

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/2000
Date Extracted: 10/19/2000
Date Analyzed: 10/19/2000
Data file: C6175.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Phenol	ND		0.27
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
2-Chlorophenol	ND		0.17
1,3-Dichlorobenzene	ND		0.34
1,4-Dichlorobenzene	ND		0.44
Benzyl alcohol	ND		0.31
1,2-Dichlorobenzene	2.34		0.36
2-Methylphenol	ND		0.25
bis(2-chloroisopropyl)ether	ND		0.55
4-Methylphenol	ND		0.29
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
2-Nitrophenol	ND		0.82
2,4-Dimethylphenol	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
Benzoic acid	ND		0.98
2,4-Dichlorophenol	ND		0.52
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	ND		0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.43
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.33
2,4,6-Trichlorophenol	ND		0.58
2,4,5-Trichlorophenol	ND		0.45
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/2000
Date Extracted: 10/19/2000
Date Analyzed: 10/19/2000
Data file: C6175.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	ND		0.11
2,4-Dinitrophenol	ND		0.41
4-Nitrophenol	ND		0.69
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	ND		0.3
Fluorene	4.05		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
4,6-Dinitro-2-methylphenol	ND		0.89
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Pentachlorophenol	ND		0.75
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	ND		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 6.39

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/2000
Date Extracted: 10/19/2000
Date Analyzed: 10/19/2000
Date File: C6175.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	4.3	5.26
	Substituted benzene	9.5	5.67
	Unknown	4.7	8.72
	Substituted benzene	11.4	9.53
	Substituted benzene	6	9.97
	Substituted benzene	64.2	11.24

Total TICs = 100.1

44256

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/2000
Date Extracted: 10/19/2000
Date Analyzed: 10/19/2000
Data file: C6176.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Phenol	ND		0.27
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
2-Chlorophenol	ND		0.17
1,3-Dichlorobenzene	ND		0.34
1,4-Dichlorobenzene	ND		0.44
Benzyl alcohol	ND		0.31
1,2-Dichlorobenzene	ND		0.36
2-Methylphenol	ND		0.25
bis(2-chloroisopropyl)ether	ND		0.55
4-Methylphenol	ND		0.29
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
2-Nitrophenol	ND		0.82
2,4-Dimethylphenol	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
Benzoic acid	ND		0.98
2,4-Dichlorophenol	ND		0.52
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	ND		0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.43
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.33
2,4,6-Trichlorophenol	ND		0.58
2,4,5-Trichlorophenol	ND		0.45
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

4429

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/2000
Date Extracted: 10/19/2000
Date Analyzed: 10/19/2000
Data file: C6176.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	ND		0.11
2,4-Dinitrophenol	ND		0.41
4-Nitrophenol	ND		0.69
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	3.75		0.3
Fluorene	ND		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
4,6-Dinitro-2-methylphenol	ND		0.89
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Pentachlorophenol	ND		0.75
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	ND		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 3.75

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/2000
Date Extracted: 10/19/2000
Date Analyzed: 10/19/2000
Date File: C6176.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown	60.8	8.71
	Unknown	4.5	8.84
	Unknown	11.6	9.68
	Unknown	5.2	11.55
	Unknown	4.1	12.60
	Unknown	8.8	13.14

Total TICs = 95

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/2000
Date Extracted: 10/17/2000
Date Analyzed: 10/17/2000
Data file: R1153.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/2000
Date Extracted: 10/17/2000
Date Analyzed: 10/17/2000
Data file: R1154.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	0.253		0.2
Aroclor-1260	ND		0.2

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/2000
Date Extracted: 10/17/2000
Date Analyzed: 10/18/2000
Data file: W2582.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/2000
Date Extracted: 10/17/2000
Date Analyzed: 10/18/2000
Data file: W2583.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	0.0128		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	0.0313		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-001
Client ID: GW-1
Date Received: 10/16/00
Date Analyzed: 10/18/00
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.0101		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	0.0209		1	0.020
Copper	0.0931		1	0.040
Lead	0.0121		1	0.004
Mercury	ND		1	0.0005
Nickel	0.365		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.151		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS

Lab ID: 6486-002
Client ID: GW-2
Date Received: 10/16/00
Date Analyzed: 10/18/00
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.0127		1	0.004
Beryllium	0.00532		1	0.004
Cadmium	0.00518		1	0.0006
Chromium	0.0404		1	0.020
Copper	0.240		1	0.040
Lead	0.0422		1	0.004
Mercury	ND		1	0.0005
Nickel	0.0628		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.173		1	0.020

4437

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CYANIDE, TOTAL

Client/Project: ENVTACT/ORBIS

Date Received: 10/16/00

Lab ID	Client ID	Result	Q	DF	Matrix-Units	MDL	% Moist	Date Analyzed
6486-001	GW-1	ND		1	Aqueous-mg/L	0.020	100	10/23/00
6486-002	GW-2	ND		1	Aqueous-mg/L	0.020	100	10/23/00

INTEGRATED ANALYTICAL LABORATORIES, LLC.

PHENOL

Client/Project: ENVTACT/ORBIS

Date Received: 10/16/00

Lab ID	Client ID	Result	Q	DF	Matrix-Units	MDL	% Moist	Date Analyzed
6486-001	GW-1	ND		1	Aqueous-mg/L	0.050	100	10/19/00
6486-002	GW-2	ND		1	Aqueous-mg/L	0.050	100	10/19/00

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METHODOLOGY SUMMARY

Analytical Parameter	Aqueous Samples Method #	Soil/Other Samples Method #
Volatiles + 15	EPA 624	NA
Semivolatiles - BNA + 25	EPA 625	NA
PCB's	EPA 8082	NA
Pesticides	EPA 8081A	NA
P.P. Metals	EPA 200.8	NA
Metals (Mercury)	EPA 245.2	NA
Cyanide, Total	EPA 335.2	NA
Phenols	EPA 420.2	NA

4440

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E3620.D

BFB Injection Date: 10/16/2000

Inst ID: MSD_E

BFB Injection Time: 9:49

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	23.0			
75	30.0 - 60.0% of mass 95	52.9			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.8			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	70.7			
175	5.0 - 9.0% of mass 174	5.2	(	7.4	)1
176	95.0 - 101.0% of mass 174	67.9	(	96.1	)1
177	5.0 - 9.0% of mass 176	4.6	(	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:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20PPB-STD	20PPB-STDMB	E3623.D	10/16/2000	11:48
100PPB-STD	100PPB-STD	E3625.D	10/16/2000	13:04
5PPB-STD	5PPB-STD	E3627.D	10/16/2000	14:20
METHOD-BLK	METHOD-BLK	E3629.D	10/16/2000	15:23
6428-003MS	6428-003MS	E3630.D	10/16/2000	16:00
6428-003MSD	6428-003MSD	E3631.D	10/16/2000	16:25
INF	6397-001	E3633.D	10/16/2000	17:14
EFF	6397-002	E3634.D	10/16/2000	17:39
B/W_GAC	6397-003	E3635.D	10/16/2000	18:04
TB	6428-001	E3636.D	10/16/2000	18:29
FB	6428-002	E3637.D	10/16/2000	18:53
MS1	6428-003	E3638.D	10/16/2000	19:18
FB_AQ.	6412-001	E3639.D	10/16/2000	19:43
TB_AQ.	6412-002	E3640.D	10/16/2000	20:08
B-20_29-33	6412-004	E3641.D	10/16/2000	20:32
B-21_33-35	6412-006	E3642.D	10/16/2000	20:57
FINAL_EFFLUEN	6406-001	E3643.D	10/16/2000	21:22
1ST_GAC_EFFLU	6406-002	E3644.D	10/16/2000	21:47
RAW_INFLUENT	6406-003	E3645.D	10/16/2000	22:12
TRIP_BLANK	6406-004	E3646.D	10/16/2000	22:36

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E3658.D

BFB Injection Date: 10/17/2000

Inst ID: MSD_E

BFB Injection Time: 10:20

m/z	Ion Abudance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	24.1
75	30.0 - 60.0% of mass 95	53.9
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	0.0 (0.0)1
174	Great than 50.0% of mass 95	65.8
175	5.0 - 9.0% of mass 174	4.9 (7.4)1
176	95.0 - 101.0% of mass 174	63.8 (97.0)1
177	5.0 - 9.0% of mass 176	4.3 (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:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20PPB-STD	20PPB-STD	E3659.D	10/17/2000	10:50
METHOD-BLK	METHOD-BLK	E3662.D	10/17/2000	12:29
6482-003MS	6482-003MS	E3663.D	10/17/2000	13:27
6482-003MSD	6482-003MSD	E3664.D	10/17/2000	13:51
GW-1	6486-001	E3666.D	10/17/2000	15:24
GW-2	6486-002	E3667.D	10/17/2000	15:48
FIELD_BLANK	6482-001	E3668.D	10/17/2000	16:23
TRIP_BLANK	6482-002	E3669.D	10/17/2000	16:48
O.S._#1	6482-003	E3670.D	10/17/2000	17:13
01	6440-001	E3671.D	10/17/2000	17:38
EFFLUENT	6453-002	E3673.D	10/17/2000	18:27
INFLUENT	6453-001	E3674.D	10/17/2000	18:52
TRIP_BLANK	6453-004	E3675.D	10/17/2000	19:17
MW-1	6465-001	E3676.D	10/17/2000	19:42
FB	6465-002	E3677.D	10/17/2000	20:07
MW-2	6465-003	E3678.D	10/17/2000	20:32
TB	6465-004	E3679.D	10/17/2000	20:57
MW-1	6473-001	E3680.D	10/17/2000	21:21
MW-2	6473-002	E3681.D	10/17/2000	21:46
MW-5	6473-003	E3682.D	10/17/2000	22:11

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E3658.D

BFB Injection Date : 10/17/200

Inst ID: MSD_E

BFB Injection Time: 10:20

m/z	Ion Abudance Criteria	%Relative Abundance	
50	15 - 40.0% of mass 95	24.1	
75	30.0 - 60.0% of mass 95	53.9	
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	0.0 (0.0)1	
174	Great than 50.0% of mass 95	65.8	
175	5.0 - 9.0% of mass 174	4.9 (7.4)1	
176	95.0 - 101.0% of mass 174	63.8 (97.0)1	
177	5.0 - 9.0% of mass 176	4.3 (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:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
MW-6	6473-004	E3683.D	10/17/2000	22:36
TB	6473-005	E3684.D	10/17/2000	23:01
6453-002MS	6453-002MS	E3686.D	10/17/2000	23:51
6453-002MSD	6453-002MSD	E3687.D	10/18/2000	0:16
MW-6	6480-001	E3689.D	10/18/2000	1:06
MW-4	6480-003	E3691.D	10/18/2000	1:55
MW-3	6480-004	E3692.D	10/18/2000	2:20
MW-2	6480-005	E3693.D	10/18/2000	2:45
MW-1	6480-006	E3694.D	10/18/2000	3:09
FIELD	6480-007	E3695.D	10/18/2000	3:34
TRIP	6480-008	E3696.D	10/18/2000	3:59
INFLUENT	6453-001DIL	E3697.D	10/18/2000	8:45
MW-1	6465-001	E3698.D	10/18/2000	9:10
MW-6	6473-004	E3699.D	10/18/2000	9:34

VOLATILE METHOD BLANK SUMMARY

Lab File ID: E3662.D

Instrument ID: MSD_E

Date Analyzed: 10/17/2000

Time Analyzed: 12:29

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
6482-003MS	6482-003MS	10/17/2000	13:27
6482-003MSD	6482-003MSD	10/17/2000	13:51
GW-1	6486-001	10/17/2000	15:24
GW-2	6486-002	10/17/2000	15:48
FIELD_BLANK	6482-001	10/17/2000	16:23
TRIP_BLANK	6482-002	10/17/2000	16:48
O.S._#1	6482-003	10/17/2000	17:13
01	6440-001	10/17/2000	17:38
EFFLUENT	6453-002	10/17/2000	18:27
INFLUENT	6453-001	10/17/2000	18:52
TRIP_BLANK	6453-004	10/17/2000	19:17
MW-1	6465-001	10/17/2000	19:42
FB	6465-002	10/17/2000	20:07
MW-2	6465-003	10/17/2000	20:32
TB	6465-004	10/17/2000	20:57
MW-1	6473-001	10/17/2000	21:21
MW-2	6473-002	10/17/2000	21:46
MW-5	6473-003	10/17/2000	22:11
MW-6	6473-004	10/17/2000	22:36
TB	6473-005	10/17/2000	23:01
6453-002MS	6453-002MS	10/17/2000	23:51
6453-002MSD	6453-002MSD	10/18/2000	0:16
MW-6	6480-001	10/18/2000	1:06
MW-4	6480-003	10/18/2000	1:55
MW-3	6480-004	10/18/2000	2:20
MW-2	6480-005	10/18/2000	2:45
MW-1	6480-006	10/18/2000	3:09
FIELD	6480-007	10/18/2000	3:34
TRIP	6480-008	10/18/2000	3:59
INFLUENT	6453-001DIL	10/18/2000	8:45
MW-1	6465-001	10/18/2000	9:10
MW-6	6473-004	10/18/2000	9:34

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: METHOD-BLK
Date Received: NA
Date Analyzed: 10/17/2000
Data file: E3662.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.36
Vinyl Chloride	ND		0.39
Bromomethane	ND		0.41
Chloroethane	ND		0.36
Trichlorofluoromethane	ND		0.44
Acrolein	ND		2.01
1,1-Dichloroethene	ND		0.47
Methylene Chloride	ND		1.91
Acrylonitrile	ND		2.87
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.3
Chloroform	ND		0.28
1,1,1-Trichloroethane	ND		0.36
Carbon Tetrachloride	ND		0.33
1,2-Dichloroethane(EDC)	ND		0.36
Benzene	ND		0.25
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.22
2-Chloroethylvinyl Ether	ND		0.22
cis-1,3-Dichloropropene	ND		0.22
Toluene	ND		0.3
trans-1,3-Dichloropropene	ND		0.22
1,1,2-Trichloroethane	ND		0.3
Tetrachloroethene	ND		0.39
Dibromochloromethane	ND		0.3
Chlorobenzene	ND		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.88
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.25
1,3-Dichlorobenzene	ND		0.3
1,4-Dichlorobenzene	ND		0.3
1,2-Dichlorobenzene	ND		0.28

Total Target Compounds: 0

4445

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: METHOD-BLK
Date Received: NA
Date Analyzed: 10/17/2000
Data file: E3662.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

42446

Response Factor Report MSD_E2

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Initial Calibration

alibration Files
20 =E3623.D 5 =E3627.D 100 =E3625.D
= =

		Compound	20	5	100	Avg	%RSD
1)	I	Pentafluorobenzene	ISTD				
2)	T	Dichlorodifluorometha	0.514	0.478	0.565	0.519	8.47
3)	P	Chloromethane	0.949	1.148	1.093	1.063	9.65
4)	C	Vinyl Chloride	0.712	0.765	0.830	0.769	7.69
5)	T	Bromomethane	0.330	0.391	0.186	0.302	34.79
6)	T	Chloroethane	0.368	0.435	0.215	0.339	33.26
7)	T	Trichlorofluoromethan	0.696	0.660	0.598	0.651	7.60
8)	T	Acrolein	0.058	0.061	0.063	0.061	4.35
9)	MC	1,1-Dichloroethene	0.489	0.519	0.547	0.518	5.59
10)	T	Acetone	0.159	0.235	0.146	0.180	26.59
11)	T	Carbon Disulfide	1.962	2.071	2.192	2.075	5.54
12)	T	Vinyl Acetate	1.836	1.877	1.782	1.832	2.61
13)	T	Methylene Chloride	0.624	0.805	0.651	0.693	14.08
14)	T	Acrylonitrile	0.204	0.205	0.216	0.209	3.21
15)	T	t-Butyl Alcohol(TBA)	0.040	0.054	0.049	0.048	15.46
16)	T	trans-1,2-Dichloroeth	0.584	0.654	0.612	0.617	5.67
17)	T	Methyl-t-Butyl Ether(	1.326	1.588	1.378	1.431	9.71
18)	P	1,1-Dichloroethane	1.329	1.544	1.447	1.440	7.45
[illegible]	T	Diisopropyl Ether(DIP	2.761	2.912	3.077	2.917	5.42
[illegible]	T	cis-1,2-Dichloroethen	0.654	0.625	0.733	0.671	8.28
21)	T	2,2-Dichloropropane	1.029	1.007	1.148	1.061	7.16
22)	T	2-Butanone(MEK)	0.360	0.315	0.343	0.339	6.67
23)	T	Bromochloromethane	0.294	0.332	0.322	0.316	6.18
25)	C	Chloroform	1.165	1.376	1.269	1.270	8.33
26)	T	1,1,1-Trichloroethane	0.989	1.032	1.138	1.053	7.28
27)	T	Carbon Tetrachloride	0.779	0.785	0.918	0.827	9.49
28)	T	1,1-Dichloropropene	0.736	0.706	0.902	0.781	13.50
29)	T	1,2-Dichloroethane(ED	1.074	1.261	1.141	1.159	8.20
30)	S	1,2-Dichloroethane-d4	0.723	0.776	0.695	0.731	5.62
31)	I	1,4-Difluorobenzene	ISTD				
32)	M	Benzene	1.904	2.028	2.087	2.006	4.66
33)	M	Trichloroethene	0.429	0.426	0.531	0.462	12.89
34)	C	1,2-Dichloropropane	0.566	0.598	0.627	0.597	5.08
35)	T	Dibromomethane	0.273	0.299	0.305	0.292	5.84
36)	T	1,4-Dioxane	0.004	0.004	0.004	0.004	8.10
37)	T	Bromodichloromethane	0.641	0.691	0.735	0.689	6.80
38)	T	2-Chloroethylvinyl Et	0.263	0.194	0.353	0.270	29.49
39)	T	cis-1,3-Dichloroprope	0.746	0.684	0.905	0.778	14.64
40)	T	4-Methyl-2-pentanone(	0.388	0.332	0.509	0.410	22.10
41)	S	Toluene-d8	1.308	1.291	1.314	1.304	0.92
42)	MC	Toluene	1.179	1.217	1.327	1.241	6.19
43)	T	trans-1,3-Dichloropro	0.679	0.623	0.838	0.713	15.60
[illegible]	T	1,1,2-Trichloroethane	0.319	0.342	0.364	0.342	6.55
[illegible]	T	Tetrachloroethene	0.422	0.393	0.504	0.440	13.04
46)	T	1,3-Dichloropropane	0.703	0.679	0.807	0.730	9.37
47)	T	2-Hexanone	0.273	0.224	0.372	0.290	25.98
48)	T	Dibromochloromethane	0.399	0.395	0.489	0.428	12.49
49)	T	1,2-Dibromoethane(EDB	0.337	0.336	0.406	0.360	11.17

50)	I	Chlorobenzene-d5	----------ISTD----------					
51)	MP	Chlorobenzene	1.555	1.720	1.699	1.658	5.42	
52)	T	1,1,1,2-Tetrachloroet	0.584	0.626	0.651	0.621	5.46	
53)	C	Ethylbenzene	2.794	2.582	3.149	2.842	10.08	
[illegible]	T	m,p-Xylene	1.050	1.050	1.122	1.074	3.85	
[illegible]	T	o-Xylene	1.022	0.908	1.135	1.021	11.13	
)	T	Styrene	1.720	1.600	1.927	1.749	9.46	
57)	P	Bromoform	0.282	0.282	0.351	0.305	13.09	
58)	T	Isopropylbenzene	2.374	1.807	2.835	2.339	22.02	
59)	S	Bromofluorobenzene	0.588	0.609	0.593	0.597	1.79	
60)	P	1,1,2,2-Tetrachloroet	0.576	0.646	0.636	0.619	6.07	
61)	T	Bromobenzene	0.662	0.682	0.747	0.697	6.42	
62)	T	1,2,3-Trichloropropan	0.593	0.671	0.649	0.637	6.28	
63)	T	n-Propylbenzene	3.273	2.934	3.688	3.299	11.45	
64)	T	2-Chlorotoluene	2.078	2.085	2.307	2.157	6.02	
65)	T	1,3,5-Trimethylbenzen	2.316	2.162	2.586	2.354	9.12	
66)	T	4-Chlorotoluene	2.554	2.727	2.752	2.678	4.02	
67)	T	tert-Butylbenzene	1.773	1.587	2.172	1.777	22.09	
68)	T	1,2,4-Trimethylbenzen	2.429	2.409	2.680	2.506	6.02	
69)	T	sec-Butylbenzene	2.527	2.063	3.021	2.537	18.88	
70)	T	1,3-Dichlorobenzene	1.338	1.407	1.469	1.404	4.67	
71)	T	4-Isopropyltoluene	2.346	2.060	2.684	2.363	13.21	
72)	T	1,4-Dichlorobenzene	1.374	1.482	1.502	1.452	4.74	
73)	T	n-Butylbenzene	2.279	1.739	2.718	2.245	21.85	
74)	T	1,2-Dichlorobenzene	1.313	1.421	1.385	1.373	4.00	
75)	T	1,2-Dibromo-3-chlorop	0.091	0.086	0.117	0.098	17.37	
76)	T	1,2,4-Trichlorobenzen	0.741	0.533	0.985	0.753	30.06	
77)	T	Hexachlorobutadiene	0.377	0.364	0.469	0.404	14.13	
78)	T	Naphthalene	1.476	0.888	1.857	1.407	34.70	
79)	T	1,2,3-Trichlorobenzen	0.665	0.582	0.803	0.683	16.28	
[illegible]	T	Ethane,1,1,2-trichlor	0.446	0.404	0.470	0.440	7.56	
[illegible]	T	Methyl Acetate	0.429	0.504	0.423	0.452	9.95	
[illegible]	T	Cyclohexane	0.960	0.820	1.138	0.973	16.35	
83)	T	Methyl Cyclohexane	0.717	0.468	0.860	0.681	29.15	

(#) = Out of Range

EA101600.M Mon Oct 16 14:43:25 2000 MSD_E2

44446

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3659.D
Acq On : 17 Oct 2000 10:50
Sample : 20PPB-STD,20PPB-STD,A,5mL,100
Misc : NA,NA,NA
S Integration Params: LSCINT.P

Vial: 2
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	115	0.00
2	T	Dichlorodifluoromethane	0.519	0.362	30.3	81	0.00
3	P	Chloromethane	1.063	0.851	19.9	103	0.00
4	C	Vinyl Chloride	0.769	0.601	21.8	97	0.00
5	T	Bromomethane	0.302	0.277	8.3	97	0.00
6	T	Chloroethane	0.339	0.297	12.4	93	0.00
7	T	Trichlorofluoromethane	0.651	0.500	23.2	83	0.00
8	T	Acrolein	0.061	0.048	21.3	96	0.00
9	MC	1,1-Dichloroethene	0.518	0.388	25.1	92	0.00
10	T	Acetone	0.180	0.139	22.8	101	0.00
11	T	Carbon Disulfide	2.075	1.591	23.3	94	0.00
12	T	Vinyl Acetate	1.832	1.787	2.5	112	0.00
13	T	Methylene Chloride	0.693	0.538	22.4	99	0.01
[illegible]	T	Acrylonitrile	0.209	0.175	16.3	99	0.00
[illegible]	T	t-Butyl Alcohol(TBA)	0.048	0.033	31.3	95	0.00
16	T	trans-1,2-Dichloroethene	0.617	0.481	22.0	95	0.00
17	T	Methyl-t-Butyl Ether(MTBE)	1.431	1.158	19.1	101	0.00
18	P	1,1-Dichloroethane	1.440	1.121	22.2	97	0.00
19	T	Diisopropyl Ether(DIPE)	2.917	2.361	19.1	99	0.00
20	T	cis-1,2-Dichloroethene	0.671	0.498	25.8	88	0.00
21	T	2,2-Dichloropropane	1.061	0.789	25.6	88	0.00
22	T	2-Butanone(MEK)	0.339	0.282	16.8	90	0.00
23	T	Bromochloromethane	0.316	0.237	25.0	93	0.00
25	C	Chloroform	1.270	0.983	22.6	97	0.00
26	T	1,1,1-Trichloroethane	1.053	0.794	24.6	93	0.00
27	T	Carbon Tetrachloride	0.827	0.595	28.1	88	0.00
28	T	1,1-Dichloropropene	0.781	0.582	25.5	91	0.00
29	T	1,2-Dichloroethane(EDC)	1.159	0.927	20.0	100	0.00
30	S	1,2-Dichloroethane-d4	0.731	0.774	-5.9	124	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	117	0.00
32	M	Benzene	2.006	1.559	22.3	96	0.00
33	M	Trichloroethene	0.462	0.338	26.8	92	0.00
34	C	1,2-Dichloropropane	0.597	0.468	21.6	97	0.00
35	T	Dibromomethane	0.292	0.224	23.3	96	0.00
36	T	1,4-Dioxane	0.004	0.003	25.0	86	0.00
37	T	Bromodichloromethane	0.689	0.523	24.1	96	0.00
38	T	2-Chloroethylvinyl Ether	0.270	0.218	19.3	97	0.00
39	T	cis-1,3-Dichloropropene	0.778	0.596	23.4	94	0.00
[illegible]	T	4-Methyl-2-pentanone(MIBK)	0.410	0.337	17.8	102	0.00
41	S	Toluene-d8	1.304	1.329	-1.9	119	0.00
42	MC	Toluene	1.241	0.951	23.4	95	0.00
43	T	trans-1,3-Dichloropropene	0.713	0.549	23.0	95	0.00
44	T	1,1,2-Trichloroethane	0.342	0.259	24.3	95	0.00
45	T	Tetrachloroethene	0.440	0.318	27.7	88	0.00

46	T	1,3-Dichloropropane	0.730	0.573	21.5	96	0.00
47	T	2-Hexanone	0.290	0.256	11.7	110	0.00
48	T	Dibromochloromethane	0.428	0.306	28.5	90	0.00
49	T	1,2-Dibromoethane(EDB)	0.360	0.272	24.4	95	0.00
	I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00
	MP	Chlorobenzene	1.658	1.282	22.7	96	0.00
52	T	1,1,1,2-Tetrachloroethane	0.621	0.463	25.4	92	0.00
53	C	Ethylbenzene	2.842	2.289	19.5	95	0.00
54	T	m,p-Xylene	1.074	0.854	20.5	95	0.00
55	T	o-Xylene	1.021	0.814	20.3	93	0.00
56	T	Styrene	1.749	1.392	20.4	94	0.00
57	P	Bromoform	0.305	0.210	31.1	86	0.00
58	T	Isopropylbenzene	2.339	1.851	20.9	91	0.00
59	S	Bromofluorobenzene	0.597	0.582	2.5	115	0.00
60	P	1,1,2,2-Tetrachloroethane	0.619	0.473	23.6	95	0.00
61	T	Bromobenzene	0.697	0.524	24.8	92	0.00
62	T	1,2,3-Trichloropropane	0.637	0.492	22.8	96	0.00
63	T	n-Propylbenzene	3.299	2.617	20.7	93	0.00
64	T	2-Chlorotoluene	2.157	1.694	21.5	95	0.00
65	T	1,3,5-Trimethylbenzene	2.354	1.855	21.2	93	0.00
66	T	4-Chlorotoluene	2.678	2.091	21.9	95	0.00
67	T	tert-Butylbenzene	1.777	1.405	20.9	92	0.00
68	T	1,2,4-Trimethylbenzene	2.506	1.962	21.7	94	0.00
69	T	sec-Butylbenzene	2.537	1.946	23.3	89	0.00
70	T	1,3-Dichlorobenzene	1.404	1.052	25.1	91	0.00
71	T	4-Isopropyltoluene	2.363	1.810	23.4	90	0.00
72	T	1,4-Dichlorobenzene	1.452	1.096	24.5	93	0.00
73	T	n-Butylbenzene	2.245	1.762	21.5	90	0.00
74	T	1,2-Dichlorobenzene	1.373	1.045	23.9	92	0.00
	T	1,2-Dibromo-3-chloropropane	0.098	0.073	25.5	93	0.00
	T	1,2,4-Trichlorobenzene	0.753	0.545	27.6	85	0.00
	T	Hexachlorobutadiene	0.404	0.274	32.2	84	0.00
78	T	Naphthalene	1.407	1.120	20.4	88	0.00
79	T	1,2,3-Trichlorobenzene	0.683	0.489	28.4	85	0.00
80	T	Ethane,1,1,2-trichloro-1,2,	0.440	0.317	28.0	83	0.00
81	T	Methyl Acetate	0.452	0.379	16.2	103	0.00
82	T	Cyclohexane	0.973	0.712	26.8	86	0.00
83	T	Methyl Cyclohexane	0.681	0.486	28.6	79	0.00

(#) = Out of Range

E3623.D EA101600.M Tue Oct 17 11:14:23 2000 MSD_E2

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/17/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	AQUEOUS	E3662.D	128	94	84
6482-003MS	AQUEOUS	E3663.D	115	106	104
6482-003MSD	AQUEOUS	E3664.D	111	103	103
6486-001	AQUEOUS	E3666.D	116	94	104
6486-002	AQUEOUS	E3667.D	122	91	101
6482-001	AQUEOUS	E3668.D	121	92	85
6482-002	AQUEOUS	E3669.D	124	93	85
6482-003	AQUEOUS	E3670.D	132	93	84
6440-001	AQUEOUS	E3671.D	126	95	97
6453-002	AQUEOUS	E3673.D	136	95	82
6453-001	AQUEOUS	E3674.D	110	94	84
6453-004	AQUEOUS	E3675.D	136	95	83
6465-001	AQUEOUS	E3676.D	132	102	96
6465-002	AQUEOUS	E3677.D	126	93	83
6465-003	AQUEOUS	E3678.D	133	95	82
6465-004	AQUEOUS	E3679.D	134	95	83
6473-001	AQUEOUS	E3680.D	137	93	92
6473-002	AQUEOUS	E3681.D	130	92	84
6473-003	AQUEOUS	E3682.D	133	97	89
6473-004	AQUEOUS	E3683.D	130	92	84
6473-005	AQUEOUS	E3684.D	137	94	82
6453-002MS	AQUEOUS	E3686.D	125	108	104
6453-002MSD	AQUEOUS	E3687.D	118	106	103
6480-001	AQUEOUS	E3689.D	140	95	84

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	92-164
SMC2 = Toluene-d8	30 ppb	83-114
SMC3 = Bromofluorobenzene	30 ppb	62-113

Column to be used to flag recovery values —

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/17/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2	# SMC3 #
6480-003	AQUEOUS	E3691.D	129	98	107
6480-004	AQUEOUS	E3692.D	132	97	82
6480-005	AQUEOUS	E3693.D	132	94	85
6480-006	AQUEOUS	E3694.D	125	98	101
6480-007	AQUEOUS	E3695.D	128	93	85
6480-008	AQUEOUS	E3696.D	135	95	83
6453-001DIL	AQUEOUS	E3697.D	121	94	84
6465-001	AQUEOUS	E3698.D	121	107	102
6473-004	AQUEOUS	E3699.D	118	92	88

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	92-164
SMC2 = Toluene-d8	30 ppb	83-114
SMC3 = Bromofluorobenzene	30 ppb	62-113

Column to be used to flag recovery values

AQUEOUS VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6482-003

Batch No.: QV4795

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.0	0.0	24.4	122	49 - 168
Benzene	20.0	0.0	19.9	100	58 - 145
Trichloroethene	20.0	0.0	19.5	98	50 - 158
Toluene	20.0	0.0	20.1	101	58 - 147
Chlorobenzene	20.0	0.0	18.8	94	58 - 145

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD #	% REC	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	0.0	25.7		129	6	20	49 - 168
Benzene	0.0	21.3		107	7	14	58 - 145
Trichloroethene	0.0	21.7		109	11	18	50 - 158
Toluene	0.0	21.5		108	7	15	58 - 147
Chlorobenzene	0.0	20.9		105	11	14	58 - 145

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __5__ outside limits

Spike Recovery: __0___ out of __10__ outside limits

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 6482-003MSD
Client ID: 6482-003MSD
Date Received: NA
Date Analyzed: 10/17/2000
Data file: E3664.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
Chloromethane	20.0	0.0	21.4	107	0.0	22.4	112
Vinyl Chloride	20.0	0.0	24.6	123	0.0	26.3	131
Bromomethane	20.0	0.0	28.0	140	0.0	29.5	147
Chloroethane	20.0	0.0	28.7	143	0.0	29.8	149
Trichlorofluoromethane	20.0	0.0	22.6	113	0.0	23.8	119
Acrolein	20.0	0.0	0.0	0	0.0	0.0	0
1,1-Dichloroethene	20.0	0.0	24.4	122	0.0	25.7	129
Methylene Chloride	20.0	0.0	20.4	102	0.0	21.5	107
Acrylonitrile	20.0	0.0	0.0	0	0.0	0.0	0
trans-1,2-Dichloroethene	20.0	0.0	21.8	109	0.0	23.0	115
1,1-Dichloroethane	20.0	0.0	20.5	103	0.0	21.9	109
Chloroform	20.0	0.0	20.4	102	0.0	21.7	108
1,1,1-Trichloroethane	20.0	0.0	23.1	116	0.0	24.4	122
Carbon Tetrachloride	20.0	0.0	25.0	125	0.0	26.2	131
1,2-Dichloroethane(EDC)	20.0	0.0	21.0	105	0.0	22.4	112
Benzene	20.0	0.0	19.9	99	0.0	21.3	107
Trichloroethene	20.0	0.0	19.5	98	0.0	21.7	108
1,2-Dichloropropane	20.0	0.0	20.0	100	0.0	21.4	107
Bromodichloromethane	20.0	0.0	18.7	93	0.0	20.1	100
2-Chloroethylvinyl Ether	20.0	0.0	18.1	90	0.0	20.2	101
cis-1,3-Dichloropropene	20.0	0.0	19.1	96	0.0	21.1	105
Toluene	20.0	0.0	20.1	101	0.0	21.5	107
trans-1,3-Dichloropropene	20.0	0.0	19.3	96	0.0	21.0	105
1,1,2-Trichloroethane	20.0	0.0	19.2	96	0.0	20.7	104
Tetrachloroethene	20.0	0.0	21.5	107	0.0	22.9	115
Dibromochloromethane	20.0	0.0	18.3	92	0.0	20.2	101
Chlorobenzene	20.0	0.0	18.8	94	0.0	20.9	105
Ethylbenzene	20.0	0.0	20.6	103	0.0	23.2	116
total-Xylenes	60.0	0.0	60.3	101	0.0	67.7	113
Bromoform	20.0	0.0	17.3	86	0.0	19.6	98
1,1,2,2-Tetrachloroethane	20.0	0.0	18.9	94	0.0	20.9	105
1,3-Dichlorobenzene	20.0	0.0	18.7	93	0.0	20.9	105
1,4-Dichlorobenzene	20.0	0.0	18.6	93	0.0	20.8	104
1,2-Dichlorobenzene	20.0	0.0	19.0	95	0.0	21.0	105

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): E3623.D

Date Analyzed: 10/16/2000

Instrument ID: MSD_E

Time Analyzed: 11:48

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	202872	6.27	275775	7.09	218852	10.42
	UPPER LIMIT	405744	6.77	551550	7.59	437704	10.92
	LOWER LIMIT	101436	5.77	137887.5	6.59	109426	9.92
	LAB SAMPLE ID						
01	100PPB-STD	189740	6.28	254061	7.10	208145	10.42
02	5PPB-STD	166744	6.28	237373	7.10	183004	10.43
03	METHOD-BLK	150144	6.28	225247	7.10	163532	10.43
04	6428-003MS	172724	6.28	236461	7.09	188161	10.42
05	6428-003MSD	172099	6.28	240465	7.10	189516	10.42
06	6397-001	185010	6.28	259857	7.10	195472	10.42
07	6397-002	158248	6.28	237724	7.10	172196	10.43
08	6397-003	140520	6.28	213441	7.10	155970	10.43
09	6428-001	149733	6.28	226635	7.10	163067	10.43
10	6428-002	136357	6.28	203174	7.10	147029	10.43
11	6428-003	139057	6.28	220357	7.10	160061	10.43
12	6412-001	150329	6.28	233142	7.10	169246	10.43
13	6412-002	133026	6.28	202030	7.10	147575	10.42
14	6412-004	153990	6.28	225430	7.10	165116	10.43
15	6412-006	160391	6.28	241743	7.10	174598	10.42
16	6406-001	152041	6.28	227937	7.10	165361	10.42
17	6406-002	134657	6.28	207663	7.10	150882	10.43
18	6406-003	141478	6.28	224372	7.10	161126	10.43
19	6406-004	140481	6.28	212090	7.10	153396	10.43
20	6406-001MS	149617	6.28	212451	7.10	169030	10.43
21	6406-001MSD	162822	6.27	230329	7.10	182092	10.42
22	6407-001	136272	6.28	210048	7.10	152095	10.43

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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 File ID (Standard): E3659.D

Date Analyzed: 10/17/2000

Instrument ID: MSD_E

Time Analyzed: 10:50

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	234118	6.27	323140	7.09	254305	10.42
	UPPER LIMIT	468236	6.77	646280	7.59	508610	10.92
	LOWER LIMIT	117059	5.77	161570	6.59	127152.5	9.92
	LAB SAMPLE ID						
01	METHOD-BLK	140176	6.27	217658	7.09	159087	10.42
02	6482-003MS	171394	6.27	244128	7.09	199398	10.42
03	6482-003MSD	167669	6.28	236734	7.10	185907	10.42
04	6486-001	157599	6.27	237681	7.09	183216	10.42
05	6486-002	136080	6.27	206529	7.09	151601	10.43
06	6482-001	151714	6.27	227764	7.10	166530	10.42
07	6482-002	138830	6.28	211173	7.10	155533	10.43
08	6482-003	129051	6.28	204649	7.10	149307	10.43
09	6440-001	128880	6.28	189967	7.10	139066	10.43
10	6453-002	126063	6.28	200513	7.10	145550	10.43
11	6453-001	162592	6.28	209987	7.10	152213	10.43
12	6453-004	125130	6.28	197089	7.10	143346	10.43
13	6465-001	130062	6.28	210699	7.10	158468	10.43
14	6465-002	136649	6.28	204298	7.10	149256	10.42
15	6465-003	123760	6.28	199842	7.10	143134	10.43
16	6465-004	127167	6.28	197499	7.10	143359	10.42
17	6473-001	123241	6.28	199530	7.10	146278	10.42
18	6473-002	128487	6.28	203352	7.10	145277	10.43
19	6473-003	124917	6.28	195564	7.10	148281	10.43
20	6473-004	127996	6.28	202757	7.10	145040	10.43
21	6473-005	123885	6.28	194825	7.10	141158	10.43
22	6453-002MS	139985	6.28	201216	7.10	161547	10.43

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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 File ID (Standard): E3659.D

Date Analyzed: 10/17/2000

Instrument ID: MSD_E

ime Analyzed: 10:50

	30UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	234118		6.27		323140		7.09		254305		10.42	
	UPPER LIMIT	468236		6.77		646280		7.59		508610		10.92	
	LOWER LIMIT	117059		5.77		161570		6.59		127152.5		9.92	
	LAB SAMPLE ID												
23	6453-002MSD	149521		6.28		212501		7.10		170409		10.43	
24	6480-001	119756		6.28		191237		7.10		138324		10.42	
25	6480-003	131335		6.28		207396		7.10		148683		10.43	
26	6480-004	128867		6.28		203507		7.10		149344		10.42	
27	6480-005	121926		6.28		196888		7.10		139498		10.42	
28	6480-006	131268		6.28		203979		7.10		150179		10.42	
29	6480-007	133513		6.28		202362		7.10		147038		10.42	
30	6480-008	122225		6.28		187439		7.10		136726		10.42	
31	6453-001DIL	147667		6.27		213160		7.09		155779		10.42	
32	6465-001	132254		6.27		204567		7.10		176349		10.42	
33	6473-004	145681		6.28		222079		7.10		158532		10.42	
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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.

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
LSC Integration Params: LSCINT.P
Quant Time: Oct 17 16:23 2000

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA101600.RES

Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Initial Calibration
DataAcq Meth : EA101600

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.27	168	157599	30.00	UG		0.00
31) 1,4-Difluorobenzene	7.09	114	237681	30.00	UG		0.00
50) Chlorobenzene-d5	10.42	117	183216	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.60	65	133923	34.86	UG		0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 116.20%				
41) Toluene-d8	8.75	98	292745	28.33	UG		0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 94.43%				
59) Bromofluorobenzene	11.82	95	113354	31.10	UG		0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 103.67%				
Target Compounds							Qvalue
32) Benzene	6.67	78	133575	8.40	UG		100
42) Toluene	8.83	92	29017	2.95	UG		100
51) Chlorobenzene	10.46	112	16332	1.61	UG	#	99
53) Ethylbenzene	10.58	91	26658	1.54	UG		100
54) m,p-Xylene	10.72	106	25696	3.92	UG		97
55) o-Xylene	11.19	106	11079	1.78	UG		98
72) 1,4-Dichlorobenzene	13.26	146	3665	0.41	UG		100
74) 1,2-Dichlorobenzene	13.72	146	56398	6.73	UG	#	99

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

47

11456

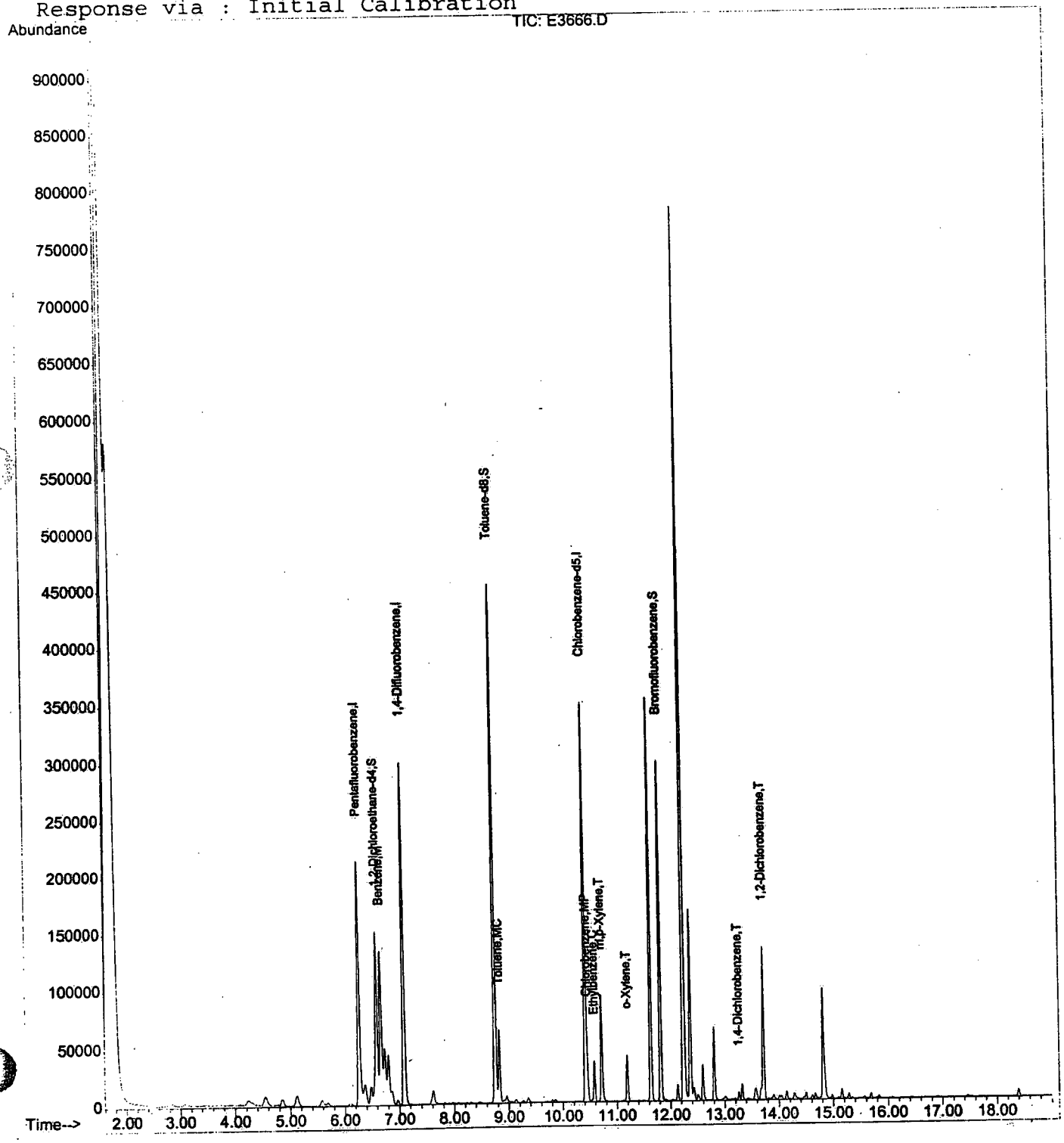
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P
Quant Time: Oct 17 16:23 2000

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA101600.RES

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Initial Calibration



4459

48

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
ALS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.540	552	564	565	rBV2	7452	16232	1.10%	0.200%
2	4.848	613	623	634	rVB4	6190	21083	1.43%	0.260%
3	5.120	661	675	686	rBV3	8706	32107	2.18%	0.396%
4	5.581	751	763	772	rBV2	5031	16313	1.11%	0.201%
5	6.266	882	894	907	rBV	213358	550146	37.33%	6.788%
6	6.376	907	915	926	rVB2	17029	55775	3.78%	0.688%
7	6.475	926	934	942	rBV4	14602	43574	2.96%	0.538%
8	6.595	942	957	964	rVV	144521	397064	26.94%	4.899%
9	6.668	964	971	978	rVV	126253	312339	21.19%	3.854%
10	6.736	979	984	990	rVV4	40274	100141	6.79%	1.236%
11	6.804	991	997	1005	rVB3	33340	80242	5.44%	0.990%
12	7.087	1041	1051	1068	rBV	299551	651174	44.18%	8.034%
13	7.615	1141	1152	1161	rBV5	11584	34622	2.35%	0.427%
14	8.750	1355	1369	1377	rBV	453507	874712	59.35%	10.792%
15	8.828	1377	1384	1394	rVB	62774	131474	8.92%	1.622%
16	10.418	1678	1688	1704	rBV	349173	707190	47.98%	8.725%
17	10.581	1712	1719	1730	rVB	35892	67895	4.61%	0.838%
18	10.717	1736	1745	1757	rBV	92903	182058	12.35%	2.246%
19	11.193	1826	1836	1846	rBV	40799	76932	5.22%	0.949%
20	11.632	1911	1920	1930	rBV	352127	618998	42.00%	7.637%
21	11.820	1947	1956	1968	rBV	298052	550616	37.36%	6.794%
22	12.134	2007	2016	2024	rBV	14620	25739	1.75%	0.318%
23	12.239	2025	2036	2051	rVV	781945	1473844	100.00%	18.185%
24	12.369	2051	2061	2068	rVV	166270	333108	22.60%	4.110%
25	12.432	2068	2073	2081	rVV4	11633	25823	1.75%	0.319%
26	12.594	2096	2104	2115	rVB	31595	59981	4.07%	0.740%
27	12.809	2136	2145	2155	rBV	63269	114000	7.73%	1.407%
28	13.321	2237	2243	2251	rVB	14134	25101	1.70%	0.310%
29	13.577	2283	2292	2302	rVB5	10438	28373	1.93%	0.350%
30	13.672	2302	2310	2312	rBV4	10231	18196	1.23%	0.225%
31	13.719	2312	2319	2329	rVB	132875	256109	17.38%	3.160%

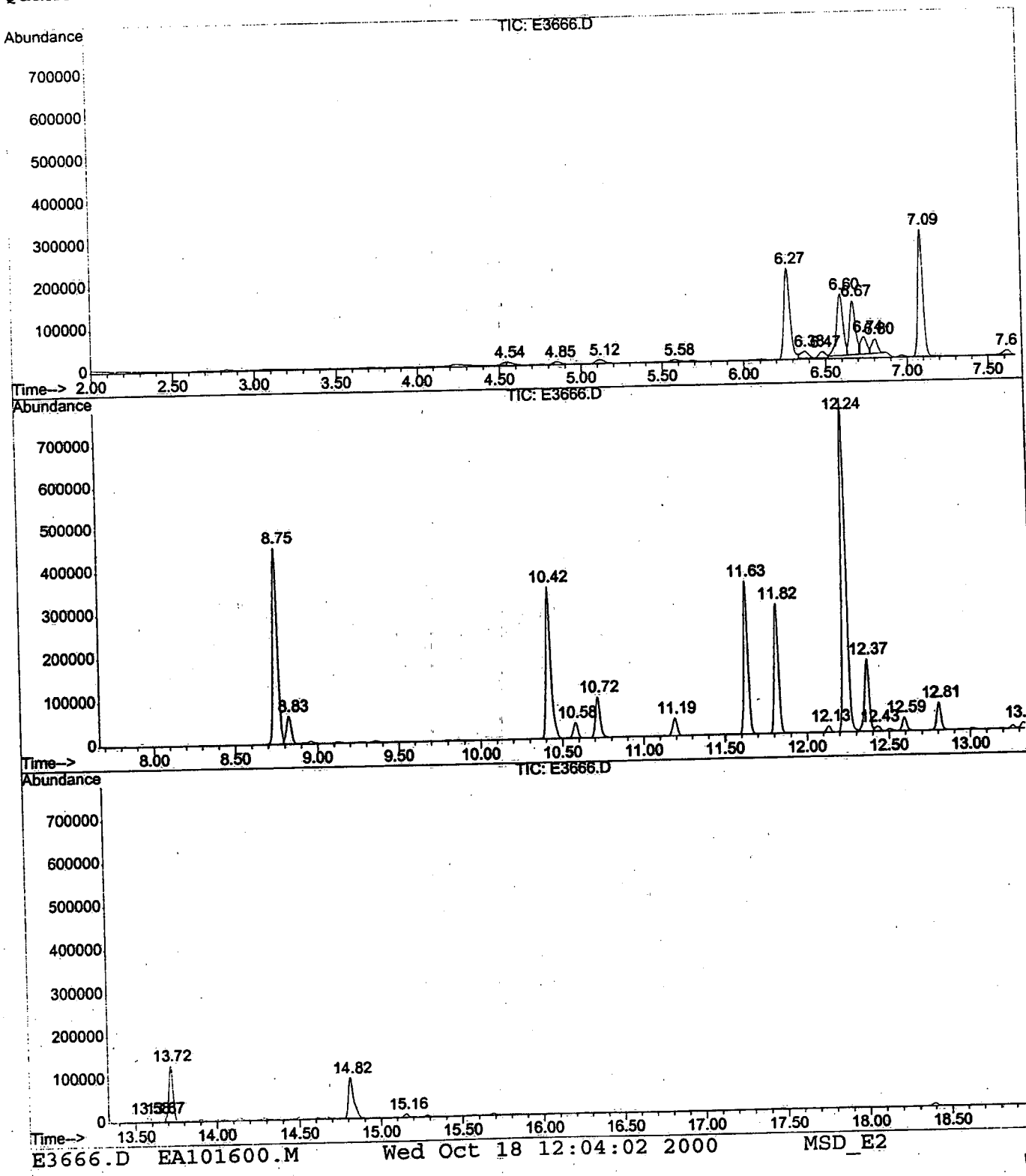
32	14.817	2521	2529	2542	rBV	94610	208034	14.12%	2.567%
33	15.157	2586	2594	2599	rBV3	8819	15932	1.08%	0.197%

Sum of corrected areas: 8104927

3666.D EA101600.M Wed Oct 18 12:04:01 2000 MSD_E2

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Operator : AMY
Acquired : 17 Oct 2000 15:24 using AcqMethod EA101600
Instrument : MSD_E2
Sample Name: GW-1,6486-001,A,5mL,100
Misc Info : ENVTACT/ORBIS,10/12/00,10/16/00
Vial Number: 9
Quant File :EA101600.RES (RTE Integrator)



E3666.D EA101600.M Wed Oct 18 12:04:02 2000 MSD_E2

51

4462

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

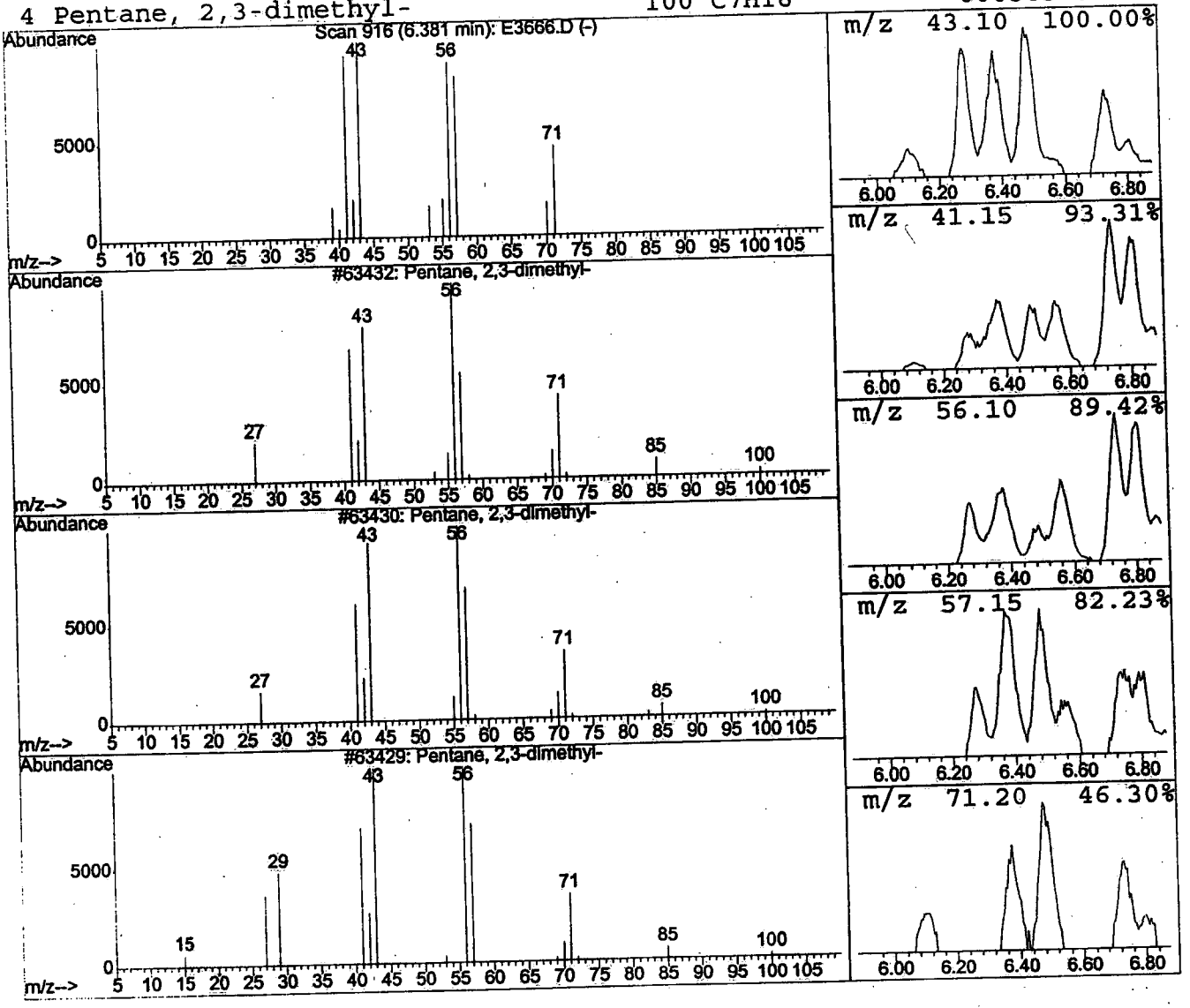
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown hydrocarbon Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.38	3.04 UG	55775	Pentafluorobenzene	6.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentane, 2,3-dimethyl-	100	C7H16	000565-59-3	72
2	Pentane, 2,3-dimethyl-	100	C7H16	000565-59-3	64
3	Pentane, 2,3-dimethyl-	100	C7H16	000565-59-3	45
4	Pentane, 2,3-dimethyl-	100	C7H16	000565-59-3	45



4463

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

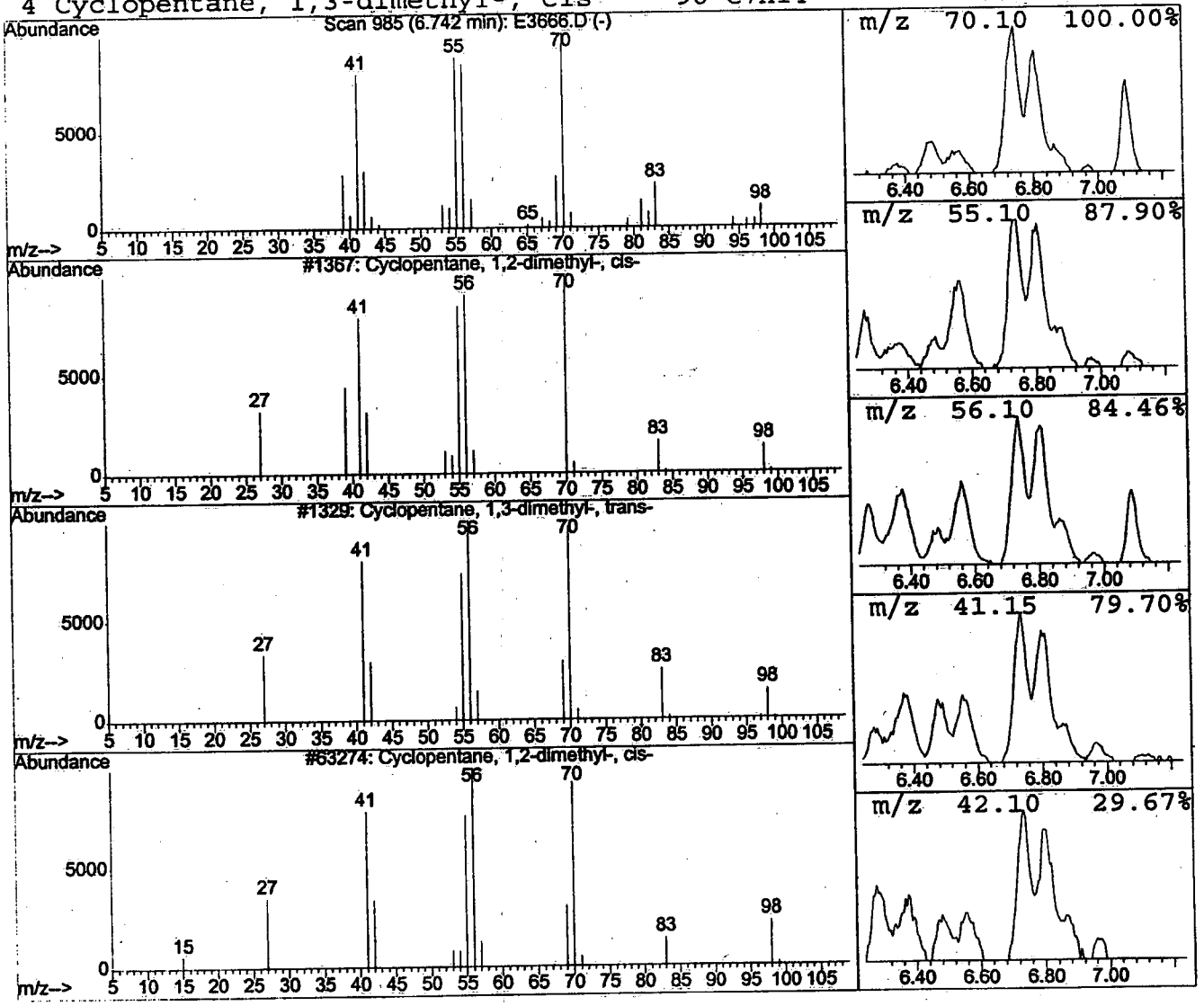
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown cyclic hydrocarbon Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.74	4.61 UG	100141	1,4-Difluorobenzene	7.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	91
2	Cyclopentane, 1,3-dimethyl-, trans-	98	C7H14	001759-58-6	80
3	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	78
4	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	72



4464

53

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

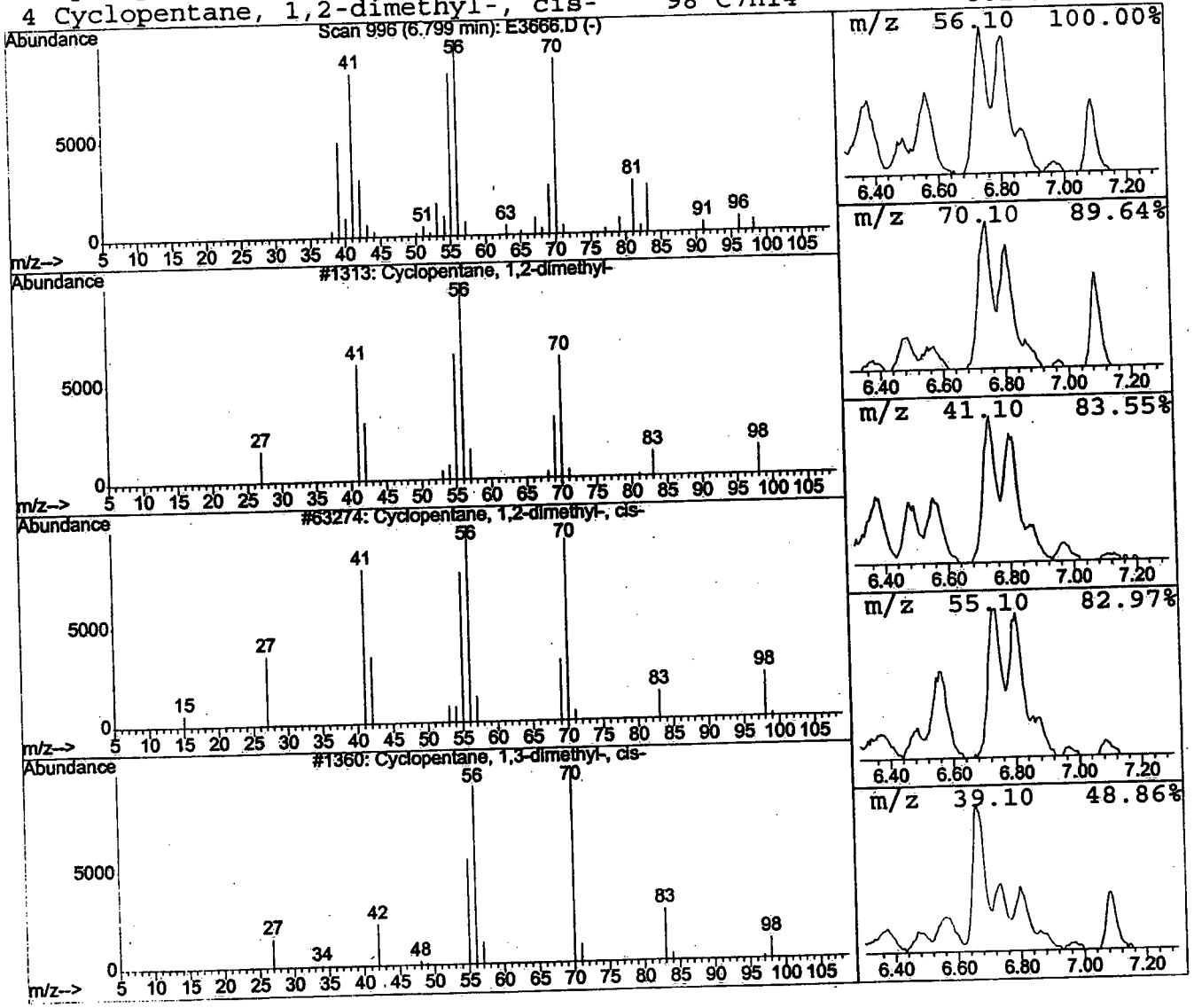
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown cyclic hydrocarbon Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.80	3.70 UG	80242	1,4-Difluorobenzene	7.09

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2-dimethyl-	98	C7H14	002452-99-5	64
2	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	56
3	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	56
4	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	50



4465

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

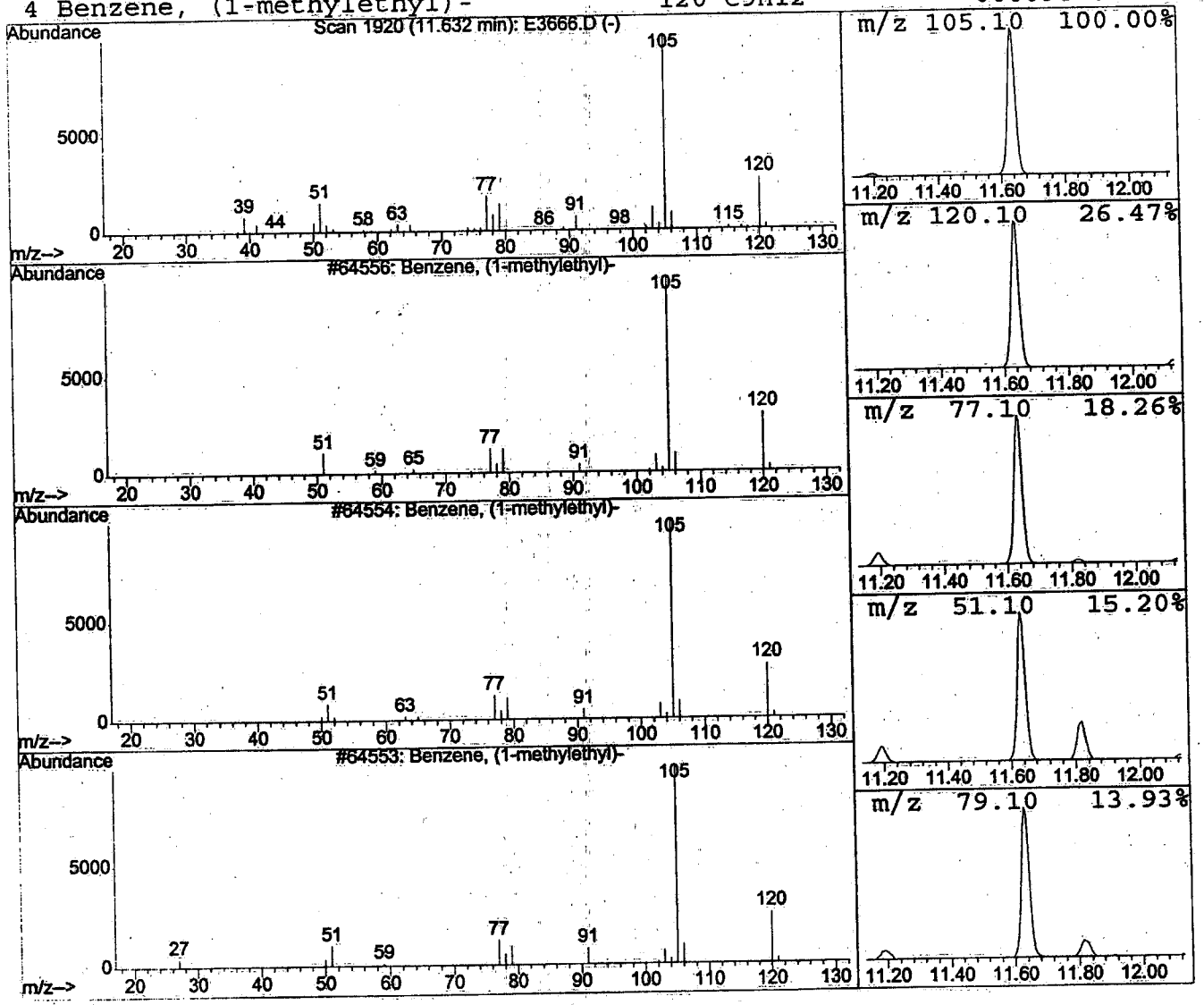
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.63	26.26 UG	618998	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91
2	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91
3	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91
4	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91



4466

55

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

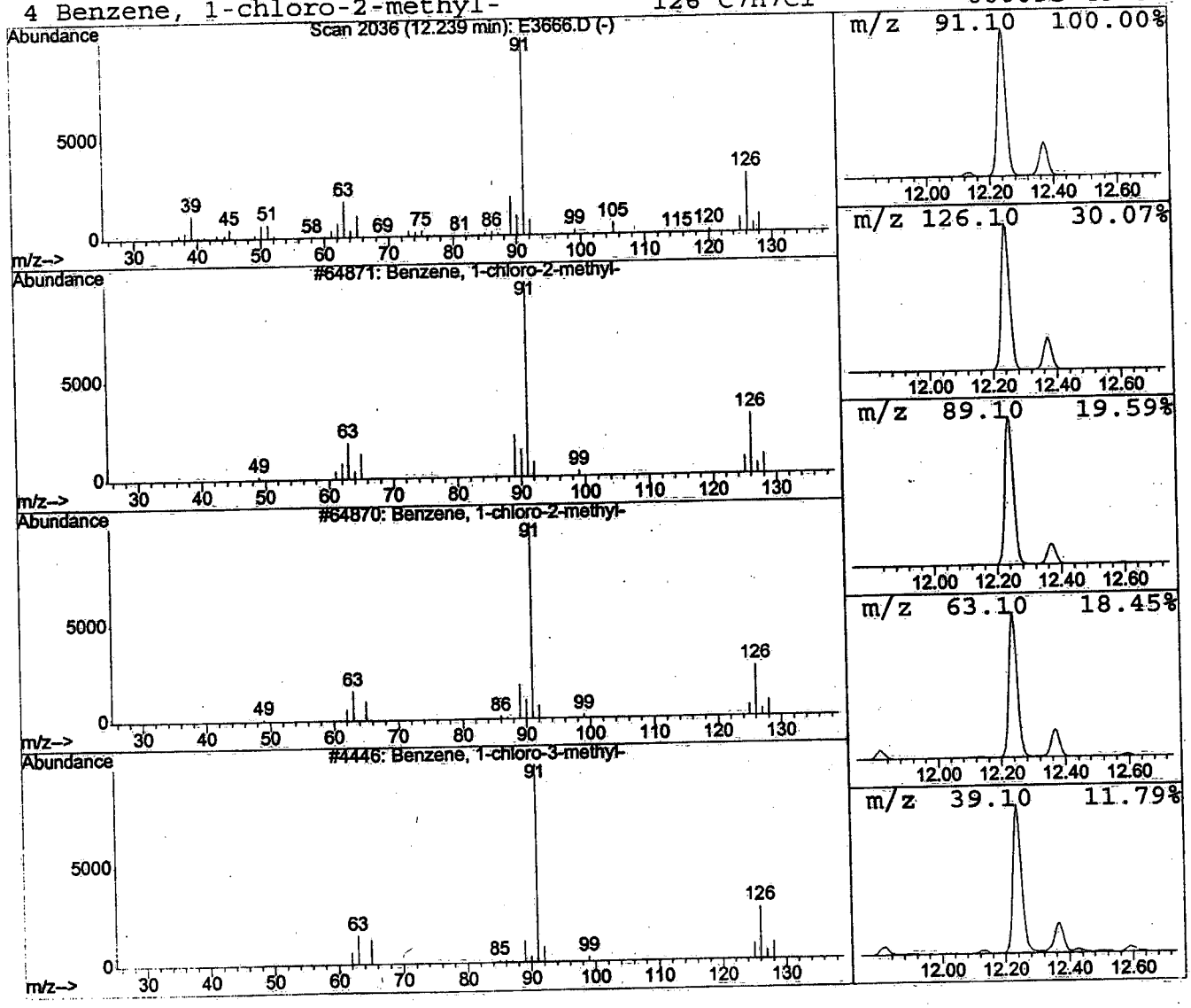
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown aromatic — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.24	62.52 UG	1473840	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	96
2	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	96
3	Benzene, 1-chloro-3-methyl-	126	C7H7Cl	000108-41-8	93
4	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	93



4467

56

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

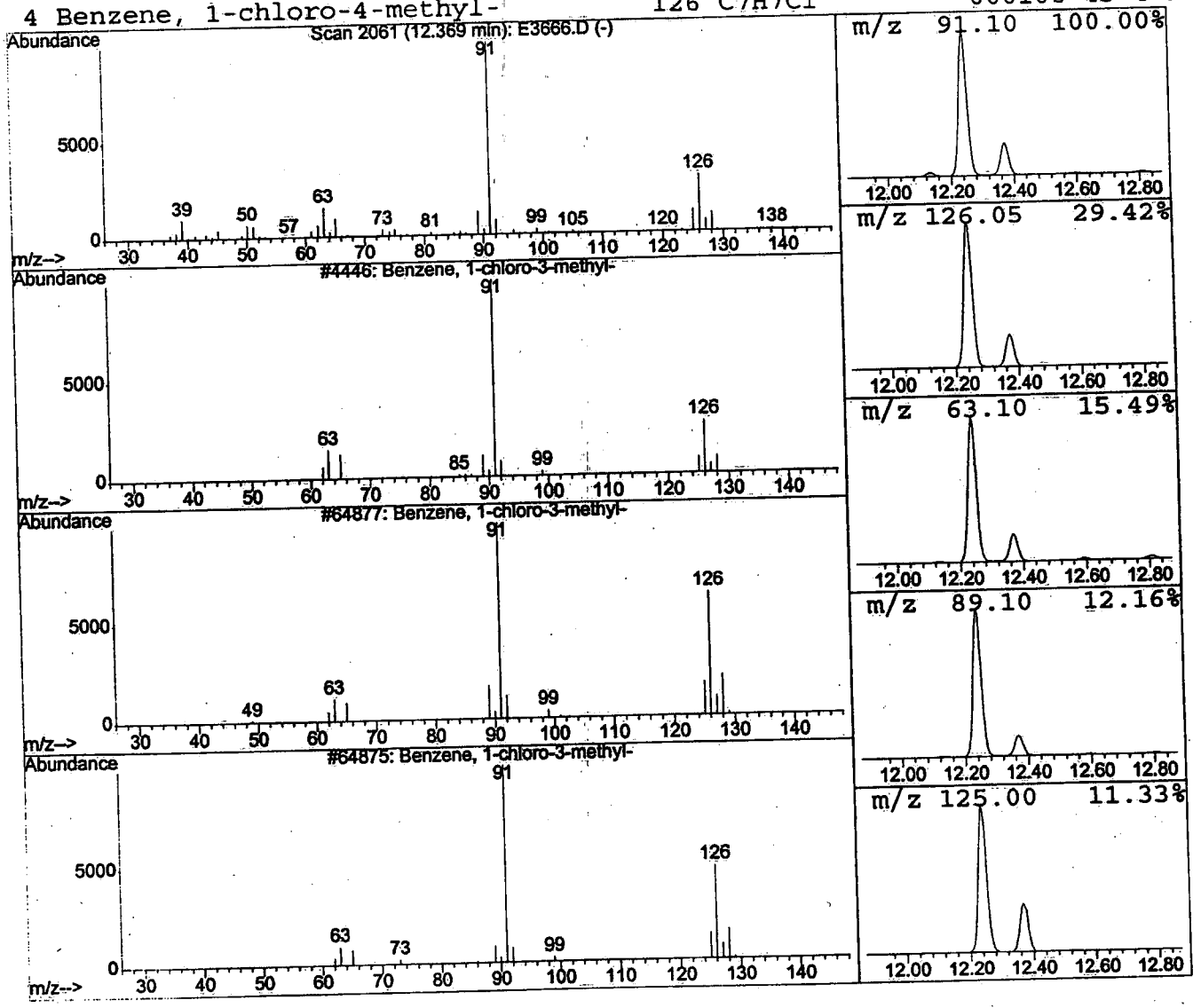
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Unknown aromatic — Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.37	14.13 UG	333108	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-chloro-3-methyl-	126	C7H7Cl	000108-41-8	97
2	Benzene, 1-chloro-3-methyl-	126	C7H7Cl	000108-41-8	95
3	Benzene, 1-chloro-3-methyl-	126	C7H7Cl	000108-41-8	95
4	Benzene, 1-chloro-4-methyl-	126	C7H7Cl	000106-43-4	94



4466

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

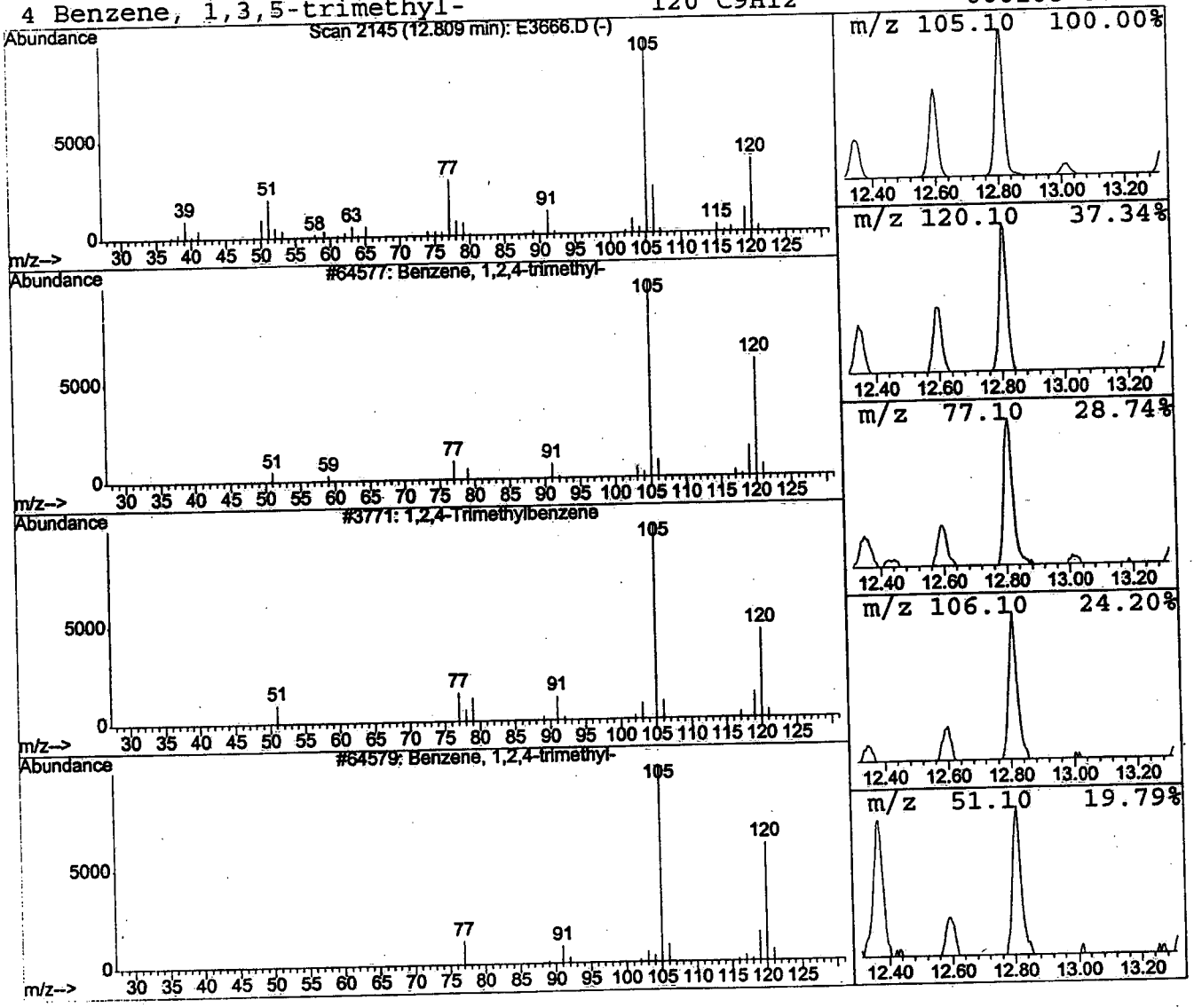
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.81	4.84 UG	114000	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	74
2	1,2,4-Trimethylbenzene	120	C9H12	000095-36-3	70
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	64
4	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	58



4469

58

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3666.D
Acq On : 17 Oct 2000 15:24
Sample : GW-1,6486-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 9
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

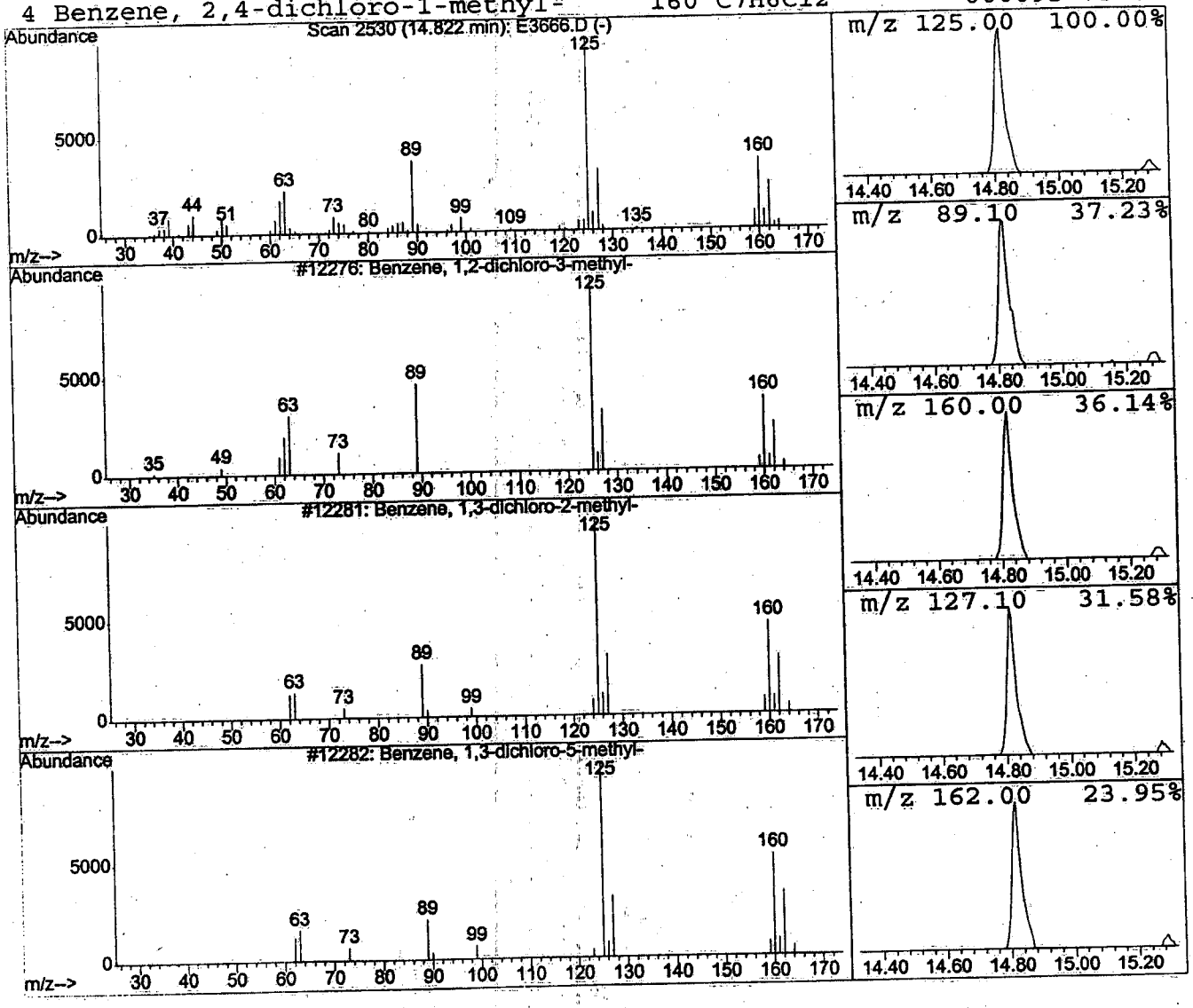
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown aromatic Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.82	8.83 UG	208034	Chlorobenzene-d5	10.42

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2-dichloro-3-methyl-	160	C7H6Cl2	032768-54-0	98
2	Benzene, 1,3-dichloro-2-methyl-	160	C7H6Cl2	000118-69-4	97
3	Benzene, 1,3-dichloro-5-methyl-	160	C7H6Cl2	025186-47-4	97
4	Benzene, 2,4-dichloro-1-methyl-	160	C7H6Cl2	000095-73-8	96



4470

59

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\10-17-00\E3667.D
Acq On : 17 Oct 2000 15:48
Sample : GW-2,6486-002,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
LS Integration Params: LSCINT.P
Quant Time: Oct 18 9:23 2000

Vial: 10
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA101600.RES

Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Initial Calibration
DataAcq Meth : EA101600

	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	6.27	168	136080	30.00	UG		0.00
31) 1,4-Difluorobenzene	7.09	114	206529	30.00	UG		0.00
50) Chlorobenzene-d5	10.43	117	151601	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.60	65	121483	36.62	UG		0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 122.07%				
41) Toluene-d8	8.76	98	244928	27.27	UG		0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 90.90%				
59) Bromofluorobenzene	11.82	95	91132	30.22	UG		0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 100.73%				
Target Compounds							Qvalue
4) Vinyl Chloride	2.26	62	9113m	2.61	UG		
32) Benzene	6.68	78	1254130	90.81	UG		100
42) Toluene	8.84	92	8025	0.94	UG		98
51) Chlorobenzene	10.46	112	129880	15.50	UG	#	100
53) Ethylbenzene	10.58	91	16595	1.16	UG		100
74) 1,2-Dichlorobenzene	13.72	146	2814	0.41	UG	#	96

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

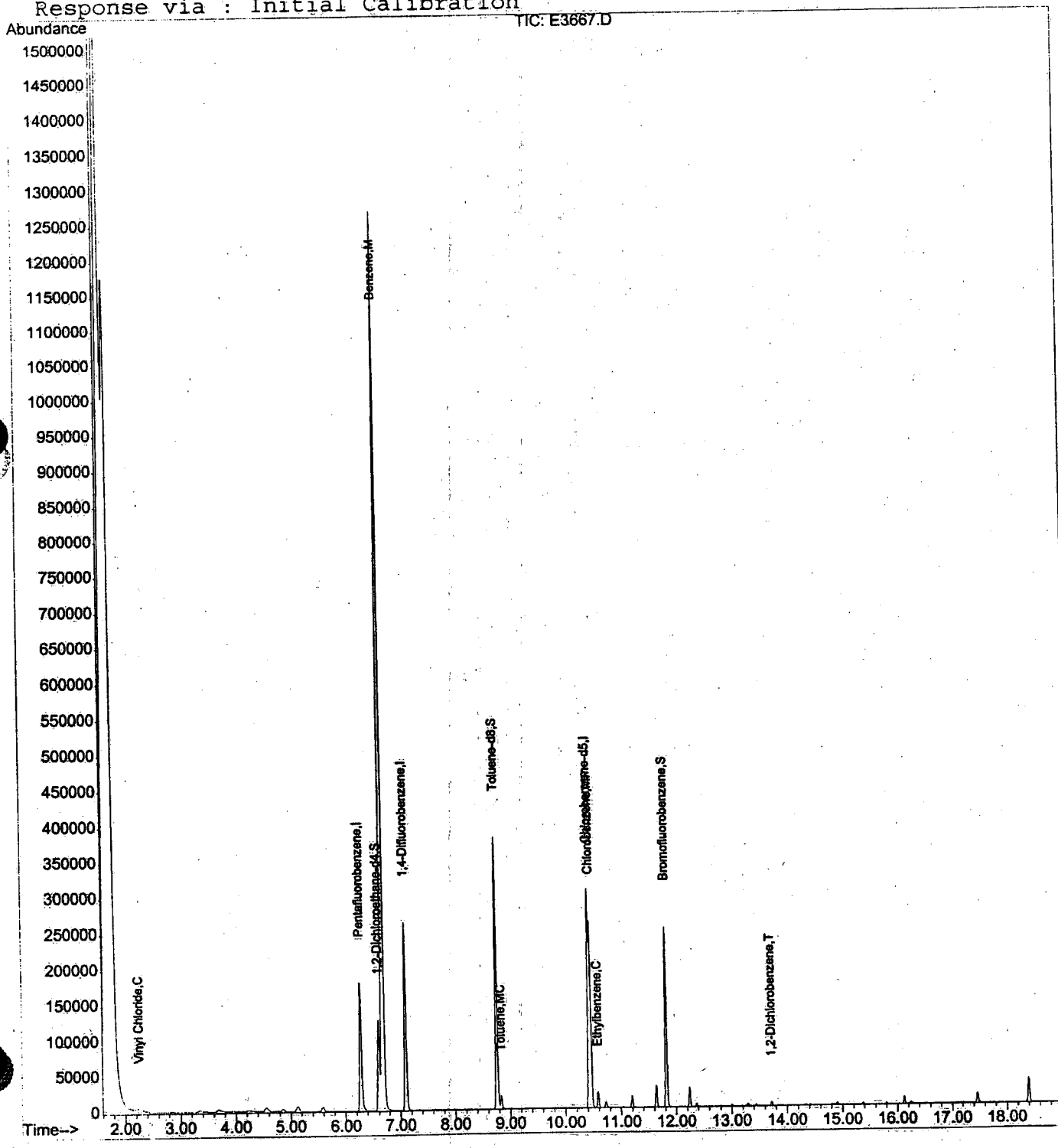
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3667.D
Acq On : 17 Oct 2000 15:48
Sample : GW-2,6486-002,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P
Quant Time: Oct 18 9:23 2000

Vial: 10
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA101600.RES

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Initial Calibration



4472

61

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3667.D
Acq On : 17 Oct 2000 15:48
Sample : GW-2,6486-002,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
3 Integration Params: LSCINT.P

Vial: 10
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

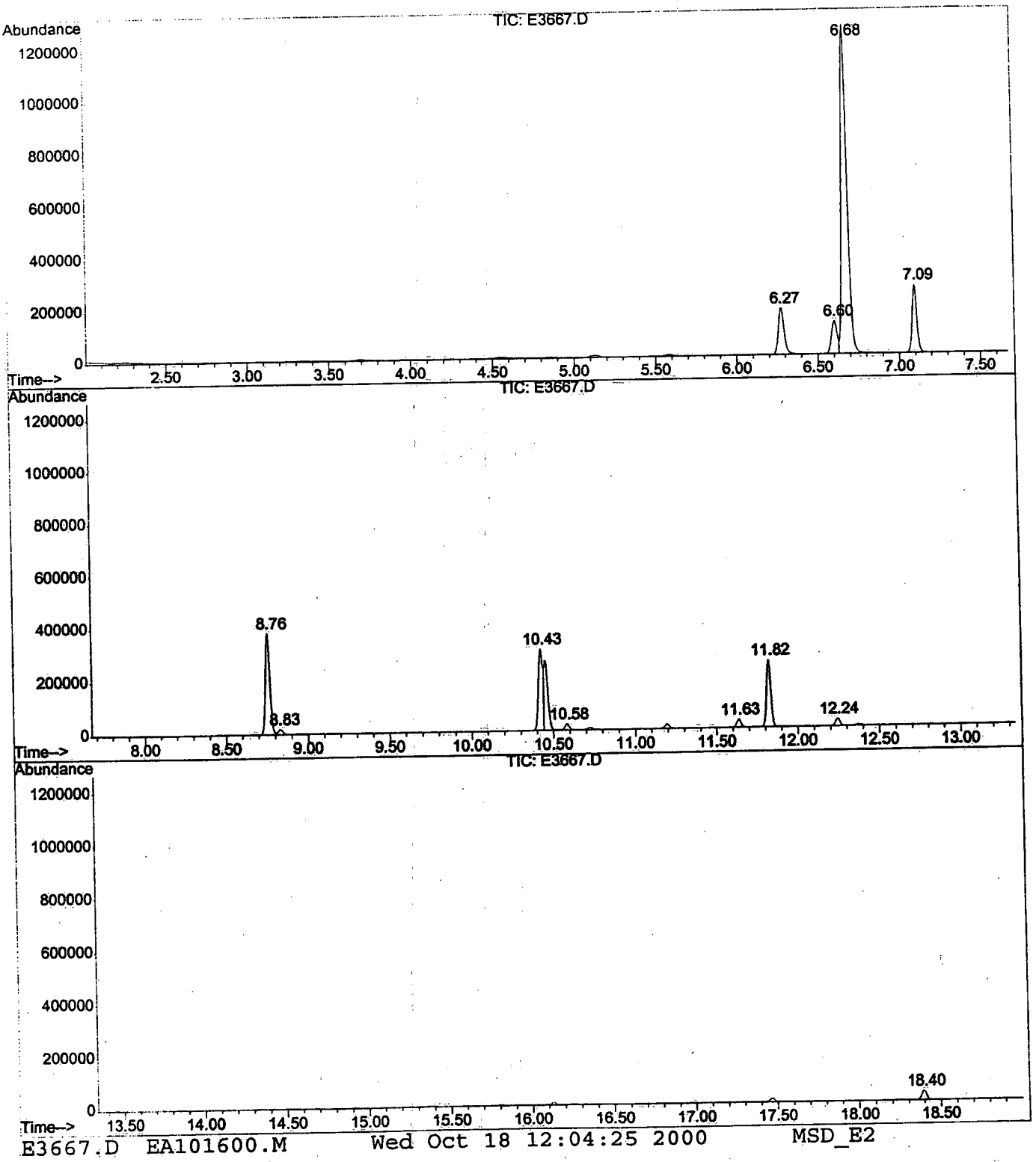
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.273	885	896	919	rVB	180234	455420	14.19%	6.931%
2	6.603	948	959	964	rBV	127890	311170	9.69%	4.736%
3	6.676	964	973	1000	rVB	1268653	3210556	100.00%	48.860%
4	7.095	1042	1053	1066	rBV	263333	564614	17.59%	8.593%
5	8.758	1361	1371	1380	rBV	381938	724962	22.58%	11.033%
6	8.831	1380	1385	1393	rVB2	18336	35831	1.12%	0.545%
7	10.426	1680	1690	1693	rBV	307211	605552	18.86%	9.216%
8	10.583	1712	1720	1729	rVB	22687	41018	1.28%	0.624%
9	11.634	1913	1921	1930	rVB2	30306	54873	1.71%	0.835%
10	11.823	1947	1957	1971	rVB	252667	446271	13.90%	6.792%
11	12.241	2030	2037	2045	rBV2	27411	50604	1.58%	0.770%
12	18.397	3205	3214	3224	rBV2	34621	70038	2.18%	1.066%

Sum of corrected areas: 6570909

E3667.D EA101600.M Wed Oct 18 12:04:24 2000 MSD_E2

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-17-00\E3667.D
Operator : AMY
Acquired : 17 Oct 2000 15:48 using AcqMethod EA101600
Instrument : MSD_E2
Sample Name: GW-2,6486-002,A,5mL,100
Misc Info : ENVTACT/ORBIS,10/12/00,10/16/00
Vial Number: 10
Quant File :EA101600.RES (RTE Integrator)



E3667.D EA101600.M Wed Oct 18 12:04:25 2000 MSD_E2

4474

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3667.D
Acq On : 17 Oct 2000 15:48
Sample : GW-2,6486-002,A,5mL,100
Misc : ENVTACT/ORBIS,10/12/00,10/16/00
MS Integration Params: LSCINT.P

Vial: 10
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

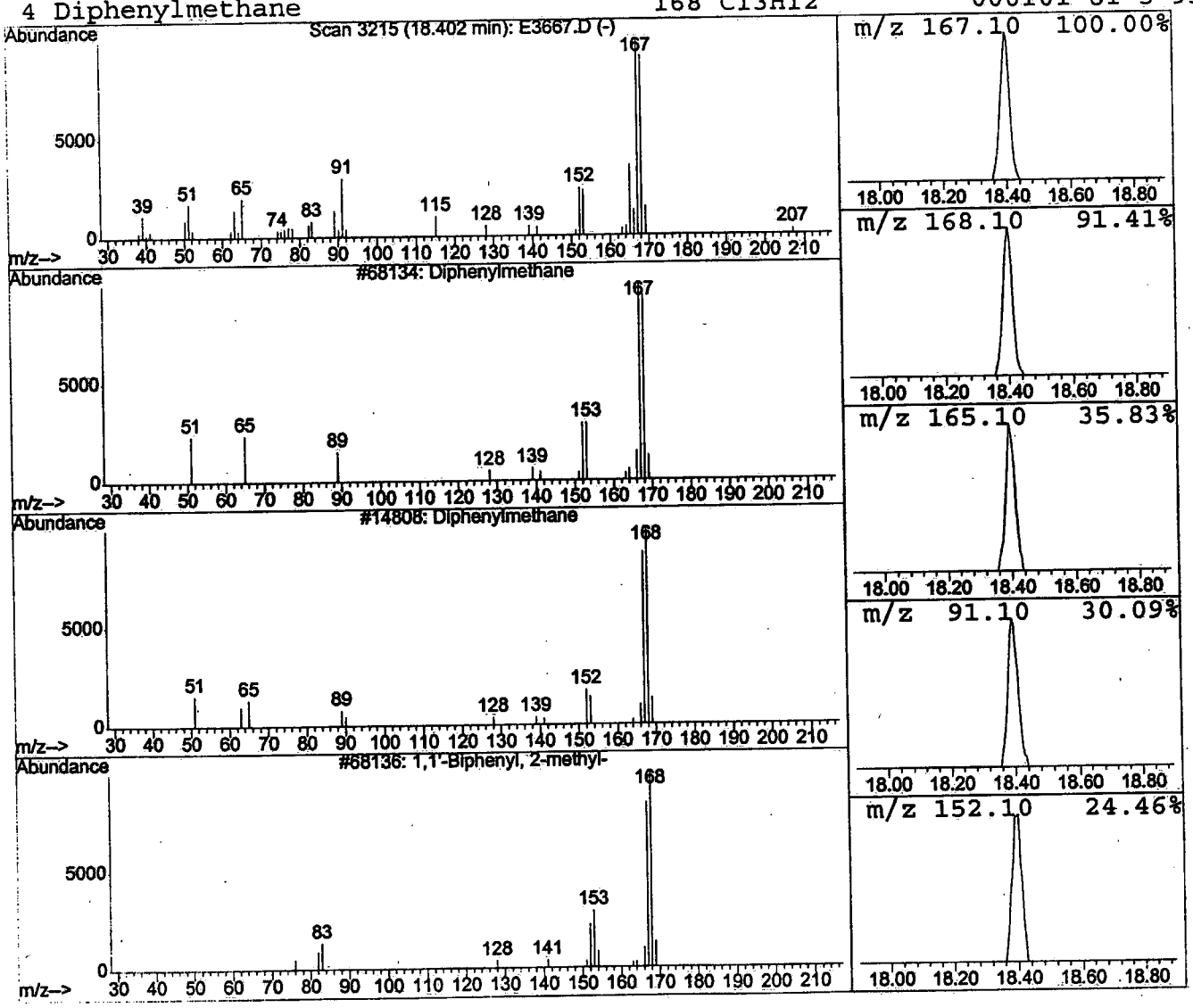
Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown aromatic Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
18.40	3.47 UG	70038	Chlorobenzene-d5	10.43

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Diphenylmethane	168	C13H12	000101-81-5	98
2	Diphenylmethane	168	C13H12	000101-81-5	94
3	1,1'-Biphenyl, 2-methyl-	168	C13H12	000643-58-3	93
4	Diphenylmethane	168	C13H12	000101-81-5	93



4475

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-17-00\E3662.D
Acq On : 17 Oct 2000 12:29
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100
Misc : NA,NA,NA
S Integration Params: LSCINT.P
Quant Time: Oct 17 13:07 2000

Vial: 5
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA101600.RES

Quant Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Initial Calibration
DataAcq Meth : EA101600

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.27	168	140176	30.00	UG	0.00
31) 1,4-Difluorobenzene	7.09	114	217658	30.00	UG	0.00
50) Chlorobenzene-d5	10.42	117	159087	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.60	65	131246	38.41	UG	0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 128.03%			
41) Toluene-d8	8.75	98	266885	28.20	UG	0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 94.00%			
59) Bromofluorobenzene	11.82	95	79312	25.06	UG	0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 83.53%			

Target Compounds Qvalue

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

4476

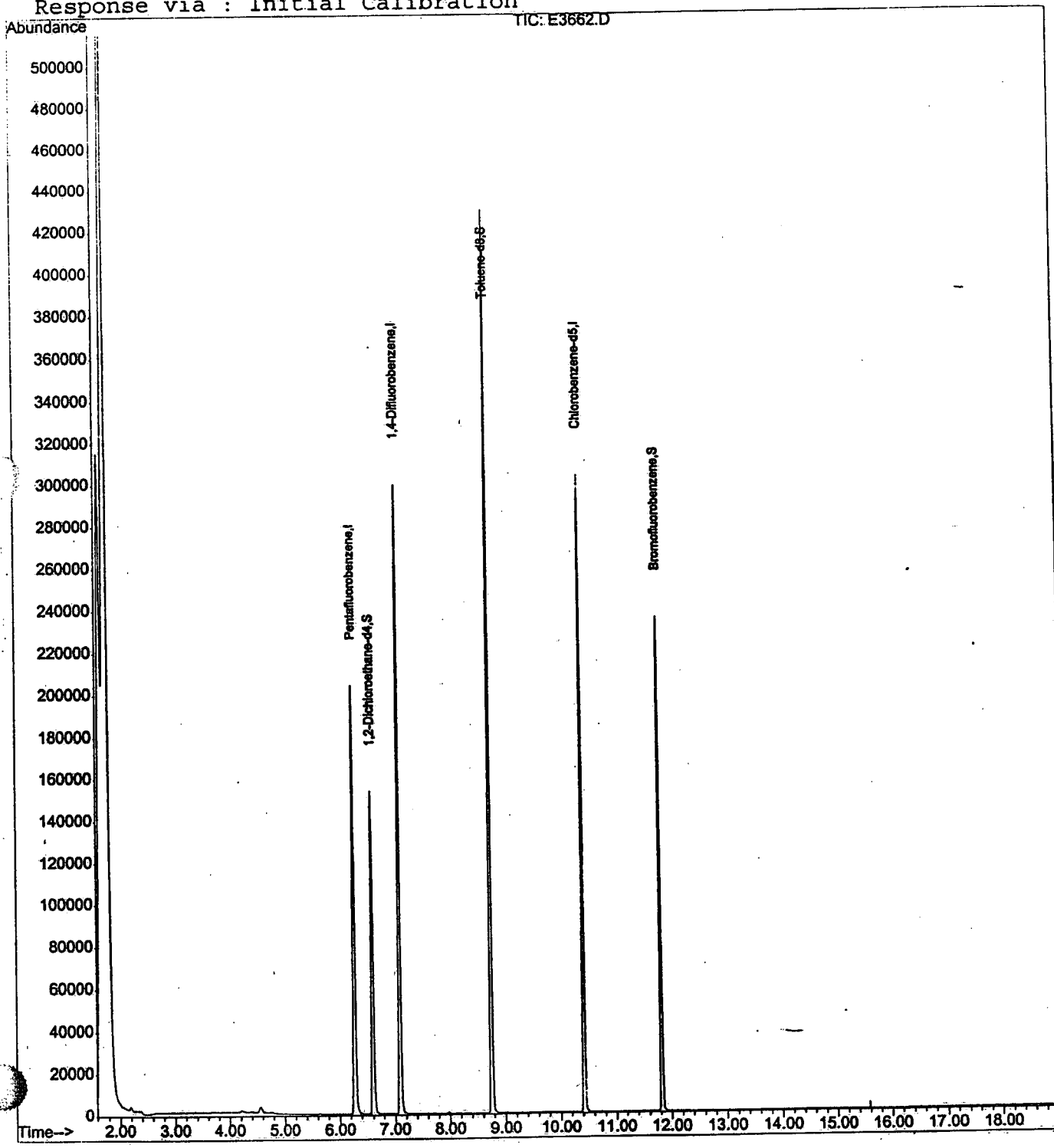
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3662.D
Acq On : 17 Oct 2000 12:29
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100
Misc : NA,NA,NA
MS Integration Params: LSCINT.P
Quant Time: Oct 17 13:07 2000

Vial: 5
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA101600.RES

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 16 14:43:11 2000
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-17-00\E3662.D
Acq On : 17 Oct 2000 12:29
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100
Misc : NA,NA,NA
3 Integration Params: LSCINT.P

Vial: 5
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA101600.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.274	883	896	913	rBV	203849	462624	58.57%	14.623%
2	6.598	948	958	977	rBV	153358	352295	44.60%	11.135%
3	7.090	1038	1052	1068	rBV	299412	600533	76.02%	18.982%
4	8.753	1357	1370	1382	rBV	429556	789929	100.00%	24.968%
5	10.422	1680	1689	1702	rBV	303271	564467	71.46%	17.842%
6	11.823	1947	1957	1975	rBV	235125	393893	49.86%	12.450%

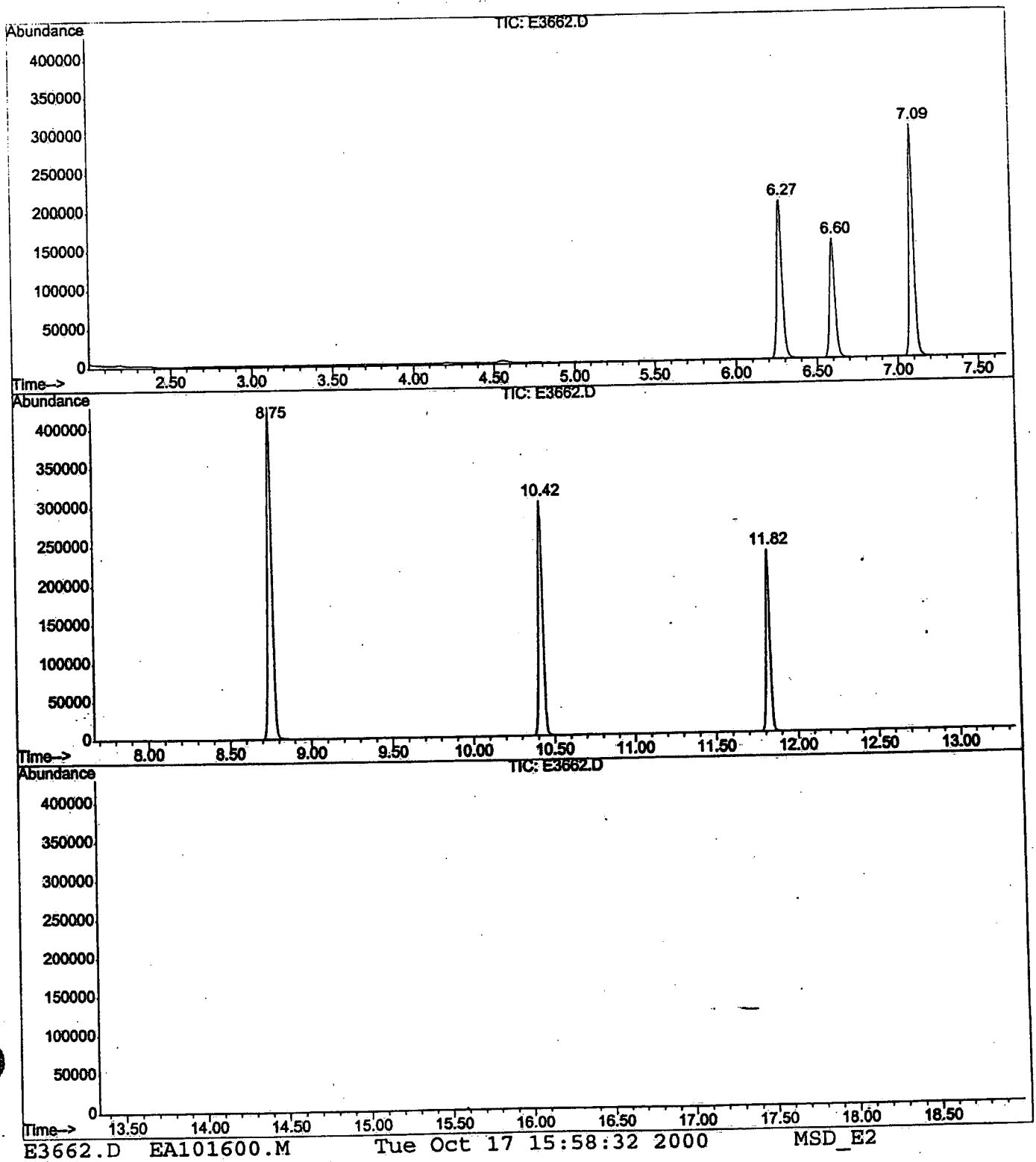
Sum of corrected areas: 3163741

E3662.D EA101600.M Tue Oct 17 15:58:31 2000 MSD_E2

4478

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-17-00\E3662.D
Operator : AMY
Acquired : 17 Oct 2000 12:29 using AcqMethod EA101600
Instrument : MSD_E2
Sample Name: METHOD-BLK,METHOD-BLK,A,5mL,100
Misc Info : NA,NA,NA
Vial Number: 5
Quant File :EA101600.RES (RTE Integrator)



E3662.D EA101600.M Tue Oct 17 15:58:32 2000 MSD_E2

4479

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5833.D

DFTPP Injection Date : 10/03/2000

Inst ID: MSDC

DFTPP Injection Time: 09:44

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	45.3			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	58.3			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	53.7			
197	Less than 1.0% of mass 198	0.0			
198	Base peak, 100% relative abundance	100.0			
199	5.0 - 9.0% or mass 198	6.1			
275	10.0 - 30.0% of mass 198	29.5			
365	Greater than 1.0% of mass 198	7.9			
441	Present, but less than mass 443	12.12	(	71.9	)3
442	40.0 - 100.0% of mass 198	80.3			
443	17.0 - 23.0% of mass 442	16.9	(	21.0	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C5834.D	10/03/2000	09:56
.	50-PPB-INJ-FOR-	C5835.D	10/03/2000	10:23
.	10-PPB-INJ-FOR-	C5836.D	10/03/2000	10:49
.	80-PPB-INJ-FOR-	C5837.D	10/03/2000	11:16
.	5-PPB-INJ-FOR-1	C5838.D	10/03/2000	11:43
.	Method-Blank	C5843.D	10/03/2000	13:54
.	DI-MS	C5844.D	10/03/2000	14:20
.	DI-MSD	C5845.D	10/03/2000	14:47
B.S.#1	5990-001	C5846.D	10/03/2000	15:14
POTABLE-WELL	6001-001	C5847.D	10/03/2000	15:40
TW1	6014-002	C5848.D	10/03/2000	16:07
FB	6014-004	C5849.D	10/03/2000	16:33
SW-1	6021-001	C5850.D	10/03/2000	17:00
SW-1	6024-001	C5851.D	10/03/2000	17:26
SUMP	6025-001	C5852.D	10/03/2000	17:53
A-1	6031-004	C5853.D	10/03/2000	18:19
T-12WS	6035-013	C5854.D	10/03/2000	18:45
.	Method-Blank	C5855.D	10/03/2000	19:12
.	DI-MS	C5856.D	10/03/2000	19:38
.	DI-MSD	C5857.D	10/03/2000	20:05
RB-092800	6042-001	C5858.D	10/03/2000	20:32
MW-1	6043-001	C5859.D	10/03/2000	20:58
RH-RB1	6057-001	C5860.D	10/03/2000	21:24

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C5833.D DFTPP Injection Date : 10/03/2000

Inst ID: MSDC DFTPP Injection Time: 09:44

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	45.3			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	58.3			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	53.7			
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	6.1			
275	10.0 - 30.0% of mass 198	29.5			
365	Greater than 1.0% of mass 198	7.9			
441	Present, but less than mass 443	12.1	(	71.9	)3
442	40.0 - 100.0% of mass 198	80.3			
443	17.0 - 23.0% of mass 442	16.9	(	21.0	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
RH-ED1	6057-002	C5861.D	10/03/2000	21:51
RH-ED2	6057-003	C5862.D	10/03/2000	22:17
RH-RB2	6057-004	C5863.D	10/03/2000	22:44
RH-RB3	6057-005	C5864.D	10/03/2000	23:10
RH-RB4	6057-006	C5865.D	10/03/2000	23:37
RH-RB5	6057-007	C5866.D	10/04/2000	00:03
DUP092700	6057-009	C5867.D	10/04/2000	00:30
T-13-WS	6051-015	C5868.D	10/04/2000	00:56
T-14-WS	6051-024	C5869.D	10/04/2000	01:23
SUMP	6048-001	C5870.D	10/04/2000	01:49
FB	6093-001	C5871.D	10/04/2000	02:16
GIL-OS	6093-002	C5872.D	10/04/2000	02:42
JON-OS	6101-001	C5873.D	10/04/2000	03:08
GWS1-1	6102-001	C5874.D	10/04/2000	03:35
GWS2-1	6102-002	C5875.D	10/04/2000	04:01
GW-9-29-00	6085-001	C5876.D	10/04/2000	04:28

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6147.D DFTPP Injection Date : 10/19/2000

Inst ID: MSDC DFTPP Injection Time: 10:46

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	59.5			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	54.4			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	57.7			
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	9.0			
275	10.0 - 30.0% of mass 198	26.2			
365	Greater than 1.0% of mass 198	8.0			
441	Present, but less than mass 443	11.38	(	71.1	)3
442	40.0 - 100.0% of mass 198	90.4			
443	17.0 - 23.0% of mass 442	16.0	(	17.7	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C6148.D	10/19/2000	10:57
.	DI-MS	C6166.D	10/19/2000	18:41
.	DI-MSD	C6167.D	10/19/2000	19:07
FB	6461-002	C6168.D	10/19/2000	19:33
SUMP	6461-003	C6169.D	10/19/2000	19:59
FB	6464-002	C6170.D	10/19/2000	20:25
MW101	6464-003	C6171.D	10/19/2000	20:51
MW102	6464-004	C6172.D	10/19/2000	21:16
MW104	6464-005	C6173.D	10/19/2000	21:42
MW2	6464-006	C6174.D	10/19/2000	22:08
GW-1	6486-001	C6175.D	10/19/2000	22:34
GW-2	6486-002	C6176.D	10/19/2000	23:00
WFB1013	6497-001	C6177.D	10/19/2000	23:26
RJ-10A	6497-003	C6178.D	10/19/2000	23:52
.	Method-Blank	C6179.D	10/20/2000	06:39

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C6179.D

Instrument ID: MSDA

Date Extracted: 10/19/00

Matrix: AQUEOUS

Date Analyzed: 10/20/2000

Time Analyzed: 06:39

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
	DI-MS	10/19/2000	18:41
	DI-MSD	10/19/2000	19:07
FB	6461-002	10/19/2000	19:33
SUMP	6461-003	10/19/2000	19:59
FB	6464-002	10/19/2000	20:25
MW101	6464-003	10/19/2000	20:51
MW102	6464-004	10/19/2000	21:16
MW104	6464-005	10/19/2000	21:42
MW2	6464-006	10/19/2000	22:08
GW-1	6486-001	10/19/2000	22:34
GW-2	6486-002	10/19/2000	23:00
WFB1013	6497-001	10/19/2000	23:26
RJ-10A	6497-003	10/19/2000	23:52
	Method-Blank	10/20/2000	06:39

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 10/19/2000
Date Analyzed: 10/20/2000
Data file: C6179.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Phenol	ND		0.27
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
2-Chlorophenol	ND		0.17
1,3-Dichlorobenzene	ND		0.34
1,4-Dichlorobenzene	ND		0.44
Benzyl alcohol	ND		0.31
1,2-Dichlorobenzene	ND		0.36
2-Methylphenol	ND		0.25
bis(2-chloroisopropyl)ether	ND		0.55
4-Methylphenol	ND		0.29
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
2-Nitrophenol	ND		0.82
2,4-Dimethylphenol	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
Benzoic acid	ND		0.98
2,4-Dichlorophenol	ND		0.52
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	ND		0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.43
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.33
2,4,6-Trichlorophenol	ND		0.58
2,4,5-Trichlorophenol	ND		0.45
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

44404

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 10/19/2000
Date Analyzed: 10/20/2000
Data file: C6179.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	ND		0.11
2,4-Dinitrophenol	ND		0.41
4-Nitrophenol	ND		0.69
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	ND		0.3
Fluorene	ND		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
4,6-Dinitro-2-methylphenol	ND		0.89
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Pentachlorophenol	ND		0.75
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	ND		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 0

4485

74

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 10/19/2000
Date Analyzed: 10/20/2000
Data file: C6179.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

Response Factor Report MSD-C

Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 12:19:40 2000
Response via : Initial Calibration

Calibration Files
5 =C5838.D 20 =C5834.D 50 =C5835.D
80 =C5837.D 10 =C5836.D

		Compound	5	20	50	80	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	N-Nitrosodimethylamin	0.677	0.762	0.993	0.859	0.693	0.797	16.44
3)	S	2-Fluorophenol	0.904	0.607	0.612	0.645	0.854	0.724	19.76
4)	S	Phenol-d5	1.399	1.304	1.513	1.385	1.560	1.432	7.20
5)	MC	Phenol	1.308	1.412	1.528	1.306	1.296	1.370	7.33
6)	T	Aniline	1.515	1.527	1.824	1.569	1.501	1.587	8.50
7)	T	bis(2-Chloroethyl)eth	1.051	0.993	1.191	1.049	0.971	1.051	8.16
8)	M	2-Chlorophenol	1.008	1.177	1.290	1.124	1.015	1.123	10.51
9)	T	1,3-Dichlorobenzene	1.170	1.230	1.523	1.371	1.159	1.291	12.01
10)	MC	1,4-Dichlorobenzene	1.377	1.274	1.626	1.443	1.293	1.403	10.13
11)	T	Benzyl alcohol	0.514	0.561	0.685	0.668	0.486	0.583	15.37
12)	T	1,2-Dichlorobenzene	1.235	1.151	1.497	1.288	1.202	1.275	10.52
13)	T	2-Methylphenol	0.886	0.899	1.066	0.990	0.880	0.944	8.59
14)	T	bis(2-chloroisopropyl	1.216	0.899	1.119	0.965	1.115	1.063	12.09
15)	T	4-Methylphenol	0.887	0.955	1.135	1.084	0.870	0.986	12.02
16)	MP	N-Nitroso-di-n-propyl	0.818	0.840	1.055	0.952	0.827	0.898	11.45
17)	T	2-Aminotoluene +4-Ami	2.318	2.206	3.454	2.286	2.212	2.495	21.58
18)	T	Hexachloroethane	0.574	0.551	0.711	0.621	0.570	0.605	10.67
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.374	0.405	0.426	0.428	0.326	0.392	10.88
21)	T	Nitrobenzene	0.444	0.367	0.459	0.398	0.407	0.415	8.89
22)	T	Isophorone	0.567	0.581	0.728	0.650	0.590	0.623	10.70
23)	TC	2-Nitrophenol	0.124	0.160	0.188	0.174	0.138	0.157	16.49
24)	T	2,4-Dimethylphenol	0.291	0.336	0.396	0.335	0.304	0.333	12.17
25)	T	bis(2-Chloroethoxy)me	0.301	0.321	0.405	0.371	0.313	0.342	12.96
26)	T	Benzoic acid	0.036	0.036	0.058	0.050	0.033	0.043	25.36
27)	T	2,4-Dimethylaniline	0.339	0.436	0.590	0.487	0.352	0.441	23.45
28)	TC	2,4-Dichlorophenol	0.221	0.264	0.306	0.269	0.221	0.256	14.04
29)	M	1,2,4-Trichlorobenzen	0.301	0.281	0.373	0.339	0.287	0.316	12.36
30)	T	Naphthalene	0.791	0.796	1.077	0.910	0.773	0.869	14.72
31)	T	4-Chloroaniline	0.289	0.323	0.388	0.375	0.311	0.337	12.61
32)	TC	Hexachlorobutadiene	0.218	0.222	0.278	0.272	0.220	0.242	12.47
33)	MC	4-Chloro-3-methylphen	0.225	0.276	0.313	0.275	0.233	0.265	13.59
34)	T	2-Methylnaphthalene	0.524	0.571	0.731	0.692	0.539	0.611	15.38
35)	I	Acenaphthene-d10	----------ISTD----------						
36)	TP	Hexachlorocyclopentad	0.307	0.265	0.267	0.301	0.206	0.269	14.94
37)	TC	2,4,6-Trichlorophenol	0.223	0.320	0.378	0.344	0.229	0.299	23.36
38)	T	2,4,5-Trichlorophenol	0.251	0.341	0.417	0.384	0.279	0.334	20.87
39)	S	2-Fluorobiphenyl	1.146	1.155	1.358	1.169	0.979	1.161	11.59
40)	T	2-Chloronaphthalene	0.902	0.922	1.173	1.069	0.889	0.991	12.59
41)	T	2-Nitroaniline	0.259	0.316	0.414	0.374	0.267	0.326	20.62
42)	T	Dimethylphthalate	1.021	1.011	1.332	1.161	0.978	1.101	13.36
43)	T	2,6-Dinitrotoluene	0.169	0.202	0.278	0.246	0.198	0.219	19.70
44)	T	Acenaphthylene	1.291	1.365	1.886	1.578	1.231	1.470	18.13
45)	T	3-Nitroaniline	0.156	0.210	0.262	0.239	0.175	0.208	21.12
46)	MC	Acenaphthene	0.828	0.837	1.211	0.999	0.780	0.931	18.99
47)	TP	2,4-Dinitrophenol	0.181	0.107	0.124	0.180	0.151	0.148	22.35

48)	MP	4-Nitrophenol	0.175	0.191	0.156	0.214	0.172	0.182	12.24
49)	M	2,4-Dinitrotoluene	0.199	0.250	0.352	0.301	0.234	0.267	22.42
50)	T	Dibenzofuran	1.200	1.273	1.615	1.494	1.142	1.345	15.00
51)	T	Diethylphthalate	1.020	1.035	1.405	1.214	1.038	1.142	14.62
52)	T	Fluorene	0.877	0.971	1.421	1.206	0.880	1.071	22.14
[redacted]	T	4-Chlorophenyl-phenyl	0.509	0.528	0.686	0.644	0.519	0.577	14.22
[redacted]	T	4-Nitroaniline	0.146	0.212	0.284	0.254	0.170	0.213	26.80
55)	I	Phenanthrene-d10	----------ISTD----------						
56)	T	4,6-Dinitro-2-methylp	0.069	0.076	0.096	0.084	0.053	0.076	21.39
57)	TC	N-Nitrosodiphenylamin	0.404	0.389	0.467	0.440	0.380	0.416	8.84
58)	T	1,2-Diphenylhydrazine	0.730	0.749	0.890	0.762	0.736	0.773	8.57
59)	S	2,4,6-Tribromophenol	0.195	0.224	0.174	0.232	0.225	0.210	11.79
60)	T	4-Bromophenyl-phenyle	0.202	0.202	0.256	0.245	0.196	0.220	12.66
61)	T	Hexachlorobenzene	0.247	0.258	0.316	0.306	0.252	0.276	11.87
62)	MC	Pentachlorophenol	0.049	0.089	0.111	0.107	0.073	0.086	29.71
63)	T	Phenanthrene	0.756	0.757	1.021	0.863	0.730	0.825	14.63
64)	T	Anthracene	0.706	0.765	1.031	0.868	0.721	0.818	16.49
65)	T	Carbazole	0.632	0.681	0.834	0.739	0.660	0.709	11.32
66)	T	Di-n-butylphthalate	0.811	0.895	1.170	1.033	0.856	0.953	15.42
67)	TC	Fluoranthene	0.660	0.775	1.076	0.853	0.707	0.814	20.08
68)	T	Benzidine	0.185	0.297	0.243	0.114	0.265	0.221	32.72
69)	I	Chrysene-d12	----------ISTD----------						
70)	M	Pyrene	0.877	0.901	1.208	1.010	0.822	0.963	15.85
71)	S	Terphenyl-d14	1.008	0.925	1.045	0.886	0.857	0.944	8.48
72)	T	3,3'-Dimethylbenzidin	0.224	0.173	0.183	0.106	0.243	0.186	28.42
73)	T	Butylbenzylphthalate	0.379	0.470	0.521	0.464	0.376	0.442	14.23
74)	T	3,3'-Dichlorobenzidin	0.287	0.297	0.370	0.259	0.296	0.302	13.64
75)	T	Benzo[a]anthracene	0.820	0.848	1.131	0.924	0.793	0.903	15.11
76)	T	Chrysene	0.783	0.764	0.963	0.832	0.743	0.817	10.75
77)	T	bis(2-Ethylhexyl)phth	0.491	0.549	0.732	0.643	0.491	0.581	18.00
[redacted]	I	Perylene-d12	----------ISTD----------						
79)	TC	Di-n-octylphthalate	0.915	1.052	1.435	1.269	0.990	1.132	18.94
80)	T	Benzo[b]fluoranthene	0.911	0.969	1.401	1.143	0.999	1.085	18.14
81)	T	Benzo[k]fluoranthene	1.143	1.034	1.445	1.193	1.037	1.170	14.37
82)	TC	Benzo[a]pyrene	0.904	0.946	1.307	1.056	0.896	1.022	16.80
83)	T	Indeno[1,2,3-cd]pyren	0.973	1.139	1.434	0.779	0.960	1.057	23.28
84)	T	Dibenz[a,h]anthracene	0.650	0.966	1.128	0.711	0.700	0.831	24.86
85)	T	Benzo[g,h,i]perylene	0.859	0.923	1.098	0.462	0.841	0.837	27.84

(#) = Out of Range

SVWC1600.M Tue Oct 03 12:19:52 2000 MSD-C

44488

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6148.D Vial: 2
Acq On : 19 Oct 2000 10:57 Operator: DP
Sample : .,20-PPB-INJ-FOR-10/19/00 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
'S Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 15:19:00 2000
Response via : Multiple Level Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	68	-0.01
2	T	N-Nitrosodimethylamine	0.797	0.698	12.4	62	0.00
3	S	2-Fluorophenol	0.724	0.599	17.3	67	-0.01
4	S	Phenol-d5	1.432	1.217	15.0	63	-0.02
5	MC	Phenol	1.370	1.324	3.4	63	-0.02
6	T	Aniline	1.587	1.291	18.7	57	-0.02
7	T	bis(2-Chloroethyl)ether	1.051	0.953	9.3	65	-0.01
8	M	2-Chlorophenol	1.123	1.107	1.4	64	-0.01
9	T	1,3-Dichlorobenzene	1.291	1.199	7.1	66	-0.01
10	MC	1,4-Dichlorobenzene	1.403	1.320	5.9	70	-0.01
11	T	Benzyl alcohol	0.583	0.499	14.4	60	-0.01
12	T	1,2-Dichlorobenzene	1.275	1.097	14.0	64	-0.01
13	T	2-Methylphenol	0.944	0.811	14.1	61	-0.01
14	T	bis(2-chloroisopropyl)ether	1.063	0.967	9.0	73	-0.01
15	T	4-Methylphenol	0.986	0.817	17.1	58	-0.02
[illegible]	MP	N-Nitroso-di-n-propylamine	0.898	0.757	15.7	61	-0.02
[illegible]	T	2-Aminotoluene +4-Aminotolu	2.495	2.617	-4.9	80	-0.02
18	T	Hexachloroethane	0.605	0.537	11.2	66	-0.02
19	I	Naphthalene-d8	1.000	1.000	0.0	61	-0.01
20	S	Nitrobenzene-d5	0.392	0.376	4.1	57	-0.01
21	T	Nitrobenzene	0.415	0.338	18.6	56	-0.01
22	T	Isophorone	0.623	0.523	16.1	55	-0.01
23	TC	2-Nitrophenol	0.157	0.149	5.1	57	0.00
24	T	2,4-Dimethylphenol	0.333	0.318	4.5	58	-0.01
25	T	bis(2-Chloroethoxy)methane	0.342	0.303	11.4	58	-0.01
26	T	Benzoic acid	0.043	0.043	0.0	74	-0.01
27	T	2,4-Dimethylaniline	0.441	0.402	8.8	56	-0.01
28	TC	2,4-Dichlorophenol	0.256	0.268	-4.7	62	-0.01
29	M	1,2,4-Trichlorobenzene	0.316	0.290	8.2	63	-0.01
30	T	Naphthalene	0.869	0.809	6.9	62	-0.01
31	T	4-Chloroaniline	0.337	0.295	12.5	56	0.00
32	TC	Hexachlorobutadiene	0.242	0.226	6.6	62	0.00
33	MC	4-Chloro-3-methylphenol	0.265	0.250	5.7	55	-0.01
34	T	2-Methylnaphthalene	0.611	0.570	6.7	61	-0.01
35	I	Acenaphthene-d10	1.000	1.000	0.0	62	0.00
36	TP	Hexachlorocyclopentadiene	0.269	0.239	11.2	56	0.00
37	TC	2,4,6-Trichlorophenol	0.299	0.300	-0.3	58	0.00
38	T	2,4,5-Trichlorophenol	0.334	0.312	6.6	57	0.00
39	S	2-Fluorobiphenyl	1.161	1.117	3.8	60	0.00
40	[illegible]	2-Chloronaphthalene	0.991	0.920	7.2	62	-0.01
41	T	2-Nitroaniline	0.326	0.268	17.8	53	0.00
42	T	Dimethylphthalate	1.101	1.004	8.8	62	-0.01
43	T	2,6-Dinitrotoluene	0.219	0.181	17.4	55	0.00
44	T	Acenaphthylene	1.470	1.323	10.0	60	0.00

4489

45	T	3-Nitroaniline	0.208	0.185	11.1	55	0.00
46	MC	Acenaphthene	0.931	0.924	0.8	69	0.00
47	TP	2,4-Dinitrophenol	0.148	0.131	11.5	76	-0.01
48	MP	4-Nitrophenol	0.182	0.169	7.1	55	0.00
[illegible]	M	2,4-Dinitrotoluene	0.267	0.269	-0.7	67	0.00
[illegible]	T	Dibenzofuran	1.345	1.338	0.5	65	0.00
	T	Diethylphthalate	1.142	1.114	2.5	67	0.00
	T	Fluorene	1.071	1.022	4.6	65	0.00
53	T	4-Chlorophenyl-phenylether	0.577	0.539	6.6	64	0.00
54	T	4-Nitroaniline	0.213	0.201	5.6	59	0.00
55	I	Phenanthrene-d10	1.000	1.000	0.0	72	0.00
56	T	4,6-Dinitro-2-methylphenol	0.076	0.080	-5.3	76	0.00
57	TC	N-Nitrosodiphenylamine	0.416	0.371	10.8	69	0.00
58	T	1,2-Diphenylhydrazine/Azobe	0.773	0.634	18.0	61	-0.01
59	S	2,4,6-Tribromophenol	0.210	0.182	13.3	59	0.00
60	T	4-Bromophenyl-phenylether	0.220	0.191	13.2	68	0.00
61	T	Hexachlorobenzene	0.276	0.251	9.1	71	0.00
62	MC	Pentachlorophenol	0.086	0.101	-17.4	83	0.00
63	T	Phenanthrene	0.825	0.755	8.5	72	0.00
64	T	Anthracene	0.818	0.796	2.7	75	0.00
65	T	Carbazole	0.709	0.686	3.2	73	0.00
66	T	Di-n-butylphthalate	0.953	0.932	2.2	75	0.00
67	TC	Fluoranthene	0.814	0.877	-7.7	82	0.00
68	T	Benzidine	0.221	0.186	15.8	45	0.00
69	I	Chrysene-d12	1.000	1.000	0.0	98	0.00
70	M	Pyrene	0.963	0.777	19.3	84	0.00
71	S	Terphenyl-d14	0.944	0.791	16.2	83	0.00
72	T	3,3'-Dimethylbenzidine	0.186	0.197	-5.9	111	0.00
73	T	Butylbenzylphthalate	0.442	0.355	19.7	74	0.00
[illegible]	T	3,3'-Dichlorobenzidine	0.302	0.300	0.7	99	0.00
[illegible]	T	Benzo[a]anthracene	0.903	0.866	4.1	100	0.00
[illegible]	T	Chrysene	0.817	0.783	4.2	100	0.00
77	T	bis(2-Ethylhexyl)phthalate	0.581	0.502	13.6	89	0.00
78	I	Perylene-d12	1.000	1.000	0.0	109	-0.01
79	TC	Di-n-octylphthalate	1.132	0.966	14.7	100	0.00
80	T	Benzo[b]fluoranthene	1.085	0.984	9.3	110	0.00
81	T	Benzo[k]fluoranthene	1.170	0.991	15.3	104	0.00
82	TC	Benzo[a]pyrene	1.022	0.899	12.0	103	0.00
83	T	Indeno[1,2,3-cd]pyrene	1.057	0.887	16.1	85	-0.02
84	T	Dibenz[a,h]anthracene	0.831	0.739	11.1	83	-0.02
85	T	Benzo[g,h,i]perylene	0.837	0.672	19.7	79	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

C5834.D SVWC1600.M Thu Oct 19 11:23:07 2000 MSD-C

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/19/2000

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
DI-MS	AQUEOUS	C6166.D	59	82	67	86	N/A	64
DI-MSD	AQUEOUS	C6167.D	56	77	75	96	65	96
6461-002	AQUEOUS	C6168.D	N/A	N/A	71	87	N/A	99
6461-003	AQUEOUS	C6169.D	N/A	N/A	65	82	N/A	103
6464-002	AQUEOUS	C6170.D	N/A	N/A	78	96	N/A	104
6464-003	AQUEOUS	C6171.D	N/A	N/A	68	82	N/A	107
6464-004	AQUEOUS	C6172.D	N/A	N/A	68	98	N/A	99
6464-005	AQUEOUS	C6173.D	N/A	N/A	68	90	N/A	98
6464-006	AQUEOUS	C6174.D	N/A	N/A	74	87	N/A	112
6486-001	AQUEOUS	C6175.D	56	73	62	89	60	112
6486-002	AQUEOUS	C6176.D	55	71	70	88	67	104
6497-001	AQUEOUS	C6177.D	58	74	64	83	55	94
6497-003	AQUEOUS	C6178.D	46	69	61	85	57	99
Method-Blank	AQUEOUS	C6179.D	75	95	82	105	71	111

EPA CLP QC LIMITS FOR:	Soil	Aqueous
S1 (2FP) = 2-Fluorophenol	36-105	37-96
S2 (PHL) = Phenol-d5	39-112	56-111
S3 (NBZ) = Nitrobenzene-d5	42-106	61-121
S4 (FBP) = 2-Fluorobiphenyl	46-120	63-124
S5 (TBP) = 2,4,6-Tribromophenol	51-141	52-153
S6 (TPH) = Terphenyl-d14	55-141	46-140

* Column to be used to flag recovery values

AQUEOUS SEMIVOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: Method-B Batch No.: 1019W1

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	30.0	0.0	21.0	70	47 - 95
2-Chlorophenol	30.0	0.0	22.0	73	49 - 85
1,4-Dichlorobenzene	30.0	0.0	20.6	69	49 - 87
N-Nitroso-di-n-propylamine	30.0	0.0	21.8	73	43 - 103
1,2,4-Trichlorobenzene	30.0	0.0	21.3	71	43 - 89
4-Chloro-3-methylphenol	30.0	0.0	22.5	75	52 - 81
Acenaphthene	30.0	0.0	26.5	88	53 - 102
4-Nitrophenol	30.0	0.0	32.0	107	40 - 126
2,4-Dinitrotoluene	30.0	0.0	28.5	95	35 - 147
Pentachlorophenol	30.0	0.0	22.3	74	31 - 75
Pyrene	30.0	0.0	25.1	84	46 - 124

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	0.0	20.8	69	1	10	47 - 95
2-Chlorophenol	0.0	21.4	71	3	7	49 - 85
1,4-Dichlorobenzene	0.0	21.4	71	3	8	49 - 87
N-Nitroso-di-n-propylamine	0.0	21.2	71	3	12	43 - 103
1,2,4-Trichlorobenzene	0.0	21.3	71	0	8	43 - 89
4-Chloro-3-methylphenol	0.0	22.1	74	1	5	52 - 81
Acenaphthene	0.0	25.4	85	3	8	53 - 102
4-Nitrophenol	0.0	28.6	95	12	17	40 - 126
2,4-Dinitrotoluene	0.0	29.7	99	4	22	35 - 147
Pentachlorophenol	0.0	21.6	72	3	9	31 - 75
Pyrene	0.0	25.1	84	0	13	46 - 124

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __11__ outside limits

Spike Recovery: __0___ out of __22__ outside limits

4492

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 10/19/2000
Date Analyzed: 10/20/2000
Data file: C6179.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
N-Nitrosodimethylamine	30.0	0.0	17.8	59	0.0	20.4	68
Phenol	30.0	0.0	21.0	70	0.0	20.8	69
Aniline	30.0	0.0	19.5	65	0.0	19.0	63
bis(2-Chloroethyl)ether	30.0	0.0	22.8	76	0.0	21.0	70
2-Chlorophenol	30.0	0.0	22.0	73	0.0	21.4	71
1,3-Dichlorobenzene	30.0	0.0	22.8	76	0.0	22.8	76
1,4-Dichlorobenzene	30.0	0.0	20.6	69	0.0	21.4	71
Benzyl alcohol	30.0	0.0	24.0	80	0.0	22.0	73
1,2-Dichlorobenzene	30.0	0.0	20.9	70	0.0	21.2	71
2-Methylphenol	30.0	0.0	21.9	73	0.0	23.1	77
bis(2-chloroisopropyl)ether	30.0	0.0	22.2	74	0.0	22.0	73
4-Methylphenol	30.0	0.0	22.8	76	0.0	24.1	80
N-Nitroso-di-n-propylamine	30.0	0.0	21.8	73	0.0	21.2	71
2-Aminotoluene +4-Aminotoluene	30.0	0.0	47.0	157	0.0	47.9	160
Hexachloroethane	30.0	0.0	21.1	70	0.0	21.6	72
Nitrobenzene	30.0	0.0	20.4	68	0.0	20.2	67
Isophorone	30.0	0.0	20.9	70	0.0	20.0	67
2-Nitrophenol	30.0	0.0	20.5	68	0.0	20.8	69
2,4-Dimethylphenol	30.0	0.0	22.3	74	0.0	23.1	77
bis(2-Chloroethoxy)methane	30.0	0.0	21.2	71	0.0	20.4	68
Benzoic acid	30.0	0.0	24.0	80	0.0	21.3	71
2,4-Dimethylaniline	30.0	0.0	20.9	70	0.0	21.3	71
2,4-Dichlorophenol	30.0	0.0	22.3	74	0.0	21.3	71
1,2,4-Trichlorobenzene	30.0	0.0	21.3	71	0.0	21.3	71
Naphthalene	30.0	0.0	22.1	74	0.0	22.5	75
4-Chloroaniline	30.0	0.0	21.1	70	0.0	20.2	67
Hexachlorobutadiene	30.0	0.0	21.8	73	0.0	22.0	73
4-Chloro-3-methylphenol	30.0	0.0	22.5	75	0.0	22.1	74
2-Methylnaphthalene	30.0	0.0	21.9	73	0.0	21.8	73
Hexachlorocyclopentadiene	30.0	0.0	20.1	67	0.0	20.3	68
2,4,6-Trichlorophenol	30.0	0.0	25.6	85	0.0	24.4	81
2,4,5-Trichlorophenol	30.0	0.0	29.8	99	0.0	27.0	90
2-Chloronaphthalene	30.0	0.0	23.6	79	0.0	23.0	77
2-Nitroaniline	30.0	0.0	24.6	82	0.0	25.4	85
Dimethylphthalate	30.0	0.0	26.7	89	0.0	26.5	88
2,6-Dinitrotoluene	30.0	0.0	25.5	85	0.0	26.6	89
Acenaphthylene	30.0	0.0	25.7	86	0.0	25.4	85

4493

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: Method-Blank
Client ID: .
Date Received: N/A
Date Extracted: 10/19/2000
Date Analyzed: 10/20/2000
Data file: C6179.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
3-Nitroaniline	30.0	0.0	28.3	94	0.0	27.6	92
Acenaphthene	30.0	0.0	26.5	88	0.0	25.4	85
2,4-Dinitrophenol	30.0	0.0	16.9	56	0.0	17.8	59
4-Nitrophenol	30.0	0.0	32.0	107	0.0	28.6	95
2,4-Dinitrotoluene	30.0	0.0	28.5	95	0.0	29.7	99
Dibenzofuran	30.0	0.0	25.9	86	0.0	24.7	82
Diethylphthalate	30.0	0.0	28.2	94	0.0	27.7	92
Fluorene	30.0	0.0	27.8	93	0.0	26.5	88
4-Chlorophenyl-phenylether	30.0	0.0	26.3	88	0.0	25.7	86
4-Nitroaniline	30.0	0.0	29.8	99	0.0	27.3	91
4,6-Dinitro-2-methylphenol	30.0	0.0	13.7	46	0.0	12.2	41
N-Nitrosodiphenylamine	30.0	0.0	23.8	79	0.0	24.1	80
1,2-Diphenylhydrazine/Azobenzene	30.0	0.0	22.1	74	0.0	22.5	75
4-Bromophenyl-phenylether	30.0	0.0	21.8	73	0.0	23.7	79
Hexachlorobenzene	30.0	0.0	24.4	81	0.0	25.3	84
Pentachlorophenol	30.0	0.0	22.3	74	0.0	21.6	72
Phenanthrene	30.0	0.0	27.4	91	0.0	26.8	89
Anthracene	30.0	0.0	27.6	92	0.0	28.5	95
Carbazole	30.0	0.0	28.3	94	0.0	28.3	94
Di-n-butylphthalate	30.0	0.0	29.1	97	0.0	29.0	97
Fluoranthene	30.0	0.0	33.4	111	0.0	33.5	112
Benzidine	30.0	0.0	16.3	54	0.0	17.6	59
Pyrene	30.0	0.0	25.1	84	0.0	25.1	84
3,3'-Dimethylbenzidine	30.0	0.0	25.1	84	0.0	25.8	86
Butylbenzylphthalate	30.0	0.0	23.6	79	0.0	24.4	81
3,3'-Dichlorobenzidine	30.0	0.0	27.0	90	0.0	28.2	94
Benzo[a]anthracene	30.0	0.0	28.7	96	0.0	28.0	93
Chrysene	30.0	0.0	27.5	92	0.0	29.0	97
bis(2-Ethylhexyl)phthalate	30.0	0.0	26.6	89	0.0	26.0	87
Di-n-octylphthalate	30.0	0.0	30.7	102	0.0	31.2	104
Benzo[b]fluoranthene	30.0	0.0	31.0	103	0.0	31.7	106
Benzo[k]fluoranthene	30.0	0.0	28.8	96	0.0	29.4	98
Benzo[a]pyrene	30.0	0.0	28.5	95	0.0	28.7	96
Indeno[1,2,3-cd]pyrene	30.0	0.0	22.3	74	0.0	22.6	75
Dibenz[a,h]anthracene	30.0	0.0	23.9	80	0.0	24.4	81
Benzo[g,h,i]perylene	30.0	0.0	20.3	68	0.0	21.0	70

4494

83

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5834.D

Date Analyzed: 10/03/2000

Instrument ID: MSDC

Time Analyzed: 09:56

	40UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	83738		6.48		296904		8.09		167213		9.84	
	UPPER LIMIT	167476		6.98		593808		8.59		334426		10.34	
	LOWER LIMIT	41869		5.98		148452		7.59		83607		9.34	
	LAB SAMPLE ID												
01	50-PPB-INJ-FOR-10/0	58889		6.48		211163		8.09		118326		9.84	
02	10-PPB-INJ-FOR-10/0	80773		6.48		288801		8.09		170013		9.84	
03	80-PPB-INJ-FOR-10/0	89486		6.48		319390		8.10		183354		9.84	
04	5-PPB-INJ-FOR-10/03	88342		6.48		322614		8.09		183952		9.84	
05	Method-Blank	64480		6.49		233886		8.09		128824		9.84	
06	DI-MS	79266		6.48		298337		8.09		160214		9.84	
07	DI-MSD	73656		6.49		272313		8.09		145948		9.84	
08	5990-001	68076		6.49		273129		8.09		141425		9.84	
09	6001-001	60264		6.49		227463		8.09		125774		9.84	
10	6014-002	63368		6.49		240205		8.09		127127		9.84	
11	6014-004	64944		6.49		247737		8.09		135608		9.84	
12	6021-001	61931		6.49		234006		8.09		118932		9.84	
13	6024-001	63543		6.48		239646		8.09		130513		9.84	
14	6025-001	65621		6.49		244877		8.09		133895		9.84	
15	6031-004	65811		6.48		247023		8.09		129520		9.84	
16	6035-013	69391		6.49		260553		8.09		138556		9.84	
17	Method-Blank	64343		6.49		230615		8.09		121318		9.84	
18	DI-MS	70081		6.49		264497		8.09		144173		9.84	
19	DI-MSD	71622		6.48		262459		8.09		145031		9.84	
20	6042-001	66020		6.49		237183		8.09		122815		9.84	
21	6043-001	64203		6.49		241667		8.09		133223		9.84	
22	6057-001	64269		6.49		249739		8.09		134046		9.84	

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

84

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5834.D

Date Analyzed: 10/03/2000

Instrument ID: MSDC

Time Analyzed: 09:56

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	83738	6.48	296904	8.09	167213	9.84
	UPPER LIMIT	167476	6.98	593808	8.59	334426	10.34
	LOWER LIMIT	41869	5.98	148452	7.59	83607	9.34
	LAB SAMPLE ID						
01	6057-002	68391	6.48	252891	8.09	137343	9.84
02	6057-003	60470	6.49	225545	8.09	118298	9.84
03	6057-004	60128	6.48	221341	8.09	117318	9.84
04	6057-005	72944	6.49	278622	8.09	149013	9.84
05	6057-006	71789	6.49	277247	8.09	147903	9.84
06	6057-007	64658	6.48	244173	8.09	125873	9.84
07	6057-009	70852	6.49	269990	8.09	146799	9.84
08	6051-015	77953	6.49	291553	8.09	154443	9.84
09	6051-024	78025	6.49	297222	8.09	154354	9.84
10	6048-001	64816	6.49	244280	8.09	129464	9.84
11	6093-001	66883	6.48	252906	8.09	136960	9.84
12	6093-002	71122	6.48	268706	8.09	140672	9.84
13	6101-001	71522	6.49	275012	8.09	149500	9.84
14	6102-001	76608	6.48	289805	8.09	153286	9.84
15	6102-002	80152	6.48	320131	8.09	171566	9.84
16	6085-001	69377	6.48	265024	8.09	137350	9.84
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5834.D

Date Analyzed: 10/03/2000

Instrument ID: MSDC

Time Analyzed: 09:56

	40UG/L	IS4 AREA #	IS4 RT #	IS5 AREA #	IS5 RT #	IS6 AREA #	IS6 RT #
	24 HOUR STD	279541	11.15	251685	13.54	200691	15.51
	UPPER LIMIT	559082	11.65	503370	14.04	401382	16.01
	LOWER LIMIT	139771	10.65	125843	13.04	100346	15.01
	LAB SAMPLE ID						
01	50-PPB-INJ-FOR-10/0	217136	11.16	196373	13.52	148654	15.48
02	10-PPB-INJ-FOR-10/0	278081	11.16	256899	13.52	189710	15.48
03	80-PPB-INJ-FOR-10/0	319889	11.16	280697	13.54	213219	15.51
04	5-PPB-INJ-FOR-10/08	298311	11.16	262718	13.57	199359	15.54
05	Method-Blank	226600	11.16	199267	13.53	156789	15.49
06	DI-MS	258779	11.16	202792	13.53	170521	15.51
07	DI-MSD	244379	11.16	206245	13.53	176957	15.50
08	5990-001	235459	11.16	204086	13.52	163712	15.48
09	6001-001	216878	11.15	196695	13.50	157107	15.46
10	6014-002	211913	11.15	194251	13.51	158621	15.47
11	6014-004	225280	11.15	200020	13.50	160059	15.46
12	6021-001	205960	11.15	196066	13.50	161316	15.45
13	6024-001	222412	11.16	208878	13.50	166145	15.45
14	6025-001	220775	11.15	198950	13.49	164341	15.45
15	6031-004	220419	11.15	194154	13.50	160629	15.45
16	6035-013	225378	11.16	196846	13.49	162298	15.45
17	Method-Blank	211185	11.16	193415	13.50	157852	15.45
18	DI-MS	252768	11.16	221039	13.49	178456	15.44
19	DI-MSD	237151	11.16	210512	13.50	175097	15.45
20	6042-001	206176	11.16	194590	13.50	163802	15.45
21	6043-001	221439	11.15	189906	13.49	159634	15.45
22	6057-001	220703	11.16	207263	13.49	169927	15.45

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C5834.D

Date Analyzed: 10/03/2000

Instrument ID: MSDC

Time Analyzed: 09:56

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	279541	11.15	251685	13.54	200691	15.51
	UPPER LIMIT	559082	11.65	503370	14.04	401382	16.01
	LOWER LIMIT	139771	10.65	125843	13.04	100346	15.01
	LAB SAMPLE ID						
01	6057-002	229000	11.15	208666	13.49	172672	15.45
02	6057-003	210137	11.15	201898	13.49	159376	15.44
03	6057-004	204677	11.16	200161	13.50	160883	15.45
04	6057-005	231270	11.15	186906	13.49	160302	15.45
05	6057-006	236758	11.15	182826	13.49	152490	15.45
06	6057-007	203524	11.16	181934	13.50	151553	15.45
07	6057-009	236825	11.15	198668	13.49	170813	15.45
08	6051-015	235603	11.15	199169	13.49	171817	15.45
09	6051-024	236424	11.15	193579	13.49	164924	15.44
10	6048-001	212503	11.16	188324	13.49	157060	15.44
11	6093-001	223765	11.15	202556	13.49	167906	15.45
12	6093-002	222506	11.16	199321	13.49	166969	15.45
13	6101-001	232765	11.15	191443	13.49	163607	15.44
14	6102-001	236745	11.15	202707	13.50	171660	15.45
15	6102-002	252478	11.15	194095	13.49	167095	15.45
16	6085-001	217993	11.16	193603	13.49	160971	15.45
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6148.D

Date Analyzed: 10/19/2000

Instrument ID: MSDC

Time Analyzed: 10:57

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24HOUR STD	56534	6.47	181392	8.08	103931	9.83
	UPPER LIMIT	113068	6.97	362784	8.58	207862	10.33
	LOWER LIMIT	28267	5.97	90696	7.58	51966	9.33
	LAB SAMPLE ID						
01	DI-MS	55602	6.47	199142	8.08	108287	9.83
02	DI-MSD	56393	6.47	201500	8.08	112208	9.83
03	6461-002	53896	6.47	186938	8.08	103463	9.83
04	6461-003	52017	6.47	179096	8.08	102299	9.83
05	6464-002	48436	6.47	161951	8.08	91289	9.83
06	6464-003	48941	6.47	166204	8.08	93762	9.83
07	6464-004	46112	6.47	176504	8.08	103151	9.83
08	6464-005	50023	6.47	173421	8.08	92013	9.83
09	6464-006	45288	6.47	151941	8.08	88154	9.83
10	6486-001	46160	6.47	167906	8.08	95893	9.83
11	6486-002	51021	6.47	172586	8.08	96151	9.83
12	6497-001	48639	6.47	167888	8.08	93521	9.83
13	6497-003	50502	6.47	166846	8.08	89086	9.83
14	Method-Blank	54708	6.46	188143	8.07	99188	9.83
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6148.D Date Analyzed: 10/19/2000

Instrument ID: MSDC Time Analyzed: 10:57

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24HOUR STD	202404	11.15	245748	13.51	218298	15.46
	UPPER LIMIT	404808	11.65	491496	14.01	436596	15.96
	LOWER LIMIT	101202	10.65	122874	13.01	109149	14.96
	LAB SAMPLE ID						
01	DI-MS	218790	11.14	256306	13.48	187289	15.43
02	DI-MSD	223419	11.15	262258	13.48	189083	15.43
03	6461-002	199367	11.15	234135	13.49	168625	15.43
04	6461-003	202258	11.15	231281	13.48	170445	15.43
05	6464-002	179241	11.14	207951	13.48	150255	15.43
06	6464-003	176284	11.15	204959	13.49	147771	15.42
07	6464-004	202771	11.15	231615	13.48	171437	15.43
08	6464-005	181936	11.14	214717	13.48	153245	15.43
09	6464-006	167796	11.15	193131	13.49	145794	15.42
10	6486-001	192902	11.15	209822	13.48	160458	15.43
11	6486-002	194982	11.14	217032	13.48	169882	15.43
12	6497-001	179589	11.15	200372	13.48	150388	15.43
13	6497-003	183294	11.15	204887	13.48	153290	15.43
14	Method-Blank	194540	11.15	206432	13.53	154571	15.49
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
Integration Params: RTEINT.P
Quant Time: Oct 20 9:48 2000

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: SVWC1600.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 15:19:00 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1600

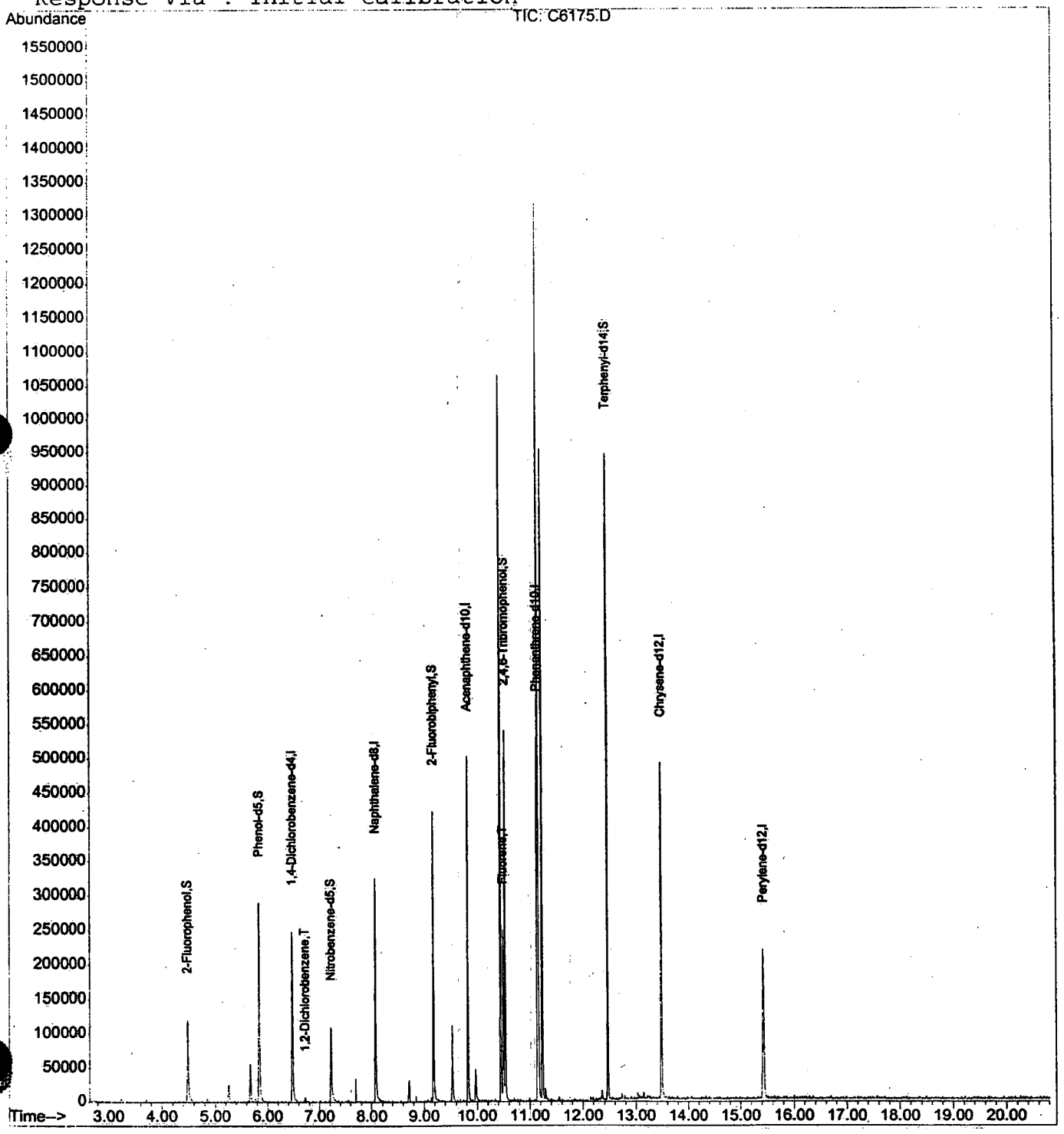
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.47	152	46160	40.00	UG	0.00
19) Naphthalene-d8	8.08	136	167906	40.00	UG	0.00
35) Acenaphthene-d10	9.83	164	95893	40.00	UG	0.00
55) Phenanthrene-d10	11.15	188	192902	40.00	UG	0.00
69) Chrysene-d12	13.48	240	209822	40.00	UG	-0.03
78) Perylene-d12	15.43	264	160458	40.00	UG	-0.05
System Monitoring Compounds						
3) 2-Fluorophenol	4.48	112	47171	56.44	UG	0.00
Spiked Amount 100.000	Range 37 - 96		Recovery = 56.44%			
4) Phenol-d5	5.83	99	120145	72.69	UG	-0.02
Spiked Amount 100.000	Range 56 - 111		Recovery = 72.69%			
20) Nitrobenzene-d5	7.22	82	51317	31.20	UG	0.00
Spiked Amount 50.000	Range 61 - 121		Recovery = 62.40%			
39) 2-Fluorobiphenyl	9.18	172	123800	44.46	UG	0.00
Spiked Amount 50.000	Range 63 - 124		Recovery = 88.92%			
59) 2,4,6-Tribromophenol	10.53	330	60650	59.85	UG	0.00
Spiked Amount 100.000	Range 52 - 153		Recovery = 59.85%			
71) Terphenyl-d14	12.47	244	277253	55.97	UG	-0.02
Spiked Amount 50.000	Range 46 - 140		Recovery = 111.94%			
Target Compounds						Qvalue
12) 1,2-Dichlorobenzene	6.71	146	3443	2.34	UG	# 85
52) Fluorene	10.49	166	10402	4.05	UG	# 1

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D Vial: 29
Acq On : 19 Oct 2000 22:34 Operator: DP
Sample : GW-1,6486-001,A,1000mL,100,10/19/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 20 9:48 2000 Quant Results File: SVWC1600.RES

Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 15:19:00 2000
Response via : Initial Calibration



4502

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
Integration Params: LSCINT.P

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

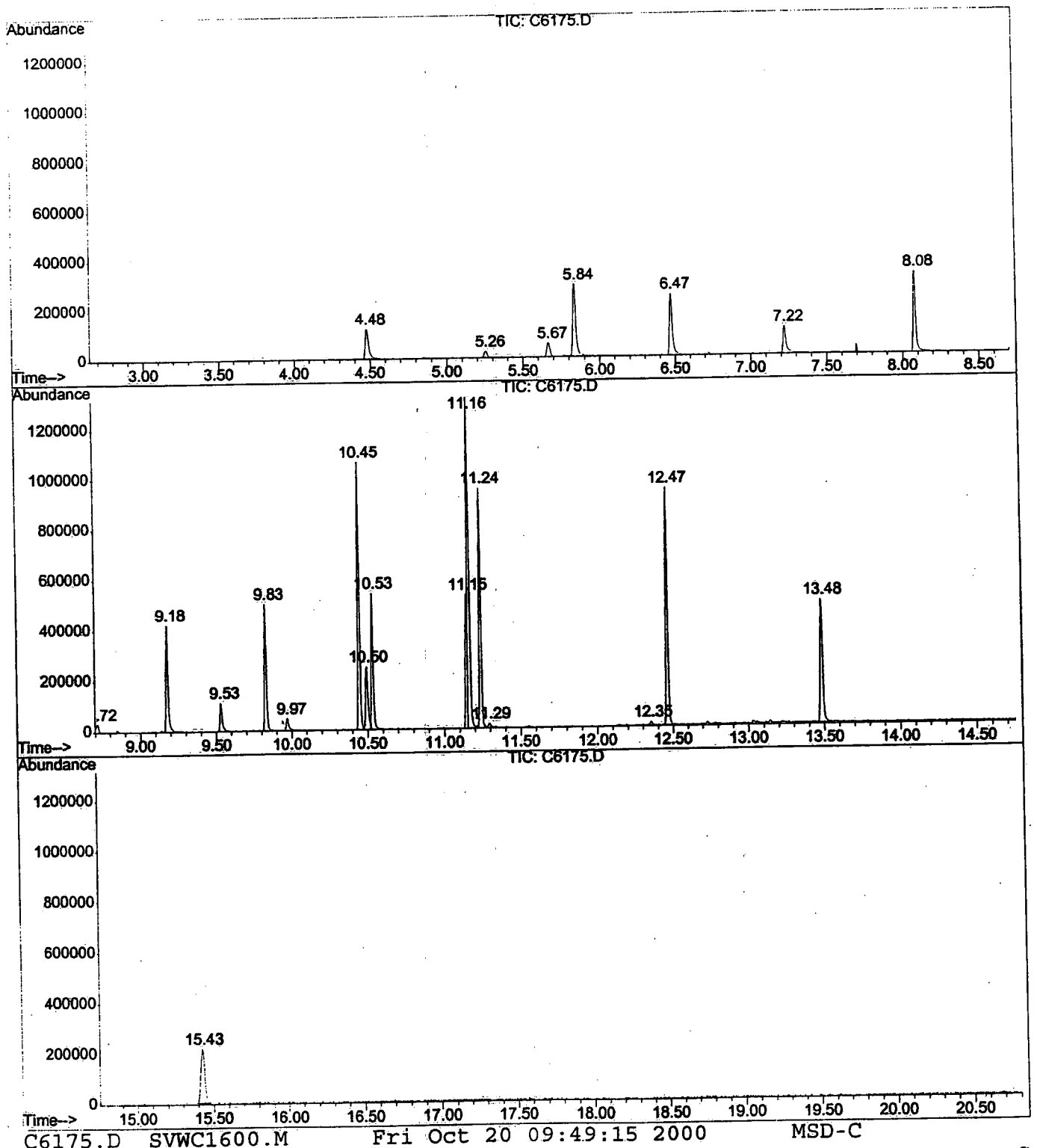
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.476	340	344	355	rBV	120325	175737	16.76%	2.150%
2	5.256	485	490	496	rBB	26266	36027	3.44%	0.441%
3	5.667	562	567	575	rBV2	56659	79870	7.62%	0.977%
4	5.838	594	599	610	rBV	290704	414782	39.56%	5.074%
5	6.474	713	718	729	rBV	248442	335181	31.97%	4.100%
6	7.221	854	858	870	rBV	110978	163012	15.55%	1.994%
7	8.081	1015	1019	1031	rBV	325243	361257	34.46%	4.419%
8	8.717	1133	1138	1142	rBB2	32683	42373	4.04%	0.518%
9	9.176	1220	1224	1234	rBV	422561	380778	36.32%	4.658%
10	9.529	1287	1290	1303	rBB	113480	120251	11.47%	1.471%
11	9.828	1342	1346	1353	rBV	503403	421022	40.16%	5.150%
12	9.972	1369	1373	1383	rBV	48337	63314	6.04%	0.774%
13	10.447	1458	1462	1466	rBV	1065409	874896	83.45%	10.702%
14	10.496	1467	1471	1475	rVV2	249170	266383	25.41%	3.259%
15	10.533	1475	1478	1490	rVB	539214	471448	44.97%	5.767%
16	11.147	1589	1593	1594	rBV	531862	460097	43.88%	5.628%
17	11.163	1594	1596	1604	rVV	1317780	1048422	100.00%	12.825%
18	11.238	1606	1610	1617	rVV	953011	738796	70.47%	9.037%
19	11.291	1617	1620	1624	rVB	16917	16751	1.60%	0.205%
20	12.354	1816	1819	1822	rBV	14837	12779	1.22%	0.156%
21	12.466	1836	1840	1846	rBV	944947	764282	72.90%	9.349%
22	13.481	2025	2030	2041	rBV	489148	551433	52.60%	6.745%
23	15.425	2388	2394	2404	rBV	216984	376019	35.87%	4.600%

Sum of corrected areas: 8174910

C6175.D SVWC1600.M Fri Oct 20 09:49:14 2000 MSD-C

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Operator : DP
Acquired : 19 Oct 2000 22:34 using AcqMethod SVWC1600
Instrument : MSD-C
Sample Name: GW-1,6486-001,A,1000mL,100,10/19/00
Misc Info : ENVTACT/ORBIS,10/12/00,10/16/00,1
Vial Number: 29
Quant File :SVWC1600.RES (RTE Integrator)



C6175.D SVWC1600.M Fri Oct 20 09:49:15 2000 MSD-C

93

4504

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

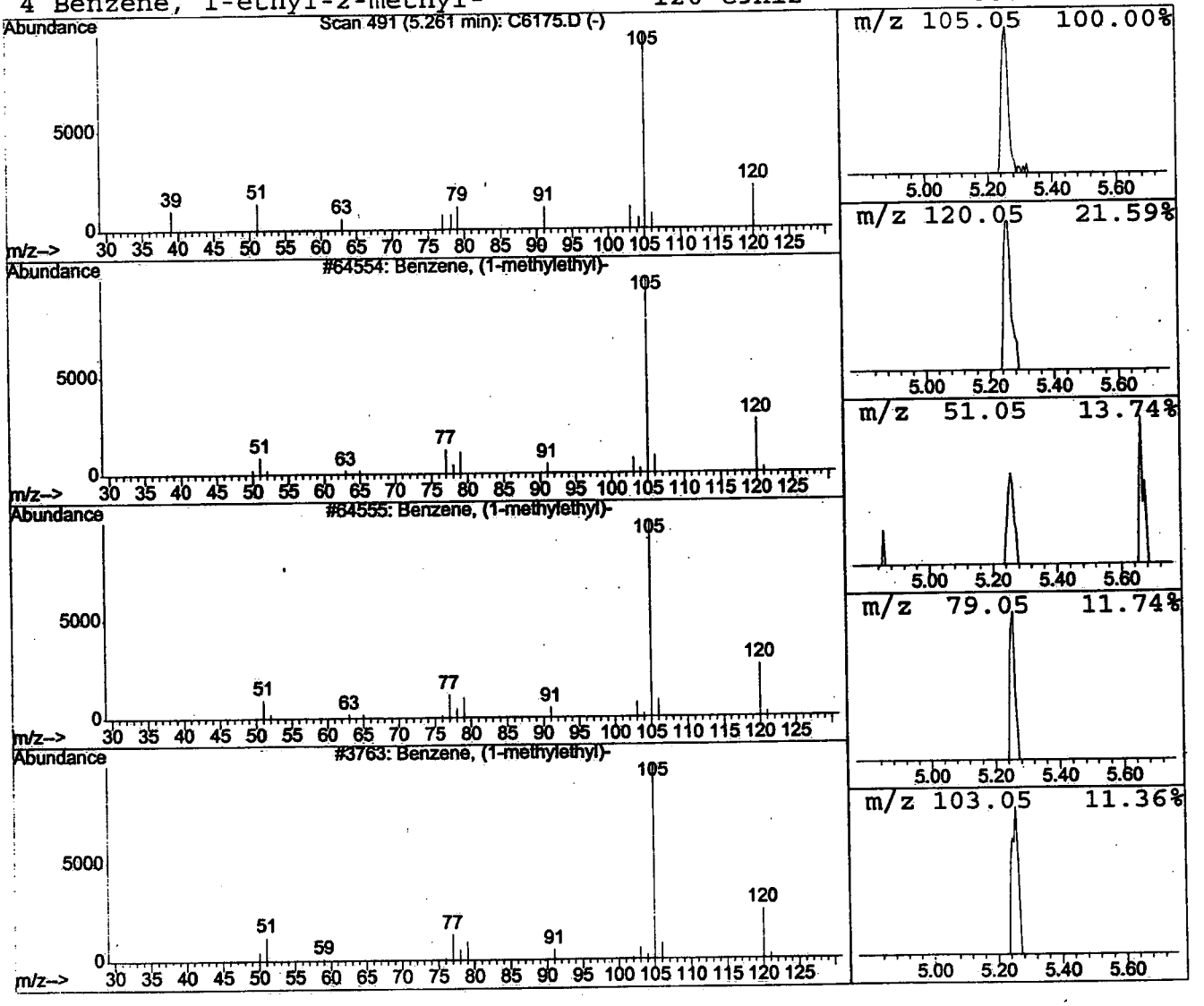
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.26	4.30 UG	36027	1,4-Dichlorobenzene-d4	6.47

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91
2	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	83
3	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	78
4	Benzene, 1-ethyl-2-methyl-	120	C9H12	000611-14-3	72



4505

94

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

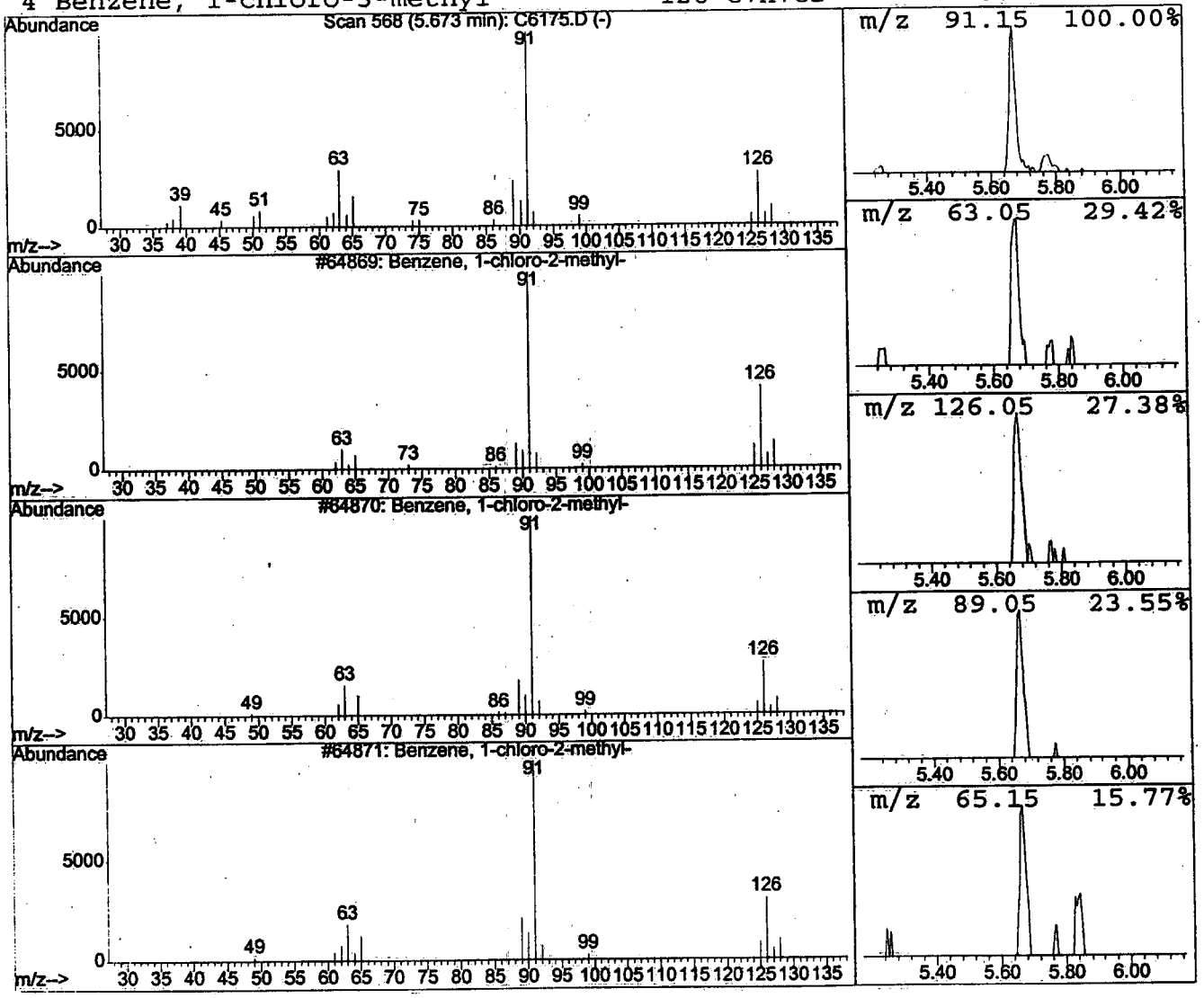
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.67	9.53 UG	79870	1,4-Dichlorobenzene-d4	6.47

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	90
2	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	87
3	Benzene, 1-chloro-2-methyl-	126	C7H7Cl	000095-49-8	72
4	Benzene, 1-chloro-3-methyl-	126	C7H7Cl	000108-41-8	72



4306

05

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

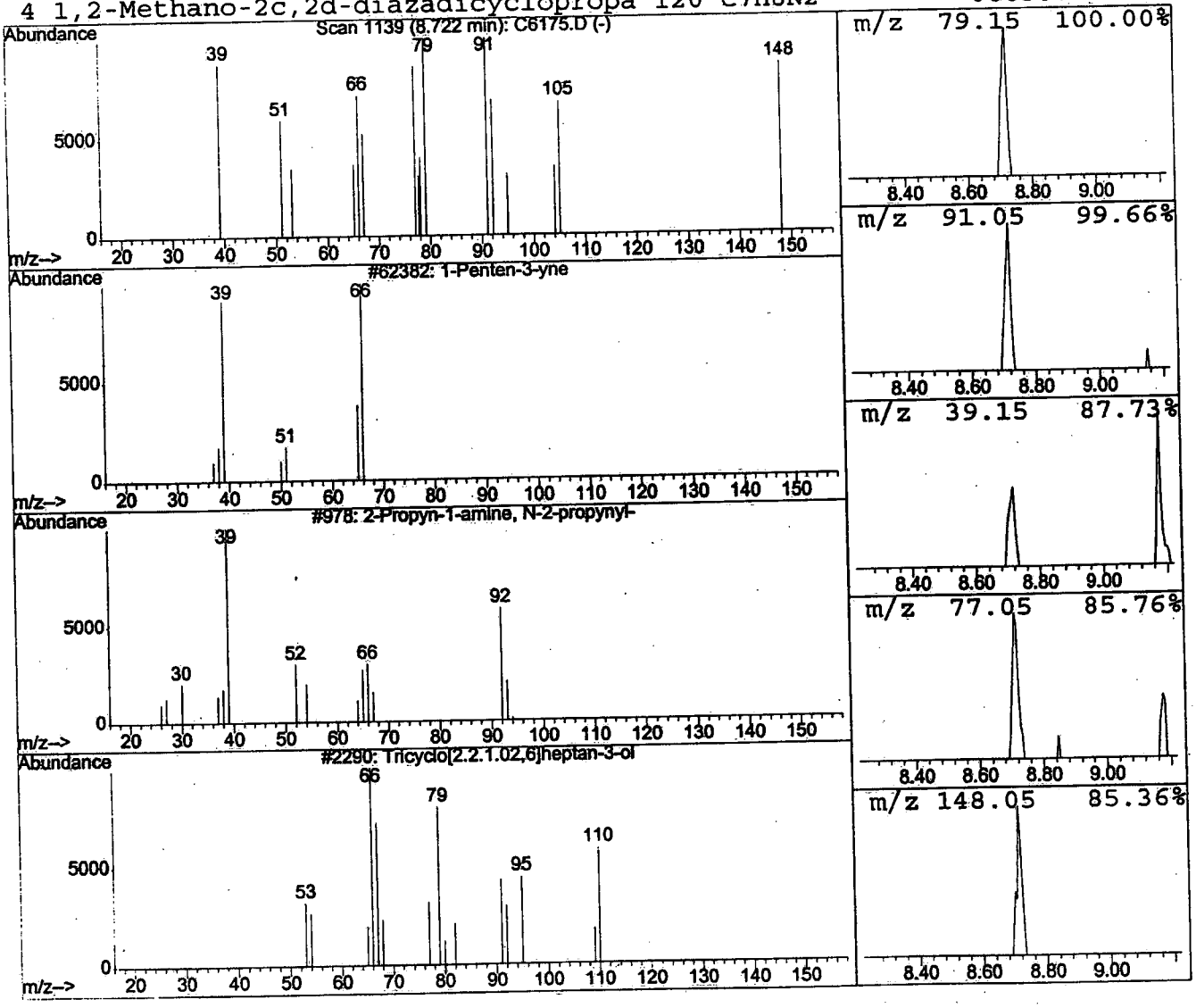
****

Peak Number 3 Unknown

Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.72	4.69 UG	42373	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Penten-3-yne	66	C5H6	000646-05-9	47
2	2-Propyn-1-amine, N-2-propynyl-	93	C6H7N	006921-28-4	43
3	Tricyclo[2.2.1.02,6]heptan-3-ol	110	C7H10O	000695-04-5	40
4	1,2-Methano-2c,2d-diazadicyclopropa	120	C7H8N2	066387-83-5	38



4507

91

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

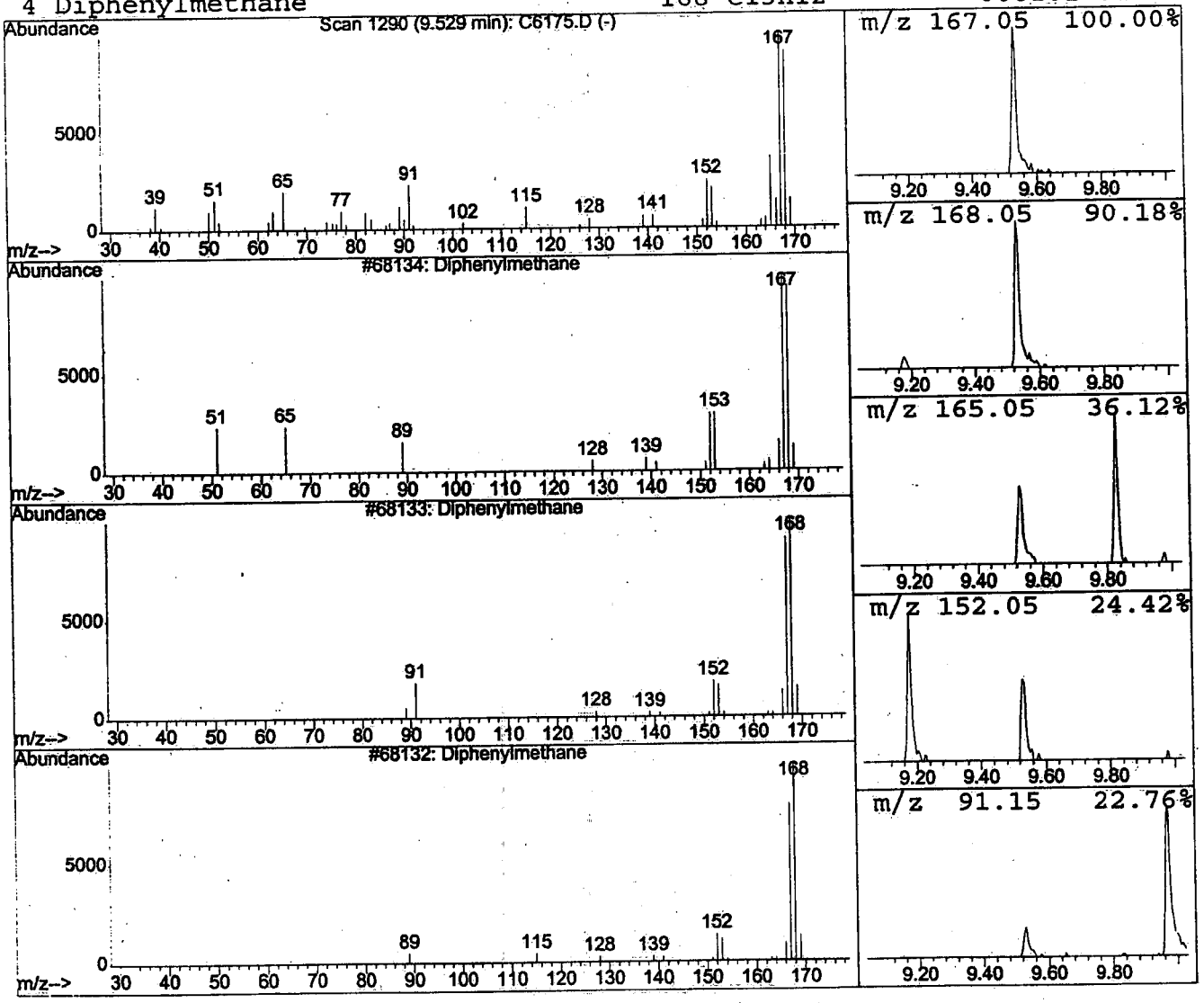
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.53	11.42 UG	120251	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Diphenylmethane	168	C13H12	000101-81-5	98
2	Diphenylmethane	168	C13H12	000101-81-5	94
3	Diphenylmethane	168	C13H12	000101-81-5	91
4	Diphenylmethane	168	C13H12	000101-81-5	91



4508

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

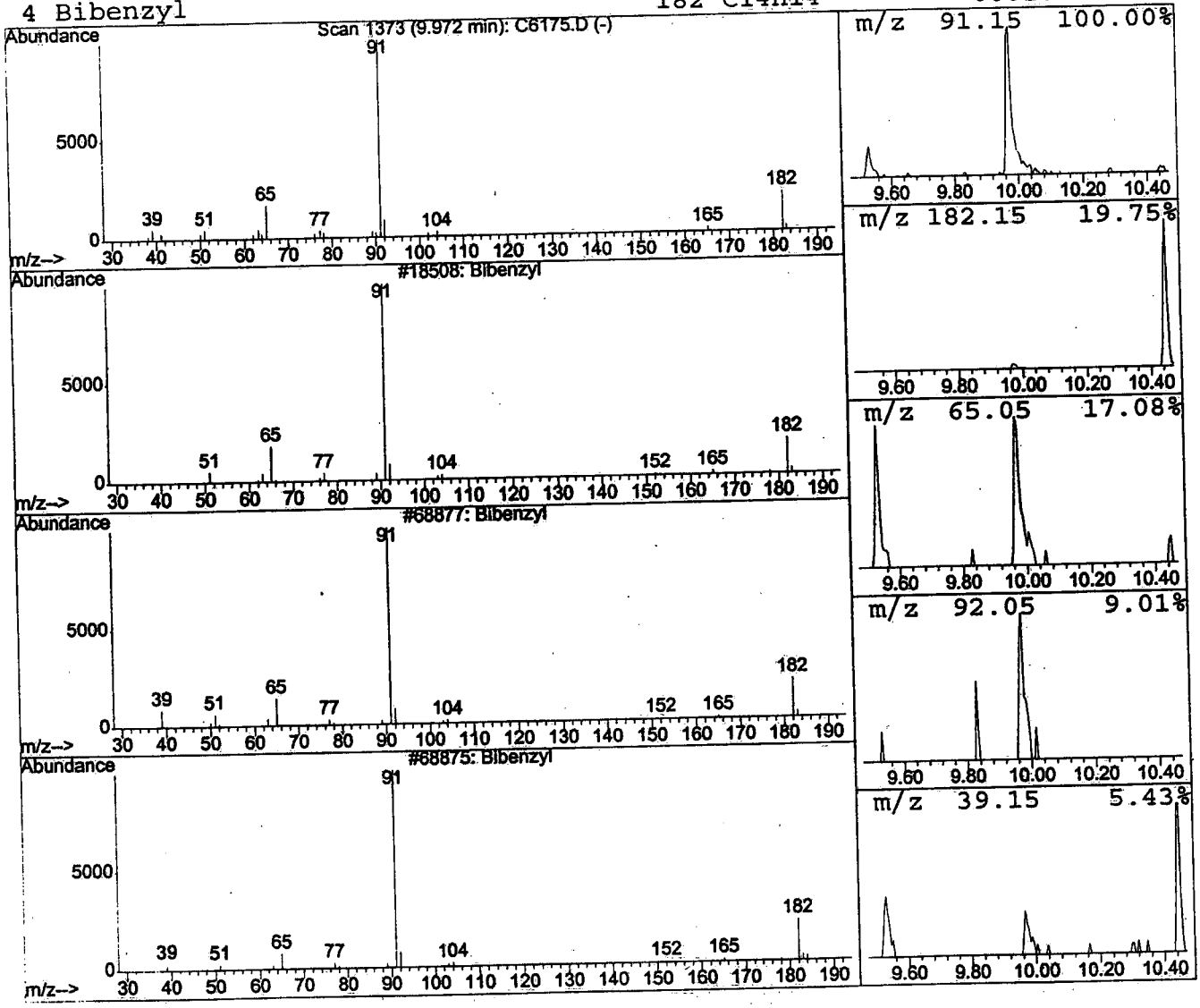
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Substituted benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.97	6.02 UG	63314	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bibenzyl	182	C14H14	000103-29-7	90
2	Bibenzyl	182	C14H14	000103-29-7	86
3	Bibenzyl	182	C14H14	000103-29-7	80
4	Bibenzyl	182	C14H14	000103-29-7	78



4509

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6175.D
Acq On : 19 Oct 2000 22:34
Sample : GW-1,6486-001,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 29
Operator: DP
Inst : MSD-C
Multiplr: 1.00

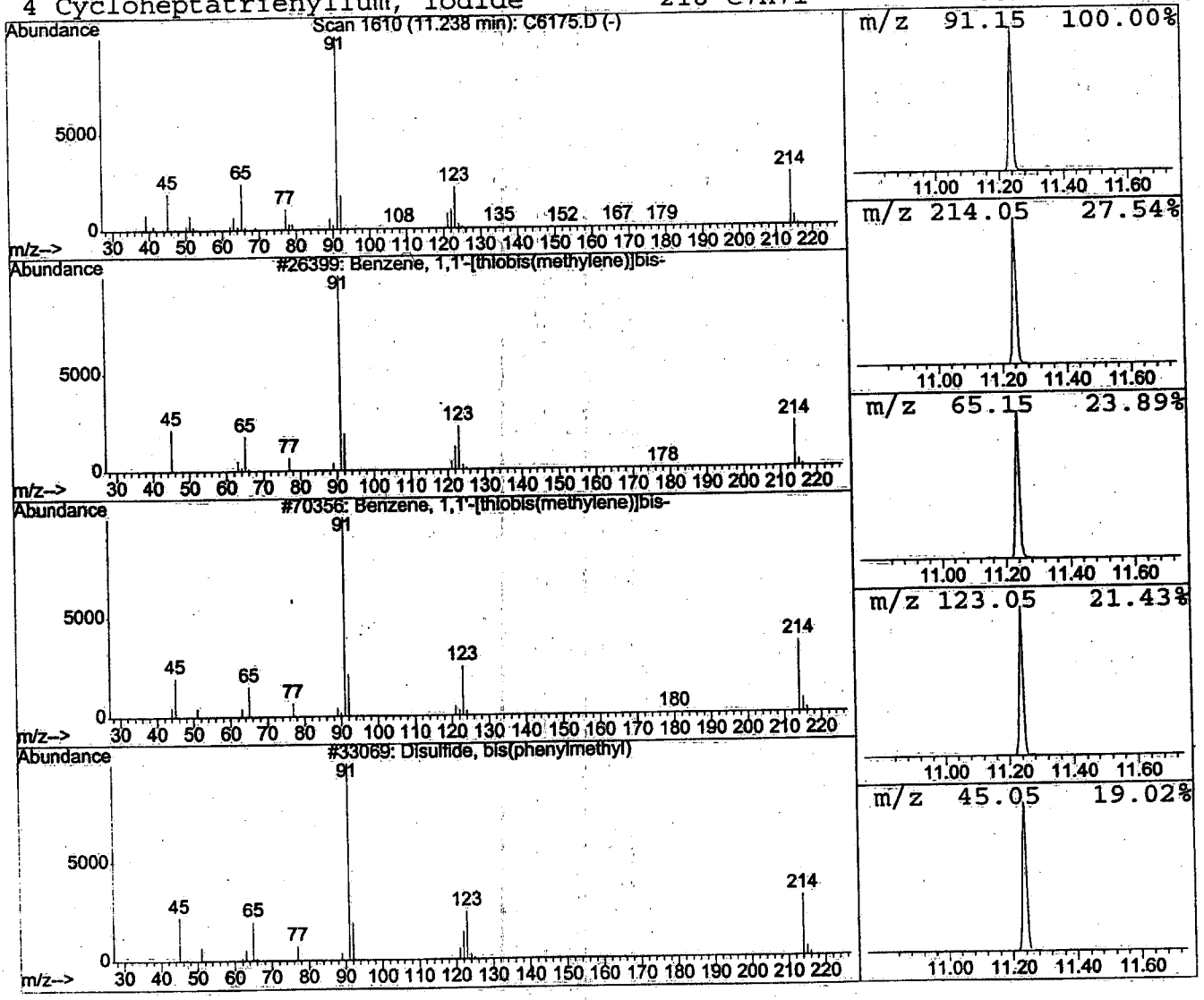
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.24	64.23 UG	738796	Phenanthrene-d10	11.15

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,1'-[thiobis(methylene)]b	214	C14H14S	000538-74-9	96
2	Benzene, 1,1'-[thiobis(methylene)]b	214	C14H14S	000538-74-9	91
3	Disulfide, bis(phenylmethyl)	246	C14H14S2	000150-60-7	90
4	Cycloheptatrienylium, iodide	218	C7H7I	001316-80-9	27



4510

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
Integration Params: RTEINT.P
Quant Time: Oct 20 9:50 2000

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: SVWC1600.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 15:19:00 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1600

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.47	152	51021	40.00	UG	-0.01
19) Naphthalene-d8	8.08	136	172586	40.00	UG	-0.01
35) Acenaphthene-d10	9.83	164	96151	40.00	UG	0.00
55) Phenanthrene-d10	11.14	188	194982	40.00	UG	-0.01
69) Chrysene-d12	13.48	240	217032	40.00	UG	-0.03
78) Perylene-d12	15.43	264	169882	40.00	UG	-0.05
System Monitoring Compounds						
3) 2-Fluorophenol	4.48	112	50485	54.65	UG	-0.01
Spiked Amount 100.000	Range 37 - 96		Recovery = 54.65%			
4) Phenol-d5	5.84	99	130575	71.48	UG	-0.02
Spiked Amount 100.000	Range 56 - 111		Recovery = 71.48%			
20) Nitrobenzene-d5	7.22	82	59011	34.91	UG	-0.01
Spiked Amount 50.000	Range 61 - 121		Recovery = 69.82%			
39) 2-Fluorobiphenyl	9.17	172	122909	44.02	UG	-0.01
Spiked Amount 50.000	Range 63 - 124		Recovery = 88.04%			
59) 2,4,6-Tribromophenol	10.53	330	68700	67.07	UG	-0.01
Spiked Amount 100.000	Range 52 - 153		Recovery = 67.07%			
71) Terphenyl-d14	12.46	244	266271	51.97	UG	-0.02
Spiked Amount 50.000	Range 46 - 140		Recovery = 103.94%			
Target Compounds						Qvalue
51) Diethylphthalate	10.16	149	10285	3.75	UG	98

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

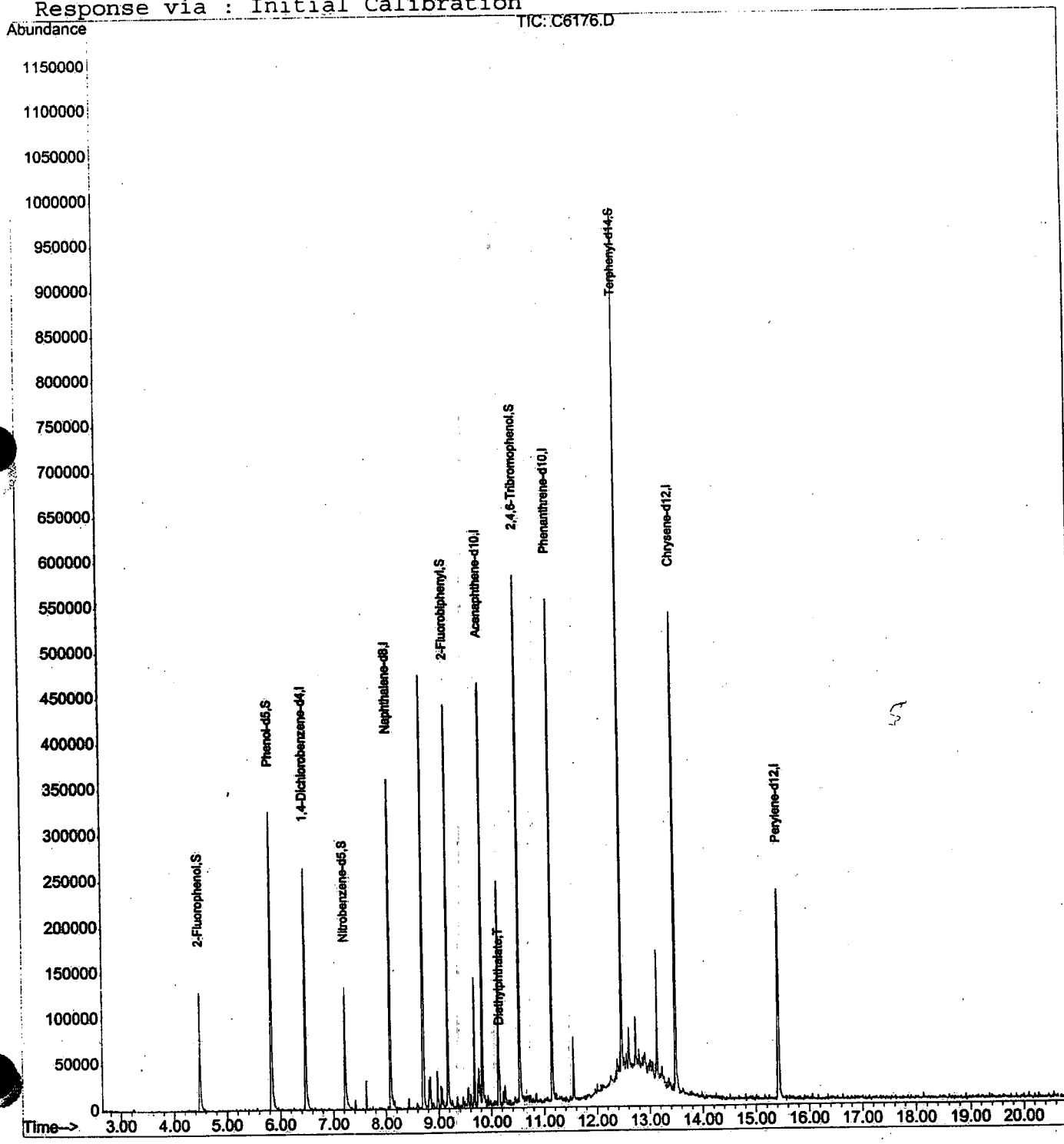
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: RTEINT.P
Quant Time: Oct 20 9:50 2000

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Quant Results File: SVWC1600.RES

Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 15:19:00 2000
Response via : Initial Calibration



101

4512

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
} Integration Params: LSCINT.P

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	4.479	339	344	354	rBV	130218	198886	25.10%	2.803%
2	5.836	593	598	609	rBV	325244	447295	56.45%	6.305%
3	6.471	713	717	731	rBV	264551	349018	44.05%	4.919%
4	7.219	853	857	877	rBV	132824	178100	22.48%	2.510%
5	7.411	888	893	896	rBB2	10943	10338	1.30%	0.146%
6	7.620	931	932	934	rBV2	31500	10980	1.39%	0.155%
7	8.079	1014	1018	1024	rBV	359897	367622	46.40%	5.182%
8	8.437	1082	1085	1087	rBV2	11745	10015	1.26%	0.141%
9	8.714	1131	1137	1141	rBV2	473879	559025	70.56%	7.879%
10	8.811	1152	1155	1157	rBV	30275	26808	3.38%	0.378%
11	8.837	1157	1160	1164	rVB2	35242	41433	5.23%	0.584%
12	8.891	1167	1170	1175	rVB2	7153	10682	1.35%	0.151%
13	8.976	1181	1186	1189	rBV	40916	41784	5.27%	0.589%
14	9.040	1194	1198	1201	rBV2	24334	22805	2.88%	0.321%
15	9.062	1201	1202	1205	rVV2	18164	10681	1.35%	0.151%
16	9.174	1220	1223	1231	rBV	436862	384149	48.48%	5.415%
17	9.345	1252	1255	1259	rVB	12656	9561	1.21%	0.135%
18	9.457	1272	1276	1280	rVB3	12250	13019	1.64%	0.184%
19	9.558	1289	1295	1300	rVB4	21050	29969	3.78%	0.422%
20	9.606	1300	1304	1309	rVB2	13897	17033	2.15%	0.240%
21	9.676	1314	1317	1323	rVB	143003	124035	15.65%	1.748%
22	9.740	1323	1329	1331	rBV2	31911	31262	3.95%	0.441%
23	9.761	1331	1333	1336	rVV3	34460	29076	3.67%	0.410%
24	9.788	1336	1338	1342	rVB4	19477	15318	1.93%	0.216%
25	9.831	1342	1346	1350	rBV	458600	426098	53.78%	6.006%
26	9.932	1360	1365	1368	rBV5	12108	12371	1.56%	0.174%
27	10.135	1399	1403	1405	rBV2	245877	229532	28.97%	3.235%
28	10.157	1405	1407	1411	rVV	38285	29730	3.75%	0.419%
29	10.226	1413	1420	1422	rBV2	16706	17158	2.17%	0.242%
30	10.258	1422	1426	1433	rVB	20493	25508	3.22%	0.360%
31	10.445	1455	1461	1466	rBV4	8701	14454	1.82%	0.204%

4513

32	10.530	1474	1477	1486	rBV	577043	539520	68.09%	7.605%
33	10.846	1531	1536	1541	rVB7	10391	11693	1.48%	0.165%
34	11.145	1588	1592	1600	rBV	549004	495032	62.48%	6.977%
35	11.551	1662	1668	1673	rBV	69794	64584	8.15%	0.910%
	12.256	1797	1800	1804	rBV6	8664	11422	1.44%	0.161%
	12.352	1815	1818	1820	rBV4	12743	10365	1.31%	0.146%
38	12.378	1820	1823	1828	rVV5	24316	39033	4.93%	0.550%
39	12.432	1830	1833	1835	rVV3	27818	28333	3.58%	0.399%
40	12.464	1835	1839	1845	rVV	953680	792319	100.00%	11.168%
41	12.507	1845	1847	1852	rVV6	16686	23893	3.02%	0.337%
42	12.555	1854	1856	1860	rVV4	17119	20180	2.55%	0.284%
43	12.603	1862	1865	1871	rBV6	45593	60381	7.62%	0.851%
44	12.731	1885	1889	1893	rVB2	53370	54537	6.88%	0.769%
45	12.795	1899	1901	1906	rVB6	21283	22291	2.81%	0.314%
46	13.009	1939	1941	1946	rVV6	13596	15405	1.94%	0.217%
47	13.051	1947	1949	1955	rVB6	18783	25329	3.20%	0.357%
48	13.105	1958	1959	1962	rBV2	18089	17258	2.18%	0.243%
49	13.137	1962	1965	1973	rVB	142894	129529	16.35%	1.826%
50	13.228	1981	1982	1986	rVB3	14776	13497	1.70%	0.190%
51	13.484	2024	2030	2035	rBV	523835	591354	74.64%	8.335%
52	15.428	2385	2394	2407	rBV2	231283	434991	54.90%	6.131%

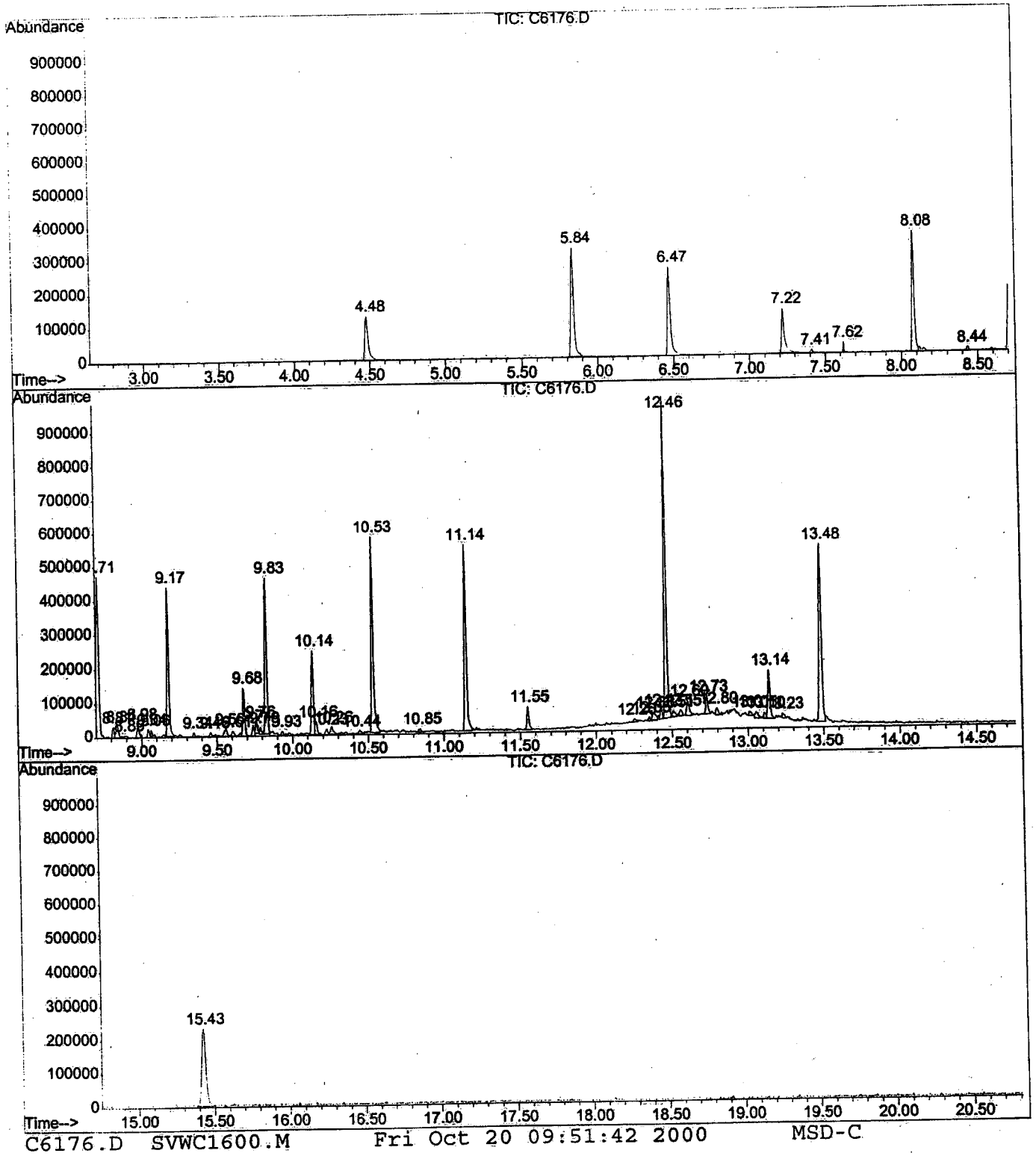
Sum of corrected areas: 7094691

C6176.D SVWC1600.M Fri Oct 20 09:51:41 2000 MSD-C

4514

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Operator : DP
Acquired : 19 Oct 2000 23:00 using AcqMethod SVWC1600
Instrument : MSD-C
Sample Name: GW-2,6486-002,A,1000mL,100,10/19/00
Misc Info : ENVTACT/ORBIS,10/12/00,10/16/00,1
Vial Number: 30
Quant File :SVWC1600.RES (RTE Integrator)



C6176.D SVWC1600.M Fri Oct 20 09:51:42 2000 MSD-C

4315

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

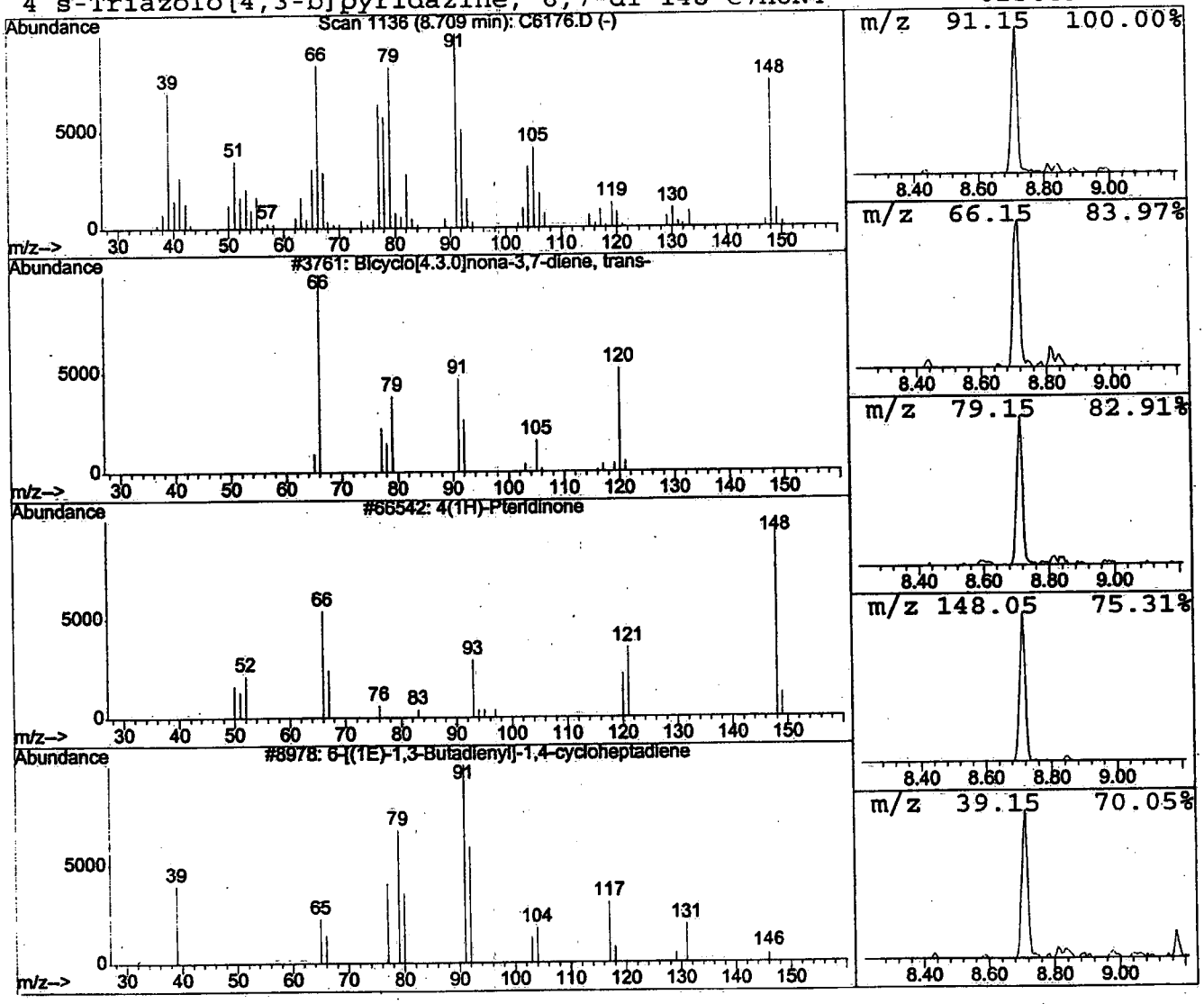
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.71	60.83 UG	559025	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.3.0]nona-3,7-diene, trans	120	C9H12	000000-00-0	52
2	4(1H)-Pteridinone	148	C6H4N4O	000700-47-0	38
3	6-[(1E)-1,3-Butadienyl]-1,4-cyclohe	146	C11H14	084984-82-7	38
4	s-Triazolo[4,3-b]pyridazine, 6,7-di	148	C7H8N4	023069-78-5	38



4516

105

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

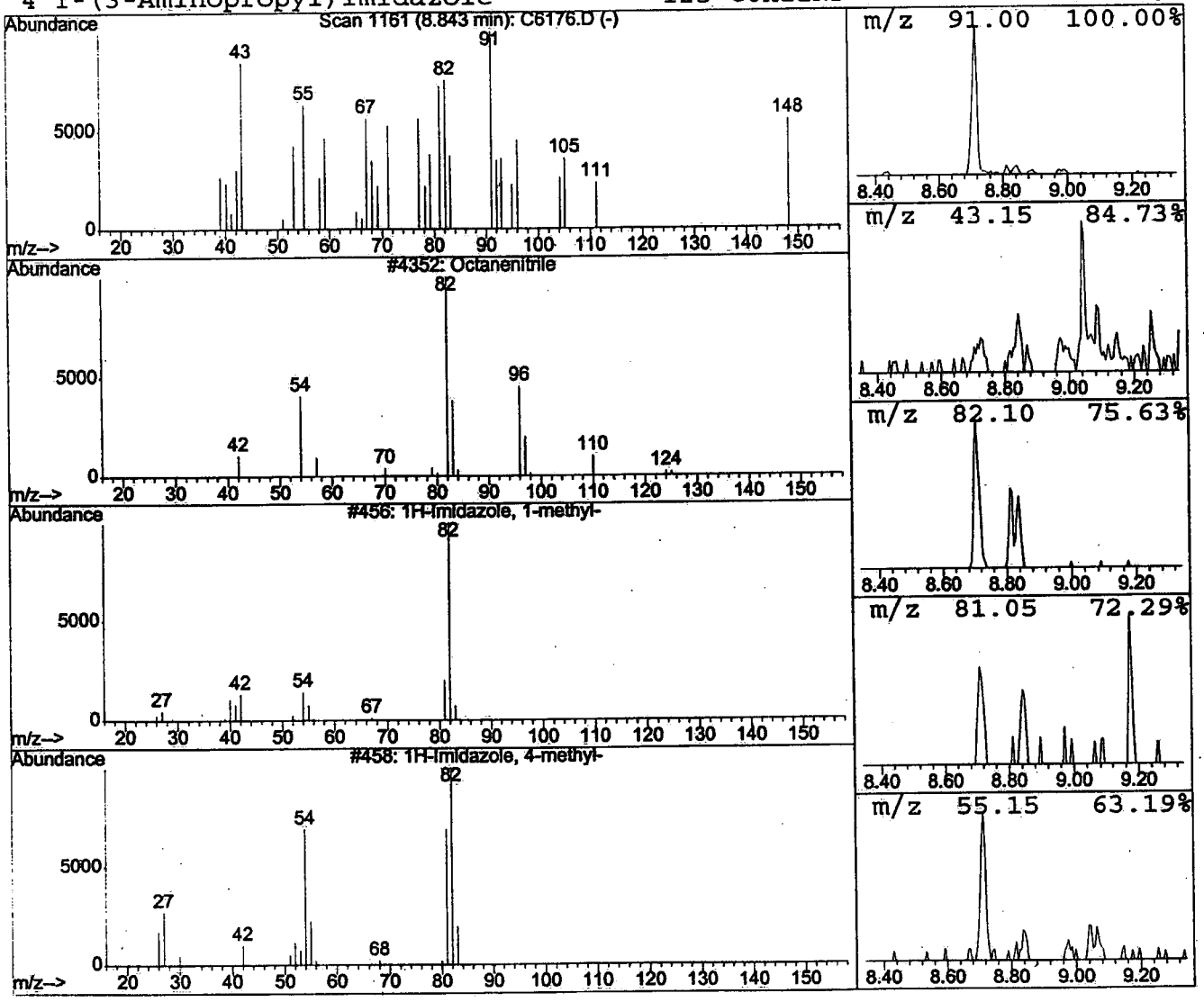
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.84	4.51 UG	41433	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octanenitrile	125	C8H15N	000124-12-9	12
2	1H-Imidazole, 1-methyl-	82	C4H6N2	000616-47-7	10
3	1H-Imidazole, 4-methyl-	82	C4H6N2	000822-36-6	9
4	1-(3-Aminopropyl)imidazole	125	C6H11N3	005036-48-6	9



4517

106

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

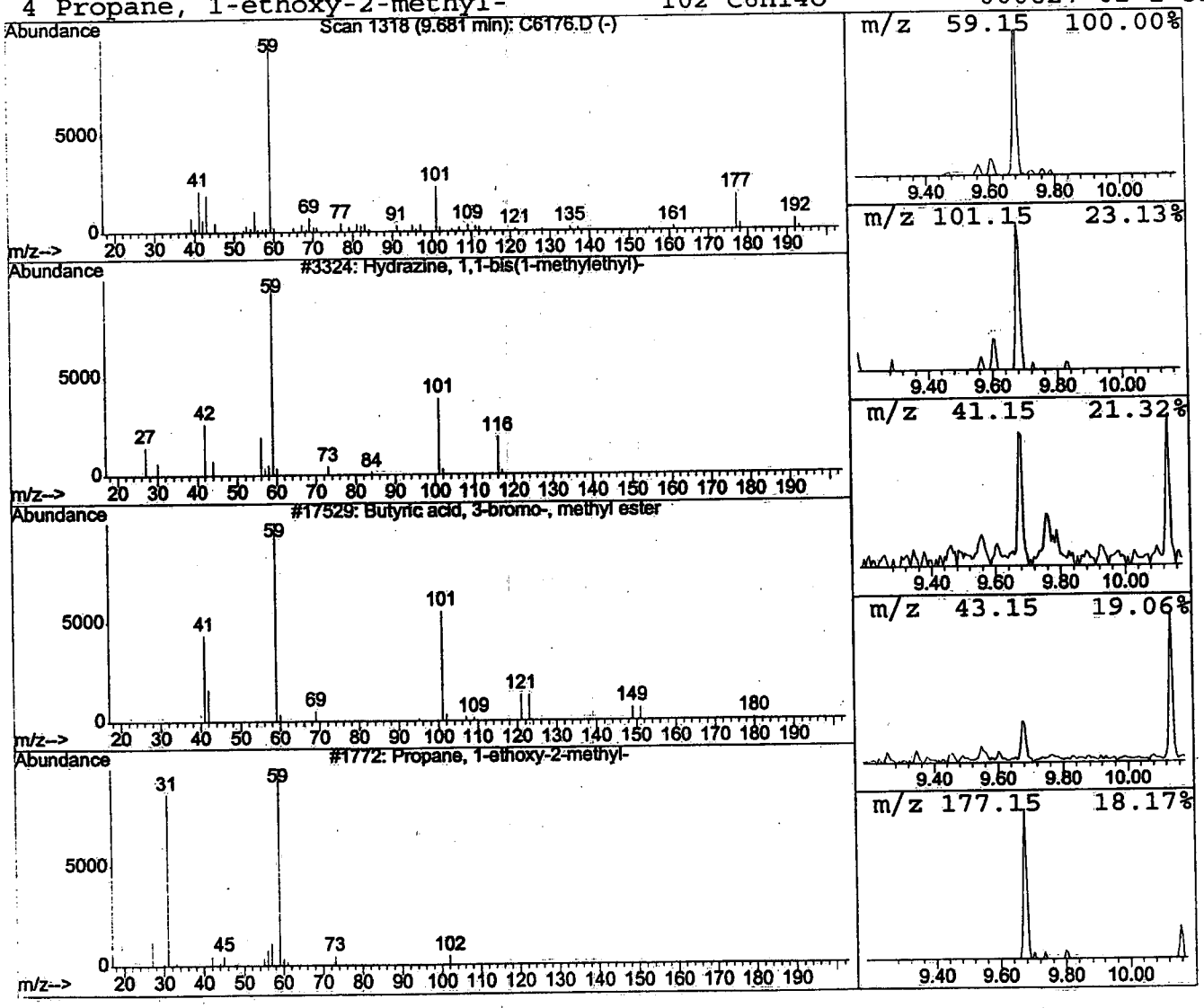
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Unknown Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.68	11.64 UG	124035	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hydrazine, 1,1-bis(1-methylethyl)-	116	C6H16N2	000921-14-2	40
2	Butyric acid, 3-bromo-, methyl este	180	C5H9BrO2	021249-59-2	40
3	Propane, 1-ethoxy-2-methyl-	102	C6H14O	000627-02-1	38
4	Propane, 1-ethoxy-2-methyl-	102	C6H14O	000627-02-1	32



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

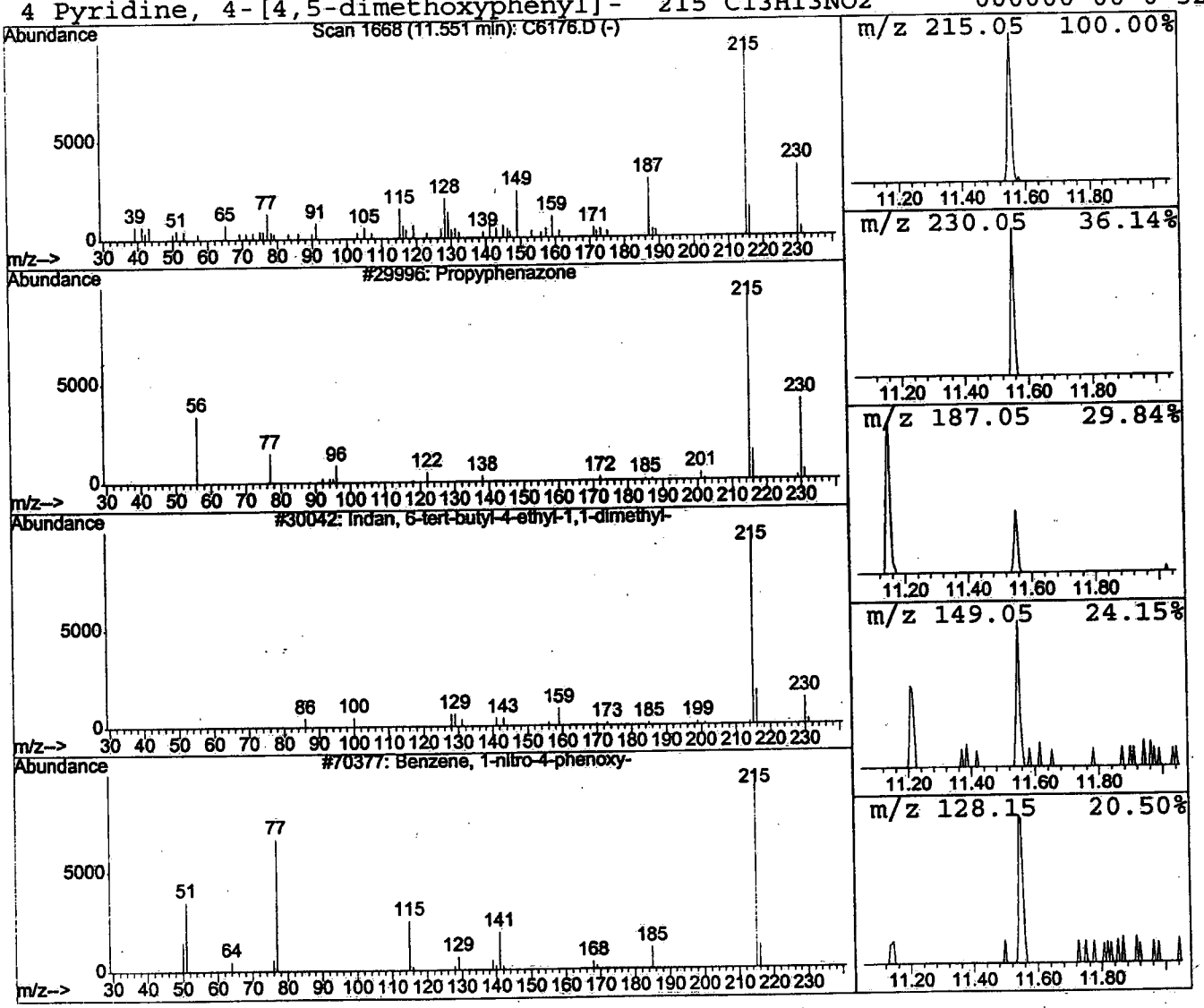
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.55	5.22 UG	64584	Phenanthrene-d10	11.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Propyphenazone	230	C14H18N2O	000479-92-5	43
2	Indan, 6-tert-butyl-4-ethyl-1,1-dim	230	C17H26	003247-65-2	38
3	Benzene, 1-nitro-4-phenoxy-	215	C12H9NO3	000620-88-2	38
4	Pyridine, 4-[4,5-dimethoxyphenyl]-	215	C13H13NO2	000000-00-0	32



4317

108

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

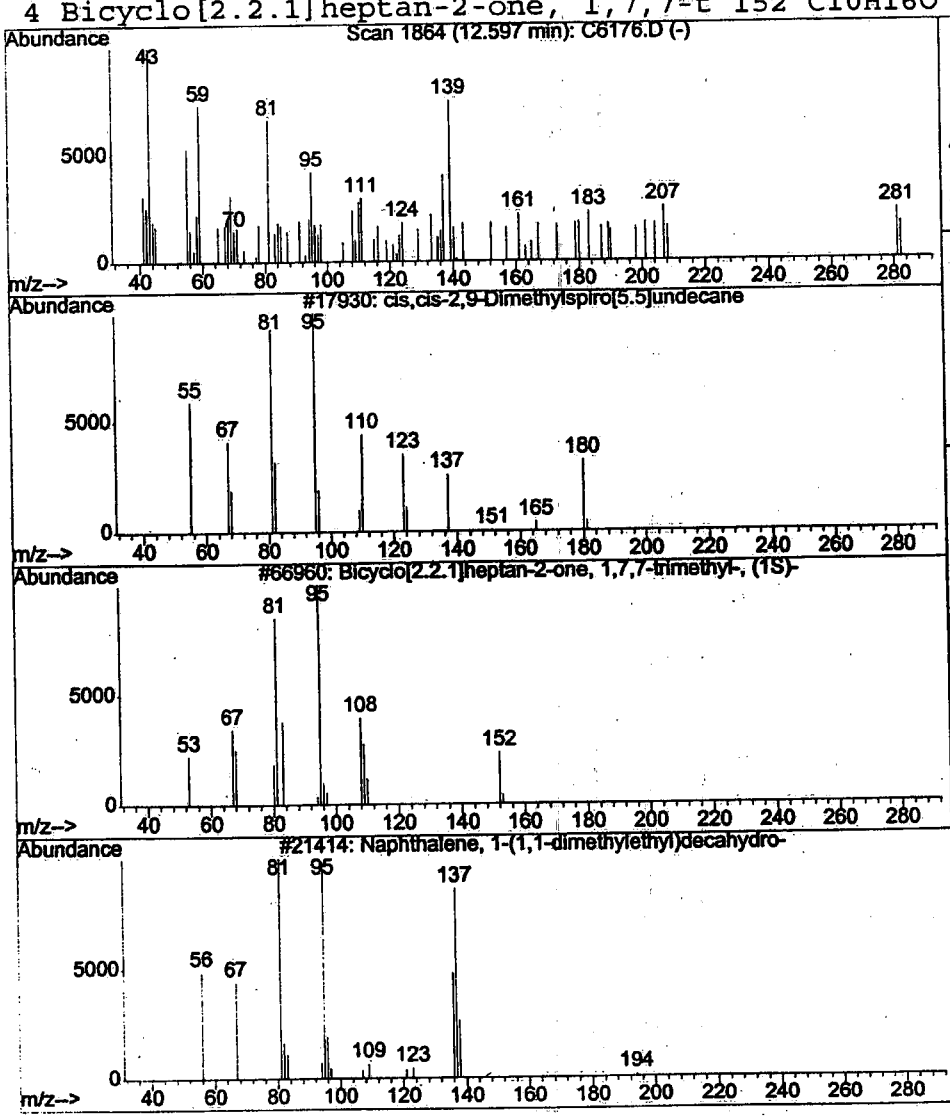
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

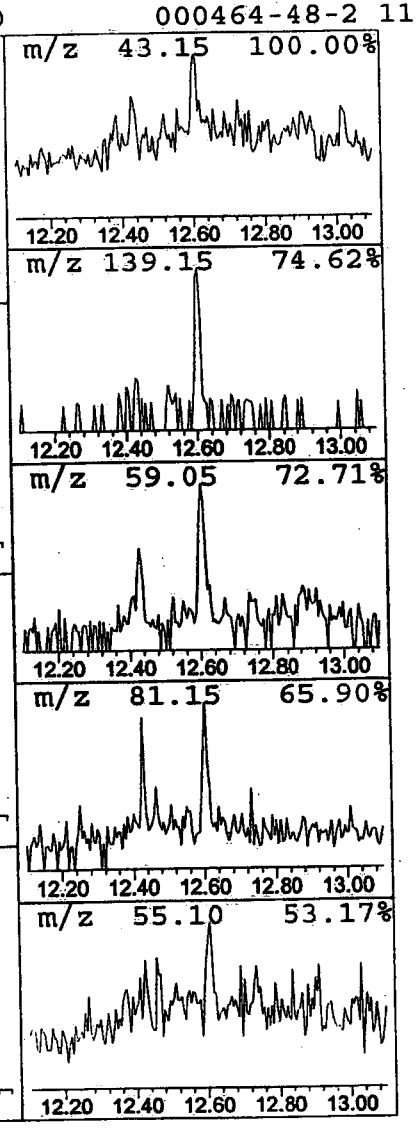
****

Peak Number 5 Unknown Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.60	4.08 UG	60381	Chrysene-d12	13.48

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	cis,cis-2,9-Dimethylspiro[5.5]undec	180	C13H24	000000-00-0	35
2	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	30
3	Naphthalene, 1-(1,1-dimethylethyl)d	194	C14H26	056292-64-9	16
4	Bicyclo[2.2.1]heptan-2-one, 1,7,7-t	152	C10H16O	000464-48-2	11





4520

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6176.D
Acq On : 19 Oct 2000 23:00
Sample : GW-2,6486-002,A,1000mL,100,10/19/00
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,1
MS Integration Params: LSCINT.P

Vial: 30
Operator: DP
Inst : MSD-C
Multiplr: 1.00

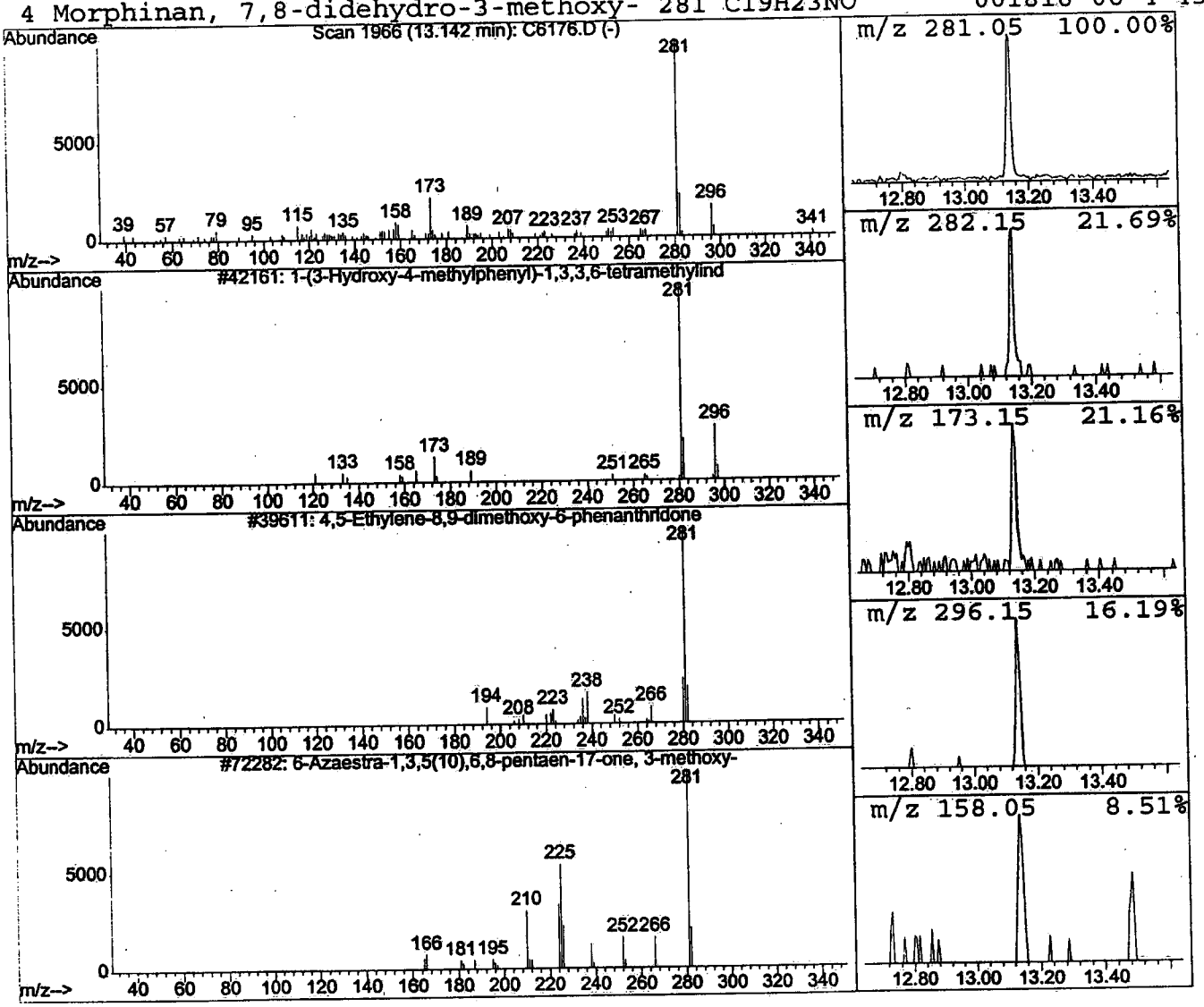
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Unknown — Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.14	8.76 UG	129529	Chrysene-d12	13.48

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-(3-Hydroxy-4-methylphenyl)-1,3,3,	296	C20H24O2	000000-00-0	91
2	4,5-Ethylene-8,9-dimethoxy-6-phenan	281	C17H15NO3	000000-00-0	49
3	6-Azaestra-1,3,5(10),6,8-pentaen-17	281	C18H19NO2	005144-20-7	47
4	Morphinan, 7,8-didehydro-3-methoxy-	281	C19H23NO	001816-06-4	43



4521

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-19-00\C6179.D Vial: 19
Acq On : 20 Oct 2000 6:39 Operator: DP
Sample : .,Method-Blank,A,1000mL,100,10/19/00 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
IS Integration Params: RTEINT.P
Quant Time: Oct 20 9:10 2000 Quant Results File: SVWC1600.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 15:19:00 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1600

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.46	152	54708	40.00	UG	-0.02
19) Naphthalene-d8	8.07	136	188143	40.00	UG	-0.01
35) Acenaphthene-d10	9.83	164	99188	40.00	UG	0.00
55) Phenanthrene-d10	11.15	188	194540	40.00	UG	0.00
69) Chrysene-d12	13.53	240	206432	40.00	UG	0.01
78) Perylene-d12	15.49	264	154571	40.00	UG	0.02
System Monitoring Compounds						
3) 2-Fluorophenol	4.46	112	73978	74.69	UG	-0.03
Spiked Amount 100.000	Range 37 - 96		Recovery = 74.69%			
4) Phenol-d5	5.82	99	186244	95.08	UG	-0.03
Spiked Amount 100.000	Range 56 - 111		Recovery = 95.08%			
20) Nitrobenzene-d5	7.21	82	75836	41.15	UG	-0.02
Spiked Amount 50.000	Range 61 - 121		Recovery = 82.30%			
49) 2-Fluorobiphenyl	9.18	172	150894	52.39	UG	0.00
Spiked Amount 50.000	Range 63 - 124		Recovery = 104.78%			
59) 2,4,6-Tribromophenol	10.53	330	72351	70.79	UG	0.00
Spiked Amount 100.000	Range 52 - 153		Recovery = 70.79%			
71) Terphenyl-d14	12.49	244	271453	55.70	UG	0.00
Spiked Amount 50.000	Range 46 - 140		Recovery = 111.40%			

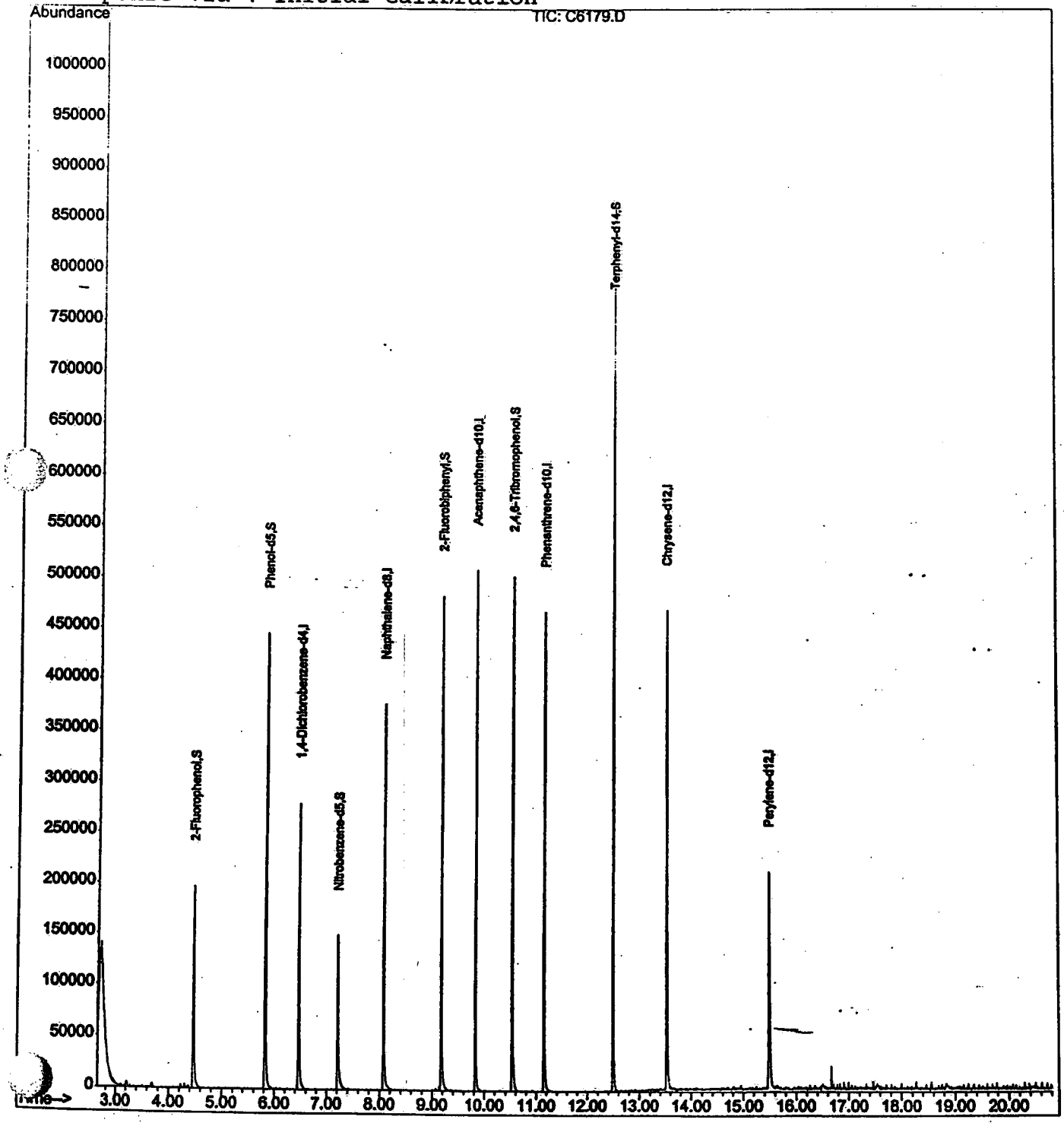
Target Compounds **Qvalue**

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6179.D Vial: 19
Acq On : 20 Oct 2000 6:39 Operator: DP
Sample : .,Method-Blank,A,1000mL,100,10/19/00 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 20 9:10 2000 Quant Results File: SVWC1600.RES

Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 03 15:19:00 2000
Response via : Initial Calibration



4823

112

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-19-00\C6179.D Vial: 19
Acq On : 20 Oct 2000 6:39 Operator: DP
Sample : .,Method-Blank,A,1000mL,100,10/19/00 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\SVWC1600.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

****
C6179.D SVWC1600.M Fri Oct 20 09:10:59 2000 MSD-C

4524

PCB METHOD BLANK SUMMARY

Lab File ID: R1151.D

Instrument ID: GC-R

Date Extracted: 10/17/2000

Matrix: AQUEOUS

Date Analyzed: 10/17/2000

Time Analyzed: 14:40

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
SFB1011	6403-001	10/17/2000	15:07
GW-1	6486-001	10/17/2000	15:33
GW-2	6486-002	10/17/2000	15:59
SFB1013	6496-001	10/17/2000	16:26
WFB1013	6497-001	10/17/2000	16:52
RJ-10A	6497-003	10/17/2000	17:18
FB-SOIL	6478-007	10/17/2000	17:44
PCB	6403-001-MS1	10/17/2000	18:37
PCB	6403-001-MSD1	10/17/2000	19:03
PCB	PBW1017-MS1	10/17/2000	19:29
WJCGG1DIS1	6493-001	10/18/2000	07:34

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 1017-BK1
Client ID: (6403.6497)
Date Received: NA
Date Extracted: 10/17/2000
Date Analyzed: 10/17/2000
Data file: R1151.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.02
Aroclor-1221	ND		0.02
Aroclor-1232	ND		0.02
Aroclor-1242	ND		0.02
Aroclor-1248	ND		0.02
Aroclor-1254	ND		0.02
Aroclor-1260	ND		0.02

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000 **Instrument ID:** GC-R
GC Column (1st): DB-5

Data File: R1003.D R1004.D R1005.D R1006.D R1007.D

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	50	100	500	1000	2000	RT	FROM	TO
Aroclor-1016	4.73	4.73	4.73	4.73	4.73	4.73	4.66	4.80
Aroclor-1016 {2}	5.65	5.66	5.66	5.66	5.65	5.66	5.59	5.73
Aroclor-1016 {3}	6.10	6.10	6.10	6.10	6.10	6.10	6.03	6.17
Aroclor-1016 {4}	7.85	7.85	7.85	7.85	7.85	7.85	7.78	7.92
Aroclor-1016 {5}	8.30	8.30	8.30	8.30	8.30	8.30	8.23	8.37
Aroclor-1221			3.03				2.96	3.10
Aroclor-1221 {2}			4.40				4.33	4.47
Aroclor-1221 {3}			4.61				4.54	4.68
Aroclor-1221 {4}			4.73				4.66	4.80
Aroclor-1221 {5}			5.70				5.63	5.77
Aroclor-1232			4.73				4.66	4.80
Aroclor-1232 {2}			6.10				6.03	6.17
Aroclor-1232 {3}			7.04				6.97	7.11
Aroclor-1232 {4}			7.85				7.78	7.92
Aroclor-1232 {5}			8.64				8.57	8.71
Aroclor-1242			6.10				6.03	6.17
Aroclor-1242 {2}			7.85				7.78	7.92
Aroclor-1242 {3}			8.39				8.32	8.46
Aroclor-1242 {4}			9.54				9.47	9.61
Aroclor-1242 {5}			10.03				9.96	10.10
Aroclor-1248			6.79				6.72	6.86
Aroclor-1248 {2}			7.85				7.78	7.92
Aroclor-1248 {3}			8.39				8.32	8.46
Aroclor-1248 {4}			9.55				9.48	9.62
Aroclor-1248 {5}			10.04				9.97	10.11
Aroclor-1254			10.27				10.20	10.34
Aroclor-1254 {2}			11.07				11.00	11.14
Aroclor-1254 {3}			12.19				12.12	12.26
Aroclor-1254 {4}			12.99				12.92	13.06
Aroclor-1254 {5}			13.77				13.70	13.84
Aroclor-1260	13.76	13.77	13.76	13.76	13.76	13.76	13.69	13.83
Aroclor-1260 {2}	14.32	14.32	14.32	14.32	14.32	14.32	14.25	14.39
Aroclor-1260 {3}	15.93	15.93	15.93	15.93	15.93	15.93	15.86	16.00
Aroclor-1260 {4}	16.83	16.84	16.84	16.84	16.84	16.84	16.77	16.91
Aroclor-1260 {5}	18.86	18.86	18.86	18.86	18.86	18.86	18.79	18.93

4527

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000 **Instrument ID:** GC-R

GC Column (1st): DB-5

Data File: R1003.D R1004.D R1005.D R1006.D R1007.D

Compound	CALIBRATION FACTORS 50	100	500	1000	2000	MEAN	%RSD
Aroclor-1016	170143	168264	148645	143138	136067	153251	9.95
Aroclor-1016 {2}	227180	214113	178323	170490	159971	190015	15.30
Aroclor-1016 {3}	23[illegible]43	227994	199023	194165	184586	208862	11.10
Aroclor-1016 {4}	159573	153786	134839	130220	123144	140312	11.15
Aroclor-1016 {5}	209543	201573	174442	168947	160469	182995	11.68
Aroclor-1221			55581				
Aroclor-1221 {2}			80372				
Aroclor-1221 {3}			56127				
Aroclor-1221 {4}			196356				
Aroclor-1221 {5}			36180				
Aroclor-1232			129795				
Aroclor-1232 {2}			76279				
Aroclor-1232 {3}			98915				
Aroclor-1232 {4}			53211				
Aroclor-1232 {5}			92633				
Aroclor-1242			134988				
Aroclor-1242 {2}			90337				
Aroclor-1242 {3}			106361				
Aroclor-1242 {4}			178970				
Aroclor-1242 {5}			162075				
Aroclor-1248			374657				
Aroclor-1248 {2}			141433				
Aroclor-1248 {3}			124474				
Aroclor-1248 {4}			327501				
Aroclor-1248 {5}			291291				
Aroclor-1254			329041				
Aroclor-1254 {2}			261671				
Aroclor-1254 {3}			522682				
Aroclor-1254 {4}			309538				
Aroclor-1254 {5}			441143				
Aroclor-1260	680470	641171	556961	551437	537825	593573	10.67
Aroclor-1260 {2}	357291	339296	288345	280962	269273	307033	12.64
Aroclor-1260 {3}	850032	790814	693451	691647	675727	740334	10.31
Aroclor-1260 {4}	477866	454644	399970	397714	387243	423487	9.49
Aroclor-1260 {5}	224625	214468	187876	183456	175762	197237	10.71
					Average %RSD		11.30

4528

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC-R

GC Column (2nd): DB-1701P

Data File: R1003.C R1004.C R1005.C R1006.C R1007.C

Compound	RT OF STANDARDS 50	100	500	1000	2000	MEAN RT	RT WINDOW FROM	TO
Aroclor-1016	4.98	4.97	4.97	4.97	4.97	4.97	4.90	5.04
Aroclor-1016 {2}	5.90	5.90	5.90	5.90	5.90	5.90	5.83	5.97
Aroclor-1016 {3}	7.13	7.13	7.13	7.12	7.12	7.13	7.06	7.20
Aroclor-1016 {4}	7.47	7.47	7.47	7.47	7.47	7.47	7.40	7.54
Aroclor-1016 {5}	7.77	7.77	7.77	7.76	7.76	7.77	7.70	7.84
Aroclor-1221			3.10				3.03	3.17
Aroclor-1221 {2}			4.49				4.42	4.56
Aroclor-1221 {3}			4.83				4.76	4.90
Aroclor-1221 {4}			4.97				4.90	5.04
Aroclor-1221 {5}			6.28				6.21	6.35
Aroclor-1232			4.97				4.90	5.04
Aroclor-1232 {2}			6.51				6.44	6.58
Aroclor-1232 {3}			7.47				7.40	7.54
Aroclor-1232 {4}			7.77				7.70	7.84
Aroclor-1232 {5}			8.80				8.73	8.87
Aroclor-1242			6.51				6.44	6.58
Aroclor-1242 {2}			7.76				7.69	7.83
Aroclor-1242 {3}			9.07				9.00	9.14
Aroclor-1242 {4}			10.05				9.98	10.12
Aroclor-1242 {5}			10.74				10.67	10.81
Aroclor-1248			7.13				7.06	7.20
Aroclor-1248 {2}			8.13				8.06	8.20
Aroclor-1248 {3}			8.80				8.73	8.87
Aroclor-1248 {4}			9.07				9.00	9.14
Aroclor-1248 {5}			9.69				9.62	9.76
Aroclor-1254			10.65				10.58	10.72
Aroclor-1254 {2}			11.69				11.62	11.76
Aroclor-1254 {3}			12.75				12.68	12.82
Aroclor-1254 {4}			13.18				13.11	13.25
Aroclor-1254 {5}			14.27				14.20	14.34
Aroclor-1260	13.18	13.19	13.18	13.18	13.18	13.18	13.11	13.25
Aroclor-1260 {2}	14.27	14.27	14.27	14.27	14.27	14.27	14.20	14.34
Aroclor-1260 {3}	15.38	15.38	15.38	15.38	15.38	15.38	15.31	15.45
Aroclor-1260 {4}	16.33	16.33	16.33	16.33	16.33	16.33	16.26	16.40
Aroclor-1260 {5}	19.38	19.38	19.38	19.38	19.38	19.38	19.31	19.45

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000 **Instrument ID:** GC-R
GC Column (2nd): DB-1701P

Data File: R1003.C R1004.C R1005.C R1006.C R1007.C

Compound	CALIBRATION FACTORS 50	100	500	1000	2000	MEAN	%RSD
Aroclor-1016	251779	237359	194441	185684	179031	209659	15.61
Aroclor-1016 {2}	496857	461354	383664	369040	347617	411706	15.57
Aroclor-1016 {3}	1050604	985332	852874	845208	817049	910213	11.20
Aroclor-1016 {4}	441372	415722	348032	340457	324994	374115	13.68
Aroclor-1016 {5}	363306	345484	294861	292451	281461	315513	11.54
Aroclor-1221			72432				
Aroclor-1221 {2}			100034				
Aroclor-1221 {3}			69694				
Aroclor-1221 {4}			251645				
Aroclor-1221 {5}			33515				
Aroclor-1232			170719				
Aroclor-1232 {2}			65431				
Aroclor-1232 {3}			130229				
Aroclor-1232 {4}			109912				
Aroclor-1232 {5}			158273				
Aroclor-1242			114757				
Aroclor-1242 {2}			196746				
Aroclor-1242 {3}			217987				
Aroclor-1242 {4}			232322				
Aroclor-1242 {5}			165486				
Aroclor-1248			495877				
Aroclor-1248 {2}			554012				
Aroclor-1248 {3}			395626				
Aroclor-1248 {4}			357515				
Aroclor-1248 {5}			245248				
Aroclor-1254			181841				
Aroclor-1254 {2}			139549				
Aroclor-1254 {3}			501151				
Aroclor-1254 {4}			324961				
Aroclor-1254 {5}			616318				
Aroclor-1260	839695	775473	651859	640761	616343	704826	13.81
Aroclor-1260 {2}	852900	801645	705106	704250	687511	750283	9.72
Aroclor-1260 {3}	655697	607726	523859	522778	505818	563176	11.58
Aroclor-1260 {4}	1314644	1251370	1134936	1150214	1128079	1195849	6.94
Aroclor-1260 {5}	354736	320538	285346	284865	279686	305034	10.56
					Average %RSD		12.02

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/17/2000 **Instrument ID:** GC-R

Data File: R1150.D **GC Column (1st):** DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.72	4.65	4.79	153251	152511	0.48
Aroclor-1016 {2}	5.65	5.58	5.72	190015	186069	2.08
Aroclor-1016 {3}	6.09	6.02	6.16	208862	204451	2.11
Aroclor-1016 {4}	7.84	7.77	7.91	140312	139315	0.71
Aroclor-1016 {5}	8.29	8.22	8.36	182995	180083	1.59
Aroclor-1260	13.75	13.68	13.82	593573	569541	4.05
Aroclor-1260 {2}	14.31	14.24	14.38	307033	294306	4.15
Aroclor-1260 {3}	15.92	15.85	15.99	740334	707216	4.47
Aroclor-1260 {4}	16.82	16.75	16.89	423487	405719	4.20
Aroclor-1260 {5}	18.85	18.78	18.92	197237	188372	4.49
					Average %D	2.83

Data File: R1150.C **GC Column (2nd):** DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.97	4.90	5.04	209659	182840	12.79
Aroclor-1016 {2}	5.90	5.83	5.97	411706	350713	14.81
Aroclor-1016 {3}	7.12	7.05	7.19	910213	784190	13.85
Aroclor-1016 {4}	7.46	7.39	7.53	374115	314972	15.81
Aroclor-1016 {5}	7.76	7.69	7.83	315513	267448	15.23
Aroclor-1260	13.17	13.10	13.24	704826	599348	14.97
Aroclor-1260 {2}	14.25	14.18	14.32	750283	645529	13.96
Aroclor-1260 {3}	15.36	15.29	15.43	563176	481222	14.55
Aroclor-1260 {4}	16.31	16.24	16.38	1195849	1044565	12.65
Aroclor-1260 {5}	19.37	19.30	19.44	305034	260184	14.70
					Average %D	14.33

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/17/2000 **Instrument ID:** GC-R

Data File: R1163.D **GC Column (1st):** DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.73	4.66	4.80	153251	149326	2.56
Aroclor-1016 {2}	5.65	5.58	5.72	190015	182298	4.06
Aroclor-1016 {3}	6.10	6.03	6.17	208862	199728	4.37
Aroclor-1016 {4}	7.85	7.78	7.92	140312	136705	2.57
Aroclor-1016 {5}	8.29	8.22	8.36	182995	177584	2.96
Aroclor-1260	13.76	13.69	13.83	593573	555992	6.33
Aroclor-1260 {2}	14.31	14.24	14.38	307033	289872	5.59
Aroclor-1260 {3}	15.93	15.86	16.00	740334	691210	6.64
Aroclor-1260 {4}	16.83	16.76	16.90	423487	397722	6.08
Aroclor-1260 {5}	18.85	18.78	18.92	197237	185931	5.73
					Average %D	4.69

Data File: R1163.C **GC Column (2nd):** DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.97	4.90	5.04	209659	186854	10.88
Aroclor-1016 {2}	5.90	5.83	5.97	411706	373043	9.39
Aroclor-1016 {3}	7.12	7.05	7.19	910213	826805	9.16
Aroclor-1016 {4}	7.47	7.40	7.54	374115	336098	10.16
Aroclor-1016 {5}	7.76	7.69	7.83	315513	290067	8.06
Aroclor-1260	13.17	13.10	13.24	704826	620930	11.90
Aroclor-1260 {2}	14.26	14.19	14.33	750283	662612	11.69
Aroclor-1260 {3}	15.37	15.30	15.44	563176	492978	12.46
Aroclor-1260 {4}	16.32	16.25	16.39	1195849	1052123	12.02
Aroclor-1260 {5}	19.37	19.30	19.44	305034	260452	14.62
					Average %D	11.03

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/17/2000

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(6403.6497)	1017-BK1	AQUEOUS	89		87		83		84	
SFB1011	6403-001	AQUEOUS	82		90		76		79	
GW-1	6486-001	AQUEOUS	75		100		76		89	
GW-2	6486-002	AQUEOUS	76		94		69		87	
SFB1013	6496-001	AQUEOUS	80		87		75		78	
WFB1013	6497-001	AQUEOUS	74		81		70		73	
RJ-10A	6497-003	AQUEOUS	75		97		72		87	
FB-SOIL	6478-007	AQUEOUS	78		86		75		78	
PCB	6403-001-MS1	AQUEOUS	89		84		86		74	
PCB	6403-001-MSD	AQUEOUS	88		85		84		76	
PCB	PBW1017-MS	AQUEOUS	83		83		79		74	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59 - 147	59 - 151
DCB = Decachlorobiphenyl	63 - 179	60 - 150

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

4533

AQUEOUS PCB MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6403-001-MSD1

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	11.9	119	35 - 161
Aroclor-1260	10.0	0.0	12.0	120	53 - 192

Compound	SAMPLE CONC. ADDED	MSD CONC. ADDED	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	0.0	12.6	126	6	21	35 - 161
Aroclor-1260	0.0	13.1	131	9	23	53 - 192

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
NC Non calculable

RPD: __0___ out of __2__ outside limits

Spike Recovery: __0___ out of __4__ outside limits

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-R **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.99 **DCB 1** 20.93 **TCMX 2** 3.69 **DCB 2** 20.60

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX1 RT	#	DCB1 RT	#	TCMX2 RT	#	DCB2 RT	#
(6403.6497)	1017-BK1	10/17/2000	14:40	3.99		20.93		3.69		20.60	
SFB1011	6403-001	10/17/2000	15:07	3.99		20.93		3.69		20.60	
GW-1	6486-001	10/17/2000	15:33	3.99		20.93		3.69		20.60	
GW-2	6486-002	10/17/2000	15:59	3.99		20.93		3.69		20.60	
SFB1013	6496-001	10/17/2000	16:26	3.99		20.93		3.69		20.60	
WFB1013	6497-001	10/17/2000	16:52	3.99		20.93		3.69		20.60	
RJ-10A	6497-003	10/17/2000	17:18	3.99		20.93		3.69		20.60	
FB-SOIL	6478-007	10/17/2000	17:44	3.99		20.93		3.69		20.60	
PCB	6403-001-MS1	10/17/2000	18:37	3.99		20.93		3.69		20.60	
PCB	6403-001-MSD1	10/17/2000	19:03	3.99		20.93		3.69		20.60	
PCB	PBW1017-MS1	10/17/2000	19:29	3.99		20.93		3.69		20.60	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene (± 0.05 Minutes)

DCB = Decachlorobiphenyl (± 0.10 Minutes)

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1153.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1153.D\ECD2A.CH
Acq On : 17 Oct 2000 15:33 Operator:
Sample : GW-1,6486-001,A,1000mL,100,10/17/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 17 15:56:56 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	125.2E6	170.7E6	15.392	15.581
Spiked Amount 205.000	Range 75 - 125		Recovery =		7.51%#	7.60%#
2) S DCB	20.93	20.60	152.8E6	212.1E6	20.450	18.156
Spiked Amount 205.000			Recovery =		9.98%	8.86%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1153.D RPCB1009.M Wed Oct 18 09:26:49 2000 GC_R

41536

125

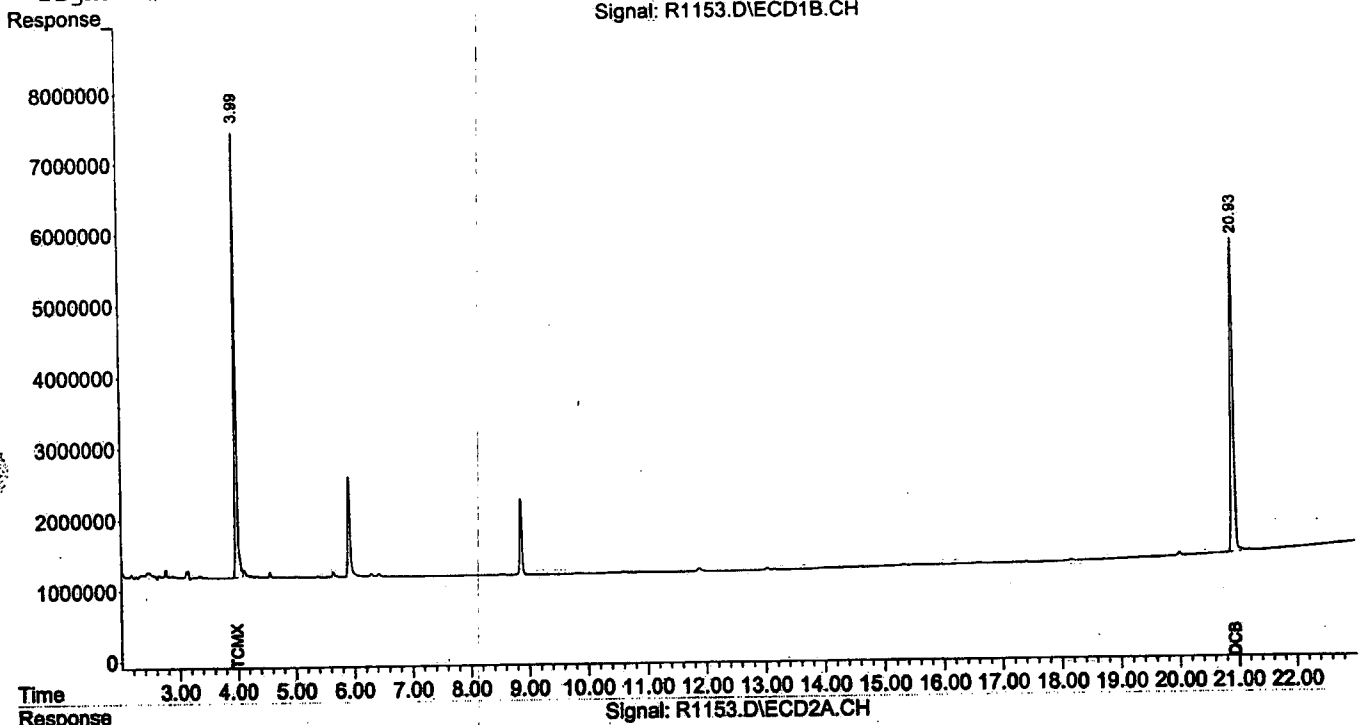
Quantitation Report (QT Reviewed)

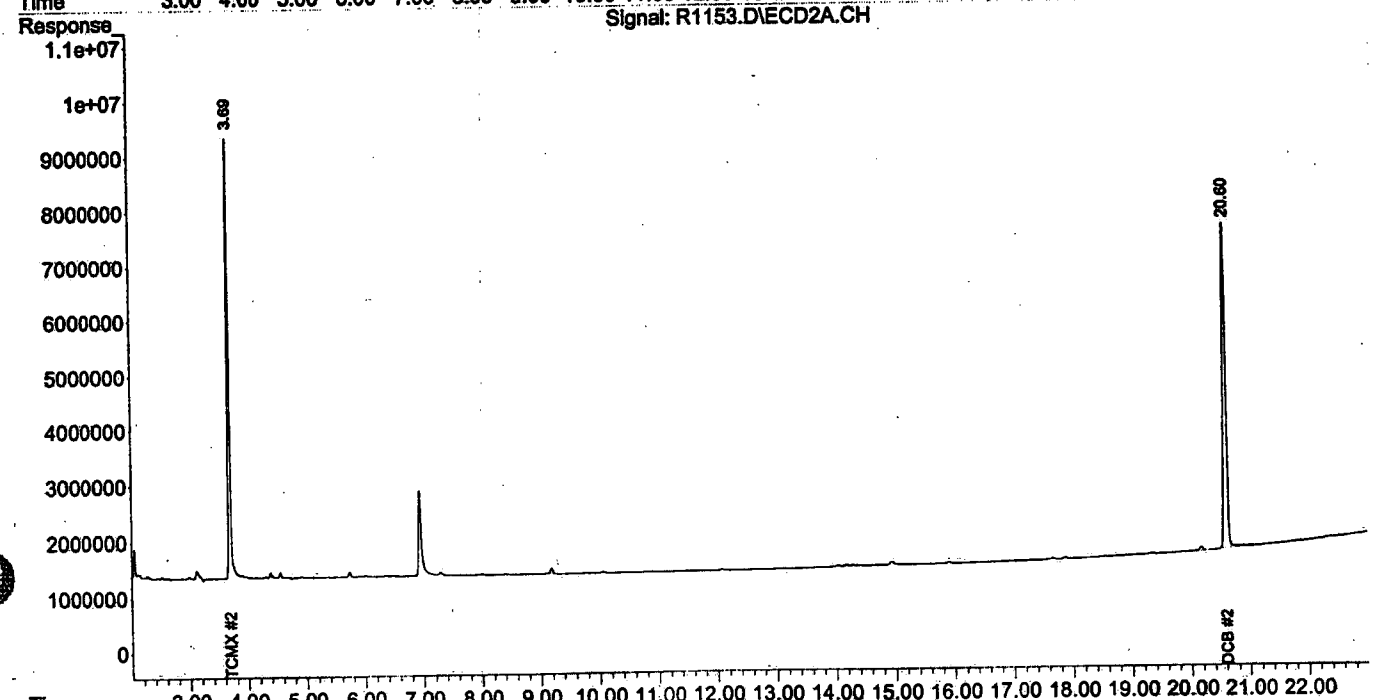
Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1153.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1153.D\ECD2A.CH
Acq On : 17 Oct 2000 15:33 Operator:
Sample : GW-1,6486-001,A,1000mL,100,10/17/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 8:12 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :

Signal #2 Phase:
Signal #2 Info :





4537

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1154.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1154.D\ECD2A.CH
Acq On : 17 Oct 2000 15:59 Operator:
Sample : GW-2,6486-002,A,1000mL,100,10/17/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 17 16:23:13 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	127.3E6	154.7E6	15.656	14.121
Spiked Amount 205.000	Range 75 - 125		Recovery =		7.64%#	6.89%#
2) S DCB	20.93	20.60	144.6E6	208.8E6	19.351	17.874
Spiked Amount 205.000			Recovery =		9.44%	8.72%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
28) L7 Aroclor-1254	10.27	10.64	1709045	762506	5.194	4.193m
29) L7 Aroclor-1254 {2}	11.06	11.68	1262141	666143	4.823	4.774m
30) L7 Aroclor-1254 {3}	12.18	12.74	3282365	3120041	6.280	6.226m
31) L7 Aroclor-1254 {4}	12.97	13.17	1362488	1684977	4.402	5.185m
32) L7 Aroclor-1254 {5}	13.76	14.26	1996364	2824765	4.525	4.583m
Sum Aroclor-1254			9612403	9058433	25.224	24.961
Average Aroclor-1254					5.045	4.992
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1154.D RPCB1009.M Wed Oct 18 09:26:57 2000 GC_R

4534

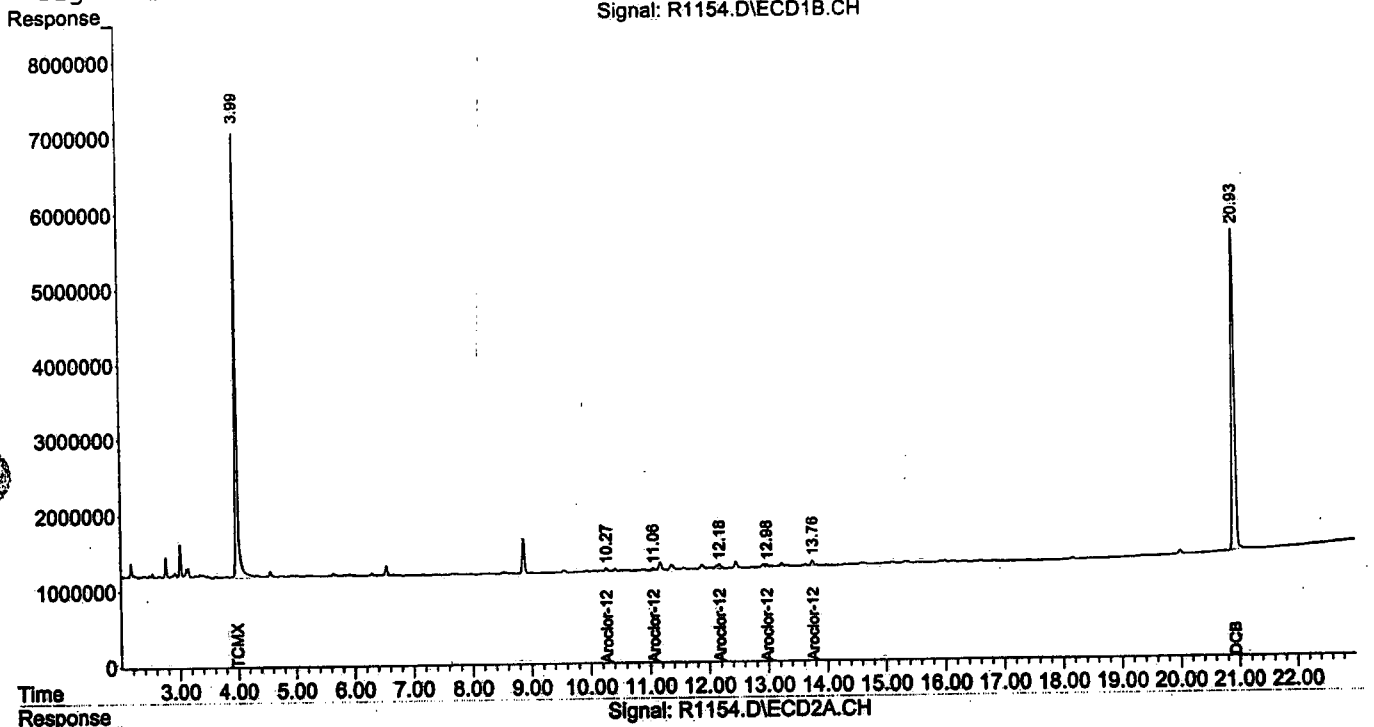
Quantitation Report (QT Reviewed)

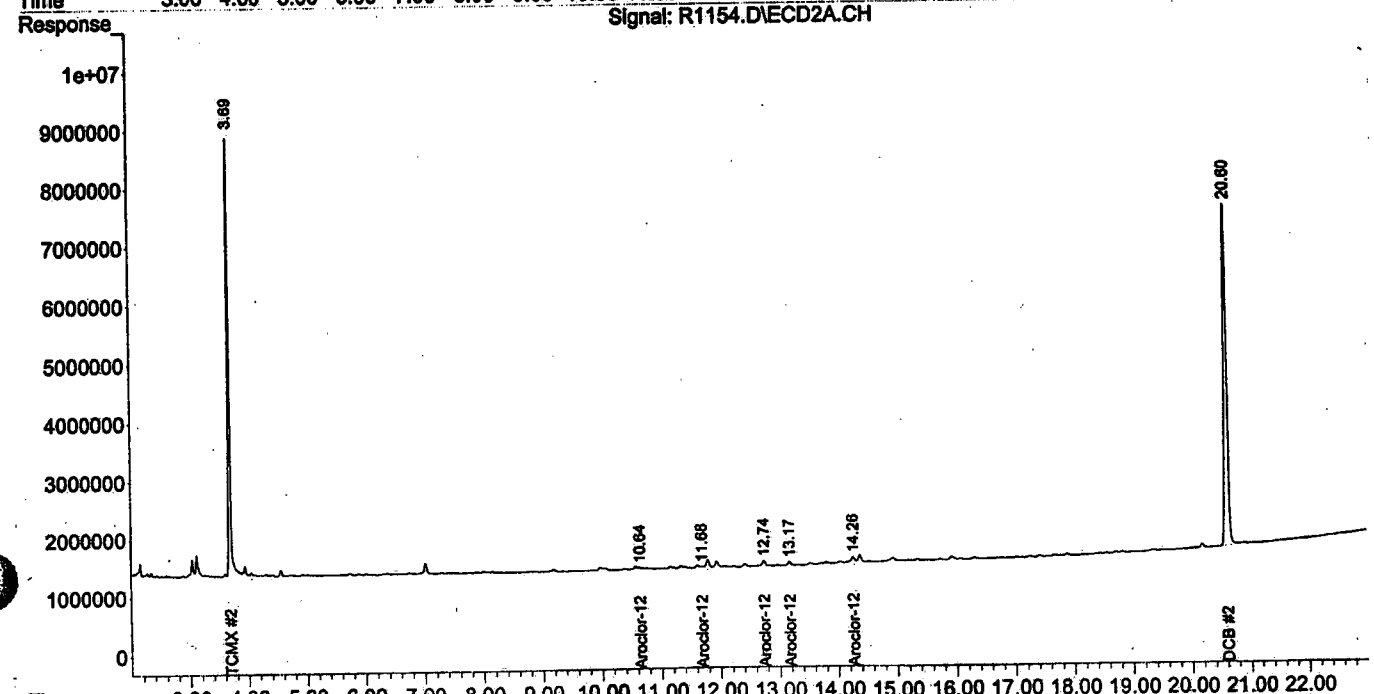
Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1154.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1154.D\ECD2A.CH
Acq On : 17 Oct 2000 15:59 Operator:
Sample : GW-2,6486-002,A,1000mL,100,10/17/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 8:14 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :

Signal #2 Phase:
Signal #2 Info :





4539

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1151.D\ECD1B.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1151.D\ECD2A.CH
Acq On : 17 Oct 2000 14:40 Operator:
Sample : (6403.6497),1017-BK1,A,1000mL,100,10/17/ Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 17 15:04:21 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	1483.8E6	1855.6E6	182.493	169.393
Spiked Amount 205.000	Range 75 - 125		Recovery =		89.02%	82.63%
2) S DCB	20.93	20.60	1328.0E6	2013.5E6	177.762	172.331
Spiked Amount 205.000			Recovery =		86.71%	84.06%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1151.D RPCB1009.M Wed Oct 18 09:26:36 2000 GC_R

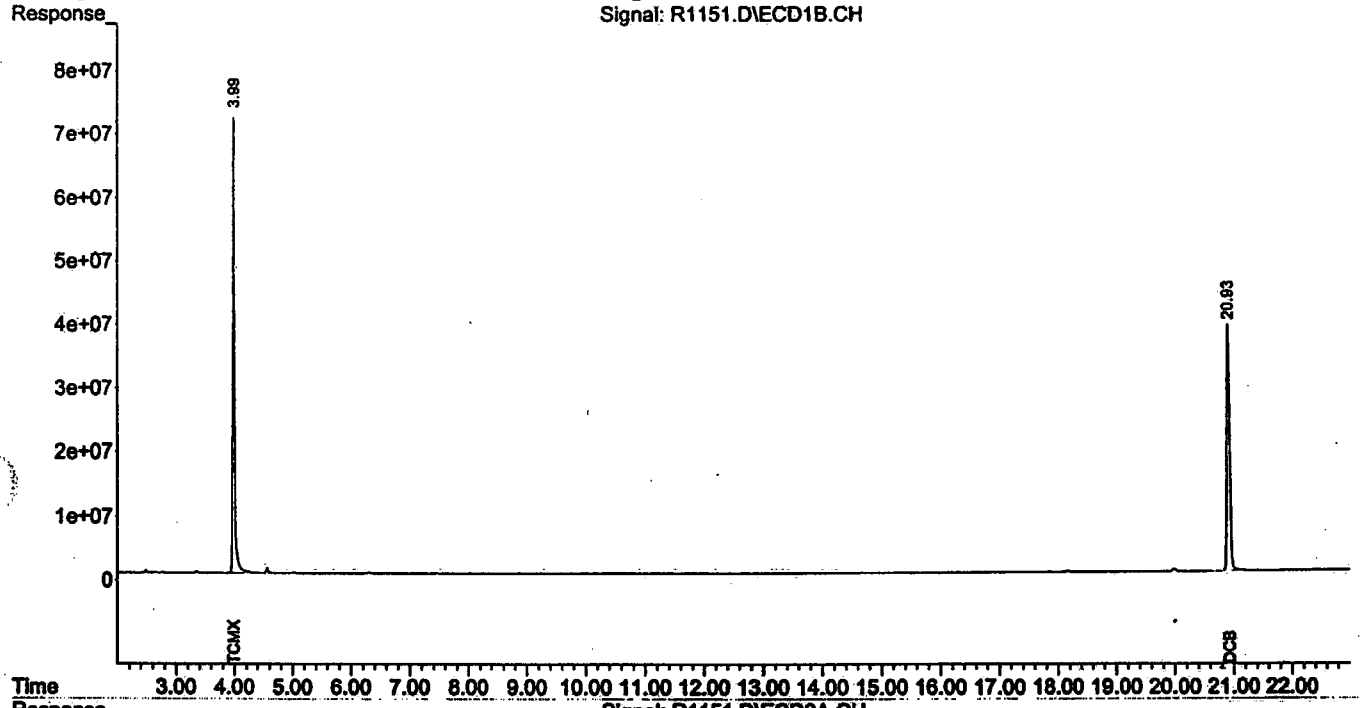
4540

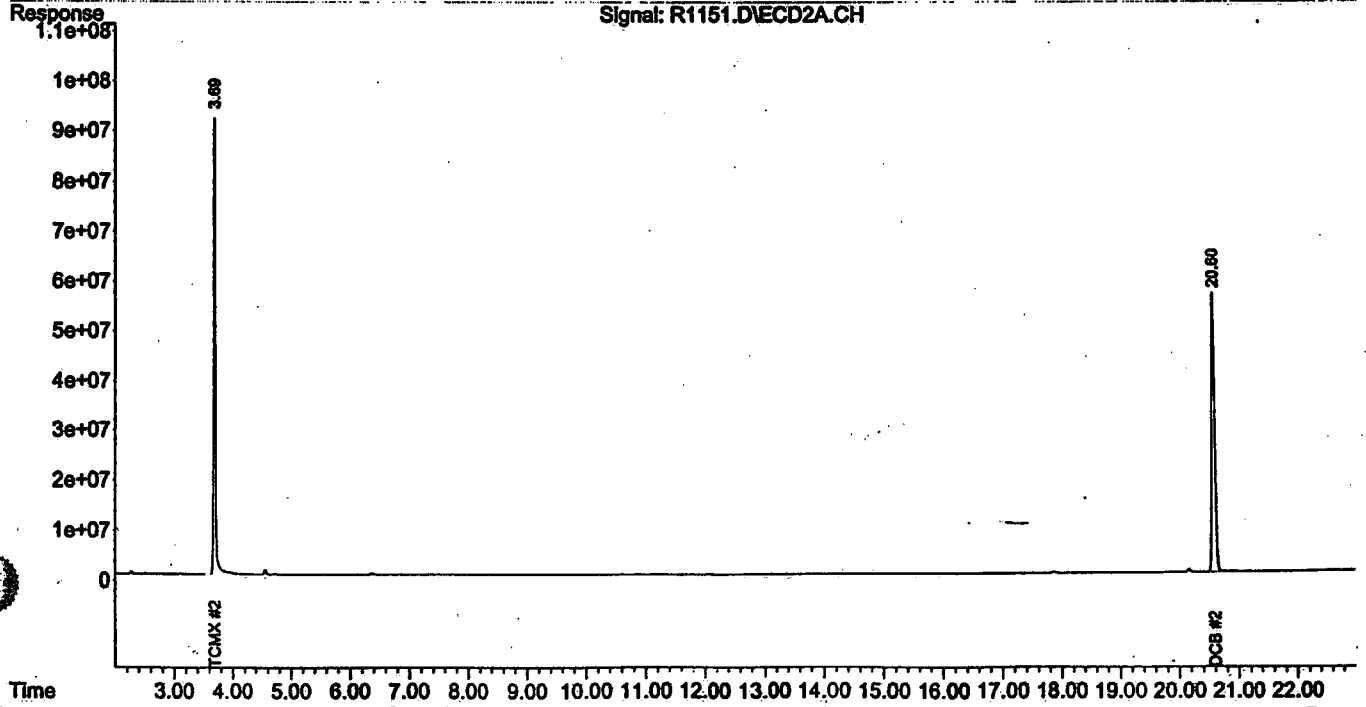
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1151.D\ECD1B.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1151.D\ECD2A.CH
Acq On : 17 Oct 2000 14:40 Operator:
Sample : (6403.6497),1017-BK1,A,1000mL,100,10/17/ Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 8:11 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4534 1

Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1150.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1150.D\ECD2A.CH
Acq On : 17 Oct 2000 14:14 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 17 14:38:06 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	838.4E6	1018.0E6	103.115	92.935
Spiked Amount 205.000	Range 75 - 125		Recovery =		50.30%#	45.33%#
2) S DCB	20.92	20.60	726.5E6	1055.4E6	97.245	90.329
Spiked Amount 205.000			Recovery =		47.44%	44.06%
Target Compounds						
3) L2 Aroclor-1016	4.72	4.97	76255562	91419852	497.585	436.042
4) L2 Aroclor-1016 {2}	5.65	5.90	93034395	175.4E6	489.615	425.926
5) L2 Aroclor-1016 {3}	6.09	7.12	102.2E6	392.1E6	489.441	430.773
6) L2 Aroclor-1016 {4}	7.84	7.46	69657252	157.5E6	496.444	420.956
7) L2 Aroclor-1016 {5}	8.29	7.76	90041355	133.7E6	492.043	423.831
Sum Aroclor-1016			431.2E6	950.1E6	2465.128	2137.527
Average Aroclor-1016					493.026	427.505
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
13) L8 Aroclor-1260	13.75	13.17	284.8E6	299.7E6	479.757	425.174
14) L8 Aroclor-1260 {2}	14.31	14.25	147.2E6	322.8E6	479.275	430.190
15) L8 Aroclor-1260 {3}	15.92	15.36	353.6E6	240.6E6	477.633	427.240
16) L8 Aroclor-1260 {4}	16.82	16.31	202.9E6	522.3E6	479.021	436.746
17) L8 Aroclor-1260 {5}	18.85	19.37	94185945	130.1E6	477.526	426.483
Sum Aroclor-1260			1082.6E6	1515.4E6	2393.211	2145.833
Average Aroclor-1260					478.642	429.167

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1150.D RPCB1009.M Wed Oct 18 09:26:30 2000 GC_R

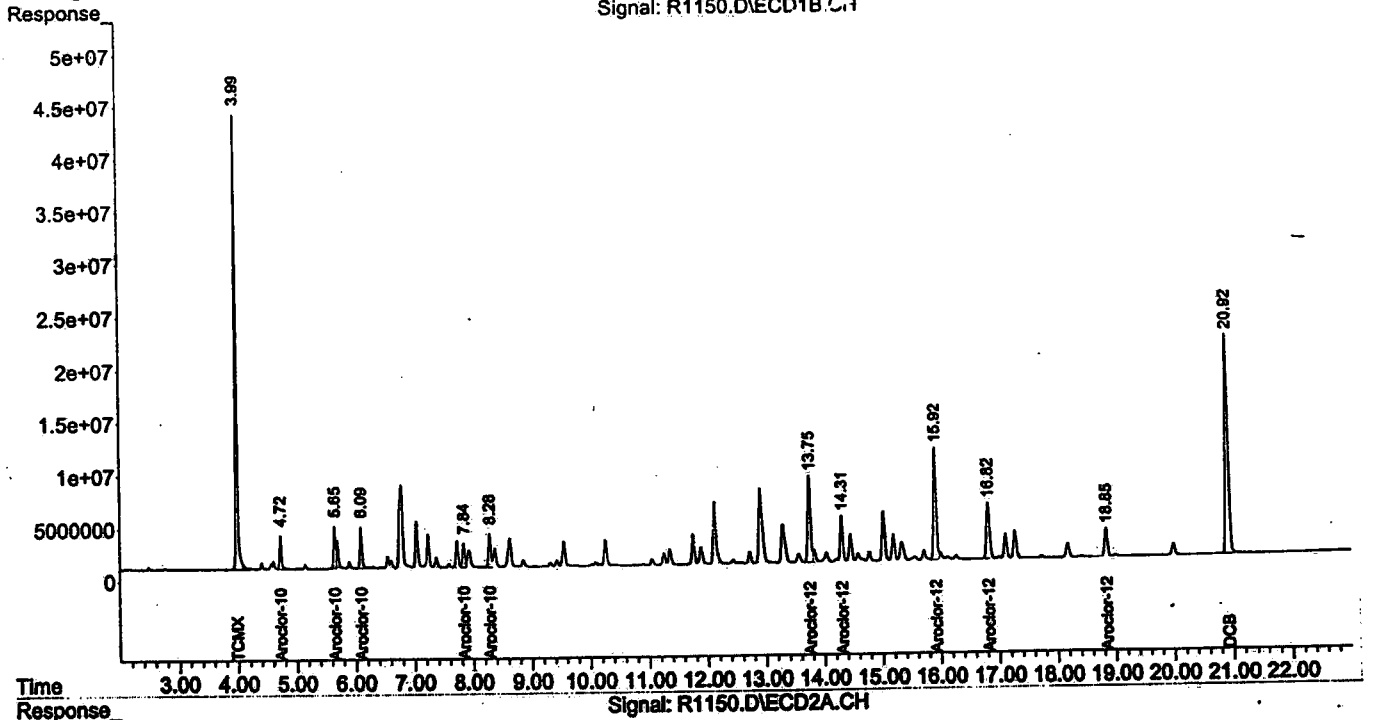
4542

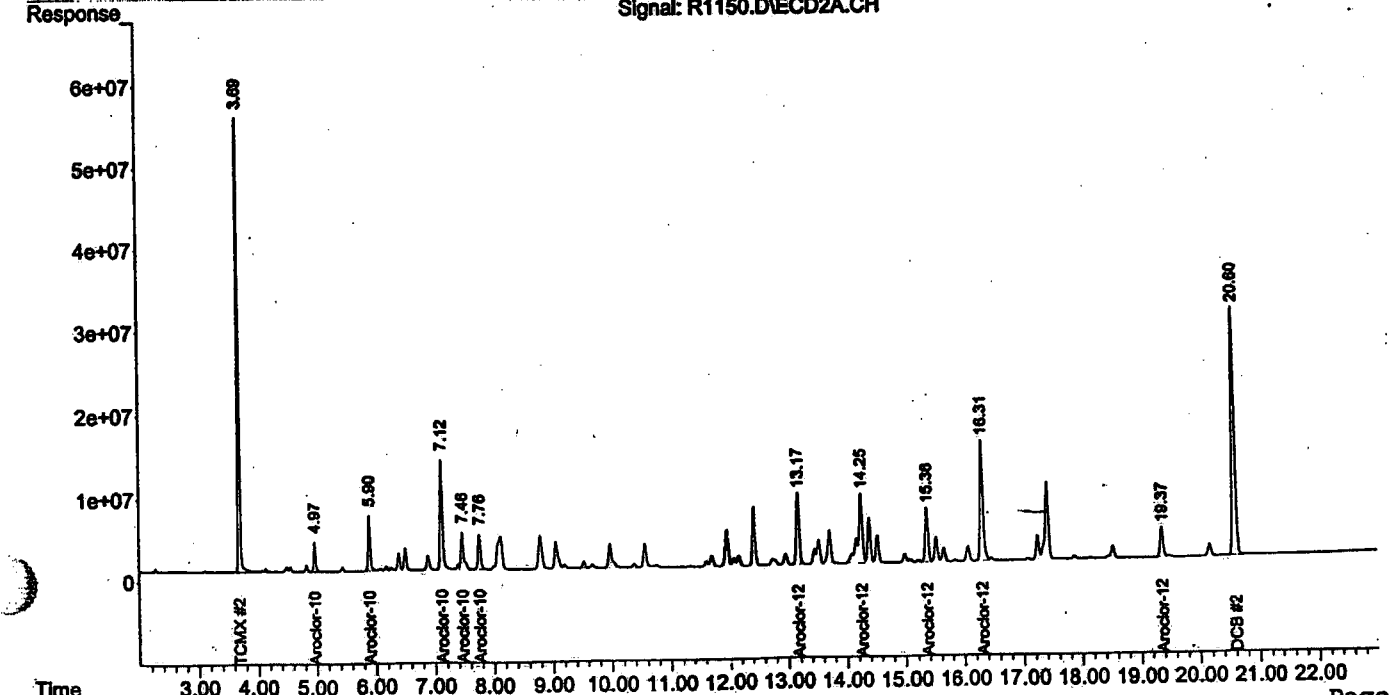
Quantitation Report (Not Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1150.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1150.D\ECD2A.CH
Acq On : 17 Oct 2000 14:14 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 8:11 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4543

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1163.D\ECD1B.CH Vial: 15
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1163.D\ECD2A.CH
Acq On : 17 Oct 2000 19:55 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 17 20:19:10 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	818.3E6	1072.8E6	100.636	97.938
Spiked Amount 205.000	Range 75 - 125		Recovery =		49.09%#	47.77%#
2) S DCB	20.93	20.60	711.1E6	1022.8E6	95.187	87.544
Spiked Amount 205.000			Recovery =		46.43%	42.70%
Target Compounds						
3) L2 Aroclor-1016	4.73	4.97	74663086	93426790	487.194	445.614
4) L2 Aroclor-1016 {2}	5.65	5.90	91148927	186.5E6	479.693	453.044
5) L2 Aroclor-1016 {3}	6.10	7.12	99863770	413.4E6	478.132	454.182
6) L2 Aroclor-1016 {4}	7.85	7.47	68352562	168.0E6	487.145	449.190
7) L2 Aroclor-1016 {5}	8.29	7.76	88791887	145.0E6	485.215	459.676
Sum Aroclor-1016			422.8E6	1006.4E6	2417.379	2261.707
Average Aroclor-1016					483.476	452.341
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
3) L8 Aroclor-1260	13.76	13.17	278.0E6	310.5E6	468.343	440.484
4) L8 Aroclor-1260 {2}	14.31	14.26	144.9E6	331.3E6	472.053	441.575
5) L8 Aroclor-1260 {3}	15.93	15.37	345.6E6	246.5E6	466.823	437.677
6) L8 Aroclor-1260 {4}	16.83	16.32	198.9E6	526.1E6	469.580	439.906
7) L8 Aroclor-1260 {5}	18.85	19.37	92965344	130.2E6	471.337	426.923
Sum Aroclor-1260			1060.4E6	1544.5E6	2348.136	2186.565
Average Aroclor-1260					469.627	437.313

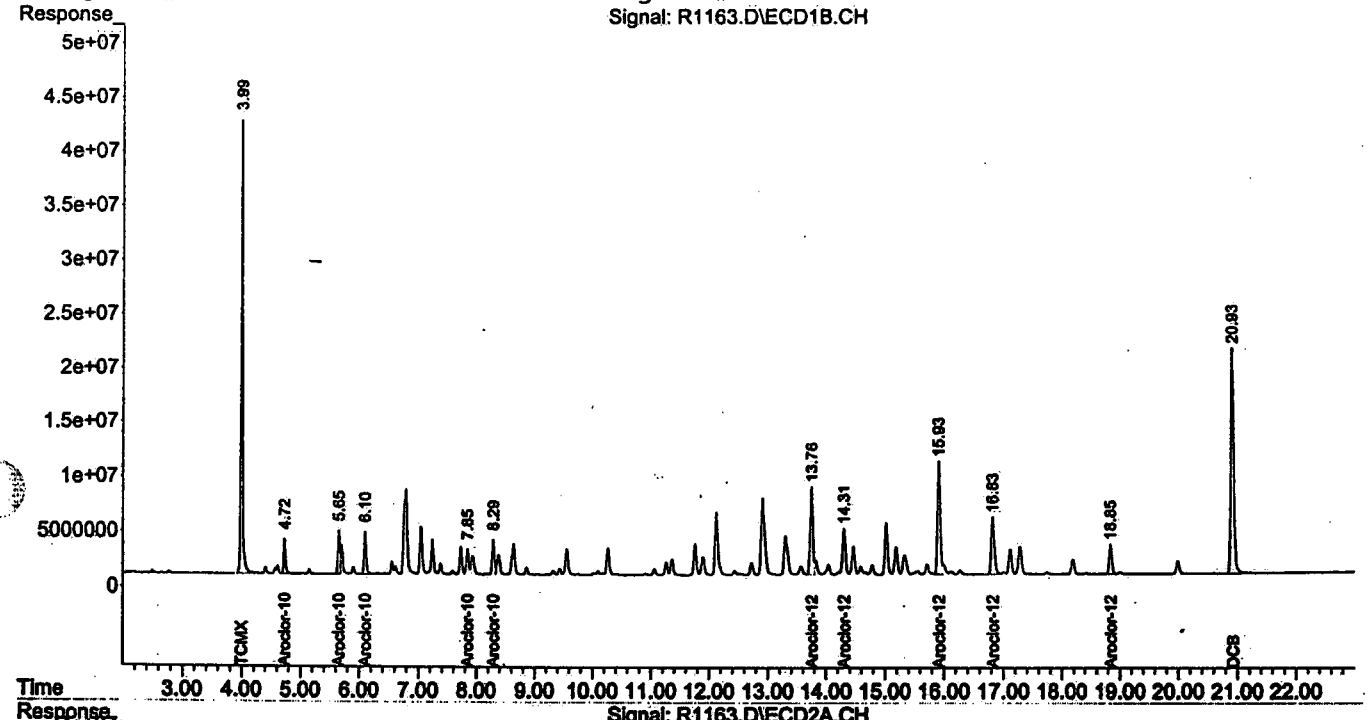
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

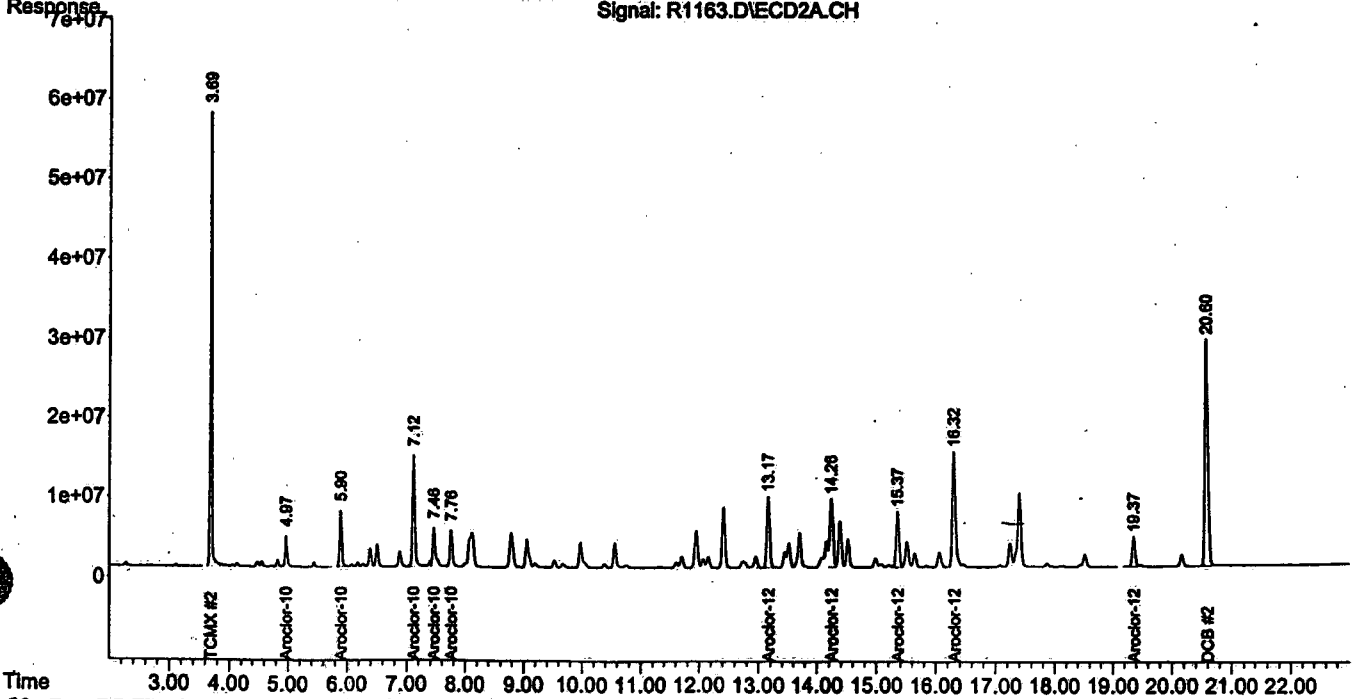
4544

Signal #1 : C:\MSDCHEM\1\DATA\10-17-00\R1163.D\ECD1B.CH Vial: 15
Signal #2 : C:\MSDCHEM\1\DATA\10-17-00\R1163.D\ECD2A.CH
Acq On : 17 Oct 2000 19:55 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 8:16 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





41545

104

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\R_OCT_00\10-09-00\R1002.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\R_OCT_00\10-09-00\R1002.D\ECD2A.CH
Acq On : 09 Oct 2000 14:07 Operator:
Sample : 8082_1254_IAS1401,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 10 10:55:00 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 10:54:32 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.70	782.6E6	1044.8E6	105.205	105.043
Spiked Amount 205.000	Range 75 - 125		Recovery =		51.32%#	51.24%#
2) S DCB	20.94	20.61	697.9E6	1093.5E6	104.850	112.694
Spiked Amount 205.000			Recovery =		51.15%	54.97%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
28) L7 Aroclor-1254	10.27	10.65	164.5E6	90920291	500.000	500.000
29) L7 Aroclor-1254 {2}	11.07	11.69	130.8E6	69774466	500.000	500.000
30) L7 Aroclor-1254 {3}	12.19	12.75	261.3E6	250.6E6	500.000	500.000
31) L7 Aroclor-1254 {4}	12.99	13.18	154.8E6	162.5E6	500.000	500.000
32) L7 Aroclor-1254 {5}	13.77	14.27	220.6E6	308.2E6	500.000	500.000
Sum Aroclor-1254			932.0E6	881.9E6	2500.000	2500.000
Average Aroclor-1254					500.000	500.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1002.D RPCB1009.M Wed Oct 18 10:15:56 2000 GC_R

4546

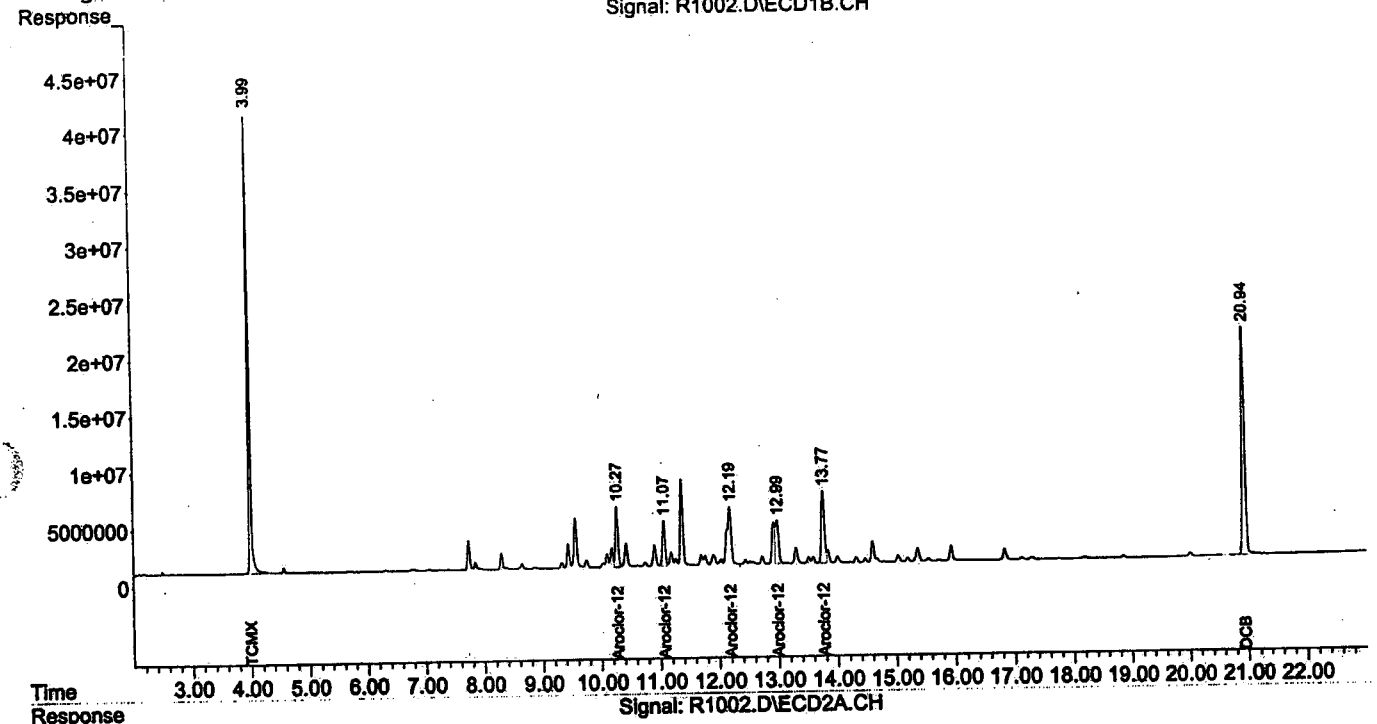
Quantitation Report (QT Reviewed)

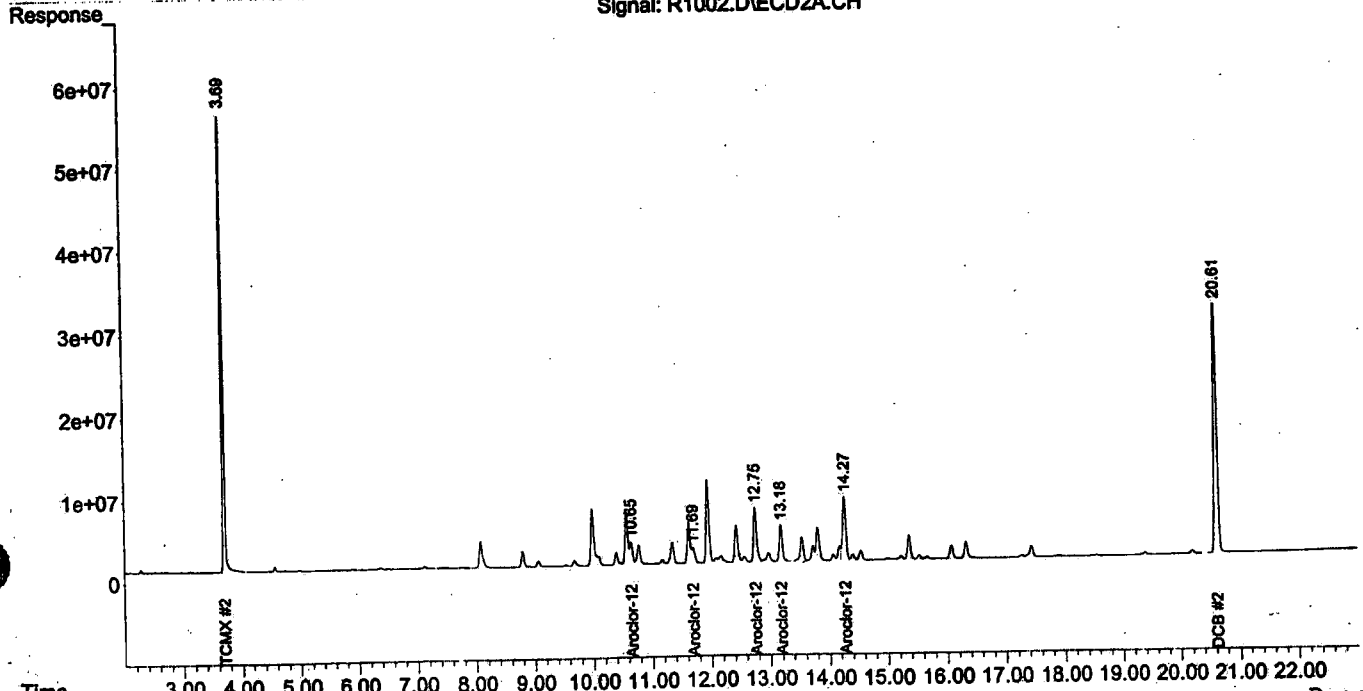
Signal #1 : C:\MSDCHEM\1\DATA\R_OCT_00\10-09-00\R1002.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\R_OCT_00\10-09-00\R1002.D\ECD2A.CH
Acq On : 09 Oct 2000 14:07 Operator:
Sample : 8082_1254_IAS1401,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 10 10:55 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 10:54:32 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :

Signal #2 Phase:
Signal #2 Info :





PESTICIDE METHOD BLANK SUMMARY

Lab File ID: W2580.D

Instrument ID: GC-W

Date Extracted: 10/17/2000

Matrix: AQUEOUS

Date Analyzed: 10/18/2000

Time Analyzed: 02:26

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
SFB1011	6403-001	10/18/2000	02:51
GW-1	6486-001	10/18/2000	03:16
GW-2	6486-002	10/18/2000	03:41
SFB1013	6496-001	10/18/2000	04:06
WFB1013	6497-001	10/18/2000	04:31
RJ-10A	6497-003	10/18/2000	04:56
PROJ._AREA_2_CO	6399-001	10/18/2000	05:21
PEST	6496-001-MS1	10/18/2000	05:46
PEST	6496-001-MSD1	10/18/2000	06:11
PEST	PBW1017-MS1	10/18/2000	06:36

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: NA

Lab ID: 1017-BK1
Client ID: (6399..6497)
Date Received: NA
Date Extracted: 10/17/2000
Date Analyzed: 10-18-
Data file: W2580.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.002
beta-BHC	ND		0.002
gamma-BHC	ND		0.002
delta-BHC	ND		0.002
Heptachlor	ND		0.002
Aldrin	ND		0.002
Heptachlor epoxide	ND		0.002
Endosulfan I	ND		0.002
4,4'-DDE	ND		0.002
Dieldrin	ND		0.002
Endrin	ND		0.002
Endosulfan II	ND		0.002
4,4'-DDD	ND		0.002
Endrin aldehyde	ND		0.002
Endosulfan sulfate	ND		0.002
4,4'-DDT	ND		0.002
Chlordane	ND		0.015
Toxaphene	ND		0.015

4549

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (1st): DB-5

Data File: W2386.D W2385.D W2384.D W2383.D W2382.D

Compound	RT OF STANDARDS					MEAN	RT WI NDOW	
	10	50	100	200	300	RT	FROM	TO
alpha-BHC	4.61	4.61	4.61	4.61	4.61	4.61	4.54	4.68
beta-BHC	5.10	5.10	5.10	5.10	5.10	5.10	5.03	5.17
gamma-BHC	5.24	5.24	5.23	5.24	5.24	5.24	5.17	5.31
delta-BHC	5.71	5.71	5.71	5.71	5.71	5.71	5.64	5.78
Heptachlor	6.81	6.81	6.81	6.81	6.81	6.81	6.74	6.88
Aldrin	7.63	7.63	7.63	7.63	7.63	7.63	7.56	7.70
Heptachlor epoxide	8.64	8.64	8.64	8.64	8.64	8.64	8.57	8.71
Endosulfan I	9.56	9.56	9.56	9.56	9.56	9.56	9.49	9.63
4,4'-DDE	10.32	10.32	10.32	10.32	10.32	10.32	10.25	10.39
Dieldrin	10.25	10.25	10.25	10.25	10.25	10.25	10.18	10.32
Endrin	10.80	10.80	10.80	10.80	10.80	10.80	10.73	10.87
Endosulfan II	11.06	11.06	11.06	11.06	11.06	11.06	10.99	11.13
4,4'-DDD	11.43	11.43	11.43	11.43	11.43	11.43	11.36	11.50
Endrin aldehyde	11.58	11.58	11.58	11.58	11.58	11.58	11.51	11.65
Endosulfan sulfate	12.23	12.23	12.23	12.23	12.23	12.23	12.16	12.30
4,4'-DDT	12.45	12.45	12.45	12.45	12.45	12.45	12.38	12.52
Endrin ketone	13.44	13.44	13.44	13.44	13.44	13.44	13.37	13.51
Methoxychlor	14.12	14.12	14.12	14.12	14.12	14.12	14.05	14.19
alpha-Chlordane	9.66	9.66	9.66	9.66	9.66	9.66	9.59	9.73
gamma-Chlordane	9.25	9.25	9.25	9.25	9.25	9.25	9.18	9.32
Chlordane 500 ppb			9.25				9.18	9.32
Chlordane {2}			9.45				9.38	9.52
Chlordane {3}			9.66				9.59	9.73
Chlordane {4}			9.80				9.73	9.87
Chlordane {5}			11.65				11.58	11.72
Toxaphene 500 ppb			13.25				13.18	13.32
Toxaphene {2}			13.37				13.30	13.44
Toxaphene {3}			13.66				13.59	13.73
Toxaphene {4}			14.11				14.04	14.18
Toxaphene {5}			14.62				14.55	14.69

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (1st): DB-5

Data File: W2386.D W2385.D W2384.D W2383.D W2382.D

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	26915425	26175522	25197701	25096122	24670862	25611126	3.57
beta-BHC	10909871	9610596	9114431	8946054	8711758	9458542	9.26
gamma-BHC	24519462	23542264	22602472	22390122	21925917	22996048	4.50
delta-BHC	24088145	23348614	22607722	22575806	22119634	22947984	3.38
Heptachlor	20404810	19572256	18780246	18471314	18004369	19046599	4.99
Aldrin	22050812	21354125	20419654	20027502	19400227	20650464	5.11
Heptachlor epoxide	20352865	19060665	18077706	17563187	16920468	18394978	7.32
Endosulfan I	19276992	17928002	17012346	16531774	15909309	17331685	7.58
4,4'-DDE	19639195	19038338	18478693	18228657	17740723	18625121	3.95
Dieldrin	19931790	19194060	18224322	17841394	17145229	18467359	5.98
Endrin	17875394	16574038	15814171	15541993	14968318	16154783	6.95
Endosulfan II	18184943	16704595	15904940	15548948	14961333	16260952	7.67
4,4'-DDD	15253438	14545199	14118547	14019993	13640649	14315565	4.30
Endrin aldehyde	14942959	12862422	12197407	11755048	11188376	12589243	11.53
Endosulfan sulfate	14811966	13570809	13113810	13008624	12522051	13405452	6.49
4,4'-DDT	15002820	14718205	14434214	14490465	14212260	14571593	2.06
Endrin ketone	19641380	17350329	16361711	15799173	15143281	16859175	10.40
Methoxychlor	7699618	6671422	6292700	6109577	5863514	6527366	11.01
alpha-Chlordane	20645878	19311961	18527328	18298018	17761262	18908889	5.92
gamma-Chlordane	20698467	19926781	19224367	19037169	18526789	19482715	4.34
Chlordane 500 ppb			1743688				
Chlordane {2}			336038				
Chlordane {3}			1675802				
Chlordane {4}			852298				
Chlordane {5}			570374				
Toxaphene 500 ppb			409140				
Toxaphene {2}			304880				
Toxaphene {3}			304812				
Toxaphene {4}			288772				
Toxaphene {5}			427868				

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (2nd): DB-1701P

Data File: W2386.C W2385.C W2384.C W2383.C W2382.C

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	10	50	100	200	300	RT	FROM	TO
alpha-BHC	5.38	5.38	5.38	5.38	5.38	5.38	5.31	5.45
beta-BHC	8.35	8.35	8.35	8.35	8.35	8.35	8.28	8.42
gamma-BHC	6.31	6.31	6.31	6.31	6.31	6.31	6.24	6.38
delta-BHC	8.90	8.90	8.90	8.90	8.90	8.90	8.83	8.97
Heptachlor	6.78	6.78	6.78	6.78	6.78	6.78	6.71	6.85
Aldrin	7.44	7.44	7.44	7.44	7.44	7.44	7.37	7.51
Heptachlor epoxide	9.25	9.25	9.25	9.25	9.25	9.25	9.18	9.32
Endosulfan I	9.92	9.93	9.92	9.92	9.92	9.92	9.85	9.99
4,4'-DDE	10.70	10.70	10.70	10.70	10.70	10.70	10.63	10.77
Dieldrin	10.95	10.95	10.95	10.95	10.95	10.95	10.88	11.02
Endrin	11.47	11.47	11.47	11.47	11.47	11.47	11.40	11.54
Endosulfan II	12.88	12.89	12.88	12.89	12.89	12.88	12.81	12.95
4,4'-DDD	12.88	12.89	12.88	12.89	12.89	12.88	12.81	12.95
Endrin aldehyde	14.02	14.02	14.02	14.02	14.02	14.02	13.95	14.09
Endosulfan sulfate	14.91	14.91	14.91	14.91	14.91	14.91	14.84	14.98
4,4'-DDT	13.36	13.36	13.36	13.36	13.36	13.36	13.29	13.43
Endrin ketone	15.93	15.93	15.93	15.93	15.93	15.93	15.86	16.00
Methoxychlor	15.22	15.22	15.22	15.22	15.22	15.22	15.15	15.29
alpha-Chlordane	10.31	10.31	10.31	10.31	10.31	10.31	10.24	10.38
gamma-Chlordane	10.16	10.16	10.16	10.16	10.16	10.16	10.09	10.23
Chlordane 500 ppb			9.29				9.22	9.36
Chlordane {2}			9.76				9.69	9.83
Chlordane {3}			10.16				10.09	10.23
Chlordane {4}			10.31				10.24	10.38
Chlordane {5}			10.37				10.30	10.44
Toxaphene 500 ppb			14.40				14.33	14.47
Toxaphene {2}			14.50				14.43	14.57
Toxaphene {3}			14.86				14.79	14.93
Toxaphene {4}			15.31				15.24	15.38
Toxaphene {5}			16.17				16.10	16.24

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (2nd): DB-1701P

Data File: W2386.C W2385.C W2384.C W2383.C W2382.C

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	192905833	187909913	181502484	184105970	168312095	182947259	5.05
beta-BHC	76651687	65900004	62946014	62523619	61453881	65895041	9.46
gamma-BHC	173359066	167665493	161702047	161972571	159215087	164782853	3.46
delta-BHC	161445322	156464010	152566892	154142270	153536715	155631042	2.28
Heptachlor	151280292	141565427	133101151	127049732	121676265	134934574	8.71
Aldrin	159997657	152070401	143309385	138290112	132382006	145209912	7.56
Heptachlor epoxide	150388913	132485015	122982727	116017845	110084533	126391806	12.50
Endosulfan I	135870765	122366342	114308499	108335176	102985568	116773270	11.03
4,4'-DDE	130429900	126415141	122218580	119927929	116463332	123090976	4.44
Dieldrin	139520697	130751341	124415352	119798645	114532296	125803666	7.72
Endrin	128161997	117925566	111539786	108320521	103347362	113859046	8.42
Endosulfan II	229316581	204627289	195287290	188522770	181556012	199861988	9.28
4,4'-DDD	229316581	204627289	195301264	188522770	181550422	199863665	9.28
Endrin aldehyde	101239377	84475847	79069482	77422498	74788318	83399105	12.69
Endosulfan sulfate	98326870	88666153	85481754	85626556	83011714	88222610	6.79
4,4'-DDT	90486892	94351023	93585891	95838044	94979229	93848216	2.19
Endrin ketone	108826693	95901893	91464547	89936929	87310828	94688178	8.97
Methoxychlor	51039326	47150624	44257072	43527057	42746183	45744052	7.42
alpha-Chlordane	144863113	133513494	127717373	125520319	121935370	130709934	6.85
gamma-Chlordane	145384261	136736448	131666679	130145265	126985148	134183560	5.35
Chlordane 500 ppb			1243889				
Chlordane {2}			3035217				
Chlordane {3}			12513214				
Chlordane {4}			11119544				
Chlordane {5}			5741793				
Toxaphene 500 ppb			2731021				
Toxaphene {2}			1928897				
Toxaphene {3}			2104517				
Toxaphene {4}			2281739				
Toxaphene {5}			1420094				

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10-18-00 10 Instrument ID: HP6890

Data File: W2599.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	4.60	4.53	4.67	25611126	25281746	1.29
beta-BHC	5.09	5.02	5.16	9458542	9112864	3.65
gamma-BHC	5.22	5.15	5.29	22996048	22662149	1.45
delta-BHC	5.70	5.63	5.77	22947984	23197178	1.09
Heptachlor	6.80	6.73	6.87	19046599	19191467	0.76
Aldrin	7.62	7.55	7.69	20650464	20321185	1.59
Heptachlor epoxide	8.63	8.56	8.70	18394978	18090761	1.65
Endosulfan I	9.55	9.48	9.62	17331685	17011989	1.84
4,4'-DDE	10.31	10.24	10.38	18625121	18374629	1.34
Dieldrin	10.24	10.17	10.31	18467359	18452409	0.08
Endrin	10.79	10.72	10.86	16154783	16325492	1.06
Endosulfan II	11.05	10.98	11.12	16260952	15989050	1.67
4,4'-DDD	11.42	11.35	11.49	14315565	14580556	1.85
Endrin aldehyde	11.57	11.50	11.64	12589243	12238515	2.79
Endosulfan sulfate	12.22	12.15	12.29	13405452	14638635	9.20
4,4'-DDT	12.44	12.37	12.51	14571593	14387729	1.26
Endrin ketone	13.43	13.36	13.50	16859175	17488893	3.74
Methoxychlor	14.12	14.05	14.19	6527366	6519274	0.12
alpha-Chlordane	9.65	9.58	9.72	18908889	18517757	2.07
gamma-Chlordane	9.24	9.17	9.31	19482715	19211402	1.39
					Average %D	2.00

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10-18-00 10 Instrument ID: HP6890

Data File: W2599.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	5.38	5.31	5.45	182947259	184596872	0.90
beta-BHC	8.34	8.27	8.41	65895041	62638597	4.94
gamma-BHC	6.30	6.23	6.37	164782853	163690942	0.66
delta-BHC	8.89	8.82	8.96	155631042	155302783	0.21
Heptachlor	6.78	6.71	6.85	134934574	130090203	3.59
Aldrin	7.44	7.37	7.51	145209912	142839845	1.63
Heptachlor epoxide	9.24	9.17	9.31	126391806	123392585	2.37
Endosulfan I	9.92	9.85	9.99	116773270	113617678	2.70
4,4'-DDE	10.69	10.62	10.76	123090976	119237257	3.13
Dieldrin	10.94	10.87	11.01	125803666	123119461	2.13
Endrin	11.46	11.39	11.53	113859046	112432041	1.25
Endosulfan II	12.87	12.80	12.94	199861988	192282387	3.79
4,4'-DDD	12.87	12.80	12.94	199863665	192282387	3.79
Endrin aldehyde	14.01	13.94	14.08	83399105	77374556	7.22
Endosulfan sulfate	14.90	14.83	14.97	88222610	87721348	0.57
4,4'-DDT	13.35	13.28	13.42	93848216	89091478	5.07
Endrin ketone	15.92	15.85	15.99	94688178	94552196	0.14
Methoxychlor	15.21	15.14	15.28	45744052	42278270	7.58
alpha-Chlordane	10.30	10.23	10.37	130709934	125834134	3.73
gamma-Chlordane	10.15	10.08	10.22	134183560	129377333	3.58
					Average %D	2.95

PESTICIDE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/18/2000

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(6399..6497)	1017-BK1	AQUEOUS	89		92		88		85	
SFB1011	6403-001	AQUEOUS	87		91		86		83	
GW-1	6486-001	AQUEOUS	67		100		87		96	
GW-2	6486-002	AQUEOUS	71		94		74		103	
SFB1013	6496-001	AQUEOUS	87		90		86		84	
WFB1013	6497-001	AQUEOUS	80		84		80		77	
RJ-10A	6497-003	AQUEOUS	77		97		82		92	
PROJ._AREA_2_CO	6399-001	AQUEOUS	66		102		74		98	
PEST	6496-001-MS1	AQUEOUS	82		87		84		81	
PEST	6496-001-MSD	AQUEOUS	85		90		87		84	
PEST	PBW1017-MS1	AQUEOUS	85		90		87		84	
(6496)	1017-BK2	SOIL	66		69		68		65	
RJ10A(A)	6496-003	SOIL	75		105		90		110	
RJ10A(B)	6496-004	SOIL	60		95		70		95	
PEST	6496-004-MS2	SOIL	70		93		69		90	
PEST	6496-004-MSD	SOIL	72		94		71		92	
PEST	PBS1017-MS2	SOIL	85		87		88		84	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59 - 147	59 - 151
DCB = Decachlorobiphenyl	63 - 179	60 - 150

Column to be used to flag recovery values
***** Values outside of QC limits
D Surrogate diluted out
M Matrix interference

4556

AQUEOUS PESTICIDES MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6496-001-MSD1

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	85.3	85	30 - 138
Heptachlor	100.0	0.0	85.9	86	42 - 137
Aldrin	100.0	0.0	87.4	87	32 - 147
Dieldrin	100.0	0.0	86.1	86	26 - 134
Endrin	100.0	0.0	79.1	79	22 - 164
4,4'-DDT	100.0	0.0	87.0	87	22 - 150

Compound	SAMPLE CONC. ADDED	MSD CONC. ADDED	MSD #	% REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC	0.0	78.8		79	7	14	30 - 138
Heptachlor	0.0	79.3		79	8	14	42 - 137
Aldrin	0.0	80.8		81	7	14	32 - 147
Dieldrin	0.0	79.9		80	7	14	26 - 134
Endrin	0.0	72.1		72	9	13	22 - 164
4,4'-DDT	0.0	80.1		80	8	16	22 - 150

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __6__ outside limits

Spike Recovery: __0___ out of __12__ outside limits

4557

PESTICIDE RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-W **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.93 **DCB 1** 18.74 **TCMX 2** 3.58 **DCB 2** 18.28

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX1 RT	#	DCB1 RT	#	TCMX2 RT	#	DCB2 RT	#
(6399..6497)	1017-BK1	10/18/2000	02:26	3.93		18.74		3.58		18.28	
SFB1011	6403-001	10/18/2000	02:51	3.93		18.74		3.58		18.28	
GW-1	6486-001	10/18/2000	03:16	3.93		18.74		3.58		18.28	
GW-2	6486-002	10/18/2000	03:41	3.93		18.74		3.58		18.28	
SFB1013	6496-001	10/18/2000	04:06	3.93		18.73		3.58		18.28	
WFB1013	6497-001	10/18/2000	04:31	3.93		18.74		3.58		18.28	
RJ-10A	6497-003	10/18/2000	04:56	3.93		18.73		3.58		18.28	
PROJ._AREA_2_CO	6399-001	10/18/2000	05:21	3.93		18.73		3.58		18.28	
PEST	6496-001-MS1	10/18/2000	05:46	3.93		18.74		3.58		18.28	
PEST	6496-001-MSD1	10/18/2000	06:11	3.93		18.74		3.58		18.28	
PEST	PBW1017-MS1	10/18/2000	06:36	3.93		18.73		3.58		18.28	
(6496)	1017-BK2	10/18/2000	07:26	3.93		18.74		3.58		18.28	
RJ10A(A)	6496-003	10/18/2000	07:51	3.93		18.74		3.58		18.28	
RJ10A(B)	6496-004	10/18/2000	08:16	3.93		18.74		3.58		18.28	
PEST	6496-004-MS2	10/18/2000	08:41	3.93		18.74		3.58		18.28	
PEST	6496-004-MSD2	10/18/2000	09:06	3.93		18.74		3.58		18.28	
PEST	PBS1017-MS2	10/18/2000	09:31	3.93		18.74		3.58		18.28	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene (_ 0.05 Minutes)

DCB = Decachlorobiphenyl (_ 0.10 Minutes)

\# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

4558

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2582.D\ECD1B.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2582.D\ECD2A.CH
Acq On : 10-18-00 3:16:24 AM Operator:
Sample : GW-1,6486-001,A,1000mL,100,10/17/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:08 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	322.5E6	2988.9E6	13.401	17.439 #
Spiked Amount 100.000			Recovery =		13.40%	17.44%
2) S DCB	18.74	18.28	466.2E6	2399.2E6	19.968	19.104
Spiked Amount 100.000			Recovery =		19.97%	19.10%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

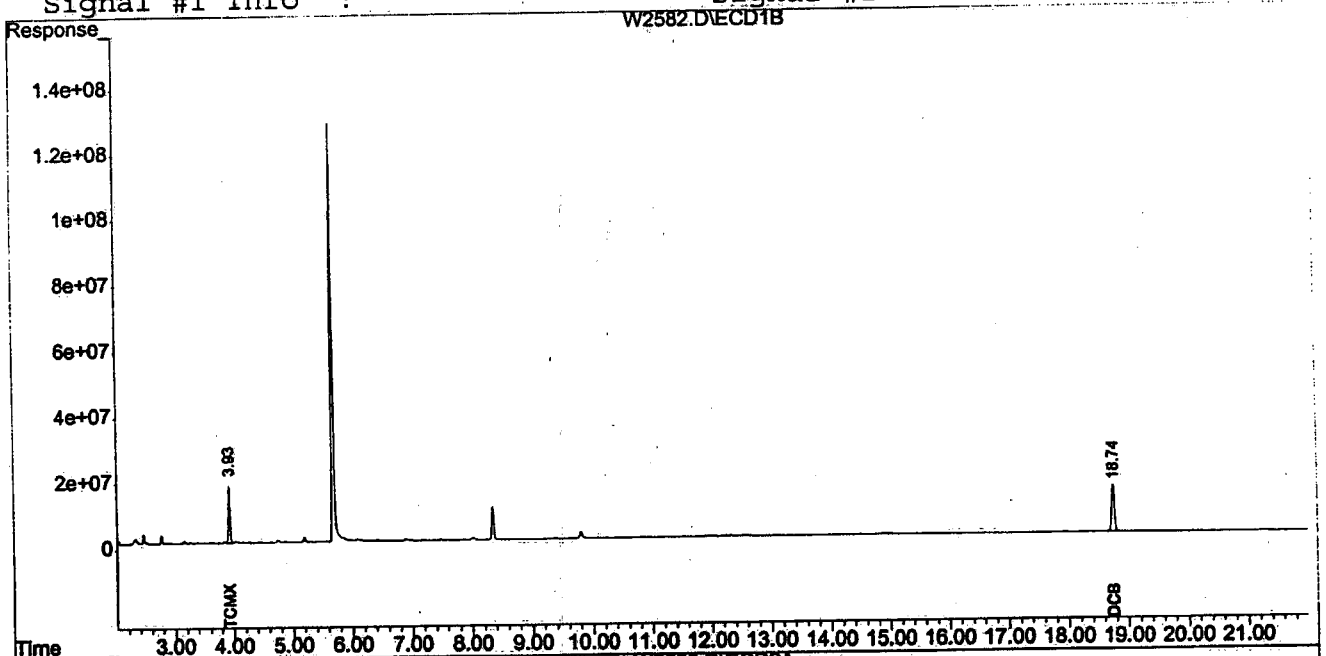
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W2582.D WPTC1009.M Wed Oct 18 14:40:35 2000 GC_W Page 1

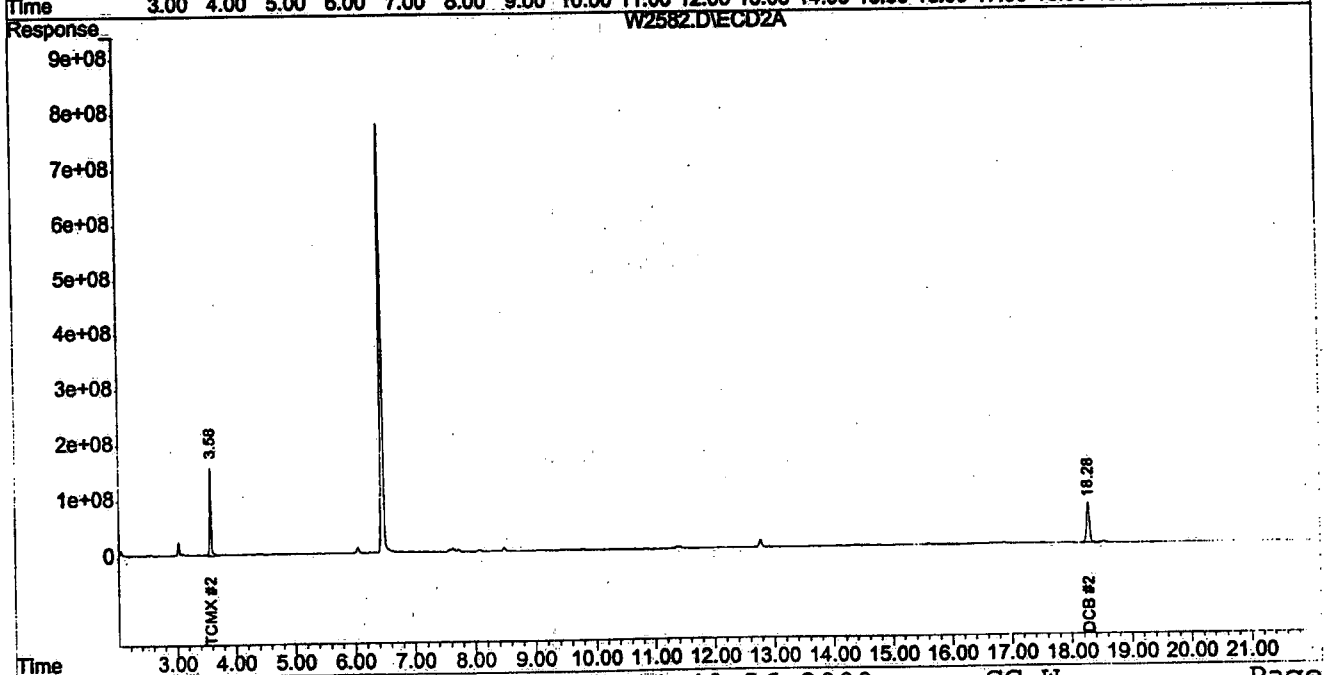
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2582.D\ECD1B.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2582.D\ECD2A.CH
Acq On : 10-18-00 3:16:24 AM Operator:
Sample : GW-1,6486-001,A,1000mL,100,10/17/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:08 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4560

119

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2583.D\ECD1B.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2583.D\ECD2A.CH
Acq On : 10-18-00 3:41:21 AM Operator:
Sample : GW-2,6486-002,A,1000mL,100,10/17/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:10 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	340.6E6	2536.5E6	14.157	14.800
Spiked Amount 100.000			Recovery =		14.16%	14.80%
2) S DCB	18.74	18.28	438.1E6	2591.4E6	18.763	20.635
Spiked Amount 100.000			Recovery =		18.76%	20.64%
Target Compounds						
11) T 4,4'-DDE	10.32	10.69	8670416	62307690	0.466m	0.506m
12) T 4,4'-DDD	11.43	12.92	17893021	107.5E6	1.250m	1.076m
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

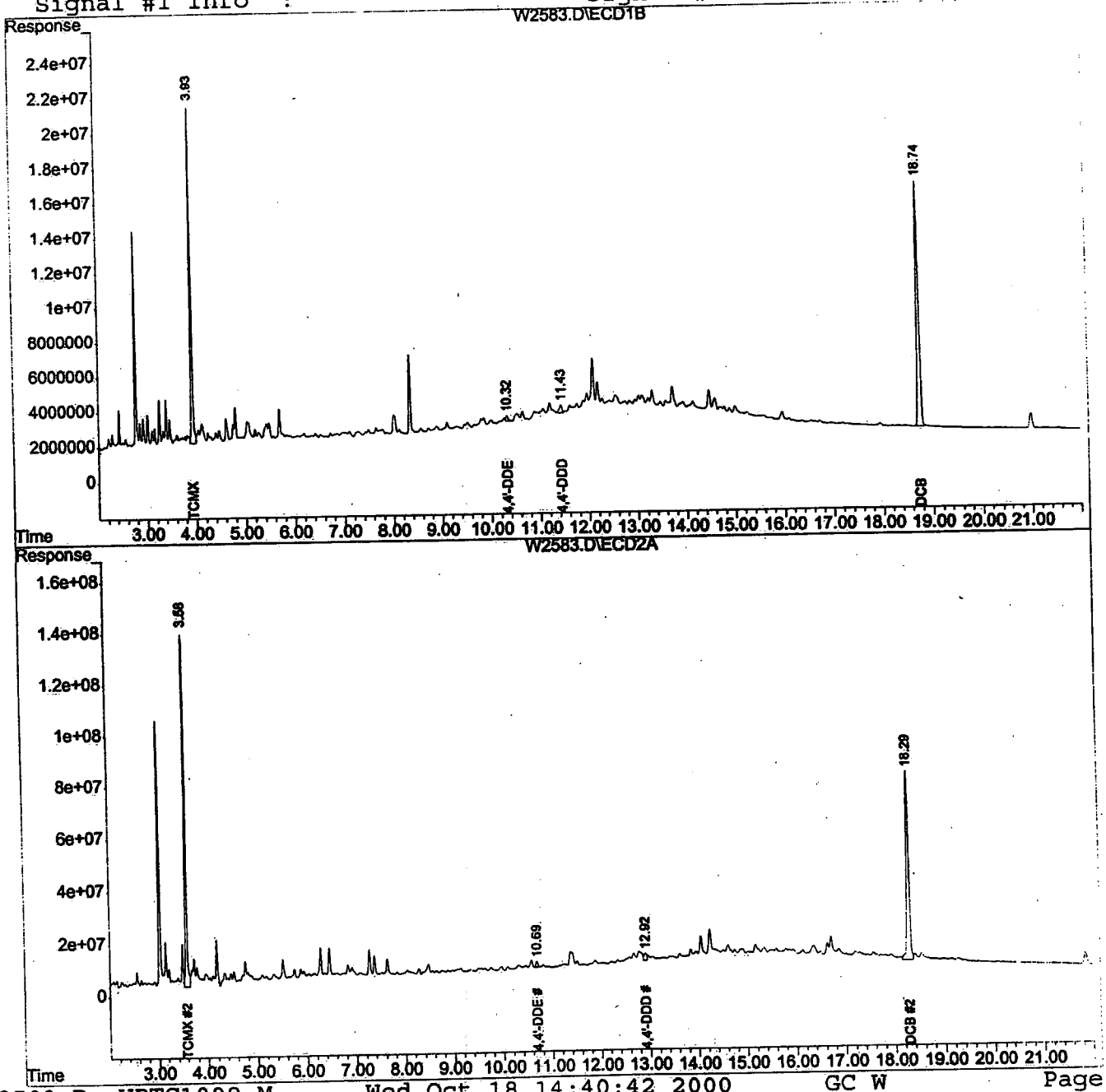
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2583.D\ECD1B.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2583.D\ECD2A.CH
Acq On : 10-18-00 3:41:21 AM Operator:
Sample : GW-2,6486-002,A,1000mL,100,10/17/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/12/00,10/16/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:10 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



4562

151

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2580.D\ECD1B.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2580.D\ECD2A.CH
Acq On : 10-18-00 2:26:19 AM Operator:
Sample : (6399..6497),1017-BK1,A,1000mL,100,10/17 Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	2135.3E6	15075.4E6	88.740	87.959
Spiked Amount 100.000			Recovery =		88.74%	87.96%
2) S DCB	18.74	18.28	2157.0E6	10647.8E6	92.378	84.786
Spiked Amount 100.000			Recovery =		92.38%	84.79%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W2580.D WPTC1009.M Wed Oct 18 14:05:32 2000 GC_W Page 1

152

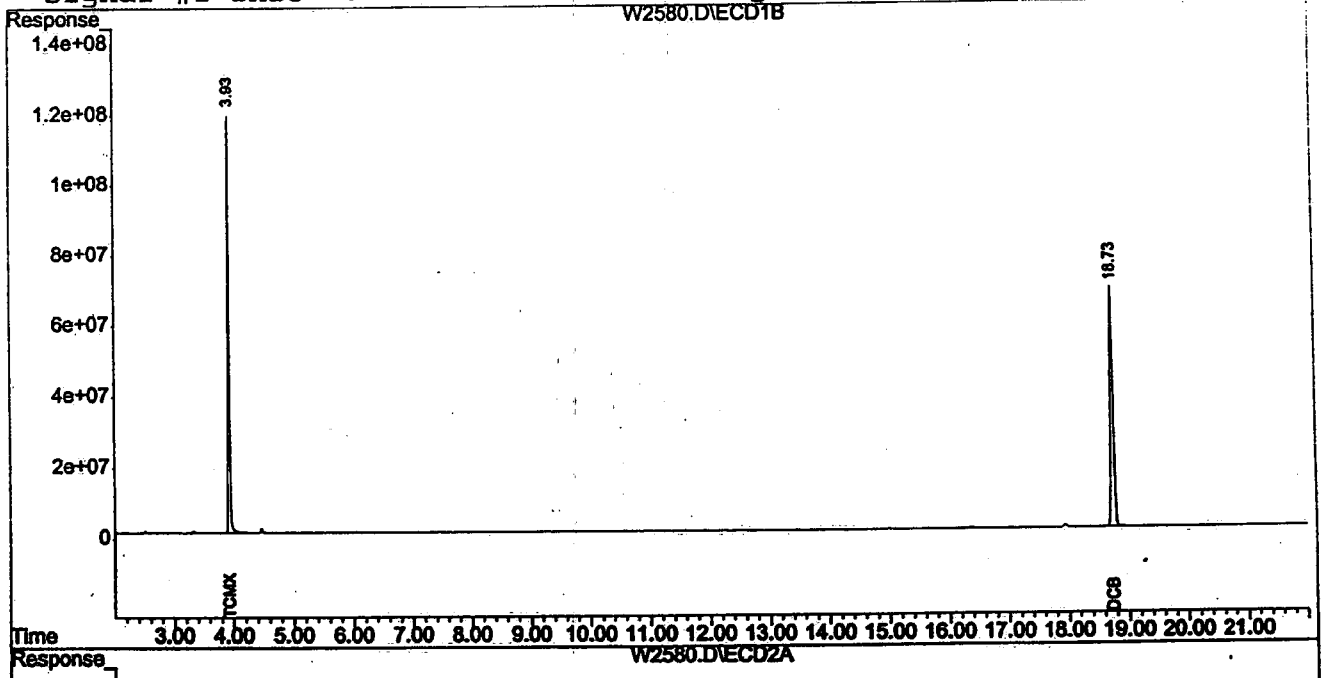
4563

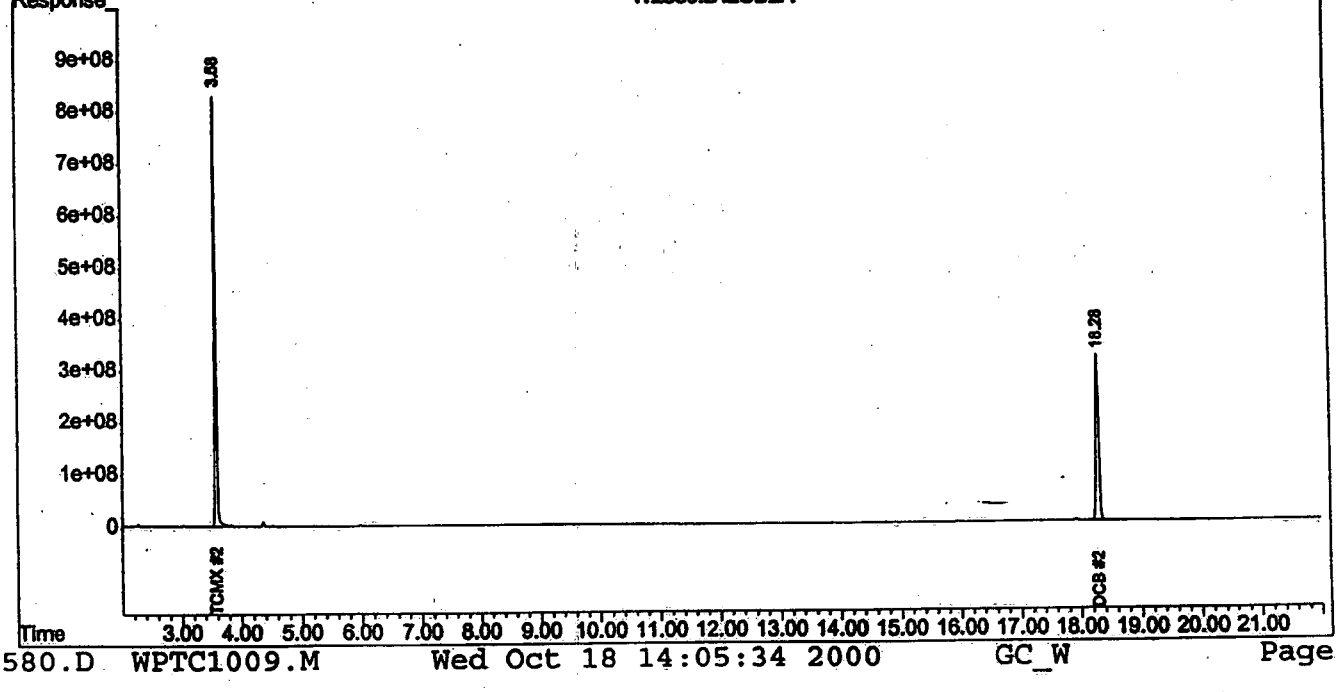
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2580.D\ECD1B.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2580.D\ECD2A.CH
Acq On : 10-18-00 2:26:19 AM Operator:
Sample : (6399..6497),1017-BK1,A,1000mL,100,10/17 Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4564

153

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2576.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2576.D\ECD2A.CH
Acq On : 10-18-00 12:46:16 AM Operator:
Sample : PEST_C_IAS_1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:00 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
	System Monitoring Compounds						
1) S	TCMX	3.93	3.58	2428.6E6	16968.2E6	100.930	99.003
	Spiked Amount 100.000			Recovery	=	100.93%	99.00%
2) S	DCB	18.74	18.28	2350.5E6	11674.1E6	100.665	92.958
	Spiked Amount 100.000			Recovery	=	100.67%	92.96%
	Target Compounds						
3) T	alpha-BHC	4.61	5.38	2640.3E6	18558.9E6	103.094	101.444
4) T	beta-BHC	5.10	8.34	938.8E6	6314.6E6	99.253	95.828
5) T	gamma-BHC	5.23	6.30	2358.7E6	16433.6E6	102.572	99.729
6) T	delta-BHC	5.71	8.89	2358.9E6	15466.1E6	102.795	99.376
7) T	Heptachlor	6.81	6.78	1892.0E6	12883.7E6	99.335	95.481
8) T	Aldrin	7.63	7.43	2138.8E6	14414.8E6	103.572	99.269
9) T	Heptachlor epoxi	8.64	9.24	1893.8E6	12437.5E6	102.950	98.404
10) T	Endosulfan I	9.56	9.92	1786.2E6	11481.2E6	103.062	98.320
11) T	4,4'-DDE	10.31	10.69	1865.9E6	11977.3E6	100.179	97.304
12) T	Dieldrin	10.25	10.94	1902.9E6	12367.1E6	103.039	98.305
13) T	Endrin	10.80	11.46	1494.9E6	10170.6E6	92.534	89.326
14) T	Endosulfan II	11.05	12.88	1668.5E6	10233.9E6	102.607	102.410
15) T	4,4'-DDD	11.43	12.88	1414.7E6	10233.9E6	98.820	102.409
16) T	Endrin aldehyde	11.58	14.01	1298.7E6	8158.6E6	103.157	97.826
17) T	Endosulfan sulfa	12.23	14.90	1504.2E6	8837.5E6	112.205	100.173
18) T	4,4'-DDT	12.45	13.35	1440.3E6	8936.9E6	98.841	95.228
19) T	Endrin ketone	13.44	15.92	1833.3E6	9677.8E6	108.740	102.207
20) T	Methoxychlor	14.12	15.21	616.1E6	4265.5E6	94.393	93.247
21) T	alpha-Chlordane	9.66	10.30	1951.3E6	12630.2E6	103.197	96.628
22) T	gamma-Chlordane	9.25	10.15	2021.5E6	13027.7E6	103.757	97.089
	Sum Chlordane			0	0	N.D.	N.D.
	Average Chlordane					0.000	0.000
	Sum Toxaphene			0	0	N.D.	N.D.
	Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W2576.D WPTC1009.M Wed Oct 18 14:04:46 2000 GC_W Page 1

4565

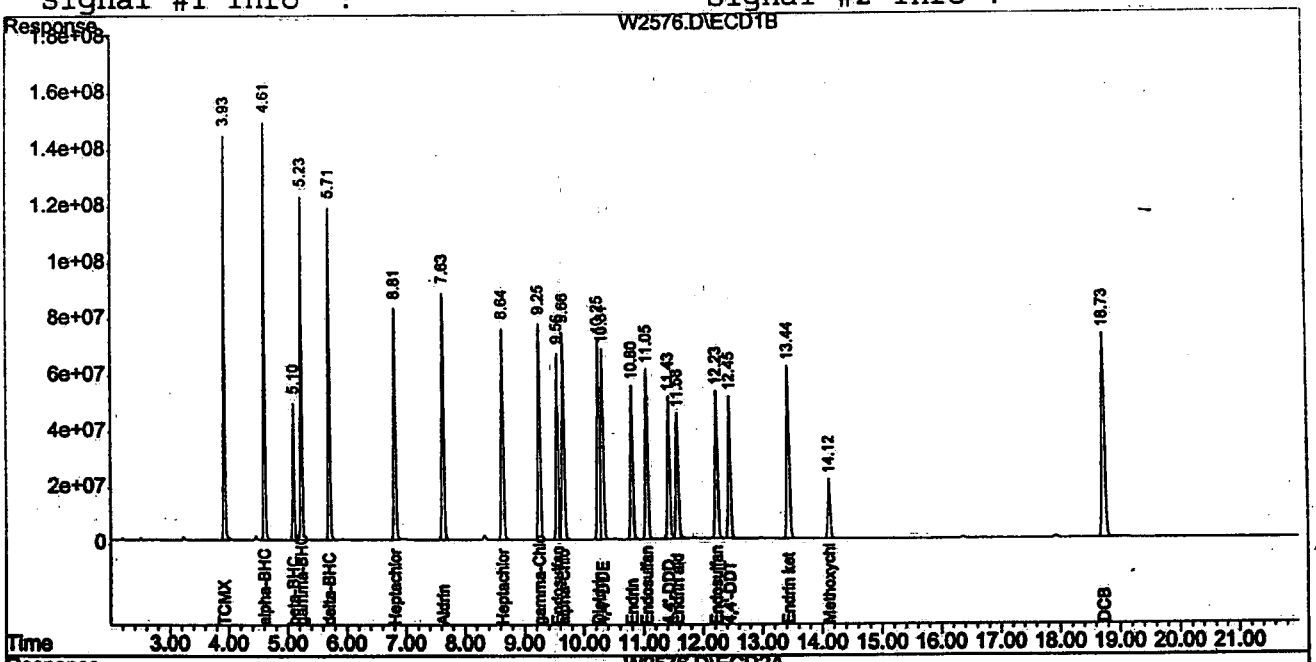
154

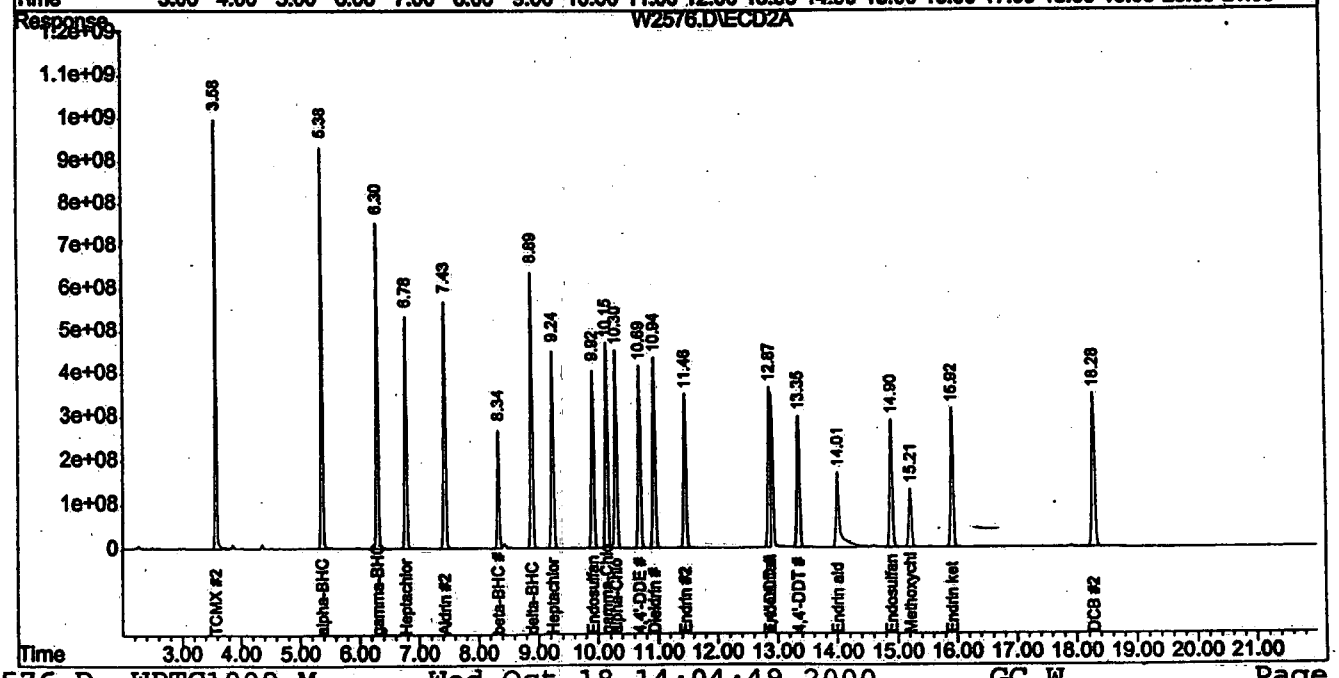
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2576.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2576.D\ECD2A.CH
Acq On : 10-18-00 12:46:16 AM Operator:
Sample : PEST_C_IAS_1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:00 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4566

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2578.D\ECD1B.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2578.D\ECD2A.CH
Acq On : 10-18-00 1:36:14 AM Operator:
Sample : TOXAPHENE_C_IAS_1395,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:00 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	2644.3E6	18682.2E6	109.894	109.003
Spiked Amount 100.000			Recovery	=	109.89%	109.00%
2) S DCB	18.74	18.28	2569.9E6	12892.6E6	110.060	102.661
Spiked Amount 100.000			Recovery	=	110.06%	102.66%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
2 L2 Toxaphene	13.25	14.40	217.2E6	1304.0E6	530.803	477.464
29) L2 Toxaphene (2)	13.37	14.49	162.4E6	932.7E6	532.547	483.543
30) L2 Toxaphene (3)	13.65	14.85	158.7E6	1033.2E6	520.600	490.947
31) L2 Toxaphene (4)	14.11	15.30	158.0E6	1093.3E6	547.135	479.141
32) L2 Toxaphene (5)	14.62	16.16	232.2E6	668.8E6	542.605	470.922
Sum Toxaphene			928.4E6	5031.9E6	2673.689	2402.018
Average Toxaphene					534.738	480.404

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W2578.D WPTC1009.M Wed Oct 18 14:04:53 2000 GC_W Page 1

4567

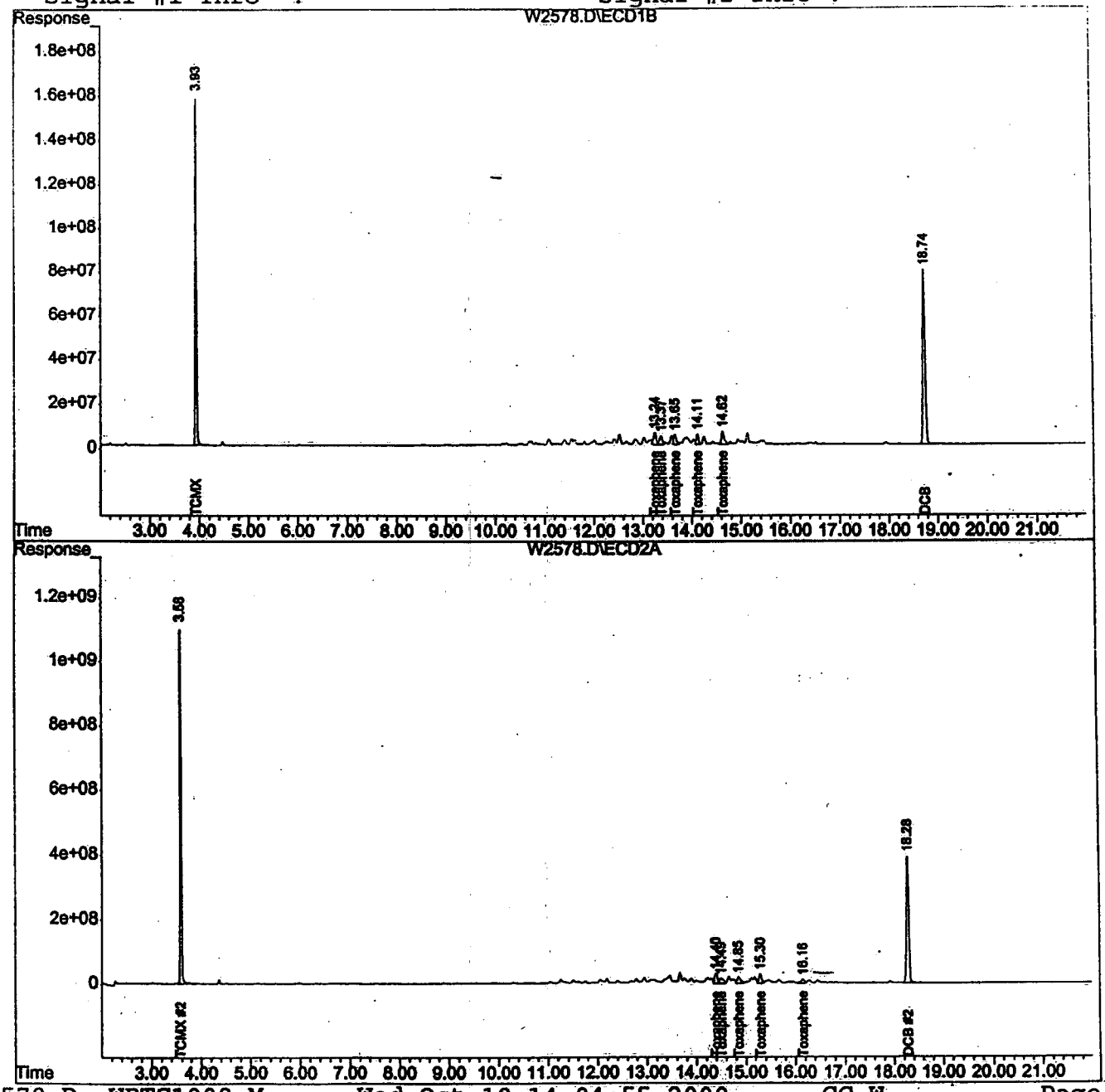
156

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2578.D\ECD1B.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2578.D\ECD2A.CH
Acq On : 10-18-00 1:36:14 AM Operator:
Sample : TOXAPHENE_C_IAS_1395,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 10:00 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



4566

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2579.D\ECD1B.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2579.D\ECD2A.CH
Acq On : 10-18-00 2:01:19 AM Operator:
Sample : CHLORDANE_C_IAS_1396,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 13:54 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	2937.9E6	20778.9E6	122.094	121.237
Spiked Amount 100.000			Recovery	=	122.09%	121.24%
2) S DCB	18.74	18.28	2867.2E6	14299.5E6	122.793	113.864
Spiked Amount 100.000			Recovery	=	122.79%	113.86%
Target Compounds						
23) L1 Chlordane	9.25	9.29	982.4E6	679.5E6	563.431m	546.240
24) L1 Chlordane {2}	9.45	9.75	180.3E6	1636.9E6	536.687m	539.299
25) L1 Chlordane {3}	9.66	10.15	933.9E6	6686.0E6	557.286m	534.315
26) L1 Chlordane {4}	9.80	10.30	469.9E6	5977.3E6	551.339m	537.547
27) L1 Chlordane {5}	11.65	10.36	323.4E6	3031.8E6	567.028	528.023
Sum Chlordane			2890.0E6	18011.4E6	2775.771	2685.424
Average Chlordane					555.154	537.085
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W2579.D WPTC1009.M Wed Oct 18 14:04:59 2000 GC_W Page 1

4569

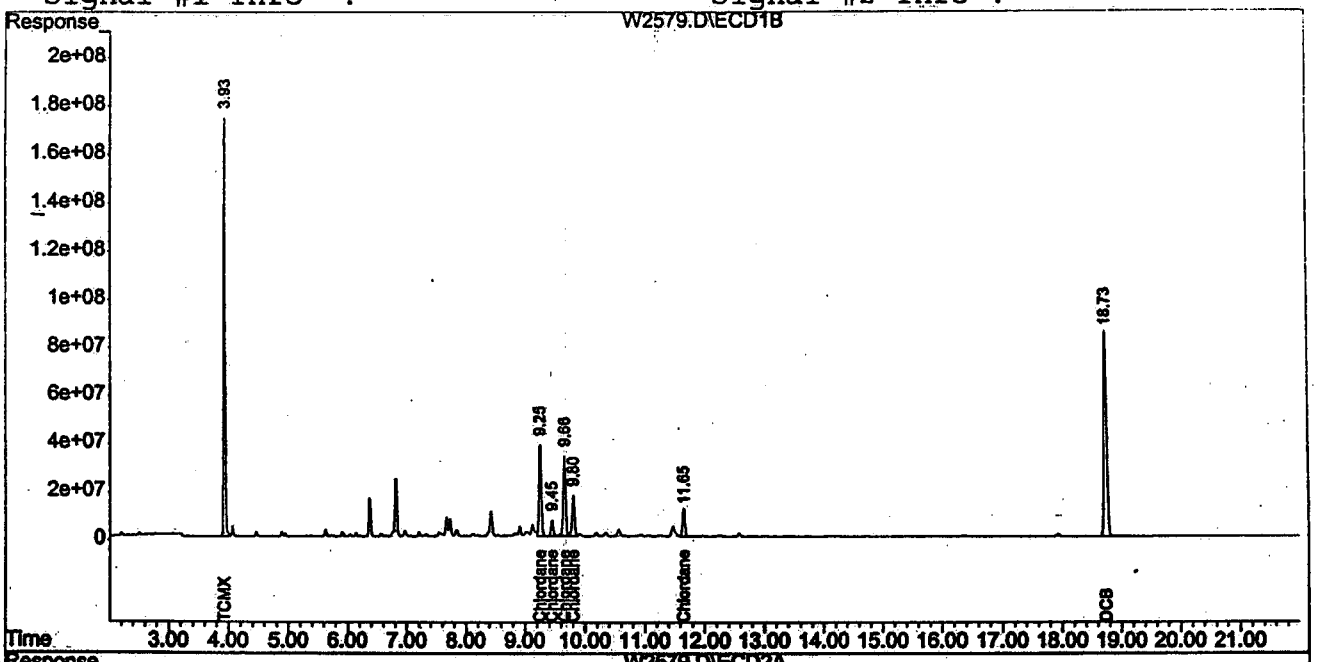
158

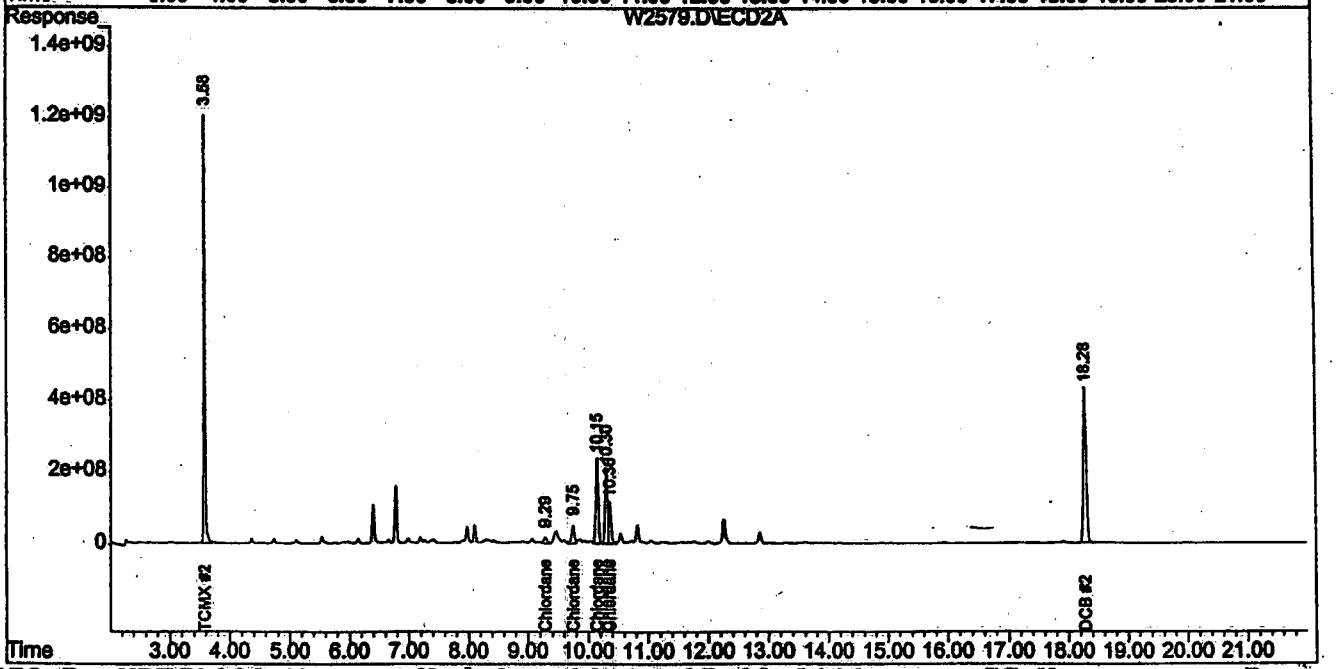
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2579.D\ECD1B.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2579.D\ECD2A.CH
Acq On : 10-18-00 2:01:19 AM Operator:
Sample : CHLORDANE_C_IAS_1396,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 13:54 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4570

159

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2599.D\ECD1B.CH Vial: 27
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2599.D\ECD2A.CH
Acq On : 10-18-00 10:32:21 AM Operator:
Sample : PEST_C_IAS_1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 14:14 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

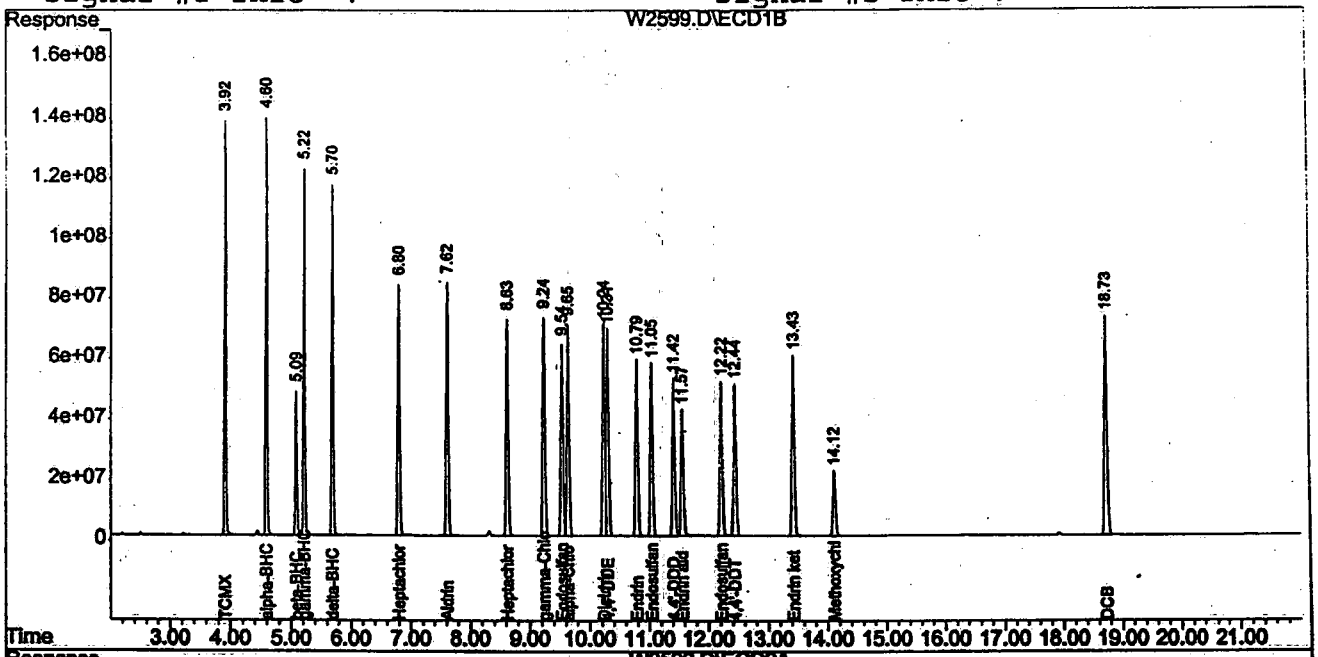
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2	
	System Monitoring Compounds							
1)	S TCMX	3.92	3.58	2304.8E6	16900.2E6	95.784	98.606	
	Spiked Amount 100.000			Recovery	=	95.78%	98.61%	
2)	S DCB	18.73	18.28	2238.8E6	11601.0E6	95.882	92.376	
	Spiked Amount 100.000			Recovery	=	95.88%	92.38%	
	Target Compounds							
3)	T alpha-BHC	4.60	5.38	2528.2E6	18459.7E6	98.714	100.902	
4)	T beta-BHC	5.09	8.34	911.3E6	6263.9E6	96.345	95.058	
5)	T gamma-BHC	5.22	6.30	2266.2E6	16369.1E6	98.548	99.337	
6)	T delta-BHC	5.70	8.89	2319.7E6	15530.3E6	101.086	99.789	
7)	T Heptachlor	6.80	6.78	1919.1E6	13009.0E6	100.761	96.410	
8)	T Aldrin	7.62	7.43	2032.1E6	14284.0E6	98.405	98.368	
9)	T Heptachlor epoxi	8.63	9.24	1809.1E6	12339.3E6	98.346	97.627	
10)	T Endosulfan I	9.55	9.92	1701.2E6	11361.8E6	98.155	97.298	
11)	T 4,4'-DDE	10.31	10.69	1837.5E6	11923.7E6	98.655	96.869	
12)	T Dieldrin	10.24	10.94	1845.2E6	12311.9E6	99.919	97.866	
13)	T Endrin	10.79	11.46	1632.5E6	11243.2E6	101.057	98.747	
14)	T Endosulfan II	11.05	12.87	1598.9E6	19228.2E6	98.328	192.415	#
15)	T 4,4'-DDD	11.42	12.87	1458.1E6	19228.2E6	101.851	192.414	#
16)	T Endrin aldehyde	11.57	14.01	1223.9E6	7737.5E6	97.214	92.776	
17)	T Endosulfan sulfa	12.22	14.90	1463.9E6	8772.1E6	109.199	99.432	
18)	T 4,4'-DDT	12.44	13.35	1438.8E6	8909.1E6	98.738	94.931	
19)	T Endrin ketone	13.43	15.92	1748.9E6	9455.2E6	103.735	99.856	
20)	T Methoxychlor	14.12	15.21	651.9E6	4227.8E6	99.876	92.424	
21)	T alpha-Chlordane	9.65	10.30	1851.8E6	12583.4E6	97.931	96.270	
22)	T gamma-Chlordane	9.24	10.15	1921.1E6	12937.7E6	98.607	96.418	
	Sum Chlordane			0	0	N.D.	N.D.	
	Average Chlordane					0.000	0.000	
	Sum Toxaphene			0	0	N.D.	N.D.	
	Average Toxaphene					0.000	0.000	

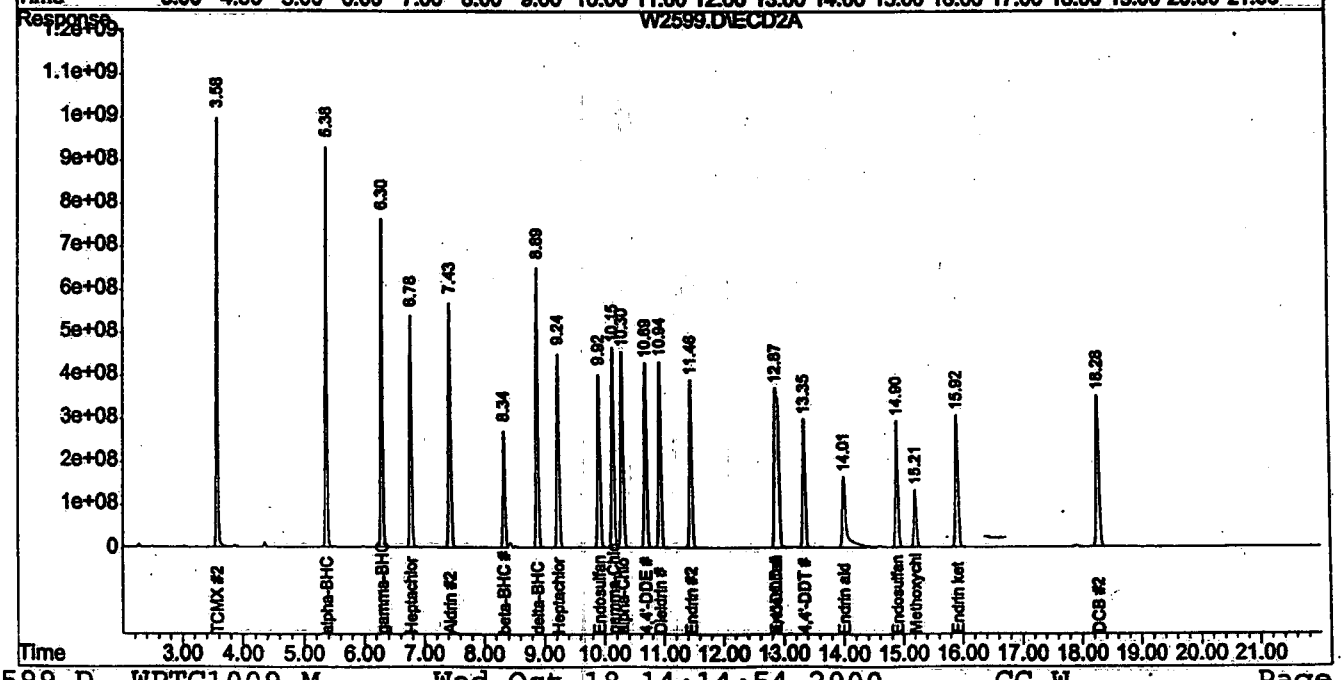
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\10-18-00\W2599.D\ECD1B.CH Vial: 27
Signal #2 : C:\HPCHEM\1\DATA\10-18-00\W2599.D\ECD2A.CH
Acq On : 10-18-00 10:32:21 AM Operator:
Sample : PEST_C_IAS_1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 18 14:14 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4572

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

BLANK RESULTS SUMMARY

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463
6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION	CONTINUING CALIBRATION 1	CONTINUING CALIBRATION 2	INST. MDL	REAGENT BLANK	MDL	IDL
Aluminum	ND	ND	ND	50.0	ND	100	
Antimony	ND	ND	ND	4.00	ND	8.00	
Arsenic	ND	ND	ND	2.00	ND	4.00	
Barium	ND	ND	ND	10.0	ND	20.0	
Beryllium	ND	ND	ND	2.00	ND	4.00	
Cadmium	ND	ND	ND	0.300	ND	0.600	
Calcium	ND	ND	ND	400	ND	800	
Chromium	ND	ND	ND	10.0	ND	20.0	
Cobalt	ND	ND	ND	20.0	ND	40.0	
Copper	ND	ND	ND	20.0	ND	40.0	
Iron	ND	ND	ND	50.0	ND	100	
Lead	ND	ND	ND	2.00	ND	4.00	
Magnesium	ND	ND	ND	100	ND	200	
Manganese	ND	ND	ND	5.00	ND	10.0	
Mercury	ND	ND	ND	0.250	ND	0.500	
Nickel	ND	ND	ND	10.0	ND	20.0	
Potassium	ND	ND	ND	100	ND	200	
Selenium	ND	ND	ND	4.00	ND	8.00	
Silver	ND	ND	ND	0.200	ND	0.400	
Sodium	ND	ND	ND	100	ND	200	
Thallium	ND	ND	ND	4.00	ND	8.00	
Vanadium	ND	ND	ND	15.0	ND	30.0	
Zinc	ND	ND	ND	10.0	ND	20.0	

This QC Blank applies to the following samples:

6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

4573

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463 6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION			CONTINUING CALIBRATION					MDL	IDL
	TRUE	FOUND	%R (1)	TRUE	FOUND	%R (1)	FOUND	%R (1)		
Aluminum	400	425	106	400	435	109	416	104	50.0	
Antimony	120	130	108	120	117	97.5	118	98.3	4.00	
Arsenic	20.0	19.8	99.0	20.0	19.6	98.0	18.2	91.0	2.00	
Barium	400	407	102	400	401	100	402	101	10.0	
Beryllium	10.0	10.1	101	10.0	9.76	97.6	10.3	103	2.00	
Cadmium	10.0	9.25	92.5	10.0	9.13	91.3	9.71	97.1	0.300	
Calcium	250000	236000	94.4	250000	236000	94.4	236000	94.4	400	
Chromium	20.0	21.1	106	20.0	21.0	105	21.6	108	10.0	
Cobalt	100	101	101	100	99.4	99.4	97.7	97.7	20.0	
Copper	50.0	51.2	102	50.0	52.2	104	50.7	101	20.0	
Iron	5000	4630	92.6	5000	4770	95.4	4930	98.6	50.0	
Lead	10.0	10.6	106	10.0	9.38	93.8	9.82	98.2	2.00	
Magnesium	250000	232000	92.8	250000	238000	95.2	237000	94.8	100	
Manganese	30.0	30.4	101	30.0	30.2	101	30.0	100	5.00	
Mercury	5.00	4.85	97.0	5.00	4.94	98.8	5.47	109	0.250	
Nickel	80.0	80.2	100	80.0	79.4	99.3	77.8	97.3	10.0	
Potassium	10000	10000	100	10000	9980	99.8	10100	101	100	
Selenium	10.0	10.7	107	10.0	10.3	103	9.57	95.7	4.00	
Silver	20.0	20.0	100	20.0	19.6	98.0	19.1	95.5	0.200	
Sodium	250000	266000	106	250000	261000	104	270000	108	100	
Thallium	20.0	21.5	108	20.0	19.0	95.0	20.3	102	4.00	
Vanadium	100	108	108	100	108	108	102	102	15.0	
Zinc	40.0	41.3	103	40.0	42.2	106	40.3	101	10.0	

(1) Control Limits: Mercury 80-120, Other Metals 90-110

4574

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463 6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SSR1	SR1	%R1	SA1	SSR2	SR2	%R2	SA2	CONTROL LIMIT %R
Aluminum	564	181	95.8	400	464	ND	116	400	75-125
Antimony	367	ND	91.8	400	387	ND	96.8	400	75-125
Arsenic	410	ND	103	400	415	ND	104	400	75-125
Barium	414	32.0	95.5	400	413	24.0	97.3	400	75-125
Beryllium	424	ND	106	400	430	ND	108	400	75-125
Cadmium	388	ND	97.0	400	372	ND	93.0	400	75-125
Calcium	52100	42200	124	8000	43000	34300	109	8000	75-125
Chromium	393	ND	98.3	400	396	ND	99.0	400	75-125
Cobalt	384	ND	96.0	400	382	ND	95.5	400	75-125
Copper	399	ND	99.8	400	393	ND	98.3	400	75-125
Iron	8840	635	103	8000	8620	417	103	8000	75-125
Lead	402	5.00	99.3	400	410	ND	103	400	75-125
Magnesium	19300	10900	105	8000	21600	13700	98.8	8000	75-125
Manganese	518	148	92.5	400	414	39.0	93.8	400	75-125
Mercury	10.1	ND	101	10.0					75-125
Nickel	379	ND	94.8	400	378	ND	94.5	400	75-125
Potassium	9010	1500	93.9	8000	11700	3940	97.0	8000	75-125
Selenium	415	ND	104	400	413	ND	103	400	75-125
Silver	384	ND	96.0	400	385	ND	96.3	400	75-125
Sodium	41800	32800	113	8000	131000	118000	NC	8000	75-125
Thallium	403	ND	101	400	412	ND	103	400	75-125
Vanadium	402	ND	101	400	412	ND	103	400	75-125
Zinc	571	168	101	400	421	ND	105	400	75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 1 6462-001

QC Sample 1 for following samples:
6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

QC Sample 2 6463-001

QC Sample 2 for following samples:
6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463 6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous

Concentration/Units: ppb (µg/L)

ANALYTE	SSR3	SR3	%R3	SA3	SSR4	SR4	%R4	SA4	CONTROL LIMIT %R
Antimony	362	ND	90.5	400	341	ND	85.3	400	75-125
Arsenic	407	10.0	99.3	400	393	10.0	95.8	400	75-125
Beryllium	421	ND	105	400	414	18.0	99.0	400	75-125
Cadmium	352	ND	88.0	400					75-125
Chromium	400	21.0	94.8	400	423	45.0	94.5	400	75-125
Copper	458	93.0	91.3	400	623	285	84.5	400	75-125
Lead	399	12.0	96.8	400	391	ND	97.8	400	75-125
Nickel	716	365	87.8	400	487	150	84.3	400	75-125
Selenium	398	ND	99.5	400	371	ND	92.8	400	75-125
Silver	376	ND	94.0	400					75-125
Thallium	400	ND	100	400	398	ND	99.5	400	75-125
Zinc	518	151	91.8	400	611	285	81.5	400	75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 3 6486-001

QC Sample 3 for following samples:
6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

QC Sample 4 6497-003

QC Sample 4 for following samples:
6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463 6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYT	SSR1	SR1	%R1	SA1	SSR2	SR2	%R2	SA2	CONTROL LIMIT %R
Arsenic	374	ND	93.5	400	397	ND	99.3	400	75-125
Lead	375	ND	93.8	400	396	ND	99.0	400	75-125
Manganese					1020	646	93.5	400	75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 1 6424-001

QC Sample 1 for following samples:
73-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1
24-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

QC Sample 2 6425-001

QC Sample 2 for following samples:
3-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463 6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 1	S1	D1	RPD1	CONTROL LIMIT 2	S2	D2	RPD2
Aluminum	20	181	176	2.80	NA	ND	ND	NC
Antimony	NA	ND	ND	NC	NA	ND	ND	NC
Arsenic	NA	ND	ND	NC	NA	ND	ND	NC
Barium	20	32.0	32.0	0	20	24.0	23.0	4.26
Beryllium	NA	ND	ND	NC	NA	ND	ND	NC
Cadmium	NA	ND	ND	NC	NA	ND	ND	NC
Calcium	20	42200	42800	1.41	20	34300	34500	0.581
Chromium	NA	ND	ND	NC	NA	ND	ND	NC
Cobalt	NA	ND	ND	NC	NA	ND	ND	NC
Copper	NA	ND	ND	NC	NA	ND	ND	NC
Iron	20	635	631	0.632	20	417	425	1.90
Lead	20	5.00	5.00	0	NA	ND	ND	NC
Magnesium	20	10900	10800	0.922	20	13700	13700	0
Manganese	20	148	149	0.673	20	39.0	40.0	2.53
Mercury	NA	ND	ND	NC				
Nickel	NA	ND	ND	NC	NA	ND	ND	NC
Potassium	20	1500	1510	0.664	20	3940	3990	1.26
Selenium	NA	ND	ND	NC	NA	ND	ND	NC
Silver	NA	ND	ND	NC	NA	ND	ND	NC
Sodium	20	32800	33500	2.11	20	118000	119000	0.844
Thallium	NA	ND	ND	NC	NA	ND	ND	NC
Vanadium	NA	ND	ND	NC	NA	ND	ND	NC
Zinc	20	168	173	2.93	NA	ND	ND	NC

S1 = Sample 1
D1 = Duplicate 1

S2 = Sample 2
D2 = Duplicate 2

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 1 6462-001

QC Sample 1 for following samples:

6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

QC Sample 2 6463-001

QC Sample 2 for following samples:

6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463
6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 3	S3	D3	RPD3	CONTROL LIMIT 4	S4	D4	RPD4
Antimony	NA	ND	ND	NC	NA	ND	ND	NC
Arsenic	20	10.0	10.0	0	20	10.0	10.0	0
Beryllium	NA	ND	ND	NC	20	18.0	21.0	15.4
Cadmium	NA	ND	ND	NC				
Chromium	20	21.0	20.0	4.88	20	45.0	46.0	2.20
Copper	20	93.0	107	14.0	20	285	289	1.39
Lead	20	12.0	12.0	0	NA	ND	ND	NC
Nickel	20	365	357	2.22	20	150	153	1.98
Selenium	NA	ND	ND	NC	NA	ND	ND	NC
Silver	NA	ND	ND	NC				
Thallium	NA	ND	ND	NC	NA	ND	ND	NC
Zinc	20	151	150	0.664	20	285	293	2.77

S3 = Sample 3
D3 = Duplicate 3

S4 = Sample 4
D4 = Duplicate 4

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 3 6486-001

QC Sample 3 for following samples:
6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

QC Sample 4 6497-003

QC Sample 4 for following samples:
6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

4579

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463 6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 1	S1	D1	RPD1	CONTROL LIMIT 2	S2	D2	RPD2
Arsenic	NA	ND	ND	NC	NA	ND	ND	NC
Lead	NA	ND	ND	NC	NA	ND	ND	NC
Manganese					20	646	643	0.465

S1 = Sample 1
D1 = Duplicate 1

S2 = Sample 2
D2 = Duplicate 2

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 1 6424-001

QC Sample 1 for following samples:
373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~ 6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07 6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04 6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

QC Sample 2 6425-001

QC Sample 2 for following samples:
373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~ 6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07 6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04 6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

4580

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463
6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

ANALYTE	AQUEOUS (ug/L)			SOLID (mg/kg)			
	TRUE	FOUND	%R(1)	TRUE	FOUND	LIMITS	%R(2)
Aluminum	400	385	96.3				
Antimony	400	364	91.0				
Arsenic	400	400	100				
Barium	400	389	97.3				
Beryllium	400	388	97.0				
Cadmium	400	388	97.0				
Calcium	8000	8290	104				
Chromium	400	395	98.8				
Cobalt	400	383	95.8				
Copper	400	384	96.0				
Iron	8000	8270	103				
Lead	400	379	94.8				
Magnesium	8000	7880	98.5				
Manganese	400	374	93.5				
Mercury	10.0	10.7	107				
Nickel	400	381	95.3				
Potassium	8000	7600	95.0				
Selenium	400	410	103				
Silver	400	386	96.5				
Sodium	8000	8020	100				
Thallium	400	382	95.5				
Vanadium	400	400	100				
Zinc	400	406	102				

(1) Control Limits = 90-110%
(2)Manufacture's Recomended Limits

Aqueous LCS Source: MV Laboratories

Solid LCS Source: Environmental Resource Associates: PriorityPollutnT/CLP Inorganics Soils

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SERIAL DILUTIONS & POST SPIKES

Lab Case Number: E00- 6373, 6390, 6407, 6423, 6424, 6425, 6437, 6458, 6462, 6463
6465, 6474, 6478, 6486, 6493, 6497, 6513, 6517, 6544

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SERIAL DILUTION		%	POST SPIKE		%
	SR	SDR	Difference	SPR	SA	Recovery
Aluminum	181			566	400	96.2
Antimony	ND			385	400	96.3
Arsenic	ND			411	400	103
Barium	32.0			421	400	97.3
Beryllium	ND			425	400	106
Cadmium	ND			382	400	95.5
Calcium	42200	40100	5.10			
Chromium	ND			393	400	98.3
Cobalt	ND			381	400	95.3
Copper	ND			405	400	101
Iron	635	693	8.73			
Lead	5.00			397	400	98.0
Magnesium	10900	10200	6.64			
Manganese	148			518	400	92.5
Mercury	ND			10.3	10.0	103
Nickel	ND			377	400	94.3
Potassium	1500			9140	8000	95.5
Selenium	ND			416	400	104
Silver	ND			386	400	96.5
Sodium	32800	33900	3.30			
Thallium	ND			402	400	101
Vanadium	ND			403	400	101
Zinc	168			575	400	102.0

SR = Sample Result
SDR = Sample Dilution Result

SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 85 - 115% Recovery

QC Sample : 6462-001

QC Sample for following samples:
6373-01~06; 6390-01; 6407-01~05, 07; 6423-07; 6517-1~2
6424-01~10, 12; 6425-01~02; 6437-01~02; 6458-01~07
6462-01~02, 14~15; 6463-01~03; 6465-01~02; 6474-04
6478-6; 6486-1~2; 6493-1; 6497-1, 3; 6513-9; 6544-1~2

4582

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
10/24/00

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

Quality Assurance Data- Blanks, Spikes, Duplicates

Associated Samples: 6486(001-002) 6500(001,009)
6486-001S/SD 6522-010
6544(001-002) 6523(002-003,005)
6497(001,003) 6440-001

Matrix: Aqueous Units: mg/L

BLANK

Parameter	Method Blank	MDL	Analysis Date
Cyanide	ND	0.020	10/23/00

Duplicate Recovery

Parameter	Lab No.		Result (mg/L)	Dup. Result (mg/L)	RPD	RPD Limits +/-
Cyanide	6486-001S		0.240	0.246	2	20

Spike Recovery

Parameter	Lab No.	Result (mg/L)	Spk Added (mg/L)	Spk Rec. (mg/L)	%SR	%Rec. Limits
Cyanide	6486-001	0.00	0.250	0.240	96	75-125

ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
NA= Not Applicable
++ = No Flash- Sample boiled at 100C

Copyright IAL Inc. 2000
All rights reserved.

4583

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
10/19/00

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

Quality Assurance Data- Blanks, Spikes, Duplicates

Associated Samples: 6552(001-003) 6465(001-002)
6508(001-003) 6465-001S/SD
6486-001-002

Matrix: Aqueous

Units: mg/L

BLANK

Parameter	Method Blank	MDL	Analysis Date
Phenols	ND	0.050	10/19/00

Duplicate Recovery

Parameter	Lab No.		Result (mg/L)	Dup. Result (mg/L)	RPD	RPD Limits +/-
Phenols	6465-001S		0.232	0.237	2	20

Spike Recovery

Parameter	Lab No.	Result (mg/L)	Spk Added (mg/L)	Spk Rec. (mg/L)	%SR	%Rec. Limits
Phenols	6465-001	0.00	0.250	0.232	93	75-125

<0.050

ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
NA= Not Applicable
++ = No Flash- Sample boiled at 100C

Copyright IAL Inc. 2000
All rights reserved.

4584

Phone # (973) 361-
Fax # (973) 989-5

INTEGRATED ANALYTICAL LABORATORIES
CHAIN OF CUSTODY

Franklin Rd
ph, NJ 07869

CLIENT & PROJECT

Name:	ENVIROTACTICS INC
Address:	2517 HWY 35 BUILDING D SUITE 202 MANASQUAN NJ 08736
Telephone #:	732-292-6100
Fax #:	732-292-2808
Project Name:	ORBIS
Project Manager:	CHRIS NEUFFER
Reference ID#:	PO#:

REPORTING

Fax to:	CHRIS NEUFFER
Fax #:	732-292-2808
Report to:	
Address:	
Invoice to:	
Address:	

Turnaround Time

Conditional / TPHC
24 hr* 48 hr 72 hr 1 wk NA Other:

Verbal/Fax
24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other:

Hard Copy
72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format

Results Only
Reduced
Regulatory
SRP Disk**: dbf or wk1
Other:

** Circle format required

ANALYTICAL PARAMETERS / PRESERVATIVES

SAMPLE MATRIX
W - Waste SL - Sludge A - Aqueous
O - Oil X - Other S - Soil
GW - Groundwater SOL - Solid

Preservatives
1. HCL 3. HNO_3
2. NaOH 4. H_2SO_4
5. MeOH 6. Other

COOLER TEMP 4 °C

SAMPLE INFORMATION

Sample ID	Sample Description	Sampling Date	Sampling Time	am	pm	Matrix	# of Containers	Lab ID	PP+40 BP	PN+15 ES									Comments
GW-1		10/12/00	1:45		X	A	8	1	✓	✓									
GW-2		10/12/00	3:30		X	A	8	2	✓	✓									

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Concentrations Expected: LOW MED HIGH

Known Hazard yes no
Describe

CUSTODY LOG

	Signature	Date	Time		Signature
Relinquished by:	[signature]	10/13/00	1210	Received by:	[signature]
Relinquished by:	[signature]	10/13/00	1900	Received by:	IAL Fridge
Relinquished by:	IAL Fridge	10/16/00	12:00	Received by:	[signature]
Relinquished by:				Received by:	
Relinquished by:				Received by:	

Comments: no labelled test

Lab Case # 6486

PAGE: 1 OF 1

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

4585

174

CHAIN OF CUSTODY

Case No.: E00-6486
Project : ORBIS
Client/Project: ENVTACT/ORBIS
Client Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan, NJ 08736
Date Received: 10/16/00
Time Received: 11:00
Report Format: Reduced

P.O. #: _____

Billing Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 20
Manasquan, NJ 08736
Verbal Due: Oct 30
Report Due: Nov 6

# of Containers	8	8
IAL ID #	6486-001	6486-002
Client ID #	GW-1	GW-2
Matrix	Aqueous	Aqueous
Sample Date	10/12/00	10/12/00
Sample Time	13:45	15:30
VO+15, PP LIST	√	√
Pesticides	√	√
PCB	√	√
BNA + 25	√	√
PP Metals -LOW	√	√
Cyanide, Total	√	√
Phenols	√	√
Electronic Del.	√	

Comments: NOTE 1: AS PER DENISE'S CONVERSATION W/ CHRIS N., ANALYZE SAMPLES FOR PP+40.
NOTE 2: PLEASE MEET GROUNDWATER LIMITS FOR METALS.

4586

INTEGRATED ANALYTICAL LABORATORIES, LLC
SAMPLE RECEIPT VERIFICATION

CASE NO: № 6456 CLIENT: ENVIROTACTICS Inc.

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

CHAIN OF CUSTODY: COMPLETE / INCOMPLETE Comments:

		Comments:
Sample Bottles Intact:	✓	
Sample Labels Intact/ Correct:	✓	
Sufficient Sample Volume:	✓	
Correct bottles/ preservative:	✓	
Samples received in holding time/ prep time:	✓	
Headspace/ bubbles in voa samples:	✓	
Samples to be subcontracted:	✓	
Preserved Sample pH checked: (Excluding voa samples)	✓	

KEY
✓ = YES
✗ = NO
(✓) = N/A

ADDITIONAL COMMENTS: See chain of custody

SAMPLE(S) VERIFIED BY: INITIAL BP DATE 10/16/00

CORRECTIVE ACTION REQUIRED: YES ✓ NO

CLIENT NOTIFIED: YES ✓ Date/ Time: 10/16 1330 NO

PROJECT CONTACT: Chris N.

SUBCONTRACTED LAB:

DATE SHIPPED:

CORRECTIVE ACTION BY CLIENT: Samples to be analyzed for PP+40, reduced detection ok.

CORRECTIVE ACTION TAKEN:

CONCLUSION:

Corrective Action taken by: INITIAL EJ DATE 10/16

REV 5/99

4587

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E00-6486
Client : Envirotactics Inc.
Project : ORBIS

	GC/MS V		EXTRACT DATE	EXTRACT TIME	EXTRACT INITIAL	ANALYSIS DATE	ANALYSIS TIME	ANALYSIS INITIAL
VO+15, PP LIST	6486-001	A		/		10/16 - 10/18		DSD
	6486-002	A				↓		↓
	GC EX							
Pesticides	6486-001	A	10/17	900	DM2	10.17-00	1200	cat
	6486-002	A		↓		↓	↓	↓
PCB	6486-001	A				10.17	100	[illegible]
	6486-002	A		↓			↓	
	GC/MS X							
BNA + 25	6486-001	A	10/19	700 - 300	DL	10/19		DPL
	6486-002	A		↓			↓	
	METALS							
PP Metals -LOW	6486-001	A	10/17	700	[illegible]	10/18	DD	
	6486-002	A		↓	↓		↓	
	WETCHEM							
Cyanide, Total	6486-001	A	10/19		SA	10/23		SA
	6486-002	A	↓		↓	↓		↓
Phenols	6486-001	A	10/17	900	DM	10/19	1430	DM
	6486-002	A		↓			↓	
	AIR							
Electronic Del.	6486-001	A		—			—	

REVIEW & APPROVAL: R Ramsay
REMARKS :

4588

Integrated Analytical Laboratories, LLC.

273 Franklin Road
Randolph, N.J. 07869

Phone: 973 361-4252
Fax: 973 989-5288

ANALYTICAL DATA REPORT

for
Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan,NJ 08736

Project: ORBIS
Lab Case Number: E00-6734
Date Report Prepared: November 8, 2000

CLIENT SAMPLE ID	LABORATORY SAMPLE ID
GW-3	6734-001
GW-4	6734-002
GW-5	6734-003
GW-6	6734-004
TB	6734-005

All required protocols were followed during analyses. These data have been reviewed and accepted by

Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, LLC. is limited to the actual cost of the analyses performed.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

	Page
Qualifiers	1
Conformance / NonConformance Summary	2
Laboratory Deliverables Check List	3
GC/MS NonConformance Summary	4
GC NonConformance Summary	5
Metal NonConformance Summary	6
Summary Report	7
Analytical Results	
Volatiles	xx
Semivolatiles	xx
PCB's	xx
Pesticides	xx
PP Metals	xx
General Analytical	
Cyanide, Total	xx
Phenols	xx
Methodology Summary	xx
Quality Control	
Volatiles	xx
Tuning Results Summary	
Method Blank Results Summary	
Calibration Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Internal Standard Summary	
Chromatograms	
Semivolatiles	xx
Tuning Results Summary	
Method Blank Results Summary	
Calibration Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Internal Standard Summary	
Chromatograms	
PCB's	xx
Method Blank Results Summary	
Standards Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Retention Time Shift Summary	
Chromatograms	

INTEGRATED ANALYTICAL LABORATORIES, LLC.

TABLE OF CONTENTS

	Page
Quality Control Cont.	
Pesticides	xx
Method Blank Results Summary	
Standards Summary	
Surrogate Compound Recovery Results Summary	
Matrix Spike/Matrix Spike Duplicate Results Summary	
Retention Time Shift Summary	
Chromatograms	
PP Metals	xx
Method Blank Results Summary	
Calibration Summary	
Spike Sample Results Summary	
Duplicate Sample Results Summary	
General Analytical	xx
Blank Results Summary	
Spike Sample Results Summary	
Duplicate Sample Results Summary	
Sample Tracking	
Chains of Custody	xx
Laboratory Chronicle	xx

INTEGRATED ANALYTICAL LABORATORIES, LLC.

MATRIX QUALIFIERS

A - Indicates the sample is an Aqueous matrix.

O - Indicates the sample is an Oil matrix.

S - Indicates the sample is a Soil, Sludge or Sediment matrix.

X - Indicates the sample is an Other matrix as indicated by Client Chain of Custody.

DATA QUALIFIERS

B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of the analyte.

C - Common Laboratory Contaminant.

D - The compound was reported from the Diluted analysis.

D.F. - Dilution Factor.

E - Estimated concentration, reported results are outside the calibrated range of the instrument.

J - Indicates an estimated value. The compound was detected at a value below the method detection limit but greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.

MDL - Method Detection Limit.

MI - Indicates compound concentration could not be determined due to Matrix Interferences.

NA - Not Applicable.

ND - Indicates the compound was analyzed for but Not Detected at the MDL.

REPORT QUALIFIERS

All solid sample analyses are reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

4592

INTEGRATED ANALYTICAL LABORATORIES, LLC.

CONFORMANCE / NONCONFORMANCE SUMMARY

Integrated Analytical Laboratories, LLC. received five (5) aqueous sample(s) from Envirotactics Inc. (Project: ORBIS) on October 26, 2000 for the analysis of:

(2) Volatiles + 15
(3) Volatiles + 10
(2) Semivolatiles - BNA + 25
(2) Semivolatiles - BN + 15
(2) PCB's
(2) Pesticides
(2) PP Metals
(2) Cyanide, Total
(2) Phenols

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

11/8/00
Date

4593

INTEGRATED ANALYTICAL LABORATORIES, LLC.

LABORATORY DELIVERABLES CHECK LIST

Lab Case Number: E00-6734

		Check If Complete
1.	Cover Page, Title Page listing Lab Certification #, facility name & address and date of report preparation.	✓
2.	Table of Contents.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds.	✓
4.	Summary Table cross-referencing Field ID's vs. Lab ID's.	✓
5.	Document bound, paginated and legible.	✓
6.	Chain of Custody.	✓
7.	Methodology Summary.	✓
8.	Laboratory Chronicle and Holding Time Check.	✓
9.	Results submitted on a dry weight basis (if applicable).	✓
10.	Method Detection Limits.	✓
11.	Lab certified by NJDEP for parameters or appropriate category of parameters or a member of the USEPA CLP.	✓
12.	NonConformance Summary.	✓

M C Slatzer
QC Reviewed by

11/8/00
Date

4594

INTEGRATED ANALYTICAL LABORATORIES
CONFORMANCE/NONCONFORMANCE SUMMARY
GC/MS VOLATILE ANALYSIS

Lab Case Number: E00 - 6734

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. BFB Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series and 8 hours for 500 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series, 12 hours for 8000 series		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds		NA
b. System Performance Check Compounds		NA
6. Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)		✓
If not met, were the calculations checked and the results qualified as "estimated"?		NA
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range)		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		NA
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed		✓

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other
✓			

13. Comments:

Organics Manager

11-3-00
Date

rev 06/00

4595

CONFORMANCE/NONCONFORMANCE SUMMARY

GC/MS SEMIVOLATILE ANALYSIS

Lab Case Number: E00- 6734

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2. GC/MS Tuning Specifications: a. DFTPP Passed		✓
3. GC/MS Tuning Frequency - Performed every 24 hours for 600 series, 12 hours for 8000 series.		✓
4. GC/MS Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis for 600 series.		✓
5. GC/MS Calibration Requirements: a. Calibration Check Compounds b. System Performance Check Compounds		✓ ✓
6. Blank Contamination - If yes, list compounds and concentrations in each blank: a. B/N Fraction b. Acid Fraction	✓	
7. Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range) a. B/N Fraction b. Acid Fraction If not met, were the calculations checked and the results qualified as "estimated"?		✓
8. Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) a. B/N Fraction b. Acid Fraction		✓
9. Internal Standard Area/Retention Time Shift meet criteria		✓
10. Extraction Holding Time Met If not met, list number of days exceeded for each sample:		✓
11. Analysis Holding Time Met If not met, list number of days exceeded for each sample:		✓
12. Sample Dilution Performed		✓

High Target Compounds	High Nontarget Compounds	Matrix Interference	Other
✓			

13. Comments:

Organics Manager

11/01/00
Date

rev 06/00

4596

INTEGRATED ANALYTICAL LABORATORIES

GC ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E00 - 6734

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks).		✓
2.	Standards Summary submitted.		✓
3.	Calibration - Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hrs of the sample analysis.		✓
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:	✓	
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
5.	Surrogate Recoveries meet criteria (if applicable). If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
6.	Matrix Spike/Matrix Spike Duplicate meet criteria (if not, list those compounds and their recoveries/% differences which fall outside the acceptable range) acceptable range:		✓
	a. PCB's		
	b. Pesticides		
	c. Herbicides		
7.	Retention Time Shift Meet Criteria (if applicable).		✓
8.	Extraction Holding Time Met. If not met, list number of days exceeded for each sample:		✓
9.	Analysis Holding Time Met. If not met, list number of days exceeded for each sample:		✓

Comments:

Organic Manager

10.31.00
Date

rev 01/00

4597

INTEGRATED ANALYTICAL LABORATORIES

METAL ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

Lab Case Number: E00 - 6734

	No	Yes
1. Calibration Summary Meet Criteria.		✓
2. ICP Interference Check Sample Results Meets Criteria (if applicable)		NA
3. Serial Dilution Summary Submitted (if applicable) / Meets Criteria		✓
4. Internal Standards Meet Criteria (if applicable)		✓
5. Laboratory Control Sample Summary Submitted (if applicable)/Meets Criteria		✓
6. Blank Contamination: If yes, list compounds and concentrations in each blank:	✓	
7. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria. (If not, list those compounds and their recoveries which fall outside the acceptable range).		✓
8. Extraction Holding Time Met. If not, list number of days exceeded for each sample:		✓
9. Analysis Holding Time Met. If not, list number of days exceeded for each sample:		✓

Additional Comments:

H. Falck-Jorgensen
Inorganics Manager

10/31-00
Date

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT
Client: Envirotactics Inc.
Project: ORBIS
Lab Case No.: E00-6734

	Lab ID:	6734-001	6734-002	6734-003	6734-004	6734-005
	Client ID:	GW-3	GW-4	GW-5	GW-6	TB
	Matrix:	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
	Sampled Date:	10/24/2000	10/24/2000	10/24/2000	10/24/2000	10/24/2000
PARAMETER(Units)						
Volatiles (ppb)						
Chloroform		ND	ND	ND	1160	ND
1,2-Dichloroethane(EDC)		0.587	ND	ND	ND	ND
Benzene		7.43	9990	4210	12200	ND
Toluene		0.607	ND	44.9	30200	ND
Tetrachloroethene		ND	ND	ND	1250	ND
Chlorobenzene		16.6	863	ND	980	ND
Total Xylenes		ND	ND	ND	617	ND
1,3-Dichlorobenzene		ND	ND	ND	1610	ND
1,2-Dichlorobenzene		0.573	ND	ND	19100	ND
TOTAL VO's:		25.797	10853	4254.9	67117	ND
TOTAL TIC's:		4.3	ND	ND	1650	ND
TOTAL VO's & TIC's:		30.097	10853	4254.9	68767	ND
Semivolatiles - BN (ppb)						
1,3-Dichlorobenzene		-	1.62	ND	-	-
1,4-Dichlorobenzene		-	10.8	ND	-	-
1,2-Dichlorobenzene		-	4.51	ND	-	-
Acenaphthene		-	21.5	ND	-	-
Diethylphthalate		-	3.23	ND	-	-
TOTAL BN'S:		-	41.66	ND	-	-
TOTAL TIC's:		-	1523.7	8.4	-	-
TOTAL BN'S & TIC's:		-	1565.36	8.4	-	-

- = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
Continued on next page.

SUMMARY REPORT

Client: Envirotactics Inc.
Project: ORBIS
Lab Case No.: E00-6734

	Lab ID:	6734-001	6734-002	6734-003	6734-004	6734-005
	Client ID:	GW-3	GW-4	GW-5	GW-6	TB
	Matrix:	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
	Sampled Date:	10/24/2000	10/24/2000	10/24/2000	10/24/2000	10/24/2000
PARAMETER(Units)						
Semivolatiles - BNA (ppb)						
Phenol		ND	-	-	350 D	-
1,3-Dichlorobenzene		ND	-	-	49.1	-
1,4-Dichlorobenzene		ND	-	-	217 D	-
Benzyl alcohol		ND	-	-	64.9	-
1,2-Dichlorobenzene		ND	-	-	2420 D	-
2-Methylphenol		ND	-	-	14.9	-
4-Methylphenol		ND	-	-	268 D	-
2,4-Dichlorophenol		ND	-	-	121 D	-
Naphthalene		ND	-	-	174 D	-
2-Methylnaphthalene		ND	-	-	7.55	-
2,4,5-Trichlorophenol		ND	-	-	15.7	-
Diethylphthalate		2.94	-	-	6.33	-
Di-n-butylphthalate		ND	-	-	29.6	-
TOTAL BNA'S:		2.94	-	-	3738.08	-
TOTAL TIC's:		66.9	-	-	1849.5	-
TOTAL BNA'S & TIC's:		69.84	-	-	5587.58	-
PCB's (ppb)		ND	-	-	ND	-
Pesticides (ppb)		ND	-	-	ND	-
Metals (ppm)						
Antimony		ND	-	-	ND	-
Arsenic		0.0128	-	-	0.00662	-
Beryllium		ND	-	-	ND	-
Cadmium		ND	-	-	ND	-
Chromium		ND	-	-	ND	-
Copper		ND	-	-	ND	-
Lead		ND	-	-	ND	-
Mercury		ND	-	-	ND	-
Nickel		ND	-	-	ND	-
Selenium		ND	-	-	ND	-
Silver		ND	-	-	ND	-
Thallium		ND	-	-	ND	-
Zinc		0.0364	-	-	0.0247	-
General Analytical						
Cyanide, Total (ppm)		0.0305	-	-	ND	-
Phenol (ppm)		ND	-	-	6.92	-

- = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
D = The compound was reported from the Diluted analysis

4600

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/2000
Date Analyzed: 11/01/2000
Data file: E3920.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.36
Vinyl Chloride	ND		0.39
Bromomethane	ND		0.41
Chloroethane	ND		0.36
Trichlorofluoromethane	ND		0.44
Acrolein	ND		2.01
1,1-Dichloroethene	ND		0.47
Methylene Chloride	ND		1.91
Acrylonitrile	ND		2.87
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.3
Chloroform	ND		0.28
1,1,1-Trichloroethane	ND		0.36
Carbon Tetrachloride	ND		0.33
1,2-Dichloroethane(EDC)	0.587		0.36
Benzene	7.43		0.25
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.22
2-Chloroethylvinyl Ether	ND		0.22
cis-1,3-Dichloropropene	ND		0.22
Toluene	0.607		0.3
trans-1,3-Dichloropropene	ND		0.22
1,1,2-Trichloroethane	ND		0.3
Tetrachloroethene	ND		0.39
Dibromochloromethane	ND		0.3
Chlorobenzene	16.6		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.88
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.25
1,3-Dichlorobenzene	ND		0.3
1,4-Dichlorobenzene	ND		0.3
1,2-Dichlorobenzene	0.573		0.28

Total Target Compounds: 25.797

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/2000
Date Analyzed: 11/01/2000
Date File: E3920.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
001634-04-4	Methyl-t-Butyl Ether(MTBE)	4.3	4.45

Total TICs = 4.3

4602

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-002
Client ID: GW-4
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Data file: E3925.D

GC/MS Column: DB-624
Sample wt/vol: 0.05mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 100
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		36
Vinyl Chloride	ND		39
Bromomethane	ND		41
Chloroethane	ND		36
Trichlorofluoromethane	ND		44
Acrolein	ND		201
1,1-Dichloroethene	ND		47
Methylene Chloride	ND		191
Acrylonitrile	ND		287
trans-1,2-Dichloroethene	ND		39
1,1-Dichloroethane	ND		30
Chloroform	ND		28
1,1,1-Trichloroethane	ND		36
Carbon Tetrachloride	ND		33
1,2-Dichloroethane(EDC)	ND		36
Benzene	9990		25
Trichloroethene	ND		36
1,2-Dichloropropane	ND		25
Bromodichloromethane	ND		22
2-Chloroethylvinyl Ether	ND		22
cis-1,3-Dichloropropene	ND		22
Toluene	ND		30
trans-1,3-Dichloropropene	ND		22
1,1,2-Trichloroethane	ND		30
Tetrachloroethene	ND		39
Dibromochloromethane	ND		30
Chlorobenzene	863		28
Ethylbenzene	ND		30
Total Xylenes	ND		88
Bromoform	ND		28
1,1,2,2-Tetrachloroethane	ND		25
1,3-Dichlorobenzene	ND		30
1,4-Dichlorobenzene	ND		30
1,2-Dichlorobenzene	ND		28

Total Target Compounds: 10853

4603

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-002
Client ID: GW-4
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Data file: E3925.D

GC/MS Column: DB-624
Sample wt/vol: 0.05mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 100
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time

No peaks detected

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-003
Client ID: GW-5
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Data file: E3926.D

GC/MS Column: DB-624
Sample wt/vol: 0.1mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 50
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		18
Vinyl Chloride	ND		19.5
Bromomethane	ND		20.5
Chloroethane	ND		18
Trichlorofluoromethane	ND		22
Acrolein	ND		101
1,1-Dichloroethene	ND		23.5
Methylene Chloride	ND		95.5
Acrylonitrile	ND		144
trans-1,2-Dichloroethene	ND		19.5
1,1-Dichloroethane	ND		15
Chloroform	ND		14
1,1,1-Trichloroethane	ND		18
Carbon Tetrachloride	ND		16.5
1,2-Dichloroethane(EDC)	ND		18
Benzene	4210		12.5
Trichloroethene	ND		18
1,2-Dichloropropane	ND		12.5
Bromodichloromethane	ND		11
2-Chloroethylvinyl Ether	ND		11
cis-1,3-Dichloropropene	ND		11
Toluene	44.9		15
trans-1,3-Dichloropropene	ND		11
1,1,2-Trichloroethane	ND		15
Tetrachloroethene	ND		19.5
Dibromochloromethane	ND		15
Chlorobenzene	ND		14
Ethylbenzene	ND		15
Total Xylenes	ND		44
Bromoform	ND		14
1,1,2,2-Tetrachloroethane	ND		12.5
1,3-Dichlorobenzene	ND		15
1,4-Dichlorobenzene	ND		15
1,2-Dichlorobenzene	ND		14

Total Target Compounds: 4254.9

4605

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-003
Client ID: GW-5
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Data file: E3926.D

GC/MS Column: DB-624
Sample wt/vol: 0.1mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 50
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Data file: E3921.D

GC/MS Column: DB-624
Sample wt/vol: 0.01mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 500
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		180
Vinyl Chloride	ND		195
Bromomethane	ND		205
Chloroethane	ND		180
Trichlorofluoromethane	ND		220
Acrolein	ND		1010
1,1-Dichloroethene	ND		235
Methylene Chloride	ND		955
Acrylonitrile	ND		1440
trans-1,2-Dichloroethene	ND		195
1,1-Dichloroethane	ND		150
Chloroform	1160		140
1,1,1-Trichloroethane	ND		180
Carbon Tetrachloride	ND		165
1,2-Dichloroethane(EDC)	ND		180
Benzene	12200		125
Trichloroethene	ND		180
1,2-Dichloropropane	ND		125
Bromodichloromethane	ND		110
2-Chloroethylvinyl Ether	ND		110
cis-1,3-Dichloropropene	ND		110
Toluene	30200		150
trans-1,3-Dichloropropene	ND		110
1,1,2-Trichloroethane	ND		150
Tetrachloroethene	1250		195
Dibromochloromethane	ND		150
Chlorobenzene	980		140
Ethylbenzene	ND		150
Total Xylenes	617		440
Bromoform	ND		140
1,1,2,2-Tetrachloroethane	ND		125
1,3-Dichlorobenzene	1610		150
1,4-Dichlorobenzene	ND		150
1,2-Dichlorobenzene	19100		140

Total Target Compounds: 67117

4607

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Date File: E3921.D

GC/MS Column: DB-624
Sample wt/vol: 0.01mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 500
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	1650	12.74

Total TICs = 1650

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-005
Client ID: TB
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Data file: E3927.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.36
Vinyl Chloride	ND		0.39
Bromomethane	ND		0.41
Chloroethane	ND		0.36
Trichlorofluoromethane	ND		0.44
Acrolein	ND		2.01
1,1-Dichloroethene	ND		0.47
Methylene Chloride	ND		1.91
Acrylonitrile	ND		2.87
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.3
Chloroform	ND		0.28
1,1,1-Trichloroethane	ND		0.36
Carbon Tetrachloride	ND		0.33
1,2-Dichloroethane(EDC)	ND		0.36
Benzene	ND		0.25
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.22
2-Chloroethylvinyl Ether	ND		0.22
cis-1,3-Dichloropropene	ND		0.22
Toluene	ND		0.3
trans-1,3-Dichloropropene	ND		0.22
1,1,2-Trichloroethane	ND		0.3
Tetrachloroethene	ND		0.39
Dibromochloromethane	ND		0.3
Chlorobenzene	ND		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.88
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.25
1,3-Dichlorobenzene	ND		0.3
1,4-Dichlorobenzene	ND		0.3
1,2-Dichlorobenzene	ND		0.28

Total Target Compounds: 0

4609

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-005
Client ID: TB
Date Received: 10/26/2000
Date Analyzed: 11/02/2000
Data file: E3927.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6349.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Phenol	ND		0.27
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
2-Chlorophenol	ND		0.17
1,3-Dichlorobenzene	ND		0.34
1,4-Dichlorobenzene	ND		0.44
Benzyl alcohol	ND		0.31
1,2-Dichlorobenzene	ND		0.36
2-Methylphenol	ND		0.25
bis(2-chloroisopropyl)ether	ND		0.55
4-Methylphenol	ND		0.29
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
2-Nitrophenol	ND		0.82
2,4-Dimethylphenol	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
Benzoic acid	ND		0.98
2,4-Dichlorophenol	ND		0.52
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	ND		0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.43
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.33
2,4,6-Trichlorophenol	ND		0.58
2,4,5-Trichlorophenol	ND		0.45
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

4611

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6349.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	ND		0.11
2,4-Dinitrophenol	ND		0.41
4-Nitrophenol	ND		0.69
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	2.94		0.3
Fluorene	ND		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
4,6-Dinitro-2-methylphenol	ND		0.89
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Pentachlorophenol	ND		0.75
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	ND		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 2.94

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Date File: C6349.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	4.3	4.22
	Unknown	27.1	8.71
	Substituted benzene	8.6	8.89
	Unknown	8.5	9.67
	Unknown	12.9	9.76
	Substituted benzene	5.5	10.44

Total TICs = 66.9

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-002
Client ID: GW-4
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6347.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
1,3-Dichlorobenzene	1.62		0.34
1,4-Dichlorobenzene	10.8		0.44
Benzyl alcohol	ND		0.31
1,2-Dichlorobenzene	4.51		0.36
bis(2-chloroisopropyl)ether	ND		0.55
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	ND		0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.33
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

4614

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-002
Client ID: GW-4
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6347.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	21.5		0.11
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	3.23		0.3
Fluorene	ND		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	ND		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 41.66

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-002
Client ID: GW-4
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Date File: C6347.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	382	4.22
	Substituted benzene	160	5.23
	Substituted benzene	47.3	7.05
	Unknown alkane	148	7.74
	Unknown	62.4	8.70
	Substituted phenol	69.2	8.77
	Substituted benzene	97.5	8.80
	Unknown alkane	77.4	8.99
	Unknown	60.4	9.76
	Substituted benzene	46.2	10.44
	Unknown	94	10.63
	Unknown	101	10.66
	Unknown	65.1	11.00
	Unknown	49.6	11.73
	Unknown	63.6	12.60

Total TICs = 1523.7

4616

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-003
Client ID: GW-5
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6348.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
1,3-Dichlorobenzene	ND		0.34
1,4-Dichlorobenzene	ND		0.44
Benzyl alcohol	ND		0.31
1,2-Dichlorobenzene	ND		0.36
bis(2-chloroisopropyl)ether	ND		0.55
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	ND		0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.33
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-003
Client ID: GW-5
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6348.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	ND		0.11
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	ND		0.3
Fluorene	ND		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	ND		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 0

4/6/18

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-003
Client ID: GW-5
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Date File: C6348.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Unknown	4.4	9.51
	Unknown	4	10.11

Total TICs = 8.4

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6350.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Phenol	371	E	0.27
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
2-Chlorophenol	ND		0.17
1,3-Dichlorobenzene	49.1		0.34
1,4-Dichlorobenzene	238	E	0.44
Benzyl alcohol	64.9		0.31
1,2-Dichlorobenzene	982	E	0.36
2-Methylphenol	14.9		0.25
bis(2-chloroisopropyl)ether	ND		0.55
4-Methylphenol	275	E	0.29
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
2-Nitrophenol	ND		0.82
2,4-Dimethylphenol	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
Benzoic acid	ND		0.98
2,4-Dichlorophenol	158	E	0.52
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	165	E	0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.43
2-Methylnaphthalene	7.55		0.18
Hexachlorocyclopentadiene	ND		0.33
2,4,6-Trichlorophenol	ND		0.58
2,4,5-Trichlorophenol	15.7		0.45
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6350.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	ND		0.11
2,4-Dinitrophenol	ND		0.41
4-Nitrophenol	ND		0.69
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	6.33		0.3
Fluorene	ND		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
4,6-Dinitro-2-methylphenol	ND		0.89
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Pentachlorophenol	ND		0.75
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	29.6		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 2377.08 E

4621

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004DIL
Client ID: GW-6
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/30/2000
Data file: C6371.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 40
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		17.2
Phenol	350		10.8
Aniline	ND		6.8
bis(2-Chloroethyl)ether	ND		6.8
2-Chlorophenol	ND		6.8
1,3-Dichlorobenzene	39.4		13.6
1,4-Dichlorobenzene	217		17.6
Benzyl alcohol	92		12.4
1,2-Dichlorobenzene	2420		14.4
2-Methylphenol	ND		10
bis(2-chloroisopropyl)ether	ND		22
4-Methylphenol	268		11.6
N-Nitroso-di-n-propylamine	ND		10
Hexachloroethane	ND		16.8
Nitrobenzene	ND		16.4
Isophorone	ND		10.4
2-Nitrophenol	ND		32.8
2,4-Dimethylphenol	ND		10.4
bis(2-Chloroethoxy)methane	ND		6.4
Benzoic acid	ND		39.2
2,4-Dichlorophenol	121		20.8
1,2,4-Trichlorobenzene	ND		13.6
Naphthalene	174		5.2
4-Chloroaniline	ND		22.4
Hexachlorobutadiene	ND		16.8
4-Chloro-3-methylphenol	ND		17.2
2-Methylnaphthalene	ND		7.2
Hexachlorocyclopentadiene	ND		13.2
2,4,6-Trichlorophenol	ND		23.2
2,4,5-Trichlorophenol	ND		18
2-Chloronaphthalene	ND		12
2-Nitroaniline	ND		20.4
Dimethylphthalate	ND		10
2,6-Dinitrotoluene	ND		17.6
Acenaphthylene	ND		7.2

4622

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004DIL
Client ID: GW-6
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/30/2000
Data file: C6371.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 40
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		28
Acenaphthene	ND		4.4
2,4-Dinitrophenol	ND		16.4
4-Nitrophenol	ND		27.6
2,4-Dinitrotoluene	ND		34.4
Dibenzofuran	ND		6.8
Diethylphthalate	ND		12
Fluorene	ND		14.8
4-Chlorophenyl-phenylether	ND		17.6
4-Nitroaniline	ND		37.2
4,6-Dinitro-2-methylphenol	ND		35.6
N-Nitrosodiphenylamine	ND		13.6
1,2-Diphenylhydrazine/Azobenzene	ND		13.6
4-Bromophenyl-phenylether	ND		18
Hexachlorobenzene	ND		20
Pentachlorophenol	ND		30
Phenanthrene	ND		6
Anthracene	ND		7.2
Carbazole	ND		11.6
Di-n-butylphthalate	ND		19.2
Fluoranthene	ND		16.4
Benzidine	ND		22
Pyrene	ND		10.4
3,3'-Dimethylbenzidine	ND		12.4
Butylbenzylphthalate	ND		22.8
3,3'-Dichlorobenzidine	ND		13.6
Benzo[a]anthracene	ND		10
Chrysene	ND		16
bis(2-Ethylhexyl)phthalate	ND		29.2
Di-n-octylphthalate	ND		25.2
Benzo[b]fluoranthene	ND		22
Benzo[k]fluoranthene	ND		27.6
Benzo[a]pyrene	ND		13.6
Indeno[1,2,3-cd]pyrene	ND		24.8
Dibenz[a,h]anthracene	ND		16.8
Benzo[g,h,i]perylene	ND		22

Total Target Compounds: 3681.4

4623

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Date File: C6350.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	Substituted benzene	116	3.20
	Substituted benzene	93.9	4.22
	Substituted benzene	56	5.13
	Substituted benzene	119	6.10
	Unknown alkane	66.8	6.89
	Substituted phenol	35.2	7.04
	Unknown	87.1	7.07
	Substituted benzene	34.8	7.48
	Substituted benzene	89.5	7.70
	Unknown	53.7	7.77
	Unknown	43.6	8.24
	Substituted phenol	48.1	8.72
	Substituted benzene	188	9.02
	Unknown	110	9.24
	Substituted benzene	134	9.35
	Substituted phenol	63.8	9.76
	Unknown	73.4	9.92
	Unknown	71.8	10.05
	Unknown	40.7	10.25
	Substituted benzene	57.2	10.45
	Substituted benzene	30.8	11.29
	Unknown	84.7	12.61
	Unknown	31.4	12.91
	Unknown alkane	34.1	14.52
	Unknown	85.9	14.71
	Total TICs =	1849.5	

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/65/00
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: R1336.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/65/00
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: R1337.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 10
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.2
Aroclor-1221	ND		0.2
Aroclor-1232	ND		0.2
Aroclor-1242	ND		0.2
Aroclor-1248	ND		0.2
Aroclor-1254	ND		0.2
Aroclor-1260	ND		0.2

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/30/2000
Data file: W2788.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/2000
Date Extracted: 10/27/2000
Date Analyzed: 10/30/2000
Data file: W2789.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 5
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.01
beta-BHC	ND		0.01
gamma-BHC	ND		0.01
delta-BHC	ND		0.01
Heptachlor	ND		0.01
Aldrin	ND		0.01
Heptachlor epoxide	ND		0.01
Endosulfan I	ND		0.01
4,4'-DDE	ND		0.01
Dieldrin	ND		0.01
Endrin	ND		0.01
Endosulfan II	ND		0.01
4,4'-DDD	ND		0.01
Endrin aldehyde	ND		0.01
Endosulfan sulfate	ND		0.01
4,4'-DDT	ND		0.01
Chlordane	ND		0.075
Toxaphene	ND		0.075

4628

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/00
Date Analyzed: 10/30/00
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.0128		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.0364		1	0.020

4629

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METALS

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/00
Date Analyzed: 10/30/00
Matrix-Units: Aqueous-mg/L (ppm)
% Moisture: 100

Compound	Result	Q	DF	MDL
Antimony	ND		1	0.008
Arsenic	0.00662		1	0.004
Beryllium	ND		1	0.004
Cadmium	ND		1	0.0006
Chromium	ND		1	0.020
Copper	ND		1	0.040
Lead	ND		1	0.004
Mercury	ND		1	0.0005
Nickel	ND		1	0.020
Selenium	ND		1	0.008
Silver	ND		1	0.0004
Thallium	ND		1	0.008
Zinc	0.0247		1	0.020

INTEGRATED ANALYTICAL LABORATORIES, LLC.

GENERAL ANALYTICAL

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-001
Client ID: GW-3
Date Received: 10/26/00
% Moisture: 100

Compound	Result	Q	Matrix Unit	DF	MDL	Date Analyzed
Cyanide, Total	0.0305		Aqueous-mg/L	1	0.020	10/31/00
Phenol	ND		Aqueous-mg/L	1	0.050	11/2/00

INTEGRATED ANALYTICAL LABORATORIES, LLC.

GENERAL ANALYTICAL

Client/Project: ENVTACT/ORBIS

Lab ID: 6734-004
Client ID: GW-6
Date Received: 10/26/00
% Moisture: 100

Compound	Result	Q	Matrix Unit	DF	MDL	Date Analyzed
Cyanide, Total	ND		Aqueous-mg/L	1	0.020	10/31/00
Phenol	6.92		Aqueous-mg/L	100	0.050	11/2/00

4632

INTEGRATED ANALYTICAL LABORATORIES, LLC.

METHODOLOGY SUMMARY

Analytical Parameter	Aqueous Samples Method #	Soil/Other Samples Method #
Volatiles + 15	EPA 624	NA
Volatiles + 10	EPA 624	NA
Semivolatiles - BNA + 25	EPA 625	NA
Semivolatiles - BN + 15	EPA 625	NA
PCB's	EPA 8082	NA
Pesticides	EPA 8081A	NA
P.P. Metals	EPA 200.8	NA
Metals (Mercury)	EPA 245.2	NA
Cyanide, Total	EPA 335.2	NA
Phenols	EPA 420.2	NA

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E3790.D

BFB Injection Date: 10/30/2000

Inst ID: MSD_E

BFB Injection Time: 11:41

m/z	Ion Abudance Criteria	%Relative Abundance	
50	15 - 40.0% of mass 95	20.7	
75	30.0 - 60.0% of mass 95	48.8	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.7	
173	Less than 2.0% of mass 174	0.0	(0.0)1
174	Great than 50.0% of mass 95	69.9	
175	5.0 - 9.0% of mass 174	5.0	(7.1)1
176	95.0 - 101.0% of mass 174	67.5	(96.5)1
177	5.0 - 9.0% of mass 176	4.4	(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:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20PPB-STD	20PPB-STD	E3791.D	10/30/2000	12:13
5PPB-STD	5PPB-STD	E3792.D	10/30/2000	12:38
100PPB-STD	100PPB-STD	E3793.D	10/30/2000	1:03
METHOD-BLK	METHOD-BLK	E3796.D	10/30/2000	2:58
6750-003MS	6750-003MS	E3797.D	10/30/2000	3:32
6750-003MSD	6750-003MSD	E3798.D	10/30/2000	3:57
VMW-5	6750-001	E3800.D	10/30/2000	4:56
GW/CONTROL	6750-002	E3801.D	10/30/2000	5:21
GW/T-A	6750-003	E3802.D	10/30/2000	5:46
GW/T-B	6750-004	E3803.D	10/30/2000	6:11
GW/T-C	6750-005	E3804.D	10/30/2000	6:36
E	6629-001	E3805.D	10/30/2000	7:01
I	6629-002	E3806.D	10/30/2000	7:26
MW_#1	6654-001	E3808.D	10/30/2000	8:16
MW_#2	6654-002	E3809.D	10/30/2000	8:41
MW_#3	6654-003	E3810.D	10/30/2000	9:06
POND_#1	6654-004	E3811.D	10/30/2000	9:31
POND_#2	6654-005	E3812.D	10/30/2000	9:56
SUMP-1	6745-001	E3813.D	10/30/2000	10:21
MW-27-50	6740-001	E3814.D	10/30/2000	10:45

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E3895.D

BFB Injection Date: 11/01/2000

Inst ID: MSD_E

BFB Injection Time: 11:45

m/z	Ion Abudance Criteria	%Relative Abundance
50	15 - 40.0% of mass 95	19.4
75	30.0 - 60.0% of mass 95	47.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Great than 50.0% of mass 95	63.3
175	5.0 - 9.0% of mass 174	4.6 (7.2)1
176	95.0 - 101.0% of mass 174	60.2 (95.1)1
177	5.0 - 9.0% of mass 176	4.1 (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:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
20PPB-STD	20PPB-STD	E3897.D	11/01/2000	12:57
METHOD-BLK	METHOD-BLK	E3899.D	11/01/2000	2:05
6859-001MS	6859-001MS	E3900.D	11/01/2000	2:45
6859-001MSD	6859-001MSD	E3901.D	11/01/2000	3:09
MW-29-56	6740-009DIL	E3903.D	11/01/2000	4:53
MW-17-155	6740-014DIL	E3904.D	11/01/2000	5:19
MW-14-42	6740-019DIL	E3905.D	11/01/2000	5:43
FIELD_BLANK	6732-011	E3906.D	11/01/2000	6:08
VE1	6768-001	E3907.D	11/01/2000	6:33
VE-6	6768-008DIL	E3908.D	11/01/2000	6:58
MW5	6652-003DIL	E3909.D	11/01/2000	7:23
FB	6652-009	E3910.D	11/01/2000	7:48
SUMP	6689-001	E3911.D	11/01/2000	8:13
MW-14S	6694-001	E3912.D	11/01/2000	8:37
MW-10D	6694-005DIL	E3913.D	11/01/2000	9:02
MW-2	6703-002	E3914.D	11/01/2000	9:27
SW-1D	6859-001	E3915.D	11/01/2000	9:52
SW-1S	6859-002	E3916.D	11/01/2000	10:17
PW-1D	6859-003	E3917.D	11/01/2000	10:42
PW-1S	6859-004	E3918.D	11/01/2000	11:06

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E3895.D BFB Injection Date : 11/01/200

Inst ID: MSD_E BFB Injection Time: 11:45

m/z	Ion Abudance Criteria	%Relative Abundance		
50	15 - 40.0% of mass 95	19.4		
75	30.0 - 60.0% of mass 95	47.9		
95	Base peak, 100% relative abundance	100.0		
96	5.0 - 9.0% of mass 95	6.8		
173	Less than 2.0% of mass 174	0.0	(0.0	)1
174	Great than 50.0% of mass 95	63.3		
175	5.0 - 9.0% of mass 174	4.6	(7.2	)1
176	95.0 - 101.0% of mass 174	60.2	(95.1	)1
177	5.0 - 9.0% of mass 176	4.1	(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:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
TB-103000	6859-005	E3919.D	11/01/2000	11:31
GW-3	6734-001	E3920.D	11/01/2000	11:56
GW-6	6734-004	E3921.D	11/02/2000	12:20
6742-001MS	6742-001MS	E3922.D	11/02/2000	12:45
6742-001MSD	6742-001MSD	E3923.D	11/02/2000	1:10
GW-4	6734-002	E3925.D	11/02/2000	1:59
GW-5	6734-003	E3926.D	11/02/2000	2:24
TB	6734-005	E3927.D	11/02/2000	2:48
EFFLUENT	6754-001	E3928.D	11/02/2000	3:13
INFLUENT	6754-002	E3929.D	11/02/2000	3:37
DS127BG	6742-001	E3930.D	11/02/2000	4:02
FB	6742-005	E3931.D	11/02/2000	4:26
FMW-25	6770-001	E3932.D	11/02/2000	4:51
FMW-26	6770-002	E3933.D	11/02/2000	5:15
FMW-24	6770-003	E3934.D	11/02/2000	5:39
FMW-10	6770-004	E3935.D	11/02/2000	6:04
FMW-11	6770-005	E3936.D	11/02/2000	6:28
TB	6770-006	E3937.D	11/02/2000	6:53
SEFF102500	6775-001	E3938.D	11/02/2000	8:19
SUMP-1	6779-001	E3939.D	11/02/2000	9:06
TB	6779-002	E3940.D	11/02/2000	9:35

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: E3895.D

BFB Injection Date : 11/01/200

Inst ID: MSD_E

BFB Injection Time: 11:45

m/z	Ion Abudance Criteria	%Relative Abundance			
50	15 - 40.0% of mass 95	19.4			
75	30.0 - 60.0% of mass 95	47.9			
95	Base peak, 100% relative abundance	100.0			
96	5.0 - 9.0% of mass 95	6.8			
173	Less than 2.0% of mass 174	0.0	(	0.0	)1
174	Great than 50.0% of mass 95	63.3			
175	5.0 - 9.0% of mass 174	4.6	(	7.2	)1
176	95.0 - 101.0% of mass 174	60.2	(	95.1	)1
177	5.0 - 9.0% of mass 176	4.1	(	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:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
FB	6769-011	E3942.D	11/02/2000	10:24
MW-14S	6694-001	E3943.D	11/02/2000	10:51

VOLATILE METHOD BLANK SUMMARY

Lab File ID: E3899.D

Instrument ID: MSD_E

Date Analyzed: 11/01/2000

Time Analyzed: 02:05

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
6859-001MS	6859-001MS	11/01/2000	2:45
6859-001MSD	6859-001MSD	11/01/2000	3:09
MW-29-56	6740-009DIL	11/01/2000	4:53
MW-17-155	6740-014DIL	11/01/2000	5:19
MW-14-42	6740-019DIL	11/01/2000	5:43
FIELD_BLANK	6732-011	11/01/2000	6:08
VE1	6768-001	11/01/2000	6:33
VE-6	6768-008DIL	11/01/2000	6:58
MW5	6652-003DIL	11/01/2000	7:23
FB	6652-009	11/01/2000	7:48
SUMP	6689-001	11/01/2000	8:13
MW-14S	6694-001	11/01/2000	8:37
MW-10D	6694-005DIL	11/01/2000	9:02
MW-2	6703-002	11/01/2000	9:27
SW-1D	6859-001	11/01/2000	9:52
SW-1S	6859-002	11/01/2000	10:17
PW-1D	6859-003	11/01/2000	10:42
PW-1S	6859-004	11/01/2000	11:06
TB-103000	6859-005	11/01/2000	11:31
GW-3	6734-001	11/01/2000	11:56
GW-6	6734-004	11/02/2000	12:20
6742-001MS	6742-001MS	11/02/2000	12:45
6742-001MSD	6742-001MSD	11/02/2000	1:10
GW-4	6734-002	11/02/2000	1:59
GW-5	6734-003	11/02/2000	2:24
TB	6734-005	11/02/2000	2:48
EFFLUENT	6754-001	11/02/2000	3:13
INFLUENT	6754-002	11/02/2000	3:37
DS127BG	6742-001	11/02/2000	4:02
FB	6742-005	11/02/2000	4:26
FMW-25	6770-001	11/02/2000	4:51
FMW-26	6770-002	11/02/2000	5:15

VOLATILE METHOD BLANK SUMMARY

Lab File ID: E3899.D Instrument ID: MSD_E

Date Analyzed: 11/01/2000 Time Analyzed: 02:05

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
FMW-24	6770-003	11/02/2000	5:39
FMW-10	6770-004	11/02/2000	6:04
FMW-11	6770-005	11/02/2000	6:28
TB	6770-006	11/02/2000	6:53
SEFF102500	6775-001	11/02/2000	8:19
SUMP-1	6779-001	11/02/2000	9:06
TB	6779-002	11/02/2000	9:35
FB	6769-011	11/02/2000	10:24
MW-14S	6694-001	11/02/2000	10:51

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: METHOD-BLK
Date Received: NA
Date Analyzed: 11/01/2000
Data file: E3899.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Chloromethane	ND		0.36
Vinyl Chloride	ND		0.39
Bromomethane	ND		0.41
Chloroethane	ND		0.36
Trichlorofluoromethane	ND		0.44
Acrolein	ND		2.01
1,1-Dichloroethene	ND		0.47
Methylene Chloride	ND		1.91
Acrylonitrile	ND		2.87
trans-1,2-Dichloroethene	ND		0.39
1,1-Dichloroethane	ND		0.3
Chloroform	ND		0.28
1,1,1-Trichloroethane	ND		0.36
Carbon Tetrachloride	ND		0.33
1,2-Dichloroethane(EDC)	ND		0.36
Benzene	ND		0.25
Trichloroethene	ND		0.36
1,2-Dichloropropane	ND		0.25
Bromodichloromethane	ND		0.22
2-Chloroethylvinyl Ether	ND		0.22
cis-1,3-Dichloropropene	ND		0.22
Toluene	ND		0.3
trans-1,3-Dichloropropene	ND		0.22
1,1,2-Trichloroethane	ND		0.3
Tetrachloroethene	ND		0.39
Dibromochloromethane	ND		0.3
Chlorobenzene	ND		0.28
Ethylbenzene	ND		0.3
Total Xylenes	ND		0.88
Bromoform	ND		0.28
1,1,2,2-Tetrachloroethane	ND		0.25
1,3-Dichlorobenzene	ND		0.3
1,4-Dichlorobenzene	ND		0.3
1,2-Dichlorobenzene	ND		0.28

Total Target Compounds: 0

4640

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Tentatively Identified Compounds

Client/Project: NA

Lab ID: METHOD-BLK
Client ID: METHOD-BLK
Date Received: NA
Date Analyzed: 11/01/2000
Data file: E3899.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

4641

Response Factor Report MSD_E2

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration

Calibration Files
20 =E3791.D 5 =E3792.D 100 =E3793.D
= =

		Compound	20	5	100	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------				
2)	T	Dichlorodifluorometha	0.382	0.392	0.457	0.410	9.88
3)	P	Chloromethane	0.689	0.745	0.877	0.770	12.52
4)	C	Vinyl Chloride	0.541	0.592	0.683	0.605	11.90
5)	T	Bromomethane	0.168	0.236	0.166	0.190	21.05
6)	T	Chloroethane	0.248	0.319	0.298	0.288	12.77
7)	T	Trichlorofluoromethan	0.362	0.374	0.426	0.387	8.91
8)	T	Acrolein	0.028	0.031	0.031	0.030	4.64
9)	MC	1,1-Dichloroethene	0.307	0.374	0.368	0.350	10.68
10)	T	Acetone	0.161	0.192	0.138	0.164	16.51
11)	T	Carbon Disulfide	1.362	1.584	1.662	1.536	10.15
12)	T	Vinyl Acetate	1.931	1.943	1.912	1.928	0.81
13)	T	Methylene Chloride	0.415	0.471	0.478	0.455	7.60
14)	T	Acrylonitrile	0.166	0.161	0.187	0.171	7.86
15)	T	t-Butyl Alcohol(TBA)	0.040	0.051	0.047	0.046	12.56
16)	T	trans-1,2-Dichloroeth	0.365	0.410	0.427	0.401	8.00
17)	T	Methyl-t-Butyl Ether(	1.009	1.143	1.133	1.095	6.85
[illegible]	P	1,1-Dichloroethane	1.135	1.239	1.306	1.226	7.02
[illegible]	T	Diisopropyl Ether(DIP	2.290	2.449	2.638	2.459	7.07
[illegible]	T	cis-1,2-Dichloroethen	0.585	0.640	0.663	0.629	6.37
21)	T	2,2-Dichloropropane	0.900	0.973	1.024	0.966	6.43
22)	T	2-Butanone(MEK)	0.251	0.302	0.282	0.278	9.14
23)	T	Bromochloromethane	0.263	0.280	0.292	0.278	5.27
25)	C	Chloroform	1.006	1.094	1.137	1.079	6.17
26)	T	1,1,1-Trichloroethane	0.826	0.910	0.973	0.903	8.21
27)	T	Carbon Tetrachloride	0.648	0.693	0.762	0.701	8.22
28)	T	1,1-Dichloropropene	0.700	0.779	0.821	0.767	8.00
29)	T	1,2-Dichloroethane(ED	0.910	0.979	0.985	0.958	4.38
30)	S	1,2-Dichloroethane-d4	0.673	0.674	0.692	0.679	1.55
31)	I	1,4-Difluorobenzene	----------ISTD----------				
32)	M	Benzene	1.589	1.743	1.776	1.703	5.86
33)	M	Trichloroethene	0.371	0.407	0.416	0.398	6.00
34)	C	1,2-Dichloropropane	0.457	0.499	0.513	0.490	6.04
35)	T	Dibromomethane	0.216	0.235	0.234	0.229	4.63
36)	T	1,4-Dioxane	0.004	0.004	0.004	0.004	6.85
37)	T	Bromodichloromethane	0.542	0.578	0.596	0.572	4.80
38)	T	2-Chloroethylvinyl Et	0.281	0.302	0.309	0.297	4.83
39)	T	cis-1,3-Dichloroprope	0.712	0.761	0.779	0.751	4.60
40)	T	4-Methyl-2-pentanone(	0.359	0.387	0.397	0.381	5.10
41)	S	Toluene-d8	1.272	1.287	1.275	1.278	0.62
42)	MC	Toluene	0.981	1.092	1.101	1.058	6.34
43)	T	trans-1,3-Dichloropro	0.659	0.703	0.719	0.694	4.54
[illegible]	T	1,1,2-Trichloroethane	0.271	0.294	0.298	0.288	5.16
[illegible]	T	Tetrachloroethene	0.304	0.341	0.351	0.332	7.45
46)	T	1,3-Dichloropropane	0.624	0.670	0.660	0.651	3.74
47)	T	2-Hexanone	0.267	0.288	0.295	0.283	5.19
48)	T	Dibromochloromethane	0.356	0.367	0.388	0.370	4.37
49)	T	1,2-Dibromoethane(EDB	0.312	0.334	0.339	0.328	4.36

4642

50)	I	Chlorobenzene-d5	----------ISTD----------					
51)	MP	Chlorobenzene	1.323	1.432	1.462		1.406	5.22
52)	T	1,1,1,2-Tetrachloroet	0.478	0.506	0.516		0.500	3.94
53)	C	Ethylbenzene	2.344	2.567	2.587		2.499	5.39
54)	T	m,p-Xylene	0.925	1.011	0.989		0.975	4.61
55)	T	o-Xylene	0.940	1.012	1.012		0.988	4.24
)	T	Styrene	1.596	1.672	1.719		1.662	3.72
57)	P	Bromoform	0.255	0.253	0.282		0.263	6.10
58)	T	Isopropylbenzene	2.207	2.406	2.498		2.370	6.26
59)	S	Bromofluorobenzene	0.584	0.585	0.587		0.586	0.21
60)	P	1,1,2,2-Tetrachloroet	0.506	0.538	0.545		0.530	3.94
61)	T	Bromobenzene	0.502	0.541	0.558		0.534	5.36
62)	T	1,2,3-Trichloropropan	0.521	0.552	0.551		0.541	3.21
63)	T	n-Propylbenzene	2.720	2.975	3.051		2.915	5.94
64)	T	2-Chlorotoluene	2.018	2.178	2.176		2.124	4.32
65)	T	1,3,5-Trimethylbenzen	2.012	2.165	2.206		2.128	4.81
66)	T	4-Chlorotoluene	2.018	2.178	2.176		2.124	4.32
67)	T	tert-Butylbenzene	1.601	1.748	1.833		1.727	6.78
68)	T	1,2,4-Trimethylbenzen	2.088	2.230	2.314		2.211	5.18
69)	T	sec-Butylbenzene	2.279	2.480	2.655		2.471	7.61
70)	T	1,3-Dichlorobenzene	1.016	1.104	1.155		1.092	6.45
71)	T	4-Isopropyltoluene	1.950	2.104	2.233		2.096	6.77
72)	T	1,4-Dichlorobenzene	1.016	1.104	1.155		1.092	6.45
73)	T	n-Butylbenzene	1.916	2.086	2.148		2.050	5.86
74)	T	1,2-Dichlorobenzene	0.963	1.035	1.070		1.023	5.35
75)	T	1,2-Dibromo-3-chlorop	0.105	0.109	0.117		0.110	5.63
76)	T	1,2,4-Trichlorobenzen	0.644	0.706	0.749		0.700	7.56
77)	T	Hexachlorobutadiene	0.248	0.292	0.296		0.278	9.39
78)	T	Naphthalene	1.407	1.570	1.582		1.520	6.43
79)	T	1,2,3-Trichlorobenzen	0.528	0.609	0.602		0.579	7.76
80)	T	Ethane,1,1,2-trichlor	0.244	0.247	0.279		0.257	7.63
81)	T	Methyl Acetate	0.349	0.437	0.405		0.397	11.24
82)	T	Cyclohexane	0.797	0.934	0.926		0.886	8.70
83)	T	Methyl Cyclohexane	0.669	0.662	0.770		0.700	8.67

(#) = Out of Range

EA103000.M Mon Oct 30 14:00:25 2000 MSD_E2

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3897.D
Acq On : 1 Nov 2000 12:57 pm
Sample : 20PPB-STD,20PPB-STD,A,5mL,100
Misc : NA,NA,NA
MS Integration Params: LSCINT.P

Vial: 3
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 35% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	73	0.00
2	T	Dichlorodifluoromethane	0.410	0.349	14.9	67	0.00
3	P	Chloromethane	0.770	0.759	1.4	80	0.00
4	C	Vinyl Chloride	0.605	0.673	-11.2	91	0.00
5	T	Bromomethane	0.190	0.206	-8.4	89	0.00
6	T	Chloroethane	0.288	0.319	-10.8	94	0.00
7	T	Trichlorofluoromethane	0.387	0.339	12.4	68	-0.01
8	T	Acrolein	0.030	0.033	-10.0	85	0.00
9	MC	1,1-Dichloroethene	0.350	0.452	-29.1	108	0.00
10	T	Acetone	0.164	0.168	-2.4	76	0.00
11	T	Carbon Disulfide	1.536	1.931	-25.7	103	0.00
12	T	Vinyl Acetate	1.928	2.284	-18.5	86	0.00
[illegible]	T	Methylene Chloride	0.455	0.598	-31.4	105	0.00
[illegible]	T	Acrylonitrile	0.171	0.208	-21.6	91	0.00
[illegible]	T	t-Butyl Alcohol(TBA)	0.046	0.055	-19.6	100	0.00
16	T	trans-1,2-Dichloroethene	0.401	0.524	-30.7	105	0.00
17	T	Methyl-t-Butyl Ether(MTBE)	1.095	1.432	-30.8	103	0.00
18	P	1,1-Dichloroethane	1.226	1.173	4.3	75	0.00
19	T	Diisopropyl Ether(DIPE)	2.459	2.052	16.6	65	0.00
20	T	cis-1,2-Dichloroethene	0.629	0.662	-5.2	82	0.00
21	T	2,2-Dichloropropane	0.966	0.953	1.3	77	0.00
22	T	2-Butanone(MEK)	0.278	0.255	8.3	74	0.00
23	T	Bromochloromethane	0.278	0.299	-7.6	83	0.00
25	C	Chloroform	1.079	1.069	0.9	77	0.00
26	T	1,1,1-Trichloroethane	0.903	0.849	6.0	75	0.00
27	T	Carbon Tetrachloride	0.701	0.610	13.0	69	0.00
28	T	1,1-Dichloropropene	0.767	0.754	1.7	79	0.00
29	T	1,2-Dichloroethane(EDC)	0.958	0.910	5.0	73	0.00
30	S	1,2-Dichloroethane-d4	0.679	0.605	10.9	66	0.00
31	I	1,4-Difluorobenzene	1.000	1.000	0.0	74	0.00
32	M	Benzene	1.703	1.724	-1.2	81	0.00
33	M	Trichloroethene	0.398	0.397	0.3	80	0.00
34	C	1,2-Dichloropropane	0.490	0.454	7.3	74	0.00
35	T	Dibromomethane	0.229	0.228	0.4	79	0.00
36	T	1,4-Dioxane	0.004	0.004	0.0	77	0.00
37	T	Bromodichloromethane	0.572	0.503	12.1	69	0.00
38	T	2-Chloroethylvinyl Ether	0.297	0.266	10.4	70	0.00
[illegible]	T	cis-1,3-Dichloropropene	0.751	0.702	6.5	73	0.00
[illegible]	T	4-Methyl-2-pentanone(MIBK)	0.381	0.318	16.5	66	0.00
41	S	Toluene-d8	1.278	1.250	2.2	73	0.00
42	MC	Toluene	1.058	1.052	0.6	80	0.00
43	T	trans-1,3-Dichloropropene	0.694	0.627	9.7	71	0.00
44	T	1,1,2-Trichloroethane	0.288	0.288	0.0	79	0.00
45	T	Tetrachloroethene	0.332	0.339	-2.1	83	0.00

4444

46	T	1,3-Dichloropropane	0.651	0.646	0.8	77	0.00
47	T	2-Hexanone	0.283	0.253	10.6	71	0.00
48	T	Dibromochloromethane	0.370	0.303	18.1	63	0.00
49	T	1,2-Dibromoethane(EDB)	0.328	0.334	-1.8	80	0.00
50	I	Chlorobenzene-d5	1.000	1.000	0.0	75	0.00
	MP	Chlorobenzene	1.406	1.461	-3.9	83	0.00
--	T	1,1,1,2-Tetrachloroethane	0.500	0.458	8.4	72	0.00
53	C	Ethylbenzene	2.499	2.477	0.9	80	0.00
54	T	m,p-Xylene	0.975	0.995	-2.1	81	0.00
55	T	o-Xylene	0.988	1.007	-1.9	81	0.00
56	T	Styrene	1.662	1.704	-2.5	81	0.00
57	P	Bromoform	0.263	0.186	29.3	55	0.00
58	T	Isopropylbenzene	2.370	2.337	1.4	80	0.00
59	S	Bromofluorobenzene	0.586	0.542	7.5	70	0.00
60	P	1,1,2,2-Tetrachloroethane	0.530	0.525	0.9	78	0.00
61	T	Bromobenzene	0.534	0.558	-4.5	84	0.00
62	T	1,2,3-Trichloropropane	0.541	0.518	4.3	75	0.00
63	T	n-Propylbenzene	2.915	2.904	0.4	81	0.00
64	T	2-Chlorotoluene	2.124	2.142	-0.8	80	0.00
65	T	1,3,5-Trimethylbenzene	2.128	2.142	-0.7	80	0.00
66	T	4-Chlorotoluene	2.124	2.142	-0.8	80	0.00
67	T	tert-Butylbenzene	1.727	1.724	0.2	81	0.00
68	T	1,2,4-Trimethylbenzene	2.211	2.224	-0.6	80	0.00
69	T	sec-Butylbenzene	2.471	2.452	0.8	81	0.00
70	T	1,3-Dichlorobenzene	1.092	1.135	-3.9	84	0.00
71	T	4-Isopropyltoluene	2.096	2.132	-1.7	83	0.00
72	T	1,4-Dichlorobenzene	1.092	1.135	-3.9	84	0.00
73	T	n-Butylbenzene	2.050	2.066	-0.8	81	0.00
74	T	1,2-Dichlorobenzene	1.023	1.056	-3.2	83	0.00
75	T	1,2-Dibromo-3-chloropropane	0.110	0.082	25.5	59	0.00
76	T	1,2,4-Trichlorobenzene	0.700	0.689	1.6	81	0.00
77	T	Hexachlorobutadiene	0.278	0.250	10.1	76	0.00
78	T	Naphthalene	1.520	1.504	1.1	81	0.00
79	T	1,2,3-Trichlorobenzene	0.579	0.565	2.4	81	0.00
80	T	Ethane,1,1,2-trichloro-1,2,	0.257	0.343	-33.5	106	0.00
81	T	Methyl Acetate	0.397	0.369	7.1	80	0.00
82	T	Cyclohexane	0.886	0.762	14.0	72	0.00
83	T	Methyl Cyclohexane	0.700	0.728	-4.0	82	0.00

(#) = Out of Range

E3791.D EA103000.M Wed Nov 01 13:26:06 2000 MSD_E2

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/01/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
METHOD-BLK	AQUEOUS	E3899.D	92	98	91
6859-001MS	AQUEOUS	E3900.D	90	97	92
6859-001MSD	AQUEOUS	E3901.D	90	97	94
6740-009DIL	AQUEOUS	E3903.D	91	97	91
6740-014DIL	AQUEOUS	E3904.D	90	97	91
6740-019DIL	AQUEOUS	E3905.D	90	97	90
6732-011	AQUEOUS	E3906.D	91	97	90
6768-001	AQUEOUS	E3907.D	90	97	89
6768-008DIL	AQUEOUS	E3908.D	90	97	91
6652-003DIL	AQUEOUS	E3909.D	90	97	89
6652-009	AQUEOUS	E3910.D	92	96	89
6689-001	AQUEOUS	E3911.D	90	97	91
6694-001	AQUEOUS	E3912.D	92	96	92
6694-005DIL	AQUEOUS	E3913.D	93	97	92
6703-002	AQUEOUS	E3914.D	94	97	92
6859-001	AQUEOUS	E3915.D	94	97	93
6859-002	AQUEOUS	E3916.D	93	97	92
6859-003	AQUEOUS	E3917.D	92	96	91
6859-004	AQUEOUS	E3918.D	91	97	91
6859-005	AQUEOUS	E3919.D	92	97	91
6734-001	AQUEOUS	E3920.D	90	97	90
6734-004	AQUEOUS	E3921.D	90	97	92
6742-001MS	AQUEOUS	E3922.D	91	97	92
6742-001MSD	AQUEOUS	E3923.D	89	98	94

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	88-96
SMC2 = Toluene-d8	30 ppb	95-100
SMC3 = Bromofluorobenzene	30 ppb	84-102

Column to be used to flag recovery values

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 11/01/2000

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
6734-002	AQUEOUS	E3925.D	92	97	92
6734-003	AQUEOUS	E3926.D	91	97	91
6734-005	AQUEOUS	E3927.D	90	97	91
6754-001	AQUEOUS	E3928.D	90	97	90
6754-002	AQUEOUS	E3929.D	90	97	91
6742-001	AQUEOUS	E3930.D	89	97	90
6742-005	AQUEOUS	E3931.D	90	97	90
6770-001	AQUEOUS	E3932.D	89	97	90
6770-002	AQUEOUS	E3933.D	88	96	89
6770-003	AQUEOUS	E3934.D	89	97	88
6770-004	AQUEOUS	E3935.D	89	97	89
6770-005	AQUEOUS	E3936.D	89	96	90
6770-006	AQUEOUS	E3937.D	88	97	88
6775-001	AQUEOUS	E3938.D	90	96	90
6779-001	AQUEOUS	E3939.D	95	97	90
6779-002	AQUEOUS	E3940.D	93	97	90
6769-011	AQUEOUS	E3942.D	88	96	90
6694-001	AQUEOUS	E3943.D	90	96	89

	Concentration	Aqueous
SMC1 = 1,2-Dichloroethane-d4	30 ppb	88-96
SMC2 = Toluene-d8	30 ppb	95-100
SMC3 = Bromofluorobenzene	30 ppb	84-102

Column to be used to flag recovery values

AQUEOUS VOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6742-001

Batch No.: QV4831

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	20.0	0.0	26.4	132	49 - 168
Benzene	20.0	0.0	20.4	102	58 - 145
Trichloroethene	20.0	0.0	24.5	123	50 - 158
Toluene	20.0	0.0	20.4	102	58 - 147
Chlorobenzene	20.0	0.0	21.5	108	58 - 145

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD #	% REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	0.0	25.9		130	2	20	49 - 168
Benzene	0.0	21.7		109	7	14	58 - 145
Trichloroethene	0.0	25.4		127	3	18	50 - 158
Toluene	0.0	21.6		108	6	15	58 - 147
Chlorobenzene	0.0	22.0		110	2	14	58 - 145

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __5__ outside limits

Spike Recovery: __0___ out of __10__ outside limits

4648

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 6742-001MSD
Client ID: 6742-001MSD
Date Received: NA
Date Analyzed: 11/02/2000
Data file: E3923.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
Chloromethane	20.0	0.0	17.9	90	0.0	18.8	94
Vinyl Chloride	20.0	0.0	31.3	156	0.0	33.1	165
Bromomethane	20.0	0.0	26.6	133	0.0	28.5	143
Chloroethane	20.0	0.0	29.1	145	0.0	30.4	152
Trichlorofluoromethane	20.0	0.0	29.3	146	0.0	30.5	153
Acrolein	20.0	0.0	0.0	0	0.0	0.0	0
1,1-Dichloroethene	20.0	0.0	26.4	132	0.0	25.9	130
Methylene Chloride	20.0	0.0	22.5	113	0.0	32.4	162
Acrylonitrile	20.0	0.0	0.0	0	0.0	0.0	0
trans-1,2-Dichloroethene	20.0	0.0	29.7	149	0.0	31.5	158
1,1-Dichloroethane	20.0	0.0	19.1	96	0.0	20.6	103
Chloroform	20.0	0.0	22.2	111	0.0	24.1	120
1,1,1-Trichloroethane	20.0	0.0	21.3	106	0.0	23.0	115
Carbon Tetrachloride	20.0	0.0	20.0	100	0.0	21.9	109
1,2-Dichloroethane(EDC)	20.0	0.0	19.8	99	0.0	21.2	106
Benzene	20.0	0.0	20.4	102	0.0	21.7	109
Trichloroethene	20.0	0.0	24.5	123	0.0	25.4	127
1,2-Dichloropropane	20.0	0.0	20.5	102	0.0	22.8	114
Bromodichloromethane	20.0	0.0	17.6	88	0.0	19.9	100
2-Chloroethylvinyl Ether	20.0	0.0	2.2	11	0.0	2.4	12
cis-1,3-Dichloropropene	20.0	0.0	18.2	91	0.0	20.6	103
Toluene	20.0	0.0	20.4	102	0.0	21.6	108
trans-1,3-Dichloropropene	20.0	0.0	17.4	87	0.0	19.7	99
1,1,2-Trichloroethane	20.0	0.0	21.3	106	0.0	23.3	117
Tetrachloroethene	20.0	0.0	23.3	116	0.0	25.5	128
Dibromochloromethane	20.0	0.0	16.2	81	0.0	18.9	95
Chlorobenzene	20.0	0.0	21.5	108	0.0	22.0	110
Ethylbenzene	20.0	0.0	20.8	104	0.0	22.8	114
total-Xylenes	60.0	0.0	64.6	108	0.0	71.5	119
Bromoform	20.0	0.0	13.4	67	0.0	15.8	79
1,1,2,2-Tetrachloroethane	20.0	0.0	21.8	109	0.0	22.6	113
1,3-Dichlorobenzene	20.0	0.0	22.6	113	0.0	24.8	124
1,4-Dichlorobenzene	20.0	0.0	22.6	113	0.0	24.8	124
1,2-Dichlorobenzene	20.0	0.0	21.1	106	0.0	23.0	115

4649

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): E3791.D

Date Analyzed: 10/30/2000

Instrument ID: MSD_E

Time Analyzed: 12:13

	30UG/L	IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	24 HOUR STD	480008		6.16		710670		6.98		555284		10.30	
	UPPER LIMIT	960016		6.66		1421340		7.48		1110568		10.80	
	LOWER LIMIT	240004		5.66		355335		6.48		277642		9.80	
	LAB SAMPLE ID												
01	5PPB-STD	432596		6.16		638541		6.98		504824		10.31	
02	100PPB-STD	409625		6.16		617360		6.98		482716		10.31	
03	METHOD-BLK	434184		6.16		656863		6.98		509007		10.30	
04	6750-003MS	385753		6.16		579571		6.98		456814		10.30	
05	6750-003MSD	403410		6.16		612563		6.98		477217		10.31	
06	6750-001	393242		6.17		590438		6.98		468026		10.30	
07	6750-002	373016		6.16		564938		6.98		444165		10.30	
08	6750-003	395461		6.16		592431		6.98		466654		10.30	
09	6750-004	380202		6.16		569915		6.98		450241		10.30	
10	6750-005	370940		6.17		553203		6.98		435744		10.30	
11	6629-001	372101		6.16		560046		6.98		438346		10.31	
12	6629-002	371497		6.16		566108		6.98		434027		10.30	
13	6654-001	371290		6.16		564431		6.98		442407		10.31	
14	6654-002	367568		6.17		557002		6.99		440411		10.31	
15	6654-003	368733		6.17		560115		6.98		442552		10.30	
16	6654-004	369277		6.16		556933		6.98		439909		10.30	
17	6654-005	367898		6.16		559615		6.98		439071		10.30	
18	6745-001	365954		6.16		556095		6.98		436413		10.30	
19	6740-001	370661		6.17		561491		6.98		441583		10.30	
20	6740-002	367786		6.16		565504		6.98		441745		10.31	
21	6740-003	380252		6.16		583734		6.98		456643		10.30	
22	6740-004	367613		6.16		564031		6.98		443291		10.31	

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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 File ID (Standard): E3897.D

Date Analyzed: 11/01/2000

Instrument ID: MSD_E

Time Analyzed: 12:57

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	349859	6.16	528848	6.98	418947	10.30
	UPPER LIMIT	699718	6.66	1057696	7.48	837894	10.80
	LOWER LIMIT	174929.5	5.66	264424	6.48	209473.5	9.80
	LAB SAMPLE ID						
01	METHOD-BLK	319037	6.17	495673	6.98	390581	10.30
02	6859-001MS	362404	6.16	554326	6.98	432398	10.30
03	6859-001MSD	324649	6.17	492755	6.98	390231	10.30
04	6740-009DIL	346432	6.16	528457	6.98	414962	10.30
05	6740-014DIL	317339	6.16	485648	6.98	381075	10.30
06	6740-019DIL	311186	6.17	478158	6.99	375884	10.30
07	6732-011	316616	6.16	486474	6.98	381150	10.31
08	6768-001	298531	6.17	458663	6.98	364766	10.30
09	6768-008DIL	312677	6.17	480042	6.98	379730	10.31
10	6652-003DIL	309259	6.17	477207	6.99	376679	10.30
11	6652-009	299933	6.17	465857	6.99	368567	10.30
12	6689-001	294525	6.16	454559	6.99	357340	10.31
13	6694-001	318432	6.17	488644	6.99	383120	10.31
14	6694-005DIL	313512	6.17	477991	6.99	381145	10.31
15	6703-002	321837	6.16	495167	6.98	390042	10.30
16	6859-001	314601	6.17	480548	6.98	378438	10.31
17	6859-002	307769	6.17	471216	6.98	371477	10.30
18	6859-003	308956	6.16	473666	6.98	373513	10.31
19	6859-004	301126	6.16	457091	6.98	360437	10.31
20	6859-005	296957	6.16	455847	6.99	359256	10.31
21	6734-001	305626	6.16	463375	6.98	366714	10.31
22	6734-004	295665	6.17	452353	6.98	355693	10.30

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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 File ID (Standard): E3897.D

Instrument ID: MSD_E

Date Analyzed: 11/01/2000

Time Analyzed: 12:57

	30UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	349859	6.16	528848	6.98	418947	10.30
	UPPER LIMIT	699718	6.66	1057696	7.48	837894	10.80
	LOWER LIMIT	174929.5	5.66	264424	6.48	209473.5	9.80
	LAB SAMPLE ID						
23	6742-001MS	303855	6.16	468857	6.98	371181	10.31
24	6742-001MSD	303580	6.16	460336	6.98	364272	10.30
25	6734-002	301011	6.16	465785	6.99	363508	10.31
26	6734-003	298645	6.17	461866	6.98	359835	10.30
27	6734-005	294598	6.16	455105	6.99	357670	10.31
28	6754-001	300368	6.17	462513	6.98	361150	10.30
29	6754-002	296442	6.17	459727	6.98	358261	10.30
30	6742-001	292428	6.17	447945	6.98	352582	10.30
31	6742-005	293202	6.16	451399	6.98	352862	10.30
32	6770-001	291099	6.17	451032	6.98	352369	10.30
33	6770-002	277523	6.16	425790	6.99	335948	10.31
34	6770-003	288119	6.17	445205	6.98	349293	10.31
35	6770-004	283722	6.16	439154	6.99	344992	10.30
36	6770-005	283909	6.17	438153	6.98	343477	10.31
37	6770-006	281630	6.16	436565	6.98	344200	10.30
38	6775-001	192767	6.19	297519	7.00	232707	10.31
39	6779-001	296811	6.16	473091	6.98	385922	10.30
40	6779-002	288139	6.16	444021	6.98	348457	10.30
42	6769-011	307436	6.16	472509	6.99	370328	10.31
43	6694-001	307315	6.16	478089	6.98	373191	10.30
44							

IS1 = PENTAFLUOROBENZENE
IS2 = 1,4-DIFLUOROBENZENE
IS3 = CHLOROBENZENE-D5

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.

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\11-01-00\E3920.D
Acq On : 1 Nov 2000 11:56 pm
Sample : GW-3,6734-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
IS Integration Params: LSCINT.P
Quant Time: Nov 2 11:03 2000

Vial: 26
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration
DataAcq Meth : EA103000

	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	6.16	168	305626	30.00	UG		0.00
31) 1,4-Difluorobenzene	6.98	114	463375	30.00	UG		0.00
50) Chlorobenzene-d5	10.31	117	366714	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.49	65	186143	26.89	UG		0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 89.63%#				
41) Toluene-d8	8.64	98	576308	29.20	UG		0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 97.33%				
59) Bromofluorobenzene	11.70	95	193823	27.08	UG		0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 90.27%				
Target Compounds							Qvalue
29) 1,2-Dichloroethane(EDC)	6.57	62	5727	0.59	UG	#	100
32) Benzene	6.56	78	195488	7.43	UG		100
42) Toluene	8.72	92	9919	0.61	UG		97
51) Chlorobenzene	10.34	112	285869	16.64	UG	#	100
74) 1,2-Dichlorobenzene	13.60	146	7163	0.57	UG	#	68

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

Quantitation Report

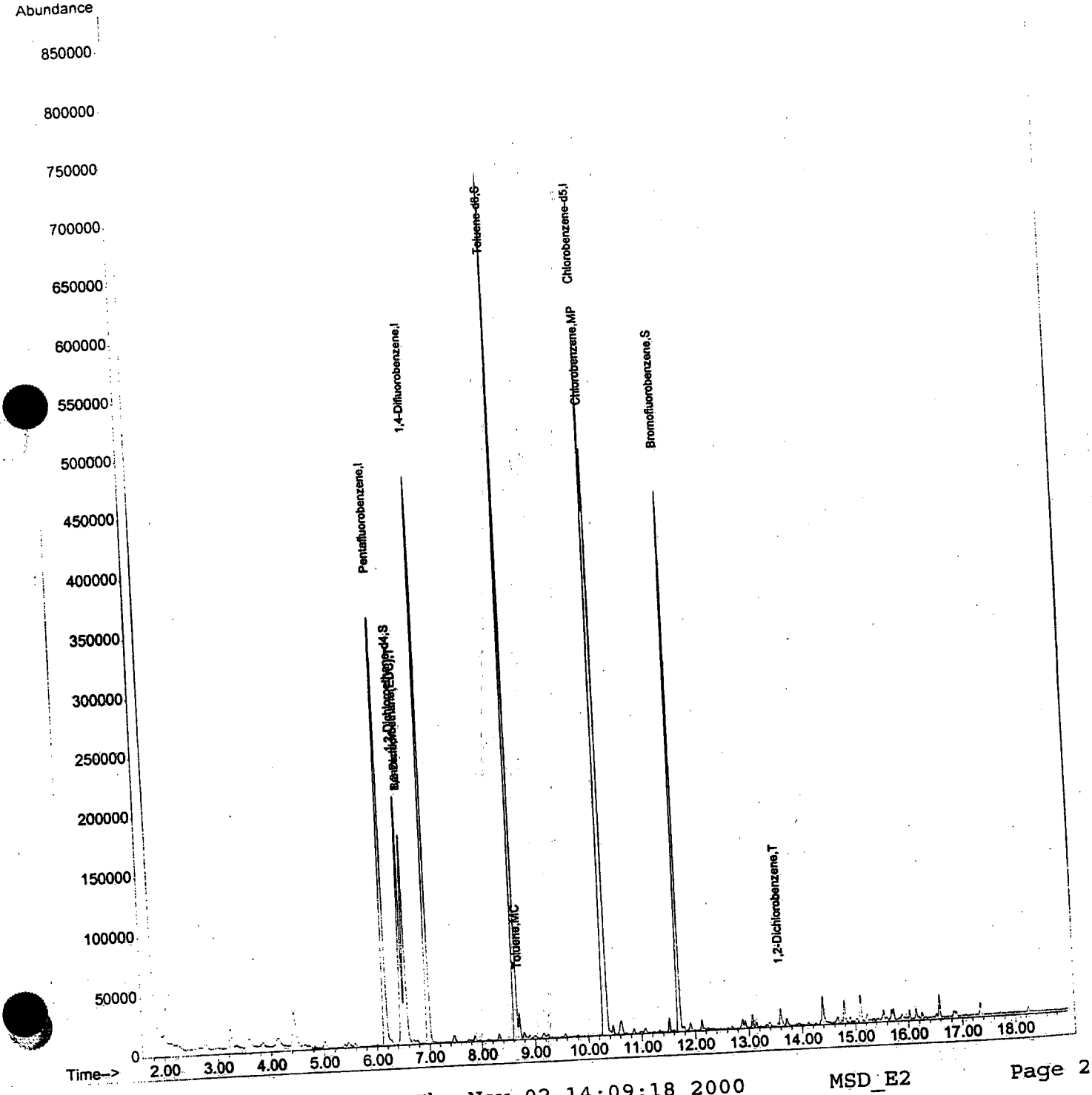
Data File : C:\HPCHEM\1\DATA\11-01-00\E3920.D
Acq On : 1 Nov 2000 11:56 pm
Sample : GW-3,6734-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P
Quant Time: Nov 2 11:03 2000

Vial: 26
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration

TIC: E3920.D



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3920.D
Acq On : 1 Nov 2000 11:56 pm
Sample : GW-3,6734-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
IS Integration Params: LSCINT.P

Vial: 26
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

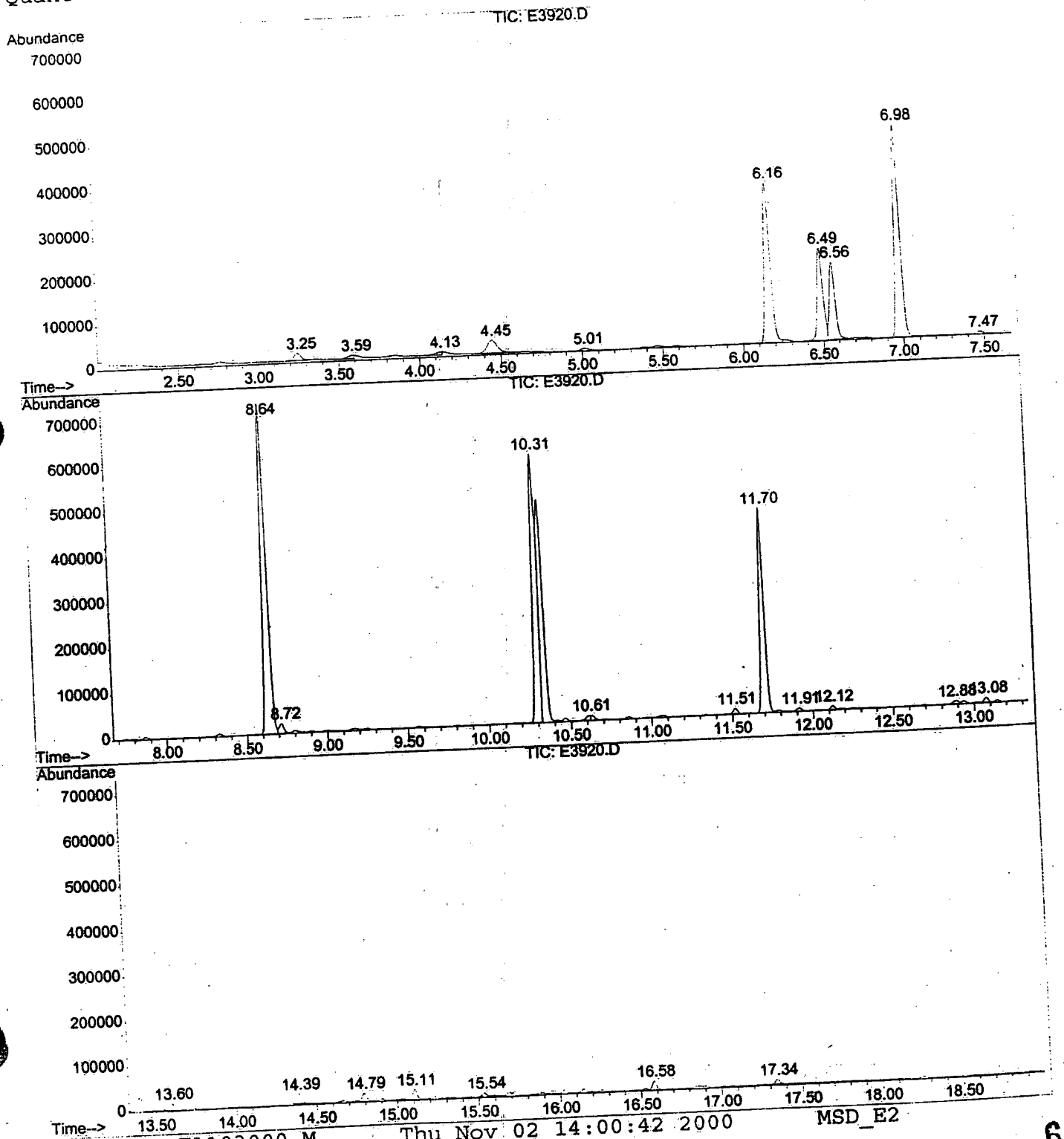
Signal : TIC

Peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.246	305	317	329	rBV2	16311	51663	3.39%	0.719%
2	3.586	370	382	384	rBV3	7917	20735	1.36%	0.288%
3	4.135	470	487	488	rBV7	7249	21470	1.41%	0.299%
4	4.449	533	547	570	rVB2	29215	130479	8.55%	1.815%
5	5.013	643	655	668	rBV2	5948	20270	1.33%	0.282%
6	6.164	863	875	890	rBV	359074	919141	60.24%	12.788%
7	6.488	918	937	944	rBV	208304	521283	34.16%	7.253%
8	6.562	944	951	969	rVB	174260	435089	28.52%	6.054%
9	6.980	1020	1031	1051	rBV	476460	1083658	71.02%	15.077%
10	7.472	1116	1125	1135	rBV6	5946	17951	1.18%	0.250%
11	8.638	1335	1348	1358	rBV	735500	1525816	100.00%	21.229%
12	8.716	1358	1363	1371	rVB	21234	41953	2.75%	0.584%
13	10.306	1656	1667	1670	rBV	596180	1206205	79.05%	16.783%
14	10.615	1717	1726	1727	rBV4	10222	19766	1.30%	0.275%
15	11.514	1892	1898	1906	rVB3	12187	22702	1.49%	0.316%
16	11.703	1924	1934	1945	rBV	453174	849419	55.67%	11.818%
17	11.912	1966	1974	1982	rVB6	7141	16085	1.05%	0.224%
18	12.121	2007	2014	2020	rBV2	8943	16609	1.09%	0.231%
19	12.885	2148	2160	2165	rBV7	7497	18946	1.24%	0.264%
20	13.078	2190	2197	2203	rVB	11123	19246	1.26%	0.268%
21	13.601	2290	2297	2311	rVB3	14923	35040	2.30%	0.488%
22	14.391	2442	2448	2458	rVB7	21754	44519	2.92%	0.619%
23	14.794	2519	2525	2539	rVB5	18877	37737	2.47%	0.525%
24	15.108	2577	2585	2591	rBV2	22863	42583	2.79%	0.592%
25	15.536	2657	2667	2672	rBV3	8643	17864	1.17%	0.249%
26	16.582	2861	2867	2874	rVB4	18998	31803	2.08%	0.442%
27	17.341	3005	3012	3022	rBV6	10536	19239	1.26%	0.268%

Sum of corrected areas: 7187271

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\11-01-00\E3920.D
Operator : AMY
Acquired : 1 Nov 2000 11:56 pm using AcqMethod EA103000
Instrument : MSD_E2
Sample Name: GW-3,6734-001,A,5mL,100
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00
Vial Number: 26
Quant File :EA103000.RES (RTE Integrator)



E3920.D EA103000.M Thu Nov 02 14:00:42 2000 MSD_E2

4656

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3920.D
Acq On : 1 Nov 2000 11:56 pm
Sample : GW-3,6734-001,A,5mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P

Vial: 26
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

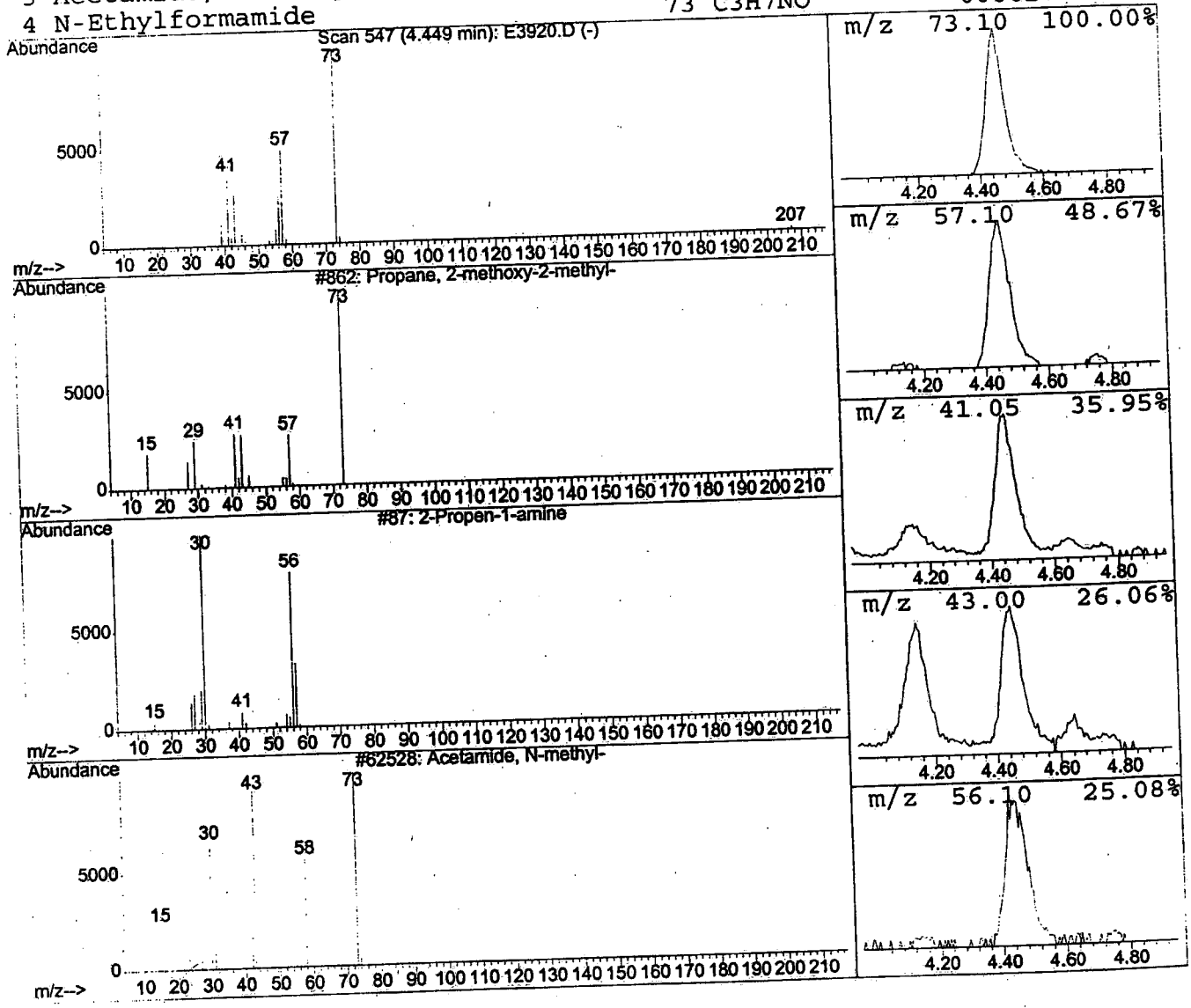
Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Methyl-t-Butyl Ether(MTBE) Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.45	4.26 UG	130479	Pentafluorobenzene	6.16

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Propane, 2-methoxy-2-methyl-	88	C5H12O	001634-04-4	28
2	2-Propen-1-amine	57	C3H7N	000107-11-9	4
3	Acetamide, N-methyl-	73	C3H7NO	000079-16-3	4
4	N-Ethylformamide	73	C3H7NO	000627-45-2	4



66

4657

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\11-01-00\E3925.D
Acq On : 2 Nov 2000 1:59 am
[redacted]ple : GW-4,6734-002,A,0.05mL,100
[redacted]sc : ENVTACT/ORBIS,10/24/00,10/26/00
S Integration Params: LSCINT.P
Quant Time: Nov 2 11:48 2000

Vial: 31
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration
DataAcq Meth : EA103000

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	6.16	168	301011	30.00	UG		0.00
31) 1,4-Difluorobenzene	6.99	114	465785	30.00	UG		0.00
50) Chlorobenzene-d5	10.31	117	363508	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.49	65	188385	27.63	UG		0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 92.10%				
41) Toluene-d8	8.64	98	575691	29.02	UG		0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 96.73%				
59) Bromofluorobenzene	11.70	95	194927	27.47	UG		0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 91.57%				
Target Compounds							Qvalue
32) Benzene	6.56	78	2640373	99.88	UG		100
51) Chlorobenzene	10.34	112	147039	8.63	UG	#	100

Quantitation Report

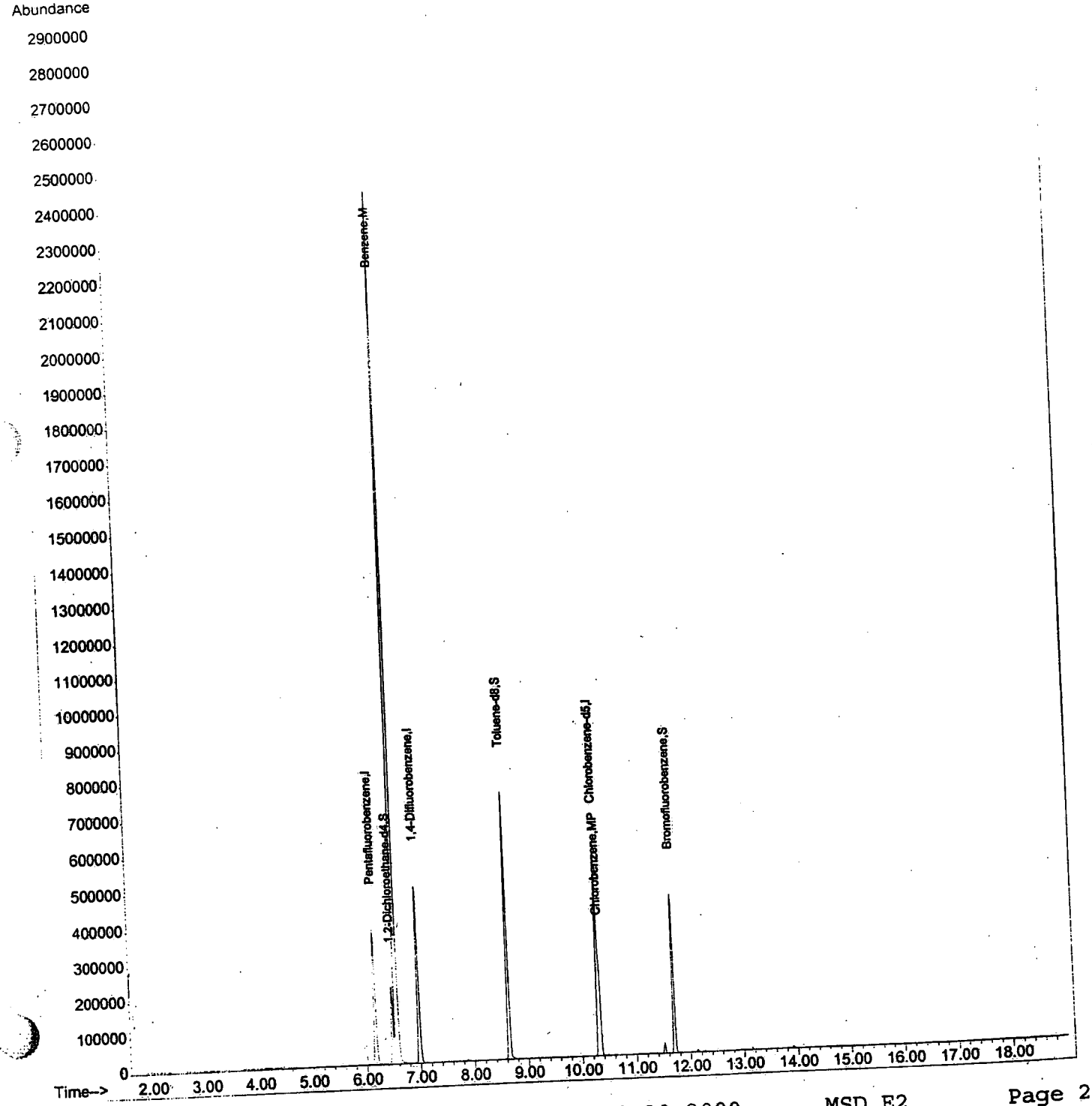
Data File : C:\HPCHEM\1\DATA\11-01-00\E3925.D
Acq On : 2 Nov 2000 1:59 am
Sample : GW-4,6734-002,A,0.05mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P
Quant Time: Nov 2 11:48 2000

Vial: 31
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration

TIC: E3925.D



68

4659

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3925.D
Acq On : 2 Nov 2000 1:59 am
Sample : GW-4,6734-002,A,0.05mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P

Vial: 31
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Filtering: 5
Sampling : 1
Min Area: 1 % of largest Peak
Start Thrs: 0.2
Max Peaks: 100
Stop Thrs : 0
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

Peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.165	863	875	898	rBV	382187	909505	15.68%	7.422%
2	6.489	927	937	942	rBV	218886	488476	8.42%	3.986%
3	6.562	942	951	985	rVB	2469226	5799480	100.00%	47.328%
4	6.981	1019	1031	1048	rBV	495507	1085948	18.72%	8.862%
5	8.639	1338	1348	1360	rBV	747185	1529146	26.37%	12.479%
6	10.307	1656	1667	1686	rBV2	581132	1594812	27.50%	13.015%
7	11.703	1924	1934	1945	rBV	445487	846383	14.59%	6.907%

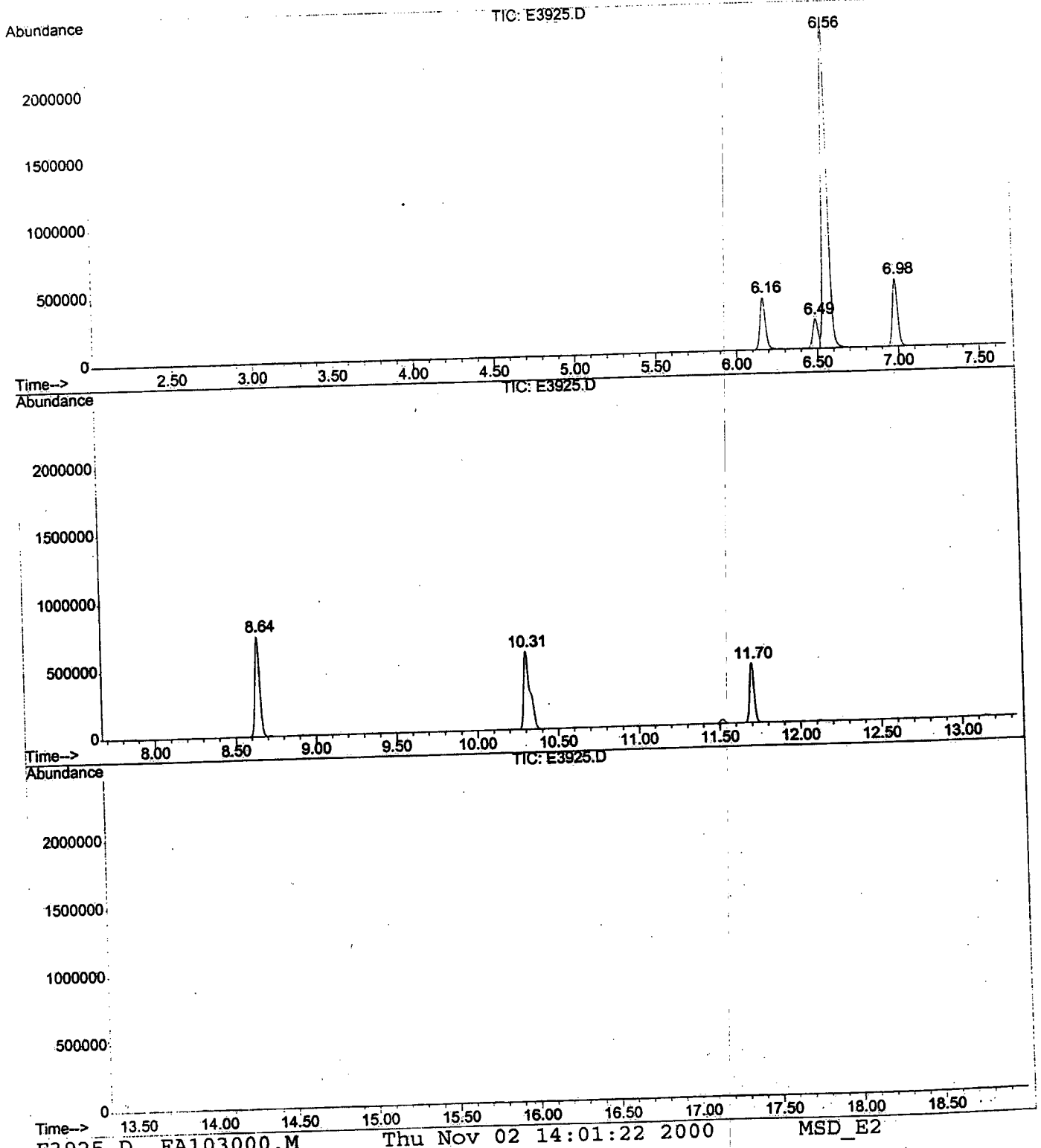
Sum of corrected areas: 12253750

E3925.D EA103000.M Thu Nov 02 14:01:21 2000 MSD_E2

4660

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\11-01-00\E3925.D
Operator : AMY
Acquired : 2 Nov 2000 1:59 am using AcqMethod EA103000
Instrument : MSD_E2
Sample Name: GW-4,6734-002,A,0.05mL,100
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00
Vial Number: 31
Quant File :EA103000.RES (RTE Integrator)



E3925.D EA103000.M Thu Nov 02 14:01:22 2000 MSD_E2

70

4661

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\11-01-00\E3926.D
Acq On : 2 Nov 2000 2:24 am
Sample : GW-5,6734-003,A,0.1mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
IS Integration Params: LSCINT.P
Quant Time: Nov 2 11:49 2000

Vial: 32
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration
DataAcq Meth : EA103000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.17	168	298645	30.00	UG	0.01
31) 1,4-Difluorobenzene	6.98	114	461866	30.00	UG	0.00
50) Chlorobenzene-d5	10.30	117	359835	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.49	65	184432	27.27	UG	0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 90.90%			
41) Toluene-d8	8.64	98	571257	29.04	UG	0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 96.80%			
59) Bromofluorobenzene	11.70	95	191317	27.24	UG	0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 90.80%			
Target Compounds						Qvalue
32) Benzene	6.56	78	2204636	84.11	UG	100
42) Toluene	8.72	92	14616	0.90	UG	98

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

Quantitation Report

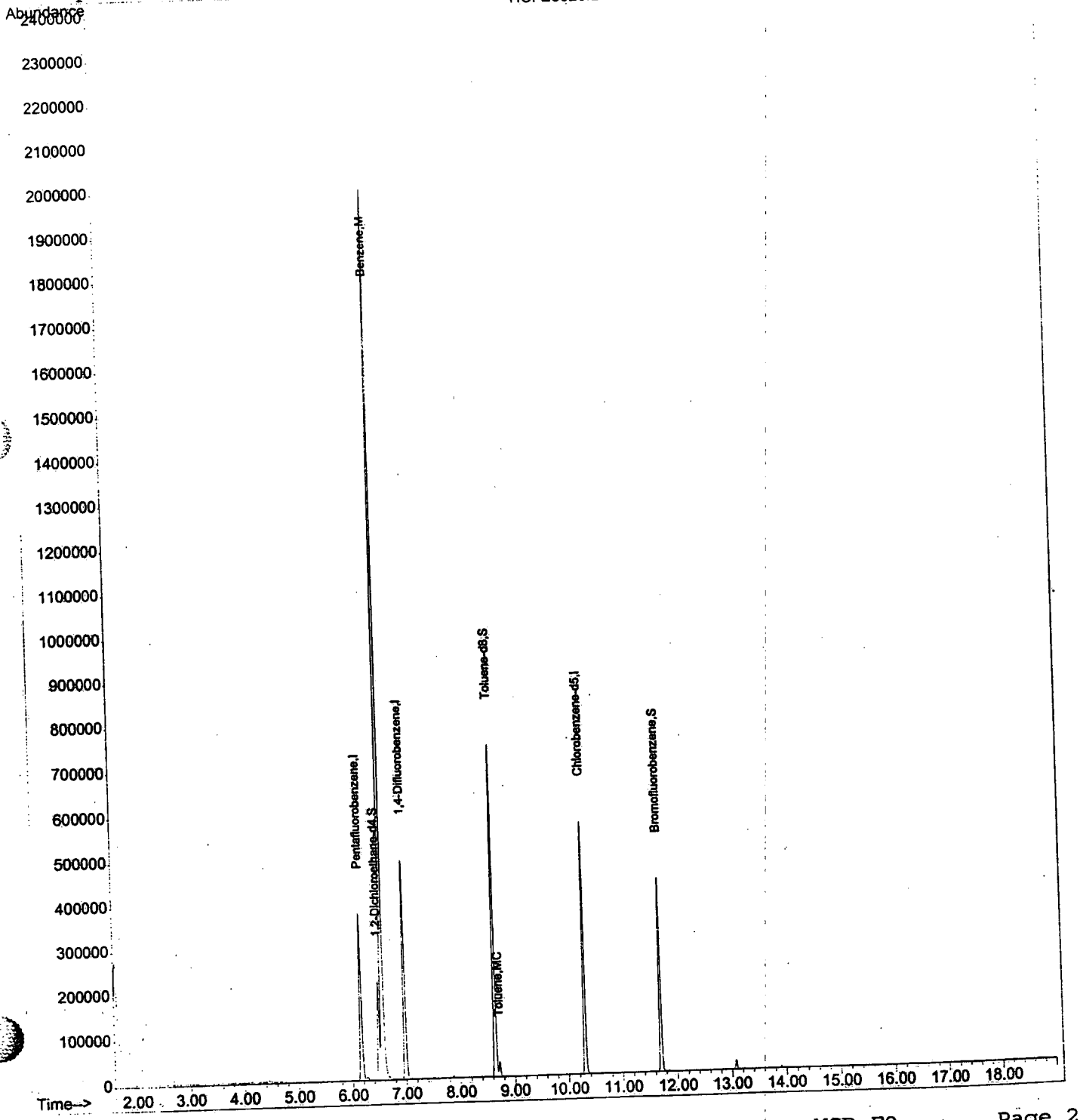
Data File : C:\HPCHEM\1\DATA\11-01-00\E3926.D
Acq On : 2 Nov 2000 2:24 am
Sample : GW-5,6734-003,A,0.1mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P
Quant Time: Nov 2 11:49 2000

Vial: 32
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration

TIC: E3926.D



72

4663

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3926.D
Acq On : 2 Nov 2000 2:24 am
Sample : GW-5,6734-003,A,0.1mL;100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P

Vial: 32
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

Peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.166	864	875	888	rBV	375629	897382	18.64%	8.313%
2	6.490	921	937	942	rBV	220362	492750	10.24%	4.565%
3	6.564	942	951	973	rVB	1996096	4813966	100.00%	44.593%
4	6.982	1021	1031	1048	rBV	492411	1073526	22.30%	9.944%
5	8.640	1338	1348	1357	rBV	744107	1510108	31.37%	13.989%
6	8.718	1357	1363	1373	rVB	32231	63819	1.33%	0.591%
7	10.303	1657	1666	1679	rBV	566698	1109845	23.05%	10.281%
8	11.700	1924	1933	1948	rBV	436097	833838	17.32%	7.724%

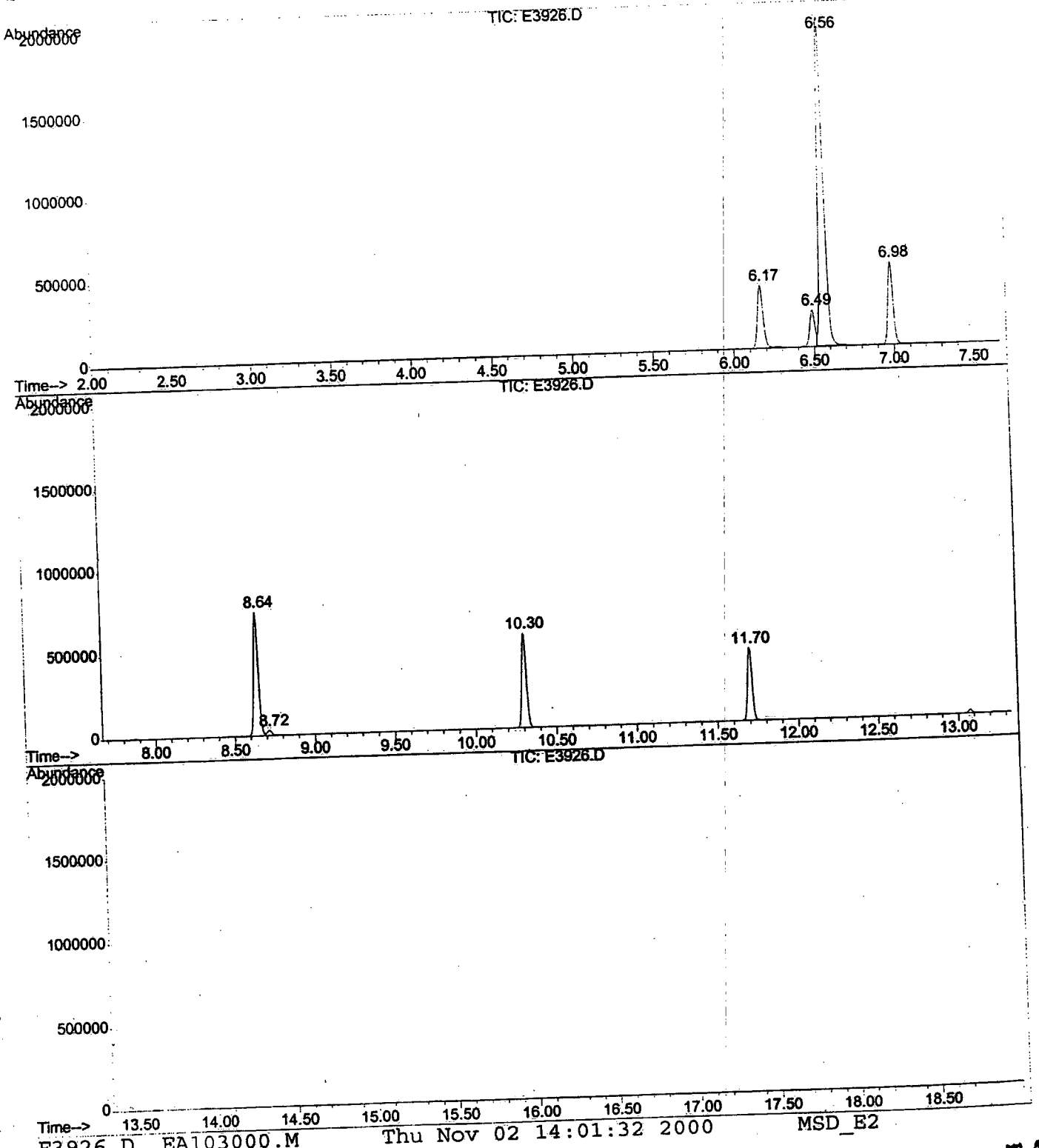
Sum of corrected areas: 10795234

E3926.D EA103000.M Thu Nov 02 14:01:31 2000 MSD_E2

4664

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\11-01-00\E3926.D
Operator : AMY
Acquired : 2 Nov 2000 2:24 am using AcqMethod EA103000
Instrument : MSD_E2
Sample Name: GW-5,6734-003,A,0.1mL,100
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00
Vial Number: 32
Quant File :EA103000.RES (RTE Integrator)



E3926.D EA103000.M Thu Nov 02 14:01:32 2000 MSD_E2

4665

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\11-01-00\E3921.D
Acq On : 2 Nov 2000 12:20 am
Sample : GW-6,6734-004,A,0.01mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
IS Integration Params: LSCINT.P
Quant Time: Nov 2 11:05 2000

Vial: 27
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration
DataAcq Meth : EA103000

	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	6.17	168	295665	30.00	UG		0.00
31) 1,4-Difluorobenzene	6.98	114	452353	30.00	UG		0.00
50) Chlorobenzene-d5	10.30	117	355693	30.00	UG		0.00
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.49	65	181187	27.06	UG		0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 90.20%				
41) Toluene-d8	8.64	98	560039	29.07	UG		0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 96.90%				
59) Bromofluorobenzene	11.70	95	192451	27.72	UG		0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 92.40%				
Target Compounds							Qvalue
25) Chloroform	5.94	83	24651	2.32	UG		100
32) Benzene	6.56	78	623860	24.30	UG		100
42) Toluene	8.72	92	962109	60.31	UG		100
45) Tetrachloroethene	9.35	166	12513	2.50	UG	#	100
51) Chlorobenzene	10.34	112	32682	1.96	UG	#	100
54) m,p-Xylene	10.61	106	14262	1.23	UG		99
70) 1,3-Dichlorobenzene	13.14	146	41693	3.22	UG	#	68
74) 1,2-Dichlorobenzene	13.60	146	462171	38.12	UG	#	100

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

Quantitation Report

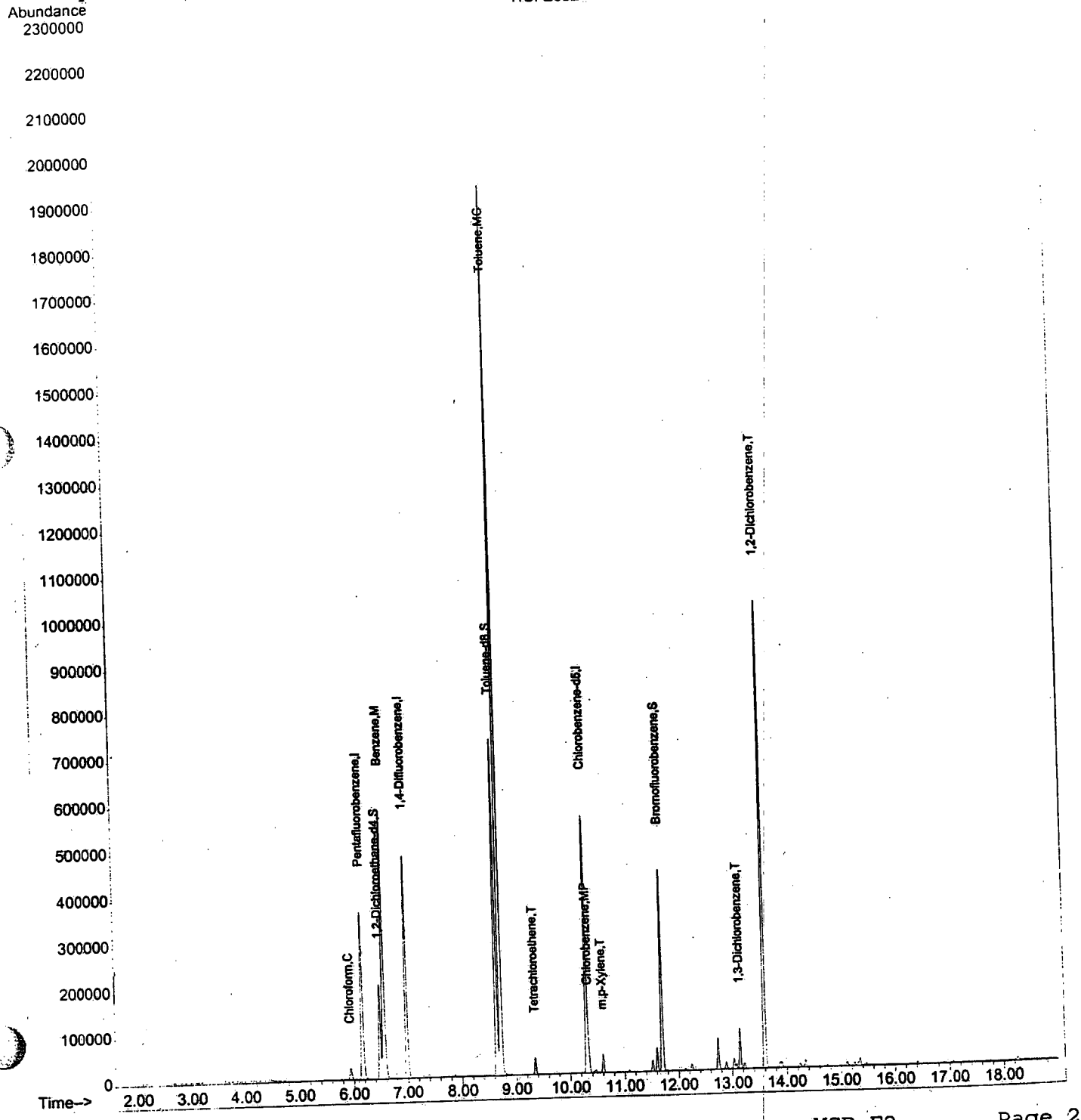
Data File : C:\HPCHEM\1\DATA\11-01-00\E3921.D
Acq On : 2 Nov 2000 12:20 am
Sample : GW-6,6734-004,A,0.01mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P
Quant Time: Nov 2 11:05 2000

Vial: 27
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration

TIC: E3921.D



4667

76

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3921.D
Acq On : 2 Nov 2000 12:20 am
[redacted]mple : GW-6,6734-004,A,0.01mL,100
[redacted]sc : ENVTACT/ORBIS,10/24/00,10/26/00
.S Integration Params: LSCINT.P

Vial: 27
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

Peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.935	823	831	845	rVB	25018	59713	1.53%	0.432%
2	6.165	864	875	894	rBV	365625	883743	22.69%	6.395%
3	6.490	926	937	943	rBV	208563	476076	12.22%	3.445%
4	6.563	943	951	971	rVB	581183	1379269	35.41%	9.981%
5	6.981	1021	1031	1048	rBV	485135	1049096	26.93%	7.592%
6	8.639	1338	1348	1355	rBV	731380	1480693	38.01%	10.715%
[redacted]	8.718	1355	1363	1379	rVB	1933797	3895587	100.00%	28.191%
[redacted]	9.351	1477	1484	1492	rBV2	37216	75402	1.94%	0.546%
9	10.302	1656	1666	1686	rBV	560585	1202608	30.87%	8.703%
10	10.601	1715	1723	1732	rBV	40615	78702	2.02%	0.570%
11	11.516	1890	1898	1907	rBV	24116	44759	1.15%	0.324%
12	11.605	1907	1915	1925	rBV	51423	93960	2.41%	0.680%
13	11.699	1925	1933	1948	rBV	438375	833086	21.39%	6.029%
14	12.740	2124	2132	2145	rBV	69239	133193	3.42%	0.964%
15	13.033	2181	2188	2193	rBV2	22798	45157	1.16%	0.327%
16	13.142	2201	2209	2219	rVB	88873	164437	4.22%	1.190%
17	13.597	2286	2296	2312	rBV	1015756	1923261	49.37%	13.918%

Sum of corrected areas: 13818742

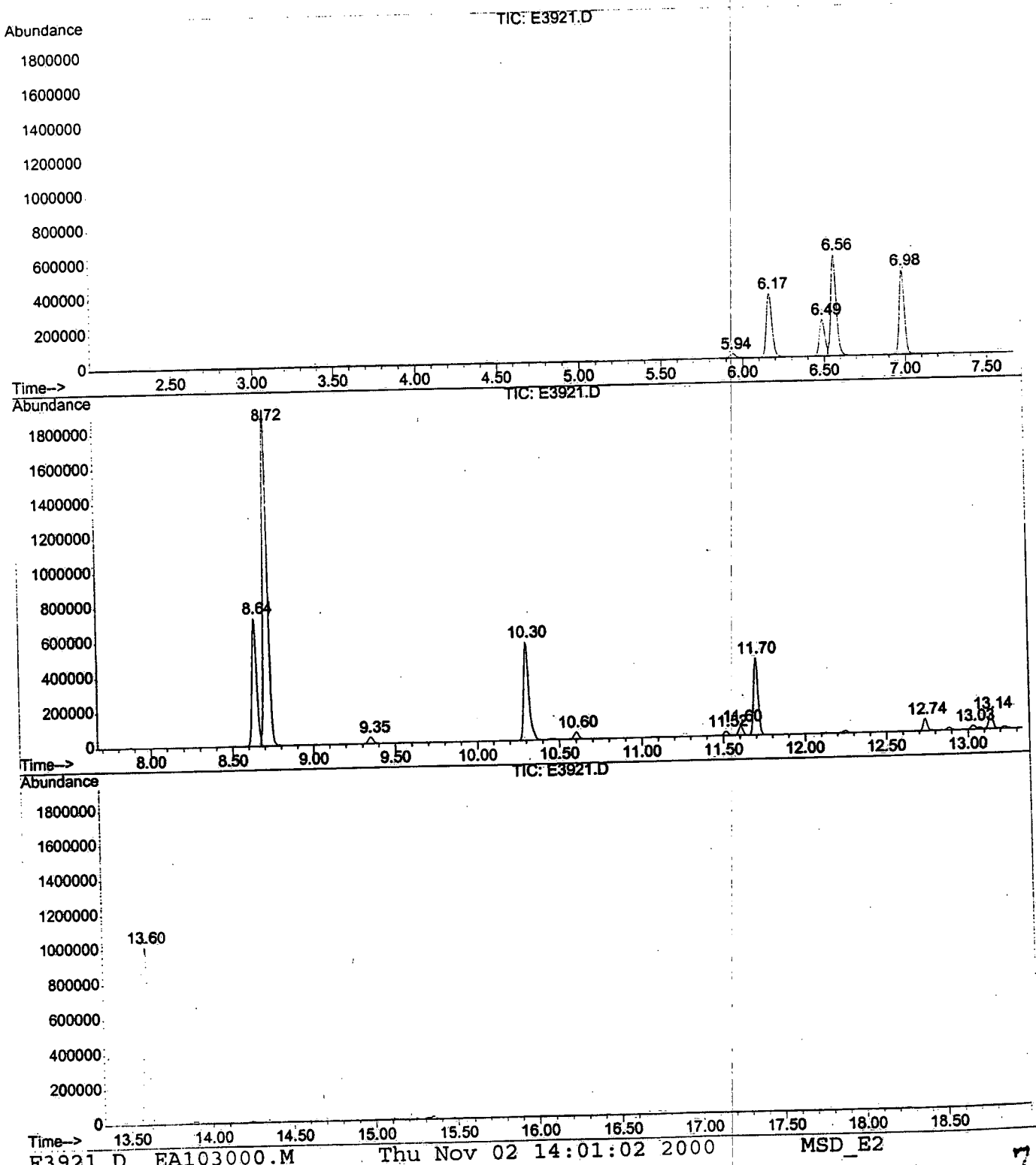
[redacted]3921.D EA103000.M Thu Nov 02 14:01:01 2000 MSD_E2

77

4666

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\11-01-00\E3921.D
Operator : AMY
Acquired : 2 Nov 2000 12:20 am using AcqMethod EA103000
Instrument : MSD_E2
Sample Name: GW-6,6734-004,A,0.01mL,100
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00
Vial Number: 27
Quant File :EA103000.RES (RTE Integrator)



E3921.D EA103000.M Thu Nov 02 14:01:02 2000 MSD_E2

78

4669

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3921.D
Acq On : 2 Nov 2000 12:20 am
Sample : GW-6,6734-004,A,0.01mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P

Vial: 27
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

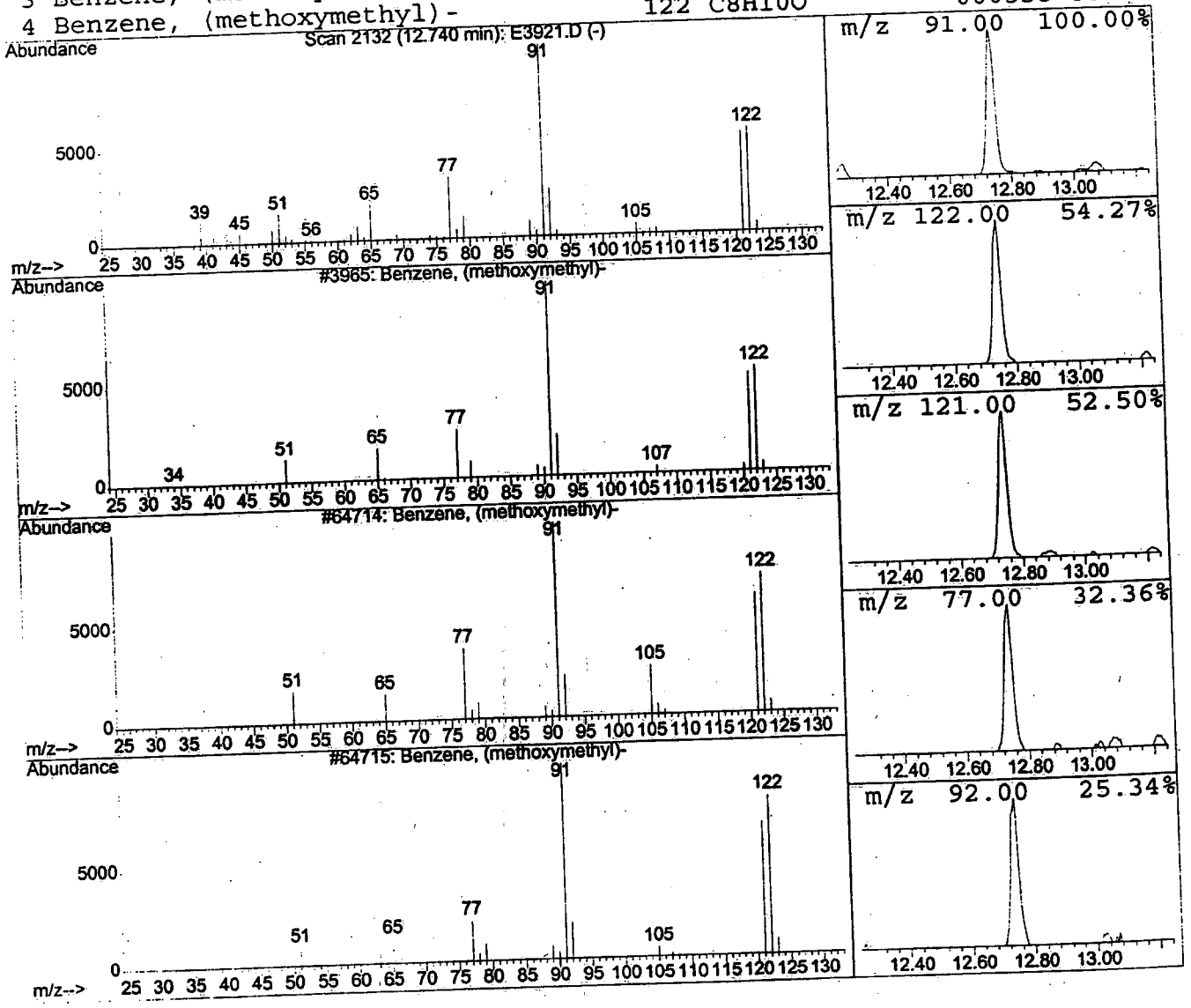
Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.74	3.32 UG	133193	Chlorobenzene-d5	10.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	91
2	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	91
3	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	90
4	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	58



4670

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\11-01-00\E3927.D
Acq On : 2 Nov 2000 2:48 am
Sample : TB,6734-005,A,5mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
IS Integration Params: LSCINT.P
Quant Time: Nov 2 11:50 2000

Vial: 33
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration
DataAcq Meth : EA103000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.16	168	294598	30.00	UG	0.00
31) 1,4-Difluorobenzene	6.99	114	455105	30.00	UG	0.00
50) Chlorobenzene-d5	10.31	117	357670	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.49	65	180807	27.10	UG	0.00
Spiked Amount 30.000	Range 90 - 142		Recovery = 90.33%			
41) Toluene-d8	8.64	98	563733	29.08	UG	0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 96.93%			
59) Bromofluorobenzene	11.70	95	191307	27.40	UG	0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 91.33%			

Target Compounds Qvalue

Quantitation Report

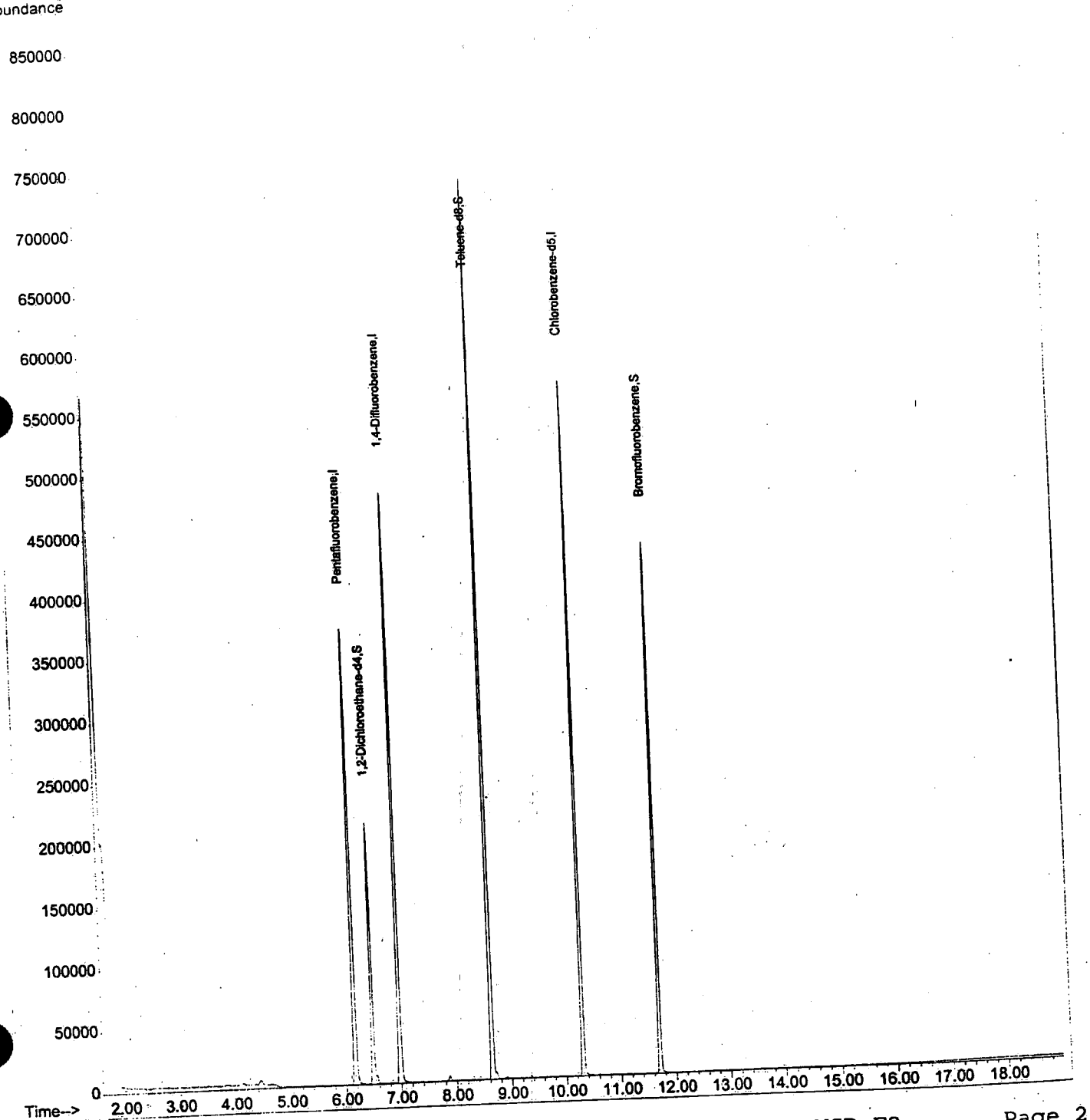
Data File : C:\HPCHEM\1\DATA\11-01-00\E3927.D
Acq On : 2 Nov 2000 2:48 am
Sample : TB,6734-005,A,5mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P
Quant Time: Nov 2 11:50 2000

Vial: 33
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration

TIC: E3927.D



81

4672

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3927.D
Acq On : 2 Nov 2000 2:48 am
Sample : TB,6734-005,A,5mL,100
Misc : ENVTACT/ORBIS,10/24/00,10/26/00
MS Integration Params: LSCINT.P

Vial: 33
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

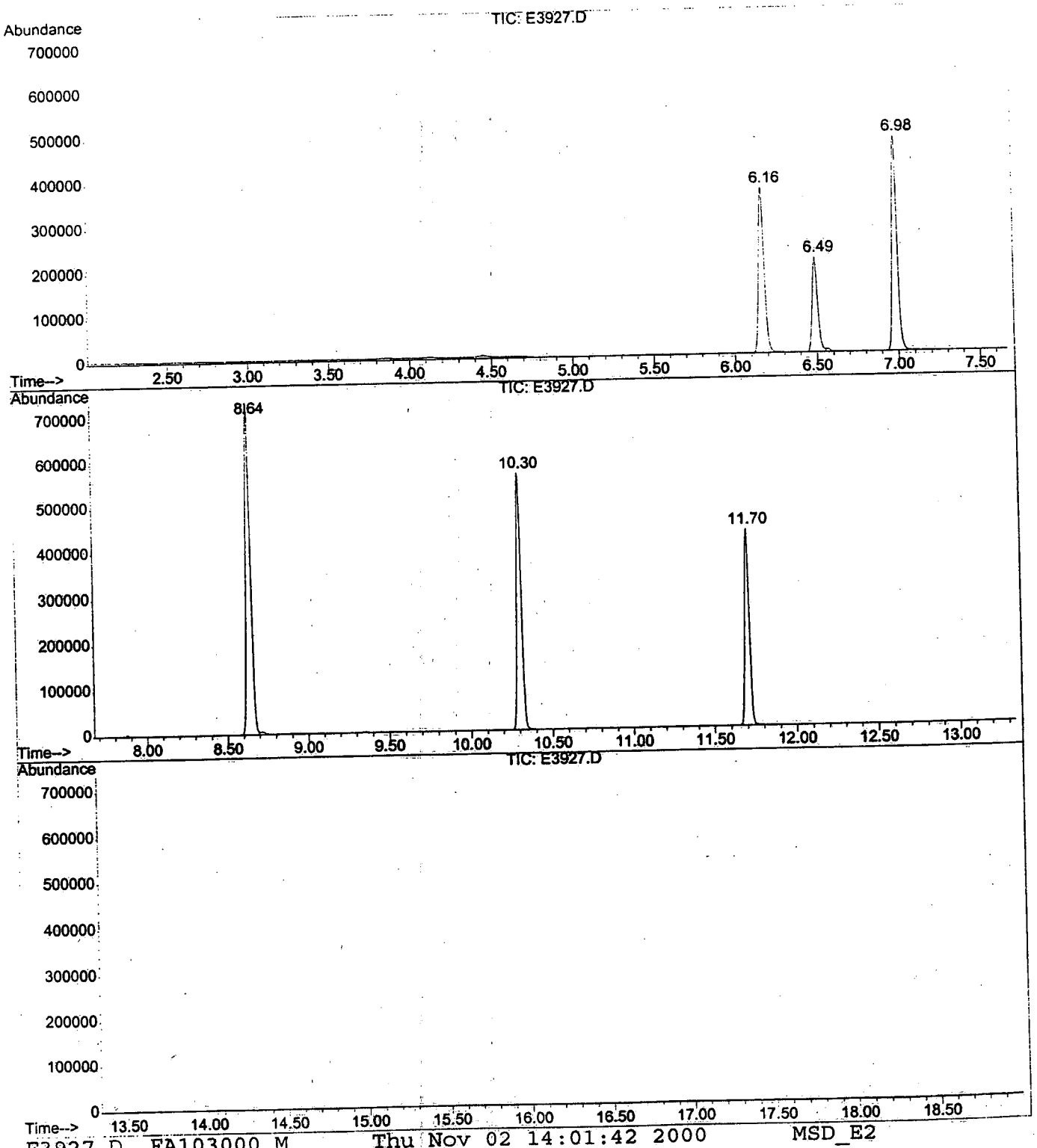
Peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.165	864	875	899	rBV	370045	884038	59.38%	15.131%
2	6.489	926	937	949	rBV	212411	489414	32.88%	8.377%
3	6.981	1019	1031	1048	rBV	480504	1056084	70.94%	18.076%
4	8.639	1338	1348	1359	rBV	737457	1488697	100.00%	25.481%
5	10.302	1657	1666	1679	rBV	567351	1098646	73.80%	18.805%
6	11.703	1924	1934	1947	rBV	431581	825496	55.45%	14.129%

Sum of corrected areas: 5842375

E3927.D EA103000.M Thu Nov 02 14:01:41 2000 MSD_E2

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\11-01-00\E3927.D
Operator : AMY
Acquired : 2 Nov 2000 2:48 am using AcqMethod EA103000
Instrument : MSD_E2
Sample Name: TB,6734-005,A,5mL,100
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00
Vial Number: 33
Quant File :EA103000.RES (RTE Integrator)



E3927.D EA103000.M Thu Nov 02 14:01:42 2000 MSD_E2

83

4674

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\11-01-00\E3899.D
Acq On : 1 Nov 2000 2:05 pm
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100
Misc : NA,NA,NA
S Integration Params: LSCINT.P
Quant Time: Nov 1 14:32 2000

Vial: 5
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Quant Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration
DataAcq Meth : EA103000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.17	168	319037	30.00	UG	0.01
31) 1,4-Difluorobenzene	6.98	114	495673	30.00	UG	0.00
50) Chlorobenzene-d5	10.30	117	390581	30.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.49	65	200222	27.71	UG	0.01
Spiked Amount 30.000	Range 90 - 142		Recovery = 92.37%			
41) Toluene-d8	8.64	98	619241	29.33	UG	0.00
Spiked Amount 30.000	Range 90 - 100		Recovery = 97.77%			
59) Bromofluorobenzene	11.70	95	207495	27.22	UG	0.00
Spiked Amount 30.000	Range 75 - 106		Recovery = 90.73%			

Target Compounds Qvalue

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

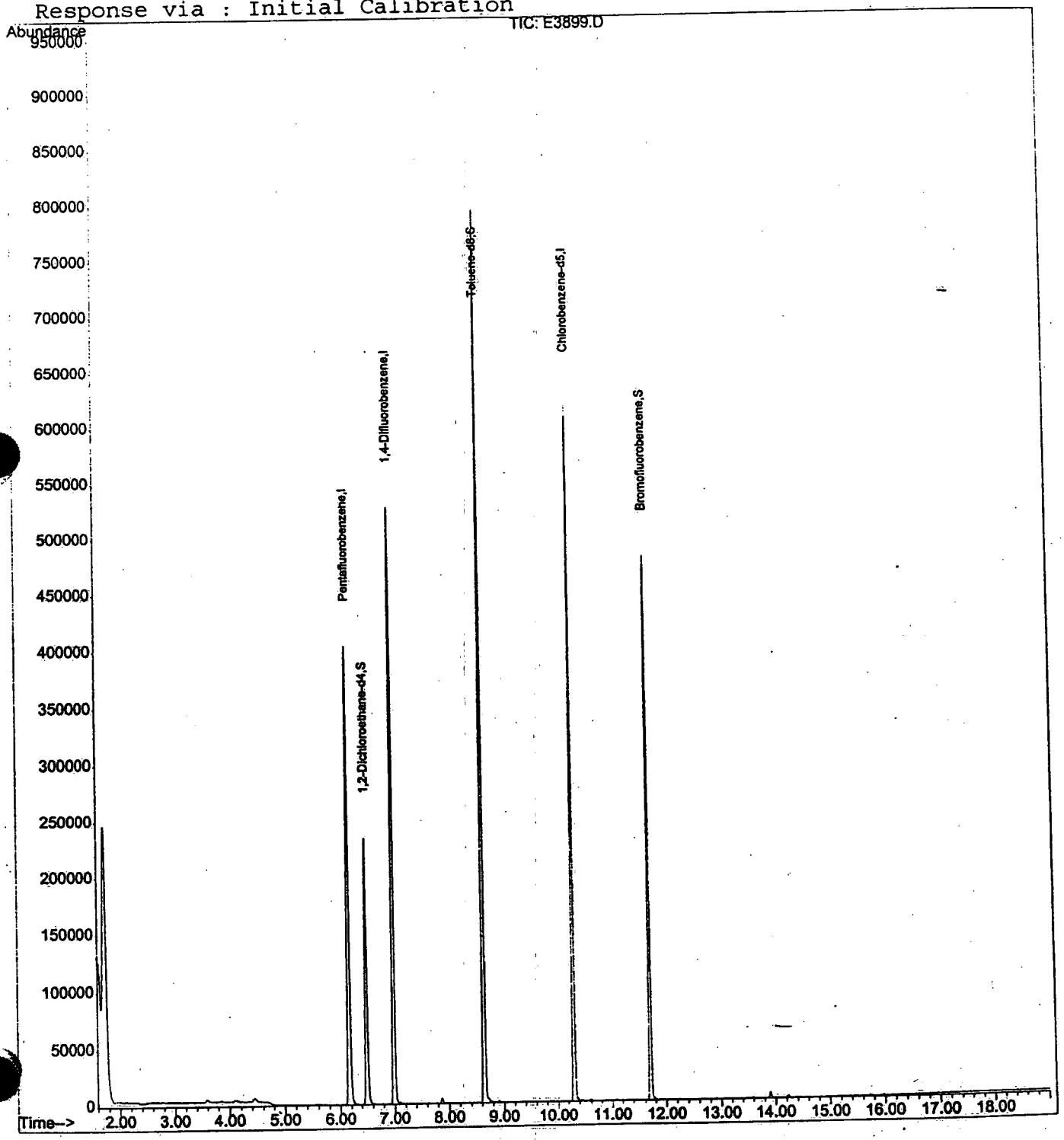
Quantitation Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3899.D
Acq On : 1 Nov 2000 2:05 pm
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100
Misc : NA,NA,NA
MS Integration Params: LSCINT.P
Quant Time: Nov 1 14:32 2000

Vial: 5
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Quant Results File: EA103000.RES

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon Oct 30 14:00:13 2000
Response via : Initial Calibration



4676

05

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\11-01-00\E3899.D
Acq On : 1 Nov 2000 2:05 pm
Sample : METHOD-BLK,METHOD-BLK,A,5mL,100
Misc : NA,NA,NA
MS Integration Params: LSCINT.P

Vial: 5
Operator: AMY
Inst : MSD_E2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\EA103000.M (RTE Integrator)
Title : VOLATILE ORGANICS BY EPA METHOD 624
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 1 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

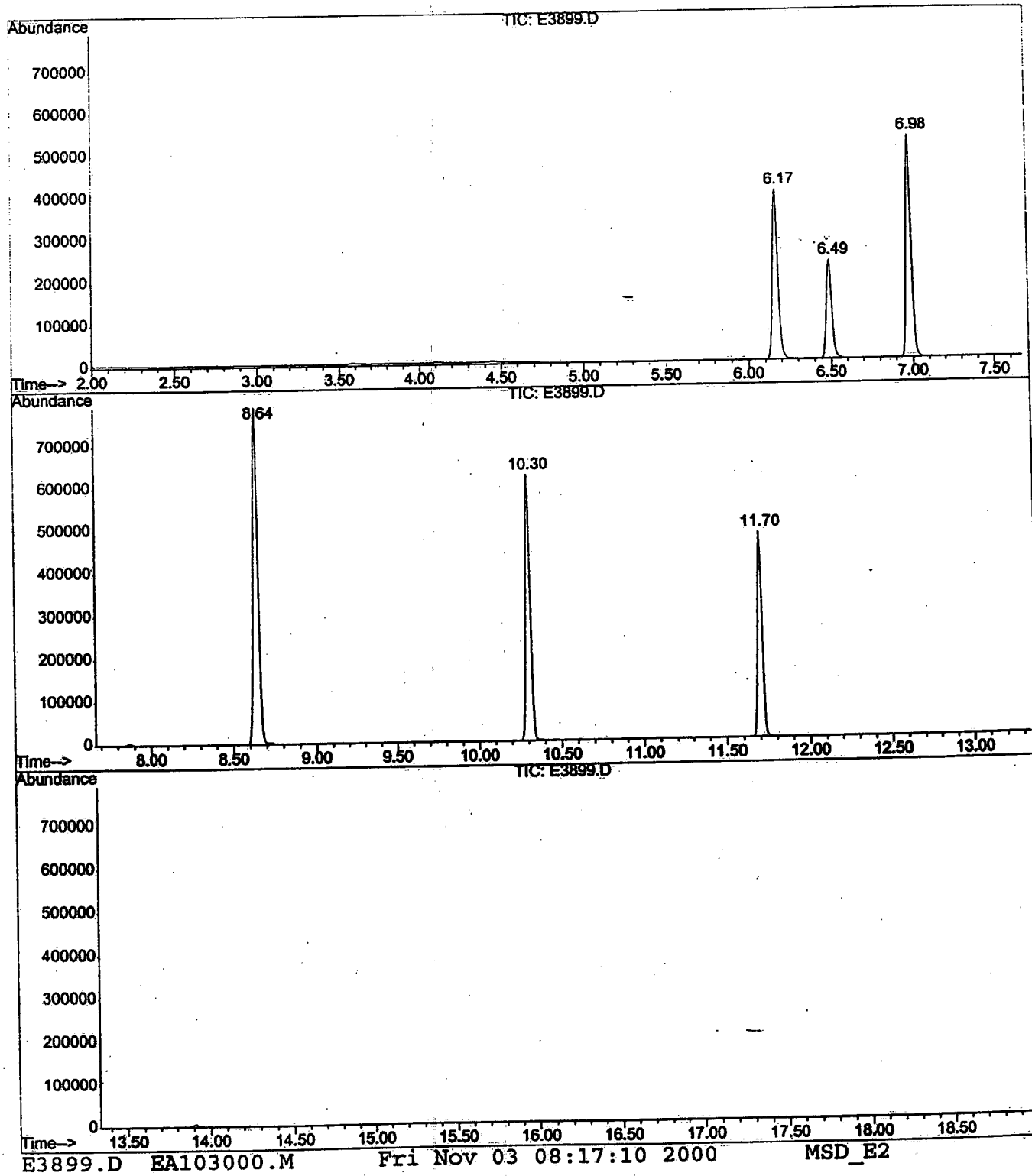
Peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	6.166	860	875	894	rBV	403537	964646	58.99%	15.080%
2	6.491	925	937	955	rBV	234257	542221	33.16%	8.476%
3	6.982	1021	1031	1051	rBV	526900	1153683	70.55%	18.035%
4	8.640	1337	1348	1361	rBV	793912	1635165	100.00%	25.561%
5	10.303	1655	1666	1687	rBV	624768	1200678	73.43%	18.769%
6	11.700	1924	1933	1949	rBV	480642	900632	55.08%	14.079%

Sum of corrected areas: 6397025

E3899.D EA103000.M Fri Nov 03 08:17:08 2000 MSD_E2

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\11-01-00\E3899.D
Operator : AMY
Acquired : 1 Nov 2000 2:05 pm using AcqMethod EA103000
Instrument : MSD_E2
Sample Name: METHOD-BLK,METHOD-BLK,A,5mL,100
Misc Info : NA,NA,NA
Vial Number: 5
Quant File :EA103000.RES (RTE Integrator)



E3899.D EA103000.M Fri Nov 03 08:17:10 2000 MSD_E2

4678

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6219.D DFTPP Injection Date : 10/24/2000

Inst ID: MSDC DFTPP Injection Time: 12:39

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	60.0			
68	Less than 2.0% of mass 69	0.0	(	0.0	)1
69	Mass 69 relative abundance	56.7			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	55.9			
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	7.3			
275	10.0 - 30.0% of mass 198	24.4			
365	Greater than 1.0% of mass 198	4.1			
441	Present, but less than mass 443	13.07	(	79.3	)3
442	40.0 - 100.0% of mass 198	80.0			
443	17.0 - 23.0% of mass 442	16.5	(	20.6	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C6220.D	10/24/2000	12:51
.	10-PPB-INJ-FOR-	C6221.D	10/24/2000	13:17
.	80-PPB-INJ-FOR-	C6222.D	10/24/2000	13:44
.	5-PPB-INJ-FOR-1	C6223.D	10/24/2000	14:10
.	50-PPB-INJ-FOR-	C6224.D	10/24/2000	14:36
.	Mthod-Blank	C6225.D	10/24/2000	15:03
.	DI-MS	C6226.D	10/24/2000	15:29
.	DI-MSD	C6227.D	10/24/2000	15:56
FB-2	6522-010	C6228.D	10/24/2000	16:23
MW-2	6518-002	C6229.D	10/24/2000	17:10
MW-1	6518-001	C6230.D	10/24/2000	17:36
MW-3	6518-003	C6231.D	10/24/2000	18:03
FIELD	6518-004	C6232.D	10/24/2000	18:30
SI-GW2	6573-001	C6243.D	10/24/2000	23:21
S2-GW2	6573-002	C6244.D	10/24/2000	23:47

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6333.D DFTPP Injection Date : 10/27/2000

Inst ID: MSDC DFTPP Injection Time: 10:37

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	55.0			
68	Less than 2.0% of mass 69	0.9	(	1.6	)1
69	Mass 69 relative abundance	54.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	56.2			
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	25.3			
365	Greater than 1.0% of mass 198	4.2			
441	Present, but less than mass 443	11.75	(	73.8	)3
442	40.0 - 100.0% of mass 198	82.1			
443	17.0 - 23.0% of mass 442	15.9	(	19.4	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C6335.D	10/27/2000	11:49
.	Method-blank	C6336.D	10/27/2000	12:16
FIELD-BLANK	6615-001	C6337.D	10/27/2000	12:42
FB5	6723-018	C6338.D	10/27/2000	13:08
WS(I)EFFLUENT	6729-001	C6339.D	10/27/2000	13:35
SUMP-1	6745-001	C6340.D	10/27/2000	14:01
.	Method-blank	C6341.D	10/27/2000	14:28
.	DI-MS	C6342.D	10/27/2000	14:55
.	DI-MSD	C6343.D	10/27/2000	15:22
FB102600	6771-010	C6344.D	10/27/2000	15:48
BLDS-1-VAULT	6769-005	C6345.D	10/27/2000	16:14
FB	6769-011	C6346.D	10/27/2000	16:41
GW-4	6734-002	C6347.D	10/27/2000	17:07
GW-5	6734-003	C6348.D	10/27/2000	17:34
GW-3	6734-001	C6349.D	10/27/2000	18:01
GW-6	6734-004	C6350.D	10/27/2000	18:27
GW-10-26	6764-001	C6351.D	10/27/2000	18:54
FB-10-26	6764-002	C6352.D	10/27/2000	19:20
SEFF102500	6775-001	C6353.D	10/27/2000	19:47
SUMP-1	6779-001	C6354.D	10/27/2000	20:13
SUMP1-1	6781-001	C6355.D	10/27/2000	20:40
FIELD-BLANK	6741-002	C6356.D	10/27/2000	21:06
FMW-9	6741-003	C6357.D	10/27/2000	21:33

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6333.D DFTPP Injection Date : 10/27/2000

Inst ID: MSDC DFTPP Injection Time: 10:37

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	55.0			
68	Less than 2.0% of mass 69	0.9	(	1.6	)1
69	Mass 69 relative abundance	54.8			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	56.2			
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	25.3			
365	Greater than 1.0% of mass 198	4.2			
441	Present, but less than mass 443	11.8	(	73.8	)3
442	40.0 - 100.0% of mass 198	82.1			
443	17.0 - 23.0% of mass 442	15.9	(	19.4	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
FMW-17	6741-004	C6358.D	10/27/2000	21:59
FMW-18	6741-005	C6359.D	10/27/2000	22:26
FMW-12	6741-006	C6360.D	10/27/2000	22:52

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: C6361.D DFTPP Injection Date : 10/30/2000

Inst ID: MSDC DFTPP Injection Time: 10:11

m/z	Ion Abudance Criteria	%Relative Abundance			
51	30.0 - 60.0% of mass 198	48.3			
68	Less than 2.0% of mass 69	0.8	(	1.7	)1
69	Mass 69 relative abundance	49.4			
70	Less than 2.0% of mass 69	0.0	(	0.0	)1
127	40.0 - 60.0% of mass 198	55.5			
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	7.2			
275	10.0 - 30.0% of mass 198	26.9			
365	Greater than 1.0% of mass 198	4.6			
441	Present, but less than mass 443	13.07	(	74.5	)3
442	40.0 - 100.0% of mass 198	90.0			
443	17.0 - 23.0% of mass 442	17.6	(	19.5	)2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

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

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
.	20-PPB-INJ-FOR-	C6369.D	10/30/2000	14:10
GW-6	6734-004DIL	C6371.D	10/30/2000	15:31
.	Method-Blank	C6372.D	10/30/2000	15:58
.	DI-MS	C6373.D	10/30/2000	16:35
.	DI-MSD	C6374.D	10/30/2000	17:01
DMW20S102600	6805-001	C6375.D	10/30/2000	17:27
FB102500	6753-017	C6376.D	10/30/2000	17:54
FB102300	6670-005	C6377.D	10/30/2000	18:20
FB	6742-005	C6378.D	10/30/2000	18:46
COMP127B-131B-	6742-006	C6379.D	10/30/2000	19:13
GB-44W	6769-010	C6380.D	10/30/2000	19:39
FMW-25	6770-001	C6381.D	10/30/2000	20:05
FMW-26	6770-002	C6382.D	10/30/2000	20:32
FMW-24	6770-003	C6383.D	10/30/2000	20:58
FMW-10	6770-004	C6384.D	10/30/2000	21:24
FMW-11	6770-005	C6385.D	10/30/2000	21:50
DITCH/S.D.	6766-001	C6386.D	10/30/2000	22:17
FB	6787-002	C6389.D	10/30/2000	23:36
IN102600	6796-001	C6390.D	10/31/2000	00:02
EF102600	6796-002	C6391.D	10/31/2000	00:28
MW-1	6787-001	C6392.D	10/31/2000	06:14
IN102600	6796-001DIL	C6395.D	10/31/2000	07:32

SEMIVOLATILE METHOD BLANK SUMMARY

Lab File ID: C6341.D

Instrument ID: MSDA

Date Extracted: 10/27/00

Matrix: AQUEOUS

Date Analyzed: 10/27/2000

Time Analyzed: 14:28

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
.	DI-MS	10/27/2000	14:55
.	DI-MSD	10/27/2000	15:22
FB102600	6771-010	10/27/2000	15:48
BLDS-1-VAULT	6769-005	10/27/2000	16:14
FB	6769-011	10/27/2000	16:41
GW-4	6734-002	10/27/2000	17:07
GW-5	6734-003	10/27/2000	17:34
GW-3	6734-001	10/27/2000	18:01
GW-6	6734-004	10/27/2000	18:27
GW-10-26	6764-001	10/27/2000	18:54
FB-10-26	6764-002	10/27/2000	19:20
SEFF102500	6775-001	10/27/2000	19:47
SUMP-1	6779-001	10/27/2000	20:13
SUMP1-1	6781-001	10/27/2000	20:40
FIELD-BLANK	6741-002	10/27/2000	21:06
FMW-9	6741-003	10/27/2000	21:33
FMW-17	6741-004	10/27/2000	21:59
FMW-18	6741-005	10/27/2000	22:26
FMW-12	6741-006	10/27/2000	22:52
GW-6	6734-004	10/30/2000	15:31

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-blank
Client ID: .
Date Received: N/A
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6341.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
N-Nitrosodimethylamine	ND		0.43
Phenol	ND		0.27
Aniline	ND		0.17
bis(2-Chloroethyl)ether	ND		0.17
2-Chlorophenol	ND		0.17
1,3-Dichlorobenzene	ND		0.34
1,4-Dichlorobenzene	ND		0.44
Benzyl alcohol	ND		0.31
1,2-Dichlorobenzene	ND		0.36
2-Methylphenol	ND		0.25
bis(2-chloroisopropyl)ether	ND		0.55
4-Methylphenol	ND		0.29
N-Nitroso-di-n-propylamine	ND		0.25
Hexachloroethane	ND		0.42
Nitrobenzene	ND		0.41
Isophorone	ND		0.26
2-Nitrophenol	ND		0.82
2,4-Dimethylphenol	ND		0.26
bis(2-Chloroethoxy)methane	ND		0.16
Benzoic acid	ND		0.98
2,4-Dichlorophenol	ND		0.52
1,2,4-Trichlorobenzene	ND		0.34
Naphthalene	ND		0.13
4-Chloroaniline	ND		0.56
Hexachlorobutadiene	ND		0.42
4-Chloro-3-methylphenol	ND		0.43
2-Methylnaphthalene	ND		0.18
Hexachlorocyclopentadiene	ND		0.33
2,4,6-Trichlorophenol	ND		0.58
2,4,5-Trichlorophenol	ND		0.45
2-Chloronaphthalene	ND		0.3
2-Nitroaniline	ND		0.51
Dimethylphthalate	ND		0.25
2,6-Dinitrotoluene	ND		0.44
Acenaphthylene	ND		0.18

4684

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS

Client/Project: N/A

Lab ID: Method-blank
Client ID: .
Date Received: N/A
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6341.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-μg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
3-Nitroaniline	ND		0.7
Acenaphthene	ND		0.11
2,4-Dinitrophenol	ND		0.41
4-Nitrophenol	ND		0.69
2,4-Dinitrotoluene	ND		0.86
Dibenzofuran	ND		0.17
Diethylphthalate	ND		0.3
Fluorene	ND		0.37
4-Chlorophenyl-phenylether	ND		0.44
4-Nitroaniline	ND		0.93
4,6-Dinitro-2-methylphenol	ND		0.89
N-Nitrosodiphenylamine	ND		0.34
1,2-Diphenylhydrazine/Azobenzene	ND		0.34
4-Bromophenyl-phenylether	ND		0.45
Hexachlorobenzene	ND		0.5
Pentachlorophenol	ND		0.75
Phenanthrene	ND		0.15
Anthracene	ND		0.18
Carbazole	ND		0.29
Di-n-butylphthalate	ND		0.48
Fluoranthene	ND		0.41
Benzidine	ND		0.55
Pyrene	ND		0.26
3,3'-Dimethylbenzidine	ND		0.31
Butylbenzylphthalate	ND		0.57
3,3'-Dichlorobenzidine	ND		0.34
Benzo[a]anthracene	ND		0.25
Chrysene	ND		0.4
bis(2-Ethylhexyl)phthalate	ND		0.73
Di-n-octylphthalate	ND		0.63
Benzo[b]fluoranthene	ND		0.55
Benzo[k]fluoranthene	ND		0.69
Benzo[a]pyrene	ND		0.34
Indeno[1,2,3-cd]pyrene	ND		0.62
Dibenz[a,h]anthracene	ND		0.42
Benzo[g,h,i]perylene	ND		0.55

Total Target Compounds: 0

INTEGRATED ANALYTICAL LABORATORIES

SEMIVOLATILE ORGANICS
Tentatively Identified Compounds

Client/Project: N/A

Lab ID: Method-blank
Client ID: .
Date Received: N/A
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6341.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

CAS #	Compound	Estimated Concentration	Retention Time
	No peaks detected		

Total TICs = 0

Response Factor Report MSD-C

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Tue Oct 24 15:13:21 2000
Response via : Initial Calibration

Calibration Files
5 =C6223.D 20 =C6220.D 50 =C6224.D
80 =C6222.D 10 =C6221.D

		Compound	5	20	50	80	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	N-Nitrosodimethylamin	0.913	0.983	0.948	1.119	0.972	0.987	7.95
3)	S	2-Fluorophenol	0.689	0.696	0.673	0.723	0.687	0.694	2.65
4)	S	Phenol-d5	1.651	1.624	1.566	1.725	1.630	1.639	3.50
5)	MC	Phenol	1.721	1.588	1.555	1.778	1.674	1.663	5.55
6)	T	Aniline	1.785	1.918	1.960	2.164	1.919	1.949	7.05
7)	T	bis(2-Chloroethyl)eth	1.414	1.369	1.320	1.481	1.417	1.400	4.27
8)	M	2-Chlorophenol	1.277	1.259	1.276	1.434	1.284	1.306	5.52
9)	T	1,3-Dichlorobenzene	1.577	1.548	1.456	1.647	1.569	1.559	4.41
10)	MC	1,4-Dichlorobenzene	1.607	1.582	1.482	1.688	1.625	1.597	4.69
11)	T	Benzyl alcohol	0.594	0.659	0.712	0.794	0.658	0.684	10.90
12)	T	1,2-Dichlorobenzene	1.534	1.475	1.380	1.552	1.534	1.495	4.71
13)	T	2-Methylphenol	1.162	1.081	1.095	1.207	1.115	1.132	4.59
14)	T	bis(2-chloroisopropyl	2.698	2.627	2.534	2.857	2.764	2.696	4.61
15)	T	4-Methylphenol	0.991	0.993	1.103	1.223	0.997	1.061	9.59
16)	MP	N-Nitroso-di-n-propyl	0.926	0.995	0.974	1.119	1.024	1.008	7.13
17)	T	2-Aminotoluene +4-Ami	3.163	3.178	2.829	3.330	3.357	3.171	6.63
18)	T	Hexachloroethane	0.590	0.599	0.592	0.672	0.604	0.612	5.65
	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.374	0.378	0.373	0.393	0.372	0.378	2.29
21)	T	Nitrobenzene	0.405	0.398	0.392	0.448	0.400	0.409	5.54
22)	T	Isophorone	0.638	0.685	0.676	0.768	0.681	0.690	6.92
23)	TC	2-Nitrophenol	0.068	0.082	0.115	0.110	0.073	0.090	24.23
24)	T	2,4-Dimethylphenol	0.318	0.312	0.325	0.366	0.334	0.331	6.44
25)	T	bis(2-Chloroethoxy)me	0.398	0.424	0.418	0.476	0.418	0.427	6.86
26)	T	Benzoic acid	0.051	0.055	0.052	0.062	0.058	0.055	8.00
27)	T	2,4-Dimethylaniline	0.511	0.540	0.510	0.612	0.550	0.545	7.65
28)	TC	2,4-Dichlorophenol	0.214	0.235	0.258	0.289	0.226	0.244	12.28
29)	M	1,2,4-Trichlorobenzen	0.321	0.328	0.312	0.352	0.334	0.330	4.61
30)	T	Naphthalene	1.057	1.037	0.943	1.065	1.084	1.037	5.36
31)	T	4-Chloroaniline	0.362	0.381	0.387	0.431	0.377	0.388	6.68
32)	TC	Hexachlorobutadiene	0.186	0.191	0.185	0.207	0.194	0.193	4.54
33)	MC	4-Chloro-3-methylphen	0.190	0.222	0.248	0.289	0.205	0.231	16.84
34)	T	2-Methylnaphthalene	0.650	0.645	0.623	0.694	0.667	0.656	4.05
35)	I	Acenaphthene-d10	----------ISTD----------						
36)	TP	Hexachlorocyclopentad	0.136	0.244	0.276	0.305	0.143	0.221	34.98
37)	TC	2,4,6-Trichlorophenol	0.199	0.304	0.326	0.371	0.224	0.285	25.08
38)	T	2,4,5-Trichlorophenol	0.271	0.350	0.354	0.391	0.268	0.327	16.75
39)	S	2-Fluorobiphenyl	1.325	1.519	1.287	1.354	1.339	1.365	6.58
40)	T	2-Chloronaphthalene	1.157	1.351	1.114	1.228	1.210	1.212	7.40
41)	T	2-Nitroaniline	0.153	0.271	0.307	0.279	0.177	0.237	28.59
42)	T	Dimethylphthalate	1.131	1.144	1.111	1.284	1.173	1.168	5.87
43)	T	2,6-Dinitrotoluene	0.111	0.180	0.224	0.268	0.140	0.184	34.26
44)	T	Acenaphthylene	1.816	1.890	1.726	1.958	1.916	1.861	4.92
45)	T	3-Nitroaniline	0.128	0.213	0.246	0.313	0.166	0.213	33.50
46)	MC	Acenaphthene	1.158	1.139	1.052	1.179	1.177	1.141	4.57
47)	TP	2,4-Dinitrophenol	0.123	0.117	0.123	0.160	0.121	0.129	13.75

4687

48)	MP	4-Nitrophenol	0.123	0.154	0.129	0.152	0.122	0.136	11.41
49)	M	2,4-Dinitrotoluene	0.126	0.265	0.262	0.220	0.139	0.202	32.73
50)	T	Dibenzofuran	1.527	1.524	1.437	1.579	1.565	1.526	3.62
51)	T	Diethylphthalate	1.089	1.111	1.051	1.268	1.102	1.124	7.42
52)	T	Fluorene	1.241	1.243	1.133	1.339	1.256	1.242	5.90
[illegible]	T	4-Chlorophenyl-phenyl	0.555	0.553	0.539	0.627	0.556	0.566	6.12
[illegible]	T	4-Nitroaniline	0.137	0.235	0.245	0.327	0.167	0.222	33.34
[illegible]	I	Phenanthrene-d10	----------ISTD----------						
56)	T	4,6-Dinitro-2-methylp	0.030	0.071	0.046	0.068	0.051	0.053	31.62
57)	TC	N-Nitrosodiphenylamin	0.468	0.477	0.472	0.502	0.501	0.484	3.38
58)	T	1,2-Diphenylhydrazine	0.879	0.923	0.919	0.950	0.973	0.929	3.79
59)	S	2,4,6-Tribromophenol	0.093	0.092	0.108	0.111	0.087	0.098	10.68
60)	T	4-Bromophenyl-phenyle	0.205	0.211	0.218	0.229	0.218	0.216	4.18
61)	T	Hexachlorobenzene	0.234	0.239	0.238	0.257	0.253	0.244	4.14
62)	MC	Pentachlorophenol	0.025	0.050	0.058	0.060	0.039	0.046	31.47
63)	T	Phenanthrene	1.004	0.984	0.896	1.022	1.031	0.988	5.51
64)	T	Anthracene	0.992	1.017	0.943	1.066	1.033	1.010	4.57
65)	T	Carbazole	0.861	0.897	0.801	0.955	0.879	0.879	6.39
66)	T	Di-n-butylphthalate	0.901	1.027	0.998	1.170	0.972	1.014	9.76
67)	TC	Fluoranthene	0.909	0.995	0.854	1.081	0.952	0.958	9.01
68)	T	Benzidine	0.149	0.230	0.194	0.307	0.210	0.218	26.50
69)	I	Chrysene-d12	----------ISTD----------						
70)	M	Pyrene	1.106	1.152	1.091	1.138	1.227	1.143	4.63
71)	S	Terphenyl-d14	0.882	0.873	0.868	0.880	0.925	0.886	2.57
72)	T	3,3'-Dimethylbenzidin	0.268	0.245	0.196	0.176	0.287	0.234	20.11
73)	T	Butylbenzylphthalate	0.345	0.386	0.482	0.545	0.352	0.422	20.81
74)	T	3,3'-Dichlorobenzidin	0.330	0.392	0.374	0.392	0.360	0.370	6.96
75)	T	Benzo[a]anthracene	1.100	1.126	1.031	1.173	1.149	1.116	4.87
76)	T	Chrysene	1.062	1.017	0.933	1.046	1.065	1.025	5.32
77)	T	bis(2-Ethylhexyl)phth	0.524	0.623	0.696	0.804	0.546	0.638	17.96
[illegible]	I	Perylene-d12	----------ISTD----------						
79)	TC	Di-n-octylphthalate	0.820	0.930	1.169	1.085	0.820	0.965	16.35
80)	T	Benzo[b]fluoranthene	1.109	1.277	1.271	1.589	1.252	1.300	13.53
81)	T	Benzo[k]fluoranthene	1.349	1.242	1.172	1.499	1.279	1.308	9.51
82)	TC	Benzo[a]pyrene	1.097	1.237	1.165	1.375	1.214	1.218	8.47
83)	T	Indeno[1,2,3-cd]pyren	1.170	1.249	0.721	0.851	1.326	1.063	24.74
84)	T	Dibenz[a,h]anthracene	0.883	0.971	0.624	0.449	1.009	0.787	30.66
85)	T	Benzo[g,h,i]perylene	0.710	0.650	0.525	0.378	0.871	0.627	29.80

(#) = Out of Range

SVWC1700.M Tue Oct 24 15:13:30 2000 MSD-C

4688

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6335.D
Acq On : 27 Oct 2000 11:49
Sample : .,20-PPB-INJ-FOR-10/27/00
Misc : N/A,N/A,N/A,1
MS Integration Params: RTEINT.P

Vial: 2
Operator:
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Multiple Level Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	89	0.00
2	T	N-Nitrosodimethylamine	0.987	0.963	2.4	87	-0.02
3	S	2-Fluorophenol	0.694	0.709	-2.2	90	-0.01
4	S	Phenol-d5	1.639	1.687	-2.9	92	-0.01
5	MC	Phenol	1.663	1.671	-0.5	93	-0.01
6	T	Aniline	1.949	1.927	1.1	89	-0.01
7	T	bis(2-Chloroethyl)ether	1.400	1.343	4.1	87	-0.01
8	M	2-Chlorophenol	1.306	1.299	0.5	91	-0.01
9	T	1,3-Dichlorobenzene	1.559	1.506	3.4	86	0.00
10	MC	1,4-Dichlorobenzene	1.597	1.546	3.2	87	-0.01
11	T	Benzyl alcohol	0.684	0.695	-1.6	93	-0.01
12	T	1,2-Dichlorobenzene	1.495	1.447	3.2	87	-0.01
13	T	2-Methylphenol	1.132	1.114	1.6	91	-0.01
14	T	bis(2-chloroisopropyl)ether	2.696	2.436	9.6	82	0.00
15	MP	4-Methylphenol	1.061	1.138	-7.3	101	0.00
	T	N-Nitroso-di-n-propylamine	1.008	0.997	1.1	89	0.00
18	T	2-Aminotoluene +4-Aminotolu	3.171	3.187	-0.5	89	0.00
		Hexachloroethane	0.612	0.616	-0.7	91	0.00
19	I	Naphthalene-d8	1.000	1.000	0.0	90	0.00
20	S	Nitrobenzene-d5	0.378	0.391	-3.4	93	0.00
21	T	Nitrobenzene	0.409	0.414	-1.2	94	-0.01
22	T	Isophorone	0.690	0.688	0.3	90	0.00
23	TC	2-Nitrophenol	0.090	0.107	-18.9	117	-0.01
24	T	2,4-Dimethylphenol	0.331	0.325	1.8	94	0.00
25	T	bis(2-Chloroethoxy)methane	0.427	0.428	-0.2	91	0.00
26	T	Benzoic acid	0.055	0.049	10.9	81	0.00
27	T	2,4-Dimethylaniline	0.545	0.513	5.9	86	0.00
28	TC	2,4-Dichlorophenol	0.244	0.266	-9.0	102	0.00
29	M	1,2,4-Trichlorobenzene	0.330	0.315	4.5	86	0.00
30	T	Naphthalene	1.037	1.036	0.1	90	0.00
31	T	4-Chloroaniline	0.388	0.359	7.5	85	0.00
32	TC	Hexachlorobutadiene	0.193	0.183	5.2	87	0.00
33	MC	4-Chloro-3-methylphenol	0.231	0.245	-6.1	99	0.00
34	T	2-Methylnaphthalene	0.656	0.601	8.4	84	0.00
35	I	Acenaphthene-d10	1.000	1.000	0.0	103	0.00
36	TP	Hexachlorocyclopentadiene	0.221	0.263	-19.0	111	0.00
37	TC	2,4,6-Trichlorophenol	0.285	0.330	-15.8	112	0.00
38	T	2,4,5-Trichlorophenol	0.327	0.341	-4.3	101	0.00
39	S	2-Fluorobiphenyl	1.365	1.303	4.5	89	0.00
40	T	2-Chloronaphthalene	1.212	1.091	10.0	83	0.00
41	T	2-Nitroaniline	0.237	0.264	-11.4	101	0.00
42	T	Dimethylphthalate	1.168	1.104	5.5	100	0.00
43	T	2,6-Dinitrotoluene	0.184	0.210	-14.1	121	0.00
44	T	Acenaphthylene	1.861	1.806	3.0	99	0.00

4689

45	T	3-Nitroaniline	0.213	0.253	-18.8	122	0.00
46	MC	Acenaphthene	1.141	1.103	3.3	100	0.00
47	TP	2,4-Dinitrophenol	0.129	0.133	-3.1	118	0.00
48	MP	4-Nitrophenol	0.136	0.144	-5.9	96	0.00
49	M	2,4-Dinitrotoluene	0.202	0.222	-9.9	87	0.00
50	T	Dibenzofuran	1.526	1.431	6.2	97	0.00
51	T	Diethylphthalate	1.124	1.091	2.9	101	0.00
	T	Fluorene	1.242	1.224	1.4	102	0.00
53	T	4-Chlorophenyl-phenylether	0.566	0.541	4.4	101	0.00
54	T	4-Nitroaniline	0.222	0.223	-0.5	98	0.00
55	I	Phenanthrene-d10	1.000	1.000	0.0	94	0.00
56	T	4,6-Dinitro-2-methylphenol	0.053	0.062	-17.0	82	0.00
57	TC	N-Nitrosodiphenylamine	0.484	0.499	-3.1	99	0.00
58	T	1,2-Diphenylhydrazine/Azobe	0.929	0.977	-5.2	100	0.00
59	S	2,4,6-Tribromophenol	0.098	0.116	-18.4	119	0.00
60	T	4-Bromophenyl-phenylether	0.216	0.219	-1.4	98	0.00
61	T	Hexachlorobenzene	0.244	0.250	-2.5	99	0.00
62	MC	Pentachlorophenol	0.046	0.055	-19.6	103	0.00
63	T	Phenanthrene	0.988	0.966	2.2	93	0.00
64	T	Anthracene	1.010	0.952	5.7	88	0.00
65	T	Carbazole	0.879	0.849	3.4	89	0.00
66	T	Di-n-butylphthalate	1.014	1.006	0.8	93	0.00
67	TC	Fluoranthene	0.958	0.947	1.1	90	0.00
68	T	Benzidine	0.218	0.215	1.4	88	0.00
69	I	Chrysene-d12	1.000	1.000	0.0	89	0.00
70	M	Pyrene	1.143	1.097	4.0	85	0.00
71	S	Terphenyl-d14	0.886	0.870	1.8	89	0.00
72	T	3,3'-Dimethylbenzidine	0.234	0.227	3.0	82	0.00
73	T	Butylbenzylphthalate	0.422	0.462	-9.5	106	0.00
74	T	3,3'-Dichlorobenzidine	0.370	0.388	-4.9	88	0.00
[illegible]	T	Benzo[a]anthracene	1.116	1.142	-2.3	90	0.00
	T	Chrysene	1.025	0.949	7.4	83	0.00
77	T	bis(2-Ethylhexyl)phthalate	0.638	0.645	-1.1	92	0.00
78	I	Perylene-d12	1.000	1.000	0.0	81	0.00
79	TC	Di-n-octylphthalate	0.965	1.036	-7.4	90	0.00
80	T	Benzo[b]fluoranthene	1.300	1.279	1.6	81	0.00
81	T	Benzo[k]fluoranthene	1.308	1.247	4.7	81	0.00
82	TC	Benzo[a]pyrene	1.218	1.192	2.1	78	0.00
83	T	Indeno[1,2,3-cd]pyrene	1.063	1.208	-13.6	78	0.00
84	T	Dibenz[a,h]anthracene	0.787	0.906	-15.1	75	0.00
85	T	Benzo[g,h,i]perylene	0.627	0.720	-14.8	89	0.00

(#) = Out of Range

C6220.D SVWC1700.M SPCC's out = 0 CCC's out = 0 Fri Oct 27 12:50:32 2000 MSD-C

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\10-30-00\C6369.D
Acq On : 30 Oct 2000 14:10
Sample : .,20-PPB-INJ-FOR-10/30/00
Misc : N/A,N/A,N/A,1
MS Integration Params: RTEINT.P

Vial: 9
Operator:
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Multiple Level Calibration

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	83	0.00
2	T	N-Nitrosodimethylamine	0.987	0.981	0.6	83	-0.01
3	S	2-Fluorophenol	0.694	0.699	-0.7	84	-0.01
4	S	Phenol-d5	1.639	1.552	5.3	80	0.00
5	MC	Phenol	1.663	1.515	8.9	79	0.00
6	T	Aniline	1.949	1.677	14.0	73	0.00
7	T	bis(2-Chloroethyl)ether	1.400	1.310	6.4	80	0.00
8	M	2-Chlorophenol	1.306	1.214	7.0	80	0.00
9	T	1,3-Dichlorobenzene	1.559	1.493	4.2	80	0.00
10	MC	1,4-Dichlorobenzene	1.597	1.575	1.4	83	0.00
11	T	Benzyl alcohol	0.684	0.608	11.1	77	0.00
12	T	1,2-Dichlorobenzene	1.495	1.411	5.6	80	-0.01
13	T	2-Methylphenol	1.132	1.025	9.5	79	0.00
14	T	bis(2-chloroisopropyl)ether.	2.696	2.308	14.4	73	0.00
15	T	4-Methylphenol	1.061	0.981	7.5	82	0.00
16	MP	N-Nitroso-di-n-propylamine	1.008	0.911	9.6	76	0.00
17	T	2-Aminotoluene +4-Aminotolu	3.171	2.920	7.9	77	0.00
18	T	Hexachloroethane	0.612	0.604	1.3	84	0.00
19	I	Naphthalene-d8	1.000	1.000	0.0	80	0.00
20	S	Nitrobenzene-d5	0.378	0.398	-5.3	84	0.00
21	T	Nitrobenzene	0.409	0.403	1.5	81	-0.01
22	T	Isophorone	0.690	0.649	5.9	76	0.00
23	TC	2-Nitrophenol	0.090	0.096	-6.7	93	-0.01
24	T	2,4-Dimethylphenol	0.331	0.310	6.3	79	0.00
25	T	bis(2-Chloroethoxy)methane	0.427	0.419	1.9	79	0.00
26	T	Benzoic acid	0.055	0.046	16.4	67	0.00
27	T	2,4-Dimethylaniline	0.545	0.511	6.2	76	0.00
28	TC	2,4-Dichlorophenol	0.244	0.243	0.4	82	0.00
29	M	1,2,4-Trichlorobenzene	0.330	0.312	5.5	76	0.00
30	T	Naphthalene	1.037	1.011	2.5	78	0.00
31	T	4-Chloroaniline	0.388	0.335	13.7	70	0.00
32	TC	Hexachlorobutadiene	0.193	0.193	0.0	81	0.00
33	MC	4-Chloro-3-methylphenol	0.231	0.213	7.8	77	0.00
34	T	2-Methylnaphthalene	0.656	0.616	6.1	76	0.00
35	I	Acenaphthene-d10	1.000	1.000	0.0	88	0.00
36	TP	Hexachlorocyclopentadiene	0.221	0.211	4.5	76	0.00
37	TC	2,4,6-Trichlorophenol	0.285	0.291	-2.1	84	0.00
38	T	2,4,5-Trichlorophenol	0.327	0.301	8.0	76	0.00
39	S	2-Fluorobiphenyl	1.365	1.353	0.9	78	0.00
40	T	2-Chloronaphthalene	1.212	1.098	9.4	72	0.00
41	T	2-Nitroaniline	0.237	0.268	-13.1	87	0.00
42	T	Dimethylphthalate	1.168	1.086	7.0	83	0.00
43	T	2,6-Dinitrotoluene	0.184	0.204	-10.9	100	0.00
44	T	Acenaphthylene	1.861	1.774	4.7	83	0.00

45	I	3-Nitroaniline	0.213	0.233	-9.4	96	0.00
46	MC	Acenaphthene	1.141	1.083	5.1	84	0.00
47	TP	2,4-Dinitrophenol	0.129	0.105	18.6	79	0.00
48	MP	4-Nitrophenol	0.136	0.143	-5.1	82	0.00
49	M	2,4-Dinitrotoluene	0.202	0.208	-3.0	69	0.00
[illegible]	T	Dibenzofuran	1.526	1.395	8.6	80	0.00
[illegible]	T	Diethylphthalate	1.124	1.069	4.9	85	0.00
[illegible]	T	Fluorene	1.242	1.206	2.9	85	0.00
53	T	4-Chlorophenyl-phenylether	0.566	0.519	8.3	82	0.00
54	T	4-Nitroaniline	0.222	0.229	-3.2	85	0.00
55	I	Phenanthrene-d10	1.000	1.000	0.0	86	0.00
56	T	4,6-Dinitro-2-methylphenol	0.053	0.045	15.1	54	0.00
57	TC	N-Nitrosodiphenylamine	0.484	0.449	7.2	81	0.00
58	T	1,2-Diphenylhydrazine/Azobe	0.929	0.878	5.5	82	0.00
59	S	2,4,6-Tribromophenol	0.098	0.111	-13.3	103	0.00
60	T	4-Bromophenyl-phenylether	0.216	0.194	10.2	79	0.00
61	T	Hexachlorobenzene	0.244	0.228	6.6	82	0.00
62	MC	Pentachlorophenol	0.046	0.049	-6.5	84	0.00
63	T	Phenanthrene	0.988	0.966	2.2	84	0.00
64	T	Anthracene	1.010	0.937	7.2	79	0.00
65	T	Carbazole	0.879	0.843	4.1	81	0.00
66	T	Di-n-butylphthalate	1.014	1.037	-2.3	87	0.00
67	TC	Fluoranthene	0.958	0.985	-2.8	85	0.00
68	T	Benzidine	0.218	0.221	-1.4	82	0.00
69	I	Chrysene-d12	1.000	1.000	0.0	88	-0.02
70	M	Pyrene	1.143	1.074	6.0	83	-0.01
71	S	Terphenyl-d14	0.886	0.881	0.6	89	-0.01
72	T	3,3'-Dimethylbenzidine	0.234	0.271	-15.8	98	-0.03
73	T	Butylbenzylphthalate	0.422	0.452	-7.1	104	-0.02
74	T	3,3'-Dichlorobenzidine	0.370	0.392	-5.9	89	-0.03
[illegible]	T	Benzo[a]anthracene	1.116	1.122	-0.5	88	-0.03
[illegible]	T	Chrysene	1.025	0.922	10.0	80	-0.03
77	T	bis(2-Ethylhexyl)phthalate	0.638	0.658	-3.1	93	-0.03
78	I	Perylene-d12	1.000	1.000	0.0	80	-0.04
79	TC	Di-n-octylphthalate	0.965	1.054	-9.2	91	-0.04
80	T	Benzo[b]fluoranthene	1.300	1.245	4.2	78	-0.03
81	T	Benzo[k]fluoranthene	1.308	1.293	1.1	84	-0.03
82	TC	Benzo[a]pyrene	1.218	1.184	2.8	77	-0.04
83	T	Indeno[1,2,3-cd]pyrene	1.063	1.260	-18.5	81	-0.05
84	T	Dibenz[a,h]anthracene	0.787	0.937	-19.1	77	-0.04
85	T	Benzo[g,h,i]perylene	0.627	0.745	-18.8	92	-0.04

(#) = Out of Range SPCC's out = 0 CCC's out = 0

C6220.D SVWC1700.M Mon Oct 30 14:34:27 2000 MSD-C

4692

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/27/2000

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
Method-blank	AQUEOUS	C6336.D	73	86	80	68	112	101
6615-001	AQUEOUS	C6337.D	N/A	N/A	74	65	N/A	104
6723-018	AQUEOUS	C6338.D	N/A	N/A	72	68	N/A	98
6729-001	AQUEOUS	C6339.D	N/A	N/A	67	65	N/A	100
6745-001	AQUEOUS	C6340.D	N/A	N/A	72	63	N/A	96
Method-blank	AQUEOUS	C6341.D	73	79	82	70	98	98
DI-MS	AQUEOUS	C6342.D	70	74	74	70	98	94
DI-MSD	AQUEOUS	C6343.D	66	71	74	68	96	91
6771-010	AQUEOUS	C6344.D	N/A	N/A	75	64	N/A	97
6769-005	AQUEOUS	C6345.D	N/A	N/A	71	65	N/A	97
6769-011	AQUEOUS	C6346.D	N/A	N/A	73	63	N/A	94
6734-002	AQUEOUS	C6347.D	N/A	N/A	73	68	N/A	93
6734-003	AQUEOUS	C6348.D	N/A	N/A	75	66	N/A	96
6734-001	AQUEOUS	C6349.D	65	67	77	73	102	100
6734-004	AQUEOUS	C6350.D	75	81	64	76	121	93
6764-001	AQUEOUS	C6351.D	N/A	N/A	77	71	N/A	99
6764-002	AQUEOUS	C6352.D	N/A	N/A	76	66	N/A	102
6775-001	AQUEOUS	C6353.D	N/A	N/A	75	65	N/A	99
6779-001	AQUEOUS	C6354.D	N/A	N/A	72	68	N/A	99
6781-001	AQUEOUS	C6355.D	N/A	N/A	68	66	N/A	96
6741-002	AQUEOUS	C6356.D	67	72	80	69	97	105
6741-003	AQUEOUS	C6357.D	65	70	76	67	103	98
6741-004	AQUEOUS	C6358.D	65	69	74	65	99	99
6741-005	AQUEOUS	C6359.D	69	75	76	69	100	98
6741-006	AQUEOUS	C6360.D	65	69	69	66	92	98

EPA CLP QC LIMITS FOR:	Soil	Aqueous
S1 (2FP) = 2-Fluorophenol	36-105	37-96
S2 (PHL) = Phenol-d5	39-112	56-111
S3 (NBZ) = Nitrobenzene-d5	42-106	61-121
S4 (FBP) = 2-Fluorobiphenyl	46-120	63-124
S5 (TBP) = 2,4,6-Tribromophenol	51-141	52-153
S6 (TPH) = Terphenyl-d14	55-141	46-140

* Column to be used to flag recovery values

FORM II SV

SEMIVOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/30/2000

Lab Sample ID	Matrix	File ID	S1	S2	S3	S4	S5	S6
6734-004DIL	AQUEOUS	C6371.D	N/A	N/A	N/A	N/A	N/A	N/A
Method-Blank	AQUEOUS	C6372.D	74	83	85	72	96	96
DI-MS	AQUEOUS	C6373.D	67	73	77	74	98	95
DI-MSD	AQUEOUS	C6374.D	63	68	73	69	93	92
6805-001	AQUEOUS	C6375.D	N/A	N/A	68	68	N/A	94
6753-017	AQUEOUS	C6376.D	64	68	71	63	84	92
6670-005	AQUEOUS	C6377.D	N/A	N/A	69	67	N/A	93
6742-005	AQUEOUS	C6378.D	70	78	77	65	88	97
6742-006	AQUEOUS	C6379.D	67	71	75	68	89	94
6769-010	AQUEOUS	C6380.D	N/A	N/A	77	67	N/A	91
6770-001	AQUEOUS	C6381.D	66	69	77	65	89	97
6770-002	AQUEOUS	C6382.D	62	68	77	68	83	98
6770-003	AQUEOUS	C6383.D	61	65	71	65	86	95
6770-004	AQUEOUS	C6384.D	66	70	71	64	86	93
6770-005	AQUEOUS	C6385.D	65	74	75	66	93	98
6766-001	AQUEOUS	C6386.D	69	75	74	64	94	90
6787-002	AQUEOUS	C6389.D	N/A	N/A	73	67	N/A	94
6796-001	AQUEOUS	C6390.D	N/A	N/A	79	68	N/A	94
6796-002	AQUEOUS	C6391.D	N/A	N/A	73	68	N/A	91
6787-001	AQUEOUS	C6392.D	N/A	N/A	75	65	N/A	93
6796-001DIL	AQUEOUS	C6395.D	N/A	N/A	N/A	N/A	N/A	N/A

EPA CLP QC LIMITS FOR:	Soil	Aqueous
S1 (2FP) = 2-Fluorophenol	36-105	37-96
S2 (PHL) = Phenol-d5	39-112	56-111
S3 (NBZ) = Nitrobenzene-d5	42-106	61-121
S4 (FBP) = 2-Fluorobiphenyl	46-120	63-124
S5 (TBP) = 2,4,6-Tribromophenol	51-141	52-153
S6 (TPH) = Terphenyl-d14	55-141	46-140

* Column to be used to flag recovery values

AQUEOUS SEMIVOLATILE MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: Method-b Batch No.: 1027W

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	30.0	0.0	20.9	70	47 - 108
2-Chlorophenol	30.0	0.0	20.2	67	49 - 85
1,4-Dichlorobenzene	30.0	0.0	19.2	64	49 - 87
N-Nitroso-di-n-propylamine	30.0	0.0	20.9	70	43 - 103
1,2,4-Trichlorobenzene	30.0	0.0	20.8	69	43 - 89
4-Chloro-3-methylphenol	30.0	0.0	23.2	77	52 - 81
Acenaphthene	30.0	0.0	22.3	74	53 - 102
4-Nitrophenol	30.0	0.0	24.8	83	40 - 126
2,4-Dinitrotoluene	30.0	0.0	35.7	119	35 - 147
Pentachlorophenol	30.0	0.0	21.8	73	31 - 75
Pyrene	30.0	0.0	24.8	83	46 - 124

Compound	SAMPLE CONC. (ug/L)	MSD CONC. (ug/L)	MSD % # REC	% RPD #	QC LIMITS RPD	REC.
Phenol	0.0	20.1	67	4	10	47 - 108
2-Chlorophenol	0.0	19.7	66	2	7	49 - 85
1,4-Dichlorobenzene	0.0	19.2	64	0	8	49 - 87
N-Nitroso-di-n-propylamine	0.0	20.2	67	4	12	43 - 103
1,2,4-Trichlorobenzene	0.0	20.2	67	3	8	43 - 89
4-Chloro-3-methylphenol	0.0	23.3	78	1	5	52 - 81
Acenaphthene	0.0	22.0	73	1	8	53 - 102
4-Nitrophenol	0.0	29.0	97	16	17	40 - 126
2,4-Dinitrotoluene	0.0	35.5	118	1	22	35 - 147
Pentachlorophenol	0.0	21.7	72	1	9	31 - 75
Pyrene	0.0	24.2	81	2	13	46 - 124

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __11__ outside limits

Spike Recovery: __0___ out of __22__ outside limits

4695

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: Method-blank
Client ID: .
Date Received: N/A
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6341.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
N-Nitrosodimethylamine	30.0	0.0	19.9	66	0.0	18.5	62
Phenol	30.0	0.0	20.9	70	0.0	20.1	67
Aniline	30.0	0.0	19.6	65	0.0	19.0	63
bis(2-Chloroethyl)ether	30.0	0.0	20.5	68	0.0	20.0	67
2-Chlorophenol	30.0	0.0	20.2	67	0.0	19.7	66
1,3-Dichlorobenzene	30.0	0.0	19.8	66	0.0	19.4	65
1,4-Dichlorobenzene	30.0	0.0	19.2	64	0.0	19.2	64
Benzyl alcohol	30.0	0.0	22.8	76	0.0	22.5	75
1,2-Dichlorobenzene	30.0	0.0	19.0	63	0.0	19.0	63
2-Methylphenol	30.0	0.0	20.7	69	0.0	20.6	69
bis(2-chloroisopropyl)ether	30.0	0.0	13.1	44	0.0	13.0	43
4-Methylphenol	30.0	0.0	23.4	78	0.0	22.9	76
N-Nitroso-di-n-propylamine	30.0	0.0	20.9	70	0.0	20.2	67
2-Aminotoluene +4-Aminotoluene	30.0	0.0	40.0	133	0.0	39.3	131
Hexachloroethane	30.0	0.0	20.3	68	0.0	19.6	65
Nitrobenzene	30.0	0.0	21.9	73	0.0	21.1	70
Isophorone	30.0	0.0	21.4	71	0.0	21.0	70
2-Nitrophenol	30.0	0.0	39.6	132	0.0	38.5	128
2,4-Dimethylphenol	30.0	0.0	22.8	76	0.0	22.3	74
bis(2-Chloroethoxy)methane	30.0	0.0	21.8	73	0.0	21.2	71
Benzoic acid	30.0	0.0	18.1	60	0.0	18.0	60
2,4-Dimethylaniline	30.0	0.0	19.6	65	0.0	19.3	64
2,4-Dichlorophenol	30.0	0.0	23.2	77	0.0	22.6	75
1,2,4-Trichlorobenzene	30.0	0.0	20.8	69	0.0	20.2	67
Naphthalene	30.0	0.0	21.2	71	0.0	20.7	69
4-Chloroaniline	30.0	0.0	20.9	70	0.0	21.1	70
Hexachlorobutadiene	30.0	0.0	21.2	71	0.0	20.6	69
4-Chloro-3-methylphenol	30.0	0.0	23.2	77	0.0	23.3	78
2-Methylnaphthalene	30.0	0.0	21.7	72	0.0	20.4	68
Hexachlorocyclopentadiene	30.0	0.0	24.0	80	0.0	25.7	86
2,4,6-Trichlorophenol	30.0	0.0	25.8	86	0.0	24.9	83
2,4,5-Trichlorophenol	30.0	0.0	24.5	82	0.0	24.4	81
2-Chloronaphthalene	30.0	0.0	21.8	73	0.0	21.2	71
2-Nitroaniline	30.0	0.0	33.7	112	0.0	33.7	112
Dimethylphthalate	30.0	0.0	23.8	79	0.0	23.3	78
2,6-Dinitrotoluene	30.0	0.0	30.8	103	0.0	30.5	102
Acenaphthylene	30.0	0.0	22.3	74	0.0	21.7	72

4696

MS/MSD SPIKE REPORT

Lab ID: Method-blank
Client ID: .
Date Received: N/A
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: C6341.D

GC/MS Column: DB-5
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	Sample	Conc. MSD	%Rec. MSD
3-Nitroaniline	30.0	0.0	29.3	98	0.0	28.4	95
Acenaphthene	30.0	0.0	22.3	74	0.0	22.0	73
2,4-Dinitrophenol	30.0	0.0	20.5	68	0.0	20.4	68
4-Nitrophenol	30.0	0.0	24.8	83	0.0	29.0	97
2,4-Dinitrotoluene	30.0	0.0	35.7	119	0.0	35.5	118
Dibenzofuran	30.0	0.0	22.6	75	0.0	22.3	74
Diethylphthalate	30.0	0.0	24.3	81	0.0	24.0	80
Fluorene	30.0	0.0	22.9	76	0.0	22.7	76
4-Chlorophenyl-phenylether	30.0	0.0	22.7	76	0.0	22.6	75
4-Nitroaniline	30.0	0.0	25.3	84	0.0	27.2	91
4,6-Dinitro-2-methylphenol	30.0	0.0	33.1	110	0.0	31.9	106
N-Nitrosodiphenylamine	30.0	0.0	25.1	84	0.0	23.9	80
1,2-Diphenylhydrazine/Azobenzene	30.0	0.0	24.1	80	0.0	22.5	75
4-Bromophenyl-phenylether	30.0	0.0	23.9	80	0.0	22.8	76
Hexachlorobenzene	30.0	0.0	25.5	85	0.0	23.8	79
Pentachlorophenol	30.0	0.0	21.8	73	0.0	21.7	72
Phenanthrene	30.0	0.0	25.4	85	0.0	24.1	80
Anthracene	30.0	0.0	24.2	81	0.0	23.2	77
Carbazole	30.0	0.0	25.9	86	0.0	25.0	83
Di-n-butylphthalate	30.0	0.0	27.9	93	0.0	26.9	90
Fluoranthene	30.0	0.0	26.8	89	0.0	26.4	88
Benzidine	30.0	0.0	19.8	66	0.0	19.9	66
Pyrene	30.0	0.0	24.8	83	0.0	24.2	81
3,3'-Dimethylbenzidine	30.0	0.0	26.8	89	0.0	26.6	89
Butylbenzylphthalate	30.0	0.0	30.6	102	0.0	30.6	102
3,3'-Dichlorobenzidine	30.0	0.0	28.6	95	0.0	28.1	94
Benzo[a]anthracene	30.0	0.0	26.7	89	0.0	25.8	86
Chrysene	30.0	0.0	25.0	83	0.0	24.3	81
bis(2-Ethylhexyl)phthalate	30.0	0.0	29.6	99	0.0	29.0	97
Di-n-octylphthalate	30.0	0.0	32.8	109	0.0	33.2	111
Benzo[b]fluoranthene	30.0	0.0	26.1	87	0.0	25.2	84
Benzo[k]fluoranthene	30.0	0.0	24.8	83	0.0	24.8	83
Benzo[a]pyrene	30.0	0.0	25.6	85	0.0	24.9	83
Indeno[1,2,3-cd]pyrene	30.0	0.0	28.5	95	0.0	29.2	97
Dibenz[a,h]anthracene	30.0	0.0	33.0	110	0.0	33.7	112
Benzo[g,h,i]perylene	30.0	0.0	33.8	113	0.0	35.8	119

4697

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6220.D

Date Analyzed: 10/24/2000

Instrument ID: MSDC

Time Analyzed: 12:51

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	147145	6.45	508062	8.07	213853	9.82
	UPPER LIMIT	294290	6.95	1016124	8.57	427706	10.32
	LOWER LIMIT	73573	5.95	254031	7.57	106927	9.32
	LAB SAMPLE ID						
01	10-PPB-INJ-FOR-10/2	130024	6.46	461724	8.07	221203	9.83
02	80-PPB-INJ-FOR-10/2	110424	6.46	388993	8.07	195185	9.82
03	5-PPB-INJ-FOR-10/24	121022	6.45	433813	8.07	210132	9.82
04	50-PPB-INJ-FOR-10/2	168012	6.45	583262	8.07	278179	9.82
05	Mthod-Blank	126023	6.46	461486	8.07	224256	9.83
06	DI-MS	153828	6.46	543190	8.07	259736	9.82
07	DI-MSD	155752	6.45	537763	8.07	262052	9.83
08	6522-010	167883	6.46	600161	8.07	290180	9.83
09	6518-002	156897	6.46	562000	8.07	268794	9.83
10	6518-001	168583	6.46	600045	8.07	287873	9.82
11	6518-003	148710	6.46	534677	8.07	256406	9.82
12	6518-004	159365	6.46	576221	8.07	273665	9.83
13	6573-001	161415	6.45	575073	8.07	274045	9.83
14	6573-002	163047	6.46	579387	8.07	278092	9.82
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6220.D

Date Analyzed: 10/24/2000

Instrument ID: MSDC

Time Analyzed: 12:51

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	344266	11.14	320810	13.52	329364	15.49
	UPPER LIMIT	688532	11.64	641620	14.02	658728	15.99
	LOWER LIMIT	172133	10.64	160405	13.02	164682	14.99
	LAB SAMPLE ID						
01	10-PPB-INJ-FOR-10/2	339732	11.15	289501	13.51	281512	15.47
02	80-PPB-INJ-FOR-10/2	331922	11.14	328083	13.51	263253	15.46
03	5-PPB-INJ-FOR-10/24	340224	11.14	315021	13.50	295834	15.47
04	50-PPB-INJ-FOR-10/2	416675	11.14	340015	13.51	344138	15.47
05	Mthod-Blank	351359	11.15	328273	13.50	300223	15.46
06	DI-MS	415511	11.14	393266	13.50	396480	15.46
07	DI-MSD	417072	11.15	397432	13.50	405135	15.46
08	6522-010	444640	11.15	402535	13.49	387389	15.44
09	6518-002	429618	11.15	403168	13.49	388093	15.45
10	6518-001	444551	11.14	406522	13.49	390511	15.44
11	6518-003	401223	11.14	351189	13.49	344045	15.44
12	6518-004	422244	11.15	369121	13.49	352947	15.44
13	6573-001	414378	11.15	379933	13.49	371938	15.44
14	6573-002	440022	11.14	435896	13.48	409908	15.44
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6335.D

Date Analyzed: 10/27/2000

Instrument ID: MSDC

Time Analyzed: 11:49

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	130283	6.45	457927	8.07	220652	9.82
	UPPER LIMIT	260566	6.95	915854	8.57	441304	10.32
	LOWER LIMIT	65142	5.95	228964	7.57	110326	9.32
	LAB SAMPLE ID						
01	Method-blank	136723	6.45	465236	8.06	235900	9.82
02	6615-001	123153	6.45	430971	8.06	229508	9.82
03	6723-018	132083	6.45	439479	8.07	212718	9.82
04	6729-001	132049	6.45	469577	8.07	237194	9.82
05	6745-001	123883	6.45	412797	8.07	199570	9.82
06	Method-blank	132283	6.45	433109	8.07	210925	9.82
07	DI-MS	145548	6.45	479284	8.07	217820	9.82
08	DI-MSD	134818	6.45	444917	8.07	208497	9.82
09	6771-010	140896	6.45	485271	8.07	244237	9.82
10	6769-005	133468	6.45	475267	8.07	214914	9.82
11	6769-011	151336	6.45	506889	8.07	239143	9.82
12	6734-002	119537	6.45	390940	8.07	184898	9.82
13	6734-003	144165	6.45	489734	8.07	235859	9.82
14	6734-001	143093	6.45	454177	8.06	200336	9.82
15	6734-004	103221	6.46	468031	8.08	183049	9.83
16	6764-001	142514	6.45	473019	8.07	212464	9.82
17	6764-002	143252	6.45	470809	8.06	221344	9.82
18	6775-001	137243	6.45	475367	8.07	236610	9.82
19	6779-001	128671	6.45	430261	8.07	201425	9.82
20	6781-001	126817	6.45	424550	8.07	192701	9.82
21	6741-002	140646	6.45	463417	8.06	221224	9.82
22	6741-003	129074	6.45	411576	8.07	194272	9.82

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6335.D

Date Analyzed: 10/27/2000

Instrument ID: MSDC

Time Analyzed: 11:49

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	130283	6.45	457927	8.07	220652	9.82
	UPPER LIMIT	260566	6.95	915854	8.57	441304	10.32
	LOWER LIMIT	65142	5.95	228964	7.57	110326	9.32
	LAB SAMPLE ID						
01	6741-004	129541	6.45	424385	8.07	201514	9.82
02	6741-005	157984	6.45	541163	8.07	250606	9.82
03	6741-006	135405	6.45	461980	8.06	201095	9.82
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6335.D Date Analyzed: 10/27/2000

Instrument ID: MSDC Time Analyzed: 11:49

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	325281	11.14	285236	13.52	266052	15.49
	UPPER LIMIT	650562	11.64	570472	14.02	532104	15.99
	LOWER LIMIT	162641	10.64	142618	13.02	133026	14.99
	LAB SAMPLE ID						
01	Method-blank	339856	11.14	286020	13.49	253137	15.45
02	6615-001	348717	11.14	273951	13.49	244088	15.45
03	6723-018	305916	11.14	268646	13.49	244128	15.45
04	6729-001	337503	11.14	268976	13.50	253006	15.46
05	6745-001	306855	11.14	284155	13.49	265450	15.45
06	Method-blank	309693	11.14	291487	13.50	267359	15.46
07	DI-MS	319168	11.14	291652	13.49	291088	15.45
08	DI-MSD	322916	11.14	300208	13.49	290223	15.44
09	6771-010	347915	11.14	298731	13.48	275063	15.44
10	6769-005	305708	11.14	283691	13.48	261234	15.44
11	6769-011	324471	11.14	296155	13.48	278756	15.44
12	6734-002	302762	11.14	288941	13.48	274414	15.43
13	6734-003	324343	11.14	289452	13.49	287168	15.44
14	6734-001	274431	11.14	261494	13.49	263619	15.44
15	6734-004	314380	11.14	310159	13.49	227100	15.44
16	6764-001	309422	11.14	277568	13.48	279130	15.43
17	6764-002	317852	11.14	274651	13.49	265815	15.44
18	6775-001	338122	11.14	294175	13.48	272511	15.44
19	6779-001	293279	11.14	283087	13.48	264691	15.43
20	6781-001	290771	11.14	274204	13.48	272270	15.43
21	6741-002	312434	11.14	299714	13.48	279164	15.43
22	6741-003	290112	11.14	288742	13.48	272914	15.44

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6335.D

Date Analyzed: 10/27/2000

Instrument ID: MSDC

Time Analyzed: 11:49

	50UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	325281	11.14	285236	13.52	266052	15.49
	UPPER LIMIT	650562	11.64	570472	14.02	532104	15.99
	LOWER LIMIT	162641	10.64	142618	13.02	133026	14.99
	LAB SAMPLE ID						
01	6741-004	305480	11.14	291039	13.48	270682	15.44
02	6741-005	329945	11.14	299434	13.48	286336	15.44
03	6741-006	300072	11.14	278579	13.49	259275	15.44
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII SV-2

4703

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6369.D Date Analyzed: 10/30/2000

Instrument ID: MSDC Time Analyzed: 14:10

	40UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	24 HOUR STD	122566	6.45	405187	8.07	188050	9.82
	UPPER LIMIT	245132	6.95	810374	8.57	376100	10.32
	LOWER LIMIT	61283	5.95	202594	7.57	94025	9.32
	LAB SAMPLE ID						
01	6734-004DIL	128224	6.45	509843	8.07	214892	9.82
02	Method-Blank	132416	6.45	440241	8.06	214380	9.82
03	DI-MS	120635	6.45	411351	8.06	190277	9.82
04	DI-MSD	113705	6.45	373625	8.07	175941	9.82
05	6805-001	114857	6.45	397685	8.07	177529	9.82
06	6753-017	113122	6.45	384847	8.07	173141	9.82
07	6670-005	112669	6.45	391274	8.07	177348	9.82
08	6742-005	122224	6.45	414553	8.06	207833	9.82
09	6742-006	116414	6.45	387373	8.07	171965	9.82
10	6769-010	114059	6.45	368518	8.06	174564	9.82
11	6770-001	112955	6.45	358856	8.06	169319	9.82
12	6770-002	122099	6.45	407904	8.07	196593	9.82
13	6770-003	111004	6.45	352067	8.06	167815	9.82
14	6770-004	110813	6.45	375332	8.07	167022	9.82
15	6770-005	113589	6.44	383651	8.06	188876	9.82
16	6766-001	118302	6.45	389299	8.07	187332	9.82
17	6787-002	114690	6.45	398472	8.07	179419	9.82
18	6796-001	115486	6.45	373705	8.07	178778	9.82
19	6796-002	109245	6.45	368189	8.07	167993	9.82
20	6787-001	112589	6.45	379601	8.06	182013	9.82
21	6796-001DIL	108965	6.45	377026	8.06	170423	9.82
22							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII SV-1

47704

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): C6369.D

Date Analyzed: 10/30/2000

Instrument ID: MSDC

Time Analyzed: 14:10

	40UG/L	IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	24 HOUR STD	295606	11.14	283826	13.49	264195	15.45
	UPPER LIMIT	591212	11.64	567652	13.99	528390	15.95
	LOWER LIMIT	147803	10.64	141913	12.99	132098	14.95
	LAB SAMPLE ID						
01	6734-004DIL	323100	11.14	301974	13.49	269527	15.44
02	Method-Blank	301769	11.14	288001	13.48	250365	15.44
03	DI-MS	290832	11.14	285860	13.49	256580	15.45
04	DI-MSD	286015	11.14	290635	13.49	270501	15.44
05	6805-001	271243	-11.14	287158	13.48	254552	15.43
06	6753-017	260068	11.14	274159	13.48	244987	15.43
07	6670-005	264415	11.14	275239	13.48	255052	15.43
08	6742-005	297518	11.14	276692	13.49	244883	15.44
09	6742-006	257058	11.14	278211	13.48	252829	15.44
10	6769-010	265090	11.14	289754	13.48	256756	15.43
11	6770-001	260467	11.14	268466	13.48	244793	15.43
12	6770-002	279307	11.14	270930	13.48	239718	15.43
13	6770-003	256589	11.14	272401	13.48	248241	15.44
14	6770-004	257284	11.14	269371	13.48	239928	15.43
15	6770-005	281002	11.14	265878	13.48	236102	15.43
16	6766-001	282581	11.14	284476	13.48	248529	15.43
17	6787-002	263944	11.14	271980	13.48	237506	15.43
18	6796-001	272890	11.14	284718	13.48	254439	15.43
19	6796-002	265073	11.14	291111	13.48	259440	15.43
20	6787-001	269959	11.14	296910	13.49	254010	15.44
21	6796-001DIL	257051	11.14	271583	13.48	234371	15.43
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = 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 values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII SV-2

4705

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D Vial: 16
Acq On : 27 Oct 2000 18:01 Operator:
Sample : GW-3,6734-001,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 30 11:51 2000 Quant Results File: SVWC1700.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1700

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.45	152	143093	40.00	UG	0.00
19) Naphthalene-d8	8.06	136	454177	40.00	UG	0.00
35) Acenaphthene-d10	9.82	164	200336	40.00	UG	0.00
55) Phenanthrene-d10	11.14	188	274431	40.00	UG	0.00
69) Chrysene-d12	13.49	240	261494	40.00	UG	-0.03
78) Perylene-d12	15.44	264	263619	40.00	UG	-0.05
System Monitoring Compounds						
3) 2-Fluorophenol	4.45	112	160628	64.73	UG	0.00
Spiked Amount 100.000	Range 37 - 96		Recovery = 64.73%			
4) Phenol-d5	5.82	99	393227	67.06	UG	0.00
Spiked Amount 100.000	Range 56 - 111		Recovery = 67.06%			
20) Nitrobenzene-d5	7.20	82	166022	38.71	UG	0.00
Spiked Amount 50.000	Range 61 - 121		Recovery = 77.42%			
39) 2-Fluorobiphenyl	9.16	172	248545	36.37	UG	0.00
Spiked Amount 50.000	Range 63 - 124		Recovery = 72.74%			
59) 2,4,6-Tribromophenol	10.53	330	68539	101.75	UG	0.00
Spiked Amount 100.000	Range 52 - 153		Recovery = 101.75%			
71) Terphenyl-d14	12.47	244	289547	50.01	UG	-0.01
Spiked Amount 50.000	Range 46 - 140		Recovery = 100.02%			
Target Compounds						Qvalue
51) Diethylphthalate	10.15	149	16561	2.94	UG	98

(#) = qualifier out of range (m) = manual integration
C6349.D SVWC1700.M Mon Oct 30 11:51:40 2000 MSD-C Page 1

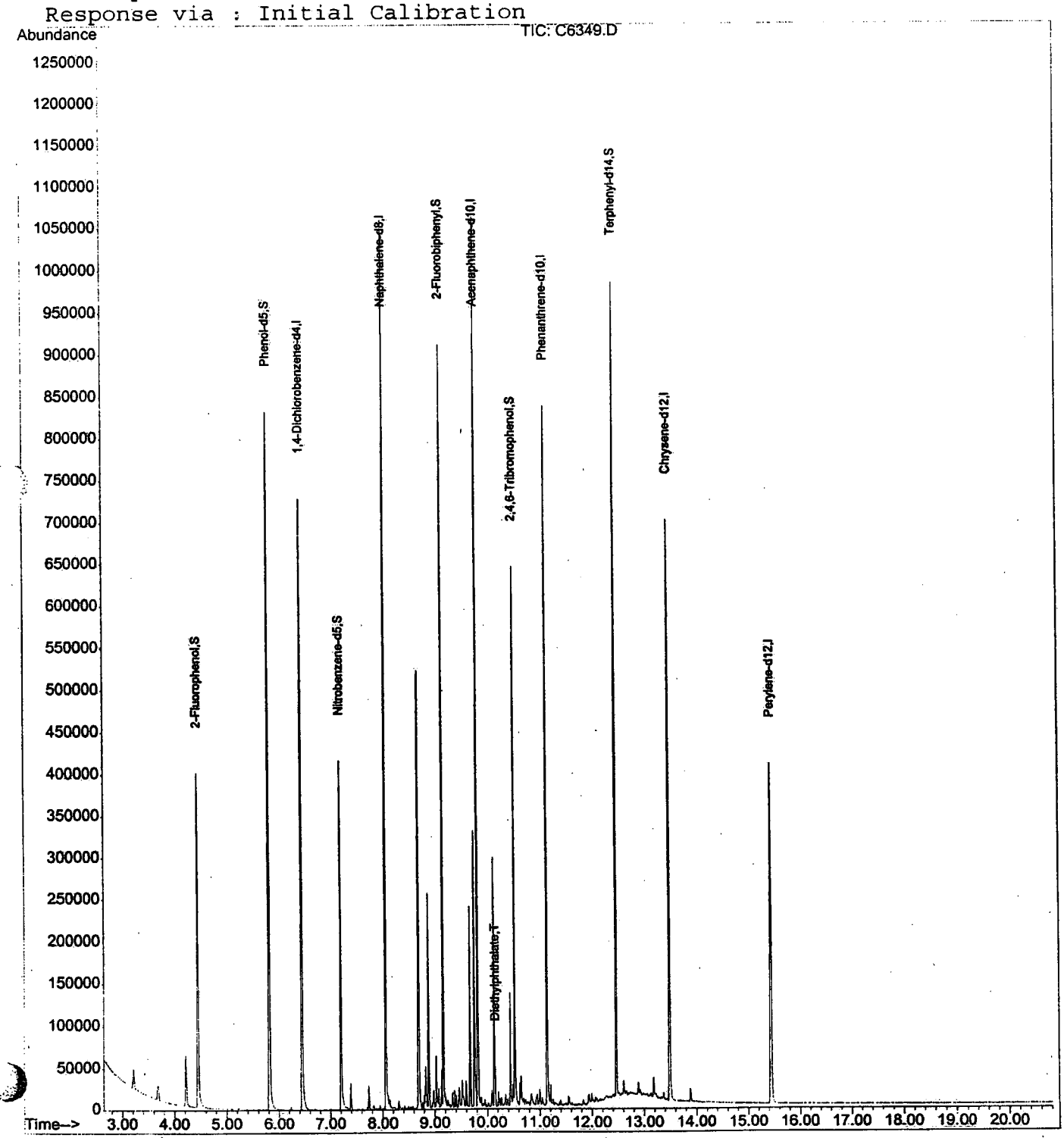
115

4706

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D Vial: 16
Acq On : 27 Oct 2000 18:01 Operator:
Sample : GW-3,6734-001,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 30 11:51 2000 Quant Results File: SVWC1700.RES

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Acq On : 27 Oct 2000 18:01
Sample : GW-3,6734-001,A,1000mL,100,10/27/00
[redacted]sc : ENVTACT/ORBIS,10/24/00,10/26/00,1
S Integration Params: LSCINT.P

Vial: 16
Operator:
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.208	102	106	120	rVB2	25203	44136	3.84%	0.365%
2	3.678	190	194	201	rVB	17924	34302	2.98%	0.284%
3	4.218	290	295	307	rVB	61725	97718	8.50%	0.809%
4	4.453	334	339	363	rBV	398463	567032	49.33%	4.692%
5	5.815	588	594	621	rBV	832498	1149372	100.00%	9.511%
6	6.451	708	713	729	rBV	728528	913805	79.50%	7.562%
7	7.199	849	853	873	rBV	416422	485038	42.20%	4.014%
[redacted]	7.391	885	889	896	rVB2	33206	36496	3.18%	0.302%
[redacted]	7.738	950	954	958	rBV	29316	25460	2.22%	0.211%
10	8.064	1011	1015	1026	rBV	1059062	1025761	89.25%	8.488%
11	8.705	1123	1135	1139	rBV2	522549	694426	60.42%	5.747%
12	8.801	1150	1153	1155	rBV	16980	15085	1.31%	0.125%
13	8.833	1155	1159	1165	rVV4	51152	62677	5.45%	0.519%
14	8.887	1165	1169	1176	rVB	255697	219891	19.13%	1.820%
15	8.983	1184	1187	1190	rVB2	20950	19103	1.66%	0.158%
16	9.036	1193	1197	1199	rVV	62287	56495	4.92%	0.468%
17	9.079	1203	1205	1207	rVB	22858	16424	1.43%	0.136%
18	9.138	1212	1216	1218	rBV2	44421	38936	3.39%	0.322%
19	9.165	1218	1221	1228	rBV	905535	758979	66.03%	6.281%
20	9.341	1246	1254	1257	rVB	18828	18379	1.60%	0.152%
21	9.373	1257	1260	1263	rBV	21711	17398	1.51%	0.144%
22	9.405	1263	1266	1271	rVB	15499	13213	1.15%	0.109%
23	9.464	1271	1277	1283	rBV2	25082	32570	2.83%	0.270%
24	9.523	1285	1288	1290	rBV	29454	25172	2.19%	0.208%
25	9.597	1299	1302	1308	rVB	31388	25166	2.19%	0.208%
26	9.672	1312	1316	1320	rBV	238397	190425	16.57%	1.576%
27	9.758	1327	1332	1335	rBV	328708	289109	25.15%	2.392%
28	9.779	1335	1336	1340	rVV	38732	24311	2.12%	0.201%
29	9.822	1340	1344	1352	rVV	1059183	899612	78.27%	7.445%
[redacted]	10.083	1388	1393	1398	rBV3	20262	26088	2.27%	0.216%
31	10.132	1398	1402	1404	rBV	296215	230601	20.06%	1.908%

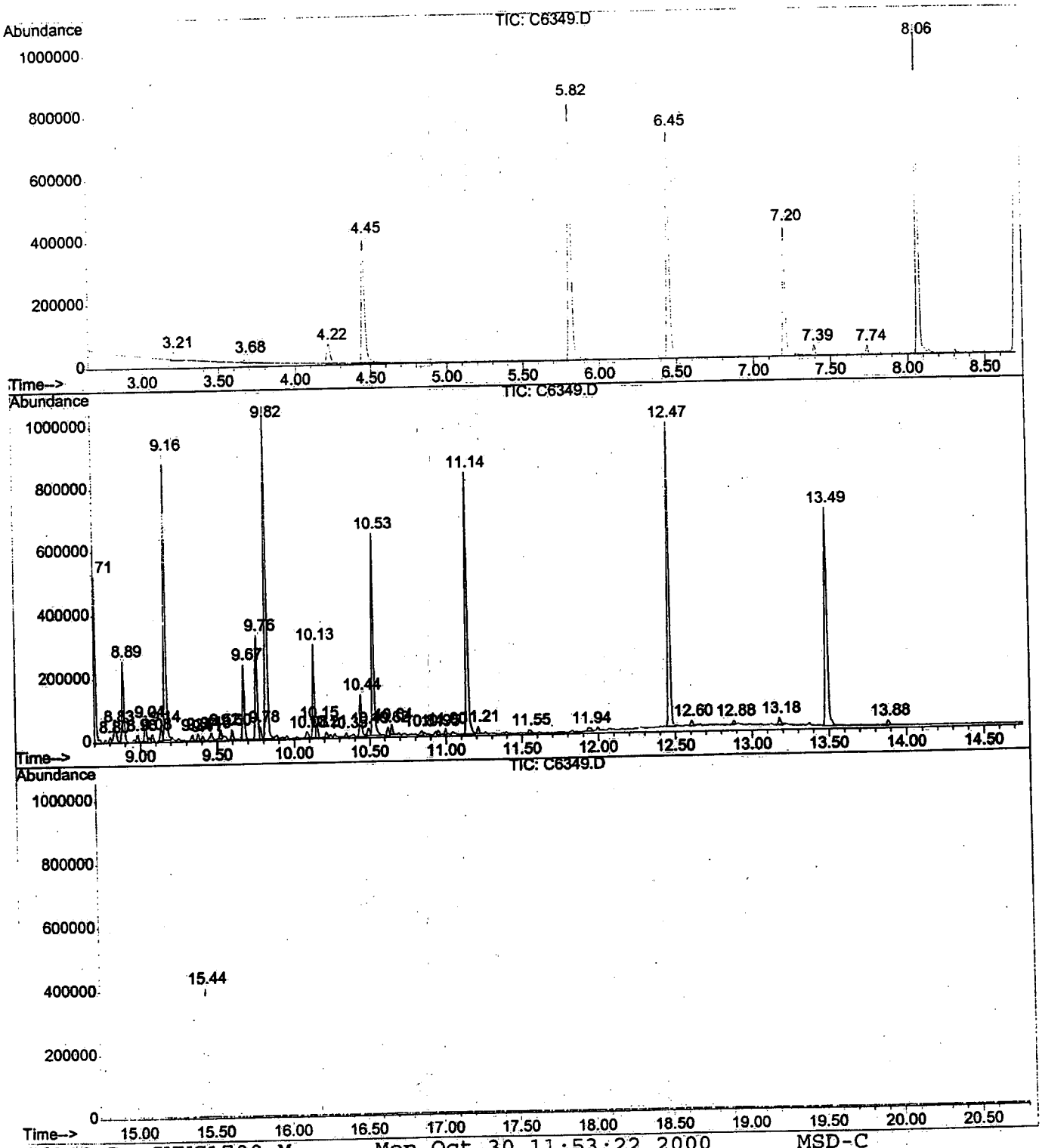
32	10.153	1404	1406	1410	rVB	49365	38209	3.32%	0.316%
33	10.212	1414	1417	1420	rBV2	18983	17461	1.52%	0.144%
34	10.345	1436	1442	1445	rVB2	14091	12946	1.13%	0.107%
35	10.441	1455	1460	1466	rBV	134861	124762	10.85%	1.032%
36	10.489	1466	1469	1472	rVV3	24991	28963	2.52%	0.240%
	10.527	1472	1476	1486	rVB	640040	568013	49.42%	4.700%
38	10.623	1490	1494	1496	rBV	27925	26735	2.33%	0.221%
39	10.644	1496	1498	1502	rVB2	30151	24430	2.13%	0.202%
40	10.842	1529	1535	1537	rBV3	15111	20552	1.79%	0.170%
41	10.949	1553	1555	1558	rVB2	13403	11719	1.02%	0.097%
42	10.997	1561	1564	1566	rVV	19230	14418	1.25%	0.119%
43	11.141	1586	1591	1601	rBV	833444	717609	62.43%	5.938%
44	11.211	1601	1604	1607	rVB	22902	17547	1.53%	0.145%
45	11.547	1664	1667	1676	rVB2	11850	16951	1.47%	0.140%
46	11.943	1736	1741	1746	rBV3	10420	18799	1.64%	0.156%
47	12.466	1835	1839	1846	rBV	970105	834514	72.61%	6.906%
48	12.605	1861	1865	1869	rBV2	17470	17744	1.54%	0.147%
49	12.883	1914	1917	1920	rBV2	13159	11936	1.04%	0.099%
50	13.177	1969	1972	1977	rBV2	23805	25650	2.23%	0.212%
51	13.486	2025	2030	2042	rBV	693030	752737	65.49%	6.229%
52	13.882	2100	2104	2109	rBV2	16488	18368	1.60%	0.152%
53	15.442	2387	2396	2412	rVB2	405229	710894	61.85%	5.883%

Sum of corrected areas: 12084137

C6349.D SVWC1700.M Mon Oct 30 11:53:21 2000 MSD-C

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Operator :
Acquired : 27 Oct 2000 18:01 using AcqMethod SVWC1700
Instrument : MSD-C
Sample Name: GW-3,6734-001,A,1000mL,100,10/27/00
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00,1
Vial Number: 16
Quant File :SVWC1700.RES (RTE Integrator)



C6349.D SVWC1700.M Mon Oct 30 11:53:22 2000 MSD-C

4710

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Acq On : 27 Oct 2000 18:01
Sample : GW-3,6734-001,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 16
Operator:
Inst : MSD-C
Multiplr: 1.00

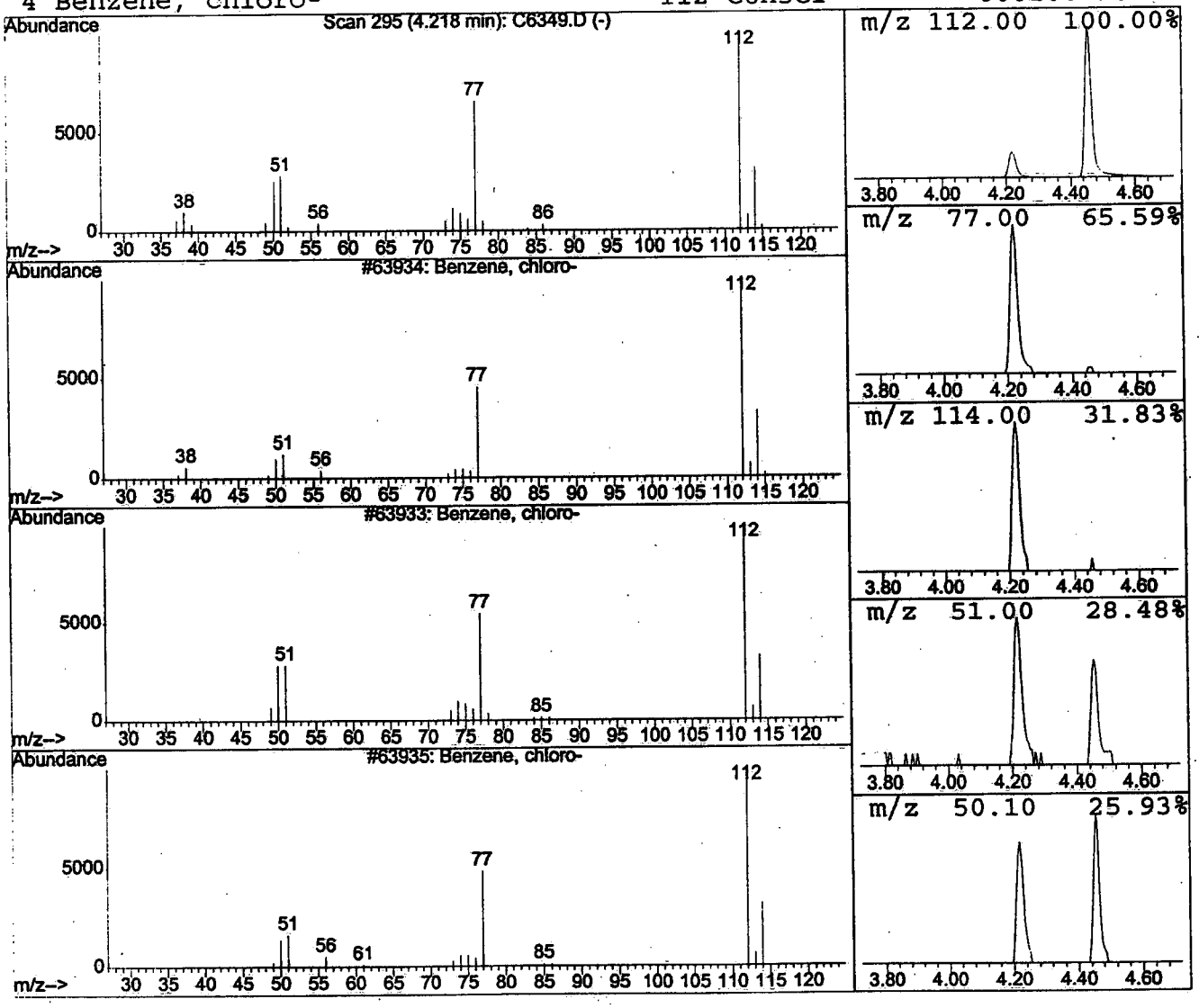
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.22	4.28 UG	97718	1,4-Dichlorobenzene-d4	6.45

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, chloro-	112	C6H5Cl	000108-90-7	94
2	Benzene, chloro-	112	C6H5Cl	000108-90-7	93
3	Benzene, chloro-	112	C6H5Cl	000108-90-7	91
4	Benzene, chloro-	112	C6H5Cl	000108-90-7	90



4711

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Acq On : 27 Oct 2000 18:01
Sample : GW-3,6734-001,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 16
Operator:
Inst : MSD-C
Multiplr: 1.00

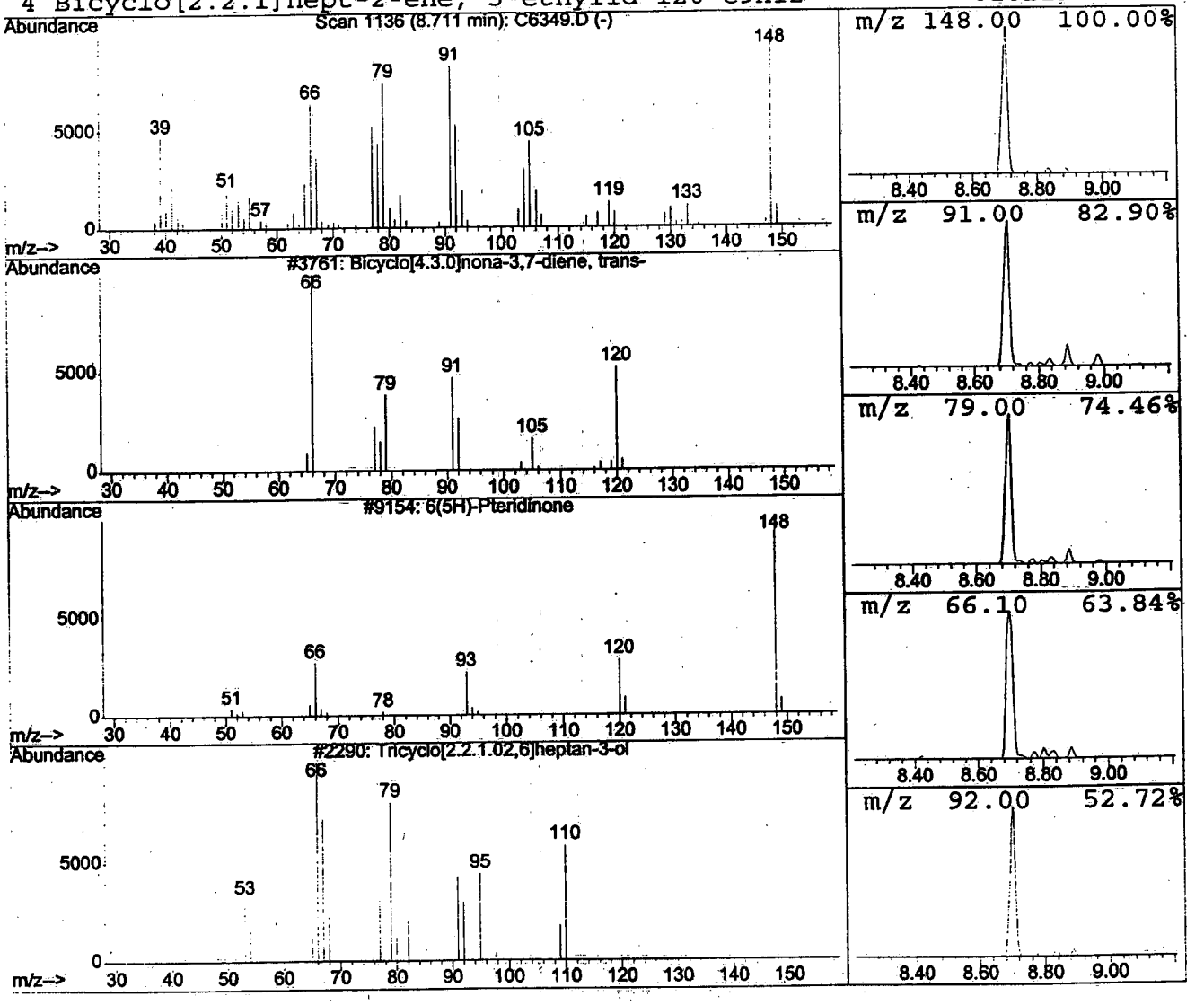
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown — Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.71	27.08 UG	694426	Naphthalene-d8	8.06

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[4.3.0]nona-3,7-diene, trans	120	C9H12	000000-00-0	58
2	6(5H)-Pteridinone	148	C6H4N4O	002432-26-0	53
3	Tricyclo[2.2.1.02,6]heptan-3-ol	110	C7H10O	000695-04-5	50
4	Bicyclo[2.2.1]hept-2-ene, 5-ethylid	120	C9H12	016219-75-3	47



4712

121

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Acq On : 27 Oct 2000 18:01
Sample : GW-3,6734-001,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 16
Operator:
Inst : MSD-C
Multiplr: 1.00

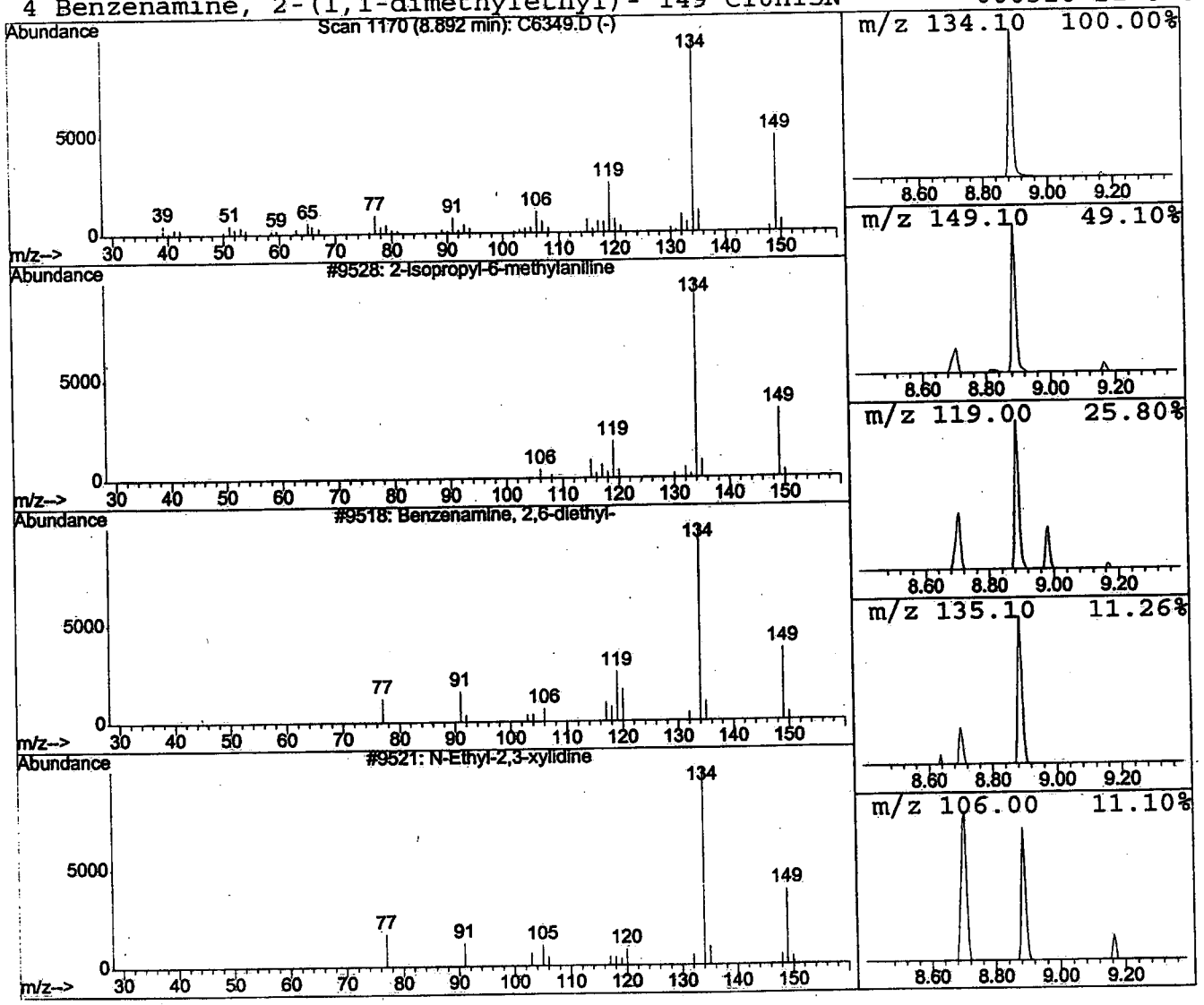
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	8.57 UG	219891	Naphthalene-d8	8.06

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Isopropyl-6-methylaniline	149	C10H15N	005266-85-3	87
2	Benzenamine, 2,6-diethyl-	149	C10H15N	000579-66-8	86
3	N-Ethyl-2,3-xylidine	149	C10H15N	041115-23-5	74
4	Benzenamine, 2-(1,1-dimethylethyl)-	149	C10H15N	006310-21-0	64



4713

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Acq On : 27 Oct 2000 18:01
Sample : GW-3,6734-001,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 16
Operator:
Inst : MSD-C
Multiplr: 1.00

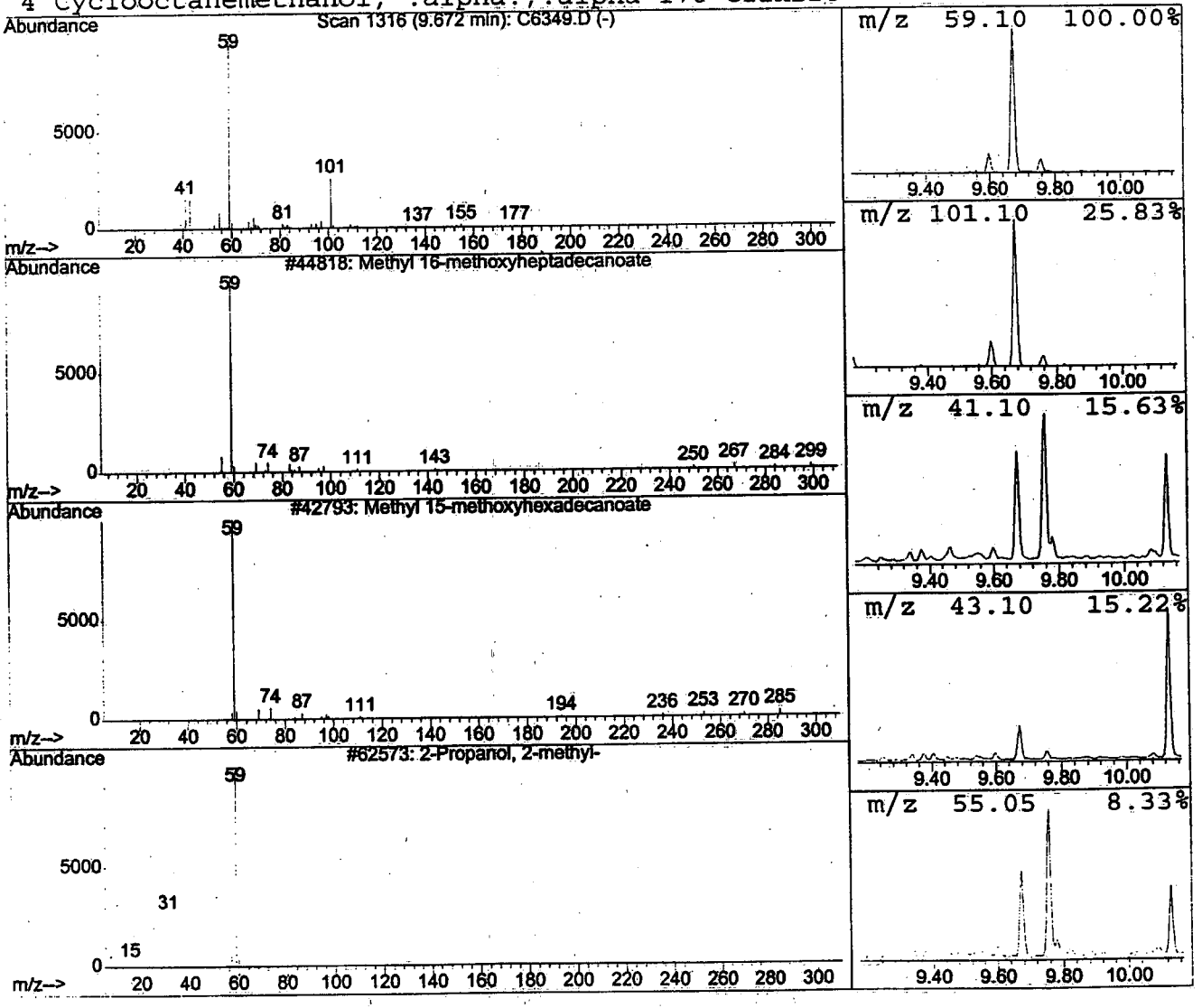
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.67	8.47 UG	190425	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Methyl 16-methoxyheptadecanoate	314	C19H38O3	000000-00-0	45
2	Methyl 15-methoxyhexadecanoate	300	C18H36O3	000000-00-0	45
3	2-Propanol, 2-methyl-	74	C4H10O	000075-65-0	40
4	Cyclooctanemethanol, .alpha.,.alpha	170	C11H22O	016624-06-9	12



4714

123

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Acq On : 27 Oct 2000 18:01
Sample : GW-3,6734-001,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 16
Operator:
Inst : MSD-C
Multiplr: 1.00

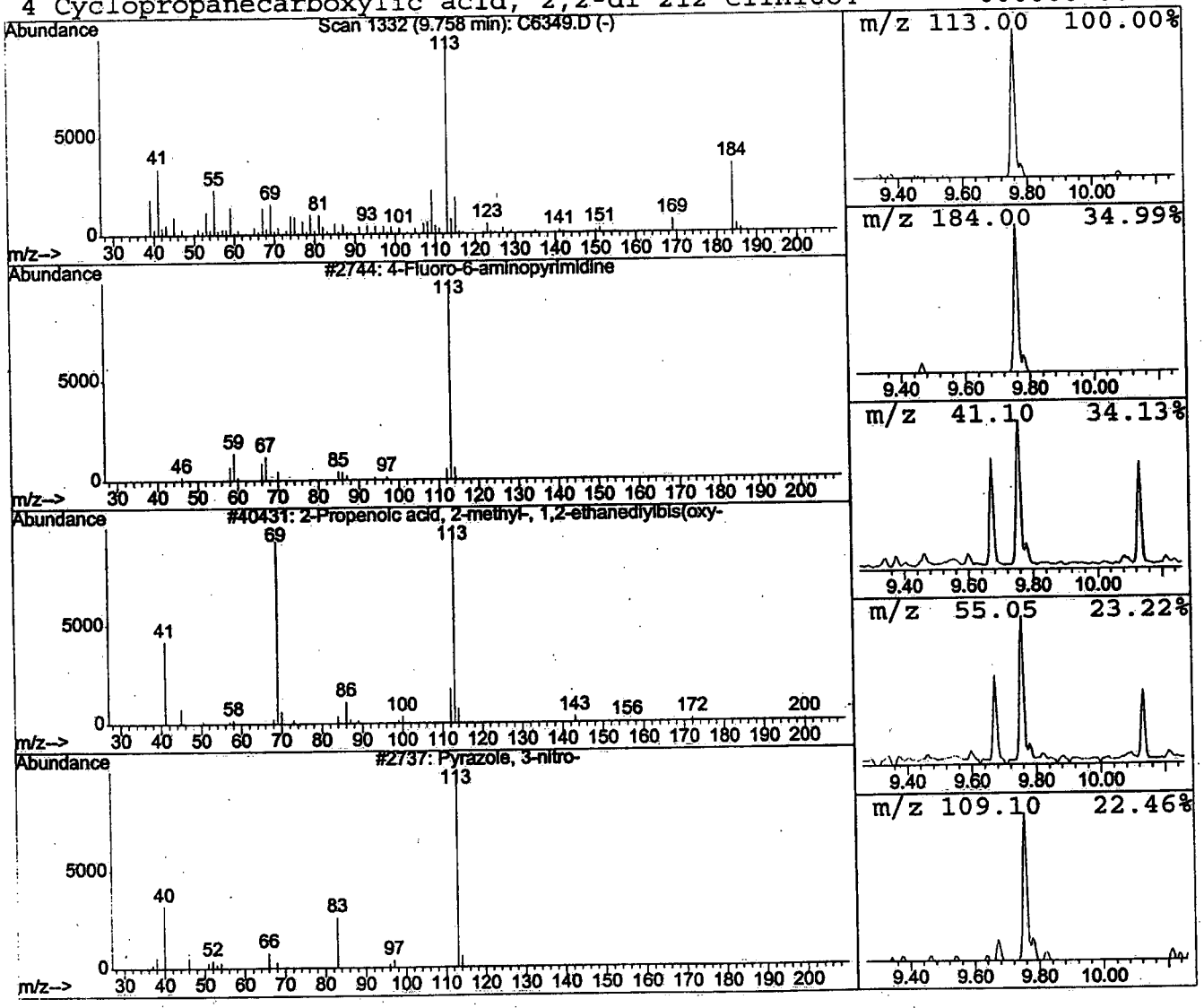
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	12.85 UG	289109	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-Fluoro-6-aminopyrimidine	113	C4H4FN3	000000-00-0	43
2	2-Propenoic acid, 2-methyl-, 1,2-et	286	C14H22O6	000109-16-0	38
3	Pyrazole, 3-nitro-	113	C3H3N3O2	026621-44-3	38
4	Cyclopropanecarboxylic acid, 2,2-di	212	C11H16O4	000000-00-0	37



4715

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6349.D
Acq On : 27 Oct 2000 18:01
Sample : GW-3,6734-001,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 16
Operator:
Inst : MSD-C
Multiplr: 1.00

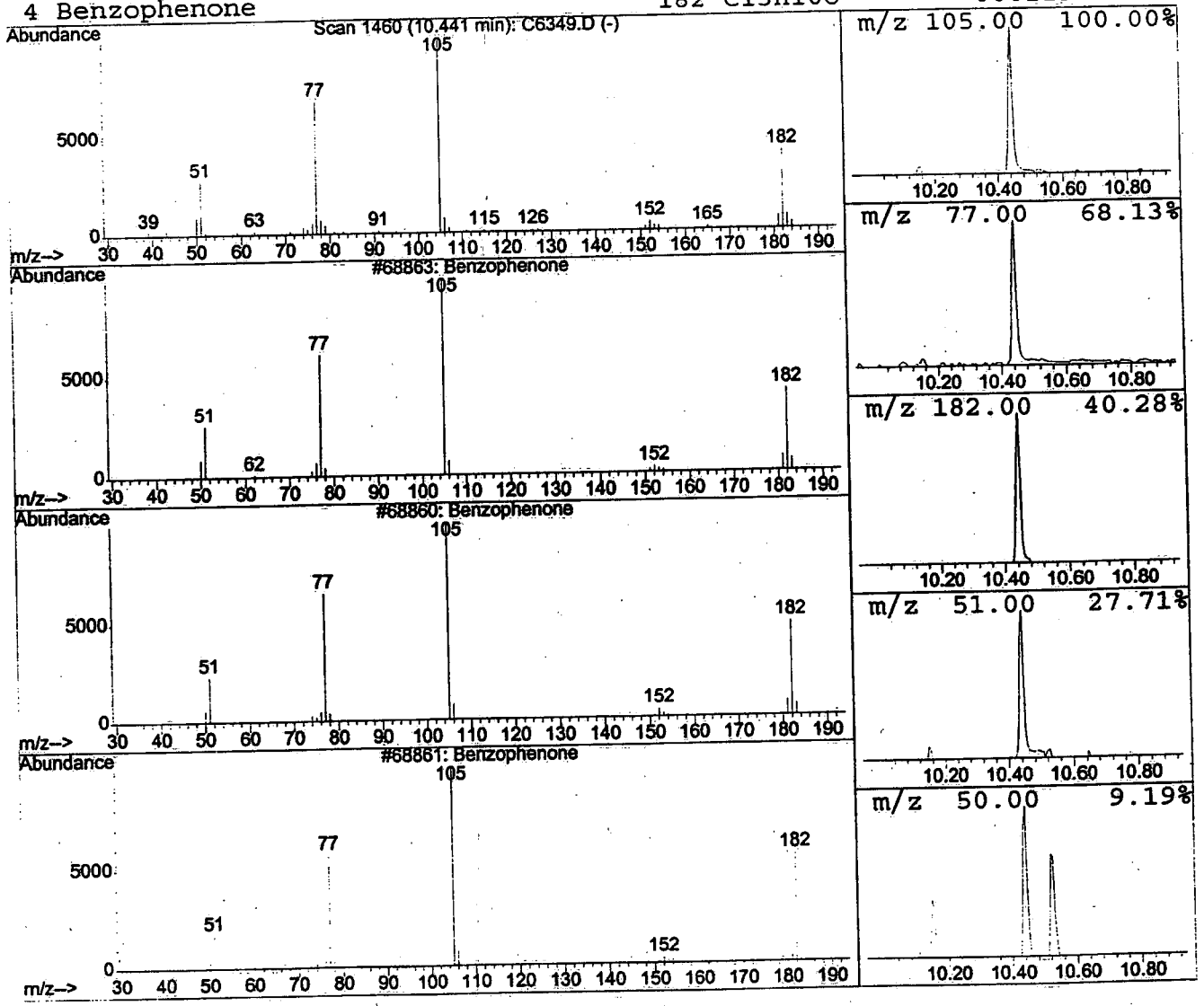
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.44	5.55 UG	124762	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzophenone	182	C13H10O	000119-61-9	95
2	Benzophenone	182	C13H10O	000119-61-9	94
3	Benzophenone	182	C13H10O	000119-61-9	94
4	Benzophenone	182	C13H10O	000119-61-9	93



4716

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D Vial: 14
Acq On : 27 Oct 2000 17:07 Operator:
Sample : GW-4,6734-002,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
S Integration Params: RTEINT.P
Quant Time: Oct 30 11:45 2000 Quant Results File: SVWC1700.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1700

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.45	152	119537	40.00	UG	0.00
19) Naphthalene-d8	8.07	136	390940	40.00	UG	0.00
35) Acenaphthene-d10	9.82	164	184898	40.00	UG	0.00
55) Phenanthrene-d10	11.14	188	302762	40.00	UG	0.00
69) Chrysene-d12	13.48	240	288941	40.00	UG	-0.03
78) Perylene-d12	15.43	264	274414	40.00	UG	-0.05

System Monitoring Compounds						
3) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 96		Recovery = 0.00%#			
4) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 56 - 111		Recovery = 0.00%#			
20) Nitrobenzene-d5	7.20	82	134861	36.53	UG	0.00
Spiked Amount 50.000	Range 61 - 121		Recovery = 73.06%			
39) 2-Fluorobiphenyl	9.17	172	213299	33.82	UG	0.00
Spiked Amount 50.000	Range 63 - 124		Recovery = 67.64%			
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 52 - 153		Recovery = 0.00%#			
71) Terphenyl-d14	12.46	244	297890	46.57	UG	-0.02
Spiked Amount 50.000	Range 46 - 140		Recovery = 93.14%			

Target Compounds						Qvalue
9) 1,3-Dichlorobenzene	6.37	146	7553	1.62	UG	# 96
10) 1,4-Dichlorobenzene	6.47	146	51727	10.84	UG	93
12) 1,2-Dichlorobenzene	6.69	146	20144	4.51	UG	99
46) Acenaphthene	9.52	153	113381	21.50	UG	# 16
51) Diethylphthalate	10.15	149	16811	3.23	UG	# 95

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

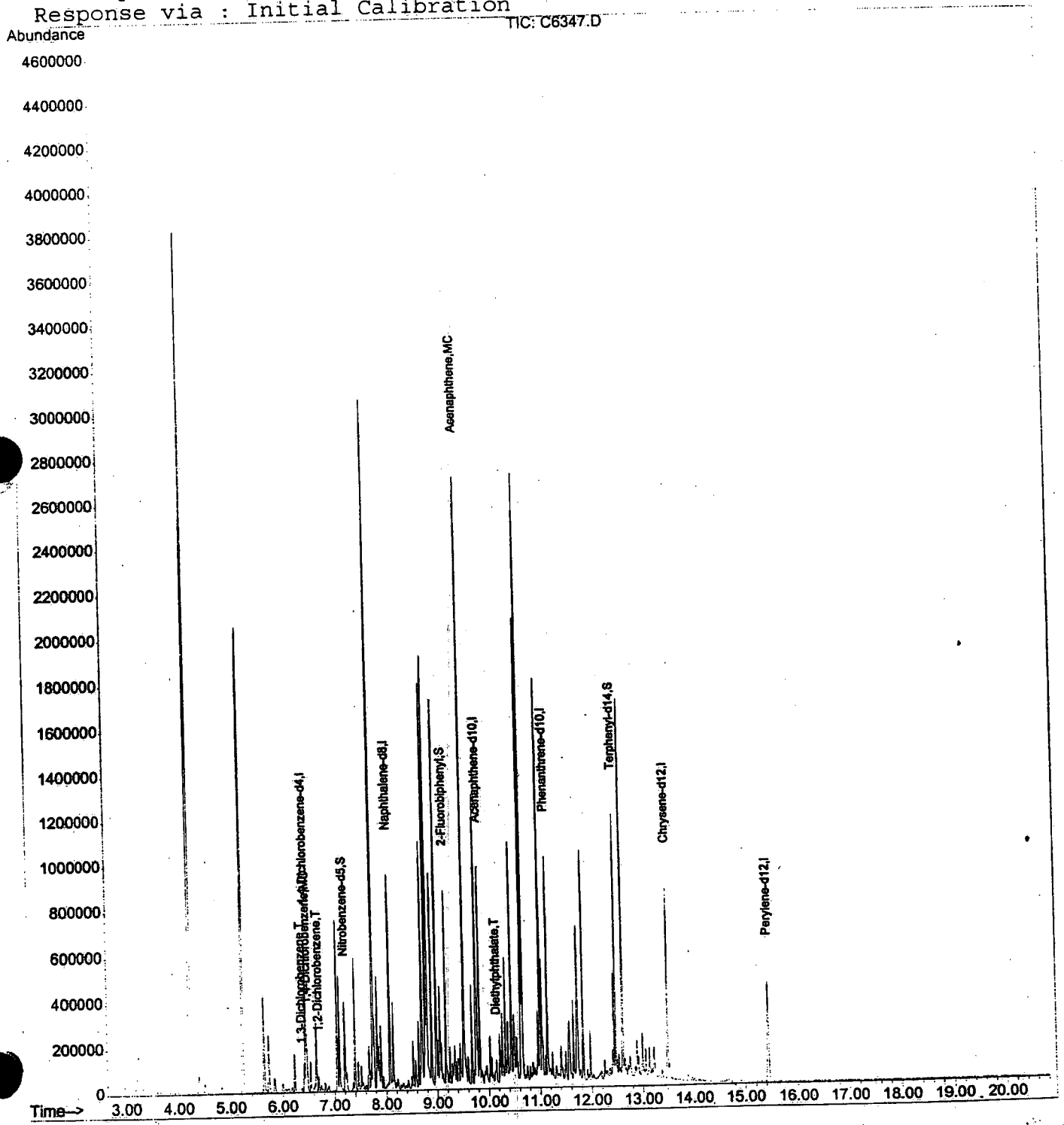
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: RTEINT.P
Quant Time: Oct 30 11:45 2000

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

Quant Results File: SVWC1700.RES

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration



4718

127

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D Vial: 14
Acq On : 27 Oct 2000 17:07 Operator:
Sample : GW-4,6734-002,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.210	102	107	118	rVB	53750	91643	1.42%	0.164%
2	4.220	288	296	315	rBV	3903327	6460283	100.00%	11.592%
3	4.385	323	327	335	rVB	86147	120326	1.86%	0.216%
4	4.503	344	349	359	rBV	46795	83765	1.30%	0.150%
5	5.230	478	485	494	rBV	2057039	2707439	41.91%	4.858%
6	5.641	556	562	567	rBV	425941	572294	8.86%	1.027%
7	5.732	574	579	588	rBV	260385	342800	5.31%	0.615%
8	5.839	595	599	615	rVB	70051	101441	1.57%	0.182%
9	6.229	668	672	678	rBV	173033	200128	3.10%	0.359%
10	6.421	703	708	710	rBV	132339	147825	2.29%	0.265%
11	6.448	710	713	717	rBV	567752	676358	10.47%	1.214%
12	6.538	726	730	738	rVB	138888	153465	2.38%	0.275%
13	6.651	747	751	755	rVB2	303316	324723	5.03%	0.583%
14	7.051	822	826	831	rBV	753869	799531	12.38%	1.435%
15	7.094	831	834	844	rVB	504253	529751	8.20%	0.951%
16	7.201	850	854	858	rBV	393525	425338	6.58%	0.763%
17	7.233	858	860	866	rVB2	81587	88371	1.37%	0.159%
18	7.393	885	890	897	rVB2	582697	599786	9.28%	1.076%
19	7.457	898	902	908	rBV	130693	142161	2.20%	0.255%
20	7.516	909	913	916	rBV	108191	101865	1.58%	0.183%
21	7.666	935	941	944	rBV2	199774	239489	3.71%	0.430%
22	7.703	944	948	950	rVV	99247	111809	1.73%	0.201%
23	7.740	950	955	958	rVV	3056768	3177939	49.19%	5.703%
24	7.767	958	960	965	rVV	329996	321718	4.98%	0.577%
25	7.831	966	972	975	rVV	498775	566745	8.77%	1.017%
26	7.863	975	978	982	rVV2	193918	254683	3.94%	0.457%
27	7.906	982	986	990	rVV	283406	288359	4.46%	0.517%
28	8.066	1012	1016	1021	rBV	921631	858980	13.30%	1.541%
29	8.136	1025	1029	1032	rVV	353297	317868	4.92%	0.570%
30	8.526	1099	1102	1107	rVB	207348	195010	3.02%	0.350%
31	8.574	1107	1111	1119	rVB4	120389	150004	2.32%	0.269%

32	8.632	1119	1122	1126	rBV	290912	260308	4.03%	0.467%
33	8.670	1126	1129	1130	rBV2	89490	75426	1.17%	0.135%
34	8.702	1130	1135	1139	rVV3	1058200	1340779	20.75%	2.406%
35	8.745	1140	1143	1144	rVV2	130462	117401	1.82%	0.211%
	8.766	1144	1147	1150	rVV	1751828	1486916	23.02%	2.668%
	8.803	1150	1154	1157	rVV2	1869200	2094033	32.41%	3.758%
	8.825	1157	1158	1164	rVV5	55658	80805	1.25%	0.145%
39	8.889	1166	1170	1177	rVB	923028	796124	12.32%	1.429%
40	8.985	1180	1188	1191	rBV	1699585	1570885	24.32%	2.819%
41	9.017	1191	1194	1196	rVB	169405	140903	2.18%	0.253%
42	9.054	1196	1201	1204	rBV2	406350	438801	6.79%	0.787%
43	9.081	1204	1206	1208	rVB	163799	111573	1.73%	0.200%
44	9.167	1219	1222	1227	rBV	844857	722428	11.18%	1.296%
45	9.247	1234	1237	1241	rVB	164205	141091	2.18%	0.253%
46	9.290	1242	1245	1247	rBV	87149	76754	1.19%	0.138%
47	9.338	1247	1254	1257	rVB3	155231	205082	3.17%	0.368%
48	9.375	1257	1261	1264	rVB2	90578	98630	1.53%	0.177%
49	9.402	1264	1266	1268	rBV	104542	101459	1.57%	0.182%
50	9.450	1272	1275	1278	rBV	168177	146232	2.26%	0.262%
51	9.525	1285	1289	1292	rBV	2543035	2184942	33.82%	3.921%
52	9.557	1294	1295	1299	rVB	103721	84698	1.31%	0.152%
53	9.599	1299	1303	1309	rVB	122866	140557	2.18%	0.252%
54	9.674	1313	1317	1322	rVB	435833	385453	5.97%	0.692%
55	9.760	1328	1333	1335	rBV2	1236400	1225287	18.97%	2.199%
56	9.781	1335	1337	1340	rVB	353790	266478	4.12%	0.478%
57	9.824	1340	1345	1349	rVB	923619	811690	12.56%	1.457%
	9.936	1359	1366	1367	rBV5	56295	101138	1.57%	0.181%
	9.957	1367	1370	1379	rVB	74854	109931	1.70%	0.197%
60	10.027	1379	1383	1385	rBV	206476	178401	2.76%	0.320%
61	10.053	1385	1388	1391	rVB	94538	83449	1.29%	0.150%
62	10.150	1402	1406	1410	rVB3	98514	122261	1.89%	0.219%
63	10.214	1414	1418	1421	rBV2	217239	225813	3.50%	0.405%
64	10.240	1421	1423	1425	rVB	118008	87155	1.35%	0.156%
65	10.267	1425	1428	1434	rVB	279438	251857	3.90%	0.452%
66	10.326	1435	1439	1442	rBV	520449	410862	6.36%	0.737%
67	10.374	1445	1448	1451	rVB	232104	180579	2.80%	0.324%
68	10.438	1454	1460	1465	rVB	1010148	937391	14.51%	1.682%
69	10.492	1465	1470	1476	rBV3	253640	358855	5.55%	0.644%
70	10.540	1476	1479	1481	rBV	136723	114749	1.78%	0.206%
71	10.625	1487	1495	1498	rBV	2032185	2042934	31.62%	3.666%
72	10.657	1498	1501	1504	rVB	2612794	2193527	33.95%	3.936%
73	10.748	1515	1518	1525	rVB	64469	79407	1.23%	0.142%
74	10.855	1534	1538	1541	rBV3	67332	77511	1.20%	0.139%
75	10.956	1554	1557	1561	rVB	241251	195889	3.03%	0.352%
76	10.999	1561	1565	1568	rVB	1725280	1415780	21.92%	2.541%
77	11.031	1568	1571	1574	rBV	487732	444544	6.88%	0.798%
78	11.143	1587	1592	1597	rVV	960940	869374	13.46%	1.560%
79	11.234	1606	1609	1618	rVB	122492	130787	2.02%	0.235%
	11.309	1618	1623	1627	rBV4	59323	84221	1.30%	0.151%
81	11.405	1638	1641	1644	rBV	138986	132267	2.05%	0.237%

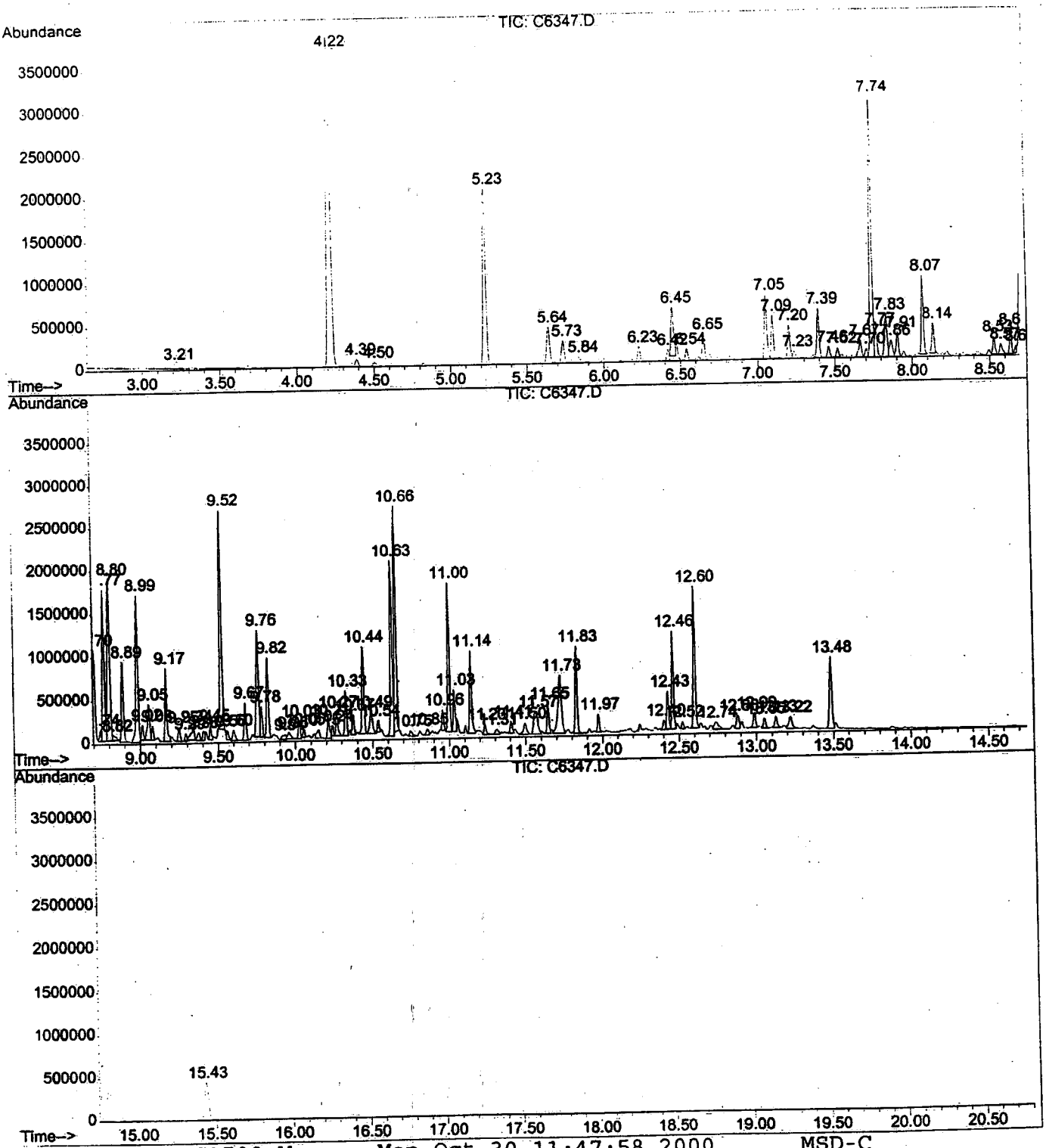
82	11.496	1650	1658	1665	rVB4	131772	195222	3.02%	0.350%
83	11.571	1665	1672	1677	rBV2	265798	515424	7.98%	0.925%
84	11.645	1682	1686	1689	rBV	349108	288498	4.47%	0.518%
85	11.726	1692	1701	1707	rVV	674208	1078429	16.69%	1.935%
86	11.832	1716	1721	1728	rVB	1013932	884648	13.69%	1.587%
[illegible]	11.971	1744	1747	1751	rBV	210648	162945	2.52%	0.292%
[illegible]	12.404	1824	1828	1830	rVV	115583	115947	1.79%	0.208%
89	12.431	1830	1833	1836	rVV	444283	409227	6.33%	0.734%
90	12.463	1836	1839	1842	rVV	1137295	859944	13.31%	1.543%
91	12.522	1847	1850	1853	rBV	85095	74861	1.16%	0.134%
92	12.602	1860	1865	1870	rBV	1641164	1411531	21.85%	2.533%
93	12.741	1887	1891	1899	rVB5	87720	170563	2.64%	0.306%
94	12.879	1914	1917	1920	rVV2	155222	187121	2.90%	0.336%
95	12.992	1933	1938	1941	rBV	176138	182863	2.83%	0.328%
96	13.050	1946	1949	1955	rVB	118778	119477	1.85%	0.214%
97	13.125	1959	1963	1969	rVB2	134092	142043	2.20%	0.255%
98	13.221	1976	1981	1991	rVB	141021	206180	3.19%	0.370%
99	13.483	2024	2030	2034	rBV	830852	887232	13.73%	1.592%
100	15.433	2386	2395	2408	rBV2	442083	750684	11.62%	1.347%

Sum of corrected areas: 55728153

C6347.D SVWC1700.M Mon Oct 30 11:47:56 2000 MSD-C

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Operator :
Acquired : 27 Oct 2000 17:07 using AcqMethod SVWC1700
Instrument : MSD-C
Sample Name: GW-4,6734-002,A,1000mL,100,10/27/00
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00,1
Vial Number: 14
Quant File :SVWC1700.RES (RTE Integrator)



C6347.D SVWC1700.M Mon Oct 30 11:47:58 2000 MSD-C

4722

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

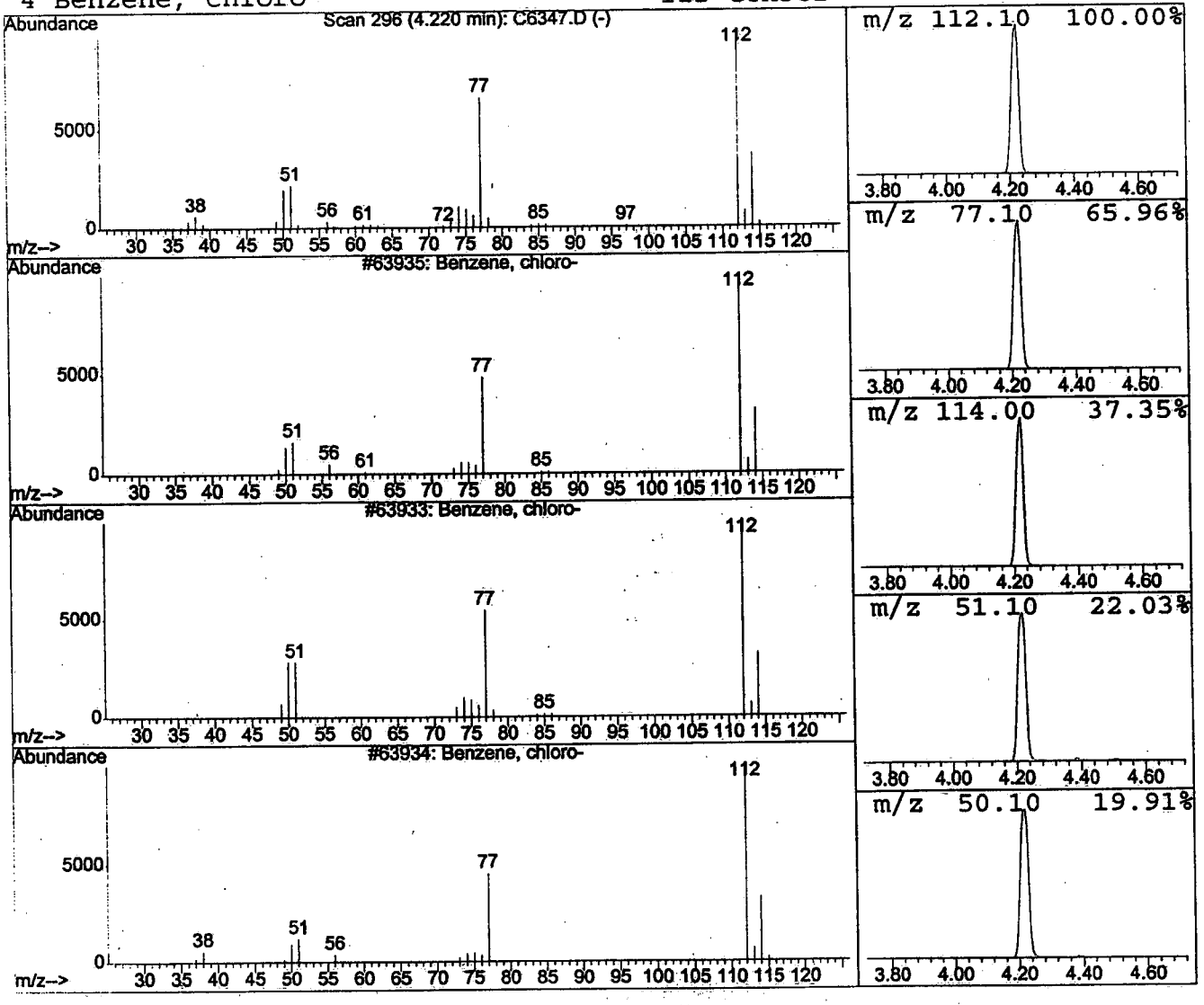
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.22	382.06 UG	6460280	1,4-Dichlorobenzene-d4	6.45

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, chloro-	112	C6H5Cl	000108-90-7	97
2	Benzene, chloro-	112	C6H5Cl	000108-90-7	94
3	Benzene, chloro-	112	C6H5Cl	000108-90-7	94
4	Benzene, chloro-	112	C6H5Cl	000108-90-7	90



4723

132

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

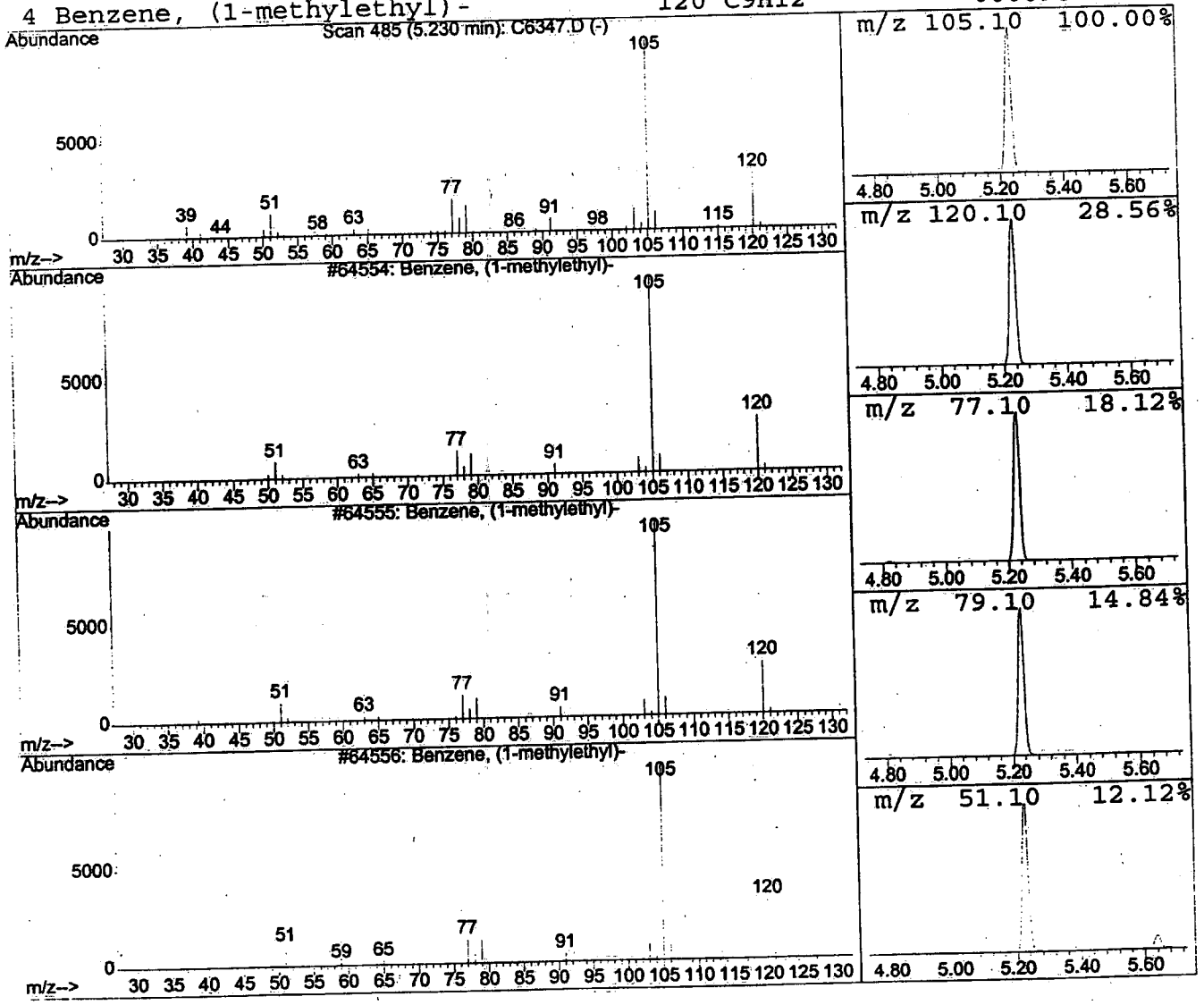
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.23	160.12 UG	2707440	1,4-Dichlorobenzene-d4	6.45

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	95
2	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	95
3	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91
4	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	91



133

4724

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

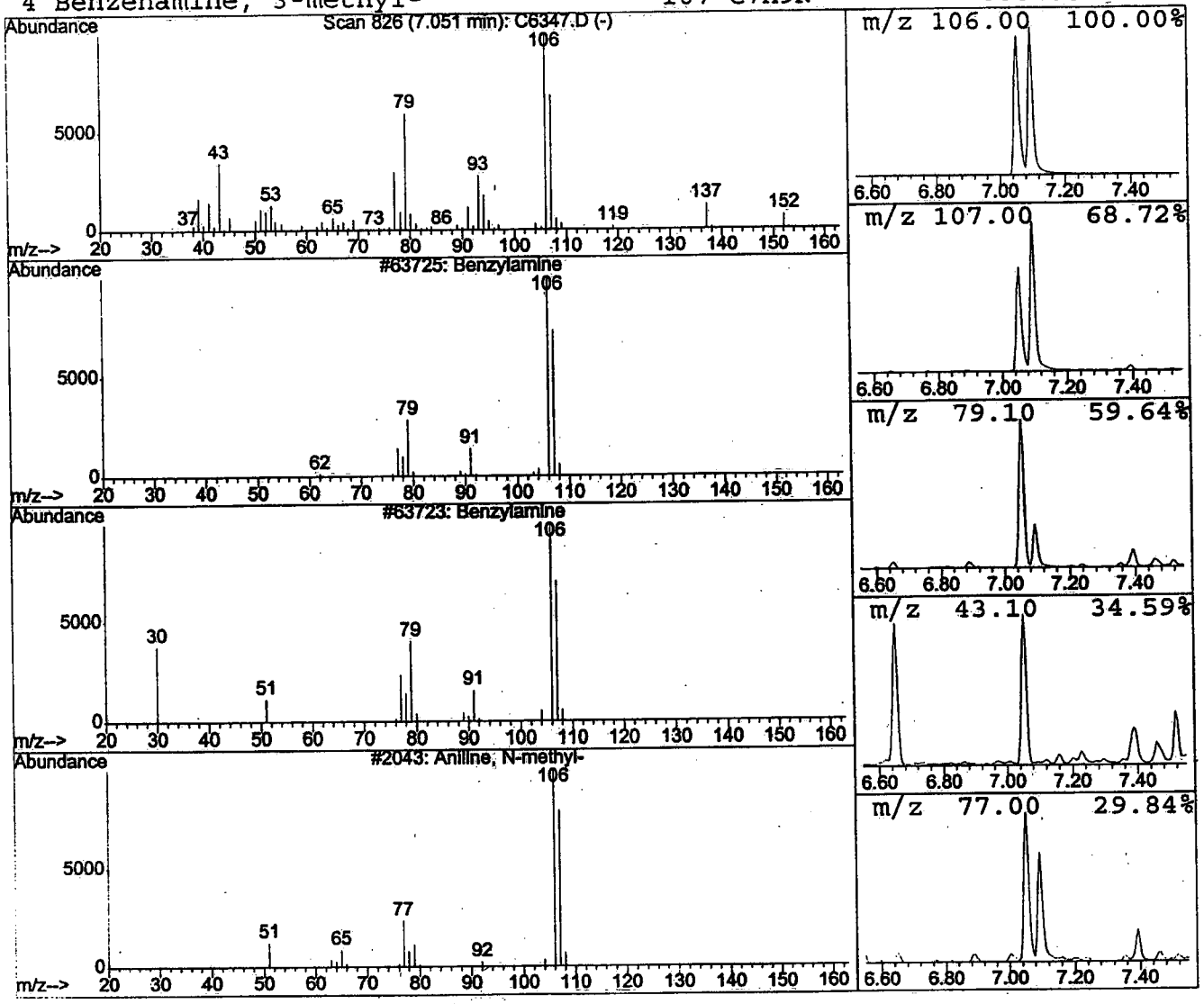
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Substituted benzene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.05	47.28 UG	799531	1,4-Dichlorobenzene-d4	6.45

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzylamine	107	C7H9N	000100-46-9	64
2	Benzylamine	107	C7H9N	000100-46-9	64
3	Aniline, N-methyl-	107	C7H9N	000100-61-8	64
4	Benzenamine, 3-methyl-	107	C7H9N	000108-44-1	53



4725

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

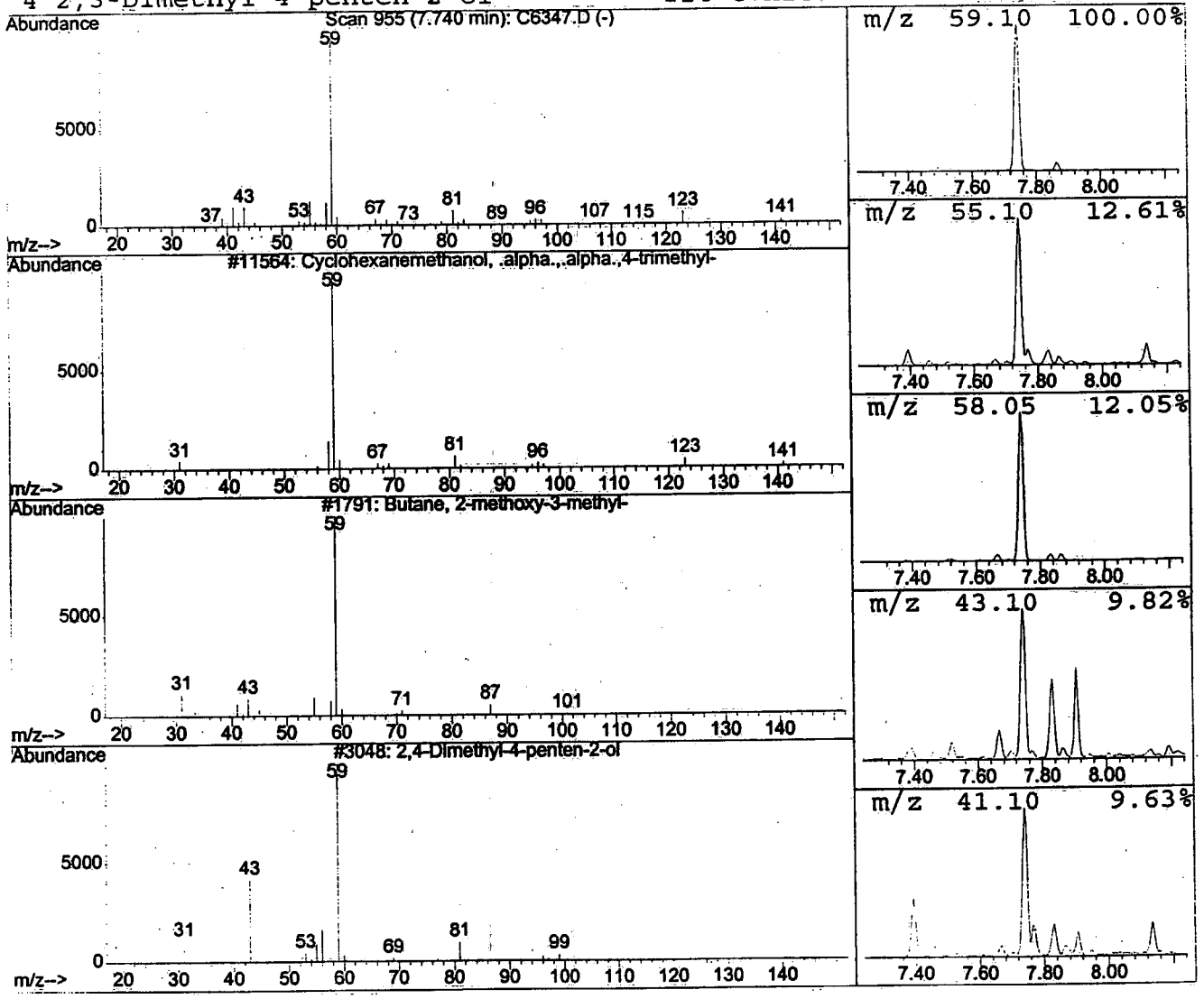
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Unknown alkane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.74	147.99 UG	3177940	Naphthalene-d8	8.07

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanemethanol, .alpha.,.alpha	156	C10H20O	000498-81-7	83
2	Butane, 2-methoxy-3-methyl-	102	C6H14O	062016-49-3	50
3	2,4-Dimethyl-4-penten-2-ol	114	C7H14O	019781-53-4	45
4	2,3-Dimethyl-4-penten-2-ol	114	C7H14O	019781-52-3	45



4726

135

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

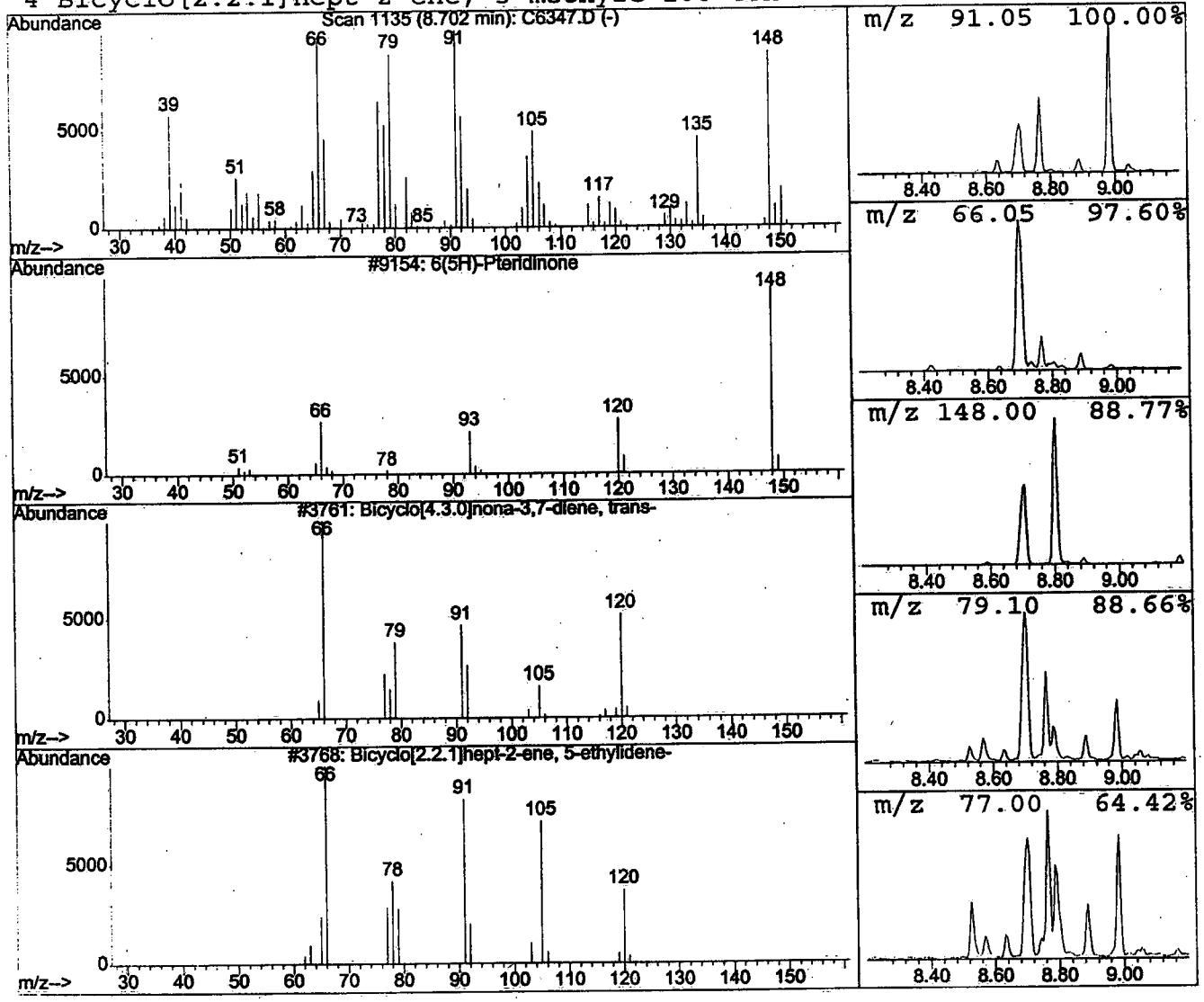
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown — Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.70	62.44 UG	1340780	Naphthalene-d8	8.07

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	6(5H)-Pteridinone	148	C6H4N4O	002432-26-0	55
2	Bicyclo[4.3.0]nona-3,7-diene, trans	120	C9H12	000000-00-0	50
3	Bicyclo[2.2.1]hept-2-ene, 5-ethylid	120	C9H12	016219-75-3	47
4	Bicyclo[2.2.1]hept-2-ene, 5-methyle	106	C8H10	000694-91-7	46



4727

126

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

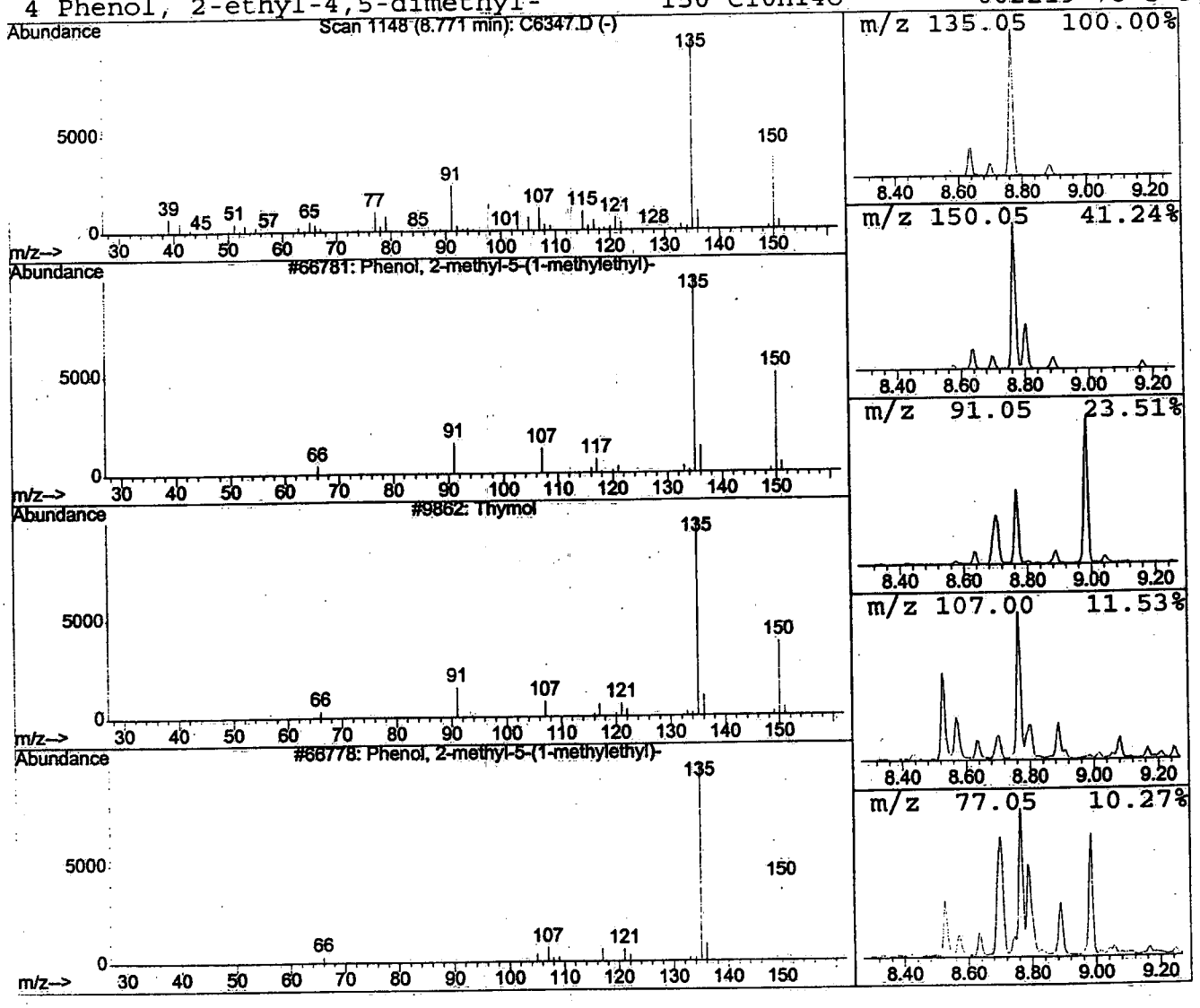
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Substituted phenol Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.77	69.24 UG	1486920	Naphthalene-d8	8.07

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	94
2	Thymol	150	C10H14O	000089-83-8	93
3	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	91
4	Phenol, 2-ethyl-4,5-dimethyl-	150	C10H14O	002219-78-5	90



4728

137

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D Vial: 14
Acq On : 27 Oct 2000 17:07 Operator:
Sample : GW-4,6734-002,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

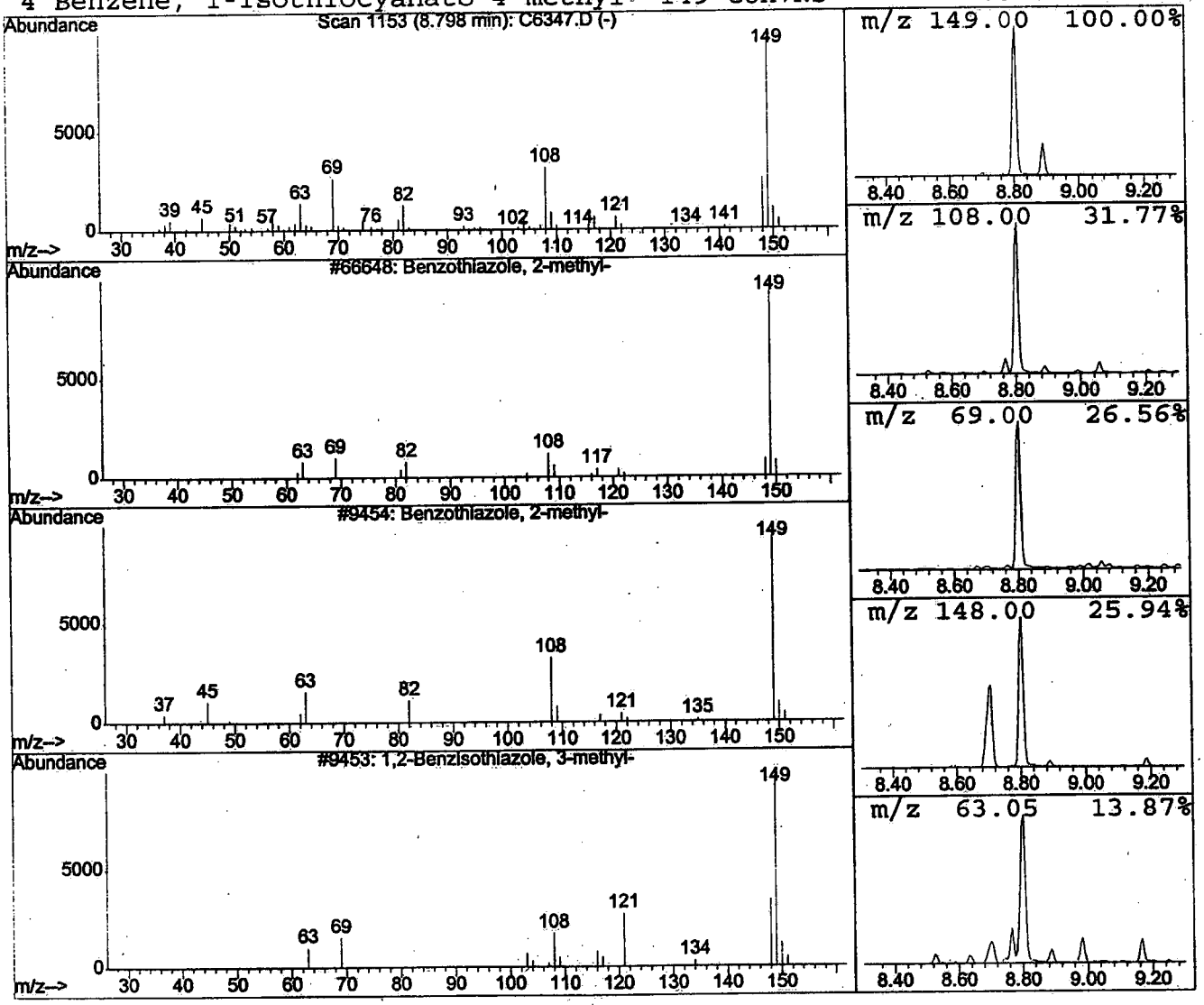
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Substituted benzene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.80	97.51 UG	2094030	Naphthalene-d8	8.07

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzothiazole, 2-methyl-	149	C8H7NS	000120-75-2	87
2	Benzothiazole, 2-methyl-	149	C8H7NS	000120-75-2	83
3	1,2-Benzisothiazole, 3-methyl-	149	C8H7NS	006187-89-9	80
4	Benzene, 1-isothiocyanato-4-methyl-	149	C8H7NS	000622-59-3	64



4729

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

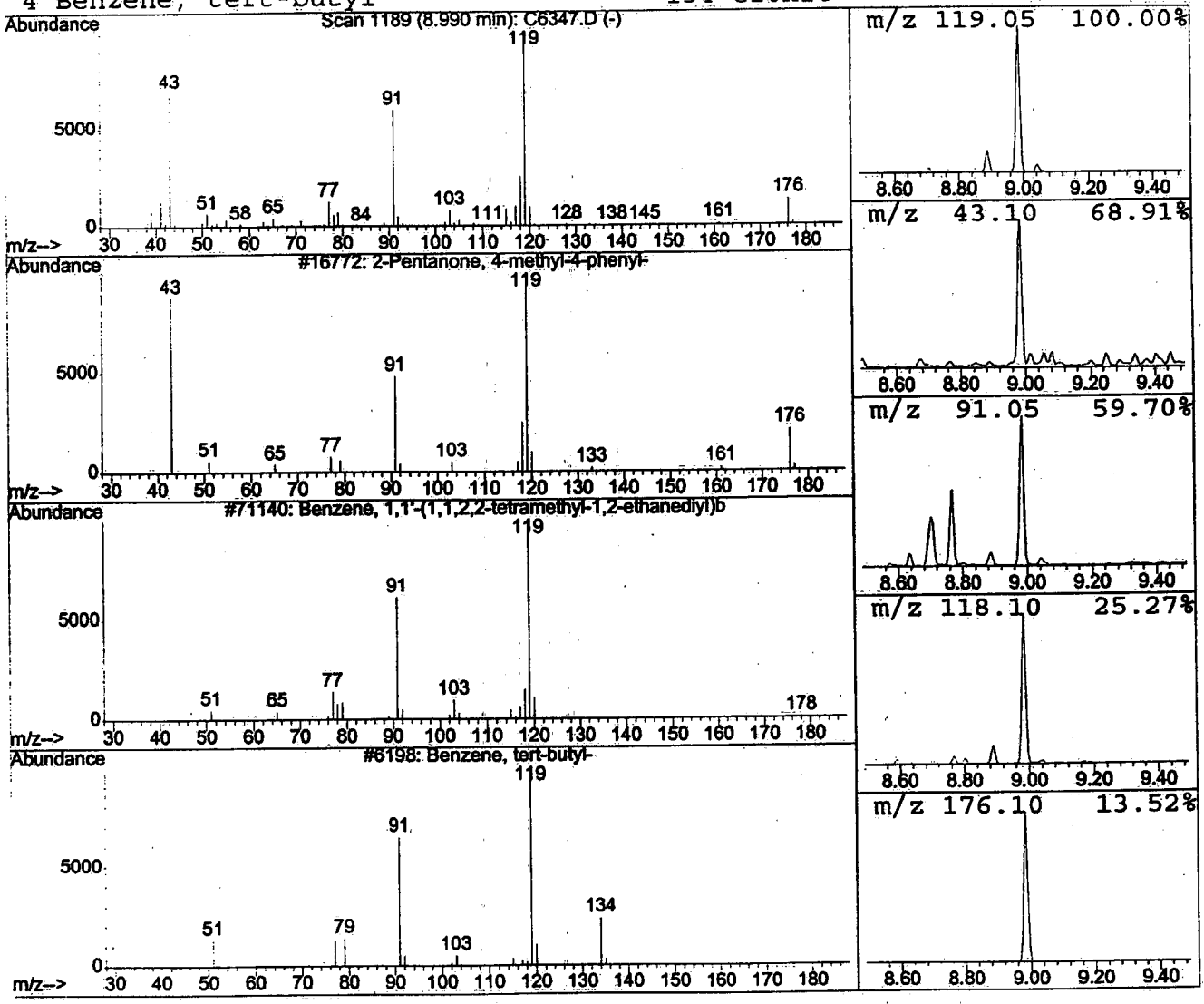
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Unknown alkane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.99	77.41 UG	1570890	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-methyl-4-phenyl-	176	C12H16O	007403-42-1	94
2	Benzene, 1,1'-(1,1,2,2-tetramethyl-	238	C18H22	001889-67-4	64
3	Benzene, tert-butyl-	134	C10H14	000098-06-6	53
4	Benzene, tert-butyl-	134	C10H14	000098-06-6	53



4730

139

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

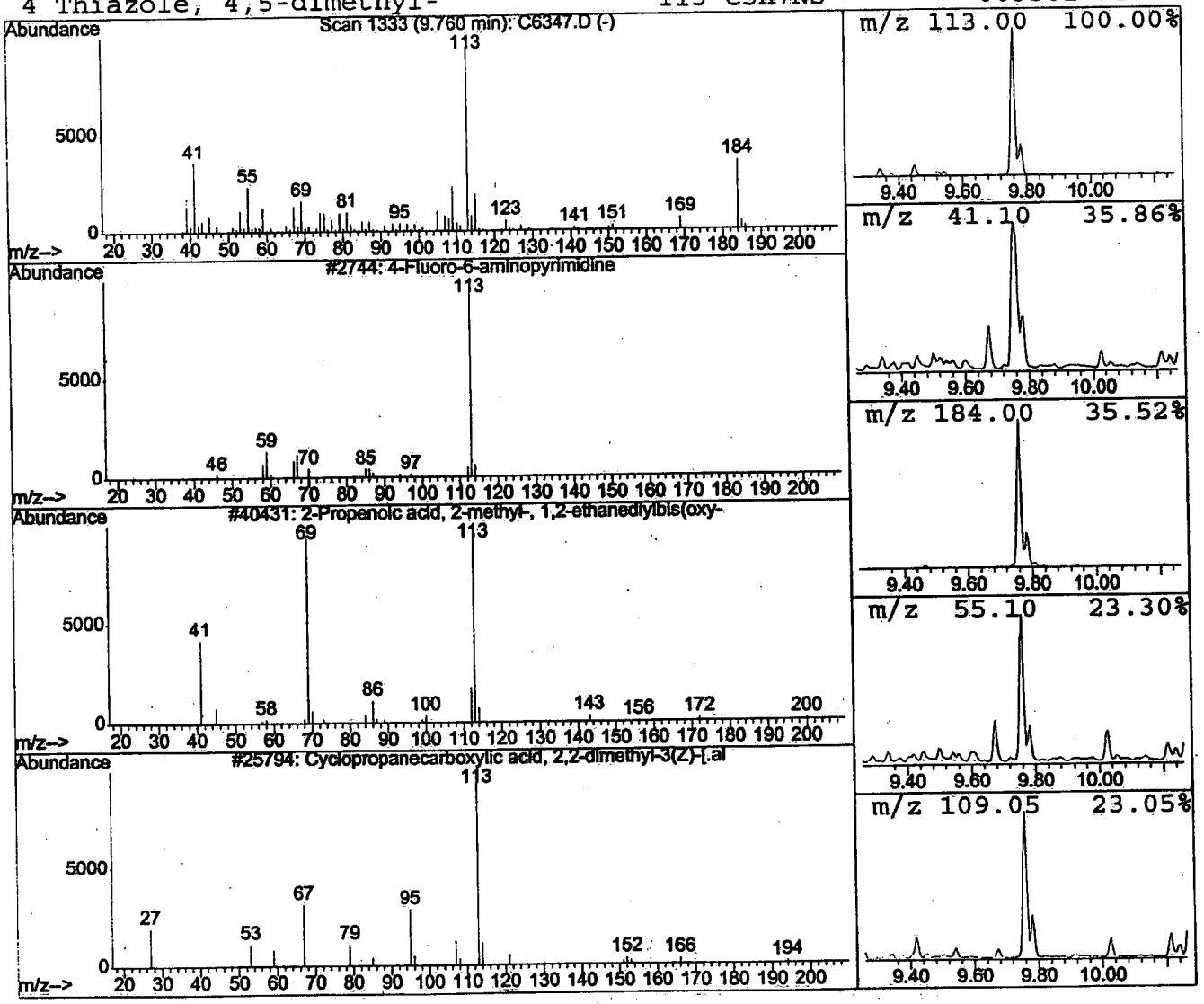
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 Unknown — Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	60.38 UG	1225290	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-Fluoro-6-aminopyrimidine	113	C4H4FN3	000000-00-0	43
2	2-Propenoic acid, 2-methyl-, 1,2-et	286	C14H22O6	000109-16-0	38
3	Cyclopropanecarboxylic acid, 2,2-di	212	C11H16O4	000000-00-0	37
4	Thiazole, 4,5-dimethyl-	113	C5H7NS	003581-91-7	37



4731

140

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

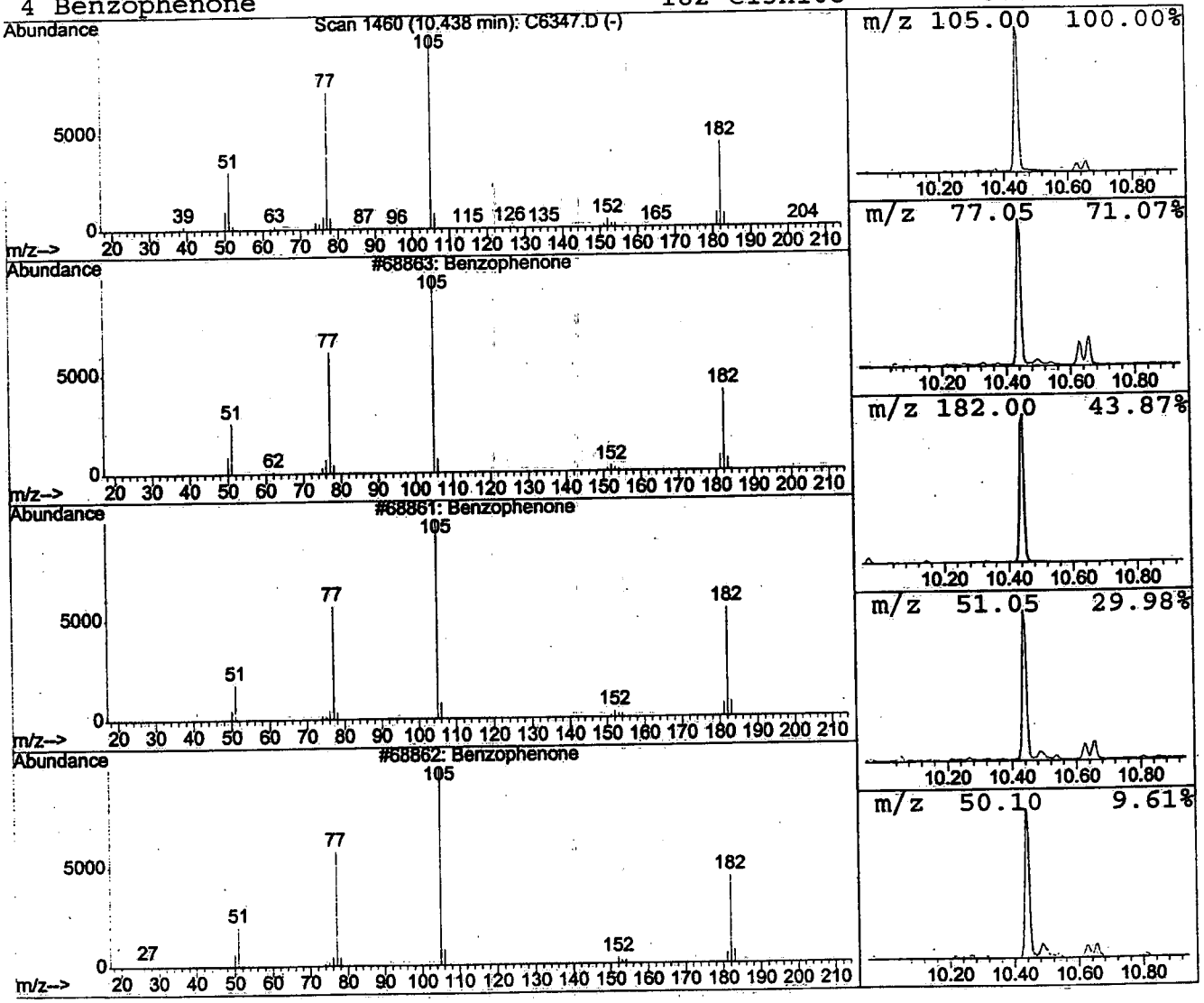
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 10 Substituted benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.44	46.19 UG	937391	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzophenone	182	C13H10O	000119-61-9	96
2	Benzophenone	182	C13H10O	000119-61-9	95
3	Benzophenone	182	C13H10O	000119-61-9	95
4	Benzophenone	182	C13H10O	000119-61-9	94



4732

141

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D Vial: 14
Acq On : 27 Oct 2000 17:07 Operator:
Sample : GW-4,6734-002,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

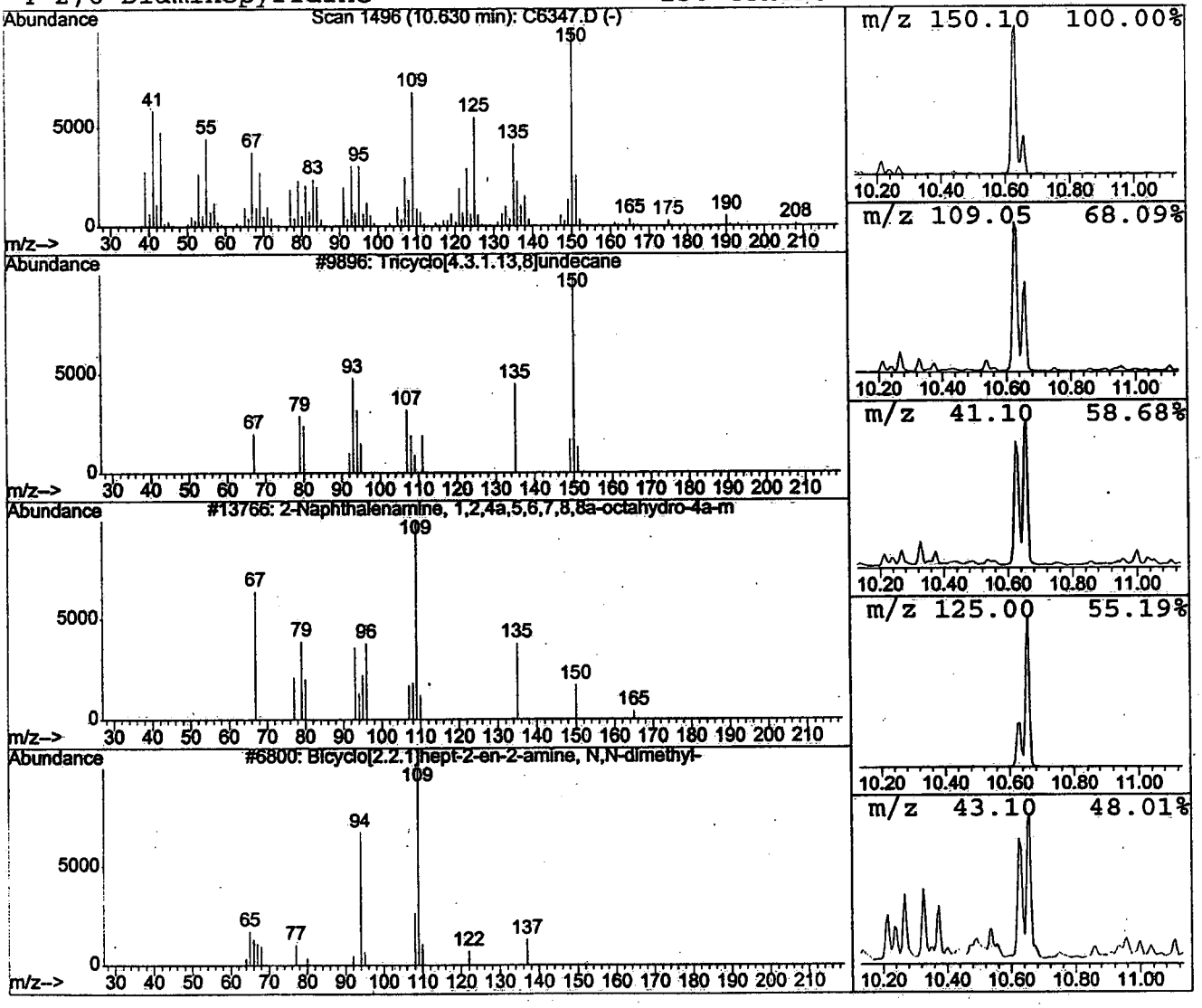
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 11 Unknown Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.63	94.00 UG	2042930	Phenanthrene-d10	11.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tricyclo[4.3.1.13,8]undecane	150	C11H18	000281-46-9	41
2	2-Naphthalenamine, 1,2,4a,5,6,7,8,8	165	C11H19N	056053-03-3	30
3	Bicyclo[2.2.1]hept-2-en-2-amine, N,	137	C9H15N	041455-23-6	11
4	2,6-Diaminopyridine	150	C5H6N6	000000-00-0	11



4733

142

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

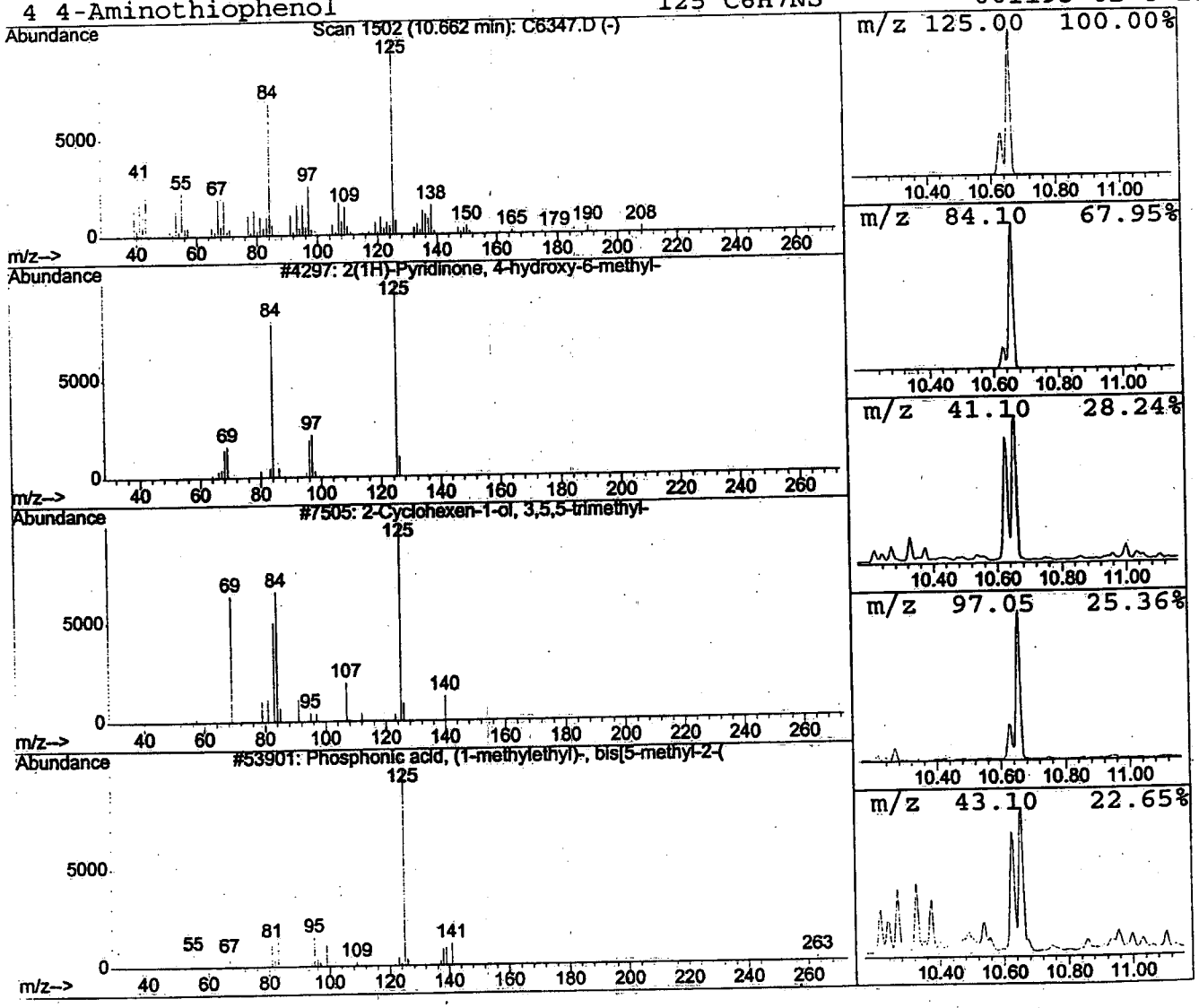
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 12 Unknown — Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.66	100.92 UG	2193530	Phenanthrene-d10	11.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2(1H)-Pyridinone, 4-hydroxy-6-methy	125	C6H7NO2	003749-51-7	40
2	2-Cyclohexen-1-ol, 3,5,5-trimethyl-	140	C9H16O	000470-99-5	38
3	Phosphonic acid, (1-methylethyl)-,	400	C23H45O3P	074630-11-8	22
4	4-Aminothiophenol	125	C6H7NS	001193-02-8	22



4734

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

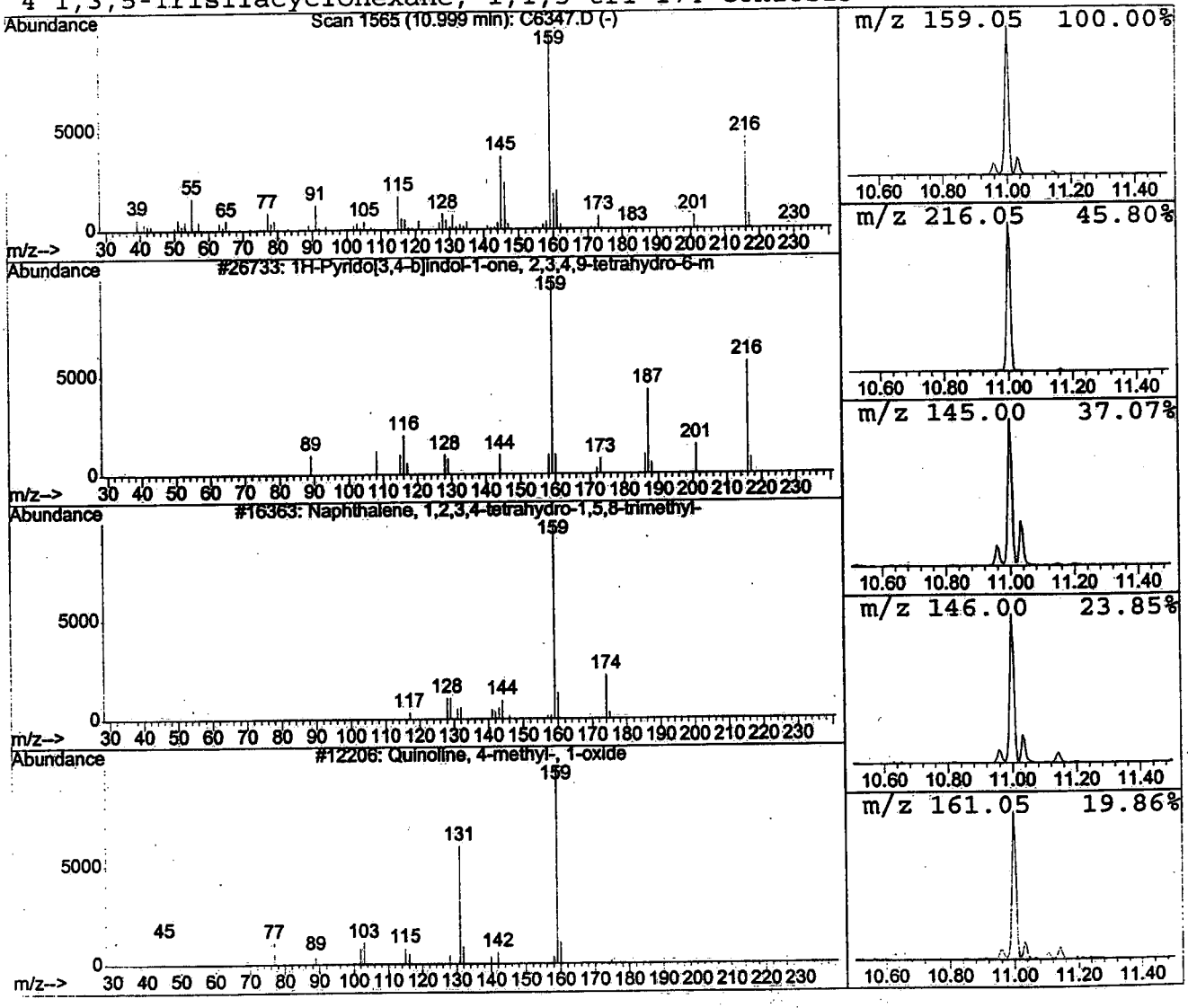
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 13 Unknown — Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.00	65.14 UG	1415780	Phenanthrene-d10	11.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1H-Pyrido[3,4-b]indol-1-one, 2,3,4,	216	C12H12N2O2	017952-87-3	50
2	Naphthalene, 1,2,3,4-tetrahydro-1,5	174	C13H18	021693-51-6	25
3	Quinoline, 4-methyl-, 1-oxide	159	C10H9NO	004053-40-1	25
4	1,3,5-Trisilacyclohexane, 1,1,3-tri	174	C6H18Si3	018339-88-3	23



4735

144

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D
Acq On : 27 Oct 2000 17:07
Sample : GW-4,6734-002,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 14
Operator:
Inst : MSD-C
Multiplr: 1.00

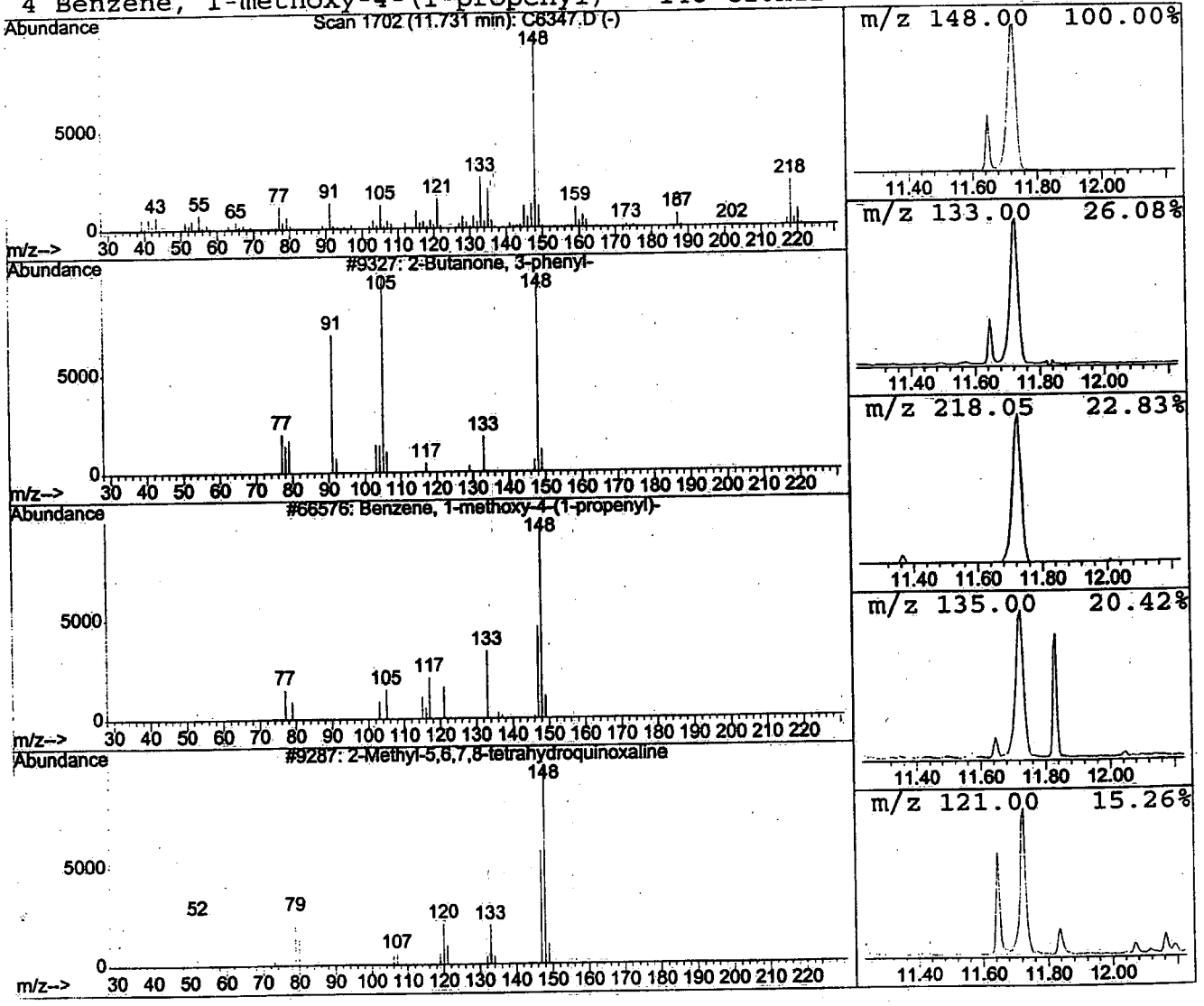
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 14 Unknown — Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.73	49.62 UG	1078430	Phenanthrene-d10	11.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butanone, 3-phenyl-	148	C10H12O	000769-59-5	43
2	Benzene, 1-methoxy-4-(1-propenyl)-	148	C10H12O	000104-46-1	38
3	2-Methyl-5,6,7,8-tetrahydroquinoxal	148	C9H12N2	000000-00-0	38
4	Benzene, 1-methoxy-4-(1-propenyl)-	148	C10H12O	000104-46-1	37



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6347.D Vial: 14
Acq On : 27 Oct 2000 17:07 Operator:
Sample : GW-4,6734-002,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

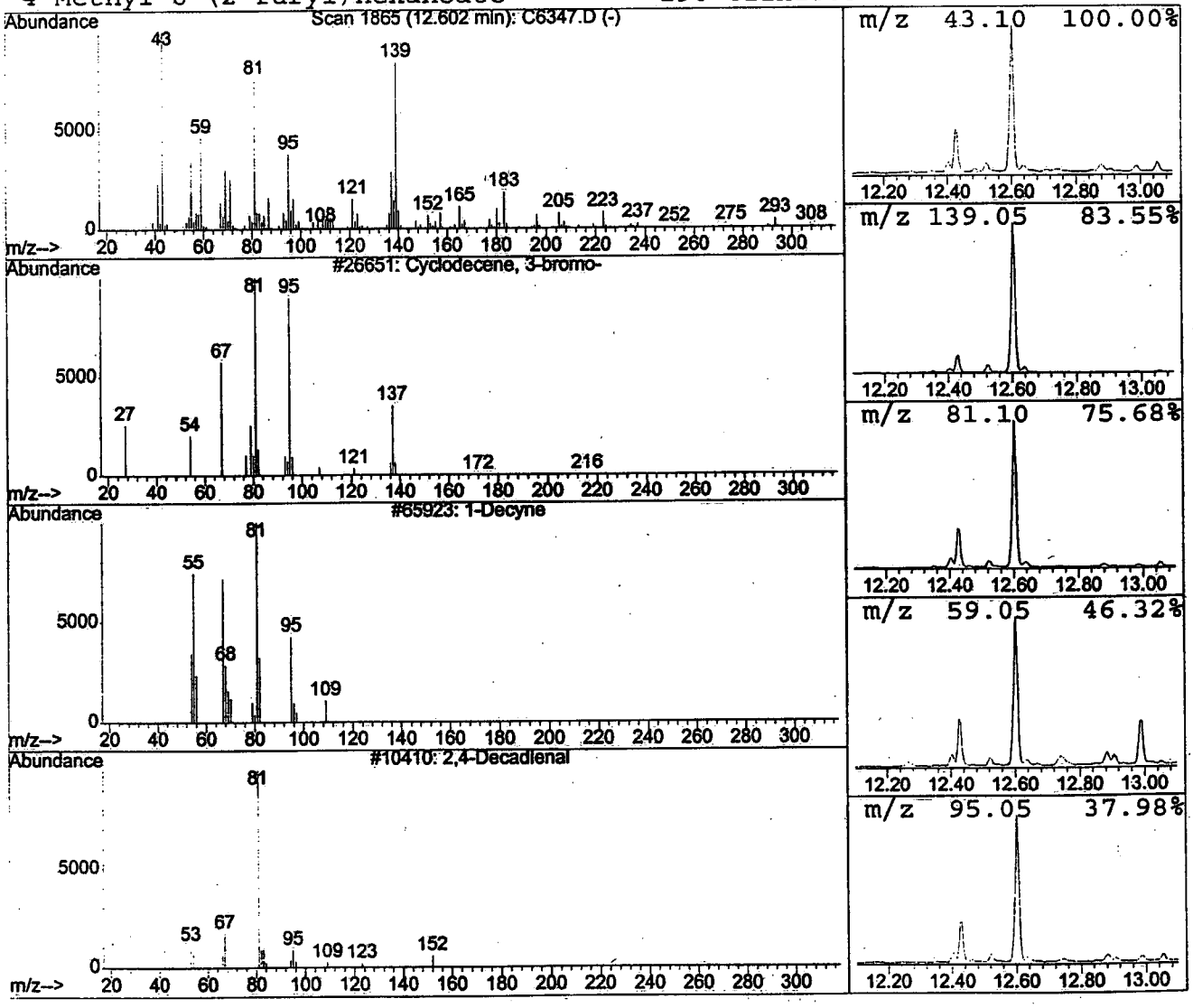
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 15 Unknown Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.60	63.64 UG	1411530	Chrysene-d12	13.48

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclodecene, 3-bromo-	216	C10H17Br	056325-56-5	22
2	1-Decyne	138	C10H18	000764-93-2	22
3	2,4-Decadienal	152	C10H16O	002363-88-4	18
4	Methyl 6-(2-furyl)hexanoate	196	C11H16O3	000000-00-0	16



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-27-00\C6348.D Vial: 15
Acq On : 27 Oct 2000 17:34 Operator:
Sample : GW-5,6734-003,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
ALS Integration Params: RTEINT.P
Quant Time: Oct 30 11:49 2000 Quant Results File: SVWC1700.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1700

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.45	152	144165	40.00	UG	0.00
19) Naphthalene-d8	8.07	136	489734	40.00	UG	0.00
35) Acenaphthene-d10	9.82	164	235859	40.00	UG	0.00
55) Phenanthrene-d10	11.14	188	324343	40.00	UG	0.00
69) Chrysene-d12	13.49	240	289452	40.00	UG	-0.03
78) Perylene-d12	15.44	264	287168	40.00	UG	-0.05

System Monitoring Compounds						
3) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 96		Recovery = 0.00%#			
4) Phenol-d5	0.00	99	0	0.00	UG	
Spiked Amount 100.000	Range 56 - 111		Recovery = 0.00%#			
20) Nitrobenzene-d5	7.20	82	173985	37.62	UG	0.00
Spiked Amount 50.000	Range 61 - 121		Recovery = 75.24%			
39) 2-Fluorobiphenyl	9.16	172	267481	33.24	UG	0.00
Spiked Amount 50.000	Range 63 - 124		Recovery = 66.48%			
59) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG	
Spiked Amount 100.000	Range 52 - 153		Recovery = 0.00%#			
71) Terphenyl-d14	12.47	244	306287	47.79	UG	-0.01
Spiked Amount 50.000	Range 46 - 140		Recovery = 95.58%			

Target Compounds Qvalue

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

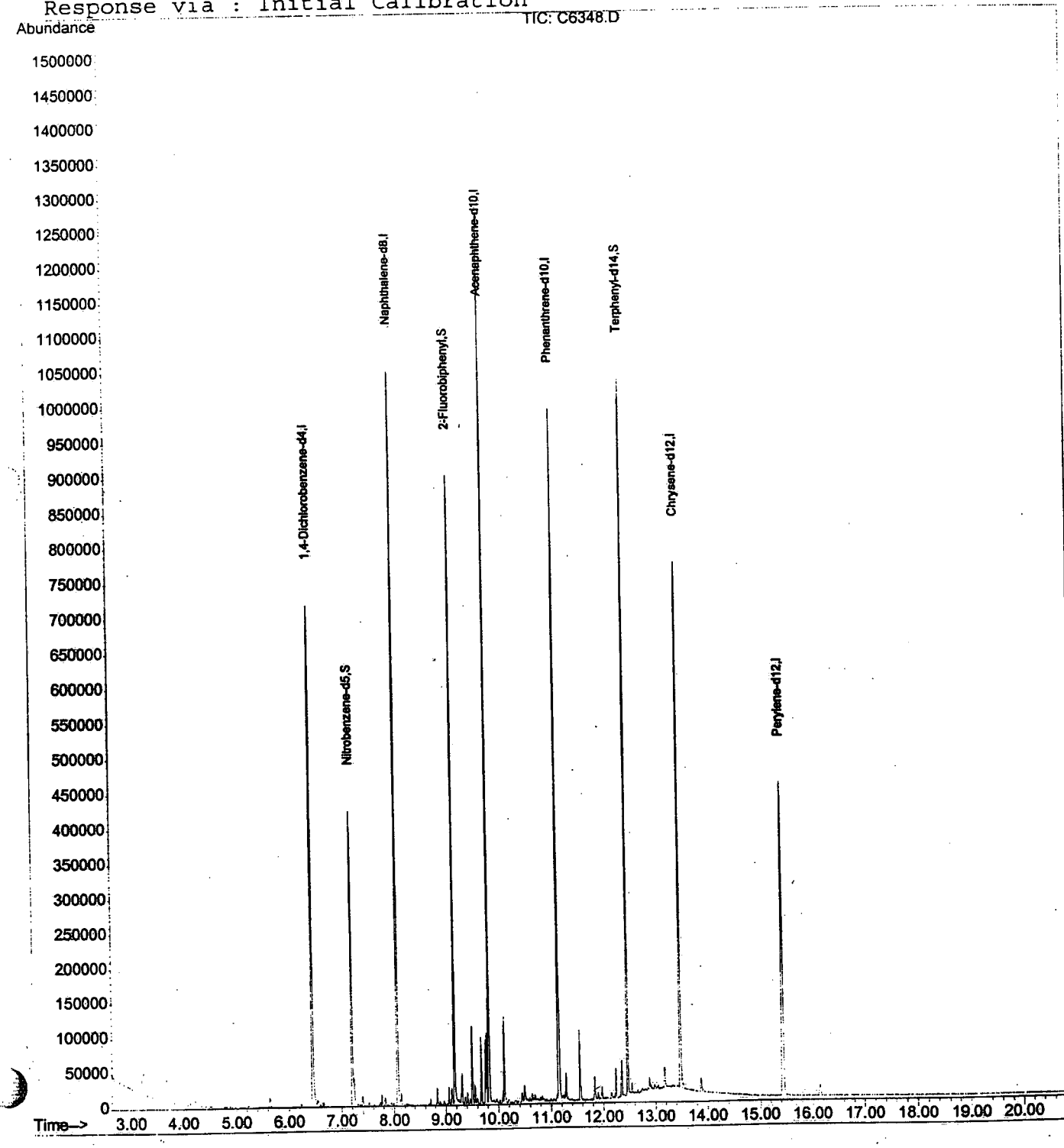
Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6348.D
Acq On : 27 Oct 2000 17:34
Sample : GW-5,6734-003,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: RTEINT.P
Quant Time: Oct 30 11:49 2000

Vial: 15
Operator:
Inst : MSD-C
Multiplr: 1.00

Quant Results File: SVWC1700.RES

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration



LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6348.D Vial: 15
Acq On : 27 Oct 2000 17:34 Operator:
Sample : GW-5,6734-003,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
'S Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0.2 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.208	102	106	118	rVB2	21387	39986	3.56%	0.442%
2	3.678	189	194	201	rVB2	32288	60871	5.43%	0.673%
3	5.638	556	561	567	rVB2	14231	18547	1.65%	0.205%
4	6.450	708	713	728	rVB	713503	881851	78.61%	9.743%
5	7.198	849	853	858	rBV	424306	468963	41.81%	5.181%
6	7.236	858	860	871	rVB	38551	47881	4.27%	0.529%
7	7.396	886	890	896	rVB3	14002	16661	1.49%	0.184%
8	7.764	957	959	963	rVB	16642	13776	1.23%	0.152%
9	7.823	966	970	975	rBB2	12139	15444	1.38%	0.171%
10	8.064	1011	1015	1026	rBV	1049820	1121780	100.00%	12.394%
11	8.138	1026	1029	1032	rVB	15650	14015	1.25%	0.155%
12	8.833	1156	1159	1165	rBV2	24217	21468	1.91%	0.237%
13	9.057	1198	1201	1204	rBV	24766	18067	1.61%	0.200%
14	9.111	1208	1211	1213	rBV	22806	19068	1.70%	0.211%
15	9.164	1218	1221	1233	rBV	897686	838393	74.74%	9.263%
16	9.287	1241	1244	1246	rBV	13653	12745	1.14%	0.141%
17	9.308	1246	1248	1251	rVB	42086	31427	2.80%	0.347%
18	9.367	1256	1259	1263	rBV2	10104	13417	1.20%	0.148%
19	9.410	1263	1267	1272	rVB	16862	14139	1.26%	0.156%
20	9.506	1281	1285	1292	rBV3	110299	120196	10.71%	1.328%
21	9.559	1292	1295	1298	rBV	25336	19273	1.72%	0.213%
22	9.672	1312	1316	1323	rBV	94791	83146	7.41%	0.919%
23	9.757	1327	1332	1334	rBV2	90766	85942	7.66%	0.950%
24	9.778	1334	1336	1340	rVV	99441	79615	7.10%	0.880%
25	9.821	1340	1344	1355	rVV	1278089	1088851	97.06%	12.030%
26	10.083	1389	1393	1395	rBV	17821	14200	1.27%	0.157%
27	10.110	1395	1398	1407	rVB	122714	109224	9.74%	1.207%
28	10.441	1457	1460	1465	rBV3	13661	17173	1.53%	0.190%
29	10.489	1466	1469	1478	rVV3	22827	33180	2.96%	0.367%
30	11.141	1587	1591	1594	rBV	984961	848130	75.61%	9.371%
31	11.285	1615	1618	1628	rVB	38912	36404	3.25%	0.402%

32	11.547	1664	1667	1670	rBV	100183	79618	7.10%	0.880%
33	11.830	1714	1720	1726	rBV2	32244	37129	3.31%	0.410%
34	11.969	1741	1746	1749	rVB2	17647	18693	1.67%	0.207%
35	12.236	1792	1796	1803	rVB	42328	38774	3.46%	0.428%
36	12.353	1812	1818	1821	rBV2	52837	65621	5.85%	0.725%
	12.466	1835	1839	1850	rVB	1020325	869957	77.55%	9.612%
38	12.540	1850	1853	1856	rBV	15251	12348	1.10%	0.136%
39	12.877	1912	1916	1919	rBV	17526	16294	1.45%	0.180%
40	13.176	1968	1972	1976	rBV	28552	31964	2.85%	0.353%
41	13.486	2025	2030	2037	rBV	750508	840960	74.97%	9.291%
42	13.876	2099	2103	2108	rBV2	19156	23445	2.09%	0.259%
43	15.436	2387	2395	2407	rBV2	448567	780905	69.61%	8.628%
44	16.141	2521	2527	2534	rVB3	15636	31327	2.79%	0.346%

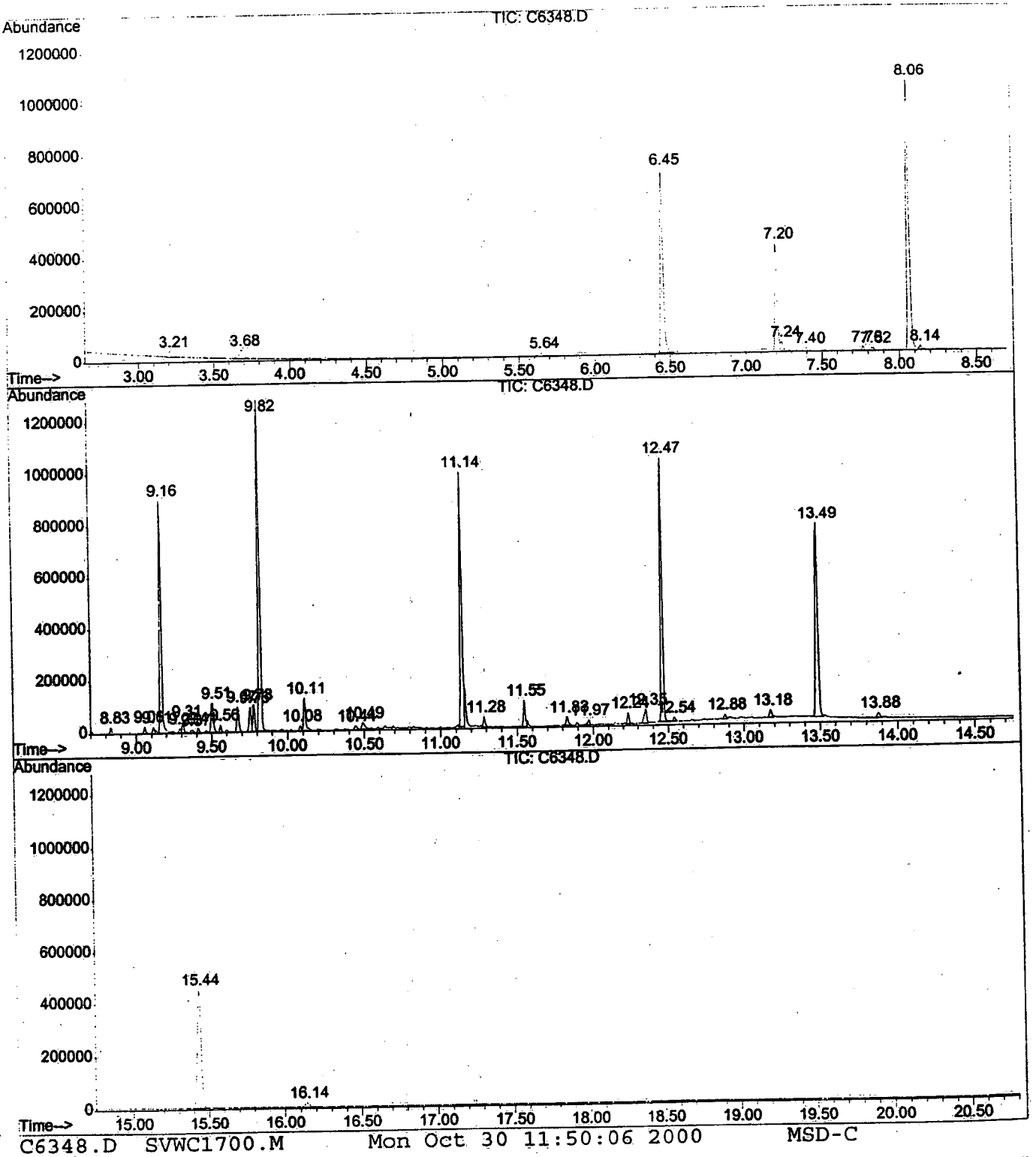
Sum of corrected areas: 9050868

C6348.D SVWC1700.M Mon Oct 30 11:50:04 2000 MSD-C

4741

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-27-00\C6348.D
Operator :
Acquired : 27 Oct 2000 17:34 using AcqMethod SVWC1700
Instrument : MSD-C
Sample Name: GW-5,6734-003,A,1000mL,100,10/27/00
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00,1
Vial Number: 15
Quant File :SVWC1700.RES (RTE Integrator)



C6348.D SVWC1700.M Mon Oct 30 11:50:06 2000 MSD-C

151

4742

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6348.D Vial: 15
Acq On : 27 Oct 2000 17:34 Operator:
Sample : GW-5,6734-003,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: LSCINT.P

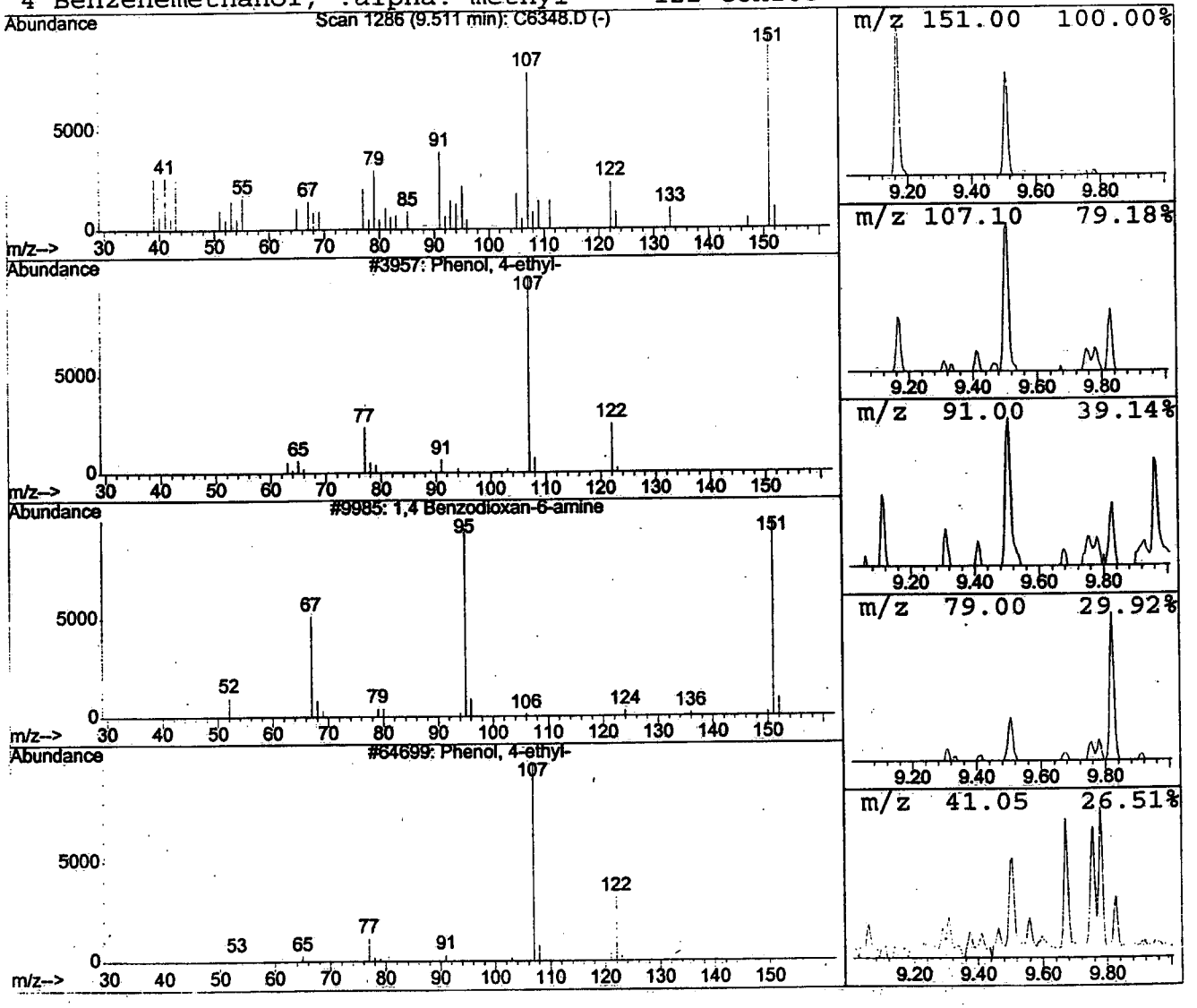
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Unknown Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.51	4.42 UG	120196	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 4-ethyl-	122	C8H10O	000123-07-9	25
2	1,4 Benzodioxan-6-amine	151	C8H9NO2	022013-33-8	25
3	Phenol, 4-ethyl-	122	C8H10O	000123-07-9	25
4	Benzenemethanol, .alpha.-methyl-	122	C8H10O	000098-85-1	22



4743

152

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6348.D
Acq On : 27 Oct 2000 17:34
Sample : GW-5,6734-003,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 15
Operator:
Inst : MSD-C
Multiplr: 1.00

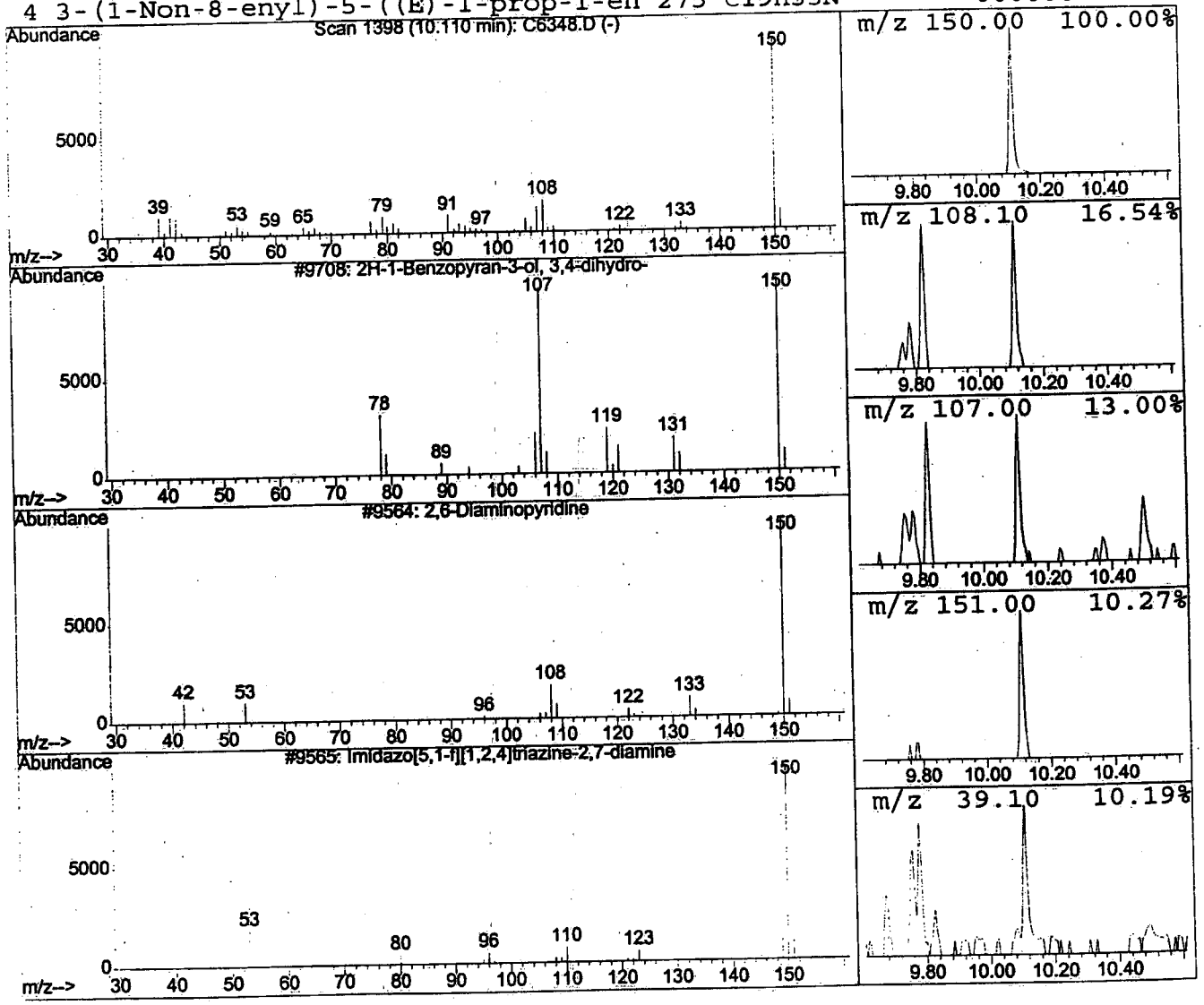
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Unknown — Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.11	4.01 UG	109224	Acenaphthene-d10	9.82

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2H-1-Benzopyran-3-ol, 3,4-dihydro-	150	C9H10O2	021834-60-6	59
2	2,6-Diaminopyridine	150	C5H6N6	000000-00-0	45
3	Imidazo[5,1-f][1,2,4]triazine-2,7-d	150	C5H6N6	051292-20-7	40
4	3-(1-Non-8-enyl)-5-((E)-1-prop-1-en	275	C19H33N	000000-00-0	36



4744

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D Vial: 17
Acq On : 27 Oct 2000 18:27 Operator:
Sample : GW-6,6734-004,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 1 9:53 2000 Quant Results File: SVWC1700.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1700

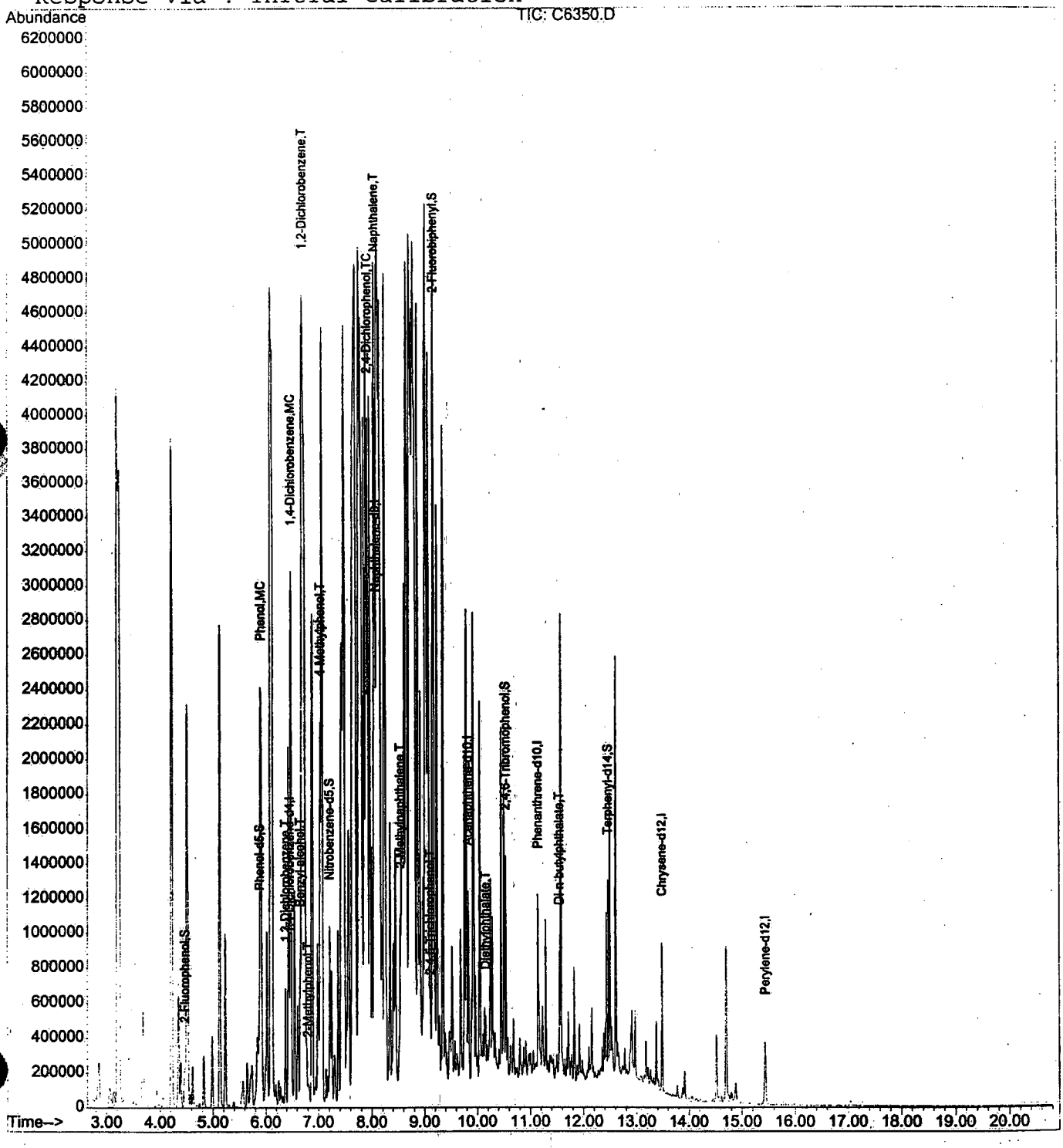
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.46	152	103221	40.00	UG		0.00
19) Naphthalene-d8	8.08	136	468031	40.00	UG		0.00
35) Acenaphthene-d10	9.83	164	183049	40.00	UG		0.00
55) Phenanthrene-d10	11.14	188	314380	40.00	UG		0.00
69) Chrysene-d12	13.49	240	310159	40.00	UG		-0.03
78) Perylene-d12	15.44	264	227100	40.00	UG		-0.05
System Monitoring Compounds							
3) 2-Fluorophenol	4.46	112	134937	75.38	UG		0.00
Spiked Amount 100.000	Range 37 - 96		Recovery = 75.38%				
4) Phenol-d5	5.88	99	344430m	81.43	UG		0.06
Spiked Amount 100.000	Range 56 - 111		Recovery = 81.43%				
20) Nitrobenzene-d5	7.21	82	142531	32.25	UG		0.00
Spiked Amount 50.000	Range 61 - 121		Recovery = 64.50%				
39) 2-Fluorobiphenyl	9.18	172	237652	38.06	UG		0.00
Spiked Amount 50.000	Range 63 - 124		Recovery = 76.12%				
59) 2,4,6-Tribromophenol	10.53	330	93235	120.82	UG		0.00
Spiked Amount 100.000	Range 52 - 153		Recovery = 120.82%				
71) Terphenyl-d14	12.46	244	319361	46.51	UG		-0.02
Spiked Amount 50.000	Range 46 - 140		Recovery = 93.02%				
Target Compounds							Qvalue
5) Phenol	5.91	94	1594199m	371.39	UG		
9) 1,3-Dichlorobenzene	6.38	146	197406	49.06	UG		99
10) 1,4-Dichlorobenzene	6.48	146	981010	238.08	UG		90
11) Benzyl alcohol	6.66	108	114495	64.91	UG		89
12) 1,2-Dichlorobenzene	6.71	146	3788584m	981.91	UG		
13) 2-Methylphenol	6.80	108	43518	14.90	UG		90
15) 4-Methylphenol	7.04	108	752384m	274.69	UG		
28) 2,4-Dichlorophenol	7.93	162	451706	157.99	UG		98
30) Naphthalene	8.07	128	2002007	164.95	UG	#	79
34) 2-Methylnaphthalene	8.54	142	57936	7.55	UG		90
38) 2,4,5-Trichlorophenol	9.12	196	23494	15.70	UG		99
51) Diethylphthalate	10.15	149	32596	6.33	UG	#	59
66) Di-n-butylphthalate	11.55	149	235616	29.58	UG		99

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D Vial: 17
Acq On : 27 Oct 2000 18:27 Operator:
Sample : GW-6,6734-004,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 1 9:53 2000 Quant Results File: SVWC1700.RES

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration



4746

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10-30-00\C6371.D Vial: 11
Acq On : 30 Oct 2000 15:31 Operator:
Sample : GW-6,6734-004DIL,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,40 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 1 9:46 2000 Quant Results File: SVWC1700.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1700

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.45	152	128224	40.00	UG	0.00
19) Naphthalene-d8	8.07	136	509843	40.00	UG	0.00
35) Acenaphthene-d10	9.82	164	214892	40.00	UG	0.00
55) Phenanthrene-d10	11.14	188	323100	40.00	UG	0.00
69) Chrysene-d12	13.49	240	301974	40.00	UG	-0.03
78) Perylene-d12	15.44	264	269527	40.00	UG	-0.05

System Monitoring Compounds						
3) 2-Fluorophenol	0.00	112	0d	0.00	UG	
Spiked Amount 100.000	Range 37 - 96		Recovery =	0.00%#		
4) Phenol-d5	0.00	99	0d	0.00	UG	
Spiked Amount 100.000	Range 56 - 111		Recovery =	0.00%#		
20) Nitrobenzene-d5	0.00	82	0d	0.00	UG	
Spiked Amount 50.000	Range 61 - 121		Recovery =	0.00%#		
39) 2-Fluorobiphenyl	0.00	172	0d	0.00	UG	
Spiked Amount 50.000	Range 63 - 124		Recovery =	0.00%#		
59) 2,4,6-Tribromophenol	0.00	330	0d	0.00	UG	
Spiked Amount 100.000	Range 52 - 153		Recovery =	0.00%#		
71) Terphenyl-d14	0.00	244	0d	0.00	UG	
Spiked Amount 50.000	Range 46 - 140		Recovery =	0.00%#		

Target Compounds						Qvalue
5) Phenol	5.83	94	46709	8.76	UG	# 58
9) 1,3-Dichlorobenzene	6.37	146	4919	0.98	UG	# 96
10) 1,4-Dichlorobenzene	6.47	146	27714	5.41	UG	91
11) Benzyl alcohol	6.65	108	5041	2.30	UG	# 38
12) 1,2-Dichlorobenzene	6.69	146	289526	60.41	UG	99
15) 4-Methylphenol	6.97	108	22830	6.71	UG	93
28) 2,4-Dichlorophenol	7.90	162	9421	3.02	UG	97
30) Naphthalene	8.01	128	57390m	4.34	UG	

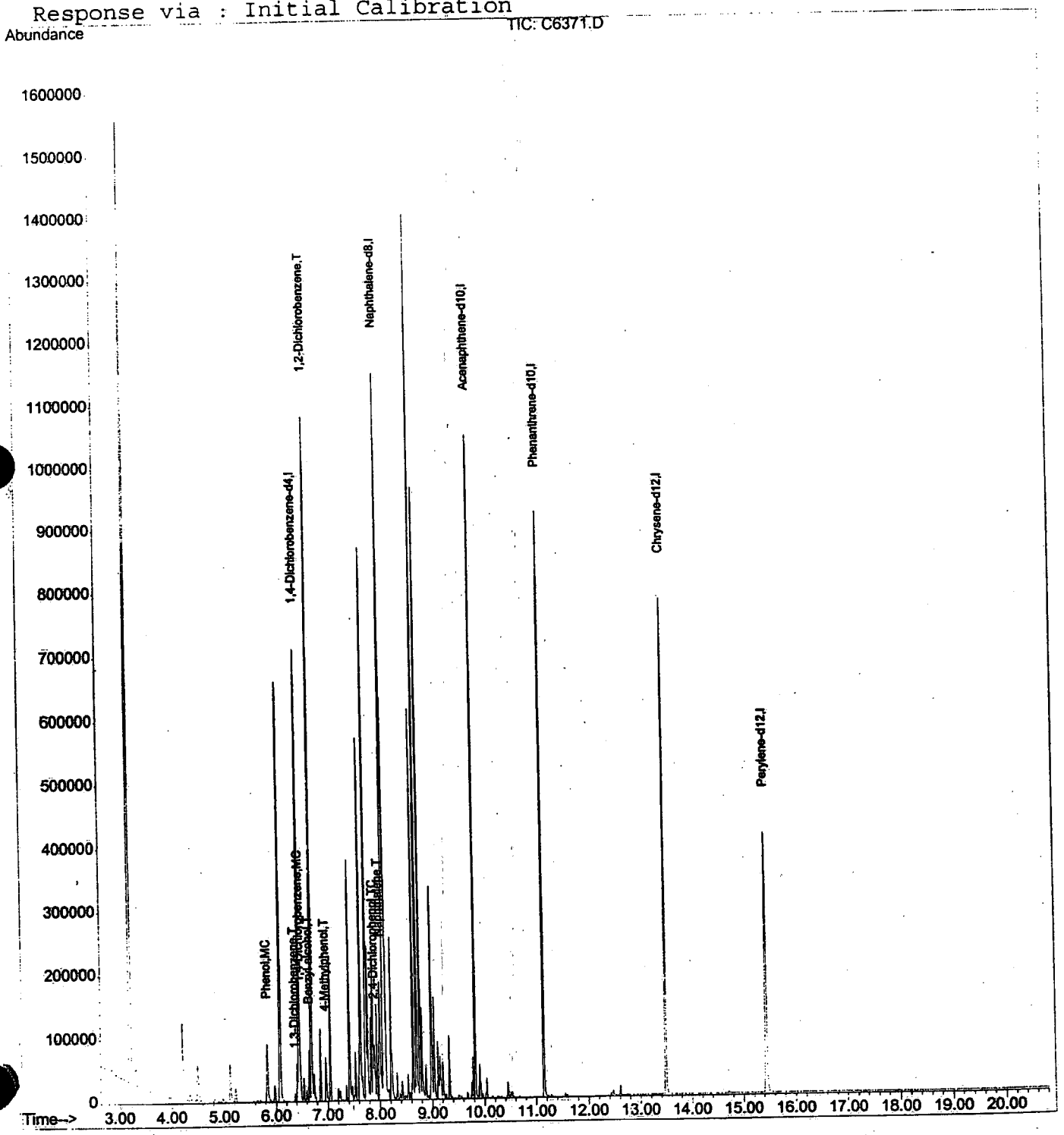
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-30-00\C6371.D
Acq On : 30 Oct 2000 15:31
Sample : GW-6,6734-004DIL,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,40
MS Integration Params: RTEINT.P
Quant Time: Nov 1 9:46 2000

Vial: 11
Operator:
Inst : MSD-C
Multiplr: 1.00
Quant Results File: SVWC1700.RES

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration



47448

LSC Area Percent Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
'S Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0.2

Filtering: 5
Min Area: 3 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.857	31	41	57	rVB3	227715	542223	2.65%	0.193%
2	3.199	99	105	109	rBV	4131482	8487630	41.42%	3.016%
3	3.680	188	195	210	rVB	551147	1011910	4.94%	0.360%
4	4.219	288	296	312	rBV	3860743	6857954	33.47%	2.437%
5	4.347	312	320	324	rVV	640914	943928	4.61%	0.335%
6	4.390	324	328	335	rVV	259282	372472	1.82%	0.132%
7	4.508	344	350	359	rVV	2314751	4678312	22.83%	1.662%
8	4.823	403	409	416	rVB	294056	405610	1.98%	0.144%
9	4.983	433	439	447	rBV	410735	552120	2.69%	0.196%
10	5.127	459	466	479	rBV	2771649	4089546	19.96%	1.453%
11	5.229	479	485	493	rVB	995522	1292183	6.31%	0.459%
12	5.640	557	562	568	rBV	260280	382557	1.87%	0.136%
13	5.838	586	599	603	rBV	394891	967697	4.72%	0.344%
14	5.907	603	612	621	rVB2	2379822	5461388	26.65%	1.940%
15	6.019	621	633	638	rBV	972671	1580924	7.71%	0.562%
16	6.100	638	648	650	rBV2	4688968	8694333	42.43%	3.089%
17	6.377	694	700	705	rBV	659082	817327	3.99%	0.290%
18	6.436	705	711	715	rBV	2046911	2921650	14.26%	1.038%
19	6.484	715	720	727	rVB	3015154	4383945	21.39%	1.558%
20	6.554	727	733	738	rVB	1208807	1633838	7.97%	0.581%
21	6.612	738	744	748	rBV	544554	860103	4.20%	0.306%
22	6.660	748	753	754	rBV	797295	930428	4.54%	0.331%
23	6.703	754	761	767	rBV4	3912639	11989227	58.51%	4.260%
24	6.890	788	796	801	rBV	2803088	4880147	23.81%	1.734%
25	6.986	810	814	819	rBV	838640	1208708	5.90%	0.429%
26	7.040	819	824	826	rBV	1828583	2569715	12.54%	0.913%
27	7.072	826	830	835	rVB	4476397	6361243	31.04%	2.260%
28	7.211	851	856	860	rBV2	953042	1326061	6.47%	0.471%
29	7.243	860	862	867	rVB2	731519	796542	3.89%	0.283%
30	7.296	867	872	880	rVB3	267208	521619	2.55%	0.185%
31	7.366	880	885	889	rBV	978957	1101531	5.38%	0.391%

4749

32	7.435	889	898	900	rBV	2572190	5164619	25.20%	1.835%
33	7.483	901	907	911	rVB	4301012	7974317	38.91%	2.833%
34	7.569	916	923	928	rVB	1468901	2801871	13.67%	0.996%
35	7.697	928	947	952	rBV4	4757334	20492098	100.00%	7.281%
[redacted]	7.766	952	960	965	rBV5	4572351	12284657	59.95%	4.365%
	7.798	965	966	973	rVB3	3755950	4629257	22.59%	1.645%
38	7.857	973	977	980	rBV2	3171390	3547690	17.31%	1.261%
39	7.900	980	985	987	rBV2	2799997	3597985	17.56%	1.278%
40	7.927	987	990	995	rVB4	3159739	4415124	21.55%	1.569%
41	7.969	995	998	1002	rVB	3597648	3732400	18.21%	1.326%
42	8.007	1002	1005	1008	rVB	985402	862895	4.21%	0.307%
43	8.049	1008	1013	1019	rBV2	4382052	9158925	44.69%	3.254%
44	8.114	1019	1025	1031	rBV4	2632417	7497480	36.59%	2.664%
45	8.199	1036	1041	1043	rVB5	544868	792516	3.87%	0.282%
46	8.242	1043	1049	1060	rVB3	4668987	9977463	48.69%	3.545%
47	8.354	1064	1070	1073	rVB3	1451745	1554757	7.59%	0.552%
48	8.413	1077	1081	1083	rBV	668132	772582	3.77%	0.275%
49	8.445	1083	1087	1095	rVB	1328010	1802462	8.80%	0.640%
50	8.541	1095	1105	1107	rBV4	955319	1584945	7.73%	0.563%
51	8.568	1107	1110	1112	rBV2	638059	780241	3.81%	0.277%
52	8.621	1116	1120	1122	rVB	1616299	1356381	6.62%	0.482%
53	8.664	1122	1128	1129	rBV	3501268	5245603	25.60%	1.864%
54	8.723	1132	1139	1144	rBV2	4259354	11012869	53.74%	3.913%
55	8.792	1150	1152	1157	rVB	968828	956734	4.67%	0.340%
56	8.872	1162	1167	1170	rBV	4013107	4415462	21.55%	1.569%
[redacted]	8.920	1172	1176	1181	rVB	1979650	1959492	9.56%	0.696%
	8.979	1184	1187	1189	rBV	816149	681882	3.33%	0.242%
[redacted]	9.022	1189	1195	1196	rBV3	4310758	5900307	28.79%	2.096%
60	9.080	1201	1206	1209	rVB2	3688746	5422360	26.46%	1.927%
61	9.150	1214	1219	1220	rBV2	2272144	2299782	11.22%	0.817%
62	9.177	1220	1224	1227	rVB2	4316544	5219386	25.47%	1.855%
63	9.235	1230	1235	1240	rVB2	3117576	3433376	16.75%	1.220%
64	9.283	1240	1244	1247	rVB3	316782	439499	2.14%	0.156%
65	9.353	1247	1257	1260	rBV	3727267	4192445	20.46%	1.490%
66	9.476	1274	1280	1282	rBV5	278323	479381	2.34%	0.170%
67	9.524	1284	1289	1293	rVB3	718613	897874	4.38%	0.319%
68	9.684	1315	1319	1323	rBV2	802970	835454	4.08%	0.297%
69	9.759	1328	1333	1336	rBV2	1809338	1998238	9.75%	0.710%
70	9.796	1336	1340	1342	rVB	2495800	2250743	10.98%	0.800%
71	9.828	1342	1346	1352	rVB2	1079720	1252468	6.11%	0.445%
72	9.887	1352	1357	1358	rBV2	491009	511327	2.50%	0.182%
73	9.919	1358	1363	1365	rBV	2342277	2299377	11.22%	0.817%
74	9.962	1369	1371	1376	rVB	523153	427017	2.08%	0.152%
75	10.047	1381	1387	1390	rBV2	2156621	2249074	10.98%	0.799%
76	10.250	1416	1425	1427	rBV	1045143	1275583	6.22%	0.453%
77	10.282	1427	1431	1434	rBV	753858	736995	3.60%	0.262%
78	10.448	1457	1462	1465	rVV	1950196	1791485	8.74%	0.637%
79	10.501	1465	1472	1475	rVV	1593769	1644957	8.03%	0.584%
[redacted]	10.534	1475	1478	1481	rVB	1181716	957215	4.67%	0.340%
81	11.143	1588	1592	1594	rBV	993269	887331	4.33%	0.315%

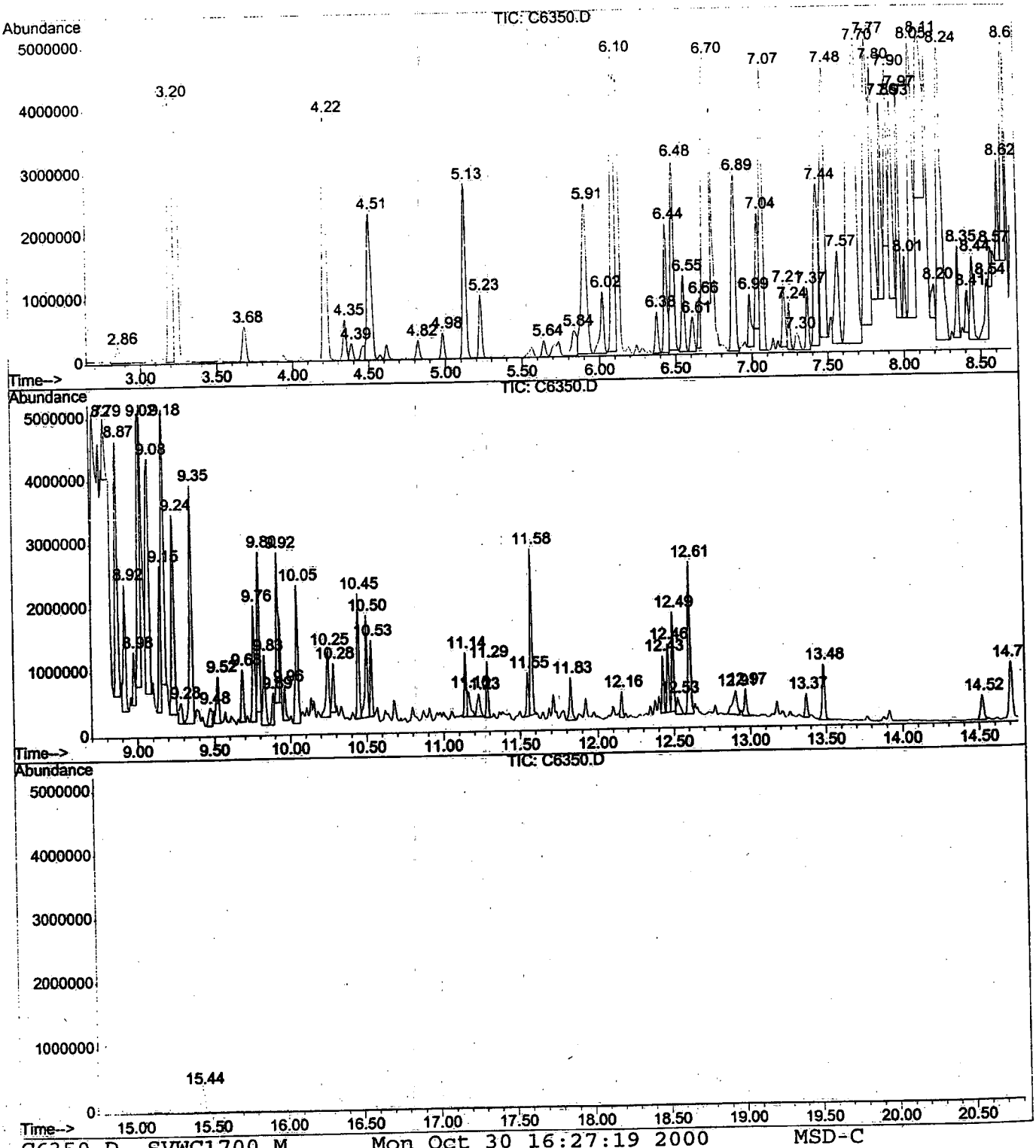
82	11.164	1594	1596	1603	rVV3	375089	465930	2.27%	0.166%
83	11.228	1603	1608	1615	rVB3	345456	475534	2.32%	0.169%
84	11.287	1615	1619	1623	rVB	864295	683771	3.34%	0.243%
85	11.549	1664	1668	1670	rVV	677747	621625	3.03%	0.221%
86	11.575	1670	1673	1678	rVB	2582306	2228366	10.87%	0.792%
	11.826	1714	1720	1726	rVB2	656748	670264	3.27%	0.238%
[illegible]	12.158	1779	1782	1785	rVV	398121	368679	1.80%	0.131%
89	12.430	1830	1833	1836	rVV	892718	731179	3.57%	0.260%
90	12.462	1836	1839	1842	rVV	1065657	905145	4.42%	0.322%
91	12.494	1842	1845	1848	rVV	1558948	1341197	6.54%	0.477%
92	12.526	1848	1851	1861	rVB3	254721	398482	1.94%	0.142%
93	12.606	1861	1866	1870	rBV	2382023	2216698	10.82%	0.788%
94	12.905	1912	1922	1927	rBV3	366021	822597	4.01%	0.292%
95	12.970	1930	1934	1943	rVB	413706	435951	2.13%	0.155%
96	13.370	2005	2009	2013	rBV	366303	384411	1.88%	0.137%
97	13.482	2025	2030	2043	rVB	864162	1047428	5.11%	0.372%
98	14.519	2217	2224	2229	rBV	388108	547800	2.67%	0.195%
99	14.706	2253	2259	2273	rVV	883281	1378149	6.73%	0.490%
100	15.438	2385	2396	2407	rVB2	362340	641864	3.13%	0.228%

Sum of corrected areas: 281442322

C6350.D SVWC1700.M Mon Oct 30 16:27:18 2000 MSD-C

LSC Report - Integrated Chromatogram

File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Operator :
Acquired : 27 Oct 2000 18:27 using AcqMethod SVWC1700
Instrument : MSD-C
Sample Name: GW-6,6734-004,A,1000mL,100,10/27/00
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00,1
Vial Number: 17
Quant File :SVWC1700.RES (RTE Integrator)



C6350.D SVWC1700.M Mon Oct 30 16:27:19 2000 MSD-C

4752

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

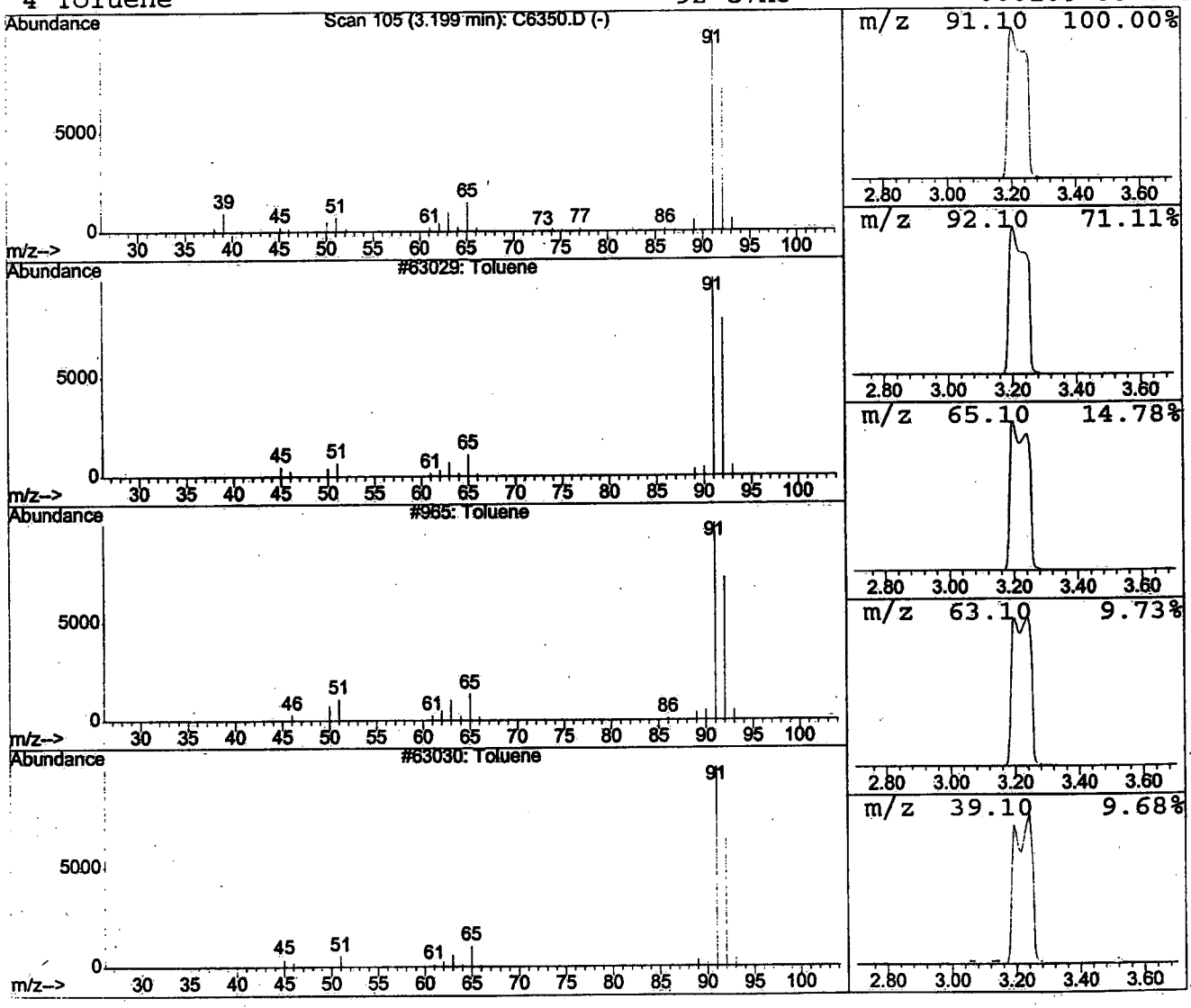
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Substituted benzene Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.20	116.20 UG	8487630	1,4-Dichlorobenzene-d4	6.46

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Toluene	92	C7H8	000108-88-3	94
2	Toluene	92	C7H8	000108-88-3	91
3	Toluene	92	C7H8	000108-88-3	91
4	Toluene	92	C7H8	000108-88-3	91



162

4753

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

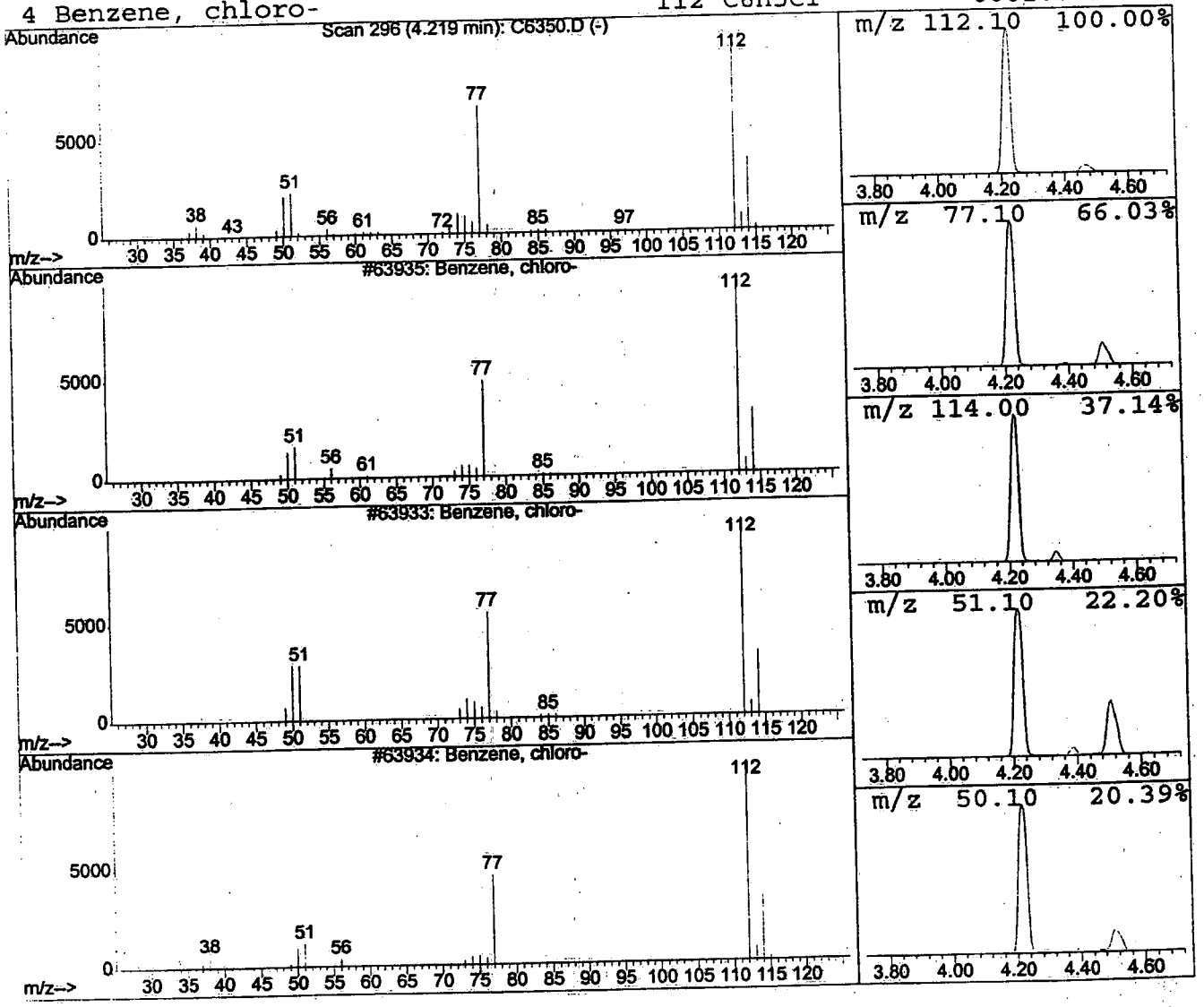
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 2 Substituted benzene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.22	93.89 UG	6857950	1,4-Dichlorobenzene-d4	6.46

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, chloro-	112	C6H5Cl	000108-90-7	97
2	Benzene, chloro-	112	C6H5Cl	000108-90-7	94
3	Benzene, chloro-	112	C6H5Cl	000108-90-7	94
4	Benzene, chloro-	112	C6H5Cl	000108-90-7	90



4754

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

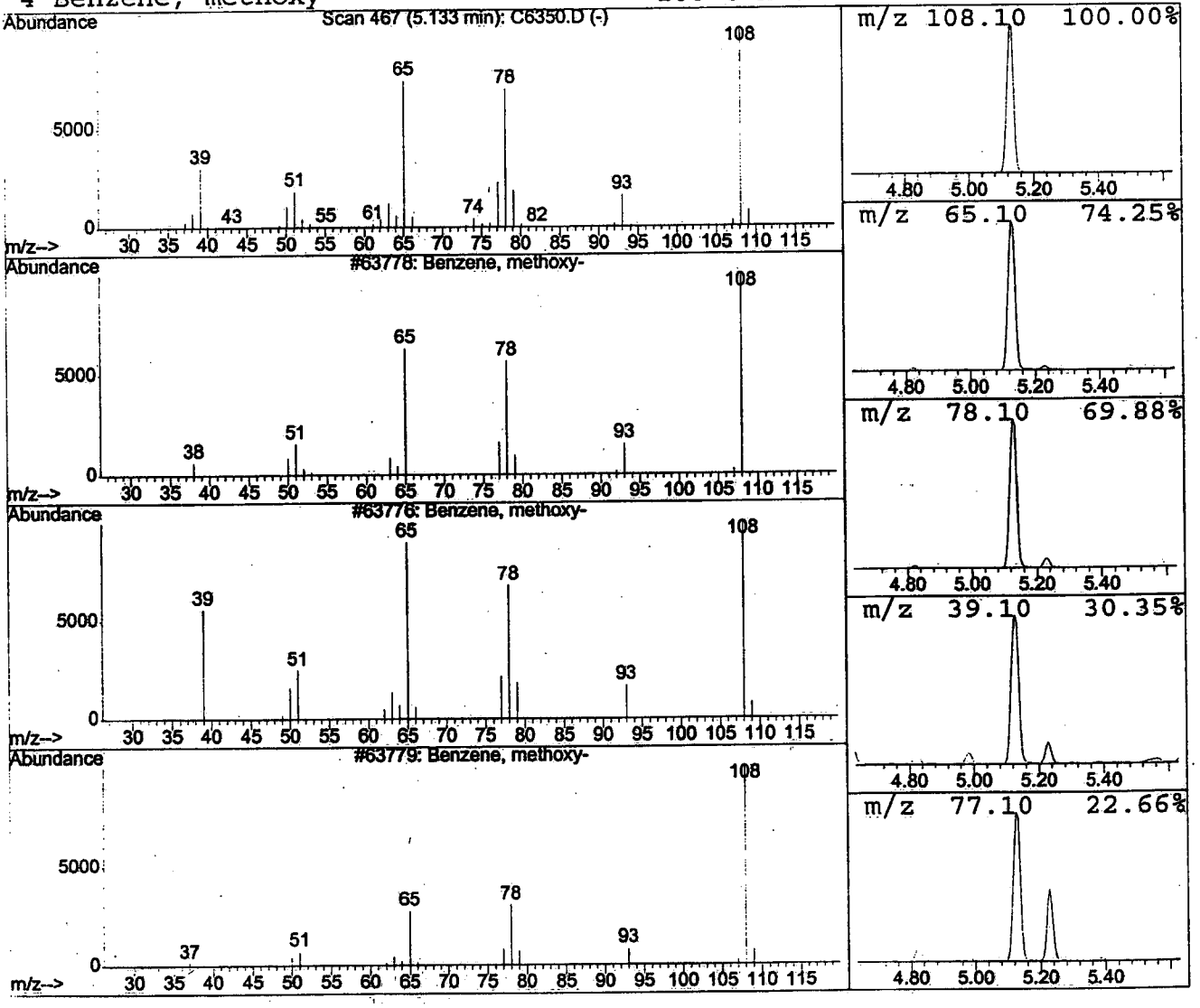
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 3 Substituted benzene Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.13	55.99 UG	4089550	1,4-Dichlorobenzene-d4	6.46

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, methoxy-	108	C7H8O	000100-66-3	97
2	Benzene, methoxy-	108	C7H8O	000100-66-3	96
3	Benzene, methoxy-	108	C7H8O	000100-66-3	95
4	Benzene, methoxy-	108	C7H8O	000100-66-3	94



4755

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

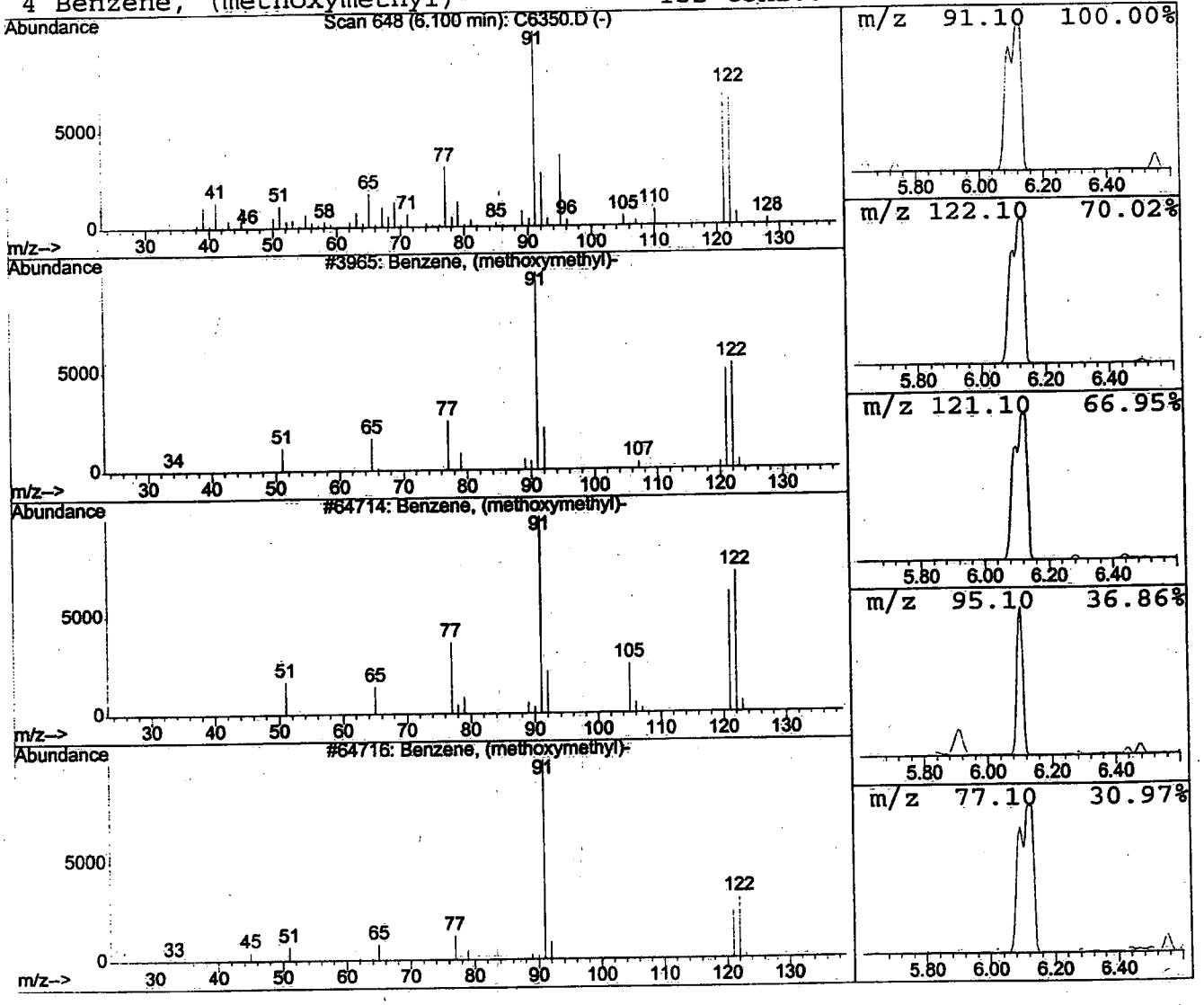
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 4 Substituted benzene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.10	119.03 UG	8694330	1,4-Dichlorobenzene-d4	6.46

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	90
2	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	76
3	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	70
4	Benzene, (methoxymethyl)-	122	C8H10O	000538-86-3	70



4756

165

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

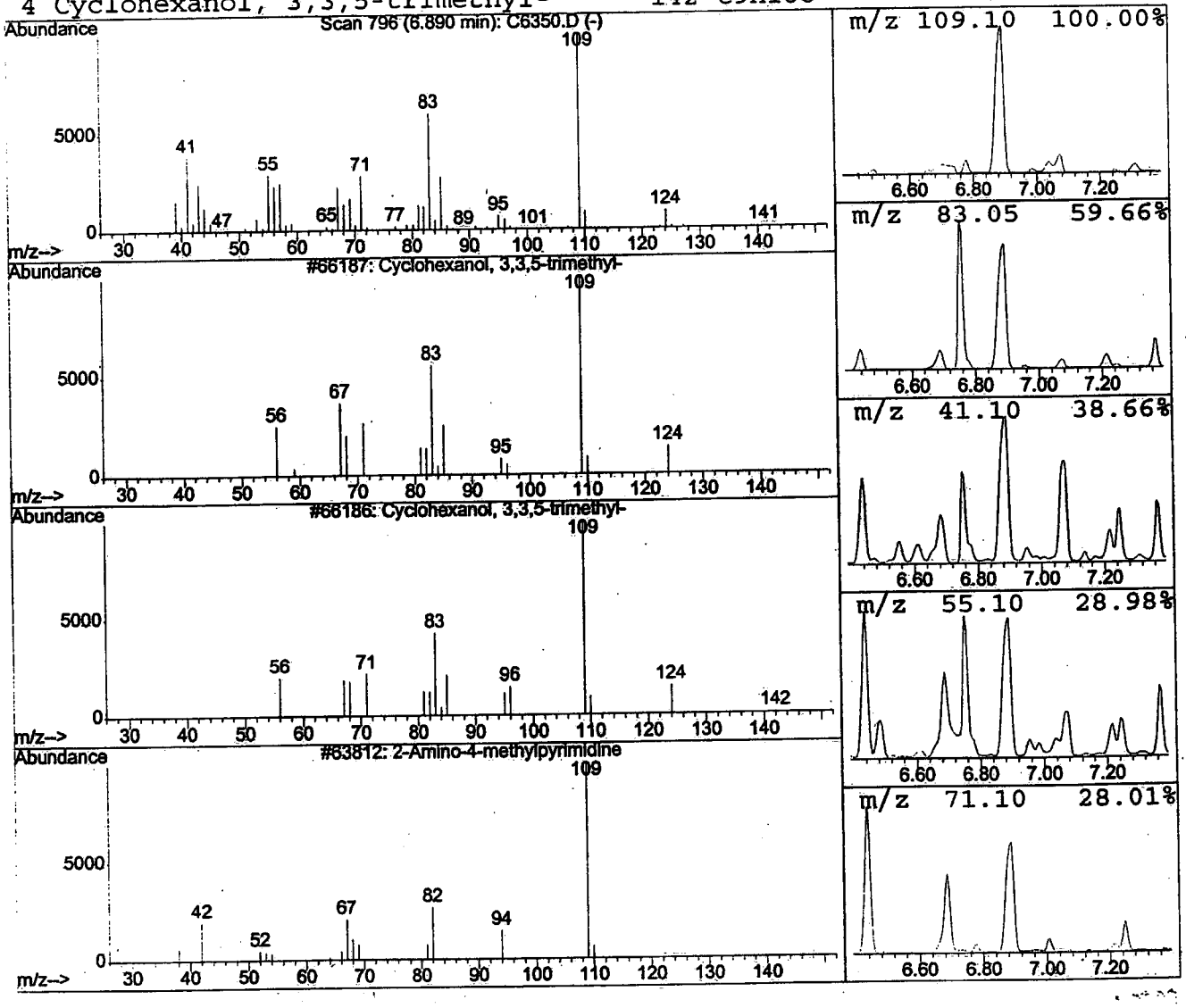
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 5 Unknown alkane Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.89	66.81 UG	4880150	1,4-Dichlorobenzene-d4	6.46

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanol, 3,3,5-trimethyl-	142	C9H18O	000116-02-9	86
2	Cyclohexanol, 3,3,5-trimethyl-	142	C9H18O	000116-02-9	43
3	2-Amino-4-methylpyrimidine	109	C5H7N3	000108-52-1	35
4	Cyclohexanol, 3,3,5-trimethyl-	142	C9H18O	000116-02-9	32



4757

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

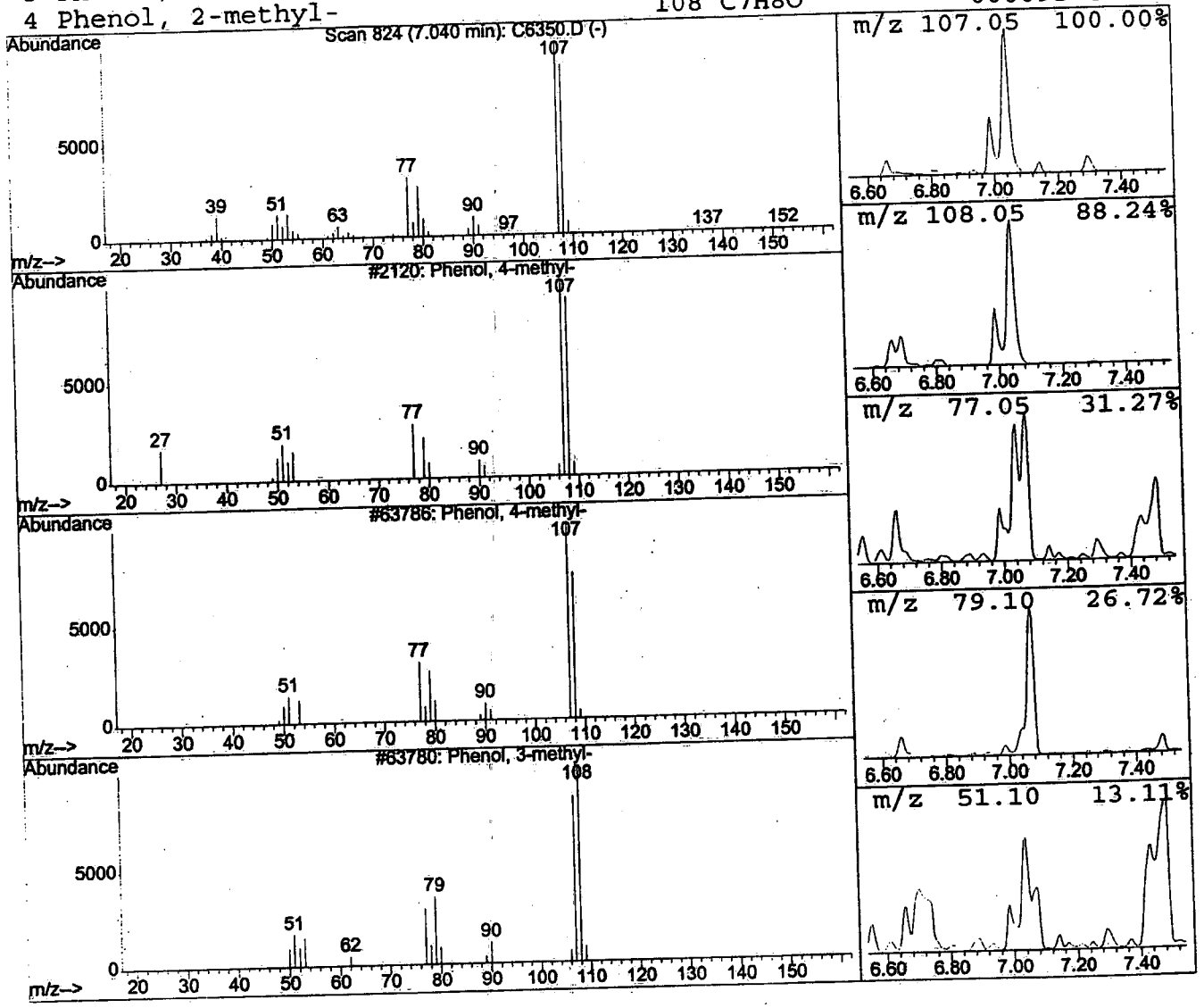
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 6 Substituted phenol Concentration Rank 21

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.04	35.18 UG	2569720	1,4-Dichlorobenzene-d4	6.46

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 4-methyl-	108	C7H8O	000106-44-5	94
2	Phenol, 4-methyl-	108	C7H8O	000106-44-5	94
3	Phenol, 3-methyl-	108	C7H8O	000108-39-4	91
4	Phenol, 2-methyl-	108	C7H8O	000095-48-7	90



4758

167

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

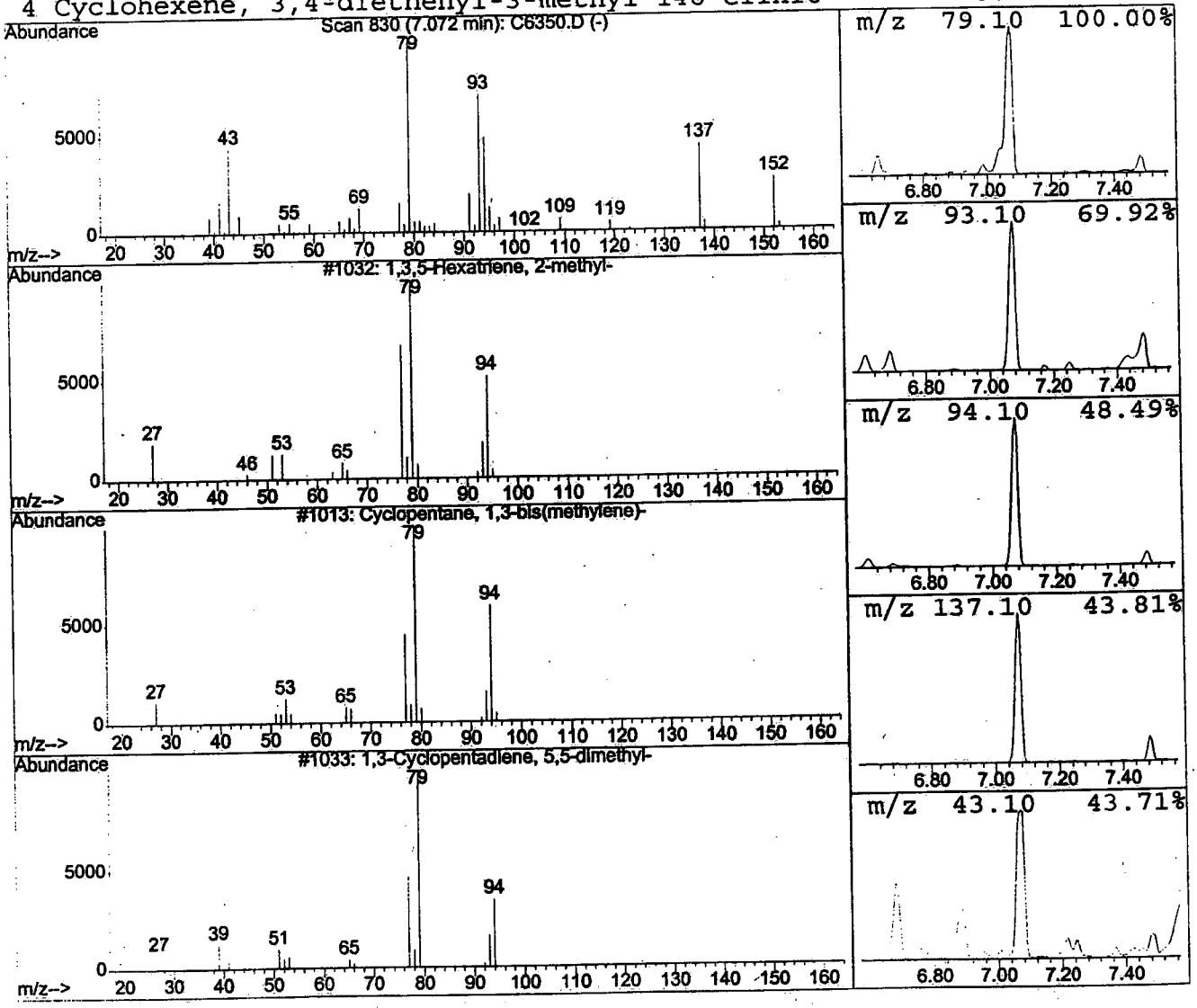
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 7 Unknown — Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.07	87.09 UG	6361240	1,4-Dichlorobenzene-d4	6.46

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3,5-Hexatriene, 2-methyl-	94	C7H10	019264-50-7	32
2	Cyclopentane, 1,3-bis(methylene)-	94	C7H10	059219-48-6	32
3	1,3-Cyclopentadiene, 5,5-dimethyl-	94	C7H10	004125-18-2	32
4	Cyclohexene, 3,4-diethenyl-3-methyl	148	C11H16	061141-77-3	25



4759

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

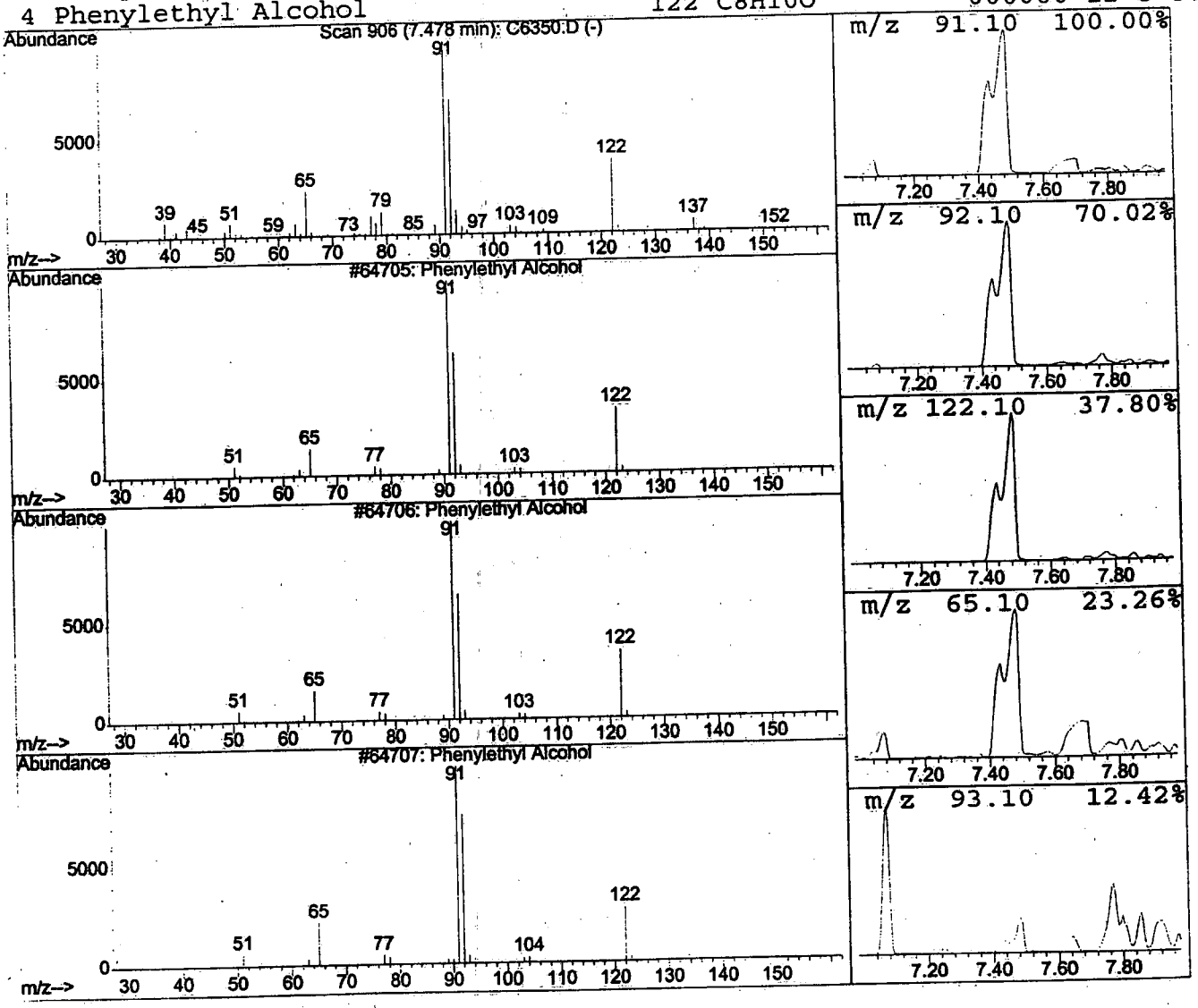
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 8 Substituted benzene Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.48	34.83 UG	7974320	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenylethyl Alcohol	122	C8H10O	000060-12-8	90
2	Phenylethyl Alcohol	122	C8H10O	000060-12-8	90
3	Phenylethyl Alcohol	122	C8H10O	000060-12-8	87
4	Phenylethyl Alcohol	122	C8H10O	000060-12-8	87



169

4760

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

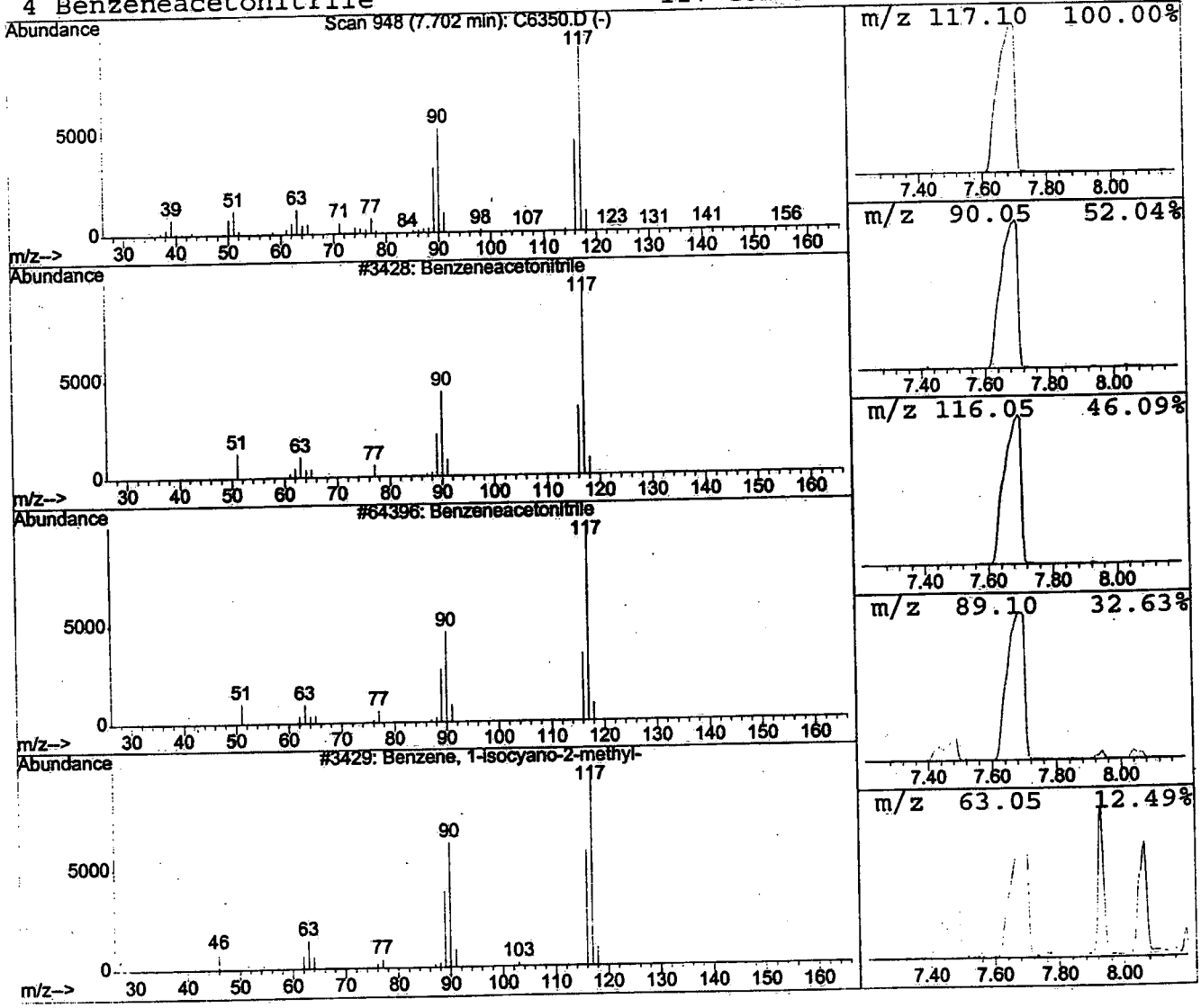
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 9 Substituted benzene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.70	89.50 UG	20492100	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzeneacetonitrile	117	C8H7N	000140-29-4	97
2	Benzeneacetonitrile	117	C8H7N	000140-29-4	96
3	Benzene, 1-isocyano-2-methyl-	117	C8H7N	010468-64-1	95
4	Benzeneacetonitrile	117	C8H7N	000140-29-4	95



170

4761

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

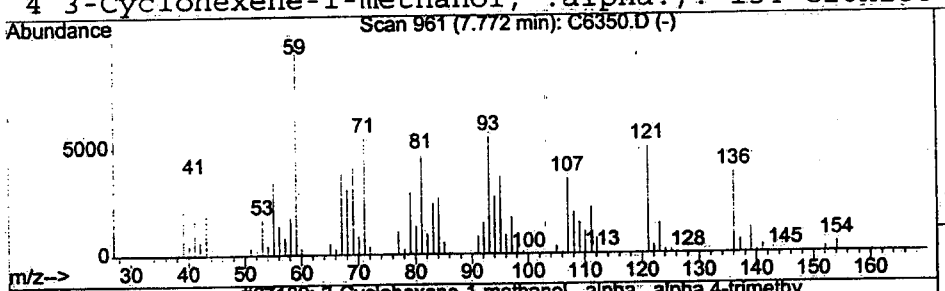
****

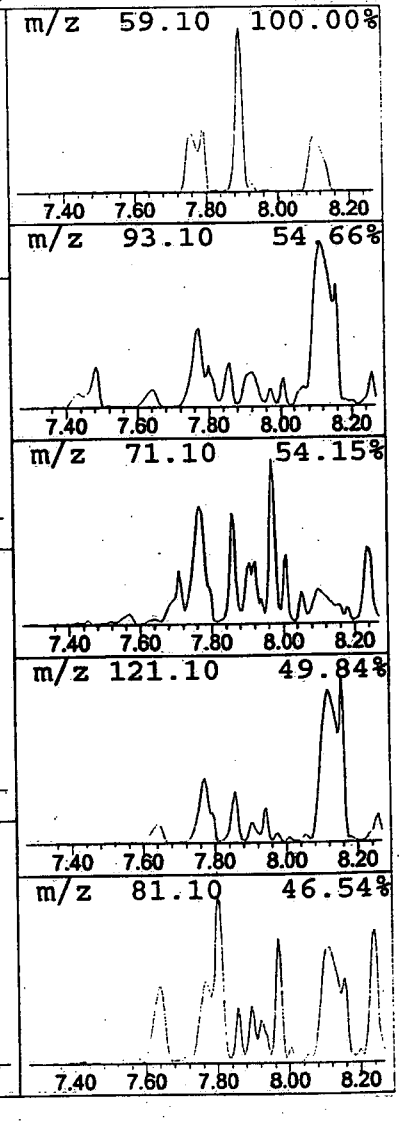
Peak Number 10 Unknown

Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.77	53.65 UG	12284700	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	3-Cyclohexene-1-methanol, .alpha.,.	154	C10H18O	000098-55-5	43
2	Linalyl propanoate	210	C13H22O2	000000-00-0	43
3	3-Cyclohexene-1-methanol, .alpha.,.	154	C10H18O	000098-55-5	43
4	3-Cyclohexene-1-methanol, .alpha.,.	154	C10H18O	010482-56-1	43





4762

171

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

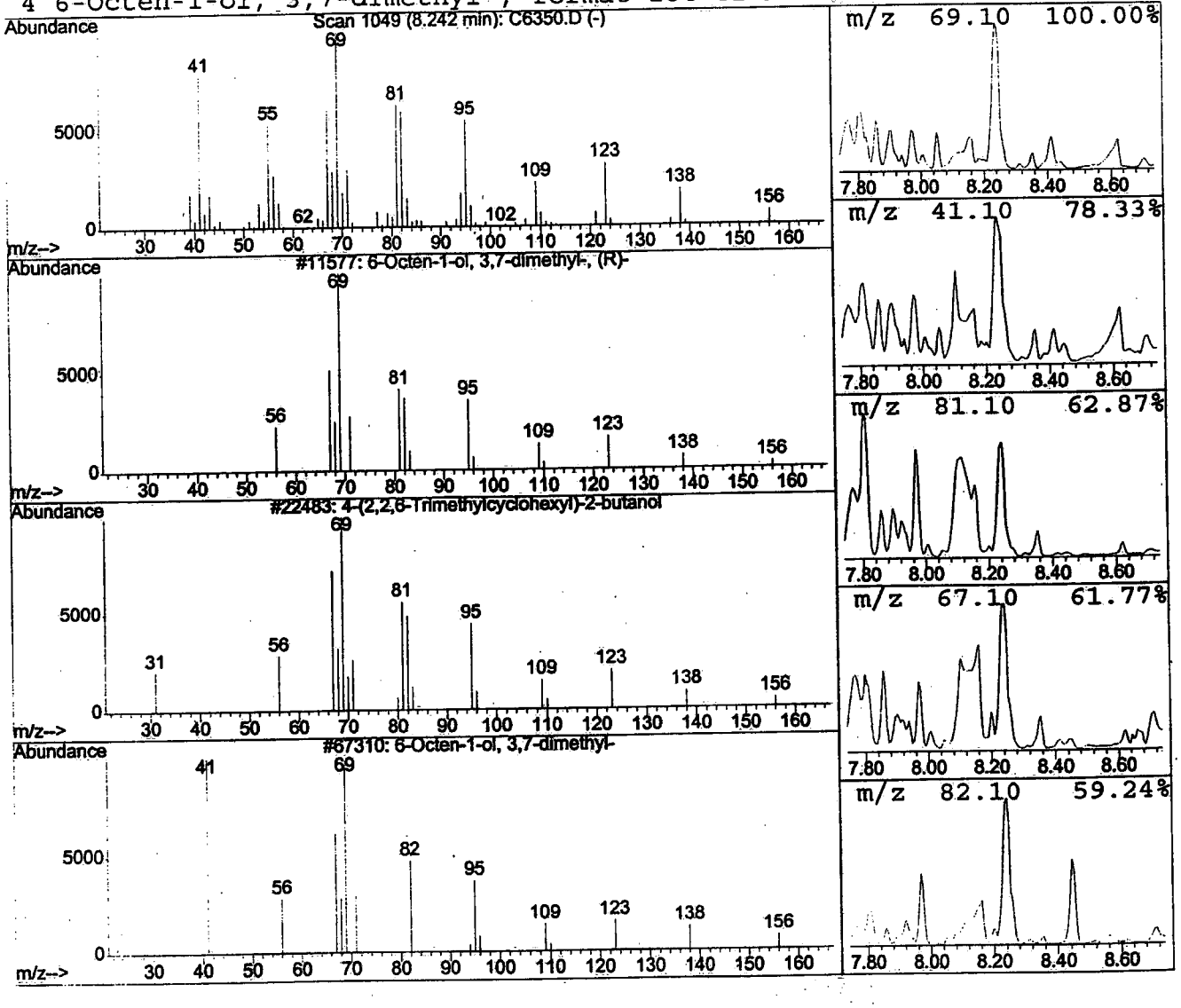
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 11 Unknown — Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.24	43.57 UG	9977460	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	6-Octen-1-ol, 3,7-dimethyl-, (R)-	156	C10H20O	001117-61-9	96
2	4-(2,2,6-Trimethylcyclohexyl)-2-but	198	C13H26O	000000-00-0	90
3	6-Octen-1-ol, 3,7-dimethyl-	156	C10H20O	000106-22-9	81
4	6-Octen-1-ol, 3,7-dimethyl-, format	184	C11H20O2	000105-85-1	72



172

4763

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

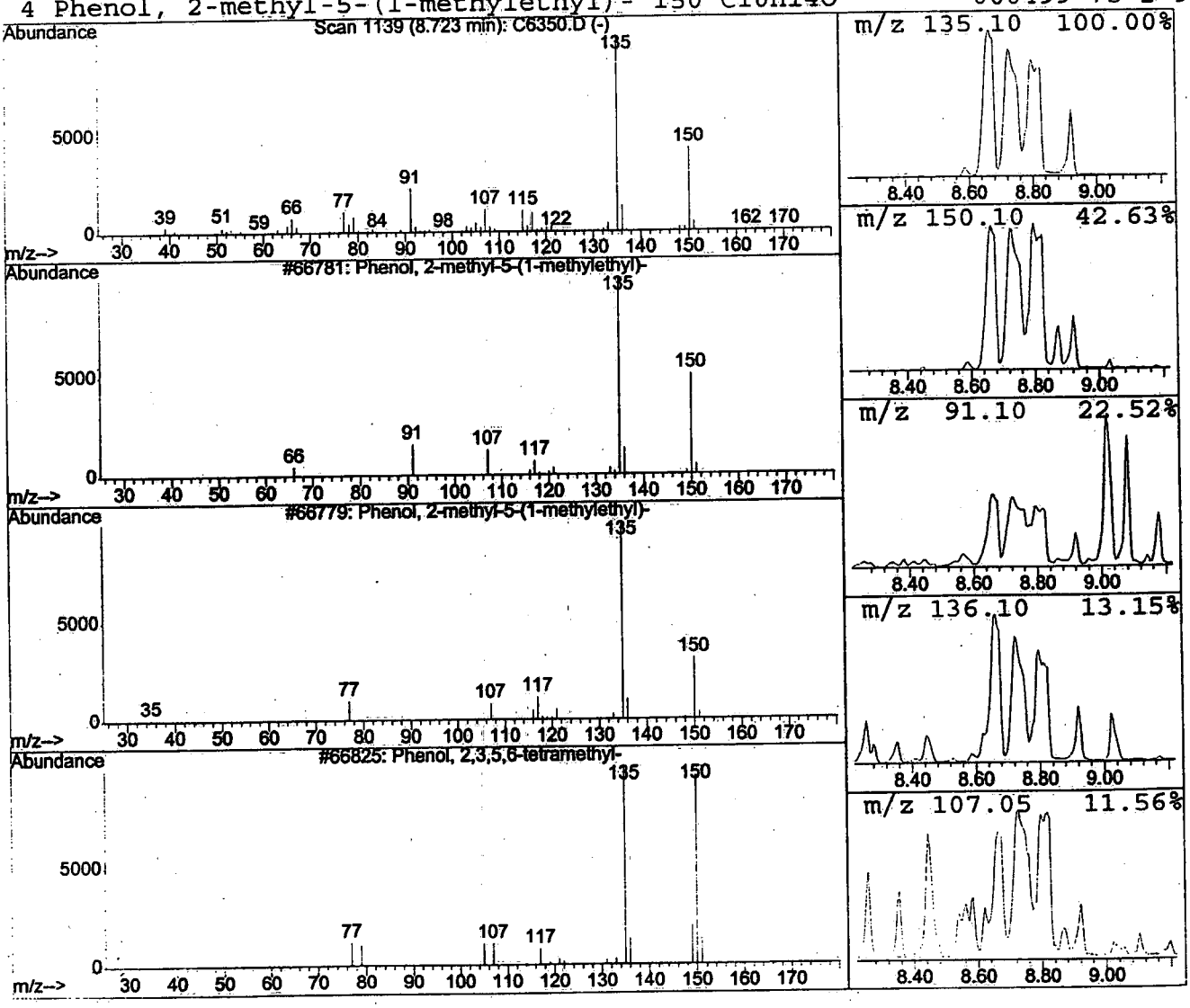
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 12 Substituted phenol Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.72	48.10 UG	11012900	Naphthalene-d8	8.08

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	94
2	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	91
3	Phenol, 2,3,5,6-tetramethyl-	150	C10H14O	000527-35-5	91
4	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	90



4764

173

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

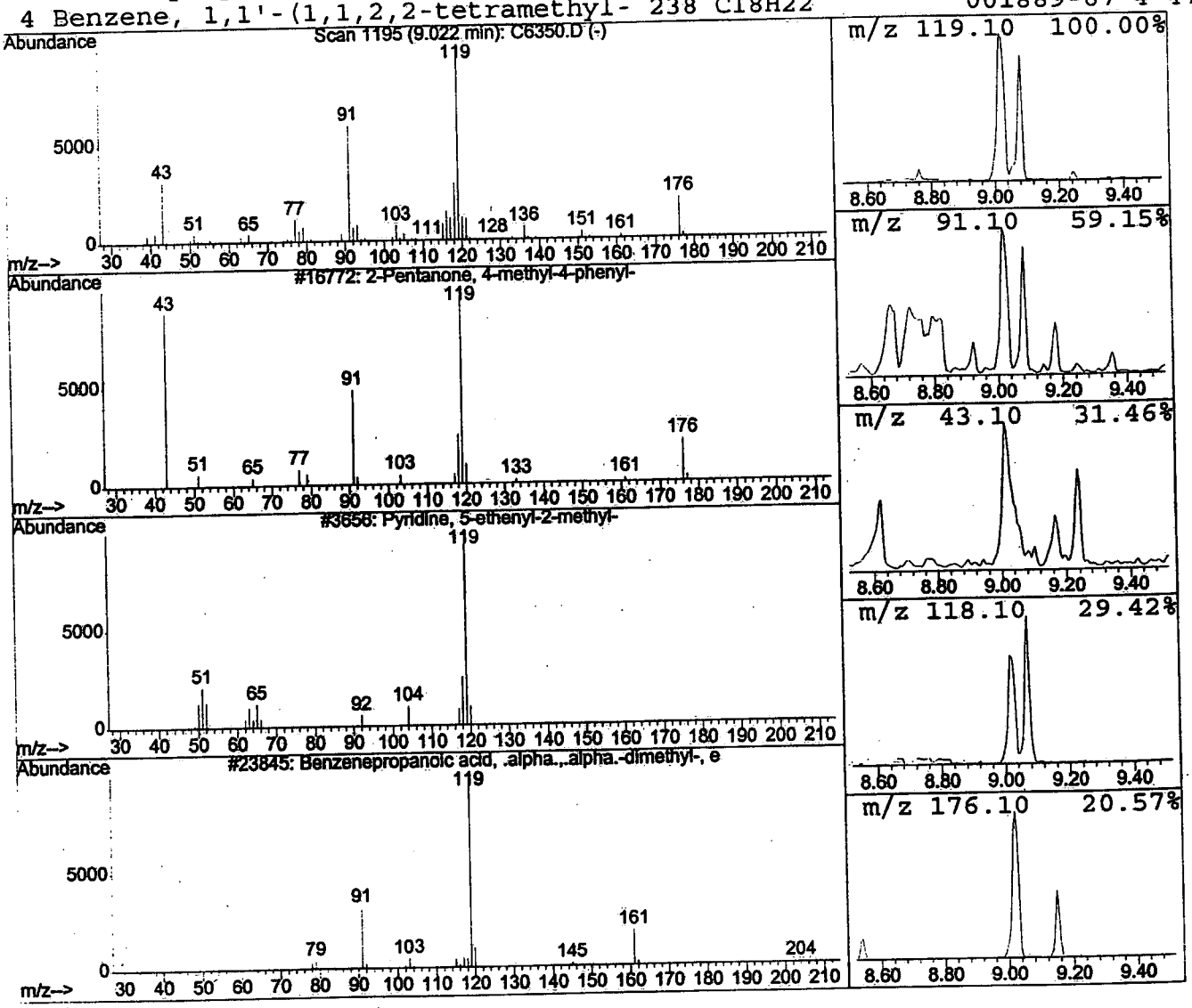
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 13 Substituted benzene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.02	188.44 UG	5900310	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-methyl-4-phenyl-	176	C12H16O	007403-42-1	81
2	Pyridine, 5-ethenyl-2-methyl-	119	C8H9N	000140-76-1	50
3	Benzenepropanoic acid, .alpha.,.alp	204	C13H16O2	054932-88-6	50
4	Benzene, 1,1'-(1,1,2,2-tetramethyl-	238	C18H22	001889-67-4	47



4765

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

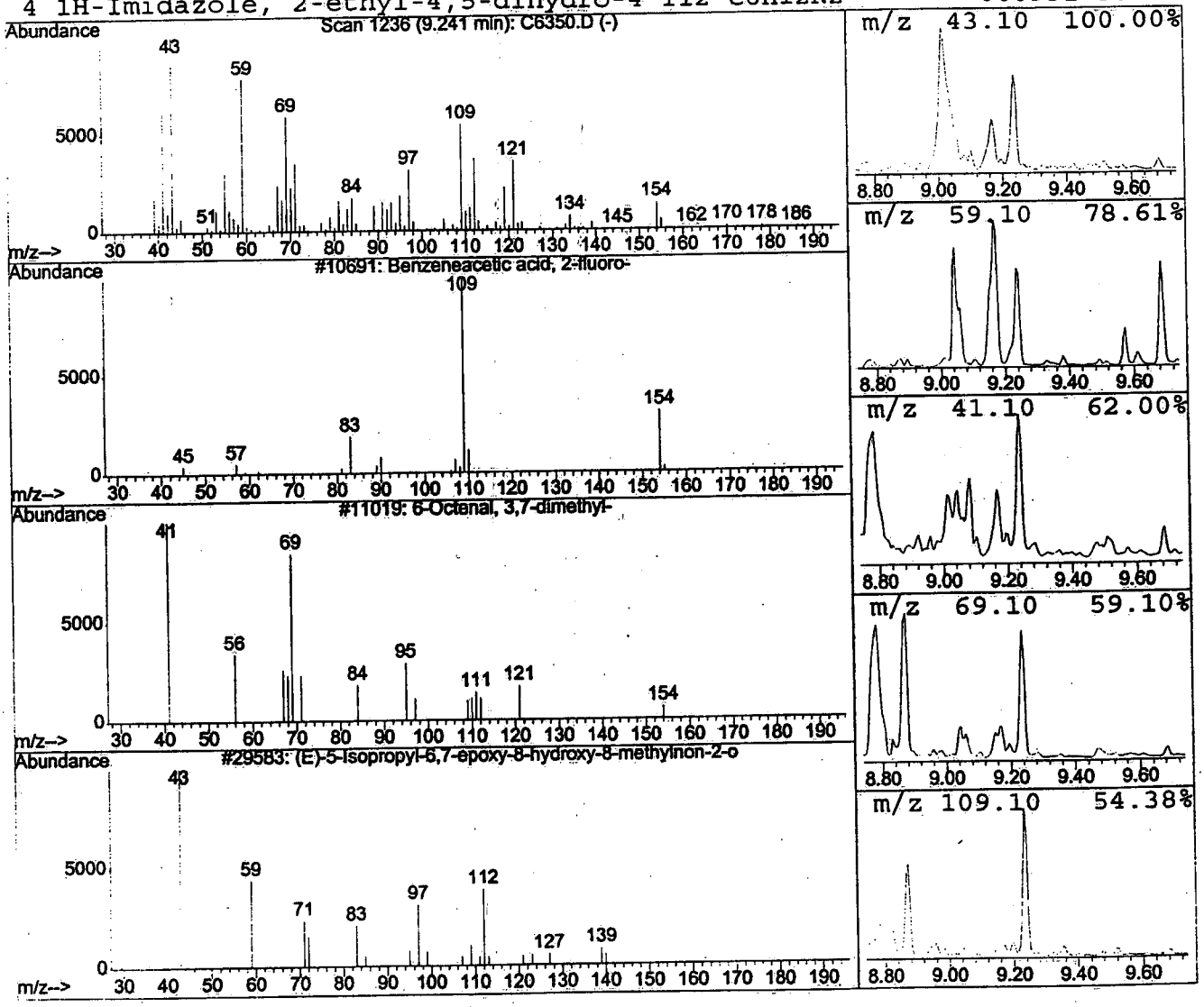
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 14 Unknown — Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.24	109.65 UG	3433380	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzeneacetic acid, 2-fluoro-	154	C8H7FO2	000451-82-1	22
2	6-Octenal, 3,7-dimethyl-	154	C10H18O	000106-23-0	22
3	(E)-5-Isopropyl-6,7-epoxy-8-hydroxy	228	C13H24O3	000000-00-0	16
4	1H-Imidazole, 2-ethyl-4,5-dihydro-4	112	C6H12N2	000931-35-1	14



4766

175

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

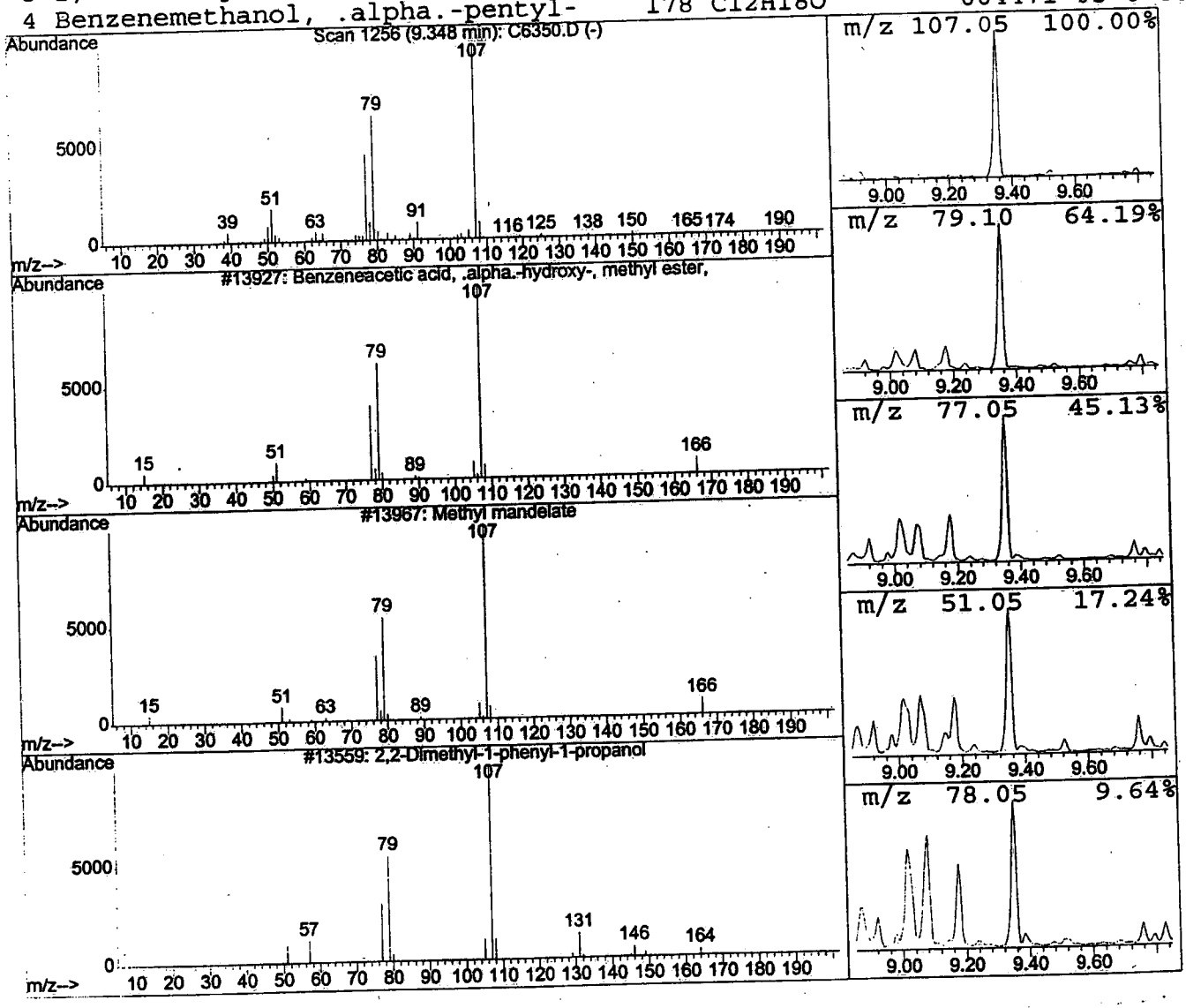
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 15 Substituted benzene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.35	133.89 UG	4192450	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzeneacetic acid, .alpha.-hydroxy	166	C9H10O3	021210-43-5	83
2	Methyl mandelate	166	C9H10O3	004358-87-6	83
3	2,2-Dimethyl-1-phenyl-1-propanol	164	C11H16O	003835-64-1	83
4	Benzenemethanol, .alpha.-pentyl-	178	C12H18O	004471-05-0	83



4767

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

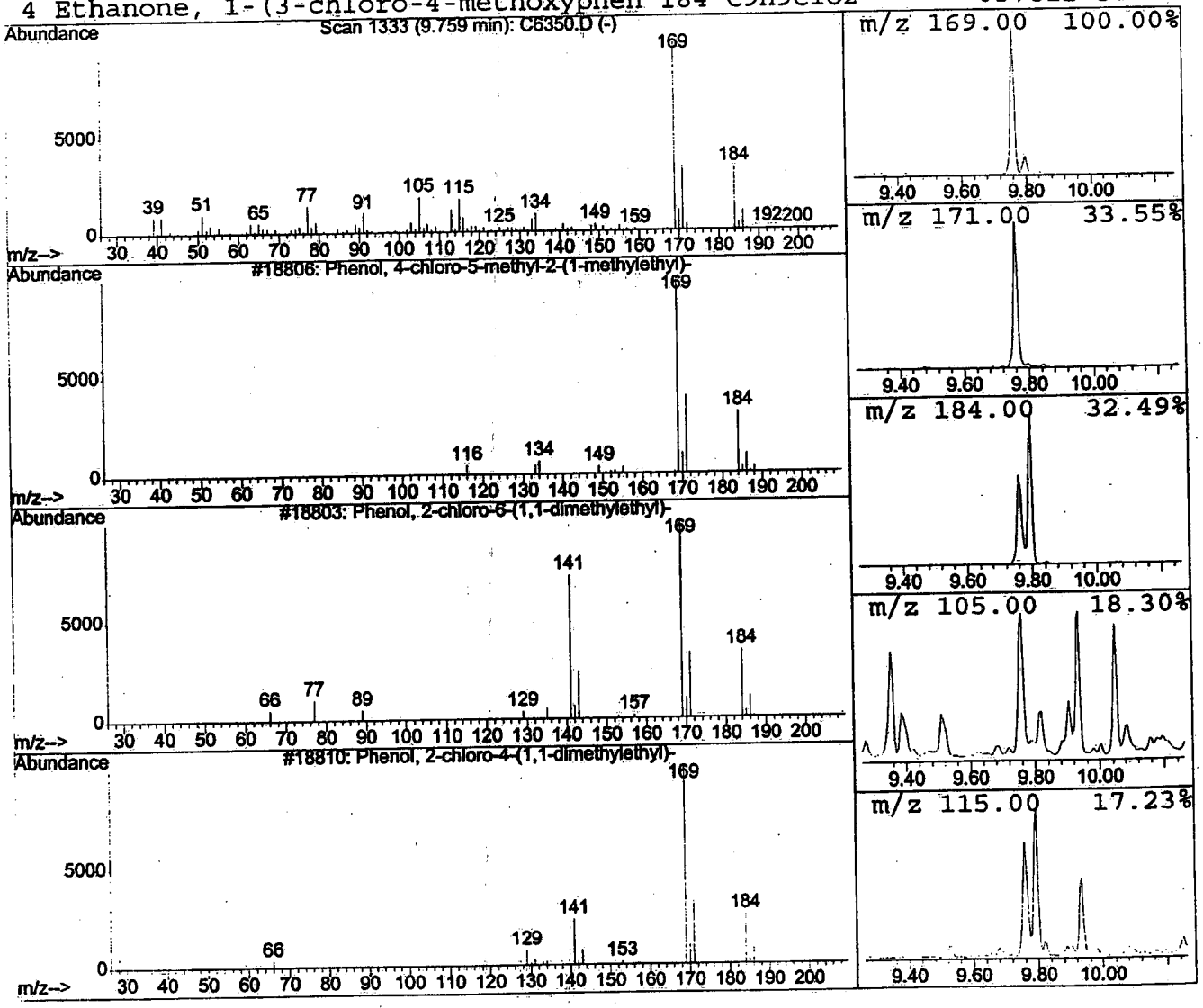
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 16 Substituted phenol Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	63.82 UG	1998240	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 4-chloro-5-methyl-2-(1-meth	184	C10H13ClO	000089-68-9	90
2	Phenol, 2-chloro-6-(1,1-dimethyleth	184	C10H13ClO	004237-37-0	81
3	Phenol, 2-chloro-4-(1,1-dimethyleth	184	C10H13ClO	000098-28-2	72
4	Ethanone, 1-(3-chloro-4-methoxyphen	184	C9H9ClO2	037612-52-5	64



4768

177

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

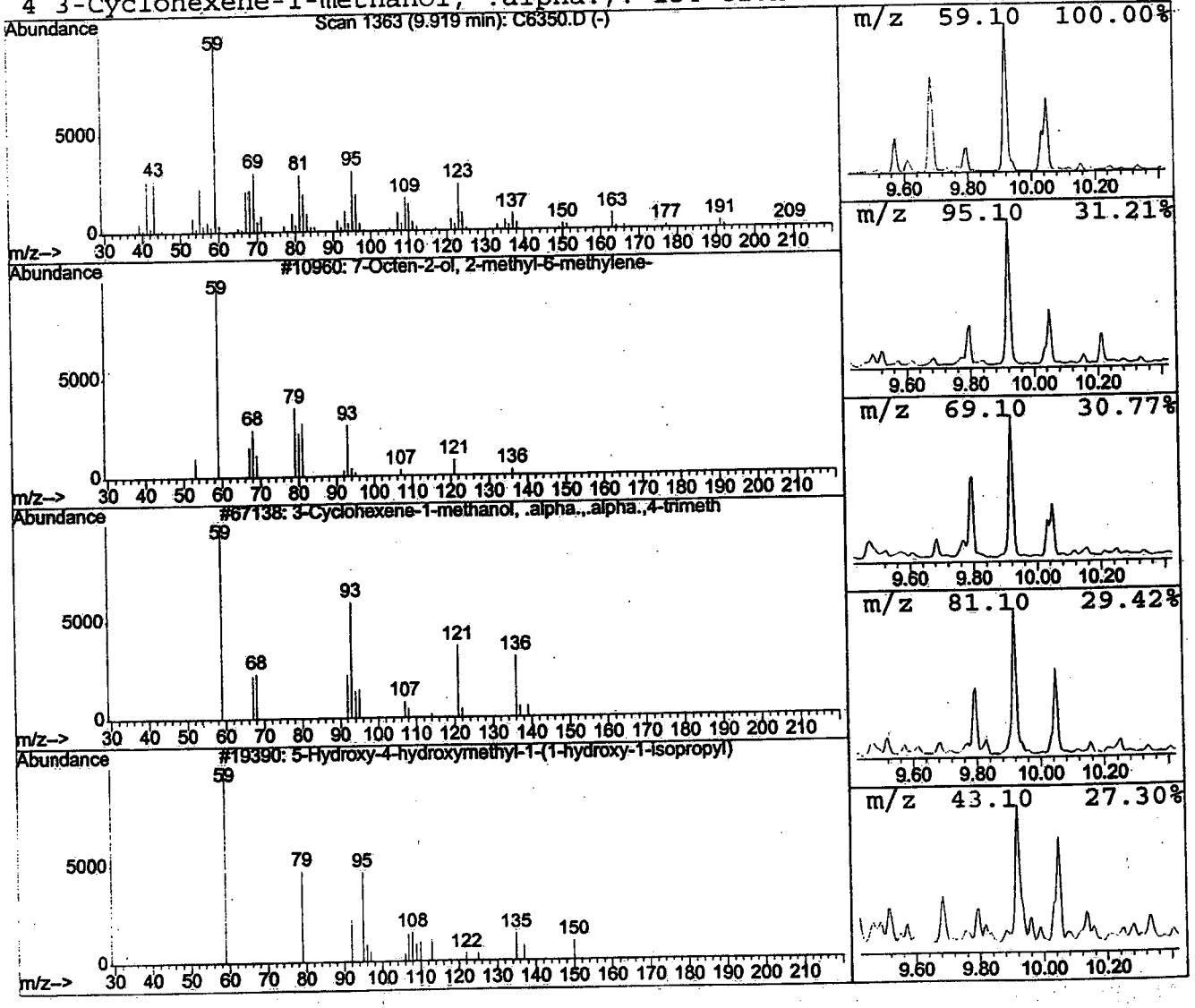
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 17 Unknown — Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.92	73.44 UG	2299380	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	7-Octen-2-ol, 2-methyl-6-methylene-	154	C10H18O	000543-39-5	25
2	3-Cyclohexene-1-methanol, .alpha.,.	154	C10H18O	010482-56-1	25
3	5-Hydroxy-4-hydroxymethyl-1-(1-hydr	186	C10H18O3	087096-72-8	25
4	3-Cyclohexene-1-methanol, .alpha.,.	154	C10H18O	000098-55-5	25



4769

178

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

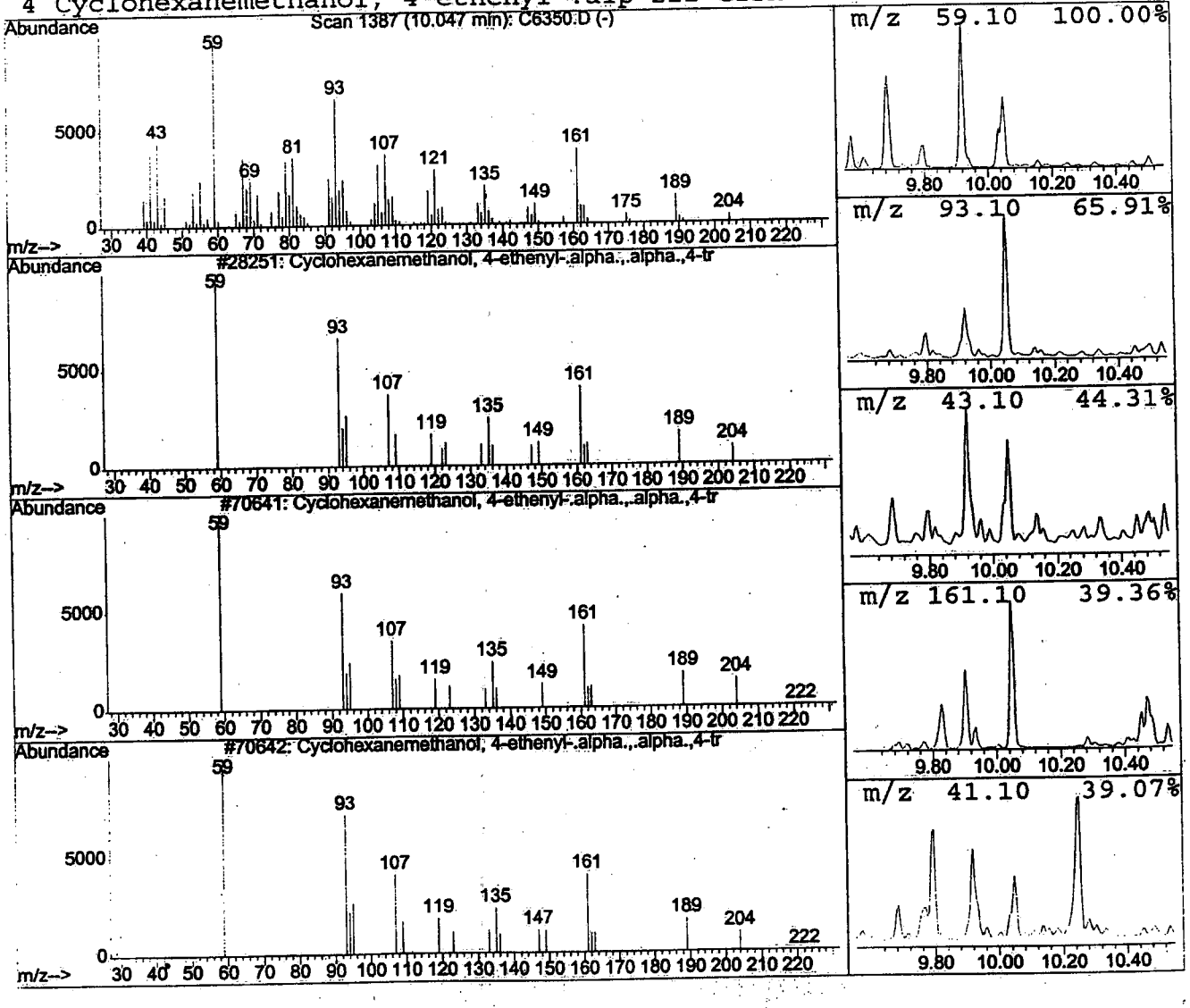
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 18 Unknown — Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.05	71.83 UG	2249070	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexanemethanol, 4-ethenyl-.alp	222	C15H26O	000639-99-6	91
2	Cyclohexanemethanol, 4-ethenyl-.alp	222	C15H26O	000639-99-6	91
3	Cyclohexanemethanol, 4-ethenyl-.alp	222	C15H26O	000639-99-6	91
4	Cyclohexanemethanol, 4-ethenyl-.alp	222	C15H26O	069686-25-5	43



179

4770

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

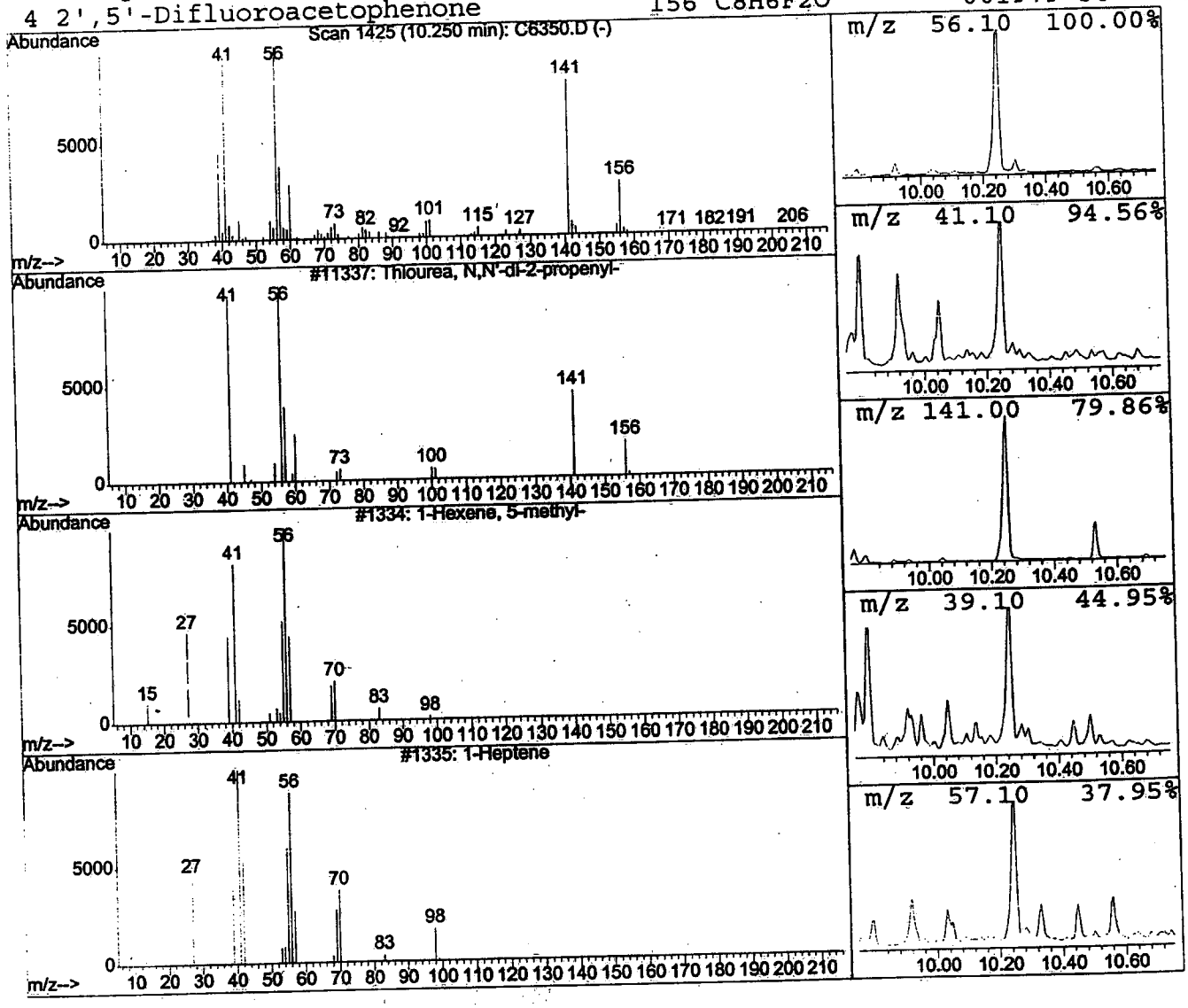
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 19 Unknown — Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.25	40.74 UG	1275580	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Thiourea, N,N'-di-2-propenyl-	156	C7H12N2S	006601-20-3	95
2	1-Hexene, 5-methyl-	98	C7H14	003524-73-0	35
3	1-Heptene	98	C7H14	000592-76-7	17
4	2',5'-Difluoroacetophenone	156	C8H6F2O	001979-36-8	16



180

4771

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

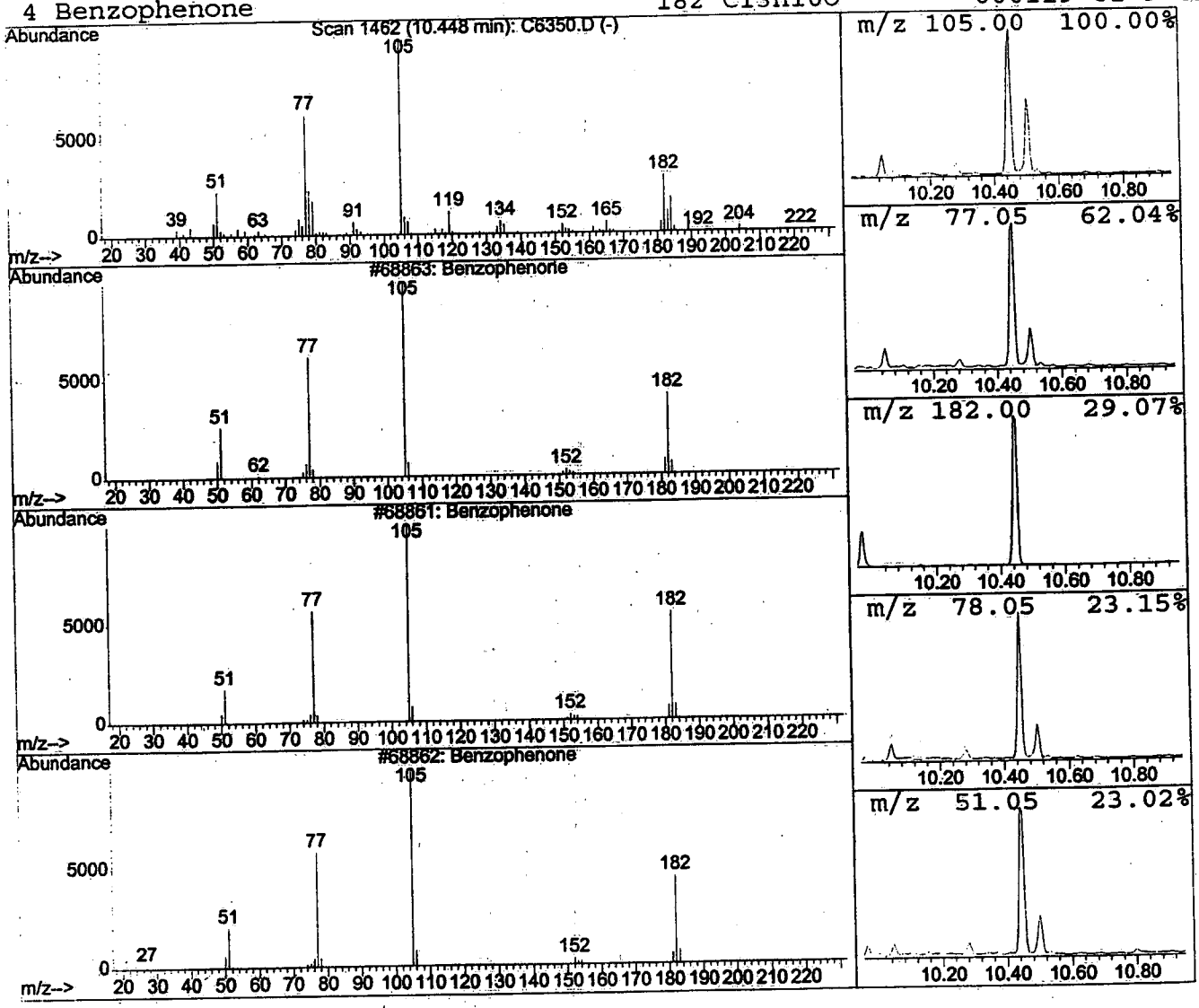
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 20 Substituted benzene Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.45	57.21 UG	1791490	Acenaphthene-d10	9.83

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzophenone	182	C13H10O	000119-61-9	70
2	Benzophenone	182	C13H10O	000119-61-9	70
3	Benzophenone	182	C13H10O	000119-61-9	70
4	Benzophenone	182	C13H10O	000119-61-9	62



4772

181

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

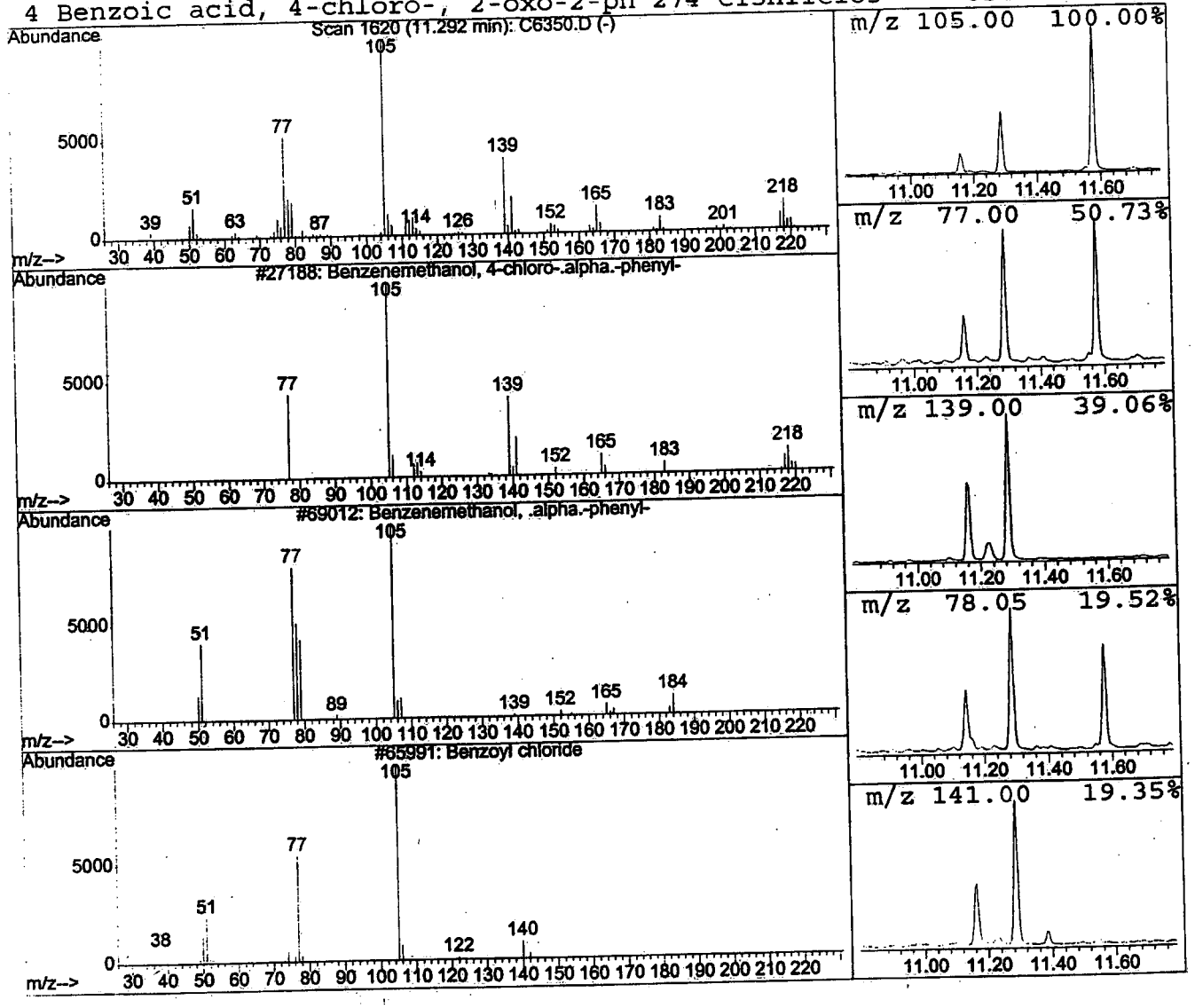
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 21 Substituted benzene Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.29	30.82 UG	683771	Phenanthrene-d10	11.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzenemethanol, 4-chloro-.alpha.-p	218	C13H11ClO	000119-56-2	94
2	Benzenemethanol, .alpha.-phenyl-	184	C13H12O	000091-01-0	43
3	Benzoyl chloride	140	C7H5ClO	000098-88-4	38
4	Benzoic acid, 4-chloro-, 2-oxo-2-ph	274	C15H11ClO3	054797-45-4	38



4773

182

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

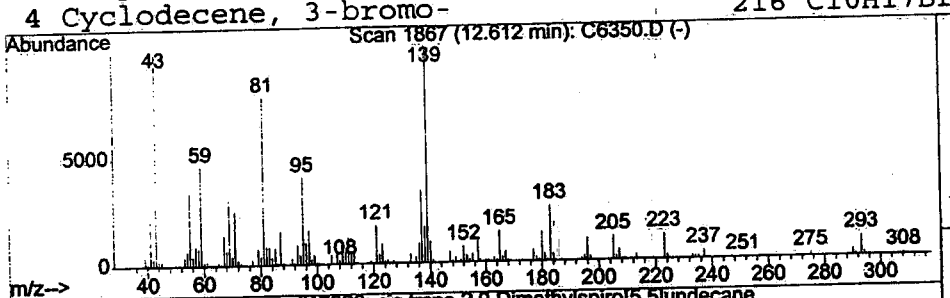
****

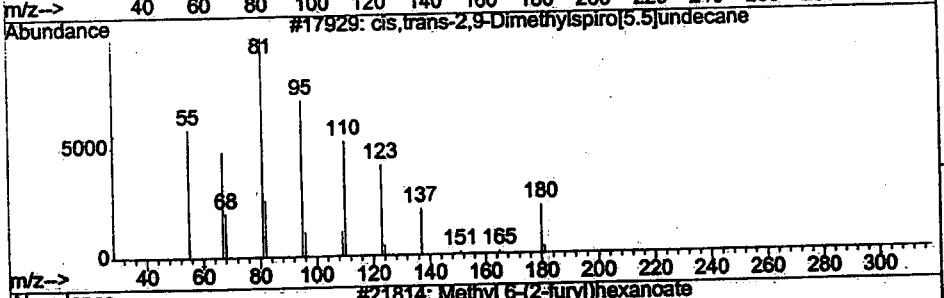
Peak Number 22 Unknown

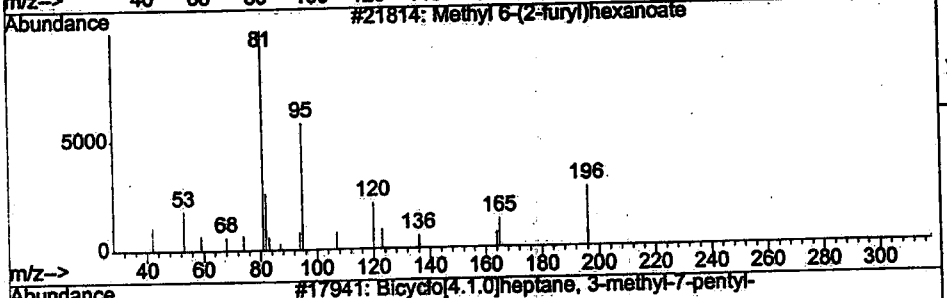
Concentration Rank 10

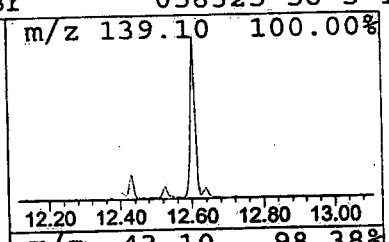
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.61	84.65 UG	2216700	Chrysene-d12	13.49

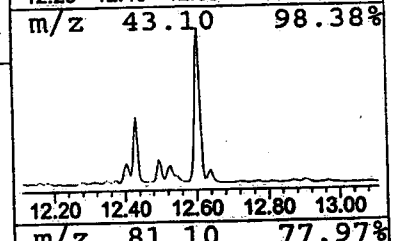
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	cis,trans-2,9-Dimethylspiro[5.5]und	180	C13H24	000000-00-0	30
2	Methyl 6-(2-furyl)hexanoate	196	C11H16O3	000000-00-0	27
3	Bicyclo[4.1.0]heptane, 3-methyl-7-p	180	C13H24	041977-48-4	22
4	Cyclodecene, 3-bromo-	216	C10H17Br	056325-56-5	14

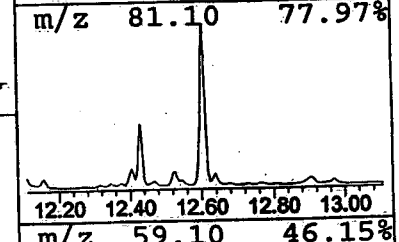


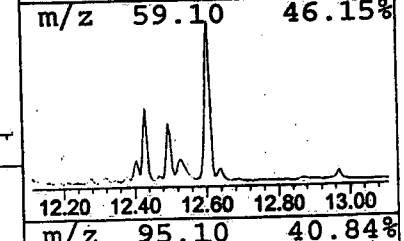


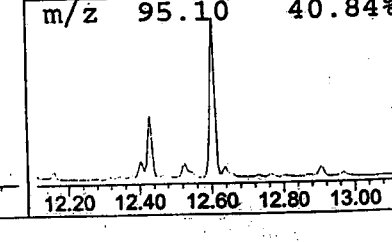












4774

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

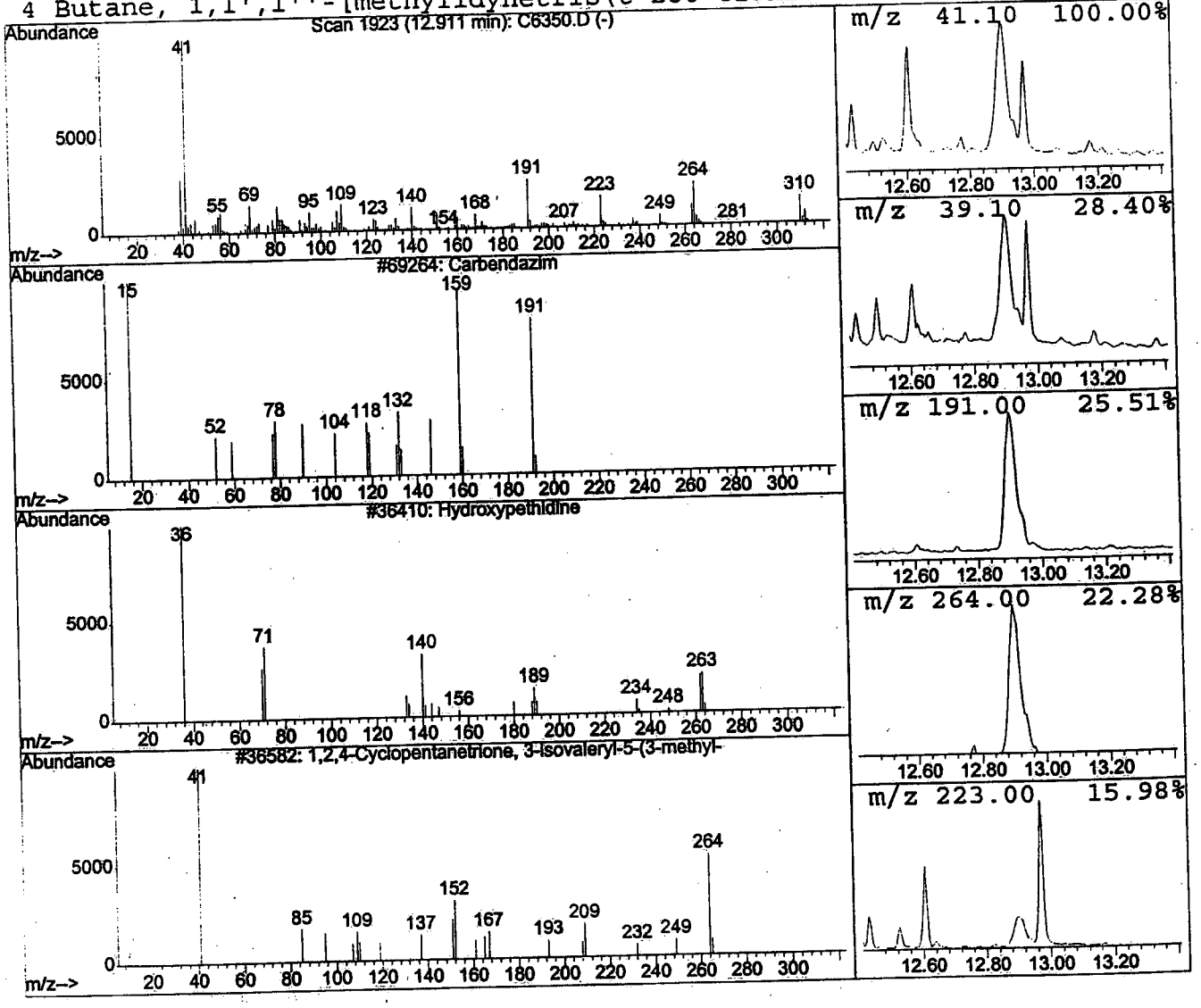
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 23 Unknown — Concentration Rank 24

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.91	31.41 UG	822597	Chrysene-d12	13.49

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbendazim	191	C9H9N3O2	010605-21-7	9
2	Hydroxypethidine	263	C15H21NO3	000468-56-4	9
3	1,2,4-Cyclopentanetrione, 3-isovale	264	C15H20O4	003613-60-3	8
4	Butane, 1,1',1''-[methylidynetris(t	280	C13H28S3	016754-60-2	1



4775

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

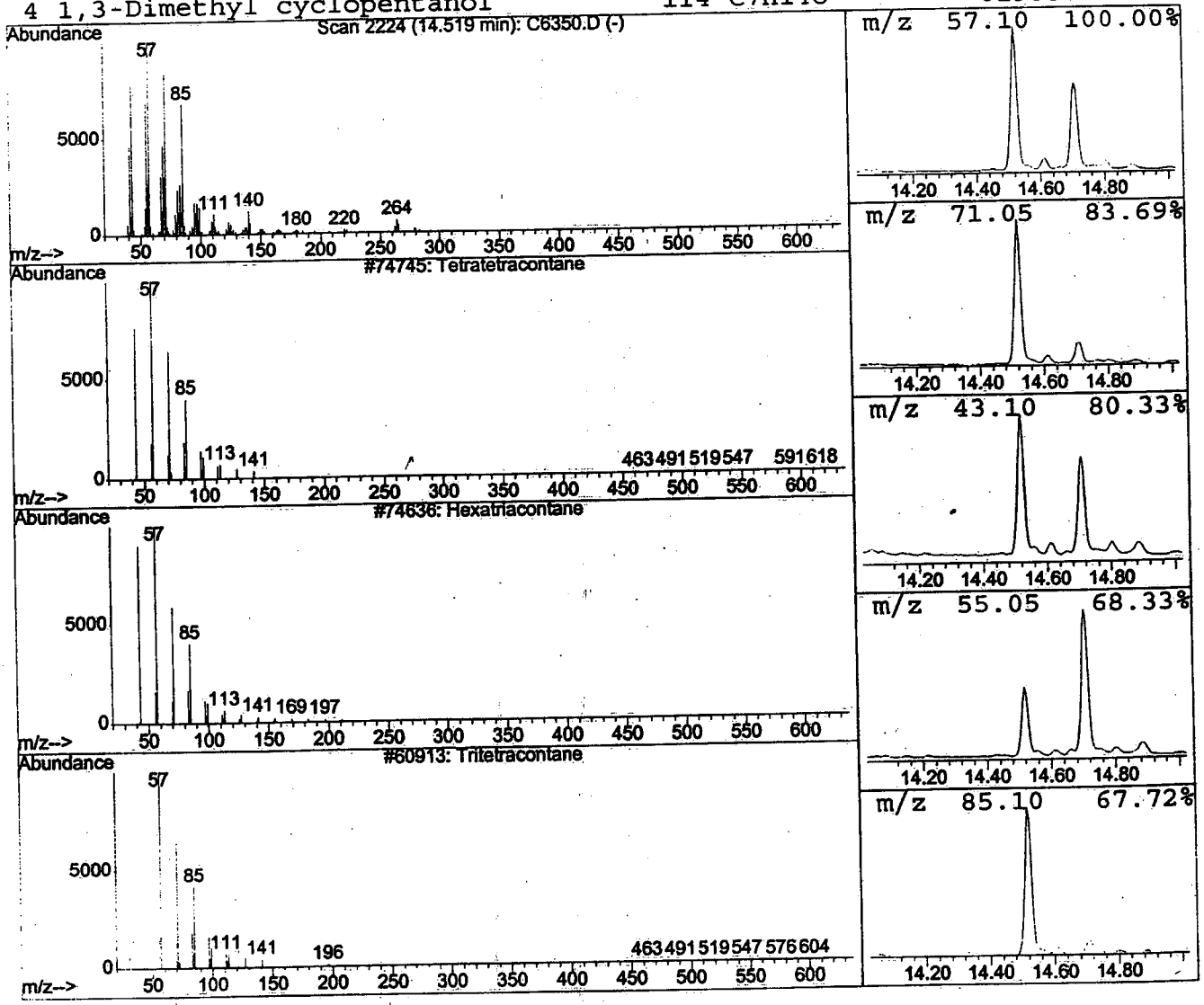
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

****

Peak Number 24 Unknown alkane — Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.52	34.14 UG	547800	Perylene-d12	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetratetracontane	619	C44H90	007098-22-8	64
2	Hexatriacontane	507	C36H74	000630-06-8	64
3	Tritetracontane	605	C43H88	007098-21-7	59
4	1,3-Dimethyl cyclopentanol	114	C7H14O	019550-46-0	58



4776

185

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6350.D
Acq On : 27 Oct 2000 18:27
Sample : GW-6,6734-004,A,1000mL,100,10/27/00
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,1
MS Integration Params: LSCINT.P

Vial: 17
Operator:
Inst : MSD-C
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

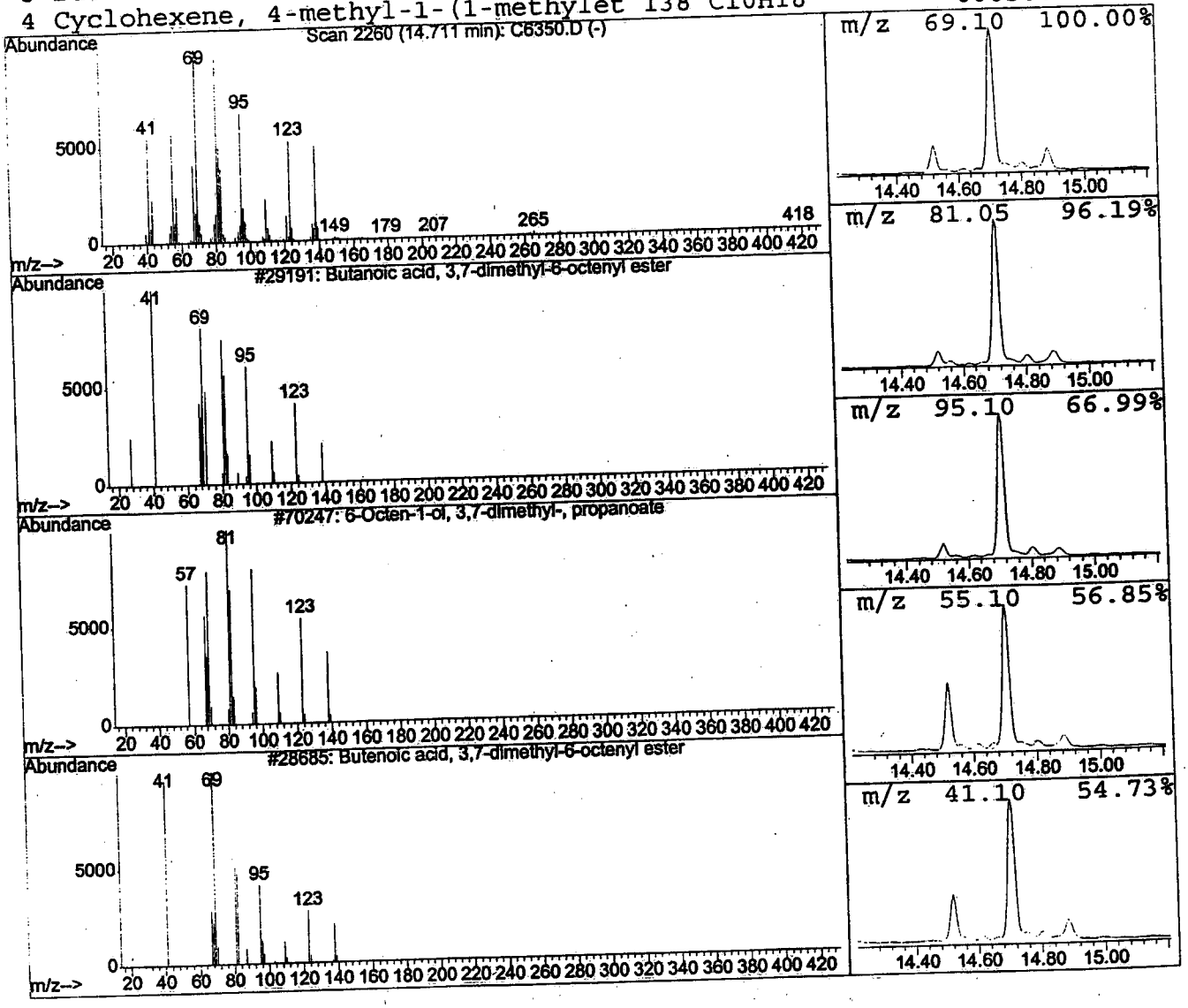
****

Peak Number 25 Unknown

Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.71	85.88 UG	1378150	Perylene-d12	15.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butanoic acid, 3,7-dimethyl-6-octen	226	C14H26O2	000141-16-2	72
2	6-Octen-1-ol, 3,7-dimethyl-, propan	212	C13H24O2	000141-14-0	58
3	Butenoic acid, 3,7-dimethyl-6-octen	224	C14H24O2	000000-00-0	50
4	Cyclohexene, 4-methyl-1-(1-methylet	138	C10H18	000500-00-5	46



4777

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\10-27-00\C6341.D Vial: 8
Acq On : 27 Oct 2000 14:28 Operator:
Sample : .,Method-blank,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
IS Integration Params: RTEINT.P
Quant Time: Oct 27 14:24 2000 Quant Results File: SVWC1700.RES

Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration
DataAcq Meth : SVWC1700

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.45	152	132283	40.00	UG	0.00
19) Naphthalene-d8	8.07	136	433109	40.00	UG	0.00
35) Acenaphthene-d10	9.82	164	210925	40.00	UG	0.00
55) Phenanthrene-d10	11.14	188	309693	40.00	UG	0.00
69) Chrysene-d12	13.50	240	291487	40.00	UG	-0.01
78) Perylene-d12	15.46	264	267359	40.00	UG	-0.03
System Monitoring Compounds						
3) 2-Fluorophenol	4.45	112	166724	72.68	UG	0.00
Spiked Amount 100.000	Range 37 - 96		Recovery = 72.68%			
4) Phenol-d5	5.82	99	430802	79.47	UG	0.00
Spiked Amount 100.000	Range 56 - 111		Recovery = 79.47%			
20) Nitrobenzene-d5	7.20	82	168241	41.13	UG	0.00
Spiked Amount 50.000	Range 61 - 121		Recovery = 82.26%			
39) 2-Fluorobiphenyl	9.17	172	250354	34.79	UG	0.00
Spiked Amount 50.000	Range 63 - 124		Recovery = 69.58%			
59) 2,4,6-Tribromophenol	10.53	330	74466	97.96	UG	0.00
Spiked Amount 100.000	Range 52 - 153		Recovery = 97.96%			
71) Terphenyl-d14	12.47	244	317794	49.24	UG	0.00
Spiked Amount 50.000	Range 46 - 140		Recovery = 98.48%			

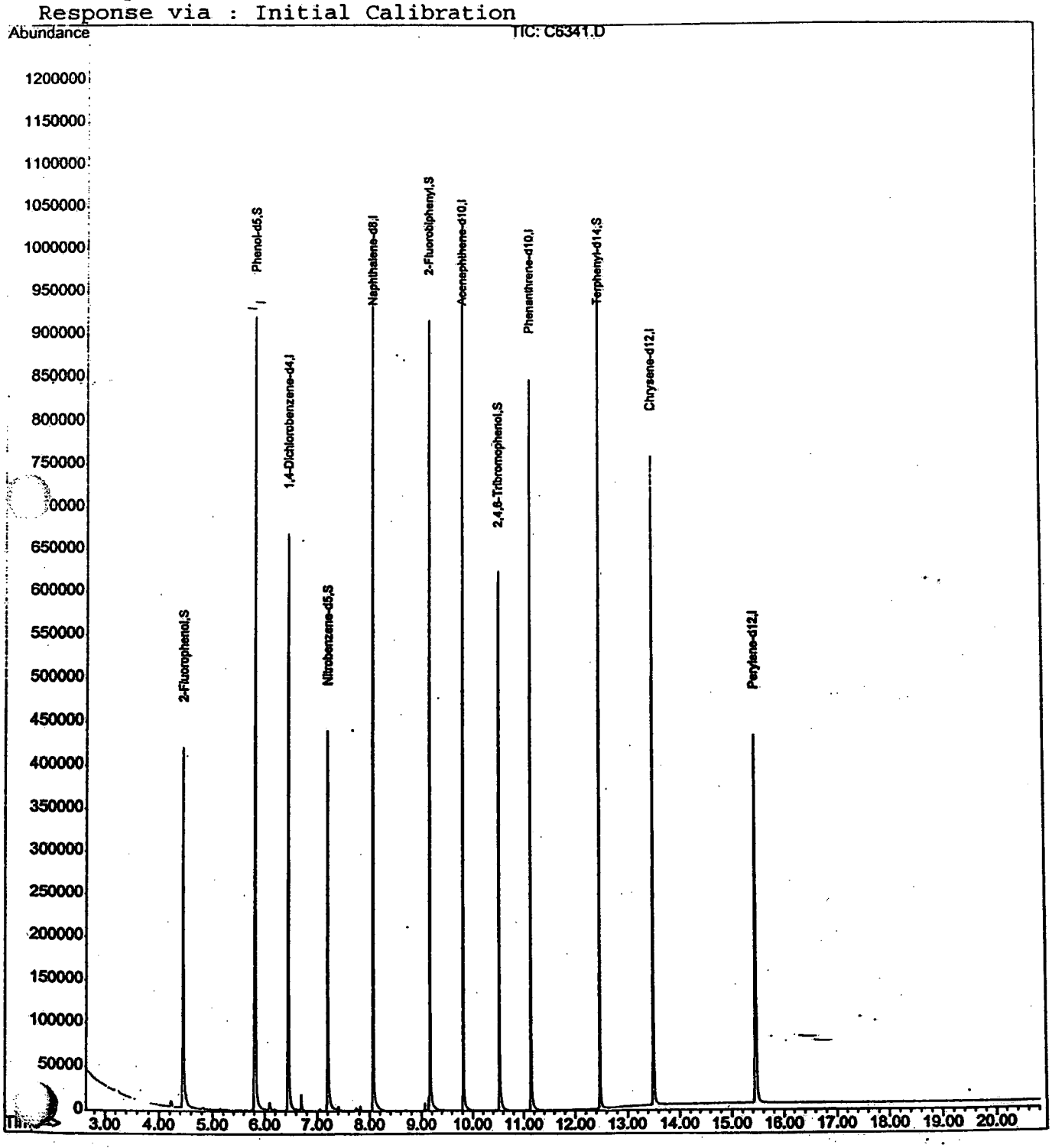
Target Compounds **Qvalue**

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6341.D Vial: 8
Acq On : 27 Oct 2000 14:28 Operator:
Sample : .,Method-blank,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 27 14:24 2000 Quant Results File: SVWC1700.RES

Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Last Update : Wed Oct 25 10:03:03 2000
Response via : Initial Calibration



188

4779

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\10-27-00\C6341.D Vial: 8
Acq On : 27 Oct 2000 14:28 Operator:
Sample : .,Method-blank,A,1000mL,100,10/27/00 Inst : MSD-C
Misc : N/A,N/A,N/A,1 Multiplr: 1.00
Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\SVWC1700.M (RTE Integrator)
Title : BNA CALIBRATION METHOD
Library : C:\DATABASE\NBS75K.L

No Library Search Compounds Detected

****
C6341.D SVWC1700.M Mon Oct 30 11:17:48 2000 MSD-C

4780

PCB METHOD BLANK SUMMARY

Lab File ID: R1334.D

Instrument ID: GC-R

Date Extracted: 10/27/2000

Matrix: AQUEOUS

Date Analyzed: 10/27/2000

Time Analyzed: 16:08

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
FB5	6723-018	10/27/2000	16:34
GW-3	6734-001	10/27/2000	17:00
GW-6	6734-004	10/27/2000	17:27
FIELD_BLANK	6741-002	10/27/2000	17:53
FMW-9	6741-003	10/27/2000	18:19
FMW-17	6741-004	10/27/2000	18:45
FMW-18	6741-005	10/27/2000	19:12
FMW-12	6741-006	10/27/2000	19:38
PCB	6741-002-MS1	10/27/2000	20:04
PCB	6741-002-MSD1	10/27/2000	20:30
PCB	PBW1027-MS1	10/27/2000	20:56

4781

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Client/Project: NA

Lab ID: 1027-BK1
Client ID: (6723.6741)
Date Received: NA
Date Extracted: 10/27/2000
Date Analyzed: 10/27/2000
Data file: R1334.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000ml
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
Aroclor-1016	ND		0.02
Aroclor-1221	ND		0.02
Aroclor-1232	ND		0.02
Aroclor-1242	ND		0.02
Aroclor-1248	ND		0.02
Aroclor-1254	ND		0.02
Aroclor-1260	ND		0.02

4782

101

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000 **Instrument ID:** GC-R
GC Column (1st): DB-5

Data File: R1003.D R1004.D R1005.D R1006.D R1007.D

Compound	RT OF STANDARDS 50	100	500	1000	2000	MEAN RT	RT WINDOW FROM	TO
Aroclor-1016	4.73	4.73	4.73	4.73	4.73	4.73	4.66	4.80
Aroclor-1016 {2}	5.65	5.66	5.66	5.66	5.65	5.66	5.59	5.73
Aroclor-1016 {3}	6.1[illegible]	6.10	6.10	6.10	6.10	6.10	6.03	6.17
Aroclor-1016 {4}	7.85	7.85	7.85	7.85	7.85	7.85	7.78	7.92
Aroclor-1016 {5}	8.30	8.30	8.30	8.30	8.30	8.30	8.23	8.37
Aroclor-1221			3.03				2.96	3.10
Aroclor-1221 {2}			4.40				4.33	4.47
Aroclor-1221 {3}			4.61				4.54	4.68
Aroclor-1221 {4}			4.73				4.66	4.80
Aroclor-1221 {5}			5.70				5.63	5.77
Aroclor-1232			4.73				4.66	4.80
Aroclor-1232 {2}			6.10				6.03	6.17
Aroclor-1232 {3}			7.04				6.97	7.11
Aroclor-1232 {4}			7.85				7.78	7.92
Aroclor-1232 {5}			8.64				8.57	8.71
Aroclor-1242			6.10				6.03	6.17
Aroclor-1242 {2}			7.85				7.78	7.92
Aroclor-1242 {3}			8.39				8.32	8.46
Aroclor-1242 {4}			9.54				9.47	9.61
Aroclor-1242 {5}			10.03				9.96	10.10
Aroclor-1248			6.79				6.72	6.86
Aroclor-1248 {2}			7.85				7.78	7.92
Aroclor-1248 {3}			8.39				8.32	8.46
Aroclor-1248 {4}			9.55				9.48	9.62
Aroclor-1248 {5}			10.04				9.97	10.11
Aroclor-1254			10.27				10.20	10.34
Aroclor-1254 {2}			11.07				11.00	11.14
Aroclor-1254 {3}			12.19				12.12	12.26
Aroclor-1254 {4}			12.99				12.92	13.06
Aroclor-1254 {5}			13.77				13.70	13.84
Aroclor-1260	13.76	13.77	13.76	13.76	13.76	13.76	13.69	13.83
Aroclor-1260 {2}	14.32	14.32	14.32	14.32	14.32	14.32	14.25	14.39
Aroclor-1260 {3}	15.93	15.93	15.93	15.93	15.93	15.93	15.86	16.00
Aroclor-1260 {4}	16.83	16.84	16.84	16.84	16.84	16.84	16.77	16.91
Aroclor-1260 {5}	18.86	18.86	18.86	18.86	18.86	18.86	18.79	18.93

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000 **Instrument ID:** GC-R
GC Column (1st): DB-5

Data File: R1003.D R1004.D R1005.D R1006.D R1007.D

Compound	CALIBRATION FACTORS 50	100	500	1000	2000	MEAN	%RSD
Aroclor-1016	170143	168264	148645	143138	136067	153251	9.95
Aroclor-1016 {2}	227180	214113	178323	170490	159971	190015	15.30
Aroclor-1016 {3}	238543	227994	199023	194165	184586	208862	11.10
Aroclor-1016 {4}	159573	153786	134839	130220	123144	140312	11.15
Aroclor-1016 {5}	209543	201573	174442	168947	160469	182995	11.68
Aroclor-1221			55581				
Aroclor-1221 {2}			80372				
Aroclor-1221 {3}			56127				
Aroclor-1221 {4}			196356				
Aroclor-1221 {5}			36180				
Aroclor-1232			129795				
Aroclor-1232 {2}			76279				
Aroclor-1232 {3}			98915				
Aroclor-1232 {4}			53211				
Aroclor-1232 {5}			92633				
Aroclor-1242			134988				
Aroclor-1242 {2}			90337				
Aroclor-1242 {3}			106361				
Aroclor-1242 {4}			178970				
Aroclor-1242 {5}			162075				
Aroclor-1248			374657				
Aroclor-1248 {2}			141433				
Aroclor-1248 {3}			124474				
Aroclor-1248 {4}			327501				
Aroclor-1248 {5}			291291				
Aroclor-1254			329041				
Aroclor-1254 {2}			261671				
Aroclor-1254 {3}			522682				
Aroclor-1254 {4}			309538				
Aroclor-1254 {5}			441143				
Aroclor-1260	680470	641171	556961	551437	537825	593573	10.67
Aroclor-1260 {2}	357291	339296	288345	280962	269273	307033	12.64
Aroclor-1260 {3}	850032	790814	693451	691647	675727	740334	10.31
Aroclor-1260 {4}	477866	454644	399970	397714	387243	423487	9.49
Aroclor-1260 {5}	224625	214468	187876	183456	175762	197237	10.71
					Average %RSD		11.30

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC-R

GC Column (2nd): DB-1701P

Data File: R1003.C R1004.C R1005.C R1006.C R1007.C

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	50	100	500	1000	2000	RT	FROM	TO
Aroclor-1016	4.98	4.97	4.97	4.97	4.97	4.97	4.90	5.04
Aroclor-1016 {2}	5.90	5.90	5.90	5.90	5.90	5.90	5.83	5.97
Aroclor-1016 {3}	7.13	7.13	7.13	7.12	7.12	7.13	7.06	7.20
Aroclor-1016 {4}	7.47	7.47	7.47	7.47	7.47	7.47	7.40	7.54
Aroclor-1016 {5}	7.77	7.77	7.77	7.76	7.76	7.77	7.70	7.84
Aroclor-1221			3.10				3.03	3.17
Aroclor-1221 {2}			4.49				4.42	4.56
Aroclor-1221 {3}			4.83				4.76	4.90
Aroclor-1221 {4}			4.97				4.90	5.04
Aroclor-1221 {5}			6.28				6.21	6.35
Aroclor-1232			4.97				4.90	5.04
Aroclor-1232 {2}			6.51				6.44	6.58
Aroclor-1232 {3}			7.47				7.40	7.54
Aroclor-1232 {4}			7.77				7.70	7.84
Aroclor-1232 {5}			8.80				8.73	8.87
Aroclor-1242			6.51				6.44	6.58
Aroclor-1242 {2}			7.76				7.69	7.83
Aroclor-1242 {3}			9.07				9.00	9.14
Aroclor-1242 {4}			10.05				9.98	10.12
Aroclor-1242 {5}			10.74				10.67	10.81
Aroclor-1248			7.13				7.06	7.20
Aroclor-1248 {2}			8.13				8.06	8.20
Aroclor-1248 {3}			8.80				8.73	8.87
Aroclor-1248 {4}			9.07				9.00	9.14
Aroclor-1248 {5}			9.69				9.62	9.76
Aroclor-1254			10.65				10.58	10.72
Aroclor-1254 {2}			11.69				11.62	11.76
Aroclor-1254 {3}			12.75				12.68	12.82
Aroclor-1254 {4}			13.18				13.11	13.25
Aroclor-1254 {5}			14.27				14.20	14.34
Aroclor-1260	13.18	13.19	13.18	13.18	13.18	13.18	13.11	13.25
Aroclor-1260 {2}	14.27	14.27	14.27	14.27	14.27	14.27	14.20	14.34
Aroclor-1260 {3}	15.38	15.38	15.38	15.38	15.38	15.38	15.31	15.45
Aroclor-1260 {4}	16.33	16.33	16.33	16.33	16.33	16.33	16.26	16.40
Aroclor-1260 {5}	19.38	19.38	19.38	19.38	19.38	19.38	19.31	19.45

4785

PCB INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC-R

GC Column (2nd): DB-1701P

Data File: R1003.C R1004.C R1005.C R1006.C R1007.C

Compound	CALIBRATION FACTORS 50	100	500	1000	2000	MEAN	%RSD
Aroclor-1016	251779	237359	194441	185684	179031	209659	15.61
Aroclor-1016 {2}	496857	461354	383664	369040	347617	411706	15.57
Aroclor-1016 {3}	1050604	985332	852874	845208	817049	910213	11.20
Aroclor-1016 {4}	441372	415722	348032	340457	324994	374115	13.68
Aroclor-1016 {5}	363306	345484	294861	292451	281461	315513	11.54
Aroclor-1221			72432				
Aroclor-1221 {2}			100034				
Aroclor-1221 {3}			69694				
Aroclor-1221 {4}			251645				
Aroclor-1221 {5}			33515				
Aroclor-1232			170719				
Aroclor-1232 {2}			65431				
Aroclor-1232 {3}			130229				
Aroclor-1232 {4}			109912				
Aroclor-1232 {5}			158273				
Aroclor-1242			114757				
Aroclor-1242 {2}			196746				
Aroclor-1242 {3}			217987				
Aroclor-1242 {4}			232322				
Aroclor-1242 {5}			165486				
Aroclor-1248			495877				
Aroclor-1248 {2}			554012				
Aroclor-1248 {3}			395626				
Aroclor-1248 {4}			357515				
Aroclor-1248 {5}			245248				
Aroclor-1254			181841				
Aroclor-1254 {2}			139549				
Aroclor-1254 {3}			501151				
Aroclor-1254 {4}			324961				
Aroclor-1254 {5}			616318				
Aroclor-1260	839695	775473	651859	640761	616343	704826	13.81
Aroclor-1260 {2}	852900	801645	705106	704250	687511	750283	9.72
Aroclor-1260 {3}	655697	607726	523859	522778	505818	563176	11.58
Aroclor-1260 {4}	1314644	1251370	1134936	1150214	1128079	1195849	6.94
Aroclor-1260 {5}	354736	320538	285346	284865	279686	305034	10.56
					Average %RSD		12.02

4786

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/27/2000 **Instrument ID:** GC-R

Data File: R1333.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.72	4.65	4.79	153251	143620	6.28
Aroclor-1016 {2}	5.65	5.58	5.72	190015	169822	10.63
Aroclor-1016 {3}	6.10	6.03	6.17	208862	191715	8.21
Aroclor-1016 {4}	7.85	7.78	7.92	140312	130846	6.75
Aroclor-1016 {5}	8.29	8.22	8.36	182995	169620	7.31
Aroclor-1260	13.76	13.69	13.83	593573	545792	8.05
Aroclor-1260 {2}	14.32	14.25	14.39	307033	285455	7.03
Aroclor-1260 {3}	15.93	15.86	16.00	740334	681089	8.00
Aroclor-1260 {4}	16.84	16.77	16.91	423487	391615	7.53
Aroclor-1260 {5}	18.86	18.79	18.93	197237	184953	6.23
					Average %D	7.60

Data File: R1333.C **GC Column (2nd):** DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
Aroclor-1016	4.97	4.90	5.04	209659	190195	9.28
Aroclor-1016 {2}	5.90	5.83	5.97	411706	384124	6.70
Aroclor-1016 {3}	7.12	7.05	7.19	910213	850894	6.52
Aroclor-1016 {4}	7.47	7.40	7.54	374115	350312	6.36
Aroclor-1016 {5}	7.76	7.69	7.83	315513	294147	6.77
Aroclor-1260	13.18	13.11	13.25	704826	659871	6.38
Aroclor-1260 {2}	14.26	14.19	14.33	750283	711262	5.20
Aroclor-1260 {3}	15.37	15.30	15.44	563176	529775	5.93
Aroclor-1260 {4}	16.32	16.25	16.39	1195849	1153702	3.52
Aroclor-1260 {5}	19.38	19.31	19.45	305034	301096	1.29
					Average %D	5.80

4787

PCB CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/28/2000 **Instrument ID:** GC-R

Data File: R1352.D **GC Column (1st):** DB-5

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
Aroclor-1016	4.72	4.65	4.79	153251	147459	3.78
Aroclor-1016 {2}	5.65	5.58	5.72	190015	176546	7.09
Aroclor-1016 {3}	6.10	6.03	6.17	208862	198014	5.19
Aroclor-1016 {4}	7.85	7.78	7.92	140312	134947	3.82
Aroclor-1016 {5}	8.29	8.22	8.36	182995	175312	4.20
Aroclor-1260	13.76	13.69	13.83	593573	561902	5.34
Aroclor-1260 {2}	14.32	14.25	14.39	307033	292967	4.58
Aroclor-1260 {3}	15.93	15.86	16.00	740334	702375	5.13
Aroclor-1260 {4}	16.84	16.77	16.91	423487	406329	4.05
Aroclor-1260 {5}	18.86	18.79	18.93	197237	187838	4.77
					Average %D	4.79

Data File: R1352.C **GC Column (2nd):** DB-1701P

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
Aroclor-1016	4.97	4.90	5.04	209659	203852	2.77
Aroclor-1016 {2}	5.90	5.83	5.97	411706	392540	4.66
Aroclor-1016 {3}	7.12	7.05	7.19	910213	870717	4.34
Aroclor-1016 {4}	7.47	7.40	7.54	374115	357308	4.49
Aroclor-1016 {5}	7.76	7.69	7.83	315513	301486	4.45
Aroclor-1260	13.18	13.11	13.25	704826	672355	4.61
Aroclor-1260 {2}	14.26	14.19	14.33	750283	726589	3.16
Aroclor-1260 {3}	15.37	15.30	15.44	563176	541741	3.81
Aroclor-1260 {4}	16.32	16.25	16.39	1195849	1180245	1.30
Aroclor-1260 {5}	19.38	19.31	19.45	305034	330856	8.47
					Average %D	4.20

47888

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/27/2000

Client ID	Lab Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(6723.6741)	1027-BK1	AQUEOUS	83		80		87		86	
FB5	6723-018	AQUEOUS	80		86		85		84	
GW-3	6734-001	AQUEOUS	67		85		85		85	
GW-6	6734-004	AQUEOUS	84		81		82		79	
FIELD_BLANK	6741-002	AQUEOUS	74		80		80		79	
FMW-9	6741-003	AQUEOUS	66		83		71		80	
FMW-17	6741-004	AQUEOUS	64		82		69		80	
FMW-18	6741-005	AQUEOUS	61		86		64		85	
FMW-12	6741-006	AQUEOUS	57	*	94		60		92	
PCB	6741-002-MS1	AQUEOUS	85		84		88		86	
PCB	6741-002-MSD	AQUEOUS	84		84		87		84	
PCB	PBW1027-MS	AQUEOUS	84		84		86		85	
(6763..6797)	1027-BK2	SOIL	81		79		85		84	
WC-3	6797-001	SOIL	40	*	80		50	*	70	
PCB	6789-001-MS2	SOIL	71		86		74		86	
PCB	6789-001-MSD	SOIL	77		92		80		93	
PCB	PBS1027-MS2	SOIL	82		81		84		82	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59 - 147	59 - 151
DCB = Decachlorobiphenyl	63 - 179	60 - 150

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

AQUEOUS PCB MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6741-002-MSD1

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
Aroclor-1016	10.0	0.0	11.1	111	35 - 161
Aroclor-1260	10.0	0.0	12.1	121	53 - 192

Compound	SAMPLE CONC. ADDED	MSD CONC. ADDED	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1016	0.0	10.4	104	7	21	35 - 161
Aroclor-1260	0.0	11.3	113	7	23	53 - 192

 # Column to be used to flag recovery and RPD values with an asterisk
*** Values outside of QC limits**
NC Non calculable

RPD: __0___ out of __2__ outside limits

Spike Recovery: __0___ out of __4__ outside limits

4790

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-R **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.99 **DCB 1** 20.95 **TCMX 2** 3.69 **DCB 2** 20.61

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX1 RT	#	DCB1 RT	#	TCMX2 RT	#	DCB2 RT	#
(6723.6741)	1027-BK1	10/27/2000	16:08	3.99		20.95		3.69		20.61	
FB	6723-018	10/27/2000	16:34	3.99		20.94		3.69		20.61	
GW-3	6734-001	10/27/2000	17:00	3.99		20.95		3.69		20.61	
GW-6	6734-004	10/27/2000	17:27	3.99		20.94		3.69		20.61	
FIELD_BLANK	6741-002	10/27/2000	17:53	3.99		20.94		3.69		20.61	
FMW-9	6741-003	10/27/2000	18:19	3.99		20.94		3.69		20.61	
FMW-17	6741-004	10/27/2000	18:45	3.99		20.94		3.69		20.61	
FMW-18	6741-005	10/27/2000	19:12	3.99		20.94		3.69		20.61	
FMW-12	6741-006	10/27/2000	19:38	3.99		20.95		3.69		20.61	
PCB	6741-002-MS1	10/27/2000	20:04	3.99		20.94		3.69		20.61	
PCB	6741-002-MSD1	10/27/2000	20:30	3.99		20.95		3.69		20.61	
PCB	PBW1027-MS1	10/27/2000	20:56	3.99		20.94		3.69		20.61	
(6763..6797)	1027-BK2	10/27/2000	21:23	3.99		20.94		3.69		20.61	
WC-3	6797-001	10/27/2000	22:15	3.99		20.95		3.69		20.61	
PCB	6789-001-MS2	10/27/2000	22:41	3.99		20.94		3.69		20.61	
PCB	6789-001-MSD2	10/27/2000	23:07	3.99		20.94		3.69		20.61	
PCB	PBS1027-MS2	10/27/2000	23:34	3.99		20.94		3.69		20.61	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene **(± 0.05 Minutes)**

DCB = Decachlorobiphenyl **(± 0.10 Minutes)**

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1336.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1336.D\ECD2A.CH
Acq On : 27 Oct 2000 17:00 Operator:
Sample : GW-3,6734-001,A,1000ml,100,10/27/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/24/00,10/65/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 27 17:24:15 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	111.6E6	191.4E6	13.720	17.476 #
Spiked Amount 205.000	Range 75 - 125		Recovery =		6.69%#	8.52%#
2) S DCB	20.95	20.61	130.2E6	203.1E6	17.429	17.385
Spiked Amount 205.000			Recovery =		8.50%	8.48%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

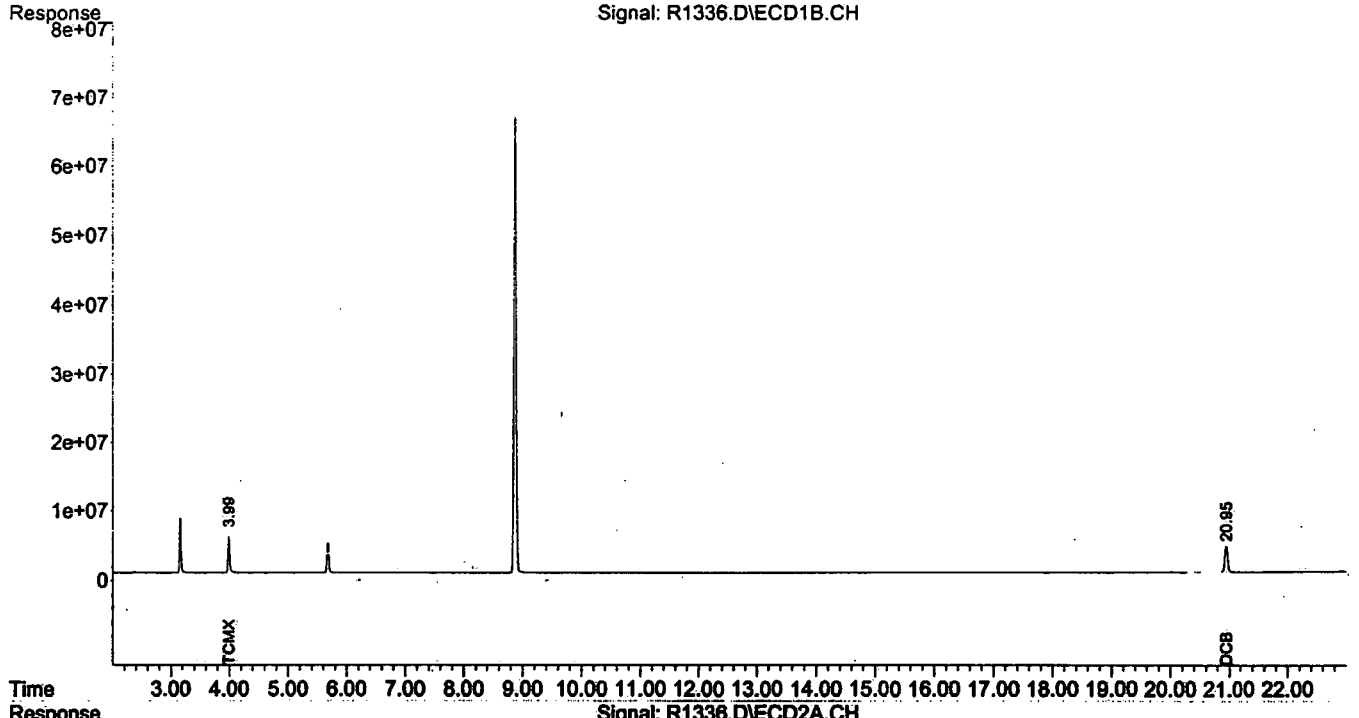
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

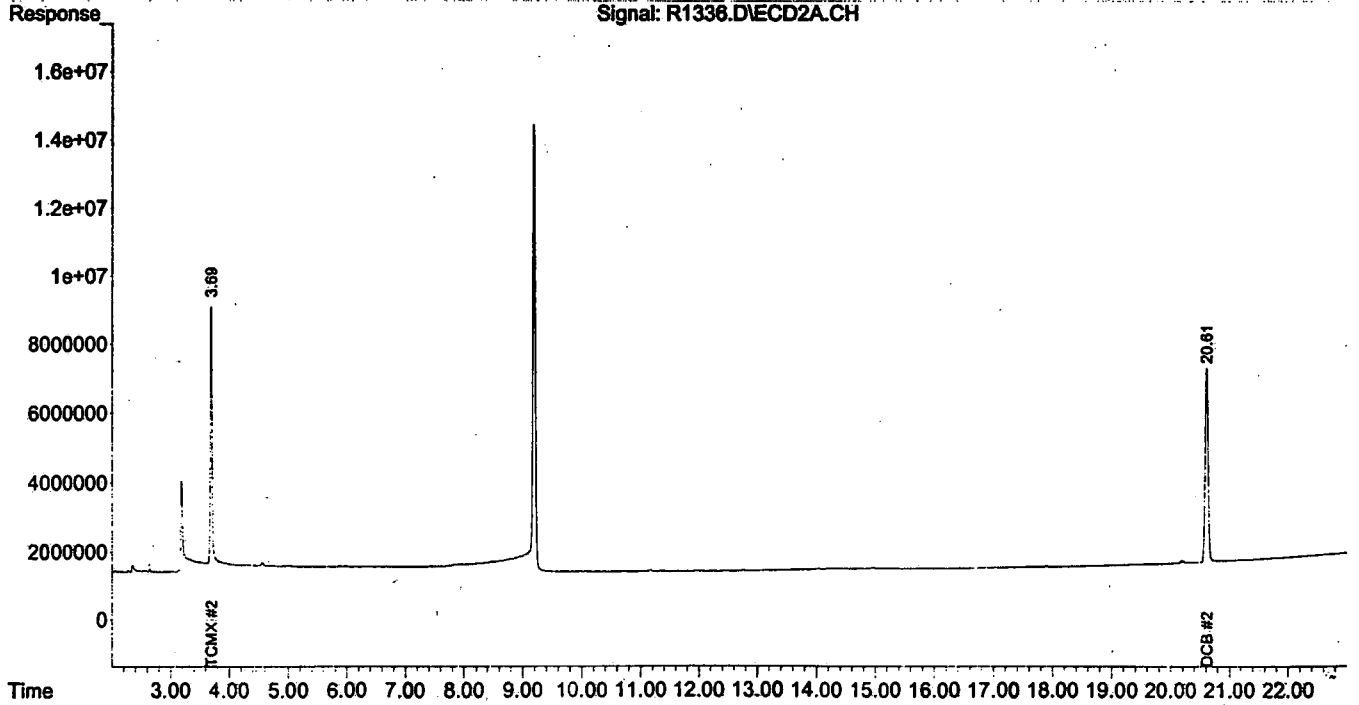
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1336.D\ECD1B.CH Vial: 5
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1336.D\ECD2A.CH
Acq On : 27 Oct 2000 17:00 Operator:
Sample : GW-3,6734-001,A,1000ml,100,10/27/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/24/00,10/65/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 17:12 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4793

202

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1337.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1337.D\ECD2A.CH
Acq On : 27 Oct 2000 17:27 Operator:
Sample : GW-6,6734-004,A,1000ml,100,10/27/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/24/00,10/65/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 27 17:50:32 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	140.3E6	185.1E6	17.253	16.901
Spiked Amount 205.000	Range 75 - 125		Recovery =		8.42%#	8.24%#
2) S DCB	20.94	20.61	123.6E6	188.2E6	16.549	16.107m
Spiked Amount 205.000			Recovery =		8.07%	7.86%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

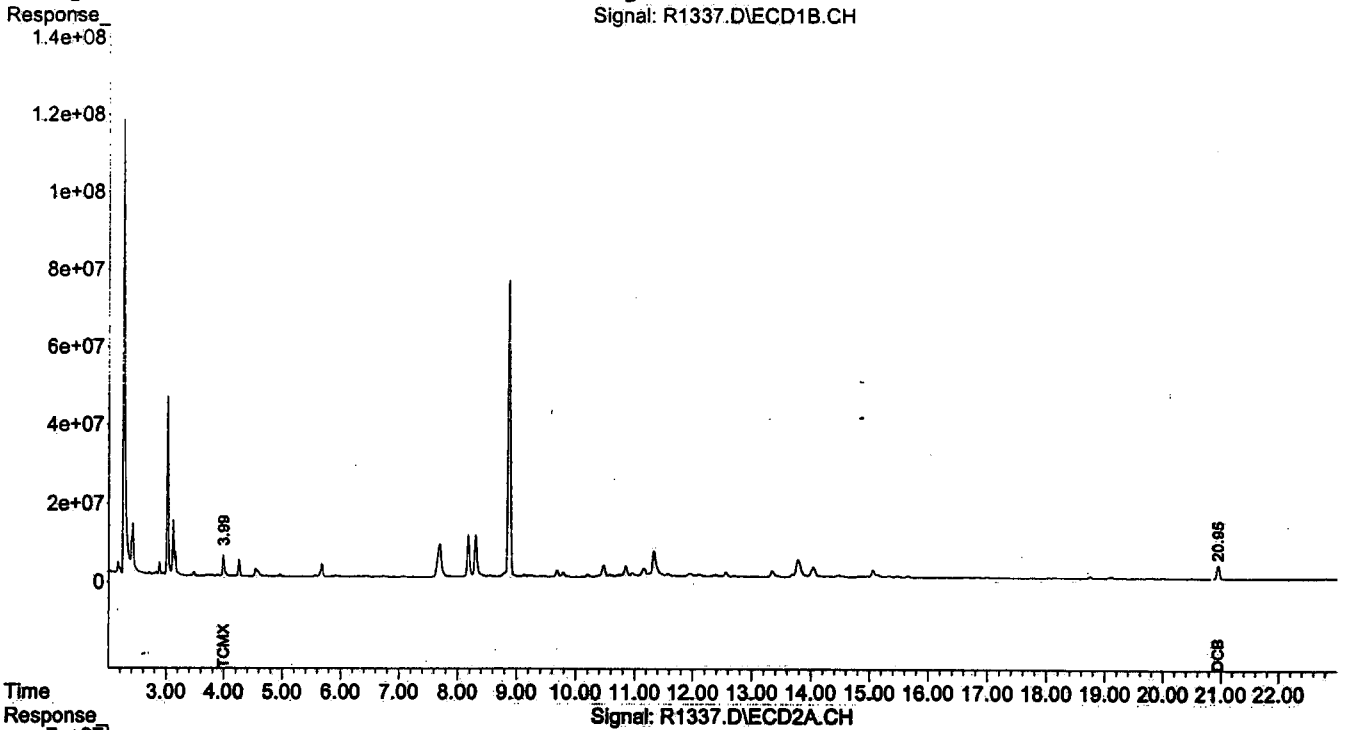
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1337.D RPCB1009.M Mon Oct 30 17:29:35 2000 GC_R

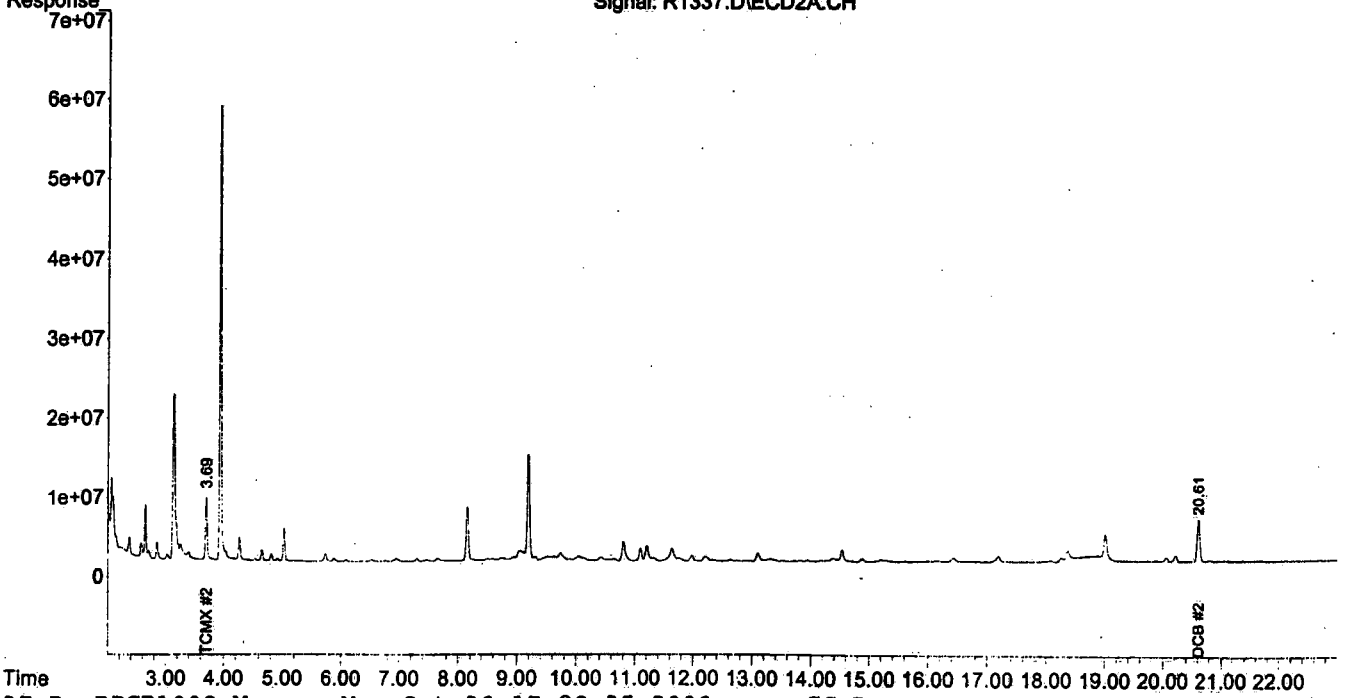
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1337.D\ECD1B.CH Vial: 6
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1337.D\ECD2A.CH
Acq On : 27 Oct 2000 17:27 Operator:
Sample : GW-6,6734-004,A,1000ml,100,10/27/00 Inst : GC_R
Misc : ENVTACT/ORBIS,10/24/00,10/65/00,10 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 17:19 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4795

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1334.D\ECD1B.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1334.D\ECD2A.CH
Acq On : 27 Oct 2000 16:08 Operator:
Sample : (6723.6741),1027-BK1,A,1000ml,100,10/27/ Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 27 16:31:53 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	1379.4E6	1950.7E6	169.646	178.074
Spiked Amount 205.000	Range 75 - 125		Recovery =		82.75%	86.87%
2) S DCB	20.95	20.61	1231.4E6	2064.6E6	164.833	176.709
Spiked Amount 205.000			Recovery =		80.41%	86.20%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1334.D RPCB1009.M Mon Oct 30 17:29:14 2000 GC_R

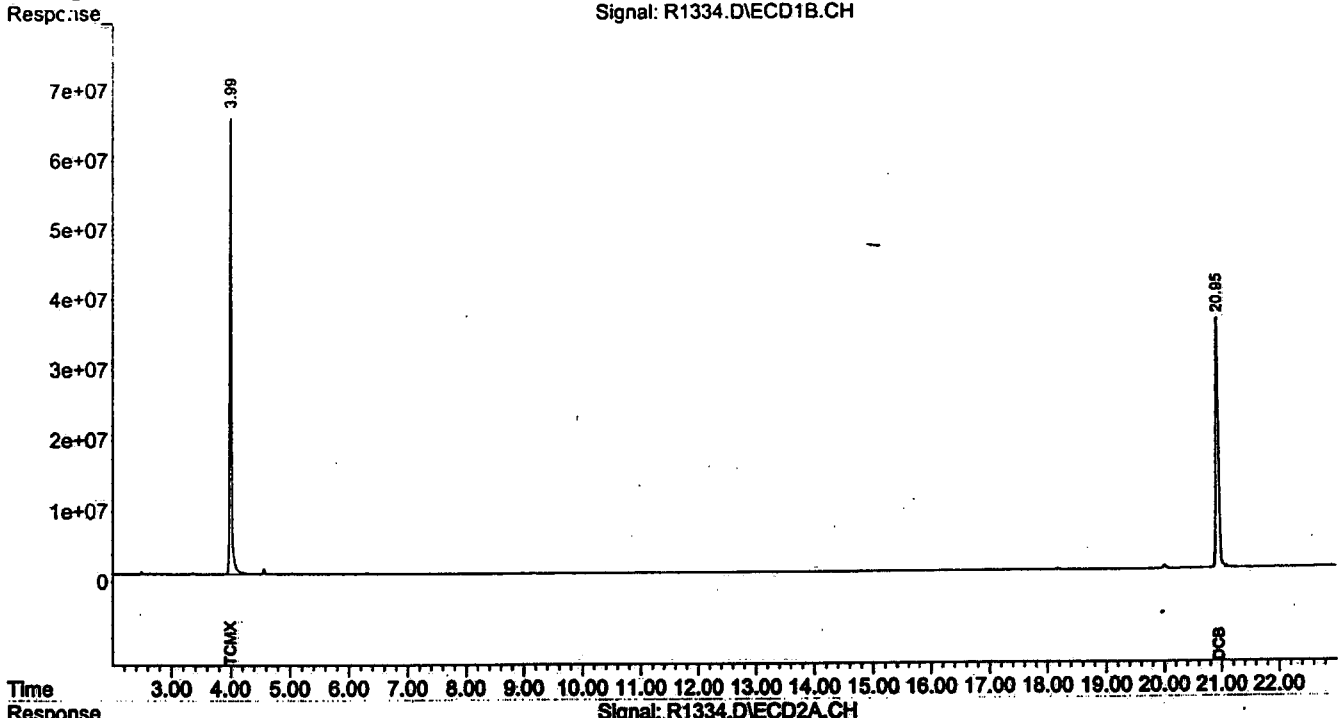
4796

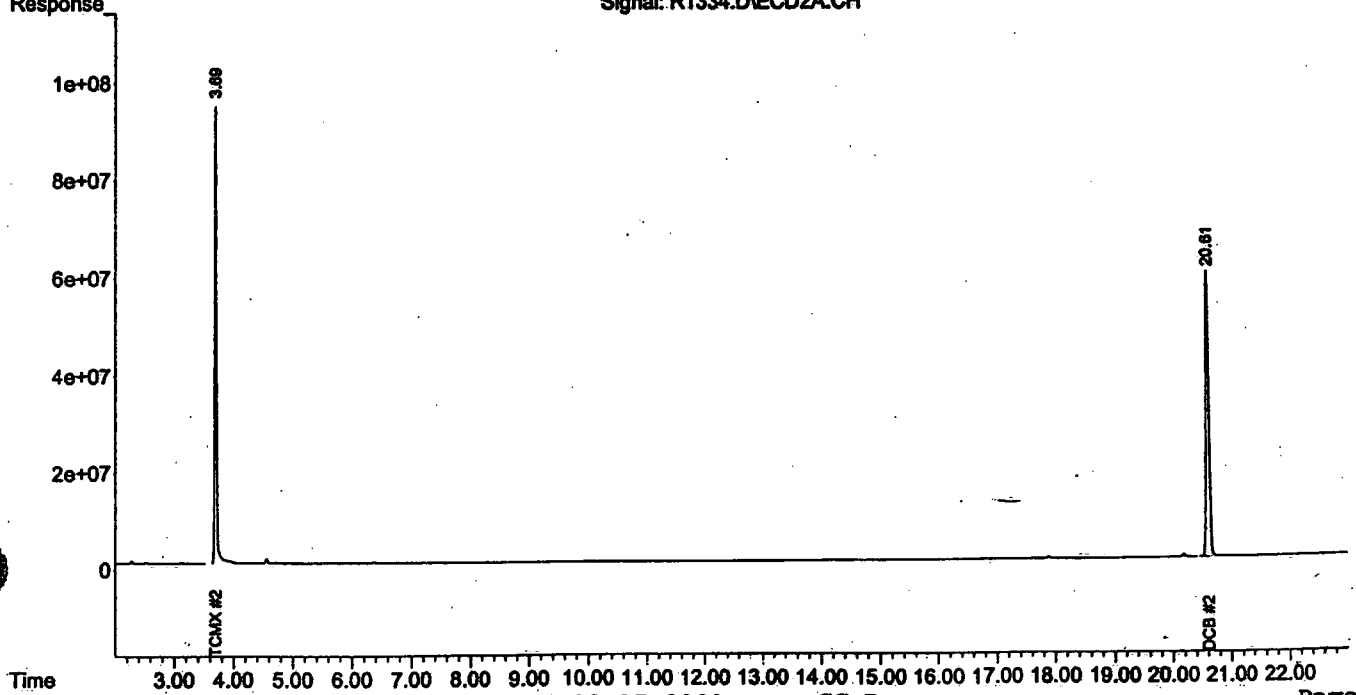
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1334.D\ECD1B.CH Vial: 3
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1334.D\ECD2A.CH
Acq On : 27 Oct 2000 16:08 Operator:
Sample : (6723.6741),1027-BK1,A,1000ml,100,10/27/ Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 17:11 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





216

4797

Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1333.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1333.D\ECD2A.CH
Acq On : 27 Oct 2000 15:42 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 27 16:05:38 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
[illegible] :

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound		RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds							
1) S TCMX		3.99	3.69	778.6E6	1102.5E6	95.758	100.651
Spiked Amount	205.000	Range	75 - 125	Recovery	=	46.71%#	49.10%#
2) S DCB		20.94	20.61	690.0E6	1127.3E6	92.359	96.487
Spiked Amount	205.000			Recovery	=	45.05%	47.07%
Target Compounds							
3) L2 Aroclor-1016		4.72	4.97	71810058	95097494	468.577	453.583
4) L2 Aroclor-1016	(2)	5.65	5.90	84911098	192.1E6	446.865	466.503
5) L2 Aroclor-1016	(3)	6.10	7.12	95857559	425.4E6	458.951	467.415
6) L2 Aroclor-1016	(4)	7.85	7.47	65422814	175.2E6	466.265	468.187
7) L2 Aroclor-1016	(5)	8.29	7.76	84810023	147.1E6	463.456	466.142
[illegible]m Aroclor-1016				402.8E6	1034.8E6	2304.114	2321.829
[illegible]ge Aroclor-1016						460.823	464.366
Sum Aroclor-1221				0	0	N.D.	N.D.
verage Aroclor-1221						0.000	0.000
Sum Aroclor-1232				0	0	N.D.	N.D.
verage Aroclor-1232						0.000	0.000
Sum Aroclor-1242				0	0	N.D.	N.D.
verage Aroclor-1242						0.000	0.000
Sum Aroclor-1248				0	0	N.D.	N.D.
verage Aroclor-1248						0.000	0.000
Sum Aroclor-1254				0	0	N.D.	N.D.
verage Aroclor-1254						0.000	0.000
13) L8 Aroclor-1260		13.76	13.18	272.9E6	329.9E6	459.751	468.109
14) L8 Aroclor-1260	(2)	14.32	14.26	142.7E6	355.6E6	464.860	473.996
15) L8 Aroclor-1260	(3)	15.93	15.37	340.5E6	264.9E6	459.987	470.346
16) L8 Aroclor-1260	(4)	16.84	16.32	195.8E6	576.9E6	462.369	482.378
17) L8 Aroclor-1260	(5)	18.86	19.38	92476613	150.5E6	468.859	493.544
Sum Aroclor-1260				1044.5E6	1677.9E6	2315.827	2388.374
Average Aroclor-1260						463.165	477.675

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1333.D RPCB1009.M Mon Oct 30 17:29:08 2000 GC_R

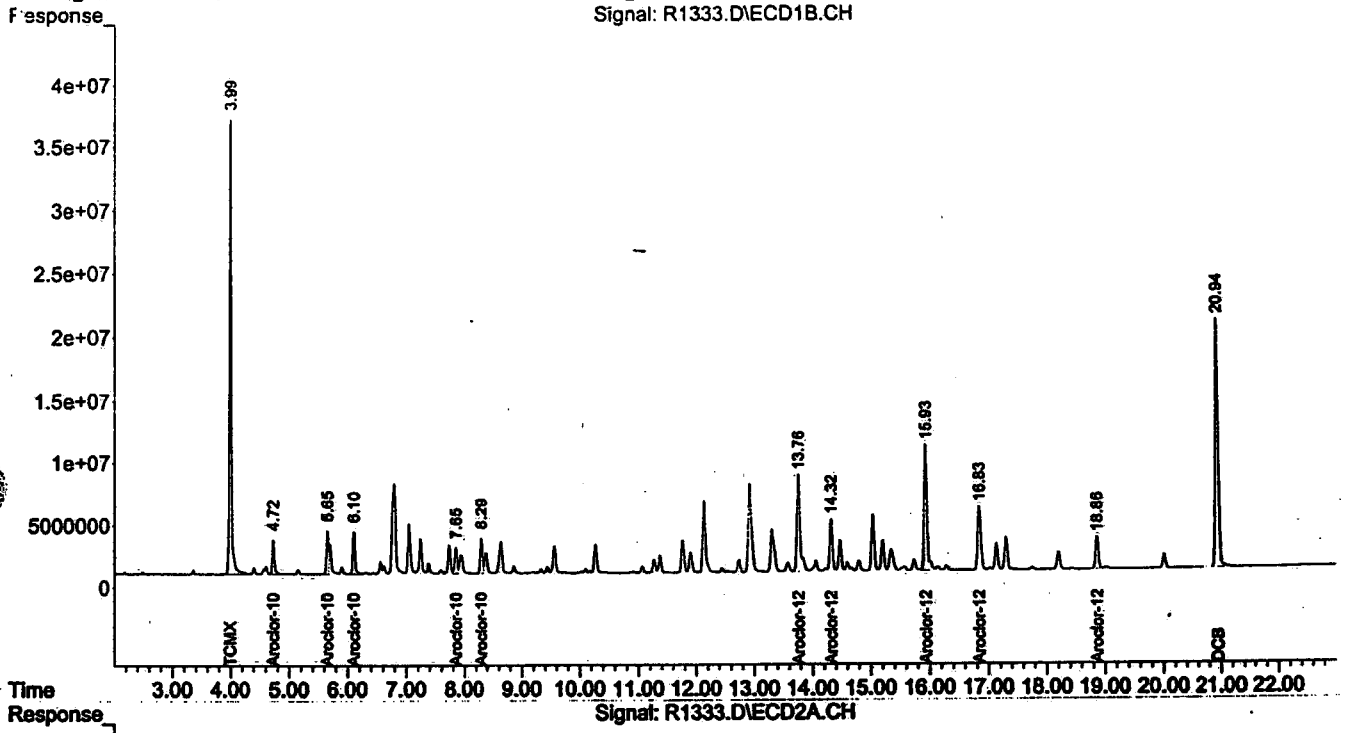
47798

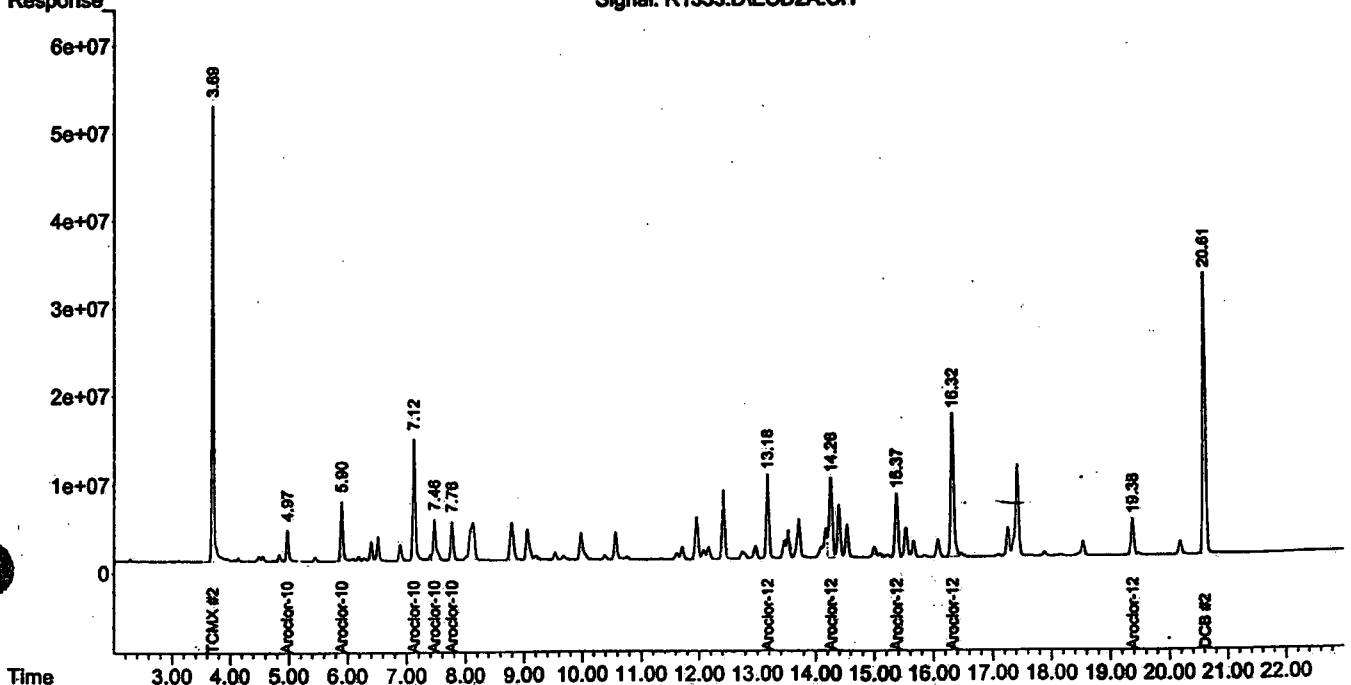
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1333.D\ECD1B.CH Vial: 2
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1333.D\ECD2A.CH
Acq On : 27 Oct 2000 15:42 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 28 17:19 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
Database Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1352.D\ECD1B.CH Vial: 21
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1352.D\ECD2A.CH
Acq On : 28 Oct 2000 00:00 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 28 00:23:45 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Initial Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.99	3.69	803.5E6	1135.0E6	98.824	103.615
Spiked Amount 205.000	Range 75 - 125		Recovery =		48.21%#	50.54%#
2) S DCB	20.94	20.61	715.0E6	1155.3E6	95.706	98.882
Spiked Amount 205.000			Recovery =		46.69%	48.24%
Target Compounds						
3) L2 Aroclor-1016	4.72	4.97	73729597	101.9E6	481.102	486.152
4) L2 Aroclor-1016 {2}	5.65	5.90	88273247	196.3E6	464.559	476.723
5) L2 Aroclor-1016 {3}	6.10	7.12	99006867	435.4E6	474.030	478.304
6) L2 Aroclor-1016 {4}	7.85	7.47	67473692	178.7E6	480.882	477.537
7) L2 Aroclor-1016 {5}	8.29	7.76	87655932	150.7E6	479.007	477.773
Sum Aroclor-1016			416.1E6	1063.0E6	2379.580	2396.489
Average Aroclor-1016					475.916	479.298
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L8 Aroclor-1260	13.76	13.18	281.0E6	336.2E6	473.322	476.965
34) L8 Aroclor-1260 {2}	14.32	14.26	146.5E6	363.3E6	477.094	484.210
35) L8 Aroclor-1260 {3}	15.93	15.37	351.2E6	270.9E6	474.364	480.969
36) L8 Aroclor-1260 {4}	16.84	16.32	203.2E6	590.1E6	479.742	493.476
37) L8 Aroclor-1260 {5}	18.86	19.38	93918988	165.4E6	476.172	542.326
Sum Aroclor-1260			1075.7E6	1725.9E6	2380.693	2477.946
Average Aroclor-1260					476.139	495.589

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
R1352.D RPCB1009.M Mon Oct 30 17:30:34 2000 GC_R

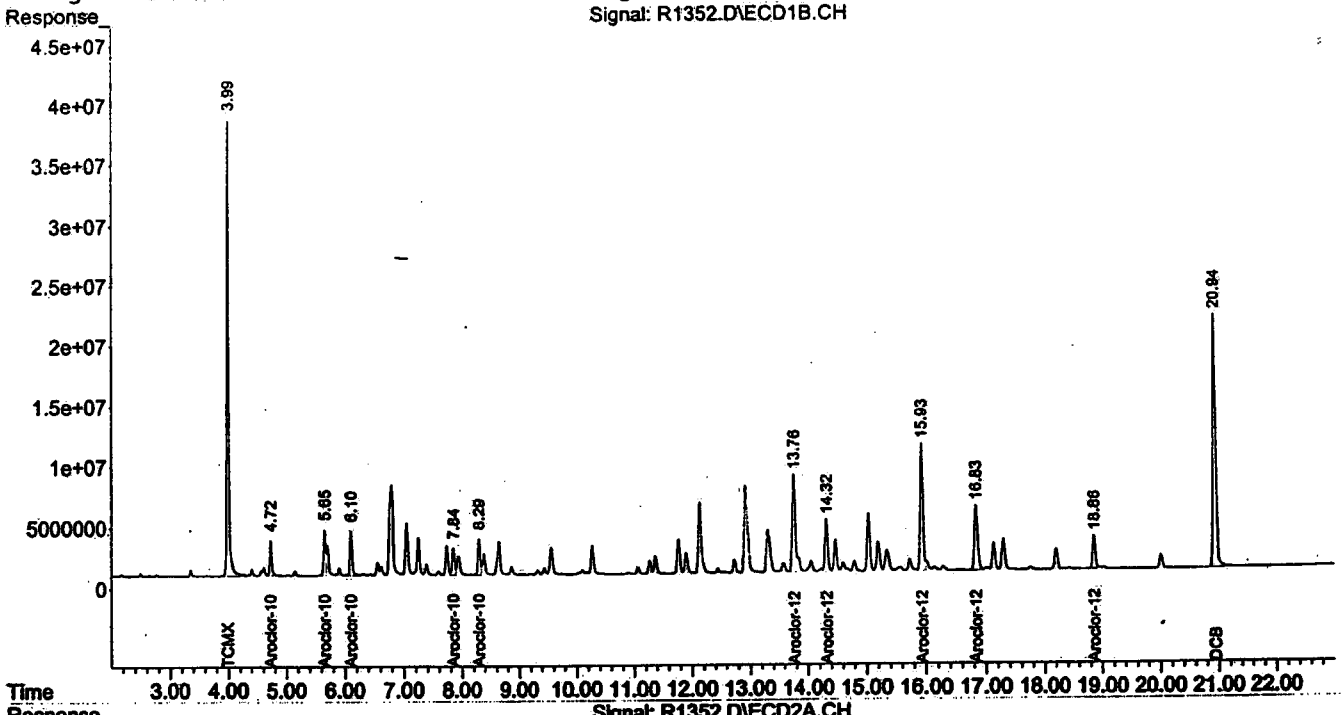
4800

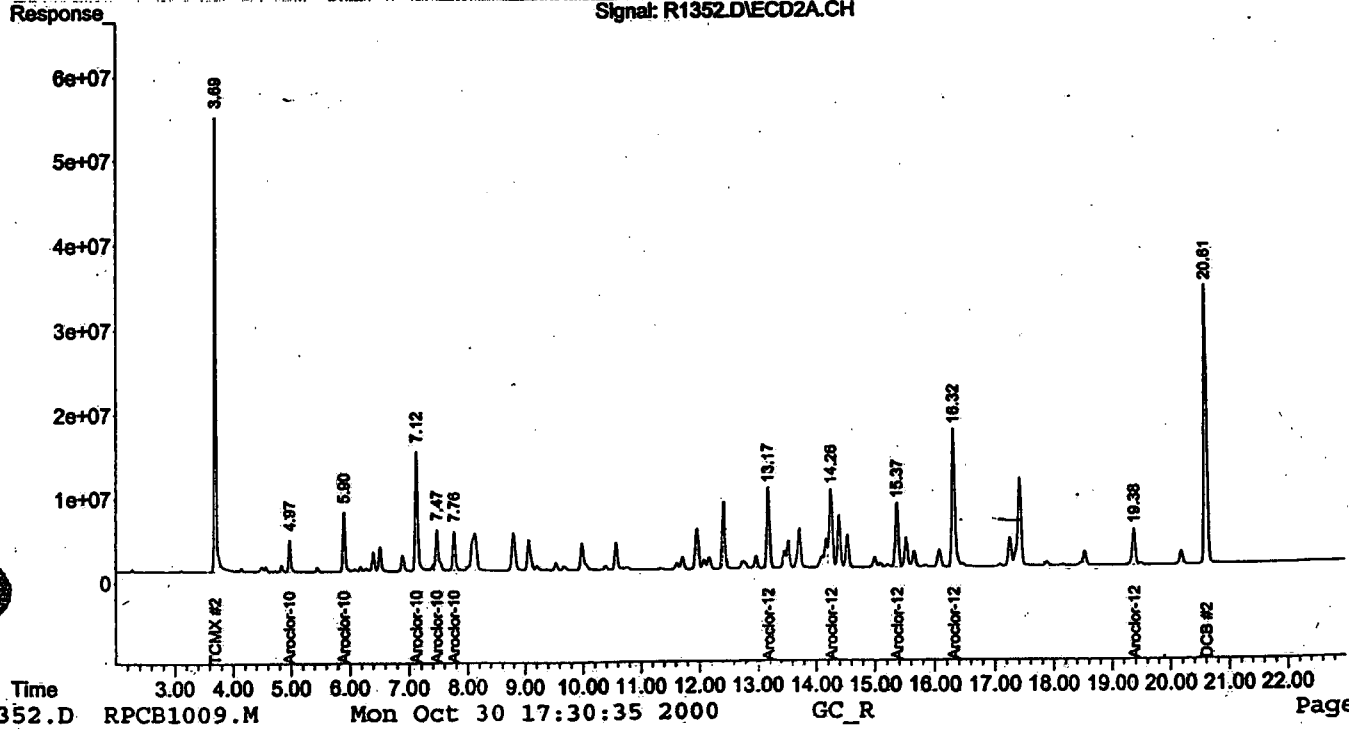
Quantitation Report (QT Reviewed)

Signal #1 : C:\MSDCHEM\1\DATA\10-27-00\R1352.D\ECD1B.CH Vial: 21
Signal #2 : C:\MSDCHEM\1\DATA\10-27-00\R1352.D\ECD2A.CH
Acq On : 28 Oct 2000 00:00 Operator:
Sample : 8082_C_IAS1404,0.5_PPM Inst : GC_R
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 17:16 2000 Quant Results File: RPCB1009.RES

Quant Method : C:\MSDCHEM\1\METHODS\RPCB1009.M (Chemstation Integrator)
Title :
Last Update : Tue Oct 10 16:43:15 2000
Response via : Multiple Level Calibration
DataAcq Meth : RPCB1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4601

PESTICIDE METHOD BLANK SUMMARY

Lab File ID: W2786.D

Instrument ID: GC-W

Date Extracted: 10/27/2000

Matrix: AQUEOUS

Date Analyzed: 10/30/2000

Time Analyzed: 02:56

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

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
FB5	6723-018	10/30/2000	03:21
GW-3	6734-001	10/30/2000	03:46
GW-6	6734-004	10/30/2000	04:11
FIELD_BLANK	6741-002	10/30/2000	04:36
FMW-9	6741-003	10/30/2000	05:01
FMW-17	6741-004	10/30/2000	05:26
FMW-18	6741-005	10/30/2000	05:51
FMW-12	6741-006	10/30/2000	06:16
PEST	6741-002-MS1	10/30/2000	06:41
PEST	6741-002-MSD1	10/30/2000	07:06
PEST	PBW1027-MS1	10/30/2000	07:31

4802

INTEGRATED ANALYTICAL LABORATORIES

PESTICIDES

Client/Project: NA

Lab ID: 1027-BK1
Client ID: (6723..6741)
Date Received: NA
Date Extracted: 10/27/2000
Date Analyzed: 10/30/2000
Data file: W2786.D

GC Column: DB-5/DB1701P
Sample wt/vol: 1000mL
Matrix-Units: Aqueous-µg/L (ppb)
Dilution Factor: 1
% Moisture: 100

Compound	Concentration	Q	MDL
alpha-BHC	ND		0.002
beta-BHC	ND		0.002
gamma-BHC	ND		0.002
delta-BHC	ND		0.002
Heptachlor	ND		0.002
Aldrin	ND		0.002
Heptachlor epoxide	ND		0.002
Endosulfan I	ND		0.002
4,4'-DDE	ND		0.002
Dieldrin	ND		0.002
Endrin	ND		0.002
Endosulfan II	ND		0.002
4,4'-DDD	ND		0.002
Endrin aldehyde	ND		0.002
Endosulfan sulfate	ND		0.002
4,4'-DDT	ND		0.002
Chlordane	ND		0.015
Toxaphene	ND		0.015

212

4803

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (1st): DB-5

Data File: W2386.D W2385.D W2384.D W2383.D W2382.D

Compound	RT OF STANDARDS					MEAN	RT WINDOW	
	10	50	100	200	300	RT	FROM	TO
alpha-BHC	4.61	4.61	4.61	4.61	4.61	4.61	4.54	4.68
beta-BHC	5.10	5.10	5.10	5.10	5.10	5.10	5.03	5.17
gamma-BHC	5.24	5.24	5.23	5.24	5.24	5.24	5.17	5.31
delta-BHC	5.71	5.71	5.71	5.71	5.71	5.71	5.64	5.78
Heptachlor	6.81	6.81	6.81	6.81	6.81	6.81	6.74	6.88
Aldrin	7.63	7.63	7.63	7.63	7.63	7.63	7.56	7.70
Heptachlor epoxide	8.64	8.64	8.64	8.64	8.64	8.64	8.57	8.71
Endosulfan I	9.56	9.56	9.56	9.56	9.56	9.56	9.49	9.63
4,4'-DDE	10.32	10.32	10.32	10.32	10.32	10.32	10.25	10.39
Dieldrin	10.25	10.25	10.25	10.25	10.25	10.25	10.18	10.32
Endrin	10.80	10.80	10.80	10.80	10.80	10.80	10.73	10.87
Endosulfan II	11.06	11.06	11.06	11.06	11.06	11.06	10.99	11.13
4,4'-DDD	11.43	11.43	11.43	11.43	11.43	11.43	11.36	11.50
Endrin aldehyde	11.58	11.58	11.58	11.58	11.58	11.58	11.51	11.65
Endosulfan sulfate	12.23	12.23	12.23	12.23	12.23	12.23	12.16	12.30
4,4'-DDT	12.45	12.45	12.45	12.45	12.45	12.45	12.38	12.52
Endrin ketone	13.44	13.44	13.44	13.44	13.44	13.44	13.37	13.51
Methoxychlor	14.12	14.12	14.12	14.12	14.12	14.12	14.05	14.19
alpha-Chlordane	9.66	9.66	9.66	9.66	9.66	9.66	9.59	9.73
gamma-Chlordane	9.25	9.25	9.25	9.25	9.25	9.25	9.18	9.32
Chlordane 500 ppb			9.25				9.18	9.32
Chlordane {2}			9.45				9.38	9.52
Chlordane {3}			9.66				9.59	9.73
Chlordane {4}			9.80				9.73	9.87
Chlordane {5}			11.65				11.58	11.72
Toxaphene 500 ppb			13.25				13.18	13.32
Toxaphene {2}			13.37				13.30	13.44
Toxaphene {3}			13.66				13.59	13.73
Toxaphene {4}			14.11				14.04	14.18
Toxaphene {5}			14.62				14.55	14.69

4804

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (1st): DB-5

Data File: W2386.D W2385.D W2384.D W2383.D W2382.D

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	26915425	26175522	25197701	25096122	24670862	25611126	3.57
beta-BHC	10909871	9610596	9114431	8946054	8711758	9458542	9.26
gamma-BHC	24519462	23542264	22602472	22390122	21925917	22996048	4.50
delta-BHC	24088145	23348614	22607722	22575806	22119634	22947984	3.38
Heptachlor	20404810	19572256	18780246	18471314	18004369	19046599	4.99
Aldrin	22050812	21354125	20419654	20027502	19400227	20650464	5.11
Heptachlor epoxide	20352865	19060665	18077706	17563187	16920468	18394978	7.32
Endosulfan I	19276992	17928002	17012346	16531774	15909309	17331685	7.58
4,4'-DDE	19639195	19038338	18478693	18228657	17740723	18625121	3.95
Dieldrin	19931790	19194060	18224322	17841394	17145229	18467359	5.98
Endrin	17875394	16574038	15814171	15541993	14968318	16154783	6.95
Endosulfan II	18184943	16704595	15904940	15548948	14961333	16260952	7.67
4,4'-DDD	15253438	14545199	14118547	14019993	13640649	14315565	4.30
Endrin aldehyde	14942959	12862422	12197407	11755048	11188376	12589243	11.53
Endosulfan sulfate	14811966	13570809	13113810	13008624	12522051	13405452	6.49
4,4'-DDT	15002820	14718205	14434214	14490465	14212260	14571593	2.06
Endrin ketone	19641380	17350329	16361711	15799173	15143281	16859175	10.40
Methoxychlor	7699618	6671422	6292700	6109577	5863514	6527366	11.01
alpha-Chlordane	20645878	19311961	18527328	18298018	17761262	18908889	5.92
gamma-Chlordane	20698467	19926781	19224367	19037169	18526789	19482715	4.34
Chlordane 500 ppb			1743688				
Chlordane {2}			336038				
Chlordane {3}			1675802				
Chlordane {4}			852298				
Chlordane {5}			570374				
Toxaphene 500 ppb			409140				
Toxaphene {2}			304880				
Toxaphene {3}			304812				
Toxaphene {4}			288772				
Toxaphene {5}			427868				

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (2nd): DB-1701P

Data File: W2386.C W2385.C W2384.C W2383.C W2382.C

Compound	LIST OF STANDARDS 10	50	100	200	300	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	5.38	5.38	5.38	5.38	5.38	5.38	5.31	5.45
beta-BHC	8.35	8.35	8.35	8.35	8.35	8.35	8.28	8.42
gamma-BHC	6.31	6.31	6.31	6.31	6.31	6.31	6.24	6.38
delta-BHC	8.90	8.90	8.90	8.90	8.90	8.90	8.83	8.97
Heptachlor	6.78	6.78	6.78	6.78	6.78	6.78	6.71	6.85
Aldrin	7.44	7.44	7.44	7.44	7.44	7.44	7.37	7.51
Heptachlor epoxide	9.25	9.25	9.25	9.25	9.25	9.25	9.18	9.32
Endosulfan I	9.92	9.93	9.92	9.92	9.92	9.92	9.85	9.99
4,4'-DDE	10.70	10.70	10.70	10.70	10.70	10.70	10.63	10.77
Dieldrin	10.95	10.95	10.95	10.95	10.95	10.95	10.88	11.02
Endrin	11.47	11.47	11.47	11.47	11.47	11.47	11.40	11.54
Endosulfan II	12.88	12.89	12.88	12.89	12.89	12.88	12.81	12.95
4,4'-DDD	12.88	12.89	12.88	12.89	12.89	12.88	12.81	12.95
Endrin aldehyde	14.02	14.02	14.02	14.02	14.02	14.02	13.95	14.09
Endosulfan sulfate	14.91	14.91	14.91	14.91	14.91	14.91	14.84	14.98
4,4'-DDT	13.36	13.36	13.36	13.36	13.36	13.36	13.29	13.43
Endrin ketone	15.93	15.93	15.93	15.93	15.93	15.93	15.86	16.00
Methoxychlor	15.22	15.22	15.22	15.22	15.22	15.22	15.15	15.29
alpha-Chlordane	10.31	10.31	10.31	10.31	10.31	10.31	10.24	10.38
gamma-Chlordane	10.16	10.16	10.16	10.16	10.16	10.16	10.09	10.23
Chlordane 500 ppb			9.29				9.22	9.36
Chlordane {2}			9.76				9.69	9.83
Chlordane {3}			10.16				10.09	10.23
Chlordane {4}			10.31				10.24	10.38
Chlordane {5}			10.37				10.30	10.44
Toxaphene 500 ppb			14.40				14.33	14.47
Toxaphene {2}			14.50				14.43	14.57
Toxaphene {3}			14.86				14.79	14.93
Toxaphene {4}			15.31				15.24	15.38
Toxaphene {5}			16.17				16.10	16.24

4806

PESTICIDE INITIAL CALIBRATION SUMMARY

Date Analyzed: 10/09/2000

Instrument ID: GC W

GC Column (2nd): DB-1701P

Data File: W2386.C W2385.C W2384.C W2383.C W2382.C

Compound	CALIBRATION FACTORS 10	50	100	200	300	MEAN	%RSD
alpha-BHC	192905833	187909913	181502484	184105970	168312095	182947259	5.05
beta-BHC	76651687	65900004	62946014	62523619	61453881	65895041	9.46
gamma-BHC	173359066	167665493	161702047	161972571	159215087	164782853	3.46
delta-BHC	161445322	156464010	152566892	154142270	153536715	155631042	2.28
Heptachlor	151280292	141565427	133101151	127049732	121676265	134934574	8.71
Aldrin	159997657	152070401	143309385	138290112	132382006	145209912	7.56
Heptachlor epoxide	150388913	132485015	122982727	116017845	110084533	126391806	12.50
Endosulfan I	135870765	122366342	114308499	108335176	102985568	116773270	11.03
4,4'-DDE	130429900	126415141	122218580	119927929	116463332	123090976	4.44
Dieldrin	139520697	130751341	124415352	119798645	114532296	125803666	7.72
Endrin	128161997	117925566	111539786	108320521	103347362	113859046	8.42
Endosulfan II	229316581	204627289	195287290	188522770	181556012	199861988	9.28
4,4'-DDD	229316581	204627289	195301264	188522770	181550422	199863665	9.28
Endrin aldehyde	101239377	84475847	79069482	77422498	74788318	83399105	12.69
Endosulfan sulfate	98326870	88666153	85481754	85626556	83011714	88222610	6.79
4,4'-DDT	90486892	94351023	93585891	95838044	94979229	93848216	2.19
Endrin ketone	108826693	95901893	91464547	89936929	87310828	94688178	8.97
Methoxychlor	51039326	47150624	44257072	43527057	42746183	45744052	7.42
alpha-Chlordane	144863113	133513494	127717373	125520319	121935370	130709934	6.85
gamma-Chlordane	145384261	136736448	131666679	130145265	126985148	134183560	5.35
Chlordane 500 ppb			1243889				
Chlordane {2}			3035217				
Chlordane {3}			12513214				
Chlordane {4}			11119544				
Chlordane {5}			5741793				
Toxaphene 500 ppb			2731021				
Toxaphene {2}			1928897				
Toxaphene {3}			2104517				
Toxaphene {4}			2281739				
Toxaphene {5}			1420094				

4807

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/30/2000 Instrument ID: HP6890

Data File: W2782.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	4.61	4.54	4.68	25611126	26309430	2.73
beta-BHC	5.10	5.03	5.17	9458542	9384782	0.78
gamma-BHC	5.24	5.17	5.31	22996048	23576604	2.52
delta-BHC	5.71	5.64	5.78	22947984	23602977	2.85
Heptachlor	6.82	6.75	6.89	19046599	17690416	7.12
Aldrin	7.63	7.56	7.70	20650464	21337359	3.33
Heptachlor epoxide	8.64	8.57	8.71	18394978	19022965	3.41
Endosulfan I	9.56	9.49	9.63	17331685	18028233	4.02
4,4'-DDE	10.32	10.25	10.39	18625121	19039291	2.22
Dieldrin	10.26	10.19	10.33	18467359	18760109	1.59
Endrin	10.81	10.74	10.88	16154783	15005640	7.11
Endosulfan II	11.06	10.99	11.13	16260952	16811943	3.39
4,4'-DDD	11.44	11.37	11.51	14315565	13565564	5.24
Endrin aldehyde	11.59	11.52	11.66	12589243	12631160	0.33
Endosulfan sulfate	12.24	12.17	12.31	13405452	14783496	10.28
4,4'-DDT	12.46	12.39	12.53	14571593	13717714	5.86
Endrin ketone	13.45	13.38	13.52	16859175	17824503	5.73
Methoxychlor	14.13	14.06	14.20	6527366	5635631	13.66
alpha-Chlordane	9.67	9.60	9.74	18908889	19532040	3.30
gamma-Chlordane	9.26	9.19	9.33	19482715	20216653	3.77
					Average %D	4.46
Chlordane 500 ppb	9.26	9.19	9.33	1743688	1882875	7.98
Chlordane {2}	9.45	9.38	9.52	336038	339121	0.92
Chlordane {3}	9.66	9.59	9.73	1675802	1792702	6.98
Chlordane {4}	9.81	9.74	9.88	852298	906267	6.33
Chlordane {5}	11.66	11.59	11.73	570374	589118	3.29
Toxaphene 500 ppb	13.26	13.19	13.33	409140	448730	9.68
Toxaphene {2}	13.38	13.31	13.45	304880	342675	12.40
Toxaphene {3}	13.67	13.60	13.74	304812	317411	4.13
Toxaphene {4}	14.13	14.06	14.20	288772	328975	13.92
Toxaphene {5}	14.64	14.57	14.71	427868	483819	13.08
					Average %D	7.87

48058

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/30/2000 Instrument ID: HP6890

Data File: W2782.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	5.37	5.30	5.44	182947259	192491161	5.22
beta-BHC	8.33	8.26	8.40	65895041	66842051	1.44
gamma-BHC	6.30	6.23	6.37	164782853	171190043	3.89
delta-BHC	8.89	8.82	8.96	155631042	164047411	5.41
Heptachlor	6.77	6.70	6.84	134934574	127139371	5.78
Aldrin	7.43	7.36	7.50	145209912	149852621	3.20
Heptachlor epoxide	9.24	9.17	9.31	126391806	132102778	4.52
Endosulfan I	9.91	9.84	9.98	116773270	122802653	5.16
4,4'-DDE	10.69	10.62	10.76	123090976	127217306	3.35
Dieldrin	10.94	10.87	11.01	125803666	132811110	5.57
Endrin	11.46	11.39	11.53	113859046	112562484	1.14
Endosulfan II	12.87	12.80	12.94	199861988	207005440	3.57
4,4'-DDD	12.87	12.80	12.94	199863665	207005440	3.57
Endrin aldehyde	14.01	13.94	14.08	83399105	85083282	2.02
Endosulfan sulfate	14.90	14.83	14.97	88222610	93739498	6.25
4,4'-DDT	13.35	13.28	13.42	93848216	93595480	0.27
Endrin ketone	15.92	15.85	15.99	94688178	102886687	8.66
Methoxychlor	15.22	15.15	15.29	45744052	43083966	5.82
alpha-Chlordane	10.30	10.23	10.37	130709934	135164751	3.41
gamma-Chlordane	10.14	10.07	10.21	134183560	138699161	3.37
					Average %D	4.08
Chlordane 500 ppb	9.28	9.21	9.35	1243889	1337854	7.55
Chlordane {2}	9.74	9.67	9.81	3035217	3322865	9.48
Chlordane {3}	10.14	10.07	10.21	12513214	13784343	10.16
Chlordane {4}	10.30	10.23	10.37	11119544	12227877	9.97
Chlordane {5}	10.35	10.28	10.42	5741793	6482996	12.91
Toxaphene 500 ppb	14.40	14.33	14.47	2731021	3099307	13.49
Toxaphene {2}	14.50	14.43	14.57	1928897	2211341	14.64
Toxaphene {3}	14.85	14.78	14.92	2104517	2413003	14.66
Toxaphene {4}	15.30	15.23	15.37	2281739	2594701	13.72
Toxaphene {5}	16.16	16.09	16.23	1420094	1599312	12.62
					Average %D	11.92

21R

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/30/2000 Instrument ID: HP6890

Data File: W2799.D GC Column (1st): DB-5

Compound	RT	RT WINDOW FROM	RT WINDOW TO	Avg CF	CC CF	%D
alpha-BHC	4.61	4.54	4.68	25611126	25799371	0.74
beta-BHC	5.10	5.03	5.17	9458542	9294815	1.73
gamma-BHC	5.24	5.17	5.31	22996048	23224215	0.99
delta-BHC	5.71	5.64	5.78	22947984	23727750	3.40
Heptachlor	6.82	6.75	6.89	19046599	18173112	4.59
Aldrin	7.63	7.56	7.70	20650464	20829073	0.86
Heptachlor epoxide	8.64	8.57	8.71	18394978	18750485	1.93
Endosulfan I	9.56	9.49	9.63	17331685	17705693	2.16
4,4'-DDE	10.32	10.25	10.39	18625121	19073091	2.41
Dieldrin	10.26	10.19	10.33	18467359	18979970	2.78
Endrin	10.81	10.74	10.88	16154783	15756383	2.47
Endosulfan II	11.06	10.99	11.13	16260952	16688825	2.63
4,4'-DDD	11.44	11.37	11.51	14315565	14599926	1.99
Endrin aldehyde	11.59	11.52	11.66	12589243	13123596	4.24
Endosulfan sulfate	12.24	12.17	12.31	13405452	15018770	12.03
4,4'-DDT	12.46	12.39	12.53	14571593	14018351	3.80
Endrin ketone	13.45	13.38	13.52	16859175	18371177	8.97
Methoxychlor	14.14	14.07	14.21	6527366	5741705	12.04
alpha-Chlordane	9.67	9.60	9.74	18908889	19027935	0.63
gamma-Chlordane	9.26	9.19	9.33	19482715	19704913	1.14
					Average %D	3.58

4810

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Date/Time Analyzed: 10/30/2000 Instrument ID: HP6890

Data File: W2799.C GC Column (2nd): DB-1701P

Compound	RT	RT WINDOW FROM	TO	Avg CF	CC CF	%D
alpha-BHC	5.37	5.30	5.44	182947259	195467703	6.84
beta-BHC	8.33	8.26	8.40	65895041	68272166	3.61
gamma-BHC	6.30	6.23	6.37	164782853	174273870	5.76
delta-BHC	8.89	8.82	8.96	155631042	170215781	9.37
Heptachlor	6.77	6.70	6.84	134934574	130157407	3.54
Aldrin	7.43	7.36	7.50	145209912	152712585	5.17
Heptachlor epoxide	9.23	9.16	9.30	126391806	134698982	6.57
Endosulfan I	9.91	9.84	9.98	116773270	125283510	7.29
4,4'-DDE	10.69	10.62	10.76	123090976	130465146	5.99
Dieldrin	10.94	10.87	11.01	125803666	136210178	8.27
Endrin	11.46	11.39	11.53	113859046	118969117	4.49
Endosulfan II	12.87	12.80	12.94	199861988	213516978	6.83
4,4'-DDD	12.87	12.80	12.94	199863665	214597351	7.37
Endrin aldehyde	14.01	13.94	14.08	83399105	89943377	7.85
Endosulfan sulfate	14.90	14.83	14.97	88222610	99053391	12.28
4,4'-DDT	13.35	13.28	13.42	93848216	95560651	1.82
Endrin ketone	15.92	15.85	15.99	94688178	108407219	14.49
Methoxychlor	15.21	15.14	15.28	45744052	45164093	1.27
alpha-Chlordane	10.30	10.23	10.37	130709934	138056520	5.62
gamma-Chlordane	10.14	10.07	10.21	134183560	141550597	5.49
					Average %D	6.50

4/811

PESTICIDE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 10/30/2000

Client ID	Sample ID	Matrix	TCMX 1 % rec	#	DCB 1 % rec	#	TCMX 2 % rec	#	DCB 2 % rec	#
(6723..6741)	1027-BK1	AQUEOUS	88		90		89		93	
FB5	6723-018	AQUEOUS	91		93		92		96	
GW-3	6734-001	AQUEOUS	65		95		98		103	
GW-6	6734-004	AQUEOUS	74		92		52	*	99	
FIELD_BLANK	6741-002	AQUEOUS	87		90		90		97	
FMW-9	6741-003	AQUEOUS	69		89		71		97	
FMW-17	6741-004	AQUEOUS	70		91		80		99	
FMW-18	6741-005	AQUEOUS	66		93		72		102	
FMW-12	6741-006	AQUEOUS	58	*	96		66		104	
PEST	6741-002-MS1	AQUEOUS	90		94		95		99	
PEST	6741-002-MSD	AQUEOUS	90		95		95		101	
PEST	PBW1027-MS1	AQUEOUS	89		94		94		99	

Surrogate QC Limits	Soil	Aqueous
TCMX = Tetrachloro-m-xylene	59 - 147	59 - 151
DCB = Decachlorobiphenyl	63 - 179	60 - 150

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out
M Matrix interference

4612

AQUEOUS PESTICIDES MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Matrix spike Lab sample ID: 6741-002-MSD1

Compound	SPIKE ADDED (ug/L)	SAMPLE CONC. (ug/L)	MS CONC. (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC	100.0	0.0	92.3	92	30 - 138
Heptachlor	100.0	0.0	87.1	87	42 - 137
Aldrin	100.0	0.0	94.6	95	32 - 147
Dieldrin	100.0	0.0	94.5	95	26 - 134
Endrin	100.0	0.0	90.2	90	22 - 164
4,4'-DDT	100.0	0.0	88.0	88	22 - 150

Compound	SAMPLE CONC. ADDED	MSD CONC. ADDED	MSD % # REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC	0.0	92.2	92	0	14	30 - 138
Heptachlor	0.0	85.9	86	1	14	42 - 137
Aldrin	0.0	93.4	93	2	14	32 - 147
Dieldrin	0.0	92.9	93	2	14	26 - 134
Endrin	0.0	88.4	88	2	13	22 - 164
4,4'-DDT	0.0	87.2	87	1	16	22 - 150

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

* Values outside of QC limits

NC Non calculable

RPD: __0___ out of __6__ outside limits

Spike Recovery: __0___ out of __12__ outside limits

PESTICIDE RETENTION TIME SHIFT SUMMARY

Instrument ID: GC-W **Column:** DB-5/DB-1701P

Surrogate RT from initial calibration :

TCMX 1 3.93 DCB 1 18.76 TCMX 2 3.57 DCB 2 18.29

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCMX 1 RT	#	DCB 1 RT	#	TCMX 2 RT	#	DCB 2 RT	#
(6723..6741)	1027-BK1	10/30/2000	02:56	3.93		18.76		3.57		18.29	
FB5	6723-018	10/30/2000	03:21	3.93		18.76		3.57		18.29	
GW-3	6734-001	10/30/2000	03:46	3.93		18.76		3.57		18.29	
GW-6	6734-004	10/30/2000	04:11	3.93		18.76		3.58		18.29	
FIELD_BLANK	6741-002	10/30/2000	04:36	3.93		18.76		3.57		18.29	
FMW-9	6741-003	10/30/2000	05:01	3.93		18.76		3.57		18.29	
FMW-17	6741-004	10/30/2000	05:26	3.93		18.76		3.57		18.29	
FMW-18	6741-005	10/30/2000	05:51	3.93		18.76		3.57		18.29	
FMW-12	6741-006	10/30/2000	06:16	3.93		18.76		3.57		18.29	
PEST	6741-002-MS1	10/30/2000	06:41	3.93		18.76		3.57		18.29	
PEST	6741-002-MSD1	10/30/2000	07:06	3.93		18.76		3.57		18.29	
PEST	PBW1027-MS1	10/30/2000	07:31	3.93		18.76		3.57		18.29	

Surrogate QC Limits

TCMX = Tetrachloro-m-xylene **(_ 0.05 Minutes)**

DCB = Decachlorobiphenyl **(_ 0.10 Minutes)**

 # Column to be used to flag recovery values
*** Values outside of QC limits**
D Surrogate diluted out
M Matrix interference

4814

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2788.D\ECD1B.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2788.D\ECD2A.CH
Acq On : 10-30-00 3:46:28 Operator:
Sample : GW-3,6734-001,A,1000mL,100,10/27/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:04 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.57	309.9E6	3363.0E6	12.880	19.622 #
Spiked Amount 100.000			Recovery	=	12.88%	19.62%
2) S DCB	18.76	18.29	440.9E6	2588.3E6	18.885	20.610
Spiked Amount 100.000			Recovery	=	18.89%	20.61%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

224

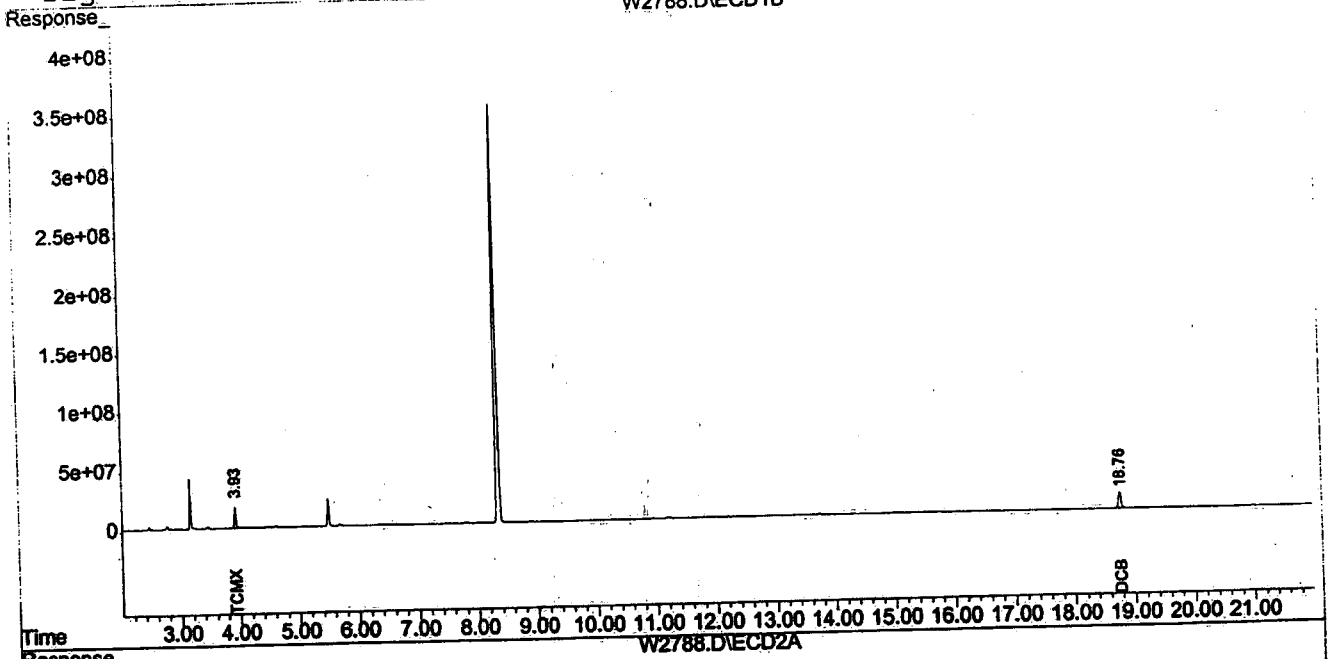
4/815

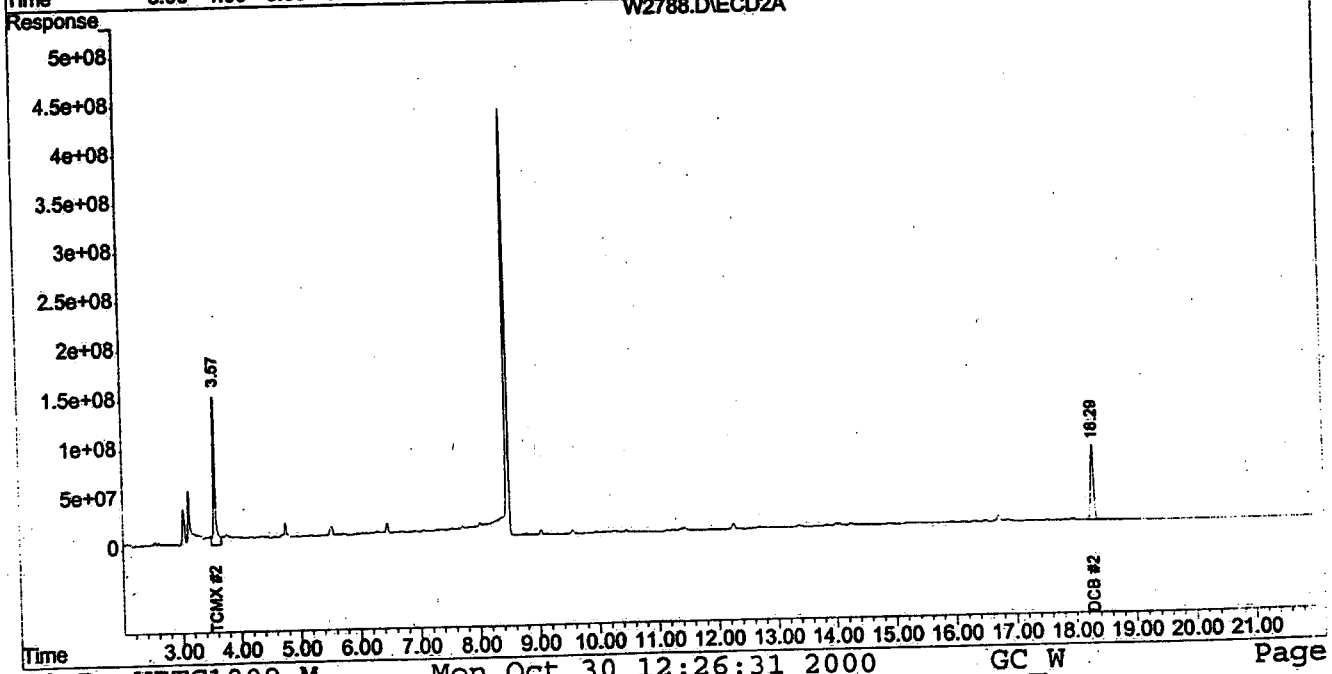
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2788.D\ECD1B.CH Vial: 10
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2788.D\ECD2A.CH
Acq On : 10-30-00 3:46:28 Operator:
Sample : GW-3,6734-001,A,1000mL,100,10/27/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:04 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase :
Signal #1 Info :
Signal #2 Phase:
Signal #2 Info :





225

4616

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2789.D\ECD1B.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2789.D\ECD2A.CH
Acq On : 10-30-00 4:11:29 Operator:
Sample : GW-6,6734-004,A,1000mL,100,10/27/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:13 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	353.8E6	1776.4E6	14.705m	10.364m#
Spiked Amount 100.000			Recovery	=	14.71%	10.36%
2) S DCB	18.76	18.29	428.6E6	2470.4E6	18.357	19.671m
Spiked Amount 100.000			Recovery	=	18.36%	19.67%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

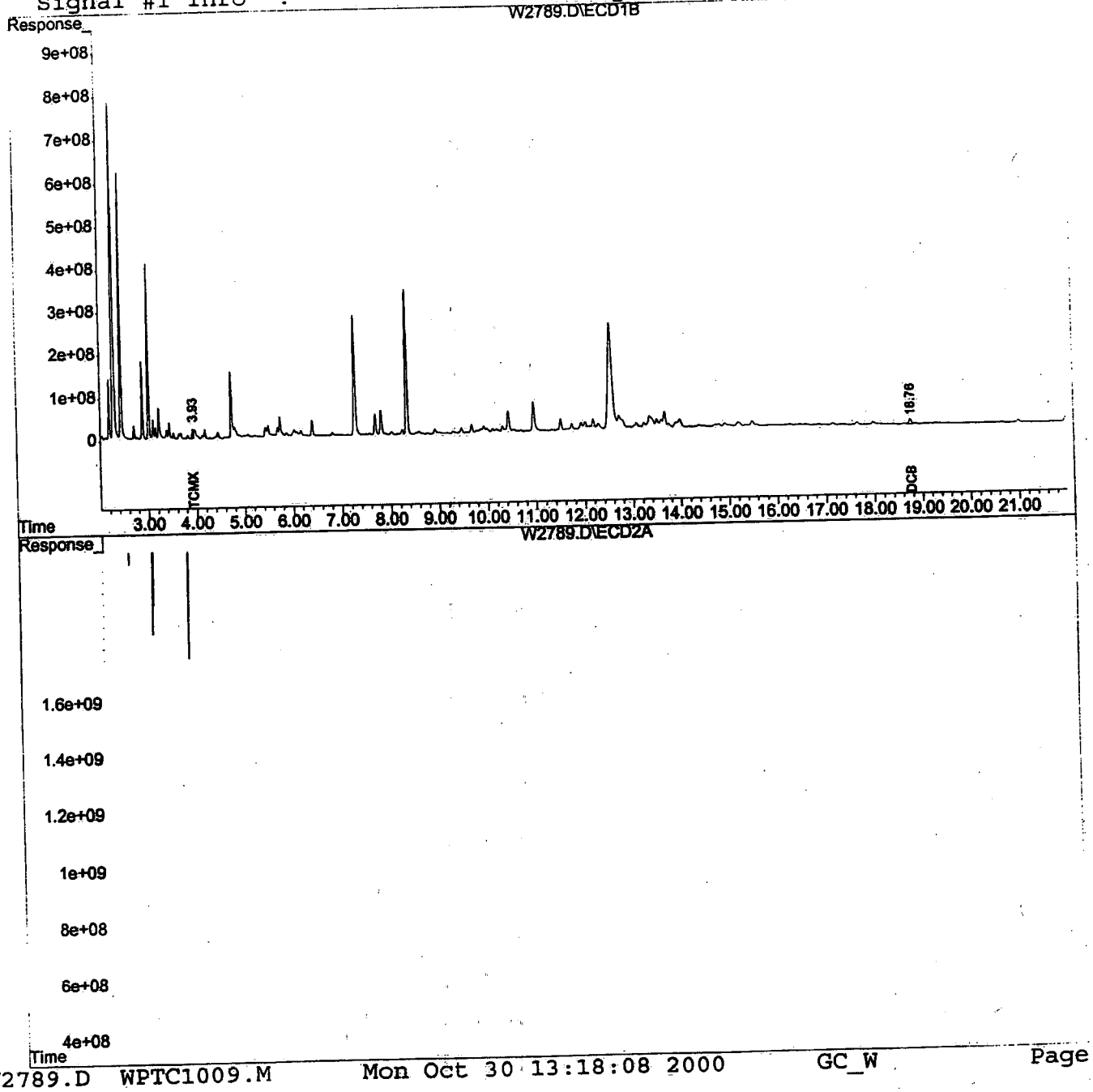
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2789.D\ECD1B.CH Vial: 11
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2789.D\ECD2A.CH
Acq On : 10-30-00 4:11:29 Operator:
Sample : GW-6,6734-004,A,1000mL,100,10/27/00 Inst : GC_W
Misc : ENVTACT/ORBIS,10/24/00,10/26/00,5 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:13 2000 Quant Results File: WPTC1009.RES

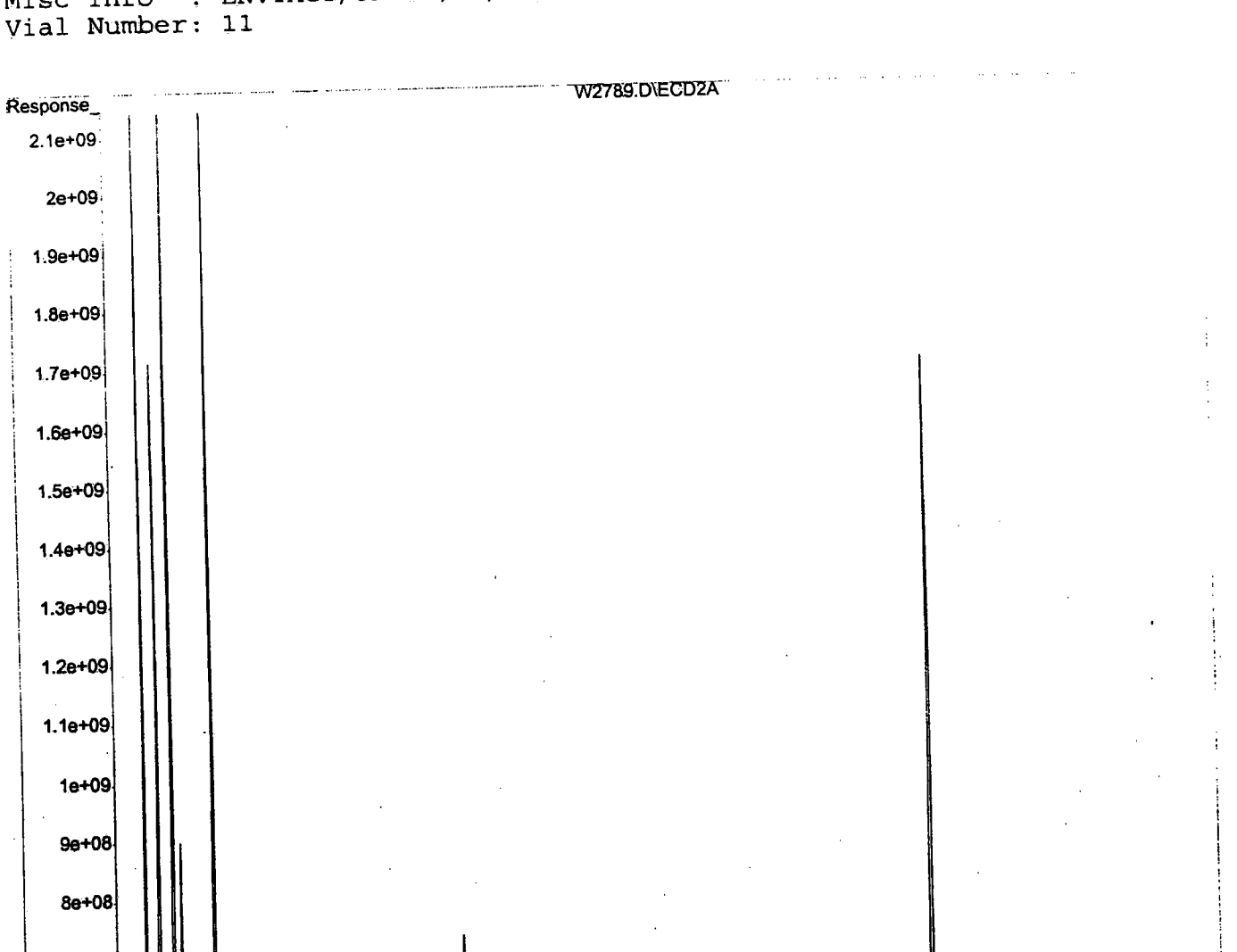
Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



4818

File : C:\HPCHEM\1\DATA\W_OCT_00\10-30-00\W2789.D
Operator :
Acquired : 10-30-00 4:11:29 using AcqMethod WPTC1009.M
Instrument : GC_W
Sample Name: GW-6,6734-004,A,1000mL,100,10/27/00
Misc Info : ENVTACT/ORBIS,10/24/00,10/26/00,5
Vial Number: 11



4819

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2786.D\ECD1B.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2786.D\ECD2A.CH
Acq On : 10-30-00 2:56:20 Operator:
Sample : (6723..6741),1027-BK1,A,1000mL,100,10/27 Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000

DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.57	2105.4E6	15305.0E6	87.496	89.299
Spiked Amount 100.000			Recovery =		87.50%	89.30%
2) S DCB	18.76	18.29	2096.7E6	11672.7E6	89.798	92.947
Spiked Amount 100.000			Recovery =		89.80%	92.95%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
W2786.D WPTC1009.M Mon Oct 30 12:26:18 2000 GC_W Page 1

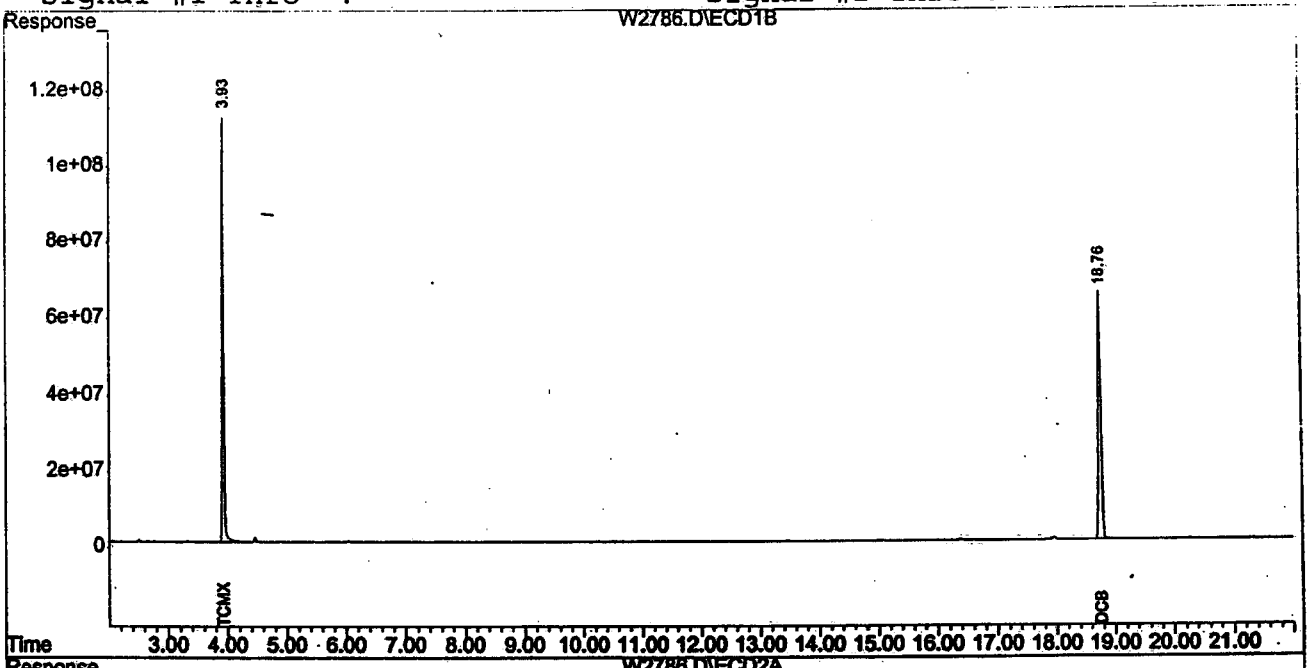
4/820

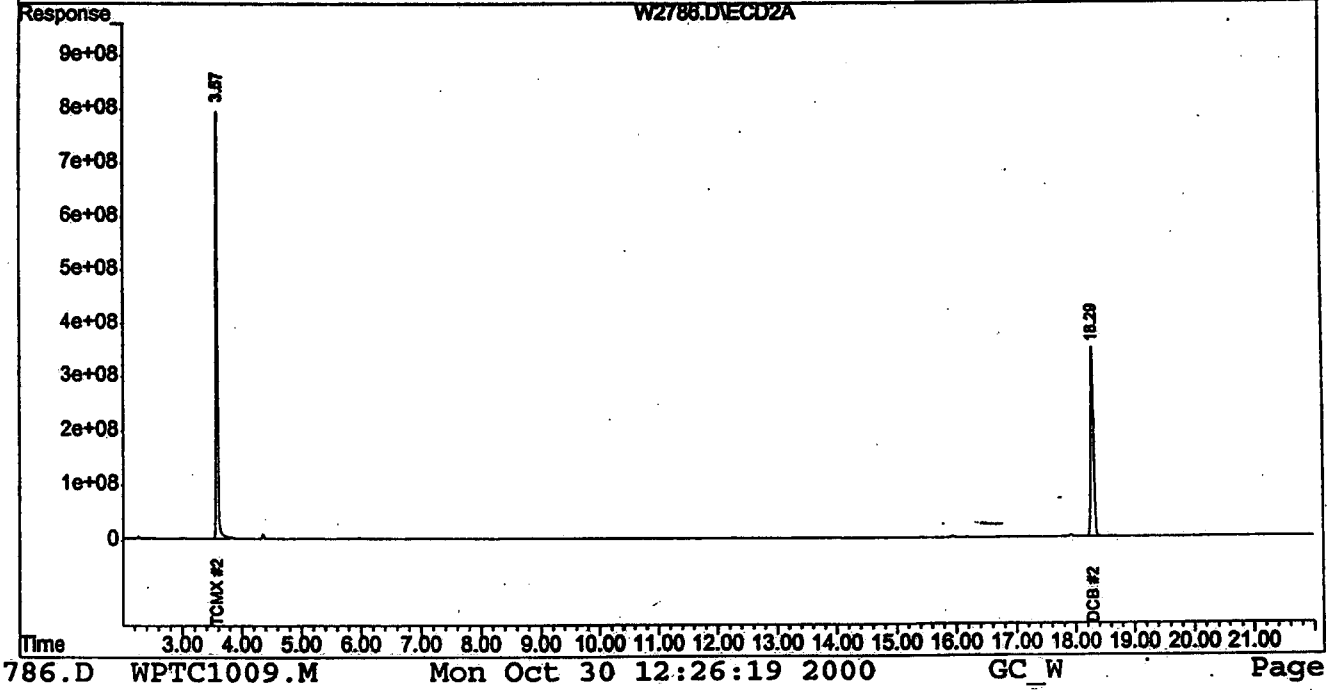
229

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2786.D\ECD1B.CH Vial: 8
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2786.D\ECD2A.CH
Acq On : 10-30-00 2:56:20 Operator:
Sample : (6723..6741),1027-BK1,A,1000mL,100,10/27 Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info .





4821

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2782.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2782.D\ECD2A.CH
Acq On : 10-30-00 1:16:13 Operator:
Sample : PEST_C_IAS1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 9:59 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

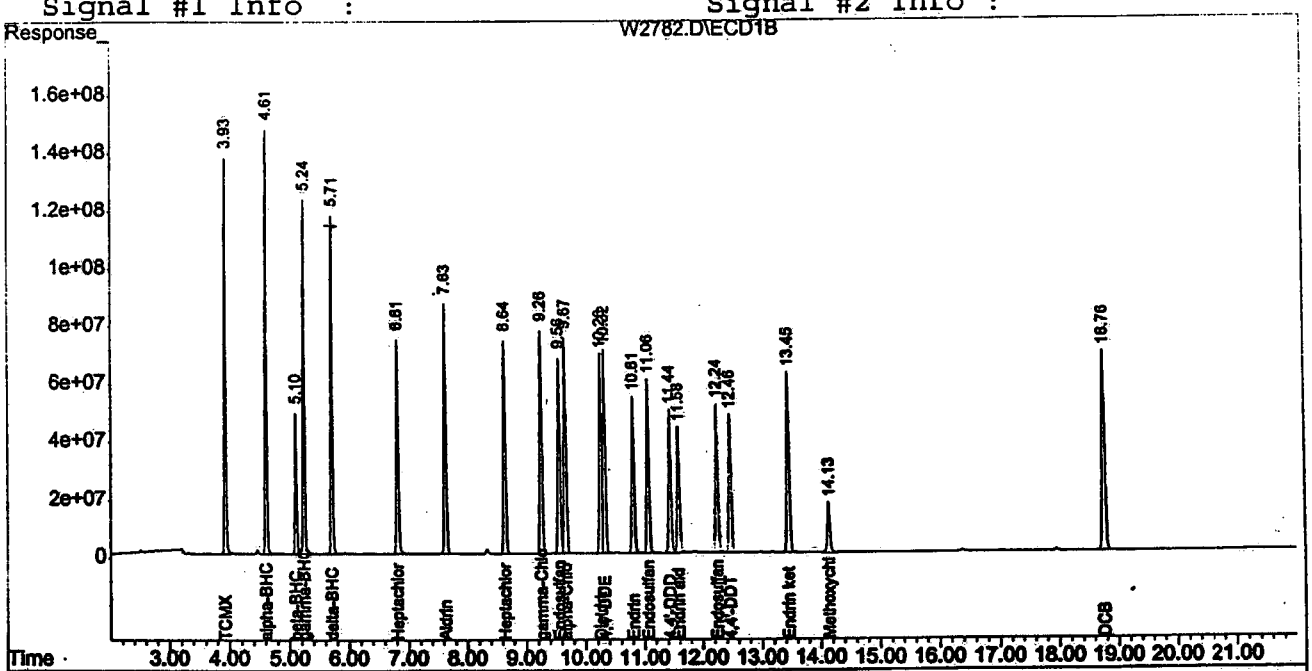
	Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2	
	System Monitoring Compounds							
1) S	TCMX	3.93	3.58	2374.2E6	16876.0E6	98.666	98.465	
Spiked Amount	100.000			Recovery	=	98.67%	98.47%	
2) S	DCB	18.76	18.29	2232.6E6	12431.5E6	95.617	98.989	
Spiked Amount	100.000			Recovery	=	95.62%	98.99%	
	Target Compounds							
3) T	alpha-BHC	4.61	5.37	2630.9E6	19249.1E6	102.727	105.217	
4) T	beta-BHC	5.10	8.33	938.5E6	6684.2E6	99.220	101.437	
5) T	gamma-BHC	5.24	6.30	2357.7E6	17119.0E6	102.525	103.888	
6) T	delta-BHC	5.71	8.89	2360.3E6	16404.7E6	102.854	105.408	
7) T	Heptachlor	6.82	6.77	1769.0E6	12713.9E6	92.880	94.223	
8) T	Aldrin	7.63	7.43	2133.7E6	14985.3E6	103.326	103.197	
9) T	Heptachlor epoxi	8.64	9.24	1902.3E6	13210.3E6	103.414	104.518	
10) T	Endosulfan I	9.56	9.91	1802.8E6	12280.3E6	104.019	105.163	
11) T	4,4'-DDE	10.32	10.69	1903.9E6	12721.7E6	102.224	103.352	
12) T	Dieldrin	10.26	10.94	1876.0E6	13281.1E6	101.585	105.570	
13) T	Endrin	10.81	11.46	1500.6E6	11256.2E6	92.887	98.861	
14) T	Endosulfan II	11.06	12.87	1681.2E6	20700.5E6	103.388	207.148	#
15) T	4,4'-DDD	11.44	12.87	1356.6E6	20700.5E6	94.761	207.147	#
16) T	Endrin aldehyde	11.59	14.01	1263.1E6	8508.3E6	100.333	102.019	
17) T	Endosulfan sulfa	12.24	14.90	1478.3E6	9373.9E6	110.280	106.253	
18) T	4,4'-DDT	12.46	13.35	1371.8E6	9359.5E6	94.140	99.731	
19) T	Endrin ketone	13.45	15.92	1782.5E6	10288.7E6	105.726	108.658	
20) T	Methoxychlor	14.13	15.22	563.6E6	4308.4E6	86.339m	94.185	
21) T	alpha-Chlordane	9.67	10.30	1953.2E6	13516.5E6	103.296	103.408	
22) T	gamma-Chlordane	9.26	10.14	2021.7E6	13869.9E6	103.767	103.365	
Sum Chlordane				0	0	N.D.	N.D.	
Average Chlordane						0.000	0.000	
Sum Toxaphene				0	0	N.D.	N.D.	
Average Toxaphene						0.000	0.000	

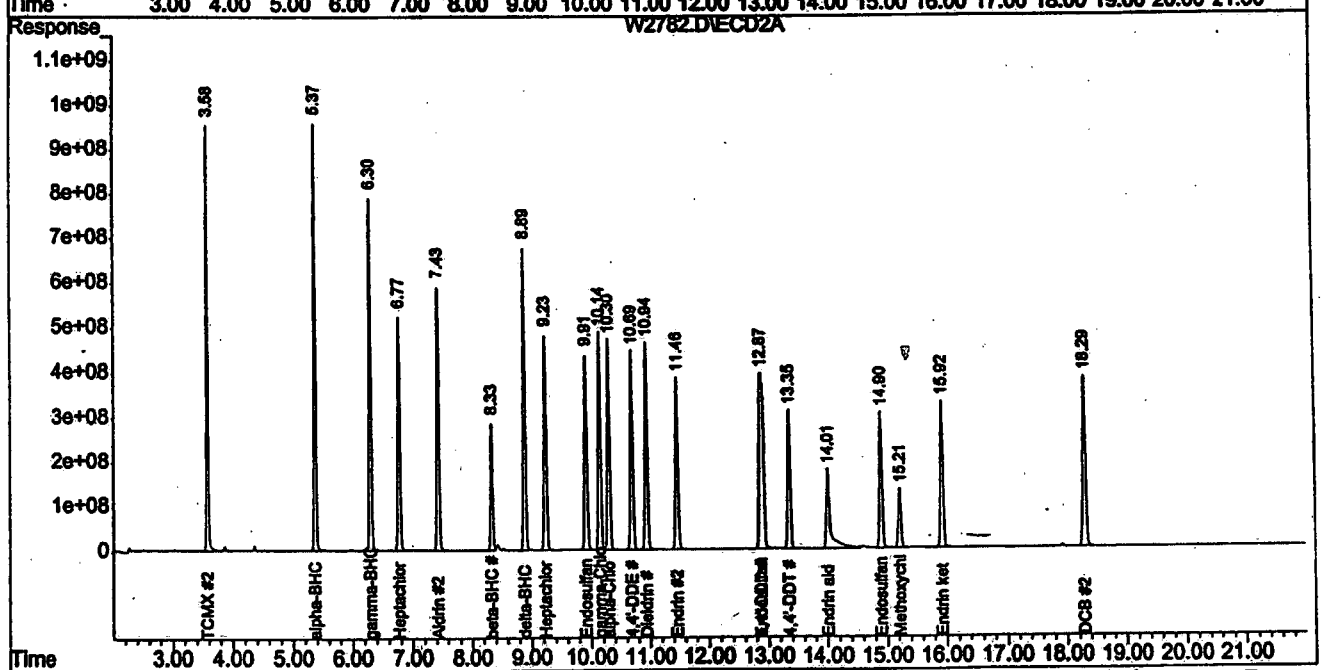
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2782.D\ECD1B.CH Vial: 4
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2782.D\ECD2A.CH
Acq On : 10-30-00 1:16:13 Operator:
Sample : PEST_C_IAS1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 9:59 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
[illegible] Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4823

222

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2784.D\ECD1B.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2784.D\ECD2A.CH
Acq On : 10-30-00 2:06:14 Operator:
Sample : TOXAPHENE_C_IAS1395,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
[illegible] : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	2938.6E6	20817.5E6	122.124	121.462
Spiked Amount 100.000			Recovery =		122.12%	121.46%
2) S DCB	18.76	18.29	2783.1E6	15723.8E6	119.192	125.205
Spiked Amount 100.000			Recovery =		119.19%	125.20%
Target Compounds						
Sum Chlordane			0	0	N.D.	N.D.
Average Chlordane					0.000	0.000
[illegible] L2 Toxaphene	13.26	14.40	224.4E6	1549.7E6	548.382	567.426
29) L2 Toxaphene (2)	13.38	14.50	171.3E6	1105.7E6	561.983	573.214
30) L2 Toxaphene (3)	13.67	14.85	158.7E6	1206.5E6	520.667	573.291m
31) L2 Toxaphene (4)	14.13	15.30	164.5E6	1297.4E6	569.610	568.580m
32) L2 Toxaphene (5)	14.64	16.16	241.9E6	799.7E6	565.384	563.101
Sum Toxaphene			960.8E6	5958.8E6	2766.027	2845.612
Average Toxaphene					553.205	569.122

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

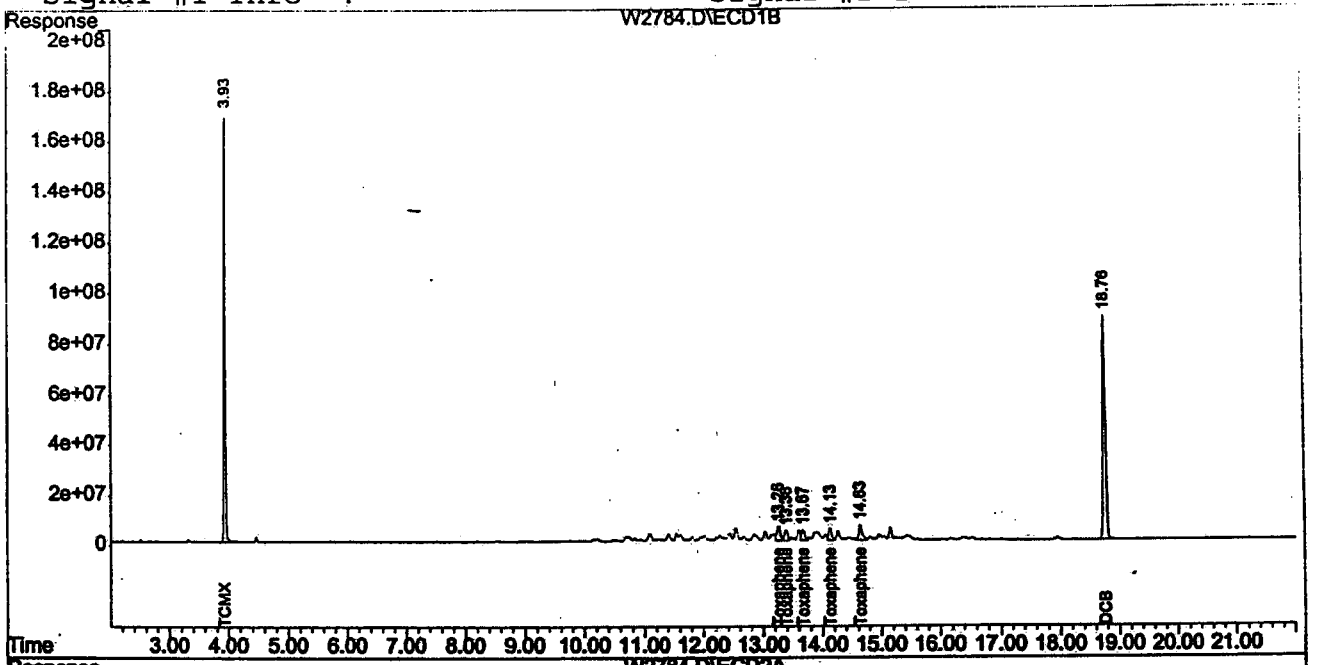
4824

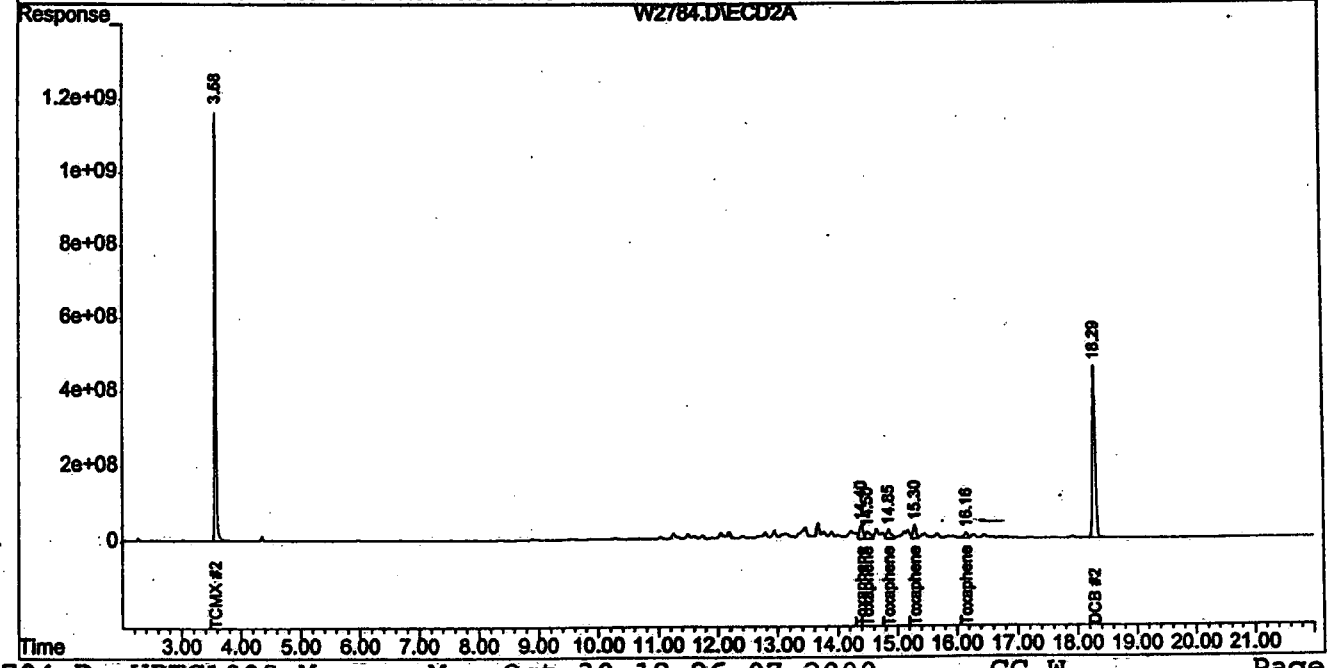
022

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2784.D\ECD1B.CH Vial: 6
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2784.D\ECD2A.CH
Acq On : 10-30-00 2:06:14 Operator:
Sample : TOXAPHENE_C_IAS1395,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
[illegible] : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4825

234

Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2785.D\ECD1B.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2785.D\ECD2A.CH
Acq On : 10-30-00 2:31:23 Operator:
Sample : CHLORDANE_C_IAS1396,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
System Monitoring Compounds						
1) S TCMX	3.93	3.58	2703.9E6	19675.5E6	112.369	114.799
Spiked Amount 100.000			Recovery	=	112.37%	114.80%
2) S DCB	18.76	18.29	2620.6E6	14638.8E6	112.232	116.565
Spiked Amount 100.000			Recovery	=	112.23%	116.57%
Target Compounds						
23) L1 Chlordane	9.26	9.28	941.4E6	668.9E6	539.911	537.771
24) L1 Chlordane {2}	9.45	9.74	169.6E6	1661.4E6	504.588	547.385
25) L1 Chlordane {3}	9.66	10.14	896.4E6	6892.2E6	534.879	550.791
26) L1 Chlordane {4}	9.81	10.30	453.1E6	6113.9E6	531.660	549.837
27) L1 Chlordane {5}	11.66	10.35	294.6E6	3241.5E6	516.431	564.545
Sum Chlordane			2755.0E6	18578.0E6	2627.470	2750.329
Average Chlordane					525.494	550.066
Sum Toxaphene			0	0	N.D.	N.D.
Average Toxaphene					0.000	0.000

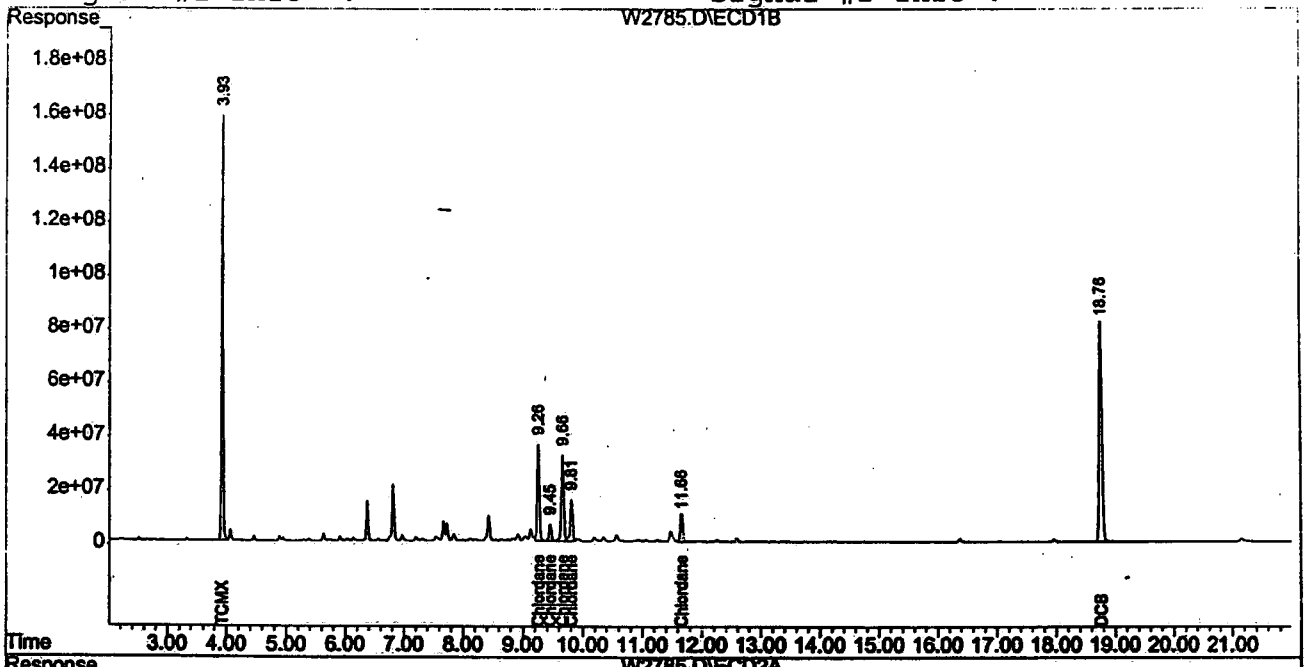
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

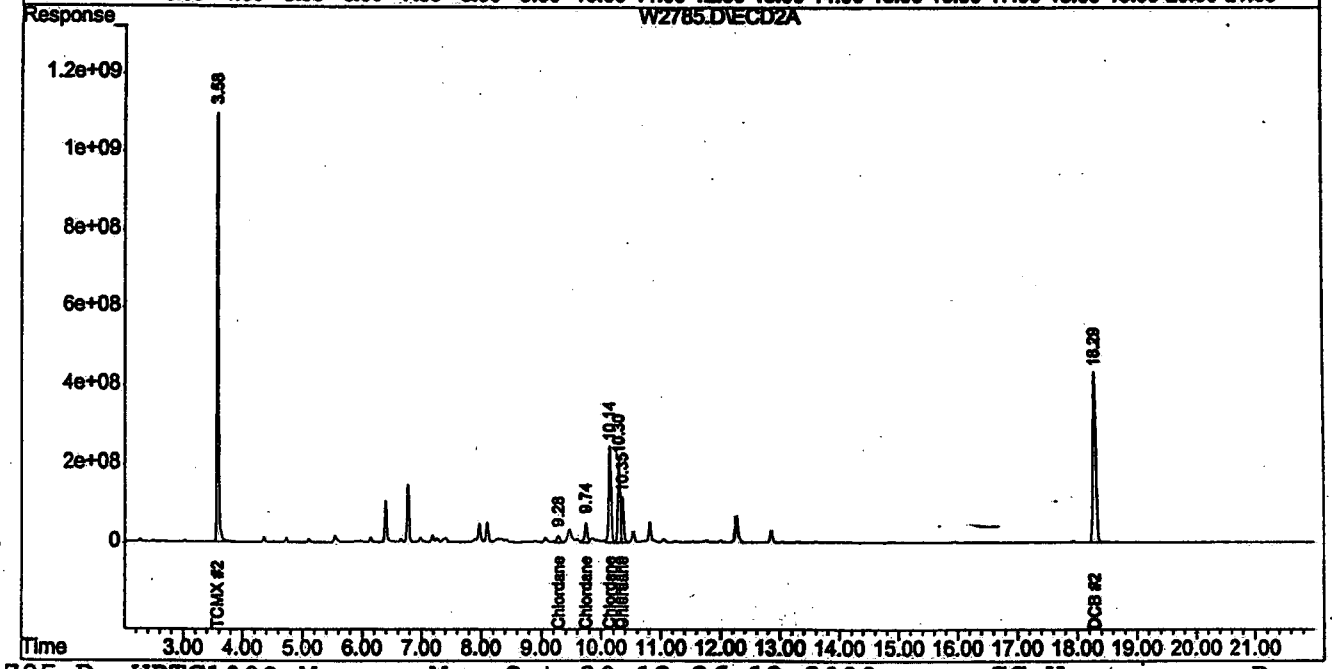
4/826

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2785.D\ECD1B.CH Vial: 7
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2785.D\ECD2A.CH
Acq On : 10-30-00 2:31:23 Operator:
Sample : CHLORDANE_C_IAS1396,0.5_PPM Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 10:01 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4827

226

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2799.D\ECD1B.CH Vial: 21
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2799.D\ECD2A.CH
Acq On : 10-30-00 8:21:48 Operator:
Sample : PEST_C_IAS1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 12:03 2000 Quant Results File: WPTC1009.RES

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Initial Calibration
DataAcq Meth : WPTC1009.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info . Signal #2 Info :

		Compound	RT#1	RT#2	Resp#1	Resp#2	ng#1	ng#2
		System Monitoring Compounds						
1)	S	TCMX	3.93	3.58	2316.8E6	17042.8E6	96.282	99.438
Spiked Amount		100.000			Recovery	=	96.28%	99.44%
2)	S	DCB	18.76	18.29	2263.0E6	12951.0E6	96.917	103.126
Spiked Amount		100.000			Recovery	=	96.92%	103.13%
		Target Compounds						
3)	T	alpha-BHC	4.61	5.37	2579.9E6	19546.8E6	100.735	106.844
4)	T	beta-BHC	5.10	8.33	929.5E6	6827.2E6	98.269	103.607
5)	T	gamma-BHC	5.24	6.30	2322.4E6	17427.4E6	100.992	105.760
6)	T	delta-BHC	5.71	8.89	2372.8E6	17021.6E6	103.398	109.371
7)	T	Heptachlor	6.82	6.77	1817.3E6	13015.7E6	95.414	96.460
8)	T	Aldrin	7.63	7.43	2082.9E6	15271.3E6	100.865	105.167
9)	T	Heptachlor epoxi	8.64	9.23	1875.0E6	13469.9E6	101.933	106.573
10)	T	Endosulfan I	9.56	9.91	1770.6E6	12528.4E6	102.158	107.288
11)	T	4,4'-DDE	10.32	10.69	1907.3E6	13046.5E6	102.405	105.991
12)	T	Dieldrin	10.26	10.94	1898.0E6	13621.0E6	102.776	108.272
13)	T	Endrin	10.81	11.46	1575.6E6	11896.9E6	97.534	104.488
14)	T	Endosulfan II	11.06	12.87	1668.9E6	21351.7E6	102.631	213.664m#
15)	T	4,4'-DDD	11.44	12.87	1460.0E6	21459.7E6	101.986	214.744m#
16)	T	Endrin aldehyde	11.59	14.01	1312.4E6	8994.3E6	104.245	107.847
17)	T	Endosulfan sulfa	12.24	14.90	1501.9E6	9905.3E6	112.035	112.277
18)	T	4,4'-DDT	12.46	13.35	1401.8E6	9556.1E6	96.203	101.825
19)	T	Endrin ketone	13.45	15.92	1837.1E6	10840.7E6	108.968	114.489
20)	T	Methoxychlor	14.14	15.21	574.2E6	4516.4E6	87.964	98.732
21)	T	alpha-Chlordane	9.67	10.30	1902.8E6	13805.7E6	100.630	105.621
22)	T	gamma-Chlordane	9.26	10.14	1970.5E6	14155.1E6	101.140	105.490
Sum Chlordane					0	0	N.D.	N.D.
Average Chlordane							0.000	0.000
Sum Toxaphene					0	0	N.D.	N.D.
Average Toxaphene							0.000	0.000

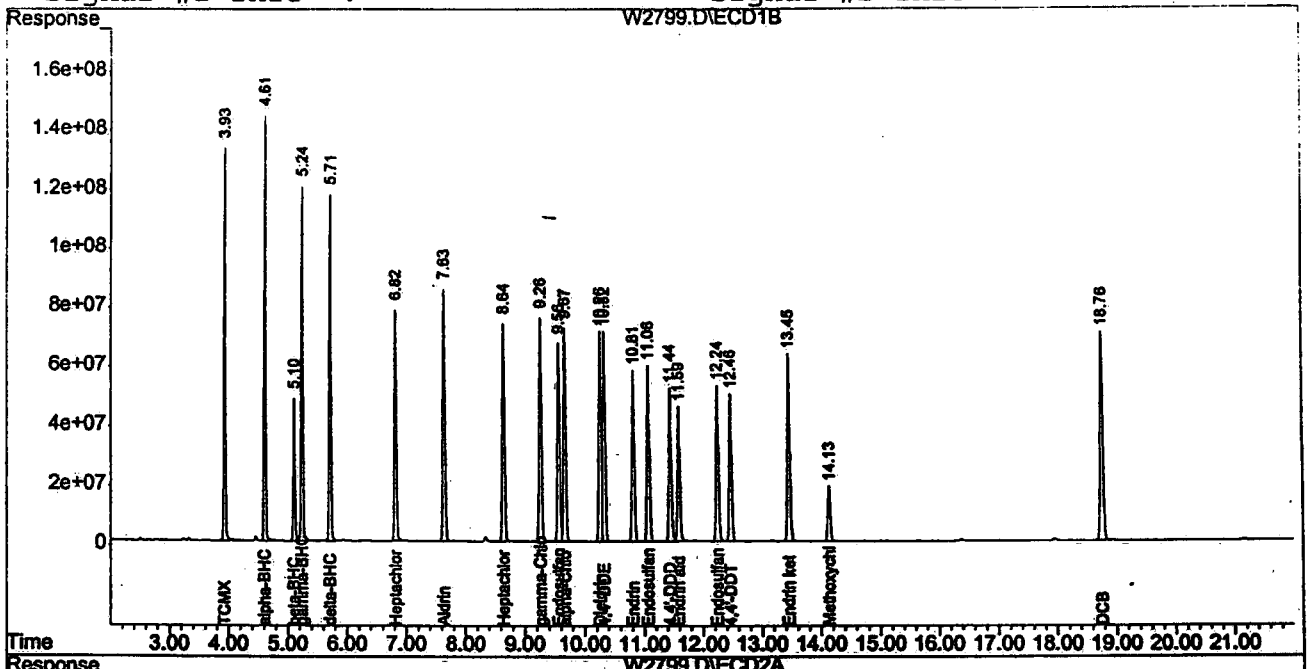
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

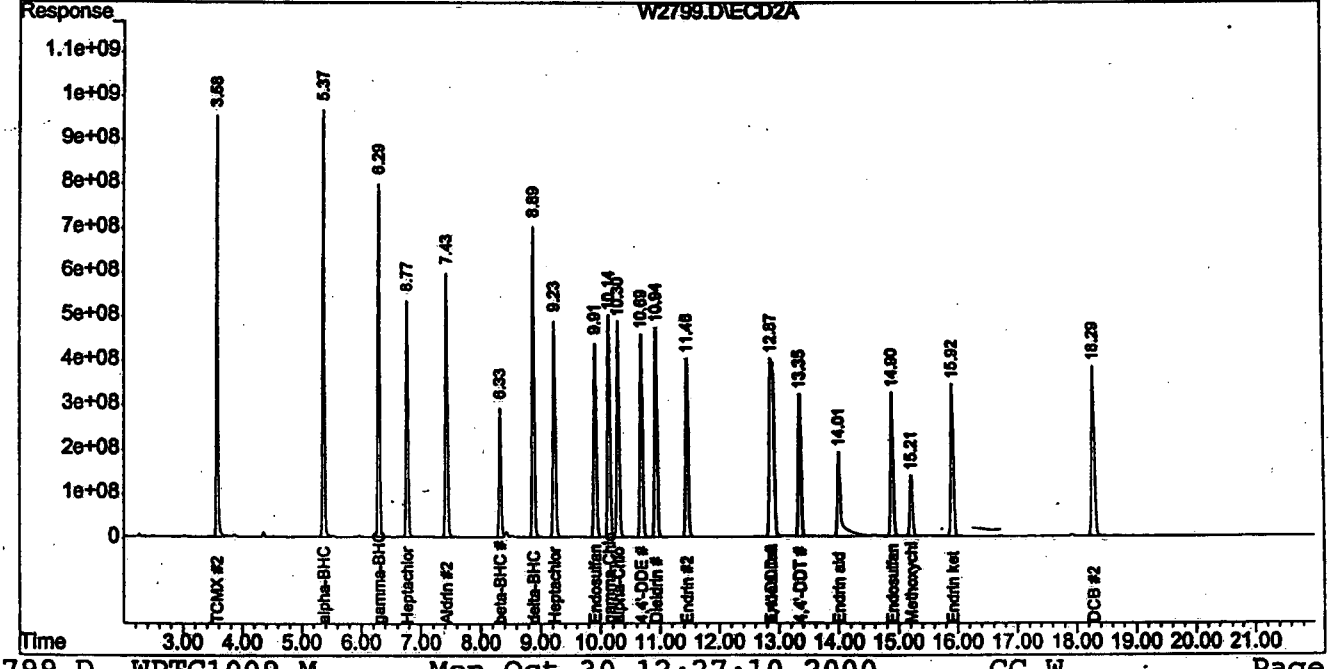
Quantitation Report (QT Reviewed)

Signal #1 : C:\HPCHEM\1\DATA\10-30-00\W2799.D\ECD1B.CH Vial: 21
Signal #2 : C:\HPCHEM\1\DATA\10-30-00\W2799.D\ECD2A.CH
Acq On : 10-30-00 8:21:48 Operator:
Sample : PEST_C_IAS1392,100_PPB Inst : GC_W
Misc : NA,NA,NA,1 Multiplr: 1.00
IntFile Signal #1: events.e IntFile Signal #2: events2.e
Quant Time: Oct 30 12:03 2000 Quant Results File: WPTC1[illegible]

Quant Method : C:\HPCHEM\1\METHODS\WPTC1009.M (Chemstation Integrator)
Title :
Last Update : Mon Oct 09 15:13:18 2000
Response via : Multiple Level Calibration
DataAcq Meth : [illegible]

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





4829

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

BLANK RESULTS SUMMARY

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION	CONTINUING CALIBRATION 1	CONTINUING CALIBRATION 2	INST. MDL	REAGENT BLANK	MDL	IDL
Aluminum	ND	ND	ND	50.0	ND	100	
Antimony	ND	ND	ND	4.00	ND	8.00	
Arsenic	ND	ND	ND	2.00	ND	4.00	
Barium	ND	ND	ND	10.0	ND	20.0	
Beryllium	ND	ND	ND	2.00	ND	4.00	
Cadmium	ND	ND	ND	0.300	ND	0.600	
Calcium	ND	ND	ND	400	ND	800	
Chromium	ND	ND	ND	10.0	ND	20.0	
Cobalt	ND	ND	ND	20.0	ND	40.0	
Copper	ND	ND	ND	20.0	ND	40.0	
Iron	ND	ND	ND	50.0	ND	100	
Lead	ND	ND	ND	2.00	ND	4.00	
Magnesium	ND	ND	ND	100	ND	200	
Manganese	ND	ND	ND	5.00	ND	10.0	
Mercury	ND	ND	ND	0.250	ND	0.500	
Nickel	ND	ND	ND	10.0	ND	20.0	
Potassium	ND	ND	ND	100	ND	200	
Selenium	ND	ND	ND	4.00	ND	8.00	
Silver	ND	ND	ND	0.200	ND	0.400	
Sodium	ND	ND	ND	100	ND	200	
Thallium	ND	ND	ND	4.00	ND	8.00	
Vanadium	ND	ND	ND	15.0	ND	30.0	
Zinc	ND	ND	ND	10.0	ND	20.0	

This QC Blank applies to the following samples:

6621-01-05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01-07,09; 6705-01,03,05-07; 6709-01; 6734-01,04; 6741-02-06; 6750-01

4830

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

INITIAL & CONTINUING CALIBRATION VERIFICATION

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

Concentration/Units: ppb (µg/L)

ANALYTE	INITIAL CALIBRATION			CONTINUING CALIBRATION					MDL	IDL
	TRUE	FOUND	%R (1)	TRUE	FOUND	%R (1)	FOUND	%R (1)		
Aluminum	400	410	103	400	405	101	365	91.3	50.0	
Antimony	120	120	100	120	117	97.5	112	93.3	4.00	
Arsenic	20.0	18.8	94.0	20.0	18.7	93.5	20.9	105	2.00	
Barium	400	371	92.8	400	363	90.8	364	91.0	10.0	
Beryllium	10.0	9.75	97.5	10.0	10.9	109	10.6	106	2.00	
Cadmium	10.0	9.55	95.5	10.0	9.50	95.0	9.78	97.8	0.300	
Calcium	250000	237000	94.8	250000	233000	93.2	232000	92.8	400	
Chromium	20.0	19.4	97.0	20.0	19.8	99.0	19.2	96.0	10.0	
Cobalt	100	93.7	93.7	100	94.1	94.1	91.7	91.7	20.0	
Copper	50.0	46.5	93.0	50.0	47.4	94.8	46.8	93.6	20.0	
Iron	5000	4600	92.0	5000	4660	93.2	4720	94.4	50.0	
Lead	10.0	9.65	96.5	10.0	9.51	95.1	9.08	90.8	2.00	
Magnesium	250000	231000	92.4	250000	231000	92.4	236000	94.4	100	
Manganese	30.0	28.7	95.7	30.0	29.4	98.0	28.7	95.7	5.00	
Mercury	5.00	5.12	102	5.00	5.16	103	5.13	103	0.250	
Nickel	80.0	75.7	94.6	80.0	75.8	94.8	73.3	91.6	10.0	
Potassium	10000	9950	99.5	10000	9900	99.0	9490	94.9	100	
Selenium	10.0	10.4	104	10.0	9.82	98.2	9.42	94.2	4.00	
Silver	20.0	19.0	95.0	20.0	18.3	91.5	18.9	94.5	0.200	
Sodium	250000	261000	104	250000	240000	96.0	275000	110	100	
Thallium	20.0	19.3	96.5	20.0	19.4	97.0	18.7	93.5	4.00	
Vanadium	100	99.6	99.6	100	101	101	98.1	98.1	15.0	
Zinc	40.0	40.1	100	40.0	41.1	103	40.3	101	10.0	

(1) Control Limits: Mercury 80-120, Other Metals 90-110

4631

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SSR1	SR1	%R1	SA1	SSR2	SR2	%R2	SA2	CONTROL LIMIT %R
Aluminum	791	406	96.3	400					75-125
Antimony	350	ND	87.5	400	343	ND	85.8	400	75-125
Arsenic	388	ND	97.0	400	388	ND	97.0	400	75-125
Barium	399	50.0	87.3	400					75-125
Beryllium	397	ND	99.3	400	411	ND	103	400	75-125
Cadmium	377	ND	94.3	400	379	ND	94.8	400	75-125
Calcium	83400	74000	118	8000					75-125
Chromium	370	ND	92.5	400	370	ND	92.5	400	75-125
Cobalt	362	ND	90.5	400					75-125
Copper	362	ND	90.5	400	368	ND	92.0	400	75-125
Iron	9100	922	102	8000					75-125
Lead	372	ND	93.0	400	366	ND	91.5	400	75-125
Magnesium	34400	25800	108	8000					75-125
Manganese	625	253	93.0	400					75-125
Mercury	10.9	ND	109	10.0					75-125
Nickel	354	ND	88.5	400	366	ND	91.5	400	75-125
Potassium	8110	1020	88.6	8000					75-125
Selenium	403	ND	101	400	402	ND	101	400	75-125
Silver	356	ND	89.0	400					75-125
Sodium	19700	12400	91.3	8000					75-125
Thallium	374	ND	93.5	400	361	ND	90.3	400	75-125
Vanadium	386	ND	96.5	400					75-125
Zinc	411	30.0	95.3	400	396	ND	99.0	400	75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 1 6705-003

QC Sample 1 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

QC Sample 2 6621-001

QC Sample 2 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

4832

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

SPIKE SAMPLE RECOVERY

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

Matrix: Aqueous

Concentration/Units: ppb (µg/L)

ANALYTE	SSR3	SR3	%R3	SA3	SSR4	SR4	%R4	SA4	CONTROL LIMIT %R
Antimony	335	ND	83.8	400					75-125
Arsenic	422	66.0	89.0	400					75-125
Beryllium	409	ND	102	400					75-125
Cadmium	345	ND	86.3	400					75-125
Chromium	360	ND	90.0	400					75-125
Copper	364	ND	91.0	400					75-125
Lead	378	26.0	88.0	400					75-125
Nickel	350	ND	87.5	400					75-125
Selenium	374	ND	93.5	400					75-125
Silver	346	ND	86.5	400					75-125
Thallium	361	ND	90.3	400					75-125
Zinc	417	62.0	88.8	400					75-125

SSR = Spike Sample Result
SA = Spike Added

SR = Sample Result
%R = Percent Recovery

NC = Non-calculable % R; Sample concentration > 4 x Spike Concentration.

QC Sample 3 6624-020

QC Sample 3 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

QC Sample 4 6703-002

QC Sample 4 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

4833

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 1	S1	D1	RPD1	CONTROL LIMIT 2	S2	D2	RPD2
Aluminum	20	406	403	0.742				
Antimony	NA	ND	ND	NC	NA	ND	ND	NC
Arsenic	NA	ND	ND	NC	NA	ND	ND	NC
Barium	20	50.0	47.0	6.19				
Beryllium	NA	ND	ND	NC	NA	ND	ND	NC
Cadmium	NA	ND	ND	NC	NA	ND	ND	NC
Calcium	20	74000	73200	1.09				
Chromium	NA	ND	ND	NC	NA	ND	ND	NC
Cobalt	NA	ND	ND	NC				
Copper	NA	ND	ND	NC	NA	ND	ND	NC
Iron	20	922	910	1.31				
Lead	NA	ND	ND	NC	NA	ND	ND	NC
Magnesium	20	25800	25800	0				
Manganese	20	253	245	3.21				
Mercury	NA	ND	ND	NC				
Nickel	NA	ND	ND	NC	NA	ND	ND	NC
Potassium	20	1020	1050	2.90				
Selenium	NA	ND	ND	NC	NA	ND	ND	NC
Silver	NA	ND	ND	NC				
Sodium	20	12400	13400	7.75				
Thallium	NA	ND	ND	NC	NA	ND	ND	NC
Vanadium	NA	ND	ND	NC				
Zinc	20	30.0	31.0	3.28	NA	ND	ND	NC

S1 = Sample 1
DI = Duplicate 1

S2 = Sample 2
D2 = Duplicate 2

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 1 6705-003

QC Sample 1 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

QC Sample 2 6621-001

QC Sample 2 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

4834

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

DUPLICATE SAMPLE RECOVERY

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	CONTROL LIMIT 3	S3	D3	RPD3	CONTROL LIMIT 4	S4	D4	RPD4
Antimony	NA	ND	ND	NC				
Arsenic	20	66.0	66.0	0				
Beryllium	NA	ND	ND	NC				
Cadmium	NA	ND	ND	NC				
Chromium	NA	ND	ND	NC				
Copper	NA	ND	ND	NC				
Lead	20	26.0	25.0	3.92				
Nickel	NA	ND	ND	NC				
Selenium	NA	ND	ND	NC				
Silver	NA	ND	ND	NC				
Thallium	NA	ND	ND	NC				
Zinc	20	62.0	63.0	1.60				

S3 = Sample 3
D3 = Duplicate 3

S4 = Sample 4
D4 = Duplicate 4

NA = Not Applicable
NC = Non-calculable RPD due to result (s) less than the detection limit.

QC Sample 3 6624-020

QC Sample 3 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

QC Sample 4 6703-002

QC Sample 4 for following samples:
6621-01~05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01~07,09; 6705-01,03,05~07; 6709-01; 6734-01,04; 6741-02~06; 6750-01

INTEGRATED ANALYTICAL LABORATORIES

METALS QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

ANALYTE	AQUEOUS (ug/L)			SOLID (mg/kg)			
	TRUE	FOUND	%R(1)	TRUE	FOUND	LIMITS	%R(2)
Aluminum	400	391	97.8				
Antimony	400	343	85.8				
Arsenic	400	382	95.5				
Barium	400	355	88.8				
Beryllium	400	380	95.0				
Cadmium	400	384	96.0				
Calcium	8000	7670	95.9				
Chromium	400	372	93.0				
Cobalt	400	364	91.0				
Copper	400	366	91.5				
Iron	8000	7900	98.8				
Lead	400	356	89.0				
Magnesium	8000	7600	95.0				
Manganese	400	377	94.3				
Mercury	10.0	10.3	103				
Nickel	400	358	89.5				
Potassium	8000	7160	89.5				
Selenium	400	396	99.0				
Silver	400	362	90.5				
Sodium	8000	7200	90.0				
Thallium	400	366	91.5				
Vanadium	400	374	93.5				
Zinc	400	396	99.0				

(1) Control Limits = 85-115%
(2)Manufacture's Recomended Limits

Aqueous LCS Source: MV Laboratories

Solid LCS Source: Environmental Resource Associates: PriorityPollutnT/CLP Inorganics Soils

4836

METALS QUALITY CONTROL

SERIAL DILUTIONS & POST SPIKES

Lab Case Number: E00- 6621, 6624, 6643, 6644, 6646, 6654, 6676, 6703, 6705, 6709, 6734, 6741, 6750

Matrix: Aqueous Concentration/Units: ppb (µg/L)

ANALYTE	SERIAL DILUTION		%	POST SPIKE		%
	SR	SDR	Difference	SPR	SA	Recovery
Aluminum	406	383	5.83			
Antimony	ND			346	400	86.5
Arsenic	ND			387	400	96.8
Barium	50.0	47.0	6.19			
Beryllium	ND			411	400	103
Cadmium	ND			376	400	94.0
Calcium	74000	73700	0.406			
Chromium	ND			376	400	94.0
Cobalt	ND			362	400	90.5
Copper	ND			363	400	90.8
Iron	922	906	1.75			
Lead	ND			369	400	92.3
Magnesium	25800	24700	4.36			
Manganese	253	252	0.396			
Mercury	ND			11.2	10.0	112
Nickel	ND			356	400	89.0
Potassium	1020	1100	7.55			
Selenium	ND			402	400	101
Silver	ND			363	400	90.8
Sodium	12400			19700	8000	91.3
Thallium	ND			368	400	92.0
Vanadium	ND			376	400	94.0
Zinc	30.0			416	400	96.5

SR = Sample Result
SDR = Sample Dilution Result

SPR = Sample Post Spike Result
SA = Spike Added

Control Limits: (+) or (-) 10% Difference or 85 - 115% Recovery

QC Sample : 6705-003

QC Sample for following samples:
6621-01-05; 6624-020,021; 6643-02; 6644-02; 6646-01; 6654-01; 6676-02; 6703-01-07,09; 6705-01,03,05-07; 6709-01; 6734-01,04; 6741-02-06; 6750-01

4837

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
11/1/00

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

Quality Assurance Data- Blanks, Spikes, Duplicates

Associated Samples: 6586(003,004,00 6624(009,020,021 6741(002-006)
6586(005S/SD) 6724(001) 6742(005,006)
6603(001) 6723(018
6604(001) 6734(001,004)

Matrix: Aqueous

Units: mg/L

BLANK

Parameter	Method Blank	MDL	Analysis Date
Cyanide	ND	0.020	10/31/00

Duplicate Recovery

Parameter	Lab No.		Result (mg/L)	Dup. Result (mg/L)	RPD	RPD Limits +/-
Cyanide	6586-005S		0.284	0.273	4	20

Spike Recovery

Parameter	Lab No.	Result (mg/L)	Spk Added (mg/L)	Spk Rec. (mg/L)	%SR	%Rec. Limits
Cyanide	6586-005	0.00	0.25	0.278	111	75-125

ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
NA= Not Applicable
++ = No Flash- Sample boiled at 100C

Copyright IAL Inc. 2000
All rights reserved.

4/836

Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869
11/2/00

Certified for NJDEP, NY(DOH)
NJ ID#14751
NY ID#11402

Quality Assurance Data- Blanks, Spikes, Duplicates

Associated Samples: 6734(001,004)
6734-001S/SD
6742(001,005)
6723-018

Matrix: Aqueous

Units: mg/L

BLANK

Parameter	Method Blank	MDL	Analysis Date
Phenols	ND	0.050	11/2/00

Duplicate Recovery

Parameter	Lab No.		Result (mg/L)	Dup. Result (mg/L)	RPD	RPD Limits +/-
Phenols	6734-001S		0.244	0.244	0	20

Spike Recovery

Parameter	Lab No.	Result (mg/L)	Spk Added (mg/L)	Spk Rec. (mg/L)	%SR	%Rec. Limits
Phenols	6734-001	0.0	0.250	0.244	98	75-125

ND = Not Detected
NC = Non calculable RPD due to value less than the detection limit
NA= Not Applicable
++ = No Flash- Sample boiled at 100C

Copyright IAL Inc. 2000
All rights reserved.

4839

Phone # (973) 36[redacted]
FAX #(973) 989-52[redacted]

INTEGRATED ANALYT[redacted] LABORATORIES
CHAIN OF [redacted]ODY

[redacted] Rd
07869

CLIENT & PROJECT

Customer:	ENVIROTACTICS INC
Address:	2517 HIGHWAY 35
	BUILDING D - SUITE 202
	MANASQUAN NJ 08736
Telephone:	732-292-0100
FAX:	732-292-2808
Project Name:	ORBIS
Project Manager:	CHRIS NEUFFER
Reference ID#	PO#:

MAILING & BILLING

Send Report To:	
Address:	
Send Invoice To:	
Address:	

Turnaround Time

Conditional / TPHC
24 hr* 48 hr 72 hr 1 wk NA Other:

Verbal/Fax
24 hr* 48 hr* 72 hr* 1 wk (1) 2 wk Other:

Hard Copy
72 hr* 1 wk* 2 wk (3 wk) Other:

*Prior to sample arrival, Lab notification is required.

Report Format

Standard
Regulatory
(Reduced/Tier II)
Other: HAZ[redacted]

ANALYTICAL REQUESTS / PRESERVATIVES

Preservatives: 1. HCL 3. HNO 2. NaOH 4. H SO 5. Other 6. Other
COOLER TEMP 4°C

SAMPLE INFORMATION

Sample Matrix: A - Aqueous, S - Soil, SL - Sludge, W - Waste, X - Other, O - Oil
Lab Case #

Sample ID	Sample Description	Sampling Date	Time	am	pm	Matrix	# of Containers	Lab ID	PETRO	VOA'S	BNA'S	Comments
GW-3		10/24/00	10:00	✓		A	8	1	✓			
GW-4			10:45	✓		A	8	2		✓	✓	
GW-5			12:30		✓	A	8	3		✓	✓	
GW-6			3:35		✓	A	7	4	✓			
TB	TRIP BLANK					A	2	5		✓		

Concentrations Expected: LOW MED HIGH
Known Hazard yes no — Describe

CUSTODY LOG

	Sign	Date	Time	am	pm	Organization	Reason
Relinquished:		10/25/00					
Received:		10/25/00	1430		X	IAL	
Relinquished:		10/25/00	1805		X	IAL	
Received:		10/26/00	6:30	X		IAL	
Relinquished:							
Received:							

LAB COPIES - WHITE & YELLOW; CLIENT COPY - RED

Comments:

8734

PAGE: 1 OF 1

0479

0479

CHAIN OF CUSTODY

Case No.: E00-6734
Project : ORBIS
Client/Project: ENVTACT/ORBIS
Client Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 202
Manasquan, NJ 08736
Date Received: 10/26/00
Time Received: 06:30
Report Format: Reduced

P.O. #: _____

Billing Address:
Envirotactics Inc.
2517 Route 35
Building D, Suite 20
Manasquan, NJ 08736
Verbal Due: Nov 9
Report Due: Nov 16

# of Containers	8	8	8	7	2
IAL ID #	6734-001	6734-002	6734-003	6734-004	6734-005
Client ID #	GW-3	GW-4	GW-5	GW-6	TB
Matrix	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
Sample Date	10/24/00	10/24/00	10/24/00	10/24/00	10/24/00
Sample Time	10:00	10:45	12:30	15:35	:
VO+15, PP LIST	√			√	
VO+10, PP LIST		√	√		√
Pesticides	√			√	
PCB	√			√	
BN + 15		√	√		
BNA + 25	√			√	
PP Metals -LOW	√			√	
Cyanide, Total	√			√	
Phenols	√			√	
Electronic Del.	√				

Comments: NOTE 1: PLEASE MEET GROUNDWATER LIMITS FOR METALS.

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: № 6734 CLIENT: ENVIROTACTICS INC.

COOLER TEMPERATURE: 2° - 6°C: ✓ (See Chain of Custody)

CHAIN OF CUSTODY: COMPLETE / INCOMPLETE Comments: _____

Sample Bottles Intact:	✓	Comments:
Sample Labels Intact/ Correct:	✓	
Sufficient Sample Volume:	✓	
Correct bottles/ preservative:	✓	
Samples received in holding time/ prep time:	✓	
Headspace/ bubbles in voa samples:	✓	
Samples to be subcontracted:	(✓)	
Preserved Sample pH checked: (Excluding voa samples)	✓	

KEY
✓ = YES
✗ = NO
(✓) = N/A

ADDITIONAL COMMENTS: _____

SAMPLE(S) VERIFIED BY: INITIAL BP DATE 10/26/00

CORRECTIVE ACTION REQUIRED: YES [ ] NO [✓]

CLIENT NOTIFIED: YES [ ] Date/ Time: _____ NO [ ]

PROJECT CONTACT: _____

SUBCONTRACTED LAB: _____

DATE SHIPPED: _____

CORRECTIVE ACTION BY CLIENT: _____

CORRECTIVE ACTION TAKEN: _____

CONCLUSION: _____

Corrective Action taken by: INITIAL _____ DATE _____

REV 5/99

4842

Integrated Analytical Laboratories, LLC.

Laboratory Custody Chronicle

Case No : E00-6734
Client : Envirotactics Inc.
Project : ORBIS

	GC/MS V		EXTRACT DATE	EXTRACT TIME	EXTRACT INITIAL	ANALYSIS DATE	ANALYSIS TIME	ANALYSIS INITIAL
VO+15, PP LIST	6734-001	A				10/26/00 - 11/1/00		DSD
	6734-004	A						
VO+10, PP LIST	6734-002	A						
	6734-003	A						
	6734-005	A						
	GC EX							
Pesticides	6734-001	A	10/27	900	EDM2	10.27.00	1200	SR
	6734-004	A						
PCB	6734-001	A						
	6734-004	A						
	GC/MS X							
BN + 15	6734-002	A	10/27	700.300	DL	10/27		DRei
	6734-003	A						
BNA + 25	6734-001	A						
	6734-004	A						
	METALS							
PP Metals -LOW	6734-001	A	10/26/00	2/2	X	10/27	1200	[illegible]
	6734-004	A						
	WETCHEM							
Cyanide, Total	6734-001	A	10/26		3M	10/31		3M
	6734-004	A						
Phenols	6734-001	A	10/27	830	DM	11/2	1200	RB
	6734-004	A						
	AIR							
Electronic Del.	6734-001	A						

REVIEW & APPROVAL: [signature]
REMARKS :

4843

ACCREDITED LABORATORIES, INC.

Implementing Tomorrow's Technology, Today™...

Analytical Data Report

for

Envirotactics
2517 Rt. 35, Bldg. D Suite 202
Manasquan, NJ 08736

Project: Orbis

Accredited Laboratories Case No.: 9881
Date Received: 10/27/00

Field ID	Laboratory Sample #
GW-7	200013302

Accredited Laboratories, Inc. New Jersey Certification Number 12007. This data has been reviewed and accepted by:

Theodore C. Gaydos
Technical Director

(732) 541-2025

CORPORATE OFFICES
20 Pershing Avenue
Carteret, New Jersey 07008

FAX (732) 541-1383

Printed on RECYCLED paper made with 20% post consumer waste

4844

TABLE OF CONTENTS

	page
Chain of Custody	1
Methodology Summary	4
Laboratory Chronicles	5
Conformance/Non-conformance Summary	7
Laboratory Certificate	8
Analytical Results	9
Volatile Organics	12
Base Neutral Organics	
Quality Control	14
Volatile Organics:	
GCMS Tune	
Standard Calibrations	
Surrogate Recovery Summary	
Internal Standard Area Check	
MS/MSD Summary	
Method Blank	33
Base Neutral Organics:	
GCMS Tune	
Standard Calibrations	
Surrogate Recovery Summary	
Internal Standard Area Check	
MS/MSD Summary	
Method Blank	
Raw Data	71
Volatile Organics	79
Base Neutral Organics	

ACCREDITED LABORATORIES, INC.
20 PERSHING AVENUE
CARTERET, NEW JERSEY 07008
PHONE (732) 541-2025 FAX (732) 541-1383

CHAIN OF CUSTODY FORM

STATE AGENCY (NJ) NY PA CT DE OTHER

CLIENT	ENVIROTACTICS	PROJECT	ORBIS
ADDRESS	2517 HWY 35 BLD D-201	CONTACT	CHRIS NEUFFER
CITY	MANASQUAN	PHONE	732-292-0100
STATE	NJ ZIP 08736	FAX	732-292-2808

ALI SAMPLE #	FIELD ID	*C	**M	DATE / TIME SAMPLED	SAMPLE DESCRIPTION	ANALYSIS
0013302	GW-7	8	A	10/27/10 5:20		VOTIO BNTIS
						HOLD FOR
						ADDITIONAL ANALYSIS

**M = MATRIX A=AQUEOUS S=SOIL G=SLUDGE P=POTABLE WATER O=OIL F=FILTER K=SOLID X=OTHER

*C = NO. CONTAINERS TURNAROUND: STANDARD - FAX (If Blank, Std. 3 weeks)

DELIVERABLES (circle one) STD (REDUCED) FULL OTHER

RELINQUISHED BY: PRINT	SIGN	RECEIVED BY: PRINT	SIGN	ORGANIZATION	DATE	TIME	REASON
CHRIS NEUFFER	[signature]	[signature]	[signature]	ALI	10/27/10	1830	[signature]

PERSON(S) ASSUMING RESPONSIBILITY FOR SAMPLING: PRINT: CHRIS NEUFFER SIGN: [signature]

COMMENTS	HAZSITE

ALI QUOTE#	
ALI CASE#	9881
P.O.#	

4846

Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Accredited Laboratories, Inc. Name:	Location: Carteret, N.J. Title: SRO
Field Sample Seal No. None	Date Broken: __/__/__	Military Time Seal Broken _____
Case No. 9881	__ Check if No Seal on Sample Shuttle.	

Field #	Laboratory #	Test Name	Date Sampled	Date Received
GW-7	200013302	VO10	10/27/00	10/27/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
11/2/00		Printed Name [redacted]	Printed Name W. LLORENTE	analysis
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	

FORM:
291COC

2

4847

Accredited Laboratories, Inc.

INTERNAL CHAIN OF CUSTODY

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Accredited Laboratories, Inc. Location: Carteret, N.J. Name: [redacted] Title: [illegible]
Field Sample Seal No. None	Date Broken: __/__/__ Military Time Seal Broken _____
Case No. 9881	Check if No Seal on Sample Shuttle.

Field #	Laboratory #	Test Name	Date Sampled	Date Received
GW-7	200013302	BN15	10/27/00	10/27/00

DATE	TIME	RELINQUISHED BY	RECEIVED BY J Bustin	PURPOSE OF CHANGE OF CUSTODY
11/1/00	8:30 am	Printed Name [redacted]	Printed Name J Bustin	Extraction
		Signature	Signature J Bustin	Aqueous Do Not Test
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	
		Printed Name	Printed Name	
		Signature	Signature	

FORM: 291COC

3

4/8/46

METHODOLOGY SUMMARY

Volatile Organics - EPA 624 (aqueous)

Volatile organic compounds are purged from a 5-ml sample by bubbling an inert gas through the aqueous sample. The purgeables are trapped in a sorbent column. When purging is completed, the sorbent column is heated and back-flushed with the inert gas to desorb the purgeables onto a GC column. The GC is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

Base-Neutral/Acid Extractables - EPA 625 (aqueous)

A 1 liter aqueous sample is serially extracted with methylene chloride at a pH greater than 11 and again at a pH less than 2. The methylene chloride extract is dried and concentrated. The extracts are combined and spiked with the internal standards prior to the injection. A measured amount is injected onto a GC and the analytes are detected with a mass spectrometer.

Date: 10/30/00 ACCREDITED LABORATORIES, INC. Time: 9:38:53

ORGANIC ANALYSIS LABORATORY CHRONICLE

DISK

Client: Envirotactics Fax Data Due: **11/08/00** Test Date Due: 11/10/00 Hard Copy Due: **11/08/00**

Client Project Name: Orbis

Date Sampled:10/27/00 Date Received:10/27/00 Report Package: Reduced

QC#:_____

Test: VO10
Test Description:Volatile Organics + 10 (VO10)

By Method: _____

SAMPLE IDENTIFICATION			M	EXTRACTION			ANALYSIS			TIC FLAG
			t							=
Field#	Case#	Sample#	x	Date	Time	Init	Date	Time	Init	=
GW-7	9881	200013302	A	_____	_____	____	11/02/00	17:02	NL.	Y

Reviewed by: DQ Date: 11/8/00

Abreviations:Sample Matrix:
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge
X=Other RPT:Report0

5

Date: 10/30/00 ACCREDITED LABORATORIES, INC. Time: 9:38:53

ORGANIC ANALYSIS LABORATORY CHRONICLE

DISK

Client: Envirotactics Fax Data Due: **11/08/00** Test Date Due: 11/03/00 Hard Copy Due: **11/08/00**

Client Project Name: Orbis

Date Sampled:10/27/00 Date Received:10/27/00 Report Package: Reduced

QC#:_____

Test: BN15
Test Description:Base Neutral Compounds + 15 (BN15)

By Method: _____

SAMPLE IDENTIFICATION			Mtx	EXTRACTION			ANALYSIS			TIC FLAG
Field#	Case#	Sample#		Date	Time	Init	Date	Time	Init	
GW-7	9881	200013302	A	11/1/00		JRB	11/4/00	00:25	DM	Y

rec'd 11/2/00 9:00am

Reviewed by: _____ Date: 11/8/00

Abreviations:Sample Matrix:
Mtx:A=Aqueous:S=Soil:O=Oil:K=Solid:F=Filters:P=Potable Water:G=Sludge
X=Other RPT:Report0

6

CONFORMANCE/NON-CONFORMANCE SUMMARY

Accredited Labs received 1 aqueous sample (Project: Orbis; ALI Case #9881) from Envirotactics, Inc. on 10/27/00 for the analyses of Volatile Organics +10 and Base Neutral Organics +15.

All analyses were performed within the required holding time.

In the Volatile Organic analyses, the MDL levels were elevated due to matrix interference.

"The laboratory has reviewed the quality assurance and quality control measurements for the sample analysis stated above."

Theodore C. Gaydos
Technical Director

State of New Jersey

Department of Environmental Protection

Certifies That

ACCREDITED LABORATORIES INCORPORATED

LABORATORY CERTIFICATION NO. [illegible]07

[illegible] the requirements of the

Regulations Governing The Certification Of

Laboratories And Environmental Measurements N.J.A.C. 7:18 et. seq.

is hereby approved as a

State Certified Environmental Laboratory

To perform the analyses as indicated on the Annual Certified Parameter List

which must accompany this certificate to be valid

Expiration Date June 30, 2001

Joseph T. Aiello, Chief
Office of Quality Assurance

THIS CERTIFICATE IS TO BE CONSPICUOUSLY DISPLAYED AT THE LABORATORY WITH THE ANNUAL CERTIFIED PARAMETER LIST IN A LOCATION ON THE PREMISES VISIBLE TO THE PUBLIC.

4853

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER	9881	MATRIX	Aqueous
SAMPLE NUMBER	0013302	DILUTION FACTOR	500
DATA FILE	>C3375	DATE EXTRACTED	
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	11/02/00
FIELD ID	GW-7	ANALYZED BY	WILLIAM

CAS #	COMPOUND	UG/L		MDL
67641	Acetone	U		900
107028	Acrolein	U		3100
107131	Acrylonitrile	U		3300
71432	Benzene	310	W	200
75274	Bromodichloromethane	U		200
75252	Bromoform	U		200
74839	Bromomethane	U		1000
78933	2-Butanone	U		200
75150	Carbon Disulfide	U		200
56235	Carbon Tetrachloride	U		200
108907	Chlorobenzene	U		200
75003	Chloroethane	U		1000
110758	2-Chloroethylvinylether	U		1000
67663	Chloroform	U		200
74873	Chloromethane	U		1000
124481	Dibromochloromethane	U		200
75343	1,1-Dichloroethane	U		200
107062	1,2-Dichloroethane	U		200
75354	1,1-Dichloroethene	U		200
156592	cis-1,2-Dichloroethene	U		200
156605	trans-1,2-Dichloroethene	U		200
78875	1,2-Dichloropropane	U		200
10061015	cis-1,3-Dichloropropene	U		200
10061026	trans-1,3-Dichloropropene	U		200
100414	Ethylbenzene	760	W	500
591786	2-Hexanone	U		450
75092	Methylene Chloride	780	W	500
108101	4-Methyl-2-pentanone	U		350
100425	Styrene	U		200
79345	1,1,2,2-Tetrachloroethane	U		300
127184	Tetrachloroethene	U		200
108883	Toluene	180000	E W	250
71556	1,1,1-Trichloroethane	U		200
79005	1,1,2-Trichloroethane	U		200
79016	Trichloroethene	U		200
75694	Trichlorofluoromethane	U		200
108054	Vinyl Acetate	U		400
75014	Vinyl Chloride	U		1000
1330207	m,p-Xylene	1400	W	1400
95476	o-Xylene	U		1100

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	100 %	76-114	OK
Toluene-d8	93 %	88-110	OK
Bromofluorobenzene	91 %	86-115	OK

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
W - Result exceeds specific ground water quality criteria.*

* Flags are based on Specific Ground Water Quality Criteria from New Jersey Register dated February 1, 1993.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0013302

Client Name: ENVIROTACTICS Field ID: GW-7

Case No.: 9881 Date Extracted:

Lab File ID: >C3375 Date Analyzed: 11/02/00

CONCENTRATION UNITS: (ug/L or ug/Kg): ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76131	*** See below	9.61	130000	
2.	Unknown aromatic	22.64	1300	

***
1. Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI9CI)

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER	9881	MATRIX	Aqueous
SAMPLE NUMBER	0013302DL	DILUTION FACTOR	5000
DATA FILE	>C3422	DATE EXTRACTED	
CLIENT NAME	ENVIROTACTICS	DATE ANALYZED	11/07/00
FIELD ID	GW-7	ANALYZED BY	WILLIAM

CAS #	COMPOUND	UG/L		MDL
67641	Acetone	U		9000
107028	Acrolein	U		31000
107131	Acrylonitrile	U		33000
71432	Benzene	U		2000
75274	Bromodichloromethane	U		2000
75252	Bromoform	U		2000
74839	Bromomethane	U		10000
78933	2-Butanone	U		2000
75150	Carbon Disulfide	U		2000
56235	Carbon Tetrachloride	U		2000
108907	Chlorobenzene	U		2000
75003	Chloroethane	U		10000
110758	2-Chloroethylvinylether	U		10000
67663	Chloroform	U		2000
74873	Chloromethane	U		10000
124481	Dibromochloromethane	U		2000
75343	1,1-Dichloroethane	U		2000
107062	1,2-Dichloroethane	U		2000
75354	1,1-Dichloroethene	U		2000
156592	cis-1,2-Dichloroethene	U		2000
156605	trans-1,2-Dichloroethene	U		2000
78875	1,2-Dichloropropane	U		2000
10061015	cis-1,3-Dichloropropene	U		2000
10061026	trans-1,3-Dichloropropene	U		2000
100414	Ethylbenzene	U		5000
591786	2-Hexanone	U		4500
75092	Methylene Chloride	U		5000
108101	4-Methyl-2-pentanone	U		3500
100425	Styrene	U		2000
79345	1,1,2,2-Tetrachloroethane	U		3000
127184	Tetrachloroethene	U		2000
108883	Toluene	130000	DW	2500
71556	1,1,1-Trichloroethane	U		2000
79005	1,1,2-Trichloroethane	U		2000
79016	Trichloroethene	U		2000
75694	Trichlorofluoromethane	U		2000
108054	Vinyl Acetate	U		4000
75014	Vinyl Chloride	U		10000
1330207	m,p-Xylene	U		14000
95476	o-Xylene	U		11000

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	100 %	76-114	OK
Toluene-d8	97 %	88-110	OK
Bromofluorobenzene	91 %	86-115	OK

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
W - Result exceeds specific ground water quality criteria.*

* Flags are based on Specific Ground Water Quality Criteria from New Jersey Register dated February 1, 1993.

11

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

CAS #	COMPOUND	UG/L	MDL	CAS #	COMPOUND	UG/L	MDL
[illegible]	Acenaphthene	U	10	131113	Dimethyl Phthalate	U	10
208968	Acenaphthylene	U	10	84742	Di-n-Butylphthalate	U	10
120127	Anthracene	U	10	121142	2,4-Dinitrotoluene	U	10
56553	Benzo(a)Anthracene	U	10	606202	2,6-Dinitrotoluene	U	10
50328	Benzo(a)Pyrene	U	10	117840	Di-n-octyl phthalate	U	10
205992	Benzo(b)fluoranthene	U	10	206440	Fluoranthene	U	10
191242	Benzo(g,h,i)Perylene	U	10	86737	Fluorene	U	10
207089	Benzo(k)Fluoranthene	U	10	118741	Hexachlorobenzene	U	10
100516	Benzyl Alcohol	U	20	87683	Hexachlorobutadiene	U	10
111444	bis(-2-Chloroethyl)Ether	U	10	77474	Hexachlorocyclopentadiene	U	10
108601	bis(2-Chloroisopropyl)ether	U	10	67721	Hexachloroethane	U	10
117817	Bis(2-Ethylhexyl)Phthalate	U	10	193395	Indeno(1,2,3-cd)Pyrene	U	10
111911	bis(-2-Chloroethoxy)Methane	U	10	78591	Isophorone	U	10
101553	4-Bromophenyl-phenylether	U	10	91576	2-Methylnaphthalene	U	10
85687	Butylbenzylphthalate	U	10	91203	Naphthalene	U	10
106478	4-Chloroaniline	U	20	88744	2-Nitroaniline	U	50
91587	2-Chloronaphthalene	U	10	99092	3-Nitroaniline	U	50
7005723	4-Chlorophenyl-phenylether	U	10	100016	4-Nitroaniline	U	50
218019	Chrysene	U	10	98953	Nitrobenzene	U	10
3703	Dibenzo(a,h)Anthracene	U	10	62759	N-Nitrosodimethylamine	U	10
2649	Dibenzofuran	U	10	86306	N-Nitrosodiphenylamine	U	[illegible]
95501	1,2-Dichlorobenzene	42	10	621647	N-Nitroso-Di-n-propylamine	U	[illegible]
541731	1,3-Dichlorobenzene	U	10	85018	Phenanthrene	U	10
106467	1,4-Dichlorobenzene	4 J	10	129000	Pyrene	U	10
91941	3,3'-Dichlorobenzidine	U	20	120821	1,2,4-Trichlorobenzene	U	10
84662	Diethylphthalate	9 J	10				

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	95 %	35-114	OK
2-Fluorobiphenyl	64 %	43-116	OK
Terphenyl-d14	54 %	33-141	OK

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
W - Result exceeds specific ground water quality criteria.*

* Flags are based on Specific Ground Water Quality Criteria from New Jersey Register dated February 1, 1993.
** 3-Methylphenol and 4-Metnylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: 0013302

Client Name: ENVIROTACTICS Field ID: GW-7

Case No.: 9881 Date Extracted: 11/01/00

Lab File ID: >B1356 Date Analyzed: 11/04/00

CONCENTRATION UNITS: (ug/L or ug/Kg): ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	108883	Benzene, methyl-	4.33	2200	
2.	95476	Benzene, 1,2-dimethyl-	7.09	420	
3.		Unknown aromatic	10.86	880	
4.		Unknown aromatic	11.88	16	
5.	21368683	*** See below	12.78	58	
6.		Unknown aromatic	13.08	16	
7.		Unknown aromatic	13.29	23	
8.		Unknown aromatic	13.76	49	
9.		Unknown aromatic	14.21	20	
10.		Unknown aromatic	14.60	36	
11.		Unknown	15.13	32	
12.	140534	*** See below	15.94	140	
13.	85916	*** See below	16.95	180	
14.		Unknown aromatic	19.89	190	
15.	119562	*** See below	22.36	970	

***

5. Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+-
12. Benzeneacetonitrile, 4-chloro-
13. Benzoic acid, 2-(methylamino)-, methyl ester
15. Benzenemethanol, 4-chloro-.alpha.-phenyl-

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

13

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >C3366 BFB Injection Date: 11/02/00

Instrument ID: HP5970BC BFB Injection Time: 10:09

GC Column: RTX-502 Column ID: 0.53

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.1
75	30.0 - 60.0% of mass 95	57.7
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	83.1
175	5.0 - 9.0% of mass 174	5.6(6.8)1
176	95.0 - 101.0% of mass 174	79.6(95.7)1
177	5.0 - 9.0% of mass 176	5.4(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD020	>C3367	11/02/00	10:28
02		VSTD010	>C3368	11/02/00	11:09
03		VSTD002	>C3369	11/02/00	11:51
04		VSTD200	>C3370	11/02/00	13:00
05		VBLKC27	>C3372	11/02/00	14:42
06		0013363	>C3373	11/02/00	15:42
07		0013364	>C3374	11/02/00	16:22
08		0013302	>C3375	11/02/00	17:02
09		0013288	>C3376	11/02/00	17:50
10		0013289	>C3377	11/02/00	18:41
11		0013290	>C3378	11/02/00	19:29
12		0013359	>C3379	11/02/00	20:18
13		0013360	>C3380	11/02/00	21:09
14		0013361	>C3381	11/02/00	21:57
15		0013362	>C3382	11/02/00	22:46
16		0013353	>C3383	11/02/00	23:36
17		0013354	>C3384	11/03/00	00:24
18		0013288MS	>C3385	11/03/00	01:12
19		0013288MSD	>C3386	11/03/00	02:01
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
BROMOFLUOROBENZENE (BFB)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

Lab File ID: >C3401 BFB Injection Date: 11/06/00

Instrument ID: HP5970BC BFB Injection Time: 09:21

GC Column: RTX-502 Column ID: 0.53

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.3
75	30.0 - 60.0% of mass 95	54.4
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	83.6
175	5.0 - 9.0% of mass 174	5.3(6.3)1
176	95.0 - 101.0% of mass 174	84.2(100.7)1
177	5.0 - 9.0% of mass 176	5.7(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

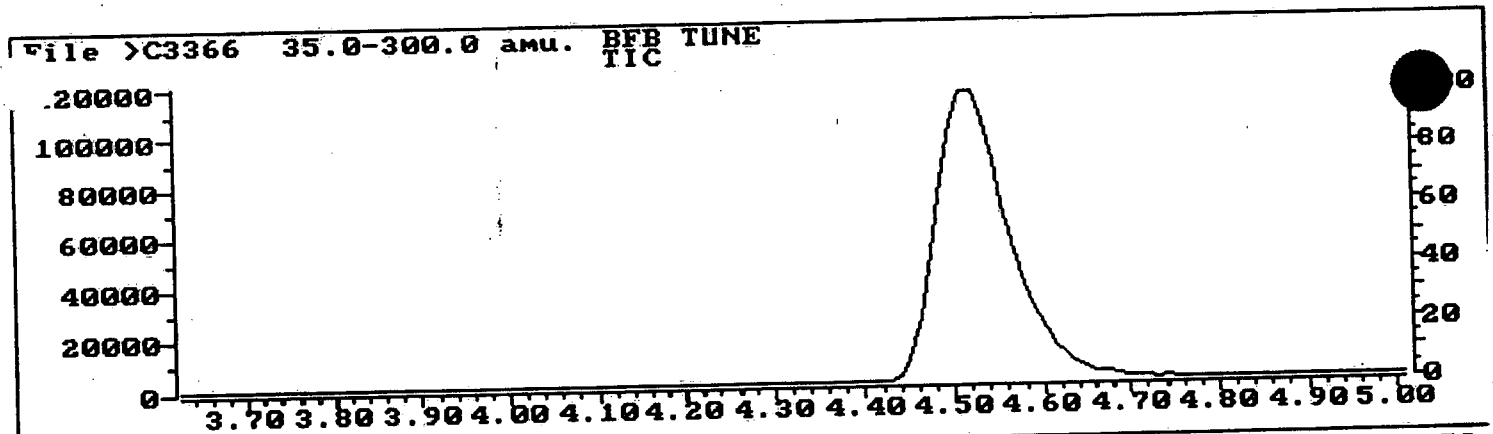
	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		VSTD020	>C3402	11/06/00	09:40
02		VSTD010	>C3403	11/06/00	10:20
03		VSTD200	>C3405	11/06/00	11:43
04		VSTD002	>C3407	11/06/00	13:45
05		VBLKC29	>C3409	11/06/00	15:30
06		0013389	>C3410	11/06/00	16:22
07		0013384	>C3411	11/06/00	17:13
08		0013459	>C3412	11/06/00	18:01
09		0013460	>C3413	11/06/00	18:51
10		0013461	>C3414	11/06/00	19:40
11		0013462	>C3415	11/06/00	20:29
12		0013463	>C3416	11/06/00	21:20
13		0013389MS	>C3417	11/06/00	22:10
14		0013389MSD	>C3418	11/06/00	22:59
15		0013354DL	>C3419	11/06/00	23:49
16		0013361DL	>C3420	11/07/00	00:37
17		0013362DL	>C3421	11/07/00	01:25
18		0013302DL	>C3422	11/07/00	02:12
19		0013458	>C3423	11/07/00	03:02
20		0013481	>C3424	11/07/00	03:50
21		0013556	>C3425	11/07/00	08:02
22					

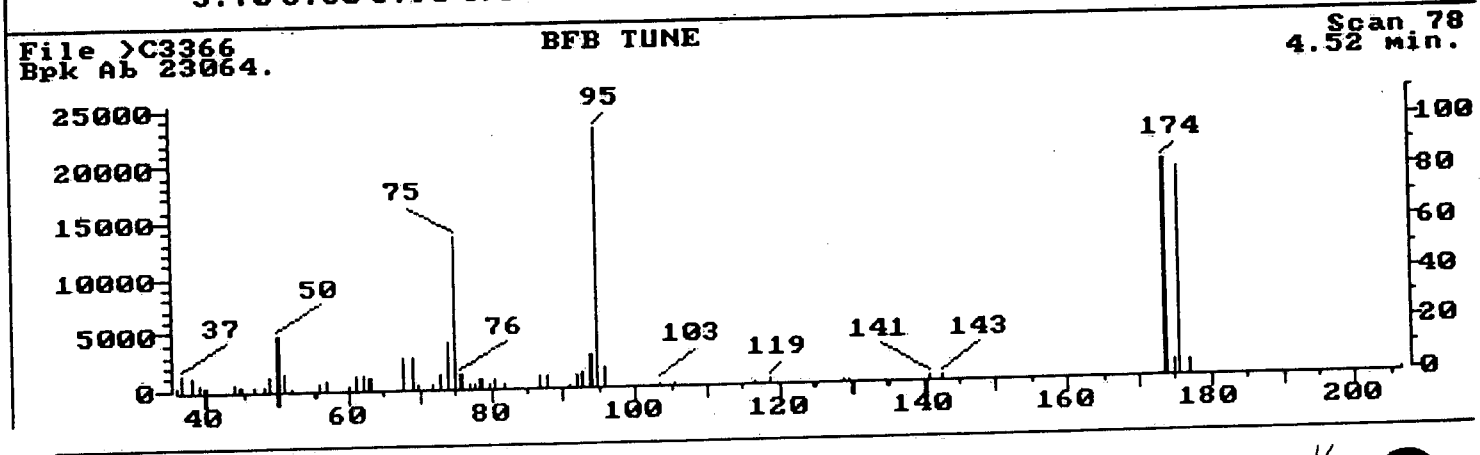
GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	20.14	20.14	OK
75	30-60% of mass 95	57.74	57.74	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	6.79	6.79	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	83.14	83.14	OK
175	5-9% of mass 174	5.62	6.75	OK
176	95-101% of mass 174	79.57	95.70	OK
177	5-9% of mass 176	5.45	6.84	OK

Injection Date: 11/02/00
Injection Time: 10:09
Data File: >C3366
Scan: 78





16

C3366 BFB TUNE
78

File: >C3366 Scan #: 78 Retn. time: 4.52

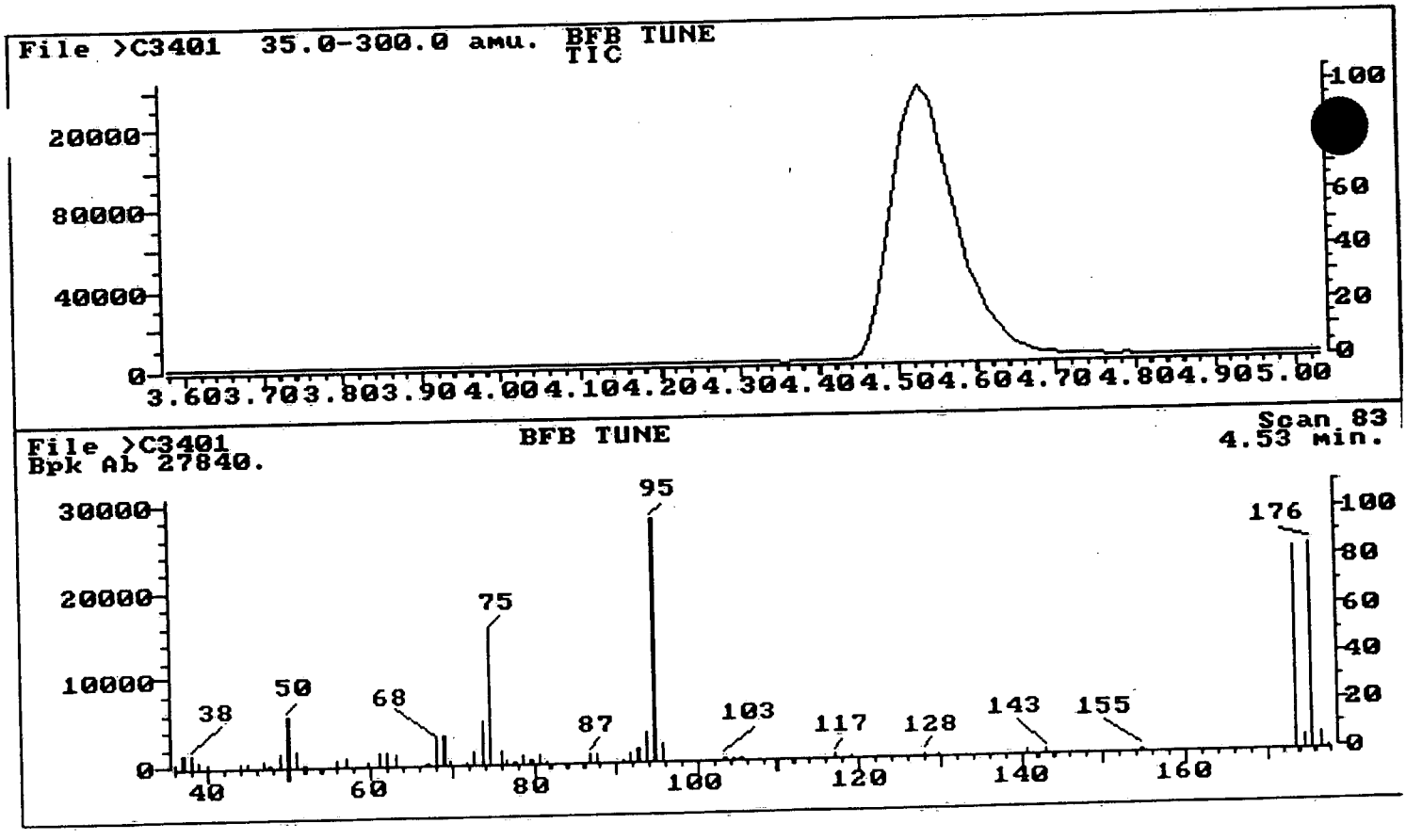
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.95	286.0	50.85	1398.0	71.85	163.0	86.75	744.0	118.75	153.0
36.85	1375.0	51.95	121.0	72.95	1103.0	87.75	776.0	128.75	62.0
37.85	1174.0	55.75	407.0	73.85	3878.0	90.85	116.0	129.65	105.0
38.95	380.0	56.85	657.0	74.85	13317.0	91.85	805.0	140.75	225.0
39.75	205.0	59.85	292.0	75.85	1065.0	92.85	999.0	142.75	220.0
43.95	438.0	60.85	1186.0	76.95	190.0	93.85	2790.0	173.80	19176.1
44.75	266.0	61.85	1038.0	77.95	178.0	94.85	23064.1	174.80	1295.0
46.85	328.0	62.95	761.0	78.75	707.0	95.85	1566.0	175.80	18352.1
47.85	181.0	67.85	2586.0	79.85	207.0	103.65	105.0	176.80	1256.0
48.85	1135.0	68.85	2519.0	80.75	681.0	105.75	98.0	206.80	64.0
49.85	4646.0	69.85	205.0	81.75	159.0	116.85	142.0		

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	20.30	20.30	OK
75	30-60% of mass 95	54.41	54.41	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	7.08	7.08	OK
173	Less than 2% of mass 174	0.00	0.00	OK
174	Greater than 50% of mass 95	83.62	83.62	OK
175	5-9% of mass 174	5.31	6.35	OK
176	95-101% of mass 174	84.17	100.65	OK
177	5-9% of mass 176	5.72	6.80	OK

Injection Date: 11/06/00
Injection Time: 09:21
Data File: >C3401
Scan: 83



C3401
83

BFB TUNE

File: >C3401 Scan #: 83 Retn. time: 4.53

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.95	233.0	51.85	83.0	72.85	1294.0	87.75	720.0	118.75	158.0
36.85	1328.0	55.85	439.0	73.85	4633.0	90.85	123.0	127.75	139.0
37.85	1363.0	56.95	698.0	74.85	15147.0	91.85	794.0	129.65	113.0
38.85	493.0	59.75	258.0	75.95	1235.0	92.85	1148.0	140.65	179.0
39.85	181.0	60.85	1264.0	76.85	206.0	93.85	3229.0	142.85	214.0
43.85	379.0	61.85	1273.0	77.65	99.0	94.85	27840.1	154.80	65.0
44.95	248.0	62.85	881.0	77.85	96.0	95.85	1970.0	173.80	23280.1
46.95	518.0	66.95	102.0	78.75	837.0	103.65	171.0	174.80	1478.0
47.65	125.0	67.85	2843.0	79.65	197.0	104.55	53.0	175.80	23432.1
48.85	1151.0	68.85	3055.0	80.75	744.0	105.65	94.0	176.80	1593.0
49.85	5652.0	69.65	231.0	81.65	109.0	116.85	190.0	177.90	70.0
50.85	1627.0	71.65	125.0	86.85	803.0				

Initial Calibration Data
HSL Compounds

ase No: Instrument ID: HP57908C

Contractor: Accredited Labs Inc. Calibration Date: 11/02/00

Contract No: CAC692

Minimum $\overline{RF}$ for SPCC is Maximum % RSD for CCC is 35%

Compound	Laboratory ID: >C3369 RF 2.00	>C3368 RF 10.00	>C3367 RF 20.00	>C3370 RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
Acrolein	.03237	.04590	.05344	.05985	.591	.04789	24.667			(Conc=20.0,100.0,200.0,2000.0)
Acrylonitrile	.19565	.19689	.23003	.23314	.746	.21393	9.551			(Conc=20.0,100.0,200.0,2000.0)
Dichlorodifluoromethane	.71460	.93695	1.04352	1.02154	.322	.92915	16.169			
Chloromethane	.71099	.69420	.74702	.70129	.358	.71337	3.289	*		
Bromomethane	.92612	.88614	.93413	.98597	.444	.93309	4.397	*		
Vinyl Chloride	.48963	.65119	.66370	.57478	.375	.59482	13.515	*		
Chloroethane	.52078	.55997	.61509	.65340	.459	.58731	9.983	*		
Methylene Chloride	6.31922	2.29756	1.90402	1.52763	.719	3.01211	73.936	*		
Acetone	.34959	.23990	.24572	.23303	.607	.26706	20.694			
Carbon Disulfide	2.17397	2.12160	2.15657	2.22790	.714	2.17001	2.042			
Trichlorofluoromethane	6.46811	6.00717	6.12473	6.53265	.505	6.28317	4.086	*		
1,1-Dichloroethene	2.00278	1.86736	1.90203	2.01956	.625	1.94793	3.834	*		
1,1-Dichloroethane	2.31400	2.05411	2.09212	2.16485	.848	2.15627	5.322	*		
T-butyl alcohol	.06654	.06610	.07869	.07942	.650	.07269	10.128			(Conc=20.0,100.0,200.0,2000.0)
cis-1,2-Dichloroethene	1.66335	1.58668	1.60878	1.66070	.949	1.62988	2.345			
rans-1,2-Dichloroethene	1.90931	1.73156	1.73668	1.81840	.773	1.79899	4.648	*		
Chloroform	2.94792	2.63520	2.62657	2.74646	.974	2.73904	5.461	*		
1,2-Dichloroethane-d4	1.78021	1.57575	1.54546	1.56126	1.086	1.61567	6.832			(Conc=1.2,6.0,12.0,120.0)
1,2-Dichloroethane	1.99884	1.83603	1.86904	1.89571	1.100	1.89990	3.702	*		
2-Butanone	.11963	.10912	.12963	.12784	.806	.12156	7.704			
Methyl t-butyl ether	.66015	.56607	.58004	.55970	.655	.59149	7.871			(Conc=10.0,50.0,100.0,1000.0)
1,1,1-Trichloroethane	.85562	.75195	.75462	.78765	.906	.78746	6.128	*		
Carbon Tetrachloride	.81075	.73314	.75987	.79254	.938	.77407	4.453	*		
Vinyl Acetate	.56946	.53116	.60551	.67882	.745	.59624	10.545			
Bromodichloromethane	.76808	.69138	.71643	.76792	1.096	.73595	5.217	*		
1,2-Dichloropropane	.38464	.33104	.33751	.34863	1.065	.35045	6.825	*		
cis-1,3-Dichloropropene	.53186	.49422	.52567	.57225	1.166	.53100	6.038	*		
Trichloroethene	.51245	.43997	.45225	.45957	1.042	.46606	6.859	*		
Benzene	1.04606	.89771	.90248	.90383	.963	.93752	7.723	*		
Dibromochloromethane	.70307	.64602	.66708	.70404	1.319	.68005	4.187	*		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

20

Initial Calibration Data
HSL Compounds

Case No:

Instrument ID: HP5790BC

Contractor: Accredited Labs Inc.

Calibration Date: 11/02/00

Contract No: CAC692

Minimum $\overline{RF}$ for SPCC is

Maximum % RSD for CCC is 35%

Laboratory ID:	>C3369	>C3368	>C3367	>C3370					
Compound	RF 2.00	RF 10.00	RF 20.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
1,1,2-Trichloroethane	.34501	.30323	.31334	.32702	1.251	.32215	5.616	*	
trans-1,3-Dichloropropene	.46059	.43416	.45706	.53023	1.231	.47051	8.821	*	
2-Chloroethylvinylether	.15917	.16446	.18467	.21978	1.136	.18202	15.090	*	(Conc=2.0,10.0,20.0,200.0)
Bromoform	.47926	.45543	.49151	.52660	1.525	.48820	6.075	*	
2-Hexanone	.20937	.20411	.22169	.24775	.898	.22073	8.817		
4-Methyl-2-pentanone	.63661	.57733	.60097	.63980	.816	.61368	4.880		
Tetrachloroethene	.83490	.72819	.71573	.69543	.926	.74356	8.388	*	
1,1,2,2-Tetrachloroethane	.59819	.52043	.54743	.55304	1.108	.55477	5.815	*	
Toluene-d8	1.54507	1.31232	1.24537	1.26954	.859	1.34307	10.236		(Conc=1.2,6.0,12.0,120.0)
Toluene	1.59087	1.33411	1.31485	1.35689	.866	1.39918	9.216	*	
Chlorobenzene	1.14337	1.00687	1.01694	1.00455	1.004	1.04293	6.441	*	
Bromofluorobenzene	.86601	.77156	.78736	.83587	1.116	.81520	5.341		(Conc=1.2,6.0,12.0,120.0)
Ethylbenzene	2.06311	1.88078	1.77007	1.90188	1.008	1.90396	6.346	*	
Styrene	.86589	.86915	.91567	.94660	1.061	.89933	4.321		
m,p-Xylene	1.83771	1.48044	1.48706	1.38824	1.016	1.54836	12.794		(Conc=2.0,10.0,20.0,200.0)
o-Xylene	1.66592	1.42252	1.43185	1.43200	1.057	1.48807	7.973		
1,2-Dichlorobenzene	.81806	.76495	.81154	.86612	1.270	.81517	5.077	*	
1,3-Dichlorobenzene	.85847	.77313	.81958	.98973	1.226	.86023	10.825	*	
1,4-Dichlorobenzene	.91738	.89289	.95673	1.00182	1.234	.94220	5.058	*	
Naphthalene	-	-	-	-	-	-	-		
Diisopropyl ether	1.81744	1.55578	1.61837	1.62984	.523	1.65536	6.817		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

.se No: _____ Instrument ID: HP5790BC

Contractor: Accredited Labs Inc. Calibration Date: 11/06/00

Contract No: CAC694

Minimum $\overline{RF}$ for SPCC is Maximum % RSD for CCC is 35%

Laboratory ID:	>C3407	>C3403	>C3402	>C3405					
Compound	RF 2.00	RF 10.00	RF 20.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Acrolein	.01842	.04870	.04957	.05427	.592	.04274	38.363		
Acrylonitrile	.19348	.22073	.21842	.21376	.747	.21160	5.870		
Dichlorodifluoromethane	.78882	1.85152	1.93739	1.64194	.321	1.55492	33.802		
Chloromethane	.68623	.89511	.82618	.81539	.358	.80573	10.816	*	
Bromomethane	.93133	1.09707	1.07713	1.07154	.446	1.04427	7.286	*	
Vinyl Chloride	.52864	.83539	.82433	.68820	.375	.71914	19.962	*	
Chloroethane	.54963	.65645	.67393	.66003	.460	.63501	9.042	*	
Methylene Chloride	6.33569	1.83922	1.53132	1.32659	.720	2.75821	86.806	*	
Acetone	.65341	.25102	.21230	.21444	.607	.33279	64.449		
Carbon Disulfide	1.78549	2.09494	2.02356	1.95119	.715	1.96380	6.751		
Trichlorofluoromethane	5.92857	6.49704	6.30320	6.20140	.504	6.23255	3.800	*	
1,1-Dichloroethene	1.67255	1.92161	1.83833	1.82314	.624	1.81391	5.717	*	
1,1-Dichloroethane	2.10214	2.16003	2.04275	2.00103	.849	2.07649	3.345	*	
T-butyl alcohol	.07380	.08814	.08436	.07709	.651	.08085	8.120		
cis-1,2-Dichloroethene	1.59952	1.65155	1.55863	1.57564	.949	1.59633	2.534		
rans-1,2-Dichloroethene	1.65658	1.79348	1.71342	1.67963	.772	1.71078	3.500	*	
Chloroform	2.67720	2.74651	2.66395	2.62025	.974	2.67698	1.956	*	
1,2-Dichloroethane-d4	1.60642	1.75191	1.49002	1.56979	1.086	1.60453	6.832		
1,2-Dichloroethane	1.90080	1.96018	1.81504	1.83398	1.100	1.87750	3.530	*	
2-Butanone	.11039	.12428	.11997	.11983	.806	.11862	4.938		
Methyl t-butyl ether	.66740	.65331	.62156	.52894	.655	.61780	10.079		
1,1,1-Trichloroethane	.78282	.79860	.76547	.75921	.905	.77652	2.290	*	
Carbon Tetrachloride	.72096	.76980	.74368	.75407	.938	.74713	2.742	*	
Vinyl Acetate	.50009	.57938	.52202	.59981	.745	.55033	8.535		
Bromodichloromethane	.72842	.74972	.72400	.74051	1.096	.73566	1.588	*	
1,2-Dichloropropane	.34661	.34825	.32890	.33105	1.065	.33870	2.993	*	
cis-1,3-Dichloropropene	.48307	.54407	.52950	.55431	1.167	.52774	5.963	*	
Trichloroethene	.47636	.51420	.46329	.44191	1.042	.47394	6.407	*	
Benzene	.91023	.97407	.88820	.86855	.963	.91026	5.033	*	
Dibromochloromethane	.59732	.71051	.66622	.67737	1.319	.66285	7.176	*	

(Conc=20.0,100.0,200.0,2000.0)
(Conc=20.0,100.0,200.0,2000.0)
(Conc=20.0,100.0,200.0,2000.0)
(Conc=1.2,6.0,12.0,120.0)
(Conc=10.0,50.0,100.0,1000.0)

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

22

Initial Calibration Data
HSL Compounds

Case No:

Instrument ID: HP5790BC

Contractor: Accredited Labs Inc.

Calibration Date: 11/06/00

Contract No: CAC694

Minimum $\overline{RF}$ for SPCC is

Maximum % RSD for CCC is 35%

Laboratory ID:	>C3407	>C3403	>C3402	>C3405						
Compound	RF 2.00	RF 10.00	RF 20.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
1,1,2-Trichloroethane	.32716	.34383	.32225	.31539	1.251	.32716	3.704	*		
trans-1,3-Dichloropropene	.42607	.47482	.47579	.51329	1.231	.47249	7.568	*		
2-Chloroethylvinylether	.15725	.18588	.18452	.20875	1.135	.18410	11.445	*		(Conc=2.0,10.0,20.0,200.0)
Bromoform	.43043	.51956	.49563	.52325	1.524	.49222	8.730	*		
2-Hexanone	.18175	.21847	.23223	.23080	.897	.21581	10.905			
4-Methyl-2-pentanone	.59021	.61701	.60784	.60045	.816	.60388	1.880			
Tetrachloroethene	.77924	.77254	.74251	.66197	.926	.73906	7.282	*		
1,1,2,2-Tetrachloroethane	.50303	.56303	.56290	.53511	1.107	.54102	5.274	*		
Toluene-d8	1.27603	1.42659	1.28933	1.21700	.858	1.30224	6.808			(Conc=1.2,6.0,12.0,120.0)
Toluene	1.47604	1.47539	1.39023	1.28211	.866	1.40594	6.534	*		
Chlorobenzene	1.07254	1.11546	1.05565	.97872	1.004	1.05559	5.409	*		
Bromofluorobenzene	.75605	.90330	.79315	.83159	1.116	.82102	7.665			(Conc=1.2,6.0,12.0,120.0)
Ethylbenzene	1.81273	1.92523	1.80549	1.71630	1.008	1.81494	4.717	*		
Styrene	.78515	.90156	.93748	.92268	1.060	.88672	7.815			
m,p-Xylene	1.70412	1.53750	1.80549	1.42577	1.013	1.61822	10.463			(Conc=2.0,10.0,20.0,200.0)
o-Xylene	1.57103	1.48804	1.48073	1.38984	1.057	1.48241	4.996			
1,2-Dichlorobenzene	.73923	.86228	.83868	.85081	1.269	.82275	6.868	*		
,3-Dichlorobenzene	.84203	.84104	1.00510	.95171	1.225	.90997	9.008	*		
1,4-Dichlorobenzene	.95507	.85330	1.00973	.98588	1.233	.95099	7.242	*		
Naphthalene	-	-	-	-	-	-	-			
Diisopropyl ether	1.60861	1.56758	1.58434	1.44684	.523	1.55184	4.639			

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

ACCREDITED LABORATORIES, INC.
WATER/SOIL VOLATILE SURROGATE RECOVERY

	ALI Sample No.	Mtx	S1 (DCE-d4)	S2 (TOL-d8)	S3 (BFB)	TOTAL OUT
1	VBLKC27	W	99	92	86	0
2	VBLKC29	W	103	96	89	0
3	0013302	W	100	93	91	0
4	0013302DL	W	100	97	91	0
5	0013288MS	W	102	90	93	0
6	0013288MSD	W	103	88	93	0

EPA CLP QC Limits for:	WATER	SOIL
S1 (DCE-d4) = 1,2-Dichloroethane-d4	(76-114)	(70-121)
S2 (TOL-d8) = Toluene-d8	(88-110)	(81-117)
S3 (BFB) = Bromofluorobenzene	(86-115)	(74-121)

* Values outside of EPA contract laboratory QC limits

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: SAS No.: _____ SDG No.:

Lab File ID (Standard): >C3367 Date Analyzed: 11/02/00

Instrument ID: HP5970BC Time Analyzed: 10:28

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	48788		15.98		173717		18.30		140802		25.51	
	UPPER LIMIT	97576		16.48		347434		18.80		281604		26.01	
	LOWER LIMIT	24394		15.48		86858		17.80		70401		25.01	
	LAB SAMPLE NO.												
01	VBLKC27	45176		15.97		162129		18.30		133184		25.55	
02	0013302	41666		15.99		151909		18.31		124901		25.52	
03	0013288MS	41552		15.98		154411		18.26		133031		25.51	
04	0013288MSD	44149		15.98		162461		18.30		142474		25.51	
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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.

25

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABORATORIES, Contract:

Lab Code: _____ Case No.: 9881 SAS No.: _____ SDG No.:

Lab File ID (Standard): >C3402 Date Analyzed: 11/06/00

Instrument ID: HP5970BC Time Analyzed: 09:40

GC Column: RTX-502 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM)		IS2(DFB)		IS3(CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	52679	15.99	183956	18.31	144544	25.56
	UPPER LIMIT	105358	16.49	367912	18.81	289088	26.06
	LOWER LIMIT	26339	15.49	91978	17.81	72272	25.06
	LAB SAMPLE NO.						
01	VBLKC29	46898	15.98	169297	18.31	136930	25.55
02	0013302DL	47708	15.98	172569	18.30	140191	25.50
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Accredited Labs, Inc. Contract: _____

Lab Code: GC/MS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - ALI Sample No.: 0013288

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0	53	107	61-145
Trichloroethene	50	0	52	105	71-120
Benzene	50	0	48	96	76-127
Toluene	50	0	46	92	76-125
Chlorobenzene	50	0	46	93	75-130

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	52	103	3	14	61-145
Trichloroethene	50	50	99	5	14	71-120
Benzene	50	48	95	1	11	76-127
Toluene	50	45	90	3	13	76-125
Chlorobenzene	50	45	90	3	13	75-130

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: _____

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

CASE NUMBER		MATRIX	Aqueous
SAMPLE NUMBER	VBLKC27	DILUTION FACTOR	1.0
DATA FILE	>C3372	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	11/02/00
FIELD ID		ANALYZED BY	WILLIAM

CAS #	COMPOUND	UG/L	MDL
67641	Acetone	U	1.8
107028	Acrolein	U	6.1
107131	Acrylonitrile	U	6.6
71432	Benzene	U	.4
75274	Bromodichloromethane	U	.4
75252	Bromoform	U	.4
74839	Bromomethane	U	2.0
78933	2-Butanone	U	.4
75150	Carbon Disulfide	U	.4
56235	Carbon Tetrachloride	U	.4
108907	Chlorobenzene	U	.4
75003	Chloroethane	U	2.0
110758	2-Chloroethylvinylether	U	2.0
67663	Chloroform	U	.4
74873	Chloromethane	U	2.0
124481	Dibromochloromethane	U	.4
75343	1,1-Dichloroethane	U	.4
107062	1,2-Dichloroethane	U	.4
75354	1,1-Dichloroethene	U	.4
156592	cis-1,2-Dichloroethene	U	.4
156605	trans-1,2-Dichloroethene	U	.4
78875	1,2-Dichloropropane	U	.4
10061015	cis-1,3-Dichloropropene	U	.4
10061026	trans-1,3-Dichloropropene	U	.4
100414	Ethylbenzene	U	1.0
591786	2-Hexanone	U	.9
75092	Methylene Chloride	U	1.0
108101	4-Methyl-2-pentanone	U	.7
100425	Styrene	U	.4
79345	1,1,2,2-Tetrachloroethane	U	.6
127184	Tetrachloroethene	U	.4
108883	Toluene	U	.5
71556	1,1,1-Trichloroethane	U	.4
79005	1,1,2-Trichloroethane	U	.4
79016	Trichloroethene	U	.4
75694	Trichlorofluoromethane	U	.4
108054	Vinyl Acetate	U	.8
75014	Vinyl Chloride	U	2.0
1330207	m,p-Xylene	U	2.8
95476	o-Xylene	U	2.1

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99 %	76-114	OK
Toluene-d8	92 %	88-110	OK
Bromofluorobenzene	86 %	86-115	OK

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.
B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
W - Result exceeds specific ground water quality criteria.*

* Flags are based on Specific Ground Water Quality Criteria from New Jersey Register dated February 1, 1993.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: VBLKC27

Client Name: Field ID:

Case No.: Date Extracted:

Lab File ID: >C3372 Date Analyzed: 11/02/00

CONCENTRATION UNITS: (ug/L or ug/Kg): ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown hydrocarbon	9.64	30	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS DATA

ASE NUMBER
SAMPLE NUMBER VBLKC29
DATA FILE >C3409
CLIENT NAME
FIELD ID

MATRIX Aqueous
DILUTION FACTOR 1.0
DATE EXTRACTED
DATE ANALYZED 11/06/00
ANALYZED BY WILLIAM

CAS #	COMPOUND	UG/L		MDL
67641	Acetone	U		1.8
107028	Acrolein	U		6.1
107131	Acrylonitrile	U		6.6
71432	Benzene	U		.4
75274	Bromodichloromethane	U		.4
75252	Bromoform	U		.4
74839	Bromomethane	U		2.0
78933	2-Butanone	U		.4
75150	Carbon Disulfide	U		.4
56235	Carbon Tetrachloride	U		.4
108907	Chlorobenzene	U		.4
75003	Chloroethane	U		2.0
110758	2-Chloroethylvinylether	U		2.0
67663	Chloroform	U		.4
74873	Chloromethane	U		2.0
124481	Dibromochloromethane	U		.4
75343	1,1-Dichloroethane	U		.4
107062	1,2-Dichloroethane	U		.4
75354	1,1-Dichloroethene	U		.4
156592	cis-1,2-Dichloroethene	U		.4
156605	trans-1,2-Dichloroethene	U		.4
78875	1,2-Dichloropropane	U		.4
10061015	cis-1,3-Dichloropropene	U		.4
10061026	trans-1,3-Dichloropropene	U		.4
100414	Ethylbenzene	U		1.0
591786	2-Hexanone	U		.9
75092	Methylene Chloride	3.1	W	1.0
108101	4-Methyl-2-pentanone	U		.7
100425	Styrene	U		.4
79345	1,1,2,2-Tetrachloroethane	U		.6
127184	Tetrachloroethene	U		.4
108883	Toluene	U		.5
71556	1,1,1-Trichloroethane	U		.4
79005	1,1,2-Trichloroethane	U		.4
79016	Trichloroethene	U		.4
75694	Trichlorofluoromethane	U		.4
108054	Vinyl Acetate	U		.8
75014	Vinyl Chloride	U		2.0
1330207	m,p-Xylene	U		2.8
95476	o-Xylene	U		[illegible]

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	103 %	76-114	OK
Toluene-d8	96 %	88-110	OK
Bromofluorobenzene	89 %	86-115	OK

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected,
D - Indicates result is based on a dilution.

B - Indicates compound found in associated blank.
E - Indicates result exceeds highest calibration standard
W - Result exceeds specific ground water quality criteria.*

* Flags are based on Specific Ground Water Quality Criteria from New Jersey Register dated February 1, 1993.

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Lab File ID: >C3372 Lab Sample ID: VBLKC27

Date Analyzed: 11/02/00 Time Analyzed: 14:42

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) N

Instrument ID: HP5970C

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0013302	>C3375	17:02
02		0013288MS	>C3385	01:12
03		0013288MSD	>C3386	02:01
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

Lab Name: ACCREDITED LABS, INC. Contract:_____

Lab Code: Case No.: 9881 SAS No.: _____ SDG No.:

Lab File ID: >C3409 Lab Sample ID: VBLKC29

Date Analyzed: 11/06/00 Time Analyzed: 15:30

GC Column: RTX-502 ID: 0.53(mm) Heated Purge: (Y/N) N

Instrument ID: HP5970C

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		0013302DL	>C3422	02:12
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

File ID: >B0990 DFTPP Injection Date: 10/06/00

Instrument ID: HP5970BB DFTPP Injection Time: 12:33

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.3
68	Less than 2.0% of mass 69	1.0(1.6)1
69	Mass 69 relative abundance	67.3
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	49.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	20.7
365	Greater than 1.00% of mass 198	1.91
441	Present, but less than mass 443	8.0
442	Greater than 40.0% of mass 198	59.4
443	17.0 - 23.0% of mass 442	11.1(18.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>B0991	10/06/00	12:48
02		SSTD160	>B0992	10/06/00	13:34
03		SSTD020	>B0993	10/06/00	14:24
04		SSTD080	>B0994	10/06/00	15:11
05		SSTD120	>B0995	10/06/00	15:58
06		SBLK01	>B0996	10/06/00	16:44
07		0012017	>B0997	10/06/00	17:30
08		0012018	>B0998	10/06/00	18:15
09		0012019	>B0999	10/06/00	19:01
10		0012020	>B1000	10/06/00	19:47
11		0012021	>B1001	10/06/00	20:32
12		0012022	>B1002	10/06/00	21:18
13		0012023	>B1003	10/06/00	22:03
14		0012024	>B1004	10/06/00	22:49
15		0012025	>B1005	10/06/00	23:34
16					
17					
18					
19					
20					
21					
22					

33

FORM V SV

4/87R

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

File ID: >F2235 DFTPP Injection Date: 10/20/00

Instrument ID: HP5970BF DFTPP Injection Time: 09:48

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.5
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	57.2
70	Less than 2.0% of mass 69	.2(.4)1
127	40.0 - 60.0% of mass 198	42.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	22.3
365	Greater than 1.00% of mass 198	2.25
441	Present, but less than mass 443	9.2
442	Greater than 40.0% of mass 198	59.1
443	17.0 - 23.0% of mass 442	10.9(18.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>F2236	10/20/00	10:02
02		SSTD160	>F2237	10/20/00	10:46
03		SSTD020	>F2238	10/20/00	11:35
04		SSTD080	>F2239	10/20/00	12:20
05		SSTD120	>F2240	10/20/00	13:06
06		SBLK09	>F2241	10/20/00	13:54
07		SBLK12	>F2242	10/20/00	14:38
08		0012621MS	>F2243	10/20/00	15:22
09		0012621MSD	>F2244	10/20/00	16:06
10		0012715MS	>F2245	10/20/00	16:50
11		0012715MSD	>F2246	10/20/00	17:34
12		0012716DL	>F2247	10/20/00	18:18
13		0012710DL	>F2248	10/20/00	19:02
14		0012577DL	>F2249	10/20/00	19:46
15		0012579DL	>F2250	10/20/00	20:30
16		SBLK16	>F2251	10/20/00	21:14
17		0012798	>F2252	10/20/00	21:57
18		0012798DL	>F2253	10/20/00	22:41
19					
20					
21					
22					

34

FORM V SV

4879

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

File ID: >F2335 DFTPP Injection Date: 11/01/00

Instrument ID: HP5970BF DFTPP Injection Time: 13:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.7
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	55.8
70	Less than 2.0% of mass 69	.3(.5)1
127	40.0 - 60.0% of mass 198	40.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	21.3
365	Greater than 1.00% of mass 198	1.73
441	Present, but less than mass 443	7.6
442	Greater than 40.0% of mass 198	48.8
443	17.0 - 23.0% of mass 442	8.9(18.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>F2336	11/01/00	13:25
02		0013223	>F2337	11/01/00	14:12
03		0013214	>F2338	11/01/00	14:55
04		0013248	>F2339	11/01/00	15:39
05		SBLK28	>F2340	11/01/00	16:23
06		SBLK29	>F2341	11/01/00	17:06
07		0013192	>F2342	11/01/00	17:49
08		0013193	>F2343	11/01/00	18:33
09		0013194	>F2344	11/01/00	19:16
10		0013330	>F2345	11/01/00	19:59
11		0013331	>F2346	11/01/00	20:43
12		0013332	>F2347	11/01/00	21:26
13		0013332MS	>F2348	11/01/00	22:09
14		0013332MSD	>F2349	11/01/00	22:52
15		0013345	>F2350	11/01/00	23:35
16		0013237	>F2351	11/02/00	00:18
17		0013329	>F2352	11/02/00	01:02
18					
19					
20					
21					
22					

35

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

File ID: >B1340 DFTPP Injection Date: 11/03/00

Instrument ID: HP5970BB DFTPP Injection Time: 12:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.0
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	57.6
70	Less than 2.0% of mass 69	0.0(0.0)1
127	40.0 - 60.0% of mass 198	41.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	20.8
365	Greater than 1.00% of mass 198	1.97
441	Present, but less than mass 443	8.7
442	Greater than 40.0% of mass 198	63.0
443	17.0 - 23.0% of mass 442	12.1(19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>B1341	11/03/00	12:57
02		0013372DL	>B1342	11/03/00	13:43
03		SBLK32	>B1343	11/03/00	14:29
04		0013496	>B1344	11/03/00	15:14
05		SBLK30	>B1345	11/03/00	16:05
06		0013493	>B1346	11/03/00	16:51
07		0013494	>B1347	11/03/00	17:36
08		0013495	>B1348	11/03/00	18:22
09		0013376DL	>B1349	11/03/00	19:07
10		0013427MS	>B1350	11/03/00	19:53
11		0013427MSD	>B1351	11/03/00	20:38
12		0013427	>B1352	11/03/00	21:23
13		0013271	>B1353	11/03/00	22:09
14		0013272	>B1354	11/03/00	22:54
15		0013273	>B1355	11/03/00	23:40
16		0013302	>B1356	11/04/00	00:25
17					
18					
19					
20					
21					
22					

36

FORM V SV

4/881

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ACCREDITED LABORATORIES, INC. Contract: _____

File ID: >B1376 DFTPP Injection Date: 11/08/00

Instrument ID: HP5970BB DFTPP Injection Time: 11:33

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	56.2
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	59.2
70	Less than 2.0% of mass 69	.3(.5)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% Relative abundance	100.
199	5.0 - 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	20.0
365	Greater than 1.00% of mass 198	1.85
441	Present, but less than mass 443	7.1
442	Greater than 40.0% of mass 198	52.2
443	17.0 - 23.0% of mass 442	10.0(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SSTD050	>B1377	11/08/00	11:48
02		0013626	>B1378	11/08/00	12:34
03		0013597	>B1379	11/08/00	13:20
04		SBLK29MS	>B1380	11/08/00	14:06
05		SBLK29MSD	>B1381	11/08/00	14:51
06		0013628	>B1382	11/08/00	15:37
07		0013490	>B1383	11/08/00	16:22
08		0013489	>B1384	11/08/00	17:07
09		0013627	>B1385	11/08/00	17:53
10		0013598	>B1386	11/08/00	18:38
11		0013551	>B1387	11/08/00	19:23
12		0013587	>B1388	11/08/00	20:09
13		0013588	>B1389	11/08/00	20:54
14		0013589	>B1390	11/08/00	21:40
15		0013516	>B1391	11/08/00	22:26
16		0013586	>B1392	11/08/00	23:11
17					
18					
19					
20					
21					
22					

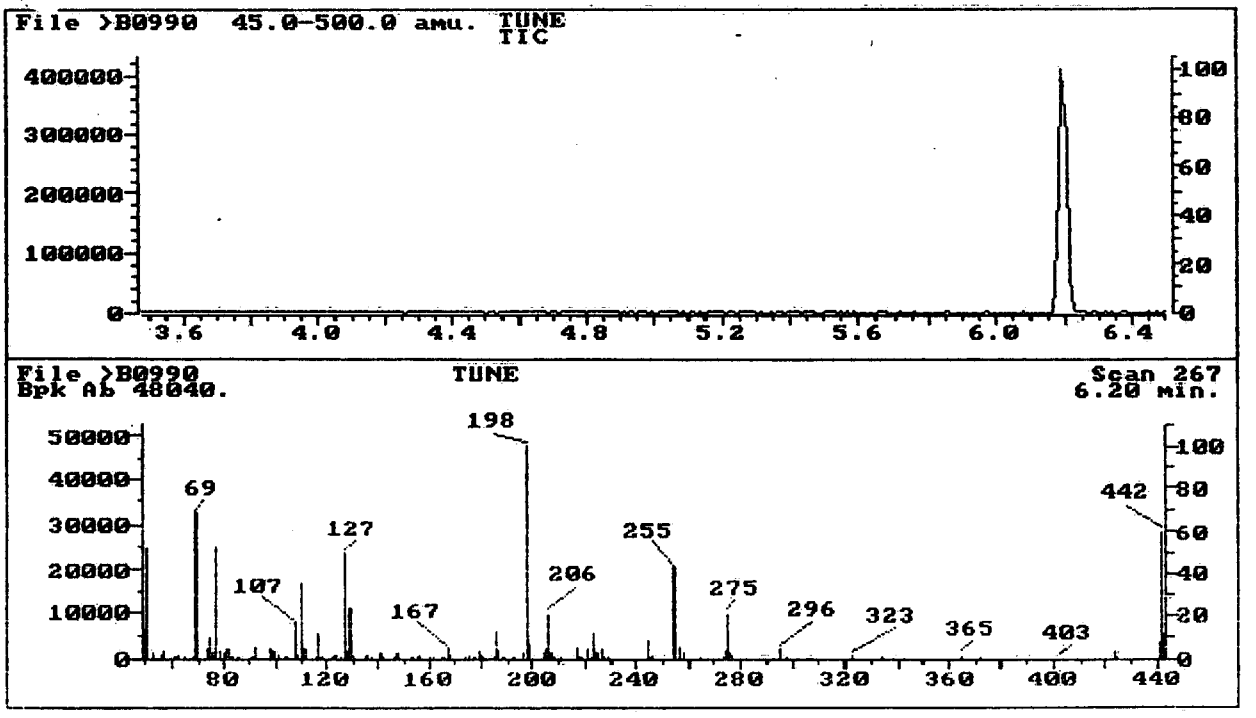
37

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	51.32	51.32	Ok
68	Less than 2% of mass 69	1.05	1.56	Ok
69	(reference only)	67.29	67.29	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	49.09	49.09	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.82	6.82	Ok
275	10-30% of mass 198	20.66	20.66	Ok
365	Greater than 1% of mass 198	1.92	1.92	Ok
441	Less than mass 443	8.01	72.01	Ok
442	Greater than 40% of mass 198	59.35	59.35	Ok
443	17-23% of mass 442	11.13	18.75	Ok

Injection Date: 10/06/00
Injection Time: 12:33
Data File: >B0990
Scan: 267



File: >80990 Scan #: 267 Retn time: 6.20

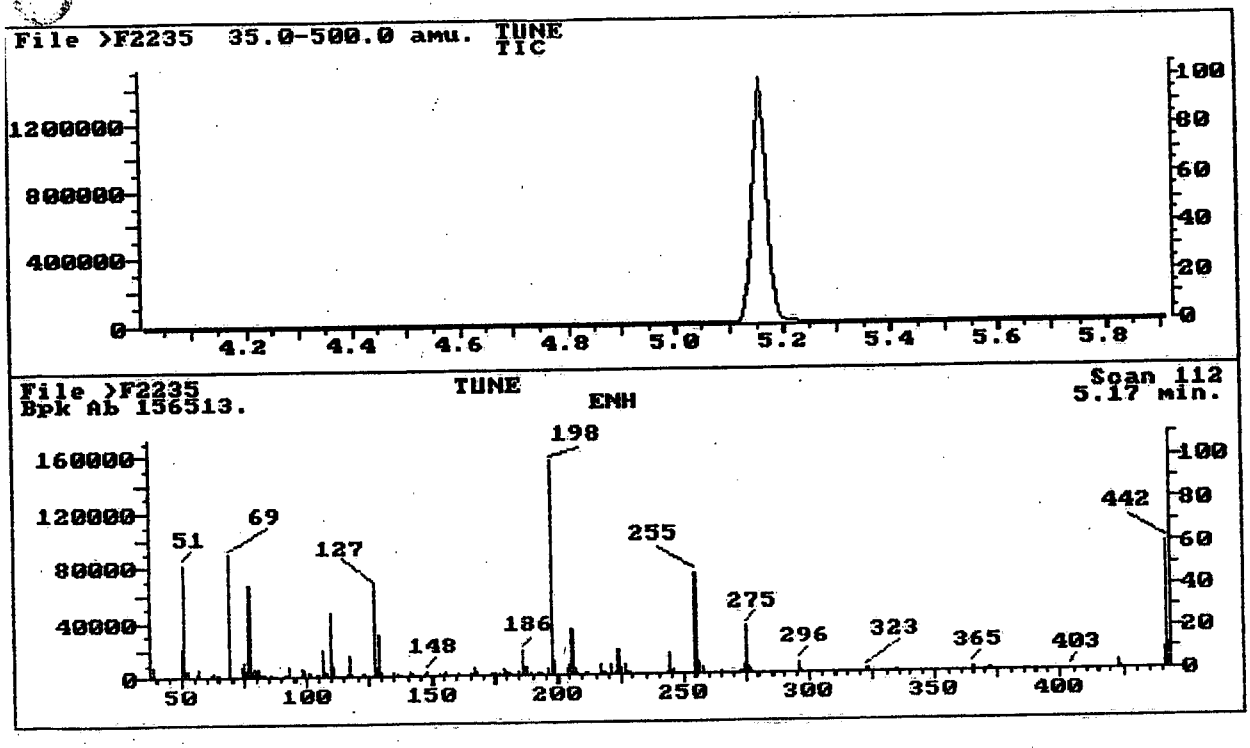
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
49.00	404.0	106.15	205.0	156.10	970.0	205.05	2417.0	265.10	459.0
50.10	6650.0	107.05	7698.0	157.10	203.0	206.15	9893.0	273.05	607.0
51.10	24656.1	108.05	1056.0	158.00	195.0	207.15	1289.0	274.05	1752.0
52.10	1158.0	109.05	189.0	159.10	151.0	208.05	350.0	275.05	9927.0
56.00	723.0	110.05	16808.0	160.10	362.0	209.05	102.0	276.15	1262.0
57.10	1801.0	111.05	2324.0	161.10	517.0	211.15	396.0	277.05	769.0
58.00	71.0	112.15	257.0	162.10	141.0	211.95	84.0	285.10	130.0
61.05	317.0	116.00	352.0	164.95	366.0	216.10	187.0	293.10	150.0
62.05	378.0	117.00	5190.0	166.05	297.0	217.00	2744.0	296.10	2417.0
63.05	1059.0	118.00	442.0	167.05	2055.0	218.00	319.0	297.10	330.0
64.05	170.0	120.10	62.0	168.05	827.0	221.10	2246.0	303.05	284.0
65.05	451.0	122.00	453.0	169.05	184.0	223.10	545.0	304.05	76.0
68.05	504.0	123.00	755.0	171.05	97.0	224.10	5484.0	314.05	98.0
69.05	32328.1	124.00	304.0	171.95	166.0	225.10	1416.0	315.15	268.0
73.05	161.0	125.10	323.0	173.05	230.0	226.10	147.0	316.15	123.0
74.05	2599.0	127.10	23584.1	174.05	441.0	227.10	2224.0	323.10	874.0
75.05	4335.0	128.10	1758.0	175.05	794.0	228.10	319.0	324.10	163.0
76.05	1284.0	129.10	10885.0	176.05	257.0	229.10	454.0	327.00	134.0
77.15	24952.1	130.05	871.0	177.05	376.0	230.00	62.0	333.10	64.0
78.15	1605.0	131.05	191.0	178.05	136.0	231.10	192.0	334.10	487.0
79.00	1732.0	134.05	276.0	179.05	1566.0	234.05	97.0	346.05	159.0
.00	1429.0	135.05	896.0	180.05	1003.0	235.05	186.0	352.15	195.0
.00	2143.0	136.05	303.0	181.05	498.0	236.05	99.0	353.15	181.0
2.10	534.0	137.05	358.0	182.00	90.0	237.05	155.0	354.10	236.0
83.10	482.0	138.05	99.0	184.00	98.0	238.95	71.0	365.10	920.0
84.00	245.0	140.05	88.0	185.00	669.0	241.05	104.0	366.10	124.0
85.00	416.0	141.05	1153.0	186.10	5998.0	242.05	247.0	372.05	435.0
86.00	702.0	142.05	402.0	187.10	1658.0	243.15	237.0	373.05	123.0
87.10	255.0	143.05	280.0	188.00	179.0	244.15	4057.0	383.15	101.0
91.10	461.0	144.05	93.0	189.00	319.0	245.15	609.0	402.00	158.0
92.10	464.0	144.95	99.0	191.00	135.0	246.05	873.0	403.10	271.0
93.00	3033.0	146.05	232.0	192.10	456.0	247.05	174.0	404.10	72.0
94.10	232.0	147.00	604.0	193.10	498.0	249.05	155.0	421.15	214.0
95.95	111.0	148.00	1229.0	194.10	115.0	253.00	90.0	422.05	182.0
98.05	2134.0	149.00	239.0	196.10	1380.0	254.10	83.0	423.10	1754.0
98.95	1809.0	150.10	73.0	198.10	48040.1	255.10	20248.1	424.10	315.0
100.05	170.0	151.20	110.0	199.05	3274.0	256.10	2908.0	441.05	3849.0
101.05	1036.0	152.10	90.0	200.05	220.0	257.10	165.0	442.15	28512.1
103.05	294.0	153.10	388.0	201.55	234.0	258.10	1140.0	443.15	5345.0
104.05	650.0	154.00	278.0	202.95	294.0	259.10	185.0	444.15	513.0
105.05	524.0	155.10	618.0	204.05	1328.0				

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	52.55	52.55	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	57.25	57.25	Ok
70	Less than 2% of mass 69	.22	.38	Ok
127	40-60% of mass 198	42.12	42.12	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.73	6.73	Ok
275	10-30% of mass 198	22.29	22.29	Ok
365	Greater than 1% of mass 198	2.25	2.25	Ok
441	Less than mass 443	9.21	84.21	Ok
442	Greater than 40% of mass 198	59.14	59.14	Ok
443	17-23% of mass 442	10.93	18.48	Ok

Injection Date: 10/20/00
Injection Time: 09:48
Data File: >F2235
Scan: 112



[illegible] [illegible]
117 [illegible]

[illegible]: >F2235 Scan #: 117 Retn. time: 5.17

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	392.	104.05	1710.	162.00	428.	219.10	153.	293.05	565.
38.05	1389.	105.05	1617.	163.00	149.	221.00	7439.	293.95	137.
39.05	8283.	107.00	19664.	164.10	162.	223.00	1974.	295.95	8386.
40.15	528.	108.00	2937.	165.00	1190.	224.00	17690.	297.05	1098.
41.05	221.	110.00	46880.	166.10	1114.	225.10	4423.	301.05	103.
43.05	41.	111.00	6353.	167.00	5922.	226.10	541.	302.00	166.
44.05	513.	112.00	720.	168.00	2514.	227.00	7458.	303.10	988.
48.15	32.	113.10	275.	169.10	497.	228.00	1045.	304.00	283.
50.00	21468.	115.00	112.	170.10	219.	229.00	1591.	308.00	102.
51.10	82240.	116.10	1286.	171.00	271.	230.00	217.	309.10	95.
52.10	3838.	117.00	14162.	172.00	660.	231.10	631.	310.00	112.
53.10	162.	118.10	1051.	173.10	757.	231.95	101.	313.10	129.
55.10	376.	119.00	163.	174.10	1422.	232.95	142.	314.10	411.
56.00	2318.	119.95	225.	175.10	2288.	233.95	498.	315.00	893.
57.00	5460.	121.05	106.	176.05	805.	234.95	469.	315.95	521.
58.10	266.	122.05	1299.	176.95	1285.	236.05	297.	316.75	101.
61.10	971.	123.05	2109.	178.05	460.	237.05	543.	319.95	22.
62.10	1065.	124.05	912.	178.95	4857.	239.05	305.	321.05	294.
63.10	2985.	125.05	783.	180.05	3156.	239.95	225.	323.05	2910.
64.05	376.	127.05	65924.	181.05	1571.	240.95	397.	324.05	490.
65.05	1326.	128.05	5408.	182.05	263.	242.05	895.	327.05	495.
[illegible].05	133.	129.05	30372.	183.05	139.	243.15	1100.	328.05	267.
[illegible].75	36.	130.05	2448.	184.05	425.	244.05	14745.	332.00	220.
[illegible].05	89600.	130.95	473.	185.05	2478.	245.05	1975.	333.00	250.
70.05	338.	132.05	259.	186.05	18684.	246.00	2753.	334.00	1744.
73.15	532.	134.00	779.	187.05	5244.	247.00	531.	335.10	445.
74.05	6840.	135.00	2418.	188.05	542.	248.00	47.	341.00	308.
75.05	11323.	136.00	912.	189.05	1094.	249.00	595.	345.95	507.
76.15	3785.	137.00	1073.	190.00	172.	250.90	110.	352.05	860.
77.15	67120.	138.10	188.	191.00	514.	252.00	168.	353.05	568.
78.10	4593.	139.00	147.	192.00	1522.	253.10	347.	354.05	886.
79.00	5330.	140.10	375.	193.00	1485.	255.00	72752.	355.15	167.
80.00	3902.	141.00	3386.	194.00	391.	256.00	10179.	365.00	3515.
81.00	5461.	142.10	1173.	195.10	139.	257.00	755.	366.00	451.
82.00	1299.	143.10	743.	196.00	4176.	258.00	3957.	370.00	95.
83.00	1196.	143.90	173.	198.00	156513.	259.10	577.	371.00	215.
84.00	169.	145.10	170.	199.00	10538.	263.95	130.	372.05	1511.
85.10	952.	146.10	572.	200.00	691.	265.05	1534.	373.05	344.
86.00	1369.	147.10	1769.	201.60	707.	266.05	222.	383.05	336.
87.10	675.	147.95	3550.	203.00	933.	271.05	179.	391.00	136.
88.00	247.	149.05	762.	204.05	4687.	271.95	196.	400.95	82.
91.10	1232.	150.15	213.	205.05	8026.	273.05	2218.	401.95	578.
92.05	1272.	151.05	445.	206.05	33416.	274.00	5980.	403.05	829.
93.05	7748.	151.75	264.	207.05	4278.	275.00	34884.	404.05	256.
94.05	609.	153.05	1114.	207.95	1142.	276.00	4541.	421.00	667.
94.95	118.	154.05	820.	208.95	316.	277.00	2603.	422.00	607.
96.05	304.	155.05	1954.	210.05	246.	278.00	400.	423.00	5397.
[illegible].05	5742.	156.05	2736.	211.05	1313.	283.10	283.	424.00	1048.
[illegible].05	4675.	157.15	581.	214.95	365.	284.10	196.	441.05	14409.
100.05	457.	157.95	579.	216.05	730.	285.10	441.	442.05	92564.
101.05	2777.	159.05	453.	216.95	8844.	288.95	110.	443.00	17110.
102.05	156.	160.05	991.	218.00	1037.	292.05	146.	444.00	1497.
103.05	817.	161.05	1610.						

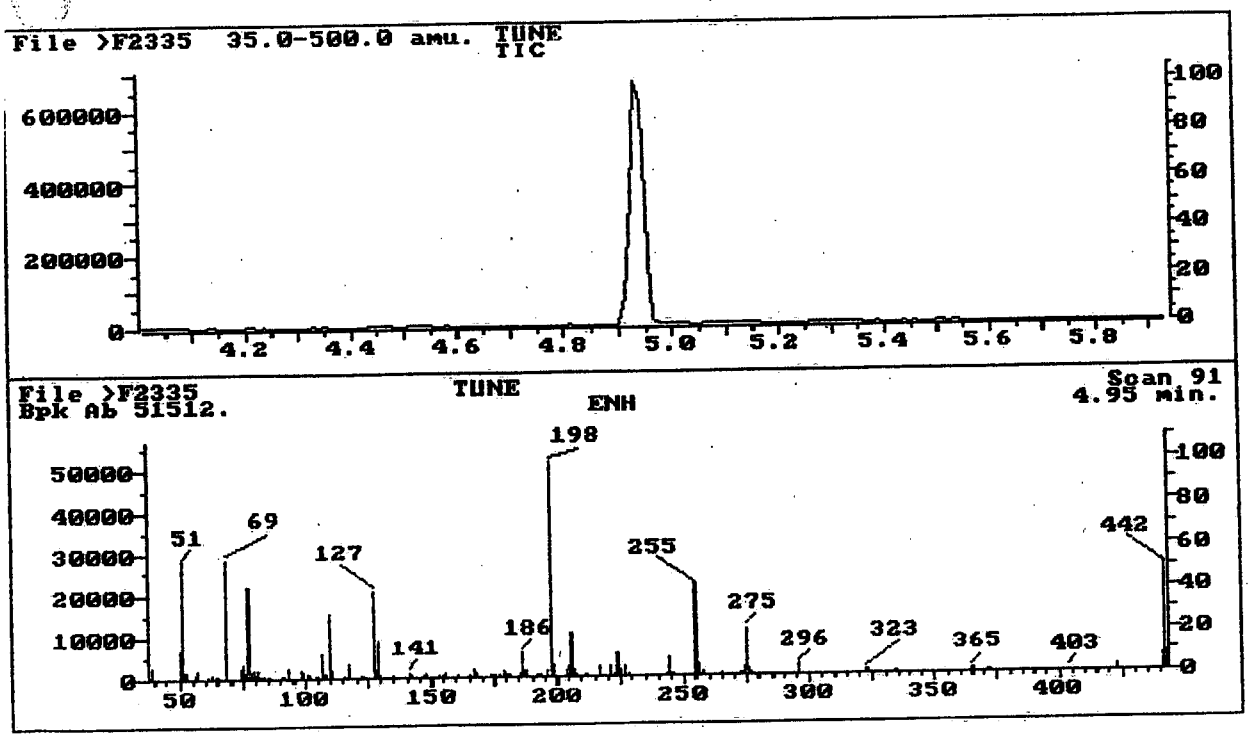
41

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	54.71	54.71	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	55.82	55.82	Ok
70	Less than 2% of mass 69	.28	.50	Ok
127	40-60% of mass 198	40.32	40.32	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.49	6.49	Ok
275	10-30% of mass 198	21.27	21.27	Ok
365	Greater than 1% of mass 198	1.73	1.73	Ok
441	Less than mass 443	7.55	85.09	Ok
442	Greater than 40% of mass 198	48.76	48.76	Ok
443	17-23% of mass 442	8.88	18.20	Ok

Injection Date: 11/01/00
Injection Time: 13:11
Data File: >F2335
Scan: 91



4887

[redacted] LINE
91 PNH

[redacted]: >F2335 Scan #: 91 Retn. time: 4.95

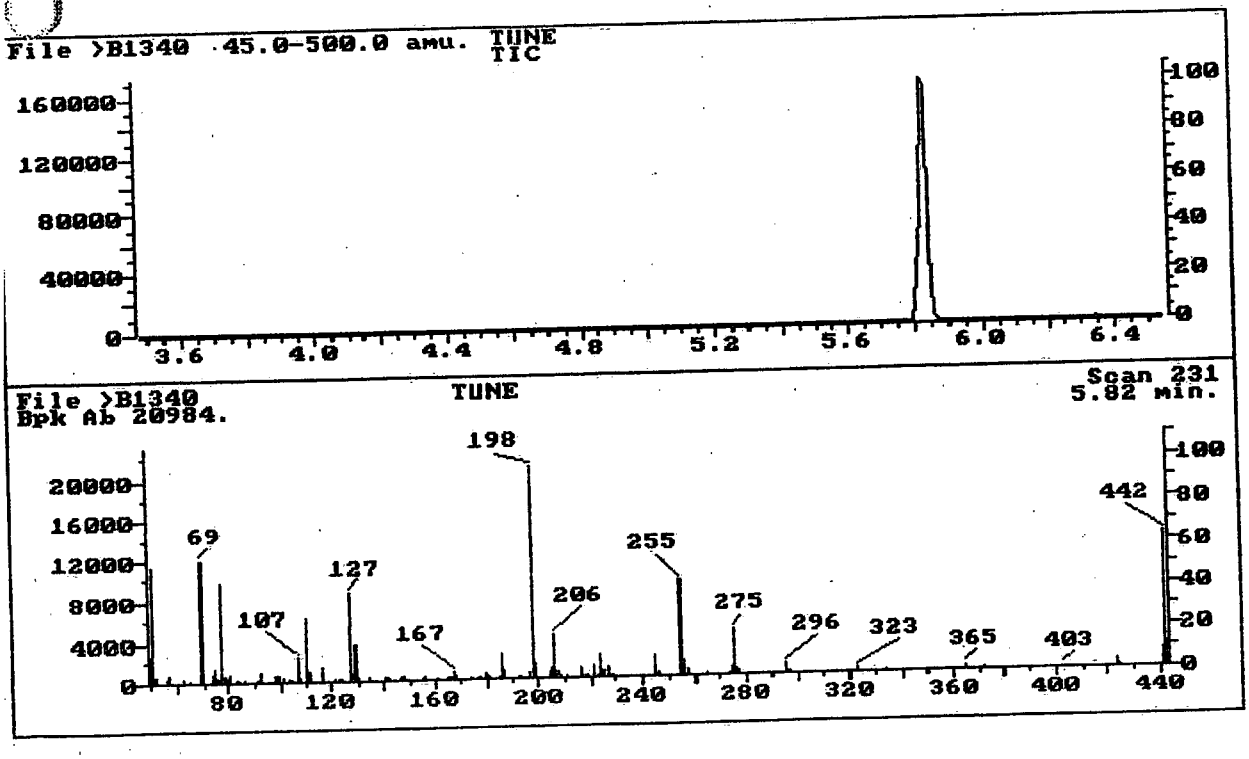
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.10	103.5	104.05	520.0	161.10	503.0	218.00	310.5	278.00	112.5
38.10	423.5	105.05	476.5	162.05	100.0	219.00	36.5	283.10	86.5
39.05	2959.0	107.05	6034.5	164.05	42.5	221.00	2883.5	284.10	57.0
40.05	244.0	108.05	943.0	164.95	381.5	223.00	567.5	284.95	126.5
41.05	191.5	110.05	15648.0	166.05	311.5	224.05	5492.0	293.05	136.5
43.05	45.0	111.05	2020.5	167.05	1839.5	225.05	1406.0	296.05	2279.5
44.05	230.0	112.05	216.0	168.05	801.5	226.05	131.0	296.95	280.0
45.05	50.5	115.05	26.5	169.05	144.0	226.95	2114.0	302.00	44.5
50.05	7138.0	116.00	360.0	170.05	45.5	227.95	300.5	303.00	306.5
51.05	28180.1	117.00	3733.5	171.05	78.0	228.95	414.0	304.10	66.0
52.15	1397.0	118.00	289.0	172.05	161.0	229.95	43.5	314.00	91.5
53.15	58.5	120.00	50.0	173.05	242.0	231.05	190.5	315.00	212.0
55.10	217.0	122.00	399.0	174.05	434.0	232.05	31.5	316.05	122.5
56.00	760.5	123.00	626.5	175.05	707.5	233.05	34.0	321.05	74.5
57.00	1936.5	124.00	267.0	176.05	240.5	234.05	142.0	322.15	43.0
61.10	335.0	125.10	253.0	177.00	404.0	234.95	162.5	323.05	844.0
62.10	317.5	127.00	20770.5	178.00	121.5	235.95	69.5	324.05	124.0
63.10	955.0	128.10	1657.0	179.00	1442.5	237.05	130.5	326.95	113.0
64.10	86.5	129.00	8974.0	180.00	951.5	239.00	84.5	328.05	56.5
65.10	508.0	130.10	735.0	181.00	448.0	240.00	62.5	332.00	50.0
67.10	93.0	131.05	157.0	182.00	53.5	241.00	94.5	333.00	75.0
[redacted].00	28752.1	132.05	64.0	183.00	41.0	242.00	214.0	334.00	473.0
[redacted].05	145.0	134.05	236.5	184.00	100.0	243.10	356.0	335.00	131.5
[redacted]3.05	209.5	135.05	745.5	185.10	775.5	244.00	4592.5	341.10	92.0
74.05	2093.0	136.05	261.5	186.10	5743.0	245.00	645.5	345.95	129.5
75.05	3737.0	137.05	312.0	187.10	1572.0	246.00	716.0	351.95	229.5
76.05	1223.5	137.95	51.0	188.10	145.0	247.00	113.5	353.05	146.0
77.05	21925.5	139.05	38.0	189.10	323.0	248.00	38.5	354.05	245.0
78.05	1439.0	140.05	110.5	190.10	50.5	249.00	126.5	354.95	37.0
79.05	1702.5	141.05	1044.5	191.00	173.5	250.00	33.0	364.90	891.5
80.05	1175.0	142.05	390.5	192.00	436.5	252.00	28.5	366.00	93.0
81.05	1739.0	142.95	248.5	193.05	468.5	253.10	69.5	371.00	60.0
82.05	423.0	144.05	41.0	193.95	82.0	254.95	21660.6	372.10	412.5
83.05	382.5	145.05	43.0	195.05	73.5	255.95	3131.5	373.10	87.0
84.05	100.5	146.05	129.5	196.05	1526.0	257.05	230.5	383.05	104.5
85.00	342.0	147.00	541.5	197.95	51512.1	257.95	1093.5	383.95	31.5
86.00	429.5	148.00	1010.5	199.05	3341.5	259.05	179.5	390.05	52.5
87.10	203.5	149.10	242.5	200.05	225.0	259.95	27.0	391.90	21.5
88.00	89.5	150.10	54.5	201.55	231.0	260.95	26.0	402.00	126.0
91.00	381.5	151.10	135.0	203.05	275.5	264.05	27.5	403.00	186.0
92.00	395.5	151.60	100.5	204.05	1374.0	265.05	429.0	404.00	70.0
93.00	2157.0	151.90	67.5	205.05	2427.0	266.05	44.0	421.05	158.5
94.10	174.0	153.00	347.0	206.05	10323.5	271.00	50.5	422.05	156.0
95.20	35.5	154.00	250.5	207.05	1371.5	272.00	53.0	423.00	1463.0
96.10	114.5	155.00	575.5	208.00	332.0	273.00	699.5	424.00	265.5
98.10	1638.0	156.10	813.5	209.00	85.5	274.00	1881.5	441.05	3890.5
99.10	1400.5	157.10	205.5	211.00	413.0	275.00	10954.5	442.05	25116.1
[redacted]00.10	87.0	157.90	196.5	215.00	100.5	276.00	1380.0	443.05	4572.0
[redacted]0.95	833.0	159.00	130.5	216.00	224.5	277.00	723.5	443.95	361.0
[redacted]03.05	309.5	160.00	309.5	217.00	2607.5				

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphosphine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	54.03	54.03	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	57.59	57.59	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	41.58	41.58	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.51	6.51	Ok
275	10-30% of mass 198	20.83	20.83	Ok
365	Greater than 1% of mass 198	1.97	1.97	Ok
441	Less than mass 443	8.75	72.40	Ok
442	Greater than 40% of mass 198	63.05	63.05	Ok
443	17-23% of mass 442	12.09	19.17	Ok

Injection Date: 11/03/00
Injection Time: 12:41
Data File: >B1340
Scan: 231



P1340 TUNE
231

F[illegible]: >B1340 Scan #: 231 Retn. time: 5.82

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
49.15	75.0	107.00	2486.0	161.10	211.0	208.05	139.0	276.10	599.0
50.05	2739.0	108.00	398.0	165.05	162.0	210.25	76.0	277.05	340.0
51.05	11338.0	110.00	6403.0	166.05	143.0	210.95	171.0	283.05	41.0
52.05	574.0	111.00	840.0	167.05	776.0	216.05	93.0	285.05	60.0
56.05	330.0	112.10	99.0	168.05	340.0	217.05	1086.0	293.15	76.0
57.05	775.0	116.00	132.0	171.95	72.0	218.05	147.0	296.00	1059.0
62.05	130.0	117.00	1404.0	173.05	89.0	221.00	1254.0	297.00	141.0
63.05	397.0	122.00	144.0	174.05	172.0	223.00	233.0	303.10	127.0
65.05	186.0	123.10	237.0	175.05	306.0	224.10	2232.0	315.05	109.0
69.00	12084.0	125.05	105.0	176.15	88.0	225.10	588.0	316.05	60.0
74.00	803.0	127.05	8726.0	177.05	152.0	226.10	60.0	323.15	330.0
75.00	1506.0	128.05	677.0	179.05	612.0	227.00	926.0	324.05	71.0
76.10	482.0	129.05	3772.0	180.05	376.0	228.10	128.0	327.05	69.0
77.10	9814.0	130.05	326.0	181.05	182.0	229.00	206.0	334.10	224.0
78.10	651.0	134.05	95.0	185.10	285.0	231.00	92.0	335.10	63.0
79.00	604.0	135.05	310.0	186.10	2325.0	240.95	56.0	352.10	116.0
80.00	444.0	135.95	117.0	187.00	692.0	242.05	126.0	353.05	81.0
81.00	726.0	137.05	132.0	188.00	70.0	243.05	114.0	354.05	113.0
82.00	158.0	141.05	402.0	189.00	131.0	244.05	1964.0	365.05	413.0
83.10	161.0	142.05	163.0	191.00	61.0	245.05	263.0	366.05	63.0
85.10	122.0	142.95	90.0	192.10	191.0	246.05	339.0	372.10	193.0
[illegible].10	162.0	147.00	210.0	193.10	189.0	247.05	79.0	402.05	71.0
[illegible].05	86.0	148.00	383.0	196.10	599.0	255.05	9296.0	403.15	105.0
[illegible].95	169.0	149.00	92.0	198.00	20984.1	256.05	1382.0	421.10	91.0
92.05	149.0	151.10	47.0	199.00	1367.0	257.05	94.0	422.20	81.0
93.05	918.0	153.00	131.0	200.10	93.0	258.00	529.0	423.10	750.0
98.05	624.0	154.00	108.0	201.45	119.0	259.00	80.0	424.20	143.0
99.05	603.0	155.00	224.0	202.95	107.0	265.10	196.0	441.15	1836.0
101.05	318.0	156.10	337.0	204.05	583.0	273.10	277.0	442.15	13230.0
103.05	106.0	157.10	70.0	205.05	964.0	274.10	722.0	443.15	2536.0
104.05	223.0	158.00	85.0	206.05	4241.0	275.10	4372.0	444.15	230.0
105.05	191.0	160.00	127.0	207.05	566.0				

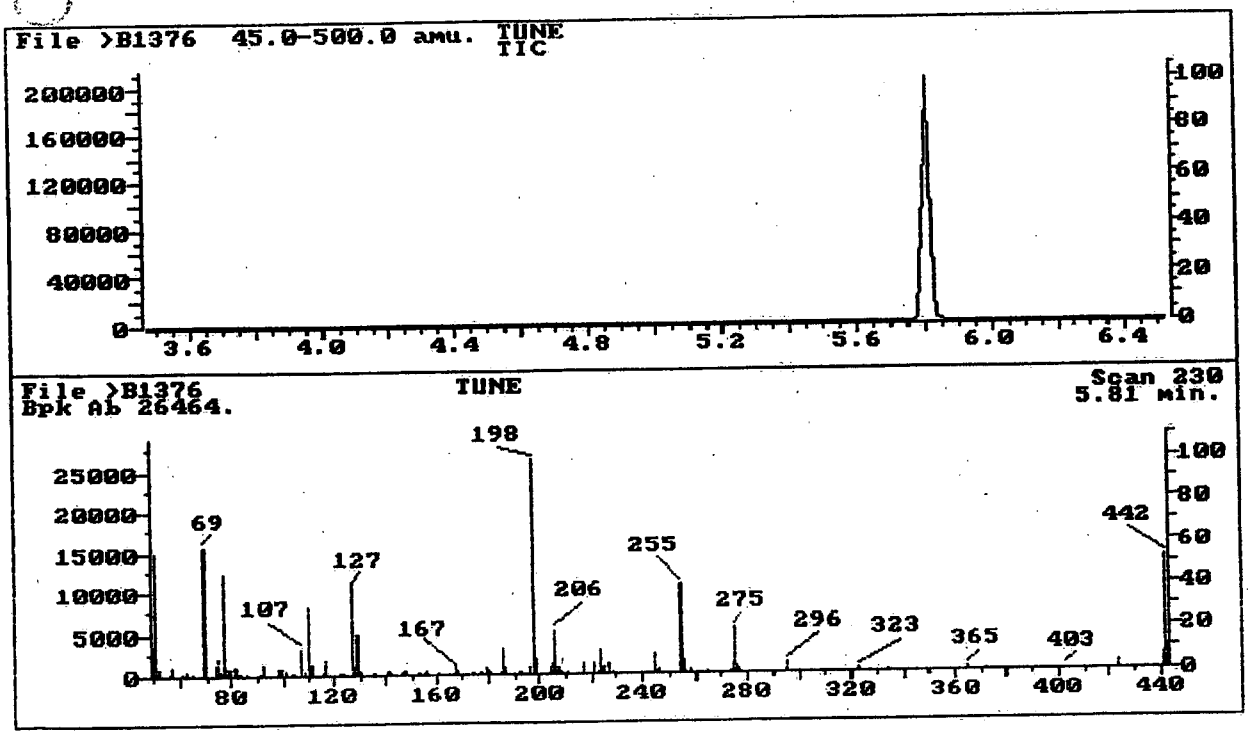
4890

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	56.24	56.24	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	59.16	59.16	Ok
70	Less than 2% of mass 69	.27	.46	Ok
127	40-60% of mass 198	41.04	41.04	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.74	6.74	Ok
275	10-30% of mass 198	19.99	19.99	Ok
365	Greater than 1% of mass 198	1.85	1.85	Ok
441	Less than mass 443	7.13	71.64	Ok
442	Greater than 40% of mass 198	52.19	52.19	Ok
443	17-23% of mass 442	9.95	19.07	Ok

Injection Date: 11/08/00
Injection Time: 11:33
Data File: >B1376
Scan: 230



: >8137A Scan #: 230 Retn. time: 5.81

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
49.05	118.0	106.00	92.0	160.00	153.0	207.05	654.0	274.00	907.0
50.05	3645.0	107.00	5204.0	161.00	246.0	208.05	185.0	275.10	5289.0
51.05	14884.0	108.00	458.0	162.00	70.0	210.35	105.0	276.10	727.0
52.05	748.0	110.00	8733.0	164.95	164.0	211.15	199.0	276.95	403.0
56.05	389.0	111.00	1088.0	165.95	168.0	215.95	110.0	285.05	75.0
57.05	1022.0	117.00	128.0	167.05	943.0	217.05	1288.0	292.95	98.0
61.05	189.0	116.10	170.0	167.95	417.0	218.05	164.0	296.00	1187.0
62.05	156.0	117.00	1887.0	169.05	87.0	221.00	1489.0	297.00	159.0
63.05	476.0	118.00	151.0	171.95	78.0	223.00	300.0	303.10	144.0
65.05	263.0	122.10	185.0	173.05	115.0	224.00	2766.0	315.05	128.0
69.00	15656.0	123.00	349.0	174.05	223.0	225.00	718.0	316.05	88.0
70.00	72.0	124.00	137.0	175.05	360.0	226.00	69.0	323.05	400.0
74.00	1085.0	125.05	144.0	176.15	140.0	227.00	1152.0	324.05	73.0
75.00	2001.0	127.05	10862.0	177.05	207.0	228.00	165.0	326.95	65.0
76.10	587.0	128.05	851.0	177.95	63.0	229.00	240.0	334.00	276.0
77.10	12194.0	128.95	4833.0	179.05	723.0	231.10	103.0	335.00	68.0
78.10	828.0	129.95	401.0	180.05	475.0	234.00	64.0	341.10	59.0
79.00	783.0	131.05	77.0	181.05	246.0	235.00	76.0	346.00	72.0
80.00	617.0	134.05	108.0	185.00	338.0	236.00	56.0	352.00	123.0
81.00	904.0	135.05	367.0	186.00	3003.0	237.10	93.0	353.05	85.0
82.00	233.0	136.05	140.0	187.00	798.0	241.95	128.0	354.05	127.0
83.10	222.0	137.05	158.0	188.00	77.0	243.05	148.0	365.05	490.0
.00	164.0	141.05	518.0	189.00	152.0	244.05	2296.0	366.05	53.0
5.00	209.0	142.05	205.0	191.00	82.0	245.05	302.0	372.00	216.0
86.95	104.0	143.05	125.0	192.00	236.0	246.05	394.0	373.10	59.0
91.05	203.0	147.00	275.0	193.10	236.0	246.95	80.0	383.00	59.0
92.05	195.0	148.00	512.0	194.00	49.0	249.05	78.0	402.05	85.0
92.95	1161.0	149.00	120.0	196.10	742.0	253.05	42.0	403.05	117.0
96.05	55.0	151.20	79.0	198.00	26464.1	255.05	10807.0	421.00	93.0
98.05	792.0	151.90	54.0	199.00	1784.0	256.05	1585.0	423.10	839.0
99.05	785.0	153.00	171.0	200.10	113.0	257.05	111.0	424.10	154.0
100.05	69.0	154.00	132.0	201.55	120.0	258.00	586.0	441.15	1887.0
101.05	469.0	155.00	269.0	203.05	142.0	259.00	105.0	442.15	13812.0
103.05	154.0	156.10	429.0	203.95	675.0	265.00	214.0	443.15	2634.0
104.05	256.0	157.10	88.0	205.05	1173.0	273.00	341.0	444.15	243.0
105.05	249.0	157.90	91.0	206.05	5220.0				

4892

Case No: ____ Instrument ID: HP5890BB

Contractor: Accredited Labs Calibration Date: 10/06/00

tract No: CALB06

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:	>B0993	>B0991	>B0994	>B0995	>B0992					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine	1.13012	1.07996	1.12667	1.52368	1.21948	.396	1.21598	14.742		
N-Nitrosodimethylamine	.88324	.81318	.93534	.88847	.91255	.402	.88656	5.186		
2-Fluorophenol	1.37167	1.33383	1.41974	1.44685	1.36783	.720	1.38798	3.238		
Aniline	2.87401	2.42843	2.78902	2.82643	2.60113	.939	2.70380	6.861		
Phenol-d5	2.11217	1.90572	2.14885	2.19809	2.02954	.945	2.07887	5.518		
Phenol	2.37517	2.20842	2.25721	2.59334	2.30130	.948	2.34709	6.420	*	
bis(-2-Chloroethyl)Ether	1.86140	1.57683	1.61611	1.51806	1.36904	.957	1.58829	11.284		
2-Chlorophenol	1.62633	1.55498	1.55023	1.51910	1.47450	.961	1.54503	3.601		
1,3-Dichlorobenzene	1.51962	1.40585	1.39905	1.28802	1.25901	.991	1.37431	7.585		
1,4-Dichlorobenzene	1.57366	1.43444	1.41723	1.29105	1.28864	1.004	1.40101	8.438	*	
Benzyl Alcohol	1.12976	.98074	1.02323	1.14251	1.05335	1.048	1.06592	6.496		
1,2-Dichlorobenzene	1.45696	1.33220	1.19642	1.11439	1.09266	1.047	1.23853	12.440		
2-Methylphenol	1.70563	1.40275	1.62193	1.49730	1.38553	1.081	1.52263	9.122		
bis(2-Chloroisopropyl)ether	2.76827	2.13301	2.72022	2.78321	2.42326	1.083	2.56559	11.020		
3&4-Methylphenol	1.77720	1.50727	1.59503	1.51019	1.61739	1.118	1.60141	6.868		
N-Nitroso-Di-n-propylamine	1.67029	1.41418	1.61047	1.69827	1.51371	1.121	1.58138	7.412		**
Hexachloroethane	.66080	.58386	.53023	.54881	.56873	1.117	.57849	8.690		
Nitrobenzene-d5	.49148	.45994	.49313	.51332	.50964	.875	.49351	4.279		
Nitrobenzene	.50626	.46845	.46878	.47769	.48223	.879	.48068	3.218		
Isophorone	1.11777	1.01655	1.07640	1.12528	1.09184	.925	1.08557	3.989		
2-Nitrophenol	.22216	.22175	.21918	.22795	.22661	.937	.22353	1.628	*	
2,4-Dimethylphenol	.37675	.35090	.34512	.34106	.34142	.953	.35105	4.245		
Benzoic Acid	.22274	.23983	.27612	.26500	.26395	.992	.25353	8.566		
bis(-2-Chloroethoxy)Methane	.57618	.51717	.52457	.53127	.54899	.969	.53963	4.370		
2,4-Dichlorophenol	.30836	.31148	.28558	.28157	.28890	.981	.29518	4.658	*	
1,2,4-Trichlorobenzene	.29977	.28287	.26110	.24804	.24467	.994	.26729	8.811		
Naphthalene	1.10518	1.02856	.99055	.85973	.86137	1.004	.96908	11.075		
4-Chloroaniline	.53369	.47451	.45774	.43197	.37953	1.024	.45549	12.422		
Hexachlorobutadiene	.14862	.15295	.12846	.11252	.11386	1.040	.13128	14.420	*	
4-Chloro-3-methylphenol	.48178	.47301	.45204	.46534	.43678	1.117	.46179	3.842	*	

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

se No: _____ Instrument ID: HP5890B

r: Accredited Labs Calibration Date: 10/06/00

tract No: CAL806

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:	>B0993	>B0991	>B0994	>B0995	>B0992					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
2-Methylnaphthalene	.78258	.68713	.65004	.61686	.58092	1.132	.66351	11.654		
Hexachlorocyclopentadiene	.25703	.24533	.25971	.23666	.23048	.884	.24584	5.136		**
2,4,6-Trichlorophenol	.41133	.38089	.35347	.32994	.31037	.898	.35720	11.235	*	
2,4,5-Trichlorophenol	.41692	.38837	.37456	.31871	.31783	.903	.36328	12.066		
2-Chloronaphthalene	1.21789	1.06563	1.00396	.93620	.85284	.920	1.01530	13.608		
2-Fluorobiphenyl	1.35765	1.15086	1.10887	.96537	.90283	.909	1.09712	16.178		
2-Nitroaniline	.63101	.56617	.62424	.61513	.58529	.944	.60437	4.564		
Dimethyl Phthalate	1.58930	1.42546	1.41392	1.28468	1.18393	.975	1.37946	11.145		
Acenaphthylene	2.09729	1.88353	1.80267	1.56007	1.39932	.979	1.74858	15.669		
3-Nitroaniline	.44098	.42984	.45488	.43580	.38074	1.002	.42845	6.589		
Acenaphthene	1.26733	1.14365	1.06159	.94847	.83690	1.006	1.05159	15.901	*	
2,4-Dinitrophenol	.15696	.21471	.24773	.25822	.25896	1.017	.22732	19.026		**
4-Nitrophenol	.30031	.32151	.31646	.29584	.31270	1.030	.30936	3.518		**
Dibenzofuran	1.83373	1.71096	1.59203	1.50155	1.37689	1.028	1.60303	11.091		
2,6-Dinitrotoluene	.35085	.34432	.36925	.35727	.34998	.984	.35433	2.687		
[illegible]nitrotoluene	.57513	.59665	.61309	.57631	.58996	1.039	.59023	2.660		
[illegible]hylphthalate	1.91452	1.72724	1.54944	1.23583	1.03798	1.075	1.49300	23.891		
[illegible]Chlorophenyl-phenylether	.67032	.62215	.54267	.46344	.38896	1.078	.53751	21.290		
Fluorene	1.53599	1.35837	1.18021	.88794	.76641	1.076	1.14578	27.910		
4-Nitroaniline	.58361	.54782	.60628	.58963	.55287	1.092	.57604	4.331		
2,4,6-Tribromophenol	.21245	.23482	.20543	.18319	.19679	1.113	.20653	9.302		
Carbazole	.07971	.07790	.07108	.06515	.06321	.987	.07141	10.330		
4,6-Dinitro-2-methylphenol	.14620	.16983	.16191	.13923	.10734	.909	.14490	16.748		
N-Nitrosodiphenylamine	.19782	.17881	.15241	.11483	.10180	.910	.14914	27.400	*	
Azobenzene	1.37198	1.27550	1.22431	1.01526	.92603	.912	1.16262	15.980		
4-Bromophenyl-phenylether	.20267	.18752	.16539	.15063	.13977	.950	.16920	15.303		
Hexachlorobenzene	.23593	.21841	.18635	.16515	.16470	.965	.19411	16.501		
Pentachlorophenol	.16735	.16616	.14718	.13785	.13526	.987	.15076	10.125	*	
Phenanthrene	1.22684	1.03996	.94010	.83784	.80385	1.003	.96972	17.624		
Anthracene	1.21326	1.08981	.95816	.87695	.78690	1.009	.98502	17.194		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

ase No: _____ Instrument ID: HP5890MS

ontractor: Accredited Labs Calibration Date: 10/06/00

tract No: CALB06

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:	>B0993	>B0991	>B0994	>B0995	>B0992					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Di-n-Butylphthalate	1.85690	1.56119	1.32472	1.09823	.90163	1.079	1.34854	27.909		
Fluoranthene	1.29671	1.09435	.98820	.87225	.81331	1.142	1.01296	18.951	*	
Benzidine	.89123	.41559	.78117	.86377	.84464	.886	.75928	25.861		
Pyrene	1.62858	1.49362	1.50147	1.69325	1.83174	.892	1.62973	8.668		
Terphenyl-d14	.99392	.90744	.89395	.97577	.98008	.908	.95023	4.837		
Butylbenzylphthalate	1.01627	.93176	.98864	1.12265	1.17075	.956	1.04601	9.399		
3,3'-Dichlorobenzidine	.43950	.39949	.36928	.39866	.41524	.999	.40443	6.352		
Benzo(a)Anthracene	1.35418	1.20962	1.17751	1.27959	1.37833	.998	1.27985	6.837		
Bis(2-Ethylhexyl)Phthalate	1.39417	1.23163	1.29932	1.42482	1.42728	1.008	1.35544	6.384		
Chrysene	1.34555	1.22706	1.20179	1.33574	1.36563	1.003	1.29515	5.792		
Di-n-octyl phthalate	2.45422	2.15492	1.78339	1.68100	1.55349	.948	1.92540	19.268	*	
Benzo(b)fluoranthene	1.67361	1.24866	1.34625	1.19672	1.09118	.974	1.31129	16.967		
Benzo(k)Fluoranthene	1.13474	1.22784	.86354	.89248	.93520	.976	1.01076	15.942		
Benzo(a)Pyrene	1.33140	1.21891	1.08155	1.02623	1.00252	.996	1.13212	12.320	*	
Indeno(1,2,3-cd)Pyrene	1.35787	1.14770	1.03069	.97132	.93726	1.070	1.08897	15.639		
Dibenzo(a,h)Anthracene	1.11353	.95010	.80427	.75735	.71172	1.071	.86739	18.922		
Benzo(g,h,i)Perylene	1.20394	1.04310	.96404	.90979	.90004	1.089	1.00419	12.476		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: ----------

Instrument ID: HP5890BF

Contractor: Accredited Labs

Calibration Date: 10/20/00

Contract No: CALF03

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >F2238 RF 20.00	>F2236 RF 50.00	>F2239 RF 80.00	>F2240 RF 120.00	>F2237 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine	.69888	.84602	.71335	.71398	.74075	.324	.74260	8.048		
N-Nitrosodimethylamine	.81965	.90734	.94245	.97679	.93691	.329	.91663	6.497		
2-Fluorophenol	1.09332	1.26965	1.40106	1.40627	1.45271	.701	1.32460	11.033		
Aniline	2.11405	1.96624	2.17169	2.24580	2.45100	.936	2.18976	8.150		
Phenol-d5	1.80036	1.78977	1.69853	1.51449	1.46869	.964	1.65437	9.347		
Phenol	1.92554	1.87976	1.87284	1.92031	1.73125	.968	1.86594	4.227	*	
bis(-2-Chloroethyl)Ether	1.50220	1.39335	1.40082	1.44059	1.38219	.958	1.42383	3.443		
2-Chlorophenol	1.50977	1.42069	1.35652	1.38162	1.18599	.967	1.37092	8.652		
1,3-Dichlorobenzene	1.45960	1.38023	1.35566	1.38784	1.30159	.989	1.37699	4.155		
1,4-Dichlorobenzene	1.48553	1.41394	1.39602	1.38233	1.28231	1.004	1.39202	5.251	*	
Benzyl Alcohol	1.02494	.97565	1.08194	1.08615	1.16166	1.067	1.06607	6.576		
1,2-Dichlorobenzene	1.43452	1.24283	1.24809	1.25701	1.19226	1.054	1.27494	7.271		
2-Methylphenol	1.48231	1.40119	1.53947	1.57801	1.55422	1.115	1.51104	4.686		
bis(2-Chloroisopropyl)ether	2.64598	2.34538	2.67270	2.77861	2.78433	1.100	2.64540	6.757		
3&4-Methylphenol	1.63421	1.55475	1.67285	1.68871	1.69638	1.158	1.64938	3.521		
N-Nitroso-Di-n-propylamine	1.42150	1.31901	1.40880	1.52708	1.54413	1.143	1.44410	6.412		**
Hexachloroethane	.48093	.45996	.45125	.45194	.41783	1.131	.45238	5.025		
Nitrobenzene-d5	.46084	.42944	.43993	.43335	.42003	.866	.43672	3.501		
Nitrobenzene	.49174	.42554	.44380	.42697	.44418	.871	.44645	6.010		
Isophorone	1.01014	.86693	.93511	.93599	.96802	.921	.94324	5.567		
2-Nitrophenol	.26092	.23326	.22934	.22883	.23075	.933	.23662	5.786	*	
2,4-Dimethylphenol	.37217	.32691	.32294	.31155	.31664	.961	.33004	7.354		
Benzoic Acid	.17634	.17564	.23506	.21779	.23076	1.021	.20712	14.058		
bis(-2-Chloroethoxy)Methane	.50352	.42109	.43091	.43825	.42430	.971	.44361	7.694		
2,4-Dichlorophenol	.34755	.31075	.30756	.30621	.27521	.990	.30946	8.301	*	
1,2,4-Trichlorobenzene	.33707	.29077	.28803	.28594	.26774	.994	.29391	8.767		
Naphthalene	1.13984	1.02002	.97511	.95403	.86807	1.005	.99141	10.052		
4-Chloroaniline	.46518	.40376	.37152	.38463	.34982	1.031	.39498	11.109		
Hexachlorobutadiene	.17989	.14590	.14174	.14012	.12509	1.043	.14655	13.803	*	
4-Chloro-3-methylphenol	.49115	.40434	.37347	.36780	.31306	1.143	.38997	16.778	*	

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: _____ Instrument ID: HP5890BF

Contractor: Accredited Labs Calibration Date: 10/20/00

Contract No: CALF03

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:	>F2238	>F2236	>F2239	>F2240	>F2237				
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC SPCC
2-Methylnaphthalene	1.14573	.93699	.80760	.80009	.67414	1.144	.87291	20.462	
Hexachlorocyclopentadiene	.15472	.18316	.22775	.21617	.20225	.877	.19681	14.637	**
2,4,6-Trichlorophenol	.39979	.36267	.35914	.34682	.30239	.897	.35416	9.896	*
2,4,5-Trichlorophenol	.42397	.38738	.35328	.32834	.25346	.906	.34929	18.481	
2-Chloronaphthalene	1.13305	.99497	.95034	.91609	.85173	.915	.96924	10.880	
2-Fluorobiphenyl	1.31248	1.14416	.98581	.92755	.79358	.905	1.03272	19.435	
2-Nitroaniline	.49604	.46449	.51220	.50452	.50353	.945	.49616	3.750	
Dimethyl Phthalate	1.52902	1.25782	1.16716	1.11044	1.15561	.978	1.24401	13.510	
Acenaphthylene	1.89079	1.61068	1.40923	1.36586	1.26946	.977	1.50921	16.363	
3-Nitroaniline	.41310	.38011	.40012	.38893	.39812	1.008	.39608	3.134	
Acenaphthene	1.22627	1.06077	.97969	.94900	.88180	1.005	1.01950	12.973	*
2,4-Dinitrophenol	.24386	.24736	.30033	.29275	.27832	1.024	.27252	9.481	**
4-Nitrophenol	.22990	.23274	.26882	.26117	.26071	1.053	.25067	7.172	**
Dibenzofuran	1.77779	1.52978	1.42538	1.41799	1.28379	1.030	1.48694	12.412	
2,6-Dinitrotoluene	.39758	.35229	.35786	.36508	.36121	.987	.36680	4.862	
2,4-Dinitrotoluene	.62485	.55624	.57108	.56346	.53634	1.046	.57039	5.797	
Diethylphthalate	1.71042	1.40438	1.16258	1.04751	1.07665	1.085	1.28031	21.741	
4-Chlorophenyl-phenylether	.69072	.54426	.44225	.43178	.39376	1.084	.50055	23.974	
Fluorene	1.44678	1.26042	1.17467	1.09060	.99119	1.081	1.19273	14.552	
4-Nitroaniline	.47971	.42419	.39489	.34446	.27486	1.105	.38362	20.346	
2,4,6-Tribromophenol	.24567	.19967	.21905	.21983	.21608	1.122	.22006	7.497	
4,6-Dinitro-2-methylphenol	.19921	.17371	.12918	.12408	.12192	.909	.14962	23.338	
N-Nitrosodiphenylamine	.51722	.42397	.34568	.34461	.27463	.908	.38122	24.286	*
Azobenzene	.95605	.84651	.73162	.68000	.59808	.909	.76245	18.469	
4-Bromophenyl-phenylether	.21976	.18972	.17842	.18211	.17650	.948	.18930	9.382	
Hexachlorobenzene	.24762	.20998	.20567	.20220	.19273	.964	.21164	9.966	
Pentachlorophenol	.14359	.13424	.15017	.14956	.15675	.991	.14686	5.756	*
Phenanthrene	1.18675	1.02595	.96508	.94450	.89732	1.004	1.00392	11.172	
Anthracene	1.17943	1.02319	.96167	.94483	.87045	1.009	.99591	11.661	
Di-n-Butylphthalate	1.63718	1.47832	1.25619	1.26950	1.18143	1.086	1.36453	13.788	

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
BSL Compounds

Case No: ----------

Instrument ID: HP5890BF

Contractor: Accredited Labs

Calibration Date: 10/20/00

Contract No: CALF03

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >F2238 RF 20.00	>F2236 RF 50.00	>F2239 RF 80.00	>F2240 RF 120.00	>F2237 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Fluoranthene	1.43235	1.22225	1.15263	1.12480	1.03244	1.149	1.19289	12.589	*	
Benzidine	.44163	.28974	.46857	.44998	.41177	.883	.41234	17.349		
Pyrene	1.33446	1.24708	1.35816	1.26284	1.26683	.886	1.29388	3.799		
Terphenyl-d14	.87973	.82510	.84671	.80261	.81941	.905	.83471	3.558		
Butylbenzylphthalate	.77145	.71315	.75292	.69912	.71262	.955	.72985	4.214		
3,3'-Dichlorobenzidine	.42393	.37198	.43119	.42124	.36016	1.001	.40170	8.214		
Benzo(a)Anthracene	1.37450	1.24271	1.33608	1.26644	1.30931	.998	1.30581	4.048		
Bis(2-Ethylhexyl)Phthalate	1.06339	.97309	.96094	.92491	.90287	1.010	.96504	6.394		
Chrysene	1.28330	1.16220	1.16494	1.10303	.94404	1.003	1.13150	10.919		
Di-n-octyl phthalate	1.71331	1.53877	1.43718	1.40318	1.24577	.948	1.46764	11.788	*	
Benzo(b)fluoranthene	1.51257	1.19290	1.22742	1.08816	1.25829	.974	1.25587	12.514		
Benzo(k)Fluoranthene	1.10157	1.15830	.99827	1.01313	.92170	.976	1.03860	8.907		
Benzo(a)Pyrene	1.27757	1.14457	1.12355	1.07007	1.02929	.996	1.12901	8.375	*	
Indeno(1,2,3-cd)Pyrene	1.45655	1.31009	1.16547	1.17103	1.01208	1.070	1.22304	13.720		
Dibenzo(a,h)Anthracene	1.19738	1.05967	.94605	.92543	.85190	1.070	.99609	13.548		
Benzo(g,h,i)Perylene	1.29005	1.16367	1.05009	1.06000	.92134	1.085	1.09703	12.576		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 11/01/00

Contractor: Accredited Labs Time: 13:25

Contract No: CALF03 Laboratory ID: >F2336

Instrument ID: HP5890RF Initial Calibration Date: 10/20/00

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Pyridine	.74260	.29030	60.91		
N-Nitrosodimethylamine	.91663	.31570	65.56		
2-Fluorophenol	1.32460	.89737	32.25		
Aniline	2.18976	1.75799	19.72		
Phenol-d5	1.65437	1.49812	9.44		
Phenol	1.86594	1.63357	12.45	*	
bis(-2-Chloroethyl)Ether	1.42383	1.18471	16.79		
2-Chlorophenol	1.37092	1.24610	9.10		
1,3-Dichlorobenzene	1.37699	1.24900	9.29		
1,4-Dichlorobenzene	1.39202	1.25372	9.94	*	
Benzyl Alcohol	1.06607	.87335	18.08		
1,2-Dichlorobenzene	1.27494	1.19955	5.91		
2-Methylphenol	1.51104	1.29071	14.58		
bis(2-Chloroisopropyl)ether	2.64540	2.39845	9.34		
3&4-Methylphenol	1.64938	1.34948	18.18		
N-Nitroso-Di-n-propylamine	1.44410	1.15731	19.86		**
achloroethane	.45238	.39292	13.14		
trobenzene-d5	.43672	.35847	17.92		
Nitrobenzene	.44645	.33661	24.60		
Isophorone	.94324	.75030	20.46		
2-Nitrophenol	.23662	.21193	10.43	*	
2,4-Dimethylphenol	.33004	.28802	12.73		
Benzoic Acid	.20712	.15767	23.88		
bis(-2-Chloroethoxy)Methane	.44361	.39173	11.70		
2,4-Dichlorophenol	.30946	.27775	10.25	*	
1,2,4-Trichlorobenzene	.29391	.27826	5.33		
Naphthalene	.99141	.87016	12.23		
4-Chloroaniline	.39498	.35548	10.00		
Hexachlorobutadiene	.14655	.13819	5.71	*	
4-Chloro-3-methylphenol	.38997	.35674	8.52	*	
2-Methylnaphthalene	.87291	.89018	1.98		
Hexachlorocyclopentadiene	.19681	.16249	17.44		**

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 11/01/00

Contractor: Accredited Labs Time: 13:25

Contract No: CALF03 Laboratory ID: >F2336

Instrument ID: HP5890BF Initial Calibration Date: 10/20/00

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-Trichlorophenol	.35416	.33495	5.42	*	
2,4,5-Trichlorophenol	.34929	.36225	3.71		
2-Chloronaphthalene	.96924	.90158	6.98		
2-Fluorobiphenyl	1.03272	1.06487	3.11		
2-Nitroaniline	.49616	.42394	14.55		
Dimethyl Phthalate	1.24401	1.08912	12.45		
Acenaphthylene	1.50921	1.40115	7.16		
3-Nitroaniline	.39608	.34361	13.25		
Acenaphthene	1.01950	.96270	5.57	*	
2,4-Dinitrophenol	.27252	.17376	36.24		**
4-Nitrophenol	.25067	.16166	35.51		**
Dibenzofuran	1.48694	1.39822	5.97		
2,6-Dinitrotoluene	.36680	.31628	13.77		
2,4-Dinitrotoluene	.57039	.46297	18.83		
Diethylphthalate	1.28031	1.14036	10.93		
4-Chlorophenyl-phenylether	.50055	.47693	4.72		
[illegible]rene	1.19273	1.09314	8.35		
[illegible]itroaniline	.38362	.36312	5.34		
2,4,6-Tribromophenol	.22006	.18788	14.63		
4,6-Dinitro-2-methylphenol	.14962	.14114	5.67		
N-Nitrosodiphenylamine	.38122	.37983	.37	*	
Azobenzene	.76245	.70418	7.64		
4-Bromophenyl-phenylether	.18930	.17329	8.46		
Hexachlorobenzene	.21164	.19292	8.84		
Pentachlorophenol	.14686	.12408	15.51	*	
Phenanthrene	1.00392	.91715	8.64		
Anthracene	.99591	.92225	7.40		
Di-n-Butylphthalate	1.36453	1.22056	10.55		
Fluoranthene	1.19289	1.07191	10.14	*	
Benzidine	.41234	.30127	26.94		
Pyrene	1.29388	1.11278	14.00		
Terphenyl-d14	.83471	.76171	8.75		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Data
BSI Compounds

Case No: Calibration Date: 11/01/00

Contractor: Accredited Labs Time: 13:25

Contract No: CALF03 Laboratory ID: >F2356

Instrument ID: HP5890BF Initial Calibration Date: 10/20/00

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Butylbenzylphthalate	.72985	.61354	15.94		
3,3'-Dichlorobenzidine	.40170	.32751	18.47		
Benzo(a)Anthracene	1.30581	1.11437	14.66		
Bis(2-Ethylhexyl)Phthalate	.96504	.86172	10.71		
Chrysene	1.13150	1.03702	8.35		
Di-n-octyl phthalate	1.46764	1.32510	9.71	*	
Benzo(b)fluoranthene	1.25587	1.10604	11.93		
Benzo(k)Fluoranthene	1.03860	.97831	5.80		
Benzo(a)Pyrene	1.12901	1.05185	6.83	*	
Indeno(1,2,3-cd)Pyrene	1.22304	1.19444	2.34		
Dibenzo(a,h)Anthracene	.99609	.91912	7.73		
Benzo(g,h,i)Perylene	1.09703	1.04912	4.37		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
BSL Compounds

Case No: [redacted] Calibration Date: 11/01/00

[redacted]tor: Accredited Labs Time: 12:57

Contract No: CALB06 Laboratory ID: >B1341

Instrument ID: HP589088 Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Pyridine	1.21598	1.17871	3.07		
N-Nitrosodimethylamine	.88656	.84085	5.16		
2-Fluorophenol	1.38798	1.13456	18.26		
Aniline	2.70380	2.32589	13.98		
Phenol-d5	2.07887	1.87882	9.62		
Phenol	2.34709	1.88278	19.78	*	
bis(-2-Chloroethyl)Ether	1.58829	1.43731	9.51		
2-Chlorophenol	1.54503	1.36536	11.63		
1,3-Dichlorobenzene	1.37431	1.22647	10.76		
1,4-Dichlorobenzene	1.40101	1.24101	11.42	*	
Benzyl Alcohol	1.06592	.95048	10.83		
1,2-Dichlorobenzene	1.23853	1.16945	5.58		
2-Methylphenol	1.52263	1.55393	2.06		
bis(2-Chloroisopropyl)ether	2.56559	3.82496	49.09		
3&4-Methylphenol	1.60141	1.69785	6.02		
[redacted]troso-Di-n-propylamine	1.58138	1.52281	3.70		**
[redacted]chloroethane	.57849	.44528	23.03		
[redacted]robenzene-d5	.49351	.43415	12.03		
Nitrobenzene	.48068	.41625	13.40		
Isophorone	1.08557	.94498	12.95		
2-Nitrophenol	.22353	.21706	2.89	*	
2,4-Dimethylphenol	.35105	.31114	11.37		
Benzoic Acid	.25353	.24670	2.69		
bis(-2-Chloroethoxy)Methane	.53963	.48764	9.63		
2,4-Dichlorophenol	.29518	.27496	6.85	*	
1,2,4-Trichlorobenzene	.26729	.24870	6.95		
Naphthalene	.96908	.88835	8.33		
4-Chloroaniline	.45549	.38377	15.75		
Hexachlorobutadiene	.13128	.11608	11.58	*	
4-Chloro-3-methylphenol	.46179	.40413	12.49	*	
2-Methylnaphthalene	.66351	.63589	4.16		
Hexachlorocyclopentadiene	.24584	.16687	32.12		**

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

ase No: ----------

Calibration Date: 11/03/00

ontractor: Accredited Labs

Time: 12:57

:ract No: CALB06

Laboratory ID: >B1341

Instrument ID: HP589088

Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-Trichlorophenol	.35720	.32227	9.78	*	
2,4,5-Trichlorophenol	.36328	.34865	4.03		
2-Chloronaphthalene	1.01530	.88873	12.47		
2-Fluorobiphenyl	1.09712	1.02156	6.89		
2-Nitroaniline	.60437	.54377	10.03		
Dimethyl Phthalate	1.37946	1.17885	14.54		
Acenaphthylene	1.74858	1.55291	11.19		
3-Nitroaniline	.42845	.38159	10.94		
Acenaphthene	1.05159	.91123	13.35	*	
2,4-Dinitrophenol	.22732	.20633	9.23		**
4-Nitrophenol	.30936	.18235	41.06		**
Dibenzofuran	1.60303	1.39520	12.97		
2,6-Dinitrotoluene	.35433	.31656	10.66		
2,4-Dinitrotoluene	.59023	.45925	22.19		
Diethylphthalate	1.49300	1.09635	26.57		
4-Chlorophenyl-phenylether	.53751	.51415	4.35		
orene	1.14578	.96502	15.78		
itroaniline	.57604	.44659	22.47		
2,4,6-Tribromophenol	.20653	.16507	20.07		
Carbazole	.07141	.04616	35.35		
4,6-Dinitro-2-methylphenol	.14490	.15429	6.48		
N-Nitrosodiphenylamine	.14914	.14454	3.08	*	
Azobenzene	1.16262	1.02346	11.97		
4-Bromophenyl-phenylether	.16920	.17058	.82		
Hexachlorobenzene	.19411	.17668	8.98		
Pentachlorophenol	.15076	.12583	16.53	*	
Phenanthrene	.96972	.90532	6.64		
Anthracene	.98502	.90142	8.49		
Di-n-Butylphthalate	1.34854	1.30111	3.52		
Fluoranthene	1.01296	.92313	8.87	*	
Benzidine	.75928	.38547	49.23		
Pyrene	1.62973	1.41599	13.12		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

ase No: | Calibration Date: 11/03/00

tor: Accredited Labs | Time: 12:57

tract No: CALB06 | Laboratory ID: >B134I

Instrument ID: HP5890B8 | Initial Calibration Date: 10/06/00

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Terphenyl-d14	.95023	.88696	6.66		
Butylbenzylphthalate	1.04601	.78904	24.57		
3,3'-Dichlorobenzidine	.40443	.35911	11.21		
Benzo(a)Anthracene	1.27985	1.14407	10.61		
Bis(2-Ethylhexyl)Phthalate	1.35544	1.02471	24.40		
Chrysene	1.29515	1.06644	17.66		
Di-n-octyl phthalate	1.92540	1.74227	9.51	*	
Benzo(b)fluoranthene	1.31129	1.16641	11.05		
Benzo(k)Fluoranthene	1.01076	1.04331	3.22		
Benzo(a)Pyrene	1.13212	1.04409	7.78	*	
Indeno(1,2,3-cd)Pyrene	1.08897	1.06993	1.75		
Dibenzo(a,h)Anthracene	.86739	.90136	3.92		
Benzo(g,h,i)Perylene	1.00419	.94900	5.50		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.:

	LAB SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	TOT OUT
01	SBLK29	49	57	61				0
02	0013302	95	64	54				0
03	SBLK29MS	47	50	49				0
04	SBLK29MSD	57	60	55				0
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d5	(10- 94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

60

SW

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: 1. SAS No.: SDG No.:

Lab File ID (Standard): >F2336 Date Analyzed: 11/01/00

Instrument ID: HP5970B F Time Analyzed: 13:25

	IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD	51644		9.02		222804		12.20		150337		16.65	
UPPER LIMIT	103288		9.52		445608		12.70		300674		17.15	
LOWER LIMIT	25822		8.52		111402		11.70		75168		16.15	
LAB SAMPLE NO.												
01 SBLK29	55839		9.01		231671		12.19		160795		16.63	
02												
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = 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.

61

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: 1 SAS No.: SDG No.:

Lab File ID (Standard): >F2336 Date Analyzed: 11/01/00

Instrument ID: HP5970B F Time Analyzed: 13:25

		IS4(PHN)			IS5(CRY)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	280318		20.32	284809	27.05	321817	30.41	
	UPPER LIMIT	560636		20.82	569618	27.55	643634	30.91	
	LOWER LIMIT	140159		19.82	142405	26.55	160909	29.91	
	LAB SAMPLE NO.								
01	SBLK29	297735		20.32	312165	27.03	264257	30.39	
02									
03									
04									
05									
06									
07									
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.

62

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: 9881 1 SAS No.: SDG No.:

Lab File ID (Standard): >B1341 Date Analyzed: 11/03/00

Instrument ID: HP5970B B Time Analyzed: 12:57

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	25476	10.15	120176	13.34	82339	17.85
UPPER LIMIT	50952	10.65	240352	13.84	164678	18.35
LOWER LIMIT	12738	9.65	60088	12.84	41170	17.35
LAB SAMPLE NO.						
01 0013302	30247	10.16	88593	13.45	65783	17.89
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = 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.

63

OLM03 0

FORM VIII SV-1

4908

RI

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: 9881 1 SAS No.: SDG No.:

Lab File ID (Standard): >81341 Date Analyzed: 11/03/00

Instrument ID: HP5970B B Time Analyzed: 12:57

	IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD	148459		21.58		99958		28.38		94933		31.76	
UPPER LIMIT	296918		22.08		199916		28.88		189866		32.26	
LOWER LIMIT	74230		21.08		49979		27.88		47466		31.26	
LAB SAMPLE NO.												
01 0013302	100887		21.58		79106		28.38		73176		31.76	
02												
03												
04												
05												
06												
07												
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.

64

SEMIVOLATILE INTERNAL STANDARDS AREA AND RT SUMMARY

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >B1377 Date Analyzed: 11/08/00

Instrument ID: HP5970B B Time Analyzed: 11:48

	IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
12 HOUR STD	19751		10.10		91210		13.30		62441		17.80	
UPPER LIMIT	39502		10.60		182420		13.80		124882		18.30	
LOWER LIMIT	9875		9.60		45605		12.80		31221		17.30	
LAB SAMPLE NO.												
01 SBLK29MS	17293		10.10		77442		13.29		55232		17.80	
02 SBLK29MSD	18930		10.10		84393		13.30		60135		17.80	
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = 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.

65

FORM VIII SV-1 01/03/0

4910

NC

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: 1 SAS No.: SDG No.:

Lab File ID (Standard): >B1377 Date Analyzed: 11/08/00

Instrument ID: HP5970B B Time Analyzed: 11:48

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	121013		21.55		112510		28.35		127096		31.76	
	UPPER LIMIT	242026		22.05		225020		28.85		254192		32.26	
	LOWER LIMIT	60506		21.05		56255		27.85		63548		31.26	
	LAB SAMPLE NO.												
01	SBLK29MS	104823		21.54		118553		28.33		112839		31.73	
02	SBLK29MSD	115837		21.53		127218		28.33		121861		31.73	
03													
04													
05													
06													
07													
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.

66

Name: Accredited Laboratories, Inc

Matrix Spike - Lab Sample No.: SBLK29M

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,4-Dichlorobenzene	100	0	58	58	36- 97
N-Nitroso-Di-n-prop.(1)	100	0	52	52	41-116
1,2,4-Trichlorobenzene	100	0	65	65	39- 98
Acenaphthene	100	0	59	59	46-118
2,4-Dinitrotoluene	100	0	59	59	24- 96
Pyrene	100	0	47	47	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	100	72	72	22	28	36- 97
N-Nitroso-Di-n-prop.(1)	100	68	68	27	38	41-116
1,2,4-Trichlorobenzene	100	79	79	19	28	39- 98
Acenaphthene	100	73	73	21	31	46-118
2,4-Dinitrotoluene	100	78	78	28	38	24- 96
Pyrene	100	58	58	21	31	26-127

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS: _____

[illegible]	Acenaphthene	U	10
[illegible]	Acenaphthylene	U	10
[illegible]	Anthracene	U	10
[illegible]	Benzo(a)Anthracene	U	10
[illegible]	Benzo(a)Pyrene	U	10
[illegible]	Benzo(b)Fluoranthene	U	10
[illegible]	Benzo(g,h,i)Perylene	U	10
[illegible]	Benzo(k)Fluoranthene	U	10
100516	Benzyl Alcohol	U	20
111444	bis(2-Chloroethyl)Ether	U	10
108601	bis(2-Chloroisopropyl)ether	U	10
117817	Bis(2-Ethylhexyl)Phthalate	U	10
111911	bis(-2-Chloroethoxy)Methane	U	10
101553	4-Bromophenyl-phenylether	U	10
85687	Butylbenzylphthalate	U	10
106478	4-Chloroaniline	U	20
91587	2-Chloronaphthalene	U	10
7005723	4-Chlorophenyl-phenylether	U	10
218019	Chrysene	U	10
53703	Dibenzo(a,h)Anthracene	U	10
[illegible]32649	Dibenzofuran	U	10
[illegible]5501	1,2-Dichlorobenzene	U	10
541731	1,3-Dichlorobenzene	U	10
106467	1,4-Dichlorobenzene	U	10
91941	3,3'-Dichlorobenzidine	U	20
84662	Diethylphthalate	U	10

[illegible]	Dimethyl Phthalate	U	10
84742	Di-n-Butylphthalate	U	10
121142	2,4-Dinitrotoluene	U	[illegible]
606202	2,6-Dinitrotoluene	U	10
117840	Di-n-octyl phthalate	U	10
206440	Fluoranthene	U	10
86737	Fluorene	U	10
118741	Hexachlorobenzene	U	10
87683	Hexachlorobutadiene	U	10
77474	Hexachlorocyclopentadiene	U	10
67721	Hexachloroethane	U	10
193395	Indeno(1,2,3-cd)Pyrene	U	10
78591	Isophorone	U	10
91576	2-Methylnaphthalene	U	10
91203	Naphthalene	U	50
88744	2-Nitroaniline	U	50
99092	3-Nitroaniline	U	50
100016	4-Nitroaniline	U	10
98953	Nitrobenzene	U	10
62759	N-Nitrosodimethylamine	U	10
86306	N-Nitrosodiphenylamine	U	10
621647	N-Nitroso-Di-n-propylamine	U	10
85018	Phenanthrene	U	10
129000	Pyrene	U	10
120821	1,2,4-Trichlorobenzene	U	10

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	49 %	35-114	OK
2-Fluorobiphenyl	57 %	43-116	OK
Terphenyl-d14	61 %	33-141	OK

J - Indicates compound concentration found below MDL.
U - Indicates compound analyzed for but not detected.
D - Indicates result is based on a dilution.
B - Indicates compound found in associated blank.
E - Concentration exceeds highest calibration standard.
W - Result exceeds specific ground water quality criteria.*

* Flags are based on Specific Ground Water Quality Criteria from New Jersey Register dated February 1, 1993.
** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Accredited Labs, Inc. Lab Sample ID: SBLK29

Client Name: Field ID:

Case No.: Date Extracted: 11/01/00

Lab File ID: >F2341 Date Analyzed: 11/01/00

CONCENTRATION UNITS: (ug/L or ug/Kg): ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Aldol Condensate	5.12	34	

* Unknowns are defined as: Compounds that are less than 80% probability or have no database entries from the library.

FORM I SV-TIC

4R

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK29

Lab Name: ACCREDITED LABS, INC. Contract:

Lab Code: Case No.: 1 SAS No.: SDG No.:

Lab File ID: >F2341 Lab Sample ID: SBLK29

Instrument ID: HP59708 F Date Extracted: 11/01/00

Matrix: (soil/water) WATER Date Analyzed: 11/01/00

Level: (low/med) LOW Time Analyzed: 17:06

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01		0013302	>B1356	11/04/00
02		SBLK29MS	>B1380	11/08/00
03		SBLK29MSD	>B1381	11/08/00
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

70

QUANT REPORT

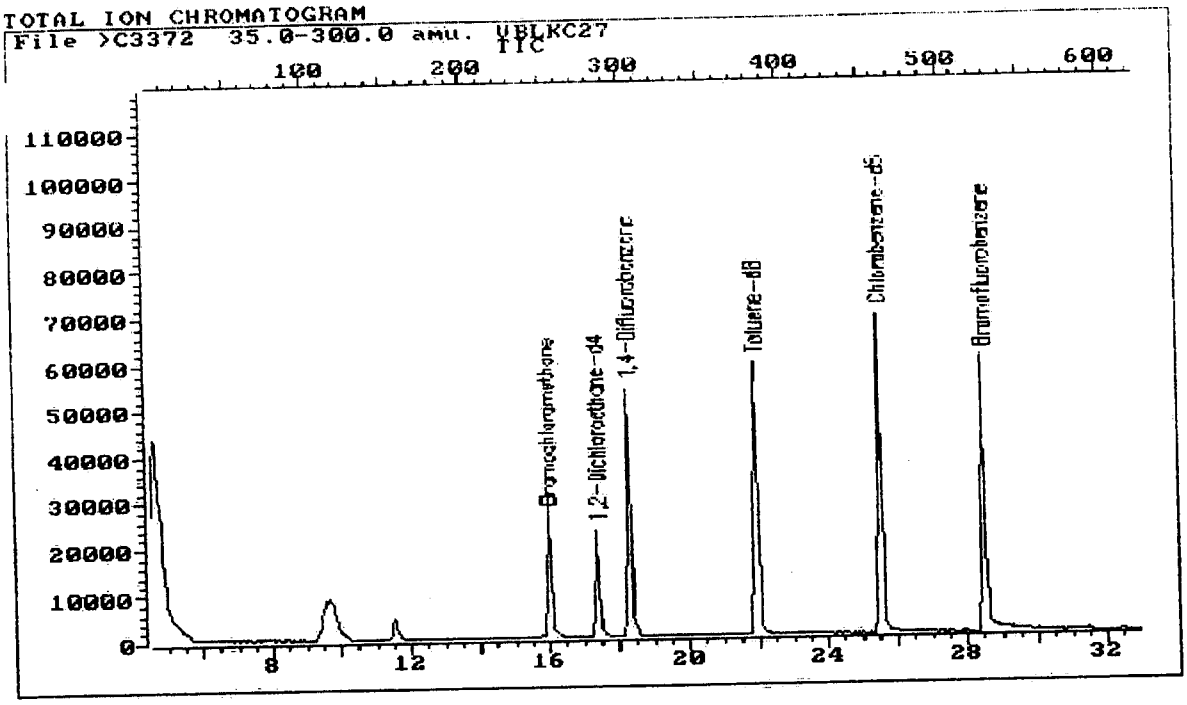
)t ator ID: WILLIAM
)utput File: ^C3372::D2
)ata File: >C3372::C2
Name: VBLKC27
Misc:

Quant Rev: 6 Quant Time: 001102 15:16
Injected at: 001102 14:42
Dilution Factor: 1.00000

ID File: IDC692::SC
Title: Accredited Labs Volatile Identity File
Last Calibration: 001102 13:51

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	15.97	252	45176	30.00	ug/l	97
19)	1,2-Dichloroethane-d4	17.39	283	72239	29.69	ug/l	97
21)	*1,4-Difluorobenzene	18.30	303	162129	30.00	ug/l	100
37)	*Chlorobenzene-d5	25.55	462	133184	30.00	ug/l	100
42)	Toluene-d8	21.94	383	164363	27.57	ug/l	94
45)	Bromofluorobenzene	28.51	527	93396	25.81	ug/l	69

* Compound is ISTD



Data File: >C3372::C2 Quant Output File: ^C3372::D2
Name: VBLKC27
Misc:

Id File: IDC692::SC
Title: Accredited Labs Volatile Identity File
Last Calibration: 001102 13:51

Operator ID: WILLIAM
Quant Time: 001102 15:16
Injected at: 001102 14:42

QUANT REPORT

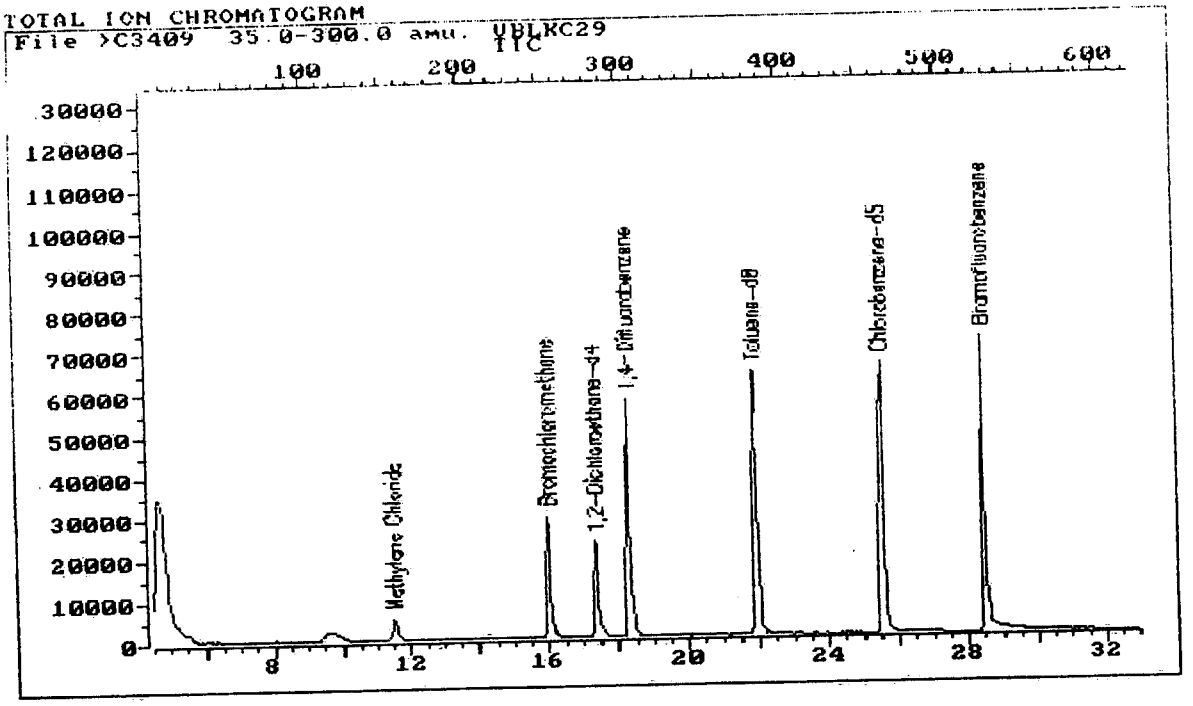
)perator ID: WILLIAM
)utput File: ^C3409::QT
)ata File: >C3409::C2
Name: VBLKC29
Misc:

Quant Rev: 6 Quant Time: 001106 16:04
Injected at: 001106 15:30
Dilution Factor: 1.00000

ID File: IDC694::SC
Title: Accredited Labs Volatile Identity File
Last Calibration: 001106 14:38

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	15.98	253	46898	30.00	ug/l	96
9)	Methylene Chloride	11.51	155	16885	3.06	ug/l	89
19)	1,2-Dichloroethane-d4	17.35	283	77673	30.97	ug/l	99
21)	*1,4-Difluorobenzene	18.31	304	169297	30.00	ug/l	100
37)	*Chlorobenzene-d5	25.55	463	136930	30.00	ug/l	100
42)	Toluene-d8	21.91	383	171056	28.78	ug/l	94
45)	Bromofluorobenzene	28.47	527	100431	26.80	ug/l	77

* Compound is ISTD



Data File: >C3409::C2 Quant Output File: ^C3409::QT
Name: VBLKC29
Misc:

Id File: IDC694::SC
Title: Accredited Labs Volatile Identity File
Last Calibration: 001106 14:38

Operator ID: WILLIAM
Quant Time: 001106 16:04
Injected at: 001106 15:30

QUANT REPORT

[redacted]tor ID: WILLIAM
ut File: ^C3375::D2
ata File: >C3375::C2
ame: 0013302
isc: 9881

Quant Rev: 6 Quant Time: 001102 17:42
Injected at: 001102 17:02
Dilution Factor: 1.00000

ENVIROTACTICS GW-7

D File: IDC692::SC
itle: Accredited Labs Volatile Identity File
ast Calibration: 001102 13:51

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	15.99	253	41666	30.00	ug/l	96
9)	Methylene Chloride	11.52	155	15363	1.55	ug/l	92
9)	1,2-Dichloroethane-d4	17.36	283	67140	29.92	ug/l	97
:1)	*1,4-Difluorobenzene	18.31	304	151909	30.00	ug/l	100
31)	Benzene	17.63	289	2967	.62	ug/l	100
37)	*Chlorobenzene-d5	25.52	462	124901	30.00	ug/l	100
42)	Toluene-d8	21.91	383	155832	27.87	ug/l	93
43)	Toluene	22.10	387	2138055M	367.03	ug/l	
45)	Bromofluorobenzene	28.48	527	92995	27.40	ug/l	72
46)	Ethylbenzene	25.74	467	12022M	1.52	ug/l	75
48)	m,p-Xylene	25.93	471	18024	2.80	ug/l	98

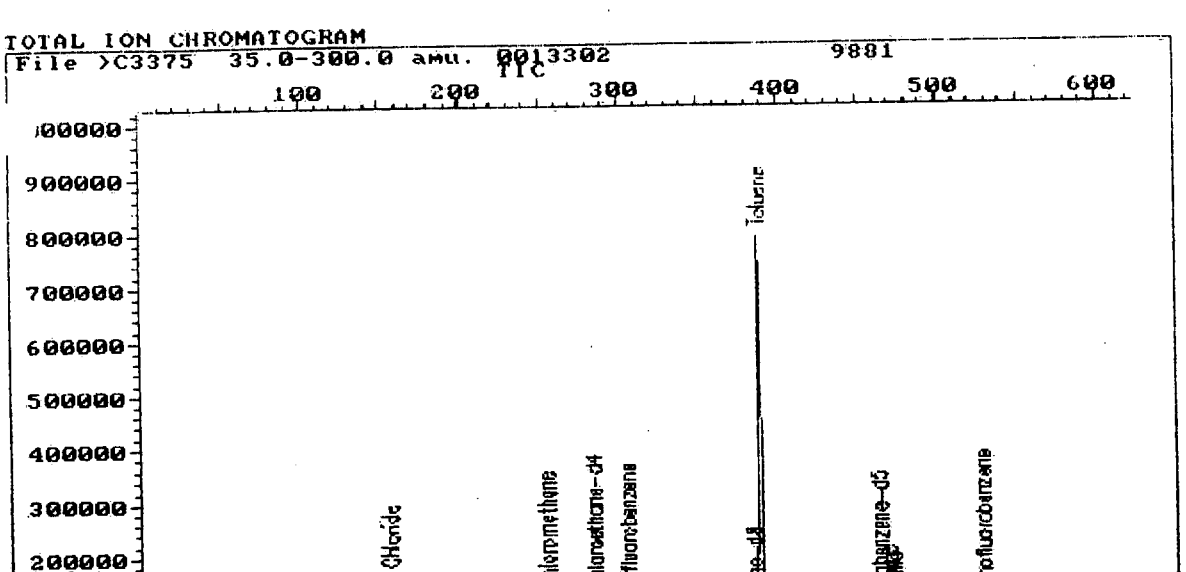
* Compound is ISTD

[redacted]

[redacted]

95

4920



Data File: >C3375::C2 Quant Output File: ^C3375::D2
Name: 0013302
Misc: 9881 ENVIROTACTICS GW-7

Id File: IDC692::SC
Title: Accredited Labs Volatile Identity File
Last Calibration: 001102 13:51

Operator ID: WILLIAM
Quant Time: 001102 17:42
Injected at: 001102 17:02

QUANT REPORT

)p ator ID: WILLIAM
)u ut File: ^C3422::QT
)ata File: >C3422::C2
Name: 0013302DL
Misc: 9881

Quant Rev: 6 Quant Time: 001107 02:52
Injected at: 001107 02:12
Dilution Factor: 1.00000

ENVIROTACTICS GW-7

ID File: IDC694::SC
Title: Accredited Labs Volatile Identity File
Last Calibration: 001106 14:38

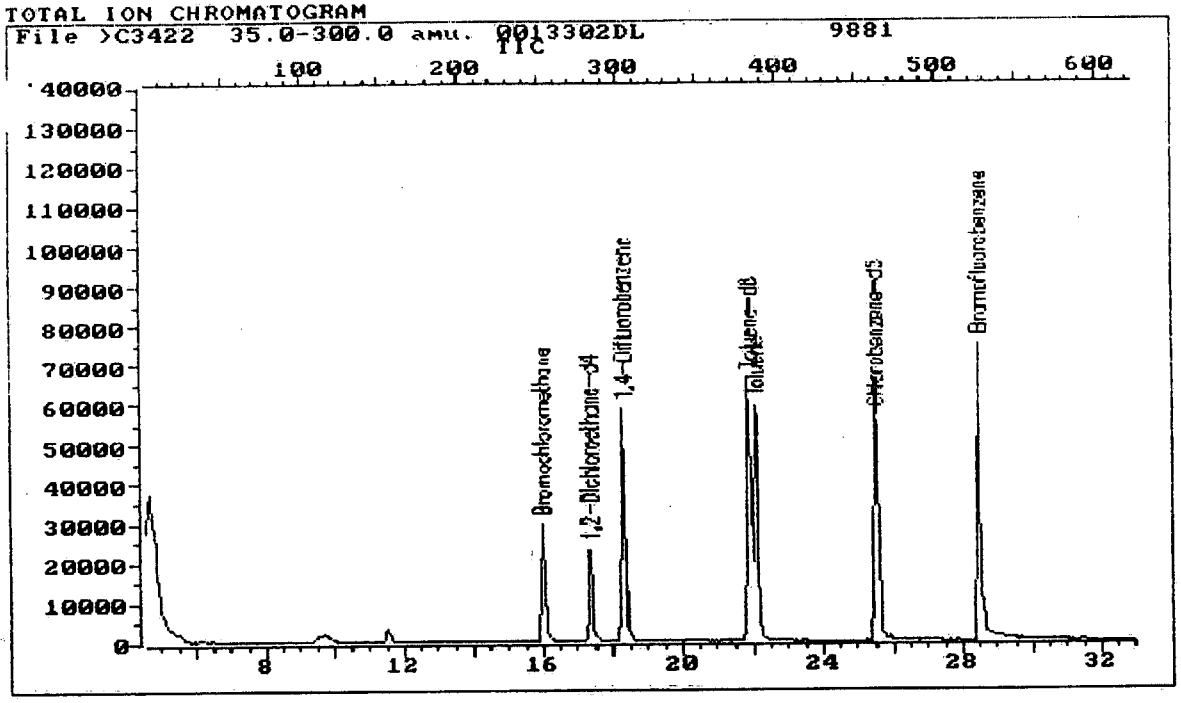
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	15.98	252	47708	30.00	ug/l	95
19)	1,2-Dichloroethane-d4	17.34	282	76708	30.06	ug/l	97
21)	*1,4-Difluorobenzene	18.30	303	172569	30.00	ug/l	100
37)	*Chlorobenzene-d5	25.50	461	140191	30.00	ug/l	100
42)	Toluene-d8	21.90	382	177970	29.25	ug/l	95
43)	Toluene	22.08	386	171265	26.07	ug/l	92
45)	Bromofluorobenzene	28.46	526	104750	27.30	ug/l	77

* Compound is ISTD

77

4922

TOTAL ION CHROMATOGRAM



Data File: >C3422::C2 Quant Output File: ^C3422::QT
Name: 0013302DL
Misc: 9881 ENVIROTACTICS GW-7

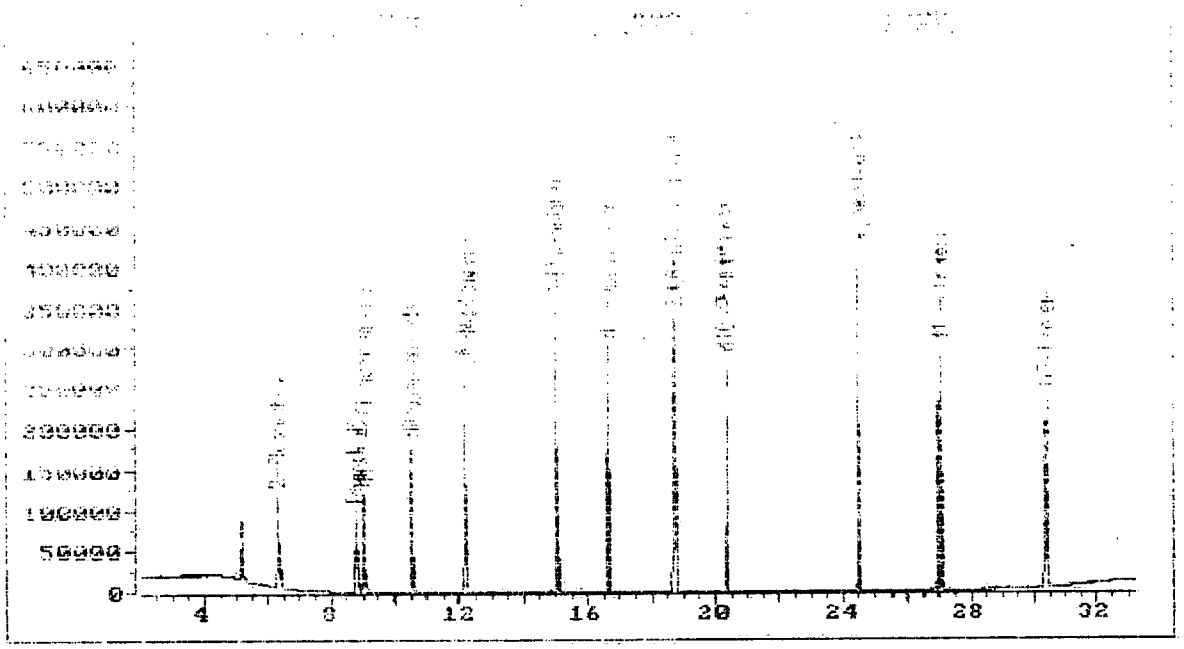
Id File: IDC694::SC
Title: Accredited Labs Volatile Identity File
Last Calibration: 001106 14:38

Operator ID: WILLIAM
Quant Time: 001107 02:52
Injected at: 001107 02:12

78

Compound	F	Scan#	Area	Conc	Units	Q
1) *d4-1,4-Dichlorobenzene	9.01	544	55839	40.00	ug/l	96
4) 2-Fluorophenol	6.26	269	105762	56.11	ug/l	100
6) Phenol-d5	8.74	391	116510	50.45	ug/l	91
19) *d8-Naphthalene	12.19	500	231671	40.00	ug/l	96
20) Nitrobenzene-d5	10.52	418	122837	48.56	ug/l	93
34) *d10-Acenaphthene	16.63	718	160795	40.00	ug/l	95
39) 2-Fluorobiphenyl	15.02	639	236025	56.85	ug/l	95
54) 2,4,6-Tribromophenol	18.69	819	112735	127.44	ug/l	98
55) *d10-Phenanthrene	20.32	899	297735	40.00	ug/l	100
67) *d12-Chrysene	27.03	1228	312165	40.00	ug/l	100
70) Terphenyl-d14	24.46	1102	397085	60.96	ug/l	88
76) *d12-Perylene	30.39	1393	264257	40.00	ug/l	100

Compound is ISTD



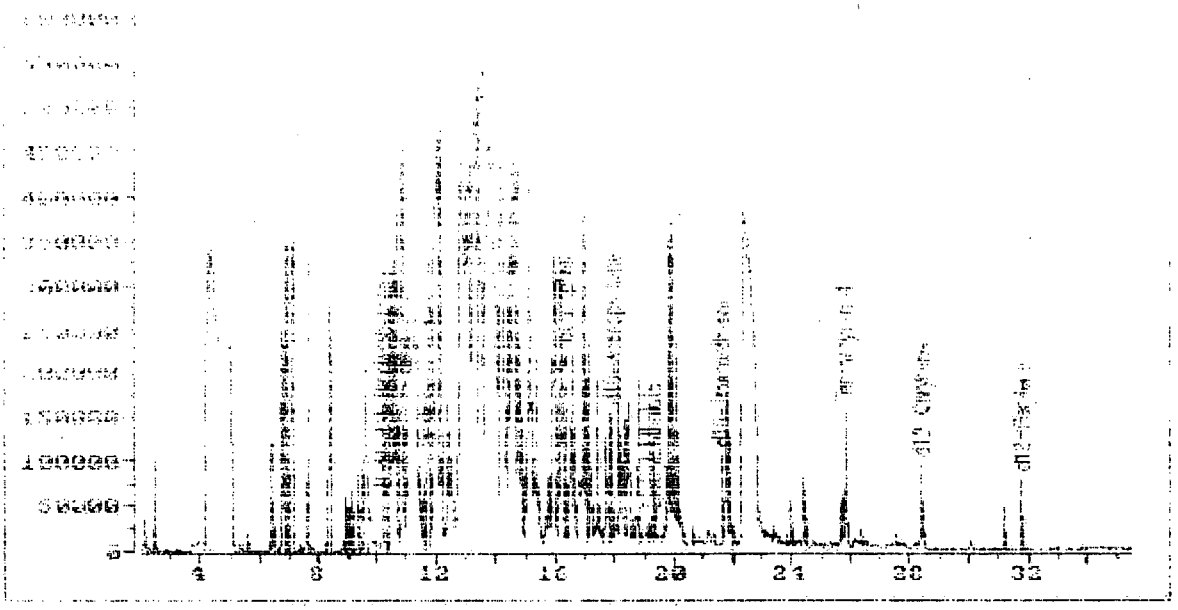
Data File: >F2341::F7 Quant Output File: ^F2341::QT
Name: SBLK29 Instrument ID: AHP5970B
Misc: 11/01/00 BTL# 2

Id File: IDF03::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001020 14:02 Last Qcal Time: <none>

Operator ID: DANIEL
Quant Time : 001101 17:40
Injected at: 001101 17:06

Compound	R.T.	Scan#	Area	Conc	Units	Q
11) *d4-1,4-Dichlorobenzene	10.16	401	30747	40.00	ug/l	98
11) 1,4-Dichlorobenzene	10.20	403	45388	4.76	ug/l	88
13) 1,2-Dichlorobenzene	10.69	422	39159	41.81	ug/l	88
19) *d8-Naphthalene	13.45	562	88593	40.00	ug/l	86
20) Nitrobenzene-d5	11.67	475	103826	94.99	ug/l	95
34) *d10-Acenaphthene	17.89	779	65783	40.00	ug/l	94
39) 2-Fluorobiphenyl	16.27	700	115789	64.17	ug/l	94
50) Diethylphthalate	19.21	844	22142	9.02	ug/l	90
55) *d10-Phenanthrene	21.58	960	100887	40.00	ug/l	100
68) *d12-Chrysene	28.38	1293	79106	40.00	ug/l	100
71) Terphenyl-d14	25.77	1165	102206	54.39	ug/l	93
77) *d12-Perylene	31.76	1459	73176	40.00	ug/l	100

* Compound is ISTD



Data File: >RI356n::EI Quant Output File: ^RI356::QJ
Name: 0013307 Instrument ID: HP5970BB
Misc: 9MBJ 11/01/00 ENVIROTACTICS GW-7 BTI #12

Id File: IDB06::ME
Title: Accredited Laboratories Base/Neutral/Acid Identity File
Last Calibration: 001007 09:23 Last Qcal Time: 001026 12:53

Operator ID: DANIEL
Quant Time : 001104 01:02
Injected at: 001104 00:25

REFERENCE 16

PROJECT NO. [illegible] REGION II SITE ASSESSMENT TEAM

To: Orbis Products File **Date:** 14 October 2002 **Page:** 1 of 1

W.O. No.: 20103.001.001.1061.00

From: Scott Snyder, Region II SAT

Subject: Wetland Acreage

The attached table documents the amount of HRS-eligible wetland acreage within a 4-mile radius of the Orbis Products site. Totals are apportioned to distance rings. This table was prepared by Jennifer Duerr, Geographic Information Systems Analyst, Weston Solutions, Inc., who used GIS programs to prepare the 4-Mile Radius Map (see Reference 12). This map indicates HRS-eligible wetlands within a 4-mile radius of the site.

Distance Ring (mile)	Wetland Acreage
On-Site	0.0
>0 - 1/4	0.0
>1/4 - ½	0.0
>½ - 1.0	2.1*
>1.0 - 2.0	47.0*
>2.0 - 3.0	74.9*
>3.0 - 4.0	295.6*

* Rounded to the nearest tenth

Signature _____

Scott Snyder

AREAS FOR HRS ELIGIBLE WETLANDS		
	AREA (ACRES)	**AREA (METERS^2)**
total area, ring 4 (3-4)	295.56	1196097.83
total area, ring 3 (2-3)	74.86	302961.05
total area, ring 2 (1-2)	46.99	190158.52
total area, ring 1 (0.5-1)	2.06	8348.70
total area, ring 0.25 (0-0.25)	0.00	0.00
total area, ring 0.5 (0.25-0.5)	0.00	0.00

Attn. A. P. I

REFERENCE 17

TELECON NOTE — REGION II SITE ASSESSMENT TEAM

W. O. NO.: 20103.001.001.1061.00 **DATE:** 17 October 2002 **TIME:** 1055

DISTRIBUTION: Orbis Products File

BETWEEN: EJ Horne **OF:** Newark Tax Assessment Office **PHONE:** (973) 733-6566

AND: Scott Snyder, Region II SAT **Subject:** Tax Assessment Office Address

Mr. Horne stated that the Tax Assessment Office address is:

920 Broad Street
Newark, NJ 07102

Signature: _____

Scott Snyder

REFERENCE 18

James E. McGreevey
Governor

State of New Jersey
Department of Environmental Protection
Division of Parks and Forestry
Office of Natural Lands Management
Natural Heritage Program
P.O. Box 404
Trenton, NJ 08625-0404
Tel. #609-984-1339
Fax. #609-984-1427

Bradley M. Campbell
Commissioner

October 21, 2002

Scott Snyder
Weston Solutions, Inc.
205 Campus Drive
Edison, NJ 08837

Re: Orbis Products Corporation Site, W.O. NO:20103-001-001-1061-00

Dear Mr. Snyder:

Thank you for your data request regarding rare species information for the above referenced project site in Newark City, Essex County.

The Natural Heritage Data Base does not have any records for rare plants or natural communities on the site.

The Landscape Project (Version 1.0) does not have any records for suitable habitat or rare species on the project site.

Attached is a list of rare species from records in the general vicinity of the project site (within approximately four miles). Attached is a list of rare species and natural communities that have been documented from Essex County. This county list can be used as a master species list for directing further inventory work. If suitable habitat is present at the project site, these species have potential to be present. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend you contact the Division of Fish and Wildlife, Endangered and Nongame Species Program.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Herbert A. Lord

Herbert A. Lord
Data Request Specialist

cc: Thomas F. Breden
Lawrence Niles
NHP File No. 02-4007462

CAUTIONS AND RESTRICTIONS ON NATURAL HERITAGE DATA

The quantity and quality of data collected by the Natural Heritage Program is dependent on the research and observations of many individuals and organizations. Not all of this information is the result of comprehensive or site-specific field surveys. Some natural areas in New Jersey have never been thoroughly surveyed. As a result, new locations for plant and animal species are continuously added to the database. Since data acquisition is a dynamic, ongoing process, the Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of New Jersey. Information supplied by the Natural Heritage Program summarizes existing data known to the program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The attached data is provided as one source of information to assist others in the preservation of natural diversity.

This office cannot provide a letter of interpretation or a statement addressing the classification of wetlands as defined by the Freshwater Wetlands Act. Requests for such determination should be sent to the DEP Land Use Regulation Program, P.O. Box 401, Trenton, NJ 08625-0401.

The Landscape Project was developed by the Division of Fish & Wildlife, Endangered and Nongame Species Program to map critical habitat for rare animal species. Some of the rare species data in the Landscape Project is in the Natural Heritage Database, while other records were obtained from other sources. Natural Heritage Database response letters will list all species (if any) found during a search of the Landscape Project. However, any reports that are included with the response letter will only reference specific records if they are in the Natural Heritage Database. This office cannot answer any inquiries about the Landscape Project. All questions should be directed to the DEP Division of Fish and Wildlife, Endangered and Nongame Species Program, P.O. Box 400, Trenton, NJ 08625-0400.

This cautions and restrictions notice must be included whenever information provided by the Natural Heritage Database is published.

NJ Department of Environmental Protection
Division of Parks and Forestry
Natural Lands Management

GENERAL VICINITY OF PROJECT SITE
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN
THE NEW JERSEY NATURAL HERITAGE DATABASE
EXCLUDING RECORDS USED FOR THE LANDSCAPE PROJECT

NAME		COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK	DATE OBSERVED	IDENT.
*** Vertebrates									
PASSERCULUS SANDWICHENSIS	•	SAVANNAH SPARROW		T/T		G5	S2B,S4N	1940-??-??	
STERNA ANTILLARUM	•	LEAST TERN		E		G4	S1B	1977-??-??	Y
STERNA ANTILLARUM		LEAST TERN		E		G4	S1B	1996-07-??	Y
*** Invertebrates									
ALASMIDONTA UNDULATA	•	TRIANGLE FLOATER		T		G4	S3	????-??-??	Y
LASMIGONA SUBVIRIDIS		GREEN FLOATER		E		G3	S1	????-??-??	Y
NICROPHORUS AMERICANUS	•	AMERICAN BURYING BEETLE	LE	E		G2G3	SH	????-??-??	Y
PAPILIO CRESPHONTES		GIANT SWALLOWTAIL				G5	S1	1937-08-28	Y
POLYGONIA PROGNE		GRAY COMMA				G5	SH	????-06-14	Y
PONTIA PROTODICE	•	CHECKERED WHITE		T		G4	S1	1996-09-??	Y
PONTIA PROTODICE		CHECKERED WHITE		T		G4	S1	????-09-10	Y
*** Other types									
COASTAL HERON ROOKERY		COASTAL HERON ROOKERY				GU	S3	1986-06-??	Y

11 Records Processed

ESSEX COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
PYRGUS WYANDOT	SOUTHERN GRIZZLED SKIPPER				G2	SH
*** Vascular plants						
ALISMA TRIVIALE	LARGE WATER-PLANTAIN		E		G5	S1
ALOPECURUS AEQUALIS VAR AEQUALIS	SHORT-AWN MEADOW-FOXTAIL				G5T?	S2
ANEMONE CANADENSIS	CANADA ANEMONE				G5	SX
CALLITRICHE PALUSTRIS	MARSH WATER-STARWORT				G5	S2
CALYSTEGIA SPITHAMAEA	ERECT BINDWEED		E		G4G5T4T5	S1
CAREX PALLESCENS	PALE SEDGE				G5	S2
CASTILLEJA COCCINEA	SCARLET INDIAN-PAINTBRUSH				G5	S2
LEMNA PERPUSILLA	MINUTE DUCKWEED		E		G5	S1
MUHLENBERGIA CAPILLARIS	LONG-AWN SMOKE GRASS		E		G5T?	S1
PENSTEMON LAEVIGATUS	SMOOTH BEARDTONGUE		E		G5	S1
PHLOX PILOSA	DOWNY PHLOX		E		G5T5	SH
PYCNANTHEMUM TORREI	TORREY'S MOUNTAIN-MINT		E		G2	S1
RANUNCULUS PUSILLUS VAR PUSILLUS	LOW SPEARWORT				G5T4?	S2
SALIX LUCIDA SSP LUCIDA	SHINING WILLOW				G5T5	S1
SANICULA TRIFOLIATA	LARGE-FRUIT BLACK-SNAKEROOT		E		G4	S1
STYLOSANTHES BIFLORA	PENCIL-FLOWER				G5	S3

44 Records Processed

ESSEX COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

	NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
*** Vertebrates							
	ACCIPITER COOPERII	COOPER'S HAWK		T/T		G5	S3B,S4N
	AMBYSTOMA LATERALE	BLUE-SPOTTED SALAMANDER		E		G5	S1
	AMMODRAMUS SAVANNARUM	GRASSHOPPER SPARROW		T/S		G5	S2B
	ASIO OTUS	LONG-EARED OWL		T/T		G5	S2B,S2N
	BARTRAMIA LONGICAUDA	UPLAND SANDPIPER		E		G5	S1B
	BUTEO LINEATUS	RED-SHOULDERED HAWK		E/T		G5	S1B,S2N
	CISTOTHORUS PLATENSIS	SEDGE WREN		E		G5	S1B
	CLEMMYS INSCULPTA	WOOD TURTLE		T		G4	S3
	DOLICHONYX ORYZIVORUS	BOBOLINK		T/T		G5	S2B
	FALCO PEREGRINUS	PEREGRINE FALCON		E		G4	S1B,S?N
	LYNX RUFUS	BOBCAT		E		G5	S3
	MELANERPES ERYTHROCEPHALUS	RED-HEADED WOODPECKER		T/T		G5	S2B,S2N
	PASSERCULUS SANDWICHENSIS	SAVANNAH SPARROW		T/T		G5	S2B,S4N
	STERNA ANTILLARUM	LEAST TERN		E		G4	S1B
	STRIX VARIA	BARRED OWL		T/T		G5	S3B
*** Invertebrates							
	ALASMIDONTA UNDULATA	TRIANGLE FLOATER				G4	S3
	CHLOSYNE HARRISII	HARRIS' CHECKERSPOT				G4	S2S3
	CHLOSYNE NYCTEIS	SILVERY CHECKERSPOT				G5	SH
	ENODIA ANTHEDON	NORTHERN PEARLY EYE				G5	S3S4
	ERYNNIS MARTIALIS	MOTTLED DUSKY WING				G3G4	SH
	LAMPSILIS CARIOSA	YELLOW LAMPMUSSEL				G3G4	S1
	LAMPSILIS RADIATA	EASTERN LAMPMUSSEL				G5	S3
	LASMIGONA SUBVIRIDIS	GREEN FLOATER				G3	S1
	NICROPHORUS AMERICANUS	AMERICAN BURYING BEETLE	LE	E		G2G3	SH
	PAPILIO CRESPHONTES	GIANT SWALLOWTAIL				G5	S1
	POLYGONIA PROGNE	GRAY COMMA				G5	SH
	PONTIA PROTODICE	CHECKERED WHITE				G4	S1

EXPLANATIONS OF CODES USED IN NATURAL HERITAGE REPORTS

FEDERAL STATUS CODES

The following U.S. Fish and Wildlife Service categories and their definitions of endangered and threatened plants and animals have been modified from the U.S. Fish and Wildlife Service (F.R. Vol. 50 No. 188; Vol. 61, No. 40; F.R. 50 CFR Part 17). Federal Status codes reported for species follow the most recent listing.

LE	Taxa formally listed as endangered.
LT	Taxa formally listed as threatened.
PE	Taxa already proposed to be formally listed as endangered.
PT	Taxa already proposed to be formally listed as threatened.
C	Taxa for which the Service currently has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species.
S/A	Similarity of appearance species.

STATE STATUS CODES

Two animal lists provide state status codes after the Endangered and Nongame Species Conservation Act of 1973 (NSSA 23:2A-13 et. seq.): the list of endangered species (N.J.A.C. 7:25-4.13) and the list defining status of indigenous, nongame wildlife species of New Jersey (N.J.A.C. 7:25-4.17(a)). The status of animal species is determined by the Nongame and Endangered Species Program (ENSP). The state status codes and definitions provided reflect the most recent lists that were revised in the New Jersey Register, Monday, June 3, 1991.

D	Declining species-a species which has exhibited a continued decline in population numbers over the years.
E	Endangered species-an endangered species is one whose prospects for survival within the state are in immediate danger due to one or many factors - a loss of habitat, over exploitation, predation, competition, disease. An endangered species requires immediate assistance or extinction will probably follow.
EX	Extirpated species-a species that formerly occurred in New Jersey, but is not now known to exist within the state.
I	Introduced species-a species not native to New Jersey that could not have established itself here without the assistance of man.
INC	Increasing species-a species whose population has exhibited a significant increase, beyond the normal range of its life cycle, over a long term period.
T	Threatened species-a species that may become endangered if conditions surrounding the species begin to or continue to deteriorate.
P	Peripheral species-a species whose occurrence in New Jersey is at the extreme edge of its present natural range.
S	Stable species-a species whose population is not undergoing any long-term increase/decrease within its natural cycle.
U	Undetermined species-a species about which there is not enough information available to determine the status.

Status for animals separated by a slash(/) indicate a duel status. First status refers to the state breeding population, and the second status refers to the migratory or winter population.

Plant taxa listed as endangered are from New Jersey's official Endangered Plant Species List N.J.S.A. 131B-15.151 et seq.

E Native New Jersey plant species whose survival in the State or nation is in jeopardy.

REGIONAL STATUS CODES FOR PLANTS

LP Indicates taxa listed by the Pinelands Commission as endangered or threatened within their legal jurisdiction. Not all species currently tracked by the Pinelands Commission are tracked by the Natural Heritage Program. A complete list of endangered and threatened Pineland species is included in the New Jersey Pinelands Comprehensive Management Plan.

EXPLANATION OF GLOBAL AND STATE ELEMENT RANKS

The Nature Conservancy has developed a ranking system for use in identifying elements (rare species and natural communities) of natural diversity most endangered with extinction. Each element is ranked according to its global, national, and state (or subnational in other countries) rarity. These ranks are used to prioritize conservation work so that the most endangered elements receive attention first. Definitions for element ranks are after The Nature Conservancy (1982: Chapter 4, 4.1-1 through 4.4.1.3-3).

GLOBAL ELEMENT RANKS

G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.

G2 Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3 Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout it's range; with the number of occurrences in the range of 21 to 100.

G4 Apparently secure globally; although it may be quite rare in parts of its range, especially at the periphery.

G5 Demonstrably secure globally; although it may be quite rare in parts of its range, especially at the periphery.

GH Of historical occurrence throughout its range i.e., formerly part of the established biota, with the expectation that it may be rediscovered.

GU Possibly in peril range-wide but status uncertain; more information needed.

GX Believed to be extinct throughout range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered.

G? Species has not yet been ranked.

STATE ELEMENT RANKS

S1 Critically imperiled in New Jersey because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres). Elements so ranked are often restricted to very specialized conditions or habitats and/or restricted to an extremely small geographical area of the state. Also included are elements which were formerly more abundant, but because of habitat destruction or some other critical factor of its biology, they have been demonstrably reduced in abundance. In essence, these are elements for which, even with intensive searching, sizable additional occurrences are unlikely to be discovered.

S2 Imperiled in New Jersey because of rarity (6 to 20 occurrences). Historically many of these elements may have been more frequent but are now known from very few extant occurrences, primarily because of habitat destruction. Diligent searching may yield additional occurrences.

S3 Rare in state with 21 to 100 occurrences (plant species in this category have only 21 to 50 occurrences). Includes elements which are widely distributed in the state but with small populations/acreage or elements with restricted distribution, but locally abundant. Not yet imperiled in state but may soon be if current trends continue. Searching often yields additional occurrences.

S4 Apparently secure in state, with many occurrences.

S5 Demonstrably secure in state and essentially ineradicable under present conditions.

SA Accidental in state, including species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range; a few of these species may even have bred on the one or two occasions they were recorded; examples include European strays or western birds on the East Coast and vice-versa.

SE Elements that are clearly exotic in New Jersey including those taxa not native to North America (introduced taxa) or taxa deliberately or accidentally introduced into the State from other parts of North America (adventive taxa). Taxa ranked SE are not a conservation priority (viable introduced occurrences of G1 or G2 elements may be exceptions).

SH Elements of historical occurrence in New Jersey. Despite some searching of historical occurrences and/or potential habitat, no extant occurrences are known. Since not all of the historical occurrences have been field surveyed, and unsearched potential habitat remains, historically ranked taxa are considered possibly extant, and remain a conservation priority for continued field work.

SP Element has potential to occur in New Jersey, but no occurrences have been reported.

SR Elements reported from New Jersey, but without persuasive documentation which would provide a basis for either accepting or rejecting the report. In some instances documentation may exist, but as of yet, its source or location has not been determined.

SRF Elements erroneously reported from New Jersey, but this error persists in the literature.

SU Elements believed to be in peril but the degree of rarity uncertain. Also included are rare taxa of uncertain taxonomical standing. More information is needed to resolve rank.

SX Elements that have been determined or are presumed to be extirpated from New Jersey. All historical occurrences have been searched and a reasonable search of potential habitat has been completed. Extirpated taxa are not a current conservation priority.

SXC Elements presumed extirpated from New Jersey, but native populations collected from the wild exist in cultivation.

SZ Not of practical conservation concern in New Jersey, because there are no definable occurrences, although the taxon is native and appears regularly in the state. An SZ rank will generally be used for long distance migrants whose occurrences during their migrations are too irregular (in terms of repeated visitation to the same locations), transitory, and dispersed to be reliably identified, mapped and protected. In other words, the migrant regularly passes through the state, but enduring, mappable element occurrences cannot be defined.

Typically, the SZ rank applies to a non-breeding population (N) in the state - for example, birds on migration. An SZ rank may in a few instances also apply to a breeding population (B), for example certain lepidoptera which regularly die out every year with no significant return migration.

Although the SZ rank typically applies to migrants, it should not be used indiscriminately. Just because a species is on migration does not mean it receives an SZ rank. SZ will only apply when the migrants occur in an irregular, transitory and dispersed manner.

B Refers to the breeding population of the element in the state.

N Refers to the non-breeding population of the element in the state.

T Element ranks containing a "T" indicate that the infraspecific taxon is being ranked differently than the full species. For example *Stachys palustris* var. *homotricha* is ranked "G5T? SH" meaning the full species is globally secure but the global rarity of the var. *homotricha* has not been determined; in New Jersey the variety is ranked historic.

Q Elements containing a "Q" in the global portion of its rank indicates that the taxon is of questionable, or uncertain taxonomical standing, e.g., some authors regard it as a full species, while others treat it at the subspecific level.

.1 Elements documented from a single location.

Note: To express uncertainty, the most likely rank is assigned and a question mark added (e.g., G2?). A range is indicated by combining two ranks (e.g., G1G2, S1S3).

IDENTIFICATION CODES

These codes refer to whether the identification of the species or community has been checked by a reliable individual and is indicative of significant habitat.

Y Identification has been verified and is indicative of significant habitat.

BLANK Identification has not been verified but there is no reason to believe it is not indicative of significant habitat.

? Either it has not been determined if the record is indicative of significant habitat or the identification of the species or community may be confusing or disputed.

Revised September 1998

REFERENCE 19

RECORD

ORBIS PRODUCTS

SITE LOG BOOK

W.O. NO. 20103.001.001.1061.00

DCN: SAT.061.001

AVERY®
White Paper
Made in U.S.A.
200 PAGE 9 5/8"X 6 1/4"
RECORD BOOK

Orbis Products Corp. (061)
NJDEP Case Manager - Rodger Fekiak
(973) 669-3974 - No. Field Office.

EPA OSC - Neil Norrell (732) 321-4357

24 September 2002 - S. Snyder arranged the ~~first~~ (2nd) file review with Carol Ramsey of the NJDEP Northern Field Office. Review scheduled for Thursday - 26 Sept. 2002.

9/24/02

26 September 2002 - Conducted a ~~first~~ (3rd) file review at NJDEP No. Field Office. The file contained a PA and a Remedial Action Workplan prepared by Newark's consultant. There is extensive soil and groundwater analytical data attached to the workplan. The data appears to contain all the QA/QC documentation necessary for validation.

9/26/02

23 October 2002 - Site HASP approved by Alanna Garrison. Action levels for site recon will be 10ppm VOCs and 25 mg/m³ for dust/aerosol - Level C. A full SAT HASP was written for the recon due to the potential for an upgrade to Level C.

10/23/02

10/23/02

10-23-02 - HASP approved by W. Scott Butterfield.

10/23/02

10-23-02, 1205 hours received air monitoring equipment from U.S. Environmental Rental
MultiRae plus PID - S/N 503160
MIE PDR1000 Dust Monitor - S/N 2655
Action Levels for upgrade to Level C during upcoming on-site reconnaissance will be 10 units above background on the PID and 25 mg/m³ on the PDR 1000 Dust Monitor.

10/23/02

10-24-02 0745 hrs - calibrated MultiRae Plus PID S/N 503160 using 100% ppm isobutylene. Other parameters calibrated by U.S. Environmental on 10/22/02 - 25 ppm H2S, 50 ppm CO and 50% LEL (methane), 20.9% O_2
0900 - Zeroed the PDR 1000 Dust Monitor as per instruction manual.

10/24/02

10/24/02

Site Reconnaissance - Orbis Prod.

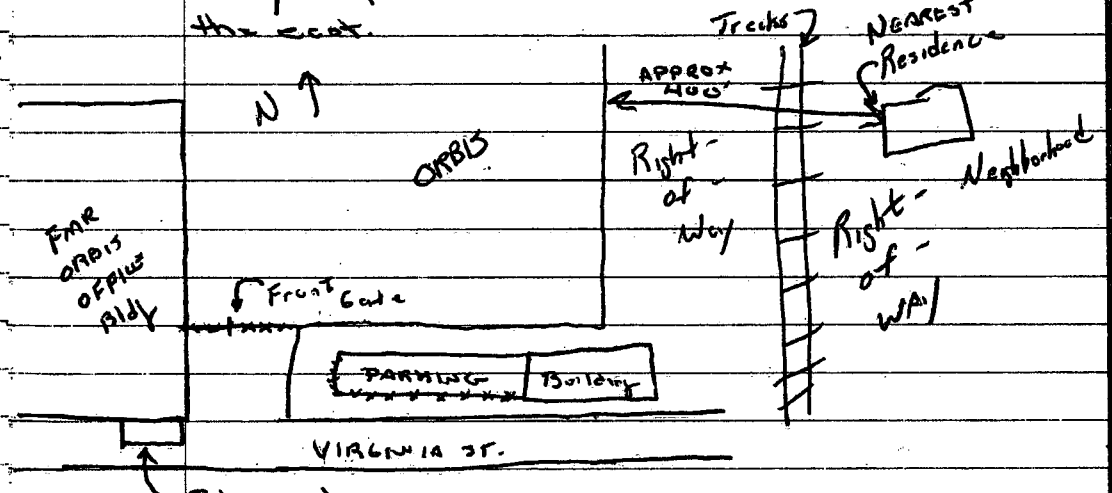
10-24-02

1105- S. Snyder and M. Capriglione arrive at the site. Weather is clear skies with temps in the mid fifties. Front gate is locked.

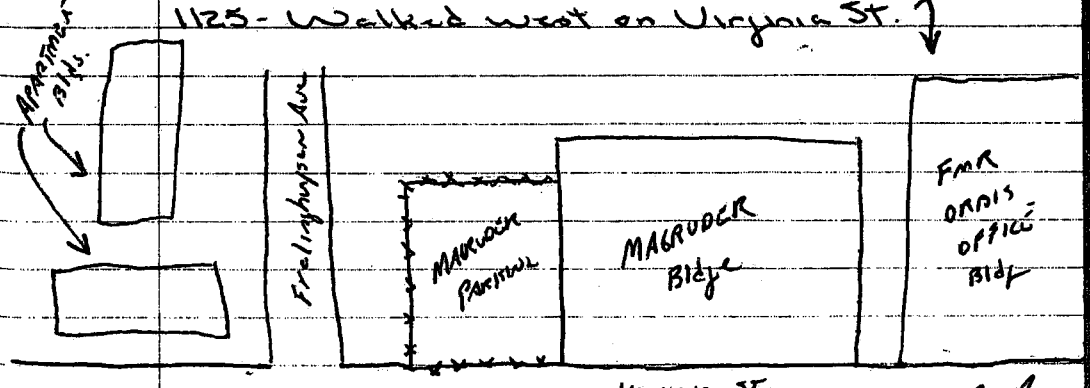
1110- Activate PID.

1113- PID indicates 0.0 ppm background VOCs.

1115- Walked east to the end of Virginia St. Railroad tracks and adjacent right of way separate site from residential area to the east.



1125- Walked west on Virginia St.



10/24/02

1130 - Measured off 200' west on Virginia St. from the SW corner of the former office building adjacent to the front gate. 200' feet extends to the corner of the Magruder Bldg. S. Snyder asked a security guard at the front gate how many people work at Magruder - he stated approximately 150.

Observed that Magruder has parking space directly bordering the Virginia Street side of the site adjacent to the front gate.

There are no terrestrial sensitive environments within 200' of the site.

There is no resource use of soil within 200' of the site.

There is no overland path to surface water. Runoff from the site is likely to be intercepted by storm drains on adjacent streets.

There are no residences, schools or day care centers within 200' of the site.

Drainage area is estimated to be equal to the site acreage (6.1) pg 6 →

10/24/02

PHOTO DOCUMENTATION
10/24/02

No. 1 - Front gate looking N-NE @ 40°
1110 hours

No. 2 - Closest residence to east side of site - railroad in foreground
E @ 70° 1120 hours

No. 3 - Orbis site from railroad right-of-way, N-NW 334° 1120 hrs.

No. 4 - Fmr Orbis office building adjacent to Front Gate N-NE @ 40° 1125 hrs

No. 5 - Magruder's parking area bordering the site. E-SE @ 120° 1145 hrs.

No. 6 - Storm drain of Virginia St adjacent to site entrance N @ 330° 1150 hrs.

Nos. 7 & 8 - Gate on north side of site fronting McClellan Ave SW @ 240° 1245 hrs

10/24/02

The surrounding topography is flat. The railroad tracks form a barrier to runoff from the east.

1155 - D. Zeno (EPA) arrives at site. Discussed lack of potential receptors and status of the SI Report.

1220 - Observing the site through the front gate it appears that the entire southern portion of the site is paved, with scattered areas of broken pavement.

1240 - Stopped by junkyard bordering Orbis on the west to ask how many people are employed there, manager stated that three people are employed at the junkyard.

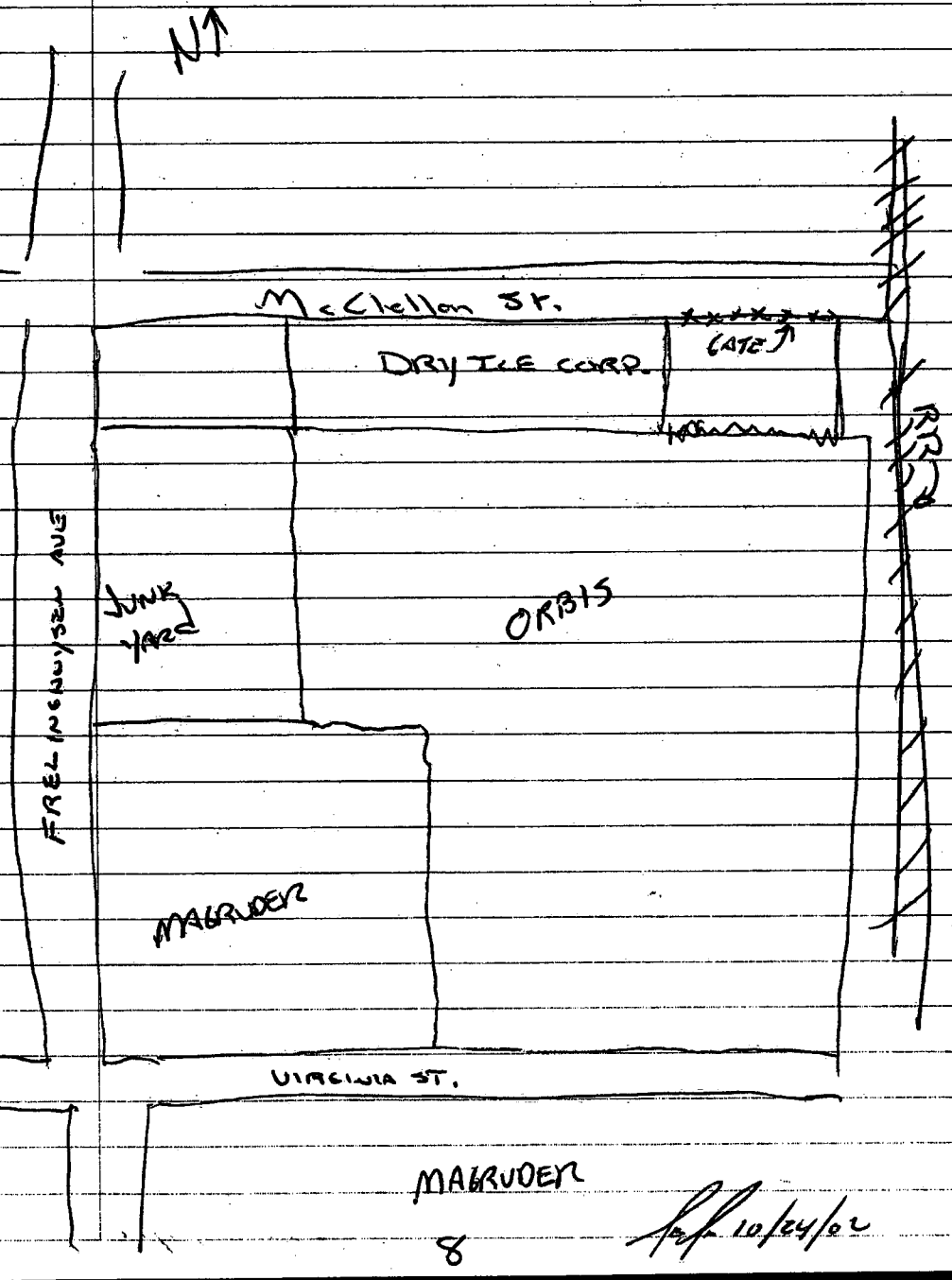
1242 - Stopped by Dry Ice Corp bordering the site to the north to ask about how many employees - customer service rep stated that 13 people are employed at the facility

1245 - observed a gate on the north side of the site fronting Mellellan St. The fence adjacent to the gate is plywood with a sheet metal covering. Inside the gate observed areas of exposed soil, some parts overgrown with weeds and some paved areas

[signature] 10/24/02

that are likely the former foundations of ASTs and demolished buildings.

At no time did the PID indicate VOCs above 0.0 ppm.



10/24/02

There does not appear to be any secondary containment for on-site soil.

The site appears to be completely fenced, however barbed wire is only present over the gates. Other portions of the fence appear to be easy to climb over - especially on the east side facing the railroad.

The nearest residence is located approx 400' east of the site on the east side of the railroad tracks.

Runoff from the south, west, and north is likely intercepted by Virginia St, Frelinghuysen Ave., and McClellan St, respectively

The site is situated in a mixed residential, commercial, and industrial area. The Magruder facility appears to be heavy industry and may be a potential off-site source of contamination.

No conditions have been noted that would warrant immediate or emergency action.

9 10/24/02

SAT departed site once at 1300 hours.
SAT did not enter the site as the gate
was locked.

10-24-02

10

10/24/02

REFERENCE 19
ATTACHMENT A

PHOTO DOCUMENTATION
ORBIS PRODUCTS CORPORATION
OFF-SITE RECONNAISSANCE
24 October 2002

PHOTO DOCUMENTATION
ORBIS PRODUCTS CORPORATION
OFF-SITE RECONNAISSANCE
24 OCTOBER 2002

Photo No. 1: Front gate facing Virginia Street, looking northeast; 1110 hours.

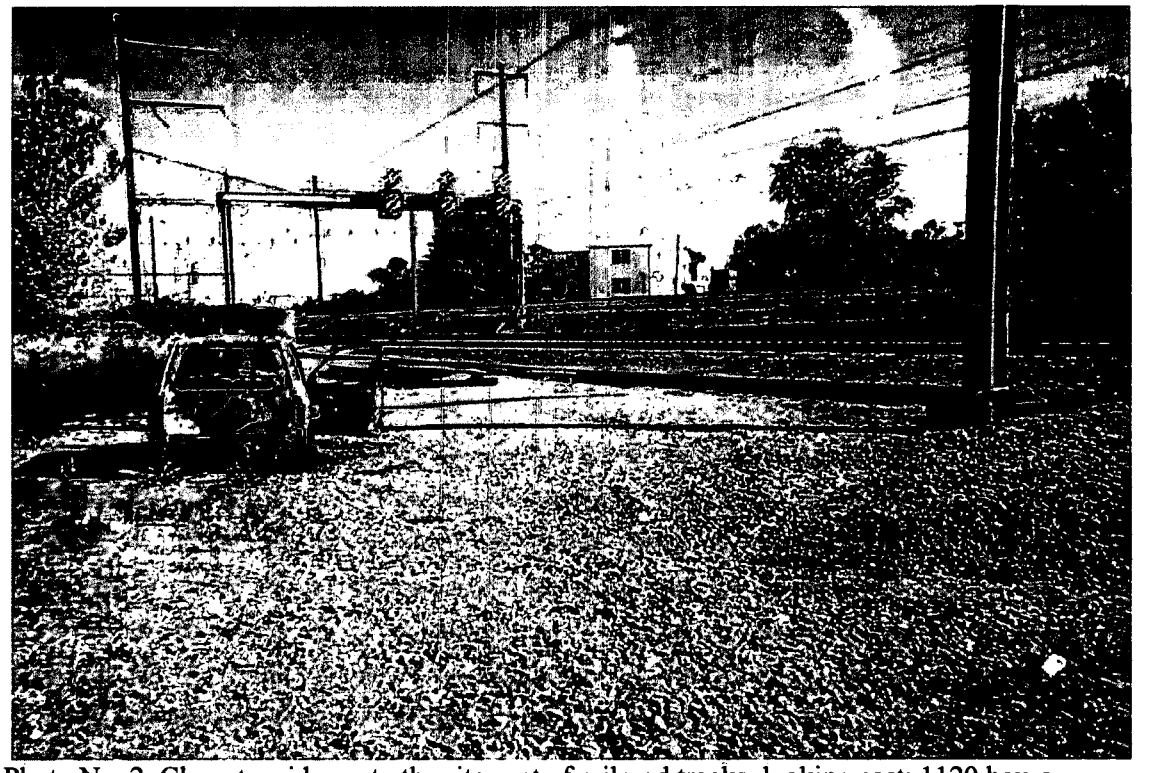


Photo No. 2: Closest residence to the site-east of railroad tracks, looking east; 1120 hours.

PHOTO DOCUMENTATION
ORBIS PRODUCTS CORPORATION
OFF-SITE RECONNAISSANCE
24 OCTOBER 2002

Photo No. 3: Orbis Site form railroad right-of-way, looking northwest; 1120 hours.

Photo No. 4: Former Orbis office building adjacent to front gate, looking northeast; 1125 hours.

PHOTO DOCUMENTATION
ORBIS PRODUCTS CORPORATION
OFF-SITE RECONNAISSANCE
24 OCTOBER 2002

Photo No. 5: Magruder's parking area bordering the site's south side, looking southeast; 1145 hours.

Photo No. 6: Storm drain on Virginia Street adjacent to front gate, looking north, 1150 hours.

PHOTO DOCUMENTATION
ORBIS PRODUCTS CORPORATION
OFF-SITE RECONNAISSANCE
24 OCTOBER 2002

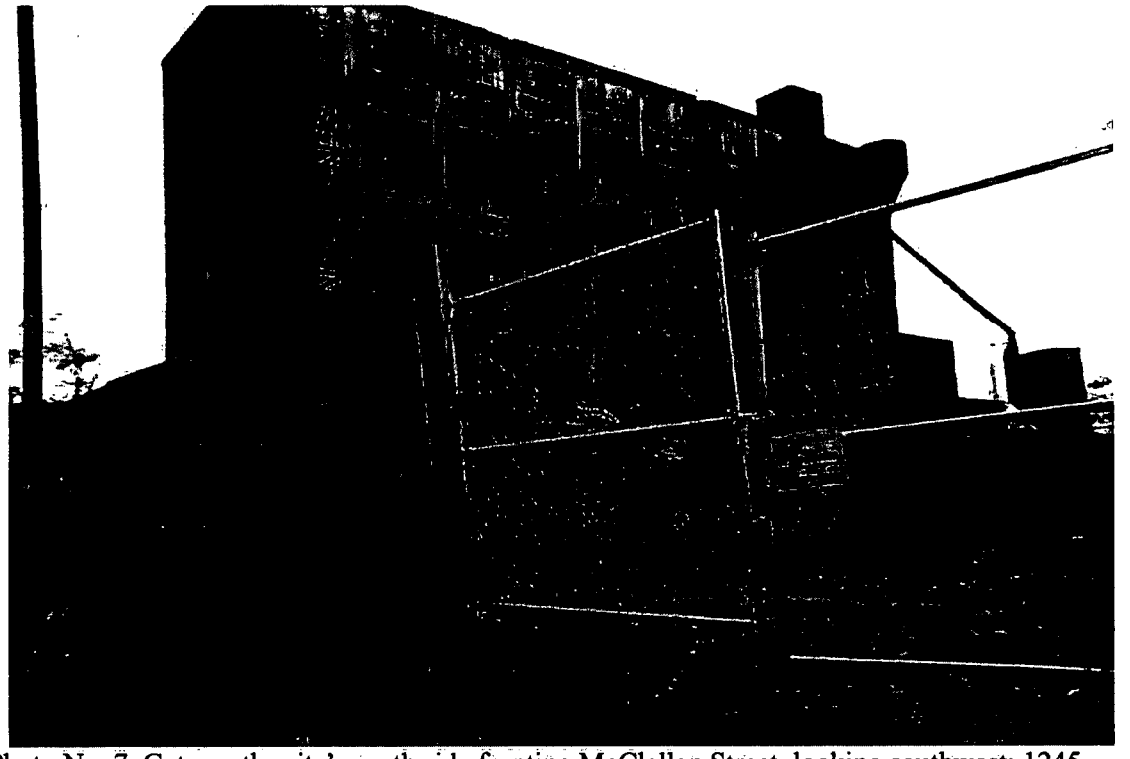


Photo No. 7: Gate on the site's north side fronting McClellan Street, looking southwest; 1245 hours.

Photo No. 8: North side of the site, looking southwest; 1245 hours.

REFERENCE 20

PROJECT NOTE — REGION II SITE ASSESSMENT TEAM

To: Orbis Products File **Date:** 23 October 2002 **Page:** 1 of 1

W.O. No.: 20103.001.001.1061.00

From: Scott Snyder, Region II SAT

Subject: Quantity of Contaminated Soil

Reference: Federal Register, 40 CFR, Part 300, Hazard Ranking System; Final Rule, Volume 55, No. 241, Environmental Protection Agency, 14 December 1990.

S. Snyder estimated the amount of contaminated soil present at the Orbis Products site. Analytical results of soil samples indicate the presence of hazardous substances throughout the site. Therefore, the quantity of contaminated soil present at the site is estimated to be equal to the site acreage minus the footprints of the major structures on site (Buildings 1 through 6). The Orbis site occupies approximately 6.1 acres. The areas of Buildings 1 through 6 were measured on a scaled map of the site (see Ref. 14, p. 269G) and totaled. This total was subtracted from the overall area of the site. Calculations are outlined below.

1 acre = 43,560 ft^2
6.1 acres = 265,716 ft^2
Building No. 1 = 7,686 ft^2
Building No. 2 = 11,502 ft^2
Building No. 3 = 4,764 ft^2
Building No. 4 = 1,681 ft^2
Building No. 5 = 4,300 ft^2
Building No. 6 = 18,793 ft^2

Total = 48,726 ft^2

265,716 ft^2 - 48,726 ft^2 = **216,990 ft^2**

Hazardous Waste Quantity Evaluation: 216,990 / 34,000 = 6.4
If the quantity of contaminated soil is reduced by 1/3 the total will be 145,383 / 34,000 = 4.3

Therefore, allowing for a margin of error of 1/3, the Hazardous Waste Quantity Factor Value remains 1.

Signature _____

Scott Snyder

federal register

Friday
December 14, 1990

Appendix A to the NCP

Part II

Environmental Protection Agency

40 CFR Part 300
Hazard Ranking System; Final Rule

–If the hazardous waste exhibits only the characteristic of toxicity (or only the characteristic of EP toxicity), include only the mass of constituents in the hazardous waste that are CERCLA hazardous substances and not the mass of the entire hazardous waste.

–If the hazardous waste exhibits any other characteristic identified under section 3001 (including any other characteristic plus the characteristic of toxicity [or the characteristic of EP toxicity]), include the mass of the entire hazardous waste.

Based on this mass, designated as C, assign a value for hazardous constituent quantity as follows:

• For the migration pathways, assign the source a value for hazardous constituent quantity using the Tier A equation of Table 2–5.

• For the soil exposure pathway, assign the area of observed contamination a value using the Tier A equation of Table 5–2 (section 5.1.2.2).

If the hazardous constituent quantity for the source (or area of observed contamination) is adequately determined (that is, the total mass of all CERCLA hazardous substances in the source and releases from the source [or in the area of observed contamination] is known or is estimated with reasonable confidence), do not evaluate the other three measures discussed below. Instead assign these other three measures a value of 0 for the source (or area of observed contamination) and proceed to section 2.4.2.1.5.

If the hazardous constituent quantity is not adequately determined, assign the source (or area of observed contamination) a value for hazardous constituent quantity based on the available data and proceed to section 2.4.2.1.2.

TABLE 2–5.—HAZARDOUS WASTE QUANTITY EVALUATION EQUATIONS

Tier	Measure	Units	Equation for assigning value [a]
A	Hazardous constituent quantity (C)	lb	C
B [b]	Hazardous wastestream quantity (W)	lb	W/5,000
C [b]	Volume (V)		
	Landfill	yd^3	V/2,500
	Surface impoundment	yd^3	V/2.5
	Surface impoundment (buried/backfilled)	yd^3	V/2.5
	Drums [c]	gallon	V/500
	Tanks and containers other than drums	yd^3	V/2.5
	Contaminated soil	yd^3	V/2,500
	Pile	yd^3	V/2.5
	Other	yd^3	V/2.5
D [b]	Area (A)		
	Landfill	ft^2	A/3,400
	Surface impoundment	ft^2	A/13
	Surface impoundment (buried/backfilled)	ft^2	A/13
	Land treatment	ft^2	A/270
	Pile [d]	ft^2	A/13
	Contaminated soil	ft^2	A/34,000

[a] Do not round to nearest integer.
[b] Convert volume to mass when necessary: 1 ton = 2,000 pounds = 1 cubic yard = 4 drums = 200 gallons.
[c] If actual volume of drums is unavailable, assume 1 drum = 50 gallons.
[d] Use land surface area under pile, not surface area of pile.

2.4.2.1.2 *Hazardous wastestream quantity.* Evaluate hazardous wastestream quantity for the source (or area of observed contamination) based on the mass of hazardous wastestreams plus the mass of any additional CERCLA pollutants and contaminants (as defined in CERCLA section 101[33], as amended) that are allocated to the source (or area of observed contamination). For a wastestream that consists solely of a hazardous waste listed pursuant to section 3001 of RCRA, as amended or that consists solely of a RCRA hazardous waste that exhibits the characteristics identified under section 3001 of RCRA, as amended, include the mass of that entire hazardous waste in the evaluation of this measure.

Based on this mass, designated as W, assign a value for hazardous wastestream quantity as follows:

• For the migration pathways, assign the source a value for hazardous wastestream quantity using the Tier B equation of Table 2–5.

• For the soil exposure pathway, assign the area of observed contamination a value using the Tier B equation of Table 5–2 (section 5.1.2.2).

Do not evaluate the volume and area measures described below if the source is the unallocated source or if the following condition applies:

• The hazardous wastestream quantity for the source (or area of observed contamination) is adequately determined—that is, total mass of all hazardous wastestreams and CERCLA pollutants and contaminants for the source and releases from the source (or for the area of observed contamination) is known or is estimated with reasonable confidence.

If the source is the unallocated source or if this condition applies, assign the volume and area measures a value of 0 for the source (or area of observed contamination) and proceed to section 2.4.2.1.5. Otherwise, assign the source (or area of observed contamination) a value for hazardous wastestream quantity based on the available data and proceed to section 2.4.2.1.3.

2.4.2.1.3 *Volume.* Evaluate the volume measure using the volume of the source (or the volume of the area of observed contamination). For the soil exposure pathway, restrict the use of the volume measure to those areas of observed contamination specified in section 5.1.2.2.

Based on the volume, designated as V, assign a value to the volume measure as follows:

• For the migration pathways, assign the source a value for volume using the appropriate Tier C equation of Table 2–5.

• For the soil exposure pathway, assign the area of observed contamination a value for volume using the appropriate Tier C equation of Table 5–2 (section 5.1.2.2).

If the volume of the source (or volume of the area of observed contamination, if applicable) can be determined, do not evaluate the area measure. Instead, assign the area measure a value of 0 and proceed to section 2.4.2.1.5. If the volume cannot be determined (or is not applicable for the soil exposure pathway), assign the source (or area of observed contamination) a value of 0 for the volume measure and proceed to section 2.4.2.1.4.

2.4.2.1.4 *Area.* Evaluate the area measure using the area of the source (or the area of the area of observed contamination). Based on this area, designated as A, assign a value to the area measure as follows:

• For the migration pathways, assign the source a value for area using the appropriate Tier D equation of Table 2–5.

• For the soil exposure pathway, assign the area of observed contamination a value for area using the appropriate Tier D equation of Table 5–2 (section 5.1.2.2).

2.4.2.1.5 *Calculation of source hazardous waste quantity value.* Select the highest of the values assigned to the source (or area of observed contamination) for the hazardous constituent quantity, hazardous wastestream quantity, volume, and area measures. Assign this value as the source hazardous waste quantity value. Do not round to the nearest integer.

2.4.2.2 *Calculation of hazardous waste quantity factor value.* Sum the source hazardous waste quantity values assigned to all sources (including the unallocated source) or areas of observed contamination for the pathway being evaluated and round this sum to the nearest integer, except: if the sum is greater than 0, but less than 1, round it to 1. Based on this value, select a hazardous waste quantity factor value for the pathway from Table 2–6.

TABLE 2–6.—HAZARDOUS WASTE QUANTITY FACTOR VALUES

Hazardous waste quantity value	Assigned value
0	0
1 [a] to 100	1 [b]
Greater than 100 to 10,000	100
Greater than 10,000 to 1,000,000	10,000
Greater than 1,000,000	1,000,000

[a] If the hazardous waste quantity value is greater than 0, but less than 1, round it to 1 as specified in text.
[b] For the pathway, if hazardous constituent quantity is not adequately determined, assign a value as specified in the text; do not assign the value of 1.

REFERENCE 21

PROJECT NOTE **REGION II SITE ASSESSMENT TEAM**

To: Orbis Products File **Date:** 30 October 2002 **Page:** 1 of 1

W.O. No.: 20103.001.001.1061.00

From: Scott Snyder, Region II SAT

Subject: Soil and Groundwater Data Validation

The attachments to this note are Data Assessments prepared by Yunru Yang, Weston Solutions, Inc. Y. Yang is a Region II certified data validation specialist. Attachment A is the data assessment for soil samples collected by Envirotactics during June through August 2001. Attachment B is the data assessment for groundwater samples collected by Envirotactics during February 2002.

Signature _____

Scott Snyder

REFERENCE 21

ATTACHMENT A

DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

Lab Case No.: E01-4385, E-01-4542, E01-4592
LABORATORY: Integrated Analytical Laboratories (IAL)
SITE: Orbis Products

DATA ASSESSMENT

The following EPA Region II data validation SOPs were followed:

- **SOP No. HW-22, Revision, 2, June 2001, Validating Semi-volatile Organic Compounds by SW-846 Method 8270**
- **SOP No. HW-24, Revision 1, June 1999, Validating Volatile Organic Compounds by SW-846 Method 8260B**
- **SOP No. HW-23B (Revision 1.0), May 2002, Validating PCB Compounds by SW-846 Method 8082**

All data were found to be valid and acceptable except those analytes which have been rejected, "R" (unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

NOTE: Sample analyses were performed following SW-846 methods. The QC criteria established in the applicable methods were used to qualify samples results following the guidelines specified in the aforementioned SOPs.

Reviewer's Signature: Yunru Yang **Date:** 10/23/2002

Verified By: _____ **Date:**

DATA ASSESSMENT

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

All holding times were met.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

All surrogate recoveries were within the control limits.

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

Samples from un-related sites were used for MS/MSD analyses. Those recoveries were not used to qualify samples collected from Orbis Products site.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

DATA ASSESSMENT

A) Method blank contamination:

None

B) Field or rinse blank contamination:

Not applicable

C) Trip blank contamination:

Not applicable

D) TCLP blank contamination:

Not applicable

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

All criteria were met.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥ .05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

DATA ASSESSMENT

VOC The following non-detects were rejected (R):
Acrolein and acrylonitrile S-71, S-74 through S-77, S-78A, S-78B, S-79A, S-79B, S-80 through S-82.

SVOC None

7. CALIBRATION:

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

For GC/MS analyses, the following criteria were used for data evaluation: Initial calibration –%RSDs <15; Continuing calibration - %D < 20 for all compounds.

VOC	"UJ"	chloroethane, trichlorofluoromethane	S-71, S-77, S-78A, S-78B, S-79A, S-79B, S-80 through S-82
	"UJ"	bromomethane, trichlorofluoromethane	S-75, S-76

SVOC

"UJ" N-Nitor-di-n-propylamine, hexachlorocyclopentadiene, benzidine S-70 through S-73, S-72A

For pesticides/PCB and herbicides analysis, the following criteria were used for data evaluation: Initial calibration –%RSDs <20; Continuing calibration - %D < 15 for all compounds.

PCB none

DATA ASSESSMENT

. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction.

No qualifications were required.

. COMPOUND IDENTIFICATION:

A) Volatile and Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

None required qualifications.

B) Pesticide Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

CB None.

DATA ASSESSMENT

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None

11. FIELD DOCUMENTATION:

None

12. OTHER PROBLEMS:

NJDEP reduced deliverables were submitted by the laboratory. As a result, the following information was not provided:

VOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

SVOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

PEST/PCB The retention time windows and calibration summary for surrogate compounds.

Dichlorobenzenes were analyzed as both volatile and semi-volatile compounds.

13. This package contains re-extractions, re-analyses or dilutions. Upon reviewing the QA results, the following Forms 1 are identified to be used.

VOC Use original data for sample S-74 with toluene result taken from the dilution analysis.

SVOC None

PCB None

DATA ASSESSMENT

DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

Lab Case No.: E01-4590 and E01-4591
LABORATORY: Integrated Analytical Laboratories (IAL)
SITE: Orbis Products

DATA ASSESSMENT

The following EPA Region II data validation SOPs were followed:

- **SOP No. HW-22, Revision, 2, June 2001, Validating Semi-volatile Organic Compounds by SW-846 Method 8270**
- **SOP No. HW-24, Revision 1, June 1999, Validating Volatile Organic Compounds by SW-846 Method 8260B**
- **SOP No. HW-23B (Revision 1.0), May 2002, Validating PCB Compounds by SW-846 Method 8082**

All data were found to be valid and acceptable except those analytes which have been rejected, "R" (unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

NOTE: Sample analyses were performed following SW-846 methods. The QC criteria established in the applicable methods were used to qualify samples results following the guidelines specified in the aforementioned SOPs.

Reviewer's Signature: Yunru Yang **Date:** 10/23/2002

Verified By: _____ **Date:**

DATA ASSESSMENT

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

All holding times were met.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

None was qualified.

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

None was qualified.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

DATA ASSESSMENT

A) Method blank contamination:

None

B) Field or rinse blank contamination:

Not applicable

C) Trip blank contamination:

None

D) TCLP blank contamination:

Not applicable

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

All criteria were met.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be $\geq$ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

DATA ASSESSMENT

VOC The non-detects of acrolein were rejected (R) for all samples.

SVOC None

7. CALIBRATION:

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

For GC/MS analyses, the following criteria were used for data evaluation: Initial calibration –%RSDs <15; Continuing calibration - %D < 20 for all compounds.

VOC None

SVOC

"UJ" N-Nitor-di-n-propylamine, benzoic acid, hexachlorocyclopentadiene, benzidine all samples

For pesticides/PCB and herbicides analysis, the following criteria were used for data evaluation: Initial calibration –%RSDs <20; Continuing calibration - %D < 15 for all compounds.

PEST/PCB none

DATA ASSESSMENT

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction.

No qualifications were required.

9. COMPOUND IDENTIFICATION:

A) Volatile and Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

None required qualifications.

B) Pesticide Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

PEST/PCB	S-94A "J"	DDT
	S-84A "JN"	DDD
	S-87 "J"	DDE

DATA ASSESSMENT

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None

11. FIELD DOCUMENTATION:

None

12. OTHER PROBLEMS:

NJDEP reduced deliverables were submitted by the laboratory. As a result, the following information was not provided:

VOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

SVOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

PEST/PCB The retention time windows and calibration summary for surrogate compounds.

Dichlorobenzenes were analyzed as both volatile and semi-volatile compounds.

13. This package contains re-extractions, re-analyses or dilutions. Upon reviewing the QA results, the following Forms 1 are identified to be used.

VOC Use original data for samples S-85, S-86A, and S-88 with toluene results taken from the dilution analysis.
Use original data for samples S-83A and S-83B with benzene results taken from the dilution analysis.
Use original data for sample S-84A with toluene and total xylene results taken from the dilution analysis.
Use original data for sample S-87 with tetrachloroethene result taken from the dilution analysis.

SVOC Use original data for sample S-94B with 1,2-diphenylhydrozine/azobenzene result taken from the dilution analysis.

PEST/PCB None

DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

Lab Case No.: E01-4833
LABORATORY: Integrated Analytical Laboratories (IAL)
SITE: Orbis Products

DATA ASSESSMENT

The following EPA Region II data validation SOPs were followed:

- **SOP No. HW-22, Revision, 2, June 2001, Validating Semi-volatile Organic Compounds by SW-846 Method 8270**
- **SOP No. HW-24, Revision 1, June 1999, Validating Volatile Organic Compounds by SW-846 Method 8260B**
- **SOP No. HW-23B (Revision 1.0), May 2002, Validating PCB Compounds by SW-846 Method 8082**

All data were found to be valid and acceptable except those analytes which have been rejected, "R" (unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

NOTE: Sample analyses were performed following SW-846 methods. The QC criteria established in the applicable methods were used to qualify samples results following the guidelines specified in the aforementioned SOPs.

Reviewer's Signature: Yunru Yang **Date:** 10/25/2002

Verified By: _____ **Date:**

DATA ASSESSMENT

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

All holding times were met.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

For sample S-108, DCB recoveries exceeded the control limits during the pesticide analysis. As a result, the detections of DDE, DDD, and DDT were qualified as estimate (J) for sample S-108.

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

With the exception of VOC analysis, samples from un-related sites were used for MS/MSD analyses. Those recoveries were not used to qualify samples collected from Orbis Products site. The MS/MSD recoveries from VOC analysis were within the control limits.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

DATA ASSESSMENT

A) Method blank contamination:

None

B) Field or rinse blank contamination:

Not applicable

C) Trip blank contamination:

Not applicable

D) TCLP blank contamination:

Not applicable

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

All criteria were met.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be ≥ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes

DATA ASSESSMENT

etected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

VOC "R" Acrolein and acrylonitrile S-95A, S-95B, S-96A, S-96B, S-97, S-98A, S-98B, S-99 through S-102, S-103A, S-103B, S-105 through S-110, S-111B, S-112, S-114A, TB

"R" Acrolein S-98ADL, S-98B, S-111A, S-113, S-114B, S-115 through S-117

SVOC None

7. CALIBRATION:

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

For GC/MS analyses, the following criteria were used for data evaluation: Initial calibration –%RSDs <15; Continuing calibration - %D < 20 for all compounds.

VOC "UJ" bromomethane, chloroethane S-98ADL, S-98B, S-111A, S-113, S-114B, S-115 through S-117

"UJ" trichloroethene S-117

SVOC

"UJ" hexachlorocyclopentadiene, 4-chlorophenyl-phenylether, 4-nitroaniline, 4-bromophenyl-phenylether, benzidine all samples requested for BN analysis

For pesticides/PCB and herbicides analysis, the following criteria were used for data evaluation: Initial alibration –%RSDs <20; Continuing calibration - %D < 15 for all compounds.

None was qualified for PEST/PCB analysis.

DATA ASSESSMENT

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction.

No qualifications were required.

9. COMPOUND IDENTIFICATION:

A) Volatile and Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

None required qualifications.

B) Pesticide Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

PCB	S-102 "J"	Arochlor-1254	S-104 "JN"	Arochlor-1254
	S-105 "R"	Arochlor-1254	S-106 "J"	Arochlor-1254
	S-108 "R"	Arochlor-1254		

DATA ASSESSMENT

ESTICIDES S-106 "J" DDE S-108 "JN" DDT

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None

11. FIELD DOCUMENTATION:

None

12. OTHER PROBLEMS:

NJDEP reduced deliverables were submitted by the laboratory. As a result, the following information was not provided:

VOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

SVOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

PEST/PCB The retention time windows and calibration summary for surrogate compounds.

Dichlorobenzenes were analyzed as both volatile and semi-volatile compounds.

Sample S-104 was not reported for VOC analysis because only methanol was received.

Aroclor-1254 pattern could not be recognized for sample S-102. The presence of Aroclor-1254 was qualified presumptive (N).

13. This package contains re-extractions, re-analyses or dilutions. Upon reviewing the QA results, the following Forms 1 are identified to be used.

VOC Use original data for sample S-98A with toluene result taken from 1:20 dilution analysis.

SVOC None

CB None

PESTICIDES Use original data for sample S-105 with DDD result taken from 1:100 dilution.

DATA ASSESSMENT

DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

Lab Case No.: E01-5281, E01-5690, E02-0533
LABORATORY: Integrated Analytical Laboratories (IAL)
SITE: Orbis Products

DATA ASSESSMENT

The following EPA Region II data validation SOPs were followed:

- **SOP No. HW-24, Revision 1, June 1999, Validating Volatile Organic Compounds by SW-846 Method 8260B**

All data were found to be valid and acceptable except those analytes which have been rejected, "R" (unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

NOTE: Sample analyses were performed following SW-846 methods. The QC criteria established in the applicable methods were used to qualify samples results following the guidelines specified in the aforementioned SOPs.

Reviewer's Signature: Yunru Yang **Date:** 10/27/2002

Verified By: _____ **Date:**

DATA ASSESSMENT

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

All holding times were met.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

All surrogate recoveries were within the control limits.

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

E01-5281	Samples from un-related sites were used for MS/MSD analyses. Those recoveries were not used to qualify samples collected from Orbis Products site.
E01-5690	MS/MSD recovery information was not available.
E02-0533	All recoveries were within control limits. No qualifications were applied.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

DATA ASSESSMENT

A) Method blank contamination:

None

B) Field or rinse blank contamination:

Not applicable

C) Trip blank contamination:

None

D) TCLP blank contamination:

Not applicable

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

All criteria were met.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be $\geq$ 0.05 in both initial and continuing calibrations. A value $<$ 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes

DATA ASSESSMENT

detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

E01-5281	"R"	Acrolein and acrylonitrile	all samples
E01-5690	"R"	Acrolein	all samples
E02-0533	"R"	Acrolein and acrylonitrile	all samples

7. CALIBRATION:

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

For GC/MS analyses, the following criteria were used for data evaluation: Initial calibration –%RSDs <15; Continuing calibration - %D < 20 for all compounds.

E01-5281	"UJ"	trichlorofluoromethane	S-119 through S-121, S-122A, S-123, S-124A, S-124B, S-125
	"UJ"	chloroethane, trichlorofluoromethane, 1,1,2,2-tetrachloroethane	S-126, S-127
E01-5690	"UJ"	bromomethane, chloroethane, bromoform	all samples
	"UJ"	trichlorofluoromethane, 1,1,1-trichloroethane, carbon tetrachloride, 1,2-dichloroethane	S-139ADL, S-139BDL
E02-0533	""UJ"	trichlorofluoromethane, carbon tetrachloride	S-140A, S-140B, S-141A, S-142A, S-142B, S-144A, S-144B, S-143A

DATA ASSESSMENT

. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction.

No qualifications were required.

. COMPOUND IDENTIFICATION:

A) Volatile and Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

None required qualifications.

B) Pesticide Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

Not applicable

DATA ASSESSMENT

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None

11. FIELD DOCUMENTATION:

None

12. OTHER PROBLEMS:

NJDEP reduced deliverables were submitted by the laboratory. As a result, the following information was not provided:

VOC — spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

13. This package contains re-extractions, re-analyses or dilutions. Upon reviewing the QA results, the following Forms 1 are identified to be used.

E01-5281

- Use original data for S-120 with chloroform, benzene, toluene, and 1,4-dichlorobenzene results taken from the dilution analysis.
- Use original data for S-124A and S-124B with benzene and toluene results taken from the dilution analysis.
- Use original data for S-128, and S-129 with toluene results taken from the dilution analysis.

E01-5690

- Use original data for S-139A with benzene and toluene results taken from the dilution analysis.
- Use original data for S-139B with benzene result taken from the dilution analysis.

E02-0533

- Use original data fro S-104A with chlorobenzene result taken from the dilution analysis.
- Use original data for S-142A and S-142B with benzene results taken from the dilution analysis.
- Use original data for S-143A with toluene result taken from the dilution analysis.

REFERENCE 21

ATTACHMENT B

DATA ASSESSMENT

Functional Guidelines for Evaluating Organic Analysis

Lab Case No.: E02-0893 and 0202014
LABORATORY: IAL (E02-0893) and VAL Associates Laboratory (0202014)
SITE: Orbis Products

DATA ASSESSMENT

The following EPA Region II data validation SOPs were followed:

- **SOP No. HW-22, Revision, 2, June 2001, Validating Semi-volatile Organic Compounds by SW-846 Method 8270**
- **SOP No. HW-24, Revision 1, June 1999, Validating Volatile Organic Compounds by SW-846 Method 8260B**

All data were found to be valid and acceptable except those analytes which have been rejected, "R" (unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material), "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

NOTE: Sample analyses were performed following SW-846 methods. The QC criteria established in the applicable methods were used to qualify samples results following the guidelines specified in the aforementioned SOPs.

Reviewer's Signature: Yunru Yang **Date:** 10/28/2002

Verified By: _____ **Date:**

DATA ASSESSMENT

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

All holding times were met.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

None was qualified.

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

None was qualified.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for common contaminants), the analytes are qualified as non-detects, "U". The following analytes in the sample shown were qualified with "U" for these reasons:

DATA ASSESSMENT

A) Method blank contamination:

None

B) Field or rinse blank contamination:

Not applicable

C) Trip blank contamination:

None

D) TCLP blank contamination:

Not applicable

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene and for semi-volatiles Decafluorotriphenyl-phosphine (DFTPP).

If the mass calibration is in error, all associated data will be classified as unusable "R".

All criteria were met.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be $\geq$ 0.05 in both initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected "R".

DATA ASSESSMENT

VOC None

SVOC "R" heptachlorocyclopentadiene, benzidine all samples

7. CALIBRATION:

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be < 30% and %D must be < 25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ". If %RSD and %D grossly exceed QC criteria, non-detects data may be qualified "R".

For the PEST/PCB fraction, if %RSD exceeds 20% for all analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

For GC/MS analyses, the following criteria were used for data evaluation: Initial calibration –%RSDs <35; Continuing calibration - %D < 20 for all compounds.

VOC None

SVOC "UJ" 4-chlorophenylphenylether, benzo(k)fluoranthene all samples

8. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

DATA ASSESSMENT

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgement to determine either partial or total rejection of the data for that sample fraction.

VOC none

SVOC

Field Blank	"UJ"	1,2-dichlorobenzene through benz(a)anthracene, bis(2-chloroethyl)ether through di-n-butylphthalate, diethylphthalate through hexachlorobenzene, hexachloroethane, N-nitrosodi-n-propylamine through N-nitrosodiphenylamine, phenanthrene, pyrene
	"R"	1,2,4-trichlorobenzene, bis(2-chloroethoxy)methane, hexachlorobutadiene, isophorone, naphthalene, nitrobenzene
MW-6	"UJ"	1,2,4-trichlorobenzene, 2,4-dinitrotoluene through benz(a)anthracene, bix(2-chloroethoxy)methane, bis(2-chloroethyl)ether, bis(2-ethylhexyl)phthalate through di-n-butylphthalate, diethylphthalate through hexachlorobutadiene, isophorone, N-nitrosodiphenylamine through pyrene
MW-9	"UJ"	1,2,4-trichlorobenzene through 1,4-dichlorobenzene, 3,3'-dichlorobenzidine, 4-bromophenylphenylether, anthracene, benz(a)anthracene, bis(2-chloroethoxy)methane through di-n-butylphthalate, fluoranthene, hexachlorobenzene, hexachlorobutadiene, hexachloroethane, iophorone through pyrene
	"R"	2,4-dinitrotoluene through 2-chloronaphthalene, 4-chlorophenylphenylether through acenaphthylene, diethylphthalate, dimethylphthalate, fluorine
MW-10	"UJ"	1,2-dichlorobenzene through 1,4-dichlorobenzene, 4-bromophenylphenylether, anthracene, bis(2-chloroethyl)ether, bis(2-chloroisopropyl)ether, di-n-butylphthalate, fluroanthene, hexachlorobenzene, hexachloroethane, N-nitrosodi-n-propylamine through N-nitrosodiphenylamine, phenanthrene, pyrene
	"R"	2,4-dinitrotoluene through 3,3'-dichlorobenzidine, 4-chlorophenylphenylether through acenaphthylene, benz(a)anthracene, bis(2-chloroethoxy)methane, bis(2-ethylhexyl)phthalate through chrysene, diethylphthalate, dimethylphthalate, fluorene, hexachlorobutadiene, isophorone, naphthalene, phenanthrene
MW-11	"UJ"	1,2-dichlorobenzene through benz(a)anthracene, bis(2-chloroethyl)ether through di-n-butylphthalate, diethylphthalate through hexachlorobenzene, hexachloroethane, N-nitrosodi-n-propylamine through N-nitrosodiphenylamine, phenanthrene, pyrene
	"R"	1,2,4-trichlorobenzene, bis(2-chloroethoxy)methane, hexachlorobutadiene, isophorone, naphthalene, nitrobenzene
MW-12	""UJ"	1,2-dichlorobenzene through 1,4-dichlorobenzene, 4-bromophenylphenylether, anthracene, benzo(a)pyrene through benzo(g,h,I)perylene, bis(2-chloroethyl)ether, bis(2-chloroisopropyl)ether, di-n-butylphthalate through dibenz(a,h)anthracene, fluoranthene, hexachlorobenzene, hexachloroethane, indeno(1,2,3-cd)pyrene, N-nitrosodi-n-propylamine through N-nitrosodiphenylamine, phenanthrene, pyrene

DATA ASSESSMENT

	"R"	1,2,4-trichlorobenzene, 2,4-dinitrotoluene through 3,3'-dichlorobenzidine, 4-chlorophenylphenylether through acenaphthylene, benz(a)anthracene, bis(2-chloroethoxy)methane, bis(2-ethylhexyl)phthalate through chrysene, diethylphthalate, dimethylphthalate, fluorene, hexachlorobutadiene, isophorone, naphthalene, nitrobenzene
MW-17	"UJ"	1,2-dichlorobenzene through 1,4-dichlorobenzene, 3,3'-dichlorobenzidine, 4-bromophenylphenylether, anthracene, benz(a)anthracene, bis(2-chloroethyl)ether through di-n-butylphthalate, fluoranthene, hexachlorobenzene, hexachloroethane, N-nitrosodi-n-propylamine through N-nitrosodiphenylamine, phenanthrene, pyrene
	"R"	1,2,4-trichlorobenzene, 2,4-dinitrotoluene through 2-chloronaphthalene, 4-chlorophenylphenylether through acenaphthylene, bis(2-chloroethoxy)methane, diethylphthalate, dimethylphthalate, fluorene, hexachlorobutadiene, isophorone, naphthalene, nitrobenzene

9. COMPOUND IDENTIFICATION:

A) Volatile and Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within ± 0.06 RRT units of the standard compound and have an ion spectra which has a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

VOC none

SVOC "R" MW-17 TIC Rt= 6.54

B) Pesticide Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

Not applicable

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None

DATA ASSESSMENT

11. FIELD DOCUMENTATION:

None

12. OTHER PROBLEMS:

NJDEP reduced deliverables were submitted by the laboratory. As a result, the following information was not provided:

VOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

SVOC spectrum of identified compounds, quantitation reports/chromatograms for standards, raw data for tuning compound.

Dichlorobenzenes were analyzed as both volatile and semi-volatile compounds.

TIC spectra submitted for BN analysis were not legible. Evaluation could not be performed.

13. This package contains re-extractions, re-analyses or dilutions. Upon reviewing the QA results, the following Forms 1 are identified to be used.

VOC Use original data for MW-17 with 1,2-dichloroethane result taken from the dilution analysis.

REFERENCE 22

PROJECT NOTE **REGION II SITE ASSESSMENT TEAM**

To: Orbis Products File **Date:** 7 March 2003 **Page:** 1 of 1

From: Scott Snyder

Subject: Population Within 4 Miles

The attachment to this note documents the resident population within 4 miles of the Orbis Products site. The information was accessed on 5 March 2003 from MABLE/Geocorr Geographic Correspondence Engine (Version 3.01). The search engine is provided by the U.S. Census Bureau. Population numbers are accessed by entering the geographic coordinates of the site in decimal degrees and specifying desired radii values.

Distance Ring (miles)	Population
0 - 0.25	1,117
0.25 - 0.50	7,414
0.50 - 1.0	15,962
1.0 - 2.0	76,484
2.0 - 3.0	147,931
3.0 - 4.0	173,834

Total = 422,742

Signature _____

Scott Snyder

WELCOME!
MABLE/Geocorr Geographic Correspondence Engine
Version 3.01

[OSEDA Mirror] | [SEDAC Mirror] | [CENSUS Mirror]

New "2K" Version With Access to 2000 Geography!

This application allows you to access the MABLE geographic data base and to generate custom "correlation lists" as reports and/or files.

Help | Examples | Usage Notes
Output Samples | New in V3 | Articles | Future

This form has 5 main sections. Only the first 2 are required.
Input | Output | Point & Distance | Bounding Box | Geographic Filter

Note: In most of the select-list boxes below you can make multiple selections. Some browsers require that you hold down the ctrl key while clicking before it will recognize multiple selections.

Input Options

Select state(s) to process. (Limit of 5 states on weekdays, 7 AM - 6 PM)
(Required Option)

- Random Pick
- ALABAMA
- ALASKA
- ARIZONA
- ARKANSAS
- CALIFORNIA
- COLORADO
- CONNECTICUT
- DELAWARE

For background information and help with any of the geographic codes used in the MABLE database (source/target geocodes) consult the file:
MAGGOT
(Master Area Geographic Glossary Of Terms)

Select "SOURCE" Geocode(s)	Select "TARGET" Geocode(s)

Entire Universe [no code]	Entire Universe [no code]
---	---
State (1990)	State (1990)
County (1990)	County (1990)
County Subdivision: MCD (1990)	County Subdivision: MCD (1990)
Place: City, Town, Village, etc. (1990)	Place: City, Town, Village, etc. (1990)
Census Tract/BNA (1990)	Census Tract/BNA (1990)
Census Block Group (1990)	Census Block Group (1990)
Census Block (1990) (+)	Census Block (1990) (+)
5-digit Postal ZIP Code (circa 7/1991)	5-digit Postal ZIP Code (circa 7/1991)
---	---
Concentric Ring Pseudo-Geocode (*)	Concentric Ring Pseudo-Geocode (*)
Hydrologic Unit Code: HUC (***)	Hydrologic Unit Code: HUC (***)
---	---
Urban-Rural Portion (1990)	Urban-Rural Portion (1990)
Metro Area: MSA or CMSA (1990)	Metro Area: MSA or CMSA (1990)
Primary MSA: PMSA (1990)	Primary MSA: PMSA (1990)
Urbanized Area: UA (1991)	Urbanized Area: UA (1991)
Congressional District: 102nd (1990)	Congressional District: 102nd (1990)
Congressional District: 103rd (1992)	Congressional District: 103rd (1992)
PUMA: Code A, 5% Sample (PUMS 1990)	PUMA: Code A, 5% Sample (PUMS 1990)

Notes:

+ If you chose census block then you may not choose more than 5 states.

* If you chose "Concentric Ring Pseudo-Geocode" from either list (above) then you **must** specify the "Point and Distance" **or** "Ring Geocode" options below.

** The 95 MSA and PMSA codes are not available in New England. NECMA95 codes are available *only* for New England.

*** Hydrologic Unit Codes are normally 8 digits, but you can specify keeping only the first 2, 4 or 6 (region, subregion and accounting units). These codes not available for Alaska and Hawaii.

- **Digits of Hydrological Unit Codes to keep:** ○ 2 ○ 4 ○ 6 ◉ 8

Weighting Variable:

Specify the weighting variable to use for determining the portion of the source geocodes corresponding to the target geocodes:

Population (1990 census)
Land Area (square km)
Housing Units (1990 census)

☐ Ignore Census Blocks with a value of 0 for the weighting variable.

Output Options

☐ Have weighted centroids calculated and kept on the output file(s)	☐ Generate 2nd allocation factor (AFACT2): portion of *target* geocodes in *source* geocodes	☑ Sort by target geocodes, then source geocodes (default is by source, then target)

You have your choice of 2 output formats: a comma-separated-value (".csv") file **and/or** a report format (".lst") file. For each file you can specify whether you want just the geographic codes, or the codes *and* the names associated with them (where applicable), or just the names.

Comma Separated Value File	Listing File
☐ Generate a CSV file	☑ Generate a listing file
Just Codes (No Names) Codes and Names Just Names (No Codes)	Just Codes (No Names) Codes and Names Just Names (No Codes)
☑ Use tabs (not commas) as delimiter	

● Process time for large areas may be several minutes.

Reset Defaults | Run Request

...following options further limit criteria set above

● Point-and-Distance Options

Specify a point (location) and distance to be used as filter:

Value for radius of Circle **or** radius of largest Ring: 4 (In miles, unless you check ☐ here to specify kilometers.)

(See just below for links to help find coordinates.)

Coordinates of Point: 40.6881388889 degrees latitude, 74.2026388889 degrees longitude.

Label of Point: Orbis Products (optional)

Define Ring criteria specifying only one of the following two options:

Either: ____ # of equi-distant rings (integer value between 1 and 10). Radius specified above will be divided by this to derive width of each Ring.

Or: Specify your own custom list of up to 10 ring radii values in ascending order (values must be greater than zero, may be fractional, and largest should equal the radius of the Circle specified above):

#1 .25 #2 .50 #3 1 #4 2 #5 3
#6 4 #7 #8 #9 #10

Links are provided here to facilitate obtaining coordinates for your location. See the HELP file for more detailed information.

- The ETAK Eagle geocoder site lets you enter a street address or street intersection. It displays the coordinates as well as a long list of geographic codes (and will also draw you a map of the area about the point.)
- To get the coordinates of any ZIP code or city use Chris Stuber's Gazetteer
- To view the region of interest try his Tiger Map Server page.
- An alternate site for street addresses or street intersections is the Yahoo Map Server (but you'll need to see the help to find lat-long coordinates).
- View county names on state level maps, check the Census Bureau's Map Stats

Note: If you specify a lat-long location the variable "distance" will be added to your output. This requires that weighted centroids also be calculated (set automatically). The "distance" variable will be between the weighted centroid and the specified Point. If you specify Ring Pseudo-Geocodes then distance and weighted centroid values will *not* be calculated or

Place codes. Enter 7-digit FIPS place codes with leading zeroes separated by blanks. You can enter 5-digit codes if only one state has been selected. Your output will be limited to the official city limits of these cities as of the 1990 census. Examples:

- 70520 70545 70550 53780 06020
  (Saginaw City, Saginaw Township North and South, Midland, Bay City, MI)

- Process time for large areas may be several minutes.

Reset Defaults | Run Request

| Top | SEDAC | OSEDA | FTP Archive | DDViewer | Credits | Comments and Suggestions |

Last Update: 11May2002

STATE CODE (FIPS)□"Ring Area"□"1990 POP"□"_us_ to ring alloc factor"
34□0.25□1117□0.003
34□0.5□7414□0.018
34□1□15962□0.038
34□2□76484□0.181
34□3□147931□0.35
34□4□173834□0.411

Distance Ring	Population
0.25	1117
0.5	7414
1	15962
2	76484
3	147931
4	173834

REFERENCE 23

United States
Environmental Protection
Agency

Office of Solid Waste and
Emergency Response
Washington, DC 20460

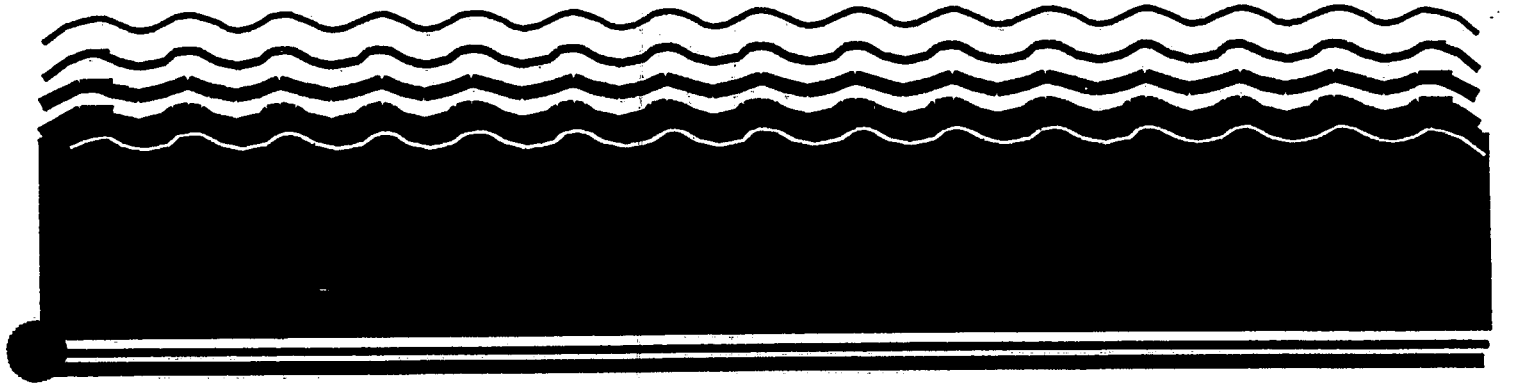
EPA/540/R95/128
May 1996

EPA

Superfund

Soil Screening Guidance: Technical Background Document

Second Edition



APPENDIX A

Generic SSLs

APPENDIX A

Generic SSLs

Table A-1 provides generic SSLs for 110 chemicals. Generic SSLs are derived using default values in the standardized equations presented in Part 2 of this document. The default values (listed in Table A-2) are conservative and are likely to be protective for the majority of site conditions across the nation.

However, the generic SSLs are not necessarily protective of all known human exposure pathways, reasonable land uses, or ecological threats. Thus, before applying generic SSLs at a site, it is extremely important to compare the conceptual site model (see the *User's Guide)* with the assumptions behind the SSLs to ensure that the site conditions and exposure pathways match those used to develop generic SSLs (see Parts 1 and 2 and Table A-2). If this comparison indicates that the site is more complex than the SSL scenario, or that there are significant exposure pathways **not** accounted for by the SSLs, then generic SSLs are not sufficient for a full evaluation of the site. A more detailed site-specific approach will be necessary to evaluate the additional pathways or site conditions.

Generic SSLs are presented separately for major pathways of concern in both surface and subsurface soils. The first column to the right of the chemical name presents levels based on direct ingestion of soil and the second column presents levels based on inhalation. As discussed in the *User's Guide*, the fugitive dust pathway may be of concern for certain metals but does not appear to be of concern for organic compounds. Therefore, SSLs for the fugitive dust pathway are only presented for inorganic compounds. Except for mercury, no SSLs for the inhalation of volatiles pathway are provided for inorganic compounds because these chemicals are not volatile.

The user should note that several of the generic SSLs for the inhalation of volatiles pathway are determined by the soil saturation concentration (C_{sat}), which is used to address and screen the potential presence of nonaqueous phase liquids (NAPLs). As explained in Section 2.4.4, for compounds that are liquid at ambient soil temperature, concentrations above C_{sat} indicate a potential for free-phase liquid contamination to be present and the need for additional investigation.

The third column presents generic SSL values for the migration to ground water pathway developed using a default DAF (dilution-attenuation factor) of 20 to account for natural processes that reduce contaminant concentrations in the subsurface (see Section 2.5.6). SSLs in Table A-1 are rounded to two significant figures except for values less than 10, which are rounded to one significant figure. Note that the 20 DAF values in Table A-1 are not exactly 20 times the 1 DAF values because each SSL is calculated independently in both the 20 DAF and 1 DAF columns, with the final value presented according to the aforementioned rounding conventions.

The fourth column contains the generic SSLs for the migration to ground water pathway developed assuming no dilution or attenuation between the source and the receptor well (i.e., a DAF of 1). These values can be used at sites where little or no dilution or attenuation of soil leachate concentrations is expected at a site (e.g., sites with shallow water tables, fractured media, karst topography, or source size greater than 30 acres).

Generally, if an SSL is not exceeded for a pathway of concern, the user may eliminate the pathway or areas of the site from further investigation. If more than one exposure pathway is of concern, the lowest SSL should be used.

Table A-1. Generic SSLs [a]

Organics				Migration to ground water	
CAS No.	Compound	Ingestion (mg/kg)	Inhalation volatiles (mg/kg)	20 DAF (mg/kg)	1 DAF (mg/kg)
83-32-9	Acenaphthene	4,700 [b]	— [c]	570 [b]	29 [b]
67-64-1	Acetone	7,800 [b]	1.0E+05 [d]	16 [b]	0.8 [b]
309-00-2	Aldrin	0.04 [e]	3 [e]	0.5 [e]	0.02 [e]
120-12-7	Anthracene	23,000 [b]	— [c]	12,000 [b]	590 [b]
56-55-3	Benz(*a*)anthracene	0.9 [e]	— [c]	2 [e]	0.08 [e,f]
71-43-2	Benzene	22 [e]	0.8 [e]	0.03	0.002 [f]
205-99-2	Benzo(*b*)fluoranthene	0.9 [e]	— [c]	5 [e]	0.2 [e,f]
207-08-9	Benzo(*k*)fluoranthene	9 [e]	— [c]	49 [e]	2 [e]
65-85-0	Benzoic acid	3.1E+05 [b]	— [c]	400 [b,i]	20 [b,i]
50-32-8	Benzo(*a*)pyrene	0.09 [e,f]	— [c]	8	0.4
111-44-4	Bis(2-chloroethyl)ether	0.6 [e]	0.2 [e,f]	0.0004 [e,f]	2E-05 [e,f]
117-81-7	Bis(2-ethylhexyl)phthalate	46 [e]	31,000 [d]	3,600	180
75-27-4	Bromodichloromethane	10 [e]	3,000 [d]	0.6	0.03
75-25-2	Bromoform	81 [e]	53 [e]	0.8	0.04
71-36-3	Butanol	7,800 [b]	10,000 [d]	17 [b]	0.9 [b]
85-68-7	Butyl benzyl phthalate	16,000 [b]	930 [d]	930 [d]	810 [b]
86-74-8	Carbazole	32 [e]	— [c]	0.6 [e]	0.03 [e,f]
75-15-0	Carbon disulfide	7,800 [b]	720 [d]	32 [b]	2 [b]
56-23-5	Carbon tetrachloride	5 [e]	0.3 [e]	0.07	0.003 [f]
57-74-9	Chlordane	0.5 [e]	20 [e]	10	0.5
106-47-8	*p*-Chloroaniline	310 [b]	— [c]	0.7 [b]	0.03 [b,f]
108-90-7	Chlorobenzene	1,600 [b]	130 [b]	1	0.07
124-48-1	Chlorodibromomethane	8 [e]	1,300 [d]	0.4	0.02
67-66-3	Chloroform	100 [e]	0.3 [e]	0.6	0.03
95-57-8	2-Chlorophenol	390 [b]	53,000 [d]	4 [b,i]	0.2 [b,f,i]
218-01-9	Chrysene	88 [e]	— [c]	160 [e]	8 [e]
72-54-8	DDD	3 [e]	— [c]	16 [e]	0.8 [e]
72-55-9	DDE	2 [e]	— [c]	54 [e]	3 [e]
50-29-3	DDT	2 [e]	— [g]	32 [e]	2 [e]
53-70-3	Dibenz(*a,h*)anthracene	0.09 [e,f]	— [c]	2 [e]	0.08 [e,f]
84-74-2	Di-*n*-butyl phthalate	7,800 [b]	2,300 [d]	2,300 [d]	270 [b]
95-50-1	1,2-Dichlorobenzene	7,000 [b]	560 [d]	17	0.9
106-46-7	1,4-Dichlorobenzene	27 [e]	— [g]	2	0.1 [f]
91-94-1	3,3-Dichlorobenzidine	1 [e]	— [c]	0.007 [e,f]	0.0003 [e,f]
75-34-3	1,1-Dichloroethane	7,800 [b]	1,300 [b]	23 [b]	1 [b]
107-06-2	1,2-Dichloroethane	7 [e]	0.4 [e]	0.02	0.001 [f]
75-35-4	1,1-Dichloroethylene	1 [e]	0.07 [e]	0.06	0.003 [f]
156-59-2	*cis*-1,2-Dichloroethylene	780 [b]	1,200 [d]	0.4	0.02
156-60-5	*trans*-1,2-Dichloroethylene	1,600 [b]	3,100 [d]	0.7	0.03
120-83-2	2,4-Dichlorophenol	230 [b]	— [c]	1 [b,i]	0.05 [b,f,i]

Table A-1 (continued)

Organics				Migration to ground water	
CAS No.	Compound	Ingestion (mg/kg)	Inhalation volatiles (mg/kg)	20 DAF (mg/kg)	1 DAF (mg/kg)
78-87-5	1,2-Dichloropropane	9 [e]	15 [b]	0.03	0.001 [f]
542-75-6	1,3-Dichloropropene	4 [e]	0.1 [e]	0.004 [e]	0.0002 [e]
60-57-1	Dieldrin	0.04 [e]	1 [e]	0.004 [e]	0.0002 [e,f]
84-66-2	Diethylphthalate	63,000 [b]	2,000 [d]	470 [b]	23 [b]
105-67-9	2,4-Dimethylphenol	1,600 [b]	--- [c]	9 [b]	0.4 [b]
51-28-5	2,4-Dinitrophenol	160 [b]	--- [c]	0.3 [b,f,j]	0.01 [b,f,j]
121-14-2	2,4-Dinitrotoluene	0.9 [e]	--- [c]	0.0008 [e,f]	4E-05 [e,f]
606-20-2	2,6-Dinitrotoluene	0.9 [e]	--- [c]	0.0007 [e,f]	3E-05 [e,f]
117-84-0	Di-*n*-octyl phthalate	1,600 [b]	10,000 [d]	10,000 [d]	10,000 [d]
115-29-7	Endosulfan	470 [b]	--- [c]	18 [b]	0.9 [b]
72-20-8	Endrin	23 [b]	--- [c]	1	0.05
100-41-4	Ethylbenzene	7,800 [b]	400 [d]	13	0.7
206-44-0	Fluoranthene	3,100 [b]	--- [c]	4,300 [b]	210 [b]
86-73-7	Fluorene	3,100 [b]	--- [c]	560 [b]	28 [b]
76-44-8	Heptachlor	0.1 [e]	0.1 [e]	23	1
1024-57-3	Heptachlor epoxide	0.07 [e]	5 [e]	0.7	0.03
118-74-1	Hexachlorobenzene	0.4 [e]	1 [e]	2	0.1 [f]
87-68-3	Hexachloro-1,3-butadiene	8 [e]	8 [e]	2	0.1 [f]
319-84-6	α-HCH (α-BHC)	0.1 [e]	0.8 [e]	0.0005 [e,f]	3E-05 [e,f]
319-85-7	β-HCH (β-BHC)	0.4 [e]	--- [g]	0.003 [e]	0.0001 [e,f]
58-89-9	γ-HCH (Lindane)	0.5 [e]	--- [c]	0.009	0.0005 [f]
77-47-4	Hexachlorocyclopentadiene	550 [b]	10 [b]	400	20
67-72-1	Hexachloroethane	46 [e]	55 [e]	0.5 [e]	0.02 [e,f]
193-39-5	Indeno(1,2,3-*cd*)pyrene	0.9 [e]	--- [c]	14 [e]	0.7 [e]
78-59-1	Isophorone	670 [e]	4,600 [d]	0.5 [e]	0.03 [e,f]
7439-97-6	Mercury	23 [b,l]	10 [b,i]	2 [i]	0.1 [i]
72-43-5	Methoxychlor	390 [b]	--- [c]	160	8
74-83-9	Methyl bromide	110 [b]	10 [b]	0.2 [b]	0.01 [b,f]
75-09-2	Methylene chloride	85 [e]	13 [e]	0.02 [e]	0.001 [e,f]
95-48-7	2-Methylphenol	3,900 [b]	--- [c]	15 [b]	0.8 [b]
91-20-3	Naphthalene	3,100 [b]	--- [c]	84 [b]	4 [b]
98-95-3	Nitrobenzene	39 [b]	92 [b]	0.1 [b,f]	0.007 [b,f]
86-30-6	*N*-Nitrosodiphenylamine	130 [e]	--- [c]	1 [e]	0.06 [e,f]
621-64-7	*N*-Nitrosodi-*n*-propylamine	0.09 [e,f]	--- [c]	5E-05 [e,f]	2E-06 [e,f]
1336-36-3	PCBs	1 [h]	--- [h]	--- [h]	--- [h]
87-86-5	Pentachlorophenol	3 [e,j]	--- [c]	0.03 [f,i]	0.001 [f,i]
108-95-2	Phenol	47,000 [b]	--- [c]	100 [b]	5 [b]
129-00-0	Pyrene	2,300 [b]	--- [c]	4,200 [b]	210 [b]
100-42-5	Styrene	16,000 [b]	1,500 [d]	4	0.2
79-34-5	1,1,2,2-Tetrachloroethane	3 [e]	0.6 [e]	0.003 [e,f]	0.0002 [e,f]

Table A-1 (continued)

Organics CAS No.	Compound	Ingestion (mg/kg)	Inhalation volatiles (mg/kg)	Migration to ground water 20 DAF (mg/kg)	Migration to ground water 1 DAF (mg/kg)
127-18-4	Tetrachloroethylene	12 [e]	11 [e]	0.06	0.003 [f]
108-88-3	Toluene	16,000 [b]	650 [d]	12	0.6
8001-35-2	Toxaphene	0.6 [e]	89 [e]	31	2
120-82-1	1,2,4-Trichlorobenzene	780 [b]	3,200 [d]	5	0.3 [f]
71-55-6	1,1,1-Trichloroethane	— [c]	1,200 [d]	2	0.1
79-00-5	1,1,2-Trichloroethane	11 [e]	1 [e]	0.02	0.0009 [f]
79-01-6	Trichloroethylene	58 [e]	5 [e]	0.06	0.003 [f]
95-95-4	2,4,5-Trichlorophenol	7,800 [b]	— [c]	270 [b,i]	14 [b,i]
88-06-2	2,4,6-Trichlorophenol	58 [e]	200 [e]	0.2 [e,f,i]	0.008 [e,f,i]
108-05-4	Vinyl acetate	78,000 [b]	1,000 [b]	170 [b]	8 [b]
75-01-4	Vinyl chloride	0.3 [e]	0.03 [e]	0.01 [f]	0.0007 [f]
108-38-3	*m*-Xylene	1.6E+05 [b]	420 [d]	210	10
95-47-6	*o*-Xylene	1.6E+05 [b]	410 [d]	190	9
106-42-3	*p*-Xylene	1.6E+05 [b]	460 [d]	200	10

REFERENCE 24

United States Environmental Protection Agency
Office of Water 4304
EPA 822-B-00-001 Summer 2000

EPA

Drinking Water Standards and Health Advisories

DRINKING WATER STANDARDS

AND HEALTH ADVISORIES

Office of Water
U.S. Environmental Protection Agency
Washington, D.C.

Summer 2000

Recycled/Recyclable
Printed on paper that contains
at least 50% recycled fiber.

The *Drinking Water Standards and Health Advisories* tables are revised periodically by EPA's Office of Water on an "as needed" basis. This Summer 2000 edition of the tables has undergone rather extensive revisions in format and content. The changes are as follows:

The tables are in PDF format to facilitate their printing from the internet.

The Health Advisory status column includes the year of publication for the final or draft Health Advisory. Final Health Advisories have been externally peer reviewed; draft documents have not.

Reference dose (RfD) values have been updated to reflect the values in the Integrated Risk Information System (IRIS), and the Drinking Water Equivalent Level (DWEL) has been calculated accordingly. Thus, both the RfD and DWEL will differ from the values in the Health Advisory document if the IRIS value is more recent than the Health Advisory. The RfD values from IRIS that differ from the values in the Health Advisory documents are in **BOLD** type to distinguish them from the other values. For chemicals with a new IRIS RfD, the lifetime Health Advisory was calculated from the DWEL using the relative source contribution values published in the Health Advisory. Where the revised lifetime value differed from the Maximum Contaminant Level Goal (MCLG), no lifetime value was provided in the Table.

For regulated chemicals, the cancer group designation reflects the status at the time of regulation.

Several pesticides listed in IRIS have been re-evaluated by the Office of Pesticide Programs (OPP) resulting in an RfD other than that in IRIS. For these pesticides, the IRIS value is listed in the Table, and the newer OPP value is given in a footnote.

The longer term Health Advisory values for children and adults were deleted from the table. A large number of these values should be reevaluated in the light of new data. However, due to resource limitations at this time, the Office of Science and Technology (OST) has not been able to update the longer term values.

In some cases there is a Health Advisory value for a contaminant but there is no reference to a Health Advisory document. These Health Advisory values can be found in the Drinking Water Criteria Document for the contaminant.

With a few exceptions, the Health Advisory values have been rounded to one significant figure.

The *Drinking Water Standards and Health Advisories* tables may be reached from the Office of Science and Technology home page at

http://www.epa.gov/OST

The tables are accessed under the OST Programs heading on the OST Home Page.

Although no permanent mailing list is kept, copies may be ordered free of charge from

SAFE DRINKING WATER HOTLINE
1-800-426-4791
Monday thru Friday, 9:00 AM to 5:30 PM EST

Copies of the supporting technical documentation for the health advisories can be ordered for a fee on the Internet at

http://www.epa.gov/OST/orderpubs.html

or from

Educational Resource Information Center (ERIC)
1929 Kenny Road
Columbus, OH 43210-1080
Telephone number 614-292-6717; 1-800-276-0462
FAX 614-292-0263
e-mail ERICSE@osu.edu
Payment by Purchase Order/Check/Visa or Mastercard.

For further information regarding the *Drinking Water Standards and Health Advisories*, call the Safe Drinking Water Hotline at 1-800-426-4791 or 703-285-1093.

DEFINITIONS

The following definitions for terms used in the Tables are not all-encompassing, and should not be construed to be "official" definitions. They are intended to assist the user in understanding terms found on the following pages.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. For lead or copper it is the level which, if exceeded in over 10% of the homes tested, triggers treatment.

Cancer Group: A qualitative weight-of-evidence judgement as to the likelihood that a chemical may be a carcinogen for humans. Each chemical is placed into one of the following five categories:

Group	Category
A	Human carcinogen
B	Probable human carcinogen: B1 indicates limited human evidence; B2 indicates sufficient evidence in animals and inadequate or no evidence in humans
C	Possible human carcinogen
D	Not classifiable as to human carcinogenicity
E	Evidence of noncarcinogenicity for humans

This categorization is based on EPA's 1986 *Guidelines for Carcinogen Risk Assessment.* The *Proposed Guidelines for Carcinogen Risk Assessment* which were published in 1996, when final, will replace the 1986 cancer guidelines.

10^{-4} Cancer Risk: The concentration of a chemical in drinking water corresponding to an estimated lifetime cancer risk of 1 in 10,000.

DWEL: Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from drinking water.

HA: Health Advisory. An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, state, and local officials.

One-day HA: The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for up to one day of exposure.

Ten-day HA: The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for up to ten days of exposure.

Lifetime HA: The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for a lifetime of exposure.

LED_{10}: Lower Limit on Effective $Dose_{10}$. The 95% lower confidence limit of the dose of a chemical needed to produce an adverse effect in 10% of those exposed to the chemical, relative to the control.

MCLG: Maximum Contaminant Level Goal. A non-enforceable health goal which is set at a level at which no known or anticipated adverse effect on the health of persons occur and which allows an adequate margin of safety.

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

RfD: Reference Dose. An estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

SDWR: Secondary Drinking Water Regulations. Non-enforceable Federal guidelines regarding cosmetic effects (such as tooth or skin discoloration) or aesthetic effects (such as taste, odor, or color) of drinking water.

TT: Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.

ABBREVIATIONS

D	Draft
F	Final
NA	Not Applicable
NOAEL	No-Observed-Adverse-Effect-Level
OPP	Office of Pesticide Programs
P	Proposed
Reg	Regulation
TT	Treatment Technique

Chemicals	Standards			Status HA Document	Health Advisories						Cancer Group
					10-kg Child						
	Status Reg.	MCLG (mg/L)	MCL (mg/L)		One-day (mg/L)	Ten-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Lifetime (mg/L)	mg/L at 10^{-4} Cancer Risk	
ORGANICS											
Acenaphthene	-	-	-	-	-	-	0.06	2	-	-	-
Acifluorfen (sodium)		-	-	F '88	2	2	0.01	0.4	-	0.1	B2
Acrylamide	F	zero	TT[1]	F '87	1.5	0.3	0.0002	0.007	-	0.001	B2
Acrylonitrile		-	-	-	-	-	-	-	-	0.006	B1
Alachlor	F	zero	0.002	F '88	0.1	0.1	0.01	0.4	-	0.04[2]	B2
Aldicarb[3]	F[4]	0.007	0.007	F '95	0.01	0.01	0.001	0.04	0.007	-	D
Aldicarb sulfone[3]	F[4]	0.007	0.007	F '95	0.01	0.01	0.001	0.04	0.007	-	D
Aldicarb sulfoxide[3]	F[4]	0.007	0.007	F '95	0.01	0.01	0.001	0.04	0.007	-	D
Aldrin	-	-	-	F '92	0.0003	0.0003	0.00003	0.001	-	0.0002	B2
Ametryn	-	-	-	F '88	9	9	0.009	0.3	0.06	-	D
Ammonium sulfamate	-	-	-	F '88	20	20	0.2	8	2	-	D
Anthracene (PAH)[5]	-	-	-	-	-	-	0.3	10	-	-	D
Atrazine[6]	F	0.003	0.003	F '88	-	-	0.035	1	0.2	-	C
Baygon	-	-	-	F '88	0.04	0.04	0.004	0.1	0.003	-	C
Bentazon	-	-	-	F '99	0.3	0.3	0.03	1	0.2	-	E
Benz[a]anthracene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
Benzene	F	zero	0.005	F '87	0.2	0.2	-	-	-	0.1	A
Benzo[a]pyrene (PAH)	F	zero	0.0002	-	-	-	-	-	-	0.002	B2
Benzo[b]fluoranthene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
Benzo[g,h,i]perylene (PAH)	-	-	-	-	-	-	-	-	-	-	D
Benzo[k]fluoranthene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
bis-2-Chloroisopropyl ether	-	-	-	F '89	4	4	0.04	1	0.3	-	D
Bromacil	-	-	-	F '88	5	5	0.1	5	0.09	-	C
Bromobenzene	-	-	-	D '86	4	4	-	-	-	-	D

[1] When acrylamide is used in drinking water systems, the combination (or product) of dose and monomer level shall not exceed that equivalent to a polyacrylamide polymer containing 0.05% monomer dosed at 1 mg/L.

[2] Determined not to be carcinogenic at low doses by OPP.

[3] The lifetime HA value or the MCLG/MCL value for any combination of two or more of these three chemicals should remain at 0.007 mg/L because of similar mode of action.

[4] Administrative stay of the effective date.

[5] PAH = Polycyclic aromatic hydrocarbon

[6] Under review

Drinking Water Standards and Health Advisories

Chemicals	Standards			Status HA Document	Health Advisories						Cancer Group
					10-kg Child						
	Status Reg.	MCLG (mg/L)	MCL (mg/L)		One-day (mg/L)	Ten-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Lifetime (mg/L)	mg/L at 10^{-4} Cancer Risk	
Bromochloromethane	-	-	-	F '89	50	1	0.01	0.5	0.09	-	D
Bromodichloromethane (THM)	F	zero	0.08[1]	D '93	6	6	0.02	0.7	-	0.06	B2
Bromoform (THM)	F	zero	0.08[1]	D '93	5	2	0.02	0.7	-	0.4	B2
Bromomethane	-	-	-	D '89	0.1	0.1	0.001	0.05	0.01	-	D
Butyl benzyl phthalate (PAE) [2]	-	-	-	-	-	-	0.2	7	-	-	C
Butylate	-	-	-	F '89	2	2	0.05	2	0.4	-	D
Carbaryl	-	-	-	F '88	1	1	0.1	4	0.7	-	D
Carbofuran[3]	F	0.04	0.04	F '87	0.05	0.05	0.005	0.2	0.04	-	E
Carbon tetrachloride	F	zero	0.005	F '87	4	0.2	0.0007	0.03	-	0.03	B2
Carboxin	-	-	-	F '88	1	1	0.1	4	0.7	-	D
Chloramben	-	-	-	F '88	3	3	0.015	0.5	0.1	-	D
Chlordane	F	zero	0.002	F '87	0.06	0.06	0.0005	0.02	-	0.001	B2
Chloroform (THM)	F	zero	0.08[1]	D '93	4	4	0.01	0.4	-	0.6	B2
Chloromethane	-	-	-	F '89	9	0.4	0.004	0.1	0.003	-	C
Chlorophenol (2-)	-	-	-	D '94	0.5	0.5	0.005	0.2	0.04	-	D
p-Chlorophenyl methyl sulfide/sulfone/sulfoxide	-	-	-	-	-	-	-	-	-	-	D
Chlorothalonil	-	-	-	F '88	0.2	0.2	0.015	0.5	-	0.15	B2
Chlorotoluene o-	-	-	-	F '89	2	2	0.02	0.7	0.1	-	D
Chlorotoluene p-	-	-	-	F '89	2	2	0.02	0.7	0.1	-	D
Chlorpyrifos	-	-	-	F '92	0.03	0.03	0.003	0.1	0.02	-	D
Chrysene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
Cyanazine	-	-	-	D '96	0.1	0.1	0.002	0.07	0.001	-	-

[1] 1998 Final Rule for Disinfectants and Disinfection By-products: The total for trihalomethanes is 0.08 mg/L.

[2] PAE = phthalate acid ester

[3] Under review

Chemicals	Standards			Status HA Document	Health Advisories						Cancer Group
					10-kg Child						
	Status Reg.	MCLG (mg/L)	MCL (mg/L)		One-day (mg/L)	Ten-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Lifetime (mg/L)	mg/L at 10^{-4} Cancer Risk	
Cyanogen chloride[1]	-	-	-	-	0.05	0.05	0.05	2	-	-	D
2,4-D (2,4-dichlorophenoxyacetic acid)	F	0.07	0.07	F '87	1	0.3	0.01	0.4	0.07	-	D
DCPA (Dacthal)	-	-	-	F '88	80	80	**0.01**	0.4	0.07	-	D
Dalapon (sodium salt)	F	0.2	0.2	F '89	3	3	0.03	0.9	0.2	-	D
Di(2-ethylhexyl)adipate	F	0.4	0.4	-	20	20	0.6	20	0.4	3	C
Di(2-ethylhexyl)phthalate (PAE)	F	zero	0.006	-	-	-	0.02	0.7	-	0.3	B2
Diazinon	-	-	-	F '88	0.02	0.02	0.00009	0.003	0.0006	-	E
Dibromochloromomethane (THM)	F	0.06	0.08[2]	D '93	6	6	0.02	0.7	0.06	0.04	C
Dibromochloropropane (DBCP)	F	zero	0.0002	F '87	0.2	0.05	-	-	-	0.003	B2
Dibutyl phthalate (PAE)	-	-	-	-	-	-	0.1	4	-	-	D
Dicamba	-	-	-	F '88	0.3	0.3	0.03	1	0.2	-	D
Dichloroacetic acid	F	zero	0.06[3]	D '93	5	5	0.004	0.1	-	-[4]	B2
Dichlorobenzene o-	F	0.6	0.6	F '87	9	9	0.09	3	0.6	-	D
Dichlorobenzene m-[5]	-	-	-	F '87	9	9	0.09	3	0.6	-	D
Dichlorobenzene p-	F	0.075	0.075	F '87	11	11	0.1	4	0.075	-	C
Dichlorodifluoromethane	-	-	-	F '89	40	40	0.2	5	1	-	D
Dichloroethylene (1,1-)	F	0.007	0.007	F '87	2	1	0.01	0.4	0.007	-	C
Dichloroethane (1,2-)	F	zero	0.005	F '87	0.7	0.7	-	-	-	0.04	B2
Dichloroethylene (cis-1,2-)	F	0.07	0.07	F '90	4	1	0.01	0.4	0.07	-	D
Dichloroethylene (trans-1,2-)	F	0.1	0.1	F '87	20	1	**0.02**	0.7	0.1	-	D
Dichloromethane	F	zero	0.005	D '93	10	2	0.06	2	-	0.5	B2
Dichlorophenol (2,4-)	-	-	-	D '94	0.03	0.03	0.003	0.1	0.02	-	E
Dichloropropane (1,2-)	F	zero	0.005	F '87	-	0.09	-	-	-	0.06	B2
Dichloropropene (1,3-)	-	-	-	F '88	0.03	0.03	**0.03**	1	-	**0.04**	B2
Dieldrin	-	-	-	F '88	0.0005	0.0005	0.00005	0.002	-	0.0002	B2
Diethyl phthalate (PAE)	-	-	-	-	-	-	0.8	30	-	-	D

[1] Under review
[2] 1998 Final Rule for Disinfectants and Disinfection By-products: The total for trihalomethanes is 0.08 mg/L.
[3] 1998 Final Rule for Disinfectants and Disinfection By-products: The total for five haloacetic acids is 0.06 mg/L.
[4] A quantitative risk estimate has not been determined.
[5] The values for m-dichlorobenzene are based on data for o-dichlorobenzene.

Drinking Water Standards and Health Advisories

Chemicals	Standards			Status HA Document	Health Advisories						Cancer Group
					10-kg Child						
	Status Reg.	MCLG (mg/L)	MCL (mg/L)		One-day (mg/L)	Ten-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Lifetime (mg/L)	mg/L at 10^{-4} Cancer Risk	
Diisopropyl methylphosphonate	-	-	-	F '89	8	8	0.08	3	0.6	-	D
Dimethrin	-	-	-	F '88	10	10	0.3	10	2	-	D
Dimethyl methylphosphonate	-	-	-	F '92	2	2	0.2	7	0.1	0.7	C
Dimethyl phthalate (PAE)	-	-	-	-	-	-	-	-	-	-	D
Dinitrobenzene (1,3-)	-	-	-	F '91	0.04	0.04	0.0001	0.005	0.001	-	D
Dinitrotoluene (2,4-)	-	-	-	F '92	0.50	0.50	0.002	0.1	-	0.005	B2
Dinitrotoluene (2,6-)	-	-	-	F '92	0.40	0.40	0.001	0.04	-	0.005	B2
Dinitrotoluene (2,6 & 2,4) [1]	-	-	-	F '92	-	-	-	-	-	0.005	B2
Dinoseb	F	0.007	0.007	F '88	0.3	0.3	0.001	0.04	0.007	-	D
Dioxane p-	-	-	-	F '87	4	0.4	-	-	-	0.3	B2
Diphenamid	-	-	-	F '88	0.3	0.3	0.03	1	0.2	-	D
Diquat	F	0.02	0.02	-	-	-	0.002	0.07	-	-	D
Disulfoton	-	-	-	F '88	0.01	0.01	0.00004	0.001	0.0003	-	E
Dithiane (1,4-)	-	-	-	F '92	0.4	0.4	0.01	0.4	0.08	-	D
Diuron	-	-	-	F '88	1	1	0.002[2]	0.07	0.01	-	D
Endothall	F	0.1	0.1	F '88	0.8	0.8	0.02	0.7	0.1	-	D
Endrin	F	0.002	0.002	F '87	0.02	0.005	0.0003	0.01	0.002	-	D
Epichlorohydrin	F	zero	TT[3]	F '87	0.1	0.1	0.002	0.07	-	0.4	B2
Ethylbenzene	F	0.7	0.7	F '87	30	3	0.1	3	0.7	-	D
Ethylene dibromide (EDB)[4]	F	zero	0.00005	F '87	0.008	0.008	-	-	-	0.00005	B2
Ethylene glycol	-	-	-	F '87	20	6	2	70	14	-	D
Ethylene Thiourea (ETU)	-	-	-	F '88	0.3	0.3	0.00008	0.003	-	0.02	B2
Fenamiphos	-	-	-	F '88	0.009	0.009	0.00025	0.009	0.002	-	D

[1] technical grade.
[2] New OPP RfD = 0.003 mg/kg/day.
[3] When epichlorohydrin is used in drinking water systems, the combination (or product) of dose and monomer level shall not exceed that equivalent to an epichlorohydrin-based polymer containing 0.01% monomer dosed at 20 mg/L.
[4] 1,2-dibromomethane

Chemicals	Standards			Status HA Standards	Health Advisories						Cancer Group
					10-kg Child						
	Status Reg.	MCLG (mg/L)	MCL (mg/L)		One-day (mg/L)	Ten-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Lifetime (mg/L)	mg/L at 10^{-4} Cancer Risk	
Fluometuron	-	-	-	F '88	2	2	0.01	0.5	0.09		D
Fluorene (PAH)	-	-	-	-	-	-	0.04	1	-	-	D
Fonofos	-	-	-	F '88	0.02	0.02	0.002	0.07	0.01	-	D
Formaldehyde	-	-	-	D '93	10	5	0.15	5	1	-	B1[1]
Glyphosate	F	0.7	0.7	F '88	20	20	0.1[2]	4	0.7	-	D
Heptachlor	F	zero	0.0004	F '87	0.01	0.01	0.0005	0.02	-	0.0008	B2
Heptachlor epoxide	F	zero	0.0002	F '87	0.01	-	0.00001	0.0004	-	0.0004	B2
Hexachlorobenzene	F	zero	0.001	F '87	0.05	0.05	0.0008	0.03	-	0.002	B2
Hexachlorobutadiene	-	-	-	F '89	0.3	0.3	0.002	0.07	0.001	0.05	C
Hexachlorocyclopentadiene	F	0.05	0.05	-	-	-	0.007	0.2	-	-	D
Hexachloroethane	-	-	-	F '91	5	5	0.001	0.04	0.001	-	C
Hexane (n-)	-	-	-	F '87	10	4	-	-	-	-	D
Hexazinone	-	-	-	F '96	3	2	0.05[3]	2	0.4	-	D
HMX[4]	-	-	-	F '88	5	5	0.05	2	0.4	-	D
Indeno[1,2,3,-c,d]pyrene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
Isophorone	-	-	-	F '92	15	15	0.2	7	0.1	4	C
Isopropyl methylphosphonate	-	-	-	F '92	30	30	0.1	4	0.7	-	D
Isopropylbenzene (cumene)	-	-	-	D '87	11	11	0.1	4	-	-	D
Lindane[5]	F	0.0002	0.0002	F '87	1	1	0.0003	0.01	0.0002	-	C
Malathion	-	-	-	F '92	0.2	0.2	0.02	0.8	0.1	-	D
Maleic hydrazide	-	-	-	F '88	10	10	0.5	20	4	-	D
MCPA[6]	-	-	-	F '88	0.1	0.1	0.0005[7]	0.02	0.004	-	D
Methomyl	-	-	-	F '88	0.3	0.3	0.025	0.9	0.2	-	E
Methoxychlor	F	0.04	0.04	F '87	0.05	0.05	0.005	0.2	0.04	-	D
Methyl ethyl ketone	-	-	-	F '87	75	7.5	0.6	20	-	-	D
Methyl parathion	-	-	-	F '88	0.3	0.3	0.00025	0.009	0.002	-	D

[1] Carcinogenicity based on inhalation exposure.
[2] New OPP RfD = 2 mg/kg/day.
[3] The Health Advisory is based on a new OPP RfD rather than the IRIS RfD.
[4] HMX = octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
[5] Lindane = γ – hexachlorocyclohexane
[6] MCPA = 4(chloro-2-methoxyphenoxy)acetic acid
[7] New OPP RfD = 0.0015 mg/kg/day

Chemicals	Standards			Status HA Document	Health Advisories						Cancer Group
					10-kg Child						
	Status Reg.	MCLG (mg/L)	MCL (mg/L)		One-day (mg/L)	Ten-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Lifetime (mg/L)	mg/L at 10^{-4} Cancer Risk	
Metolachlor	-	-	-	F '88	2	2	0.15[1]	0.5	0.1	-	C
Metribuzin	-	-	-	F '88	5	5	0.025[2]	0.9	0.2	-	D
Monochloroacetic acid	F	-	0.06[3]	-	-	-	-	-	-	-	-
Monochlorobenzene	F	0.1	0.1	F '87	4	4	0.02	0.7	0.1	-	D
Naphthalene	-	-	-	F '90	0.5	0.5	0.02	0.7	0.1	-	C
Nitrocellulose (non-toxic)	-	-	-	F '88	-	-	-	-	-	-	-
Nitroguanidine	-	-	-	F '90	10	10	0.1	4	0.7	-	D
Nitrophenol p-	-	-	-	F '92	0.8	0.8	0.008	0.3	0.06	-	D
Oxamyl (Vydate)	F	0.2	0.2	F '87	0.2	0.2	0.025	0.9	0.2	-	E
Paraquat	-	-	-	F '88	0.1	0.1	0.0045	0.2	0.03	-	C
Pentachlorophenol	F	zero	0.001	F '87	1	0.3	0.03	1	-	0.03	B2
Phenanthrene (PAH)	-	-	-	-	-	-	-	-	-	-	D
Phenol	-	-	-	D '92	6	6	0.6	20	4	-	D
Picloram	F	0.5	0.5	F '88	20	20	0.07[4]	2	0.5	-	D
Polychlorinated biphenyls (PCBs)	F	zero	0.0005	D '93	-	-	-	-	-	0.01	B2
Prometon[5]	-	-	-	F '88	0.2	0.2	0.015	0.5	0.1	-	D
Pronamide	-	-	-	F '88	0.8	0.8	0.075	3	0.05	-	C
Propachlor	-	-	-	F '88	0.5	0.5	0.01	0.5	0.09	-	D
Propazine	-	-	-	F '88	1	1	0.02	0.7	0.01	-	C
Propham	-	-	-	F '88	5	5	0.02	0.6	0.1	-	D
Pyrene (PAH)	-	-	-	-	-	-	0.03	-	-	-	D
RDX[6]	-	-	-	F '88	0.1	0.1	0.003	0.1	0.002	0.03	C
Simazine	F	0.004	0.004	F '88	0.5	0.5	0.005	0.2	0.004	-	C
Styrene	F	0.1	0.1	F '87	20	2	0.2	7	0.1	-	C
2,4,5-T (Trichlorophenoxyacetic acid)	-	-	-	F '88	0.8	0.8	0.01	0.4	0.07	-	D

[1] New OPP RfD = 0.1 mg/kg/day
[2] New OPP RfD = 0.013 mg/kg/day
[3] 1998 Final Rule for Disinfectants and Disinfection By-products: the total for five haloacetic acids is 0.06mg/L.
[4] New OPP RfD = 0.2 mg/kg/day
[5] Under review.
[6] RDX = hexahydro-1,3,5-trinitro-1,3,5-triazine

Chemicals	Standards			Status HA Document	Health Advisories						Cancer Group
					10-kg Child						
	Status Reg.	MCLG (mg/L)	MCL (mg/L)		One-day (mg/L)	Ten-day (mg/L)	RfD (mg/kg/day)	DWEL (mg/L)	Lifetime (mg/L)	mg/L at 10^{-4} Cancer Risk	
2,3,7,8-TCDD (Dioxin)	F	zero	3E-08	F '87	1E-06	1E-07	1E-09	4E-08	-	2E-08	B2
Tebuthiuron	-	-	-	F '88	3	3	0.07	2	0.5	-	D
Terbacil	-	-	-	F '88	0.3	0.3	0.01	0.4	0.09	-	E
Terbufos	-	-	-	F '88	0.005	0.005	0.0001	0.005	0.0009	-	D
Tetrachloroethane (1,1,1,2-)	-	-	-	F '89	2	2	0.03	1	0.07	0.1	C
Tetrachloroethane (1,1,2,2-)	-	-	-	F '89	0.04	0.04	0.00005	0.002	0.0003	0.02	C
Tetrachloroethylene	F	zero	0.005	F '87	2	2	0.01	0.5	0.01	-	-
Trichlorofluoromethane	-	-	-	F '89	7	7	0.3	10	2	-	D
Toluene	F	1	1	D '93	20	2	0.2	7	1	-	D
Toxaphene	F	zero	0.003	F '96	0.004	0.004	0.0004	0.01	-	0.003	B2
2,4,5-TP (Silvex)	F	0.05	0.05	F '88	0.2	0.2	0.008	0.3	0.05	-	D
Trichloroacetic acid	F	0.3	0.06[1]	D '96	4	4	0.1	4.0	0.3	-	C
Trichlorobenzene (1,2,4-)	F	0.07	0.07	F '89	0.1	0.1	0.001	0.05	0.01	-	D
Trichlorobenzene (1,3,5-)	-	-	-	F '89	0.6	0.6	0.006	0.2	0.04	-	D
Trichloroethane (1,1,1-)	F	0.2	0.2	F '87	100	40	0.035	1	0.2	-	D
Trichloroethane (1,1,2-)	F	0.003	0.005	F '89	0.6	0.4	0.004	0.1	0.003	0.06	C
Trichloroethylene [2]	F	zero	0.005	F '87	-	-	0.007	0.2	-	0.2	B2
Trichlorophenol (2,4,6-)	-	-	-	D '94	0.03	0.03	0.0003	0.01	-	0.3	B2
Trichloropropane (1,2,3-)	-	-	-	F '89	0.6	0.6	0.006	0.2	0.04	-	-
Trifluralin	-	-	-	F '90	0.08	0.08	0.0075	0.3	0.005	0.5	C
Trimethylbenzene (1,2,4-)	-	-	-	D '87	-	-	-	-	-	-	D
Trimethylbenzene (1,3,5-)	-	-	-	D '87	10	-	-	-	-	-	D
Trinitroglycerol	-	-	-	F '87	0.005	0.005	-	-	0.005	0.2	-
Trinitrotoluene (2,4,6-)	-	-	-	F '89	0.02	0.02	0.0005	0.02	0.002	0.1	C
Vinyl chloride[2]	F	zero	0.002	F '87	3	3	-	-	-	0.002	A
Xylenes	F	10	10	D '93	40	40	2	70	10	-	D

[1] 1998 Final Rule for Disinfectants and Disinfection By-products: The total for five haloacetic acids is 0.06 mg/L.

[2] Under review

REFERENCE 25

TELECON NOTE **REGION II SITE ASSESSMENT TEAM**

W. O. NO.: 20103.001.001.1061.00 **DATE:** 8 September 2003 **TIME:** 1440

DISTRIBUTION: Orbis Products File

BETWEEN: David Oster **OF:** NJDEP **PHONE:** (973) 669-3960

AND: Scott Snyder, Region II SAT **Subject:** Status of the Orbis site

Spoke to Mr. Dave Oster, NJDEP regarding the Orbis site. I asked Mr. Oster if the possible responsible party (PRP) had any agreement with the State to conduct remediation at the site. Mr. Oster stated that a developing firm known as McClellan Street Urban Renewal signed a Memorandum of Agreement (MOA) with the State on 20 September 2002, and has submitted an approved Remedial Action Workplan. Mr. Oster could not provide specifics about the agreement but stated that the redevelopment is for "commercial purposes". Mr. Oster stated that the former case manager for the site no longer works at the NJDEP and that the case will be reassigned next month.

Mr. Oster provided a contact name and number for McClellan Street Urban Renewal:

Mr. John Zidziunas
(973) 332-1480

Signature: _____

Scott Snyder

REFERENCE 26

TELECON NOTE — REGION II SITE ASSESSMENT TEAM

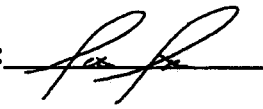
W. O. NO.: 20103.001.001.1061.00 **DATE:** 8 September 2003 **TIME:** 1510

DISTRIBUTION: Orbis Products File

BETWEEN: John Zidziunas **OF:** McClellan Street Urban Renewal
PHONE: (973) 332-1480

AND: Scott Snyder, Region II SAT **Subject:** Status of the Orbis site

Spoke to Mr. Zidziunas regarding remediation at the Orbis site. Mr. Zidziunas confirmed that McClellan Street Urban Renewal has signed a Memorandum of Agreement (MOA) with the State to remediate and develop the Orbis site. Mr. Zidziunas stated that work has not begun at the site due to ongoing litigation with the City of Newark, who, Mr. Zidziunas stated, still owns the property. Mr. Zidziunas stated that he has retained Joseph Environmental and Envirotactics to perform remediation at the site. Mr. Zidziunas confirmed that the site will be redeveloped as a commercial property and he anticipates that work will begin at the site in 4 to 6 months.

Signature: 

Scott Snyder