US EPA RECORD CENTER REGION 5
588533

VOLATILES

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DATA PACKET
Volatiles

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-1

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	N/A	**ENCOTEC QC Set ID:**	VOGH2101M
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091983
Method Reference:	8260	**Percent Total Solids:**	N/A
Matrix:	LIQUID, NON-AQUEOUS	**Calculation Basis:**	Wet Weight

	VOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acetone	67-64-1	200000	20000	U	
2	Acetonitrile	75-05-8	1000000	20000	U	
3	Benzene	71-43-2	100000	20000	U	
4	Bromodichloromethane	75-27-4	100000	20000	U	
5	Bromoform	75-25-2	100000	20000	U	
6	Bromomethane	74-83-9	100000	20000	U	
7	2-Butanone (MEK)	78-93-3	200000	20000	U	
8	Carbon disulfide	75-15-0	100000	20000	U	
9	Carbon tetrachloride	56-23-5	100000	20000	U	
10	Chlorobenzene	108-90-7	100000	20000	U	
11	Chloroethane	75-00-3	100000	20000	U	
12	Chloroform	67-66-3	100000	20000	U	
13	Chloromethane	74-87-3	100000	20000	U	
14	Dibromochloromethane	124-48-1	100000	20000	U	
15	1,2-Dichlorobenzene	95-50-1	100000	20000	U	
16	1,4-Dichlorobenzene	106-46-7	100000	20000	U	
17	1,3-Dichlorobenzene	541-73-1	100000	20000	U	
18	1,2-Dichloroethane	107-06-2	100000	20000	U	
19	1,1-Dichloroethane	75-34-3	100000	20000	U	
20	trans-1,2-Dichloroethene	156-60-5	100000	20000	U	
21	cis-1,2-Dichloroethene	156-59-2	100000	20000	U	
22	1,1-Dichloroethene	75-35-4	100000	20000	U	
23	1,2-Dichloropropane	78-87-5	100000	20000	U	
24	trans-1,3-Dichloropropene	10061-02-6	100000	20000	U	
25	cis-1,3-Dichloropropene	10061-01-5	100000	20000	U	
26	Ethylbenzene	100-41-4	100000	20000	300000	
27	Ethylene dibromide	106-93-4	100000	20000	U	
28	Ethylene oxide	75-21-8	4000000	20000	U	
29	2-Hexanone	591-78-6	200000	20000	U	
30	Methyl(tert)butyl ether	1634-04-4	1000000	20000	U	
31	4-Methyl-2-pentanone (MIBK)	108-10-1	200000	20000	U	
32	Methylene chloride	75-09-2	100000	20000	U	
33	Styrene	100-42-5	100000	20000	U	
34	1,1,2,2-Tetrachloroethane	79-34-5	100000	20000	U	
35	Tetrachloroethene	127-18-4	100000	20000	U	

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Report Date: 08/21/98

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-1

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	N/A	**ENCOTEC QC Set ID:**	VOGH2101M
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091983
Method Reference:	8260	**Percent Total Solids:**	N/A
Matrix:	LIQUID, NON-AQUEOUS	**Calculation Basis:**	Wet Weight

	VOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
36	Toluene	108-88-3	100000	20000	410000	
37	1,1,2-Trichloroethane	79-00-5	100000	20000	U	
38	1,1,1-Trichloroethane	71-55-6	100000	20000	U	
39	Trichloroethene	79-01-6	100000	20000	U	
40	Vinyl chloride	75-01-4	100000	20000	U	
41	total Xylenes	1330-20-7	300000	20000	1600000	

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Report Date: 08/21/98

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-2

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	N/A	**ENCOTEC QC Set ID:**	VOGH2101W
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091984
Method Reference:	8260	**Percent Total Solids:**	N/A
Matrix:	LIQUID, AQUEOUS	**Calculation Basis:**	N/A

	VOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/L)	Dil	Conc (ug/L)	Flag
1	Acetone	67-64-1	20000	2000	U	
2	Acetonitrile	75-05-8	100000	2000	U	
3	Benzene	71-43-2	10000	2000	18000	
4	Bromodichloromethane	75-27-4	2000	2000	U	
5	Bromoform	75-25-2	2000	2000	U	
6	Bromomethane	74-83-9	2000	2000	U	
7	2-Butanone (MEK)	78-93-3	20000	2000	U	
8	Carbon disulfide	75-15-0	10000	2000	U	
9	Carbon tetrachloride	56-23-5	2000	2000	U	
10	Chlorobenzene	108-90-7	2000	2000	U	
11	Chloroethane	75-00-3	2000	2000	U	
12	Chloroform	67-66-3	2000	2000	U	
13	Chloromethane	74-87-3	2000	2000	U	
14	Dibromochloromethane	124-48-1	2000	2000	U	
15	1,4-Dichlorobenzene	106-46-7	2000	2000	U	
16	1,2-Dichlorobenzene	95-50-1	2000	2000	U	
17	1,3-Dichlorobenzene	541-73-1	2000	2000	U	
18	1,2-Dichloroethane	107-06-2	2000	2000	3900	
19	1,1-Dichloroethane	75-34-3	2000	2000	U	
20	trans-1,2-Dichloroethene	156-60-5	2000	2000	U	
21	cis-1,2-Dichloroethene	156-59-2	2000	2000	U	
22	1,1-Dichloroethene	75-35-4	2000	2000	U	
23	1,2-Dichloropropane	78-87-5	2000	2000	U	
24	trans-1,3-Dichloropropene	10061-02-6	2000	2000	U	
25	cis-1,3-Dichloropropene	10061-01-5	2000	2000	U	
26	Ethylbenzene	100-41-4	2000	2000	2300	
27	Ethylene dibromide	106-93-4	2000	2000	U	
28	Ethylene oxide	75-21-8	400000	2000	U	
29	2-Hexanone	591-78-6	20000	2000	U	
30	Methyl(tert)butyl ether	1634-04-4	100000	2000	U	
31	4-Methyl-2-pentanone (MIBK)	108-10-1	20000	2000	U	
32	Methylene chloride	75-09-2	10000	2000	U	
33	Styrene	100-42-5	2000	2000	U	
34	1,1,2,2-Tetrachloroethane	79-34-5	2000	2000	U	
35	Tetrachloroethene	127-18-4	2000	2000	U	

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Report Date: 08/21/98

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-2

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	N/A	**ENCOTEC QC Set ID:**	VOGH2101W
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091984
Method Reference:	8260	**Percent Total Solids:**	N/A
Matrix:	LIQUID, AQUEOUS	**Calculation Basis:**	N/A

	VOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/L)	Dil	Conc (ug/L)	Flag
36	Toluene	108-88-3	2000	2000	35000	
37	1,1,2-Trichloroethane	79-00-5	2000	2000	U	
38	1,1,1-Trichloroethane	71-55-6	2000	2000	U	
39	Trichloroethene	79-01-6	2000	2000	U	
40	Vinyl chloride	75-01-4	2000	2000	U	
41	total Xylenes	1330-20-7	6000	2000	22000	

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Report Date: 08/21/98

QUALITY ASSESSMENT REPORT - METHOD BLANK Analysis

Extraction Date:	N/A	**ENCOTEC Project ID:**	71060
Analysis Date:	08/21/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Second Analysis Date:	N/A	**ENCOTEC QC Set ID:**	VOGH2101M
Method Reference:	8260	**ENCOTEC Submission ID:**	100013219
Matrix:	LIQUID, NON-AQUEOUS	**ENCOTEC Method Blank ID:**	200089780

	VOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acetone	67-64-1	100	1.0	U	
2	Acetonitrile	75-05-8	100	1.0	U	
3	Benzene	71-43-2	10	1.0	U	
4	Bromodichloromethane	75-27-4	10	1.0	U	
5	Bromoform	75-25-2	10	1.0	U	
6	Bromomethane	74-83-9	10	1.0	U	
7	2-Butanone (MEK)	78-93-3	100	1.0	U	
8	Carbon disulfide	75-15-0	100	1.0	U	
9	Carbon tetrachloride	56-23-5	10	1.0	U	
10	Chlorobenzene	108-90-7	10	1.0	U	
11	Chloroethane	75-00-3	10	1.0	U	
12	Chloroform	67-66-3	10	1.0	U	
13	Chloromethane	74-87-3	10	1.0	U	
14	Dibromochloromethane	124-48-1	10	1.0	U	
15	1,2-Dichlorobenzene	95-50-1	10	1.0	U	
16	1,4-Dichlorobenzene	106-46-7	10	1.0	U	
17	1,3-Dichlorobenzene	541-73-1	10	1.0	U	
18	1,2-Dichloroethane	107-06-2	10	1.0	U	
19	1,1-Dichloroethane	75-34-3	10	1.0	U	
20	trans-1,2-Dichloroethene	156-60-5	10	1.0	U	
21	cis-1,2-Dichloroethene	156-59-2	10	1.0	U	
22	1,1-Dichloroethene	75-35-4	10	1.0	U	
23	1,2-Dichloropropane	78-87-5	10	1.0	U	
24	trans-1,3-Dichloropropene	10061-02-6	10	1.0	U	
25	cis-1,3-Dichloropropene	10061-01-5	10	1.0	U	
26	Ethylbenzene	100-41-4	10	1.0	U	
27	Ethylene dibromide	106-93-4	10	1.0	U	
28	Ethylene oxide	75-21-8	1000	1.0	U	
29	2-Hexanone	591-78-6	100	1.0	U	
30	Methyl(tert)butyl ether	1634-04-4	100	1.0	U	
31	4-Methyl-2-pentanone (MIBK)	108-10-1	100	1.0	U	
32	Methylene chloride	75-09-2	10	1.0	U	
33	Styrene	100-42-5	10	1.0	U	
34	1,1,2,2-Tetrachloroethane	79-34-5	10	1.0	U	
35	Tetrachloroethene	127-18-4	10	1.0	U	
36	Toluene	108-88-3	10	1.0	U	
37	1,1,2-Trichloroethane	79-00-5	10	1.0	U	
38	1,1,1-Trichloroethane	71-55-6	10	1.0	U	
39	Trichloroethene	79-01-6	10	1.0	U	
40	Vinyl chloride	75-01-4	10	1.0	U	
41	total Xylenes	1330-20-7	30	1.0	U	

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Report Date: 08/25/98

QUALITY ASSESSMENT REPORT - METHOD BLANK Analysis

Extraction Date:	N/A	**ENCOTEC Project ID:**	71060
Analysis Date:	08/21/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Second Analysis Date:	N/A	**ENCOTEC QC Set ID:**	VOGH2101W
Method Reference:	8260	**ENCOTEC Submission ID:**	100013219
Matrix:	LIQUID, AQUEOUS	**ENCOTEC Method Blank ID:**	200089781

	VOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/L)	Dil	Conc (ug/L)	Flag
1	Acetone	67-64-1	100	1.0	U	
2	Acetonitrile	75-05-8	50	1.0	U	
3	Benzene	71-43-2	5.0	1.0	U	
4	Bromodichloromethane	75-27-4	1.0	1.0	U	
5	Bromoform	75-25-2	1.0	1.0	U	
6	Bromomethane	74-83-9	1.0	1.0	U	
7	2-Butanone (MEK)	78-93-3	50	1.0	U	
8	Carbon disulfide	75-15-0	50	1.0	U	
9	Carbon tetrachloride	56-23-5	1.0	1.0	U	
10	Chlorobenzene	108-90-7	1.0	1.0	U	
11	Chloroethane	75-00-3	1.0	1.0	U	
12	Chloroform	67-66-3	1.0	1.0	U	
13	Chloromethane	74-87-3	1.0	1.0	U	
14	Dibromochloromethane	124-48-1	1.0	1.0	U	
15	1,4-Dichlorobenzene	106-46-7	1.0	1.0	U	
16	1,2-Dichlorobenzene	95-50-1	1.0	1.0	U	
17	1,3-Dichlorobenzene	541-73-1	1.0	1.0	U	
18	1,2-Dichloroethane	107-06-2	1.0	1.0	U	
19	1,1-Dichloroethane	75-34-3	1.0	1.0	U	
20	trans-1,2-Dichloroethene	156-60-5	1.0	1.0	U	
21	cis-1,2-Dichloroethene	156-59-2	1.0	1.0	U	
22	1,1-Dichloroethene	75-35-4	1.0	1.0	U	
23	1,2-Dichloropropane	78-87-5	1.0	1.0	U	
24	trans-1,3-Dichloropropene	10061-02-6	1.0	1.0	U	
25	cis-1,3-Dichloropropene	10061-01-5	1.0	1.0	U	
26	Ethylbenzene	100-41-4	1.0	1.0	U	
27	Ethylene dibromide	106-93-4	1.0	1.0	U	
28	Ethylene oxide	75-21-8	200	1.0	U	
29	2-Hexanone	591-78-6	50	1.0	U	
30	Methyl(tert)butyl ether	1634-04-4	50	1.0	U	
31	4-Methyl-2-pentanone (MIBK)	108-10-1	50	1.0	U	
32	Methylene chloride	75-09-2	5.0	1.0	U	
33	Styrene	100-42-5	1.0	1.0	U	
34	1,1,2,2-Tetrachloroethane	79-34-5	1.0	1.0	U	
35	Tetrachloroethene	127-18-4	1.0	1.0	U	
36	Toluene	108-88-3	1.0	1.0	U	
37	1,1,2-Trichloroethane	79-00-5	1.0	1.0	U	
38	1,1,1-Trichloroethane	71-55-6	1.0	1.0	U	
39	Trichloroethene	79-01-6	1.0	1.0	U	
40	Vinyl chloride	75-01-4	1.0	1.0	U	
41	total Xylenes	1330-20-7	3.0	1.0	U	

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Report Date: 08/25/98

Safety-Kleen (ENCOTEC), Inc.
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SOIL MATRIX SURROGATE RECOVERY
VOLATILE ORGANICS

Project Name: ECOLOGY & ENVIRONMENT
Project Number: 71060
Method: 8240 ___ 8260 X 8260A __
Report Date: August 24, 1998
QC Set I.D.: VOGH2101M

ENCOTEC Sample I.D.	%Recovery Dibromofluoromethane (80-120)	%Recovery D4-1,2-Dichloroethane (70-121)	%Recovery D8-Toluene (81-117)	%Recovery BFB (74-121)
200091983	94	85	108	101
200089780 MB	93	83	102	101
200089932 LCS	94	88	97	102
200091983 MS	103	88	105	103
200091983 MSD	91	82	105	102

* Value outside of established quality control windows.
DL = Sample matrix diluted, therefore surrogate recoveries are not applicable.
M = Matrix interferences caused distortion to recovery value.

RECOVERY: 0 out of 20 outside QC Windows.

Note:

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WATER MATRIX SURROGATE RECOVERY
VOLATILE ORGANICS

Project Name: ECOLOGY & ENVIRONMENT
Project Number: 71060
Method: 624___ 8240___ 8260_X__
Report Date: August 24, 1998
QC Set I.D.: VOGH2101W

ENCOTEC Sample I.D.	% Recovery Dibromofluoromethane (86-118)	% Recovery D4-1,2-Dichloroethane (76-114)	% Recovery D8-Toluene (88-110)	% Recovery BFB (86-115)
200091984	92	90	100	103
200089781 MB	95	85	104	102
200089938 LCS	94	88	97	102
200091984 MS	86	80	101	103
200091984 MSD	93	86	99	102

All samples fortified with 0.05 mg/L of each surrogate analyte.

* Value outside of established quality control windows.
DL = Sample matrix diluted, therefore surrogate recoveries are not applicable.
M = Matrix interferences caused distortion to recovery value.

RECOVERY: __0__ out of __20__ outside QC Windows.

Note:

Form 065VWN2G.GN1 Rev. 08/10/98

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LABORATORY CONTROL SAMPLE (LCS)
VOLATILE ORGANICS - SOIL MATRIX

Project Name: ENCOTEC
Project Number: 10000
QC Set ID: VOGH2101M

ENCOTEC ID: 200089932

Compound	Conc. Spiked (mg/Kg)	Conc. LCS (mg/Kg)	Percent Recovery (%)	Quality Control Windows Recovery (%)
Benzene	0.0100	0.0103	103	76-136
Bromodichloromethane	0.0100	0.0095	95	78-131
Bromoform	0.0100	0.0078	78	68-124
Carbon tetrachloride	0.0100	0.0106	106	70-136
Chlorobenzene	0.0100	0.0109	109	73-127
Chloroform	0.0100	0.0099	99	78-126
Dibromochloromethane	0.0100	0.0087	87	67-133
1,1-Dichloroethane	0.0100	0.0104	104	66-140
1,2-Dichloroethane	0.0100	0.0090	90	63-140
1,1-Dichloroethene	0.0100	0.0092	92	47-187
trans-1,2-Dichloroethene	0.0100	0.0094	94	69-143
1,2-Dichloropropane	0.0100	0.0104	104	70-122
Ethylbenzene	0.0100	0.0111	111	73-129
Methylene chloride	0.0100	0.0094	94	61-163
1,1,2,2-Tetrachloroethane	0.0100	0.0070	70	68-120
Tetrachloroethene	0.0100	0.0110	110	61-135
Toluene	0.0100	0.0104	104	71-133
1,1,1-Trichloroethane	0.0100	0.0107	107	67-129
1,1,2-Trichloroethane	0.0100	0.0081	81	73-125
Trichloroethene	0.0100	0.0106	106	64-152

Recovery: 0 out of 20 outside QC windows

Note:

SAVED AS: C:\HPCHEM\1\DATA\QC\VLH21M1G.XLS

Rev. 02/24/97

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LABORATORY CONTROL SAMPLE (LCS)
LOW LEVEL VOLATILE ORGANICS - WATER MATRIX

Project Name: ENCOTEC
Project Number: 10000
QC Set ID: VOGH2101W

ENCOTEC ID: 200089938

Compound	Conc. Spiked (mg/L)	Conc. LCS (mg/L)	Percent Recovery (%)	Quality Control Limits Recovery (%)
Benzene	0.0100	0.0103	103	60-142
Bromodichloromethane	0.0100	0.0095	95	63-132
Bromoform	0.0100	0.0078	78	44-151
Carbon tetrachloride	0.0100	0.0106	106	48-141
Chlorobenzene	0.0100	0.0109	109	72-126
Chloroform	0.0100	0.0099	99	67-138
Dibromochloromethane	0.0100	0.0087	87	60-133
1,1-Dichloroethane	0.0100	0.0104	104	61-137
1,2-Dichloroethane	0.0100	0.0090	90	54-155
1,1-Dichloroethene	0.0100	0.0092	92	35-142
trans-1,2-Dichloroethene	0.0100	0.0094	94	60-136
1,2-Dichloropropane	0.0100	0.0104	104	64-138
Ethylbenzene	0.0100	0.0111	111	64-130
Methylene chloride	0.0100	0.0094	94	7-168
1,1,2,2-Tetrachloroethane	0.0100	0.0070	70	53-141
Tetrachloroethene	0.0100	0.0110	110	53-134
Toluene	0.0100	0.0104	104	65-132
1,1,1-Trichloroethane	0.0100	0.0107	107	55-142
1,1,2-Trichloroethane	0.0100	0.0081	81	61-138
Trichloroethene	0.0100	0.0106	106	47-139

Recovery: 0 out of 20 outside QC windows

Note:

SAVED AS: C:\HPCHEM\1\DATA\QC\VLH21W1G.XLS

Rev. 02/24/97

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MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)

VOLATILE ORGANICS - SOIL MATRIX

Project Name: ENCOTEC
Project Number: 10000
QC Set ID: VOGH2101M

ENCOTEC ID: 200091983

Compound	Conc. Spiked (mg/Kg)	Sample Result (mg/Kg)	Conc. MS (mg/Kg)	Percent Recovery (%)	Conc. MSD (mg/Kg)	Percent Recovery (%)	RPD (%)	Quality Control Limits RPD (%)	Quality Control Limits Recovery (%)
1,1-Dichloroethene	200	U	242	121	231	116	4.49	22	59-172
Trichloroethene	200	U	206	103	203	102	1.66	24	62-137
Chlorobenzene	200	U	211	106	210	105	0.67	21	60-133
Toluene	200	413	623	105	635	111	1.88	21	59-139
Benzene	200	42	274	116	244	101	11.82	21	66-142

1222

RPD: 0 out of 5 outside of quality control limits.
Recovery: 0 out of 10 outside of quality control limits.

Note:
SAVED AS: C:\HPCHEM\1\DATA\QC\VMH21M1G.XLS

Laidlaw Enviro ental, Inc. / ENCOTEC
3985 Research Park ive * Ann Arbor, MI 48108
313 / 761-1389

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)
LOW LEVEL VOLATILE ORGANICS - WATER MATRIX

Project Name: ENCOTEC
Project Number: 10000
QC Set ID: VOGH2101W

ENCOTEC ID: 200091984

Compound	Conc. Spiked (mg/L)	Sample Result (mg/L)	Conc. MS (mg/L)	Percent Recovery (%)	Conc. MSD (mg/L)	Percent Recovery (%)	RPD (%)	Quality Control Limits RPD (%)	Quality Control Limits Recovery (%)
1,1-Dichloroethene	20.0	U	22.4	112	23.3	117	3.85	14	61-145
Trichloroethene	20.0	U	19.8	99	20.8	104	4.92	14	71-120
Chlorobenzene	20.0	U	22.4	112	22.9	114	2.03	13	75-130
Toluene	20.0	35	57.2	111	58.7	119	2.69	13	76-125
Benzene	20.0	18	37.9	99	42.2	121	10.74	11	76-127

1223

RPD: 0 out of 5 outside of quality control limits.
Recovery: 0 out of 10 outside of quality control limits.

Note:
SAVED AS: C:\HPCHEM\1\DATA\QC\VMH21W1G.XLS

RAW DATA
Volatiles

GC/MS VOA ANALYSIS LOG

ENCOTEC

INSTRUMENT 007 CONDITONS: DB-624 (75M,.53mM,3u)

Std. ID: MV473D-474D

Reference Std: 10VG0817

Disk Space: —

Namelists: —

VOGH17Ø1W

Analyst: YMB

Date: 8/17/98

EMV: 2376

ENCOTEC Tape Number: 5-98-G

No.	Client	Batch	Time	File Name	Matrix	pH Check	Dilution Scheme	Dil. Fact.	Voa No.	Re-runs	$MeCl_2$ Tracking	Cmpnds over Linear Rng
1	Encotec	10000	11:36	BFBG0817	H_2O	NA	NA	NA	3			
2			124	50VG0817					4			
3			1247	25VG0817					5			
4			1322	10VG0817					6			
5			1358	5VG0817					7			
6			1433	1VG0817					8			
7				LCSG0817					9			LCS# 89916
8				VWBH171G					10			MB# 89756
9				VWBH17G1					11		<1 use	
10				TOEG0817					12			
11	BIG	13067		91012VR2		<2	1ml → 10ml	1/10	13			
12				91012VM					14			
13				91012VD					15			
14		13113		91300V			10ml	1/1	16			
15				91301V					1	1/1 Bad purge		
16				91302V					3		<1	
17				91303V					4			
18				91304V			1ml → 10ml	1/10	5			
19		13111		91282V			100ul → 10ml	1/100	6	1/40 c)		
20			23:17	91283V					7	1/200 c)		mod P-Xylene (109)
21				91284V			500ul → 10ml	1/20	8	1/125 c) → out of 12 hrs.		[illegible] 1,2,4-TMB
22												
23												YMB 8/17/98

	IS1	RT	IS2	RT	IS3	RT	IS4	RT
Upper	4435482	9.25	4740566	9.47	4149982	15.44	2487180	20.81
Lower	1108871	8.25	1185142	8.47	1037496	14.44	621795	19.81

balance F33615 check: wts. NA

weight set ID: S001 readings NA

Re-analysis codes: B) EICPs C) Dilution D) Possible carry-over

007LOG_OMVOALOG.xls 2/21/98

1225

VOC INTERNAL STANDARD AREA and RT SUMMARY

Page____

Reference Std. 1562821 SDG No. _____

Instrument ID 557 DB624 CAP 0.53mm, 70M

Date/Time Analyzed: 8 / 21 / 98 9 : 20 am pm Heated Purge: _____ °C

		IS$_1$ (MCL) Area	#	RT	#	IS$_2$ (DFB) Area	#	RT	#	IS$_3$ (CBZ) Area	#	RT	#	IS$_4$ (DCB) Area	#	RT	#
12-Hour Standard	Upper Limit	4245614		9.40		4442240		9.63		3810420		15.63		2239196		21.00	
	Lower Limit	1136424		8.40		1185085		8.63		952733		14.63		559799		20.00	
	Sample ENCOTEC ID																
1	20008938 LCS	2141377		9.21		2257188		9.22		1936546		15.22		1099550		20.61	
2	20008981 MB	2157720		9.26		2274744		9.29		1844228		15.27		1106015		20.66	
3	20009984	1952993		9.26		2002128		9.29		1806978		15.31		1029253		20.68	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	

Sample Number

Column is used to flag values outside QC limits.

* Value is outside QC limits.

IS$_1$ (MCL) = Methylene chloride-d$_2$

IS$_2$ (DFB) = 1,4-Difluorobenzene

IS$_3$ (CBZ) = Chlorobenzene-d$_5$

IS$_4$ (DCB) = Dichlorobenzene

C

AREA UPPER LIMIT = +100% of internal standard area

REA 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

VOC INTERNAL STANDARD AREA and RT SUMMARY

Page____

Reference Std. 13603821 SDG No. _____

Instrument ID 227 DB624 CAP 0.53mm, 70M

Date/Time Analyzed: 8 /21 /98 9 : 00 am pm Heated Purge: _____ °C

		IS$_1$ (MCL) Area	#	RT	#	IS$_2$ (DFB) Area	#	RT	#	IS$_3$ (CBZ) Area	#	RT	#	IS$_4$ (DCB) Area	#	RT	#
12-Hour Standard	Upper Limit	4545614		9.40		4741240		9.63		3712920		15.63		2239196		21.25	
	Lower Limit	1364424		8.40		1175375		8.63		952733		14.63		559799		20.25	
Sample ENCOTEC ID																	
1	20008932 LCS	2143277		9.21		2257488		9.22		1936576		15.22		1099550		20.61	
2	20008980 mb	2135724		9.23		2250045		9.25		1854241		15.26		1090063		20.65	
3	20001983	2187511		9.24		2258114		9.27		1838288		15.25		1097290		20.64	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	

Sample Number

Column is used to flag values outside QC limits.

* Value is outside QC limits.

IS$_1$ (MCL) = Methylene chloride-d$_2$

IS$_2$ (DFB) = 1,4-Difluorobenzene

IS$_3$ (CBZ) = Chlorobenzene-d$_5$

IS$_4$ (DCB) = Dichlorobenzene

C

AREA UPPER LIMIT = +100% of internal standard area

REA 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

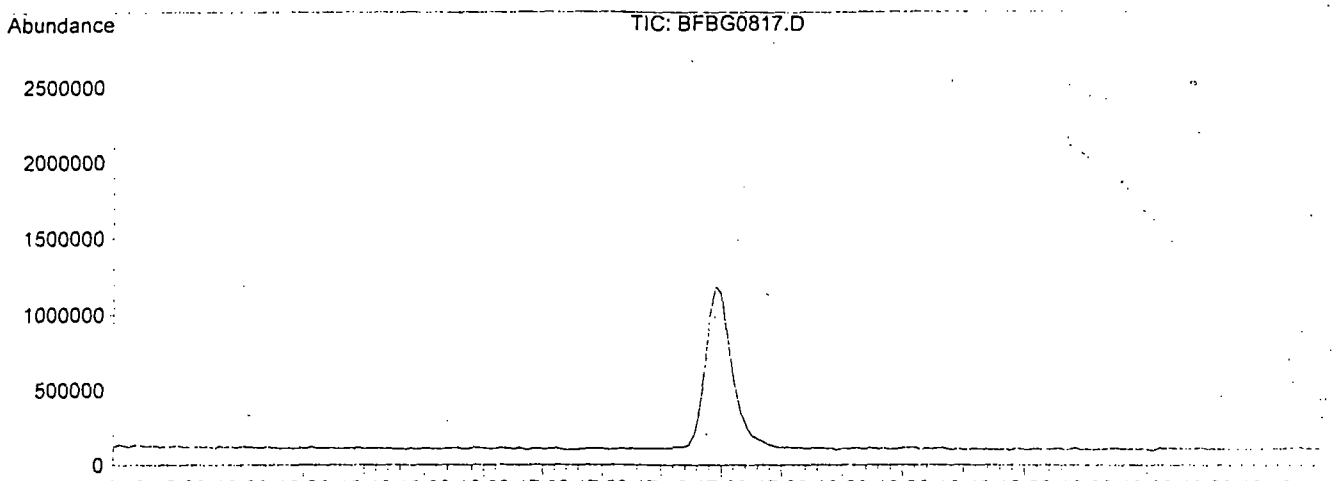
VOAISART.xls 5/5/98

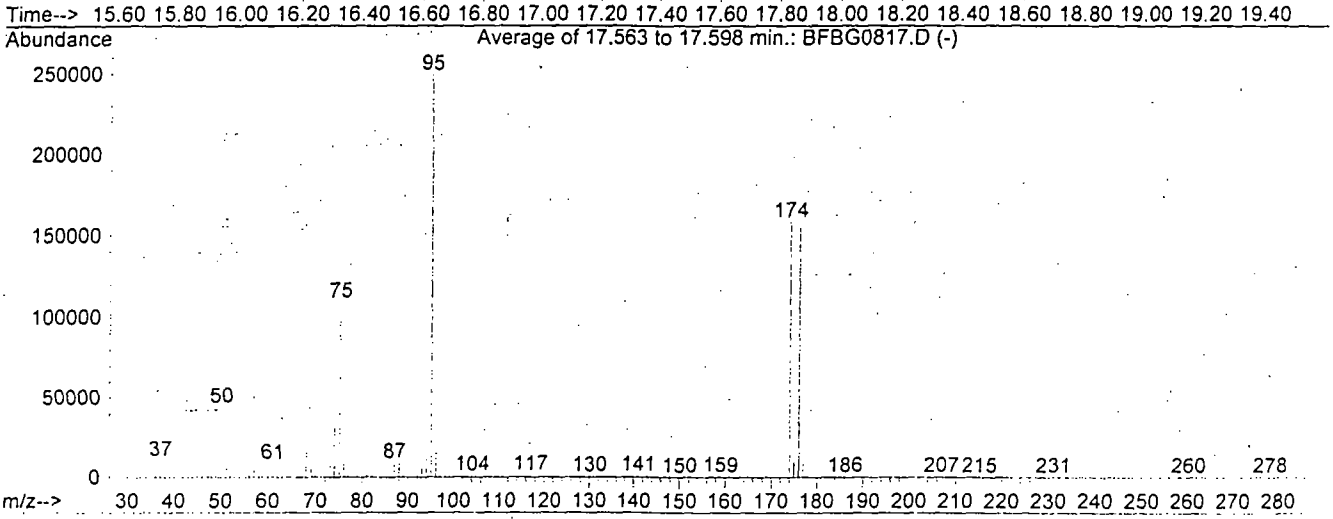
BFB

Data File : C:\HPCHEM\1\DATA\BFBG0817.D
Acq On : 17 Aug 98 11:36
Sample :
Misc : MV473D-474D

Vial: 1
Operator: mjk
Inst : 5971-007
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :





AutoFind: Scans 1008, 1009, 1010; Background Corrected with Scan 998

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	43922	PASS
75	95	30	60	43.4	109085	PASS
95	95	100	100	100.0	251628	PASS
96	95	5	9	6.1	15354	PASS
173	174	0.00	2	0.2	254	PASS
174	95	50	100	63.0	158464	PASS
175	174	5	9	6.7	10656	PASS
176	174	95	101	98.6	156192	PASS
177	176	5	9	6.4	10009	PASS

BFBG0817.D VOALOW.M Mon Aug 17 12:40:39 1998

Average of 17.563 to 17.598 min.: BFBG0817.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1916	49.00	7635	62.00	8582	75.15	109085
37.05	10574	50.05	43922	63.10	5992	76.05	8509
38.10	9748	51.10	11832	64.05	434	77.05	517
39.05	3882	52.10	415	67.00	1334	78.05	1012
40.05	366	55.15	1340	68.00	20506	79.00	2635
42.10	93	56.00	2506	69.05	19064	80.00	743
44.05	1538	56.15	907	70.15	1326	81.05	2733
45.05	1929	57.05	4809	71.05	30	81.95	271
46.15	330	58.15	737	72.05	1047	83.10	21
47.10	3265	60.05	1877	73.10	9395	83.75	172
48.05	1592	61.00	8671	74.00	32945	85.25	162

Average of 17.563 to 17.598 min.: BFBG0817.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.15	162	98.15	407	115.00	694	128.05	137
87.05	9051	99.20	233	115.70	241	128.85	190
88.05	8652	102.00	234	116.05	553	129.05	56
89.00	537	103.05	360	117.00	1021	129.95	168
91.05	429	104.05	943	117.80	134	130.10	410
92.05	3989	105.00	191	117.95	492	131.05	270
93.05	6192	106.00	856	118.90	849	134.65	207
94.05	21244	107.10	173	120.00	163	135.15	203
95.05	251628	107.30	135	121.10	151	136.15	164
96.10	15354	108.20	151	123.05	228	136.90	296
97.00	837	109.95	16	124.15	199	141.05	913

Average of 17.563 to 17.598 min.: BFBG0817.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
142.10	500	156.10	201	175.05	10656	207.00	283
142.90	714	156.90	235	176.05	156192	215.20	146
143.15	365	157.05	548	177.05	10009	231.05	159
145.00	573	159.00	557	177.95	404	260.20	184
145.95	169	160.95	536	181.05	150	278.25	142
147.20	170	165.00	176	182.95	135		
147.90	146	167.20	162	186.15	241		
148.05	426	168.05	150	190.95	152		
150.00	137	169.00	666	191.95	154		
152.05	420	173.05	254	202.10	157		
155.05	292	174.05	158464	205.10	173		

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\data\BFBG0817.D
Acq On : 17 Aug 98 11:36
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 12:06 1998

Vial: 1
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.69	96	2268753	10.00	ng/mL	-0.32
25) 1,4-Difluorobenzene***(INT	8.92	114	2374660	10.00	ng/mL	-0.30
49) D5-Chlorobenzene***(INT.ST	14.88	117	1987973	10.00	ng/mL	-0.34
67) D4-1,4-Dichlorobenzene***(	20.29	152	1250209	10.00	ng/mL	-0.28
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.46	113	1284172	12.02	ng/ml	-0.30
Surrogate Spike 10.000			Recovery	=	120.20%	
34) D4-1,2-Dichloroethane***(S	8.05	65	658135	10.99	ng/ml	-0.32
Surrogate Spike 10.000			Recovery	=	109.90%	
50) d8-Toluene***(SURR.STD.)**	11.82	98	2096353	9.90	ng/ml	-0.32
Surrogate Spike 10.000			Recovery	=	99.00%	
68) Bromofluorobenzene***(SURR	17.58	95	1641109	9.94	ng/ml	-0.30
Surrogate Spike 10.000			Recovery	=	99.40%	

Target Compounds						Qvalue
5) Ethylene oxide	2.75	44	25681	1.15	ng/mL#	100
6) Bromomethane	2.66	94	11543	-2.00	ng/ml	79
10) Acrolein	3.79	56	5681	1.56	ng/mL#	1
13) Acetone	3.96	43	5665	0.41	ng/ml#	1
17) Methylene Chloride	4.50	84	27416	0.36	ng/ml#	23
24) 2-Butanone	6.68	43	8915	0.57	ng/ml#	56
28) Methacrylonitrile	7.16	67	5047	0.42	ng/mL#	1
47) 4-Methyl-2-pentanone	11.79	43	13631	0.38	ng/ml#	47
70) 1,2,3-Trichloropropane	18.00	110	6293	-0.64	ng/mL#	1

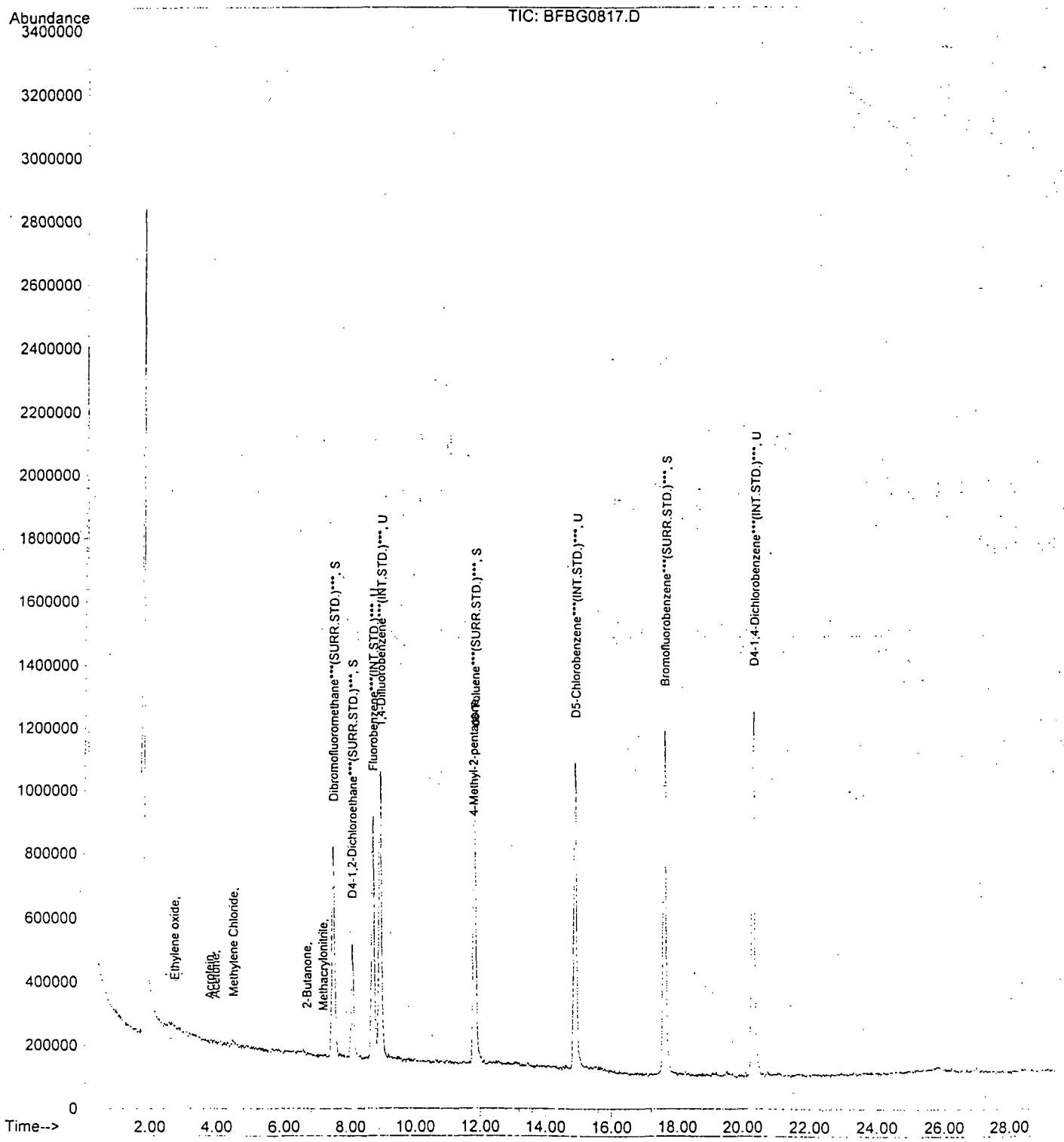
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\data\BFBG0817.D
Acq On : 17 Aug 98 11:36
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 12:06 1998

Vial: 1
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Multiple Level Calibration



ENCOTEC GC/MS VOLATILE 5 WAY CALIBRATION Page:

Instrument ID: 5971-007

Initial Calibration Date: 8/17/98

STD	FILE:	STD	FILE:	STD	FILE:
10	10VG0817.D	25	25VG0817.D	1.0	1VG0817.D
50	50VG0817.D	5.0	5VG0817.D		

1232

Compound	1.0	5.0	10	25	50	RF avg.	% RSD	RF Cont	Cont Rec	% Drift	CCC/SPCC
Chloromethane	0.291	0.288	0.255	0.283	0.299	0.283					**
Vinyl Chloride	0.261	0.261	0.243	0.274	0.272	0.262	4.8				*
1,1-Dichloroethene	0.330	0.271	0.248	0.282	0.272	0.281	11				*
1,1-Dichloroethane	0.573	0.642	0.580	0.615	0.588	0.600					**
Chloroform	0.624	0.585	0.584	0.625	0.614	0.607	3.4				*
1,2-Dichloropropane	0.294	0.321	0.306	0.331	0.328	0.316	4.9				*
Bromoform	0.287	0.279	0.305	0.364	0.365	0.320					**
1,1,2,2-Tetrachloroethane	0.767	0.733	0.764	0.806	0.557	0.725					**
Toluene	1.260	1.053	1.029	1.140	1.140	1.124	8.1				*
Chlorobenzene	0.891	0.845	0.889	0.944	0.929	0.900					**
Ethylbenzene	0.422	0.351	0.377	0.418	0.414	0.397	7.8				*

* = CCC - Calibration Check Compound: %RSD < 30 for initial calibration; % Diff. < 20.0 for continuing calibration. Meets criteria for 8260B

** = SPCC - System Performance Check Compound: Minimum avg. RF > .100 & 0.300 for Chlorobenzene and 1,1,2,2-Tetrachloroethane

% RSD = Relative Standard Deviation

% Drift = (Cont. Cal. Std Conc. - Recovery Conc. / Cont. Cal. Std. Conc. Rec. x 100)

EICPS:	IS1	RT1	IS2	RT2	IS3	RT3	IS4	RT4
UPPER	4435482	9.25	4740566	9.47	4149982	15.44	2487180	20.81
LOWER	1108871	8.25	1185142	8.47	1037496	14.44	621795	19.81

Response Factor Report 5971-007

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration

Calibration Files
10 =10VG0817.D 50 =50VG0817.D 25 =25VG0817.D
5.0 =5VG0817.D 1.0 =1VG0817.D

		Compound	10	50	25	5.0	1.0	Avg	%RSD	
1)	U	Fluorobenzene***(INT.	----------ISTD----------							
2)		Dichlorodifluorometha	0.326	0.376	0.380	0.347	0.378	0.361	6.69	
3)		Chloromethane	0.255	0.299	0.283	0.288	0.291	0.283	5.92	
4)		Vinyl Chloride	0.243	0.272	0.274	0.261	0.261	0.262	4.78	
5)		Ethylene oxide	0.049	0.063	0.072	0.088	0.164	0.087	51.78	.988
6)		Bromomethane	0.241	0.193	0.221	0.283	0.333	0.254	21.59	.995 L
7)		Chloroethane	0.165	0.167	0.176	0.200	0.161	0.174	8.96	
8)		Trichlorofluoromethan	0.515	0.561	0.589	0.570	0.587	0.565	5.31	
9)		Ethyl ether	0.179	0.175	0.185	0.197	0.225	0.192	10.46	
10)		Acrolein	0.023	0.025	0.025	0.024	0.014	0.022	21.30	1.0 L
11)		1,1-Dichloroethene	0.248	0.272	0.282	0.271	0.330	0.281	10.83	
12)		1,1,2-Trichloro-1,2,2	0.324	0.369	0.380	0.349	0.361	0.357	6.04	
13)		Acetone	0.044	0.051	0.047	0.054	0.100	0.059	38.98	.997
14)		Iodomethane	0.360	0.312	0.351	0.323	0.417	0.353	11.60	
15)		Carbon Disulfide	0.774	0.847	0.875	0.843	0.852	0.838	4.53	
16)		Acetonitrile	0.013	0.014	0.014	0.014	0.016	0.014	8.06	
17)		Methylene Chloride	0.304	0.299	0.309	0.360	0.477	0.350	21.54	1.0 L
18)		trans-1,2-Dichloroeth	0.330	0.341	0.358	0.372	0.366	0.353	4.97	
19)		T-methylbutyl ether	0.667	0.634	0.674	0.722	0.648	0.669	4.97	
20)		Acrylonitrile	0.052	0.051	0.054	0.051	0.052	0.052	2.35	
21)		1,1-Dichloroethane	0.580	0.588	0.615	0.642	0.573	0.600	4.76	
22)		Vinyl acetate	0.274	0.249	0.313	0.288	0.286	0.282	8.17	
23)		cis-1,2-dichloroethen	0.318	0.337	0.346	0.332	0.356	0.338	4.18	
24)		2-Butanone	0.087	0.079	0.084	0.082	0.092	0.085	5.97	
25)	U	1,4-Difluorobenzene**	----------ISTD----------							
26)		Propionitrile	0.016	0.015	0.016	0.017	0.026	0.018	24.34	.998 L
27)		Bromochloromethane	0.152	0.161	0.159	0.149	0.146	0.154	4.13	
28)		Methacrylonitrile	0.060	0.060	0.063	0.060	0.068	0.062	5.48	
29)		Chloroform	0.584	0.614	0.625	0.585	0.624	0.607	3.38	
30)		1,2-Dichloroethane	0.323	0.322	0.330	0.323	0.355	0.330	4.30	
31)	S	Dibromofluoromethane*	0.549	0.528	0.540	0.565	0.531	0.543	2.76	
32)		1,1,1-Trichloroethane	0.468	0.528	0.527	0.461	0.517	0.500	6.57	
33)		Carbon Tetrachloride	0.444	0.515	0.525	0.422	0.436	0.468	10.19	
34)	S	D4-1,2-Dichloroethane	0.303	0.284	0.319	0.301	0.293	0.300	4.42	
35)		Benzene	0.822	0.862	0.878	0.789	0.868	0.844	4.43	
36)		2-Nitropropane	0.210	0.195	0.210	0.187	0.230	0.206	7.93	
37)		Isobutyl alcohol	0.002	0.002	0.002	0.002	0.002	0.002	7.90	
38)		n-Butanol	0.005	0.005	0.006	0.006	0.008	0.006	17.07	.99 L
39)		1,2-Dichloropropane	0.306	0.328	0.331	0.321	0.294	0.316	4.94	
40)		Methyl methacrylate	0.152	0.152	0.159	0.148	0.165	0.155	4.34	
41)		Dibromomethane	0.229	0.231	0.235	0.241	0.260	0.239	5.25	

(#) = Out of Range

Response Factor Report 5971-007

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration

Calibration Files
10 =10VG0817.D 50 =50VG0817.D 25 =25VG0817.D
5.0 =5VG0817.D 1.0 =1VG0817.D

		Compound	10	50	25	5.0	1.0	Avg	%RSD	
42)		1,4-Dioxane	0.002	0.002	0.002	0.002	0.002	0.002	6.76	
43)		Trichloroethene	0.363	0.422	0.391	0.380	0.407	0.393	5.85	
44)		Bromodichloromethane	0.601	0.648	0.657	0.614	0.590	0.622	4.70	
45)		cis-1,3-Dichloroprope	0.481	0.498	0.519	0.502	0.449	0.490	5.41	
46)		2-Chloroethyl vinyl e	0.057	0.065	0.061	0.090	0.101	0.075	26.26	.995
47)		4-Methyl-2-pentanone	0.201	0.191	0.203	0.210	0.223	0.206	5.79	
48)		Pyridine	0.006	0.005	0.007	0.007	0.002	0.005	41.40	.924
49)	U	D5-Chlorobenzene***(I	----------ISTD----------							
50)	S	d8-Toluene***(SURR.ST	0.997	1.087	1.055	1.090	1.106	1.067	4.07	
51)		Toluene	1.029	1.140	1.140	1.053	1.260	1.124	8.10	
52)		trans-1,3-Dichloropro	0.442	0.497	0.498	0.450	0.541	0.486	8.33	
53)		Ethyl methacrylate	0.381	0.416	0.418	0.383	0.411	0.402	4.55	
54)		1,1,2-Trichloroethane	0.316	0.339	0.340	0.314	0.364	0.335	6.09	
55)		Tetrachloroethene	0.349	0.417	0.411	0.362	0.405	0.389	7.99	
56)		2-Hexanone	0.152	0.153	0.166	0.149	0.210	0.166	15.29	.998
57)		Dibromochloromethane	0.467	0.553	0.553	0.462	0.549	0.517	9.23	
58)		1,2-Dibromoethane	0.425	0.449	0.458	0.369	0.459	0.432	8.73	
59)		Chlorobenzene	0.889	0.929	0.944	0.845	0.891	0.900	4.29	
60)		1,1,1,2-Tetrachloroet	0.410	0.448	0.454	0.398	0.473	0.437	7.28	
61)		Ethylbenzene	0.377	0.414	0.418	0.351	0.422	0.397	7.85	
62)		m-Xylene and P-xylene	0.492	0.545	0.563	0.501	0.551	0.530	5.99	
63)		o-Xylene	0.482	0.526	0.545	0.465	0.534	0.511	6.83	
64)		Styrene	0.855	0.908	0.936	0.806	0.914	0.884	5.98	
65)		Bromoform	0.305	0.365	0.364	0.279	0.287	0.320	13.02	
66)		Cyclohexanone	0.020	0.019	0.022	0.020	0.030	0.022	20.64	.994
67)	U	D4-1,4-Dichlorobenzen	----------ISTD----------							
68)	S	Bromofluorobenzene***	1.316	1.294	1.340	1.299	1.346	1.319	1.78	
69)		1,1,2,2-Tetrachloroet	0.764	0.557	0.806	0.733	0.767	0.725	13.45	
70)		1,2,3-Trichloropropan	0.226	0.222	0.251	0.235	0.387	0.264	26.20	.996
71)		Trans-1,4-Dichloro-2-	0.061	0.051	0.067	0.054	0.049	0.056	13.24	
72)		1,3-Dichlorobenzene	1.300	1.353	1.404	1.257	1.329	1.329	4.16	
73)		1,4-Dichlorobenzene	1.406	1.419	1.468	1.355	1.419	1.413	2.85	
74)		1,2-Dichlorobenzene	1.238	1.245	1.287	1.199	1.244	1.243	2.53	
75)		1,2-Dibromo-3-chlorop	0.169	0.115	0.179	0.151	0.176	0.158	16.65	.921

(#) = Out of Range

Compound List Report .5971-007

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
Total Cpnds : 75

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	U	Fluorobenzene***(INT.STD.)***	96	8.80	1.000	A	1	A	B
2		Dichlorodifluoromethane	85	2.01	0.229	A	3	A	B
3		Chloromethane	50	2.26	0.257	A	1	A	B
4		Vinyl Chloride	62	2.34	0.267	A	1	A	B
5		Ethylene oxide	44	2.73	0.310	A	2	A	B
6		Bromomethane	94	2.73	0.310	L	1	A	B
7		Chloroethane	64	2.87	0.326	A	2	A	B
8		Trichlorofluoromethane	101	3.20	0.363	A	1	A	B
9		Ethyl ether	59	3.54	0.403	A	2	A	B
10		Acrolein	56	3.72	0.423	L	1	A	B
11		1,1-Dichloroethene	96	3.88	0.440	A	3	A	B
12		1,1,2-Trichloro-1,2,2-trifluor	151	3.89	0.442	A	3	A	B
13		Acetone	43	3.93	0.446	L	1	A	B
14		Iodomethane	142	4.08	0.464	A	1	A	B
15		Carbon Disulfide	76	4.17	0.474	A	2	A	B
16		Acetonitrile	41	4.29	0.488	A	2	A	B
17		Methylene Chloride	84	4.59	0.522	L	3	A	B
18		trans-1,2-Dichloroethene	96	5.04	0.573	A	3	A	B
19		T-methylbutyl ether	73	5.08	0.577	A	2	A	B
20		Acrylonitrile	53	4.97	0.565	A	2	A	B
21		1,1-Dichloroethane	63	5.72	0.650	A	2	A	B
22		Vinyl acetate	43	5.82	0.662	A	1	A	B
23		cis-1,2-dichloroethene	96	6.69	0.761	A	3	A	B
24		2-Butanone	43	6.74	0.767	A	2	A	B
25	U	1,4-Difluorobenzene***(INT.STD	114	9.02	1.000	A	2	A	B
26		Propionitrile	54	6.83	0.757	L	3	A	B
27		Bromochloromethane	128	7.13	0.790	A	2	A	B
28		Methacrylonitrile	67	7.11	0.788	A	3	A	B
29		Chloroform	83	7.30	0.809	A	2	A	B
30		1,2-Dichloroethane	62	8.31	0.921	A	3	A	B
31	S	Dibromofluoromethane***(SURR.S	113	7.58	0.840	A	1	A	B
32		1,1,1-Trichloroethane	97	7.60	0.842	A	3	A	B
33		Carbon Tetrachloride	117	7.91	0.877	A	3	A	B
34	S	D4-1,2-Dichloroethane***(SURR.	65	8.17	0.906	A	2	A	B
35		Benzene	78	8.26	0.915	A	2	A	B
36		2-Nitropropane	43	8.26	0.915	A	3	A	B
37		Isobutyl alcohol	74	8.29	0.919	A	1	A	B
38		n-Butanol	56	9.55	1.058	L	3	A	B
39		1,2-Dichloropropane	63	9.93	1.100	A	2	A	B
40		Methyl methacrylate	69	10.22	1.133	A	2	A	B
41		Dibromomethane	93	10.15	1.125	A	3	A	B
42		1,4-Dioxane	88	10.24	1.135	A	1	A	B
43		Trichloroethene	130	9.53	1.056	A	3	A	B
44		Bromodichloromethane	83	10.50	1.164	A	2	A	B
45		cis-1,3-Dichloropropene	75	11.39	1.262	A	2	A	B
46		2-Chloroethyl vinyl ether	63	11.13	1.233	L	2	A	B
47		4-Methyl-2-pentanone	43	11.77	1.305	A	3	A	B
48		Pyridine	79	12.21	1.353	A	1	A	B
49	U	D5-Chlorobenzene***(INT.STD.)*	117	15.01	1.000	A	1	A	B
50	S	d8-Toluene***(SURR.STD.)***	98	11.93	0.795	A	1	A	B
51		Toluene	91	12.08	0.805	A	1	A	B

52		trans-1,3-Dichloropropene	75	12.57	0.838	A	2	A	B
53		Ethyl methacrylate	69	12.83	0.855	A	3	A	B
54		1,1,2-Trichloroethane	97	12.94	0.862	A	2	A	B
55		Tetrachloroethene	164	13.21	0.881	A	3	A	B
56		2-Hexanone	43	13.53	0.901	L	3	A	B
57		Dibromochloromethane	129	13.75	0.916	A	3	A	B
58		1,2-Dibromoethane	107	13.95	0.929	A	1	A	B
59		Chlorobenzene	112	15.06	1.003	A	1	A	B
60		1,1,1,2-Tetrachloroethane	131	15.27	1.017	A	3	A	B
61		Ethylbenzene	106	15.34	1.022	A	1	A	B
62		m-Xylene and P-xylene	106	15.61	1.041	A	1	A	B
63		o-Xylene	106	16.50	1.100	A	1	A	B
64		Styrene	104	16.54	1.102	A	2	A	B
65		Bromoform	173	16.90	1.126	A	1	A	B
66		Cyclohexanone	98	17.53	1.168	L	3	A	B
67	U	D4-1,4-Dichlorobenzene***(INT.	152	20.40	1.000	A	2	A	B
68	S	Bromofluorobenzene***(SURR.STD	95	17.68	0.867	A	3	A	B
69		1,1,2,2-Tetrachloroethane	83	18.08	0.887	A	1	A	B
70		1,2,3-Trichloropropane	110	18.14	0.889	L	2	A	B
71		Trans-1,4-Dichloro-2-butene	88	18.19	0.892	A	3	A	B
72		1,3-Dichlorobenzene	146	20.22	0.991	A	2	A	B
73		1,4-Dichlorobenzene	146	20.45	1.003	A	2	A	B
74		1,2-Dichlorobenzene	146	21.32	1.045	A	2	A	B
75		1,2-Dibromo-3-chloropropane	75	23.18	1.136	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VOALOW.M Mon Aug 17 15:28:13 1998

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\50VG0817.D
Acq On : 17 Aug 98 12:11
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:25 1998

Vial: 2
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.78	96	2355076m	10.00	ng/mL	-0.23
25) 1,4-Difluorobenzene***(INT	9.02	114	2486193	10.00	ng/mL	-0.20
49) D5-Chlorobenzene***(INT.ST	14.97	117	2041723	10.00	ng/mL	-0.25
67) D4-1,4-Dichlorobenzene***(	20.35	152	1290855	10.00	ng/mL	-0.23
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.56	113	1313467	11.74	ng/ml	-0.20
Surrogate Spike 10.000			Recovery	=	117.40%	
34) D4-1,2-Dichloroethane***(S	8.14	65	705191	11.25	ng/ml	-0.23
Surrogate Spike 10.000			Recovery	=	112.50%	
50) d8-Toluene***(SURR.STD.)**	11.91	98	2219470	10.20	ng/ml	-0.23
Surrogate Spike 10.000			Recovery	=	102.00%	
68) Bromofluorobenzene***(SURR	17.65	95	1670727	9.80	ng/ml	-0.23
Surrogate Spike 10.000			Recovery	=	98.00%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.00	85	4424529m	50.97	ng/mL	0
3) Chloromethane	2.24	50	3522346m	55.96	ng/ml	0
4) Vinyl Chloride	2.33	62	3200337m	53.64	ng/ml	0
5) Ethylene oxide	2.45	44	742961m	32.01	ng/mL	0
6) Bromomethane	2.69	94	2270637m	42.72	ng/ml	0
7) Chloroethane	2.80	64	1961954m	42.86	ng/ml	48
8) Trichlorofluoromethane	3.14	101	6610342m	43.62	ng/mL	0
9) Ethyl ether	3.54	59	2056565m	49.04	ng/mL	0
10) Acrolein	3.70	56	1475040m	390.40	ng/mL	0
11) 1,1-Dichloroethene	3.84	96	3200087m	46.67	ng/ml	0
12) 1,1,2-Trichloro-1,2,2-trif	3.86	151	4342624m	43.40	ng/mL	0
13) Acetone	3.94	43	1196053m	83.18	ng/ml	0
14) Iodomethane	4.05	142	3678767m	41.92	ng/mL	0
15) Carbon Disulfide	4.14	76	9968797m	49.79	ng/ml	0
16) Acetonitrile	4.33	41	822978m	288.26	ng/mL	15
17) Methylene Chloride	4.57	84	3519582m	43.92	ng/ml	3
18) trans-1,2-Dichloroethene	5.01	96	4014842m	47.16	ng/ml	1
19) T-methylbutyl ether	5.06	73	7471112m	52.92	ng/mL	0
20) Acrylonitrile	4.95	53	2974564m	299.53	ng/mL	0
21) 1,1-Dichloroethane	5.68	63	6924300m	48.21	ng/ml	0
22) Vinyl acetate	5.81	43	2934457m	47.27	ng/mL	71
23) cis-1,2-dichloroethene	6.69	96	3968388m	47.97	ng/ml	1
24) 2-Butanone	6.74	43	1856861m	114.64	ng/ml	56
26) Propionitrile	6.83	54	934010	272.12	ng/mL#	92
27) Bromochloromethane	7.11	128	1997001	46.80	ng/ml	99
28) Methacrylonitrile	7.09	67	3705346	293.32	ng/mL	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\50VG0817.D
Acq On : 17 Aug 98 12:11
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:25 1998

Vial: 2
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	Chloroform	7.27	83	7630358	49.96 ng/ml	98
30)	1,2-Dichloroethane	8.29	62	4001609	52.43 ng/ml	98
32)	1,1,1-Trichloroethane	7.58	97	6557980	48.28 ng/ml	98
33)	Carbon Tetrachloride	7.87	117	6397898	51.87 ng/ml	99
35)	Benzene	8.24	78	10717039	51.55 ng/ml	95
36)	2-Nitropropane	8.29	43	4845568	161.89 ng/mL#	65
37)	Isobutyl alcohol	8.27	74	1199728	3027.36 ng/mL#	1
38)	n-Butanol	9.56	56	611270m	4168.55 ng/mL	21
39)	1,2-Dichloropropane	9.91	63	4077574	49.99 ng/ml	99
40)	Methyl methacrylate	10.24	69	1895642	57.59 ng/mL#	98
41)	Dibromomethane	10.14	93	2874548	51.13 ng/mL#	100
42)	1,4-Dioxane	10.26	88	1187262	3196.10 ng/mL	86
43)	Trichloroethene	9.49	130	5249006	50.43 ng/ml	98
44)	Bromodichloromethane	10.47	83	8054728	54.02 ng/ml	99
45)	cis-1,3-Dichloropropene	11.37	75	6194020	50.83 ng/ml	98
46)	2-Chloroethyl vinyl ether	11.13	63	804591	35.30 ng/mL#	50
47)	4-Methyl-2-pentanone	11.75	43	4750319	126.62 ng/ml	98
48)	Pyridine	12.00	79	2917927	8778.51 ng/mL#	100
51)	Toluene	12.05	91	11636197	45.07 ng/ml	99
52)	trans-1,3-Dichloropropene	12.54	75	5072096	54.34 ng/ml	99
53)	Ethyl methacrylate	12.83	69	4246369	56.42 ng/mL#	97
54)	1,1,2-Trichloroethane	12.92	97	3460084	55.58 ng/ml	99
55)	Tetrachloroethene	13.20	164	4260198	46.96 ng/ml	98
56)	2-Hexanone	13.51	43	3125954	131.11 ng/ml#	98
57)	Dibromochloromethane	13.74	129	5643575	50.42 ng/ml	99
58)	1,2-Dibromoethane	13.93	107	4579753	49.32 ng/ml	98
59)	Chlorobenzene	15.02	112	9481766	49.74 ng/ml	100
60)	1,1,1,2-Tetrachloroethane	15.25	131	4577257	49.30 ng/mL	93
61)	Ethylbenzene	15.32	106	4230154	48.21 ng/ml	91
62)	m-Xylene and P-xylene	15.60	106	11127947	96.49 ng/ml	96
63)	o-Xylene	16.47	106	5371596	50.41 ng/ml	95
64)	Styrene	16.50	104	9270895	50.57 ng/ml	98
65)	Bromoform	16.87	173	3726697	58.65 ng/ml	97
66)	Cyclohexanone	17.48	98	982675	526.50 ng/ml#	81
69)	1,1,2,2-Tetrachloroethane	18.05	83	3596625	54.58 ng/mL	97
70)	1,2,3-Trichloropropane	18.10	110	1435784	57.98 ng/mL#	76
71)	Trans-1,4-Dichloro-2-buten	18.19	88	654706	116.27 ng/mL#	88
72)	1,3-Dichlorobenzene	20.19	146	8730791	46.73 ng/ml	99
73)	1,4-Dichlorobenzene	20.41	146	9161807	46.62 ng/ml	100
74)	1,2-Dichlorobenzene	21.27	146	8034549	47.72 ng/ml	99
75)	1,2-Dibromo-3-chloropropan	23.11	75	1487865	114.60 ng/ml	92

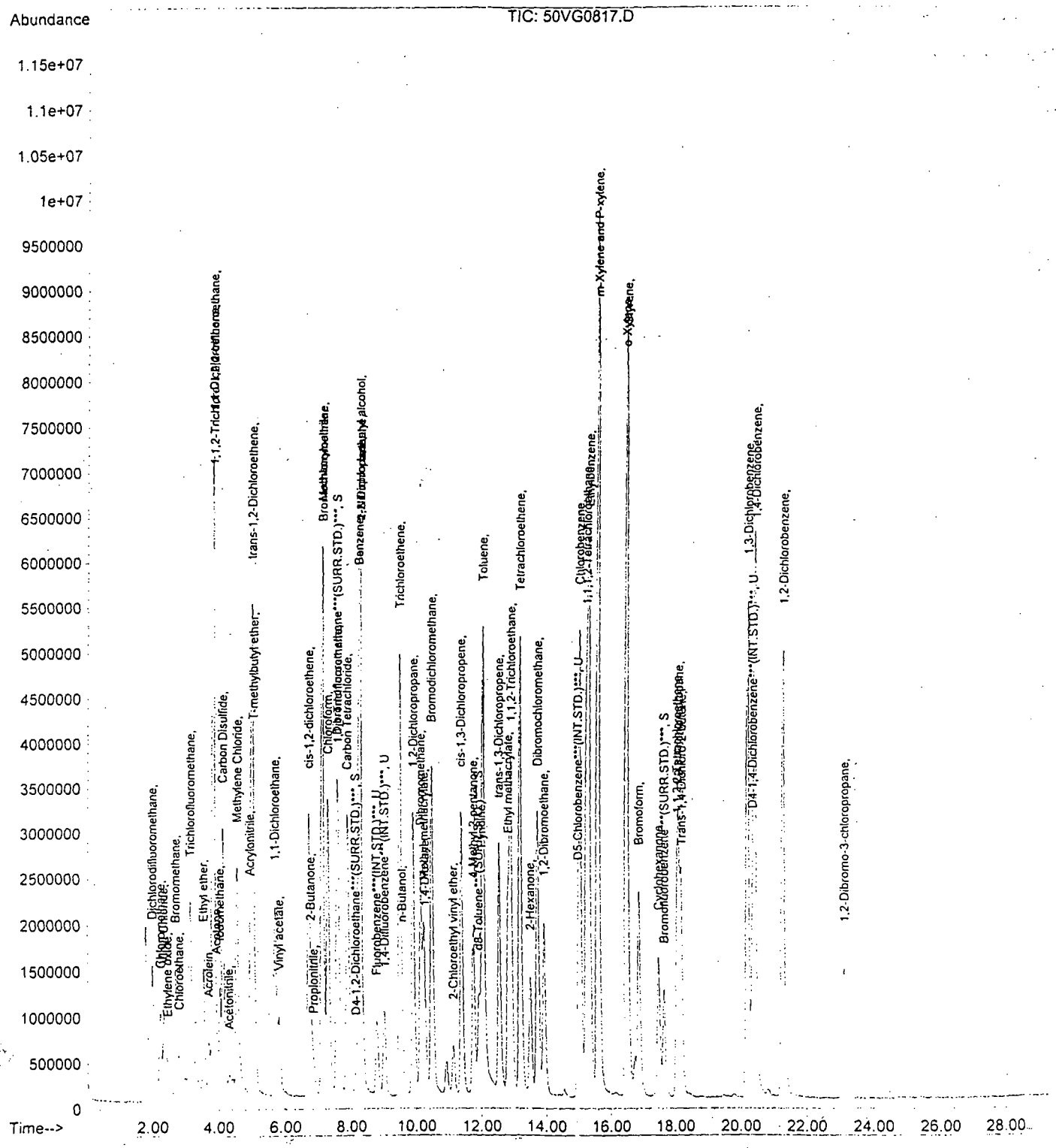
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\50VG0817.D
Acq On : 17 Aug 98 12:11
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:25 1998

Vial: 2
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Multiple Level Calibration



1239

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\25VG0817.D
Acq On : 17 Aug 98 12:47
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:32 1998

Vial: 3
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.77	96	2229902	10.00	ng/mL	-0.24
25) 1,4-Difluorobenzene***(INT	8.99	114	2370851	10.00	ng/mL	-0.23
49) D5-Chlorobenzene***(INT.ST	14.96	117	1986995	10.00	ng/mL	-0.26
67) D4-1,4-Dichlorobenzene***(	20.33	152	1225249	10.00	ng/mL	-0.24
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.55	113	1280338	12.01	ng/ml	-0.21
Surrogate Spike 10.000			Recovery	=	120.10%	
34) D4-1,2-Dichloroethane***(S	8.14	65	757479	12.67	ng/ml	-0.23
Surrogate Spike 10.000			Recovery	=	126.70%	
50) d8-Toluene***(SURR.STD.)**	11.90	98	2096617	9.90	ng/ml	-0.24
Surrogate Spike 10.000			Recovery	=	99.00%	
68) Bromofluorobenzene***(SURR	17.64	95	1642146	10.14	ng/ml	-0.24
Surrogate Spike 10.000			Recovery	=	101.40%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.02	85	2120807	26.10	ng/mL	99
3) Chloromethane	2.26	50	1577936	26.48	ng/ml	98
4) Vinyl Chloride	2.35	62	1529954	27.08	ng/ml	94
5) Ethylene oxide	2.70	44	401222	18.26	ng/mL#	100
6) Bromomethane	2.72	94	1230758	23.50	ng/ml	98
7) Chloroethane	2.86	64	983553	22.69	ng/ml#	83
8) Trichlorofluoromethane	3.17	101	3286215	22.90	ng/mL	99
9) Ethyl ether	3.55	59	1029211	25.92	ng/mL#	96
10) Acrolein	3.71	56	692624	193.61	ng/mL	89
11) 1,1-Dichloroethene	3.86	96	1574466	24.25	ng/ml	99
12) 1,1,2-Trichloro-1,2,2-trif	3.86	151	2121049	22.39	ng/mL	97
13) Acetone	3.95	43	523285	38.44	ng/ml	94
14) Iodomethane	4.07	142	1954483	23.56	ng/mL	98
15) Carbon Disulfide	4.16	76	4878049	25.73	ng/ml#	83
16) Acetonitrile	4.33	41	386892	143.12	ng/mL#	68
17) Methylene Chloride	4.58	84	1722206	22.70	ng/ml	99
18) trans-1,2-Dichloroethene	5.03	96	1996457	24.77	ng/ml	99
19) T-methylbutyl ether	5.06	73	3758154	28.12	ng/mL	99
20) Acrylonitrile	4.96	53	1500373	159.56	ng/mL	94
21) 1,1-Dichloroethane	5.71	63	3430053	25.22	ng/ml	99
22) Vinyl acetate	5.81	43	1742508	29.64	ng/mL	99
23) cis-1,2-dichloroethene	6.68	96	1926680	24.60	ng/ml	97
24) 2-Butanone	6.75	43	935481	61.00	ng/ml	95
26) Propionitrile	6.82	54	487437	148.92	ng/mL#	89
27) Bromochloromethane	7.10	128	944986	23.22	ng/ml	96
28) Methacrylonitrile	7.08	67	1869514	155.19	ng/mL	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\25VG0817.D
Acq On : 17 Aug 98 12:47
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:32 1998

Vial: 3
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroform	7.27	83	3706045	25.45	ng/ml	98
30)	1,2-Dichloroethane	8.28	62	1953119	26.84	ng/ml	96
32)	1,1,1-Trichloroethane	7.57	97	3122382	24.11	ng/ml	99
33)	Carbon Tetrachloride	7.88	117	3109798	26.44	ng/ml	98
35)	Benzene	8.25	78	5203659	26.25	ng/ml#	93
36)	2-Nitropropane	8.26	43	2490255	87.25	ng/mL#	80
37)	Isobutyl alcohol	8.25	74	586336	1551.52	ng/mL#	1
38)	n-Butanol	9.53	56	326399m	2325.55	ng/mL	45
39)	1,2-Dichloropropane	9.90	63	1961189	25.21	ng/ml	99
40)	Methyl methacrylate	10.21	69	943507	30.06	ng/mL#	97
41)	Dibromomethane	10.11	93	1392791	25.98	ng/mL#	98
42)	1,4-Dioxane	10.23	88	585263	1652.17	ng/mL	82
43)	Trichloroethene	9.48	130	2317427	23.35	ng/ml	98
44)	Bromodichloromethane	10.47	83	3896750	27.40	ng/ml	100
45)	cis-1,3-Dichloropropene	11.36	75	3075084	26.46	ng/ml	98
46)	2-Chloroethyl vinyl ether	11.12	63	359406	16.53	ng/mL#	54
47)	4-Methyl-2-pentanone	11.73	43	2402044	67.14	ng/ml	99
48)	Pyridine	12.02	79	2140824m	6753.95	ng/mL	100
51)	Toluene	12.04	91	5663603	22.54	ng/ml	99
52)	trans-1,3-Dichloropropene	12.53	75	2474954	27.25	ng/ml	98
53)	Ethyl methacrylate	12.80	69	2075990	28.34	ng/mL#	96
54)	1,1,2-Trichloroethane	12.89	97	1690870	27.91	ng/ml	98
55)	Tetrachloroethene	13.19	164	2041570	23.12	ng/ml	97
56)	2-Hexanone	13.48	43	1646031	70.94	ng/ml#	98
57)	Dibromochloromethane	13.71	129	2747868	25.88	ng/ml	98
58)	1,2-Dibromoethane	13.92	107	2273510	25.49	ng/ml	96
59)	Chlorobenzene	15.01	112	4687342	25.27	ng/ml	100
60)	1,1,1,2-Tetrachloroethane	15.22	131	2256955	24.98	ng/mL	93
61)	Ethylbenzene	15.31	106	2077726	24.33	ng/ml	93
62)	m-Xylene and P-xylene	15.57	106	5590876	49.81	ng/ml	99
63)	o-Xylene	16.46	106	2708205	26.12	ng/ml	95
64)	Styrene	16.49	104	4649534	26.06	ng/ml	98
65)	Bromoform	16.86	173	1810555	30.08	ng/ml	100
66)	Cyclohexanone	17.46	98	548345	303.27	ng/ml#	84
69)	1,1,2,2-Tetrachloroethane	18.04	83	2469414	39.48	ng/mL	99
70)	1,2,3-Trichloropropane	18.09	110	769845	32.35	ng/mL#	1
71)	Trans-1,4-Dichloro-2-buten	18.16	88	409099	76.54	ng/mL#	87
72)	1,3-Dichlorobenzene	20.16	146	4301780	24.26	ng/ml	99
73)	1,4-Dichlorobenzene	20.39	146	4495149	24.10	ng/ml	99
74)	1,2-Dichlorobenzene	21.24	146	3943354	24.67	ng/ml	100
75)	1,2-Dibromo-3-chloropropan	23.08	75	1095594	88.90	ng/ml	94

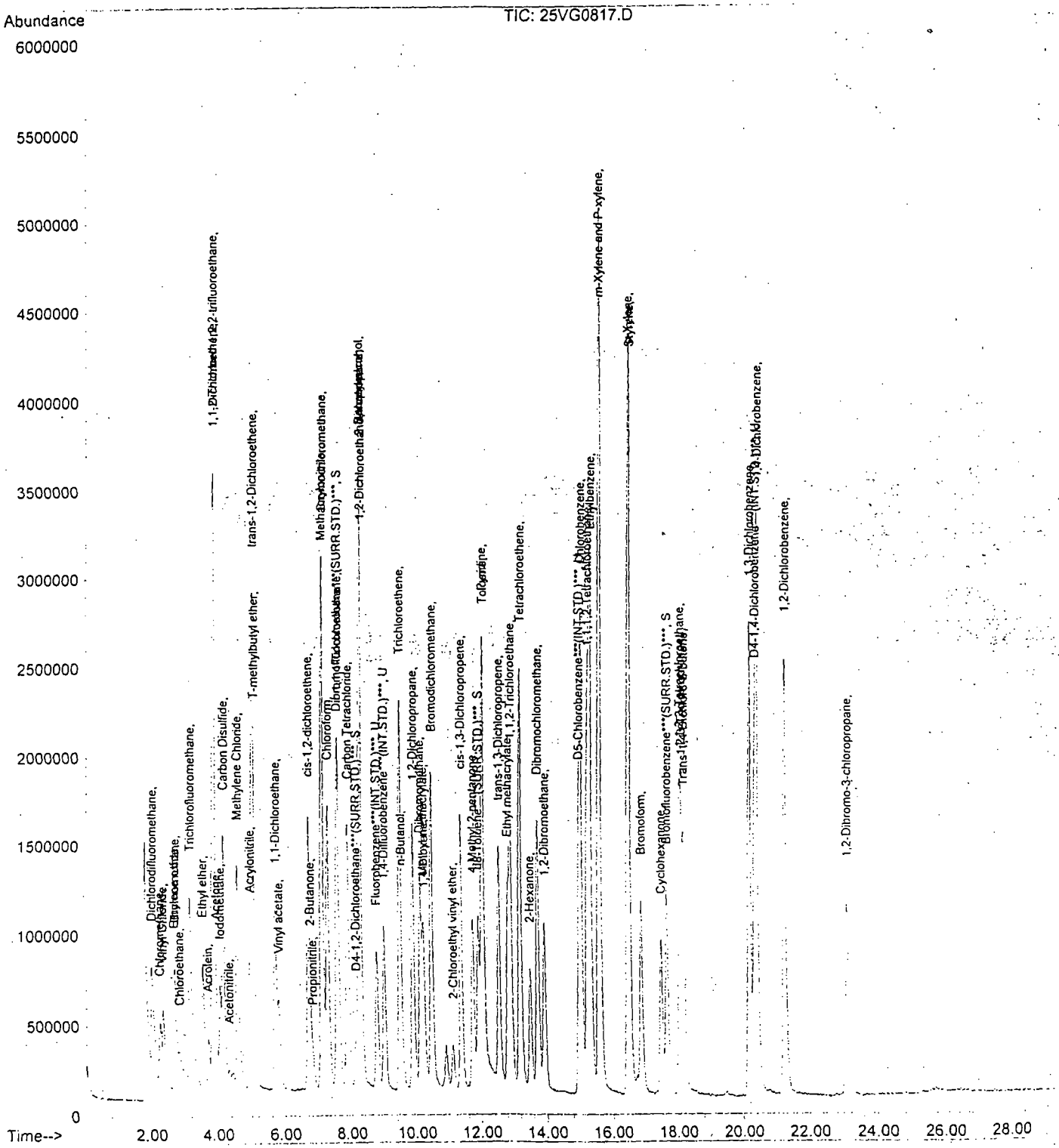
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\25VG0817.D
Acq On : 17 Aug 98 12:47
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:32 1998

Vial: 3
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10VG0817.D
Acq On : 17 Aug 98 13:22
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:52 1998

Vial: 4
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.75	96	2217741	10.00	ng/mL	-0.02
25) 1,4-Difluorobenzene***(INT	8.97	114	2370283	10.00	ng/mL	-0.02
49) D5-Chlorobenzene***(INT.ST	14.94	117	2074991	10.00	ng/mL	-0.02
67) D4-1,4-Dichlorobenzene***(	20.31	152	1243590	10.00	ng/mL	-0.02
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.53	113	1300976	11.32	ng/ml	-0.02
Surrogate Spike 10.000			Recovery	=	113.20%	
34) D4-1,2-Dichloroethane***(S	8.10	65	718162	11.33	ng/ml	-0.04
Surrogate Spike 10.000			Recovery	=	113.30%	
50) d8-Toluene***(SURR.STD.)**	11.86	98	2068144	9.34	ng/ml	-0.04
Surrogate Spike 10.000			Recovery	=	93.40%	
68) Bromofluorobenzene***(SURR	17.62	95	1636327	9.96	ng/ml	-0.02
Surrogate Spike 10.000			Recovery	=	99.60%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.00	85	722799	8.99	ng/mL	98
3) Chloromethane	2.23	50	565893	9.31	ng/ml	100
4) Vinyl Chloride	2.33	62	537938	9.54	ng/ml	96
5) Ethylene oxide	2.68	44	109542	4.71	ng/mL#	100
6) Bromomethane	2.70	94	533713	9.51	ng/ml	95
7) Chloroethane	2.83	64	365685	8.65	ng/ml	96
8) Trichlorofluoromethane	3.15	101	1142804	8.48	ng/mL	100
9) Ethyl ether	3.53	59	397056	10.15	ng/mL#	100
10) Acrolein	3.69	56	258361	63.62	ng/mL	91
11) 1,1-Dichloroethene	3.84	96	548906	8.78	ng/ml	97
12) 1,1,2-Trichloro-1,2,2-trif	3.86	151	718803	8.16	ng/mL	97
13) Acetone	3.91	43	196799	14.38	ng/ml	94
14) Iodomethane	4.05	142	799138	10.51	ng/mL	97
15) Carbon Disulfide	4.14	76	1716675	9.26	ng/ml#	87
16) Acetonitrile	4.33	41	146579	50.85	ng/mL#	53
17) Methylene Chloride	4.56	84	673096	9.10	ng/ml	98
18) trans-1,2-Dichloroethene	5.01	96	731916	9.39	ng/ml	98
19) T-methylbutyl ether	5.04	73	1479088	10.84	ng/mL	98
20) Acrylonitrile	4.94	53	581752	57.17	ng/mL	92
21) 1,1-Dichloroethane	5.67	63	1286021	9.71	ng/ml	98
22) Vinyl acetate	5.79	43	607772	9.97	ng/mL	100
23) cis-1,2-dichloroethene	6.66	96	705588	9.21	ng/ml	99
24) 2-Butanone	6.71	43	385032	22.98	ng/ml#	97
26) Propionitrile	6.78	54	190811	55.02	ng/mL#	92
27) Bromochloromethane	7.08	128	361303	9.13	ng/ml	96
28) Methacrylonitrile	7.06	67	715194	56.32	ng/mL	96

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10VG0817.D
Acq On : 17 Aug 98 13:22
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:52 1998

Vial: 4
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroform	7.25	83	1384139	9.74	ng/ml	98
30)	1,2-Dichloroethane	8.24	62	765339	10.65	ng/ml	96
32)	1,1,1-Trichloroethane	7.55	97	1110305	9.06	ng/ml	97
33)	Carbon Tetrachloride	7.86	117	1053398	9.19	ng/ml	96
35)	Benzene	8.21	78	1947423	10.03	ng/ml	98
36)	2-Nitropropane	8.23	43	993957	28.45	ng/mL#	77
37)	Isobutyl alcohol	8.23	74	220214	535.41	ng/mL#	1
38)	n-Butanol	9.50	56	128777	135.87	ng/mL#	1
39)	1,2-Dichloropropane	9.86	63	725979	9.47	ng/ml	98
40)	Methyl methacrylate	10.19	69	361128	10.79	ng/mL#	97
41)	Dibromomethane	10.09	93	542627	10.25	ng/mL#	98
42)	1,4-Dioxane	10.21	88	218694	554.48	ng/mL	91
43)	Trichloroethene	9.46	130	860846	9.13	ng/ml	97
44)	Bromodichloromethane	10.44	83	1425561	10.09	ng/ml	99
45)	cis-1,3-Dichloropropene	11.34	75	1139545	9.92	ng/ml	95
46)	2-Chloroethyl vinyl ether	11.08	63	136121	7.26	ng/mL#	71
47)	4-Methyl-2-pentanone	11.70	43	954344	24.30	ng/ml	97
48)	Pyridine	12.05	79	752310	1144.80	ng/mL#	100
51)	Toluene	12.00	91	2134254	8.43	ng/ml	99
52)	trans-1,3-Dichloropropene	12.50	75	916559	9.66	ng/ml	100
53)	Ethyl methacrylate	12.78	69	790913	10.06	ng/mL#	99
54)	1,1,2-Trichloroethane	12.87	97	656281	10.17	ng/ml	98
55)	Tetrachloroethene	13.15	164	724510	8.37	ng/ml	98
56)	2-Hexanone	13.46	43	632459	23.59	ng/ml#	98
57)	Dibromochloromethane	13.69	129	968392	9.27	ng/ml	99
58)	1,2-Dibromoethane	13.90	107	881561	9.83	ng/ml	99
59)	Chlorobenzene	14.99	112	1845334	9.84	ng/ml	98
60)	1,1,1,2-Tetrachloroethane	15.20	131	849815	9.40	ng/mL	94
61)	Ethylbenzene	15.29	106	783128	9.24	ng/ml	97
62)	m-Xylene and P-xylene	15.55	106	2040893	18.11	ng/ml	98
63)	o-Xylene	16.44	106	1000250	9.46	ng/ml	98
64)	Styrene	16.47	104	1774598	9.81	ng/ml	100
65)	Bromoform	16.84	173	632724	9.86	ng/ml	96
66)	Cyclohexanone	17.44	98	205237	59.11	ng/ml#	85
69)	1,1,2,2-Tetrachloroethane	18.02	83	949990	12.77	ng/mL	99
70)	1,2,3-Trichloropropane	18.07	110	281441	9.74	ng/mL#	68
71)	Trans-1,4-Dichloro-2-buten	18.14	88	150997	25.26	ng/mL#	87
72)	1,3-Dichlorobenzene	20.16	146	1616646	9.42	ng/ml	99
73)	1,4-Dichlorobenzene	20.37	146	1749053	9.70	ng/ml	97
74)	1,2-Dichlorobenzene	21.22	146	1539297	9.86	ng/ml	99
75)	1,2-Dibromo-3-chloropropan	23.08	75	419941	27.65	ng/ml	94

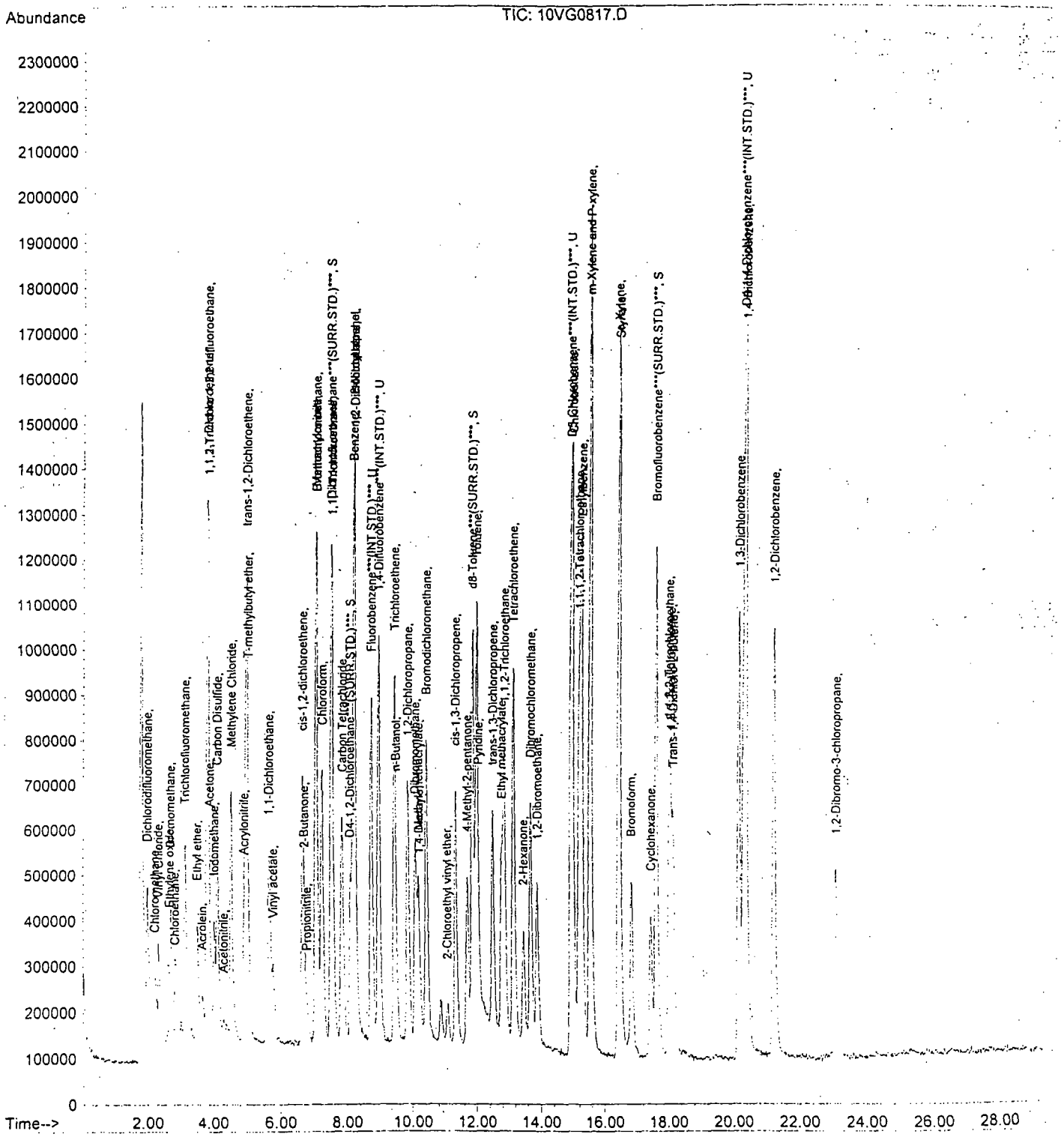
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10VG0817.D
Acq On : 17 Aug 98 13:22
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 13:52 1998

Vial: 4
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\5VG0817.D
Acq On : 17 Aug 98 13:58
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 14:58 1998

Vial: 5
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.71	96	2033831	10.00	ng/mL	-0.04
25) 1,4-Difluorobenzene***(INT	8.94	114	2263626	10.00	ng/mL	-0.04
49) D5-Chlorobenzene***(INT.ST	14.96	117	2101918	10.00	ng/mL	0.02
67) D4-1,4-Dichlorobenzene***(	20.31	152	1262734	10.00	ng/mL	0.00
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.50	113	1279035	11.28	ng/ml	-0.04
Surrogate Spike 10.000			Recovery	=	112.80%	
34) D4-1,2-Dichloroethane***(S	8.07	65	681552	10.81	ng/ml	-0.04
Surrogate Spike 10.000			Recovery	=	108.10%	
50) d8-Toluene***(SURR.STD.)**	11.86	98	2290749	10.38	ng/ml	0.00
Surrogate Spike 10.000			Recovery	=	103.80%	
68) Bromofluorobenzene***(SURR	17.62	95	1640676	9.79	ng/ml	0.00
Surrogate Spike 10.000			Recovery	=	97.90%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.00	85	352413	5.31	ng/mL	98
3) Chloromethane	2.23	50	293254	5.37	ng/ml	99
4) Vinyl Chloride	2.33	62	265373	5.32	ng/ml	91
5) Ethylene oxide	2.71	44	89828	5.18	ng/mL#	100
6) Bromomethane	2.71	94	287322	5.18	ng/ml	97
7) Chloroethane	2.83	64	203143	5.51	ng/ml#	91
8) Trichlorofluoromethane	3.16	101	579261	5.05	ng/mL	98
9) Ethyl ether	3.53	59	200695	5.73	ng/mL#	94
10) Acrolein	3.69	56	122073	31.40	ng/mL#	84
11) 1,1-Dichloroethene	3.84	96	276083	5.09	ng/ml	99
12) 1,1,2-Trichloro-1,2,2-trif	3.86	151	354699	4.79	ng/mL	99
13) Acetone	3.91	43	108911	8.87	ng/ml	98
14) Iodomethane	4.05	142	328937	4.95	ng/mL	100
15) Carbon Disulfide	4.14	76	857477	5.29	ng/ml#	86
16) Acetonitrile	4.31	41	69844	26.67	ng/mL	94
17) Methylene Chloride	4.56	84	365928	5.62	ng/ml	95
18) trans-1,2-Dichloroethene	5.01	96	378341	5.53	ng/ml	96
19) T-methylbutyl ether	5.03	73	733922	5.95	ng/mL	99
20) Acrylonitrile	4.94	53	261706	27.71	ng/mL	99
21) 1,1-Dichloroethane	5.67	63	652824	5.60	ng/ml	98
22) Vinyl acetate	5.79	43	292390	5.51	ng/mL	100
23) cis-1,2-dichloroethene	6.64	96	338053	5.07	ng/ml	97
24) 2-Butanone	6.70	43	166158	10.51	ng/ml#	90
26) Propionitrile	6.76	54	93959	27.39	ng/mL#	95
27) Bromochloromethane	7.06	128	169149	4.56	ng/ml	93
28) Methacrylonitrile	7.04	67	337124	26.98	ng/mL	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\5VG0817.D
Acq On : 17 Aug 98 13:58
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 14:58 1998

Vial: 5
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroform	7.22	83	662461	4.92	ng/ml	98
30)	1,2-Dichloroethane	8.21	62	365128	5.23	ng/ml	97
32)	1,1,1-Trichloroethane	7.51	97	521343	4.58	ng/ml	97
33)	Carbon Tetrachloride	7.81	117	477300	4.44	ng/ml	99
35)	Benzene	8.17	78	892838	4.79	ng/ml#	91
36)	2-Nitropropane	8.21	43	423273	11.35	ng/mL#	82
37)	Isobutyl alcohol	8.19	74	119316	292.55	ng/mL#	5
38)	n-Butanol	9.48	56	64302	64.99	ng/mL#	1
39)	1,2-Dichloropropane	9.83	63	363360	5.05	ng/ml	98
40)	Methyl methacrylate	10.16	69	167524	5.16	ng/mL#	99
41)	Dibromomethane	10.05	93	272230	5.42	ng/mL#	95
42)	1,4-Dioxane	10.21	88	112550	290.03	ng/mL#	75
43)	Trichloroethene	9.41	130	429689	4.86	ng/ml	96
44)	Bromodichloromethane	10.42	83	694480	5.18	ng/ml#	99
45)	cis-1,3-Dichloropropene	11.32	75	567865	5.28	ng/ml	97
46)	2-Chloroethyl vinyl ether	11.06	63	102166	6.13	ng/mL#	45
47)	4-Methyl-2-pentanone	11.69	43	474772	12.23	ng/ml	96
48)	Pyridine	12.12	79	413559m	453.58	ng/mL	100
51)	Toluene	12.00	91	1107179	4.48	ng/ml	96
52)	trans-1,3-Dichloropropene	12.50	75	473258	4.98	ng/ml	98
53)	Ethyl methacrylate	12.78	69	402019	5.06	ng/mL#	97
54)	1,1,2-Trichloroethane	12.87	97	330297	5.08	ng/ml	97
55)	Tetrachloroethene	13.16	164	380481	4.57	ng/ml	96
56)	2-Hexanone	13.50	43	312154	11.05	ng/ml#	96
57)	Dibromochloromethane	13.70	129	485989	5.13	ng/ml	98
58)	1,2-Dibromoethane	13.90	107	387696	4.64	ng/ml	100
59)	Chlorobenzene	15.01	112	888060	4.76	ng/ml	96
60)	1,1,1,2-Tetrachloroethane	15.22	131	417867	4.71	ng/mL	93
61)	Ethylbenzene	15.30	106	368859	4.43	ng/ml	96
62)	m-Xylene and P-xylene	15.57	106	1052421	9.52	ng/ml	100
63)	o-Xylene	16.45	106	489159	4.66	ng/ml	97
64)	Styrene	16.47	104	846633	4.70	ng/ml	99
65)	Bromoform	16.85	173	293521	5.13	ng/ml	98
66)	Cyclohexanone	17.48	98	106619	29.27	ng/ml#	1
69)	1,1,2,2-Tetrachloroethane	18.02	83	462919	5.96	ng/mL	99
70)	1,2,3-Trichloropropane	18.07	110	148365	4.83	ng/mL#	87
71)	Trans-1,4-Dichloro-2-buten	18.16	88	68184	10.76	ng/mL#	93
72)	1,3-Dichlorobenzene	20.16	146	793854	4.69	ng/ml	97
73)	1,4-Dichlorobenzene	20.38	146	855198	4.80	ng/ml	99
74)	1,2-Dichlorobenzene	21.22	146	756957	4.86	ng/ml	97
75)	1,2-Dibromo-3-chloropropan	23.08	75	190338	11.70	ng/ml	97

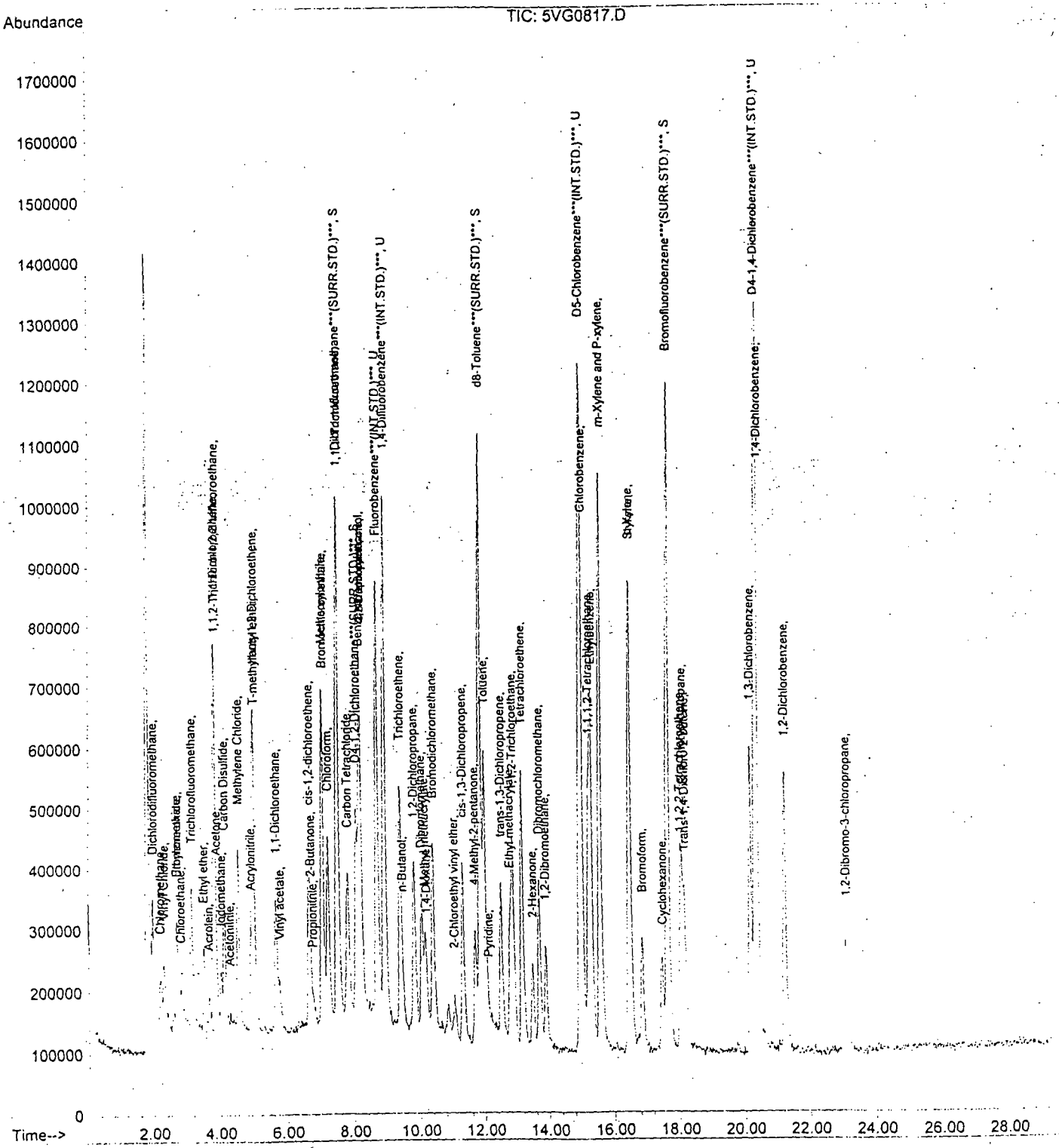
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\5VG0817.D
Acq On : 17 Aug 98 13:58
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 14:58 1998

Vial: 5
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\1VG0817.D
Acq On : 17 Aug 98 14:33
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 15:20 1998

Vial: 6
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.80	96	2237752	10.00	ng/mL	0.08
25) 1,4-Difluorobenzene***(INT	9.02	114	2324123	10.00	ng/mL	0.08
49) D5-Chlorobenzene***(INT.ST	15.01	117	1912697	10.00	ng/mL	0.05
67) D4-1,4-Dichlorobenzene***(	20.40	152	1196200	10.00	ng/mL	0.08
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.58	113	1233423	10.18	ng/ml	0.08
Surrogate Spike 10.000			Recovery	=	101.80%	
34) D4-1,2-Dichloroethane***(S	8.17	65	681681	10.08	ng/ml	0.10
Surrogate Spike 10.000			Recovery	=	100.80%	
50) d8-Toluene***(SURR.STD.)**	11.93	98	2115558	10.44	ng/ml	0.07
Surrogate Spike 10.000			Recovery	=	104.40%	
68) Bromofluorobenzene***(SURR	17.68	95	1610431	10.22	ng/ml	0.07
Surrogate Spike 10.000			Recovery	=	102.20%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.01	85	84689	1.60	ng/mL#	88
3) Chloromethane	2.26	50	65103	1.05	ng/ml	84
4) Vinyl Chloride	2.34	62	58512	1.05	ng/ml#	70
5) Ethylene oxide	2.73	44	36781	1.96	ng/mL#	100
6) Bromomethane	2.73	94	74425	-0.67	ng/ml	83
7) Chloroethane	2.87	64	36086	0.88	ng/ml#	89
8) Trichlorofluoromethane	3.20	101	131379	1.06	ng/mL	93
9) Ethyl ether	3.54	59	50260	1.25	ng/mL#	95
10) Acrolein	3.72	56	15485	3.25	ng/mL#	22
11) 1,1-Dichloroethene	3.88	96	73841	1.24	ng/ml#	84
12) 1,1,2-Trichloro-1,2,2-trif	3.89	151	80807	1.02	ng/mL	95
13) Acetone	3.93	43	44667	3.23	ng/ml#	83
14) Iodomethane	4.08	142	93355	0.58	ng/mL	92
15) Carbon Disulfide	4.17	76	190697	1.06	ng/ml#	89
16) Acetonitrile	4.29	41	18100	6.16	ng/mL#	65
17) Methylene Chloride	4.59	84	106734	1.44	ng/ml	90
18) trans-1,2-Dichloroethene	5.04	96	81920	1.07	ng/ml	97
19) T-methylbutyl ether	5.08	73	145103	1.01	ng/mL#	91
20) Acrylonitrile	4.97	53	58315	5.37	ng/mL#	94
21) 1,1-Dichloroethane	5.72	63	128274	0.98	ng/ml#	82
22) Vinyl acetate	5.82	43	63966	1.08	ng/mL	97
23) cis-1,2-dichloroethene	6.69	96	79590	1.08	ng/ml	97
24) 2-Butanone	6.74	43	41195	2.24	ng/ml#	56
26) Propionitrile	6.83	54	29904	8.19	ng/mL#	48
27) Bromochloromethane	7.13	128	33920	0.90	ng/ml	81
28) Methacrylonitrile	7.11	67	78491	5.77	ng/mL#	88

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\1VG0817.D
Acq On : 17 Aug 98 14:33
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 15:20 1998

Vial: 6
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroform	7.30	83	145129	1.05	ng/ml	95
30)	1,2-Dichloroethane	8.31	62	82572	1.13	ng/ml#	74
32)	1,1,1-Trichloroethane	7.60	97	120210	1.04	ng/ml#	93
33)	Carbon Tetrachloride	7.91	117	101320	0.94	ng/ml#	92
35)	Benzene	8.26	78	201622	1.06	ng/ml#	71
36)	2-Nitropropane	8.26	43	106711	2.55	ng/mL#	85
37)	Isobutyl alcohol	8.29	74	26301	58.83	ng/mL#	1
38)	n-Butanol	9.55	56	17452	7.79	ng/mL#	1
39)	1,2-Dichloropropane	9.93	63	68293	0.92	ng/ml#	76
40)	Methyl methacrylate	10.22	69	38385	1.11	ng/mL#	1
41)	Dibromomethane	10.15	93	60479	1.14	ng/mL#	70
42)	1,4-Dioxane	10.24	88	25576	60.23	ng/mL#	51
43)	Trichloroethene	9.53	130	94481	1.04	ng/ml#	84
44)	Bromodichloromethane	10.50	83	137224	0.98	ng/ml#	90
45)	cis-1,3-Dichloropropene	11.39	75	104350	0.93	ng/ml#	81
46)	2-Chloroethyl vinyl ether	11.13	63	23546	1.47	ng/mL#	1
47)	4-Methyl-2-pentanone	11.77	43	103768	2.41	ng/ml#	90
48)	Pyridine	12.21	79	21900	18.04	ng/mL#	100
51)	Toluene	12.08	91	241072	1.10	ng/ml	92
52)	trans-1,3-Dichloropropene	12.57	75	103502	1.17	ng/ml#	85
53)	Ethyl methacrylate	12.83	69	78523	1.06	ng/mL#	91
54)	1,1,2-Trichloroethane	12.94	97	69607	1.16	ng/ml	98
55)	Tetrachloroethene	13.21	164	77539	1.05	ng/ml#	85
56)	2-Hexanone	13.53	43	80247	2.93	ng/ml#	93
57)	Dibromochloromethane	13.75	129	104949	1.83	ng/ml	96
58)	1,2-Dibromoethane	13.95	107	87748	1.51	ng/ml	90
59)	Chlorobenzene	15.06	112	170470	1.01	ng/ml#	73
60)	1,1,1,2-Tetrachloroethane	15.27	131	90506	1.14	ng/mL#	86
61)	Ethylbenzene	15.34	106	80694	1.09	ng/ml	88
62)	m-Xylene and P-xylene	15.61	106	210603	2.13	ng/ml	98
63)	o-Xylene	16.50	106	102228	1.09	ng/ml	96
64)	Styrene	16.54	104	174830	1.08	ng/ml	97
65)	Bromoform	16.90	173	54963	1.86	ng/ml	99
66)	Cyclohexanone	17.53	98	29063	6.30	ng/ml#	58
69)	1,1,2,2-Tetrachloroethane	18.08	83	91729	1.21	ng/mL	97
70)	1,2,3-Trichloropropane	18.14	110	46246	1.09	ng/mL#	55
71)	Trans-1,4-Dichloro-2-buten	18.19	88	11681	1.87	ng/mL#	40
72)	1,3-Dichlorobenzene	20.22	146	159033	1.01	ng/ml	98
73)	1,4-Dichlorobenzene	20.45	146	169692m	1.02	ng/ml	97
74)	1,2-Dichlorobenzene	21.32	146	148764	1.02	ng/ml#	70
75)	1,2-Dibromo-3-chloropropan	23.18	75	42198	2.60	ng/ml#	4

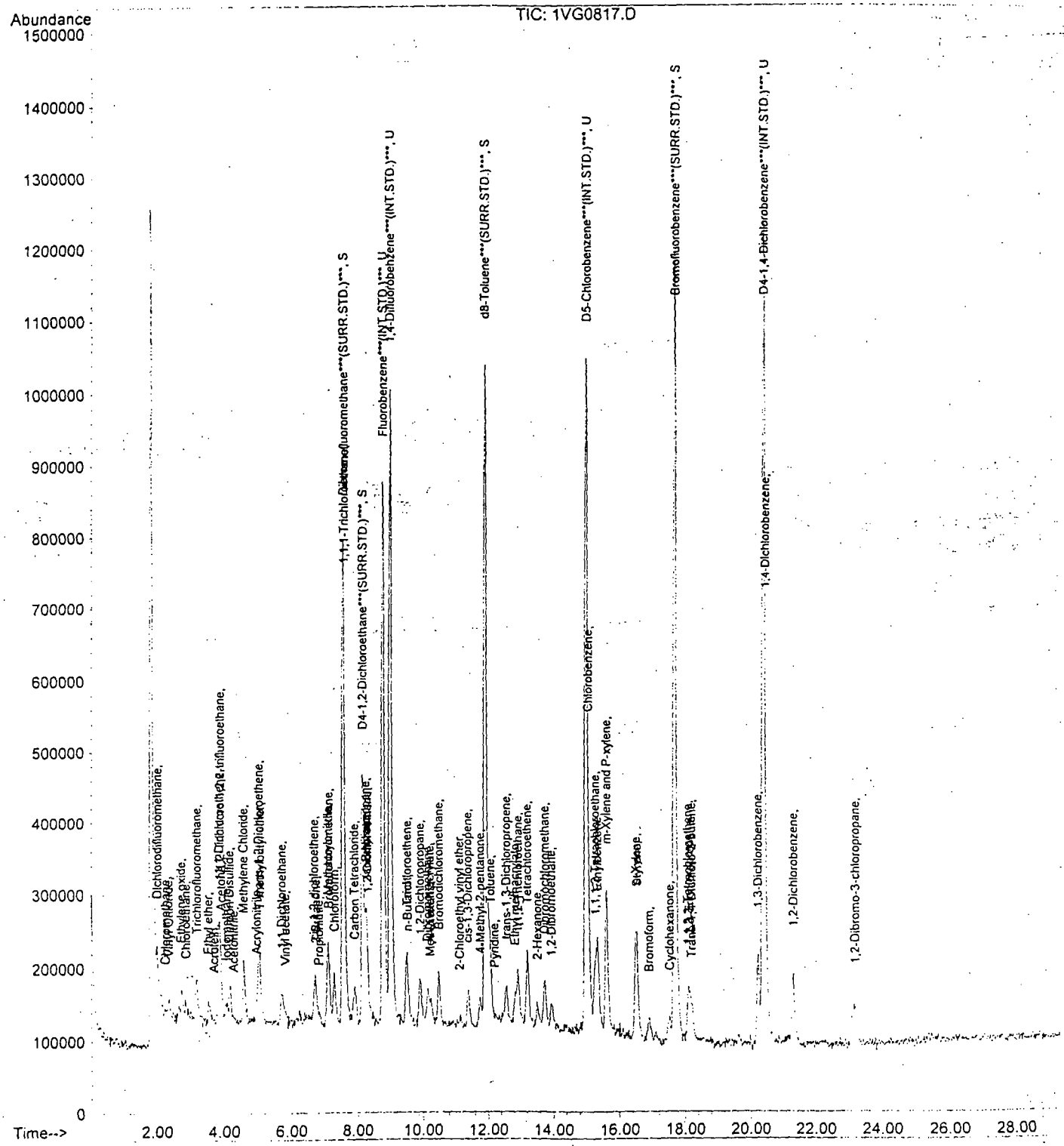
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\1VG0817.D
Acq On : 17 Aug 98 14:33
Sample :
Misc : MV473D-474D
Quant Time: Aug 17 15:20 1998

Vial: 6
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Thu Aug 13 20:29:00 1998
Response via : Multiple Level Calibration



GC/MS VC ANALYSIS LOG

ENCOTEC

INSTRUMENT 007 CONDITONS: DB-624 (75M,.53mM,3u)

Std. ID: MW 4730 · 4740

Reference Std: 1060821

Disk Space: -

Namelists: - -

VOGH2101W

VOGH2101M

©

Analyst: [signature]

Date: 8/21/96

EMV: 2376

ENCOTEC Tape Number: 5 98 0

No.	Client	Batch	Time	File Name	Matrix	pH Check	Dilution Scheme	Dil. Fact.	Voa No.	Re-runs	$MeCl_2$ Tracking	Cmpnds over Linear Rng
1	Encotec	10000	0936	1060821	n/a	n/a	n/a	n/a	3			
2	↓	↓		LCS60821	↓	↓	↓	↓	4		LCS	88932 / 89938
3	↓	↓		VMB1121G1	↓	↓	↓	↓	5		<1ppb ML	89780
4	↓	↓		VMB1121C	↓	↓	↓	↓	6		↓	(clean) %
5	↓	↓		VWB1121G1	↓	↓	↓	↓	7		<1ppb MB	89781
6	EEI	13219	1141	91984V	H_2O	<2	5ml → 10ml	1:2000	8		↓	
7	↓	↓	1212	91984VM	↓	↓	↓	↓	9		MS	
8	↓	↓	1242	91984VD	↓	↓	↓	↓	10		MSD	
9	↓	↓	1313	91983V	[illegible]	-	5g/10ml → 5ml/1ml → 200µl/10ml	1:20000	11		<1ppb	
10	↓	↓	1404	91983VM	↓	↓	↓	↓	12		MS	
11	↓	↓	1435	91983VD	↓	↓	↓	↓	13		MSD	
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												

	IS1	RT	IS2	RT	IS3	RT	IS4	RT
Upper	4545614	9.40	4740340	9.63	3810920	15.63	2239196	21.00
Lower	1136404	8.40	1185025	8.63	952333	14.63	559799	20.00

balance F33615 check: wts. n/a - -

weight set ID: S001 readings n/a - -

Re-analysis codes: B) EICPs C) Dilution D) Possible carry-over

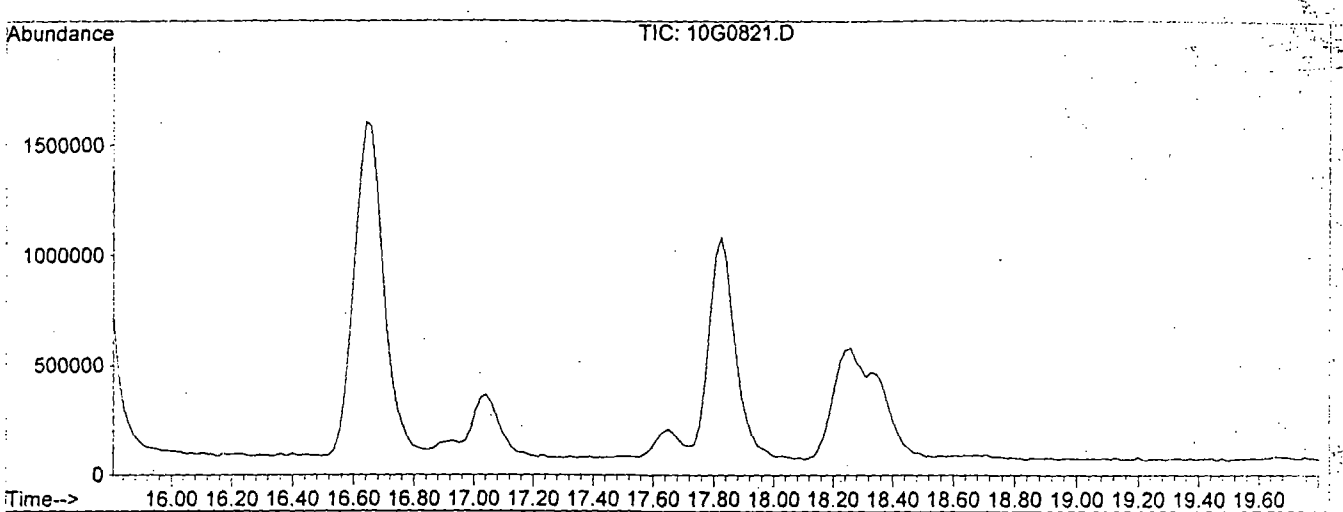
1252

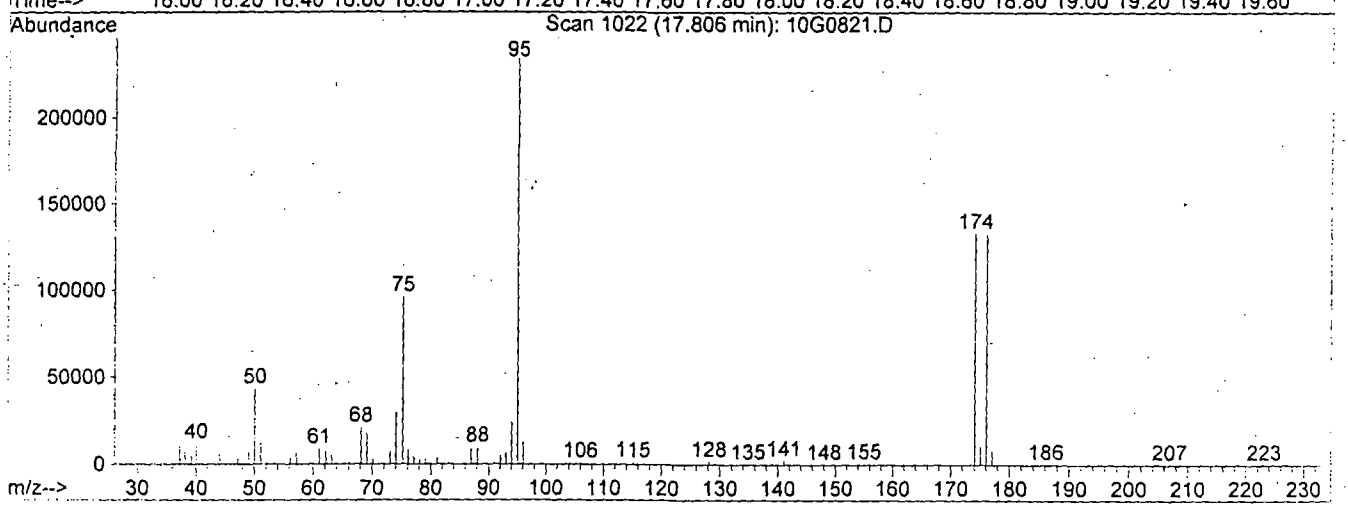
BFB

Data File : C:\HPCHEM\1\data\10G0821.D
Acq On : 21 Aug 98 9:06
Sample :
Misc : MV473D-474D

Vial: 7
Operator: mjk
Inst : 5971-007
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :





Spectrum Information: Scan 1022

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.6	43536	PASS
75	95	30	60	41.1	96296	PASS
95	95	100	100	100.0	234112	PASS
96	95	5	9	5.7	13329	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	56.8	133056	PASS
175	174	5	9	8.2	10918	PASS
176	174	95	101	99.4	132224	PASS
177	176	5	9	6.4	8467	PASS

Scan 1022 (17.806 min): 10G0821.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	2472	47.75	1414	62.10	7376	73.00	7726
37.15	11141	49.05	7241	63.10	5485	74.00	30336
38.05	9377	50.05	43536	63.90	902	75.15	96296
39.15	4922	51.10	12587	65.10	1688	76.05	8566
40.05	12130	52.20	1127	66.10	1022	77.05	5003
41.05	2894	53.00	638	67.00	1163	78.05	2610
41.95	1109	55.00	3404	68.10	21440	79.05	3186
43.15	1791	56.10	3380	69.10	18664	79.95	938
44.05	9984	57.10	6520	70.10	2924	81.05	3636
45.05	3120	60.00	1670	71.10	718	82.25	827
47.15	3479	61.00	9161	71.90	1344	83.05	1010

Scan 1022 (17.806 min): 10G0821.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.05	455	98.05	445	118.90	449	142.05	667
86.95	9075	104.10	1030	121.00	418	142.75	584
88.05	9891	104.80	668	126.85	417	148.00	506
89.05	688	106.00	1083	127.15	425	149.00	419
90.95	1069	107.10	516	128.15	1875	152.10	415
92.05	5132	111.00	825	129.05	800	155.00	771
93.05	6857	112.10	510	129.95	593	159.00	567
94.05	24736	113.00	500	134.85	406	168.20	840
95.05	234112	115.10	1386	139.05	1235	174.05	133056
96.05	13329	115.70	505	139.95	767	175.05	10918
96.85	554	117.00	1034	141.05	2516	176.05	132224

Scan 1022 (17.806 min): 10G0821.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.05	8467						
185.25	512						
186.15	605						
201.00	406						
206.90	410						
223.15	516						

GC/MS VOLATILE 5 WAY CALIBRATION

Page:

Instrument ID: 5971-007

Initial Calibration Date: 8/17/98

Continuing Calibration Date: 8/21/98

Continuing File Name: 10G0821.D

STD	FILE:	STD	FILE:	STD	FILE:
10	10VG0817.D	25	25VG0817.D	1.0	1VG0817.D
50	50VG0817.D	5.0	5VG0817.D		

Compound	1.0	5.0	10	25	50	RF avg.	% RSD	RF Cont	Cont Rec	% Drift	CCC/SPCC
Chloromethane	0.291	0.288	0.255	0.283	0.299	0.283		0.250			**
Vinyl Chloride	0.261	0.261	0.243	0.274	0.272	0.262	4.8		10.01	0.1	*
1,1-Dichloroethene	0.330	0.271	0.248	0.282	0.272	0.281	11		9.70	3.0	*
1,1-Dichloroethane	0.573	0.642	0.580	0.615	0.588	0.600		0.576			**
Chloroform	0.624	0.585	0.584	0.625	0.614	0.607	3.4		9.81	1.9	*
1,2-Dichloropropane	0.294	0.321	0.306	0.331	0.328	0.316	4.9		9.42	5.8	*
Bromoform	0.287	0.279	0.305	0.364	0.365	0.320		0.242			**
1,1,2,2-Tetrachloroethane	0.767	0.733	0.764	0.806	0.557	0.725		0.582			**
Toluene	1.260	1.053	1.029	1.140	1.140	1.124	8.1		10.39	3.9	*
Chlorobenzene	0.891	0.845	0.889	0.944	0.929	0.900		0.910			**
Ethylbenzene	0.422	0.351	0.377	0.418	0.414	0.397	7.8		10.29	2.9	*

* = CCC - Calibration Check Compound: %RSD < 30 for initial calibration; % Diff. < 20.0 for continuing calibration. Meets criteria for 8260B

** = SPCC - System Performance Check Compound: Minimum avg. RF > .100 & 0.300 for Chlorobenzene and 1,1,2,2-Tetrachloroethane

% RSD = Relative Standard Deviation

% Drift = (Cont. Cal. Std Conc. - Recovery Conc. / Cont. Cal. Std. Conc. Rec. x 100)

EICPS:	IS1	RT1	IS2	RT2	IS3	RT3	IS4	RT4
UPPER	4545614	9.40	4740340	9.63	3810930	15.63	2239196	21.05
LOWER	1136404	8.40	1185085	8.63	952733	14.63	559799	20.05

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\10G0821.D
Acq On : 21 Aug 98 9:06
Sample :
Misc : MV473D-474D

Vial: 7
Operator: mjk
Inst : 5971-007
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	U	Fluorobenzene***(INT.STD.)*	1.000	1.000	0.0	102	0.10
2		Dichlorodifluoromethane	0.361	0.340	5.8	107	0.02
3		Chloromethane	0.283	0.250	11.7	101	0.00
4		Vinyl Chloride	0.262	0.262	0.0	111	0.03
5		Ethylene oxide	0.087	0.051	41.4#	105	0.02
6		Bromomethane	0.254	0.225	11.4	96	0.02
7		Chloroethane	0.174	0.167	4.0	104	0.00
8		Trichlorofluoromethane	0.565	0.590	-4.4	117	0.02
9		Ethyl ether	0.192	0.142	26.0#	81	0.07
10		Acrolein	0.022	0.017	22.7	76	0.05
11		1,1-Dichloroethene	0.281	0.272	3.2	113	0.05
12		1,1,2-Trichloro-1,2,2-trifl	0.357	0.371	-3.9	117	0.05
13		Acetone	0.059	0.035	40.7#	81	0.09
14		Iodomethane	0.353	0.500	-41.6#	142	0.05
15		Carbon Disulfide	0.838	0.846	-1.0	112	0.07
16		Acetonitrile	0.014	0.009	35.7#	67	0.12
17		Methylene Chloride	0.350	0.299	14.6	101	0.07
18		trans-1,2-Dichloroethene	0.353	0.335	5.1	104	0.07
19		T-methylbutyl ether	0.669	0.515	23.0	79	0.07
20		Acrylonitrile	0.052	0.035	32.7#	68	0.09
21		1,1-Dichloroethane	0.600	0.576	4.0	102	0.07
22		Vinyl acetate	0.282	0.217	23.0	81	0.09
23		cis-1,2-dichloroethene	0.338	0.326	3.6	105	0.10
24		2-Butanone	0.085	0.051	40.0#	60	0.10
25	U	1,4-Difluorobenzene***(INT.	1.000	1.000	0.0	100	0.10
26		Propionitrile	0.018	0.011	38.9#	68	0.09
27		Bromochloromethane	0.154	0.146	5.2	96	0.09
28		Methacrylonitrile	0.062	0.044	29.0#	73	0.09
29		Chloroform	0.607	0.595	2.0	102	0.09
30		1,2-Dichloroethane	0.330	0.280	15.2	87	0.09
31	S	Dibromofluoromethane***(SUR	0.543	0.503	7.4	92	0.09
32		1,1,1-Trichloroethane	0.500	0.530	-6.0	113	0.09
33		Carbon Tetrachloride	0.468	0.485	-3.6	109	0.09
34	S	D4-1,2-Dichloroethane***(SU	0.300	0.264	12.0	87	0.09
35		Benzene	0.844	0.856	-1.4	104	0.10
36		2-Nitropropane	0.206	0.111	46.1#	53	0.12
37		Isobutyl alcohol	0.002	0.002	0.0	81	0.09
38		n-Butanol	0.006	0.003	50.0#	53	0.12
39		1,2-Dichloropropane	0.316	0.298	5.7	97	0.10
40		Methyl methacrylate	0.155	0.106	31.6#	69	0.14

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\10G0821.D
Acq On : 21 Aug 98 9:06
Sample :
Misc : MV473D-474D

Vial: 7
Operator: mjk
Inst : 5971-007
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41		Dibromomethane	0.239	0.192	19.7	84	0.10
42		1,4-Dioxane	0.002	0.001	50.0#	57	0.10
43		Trichloroethene	0.393	0.374	4.8	103	0.09
44		Bromodichloromethane	0.622	0.580	6.8	96	0.10
45		cis-1,3-Dichloropropene	0.490	0.464	5.3	96	0.12
46		2-Chloroethyl vinyl ether	0.075	0.091	-21.3	158#	0.12
47		4-Methyl-2-pentanone	0.206	0.131	36.4#	65	0.10
48		Pyridine	0.005	0.000	100.0#	3#	0.24
49	U	D5-Chlorobenzene***(INT.STD	1.000	1.000	0.0	92	0.12
50	S	d8-Toluene***(SURR.STD.)***	1.067	1.094	-2.5	101	0.12
51		Toluene	1.124	1.169	-4.0	104	0.10
52		trans-1,3-Dichloropropene	0.486	0.435	10.5	90	0.10
53		Ethyl methacrylate	0.402	0.302	24.9	73	0.12
54		1,1,2-Trichloroethane	0.335	0.286	14.6	83	0.12
55		Tetrachloroethene	0.389	0.430	-10.5	113	0.14
56		2-Hexanone	0.166	0.093	44.0#	56	0.12
57		Dibromochloromethane	0.517	0.443	14.3	87	0.12
58		1,2-Dibromoethane	0.432	0.377	12.7	82	0.14
59		Chlorobenzene	0.900	0.910	-1.1	94	0.12
60		1,1,1,2-Tetrachloroethane	0.437	0.414	-5.3	93	0.14
61		Ethylbenzene	0.397	0.408	-2.8	99	0.14
62		m-Xylene and P-xylene	0.530	0.543	-2.5	101	0.14
63		o-Xylene	0.511	0.517	-1.2	98	0.12
64		Styrene	0.884	0.870	1.6	93	0.12
65		Bromoform	0.320	0.242	24.4	73	0.12
66		Cyclohexanone	0.022	0.009	59.1#	41#	0.14
67	U	D4-1,4-Dichlorobenzene***(I	1.000	1.000	0.0	90	0.16
68	S	Bromofluorobenzene***(SURR.	1.319	1.369	-3.8	94	0.14
69		1,1,2,2-Tetrachloroethane	0.725	0.582	19.7	69	0.14
70		1,2,3-Trichloropropane	0.264	0.190	28.0#	76	0.14
71		Trans-1,4-Dichloro-2-butene	0.056	0.047	16.1	70	0.16
72		1,3-Dichlorobenzene	1.329	1.375	-3.5	95	0.16
73		1,4-Dichlorobenzene	1.413	1.441	-2.0	92	0.16
74		1,2-Dichlorobenzene	1.243	1.212	2.5	88	0.14
75		1,2-Dibromo-3-chloropropane	0.158	0.109	31.0#	58	0.12

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\data\10G0821.D
Acq On : 21 Aug 98 9:06
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 9:32 1998

Vial: 7
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.90	96	2272807	10.00	ng/mL	0.10
25) 1,4-Difluorobenzene***(INT	9.13	114	2370170	10.00	ng/mL	0.10
49) D5-Chlorobenzene***(INT.ST	15.13	117	1905465	10.00	ng/mL	0.12
67) D4-1,4-Dichlorobenzene***(	20.55	152	1119598	10.00	ng/mL	0.16
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.67	113	1193369	9.28	ng/ml	0.09
Surrogate Spike 10.000			Recovery	=	92.80%	
34) D4-1,2-Dichloroethane***(S	8.26	65	624839	8.78	ng/ml	0.09
Surrogate Spike 10.000			Recovery	=	87.80%	
50) d8-Toluene***(SURR.STD.)**	12.05	98	2084254	10.25	ng/ml	0.12
Surrogate Spike 10.000			Recovery	=	102.50%	
68) Bromofluorobenzene***(SURR	17.82	95	1532187	10.37	ng/ml	0.14
Surrogate Spike 10.000			Recovery	=	103.70%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.03	85	773277	9.41	ng/mL	98
3) Chloromethane	2.26	50	569027	8.84	ng/ml	96
4) Vinyl Chloride	2.38	62	596610	10.01	ng/ml	98
5) Ethylene oxide	2.74	44	115156	5.80	ng/mL#	100
6) Bromomethane	2.74	94	511862	9.64	ng/ml	95
7) Chloroethane	2.87	64	380668	9.64	ng/ml	94
8) Trichlorofluoromethane	3.21	101	1339981	10.44	ng/mL	99
9) Ethyl ether	3.61	59	322271	7.38	ng/mL#	98
10) Acrolein	3.77	56	197064	36.67	ng/mL	90
11) 1,1-Dichloroethene	3.93	96	618591	9.70	ng/ml	99
12) 1,1,2-Trichloro-1,2,2-trif	3.94	151	843680	10.41	ng/mL	98
13) Acetone	4.01	43	158950	14.22	ng/ml#	85
14) Iodomethane	4.14	142	1136191	14.17	ng/mL	97
15) Carbon Disulfide	4.24	76	1922642	10.09	ng/ml#	83
16) Acetonitrile	4.41	41	97711	30.28	ng/mL#	86
17) Methylene Chloride	4.66	84	680123	9.38	ng/ml	96
18) trans-1,2-Dichloroethene	5.11	96	760529	9.47	ng/ml	97
19) T-methylbutyl ether	5.14	73	1170982	7.70	ng/mL	99
20) Acrylonitrile	5.06	53	397993	33.62	ng/mL	97
21) 1,1-Dichloroethane	5.79	63	1308449	9.60	ng/ml	98
22) Vinyl acetate	5.91	43	493828	7.71	ng/mL	98
23) cis-1,2-dichloroethene	6.80	96	741550	9.66	ng/ml	97
24) 2-Butanone	6.85	43	229642	11.93	ng/ml#	93
26) Propionitrile	6.92	54	129721	31.77	ng/mL#	93
27) Bromochloromethane	7.21	128	346819	9.53	ng/ml	98
28) Methacrylonitrile	7.20	67	518855	35.29	ng/mL	97

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\data\10G0821.D
Acq On : 21 Aug 98 9:06
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 9:32 1998

Vial: 7
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	Chloroform	7.39	83	1410045	9.81	ng/ml	98
30)	1,2-Dichloroethane	8.40	62	663495	8.47	ng/ml	98
32)	1,1,1-Trichloroethane	7.68	97	1256291	10.60	ng/ml	99
33)	Carbon Tetrachloride	8.00	117	1149178	10.35	ng/ml	99
35)	Benzene	8.36	78	2028480	10.14	ng/ml	97
36)	2-Nitropropane	8.38	43	527175	10.78	ng/mL#	85
37)	Isobutyl alcohol	8.38	74	179437	373.36	ng/mL#	45
38)	n-Butanol	9.67	56	68050	47.05	ng/mL#	1
39)	1,2-Dichloropropane	10.03	63	705838	9.42	ng/ml	98
40)	Methyl methacrylate	10.36	69	250384	6.80	ng/mL#	97
41)	Dibromomethane	10.26	93	455686	8.04	ng/mL#	99
42)	1,4-Dioxane	10.34	88	125379	266.62	ng/mL	92
43)	Trichloroethene	9.61	130	885857	9.52	ng/ml	98
44)	Bromodichloromethane	10.61	83	1374729	9.32	ng/ml	100
45)	cis-1,3-Dichloropropene	11.51	75	1099061	9.47	ng/ml	99
46)	2-Chloroethyl vinyl ether	11.25	63	214678	13.93	ng/mL#	58
47)	4-Methyl-2-pentanone	11.88	43	618727	12.70	ng/ml	98
48)	Pyridine	12.45	79	25698	19.74	ng/mL#	100
51)	Toluene	12.19	91	2226983	10.39	ng/ml	99
52)	trans-1,3-Dichloropropene	12.68	75	828809	8.96	ng/ml	99
53)	Ethyl methacrylate	12.95	69	576209	7.53	ng/mL#	94
54)	1,1,2-Trichloroethane	13.06	97	545653	8.55	ng/ml	99
55)	Tetrachloroethene	13.35	164	819158	11.05	ng/ml	97
56)	2-Hexanone	13.65	43	355278	11.44	ng/ml#	93
57)	Dibromochloromethane	13.88	129	844387	8.58	ng/ml	99
58)	1,2-Dibromoethane	14.08	107	718601	8.73	ng/ml	99
59)	Chlorobenzene	15.18	112	1733539	10.11	ng/ml	99
60)	1,1,1,2-Tetrachloroethane	15.41	131	788443	9.48	ng/mL	93
61)	Ethylbenzene	15.48	106	777608	10.29	ng/ml	95
62)	m-Xylene and P-xylene	15.75	106	2069846	20.49	ng/ml	99
63)	o-Xylene	16.62	106	984890	10.12	ng/ml	97
64)	Styrene	16.66	104	1658214	9.85	ng/ml	99
65)	Bromoform	17.02	173	461373	7.56	ng/ml	98
66)	Cyclohexanone	17.67	98	84948	18.78	ng/ml#	80
69)	1,1,2,2-Tetrachloroethane	18.22	83	651856	8.03	ng/mL	99
70)	1,2,3-Trichloropropane	18.28	110	212698	7.68	ng/mL#	84
71)	Trans-1,4-Dichloro-2-buten	18.35	88	105892	16.83	ng/mL#	91
72)	1,3-Dichlorobenzene	20.38	146	1538946	10.34	ng/ml	98
73)	1,4-Dichlorobenzene	20.61	146	1613592	10.20	ng/ml	99
74)	1,2-Dichlorobenzene	21.46	146	1356417	9.75	ng/ml	98
75)	1,2-Dibromo-3-chloropropan	23.30	75	243033	13.74	ng/ml	91

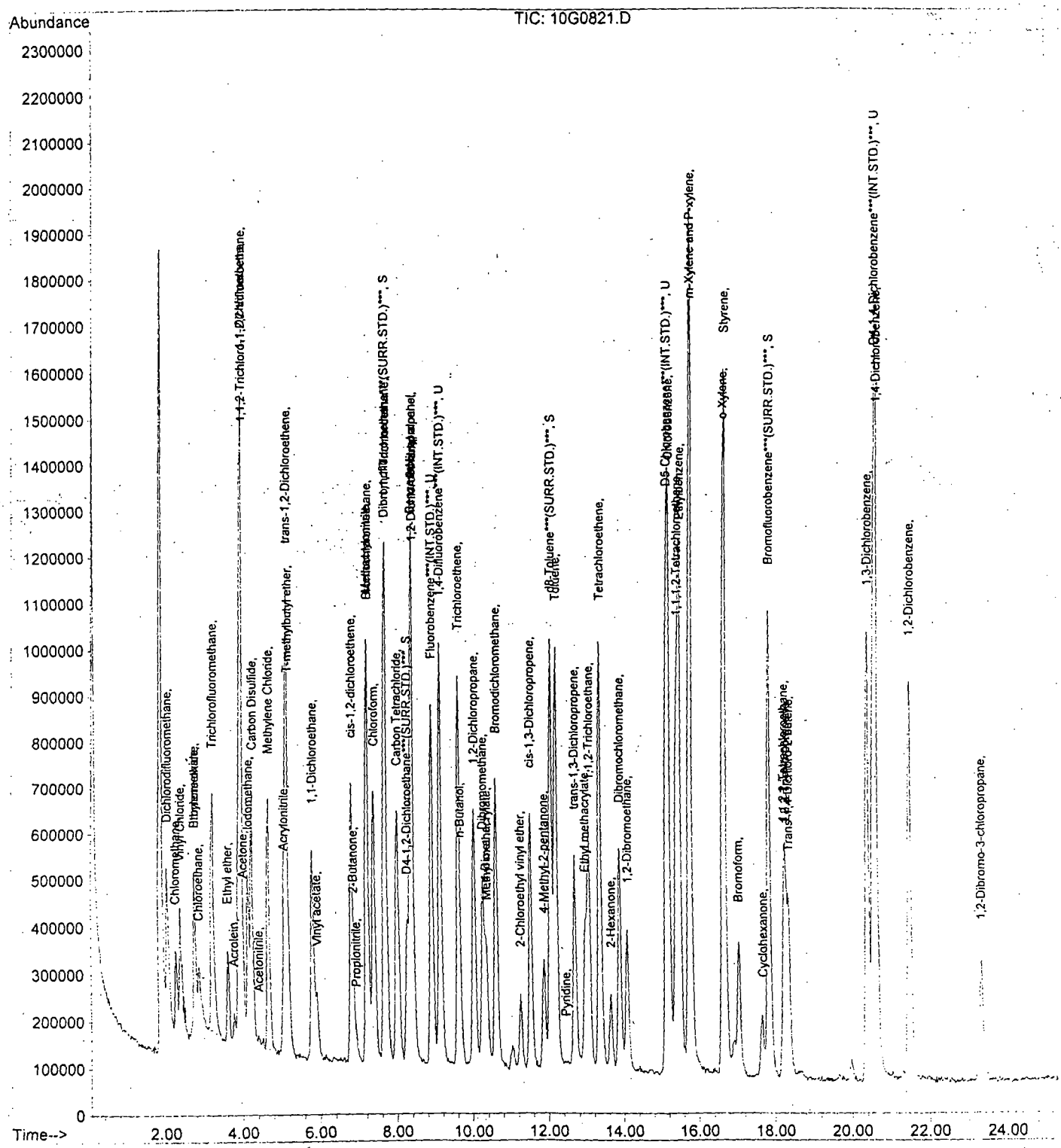
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\data\10G0821.D
Acq On : 21 Aug 98 9:06
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 9:32 1998

Vial: 7
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\VWBH21G1.D
Acq On : 21 Aug 98 11:11
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 11:38 1998

Vial: 11
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

89781

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

X1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.06	96	2157730	10.00	ng/mL	0.27
25) 1,4-Difluorobenzene***(INT	9.29	114	2274704	10.00	ng/mL	0.27
49) D5-Chlorobenzene***(INT.ST	15.27	117	1844228	10.00	ng/mL	0.27
67) D4-1,4-Dichlorobenzene***(	20.66	152	1106015	10.00	ng/mL	0.27
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.83	113	1175598	9.52	ng/ml	0.25
Surrogate Spike 10.000			Recovery	=	95.20%	
34) D4-1,2-Dichloroethane***(S	8.42	65	580599	8.51	ng/ml	0.25
Surrogate Spike 10.000			Recovery	=	85.10%	
50) d8-Toluene***(SURR.STD.)**	12.21	98	2039120	10.36	ng/ml	0.28
Surrogate Spike 10.000			Recovery	=	103.60%	
68) Bromofluorobenzene***(SURR	17.97	95	1489004	10.21	ng/ml	0.28
Surrogate Spike 10.000			Recovery	=	102.10%	

Target Compounds Qvalue

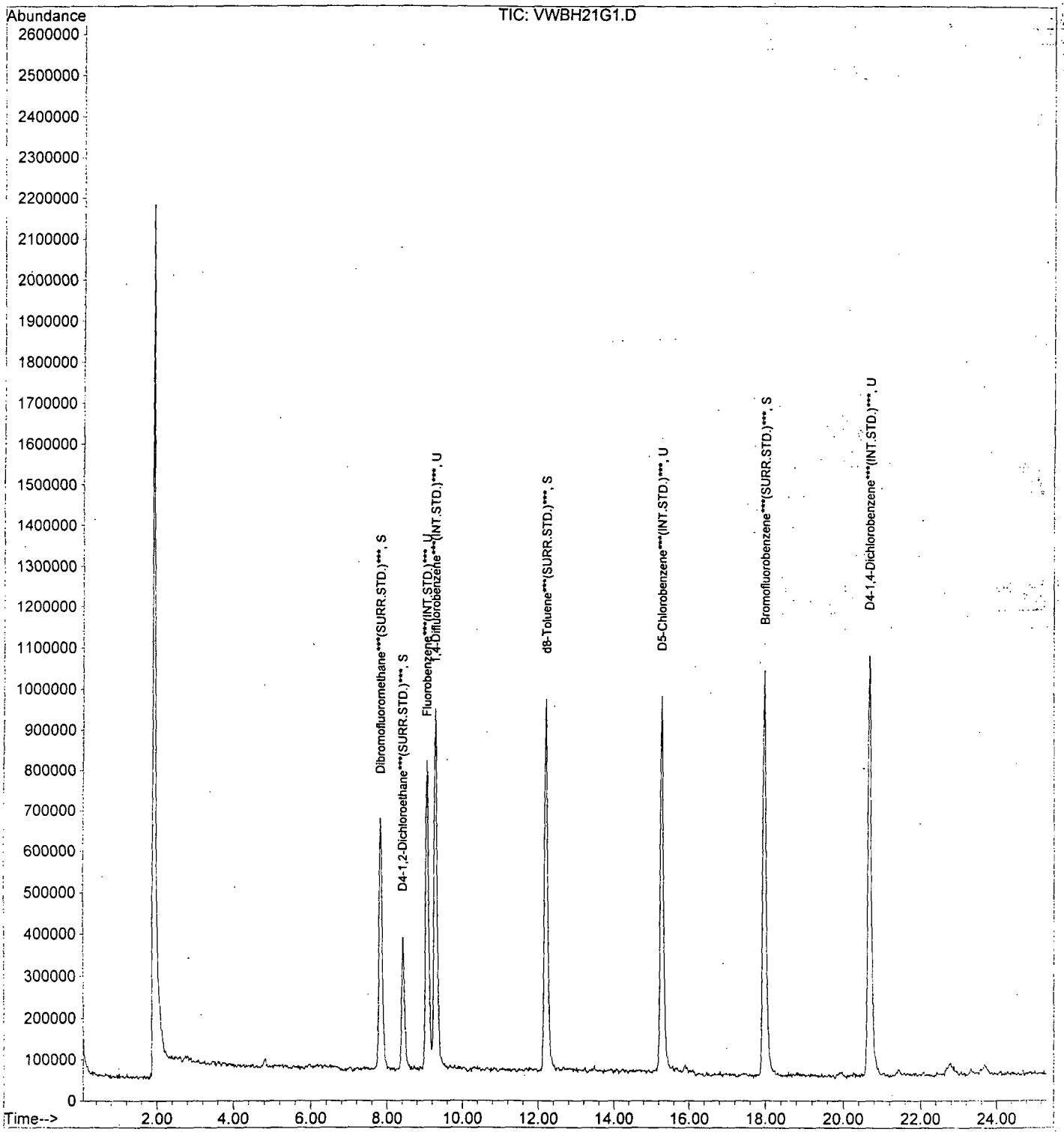
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\VWBH21G1.D
Acq On : 21 Aug 98 11:11
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 11:38 1998

Vial: 11
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\VMBH21G1.D
Acq On : 21 Aug 98 10:10
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:40 1998

Vial: 9
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.03	96	2135724	10.00	ng/mL	0.23
25) 1,4-Difluorobenzene***(INT	9.25	114	2250045	10.00	ng/mL	0.23
49) D5-Chlorobenzene***(INT.ST	15.26	117	1854241	10.00	ng/mL	0.25
67) D4-1,4-Dichlorobenzene***(	20.65	152	1090063	10.00	ng/mL	0.25
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.79	113	1128689	9.25	ng/ml	0.21
Surrogate Spike 10.000			Recovery	=	92.50%	
34) D4-1,2-Dichloroethane***(S	8.39	65	562811	8.33	ng/ml	0.21
Surrogate Spike 10.000			Recovery	=	83.30%	
50) d8-Toluene***(SURR.STD.)**	12.18	98	2014094	10.18	ng/ml	0.25
Surrogate Spike 10.000			Recovery	=	101.80%	
68) Bromofluorobenzene***(SURR	17.93	95	1451456	10.09	ng/ml	0.25
Surrogate Spike 10.000			Recovery	=	100.90%	

Target Compounds Qvalue

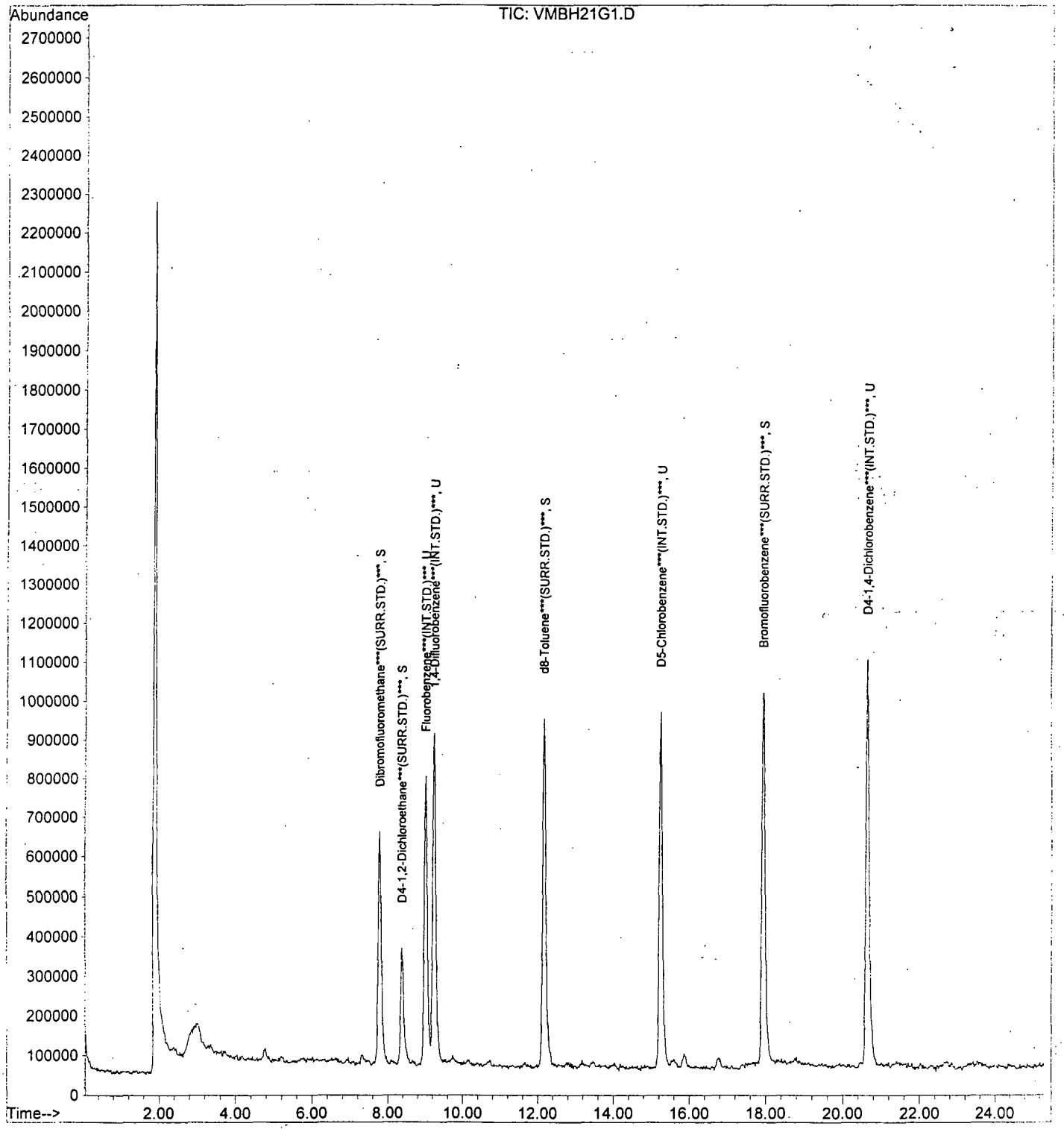
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\VMBH21G1.D
Acq On : 21 Aug 98 10:10
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:40 1998

Vial: 9
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91984V.D
Acq On : 21 Aug 98 11:41
Sample : 1:2000
Misc : MV473D-474D
Quant Time: Aug 21 12:11 1998

Vial: 12
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

X2000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.06	96	1952993	10.00	ng/mL	0.27
25) 1,4-Difluorobenzene***(INT	9.29	114	2100128	10.00	ng/mL	0.27
49) D5-Chlorobenzene***(INT.ST	15.31	117	1806978	10.00	ng/mL	0.30
67) D4-1,4-Dichlorobenzene***(	20.68	152	1029253	10.00	ng/mL	0.28
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.83	113	1048963	9.21	ng/ml	0.25
Surrogate Spike 10.000			Recovery	=	92.10%	
34) D4-1,2-Dichloroethane***(S	8.42	65	569255	9.03	ng/ml	0.25
Surrogate Spike 10.000			Recovery	=	90.30%	
50) d8-Toluene***(SURR.STD.)**	12.21	98	1920777	9.96	ng/ml	0.28
Surrogate Spike 10.000			Recovery	=	99.60%	
68) Bromofluorobenzene***(SURR	17.99	95	1396953	10.29	ng/ml	0.30
Surrogate Spike 10.000			Recovery	=	102.90%	
Target Compounds						Qvalue
13) Acetone	4.14	43	20920	2.39	ng/ml#	86
19) T-methylbutyl ether	5.31	73	339400	2.60	ng/mL#	75
30) 1,2-Dichloroethane	8.58	62	133790	1.93	ng/ml#	84
35) Benzene	8.54	78	1595691	9.01	ng/ml#	94
51) Toluene	12.35	91	3550876	17.48	ng/ml	98
61) Ethylbenzene	15.65	106	83046	1.16	ng/ml	100
62) m-Xylene and P-xylene	15.92	106	747348	7.80	ng/ml	100
63) o-Xylene	16.80	106	299191	3.24	ng/ml	100

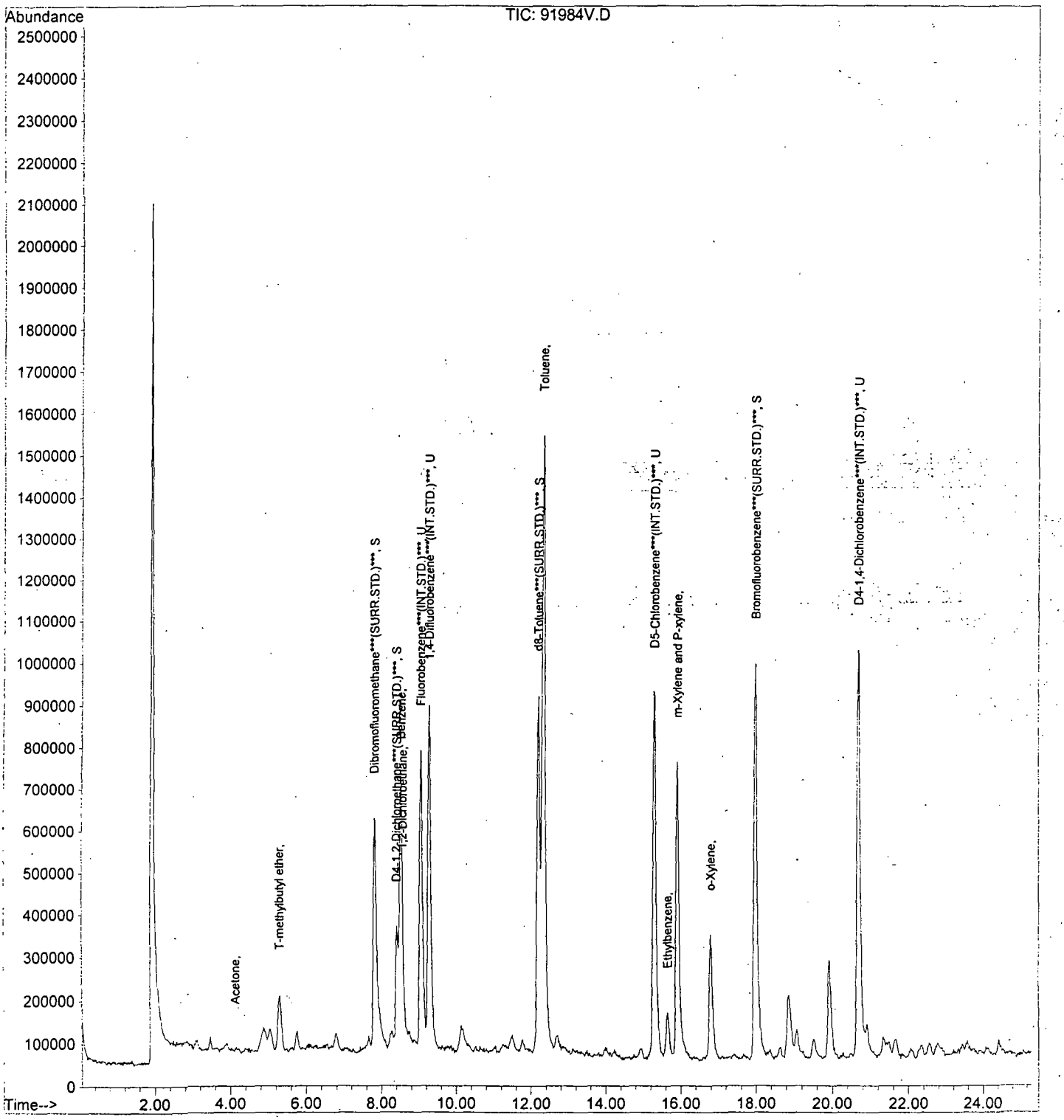
(#) = qualifier out of range (m) = manual integration

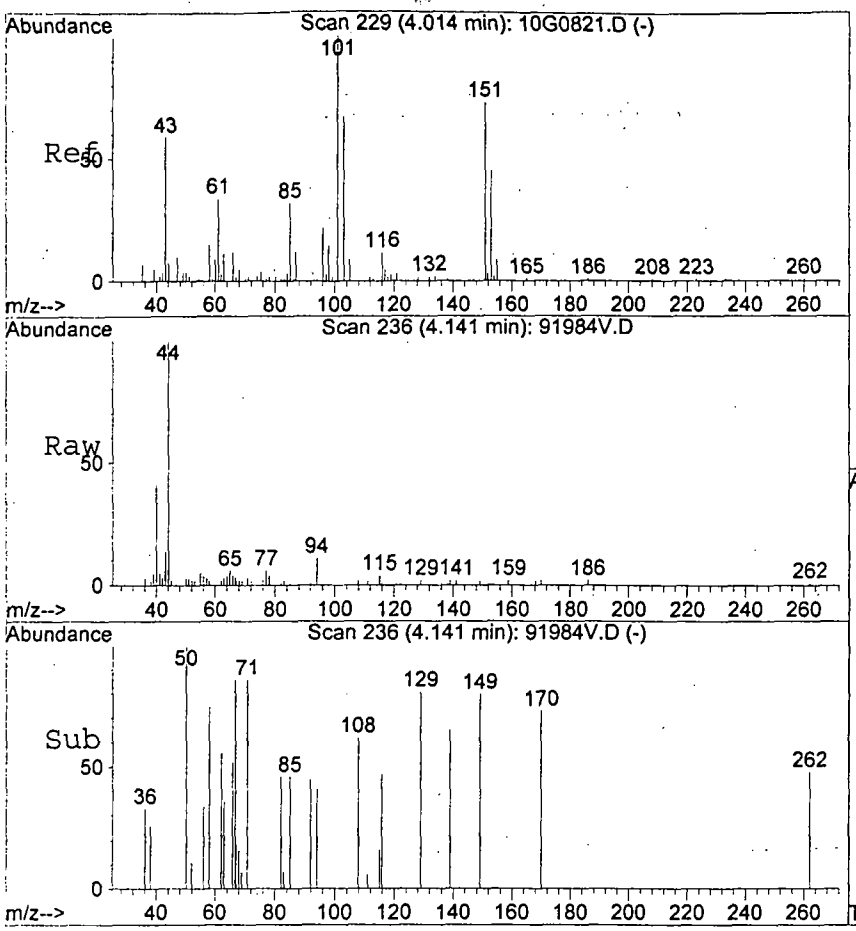
Quantitation Report

Data File : C:\HPCHEM\1\DATA\91984V.D
Acq On : 21 Aug 98 11:41
Sample : 1:2000
Misc : MV473D-474D
Quant Time: Aug 21 12:11 1998

Vial: 12
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration

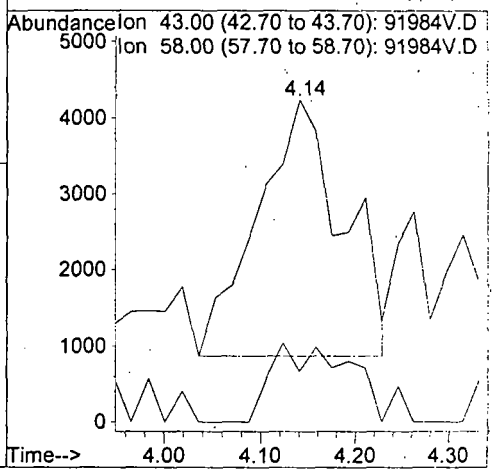


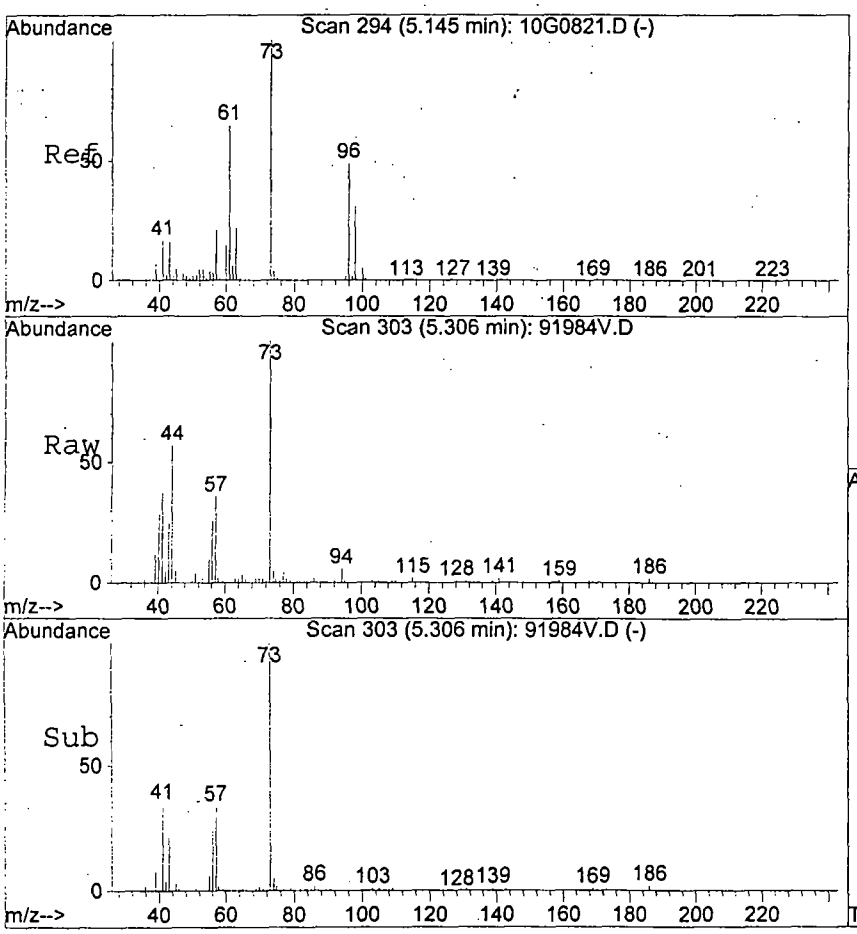


#13
Acetone
Concen: 2.39 ng/ml
RT: 4.14 min Scan# 236
Delta R.T. 0.21 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:43 Resp: 20920

Ion	Ratio	Lower	Upper
43	100		
58	29.7	30.4	45.6#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

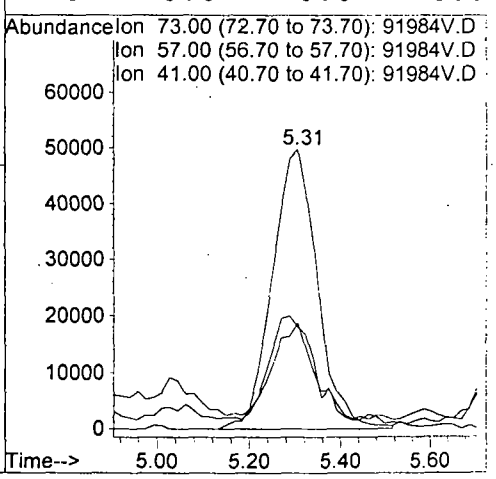




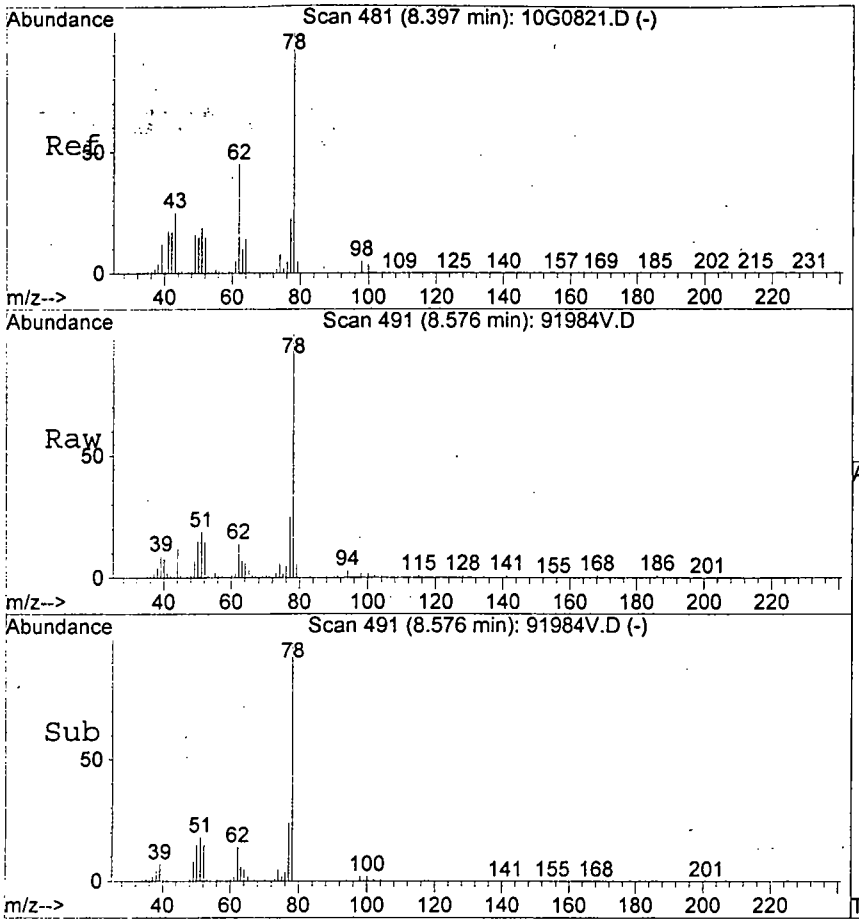
#19
T-methylbutyl ether
Concen: 2.60 ng/mL
RT: 5.31 min Scan# 303
Delta R.T. 0.23 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:73 Resp: 339400

Ion	Ratio	Lower	Upper
73	100		
57	37.1	19.1	28.7#
41	31.7	16.6	25.0#
0	0.0	0.0	0.0



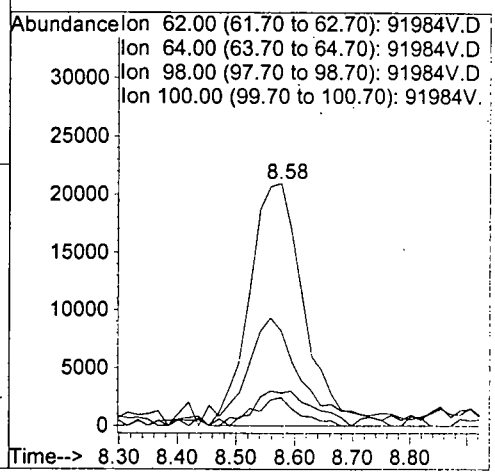
Sample: 1:2000 Analyst: mjk Instrument: 5971-007
91984V.D VOALOW.M Fri Aug 21 12:12:25 1998

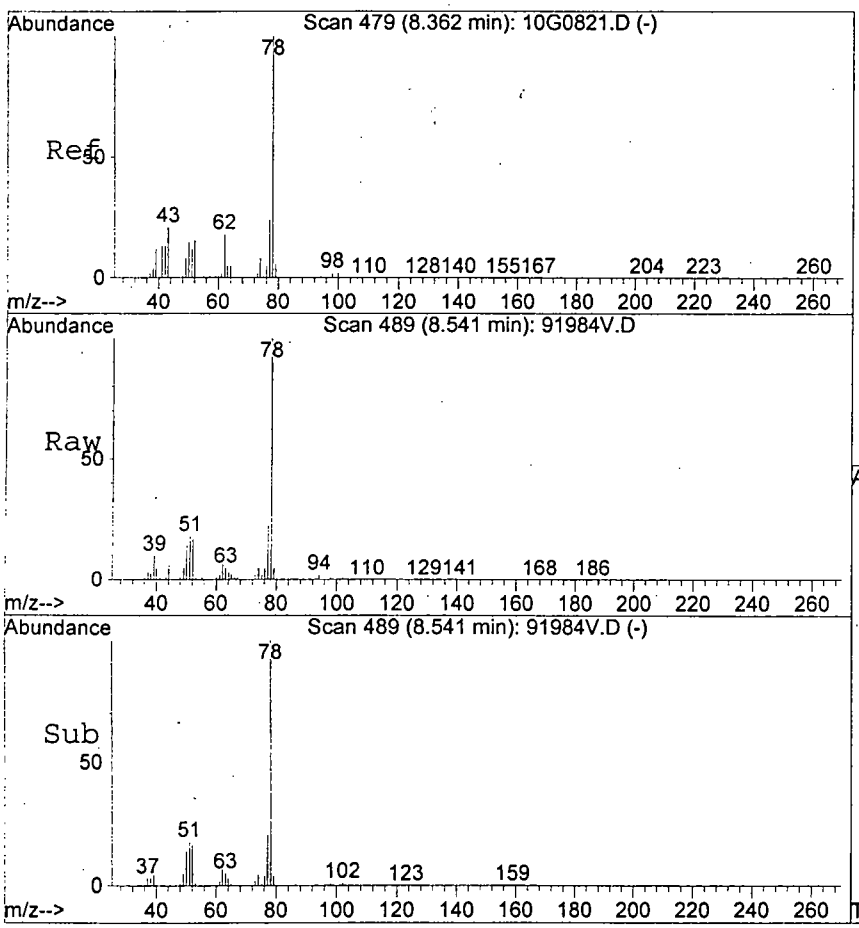


#30
1,2-Dichloroethane
Concen: 1.93 ng/ml
RT: 8.58 min Scan# 491
Delta R.T. 0.27 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:62 Resp: 133790

Ion	Ratio	Lower	Upper
62	100		
64	46.1	27.1	40.7#
98	16.0	10.4	15.6#
100	9.9	6.0	9.0#

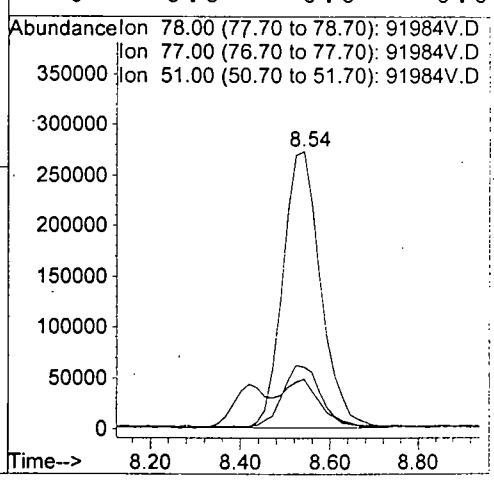




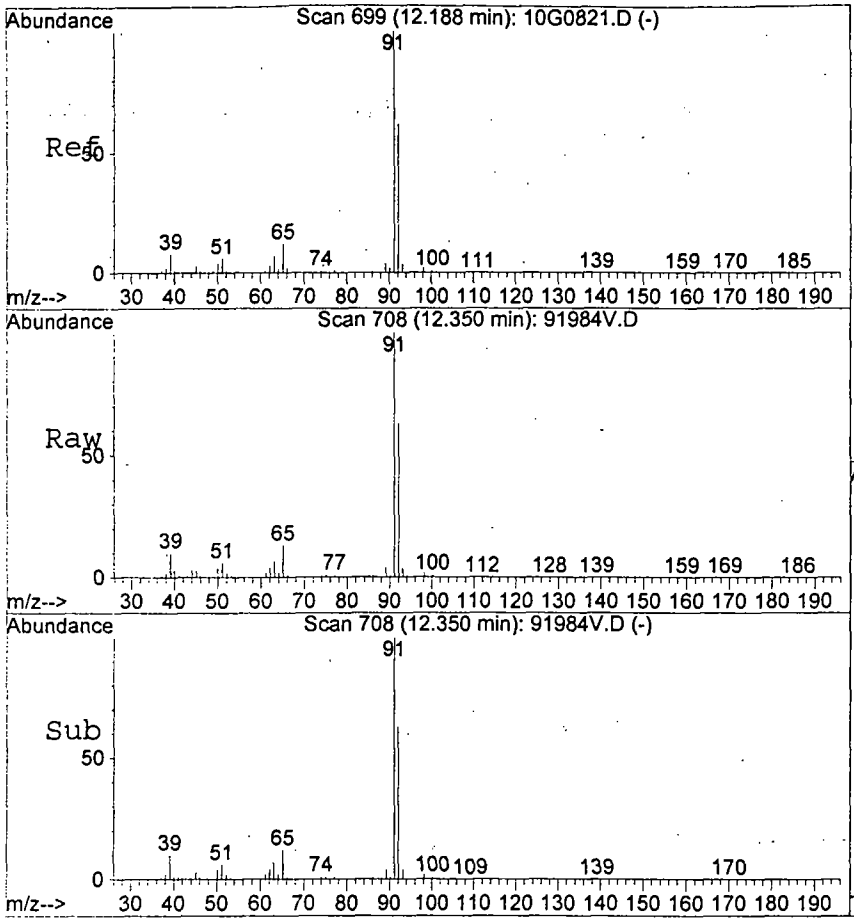
#35
Benzene
Concen: 9.01 ng/ml
RT: 8.54 min Scan# 489
Delta R.T. 0.28 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:78 Resp: 1595691

Ion	Ratio	Lower	Upper
78	100		
77	23.0	17.1	25.7
51	16.9	17.0	25.4#
0	0.0	0.0	0.0



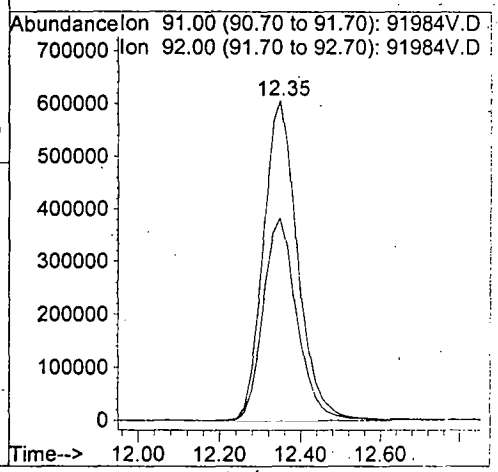
Sample: 1:2000 Analyst: mjk Instrument: 5971-007
91984V.D VOALOW.M Fri Aug 21 12:12:28 1998

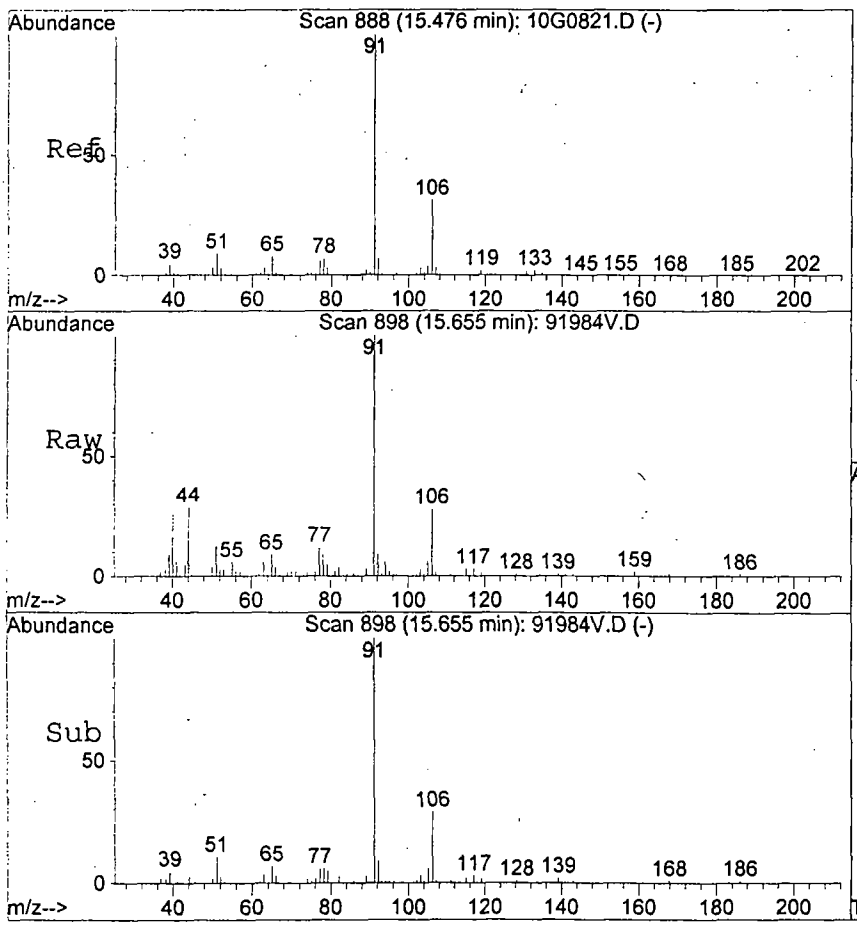


#51
Toluene
Concen: 17.48 ng/ml
RT: 12.35 min Scan# 708
Delta R.T. 0.27 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:91 Resp: 3550876

Ion	Ratio	Lower	Upper
91	100		
92	63.0	49.0	73.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

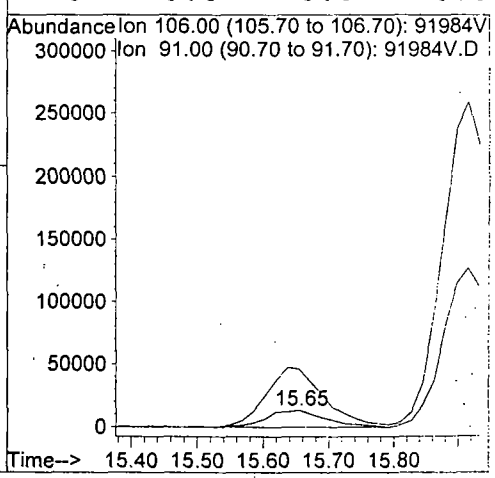


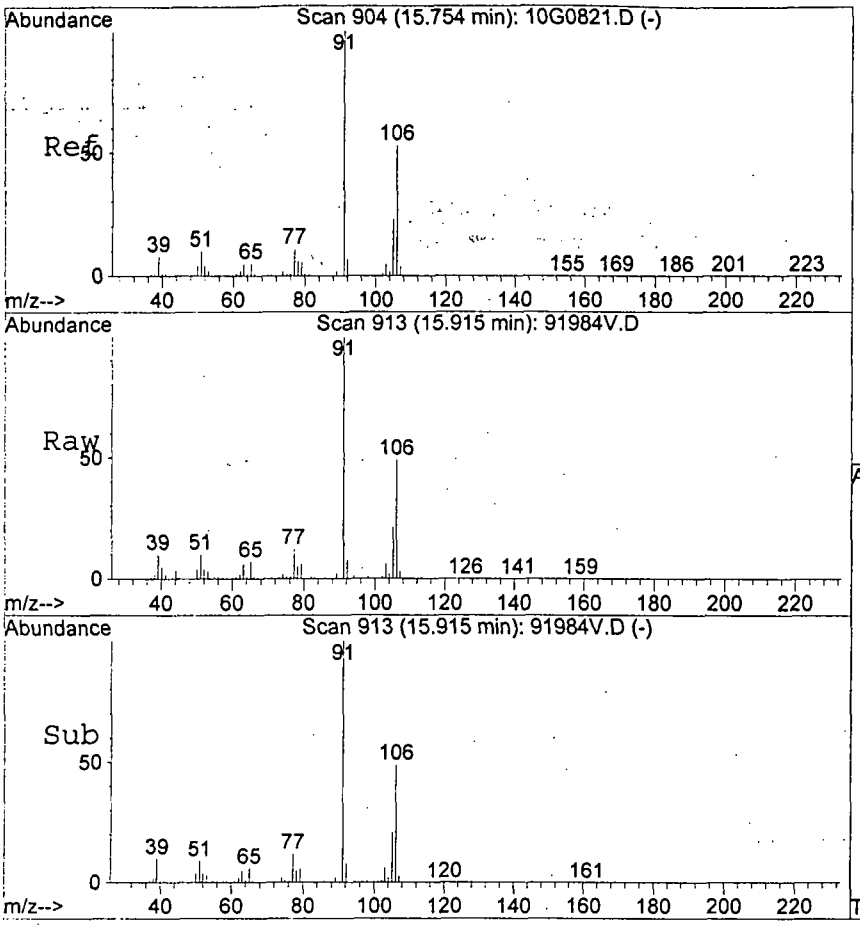


#61
Ethylbenzene
Concen: 1.16 ng/ml
RT: 15.65 min Scan# 898
Delta R.T. 0.32 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:106 Resp: 83046

Ion	Ratio	Lower	Upper
106	100		
91	351.9	281.1	421.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

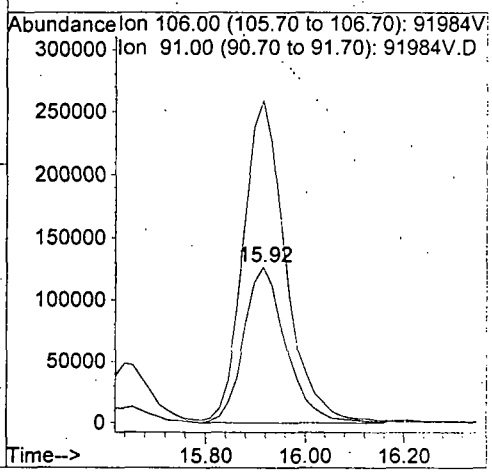


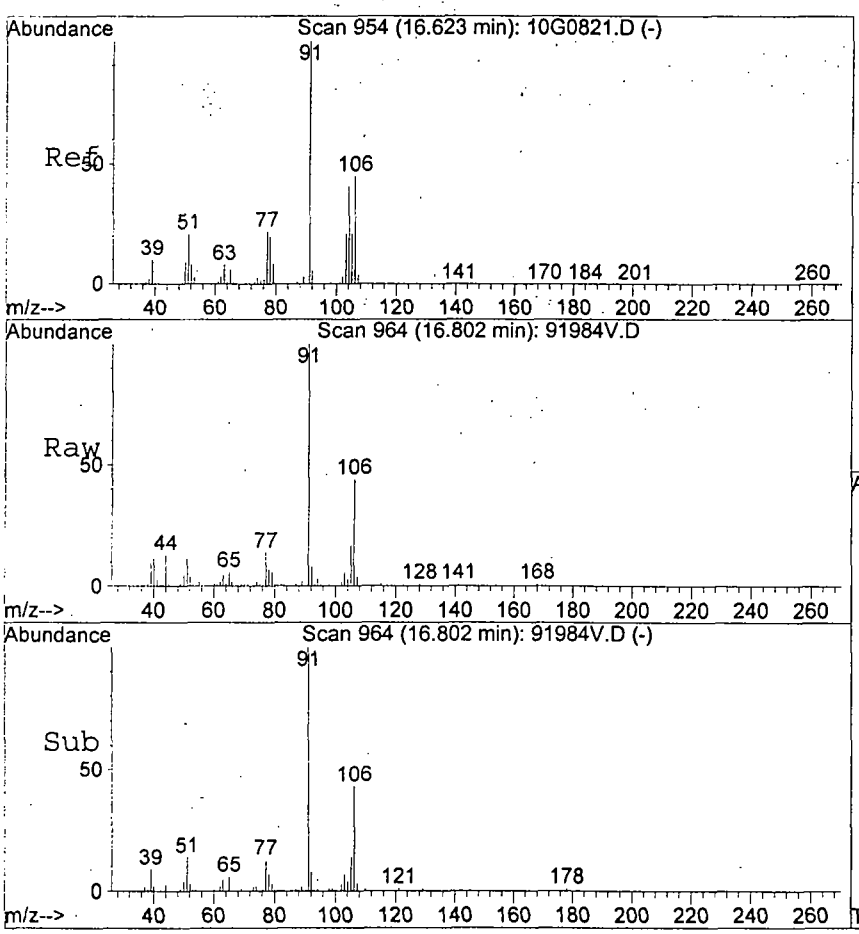


#62
m-Xylene and P-xylene
Concen: 7.80 ng/ml
RT: 15.92 min Scan# 913
Delta R.T. 0.30 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:106 Resp: 747348

Ion	Ratio	Lower	Upper
106	100		
91	201.6	161.8	242.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

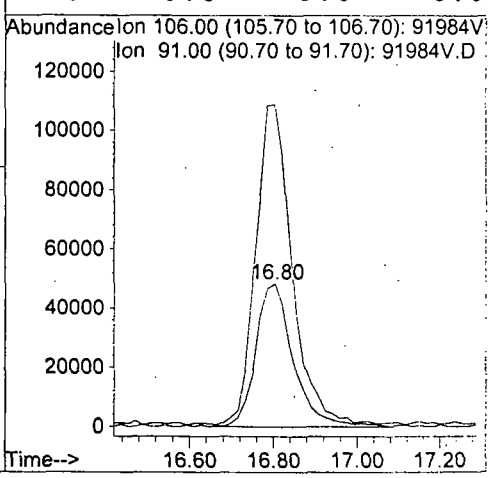




#63
o-Xylene
Concen: 3.24 ng/ml
RT: 16.80 min Scan# 964
Delta R.T. 0.30 min
Lab File: 91984V.D
Acq: 21 Aug 98 11:41

Tgt Ion:106 Resp: 299191

Ion	Ratio	Lower	Upper
106	100		
91	214.9	171.3	256.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Sample: 1:2000 Analyst: mjk Instrument: 5971-007
91984V.D VOALOW.M Fri Aug 21 12:12:34 1998

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91983V.D
Acq On : 21 Aug 98 13:13
Sample : 1:20000
Misc : MV473D-474D
Quant Time: Aug 21 14:13 1998

Vial: 15
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

X 20000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.04	96	2187511	10.00	ng/mL	0.25
25) 1,4-Difluorobenzene***(INT	9.27	114	2258114	10.00	ng/mL	0.25
49) D5-Chlorobenzene***(INT.ST	15.25	117	1838288	10.00	ng/mL	0.25
67) D4-1,4-Dichlorobenzene***(	20.64	152	1097290	10.00	ng/mL	0.25
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.81	113	1149950	9.39	ng/ml	0.23
Surrogate Spike 10.000			Recovery	=	93.90%	
34) D4-1,2-Dichloroethane***(S	8.40	65	576357	8.50	ng/ml	0.23
Surrogate Spike 10.000			Recovery	=	85.00%	
50) d8-Toluene***(SURR.STD.)**	12.17	98	2110237	10.76	ng/ml	0.25
Surrogate Spike 10.000			Recovery	=	107.60%	
68) Bromofluorobenzene***(SURR	17.95	95	1468396	10.14	ng/ml	0.26
Surrogate Spike 10.000			Recovery	=	101.40%	
Target Compounds						Qvalue
35) Benzene	8.51	78	399338	2.10	ng/ml#	77
51) Toluene	12.31	91	4263601	20.63	ng/ml	97
61) Ethylbenzene	15.58	106	1109592	15.22	ng/ml	96
62) m-Xylene and P-xylene	15.86	106	5382644	55.23	ng/ml	97
63) o-Xylene	16.75	106	2299885	24.50	ng/ml	98

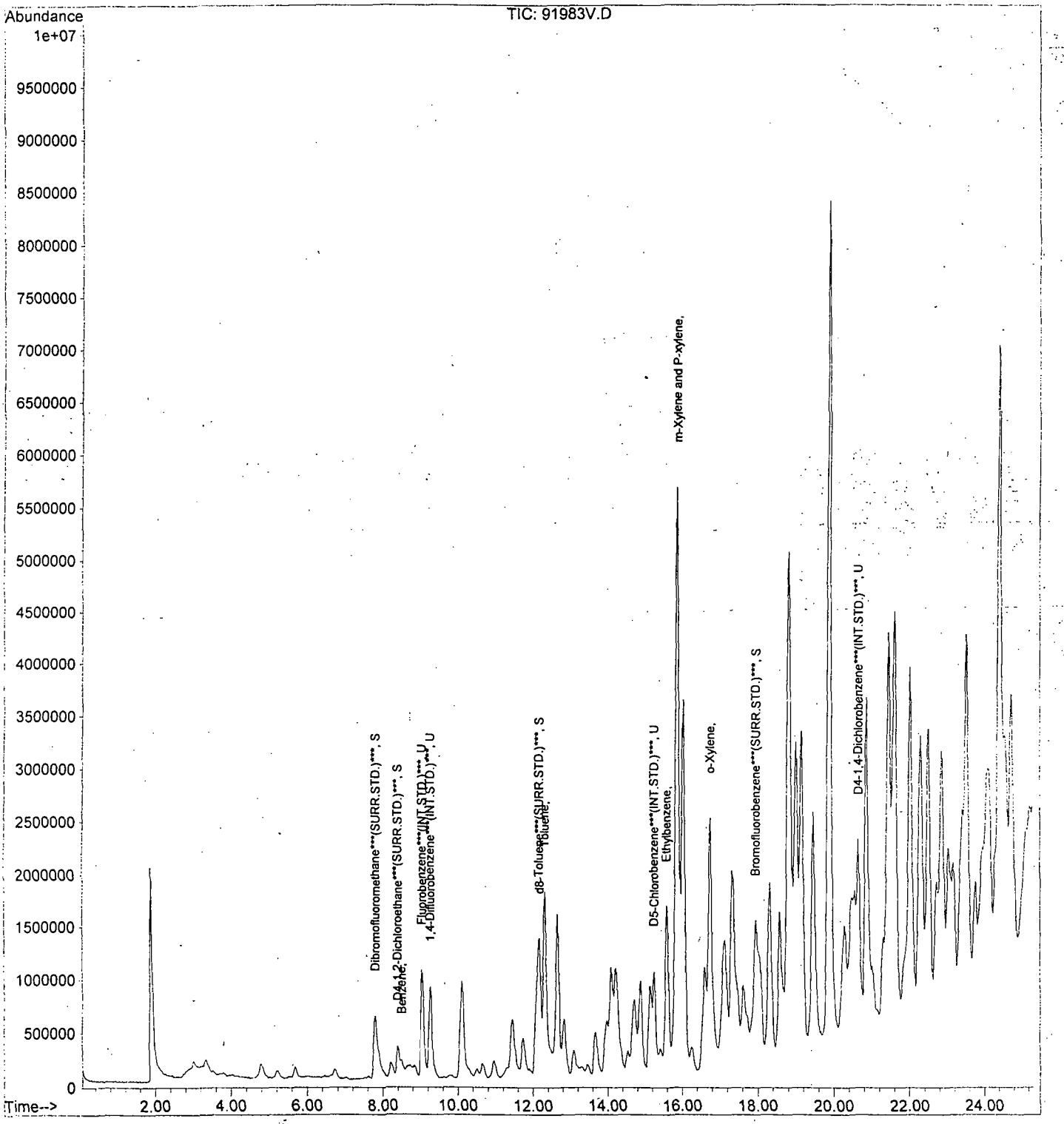
(#) = qualifier out of range (m) = manual integration

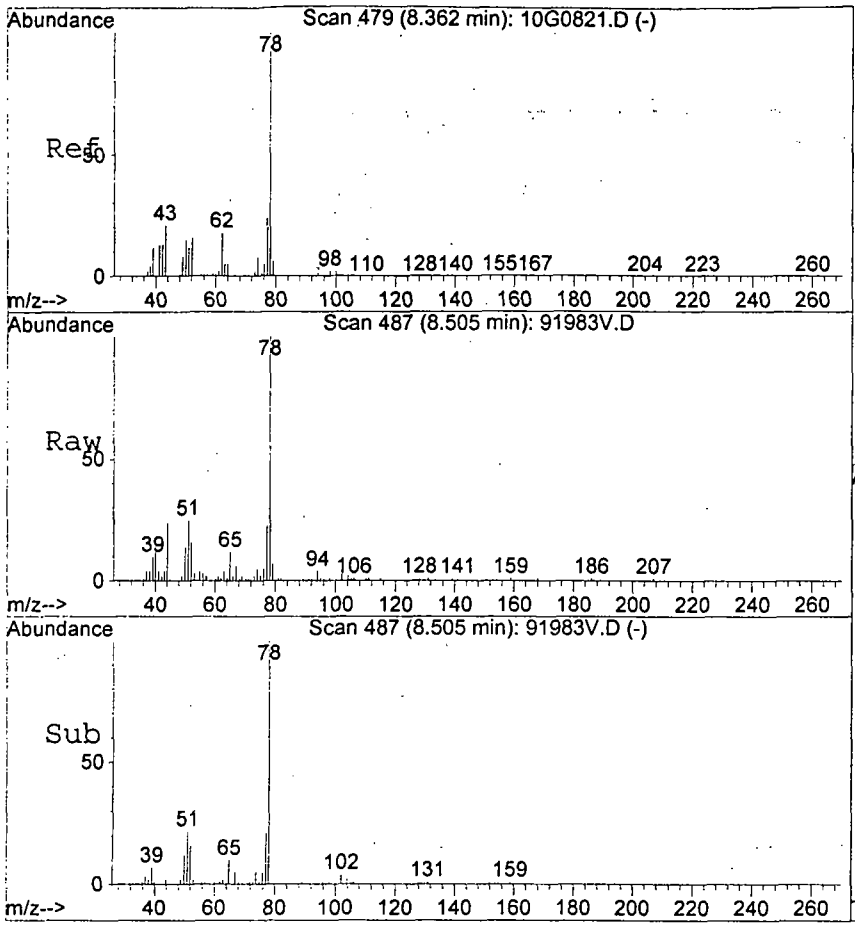
Quantitation Report

Data File : C:\HPCHEM\1\DATA\91983V.D
Acq On : 21 Aug 98 13:13
Sample : 1:20000
Misc : MV473D-474D
Quant Time: Aug 21 14:13 1998

Vial: 15
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration

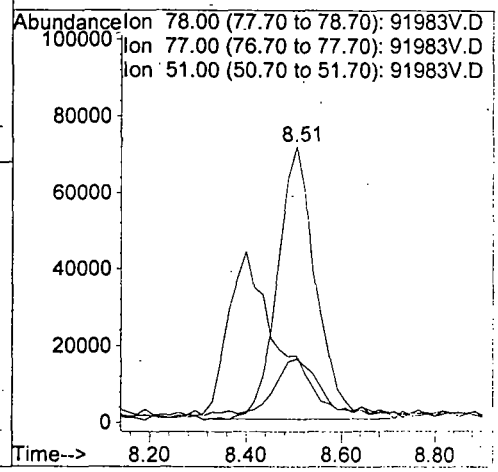


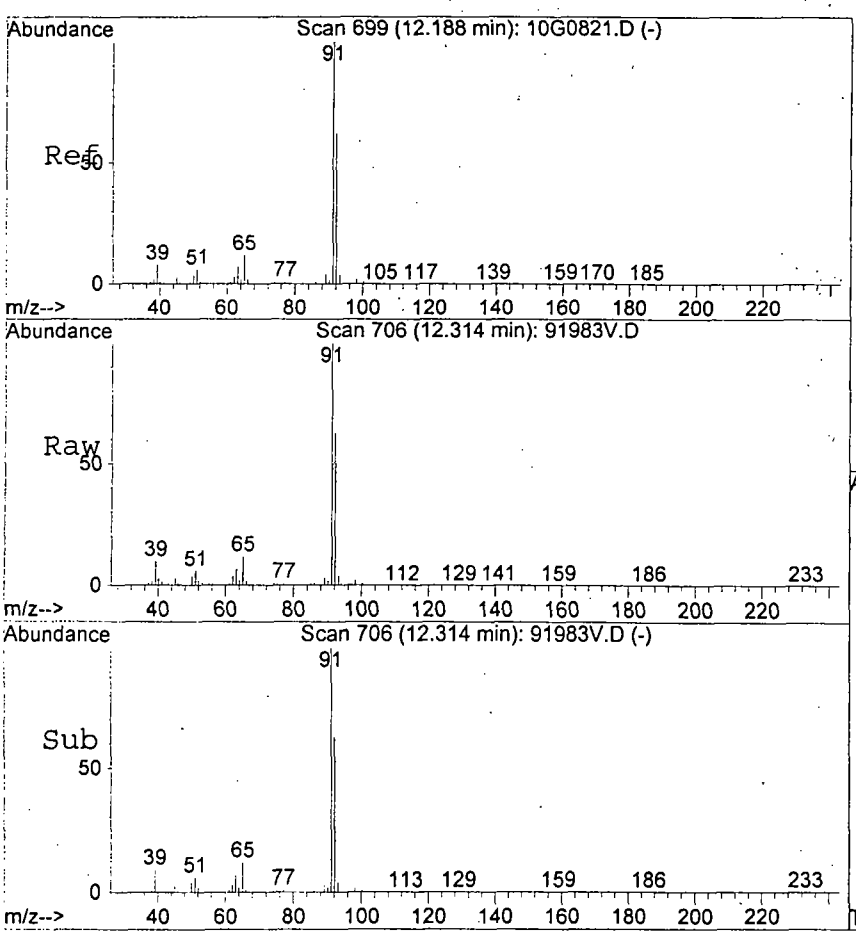


#35
Benzene
Concen: 2.10 ng/ml
RT: 8.51 min Scan# 487
Delta R.T. 0.25 min
Lab File: 91983V.D
Acq: 21 Aug 98 13:13

Tgt Ion:78 Resp: 399338

Ion	Ratio	Lower	Upper
78	100		
77	21.5	17.1	25.7
51	0.0	17.0	25.4#
0	0.0	0.0	0.0

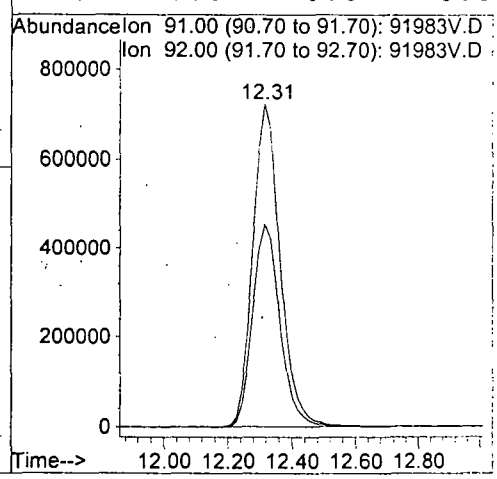


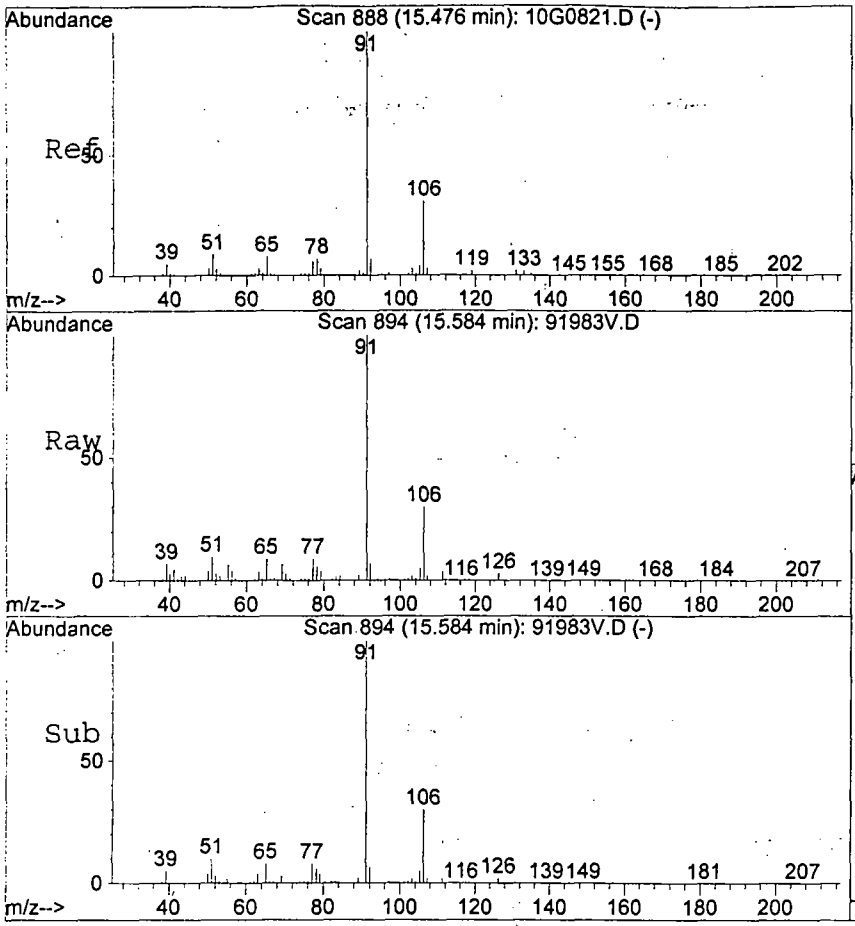


#51
Toluene
Concen: 20.63 ng/ml
RT: 12.31 min Scan# 706
Delta R.T. 0.23 min
Lab File: 91983V.D
Acq: 21 Aug 98 13:13

Tgt Ion:91 Resp: 4263601

Ion	Ratio	Lower	Upper
91	100		
92	63.4	49.0	73.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

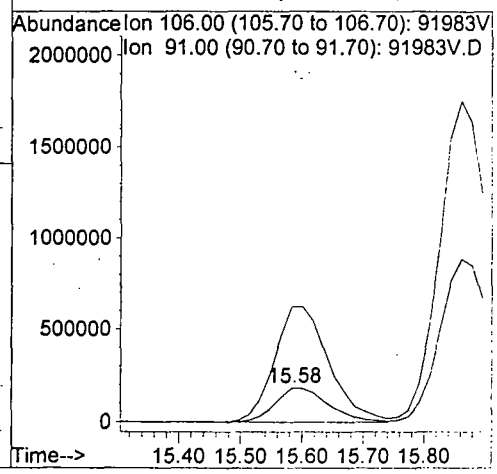


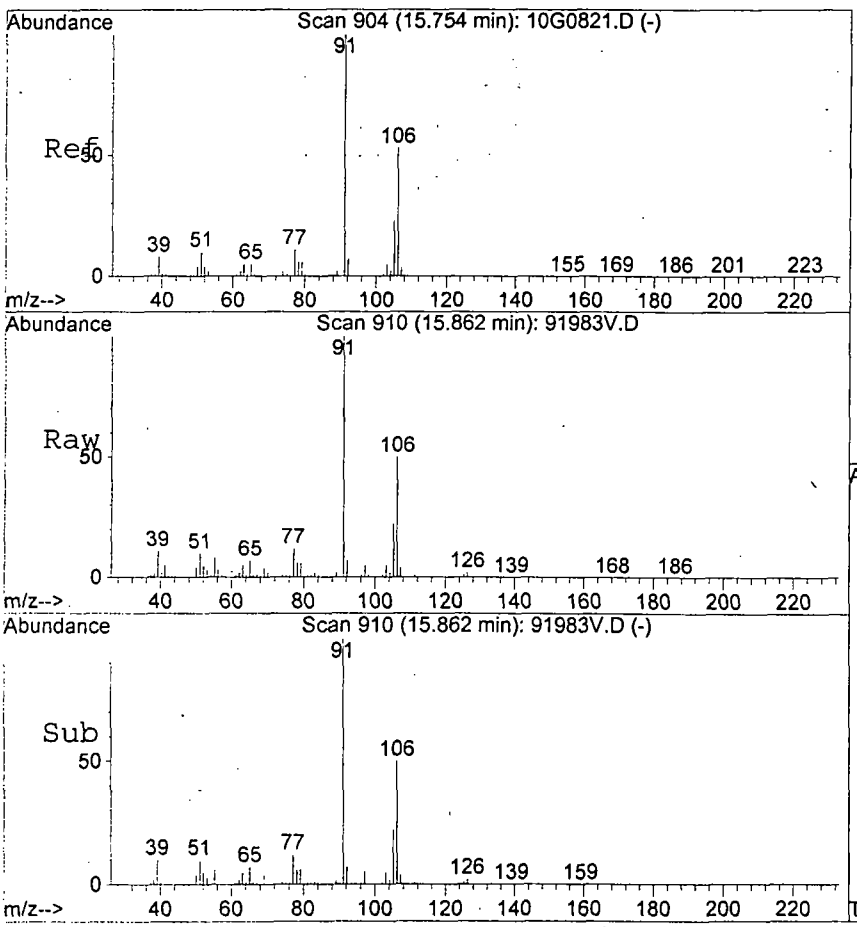


#61
Ethylbenzene
Concen: 15.22 ng/ml
RT: 15.58 min Scan# 894
Delta R.T. 0.25 min
Lab File: 91983V.D
Acq: 21 Aug 98 13:13

Tgt Ion:106 Resp: 1109592

Ion	Ratio	Lower	Upper
106	100		
91	343.2	281.1	421.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

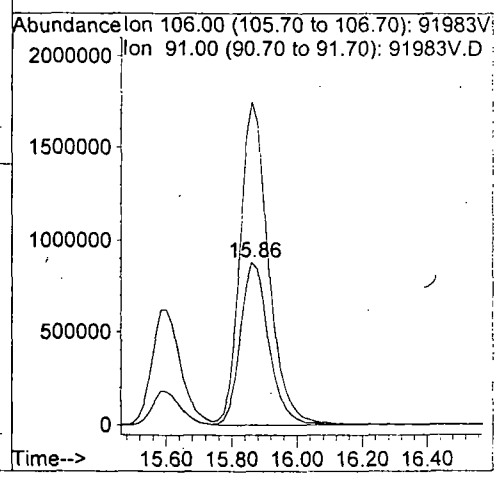


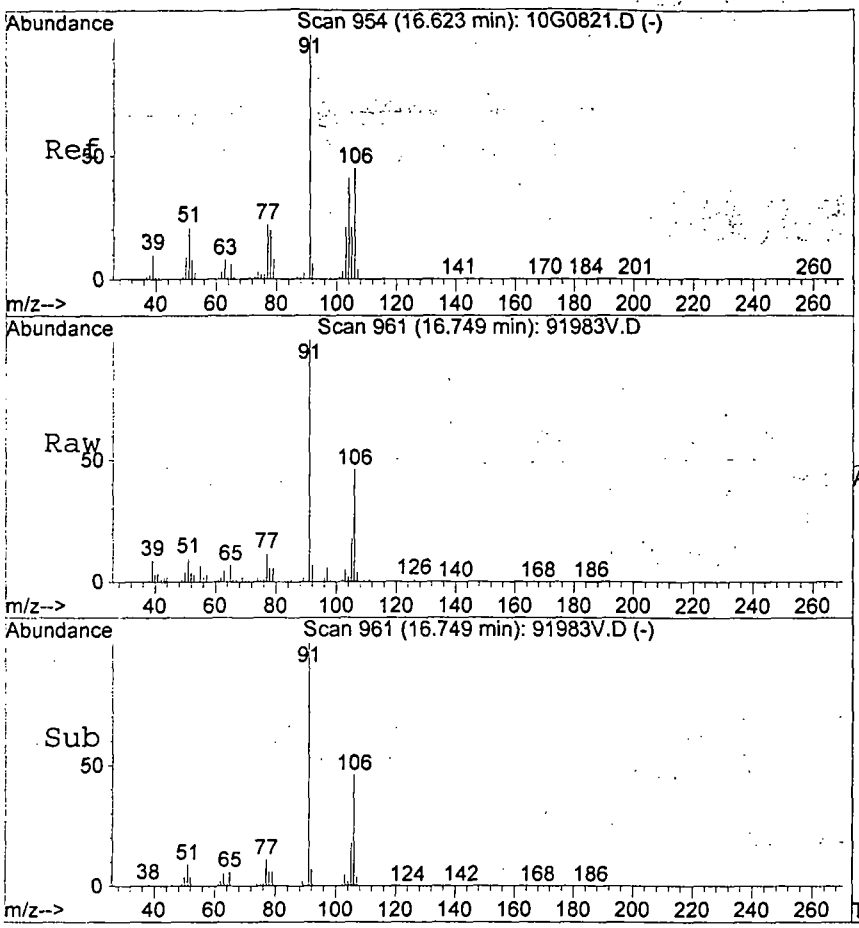


#62
m-Xylene and P-xylene
Concen: 55.23 ng/ml
RT: 15.86 min Scan# 910
Delta R.T. 0.25 min
Lab File: 91983V.D
Acq: 21 Aug 98 13:13

Tgt Ion:106 Resp: 5382644

Ion	Ratio	Lower	Upper
106	100		
91	197.5	161.8	242.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

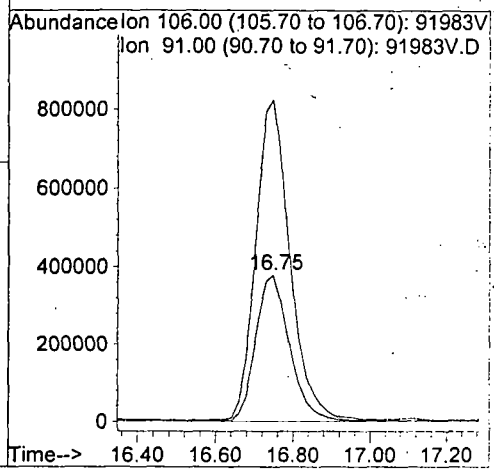




#63
o-Xylene
Concen: 24.50 ng/ml
RT: 16.75 min Scan# 961
Delta R.T. 0.25 min
Lab File: 91983V.D
Acq: 21 Aug 98 13:13

Tgt Ion:106 Resp: 2299885

Ion	Ratio	Lower	Upper
106	100		
91	217.4	171.3	256.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Sample: 1:20000 Analyst: mjk Instrument: 5971-007
91983V.D VOALOW.M Fri Aug 21 14:16:59 1998

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\LCSG0821.D
Acq On : 21 Aug 98 9:39
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:08 1998

Vial: 8
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

89938

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

X1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.01	96	2140377	10.00	ng/mL	0.22
25) 1,4-Difluorobenzene***(INT	9.22	114	2257188	10.00	ng/mL	0.20
49) D5-Chlorobenzene***(INT.ST	15.22	117	1936576	10.00	ng/mL	0.22
67) D4-1,4-Dichlorobenzene***(	20.61	152	1099550	10.00	ng/mL	0.22
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.78	113	1152883	9.41	ng/ml	0.20
Surrogate Spike 10.000			Recovery	=	94.10%	
34) D4-1,2-Dichloroethane***(S	8.37	65	596144	8.80	ng/ml	0.20
Surrogate Spike 10.000			Recovery	=	88.00%	
50) d8-Toluene***(SURR.STD.)**	12.14	98	2007037	9.71	ng/ml	0.22
Surrogate Spike 10.000			Recovery	=	97.10%	
68) Bromofluorobenzene***(SURR	17.92	95	1479774	10.20	ng/ml	0.23
Surrogate Spike 10.000			Recovery	=	102.00%	

Target Compounds						Qvalue
3) Chloromethane	2.32	50	260301	4.29	ng/ml	99
4) Vinyl Chloride	2.44	62	346414	6.17	ng/ml	97
5) Ethylene oxide	2.84	44	43906	2.35	ng/mL#	100
6) Bromomethane	2.86	94	362720	6.68	ng/ml	100
7) Chloroethane	2.98	64	318233	8.56	ng/ml	98
11) 1,1-Dichloroethene	4.04	96	552392	9.20	ng/ml	99
13) Acetone	4.09	43	106382	10.18	ng/ml#	78
15) Carbon Disulfide	4.35	76	1442793	8.04	ng/ml#	83
16) Acetonitrile	4.44	41	5467	1.80	ng/mL#	1
17) Methylene Chloride	4.77	84	642328	9.41	ng/ml	97
18) trans-1,2-Dichloroethene	5.24	96	709482	9.38	ng/ml	98
20) Acrylonitrile	5.12	53	6757	0.61	ng/mL#	17
21) 1,1-Dichloroethane	5.92	63	1329329	10.36	ng/ml	97
23) cis-1,2-dichloroethene	6.91	96	674427	9.33	ng/ml	97
24) 2-Butanone	6.93	43	115103	6.35	ng/ml#	87
29) Chloroform	7.50	83	1359684	9.93	ng/ml	99
30) 1,2-Dichloroethane	8.51	62	673729	9.03	ng/ml#	96
32) 1,1,1-Trichloroethane	7.81	97	1210003	10.72	ng/ml	100
33) Carbon Tetrachloride	8.11	117	1120709	10.60	ng/ml	97
35) Benzene	8.47	78	1958815	10.29	ng/ml	98
37) Isobutyl alcohol	8.46	74	93349	203.96	ng/mL#	1
39) 1,2-Dichloropropane	10.13	63	742597	10.41	ng/ml	99
43) Trichloroethene	9.71	130	942702	10.64	ng/ml	97
44) Bromodichloromethane	10.70	83	1329774	9.47	ng/ml	99
45) cis-1,3-Dichloropropene	11.60	75	1043727	9.44	ng/ml	97
47) 4-Methyl-2-pentanone	11.97	43	296921	6.40	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\LCSG0821.D
Acq On : 21 Aug 98 9:39
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:08 1998

Vial: 8
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Pyridine	12.39	79	5140	4.15 ng/mL#	100
51) Toluene	12.28	91	2260663	10.38 ng/ml	99
52) trans-1,3-Dichloropropene	12.77	75	802305	8.53 ng/ml	99
54) 1,1,2-Trichloroethane	13.13	97	522053	8.05 ng/ml	98
55) Tetrachloroethene	13.43	164	827419	10.98 ng/ml	97
56) 2-Hexanone	13.73	43	179625	5.36 ng/ml#	93
57) Dibromochloromethane	13.97	129	866210	8.66 ng/ml	97
59) Chlorobenzene	15.29	112	1897467	10.89 ng/ml	100
61) Ethylbenzene	15.57	106	850291	11.07 ng/ml	94
62) m-Xylene and P-xylene	15.85	106	2223507	21.66 ng/ml	99
63) o-Xylene	16.72	106	1046633	10.58 ng/ml	98
64) Styrene	16.75	104	1719676	10.05 ng/ml	96
65) Bromoform	17.13	173	483396	7.80 ng/ml	98
69) 1,1,2,2-Tetrachloroethane	18.30	83	557450m	6.99 ng/mL	100

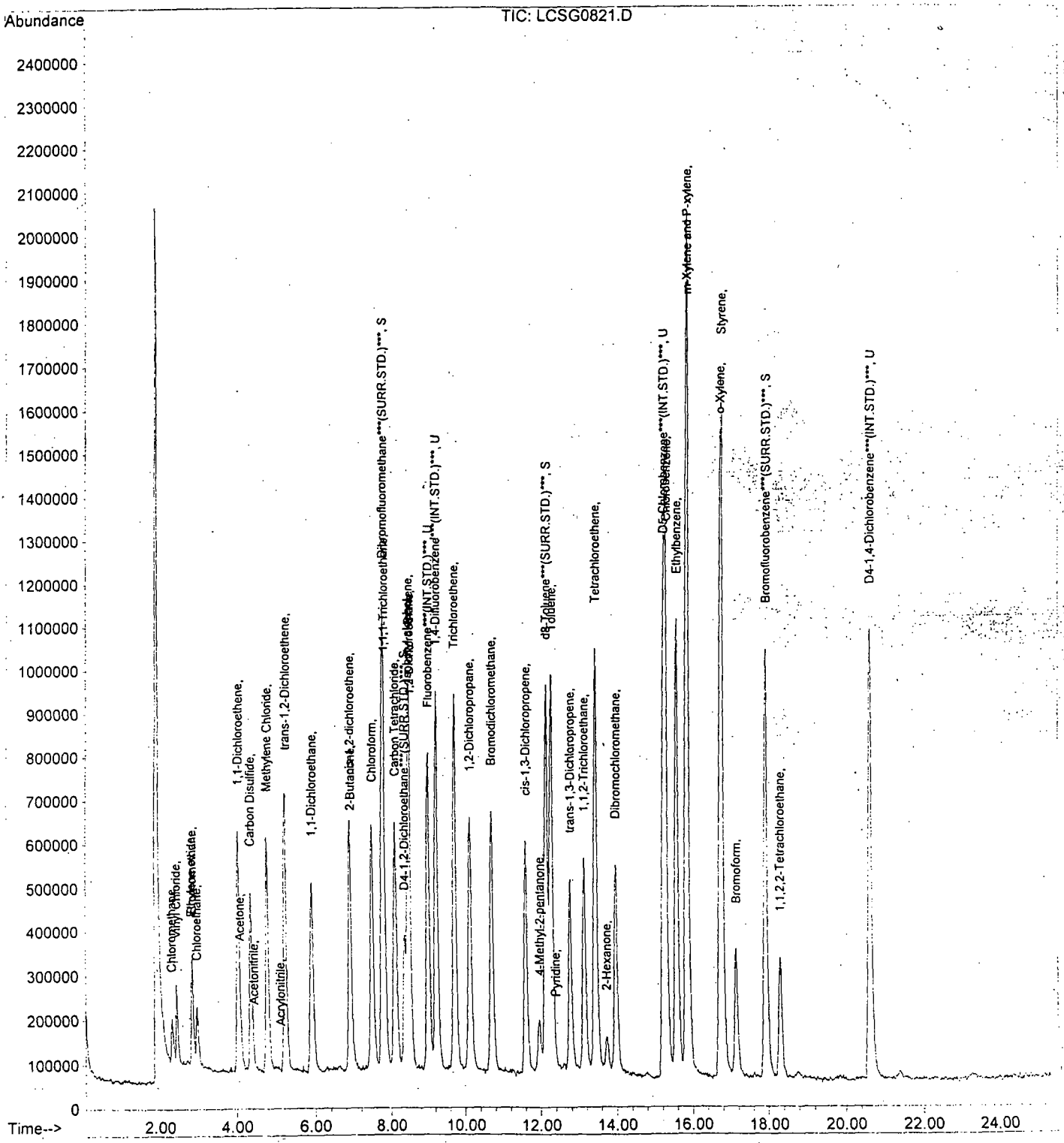
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\LCSG0821.D
Acq On : 21 Aug 98 9:39
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:08 1998

Vial: 8
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\LCSG0821.D
Acq On : 21 Aug 98 9:39
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:08 1998

Vial: 8
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

29932

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

X1

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.01	96	2140377	10.00 ng/mL	0.22
25) 1,4-Difluorobenzene***(INT	9.22	114	2257188	10.00 ng/mL	0.20
49) D5-Chlorobenzene***(INT.ST	15.22	117	1936576	10.00 ng/mL	0.22
67) D4-1,4-Dichlorobenzene***(	20.61	152	1099550	10.00 ng/mL	0.22
System Monitoring Compounds					
31) Dibromofluoromethane***(SU	7.78	113	1152883	9.41 ng/ml	0.20
Surrogate Spike 10.000			Recovery	= 94.10%	
34) D4-1,2-Dichloroethane***(S	8.37	65	596144	8.80 ng/ml	0.20
Surrogate Spike 10.000			Recovery	= 88.00%	
50) d8-Toluene***(SURR.STD.)**	12.14	98	2007037	9.71 ng/ml	0.22
Surrogate Spike 10.000			Recovery	= 97.10%	
68) Bromofluorobenzene***(SURR	17.92	95	1479774	10.20 ng/ml	0.23
Surrogate Spike 10.000			Recovery	= 102.00%	

Target Compounds					Qvalue
3) Chloromethane	2.32	50	260301	4.29 ng/ml	99
4) Vinyl Chloride	2.44	62	346414	6.17 ng/ml	97
5) Ethylene oxide	2.84	44	43906	2.35 ng/mL#	100
6) Bromomethane	2.86	94	362720	6.68 ng/ml	100
7) Chloroethane	2.98	64	318233	8.56 ng/ml	98
11) 1,1-Dichloroethene	4.04	96	552392	9.20 ng/ml	99
13) Acetone	4.09	43	106382	10.18 ng/ml#	78
15) Carbon Disulfide	4.35	76	1442793	8.04 ng/ml#	83
16) Acetonitrile	4.44	41	5467	1.80 ng/mL#	1
17) Methylene Chloride	4.77	84	642328	9.41 ng/ml	97
18) trans-1,2-Dichloroethene	5.24	96	709482	9.38 ng/ml	98
20) Acrylonitrile	5.12	53	6757	0.61 ng/mL#	17
21) 1,1-Dichloroethane	5.92	63	1329329	10.36 ng/ml	97
23) cis-1,2-dichloroethene	6.91	96	674427	9.33 ng/ml	97
24) 2-Butanone	6.93	43	115103	6.35 ng/ml#	87
29) Chloroform	7.50	83	1359684	9.93 ng/ml	99
30) 1,2-Dichloroethane	8.51	62	673729	9.03 ng/ml#	96
32) 1,1,1-Trichloroethane	7.81	97	1210003	10.72 ng/ml	100
33) Carbon Tetrachloride	8.11	117	1120709	10.60 ng/ml	97
35) Benzene	8.47	78	1958815	10.29 ng/ml	98
37) Isobutyl alcohol	8.46	74	93349	203.96 ng/mL#	1
39) 1,2-Dichloropropane	10.13	63	742597	10.41 ng/ml	99
43) Trichloroethene	9.71	130	942702	10.64 ng/ml	97
44) Bromodichloromethane	10.70	83	1329774	9.47 ng/ml	99
45) cis-1,3-Dichloropropene	11.60	75	1043727	9.44 ng/ml	97
47) 4-Methyl-2-pentanone	11.97	43	296921	6.40 ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\LCSG0821.D
Acq On : 21 Aug 98 9:39
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:08 1998

Vial: 8
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48) Pyridine	12.39	79	5140	4.15 ng/mL#	100
51) Toluene	12.28	91	2260663	10.38 ng/ml	99
52) trans-1,3-Dichloropropene	12.77	75	802305	8.53 ng/ml	99
54) 1,1,2-Trichloroethane	13.13	97	522053	8.05 ng/ml	98
55) Tetrachloroethene	13.43	164	827419	10.98 ng/ml	97
56) 2-Hexanone	13.73	43	179625	5.36 ng/ml#	93
57) Dibromochloromethane	13.97	129	866210	8.66 ng/ml	97
59) Chlorobenzene	15.29	112	1897467	10.89 ng/ml	100
61) Ethylbenzene	15.57	106	850291	11.07 ng/ml	94
62) m-Xylene and P-xylene	15.85	106	2223507	21.66 ng/ml	99
63) o-Xylene	16.72	106	1046633	10.58 ng/ml	98
64) Styrene	16.75	104	1719676	10.05 ng/ml	96
65) Bromoform	17.13	173	483396	7.80 ng/ml	98
69) 1,1,2,2-Tetrachloroethane	18.30	83	557450m	6.99 ng/mL	100

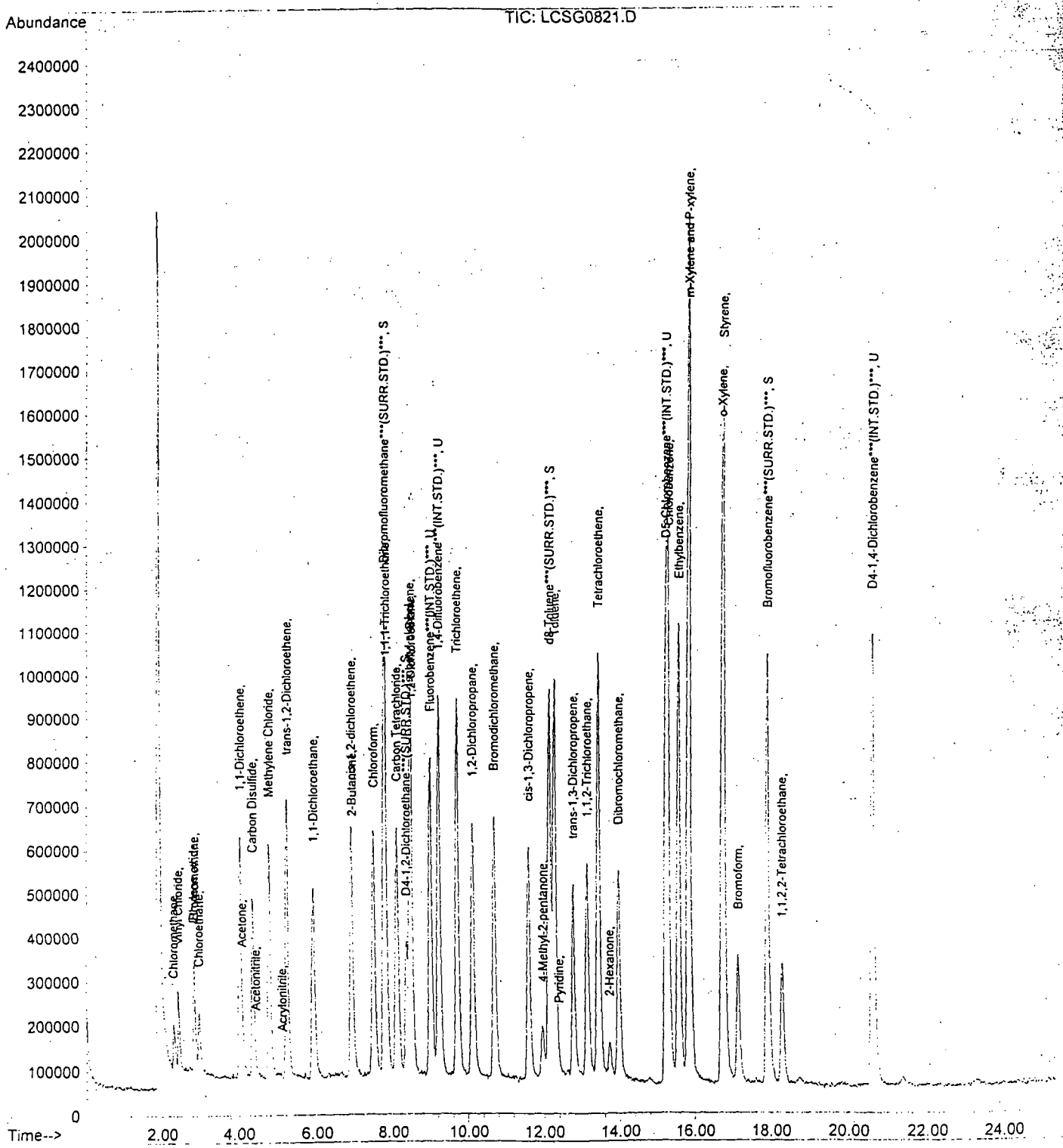
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\LCSG0821.D
Acq On : 21 Aug 98 9:39
Sample :
Misc : MV473D-474D
Quant Time: Aug 21 10:08 1998

Vial: 8
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91984VM.D
Acq On : 21 Aug 98 12:12
Sample : 1:2000
Misc : MV473D-474D
Quant Time: Aug 21 12:41 1998

Vial: 13
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

x2000

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.04	96	2091955	10.00 ng/mL	0.24
25) 1,4-Difluorobenzene***(INT	9.27	114	2215607	10.00 ng/mL	0.24
49) D5-Chlorobenzene***(INT.ST	15.30	117	1873518	10.00 ng/mL	0.29
67) D4-1,4-Dichlorobenzene***(	20.68	152	1056898	10.00 ng/mL	0.28
System Monitoring Compounds					
31) Dibromofluoromethane***(SU	7.80	113	1031117	8.58 ng/ml	0.23
Surrogate Spike 10.000			Recovery	= 85.80%	
34) D4-1,2-Dichloroethane***(S	8.40	65	534762	8.04 ng/ml	0.23
Surrogate Spike 10.000			Recovery	= 80.40%	
50) d8-Toluene***(SURR.STD.)**	12.21	98	2011096	10.06 ng/ml	0.28
Surrogate Spike 10.000			Recovery	= 100.60%	
68) Bromofluorobenzene***(SURR	17.98	95	1442199	10.34 ng/ml	0.29
Surrogate Spike 10.000			Recovery	= 103.40%	

Target Compounds					Qvalue
11) 1,1-Dichloroethene	4.07	96	658934	11.22 ng/ml	99
13) Acetone	4.14	43	16426	1.82 ng/ml	88
19) T-methylbutyl ether	5.30	73	331093	2.37 ng/mL#	64
30) 1,2-Dichloroethane	8.54	62	155065	2.12 ng/ml#	83
35) Benzene	8.50	78	3540611	18.94 ng/ml	95
43) Trichloroethene	9.75	130	861864	9.91 ng/ml	98
51) Toluene	12.34	91	6020561	28.58 ng/ml	99
59) Chlorobenzene	15.35	112	1886903	11.20 ng/ml	99
61) Ethylbenzene	15.65	106	85987	1.16 ng/ml	85
62) m-Xylene and P-xylene	15.93	106	697640	7.02 ng/ml	100
63) o-Xylene	16.80	106	285718	2.99 ng/ml	98

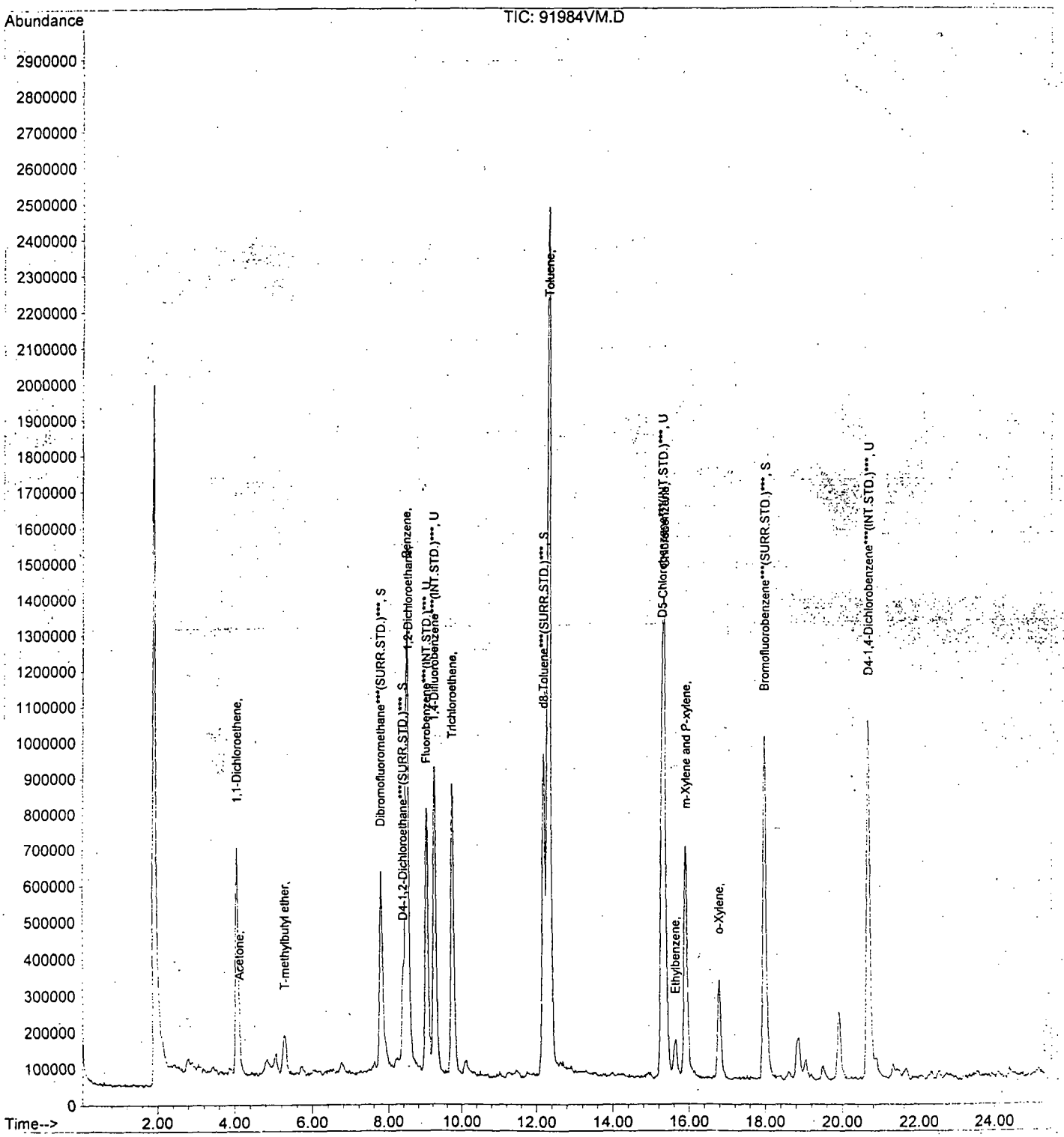
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\91984VM.D
Acq On : 21 Aug 98 12:12
Sample : 1:2000
Misc : MV473D-474D
Quant Time: Aug 21 12:41 1998

Vial: 13
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91984VD.D
Acq On : 21 Aug 98 12:42
Sample : 1:2000
Misc : MV473D-474D
Quant Time: Aug 21 13:11 1998

Vial: 14
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

x2000

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	9.06	96	2009005	10.00 ng/mL	0.26
25) 1,4-Difluorobenzene***(INT	9.28	114	2123938	10.00 ng/mL	0.26
49) D5-Chlorobenzene***(INT.ST	15.27	117	1807066	10.00 ng/mL	0.26
67) D4-1,4-Dichlorobenzene***(	20.66	152	1037604	10.00 ng/mL	0.26
System Monitoring Compounds					
31) Dibromofluoromethane***(SU	7.82	113	1067004	9.26 ng/ml	0.24
Surrogate Spike 10.000			Recovery	= 92.60%	
34) D4-1,2-Dichloroethane***(S	8.41	65	546233	8.57 ng/ml	0.24
Surrogate Spike 10.000			Recovery	= 85.70%	
50) d8-Toluene***(SURR.STD.)**	12.19	98	1904509	9.88 ng/ml	0.26
Surrogate Spike 10.000			Recovery	= 98.80%	
68) Bromofluorobenzene***(SURR	17.96	95	1400085	10.23 ng/ml	0.28
Surrogate Spike 10.000			Recovery	= 102.30%	
Target Compounds					Qvalue
11) 1,1-Dichloroethene	4.07	96	657615	11.66 ng/ml	98
13) Acetone	4.14	43	17129	1.96 ng/ml#	37
19) T-methylbutyl ether	5.30	73	338883	2.52 ng/mL#	75
30) 1,2-Dichloroethane	8.55	62	164571	2.34 ng/ml	99
35) Benzene	8.52	78	3778555	21.09 ng/ml	95
43) Trichloroethene	9.75	130	867479	10.41 ng/ml	99
51) Toluene	12.33	91	5966601	29.36 ng/ml	99
59) Chlorobenzene	15.34	112	1857477	11.43 ng/ml	99
61) Ethylbenzene	15.63	106	75182	1.05 ng/ml	95
62) m-Xylene and P-xylene	15.89	106	696934	7.27 ng/ml	95
63) o-Xylene	16.76	106	284637	3.08 ng/ml	96

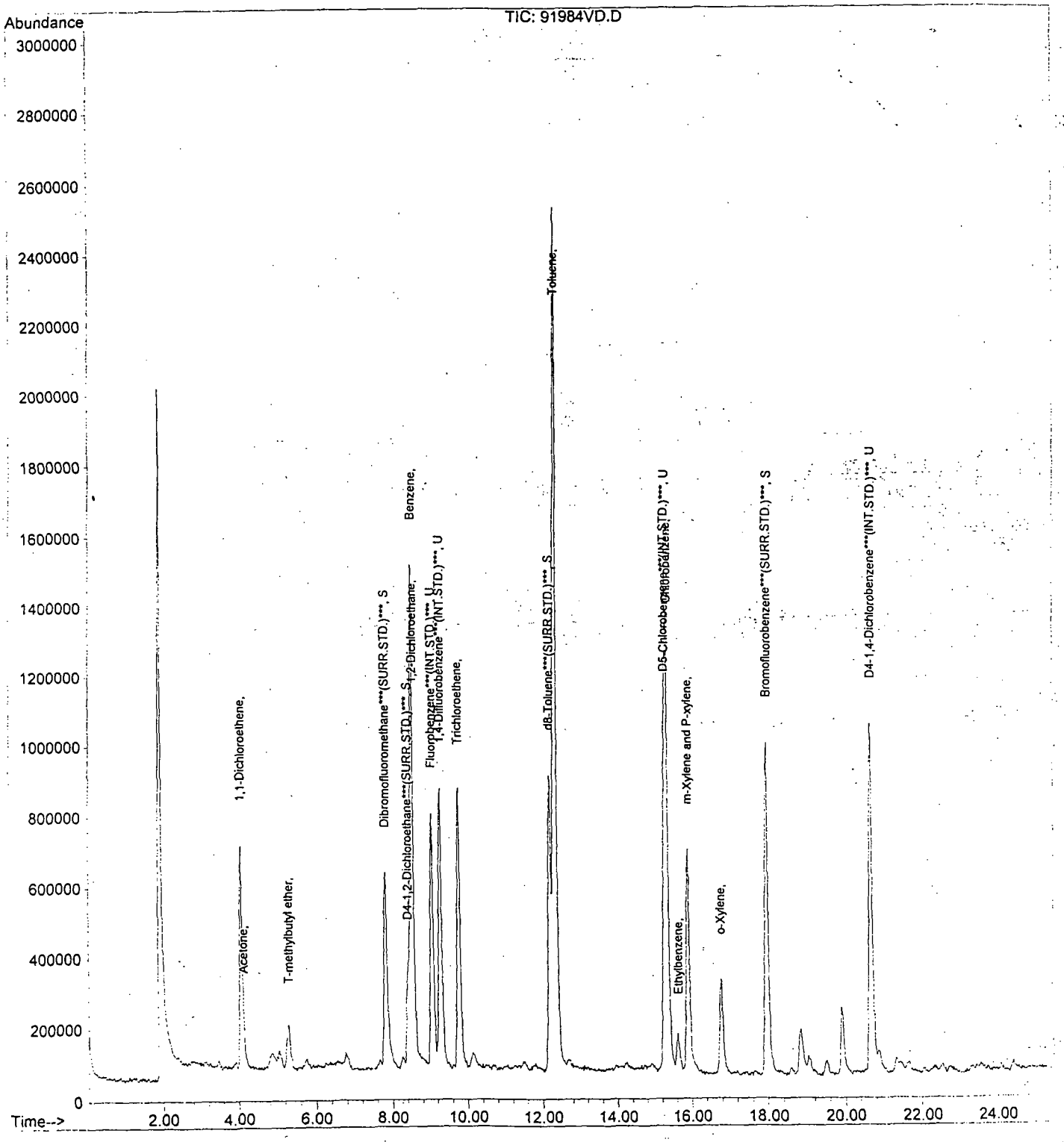
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\91984VD.D
Acq On : 21 Aug 98 12:42
Sample : 1:2000
Misc : MV473D-474D
Quant Time: Aug 21 13:11 1998

Vial: 14
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91983VM.D
Acq On : 21 Aug 98 14:04
Sample : 1:20000
Misc : MV473D-474D
Quant Time: Aug 21 14:38 1998

Vial: 16
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

x20000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.87	96	1857195	10.00	ng/mL	0.08
25) 1,4-Difluorobenzene***(INT	9.12	114	1944292	10.00	ng/mL	0.09
49) D5-Chlorobenzene***(INT.ST	15.19	117	1951171	10.00	ng/mL	0.18
67) D4-1,4-Dichlorobenzene***(	20.58	152	1114211	10.00	ng/mL	0.18
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.67	113	1084717	10.28	ng/ml	0.09
Surrogate Spike 10.000			Recovery	=	102.80%	
34) D4-1,2-Dichloroethane***(S	8.25	65	515401	8.83	ng/ml	0.08
Surrogate Spike 10.000			Recovery	=	88.30%	
50) d8-Toluene***(SURR.STD.)**	12.07	98	2194709	10.54	ng/ml	0.14
Surrogate Spike 10.000			Recovery	=	105.40%	
68) Bromofluorobenzene***(SURR	17.88	95	1506601	10.25	ng/ml	0.20
Surrogate Spike 10.000			Recovery	=	102.50%	

Target Compounds						Qvalue
11) 1,1-Dichloroethene	3.90	96	629534	12.08	ng/ml	98
35) Benzene	8.35	78	2248555	13.71	ng/ml#	94
43) Trichloroethene	9.59	130	787943	10.32	ng/ml	98
51) Toluene	12.21	91	6836569	31.16	ng/ml	99
59) Chlorobenzene	15.24	112	1853537	10.56	ng/ml	99
61) Ethylbenzene	15.52	106	1175329	15.19	ng/ml	94
62) m-Xylene and P-xylene	15.79	106	5504548	53.21	ng/ml	97
63) o-Xylene	16.68	106	2369393	23.78	ng/ml	100

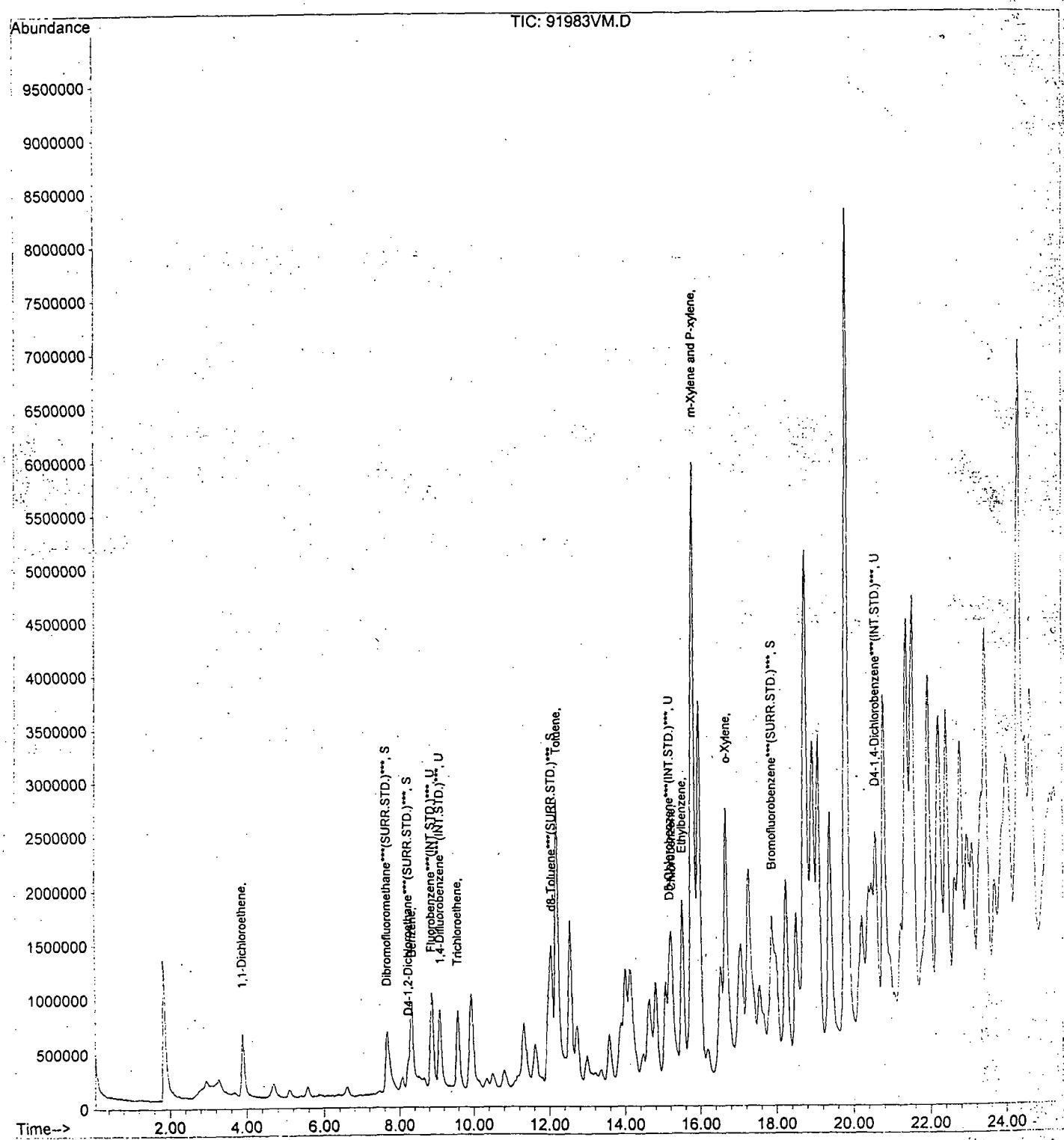
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\91983VM.D
Acq On : 21 Aug 98 14:04
Sample : 1:20000
Misc : MV473D-474D
Quant Time: Aug 21 14:38 1998

Vial: 16
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



1287

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91983VD.D
Acq On : 21 Aug 98 14:35
Sample : 1:20000
Misc : MV473D-474D
Quant Time: Aug 21 15:05 1998

Vial: 17
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Quant Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Mon Aug 17 15:27:58 1998
Response via : Initial Calibration
DataAcq Meth : VOALOW

X20000

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene***(INT.STD.)	8.94	96	1890972	10.00	ng/mL	0.14
25) 1,4-Difluorobenzene***(INT	9.19	114	2199241	10.00	ng/mL	0.16
49) D5-Chlorobenzene***(INT.ST	15.24	117	1933544	10.00	ng/mL	0.23
67) D4-1,4-Dichlorobenzene***(	20.61	152	1080243	10.00	ng/mL	0.21
System Monitoring Compounds						
31) Dibromofluoromethane***(SU	7.72	113	1081663	9.06	ng/ml	0.14
Surrogate Spike 10.000			Recovery	=	90.60%	
34) D4-1,2-Dichloroethane***(S	8.32	65	541773m	8.21	ng/ml	0.14
Surrogate Spike 10.000			Recovery	=	82.10%	
50) d8-Toluene***(SURR.STD.)**	12.12	98	2164416	10.49	ng/ml	0.20
Surrogate Spike 10.000			Recovery	=	104.90%	
68) Bromofluorobenzene***(SURR	17.92	95	1453001	10.20	ng/ml	0.23
Surrogate Spike 10.000			Recovery	=	102.00%	

Target Compounds						Qvalue
11) 1,1-Dichloroethene	3.95	96	612749	11.55	ng/ml	97
35) Benzene	8.40	78	2260637	12.18	ng/ml#	94
43) Trichloroethene	9.67	130	876599	10.15	ng/ml	98
47) 4-Methyl-2-pentanone	12.02	43	117423	2.60	ng/ml#	47
51) Toluene	12.26	91	6902166	31.75	ng/ml	99
59) Chlorobenzene	15.29	112	1824717	10.49	ng/ml	97
61) Ethylbenzene	15.59	106	1198123	15.62	ng/ml	92
62) m-Xylene and P-xylene	15.85	106	5540060	54.04	ng/ml	98
63) o-Xylene	16.73	106	2464057	24.96	ng/ml	95

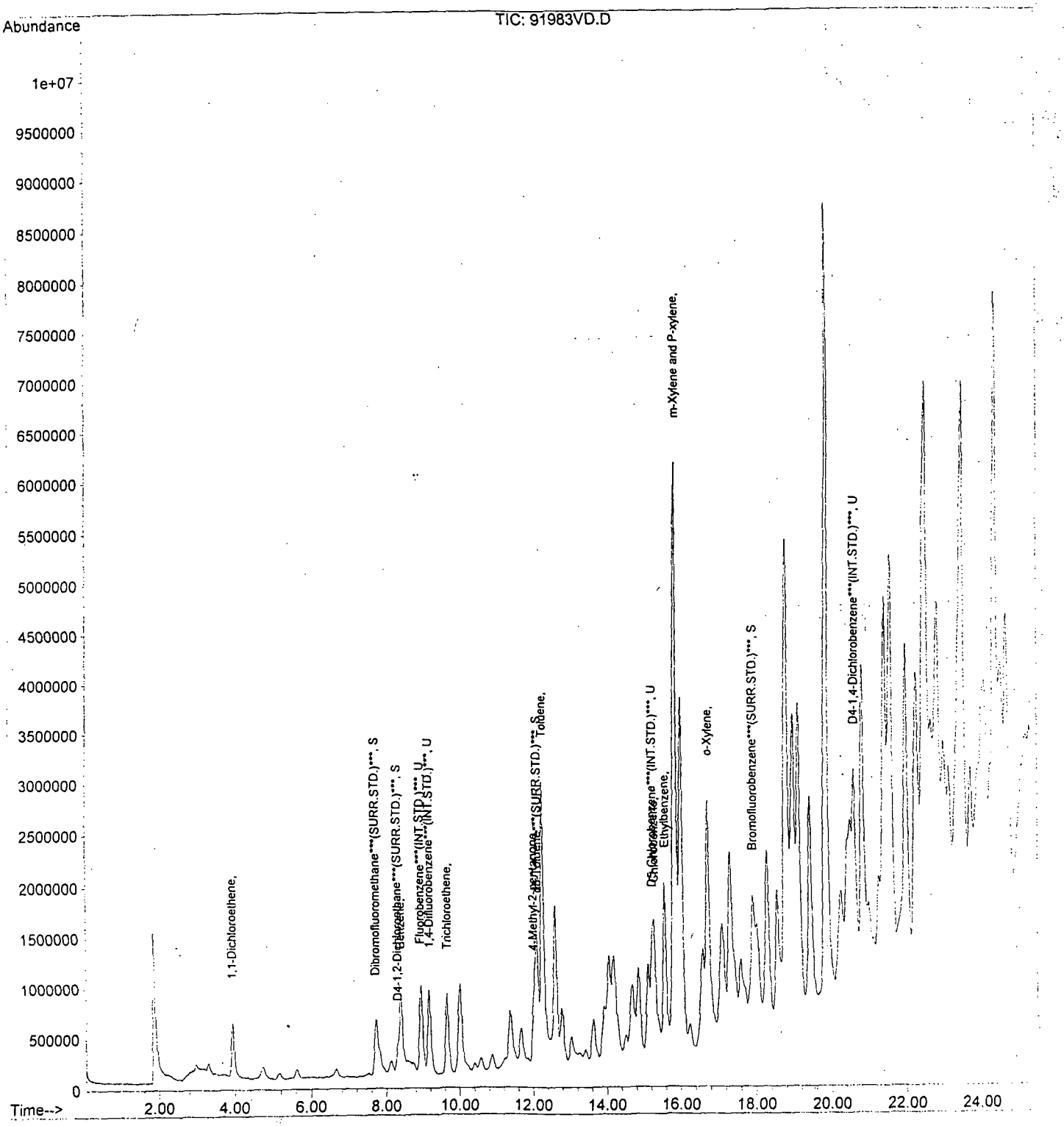
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\91983VD.D
Acq On : 21 Aug 98 14:35
Sample : 1:20000
Misc : MV473D-474D
Quant Time: Aug 21 15:05 1998

Vial: 17
Operator: mjk
Inst : 5971-007
Multiplr: 1.00
Quant Results File: VOALOW.RES

Method : C:\HPCHEM\1\METHODS\VOALOW.M
Title :
Last Update : Fri Aug 21 09:40:23 1998
Response via : Multiple Level Calibration



GASOLINE RANGE ORGANICS

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Calibration Reports
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LCS
MS/MSD

DATA PACKET

Gasoline Range Organics

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

ORGANIC ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: GRO
Report Date: August 21, 1998

Sample I.D.: DLT-1
Sample Date: 08/12/98
Date Received: 08/13/98
Date Analyzed: 08/20/98
ENCOTEC I.D.: 200091983
QC Set I.D.: VGMH1901W

U = Analyte not detected.

HYDROCARBON	CAS NUMBER	CONC. (mg/L)	DETECTION LIMIT (mg/L)
Gasoline Range Organics	----	24000	2500

Note:

Form 018VWN1G.GEN

Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

ORGANIC ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT INC.
Project Number: 71060
Method: GRO
Report Date: August 21, 1998

Sample I.D.: DLT-2
Sample Date: 08/12/98
Date Received: 08/13/98
Date Analyzed: 08/20/98
ENCOTEC I.D.: 200091984
QC Set I.D.: VGMH1901W

U = Analyte not detected.

HYDROCARBON	CAS NUMBER	CONC. (mg/L)	DETECTION LIMIT (mg/L)
Gasoline Range Organics	----	92	50

Note:

Form 018VWN1G.GEN

Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

ORGANIC ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC
Project Number: 71060
Method: GRO
Report Date: August 21, 1998

Sample I.D.: METHOD BLANK
Sample Date: N/A
Date Received: N/A
Date Analyzed: 08/20/98
ENCOTEC I.D.: 200089678
QC Set I.D.: VGMH1901W

U = Analyte not detected.

HYDROCARBON	CAS NUMBER	CONC. (mg/L)	DETECTION LIMIT (mg/L)
Gasoline Range Organics	----	U	0.050

Note:

Form 018VWN1G.GEN

Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

WATER MATRIX SURROGATE RECOVERY
GASOLINE RANGE ORGANICS

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: GRO
Report Date: August 21, 1998
QC Set I.D.: VGMH1901W

ENCOTEC Sample Number	Percent Recovery p-Bromofluorobenzene 50 - 150**
200091983	99
200091984	98
200089678 MB	97
200089972 LCS	99
200091984 MS	94
200091984 MSD	97

* Value outside of established quality control windows.
** Percent recovery quality control windows.
DL = Sample matrix diluted, therefore surrogate recoveries are not applicable.
M = Matrix interferences caused distortion to recovery value.

RECOVERY: 0 out of 6 outside QC Windows.

Note:

Form 018VSL2G.GEN Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
(734) 761-1389

WATER MATRIX LABORATORY CONTROL SAMPLE RECOVERY
GASOLINE RANGE ORGANICS

Project Name: ENCOTEC
Project Number: 10000
Method: GRO

Date Analyzed: 08/19/98
ENCOTEC ID: 200089972
QC Set ID: VGMH1901W

U = Analyte not detected.

HYDROCARBONS	AMOUNT SPIKED (mg/L)	AMOUNT RECOVERED (mg/L)	PERCENT RECOVERED (percent)	QC LIMITS RANGE (percent)
Regular Unleaded Gasoline	0.250	0.263	105	50 - 150

RECOVERY: __0__ out of __1__ outside QC Windows.

Note:

Form 018VWN4G.GEN Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

WATER MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) RECOVERY
TOTAL HYDROCARBONS

Project Name: ENCOTEC
Project Number: 10000
Method: GRO
QC Set I.D.: VGMH1901W

SAMPLE SPIKED - ENCOTEC ID: 200091984

Compound	Concentration Spiked (mg/L)	Sample Result (mg/L)	Conc. MS (mg/L)	% Rec	Conc. MSD (mg/L)	% Rec	RPD	QUALITY CONTROL WINDOWS RPD	QUALITY CONTROL WINDOWS % Recovery
Regular Unleaded Gasoline	250	92	471	138	358	105	27.3	40	50 - 150

U = Analyte not detected in non-spiked sample
RPD = Relative Percent Difference
***** Value outside of quality control windows.

M = Matrix interferences caused distortion to recovery value.
D = Detected; results must be greater than zero.

RPD: 0 out of 1 outside QC Windows
RECOVERY: 0 out of 2 outside QC Windows

Note:

Form 018VWN3G.GEN

Rev. 08/10/98

RAW DATA

Gasoline Range Organics

ENCOTEC

GC ANALYSIS LOG SHEET

Page _____

INSTRUMENT 012: Tracor 540, with purge-and-trap sample introduction device and PID & HALL detectors, in series.

COLUMN TYPE: DB-624 (75M..53mM.3u.) VGMH1901W

CONDITIONS: 40CH6 18C/min 220 H1 75 Method #3 in 1D

Analyst: SB

SOLVENT He @ 10 psi

Std. ID SWI=GV038D STD=GV039D

Date: 8-20-98

Cyc. No.	Client	Time QC#	File Name	Matrix	pH Check	Dilution Scheme	Dil. Fact.	Voa No.	Re-runs	Method
1	ENCOTEC		MB082098	wtr	NA	NA	NA	15		BH19MM
2	↓		1250 ng	↓	↓	↓	↓	16		
3	↓	89678	MB082098			↓	↓	1		
4	EEI 13219		91984g			5.0 µl/5.0 ml	1/1000	2		
5	↓		91983g			100 µl/1000 µl; 10 µl/1000 µl; 50 µl/5.0 ml	1/500000	3	1/50,000	
6	↓		91984gM			5.0 µl/5.0 ml	1/1000	4		
7	↓		91984gd			↓	1/1000	5		
8	↓		91983g	↓	↓	100 µl/1000 µl; 10 µl/1000 µl; 100 µl/5.0 ml	1/50,000	6		
9										
10										
11										
12										
13										
14										
15										
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25										
26										
27										
28										
29										
30										

Weight set ID: S001

Balance E23615 check: wts. ___ ___ ___ readings ___ ___ ___

745

012LOG.XLS 07/05/95

ENCOTEC

GC ANALYSIS LOG SHEET

Page_____

INSTRUMENT 012: Tracor 540, with purge-and-trap sample introduction device and PID & HALL detectors, in series.

COLUMN TYPE: DB-624 (75M,.53mM,3u) VGMH1901W

CONDITIONS: 40CH6 18C/min 220 H1.75, Method #3 on GC

Analyst: SB

SOLVENT: He @ 10 psi

Std. ID Surr=GV038D STD=GV039D

Date: 8-19-98

Cyc. No.	Client	Time QC#	File Name	Matrix	pH Check	Dilution Scheme	Dil. Fact.	Voa No.	Re-runs	Method
1	ENCOTEC		blank	wtr	NA	NA	NA	2		BH19MM
2			250 ng					3		
3			1000 ng					5		
4			2000 ng					7		
5			5000 ng					9		
6			MB081998					10		
7			500 ng					11		
8		89677	MB081998					12		
9		89972	LCS081998					13		
10	EEI 13219		91984g			500µl/5.0 ml	1/10	14	1/1000	
11			91983g			5.0µl/5.0 ml	1/1000	15	1/1000000	
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

Weight set ID: S001

Balance E23615 check: wts. ____ ____ ____ readings ____ ____ ____

746

XLS 07/05/95

VOLATILES DILUTION SHEET

STANDARDS:

1- Inject 0.02 mL of 100 ug/mL (mg/L) STD into 200 mL BPSQ.
2. Purge volumes of 1, 5, and 10 mL of the mixture, at 10 ng/mL.
3- Calibration range is 10 - 100 ng absolute.

WATERS:

Headers: (W, amount purged, mL)

1- Purge 10 mL of initial sample; make dilutions as necessary.
2- Determine concentration as follows:

$$\frac{\textit{amt detected}, \text{ ng}}{\textit{amt purged}, \text{ mL}} * \frac{1 \text{ mg}}{1{,}000{,}000 \text{ ng}} * \frac{1000 \text{ mL}}{1 \text{ L}}$$

3- Analytical range is generally 0.001 - 0.01 mg/L (for 10 mL purged).

SOILS (Heated headspace):

Headers: (H, amount purged, g)

1- Purge 5.0 g of soil in 10 mL BPSQ
2- Determine concentration as follows:

$$\frac{\textit{amt detected}, \text{ ng}}{\textit{amt purged}, \text{ g}} * \frac{1 \text{ mg}}{1{,}000{,}000 \text{ ng}} * \frac{1000 \text{ g}}{1 \text{ Kg}}$$

3- Analytical range is generally 0.002 - 0.02 mg/Kg (for 5.0 g purged).

SOILS (Methanol extraction):

Headers: (M, amount injected, wt soil extracted, amount MeOH used)

1- Weigh 5.0 g soil into 20mL scintillation vial.
2- Add 20 mL MeOH and tumble for $\geq$ 15 minutes.
3- Inject 0.1 mL of MeOH extract into 10 mL BPSQ.
4- Determine concentration as follows:

$$\frac{\textit{amt detected}, \text{ ng}}{\textit{amt purged}, \text{ mL}} * \frac{20 \text{ mL MeOH added}}{5 \text{ g soil extracted}} * \frac{1 \text{ mg}}{10^6 \text{ ng}} * \frac{10^3 \text{ g}}{1 \text{ Kg}}$$

5- Analytical range is generally 0.4 - 4.0 mg/Kg (for 5.0 g weight).

EXAMPLE:

A sample of H_2O measures 23 ng of TCE.

$$\frac{23 \text{ ng}}{10 \text{ mL}} * \frac{1 \text{ mg}}{1{,}000{,}000 \text{ ng}} * \frac{1000 \text{ mL}}{1 \text{ L}}$$

CALIBRATION STANDARDS PREPARATION GUIDE

GENERAL INFORMATION:

WORKING STANDARD TYPE: *VOA 601/602 STD*

SOLVENT USED: *BPSQ*

NUMBER OF CALIBRATION LEVELS: *6*

FREQUENCY OF FORMULATION: *Every analytical event*

Is an internal standard required? *No*

OTHER INFORMATION:

The 601/602 standard is made from one intermediate compound mix and the surrogate standard mix which are prepared in methanol. The volumes of the 601/602 standard and surrogate standard added vary with the concentration while the volume is constant.

FORMULATION OF CALIBRATION LEVELS:

CONSTITUENTS:

STD #1: 10 ng/uL VOA 601/602 STANDARD

STD #2: 10 ng/uL VOA SURROGATE STANDARD

CALIBRATION LEVEL	STD CONC (ng/mL)	STD #1 VOL(uL)	STD #2 VOL(uL)	solvent VOL(uL)
1	1	0.5	0.5	5000
2	10	5	5	5000
3	20	10	10	5000
4	30	15	15	5000
5	40	20	20	5000
6	50	25	25	5000

CSPG Code: GVOA1 01/31/95

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3983 Research Park Drive * Ann Arbor, MI 48108
(313) 761-1389

Retention Time Window Analysis
Method 8020

Study I.D.: ATRACCR 540 VOA041894
Column I.D.: DB-624 7544 0.53ID
Study Date: 04/18/94

FILE:	A035Y4	A036Y4	A036Y30				
Compound	Retention Time #1 (Minutes)	Retention Time #2 (Minutes)	Retention Time #3 (Minutes)	Retention Time Average (Minutes)	Retention Time STD (Minutes)	3 x STD (Minutes)	Retention Time Window (%)
Benzene	17.898	18.112	18.072	18.027	0.114	0.341	1.892
aaa-F3Toluene	19.649	19.850	19.809	19.769	0.106	0.318	1.610
Toluene	21.694	21.893	21.841	21.810	0.104	0.311	1.428
ClBenzene	24.514	24.702	24.662	24.626	0.099	0.296	1.200
EthylBenzene	24.702	24.889	24.849	24.813	0.099	0.296	1.191
mp-xylene	24.929	25.116	25.076	25.040	0.099	0.296	1.180
o-Xylene	25.758	25.945	25.905	25.869	0.099	0.296	1.143
m-ClBenzene	29.153	29.313	29.313	29.260	0.093	0.278	0.950
p-ClBenzene	29.326	29.487	29.500	29.438	0.097	0.290	0.985
o-ClBenzene	30.142	30.302	30.316	30.253	0.097	0.290	0.959

Note: All calculations utilize the full precision available on both EXCEL 4.0 and the Nelson 2600 chromatography system; displayed final values may differ slightly from those obtained utilizing displayed values as input.

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Results File: N:\QPRO\RSL\AD35Y4.PRN
File Saved As: N:\EXCEL\QCRTW\AD35Y4.XLS

DFLEWIN.XLT
REV 01/24/94

Environmental Control Technology Corporation
3985 Research Park Drive * Ann Arbor, MI 48108
(313) 761-1389

Retention Time Window Analysis
Method 8010

Study I.D.: ATRACOR 540 VOA041894
Column I.D.: DB-624 75M 0.53ID
Study Date: 04/18/94

FILE:	B035Y4	B0..Y4	B036Y30				
Compound	Retention Time #1 (Minutes)	Retention Time #2 (Minutes)	Retention Time #3 (Minutes)	Retention Time Average (Minutes)	Retention Time STD (Minutes)	3 x STD (Minutes)	Retention Time Window (%)
F2Cl2methane	6.603	6.604	6.737	6.715	0.102	0.306	4.561
Clmethane	7.472	7.552	7.512	7.512	0.040	0.120	1.601
VinylCl	7.806	8.020	7.980	7.935	0.114	0.341	4.298
Brmethane	9.049	9.263	9.236	9.183	0.117	0.350	3.807
Clethane	9.410	9.637	9.611	9.553	0.124	0.373	3.900
Cl3Fmethane	10.292	10.520	10.493	10.435	0.124	0.373	3.571
11-Cl2ethane	11.843	12.070	12.043	11.985	0.124	0.373	3.109
MethyleneCl	13.113	13.340	13.300	13.251	0.121	0.364	2.746
t-11-Cl2ethene	13.808	14.048	13.995	13.950	0.126	0.379	2.717
11-Cl2ethane	14.784	15.011	14.971	14.922	0.121	0.364	2.439
c-12-Cl2ethene	16.067	16.281	16.241	16.196	0.114	0.341	2.106
Clform	16.708	16.936	16.895	16.846	0.121	0.364	2.160
111-Cl3ethane	17.163	17.377	17.337	17.292	0.114	0.341	1.972
CCl4	17.524	17.738	17.711	17.657	0.117	0.350	1.980
12-Cl2ethane	17.911	18.125	18.085	18.041	0.114	0.341	1.890
TCE	19.195	19.393	19.348	19.319	0.100	0.337	1.691
12-Cl2propane	19.622	19.836	19.796	19.751	0.114	0.341	1.727
BrCl2methane	20.144	20.344	20.304	20.264	0.106	0.318	1.571
2Clethylvinylether	20.652	20.832	20.812	20.772	0.106	0.318	1.531
c-13-Cl2propene	21.012	21.213	21.159	21.128	0.104	0.311	1.474
t-13-Cl2propene	22.048	22.236	22.202	22.175	0.096	0.289	1.304
112-Cl3ethane	22.456	22.643	22.590	22.563	0.096	0.289	1.281
PCE	22.844	23.044	22.977	22.955	0.102	0.306	1.334
ClBr2methane	23.283	23.485	23.418	23.396	0.102	0.306	1.309
Clbenzene	24.541	24.742	24.688	24.657	0.104	0.311	1.263
Brform	26.235	26.413	26.386	26.341	0.101	0.304	1.153
14-Cl2benzene	26.693	26.860	26.854	26.809	0.101	0.304	1.133
1122-Cl4ethane	27.068	27.255	27.228	27.183	0.101	0.304	1.117
m-Cl2benzene	29.179	29.340	29.333	29.291	0.097	0.290	0.990
p-Cl2benzene	29.353	29.514	29.507	29.445	0.097	0.290	0.985
o-Cl2benzene	30.169	30.319	30.342	30.280	0.097	0.290	0.958

Note: All calculations utilize the full precision available on both EXCEL 4.0 and the Nelson 2600 chromatography system, displayed final values may differ slightly from those obtained utilizing displayed values as input.

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Results File: N:\QPROJSL\B035Y4.PRN
File Saved As: N:\EXCELQC\RTW\B035Y4.XLS

DFLEWIN.XLT
REV 01/24/94

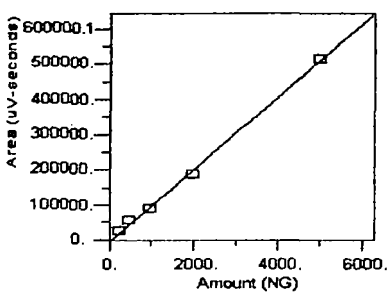
GRO Method Update

Calibration File Name: **C:\M\BH19MM.CA** Version = 6
External standard calibration
No injection volume correction
No sample weight correction
Area reject threshold = 100
Reference peak area reject threshold = 1000
Amount units = NG
2 components with 5 levels each

1 TOTAL GRO

Retention time = -1.000 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	250.000	27284.0	109.136	Manual	8/19/98 10:24:52
2	500.000	55978.0	111.956	Manual	8/19/98 15:20:29
3	1000.000	89368.0	89.368	Manual	8/19/98 15:20:29
4	2000.000	189228.0	94.614	Manual	8/19/98 15:20:29
5	5000.000	515286.0	103.0572	Manual	8/19/98 15:20:29



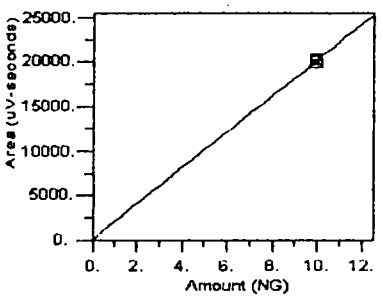
Calibration formula: Y = 102.937 X + -4711.761
Fit type = Linear with equal weighting
Coefficient of determination = 0.9977, Average error = 13.10%
Average CF = 101.6262 with RSD = 9.39%

2 SURROGATE

Retention time = 11.648 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	20060.7	2006.071	Manual	8/19/98 10:24:52
2	10.000	19663.0	1966.3	Manual	8/19/98 15:20:29
3	10.000	20339.0	2033.9	Manual	8/19/98 15:20:29
4	10.000	20338.0	2033.8	Manual	8/19/98 15:20:29

Level	Amount	Area	Area/Amt	Source	Date and time
5	10.000	20352.0	2035.2	Manual	8/19/98 15:20:29



Calibration formula: Y = 2015.054 X
Fit type = Linear with equal weighting, forced to origin
Coefficient of determination = 0.0000, Average error = 1.15%
Average CF = 2015.0540 with RSD = 1.48%

GRO Calibration Update & Quant. Reports

Sample Name = 250NG
Raw File Name = C:\M\BH19M.02R

Date Aquired = 08-19-1998 10:15:29
Today's Date = 8/19/98
Today's Time = 10:15:42
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 37
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.504		0.00	18124	989
3.004		0.00	1960412	282114
5.177		0.00	2796	399
9.789		0.00	1783	316
10.028		0.00	3338	428
10.440		0.00	1309	206
11.648	SURROGATE	9.09	20061	3847
13.360		0.00	4667	1046
15.890		0.00	1511	345
16.086		0.00	6254	1337
16.726		0.00	2812	685
18.913		0.00	2814	636

SLICE AREA = 47345

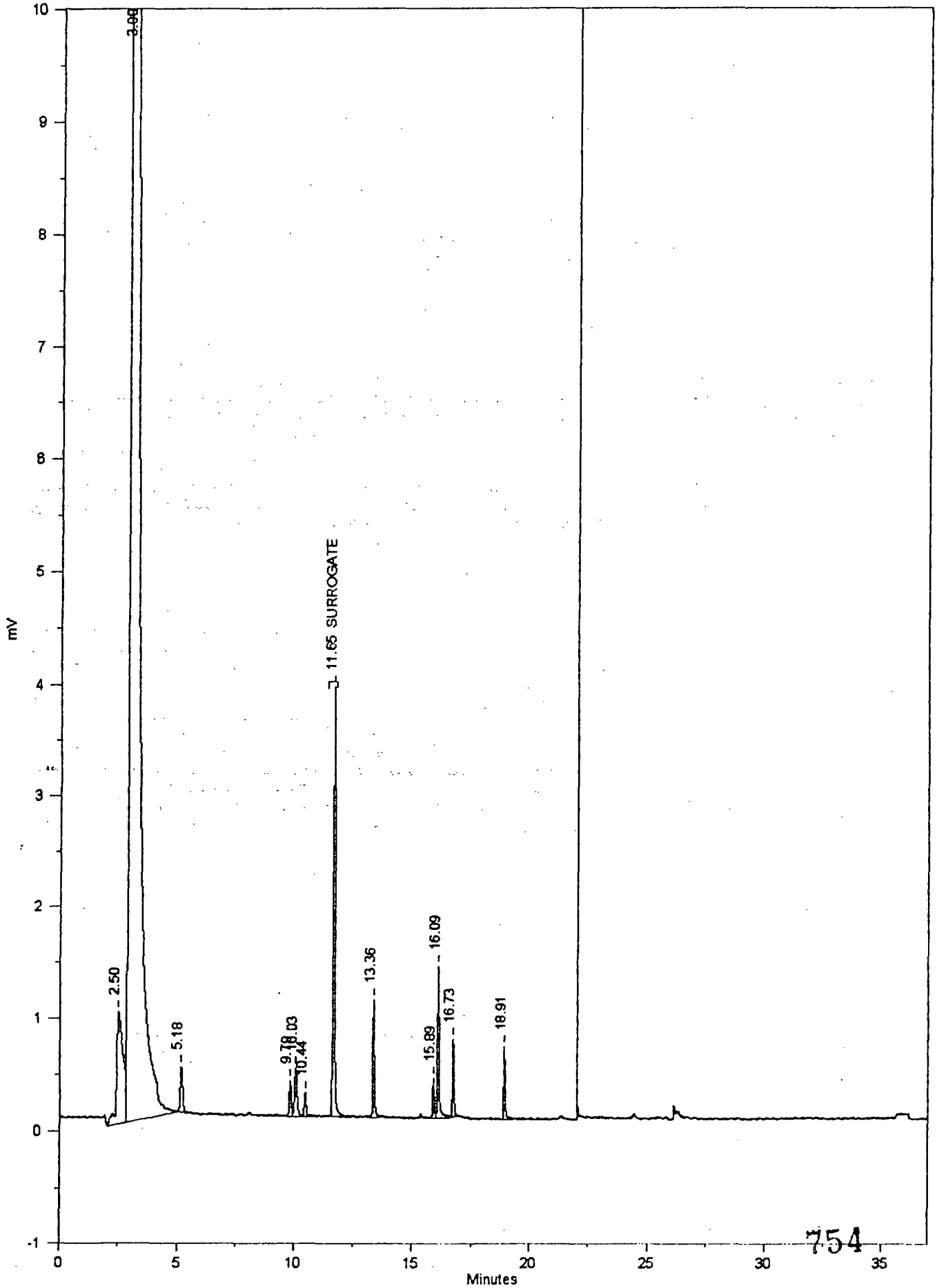
TOTAL GRO AREA = 27284

TOTAL GRO = 228 NG

SOIL TOTAL GRO = 2.28 MG/KG

H2O TOTAL GRO = .0455 MG/L

250NG
C:\M\BH19M.02R



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Calibration file name: **C:\M\BH19MM.CA** Version number changed from 1 to 2
Area file name: C:\M\BH19M.02A□
Amount injected = 1 -- No injection volume correction
Calibration Level = 1 -- Replace old values with new
Updating both responses and retention times
Updated at 8/19/98 10:15:46

Component Name	Old Ret. time	Measured Ret. time	New Ret. time	Old Response	Measured Response	New Response	Avg CF Slope	% RSD of slope	Average % error
TOTAL GRO	-1.000	NP	No change	32232.0	NP	0.0	101.420	44.41	18.92
SURROGATE	11.540	11.648	11.648	21668.0	20060.7	20060.7	2185.082	3.65	2.34

Sample Name = 500NG
Raw File Name = C:\M\BH19M.07R

Date Aquired = 08-19-1998 15:11:29
Today's Date = 8/19/98
Today's Time = 15:11:42
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.543		0.00	5497	362
2.979		0.00	2292361	349416
5.191		0.00	6537	931
9.761		0.00	3341	597
10.005		0.00	7713	999
10.403		0.00	2712	463
11.614	SURROGATE	9.34	19663	3744
13.331		0.00	9369	2082
15.870		0.00	2859	706
16.067		0.00	11895	2765
16.706		0.00	6063	1373
18.898		0.00	5489	1206

SLICE AREA = 75641

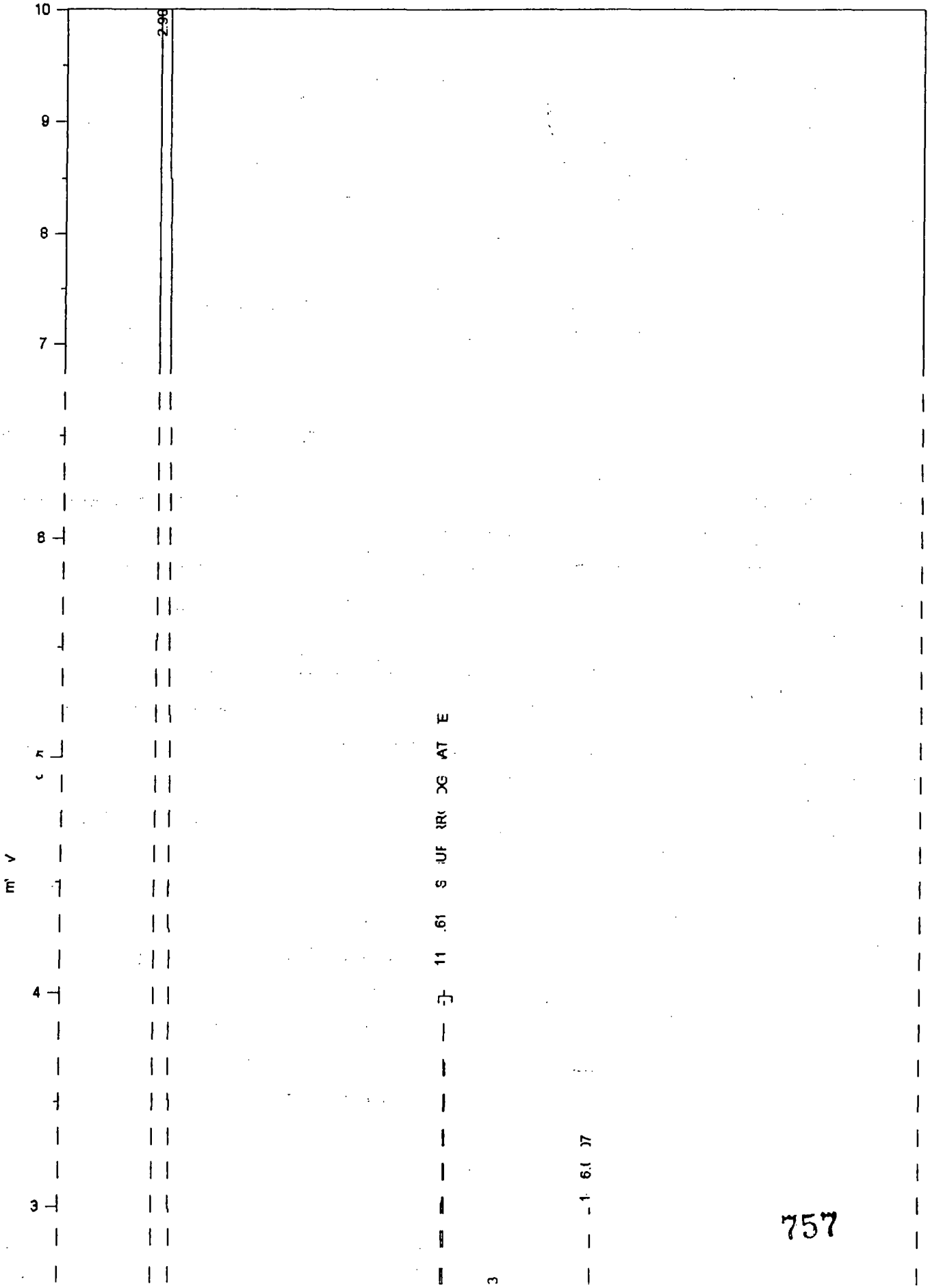
TOTAL GRO AREA = 55978

TOTAL GRO = 334 NG

SOIL TOTAL GRO = 3.34 MG/KG

H2O TOTAL GRO = .0669 MG/L

500NG
C:\M\BH19M.07R



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Sample Name = 1000NG
Raw File Name = C:\M\BH19M.03R

Date Aquired = 08-19-1998 11:28:07
Today's Date = 8/19/98
Today's Time = 16:01:37
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 37
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.527		0.00	18520	1281
3.009		0.00	3318404	427606
5.179		0.00	9953	1412
9.756		0.00	5657	1016
9.999		0.00	11650	1503
10.401		0.00	4329	686
11.620	SURROGATE	10.09	20339	3700
13.339		0.00	15612	3492
15.883		0.00	4563	1152
16.081		0.00	18950	4476
16.723		0.00	10157	2296
18.913		0.00	8496	1985

SLICE AREA = 109708

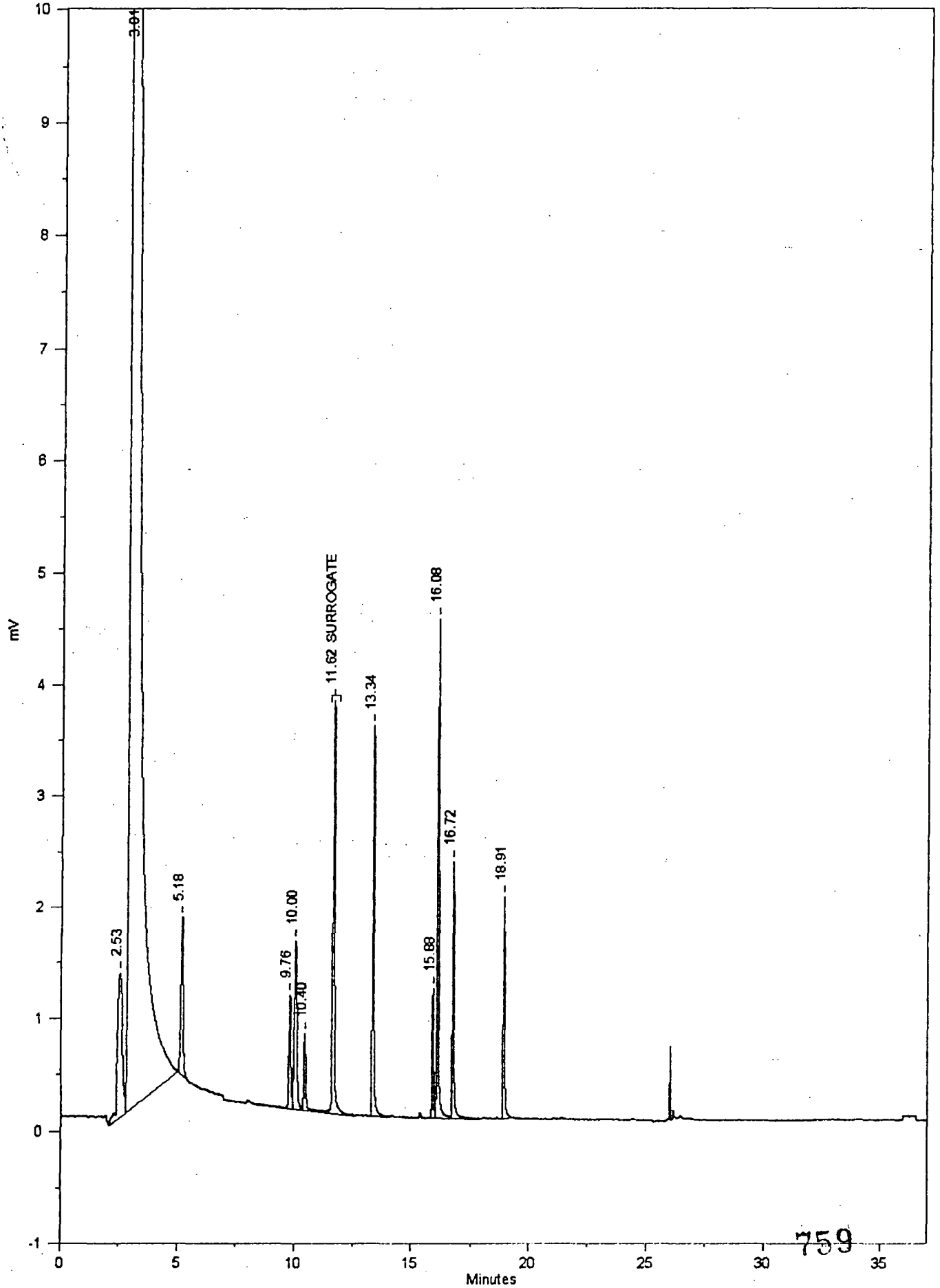
TOTAL GRO AREA = 89368

TOTAL GRO = 879 NG

SOIL TOTAL GRO = 8.79 MG/KG

H2O TOTAL GRO = .1759 MG/L

1000NG
C:\M\BH19M.03R



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Sample Name = 2000NG
Raw File Name = C:\M\BH19M.04R

Date Aquired = 08-19-1998 12:41:10
Today's Date = 8/19/98
Today's Time = 16:01:46
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 37
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.477		0.00	33390	1821
3.089		0.00	5551046	521097
5.181		0.00	21997	3084
9.767		0.00	11563	2129
10.008		0.00	24529	3179
10.412		0.00	9109	1499
11.624	SURROGATE	10.09	20338	3743
13.341		0.00	32745	7425
15.877		0.00	9741	2469
16.076		0.00	40588	9950
16.715		0.00	20450	4892
18.906		0.00	18505	4398

SLICE AREA = 209567

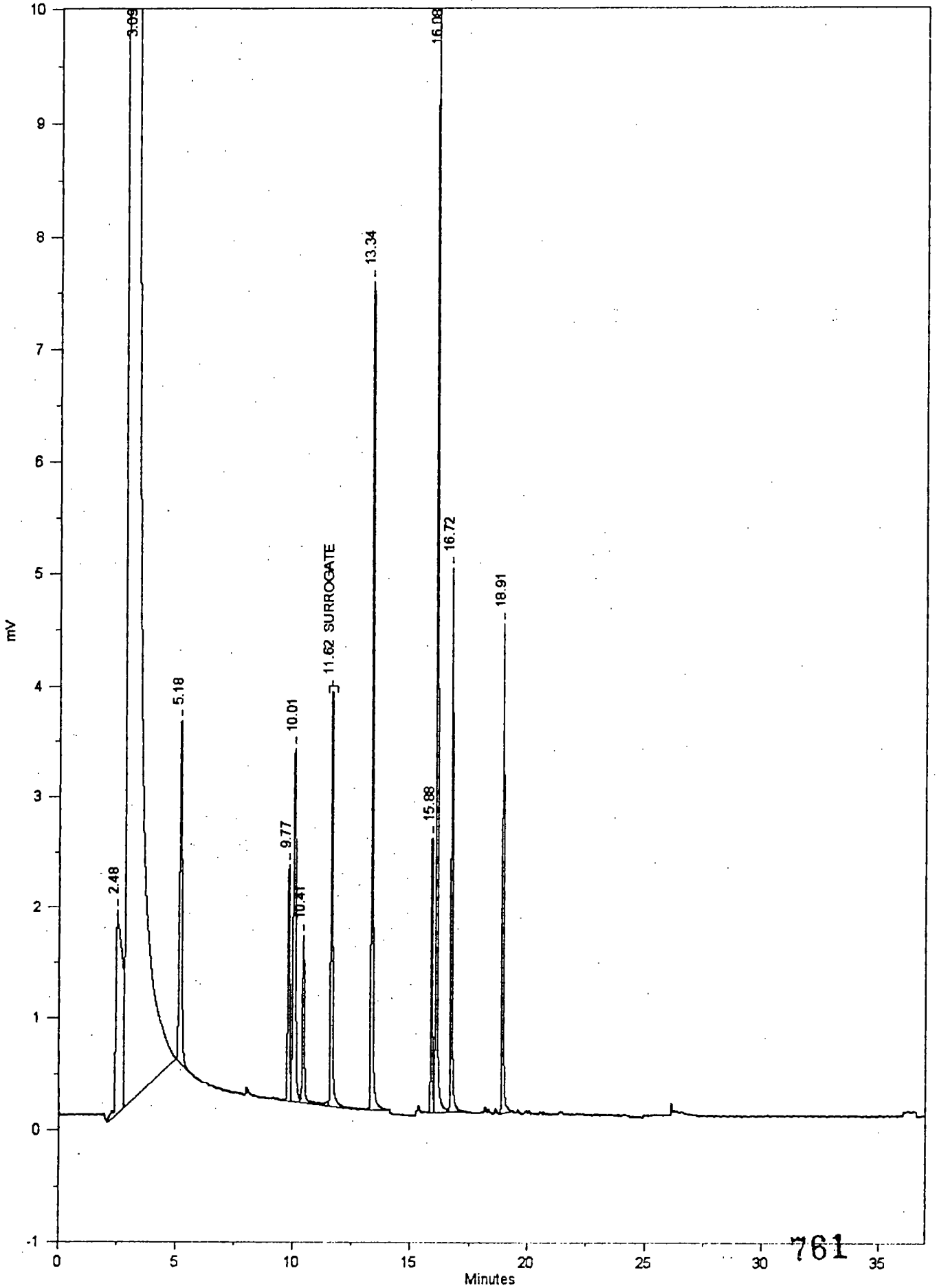
TOTAL GRO AREA = 189228

TOTAL GRO = 1862 NG

SOIL TOTAL GRO = 18.62 MG/KG

H2O TOTAL GRO = .3724 MG/L

2000NG
C:\M\BH19M.04R



Sample Name = 5000NG
Raw File Name = C:\M\BH19M.05R

Date Aquired = 08-19-1998 13:41:55
Today's Date = 8/19/98
Today's Time = 16:01:54
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 24.61
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.253		0.00	892	81
2.449		0.00	9246	1632
3.266		0.00	13782230	640953
5.130		0.00	61399	8715
8.010		0.00	1823	177
9.756		0.00	31560	5899
9.998		0.00	62857	8171
10.402		0.00	21858	3874
11.623	SURROGATE	10.10	20352	3702
13.341		0.00	90947	21352
15.879		0.00	26656	6820
16.079		0.00	113225	28461
16.718		0.00	55598	13890
18.909		0.00	49362	11995
22.117		0.00	1614	353

SLICE AREA = 535638

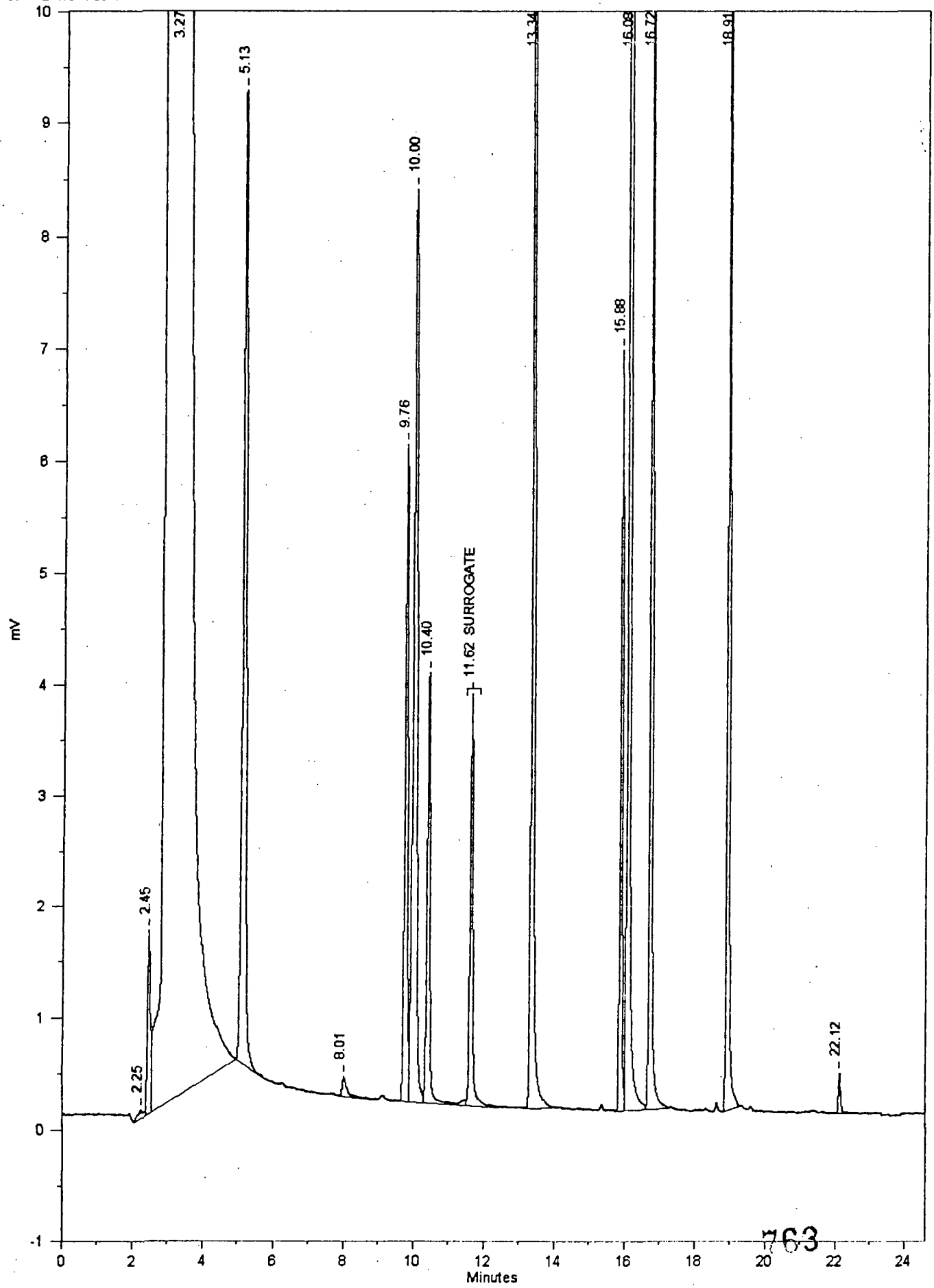
TOTAL GRO AREA = 515286

TOTAL GRO = 5070 NG

SOIL TOTAL GRO = 50.70 MG/KG

H2O TOTAL GRO = 1.0141 MG/L

5000NG
C:\M\BH19M.05R



763

x 50,000

use this run, quant on 2nd page

Sample Name = 91983G 1:50000
Raw File Name = C:\M\BH20M.08R

Date Aquired = 08-20-1998 14:17:46
Today's Date = 8/20/98
Today's Time = 14:18:00
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.420		0.00	7752	1397
3.437		0.00	23975310	748380
6.164		0.00	438	121
7.592		0.00	1009	105
7.979		0.00	2713	295
9.055		0.00	2123	236
9.440		0.00	1060	157
9.703		0.00	466	102
10.351		0.00	2502	425
11.349		0.00	5883	892
11.581	SURROGATE 99%	9.90	19948	3526
12.140		0.00	1008	174
12.580		0.00	4476	595
12.837		0.00	2413	410
13.137		0.00	4673	744
13.300		0.00	7988	1546
13.592		0.00	8949	1798
13.742		0.00	2789	546
13.946		0.00	1046	228
14.395		0.00	2127	445
14.639		0.00	1168	226
14.732		0.00	1862	551
15.200		0.00	4585	621
15.307		0.00	4665	1036
15.500		0.00	4165	975
15.841		0.00	7172	1439
16.039		0.00	23252	4947
16.147		0.00	18528	4235
16.337		0.00	1215	260
16.582		0.00	4428	931
16.681		0.00	9731	2059
16.950		0.00	6260	1328
17.101		0.00	9633	1828
17.290		0.00	1071	345
17.597		0.00	3152	508
17.796		0.00	6629	1176
17.965		0.00	4349	940
18.127		0.00	19026	3530
18.329		0.00	25420	3524
18.585		0.00	8149	1791
18.874		0.00	26873	6285
19.146		0.00	4473	762
19.266		0.00	9342	1439
19.556		0.00	10746	2353
19.931		0.00	13015	2194
20.038		0.00	19892	3453
20.287		0.00	17946	2383
20.526		0.00	13001	2154

Ret Time (min)	Peak Name	Amount	Area	Height
20.659		0.00	10348	2019
20.884		0.00	13740	1928
21.042		0.00	8367	1740
21.230		0.00	4743	1104
21.401		0.00	18371	2707
21.520		0.00	5637	1078
21.658		0.00	5557	803
21.822		0.00	10988	2068
21.938		0.00	3730	867
22.112		0.00	35873	4335
22.367		0.00	14987	1838
22.673		0.00	5800	963
22.795		0.00	21054	1427
23.265		0.00	11704	1115
23.419		0.00	5572	842
23.727		0.00	7315	788
23.953		0.00	962	141
24.503		0.00	16835	1731
24.959		0.00	10409	891
25.319		0.00	6771	722

SLICE AREA = 262946

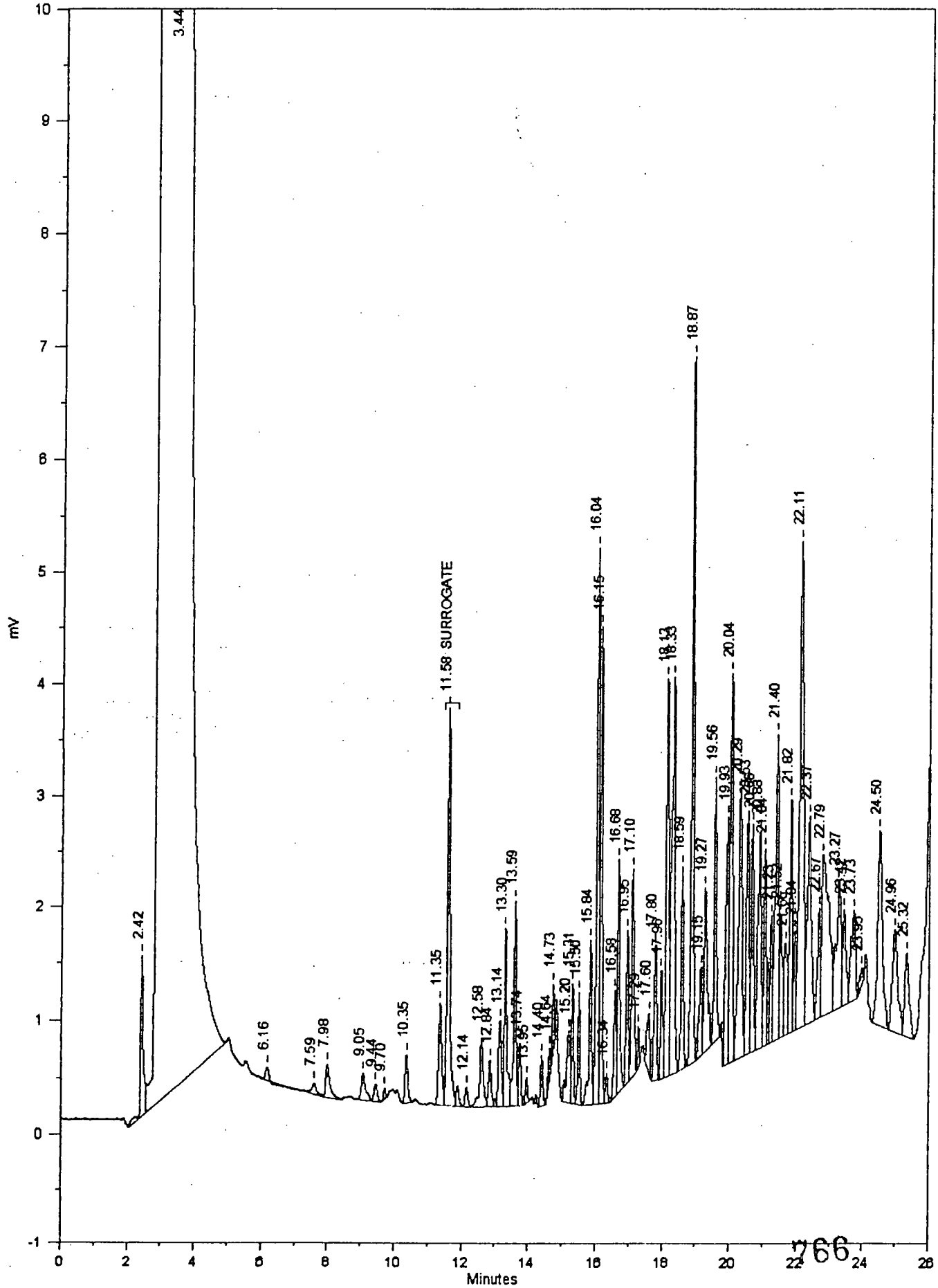
TOTAL GRO AREA = 242997

TOTAL GRO = 2391 NG

SOIL TOTAL GRO = 23.91 MG/KG

H2O TOTAL GRO = .4782 MG/L x 50,000 =

91983G 1:50000
C:\M\BH20M.08R



Sample Name = 91983G 1:1000
Raw File Name = C:\M\BH19M.11R

x1000 do not use, over range of curve rerun 1/1,000,000

Date Aquired = 08-19-1998 17:37:35
Today's Date = 8/19/98
Today's Time = 17:38:34
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.545		0.00	26425	2207
2.926		0.00	1267927	224939
3.259		0.00	46085	5614
3.622		0.00	26425	3890
3.824		0.00	5398	879
4.082		0.00	8134	1112
4.301		0.00	1708	252
5.172		0.00	44081	4278
5.669		0.00	20463	2595
6.061		0.00	2693	383
6.288		0.00	26146	3506
6.758		0.00	6049	402
6.955		0.00	534	112
7.361		0.00	3487	499
7.671		0.00	31308	3387
8.766		0.00	7679	987
9.115		0.00	70466	7676
9.499		0.00	41735	5846
9.737		0.00	29404	5327
10.011		0.00	50462	4335
10.129		0.00	29562	4379
10.385		0.00	84057	15360
10.661		0.00	12942	1610
10.928		0.00	1385	293
11.091		0.00	5179	770
11.392		0.00	237670	37879
11.588	SURROGATE	17.45	35172	6165
11.752		0.00	20783	3904
11.900		0.00	28389	4916
12.170		0.00	34358	5691
12.483		0.00	23509	3508
12.613		0.00	161941	23569
12.867		0.00	108759	15636
13.170		0.00	191460	30918
13.321		0.00	312025	75183
13.438		0.00	67813	10389
13.632		0.00	382879	81508
13.775		0.00	113915	21931
13.980		0.00	58280	10056
14.143		0.00	18662	3395
14.262		0.00	21864	4651
14.431		0.00	109722	21227
14.669		0.00	126000	21907
14.769		0.00	215604	44332
14.864		0.00	247715	38530
15.100		0.00	41553	9230
15.237		0.00	186839	28024
15.350		0.00	275972	55319

Ret Time (min)	Peak Name	Amount	Area	Height
15.544		0.00	236742	49887
15.773		0.00	48166	9720
15.870		0.00	280332	65037
16.085		0.00	1164648	249022
16.211		0.00	1275546	282391
16.385		0.00	68021	13373
16.628		0.00	242585	50275
16.719		0.00	602348	104959
16.998		0.00	539641	100241
17.150		0.00	733065	98686
17.327		0.00	157870	36113
17.489		0.00	274667	39393
17.641		0.00	626879	85036
17.826		0.00	585680	88228
18.007		0.00	218352	46287
18.175		0.00	973969	162160
18.313		0.00	569080	131582
18.426		0.00	2206037	461639
18.636		0.00	625726	87877
18.946		0.00	1947547	291742
19.213		0.00	619244	72979
19.332		0.00	859912	106489
19.614		0.00	1400631	152088
19.820		0.00	338759	73582
19.983		0.00	590872	87071
20.101		0.00	838704	128946
20.407		0.00	1777010	215393
20.522		0.00	1377182	248324
20.600		0.00	603256	109267
20.718		0.00	715575	90524
20.897		0.00	832182	87698
21.117		0.00	618589	82854
21.300		0.00	799741	102980
21.482		0.00	960859	109010
21.656		0.00	488173	55262
21.887		0.00	388393	59561
22.001		0.00	230696	44473
22.222		0.00	1012573	92199
22.344		0.00	520006	88580
22.439		0.00	1165251	93710
22.743		0.00	187988	27677
22.923		0.00	476028	34071
23.125		0.00	137113	31522
23.208		0.00	229872	36564
23.380		0.00	409457	53486
23.542		0.00	165218	28760
23.604		0.00	265358	35055
23.840		0.00	126163	15413
23.985		0.00	92662	11794
24.314		0.00	437423	27708
24.544		0.00	104651	16241
24.608		0.00	136923	16237
25.050		0.00	123672	7294
25.439		0.00	75538	5971
25.770		0.00	756	302

SLICE AREA = 16865420

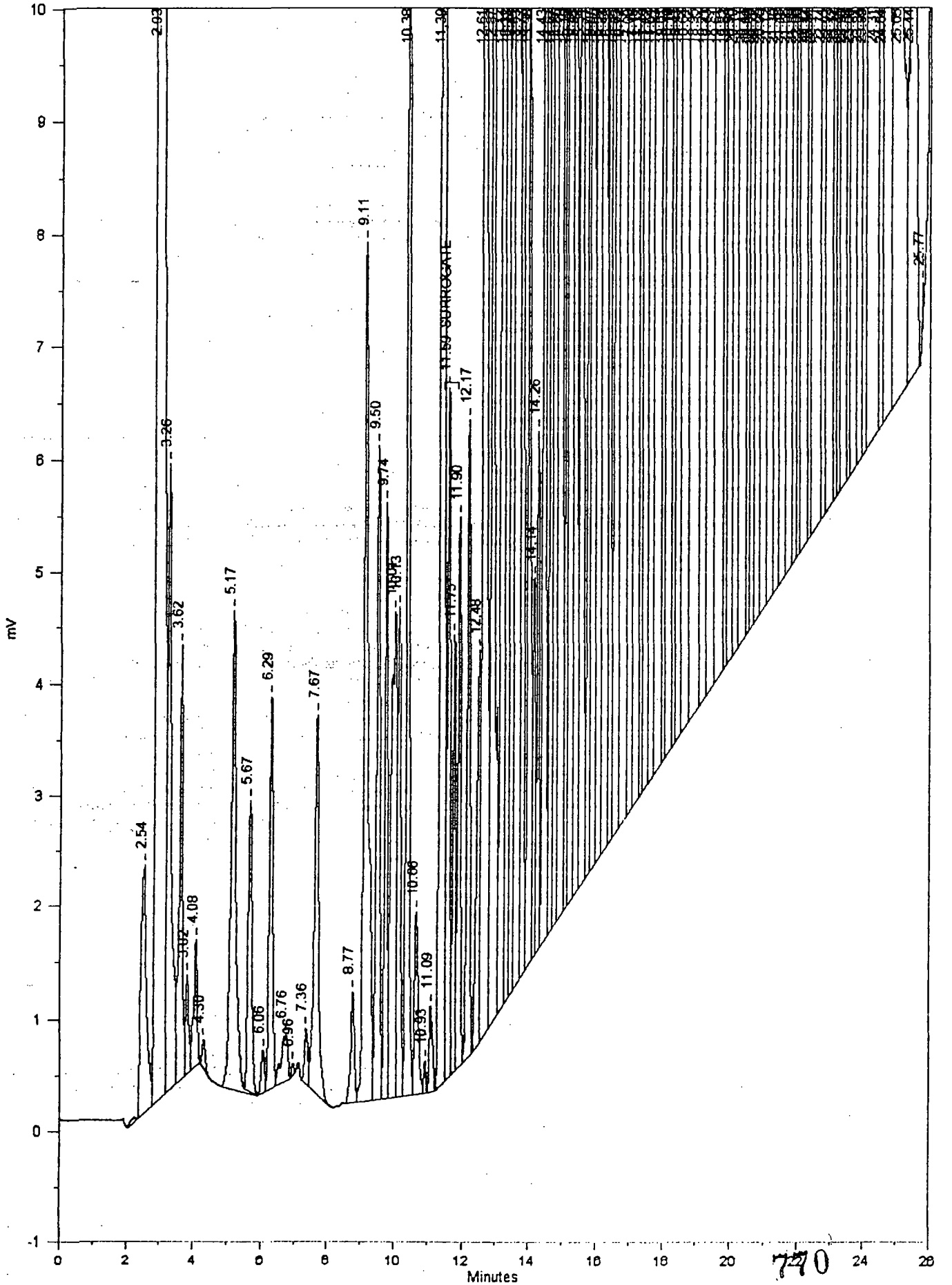
TOTAL GRO AREA = 16830250

TOTAL GRO = 165609 NG

SOIL TOTAL GRO = 1656.09 MG/KG

H2O TOTAL GRO = 33.1219 MG/L

91983G 1:1000
C:\M\BH19M.11R



770

Sample Name = 91983G 1:1000000
Raw File Name = C:\M\BH20M.05R

x 1,000,000 do not use, rerun at x 50,000

Date Aquired = 08-20-1998 12:28:16
Today's Date = 8/20/98
Today's Time = 12:28:28
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.500		0.00	20464	1645
2.964		0.00	2644029	379259
11.564	SURROGATE 93%	9.31	18765	3582
16.025		0.00	1158	258
16.131		0.00	1256	284
16.934		0.00	455	99
17.086		0.00	623	108
18.113		0.00	830	176
18.316		0.00	2167	401
18.570		0.00	488	98
18.857		0.00	1757	341
19.253		0.00	1059	103
19.542		0.00	816	146
20.025		0.00	1727	189
20.268		0.00	2133	406
20.515		0.00	521	107
20.874		0.00	670	97
21.386		0.00	822	124
22.081		0.00	2219	325
22.353		0.00	846	126
24.474		0.00	1009	103

SLICE AREA = 27498

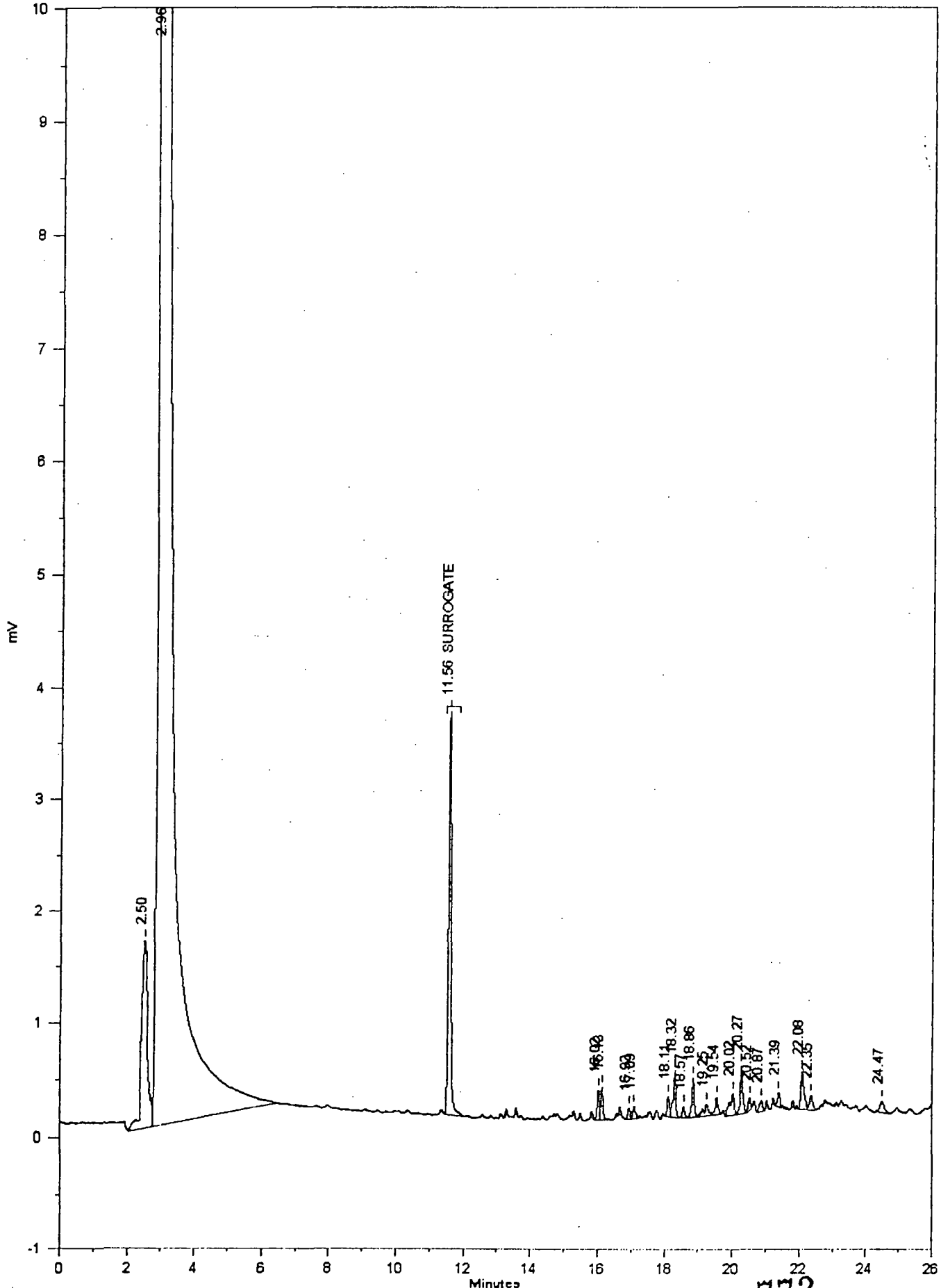
TOTAL GRO AREA = 8732

TOTAL GRO = 86 NG

SOIL TOTAL GRO = .86 MG/KG

H2O TOTAL GRO = .0172 MG/L

91983G 1:1000000
C:\M\BH20M.05R



Sample Name = 91984G 1:1000
Raw File Name = C:\M\BH20M.04R

X1000 use this run

Date Aquired = 08-20-1998 11:51:50
Today's Date = 8/20/98
Today's Time = 11:59:05
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.526		0.00	19073	1822
2.914		0.00	1288729	215313
5.313		0.00	1115	148
5.644		0.00	1599	199
9.724		0.00	12366	2043
11.582	SURROGATE 98%	9.79	19718	3813
13.297		0.00	17025	3982
15.839		0.00	797	197
16.034		0.00	6897	1605
16.676		0.00	3422	775
18.116		0.00	1085	241
18.583		0.00	436	90
18.868		0.00	1857	428
19.547		0.00	579	119
19.859		0.00	464	91
23.293		0.00	702	58

SLICE AREA = 66317

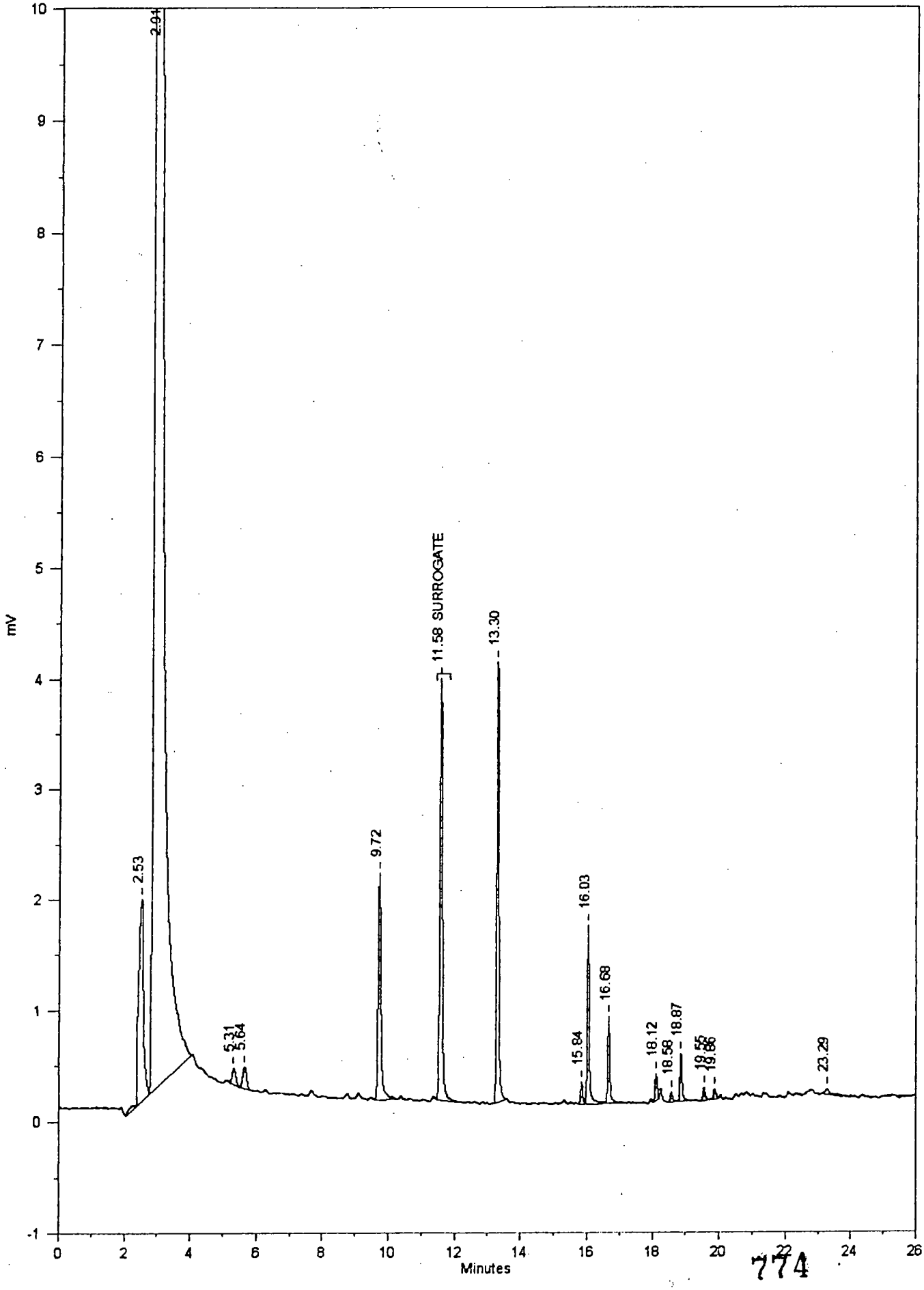
TOTAL GRO AREA = 46599

TOTAL GRO = 459 NG

SOIL TOTAL GRO = 4.59 MG/KG

H2O TOTAL GRO = .0917 MG/L x1000 =

91984G 1:1000
C:\M\BH20M.04R



x10 do not use, over range of curve

Sample Name = 91984G 1:10
Raw File Name = C:\M\BH19M.10R

Date Aquired = 08-19-1998 17:01:01
Today's Date = 8/19/98
Today's Time = 17:02:00
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.556		0.00	59403	11831
2.924		0.00	1270406	216675
3.266		0.00	50405	6599
3.638		0.00	42957	6524
3.836		0.00	14297	2800
4.093		0.00	43402	6426
4.362		0.00	5006	851
4.670		0.00	1054	255
5.181		0.00	125677	4733
5.338		0.00	138561	19963
5.665		0.00	175463	22485
6.064		0.00	7756	1125
6.285		0.00	24648	3538
6.540		0.00	5096	794
6.780		0.00	20626	1759
6.961		0.00	7713	1094
7.107		0.00	12821	1255
7.369		0.00	15843	2057
7.685		0.00	61440	6803
8.313		0.00	923	138
8.536		0.00	3596	500
8.779		0.00	35715	4959
9.118		0.00	57979	6750
9.493		0.00	19278	2736
9.766		0.00	1531985	276018
10.135		0.00	20896	2915
10.382		0.00	25642	4023
10.656		0.00	17677	2168
10.922		0.00	2505	464
11.079		0.00	8093	1357
11.381		0.00	37689	6118
11.597	SURROGATE	11.43	23026	4208
11.747		0.00	3696	746
11.893		0.00	1628	332
12.051		0.00	1756	340
12.196		0.00	4323	717
12.429		0.00	12444	1684
12.603		0.00	10654	1654
12.860		0.00	6889	1342
13.012		0.00	4159	898
13.169		0.00	3121	623
13.357		0.00	2556308	592615
13.789		0.00	7292	1181
13.968		0.00	484	169
14.256		0.00	1246	340
14.469		0.00	3046	437
14.617		0.00	6623	1211
14.804		0.00	6998	1020

Ret Time (min)	Peak Name	Amount	Area	Height
15.083		0.00	926	212
15.325		0.00	7674	1293
15.519		0.00	4015	996
15.681		0.00	1514	344
15.859		0.00	101879	26633
16.072		0.00	840659	216523
16.706		0.00	357202	92257
17.114		0.00	4289	501
17.307		0.00	5865	1271
17.600		0.00	3892	572
17.771		0.00	2167	484
17.978		0.00	14762	3838
18.141		0.00	131255	27233
18.284		0.00	55541	12038
18.595		0.00	37546	8782
18.892		0.00	189716	43942
19.330		0.00	4297	625
19.571		0.00	49079	10668
19.878		0.00	54527	10977
20.057		0.00	22659	4519
20.219		0.00	9243	2277
20.340		0.00	6271	1048
20.536		0.00	17004	2591
20.677		0.00	18441	3454
20.828		0.00	12881	2152
21.163		0.00	3619	727
21.344		0.00	6890	1727
21.431		0.00	21563	2756
21.840		0.00	12737	2378
22.117		0.00	26289	3883
22.378		0.00	5736	825
22.687		0.00	2012	337
22.814		0.00	2121	321
23.290		0.00	32098	4232
24.091		0.00	2723	295
24.512		0.00	2958	334
24.989		0.00	1875	193

SLICE AREA = 6770216

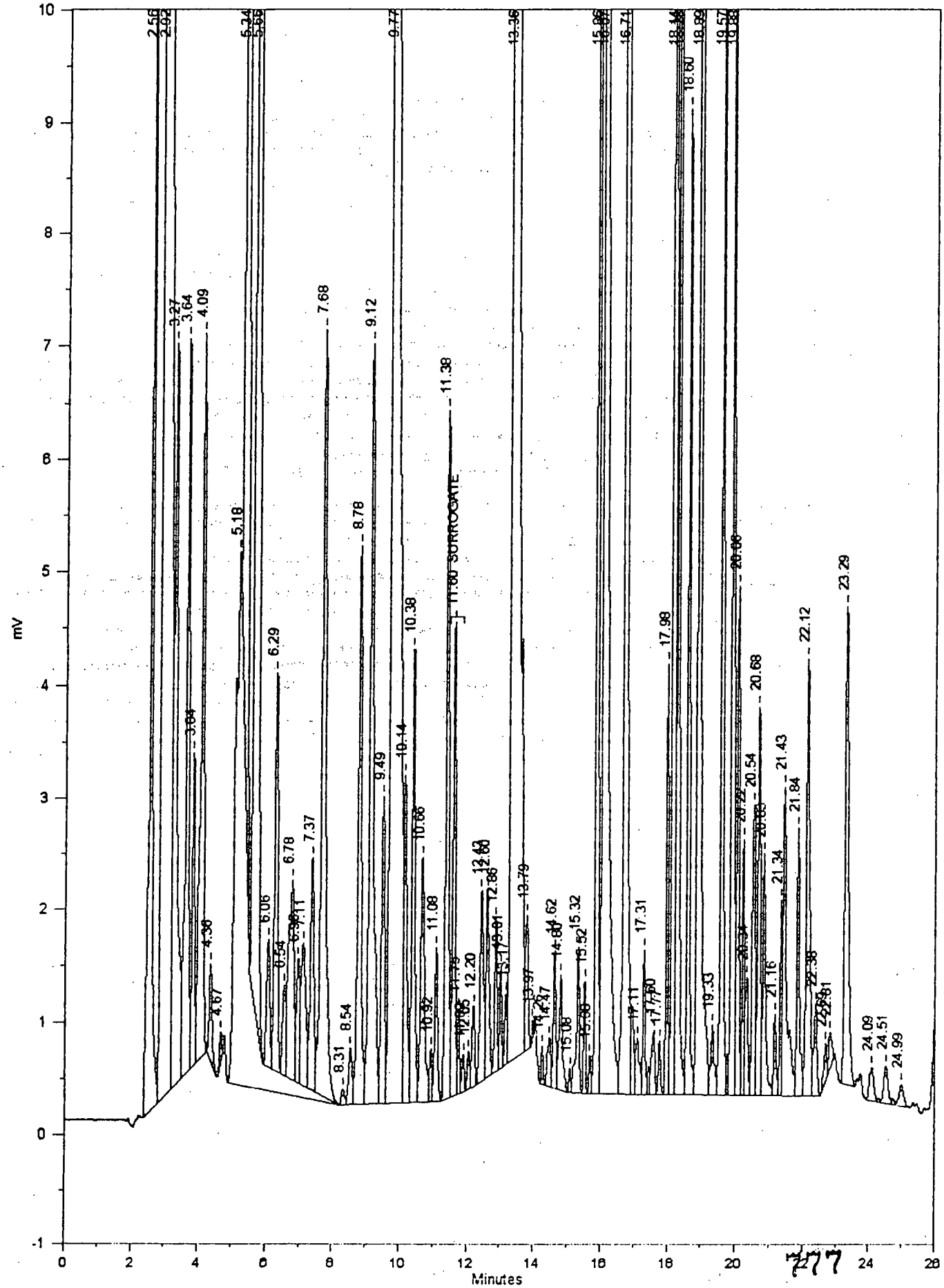
TOTAL GRO AREA = 6747190

TOTAL GRO = 66392 NG

SOIL TOTAL GRO = 663.92 MG/KG

H2O TOTAL GRO = 13.2784 MG/L

91984G 1:10
C:\M\BH19M.10R



GRO MB# 89678

Sample Name = MB082098
Raw File Name = C:\M\BH20M.03R

Date Aquired = 08-20-1998 11:15:23
Today's Date = 8/20/98
Today's Time = 11:15:35
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.510		0.00	23461	2215
2.927		0.00	1156215	201310
11.618	SURROGATE 97%	9.71	19574	3726
20.768		0.00	907	94
22.104		0.00	340	61
22.796		0.00	3220	296
24.007		0.00	657	102

SLICE AREA = 19574

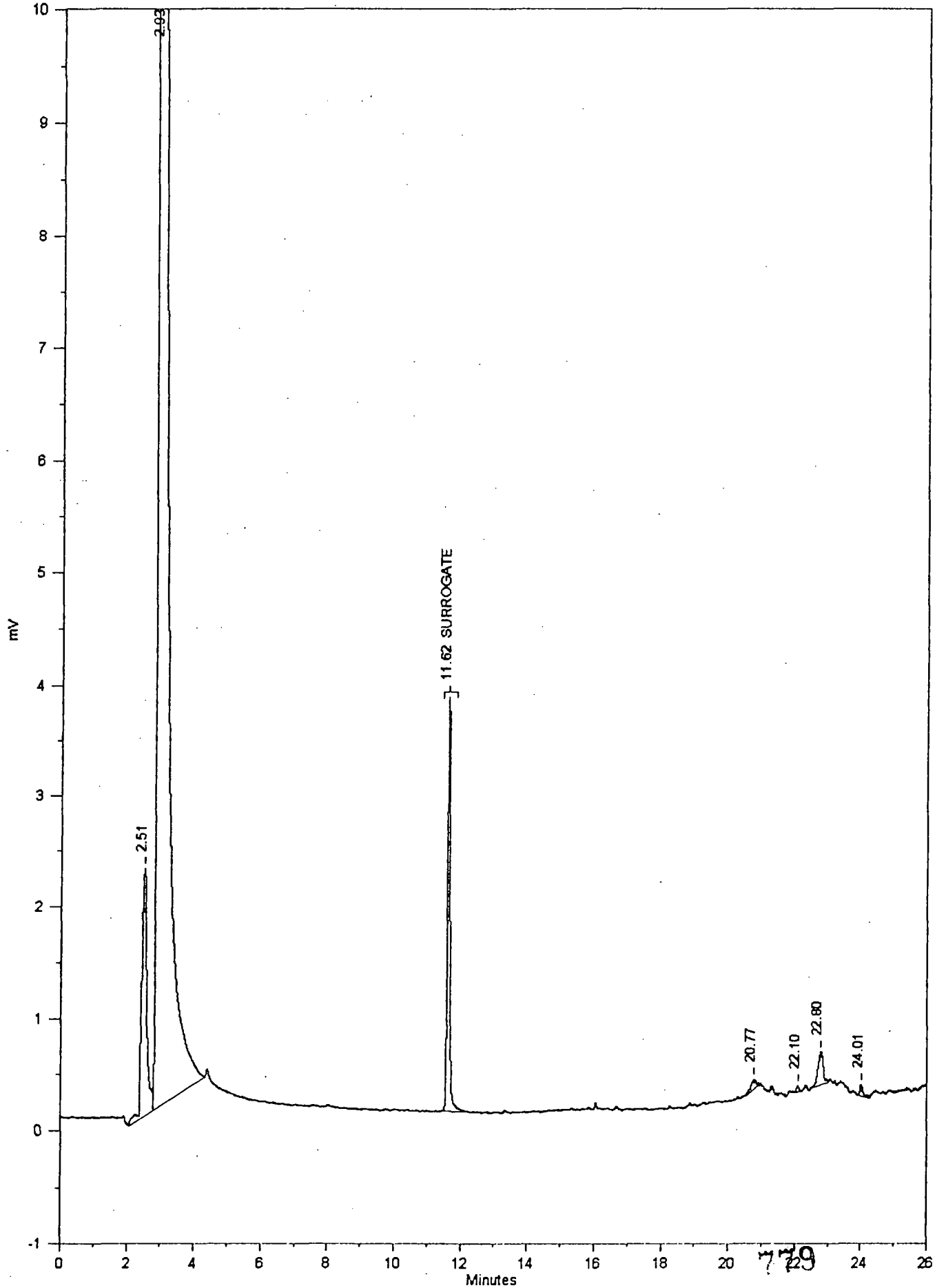
TOTAL GRO AREA = 0

TOTAL GRO = 0 NG

SOIL TOTAL GRO = .00 MG/KG

H2O TOTAL GRO = .0000 MG/L

MB082098
C:\M\BH20M.03R



GRO
LCS# 89972

Sample Name = LCS081998
Raw File Name = C:\M\BH19M.09R

Date Aquired = 08-19-1998 16:24:20
Today's Date = 8/19/98
Today's Time = 16:24:32
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.507		0.00	20217	1394
3.023		0.00	4186316	475176
5.169		0.00	15604	2206
9.753		0.00	8003	1457
10.003		0.00	18030	2327
10.400		0.00	6003	1087
11.614	SURROGATE 99%	9.89	19937	3843
13.327		0.00	22979	5133
15.863		0.00	6818	1719
16.061		0.00	28488	6844
16.700		0.00	14316	3411
18.888		0.00	13204	3056

SLICE AREA = 153383

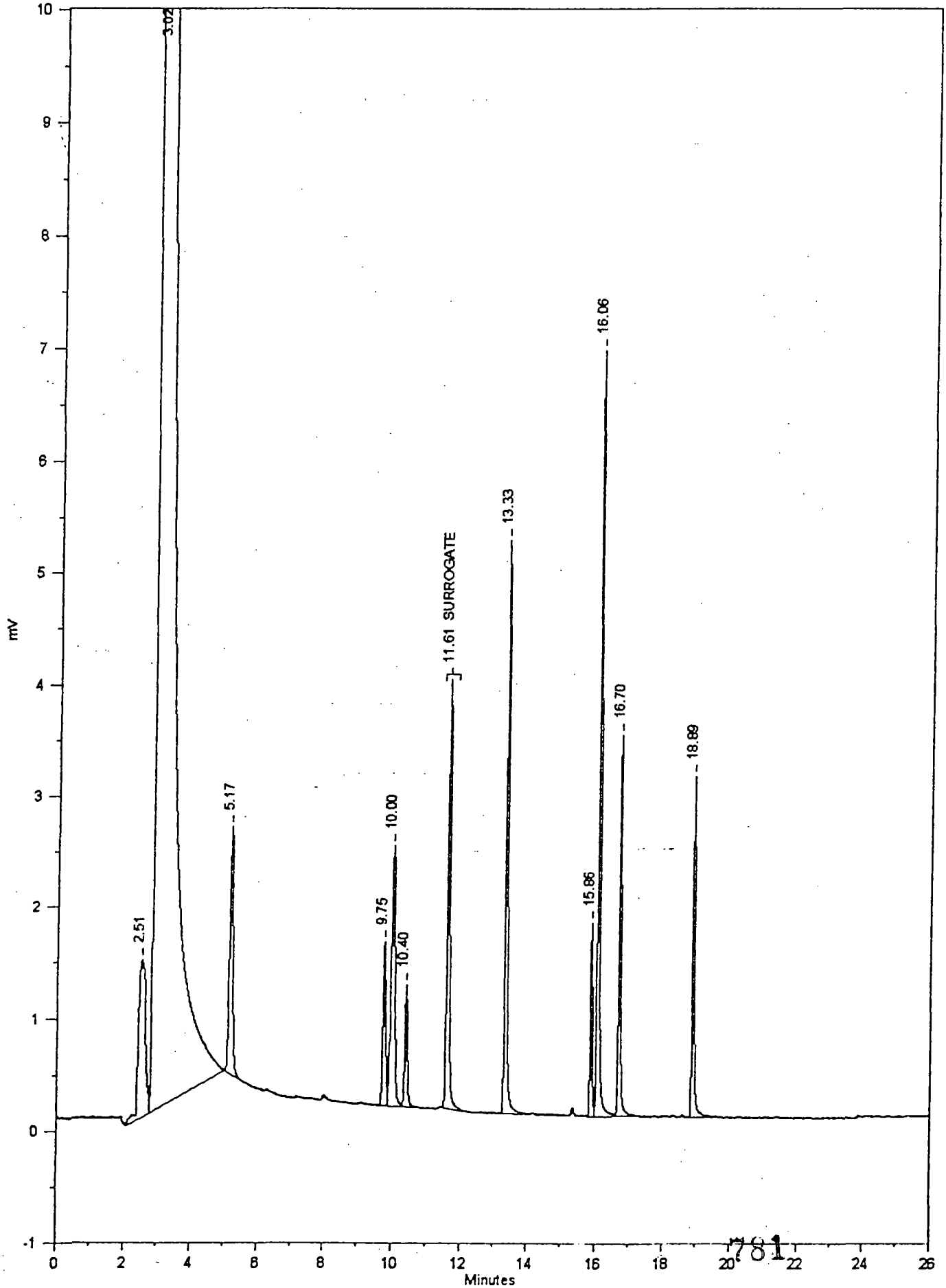
TOTAL GRO AREA = 133446

TOTAL GRO = 1313 NG

SOIL TOTAL GRO = 13.13 MG/KG

H2O TOTAL GRO = .2626 MG/L

LCS081998
C:\M\BH19M.09R



x1000

Sample Name = 91984GM 1:1000
Raw File Name = C:\M\BH20M.06R

Date Aquired = 08-20-1998 13:04:45
Today's Date = 8/20/98
Today's Time = 13:04:58
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 26
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.529		0.00	25158	1792
3.022		0.00	4394636	490055
5.153		0.00	16168	2263
5.643		0.00	1720	222
6.260		0.00	537	80
7.670		0.00	639	84
9.094		0.00	1224	145
9.473		0.00	613	98
9.726		0.00	18948	3440
9.971		0.00	19125	2444
10.370		0.00	6467	1228
11.370		0.00	1110	166
11.581	SURROGATE 94%	9.38	18906	3693
12.587		0.00	1595	174
12.841		0.00	724	150
13.300		0.00	42200	9928
13.594		0.00	1141	256
14.604		0.00	455	86
15.308		0.00	1529	353
15.503		0.00	1051	260
15.839		0.00	8337	2128
16.037		0.00	44759	10515
16.679		0.00	20537	5012
17.588		0.00	2344	297
17.755		0.00	1066	255
17.966		0.00	1079	265
18.123		0.00	9451	1893
18.269		0.00	6589	1076
18.585		0.00	2712	614
18.872		0.00	27228	6505
19.314		0.00	1054	146
19.552		0.00	5749	975
19.927		0.00	5937	842
20.040		0.00	6031	1266
20.283		0.00	3721	622
20.519		0.00	4151	681
20.654		0.00	4745	927
20.814		0.00	2388	382
21.420		0.00	4637	592
21.821		0.00	2083	542
22.091		0.00	5952	1007
22.669		0.00	1375	216
22.805		0.00	3472	303
23.284		0.00	4131	387
24.016		0.00	2349	287
24.521		0.00	1573	148
25.020		0.00	1119	113

SLICE AREA = 258255

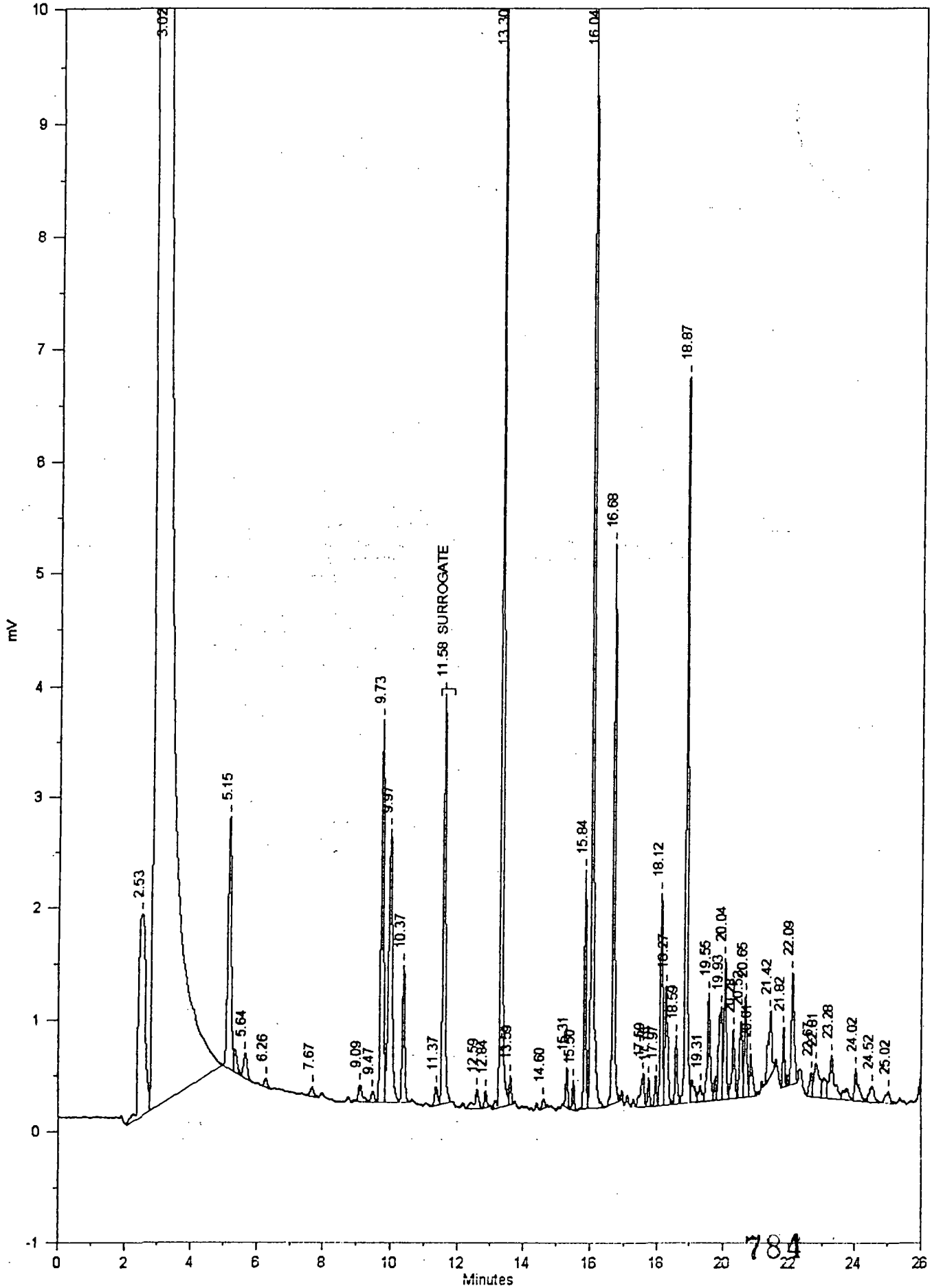
TOTAL GRO AREA = 239349

TOTAL GRO = 2355 NG

SOIL TOTAL GRO = 23.55 MG/KG

H2O TOTAL GRO = .4710 MG/L

91984GM 1:1000
C:\M\BH20M.06R



Sample Name = 91984GD 1:1000
Raw File Name = C:\M\BH20M.07R

Date Aquired = 08-20-1998 13:37:16
Today's Date = 8/20/98
Today's Time = 13:37:28
Operator = SB
Method file = C:\M\GRO.MET
Calibration file = C:\M\BH19MM.CAL
Instrument = TRACOR-M--FID
Run Time = 21.90667
Area Reject = 100
Dilution Factor = 1
Amount Injected = 1

Ret Time (min)	Peak Name	Amount	Area	Height
2.530		0.00	32244	2148
3.028		0.00	4411478	487834
5.154		0.00	14281	2133
5.645		0.00	1859	239
6.263		0.00	614	92
7.654		0.00	709	89
8.759		0.00	523	64
9.095		0.00	1210	137
9.466		0.00	464	80
9.724		0.00	18722	3368
9.965		0.00	18693	2389
10.367		0.00	6130	1137
11.363		0.00	906	131
11.583	SURROGATE 97%	9.67	19495	3662
13.301		0.00	38467	9329
15.316		0.00	530	121
15.840		0.00	7550	1948
16.038		0.00	35959	8876
16.678		0.00	17472	4219
18.119		0.00	1736	380
18.583		0.00	636	153
18.868		0.00	15460	3599
19.556		0.00	923	183
19.867		0.00	697	135
20.510		0.00	349	63

SLICE AREA = 201417

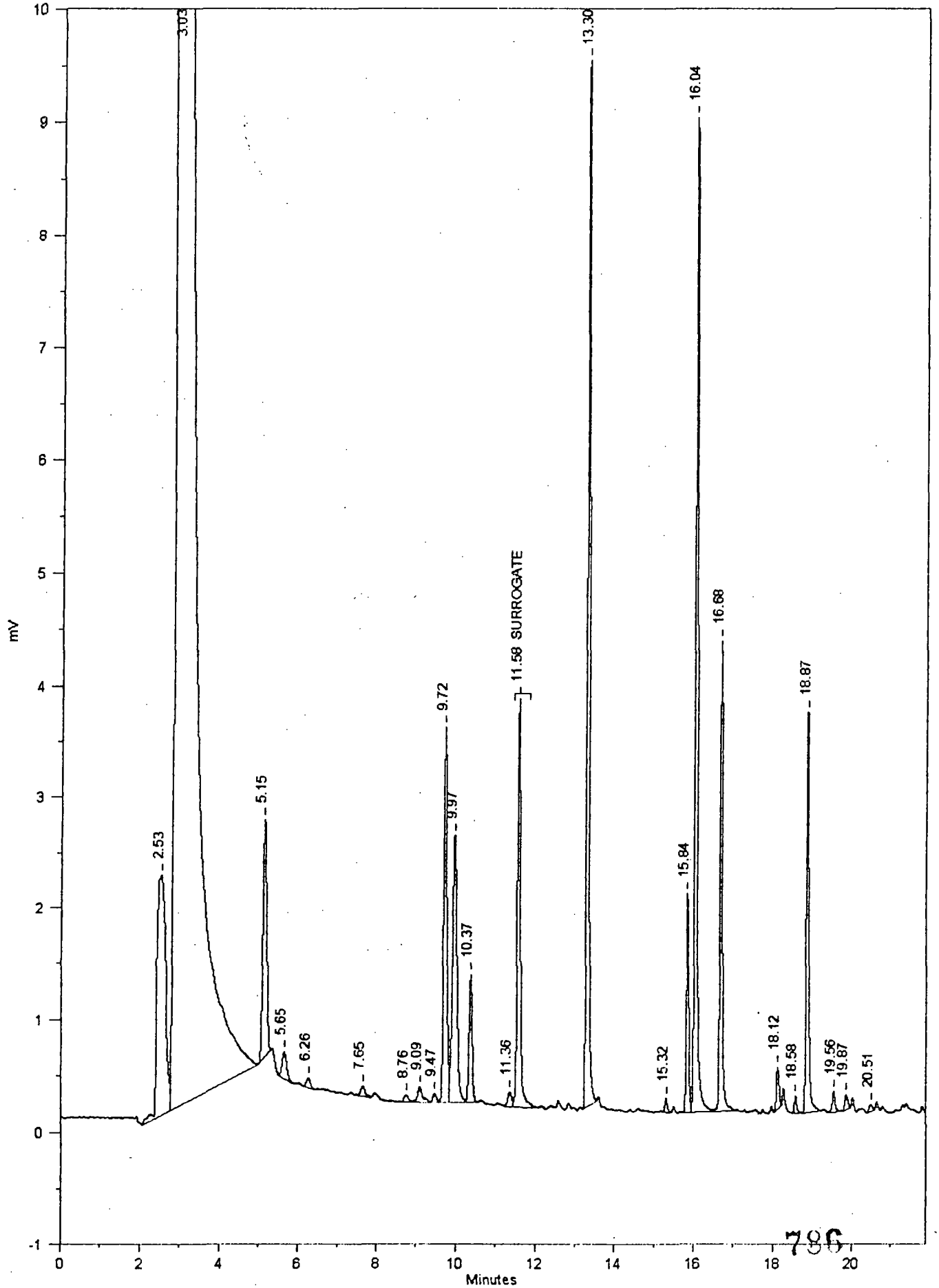
TOTAL GRO AREA = 181922

TOTAL GRO = 1790 NG

SOIL TOTAL GRO = 17.90 MG/KG

H2O TOTAL GRO = .3580 MG/L

91984GD 1:1000
C:\M\BH20M.07R



DIESEL RANGE ORGANICS

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LCS
MS/MSD

DATA PACKET
Diesel Range Organics

Safety-Kleen (ENCOTEC) Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

ORGANIC ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: DRO
Report Date: August 25, 1998

Sample I.D.: DLT-1
Sample Date: 08/12/98
Date Received: 08/13/98
Date Extracted: 08/20/98
Date Analyzed: 08/24/98
ENCOTEC I.D.: 200091983
QC Set I.D.: DROH2002O

U = Analyte not detected.

HYDROCARBON	CAS NUMBER	CONC. (mg/Kg)	DETECTION LIMIT (mg/Kg)
Diesel Range Organics	----	180000	50000

Analysis reported on _X_ WET ____ DRY weight basis.

Percent Total Solids __NA__

Note:

Form 059SSL1G.GN2 Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

ORGANIC ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: DRO
Report Date: August 25, 1998

Sample I.D.: DLT-2
Sample Date: 08/12/98
Date Received: 08/13/98
Date Extracted: 08/23/98
Date Analyzed: 08/24/98
ENCOTEC I.D.: 200091984
QC Set I.D.: DROH0601W

U = Analyte not detected.

HYDROCARBON	CAS NUMBER	CONC. (mg/L)	DETECTION LIMIT (mg/L)
Diesel Range Organics	----	29	2.0

Note:

Form 059SWN1G.GN2 Rev. 08/10/98

Safety-Kleen (ENCOTEC) Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

ORGANIC ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: DRO
Report Date: August 25, 1998

Sample I.D.: METHOD BLANK
Sample Date: NA
Date Received: NA
Date Extracted: 08/20/98
Date Analyzed: 08/20/98
ENCOTEC I.D.: 200089681
QC Set I.D.: DROH2002O

U = Analyte not detected.

HYDROCARBON	CAS NUMBER	CONC. (mg/Kg)	DETECTION LIMIT (mg/Kg)
Diesel Range Organics	----	U	10

Analysis reported on NA WET NA DRY weight basis.

Percent Total Solids NA

Note:

Form 059SSL1G.GN2 Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

ORGANIC ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: DRO
Report Date: August 25, 1998

Sample I.D.: METHOD BLANK
Sample Date: NA
Date Received: NA
Date Extracted: 08/23/98
Date Analyzed: 08/24/98
ENCOTEC I.D.: 200089683
QC Set I.D.: DROH0601W

U = Analyte not detected.

HYDROCARBON	CAS NUMBER	CONC. (mg/L)	DETECTION LIMIT (mg/L)
Diesel Range Organics	----	U	0.20

Note:

Form 059SWN1G.GN2 Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

SOIL MATRIX SURROGATE RECOVERY
DIESEL RANGE ORGANICS

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: DRO
Report Date: August 25, 1998
QC Set I.D.: DROH2002O

ENCOTEC Sample Number	Percent Recovery o-Terphenyl 50 - 150**
200091983	DL
200089681 MB	98
200089974 LCS	78
200091983 MS	DL
200091983 MSD	DL

* Value outside of established quality control windows.
** Percent recovery quality control windows.
DL = Sample matrix diluted, therefore surrogate recoveries are not applicable.
M = Matrix interferences caused distortion to recovery value.

RECOVERY: 0 out of 2 outside QC Windows.

Note:

Form 059SSL2G.GN1 Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

WATER MATRIX SURROGATE RECOVERY
DIESEL RANGE ORGANICS

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: DRO
Report Date: August 25, 1998
QC Set I.D.: DROH0601W

ENCOTEC Sample Number	Percent Recovery *o*-Terphenyl 50 - 150**
200091984	DL
200089683 MB	110
200089973 LCS	71
200090692 MS	86
200090692 MSD	84

* Value outside of established quality control windows.
** Percent recovery quality control windows.
DL = Sample matrix diluted, therefore surrogate recoveries are not applicable.
M = Matrix interferences caused distortion to recovery value.

RECOVERY: 0 out of 4 outside QC Windows.

Note:

Form 059SWN2G.GN1 Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

SOIL MATRIX LABORATORY CONTROL SAMPLE RECOVERY
DIESEL RANGE ORGANICS

Project Name: ENCOTEC
Project Number: 10000
Method: DRO

Date Extracted: 08/20/98
Date Analyzed: 08/20/98
ENCOTEC I.D.: 200089974
QC Set I.D.: DROH2002O

U = Analyte not detected.
B = Analyte present in method blank.

HYDROCARBONS	AMOUNT SPIKED (mg/Kg)	AMOUNT RECOVERED (mg/Kg)	PERCENT RECOVERED (percent)	QC LIMITS RANGE (percent)
Ten-component DRO spike	1000	740	74	50 - 150

RECOVERY: 0 out of 1 outside QC Windows.

Note:

Form 059SSL4G.GN1 Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

WATER MATRIX LABORATORY CONTROL SAMPLE RECOVERY
DIESEL RANGE ORGANICS

Project Name: ENCOTEC
Project Number: 10000
Method: DRO

Date Extracted: 08/06/98
Date Analyzed: 08/10/98
ENCOTEC I.D.: 200089973
QC Set I.D.: DROH0601W

U = Analyte not detected.
B = Analyte present in method blank.

HYDROCARBONS	AMOUNT SPIKED (mg/L)	AMOUNT RECOVERED (mg/L)	PERCENT RECOVERED (percent)	QC LIMITS RANGE (percent)
Ten-component DRO spike	1.00	0.65	65	50 - 150

RECOVERY: 0 out of 1 outside QC Windows.

Note:

Form 059SWN4G.GN1 Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

SOIL MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) RECOVERY
TOTAL HYDROCARBONS

Project Name: ENCOTEC
Project Number: 10000
Method: DRO
QC Set I.D.: DROH20020

SAMPLE SPIKED - ENCOTEC ID: 200091983

Compound	Concentration Spiked (mg/Kg)	Sample Result (mg/Kg)	Conc. MS (mg/Kg)	% Rec	Conc. MSD (mg/Kg)	% Rec	RPD	QUALITY CONTROL WINDOWS RPD	QUALITY CONTROL WINDOWS % Recovery
Ten-component DRO spike	1000	M	M	NA	M	NA	NA	40	50 - 150

U = Analyte not detected in non-spiked sample
RPD = Relative Percent Difference
* Value outside of quality control windows.

M = Matrix interferences caused distortion to recovery value.
D = Detected; results must be greater than zero.

RPD: 0 out of 0 outside QC Windows
RECOVERY: 0 out of 0 outside QC Windows

Note:

Form 059SSL3G.GN2

Rev. 08/10/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

WATER MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) RECOVERY
TOTAL HYDROCARBONS

Project Name: ENCOTEC
Project Number: 10000
Method: DRO
QC Set I.D.: DROH0601W

SAMPLE SPIKED - ENCOTEC ID: 200090692

Compound	Concentration Spiked (mg/L)	Sample Result (mg/L)	Conc. MS (mg/L)	% Rec	Conc. MSD (mg/L)	% Rec	RPD	QUALITY CONTROL WINDOWS RPD	QUALITY CONTROL WINDOWS % Recovery
Ten-component DRO spike	4.00	U	3.14	78	3.04	76	3	40	50 - 150

U = Analyte not detected in non-spiked sample
RPD = Relative Percent Difference
* Value outside of quality control windows.

M = Matrix interferences caused distortion to recovery value.
D = Detected; results must be greater than zero.

RPD: 0 out of 1 outside QC Windows
RECOVERY: 0 out of 2 outside QC Windows

Note:

Form 059SWN3G.GN1

Rev. 08/10/98

ORGANICS EXTRACTION WORKSHEET

Method: 3510 ____ 3520 ____ 3550 ____ 3545 ____

PARAMETER: DRO

Matrix: Water ____ Soil ____ oil ✓

SURROGATE: SDRO
CONC: 100ppm AMT: 0.5 ml
ID: ____

SPIKE: MS DRO
CONC: 100ppm AMT: 1.0 ml
ID: ____

DATE 8/20/98

CLIENT: EEI
BATCH #: 13219

QC SET ID: DRO H20020

SURR/SPK CHECKED BY: ____

LCS ID: LDRO H20020

CLIENT	CLIENT I.D.	ENCOTEC NUMBER	AMOUNT (L or g)	Final Vol	Split Ratio	REMARKS
EEI	DLT-1	91983	1.0	1.0	5/10	
	mB082098-1A	89681	—	1.0	5/10	
	LCS	89974	—	1.0	5/10	
	MS	91983	1.0	1.0	5/10	
	MSD	91983	1.0	1.0	5/10	

AC 8/20

SAMPLE	LOCATION	DATE/TIME	ANALYST
TAKEN FROM	Login	8-20-98 12:50	AC
BROUGHT TO	org ext	8-20-98 12:50	AC
RETURNED TO	Login	8-20-98 2:00	AC
EXTRACTS STORED IN	18A	8-20-98 13:50	AC
EXTRACTS TAKEN TO	HPLC	8-20-98	AC

	ANALYST	DATE/TIME
EXT.	AC	8-20-98 13:00
CONC	AC	8-20-98 14:00

CALIBRATION WEIGHT SET: 8001
BALANCE ID: 19530

WT. USED (g)	1	2.0
BAL. RD. (g)	1.00	2.00

CHECKED BY: Tiffany Clark DATE 8/20/98

CAL. REQ. (+/- 0.05 g) Y (N)

PROCEDURE SUMMARY

1 gram sample / MS/MSD / Surrogate / LCS bring up 10 mL MeCl2 take 5/10 split Blow down 1 [illegible]

DIESEL RANGE ORGANICS EXTRACTION

Method: 3510 ✓
3520
3550
3545

Matrix:
Water ✓
Soil

DRO SURROGATE: SDRO
CONC: 50 ppm; AMT: 0.5 mL
ID: GM 0090

DATE 8 / 19 / 98

CLIENT: EET
BATCH #: 13219

DRO SPIKE:
CONC: 100 ppm; AMT: 1.0 mL
ID:

QC SET ID DRO H0601W

SURR/SPK CHECKED BY DJO

LCS ID LDRO H0601W

CLIENT	CLIENT I.D.	ENCOTEC NUMBER	AMOUNT (L or g)	REMARKS 4.0 mL F.V. No Splits MeCl2 lot # BS124
EET	DLT-2	91984	.100	
↓	MB081998-1C	89680	1.00	
				DJO 08/19/98

	LOCATION	DATE/TIME	ANALYST
SAMPLE TAKEN FROM	LI	08/19/98 09:30	DJO
SAMPLE BROUGHT TO	OE	08/19/98 - 07:30	DJO
SAMPLES RETURNED TO	LI	08/19/98 - 16:15	DJO
EXTRACTS STORED IN	12	08/19/98 - 16:00	DJO
EXTRACTS TAKEN TO	GC	08/20/98 300	FK

	ANALYST	DATE/TIME
EXT.	DJO	08/19/98 - 10:45
CONC.	FK	08/20/98 / 300

CALIBRATION WEIGHT SET S002
BALANCE ID: 19530

WT. USED (g)		
BAL. RD. (g)		

CAL. REQ. (+/- 0.05 g) Y N

CHECKED BY: [signature] DATE 8 22 98

PROCEDURE SUMMARY

WATERS: 1.0 L is extracted 3x w/60 ml of MeCl2, conc. at low temperature (90 C) on steambath and microsnydered to FINAL VOLUME = 4.0 mL;

SOILS: 30g sample is extracted 3x with 100 ml of 50 MeCl2, concentrated and microsnydered to FINAL VOLUME = 4.0 mL

800

DRO.XLS 08/10/96

DIESEL RANGE ORGANICS EXTRACTION

Method: 3510 ✓
3520
3550
3545

Matrix:
Water ✓
Soil

DRO SURROGATE: SDRO
CONC: 50 ppm; AMT: 0.5 mL
ID: CM0090

DATE 8/23/98

CLIENT: EEF
BATCH #: 13219

DRO SPIKE: FK
CONC: 100 ppm; AMT: 1.0 mL
ID:

QC SET ID DRO H0601W

SURR/SPK
CHECKED BY

LCS ID LDRO H0601W

CLIENT	CLIENT I.D.	ENCOTEC NUMBER	AMOUNT (L or g)	no split F.V = 4.0 REMARKS
EEF	DLT-2	91984	0.1	dilution to 1L re-extract from 81998
1	MB082398-1D	89683	1.0	
				TE 82398

	LOCATION	DATE/TIME	ANALYST
SAMPLE TAKEN FROM	WS	82398/1pm	TE
SAMPLES BROUGHT TO	OE	1/1pm	1
SAMPLES RETURNED TO	WS	1/3pm	1
EXTRACTS STORED IN	#12	1/3:30pm	1
EXTRACTS TAKEN TO	HDLC	082398/1400	vlo

	ANALYST	DATE/TIME
EXT.	TE	82398/3pm
CONC.	vlo	~~0698~~ 1300 082398

CALIBRATION WEIGHT SET S002
BALANCE ID: 19530

WT. USED (g)		
BAL. RD. (g)		

CAL. REQ. (+/- 0.05 g) Y N

CHECKED BY: V Gopko DATE 08/24/98

PROCEDURE SUMMARY:

WATERS: 1.0 L is extracted 3x w/60 ml of MeCl2, conc. at low temperature (90 C) on steambath and microsnydered to FINAL VOLUME = 4.0 mL;

SOILS: 30g sample is extracted 3x with 100 ml of 50 MeCl2, concentrated and microsnydered to FINAL VOLUME = 4.0 mL

DRO XLS 06/10/96

ORGANIC ANALYSIS RE-EXTRACTION REQUEST FORM

Parameter: DRO

Client Code	Submission Number	ENCOTEC Numbers	Matrix	Orig. Smpl Vol/Wt	Original Ext. Date
EEI	13219	91984	H_2O	1 L	8/19/98

REASONS FOR RE-EXTRACTION (Check all that apply)

1. Noncompliant QC:
   Surrogate Recoveries Low ☒ High ☐
   LCS/LCD Recoveries Low ☐ High ☐
   RPDs LCS/LCDs ☐ MS/MSDs ☐
2. Matrix Interference ☐
3. Contamination of Method Blank ☒ QC ☐ Samples ☐
4. Incorrect Surrogate/Spike Amount ☐
5. Samples require client-specified QC ☐
6. Other (explain): MB contamination + No Surrogate recovery
   NEED REEXTRACT PLEASE

Has the original data been sent on to Data Systems (DS)? ☐ Yes ☐ No ☐ Data is being submitted as *PRELIMINARY*

If "YES" is checked, inform DS IMMEDIATELY to place a hold on those results! _____ date DS is informed

Will project due date be exceeded by reanalysis? ☐ Yes ☐ No

Requested by [signature] ☒ GC ☐ GC/MS Date 8/21/98

Approved by _____ Requesting Lab Group Leader/Designate Date _____

Approved by [signature] Extractions Group Leader/Designate Date 8/24/98

Date: 8/24/98

CORRECTIVE ACTION BY ORGANIC EXTRACTIONS

Holding Time

1. Re-extract Sample w/in ☐ outside[1] ☒
2. Reprocess new split of sample ☐
3. Insufficient amount of sample[1] ☐

[1] If reextraction will take place outside holding time or if there is insufficient sample for reextraction, complete an ACA.

4. Additional Processing of Sample : _____

REANALYSIS RESULTS

Reanalysis completed on _____

in QC Set _____ by _____ (print analyst's name) analyst's initials

1. Contamination Eliminated (i.e., Extraction Technique): ☐
2. QC Results (Surrogate / LCS/LCD / MS/MSD) within windows (i.e., Extraction Technique): ☐
   (circle those that apply)
3. Reanalysis confirms original results (i.e., Matrix Interference): ☐
4. Reanalysis does not confirm original results: ☐

The PM and DS receive copies of this form on the day it is approved by the requesting group's Group Leader/Designate.

PM: _____ (print PM name) *PM initials*[2] cc'd on Date: _____

[2] The PM initials the form if he/she is available when the form is presented.

Data Systems cc'd on Date: _____

ANALYSIS CORRECTIVE ACTION FORM

This form is to document variances to analytical protocols which have originated in the laboratory; check or complete statements as applicable.

Lab: Org. Ext. Parameter: DRO Submission ID(s) affected: 13219

Sample ID(s) affected: 91984

Primary analyst: Frank Kodrack (print) Date: 8 21 98

PROBLEM(S) ENCOUNTERED and CORRECTIVE ACTION(S) TAKEN

1. ☐ Unable to recover from unacceptable continuing calibration criteria for detected target analyte(s). Affected samples are not being analyzed under a new Initial Calibration because _____

2. ☐ Method blank contamination for target analyte(s) exceeding that permitted by the CORQC SOP exists; one or more associated samples are affected and are being reextracted and/or reprocessed.

☐ Data with QC outliers for LCS / LCD / MS / MSD / MD / Surrogate.
(circle affected QC sample(s))

The situation requires reanalysis / reprocessing / reextraction / post-digestion spike per the CORQC SOP
(circle corrective action taken)

Where applicable, a redigestion or reextraction request form is being initiated; a copy of the approved form will be provided to the Project Manager within one business day of issue.

3. ☑ Holding time missed / preservation improper due to:
(circle one)

ENCOTEC error / client error / reextraction / reanalysis / project amendment.
(circle one)

4. ☐ other (See reverse)

C

APPROVAL TO PROCEED

☑ Approved ☐ Rejected reason: Holding time expired prior to Request for Re-extraction

Group Leader: [signature] Date: 8 / 21 / 98

If item 4.I. (side two) is completed, a copy of this form MUST also be provided to the QCO or Technical Director(TD) for co-approval before proceeding

☐ Approved ☐ Rejected reason: _____

QCO/TD (circle): _____ Date: ___ / ___ / ___

DISTRIBUTION (WITHIN ONE BUSINESS DAY)

If item 3 or 4 is checked, the Group Leader (or designate) is to identifiy the Project Manager and date of distribution. The Project Manager, if available, is to acknowledge receipt by initialing a copy of this approved form. Original to be filed with raw data.

cc to Project Manager (PM): _____ (print) _____ (PM's initials) Date: ___ / ___ / ___

803

ANCORAC fm. 04 21 98

RAW DATA

Diesel Range Organics

Turbochrom Sequence File : N:\TC4\DRO\B11D.SEQ
Created by : JN on : 8/7/98 09:21 AM
Edited by : JH on : 8/24/98 03:09 PM
Description : Column; DB-1 30M x 0.53ID
Temp; 40 H2 to 75@7/min H0 to 180@8/min H1 to 300@9/min H0

INJ; 250 DET; 320 Attenuation=4, Range=12

Number of Times Edited : 16

Sequence File Header Information:

Number of Rows : 79
Instrument Type : 760 / 900 Series Intelligent Interface
Injection Type : SINGLE

Sequence Sample Descriptions - Channel B

Row	Type	Sample Name	Sample Number	Study Name	Sample Amount	ISTD Amount	Sample Volume	Dil. Factor	Mult	Divisor	Addend	Norm. factor
1	Sample	PRIMER			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
2	Sample	PRIMER			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
3	Sample	PRIMER			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
4	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
5	Sample	L1DH5; GM016D			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
6	Sample	L2DH5; GM015D			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
7	Sample	L3DH5; GM014D			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
8	Sample	L4DH5; GM013D			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
9	Sample	L5DH5; GM012D			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
10	Sample	L6DH5; GM011D			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
11	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
12	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
13	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
14	Sample	EGG OIL DL1000			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
15	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
16	Sample	EGG/12915 DF100	89227		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
17	Sample	EGG/12915 DF100	89228		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
18	Sample	EGG/12915 DF100	89229		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
19	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
20	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
21	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
22	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
23	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
24	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
25	Sample	ENC/11111 RR	89677B	DROH0301O	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
26	Sample	ENC/11111 RR	89972L		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
27	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
28	Sample	ENC/11111 RR	89678B	DROH0601W	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
29	Sample	ENC/11111 RR	89973L		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
30	Sample	EGG/12915	90692		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
31	Sample	EGG/12915	90693		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
32	Sample	EGG/12915	90692S		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
33	Sample	EGG/12915	90692D		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
34	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
35	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
36	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
37	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
38	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
39	Sample	ENC/11111	89680B	DROH0601W	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
40	Sample	EEI/13219	91984		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
41	Sample	ENC/11111	89682B	DROH2002S	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
42	Sample	ENC/11111	89975L		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
43	Sample	GF/13346	92657		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
44	Sample	GF/13346	92657S		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
45	Sample	GF/13346	92657D		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
46	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
47	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
48	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
49	Sample	ENC/11111	89681B	DROH2002O	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
50	Sample	ENC/11111	89974L		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
51	Sample	EEI/13219 DF10	91983		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
52	Sample	EEI/13219	91983		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
53	Sample	EEI/13219	91983S		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
54	Sample	EEI/13219	91983D		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
55	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000

56	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
57	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
58	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
59	Sample	~~CCV L3DH5; GM01~~			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
60	Sample	GF/13346 DF10	92657		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
61	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
62	Sample	~~EEI/13219 DF10~~	~~91984~~		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
63	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
64	Sample	ENC/11111 RR	89680B	DROH0601W	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
65	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
66	Sample	~~CCV L3DH5; GM01~~			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
67	Sample	GF/13346 DF5	92657		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
68	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
69	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
70	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
71	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
72	Sample	EEI/13219 DF5000	91983		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
73	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
74	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
75	Sample	BLK MECL2			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
76	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
77	Sample	ENC/11111 RE	89680B	DROH0601W	1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
78	Sample	EEI/13219 RE DF	91984		1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000
79	Sample	CCV L3DH5; GM01			1.000	1.000	1.000	1.000	1.000	1.000	0.000	100.000

Curve Linearity

Level	Total Area
L1DH5; GM024C	22123185
L2DH5; GM023C	39251392
L3DH5; GM022C	71555351
L4DH5; GM021C	100016628
L5DH5; GM020C	125372007
L6DH5; GM019C	156118244

Sequence Name	B11D
Date	8/9/98
Analyst Initials	JEH
Amount injected in ul	6.5
ng of IS injected	65.0

z

Level	C10 - C28 ug/ml	Area	o-Terphenyl ug/ml	Area	5-alpha-Androstane ug/ml	Area
L1DH5; GM024C	50	17187579	4	1418180	10	3517426
L2DH5; GM023C	100	32662032	8	2970386	10	3618974
L3DH5; GM022C	200	62139392	16	5735195	10	3680764
L4DH5; GM021C	300	88020713	24	8232710	10	3763205
L5DH5; GM020C	400	111486216	32	10341555	10	3544236
L6DH5; GM019C	500	139411402	40	12976140	10	3730702

L1DH5; GM024C	RF	0.98	1.01
L2DH5; GM023C	RF	0.90	1.03
L3DH5; GM022C	RF	0.84	0.97
L4DH5; GM021C	RF	0.78	0.91
L5DH5; GM020C	RF	0.79	0.91
L6DH5; GM019C	RF	0.75	0.87

Average RF	0.84	0.95
Standard Deviation	0.09	0.06
%RSD	10.365	6.507

Curve Linearity can be assumed if the %RSD is < or = 25%.

Only the yellow shaded area needs to be filled in.

Laidlaw Environmental, Inc./ENCOTEC
3985 Research Park Drive * Ann Arbor, MI 48108
(313) 761-1389

Retention Time Window Analysis
DRO SURROGATES

Instrument I.D.: 3400-7
Column I.D.: JW Scientific
Study Date: 1/23/98

FILE:	B01D064	B01D065	B01D078					
Compound	Retention Time #1 (Minutes)	Retention Time #2 (Minutes)	Retention Time #3 (Minutes)	Retention Time Average (Minutes)	Retention Time STD (Minutes)	3 x STD (Minutes)	3 second Window (%)	Retention Time Window (%)
OTP (S)	21.000	21.040	21.030	21.023	0.021	0.062	0.238	0.297
5-alpha Androstane	22.960	22.980	22.980	22.973	0.012	0.035	0.218	0.218

Note: All calculations utilize the full precision available on both EXCEL 5.0 and the Turbochrom or Nelson 2600 chromatography system; displayed final values may differ slightly from those obtained utilizing displayed values as input.

A three second window is generated (as a percent of the average retention time) along with three times the standard deviation, the retention time window (%) is the greater of the two

808

Software Version: 4.1<2F12>
Sample Name : L1DH5; GM016D Time : 8/27/98 10:06 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/9/98 05:21 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D005.RAW
Result File : N:\TC4\DRO\B11D005.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D005.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

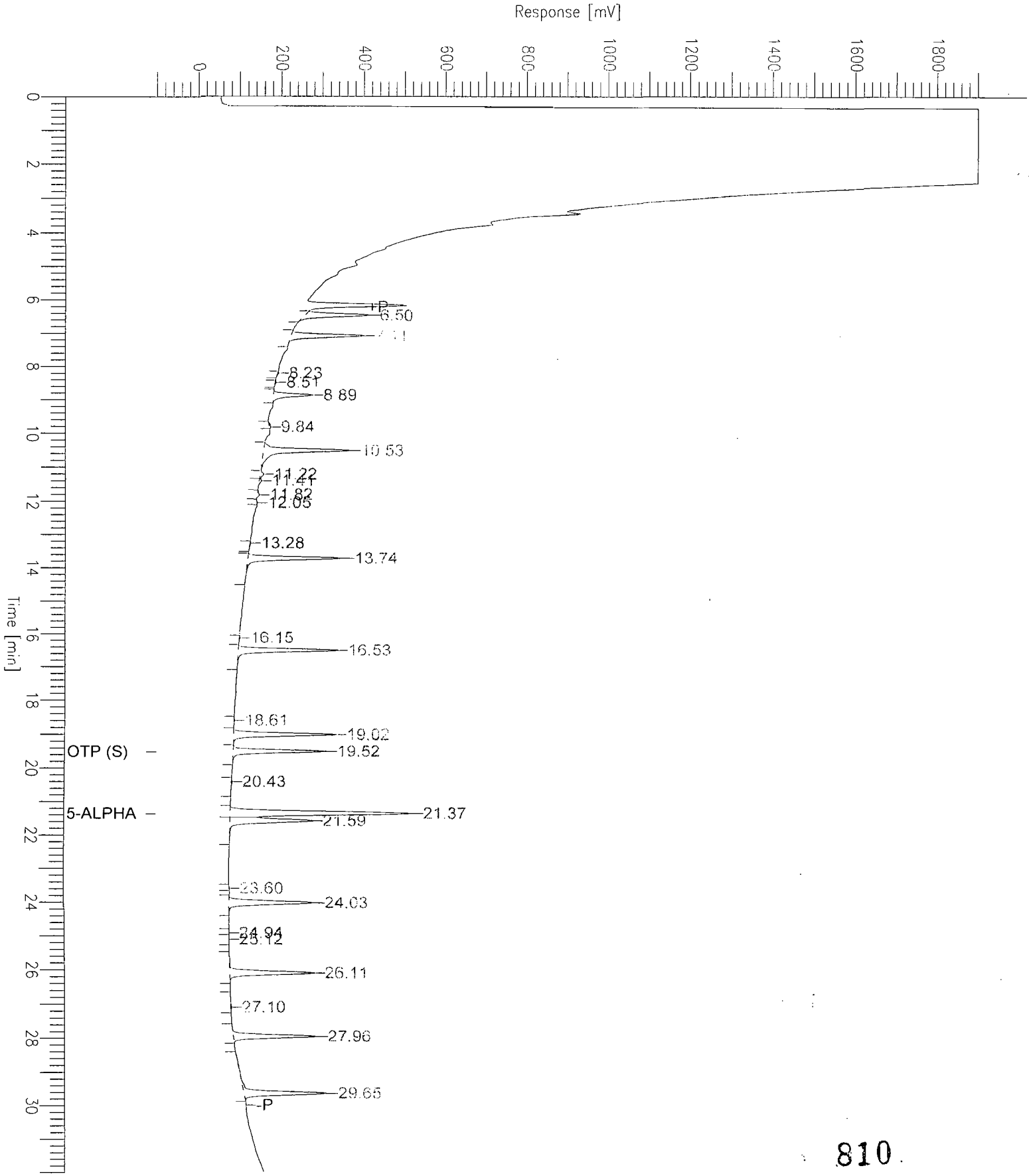
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.495		1.0653	1.0653	1065300	158147.06		BB	1.0000e+06	
2	7.113		1.2060	1.2060	1205960	179383.95		BB	1.0000e+06	
5	8.886		0.6360	0.6360	636005	95865.56		BB	1.0000e+06	
7	10.527		1.6739	1.6739	1673900	213238.36		BV	1.0000e+06	
13	13.735		1.5448	1.5448	1544815	234399.29		BB	1.0000e+06	
15	16.525		1.6296	1.6296	1629600	245771.26		BB	1.0000e+06	
17	19.023		1.6571	1.6571	1657135	251772.75		BB	1.0000e+06	
18	19.517	OTP (S)	3.6988	3.6988	1418180	226753.63		BB	3.8342e+05	
20	21.368	5-alpha Androstane	----------	10.0000	3517426	445185.80		BV	3.5174e+05	
21	21.592		1.6700	1.6700	1670034	202781.43		VB	1.0000e+06	
23	24.029		1.5503	1.5503	1550320	207486.98		BB	1.0000e+06	
26	26.111		1.5142	1.5142	1514150	206621.87		BB	1.0000e+06	
28	27.962		1.4551	1.4551	1455060	205316.24		BB	1.0000e+06	
29	29.648		1.5853	1.5853	1585300	204037.18		BB	1.0000e+06	
			20.8864	30.8864	22123185		3.08e+06		1.2735e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D005.TX0

Chromatogram

Sample Name : L1DH5; GM016D
FileName : N:\TC4\DRO\B11D005.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:06 AM
Time of Injection: 8/9/98 05:21 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : L2DH5; GM015D Time : 8/27/98 10:06 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/9/98 06:04 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D006.RAW
Result File : N:\TC4\DRO\B11D006.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D006.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

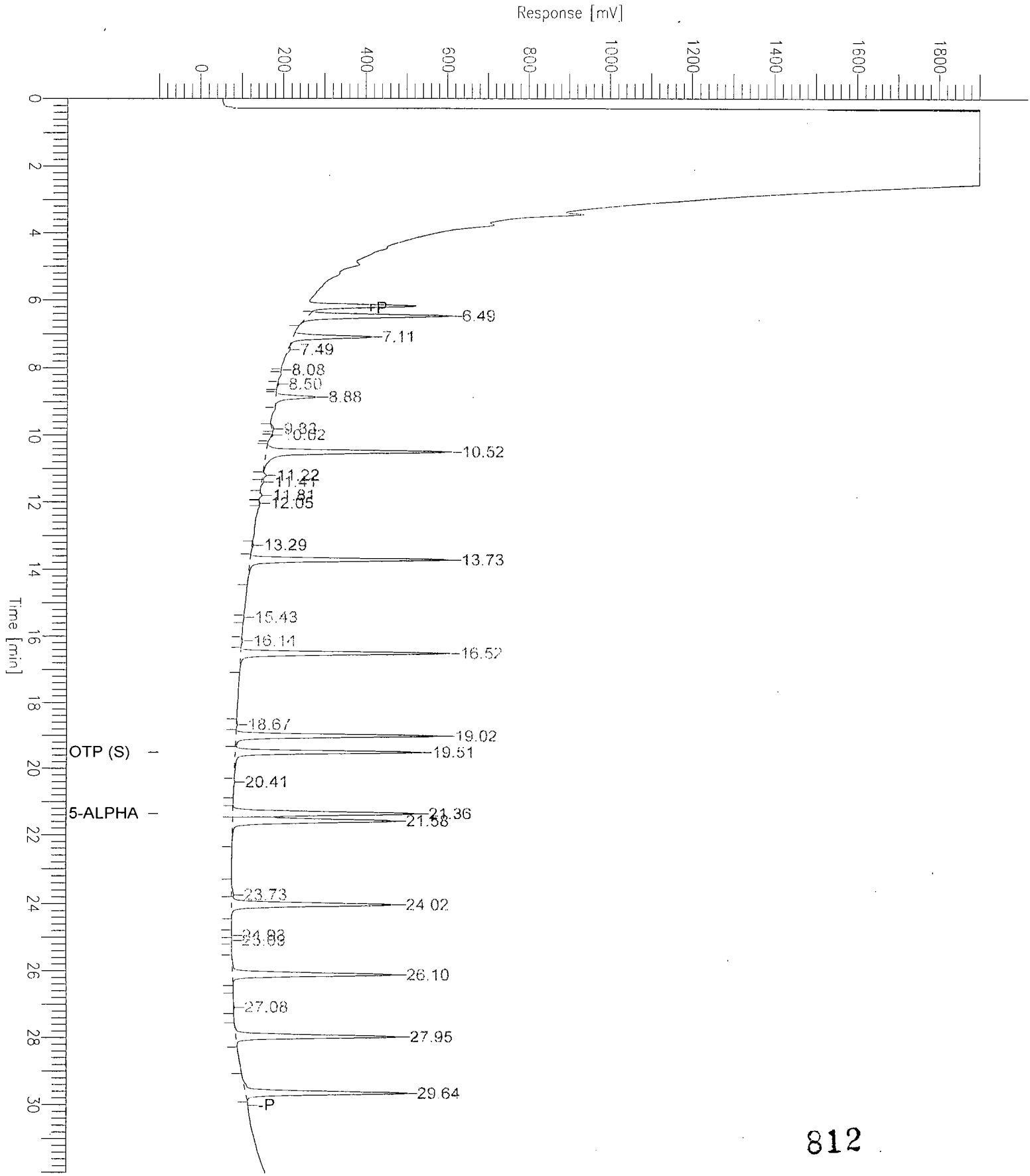
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.487		2.4128	2.4128	2412840	353202.74		BB	1.0000e+06	
2	7.106		1.2979	1.2979	1297880	192943.96		BE	1.0000e+06	
6	8.880		0.6927	0.6927	692740	102991.25		BB	1.0000e+06	
9	10.519		3.2656	3.2656	3265571	453285.93		BV	1.0000e+06	
15	13.729		3.2097	3.2097	3209715	492740.20		BB	1.0000e+06	
18	16.517		3.3248	3.3248	3324810	510305.24		BB	1.0000e+06	
20	19.016		3.3871	3.3871	3387055	508459.11		BV	1.0000e+06	
21	19.510	OTP (S)	7.5297	7.5297	2970386	460906.25		VV	3.9449e+05	
23	21.362	5-alpha Androstane	----------	10.0000	3618974	454469.20		BV	3.6190e+05	
24	21.583		3.2600	3.2600	3260006	396822.82		VB	1.0000e+06	
26	24.021		3.0497	3.0497	3049720	400940.16		VB	1.0000e+06	
29	26.103		2.9418	2.9418	2941815	398926.28		BB	1.0000e+06	
31	27.954		2.8923	2.8923	2892300	399502.21		BB	1.0000e+06	
32	29.639		2.9276	2.9276	2927580	396200.88		BB	1.0000e+06	
			40.1918	50.1918	39251392		5.52e+06		1.2756e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D006.TX0

Chromatogram

Sample Name : L2DH5; GM015D
FileName : N:\TC4\DRO\B11D006.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:06 AM
Time of Injection: 8/9/98 06:04 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : L3DH5; GM014D Time : 8/27/98 10:06 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/9/98 06:47 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D007.RAW
Result File : N:\TC4\DRO\B11D007.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D007.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

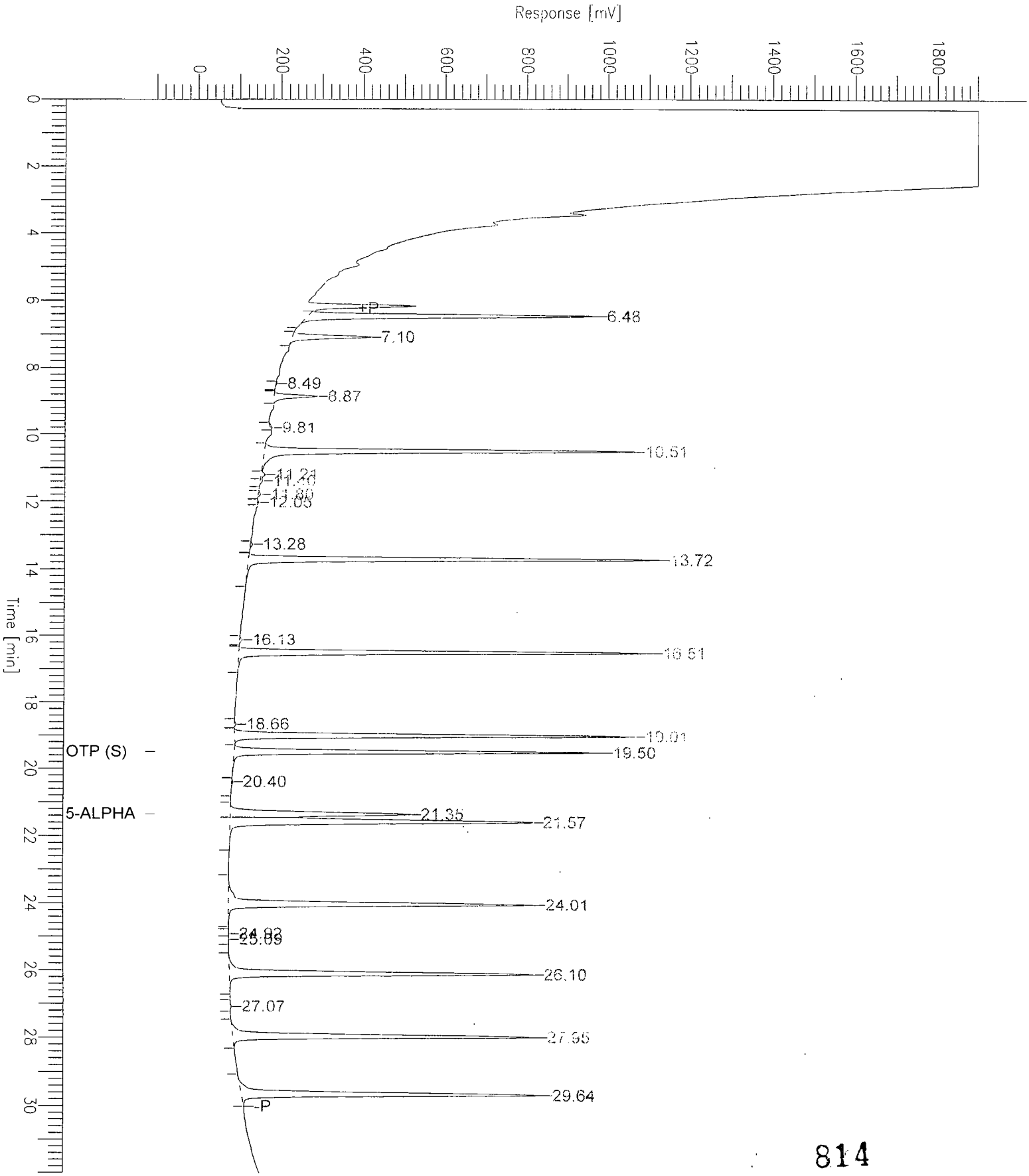
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.478		4.9211	4.9211	4921100	713038.94		BB	1.0000e+06	
2	7.099		1.2953	1.2953	1295255	192524.54		BB	1.0000e+06	
4	8.871		0.6942	0.6942	694180	104502.87		BB	1.0000e+06	
6	10.509		6.2980	6.2980	6297961	921081.95		BV	1.0000e+06	
12	13.718		6.4778	6.4778	6477835	1.01e+06		BB	1.0000e+06	
14	16.505		6.6876	6.6876	6687605	1.02e+06		BB	1.0000e+06	
16	19.006		6.6504	6.6504	6650420	985907.57		BB	1.0000e+06	
17	19.498	OTP (S)	14.2946	14.2946	5735195	901890.22		BB	4.0121e+05	
19	21.353	5-alpha Androstane	----------	10.0000	3680674	439067.92		BV	3.6807e+05	
20	21.574		6.1911	6.1911	6191076	745680.18		VB	1.0000e+06	
21	24.014		6.0264	6.0264	6026370	749999.57		BB	1.0000e+06	
24	26.095		5.7066	5.7066	5706570	746006.60		BB	1.0000e+06	
26	27.948		5.5849	5.5849	5584905	743147.26		BB	1.0000e+06	
27	29.637		5.6062	5.6062	5606205	737136.71	*	BB	1.0000e+06	
			76.4341	86.4341	71555351		1.00e+07		1.2769e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D007.TX0

Chromatogram

Sample Name : L3DH5; GM014D
FileName : N:\TC4\DRO\B11D007.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:06 AM
Time of Injection: 8/9/98 06:47 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : L4DH5; GM013D Time : 8/27/98 10:06 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/9/98 07:30 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D008.RAW
Result File : N:\TC4\DRO\B11D008.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D008.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

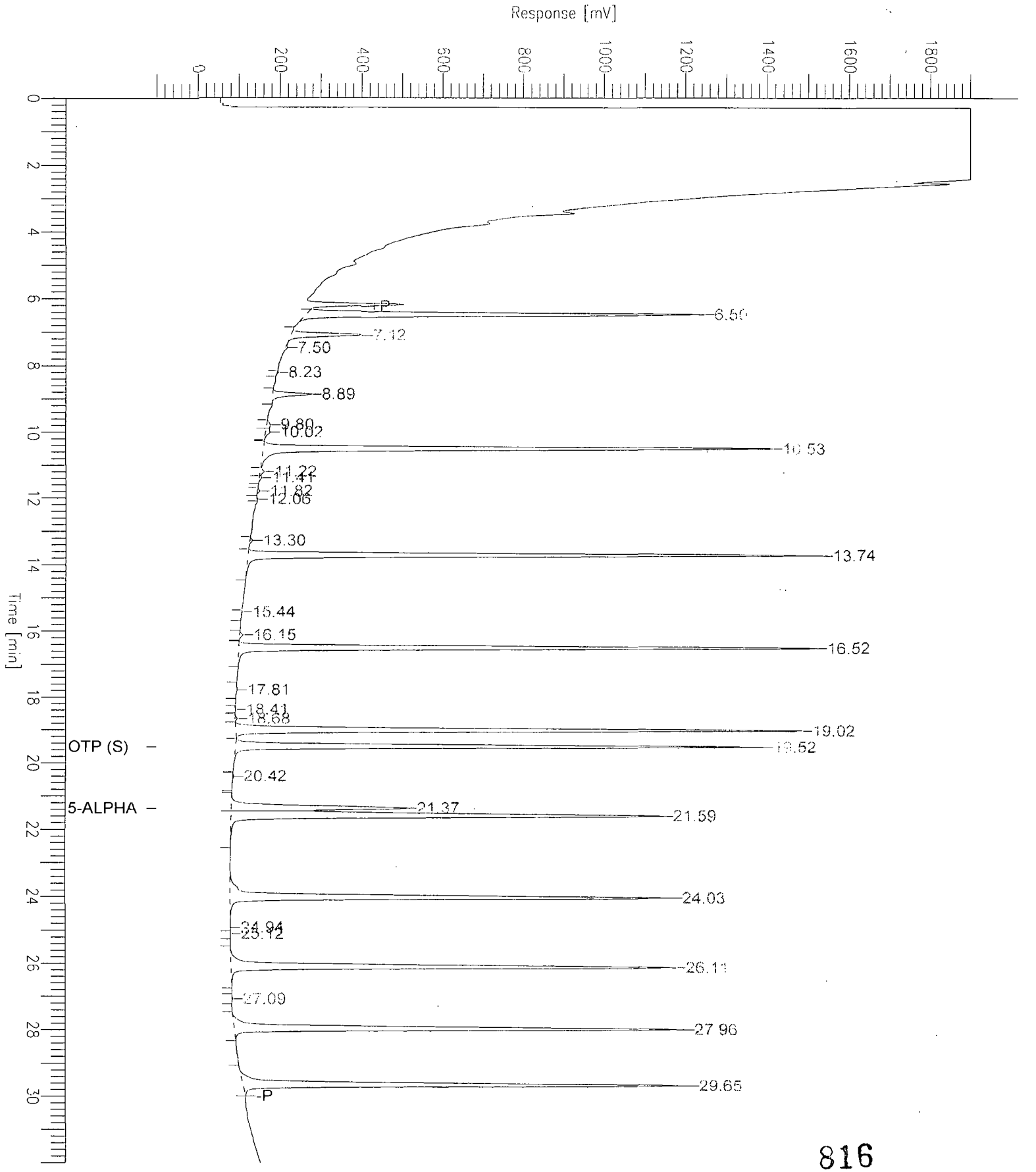
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.495		6.7954	6.7954	6795400	986609.15		BB	1.0000e+06	
2	7.117		1.1531	1.1531	1153060	176257.86		BE	1.0000e+06	
5	8.888		0.6406	0.6406	640610	94703.45		BB	1.0000e+06	
8	10.525		8.5444	8.5444	8544441	1.28e+06		BV	1.0000e+06	
14	13.735		9.0350	9.0350	9035030	1.41e+06		BB	1.0000e+06	
17	16.523		9.5064	9.5064	9506390	1.44e+06		BB	1.0000e+06	
21	19.024		9.5163	9.5163	9516330	1.41e+06		BB	1.0000e+06	
22	19.517	OTP (S)	20.0695	20.0695	8232710	1.30e+06		BB	4.1021e+05	
24	21.374	5-alpha Androstane	----------	10.0000	3763205	433619.90		BV	3.7632e+05	
25	21.594		8.9254	8.9254	8925420	1.07e+06		VB	1.0000e+06	
26	24.029		8.8035	8.8035	8803472	1.09e+06		BE	1.0000e+06	
29	26.112		8.4551	8.4551	8455100	1.10e+06		BB	1.0000e+06	
31	27.963		8.3392	8.3392	8339190	1.11e+06		BB	1.0000e+06	
32	29.650		8.3063	8.3063	8306270	1.10e+06		BB	1.0000e+06	
			108.0902	118.0902	100016628	1.40e+07			1.2787e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D008.TX0

Chromatogram

Sample Name : L4DH5; GM013D
FileName : N:\TC4\DRO\B11D008.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:06 AM
Time of Injection: 8/9/98 07:30 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : L5DH5; GM012D Time : 8/27/98 10:07 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/9/98 08:14 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D009.RAW
Result File : N:\TC4\DRO\B11D009.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D009.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

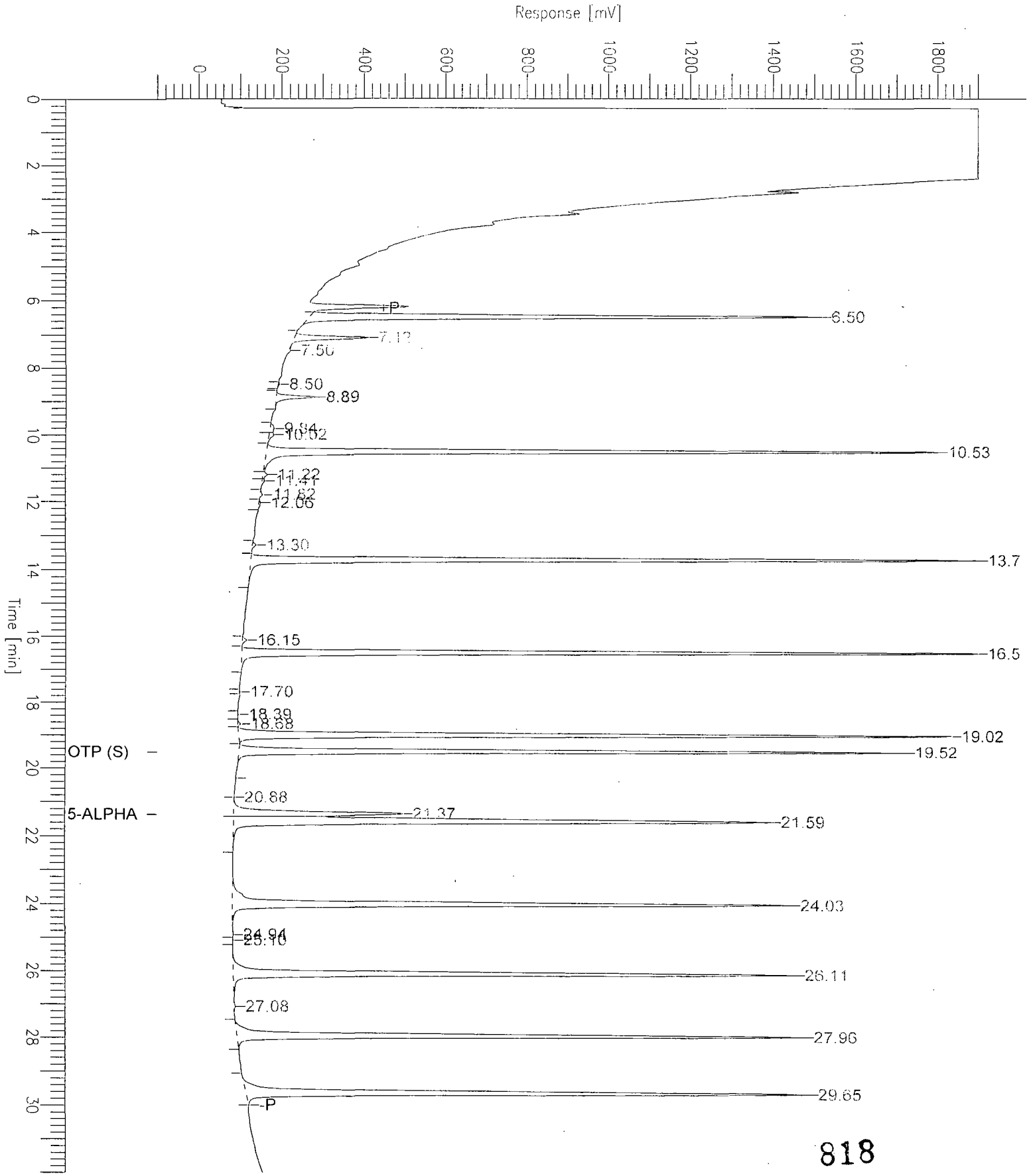
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.499		8.6642	8.6642	8664155	1.25e+06		BB	1.0000e+06	
2	7.120		1.1725	1.1725	1172550	179815.29		BE	1.0000e+06	
5	8.890		0.6621	0.6621	662070	97279.43		BB	1.0000e+06	
8	10.527		11.0159	11.0159	11015897	1.65e+06		BV	1.0000e+06	
14	13.736		11.6547	11.6547	11654720	1.81e+06		BB	1.0000e+06	
16	16.524		12.1568	12.1568	12156780	1.83e+06		BB	1.0000e+06	
20	19.023		12.0157	12.0157	12015740	1.76e+06		BB	1.0000e+06	
21	19.516	OTP (S)	26.7679	26.7679	10341555	1.62e+06		BV	3.8634e+05	
23	21.374	5-alpha Androstane	----------	10.0000	3544236	413331.48		BV	3.5442e+05	
24	21.591		11.2577	11.2577	11257664	1.33e+06		VB	1.0000e+06	
25	24.029		11.0601	11.0601	11060089	1.36e+06		BE	1.0000e+06	
28	26.110		10.7219	10.7219	10721920	1.38e+06		BE	1.0000e+06	
30	27.962		10.5799	10.5799	10579920	1.39e+06		BB	1.0000e+06	
31	29.647		10.5247	10.5247	10524710	1.37e+06		*BB	1.0000e+06	
			138.2541	148.2541	125372007	1.74e+07			1.2741e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D009.TX0

Chromatogram

Sample Name : L5DH5; GM012D
FileName : N:\TC4\DRO\B11D009.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:07 AM
Time of Injection: 8/9/98 08:14 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : L6DH5; GM011D Time : 8/27/98 10:07 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/9/98 08:57 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D010.RAW
Result File : N:\TC4\DRO\B11D010.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D010.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

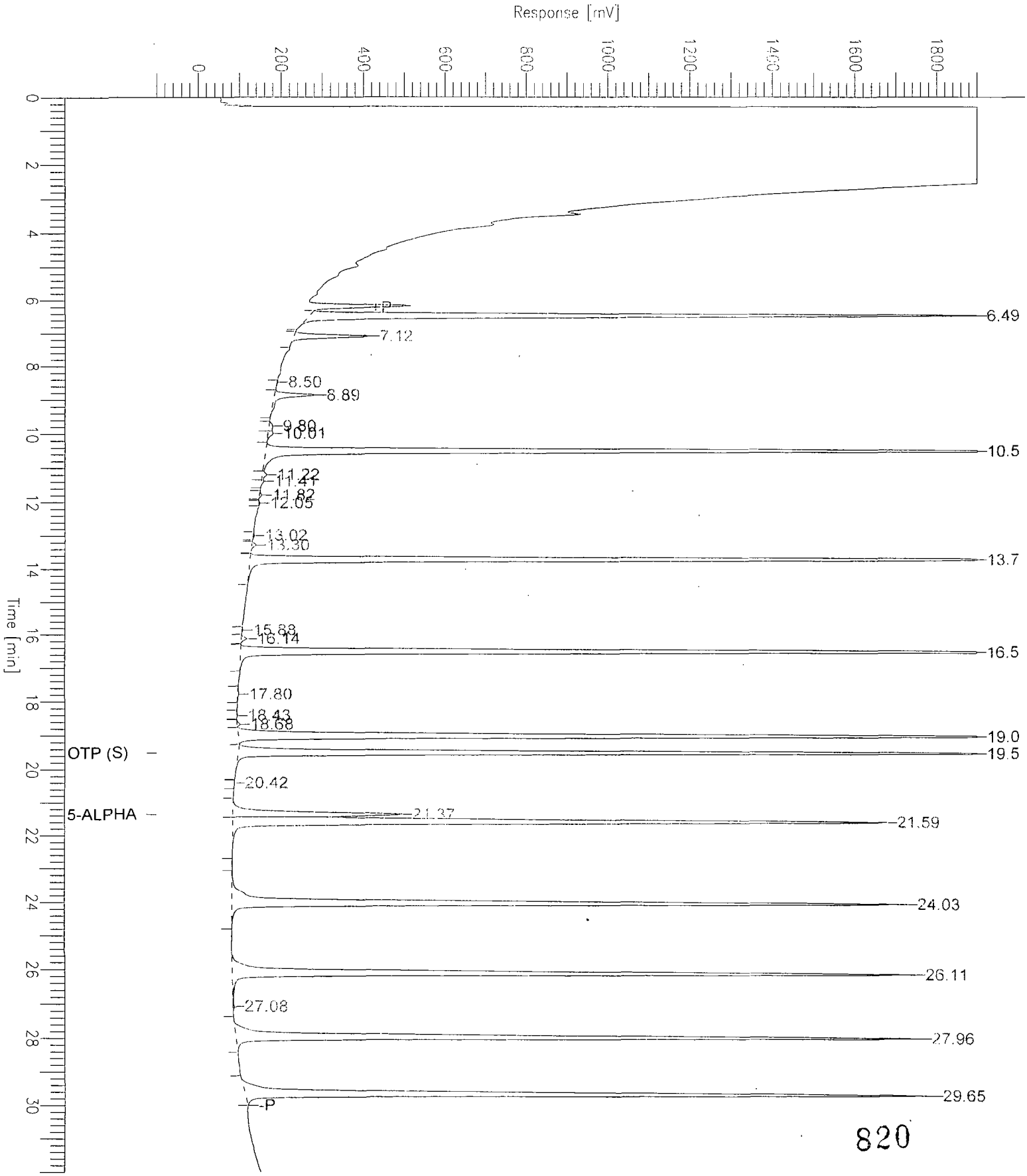
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.492		11.5915	11.5915	11591510		1.67e+06	BB	1.0000e+06	
2	7.115		1.2167	1.2167	1216705		184542.08	BB	1.0000e+06	
4	8.886		0.7764	0.7764	776406		101262.74	VB	1.0000e+06	
7	10.524		14.2459	14.2459	14245911		2.14e+06	BV	1.0000e+06	
14	13.732		14.9847	14.9847	14984650		2.32e+06	BB	1.0000e+06	
17	16.521		15.4399	15.4399	15439870		2.31e+06	BB	1.0000e+06	
21	19.023		14.9423	14.9423	14942297		2.16e+06	VB	1.0000e+06	
22	19.514	OTP (S)	31.9085	31.9085	12976140		2.00e+06	BB	4.0667e+05	
24	21.372	5-alpha Androstane	----------	10.0000	3730702		413129.20	BV	3.7307e+05	
25	21.590		13.6955	13.6955	13695498		1.61e+06	VB	1.0000e+06	
26	24.029		13.5230	13.5230	13522980		1.65e+06	BB	1.0000e+06	
27	26.112		13.0749	13.0749	13074890		1.68e+06	BE	1.0000e+06	
29	27.962		12.9773	12.9773	12977300		1.68e+06	BB	1.0000e+06	
30	29.651		12.9434	12.9434	12943385		1.68e+06	*BB	1.0000e+06	
			171.3199	181.3199	156118244		2.16e+07		1.2780e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D010.TX0

Chromatogram

Sample Name : L6DH5; GM011D
FileName : N:\TC4\DRO\B11D010.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:07 AM
Time of Injection: 8/9/98 08:57 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : CCV L3DH5; GM014D Time : 8/27/98 10:16 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/20/98 12:41 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D038.RAW
Result File : N:\TC4\DRO\B11D038.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D038.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

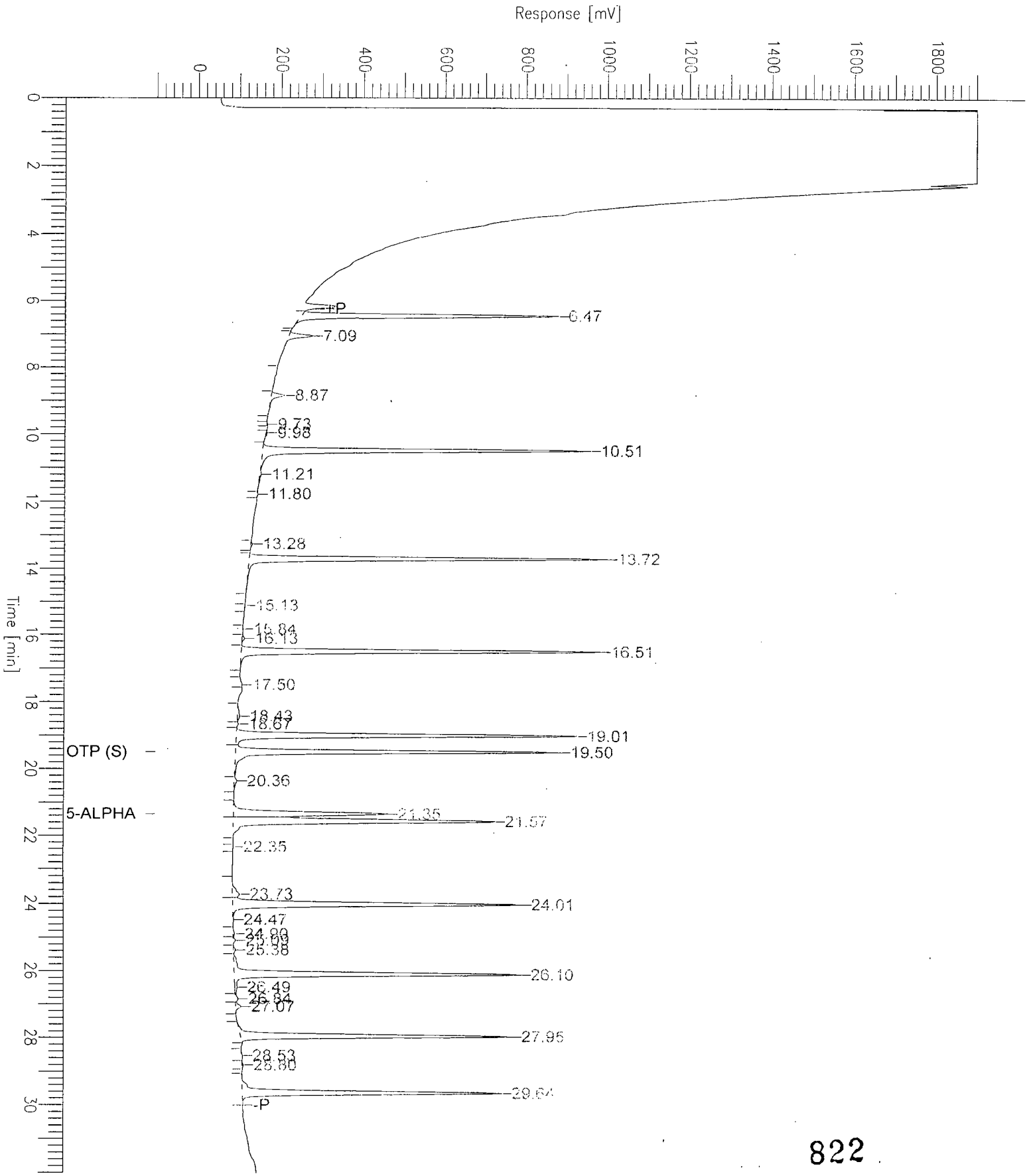
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.470		4.4462	4.4462	4446200	631660.86		BB	1.0000e+06	
6	10.506		5.4296	5.4296	5429559	809441.84		BE	1.0000e+06	
10	13.717		5.7119	5.7119	5711860	876820.88		BB	1.0000e+06	
14	16.506		5.8366	5.8366	5836590	887394.59		VB	1.0000e+06	
18	19.008		5.7202	5.7202	5720214	844521.89		VV	1.0000e+06	
19	19.498	OTP (S)	15.3052	15.3052	5260174	795427.29		VV	3.4369e+05	
21	21.352	5-alpha Androstane	----------	10.0000	3152922	376059.50		BV	3.1529e+05	
22	21.572		5.4216	5.4216	5421648	641933.83		VB	1.0000e+06	
25	24.013		5.4406	5.4406	5440641	707177.15		VE	1.0000e+06	
30	26.098		5.3349	5.3349	5334914	700263.21		VE	1.0000e+06	
34	27.951		4.7867	4.7867	4786670	661859.06		BB	1.0000e+06	
37	29.636		4.6727	4.6727	4672665	635059.19		*BB	1.0000e+06	
			68.1061	78.1061	61214058		8.57e+06		1.0659e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D038.TX0

Chromatogram

Sample Name : CCV L3DH5; GM014D
FileName : N:\TC4\DRO\B11D038.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:16 AM
Time of Injection: 8/20/98 12:41 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : CCV L3DH5; GM014D Time : 8/27/98 10:08 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/20/98 11:16 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D048.RAW
Result File : N:\TC4\DRO\B11D048.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D048.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

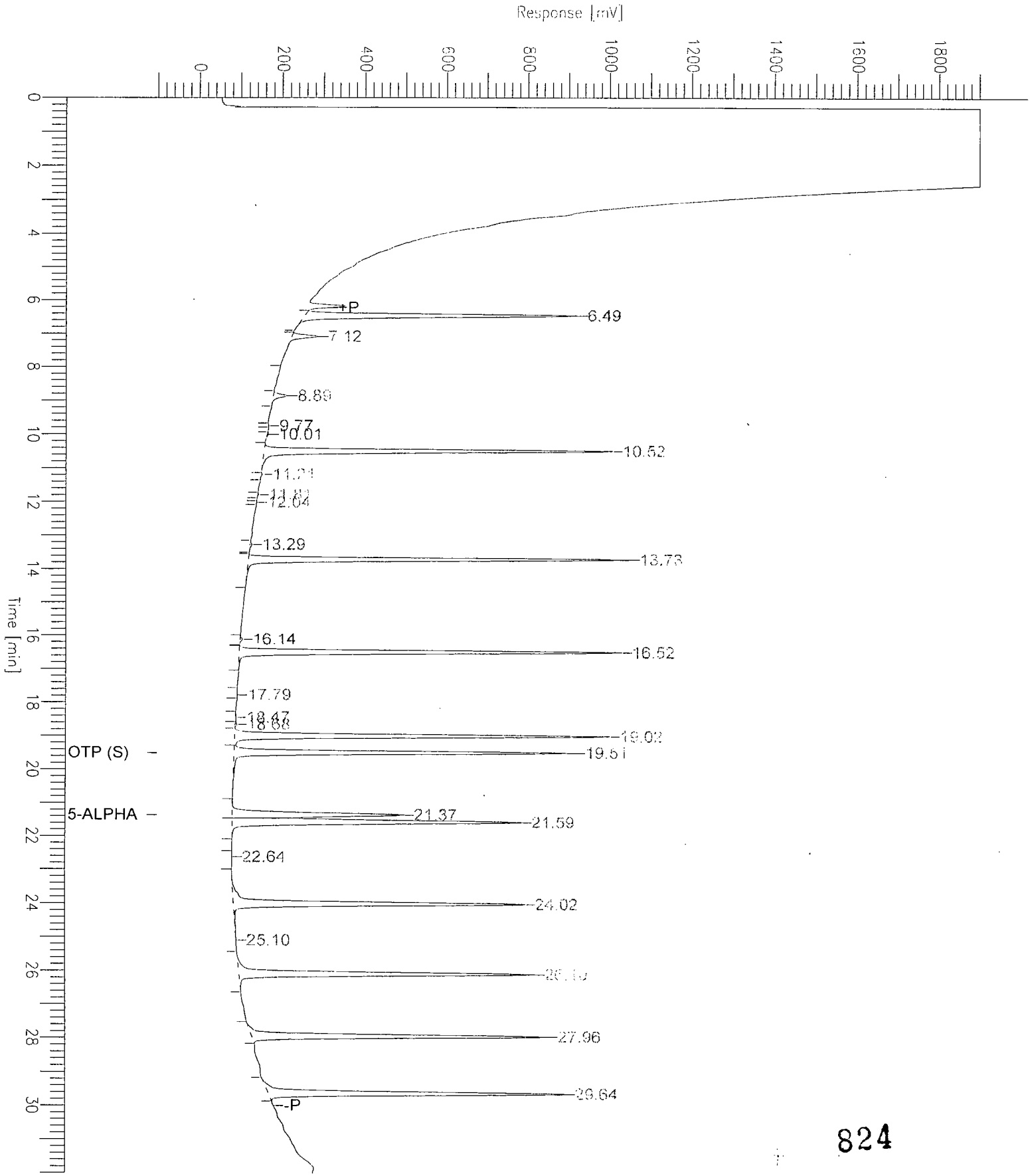
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.492		4.6800	4.6800	4680000	676689.02		BB	1.0000e+06	
6	10.522		5.6127	5.6127	5612711	859071.44		BV	1.0000e+06	
11	13.733		5.9136	5.9136	5913610	930636.49		BB	1.0000e+06	
13	16.521		6.1355	6.1355	6135470	938646.95		BB	1.0000e+06	
17	19.020		6.2434	6.2434	6243423	918405.43		VV	1.0000e+06	
18	19.513	OTP (S)	14.1065	14.1065	5445513	834978.94		VB	3.8603e+05	
19	21.369	5-alpha Androstane	----------	10.0000	3541376	417002.99		BV	3.5414e+05	
20	21.587		5.7772	5.7772	5777169	706406.68		VB	1.0000e+06	
22	24.024		5.7659	5.7659	5765860	717561.23		BE	1.0000e+06	
24	26.104		5.5457	5.5457	5545670	723644.16		BB	1.0000e+06	
25	27.955		5.3253	5.3253	5325295	725886.10		BB	1.0000e+06	
26	29.642		5.4607	5.4607	5460680	733858.58		BB	1.0000e+06	
			70.5664	80.5664	65446777		9.18e+06		1.0740e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D048.TX0

Chromatogram

Sample Name : CCV L3DH5; GM014D
FileName : N:\TC4\DRO\B11D048.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:08 AM
Time of Injection: 8/20/98 11:16 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : CCV L3DH5; GM014D
Sample Number:
Operator :

Time : 8/27/98 10:08 AM
Study :

Instrument : 3400-7
AutoSampler :
Rack/Vial : 0/0

Channel : B A/D mV Range : 10000

Interface Serial # : 2057574544 Data Acquisition Time: 8/21/98 05:47 AM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D057.RAW
Result File : N:\TC4\DRO\B11D057.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D057.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul
Sample Amount : 1.0000

Area Reject : 475000.000000
Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

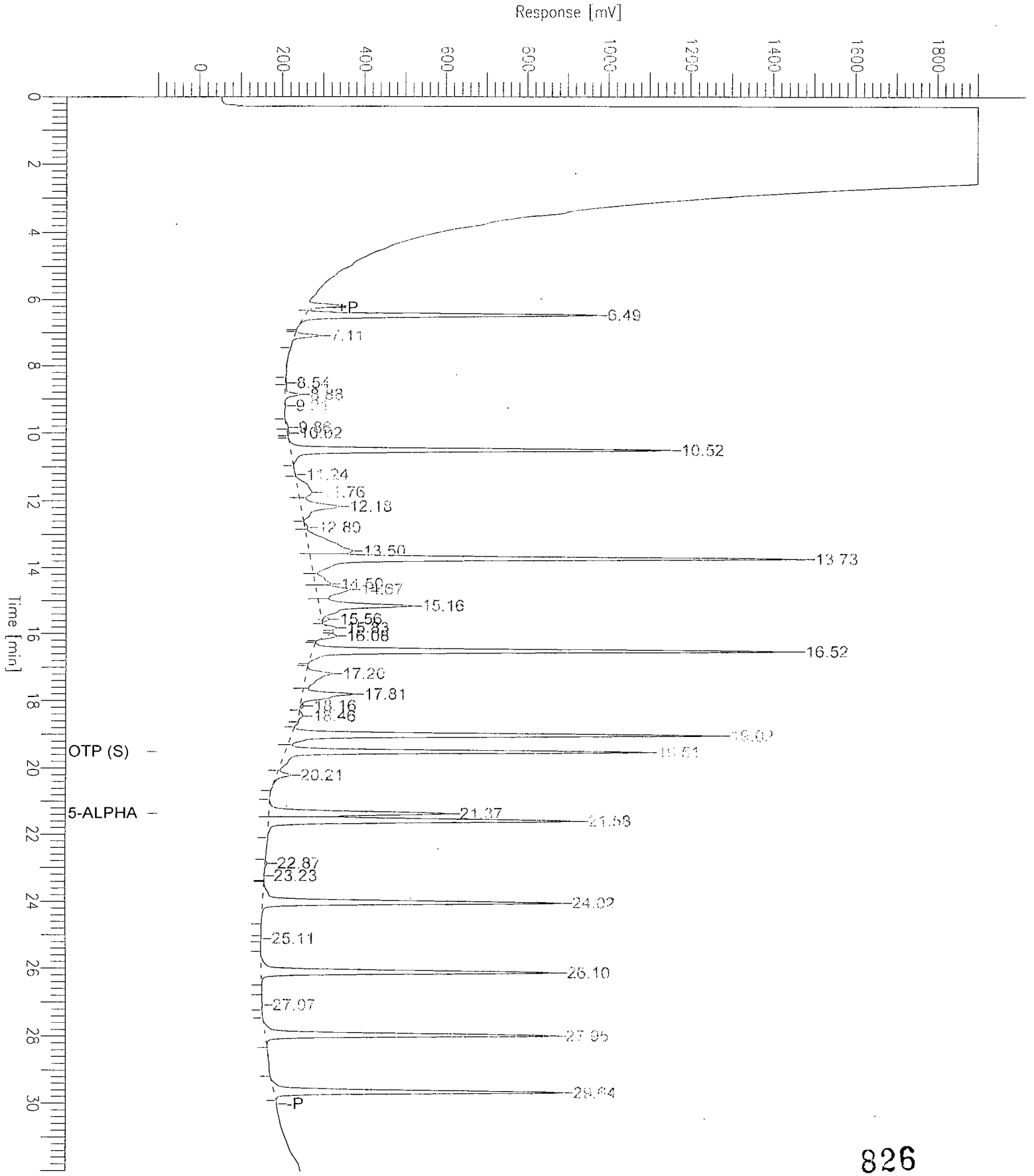
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.490		5.0545	5.0545	5054510	724711.08		BB	1.0000e+06	
8	10.521		6.4060	6.4060	6406011	936044.39		BV	1.0000e+06	
10	11.763		0.8406	0.8406	840627	33374.65		VV	1.0000e+06	
11	12.178		1.4252	1.4252	1425220	92984.53		VB	1.0000e+06	
13	13.502		2.5291	2.5291	2529063	105730.05		VV	1.0000e+06	
14	13.731		9.2732	9.2732	9273178	1.21e+06		VV	1.0000e+06	
15	14.497		0.5469	0.5469	546890	37002.62		VV	1.0000e+06	
16	14.667		1.3014	1.3014	1301391	83371.30		VV	1.0000e+06	
17	15.161		2.5277	2.5277	2527674	227159.77		VE	1.0000e+06	
21	16.518		8.1495	8.1495	8149470	1.18e+06		BB	1.0000e+06	
22	17.196		1.0806	1.0806	1080552	63685.11		BV	1.0000e+06	
23	17.808		1.4349	1.4349	1434878	126958.88		VE	1.0000e+06	
26	19.018		7.3129	7.3129	7312944	1.05e+06		BV	1.0000e+06	
27	19.510	OTP (S)	14.6800	14.6800	6108607	897427.25		VV	4.1612e+05	
29	21.365	5-alpha Androstane	----------	10.0000	3817400	442524.72		BV	3.8174e+05	
30	21.584		6.1772	6.1772	6177150	758328.50		VB	1.0000e+06	
33	24.020		5.8193	5.8193	5819310	734565.10		BB	1.0000e+06	
35	26.101		5.4577	5.4577	5457730	724192.66		BB	1.0000e+06	
37	27.952		5.3508	5.3508	5350780	711679.00		BB	1.0000e+06	
38	29.638		5.2644	5.2644	5264380	711198.46		BB	1.0000e+06	
			90.6318	100.6318	85877764		1.09e+07		1.8798e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D057.TX0

Chromatogram

Sample Name : CCV L3DH5; GM014D
FileName : N:\TC4\DRO\B11D057.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:08 AM
Time of Injection: 8/21/98 05:47 AM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : CCV L3DH5; GM014D Time : 8/27/98 10:10 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/24/98 01:09 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D070.RAW
Result File : N:\TC4\DRO\B11D070.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D070.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

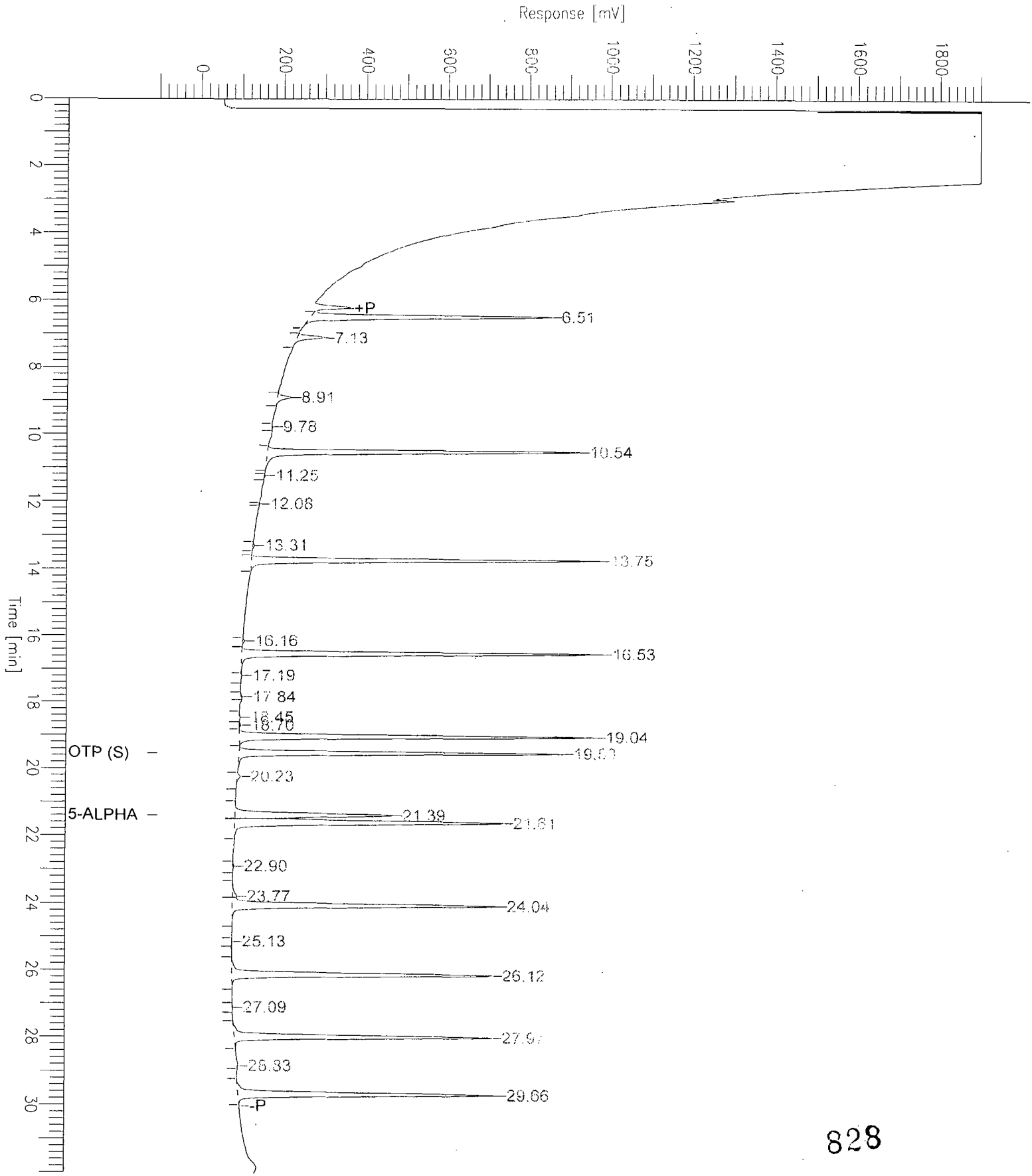
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.511		4.1052	4.1052	4105215	594672.75		BB	1.0000e+06	
5	10.538		5.0557	5.0557	5055675	767046.18		BB	1.0000e+06	
9	13.747		5.3292	5.3292	5329215	854483.35		BB	1.0000e+06	
11	16.534		5.6595	5.6595	5659518	881418.27		BV	1.0000e+06	
16	19.036		5.7623	5.7623	5762280	871098.53		BB	1.0000e+06	
17	19.530	OTP (S)	14.3720	14.3720	4917183	794646.82		BV	3.4214e+05	
19	21.390	5-alpha Androstane	----------	10.0000	3138707	384643.47		BV	3.1387e+05	
20	21.607		5.3578	5.3578	5357753	659248.95		VB	1.0000e+06	
23	24.043		4.9323	4.9323	4932252	652297.30		VB	1.0000e+06	
25	26.123		4.7116	4.7116	4711620	639529.58		BB	1.0000e+06	
27	27.974		4.6258	4.6258	4625754	634462.50		BV	1.0000e+06	
29	29.661		4.5717	4.5717	4571680	635542.09		BB	1.0000e+06	
			64.4830	74.4830	58166852		8.37e+06		1.0656e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D070.TX0

Chromatogram

Sample Name : CCV L3DH5; GM014D
FileName : N:\TC4\DRO\B11D070.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:10 AM
Time of Injection: 8/24/98 01:09 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : CCV L3DH5; GM014D Time : 8/27/98 10:11 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/24/98 07:07 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D076.RAW
Result File : N:\TC4\DRO\B11D076.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D076.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

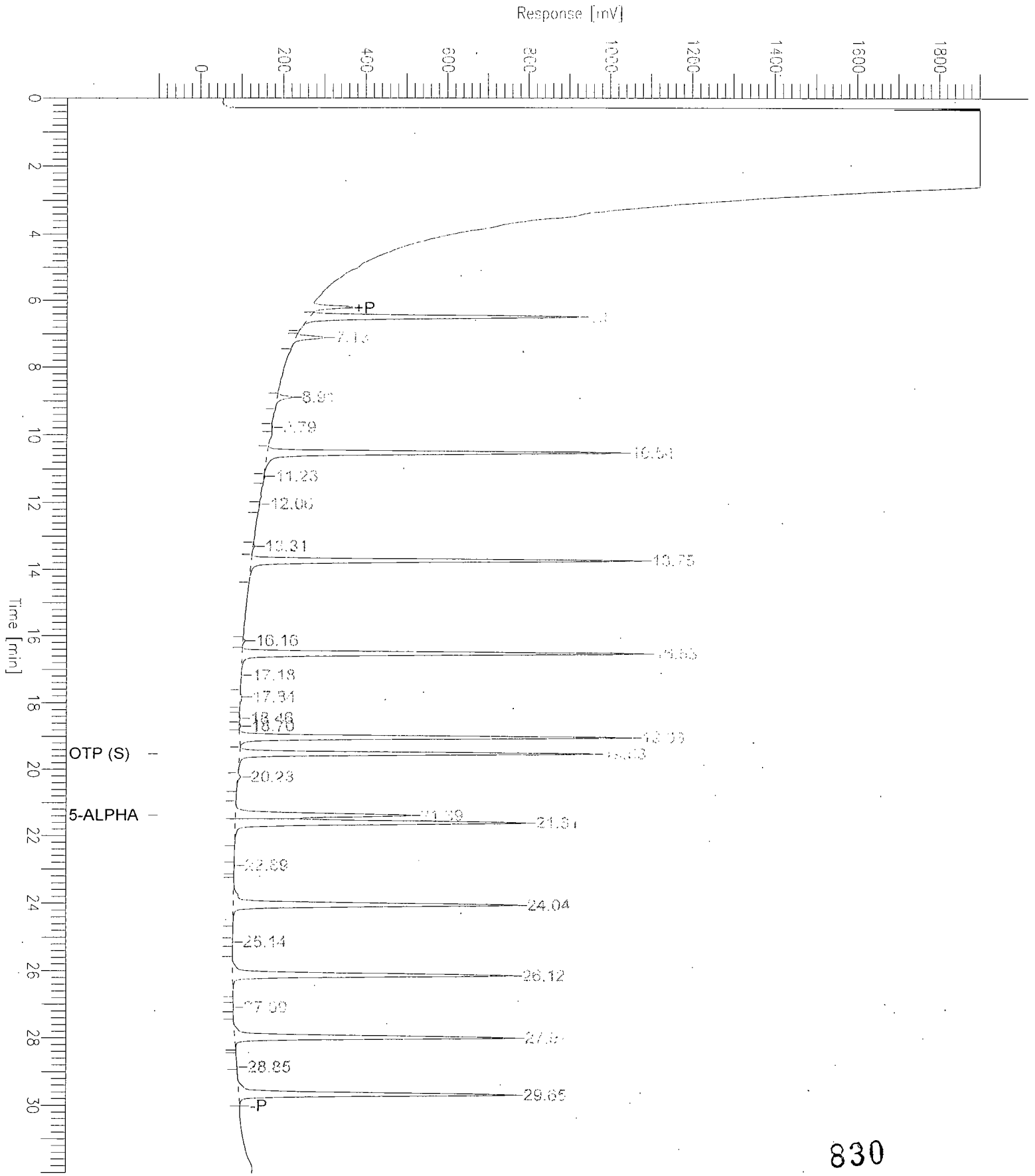
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.508		4.6043	4.6043	4604295	667983.78		BB	1.0000e+06	
2	7.132		0.4859	0.4859	485880	71419.51		BB	1.0000e+06	
5	10.537		5.7097	5.7097	5709655	868024.36		BB	1.0000e+06	
9	13.746		6.0844	6.0844	6084375	958981.97		BB	1.0000e+06	
11	16.533		6.3697	6.3697	6369650	982956.18		BE	1.0000e+06	
16	19.032		6.3831	6.3831	6383080	958350.78		BB	1.0000e+06	
17	19.526	OTP (S)	14.2352	14.2352	5463259	877094.07		BV	3.8378e+05	
19	21.385	5-alpha Androstane	----------	10.0000	3520783	424668.54		BV	3.5208e+05	
20	21.605		5.8191	5.8191	5819057	711868.84		VB	1.0000e+06	
22	24.038		5.4739	5.4739	5473940	696593.43		BB	1.0000e+06	
24	26.120		5.1395	5.1395	5139470	683769.46		BB	1.0000e+06	
26	27.969		5.0470	5.0470	5046990	684463.88		BB	1.0000e+06	
28	29.654		4.9967	4.9967	4996741	672027.89		*VB	1.0000e+06	
			70.3483	80.3483	65097175		9.26e+06		1.1736e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D076.TX0

Chromatogram

Sample Name : CCV L3DH5; GM014D
FileName : N:\TC4\DRO\B11D076.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:11 AM
Time of Injection: 8/24/98 07:07 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : CCV L3DH5; GM014D Time : 8/27/98 10:11 AM
Sample Number: Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/24/98 09:18 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D079.RAW
Result File : N:\TC4\DRO\B11D079.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D079.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

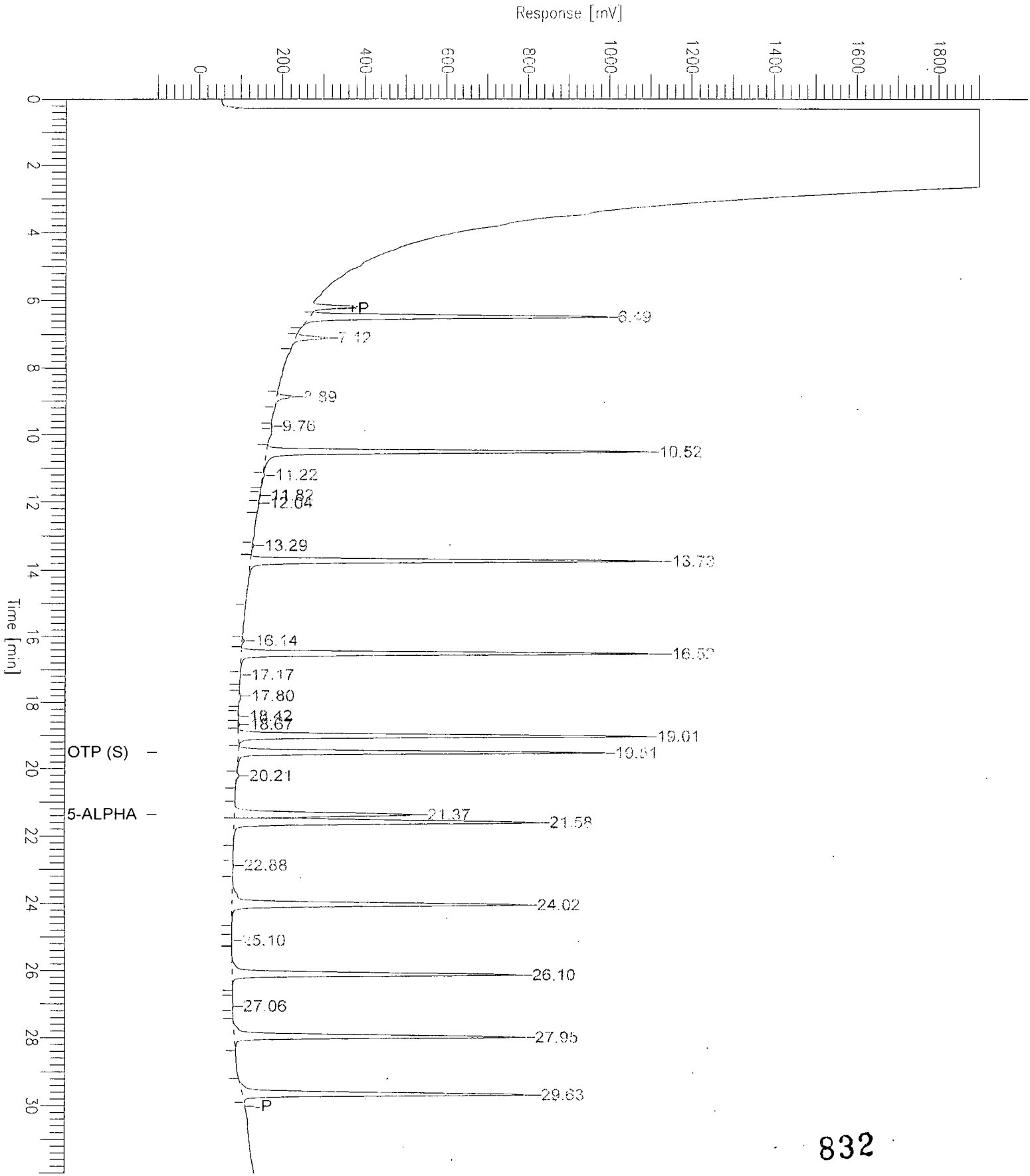
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.492		5.1072	5.1072	5107240	739258.54		BB	1.0000e+06	
2	7.116		0.5244	0.5244	524410	78428.70		BB	1.0000e+06	
5	10.519		6.1438	6.1438	6143815	935699.24		BV	1.0000e+06	
10	13.728		6.4128	6.4128	6412800	1.01e+06		BB	1.0000e+06	
12	16.515		6.6487	6.6487	6648722	1.03e+06		BV	1.0000e+06	
17	19.013		6.6603	6.6603	6660260	1.00e+06		BB	1.0000e+06	
18	19.508	OTP (S)	14.0452	14.0452	5683702	909702.32		BV	4.0467e+05	
20	21.365	5-alpha Androstane	----------	10.0000	3712394	444713.54		BV	3.7124e+05	
21	21.582		6.0016	6.0016	6001586	744985.06		VB	1.0000e+06	
23	24.018		5.6858	5.6858	5685780	719855.95		BB	1.0000e+06	
25	26.098		5.2919	5.2919	5291945	707866.45		BB	1.0000e+06	
27	27.948		5.2132	5.2132	5213200	709575.08		BB	1.0000e+06	
28	29.634		5.0831	5.0831	5083090	704741.55		BB	1.0000e+06	
			72.8181	82.8181	68168944		9.73e+06		1.1776e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D079.TX0

Chromatogram

Sample Name : CCV L3DH5; GM014D
FileName : N:\TC4\DRO\B11D079.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #:
Date : 8/27/98 10:11 AM
Time of Injection: 8/24/98 09:18 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : EEI/13219 DF5000 Time : 8/27/98 10:10 AM
Sample Number: 91983 Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/24/98 02:38 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D072.RAW
Result File : N:\TC4\DRO\B11D072.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D072.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

USE

EXTERNAL STANDARD REPORT

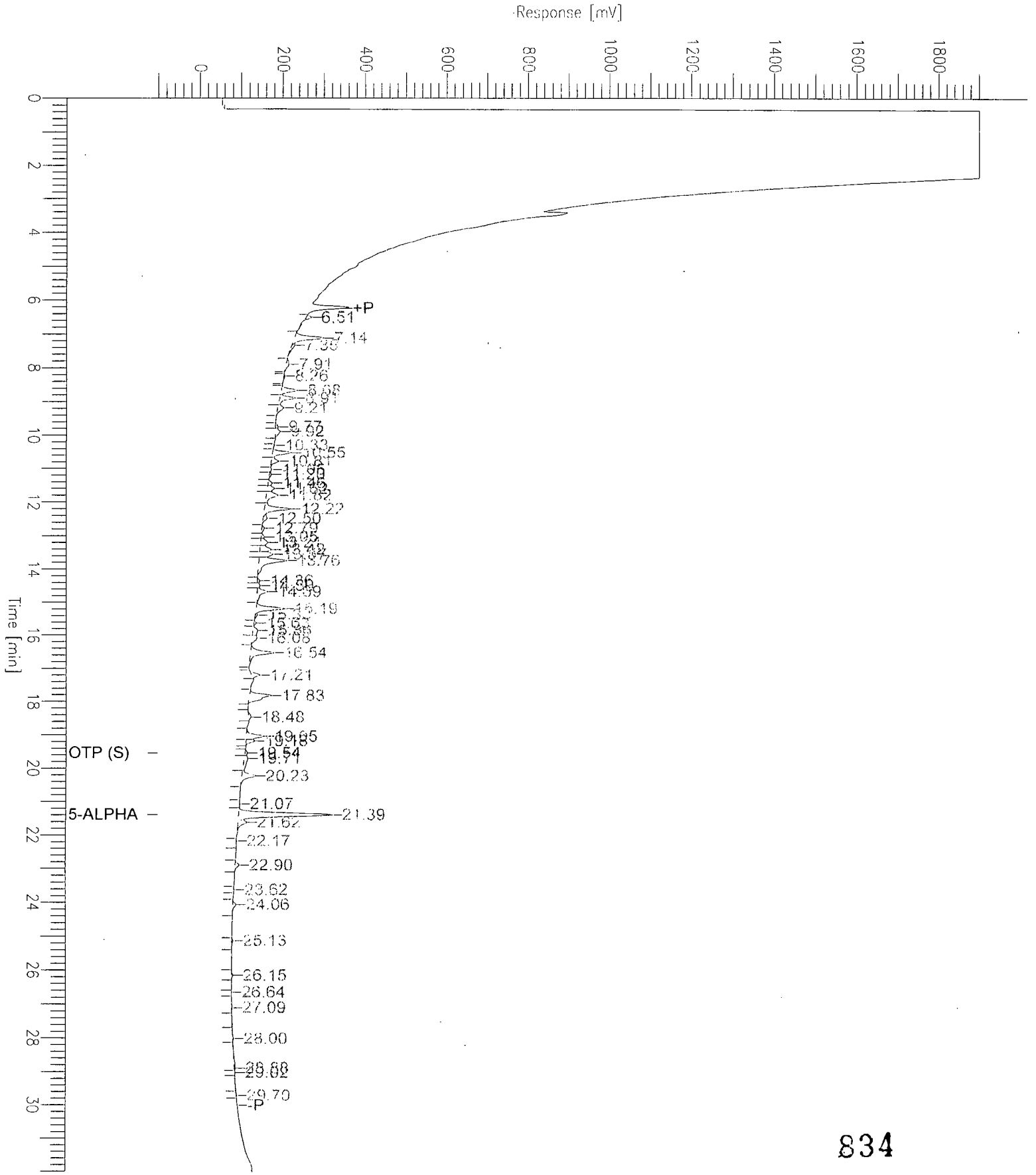
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
2	7.136		0.5364	0.5364	536365		71223.94	BE	1.0000e+06	
19	12.220		0.4834	0.4834	483372		62553.91	VE	1.0000e+06	
26	13.758		0.6534	0.6534	653394		66929.72	VB	1.0000e+06	
35	16.542		0.4829	0.4829	482850		56392.83	BB	1.0000e+06	
37	17.829		0.5375	0.5375	537485		52308.35	BB	1.0000e+06	
45	21.393	5-alpha Androstane	----------	10.0000	1810596		228676.55	VE	1.8106e+05	
			2.6935	12.6935	4504061		538085.31		5.1811e+06	

Report stored in ASCII file: N:\TC4\DRO\B11D072.TX0

Chromatogram

Sample Name : EEI/13219 DF5000
FileName : N:\TC4\DRO\B11D072.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 91983
Date : 8/27/98 10:10 AM
Time of Injection: 8/24/98 02:38 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : EEI/13219 DF10 Time : 8/27/98 10:08 AM
Sample Number: 91983 Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/21/98 01:26 AM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D051.RAW
Result File : N:\TC4\DRO\B11D051.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D051.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

NOT USED

EXTERNAL STANDARD REPORT

Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.321		5.2916	5.2916	5291556	686706.82	*BV		1.0000e+06	
2	6.508		91.1197	91.1197	91119744	8.40e+06	VV		1.0000e+06	+
3	6.873		11.6520	11.6520	11652040	1.39e+06	VV		1.0000e+06	
4	7.079		47.6392	47.6392	47639168	4.81e+06	VV		1.0000e+06	
5	7.390		97.4970	97.4970	97497035	5.49e+06	VV		1.0000e+06	
6	7.945		148.8257	148.8257	148825689	7.21e+06	VV		1.0000e+06	
7	8.360		91.0848	91.0848	91084803	5.64e+06	VV		1.0000e+06	
8	8.608		152.6375	152.6375	152637471	8.45e+06	VV		1.0000e+06	+
9	8.958		57.6834	57.6834	57683377	6.36e+06	VV		1.0000e+06	
10	9.158		197.4217	197.4217	197421744	8.40e+06	VV		1.0000e+06	+
11	9.592		106.4680	106.4680	106467951	8.40e+06	VV		1.0000e+06	+
12	9.758		224.2195	224.2195	224219451	8.42e+06	VV		1.0000e+06	+
13	10.192		5026.9465	5026.9465	5026946498	8.43e+06	VV		1.0000e+06	+
14	20.125		205.3386	205.3386	205338646	8.65e+06	VV		1.0000e+06	+
15	20.528		80.7848	80.7848	80784831	5.87e+06	VV		1.0000e+06	
16	20.808		60.2405	60.2405	60240467	5.17e+06	VV		1.0000e+06	
17	21.110		112.1976	112.1976	112197639	6.25e+06	VV		1.0000e+06	
18	21.395	5-alpha Androstane	----------	10.0000	87637000	7.07e+06	VV		8.7637e+06	
19	21.575		116.8922	116.8922	116892226	8.62e+06	VV		1.0000e+06	+
20	21.855		40.8487	40.8487	40848705	3.33e+06	VV		1.0000e+06	
21	22.170		57.5449	57.5449	57544910	3.26e+06	VV		1.0000e+06	
22	22.418		28.5521	28.5521	28552084	2.91e+06	VV		1.0000e+06	
23	22.538		35.2192	35.2192	35219175	2.95e+06	VV		1.0000e+06	
24	22.864		74.7794	74.7794	74779375	6.58e+06	VV		1.0000e+06	
25	23.046		19.8697	19.8697	19869709	2.00e+06	VV		1.0000e+06	
26	23.326		26.9808	26.9808	26980809	1.61e+06	VV		1.0000e+06	
27	23.656		18.5796	18.5796	18579626	1.10e+06	VV		1.0000e+06	
28	24.015		29.0550	29.0550	29054987	2.84e+06	VE		1.0000e+06	
29	24.442		2.2420	2.2420	2241970	186605.13	EB		1.0000e+06	
30	25.086		8.3891	8.3891	8389060	1.23e+06	BV		1.0000e+06	
32	26.090		3.3503	3.3503	3350319	518517.89	BV		1.0000e+06	

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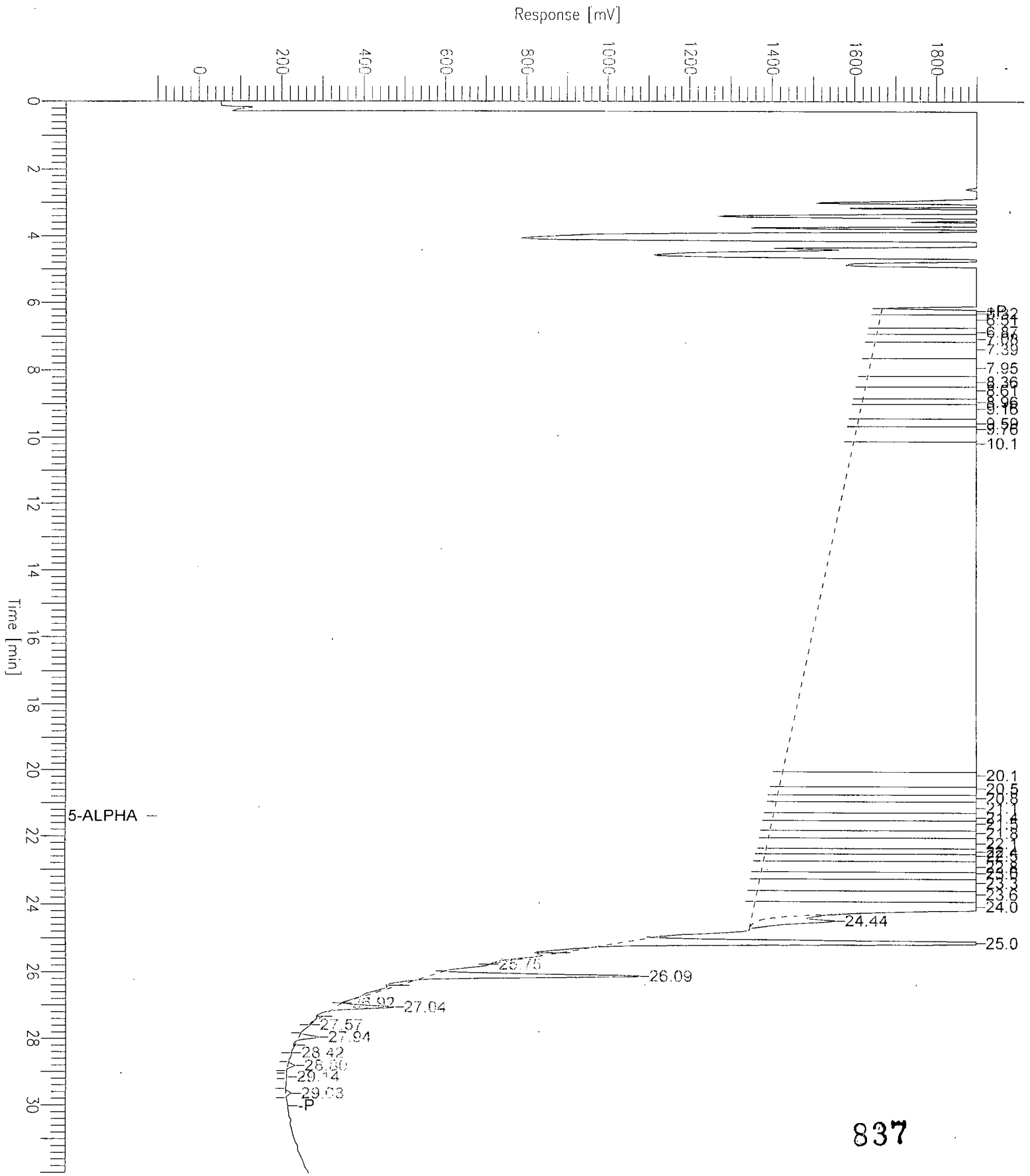
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
34	27.039		0.8239	0.8239	823944	142374.79		BV	1.0000e+06	
			7180.1750	7190.1750	7267812008		1.52e+08		3.9764e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D051.TX0

Chromatogram

Sample Name : EEI/13219 DF10
FileName : N:\TC4\DRO\B11D051.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 91983 Page 1 of 1
Date : 8/27/98 10:08 AM
Time of Injection: 8/21/98 01:26 AM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : EEI/13219 Time : 8/27/98 10:08 AM
Sample Number: 91983 Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/21/98 02:09 AM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D052.RAW
Result File : N:\TC4\DRO\B11D052.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D052.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

NOT USED

EXTERNAL STANDARD REPORT

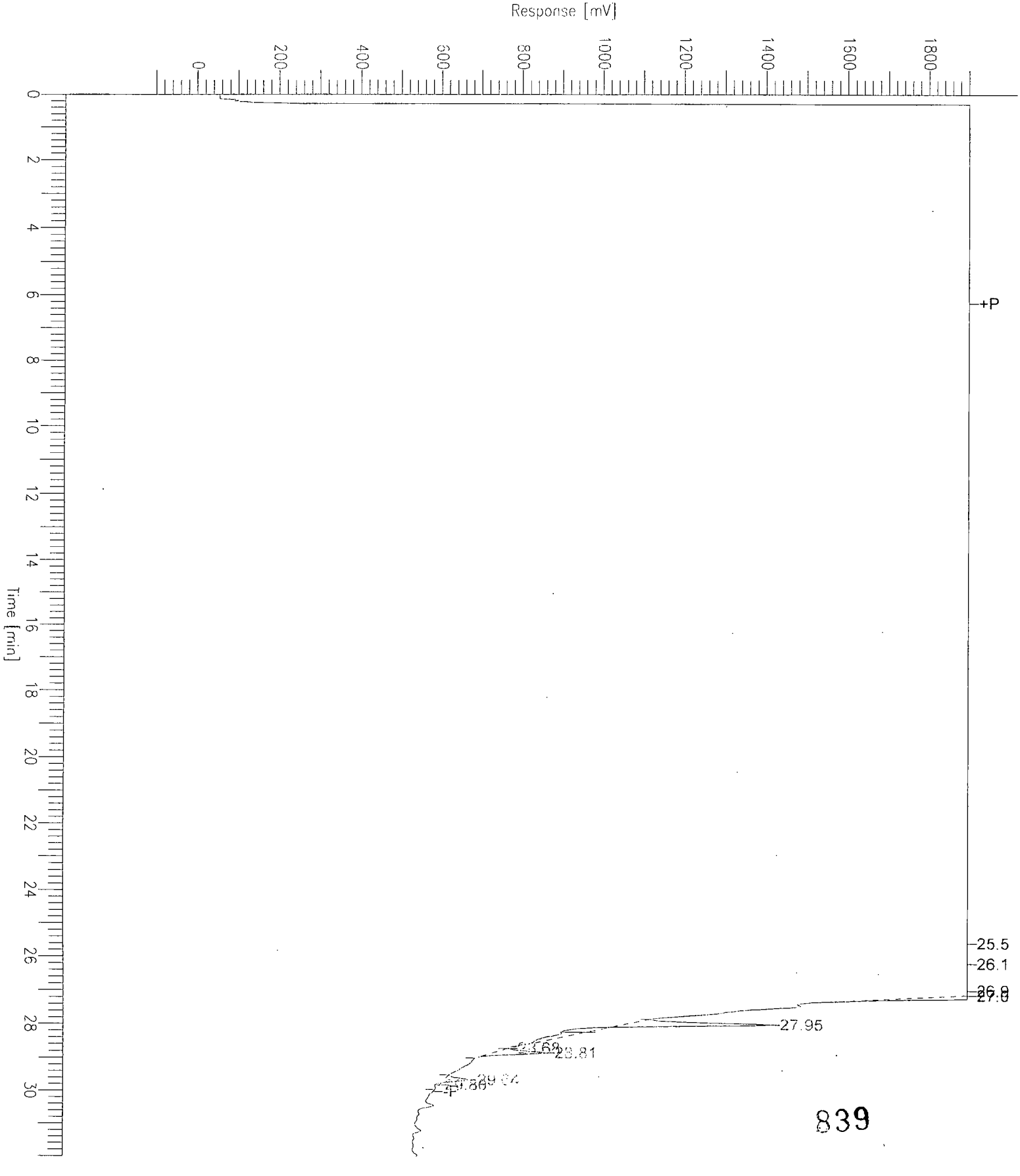
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	25.521		4.8684	4.8684	4868405	377131.49	BB	1.0000e+06		
2	26.128		30.3835	30.3835	30383506	4.63e+06	BV	1.0000e+06		
3	26.917		4.5063	4.5063	4506291	1.02e-09	VB	1.0000e+06		
4	27.060		9.8303	9.8303	9830270	1.34e+06	BB	1.0000e+06		
5	27.953		1.7765	1.7765	1776456	354000.74	BV	1.0000e+06		
6	28.683		0.7987	0.7987	798696	5.57e-10	VB	1.0000e+06		
7	28.813		0.8494	0.8494	849440	128029.76	BB	1.0000e+06		
			53.0131	53.0131	53013065	6.83e+06		7.0000e+06		

Report stored in ASCII file: N:\TC4\DRO\B11D052.TX0

Chromatogram

Sample Name : EEI/13219
FileName : N:\TC4\DRO\B11D052.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 91983
Date : 8/27/98 10:08 AM
Time of Injection: 8/21/98 02:09 AM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : EEI/13219 RE DF10 Time : 8/27/98 10:11 AM
Sample Number: 91984 Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/24/98 08:35 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D078.RAW
Result File : N:\TC4\DRO\B11D078.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D078.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

USE

EXTERNAL STANDARD REPORT

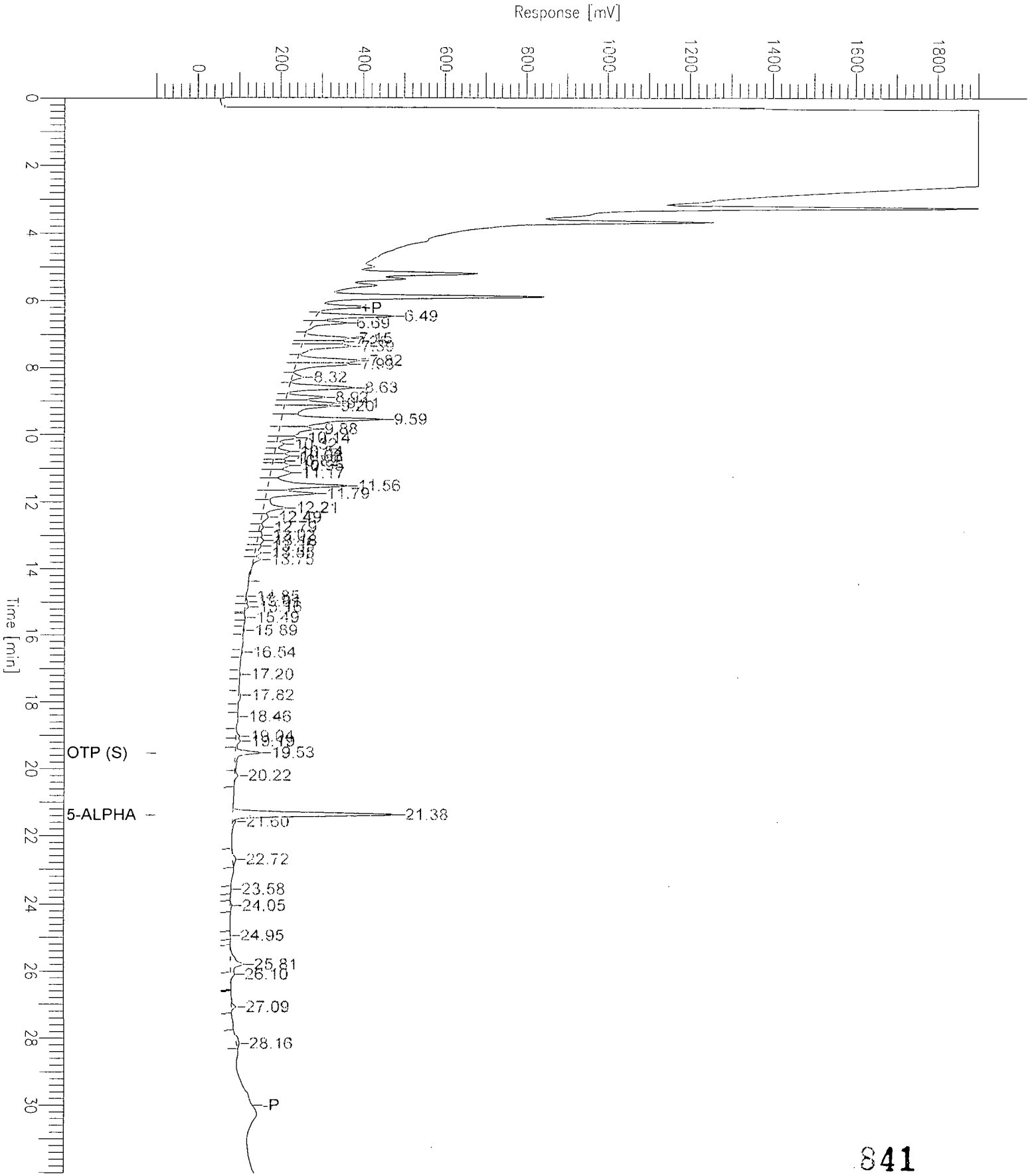
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.488		1.2859	1.2859	1285881	191870.00		BV	1.0000e+06	
2	6.691		0.5899	0.5899	589874	85103.83		VB	1.0000e+06	
3	7.145		0.9070	0.9070	906952	109283.53		BV	1.0000e+06	
4	7.253		0.5912	0.5912	591218	101174.08		VV	1.0000e+06	
5	7.389		1.0131	1.0131	1013131	119873.68		VV	1.0000e+06	
6	7.819		1.2474	1.2474	1247366	151227.33		VV	1.0000e+06	
7	7.928		0.9354	0.9354	935355	133509.57		VV	1.0000e+06	
9	8.630		1.3121	1.3121	1312120	159570.26		BB	1.0000e+06	
10	8.915		0.6689	0.6689	668923	93396.98		BV	1.0000e+06	
11	9.107		0.9985	0.9985	998547	125201.25		VV	1.0000e+06	
12	9.195		0.9981	0.9981	998136	112201.30		VV	1.0000e+06	
13	9.587		2.5401	2.5401	2540136	248168.76		VV	1.0000e+06	
14	9.880		1.0088	1.0088	1008793	83552.28		VV	1.0000e+06	
21	11.167		0.5335	0.5335	533543	49321.49		VV	1.0000e+06	
22	11.555		1.8169	1.8169	1816888	192911.21		VV	1.0000e+06	
23	11.786		0.9893	0.9893	989305	120341.92		VV	1.0000e+06	
24	12.211		0.5979	0.5979	597884	53436.15		VV	1.0000e+06	
43	19.528	OTP (S)	1.5770	1.5770	535052	61630.46		VV	3.3929e+05	
45	21.379	5-alpha Androstane	----------	10.0000	3112560	395317.19		BE	3.1126e+05	
51	25.805		0.5100	0.5100	510038	33016.52		BV	1.0000e+06	
			20.1211	30.1211	22191702		2.62e+06		1.8651e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D078.TX0

Chromatogram

Sample Name : EEI/13219 RE DF10
FileName : N:\TC4\DRO\B11D078.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 91984 Page 1 of 1
Date : 8/27/98 10:11 AM
Time of Injection: 8/24/98 08:35 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : EEI/13219 Time : 8/27/98 10:16 AM
Sample Number: 91984 Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/20/98 05:26 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D040.RAW
Result File : N:\TC4\DRO\B11D040.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D040.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

NOT USED

EXTERNAL STANDARD REPORT

Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.267		1.3529	1.3529	1352875	184991.12	*BV		1.0000e+06	
2	6.473		27.4187	27.4187	27418670	3.84e+06	VV		1.0000e+06	
3	6.675		13.0051	13.0051	13005066	1.86e+06	VE		1.0000e+06	
4	6.810		0.8333	0.8333	833340	169137.96	EB		1.0000e+06	
5	7.256		24.0908	24.0908	24090830	2.83e+06	BV		1.0000e+06	
6	7.376		33.5159	33.5159	33515877	3.40e+06	VE		1.0000e+06	
7	7.528		1.6040	1.6040	1604020	282437.92	EV		1.0000e+06	
8	7.802		40.2697	40.2697	40269733	4.89e+06	VV		1.0000e+06	
9	7.919		30.6011	30.6011	30601100	4.35e+06	VB		1.0000e+06	
10	8.310		7.3294	7.3294	7329410	1.05e+06	BB		1.0000e+06	
11	8.626		54.6764	54.6764	54676360	6.41e+06	BB		1.0000e+06	
12	8.916		6.5558	6.5558	6555805	1.16e+06	BB		1.0000e+06	
13	9.106		7.2981	7.2981	7298060	943485.94	BB		1.0000e+06	
15	9.569		47.0697	47.0697	47069695	7.16e+06	BE		1.0000e+06	+
16	9.694		1.8679	1.8679	1867860	422894.83	EV		1.0000e+06	
17	9.879		8.6569	8.6569	8656875	1.56e+06	VB		1.0000e+06	
18	10.128		4.9595	4.9595	4959495	1.21e+06	BB		1.0000e+06	
19	10.304		3.9886	3.9886	3988600	821661.98	BB		1.0000e+06	
20	10.534		15.6047	15.6047	15604745	2.18e+06	BV		1.0000e+06	
21	10.652		13.4509	13.4509	13450942	1.87e+06	VV		1.0000e+06	
22	10.944		32.4754	32.4754	32475396	2.65e+06	VV		1.0000e+06	
23	11.142		27.2362	27.2362	27236174	2.64e+06	VV		1.0000e+06	
24	11.508		104.1939	104.1939	104193945	9.02e+06	VV		1.0000e+06	+
25	11.771		55.5798	55.5798	55579766	7.52e+06	VV		1.0000e+06	
26	12.196		42.2692	42.2692	42269250	3.91e+06	VV		1.0000e+06	
27	12.462		19.5115	19.5115	19511461	1.41e+06	VV		1.0000e+06	
28	12.766		13.2121	13.2121	13212123	1.02e+06	VV		1.0000e+06	
29	13.120		19.9135	19.9135	19913458	1.58e+06	VV		1.0000e+06	
30	13.286		14.4405	14.4405	14440550	1.72e+06	VV		1.0000e+06	
31	13.501		15.5316	15.5316	15531594	1.78e+06	VV		1.0000e+06	
32	13.732		14.0562	14.0562	14056166	1.72e+06	VE		1.0000e+06	

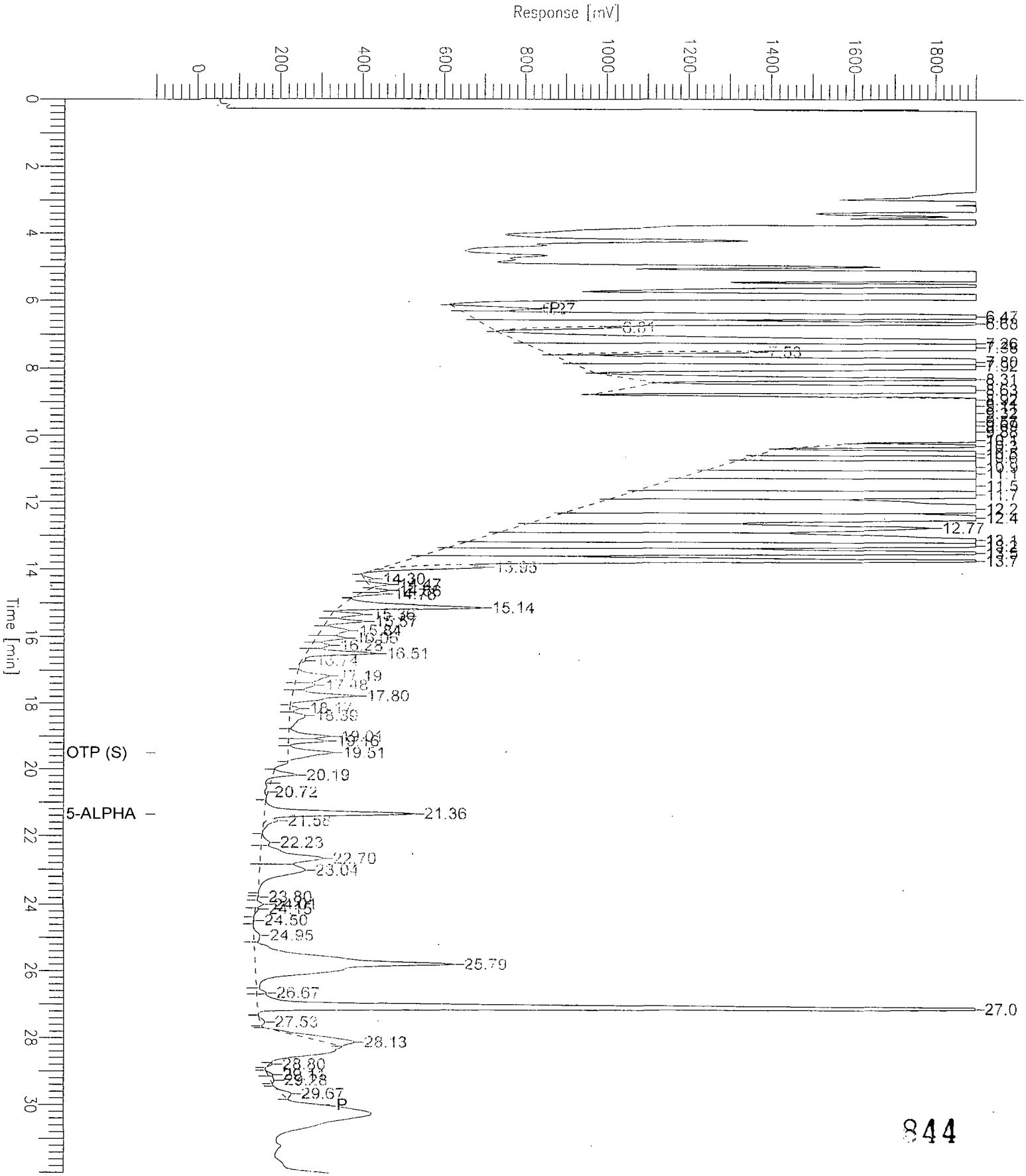
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
33	13.951		1.6002	1.6002	1600230	202593.06		EB	1.0000e+06	
38	15.141		2.9602	2.9602	2960180	351807.57		BB	1.0000e+06	
39	15.356		0.5623	0.5623	562261	76243.47		BV	1.0000e+06	
40	15.567		0.6605	0.6605	660536	92107.29		VV	1.0000e+06	
41	15.837		0.8130	0.8130	813027	67409.00		VV	1.0000e+06	
42	16.063		0.5845	0.5845	584525	71658.67		VV	1.0000e+06	
44	16.508		1.3407	1.3407	1340735	172178.53		VE	1.0000e+06	
46	17.191		1.1372	1.1372	1137187	78574.88		BV	1.0000e+06	
47	17.478		0.5033	0.5033	503277	49632.02		VV	1.0000e+06	
48	17.796		1.7387	1.7387	1738701	156891.99		VB	1.0000e+06	
50	18.394		0.6002	0.6002	600243	37862.54		VV	1.0000e+06	
51	19.014		0.8661	0.8661	866142	101698.46		VV	1.0000e+06	
52	19.155		0.6620	0.6620	661957	92397.57		VV	1.0000e+06	
53	19.510	OTP (S)	3.5593	3.5593	1317985	108895.84		VB	3.7029e+05	
57	21.356	5-alpha Androstane	----------	10.0000	3396970	367046.30		BE	3.3970e+05	
60	22.698		2.7454	2.7454	2745402	150410.83		VV	1.0000e+06	
61	23.042		2.1415	2.1415	2141495	109649.01		VB	1.0000e+06	
67	25.791		10.8291	10.8291	10829104	487699.32		VV	1.0000e+06	
69	27.074		18.4267	18.4267	18426669	2.49e+06		VB	1.0000e+06	
71	28.125		1.4244	1.4244	1424365	73452.28		BB	1.0000e+06	
			755.7246	765.7246	756880233		8.69e+07		4.9710e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D040.TX0

Chromatogram

Sample Name : EEI/13219
FileName : N:\TC4\DRO\B11D040.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 91984
Date : 8/27/98 10:16 AM
Time of Injection: 8/20/98 05:26 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : ENC/11111 Time : 8/27/98 10:08 AM
Sample Number: 89681B Study : DROH2002O
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/20/98 11:59 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D049.RAW
Result File : N:\TC4\DRO\B11D049.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D049.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

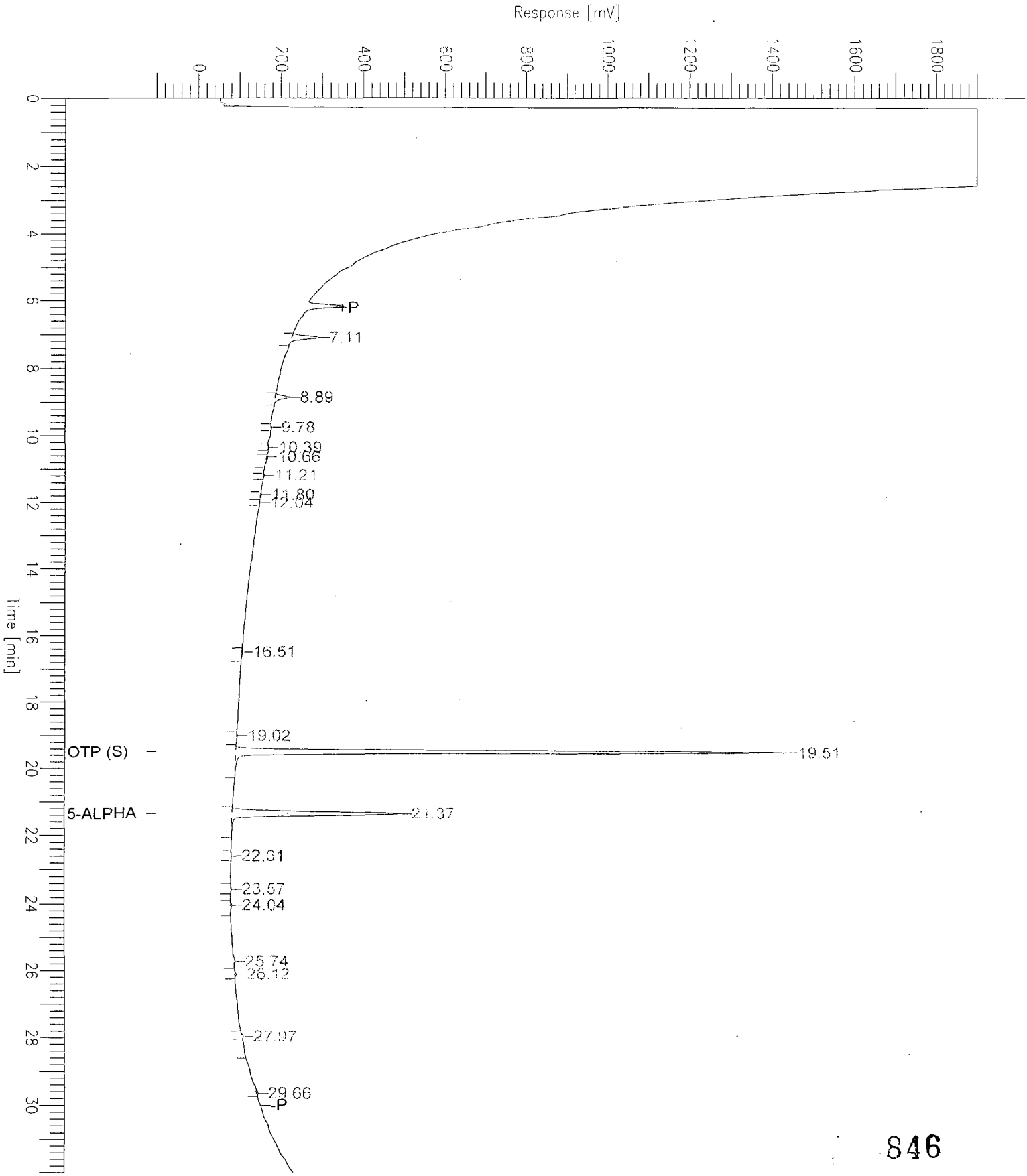
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
11	19.511	OTP (S)	23.6351	23.6351	8439800	1.36e+06		BB	3.5709e+05	
12	21.366	5-alpha Androstane	----------	10.0000	3275865	411887.04		BB	3.2759e+05	
			23.6351	33.6351	11715665	1.77e+06			6.8467e+05	

Report stored in ASCII file: N:\TC4\DRO\B11D049.TXO

Chromatogram

Sample Name : ENC/11111
FileName : N:\TC4\DRO\B11D049.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 89681B
Date : 8/27/98 10:08 AM
Time of Injection: 8/20/98 11:59 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : ENC/11111 RE Time : 8/27/98 10:11 AM
Sample Number: 89683B Study : DROH0601W
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/24/98 07:51 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D077.RAW
Result File : N:\TC4\DRO\B11D077.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D077.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

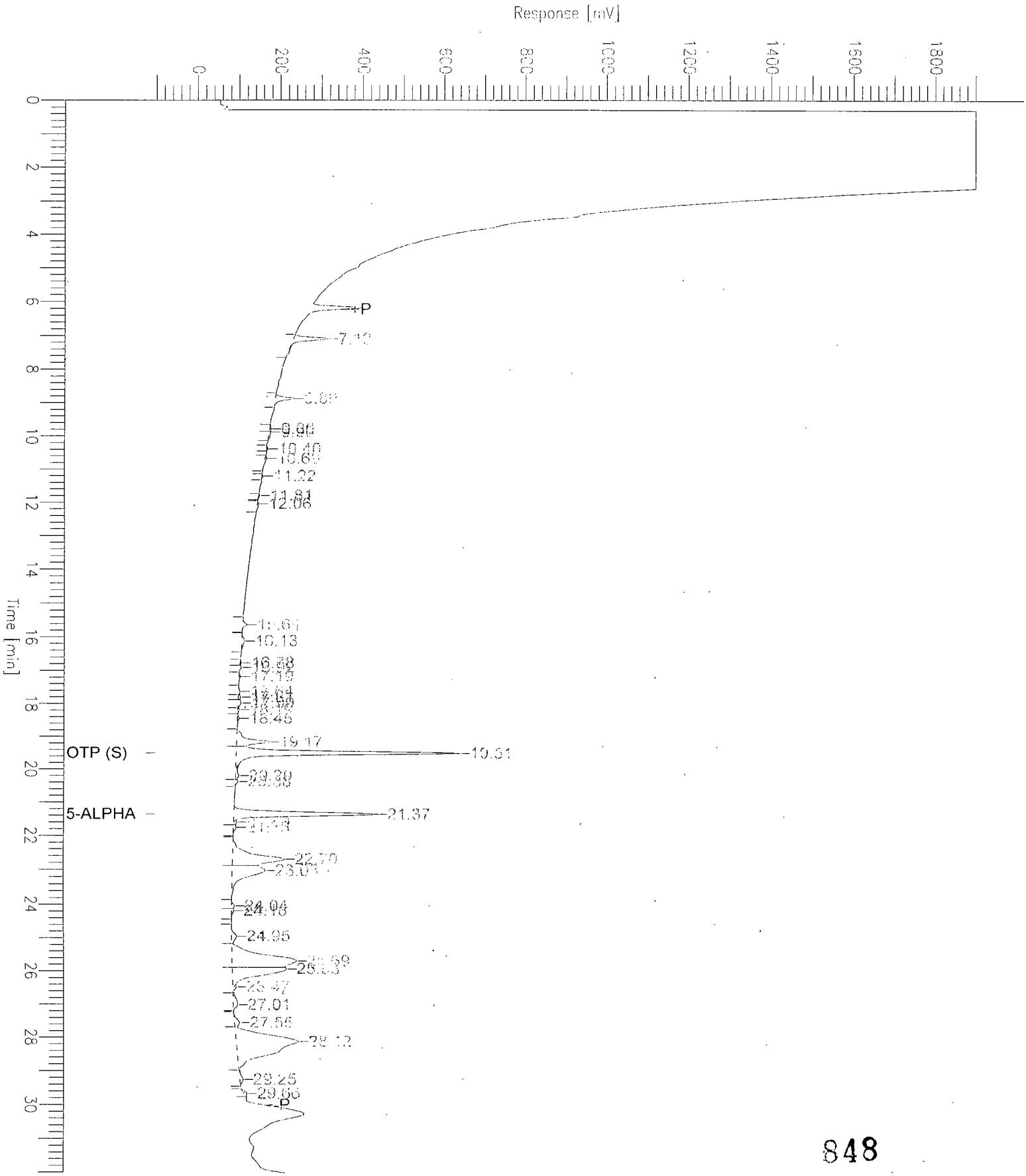
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	7.121		0.5970	0.5970	596995		84753.65	BB	1.0000e+06	
20	19.168		0.8760	0.8760	875985		78583.82	BV	1.0000e+06	
21	19.512	OTP (S)	13.5565	13.5565	4311537		548858.75	VE	3.1804e+05	
24	21.368	5-alpha Androstane	----------	10.0000	2917676		348767.62	BE	2.9177e+05	
27	22.702		2.2731	2.2731	2273126		125283.09	BV	1.0000e+06	
28	23.029		1.5315	1.5315	1531504		79517.94	VB	1.0000e+06	
32	25.686		3.7417	3.7417	3741727		155729.64	VV	1.0000e+06	
33	25.930		2.0462	2.0462	2046211		130527.89	VE	1.0000e+06	
37	28.118		5.4571	5.4571	5457103		150865.96	VV	1.0000e+06	
			30.0791	40.0791	23751863		1.70e+06		7.6098e+06	

Report stored in ASCII file: N:\TC4\DRO\B11D077.TX0

Chromatogram

Sample Name : ENC/11111 RE
FileName : N:\TC4\DRO\B11D077.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 89680B
Date : 8/27/98 10:11 AM
Time of Injection: 8/24/98 07:51 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : ENC/11111 Time : 8/27/98 10:08 AM
Sample Number: 89974L Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/21/98 12:42 AM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D050.RAW
Result File : N:\TC4\DRO\B11D050.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D050.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

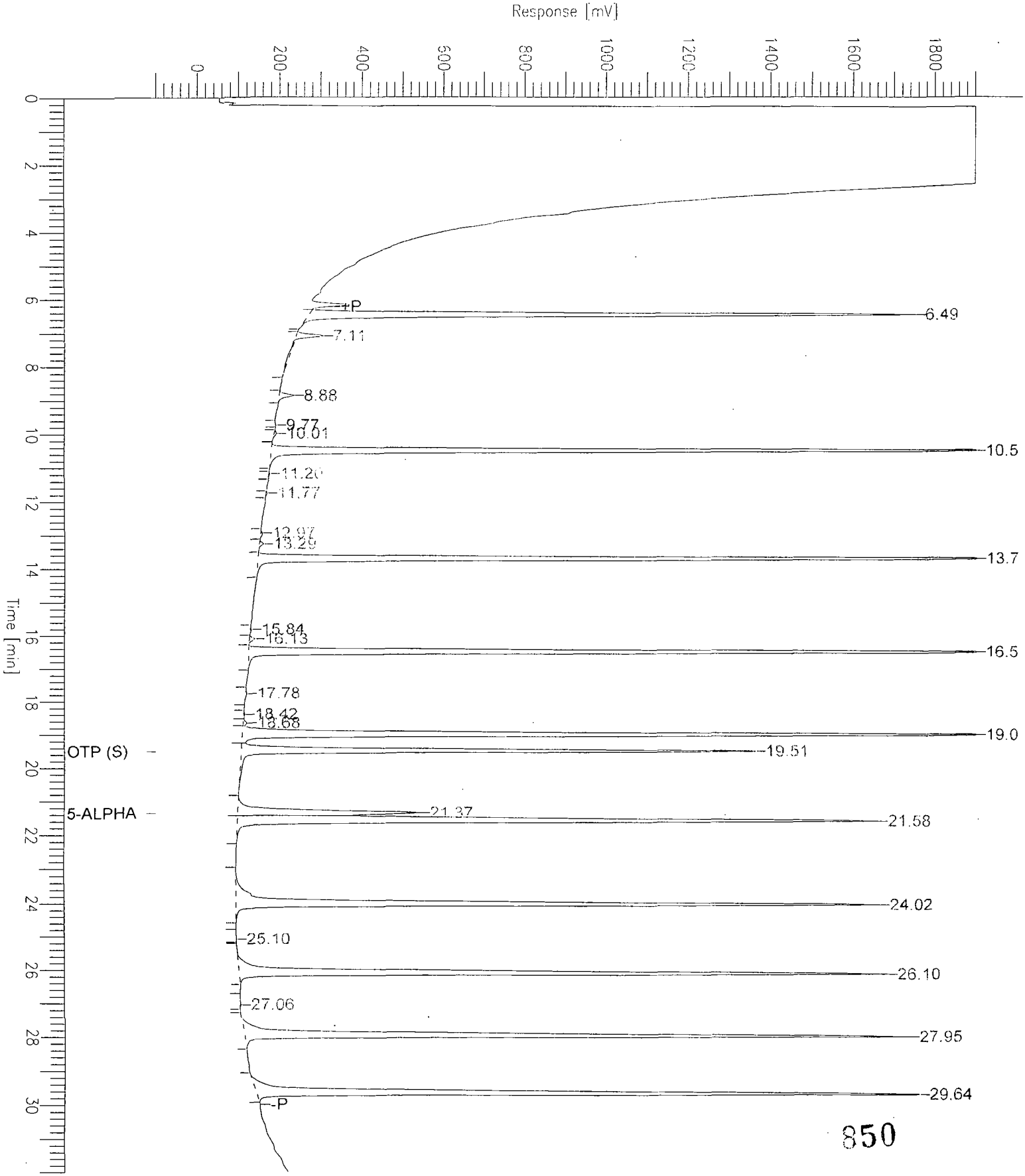
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.488		10.4376	10.4376	10437555	1.49e+06		BB	1.0000e+06	
6	10.520		12.7459	12.7459	12745930	1.93e+06		BB	1.0000e+06	
11	13.730		13.8043	13.8043	13804310	2.14e+06		BB	1.0000e+06	
14	16.517		14.6163	14.6163	14616270	2.18e+06		BB	1.0000e+06	
18	19.017		14.8241	14.8241	14824080	2.11e+06		VV	1.0000e+06	
19	19.509	OTP (S)	18.9477	18.9477	8658490	1.28e+06		VB	4.5697e+05	
20	21.366	5-alpha Androstane	----------	10.0000	4192156	443855.68		BV	4.1922e+05	
21	21.584		13.1989	13.1989	13198944	1.56e+06		VB	1.0000e+06	
22	24.020		13.0903	13.0903	13090330	1.57e+06		BB	1.0000e+06	
24	26.102		12.4605	12.4605	12460520	1.58e+06		BB	1.0000e+06	
26	27.952		12.5441	12.5441	12544130	1.62e+06		BB	1.0000e+06	
27	29.641		12.5369	12.5369	12536940	1.64e+06		BB	1.0000e+06	
			149.2067	159.2067	143109655	1.95e+07			1.0876e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D050.TX0

Chromatogram

Sample Name : ENC/11111
FileName : N:\TC4\DRO\B11D050.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 89974L
Date : 8/27/98 10:08 AM
Time of Injection: 8/21/98 12:42 AM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : ENC/11111 RR
Sample Number: 89973L
Operator :

Time : 8/11/98 07:27 AM
Study :

Instrument : 3400-7
AutoSampler :
Rack/Vial : 0/0

Channel : B A/D mV Range : 10000

Interface Serial # : 2057574544 Data Acquisition Time: 8/10/98 07:02 PM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D029.RAW
Result File : N:\TC4\DRO\B11D029.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D029.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul
Sample Amount : 1.0000

Area Reject : 475000.000000
Dilution Factor : 1.00

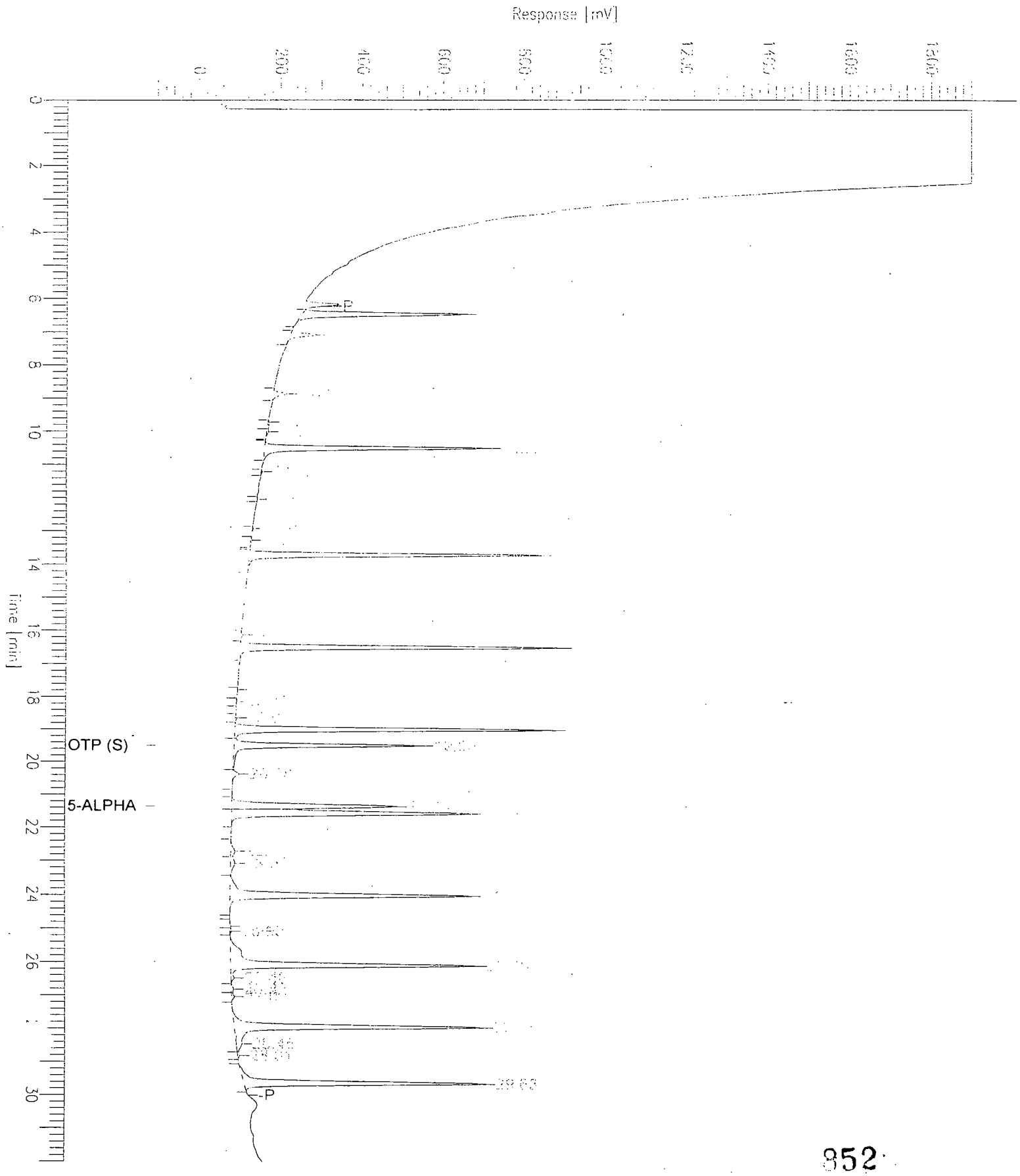
EXTERNAL STANDARD REPORT

Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	6.486		2.8278	2.8278	2827765	408785.26		BB	1.0000e+06	
6	10.517		3.7143	3.7143	3714300	557653.10		BB	1.0000e+06	
11	13.726		4.6966	4.6966	4696550	730668.18		BB	1.0000e+06	
13	16.513		5.2807	5.2807	5280745	801297.87		BB	1.0000e+06	
17	19.011		5.5150	5.5150	5514959	797627.72		BV	1.0000e+06	
18	19.503	OTP (S)	8.5772	8.5772	3261430	466891.97		VV	3.8024e+05	
20	21.357	5-alpha Androstane	----------	10.0000	3488290	408093.97		BV	3.4883e+05	
21	21.576		5.0421	5.0421	5042080	594073.11		VB	1.0000e+06	
24	24.014		4.9920	4.9920	4992042	594422.03		VB	1.0000e+06	
27	26.094		5.5790	5.5790	5578962	608465.15		BE	1.0000e+06	
31	27.946		5.0118	5.0118	5011758	613384.63		BE	1.0000e+06	
34	29.633		4.6774	4.6774	4677355	594364.44		BB	1.0000e+06	
			55.9137	65.9137	54086236	7.18e+06			1.0729e+07	

Chromatogram

Sample Name : ENC/11111 RR
FileName : N:\TC4\DRO\B11D029.raw
Method : B11DH
St Time : 0.00 min End Time : 32.00 min
Sc Factor: 0.0 Plot Offset: -100 mV

Sample #: 89973L
Date : 8/11/98 07:27 AM
Time of Injection: 8/10/98 07:02 PM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : EEI/13219 Time : 8/27/98 10:08 AM
Sample Number: 91983S Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/21/98 02:53 AM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D053.RAW
Result File : N:\TC4\DRO\B11D053.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D053.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

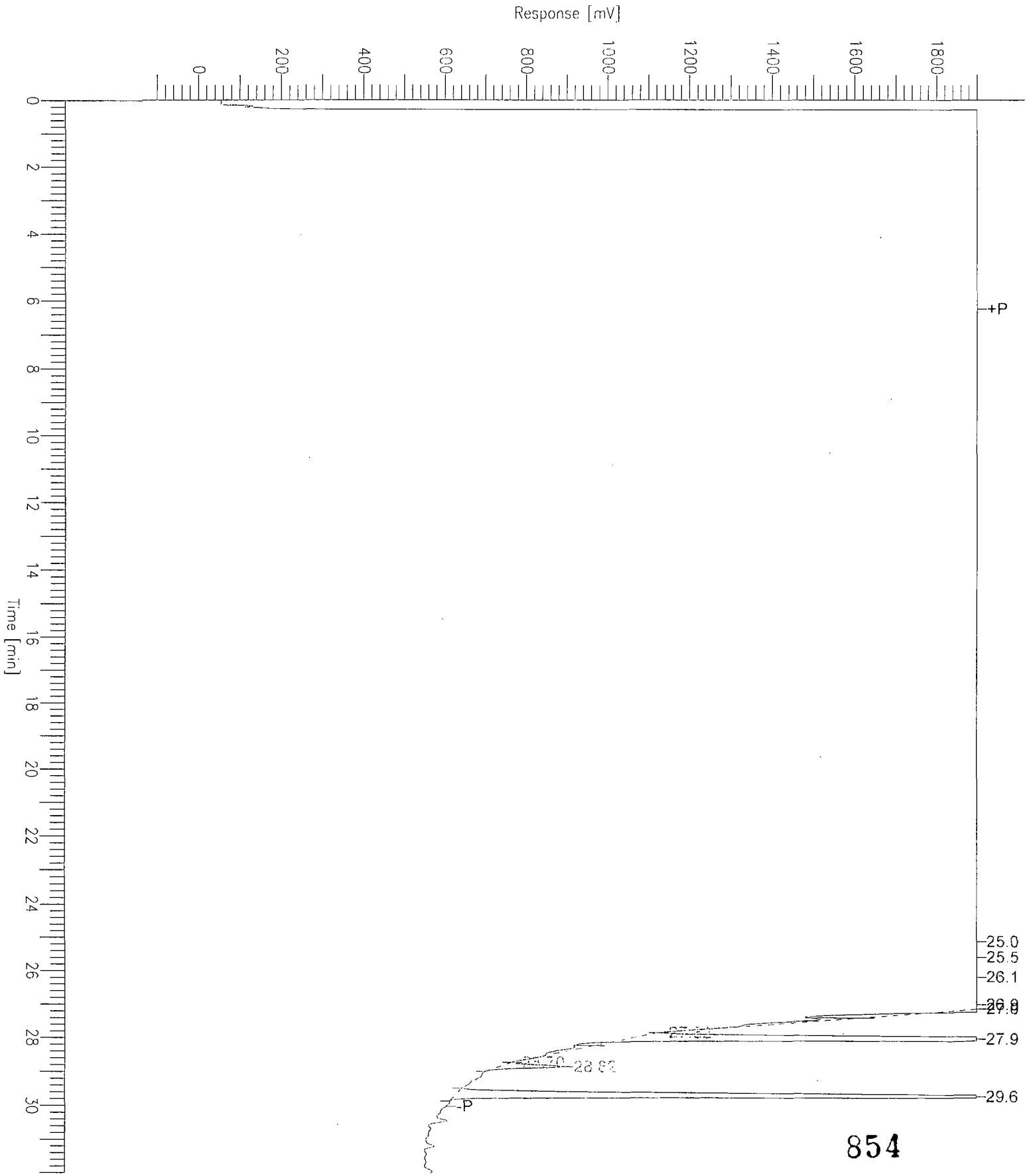
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	25.092		16.8154	16.8154	16815435	457031.50		BB	1.0000e+06	+
2	25.545		7.0612	7.0612	7061210	462450.67		BB	1.0000e+06	
3	26.142		43.0629	43.0629	43062896	5.83e+06		BV	1.0000e+06	+
4	26.950		2.5695	2.5695	2569516	2.10e-09		VB	1.0000e+06	
5	27.074		8.2363	8.2363	8236250	1.50e+06		BV	1.0000e+06	
6	27.817		1.2292	1.2292	1229230	0.00		VB	1.0000e+06	
7	27.968		16.7507	16.7507	16750711	2.61e+06		BV	1.0000e+06	
8	28.700		0.5246	0.5246	524561	-6.48e-10		VB	1.0000e+06	
9	28.818		0.9690	0.9690	968970	156358.19		BB	1.0000e+06	
10	29.647		14.9354	14.9354	14935390	2.24e+06		BB	1.0000e+06	
			112.1542	112.1542	112154170	1.33e+07			1.0000e+07	

Report stored in ASCII file: N:\TC4\DRO\B11D053.TX0

Chromatogram

Sample Name : EEI/13219
FileName : N:\TC4\DRO\B11D053.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 91983S
Date : 8/27/98 10:08 AM
Time of Injection: 8/21/98 02:53 AM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



Software Version: 4.1<2F12>
Sample Name : EEI/13219 Time : 8/27/98 10:08 AM
Sample Number: 91983D Study :
Operator :

Instrument : 3400-7 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 2057574544 Data Acquisition Time: 8/21/98 03:37 AM
Delay Time : 0.00 min.
End Time : 32.00 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : N:\TC4\DRO\B11D054.RAW
Result File : N:\TC4\DRO\B11D054.RST
Inst Method : N:\TC4\DRO\B11DH from N:\TC4\DRO\B11D054.RST
Proc Method : N:\TC4\DRO\B11DH.mth
Calib Method : N:\TC4\DRO\B11DH.mth
Sequence File : N:\TC4\DRO\B11D.SEQ

Sample Volume : 1.0000 ul Area Reject : 475000.000000
Sample Amount : 1.0000 Dilution Factor : 1.00

EXTERNAL STANDARD REPORT

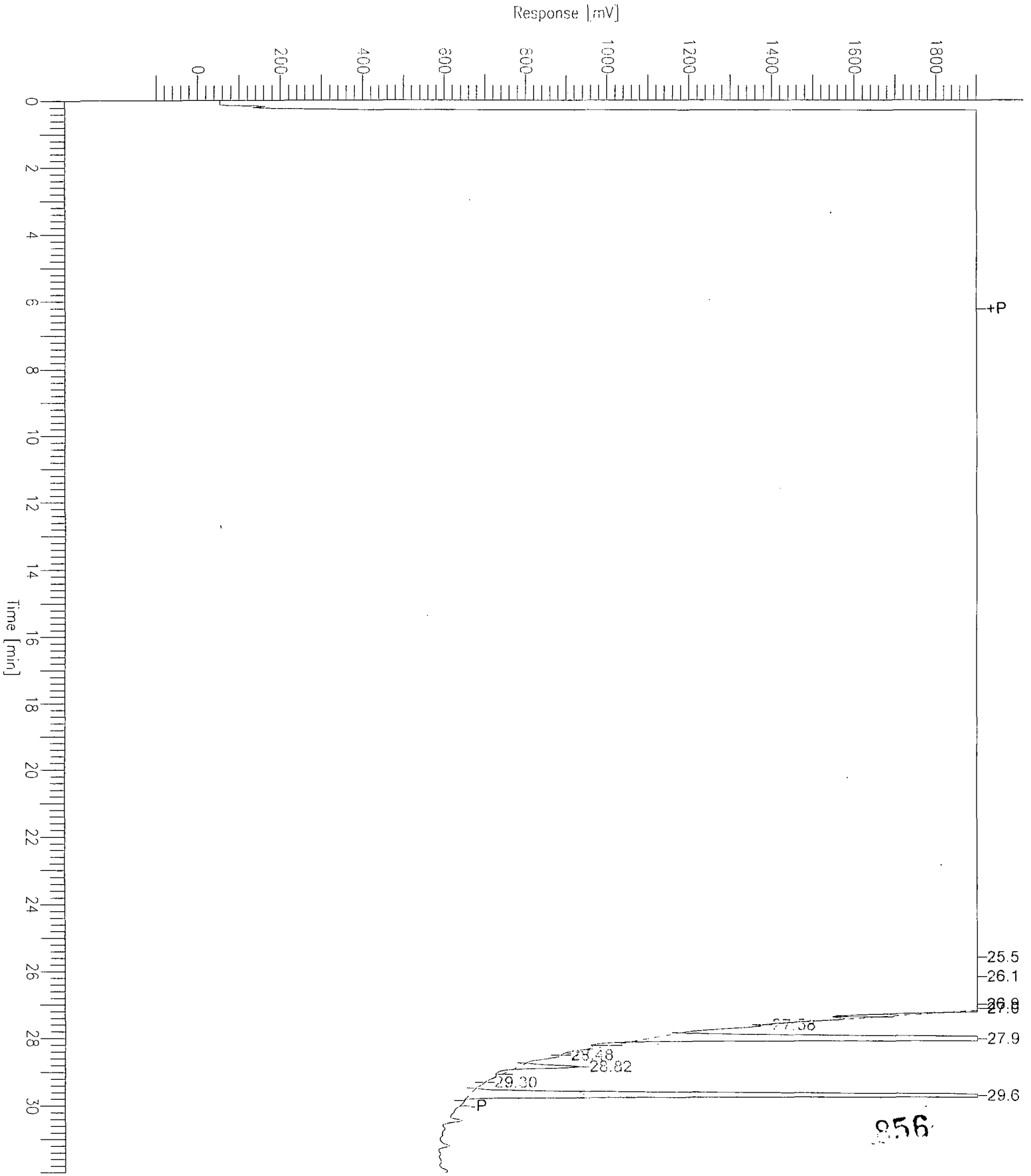
Peak #	Ret Time [min]	Component Name	Adjusted Amount in ug/ml	Raw Amount	Area [µV·s]	Cal. Range	Height [µV]	BL	Area/ Amount	Volt Range
1	25.547		3.4858	3.4858	3485780	461228.47		BB	1.0000e+06	
2	26.125		44.0453	44.0453	44045331	5.78e+06		BV	1.0000e+06	+
3	26.950		2.3671	2.3671	2367131	8.00e-10		VB	1.0000e+06	
4	27.077		9.4629	9.4629	9462862	1.58e+06		BV	1.0000e+06	
6	27.971		17.2918	17.2918	17291771	2.65e+06		BV	1.0000e+06	
8	28.823		0.7178	0.7178	717781	149174.94		BV	1.0000e+06	
10	29.652		15.4536	15.4536	15453610	2.27e+06		BB	1.0000e+06	
			92.8243	92.8243	92824267		1.29e+07		7.0000e+06	

Report stored in ASCII file: N:\TC4\DRO\B11D054.TX0

Chromatogram

Sample Name : EEI/13219
FileName : N:\TC4\DRO\B11D054.raw
Method : B11DH
Start Time : 0.00 min End Time : 32.00 min
Scale Factor: 0.0 Plot Offset: -100 mV

Sample #: 91983D
Date : 8/27/98 10:08 AM
Time of Injection: 8/21/98 03:37 AM
Low Point : -100.00 mV High Point : 1900.00 mV
Plot Scale: 2000.0 mV



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SEMIVOLATILES

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DATA PACKET
Semivolatiles

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-1

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	08/18/98	**ENCOTEC QC Set ID:**	BNAH1811S
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091983
Method Reference:	8270	**Percent Total Solids:**	N/A
Matrix:	LIQUID, NON-AQUEOUS	**Calculation Basis:**	Wet Weight

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	100000	20	530000	
2	Acenaphthylene	208-96-8	100000	20	U	
3	Aniline	62-53-3	400000	20	U	
4	Anthracene	120-12-7	100000	20	300000	
5	Benzidine	92-87-5	1000000	20	U	
6	Benzo(a)anthracene	56-55-3	100000	20	U	
7	Benzo(a)pyrene	50-32-8	100000	20	U	
8	Benzo(b)fluoranthene	205-99-2	100000	20	U	
9	Benzo(g,h,i)perylene	191-24-2	100000	20	U	
10	Benzo(k)fluoranthene	207-08-9	100000	20	U	
11	4-Bromophenyl phenyl ether	101-55-3	100000	20	U	
12	Butyl benzyl phthalate	85-68-7	100000	20	U	
13	4-Chloro-3-methylphenol	59-50-7	100000	20	U	
14	4-Chloroaniline	106-47-8	400000	20	U	
15	bis(2-Chloroethoxy)methane	111-91-1	100000	20	U	
16	bis(2-Chloroethyl) ether	111-44-4	100000	20	U	
17	bis(2-Chloroisopropyl) ether	108-60-1	100000	20	U	
18	2-Chloronaphthalene	91-58-7	100000	20	U	
19	2-Chlorophenol	95-57-8	100000	20	U	
20	4-Chlorophenyl phenyl ether	7005-72-3	100000	20	U	
21	Chrysene	218-01-9	100000	20	U	
22	Di-n-butyl phthalate	84-74-2	100000	20	U	
23	Di-n-octyl phthalate	117-84-0	100000	20	U	
24	Dibenz(a,h)anthracene	53-70-3	100000	20	U	
25	Dibenzofuran	132-64-9	100000	20	290000	
26	3,3'-Dichlorobenzidine	91-94-1	400000	20	U	
27	2,4-Dichlorophenol	120-83-2	100000	20	U	
28	Diethyl phthalate	84-66-2	100000	20	U	
29	Dimethyl phthalate	131-11-3	100000	20	U	
30	2,4-Dimethylphenol	105-67-9	100000	20	U	
31	4,6-Dinitro-2-methylphenol	534-52-1	400000	20	U	
32	2,4-Dinitrophenol	51-28-5	400000	20	U	
33	2,6-Dinitrotoluene	606-20-2	100000	20	U	
34	2,4-Dinitrotoluene	121-14-2	100000	20	U	
35	bis(2-Ethylhexyl) phthalate	117-81-7	100000	20	U	

Safety-Kleen (ENCOTEC), Inc.
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Report Date: 08/24/98

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-1

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	08/18/98	**ENCOTEC QC Set ID:**	BNAH1811S
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091983
Method Reference:	8270	**Percent Total Solids:**	N/A
Matrix:	LIQUID, NON-AQUEOUS	**Calculation Basis:**	Wet Weight

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
36	Fluoranthene	206-44-0	100000	20	U	
37	Fluorene	86-73-7	100000	20	640000	
38	Hexachlorobenzene	118-74-1	100000	20	U	
39	Hexachlorobutadiene	87-68-3	100000	20	U	
40	Hexachlorocyclopentadiene	77-47-4	100000	20	U	
41	Hexachloroethane	67-72-1	100000	20	U	
42	Indeno(1,2,3-c,d)pyrene	193-39-5	100000	20	U	
43	Isophorone	78-59-1	100000	20	U	
44	N-Nitroso-di-n-propylamine	621-64-7	100000	20	U	
45	N-Nitrosodiphenylamine	86-30-6	100000	20	1000000	
46	Naphthalene	91-20-3	100000	20	1900000	
47	4-Nitroaniline	100-01-6	400000	20	U	
48	3-Nitroaniline	99-09-2	400000	20	U	
49	2-Nitroaniline	88-74-4	400000	20	U	
50	Nitrobenzene	98-95-3	100000	20	U	
51	4-Nitrophenol	100-02-7	400000	20	U	
52	2-Nitrophenol	88-75-5	100000	20	U	
53	Octachlorocyclopentene	706-78-5	100000	20	U	
54	Pentachlorophenol	87-86-5	400000	20	U	
55	Phenanthrene	85-01-8	100000	20	1500000	
56	Phenol	108-95-2	100000	20	U	
57	Pyrene	129-00-0	100000	20	150000	
58	1,2,4-Trichlorobenzene	120-82-1	100000	20	U	
59	2,4,6-Trichlorophenol	88-06-2	100000	20	U	

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Report Date: 08/24/98

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-2

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	08/15/98	**ENCOTEC QC Set ID:**	BNAH1905W
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091984
Method Reference:	8270	**Percent Total Solids:**	N/A
Matrix:	LIQUID, AQUEOUS	**Calculation Basis:**	N/A

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/L)	Dil	Conc (ug/L)	Flag
1	Acenaphthene	83-32-9	500	10	U	
2	Acenaphthylene	208-96-8	500	10	U	
3	Aniline	62-53-3	2000	10	U	
4	Anthracene	120-12-7	500	10	U	
5	Benzidine	92-87-5	5000	10	U	
6	Benzo(a)anthracene	56-55-3	500	10	U	
7	Benzo(a)pyrene	50-32-8	500	10	U	
8	Benzo(b)fluoranthene	205-99-2	500	10	U	
9	Benzo(g,h,i)perylene	191-24-2	500	10	U	
10	Benzo(k)fluoranthene	207-08-9	500	10	U	
11	4-Bromophenyl phenyl ether	101-55-3	500	10	U	
12	Butyl benzyl phthalate	85-68-7	500	10	U	
13	4-Chloro-3-methylphenol	59-50-7	500	10	U	
14	4-Chloroaniline	106-47-8	2000	10	U	
15	bis(2-Chloroethoxy)methane	111-91-1	500	10	U	
16	bis(2-Chloroethyl) ether	111-44-4	500	10	U	
17	bis(2-Chloroisopropyl) ether	108-60-1	500	10	U	
18	2-Chloronaphthalene	91-58-7	500	10	U	
19	2-Chlorophenol	95-57-8	500	10	U	
20	4-Chlorophenyl phenyl ether	7005-72-3	500	10	U	
21	Chrysene	218-01-9	500	10	U	
22	Di-n-butyl phthalate	84-74-2	500	10	U	
23	Di-n-octyl phthalate	117-84-0	500	10	U	
24	Dibenz(a,h)anthracene	53-70-3	500	10	U	
25	Dibenzofuran	132-64-9	500	10	U	
26	3,3'-Dichlorobenzidine	91-94-1	2000	10	U	
27	2,4-Dichlorophenol	120-83-2	500	10	U	
28	Diethyl phthalate	84-66-2	500	10	U	
29	Dimethyl phthalate	131-11-3	500	10	U	
30	2,4-Dimethylphenol	105-67-9	500	10	U	
31	4,6-Dinitro-2-methylphenol	534-52-1	2000	10	U	
32	2,4-Dinitrophenol	51-28-5	2000	10	U	
33	2,6-Dinitrotoluene	606-20-2	500	10	U	
34	2,4-Dinitrotoluene	121-14-2	500	10	U	
35	bis(2-Ethylhexyl) phthalate	117-81-7	500	10	3600	

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Report Date: 08/24/98

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.
Project/Site: KJ5103
Sample ID: DLT-2

Date Sampled:	08/12/98	**ENCOTEC Project ID:**	71060
Date Received:	08/13/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Date Extracted:	08/15/98	**ENCOTEC QC Set ID:**	BNAH1905W
Analysis Date:	08/21/98	**ENCOTEC Submission ID:**	100013219
Second Analysis Date:	N/A	**ENCOTEC Sample ID:**	200091984
Method Reference:	8270	**Percent Total Solids:**	N/A
Matrix:	LIQUID, AQUEOUS	**Calculation Basis:**	N/A

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/L)	Dil	Conc (ug/L)	Flag
36	Fluoranthene	206-44-0	500	10	U	
37	Fluorene	86-73-7	500	10	U	
38	Hexachlorobenzene	118-74-1	500	10	U	
39	Hexachlorobutadiene	87-68-3	500	10	U	
40	Hexachlorocyclopentadiene	77-47-4	500	10	U	
41	Hexachloroethane	67-72-1	500	10	U	
42	Indeno(1,2,3-c,d)pyrene	193-39-5	500	10	U	
43	Isophorone	78-59-1	500	10	U	
44	N-Nitroso-di-n-propylamine	621-64-7	500	10	U	
45	N-Nitrosodiphenylamine	86-30-6	500	10	U	
46	Naphthalene	91-20-3	500	10	8300	
47	4-Nitroaniline	100-01-6	2000	10	U	
48	3-Nitroaniline	99-09-2	2000	10	U	
49	2-Nitroaniline	88-74-4	2000	10	U	
50	Nitrobenzene	98-95-3	500	10	U	
51	4-Nitrophenol	100-02-7	2000	10	U	
52	2-Nitrophenol	88-75-5	500	10	U	
53	Octachlorocyclopentene	706-78-5	500	10	U	
54	Pentachlorophenol	87-86-5	2000	10	U	
55	Phenanthrene	85-01-8	500	10	U	
56	Phenol	108-95-2	500	10	U	
57	Pyrene	129-00-0	500	10	U	
58	1,2,4-Trichlorobenzene	120-82-1	500	10	U	
59	2,4,6-Trichlorophenol	88-06-2	500	10	U	

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Report Date: 08/24/98

QUALITY ASSESSMENT REPORT - METHOD BLANK Analysis

Extraction Date:	08/18/98	**ENCOTEC Project ID:**	71060
Analysis Date:	08/18/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Second Analysis Date:	N/A	**ENCOTEC QC Set ID:**	BNAH1811S
Method Reference:	8270	**ENCOTEC Submission ID:**	100013219
Matrix:	LIQUID, NON-AQUEOUS	**ENCOTEC Method Blank ID:**	200089720

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	330	1.0	U	
2	Acenaphthylene	208-96-8	330	1.0	U	
3	Aniline	62-53-3	1700	1.0	U	
4	Anthracene	120-12-7	330	1.0	U	
5	Benzidine	92-87-5	5000	1.0	U	
6	Benzo(a)anthracene	56-55-3	330	1.0	U	
7	Benzo(a)pyrene	50-32-8	330	1.0	U	
8	Benzo(b)fluoranthene	205-99-2	330	1.0	U	
9	Benzo(g,h,i)perylene	191-24-2	330	1.0	U	
10	Benzo(k)fluoranthene	207-08-9	330	1.0	U	
11	4-Bromophenyl phenyl ether	101-55-3	330	1.0	U	
12	Butyl benzyl phthalate	85-68-7	330	1.0	U	
13	4-Chloro-3-methylphenol	59-50-7	330	1.0	U	
14	4-Chloroaniline	106-47-8	1300	1.0	U	
15	bis(2-Chloroethoxy)methane	111-91-1	330	1.0	U	
16	bis(2-Chloroethyl) ether	111-44-4	330	1.0	U	
17	bis(2-Chloroisopropyl) ether	108-60-1	330	1.0	U	
18	2-Chloronaphthalene	91-58-7	330	1.0	U	
19	2-Chlorophenol	95-57-8	330	1.0	U	
20	4-Chlorophenyl phenyl ether	7005-72-3	330	1.0	U	
21	Chrysene	218-01-9	330	1.0	U	
22	Di-n-butyl phthalate	84-74-2	330	1.0	U	
23	Di-n-octyl phthalate	117-84-0	330	1.0	U	
24	Dibenz(a,h)anthracene	53-70-3	330	1.0	U	
25	Dibenzofuran	132-64-9	330	1.0	U	
26	3,3'-Dichlorobenzidine	91-94-1	2000	1.0	U	
27	2,4-Dichlorophenol	120-83-2	330	1.0	U	
28	Diethyl phthalate	84-66-2	330	1.0	U	
29	Dimethyl phthalate	131-11-3	330	1.0	U	
30	2,4-Dimethylphenol	105-67-9	330	1.0	U	
31	4,6-Dinitro-2-methylphenol	534-52-1	1700	1.0	U	
32	2,4-Dinitrophenol	51-28-5	1700	1.0	U	
33	2,6-Dinitrotoluene	606-20-2	330	1.0	U	
34	2,4-Dinitrotoluene	121-14-2	330	1.0	U	
35	bis(2-Ethylhexyl) phthalate	117-81-7	330	1.0	U	
36	Fluoranthene	206-44-0	330	1.0	U	
37	Fluorene	86-73-7	330	1.0	U	
38	Hexachlorobenzene	118-74-1	330	1.0	U	
39	Hexachlorobutadiene	87-68-3	330	1.0	U	
40	Hexachlorocyclopentadiene	77-47-4	330	1.0	U	
41	Hexachloroethane	67-72-1	330	1.0	U	
42	Indeno(1,2,3-c,d)pyrene	193-39-5	330	1.0	U	

Safety-Kleen (ENCOTEC), Inc.
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Telephone: (734) 761-1389 - Telefax: (734) 761-1034

Report Date: 08/21/98

QUALITY ASSESSMENT REPORT - METHOD BLANK Analysis

Extraction Date:	08/18/98	**ENCOTEC Project ID:**	71060
Analysis Date:	08/18/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Second Analysis Date:	N/A	**ENCOTEC QC Set ID:**	BNAH1811S
Method Reference:	8270	**ENCOTEC Submission ID:**	100013219
Matrix:	LIQUID, NON-AQUEOUS	**ENCOTEC Method Blank ID:**	200089720

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
43	Isophorone	78-59-1	330	1.0	U	
44	N-Nitroso-di-n-propylamine	621-64-7	330	1.0	U	
45	N-Nitrosodiphenylamine	86-30-6	330	1.0	U	
46	Naphthalene	91-20-3	330	1.0	U	
47	4-Nitroaniline	100-01-6	1700	1.0	U	
48	3-Nitroaniline	99-09-2	1700	1.0	U	
49	2-Nitroaniline	88-74-4	1700	1.0	U	
50	Nitrobenzene	98-95-3	330	1.0	U	
51	4-Nitrophenol	100-02-7	1700	1.0	U	
52	2-Nitrophenol	88-75-5	330	1.0	U	
53	Octachlorocyclopentene	706-78-5	330	1.0	U	
54	Pentachlorophenol	87-86-5	3400	1.0	U	
55	Phenanthrene	85-01-8	330	1.0	U	
56	Phenol	108-95-2	330	1.0	U	
57	Pyrene	129-00-0	330	1.0	U	
58	1,2,4-Trichlorobenzene	120-82-1	330	1.0	U	
59	2,4,6-Trichlorophenol	88-06-2	330	1.0	U	

QUALITY ASSESSMENT REPORT - METHOD BLANK Analysis

Extraction Date:	08/19/98	**ENCOTEC Project ID:**	71060
Analysis Date:	08/20/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Second Analysis Date:	N/A	**ENCOTEC QC Set ID:**	BNAH1905W
Method Reference:	8270	**ENCOTEC Submission ID:**	100013219
Matrix:	LIQUID, AQUEOUS	**ENCOTEC Method Blank ID:**	200089725

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/L)	Dil	Conc (ug/L)	Flag
1	Acenaphthene	83-32-9	5.0	1.0	U	
2	Acenaphthylene	208-96-8	5.0	1.0	U	
3	Aniline	62-53-3	20	1.0	U	
4	Anthracene	120-12-7	5.0	1.0	U	
5	Benzidine	92-87-5	50	1.0	U	
6	Benzo(a)anthracene	56-55-3	5.0	1.0	U	
7	Benzo(a)pyrene	50-32-8	5.0	1.0	U	
8	Benzo(b)fluoranthene	205-99-2	5.0	1.0	U	
9	Benzo(g,h,i)perylene	191-24-2	5.0	1.0	U	
10	Benzo(k)fluoranthene	207-08-9	5.0	1.0	U	
11	4-Bromophenyl phenyl ether	101-55-3	5.0	1.0	U	
12	Butyl benzyl phthalate	85-68-7	5.0	1.0	U	
13	4-Chloro-3-methylphenol	59-50-7	5.0	1.0	U	
14	4-Chloroaniline	106-47-8	20	1.0	U	
15	bis(2-Chloroethoxy)methane	111-91-1	5.0	1.0	U	
16	bis(2-Chloroethyl) ether	111-44-4	5.0	1.0	U	
17	bis(2-Chloroisopropyl) ether	108-60-1	5.0	1.0	U	
18	2-Chloronaphthalene	91-58-7	5.0	1.0	U	
19	2-Chlorophenol	95-57-8	5.0	1.0	U	
20	4-Chlorophenyl phenyl ether	7005-72-3	5.0	1.0	U	
21	Chrysene	218-01-9	5.0	1.0	U	
22	Di-n-butyl phthalate	84-74-2	5.0	1.0	7.0	
23	Di-n-octyl phthalate	117-84-0	5.0	1.0	U	
24	Dibenz(a,h)anthracene	53-70-3	5.0	1.0	U	
25	Dibenzofuran	132-64-9	5.0	1.0	U	
26	3,3'-Dichlorobenzidine	91-94-1	20	1.0	U	
27	2,4-Dichlorophenol	120-83-2	5.0	1.0	U	
28	Diethyl phthalate	84-66-2	5.0	1.0	U	
29	Dimethyl phthalate	131-11-3	5.0	1.0	U	
30	2,4-Dimethylphenol	105-67-9	5.0	1.0	U	
31	4,6-Dinitro-2-methylphenol	534-52-1	20	1.0	U	
32	2,4-Dinitrophenol	51-28-5	20	1.0	U	
33	2,6-Dinitrotoluene	606-20-2	5.0	1.0	U	
34	2,4-Dinitrotoluene	121-14-2	5.0	1.0	U	
35	bis(2-Ethylhexyl) phthalate	117-81-7	5.0	1.0	U	
36	Fluoranthene	206-44-0	5.0	1.0	U	
37	Fluorene	86-73-7	5.0	1.0	U	
38	Hexachlorobenzene	118-74-1	5.0	1.0	U	
39	Hexachlorobutadiene	87-68-3	5.0	1.0	U	
40	Hexachlorocyclopentadiene	77-47-4	5.0	1.0	U	
41	Hexachloroethane	67-72-1	5.0	1.0	U	
42	Indeno(1,2,3-c,d)pyrene	193-39-5	5.0	1.0	U	

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive ■ Ann Arbor, MI 48108
Telephone: (734) 761-1389 - Telefax: (734) 761-1034

Report Date: 08/26/98

QUALITY ASSESSMENT REPORT - METHOD BLANK Analysis

Extraction Date:	08/19/98	**ENCOTEC Project ID:**	71060
Analysis Date:	08/20/98	**ENCOTEC SDG ID:**	EE-WC-98H2
Second Analysis Date:	N/A	**ENCOTEC QC Set ID:**	BNAH1905W
Method Reference:	8270	**ENCOTEC Submission ID:**	100013219
Matrix:	LIQUID, AQUEOUS	**ENCOTEC Method Blank ID:**	200089725

	SEMIVOLATILE ORGANICS MDEQ Part 201 List	CAS #	Quant Limit (ug/L)	Dil	Conc (ug/L)	Flag
43	Isophorone	78-59-1	5.0	1.0	U	
44	N-Nitroso-di-n-propylamine	621-64-7	5.0	1.0	U	
45	N-Nitrosodiphenylamine	86-30-6	5.0	1.0	U	
46	Naphthalene	91-20-3	5.0	1.0	U	
47	4-Nitroaniline	100-01-6	20	1.0	U	
48	3-Nitroaniline	99-09-2	20	1.0	U	
49	2-Nitroaniline	88-74-4	20	1.0	U	
50	Nitrobenzene	98-95-3	5.0	1.0	U	
51	4-Nitrophenol	100-02-7	20	1.0	U	
52	2-Nitrophenol	88-75-5	5.0	1.0	U	
53	Octachlorocyclopentene	706-78-5	5.0	1.0	U	
54	Pentachlorophenol	87-86-5	20	1.0	U	
55	Phenanthrene	85-01-8	5.0	1.0	U	
56	Phenol	108-95-2	5.0	1.0	U	
57	Pyrene	129-00-0	5.0	1.0	U	
58	1,2,4-Trichlorobenzene	120-82-1	5.0	1.0	U	
59	2,4,6-Trichlorophenol	88-06-2	5.0	1.0	U	

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Report Date: 08/26/98

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

WATER MATRIX SURROGATE RECOVERY
SEMIVOLATILE ORGANICS

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: 625 ___ 8270 X
Report Date: August 26, 1998
QC Set I.D.: BNAH1811S

ENCOTEC Sample ID	BASE-NEUTRAL EXTRACTABLE ANALYTES % Recovery Nitro-benzene-d_5 (23 - 120)	% Recovery 2-Fluorobi-phenyl (30 - 115)	% Recovery Ter-phenyl-d_{14} (18 - 140)	ACID EXTRACTABLE ANALYTES % Recovery Phenol -d_5 (15 - 115)	% Recovery 2-Fluoro-phenol (15 - 121)	% Recovery 2,4,6-Tribromo-phenol (15 - 130)
200091983	DL	DL	DL	DL	DL	DL
200089720 MB	85	88	93	95	96	89
200089895 LCS	97	95	101	92	101	110

* Value outside of quality control windows.
DL = Sample extract diluted, therefore surrogate recoveries not applicable.
M = Matrix interferences caused distortion to recovery value.

RECOVERY: 0 out of 12 outside QC Windows

Note:

Form 090SWN2G.GN1 Rev. 08/10/98

1380

Safety-Kleen (ENCOTEC), Inc.
3985 Research Park Drive * Ann Arbor, MI 48108
734 / 761-1389

WATER MATRIX SURROGATE RECOVERY
SEMIVOLATILE ORGANICS

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Method: 625 ___ 8270 X
Report Date: August 26, 1998
QC Set I.D.: BNAH1905W

ENCOTEC Sample ID	BASE-NEUTRAL EXTRACTABLE ANALYTES % Recovery Nitro-benzene-d_5 (23 - 120)	% Recovery 2-Fluorobi-phenyl (30 - 115)	% Recovery Ter-phenyl-d_{14} (18 - 140)	ACID EXTRACTABLE ANALYTES % Recovery Phenol -d_5 (15 - 115)	% Recovery 2-Fluoro-phenol (15 - 121)	% Recovery 2,4,6-Tribromo-phenol (15 - 130)
200091984	DL	DL	DL	DL	DL	DL
200089725 MB	85	76	88	39	59	91
200089896 LCS	88	80	88	38	57	108
200092204 MS	84	84	89	55	73	98
200092204 MSD	91	84	88	55	66	99

* Value outside of quality control windows.
DL = Sample extract diluted, therefore surrogate recoveries not applicable.
M = Matrix interferences caused distortion to recovery value.

RECOVERY: 0 out of 24 outside QC Windows

Note:

Form 090SWN2G.GN1 Rev. 08/10/98

Laidlaw Environmental, Inc. / ENCOTEC
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313 / 761-1389

LABORATORY CONTROL SAMPLE (LCS)
SEMIVOLATILE ORGANICS - SOIL MATRIX

Project Name: ENCOTEC
Project Number: 10000
QC Set ID: BNAH1811S

ENCOTEC ID: 200089895

Compound	Conc. pike (mg/kg)	Conc. LCS (mg/kg)	Percent Recovery (%)	uality Contro Windows Recovery (%)
2-Chlorophenol	3.30	3.03	92	57-112
bis(2-Chloroethyl)ether	3.30	3.13	95	61-123
Phenol	3.30	2.58	78	58-120
1,3-Dichlorobenzene	3.30	3.13	95	68-114
1,4-Dichlorobenzene	3.30	3.21	97	67-119
1,2-Dichlorobenzene	3.30	3.45	105	71-116
bis(2-Chloroisopropyl)ether	3.30	3.13	95	52-151
Hexachloroethane	3.30	3.32	101	69-126
n-Nitroso-di-n-propylamine	3.30	3.61	109	79-114
Nitrobenzene	3.30	3.34	101	46-137
Isophorone	3.30	3.43	104	61-126
2-Nitrophenol	3.30	3.21	97	62-113
2,4-Dimethylphenol	3.30	3.49	106	54-121
bis(2-Chloroethoxy)methane	3.30	3.45	105	74-127
2,4-Dichlorophenol	3.30	3.18	96	61-116
1,2,4-Trichlorobenzene	3.30	3.34	101	74-120
Naphthalene	3.30	3.37	102	75-119
Hexachlorobutadiene	3.30	3.57	108	58-162
4-Chloro-3-methylphenol	3.30	3.13	95	80-117
2,4,6-Trichlorophenol	3.30	3.09	94	62-116
2-Chloronaphthalene	3.30	3.13	95	70-124
Acenaphthylene	3.30	3.33	101	69-118
2,6-Dinitrotoluene	3.30	3.48	105	30-167
Acenaphthene	3.30	3.66	111	68-131
2,4-Dinitrophenol	3.30	1.47	45	D-113
2,4-Dinitrotoluene	3.30	3.35	102	78-121
4-Nitrophenol	3.30	2.49	75	56-109
Fluorene	3.30	3.61	109	74-132
4-Chlorophenyl phenyl ether	3.30	3.52	107	74-128
Diethylphthalate	3.30	3.39	103	72-128
4,6-Dinitro-2-methylphenol	3.30	1.76	53	2-175
n-Nitrosodiphenylamine	3.30	3.55	108	30-171
4-Bromophenyl phenyl ether	3.30	3.56	108	68-131
Hexachlorobenzene	3.30	3.40	103	68-128
Pentachlorophenol	3.30	1.82	55	18-100
Phenanthrene	3.30	3.44	104	74-126
Anthracene	3.30	3.50	106	75-132
Di-n-butyl phthalate	3.30	3.29	100	77-126
Fluoranthene	3.30	3.41	103	69-141
Pyrene	3.30	3.33	101	65-145
Butyl benzyl phthalate	3.30	3.28	99	71-143
Benzo(a)anthracene	3.30	3.49	106	69-139
Chrysene	3.30	4.21	128	48-182
3-3'-Dichlorobenzidine	3.30	2.87	87	D-292
bis(2-Ethylhexyl)phthalate	3.30	3.53	107	38-188
Di-n-octyl phthalate	3.30	3.79	115	21-173
Benzo(b)fluoranthene	3.30	3.73	113	50-135
Benzo(k)fluoranthene	3.30	3.26	99	62-141
Benzo(a)pyrene	3.30	3.50	106	70-134
Indeno(1,2,3-cd)pyrene	3.30	3.02	92	35-169
Dibenz(a,h)anthracene	3.30	3.89	118	41-171
Benzo(ghi)perylene	3.30	2.98	90	2-192

Recovery: 0 out of 52 outside QC windows

Note:
SAVED AS: C:\HPCHEM\1\DATA\QC\BLH1011S.XLS

Form 090SSM4G.XL2 Rev.10/01/96

Laidlaw Environmental, Inc. / ENCOTEC
3985 Research Park Drive * Ann Arbor, MI 48108
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LABORATORY CONTROL SAMPLE (LCS)
SEMIVOLATILE ORGANICS - WATER MATRIX

Project Name: ENCOTEC
Project Number: 10000
QC Set ID: BNAH1905W

ENCOTEC ID: 200089896

Compound	Conc. Spiked (mg/L)	Conc LCS (mg/L)	Percen Recovery (%)	Quality Control Windows Recovery (%)
2-Chlorophenol	0.100	0.0862	86	12-143
bis(2-Chloroethyl)ether	0.100	0.0774	77	42-120
Phenol	0.100	0.0362	36	D-127
1,3-Dichlorobenzene	0.100	0.0722	72	10-119
1,4-Dichlorobenzene	0.100	0.0780	78	11-122
1,2-Dichlorobenzene	0.100	0.0790	79	14-123
bis(2-Chloroisopropyl)ether	0.100	0.0820	82	18-149
Hexachloroethane	0.100	0.0773	77	6-122
n-Nitroso-di-n-propylamine	0.100	0.0949	95	44-130
Nitrobenzene	0.100	0.0903	90	39-130
Isophorone	0.100	0.0919	92	48-129
2-Nitrophenol	0.100	0.0912	91	11-145
2,4-Dimethylphenol	0.100	0.0764	76	12-125
bis(2-Chloroethoxy)methane	0.100	0.0943	94	43-135
2,4-Dichlorophenol	0.100	0.0921	92	12-149
1,2,4-Trichlorobenzene	0.100	0.0796	80	10-128
Naphthalene	0.100	0.0857	86	18-132
Hexachlorobutadiene	0.100	0.0839	84	4-141
4-Chloro-3-methylphenol	0.100	0.0890	89	28-141
2,4,6-Trichlorophenol	0.100	0.0916	92	D-158
2-Chloronaphthalene	0.100	0.0828	83	16-137
Acenaphthylene	0.100	0.0845	84	27-133
2,6-Dinitrotoluene	0.100	0.0961	96	47-135
Acenaphthene	0.100	0.0927	93	28-138
2,4-Dinitrophenol	0.100	0.0510	51	D-142
2,4-Dinitrotoluene	0.100	0.0827	83	51-131
4-Nitrophenol	0.100	0.0260	26	D-130
Fluorene	0.100	0.0913	91	42-132
4-Chlorophenyl phenyl ether	0.100	0.0915	91	39-129
Diethylphthalate	0.100	0.0441	44	D-145
4,6-Dinitro-2-methylphenol	0.100	0.0812	81	D-190
n-Nitrosodiphenylamine	0.100	0.0890	89	35-146
4-Bromophenyl phenyl ether	0.100	0.0998	100	37-133
Hexachlorobenzene	0.100	0.0964	96	40-138
Pentachlorophenol	0.100	0.0844	84	D-167
Phenanthrene	0.100	0.0935	94	37-141
Anthracene	0.100	0.0890	89	48-129
Di-n-butyl phthalate	0.100	0.0759	76	19-136
Fluoranthene	0.100	0.0871	87	47-130
Pyrene	0.100	0.0893	89	14-174
Butyl benzyl phthalate	0.100	0.0674	67	D-157
Benzo(a) anthracene	0.100	0.0969	97	32-151
Chrysene	0.100	0.112	112	43-189
3,3'-Dichlorobenzidine	0.100	0.111	111	D-275
bis(2-Ethylhexyl)phthalate	0.100	0.0874	87	5-188
Di-n-octyl phthalate	0.100	0.105	105	18-165
Benzo(b) fluoranthene	0.100	0.0863	86	30-149
Benzo(k) fluoranthene	0.100	0.0719	72	28-182
Benzo(a) pyrene	0.100	0.0857	86	42-142
Indeno(1,2,3-cd) pyrene	0.100	0.107	107	19-173
Dibenz(a,h) anthracene	0.100	0.140	140	23-203
Benzo(ghi) perylene	0.100	0.118	118	17-183

D = Detected, result must be greater than zero.

Recovery: 0 out of 52 outside QC windows

Note:
SAVED AS: C:\HPCHEM\1\DATA\QC\BLH1905W.XLS

Laidlaw Environmental, Inc. / ENCOTEC
3985 Research Park Drive * Ann Arbor, MI 48108
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MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)
SEMIVOLATILE ORGANICS - WATER MATRIX

Project Name: ENCOTEC
Project Number: 10000
QC Set ID: BNAH1905W

SAMPLE SPIKED - ENCOTEC ID: 200092204

Compound	Conc. Spiked (mg/L)	Sample Result (mg/L)	Conc. MS (mg/L)	Percent Recovery (%)	Conc. MSD (mg/L)	Percent Recovery (%)	RPD (%)	Quality Control Limits RPD (%)	Quality Control Limits Recovery (%)
1,2,4-Trichlorobenzene	0.100	U	0.0896	90	0.0870	87	3.01	24	56-126
Acenaphthene	0.100	U	0.0685	68	0.0707	71	3.29	21	59-125
2,4-Dinitrotoluene	0.100	U	0.0672	67	0.0707	71	5.02	22	67-119
Pyrene	0.100	U	0.0671	67	0.0650	65	3.26	32	48-150
N-Nitroso-di-n-propylamine	0.100	U	0.0869	87	0.0924	92	6.10	24	49-140
1,4-Dichlorobenzene	0.100	U	0.0829	83	0.0886	89	6.67	27	64-113
Pentachlorophenol	0.150	U	0.131	88	0.130	87	0.96	31	D-171
Phenol	0.150	U	0.0760	51	0.0742	49	2.45	18	D-112
2-Chlorophenol	0.150	U	0.119	80	0.127	85	6.04	19	35-133
4-Chloro-3-methylphenol	0.150	U	0.120	80	0.128	85	5.88	16	47-129
4-Nitrophenol	0.150	U	0.0606	40	0.0630	42	3.90	44	D-106

D = Detected, result must be greater than zero.
RPD: 0 out of 11 outside of QC Windows.
Recovery: 0 out of 22 outside of QC Windows.

Note:
SAVED AS: C:\HPCHEM\1\DATA\QC\BMH1905W.XLS
Form 090SWN3G.XLS

Rev. 10/09/96

BNA WATER EXTRACTION

Method: 3510B/3510 ✓
3520 ___

BNA SURROGATE: S-
CONC: 100/150 ppm, AMT: 1.0 mL
ID: MB 153 D

DATE 8 / 19 / 98

BNA SPIKE: MS-
CONC: 100/150 ppm, AMT: 1.0 mL
ID: MB 154 D

CLIENT	BATCH #
GMI	13268
CON	13257
EQC	13263

Client	Batch #
EEI	13219

BNAH 1905W

SURR/SPK CHECKED BY DJO

MeCl2 Lot #: BS-124

QC SET ID ~~BNPH1103T~~ FK

CLIENT	CLIENT I.D.	ENCOTEC NUMBER	AMT (L)	Final Vol	Split Ratio	REMARKS
GMI	Storm Pond	92269	.100	2.0	1	100 ml Initial Volume Emulsion in Base Portion
CON	TP-6492-081798-MP-206	92203	1.00	2.0	1	Emulsion in Base Portion
↓	TP-6492-081798-MP-207	92204	1.00	2.0	1	
EQC	Well # 39	92247	1.00	2.0	1	
EEI	DLT-2	91984	.100	2.0	1	100 ml Initial Volume Emulsion in Base Portion
GMI, CON, EQC, EEI	MB081998-1A	89725	1.00	2.0	1	
↓	MS	92204	.50	2.0	1	
↓	MSD	92204	.50	2.0	1	
↓	LCS	89896	1.00	2.0	1	Spiked w/ 1.0 ml of C-397 625 LCS Spike Lot # 081398-06
	"					DJO 08/19/98

	LOCATION	DATE/TIME	ANALYST
AMPLES TAKEN FROM	LI	08/19/98 - 07:30	DJO
SAMPLES RETURNED TO	LI	08/19/98 - 16:15	DJO
EXTRACTS STORED IN	12	08/19/98 - 17:30	DJO
EXTRACTS TAKEN TO	GC MS	08/20/98 - 17:00	DJO

	ANALYST	DATE/TIME
EXT	DJO	08/19/98 - 10:45
CONC	DJO	08/20/98 - 13:00

CHECKED BY: David J Oufield DATE 08 / 20 / 98

PROCEDURE SUMMARY:

WATERS: 1.0 L sample, pH adjusted to >11 (BN portion), extracted 3 times with 60 ml MeCl2; pH adjusted to <2 (Acid portion), extracted 3 times with 60 ml MeCl2; BN and Acid portions combined and concentrated at low temperature (90 C) to FINAL VOLUME = 2.0 ML

1305

BNAWATER.xls 6/23/98

ORGANICS EXTRACTION WORKSHEET

Method: 3510 ____
3520 ____
3550 ____
3545 ____

PARAMETER: BNA med Wt

Matrix:
Water ____
Soil ____
Oil ✓

SURROGATE:
CONC: 100/150 ; AMT: 1.0 ml
ID: mB153D

DATE 8/18/98

CLIENT	BATCH #
Grn	13219
EET	13199

SPIKE:
CONC: ____ ; AMT: 1.0 ml
ID: mB159C

QC SET ID BNAH1811S

SURR/SPK CHECKED BY ____

1.00

LCS ID LBNAH1811S

CLIENT	CLIENT I.D.	ENCOTEC NUMBER	AMOUNT (L or g)	Final Vol	Split Ratio	REMARKS
Grn	sub-Basement oil	91871	1.00	1.0	5/10	QC Set ID BNAG2805T
EET	DLT-1	91983	1.0	1.0	5/10	
	MS	91983	1.0	10	5/10	
	MSD	91983	1.0	1.0	5/10	Put BNAs
	LCS	89895	–	1.0	5/10	in H_2O on
	mB081898 1A	89720	–	1.0	5/10	evap
						JC 08-18-98

SAMPLE	LOCATION	DATE/TIME	ANALYST
TAKEN FROM	Login	8/18/98 2:00	JC
BROUGHT TO	ext/org	8/18/98 2:15	JC
RETURNED TO	Login/WS	8/18/98 3:20	JC
EXTRACTS STORED IN	18A	8/18/98 3:40	JC
EXTRACTS TAKEN TO	GC/ms	8/18/98 4:00	JC

	ANALYST	DATE/TIME
EXT.	JC	8/18/98 2:00
CONC.	JC	8/18/98 4:00

CALIBRATION WEIGHT SET 9002
BALANCE ID: 19530

WT. USED (g)	1	2
BAL. RD. (g)	1.00	2.00

CAL. REQ. (+/- 0.05 g) Y (N)

CHECKED BY: J Clark DATE 8/18/98

PROCEDURE SUMMARY

BLANK.XLS 02/16/96

RAW DATA
Semivolatiles

Safety-Kleen / Encotec
GC/MS Semivolatile Analysis

HSL 5 way

Standard ID's: MB195D:MB202D-MB206D
Reference Std : 50BH13U.D
Instrument ID: 5970-021
GC Column : DB-5MS CAP 30 M, 0.25 mm, 0.25u

Run ID : 8-13-98U
Date : 8/13/1998
Tape Number : 7-98-U
Operator : JLF
Multiplier : 2176

	Client	Batch	Time	File Name	Type	Matrix	Dilution	Factor	Rerun	Sample ID
1	ENCOTEC	10000	13:58	DFTH13U	TUNE	N/A	N/A	N/A		Breakdown = 1.2%
2	ENCOTEC	10000	14:39	160BUH13	STD	N/A	N/A	N/A		
3	ENCOTEC	10000	15:19	120BUH13	STD	N/A	N/A	N/A		
4	ENCOTEC	10000	16:54	80BUH13	STD	N/A	N/A	N/A		
5	ENCOTEC	10000	17:35	50BUH13	STD	N/A	N/A	N/A		
6	ENCOTEC	10000	18:15	10BUH13	STD	N/A	N/A	N/A		
7	ENCOTEC	10000	18:56	DFTUH13	TUNE	N/A	N/A	N/A		Breakdown = 0.5%
8	ENCOTEC	10000	19:36	50BH13U	STD	N/A	N/A	N/A		
9	ENCOTEC	10000	20:17	50IXH13U	STD	N/A	N/A	N/A		
10	CON	13050	20:57	90898B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
11	CON	13050	21:38	90899B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
12	CON	13050	22:19	90899BT	TSPIKE	TCLP	500 ul Sample + 5 uL IS	1/1		
13	CON	13050	22:59	90900B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
14	CON	13050	23:40	90901B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
15	CON	13050	00:20	90902B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
16	CON	13050	01:01	90903B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
17	SBR	13023	01:41	90770B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
18	SBR	13023	02:22	90771B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
19	SBR	13023	03:02	90772B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
20	SBR	13023	03:43	90773B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
21	EEI	13119	04:23	91343B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
22	EEI	13119	05:03	91342B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1	A	

	IS1	RT	IS2	RT	IS3	RT	IS4	RT	IS5	RT	IS6	RT
Upper Limit	1047970	6.48	3635936	8.88	2156378	12.54	3817206	16.29	3471234	23.25	2013652	26.67
Lower Limit	261993	5.48	908984	7.88	539095	11.54	954302	15.29	867809	22.25	503413	25.67

Re- Analysis Codes: A) Surrogates B) EICP's C) Dilution D) Carry-Over

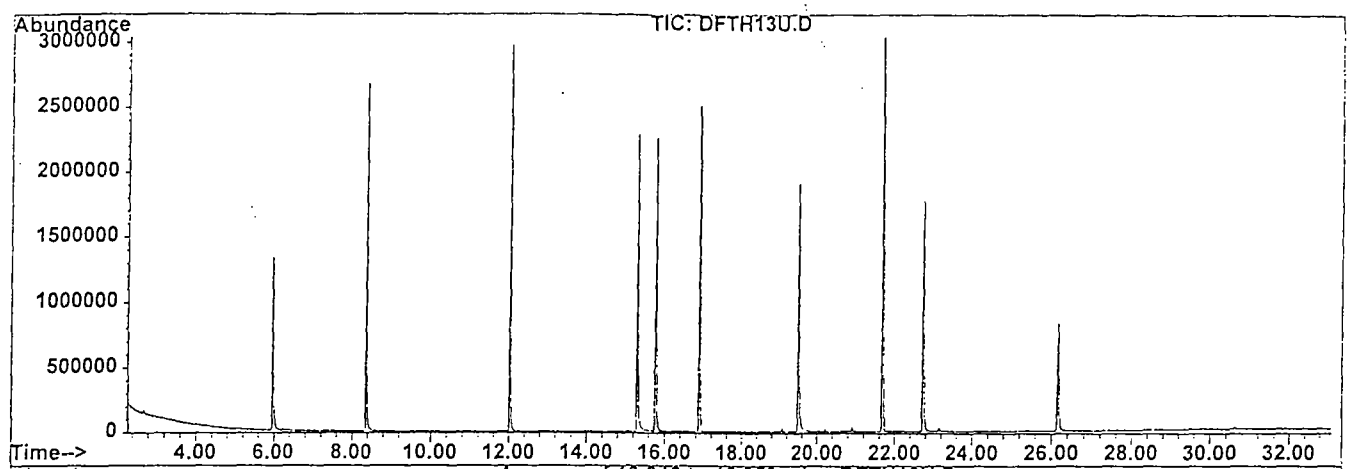
Generated 8/14/98 2:10:07 PM

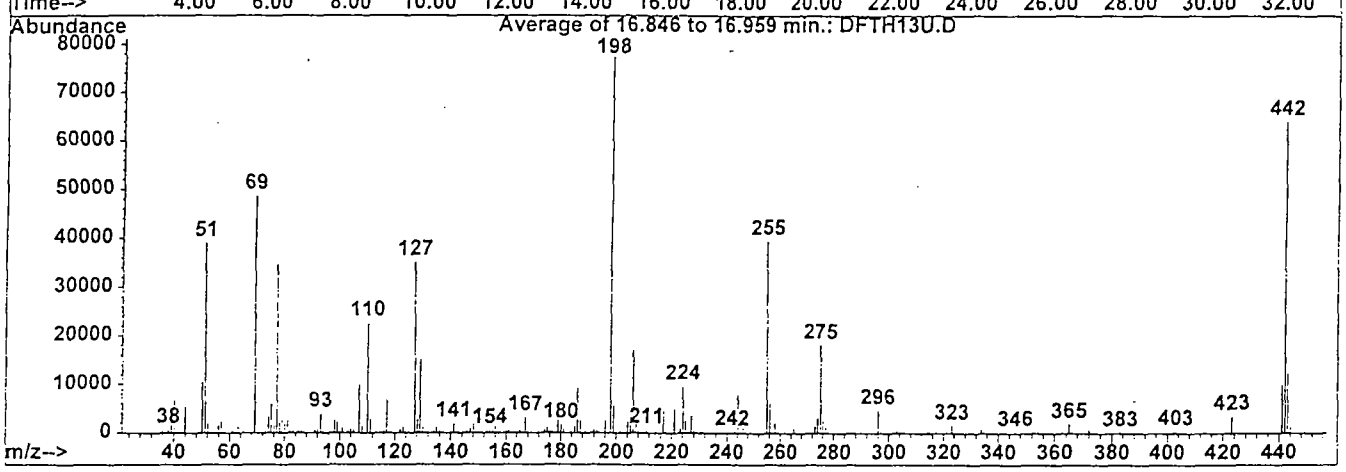
DFTPP - EPA TUNE

Data File : C:\HPCHEM\1\DATA\DFTH13U.D
Acq On : 13 Aug 98 1:58 pm
Sample :
Misc : 8-13-98U

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :





Spectrum Information: Average of 16.846 to 16.959 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	50.5	39071	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	62.9	48716	PASS
70	69	0.00	2	0.4	195	PASS
127	198	40	60	45.4	35180	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	77421	PASS
199	198	5	9	7.3	5648	PASS
275	198	10	30	23.6	18234	PASS
365	198	1	100	2.6	1981	PASS
441	443	0.01	100	79.7	9814	PASS
442	198	40	100	82.9	64167	PASS
443	442	17	23	19.2	12319	PASS

Average of 16.846 to 16.959 min.: DFTH13U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	64	43.05	215	55.05	369	68.95	48716
35.75	311	43.95	5365	55.95	1562	70.05	195
36.00	690	45.00	119	56.95	2513	73.05	386
36.85	187	45.80	72	58.05	74	73.95	3428
37.10	143	47.00	64	61.05	549	74.95	6056
38.00	749	49.00	462	61.95	488	76.10	1764
38.30	81	49.75	65	63.05	1427	77.05	34843
39.00	4543	50.05	10694	63.85	67	78.05	2099
39.95	6736	51.05	39071	64.05	240	78.95	2759
40.90	159	52.05	1971	65.05	653	79.95	1914
41.05	279	52.95	78	67.05	78	80.95	2593

Average of 16.846 to 16.959 min.: DFTH13U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.95	689	95.90	116	107.00	9996	123.00	1202
83.00	714	97.00	79	108.00	1563	123.85	104
83.95	68	98.00	2694	110.00	22769	124.00	413
84.95	552	99.00	2452	111.00	2959	125.00	509
86.00	920	100.10	191	111.95	325	127.00	35180
87.00	394	100.95	1222	112.90	83	128.05	2838
87.90	67	103.00	488	116.00	657	128.95	15579
91.05	691	104.00	917	117.00	6894	130.00	1379
92.00	805	104.95	848	117.95	531	131.05	286
93.00	3996	105.90	206	119.00	87	132.05	95
94.05	304	106.20	81	121.85	822	134.00	520

Average of 16.846 to 16.959 min.: DFTH13U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.95	1209	147.00	925	157.75	364	169.05	221
135.95	521	147.95	1896	159.00	235	170.90	105
137.05	499	148.90	365	160.00	410	171.95	386
138.15	64	149.95	77	160.90	758	172.95	325
139.85	80	151.05	274	162.00	126	174.00	689
140.05	123	151.85	92	164.00	75	175.00	1147
140.95	1958	152.90	502	165.00	732	176.05	356
142.05	567	153.95	543	166.00	421	176.95	661
142.85	417	154.95	894	167.00	3228	177.90	154
144.95	91	155.95	1478	167.80	144	178.90	2759
145.95	358	157.00	312	168.00	1225	180.00	1671

Average of 16.846 to 16.959 min.: DFTH13U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
181.00	894	194.05	194	206.05	17176	215.95	221
181.80	83	195.05	200	207.05	2124	216.95	4559
184.00	237	195.95	2526	208.00	536	217.95	643
184.95	1300	197.90	77421	208.95	79	220.95	4957
186.00	9333	198.95	5648	209.25	65	223.00	1054
187.00	2541	199.95	366	210.25	238	223.95	9723
188.00	289	200.85	70	211.00	683	224.95	2558
188.90	499	201.50	456	211.35	70	225.95	112
190.90	238	203.00	398	211.95	63	226.95	3623
191.95	735	204.05	2430	212.95	66	227.95	572
193.00	729	205.05	4135	214.95	201	228.95	677

Average of 16.846 to 16.959 min.: DFTH13U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
229.95	90	244.00	7995	258.95	283	278.00	251
231.00	346	245.00	1065	264.95	974	282.85	68
233.85	104	246.00	1417	266.00	69	283.15	67
234.05	119	247.05	247	270.00	72	284.85	85
234.90	291	247.90	65	270.90	64	285.05	142
237.05	259	249.00	286	271.80	110	292.85	135
238.90	261	252.85	189	272.95	1421	293.05	176
240.00	69	255.00	39626	274.00	3159	295.05	112
241.00	182	256.00	6407	275.00	18234	295.95	4754
241.95	390	257.00	492	275.95	2521	296.95	651
243.00	525	257.95	2065	277.00	1246	302.95	620

Average of 16.846 to 16.959 min.: DFTH13U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
303.90	184	333.00	93	372.00	897	441.00	9814
307.85	66	334.00	1038	372.95	210	442.00	64167
314.05	295	334.95	221	383.00	230	442.95	12319
314.90	448	340.95	231	390.10	87	444.00	1270
316.10	303	346.00	272	402.00	315		
321.10	177	352.10	429	403.00	476		
323.00	1609	353.00	381	404.10	116		
324.00	319	354.05	485	420.95	316		
327.00	246	364.95	1981	422.00	301		
328.10	85	366.00	264	423.00	3527		
331.80	63	370.95	80	423.95	718		

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\DFTH13U.D
Acq On : 13 Aug 98 1:58 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 14:31 1998

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: DFTPP.RES

Quant Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\DFTG29U.D
DataAcq Meth : DFTPP

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.97	152	529781	40.00 ng	-0.01
2) d8-Naphthalene (I)	8.38	136	1960956	40.00 ng	-0.03
3) d10-Acenaphthene (I)	12.04	164	1100054	40.00 ng	-0.05
5) d10-Phenanthrene (I)	15.78	188	1798828	40.00 ng	-0.08
10) d12-Chrysene (I)	22.75	240	1529016	40.00 ng	-0.08
11) d12-Perylene (I)	26.17	264	746245	40.00 ng	-0.11

System Monitoring Compounds

Target Compounds					Qvalue
4) Pentachlorophenol	15.31	266	571644	66.06 ng	99
6) Benzidine	19.51	184	1673600	45.79 ng	94
7) 4,4'-DDE	0.00	246		N.D.	
8) 4,4'-DDD	20.91	235	17027	29.07 ng	100
9) 4,4'-DDT	21.70	235	1358575	75.50 ng	100

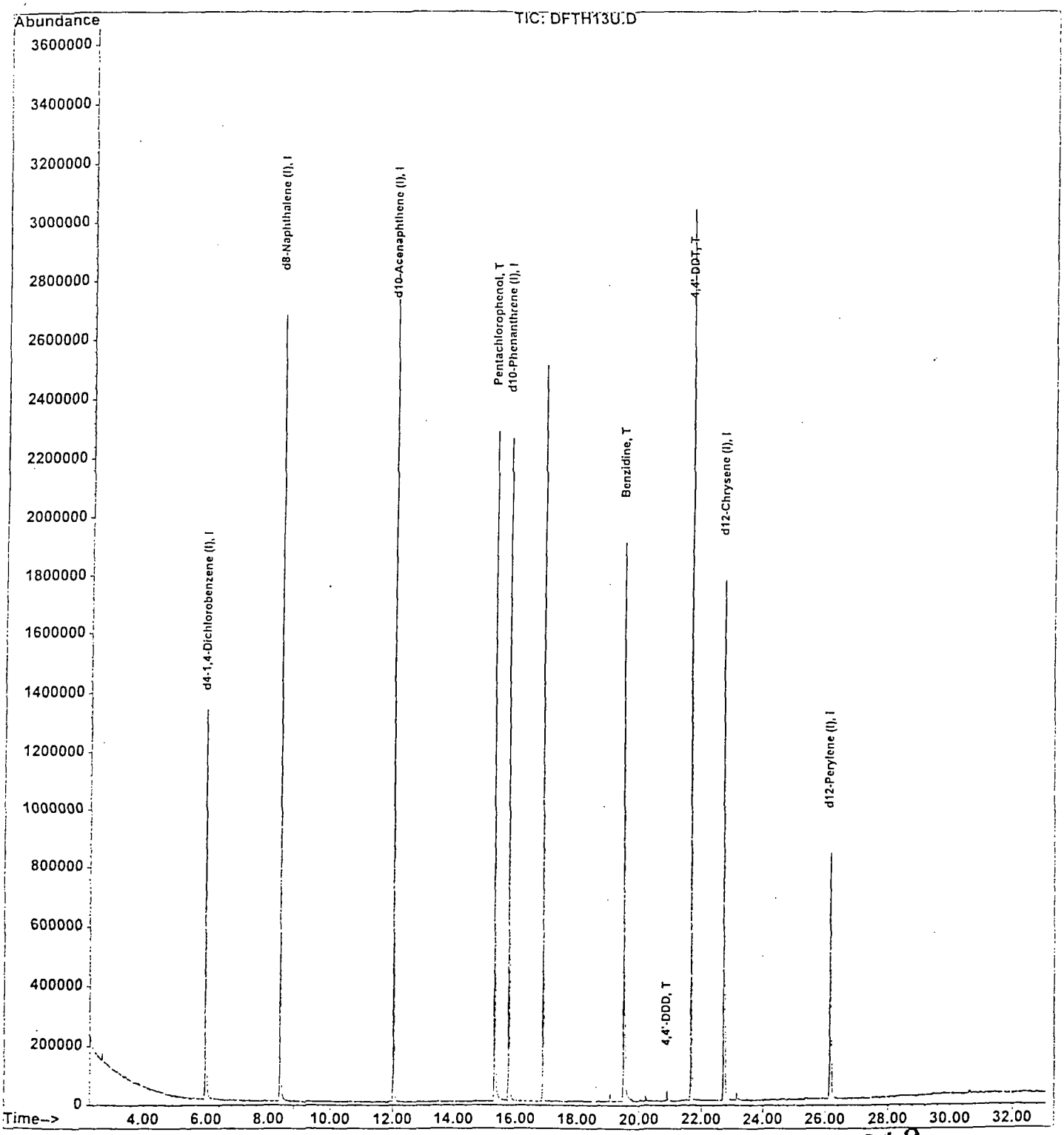
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DFTH13U.D
Acq On : 13 Aug 98 1:58 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 14:31 1998

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: DFTPP.RES

Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Single Level Calibration



Compound List Report 5970-021

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
Total Cpnds : 85

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	d4-1,4-Dichlorobenzene (I)	152	5.97	1.000	A	1	A	L
2	T	Pyridine	79	2.53	0.424	L	2	A	B
3	S	2-Fluorophenol (S)	112	3.94	0.659	A	1	A	B
4	T	Aniline	93	5.42	0.908	A	2	A	B
5	S	d4-2-Chlorophenol (S)	132	5.57	0.932	A	2	A	B
6	T	2-Chlorophenol	128	5.60	0.938	A	2	A	B
7	T	bis(2-Chloroethyl) ether	93	5.55	0.930	A	2	A	B
8	S	d5-Phenol (S)	99	5.37	0.900	A	2	A	B
9	T	Phenol	94	5.39	0.903	A	2	A	B
10	T	1,3-Dichlorobenzene	146	5.86	0.981	A	2	A	B
11	T	1,4-Dichlorobenzene	146	5.99	1.003	A	2	A	B
12	S	d4-1,2-Dichlorobenzene (S)	152	6.23	1.043	A	2	A	B
13	T	1,2-Dichlorobenzene	146	6.26	1.049	A	2	A	B
14	T	Benzyl alcohol	108	6.26	1.049	A	3	A	B
15	T	bis(2-Chloroisopropyl) ether	45	6.52	1.092	A	2	A	B
16	T	2-Methylphenol	108	6.47	1.084	A	1	A	B
17	T	Hexachloroethane	117	6.86	1.149	A	2	A	B
18	T	n-Nitroso-di-n-propylamine	70	6.76	1.132	A	3	A	B
19	T	3-Methylphenol	108	6.76	1.132	A	1	A	B
20	T	4-Methylphenol	108	6.76	1.132	A	1	A	B
21	I	d8-Naphthalene (I)	136	8.37	1.000	A	1	A	L
22	S	d5-Nitrobenzene (S)	82	6.99	0.834	A	2	A	B
23	T	Nitrobenzene	77	7.02	0.838	A	2	A	B
24	T	Isophorone	82	7.50	0.896	A	2	A	B
25	T	2-Nitrophenol	139	7.63	0.911	A	2	A	B
26	T	2,4-Dimethylphenol	107	7.79	0.931	A	2	A	B
27	T	bis(2-chloroethoxy) methane	93	8.00	0.956	A	2	A	B
28	T	2,4-Dichlorophenol	162	8.12	0.969	A	2	A	B
29	T	1,2,4-Trichlorobenzene	180	8.28	0.988	A	2	A	B
30	T	Naphthalene	128	8.41	1.004	A	2	A	B
31	T	Benzoic acid	122	8.09	0.966	A	2	A	B
32	T	4-Chloroaniline	127	8.58	1.025	A	1	A	B
33	T	Hexachlorobutadiene	225	8.71	1.040	A	2	A	B
34	T	2-Methylnaphthalene	142	9.86	1.177	A	1	A	B
35	T	4-Chloro-3-methylphenol	107	9.63	1.150	A	2	A	B
36	I	d10-Acenapthene (I)	164	12.04	1.000	A	2	A	L
37	T	Hexachlorocyclopentadiene	237	10.20	0.847	A	2	A	B
38	T	2,4,6-Trichlorophenol	196	10.47	0.870	A	2	A	B
39	T	2,4,5-Trichlorophenol	196	10.54	0.875	A	2	A	B
40	S	2-Fluorobiphenyl (S)	172	10.68	0.887	A	1	A	B
41	T	2-Chloronapthalene	162	10.86	0.902	A	2	A	B
42	T	2-Nitroaniline	65	11.12	0.924	A	2	A	B
43	T	Acenaphthylene	152	11.73	0.975	A	2	A	B
44	T	Dimethylphthalate	163	11.58	0.962	A	2	A	B
45	T	2,6-Dinitrotoluene	165	11.68	0.971	A	2	A	B
46	T	Acenaphthene	153	12.10	1.005	A	2	A	B
47	T	3-Nitroaniline	138	12.00	0.997	A	2	A	B
48	T	2,4-Dinitrophenol	184	12.25	1.018	L	2	A	B
49	T	Dibenzofuran	168	12.49	1.038	A	1	A	B
50	T	2,4-Dinitrotoluene	165	12.52	1.040	L	2	A	B
51	T	4-Nitrophenol	109	12.45	1.034	A	2	A	B

52		T	Fluorene	166	13.31	1.106	A	2	A	B
53		T	4-Chlorophenyl phenyl ether	204	13.41	1.114	A	2	A	B
54		T	Diethylphthalate	149	13.21	1.098	A	2	A	B
55		T	4-Nitroaniline	138	13.42	1.115	L	2	A	B
56	I		d10-Phenanthrene (I)	188	15.80	1.000	A	2	A	L
57		T	4,6-Dinitro-2-methylphenol	198	13.54	0.857	L	2	A	B
58		T	n-Nitrosodiphenylamine	169	13.73	0.869	A	2	A	B
59		S	2,4,6-Tribromophenol (S)	330	13.96	0.884	A	2	A	B
60		T	Octachlorocyclopentene	307	13.97	0.885	A	2	A	B
61		T	4-Bromophenyl phenyl ether	248	14.70	0.931	A	2	A	B
62		T	Hexachlorobenzene	284	14.75	0.934	A	2	A	B
63		T	Pentachlorophenol	266	15.32	0.970	A	2	A	B
64		T	Phenanthrene	178	15.84	1.003	A	2	A	B
65		T	Anthracene	178	15.97	1.011	A	2	A	B
66		T	Carbazole	167	16.47	1.043	A	3	A	B
67		T	Di-n-butyl phthalate	149	17.67	1.118	A	2	A	B
68		T	Fluoranthene	202	19.01	1.203	A	2	A	B
69	I		d12-Chrysene (I)	240	22.75	1.000	A	2	A	L
70		T	Benzidine	184	19.51	0.857	A	2	A	B
71		T	Pyrene	202	19.57	0.860	A	2	A	B
72		S	d14-Terphenyl (S)	244	20.17	0.887	A	2	A	B
73		T	Butyl benzyl phthalate	149	21.57	0.948	L	2	A	B
74		T	Benzo(a) anthracene	228	22.73	0.999	A	2	A	B
75		T	Chrysene	228	22.81	1.003	A	2	A	B
76		T	3,3'-Dichlorobenzidine	252	22.76	1.001	L	2	A	B
77		T	bis(2-Ethylhexyl) phthalate	149	23.15	1.018	L	2	A	B
78		T	Di-n-octyl phthalate	149	24.73	1.087	L	1	A	B
79	I		d12-Perylene (I)	264	26.17	1.000	A	2	A	B
80		T	Benzo(b) fluoranthene	252	25.28	0.966	A	2	A	B
81		T	Benzo(k) fluoranthene	252	25.35	0.969	A	2	A	B
82		T	Benzo(a) pyrene	252	26.02	0.994	A	2	A	B
83		T	Indeno (1,2,3-cd) pyrene	276	28.67	1.096	A	2	A	B
84		T	Dibenz (ah) anthracene	278	28.75	1.099	L	2	A	B
85		T	Benzo (ghi) perylene	276	29.25	1.118	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

BNAHSL.M Thu Aug 13 20:37:17 1998

ENCOTEC GC/MS SEMIVOLATILE 5 WAY CALIBRATION

Instrument ID: 5970-021

Initial Calibration Date: 8/13/98

STD	FILE:	STD	FILE:	STD	FILE:
160	160BUH13.D	80	80BUH13.D	10	10BUH13.D
120	120BUH13.D	50	50BUH13.D		

Compound	10	50	80	120	160	RF avg.	% RSD	RF Cont	Cont Rec	% Drift	CCC/SPCC
Phenol	1.474	1.627	1.712	1.417	1.558	1.557	7.5				*
1,4-Dichlorobenzene	1.549	1.430	1.423	1.400	1.274	1.415	6.9				*
n-Nitroso-di-n-propylamine	0.755	0.898	1.013	0.932	0.763	0.872					**
2-Nitrophenol	0.143	0.188	0.186	0.193	0.210	0.184	13				*
2,4-Dichlorophenol	0.260	0.288	0.273	0.287	0.278	0.277	4.1				*
Hexachlorobutadiene	0.208	0.203	0.182	0.187	0.185	0.193	6.1				*
4-Chloro-3-methylphenol	0.236	0.285	0.318	0.296	0.261	0.279	11				*
Hexachlorocyclopentadiene	0.350	0.394	0.385	0.448	0.443	0.404					**
2,4,6-Trichlorophenol	0.288	0.339	0.333	0.383	0.377	0.344	11				*
Acenaphthene	1.166	1.068	1.010	1.049	1.015	1.062	5.9				*
2,4-Dinitrophenol	--------	0.063	0.142	0.166	0.195	0.142					**
4-Nitrophenol	--------	0.093	0.125	0.122	0.143	0.121					**
n-Nitrosodiphenylamine	0.419	0.465	0.439	0.458	0.431	0.443	4.3				*
Pentachlorophenol	--------	0.124	0.142	0.166	0.155	0.147	12				*
Fluoranthene	0.903	0.997	1.026	1.011	0.907	0.969	6.1				*
Di-n-octyl phthalate	0.462	0.831	0.919	0.944	1.022	0.835	26				*
Benzo(a) pyrene	0.924	1.233	1.212	1.231	1.241	1.168	12				*

* = ~~CCC~~ CCC - Calibration Check Compound: %RSD < 30 for initial calibration; % Diff. < 20.0 for continuing calibration.

** = ~~SPCC~~ SPCC - System Performance Check Compound: Minimum avg. RF > .050 for initial calibration, RF > 0.050 for continuing calibration

% RSD = Relative Standard Deviation

% Drift = (Cont. Cal. Std Conc. - Recovery Conc.) / Cont. Cal. Std. Conc. Rec. x 100

EICPS:

IS1	RT1	IS2	RT2	IS3	RT3	IS4	RT4	IS5	RT5	IS6	RT6
927752	6.48	3212664	8.88	1813406	12.54	2912534	16.28	2426230	23.25	1222432	26.67
231938	5.48	803166	7.88	453352	11.54	728134	15.28	606558	22.25	305608	25.67

Response Factor Report 5970-021

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration

Calibration Files
160 =160BUH13.D 120 =120BUH13.D 80 =80BUH13.D
50 =50BUH13.D 10 =10BUH13.D

		Compound	160	120	80	50	10	Avg	%RSD	
1)	I	d4-1,4-Dichlorobenzen	----------ISTD----------							
2)	T	Pyridine	1.004	1.095	1.069	1.207	0.783	1.032	15.20	L
3)	S	2-Fluorophenol (S)	1.039	1.066	1.075	0.999	0.887	1.013	7.57	
4)	T	Aniline	1.585	1.622	1.758	1.671	1.467	1.621	6.64	
5)	S	d4-2-Chlorophenol (S)	1.041	1.084	1.121	1.162	1.065	1.095	4.33	
6)	T	2-Chlorophenol	1.197	1.226	1.271	1.298	1.186	1.235	3.86	
7)	T	bis(2-Chloroethyl) et	1.173	1.176	1.303	1.347	1.306	1.261	6.41	
8)	S	d5-Phenol (S)	1.267	1.321	1.380	1.416	1.292	1.335	4.61	
9)	T	Phenol	1.558	1.417	1.712	1.627	1.474	1.557	7.54	
10)	T	1,3-Dichlorobenzene	1.311	1.315	1.300	1.432	1.381	1.348	4.23	
11)	T	1,4-Dichlorobenzene	1.274	1.400	1.423	1.430	1.549	1.415	6.92	
12)	S	d4-1,2-Dichlorobenzen	0.802	0.829	0.821	0.926	0.952	0.866	7.83	
13)	T	1,2-Dichlorobenzene	1.292	1.192	1.266	1.350	1.445	1.309	7.26	
14)	T	Benzyl alcohol	0.659	0.658	0.743	0.688	0.549	0.659	10.73	
15)	T	bis(2-Chloroisopropyl	2.173	2.195	2.567	2.362	2.423	2.344	6.99	
16)	T	2-Methylphenol	0.947	0.944	1.126	1.041	0.957	1.003	7.95	
17)	T	Hexachloroethane	0.620	0.625	0.684	0.659	0.683	0.654	4.70	
18)	T	n-Nitroso-di-n-propyl	0.763	0.932	1.013	0.898	0.755	0.872	12.78	
19)	T	3-Methylphenol	2.046	2.096	2.269	2.276	1.996	2.136	6.04	
20)	T	4-Methylphenol	2.046	2.096	2.269	2.276	1.996	2.136	6.04	
21)	I	d8-Naphthalene (I)	----------ISTD----------							
22)	S	d5-Nitrobenzene (S)	0.345	0.351	0.377	0.376	0.341	0.358	4.86	
23)	T	Nitrobenzene	0.367	0.351	0.387	0.371	0.328	0.361	6.15	
24)	T	Isophorone	0.628	0.663	0.708	0.696	0.665	0.672	4.72	
25)	T	2-Nitrophenol	0.210	0.193	0.186	0.188	0.143	0.184	13.44	
26)	T	2,4-Dimethylphenol	0.314	0.329	0.320	0.318	0.285	0.313	5.41	
27)	T	bis(2-chloroethoxy) m	0.398	0.408	0.453	0.471	0.416	0.429	7.27	
28)	T	2,4-Dichlorophenol	0.278	0.287	0.273	0.288	0.260	0.277	4.15	
29)	T	1,2,4-Trichlorobenzen	0.302	0.325	0.312	0.335	0.339	0.323	4.80	
30)	T	Naphthalene	0.862	0.985	0.958	1.038	1.016	0.972	7.04	
31)	T	Benzoic acid	0.269	0.167	0.154	0.100		0.172	40.80	0.933
32)	T	4-Chloroaniline	0.374	0.421	0.406	0.410	0.340	0.390	8.46	
33)	T	Hexachlorobutadiene	0.185	0.187	0.182	0.203	0.208	0.193	6.09	
34)	T	2-Methylnaphthalene	0.536	0.615	0.633	0.642	0.639	0.613	7.22	
35)	T	4-Chloro-3-methylphen	0.261	0.296	0.318	0.285	0.236	0.279	11.29	
36)	I	d10-Acenapthene (I)	----------ISTD----------							
37)	T	Hexachlorocyclopentad	0.443	0.448	0.385	0.394	0.350	0.404	10.20	
38)	T	2,4,6-Trichlorophenol	0.377	0.383	0.333	0.339	0.288	0.344	11.22	
39)	T	2,4,5-Trichlorophenol	0.377	0.401	0.358	0.389	0.357	0.377	5.09	
40)	S	2-Fluorobiphenyl (S)	1.128	1.183	1.063	1.247	1.283	1.181	7.52	
41)	T	2-Chloronapthalene	1.072	1.050	0.972	1.096	1.168	1.072	6.62	

(#) = Out of Range

Response Factor Report 5970-021

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration

Calibration Files
160 =160BUH13.D 120 =120BUH13.D 80 =80BUH13.D
50 =50BUH13.D 10 =10BUH13.D

		Compound	160	120	80	50	10	Avg	%RSD	
42)	T	2-Nitroaniline	0.379	0.365	0.371	0.316		0.358	7.96	
43)	T	Acenaphthylene	1.561	1.731	1.631	1.729	1.743	1.679	4.76	
44)	T	Dimethylphthalate	1.249	1.270	1.173	1.202	1.256	1.230	3.33	
45)	T	2,6-Dinitrotoluene	0.284	0.301	0.300	0.300	0.255	0.288	6.92	
46)	T	Acenaphthene	1.015	1.049	1.010	1.068	1.166	1.062	5.92	
47)	T	3-Nitroaniline	0.342	0.309	0.291	0.260		0.300	11.44	
48)	T	2,4-Dinitrophenol	0.195	0.166	0.142	0.063		0.142	40.12	L
49)	T	Dibenzofuran	1.504	1.459	1.413	1.484	1.546	1.481	3.34	
50)	T	2,4-Dinitrotoluene	0.451	0.457	0.413	0.394	0.292	0.402	16.54	L
51)	T	4-Nitrophenol	0.143	0.122	0.125	0.093		0.121	17.19	0.988
52)	T	Fluorene	1.201	1.179	1.106	1.098	1.153	1.147	3.92	
53)	T	4-Chlorophenyl phenyl	0.635	0.622	0.572	0.598	0.624	0.610	4.13	
54)	T	Diethylphthalate	1.287	1.252	1.241	1.228	1.184	1.239	3.04	
55)	T	4-Nitroaniline	0.328	0.289	0.277	0.217		0.278	16.48	L
56)	I	d10-Phenanthrene (I)	----------ISTD----------							
57)	T	4,6-Dinitro-2-methylp	0.150	0.149	0.130	0.098		0.132	18.42	L
58)	T	n-Nitrosodiphenylamin	0.431	0.458	0.439	0.465	0.419	0.443	4.27	
59)	S	2,4,6-Tribromophenol	0.131	0.140	0.121	0.125	0.094	0.122	14.15	
60)	T	Octachlorocyclopenten	0.162	0.177	0.160	0.170	0.166	0.167	3.92	
61)	T	4-Bromophenyl phenyl	0.214	0.228	0.210	0.228	0.210	0.218	4.39	
62)	T	Hexachlorobenzene	0.278	0.293	0.272	0.298	0.295	0.287	4.03	
63)	T	Pentachlorophenol	0.155	0.166	0.142	0.124		0.147	12.27	
64)	T	Phenanthrene	0.855	0.909	0.889	0.932	0.889	0.895	3.21	
65)	T	Anthracene	0.912	0.983	0.948	0.959	0.892	0.939	3.89	
66)	T	Carbazole	0.803	0.849	0.835	0.824	0.682	0.798	8.43	
67)	T	Di-n-butyl phthalate	1.189	1.183	1.236	1.208	0.995	1.162	8.23	
68)	T	Fluoranthene	0.907	1.011	1.026	0.997	0.903	0.969	6.13	
69)	I	d12-Chrysene (I)	----------ISTD----------							
70)	T	Benzidine	0.291	0.237	0.165	0.137	0.065	0.179	48.96	0.954
71)	T	Pyrene	1.427	1.375	1.125	1.241	1.149	1.264	10.62	
72)	S	d14-Terphenyl (S)	0.997	0.953	0.775	0.847	0.783	0.871	11.49	
73)	T	Butyl benzyl phthalat	0.604	0.576	0.560	0.534	0.372	0.529	17.29	L
74)	T	Benzo(a) anthracene	0.924	0.960	0.926	0.965	0.900	0.935	2.90	
75)	T	Chrysene	0.762	0.798	0.761	0.785	0.824	0.786	3.38	
76)	T	3,3'-Dichlorobenzidin	0.294	0.268	0.249	0.211	0.084	0.221	37.22	L
77)	T	bis(2-Ethylhexyl) pht	0.784	0.763	0.738	0.714	0.480	0.696	17.78	L
78)	T	Di-n-octyl phthalate	1.022	0.944	0.919	0.831	0.462	0.835	26.30	L
79)	I	d12-Perylene (I)	----------ISTD----------							
80)	T	Benzo(b) fluoranthene	1.479	1.542	1.495	1.460	1.109	1.417	12.34	
81)	T	Benzo(k) fluoranthene	1.453	1.376	1.545	1.426	1.484	1.457	4.34	
82)	T	Benzo(a) pyrene	1.241	1.231	1.212	1.233	0.924	1.168	11.72	

#) = Out of Range

Response Factor Report 5970-021

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration

Calibration Files
160 =160BUH13.D 120 =120BUH13.D 80 =80BUH13.D
50 =50BUH13.D 10 =10BUH13.D

		Compound	160	120	80	50	10	Avg	%RSD	
83)	T	Indeno (1,2,3-cd) pyr	0.943	0.969	0.830	0.755	0.681	0.836	14.63	
84)	T	Dibenz (ah) anthracen	0.619	0.617	0.541	0.589	0.402	0.554	16.39	L
85)	T	Benzo (ghi) perylene	0.792	0.822	0.717	0.854	0.716	0.780	7.96	

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\160BUH13.D
Acq On : 13 Aug 98 2:39 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:09 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.98	152	662597	40.00	ng	-0.01
21) d8-Naphthalene (I)	8.40	136	2330600	40.00	ng	0.00
36) d10-Acenapthene (I)	12.06	164	1279244	40.00	ng	0.00
56) d10-Phenanthrene (I)	15.82	188	2429921	40.00	ng	0.00
69) d12-Chrysene (I)	22.79	240	1529759	40.00	ng	0.00
79) d12-Perylene (I)	26.19	264	727182	40.00	ng	-0.03
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.97	112	2754489	108.10	ng	0.02
Surrogate Spike 150.000			Recovery = 72.07%			
5) d4-2-Chlorophenol (S)	5.60	132	2759527	100.11	ng	0.02
Surrogate Spike 150.000			Recovery = 66.74%			
8) d5-Phenol (S)	5.44	99	3357493	104.23	ng	0.05
Surrogate Spike 150.000			Recovery = 69.49%			
12) d4-1,2-Dichlorobenzene (S)	6.25	152	2126514	102.82	ng	0.00
Surrogate Spike 100.000			Recovery = 102.82%			
22) d5-Nitrobenzene (S)	7.02	82	3213919	104.01	ng	0.02
Surrogate Spike 100.000			Recovery = 104.01%			
40) 2-Fluorobiphenyl (S)	10.70	172	5771602	101.00	ng	0.00
Surrogate Spike 100.000			Recovery = 101.00%			
59) 2,4,6-Tribromophenol (S)	13.99	330	1275252	99.59	ng	0.02
Surrogate Spike 150.000			Recovery = 66.39%			
72) d14-Terphenyl (S)	20.19	244	6100617	122.90	ng	0.00
Surrogate Spike 100.000			Recovery = 122.90%			

Target Compounds							Qvalue
2) Pyridine	2.51	79	2662035	86.25	ng		92
4) Aniline	5.44	93	4200346	100.05	ng	#	13
6) 2-Chlorophenol	5.64	128	3172049	104.26	ng		92
7) bis(2-Chloroethyl) ether	5.60	93	3109717	106.13	ng		97
9) Phenol	5.48	94	4128340	111.72	ng		94
10) 1,3-Dichlorobenzene	5.88	146	3473986	105.02	ng		98
11) 1,4-Dichlorobenzene	6.01	146	3375851	98.14	ng		98
13) 1,2-Dichlorobenzene	6.28	146	3423831	107.13	ng		98
14) Benzyl alcohol	6.30	108	1745324	95.82	ng		96
15) bis(2-Chloroisopropyl) eth	6.54	45	5760452	98.05	ng	#	100
16) 2-Methylphenol	6.51	108	2509426	95.21	ng		100
17) Hexachloroethane	6.88	117	1643865	104.99	ng	#	77
18) n-Nitroso-di-n-propylamine	6.86	70	2020924	89.30	ng		98
19) 3-Methylphenol	6.83	108	2710807	52.22	ng		96
20) 4-Methylphenol	6.83	108	2710807	52.22	ng		96
23) Nitrobenzene	7.07	77	3421561	110.56	ng		98
24) Isophorone	7.57	82	5851084	100.24	ng		100

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\160BUH13.D
Acq On : 13 Aug 98 2:39 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:09 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
25) 2-Nitrophenol	7.67	139	1955805	111.27 ng		89
26) 2,4-Dimethylphenol	7.85	107	2929664	96.75 ng		99
27) bis(2-chloroethoxy) methan	8.04	93	3713217	96.81 ng		98
28) 2,4-Dichlorophenol	8.17	162	2591353	99.96 ng		98
29) 1,2,4-Trichlorobenzene	8.30	180	2817352	98.94 ng		95
30) Naphthalene	8.44	128	8034294	97.42 ng		99
31) Benzoic acid	7.85	122	2504278	178.93 ng	#	13
32) 4-Chloroaniline	8.61	127	3486186	94.45 ng		100
33) Hexachlorobutadiene	8.73	225	1722658	104.39 ng		99
34) 2-Methylnaphthalene	9.88	142	4996287	89.27 ng		99
35) 4-Chloro-3-methylphenol	9.65	107	2435715	91.26 ng		97
37) Hexachlorocyclopentadiene	10.22	237	2268795	117.47 ng		96
38) 2,4,6-Trichlorophenol	10.49	196	1929598	103.72 ng		95
39) 2,4,5-Trichlorophenol	10.56	196	1929749	97.38 ng		94
41) 2-Chloronapthalene	10.90	162	5486134	104.39 ng		97
42) 2-Nitroaniline	11.17	65	1938751	104.60 ng		96
43) Acenaphthylene	11.75	152	7988426	94.76 ng		98
44) Dimethylphthalate	11.65	163	6390579	100.01 ng		99
45) 2,6-Dinitrotoluene	11.73	165	1454106	94.53 ng		91
46) Acenaphthene	12.14	153	5196179	98.13 ng		98
47) 3-Nitroaniline	12.07	138	1748438	109.64 ng	#	91
48) 2,4-Dinitrophenol	12.28	184	998516	160.14 ng		87
49) Dibenzofuran	12.53	168	7695678	102.35 ng		99
50) 2,4-Dinitrotoluene	12.59	165	2309432	109.24 ng	#	53
51) 4-Nitrophenol	12.51	109	733997	117.63 ng		92
52) Fluorene	13.36	166	6147823	103.94 ng		100
53) 4-Chlorophenyl phenyl ethe	13.45	204	3247077	103.65 ng		93
54) Diethylphthalate	13.28	149	6585915	102.01 ng		99
55) 4-Nitroaniline	13.57	138	1676819	124.32 ng		93
57) 4,6-Dinitro-2-methylphenol	13.62	198	1453907	137.44 ng	#	93
58) n-Nitrosodiphenylamine	13.80	169	4193649	97.00 ng		99
60) Octachlorocyclopentene	13.99	307	1576651	98.41 ng		93
61) 4-Bromophenyl phenyl ether	14.74	248	2082339	97.24 ng		94
62) Hexachlorobenzene	14.78	284	2702577	97.38 ng	#	82
63) Pentachlorophenol	15.35	266	1502867	112.21 ng		96
64) Phenanthrene	15.90	178	8306366	96.55 ng		100
65) Anthracene	16.03	178	8867410	100.59 ng		100
66) Carbazole	16.53	167	7801460	108.01 ng		99
67) Di-n-butyl phthalate	17.70	149	11554006	99.19 ng		99
68) Fluoranthene	19.04	202	8813680	99.22 ng		97
70) Benzidine	19.53	184	1780033	102.13 ng		98
71) Pyrene	19.62	202	8733736	121.49 ng		98
73) Butyl benzyl phthalate	21.59	149	3698379	104.44 ng		97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\160BUH13.D
Acq On : 13 Aug 98 2:39 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:09 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
74) Benzo(a) anthracene	22.75	228	5651961	100.36 ng		99
75) Chrysene	22.85	228	4659771	82.07 ng		98
76) 3,3'-Dichlorobenzidine	22.80	252	1799442	102.63 ng		98
77) bis(2-Ethylhexyl) phthalat	23.17	149	4800032	97.83 ng	#	98
78) Di-n-octyl phthalate	24.75	149	6251115	88.87 ng		100
80) Benzo(b) fluoranthene	25.32	252	4300875	110.08 ng		99
81) Benzo(k) fluoranthene	25.40	252	4224973m	115.12 ng		100
82) Benzo(a) pyrene	26.06	252	3610912	112.78 ng		98
83) Indeno (1,2,3-cd) pyrene	28.71	276	2742182	121.16 ng	#	93
84) Dibenz (ah) anthracene	28.77	278	1801078	74.42 ng		98
85) Benzo (ghi) perylene	29.29	276	2304800	100.42 ng		97

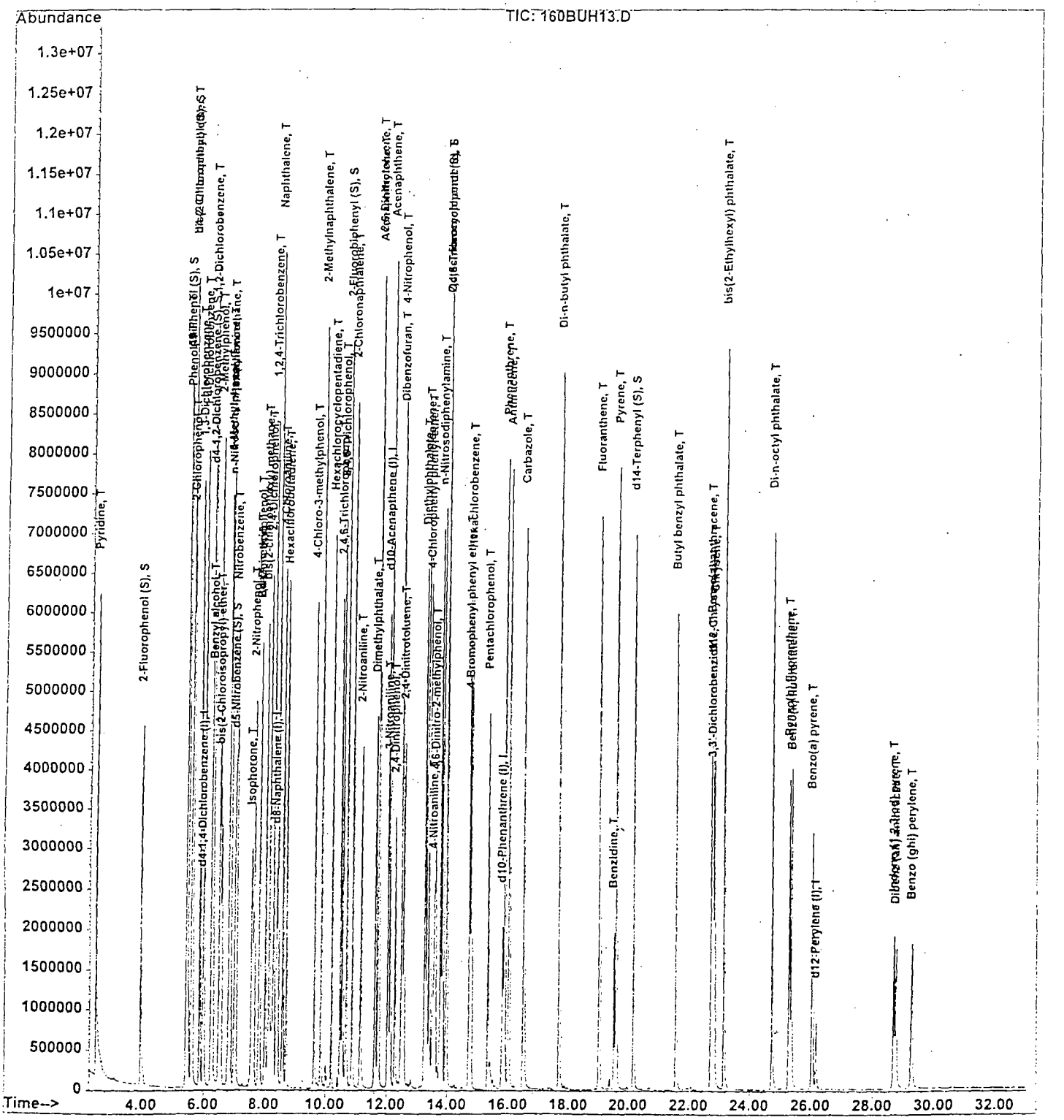
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\160BUH13.D
Acq On : 13 Aug 98 2:39 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:09 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Multiple Level Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\120BUH13.D
Acq On : 13 Aug 98 3:19 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 15:53 1998

Vial: 3
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.97	152	560627	40.00	ng	-0.02
21) d8-Naphthalene (I)	8.39	136	1918022	40.00	ng	0.00
36) d10-Acenapthene (I)	12.04	164	1069180	40.00	ng	-0.02
56) d10-Phenanthrene (I)	15.80	188	1874308	40.00	ng	-0.02
69) d12-Chrysene (I)	22.77	240	1362687	40.00	ng	-0.02
79) d12-Perylene (I)	26.19	264	694995	40.00	ng	-0.03
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.96	112	1793166	83.17	ng	0.00
Surrogate Spike 150.000			Recovery = 55.45%			
5) d4-2-Chlorophenol (S)	5.58	132	1822874	78.16	ng	0.00
Surrogate Spike 150.000			Recovery = 52.11%			
8) d5-Phenol (S)	5.42	99	2221722	81.51	ng	0.03
Surrogate Spike 150.000			Recovery = 54.34%			
12) d4-1,2-Dichlorobenzene (S)	6.25	152	1394561	79.69	ng	0.00
Surrogate Spike 100.000			Recovery = 79.69%			
22) d5-Nitrobenzene (S)	7.00	82	2018793	79.39	ng	0.00
Surrogate Spike 100.000			Recovery = 79.39%			
40) 2-Fluorobiphenyl (S)	10.68	172	3794572	79.45	ng	-0.02
Surrogate Spike 100.000			Recovery = 79.45%			
59) 2,4,6-Tribromophenol (S)	13.97	330	785069	79.48	ng	0.00
Surrogate Spike 150.000			Recovery = 52.99%			
72) d14-Terphenyl (S)	20.19	244	3895917	88.10	ng	0.00
Surrogate Spike 100.000			Recovery = 88.10%			

Target Compounds							Qvalue
2) Pyridine	2.49	79	1841272	70.51	ng		96
4) Aniline	5.44	93	2728273	76.80	ng		90
6) 2-Chlorophenol	5.62	128	2061147	80.07	ng		93
7) bis(2-Chloroethyl) ether	5.58	93	1977153	79.75	ng		97
9) Phenol	5.44	94	2384011	76.25	ng		98
10) 1,3-Dichlorobenzene	5.87	146	2211603	79.01	ng		97
11) 1,4-Dichlorobenzene	6.00	146	2353999	80.88	ng		98
13) 1,2-Dichlorobenzene	6.26	146	2004331	74.12	ng		97
14) Benzyl alcohol	6.28	108	1106693	71.81	ng		98
15) bis(2-Chloroisopropyl) eth	6.54	45	3692472	74.28	ng	#	100
16) 2-Methylphenol	6.49	108	1587377	71.18	ng		99
17) Hexachloroethane	6.88	117	1050690	79.31	ng	#	76
18) n-Nitroso-di-n-propylamine	6.84	70	1567034	81.84	ng	#	34
19) 3-Methylphenol	6.81	108	1762229	40.12	ng		97
20) 4-Methylphenol	6.81	108	1762229	40.12	ng		97
23) Nitrobenzene	7.05	77	2020285	79.32	ng		99
24) Isophorone	7.55	82	3814046	79.39	ng		100

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\120BUH13.D
Acq On : 13 Aug 98 3:19 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 15:53 1998

Vial: 3
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
25)	2-Nitrophenol	7.65	139	1107824	76.58 ng		89
26)	2,4-Dimethylphenol	7.83	107	1895398	76.06 ng		100
27)	bis(2-chloroethoxy) methan	8.02	93	2347606	74.37 ng		99
28)	2,4-Dichlorophenol	8.15	162	1649258	77.30 ng		97
29)	1,2,4-Trichlorobenzene	8.29	180	1869568	79.78 ng		97
30)	Naphthalene	8.44	128	5668949	83.52 ng		99
31)	Benzoic acid	8.23	122	961568	83.48 ng		95
32)	4-Chloroaniline	8.60	127	2425158	79.84 ng		100
33)	Hexachlorobutadiene	8.71	225	1076137	79.24 ng		99
34)	2-Methylnaphthalene	9.88	142	3538630	76.82 ng		99
35)	4-Chloro-3-methylphenol	9.65	107	1701411	77.46 ng		99
37)	Hexachlorocyclopentadiene	10.21	237	1435952	88.95 ng		95
38)	2,4,6-Trichlorophenol	10.49	196	1228191	78.99 ng		96
39)	2,4,5-Trichlorophenol	10.55	196	1286284	77.66 ng		93
41)	2-Chloronapthalene	10.88	162	3368382	76.68 ng		96
42)	2-Nitroaniline	11.15	65	1169400	75.49 ng		98
43)	Acenaphthylene	11.75	152	5552999	78.81 ng		99
44)	Dimethylphthalate	11.63	163	4073880	76.28 ng		99
45)	2,6-Dinitrotoluene	11.72	165	964556	75.02 ng		92
46)	Acenaphthene	12.12	153	3364534	76.02 ng		99
47)	3-Nitroaniline	12.04	138	991616	74.40 ng	#	89
48)	2,4-Dinitrophenol	12.26	184	533284	102.33 ng		88
49)	Dibenzofuran	12.51	168	4679982	74.47 ng		100
50)	2,4-Dinitrotoluene	12.57	165	1466026	82.97 ng	#	51
51)	4-Nitrophenol	12.47	109	392709	75.30 ng	#	1
52)	Fluorene	13.34	166	3781323	76.49 ng		99
53)	4-Chlorophenyl phenyl ethe	13.43	204	1994007	76.16 ng		93
54)	Diethylphthalate	13.25	149	4016660	74.44 ng		99
55)	4-Nitroaniline	13.52	138	928154	82.33 ng		96
57)	4,6-Dinitro-2-methylphenol	13.59	198	836145	102.47 ng	#	56
58)	n-Nitrosodiphenylamine	13.76	169	2574847	77.21 ng		99
60)	Octachlorocyclopentene	13.99	307	993235	80.37 ng		91
61)	4-Bromophenyl phenyl ether	14.72	248	1283316	77.69 ng		91
62)	Hexachlorobenzene	14.78	284	1645207	76.85 ng	#	88
63)	Pentachlorophenol	15.33	266	933808	90.39 ng		99
64)	Phenanthrene	15.88	178	5110033	77.00 ng		99
65)	Anthracene	16.01	178	5526380	81.28 ng		99
66)	Carbazole	16.51	167	4772933	85.67 ng		99
67)	Di-n-butyl phthalate	17.68	149	6652531	74.04 ng		99
68)	Fluoranthene	19.04	202	5686984	83.00 ng		98
70)	Benzidine	19.51	184	968490	65.33 ng		99
71)	Pyrene	19.60	202	5621653	87.78 ng		98
73)	Butyl benzyl phthalate	21.59	149	2353821	74.62 ng		99

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\120BUH13.D
Acq On : 13 Aug 98 3:19 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 15:53 1998

Vial: 3
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
74) Benzo(a) anthracene	22.75	228	3924053	78.22 ng		100
75) Chrysene	22.83	228	3262071	64.50 ng		99
76) 3,3'-Dichlorobenzidine	22.78	252	1095961	70.17 ng		96
77) bis(2-Ethylhexyl) phthalat	23.17	149	3117565	71.33 ng	#	98
78) Di-n-octyl phthalate	24.75	149	3858626	61.58 ng		100
80) Benzo(b) fluoranthene	25.32	252	3214869	86.09 ng		95
81) Benzo(k) fluoranthene	25.38	252	2868500	81.78 ng		98
82) Benzo(a) pyrene	26.06	252	2566728	83.88 ng		99
83) Indeno (1,2,3-cd) pyrene	28.69	276	2020897	93.43 ng	#	92
84) Dibenz (ah) anthracene	28.77	278	1286821	55.64 ng		99
85) Benzo (ghi) perylene	29.28	276	1713082	78.10 ng		97

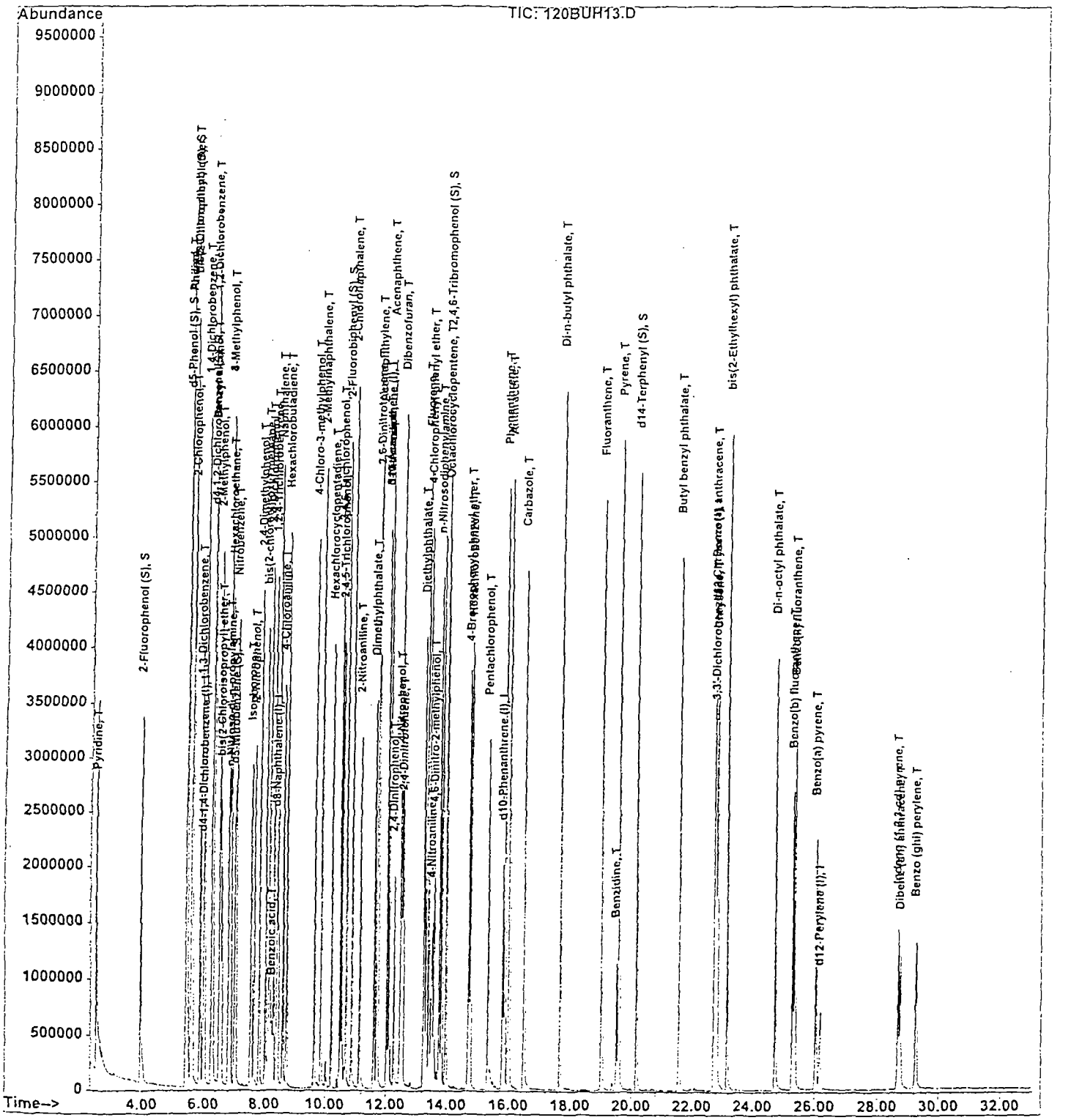
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\120BUH13.D
Acq On : 13 Aug 98 3:19 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 15:53 1998

Vial: 3
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Multiple Level Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\80BUH13.D
Acq On : 13 Aug 98 4:54 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 17:28 1998

Vial: 4
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.98	152	497516	40.00	ng	-0.01
21) d8-Naphthalene (I)	8.40	136	1798455	40.00	ng	0.00
36) d10-Acenapthene (I)	12.06	164	1100634	40.00	ng	0.00
56) d10-Phenanthrene (I)	15.80	188	1925332	40.00	ng	-0.01
69) d12-Chrysene (I)	22.79	240	1783046	40.00	ng	0.00
79) d12-Perylene (I)	26.19	264	829882	40.00	ng	-0.03
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.94	112	1069996	55.92	ng	-0.01
Surrogate Spike 150.000			Recovery = 37.28%			
5) d4-2-Chlorophenol (S)	5.59	132	1115225	53.88	ng	0.00
Surrogate Spike 150.000			Recovery = 35.92%			
8) d5-Phenol (S)	5.41	99	1372832	56.76	ng	0.02
Surrogate Spike 150.000			Recovery = 37.84%			
12) d4-1,2-Dichlorobenzene (S)	6.23	152	816592	52.58	ng	-0.01
Surrogate Spike 100.000			Recovery = 52.58%			
22) d5-Nitrobenzene (S)	7.01	82	1355658	56.85	ng	0.00
Surrogate Spike 100.000			Recovery = 56.85%			
40) 2-Fluorobiphenyl (S)	10.69	172	2340341	47.60	ng	-0.01
Surrogate Spike 100.000			Recovery = 47.60%			
59) 2,4,6-Tribromophenol (S)	13.98	330	465894	45.92	ng	0.00
Surrogate Spike 150.000			Recovery = 30.61%			
72) d14-Terphenyl (S)	20.19	244	2765245	47.79	ng	0.00
Surrogate Spike 100.000			Recovery = 47.79%			

Target Compounds						Qvalue
2) Pyridine	2.49	79	1063256	45.88	ng	95
4) Aniline	5.44	93	1749685	55.50	ng	95
6) 2-Chlorophenol	5.62	128	1264316	55.35	ng	95
7) bis(2-Chloroethyl) ether	5.59	93	1296403	58.93	ng	99
9) Phenol	5.44	94	1703116	61.38	ng	94
10) 1,3-Dichlorobenzene	5.86	146	1293082	52.06	ng	99
11) 1,4-Dichlorobenzene	6.01	146	1415438	54.80	ng	99
13) 1,2-Dichlorobenzene	6.27	146	1259958	52.50	ng	99
14) Benzyl alcohol	6.28	108	739331	54.06	ng	98
15) bis(2-Chloroisopropyl) eth	6.54	45	2554475	57.91	ng	# 100
16) 2-Methylphenol	6.49	108	1120778	56.63	ng	98
17) Hexachloroethane	6.88	117	680442	57.88	ng	88
18) n-Nitroso-di-n-propylamine	6.80	70	1007953	59.32	ng	99
19) 3-Methylphenol	6.80	108	1128705	28.95	ng	96
20) 4-Methylphenol	6.80	108	1128705	28.95	ng	96
23) Nitrobenzene	7.06	77	1391180	58.25	ng	97
24) Isophorone	7.54	82	2548107	56.57	ng	98

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\80BUH13.D
Acq On : 13 Aug 98 4:54 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 17:28 1998

Vial: 4
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
25) 2-Nitrophenol	7.65	139	669807	49.38 ng		94
26) 2,4-Dimethylphenol	7.82	107	1149985	49.22 ng		97
27) bis(2-chloroethoxy) methan	8.02	93	1628404	55.02 ng		99
28) 2,4-Dichlorophenol	8.14	162	983637	49.17 ng		97
29) 1,2,4-Trichlorobenzene	8.30	180	1121056	51.02 ng		99
30) Naphthalene	8.43	128	3446998	54.16 ng		100
31) Benzoic acid	8.20	122	553288	51.23 ng		96
32) 4-Chloroaniline	8.59	127	1459395	51.24 ng		100
33) Hexachlorobutadiene	8.72	225	653583	51.32 ng		100
34) 2-Methylnaphthalene	9.88	142	2277943	52.74 ng		100
35) 4-Chloro-3-methylphenol	9.65	107	1143429	55.52 ng		99
37) Hexachlorocyclopentadiene	10.22	237	847335	50.99 ng		97
38) 2,4,6-Trichlorophenol	10.49	196	732048	45.73 ng		96
39) 2,4,5-Trichlorophenol	10.56	196	788917	46.27 ng		96
41) 2-Chloronapthalene	10.88	162	2140584	47.34 ng		98
42) 2-Nitroaniline	11.15	65	816372	51.19 ng		98
43) Acenaphthylene	11.75	152	3589205	49.49 ng		99
44) Dimethylphthalate	11.62	163	2581693	46.96 ng		99
45) 2,6-Dinitrotoluene	11.72	165	660275	49.89 ng		92
46) Acenaphthene	12.12	153	2223798	48.81 ng		99
47) 3-Nitroaniline	12.04	138	640825	46.70 ng		96
48) 2,4-Dinitrophenol	12.27	184	312542	58.26 ng		91
49) Dibenzofuran	12.51	168	3110362	48.08 ng		99
50) 2,4-Dinitrotoluene	12.56	165	908433	49.94 ng		94
51) 4-Nitrophenol	12.48	109	275160	51.25 ng	#	1
52) Fluorene	13.35	166	2434662	47.84 ng		100
53) 4-Chlorophenyl phenyl ethe	13.43	204	1258434	46.69 ng		96
54) Diethylphthalate	13.25	149	2732390	49.19 ng		100
55) 4-Nitroaniline	13.51	138	610768	52.63 ng		97
57) 4,6-Dinitro-2-methylphenol	13.57	198	501516	59.83 ng	#	96
58) n-Nitrosodiphenylamine	13.77	169	1690707	49.35 ng		99
60) Octachlorocyclopentene	13.99	307	616607	48.57 ng		96
61) 4-Bromophenyl phenyl ether	14.72	248	807525	47.59 ng		95
62) Hexachlorobenzene	14.78	284	1046247	47.58 ng		91
63) Pentachlorophenol	15.33	266	546859	51.53 ng		96
64) Phenanthrene	15.88	178	3422544	50.21 ng		100
65) Anthracene	16.01	178	3649600	52.25 ng		99
66) Carbazole	16.51	167	3215998	56.19 ng		100
67) Di-n-butyl phthalate	17.69	149	4757697	51.55 ng		99
68) Fluoranthene	19.04	202	3951979	56.15 ng		99
70) Benzidine	19.53	184	588470	34.40 ng		99
71) Pyrene	19.61	202	4011172	47.87 ng		100
73) Butyl benzyl phthalate	21.59	149	1995563	48.35 ng		100

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\80BUH13.D
Acq On : 13 Aug 98 4:54 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 17:28 1998

Vial: 4
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
74) Benzo(a) anthracene	22.75	228	3302169	50.31 ng		100
75) Chrysene	22.85	228	2713227	41.00 ng		99
76) 3,3'-Dichlorobenzidine	22.80	252	889346	43.52 ng		97
77) bis(2-Ethylhexyl) phthalat	23.17	149	2631251	46.01 ng	#	99
78) Di-n-octyl phthalate	24.76	149	3276179	39.96 ng		99
80) Benzo(b) fluoranthene	25.32	252	2481680	55.66 ng		98
81) Benzo(k) fluoranthene	25.38	252	2563738	61.21 ng		99
82) Benzo(a) pyrene	26.06	252	2011212	55.04 ng		100
83) Indeno (1,2,3-cd) pyrene	28.71	276	1377224	53.32 ng	#	92
84) Dibenz (ah) anthracene	28.77	278	897348	32.49 ng		98
85) Benzo (ghi) perylene	29.29	276	1190228	45.44 ng		98

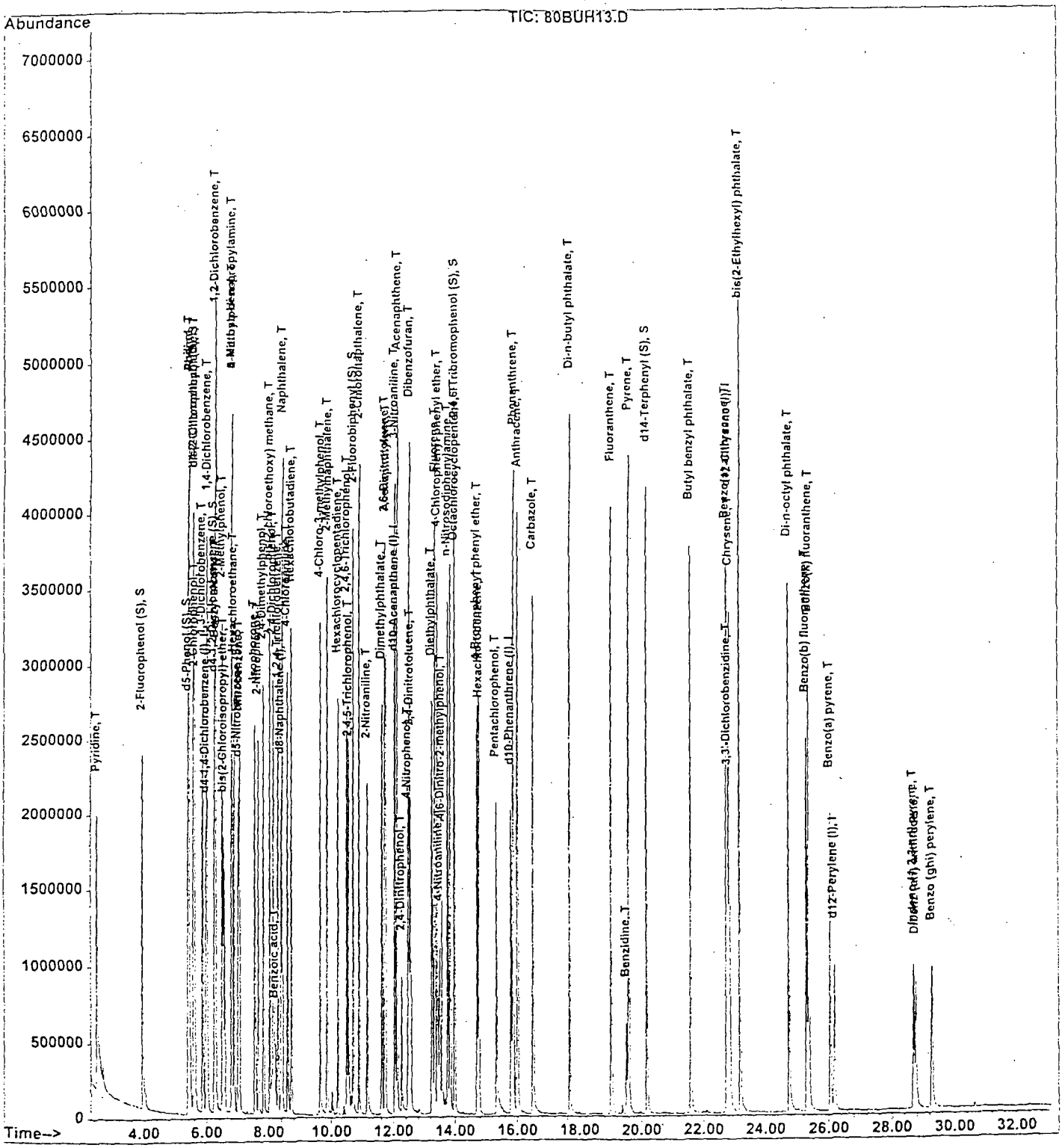
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\80BUH13.D
Acq On : 13 Aug 98 4:54 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 17:28 1998

Vial: 4
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Multiple Level Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH13.D
Acq On : 13 Aug 98 5:35 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 18:08 1998

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.98	152	463876	40.00	ng	-0.01
21) d8-Naphthalene (I)	8.38	136	1606332	40.00	ng	-0.01
36) d10-Acenapthene (I)	12.04	164	906703	40.00	ng	-0.01
56) d10-Phenanthrene (I)	15.78	188	1456267	40.00	ng	-0.03
69) d12-Chrysene (I)	22.75	240	1213115	40.00	ng	-0.03
79) d12-Perylene (I)	26.17	264	611216	40.00	ng	-0.04
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.94	112	579346	32.48	ng	-0.01
Surrogate Spike 150.000			Recovery = 21.65%			
5) d4-2-Chlorophenol (S)	5.57	132	673589	34.90	ng	-0.01
Surrogate Spike 150.000			Recovery = 23.27%			
8) d5-Phenol (S)	5.39	99	820823	36.40	ng	0.00
Surrogate Spike 150.000			Recovery = 24.27%			
12) d4-1,2-Dichlorobenzene (S)	6.23	152	536863	37.08	ng	-0.01
Surrogate Spike 100.000			Recovery = 37.08%			
22) d5-Nitrobenzene (S)	6.99	82	754921	35.45	ng	-0.01
Surrogate Spike 100.000			Recovery = 35.45%			
40) 2-Fluorobiphenyl (S)	10.69	172	1413590	34.90	ng	-0.01
Surrogate Spike 100.000			Recovery = 34.90%			
59) 2,4,6-Tribromophenol (S)	13.96	330	226885	29.56	ng	-0.01
Surrogate Spike 150.000			Recovery = 19.71%			
72) d14-Terphenyl (S)	20.17	244	1284911	32.64	ng	-0.01
Surrogate Spike 100.000			Recovery = 32.64%			

Target Compounds							Qvalue
2) Pyridine	2.47	79	699747	32.39	ng		89
4) Aniline	5.43	93	969044	32.97	ng		95
6) 2-Chlorophenol	5.60	128	752404	35.33	ng		93
7) bis(2-Chloroethyl) ether	5.57	93	780791	38.06	ng		95
9) Phenol	5.41	94	943292	36.46	ng		93
10) 1,3-Dichlorobenzene	5.86	146	830338	35.85	ng		98
11) 1,4-Dichlorobenzene	6.01	146	829093	34.43	ng		99
13) 1,2-Dichlorobenzene	6.27	146	782805	34.99	ng		99
14) Benzyl alcohol	6.27	108	398862	31.28	ng		97
15) bis(2-Chloroisopropyl) eth	6.52	45	1369700	33.30	ng	#	100
16) 2-Methylphenol	6.48	108	603601	32.71	ng		97
17) Hexachloroethane	6.86	117	382282	34.88	ng	#	76
18) n-Nitroso-di-n-propylamine	6.78	70	520925	32.88	ng		96
19) 3-Methylphenol	6.78	108	659733	18.15	ng		98
20) 4-Methylphenol	6.78	108	659733	18.15	ng		98
23) Nitrobenzene	7.04	77	744423	34.90	ng		95
24) Isophorone	7.52	82	1398358	34.76	ng		100

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH13.D
Acq On : 13 Aug 98 5:35 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 18:08 1998

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
25) 2-Nitrophenol	7.65	139	377911	31.19 ng		92
26) 2,4-Dimethylphenol	7.80	107	637886	30.56 ng		98
27) bis(2-chloroethoxy) methan	8.01	93	945926	35.78 ng		98
28) 2,4-Dichlorophenol	8.12	162	578651	32.38 ng		98
29) 1,2,4-Trichlorobenzene	8.28	180	673367	34.31 ng		96
30) Naphthalene	8.43	128	2083706	36.66 ng		99
31) Benzoic acid	8.09	122	201168	20.85 ng		95
32) 4-Chloroaniline	8.59	127	823152	32.36 ng		99
33) Hexachlorobutadiene	8.72	225	407668	35.84 ng		99
34) 2-Methylnaphthalene	9.86	142	1288927	33.41 ng		99
35) 4-Chloro-3-methylphenol	9.64	107	572617	31.13 ng		98
37) Hexachlorocyclopentadiene	10.20	237	446225	32.60 ng		96
38) 2,4,6-Trichlorophenol	10.48	196	383932	29.12 ng		98
39) 2,4,5-Trichlorophenol	10.54	196	441124	31.41 ng		96
41) 2-Chloronapthalene	10.86	162	1242674	33.36 ng		96
42) 2-Nitroaniline	11.12	65	357895	27.24 ng		94
43) Acenaphthylene	11.74	152	1959848	32.80 ng		99
44) Dimethylphthalate	11.61	163	1362758	30.09 ng		99
45) 2,6-Dinitrotoluene	11.69	165	340256	31.21 ng		91
46) Acenaphthene	12.11	153	1210336	32.25 ng		98
47) 3-Nitroaniline	12.01	138	294112	26.02 ng		92
48) 2,4-Dinitrophenol	12.25	184	71226	16.12 ng	#	68
49) Dibenzofuran	12.49	168	1681594	31.55 ng		93
50) 2,4-Dinitrotoluene	12.54	165	446678	29.81 ng		87
51) 4-Nitrophenol	12.45	109	105573	23.87 ng	#	1
52) Fluorene	13.32	166	1244654	29.69 ng		98
53) 4-Chlorophenyl phenyl ethe	13.41	204	677970	30.53 ng		94
54) Diethylphthalate	13.24	149	1392089	30.42 ng		99
55) 4-Nitroaniline	13.45	138	246170	25.75 ng		93
57) 4,6-Dinitro-2-methylphenol	13.54	198	177962	28.07 ng	#	56
58) n-Nitrosodiphenylamine	13.74	169	846688	32.68 ng		97
60) Octachlorocyclopentene	13.98	307	308659	32.15 ng		97
61) 4-Bromophenyl phenyl ether	14.70	248	415801	32.40 ng		92
62) Hexachlorobenzene	14.75	284	542770	32.63 ng	#	83
63) Pentachlorophenol	15.32	266	225878	28.14 ng		99
64) Phenanthrene	15.85	178	1697348	32.92 ng		100
65) Anthracene	15.99	178	1746607	33.06 ng		99
66) Carbazole	16.49	167	1499246	34.63 ng		99
67) Di-n-butyl phthalate	17.67	149	2199668	31.51 ng		99
68) Fluoranthene	19.01	202	1815419	34.10 ng		98
70) Benzidine	19.51	184	207782	21.50 ng	#	98
71) Pyrene	19.58	202	1882265	33.02 ng		98
73) Butyl benzyl phthalate	21.58	149	809614	28.83 ng		99

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH13.D
Acq On : 13 Aug 98 5:35 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 18:08 1998

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
74)	Benzo(a) anthracene	22.74	228	1462697	32.75 ng		100
75)	Chrysene	22.82	228	1189883	26.43 ng		99
76)	3,3'-Dichlorobenzidine	22.79	252	320287	23.03 ng		99
77)	bis(2-Ethylhexyl) phthalat	23.16	149	1081968	27.81 ng	#	99
78)	Di-n-octyl phthalate	24.74	149	1259863	22.59 ng		99
80)	Benzo(b) fluoranthene	25.30	252	1115548	33.97 ng		97
81)	Benzo(k) fluoranthene	25.37	252	1089693	35.32 ng		99
82)	Benzo(a) pyrene	26.05	252	942058	35.00 ng		99
83)	Indeno (1,2,3-cd) pyrene	28.69	276	576630	30.31 ng	#	99
84)	Dibenz (ah) anthracene	28.76	278	450348	22.14 ng		99
85)	Benzo (ghi) perylene	29.27	276	652425	33.82 ng		98

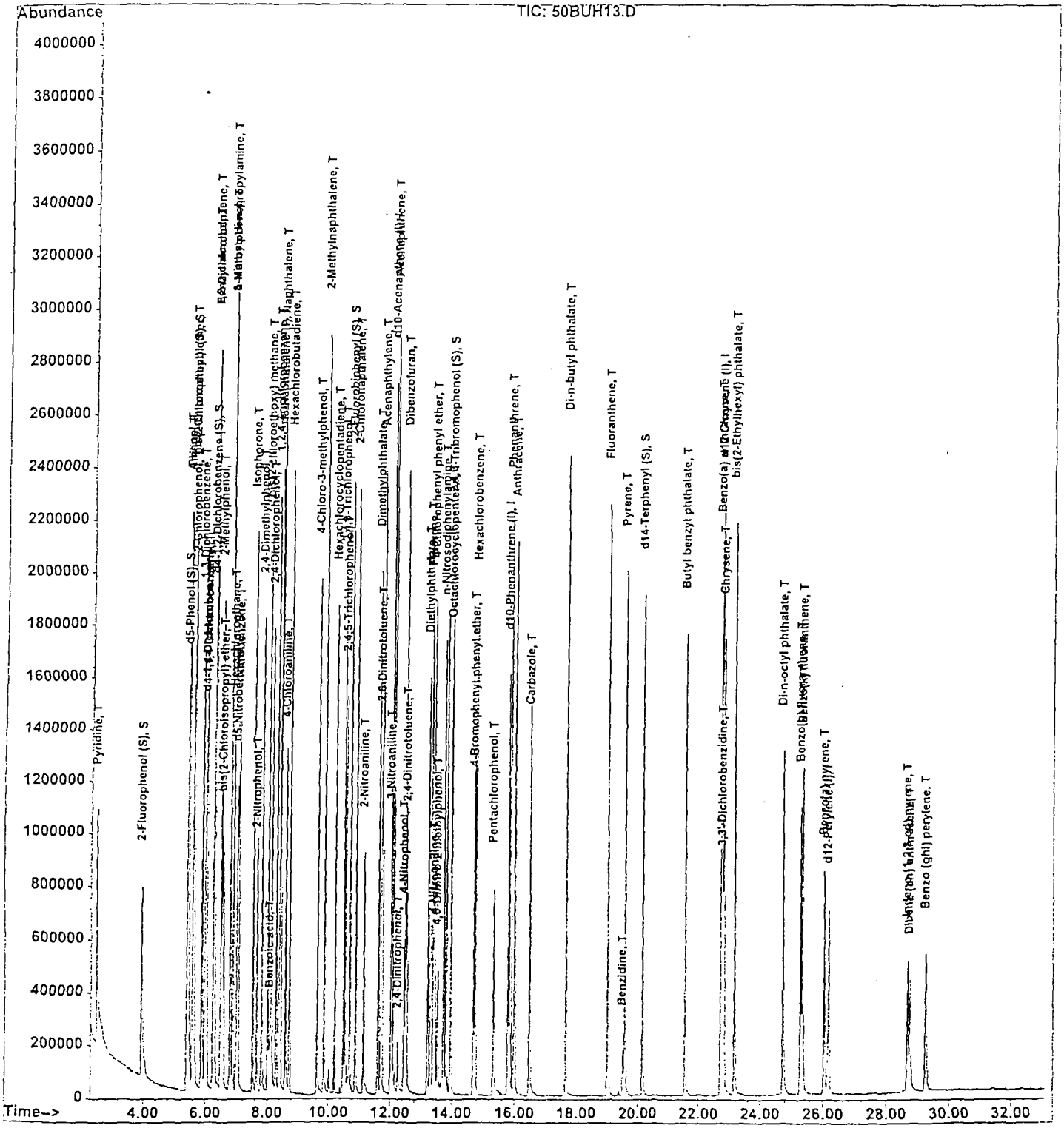
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\50BUH13.D
Acq On : 13 Aug 98 5:35 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 18:08 1998

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10BUH13.D
Acq On : 13 Aug 98 6:15 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:19 1998

Vial: 6
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.97	152	469072	40.00 ng	-0.02
21) d8-Naphthalene (I)	8.37	136	1645671	40.00 ng	-0.02
36) d10-Acenapthene (I)	12.04	164	887683	40.00 ng	-0.02
56) d10-Phenanthrene (I)	15.80	188	1513481	40.00 ng	-0.02
69) d12-Chrysene (I)	22.75	240	1162248	40.00 ng	-0.03
79) d12-Perylene (I)	26.17	264	628675	40.00 ng	-0.05
System Monitoring Compounds					
3) 2-Fluorophenol (S)	3.94	112	103982	5.76 ng	-0.02
Surrogate Spike 150.000			Recovery	= 3.84%	
5) d4-2-Chlorophenol (S)	5.57	132	124949	6.40 ng	-0.02
Surrogate Spike 150.000			Recovery	= 4.27%	
8) d5-Phenol (S)	5.37	99	151532	6.64 ng	-0.02
Surrogate Spike 150.000			Recovery	= 4.43%	
12) d4-1,2-Dichlorobenzene (S)	6.23	152	111614	7.62 ng	-0.02
Surrogate Spike 100.000			Recovery	= 7.62%	
22) d5-Nitrobenzene (S)	6.99	82	140148	6.42 ng	-0.02
Surrogate Spike 100.000			Recovery	= 6.42%	
40) 2-Fluorobiphenyl (S)	10.68	172	284800	7.18 ng	-0.02
Surrogate Spike 100.000			Recovery	= 7.18%	
59) 2,4,6-Tribromophenol (S)	13.96	330	35524	4.45 ng	-0.02
Surrogate Spike 150.000			Recovery	= 2.97%	
72) d14-Terphenyl (S)	20.17	244	227476	6.03 ng	-0.02
Surrogate Spike 100.000			Recovery	= 6.03%	

Target Compounds						Qvalue
2) Pyridine	2.53	79	91868	4.20 ng	#	80
4) Aniline	5.42	93	172065	5.79 ng		95
6) 2-Chlorophenol	5.60	128	139131	6.46 ng		93
7) bis(2-Chloroethyl) ether	5.55	93	153159	7.38 ng		99
9) Phenol	5.39	94	172841	6.61 ng	#	12
10) 1,3-Dichlorobenzene	5.86	146	161978	6.92 ng		97
11) 1,4-Dichlorobenzene	5.99	146	181625	7.46 ng		98
13) 1,2-Dichlorobenzene	6.26	146	169482	7.49 ng		98
14) Benzyl alcohol	6.26	108	64378	4.99 ng		96
15) bis(2-Chloroisopropyl) eth	6.52	45	284105	6.83 ng	#	100
16) 2-Methylphenol	6.47	108	112227	6.01 ng		91
17) Hexachloroethane	6.86	117	80137	7.23 ng	#	80
18) n-Nitroso-di-n-propylamine	6.76	70	88586	5.53 ng		99
19) 3-Methylphenol	6.76	108	117010	3.18 ng		83
20) 4-Methylphenol	6.76	108	117010	3.18 ng		83
23) Nitrobenzene	7.02	77	135023	6.18 ng		95
24) Isophorone	7.50	82	273457	6.63 ng		99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10BUH13.D
Acq On : 13 Aug 98 6:15 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:19 1998

Vial: 6
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
25) 2-Nitrophenol	7.63	139	58812	4.74 ng		92
26) 2,4-Dimethylphenol	7.79	107	117054	5.47 ng		99
27) bis(2-chloroethoxy) methan	8.00	93	171046	6.32 ng		98
28) 2,4-Dichlorophenol	8.12	162	106863	5.84 ng		96
29) 1,2,4-Trichlorobenzene	8.28	180	139310	6.93 ng		98
30) Naphthalene	8.41	128	417853	7.18 ng		98
32) 4-Chloroaniline	8.58	127	140023	5.37 ng		99
33) Hexachlorobutadiene	8.71	225	85505	7.34 ng		98
34) 2-Methylnaphthalene	9.86	142	262718	6.65 ng		97
35) 4-Chloro-3-methylphenol	9.63	107	97159	5.16 ng		98
37) Hexachlorocyclopentadiene	10.20	237	77782	5.80 ng		95
38) 2,4,6-Trichlorophenol	10.47	196	63812	4.94 ng		99
39) 2,4,5-Trichlorophenol	10.54	196	79245	5.76 ng		95
41) 2-Chloronapthalene	10.86	162	259123	7.11 ng		98
42) 2-Nitroaniline	11.12	65	48068	3.74 ng		94
43) Acenaphthylene	11.73	152	386780	6.61 ng		99
44) Dimethylphthalate	11.58	163	278820	6.29 ng		99
45) 2,6-Dinitrotoluene	11.68	165	56484	5.29 ng		91
46) Acenaphthene	12.10	153	258690	7.04 ng		99
47) 3-Nitroaniline	12.00	138	39915	3.61 ng	#	92
49) Dibenzofuran	12.49	168	343000	6.57 ng	#	81
50) 2,4-Dinitrotoluene	12.52	165	64899	4.42 ng	#	98
52) Fluorene	13.31	166	255792	6.23 ng		99
53) 4-Chlorophenyl phenyl ethe	13.41	204	138437	6.37 ng		93
54) Diethylphthalate	13.21	149	262688	5.86 ng		97
55) 4-Nitroaniline	13.42	138	25682	2.74 ng		94
58) n-Nitrosodiphenylamine	13.73	169	158591	5.89 ng		99
60) Octachlorocyclopentene	13.97	307	62661	6.28 ng		92
61) 4-Bromophenyl phenyl ether	14.70	248	79304	5.95 ng		97
62) Hexachlorobenzene	14.75	284	111684	6.46 ng	#	82
64) Phenanthrene	15.84	178	336294	6.28 ng		99
65) Anthracene	15.97	178	337541	6.15 ng		99
66) Carbazole	16.47	167	257985	5.73 ng		98
67) Di-n-butyl phthalate	17.67	149	376476	5.19 ng		99
68) Fluoranthene	19.01	202	341657	6.18 ng		99
70) Benzidine	19.51	184	18999	8.91 ng		97
71) Pyrene	19.57	202	333973	6.11 ng		99
73) Butyl benzyl phthalate	21.57	149	108093	4.02 ng		99
74) Benzo(a) anthracene	22.73	228	261442	6.11 ng		99
75) Chrysene	22.81	228	239448	5.55 ng		99
76) 3,3'-Dichlorobenzidine	22.76	252	24482	1.84 ng	#	95
77) bis(2-Ethylhexyl) phthalat	23.15	149	139344	3.74 ng	#	100
78) Di-n-octyl phthalate	24.73	149	134146	2.51 ng		98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\10BUH13.D
Acq On : 13 Aug 98 6:15 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:19 1998

Vial: 6
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
80) Benzo(b) fluoranthene	25.28	252	174267	5.16 ng		99
81) Benzo(k) fluoranthene	25.35	252	233222	7.35 ng		98
82) Benzo(a) pyrene	26.02	252	145256	5.25 ng		99
83) Indeno (1,2,3-cd) pyrene	28.67	276	107044	5.47 ng	#	90
84) Dibenz (ah) anthracene	28.75	278	63112	3.02 ng		94
85) Benzo (ghi) perylene	29.25	276	112485	5.67 ng		97

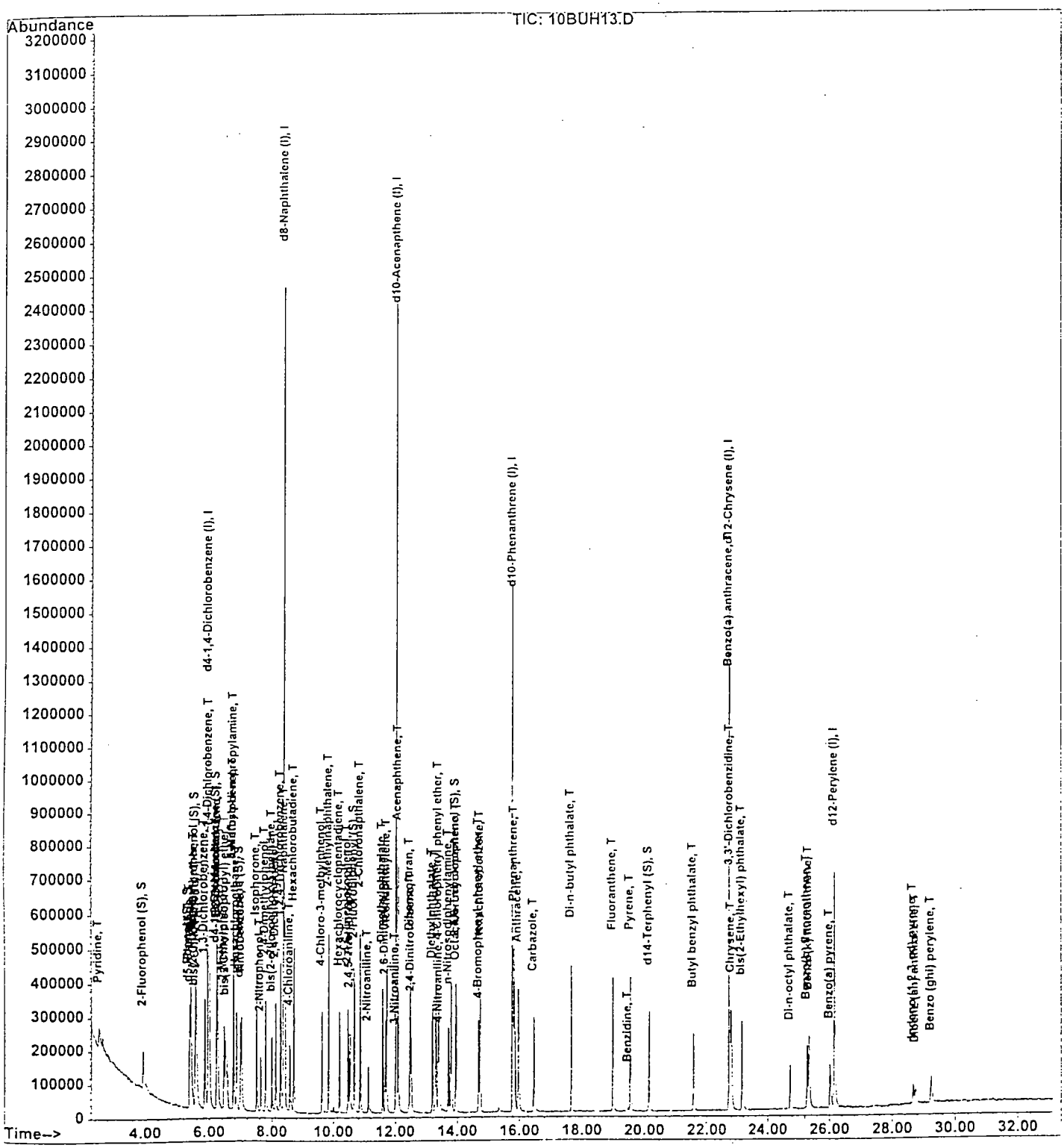
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\10BUH13.D
Acq On : 13 Aug 98 6:15 pm
Sample :
Misc : 8-13-98U
Quant Time: Aug 13 20:19 1998

Vial: 6
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Tue Aug 11 21:48:35 1998
Response via : Multiple Level Calibration



Safety-Kleen / Encotec
GC/MS Semivolatile Analysis

Standard ID's: MB195D:MB202D-MB206D
Reference Std : 50BUH18.D
Instrument ID: 5970-021
GC Column : DB-5MS CAP 30 M, 0.25 mm, 0.25u

Run ID : 8-18-98U
Date : 8/18/1998
Tape Number : 7-98-U
Operator : JLF
Multiplier : 2176

	Client	Batch	Time	File Name	Type	Matrix	Dilution	Factor	Rerun	Sample ID
1	ENCOTEC	10000	11:39	DFTH18U	TUNE	N/A	N/A	N/A		Breakdown = 0.5%
2	ENCOTEC	10000	12:20	50BUH18	STD	N/A	N/A	N/A		
3	ENCOTEC	10000	13:00	50IXH18U	STD	N/A	N/A	N/A		
4	ENCOTEC	10000	13:41	89892LCS	LCS	WATER	500 ul Sample + 5 uL IS	1/1		
5	ENCOTEC	10000	14:21	89982LCD	LCD	WATER	500 ul Sample + 5 uL IS	1/1		
6	GLD	13160	15:02	91529B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1	B	
7	ENCOTEC	10000	15:42	91529BM	MS	WATER	500 ul Sample + 5 uL IS	1/1	B	
8	ENCOTEC	10000	16:23	91529BD	MSD	WATER	500 ul Sample + 5 uL IS	1/1	B	
9	ENCOTEC	10000	17:03	89720MB	BLANK	MED. LE	500 ul Sample + 5 uL IS	1/1	B	LMBH181A
10	ENCOTEC	10000	17:44	89895LCS	LCS	MED. LE	500 ul Sample + 5 uL IS	1/1		LCMH181A
11	EEI	13219	18:24	91983DL	SAMPLE	MED. LE	100 ul Sample + 400 ul + 5 uL IS	1/5	C	
12	GMR	13199	20:26	91871DL	SAMPLE	MED. LE	100 ul Sample + 400 ul + 5 uL IS	1/5	B	
13	CON	13134	21:07	91413B	SAMPLE	SOIL	500 ul Sample + 5 uL IS	1/1		
14	CON	13134	21:47	91414B	SAMPLE	SOIL	500 ul Sample + 5 uL IS	1/1		
15	CON	13134	22:28	91415B	SAMPLE	SOIL	500 ul Sample + 5 uL IS	1/1		
16	CON	13134	23:08	91416B	SAMPLE	SOIL	500 ul Sample + 5 uL IS	1/1		

	IS1	RT	IS2	RT	IS3	RT	IS4	RT	IS5	RT	IS6	RT
Upper Limit	992542	6.50	3521156	8.92	2123038	12.58	3830082	16.36	3763294	23.33	2350012	26.77
Lower Limit	248136	5.50	880289	7.92	530760	11.58	957521	15.36	940824	22.33	587503	25.77

Re- Analysis Codes: A) Surrogates B) EICP's C) Dilution D) Carry-Over

Generated 8/19/98 10:27:26 AM

BNA INTERNAL STANDARD AREA and RT SUMMARY

Reference Std. 50BUH18 SDG No. EE-WC-98H2

Instrument ID 021 GC Column: DB-5 CAP 0.32mm, 30M

Date/Time Analyzed: 8/18/98 / 12 : 20 ~~am~~ pm

		IS_1 (DCB) Area	#	RT	#	IS_2 (NPT) Area	#	RT	#	IS_3 (ANT) Area	#	RT	#
12-Hour Standard	Upper Limit	992542		6.50		3521156		8.92		2123038		12.58	
	Lower Limit	248136		5.50		880289		7.92		530760		11.58	
Sample Number	Sample ENCOTEC ID												
1	89720MB	454816		5.99		1611289		8.41		941986		12.07	
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

IS_1 (DCB) = 1,4 -Dichlorobenzene-d_4

IS_2 (NPT) = Naphthalene-d_8

IS_3 (ANT) = Acenaphthalene-d_{10}

Column is used to flag values outside QC limits.

* Value is outside QC limits.

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

BNA INTERNAL STANDARD AREA and RT SUMMARY

Reference Std. 50 BUH18 SDG No. EE-WC-98H2

Instrument ID 021 GC Column: DB-5 CAP 0.32mm, 30M

Date/Time Analyzed: 8/18/98 / 12 : 20 ~~am~~ pm

		IS$_4$ (PHN) Area	#	RT	#	IS$_5$ (CRY) Area	#	RT	#	IS$_6$ (PRY) Area	#	RT	#
12-Hour Standard	Upper Limit	3830082		16.36		3763294		23.33		2350012		26.77	
	Lower Limit	957521		15.36		940824		22.33		587503		25.77	
Sample ENCOTEC ID													
1	89720MB	1700943		15.84		1213013		22.81		500058	*	26.25	
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

Sample Number

IS$_4$ (PHN) = Phenanthrene-d_{10}
IS$_5$ (CRY) = Chrysene-d_{12}
IS$_6$ (PRY) = Perylene-d_{12}

Column is used to flag values outside QC limits.
* Value is outside QC limits.

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

C

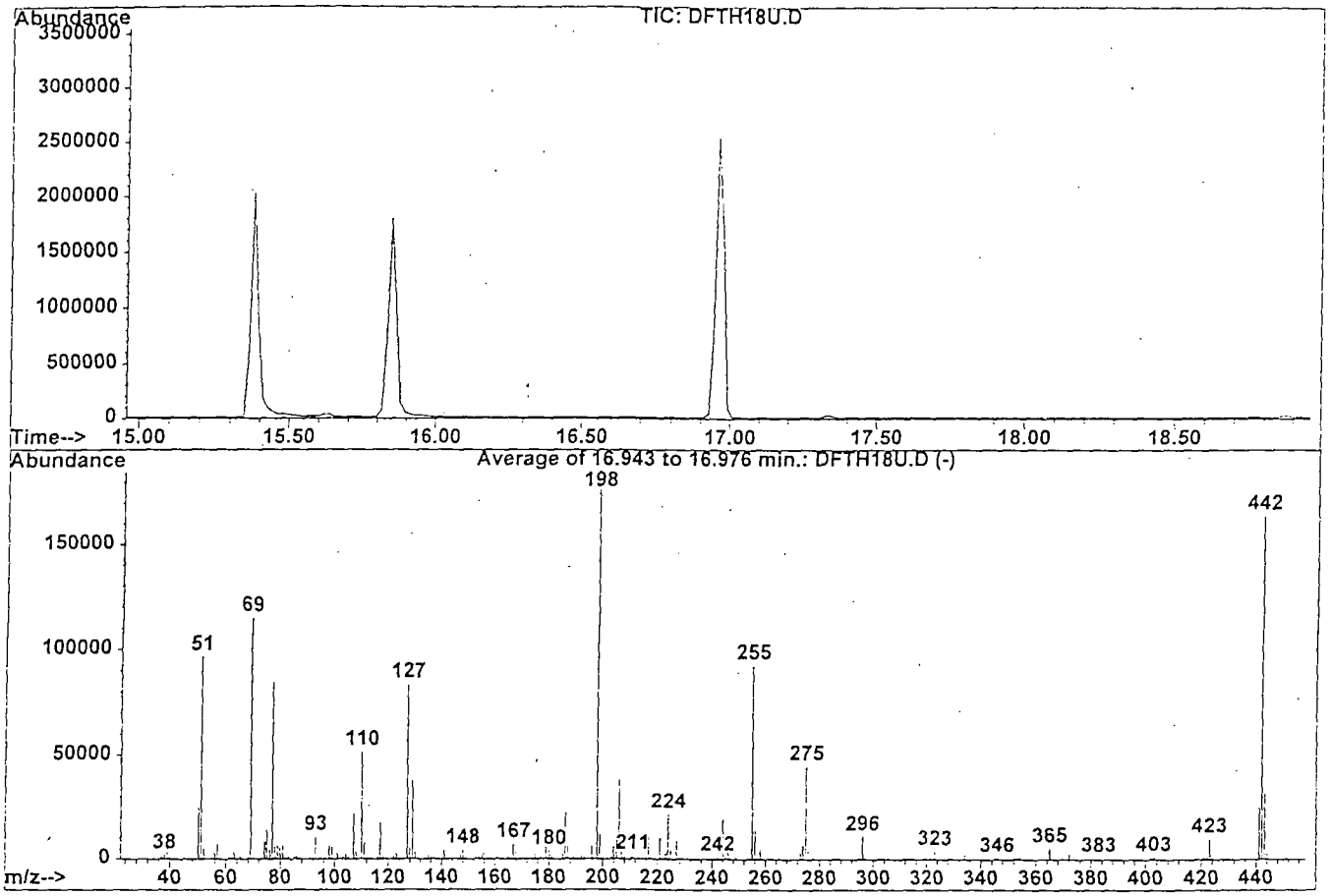
1342

DFTPP - EPA TUNE

Data File : C:\HPCHEM\1\DATA\DFTH18U.D
Acq On : 18 Aug 98 11:39 am
Sample :
Misc : 8-18-98U

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :



AutoFind: Scans 910, 911, 912; Background Corrected with Scan 906

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.8	96635	PASS
68	69	0.00	2	1.1	1241	PASS
69	198	0.00	100	65.2	114992	PASS
70	69	0.00	2	0.4	496	PASS
127	198	40	60	47.5	83805	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	176363	PASS
199	198	5	9	6.9	12235	PASS
275	198	10	30	25.7	45375	PASS
365	198	1	100	3.1	5468	PASS
441	443	0.01	100	78.8	25029	PASS
442	198	40	100	93.0	164045	PASS
443	442	17	23	19.4	31771	PASS

DFTH18U.D BNAHSL.M Tue Aug 18 13:02:36 1998

Average of 16.943 to 16.976 min.: DFTH18U.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	123	49.15	705	61.85	369	74.05	8533
36.95	1072	50.05	25096	62.05	1031	74.95	14259
38.00	1991	51.05	96635	63.05	3342	76.05	4560
39.00	10796	52.05	5182	64.00	698	77.05	84651
39.95	948	53.05	182	65.10	1600	78.05	6238
40.70	174	54.90	705	66.55	179	78.95	6979
41.00	412	55.95	3090	68.00	1241	79.95	5602
42.10	220	57.00	7255	68.95	114992	80.95	6535
42.60	257	57.95	272	70.00	496	81.95	1608
44.00	160	60.95	339	71.95	265	82.95	1490
45.00	222	61.15	769	73.10	704	85.00	1177

Average of 16.943 to 16.976 min.: DFTH18U.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
86.00	1983	100.10	496	111.95	1011	125.55	263
87.05	1022	101.00	3422	112.90	170	127.05	83805
88.00	372	103.00	1439	115.00	183	128.05	7178
91.00	1598	104.00	2576	116.00	1412	129.00	38373
92.00	1720	105.00	1710	116.95	17956	130.00	3192
93.00	10703	106.10	295	117.95	1387	131.05	572
94.00	777	107.00	22382	118.90	243	131.95	216
96.10	295	108.00	3733	121.90	1726	133.95	1175
96.80	225	109.00	323	122.90	2775	135.00	2875
98.00	6753	110.00	51877	124.00	1168	136.00	1165
99.00	6115	111.00	8166	125.05	1224	137.00	1458

Average of 16.943 to 16.976 min.: DFTH18U.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
139.05	249	151.00	614	161.80	451	173.95	1639
140.05	219	152.05	187	162.00	277	175.00	2739
140.95	4457	152.90	1641	165.00	1587	176.00	1112
141.95	1789	153.95	1300	166.00	1443	177.00	1687
142.85	803	155.00	2245	167.00	7277	177.95	445
144.75	171	155.95	2947	168.00	4099	178.95	6209
145.95	612	156.95	991	169.00	833	180.00	3994
147.00	2568	158.00	698	170.00	207	180.95	2107
147.95	4485	158.95	797	171.20	177	181.90	249
148.90	1036	159.95	1249	172.00	821	184.05	481
150.05	216	160.95	2014	173.05	980	185.00	2959

Average of 16.943 to 16.976 min.: DFTH18U.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
186.00	22313	198.95	12235	210.65	487	225.05	5321
186.95	6440	199.95	902	211.05	1708	226.05	368
188.05	932	201.45	590	211.25	498	226.95	9190
188.95	1092	201.70	550	215.05	201	227.95	1379
190.80	332	203.05	1179	215.95	883	228.95	1952
191.95	1868	204.05	6078	216.95	10939	231.00	798
193.00	1805	205.05	9319	217.95	1145	234.05	238
193.95	447	206.05	38707	221.00	10848	235.00	603
194.95	449	207.05	5417	222.05	180	235.75	179
196.00	6417	208.00	1410	222.95	2985	235.95	206
197.90	176363	210.10	605	224.00	21844	236.95	506

Average of 16.943 to 16.976 min.: DFTH18U.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
239.00	167	255.00	92963	277.00	3416	314.05	571
240.00	197	256.00	14424	277.95	421	314.95	1147
240.90	320	256.95	1146	282.95	423	315.95	621
242.05	1346	258.00	5168	285.00	652	321.05	372
243.00	1279	258.95	622	292.95	732	323.00	4211
244.00	19562	264.95	1795	294.85	234	323.95	664
245.00	2611	272.10	177	295.95	11294	327.00	725
246.00	3307	272.95	3450	296.95	1378	327.90	239
246.90	525	273.95	7416	301.85	191	332.00	184
248.95	928	275.05	45375	303.00	1192	333.00	517
253.05	491	276.00	5988	304.00	357	334.00	2423

Average of 16.943 to 16.976 min.: DFTH18U.D

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
335.00	581	372.95	802	439.05	215		
341.00	326	382.90	811	441.05	25029		
345.95	787	389.90	180	442.05	164045		
352.10	1006	390.90	196	443.05	31771		
353.00	853	401.95	757	444.05	2955		
354.00	1316	402.95	1282	444.95	182		
355.05	178	404.00	520				
364.95	5468	420.95	1242				
365.85	644	422.00	1187				
370.95	307	423.00	10084				
372.00	2578	423.95	1813				

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\DFTH18U.D
Acq On : 18 Aug 98 11:39 am
Sample :
Misc : 8-18-98U
Quant Time: Aug 18 12:12 1998

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: DFTPP.RES

Quant Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\DFTG29U.D
DataAcq Meth : DFTPP

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.99	152	402676	40.00 ng	0.00
2) d8-Naphthalene (I)	8.41	136	1421395	40.00 ng	0.00
3) d10-Acenaphthene (I)	12.09	164	847477	40.00 ng	0.00
5) d10-Phenanthrene (I)	15.85	188	1476574	40.00 ng	-0.01
10) d12-Chrysene (I)	22.82	240	1343998	40.00 ng	-0.01
11) d12-Perylene (I)	26.27	264	960566	40.00 ng	0.00

System Monitoring Compounds

Target Compounds					Qvalue
4) Pentachlorophenol	15.38	266	496873	74.53 ng	99
6) Benzidine	19.59	184	1685681	56.19 ng #	93
7) 4,4'-DDE	0.00	246		N.D.	
8) 4,4'-DDD	20.98	235	5966	12.41 ng	100
9) 4,4'-DDT	21.77	235	1269331	85.93 ng	100

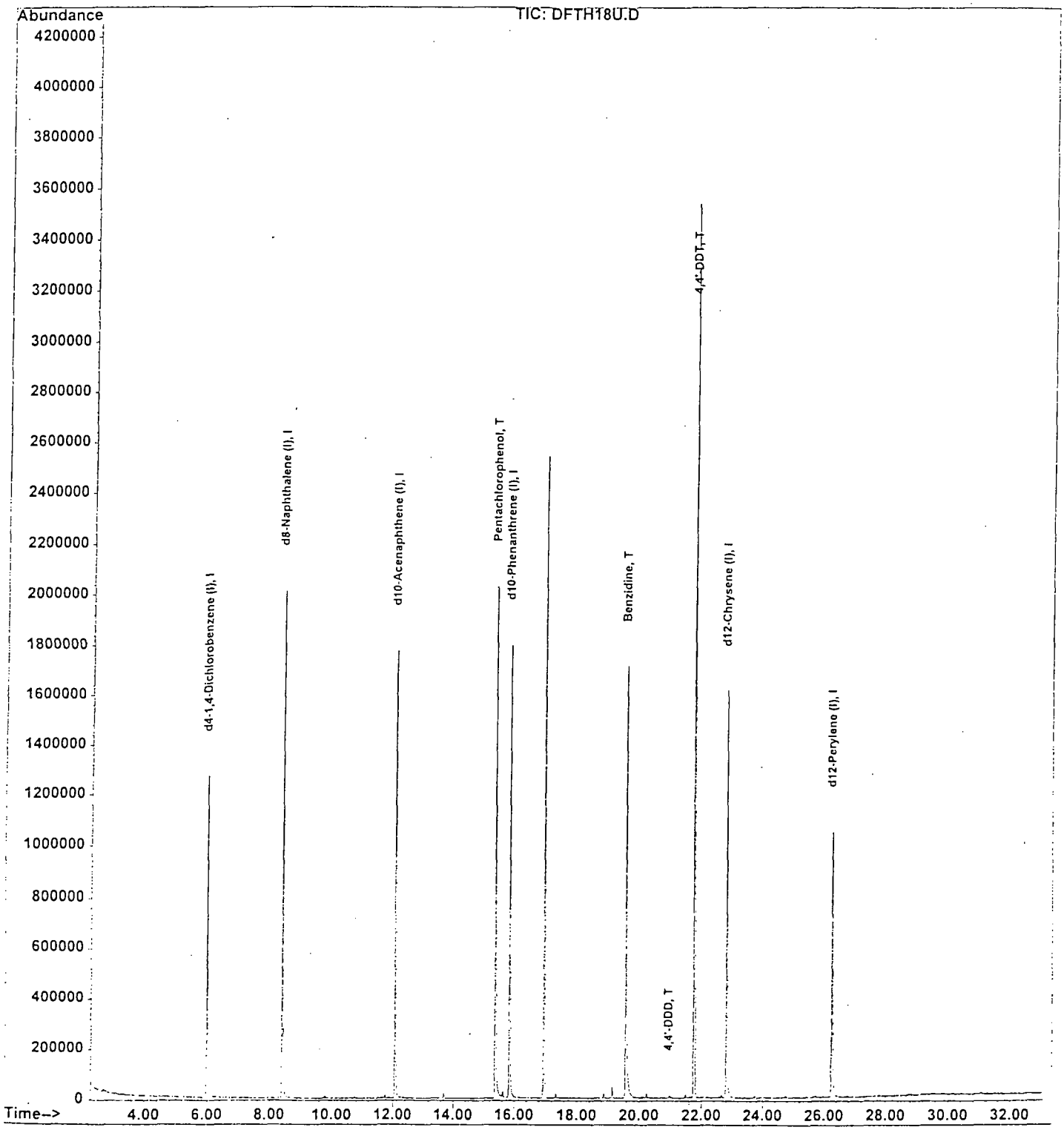
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DFTH18U.D
Acq On : 18 Aug 98 11:39 am
Sample :
Misc : 8-18-98U
Quant Time: Aug 18 12:12 1998

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: DFTPP.RES

Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Single Level Calibration



ENCOTEC GC/MS SEMIVOLATILE 5 WAY CALIBRATION

Instrument ID: 5970-021
Initial Calibration Date:
Continuing Calibration Date:
Continuing File Name: 50BUH18.D

STD	FILE:	STD	FILE:	STD	FILE:
160	160BUH13.D	80	80BUH13.D	10	10BUH13.D
120	120BUH13.D	50	50BUH13.D		

Compound	10	50	80	120	160	RF avg.	% RSD	RF Cont	Cont Rec	% Drift	CCC/SPCC
Phenol	1.474	1.627	1.712	1.417	1.558	1.557	7.5		50.63	1.3	*
1,4-Dichlorobenzene	1.549	1.430	1.423	1.400	1.274	1.415	6.9		52.13	4.3	*
n-Nitroso-di-n-propylamine	0.755	0.898	1.013	0.932	0.763	0.872		0.929			**
2-Nitrophenol	0.143	0.188	0.186	0.193	0.210	0.184	13		50.00	0.00	*
2,4-Dichlorophenol	0.260	0.288	0.273	0.287	0.278	0.277	4.1		52.38	4.8	*
Hexachlorobutadiene	0.208	0.203	0.182	0.187	0.185	0.193	6.1		52.10	4.2	*
4-Chloro-3-methylphenol	0.236	0.285	0.318	0.296	0.261	0.279	11		54.21	8.4	*
Hexachlorocyclopentadiene	0.350	0.394	0.385	0.448	0.443	0.404		0.385			**
2,4,6-Trichlorophenol	0.288	0.339	0.333	0.383	0.377	0.344	11		51.30	2.6	*
Acenaphthene	1.166	1.068	1.010	1.049	1.015	1.062	5.9		50.96	1.9	*
2,4-Dinitrophenol	--------	0.063	0.142	0.166	0.195	0.142		0.096			**
4-Nitrophenol	--------	0.093	0.125	0.122	0.143	0.121		0.120			**
n-Nitrosodiphenylamine	0.419	0.465	0.439	0.458	0.431	0.443	4.3		51.70	3.4	*
Pentachlorophenol	--------	0.124	0.142	0.166	0.155	0.147	12		44.57	11	*
Fluoranthene	0.903	0.997	1.026	1.011	0.907	0.969	6.1		54.59	9.2	*
Di-n-octyl phthalate	0.462	0.831	0.919	0.944	1.022	0.835	26		52.46	4.9	*
Benzo(a) pyrene	0.924	1.233	1.212	1.231	1.241	1.168	12		52.17	4.3	*

* = CCC - Calibration Check Compound: %RSD < 30 for initial calibration; % Diff. < 20.0 for continuing calibration.

** = SPCC - System Performance Check Compound: Minimum avg. RF > .050 for initial calibration, RF > 0.050 for continuing calibration

% RSD = Relative Standard Deviation

% Drift = (Cont. Cal. Std Conc. - Recovery Conc.) / Cont. Cal. Std. Conc. Rec. x 100

EICPS:

IS1	RT1	IS2	RT2	IS3	RT3	IS4	RT4	IS5	RT5	IS6	RT6
992542	6.50	3521156	8.92	2123038	12.58	3830082	16.36	3763294	23.33	2350012	26.77
248136	5.50	880289	7.92	530760	11.58	957521	15.36	940824	22.33	587503	25.77

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BUH18.D
Acq On : 18 Aug 98 12:20 pm
Sample :
Misc : 8-18-98U

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	d4-1,4-Dichlorobenzene (I)	1.000	1.000	0.0	107	0.03
2	T	Pyridine	1.032	1.426	-38.2#	126	-0.03
3	S	2-Fluorophenol (S)	1.013	0.998	1.5	107	0.03
4	T	Aniline	1.621	1.655	-2.1	106	0.05
5	S	d4-2-Chlorophenol (S)	1.095	1.149	-4.9	106	0.05
6	T	2-Chlorophenol	1.235	1.217	1.5	100	0.03
7	T	bis(2-Chloroethyl) ether	1.261	1.271	-0.8	101	0.05
8	S	d5-Phenol (S)	1.335	1.334	0.1	101	0.05
9	T	Phenol	1.557	1.577	-1.3	104	0.06
10	T	1,3-Dichlorobenzene	1.348	1.352	-0.3	101	0.03
11	T	1,4-Dichlorobenzene	1.415	1.475	-4.2	110	0.05
12	S	d4-1,2-Dichlorobenzene (S)	0.866	0.877	-1.3	101	0.03
13	T	1,2-Dichlorobenzene	1.309	1.368	-4.5	108	0.03
14	T	Benzyl alcohol	0.659	0.658	0.2	102	0.03
15	T	bis(2-Chloroisopropyl) ethe	2.344	2.363	-0.8	107	0.05
16	T	2-Methylphenol	1.003	1.000	0.3	103	0.03
17	T	Hexachloroethane	0.654	0.662	-1.2	107	0.05
18	T	n-Nitroso-di-n-propylamine	0.872	0.929	-6.5	111	0.05
19	T	3-Methylphenol	2.136	2.243	-5.0	105	0.06
20	T	4-Methylphenol	2.136	2.243	-5.0	105	0.06
21	I	d8-Naphthalene (I)	1.000	1.000	0.0	110	0.05
22	S	d5-Nitrobenzene (S)	0.358	0.359	-0.3	105	0.05
23	T	Nitrobenzene	0.361	0.354	1.9	105	0.05
24	T	Isophorone	0.672	0.672	0.0	106	0.06
25	T	2-Nitrophenol	0.184	0.184	0.0	107	0.05
26	T	2,4-Dimethylphenol	0.313	0.320	-2.2	110	0.05
27	T	bis(2-chloroethoxy) methane	0.429	0.435	-1.4	101	0.03
28	T	2,4-Dichlorophenol	0.277	0.290	-4.7	110	0.05
29	T	1,2,4-Trichlorobenzene	0.323	0.345	-6.8	113	0.05
30	T	Naphthalene	0.972	0.974	-0.2	103	0.05
31	T	Benzoic acid	0.172	0.094	45.3#	103	0.07
32	T	4-Chloroaniline	0.390	0.406	-4.1	108	0.03
33	T	Hexachlorobutadiene	0.193	0.201	-4.1	108	0.05
34	T	2-Methylnaphthalene	0.613	0.657	-7.2	112	0.05
35	T	4-Chloro-3-methylphenol	0.279	0.303	-8.6	116	0.05
36	I	d10-Acenapthene (I)	1.000	1.000	0.0	117	0.05
37	T	Hexachlorocyclopentadiene	0.404	0.385	4.7	115	0.05
38	T	2,4,6-Trichlorophenol	0.344	0.353	-2.6	122	0.05
39	T	2,4,5-Trichlorophenol	0.377	0.399	-5.8	120	0.05
40	S	2-Fluorobiphenyl (S)	1.181	1.191	-0.8	112	0.05

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BUH18.D
Acq On : 18 Aug 98 12:20 pm
Sample :
Misc : 8-18-98U

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T	2-Chloronapthalene	1.072	1.075	-0.3	115	0.05
42	T	2-Nitroaniline	0.358	0.339	5.3	126	0.06
43	T	Acenaphthylene	1.679	1.764	-5.1	119	0.05
44	T	Dimethylphthalate	1.230	1.231	-0.1	120	0.06
45	T	2,6-Dinitrotoluene	0.288	0.332	-15.3	129	0.06
46	T	Acenaphthene	1.062	1.082	-1.9	119	0.05
47	T	3-Nitroaniline	0.300	0.296	1.3	133	0.06
48	T	2,4-Dinitrophenol	0.142	0.096	32.4#	179#	0.04
49	T	Dibenzofuran	1.481	1.503	-1.5	119	0.05
50	T	2,4-Dinitrotoluene	0.402	0.429	-6.7	127	0.07
51	T	4-Nitrophenol	0.121	0.120	0.8	150#	0.06
52	T	Fluorene	1.147	1.219	-6.3	130	0.06
53	T	4-Chlorophenyl phenyl ether	0.610	0.621	-1.8	121	0.06
54	T	Diethylphthalate	1.239	1.298	-4.8	124	0.08
55	T	4-Nitroaniline	0.278	0.271	2.5	146	0.10
56	I	d10-Phenanthrene (I)	1.000	1.000	0.0	132	0.06
57	T	4,6-Dinitro-2-methylphenol	0.132	0.109	17.4	147	0.06
58	T	n-Nitrosodiphenylamine	0.443	0.458	-3.4	129	0.06
59	S	2,4,6-Tribromophenol (S)	0.122	0.134	-9.8	142	0.06
60	T	Octachlorocyclopentene	0.167	0.179	-7.2	139	0.06
61	T	4-Bromophenyl phenyl ether	0.218	0.223	-2.3	128	0.05
62	T	Hexachlorobenzene	0.287	0.304	-5.9	134	0.06
63	T	Pentachlorophenol	0.147	0.131	10.9	139	0.06
64	T	Phenanthrene	0.895	0.924	-3.2	130	0.08
65	T	Anthracene	0.939	0.948	-1.0	130	0.08
66	T	Carbazole	0.798	0.857	-7.4	137	0.08
67	T	Di-n-butyl phthalate	1.162	1.247	-7.3	136	0.06
68	T	Fluoranthene	0.969	1.058	-9.2	140	0.08
69	I	d12-Chrysene (I)	1.000	1.000	0.0	155#	0.08
70	T	Benzidine	0.179	0.166	7.3	188#	0.07
71	T	Pyrene	1.264	1.112	12.0	139	0.08
72	S	d14-Terphenyl (S)	0.871	0.768	11.8	141	0.06
73	T	Butyl benzyl phthalate	0.529	0.532	-0.6	155#	0.07
74	T	Benzo(a) anthracene	0.935	0.945	-1.1	152#	0.06
75	T	Chrysene	0.786	0.820	-4.3	162#	0.08
76	T	3,3'-Dichlorobenzidine	0.221	0.258	-16.7	189#	0.08
77	T	bis(2-Ethylhexyl) phthalate	0.696	0.698	-0.3	152#	0.07
78	T	Di-n-octyl phthalate	0.835	0.921	-10.3	172#	0.07
79	I	d12-Perylene (I)	1.000	1.000	0.0	192#	0.10

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BUH18.D
Acq On : 18 Aug 98 12:20 pm
Sample :
Misc : 8-18-98U

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
80	T	Benzo(b) fluoranthene	1.417	1.414	0.2	186#	0.10
81	T	Benzo(k) fluoranthene	1.457	1.434	1.6	193#	0.10
82	T	Benzo(a) pyrene	1.168	1.219	-4.4	190#	0.10
83	T	Indeno (1,2,3-cd) pyrene	0.836	0.871	-4.2	222#	0.11
84	T	Dibenz (ah) anthracene	0.554	0.563	-1.6	183#	0.10
85	T	Benzo (ghi) perylene	0.780	0.756	3.1	170#	0.11

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH18.D
Acq On : 18 Aug 98 12:20 pm
Sample :
Misc : 8-18-98U
Quant Time: Aug 18 12:53 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	6.00	152	496271	40.00 ng	0.03
21) d8-Naphthalene (I)	8.42	136	1760578	40.00 ng	0.05
36) d10-Acenapthene (I)	12.08	164	1061519	40.00 ng	0.05
56) d10-Phenanthrene (I)	15.86	188	1915041	40.00 ng	0.06
69) d12-Chrysene (I)	22.83	240	1881647	40.00 ng	0.08
79) d12-Perylene (I)	26.27	264	1175006	40.00 ng	0.10
System Monitoring Compounds					
3) 2-Fluorophenol (S)	3.97	112	619004	49.24 ng	0.03
Surrogate Spike 150.000			Recovery =	32.83%	
5) d4-2-Chlorophenol (S)	5.61	132	712799	52.49 ng	0.05
Surrogate Spike 150.000			Recovery =	34.99%	
8) d5-Phenol (S)	5.42	99	827699	49.97 ng	0.05
Surrogate Spike 150.000			Recovery =	33.31%	
12) d4-1,2-Dichlorobenzene (S)	6.26	152	544232	50.66 ng	0.03
Surrogate Spike 100.000			Recovery =	50.66%	
22) d5-Nitrobenzene (S)	7.03	82	789612	50.14 ng	0.05
Surrogate Spike 100.000			Recovery =	50.14%	
40) 2-Fluorobiphenyl (S)	10.73	172	1579716	50.41 ng	0.05
Surrogate Spike 100.000			Recovery =	50.41%	
59) 2,4,6-Tribromophenol (S)	14.02	330	321194	54.96 ng	0.06
Surrogate Spike 150.000			Recovery =	36.64%	
72) d14-Terphenyl (S)	20.23	244	1805921	44.07 ng	0.06
Surrogate Spike 100.000			Recovery =	44.07%	

Target Compounds						Qvalue
2) Pyridine	2.50	79	884704	66.48 ng		91
4) Aniline	5.47	93	1026940	51.07 ng		96
6) 2-Chlorophenol	5.63	128	754722	49.24 ng		93
7) bis(2-Chloroethyl) ether	5.60	93	788760	50.42 ng		99
9) Phenol	5.45	94	978294	50.63 ng		96
10) 1,3-Dichlorobenzene	5.89	146	838799	50.17 ng		98
11) 1,4-Dichlorobenzene	6.03	146	915166	52.13 ng		98
13) 1,2-Dichlorobenzene	6.29	146	848570	52.25 ng		98
14) Benzyl alcohol	6.29	108	408034	49.88 ng		97
15) bis(2-Chloroisopropyl) eth	6.57	45	1465883	50.40 ng	#	100
16) 2-Methylphenol	6.50	108	620433	49.86 ng		99
17) Hexachloroethane	6.91	117	410647	50.59 ng	#	76
18) n-Nitroso-di-n-propylamine	6.81	70	576148	53.24 ng		99
19) 3-Methylphenol	6.82	108	695563	26.24 ng		97
20) 4-Methylphenol	6.82	108	695563	26.24 ng		97
23) Nitrobenzene	7.07	77	778814	49.05 ng		99
24) Isophorone	7.57	82	1478966	50.00 ng		98

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH18.D
Acq On : 18 Aug 98 12:20 pm
Sample :
Misc : 8-18-98U
Quant Time: Aug 18 12:53 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
25) 2-Nitrophenol	7.68	139	404817	50.00 ng		96
26) 2,4-Dimethylphenol	7.84	107	704552	51.12 ng		98
27) bis(2-chloroethoxy) methan	8.03	93	956929	50.66 ng		99
28) 2,4-Dichlorophenol	8.16	162	639024	52.38 ng		98
29) 1,2,4-Trichlorobenzene	8.33	180	759384	53.49 ng		97
30) Naphthalene	8.45	128	2143160	50.11 ng		100
31) Benzoic acid	8.16	122	206388	27.19 ng		91
32) 4-Chloroaniline	8.62	127	892966	51.98 ng		99
33) Hexachlorobutadiene	8.76	225	442276	52.10 ng		98
34) 2-Methylnaphthalene	9.91	142	1446405	53.61 ng		100
35) 4-Chloro-3-methylphenol	9.68	107	666304	54.21 ng		97
37) Hexachlorocyclopentadiene	10.25	237	511221	47.68 ng		96
38) 2,4,6-Trichlorophenol	10.52	196	467970	51.30 ng		93
39) 2,4,5-Trichlorophenol	10.58	196	529719	53.01 ng		95
41) 2-Chloronapthalene	10.91	162	1426056	50.14 ng		96
42) 2-Nitroaniline	11.18	65	450109	47.44 ng		95
43) Acenaphthylene	11.78	152	2341197	52.54 ng		99
44) Dimethylphthalate	11.65	163	1633682	50.04 ng		100
45) 2,6-Dinitrotoluene	11.75	165	440625	57.67 ng		92
46) Acenaphthene	12.15	153	1435608	50.96 ng		99
47) 3-Nitroaniline	12.07	138	392473	49.24 ng		93
48) 2,4-Dinitrophenol	12.29	184	127785	56.22 ng	#	88
49) Dibenzofuran	12.54	168	1993901	50.73 ng		98
50) 2,4-Dinitrotoluene	12.58	165	569478	51.89 ng	#	92
51) 4-Nitrophenol	12.50	109	158828	49.46 ng	#	1
52) Fluorene	13.37	166	1617224	53.11 ng		99
53) 4-Chlorophenyl phenyl ethe	13.47	204	823368	50.86 ng		97
54) Diethylphthalate	13.29	149	1722044	52.39 ng		98
55) 4-Nitroaniline	13.52	138	359433	58.04 ng		97
57) 4,6-Dinitro-2-methylphenol	13.60	198	262115	51.99 ng	#	56
58) n-Nitrosodiphenylamine	13.79	169	1095462	51.70 ng		97
60) Octachlorocyclopentene	14.04	307	428654	53.67 ng		95
61) 4-Bromophenyl phenyl ether	14.75	248	533608	51.12 ng		98
62) Hexachlorobenzene	14.81	284	726995	52.88 ng	#	89
63) Pentachlorophenol	15.38	266	313060	44.57 ng		94
64) Phenanthrene	15.92	178	2213009	51.66 ng		99
65) Anthracene	16.05	178	2268766	50.47 ng		99
66) Carbazole	16.55	167	2050525	53.64 ng		99
67) Di-n-butyl phthalate	17.73	149	2984269	53.64 ng		99
68) Fluoranthene	19.09	202	2532590	54.59 ng		97
70) Benzidine	19.57	184	390999	46.42 ng		98
71) Pyrene	19.65	202	2614557	43.99 ng		98
73) Butyl benzyl phthalate	21.64	149	1251156	49.03 ng		98

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH18.D
Acq On : 18 Aug 98 12:20 pm
Sample :
Misc : 8-18-98U
Quant Time: Aug 18 12:53 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
74) Benzo(a) anthracene	22.80	228	2222939	50.55 ng		99
75) Chrysene	22.89	228	1927817	52.15 ng		99
76) 3,3'-Dichlorobenzidine	22.85	252	605695	54.05 ng		97
77) bis(2-Ethylhexyl) phthalat	23.22	149	1642179	48.68 ng	#	98
78) Di-n-octyl phthalate	24.80	149	2166307	52.46 ng		100
80) Benzo(b) fluoranthene	25.38	252	2076438	49.89 ng		97
81) Benzo(k) fluoranthene	25.44	252	2105995	49.22 ng		100
82) Benzo(a) pyrene	26.12	252	1790426	52.17 ng		97
83) Indeno (1,2,3-cd) pyrene	28.78	276	1278655	52.10 ng	#	91
84) Dibenz (ah) anthracene	28.85	278	826356	49.65 ng		99
85) Benzo (ghi) perylene	29.36	276	1110441	48.45 ng		98

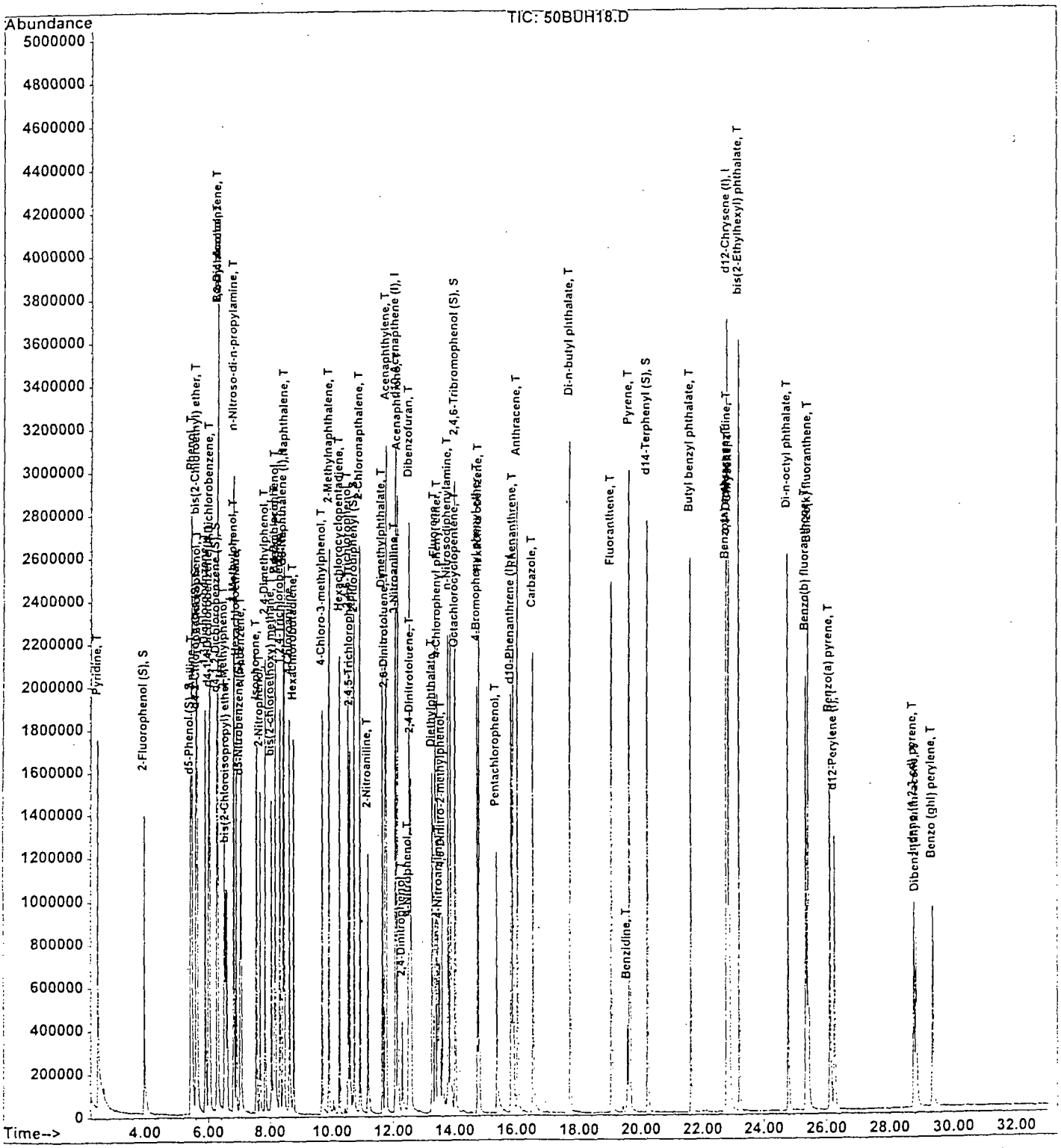
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\50BUH18.D
Acq On : 18 Aug 98 12:20 pm
Sample :
Misc : 8-18-98U
Quant Time: Aug 18 12:53 1998

Vial: 2
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91983DL.D
Acq On : 18 Aug 98 6:24 pm
Sample : 1:5
Misc : 8-18-98U
Quant Time: Aug 19 9:43 1998

Vial: 11
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

(+5) Reruns 1/20

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	6.03	152	541959	40.00	ng	0.06
21) d8-Naphthalene (I)	8.49	136	1817750	40.00	ng	0.11
36) d10-Acenapthene (I)	12.26	164	1516484	40.00	ng	0.23
56) d10-Phenanthrene (I)	16.05	188	1844445	40.00	ng	0.26
69) d12-Chrysene (I)	22.83	240	1289663	40.00	ng	0.08
79) d12-Perylene (I)	26.25	264	675054	40.00	ng	0.08
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.95	112	422322	30.76	ng	0.02
Surrogate Spike 150.000			Recovery = 20.51%			
5) d4-2-Chlorophenol (S)	5.62	132	438200	29.55	ng	0.05
Surrogate Spike 150.000			Recovery = 19.70%			
8) d5-Phenol (S)	5.42	99	554912	30.68	ng	0.05
Surrogate Spike 150.000			Recovery = 20.45%			
12) d4-1,2-Dichlorobenzene (S)	6.29	152	258974m	22.07	ng	0.06
Surrogate Spike 100.000			Recovery = 22.07%			
22) d5-Nitrobenzene (S)	7.05	82	382058m	23.50	ng	0.06
Surrogate Spike 100.000			Recovery = 23.50%			
40) 2-Fluorobiphenyl (S)	10.87	172	820698	18.33	ng	0.19
Surrogate Spike 100.000			Recovery = 18.33%			
59) 2,4,6-Tribromophenol (S)	14.26	330	148663	26.41	ng	0.31
Surrogate Spike 150.000			Recovery = 17.61%			
72) d14-Terphenyl (S)	20.28	244	751378m	26.75	ng	0.11
Surrogate Spike 100.000			Recovery = 26.75%			

Target Compounds							Qvalue
30) Naphthalene	8.54	128	14863841	336.59	ng	#	80
34) 2-Methylnaphthalene	10.13	142	28991934m	1040.84	ng		97
46) Acenaphthene	12.33	153	2520540	62.62	ng	#	68
49) Dibenzofuran	12.76	168	2482990	44.22	ng		94
52) Fluorene	13.60	166	2926202	67.27	ng	#	75
64) Phenanthrene	16.15	178	9952502	241.24	ng	#	96
65) Anthracene	16.26	178	1475071	34.07	ng	#	1
68) Fluoranthene	19.22	202	612775m	13.71	ng		72
71) Pyrene	19.75	202	1523632m	37.40	ng		51

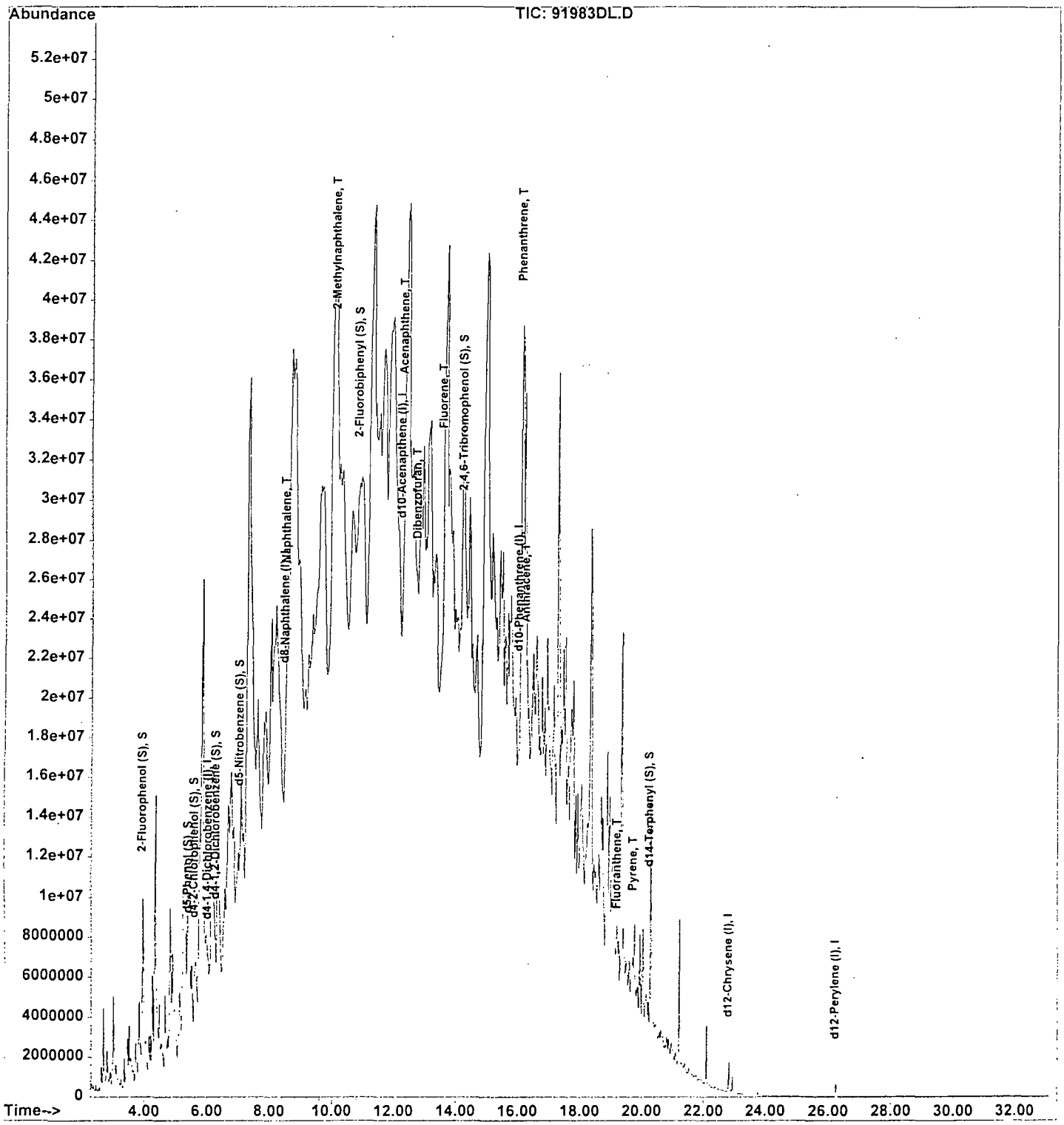
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\91983DL.D
Acq On : 18 Aug 98 6:24 pm
Sample : 1:5
Misc : 8-18-98U
Quant Time: Aug 19 9:43 1998

Vial: 11
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\89720MB.D
Acq On : 18 Aug 98 5:03 pm
Sample : LMBH181A
Misc : 8-18-98U
Quant Time: Aug 19 9:25 1998

Vial: 9
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Exps out
rerun 1:1

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.99	152	454816	40.00	ng	0.02
21) d8-Naphthalene (I)	8.41	136	1611289	40.00	ng	0.03
36) d10-Acenapthene (I)	12.07	164	941986	40.00	ng	0.03
56) d10-Phenanthrene (I)	15.84	188	1700943	40.00	ng	0.05
69) d12-Chrysene (I)	22.81	240	1213013	40.00	ng	0.06
79) d12-Perylene (I)	26.25	264	500058	40.00	ng	0.08
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.97	112	1663644	144.39	ng	0.03
Surrogate Spike 150.000			Recovery	=	96.26%	
5) d4-2-Chlorophenol (S)	5.60	132	1664821	133.76	ng	0.03
Surrogate Spike 150.000			Recovery	=	89.17%	
8) d5-Phenol (S)	5.44	99	2093375	137.90	ng	0.06
Surrogate Spike 150.000			Recovery	=	91.93%	
12) d4-1,2-Dichlorobenzene (S)	6.26	152	887587	90.14	ng	0.03
Surrogate Spike 100.000			Recovery	=	90.14%	
22) d5-Nitrobenzene (S)	7.02	82	1200991	83.32	ng	0.03
Surrogate Spike 100.000			Recovery	=	83.32%	
40) 2-Fluorobiphenyl (S)	10.71	172	2493604	89.66	ng	0.03
Surrogate Spike 100.000			Recovery	=	89.66%	
59) 2,4,6-Tribromophenol (S)	14.00	330	390801	75.29	ng	0.05
Surrogate Spike 150.000			Recovery	=	50.19%	
72) d14-Terphenyl (S)	20.23	244	2923072	110.65	ng	0.06
Surrogate Spike 100.000			Recovery	=	110.65%	

Target Compounds Qvalue

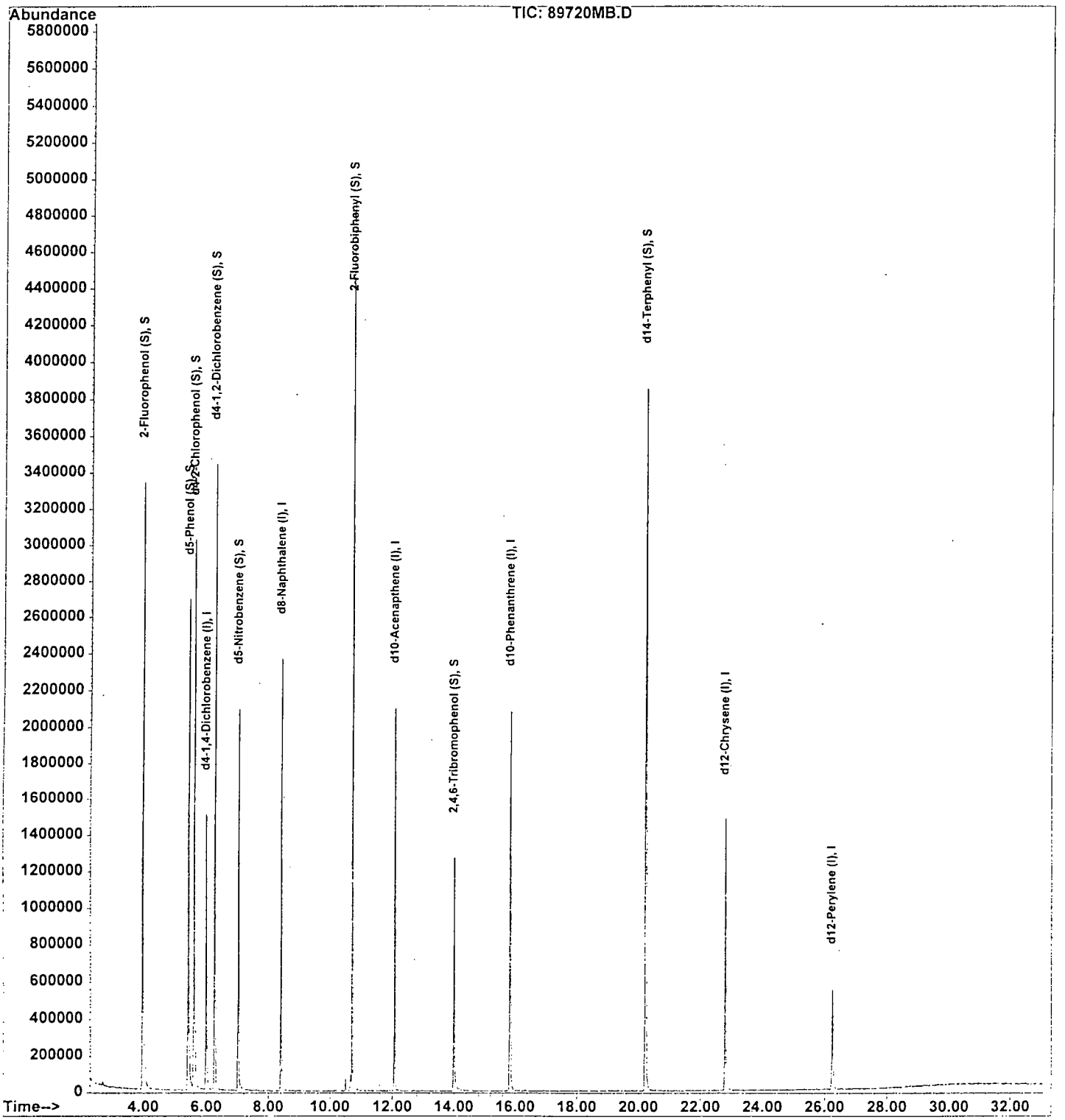
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\89720MB.D
Acq On : 18 Aug 98 5:03 pm
Sample : LMBH181A
Misc : 8-18-98U
Quant Time: Aug 19 9:25 1998

Vial: 9
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration



Safety-Kleen / Encotec
GC/MS Semivolatile Analysis

Standard ID's: MB195D:MB202D-MB206D
Reference Std : 50BH20U.D
Instrument ID: 5970-021
GC Column : DB-5MS CAP 30 M, 0.25 mm, 0.25u

Run ID : 8-20-98U
Date : 8/20/1998
Tape Number : 7-98-U
Operator : JLF
Multiplier : 2176

	Client	Batch	Time	File Name	Type	Matrix	Dilution	Factor	Rerun	Sample ID
1	ENCOTEC	10000	18:00	DFTH20U	TUNE	N/A	N/A	N/A		Breakdown = 0.3%
2	ENCOTEC	10000	20:43	50BH20U	STD	N/A	N/A	N/A		
3	ENCOTEC	10000	21:23	50IXH20U	STD	N/A	N/A	N/A		
4	ENCOTEC	10000	22:04	89725MB	BLANK	WATER	500 ul Sample + 5 uL IS	1/1		
5	ENCOTEC	10000	22:44	89896LCS	LCS	WATER	500 ul Sample + 5 uL IS	1/1		
6	CON	13257	23:25	92203B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
7	CON	13257	00:05	92204B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
8	CON	13257	00:46	92204BM	MS	WATER	500 ul Sample + 5 uL IS	1/1		
9	CON	13257	01:26	92204BD	MSD	WATER	500 ul Sample + 5 uL IS	1/1		
10	EQC	13263	02:07	92247B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
11	GMI	13268	02:48	92269B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1		
12	EEI	13219	03:28	91984B	SAMPLE	WATER	500 ul Sample + 5 uL IS	1/1	A,C	
13	EEI	13219	04:09	91983DL	SAMPLE	WATER	25 ul Sample + 475 ul + 5 uL IS	1/20	C	

1360

	IS1	RT	IS2	RT	IS3	RT	IS4	RT	IS5	RT	IS6	RT
Upper Limit	1142218	6.52	3962620	8.94	2349736	12.60	4046118	16.36	3462000	23.34	2347776	26.78
Lower Limit	285555	5.52	990655	7.94	587434	11.60	1011530	15.36	865500	22.34	586944	25.78

Re- Analysis Codes: A) Surrogates B) EICP's C) Dilution D) Carry-Over

Generated 8/21/98 12:56:48 PM

BNA INTERNAL STANDARD AREA and RT SUMMARY

Reference Std. 50BH20U SDG No. EE-WC-98H2

Instrument ID 021 GC Column: DB-5 CAP 0.32mm, 30M

Date/Time Analyzed: 8/20/98 / 20 : 43 ~~am~~ pm

		IS_1 (DCB) Area	#	RT	#	IS_2 (NPT) Area	#	RT	#	IS_3 (ANT) Area	#
12-Hour Standard	Upper Limit	1142218		6.52		3962620		8.94		2349736	
	Lower Limit	285555		5.52		990655		7.94		587434	
Sample ENCOTEC ID											
1	89725MB	550913		6.02		1927415		8.42		1193127	
2	91983 DL	663291		6.03		2110453		8.45		1442130	
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											

Sample Number

IS_1 (DCB) = 1,4 -Dichlorobenzene-d_4

IS_2 (NPT) = Naphthalene-d_8

IS_3 (ANT) = Acenaphthalene-d_{10}

Column is used to flag values outside QC limits.

* Value is outside QC limits.

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

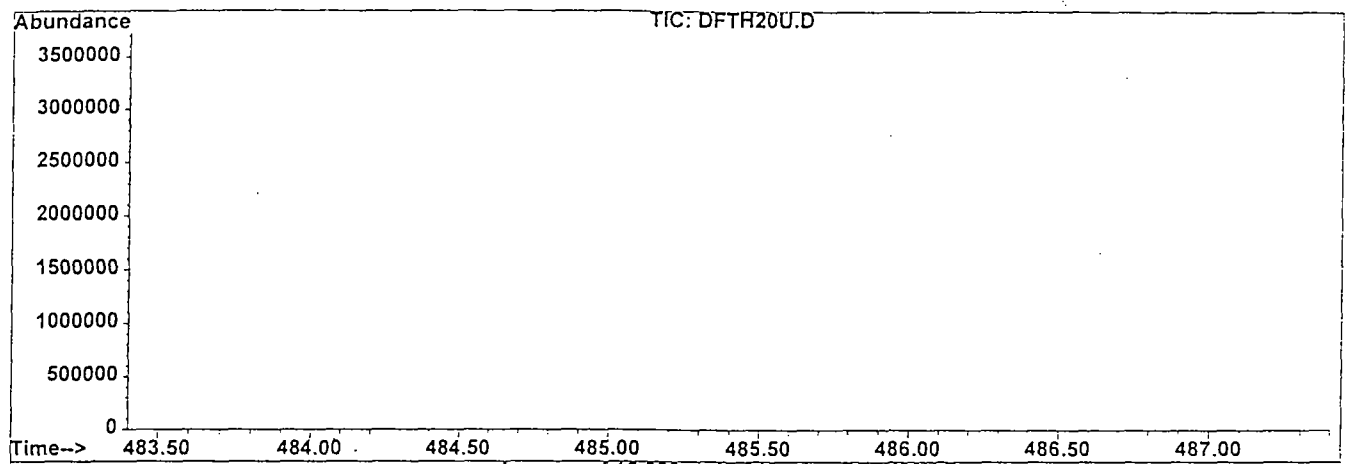
C

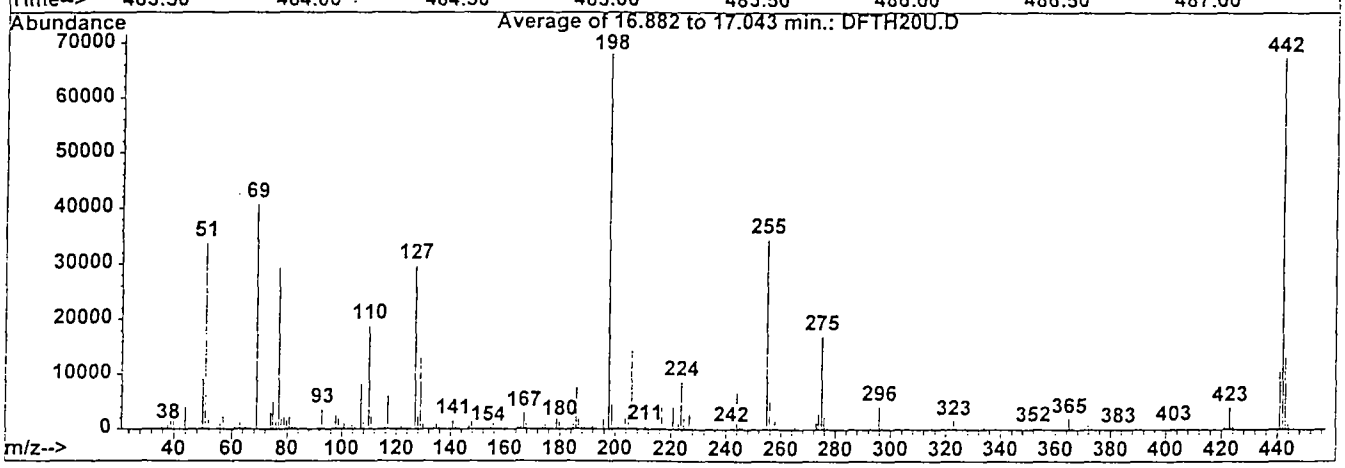
DFTPP - EPA TUNE

Data File : C:\HPCHEM\1\DATA\DFTH20U.D
Acq On : 20 Aug 98 6:00 pm
Sample :
Misc : 8-20-98U

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :





Spectrum Information: Average of 16.882 to 17.043 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	49.5	33770	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	59.8	40775	PASS
70	69	0.00	2	0.4	156	PASS
127	198	40	60	43.6	29737	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100:0	68155	PASS
199	198	5	9	7.0	4741	PASS
275	198	10	30	25.1	17136	PASS
365	198	1	100	3.0	2030	PASS
441	443	0.01	100	80.4	10627	PASS
442	198	40	100	98.9	67408	PASS
443	442	17	23	19.6	13222	PASS

DFTH20U.D BNAHSL.M Thu Aug 20 18:24:43 1998

Average of 16.882 to 17.043 min.: DFTH20U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.20	64	43.05	190	56.00	1056	68.95	40775
35.90	444	44.00	4105	57.05	2417	70.00	156
36.05	389	44.80	55	58.05	72	71.35	48
37.00	338	45.05	159	58.35	49	73.00	370
37.80	51	49.05	404	61.00	486	74.05	3079
38.00	800	49.55	47	62.00	337	74.95	5040
39.00	4023	49.85	72	63.00	1201	76.05	1548
39.95	5491	50.05	9367	64.00	173	77.05	29656
41.05	184	51.05	33770	65.05	638	77.95	1967
42.00	251	52.05	1725	66.95	76	78.95	2406
42.90	100	55.00	158	67.25	70	79.95	1609

Average of 16.882 to 17.043 min.: DFTH20U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
80.95	2314	93.00	3706	105.80	63	121.95	598
81.95	577	93.95	281	107.00	8260	123.00	992
83.00	545	96.10	205	108.00	1261	124.00	462
84.75	52	97.00	76	110.00	18870	125.00	397
84.95	397	98.00	2563	110.95	2600	126.95	29737
86.00	671	99.00	2011	112.00	269	128.05	2454
86.95	321	99.95	130	116.00	525	128.95	13086
88.00	58	101.00	1222	116.95	6240	129.95	1168
90.90	68	103.05	406	117.90	403	131.00	168
91.05	473	103.95	792	120.00	78	132.05	72
92.00	577	105.00	617	121.80	65	132.95	47

Average of 16.882 to 17.043 min.: DFTH20U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
134.00	357	145.95	225	155.95	1173	165.95	406
134.95	1020	146.90	721	156.90	254	167.00	3061
136.00	390	147.95	1515	157.90	294	168.00	1183
136.75	56	148.90	259	158.90	176	168.95	207
136.95	373	149.95	60	159.95	453	170.00	54
137.85	119	151.00	231	160.90	598	170.95	134
139.05	54	151.65	72	161.90	89	171.95	233
140.00	173	151.95	73	162.10	112	172.95	289
140.95	1672	152.95	409	162.90	49	174.00	585
141.95	615	153.90	314	164.00	65	175.00	1003
142.95	297	154.95	730	164.95	634	176.00	345

Average of 16.882 to 17.043 min.: DFTH20U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.30	115	185.00	1004	196.60	54	208.90	162
176.80	145	186.00	7730	197.90	68155	210.05	96
177.00	319	186.95	2292	198.95	4741	210.35	51
178.05	226	188.05	385	199.90	337	210.95	623
178.95	2263	188.95	452	201.45	397	211.75	90
180.00	1412	190.00	46	202.95	405	214.95	154
181.00	819	190.95	212	204.00	2014	215.75	47
181.90	67	191.95	642	205.00	3606	216.05	335
182.10	79	192.95	678	206.05	14900	216.95	4181
183.00	53	193.85	147	206.95	2440	217.90	365
184.05	198	195.90	1920	207.95	649	220.95	4232

Average of 16.882 to 17.043 min.: DFTH20U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.95	1024	234.90	238	244.00	6750	257.05	365
223.95	8756	235.85	66	245.00	1012	257.95	1739
224.95	2062	237.00	174	245.90	1201	258.95	295
225.95	155	238.90	55	247.00	251	263.75	104
226.95	3074	239.10	76	248.00	49	265.00	819
227.85	426	239.80	54	248.95	232	265.85	273
228.95	678	240.00	88	249.80	55	271.00	111
229.65	55	240.90	184	251.80	55	272.00	57
230.95	280	242.00	437	252.80	87	273.00	1307
233.05	56	242.90	183	255.00	34548	273.90	2901
234.00	177	243.10	306	256.00	5200	275.00	17136

Average of 16.882 to 17.043 min.: DFTH20U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
276.00	2377	302.05	54	328.00	63	364.95	2030
277.00	1148	302.95	512	332.10	66	365.90	273
277.95	154	304.05	82	333.05	117	370.85	67
282.95	93	314.00	200	334.00	866	371.95	982
283.95	85	314.95	430	334.95	205	372.95	306
285.00	231	315.90	323	340.90	158	383.00	285
288.85	49	320.90	159	345.90	306	390.00	69
292.90	290	322.10	68	351.95	429	390.90	55
293.95	48	323.00	1624	352.95	376	401.95	418
295.95	4252	324.00	257	353.95	488	403.00	600
296.95	622	327.00	272	355.05	96	404.00	152

Average of 16.882 to 17.043 min.: DFTH20U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
421.00	558						
422.00	546						
423.00	4120						
424.00	723						
440.95	10627						
441.95	67408						
442.95	13222						
443.95	1075						

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\DFTH20U.D
Acq On : 20 Aug 98 6:00 pm
Sample :
Misc : 8-20-98U
Quant Time: Aug 20 18:34 1998

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: DFTPP.RES

Quant Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\DFTG29U.D
DataAcq Meth : DFTPP

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	6.01	152	543524	40.00 ng	0.02
2) d8-Naphthalene (I)	8.43	136	1949255	40.00 ng	0.02
3) d10-Acenaphthene (I)	12.09	164	1135603	40.00 ng	0.00
5) d10-Phenanthrene (I)	15.87	188	1936600	40.00 ng	0.00
10) d12-Chrysene (I)	22.83	240	1712033	40.00 ng	0.00
11) d12-Perylene (I)	26.29	264	1359827	40.00 ng	0.00

System Monitoring Compounds

Target Compounds					Qvalue
4) Pentachlorophenol	15.40	266	584520	65.43 ng	97
6) Benzidine	19.59	184	2028945	51.57 ng #	93
7) 4,4'-DDE	0.00	246		N.D.	
8) 4,4'-DDD	21.00	235	4219	6.69 ng	100
9) 4,4'-DDT	21.77	235	1677613	86.60 ng	100

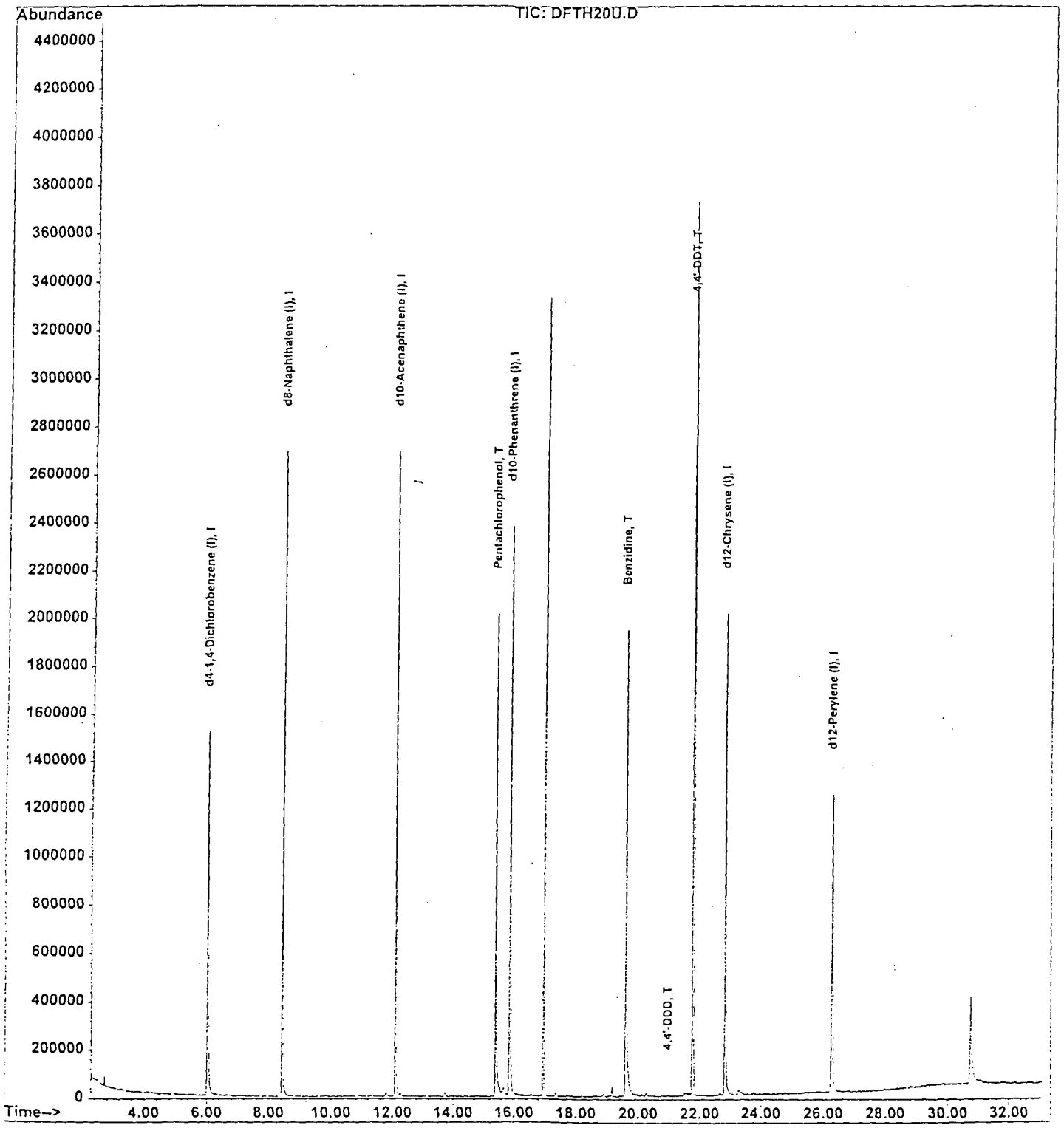
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DFTH20U.D
Acq On : 20 Aug 98 6:00 pm
Sample :
Misc : 8-20-98U
Quant Time: Aug 20 18:34 1998

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: DFTPP.RES

Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Single Level Calibration



ENCOTEC GC/MS SEMIVOLATILE 5 WAY CALIBRATION

Instrument ID: 5970-021
Initial Calibration Date: 8/13/98
Continuing Calibration Date: 8/20/98
Continuing File Name: 50BH20U.D

STD	FILE:	STD	FILE:	STD	FILE:
160	160BUH13.D	80	80BUH13.D	10	10BUH13.D
120	120BUH13.D	50	50BUH13.D		

Compound	10	50	80	120	160	RF avg.	% RSD	RF Cont	Cont Rec	% Drift	CCC/SPCC
Phenol	1.474	1.627	1.712	1.417	1.558	1.557	7.5		50.14	0.29	*
1,4-Dichlorobenzene	1.549	1.430	1.423	1.400	1.274	1.415	6.9		53.36	6.7	*
n-Nitroso-di-n-propylamine	0.755	0.898	1.013	0.932	0.763	0.872		0.904			**
2-Nitrophenol	0.143	0.188	0.186	0.193	0.210	0.184	13		51.05	2.1	*
2,4-Dichlorophenol	0.260	0.288	0.273	0.287	0.278	0.277	4.1		53.95	7.9	*
Hexachlorobutadiene	0.208	0.203	0.182	0.187	0.185	0.193	6.1		55.10	10	*
4-Chloro-3-methylphenol	0.236	0.285	0.318	0.296	0.261	0.279	11		53.72	7.4	*
Hexachlorocyclopentadiene	0.350	0.394	0.385	0.448	0.443	0.404		0.388			**
2,4,6-Trichlorophenol	0.288	0.339	0.333	0.383	0.377	0.344	11		52.92	5.8	*
Acenaphthene	1.166	1.068	1.010	1.049	1.015	1.062	5.9		50.75	1.5	*
2,4-Dinitrophenol	--------	0.063	0.142	0.166	0.195	0.142		0.066			**
4-Nitrophenol	--------	0.093	0.125	0.122	0.143	0.121		0.086			**
n-Nitrosodiphenylamine	0.419	0.465	0.439	0.458	0.431	0.443	4.3		51.95	3.9	*
Pentachlorophenol	--------	0.124	0.142	0.166	0.155	0.147	12		45.86	8.3	*
Fluoranthene	0.903	0.997	1.026	1.011	0.907	0.969	6.1		50.56	1.1	*
Di-n-octyl phthalate	0.462	0.831	0.919	0.944	1.022	0.835	26		55.80	12	*
Benzo(a) pyrene	0.924	1.233	1.212	1.231	1.241	1.168	12		50.47	0.93	*

* = CCC - Calibration Check Compound: %RSD < 30 for initial calibration; % Diff. < 20.0 for continuing calibration.
** = SPCC - System Performance Check Compound: Minimum avg. RF > .050 for initial calibration, RF > 0.050 for continuing calibration
% RSD = Relative Standard Deviation
% Drift = (Cont. Cal. Std Conc. - Recovery Conc.) / Cont. Cal. Std. Conc. Rec. x 100

EICPS:

IS1	RT1	IS2	RT2	IS3	RT3	IS4	RT4	IS5	RT5	IS6	RT6
1142218	6.52	3962620	8.94	2349736	12.60	4046118	16.36	3462000	23.34	2347776	26.78
285555	5.52	990655	7.94	587434	11.60	1011530	15.36	865500	22.34	586944	25.78

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BH20U.D
Acq On : 20 Aug 98 8:43 pm
Sample :
Misc : 8-20-98U

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	d4-1,4-Dichlorobenzene (I)	1.000	1.000	0.0	123	0.05
2	T	Pyridine	1.032	1.090	-5.6	111	-0.02
3	S	2-Fluorophenol (S)	1.013	1.048	-3.5	129	0.05
4	T	Aniline	1.621	1.531	5.6	113	0.06
5	S	d4-2-Chlorophenol (S)	1.095	1.127	-2.9	119	0.06
6	T	2-Chlorophenol	1.235	1.229	0.5	117	0.05
7	T	bis(2-Chloroethyl) ether	1.261	1.328	-5.3	121	0.06
8	S	d5-Phenol (S)	1.335	1.306	2.2	114	0.06
9	T	Phenol	1.557	1.562	-0.3	118	0.08
10	T	1,3-Dichlorobenzene	1.348	1.347	0.1	116	0.05
11	T	1,4-Dichlorobenzene	1.415	1.510	-6.7	130	0.06
12	S	d4-1,2-Dichlorobenzene (S)	0.866	0.875	-1.0	116	0.05
13	T	1,2-Dichlorobenzene	1.309	1.382	-5.6	126	0.05
14	T	Benzyl alcohol	0.659	0.655	0.6	117	0.05
15	T	bis(2-Chloroisopropyl) ethe	2.344	2.346	-0.1	122	0.06
16	T	2-Methylphenol	1.003	0.983	2.0	116	0.05
17	T	Hexachloroethane	0.654	0.664	-1.5	124	0.06
18	T	n-Nitroso-di-n-propylamine	0.872	0.904	-3.7	124	0.06
19	T	3-Methylphenol	2.136	2.261	-5.9	122	0.08
20	T	4-Methylphenol	2.136	2.261	-5.9	122	0.08
21	I	d8-Naphthalene (I)	1.000	1.000	0.0	123	0.06
22	S	d5-Nitrobenzene (S)	0.358	0.354	1.1	116	0.06
23	T	Nitrobenzene	0.361	0.340	5.8	113	0.06
24	T	Isophorone	0.672	0.691	-2.8	122	0.08
25	T	2-Nitrophenol	0.184	0.188	-2.2	123	0.06
26	T	2,4-Dimethylphenol	0.313	0.318	-1.6	123	0.06
27	T	bis(2-chloroethoxy) methane	0.429	0.436	-1.6	114	0.06
28	T	2,4-Dichlorophenol	0.277	0.299	-7.9	128	0.06
29	T	1,2,4-Trichlorobenzene	0.323	0.352	-9.0	129	0.06
30	T	Naphthalene	0.972	0.978	-0.6	116	0.06
31	T	Benzoic acid	0.172	0.092	46.5#	113	0.09
32	T	4-Chloroaniline	0.390	0.387	0.8	117	0.05
33	T	Hexachlorobutadiene	0.193	0.213	-10.4	129	0.05
34	T	2-Methylnaphthalene	0.613	0.638	-4.1	123	0.06
35	T	4-Chloro-3-methylphenol	0.279	0.300	-7.5	130	0.06
36	I	d10-Acenapthene (I)	1.000	1.000	0.0	130	0.06
37	T	Hexachlorocyclopentadiene	0.404	0.388	4.0	128	0.06
38	T	2,4,6-Trichlorophenol	0.344	0.364	-5.8	139	0.06
39	T	2,4,5-Trichlorophenol	0.377	0.402	-6.6	134	0.06
40	S	2-Fluorobiphenyl (S)	1.181	1.177	0.3	122	0.05

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BH20U.D
Acq On : 20 Aug 98 8:43 pm
Sample :
Misc : 8-20-98U

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	T	2-Chloronapthalene	1.072	1.088	-1.5	129	0.06
42	T	2-Nitroaniline	0.358	0.329	8.1	135	0.08
43	T	Acenaphthylene	1.679	1.730	-3.0	130	0.06
44	T	Dimethylphthalate	1.230	1.255	-2.0	135	0.08
45	T	2,6-Dinitrotoluene	0.288	0.323	-12.2	139	0.08
46	T	Acenaphthene	1.062	1.078	-1.5	131	0.06
47	T	3-Nitroaniline	0.300	0.280	6.7	140	0.08
48	T	2,4-Dinitrophenol	0.142	0.066	53.5#	137	0.06
49	T	Dibenzofuran	1.481	1.517	-2.4	133	0.06
50	T	2,4-Dinitrotoluene	0.402	0.405	-0.7	133	0.08
51	T	4-Nitrophenol	0.121	0.086	28.9#	120	0.07
52	T	Fluorene	1.147	1.176	-2.5	139	0.10
53	T	4-Chlorophenyl phenyl ether	0.610	0.631	-3.4	137	0.08
54	T	Diethylphthalate	1.239	1.276	-3.0	135	0.08
55	T	4-Nitroaniline	0.278	0.215	22.7	128	0.11
56	I	d10-Phenanthrene (I)	1.000	1.000	0.0	139	0.06
57	T	4,6-Dinitro-2-methylphenol	0.132	0.110	16.7	156#	0.08
58	T	n-Nitrosodiphenylamine	0.443	0.460	-3.8	137	0.08
59	S	2,4,6-Tribromophenol (S)	0.122	0.130	-6.6	145	0.08
60	T	Octachlorocyclopentene	0.167	0.197	-18.0	161#	0.08
61	T	4-Bromophenyl phenyl ether	0.218	0.238	-9.2	145	0.06
62	T	Hexachlorobenzene	0.287	0.311	-8.4	145	0.08
63	T	Pentachlorophenol	0.147	0.135	8.2	151#	0.07
64	T	Phenanthrene	0.895	0.916	-2.3	136	0.08
65	T	Anthracene	0.939	0.937	0.2	136	0.10
66	T	Carbazole	0.798	0.752	5.8	127	0.10
67	T	Di-n-butyl phthalate	1.162	1.188	-2.2	137	0.08
68	T	Fluoranthene	0.969	0.980	-1.1	136	0.08
69	I	d12-Chrysene (I)	1.000	1.000	0.0	143	0.10
70	T	Benzidine	0.179	0.079	55.9#	82	0.08
71	T	Pyrene	1.264	1.170	7.4	134	0.10
72	S	d14-Terphenyl (S)	0.871	0.798	8.4	134	0.08
73	T	Butyl benzyl phthalate	0.529	0.517	2.3	138	0.08
74	T	Benzo(a) anthracene	0.935	0.940	-0.5	139	0.08
75	T	Chrysene	0.786	0.816	-3.8	148	0.10
76	T	3,3'-Dichlorobenzidine	0.221	0.283	-28.1#	191#	0.10
77	T	bis(2-Ethylhexyl) phthalate	0.696	0.699	-0.4	140	0.08
78	T	Di-n-octyl phthalate	0.835	0.991	-18.7	170#	0.08
79	I	d12-Perylene (I)	1.000	1.000	0.0	192#	0.11

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BH20U.D
Acq On : 20 Aug 98 8:43 pm
Sample :
Misc : 8-20-98U

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
80	T	Benzo(b) fluoranthene	1.417	1.299	8.3	171#	0.10
81	T	Benzo(k) fluoranthene	1.457	1.469	-0.8	198#	0.11
82	T	Benzo(a) pyrene	1.168	1.179	-0.9	184#	0.11
83	T	Indeno (1,2,3-cd) pyrene	0.836	1.109	-32.7#	282#	0.13
84	T	Dibenz (ah) anthracene	0.554	0.717	-29.4#	234#	0.11
85	T	Benzo (ghi) perylene	0.780	0.968	-24.1	218#	0.13

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91983DL.D
Acq On : 21 Aug 98 4:09 am
Sample : 1:20
Misc : 8-20-98U
Quant Time: Aug 24 11:14 1998

Vial: 17
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

+20

Eups good

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	6.03	152	663291	40.00	ng	0.06
21) d8-Naphthalene (I)	8.45	136	2110453	40.00	ng	0.08
36) d10-Acenapthene (I)	12.16	164	1442130	40.00	ng	0.13
56) d10-Phenanthrene (I)	15.94	188	2537406	40.00	ng	0.14
69) d12-Chrysene (I)	22.84	240	2340004	40.00	ng	0.10
79) d12-Perylene (I)	26.28	264	1730424	40.00	ng	0.11
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.98	112	89734	5.34	ng	0.05
Surrogate Spike 150.000			Recovery = 3.56%			
5) d4-2-Chlorophenol (S)	5.63	132	136201	7.50	ng	0.06
Surrogate Spike 150.000			Recovery = 5.00%			
8) d5-Phenol (S)	5.44	99	129367	5.84	ng	0.06
Surrogate Spike 150.000			Recovery = 3.89%			
12) d4-1,2-Dichlorobenzene (S)	6.29	152	126702	8.82	ng	0.06
Surrogate Spike 100.000			Recovery = 8.82%			
22) d5-Nitrobenzene (S)	7.05	82	378194	20.03	ng	0.06
Surrogate Spike 100.000			Recovery = 20.03%			
40) 2-Fluorobiphenyl (S)	10.78	172	253273	5.95	ng	0.10
Surrogate Spike 100.000			Recovery = 5.95%			
59) 2,4,6-Tribromophenol (S)	14.12	330	70974	9.17	ng	0.16
Surrogate Spike 150.000			Recovery = 6.11%			
72) d14-Terphenyl (S)	20.26	244	288338	5.66	ng	0.10
Surrogate Spike 100.000			Recovery = 5.66%			

Target Compounds							Qvalue
30) Naphthalene	8.50	128	4960650	96.75	ng	#	85
34) 2-Methylnaphthalene	10.00	142	11812724	365.27	ng		98
46) Acenaphthene	12.23	153	1012164	26.44	ng	#	65
49) Dibenzofuran	12.62	168	761767	14.27	ng		93
52) Fluorene	13.47	166	1314422	31.77	ng	#	76
58) n-Nitrosodiphenylamine	13.87	169	1419103	50.55	ng	#	46
64) Phenanthrene	16.00	178	4198066	73.97	ng		98
65) Anthracene	16.13	178	878921m	14.76	ng		97
66) Carbazole	16.62	167	189981	3.75	ng	#	68
71) Pyrene	19.70	202	557872	7.55	ng	#	88

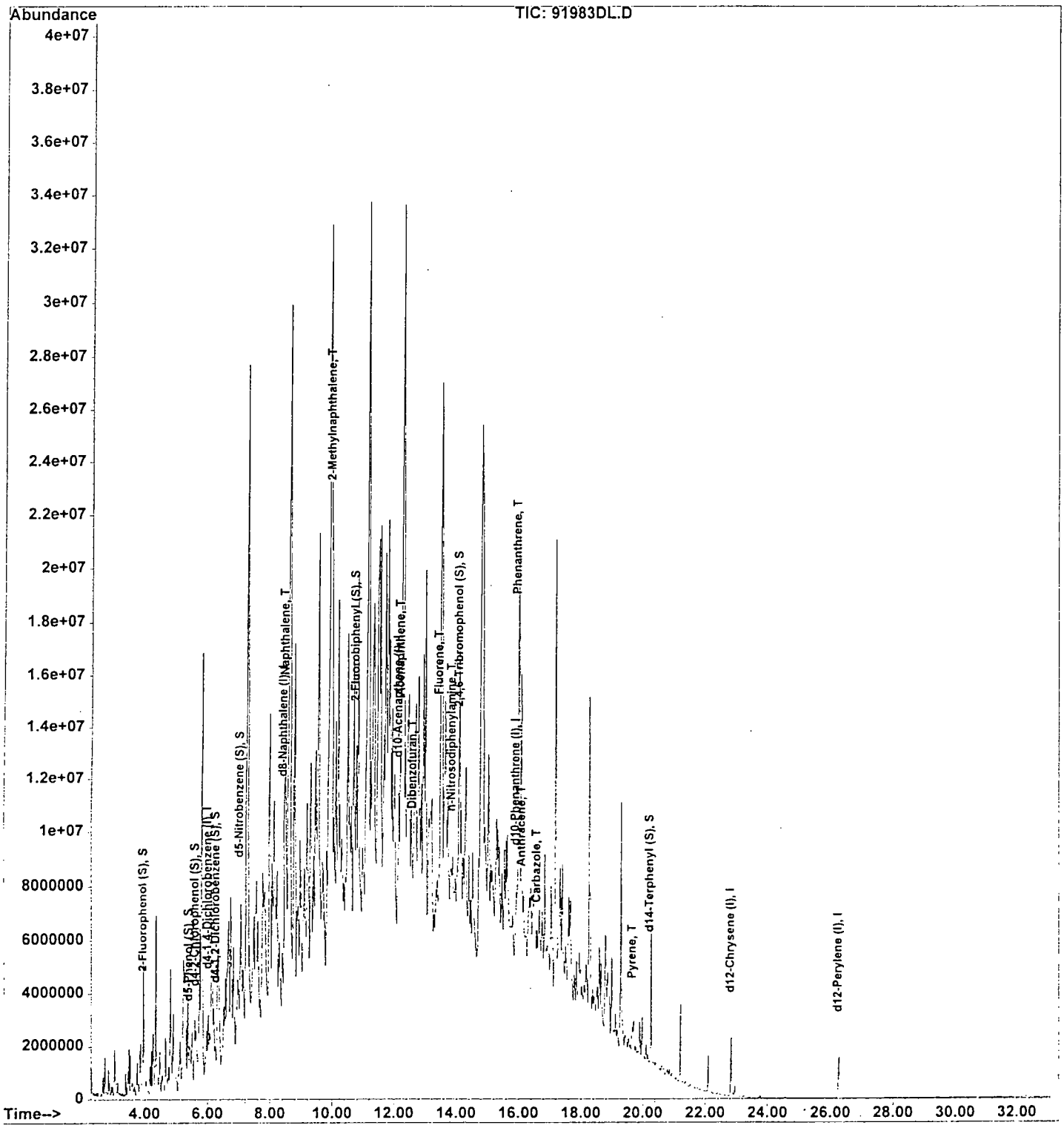
(#) = qualifier out of range (m) = manual integration

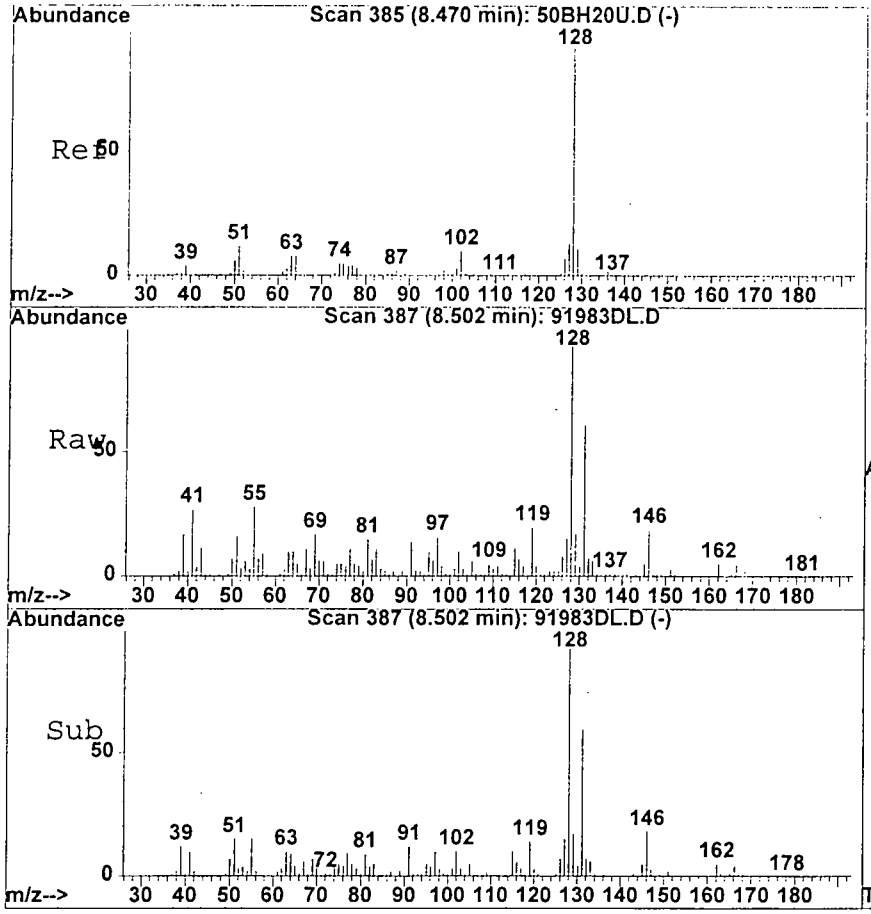
Quantitation Report

Data File : C:\HPCHEM\1\DATA\91983DL.D
Acq On : 21 Aug 98 4:09 am
Sample : 1:20
Misc : 8-20-98U
Quant Time: Aug 24 11:14 1998

Vial: 17
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Mon Aug 24 11:04:32 1998
Response via : Multiple Level Calibration

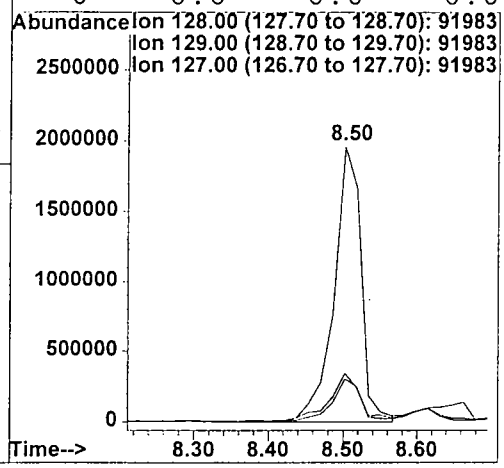


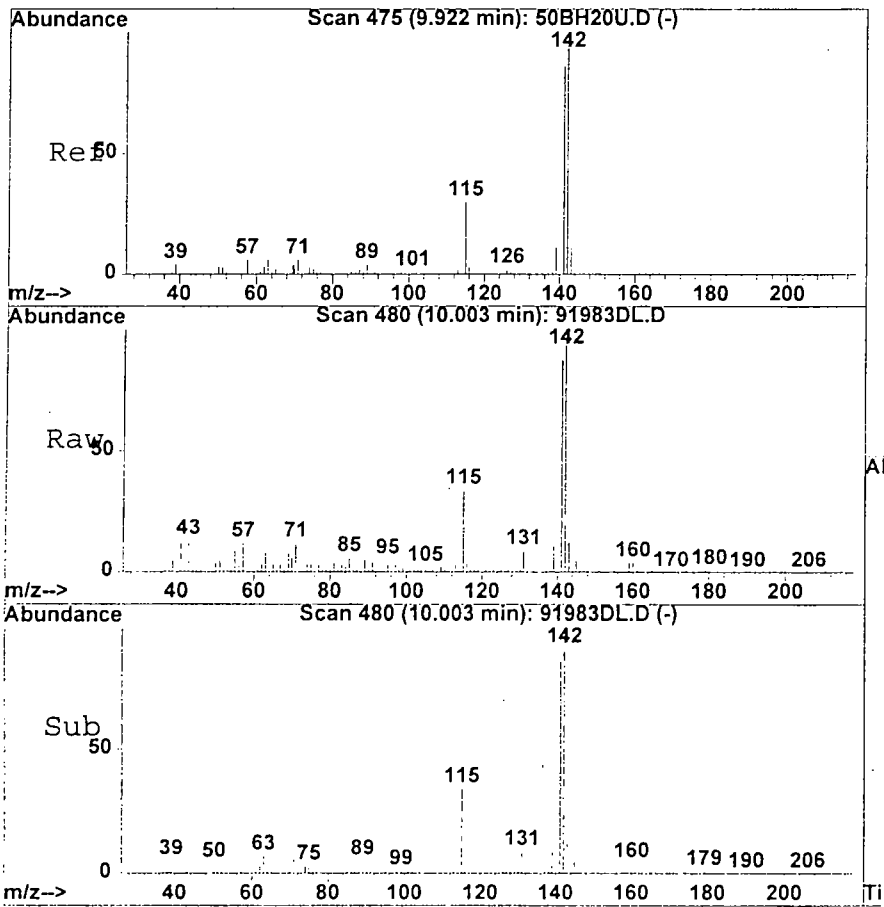


#30
Naphthalene
Concen: 96.75 ng
RT: 8.50 min Scan# 387
Delta R.T. 0.10 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:128 Resp: 4960650

Ion	Ratio	Lower	Upper
128	100		
129	20.8	8.8	13.2#
127	15.8	10.8	16.2
0	0.0	0.0	0.0

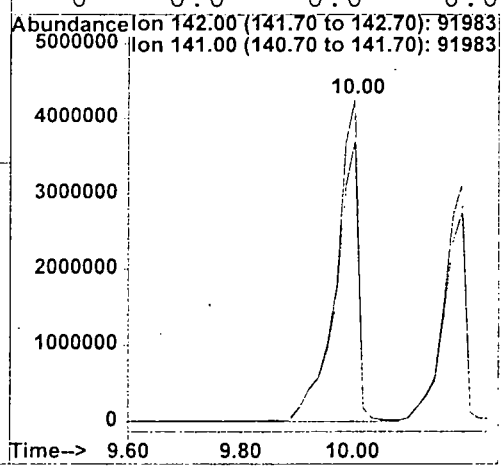


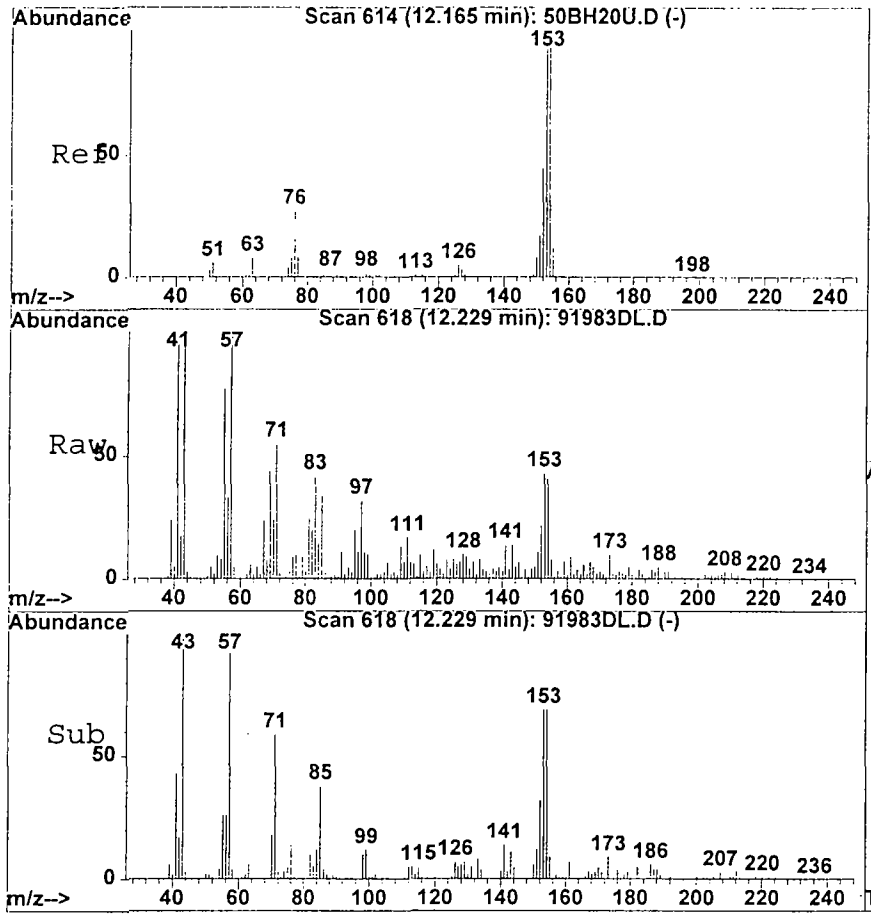


#34
2-Methylnaphthalene
Concen: 365.27 ng
RT: 10.00 min Scan# 480
Delta R.T. 0.14 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:142 Resp:11812724

Ion	Ratio	Lower	Upper
142	100		
141	87.4	68.3	102.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

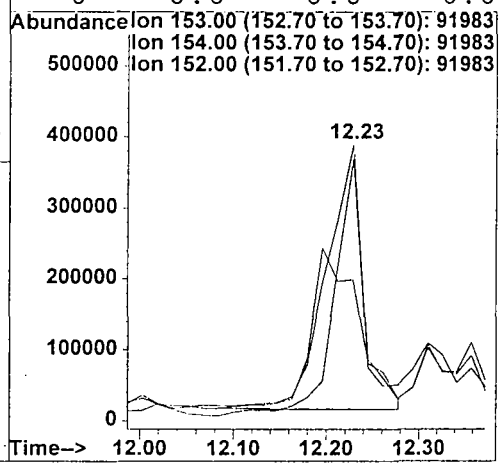


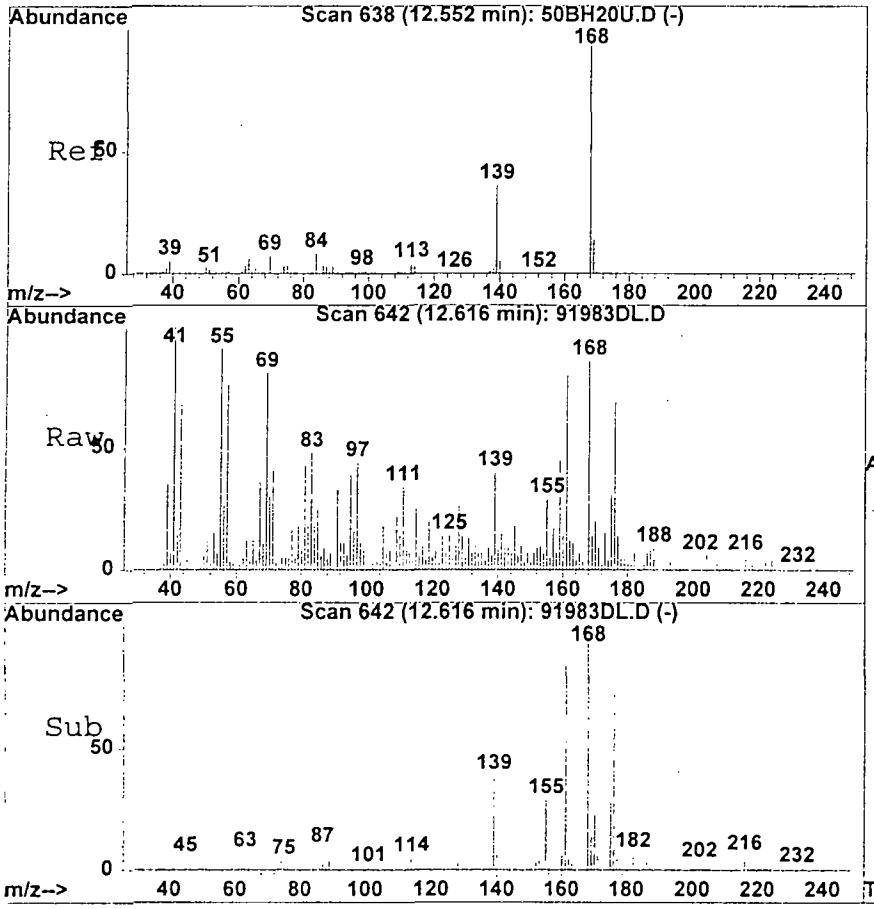


#46
Acenaphthene
Concen: 26.44 ng
RT: 12.23 min Scan# 618
Delta R.T. 0.13 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:153 Resp: 1012164

Ion	Ratio	Lower	Upper
153	100		
154	77.3	75.4	113.2
152	0.0	37.7	56.5#
0	0.0	0.0	0.0

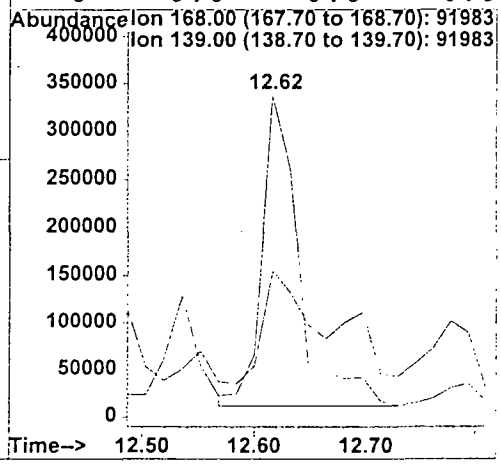


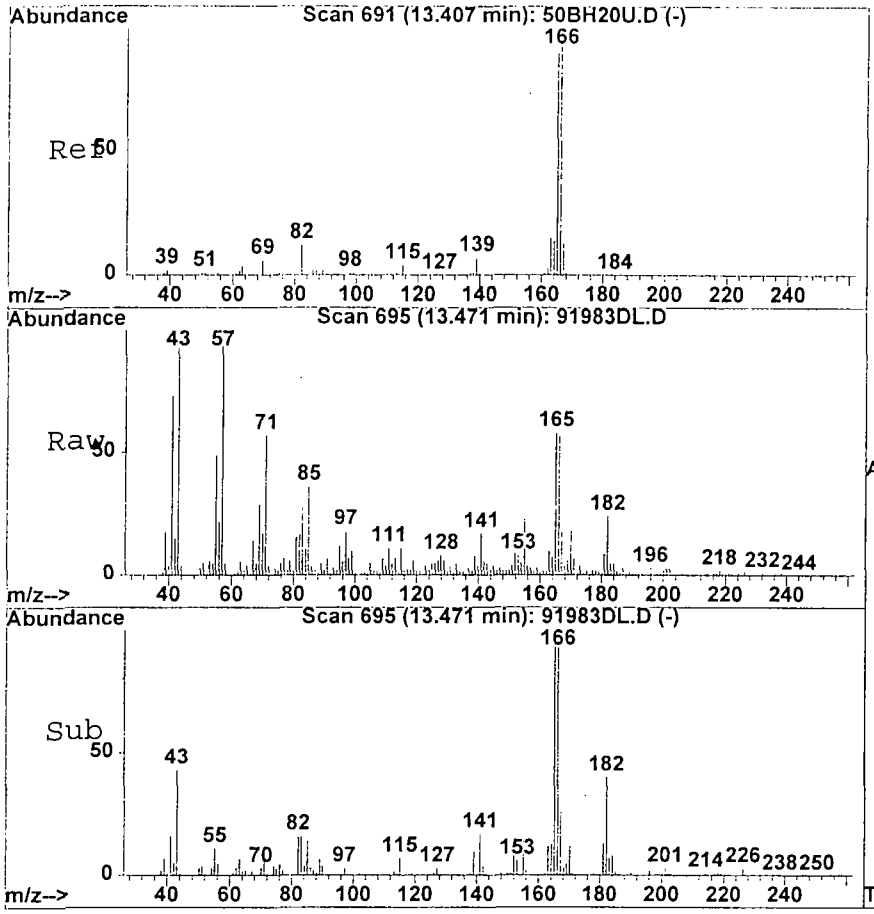


#49
Dibenzofuran
Concen: 14.27 ng
RT: 12.62 min Scan# 642
Delta R.T. 0.13 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:168 Resp: 761767

Ion	Ratio	Lower	Upper
168	100		
139	46.1	41.0	61.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

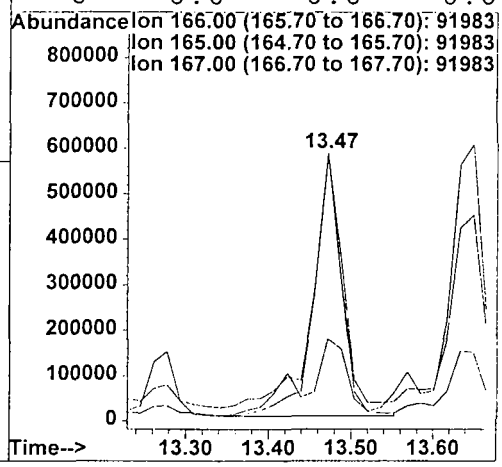


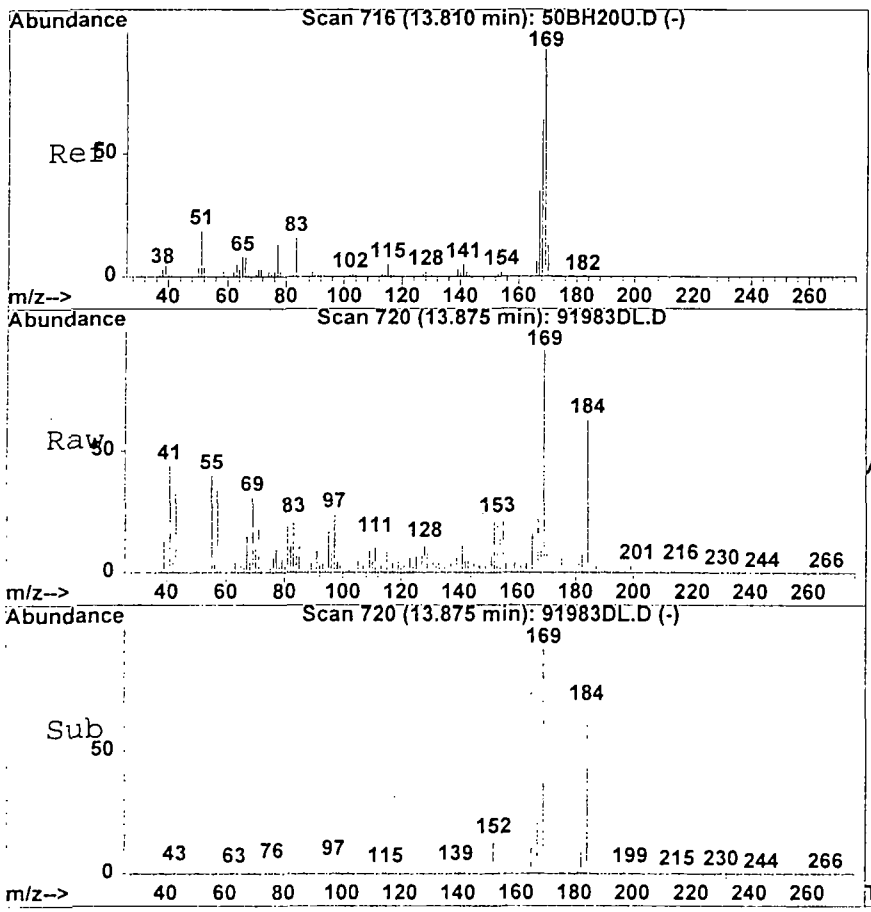


#52
Fluorene
Concen: 31.77 ng
RT: 13.47 min Scan# 695
Delta R.T. 0.16 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:166 Resp: 1314422

Ion	Ratio	Lower	Upper
166	100		
165	105.7	72.9	109.3
167	46.0	10.9	16.3#
0	0.0	0.0	0.0

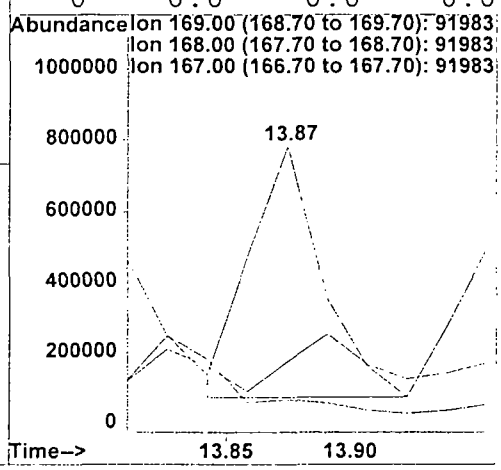


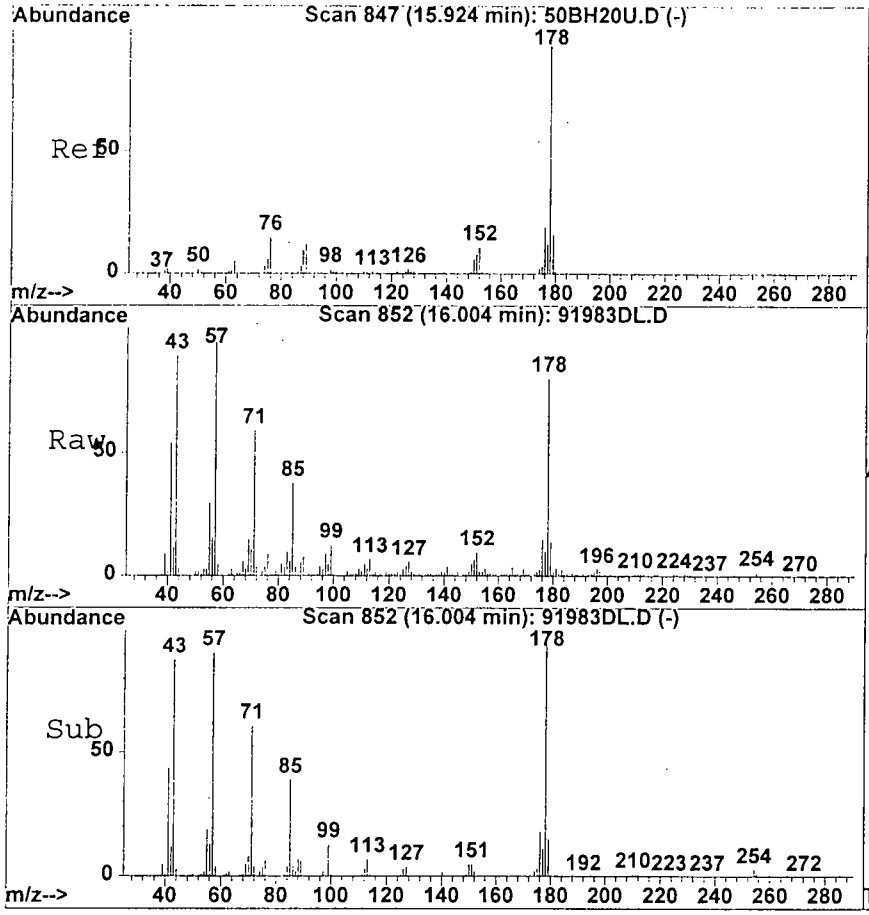


#58
n-Nitrosodiphenylamine
Concen: 50.55 ng
RT: 13.87 min Scan# 720
Delta R.T. 0.14 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:169 Resp: 1419103

Ion	Ratio	Lower	Upper
169	100		
168	0.0	50.6	75.8#
167	31.7	27.1	40.7
0	0.0	0.0	0.0

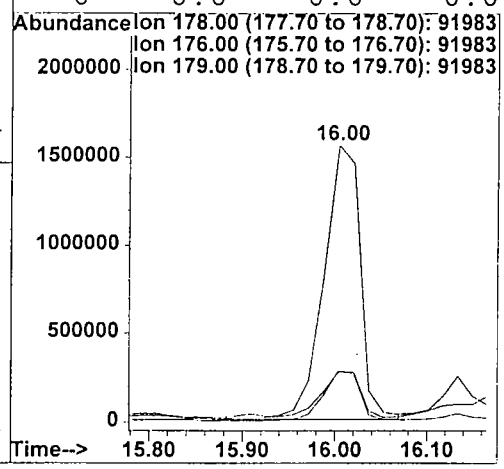


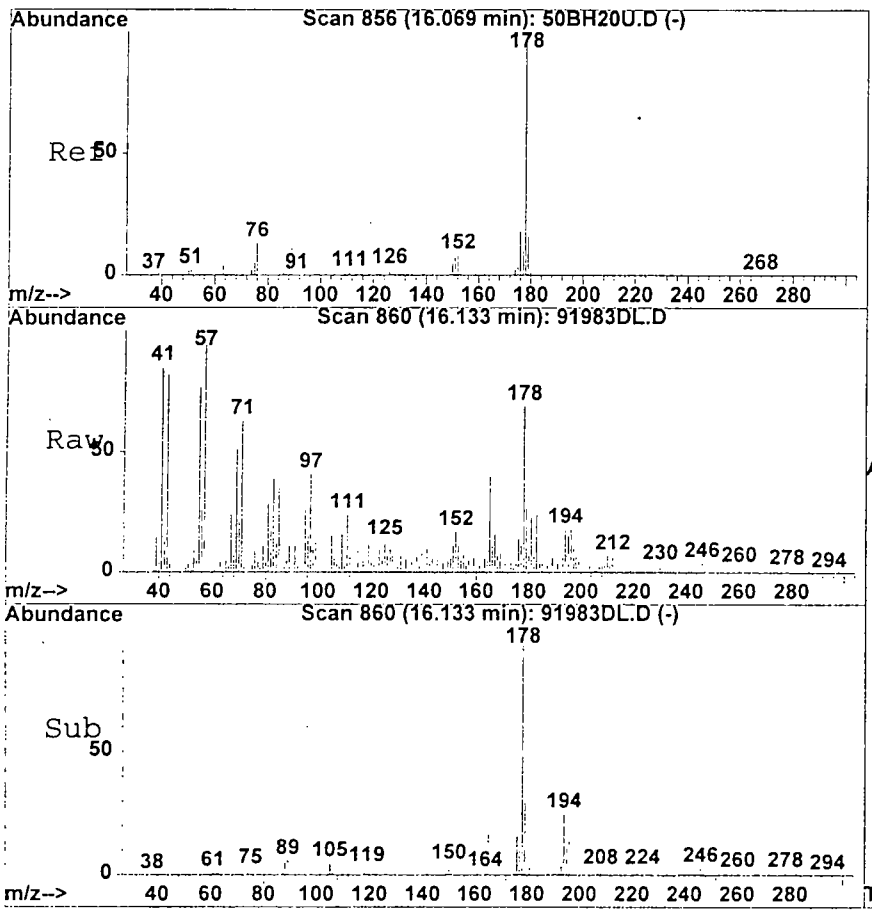


#64
Phenanthrene
Concen: 73.97 ng
RT: 16.00 min Scan# 852
Delta R.T. 0.16 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:178 Resp: 4198066

Ion	Ratio	Lower	Upper
178	100		
176	18.6	15.0	22.4
179	17.4	12.6	19.0
0	0.0	0.0	0.0

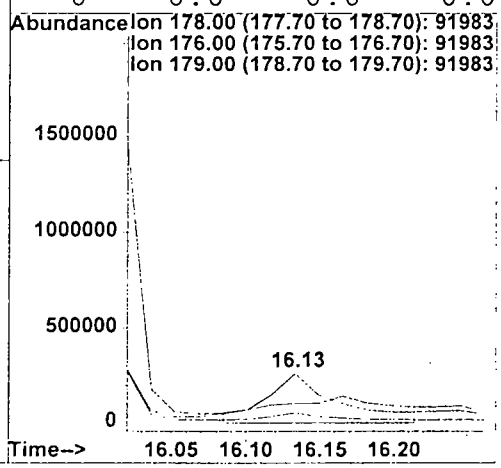


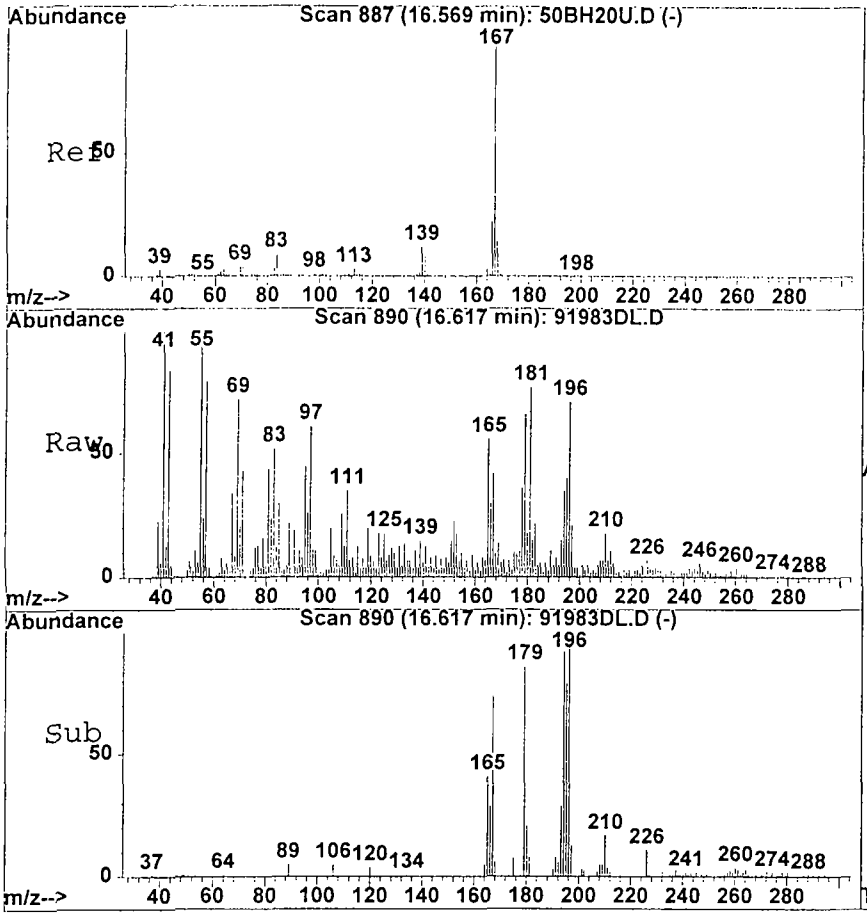


#65
Anthracene
Concen: 14.76 ng m
RT: 16.13 min Scan# 860
Delta R.T. 0.16 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:178 Resp: 878921

Ion	Ratio	Lower	Upper
178	100		
176	19.9	14.5	21.7
179	39.7	12.3	18.5#
0	0.0	0.0	0.0

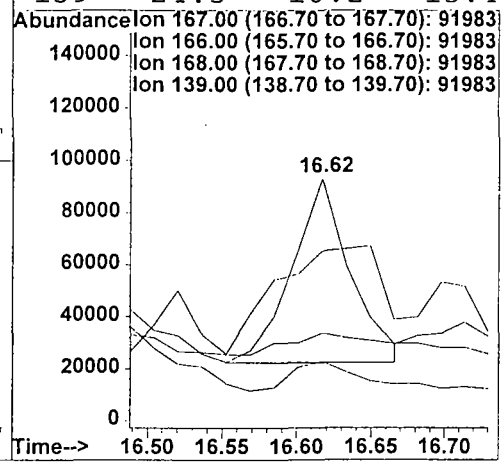


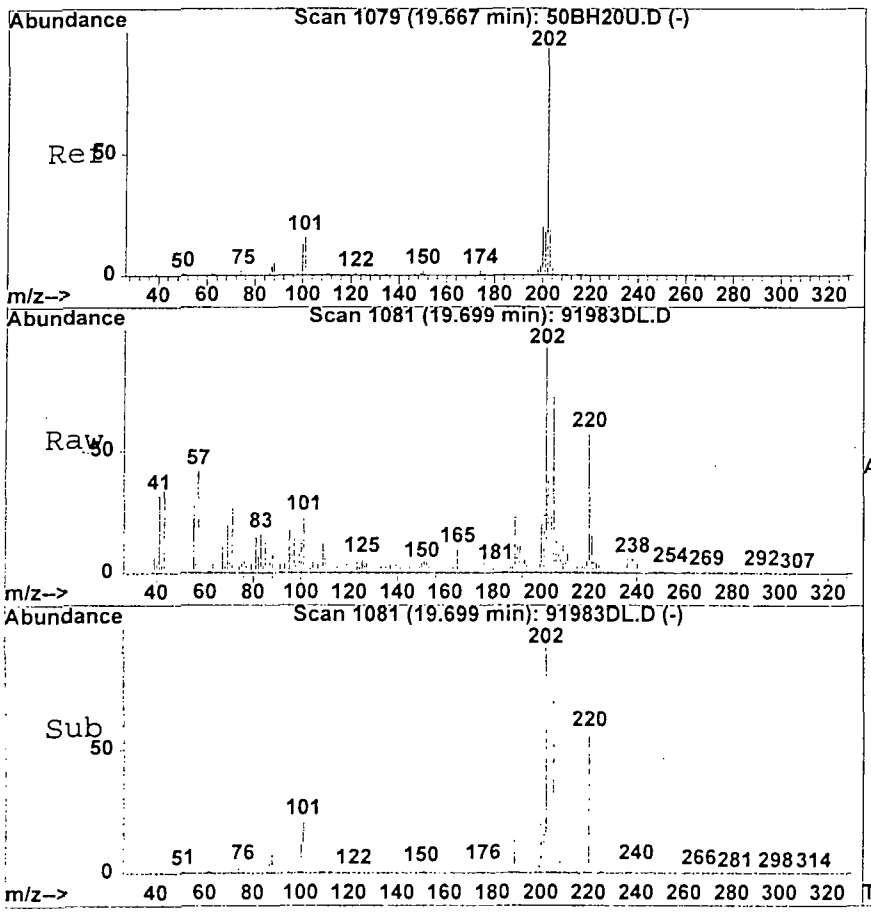


#66
Carbazole
Concen: 3.75 ng
RT: 16.62 min Scan# 890
Delta R.T. 0.14 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:167 Resp: 189981

Ion	Ratio	Lower	Upper
167	100		
166	0.0	16.6	24.8#
168	20.6	10.9	16.3#
139	24.3	10.2	15.4#

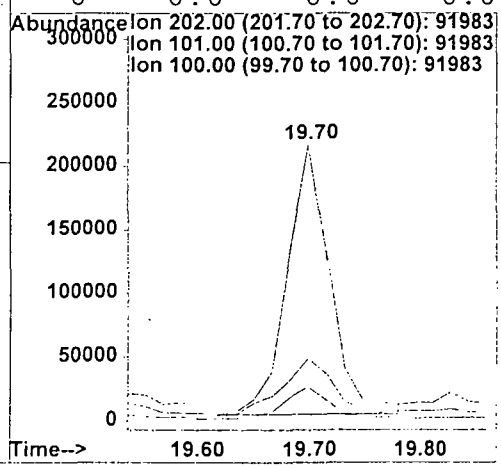




#71
Pyrene
Concen: 7.55 ng
RT: 19.70 min Scan# 1081
Delta R.T. 0.13 min
Lab File: 91983DL.D
Acq: 21 Aug 98 4:09 am

Tgt Ion:202 Resp: 557872

Ion	Ratio	Lower	Upper
202	100		
101	26.7	15.6	23.4#
100	12.9	12.9	19.3#
0	0.0	0.0	0.0



Sample: 1:20 Analyst: JLF Instrument: 5970-021
91983DL.D BNAHSL.M Mon Aug 24 11:15:34 1998

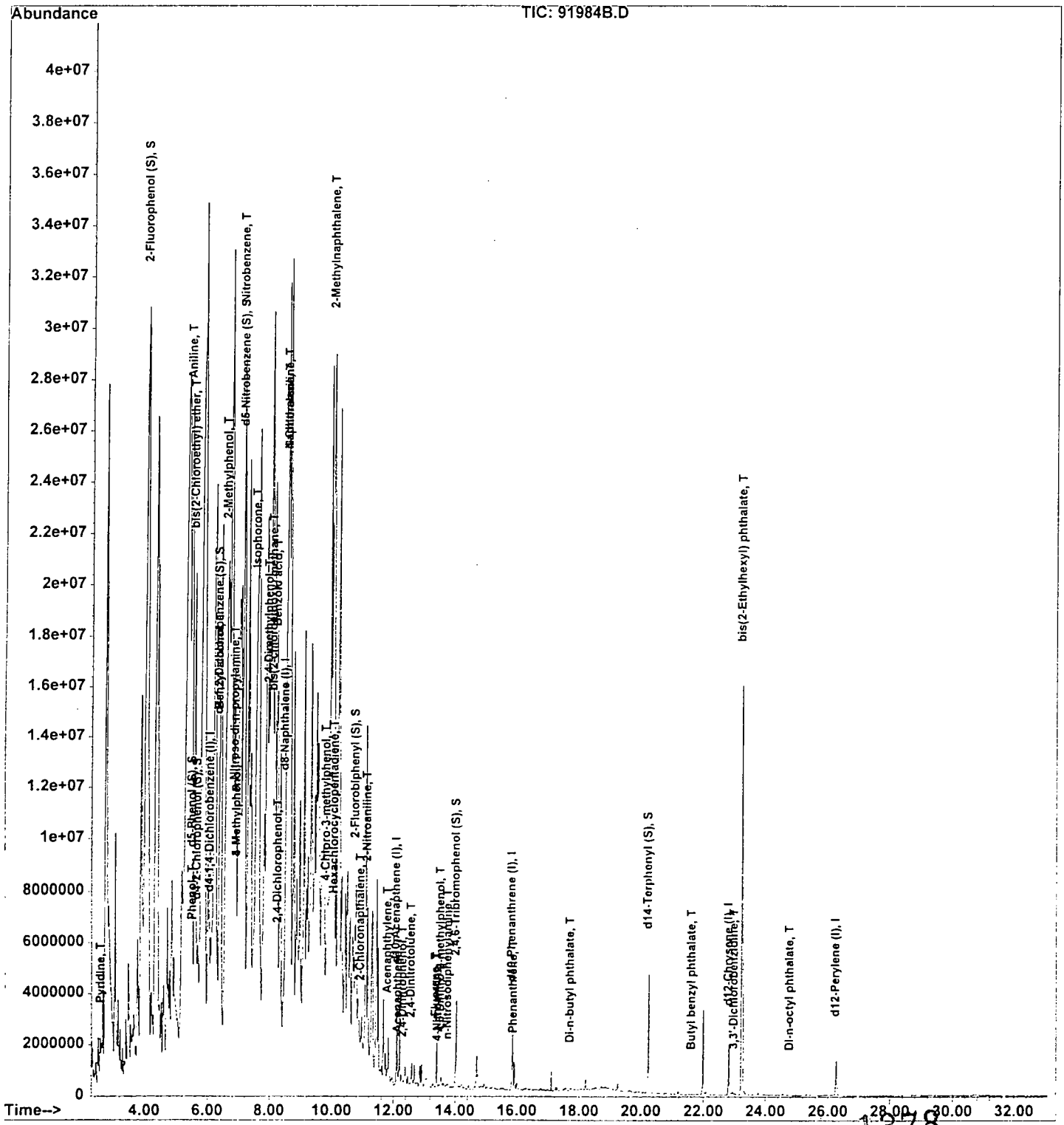
Quantitation Report

Data File : C:\HPCHEM\1\DATA\91984B.D
Acq On : 21 Aug 98 3:28 am
Sample :
Misc : 8-20-98U
Quant Time: Aug 21 4:02 1998

Vial: 16
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

x1 RERUN 1:10 DUE TO MATRIX



1378

Safety-Kleen / Encotec
GC/MS Semivolatile Analysis

Standard ID's: MB195D:MB202D-MB206D
Reference Std : 50BUH21.D
Instrument ID: 5970-021
GC Column : DB-5MS CAP 30 M, 0.25 mm, 0.25u

Run ID : 8-21-98U
Date : 8/21/1998
Tape Number : 7-98-U
Operator : JLF
Multiplier : 2176

	Client	Batch	Time	File Name	Type	Matrix	Dilution	Factor	Rerun	Sample ID
1	ENCOTEC	10000	13:29	DFTH21U	TUNE	N/A	N/A	N/A		Breakdown = 0.3%
2	ENCOTEC	10000	16:39	50BUH21	STD	N/A	N/A	N/A		
3	ENCOTEC	10000	17:23	50IXH21U	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1		
4	ENCOTEC	10000	18:04	89732MB	BLANK	TCLP	500 ul Sample + 5 uL IS	1/1		LTBH203C
5	ENCOTEC	10000	18:45	89731MB	BLANK	TCLP	500 ul Sample + 5 uL IS	1/1		LTBH202B
6	ENCOTEC	10000	19:26	89899LCS	LCS	TCLP	500 ul Sample + 5 uL IS	1/1		LCTH203C
7	EEI	13219	20:47	91984DL	SAMPLE	WATER	50 ul Sample + 450 ul + 5 uL IS	1/10		
8	CON	13269	21:27	92273B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
9	CON	13269	22:08	92273BT	TSPIKE	TCLP	500 ul Sample + 5 uL IS	1/1		
10	BFI	13261	22:48	92226B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
11	BFI	13261	23:29	92227B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1		
12	BFI	13261	00:09	92229BB	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1	A,B	BOTTOM
13	FPR	13270	00:50	92277B	SAMPLE	TCLP	500 ul Sample + 5 uL IS	1/1	B,C	
14	ENCOTEC	10000	01:30	38197B	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1		Out of 12 hours
15	ENCOTEC	10000	02:11	38197D	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours
16	ENCOTEC	10000	02:52	38170B	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours
17	ENCOTEC	10000	03:32	38170D	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours
18	ENCOTEC	10000	04:13	BS726B	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours
19	ENCOTEC	10000	04:53	BS726D	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours
20	ENCOTEC	10000	05:34	M06321B	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours
21	ENCOTEC	10000	06:15	M06321D	SAMPLE	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours
22	ENCOTEC	10000	06:55	MBMECL2	BLANK	N/A	500 ul Sample + 5 uL IS	1/1	B	Out of 12 hours

	IS1	RT	IS2	RT	IS3	RT	IS4	RT	IS5	RT	IS6	RT
Upper Limit	1071556	6.49	3688426	8.91	2191470	12.57	3706552	16.33	3378564	23.30	1956148	26.73
Lower Limit	267889	5.49	922107	7.91	547868	11.57	926638	15.33	844641	22.30	489037	25.73

Re- Analysis Codes: A) Surrogates B) EICP's C) Dilution D) Carry-Over

Generated 8/23/98 8:52:45 AM

BNA INTERNAL STANDARD AREA and RT SUMMARY

Reference Std. 50 BU H21 SDG No. EE-WC-98H2

Instrument ID 021 GC Column: DB-5 CAP 0.32mm, 30M

Date/Time Analyzed: 8/21/98 / 16 : 39 ~~am~~ pm

		IS_1 (DCB) Area	#	RT	#	IS_2 (NPT) Area	#	RT	#	IS_3 (ANT) Area	#	RT	#
12-Hour Standard	Upper Limit	1071556		6.49		3688426		8.91		2191470		12.57	
	Lower Limit	267889		5.49		922107		7.91		547868		11.57	
Sample ENCOTEC ID													
Sample Number 1	91984 DL	683880		5.99		2403304		8.41		1408849		12.06	
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

IS_1 (DCB) = 1,4 -Dichlorobenzene-d_4

IS_2 (NPT) = Naphthalene-d_8

IS_3 (ANT) = Acenaphthalene-d_{10}

Column is used to flag values outside QC limits.

* Value is outside QC limits.

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

C

1380

BNA INTERNAL STANDARD AREA and RT SUMMARY

Reference Std. 50 BUH21 SDG No. EE-WC-98H2

Instrument ID 021 GC Column: DB-5 CAP 0.32mm, 30M

Date/Time Analyzed: 8/21/98 / 16 : 39 ~~am~~ pm

		IS_4 (PHN) Area	#	RT	#	IS_5 (CRY) Area	#	RT	#	IS_6 (PRY) Area	#	RT	#
12-Hour Standard	Upper Limit	3706552		16.33		3378564		23.30		1956148		26.73	
	Lower Limit	926638		15.33		844641		22.30		489037		25.73	
Sample ENCOTEC ID													
1	91984DL	2410247		15.82		2231531		22.79		1479747		26.22	
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

Sample Number

IS_4 (PHN) = Phenanthrene-d_{10}
IS_5 (CRY) = Chrysene-d_{12}
IS_6 (PRY) = Perylene-d_{12}

Column is used to flag values outside QC limits.
* Value is outside QC limits.

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

C

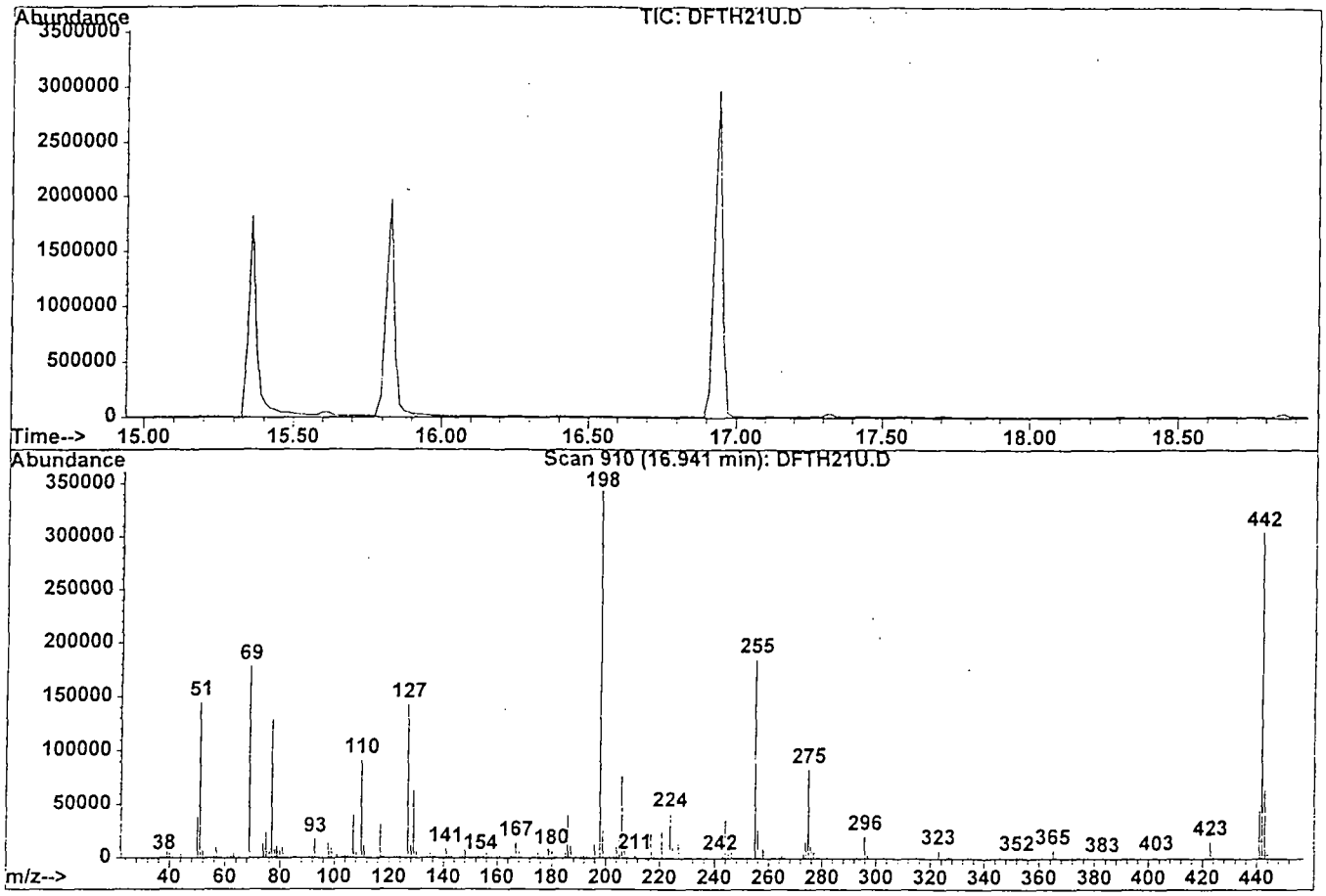
1381

DFTPP - EPA TUNE

Data File : C:\HPCHEM\1\DATA\DFTH21U.D
Acq On : 21 Aug 98 1:29 pm
Sample :
Misc : 8-21-98U

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :



Spectrum Information: Scan 910

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.2	145216	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	51.9	178752	PASS
70	69	0.00	2	0.3	517	PASS
127	198	40	60	41.6	143296	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	344128	PASS
199	198	5	9	7.4	25368	PASS
275	198	10	30	24.3	83776	PASS
365	198	1	100	2.5	8490	PASS
441	443	0.01	100	69.5	44968	PASS
442	198	40	100	88.7	305216	PASS
443	442	17	23	21.2	64736	PASS

Scan 910 (16.941 min): DFTH21U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	619	53.25	556	68.95	178752	81.95	2174
36.90	849	54.95	875	70.05	517	82.95	2000
38.10	2219	55.95	4596	73.05	1309	83.95	626
39.00	14791	56.95	10694	73.95	13603	85.05	1933
40.00	4751	58.05	523	74.95	23792	86.00	2803
41.10	655	60.95	2180	76.05	6684	87.10	1715
42.90	704	62.05	2333	77.05	128392	91.00	2403
44.00	3847	63.05	5937	78.05	8523	92.00	2817
50.05	38480	63.95	751	78.95	11167	93.00	18200
51.05	145216	65.05	2025	79.95	7446	93.90	1230
51.95	7368	67.05	535	80.95	10491	96.10	544

Scan 910 (16.941 min): DFTH21U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
98.00	13928	110.00	91720	126.95	143296	139.95	754
99.00	9992	111.00	11875	128.05	11739	140.95	8861
100.00	721	111.90	1666	128.95	64024	141.95	3399
101.00	4546	112.90	976	129.95	6083	142.95	2488
102.30	684	115.90	2171	130.95	676	144.85	646
103.00	2086	116.90	31560	131.95	668	146.05	1631
104.00	3582	118.00	2181	133.95	1427	147.05	3394
104.90	3351	121.90	3428	135.05	4828	147.95	8004
106.00	1769	122.90	3755	136.05	2401	148.85	1409
107.00	40536	123.95	2018	136.95	2425	149.85	552
108.00	5870	124.95	1674	138.75	604	151.15	946

Scan 910 (16.941 min): DFTH21U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
152.15	621	164.00	734	175.90	2081	188.00	1344
152.95	2310	165.00	3318	177.00	2693	189.00	3057
153.95	2074	166.00	2331	178.90	11274	190.00	536
154.95	3055	167.00	14932	180.00	7370	190.90	1555
156.05	5752	168.00	6200	181.00	3401	191.90	3316
156.95	1290	169.00	1230	182.00	982	193.00	3180
157.95	1634	170.80	927	183.00	578	194.00	785
158.95	1067	172.00	1558	184.00	1090	195.20	1112
159.95	2677	173.00	2205	185.00	5005	195.90	13104
160.95	3361	174.00	3059	186.00	40600	197.90	344128
161.90	1026	175.00	5449	187.00	11761	198.95	25368

Scan 910 (16.941 min): DFTH21U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
200.05	1445	214.95	968	230.95	2003	246.00	6871
201.45	1554	216.95	22984	233.95	1362	246.90	1156
203.05	2419	217.95	2907	234.95	679	248.90	1332
204.05	10850	220.95	24648	237.00	1159	251.90	584
205.05	19064	223.05	4715	238.90	798	252.90	1219
206.05	77576	223.95	43112	239.90	521	253.30	952
206.95	10095	224.95	10803	241.00	1279	255.00	185792
208.05	2703	226.95	18496	242.00	2626	256.00	27192
208.95	1003	227.95	2056	243.00	2674	256.90	2465
210.95	3177	228.95	3225	244.00	36336	257.90	9822
211.65	1548	229.85	593	245.00	4981	258.90	1356

Scan 910 (16.941 min): DFTH21U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
263.90	971	283.95	651	316.00	1298	345.90	1534
264.90	3993	284.95	1008	321.10	756	352.05	2557
265.90	751	292.95	1462	323.00	7953	353.05	1508
271.90	695	294.05	548	324.00	1667	354.05	2856
273.00	5532	295.95	21048	326.90	1734	355.05	835
273.90	15627	296.95	3590	328.00	820	364.95	8490
275.05	83776	302.15	548	331.90	632	365.95	1262
275.95	11788	302.95	2737	333.20	805	370.85	650
276.95	7213	303.95	726	334.00	4295	371.95	3736
277.85	1519	314.10	906	335.00	1646	372.95	1253
283.05	588	314.90	1711	341.00	1204	382.95	1013

Scan 910 (16.941 min): DFTH21U.D

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
390.00	988	441.95	305216				
391.80	605	442.95	64736				
401.90	1522	443.95	5245				
403.00	2434						
404.00	738						
421.00	2320						
422.00	2199						
422.90	16408						
423.90	3688						
438.95	577						
440.95	44968						

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\DFTH21U.D
Vial: 1
Acq On : 21 Aug 98 1:29 pm
Operator: JLF
Sample :
Inst : 5970-021
Misc : 8-21-98U
Multiplr: 1.00
Quant Time: Aug 21 14:02 1998
Quant Results File: DFTPP.RES

Quant Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\DFTG29U.D
DataAcq Meth : DFTPP

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.99	152	454157	40.00 ng	0.00
2) d8-Naphthalene (I)	8.41	136	1551157	40.00 ng	0.00
3) d10-Acenaphthene (I)	12.07	164	913665	40.00 ng	-0.01
5) d10-Phenanthrene (I)	15.83	188	1587993	40.00 ng	-0.03
10) d12-Chrysene (I)	22.80	240	1594379	40.00 ng	-0.03
11) d12-Perylene (I)	26.23	264	1099422	40.00 ng	-0.04

System Monitoring Compounds

Target Compounds					Qvalue
4) Pentachlorophenol	15.36	266	486206	67.65 ng	97
6) Benzidine	19.55	184	1741945	53.99 ng #	92
7) 4,4'-DDE	0.00	246		N.D.	
8) 4,4'-DDD	20.96	235	4958	9.59 ng	100
9) 4,4'-DDT	21.73	235	1491267	93.88 ng	100

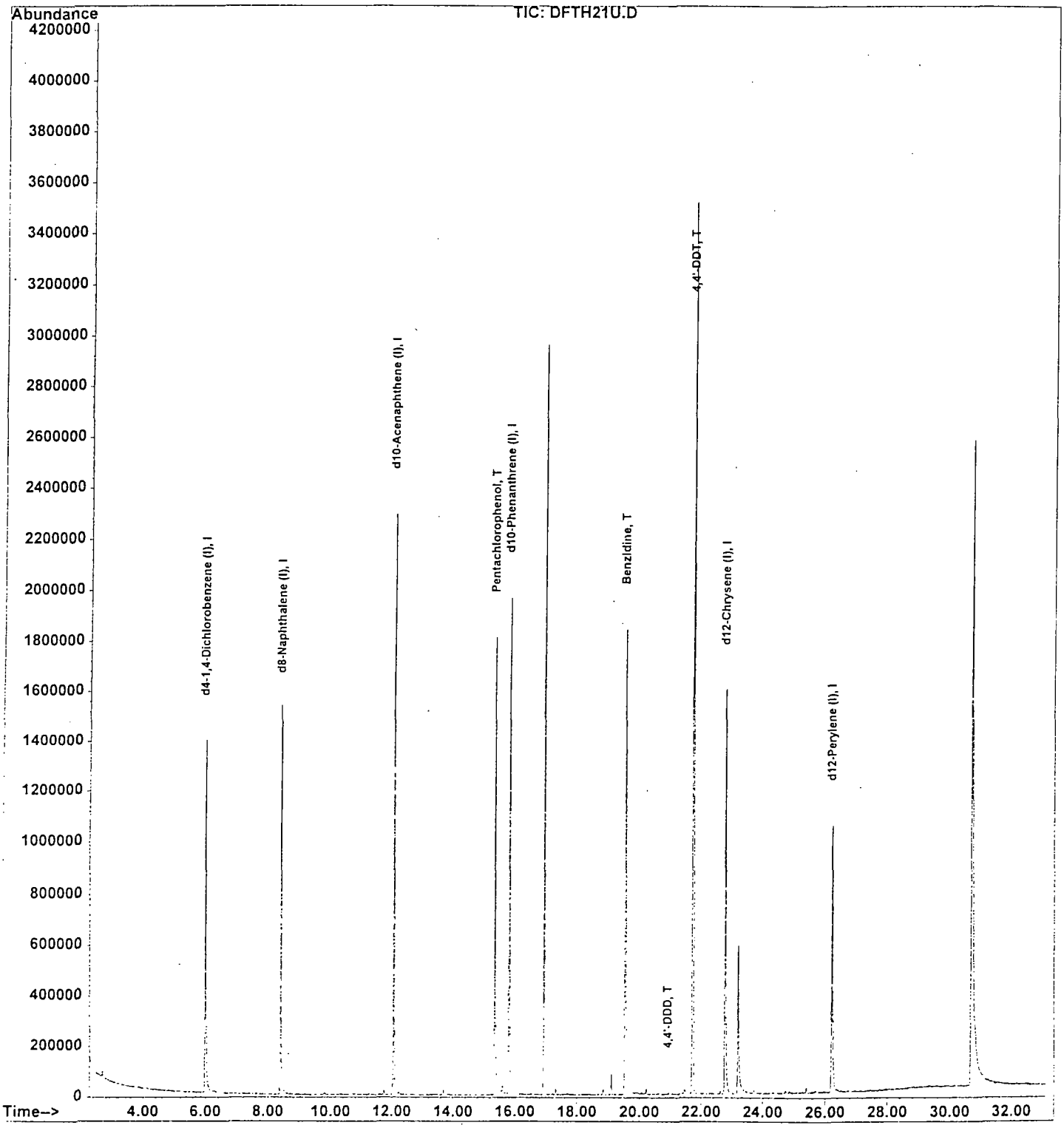
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\DFTH21U.D
Acq On : 21 Aug 98 1:29 pm
Sample :
Misc : 8-21-98U
Quant Time: Aug 21 14:02 1998

Vial: 1
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: DFTPP.RES

Method : C:\HPCHEM\1\METHODS\DFTPP.M
Title :
Last Update : Mon Feb 23 20:23:22 1998
Response via : Single Level Calibration



ENCOTEC GC/MS SEMIVOLATILE 5 WAY CALIBRATION

Instrument ID: 5970-021
Initial Calibration Date: 8/13/98
Continuing Calibration Date: 8/21/98
Continuing File Name: 50BUH21.D

STD	FILE:	STD	FILE:	STD	FILE:
160	160BUH13.D	80	80BUH13.D	10	10BUH13.D
120	120BUH13.D	50	50BUH13.D		

Compound	10	50	80	120	160	RF avg.	% RSD	RF Cont	Cont Rec	% Drift	CCC/SPCC
Phenol	1.474	1.627	1.712	1.417	1.558	1.557	7.5		50.47	0.94	*
1,4-Dichlorobenzene	1.549	1.430	1.423	1.400	1.274	1.415	6.9		53.01	6.0	*
n-Nitroso-di-n-propylamine	0.755	0.898	1.013	0.932	0.763	0.872		0.901			**
2-Nitrophenol	0.143	0.188	0.186	0.193	0.210	0.184	13		50.09	0.18	*
2,4-Dichlorophenol	0.260	0.288	0.273	0.287	0.278	0.277	4.1		53.27	6.5	*
Hexachlorobutadiene	0.208	0.203	0.182	0.187	0.185	0.193	6.1		54.88	9.8	*
4-Chloro-3-methylphenol	0.236	0.285	0.318	0.296	0.261	0.279	11		52.66	5.3	*
Hexachlorocyclopentadiene	0.350	0.394	0.385	0.448	0.443	0.404		0.361			**
2,4,6-Trichlorophenol	0.288	0.339	0.333	0.383	0.377	0.344	11		51.29	2.6	*
Acenaphthene	1.166	1.068	1.010	1.049	1.015	1.062	5.9		48.47	3.1	*
2,4-Dinitrophenol	--------	0.063	0.142	0.166	0.195	0.142		0.060			**
4-Nitrophenol	--------	0.093	0.125	0.122	0.143	0.121		0.091			**
n-Nitrosodiphenylamine	0.419	0.465	0.439	0.458	0.431	0.443	4.3		51.26	2.5	*
Pentachlorophenol	--------	0.124	0.142	0.166	0.155	0.147	12		42.36	15	*
Fluoranthene	0.903	0.997	1.026	1.011	0.907	0.969	6.1		55.52	11	*
Di-n-octyl phthalate	0.462	0.831	0.919	0.944	1.022	0.835	26		48.53	2.9	*
Benzo(a) pyrene	0.924	1.233	1.212	1.231	1.241	1.168	12		51.33	2.7	*

* = CCC - Calibration Check Compound: %RSD < 30 for initial calibration; % Diff. < 20.0 for continuing calibration.
** = SPCC - System Performance Check Compound: Minimum avg. RF > .050 for initial calibration, RF > 0.050 for continuing calibration
% RSD = Relative Standard Deviation
% Drift = (Cont. Cal. Std Conc. - Recovery Conc.) / Cont. Cal. Std. Conc. Rec. x 100

EICPS:

IS1	RT1	IS2	RT2	IS3	RT3	IS4	RT4	IS5	RT5	IS6	RT6
1071556	6.49	3688426	8.91	2191470	12.57	3706552	16.33	3378564	23.30	1956148	26.73
267889	5.49	922107	7.91	547868	11.57	926638	15.33	844641	22.30	489037	25.73

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BUH21.D
Acq On : 21 Aug 98 4:39 pm
Sample :
Misc : 8-21-98U

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAIX.M
Title :
Last Update : Fri Jul 31 11:09:12 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	d4-1,4-Dichlorobenzene (I)	1.000	1.000	0.0	67	0.00
2	T	Pyridine	N/A	1.00	0.0	81	-24.52#
3	T	2-Fluorophenol (S)	N/A	1.00	0.0	80	-23.07#
4	T	Aniline	N/A	1.00	0.0	117	-21.57#
5	T	d4-2-Chlorophenol (S)	N/A	1.00	0.0	89	-21.43#
6	T	2-Chlorophenol	N/A	1.00	0.0	95	-21.39#
7	T	bis(2-Chloroethyl) ether	N/A	1.00	0.0	98	-21.44#
8	T	d5-Phenol (S)	N/A	1.00	0.0	101	-21.60#
9	T	Phenol	N/A	1.00	0.0	121	-21.59#
10	T	1,3-Dichlorobenzene	N/A	1.00	0.0	110	-21.14#
11	T	1,4-Dichlorobenzene	N/A	1.00	0.0	116	-21.01#
12	T	d4-1,2-Dichlorobenzene (S)	N/A	1.00	0.0	71	-20.76#
13	T	1,2-Dichlorobenzene	N/A	1.00	0.0	106	-20.75#
14	T	Benzyl alcohol	N/A	1.00	0.0	50#	-20.75#
15	T	bis(2-Chloroisopropyl) ethe	N/A	1.00	0.0	181#	-20.47#
16	T	2-Methylphenol	N/A	1.00	0.0	77	-20.52#
17	T	Hexachloroethane	N/A	1.00	0.0	51	-20.13#
18	T	n-Nitroso-di-n-propylamine	N/A	1.00	0.0	69	-20.23#
19	T	3-Methylphenol	N/A	1.00	0.0	82	-20.22#
20	T	4-Methylphenol	N/A	1.00	0.0	82	-20.22#
21	T	d8-Naphthalene (I)	N/A	1.00	0.0	212#	-18.62#
22	T	d5-Nitrobenzene (S)	N/A	1.00	0.0	92	-20.01#
23	T	Nitrobenzene	N/A	1.00	0.0	91	-19.97#
24	T	Isophorone	N/A	1.00	0.0	186#	-19.47#
25	T	2-Nitrophenol	N/A	1.00	0.0	49#	-19.36#
26	T	2,4-Dimethylphenol	N/A	1.00	0.0	80	-19.20#
27	T	bis(2-chloroethoxy) methane	N/A	1.00	0.0	118	-18.99#
28	T	2,4-Dichlorophenol	N/A	1.00	0.0	78	-18.88#
29	T	1,2,4-Trichlorobenzene	N/A	1.00	0.0	92	-18.72#
30	T	Naphthalene	N/A	1.00	0.0	256#	-18.59#
31	T	Benzoic acid	N/A	1.00	0.0	23#	-18.88#
32	T	4-Chloroaniline	N/A	1.00	0.0	101	-18.42#
33	T	Hexachlorobutadiene	N/A	1.00	0.0	56	-18.28#
34	T	2-Methylnaphthalene	N/A	1.00	0.0	170#	-17.13#
35	T	4-Chloro-3-methylphenol	N/A	1.00	0.0	78	-17.36#
36	T	d10-Acenapthene (I)	N/A	1.00	0.0	126	-14.96#
37	T	Hexachlorocyclopentadiene	N/A	1.00	0.0	57	-16.80#
38	T	2,4,6-Trichlorophenol	N/A	1.00	0.0	56	-16.52#
39	T	2,4,5-Trichlorophenol	N/A	1.00	0.0	64	-16.46#
40	T	2-Fluorobiphenyl (S)	N/A	1.00	0.0	188#	-16.33#
41	T	2-Chloronapthalene	N/A	1.00	0.0	168#	-16.13#
42	T	2-Nitroaniline	N/A	1.00	0.0	50	-15.86#

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\50BUH21.D
Acq On : 21 Aug 98 4:39 pm
Sample :
Misc : 8-21-98U

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\BNAIX.M
Title :
Last Update : Fri Jul 31 11:09:12 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
43 T	Acenaphthylene	N/A	1.00	0.0	263#	-15.26#
44 T	Dimethylphthalate	N/A	1.00	0.0	193#	-15.39#
45 T	2,6-Dinitrotoluene	N/A	1.00	0.0	49#	-15.29#
46 T	Acenaphthene	N/A	1.00	0.0	162#	-14.89#
47 T	3-Nitroaniline	N/A	1.00	0.0	42#	-14.97#
48 T	2,4-Dinitrophenol	N/A	1.00	0.0	9#	-14.75#
49 T	Dibenzofuran	N/A	1.00	0.0	235#	-14.50#
50 T	2,4-Dinitrotoluene	N/A	1.00	0.0	65	-14.46#
51 T	4-Nitrophenol	N/A	1.00	0.0	14#	-14.55#
52 T	Fluorene	N/A	1.00	0.0	183#	-13.67#
53 T	4-Chlorophenyl phenyl ether	N/A	1.00	0.0	97	-13.58#
54 T	Diethylphthalate	N/A	1.00	0.0	195#	-13.76#
55 T	4-Nitroaniline	N/A	1.00	0.0	35#	-13.52#
56 I	d10-Phenanthrene (I)	1.000	1.000	0.0	71	-0.04
57 T	4,6-Dinitro-2-methylphenol	N/A	1.00	0.0	27#	-13.44#
58 T	n-Nitrosodiphenylamine	N/A	1.00	0.0	121	-13.25#
59 T	2,4,6-Tribromophenol (S)	N/A	1.00	0.0	37#	-13.02#
60 T	Octachlorocyclopentene	N/A	1.00	0.0	50	-13.02#
61 T	4-Bromophenyl phenyl ether	N/A	1.00	0.0	63	-12.29#
62 T	Hexachlorobenzene	N/A	1.00	0.0	85	-12.23#
63 T	Pentachlorophenol	N/A	1.00	0.0	33#	-11.66#
64 T	Phenanthrene	N/A	1.00	0.0	245#	-11.13#
65 T	Anthracene	N/A	1.00	0.0	251#	-11.00#
66 T	Carbazole	N/A	1.00	0.0	210#	-10.50#
67 T	Di-n-butyl phthalate	N/A	1.00	0.0	333#	-9.33#
68 T	Fluoranthene	N/A	1.00	0.0	287#	-7.97#
69 I	d12-Chrysene (I)	1.000	1.000	0.0	77	-0.02
70 T	Benzidine	N/A	1.00	0.0	17#	-7.47#
71 T	Pyrene	N/A	1.00	0.0	280#	-7.41#
72 T	d14-Terphenyl (S)	N/A	1.00	0.0	202#	-6.82#
73 T	Butyl benzyl phthalate	N/A	1.00	0.0	125	-5.41#
74 T	Benzo(a) anthracene	N/A	1.00	0.0	230#	-4.24#
75 T	Chrysene	N/A	1.00	0.0	206#	-4.16#
76 T	3,3'-Dichlorobenzidine	N/A	1.00	0.0	68	-4.21#
77 T	bis(2-Ethylhexyl) phthalate	N/A	1.00	0.0	158#	-3.84#
78 T	Di-n-octyl phthalate	N/A	1.00	0.0	204#	-2.26#
79 T	d12-Perylene (I)	N/A	1.00	0.0	113	-0.79#
80 T	Benzo(b) fluoranthene	N/A	1.00	0.0	204#	-1.61#
81 T	Benzo(k) fluoranthene	N/A	1.00	0.0	204#	-1.61#
82 T	Benzo(a) pyrene	N/A	1.00	0.0	169#	-0.94#

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH21.D
Acq On : 21 Aug 98 4:39 pm
Sample :
Misc : 8-21-98U
Quant Time: Aug 21 17:29 1998

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.99	152	535778	40.00	ng	0.02
21) d8-Naphthalene (I)	8.41	136	1844213	40.00	ng	0.03
36) d10-Acenapthene (I)	12.07	164	1095735	40.00	ng	0.03
56) d10-Phenanthrene (I)	15.83	188	1853276	40.00	ng	0.03
69) d12-Chrysene (I)	22.80	240	1689282	40.00	ng	0.05
79) d12-Perylene (I)	26.23	264	978074	40.00	ng	0.07
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.95	112	693709	51.11	ng	0.02
Surrogate Spike 150.000			Recovery = 34.07%			
5) d4-2-Chlorophenol (S)	5.60	132	776429	52.96	ng	0.03
Surrogate Spike 150.000			Recovery = 35.31%			
8) d5-Phenol (S)	5.42	99	880923	49.26	ng	0.05
Surrogate Spike 150.000			Recovery = 32.84%			
12) d4-1,2-Dichlorobenzene (S)	6.26	152	613600	52.90	ng	0.03
Surrogate Spike 100.000			Recovery = 52.90%			
22) d5-Nitrobenzene (S)	7.02	82	802658	48.65	ng	0.03
Surrogate Spike 100.000			Recovery = 48.65%			
40) 2-Fluorobiphenyl (S)	10.70	172	1631095	50.42	ng	0.02
Surrogate Spike 100.000			Recovery = 50.42%			
59) 2,4,6-Tribromophenol (S)	14.00	330	322379	57.00	ng	0.05
Surrogate Spike 150.000			Recovery = 38.00%			
72) d14-Terphenyl (S)	20.20	244	1750572	47.58	ng	0.03
Surrogate Spike 100.000			Recovery = 47.58%			

Target Compounds							Qvalue
2) Pyridine	2.50	79	704866	48.13	ng		91
4) Aniline	5.45	93	1019274	46.95	ng		96
6) 2-Chlorophenol	5.63	128	826784	49.96	ng		91
7) bis(2-Chloroethyl) ether	5.58	93	849973	50.33	ng		95
9) Phenol	5.44	94	1052919	50.47	ng		90
10) 1,3-Dichlorobenzene	5.89	146	954972	52.90	ng		98
11) 1,4-Dichlorobenzene	6.02	146	1004691	53.01	ng		99
13) 1,2-Dichlorobenzene	6.28	146	918533	52.39	ng		97
14) Benzyl alcohol	6.28	108	432551	48.98	ng		98
15) bis(2-Chloroisopropyl) eth	6.55	45	1574194	50.13	ng	#	100
16) 2-Methylphenol	6.50	108	671978	50.02	ng		97
17) Hexachloroethane	6.89	117	446493	50.95	ng	#	73
18) n-Nitroso-di-n-propylamine	6.79	70	603296	51.64	ng		98
19) 3-Methylphenol	6.81	108	714612	24.97	ng		97
20) 4-Methylphenol	6.81	108	714612	24.97	ng		97
23) Nitrobenzene	7.05	77	792738	47.66	ng		94
24) Isophorone	7.55	82	1615668	52.15	ng		99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH21.D
Acq On : 21 Aug 98 4:39 pm
Sample :
Misc : 8-21-98U
Quant Time: Aug 21 17:29 1998

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
25)	2-Nitrophenol	7.66	139	424775	50.09 ng		89
26)	2,4-Dimethylphenol	7.83	107	692119	47.94 ng		98
27)	bis(2-chloroethoxy) methan	8.04	93	1020932	51.60 ng		99
28)	2,4-Dichlorophenol	8.15	162	680791	53.27 ng		96
29)	1,2,4-Trichlorobenzene	8.31	180	801546	53.90 ng		97
30)	Naphthalene	8.44	128	2223720	49.63 ng		99
31)	Benzoic acid	8.15	122	199165	25.05 ng		90
32)	4-Chloroaniline	8.60	127	873708	48.55 ng		100
33)	Hexachlorobutadiene	8.75	225	488040	54.88 ng		99
34)	2-Methylnaphthalene	9.89	142	1473858	52.15 ng		99
35)	4-Chloro-3-methylphenol	9.66	107	677979	52.66 ng		99
37)	Hexachlorocyclopentadiene	10.23	237	494732	44.70 ng		97
38)	2,4,6-Trichlorophenol	10.50	196	483024	51.29 ng		94
39)	2,4,5-Trichlorophenol	10.57	196	556829	53.98 ng		96
41)	2-Chloronapthalene	10.89	162	1458222	49.67 ng		95
42)	2-Nitroaniline	11.17	65	435326	44.45 ng		96
43)	Acenaphthylene	11.76	152	2280659	49.59 ng		99
44)	Dimethylphthalate	11.63	163	1673297	49.66 ng		99
45)	2,6-Dinitrotoluene	11.73	165	426790	54.11 ng	#	87
46)	Acenaphthene	12.13	153	1409555	48.47 ng		99
47)	3-Nitroaniline	12.05	138	362539	44.06 ng		90
48)	2,4-Dinitrophenol	12.28	184	82455	49.03 ng	#	67
49)	Dibenzofuran	12.52	168	2038527	50.25 ng		89
50)	2,4-Dinitrotoluene	12.57	165	560082	49.73 ng		83
51)	4-Nitrophenol	12.47	109	125181	37.76 ng	#	1
52)	Fluorene	13.36	166	1588214	50.53 ng		100
53)	4-Chlorophenyl phenyl ethe	13.44	204	842446	50.42 ng		94
54)	Diethylphthalate	13.26	149	1696730	50.01 ng		98
55)	4-Nitroaniline	13.50	138	304017	51.45 ng		97
57)	4,6-Dinitro-2-methylphenol	13.59	198	235420	49.73 ng	#	56
58)	n-Nitrosodiphenylamine	13.78	169	1051001	51.26 ng		95
60)	Octachlorocyclopentene	14.00	307	435827	56.38 ng		94
61)	4-Bromophenyl phenyl ether	14.73	248	548465	54.29 ng		94
62)	Hexachlorobenzene	14.80	284	733712	55.15 ng	#	88
63)	Pentachlorophenol	15.36	266	287907	42.36 ng		97
64)	Phenanthrene	15.89	178	2130909	51.41 ng		99
65)	Anthracene	16.02	178	2177653	50.06 ng		99
66)	Carbazole	16.52	167	1827091	49.39 ng		99
67)	Di-n-butyl phthalate	17.70	149	2887452	53.63 ng		99
68)	Fluoranthene	19.05	202	2492675	55.52 ng		95
70)	Benzidine	19.55	184	150594	19.92 ng	#	97
71)	Pyrene	19.62	202	2433898	45.61 ng		96
73)	Butyl benzyl phthalate	21.62	149	1089203	47.73 ng		97

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

1391

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\50BUH21.D
Vial: 5
Acq On : 21 Aug 98 4:39 pm
Operator: JLF
Sample :
Inst : 5970-021
Misc : 8-21-98U
Multiplr: 1.00
Quant Time: Aug 21 17:29 1998
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
74)	Benzo(a) anthracene	22.78	228	1996449	50.57 ng		99
75)	Chrysene	22.86	228	1789853	53.93 ng		99
76)	3,3'-Dichlorobenzidine	22.81	252	587721	57.42 ng	#	96
77)	bis(2-Ethylhexyl) phthalat	23.18	149	1374662	45.74 ng	#	96
78)	Di-n-octyl phthalate	24.77	149	1770134	48.53 ng		100
80)	Benzo(b) fluoranthene	25.35	252	1795776m	51.83 ng		98
81)	Benzo(k) fluoranthene	25.41	252	1766800	49.61 ng		99
82)	Benzo(a) pyrene	26.09	252	1466275	51.33 ng		96
83)	Indeno (1,2,3-cd) pyrene	28.73	276	1162734	56.91 ng	#	88
84)	Dibenz (ah) anthracene	28.82	278	732316	52.50 ng		96
85)	Benzo (ghi) perylene	29.33	276	1022138	53.58 ng		98

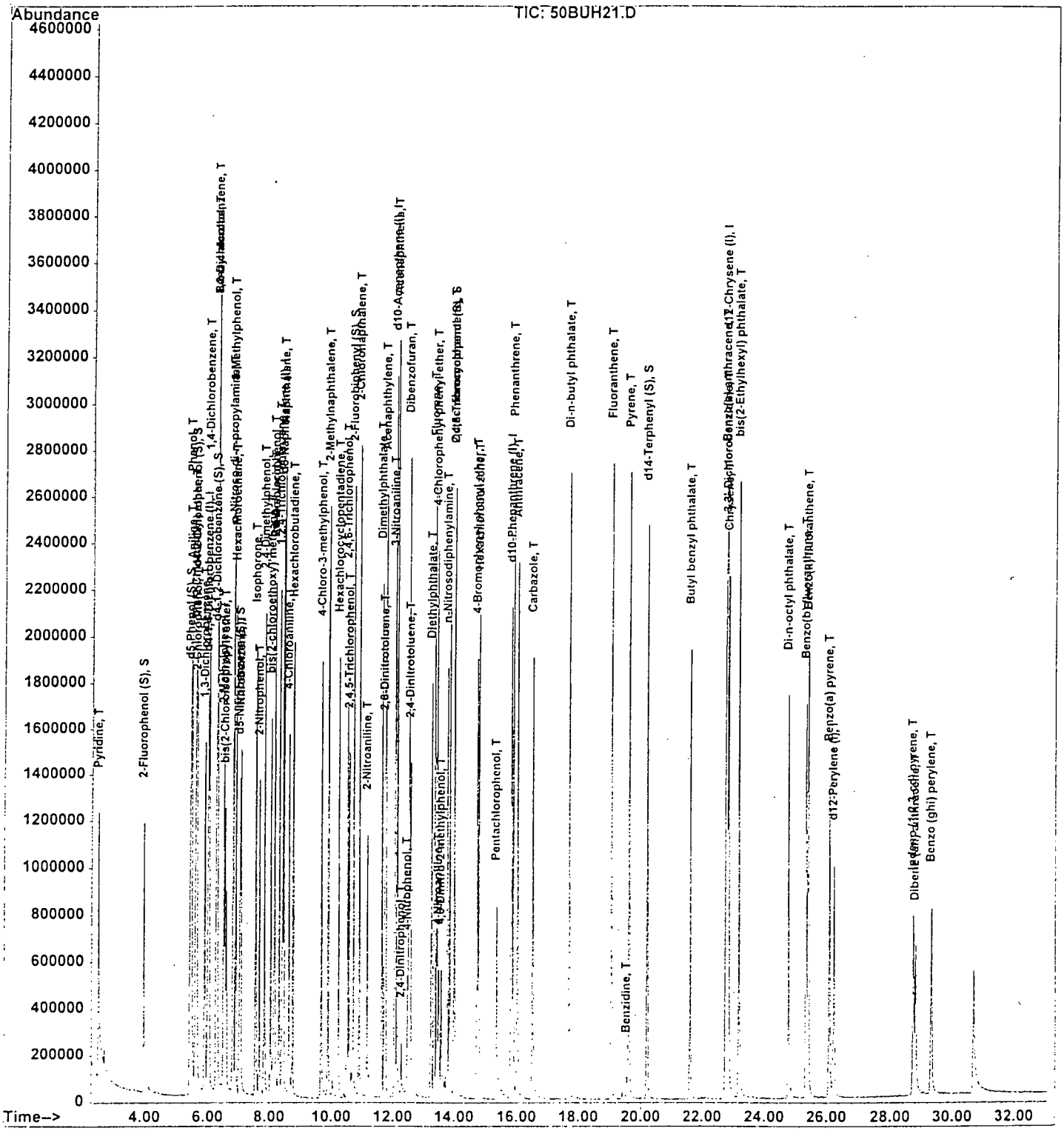
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\50BUH21.D
Acq On : 21 Aug 98 4:39 pm
Sample :
Misc : 8-21-98U
Quant Time: Aug 21 17:29 1998

Vial: 5
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAIX.M
Title :
Last Update : Fri Jul 31 11:09:12 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\91984DL.D
Acq On : 21 Aug 98 8:47 pm
Sample : 1:10
Misc : 8-21-98U
Quant Time: Aug 21 21:40 1998

Vial: 12
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

X10

Exp good

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.99	152	683880	40.00 ng	0.02
21) d8-Naphthalene (I)	8.41	136	2403304	40.00 ng	0.04
36) d10-Acenapthene (I)	12.06	164	1408849	40.00 ng	0.02
56) d10-Phenanthrene (I)	15.82	188	2410247	40.00 ng	0.02
69) d12-Chrysene (I)	22.79	240	2231531	40.00 ng	0.04
79) d12-Perylene (I)	26.22	264	1479747	40.00 ng	0.05
System Monitoring Compounds					
3) 2-Fluorophenol (S)	3.96	112	120234	6.94 ng	0.02
Surrogate Spike 150.000			Recovery	= 4.63%	
5) d4-2-Chlorophenol (S)	5.61	132	209353	11.19 ng	0.04
Surrogate Spike 150.000			Recovery	= 7.46%	
8) d5-Phenol (S)	5.41	99	103369	4.53 ng	0.04
Surrogate Spike 150.000			Recovery	= 3.02%	
12) d4-1,2-Dichlorobenzene (S)	6.25	152	117515	7.94 ng	0.02
Surrogate Spike 100.000			Recovery	= 7.94%	
22) d5-Nitrobenzene (S)	7.02	82	162075	7.54 ng	0.04
Surrogate Spike 100.000			Recovery	= 7.54%	
40) 2-Fluorobiphenyl (S)	10.70	172	316199	7.60 ng	0.02
Surrogate Spike 100.000			Recovery	= 7.60%	
59) 2,4,6-Tribromophenol (S)	13.98	330	74606	10.14 ng	0.02
Surrogate Spike 150.000			Recovery	= 6.76%	
72) d14-Terphenyl (S)	20.19	244	324420	6.68 ng	0.02
Surrogate Spike 100.000			Recovery	= 6.68%	

Target Compounds						Qvalue
26) 2,4-Dimethylphenol	7.85	107	88487	4.70 ng		96
30) Naphthalene	8.46	128	4824839	82.64 ng	#	92
34) 2-Methylnaphthalene	9.90	142	4619920	125.45 ng		98
77) bis(2-Ethylhexyl) phthalat	23.19	149	1363723	35.66 ng	#	94

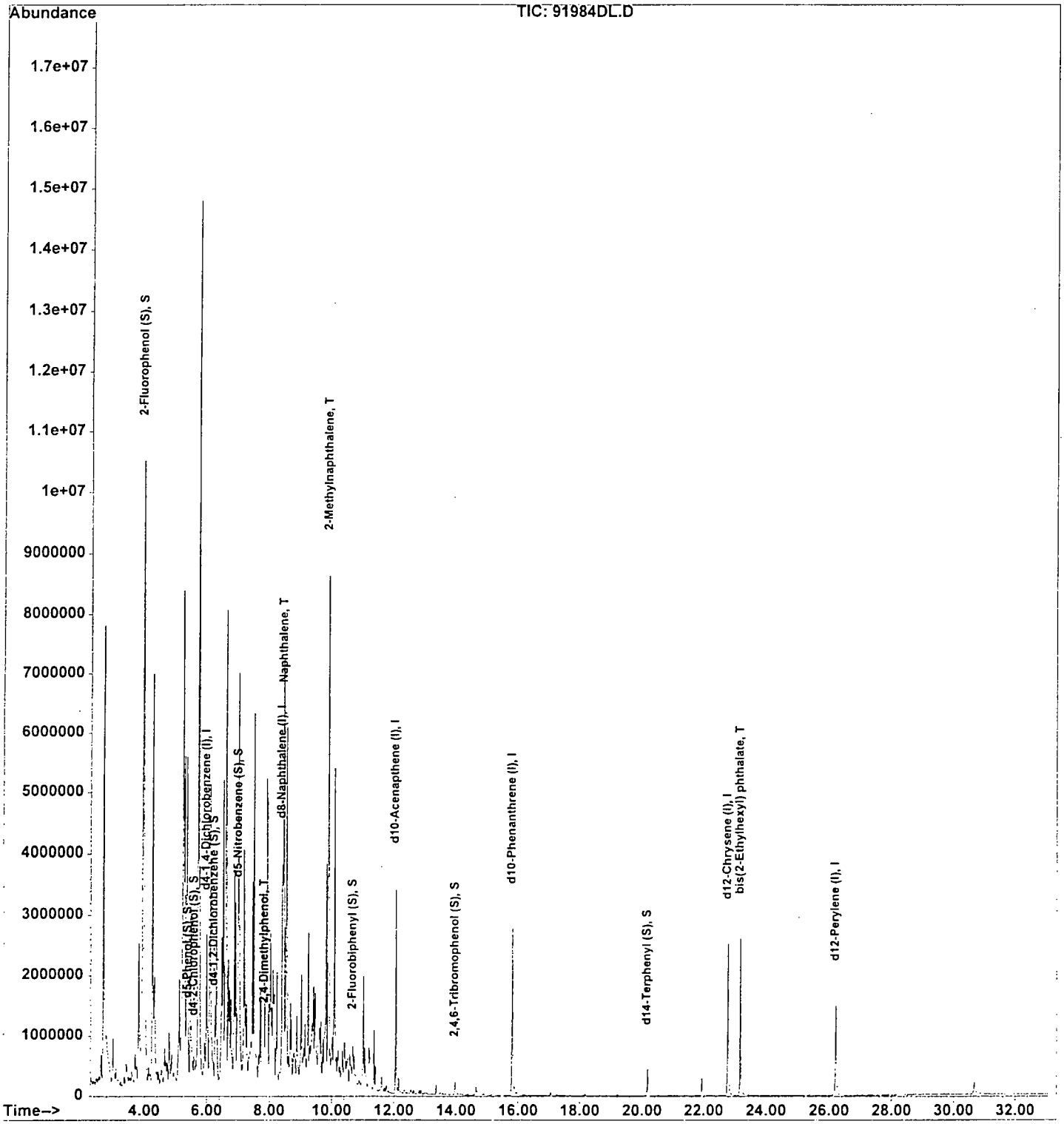
(#) = qualifier out of range (m) = manual integration

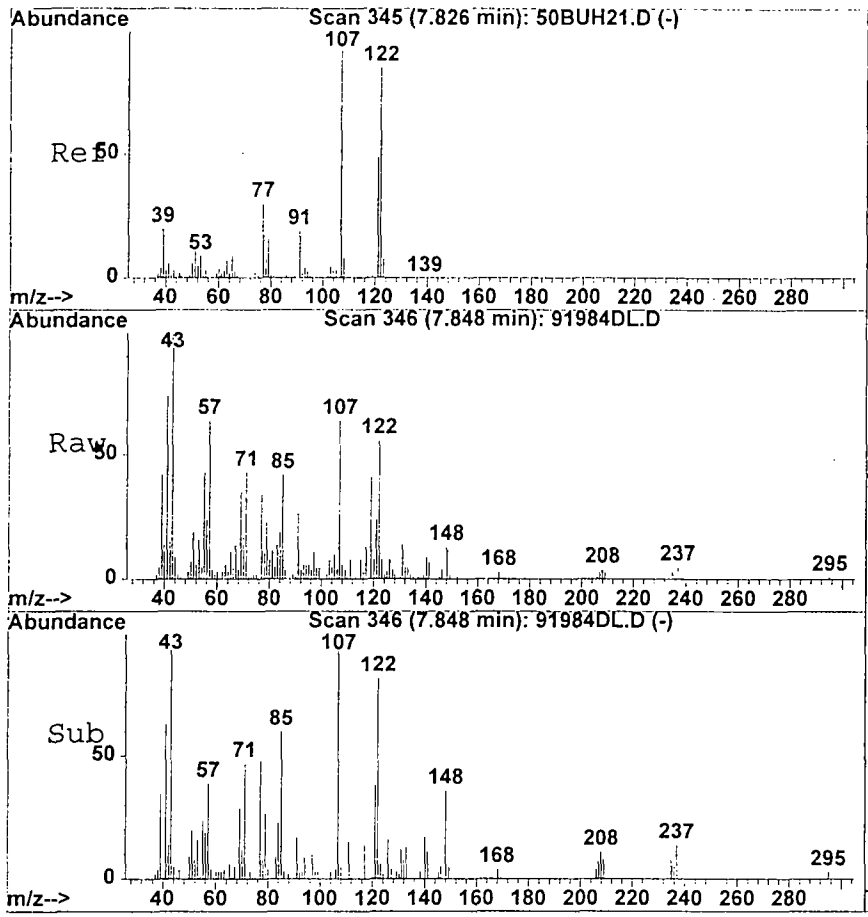
Quantitation Report

Data File : C:\HPCHEM\1\DATA\91984DL.D
Acq On : 21 Aug 98 8:47 pm
Sample : 1:10
Misc : 8-21-98U
Quant Time: Aug 21 21:40 1998

Vial: 12
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAIX.M
Title :
Last Update : Fri Jul 31 11:09:12 1998
Response via : Multiple Level Calibration

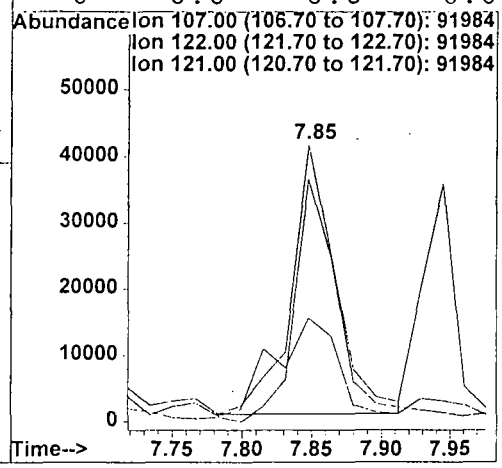


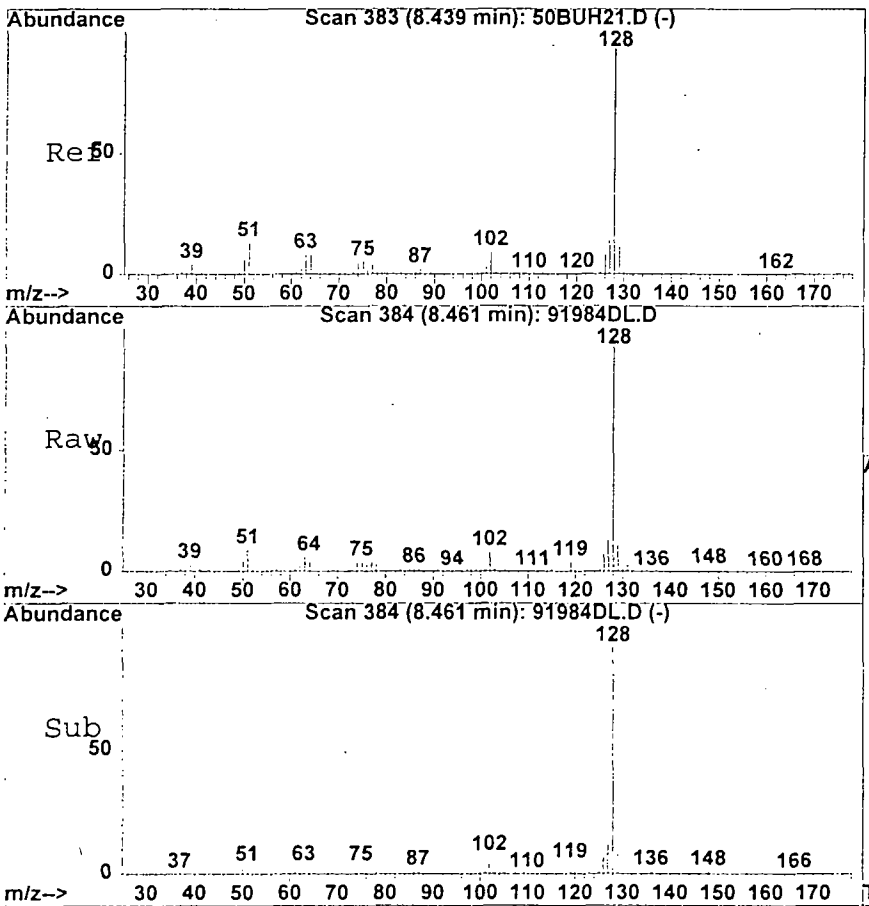


#26
2,4-Dimethylphenol
Concen: 4.70 ng
RT: 7.85 min Scan# 346
Delta R.T. 0.05 min
Lab File: 91984DL.D
Acq: 21 Aug 98 8:47 pm

Tgt Ion:107 Resp: 88487

Ion	Ratio	Lower	Upper
107	100		
122	87.1	68.0	102.0
121	51.0	37.8	56.6
0	0.0	0.0	0.0

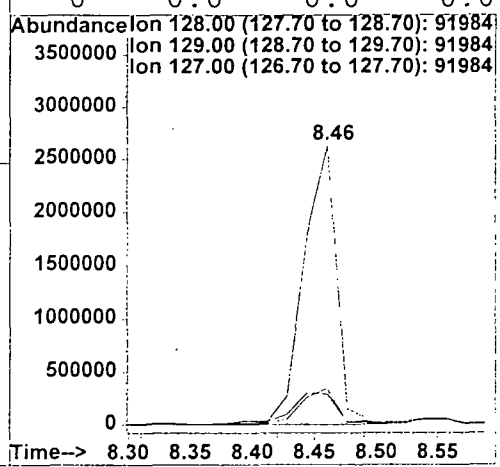


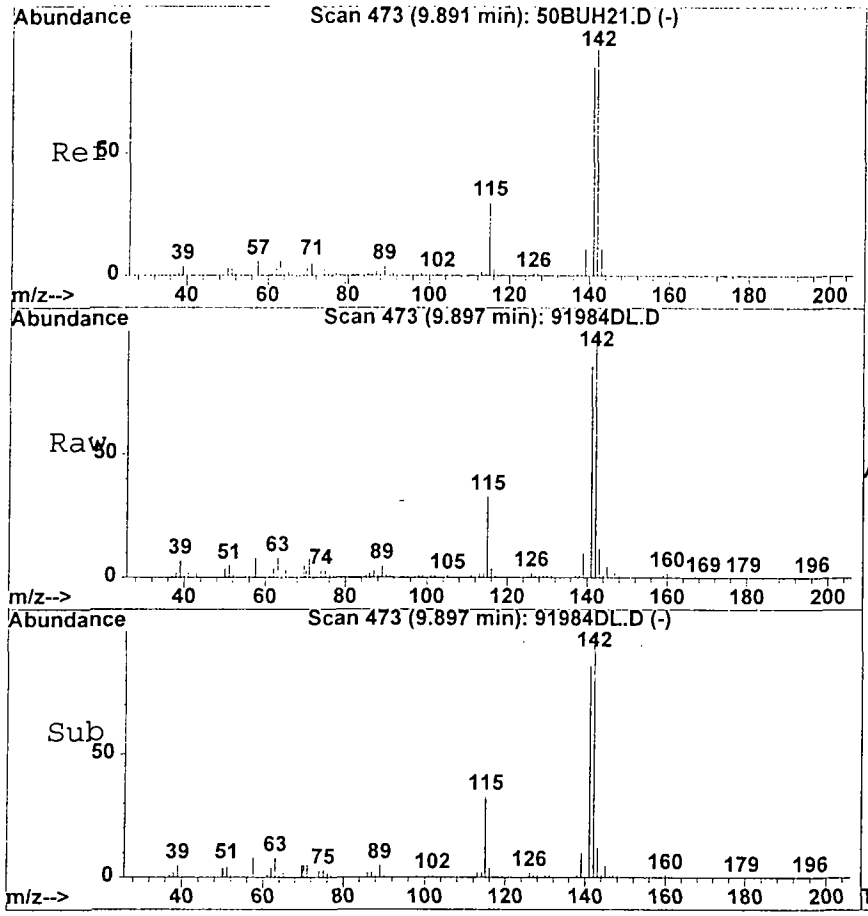


#30
Naphthalene
Concen: 82.64 ng
RT: 8.46 min Scan# 384
Delta R.T. 0.05 min
Lab File: 91984DL.D
Acq: 21 Aug 98 8:47 pm

Tgt Ion:128 Resp: 4824839

Ion	Ratio	Lower	Upper
128	100		
129	16.4	8.8	13.2#
127	14.4	10.8	16.2
0	0.0	0.0	0.0

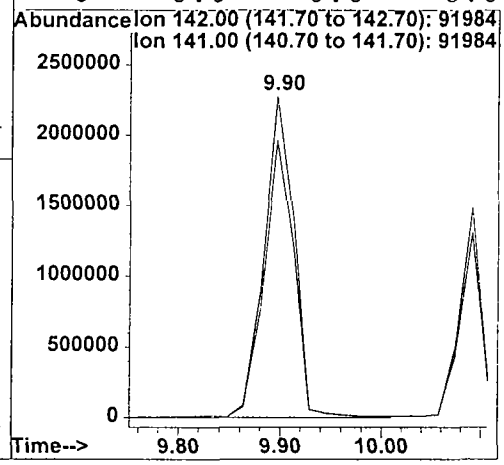


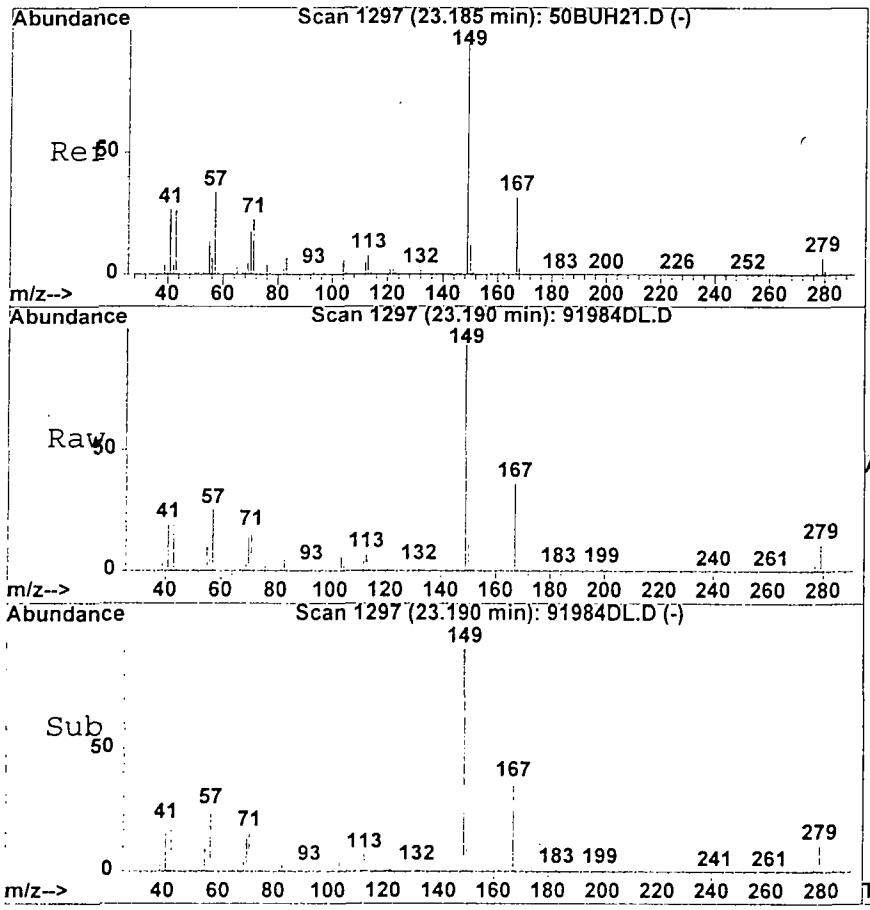


#34
2-Methylnaphthalene
Concen: 125.45 ng
RT: 9.90 min Scan# 473
Delta R.T. 0.04 min
Lab File: 91984DL.D
Acq: 21 Aug 98 8:47 pm

Tgt Ion:142 Resp: 4619920

Ion	Ratio	Lower	Upper
142	100		
141	86.8	68.3	102.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

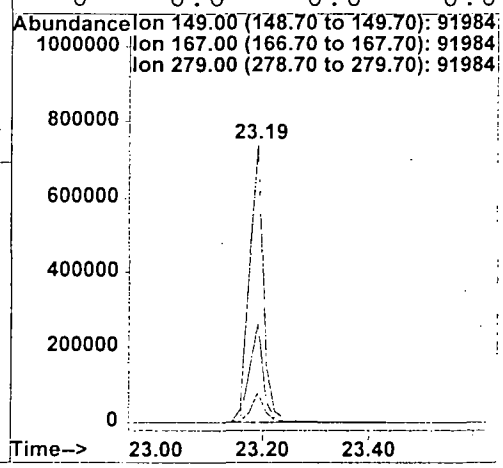




#77
bis(2-Ethylhexyl) phthalate
Concen: 35.66 ng
RT: 23.19 min Scan# 1297
Delta R.T. 0.04 min
Lab File: 91984DL.D
Acq: 21 Aug 98 8:47 pm

Tgt Ion:149 Resp: 1363723

Ion	Ratio	Lower	Upper
149	100		
167	34.4	25.0	37.6
279	10.2	0.0	0.0#
0	0.0	0.0	0.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\89720MBR.D
Acq On : 24 Aug 98 8:39 pm
Sample : LMBH181A
Misc : 8-24-98U
Quant Time: Aug 24 21:13 1998

Vial: 14
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Mon Aug 24 11:04:32 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Eicp's good

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	5.97	152	542575	40.00	ng	0.00
21) d8-Naphthalene (I)	8.39	136	2011033	40.00	ng	0.02
36) d10-Acenapthene (I)	12.06	164	1187887	40.00	ng	0.02
56) d10-Phenanthrene (I)	15.81	188	2021447	40.00	ng	0.02
69) d12-Chrysene (I)	22.78	240	1673564	40.00	ng	0.04
79) d12-Perylene (I)	26.22	264	995091	40.00	ng	0.05
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.96	112	1980314	144.07	ng	0.02
Surrogate Spike 150.000			Recovery	=	96.05%	
5) d4-2-Chlorophenol (S)	5.59	132	2092037	140.90	ng	0.02
Surrogate Spike 150.000			Recovery	=	93.93%	
8) d5-Phenol (S)	5.42	99	2590976	143.08	ng	0.05
Surrogate Spike 150.000			Recovery	=	95.39%	
12) d4-1,2-Dichlorobenzene (S)	6.25	152	1080929	92.02	ng	0.02
Surrogate Spike 100.000			Recovery	=	92.02%	
22) d5-Nitrobenzene (S)	7.02	82	1524646	84.75	ng	0.04
Surrogate Spike 100.000			Recovery	=	84.75%	
40) 2-Fluorobiphenyl (S)	10.70	172	3070480	87.55	ng	0.02
Surrogate Spike 100.000			Recovery	=	87.55%	
59) 2,4,6-Tribromophenol (S)	13.99	330	825413	133.80	ng	0.04
Surrogate Spike 150.000			Recovery	=	89.20%	
72) d14-Terphenyl (S)	20.20	244	3401161	93.32	ng	0.04
Surrogate Spike 100.000			Recovery	=	93.32%	

Target Compounds Qvalue

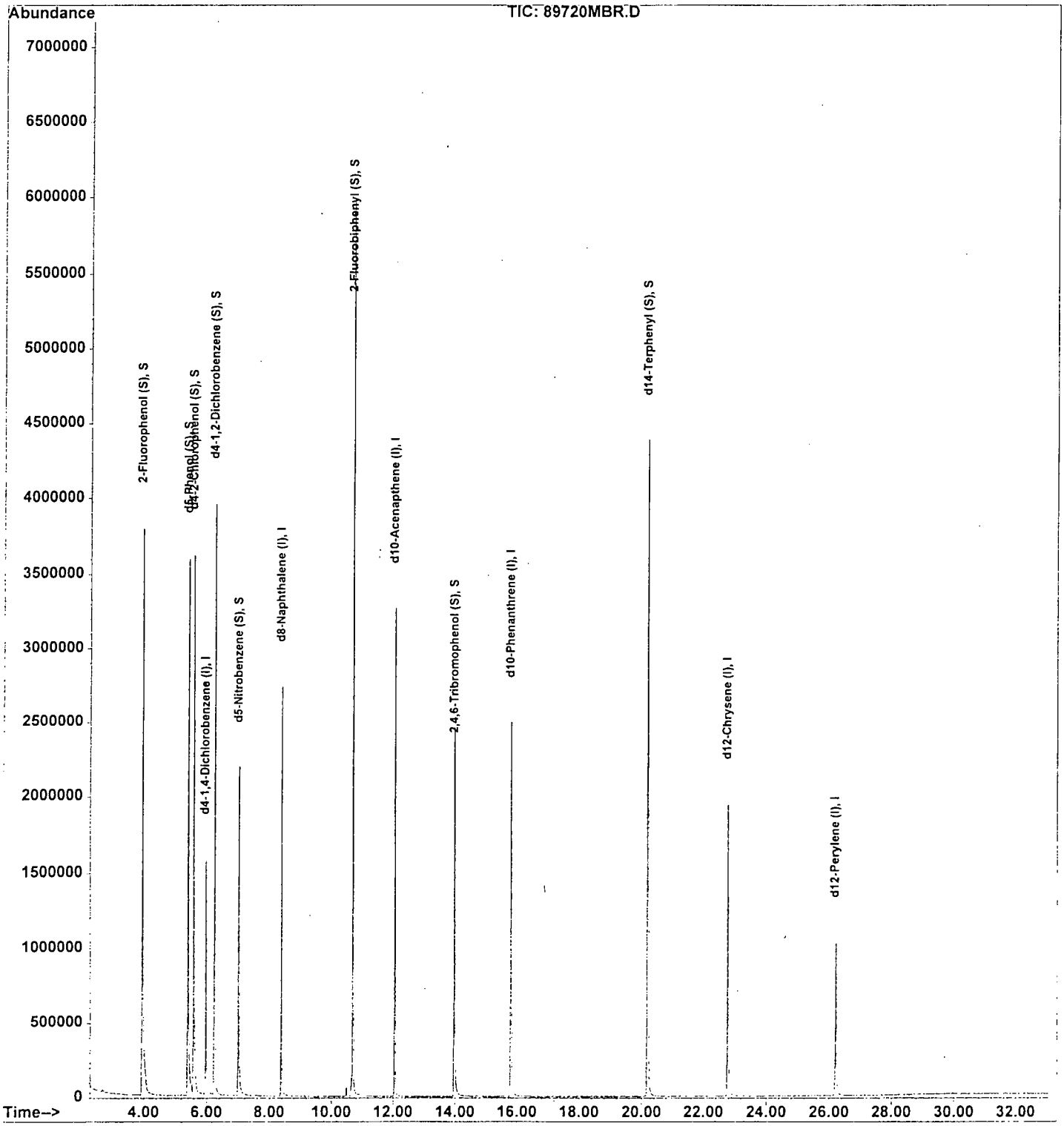
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\89720MBR.D
Acq On : 24 Aug 98 8:39 pm
Sample : LMBH181A
Misc : 8-24-98U
Quant Time: Aug 24 21:13 1998

Vial: 14
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Mon Aug 24 11:04:32 1998
Response via : Multiple Level Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\89725MB.D
Acq On : 20 Aug 98 10:04 pm
Sample :
Misc : 8-20-98U
Quant Time: Aug 21 8:53 1998

Vial: 8
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Y1

Eics good

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	6.02	152	550913	40.00 ng	0.05
21) d8-Naphthalene (I)	8.42	136	1927415	40.00 ng	0.05
36) d10-Acenapthene (I)	12.10	164	1193127	40.00 ng	0.06
56) d10-Phenanthrene (I)	15.86	188	1937360	40.00 ng	0.06
69) d12-Chrysene (I)	22.83	240	1434677	40.00 ng	0.08
79) d12-Perylene (I)	26.27	264	1070779	40.00 ng	0.10
System Monitoring Compounds					
3) 2-Fluorophenol (S)	4.00	112	1241750	88.97 ng	0.06
Surrogate Spike 150.000			Recovery	= 59.31%	
5) d4-2-Chlorophenol (S)	5.61	132	1936730	128.47 ng	0.05
Surrogate Spike 150.000			Recovery	= 85.65%	
8) d5-Phenol (S)	5.44	99	1085967	59.06 ng	0.06
Surrogate Spike 150.000			Recovery	= 39.37%	
12) d4-1,2-Dichlorobenzene (S)	6.28	152	959679	80.46 ng	0.05
Surrogate Spike 100.000			Recovery	= 80.46%	
22) d5-Nitrobenzene (S)	7.05	82	1472253	85.39 ng	0.06
Surrogate Spike 100.000			Recovery	= 85.39%	
40) 2-Fluorobiphenyl (S)	10.73	172	2678549	76.04 ng	0.05
Surrogate Spike 100.000			Recovery	= 76.04%	
59) 2,4,6-Tribromophenol (S)	14.02	330	802607	135.75 ng	0.06
Surrogate Spike 150.000			Recovery	= 90.50%	
72) d14-Terphenyl (S)	20.25	244	2749395	88.00 ng	0.08
Surrogate Spike 100.000 ..			Recovery	= 88.00%	
Target Compounds					Qvalue
67) Di-n-butyl phthalate	17.73	149	392297	6.97 ng	100

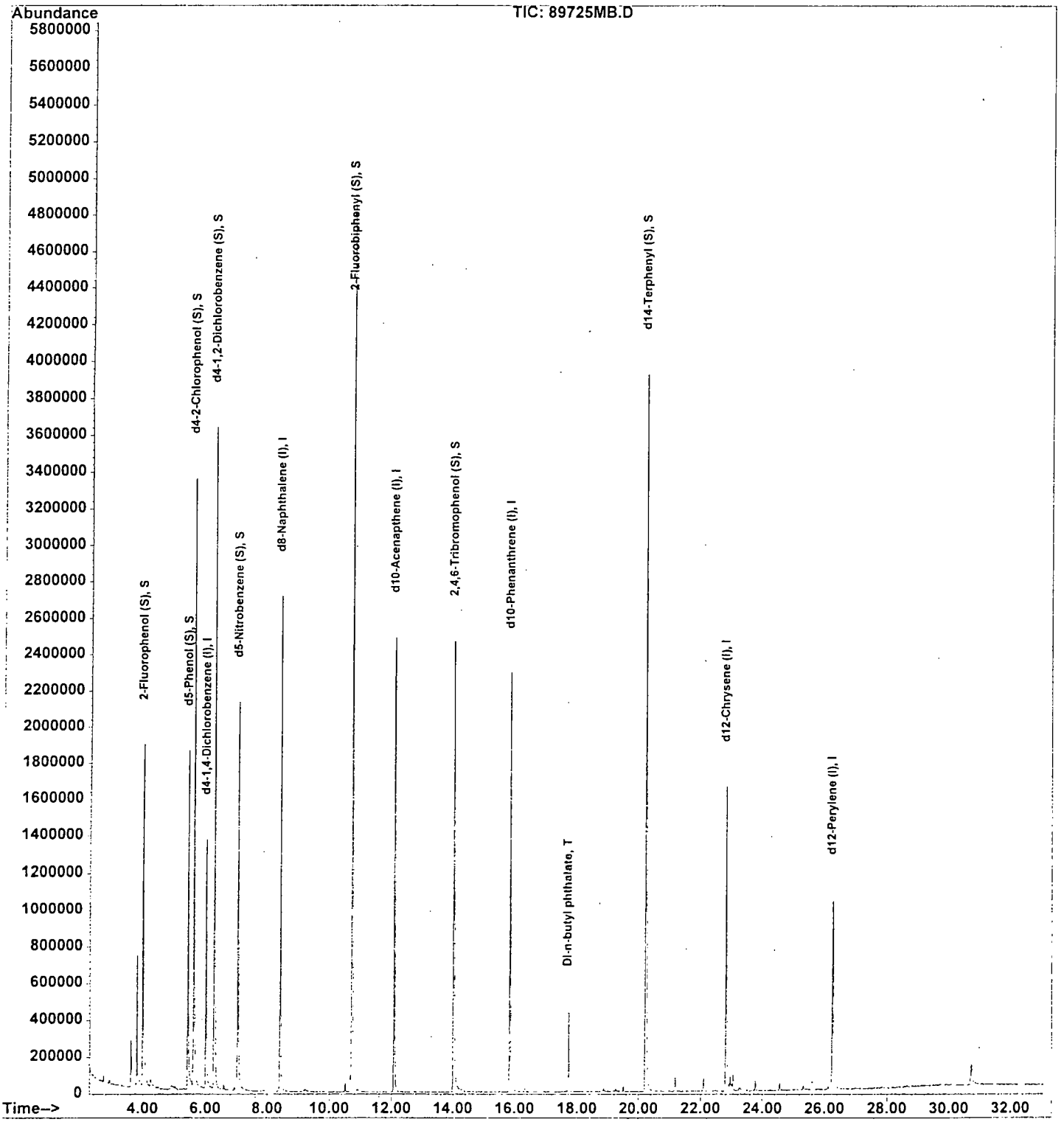
(#) = qualifier out of range (m) = manual integration

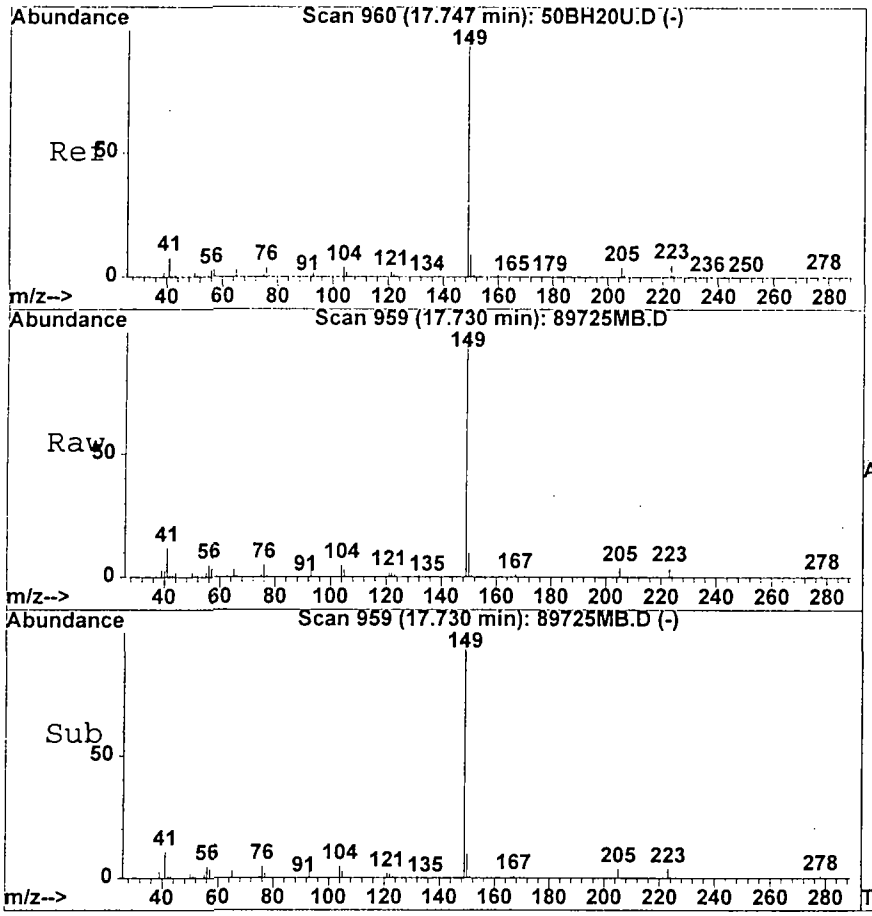
Quantitation Report

Data File : C:\HPCHEM\1\DATA\89725MB.D
Acq On : 20 Aug 98 10:04 pm
Sample :
Misc : 8-20-98U
Quant Time: Aug 21 8:53 1998

Vial: 8
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration

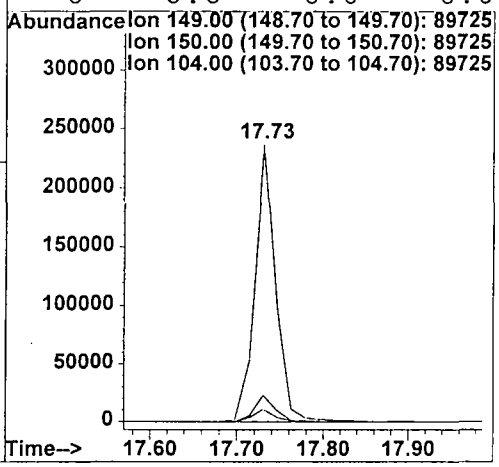




#67
Di-n-butyl phthalate
Concen: 6.97 ng
RT: 17.73 min Scan# 959
Delta R.T. 0.06 min
Lab File: 89725MB.D
Acq: 20 Aug 98 10:04 pm

Tgt Ion:149 Resp: 392297

Ion	Ratio	Lower	Upper
149	100		
150	9.4	7.6	11.4
104	4.7	3.6	5.4
0	0.0	0.0	0.0



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\89895LCS.D
Vial: 10
Acq On : 18 Aug 98 5:44 pm
Operator: JLF
Sample : LCMH181A
Inst : 5970-021
Misc : 8-18-98U
Multiplr: 1.00
Quant Time: Aug 19 9:27 1998
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	6.02	152	485511	40.00	ng	0.05
21) d8-Naphthalene (I)	8.43	136	1727275	40.00	ng	0.05
36) d10-Acenapthene (I)	12.09	164	1046202	40.00	ng	0.05
56) d10-Phenanthrene (I)	15.85	188	1826238	40.00	ng	0.05
69) d12-Chrysene (I)	22.84	240	1457435	40.00	ng	0.09
79) d12-Perylene (I)	26.27	264	709911	40.00	ng	0.10
System Monitoring Compounds						
3) 2-Fluorophenol (S)	4.04	112	1854808	150.80	ng	0.10
Surrogate Spike 150.000			Recovery	=	100.53%	
5) d4-2-Chlorophenol (S)	5.65	132	1959043	147.45	ng	0.09
Surrogate Spike 150.000			Recovery	=	98.30%	
8) d5-Phenol (S)	5.48	99	2239783	138.22	ng	0.10
Surrogate Spike 150.000			Recovery	=	92.15%	
12) d4-1,2-Dichlorobenzene (S)	6.28	152	1062481	101.08	ng	0.05
Surrogate Spike 100.000			Recovery	=	101.08%	
22) d5-Nitrobenzene (S)	7.04	82	1500604	97.12	ng	0.05
Surrogate Spike 100.000			Recovery	=	97.12%	
40) 2-Fluorobiphenyl (S)	10.72	172	2919073	94.51	ng	0.04
Surrogate Spike 100.000			Recovery	=	94.51%	
59) 2,4,6-Tribromophenol (S)	14.03	330	916225	164.40	ng	0.07
Surrogate Spike 150.000			Recovery	=	109.60%	
72) d14-Terphenyl (S)	20.24	244	3190196	100.51	ng	0.07
Surrogate Spike 100.000			Recovery	=	100.51%	

Target Compounds							Qvalue
6) 2-Chlorophenol	5.67	128	1377935	91.89	ng		94
7) bis(2-Chloroethyl) ether	5.64	93	1451473	94.84	ng		97
9) Phenol	5.49	94	1475747	78.06	ng	#	57
10) 1,3-Dichlorobenzene	5.91	146	1553751	94.98	ng		99
11) 1,4-Dichlorobenzene	6.06	146	1670118	97.25	ng		97
13) 1,2-Dichlorobenzene	6.32	146	1660771	104.53	ng		96
15) bis(2-Chloroisopropyl) eth	6.56	45	2646808	93.02	ng	#	100
17) Hexachloroethane	6.91	117	799289	100.65	ng	#	76
18) n-Nitroso-di-n-propylamine	6.82	70	1157050	109.29	ng		96
23) Nitrobenzene	7.09	77	1575892	101.16	ng		98
24) Isophorone	7.57	82	3012526	103.82	ng		98
25) 2-Nitrophenol	7.69	139	771693	97.16	ng		91
26) 2,4-Dimethylphenol	7.86	107	1430447	105.80	ng		99
27) bis(2-chloroethoxy) methan	8.06	93	1935008	104.41	ng		98
28) 2,4-Dichlorophenol	8.19	162	1153573	96.37	ng		97
29) 1,2,4-Trichlorobenzene	8.33	180	1408308	101.11	ng		96
30) Naphthalene	8.48	128	4284314	102.10	ng		100

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\89895LCS.D
Acq On : 18 Aug 98 5:44 pm
Sample : LCMH181A
Misc : 8-18-98U
Quant Time: Aug 19 9:27 1998

Vial: 10
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RES

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	Hexachlorobutadiene	8.75	225	900718	108.15 ng		100
35)	4-Chloro-3-methylphenol	9.69	107	1143080	94.80 ng		98
37)	Hexachlorocyclopentadiene	10.24	237	686960	65.01 ng		94
38)	2,4,6-Trichlorophenol	10.53	196	841313	93.57 ng		95
41)	2-Chloronapthalene	10.91	162	2661927	94.96 ng		97
43)	Acenaphthylene	11.78	152	4432158	100.93 ng		99
45)	2,6-Dinitrotoluene	11.75	165	794239	105.47 ng	#	86
46)	Acenaphthene	12.17	153	3081221	110.97 ng		98
48)	2,4-Dinitrophenol	12.30	184	49534	44.57 ng	#	57
50)	2,4-Dinitrotoluene	12.61	165	1169748	101.42 ng	#	63
51)	4-Nitrophenol	12.54	109	238406	75.33 ng	#	7
52)	Fluorene	13.40	166	3279429	109.27 ng		99
53)	4-Chlorophenyl phenyl ethe	13.48	204	1702767	106.73 ng		93
54)	Diethylphthalate	13.30	149	3329639	102.79 ng		98
57)	4,6-Dinitro-2-methylphenol	13.61	198	259840	53.24 ng	#	93
58)	n-Nitrosodiphenylamine	13.80	169	2175673	107.68 ng		99
61)	4-Bromophenyl phenyl ether	14.77	248	1072476	107.73 ng		94
62)	Hexachlorobenzene	14.83	284	1352015	103.13 ng	#	89
63)	Pentachlorophenol	15.40	266	370087	55.26 ng		100
64)	Phenanthrene	15.93	178	4262648	104.35 ng		100
65)	Anthracene	16.06	178	4546039	106.05 ng		99
67)	Di-n-butyl phthalate	17.74	149	5285660	99.62 ng		99
68)	Fluoranthene	19.09	202	4572568	103.36 ng		97
71)	Pyrene	19.66	202	4646418	100.92 ng		96
73)	Butyl benzyl phthalate	21.64	149	2104650	99.49 ng		96
74)	Benzo(a) anthracene	22.80	228	3604981	105.84 ng		100
75)	Chrysene	22.90	228	3651471	127.53 ng		99
76)	3,3'-Dichlorobenzidine	22.85	252	839548	87.00 ng		96
77)	bis(2-Ethylhexyl) phthalat	23.22	149	2980816	107.02 ng	#	97
78)	Di-n-octyl phthalate	24.80	149	4071088	114.81 ng		99
80)	Benzo(b) fluoranthene	25.38	252	2839858	112.93 ng		97
81)	Benzo(k) fluoranthene	25.45	252	2551496	98.70 ng		99
82)	Benzo(a) pyrene	26.13	252	2196990	105.96 ng		98
83)	Indeno (1,2,3-cd) pyrene	28.79	276	1357981	91.58 ng	#	95
84)	Dibenz (ah) anthracene	28.85	278	1267589	117.73 ng		97
85)	Benzo (ghi) perylene	29.37	276	1248752	90.19 ng		97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\89896LCS.D
Vial: 9
Acq On : 20 Aug 98 10:44 pm
Operator: JLF
Sample :
Inst : 5970-021
Misc : 8-20-98U
Multiplr: 1.00
Quant Time: Aug 21 9:49 1998
Quant Results File: BNAHSL.RE

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) d4-1,4-Dichlorobenzene (I)	6.02	152	640193	40.00	ng	0.05
21) d8-Naphthalene (I)	8.44	136	2289277	40.00	ng	0.07
36) d10-Acenapthene (I)	12.11	164	1382317	40.00	ng	0.07
56) d10-Phenanthrene (I)	15.86	188	2235716	40.00	ng	0.07
69) d12-Chrysene (I)	22.85	240	1644756	40.00	ng	0.10
79) d12-Perylene (I)	26.29	264	1303962	40.00	ng	0.12
System Monitoring Compounds						
3) 2-Fluorophenol (S)	3.99	112	1392714	85.87	ng	0.05
Surrogate Spike 150.000			Recovery = 57.25%			
5) d4-2-Chlorophenol (S)	5.64	132	2342710	133.73	ng	0.07
Surrogate Spike 150.000			Recovery = 89.15%			
8) d5-Phenol (S)	5.44	99	1221860	57.18	ng	0.07
Surrogate Spike 150.000			Recovery = 38.12%			
12) d4-1,2-Dichlorobenzene (S)	6.28	152	1130182	81.54	ng	0.05
Surrogate Spike 100.000			Recovery = 81.54%			
22) d5-Nitrobenzene (S)	7.06	82	1800276	87.91	ng	0.07
Surrogate Spike 100.000			Recovery = 87.91%			
40) 2-Fluorobiphenyl (S)	10.73	172	3277526	80.31	ng	0.05
Surrogate Spike 100.000			Recovery = 80.31%			
59) 2,4,6-Tribromophenol (S)	14.04	330	1104214	161.84	ng	0.09
Surrogate Spike 150.000			Recovery = 107.89%			
72) d14-Terphenyl (S)	20.25	244	3158786	88.19	ng	0.09
Surrogate Spike 100.000			Recovery = 88.19%			

Target Compounds							Qvalue
6) 2-Chlorophenol	5.67	128	1704893	86.23	ng		93
7) bis(2-Chloroethyl) ether	5.62	93	1562559	77.43	ng		97
9) Phenol	5.47	94	901448	36.16	ng	#	57
10) 1,3-Dichlorobenzene	5.91	146	1558289	72.24	ng		97
11) 1,4-Dichlorobenzene	6.06	146	1765473	77.96	ng		98
13) 1,2-Dichlorobenzene	6.31	146	1654141	78.95	ng		97
15) bis(2-Chloroisopropyl) eth	6.57	45	3076394	82.00	ng	#	100
17) Hexachloroethane	6.93	117	809136	77.27	ng	#	70
18) n-Nitroso-di-n-propylamine	6.83	70	1325011	94.92	ng		94
23) Nitrobenzene	7.10	77	1864349	90.29	ng		97
24) Isophorone	7.59	82	3534593	91.90	ng		99
25) 2-Nitrophenol	7.70	139	959715	91.16	ng		91
26) 2,4-Dimethylphenol	7.86	107	1369667	76.43	ng		99
27) bis(2-chloroethoxy) methan	8.07	93	2315134	94.25	ng		98
28) 2,4-Dichlorophenol	8.20	162	1460802	92.08	ng		97
29) 1,2,4-Trichlorobenzene	8.35	180	1469577	79.61	ng		97
30) Naphthalene	8.49	128	4764755	85.67	ng		100

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\89896LCS.D
Acq On : 20 Aug 98 10:44 pm
Sample :
Misc : 8-20-98U
Quant Time: Aug 21 9:49 1998

Vial: 9
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RE

Quant Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Initial Calibration
DataAcq Meth : BNAHSL

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	Hexachlorobutadiene	8.77	225	925682	83.86 ng		98
35)	4-Chloro-3-methylphenol	9.70	107	1422721	89.02 ng		97
37)	Hexachlorocyclopentadiene	10.25	237	627892	44.97 ng		95
38)	2,4,6-Trichlorophenol	10.54	196	1087721	91.56 ng		95
41)	2-Chloronapthalene	10.93	162	3068104	82.84 ng		96
43)	Acenaphthylene	11.80	152	4901291	84.47 ng		99
45)	2,6-Dinitrotoluene	11.77	165	955684	96.05 ng		90
46)	Acenaphthene	12.17	153	3402300	92.74 ng		98
48)	2,4-Dinitrophenol	12.30	184	121018	50.99 ng	#	58
50)	2,4-Dinitrotoluene	12.61	165	1241026	82.66 ng	#	53
51)	4-Nitrophenol	12.51	109	108739	26.00 ng	#	1
52)	Fluorene	13.41	166	3621568	91.33 ng		100
53)	4-Chlorophenyl phenyl ethe	13.49	204	1927729	91.45 ng		92
54)	Diethylphthalate	13.30	149	1885978	44.06 ng		98
57)	4,6-Dinitro-2-methylphenol	13.62	198	590128	81.18 ng	#	93
58)	n-Nitrosodiphenylamine	13.82	169	2202009	89.02 ng		96
61)	4-Bromophenyl phenyl ether	14.78	248	1216780	99.84 ng	#	91
62)	Hexachlorobenzene	14.85	284	1547062	96.40 ng	#	87
63)	Pentachlorophenol	15.40	266	692011	84.40 ng		98
64)	Phenanthrene	15.95	178	4676061	93.51 ng		99
65)	Anthracene	16.07	178	4670536	89.00 ng		99
67)	Di-n-butyl phthalate	17.74	149	4926913	75.85 ng		99
68)	Fluoranthene	19.11	202	4717694	87.11 ng		96
71)	Pyrene	19.67	202	4640943	89.32 ng		96
73)	Butyl benzyl phthalate	21.66	149	1561095	67.44 ng		96
74)	Benzo(a) anthracene	22.82	228	3725824	96.93 ng		100
75)	Chrysene	22.92	228	3621455	112.08 ng		99
76)	3,3'-Dichlorobenzidine	22.87	252	1255435	111.28 ng		96
77)	bis(2-Ethylhexyl) phthalat	23.22	149	2716182	87.42 ng	#	97
78)	Di-n-octyl phthalate	24.82	149	4160247	104.79 ng		100
80)	Benzo(b) fluoranthene	25.40	252	3987147m	86.32 ng		98
81)	Benzo(k) fluoranthene	25.46	252	3415638	71.93 ng		99
82)	Benzo(a) pyrene	26.16	252	3262482	85.66 ng		98
83)	Indeno (1,2,3-cd) pyrene	28.80	276	2903241m	106.59 ng		87
84)	Dibenz (ah) anthracene	28.88	278	2792162	140.11 ng		97
85)	Benzo (ghi) perylene	29.40	276	3012578	118.46 ng		97

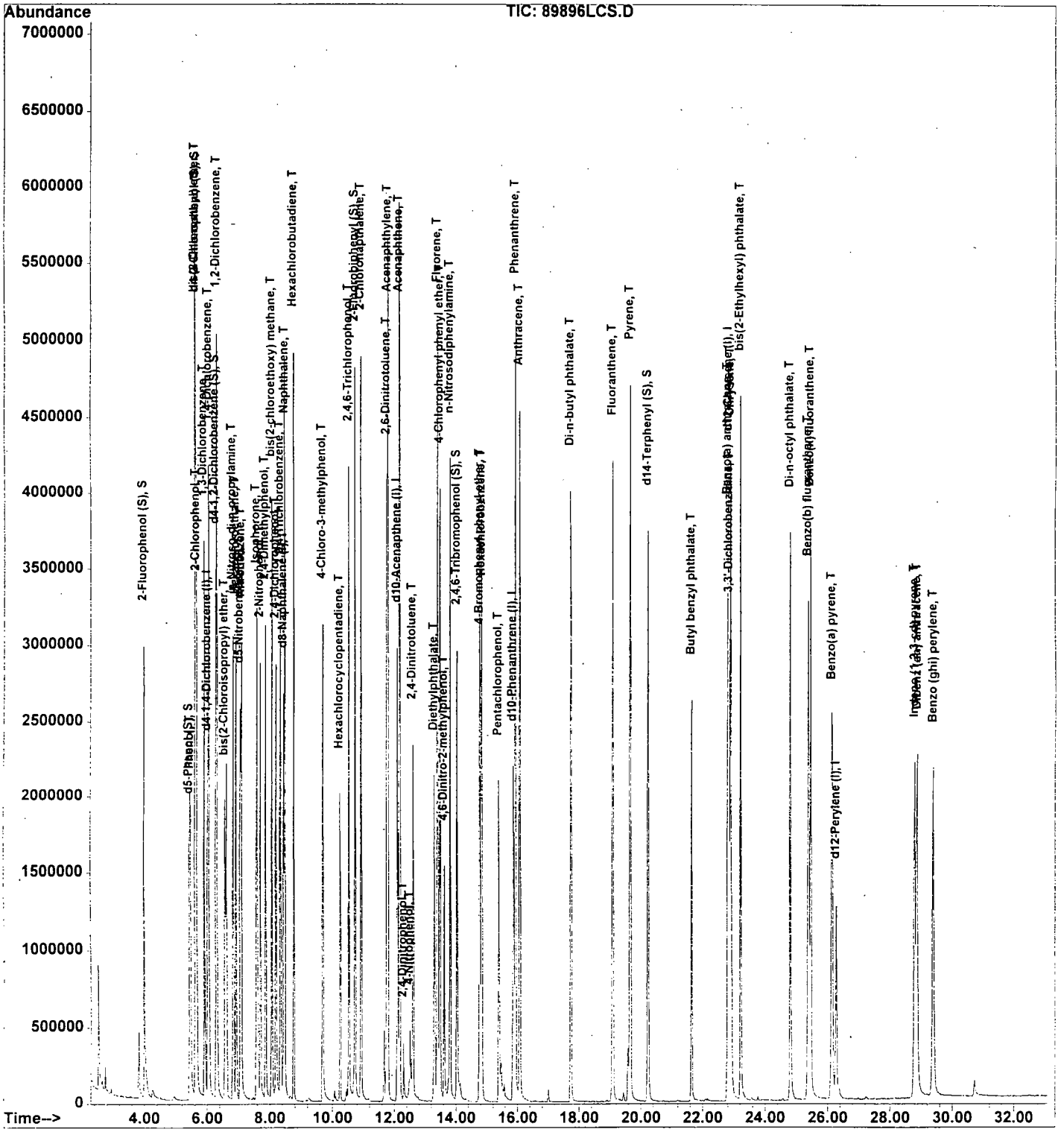
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\89896LCS.D
Acq On : 20 Aug 98 10:44 pm
Sample :
Misc : 8-20-98U
Quant Time: Aug 21 9:49 1998

Vial: 9
Operator: JLF
Inst : 5970-021
Multiplr: 1.00
Quant Results File: BNAHSL.RE

Method : C:\HPCHEM\1\METHODS\BNAHSL.M
Title :
Last Update : Thu Aug 13 20:37:03 1998
Response via : Multiple Level Calibration



1407