SITE INVESTIGATION REPORT FOR IRP SITES NO. 25 AND NO. 26

VOLUME IV

148th FIGHTER WING
MINNESOTA AIR NATIONAL GUARD
DULUTH AIR NATIONAL GUARD BASE
DULUTH, MINNESOTA

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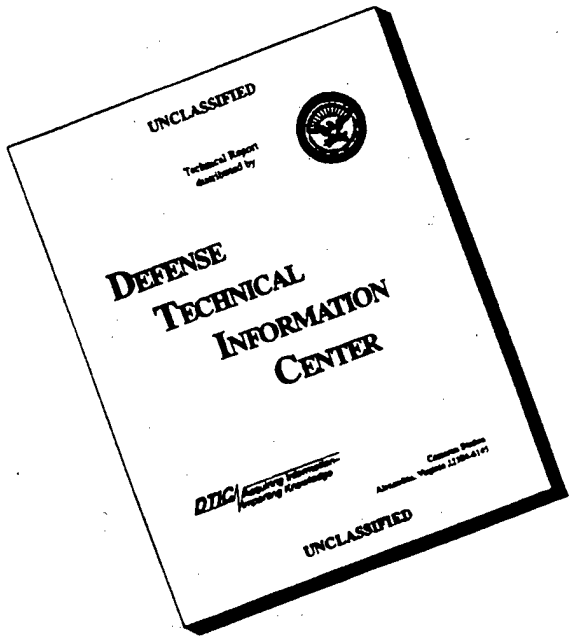

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1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	July, 1996	Site Investigation Report

4. TITLE AND SUBTITLE
Site Investigation Report for IRP Sites No. 25 and No. 26, 148th Fighter Wing, Duluth Air National Guard Base, Duluth, MN. Volume IV

5. FUNDING NUMBERS

6. AUTHOR(S)
NA

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Operational Technologies Corp.
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8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
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3500 Fetchet Avenue
Andrews AFB MD 20762-5157

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
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12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

Site Investigation Report for IRP Sites No. 25 and No. 26, 148th Fighter Wing, Duluth Air National Guard Base, Duluth, MN, Volume II, Appendix M. This is the fourth volume of a four volume site investigation report. This investigation involves two sites; site 25 -- Old Motor Pool area, and site 26 -- Ramp Disposal Area. Soil and groundwater contamination above state action levels were found at site 25; no significant contamination was found at site 26. Site 25 cleanup will be included in the scheduled cleanup of site 21.

14. SUBJECT TERMS
Installation Restoration Program; Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); Air National Guard; Site Investigation; Minnesota Air National Guard; Duluth, MN.

15. NUMBER OF PAGES
1004

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	None

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Block 3. Type of Report and Dates Covered. State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

Block 4. Title and Subtitle. A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers. To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C	- Contract	PR	- Project
G	- Grant	TA	- Task
PE	- Program Element	WU	- Work Unit Accession No.

Block 6. Author(s). Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

Block 7. Performing Organization Name(s) and Address(es). Self-explanatory.

Block 8. Performing Organization Report Number. Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es). Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Report Number. *(If known)*

Block 11. Supplementary Notes. Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in.... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

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- DOD - See DoDD 5230.24, "Distribution Statements on Technical Documents."
- DOE - See authorities.
- NASA - See Handbook NHB 2200.2.
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SITE INVESTIGATION REPORT FOR IRP SITES NO. 25 AND NO. 26

VOLUME IV

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JUNE 1996

Prepared For

HQ ANG/CEVR
ANDREWS AFB, MARYLAND

Prepared By

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4100 N.W. Loop 410, Suite 230
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(210) 731-0000

1315-197

APPENDIX M

LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-05

Operational Tech

SAMPLE ID: 026.002BH 6.5-7

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	86	23	120
2-Fluorobiphenyl	1600 ug/Kg	85	30	115
Terphenyl-d14	1600 ug/Kg	91	18	137
Phenol-d5	2500 ug/Kg	61	24	113
2-Fluorophenol	2500 ug/Kg	51	25	121
2,4,6-Tribromophenol	2500 ug/Kg	90	19	122

ANALYZED BY: LH DATE/TIME: 05/16/95 17:55:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129s13.d
Lab Smp Id: 9505209-05A-8240S/1X
Inj Date : 09-MAY-1995 18:17
Operator : HLW Inst ID: k.i
Smp Info : 9505209-05A-8240S/1X
Misc Info : K129S1/K129B02/K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 12-May-1995 10:45 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 26
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.122	2.123	(1.000)	86515	250	
* 31 1,4-Difluorobenzene	114.00	2.804	2.789	(1.000)	515085	250	
* 51 Chlorobenzene-d5	117.00	6.759	6.759	(1.000)	378938	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.380	2.365	(1.121)	36023	240	47
$ 40 Toluene-d8	98.00	4.546	4.532	(0.673)	572185	240	49
$ 61 Bromofluorobenzene	95.00	8.880	8.865	(1.314)	200077	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129s13.d
Lab Smp Id: 9505209-05A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1/K129B02/K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	86515	0.05
31 1,4-Difluorobenzene	552052	276026	1104104	515085	-6.70
51 Chlorobenzene-d5	389031	194516	778062	378938	-2.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.03
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.52
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.01

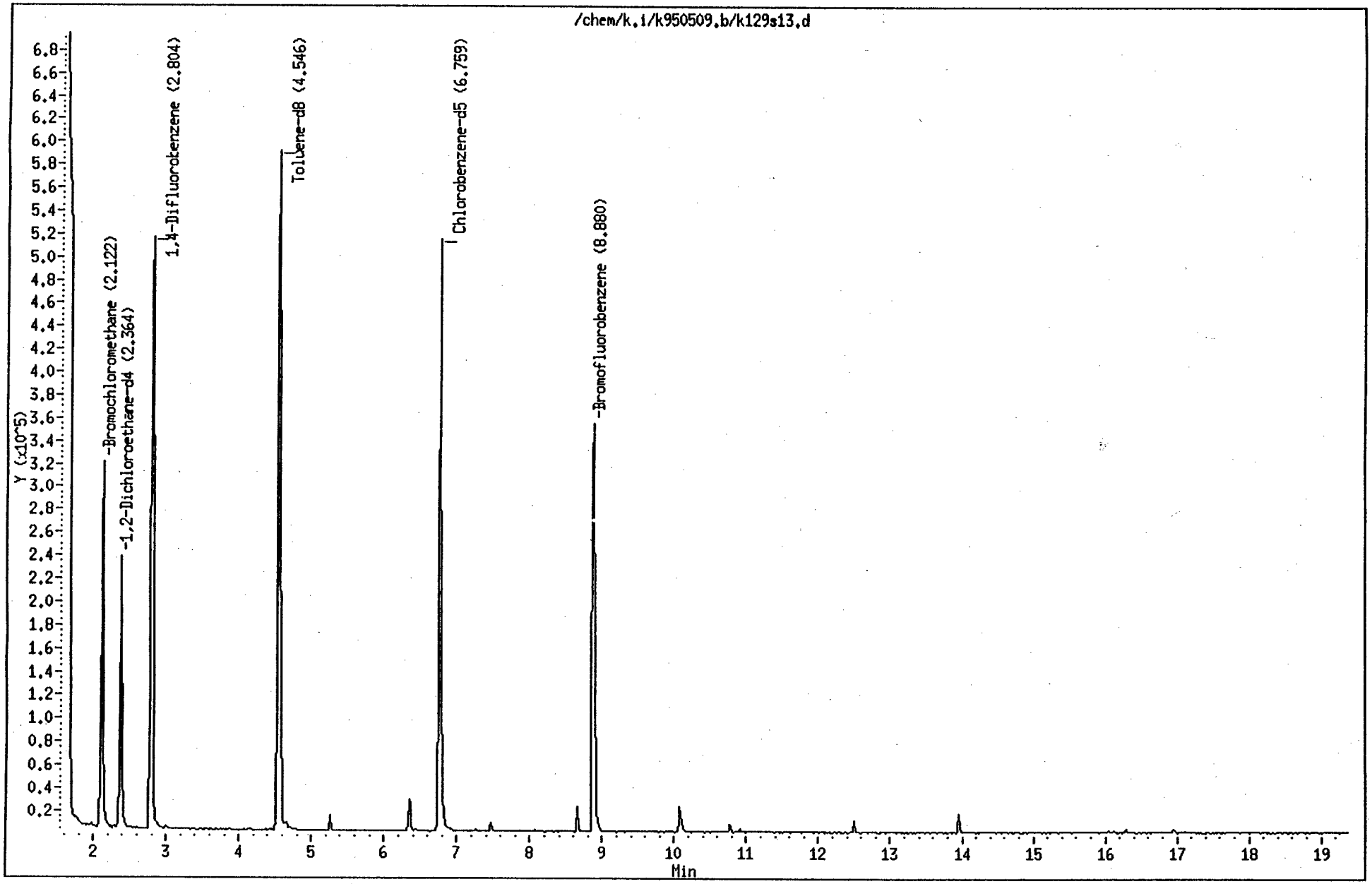
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129s13.d
Date : 09-MAY-1995 18:17
Client ID:
Sample Info: 9505209-05A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136s08.d
Lab Smp Id:
Inj Date : 16-MAY-1995 17:55
Operator : LH Inst ID: h.i
Smp Info : 9505209-05B-8270S/1X
Misc Info : E132S1/H132B02/H136IC1
Comment :
Method : /chem/h.i/h950516.b/hclps.m
Meth Date : 16-May-1995 16:57 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 12
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)	
* 11 1,4-Dichlorobenzene-d4	152.00	4.441	4.454	(1.000)	120627	40		
* 32 Naphthalene-d8	136.00	5.626	5.651	(1.000)	430687	40		
* 48 Acenaphthene-d10	164.00	7.404	7.417	(1.000)	219556	40		
* 65 Phenanthrene-d10	188.00	8.897	8.922	(1.000)	313569	40		(M)
* 76 Chrysene-d12	240.00	11.753	11.777	(1.000)	196885	40		
* 83 Perylene-d12	264.00	13.969	13.993	(1.000)	114393	40		
$ 23 Nitrobenzene-d5	82.00	4.951	4.964	(0.880)	289271	82	1400	
$ 41 2-Fluorobiphenyl	172.00	6.716	6.729	(0.907)	592577	82	1400	
$ 72 Terphenyl-d14	244.00	10.532	10.545	(0.896)	479801	88	1500	
$ 4 Phenol-d5	99.00	4.145	4.158	(0.933)	400716	91	1500	
$ 3 2-Fluorophenol	112.00	3.458	3.423	(0.779)	310530	76	1300	
$ 61 2,4,6-Tribromophenol	329.70	8.221	8.234	(0.919)	171119	140	2200	

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136s08.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclps.m
Misc Info: E132S1/H132B02/H136IC1

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	120627	16.91
32 Naphthalene-d8	348029	174014	696058	430687	23.75
48 Acenaphthene-d10	171424	85712	342848	219556	28.08
65 Phenanthrene-d10	222794	111397	445588	313569	40.74
76 Chrysene-d12	137788	68894	275576	196885	42.89
83 Perylene-d12	83290	41645	166580	114393	37.34

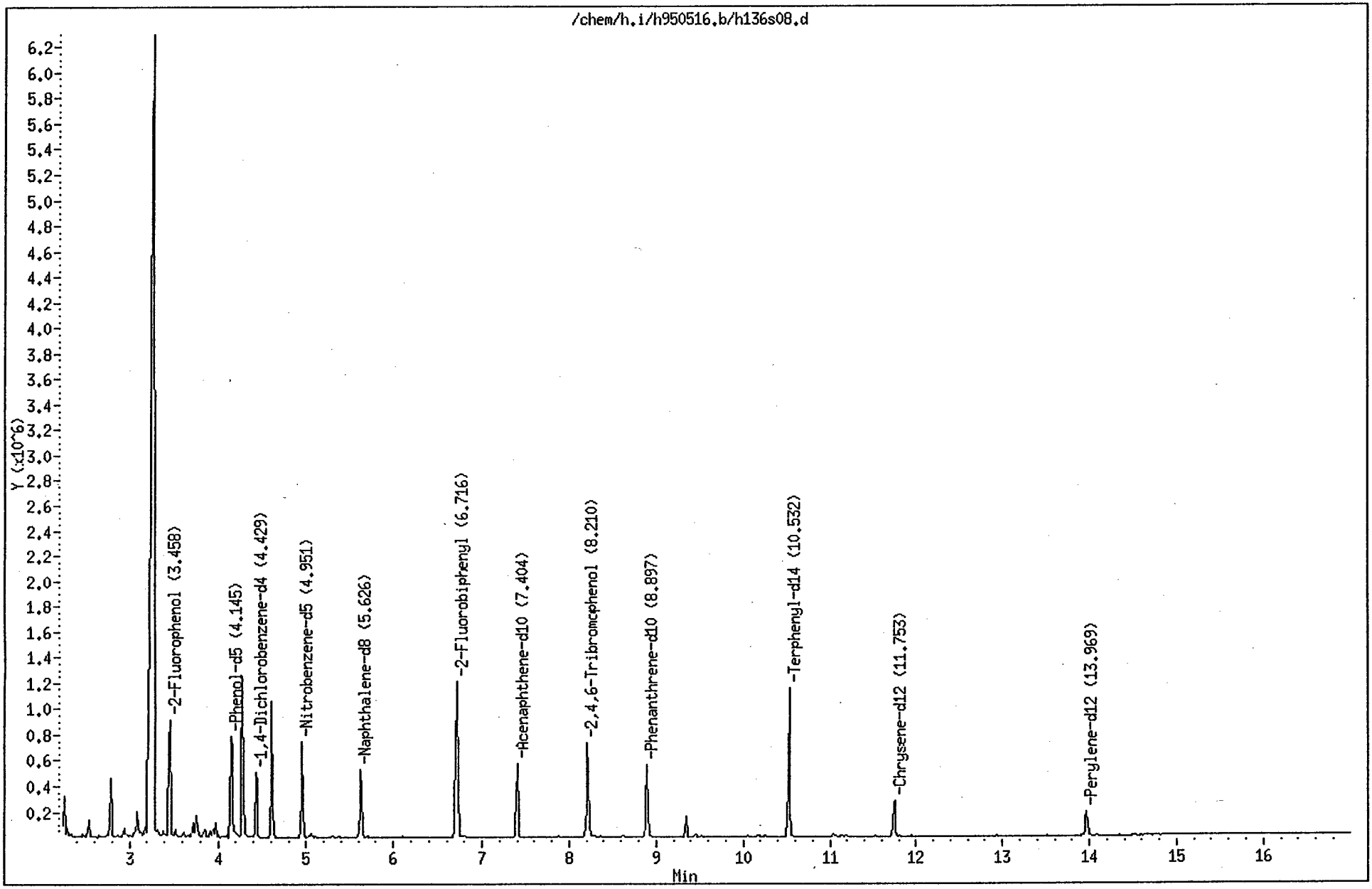
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.29
32 Naphthalene-d8	5.65	5.15	6.15	5.63	-0.44
48 Acenaphthene-d10	7.42	6.92	7.92	7.40	-0.17
65 Phenanthrene-d10	8.92	8.42	9.42	8.90	-0.28
76 Chrysene-d12	11.78	11.28	12.28	11.75	-0.21
83 Perylene-d12	13.99	13.49	14.49	13.97	-0.18

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.

Data File: /chem/h.i/h950516.b/h136s08.d
Date : 16-MAY-1995 17:55
Client ID:
Sample Info: 9505209-05B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026.002-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/04/95 15:15:00
DATE RECEIVED: 05/05/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Cadmium, Total METHOD 6010 *** Analyzed by: DQ Date: 05/17/95	ND	0.004	mg/L
Chromium, Total METHOD 6010 *** Analyzed by: DQ Date: 05/17/95	ND	0.01	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: MM Date: 05/08/95	05/08/95		
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: MM Date: 05/08/95	05/08/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/09/95	ND	0.004	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026.002-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/04/95 15:15:00
DATE RECEIVED: 05/05/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/L
Benzene	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	20	ug/L
Carbon Disulfide	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chloroethane	ND	10	ug/L
2-Chloroethylvinylether	ND	10	ug/L
Chloroform	5	5	ug/L
Chloromethane	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
total-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Methylene Chloride	ND	5	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
Styrene	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L

METHOD: 8240, Volatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-06

Operational Tech

SAMPLE ID: 026.002-RB

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	98	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	98	86	115

ANALYZED BY: JC DATE/TIME: 05/08/95 17:34:00
METHOD: 8240, Volatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS: *SP* for Target Compound List

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026.002-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/04/95 15:15:00
DATE RECEIVED: 05/05/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	8	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-06

Operational Tech

SAMPLE ID: 026.002-RB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-06

Operational Tech

SAMPLE ID: 026.002-RB

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	82	35	114
2-Fluorobiphenyl	50 ug/L	89	43	116
Terphenyl-d14	50 ug/L	75	33	141
Phenol-d5	75 ug/L	54	10	110
2-Fluorophenol	75 ug/L	54	21	110
2,4,6-Tribromophenol	75 ug/L	106	10	123

ANALYZED BY: LH DATE/TIME: 05/16/95 17:30:00
EXTRACTED BY: RN DATE/TIME: 05/09/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS: *SP* for Target Compound List

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

ata file : /chem/l.i/l950508.b/l128s13.d
ab Smp Id:
nj Date : 08-MAY-1995 17:34
perator : JC Inst ID: l.i
mp Info : 9505209-06A-8240W/1X
isc Info : L128W1/L128B01/L128CW1
omment :
ethod : /chem/l.i/l950508.b/lvoclpw.m
eth Date : 09-May-1995 08:35 jimmy Quant Type: ISTD
al Date : 08-MAY-1995 09:08 Cal File: l128cw1.d
ls bottle: 20
il Factor: 1.000
ntegrator: HP RTE Compound Sublist: normal.sub
arget Version: 3.10

mpounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL ug/L)	
13 Methylene Chloride	84.00	3.266	3.239	(0.622)	8745	23	4	(a)
24 Chloroform	83.00	5.263	5.245	(1.002)	19407	24	5	
23 Bromochloromethane	128.00	5.254	5.227	(1.000)	61816	250		
32 1,4-Difluorobenzene	114.00	6.956	6.938	(1.000)	322382	250		
50 Chlorobenzene-d5	117.00	11.119	11.110	(1.000)	263229	250		
26 1,2-Dichloroethane-d4	102.00	6.020	6.002	(1.146)	24658	240	49	
43 Toluene-d8	98.00	9.176	9.167	(0.825)	354763	260	51	
61 Bromofluorobenzene	95.00	12.795	12.786	(1.151)	132059	240	49	

: Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l128s13.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/1950508.b/lvoclpw.m
Misc Info: L128W1/L128B01/L128CW1

Calibration Date: 05/08/95
Calibration Time: 0908

Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
23 Bromochloromethane	60624	30312	121248	61816	1.97
32 1,4-Difluorobenzene	320419	160210	640838	322382	0.61
50 Chlorobenzene-d5	260163	130082	520326	263229	1.18

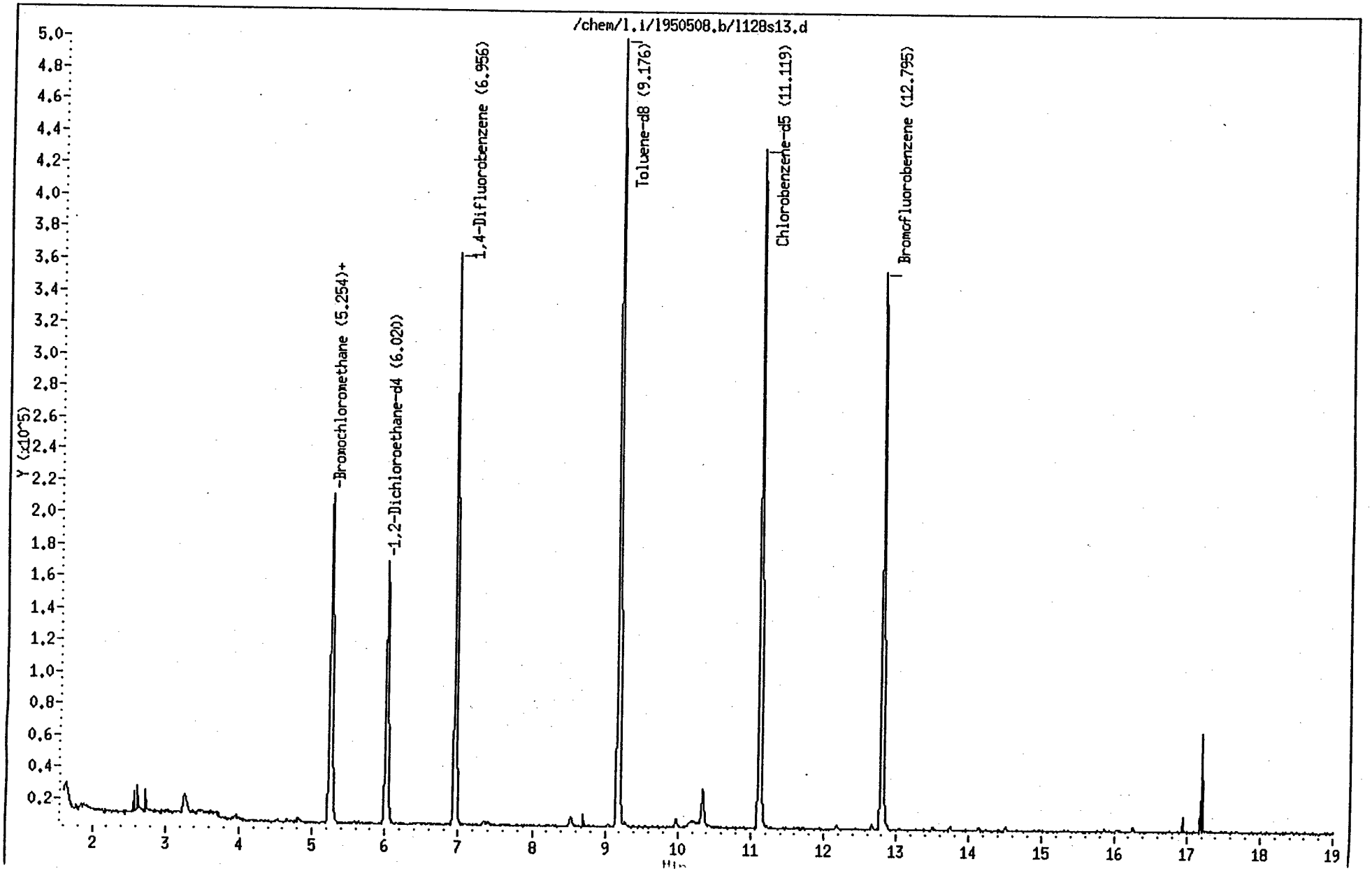
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.23	4.73	5.73	5.25	0.51
32 1,4-Difluorobenzene	6.94	6.44	7.44	6.96	0.26
50 Chlorobenzene-d5	11.11	10.61	11.61	11.12	0.08

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.

Data File: /chem/1.i/1950508.b/1128s13.d
Date : 08-MAY-1995 17:34
Client ID:
Sample Info: 9505209-06A-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



Data File: /chem/l.i/1950508.b/l128s13.d

Date : 08-MAY-1995 17:34

Client ID:

Instrument: l.i

Sample Info: 9505209-06A-8240W/1X

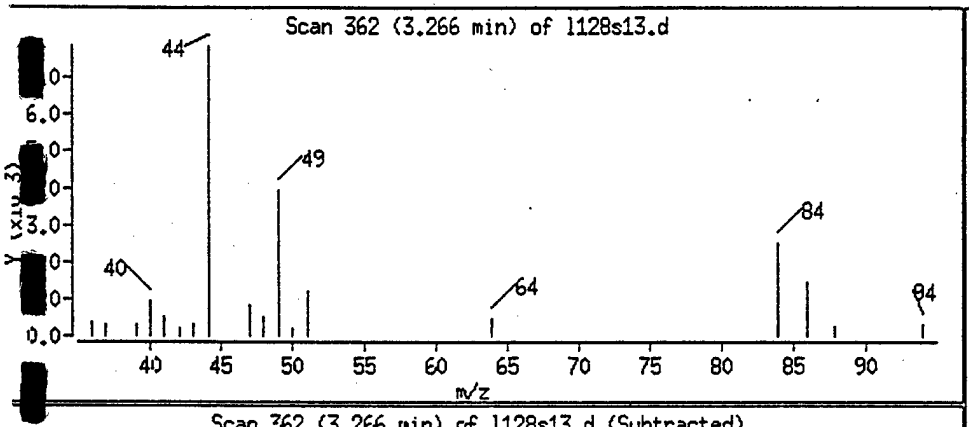
Purge Volume: 5.0

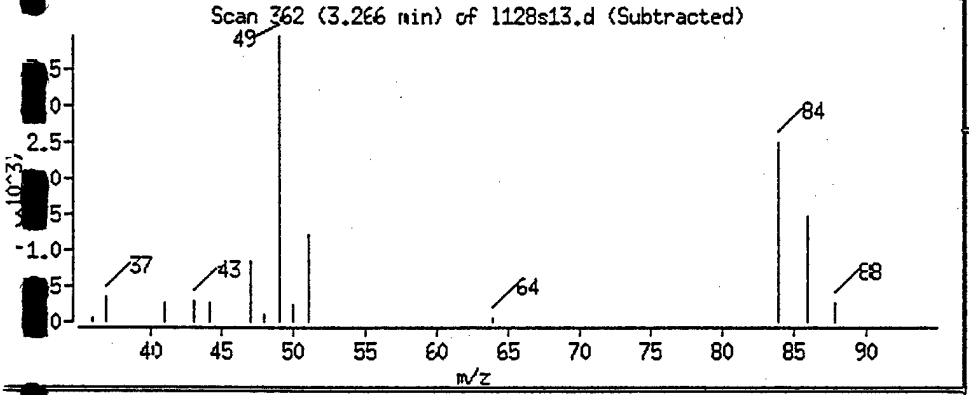
Operator: JC

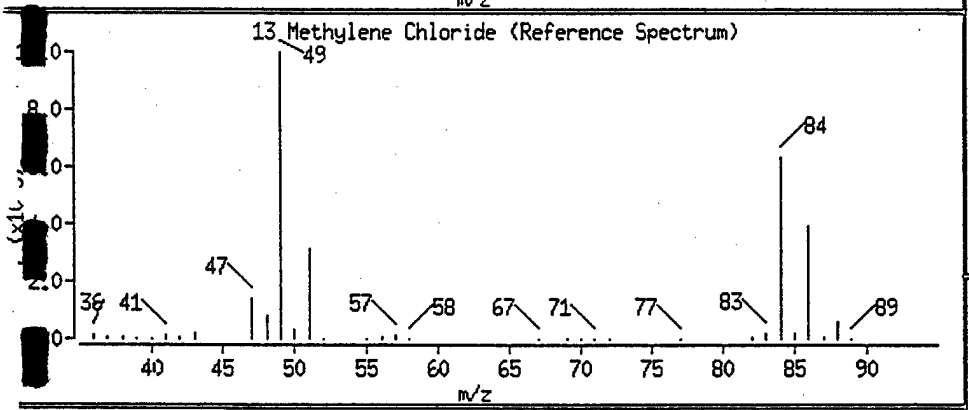
Column phase: 30m,hp5ms,0.25u df

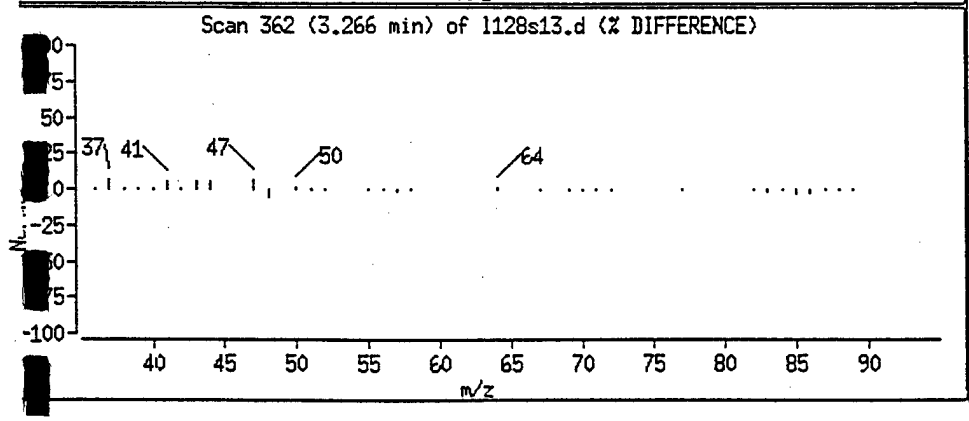
Column diameter: 0.25

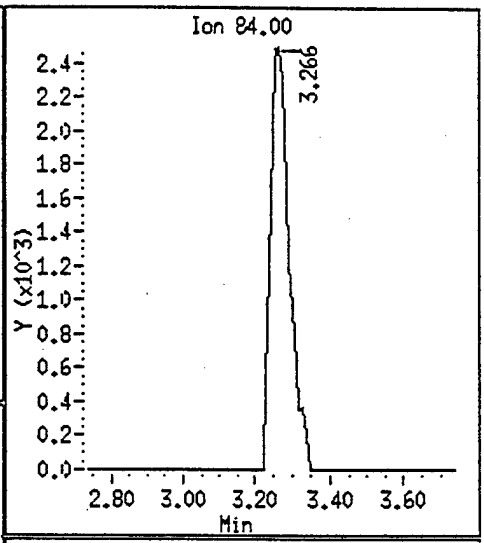
13 Methylene Chloride

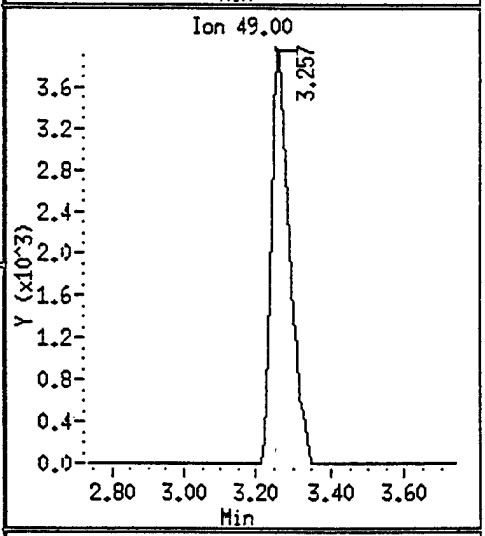


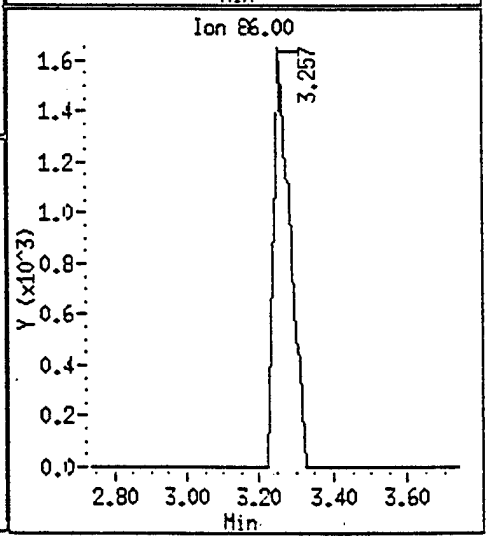








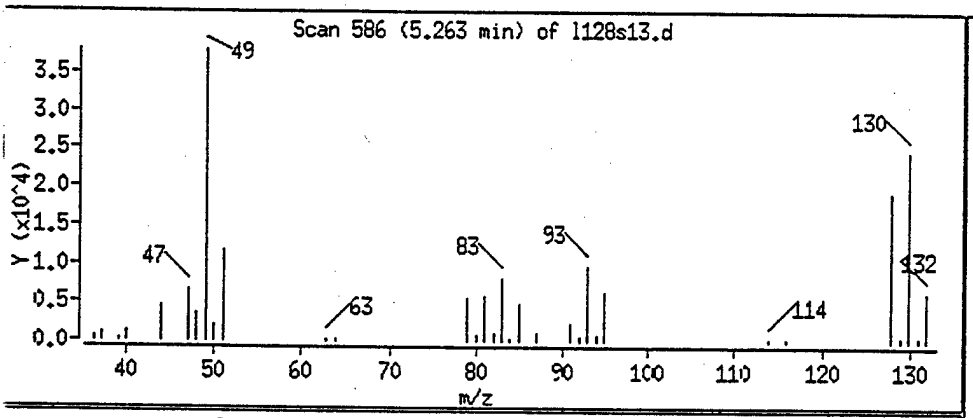


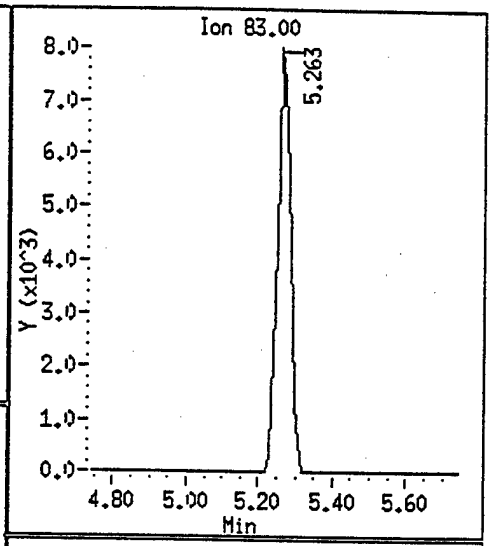


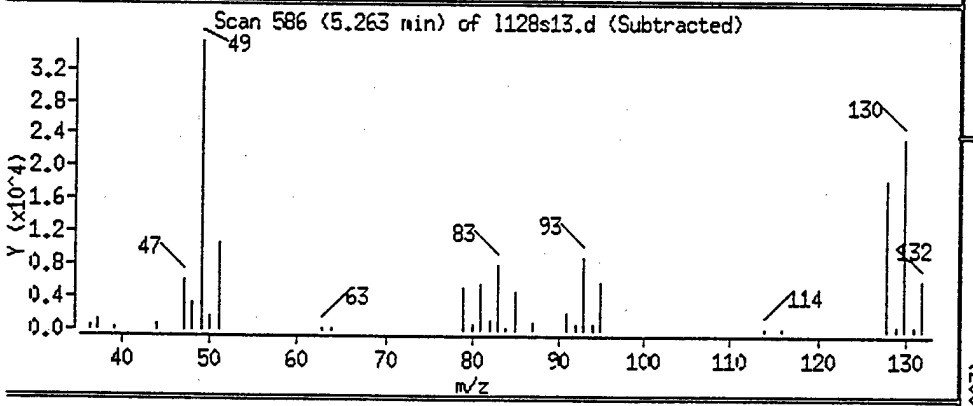
Data File: /chem/1.i/1950508.b/1128s13.d
Date : 08-MAY-1995 17:34
Client ID:
Sample Info: 9505209-06A-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

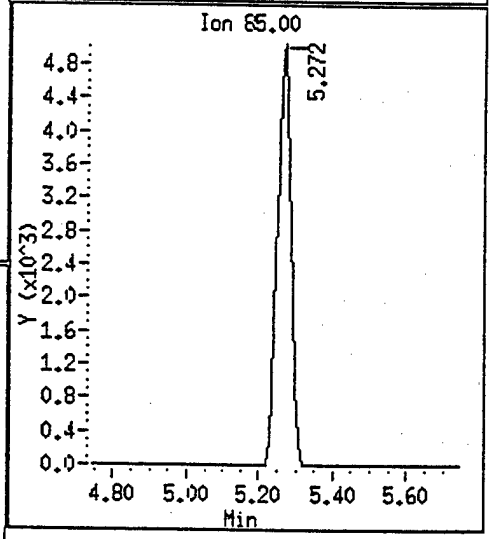
Instrument: 1.i
Operator: JC
Column diameter: 0.25

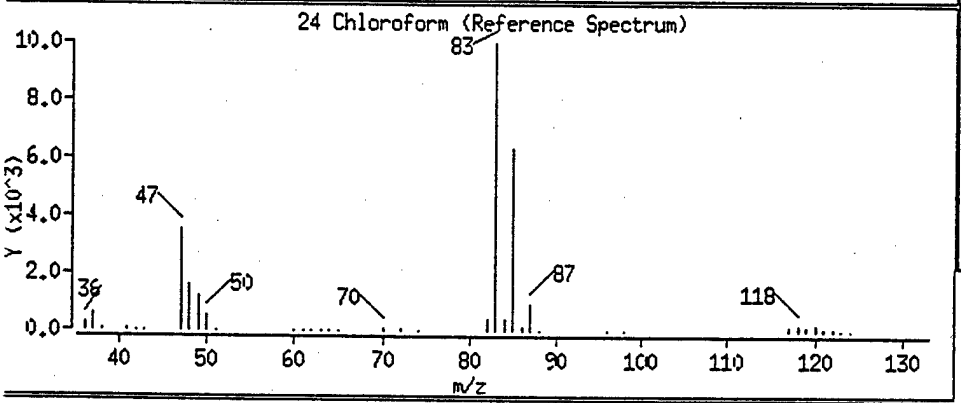
24 Chloroform

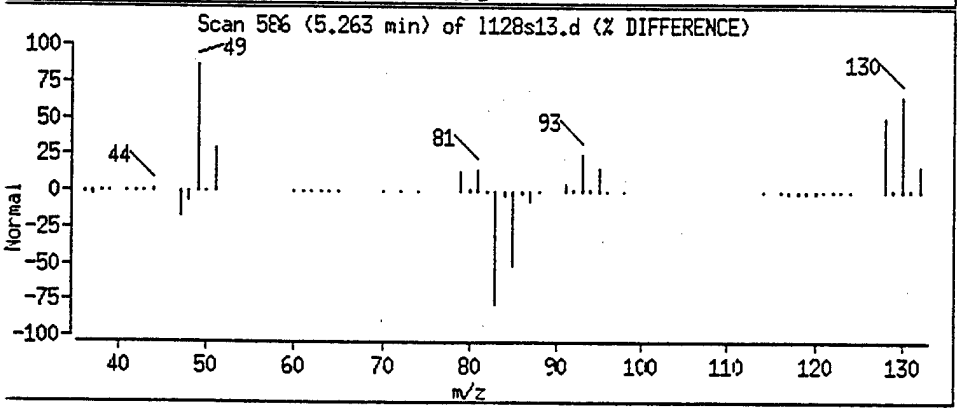












SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136s07.d
Lab Smp Id:
Inj Date : 16-MAY-1995 17:30
Operator : LH Inst ID: h.i
Smp Info : 9505209-06B-8270W/1X
Misc Info : E129C1/J129B01/H136IC1
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 21:39 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 11
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	36 4-Chloro-3-methylphenol	107.00	6.222	6.232	(1.103)	40824	15	8
*	11 1,4-Dichlorobenzene-d4	152.00	4.444	4.454	(1.000)	110366	40	
*	32 Naphthalene-d8	136.00	5.641	5.651	(1.000)	364733	40	
*	48 Acenaphthene-d10	164.00	7.407	7.417	(1.000)	157541	40	
*	65 Phenanthrene-d10	188.00	8.900	8.922	(1.000)	216238	40	
*	76 Chrysene-d12	240.00	11.756	11.777	(1.000)	137070	40	
*	83 Perylene-d12	264.00	13.972	13.993	(1.000)	74425	40	
$	23 Nitrobenzene-d5	82.00	4.966	4.964	(0.880)	245267	82	41
$	41 2-Fluorobiphenyl	172.00	6.720	6.729	(0.907)	461671	89	44
$	72 Terphenyl-d14	244.00	10.536	10.545	(0.896)	285692	75	38
$	4 Phenol-d5	99.00	4.160	4.158	(0.936)	325592	81	40
$	3 2-Fluorophenol	112.00	3.425	3.423	(0.771)	303775	81	41
$	61 2,4,6-Tribromophenol	329.70	8.225	8.234	(0.924)	138364	160	79

Data File: /chem/h.i/h950516.b/h136s07.d

Date : 16-MAY-1995 17:30

Client ID:

Instrument: h.i

Sample Info: 9505209-06B-8270W/1X

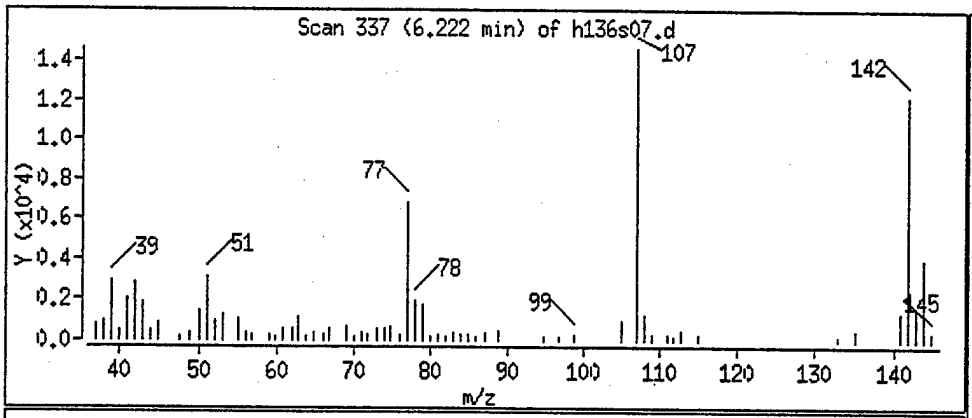
Volume Injected (uL): 2.0

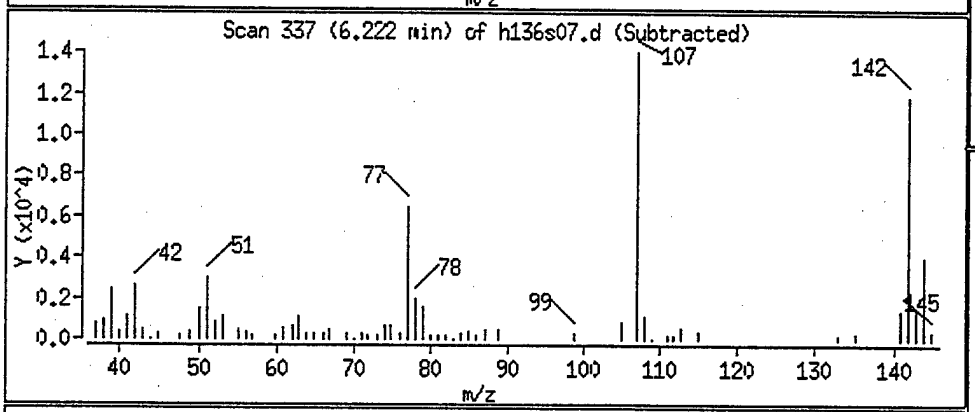
Operator: LH

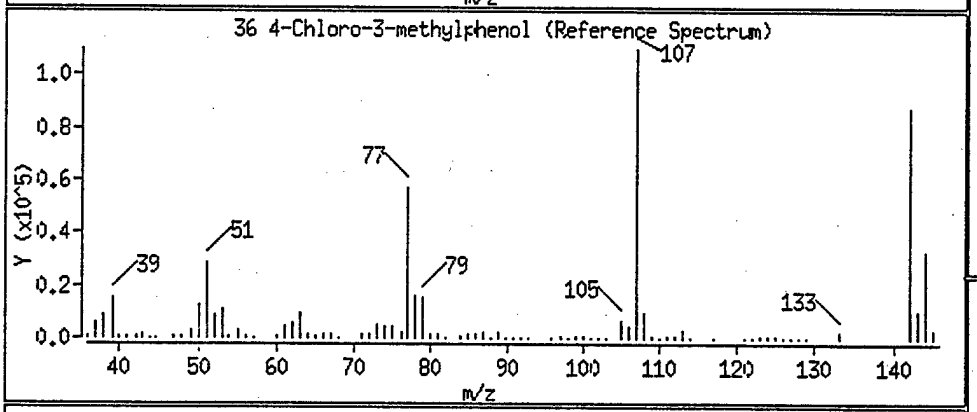
Column phase:

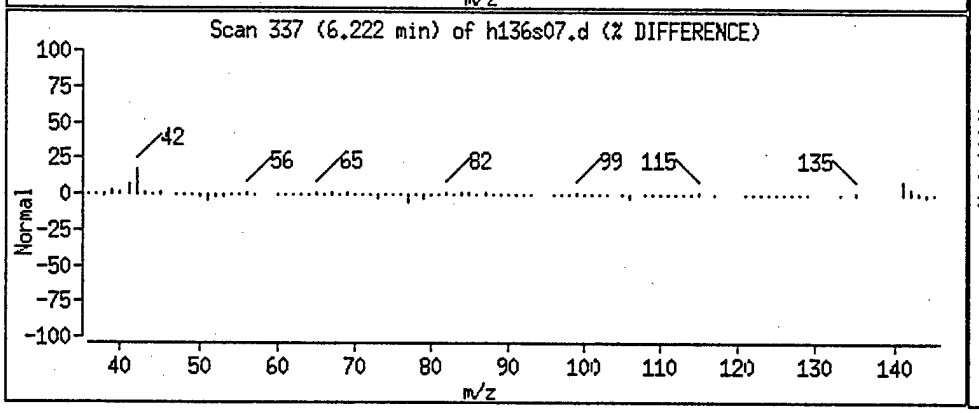
Column diameter: 0.25

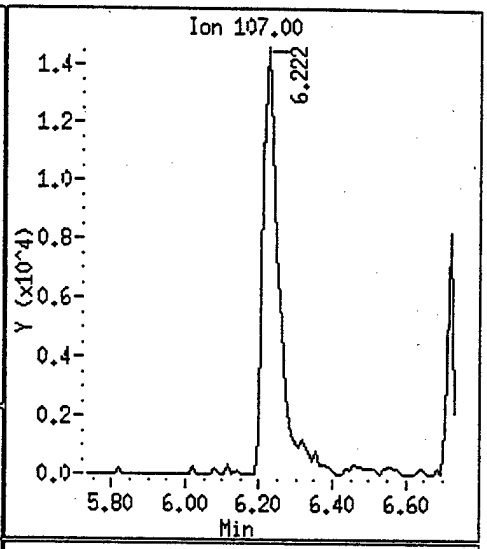
36 4-Chloro-3-methylphenol

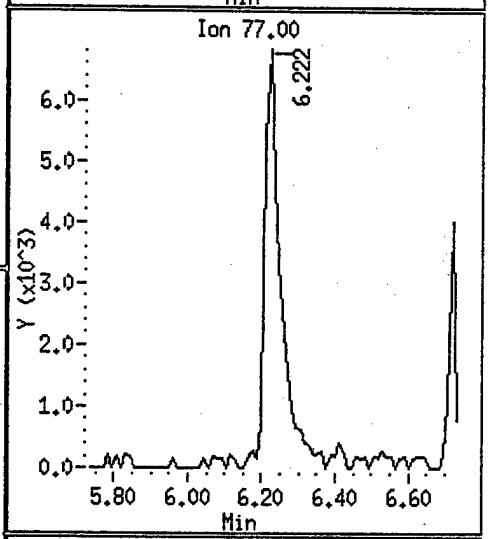


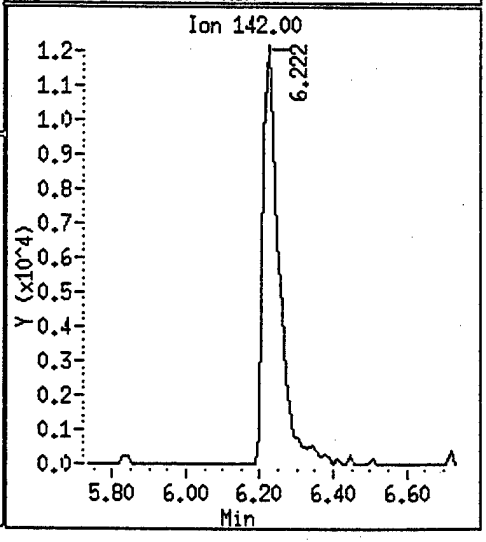












SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136s07.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: E129C1/J129B01/H136IC1

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

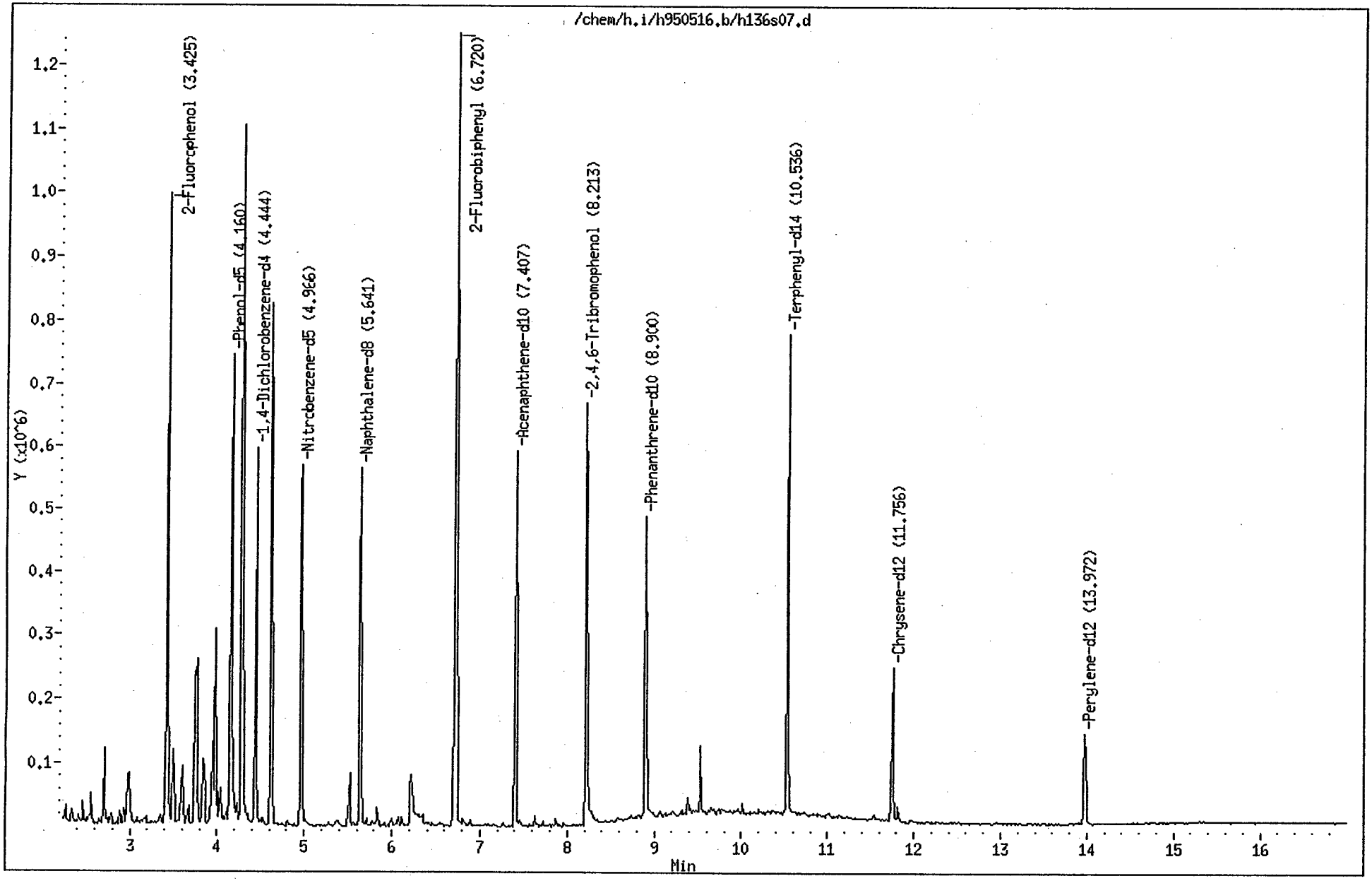
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	110366	6.96
32 Naphthalene-d8	348029	174014	696058	364733	4.80
48 Acenaphthene-d10	171424	85712	342848	157541	-8.10
65 Phenanthrene-d10	222794	111397	445588	216238	-2.94
76 Chrysene-d12	137788	68894	275576	137070	-0.52
83 Perylene-d12	83290	41645	166580	74425	-10.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.21
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.17
48 Acenaphthene-d10	7.42	6.92	7.92	7.41	-0.13
65 Phenanthrene-d10	8.92	8.42	9.42	8.90	-0.24
76 Chrysene-d12	11.78	11.28	12.28	11.76	-0.18
83 Perylene-d12	13.99	13.49	14.49	13.97	-0.15

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.

Data File: /chem/h.i/h950516.b/h136s07.d
Date : 16-MAY-1995 17:30
Client ID:
Sample Info: 9505209-06B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-07

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth
SITE: IRP Site 26
SAMPLED BY: Provided by SPL
SAMPLE ID: Trip Blank

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 04/26/95
DATE RECEIVED: 05/05/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/L
Benzene	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	20	ug/L
Carbon Disulfide	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chloroethane	ND	10	ug/L
2-Chloroethylvinylether	ND	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
total-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Methylene Chloride	ND	5	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
Styrene	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L

METHOD: 8240, Volatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505209-07

Operational Tech

SAMPLE ID: Trip Blank

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	100	76	114
Toluene-d8	50 ug/L	102	88	110
4-Bromofluorobenzene	50 ug/L	100	86	115

ANALYZED BY: JC DATE/TIME: 05/08/95 16:39:00
METHOD: 8240, Volatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950508.b/l128s11.d
Lab Smp Id:
Inj Date : 08-MAY-95 16:39
Operator : JC Inst ID: l.i
Smp Info : 9505209-07A-8240W/1X
Misc Info : L128W1/L128B01/L128CW1
Comment :
Method : /chem/l.i/l950508.b/lvoclpw.m
Meth Date : 08-May-1995 16:39 jimmy Quant Type: ISTD
Cal Date : 08-MAY-1995 09:08 Cal File: l128cw1.d
Als bottle: 18
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	23 Bromochloromethane	128.00	5.242	5.227	(1.000)	60040	250	
*	2 1,4-Difluorobenzene	114.00	6.944	6.938	(1.000)	321547	250	
	0 Chlorobenzene-d5	117.00	11.125	11.110	(1.000)	264769	250	
	26 1,2-Dichloroethane-d4	102.00	6.008	6.002	(1.146)	24431	250	50
$	43 Toluene-d8	98.00	9.173	9.167	(0.825)	358056	260	51
$	1 Bromofluorobenzene	95.00	12.792	12.786	(1.150)	135463	250	50

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l128s11.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950508.b/lvoclpw.m
Misc Info: L128W1/L128B01/L128CW1

Calibration Date: 05/08/95
Calibration Time: 0908

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	60624	30312	121248	60040	-0.96
32 1,4-Difluorobenzene	320419	160210	640838	321547	0.35
50 Chlorobenzene-d5	260163	130082	520326	264769	1.77

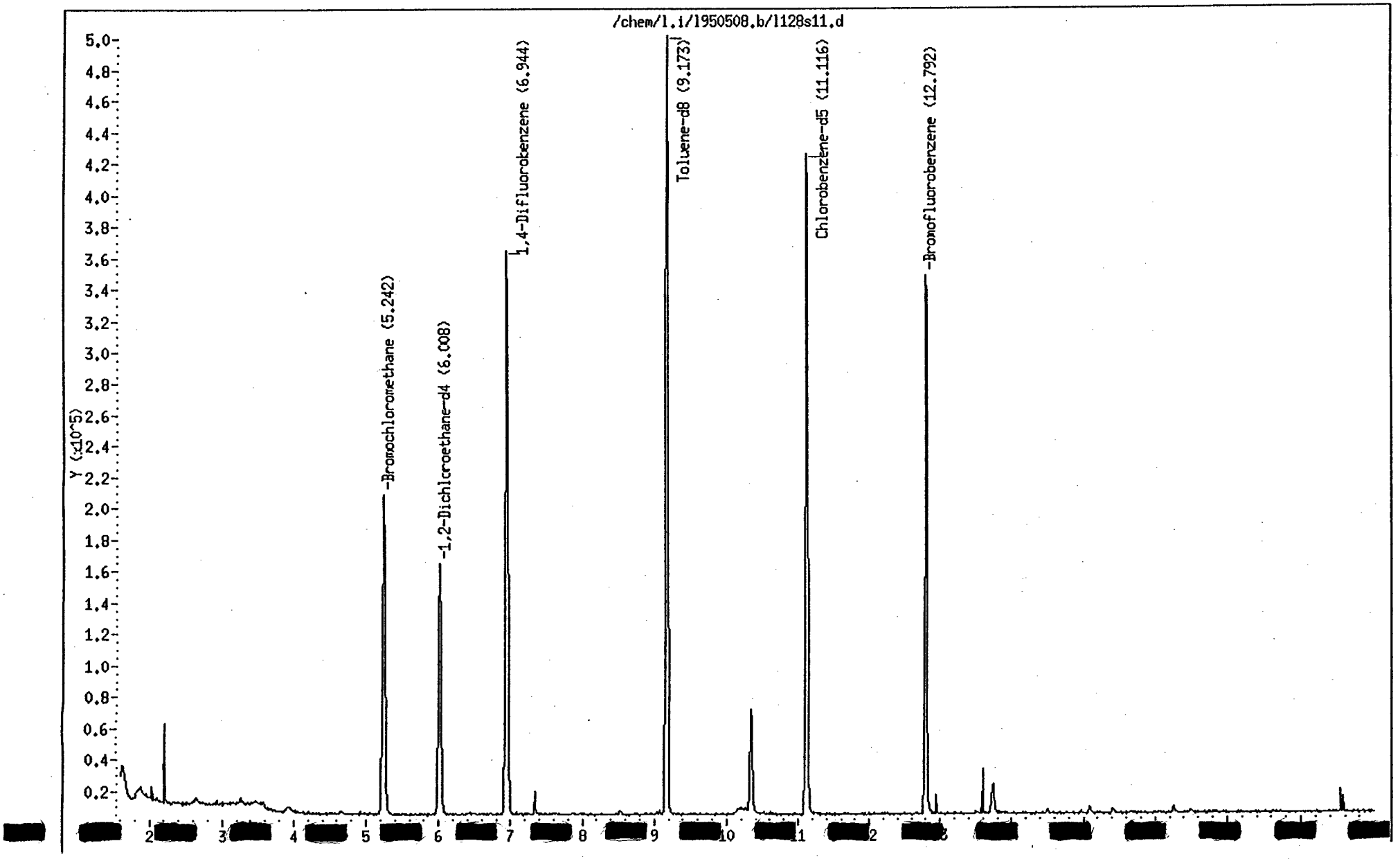
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.23	4.73	5.73	5.24	0.28
32 1,4-Difluorobenzene	6.94	6.44	7.44	6.94	0.08
50 Chlorobenzene-d5	11.11	10.61	11.61	11.12	0.13

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.

Data File: /chem/1.i/1950508.b/1128s11.d
Date : 08-MAY-95 16:39
Client ID:
Sample Info: 9505209-07A-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95 - 05 - 209

Approved for release by:

M. Scott Sample

M. Scott Sample, Laboratory Director *Date:* 5/30/95

Karen Satterfield

Karen Satterfield, Project Manager *Date:* 5/30/95

QUALITY CONTROL

DOCUMENTATION

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 505164 SAS No.: ___ SDG NO.: 505209

Matrix Spike - EPA Sample No.: 026-001BB 9-9.5

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMIT REC.
1,1-Dichloroethene	50.0	0	44	88	59-172
Trichloroethene	50.0	0	44	88	62-137
Benzene	50.0	0	47	94	66-142
Toluene	50.0	0	43	86	59-139
Chlorobenzene	50.0	0	41	82	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
1,1-Dichloroethene	50.0	46	92	4	22	59-172
Trichloroethene	50.0	46	92	4	24	62-137
Benzene	50.0	49	98	4	21	66-142
Toluene	50.0	45	90	5	21	59-139
Chlorobenzene	50.0	43	86	5	21	60-133

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

* Values outside of QC Limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

FORM III VOA - 2

Idelis Williams, QC Officer

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 504362 SAS No.: ____ SDG NO.: 505209

Matrix Spike - EPA Sample No.: SFA - Q2

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
1,1-Dichloroethene	50.0	0	46	92	61-145
Trichloroethene	50.0	0	45	90	71-120
Benzene	50.0	0	48	96	76-127
Toluene	50.0	0	50	100	76-125
Chlorobenzene	50.0	0	50	100	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
1,1-Dichloroethene	50.0	46	92	0	14	61-145
Trichloroethene	50.0	45	90	0	14	71-120
Benzene	50.0	47	94	2	11	76-127
Toluene	50.0	49	98	2	13	76-125
Chlorobenzene	50.0	49	98	2	13	75-130

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

* Values outside of QC Limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

FORM III VOA - 1

Idelis Williams, Q C Officer

Matrix: Soil
Sample ID: BLANK
Batch: K950509094856

Reported on: 05/16/95 12:35
Analyzed on: 05/09/95 12:29
Analyst: HLW

METHOD 8240S **K129B02**

Compound	Result	Detection Limit	Units
1,2-Dichloroethene (total)	ND	5	ug/Kg
Xylene (Total)	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Chloroethane	ND	10	ug/Kg
Bromomethane	ND	10	ug/Kg
Acetone	ND	100	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
Methylene Chloride	ND	5	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Chloroform	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
Benzene	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: K950509094856

Reported on: 05/16/95 12:35
Analyzed on: 05/09/95 12:29
Analyst: HLW

METHOD 8240S **K129B02**

Compound	Result	Detection Limit	Units
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	97	70-121	% Recovery
Toluene-d8	98	84-138	% Recovery
Bromofluorobenzene	97	59-113	% Recovery

Samples in Batch 9505209-01 9505209-02 9505209-03 9505209-04 9505209-05

Notes
ND - Not detected.

Idelis Williams, QC Officer

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129b02.d
Lab Smp Id: BLANK-8240S/1X
Inj Date : 09-MAY-1995 12:29
Operator : HLW Inst ID: k.i
Smp Info : BLANK-8240S/1X
Misc Info : K129S1//K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 09-May-1995 11:38 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.120	2.123	(1.000)	95890	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.378	2.365	(1.121)	41030	240	48
* 31 1,4-Difluorobenzene	114.00	2.802	2.789	(1.000)	548254	250	
$ 40 Toluene-d8	98.00	4.545	4.532	(0.673)	622868	240	49
* 51 Chlorobenzene-d5	117.00	6.757	6.759	(1.000)	414533	250	
$ 61 Bromofluorobenzene	95.00	8.863	8.865	(1.312)	219572	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129b02.d
Lab Smp Id: BLANK-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1//K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	95890	10.89
31 1,4-Difluorobenzene	1552052	776026	1104104	548254	-0.69
51 Chlorobenzene-d5	389031	194516	778062	414533	6.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.11
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.46
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.03

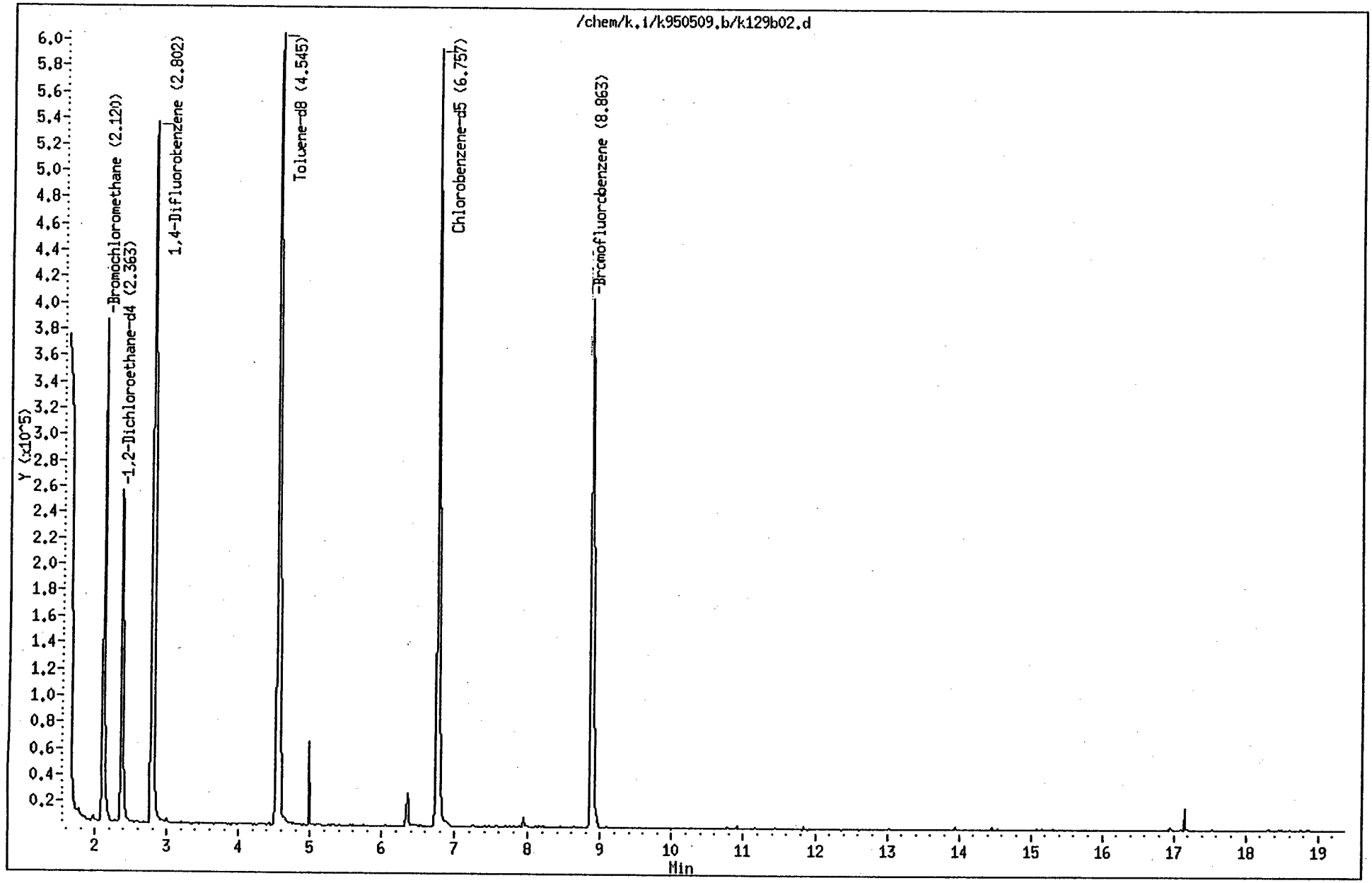
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129b02.d
Date : 09-MAY-1995 12:29
Client ID:
Sample Info: BLANK-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



Matrix: Aqueous
Sample ID: BLANK
Batch: L950508104642

Reported on: 05/16/95 12:35
Analyzed on: 05/08/95 09:35
Analyst: JC

METHOD 8240/624 L128B01

Compound	Result	Detection Limit	Units
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: L950508104642

Reported on: 05/16/95 12:35
Analyzed on: 05/08/95 09:35
Analyst: JC

METHOD 8240/624 L128B01

Compound	Result	Detection Limit	Units
Styrene	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	99	76-114	% Recovery
Toluene-d8	103	88-110	% Recovery
Bromofluorobenzene	97	86-115	% Recovery

Samples in Batch 9505209-06 9505209-07

Notes

ND - Not detected.

Idelis Williams, QC Officer

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950508.b/l128b01.d
Lab Smp Id:
Inj Date : 08-MAY-1995 09:35
Operator : JC Inst ID: l.i
Smp Info : BLANK-8240W/1X
Misc Info : L128W1//L128CW1
Comment :
Method : /chem/l.i/l950508.b/lvoclpw.m
Meth Date : 08-May-1995 09:30 jimmy Quant Type: ISTD
Cal Date : 08-MAY-1995 09:08 Cal File: l128cw1.d
Vial bottle: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
23 Bromochloromethane	128.00	5.233	5.227	(1.000)	60720	250	
26 1,2-Dichloroethane-d4	102.00	6.009	6.002	(1.148)	24450	250	49
1,4-Difluorobenzene	114.00	6.936	6.938	(1.000)	322660	250	
Toluene-d8	98.00	9.164	9.167	(0.824)	343807	260	52
50 Chlorobenzene-d5	117.00	11.116	11.110	(1.000)	253617	250	
Bromofluorobenzene	95.00	12.792	12.786	(1.151)	127003	240	49

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: l.i
ab File ID: l128b01.d
ab Smp Id:
nalysis Type: VOA
uant Type: ISTD
perator: JC
ethod File: /chem/l.i/1950508.b/lvoclpw.m
isc Info: L128W1//L128CW1

Calibration Date: 05/08/95
Calibration Time: 0908

Level: LOW
Sample Type: WATER

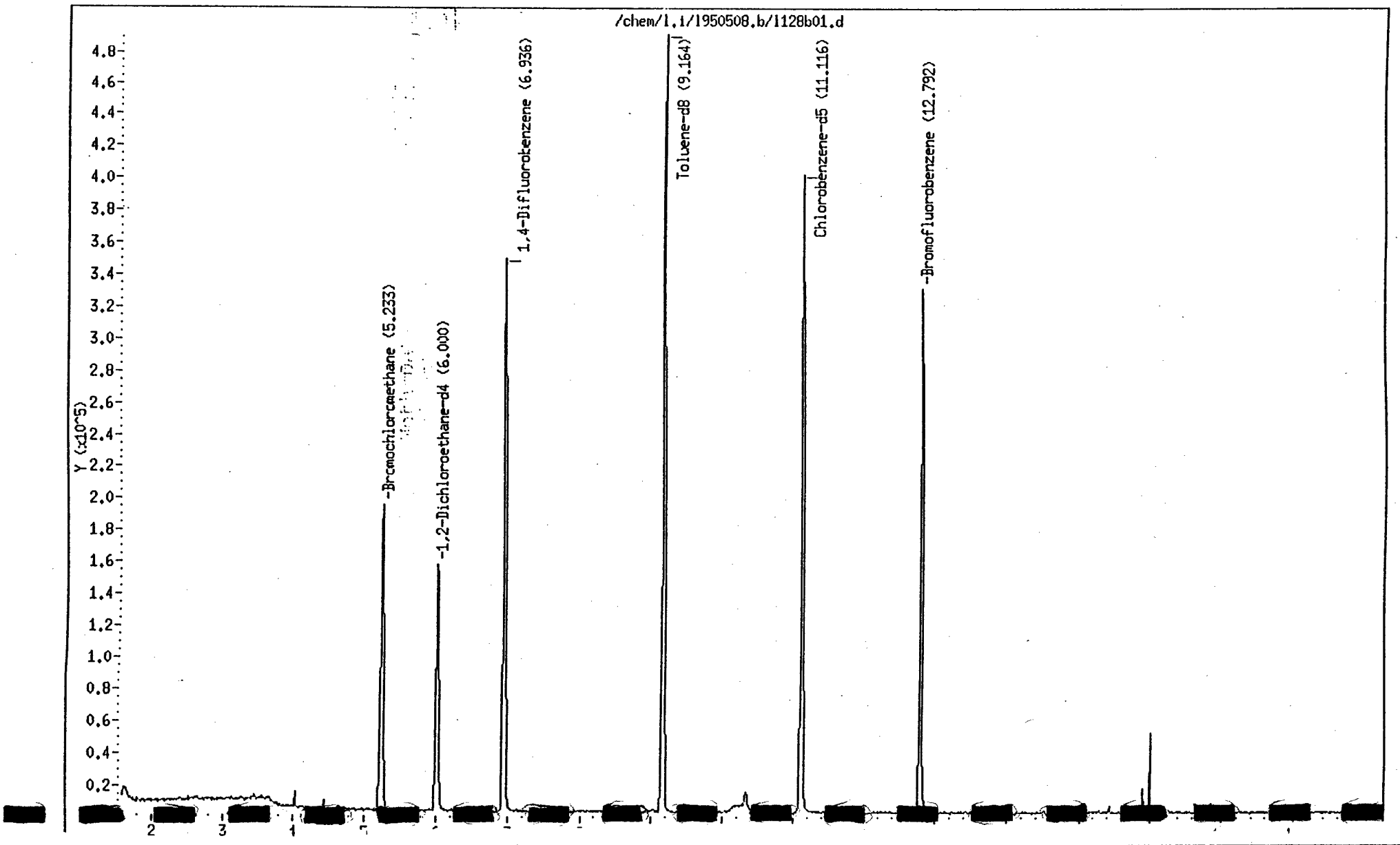
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	60624	30312	121248	60720	0.16
32 1,4-Difluorobenzene	320419	160210	640838	322660	0.70
50 Chlorobenzene-d5	260163	130082	520326	253617	-2.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.23	4.73	5.73	5.23	0.12
32 1,4-Difluorobenzene	6.94	6.44	7.44	6.94	-0.04
50 Chlorobenzene-d5	11.11	10.61	11.61	11.12	0.06

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950508.b/1128b01.d
Date : 08-MAY-95 09:35
Client ID:
Sample Info: BLANK-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i
Operator: JC
Column diameter: 0.25

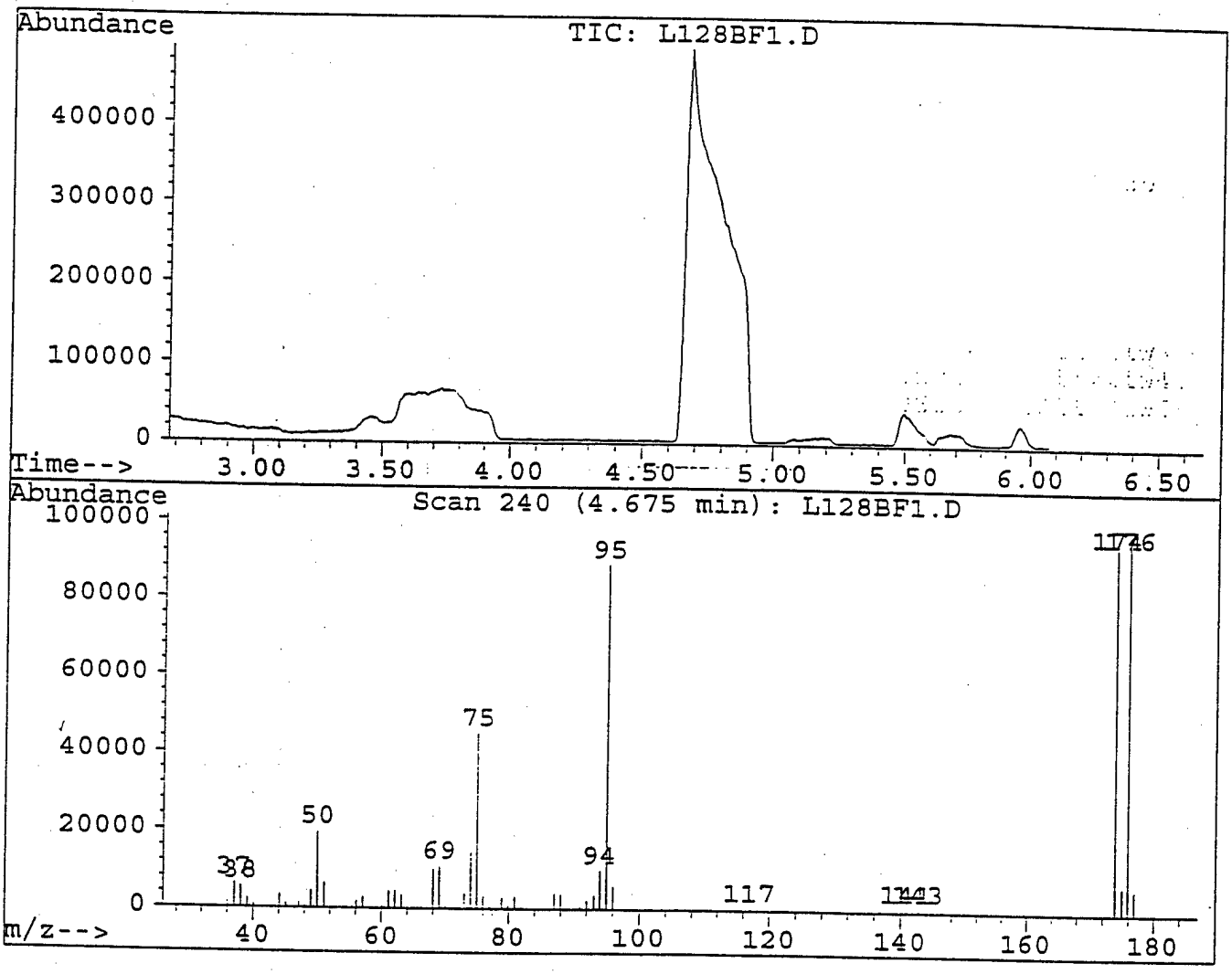


BFB

Data File : C:\HPCHEM\1\DATA\L950508\L128BF1.D
Acq On : 8 May 95 8:46 am
Sample : 50 NG BFB
Misc : PURGING INJECTION

Vial: 1
Operator:
Inst : 1
Multiplr: 1.00

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



Peak Apex is scan: 240

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	19608	PASS
75	95	30	60	51.0	45272	PASS
95	95	100	100	100.0	88808	PASS
96	95	5	9	6.7	5913	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	108.4	96256	PASS
175	174	5	9	7.4	7167	PASS
176	174	95	101	99.2	95488	PASS
177	176	5	9	6.5	6216	PASS

Data File: /chem/k.i/k950509.b/k129bf1.d

Date : 09-MAY-95 10:11

Client ID:

Sample Info: BFB 50 NG

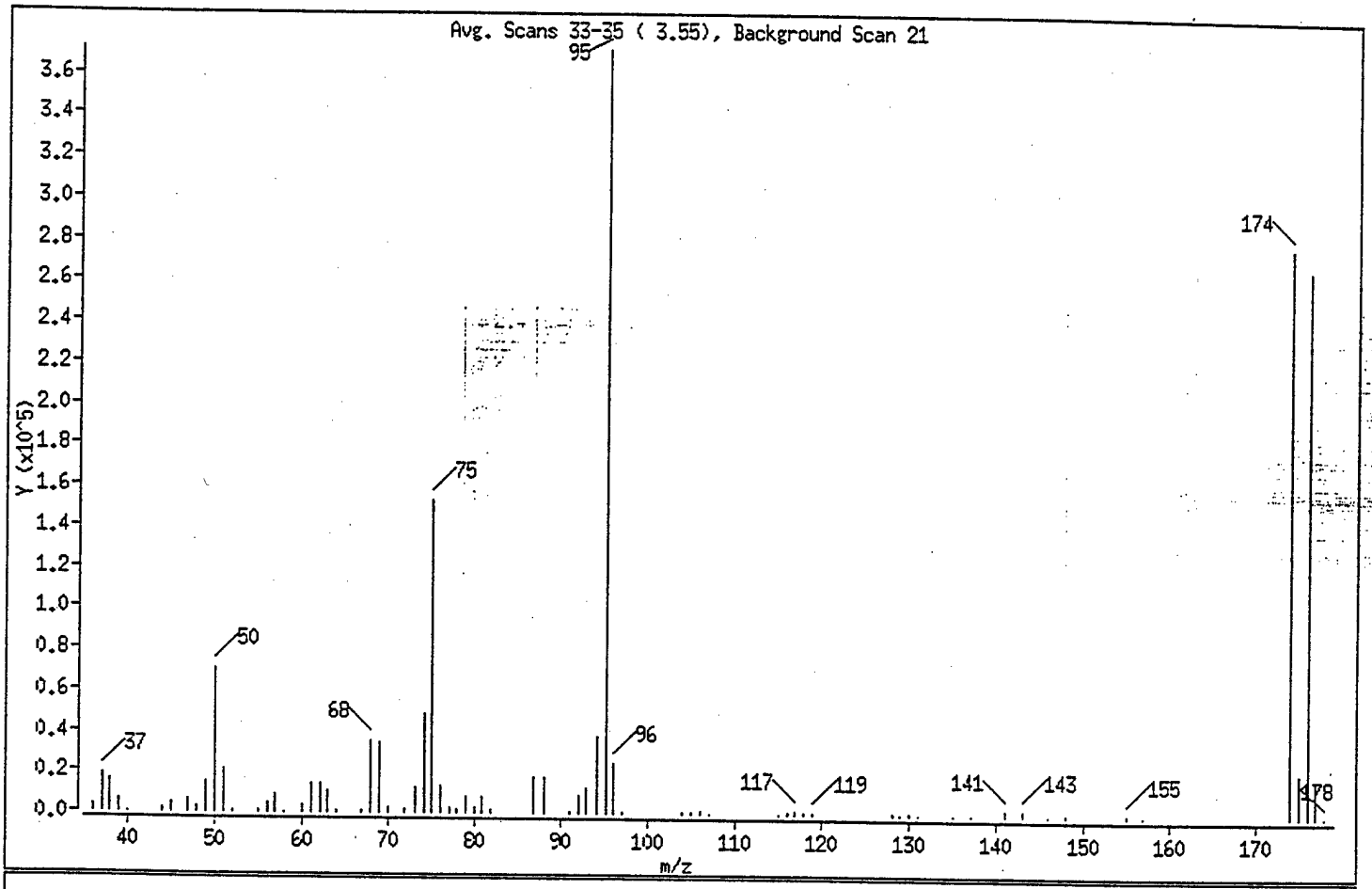
Instrument: k.i

Operator:

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.95
75	30.00 - 60.00% of mass 95	41.14
96	5.00 - 9.00% of mass 95	6.52
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	74.71
175	5.00 - 9.00% of mass 174	5.61 (7.51)
176	95.00 - 101.00% of mass 174	71.88 (96.22)
177	5.00 - 9.00% of mass 176	4.77 (6.64)

Data File: /chem/k.i/k950509.b/k129bf1.d
Date : 09-MAY-95 10:11
Client ID:
Sample Info: BFB 50 NG

Instrument: k.i
Operator:
Column phase:
Column diameter: 2.00

Data File: k129bf1.d
Spectrum : Avg. Scans 33-35 (3.55), Background Scan 21
Largest m/z: 95.10
Number of peaks: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	3803	62.05	13883	88.05	17792	129.95	1052
37.10	18904	63.05	10314	91.00	1259	131.00	181
38.10	16210	64.05	999	92.10	8673	135.00	245
39.10	6108	66.95	539	93.00	12683	136.90	212
40.00	96	68.05	35072	94.10	37624	140.95	2473
44.05	1612	69.05	34656	95.10	372096	142.95	2646
45.05	4027	70.05	2834	96.10	24272	145.95	223
47.05	6049	72.00	1832	97.10	808	147.95	834
47.95	2424	73.10	12557	103.95	1290	155.00	794
49.05	14547	74.10	48176	104.95	838	156.90	424
50.05	70512	75.10	153088	105.95	1346	174.00	277952
51.10	21104	76.10	13253	106.95	188	175.00	20872
52.10	1098	77.10	2474	115.00	171	176.00	267456
55.10	1039	78.00	1771	115.90	939	177.00	17752
56.00	4571	78.90	7822	116.90	1701	178.00	395
57.00	9122	80.00	2237	117.90	963		
58.00	215	80.95	8051	118.90	1280		
60.00	3258	81.95	1611	127.95	1081		
61.05	14489	86.95	17832	128.95	244		

Data File: /chem/k.i/k950509.b/k129bf1.d

Page 1

Date : 09-MAY-95 10:11

Client ID:

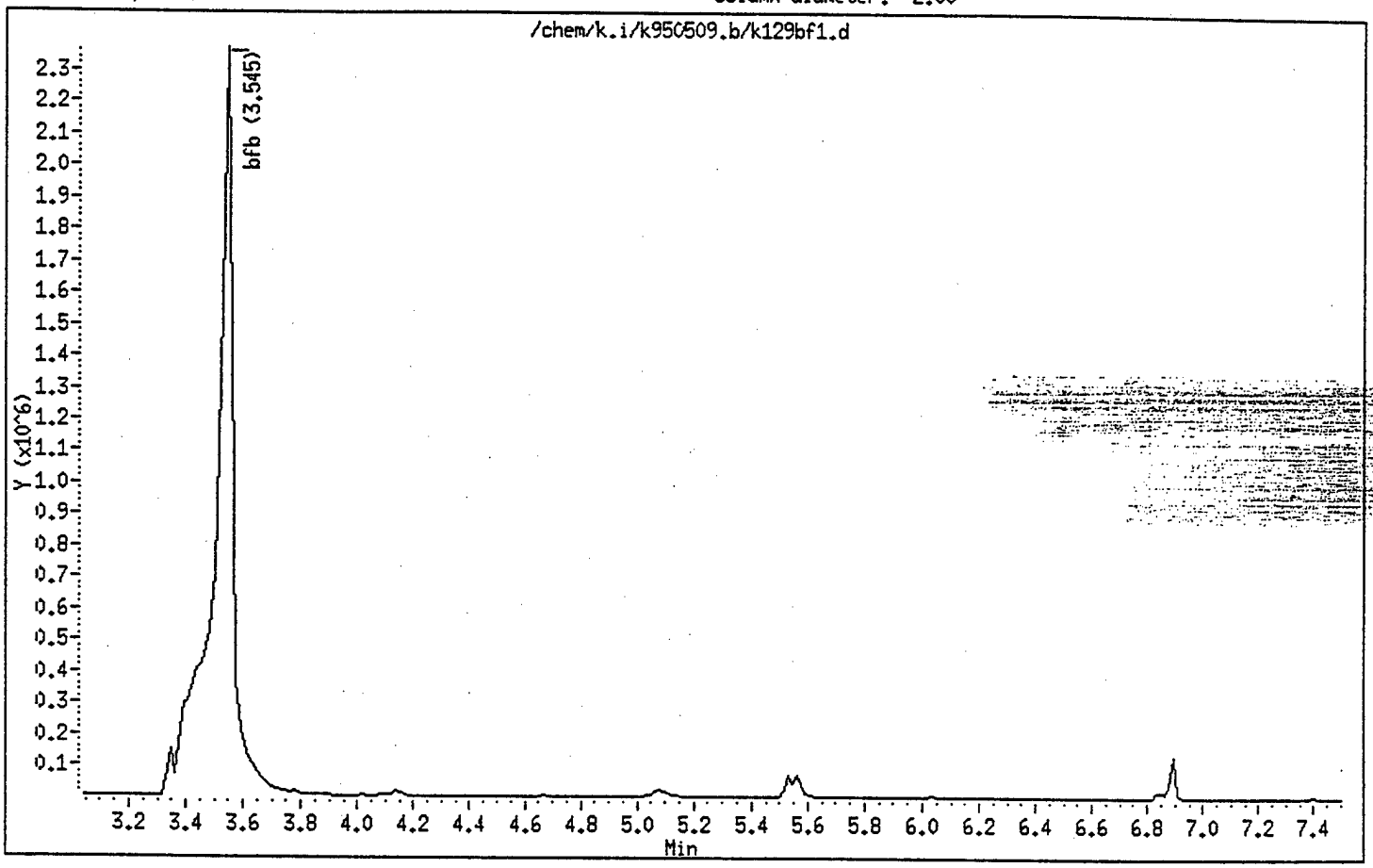
Instrument: k.i

Sample Info: BFB 50 NG

Operator:

Column phase:

Column diameter: 2.00



SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 20:30
End Cal Date : 02-MAY-1995 21:27
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/k.i/k950502.b/kvoclps.m
Cal Date : 03-May-1995 10:04 hillery
Curve Type : Average

Calibration File Names:
Level 1: /chem/k.i/k950502.b/k122is1e.d
Level 2: /chem/k.i/k950502.b/k122is2e.d
Level 3: /chem/k.i/k950502.b/k122cs7.d
Level 4: /chem/k.i/k950502.b/k122is4e.d
Level 5: /chem/k.i/k950502.b/k122is5e.d

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	4 Chloromethane	2.61598	2.81482	2.12233	2.24403	2.45830	2.45109	11.367
	5 Vinyl Chloride	2.65380	2.94683	2.27075	2.29473	2.52382	2.53798	10.993
	7 Bromomethane	2.11466	2.01524	1.61752	1.66188	1.78547	1.83895	11.862
	6 Chloroethane	1.70772	2.47252	1.96573	1.98068	2.14242	2.05381	13.687
	9 Trichlorofluoromethane	1.49304	2.08578	2.00085	1.92770	2.26966	1.95541	14.741
	8 Acetone	0.27178	0.26116	0.28834	0.18784	0.20866	0.24356	17.700
	10 1,1-Dichloroethene	1.85538	2.17717	2.01911	2.00216	2.12934	2.03663	6.147
	11 Methylene Chloride	2.38104	2.68890	2.40798	2.23657	2.35295	2.41349	6.930
M	1 1,2-Dichloroethene (total)	2.48786	2.60735	2.54327	2.57358	2.54340	2.55109	1.730
	12 Carbon Disulfide	7.61210	8.72426	7.92999	7.84861	8.50089	8.12317	5.767
	13 trans-1,2-Dichloroethene	2.45393	2.74754	2.54113	2.51774	2.65500	2.58307	4.537
	14 1,1-Dichloroethane	4.64531	5.12809	4.72981	4.78124	4.76879	4.81065	3.851
	16 Vinyl Acetate	4.39095	4.67428	4.62771	4.19908	3.81329	4.34106	8.099
	17 2-Butanone	2.07727	1.95040	2.25063	1.42863	1.46330	1.83405	20.182
	19 cis-1,2-Dichloroethene	2.52179	2.46715	2.54541	2.62942	2.43180	2.51911	3.022
	21 Chloroform	4.03686	4.22412	3.99063	3.86111	4.20345	4.06323	3.740
	24 1,1,1-Trichloroethane	3.10851	3.57553	3.17577	3.10886	3.55489	3.30471	7.247
	25 1,2-Dichloroethane	0.46771	0.44242	0.46820	0.45167	0.45093	0.45619	2.487
	27 Benzene	1.45923	1.42676	1.47373	1.47356	1.42845	1.45235	1.608
	28 Carbon Tetrachloride	0.37727	0.36450	0.38452	0.39331	0.40772	0.38546	4.232
	33 1,2-Dichloropropane	0.39723	0.37732	0.40855	0.37269	0.37777	0.38671	3.990
	34 Trichloroethene	0.33210	0.31444	0.34870	0.32128	0.32473	0.32825	3.986
	35 Bromodichloromethane	0.41562	0.40335	0.45507	0.41056	0.44324	0.42557	5.255
	15 2-Chloroethylvinylether	0.76056	0.69309	0.74966	0.77129	0.68699	0.73232	5.381
	38 4-Methyl-2-Pentanone	0.36838	0.41150	0.43019	0.23238	0.26823	0.34214	25.631
	42 cis-1,3-Dichloropropene	0.39013	0.36628	0.41665	0.38134	0.39805	0.39049	4.810
	37 trans-1,3-Dichloropropene	0.66711	0.74886	0.70980	0.62420	0.74084	0.69816	7.498

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 20:30
End Cal Date : 02-MAY-1995 21:27
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/k.i/k950502.b/kvoclps.m
Cal Date : 03-May-1995 10:04 hillery
Curve Type : Average

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	43 Toluene	1.22134	1.32245	1.18326	1.04139	1.17488	1.18866	8.504
	44 1,1,2-Trichloroethane	0.34616	0.33240	0.31910	0.27189	0.31178	0.31627	8.874
	45 2-Hexanone	0.35970	0.60509	0.51642	0.14372	0.31633	0.38825	46.295
	46 Dibromochloromethane	0.36006	0.38294	0.37802	0.33114	0.40668	0.37177	7.573
	48 Tetrachloroethene	0.41111	0.43522	0.40448	0.35990	0.40363	0.40287	6.757
	52 Chlorobenzene	1.13558	1.08935	1.14714	1.12095	1.06593	1.11179	3.019
M	2 Xylene (Total)	0.69398	0.81685	0.69844	0.69500	0.67635	0.71612	7.953
	53 Ethylbenzene	0.59157	0.65401	0.60740	0.59508	0.59898	0.60941	4.204
	54 m,p-Xylene(s)	0.71166	0.83335	0.73199	0.70548	0.65004	0.72650	9.222
	55 Bromoform	0.17950	0.21853	0.21733	0.20692	0.24260	0.21298	10.719
	57 Styrene	1.03398	1.23180	1.04130	1.08557	1.25174	1.12888	9.316
	58 o-Xylene	0.65863	0.78384	0.63135	0.67405	0.72897	0.69537	8.765
	59 1,1,2,2-Tetrachloroethane	0.36578	0.44209	0.33519	0.32841	0.31594	0.35748	14.192
S	23 1,2-Dichloroethane-d4	0.46776	0.54303	0.42892	0.45129	0.52086	0.48237	9.941
S	40 Toluene-d8	1.71636	1.89329	1.54687	1.47209	1.67607	1.66093	9.799
S	61 Bromofluorobenzene	0.65848	0.66793	0.55819	0.46477	0.53858	0.57759	14.826

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is1e.d
Lab Smp Id: 10 PPB STD 8240S
Inj Date : 02-MAY-1995 20:30
Operator : HLW Inst ID: k.i
Smp Info : 10 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 9
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
4	Chloromethane	50.00	1.348	1.392	(0.636)	43102	62	12
5	Vinyl Chloride	62.00	1.394	1.422	(0.657)	43725	58	12 (Q)
7	Bromomethane	94.00	1.424	1.437	(0.671)	34842	65	13
6	Chloroethane	64.00	1.439	1.437	(0.679)	28137	43	9 (aQ)
9	Trichlorofluoromethane	100.90	1.515	1.528	(0.714)	24600	37	7
8	Acetone	58.00	1.515	1.513	(0.714)	4478	47	9 (aQM)
10	1,1-Dichloroethene	96.00	1.621	1.619	(0.764)	30570	46	9
11	Methylene Chloride	84.00	1.667	1.665	(0.786)	39231	49	10
M 1	1,2-Dichloroethene (total)	96.00				81982	98	20
12	Carbon Disulfide	76.00	1.712	1.710	(0.807)	125420	48	10
13	trans-1,2-Dichloroethene	96.00	1.773	1.786	(0.836)	40432	48	10
14	1,1-Dichloroethane	63.00	1.848	1.846	(0.871)	76538	49	10
16	Vinyl Acetate	43.00	1.863	1.862	(0.879)	72347	47	9 (a)
17	2-Butanone	43.00	1.970	1.952	(0.929)	34226	46	9 (a)
19	cis-1,2-Dichloroethene	96.00	2.045	2.043	(0.964)	41550	50	10
21	Chloroform	83.00	2.121	2.119	(1.000)	66513	50	10
24	1,1,1-Trichloroethane	97.00	2.394	2.392	(1.129)	51217	49	10
25	1,2-Dichloroethane	62.00	2.409	2.407	(0.864)	47068	50	10
27	Benzene	78.00	2.545	2.543	(0.913)	146848	50	10
28	Carbon Tetrachloride	117.00	2.576	2.574	(0.924)	37966	49	10
33	1,2-Dichloropropane	63.00	3.076	3.074	(1.103)	39975	49	10
34	Trichloroethene	130.00	3.091	3.089	(1.109)	33421	48	10
35	Bromodichloromethane	83.00	3.212	3.210	(1.152)	41826	46	9
15	2-Chloroethylvinylether	63.00	1.848	1.846	(0.663)	76538	51	10
38	4-Methyl-2-Pentanone	43.00	4.061	3.998	(1.457)	37072	43	8 (a)
42	cis-1,3-Dichloropropene	75.00	4.651	4.634	(1.669)	39260	47	9
37	trans-1,3-Dichloropropene	75.00	3.954	3.953	(0.587)	47187	47	9
43	Toluene	92.00	4.636	4.634	(0.688)	86390	52	10
44	1,1,2-Trichloroethane	83.00	4.788	4.771	(0.710)	24485	54	11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.424	5.347	(0.804)	25443	35	7(a)
	46 Dibromochloromethane	129.00	5.394	5.377	(0.800)	25468	48	10
	48 Tetrachloroethene	164.00	5.788	5.786	(0.858)	29079	51	10
	52 Chlorobenzene	112.00	6.803	6.801	(1.009)	80324	49	10
M	2 Xylene (Total)	106.00				147264	150	30
	53 Ethylbenzene	106.00	7.242	7.241	(1.074)	41844	49	10
	54 m,p-Xylene(s)	106.00	7.455	7.468	(1.106)	100677	97	19
	55 Bromoform	173.00	7.818	7.816	(1.160)	12697	41	8
	57 Styrene	104.00	8.015	8.013	(1.189)	73137	50	10
	58 o-Xylene	106.00	8.061	8.074	(1.196)	46587	52	10
	59 1,1,2,2-Tetrachloroethane	83.00	8.621	8.604	(1.279)	25873	54	11
*	20 Bromochloromethane	128.00	2.121	2.119	(1.000)	82382	250	
*	31 1,4-Difluorobenzene	114.00	2.788	2.786	(1.000)	503171	250	
*	51 Chlorobenzene-d5	117.00	6.742	6.756	(1.000)	353668	250	
$	23 1,2-Dichloroethane-d4	102.00	2.364	2.362	(1.114)	7707	54	11(R)
$	40 Toluene-d8	98.00	4.530	4.528	(0.672)	121404	55	11(R)
$	61 Bromofluorobenzene	95.00	8.864	8.847	(1.315)	46577	59	12(R)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is1e.d
Lab Smp Id: 10 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	77408	38704	154816	82382	6.43
31 1,4-Difluorobenzene	488350	244175	976700	503171	3.03
51 Chlorobenzene-d5	357839	178920	715678	353668	-1.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.10
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.07
51 Chlorobenzene-d5	6.76	6.26	7.26	6.74	-0.19

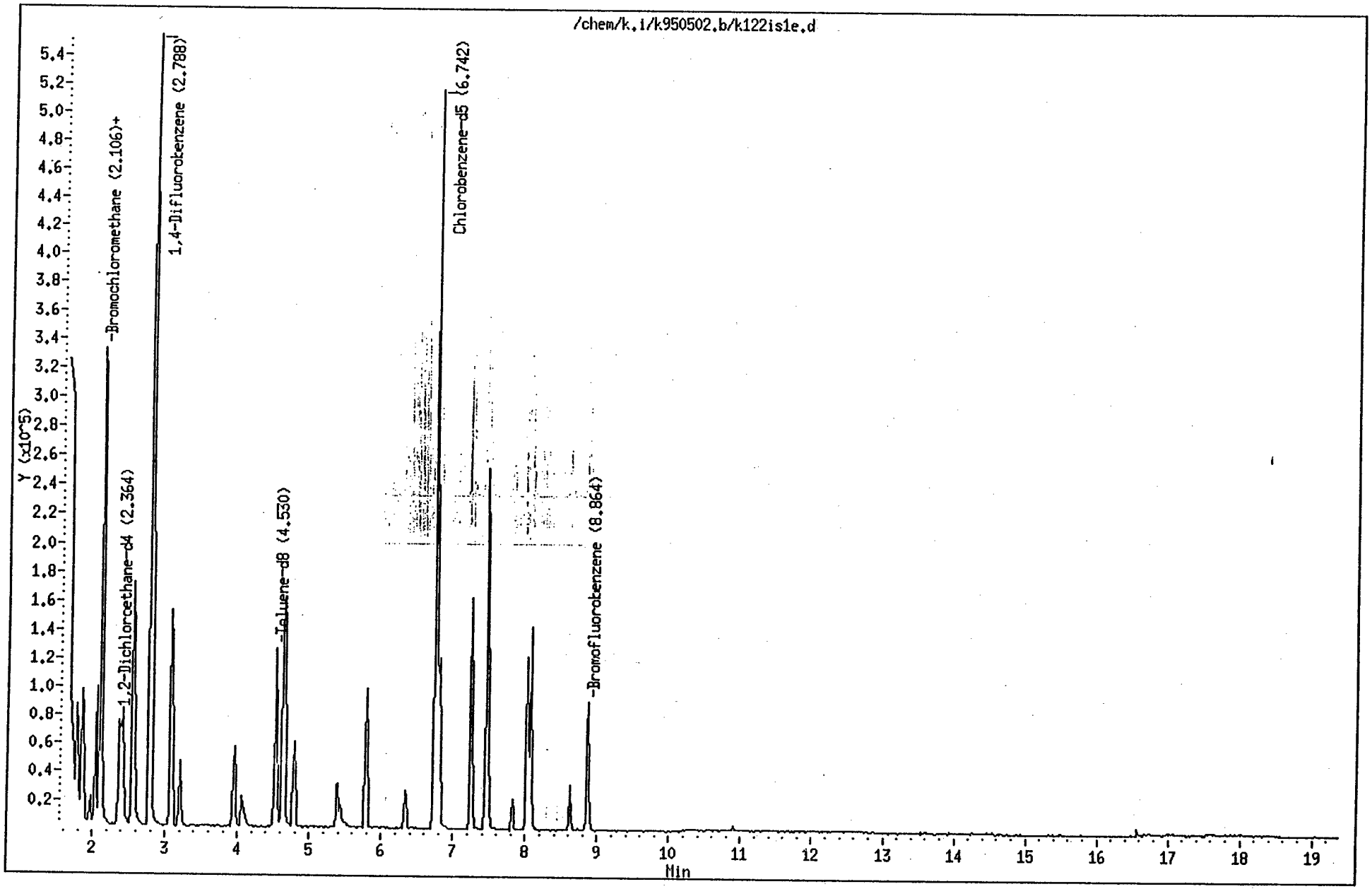
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is1e.d
Date : 02-MAY-1995 20:30
Client ID:
Sample Info: 10 PPB STD 8240S

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is2e.d
Lab Smp Id: 20 PPB STD 8240S
Inj Date : 02-MAY-1995 19:54
Operator : HLW Inst ID: k.i
Smp Info : 20 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 8
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	4 Chloromethane	50.00	1.362	1.392	(0.643)	81838	130	26
	5 Vinyl Chloride	62.00	1.392	1.422	(0.657)	85676	130	26 (QM)
	7 Bromomethane	94.00	1.438	1.437	(0.678)	58591	120	25
	6 Chloroethane	64.00	1.453	1.437	(0.685)	71886	120	25 (Q)
	9 Trichlorofluoromethane	100.90	1.529	1.528	(0.721)	60642	100	21
	8 Acetone	58.00	1.514	1.513	(0.714)	7593	90	18 (aQM)
	10 1,1-Dichloroethene	96.00	1.620	1.619	(0.764)	63299	110	22
	11 Methylene Chloride	84.00	1.665	1.665	(0.786)	78177	110	22
M	1 1,2-Dichloroethene (total)	96.00				151612	200	41
	12 Carbon Disulfide	76.00	1.710	1.710	(0.807)	253649	110	22
	13 trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	79882	110	22
	14 1,1-Dichloroethane	63.00	1.847	1.846	(0.871)	149094	110	22
	16 Vinyl Acetate	43.00	1.862	1.862	(0.878)	135900	100	20
	17 2-Butanone	43.00	1.968	1.952	(0.928)	56706	87	17 (a)
	19 cis-1,2-Dichloroethene	96.00	2.044	2.043	(0.964)	71730	97	19
	21 Chloroform	83.00	2.120	2.119	(1.000)	122812	100	21
	24 1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	103955	110	22
	25 1,2-Dichloroethane	62.00	2.408	2.407	(0.864)	95170	94	19
	27 Benzene	78.00	2.544	2.543	(0.913)	306916	97	19
	28 Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	78408	95	19
	33 1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	81167	92	18
	34 Trichloroethene	130.00	3.089	3.089	(1.109)	67641	90	18
	35 Bromodichloromethane	83.00	3.211	3.210	(1.152)	86766	89	18
	15 2-Chloroethylvinylether	63.00	1.847	1.846	(0.663)	149094	92	18
	38 4-Methyl-2-Pentanone	43.00	4.029	3.998	(1.446)	88519	96	19
	42 cis-1,3-Dichloropropene	75.00	4.635	4.634	(1.663)	78792	88	18
	37 trans-1,3-Dichloropropene	75.00	3.953	3.953	(0.586)	99671	100	21
	43 Toluene	92.00	4.635	4.634	(0.688)	176014	110	22
	44 1,1,2-Trichloroethane	83.00	4.786	4.771	(0.710)	44241	100	21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.392	5.347	(0.800)	80536	120	23
	46 Dibromochloromethane	129.00	5.392	5.377	(0.800)	50968	100	20
	48 Tetrachloroethene	164.00	5.786	5.786	(0.858)	57926	110	22
	52 Chlorobenzene	112.00	6.802	6.801	(1.009)	144990	95	19
M	2 Xylene (Total)	106.00				326160	350	70
	53 Ethylbenzene	106.00	7.241	7.241	(1.074)	87047	110	22
	54 m,p-Xylene(s)	106.00	7.453	7.468	(1.106)	221833	230	46
	55 Bromoform	173.00	7.817	7.816	(1.160)	29086	100	20
	57 Styrene	104.00	8.014	8.013	(1.189)	163949	120	24
	58 o-Xylene	106.00	8.059	8.074	(1.196)	104327	120	25
	59 1,1,2,2-Tetrachloroethane	83.00	8.605	8.604	(1.276)	58841	130	26
*	20 Bromochloromethane	128.00	2.120	2.119	(1.000)	72685	250	
*	31 1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	537784	250	
*	51 Chlorobenzene-d5	117.00	6.741	6.756	(1.000)	332743	250	
$	23 1,2-Dichloroethane-d4	102.00	2.362	2.362	(1.114)	15788	130	25(R)
$	40 Toluene-d8	98.00	4.529	4.528	(0.672)	251991	120	24(R)
$	61 Bromofluorobenzene	95.00	8.862	8.847	(1.315)	88899	120	24(R)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is2e.d
Lab Smp Id: 20 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	307408	153704	154816	272685	-6.10
31 1,4-Difluorobenzene	488350	244175	976700	537784	10.12
51 Chlorobenzene-d5	357839	178920	715678	332743	-7.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.03
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.02
51 Chlorobenzene-d5	6.76	6.26	7.26	6.74	-0.22

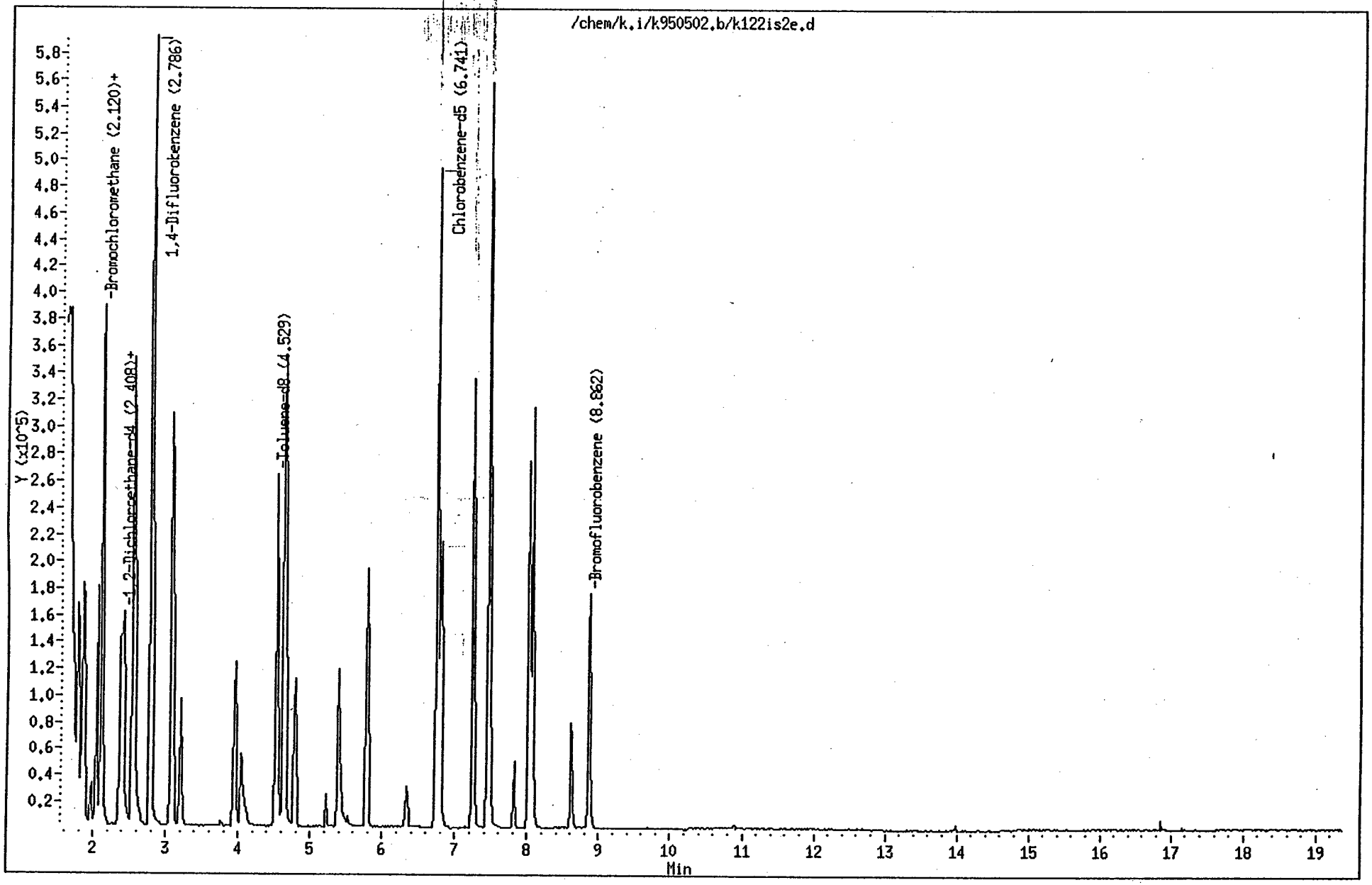
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is2e.d
Date : 02-MAY-1995 19:54
Client ID:
Sample Info: 20 PPB STD 8240S

Column phase: 30m,hp5ms,0.25u df

Instrument: k.i

Operator: HLW
Column diameter: 0.25



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122cs7.d
Lab Smp Id: 50 PPB STD 8240S
Inj Date : 02-MAY-1995 18:00
Operator : HLW Inst ID: k.i
Smp Info : 50 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	4 Chloromethane	50.00	1.361	1.392	(0.642)	164285	250	50
	5 Vinyl Chloride	62.00	1.407	1.422	(0.664)	175774	250	50
	7 Bromomethane	94.00	1.437	1.437	(0.678)	125209	250	50
	6 Chloroethane	64.00	1.437	1.437	(0.678)	152163	250	50
	9 Trichlorofluoromethane	100.90	1.528	1.528	(0.721)	154882	250	50
	8 Acetone	58.00	1.513	1.513	(0.714)	22320	250	50(a)
	10 1,1-Dichloroethene	96.00	1.619	1.619	(0.764)	156295	250	50
	11 Methylene Chloride	84.00	1.665	1.665	(0.785)	186397	250	50
M	1 1,2-Dichloroethene (total)	96.00				393739	500	100
	12 Carbon Disulfide	76.00	1.710	1.710	(0.807)	613845	250	50
	13 trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	196704	250	50
	14 1,1-Dichloroethane	63.00	1.846	1.846	(0.871)	366125	250	50
	16 Vinyl Acetate	43.00	1.861	1.862	(0.878)	358222	250	50
	17 2-Butanone	43.00	1.968	1.952	(0.928)	174217	250	50
	19 cis-1,2-Dichloroethene	96.00	2.043	2.043	(0.964)	197035	250	50
	21 Chloroform	83.00	2.119	2.119	(1.000)	308907	250	50
	24 1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	245830	250	50
	25 1,2-Dichloroethane	62.00	2.407	2.407	(0.864)	228647	250	50
	27 Benzene	78.00	2.543	2.543	(0.913)	719698	250	50
	28 Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	187782	250	50
	33 1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	199516	250	50
	34 Trichloroethene	130.00	3.089	3.089	(1.109)	170287	250	50
	35 Bromodichloromethane	83.00	3.210	3.210	(1.152)	222234	250	50
	15 2-Chloroethylvinylether	63.00	1.846	1.846	(0.663)	366096	250	50
	38 4-Methyl-2-Pentanone	43.00	4.013	3.998	(1.441)	210082	250	50
	42 cis-1,3-Dichloropropene	75.00	4.649	4.634	(1.669)	203470	250	50
	37 trans-1,3-Dichloropropene	75.00	3.952	3.953	(0.585)	253995	250	50
	43 Toluene	92.00	4.634	4.634	(0.686)	423416	250	50
	44 1,1,2-Trichloroethane	83.00	4.786	4.771	(0.708)	114187	250	50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.377	5.347	(0.796)	184794	250	50
	46 Dibromochloromethane	129.00	5.392	5.377	(0.798)	135271	250	50
	48 Tetrachloroethene	164.00	5.801	5.786	(0.859)	144739	250	50
	52 Chlorobenzene	112.00	6.801	6.801	(1.007)	410492	250	50
M	2 Xylene (Total)	106.00				749788	750	150
	53 Ethylbenzene	106.00	7.240	7.241	(1.072)	217352	250	50
	54 m,p-Xylene(s)	106.00	7.468	7.468	(1.105)	523866	500	100
	55 Bromoform	173.00	7.816	7.816	(1.157)	77770	250	50
	57 Styrene	104.00	8.013	8.013	(1.186)	372618	250	50
	58 o-Xylene	106.00	8.074	8.074	(1.195)	225922	250	50
	59 1,1,2,2-Tetrachloroethane	83.00	8.604	8.604	(1.274)	119944	250	50
*	20 Bromochloromethane	128.00	2.119	2.119	(1.000)	77408	250	
*	31 1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	488350	250	
*	51 Chlorobenzene-d5	117.00	6.756	6.756	(1.000)	357839	250	
$	23 1,2-Dichloroethane-d4	102.00	2.361	2.362	(1.114)	33202	250	50
$	40 Toluene-d8	98.00	4.528	4.528	(0.670)	553531	250	50
$	61 Bromofluorobenzene	95.00	8.862	8.847	(1.312)	199743	250	50

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122cs7.d
Lab Smp Id: 50 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	77408	38704	154816	77408	0.00
31 1,4-Difluorobenzene	488350	244175	976700	488350	0.00
51 Chlorobenzene-d5	357839	178920	715678	357839	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.00
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

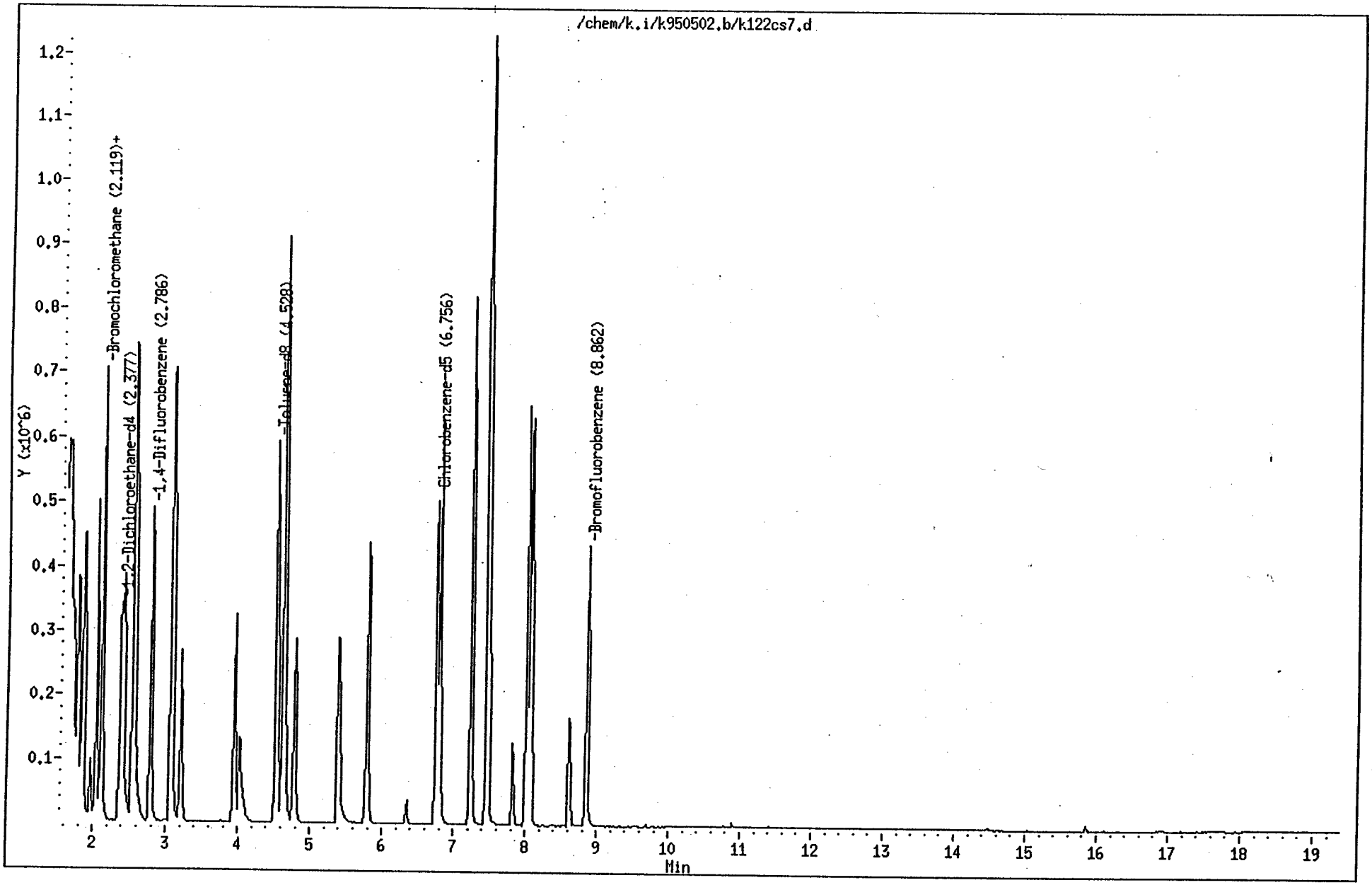
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122cs7.d
Date : 02-MAY-1995 18:00
Client ID:
Sample Info: 50 PPB STD 8240S

Column phase: 30m,hp5ms,0.25u df

Instrument: k.i

Operator: HLW
Column diameter: 0.25



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is4e.d
Lab Smp Id: 100 PPB STD 8240S
Inj Date : 02-MAY-1995 21:00
Operator : HLW Inst ID: k.i
Smp Info : 100 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 9
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	4 Chloromethane	50.00	1.377	1.392	(0.650)	363004	530	100
	5 Vinyl Chloride	62.00	1.422	1.422	(0.671)	371205	500	100
	7 Bromomethane	94.00	1.437	1.437	(0.678)	268832	510	100
	6 Chloroethane	64.00	1.437	1.437	(0.678)	320402	500	100
	9 Trichlorofluoromethane	100.90	1.528	1.528	(0.721)	311832	480	96
	8 Acetone	58.00	1.513	1.513	(0.714)	30386	320	65(a)
	10 1,1-Dichloroethene	96.00	1.619	1.619	(0.764)	323877	500	99
	11 Methylene Chloride	84.00	1.665	1.665	(0.785)	361796	460	93
M	1 1,2-Dichloroethene (total)	96.00				832625	1000	200
	12 Carbon Disulfide	76.00	1.725	1.710	(0.814)	1269622	490	99
	13 trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	407280	500	99
	14 1,1-Dichloroethane	63.00	1.847	1.846	(0.871)	773432	500	100
	16 Vinyl Acetate	43.00	1.862	1.862	(0.878)	679260	450	91
	17 2-Butanone	43.00	1.953	1.952	(0.921)	231101	320	63
	19 cis-1,2-Dichloroethene	96.00	2.043	2.043	(0.964)	425345	520	100
	21 Chloroform	83.00	2.119	2.119	(1.000)	624589	480	97
	24 1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	502902	490	98
	25 1,2-Dichloroethane	62.00	2.407	2.407	(0.864)	452921	480	96
	27 Benzene	78.00	2.544	2.543	(0.913)	1477643	500	100
	28 Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	394399	510	100
	33 1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	373720	460	91
	34 Trichloroethene	130.00	3.089	3.089	(1.109)	322170	460	92
	35 Bromodichloromethane	83.00	3.210	3.210	(1.152)	411699	450	90
	15 2-Chloroethylvinylether	63.00	1.847	1.846	(0.663)	773432	510	100
	38 4-Methyl-2-Pentanone	43.00	4.013	3.998	(1.441)	233024	270	54
	42 cis-1,3-Dichloropropene	75.00	4.635	4.634	(1.664)	382393	460	92
	37 trans-1,3-Dichloropropene	75.00	3.953	3.953	(0.585)	481365	440	88
	43 Toluene	92.00	4.635	4.634	(0.686)	803091	440	88
	44 1,1,2-Trichloroethane	83.00	4.786	4.771	(0.708)	209676	430	85

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
45	2-Hexanone	43.00	5.377	5.347	(0.796)	110835	140	28
46	Dibromochloromethane	129.00	5.392	5.377	(0.798)	255368	440	88
48	Tetrachloroethene	164.00	5.786	5.786	(0.856)	277544	440	89
52	Chlorobenzene	112.00	6.801	6.801	(1.007)	864442	490	98
M 2	Xylene (Total)	106.00				1607895	1500	300
53	Ethylbenzene	106.00	7.241	7.241	(1.072)	458911	490	98
54	m,p-Xylene(s)	106.00	7.453	7.468	(1.103)	1088090	960	190
55	Bromoform	173.00	7.816	7.816	(1.157)	159567	480	95
57	Styrene	104.00	8.013	8.013	(1.186)	837162	520	100
58	o-Xylene	106.00	8.059	8.074	(1.193)	519805	530	110
59	1,1,2,2-Tetrachloroethane	83.00	8.604	8.604	(1.274)	253257	490	98
* 20	Bromochloromethane	128.00	2.119	2.119	(1.000)	80882	250	
* 31	1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	501386	250	
* 51	Chlorobenzene-d5	117.00	6.756	6.756	(1.000)	385585	250	
$ 23	1,2-Dichloroethane-d4	102.00	2.362	2.362	(1.114)	73003	530	100(R)
$ 40	Toluene-d8	98.00	4.528	4.528	(0.670)	1135233	480	95(R)
$ 61	Bromofluorobenzene	95.00	8.847	8.847	(1.310)	358413	420	83(R)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is4e.d
Lab Smp Id: 100 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
20 Bromochloromethane	77408	38704	154816	80882	4.49
31 1,4-Difluorobenzene	488350	244175	976700	501386	2.67
51 Chlorobenzene-d5	357839	178920	715678	385585	17.75

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.01
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.01
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

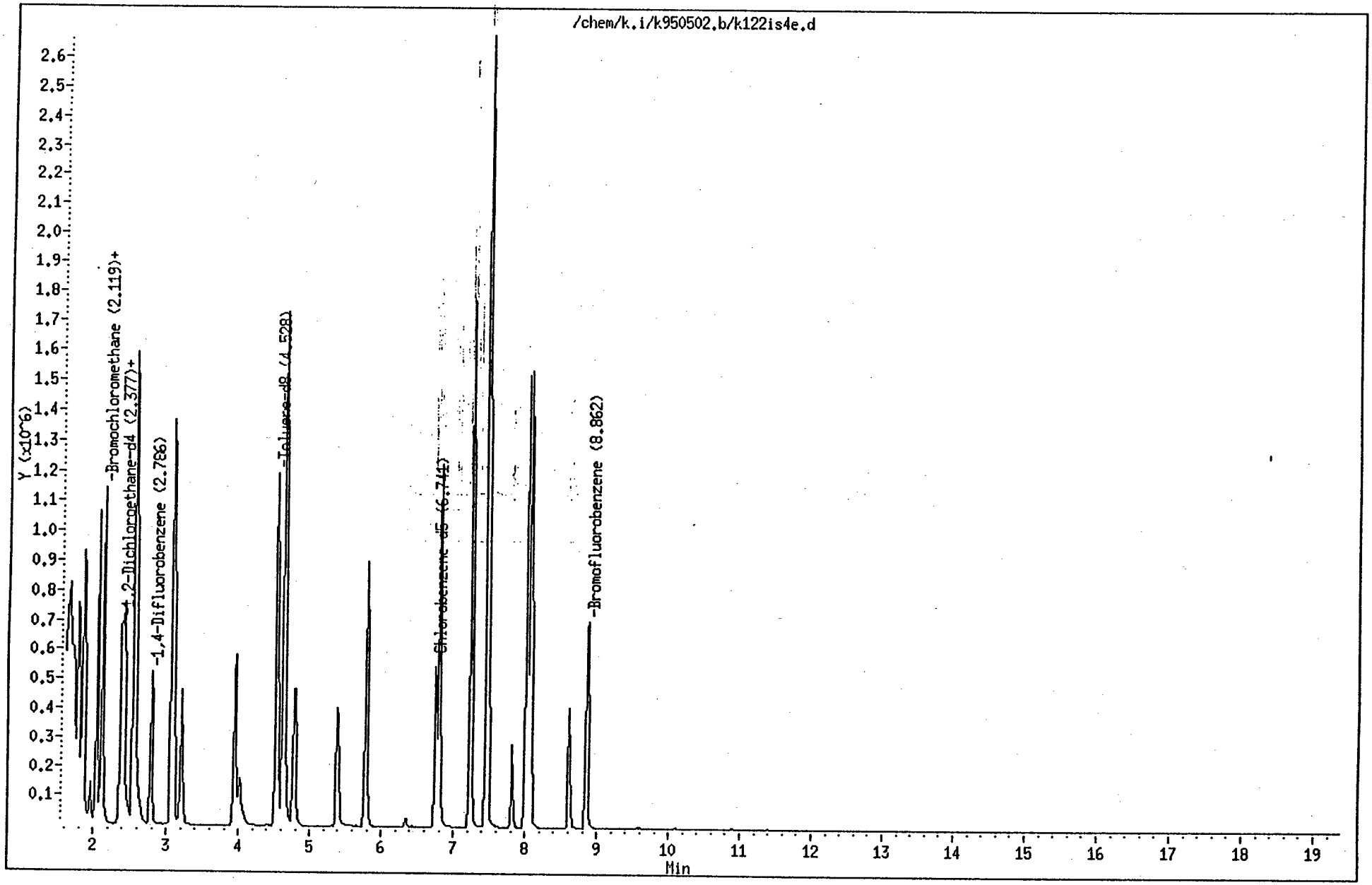
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is4e.d
Date : 02-MAY-1995 21:00
Client ID:
Sample Info: 100 PPB STD 8240S

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is5e.d
Lab Smp Id: 200 PPB STD 8240S
Inj Date : 02-MAY-1995 21:27
Operator : HLW Inst ID: k.i
Smp Info : 200 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 10
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	4 Chloromethane	50.00	1.392	1.392	(0.657)	685728	1200	230
	5 Vinyl Chloride	62.00	1.422	1.422	(0.671)	704004	1100	220
	7 Bromomethane	94.00	1.437	1.437	(0.678)	498045	1100	220
	6 Chloroethane	64.00	1.437	1.437	(0.678)	597616	1100	220
	9 Trichlorofluoromethane	100.90	1.528	1.528	(0.721)	633109	1100	230
	8 Acetone	58.00	1.513	1.513	(0.714)	58205	720	140
	10 1,1-Dichloroethene	96.00	1.619	1.619	(0.764)	593966	1000	210
	11 Methylene Chloride	84.00	1.665	1.665	(0.785)	656340	980	200
M	1 1,2-Dichloroethene (total)	96.00				1418932	2000	400 (A)
	12 Carbon Disulfide	76.00	1.710	1.710	(0.807)	2371271	1100	210
	13 trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	740595	1000	210
	14 1,1-Dichloroethane	63.00	1.846	1.846	(0.871)	1330224	1000	200
	16 Vinyl Acetate	43.00	1.862	1.862	(0.878)	1063693	820	160
	17 2-Butanone	43.00	1.952	1.952	(0.921)	408178	650	130
	19 cis-1,2-Dichloroethene	96.00	2.043	2.043	(0.964)	678337	960	190
	21 Chloroform	83.00	2.119	2.119	(1.000)	1172526	1000	210
	24 1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	991614	1100	220
	25 1,2-Dichloroethane	62.00	2.407	2.407	(0.864)	873142	960	190
	27 Benzene	78.00	2.543	2.543	(0.913)	2765913	970	190
	28 Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	789468	1100	210
	33 1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	731473	920	180
	34 Trichloroethene	130.00	3.089	3.089	(1.109)	628771	930	190
	35 Bromodichloromethane	83.00	3.210	3.210	(1.152)	858246	970	190
	15 2-Chloroethylvinylether	63.00	1.846	1.846	(0.663)	1330224	920	180
	38 4-Methyl-2-Pentanone	43.00	3.998	3.998	(1.435)	519380	620	120
	42 cis-1,3-Dichloropropene	75.00	4.634	4.634	(1.664)	770745	960	190
	37 trans-1,3-Dichloropropene	75.00	3.953	3.953	(0.585)	993745	1000	210
	43 Toluene	92.00	4.634	4.634	(0.686)	1575951	990	200
	44 1,1,2-Trichloroethane	83.00	4.771	4.771	(0.706)	418215	980	200

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.347	5.347	(0.791)	424312	610	120
	46 Dibromochloromethane	129.00	5.377	5.377	(0.796)	545513	1100	220
	48 Tetrachloroethene	164.00	5.786	5.786	(0.856)	541413	1000	200
	52 Chlorobenzene	112.00	6.801	6.801	(1.007)	1429806	930	180
M	2 Xylene (Total)	106.00				2721696	2900	580
	53 Ethylbenzene	106.00	7.241	7.241	(1.072)	803456	990	200
	54 m,p-Xylene(s)	106.00	7.468	7.468	(1.105)	1743881	1800	360
	55 Bromoform	173.00	7.816	7.816	(1.157)	325417	1100	220
	57 Styrene	104.00	8.013	8.013	(1.186)	1679049	1200	240(A)
	58 o-Xylene	106.00	8.074	8.074	(1.195)	977815	1200	230
	59 1,1,2,2-Tetrachloroethane	83.00	8.604	8.604	(1.274)	423790	940	190
*	20 Bromochloromethane	128.00	2.119	2.119	(1.000)	69736	250	
*	31 1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	484077	250	
*	51 Chlorobenzene-d5	117.00	6.756	6.756	(1.000)	335343	250	
$	23 1,2-Dichloroethane-d4	102.00	2.362	2.362	(1.114)	145292	1200	240(AR)
$	40 Toluene-d8	98.00	4.528	4.528	(0.670)	2248228	1100	220(AR)
$	61 Bromofluorobenzene	95.00	8.847	8.847	(1.310)	722436	960	190(R)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is5e.d
Lab Smp Id: 200 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	77408	38704	154816	69736	-9.91
31 1,4-Difluorobenzene	488350	244175	976700	484077	-0.87
51 Chlorobenzene-d5	357839	178920	715678	335343	-6.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.01
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.00
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

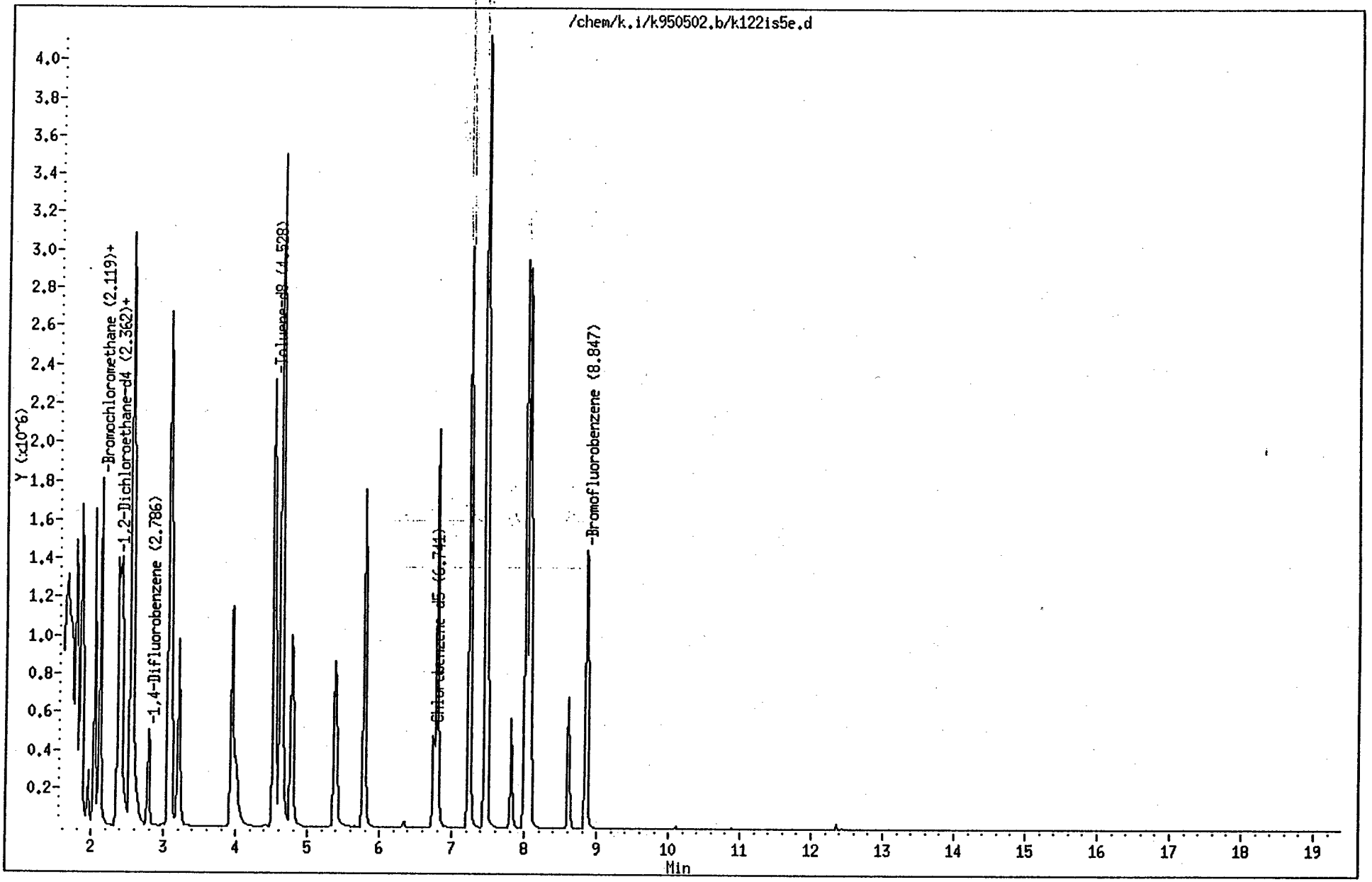
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is5e.d
Date : 02-MAY-1995 21:27
Client ID:
Sample Info: 200 PPB STD 8240S

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 08:20
End Cal Date : 02-MAY-1995 10:09
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/1.i/1950502.b/lvoclpw.m
Cal Date : 02-May-1995 12:35 jimmy
Curve Type : Average

Calibration File Names:
Level 1: /chem/1.i/1950502.b/l122iw1.d
Level 2: /chem/1.i/1950502.b/l122iw2.d
Level 3: /chem/1.i/1950502.b/l122iw3.d
Level 4: /chem/1.i/1950502.b/l122iw4.d
Level 5: /chem/1.i/1950502.b/l122iw5.d

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	1 Chloromethane	2.18516	2.41369	2.34254	2.34459	2.27337	2.31187	3.741
	2 Vinyl Chloride	1.99513	2.04224	1.97343	1.82446	1.64612	1.89627	8.535
	3 Bromomethane	1.55227	1.52782	1.48024	1.46593	1.43200	1.49165	3.238
	4 Chloroethane	1.17376	1.21365	1.21946	1.22653	1.18917	1.20452	1.844
	7 Trichlorofluoromethane	1.08854	1.09152	1.22776	1.36602	1.69994	1.29475	19.599
	8 Acetone	0.39432	0.37258	0.36915	0.40432	0.37568	0.38321	3.992
	11 1,1-Dichloroethene	1.36223	1.40612	1.41890	1.45183	1.48326	1.42447	3.226
	13 Methylene Chloride	1.65671	1.69764	1.70739	1.71305	1.71653	1.69826	1.431
	14 Carbon Disulfide	5.47449	5.61112	5.70231	5.84509	5.92531	5.71166	3.155
	15 trans-1,2-Dichloroethene	1.71472	1.76561	1.76706	1.80241	1.83084	1.77613	2.462
	17 1,1-Dichloroethane	3.50970	3.57895	3.61300	3.70305	3.78693	3.63833	2.979
M	18 1,2-Dichloroethene (total)	1.79480	1.82876	1.86726	1.90995	1.94120	1.86839	3.168
	19 Vinyl Acetate	6.10564	6.03371	6.03145	5.75757	5.72555	5.93078	2.962
	20 2-Butanone	2.90135	2.80081	2.84705	2.72879	2.57111	2.76982	4.616
	21 cis-1,2-Dichloroethene	1.87487	1.89190	1.96746	2.01748	2.05156	1.96066	3.920
	24 Chloroform	3.27103	3.21705	3.24192	3.30903	3.36093	3.27999	1.730
	27 1,1,1-Trichloroethane	0.44253	0.44230	0.44548	0.43804	0.44744	0.44316	0.806
	28 1,2-Dichloroethane	2.68199	2.75053	2.74818	2.82655	2.81908	2.76527	2.147
	30 Benzene	1.43537	1.43397	1.45211	1.42255	1.43575	1.43595	0.734
	31 Carbon Tetrachloride	0.35583	0.35728	0.35871	0.36313	0.36740	0.36047	1.315
	34 1,2-Dichloropropane	0.38664	0.38497	0.39262	0.39181	0.39125	0.38946	0.878
	35 Trichloroethene	0.32287	0.32073	0.32503	0.32801	0.32640	0.32461	0.885
	37 Bromodichloromethane	0.44319	0.43773	0.43671	0.44976	0.44872	0.44322	1.361
	39 2-Chloroethylvinylether	0.08185	0.08605	0.09305	0.10062	0.10424	0.09316	10.137
	40 4-Methyl-2-Pentanone	0.66423	0.70332	0.71347	0.70841	0.67235	0.69236	3.242
	41 cis-1,3-Dichloropropene	0.53353	0.53817	0.54637	0.55710	0.55961	0.54696	2.087
	42 trans-1,3-Dichloropropene	0.47718	0.47459	0.48403	0.49488	0.50148	0.48643	2.365

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 08:20
End Cal Date : 02-MAY-1995 10:09
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/l.i/l950502.b/lvoclpw.m
Cal Date : 02-May-1995 12:35 jimmy
Curve Type : Average

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	44 Toluene	0.97364	0.98226	1.00040	1.00583	0.99789	0.99200	1.360
	45 1,1,2-Trichloroethane	0.26649	0.27347	0.26844	0.26731	0.26716	0.26858	1.052
	46 2-Hexanone	0.73012	0.78507	0.85353	0.86654	0.80964	0.80898	6.796
	47 Dibromochloromethane	0.30896	0.30152	0.30816	0.31520	0.32124	0.31102	2.409
	49 Tetrachloroethene	0.38483	0.37675	0.37992	0.37393	0.37735	0.37856	1.084
	52 Chlorobenzene	0.99206	0.99114	1.00706	1.00122	1.00558	0.99941	0.746
M	53 Xylene (Total)	0.62087	0.61750	0.63644	0.63397	0.63579	0.62891	1.432
	54 Ethylbenzene	0.50369	0.50586	0.51839	0.52425	0.52378	0.51520	1.906
	55 m,p-Xylene(s)	0.62893	0.61946	0.64133	0.64047	0.64189	0.63442	1.565
	56 Bromoform	0.31406	0.29539	0.31041	0.31825	0.32211	0.31204	3.300
	57 Styrene	0.86874	0.94132	1.02509	1.04868	1.06044	0.98886	8.263
	59 o-Xylene	0.60474	0.61359	0.62664	0.62097	0.62359	0.61791	1.425
	60 1,1,2,2-Tetrachloroethane	0.49941	0.48995	0.52208	0.50938	0.48460	0.50108	3.007
$	26 1,2-Dichloroethane-d4	0.41997	0.42049	0.41364	0.42322	0.42852	0.42117	1.283
$	43 Toluene-d8	1.42906	1.37537	1.39126	1.38068	1.38476	1.39222	1.537
$	61 Bromofluorobenzene	0.51077	0.50759	0.52461	0.52897	0.53300	0.52099	2.157

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950502.b/l122iw1.d
Lab Smp Id:
Inj Date : 02-MAY-1995 08:20
Operator : JC Inst ID: l.i
Smp Info : 10 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/l950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy Quant Type: ISTD
Cal Date : 02-MAY-1995 09:14 Cal File: l122iw3.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
1	Chloromethane	50.00	1.760	1.760	(0.337)	23768	50	47(a)
2	Vinyl Chloride	62.00	1.876	1.876	(0.359)	21701	50	53
3	Bromomethane	94.00	2.116	2.116	(0.406)	16884	50	52
4	Chloroethane	64.00	2.188	2.188	(0.419)	12767	50	49
7	Trichlorofluoromethane	101.00	2.535	2.535	(0.486)	11840	50	42
8	Acetone	58.00	2.598	2.598	(0.498)	4289	50	51(a)
11	1,1-Dichloroethene	96.00	2.990	2.990	(0.573)	14817	50	48
13	Methylene Chloride	84.00	3.239	3.239	(0.621)	18020	50	49
18	1,2-Dichloroethene (total)	96.00				39044	100	96
14	Carbon Disulfide	76.00	3.355	3.355	(0.643)	59546	50	48
15	trans-1,2-Dichloroethene	96.00	3.819	3.819	(0.732)	18651	50	48
17	1,1-Dichloroethane	63.00	4.149	4.149	(0.795)	38175	50	48
19	Vinyl Acetate	43.00	4.247	4.247	(0.814)	66411	50	51
20	2-Butanone	43.00	4.612	4.612	(0.884)	31558	50	52(a)
21	cis-1,2-Dichloroethene	96.00	4.951	4.951	(0.949)	20393	50	48
24	Chloroform	83.00	5.227	5.227	(1.002)	35579	50	50
27	1,1,1-Trichloroethane	97.00	6.012	6.012	(0.869)	25362	50	50
28	1,2-Dichloroethane	62.00	6.101	6.101	(1.169)	29172	50	48
30	Benzene	78.00	6.466	6.466	(0.934)	82263	50	50
31	Carbon Tetrachloride	117.00	6.484	6.484	(0.937)	20393	50	49
34	1,2-Dichloropropane	63.00	7.447	7.447	(1.076)	22159	50	50
35	Trichloroethene	130.00	7.482	7.482	(1.081)	18504	50	50
37	Bromodichloromethane	83.00	7.670	7.670	(1.108)	25400	50	50
39	2-Chloroethylvinylether	63.00	8.276	8.276	(1.196)	4691	50	44(a)
40	4-Methyl-2-Pentanone	43.00	8.499	8.499	(1.228)	38068	50	48
41	cis-1,3-Dichloropropene	75.00	8.534	8.534	(1.233)	30577	50	49
42	trans-1,3-Dichloropropene	75.00	9.158	9.158	(1.323)	27348	50	49
44	Toluene	92.00	9.247	9.247	(0.833)	43464	50	49
45	1,1,2-Trichloroethane	83.00	9.337	9.337	(1.349)	15273	50	50

mpounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
4[redacted] 2-Hexanone	43.00	9.702	9.702	(0.874)	32593	50	45(a)
47 Dibromochloromethane	129.00	9.961	9.961	(1.439)	17707	50	50
49 Tetrachloroethene	164.00	10.308	10.308	(0.929)	17179	50	51
5[redacted] Chlorobenzene	112.00	11.146	11.146	(1.004)	44286	50	50
5[redacted] Xylene (Total)	106.00				83148	150	150
54 Ethylbenzene	106.00	11.449	11.449	(1.031)	22485	50	49
55 m,p-Xylene(s)	106.00	11.610	11.610	(1.046)	56152	100	99
5[redacted] Bromoform	173.00	12.029	12.029	(1.083)	14020	50	50
5[redacted] Styrene	104.00	12.082	12.082	(1.088)	38781	50	44
59 o-Xylene	106.00	12.136	12.136	(1.093)	26996	50	49
60 1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.124)	22294	50	50
2[redacted] Bromochloromethane	128.00	5.218	5.218	(1.000)	54385	250	
3[redacted] 1,4-Difluorobenzene	114.00	6.921	6.921	(1.000)	286556	250	
50 Chlorobenzene-d5	117.00	11.101	11.101	(1.000)	223203	250	
2[redacted] 1,2-Dichloroethane-d4	102.00	5.994	5.994	(1.149)	4568	50	50
4[redacted] Toluene-d8	98.00	9.149	9.149	(0.824)	63794	50	51
61 Bromofluorobenzene	95.00	12.777	12.777	(1.151)	22801	50	49

[redacted]lag Legend

- Target compound detected but, quantitated amount [redacted]Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l122iw1.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950502.b/lvoclpw.m
Misc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	54385	-5.36
32 1,4-Difluorobenzene	309137	154568	618274	286556	-7.30
50 Chlorobenzene-d5	240326	120163	480652	223203	-7.12

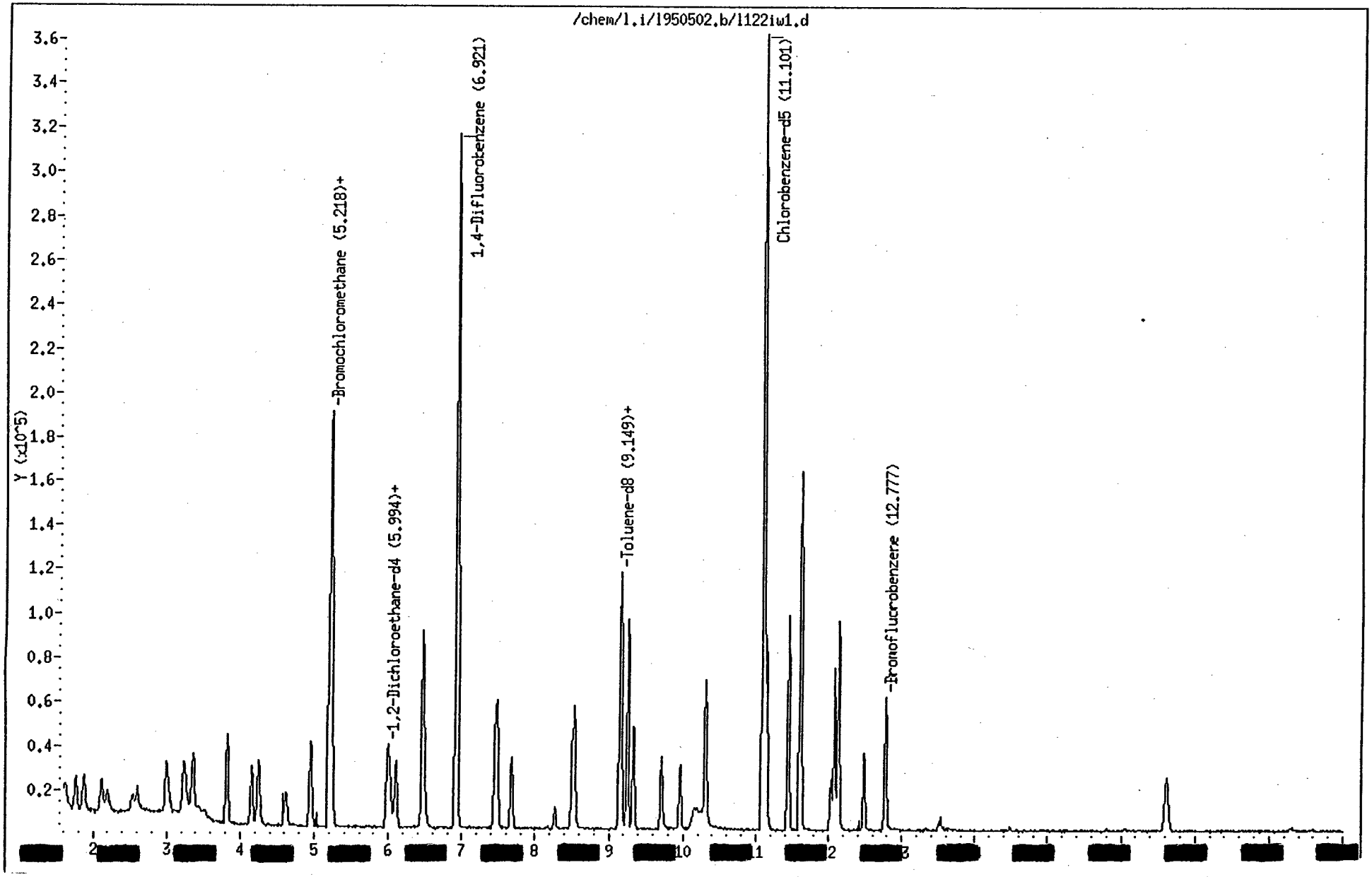
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.02
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.92	0.02
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.01

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950502.b/1122iw1.d
Date : 02-MAY-1995 08:20
Client ID:
Sample Info: 10 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950502.b/l122iw2.d
Lab Smp Id:
Inj Date : 02-MAY-1995 08:47
Operator : JC
Inst ID: l.i
Smp Info : 20 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/1950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy
Quant Type: ISTD
Cal Date : 02-MAY-1995 09:14
Cal File: l122iw3.d
Vials bottle: 3
Calibration Sample, Level: 2
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
1 Chloromethane	50.00	1.764	1.764	(0.338)	55117	100	100
2 Vinyl Chloride	62.00	1.880	1.880	(0.361)	46635	100	110
3 Bromomethane	94.00	2.112	2.112	(0.405)	34888	100	100
4 Chloroethane	64.00	2.183	2.183	(0.419)	27714	100	100
7 Trichlorofluoromethane	101.00	2.531	2.531	(0.485)	24925	100	84
8 Acetone	58.00	2.593	2.593	(0.497)	8508	100	97(a)
11 1,1-Dichloroethene	96.00	2.994	2.994	(0.574)	32109	100	99
13 Methylene Chloride	84.00	3.235	3.235	(0.620)	38766	100	100
18 1,2-Dichloroethene (total)	96.00				83520	200	200
14 Carbon Disulfide	76.00	3.360	3.360	(0.644)	128131	100	98
15 trans-1,2-Dichloroethene	96.00	3.814	3.814	(0.732)	40318	100	99
17 1,1-Dichloroethane	63.00	4.153	4.153	(0.797)	81726	100	98
19 Vinyl Acetate	43.00	4.251	4.251	(0.815)	137781	100	100
20 2-Butanone	43.00	4.617	4.617	(0.885)	63957	100	100
21 cis-1,2-Dichloroethene	96.00	4.955	4.955	(0.950)	43202	100	96
24 Chloroform	83.00	5.232	5.232	(1.003)	73462	100	98
27 1,1,1-Trichloroethane	97.00	6.016	6.016	(0.869)	54178	100	100
28 1,2-Dichloroethane	62.00	6.105	6.105	(1.171)	62809	100	99
30 Benzene	78.00	6.462	6.462	(0.933)	175650	100	100
31 Carbon Tetrachloride	117.00	6.489	6.489	(0.937)	43764	100	99
34 1,2-Dichloropropane	63.00	7.451	7.451	(1.076)	47156	100	99
35 Trichloroethene	130.00	7.478	7.478	(1.080)	39287	100	99
37 Bromodichloromethane	83.00	7.674	7.674	(1.108)	53619	100	99
39 2-Chloroethylvinylether	63.00	8.271	8.271	(1.194)	10541	100	92
40 4-Methyl-2-Pentanone	43.00	8.503	8.503	(1.228)	86151	100	100
41 cis-1,3-Dichloropropene	75.00	8.539	8.539	(1.233)	65921	100	98
42 trans-1,3-Dichloropropene	75.00	9.163	9.163	(1.323)	58133	100	98
44 Toluene	92.00	9.252	9.252	(0.834)	95391	100	99
45 1,1,2-Trichloroethane	83.00	9.332	9.332	(1.348)	33498	100	100

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	2-Hexanone	43.00	9.707	9.707	(0.875)	76241	100	97
	Dibromochloromethane	129.00	9.956	9.956	(1.438)	36934	100	97
49	Tetrachloroethene	164.00	10.304	10.304	(0.928)	36588	100	100
52	Chlorobenzene	112.00	11.142	11.142	(1.004)	96253	100	99
	Xylene (Total)	106.00				179904	300	290
	Ethylbenzene	106.00	11.445	11.445	(1.031)	49126	100	98
55	m,p-Xylene(s)	106.00	11.614	11.614	(1.047)	120316	200	200
	Bromoform	173.00	12.033	12.033	(1.084)	28686	100	95
	Styrene	104.00	12.078	12.078	(1.088)	91415	100	95
59	o-Xylene	106.00	12.140	12.140	(1.094)	59588	100	99
60	1,1,2,2-Tetrachloroethane	83.00	12.488	12.488	(1.125)	47581	100	98
	Bromochloromethane	128.00	5.214	5.214	(1.000)	57088	250	
	1,4-Difluorobenzene	114.00	6.925	6.925	(1.000)	306230	250	
50	Chlorobenzene-d5	117.00	11.097	11.097	(1.000)	242784	250	
26	1,2-Dichloroethane-d4	102.00	5.989	5.989	(1.149)	9602	100	100
	Toluene-d8	98.00	9.145	9.145	(0.824)	133567	100	99
	Bromofluorobenzene	95.00	12.773	12.773	(1.151)	49294	100	97

Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l122iw2.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950502.b/lvoclpw.m
Misc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

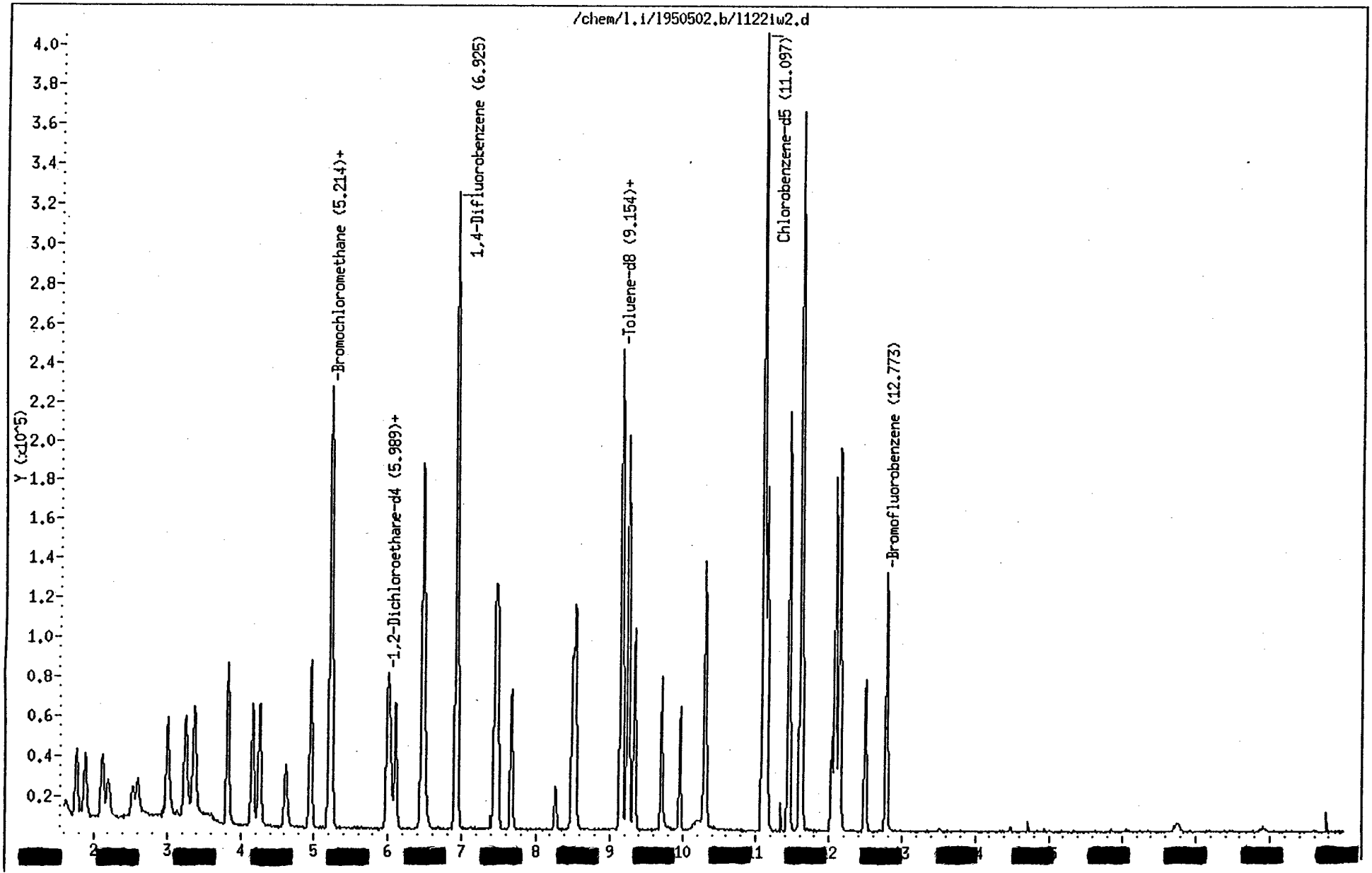
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	57088	-0.66
32 1,4-Difluorobenzene	309137	154568	618274	306230	-0.94
50 Chlorobenzene-d5	240326	120163	480652	242784	1.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.21	-0.06
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.93	0.08
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.03

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.

Data File: /chem/l.i/1950502.b/l122iw2.d
Date : 02-MAY-1995 08:47
Client ID:
Sample Info: 20 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i
Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950502.b/l122iw3.d
Lab Smp Id:
Inj Date : 02-MAY-1995 09:14
Operator : JC
Inst ID: l.i
Smp Info : 50 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/l950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy
Quant Type: ISTD
Cal Date : 02-MAY-1995 09:14
Cal File: l122iw3.d
Als bottle: 4
Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
1 Chloromethane	50.00	1.776	1.776	(0.340)	134614	250	250
2 Vinyl Chloride	62.00	1.883	1.883	(0.361)	113403	250	260
3 Bromomethane	94.00	2.115	2.115	(0.405)	85062	250	250
4 Chloroethane	64.00	2.195	2.195	(0.421)	70076	250	250
7 Trichlorofluoromethane	101.00	2.534	2.534	(0.486)	70553	250	240
8 Acetone	58.00	2.597	2.597	(0.498)	21213	250	240(a)
11 1,1-Dichloroethene	96.00	2.998	2.998	(0.575)	81537	250	250
13 Methylene Chloride	84.00	3.238	3.238	(0.621)	98115	250	250
18 1,2-Dichloroethene (total)	96.00				214604	500	500
14 Carbon Disulfide	76.00	3.363	3.363	(0.645)	327683	250	250
15 trans-1,2-Dichloroethene	96.00	3.818	3.818	(0.732)	101544	250	250
17 1,1-Dichloroethane	63.00	4.156	4.156	(0.797)	207621	250	250
19 Vinyl Acetate	43.00	4.246	4.246	(0.814)	346597	250	250
20 2-Butanone	43.00	4.611	4.611	(0.884)	163606	250	260
21 cis-1,2-Dichloroethene	96.00	4.959	4.959	(0.950)	113060	250	250
24 Chloroform	83.00	5.235	5.235	(1.003)	186297	250	250
27 1,1,1-Trichloroethane	97.00	6.019	6.019	(0.870)	137715	250	250
28 1,2-Dichloroethane	62.00	6.100	6.100	(1.169)	157924	250	250
30 Benzene	78.00	6.465	6.465	(0.934)	448900	250	250
31 Carbon Tetrachloride	117.00	6.492	6.492	(0.938)	110889	250	250
34 1,2-Dichloropropane	63.00	7.446	7.446	(1.076)	121374	250	250
35 Trichloroethene	130.00	7.481	7.481	(1.081)	100479	250	250
37 Bromodichloromethane	83.00	7.677	7.677	(1.109)	135002	250	250
39 2-Chloroethylvinylether	63.00	8.275	8.275	(1.196)	28765	250	250
40 4-Methyl-2-Pentanone	43.00	8.498	8.498	(1.228)	220559	250	260
41 cis-1,3-Dichloropropene	75.00	8.533	8.533	(1.233)	168904	250	250
42 trans-1,3-Dichloropropene	75.00	9.166	9.166	(1.325)	149633	250	250
44 Toluene	92.00	9.246	9.246	(0.833)	240421	250	250
45 1,1,2-Trichloroethane	83.00	9.327	9.327	(1.348)	82986	250	250

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
46	2-Hexanone	43.00	9.701	9.701	(0.874)	205126	250	260
47	Dibromochloromethane	129.00	9.959	9.959	(1.439)	95265	250	250
49	Tetrachloroethene	164.00	10.307	10.307	(0.929)	91305	250	250
52	Chlorobenzene	112.00	11.145	11.145	(1.004)	242022	250	250
53	Xylene (Total)	106.00				458856	750	760
54	Ethylbenzene	106.00	11.448	11.448	(1.031)	124583	250	250
55	m,p-Xylene(s)	106.00	11.609	11.609	(1.046)	308258	500	500
56	Bromoform	173.00	12.027	12.027	(1.083)	74600	250	250
57	Styrene	104.00	12.081	12.081	(1.088)	246356	250	260
59	o-Xylene	106.00	12.134	12.134	(1.093)	150598	250	250
60	1,1,2,2-Tetrachloroethane	83.00	12.482	12.482	(1.124)	125470	250	260
1	Bromochloromethane	128.00	5.217	5.217	(1.000)	57465	250	
2	1,4-Difluorobenzene	114.00	6.920	6.920	(1.000)	309137	250	
50	Chlorobenzene-d5	117.00	11.100	11.100	(1.000)	240326	250	
26	1,2-Dichloroethane-d4	102.00	5.993	5.993	(1.149)	23770	250	240
58	Toluene-d8	98.00	9.148	9.148	(0.824)	334357	250	250
61	Bromofluorobenzene	95.00	12.776	12.776	(1.151)	126078	250	250

Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l122iw3.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950502.b/lvoclpw.m
Misc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

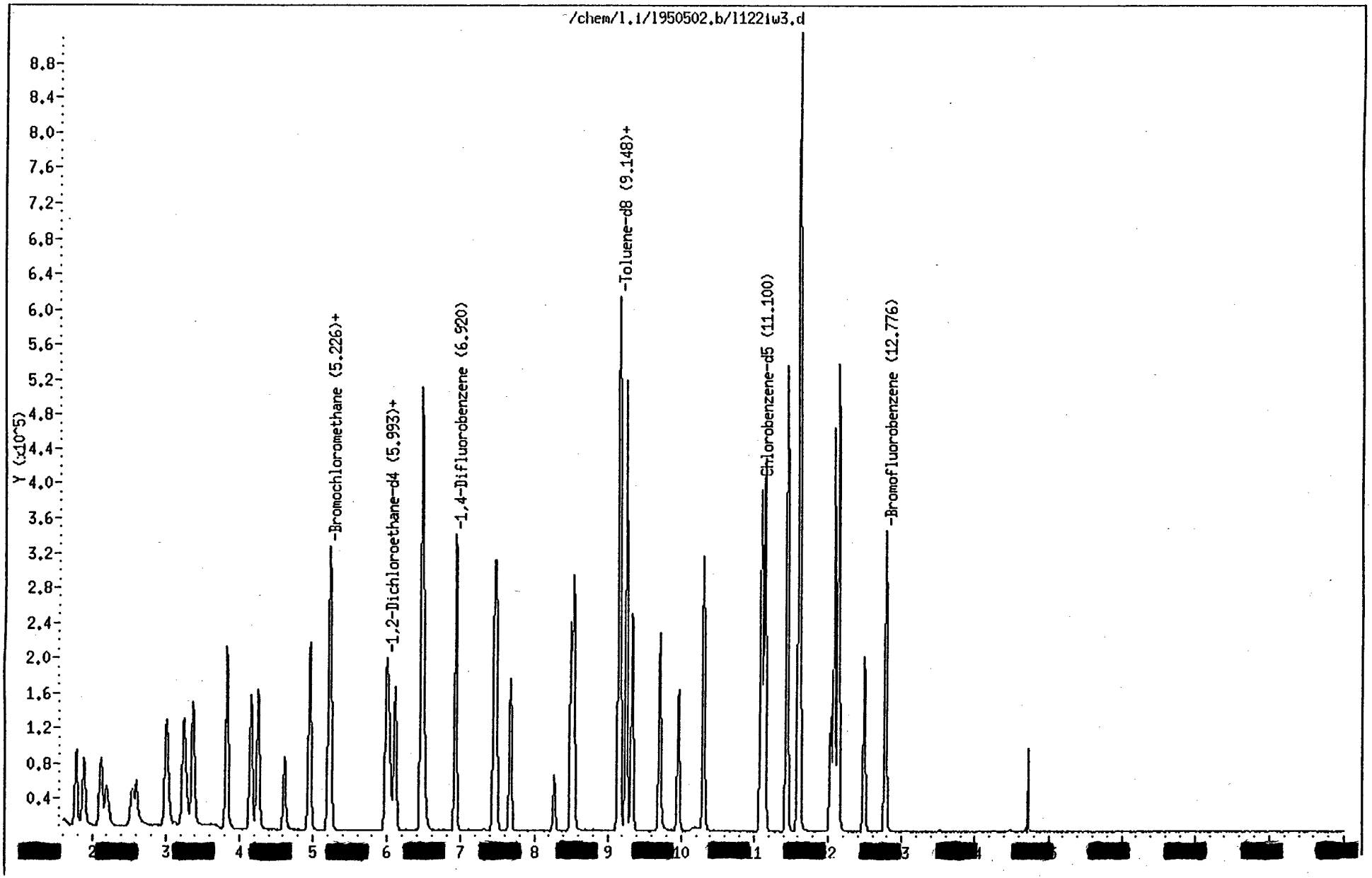
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	57465	0.00
32 1,4-Difluorobenzene	309137	154568	618274	309137	0.00
50 Chlorobenzene-d5	240326	120163	480652	240326	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.00
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.92	0.00
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00

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.

Data File: /chem/l.i/1950502.b/l122iw3.d
Date : 02-MAY-1995 09:14
Client ID:
Sample Info: 50 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i
Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950502.b/l122iw4.d
Lab Smp Id:
Inj Date : 02-MAY-1995 09:41
Operator : JC
Inst ID: l.i
Smp Info : 100 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/1950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy
Quant Type: ISTD
Cal Date : 02-MAY-1995 09:14
Cal File: l122iw3.d
Als bottle: 5
Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1 Chloromethane	50.00	1.776	1.776	(0.340)	267462	500	510
2 Vinyl Chloride	62.00	1.892	1.892	(0.362)	208127	500	480
3 Bromomethane	94.00	2.124	2.124	(0.406)	167228	500	490
4 Chloroethane	64.00	2.195	2.195	(0.420)	139918	500	510
7 Trichlorofluoromethane	101.00	2.552	2.552	(0.488)	155830	500	530
8 Acetone	58.00	2.605	2.605	(0.498)	46123	500	530
11 1,1-Dichloroethene	96.00	3.006	3.006	(0.575)	165619	500	510
13 Methylene Chloride	84.00	3.247	3.247	(0.621)	195418	500	500
18 1,2-Dichloroethene (total)	96.00				435758	1000	1000
14 Carbon Disulfide	76.00	3.372	3.372	(0.645)	666785	500	510
15 trans-1,2-Dichloroethene	96.00	3.826	3.826	(0.732)	205612	500	510
17 1,1-Dichloroethane	63.00	4.165	4.165	(0.797)	422429	500	510
19 Vinyl Acetate	43.00	4.254	4.254	(0.814)	656801	500	480
20 2-Butanone	43.00	4.620	4.620	(0.884)	311290	500	490
21 cis-1,2-Dichloroethene	96.00	4.967	4.967	(0.951)	230146	500	510
24 Chloroform	83.00	5.244	5.244	(1.003)	377481	500	500
27 1,1,1-Trichloroethane	97.00	6.028	6.028	(0.870)	274410	500	490
28 1,2-Dichloroethane	62.00	6.108	6.108	(1.169)	322441	500	510
30 Benzene	78.00	6.474	6.474	(0.934)	891151	500	500
31 Carbon Tetrachloride	117.00	6.492	6.492	(0.937)	227482	500	500
34 1,2-Dichloropropane	63.00	7.454	7.454	(1.076)	245448	500	500
35 Trichloroethene	130.00	7.490	7.490	(1.081)	205482	500	500
37 Bromodichloromethane	83.00	7.677	7.677	(1.108)	281748	500	510
39 2-Chloroethylvinylether	63.00	8.274	8.274	(1.194)	63033	500	540
40 4-Methyl-2-Pentanone	43.00	8.497	8.497	(1.226)	443781	500	510
41 cis-1,3-Dichloropropene	75.00	8.542	8.542	(1.233)	348996	500	510
42 trans-1,3-Dichloropropene	75.00	9.166	9.166	(1.323)	310015	500	510
44 Toluene	92.00	9.255	9.255	(0.834)	495230	500	510
45 1,1,2-Trichloroethane	83.00	9.335	9.335	(1.347)	167456	500	500

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	2-Hexanone	43.00	9.701	9.701	(0.874)	426649	500	540
	Dibromochloromethane	129.00	9.959	9.959	(1.437)	197453	500	510
49	Tetrachloroethene	164.00	10.307	10.307	(0.929)	184108	500	490
52	Chlorobenzene	112.00	11.145	11.145	(1.004)	492961	500	500
	Xylene (Total)	106.00				936418	1500	1500
	Ethylbenzene	106.00	11.448	11.448	(1.031)	258120	500	510
55	m,p-Xylene(s)	106.00	11.617	11.617	(1.047)	630678	1000	1000
	Bromoform	173.00	12.036	12.036	(1.084)	156693	500	510
	Styrene	104.00	12.081	12.081	(1.088)	516328	500	530
59	o-Xylene	106.00	12.134	12.134	(1.093)	305740	500	500
60	1,1,2,2-Tetrachloroethane	83.00	12.482	12.482	(1.124)	250796	500	510
	Bromochloromethane	128.00	5.226	5.226	(1.000)	57038	250	
	1,4-Difluorobenzene	114.00	6.928	6.928	(1.000)	313223	250	
50	Chlorobenzene-d5	117.00	11.100	11.100	(1.000)	246179	250	
26	1,2-Dichloroethane-d4	102.00	5.992	5.992	(1.147)	48279	500	500
	Toluene-d8	98.00	9.148	9.148	(0.824)	679788	500	500
	Bromofluorobenzene	95.00	12.776	12.776	(1.151)	260441	500	510

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: l.i
ab File ID: l122iw4.d
ab Smp Id:
nalysis Type: VOA
uant Type: ISTD
perator: JC
ethod File: /chem/l.i/l950502.b/lvoclpw.m
isc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

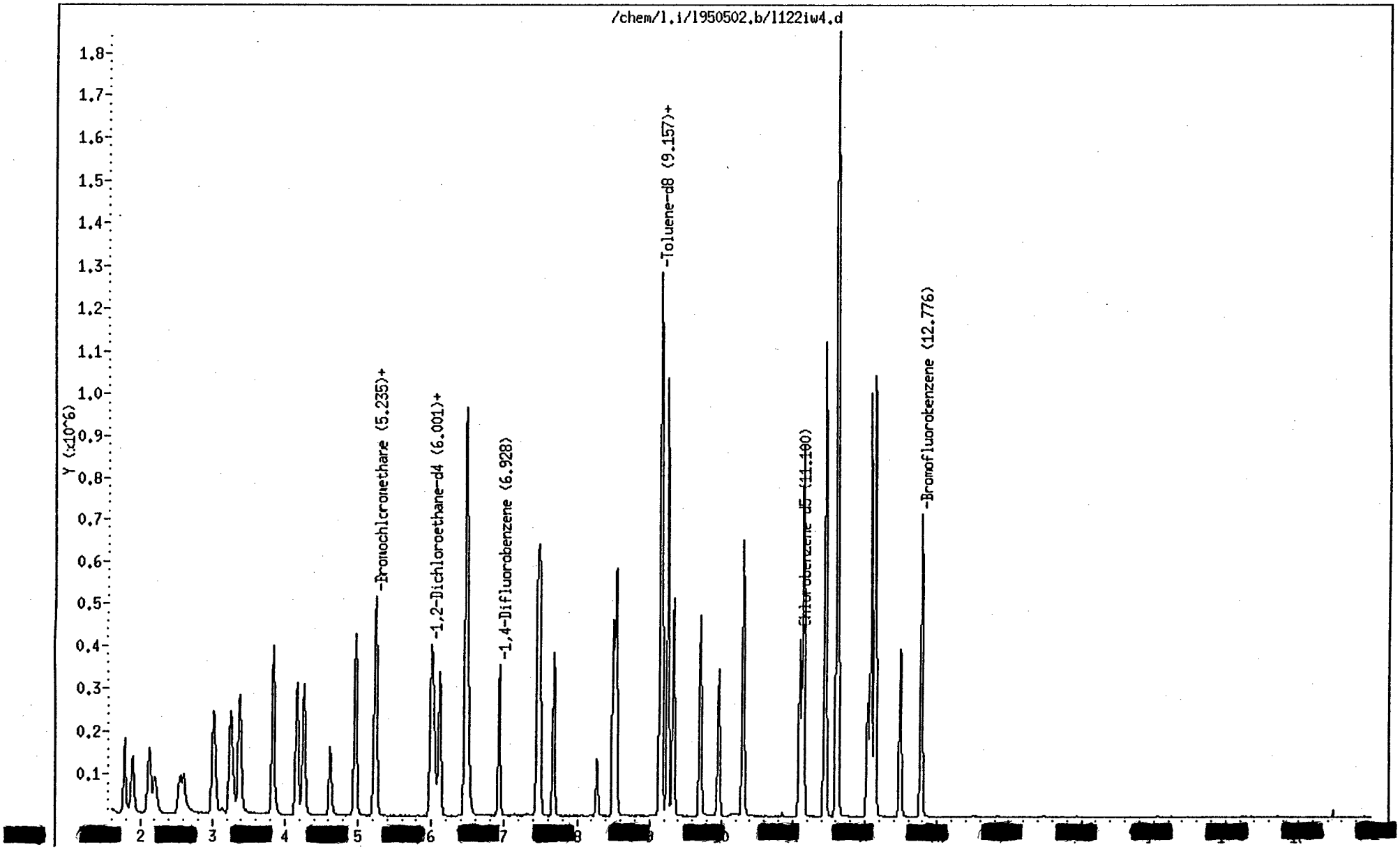
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	57038	-0.74
32 1,4-Difluorobenzene	309137	154568	618274	313223	1.32
50 Chlorobenzene-d5	240326	120163	480652	246179	2.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.23	0.16
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.93	0.12
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950502.b/1122iw4.d
Date : 02-MAY-1995 09:41
Client ID:
Sample Info: 100 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i
Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950502.b/l122iw5.d
Lab Smp Id:
Inj Date : 02-MAY-1995 10:09
Operator : JC
Inst ID: l.i
Smp Info : 200 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/l950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:43 jimmy
Quant Type: ISTD
Cal Date : 02-MAY-1995 09:14
Cal File: l122iw3.d
Als bottle: 6
Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
1 Chloromethane	50.00	1.774	1.774	(0.340)	496676	1000	980
2 Vinyl Chloride	62.00	1.881	1.881	(0.360)	359637	1000	870
3 Bromomethane	94.00	2.122	2.122	(0.406)	312858	1000	960
4 Chloroethane	64.00	2.185	2.185	(0.418)	259806	1000	990
7 Trichlorofluoromethane	101.00	2.550	2.550	(0.488)	371395	1000	1300(A)
8 Acetone	58.00	2.603	2.603	(0.498)	82078	1000	980
11 1,1-Dichloroethene	96.00	2.996	2.996	(0.573)	324057	1000	1000
13 Methylene Chloride	84.00	3.236	3.236	(0.619)	375020	1000	1000
18 1,2-Dichloroethene (total)	96.00				848211	2000	2100(A)
14 Carbon Disulfide	76.00	3.361	3.361	(0.643)	1294538	1000	1000
15 trans-1,2-Dichloroethene	96.00	3.825	3.825	(0.732)	399994	1000	1000
17 1,1-Dichloroethane	63.00	4.154	4.154	(0.795)	827354	1000	1000
19 Vinyl Acetate	43.00	4.253	4.253	(0.814)	1250896	1000	960
20 2-Butanone	43.00	4.609	4.609	(0.882)	561725	1000	930
21 cis-1,2-Dichloroethene	96.00	4.957	4.957	(0.949)	448217	1000	1000
24 Chloroform	83.00	5.233	5.233	(1.002)	734283	1000	1000
27 1,1,1-Trichloroethane	97.00	6.018	6.018	(0.869)	543601	1000	1000
28 1,2-Dichloroethane	62.00	6.107	6.107	(1.169)	615902	1000	1000
30 Benzene	78.00	6.463	6.463	(0.933)	1744305	1000	1000
31 Carbon Tetrachloride	117.00	6.490	6.490	(0.937)	446359	1000	1000
34 1,2-Dichloropropane	63.00	7.453	7.453	(1.076)	475338	1000	1000
35 Trichloroethene	130.00	7.479	7.479	(1.080)	396546	1000	1000
37 Bromodichloromethane	83.00	7.676	7.676	(1.108)	545152	1000	1000
39 2-Chloroethylvinylether	63.00	8.273	8.273	(1.194)	126639	1000	1100
40 4-Methyl-2-Pentanone	43.00	8.496	8.496	(1.226)	816847	1000	970
41 cis-1,3-Dichloropropene	75.00	8.540	8.540	(1.233)	679880	1000	1000
42 trans-1,3-Dichloropropene	75.00	9.164	9.164	(1.323)	609260	1000	1000
44 Toluene	92.00	9.253	9.253	(0.834)	963192	1000	1000
45 1,1,2-Trichloroethane	83.00	9.333	9.333	(1.347)	324579	1000	990

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
2-Hexanone	43.00	9.699	9.699	(0.874)	781487	1000	1000
Dibromochloromethane	129.00	9.957	9.957	(1.438)	390277	1000	1000
Tetrachloroethene	164.00	10.305	10.305	(0.929)	364233	1000	1000
Chlorobenzene	112.00	11.143	11.143	(1.004)	970622	1000	1000
Xylene (Total)	106.00				1841062	3000	3000
Ethylbenzene	106.00	11.446	11.446	(1.031)	505573	1000	1000
m,p-Xylene(s)	106.00	11.615	11.615	(1.047)	1239149	2000	2000
Bromoform	173.00	12.034	12.034	(1.084)	310911	1000	1000
Styrene	104.00	12.079	12.079	(1.088)	1023574	1000	1100
o-Xylene	106.00	12.141	12.141	(1.094)	601913	1000	1000
1,1,2,2-Tetrachloroethane	83.00	12.480	12.480	(1.124)	467749	1000	970
Bromochloromethane	128.00	5.224	5.224	(1.000)	54619	250	
1,4-Difluorobenzene	114.00	6.927	6.927	(1.000)	303728	250	
Chlorobenzene-d5	117.00	11.098	11.098	(1.000)	241308	250	
1,2-Dichloroethane-d4	102.00	5.991	5.991	(1.147)	93621	1000	1000(A)
Toluene-d8	98.00	9.146	9.146	(0.824)	1336610	1000	990
Bromofluorobenzene	95.00	12.774	12.774	(1.151)	514468	1000	1000(A)

QC Flag Legend

- Target compound detected but, quantitated amount exceeded maximum amount.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l122iw5.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950502.b/lvoclpw.m
Misc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

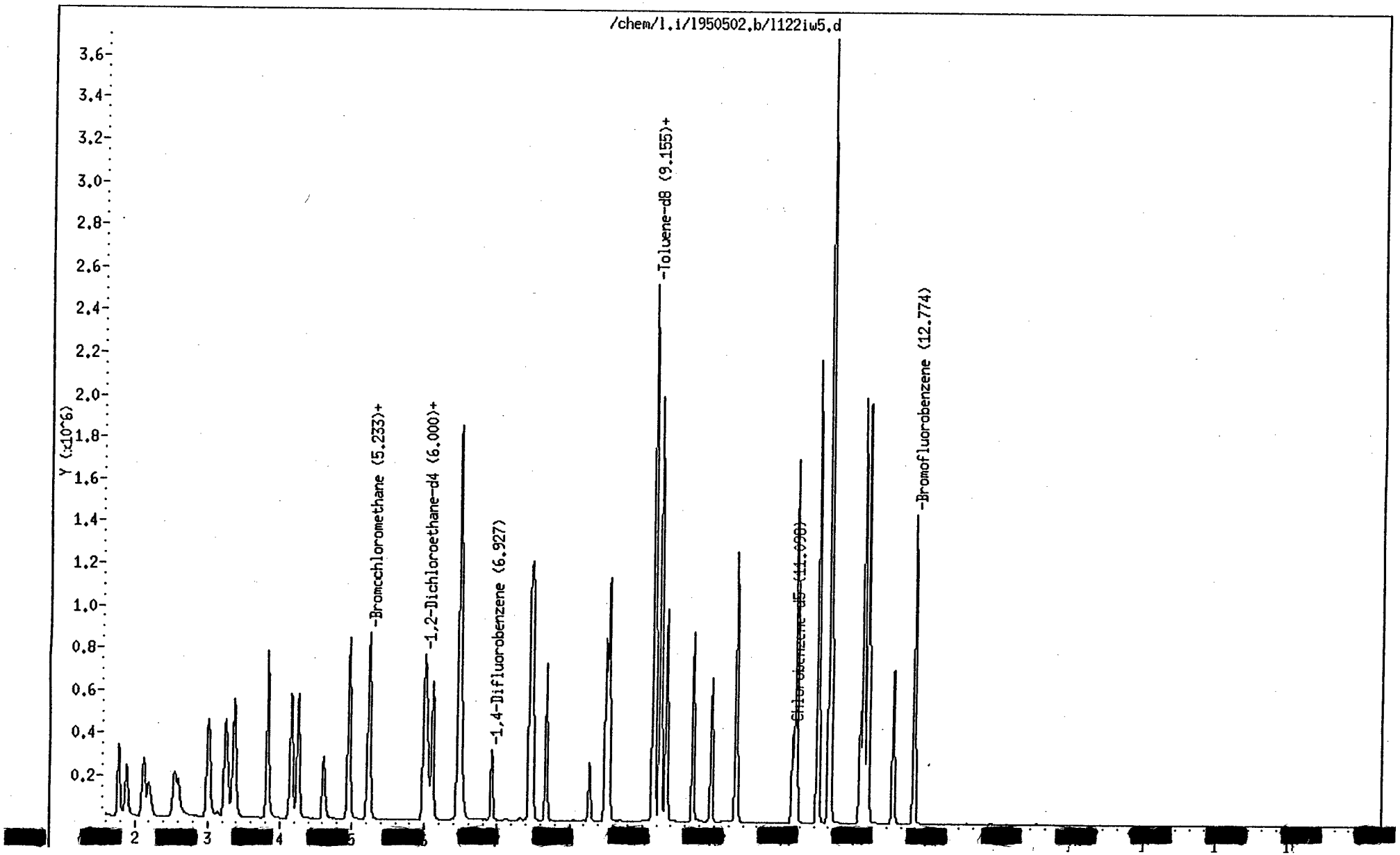
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	54619	-4.95
32 1,4-Difluorobenzene	309137	154568	618274	303728	-1.75
50 Chlorobenzene-d5	240326	120163	480652	241308	0.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.13
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.93	0.10
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.02

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.

Data File: /chem/l.i/1950502.b/l122iw5.d
Date : 02-MAY-1995 10:09
Client ID:
Sample Info: 200 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i
Operator: JC
Column diameter: 0.25



Data File: /chem/j.i/j950509.b/j129cc1.d
Report Date: 11-May-1995 10:37

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: j.i
Lab File ID: j129cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 09-MAY-1995 08:09
Init. Calibration Date(s): 05/03/95 05/03/95
Init. Calibration Times: 13:54 13:54
Method File: /chem/j.i/j950509.b/jclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
2	Pyridine	2.622	2.559	0.010	2.4	40.0	
5	Phenol	3.057	2.794	0.800	8.6	25.0	
6	Aniline	2.804	3.273	0.010	16.7	40.0	
7	bis(2-Chloroethyl)ether	2.312	2.509	0.700	8.5	25.0	
9	2-Chlorophenol	1.582	1.389	0.800	12.2	25.0	
10	1,3-Dichlorobenzene	1.319	1.333	0.600	1.1	25.0	
12	1,4-Dichlorobenzene	1.637	1.789	0.500	9.3	25.0	
13	Benzyl alcohol	0.299	0.274	0.010	8.4	40.0	
15	1,2-Dichlorobenzene	1.963	2.056	0.400	4.7	25.0	
16	2-Methylphenol	2.551	3.485	0.700	36.6	25.0	<-
18	bis(2-chloroisopropyl)ether	3.284	3.822	0.010	16.4	40.0	
19	4-Methylphenol	2.663	3.295	0.600	23.7	25.0	
21	N-Nitroso-di-n-propylamine	2.311	2.587	0.500	11.9	25.0	
22	Hexachloroethane	1.000	1.194	0.300	19.4	25.0	
24	Nitrobenzene	0.372	0.370	0.200	0.6	25.0	
25	Isophorone	0.914	0.957	0.400	4.8	25.0	
26	2-Nitrophenol	0.209	0.204	0.100	2.5	25.0	
27	2,4-Dimethylphenol	0.350	0.390	0.200	11.5	25.0	
28	Benzoic acid	0.123	0.223	0.010	81.7	100.0	
29	bis(2-Chloroethoxy)methane	0.451	0.445	0.300	1.4	25.0	
30	2,4-Dichlorophenol	0.315	0.309	0.200	2.1	25.0	
31	1,2,4-Trichlorobenzene	0.332	0.341	0.200	2.7	25.0	
33	Naphthalene	1.012	1.046	0.700	3.4	25.0	
34	4-Chloroaniline	0.398	0.439	0.010	10.3	40.0	
35	Hexachlorobutadiene	0.174	0.187	0.010	7.3	40.0	
36	4-Chloro-3-methylphenol	0.330	0.371	0.200	12.4	25.0	
37	2-Methylnaphthalene	0.797	0.822	0.400	3.2	25.0	
38	Hexachlorocyclopentadiene	0.229	0.170	0.010	25.7	40.0	
39	2,4,6-Trichlorophenol	0.365	0.344	0.200	5.7	25.0	
40	2,4,5-Trichlorophenol	0.381	0.420	0.200	10.0	25.0	
42	2-Chloronaphthalene	1.128	1.141	0.800	1.2	25.0	
43	2-Nitroaniline	0.398	0.405	0.010	1.7	40.0	
44	Dimethylphthalate	1.383	1.525	0.010	10.3	40.0	
45	2,6-Dinitrotoluene	0.336	0.350	0.200	4.2	25.0	
46	Acenaphthylene	1.886	1.906	1.300	1.1	25.0	
47	3-Nitroaniline	0.346	0.338	0.010	2.3	40.0	
49	Acenaphthene	1.116	1.135	0.800	1.7	25.0	
50	2,4-Dinitrophenol	0.119	0.112	0.010	5.9	40.0	
51	4-Nitrophenol	0.101	0.146	0.010	44.4	100.0	
52	Dibenzofuran	1.690	1.710	0.800	1.1	25.0	

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: j.i
Lab File ID: j129cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 09-MAY-1995 08:09
Init. Calibration Date(s): 05/03/95 05/03/95
Init. Calibration Times: 13:54 13:54
Method File: /chem/j.i/j950509.b/jclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	53 2,4-Dinitrotoluene	0.442	0.461	0.200	4.3	25.0	
	54 Diethylphthalate	1.194	1.251	0.010	4.7	40.0	
	55 4-Chlorophenyl-phenylether	0.632	0.665	0.400	5.4	25.0	
	56 Fluorene	1.336	1.397	0.900	4.5	25.0	
	57 4-Nitroaniline	0.319	0.338	0.010	6.0	40.0	
	58 4,6-Dinitro-2-methylphenol	0.123	0.119	0.010	3.2	40.0	
	59 n-Nitrosodiphenylamine	0.549	0.554	0.010	1.0	40.0	
	60 1,2-Diphenylhydrazine	2.286	2.203	0.010	3.6	40.0	
	62 4-Bromophenyl-phenylether	0.231	0.235	0.100	1.7	25.0	
	63 Hexachlorobenzene	0.265	0.258	0.100	2.7	25.0	
	64 Pentachlorophenol	0.092	0.128	0.050	39.0	25.0	<-
	66 Phenanthrene	1.410	1.390	0.700	1.4	25.0	
	67 Anthracene	1.214	1.214	0.700	0.0	25.0	
	68 Carbazole	1.113	1.093	0.010	1.8	40.0	
	69 Di-n-butylphthalate	1.370	1.387	0.010	1.3	40.0	
	70 Fluoranthene	1.192	1.198	0.600	0.5	25.0	
	71 Pyrene	1.561	1.366	0.600	12.5	25.0	
	73 Butylbenzylphthalate	0.774	0.725	0.010	6.4	40.0	
	74 3,3'-Dichlorobenzidine	0.431	0.450	0.010	4.5	40.0	
	75 Benzo[a]anthracene	1.294	1.295	0.800	0.1	25.0	
	77 Chrysene	1.080	1.144	0.700	6.0	25.0	
	78 bis(2-Ethylhexyl)phthalate	0.820	0.874	0.010	6.6	40.0	
	79 Di-n-octylphthalate	2.622	2.393	0.010	8.7	40.0	
	80 Benzo[b]fluoranthene	2.008	1.724	0.700	14.1	25.0	
	81 Benzo[k]fluoranthene	1.898	1.868	0.700	1.6	25.0	
	82 Benzo[a]pyrene	1.642	1.603	0.700	2.4	25.0	
	84 Indeno[1,2,3-cd]pyrene	1.502	1.548	0.500	3.0	25.0	
	85 Dibenz[a,h]anthracene	1.265	1.319	0.400	4.3	25.0	
	86 Benzo[g,h,i]perylene	1.222	1.195	0.500	2.2	25.0	
$	23 Nitrobenzene-d5	0.369	0.346	0.200	6.2	25.0	
$	41 2-Fluorobiphenyl	1.276	1.281	0.700	0.4	25.0	
$	72 Terphenyl-d14	1.044	0.933	0.500	10.7	25.0	
$	4 Phenol-d5	2.693	2.223	0.800	17.4	25.0	
$	3 2-Fluorophenol	0.777	0.820	0.600	5.6	25.0	
$	61 2,4,6-Tribromophenol	0.128	0.123	0.010	3.5	40.0	
	96 Benzidine	0.332	0.135	0.010	59.3	100.0	

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129cs2.d
Lab Smp Id: 50 PPB STD 8240S
Inj Date : 09-MAY-1995 11:08
Operator : HLW Inst ID: k.i
Smp Info : 50 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 09-May-1995 11:38 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
4	Chloromethane	50.00	1.365	1.365	(0.643)	248975	250	50
5	Vinyl Chloride	62.00	1.395	1.395	(0.657)	245411	250	50
7	Bromomethane	94.00	1.441	1.441	(0.679)	164865	250	50
6	Chloroethane	64.00	1.441	1.441	(0.679)	206967	250	50
9	Trichlorofluoromethane	100.90	1.517	1.517	(0.714)	126075	250	50
8	Acetone	58.00	1.517	1.517	(0.714)	12488	250	50(a)
10	1,1-Dichloroethene	96.00	1.623	1.623	(0.764)	164166	250	50
11	Methylene Chloride	84.00	1.668	1.668	(0.786)	185629	250	50
M 1	1,2-Dichloroethene (total)	96.00				408080	500	100
12	Carbon Disulfide	76.00	1.714	1.714	(0.807)	639149	250	50
13	trans-1,2-Dichloroethene	96.00	1.774	1.774	(0.836)	190950	250	50
14	1,1-Dichloroethane	63.00	1.850	1.850	(0.872)	415024	250	50
16	Vinyl Acetate	43.00	1.865	1.865	(0.879)	279989	250	50
17	2-Butanone	43.00	1.956	1.956	(0.921)	92900	250	50
19	cis-1,2-Dichloroethene	96.00	2.047	2.047	(0.964)	217130	250	50
21	Chloroform	83.00	2.123	2.123	(1.000)	336741	250	50
24	1,1,1-Trichloroethane	97.00	2.395	2.395	(1.128)	251956	250	50
25	1,2-Dichloroethane	62.00	2.411	2.411	(0.864)	233295	250	50
27	Benzene	78.00	2.547	2.547	(0.913)	805173	250	50
28	Carbon Tetrachloride	117.00	2.577	2.577	(0.924)	193109	250	50
33	1,2-Dichloropropane	63.00	3.077	3.077	(1.103)	224444	250	50
34	Trichloroethene	130.00	3.092	3.092	(1.109)	184595	250	50
35	Bromodichloromethane	83.00	3.214	3.214	(1.152)	239054	250	50
15	2-Chloroethylvinylether	63.00	1.850	1.850	(0.663)	415024	250	50
38	4-Methyl-2-Pentanone	43.00	4.032	4.032	(1.445)	135521	250	50
42	cis-1,3-Dichloropropene	75.00	4.653	4.653	(1.668)	204094	250	50
37	trans-1,3-Dichloropropene	75.00	3.956	3.956	(0.585)	265523	250	50
43	Toluene	92.00	4.638	4.638	(0.686)	457812	250	50
44	1,1,2-Trichloroethane	83.00	4.789	4.789	(0.709)	117329	250	50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.396	5.396	(0.798)	117606	250	50
	46 Dibromochloromethane	129.00	5.396	5.396	(0.798)	138579	250	50
	48 Tetrachloroethene	164.00	5.805	5.805	(0.859)	142462	250	50
	52 Chlorobenzene	112.00	6.805	6.805	(1.007)	436573	250	50
M	2 Xylene (Total)	106.00				856274	750	150
	53 Ethylbenzene	106.00	7.244	7.244	(1.072)	231669	250	50
	54 m,p-Xylene(s)	106.00	7.471	7.471	(1.105)	562419	500	100
	55 Bromoform	173.00	7.835	7.835	(1.159)	78792	250	50
	57 Styrene	104.00	8.017	8.017	(1.186)	465072	250	50
	58 o-Xylene	106.00	8.077	8.077	(1.195)	293855	250	50
	59 1,1,2,2-Tetrachloroethane	83.00	8.623	8.623	(1.276)	153370	250	50
*	20 Bromochloromethane	128.00	2.123	2.123	(1.000)	86471	250	
*	31 1,4-Difluorobenzene	114.00	2.789	2.789	(1.000)	552052	250	
*	51 Chlorobenzene-d5	117.00	6.759	6.759	(1.000)	389031	250	
$	23 1,2-Dichloroethane-d4	102.00	2.365	2.365	(1.114)	38140	250	50
$	40 Toluene-d8	98.00	4.532	4.532	(0.670)	598801	250	50
$	61 Bromofluorobenzene	95.00	8.865	8.865	(1.312)	212343	250	50

QC Flag Legend

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129cs2.d
Lab Smp Id: 50 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info:

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	86471	0.00
31 1,4-Difluorobenzene	552052	276026	1104104	552052	0.00
51 Chlorobenzene-d5	389031	194516	778062	389031	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.00
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

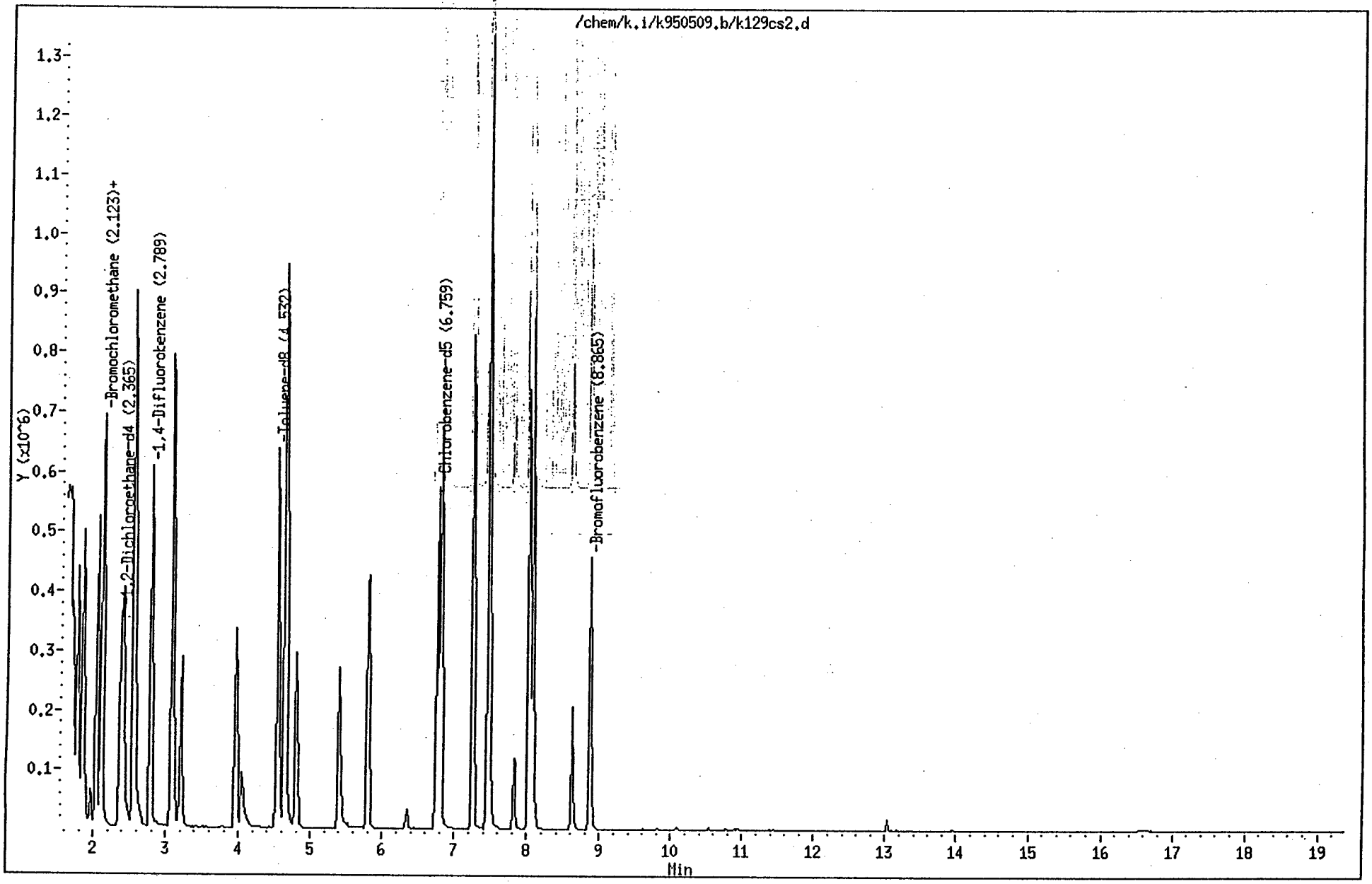
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129cs2.d
Date : 09-MAY-1995 11:08
Client ID:
Sample Info: 50 PPB STD 8240S

Column phase: 30m,hp5ms,0.25u df

Instrument: k.i

Operator: HLW
Column diameter: 0.25



SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l128cw1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 08-MAY-1995 09:08
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 08:20 10:09
Method File: /chem/l.i/1950508.b/lvoclpw.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	1 Chloromethane	2.312	1.777	0.010	23.1	40.0
	2 Vinyl Chloride	1.896	1.737	0.100	8.4	25.0
	3 Bromomethane	1.492	1.360	0.100	8.8	25.0
	4 Chloroethane	1.205	1.112	0.010	7.7	40.0
	7 Trichlorofluoromethane	1.295	1.365	0.010	5.4	40.0
	8 Acetone	0.383	0.325	0.010	15.2	100.0
	11 1,1-Dichloroethene	1.424	1.265	0.100	11.2	25.0
	13 Methylene Chloride	1.698	1.561	0.010	8.1	40.0
M	18 1,2-Dichloroethene (total)	1.868	1.747	0.010	6.5	40.0
	14 Carbon Disulfide	5.712	5.094	0.010	10.8	40.0
	15 trans-1,2-Dichloroethene	1.776	1.646	0.010	7.3	40.0
	17 1,1-Dichloroethane	3.638	3.491	0.200	4.1	25.0
	19 Vinyl Acetate	5.931	5.642	0.010	4.9	100.0
	20 2-Butanone	2.770	2.206	0.010	20.3	100.0
	21 cis-1,2-Dichloroethene	1.961	1.847	0.010	5.8	25.0
	24 Chloroform	3.280	3.244	0.200	1.1	25.0
	27 1,1,1-Trichloroethane	0.443	0.439	0.100	0.9	25.0
	28 1,2-Dichloroethane	2.765	2.777	0.100	0.4	25.0
	30 Benzene	1.436	1.385	0.500	3.5	25.0
	31 Carbon Tetrachloride	0.360	0.396	0.100	9.9	25.0
	34 1,2-Dichloropropane	0.389	0.381	0.010	2.1	25.0
	35 Trichloroethene	0.325	0.329	0.300	1.4	25.0
	37 Bromodichloromethane	0.443	0.447	0.200	0.9	25.0
	39 2-Chloroethylvinylether	0.093	0.125	0.010	34.1	100.0
	40 4-Methyl-2-Pentanone	0.692	0.601	0.010	13.2	100.0
	41 cis-1,3-Dichloropropene	0.547	0.553	0.100	1.2	25.0
	42 trans-1,3-Dichloropropene	0.486	0.482	0.100	0.8	25.0
	44 Toluene	0.992	0.936	0.400	5.6	25.0
	45 1,1,2-Trichloroethane	0.269	0.263	0.100	2.2	25.0
	46 2-Hexanone	0.809	0.691	0.010	14.6	100.0
	47 Dibromochloromethane	0.311	0.334	0.100	7.3	25.0
	49 Tetrachloroethene	0.379	0.391	0.200	3.2	25.0
	52 Chlorobenzene	0.999	0.994	0.500	0.5	25.0
M	53 Xylene (Total)	0.629	0.607	0.300	3.5	25.0
	54 Ethylbenzene	0.515	0.495	0.100	3.9	25.0
	55 m,p-Xylene(s)	0.634	0.611	0.300	3.7	25.0
	56 Bromoform	0.312	0.323	0.100	3.4	25.0
	57 Styrene	0.989	0.977	0.300	1.2	25.0
	59 o-Xylene	0.618	0.600	0.300	2.9	25.0
	60 1,1,2,2-Tetrachloroethane	0.501	0.463	0.300	7.6	25.0

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l128cw1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 08-MAY-1995 09:08
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 08:20 10:09
Method File: /chem/l.i/l950508.b/lvoclpw.m

COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
$ 26 1,2-Dichloroethane-d4	0.421	0.408	0.010	3.1	40.0
$ 43 Toluene-d8	1.392	1.313	0.010	5.7	40.0
$ 61 Bromofluorobenzene	0.521	0.514	0.010	1.4	25.0

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950508.b/l128cw1.d
Lab Smp Id:
Inj Date : 08-MAY-1995 09:08
Operator : JC
Smp Info : 50 UG-L STD-8240W/1X
Misc Info : L128W1//L128CW1
Comment :
Method : /chem/l.i/1950508.b/1voclpw.m
Meth Date : 08-May-1995 09:30 jimmy
Cal Date : 08-MAY-1995 09:08
Vials bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l128cw1.d
Continuing Calibration Sample

Compound Sublist: normal.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1 Chloromethane	50.00	1.777	1.777	(0.340)	107731	250	190
2 Vinyl Chloride	62.00	1.884	1.884	(0.360)	105296	250	230
3 Bromomethane	94.00	2.125	2.125	(0.407)	82431	250	230
4 Chloroethane	64.00	2.196	2.196	(0.420)	67406	250	230
7 Trichlorofluoromethane	101.00	2.544	2.544	(0.487)	82744	250	260
8 Acetone	58.00	2.606	2.606	(0.499)	19706	250	210(a)
11 1,1-Dichloroethene	96.00	2.998	2.998	(0.574)	76676	250	220
13 Methylene Chloride	84.00	3.239	3.239	(0.620)	94648	250	230
18 1,2-Dichloroethene (total)	96.00				211762	500	470
14 Carbon Disulfide	76.00	3.364	3.364	(0.644)	308797	250	220
15 trans-1,2-Dichloroethene	96.00	3.827	3.827	(0.732)	99801	250	230
17 1,1-Dichloroethane	63.00	4.166	4.166	(0.797)	211610	250	240
19 Vinyl Acetate	43.00	4.255	4.255	(0.814)	342041	250	240
20 2-Butanone	43.00	4.621	4.621	(0.884)	133751	250	200
21 cis-1,2-Dichloroethene	96.00	4.968	4.968	(0.951)	111961	250	240
24 Chloroform	83.00	5.245	5.245	(1.003)	196694	250	250
27 1,1,1-Trichloroethane	97.00	6.029	6.029	(0.869)	140648	250	250
28 1,2-Dichloroethane	62.00	6.118	6.118	(1.171)	168342	250	250
30 Benzene	78.00	6.475	6.475	(0.933)	443894	250	240
31 Carbon Tetrachloride	117.00	6.502	6.502	(0.937)	126910	250	270
34 1,2-Dichloropropane	63.00	7.464	7.464	(1.076)	122122	250	240
35 Trichloroethene	130.00	7.500	7.500	(1.081)	105467	250	250
37 Bromodichloromethane	83.00	7.687	7.687	(1.108)	143344	250	250
39 2-Chloroethylvinylether	63.00	8.284	8.284	(1.194)	40038	250	340
40 4-Methyl-2-Pentanone	43.00	8.516	8.516	(1.227)	192452	250	220
41 cis-1,3-Dichloropropene	75.00	8.552	8.552	(1.233)	177320	250	250
42 trans-1,3-Dichloropropene	75.00	9.176	9.176	(1.322)	154540	250	250
44 Toluene	92.00	9.265	9.265	(0.834)	243555	250	240
45 1,1,2-Trichloroethane	83.00	9.345	9.345	(1.347)	84138	250	240

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	CN-COL (ng)
	2-Hexanone	43.00	9.720	9.720	(0.875)	179646	250	210
	Dibromochloromethane	129.00	9.969	9.969	(1.437)	106977	250	270
49	Tetrachloroethene	164.00	10.317	10.317	(0.929)	101682	250	260
52	Chlorobenzene	112.00	11.164	11.164	(1.005)	258616	250	250
	Xylene (Total)	106.00				473843	750	720
	Ethylbenzene	106.00	11.458	11.458	(1.031)	128813	250	240
55	m,p-Xylene(s)	106.00	11.627	11.627	(1.047)	317828	500	480
	Bromoform	173.00	12.046	12.046	(1.084)	83914	250	260
	Styrene	104.00	12.091	12.091	(1.088)	254276	250	250
59	o-Xylene	106.00	12.153	12.153	(1.094)	156015	250	240
60	1,1,2,2-Tetrachloroethane	83.00	12.501	12.501	(1.125)	120410	250	230
	Bromochloromethane	128.00	5.227	5.227	(1.000)	60624	250	
	1,4-Difluorobenzene	114.00	6.938	6.938	(1.000)	320419	250	
50	Chlorobenzene-d5	117.00	11.110	11.110	(1.000)	260163	250	
26	1,2-Dichloroethane-d4	102.00	6.002	6.002	(1.148)	24743	250	240
	Toluene-d8	98.00	9.167	9.167	(0.825)	341723	250	240
	Bromofluorobenzene	95.00	12.786	12.786	(1.151)	133659	250	250

Q Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l128cw1.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/1950508.b/lvoclpw.m
Misc Info: L128W1//L128CW1

Calibration Date: 05/08/95
Calibration Time: 0908

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	60624	30312	121248	60624	0.00
32 1,4-Difluorobenzene	320419	160210	640838	320419	0.00
50 Chlorobenzene-d5	260163	130082	520326	260163	0.00

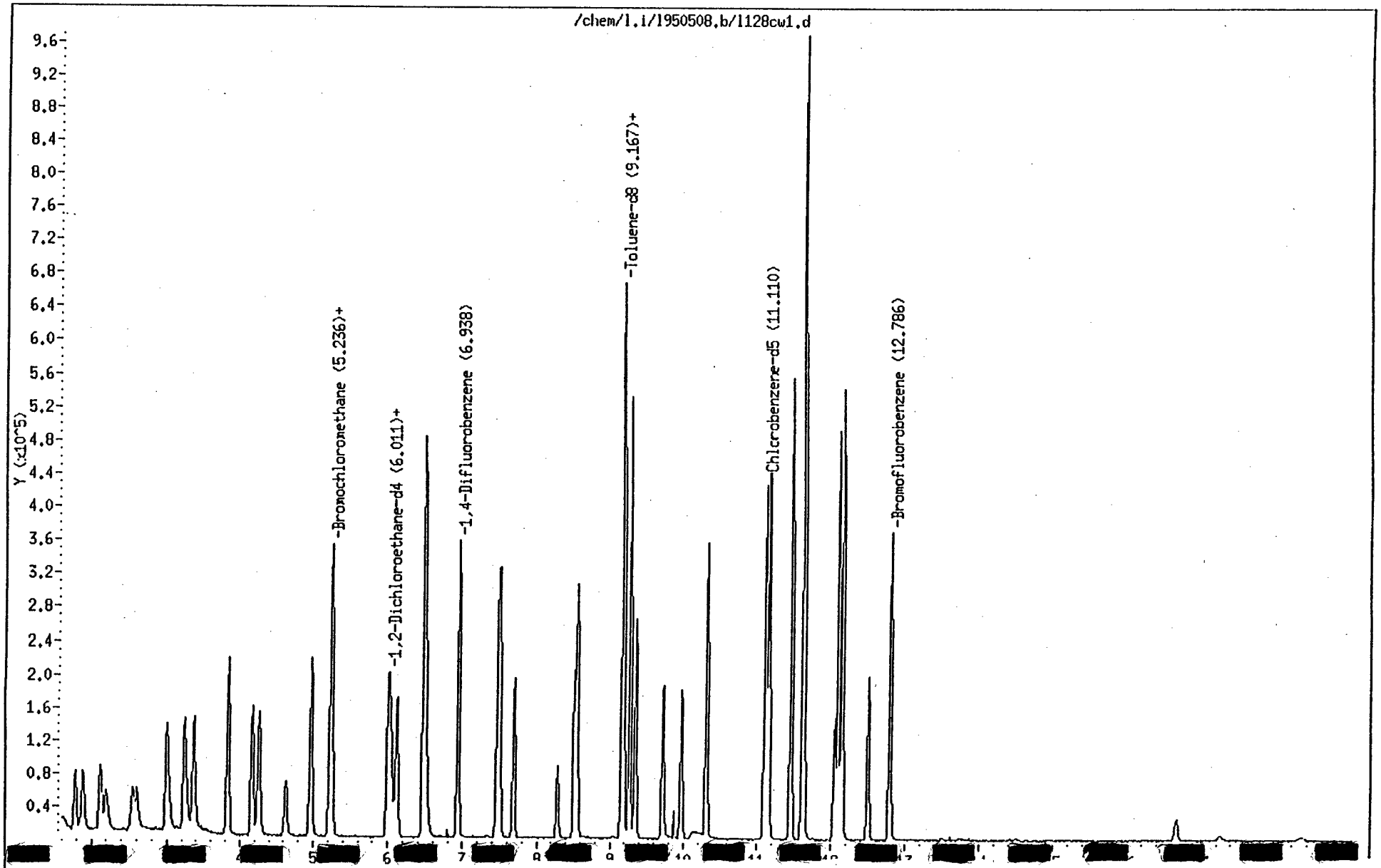
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.23	4.73	5.73	5.23	0.00
32 1,4-Difluorobenzene	6.94	6.44	7.44	6.94	0.00
50 Chlorobenzene-d5	11.11	10.61	11.61	11.11	0.00

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.

Data File: /chem/1.i/1950508.b/1128cw1.d
Date : 08-MAY-1995 09:08
Client ID:
Sample Info: 50 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



3A

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: BLANK SAS No.: ___ SDG NO.: 505209

Matrix Spike - EPA Sample No.: BLK01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
Phenol	75	0	45	60	12-110
2-Chlorophenol	75	0	49	65	27-123
1,4-Dichlorobenzene	50	0	18	36	36- 97
N-Nitroso-di-n-propylamin	50	0	34	68	41-116
1,2,4-Trichlorobenzene	50	0	21	42	39- 98
4-Chloro-3-methylphenol	75	0	61	81	23- 97
Acenaphthene	50	0	32	64	46-118
4-Nitrophenol	75	0	48	64	10- 80
2,4-Dinitrotoluene	50	0	42	84	24- 96
Pentachlorophenol	75	0	44	59	9-103
Pyrene	50	0	32	64	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
Phenol	75	45	60	0	42	12-110
2-Chlorophenol	75	50	67	3	40	27-123
1,4-Dichlorobenzene	50	19	38	5	28	36- 97
N-Nitroso-di-n-propylamin	50	32	64	6	38	41-116
1,2,4-Trichlorobenzene	50	21	42	0	28	39- 98
4-Chloro-3-methylphenol	75	62	83	2	42	23- 97
Acenaphthene	50	33	66	3	31	46-118
4-Nitrophenol	75	51	68	6	50	10- 80
2,4-Dinitrotoluene	50	43	86	2	38	24- 96
Pentachlorophenol	75	46	61	3	50	9-103
Pyrene	50	30	60	6	31	26-127

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

* Values outside of QC Limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

FORM III SV - 1

Idelis Williams, QC Officer

3B

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 505204 SAS No.: ___ SDG NO.: 505209

Matrix Spike - EPA Sample No.: RV018-06

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMIT REC.
Phenol	2500	0	1800	72	26- 90
2-Chlorophenol	2500	0	1800	72	25-102
1,4-Dichlorobenzene	1600	0	1200	75	28-104
N-Nitroso-di-n-prop.(1)	1600	0	1400	88	41-126
1,2,4-Trichlorobenzene	1600	0	1300	81	38-107
4-Chloro-3-methylphenol	2500	0	2500	100	26-103
Acenaphthene	1600	0	1300	81	31-137
4-Nitrophenol	2500	0	2800	112	11-114
2,4-Dinitrotoluene	1600	0	1700	106*	28- 89
Pentachlorophenol	2500	0	2200	88	17-109
Pyrene	1600	0	1400	88	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
Phenol	2500	1800	72	0	35	26- 90
2-Chlorophenol	2500	1800	72	0	50	25-102
1,4-Dichlorobenzene	1600	1100	69	8	27	28-104
N-Nitroso-di-n-prop.(1)	1600	1400	88	0	38	41-126
1,2,4-Trichlorobenzene	1600	1300	81	0	23	38-107
4-Chloro-3-methylphenol	2500	2300	92	8	33	26-103
Acenaphthene	1600	1200	75	8	19	31-137
4-Nitrophenol	2500	2600	104	7	50	11-114
2,4-Dinitrotoluene	1600	1600	100*	6	47	28- 89
Pentachlorophenol	2500	2000	80	10	47	17-109
Pyrene	1600	1400	88	0	36	35-142

(1) N-Nitroso-di-n-propylamine

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

* Values outside of QC Limits

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits

FORM III SV - 2

Idelis Williams, QC Officer

Data File: /chem/h.i/h950511.b/h126kb2.d
Report Date: 11-May-1995 14:32

SPL Houston Labs

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: 8270s.spk
Method File: /chem/h.i/h950511.b/hclps.m
Misc Info: E126S1/H126B02/H131CC1

Client SDG: h950511
Fraction: SV

Operator: LH
SampleType: BLANK
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
5	Phenol	2500	1700	69.31	26-90
9	2-Chlorophenol	2500	1600	65.89	25-102
12	1,4-Dichlorobenzen	1600	1000	65.80	28-104
21	N-Nitroso-di-n-pro	1600	1200	78.13	41-126
31	1,2,4-Trichloroben	1600	1100	71.52	38-107
36	4-Chloro-3-methylp	2500	2000	81.94	26-103
49	Acenaphthene	1600	1100	70.45	31-137
51	4-Nitrophenol	2500	2400	95.39	11-114
53	2,4-Dinitrotoluene	1600	1400	88.67	28-89
64	Pentachlorophenol	2500	2200	89.59	17-109
71	Pyrene	1600	1200	75.08	35-142

	SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 23	Nitrobenzene-d5	1600	1200	78.67	23-120
$ 41	2-Fluorobiphenyl	1600	1200	76.77	30-115
$ 72	Terphenyl-d14	1600	1300	82.94	18-137
$ 3	2-Fluorophenol	2500	1900	74.82	25-121
$ 4	Phenol-d5	2500	1900	77.83	24-113
$ 61	2,4,6-Tribromophen	2500	2000	79.86	19-122

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: E950512044703

Reported on: 05/19/95 10:08
Analyzed on: 05/15/95 18:42
Analyst: LH

METHOD 8270 BLANK H132B02

Compound	Result	Detection Limit	Units
Pyridine	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
bis(2-Chloroethyl)ether	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
bis(2-chloroisopropyl)ethe	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
N-Nitroso-di-n-propylamine	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Nitrobenzene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Benzoic acid	ND	1600	ug/Kg
bis(2-Chloroethoxy)methane	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
4-Chloro-3-methylphenol	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
Dimethylphthalate	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: E950512044703

Reported on: 05/19/95 10:08
Analyzed on: 05/15/95 18:42
Analyst: LH

METHOD 8270 BLANK H132B02

Compound	Result	Detection Limit	Units
Acenaphthylene	ND	330	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
Acenaphthene	ND	330	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
Dibenzofuran	ND	330	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
4-Chlorophenyl-phenylether	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
4,6-Dinitro-2-methylphenol	ND	800	ug/Kg
n-Nitrosodiphenylamine	ND	330	ug/Kg
1,2-Diphenylhydrazine	ND	330	ug/Kg
4-Bromophenyl-phenylether	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
Di-n-butylphthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
Benzo[a]anthracene	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
bis(2-Ethylhexyl)phthalate	ND	330	ug/Kg
Di-n-octylphthalate	ND	330	ug/Kg
Benzo[b]fluoranthene	ND	330	ug/Kg
Benzo[k]fluoranthene	ND	330	ug/Kg
Benzo[a]pyrene	ND	330	ug/Kg
Indeno[1,2,3-cd]pyrene	ND	330	ug/Kg
Dibenz[a,h]anthracene	ND	330	ug/Kg

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: E950512044703

Reported on: 05/19/95 10:08
Analyzed on: 05/15/95 18:42
Analyst: LH

METHOD 8270 BLANK H132B02

Compound	Result	Detection Limit	Units
Benzo[g,h,i]perylene	ND	330	ug/Kg

Surrogate	Result	QC Criteria	Units
2-Fluorophenol	45	25-121	% Recovery
Phenol-d5	54	24-113	% Recovery
Nitrobenzene-d5	70	23-120	% Recovery
2-Fluorobiphenyl	71	30-115	% Recovery
2,4,6-Tribromophenol	88	19-122	% Recovery
Terphenyl-d14	86	18-137	% Recovery

Samples in Batch 9505209-01 9505209-02 9505209-03 9505209-04 9505209-05

Notes
ND - Not detected.

Idelis Williams, QC Officer

SPL Houston Labs

Data file : /chem/h.i/h950515.b/h132b02.d
Lab Smp Id:
Inj Date : 15-MAY-1995 18:42
Operator : LH
Smp Info : BLANK-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 15-May-1995 17:01 liping
Cal Date : 15-MAY-1995 15:26
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h135cc1.d

Compound Sublist: blk.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
$	3 2-Fluorophenol	112.00	3.489	3.458	(0.780)	458931	68	1100
$	4 Phenol-d5	99.00	4.188	4.193	(0.936)	598458	80	1300
*	11 1,4-Dichlorobenzene-d4	152.00	4.472	4.477	(1.000)	193111	40	
$	23 Nitrobenzene-d5	82.00	4.982	4.999	(0.879)	382000	68	1100
*	32 Naphthalene-d8	136.00	5.669	5.674	(1.000)	711630	40	
$	41 2-Fluorobiphenyl	172.00	6.759	6.765	(0.908)	768337	68	1100
*	48 Acenaphthene-d10	164.00	7.447	7.452	(1.000)	344724	40	
$	61 2,4,6-Tribromophenol	329.70	8.264	8.258	(0.924)	215471	130	2200
*	65 Phenanthrene-d10	188.00	8.940	8.945	(1.000)	477181	40	
$	72 Terphenyl-d14	244.00	10.575	10.580	(0.896)	688994	82	1400
*	76 Chrysene-d12	240.00	11.808	11.813	(1.000)	311102	40	
*	83 Perylene-d12	264.00	14.047	14.053	(1.000)	194677	40	

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h132b02.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	193111	56.97
32 Naphthalene-d8	418440	209220	836880	711630	70.07
48 Acenaphthene-d10	198324	99162	396648	344724	73.82
65 Phenanthrene-d10	270386	135193	540772	477181	76.48
76 Chrysene-d12	175926	87963	351852	311102	76.84
83 Perylene-d12	106536	53268	213072	194677	82.73

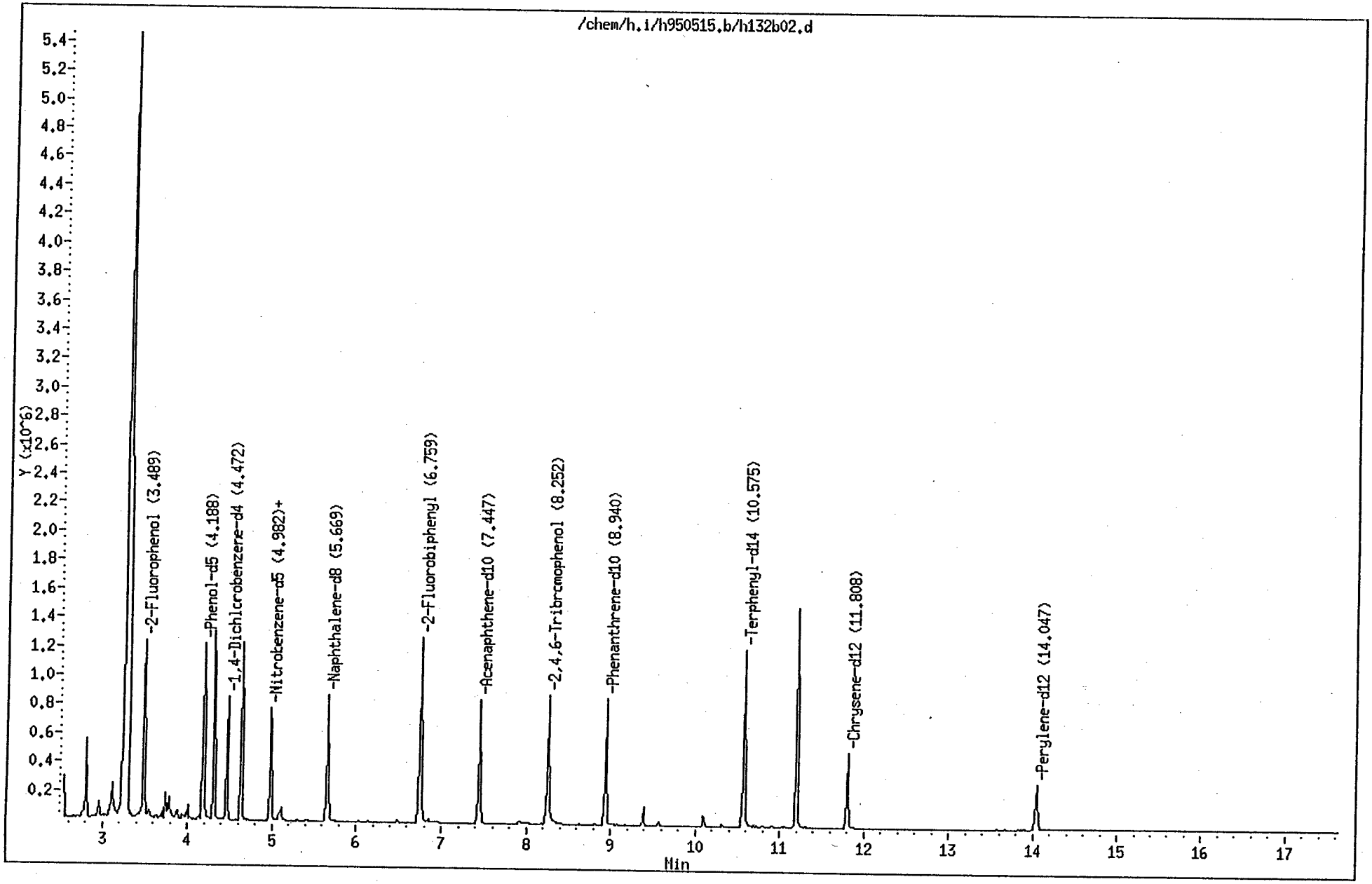
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.12
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.09
48 Acenaphthene-d10	7.45	6.95	7.95	7.45	-0.07
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.06
76 Chrysene-d12	11.81	11.31	12.31	11.81	-0.04
83 Perylene-d12	14.05	13.55	14.55	14.05	-0.04

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.

Data File: /chem/h.i/h950515.b/h132b02.d
Date : 15-MAY-95 18:42
Client ID:
Sample Info: BLANK-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Blank QC Report

Matrix: Aqueous
Sample ID: BLANK
Batch: E950509041714

Reported on: 05/19/95 10:12
Analyzed on: 05/16/95 14:22
Analyst: PC

METHOD 8270

Compound	Result	Detection Limit	Units
Pyridine	ND	5	ug/L
Phenol	ND	5	ug/L
Aniline	ND	5	ug/L
bis(2-Chloroethyl)ether	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
bis(2-chloroisopropyl)ethe	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
N-Nitroso-di-n-propylamine	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Nitrobenzene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Benzoic acid	ND	25	ug/L
bis(2-Chloroethoxy)methane	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
4-Chloro-3-methylphenol	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
Dimethylphthalate	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950509041714

Reported on: 05/19/95 10:1
Analyzed on: 05/16/95 14:22
Analyst: PC

METHOD 8270

Compound	Result	Detection Limit	Units
Acenaphthylene	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
Acenaphthene	ND	5	ug/L
2,4-Dinitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
Dibenzofuran	ND	5	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
4-Chlorophenyl-phenylether	ND	5	ug/L
Fluorene	ND	5	ug/L
4-Nitroaniline	ND	25	ug/L
4,6-Dinitro-2-methylphenol	ND	25	ug/L
n-Nitrosodiphenylamine	ND	5	ug/L
1,2-Diphenylhydrazine	ND	5	ug/L
4-Bromophenyl-phenylether	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Anthracene	ND	5	ug/L
Carbazole	ND	5	ug/L
Di-n-butylphthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Pyrene	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
Benzo[a]anthracene	ND	5	ug/L
Chrysene	ND	5	ug/L
bis(2-Ethylhexyl)phthalate	ND	5	ug/L
Di-n-octylphthalate	ND	5	ug/L
Benzo[b]fluoranthene	ND	5	ug/L
Benzo[k]fluoranthene	ND	5	ug/L
Benzo[a]pyrene	ND	5	ug/L
Indeno[1,2,3-cd]pyrene	ND	5	ug/L
Dibenz[a,h]anthracene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950509041714

Reported on: 05/19/95 10:12
Analyzed on: 05/16/95 14:22
Analyst: PC

METHOD 8270

Compound	Result	Detection Limit	Units
Benzo[g,h,i]perylene	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
2-Fluorophenol	66	21-110	% Recovery
Phenol-d5	70	10-110	% Recovery
Nitrobenzene-d5	65	35-114	% Recovery
2-Fluorobiphenyl	61	43-116	% Recovery
2,4,6-Tribromophenol	63	10-123	% Recovery
Terphenyl-d14	75	33-141	% Recovery

Samples in Batch 9505209-06

Notes

ND - Not detected.

Idelis Williams, QC Officer

SPL Houston Labs

)ata file : /chem/j.i/j950516.b/j129b01.d
.ab Smp Id:
nj Date : 16-MAY-1995 14:22
)perator : PC
Inst ID: j.i
;mp Info : BLANK-8270W/1X
:isc Info : E129C1/J129B01a/J136CC1
.omment :
ethod : /chem/j.i/j950516.b/jclpw.m
eth Date : 17-May-1995 09:54 patti
Quant Type: ISTD
al Date : 16-MAY-1995 13:36
Cal File: j136cc1.d
.ls bottle: 1
il Factor: 1.000
ntegrator: HP RTE
Compound Sublist: BLK.sub
arget Version: 3.10

.mpounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
3 2-Fluorophenol	112.00	5.833	5.843	(0.724)	501427	99	50(Q)
4 Phenol-d5	99.00	7.445	7.451	(0.924)	1252051	100	53
11 1,4-Dichlorobenzene-d4	152.00	8.055	8.051	(1.000)	308234	40	
23 Nitrobenzene-d5	82.00	9.265	9.274	(0.854)	802677	65	32
32 Naphthalene-d8	136.00	10.855	10.855	(1.000)	1317031	40	
41 2-Fluorobiphenyl	172.00	13.491	13.495	(0.893)	1592569	61	30
48 Acenaphthene-d10	164.00	15.115	15.121	(1.000)	800572	40	
61 2,4,6-Tribromophenol	329.70	17.096	17.100	(0.912)	358018	95	47
65 Phenanthrene-d10	188.00	18.740	18.738	(1.000)	1236696	40	
72 Terphenyl-d14	244.00	22.711	22.709	(0.893)	1960106	75	37
76 Chrysene-d12	240.00	25.433	25.435	(1.000)	1056137	40	
83 Perylene-d12	264.00	29.954	29.953	(1.000)	695497	40	

C Flag Legend

- Qualifier signal failed the ratio test.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: j.i
Lab File ID: j129b01.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: PC
Method File: /chem/j.i/j950516.b/jclpw.m
Misc Info: E129C1/J129B01a/J136CC1

Calibration Date: 05/16/95
Calibration Time: 1336

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
1 1,4-Dichlorobenzene-	289308	144654	578616	308234	6.54
2 Naphthalene-d8	1152470	576235	2304940	1317031	14.28
48 Acenaphthene-d10	670048	335024	1340096	800572	19.48
5 Phenanthrene-d10	991595	495798	1983190	1236696	24.72
6 Chrysene-d12	817574	408787	1635148	1056137	29.18
3 Perylene-d12	498000	249000	996000	695497	39.66

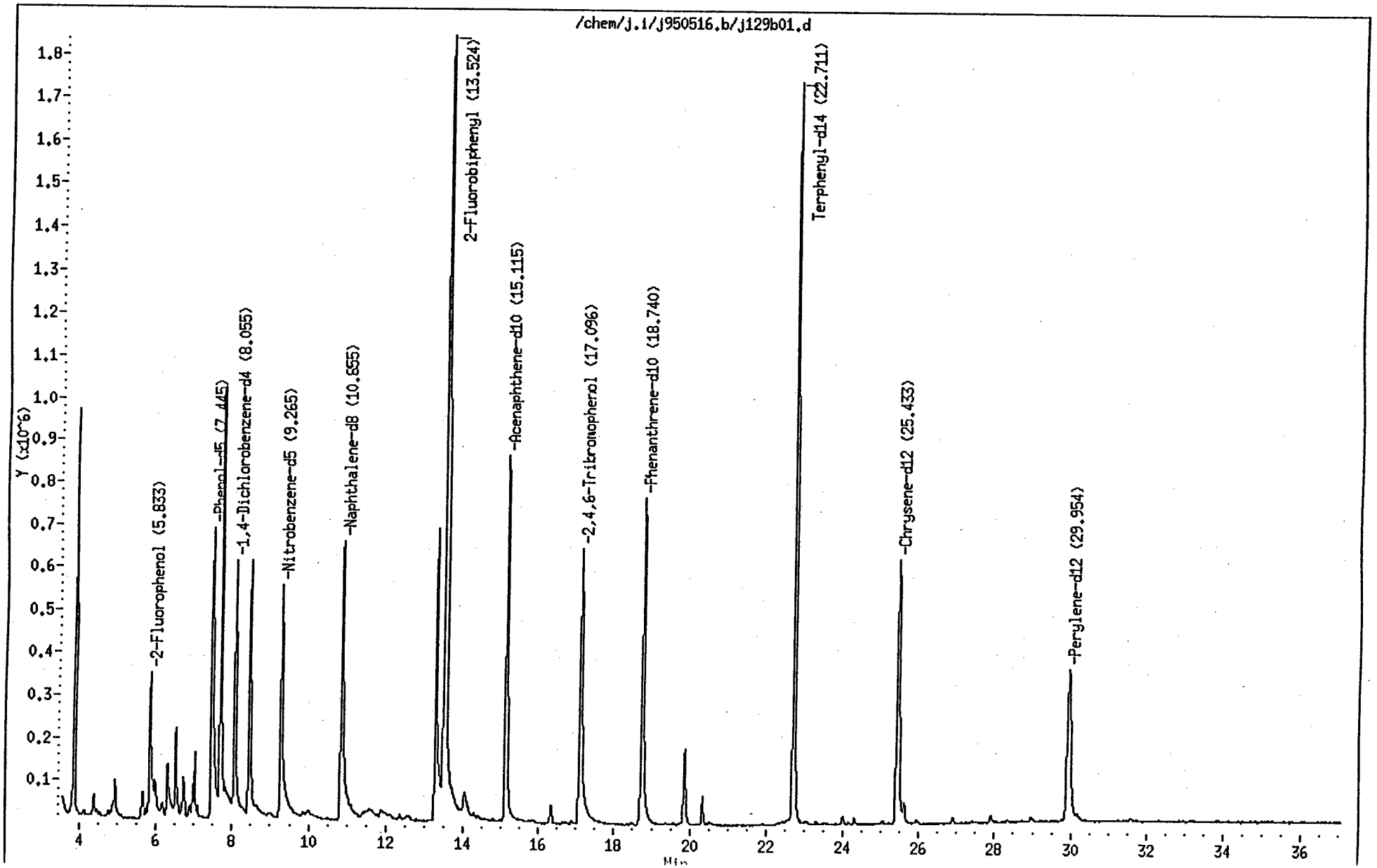
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
1 1,4-Dichlorobenzene-	8.05	7.55	8.55	8.06	0.05
2 Naphthalene-d8	10.85	10.35	11.35	10.85	0.00
8 Acenaphthene-d10	15.12	14.62	15.62	15.12	-0.04
5 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.01
6 Chrysene-d12	25.44	24.94	25.94	25.43	-0.01
3 Perylene-d12	29.95	29.45	30.45	29.95	0.00

EA UPPER LIMIT = +100% of internal standard area.
EA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/j.i/j950516.b/j129b01.d
Date : 16-MAY-1995 14:22
Client ID:
Sample Info: BLANK-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: j.i

Operator: PC
Column diameter: 0.25

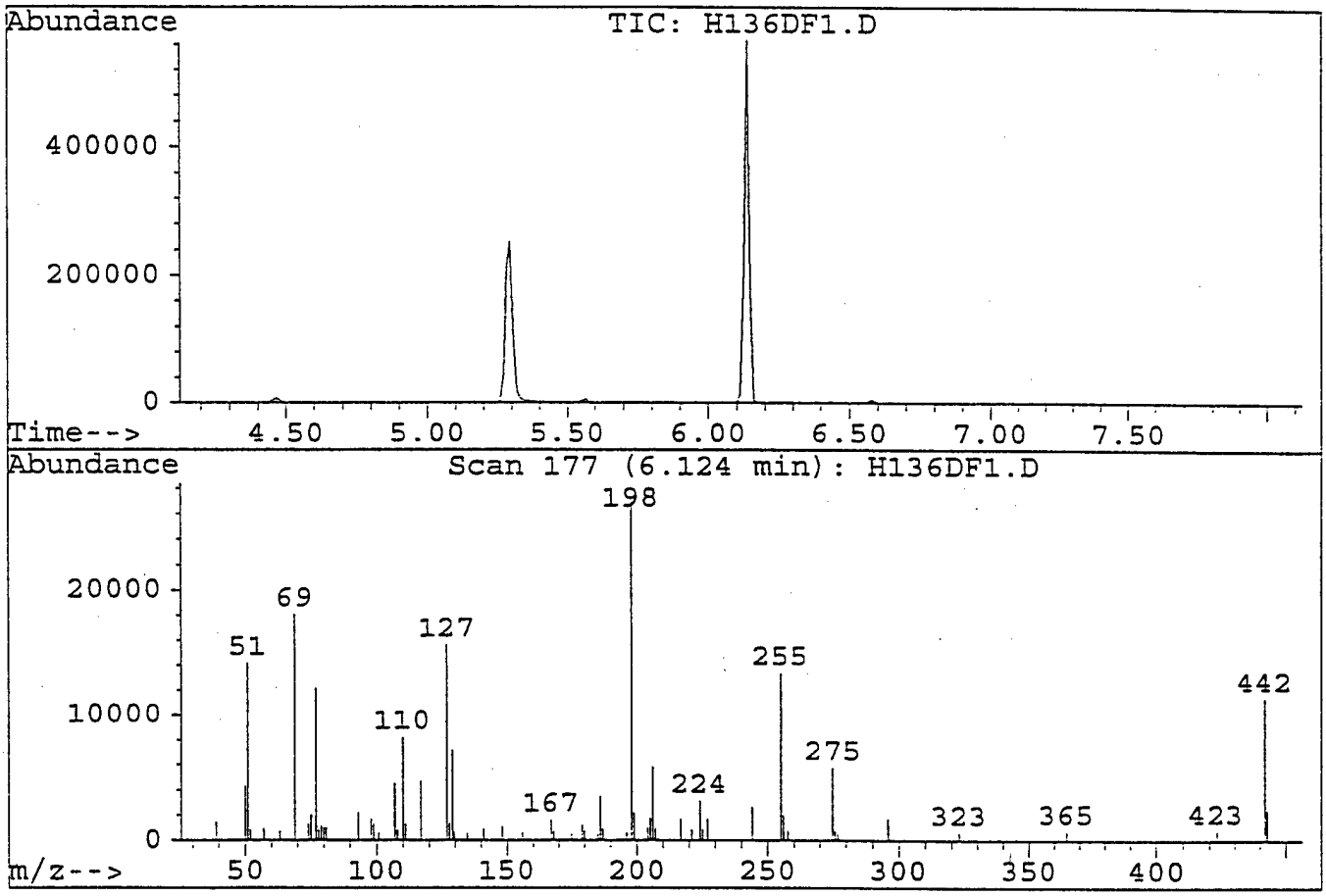


DFTPP

Data File : C:\HPCHEM\1\DATA\H950516\H136DF1.D
Acq On : 16 May 95 11:38 am
Sample : 50 NG DFTPP
Misc : 950516 50NG DFTPP

Vial: 1
Operator: LH
Inst : h
Multiplr: 1.00

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



Peak Apex is scan: 177

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	52.5	14211	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	66.8	18088	PASS
70	69	0	2	0.0	0	PASS
127	198	40	60	57.8	15657	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	27088	PASS
199	198	5	9	8.2	2212	PASS
275	198	10	30	21.4	5796	PASS
365	198	1	100	2.6	706	PASS
441	443	0	100	0.0	0	PASS
442	198	40	100	42.1	11400	PASS
443	442	17	23	20.9	2388	PASS

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-1995 11:52
End Cal Date : 16-MAY-1995 13:52
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950516.b/hclpw.m
Cal Date : 16-May-1995 15:06 liping
Curve Type : Average

Calibration File Names:
Level 1: /chem/h.i/h950516.b/h136ic5.d
Level 2: /chem/h.i/h950516.b/h136ic1.d
Level 3: /chem/h.i/h950516.b/h136ic4.d
Level 4: /chem/h.i/h950516.b/h136ic3.d
Level 5: /chem/h.i/h950516.b/h136ic2.d

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
2 Pyridine	0.93085	1.13643	0.91995	0.91370	0.95641	0.97147	9.640
5 Phenol	1.53843	1.59148	1.34245	1.13600	1.09025	1.33972	16.964
6 Aniline	1.23826	1.29266	1.24247	1.22638	1.06134	1.21222	7.266
7 bis(2-Chloroethyl)ether	1.37570	1.42358	1.23271	1.08935	1.08904	1.24208	12.578
9 2-Chlorophenol	1.32738	1.35636	1.26991	1.13220	1.11061	1.23929	9.060
10 1,3-Dichlorobenzene	1.59187	1.56769	1.45432	1.28242	1.27962	1.43518	10.452
12 1,4-Dichlorobenzene	1.59811	1.50446	1.42332	1.24664	1.29165	1.41284	10.326
13 Benzyl alcohol	0.19961	0.23473	0.23987	0.21461	0.19584	0.21693	9.199
15 1,2-Dichlorobenzene	1.47536	1.40280	1.25252	1.09731	1.07837	1.26127	14.087
16 2-Methylphenol	1.27262	1.34079	1.24523	1.23090	1.09154	1.23622	7.381
17 ortho-Cresol	1.27262	1.34079	1.24523	1.23090	1.09154	1.23622	7.381
18 bis(2-chloroisopropyl)ether	0.83661	0.84555	0.74673	0.67024	0.63736	0.74730	12.634
19 4-Methylphenol	1.26053	1.30180	1.14902	0.98135	0.91026	1.12059	15.253
20 meta,para-Cresol	1.26053	1.30180	1.14902	0.98135	0.91026	1.12059	15.253
21 N-Nitroso-di-n-propylamine	0.68927	0.62395	0.60583	0.54622	0.50082	0.59322	12.236
22 Hexachloroethane	0.57602	0.54593	0.53691	0.49558	0.49311	0.52951	6.653
24 Nitrobenzene	0.31606	0.31105	0.29906	0.27412	0.27725	0.29551	6.481
25 Isophorone	0.59718	0.58785	0.54895	0.53379	0.51024	0.55560	6.580
26 2-Nitrophenol	0.21514	0.21865	0.21321	0.19960	0.19772	0.20886	4.569
27 2,4-Dimethylphenol	0.37998	0.36719	0.38461	0.35979	0.36318	0.37095	2.914
28 Benzoic acid	0.16594	0.16428	0.18636	0.20212	0.19758	0.18326	9.572
29 bis(2-Chloroethoxy)methane	0.33468	0.32954	0.29378	0.26651	0.25444	0.29579	12.215
30 2,4-Dichlorophenol	0.31747	0.29926	0.29605	0.27144	0.26632	0.29011	7.276
31 1,2,4-Trichlorobenzene	0.35006	0.33579	0.31664	0.28782	0.28929	0.31592	8.755
33 Naphthalene	1.06068	1.00233	0.89613	0.80192	0.79364	0.91094	13.063
34 4-Chloroaniline	0.35817	0.33131	0.35020	0.32001	0.31213	0.33436	5.844

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INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-1995 11:52
End Cal Date : 16-MAY-1995 13:52
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950516.b/hclpw.m
Cal Date : 16-May-1995 15:06 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
35 Hexachlorobutadiene	0.21398	0.19573	0.20536	0.19152	0.19523	0.20036	4.577
36 4-Chloro-3-methylphenol	0.29595	0.29088	0.31411	0.29798	0.28845	0.29748	3.380
37 2-Methylnaphthalene	0.71300	0.64446	0.62305	0.55148	0.54250	0.61490	11.450
38 Hexachlorocyclopentadiene	0.37919	0.39660	0.43470	0.42490	0.41843	0.41076	5.483
39 2,4,6-Trichlorophenol	0.38408	0.38338	0.36360	0.35323	0.33013	0.36288	6.217
40 2,4,5-Trichlorophenol	0.42915	0.47626	0.49058	0.45000	0.45103	0.45940	5.253
42 2-Chloronaphthalene	1.24587	1.19399	1.09819	1.01038	0.98522	1.10673	10.212
43 2-Nitroaniline	0.27572	0.28129	0.29019	0.27612	0.26502	0.27767	3.302
44 Dimethylphthalate	1.52943	1.43407	1.33343	1.20273	1.15637	1.33121	11.695
45 2,6-Dinitrotoluene	0.34440	0.33611	0.34434	0.29981	0.28983	0.32290	8.081
46 Acenaphthylene	2.00977	1.90998	1.76946	1.56597	1.51402	1.75384	12.193
47 3-Nitroaniline	0.30305	0.31102	0.32858	0.29389	0.28390	0.30409	5.601
49 Acenaphthene	1.20408	1.10783	1.03238	0.93600	0.89012	1.03408	12.298
50 2,4-Dinitrophenol	0.08347	0.14121	0.18883	0.18438	0.17488	0.15455	28.404
51 4-Nitrophenol	0.11681	0.14065	0.18665	0.17400	0.16216	0.15605	17.761
52 Dibenzofuran	1.73808	1.64776	1.50165	1.31579	1.27640	1.49594	13.468
53 2,4-Dinitrotoluene	0.42188	0.42595	0.42345	0.37219	0.35678	0.40005	8.237
54 Diethylphthalate	1.60277	1.41407	1.40290	1.20996	1.16152	1.35824	13.046
55 4-Chlorophenyl-phenylether	0.65696	0.58783	0.54472	0.46371	0.46280	0.54320	15.325
56 Fluorene	1.24090	1.09432	1.00295	0.85706	0.83676	1.00640	16.761
57 4-Nitroaniline	0.27489	0.28723	0.30775	0.26888	0.24903	0.27756	7.854
58 4,6-Dinitro-2-methylphenol	0.12365	0.16323	0.18611	0.18070	0.17537	0.16581	15.106
59 n-Nitrosodiphenylamine	0.60285	0.59232	0.55700	0.52471	0.51684	0.55874	6.925
60 1,2-Diphenylhydrazine	1.60393	1.43768	1.33184	1.30555	1.37953	1.41170	8.404
62 4-Bromophenyl-phenylether	0.30495	0.28562	0.27457	0.25874	0.25716	0.27621	7.209
63 Hexachlorobenzene	0.37036	0.35104	0.33159	0.31889	0.32230	0.33884	6.376
64 Pentachlorophenol	0.13935	0.18792	0.20474	0.20590	0.20356	0.18830	15.044
66 Phenanthrene	1.27668	1.17458	1.11186	0.98722	0.99280	1.10863	11.117
67 Anthracene	1.21519	1.20088	1.06904	0.98974	0.98672	1.09231	10.143
68 Carbazole	1.01709	0.97877	0.93805	0.85389	0.82960	0.92348	8.678
69 Di-n-butylphthalate	1.72436	1.51736	1.37624	1.27961	1.25811	1.43113	13.501
70 Fluoranthene	1.09653	0.99165	0.98804	0.89018	0.87376	0.96803	9.300
71 Pyrene	1.58611	1.58875	1.54509	1.38185	1.33160	1.48668	8.152
73 Butylbenzylphthalate	0.78611	0.80246	0.78933	0.74112	0.76341	0.77649	3.125

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-1995 11:52
End Cal Date : 16-MAY-1995 13:52
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950516.b/hclpw.m
Cal Date : 16-May-1995 15:06 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
74 3,3'-Dichlorobenzidine	0.40237	0.42551	0.42614	0.43275	0.44333	0.42602	3.530
75 Benzo[a]anthracene	1.20649	1.20060	1.19582	1.09984	1.09824	1.16020	4.823
77 Chrysene	1.11479	1.09687	1.05851	1.00840	1.01174	1.05806	4.566
78 bis(2-Ethylhexyl)phthalate	1.00490	1.02970	0.93553	0.89374	0.93701	0.96017	5.797
79 Di-n-octylphthalate	2.25909	2.50708	2.41641	2.45528	2.29662	2.38690	4.418
80 Benzo[b]fluoranthene	1.58278	1.59993	1.79840	1.59058	1.69843	1.65402	5.643
81 Benzo[k]fluoranthene	1.88456	2.04899	1.68314	1.59707	1.44851	1.73245	13.681
82 Benzo[a]pyrene	1.33619	1.38455	1.38442	1.32997	1.32330	1.35169	2.241
84 Indeno[1,2,3-cd]pyrene	1.24911	1.30200	1.30952	1.37565	1.42483	1.33222	5.146
85 Dibenz[a,h]anthracene	1.01868	1.04135	1.05638	1.13636	1.15045	1.08065	5.465
86 Benzo[g,h,i]perylene	1.02385	1.02821	1.06118	1.11289	1.12912	1.07105	4.498
96 Benzidine	0.01623	0.01164	0.01311	0.01324	0.01420	0.01369	12.373
$ 3 2-Fluorophenol	1.24714	1.35552	1.24210	1.15771	1.14358	1.22921	6.913
$ 4 Phenol-d5	1.39429	1.45505	1.26936	1.12905	1.07570	1.26469	12.943
$ 23 Nitrobenzene-d5	0.33050	0.32715	0.31698	0.30321	0.30369	0.31631	4.031
$ 41 2-Fluorobiphenyl	1.42162	1.31597	1.16657	1.05235	1.01483	1.19427	14.479
$ 61 2,4,6-Tribromophenol	0.15937	0.16154	0.15931	0.15670	0.18113	0.16361	6.077
$ 72 Terphenyl-d14	1.15424	1.11113	1.08546	0.98061	0.98490	1.06326	7.290

SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic5.d
Lab Smp Id:
Inj Date : 16-MAY-1995 13:52
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD020
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 6
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
2	Pyridine	79.00	2.550	2.546	(0.574)	40258	16	8
5	Phenol	94.00	4.162	4.170	(0.936)	66535	19	10
6	Aniline	93.00	4.185	4.193	(0.941)	53553	19	10
7	bis(2-Chloroethyl)ether	93.00	4.221	4.217	(0.949)	59497	19	10
9	2-Chlorophenol	128.00	4.292	4.300	(0.965)	57407	20	10
10	1,3-Dichlorobenzene	146.00	4.422	4.418	(0.995)	68846	20	10
12	1,4-Dichlorobenzene	146.00	4.458	4.466	(1.003)	69116	21	11
13	Benzyl alcohol	108.00	4.742	4.679	(1.067)	8633	17	8 (QM)
15	1,2-Dichlorobenzene	146.00	4.636	4.632	(1.043)	63807	21	10
16	2-Methylphenol	108.00	4.695	4.703	(1.056)	55039	19	9
18	bis(2-chloroisopropyl)ether	45.00	4.707	4.715	(1.059)	36182	20	10 (Q)
19	4-Methylphenol	108.00	4.825	4.833	(1.085)	54516	19	10
21	N-Nitroso-di-n-propylamine	70.00	4.837	4.845	(1.088)	29810	22	11
22	Hexachloroethane	117.00	4.920	4.916	(1.107)	24912	21	10
24	Nitrobenzene	77.00	4.979	4.987	(0.882)	46822	20	10
25	Isophorone	82.00	5.204	5.201	(0.922)	88468	20	10
26	2-Nitrophenol	139.00	5.287	5.295	(0.937)	31872	20	10 (a)
27	2,4-Dimethylphenol	107.00	5.335	5.331	(0.945)	56291	21	10
28	Benzoic acid	122.00	5.406	5.449	(0.958)	24583	20	10 (aQM)
29	bis(2-Chloroethoxy)methane	93.00	5.406	5.414	(0.958)	49580	20	10
30	2,4-Dichlorophenol	162.00	5.536	5.532	(0.981)	47031	21	11
31	1,2,4-Trichlorobenzene	180.00	5.607	5.603	(0.994)	51859	21	10
33	Naphthalene	128.00	5.667	5.675	(1.004)	157132	21	10
34	4-Chloroaniline	127.00	5.726	5.734	(1.015)	53060	22	11
35	Hexachlorobutadiene	225.00	5.844	5.852	(1.036)	31699	22	11
36	4-Chloro-3-methylphenol	107.00	6.235	6.232	(1.105)	43843	20	10
37	2-Methylnaphthalene	142.00	6.342	6.350	(1.124)	105625	22	11
38	Hexachlorocyclopentadiene	237.00	6.579	6.587	(0.887)	29816	19	10
39	2,4,6-Trichlorophenol	196.00	6.662	6.658	(0.898)	30201	20	10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.709	6.717	(0.904)	33745	18	9 (a)
42	2-Chloronaphthalene	162.00	6.840	6.836	(0.922)	97965	21	10
43	2-Nitroaniline	65.00	6.958	6.966	(0.938)	21680	20	10 (a)
44	Dimethylphthalate	163.00	7.171	7.168	(0.966)	120261	21	11
45	2,6-Dinitrotoluene	165.00	7.231	7.239	(0.974)	27081	20	10
46	Acenaphthylene	152.00	7.266	7.263	(0.979)	158031	21	10
47	3-Nitroaniline	138.00	7.373	7.381	(0.994)	23829	19	10 (a)
49	Acenaphthene	153.00	7.456	7.452	(1.005)	94679	22	11
50	2,4-Dinitrophenol	184.00	7.480	7.488	(1.008)	6563	12	6 (aQ)
51	4-Nitrophenol	109.00	7.598	7.582	(1.024)	9185	17	8 (a)
52	Dibenzofuran	168.00	7.610	7.618	(1.026)	136668	21	10
53	2,4-Dinitrotoluene	165.00	7.634	7.630	(1.029)	33173	20	10
54	Diethylphthalate	149.00	7.883	7.891	(1.062)	126028	23	11
55	4-Chlorophenyl-phenylether	204.00	7.954	7.962	(1.072)	51658	22	11
56	Fluorene	166.00	7.965	7.962	(1.073)	97574	23	11
57	4-Nitroaniline	138.00	8.001	8.009	(1.078)	21615	19	10 (a)
58	4,6-Dinitro-2-methylphenol	198.00	8.048	8.056	(0.903)	13083	15	8 (a)
59	n-Nitrosodiphenylamine	169.00	8.084	8.080	(0.907)	63785	20	10
60	1,2-Diphenylhydrazine	77.00	8.108	8.116	(0.910)	169706	22	11
62	4-Bromophenyl-phenylether	248.00	8.451	8.448	(0.948)	32266	21	11
63	Hexachlorobenzene	283.70	8.605	8.613	(0.965)	39187	21	10
64	Pentachlorophenol	265.50	8.795	8.791	(0.987)	14744	15	7 (a)
66	Phenanthrene	178.00	8.937	8.945	(1.003)	135081	22	11
67	Anthracene	178.00	8.985	8.981	(1.008)	128575	20	10
68	Carbazole	167.00	9.139	9.147	(1.025)	107615	21	10
69	Di-n-butylphthalate	149.00	9.542	9.538	(1.070)	182448	23	11
70	Fluoranthene	202.00	10.158	10.166	(1.140)	116020	22	11
71	Pyrene	202.00	10.383	10.391	(0.882)	114502	20	10
73	Butylbenzylphthalate	149.00	11.094	11.090	(0.943)	56750	20	10
74	3,3'-Dichlorobenzidine	252.00	11.722	11.718	(0.996)	29047	19	9
75	Benzo[a]anthracene	228.00	11.746	11.754	(0.998)	87097	20	10
77	Chrysene	228.00	11.793	11.801	(1.002)	80477	20	10
78	bis(2-Ethylhexyl)phthalate	149.00	11.829	11.837	(1.005)	72544	20	10
79	Di-n-octylphthalate	149.00	12.717	12.725	(0.909)	99704	18	9
80	Benzo[b]fluoranthene	252.00	13.357	13.365	(0.955)	69855	20	10
81	Benzo[k]fluoranthene	252.00	13.393	13.401	(0.958)	83174	18	9
82	Benzo[a]pyrene	252.00	13.891	13.899	(0.993)	58972	19	10
84	Indeno[1,2,3-cd]pyrene	276.00	15.905	15.925	(1.137)	55129	19	10
85	Dibenz[a,h]anthracene	278.00	15.941	15.949	(1.140)	44959	20	10
86	Benzo[g,h,i]perylene	276.00	16.450	16.458	(1.176)	45187	20	10
$ 3	2-Fluorophenol	112.00	3.427	3.423	(0.771)	53937	18	9 (R)
$ 4	Phenol-d5	99.00	4.162	4.158	(0.936)	60301	19	10
$ 61	2,4,6-Tribromophenol	329.70	8.226	8.234	(0.923)	16862	20	10
$ 23	Nitrobenzene-d5	82.00	4.967	4.964	(0.880)	48961	20	10 (R)
$ 41	2-Fluorobiphenyl	172.00	6.733	6.729	(0.907)	111784	22	11 (R)
$ 72	Terphenyl-d14	244.00	10.537	10.545	(0.895)	83325	21	10 (R)
* 11	1,4-Dichlorobenzene-d4	152.00	4.446	4.454	(1.000)	86497	40	
* 32	Naphthalene-d8	136.00	5.643	5.651	(1.000)	296285	40	
* 48	Acenaphthene-d10	164.00	7.420	7.417	(1.000)	157263	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.913	8.922	1.000)	211613	40	
* 76 Chrysene-d12	240.00	11.769	11.777	(1.000)	144381	40	
* 83 Perylene-d12	264.00	13.985	13.993	(1.000)	88269	40	
17 ortho-Cresol	108.00	4.695	4.703	(1.056)	55039	19	9
20 meta,para-Cresol	108.00	4.825	4.833	(1.085)	54516	19	10
96 Benzidine	184.00	10.537	10.770	(0.895)	1172	28	14

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic5.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD020

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	86497	-16.17
32 Naphthalene-d8	348029	174014	696058	296285	-14.87
48 Acenaphthene-d10	171424	85712	342848	157263	-8.26
65 Phenanthrene-d10	222794	111397	445588	211613	-5.02
76 Chrysene-d12	137788	68894	275576	144381	4.78
83 Perylene-d12	83290	41645	166580	88269	5.98

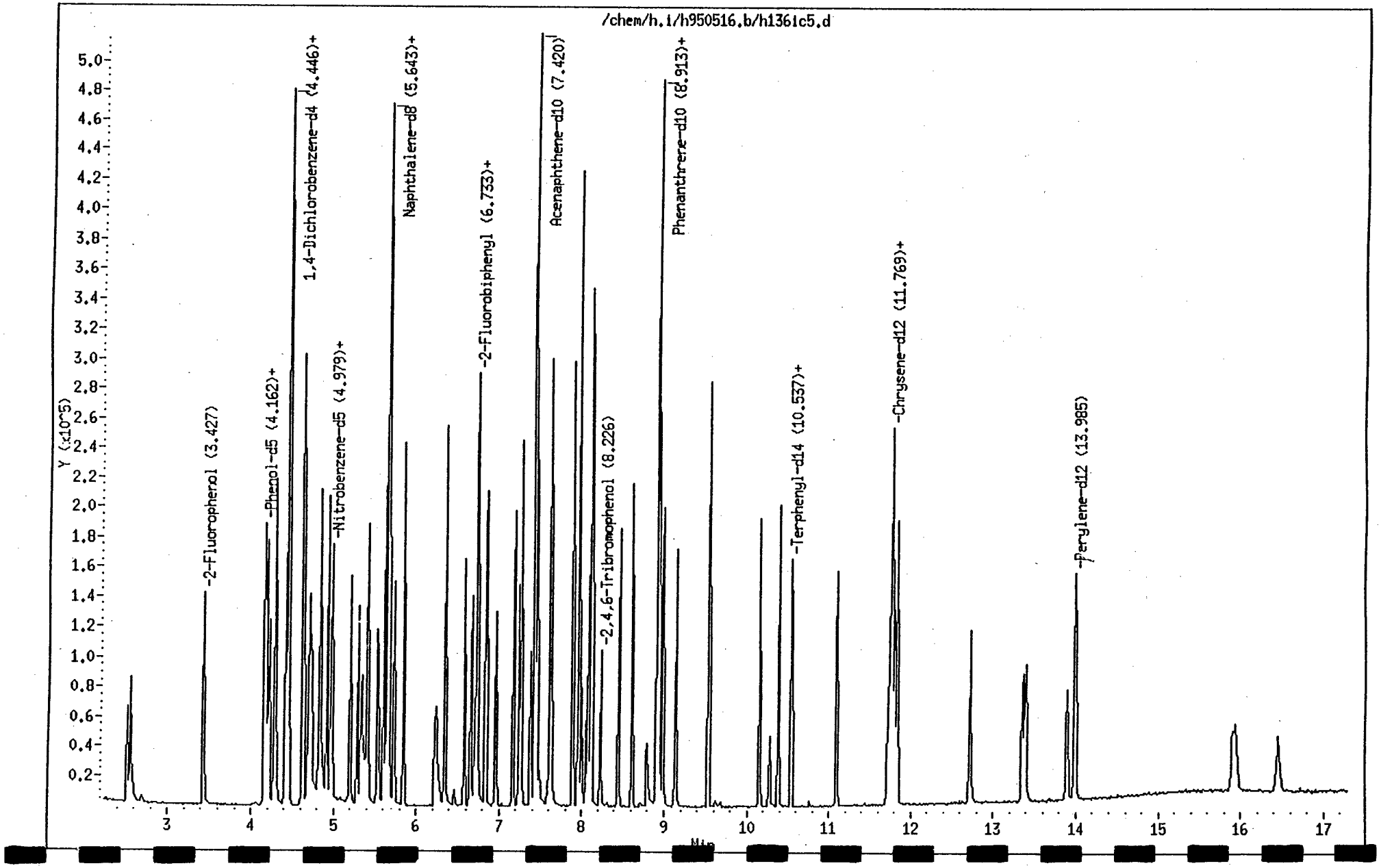
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.45	-0.18
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.14
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.05
65 Phenanthrene-d10	8.92	8.42	9.42	8.91	-0.09
76 Chrysene-d12	11.78	11.28	12.28	11.77	-0.07
83 Perylene-d12	13.99	13.49	14.49	13.99	-0.06

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.

Data File: /chem/h.i/h950516.b/h1361c5.d
Date : 16-MAY-95 13:52
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic1.d
Lab Smp Id:
Inj Date : 16-MAY-1995 11:52
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950516 STD050
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping
Cal Date : 16-MAY-1995 11:52
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h136ic1.d

Compound Sublist: std.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.546	2.546	(0.572)	146575	50	25
5 Phenol	94.00	4.170	4.170	(0.936)	205267	50	25
6 Aniline	93.00	4.193	4.193	(0.941)	166726	50	25
7 bis(2-Chloroethyl)ether	93.00	4.217	4.217	(0.947)	183611	50	25
9 2-Chlorophenol	128.00	4.300	4.300	(0.965)	174942	50	25
10 1,3-Dichlorobenzene	146.00	4.418	4.418	(0.992)	202199	50	25
12 1,4-Dichlorobenzene	146.00	4.466	4.466	(1.003)	194044	50	25
13 Benzyl alcohol	108.00	4.679	4.679	(1.051)	30275	50	25(M)
15 1,2-Dichlorobenzene	146.00	4.632	4.632	(1.040)	180932	50	25
16 2-Methylphenol	108.00	4.703	4.703	(1.056)	172933	50	25
18 bis(2-chloroisopropyl)ether	45.00	4.715	4.715	(1.059)	109058	50	25
19 4-Methylphenol	108.00	4.833	4.833	(1.085)	167905	50	25
21 N-Nitroso-di-n-propylamine	70.00	4.845	4.845	(1.088)	80476	50	25
22 Hexachloroethane	117.00	4.916	4.916	(1.104)	70413	50	25
24 Nitrobenzene	77.00	4.987	4.987	(0.883)	135316	50	25
25 Isophorone	82.00	5.201	5.201	(0.920)	255738	50	25
26 2-Nitrophenol	139.00	5.295	5.295	(0.937)	95121	50	25
27 2,4-Dimethylphenol	107.00	5.331	5.331	(0.943)	159742	50	25
28 Benzoic acid	122.00	5.449	5.449	(0.964)	71466	50	25
29 bis(2-Chloroethoxy)methane	93.00	5.414	5.414	(0.958)	143361	50	25
30 2,4-Dichlorophenol	162.00	5.532	5.532	(0.979)	130189	50	25
31 1,2,4-Trichlorobenzene	180.00	5.603	5.603	(0.992)	146082	50	25
33 Naphthalene	128.00	5.675	5.675	(1.004)	436051	50	25
34 4-Chloroaniline	127.00	5.734	5.734	(1.015)	144131	50	25
35 Hexachlorobutadiene	225.00	5.852	5.852	(1.036)	85151	50	25
36 4-Chloro-3-methylphenol	107.00	6.232	6.232	(1.103)	126545	50	25
37 2-Methylnaphthalene	142.00	6.350	6.350	(1.124)	280364	50	25
38 Hexachlorocyclopentadiene	237.00	6.587	6.587	(0.888)	84983	50	25
39 2,4,6-Trichlorophenol	196.00	6.658	6.658	(0.898)	82150	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.717	6.717	(0.906)	102052	50	25
42	2-Chloronaphthalene	162.00	6.836	6.836	(0.922)	255849	50	25
43	2-Nitroaniline	65.00	6.966	6.966	(0.939)	60275	50	25
44	Dimethylphthalate	163.00	7.168	7.168	(0.966)	307292	50	25
45	2,6-Dinitrotoluene	165.00	7.239	7.239	(0.976)	72022	50	25
46	Acenaphthylene	152.00	7.263	7.263	(0.979)	409270	50	25
47	3-Nitroaniline	138.00	7.381	7.381	(0.995)	66646	50	25
49	Acenaphthene	153.00	7.452	7.452	(1.005)	237386	50	25
50	2,4-Dinitrophenol	184.00	7.488	7.488	(1.010)	30259	50	25
51	4-Nitrophenol	109.00	7.582	7.582	(1.022)	30138	50	25
52	Dibenzofuran	168.00	7.618	7.618	(1.027)	353082	50	25
53	2,4-Dinitrotoluene	165.00	7.630	7.630	(1.029)	91273	50	25
54	Diethylphthalate	149.00	7.891	7.891	(1.064)	303006	50	25
55	4-Chlorophenyl-phenylether	204.00	7.962	7.962	(1.073)	125960	50	25
56	Fluorene	166.00	7.962	7.962	(1.073)	234490	50	25
57	4-Nitroaniline	138.00	8.009	8.009	(1.080)	61548	50	25
58	4,6-Dinitro-2-methylphenol	198.00	8.056	8.056	(0.903)	45458	50	25
59	n-Nitrosodiphenylamine	169.00	8.080	8.080	(0.906)	164956	50	25
60	1,2-Diphenylhydrazine	77.00	8.116	8.116	(0.910)	400382	50	25
62	4-Bromophenyl-phenylether	248.00	8.448	8.448	(0.947)	79542	50	25
63	Hexachlorobenzene	283.70	8.613	8.613	(0.965)	97763	50	25
64	Pentachlorophenol	265.50	8.791	8.791	(0.985)	52335	50	25
66	Phenanthrene	178.00	8.945	8.945	(1.003)	327111	50	25
67	Anthracene	178.00	8.981	8.981	(1.007)	334435	50	25
68	Carbazole	167.00	9.147	9.147	(1.025)	272581	50	25
69	Di-n-butylphthalate	149.00	9.538	9.538	(1.069)	422572	50	25
70	Fluoranthene	202.00	10.166	10.166	(1.139)	276166	50	25
71	Pyrene	202.00	10.391	10.391	(0.882)	273639	50	25
73	Butylbenzylphthalate	149.00	11.090	11.090	(0.942)	138212	50	25
74	3,3'-Dichlorobenzidine	252.00	11.718	11.718	(0.995)	73287	50	25
75	Benzo[a]anthracene	228.00	11.754	11.754	(0.998)	206785	50	25
77	Chrysene	228.00	11.801	11.801	(1.002)	188920	50	25
78	bis(2-Ethylhexyl)phthalate	149.00	11.837	11.837	(1.005)	177351	50	25
79	Di-n-octylphthalate	149.00	12.725	12.725	(0.909)	261018	50	25
80	Benzo[b]fluoranthene	252.00	13.365	13.365	(0.955)	166573	50	25
81	Benzo[k]fluoranthene	252.00	13.401	13.401	(0.958)	213325	50	25
82	Benzo[a]pyrene	252.00	13.899	13.899	(0.993)	144149	50	25
84	Indeno[1,2,3-cd]pyrene	276.00	15.925	15.925	(1.138)	135554	50	25
85	Dibenz[a,h]anthracene	278.00	15.949	15.949	(1.140)	108418	50	25
86	Benzo[g,h,i]perylene	276.00	16.458	16.458	(1.176)	107050	50	25
$ 3	2-Fluorophenol	112.00	3.423	3.423	(0.769)	174833	50	25
$ 4	Phenol-d5	99.00	4.158	4.158	(0.933)	187670	50	25
$ 61	2,4,6-Tribromophenol	329.70	8.234	8.234	(0.923)	44987	50	25
$ 23	Nitrobenzene-d5	82.00	4.964	4.964	(0.878)	142323	50	25
$ 41	2-Fluorobiphenyl	172.00	6.729	6.729	(0.907)	281986	50	25
$ 72	Terphenyl-d14	244.00	10.545	10.545	(0.895)	191375	50	25
* 11	1,4-Dichlorobenzene-d4	152.00	4.454	4.454	(1.000)	103183	40	
* 32	Naphthalene-d8	136.00	5.651	5.651	(1.000)	348029	40	
* 48	Acenaphthene-d10	164.00	7.417	7.417	(1.000)	171424	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.922	8.922	(1.000)	222794	40	
* 76 Chrysene-d12	240.00	11.777	11.777	(1.000)	137788	40	
* 83 Perylene-d12	264.00	13.993	13.993	(1.000)	83290	40	
17 ortho-Cresol	108.00	4.703	4.703	(1.056)	172933	50	25
20 meta,para-Cresol	108.00	4.833	4.833	(1.085)	167905	50	25
96 Benzidine	184.00	10.770	10.770	(0.914)	2005	50	25

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD050

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

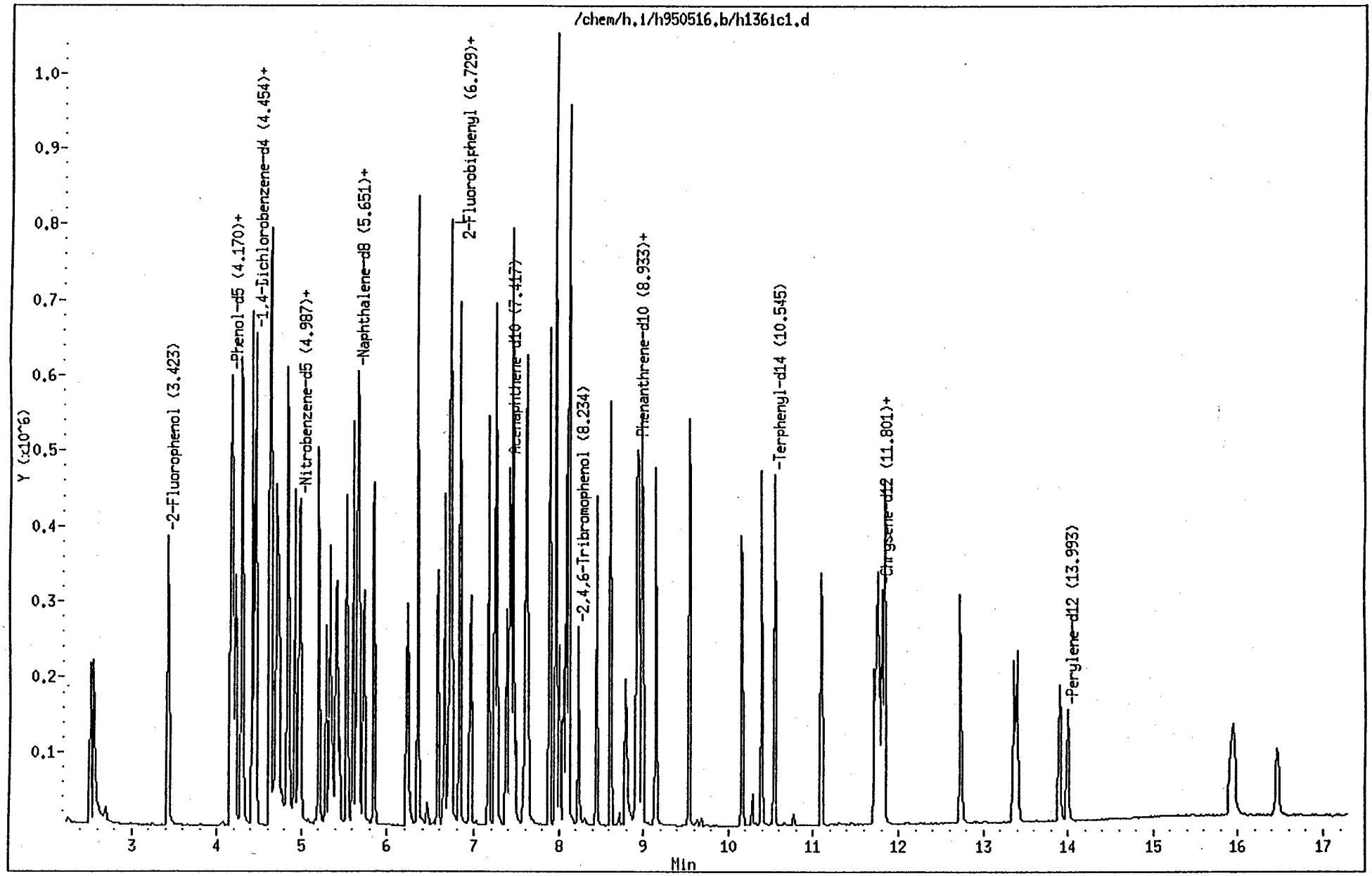
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	103183	0.00
32 Naphthalene-d8	348029	174014	696058	348029	0.00
48 Acenaphthene-d10	171424	85712	342848	171424	0.00
65 Phenanthrene-d10	222794	111397	445588	222794	0.00
76 Chrysene-d12	137788	68894	275576	137788	0.00
83 Perylene-d12	83290	41645	166580	83290	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.45	0.00
32 Naphthalene-d8	5.65	5.15	6.15	5.65	0.00
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.00
65 Phenanthrene-d10	8.92	8.42	9.42	8.92	0.00
76 Chrysene-d12	11.78	11.28	12.28	11.78	0.00
83 Perylene-d12	13.99	13.49	14.49	13.99	0.00

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.

Data File: /chem/h.i/h950516.b/h1361c1.d
Date : 16-MAY-95 11:52
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic4.d
Lab Smp Id:
Inj Date : 16-MAY-1995 14:16
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD080
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	2.548	2.546	(0.573)	188941	65	32
5	Phenol	94.00	4.171	4.170	(0.939)	275716	67	34
6	Aniline	93.00	4.195	4.193	(0.944)	255180	77	38
7	bis(2-Chloroethyl)ether	93.00	4.219	4.217	(0.949)	253177	69	35
9	2-Chlorophenol	128.00	4.302	4.300	(0.968)	260817	75	37
10	1,3-Dichlorobenzene	146.00	4.420	4.418	(0.995)	298691	74	37
12	1,4-Dichlorobenzene	146.00	4.456	4.466	(1.003)	292325	76	38
13	Benzyl alcohol	108.00	4.788	4.679	(1.077)	49264	82	41(QM)
15	1,2-Dichlorobenzene	146.00	4.634	4.632	(1.043)	257245	71	36
16	2-Methylphenol	108.00	4.693	4.703	(1.056)	255747	74	37
18	bis(2-chloroisopropyl)ether	45.00	4.717	4.715	(1.061)	153364	71	35
19	4-Methylphenol	108.00	4.835	4.833	(1.088)	235987	71	35
21	N-Nitroso-di-n-propylamine	70.00	4.847	4.845	(1.091)	124427	78	39
22	Hexachloroethane	117.00	4.918	4.916	(1.107)	110271	79	39
24	Nitrobenzene	77.00	4.989	4.987	(0.884)	212202	77	38
25	Isophorone	82.00	5.202	5.201	(0.922)	389517	75	37
26	2-Nitrophenol	139.00	5.285	5.295	(0.937)	151284	78	39
27	2,4-Dimethylphenol	107.00	5.333	5.331	(0.945)	272911	84	42
28	Benzoic acid	122.00	5.475	5.449	(0.971)	132238	91	45
29	bis(2-Chloroethoxy)methane	93.00	5.404	5.414	(0.958)	208455	71	36
30	2,4-Dichlorophenol	162.00	5.534	5.532	(0.981)	210066	79	40
31	1,2,4-Trichlorobenzene	180.00	5.605	5.603	(0.994)	224678	75	38
33	Naphthalene	128.00	5.665	5.675	(1.004)	635864	72	36
34	4-Chloroaniline	127.00	5.724	5.734	(1.015)	248494	84	42
35	Hexachlorobutadiene	225.00	5.842	5.852	(1.036)	145720	84	42
36	4-Chloro-3-methylphenol	107.00	6.233	6.232	(1.105)	222884	86	43
37	2-Methylnaphthalene	142.00	6.352	6.350	(1.126)	442101	77	39
38	Hexachlorocyclopentadiene	237.00	6.577	6.587	(0.887)	162874	88	44
39	2,4,6-Trichlorophenol	196.00	6.660	6.658	(0.898)	136235	76	38

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.707	6.717	(0.904)	183810	82	41
42	2-Chloronaphthalene	162.00	6.838	6.836	(0.922)	411469	74	37
43	2-Nitroaniline	65.00	6.956	6.966	(0.938)	108730	82	41
44	Dimethylphthalate	163.00	7.170	7.168	(0.966)	499610	74	37
45	2,6-Dinitrotoluene	165.00	7.241	7.239	(0.976)	129019	82	41
46	Acenaphthylene	152.00	7.264	7.263	(0.979)	662983	74	37
47	3-Nitroaniline	138.00	7.383	7.381	(0.995)	123112	84	42
49	Acenaphthene	153.00	7.454	7.452	(1.005)	386814	74	37
50	2,4-Dinitrophenol	184.00	7.478	7.488	(1.008)	70750	110	53
51	4-Nitrophenol	109.00	7.584	7.582	(1.022)	69934	110	53
52	Dibenzofuran	168.00	7.608	7.618	(1.026)	562640	73	36
53	2,4-Dinitrotoluene	165.00	7.632	7.630	(1.029)	158658	80	40
54	Diethylphthalate	149.00	7.892	7.891	(1.064)	525637	79	40
55	4-Chlorophenyl-phenylether	204.00	7.952	7.962	(1.072)	204094	74	37
56	Fluorene	166.00	7.964	7.962	(1.073)	375787	73	37
57	4-Nitroaniline	138.00	8.011	8.009	(1.080)	115306	86	43
58	4,6-Dinitro-2-methylphenol	198.00	8.058	8.056	(0.904)	96206	91	46
59	n-Nitrosodiphenylamine	169.00	8.082	8.080	(0.907)	287922	75	38
60	1,2-Diphenylhydrazine	77.00	8.118	8.116	(0.911)	688452	74	37
62	4-Bromophenyl-phenylether	248.00	8.449	8.448	(0.948)	141928	77	38
63	Hexachlorobenzene	283.70	8.603	8.613	(0.965)	171407	76	38
64	Pentachlorophenol	265.50	8.793	8.791	(0.987)	105835	87	44
66	Phenanthrene	178.00	8.935	8.945	(1.003)	574740	76	38
67	Anthracene	178.00	8.983	8.981	(1.008)	552606	71	36
68	Carbazole	167.00	9.137	9.147	(1.025)	484893	77	38
69	Di-n-butylphthalate	149.00	9.528	9.538	(1.069)	711404	72	36
70	Fluoranthene	202.00	10.156	10.166	(1.140)	510736	80	40
71	Pyrene	202.00	10.381	10.391	(0.883)	493428	78	39
73	Butylbenzylphthalate	149.00	11.080	11.090	(0.943)	252074	79	39
74	3,3'-Dichlorobenzidine	252.00	11.708	11.718	(0.996)	136090	80	40
75	Benzo[a]anthracene	228.00	11.732	11.754	(0.998)	381888	80	40
77	Chrysene	228.00	11.791	11.801	(1.003)	338037	77	39
78	bis(2-Ethylhexyl)phthalate	149.00	11.815	11.837	(1.005)	298762	73	36
79	Di-n-octylphthalate	149.00	12.704	12.725	(0.909)	468657	77	38
80	Benzo[b]fluoranthene	252.00	13.344	13.365	(0.955)	348797	90	45
81	Benzo[k]fluoranthene	252.00	13.391	13.401	(0.958)	326441	66	33
82	Benzo[a]pyrene	252.00	13.877	13.899	(0.993)	268506	80	40
84	Indeno[1,2,3-cd]pyrene	276.00	15.891	15.925	(1.137)	253979	80	40
85	Dibenz[a,h]anthracene	278.00	15.927	15.949	(1.140)	204883	81	40
86	Benzo[g,h,i]perylene	276.00	16.436	16.458	(1.176)	205814	82	41
$ 3	2-Fluorophenol	112.00	3.425	3.423	(0.771)	255106	73	37
$ 4	Phenol-d5	99.00	4.160	4.158	(0.936)	260704	70	35
$ 61	2,4,6-Tribromophenol	329.70	8.224	8.234	(0.923)	82352	79	39
$ 23	Nitrobenzene-d5	82.00	4.965	4.964	(0.880)	224916	78	39
$ 41	2-Fluorobiphenyl	172.00	6.731	6.729	(0.907)	437090	71	35
$ 72	Terphenyl-d14	244.00	10.535	10.545	(0.896)	346643	78	39
* 11	1,4-Dichlorobenzene-d4	152.00	4.444	4.454	(1.000)	102691	40	
* 32	Naphthalene-d8	136.00	5.641	5.651	(1.000)	354785	40	
* 48	Acenaphthene-d10	164.00	7.418	7.417	(1.000)	187340	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
65 Phenanthrene-d10	188.00	8.912	8.922	(1.000)	258459	40	
76 Chrysene-d12	240.00	11.756	11.777	(1.000)	159676	40	
83 Perylene-d12	264.00	13.972	13.993	(1.000)	96974	40	
17 ortho-Cresol	108.00	4.693	4.703	(1.056)	255747	74	37
20 meta,para-Cresol	108.00	4.835	4.833	(1.088)	235987	71	35
96 Benzidine	184.00	10.760	10.770	(0.915)	4187	90	45

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic4.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD080

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	102691	-0.48
32 Naphthalene-d8	348029	174014	696058	354785	1.94
48 Acenaphthene-d10	171424	85712	342848	187340	9.28
65 Phenanthrene-d10	222794	111397	445588	258459	16.01
76 Chrysene-d12	137788	68894	275576	159676	15.89
83 Perylene-d12	83290	41645	166580	96974	16.43

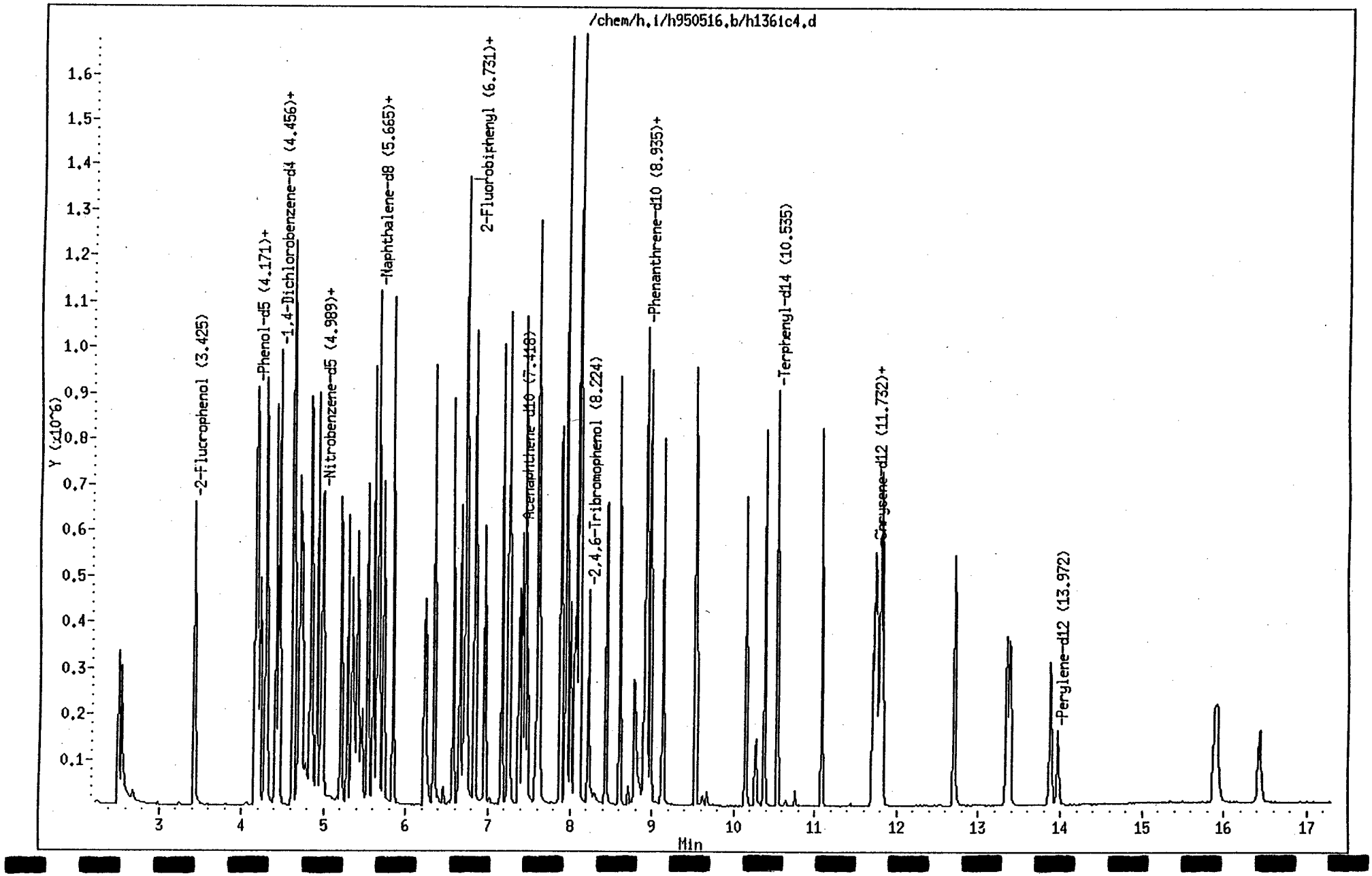
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.22
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.18
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.02
65 Phenanthrene-d10	8.92	8.42	9.42	8.91	-0.11
76 Chrysene-d12	11.78	11.28	12.28	11.76	-0.19
83 Perylene-d12	13.99	13.49	14.49	13.97	-0.16

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.

Data File: /chem/h.i/h950516.b/h136ic4.d
Date : 16-MAY-95 14:16
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic3.d
Lab Smp Id:
Inj Date : 16-MAY-1995 12:41
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD120
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	2.547	2.546	(0.572)	313371	96	48
5	Phenol	94.00	4.183	4.170	(0.939)	389614	86	43(Q)
6	Aniline	93.00	4.195	4.193	(0.941)	420610	110	57
7	bis(2-Chloroethyl)ether	93.00	4.230	4.217	(0.949)	373614	92	46
9	2-Chlorophenol	128.00	4.313	4.300	(0.968)	388309	100	50
10	1,3-Dichlorobenzene	146.00	4.420	4.418	(0.992)	439830	98	49
12	1,4-Dichlorobenzene	146.00	4.467	4.466	(1.003)	427559	99	50
13	Benzyl alcohol	108.00	4.740	4.679	(1.064)	73603	110	55(QM)
15	1,2-Dichlorobenzene	146.00	4.633	4.632	(1.040)	376343	94	47
16	2-Methylphenol	108.00	4.704	4.703	(1.056)	422160	110	55
18	bis(2-chloroisopropyl)ether	45.00	4.716	4.715	(1.058)	229872	95	48
19	4-Methylphenol	108.00	4.846	4.833	(1.088)	336572	90	45
21	N-Nitroso-di-n-propylamine	70.00	4.858	4.845	(1.090)	187335	100	52
22	Hexachloroethane	117.00	4.917	4.916	(1.104)	169968	110	54
24	Nitrobenzene	77.00	5.000	4.987	(0.885)	324480	100	53
25	Isophorone	82.00	5.226	5.201	(0.925)	631868	110	54
26	2-Nitrophenol	139.00	5.297	5.295	(0.937)	236270	110	55
27	2,4-Dimethylphenol	107.00	5.344	5.331	(0.945)	425892	120	59
28	Benzoic acid	122.00	5.510	5.449	(0.975)	239260	150	74
29	bis(2-Chloroethoxy)methane	93.00	5.415	5.414	(0.958)	315477	97	48
30	2,4-Dichlorophenol	162.00	5.546	5.532	(0.981)	321306	110	54
31	1,2,4-Trichlorobenzene	180.00	5.617	5.603	(0.994)	340696	100	51
33	Naphthalene	128.00	5.676	5.675	(1.004)	949251	96	48
34	4-Chloroaniline	127.00	5.735	5.734	(1.015)	378800	120	58
35	Hexachlorobutadiene	225.00	5.854	5.852	(1.036)	226704	120	59
36	4-Chloro-3-methylphenol	107.00	6.233	6.232	(1.103)	352731	120	61
37	2-Methylnaphthalene	142.00	6.351	6.350	(1.124)	652800	100	51
38	Hexachlorocyclopentadiene	237.00	6.588	6.587	(0.887)	256398	130	64
39	2,4,6-Trichlorophenol	196.00	6.671	6.658	(0.898)	213151	110	55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.719	6.717	(0.904)	271545	110	57
	42 2-Chloronaphthalene	162.00	6.849	6.836	(0.922)	609702	100	51
	43 2-Nitroaniline	65.00	6.968	6.966	(0.938)	166624	120	59
	44 Dimethylphthalate	163.00	7.181	7.168	(0.967)	725772	100	50
	45 2,6-Dinitrotoluene	165.00	7.252	7.239	(0.976)	180916	110	54
	46 Acenaphthylene	152.00	7.276	7.263	(0.979)	944965	98	49
	47 3-Nitroaniline	138.00	7.394	7.381	(0.995)	177344	110	57
	49 Acenaphthene	153.00	7.465	7.452	(1.005)	564816	100	51
	50 2,4-Dinitrophenol	184.00	7.489	7.488	(1.008)	111259	160	78
	51 4-Nitrophenol	109.00	7.596	7.582	(1.022)	104999	150	74 (Q)
	52 Dibenzofuran	168.00	7.619	7.618	(1.026)	793997	96	48
	53 2,4-Dinitrotoluene	165.00	7.643	7.630	(1.029)	224595	100	52
	54 Diethylphthalate	149.00	7.904	7.891	(1.064)	730138	100	51
	55 4-Chlorophenyl-phenylether	204.00	7.963	7.962	(1.072)	279818	95	47
	56 Fluorene	166.00	7.975	7.962	(1.073)	517183	94	47
	57 4-Nitroaniline	138.00	8.022	8.009	(1.080)	162254	110	56
	58 4,6-Dinitro-2-methylphenol	198.00	8.070	8.056	(0.904)	135735	130	66
	59 n-Nitrosodiphenylamine	169.00	8.093	8.080	(0.907)	394150	110	53
	60 1,2-Diphenylhydrazine	77.00	8.129	8.116	(0.911)	980691	110	54
	62 4-Bromophenyl-phenylether	248.00	8.461	8.448	(0.948)	194355	110	54
	63 Hexachlorobenzene	283.70	8.615	8.613	(0.965)	239544	110	54
	64 Pentachlorophenol	265.50	8.804	8.791	(0.987)	154669	130	66
	66 Phenanthrene	178.00	8.947	8.945	(1.003)	741575	100	50
	67 Anthracene	178.00	8.994	8.981	(1.008)	743469	99	49
	68 Carbazole	167.00	9.160	9.147	(1.027)	641416	100	52
	69 Di-n-butylphthalate	149.00	9.551	9.538	(1.070)	961210	100	50
	70 Fluoranthene	202.00	10.167	10.166	(1.139)	668680	110	54
	71 Pyrene	202.00	10.392	10.391	(0.882)	640318	100	52
	73 Butylbenzylphthalate	149.00	11.103	11.090	(0.943)	343416	110	55
	74 3,3'-Dichlorobenzidine	252.00	11.731	11.718	(0.996)	200527	120	61
	75 Benzo[a]anthracene	228.00	11.755	11.754	(0.998)	509641	110	55
	77 Chrysene	228.00	11.814	11.801	(1.003)	467268	110	55
	78 bis(2-Ethylhexyl)phthalate	149.00	11.838	11.837	(1.005)	414137	100	52
	79 Di-n-octylphthalate	149.00	12.727	12.725	(0.909)	697804	120	59
	80 Benzo[b]fluoranthene	252.00	13.367	13.365	(0.955)	452050	120	60
	81 Benzo[k]fluoranthene	252.00	13.414	13.401	(0.959)	453894	94	47
	82 Benzo[a]pyrene	252.00	13.912	13.899	(0.994)	377984	120	58
	84 Indeno[1,2,3-cd]pyrene	276.00	15.938	15.925	(1.139)	390966	130	63
	85 Dibenz[a,h]anthracene	278.00	15.962	15.949	(1.141)	322959	130	65
	86 Benzo[g,h,i]perylene	276.00	16.483	16.458	(1.178)	316289	130	65
$	3 2-Fluorophenol	112.00	3.436	3.423	(0.771)	397060	100	51
$	4 Phenol-d5	99.00	4.171	4.158	(0.936)	387229	93	46
$	61 2,4,6-Tribromophenol	329.70	8.236	8.234	(0.923)	117707	120	58
$	23 Nitrobenzene-d5	82.00	4.977	4.964	(0.880)	358924	110	56
$	41 2-Fluorobiphenyl	172.00	6.742	6.729	(0.907)	635030	96	48
$	72 Terphenyl-d14	244.00	10.546	10.545	(0.895)	454390	100	53
*	11 1,4-Dichlorobenzene-d4	152.00	4.455	4.454	(1.000)	114323	40	
*	32 Naphthalene-d8	136.00	5.652	5.651	(1.000)	394576	40	
*	48 Acenaphthene-d10	164.00	7.430	7.417	(1.000)	201146	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.923	8.922	(1.000)	250391	40	
* 76 Chrysene-d12	240.00	11.779	11.777	(1.000)	154459	40	
* 83 Perylene-d12	264.00	13.995	13.993	(1.000)	94735	40	
17 ortho-Cresol	108.00	4.704	4.703	(1.056)	422160	110	55
20 meta,para-Cresol	108.00	4.846	4.833	(1.088)	336572	90	45
96 Benzidine	184.00	10.771	10.770	(0.914)	6137	140	68

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic3.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD120

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	114323	10.80
32 Naphthalene-d8	348029	174014	696058	394576	13.37
48 Acenaphthene-d10	171424	85712	342848	201146	17.34
65 Phenanthrene-d10	222794	111397	445588	250391	12.39
76 Chrysene-d12	137788	68894	275576	154459	12.10
83 Perylene-d12	83290	41645	166580	94735	13.74

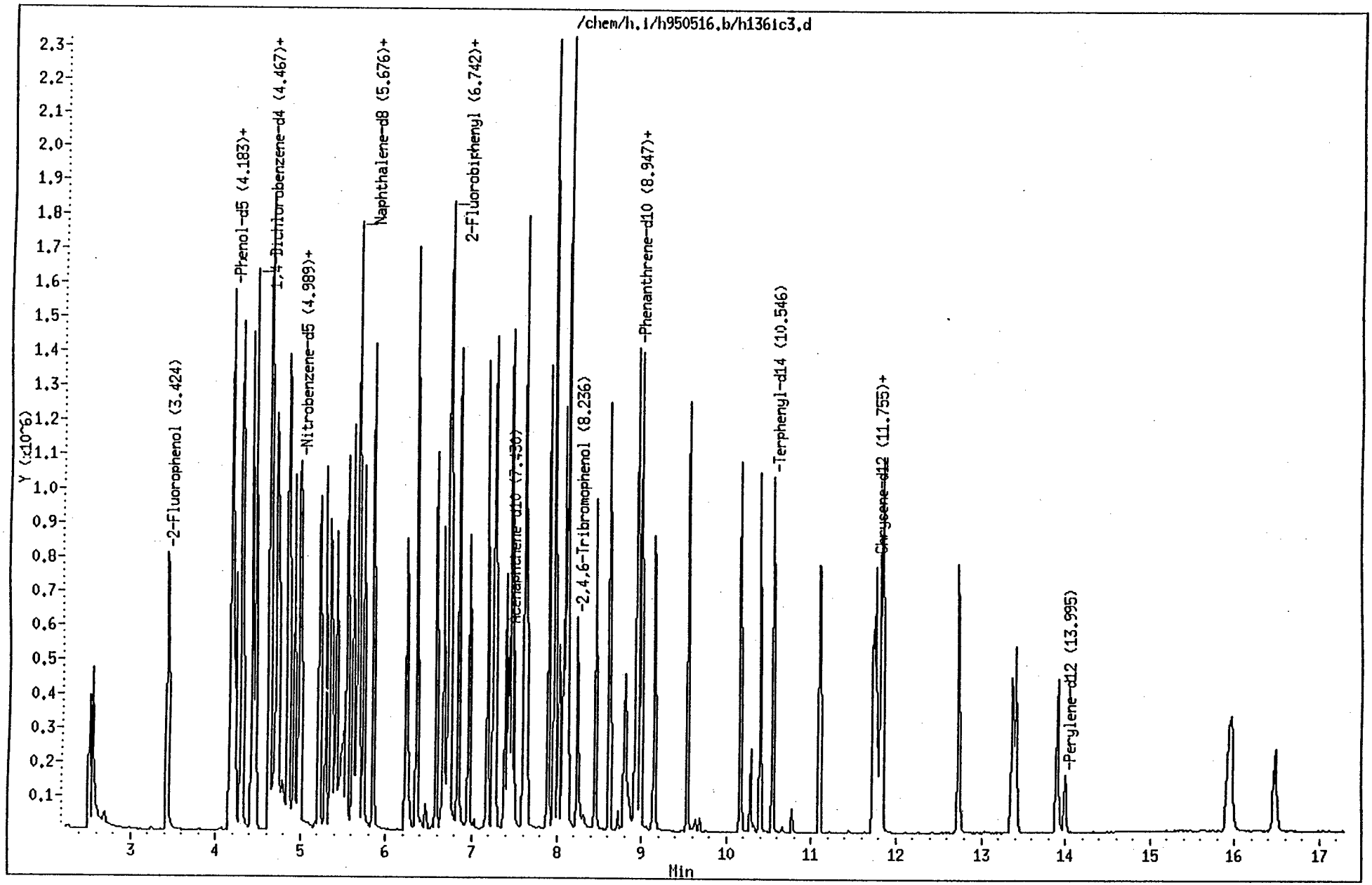
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.46	0.03
32 Naphthalene-d8	5.65	5.15	6.15	5.65	0.02
48 Acenaphthene-d10	7.42	6.92	7.92	7.43	0.18
65 Phenanthrene-d10	8.92	8.42	9.42	8.92	0.01
76 Chrysene-d12	11.78	11.28	12.28	11.78	0.01
83 Perylene-d12	13.99	13.49	14.49	13.99	0.01

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.

Data File: /chem/h.i/h950516.b/h1361c3.d
Date : 16-MAY-95 12:41
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic2.d
Lab Smp Id:
Inj Date : 16-MAY-1995 14:41
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD160
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
2	Pyridine	79.00	2.546	2.546	(0.573)	329510	130	67
5	Phenol	94.00	4.182	4.170	(0.941)	375622	110	55(Q)
6	Aniline	93.00	4.193	4.193	(0.944)	365661	130	66
7	bis(2-Chloroethyl)ether	93.00	4.217	4.217	(0.949)	375204	120	61
9	2-Chlorophenol	128.00	4.300	4.300	(0.968)	382636	130	66
10	1,3-Dichlorobenzene	146.00	4.419	4.418	(0.995)	440865	130	65
12	1,4-Dichlorobenzene	146.00	4.454	4.466	(1.003)	445009	140	69
13	Benzyl alcohol	108.00	4.786	4.679	(1.077)	67471	130	67(QM)
15	1,2-Dichlorobenzene	146.00	4.632	4.632	(1.043)	371528	120	61
16	2-Methylphenol	108.00	4.691	4.703	(1.056)	376067	130	65
18	bis(2-chloroisopropyl)ether	45.00	4.703	4.715	(1.059)	219587	120	60
19	4-Methylphenol	108.00	4.833	4.833	(1.088)	313610	110	56
21	N-Nitroso-di-n-propylamine	70.00	4.845	4.845	(1.091)	172548	130	64(Q)
22	Hexachloroethane	117.00	4.916	4.916	(1.107)	169889	140	72
24	Nitrobenzene	77.00	4.987	4.987	(0.884)	312306	140	71
25	Isophorone	82.00	5.213	5.201	(0.924)	574751	140	69
26	2-Nitrophenol	139.00	5.284	5.295	(0.937)	222713	140	72
27	2,4-Dimethylphenol	107.00	5.343	5.331	(0.947)	409095	160	79
28	Benzoic acid	122.00	5.485	5.449	(0.973)	222556	190	96
29	bis(2-Chloroethoxy)methane	93.00	5.402	5.414	(0.958)	286611	120	62
30	2,4-Dichlorophenol	162.00	5.533	5.532	(0.981)	299989	140	71
31	1,2,4-Trichlorobenzene	180.00	5.604	5.603	(0.994)	325869	140	69
33	Naphthalene	128.00	5.663	5.675	(1.004)	893982	130	63
34	4-Chloroaniline	127.00	5.722	5.734	(1.015)	351590	150	75
35	Hexachlorobutadiene	225.00	5.841	5.852	(1.036)	219914	160	80
36	4-Chloro-3-methylphenol	107.00	6.220	6.232	(1.103)	324914	160	79
37	2-Methylnaphthalene	142.00	6.338	6.350	(1.124)	611089	130	67
38	Hexachlorocyclopentadiene	237.00	6.575	6.587	(0.888)	238578	170	84
39	2,4,6-Trichlorophenol	196.00	6.658	6.658	(0.899)	188233	140	69

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.706	6.717	(0.906)	237166	150	76
42	2-Chloronaphthalene	162.00	6.824	6.836	(0.922)	561754	130	66
43	2-Nitroaniline	65.00	6.955	6.966	(0.939)	151110	150	75
44	Dimethylphthalate	163.00	7.168	7.168	(0.968)	659341	130	64
45	2,6-Dinitrotoluene	165.00	7.239	7.239	(0.978)	165254	140	69
46	Acenaphthylene	152.00	7.251	7.263	(0.979)	863263	130	63
47	3-Nitroaniline	138.00	7.381	7.381	(0.997)	161876	150	73
49	Acenaphthene	153.00	7.440	7.452	(1.005)	507530	130	64
50	2,4-Dinitrophenol	184.00	7.476	7.488	(1.010)	99712	200	99
51	4-Nitrophenol	109.00	7.583	7.582	(1.024)	92459	180	92(Q)
52	Dibenzofuran	168.00	7.606	7.618	(1.027)	727775	120	62
53	2,4-Dinitrotoluene	165.00	7.630	7.630	(1.030)	203427	130	67
54	Diethylphthalate	149.00	7.879	7.891	(1.064)	662276	130	66
55	4-Chlorophenyl-phenylether	204.00	7.950	7.962	(1.074)	263879	120	63
56	Fluorene	166.00	7.950	7.962	(1.074)	477106	120	61
57	4-Nitroaniline	138.00	8.009	8.009	(1.082)	141993	140	69
58	4,6-Dinitro-2-methylphenol	198.00	8.057	8.056	(0.905)	119211	170	86
59	n-Nitrosodiphenylamine	169.00	8.080	8.080	(0.908)	351323	140	70
60	1,2-Diphenylhydrazine	77.00	8.104	8.116	(0.911)	937736	150	77
62	4-Bromophenyl-phenylether	248.00	8.436	8.448	(0.948)	174803	140	72
63	Hexachlorobenzene	283.70	8.602	8.613	(0.967)	219083	150	73
64	Pentachlorophenol	265.50	8.780	8.791	(0.987)	138373	170	87
66	Phenanthrene	178.00	8.922	8.945	(1.003)	674857	140	68
67	Anthracene	178.00	8.969	8.981	(1.008)	670722	130	66
68	Carbazole	167.00	9.135	9.147	(1.027)	563919	140	68
69	Di-n-butylphthalate	149.00	9.526	9.538	(1.071)	855201	130	66
70	Fluoranthene	202.00	10.142	10.166	(1.140)	593938	140	70
71	Pyrene	202.00	10.367	10.391	(0.882)	581341	130	67
73	Butylbenzylphthalate	149.00	11.078	11.090	(0.943)	333282	150	76
74	3,3'-Dichlorobenzidine	252.00	11.707	11.718	(0.996)	193546	170	83
75	Benzo[a]anthracene	228.00	11.730	11.754	(0.998)	479463	150	73
77	Chrysene	228.00	11.789	11.801	(1.003)	441697	150	74
78	bis(2-Ethylhexyl)phthalate	149.00	11.813	11.837	(1.005)	409071	140	73
79	Di-n-octylphthalate	149.00	12.702	12.725	(0.909)	688326	150	73
80	Benzo[b]fluoranthene	252.00	13.342	13.365	(0.955)	509041	170	85
81	Benzo[k]fluoranthene	252.00	13.377	13.401	(0.958)	434137	110	56
82	Benzo[a]pyrene	252.00	13.875	13.899	(0.993)	396609	150	76
84	Indeno[1,2,3-cd]pyrene	276.00	15.890	15.925	(1.137)	427038	180	88
85	Dibenz[a,h]anthracene	278.00	15.925	15.949	(1.140)	344805	180	88
86	Benzo[g,h,i]perylene	276.00	16.447	16.458	(1.177)	338410	180	88
$ 3	2-Fluorophenol	112.00	3.423	3.423	(0.771)	393997	130	67
$ 4	Phenol-d5	99.00	4.170	4.158	(0.939)	370609	120	59
$ 61	2,4,6-Tribromophenol	329.70	8.223	8.234	(0.924)	123123	180	90
$ 23	Nitrobenzene-d5	82.00	4.964	4.964	(0.880)	32080	150	74(R)
$ 41	2-Fluorobiphenyl	172.00	6.729	6.729	(0.909)	578635	120	62(R)
$ 72	Terphenyl-d14	244.00	10.533	10.545	(0.896)	429978	140	71(R)
* 11	1,4-Dichlorobenzene-d4	152.00	4.442	4.454	(1.000)	86132	40	
* 32	Naphthalene-d8	136.00	5.639	5.651	(1.000)	281607	40	
* 48	Acenaphthene-d10	164.00	7.405	7.417	(1.000)	142545	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.898	8.922	(1.000)	169938	40	
* 76 Chrysene-d12	240.00	11.754	11.777	(1.000)	109143	40	
* 83 Perylene-d12	264.00	13.970	13.993	(1.000)	74928	40	
17 ortho-Cresol	108.00	4.691	4.703	(1.056)	376067	130	65
20 meta,para-Cresol	108.00	4.833	4.833	(1.088)	313610	110	56
96 Benzidine	184.00	10.747	10.770	(0.914)	6200	200	98

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic2.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD160

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

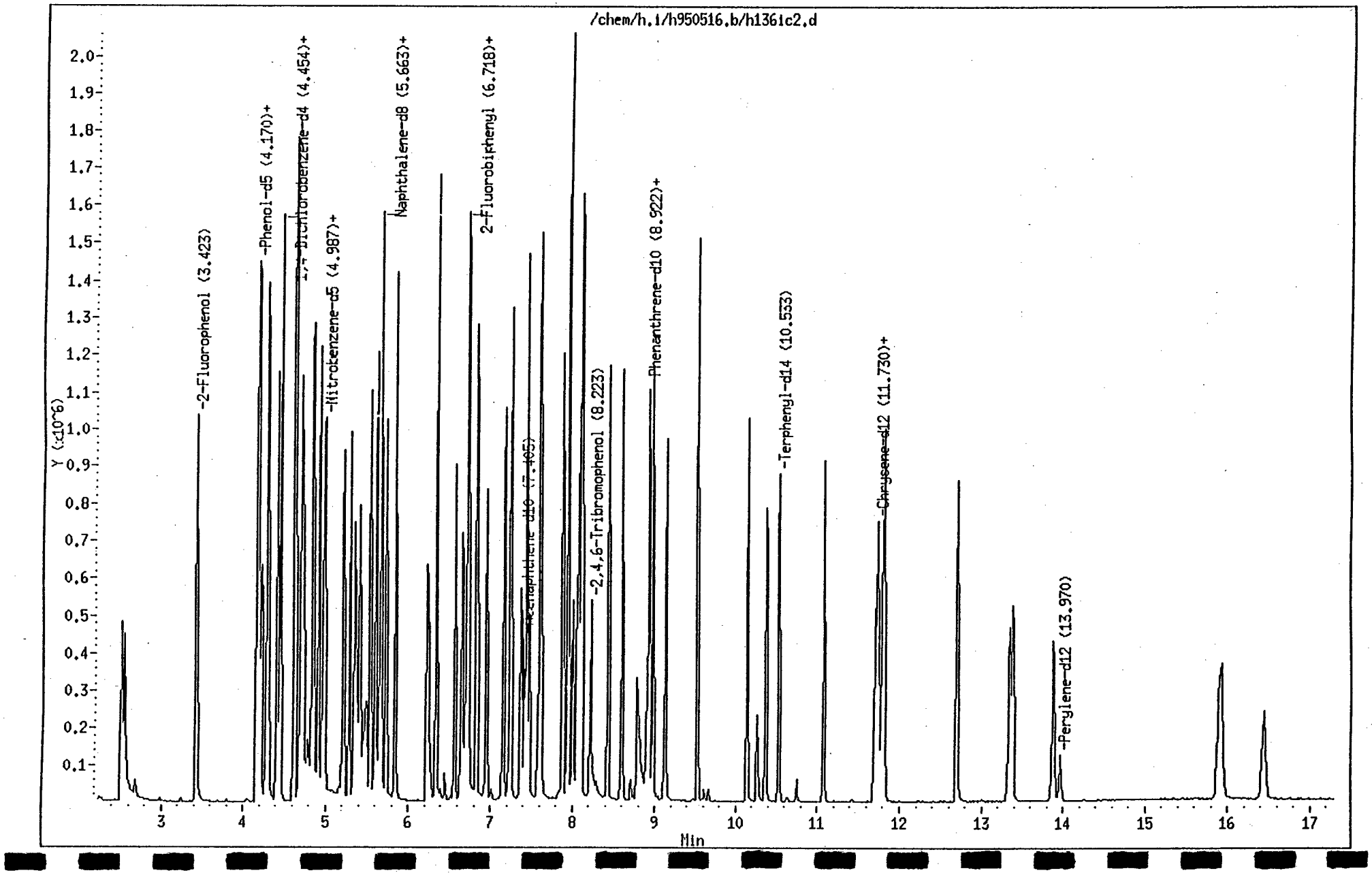
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	86132	-16.53
32 Naphthalene-d8	348029	174014	696058	281607	-19.09
48 Acenaphthene-d10	171424	85712	342848	142545	-16.85
65 Phenanthrene-d10	222794	111397	445588	169938	-23.72
76 Chrysene-d12	137788	68894	275576	109143	-20.79
83 Perylene-d12	83290	41645	166580	74928	-10.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.26
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.21
48 Acenaphthene-d10	7.42	6.92	7.92	7.40	-0.16
65 Phenanthrene-d10	8.92	8.42	9.42	8.90	-0.26
76 Chrysene-d12	11.78	11.28	12.28	11.75	-0.20
83 Perylene-d12	13.99	13.49	14.49	13.97	-0.17

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.

Data File: /chem/h.i/h950516.b/h1361c2.d
Date : 16-MAY-95 14:41
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950516.b/h136ic1.d
Report Date: 26-May-1995 19:35

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h136ic1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 16-MAY-1995 11:52
Init. Calibration Date(s): 05/16/95 05/16/95
Init. Calibration Times: 11:52 13:52
Method File: /chem/h.i/h950516.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
2	Pyridine	0.971	1.136	0.010	17.0	50.0
5	Phenol	1.340	1.591	0.800	18.8	25.0
6	Aniline	1.212	1.293	0.010	6.6	100.0
7	bis(2-Chloroethyl)ether	1.242	1.424	0.700	14.6	25.0
9	2-Chlorophenol	1.239	1.356	0.800	9.4	25.0
10	1,3-Dichlorobenzene	1.435	1.568	0.600	9.2	25.0
12	1,4-Dichlorobenzene	1.413	1.504	0.500	6.5	25.0
13	Benzyl alcohol	0.217	0.235	0.010	8.2	100.0
15	1,2-Dichlorobenzene	1.261	1.403	0.400	11.2	25.0
16	2-Methylphenol	1.236	1.341	0.700	8.5	25.0
18	bis(2-chloroisopropyl)ether	0.747	0.846	0.010	13.1	100.0
19	4-Methylphenol	1.121	1.302	0.600	16.2	25.0
21	N-Nitroso-di-n-propylamine	0.593	0.624	0.500	5.2	25.0
22	Hexachloroethane	0.530	0.546	0.300	3.1	25.0
24	Nitrobenzene	0.296	0.311	0.200	5.3	25.0
25	Isophorone	0.556	0.588	0.400	5.8	50.0
26	2-Nitrophenol	0.209	0.219	0.100	4.7	25.0
27	2,4-Dimethylphenol	0.371	0.367	0.200	1.0	25.0
28	Benzoic acid	0.183	0.164	0.010	10.4	40.0
29	bis(2-Chloroethoxy)methane	0.296	0.330	0.300	11.4	25.0
30	2,4-Dichlorophenol	0.290	0.299	0.200	3.2	25.0
31	1,2,4-Trichlorobenzene	0.316	0.336	0.200	6.3	25.0
33	Naphthalene	0.911	1.002	0.700	10.0	25.0
34	4-Chloroaniline	0.334	0.331	0.010	0.9	40.0
35	Hexachlorobutadiene	0.200	0.196	0.010	2.3	40.0
36	4-Chloro-3-methylphenol	0.297	0.291	0.200	2.2	25.0
37	2-Methylnaphthalene	0.615	0.644	0.400	4.8	25.0
38	Hexachlorocyclopentadiene	0.411	0.397	0.010	3.4	40.0
39	2,4,6-Trichlorophenol	0.363	0.383	0.200	5.6	25.0
40	2,4,5-Trichlorophenol	0.459	0.476	0.200	3.7	25.0
42	2-Chloronaphthalene	1.107	1.194	0.800	7.9	25.0
43	2-Nitroaniline	0.278	0.281	0.010	1.3	40.0
44	Dimethylphthalate	1.331	1.434	0.010	7.7	40.0
45	2,6-Dinitrotoluene	0.323	0.336	0.200	4.1	25.0
46	Acenaphthylene	1.754	1.910	1.300	8.9	25.0
47	3-Nitroaniline	0.304	0.311	0.010	2.3	40.0
49	Acenaphthene	1.034	1.108	0.800	7.1	25.0
50	2,4-Dinitrophenol	0.155	0.141	0.010	8.6	40.0
51	4-Nitrophenol	0.156	0.141	0.010	9.9	40.0
52	Dibenzofuran	1.496	1.648	0.800	10.1	25.0

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h136ic1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 16-MAY-1995 11:52
Init. Calibration Date(s): 05/16/95 05/16/95
Init. Calibration Times: 11:52 13:52
Method File: /chem/h.i/h950516.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	53 2,4-Dinitrotoluene	0.400	0.426	0.200	6.5	40.0
	54 Diethylphthalate	1.358	1.414	0.010	4.1	40.0
	55 4-Chlorophenyl-phenylether	0.543	0.588	0.400	8.2	25.0
	56 Fluorene	1.006	1.094	0.900	8.7	25.0
	57 4-Nitroaniline	0.278	0.287	0.010	3.5	40.0
	58 4,6-Dinitro-2-methylphenol	0.166	0.163	0.010	1.6	50.0
	59 n-Nitrosodiphenylamine	0.559	0.592	0.010	6.0	40.0
	60 1,2-Diphenylhydrazine	1.412	1.438	0.010	1.8	40.0
	62 4-Bromophenyl-phenylether	0.276	0.286	0.100	3.4	25.0
	63 Hexachlorobenzene	0.339	0.351	0.100	3.6	25.0
	64 Pentachlorophenol	0.188	0.188	0.050	0.2	25.0
	66 Phenanthrene	1.109	1.175	0.700	5.9	25.0
	67 Anthracene	1.092	1.201	0.700	9.9	25.0
	68 Carbazole	0.923	0.979	0.010	6.0	40.0
	69 Di-n-butylphthalate	1.431	1.517	0.010	6.0	40.0
	70 Fluoranthene	0.968	0.992	0.600	2.4	25.0
	71 Pyrene	1.487	1.589	0.600	6.9	25.0
	73 Butylbenzylphthalate	0.776	0.802	0.010	3.3	40.0
	74 3,3'-Dichlorobenzidine	0.426	0.426	0.010	0.1	40.0
	75 Benzo[a]anthracene	1.160	1.201	0.800	3.5	25.0
	77 Chrysene	1.058	1.097	0.700	3.7	25.0
	78 bis(2-Ethylhexyl)phthalate	0.960	1.030	0.010	7.2	40.0
	79 Di-n-octylphthalate	2.387	2.507	0.010	5.0	40.0
	80 Benzo[b]fluoranthene	1.654	1.600	0.700	3.3	25.0
	81 Benzo[k]fluoranthene	1.732	2.049	0.700	18.3	25.0
	82 Benzo[a]pyrene	1.352	1.385	0.700	2.4	25.0
	84 Indeno[1,2,3-cd]pyrene	1.332	1.302	0.500	2.3	25.0
	85 Dibenz[a,h]anthracene	1.081	1.041	0.400	3.6	25.0
	86 Benzo[g,h,i]perylene	1.071	1.028	0.500	4.0	25.0
$	3 2-Fluorophenol	1.229	1.356	0.600	10.3	25.0
$	4 Phenol-d5	1.265	1.455	0.800	15.1	25.0
$	61 2,4,6-Tribromophenol	0.164	0.162	0.010	1.3	40.0
$	23 Nitrobenzene-d5	0.316	0.327	0.200	3.4	25.0
$	41 2-Fluorobiphenyl	1.194	1.316	0.700	10.2	25.0
$	72 Terphenyl-d14	1.063	1.111	0.500	4.5	25.0
	17 ortho-Cresol	1.236	1.341	0.700	8.5	25.0
	20 meta,para-Cresol	1.121	1.302	0.600	16.2	25.0
	96 Benzidine	0.014	0.012	0.010	14.9	100.0

SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic1.d
Lab Smp Id:
Inj Date : 16-MAY-1995 11:52
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD050
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	2.546	2.546	(0.572)	146575	50	25
5	Phenol	94.00	4.170	4.170	(0.936)	205267	50	25
6	Aniline	93.00	4.193	4.193	(0.941)	166726	50	25
7	bis(2-Chloroethyl)ether	93.00	4.217	4.217	(0.947)	183611	50	25
9	2-Chlorophenol	128.00	4.300	4.300	(0.965)	174942	50	25
10	1,3-Dichlorobenzene	146.00	4.418	4.418	(0.992)	202199	50	25
12	1,4-Dichlorobenzene	146.00	4.466	4.466	(1.003)	194044	50	25
13	Benzyl alcohol	108.00	4.679	4.679	(1.051)	30275	50	25 (M)
15	1,2-Dichlorobenzene	146.00	4.632	4.632	(1.040)	180932	50	25
16	2-Methylphenol	108.00	4.703	4.703	(1.056)	172933	50	25
18	bis(2-chloroisopropyl)ether	45.00	4.715	4.715	(1.059)	109058	50	25
19	4-Methylphenol	108.00	4.833	4.833	(1.085)	167905	50	25
21	N-Nitroso-di-n-propylamine	70.00	4.845	4.845	(1.088)	80476	50	25
22	Hexachloroethane	117.00	4.916	4.916	(1.104)	70413	50	25
24	Nitrobenzene	77.00	4.987	4.987	(0.883)	135316	50	25
25	Isophorone	82.00	5.201	5.201	(0.920)	255738	50	25
26	2-Nitrophenol	139.00	5.295	5.295	(0.937)	95121	50	25
27	2,4-Dimethylphenol	107.00	5.331	5.331	(0.943)	159742	50	25
28	Benzoic acid	122.00	5.449	5.449	(0.964)	71466	50	25
29	bis(2-Chloroethoxy)methane	93.00	5.414	5.414	(0.958)	143361	50	25
30	2,4-Dichlorophenol	162.00	5.532	5.532	(0.979)	130189	50	25
31	1,2,4-Trichlorobenzene	180.00	5.603	5.603	(0.992)	146082	50	25
33	Naphthalene	128.00	5.675	5.675	(1.004)	436051	50	25
34	4-Chloroaniline	127.00	5.734	5.734	(1.015)	144131	50	25
35	Hexachlorobutadiene	225.00	5.852	5.852	(1.036)	85151	50	25
36	4-Chloro-3-methylphenol	107.00	6.232	6.232	(1.103)	126545	50	25
37	2-Methylnaphthalene	142.00	6.350	6.350	(1.124)	280364	50	25
38	Hexachlorocyclopentadiene	237.00	6.587	6.587	(0.888)	84983	50	25
39	2,4,6-Trichlorophenol	196.00	6.658	6.658	(0.898)	82150	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.717	6.717	(0.906)	102052	50	25
	2 2-Chloronaphthalene	162.00	6.836	6.836	(0.922)	255849	50	25
	43 2-Nitroaniline	65.00	6.966	6.966	(0.939)	60275	50	25
	44 Dimethylphthalate	163.00	7.168	7.168	(0.966)	307292	50	25
	45 2,6-Dinitrotoluene	165.00	7.239	7.239	(0.976)	72022	50	25
	46 Acenaphthylene	152.00	7.263	7.263	(0.979)	409270	50	25
	47 3-Nitroaniline	138.00	7.381	7.381	(0.995)	66646	50	25
	49 Acenaphthene	153.00	7.452	7.452	(1.005)	237386	50	25
	50 2,4-Dinitrophenol	184.00	7.488	7.488	(1.010)	30259	50	25
	51 4-Nitrophenol	109.00	7.582	7.582	(1.022)	30138	50	25
	52 Dibenzofuran	168.00	7.618	7.618	(1.027)	353082	50	25
	53 2,4-Dinitrotoluene	165.00	7.630	7.630	(1.029)	91273	50	25
	54 Diethylphthalate	149.00	7.891	7.891	(1.064)	303006	50	25
	55 4-Chlorophenyl-phenylether	204.00	7.962	7.962	(1.073)	125960	50	25
	56 Fluorene	166.00	7.962	7.962	(1.073)	234490	50	25
	57 4-Nitroaniline	138.00	8.009	8.009	(1.080)	61548	50	25
	58 4,6-Dinitro-2-methylphenol	198.00	8.056	8.056	(0.903)	45458	50	25
	59 n-Nitrosodiphenylamine	169.00	8.080	8.080	(0.906)	164956	50	25
	60 1,2-Diphenylhydrazine	77.00	8.116	8.116	(0.910)	400382	50	25
	62 4-Bromophenyl-phenylether	248.00	8.448	8.448	(0.947)	79542	50	25
	63 Hexachlorobenzene	283.70	8.613	8.613	(0.965)	97763	50	25
	64 Pentachlorophenol	265.50	8.791	8.791	(0.985)	52335	50	25
	66 Phenanthrene	178.00	8.945	8.945	(1.003)	327111	50	25
	67 Anthracene	178.00	8.981	8.981	(1.007)	334435	50	25
	68 Carbazole	167.00	9.147	9.147	(1.025)	272581	50	25
	69 Di-n-butylphthalate	149.00	9.538	9.538	(1.069)	422572	50	25
	70 Fluoranthene	202.00	10.166	10.166	(1.139)	276166	50	25
	71 Pyrene	202.00	10.391	10.391	(0.882)	273639	50	25
	73 Butylbenzylphthalate	149.00	11.090	11.090	(0.942)	138212	50	25
	74 3,3'-Dichlorobenzidine	252.00	11.718	11.718	(0.995)	73287	50	25
	75 Benzo[a]anthracene	228.00	11.754	11.754	(0.998)	206785	50	25
	77 Chrysene	228.00	11.801	11.801	(1.002)	188920	50	25
	78 bis(2-Ethylhexyl)phthalate	149.00	11.837	11.837	(1.005)	177351	50	25
	79 Di-n-octylphthalate	149.00	12.725	12.725	(0.909)	261018	50	25
	80 Benzo[b]fluoranthene	252.00	13.365	13.365	(0.955)	166573	50	25
	81 Benzo[k]fluoranthene	252.00	13.401	13.401	(0.958)	213325	50	25
	82 Benzo[a]pyrene	252.00	13.899	13.899	(0.993)	144149	50	25
	84 Indeno[1,2,3-cd]pyrene	276.00	15.925	15.925	(1.138)	135554	50	25
	85 Dibenz[a,h]anthracene	278.00	15.949	15.949	(1.140)	108418	50	25
	86 Benzo[g,h,i]perylene	276.00	16.458	16.458	(1.176)	107050	50	25
	3 2-Fluorophenol	112.00	3.423	3.423	(0.769)	174833	50	25
	4 Phenol-d5	99.00	4.158	4.158	(0.933)	187670	50	25
S	61 2,4,6-Tribromophenol	329.70	8.234	8.234	(0.923)	44987	50	25
	23 Nitrobenzene-d5	82.00	4.964	4.964	(0.878)	142323	50	25
	41 2-Fluorobiphenyl	172.00	6.729	6.729	(0.907)	281986	50	25
S	72 Terphenyl-d14	244.00	10.545	10.545	(0.895)	191375	50	25
*	11 1,4-Dichlorobenzene-d4	152.00	4.454	4.454	(1.000)	103183	40	
	32 Naphthalene-d8	136.00	5.651	5.651	(1.000)	348029	40	
	48 Acenaphthene-d10	164.00	7.417	7.417	(1.000)	171424	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN ng)	FINAL ug/L)	
* 65 Phenanthrene-d10	188.00	8.922	8.922	(1.000)	222794	40		
* 76 Chrysene-d12	240.00	11.777	11.777	(1.000)	137788	40		
* 83 Perylene-d12	264.00	13.993	13.993	(1.000)	83290	40		
17 ortho-Cresol	108.00	4.703	4.703	(1.056)	172933	50		2E
20 meta,para-Cresol	108.00	4.833	4.833	(1.085)	167905	50		2E
96 Benzidine	184.00	10.770	10.770	0.914)	2005	50		2E

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD050

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	103183	0.00
32 Naphthalene-d8	348029	174014	696058	348029	0.00
48 Acenaphthene-d10	171424	85712	342848	171424	0.00
65 Phenanthrene-d10	222794	111397	445588	222794	0.00
76 Chrysene-d12	137788	68894	275576	137788	0.00
83 Perylene-d12	83290	41645	166580	83290	0.00

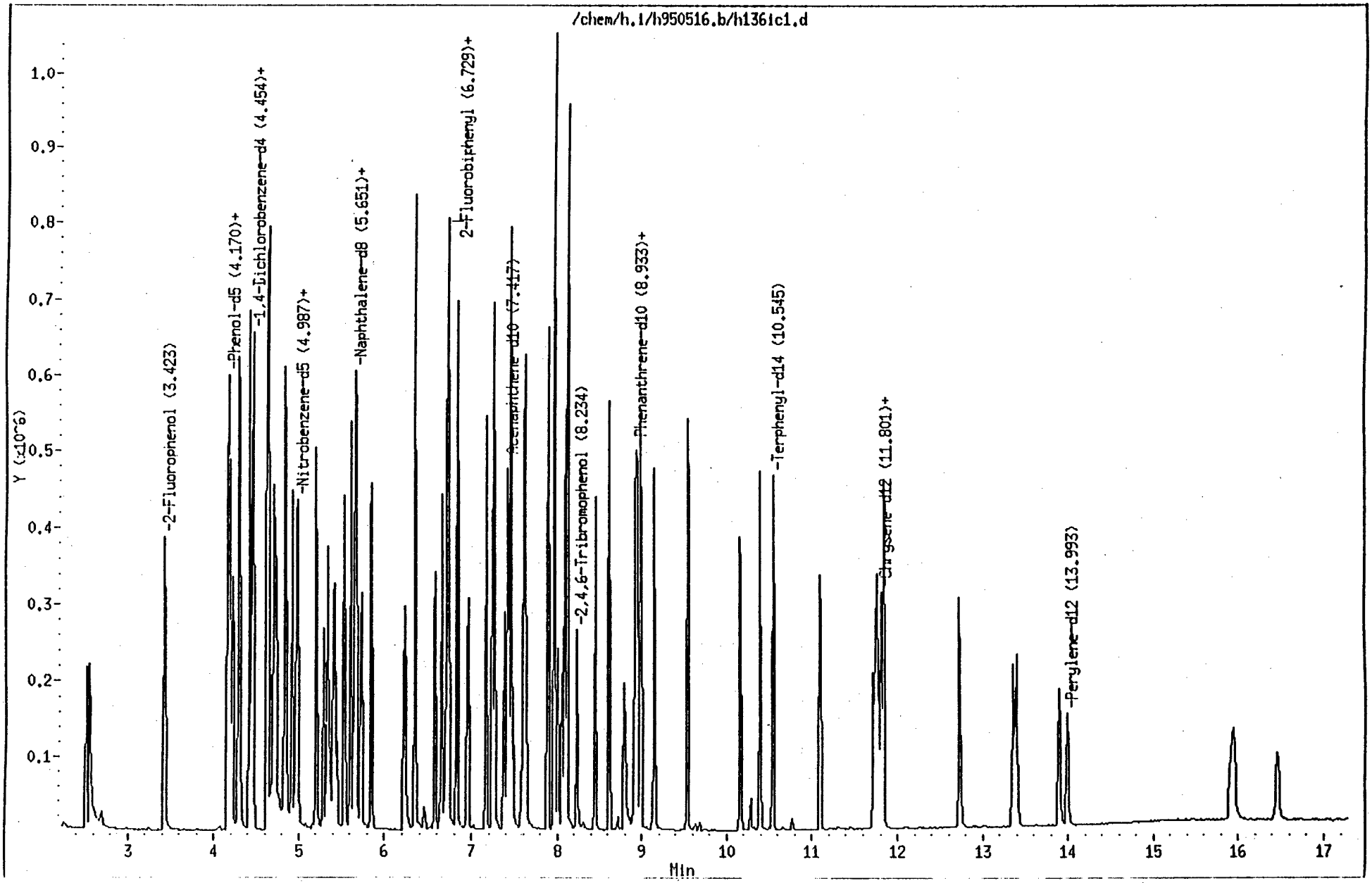
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.45	0.00
32 Naphthalene-d8	5.65	5.15	6.15	5.65	0.00
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.00
65 Phenanthrene-d10	8.92	8.42	9.42	8.92	0.00
76 Chrysene-d12	11.78	11.28	12.28	11.78	0.00
83 Perylene-d12	13.99	13.49	14.49	13.99	0.00

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.

Data File: /chem/h.i/h950516.b/h1361c1.d
Date : 16-MAY-95 11:52
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



ICP Spectroscopy Method 6010 Quality Control Report

Matrix: Water Units: mg/L Analyst: DQ

Date:051795 Time:1010 File Name:051795DQ Checked: J. Marroz 5/18/95

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver						
Aluminum						
Arsenic						
Barium						
Beryllium						
Calcium						
Cadmium	ND	2.00	2.053	103	1.60	2.40
Cobalt						
Chromium	ND	2.00	2.059	103	1.60	2.40
Copper						
Iron						
Potassium	ND	20.00	18.940	95	16.00	24.00
Magnesium						
Manganese						
Sodium						
Nickel						
Lead						
Antimony						
Selenium						
Thallium						
Vanadium						
Zinc						

Work Orders in Batch

Work Order	Fractions
95-05-209	06C
95-05-216	01A

Matrix Spike - Spike Duplicate Results

Work Order Spiked: 95-05-209 06C

Element	Sample Result	Spike Added	Matrix Spike Result	Matrix Spike Recovery	Matrix Spike Duplicate Result	Matrix Spike Duplicate Recovery	QC Limits % Recovery		Spike RPD %	QC Limits %
Silver										
Aluminum										
Arsenic										
Barium										
Beryllium										
Calcium										
Cadmium	ND	1.0	1.03	103	1.041	104	80	120	1.1	20.0
Cobalt										
Chromium	ND	1.0	1.028	103	1.038	104	80	120	1.0	20.0
Copper										
Iron										
Potassium	ND	10.0	9.411	94	9.838	98	80	120	4.4	20.0
Magnesium										
Manganese										
Sodium										
Nickel										
Lead										
Antimony										
Selenium										
Thallium										
Vanadium										
Zinc										

Idelis Williams, QC Officer 5/19/95

HOUSTON ENVIRONMENTAL
ICP SPECTROSCOPY
QUALITY ASSURANCE AND CONTROL REPORT

ICPQAQC.RC REV.4/94

Date of Analysis: 5/17/95 Time: 8:50 Analyst: JM Units: mg/L

Inst. ☐ Thermo-Jarrell Ash 61E ☑ Perkin Elmer Plasma 40

File #: 0517A Method: ☐ 200.7 ☑ 6010

Digest: P3050P TCLP: ☐ Water ☐ Soil ☐ Other ☐ Oil

Matrix: ☑ Soil ☐ Water ☐ Leachate

SPL Sample #'s In Batch:

9505164-1C-100, 120,	13C		
9505209-1C-5C			

SPL QA/QC Sample ID: #1 9505164-10C #2 _____ #3 _____

Blank and Check Standard				QA/QC	Matrix Spike and Spike Duplicate Data					
Elem.	Method Blank	LCS Theoret.	LCS Rec. (±20%)	Sample Conc.	Spike Added	Spike Conc.	Spk. Dup. Conc.	Spike % Rec.	Spk. Dup. % Rec.	MS-MSD % RPD
Cd	ND	~~0.502~~ 0.469	107.0	ND	1.00	1.025	1.006	102.5	100.6	2

*Flags ☐ MS or MSD Out of QA Limits (±25%)
☐ Spike RPD Out of QA Limits (±20%)
☐ See Case Narrative
☐ Within Soil LCS Limits _____

Analyst [signature]

Supervisor Approval [signature] Date 5-17-95

QA/QC Approval [signature] Date 5-17-95

Idelis Williams, QC Officer

SPL QUALITY CONTROL SUMMARY

Rev. 4/94

Atomic Absorption Analysis

Element: CR

Test Code: CRSG

Method: P3050G

Instrument: B

Date: 5/18/95

Time: 08:09

File #: 0518A

Analyst: WFC

Matrix: Soil ☑ Water ☐

Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Units: mg/kg

Sample #'s in Batch

05164-1c-	10c, 12c, 13c			
05209-1c-	5c			

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
*05164-10c	MB	115.0	91.3%	12.1	20.0	22.9	23.3	54.0%*	56.0%*	4
LCS 5/15	MB	167.0	61.1%	NA	20.0					

• FLAGS •

☑ • = Values Outside QC Range

☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)

☐ RPD out of QA/QC Limits (20 %)

☑ Soil LCS % Rec. Range 54.2% - 141.7%

☐ Sample used for QA/QC only

Analyst: Wallace Faucel Date: 5/18/95

Approved By: [signature] Date: 5-18-95

[signature] Date: 5/18/95

Technical Director

SPL QUALITY CONTROL SUMMARY

Rev. 4/94

Atomic Absorption Analysis

Element: PB

Test Code: PBSG

Method: P3050G

Instrument: B

Date: 5/17/95

Time: 08:39

File #: 0517A

Analyst: WFC

Matrix: Soil ☑ Water ☐

Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Units: mg/kg

Sample #'s in Batch

04699-3A-	7A			
04701-1A-	6A			
04968-1A	-15A			
05209-1c-	5c			

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
04701-1A	MD	162.0	78.4%	26.5	50.0	67.2	68.1	81.4%	83.2%	2
*04968-6A	MD	162.0	78.4%	24.9	50.0	56.1	58.0	62.4%*	66.2%*	6

• FLAGS •

- ☑ • = Values Outside QC Range
- ☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)
- ☑ RPD out of QA/QC Limits (20 %)
- ☐ Soil LCS % Rec. Range 53.0% - 142.0%
- ☐ Sample used for QA/QC only

Analyst: Wallajit Sawal Date: 5/17/95

Approved By: Dan Z. Date: 5-17-95

Date: 5-18-95

WETDUPCA.RC Rev. 4/94

Wet Chemistry QA/QC Validation Report

Test Name: MOISTURE

M Test Code: MOISTD Date: 5/9/95 Analyst: CA/ST

Method D 2216 Time: 8:50 am Matrix ☐ Liquid ☐ Soil ☐ Other

Samples in Batch: 19 Reporting Units: grams of H2O

Sample #'s in Batch:

95259-1B→5B	95C5330-1B→3B 3C	
95226-1B	95C5331-1B, 3B 4A	
95245-6C	95C5327-3A→4A 6A→7A	
95281-9D		

Standards	Actual Concentration	Theoretical Concentration	Percent Recovery	QC Limits (**) (Mandatory) Upper Limit	Lower Limit
Check Standard 1					
Check Standard 2					
Check Standard 3					
(Outside Source)					

DUPLICATES

QA/QC Duplicate Sample ID	Sample Result <1>	Sample Result <2>	Relative Percent Difference	QC LIMITS (**) (Advisory) Relative Percent Difference Max.
95226-1B	22	21	4.7	23.1
95327-7A	9	9	0	1

* Percent Difference (RPD) Calculation:

$$RPD = \frac{|<1> - <2>|}{(<1> + <2>) \times 0.5} \times 100$$

(**) = Source: SPL Houston Historical Data

* = Indicates Value Outside QA/QC Range

Approved By: [signature] Date: 5/11/95

Prepared By: [signature] Date: 5/11/95

[signature]
Idelis Williams, QC Officer Date: 5/11/95

CORRECTED COPY

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 07/17/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:40:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	11	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	13	2	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

CORRECTED COPY

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 07/17/9

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:40:0
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	2.8	0.4	mg/K

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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Certificate of Analysis No. H9-9505164-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

07/17/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:40:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-01

Operational Tech

SAMPLE ID: 026-001BH 2-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	90	70	121
Toluene-d8	50 ug/Kg	100	84	138
4-Bromofluorobenzene	50 ug/Kg	88	59	113

ANALYZED BY: HLW DATE/TIME: 05/08/95 18:34:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

CORRECTED COPY

Certificate of Analysis No. H9-9505164-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

07/17/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:40:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

CORRECTED COPY

Certificate of Analysis No. H9-9505164-01

Operational Tech

SAMPLE ID: 026-001BH 2-2.5

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

CORRECTED COPY

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-01

Operational Tech

SAMPLE ID: 026-001BH 2-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	79	23	120
2-Fluorobiphenyl	1600 ug/Kg	85	30	115
Terphenyl-d14	1600 ug/Kg	101	18	137
Phenol-d5	2500 ug/Kg	58	24	113
2-Fluorophenol	2500 ug/Kg	47	25	121
2,4,6-Tribromophenol	2500 ug/Kg	108	19	122

ANALYZED BY: LH DATE/TIME: 05/16/95 20:22:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128s13.d
Lab Smp Id: 9505164-01A-8240S/1X
Inj Date : 08-MAY-1995 18:34
Operator : HLW Inst ID: k.i
Smp Info : 9505164-01A-8240S/1X
Misc Info : K128S1/K128B02/K127CS2
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 12-May-1995 08:16 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 26
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.120	2.120	(1.000)	89184	250	
* 31 1,4-Difluorobenzene	114.00	2.802	2.802	(1.000)	514338	250	
* 51 Chlorobenzene-d5	117.00	6.772	6.772	(1.000)	379903	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.378	2.378	(1.121)	36830	220	45
$ 40 Toluene-d8	98.00	4.545	4.545	(0.671)	580602	250	50
$ 61 Bromofluorobenzene	95.00	8.878	8.878	(1.311)	185120	220	44

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128s13.d
Lab Smp Id: 9505164-01A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info: K128S1/K128B02/K127CS2

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	89184	0.57
31 1,4-Difluorobenzene	553116	276558	1106232	514338	-7.01
51 Chlorobenzene-d5	397197	198598	794394	379903	-4.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.01
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	-0.01
51 Chlorobenzene-d5	6.77	6.27	7.27	6.77	0.00

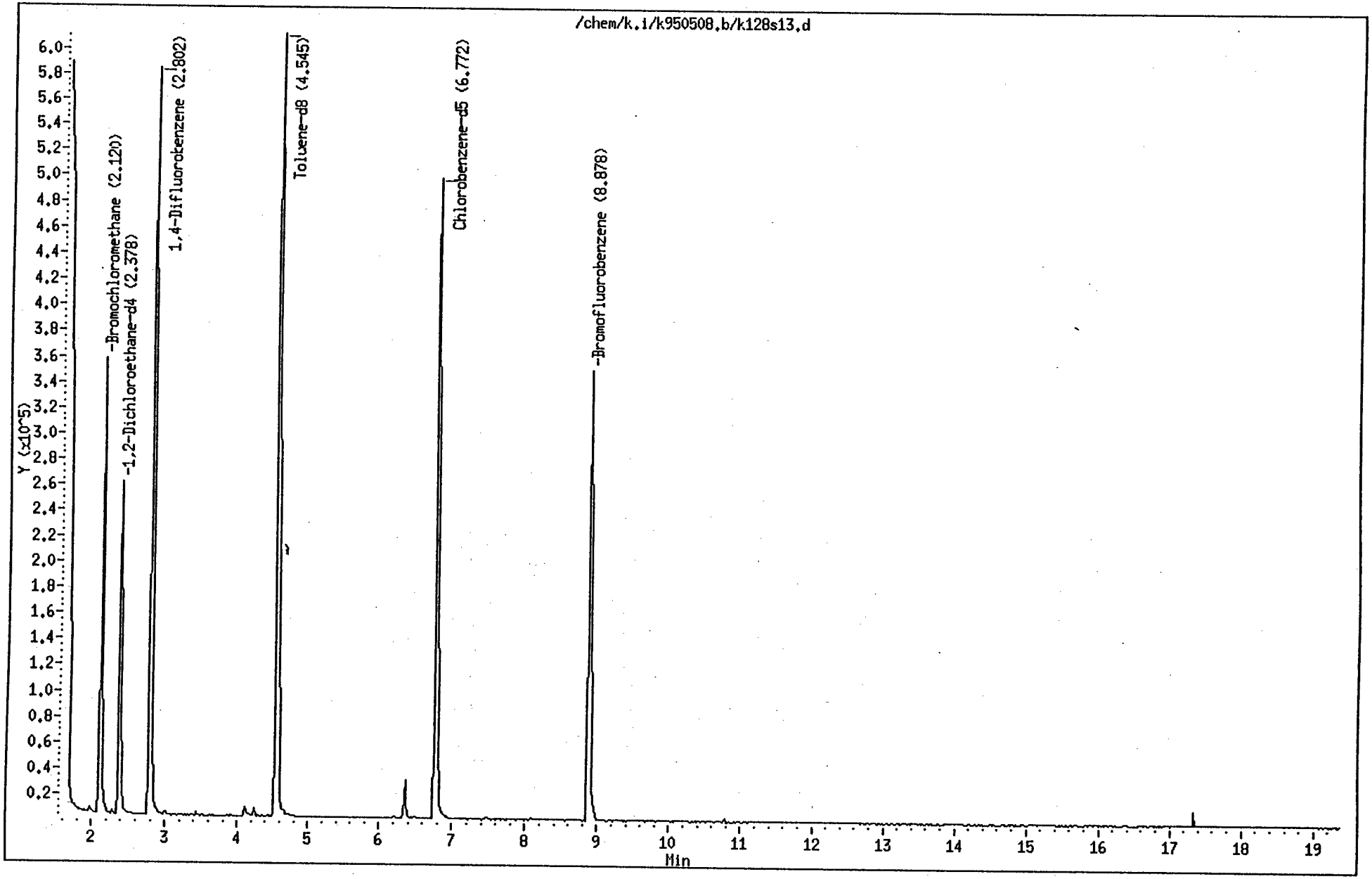
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128s13.d
Date : 08-MAY-1995 10:34
Client ID:
Sample Info: 9505164-01A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136s14.d
Lab Smp Id:
Inj Date : 16-MAY-95 20:22
Operator : LH Inst ID: h.i
Smp Info : 9505164-01B-8270S/1X
Misc Info : E132S1/H132B02/H136IC1
Comment :
Method : /chem/h.i/h950516.b/hclps.m
Meth Date : 16-May-1995 16:57 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 18
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
*	11 1,4-Dichlorobenzene-d4	152.00	4.444	4.454	(1.000)	132394	40	
*	32 Naphthalene-d8	136.00	5.629	5.651	(1.000)	455088	40	
*	48 Acenaphthene-d10	164.00	7.407	7.417	(1.000)	210680	40	
*	65 Phenanthrene-d10	188.00	8.900	8.922	(1.000)	255441	40	
*	76 Chrysene-d12	240.00	11.756	11.777	(1.000)	130404	40	
*	83 Perylene-d12	264.00	13.972	13.993	(1.000)	71532	40	
$	23 Nitrobenzene-d5	82.00	4.954	4.964	(0.880)	283474	76	1300
$	41 2-Fluorobiphenyl	172.00	6.720	6.729	(0.907)	564038	81	1400
$	72 Terphenyl-d14	244.00	10.535	10.545	(0.896)	350916	97	1600
$	4 Phenol-d5	99.00	4.160	4.158	(0.936)	418416	87	1400
$	3 2-Fluorophenol	112.00	3.449	3.423	(0.776)	316023	70	1200
$	61 2,4,6-Tribromophenol	329.70	8.225	8.234	(0.924)	166614	160	2700

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136s14.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclps.m
Misc Info: E132S1/H132B02/H136IC1

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: SOIL

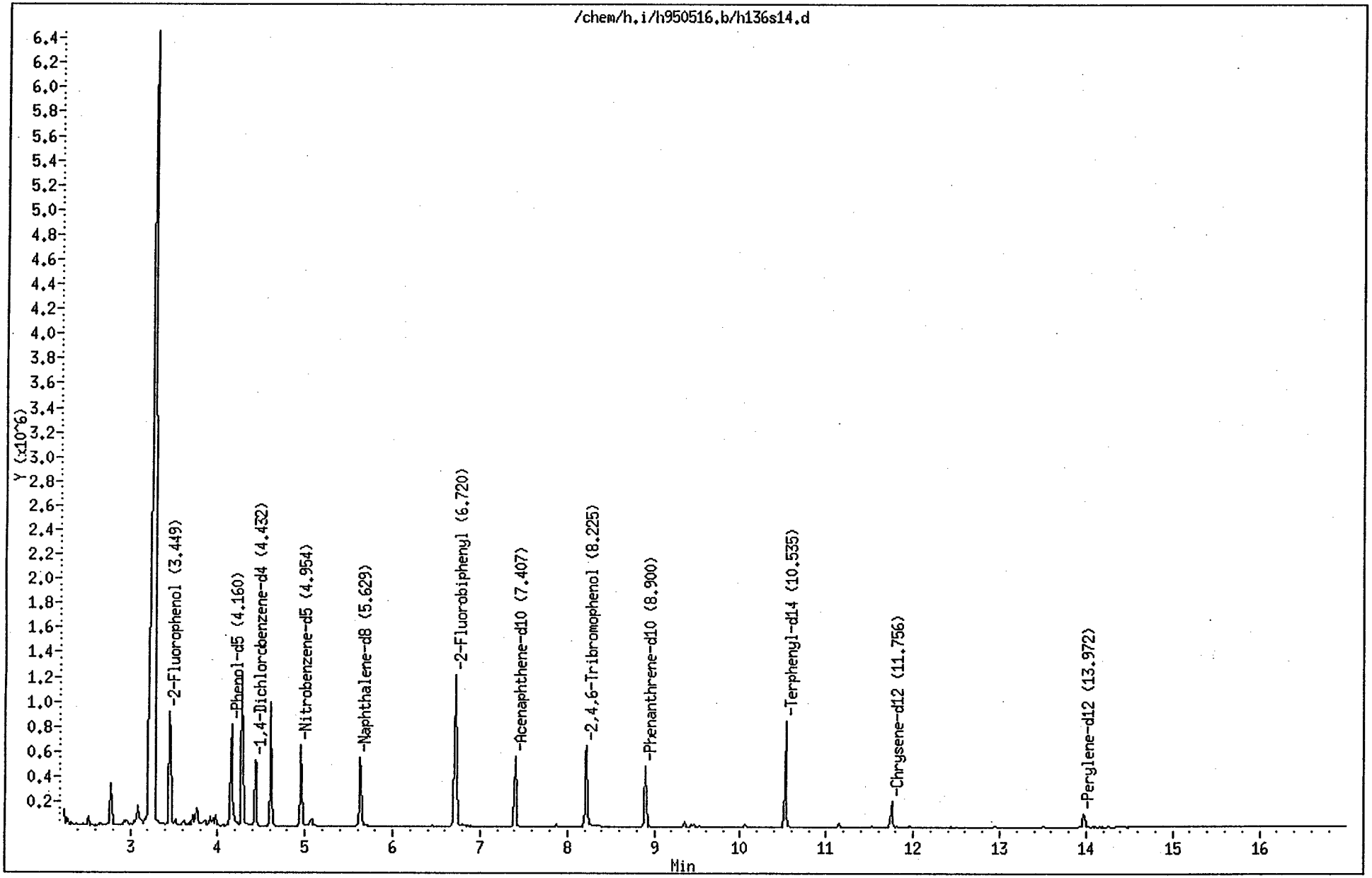
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	132394	28.31
32 Naphthalene-d8	348029	174014	696058	455088	30.76
48 Acenaphthene-d10	171424	85712	342848	210680	22.90
65 Phenanthrene-d10	222794	111397	445588	255441	14.65
76 Chrysene-d12	137788	68894	275576	130404	-5.36
83 Perylene-d12	83290	41645	166580	71532	-14.12

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.22
32 Naphthalene-d8	5.65	5.15	6.15	5.63	-0.38
48 Acenaphthene-d10	7.42	6.92	7.92	7.41	-0.13
65 Phenanthrene-d10	8.92	8.42	9.42	8.90	-0.24
76 Chrysene-d12	11.78	11.28	12.28	11.76	-0.18
83 Perylene-d12	13.99	13.49	14.49	13.97	-0.15

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.

Data File: /chem/h.i/h950516.b/h136s14.d
Date : 16-MAY-95 20:22
Client ID:
Sample Info: 9505164-01B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	12	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	10	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	2.4	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-02

Operational Tech

SAMPLE ID: 026-001BH 9.5-10

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	92	70	121
Toluene-d8	50 ug/Kg	100	84	138
4-Bromofluorobenzene	50 ug/Kg	92	59	113

ANALYZED BY: HLW DATE/TIME: 05/08/95 19:05:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/9

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 15:35:0
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil
(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-02

Operational Tech

SAMPLE ID: 026-001BH 9.5-10

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-02

Operational Tech

SAMPLE ID: 026-001BH 9.5-10

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	85	23	120
2-Fluorobiphenyl	1600 ug/Kg	83	30	115
Terphenyl-d14	1600 ug/Kg	84	18	137
Phenol-d5	2500 ug/Kg	61	24	113
2-Fluorophenol	2500 ug/Kg	51	25	121
2,4,6-Tribromophenol	2500 ug/Kg	98	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 20:45:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128s14.d
Lab Smp Id: 9505164-02A-8240S/1X
Inj Date : 08-MAY-1995 19:05
Operator : HLW Inst ID: k.i
Smp Info : 9505164-02A-8240S/1X
Misc Info : K128S1/K128B02/K127CS2
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 12-May-1995 08:16 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 27
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.120	2.120	(1.000)	85050	250	
* 31 1,4-Difluorobenzene	114.00	2.802	2.802	(1.000)	490413	250	
* 51 Chlorobenzene-d5	117.00	6.772	6.772	(1.000)	358355	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.378	2.378	(1.121)	36072	230	46
$ 40 Toluene-d8	98.00	4.545	4.545	(0.671)	546441	250	50
$ 61 Bromofluorobenzene	95.00	8.878	8.878	(1.311)	182658	230	46

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128s14.d
Lab Smp Id: 9505164-02A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info: K128S1/K128B02/K127CS2

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	85050	-4.09
31 1,4-Difluorobenzene	553116	276558	1106232	490413	-11.34
51 Chlorobenzene-d5	397197	198598	794394	358355	-9.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	0.00
51 Chlorobenzene-d5	6.77	6.27	7.27	6.77	0.00

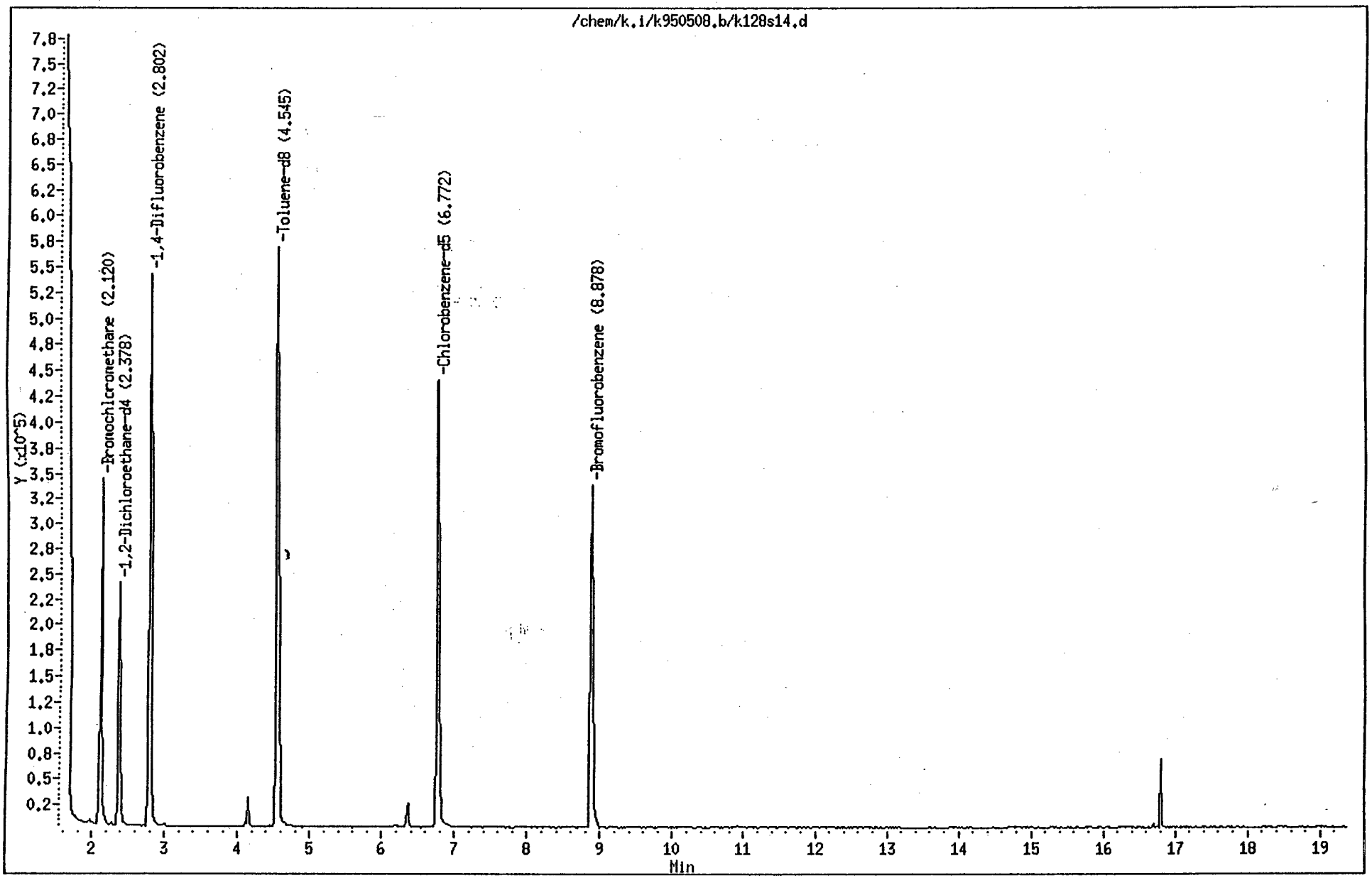
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128s14.d
Date : 08-MAY-1995 19:05
Client ID:
Sample Info: 9505164-02A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s02.d
Lab Smp Id:
Inj Date : 15-MAY-1995 20:45
Operator : LH
Inst ID: h.i
Smp Info : 9505164-02B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping
Quant Type: ISTD
Cal Date : 15-MAY-1995 15:26
Cal File: h135cc1.d
Als bottle: 11
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: 8270.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
* 11 1,4-Dichlorobenzene-d4	152.00	4.469	4.477	(1.000)	180275	40	
* 32 Naphthalene-d8	136.00	5.665	5.674	(1.000)	648739	40	
* 48 Acenaphthene-d10	164.00	7.443	7.452	(1.000)	301355	40	
* 65 Phenanthrene-d10	188.00	8.936	8.945	(1.000)	415910	40	
* 76 Chrysene-d12	240.00	11.804	11.813	(1.000)	282384	40	
* 83 Perylene-d12	264.00	14.044	14.053	(1.000)	180897	40	
$ 23 Nitrobenzene-d5	82.00	4.990	4.999	(0.881)	419625	82	1400
$ 41 2-Fluorobiphenyl	172.00	6.756	6.765	(0.908)	785905	80	1300
$ 72 Terphenyl-d14	244.00	10.583	10.580	(0.897)	617218	81	1400
$ 4 Phenol-d5	99.00	4.184	4.193	(0.936)	631272	91	1500
$ 3 2-Fluorophenol	112.00	3.485	3.458	(0.780)	484311	77	1300
$ 61 2,4,6-Tribromophenol	329.70	8.261	8.258	(0.924)	208924	150	2400

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s02.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	180275	46.54
32 Naphthalene-d8	418440	209220	836880	648739	55.04
48 Acenaphthene-d10	198324	99162	396648	301355	51.95
65 Phenanthrene-d10	270386	135193	540772	415910	53.82
76 Chrysene-d12	175926	87963	351852	282384	60.51
83 Perylene-d12	106536	53268	213072	180897	69.80

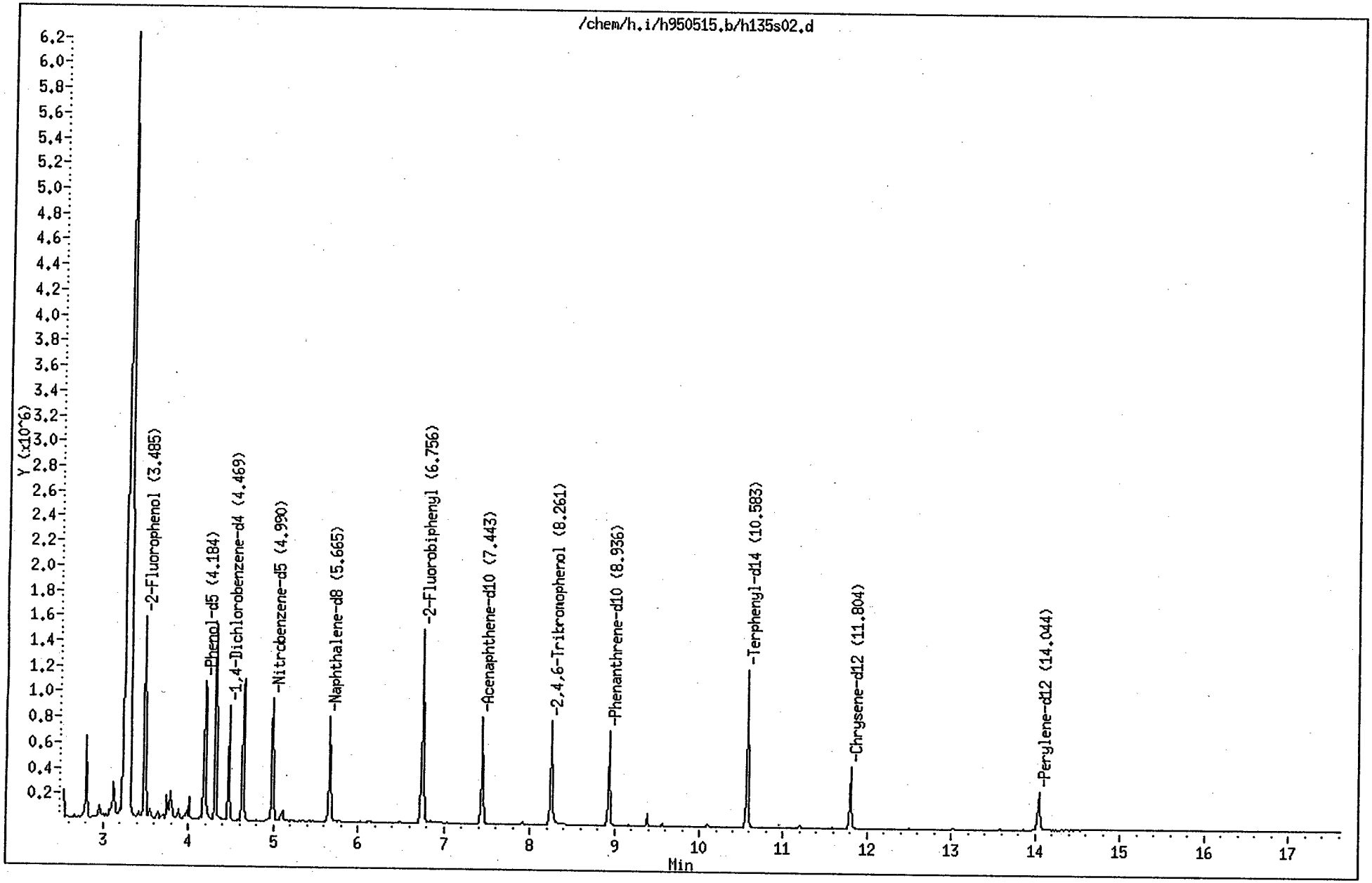
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.20
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.16
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.12
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.10
76 Chrysene-d12	11.81	11.31	12.31	11.80	-0.08
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.06

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.

Data File: /chem/h.i/h950515.b/h135s02.d
Date : 15-MAY-1995 20:45
Client ID:
Sample Info: 9505164-02B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:32:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	10	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	9	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:32:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	5.3	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:32:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-03

Operational Tech

SAMPLE ID: 026-004BH 2-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	90	70	121
Toluene-d8	50 ug/Kg	100	84	138
4-Bromofluorobenzene	50 ug/Kg	94	59	113

ANALYZED BY: HLW DATE/TIME: 05/08/95 19:32:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:32:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-03

Operational Tech

SAMPLE ID: 026-004BH 2-2.5

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl) Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd) Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-03

Operational Tech

SAMPLE ID: 026-004BH 2-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	86	23	120
2-Fluorobiphenyl	1600 ug/Kg	83	30	115
Terphenyl-d14	1600 ug/Kg	86	18	137
Phenol-d5	2500 ug/Kg	60	24	113
2-Fluorophenol	2500 ug/Kg	51	25	121
2,4,6-Tribromophenol	2500 ug/Kg	97	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 21:10:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128s15.d
Lab Smp Id: 9505164-03A-8240S/1X
Inj Date : 08-MAY-1995 19:32
Operator : HLW Inst ID: k.i
Smp Info : 9505164-03A-8240S/1X
Misc Info : K128S1/K128B02/K127CS2
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 12-May-1995 08:16 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 28
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.120	2.120	(1.000)	90603	250	
* 31 1,4-Difluorobenzene	114.00	2.802	2.802	(1.000)	529149	250	
* 51 Chlorobenzene-d5	117.00	6.772	6.772	(1.000)	394781	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.378	2.378	(1.121)	37775	230	45
$ 40 Toluene-d8	98.00	4.545	4.545	(0.671)	600233	250	50
$ 61 Bromofluorobenzene	95.00	8.878	8.878	(1.311)	205412	240	47

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128s15.d
Lab Smp Id: 9505164-03A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info: K128S1/K128B02/K127CS2

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	90603	2.17
31 1,4-Difluorobenzene	553116	276558	1106232	529149	-4.33
51 Chlorobenzene-d5	397197	198598	794394	394781	-0.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	0.00
51 Chlorobenzene-d5	6.77	6.27	7.27	6.77	0.00

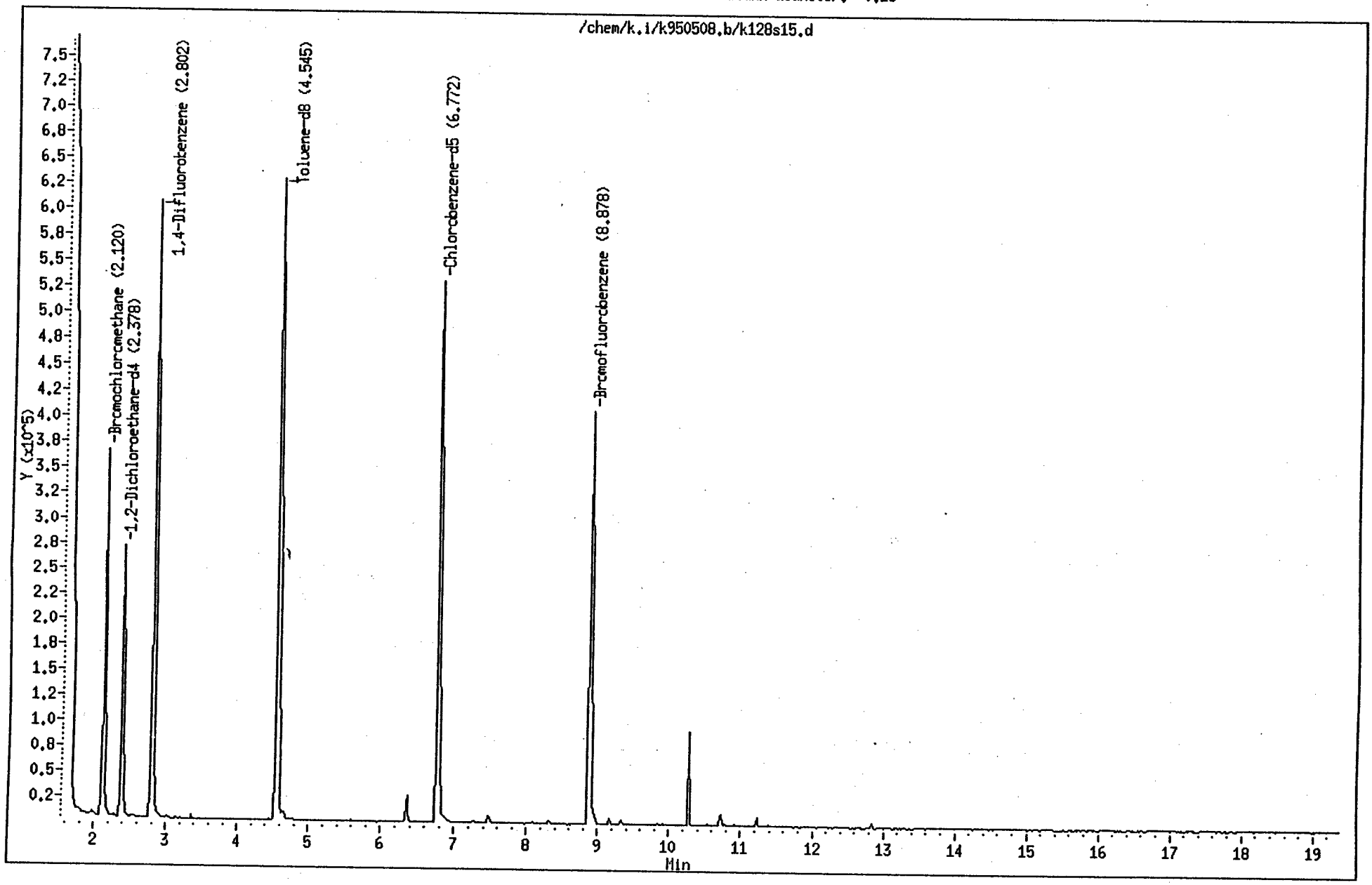
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128s15.d
Date : 08-MAY-1995 19:32
Client ID:
Sample Info: 9505164-03A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s03.d
Lab Smp Id:
Inj Date : 15-MAY-95 21:10
Operator : LH Inst ID: h.i
Smp Info : 9505164-03B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping Quant Type: ISTD
Cal Date : 15-MAY-1995 15:26 Cal File: h135cc1.d
Als bottle: 12
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 11 1,4-Dichlorobenzene-d4	152.00	4.471	4.477	(1.000)	174224	40	
* 32 Naphthalene-d8	136.00	5.668	5.674	(1.000)	614099	40	
* 48 Acenaphthene-d10	164.00	7.446	7.452	(1.000)	292631	40	
* 65 Phenanthrene-d10	188.00	8.939	8.945	(1.000)	394841	40	
* 76 Chrysene-d12	240.00	11.807	11.813	(1.000)	235769	40	
* 83 Perylene-d12	264.00	14.046	14.053	(1.000)	151469	40	
$ 23 Nitrobenzene-d5	82.00	4.993	4.999	(0.881)	404546	83	1400
$ 41 2-Fluorobiphenyl	172.00	6.759	6.765	(0.908)	766560	80	1300
$ 72 Terphenyl-d14	244.00	10.574	10.580	(0.896)	527493	83	1400
$ 4 Phenol-d5	99.00	4.187	4.193	(0.936)	609347	91	1500
$ 3 2-Fluorophenol	112.00	3.476	3.458	(0.777)	466367	76	1300
$ 61 2,4,6-Tribromophenol	329.70	8.264	8.258	(0.924)	196579	140	2400

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s03.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	174224	41.62
32 Naphthalene-d8	418440	209220	836880	614099	46.76
48 Acenaphthene-d10	198324	99162	396648	292631	47.55
65 Phenanthrene-d10	270386	135193	540772	394841	46.03
76 Chrysene-d12	175926	87963	351852	235769	34.02
83 Perylene-d12	106536	53268	213072	151469	42.18

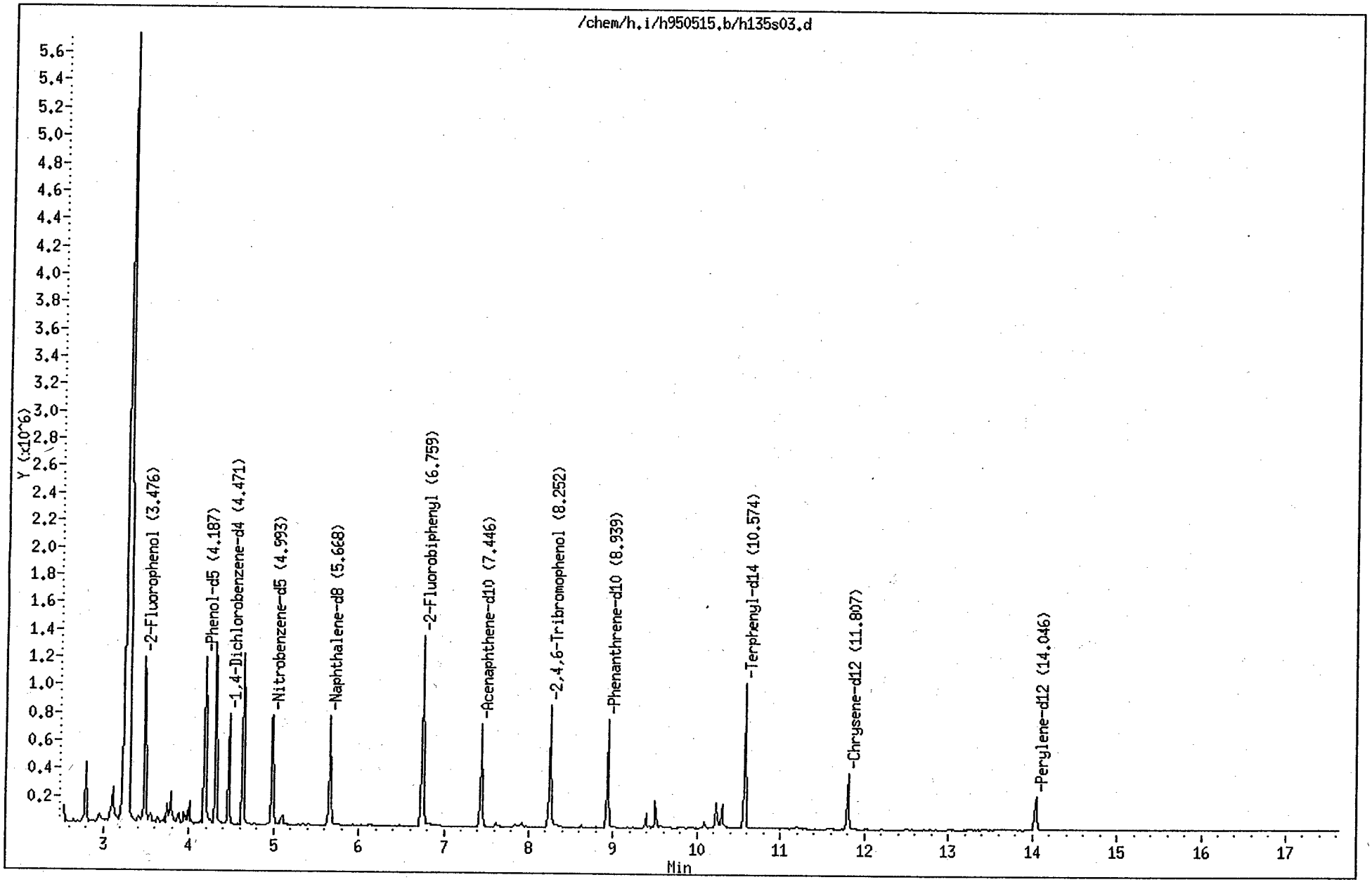
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.13
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.11
48 Acenaphthene-d10	7.45	6.95	7.95	7.45	-0.08
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.07
76 Chrysene-d12	11.81	11.31	12.31	11.81	-0.05
83 Perylene-d12	14.05	13.55	14.55	14.05	-0.04

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.

Data File: /chem/h.i/h950515.b/h135s03.d
Date : 15-MAY-95 21:10
Client ID:
Sample Info: 9505164-03B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:47:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	12	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	7	2	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:47:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	2.5	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:47:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil
(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-04

Operational Tech

SAMPLE ID: 026-004BH 9.5-10

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	90	70	121
Toluene-d8	50 ug/Kg	106	84	138
4-Bromofluorobenzene	50 ug/Kg	100	59	113

ANALYZED BY: HLW DATE/TIME: 05/08/95 19:59:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-004BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:47:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-04

Operational Tech

SAMPLE ID: 026-004BH 9.5-10

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-04

Operational Tech

SAMPLE ID: 026-004BH 9.5-10

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	84	23	120
2-Fluorobiphenyl	1600 ug/Kg	82	30	115
Terphenyl-d14	1600 ug/Kg	83	18	137
Phenol-d5	2500 ug/Kg	63	24	113
2-Fluorophenol	2500 ug/Kg	54	25	121
2,4,6-Tribromophenol	2500 ug/Kg	103	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 21:34:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128s16.d
Lab Smp Id: 9505164-04A-8240S/1X
Inj Date : 08-MAY-1995 19:59
Operator : HLW Inst ID: k.i
Smp Info : 9505164-04A-8240S/1X
Misc Info : K128S1/K128B02/K127CS2
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 12-May-1995 08:16 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 29
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.122	2.120	(1.000)	89707	250	
* 31 1,4-Difluorobenzene	114.00	2.804	2.802	(1.000)	527571	250	
* 51 Chlorobenzene-d5	117.00	6.774	6.772	(1.000)	368507	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.380	2.378	(1.121)	37434	230	45
$ 40 Toluene-d8	98.00	4.546	4.545	(0.671)	591336	260	53
$ 61 Bromofluorobenzene	95.00	8.880	8.878	(1.311)	201082	250	50

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128s16.d
Lab Smp Id: 9505164-04A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info: K128S1/K128B02/K127CS2

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	89707	1.16
31 1,4-Difluorobenzene	553116	276558	1106232	527571	-4.62
51 Chlorobenzene-d5	397197	198598	794394	368507	-7.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.08
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	0.06
51 Chlorobenzene-d5	6.77	6.27	7.27	6.77	0.03

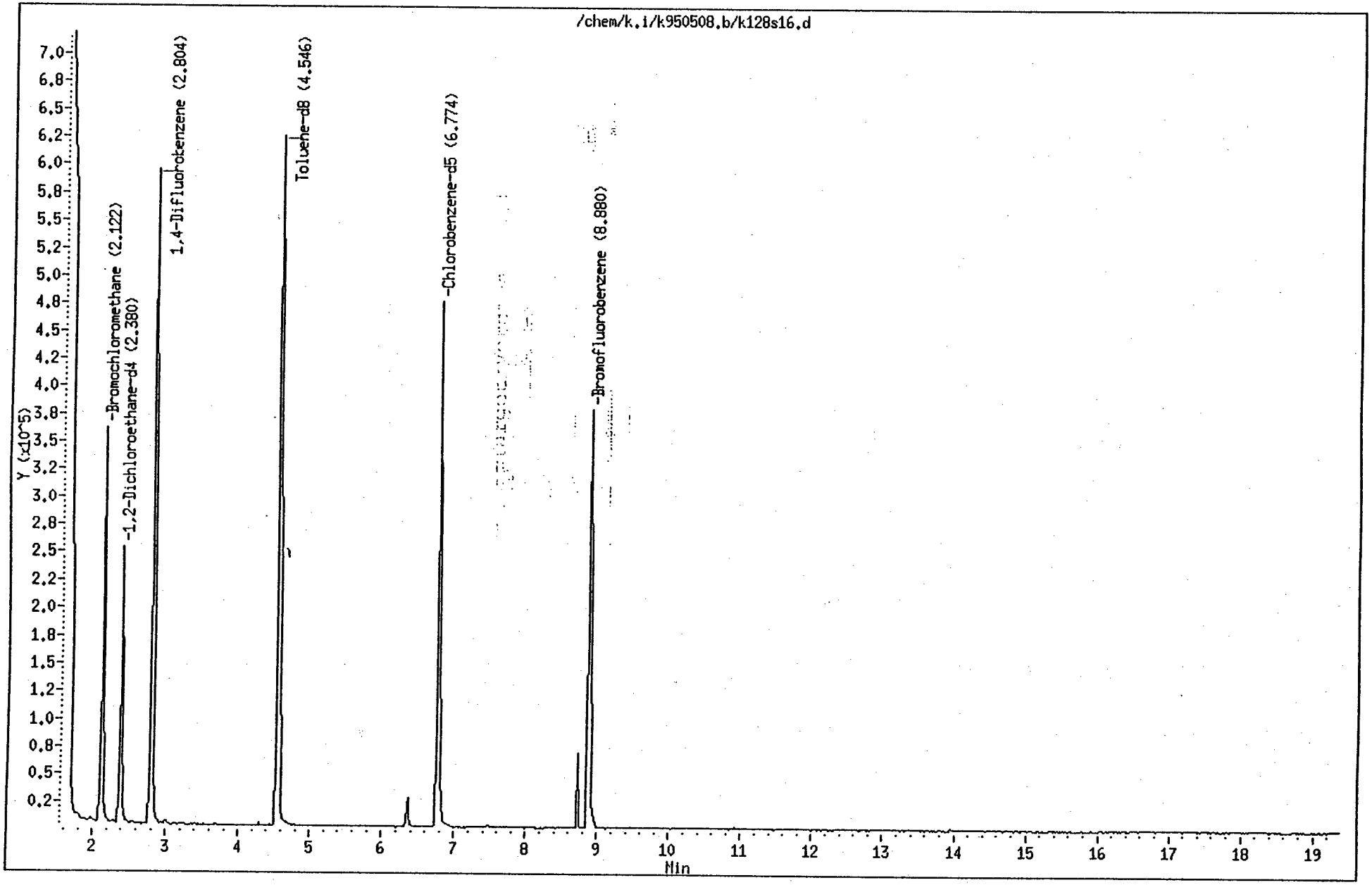
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128s16.d
Date : 08-MAY-1995 19:59
Client ID:
Sample Info: 9505164-04A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s04.d
Lab Smp Id:
Inj Date : 15-MAY-1995 21:34
Operator : LH
Smp Info : 9505164-04B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping
Cal Date : 15-MAY-1995 15:26
Als bottle: 13
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h135cc1.d

Compound Sublist: 8270.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
* 11 1,4-Dichlorobenzene-d4	152.00	4.469	4.477	(1.000)	153684	40	
* 32 Naphthalene-d8	136.00	5.665	5.674	(1.000)	573171	40	
* 48 Acenaphthene-d10	164.00	7.443	7.452	(1.000)	275136	40	
* 65 Phenanthrene-d10	188.00	8.936	8.945	(1.000)	397087	40	
* 76 Chrysene-d12	240.00	11.804	11.813	(1.000)	279512	40	
* 83 Perylene-d12	264.00	14.044	14.053	(1.000)	171637	40	
$ 23 Nitrobenzene-d5	82.00	4.990	4.999	(0.881)	368286	81	1300
$ 41 2-Fluorobiphenyl	172.00	6.756	6.765	(0.908)	711308	79	1300
$ 72 Terphenyl-d14	244.00	10.583	10.580	(0.897)	603278	80	1300
$ 4 Phenol-d5	99.00	4.184	4.193	(0.936)	556468	94	1600
$ 3 2-Fluorophenol	112.00	3.485	3.458	(0.780)	432086	80	1300
$ 61 2,4,6-Tribromophenol	329.70	8.261	8.258	(0.924)	211033	150	2600

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s04.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	153684	24.92
32 Naphthalene-d8	418440	209220	836880	573171	36.98
48 Acenaphthene-d10	198324	99162	396648	275136	38.73
65 Phenanthrene-d10	270386	135193	540772	397087	46.86
76 Chrysene-d12	175926	87963	351852	279512	58.88
83 Perylene-d12	106536	53268	213072	171637	61.11

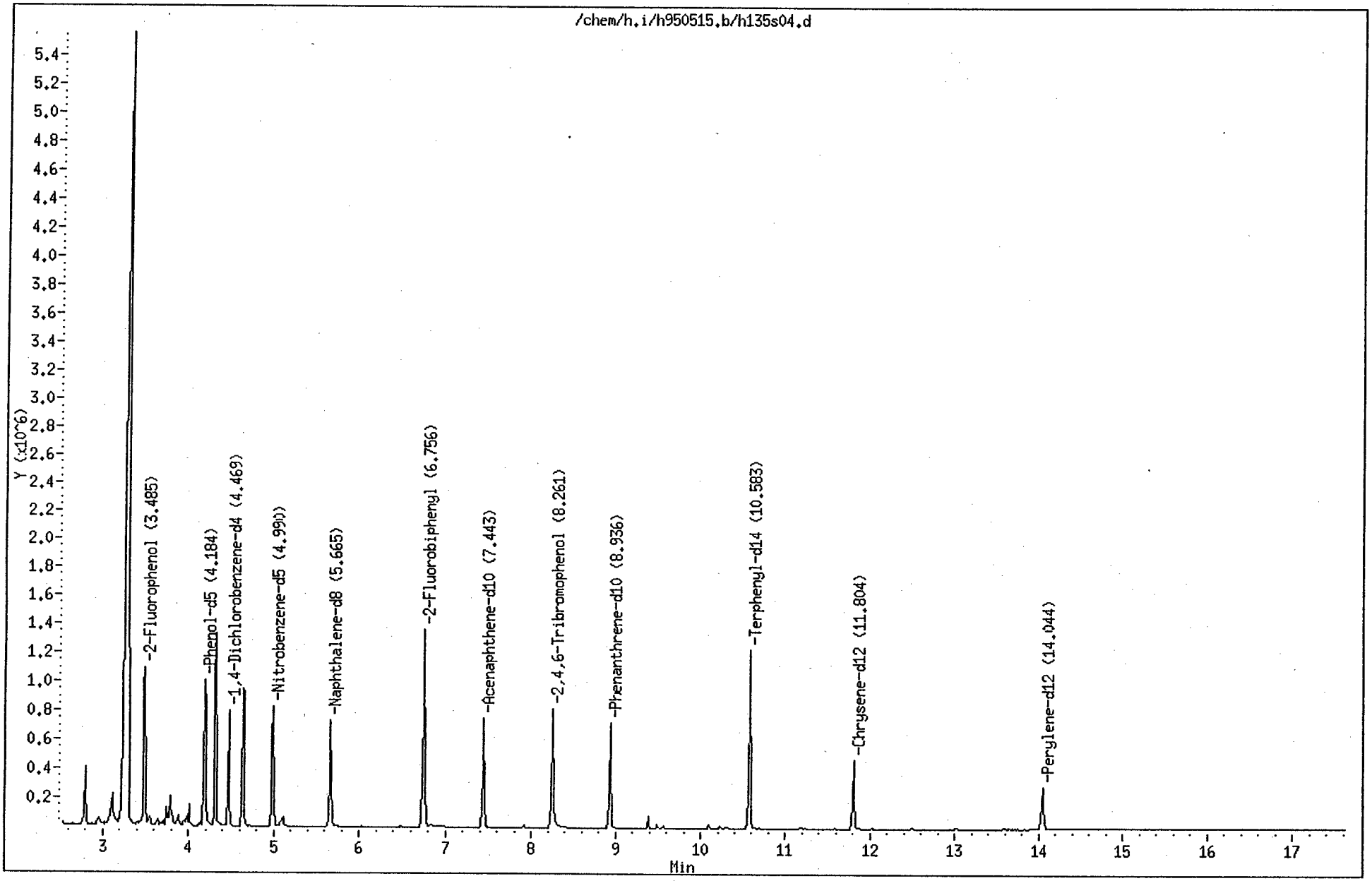
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.20
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.16
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.12
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.10
76 Chrysene-d12	11.81	11.31	12.31	11.80	-0.08
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.06

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.

Data File: /chem/h.i/h950515.b/h135s04.d
Date : 15-MAY-1995 21:34
Client ID:
Sample Info: 9505164-04B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 1.5-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:45:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	5	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	7	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 1.5-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:45:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	4.6	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 1.5-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:45:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-05

Operational Tech

SAMPLE ID: 026-005BH 1.5-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	88	70	121
Toluene-d8	50 ug/Kg	104	84	138
4-Bromofluorobenzene	50 ug/Kg	96	59	113

ANALYZED BY: HLW DATE/TIME: 05/08/95 20:25:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 1.5-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:45:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-05

Operational Tech

SAMPLE ID: 026-005BH 1.5-2.5

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-05

Operational Tech

SAMPLE ID: 026-005BH 1.5-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	87	23	120
2-Fluorobiphenyl	1600 ug/Kg	83	30	115
Terphenyl-d14	1600 ug/Kg	87	18	137
Phenol-d5	2500 ug/Kg	62	24	113
2-Fluorophenol	2500 ug/Kg	53	25	121
2,4,6-Tribromophenol	2500 ug/Kg	101	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 21:59:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128s17.d
Lab Smp Id: 9505164-05A-8240S/1X
Inj Date : 08-MAY-1995 20:25
Operator : HLW Inst ID: k.i
Smp Info : 9505164-05A-8240S/1X
Misc Info : K128S1/K128B02/K127CS2
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 12-May-1995 08:16 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 30
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.122	2.120	(1.000)	88864	250	
* 31 1,4-Difluorobenzene	114.00	2.804	2.802	(1.000)	521793	250	
* 51 Chlorobenzene-d5	117.00	6.774	6.772	(1.000)	367512	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.379	2.378	(1.121)	36206	220	44
$ 40 Toluene-d8	98.00	4.546	4.545	(0.671)	581719	260	52
$ 61 Bromofluorobenzene	95.00	8.880	8.878	(1.311)	192565	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128s17.d
Lab Smp Id: 9505164-05A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info: K128S1/K128B02/K127CS2

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	88864	0.21
31 1,4-Difluorobenzene	553116	276558	1106232	521793	-5.66
51 Chlorobenzene-d5	397197	198598	794394	367512	-7.47

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.07
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	0.06
51 Chlorobenzene-d5	6.77	6.27	7.27	6.77	0.02

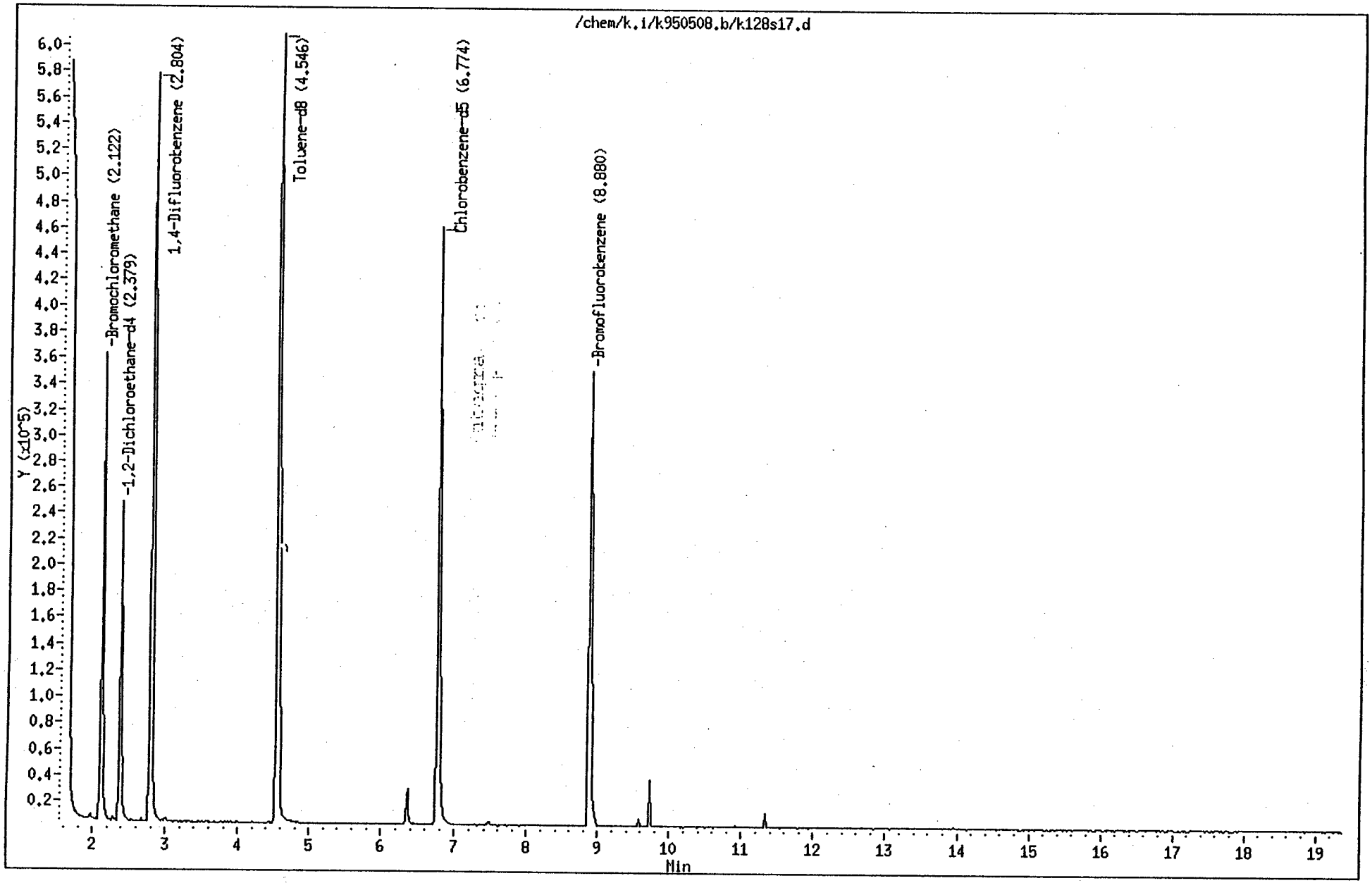
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128s17.d
Date : 08-MAY-1995 20:25
Client ID:
Sample Info: 9505164-05A-8240S/1X

Column phase: 30m,hp5ms,0.25u df

Instrument: k.i

Operator: HLW
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s05.d
Lab Smp Id:
Inj Date : 15-MAY-95 21:59
Operator : LH Inst ID: h.i
Smp Info : 9505164-05B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping Quant Type: ISTD
Cal Date : 15-MAY-1995 15:26 Cal File: h135cc1.d
Als bottle: 14
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 11 1,4-Dichlorobenzene-d4	152.00	4.469	4.477	(1.000)	159232	40	
* 32 Naphthalene-d8	136.00	5.666	5.674	(1.000)	570325	40	
* 48 Acenaphthene-d10	164.00	7.444	7.452	(1.000)	267554	40	
* 65 Phenanthrene-d10	188.00	8.937	8.945	(1.000)	353622	40	
* 76 Chrysene-d12	240.00	11.805	11.813	(1.000)	223780	40	
* 83 Perylene-d12	264.00	14.044	14.053	(1.000)	145607	40	
$ 23 Nitrobenzene-d5	82.00	4.991	4.999	(0.881)	376352	83	1400
$ 41 2-Fluorobiphenyl	172.00	6.757	6.765	(0.908)	699575	80	1300
$ 72 Terphenyl-d14	244.00	10.572	10.580	(0.896)	506485	84	1400
$ 4 Phenol-d5	99.00	4.185	4.193	(0.936)	574170	94	1600
$ 3 2-Fluorophenol	112.00	3.486	3.458	(0.780)	440045	79	1300
$ 61 2,4,6-Tribromophenol	329.70	8.262	8.258	(0.924)	183258	150	2500

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s05.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	159232	29.43
32 Naphthalene-d8	418440	209220	836880	570325	36.30
48 Acenaphthene-d10	198324	99162	396648	267554	34.91
65 Phenanthrene-d10	270386	135193	540772	353622	30.78
76 Chrysene-d12	175926	87963	351852	223780	27.20
83 Perylene-d12	106536	53268	213072	145607	36.67

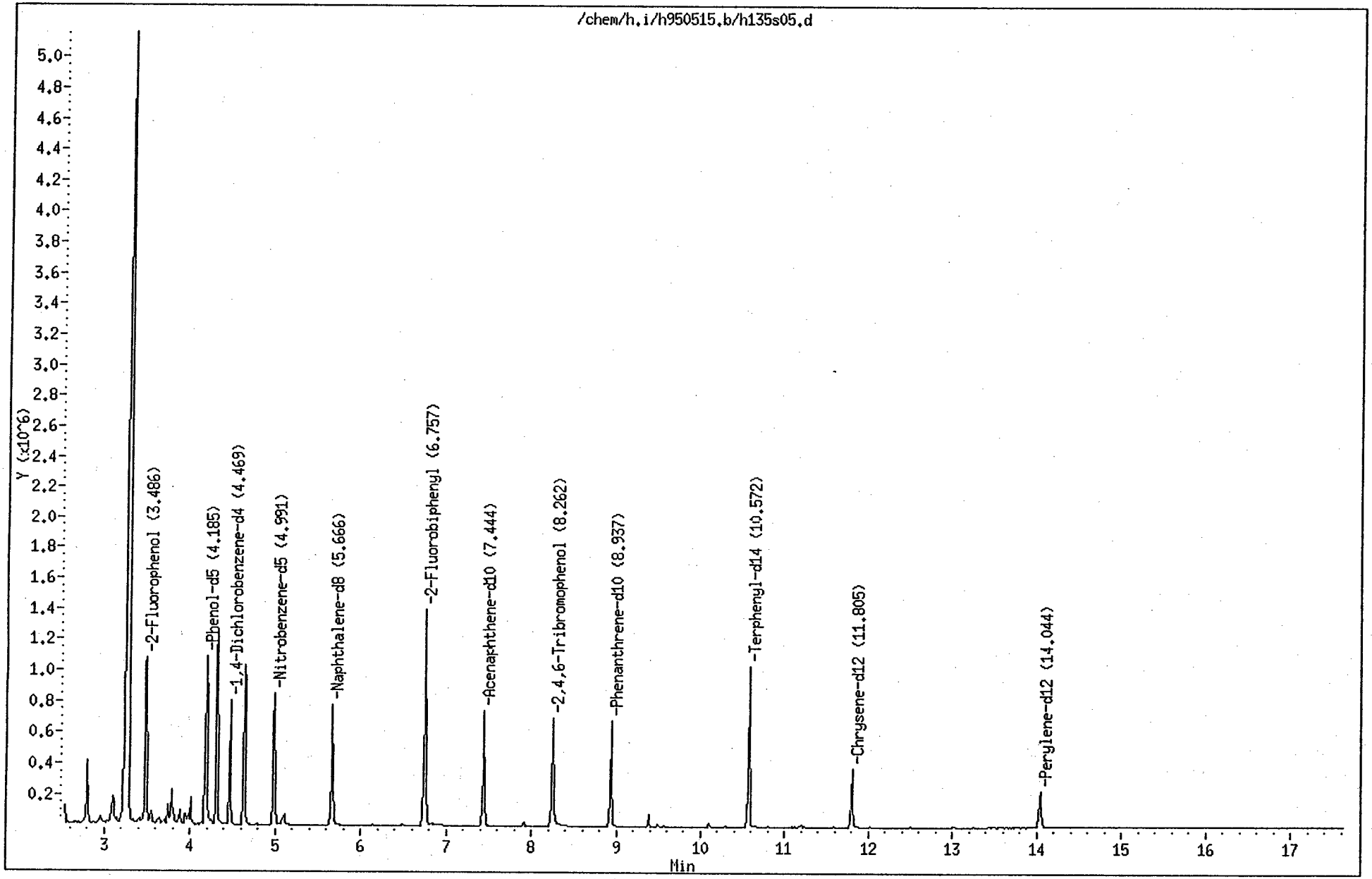
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.18
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.14
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.11
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.09
76 Chrysene-d12	11.81	11.31	12.31	11.80	-0.07
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.06

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.

Data File: /chem/h.i/h950515.b/h135s05.d
Date : 15-MAY-95 21:59
Client ID:
Sample Info: 9505164-05B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:00:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	10	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	3	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:00:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	2.4	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/9

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:00:0
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-06

Operational Tech

SAMPLE ID: 026-005BH 9.5-10

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	98	70	121
Toluene-d8	50 ug/Kg	106	84	138
4-Bromofluorobenzene	50 ug/Kg	90	59	113

ANALYZED BY: HLW DATE/TIME: 05/08/95 20:52:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH 9.5-10

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 14:00:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-06

Operational Tech

SAMPLE ID: 026-005BH 9.5-10

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-06

Operational Tech

SAMPLE ID: 026-005BH 9.5-10

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	85	23	120
2-Fluorobiphenyl	1600 ug/Kg	84	30	115
Terphenyl-d14	1600 ug/Kg	87	18	137
Phenol-d5	2500 ug/Kg	60	24	113
2-Fluorophenol	2500 ug/Kg	52	25	121
2,4,6-Tribromophenol	2500 ug/Kg	106	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 22:24:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128s18.d
Lab Smp Id: 9505164-06A-8240S/1X
Inj Date : 08-MAY-1995 20:52
Operator : HLW Inst ID: k.i
Smp Info : 9505164-06A-8240S/1X
Misc Info : K128S1/K128B02/K127CS2
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 12-May-1995 08:16 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 31
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.120	2.120	(1.000)	82232	250	
* 31 1,4-Difluorobenzene	114.00	2.802	2.802	(1.000)	492617	250	
* 51 Chlorobenzene-d5	117.00	6.772	6.772	(1.000)	345426	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.378	2.378	(1.121)	36776	240	49
$ 40 Toluene-d8	98.00	4.545	4.545	(0.671)	556177	270	53
$ 61 Bromofluorobenzene	95.00	8.878	8.878	(1.311)	171288	220	45

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128s18.d
Lab Smp Id: 9505164-06A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info: K128S1/K128B02/K127CS2

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	82232	-7.27
31 1,4-Difluorobenzene	553116	276558	1106232	492617	-10.94
51 Chlorobenzene-d5	397197	198598	794394	345426	-13.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	0.00
51 Chlorobenzene-d5	6.77	6.27	7.27	6.77	0.00

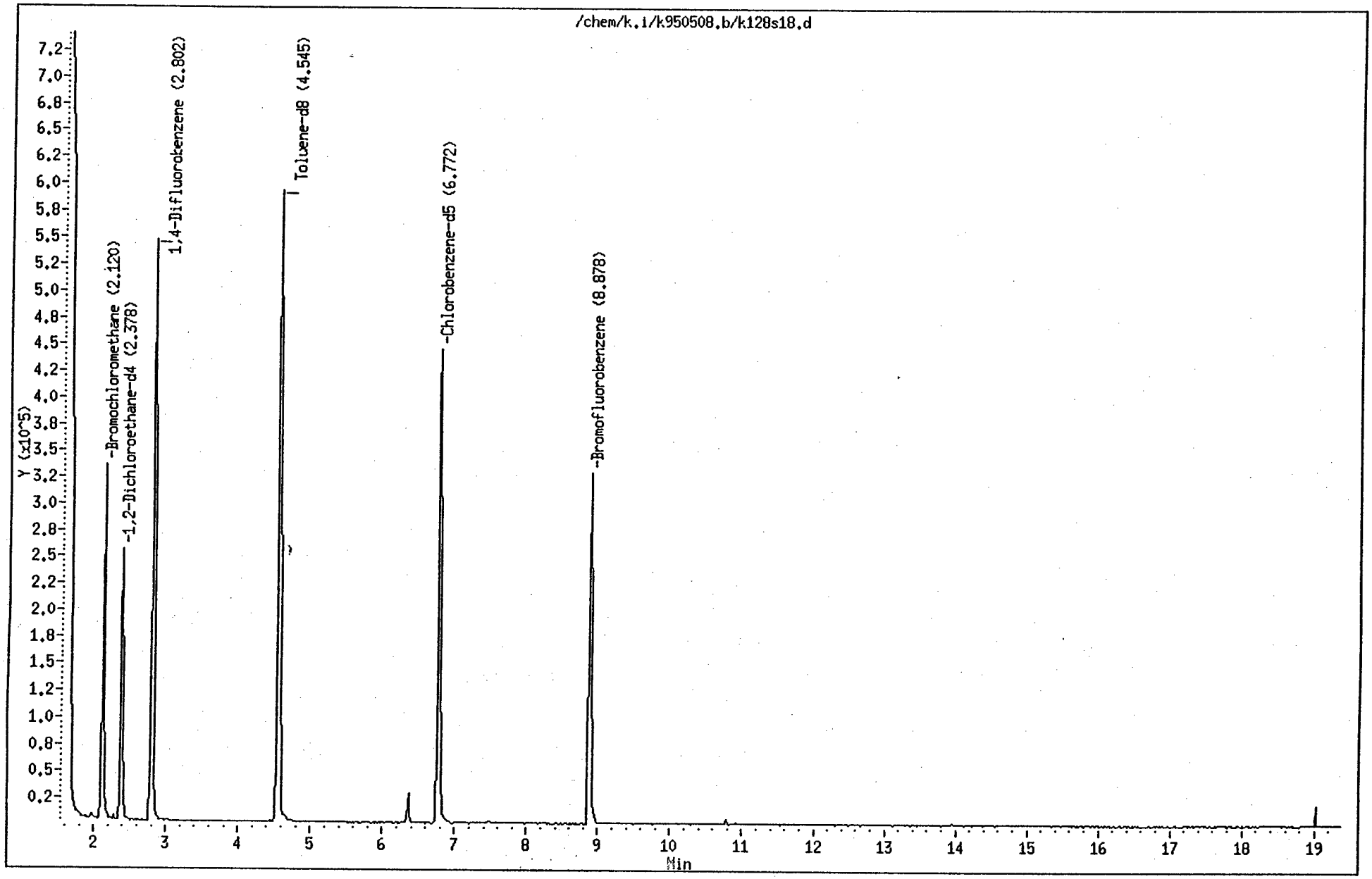
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128s18.d
Date : 08-MAY-1995 20:52
Client ID:
Sample Info: 9505164-06A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s06.d
Lab Smp Id:
Inj Date : 15-MAY-95 22:24
Operator : LH
Inst ID: h.i
Smp Info : 9505164-06B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping
Quant Type: ISTD
Cal Date : 15-MAY-1995 15:26
Cal File: h135cc1.d
Als bottle: 15
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: 8270.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 11 1,4-Dichlorobenzene-d4	152.00	4.469	4.477	(1.000)	166470	40	
* 32 Naphthalene-d8	136.00	5.666	5.674	(1.000)	597604	40	
* 48 Acenaphthene-d10	164.00	7.444	7.452	(1.000)	282141	40	
* 65 Phenanthrene-d10	188.00	8.937	8.945	(1.000)	379157	40	
* 76 Chrysene-d12	240.00	11.805	11.813	(1.000)	258698	40	
* 83 Perylene-d12	264.00	14.044	14.053	(1.000)	163978	40	
$ 23 Nitrobenzene-d5	82.00	4.991	4.999	(0.881)	389188	82	1400
$ 41 2-Fluorobiphenyl	172.00	6.757	6.765	(0.908)	742098	80	1300
$ 72 Terphenyl-d14	244.00	10.584	10.580	(0.897)	581618	83	1400
$ 4 Phenol-d5	99.00	4.185	4.193	(0.936)	577596	90	1500
$ 3 2-Fluorophenol	112.00	3.486	3.458	(0.780)	453030	78	1300
$ 61 2,4,6-Tribromophenol	329.70	8.261	8.258	(0.924)	206327	160	2600

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s06.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	166470	35.32
32 Naphthalene-d8	418440	209220	836880	597604	42.82
48 Acenaphthene-d10	198324	99162	396648	282141	42.26
65 Phenanthrene-d10	270386	135193	540772	379157	40.23
76 Chrysene-d12	175926	87963	351852	258698	47.05
83 Perylene-d12	106536	53268	213072	163978	53.92

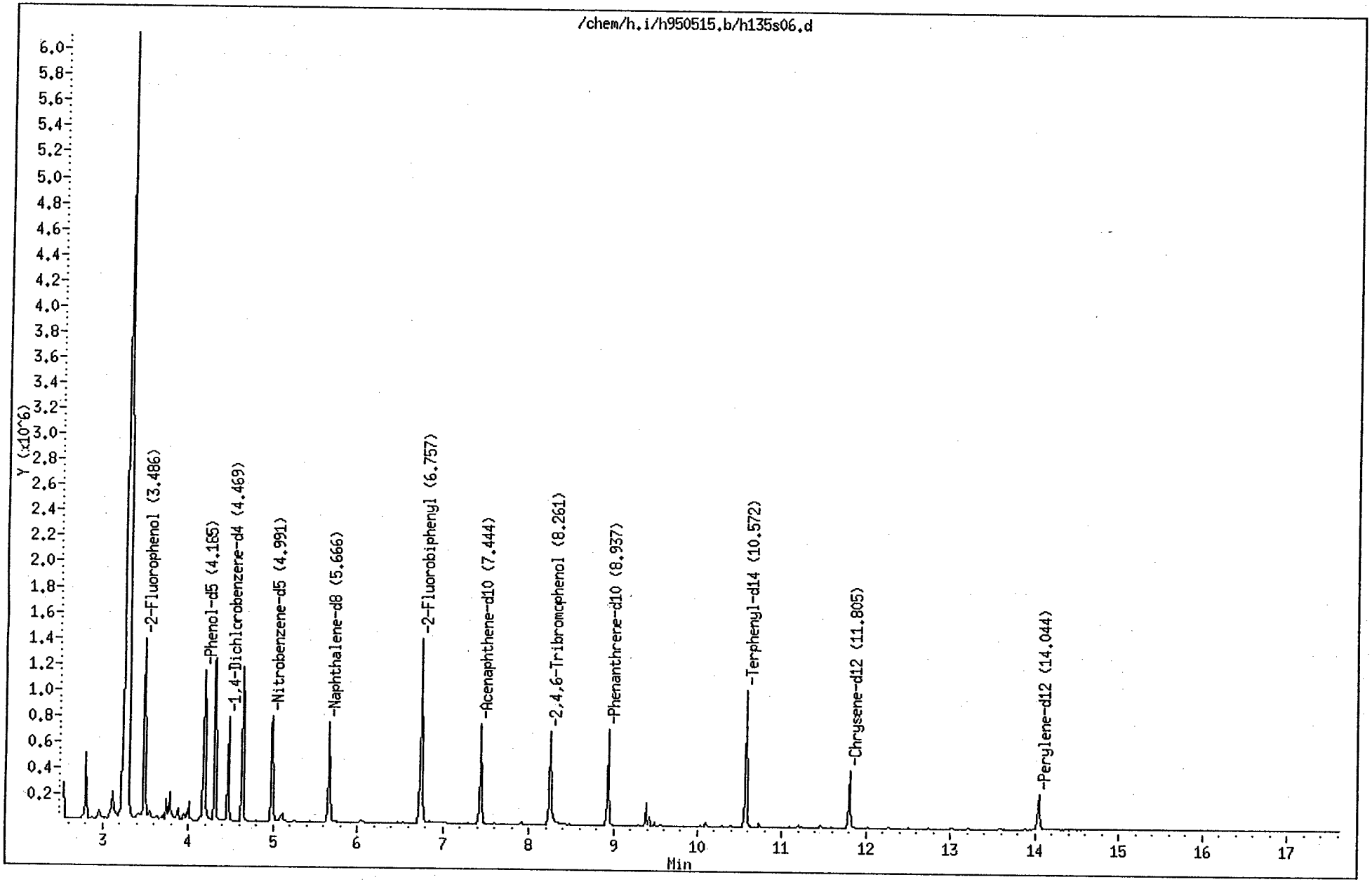
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.18
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.14
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.11
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.09
76 Chrysene-d12	11.81	11.31	12.31	11.80	-0.07
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.06

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.

Data File: /chem/h.i/h950515.b/h135s06.d
Date : 15-MAY-95 22:24
Client ID:
Sample Info: 9505164-06B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-07

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 11.5-12

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:20:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	12	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	4	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-07

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 11.5-12

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:20:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	2.6	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-07

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 11.5-12

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:20:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-07

Operational Tech

SAMPLE ID: 026-006BH 11.5-12

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	98	70	121
Toluene-d8	50 ug/Kg	94	84	138
4-Bromofluorobenzene	50 ug/Kg	94	59	113

ANALYZED BY: HLW DATE/TIME: 05/09/95 12:55:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-07

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 11.5-12

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:20:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-07

Operational Tech

SAMPLE ID: 026-006BH 11.5-12

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl) Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd) Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-07

Operational Tech

SAMPLE ID: 026-006BH 11.5-12

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	91	23	120
2-Fluorobiphenyl	1600 ug/Kg	85	30	115
Terphenyl-d14	1600 ug/Kg	83	18	137
Phenol-d5	2500 ug/Kg	64	24	113
2-Fluorophenol	2500 ug/Kg	54	25	121
2,4,6-Tribromophenol	2500 ug/Kg	109	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 22:49:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129s01.d
Lab Smp Id: 9505164-07A-8240S/1X
Inj Date : 09-MAY-95 12:55
Operator : HLW Inst ID: k.i
Smp Info : 9505164-07A-8240S/1X
Misc Info : K129S1/K129B02/K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 09-May-1995 11:38 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 14
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.121	2.123	(1.000)	93613	250	
* 31 1,4-Difluorobenzene	114.00	2.803	2.789	(1.000)	537293	250	
* 51 Chlorobenzene-d5	117.00	6.758	6.759	(1.000)	406721	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.364	2.365	(1.114)	40424	240	49
$ 40 Toluene-d8	98.00	4.531	4.532	(0.670)	591163	240	47
$ 61 Bromofluorobenzene	95.00	8.864	8.865	(1.312)	207967	230	47

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129s01.d
Lab Smp Id: 9505164-07A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1/K129B02/K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	93613	8.26
31 1,4-Difluorobenzene	552052	276026	1104104	537293	-2.67
51 Chlorobenzene-d5	389031	194516	778062	406721	4.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.06
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.50
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.02

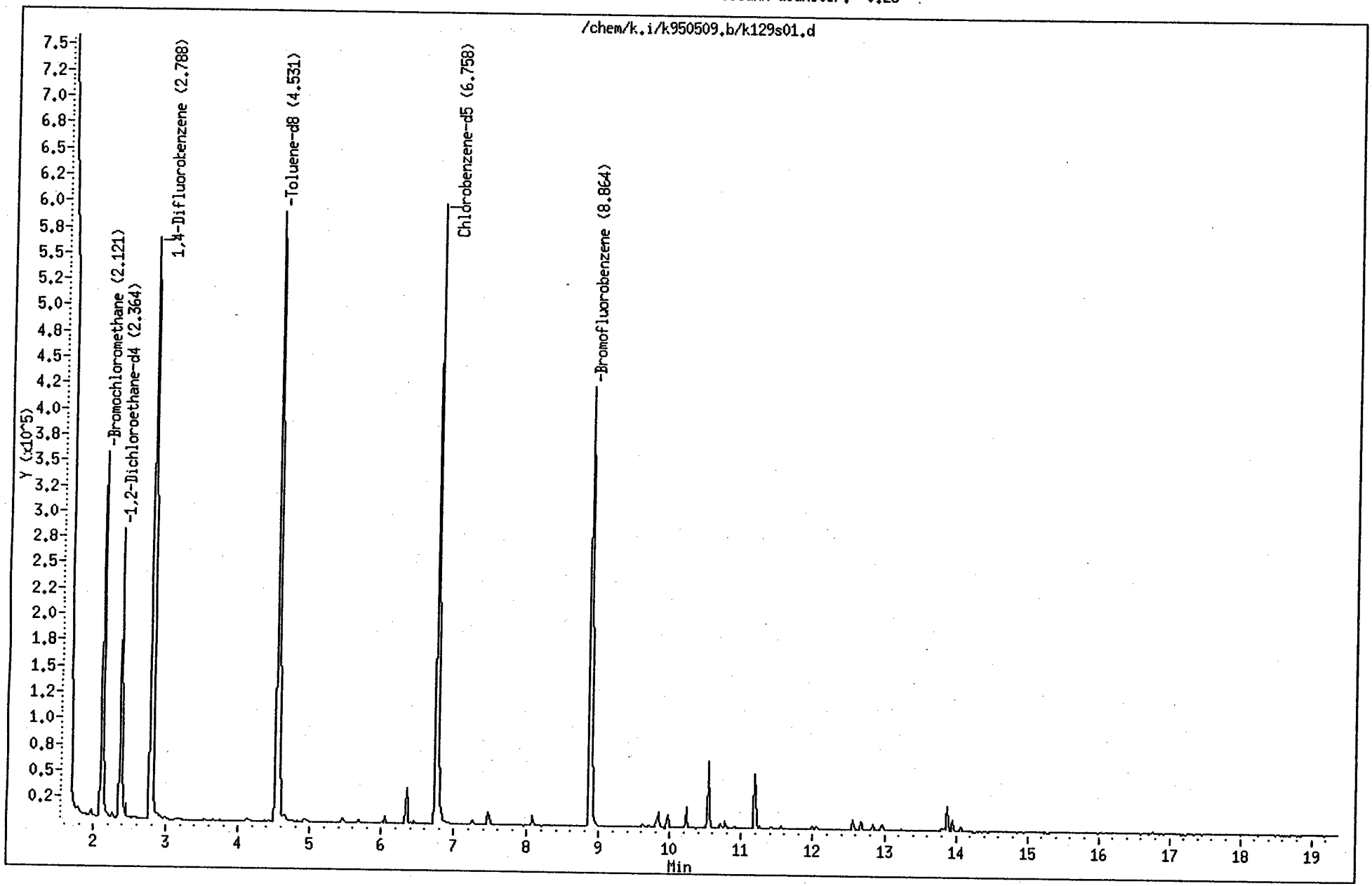
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129s01.d
Date : 09-MAY-1995 12:55
Client ID:
Sample Info: 9505164-07A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s07.d
Lab Smp Id:
Inj Date : 15-MAY-95 22:49
Operator : LH Inst ID: h.i
Smp Info : 9505164-07B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping Quant Type: ISTD
Cal Date : 15-MAY-1995 15:26 Cal File: h135cc1.d
Als bottle: 16
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
*	11 1,4-Dichlorobenzene-d4	152.00	4.469	4.477	(1.000)	162295	40	
*	32 Naphthalene-d8	136.00	5.666	5.674	(1.000)	598303	40	
*	48 Acenaphthene-d10	164.00	7.444	7.452	(1.000)	296009	40	
*	65 Phenanthrene-d10	188.00	8.937	8.945	(1.000)	429271	40	
*	76 Chrysene-d12	240.00	11.805	11.813	(1.000)	309292	40	
*	83 Perylene-d12	264.00	14.045	14.053	(1.000)	195386	40	
$	23 Nitrobenzene-d5	82.00	4.991	4.999	(0.881)	416761	88	1500
$	41 2-Fluorobiphenyl	172.00	6.757	6.765	(0.908)	793389	82	1400
$	72 Terphenyl-d14	244.00	10.584	10.580	(0.897)	667570	80	1300
$	4 Phenol-d5	99.00	4.185	4.193	(0.936)	602329	96	1600
$	3 2-Fluorophenol	112.00	3.486	3.458	(0.780)	462593	81	1400
$	61 2,4,6-Tribromophenol	329.70	8.262	8.258	(0.924)	240116	160	2700

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s07.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	162295	31.92
32 Naphthalene-d8	418440	209220	836880	598303	42.98
48 Acenaphthene-d10	198324	99162	396648	296009	49.26
65 Phenanthrene-d10	270386	135193	540772	429271	58.76
76 Chrysene-d12	175926	87963	351852	309292	75.81
83 Perylene-d12	106536	53268	213072	195386	83.40

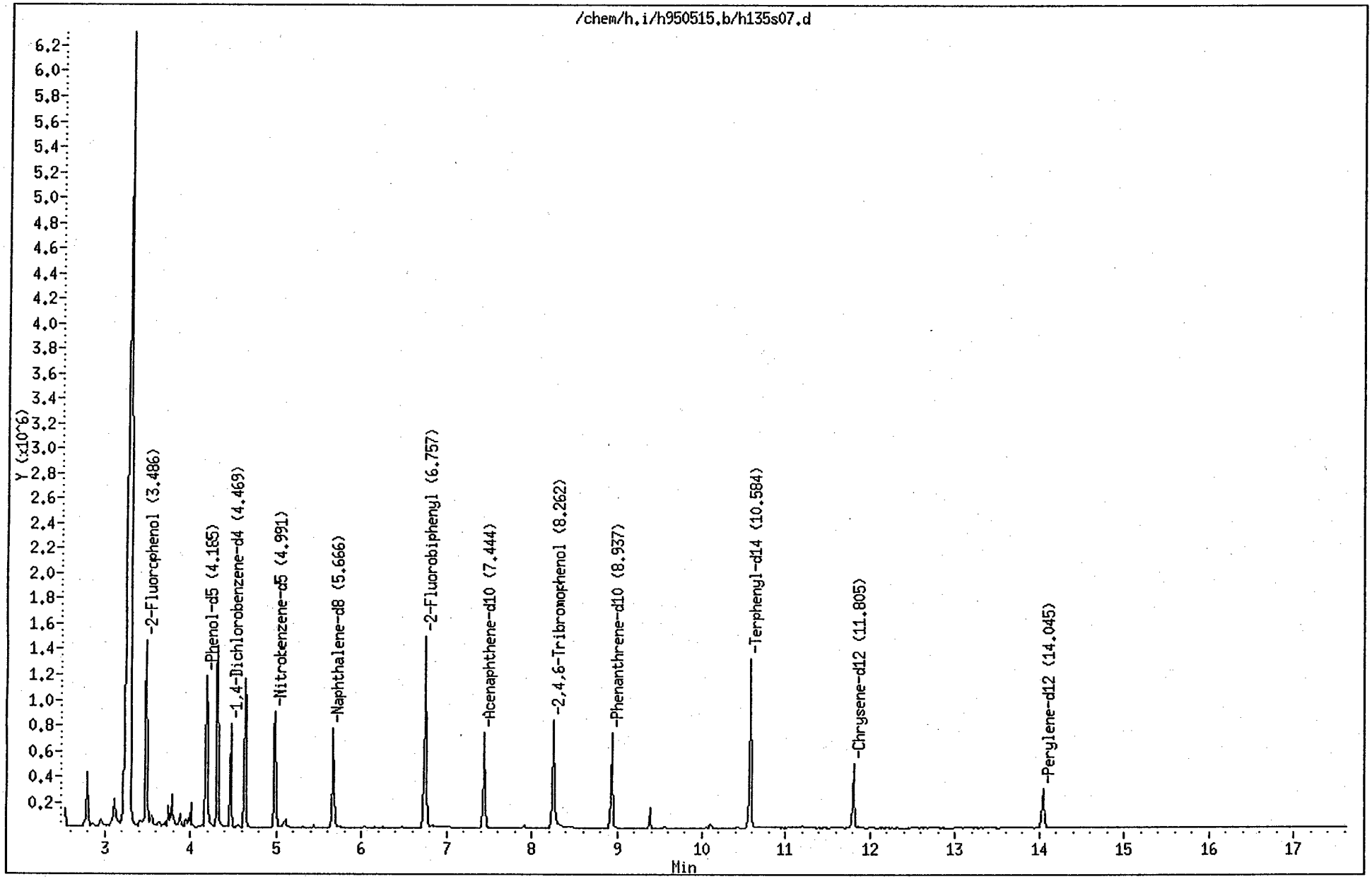
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.18
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.14
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.11
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.09
76 Chrysene-d12	11.81	11.31	12.31	11.80	-0.07
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.06

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.

Data File: /chem/h.i/h950515.b/h135s07.d
Date : 15-MAY-95 22:49
Client ID:
Sample Info: 9505164-07B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-08

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/9

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 12:45:0
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	9	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	5	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-08

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 12:45:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	2.4	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-08

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 12:45:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-08

Operational Tech

SAMPLE ID: 026-006BH 2-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	94	70	121
Toluene-d8	50 ug/Kg	102	84	138
4-Bromofluorobenzene	50 ug/Kg	94	59	113

ANALYZED BY: HLW DATE/TIME: 05/09/95 13:22:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-08

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-006BH 2-2.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 12:45:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	660	ug/Kg
Acenaphthylene	ND	660	ug/Kg
Aniline	ND	660	ug/Kg
Anthracene	ND	660	ug/Kg
Benzo(a)Anthracene	ND	660	ug/Kg
Benzo(b)Fluoranthene	ND	660	ug/Kg
Benzo(k)Fluoranthene	ND	660	ug/Kg
Benzo(a)Pyrene	ND	660	ug/Kg
Benzoic Acid	ND	3200	ug/Kg
Benzo(g,h,i)Perylene	ND	660	ug/Kg
Benzyl alcohol	ND	660	ug/Kg
4-Bromophenylphenyl ether	ND	660	ug/Kg
Butylbenzylphthalate	ND	660	ug/Kg
di-n-Butyl phthalate	ND	660	ug/Kg
Carbazole	ND	660	ug/Kg
4-Chloroaniline	ND	660	ug/Kg
bis(2-Chloroethoxy)Methane	ND	660	ug/Kg
bis(2-Chloroethyl)Ether	ND	660	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	660	ug/Kg
4-Chloro-3-Methylphenol	ND	660	ug/Kg
2-Chloronaphthalene	ND	660	ug/Kg
2-Chlorophenol	ND	660	ug/Kg
4-Chlorophenylphenyl ether	ND	660	ug/Kg
Chrysene	ND	660	ug/Kg
Dibenz(a,h)Anthracene	ND	660	ug/Kg
Dibenzofuran	ND	660	ug/Kg
1,2-Dichlorobenzene	ND	660	ug/Kg
1,3-Dichlorobenzene	ND	660	ug/Kg
1,4-Dichlorobenzene	ND	660	ug/Kg
3,3'-Dichlorobenzidine	ND	660	ug/Kg
2,4-Dichlorophenol	ND	660	ug/Kg
Diethylphthalate	ND	660	ug/Kg
2,4-Dimethylphenol	ND	660	ug/Kg
Dimethyl Phthalate	ND	660	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	1600	ug/Kg
2,4-Dinitrophenol	ND	1600	ug/Kg
2,4-Dinitrotoluene	ND	660	ug/Kg
2,6-Dinitrotoluene	ND	660	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-08

Operational Tech

SAMPLE ID: 026-006BH 2-2.5

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	660	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	660	ug/Kg
Fluoranthene	870	660	ug/Kg
Fluorene	ND	660	ug/Kg
Hexachlorobenzene	ND	660	ug/Kg
Hexachlorobutadiene	ND	660	ug/Kg
Hexachloroethane	ND	660	ug/Kg
Hexachlorocyclopentadiene	ND	660	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	660	ug/Kg
Isophorone	ND	660	ug/Kg
2-Methylnaphthalene	ND	660	ug/Kg
2-Methylphenol	ND	660	ug/Kg
4-Methylphenol	ND	660	ug/Kg
Naphthalene	ND	660	ug/Kg
2-Nitroaniline	ND	1600	ug/Kg
3-Nitroaniline	ND	1600	ug/Kg
4-Nitroaniline	ND	1600	ug/Kg
Nitrobenzene	ND	660	ug/Kg
2-Nitrophenol	ND	660	ug/Kg
4-Nitrophenol	ND	1600	ug/Kg
N-Nitrosodiphenylamine (1)	ND	660	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	660	ug/Kg
Di-n-Octyl Phthalate	ND	660	ug/Kg
Pentachlorophenol	ND	1600	ug/Kg
Phenanthrene	800	660	ug/Kg
Phenol	ND	660	ug/Kg
Pyrene	710	660	ug/Kg
Pyridine	ND	660	ug/Kg
1,2,4-Trichlorobenzene	ND	660	ug/Kg
2,4,5-Trichlorophenol	ND	1600	ug/Kg
2,4,6-Trichlorophenol	ND	660	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-08

Operational Tech

SAMPLE ID: 026-006BH 2-2.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	94	23	120
2-Fluorobiphenyl	1600 ug/Kg	100	30	115
Terphenyl-d14	1600 ug/Kg	98	18	137
Phenol-d5	2500 ug/Kg	76	24	113
2-Fluorophenol	2500 ug/Kg	62	25	121
2,4,6-Tribromophenol	2500 ug/Kg	100	19	122

ANALYZED BY: LH
DATE/TIME: 05/16/95 19:57:00
EXTRACTED BY: JK
DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129s02.d
Lab Smp Id: 9505164-08A-8240S/1X
Inj Date : 09-MAY-1995 13:22
Operator : HLW Inst ID: k.i
Smp Info : 9505164-08A-8240S/1X
Misc Info : K129S1/K129B02/K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 12-May-1995 10:45 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 15
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.120	2.123	(1.000)	92530	250	
* 31 1,4-Difluorobenzene	114.00	2.802	2.789	(1.000)	524307	250	
* 51 Chlorobenzene-d5	117.00	6.757	6.759	(1.000)	370045	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.363	2.365	(1.114)	38335	230	47
$ 40 Toluene-d8	98.00	4.545	4.532	(0.673)	586421	260	51
$ 61 Bromofluorobenzene	95.00	8.863	8.865	(1.312)	190415	240	47

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129s02.d
Lab Smp Id: 9505164-08A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1/K129B02/K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	92530	7.01
31 1,4-Difluorobenzene	552052	276026	1104104	524307	-5.03
51 Chlorobenzene-d5	389031	194516	778062	370045	-4.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.10
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.46
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.03

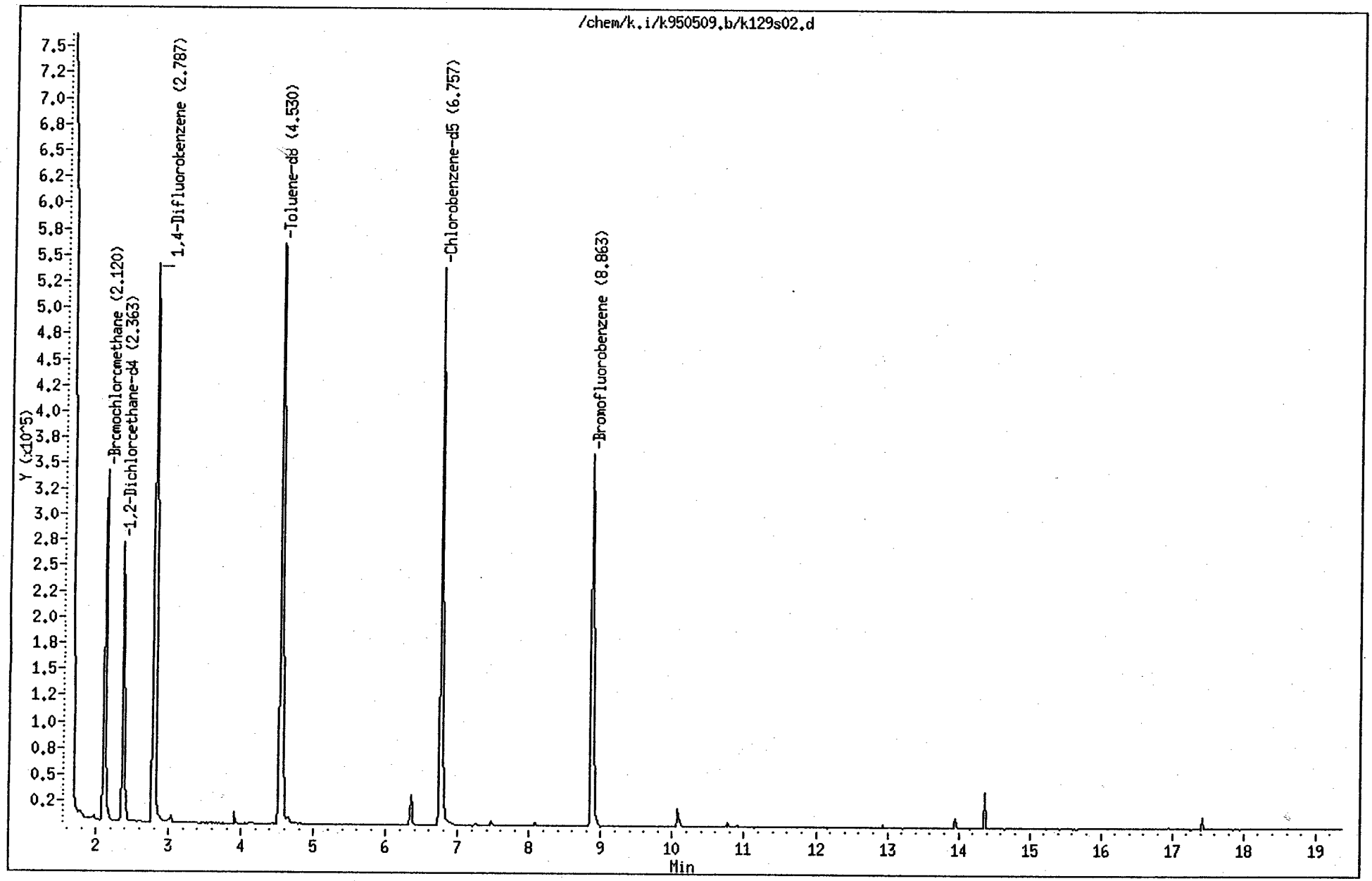
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129s02.d
Date : 09-MAY-1995 13:22
Client ID:
Sample Info: 9505164-08A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136s13.d
Lab Smp Id:
Inj Date : 16-MAY-1995 19:57
Operator : LH
Smp Info : 9505164-08B-8270S/1X
Misc Info : E132S1/H132B02/H136IC1
Comment :
Method : /chem/h.i/h950516.b/hclps.m
Meth Date : 16-May-1995 16:57 liping
Cal Date : 16-MAY-1995 11:52
Als bottle: 17
Dil Factor: 2.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h136ic1.d

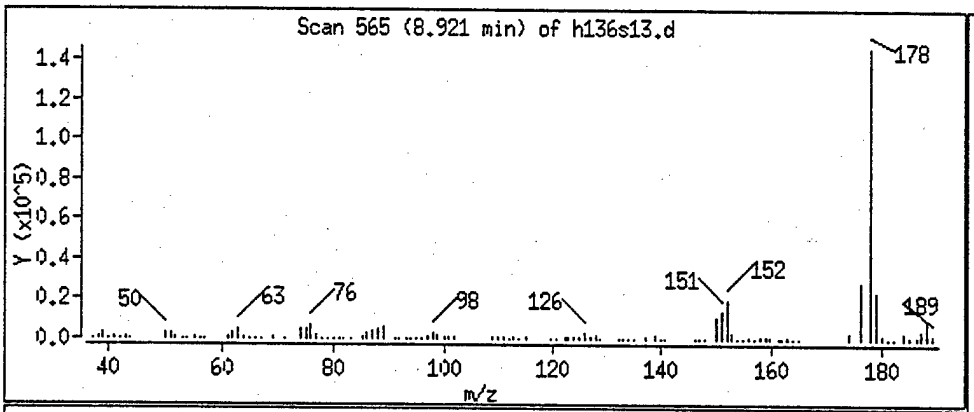
Compound Sublist: 8270.sub

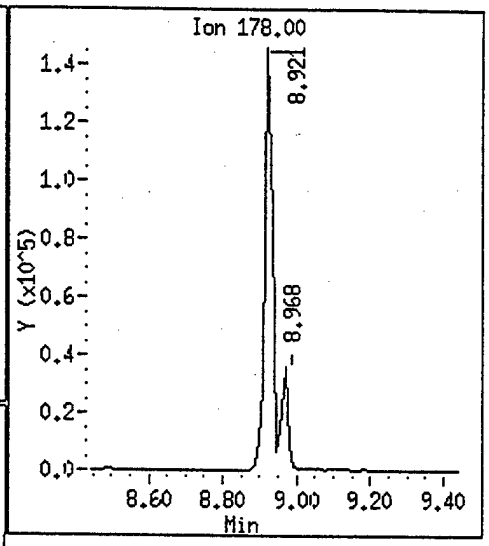
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	66 Phenanthrene	178.00	8.921	8.945	(1.003)	200180	24	800
	70 Fluoranthene	202.00	10.141	10.166	(1.140)	184320	26	870
	71 Pyrene	202.00	10.378	10.391	(0.883)	130828	21	710
*	11 1,4-Dichlorobenzene-d4	152.00	4.441	4.454	(1.000)	137962	40	
*	32 Naphthalene-d8	136.00	5.638	5.651	(1.000)	501891	40	
*	48 Acenaphthene-d10	164.00	7.404	7.417	(1.000)	234319	40	
*	65 Phenanthrene-d10	188.00	8.897	8.922	(1.000)	283903	40	
*	76 Chrysene-d12	240.00	11.753	11.777	(1.000)	153893	40	
*	83 Perylene-d12	264.00	13.981	13.993	(1.000)	97228	40	
$	23 Nitrobenzene-d5	82.00	4.951	4.964	(0.878)	184560	45	1500
$	41 2-Fluorobiphenyl	172.00	6.717	6.729	(0.907)	369515	48	1600
$	72 Terphenyl-d14	244.00	10.533	10.545	(0.896)	201818	47	1600
$	4 Phenol-d5	99.00	4.145	4.158	(0.933)	285868	57	1900
$	3 2-Fluorophenol	112.00	3.446	3.423	(0.776)	216135	46	1500
$	61 2,4,6-Tribromophenol	329.70	8.222	8.234	(0.924)	85903	75	2500

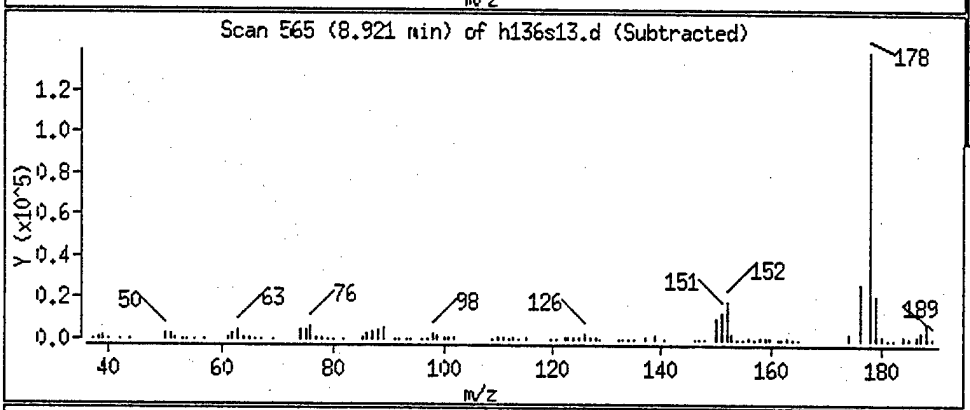
Data File: /chem/h.i/h950516.b/h136s13.d
Date : 16-MAY-1995 19:57
Client ID:
Sample Info: 9505164-08B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

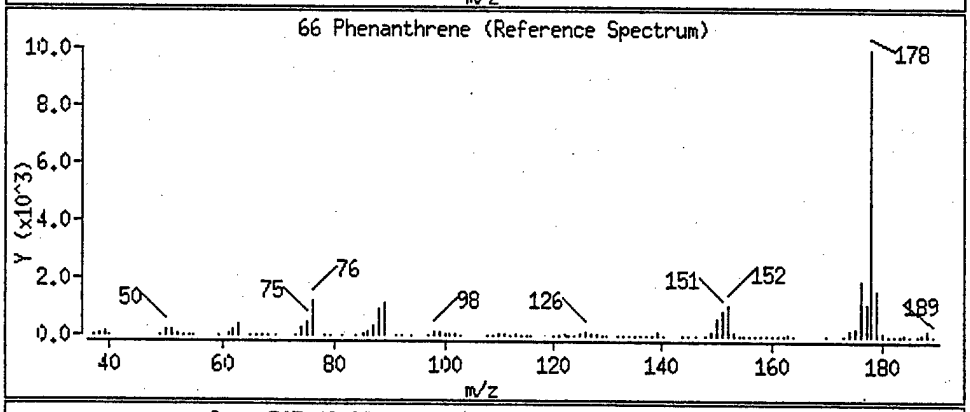
Instrument: h.i
Operator: LH
Column diameter: 0.25

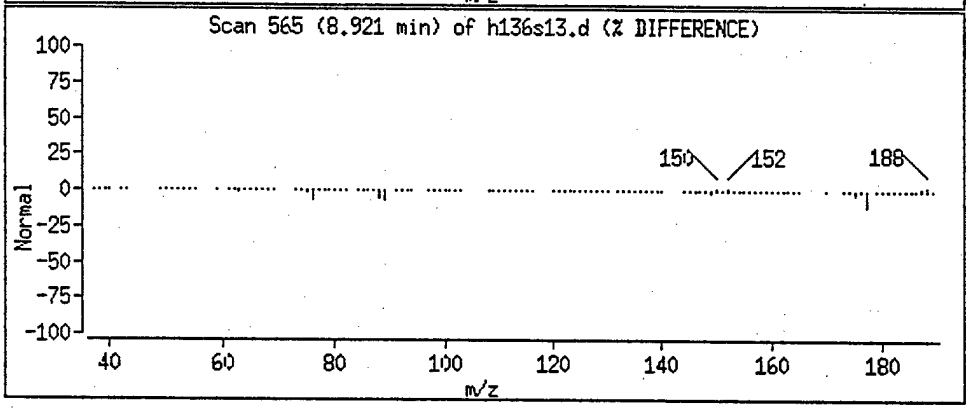
66 Phenanthrene







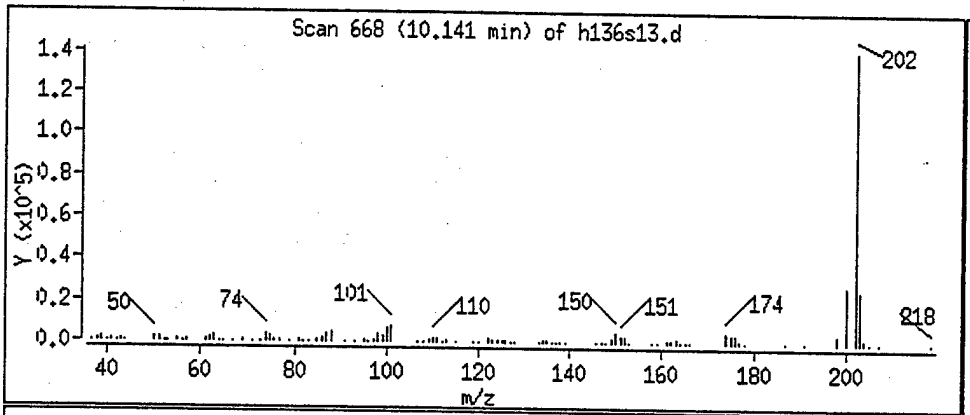


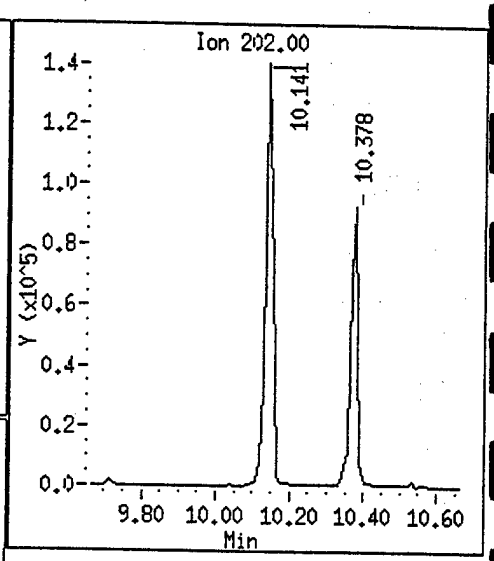


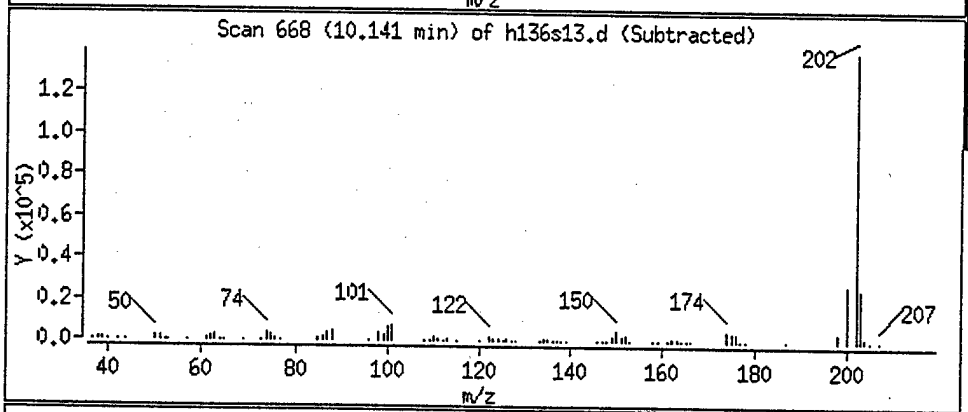
Data File: /chem/h.i/h950516.b/h136s13.d
Date : 16-MAY-1995 19:57
Client ID:
Sample Info: 9505164-08B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

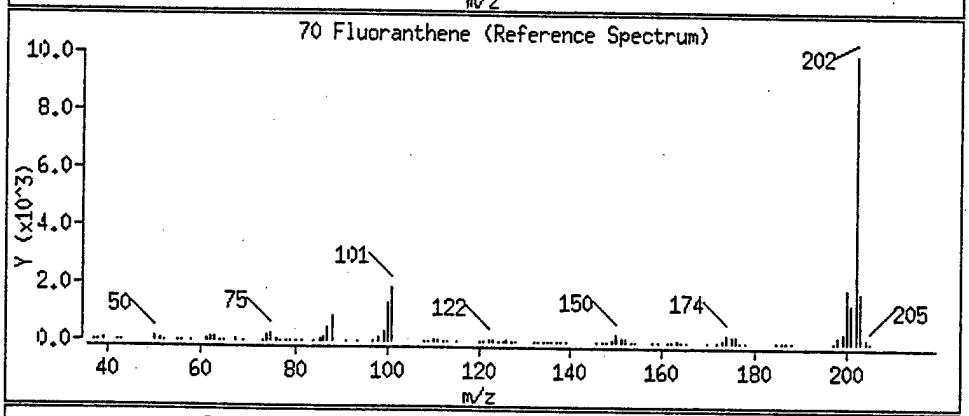
Instrument: h.i
Operator: LH
Column diameter: 0.25

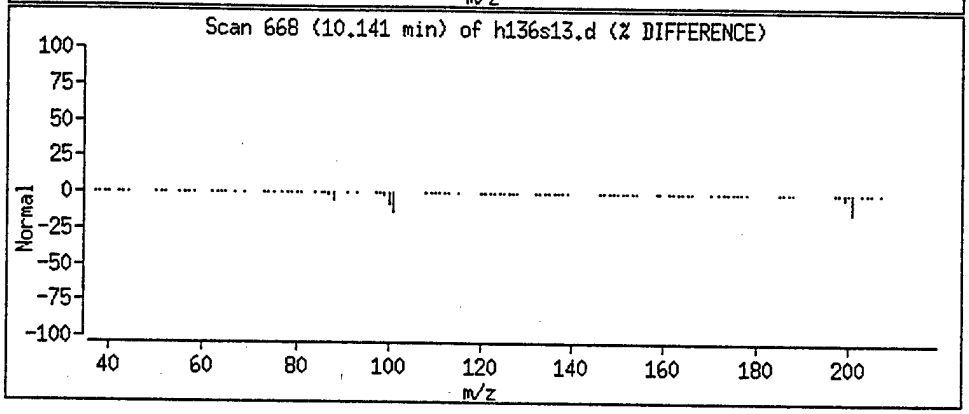
70 Fluoranthene











Data File: /chem/h.i/h950516.b/h136s13.d

Date : 16-MAY-1995 19:57

Client ID:

Instrument: h.i

Sample Info: 9505164-08B-8270S/1X

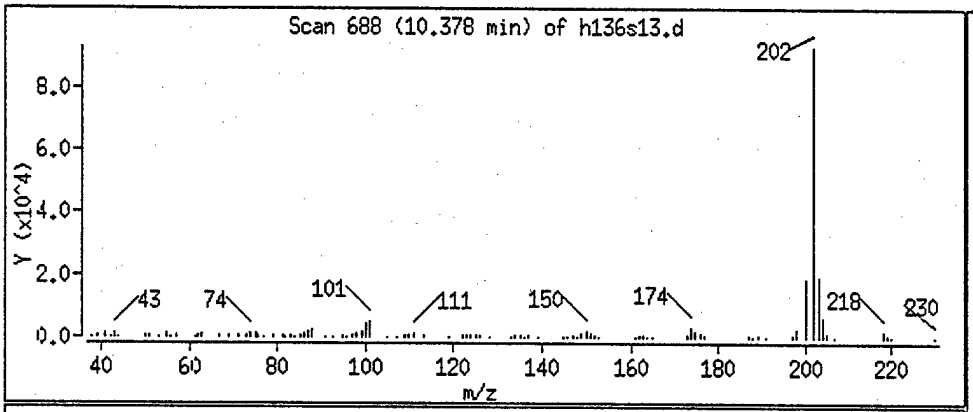
Volume Injected (uL): 2.0

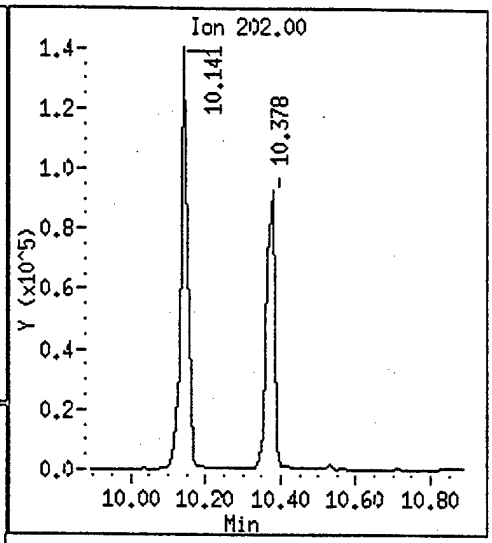
Operator: LH

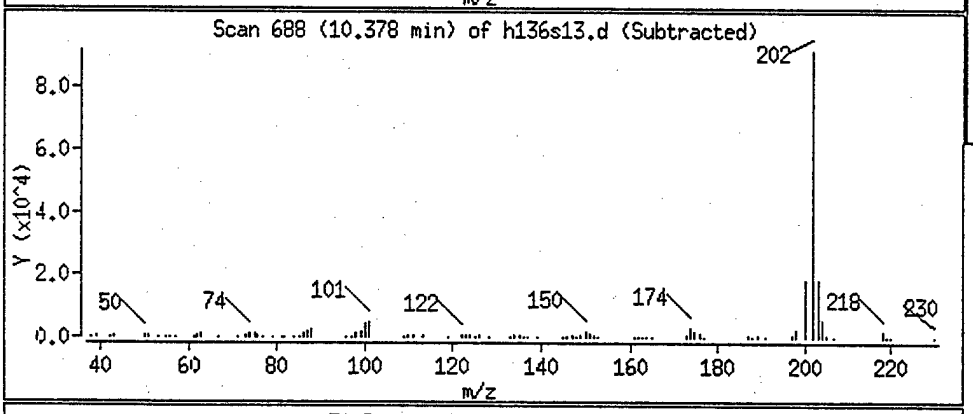
Column phase:

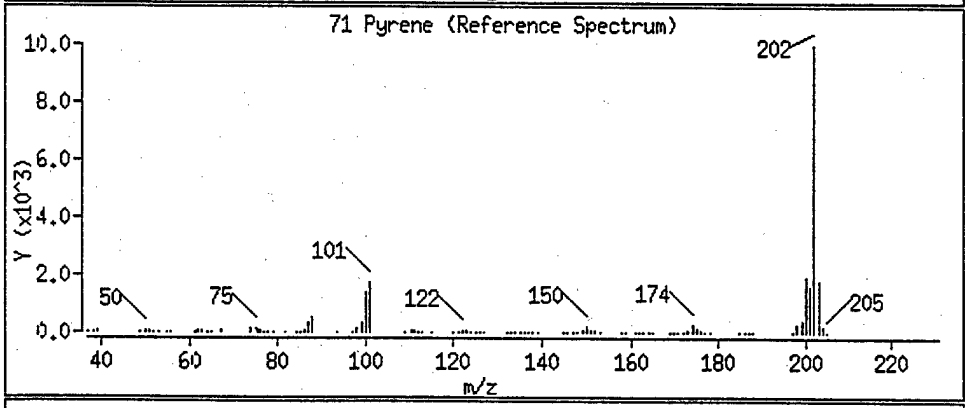
Column diameter: 0.25

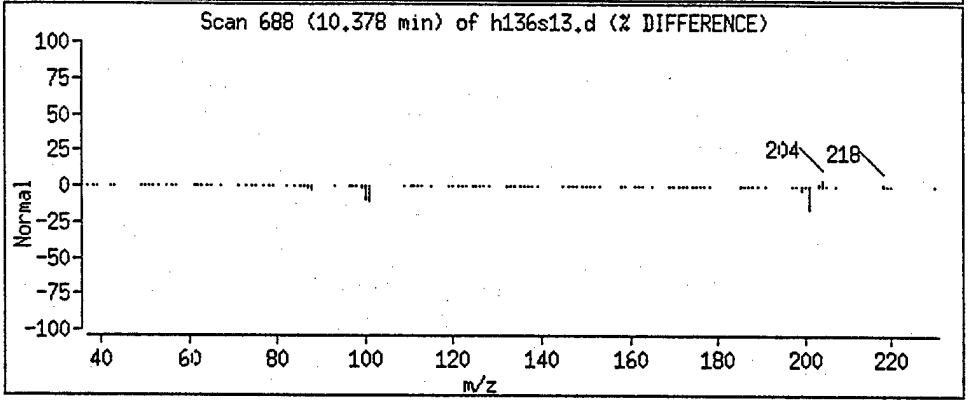
71 Pyrene











HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-09

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH .5-1.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:48:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	9	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	8	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9505164-09

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ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH .5-1.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:48:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	4.2	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-09

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH .5-1.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:48:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	7	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-09

Operational Tech

SAMPLE ID: 026-005BH .5-1.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	96	70	121
Toluene-d8	50 ug/Kg	98	84	138
4-Bromofluorobenzene	50 ug/Kg	96	59	113

ANALYZED BY: HLW DATE/TIME: 05/09/95 13:49:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-09

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-005BH .5-1.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:48:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	990	ug/Kg
Acenaphthylene	ND	990	ug/Kg
Aniline	ND	990	ug/Kg
Anthracene	ND	990	ug/Kg
Benzo(a)Anthracene	ND	990	ug/Kg
Benzo(b)Fluoranthene	ND	990	ug/Kg
Benzo(k)Fluoranthene	ND	990	ug/Kg
Benzo(a)Pyrene	ND	990	ug/Kg
Benzoic Acid	ND	4800	ug/Kg
Benzo(g,h,i)Perylene	ND	990	ug/Kg
Benzyl alcohol	ND	990	ug/Kg
4-Bromophenylphenyl ether	ND	990	ug/Kg
Butylbenzylphthalate	ND	990	ug/Kg
di-n-Butyl phthalate	ND	990	ug/Kg
Carbazole	ND	990	ug/Kg
4-Chloroaniline	ND	990	ug/Kg
bis(2-Chloroethoxy)Methane	ND	990	ug/Kg
bis(2-Chloroethyl)Ether	ND	990	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	990	ug/Kg
4-Chloro-3-Methylphenol	ND	990	ug/Kg
2-Chloronaphthalene	ND	990	ug/Kg
2-Chlorophenol	ND	990	ug/Kg
4-Chlorophenylphenyl ether	ND	990	ug/Kg
Chrysene	ND	990	ug/Kg
Dibenz(a,h)Anthracene	ND	990	ug/Kg
Dibenzofuran	ND	990	ug/Kg
1,2-Dichlorobenzene	ND	990	ug/Kg
1,3-Dichlorobenzene	ND	990	ug/Kg
1,4-Dichlorobenzene	ND	990	ug/Kg
3,3'-Dichlorobenzidine	ND	990	ug/Kg
2,4-Dichlorophenol	ND	990	ug/Kg
Diethylphthalate	ND	990	ug/Kg
2,4-Dimethylphenol	ND	990	ug/Kg
Dimethyl Phthalate	ND	990	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	2400	ug/Kg
2,4-Dinitrophenol	ND	2400	ug/Kg
2,4-Dinitrotoluene	ND	990	ug/Kg
2,6-Dinitrotoluene	ND	990	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-09

Operational Tech

SAMPLE ID: 026-005BH .5-1.5

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	990	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	990	ug/Kg
Fluoranthene	ND	990	ug/Kg
Fluorene	ND	990	ug/Kg
Hexachlorobenzene	ND	990	ug/Kg
Hexachlorobutadiene	ND	990	ug/Kg
Hexachloroethane	ND	990	ug/Kg
Hexachlorocyclopentadiene	ND	990	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	990	ug/Kg
Isophorone	ND	990	ug/Kg
2-Methylnaphthalene	ND	990	ug/Kg
2-Methylphenol	ND	990	ug/Kg
4-Methylphenol	ND	990	ug/Kg
Naphthalene	ND	990	ug/Kg
2-Nitroaniline	ND	2400	ug/Kg
3-Nitroaniline	ND	2400	ug/Kg
4-Nitroaniline	ND	2400	ug/Kg
Nitrobenzene	ND	990	ug/Kg
2-Nitrophenol	ND	990	ug/Kg
4-Nitrophenol	ND	2400	ug/Kg
N-Nitrosodiphenylamine (1)	ND	990	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	990	ug/Kg
Di-n-Octyl Phthalate	ND	990	ug/Kg
Pentachlorophenol	ND	2400	ug/Kg
Phenanthrene	ND	990	ug/Kg
Phenol	ND	990	ug/Kg
Pyrene	ND	990	ug/Kg
Pyridine	ND	990	ug/Kg
1,2,4-Trichlorobenzene	ND	990	ug/Kg
2,4,5-Trichlorophenol	ND	2400	ug/Kg
2,4,6-Trichlorophenol	ND	990	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-09

Operational Tech

SAMPLE ID: 026-005BH .5-1.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	84	23	120
2-Fluorobiphenyl	1600 ug/Kg	89	30	115
Terphenyl-d14	1600 ug/Kg	92	18	137
Phenol-d5	2500 ug/Kg	76	24	113
2-Fluorophenol	2500 ug/Kg	61	25	121
2,4,6-Tribromophenol	2500 ug/Kg	87	19	122

ANALYZED BY: LH DATE/TIME: 05/16/95 00:28:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129s03.d
Lab Smp Id: 9505164-09A-8240S/1X
Inj Date : 09-MAY-1995 13:49
Operator : HLW Inst ID: k.i
Smp Info : 9505164-09A-8240S/1X
Misc Info : K129S1/K129B02/K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 12-May-1995 10:45 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 16
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
43 Toluene	92.00	4.650	4.638	(0.688)	60598	33	7
53 Ethylbenzene	106.00	7.256	7.244	(1.074)	13224	14	3(aH)
* 20 Bromochloromethane	128.00	2.119	2.123	(1.000)	92068	250	
* 31 1,4-Difluorobenzene	114.00	2.801	2.789	(1.000)	524633	250	
* 51 Chlorobenzene-d5	117.00	6.756	6.759	(1.000)	388205	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.377	2.365	(1.122)	38695	240	48
$ 40 Toluene-d8	98.00	4.544	4.532	(0.673)	586053	240	49
$ 61 Bromofluorobenzene	95.00	8.862	8.865	(1.312)	204391	240	48

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129s03.d
Lab Smp Id: 9505164-09A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1/K129B02/K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	92068	6.47
31 1,4-Difluorobenzene	552052	276026	1104104	524633	-4.97
51 Chlorobenzene-d5	389031	194516	778062	388205	-0.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.16
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.43
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.05

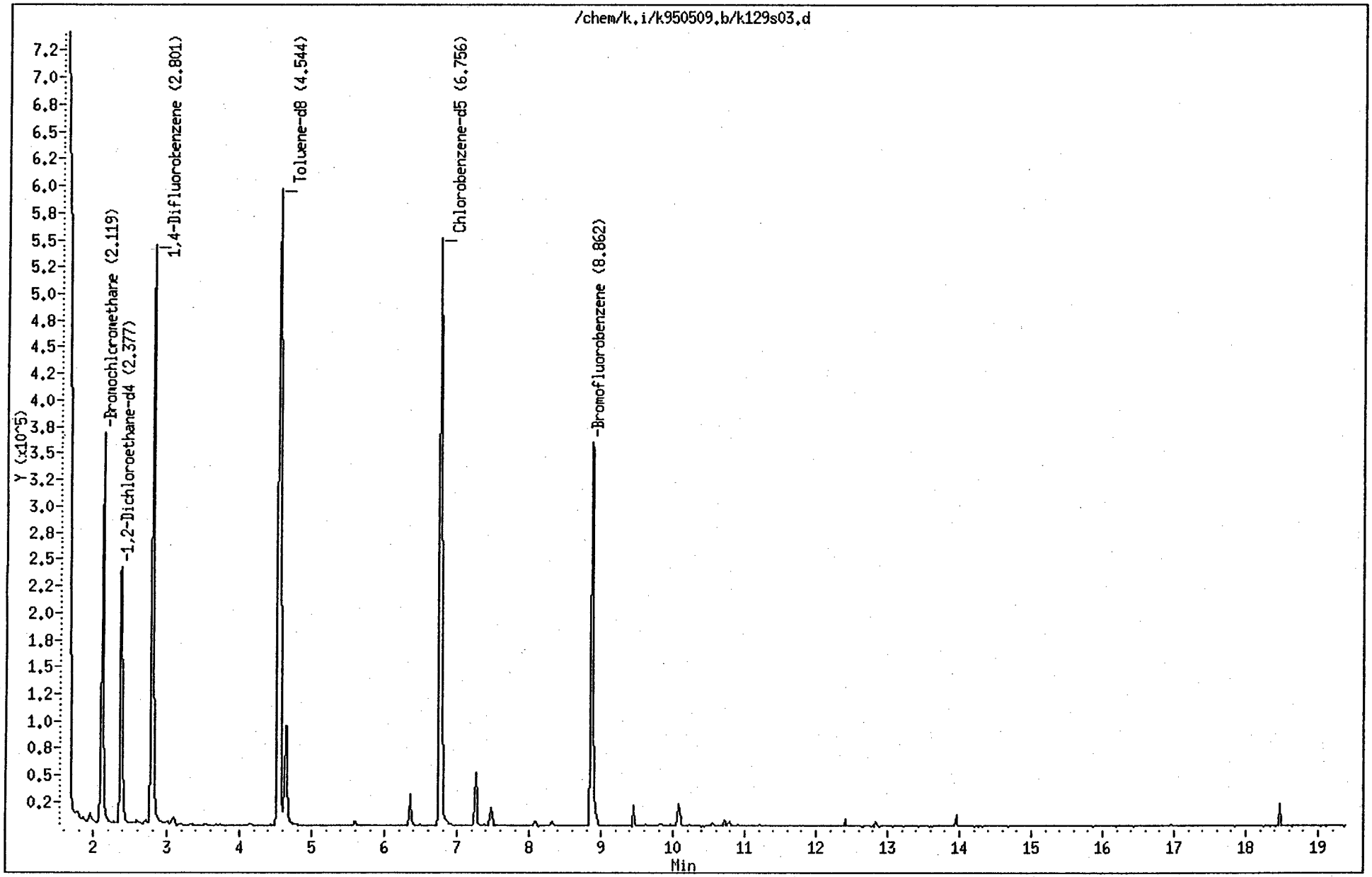
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129s03.d
Date : 09-MAY-1995 13:49
Client ID:
Sample Info: 9505164-09A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df

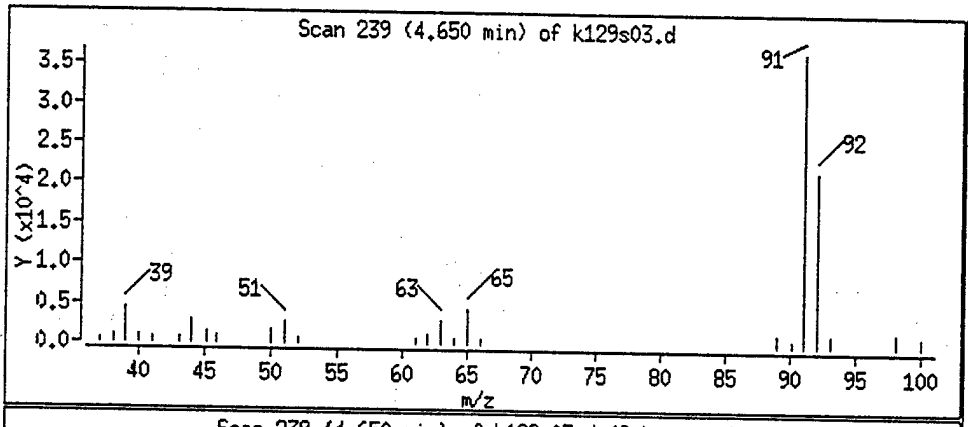


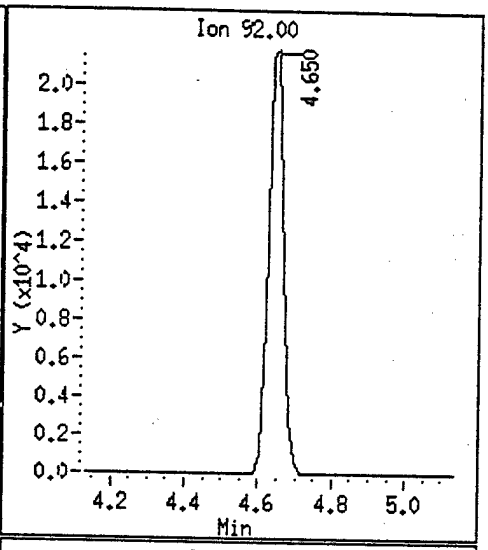
Data File: /chem/k.i/k950509.b/k129s03.d
Date : 09-MAY-1995 13:49
Client ID:
Sample Info: 9505164-09A-8240S/1X

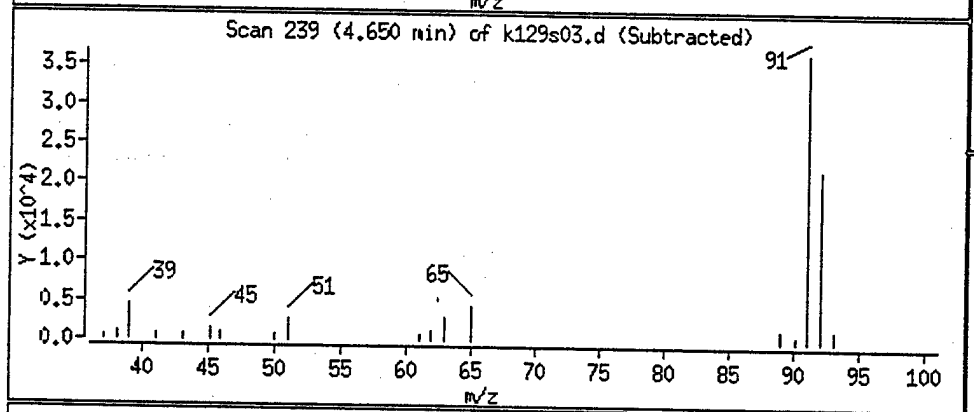
Instrument: k.i

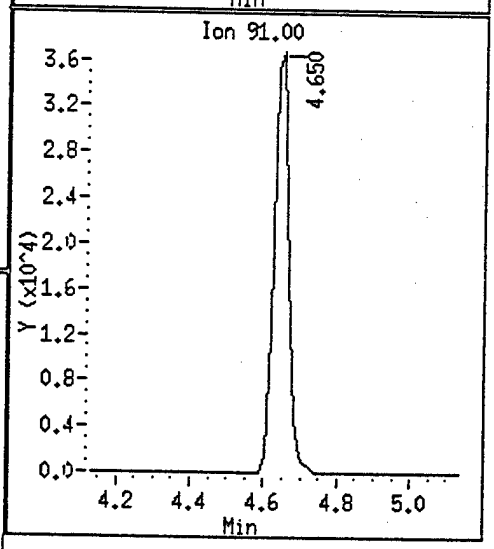
Operator: HLW
Column phase: 30m,hp5ms,0.25u df
Column diameter: 0.25

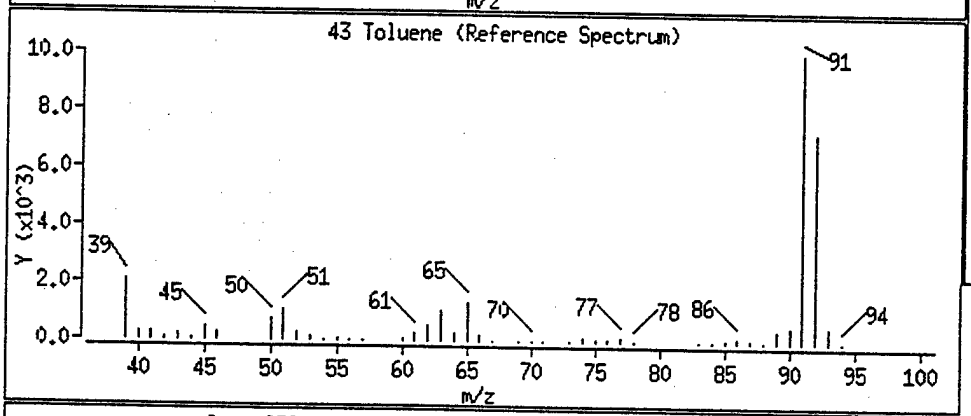
43 Toluene

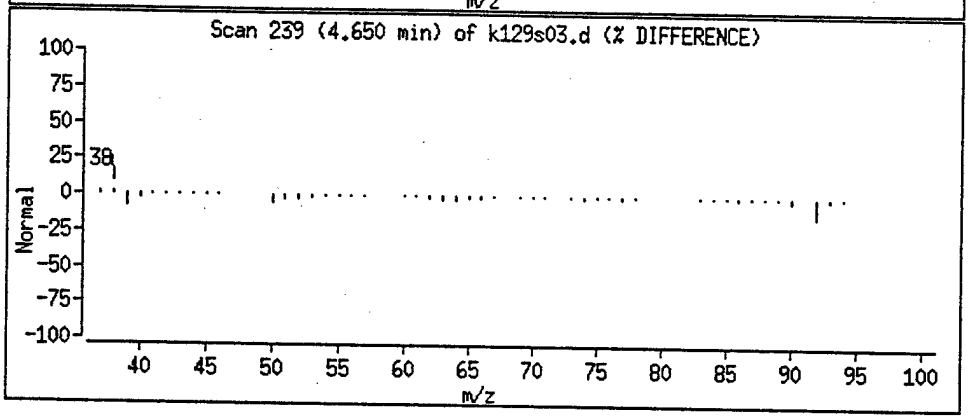








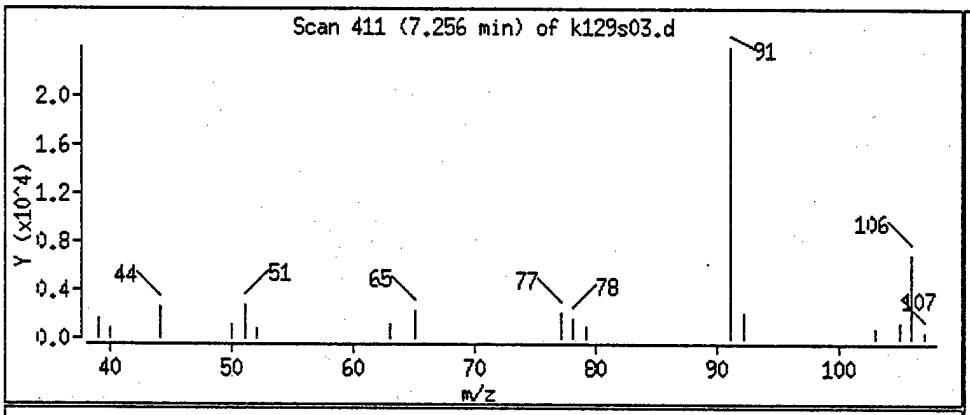


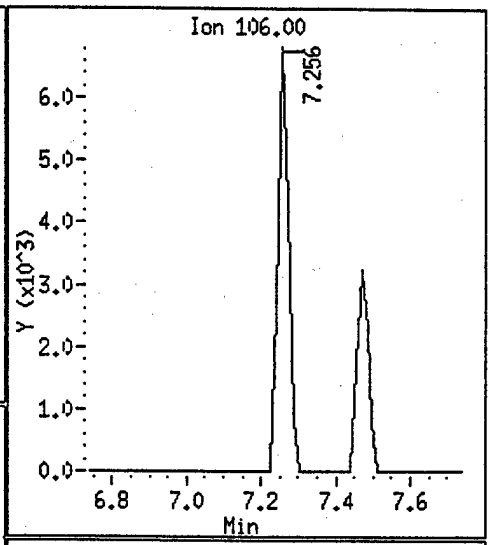


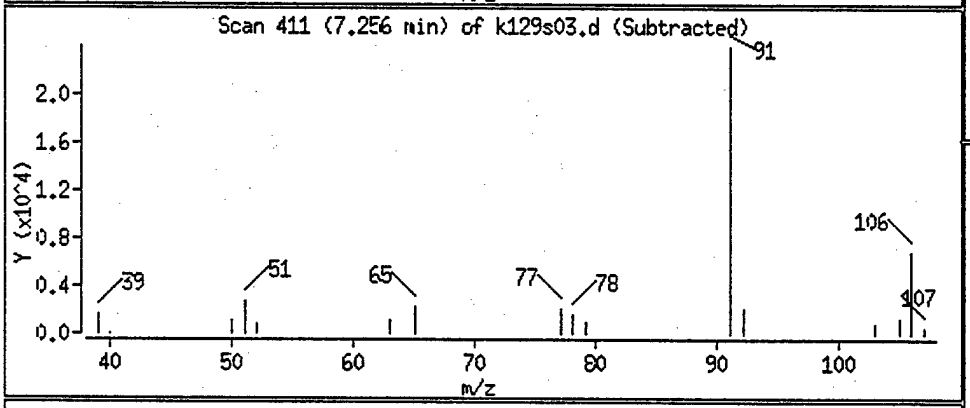
Data File: /chem/k.i/k950509.b/k129s03.d
Date : 09-MAY-1995 13:49
Client ID:
Sample Info: 9505164-09A-8240S/1X

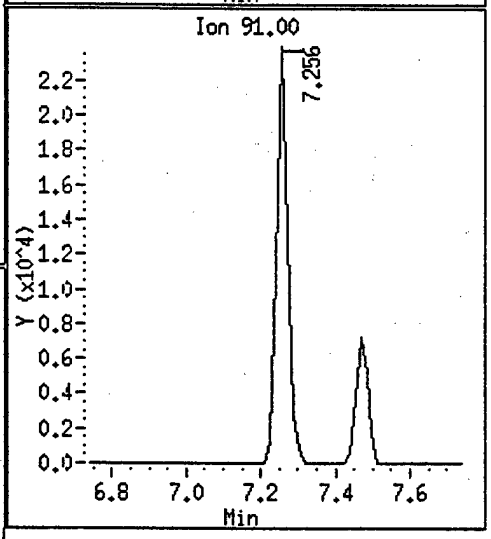
Instrument: k.i
Operator: HLW
Column phase: 30m,hp5ms,0.25u df
Column diameter: 0.25

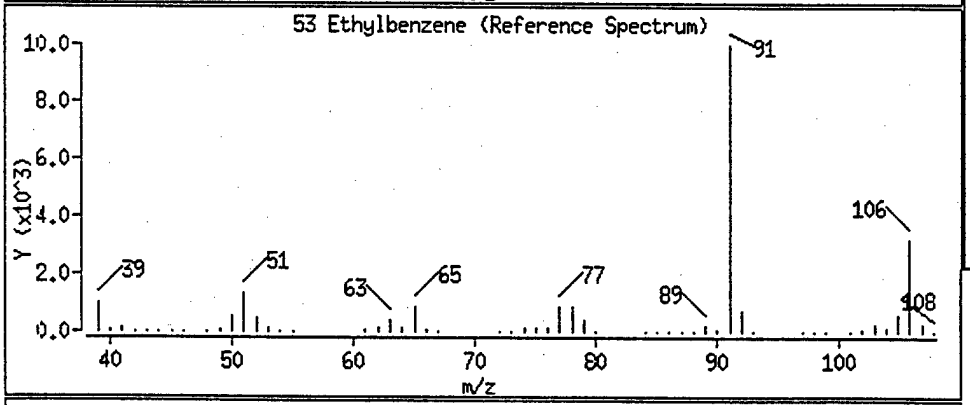
53 Ethylbenzene

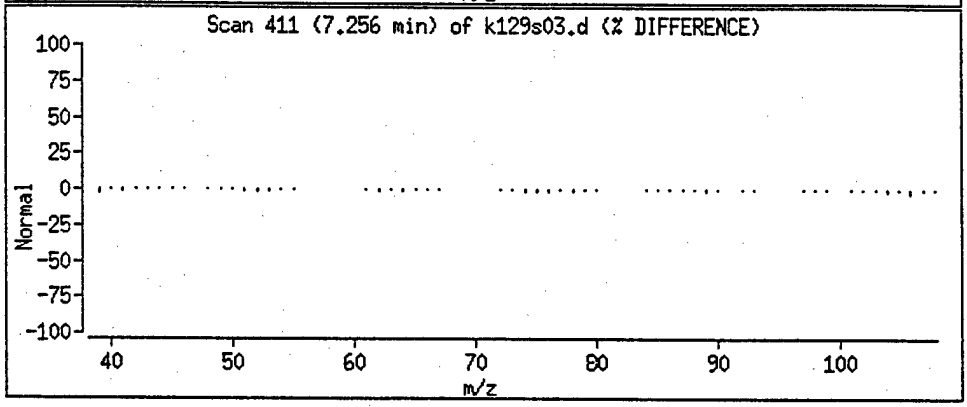












SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s11.d
Lab Smp Id:
Inj Date : 16-MAY-95 00:28
Operator : LH
Smp Info : 9505164-09B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping
Cal Date : 15-MAY-1995 15:26
Als bottle: 20
Dil Factor: 3.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h135cc1.d

Compound Sublist: 8270.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
* 11 1,4-Dichlorobenzene-d4	152.00	4.473	4.477	(1.000)	147915	40	
* 32 Naphthalene-d8	136.00	5.670	5.674	(1.000)	557083	40	
* 48 Acenaphthene-d10	164.00	7.447	7.452	(1.000)	290061	40	
* 65 Phenanthrene-d10	188.00	8.940	8.945	(1.000)	410803	40	
* 76 Chrysene-d12	240.00	11.808	11.813	(1.000)	238667	40	
* 83 Perylene-d12	264.00	14.060	14.053	(1.000)	141897	40	
$ 23 Nitrobenzene-d5	82.00	4.982	4.999	(0.879)	119342	27	1300
$ 41 2-Fluorobiphenyl	172.00	6.760	6.765	(0.908)	271166	28	1400
$ 72 Terphenyl-d14	244.00	10.576	10.580	(0.896)	189758	29	1500
$ 4 Phenol-d5	99.00	4.188	4.193	(0.936)	214995	38	1900
$ 3 2-Fluorophenol	112.00	3.465	3.458	(0.775)	157633	30	1500
$ 61 2,4,6-Tribromophenol	329.70	8.265	8.258	(0.924)	61432	44	2200

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s11.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	147915	20.23
32 Naphthalene-d8	418440	209220	836880	557083	33.13
48 Acenaphthene-d10	198324	99162	396648	290061	46.26
65 Phenanthrene-d10	270386	135193	540772	410803	51.93
76 Chrysene-d12	175926	87963	351852	238667	35.66
83 Perylene-d12	106536	53268	213072	141897	33.19

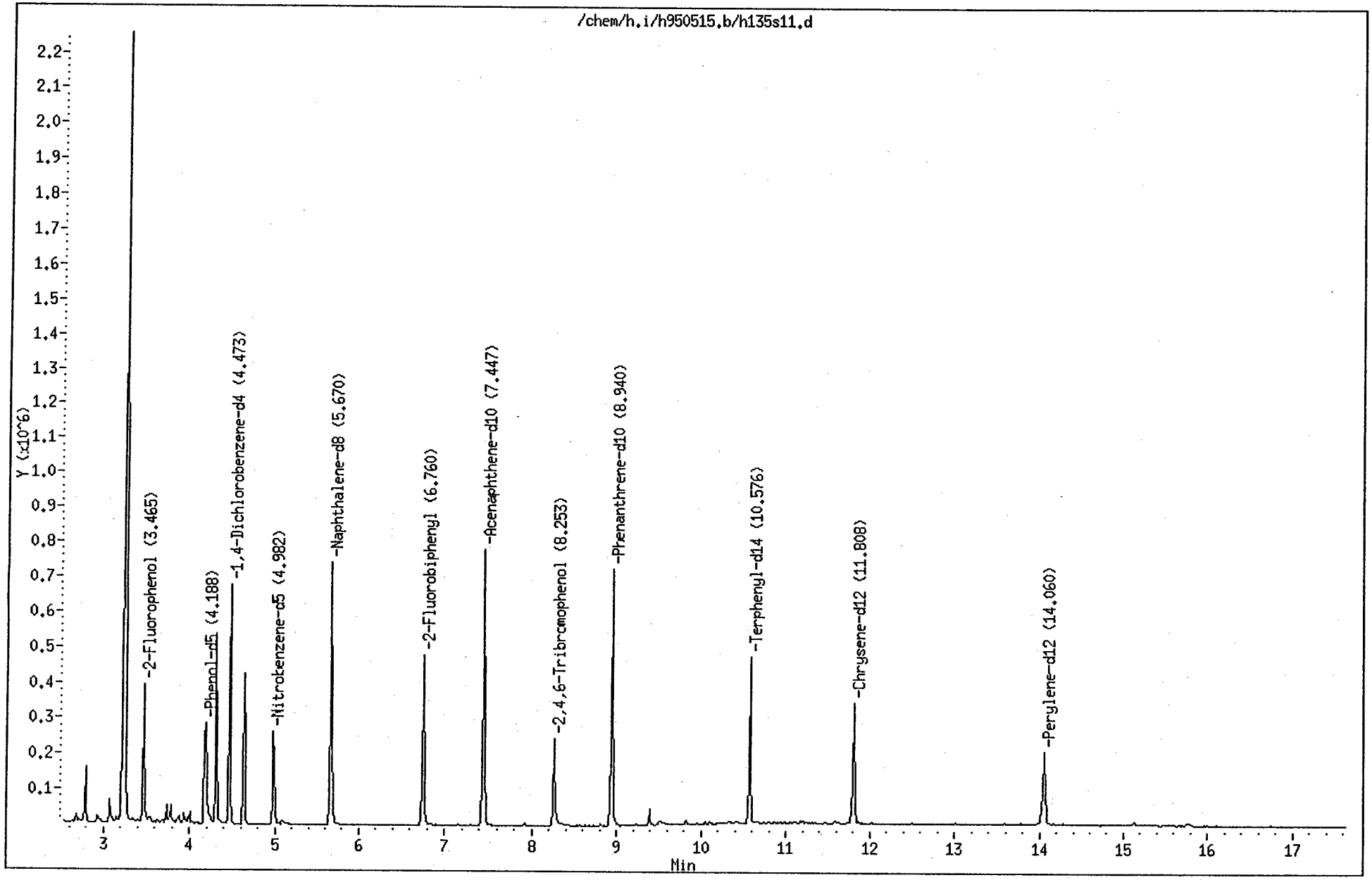
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.11
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.08
48 Acenaphthene-d10	7.45	6.95	7.95	7.45	-0.06
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.05
76 Chrysene-d12	11.81	11.31	12.31	11.81	-0.04
83 Perylene-d12	14.05	13.55	14.55	14.06	0.05

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.

Data File: /chem/h.i/h950515.b/h135s11.d
Date : 16-MAY-95 00:28
Client ID:
Sample Info: 9505164-09B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-10

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Moisture, E.P.A. METHOD CLP SOW Analyzed by: CA Date: 05/10/95	8	1	wt. %
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	ND	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	6	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-10

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4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	2.5	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9505164-10

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-10

Operational Tech

SAMPLE ID: 026-001BH 9-9.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	94	70	121
Toluene-d8	50 ug/Kg	98	84	138
4-Bromofluorobenzene	50 ug/Kg	92	59	113

ANALYZED BY: HLW
DATE/TIME: 05/09/95 14:15:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-10

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	ND	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-10

Operational Tech

SAMPLE ID: 026-001BH 9-9.5

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	ND	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-10

Operational Tech

SAMPLE ID: 026-001BH 9-9.5

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	87	23	120
2-Fluorobiphenyl	1600 ug/Kg	85	30	115
Terphenyl-d14	1600 ug/Kg	84	18	137
Phenol-d5	2500 ug/Kg	60	24	113
2-Fluorophenol	2500 ug/Kg	49	25	121
2,4,6-Tribromophenol	2500 ug/Kg	91	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 23:13:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129s04.d
Lab Smp Id: 9505164-10A-8240S/1X
Inj Date : 09-MAY-1995 14:15
Operator : HLW
Inst ID: k.i
Smp Info : 9505164-10A-8240S/1X
Misc Info : K129S1/K129B02/K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 12-May-1995 10:45 hillery
Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08
Cal File: k129cs2.d
Als bottle: 17
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.119	2.123	(1.000)	89799	250	
* 31 1,4-Difluorobenzene	114.00	2.801	2.789	(1.000)	523295	250	
* 51 Chlorobenzene-d5	117.00	6.756	6.759	(1.000)	391181	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.377	2.365	(1.122)	37441	240	47
$ 40 Toluene-d8	98.00	4.544	4.532	(0.673)	586839	240	49
$ 61 Bromofluorobenzene	95.00	8.862	8.865	(1.312)	198677	230	46

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129s04.d
Lab Smp Id: 9505164-10A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1/K129B02/K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	89799	3.85
31 1,4-Difluorobenzene	552052	276026	1104104	523295	-5.21
51 Chlorobenzene-d5	389031	194516	778062	391181	0.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.16
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.42
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.05

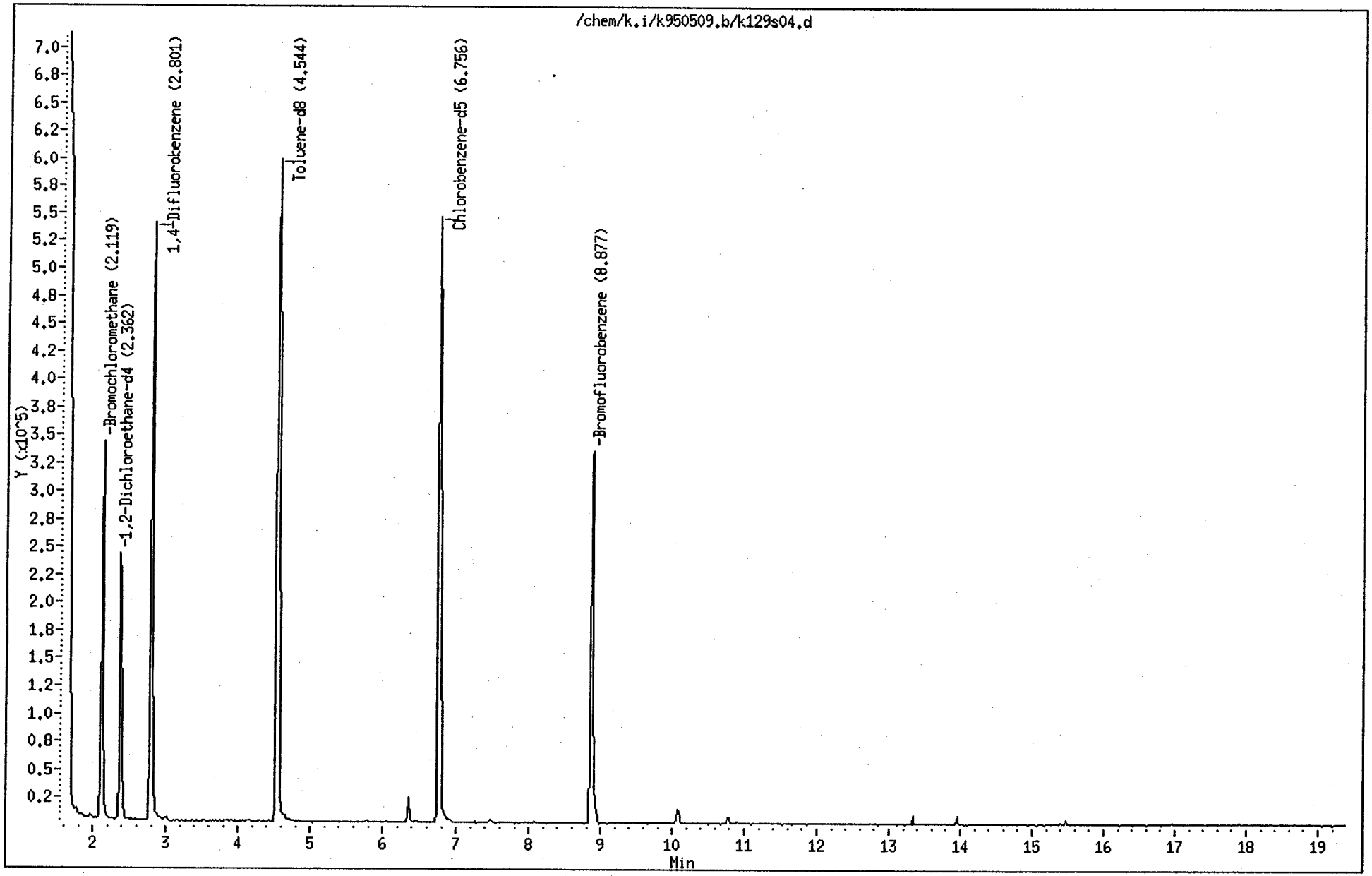
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129s04.d
Date : 09-MAY-1995 14:15
Client ID:
Sample Info: 9505164-10A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s08.d
Lab Smp Id:
Inj Date : 15-MAY-95 23:13
Operator : LH Inst ID: h.i
Smp Info : 9505164-10B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping Quant Type: ISTD
Cal Date : 15-MAY-1995 15:26 Cal File: h135cc1.d
Als bottle: 17
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 11 1,4-Dichlorobenzene-d4	152.00	4.470	4.477	(1.000)	158645	40	
* 32 Naphthalene-d8	136.00	5.667	5.674	(1.000)	577330	40	
* 48 Acenaphthene-d10	164.00	7.444	7.452	(1.000)	274871	40	
* 65 Phenanthrene-d10	188.00	8.937	8.945	(1.000)	369245	40	
* 76 Chrysene-d12	240.00	11.805	11.813	(1.000)	239761	40	
* 83 Perylene-d12	264.00	14.045	14.053	(1.000)	150488	40	
$ 23 Nitrobenzene-d5	82.00	4.991	4.999	(0.881)	381143	83	1400
$ 41 2-Fluorobiphenyl	172.00	6.757	6.765	(0.908)	730821	81	1400
$ 72 Terphenyl-d14	244.00	10.573	10.580	(0.896)	518326	80	1300
$ 4 Phenol-d5	99.00	4.186	4.193	(0.936)	546528	89	1500
$ 3 2-Fluorophenol	112.00	3.486	3.458	(0.780)	410901	74	1200
$ 61 2,4,6-Tribromophenol	329.70	8.262	8.258	(0.924)	172726	140	2300

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s08.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	158645	28.96
32 Naphthalene-d8	418440	209220	836880	577330	37.97
48 Acenaphthene-d10	198324	99162	396648	274871	38.60
65 Phenanthrene-d10	270386	135193	540772	369245	36.56
76 Chrysene-d12	175926	87963	351852	239761	36.29
83 Perylene-d12	106536	53268	213072	150488	41.26

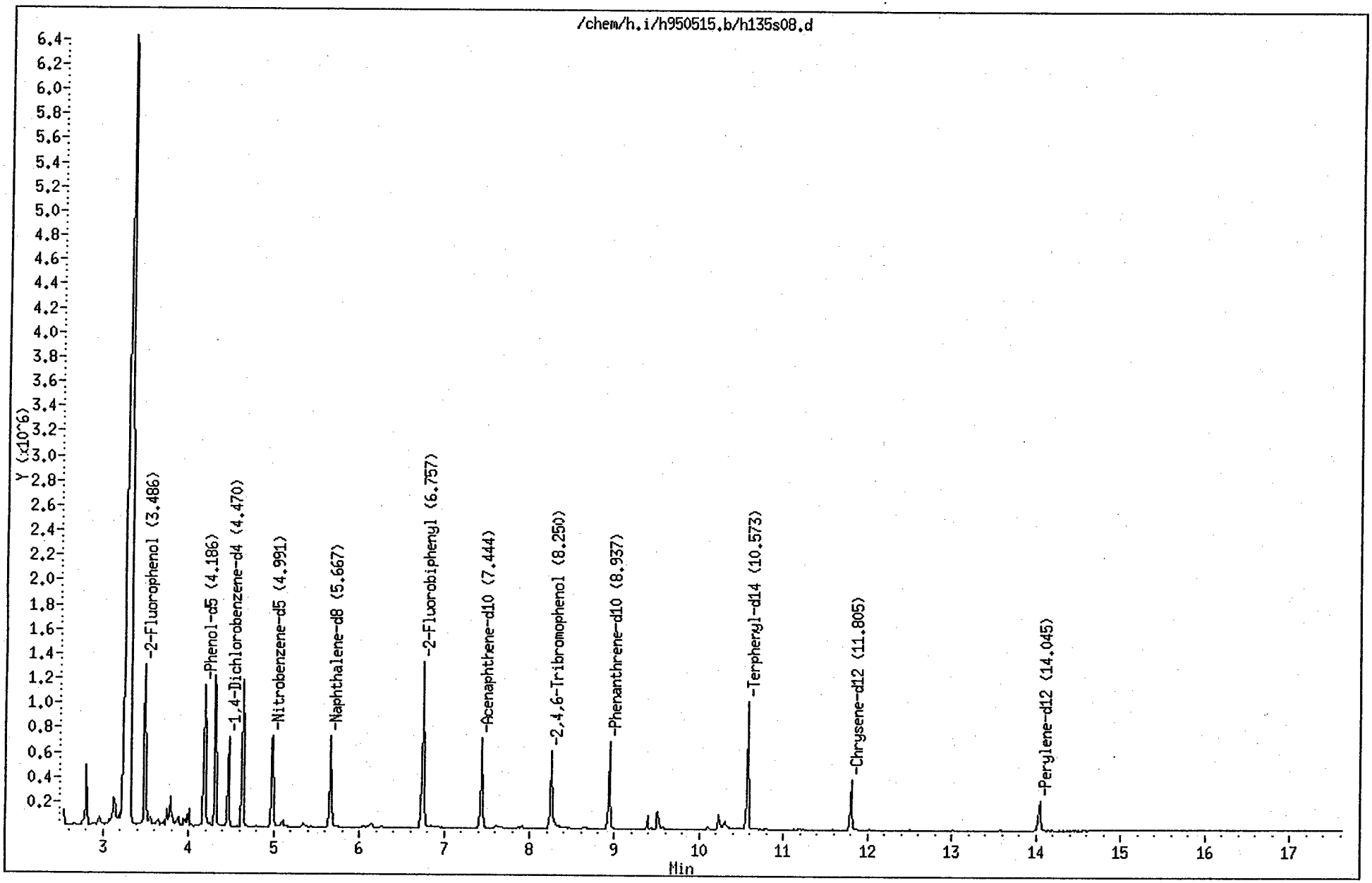
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.17
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.13
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.10
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.08
76 Chrysene-d12	11.81	11.31	12.31	11.81	-0.06
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.05

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.

Data File: /chem/h.i/h950515.b/h135s08.d
Date : 15-MAY-95 23:13
Client ID:
Sample Info: 9505164-10B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-11

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: Equipment Blank

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/03/95 16:50:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: JM Date: 05/05/95	05/05/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/08/95	ND	0.004	mg/L
Chromium, Total METHOD 6010 *** Analyzed by: DQ Date: 05/09/95	ND	0.01	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/05/95	05/05/95		
Cadmium, Total METHOD 6010 *** Analyzed by: DQ Date: 05/09/95	ND	0.004	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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San Antonio, TX 78229
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DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: Equipment Blank

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/03/95 16:50:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/05/95	05/05/95		

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: Equipment Blank

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/03/95 16:50:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/L
Benzene	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
2-Butanone	ND	20	ug/L
Carbon Disulfide	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chloroethane	ND	10	ug/L
2-Chloroethylvinylether	ND	10	ug/L
Chloroform	5	5	ug/L
Chloromethane	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
total-1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Methylene Chloride	ND	5	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
Styrene	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L

METHOD: 8240, Volatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-11

Operational Tech

SAMPLE ID: Equipment Blank

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	100	76	114
Toluene-d8	50 ug/L	100	88	110
4-Bromofluorobenzene	50 ug/L	96	86	115

ANALYZED BY: JC DATE/TIME: 05/06/95 10:11:00
METHOD: 8240, Volatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS: *SP* for Target Compound List

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-11

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: Equipment Blank

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/03/95 16:50:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-11

Operational Tech

SAMPLE ID: Equipment Blank

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-11

Operational Tech

SAMPLE ID: Equipment Blank

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	74	35	114
2-Fluorobiphenyl	50 ug/L	81	43	116
Terphenyl-d14	50 ug/L	73	33	141
Phenol-d5	75 ug/L	51	10	110
2-Fluorophenol	75 ug/L	55	21	110
2,4,6-Tribromophenol	75 ug/L	95	10	123

ANALYZED BY: LH DATE/TIME: 05/15/95 20:20:00
EXTRACTED BY: RN DATE/TIME: 05/09/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS: *SP* for Target Compound List

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Data File: /chem/l.i/1950505.b/l125s28.d
Report Date: 06-May-1995 13:59

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950505.b/l125s28.d
Lab Smp Id:
Inj Date : 06-MAY-1995 10:11
Operator : JC Inst ID: l.i
Smp Info : 9505164-11A-8240W/1X
Misc Info : L125W1/L125B02/L124CW1
Comment :
Method : /chem/l.i/1950505.b/lvoclpw.m
Meth Date : 06-May-1995 13:46 jimmy Quant Type: ISTD
Cal Date : 06-MAY-1995 01:18 Cal File: l125cw1.d
Als bottle: 38
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
13 Methylene Chloride	84.00	3.245	3.244	(0.621)	6874	20	4 (a)
24 Chloroform	83.00	5.242	5.241	(1.003)	15995	25	5
[illegible] Bromochloromethane	128.00	5.224	5.223	(1.000)	47881	250	
[illegible] 1,4-Difluorobenzene	114.00	6.935	6.926	(1.000)	247347	250	
50 Chlorobenzene-d5	117.00	11.107	11.097	(1.000)	198370	250	
[illegible] 1,2-Dichloroethane-d4	102.00	5.999	5.990	(1.148)	19269	250	50
[illegible] Toluene-d8	98.00	9.155	9.154	(0.824)	272682	250	50
61 Bromofluorobenzene	95.00	12.783	12.773	(1.151)	97547	240	48

Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l125s28.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/1950505.b/lvoclpw.m
Misc Info: L125W1/L125B02/L124CW1

Calibration Date: 05/06/95
Calibration Time: 0118

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	48316	24158	96632	47881	-0.90
32 1,4-Difluorobenzene	248535	124268	497070	247347	-0.48
50 Chlorobenzene-d5	204023	102012	408046	198370	-2.77

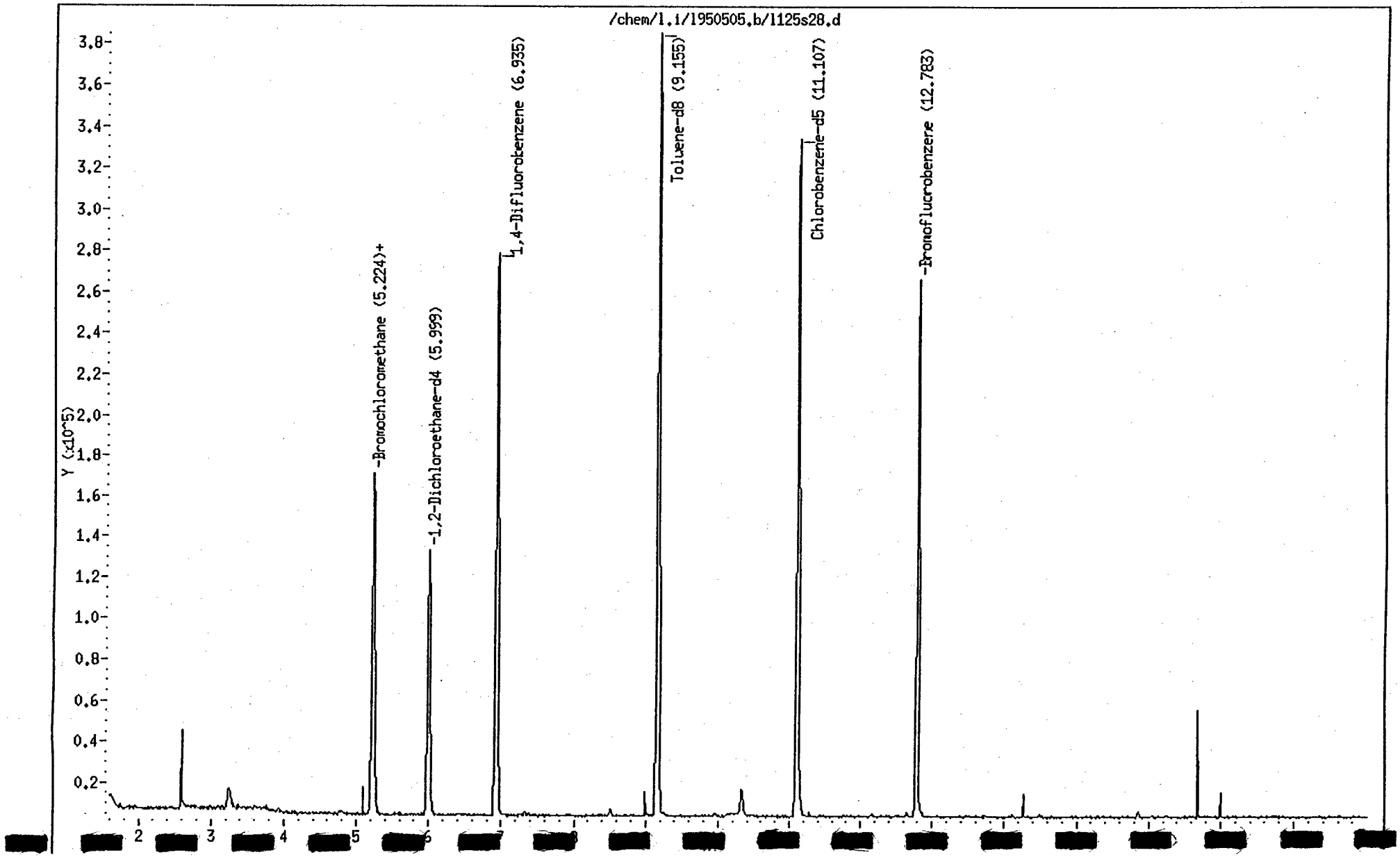
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.02
32 1,4-Difluorobenzene	6.93	6.43	7.43	6.94	0.14
50 Chlorobenzene-d5	11.10	10.60	11.60	11.11	0.09

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.

Data File: /chem/1.i/1950505.b/1125s28.d
Date : 06-MAY-1995 10:11
Client ID:
Sample Info: 9505164-11A-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

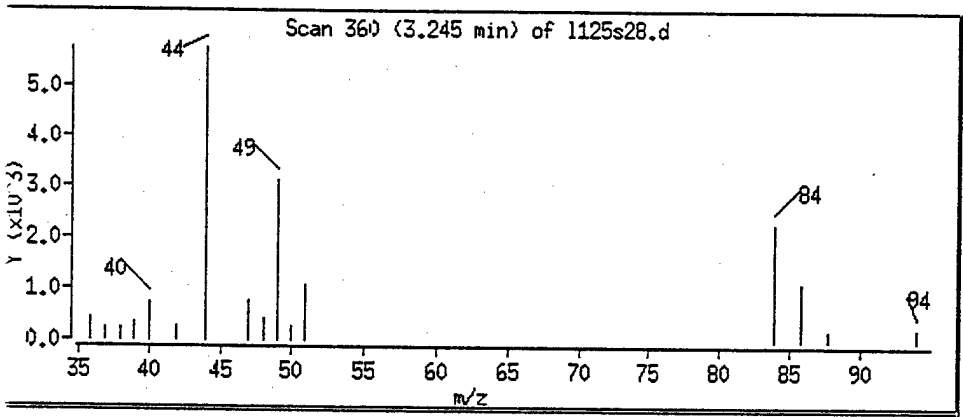
Instrument: 1.i

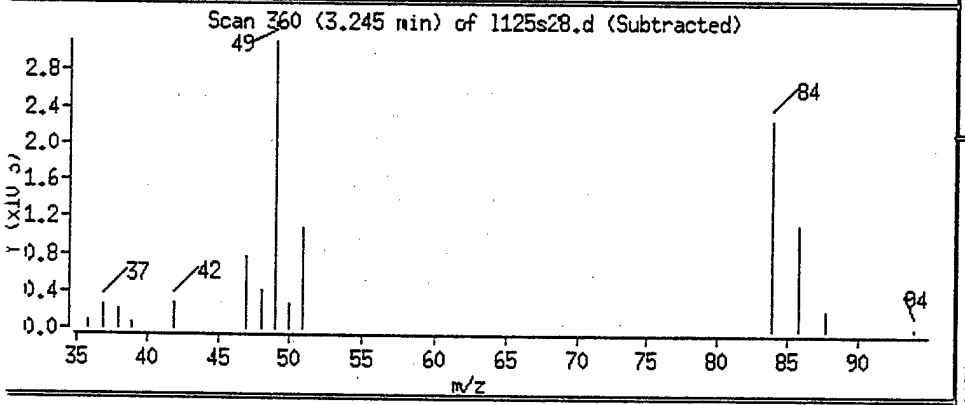
Operator: JC
Column diameter: 0.25

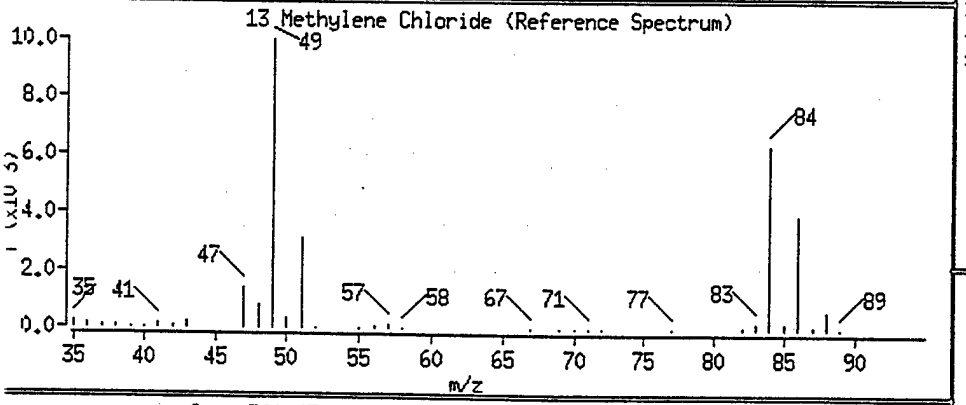


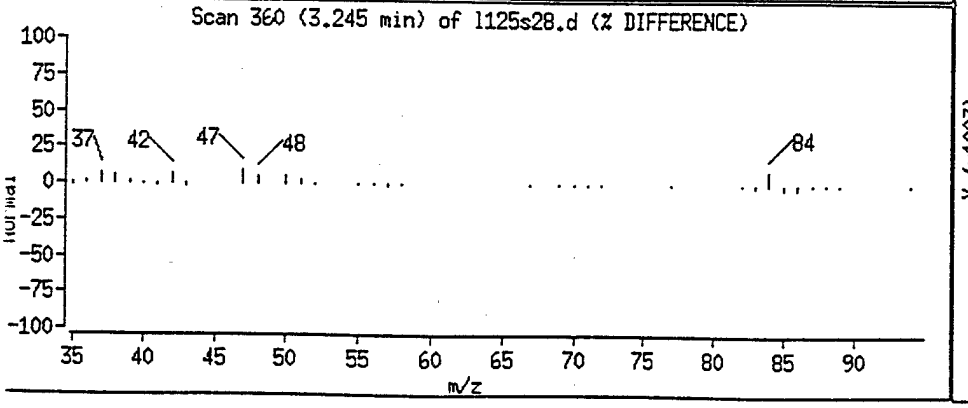
Data File: /chem/l.i/1950505.b/l125s28.d
Date : 06-MAY-1995 10:11
Client ID:
Instrument: l.i
Sample Info: 9505164-11A-8240W/1X
Purge Volume: 5.0
Operator: JC
Column phase: 30m,hp5ms,0.25u df
Column diameter: 0.25

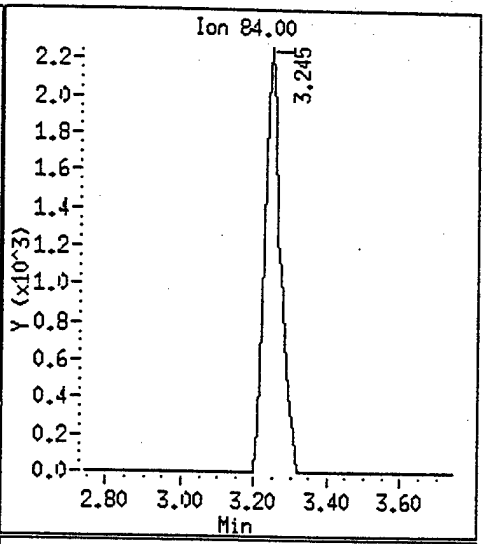
13 Methylene Chloride

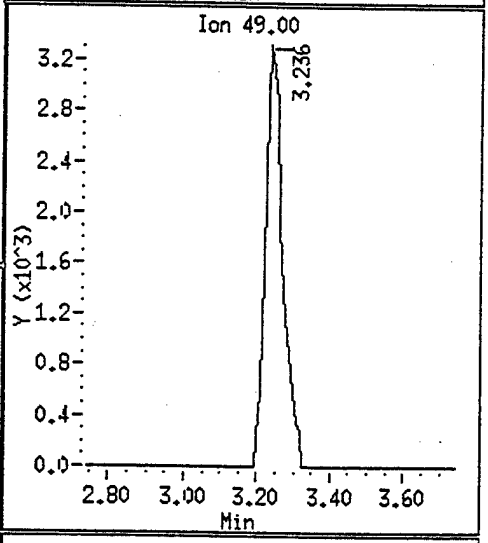


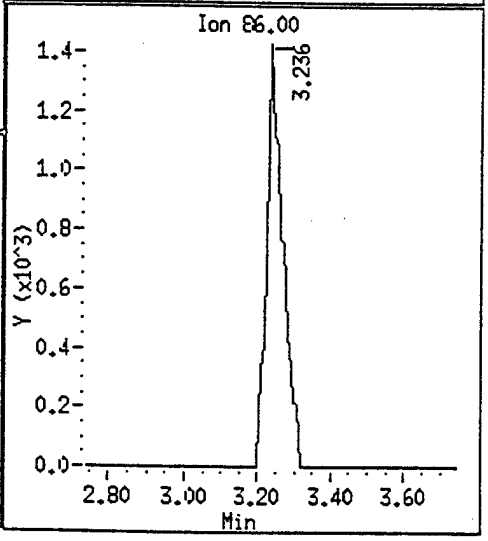












Data File: /chem/1.i/1950505.b/1125s28.d

Date : 06-MAY-1995 10:11

Client ID:

Instrument: 1.i

Sample Info: 9505164-11A-8240W/1X

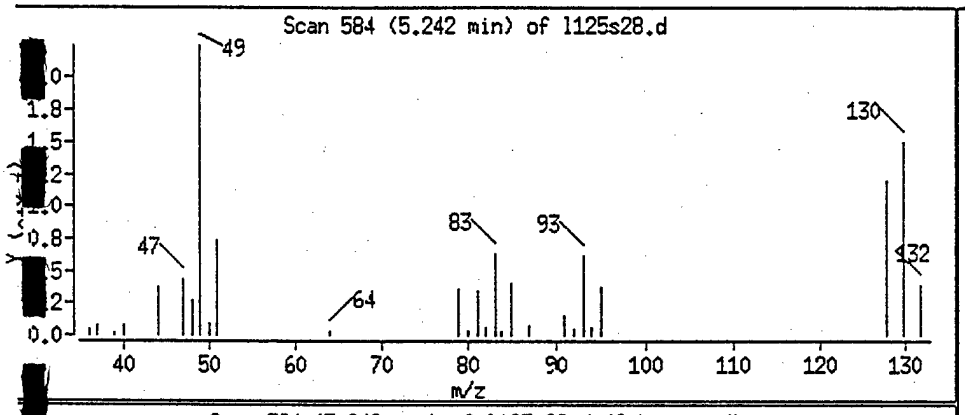
Purge Volume: 5.0

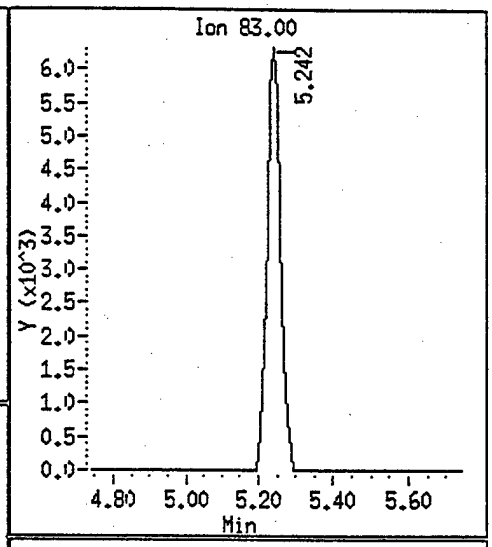
Operator: JC

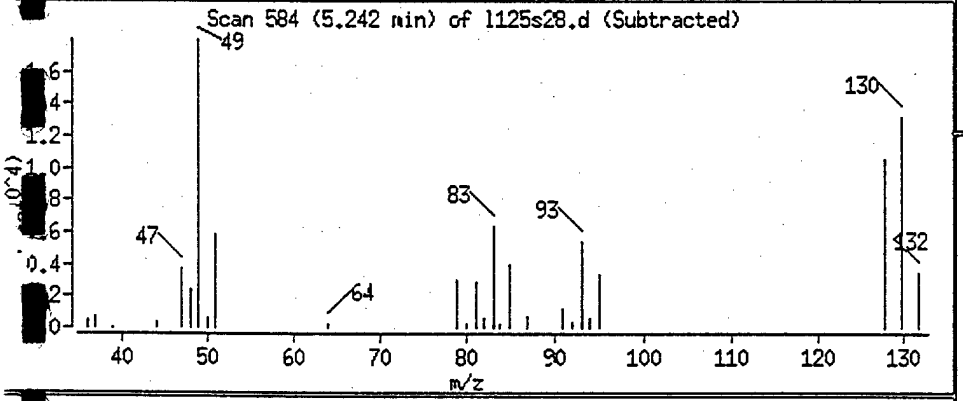
Column phase: 30m,hp5ms,0.25u df

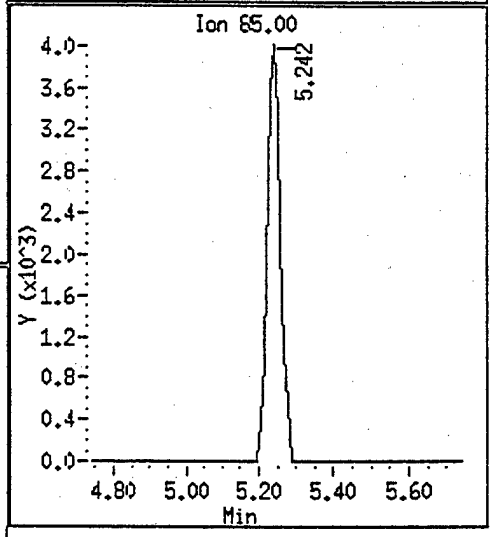
Column diameter: 0.25

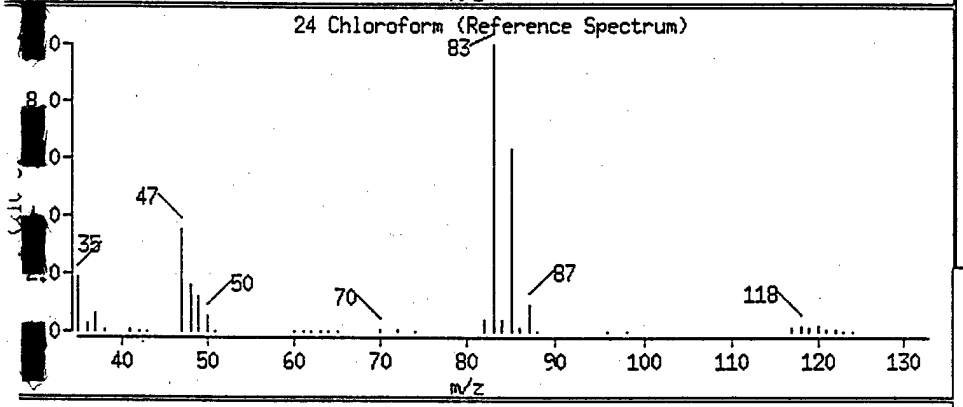
24 Chloroform

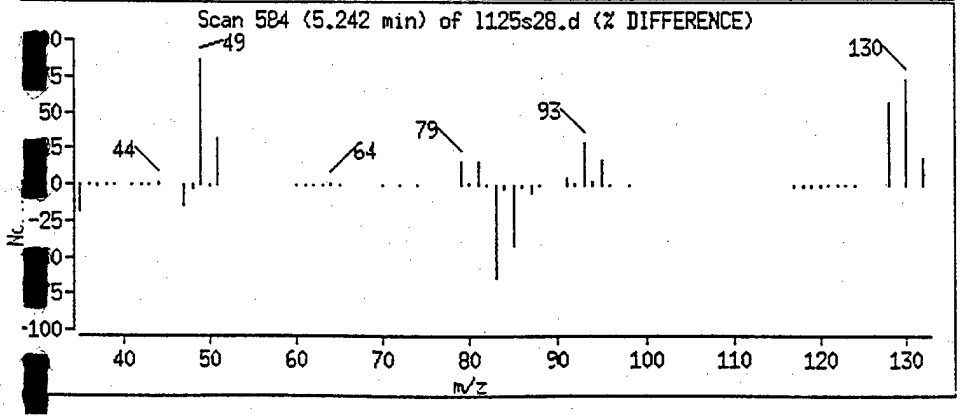












SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s01.d
Lab Smp Id:
Inj Date : 15-MAY-1995 20:20
Operator : LH
Smp Info : 9505164-11B-8270W/1X
Misc Info : E129C1/J129B01/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclpw.m
Meth Date : 16-May-1995 11:45 liping
Cal Date : 15-MAY-1995 15:26
Als bottle: 10
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h135cc1.d

Compound Sublist: 8270.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 11 1,4-Dichlorobenzene-d4	152.00	4.470	4.477	(1.000)	143516	40	
* 32 Naphthalene-d8	136.00	5.679	5.674	(1.000)	503480	40	
* 48 Acenaphthene-d10	164.00	7.444	7.452	(1.000)	220433	40	
* 65 Phenanthrene-d10	188.00	8.938	8.945	(1.000)	335282	40	
* 76 Chrysene-d12	240.00	11.805	11.813	(1.000)	243873	40	
* 83 Perylene-d12	264.00	14.033	14.053	(1.000)	100492	40	
$ 23 Nitrobenzene-d5	82.00	4.991	4.999	(0.879)	297690	74	37
$ 41 2-Fluorobiphenyl	172.00	6.757	6.765	(0.908)	586740	81	41
$ 72 Terphenyl-d14	244.00	10.573	10.580	(0.896)	480921	73	36
$ 4 Phenol-d5	99.00	4.186	4.193	(0.936)	423296	77	38
$ 3 2-Fluorophenol	112.00	3.463	3.458	(0.775)	415922	83	41
$ 61 2,4,6-Tribromophenol	329.70	8.262	8.258	(0.924)	164231	140	71

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s01.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclpw.m
Misc Info: E129C1/H129B01/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	143516	16.66
32 Naphthalene-d8	418440	209220	836880	503480	20.32
48 Acenaphthene-d10	198324	99162	396648	220433	11.15
65 Phenanthrene-d10	270386	135193	540772	335282	24.00
76 Chrysene-d12	175926	87963	351852	243873	38.62
83 Perylene-d12	106536	53268	213072	100492	-5.67

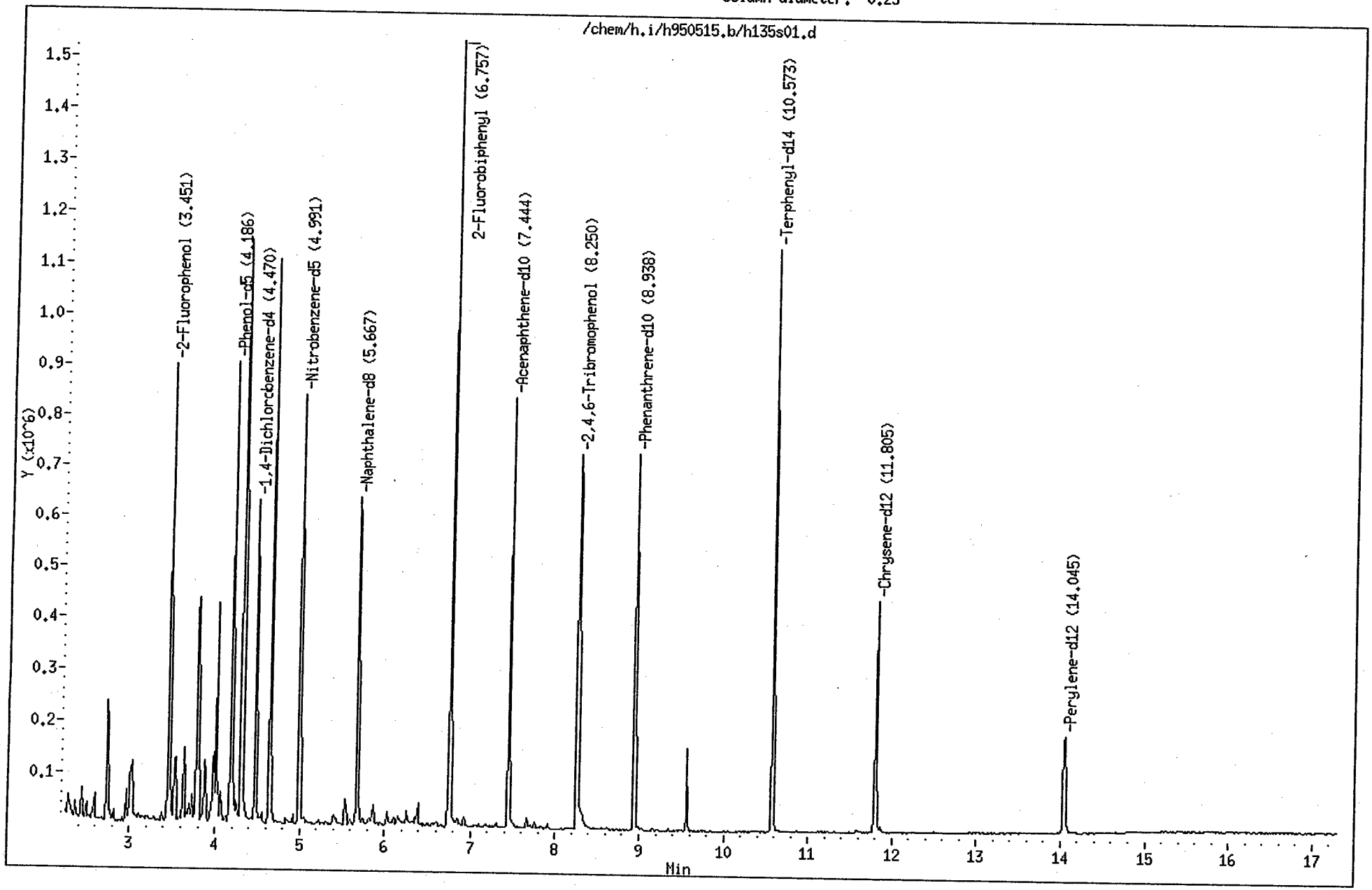
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.17
32 Naphthalene-d8	5.67	5.17	6.17	5.68	0.08
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.10
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.08
76 Chrysene-d12	11.81	11.31	12.31	11.81	-0.06
83 Perylene-d12	14.05	13.55	14.55	14.03	-0.14

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.

Data File: /chem/h.i/h950515.b/h135s01.d
Date : 15-MAY-1995 20:20
Client ID:
Sample Info: 9505164-11B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-12

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5 MS

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	102	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	11	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	6.5	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-12

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5 MS

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	47	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	41	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	44	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	43	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	44	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-12

Operational Tech

SAMPLE ID: 026-001BH 9-9.5 MS

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	94	70	121
Toluene-d8	50 ug/Kg	98	84	138
4-Bromofluorobenzene	50 ug/Kg	100	59	113

ANALYZED BY: HLW DATE/TIME: 05/09/95 14:43:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-12

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5 MS

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	1200	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	2100	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	1500	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	1100	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	1600	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-12

Operational Tech

SAMPLE ID: 026-001BH 9-9.5 MS

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	3300	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	1500	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	2400	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	1200	330	ug/Kg
Pyrene	1100	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	1200	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-12

Operational Tech

SAMPLE ID: 026-001BH 9-9.5 MS

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	82	23	120
2-Fluorobiphenyl	1600 ug/Kg	81	30	115
Terphenyl-d14	1600 ug/Kg	85	18	137
Phenol-d5	2500 ug/Kg	54	24	113
2-Fluorophenol	2500 ug/Kg	53	25	121
2,4,6-Tribromophenol	2500 ug/Kg	103	19	122

ANALYZED BY: LH DATE/TIME: 05/15/95 23:38:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129s05.d
Lab Smp Id: 9505164-12A-8240S/1X
Inj Date : 09-MAY-1995 14:43
Operator : HLW Inst ID: k.i
Smp Info : 9505164-12A-8240S/1X
Misc Info : K129S1/K129B02/K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 12-May-1995 10:45 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 18
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: lcs.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
*	20 Bromochloromethane	128.00	2.120	2.123	(1.000)	82155	250	
*	31 1,4-Difluorobenzene	114.00	2.801	2.789	(1.000)	510371	250	
*	51 Chlorobenzene-d5	117.00	6.756	6.759	(1.000)	376686	250	
$	23 1,2-Dichloroethane-d4	102.00	2.377	2.365	(1.122)	34195	240	47
$	40 Toluene-d8	98.00	4.544	4.532	(0.673)	573739	250	49
$	61 Bromofluorobenzene	95.00	8.862	8.865	(1.312)	206327	250	50
	10 1,1-Dichloroethene	96.00	1.620	1.623	(0.764)	137856	220	44
	27 Benzene	78.00	2.559	2.547	(0.913)	702129	240	47
	34 Trichloroethene	130.00	3.089	3.092	(1.103)	151747	220	44
	43 Toluene	92.00	4.635	4.638	(0.686)	382802	220	43
	52 Chlorobenzene	112.00	6.817	6.805	(1.009)	347138	200	41

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129s05.d
Lab Smp Id: 9505164-12A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1/K129B02/K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	82155	-4.99
31 1,4-Difluorobenzene	552052	276026	1104104	510371	-7.55
51 Chlorobenzene-d5	389031	194516	778062	376686	-3.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.15
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.43
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.05

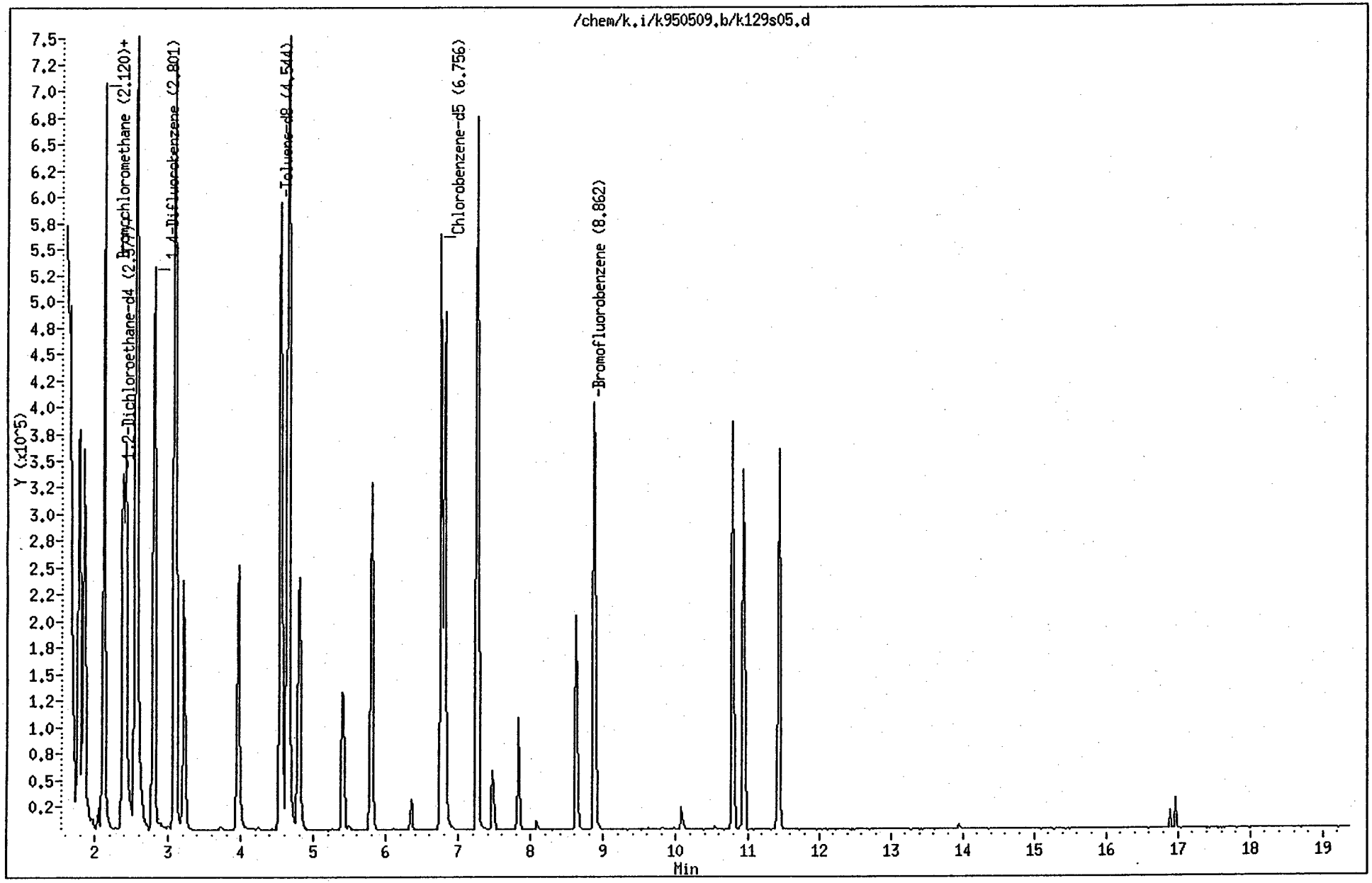
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129s05.d
Date : 09-MAY-1995 14:43
Client ID:
Sample Info: 9505164-12A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s09.d
Lab Smp Id:
Inj Date : 15-MAY-1995 23:38
Operator : LH
Smp Info : 9505164-12B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping
Cal Date : 15-MAY-1995 15:26
Als bottle: 18
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h135cc1.d
QC Sample: MS

Compound Sublist: 8270.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	5 Phenol	94.00	4.208	4.205	(0.942)	423934	71	1200
	9 2-Chlorophenol	128.00	4.327	4.323	(0.968)	414164	88	1500
	12 1,4-Dichlorobenzene	146.00	4.493	4.489	(1.005)	348024	68	1100
	21 N-Nitroso-di-n-propylamine	70.00	4.860	4.869	(1.087)	202402	90	1500
	31 1,2,4-Trichlorobenzene	180.00	5.630	5.639	(0.994)	336571	75	1200
	36 4-Chloro-3-methylphenol	107.00	6.246	6.255	(1.102)	482624	120	2100
	49 Acenaphthene	153.00	7.479	7.476	(1.005)	561108	71	1200
	51 4-Nitrophenol	109.00	7.621	7.618	(1.024)	177479	200	3300(QR)
	53 2,4-Dinitrotoluene	165.00	7.668	7.665	(1.030)	289992	96	1600(QRM)
	64 Pentachlorophenol	265.50	8.830	8.827	(0.987)	249317	140	2400
	71 Pyrene	202.00	10.418	10.414	(0.883)	696251	64	1100
*	11 1,4-Dichlorobenzene-d4	152.00	4.469	4.477	(1.000)	139872	40	
*	32 Naphthalene-d8	136.00	5.666	5.674	(1.000)	569561	40	
*	48 Acenaphthene-d10	164.00	7.443	7.452	(1.000)	278810	40	
*	65 Phenanthrene-d10	188.00	8.948	8.945	(1.000)	408157	40	
*	76 Chrysene-d12	240.00	11.804	11.813	(1.000)	273688	40	
*	83 Perylene-d12	264.00	14.044	14.053	(1.000)	180364	40	
$	23 Nitrobenzene-d5	82.00	4.990	4.999	(0.881)	356107	79	1300
$	41 2-Fluorobiphenyl	172.00	6.756	6.765	(0.908)	707580	78	1300
$	72 Terphenyl-d14	244.00	10.584	10.580	(0.897)	599365	81	1400
$	4 Phenol-d5	99.00	4.196	4.193	(0.939)	439408	82	1400(Q)
$	3 2-Fluorophenol	112.00	3.485	3.458	(0.780)	392620	80	1300
$	61 2,4,6-Tribromophenol	329.70	8.261	8.258	(0.923)	215920	150	2600

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s09.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	139872	13.70
32 Naphthalene-d8	418440	209220	836880	569561	36.12
48 Acenaphthene-d10	198324	99162	396648	278810	40.58
65 Phenanthrene-d10	270386	135193	540772	408157	50.95
76 Chrysene-d12	175926	87963	351852	273688	55.57
83 Perylene-d12	106536	53268	213072	180364	69.30

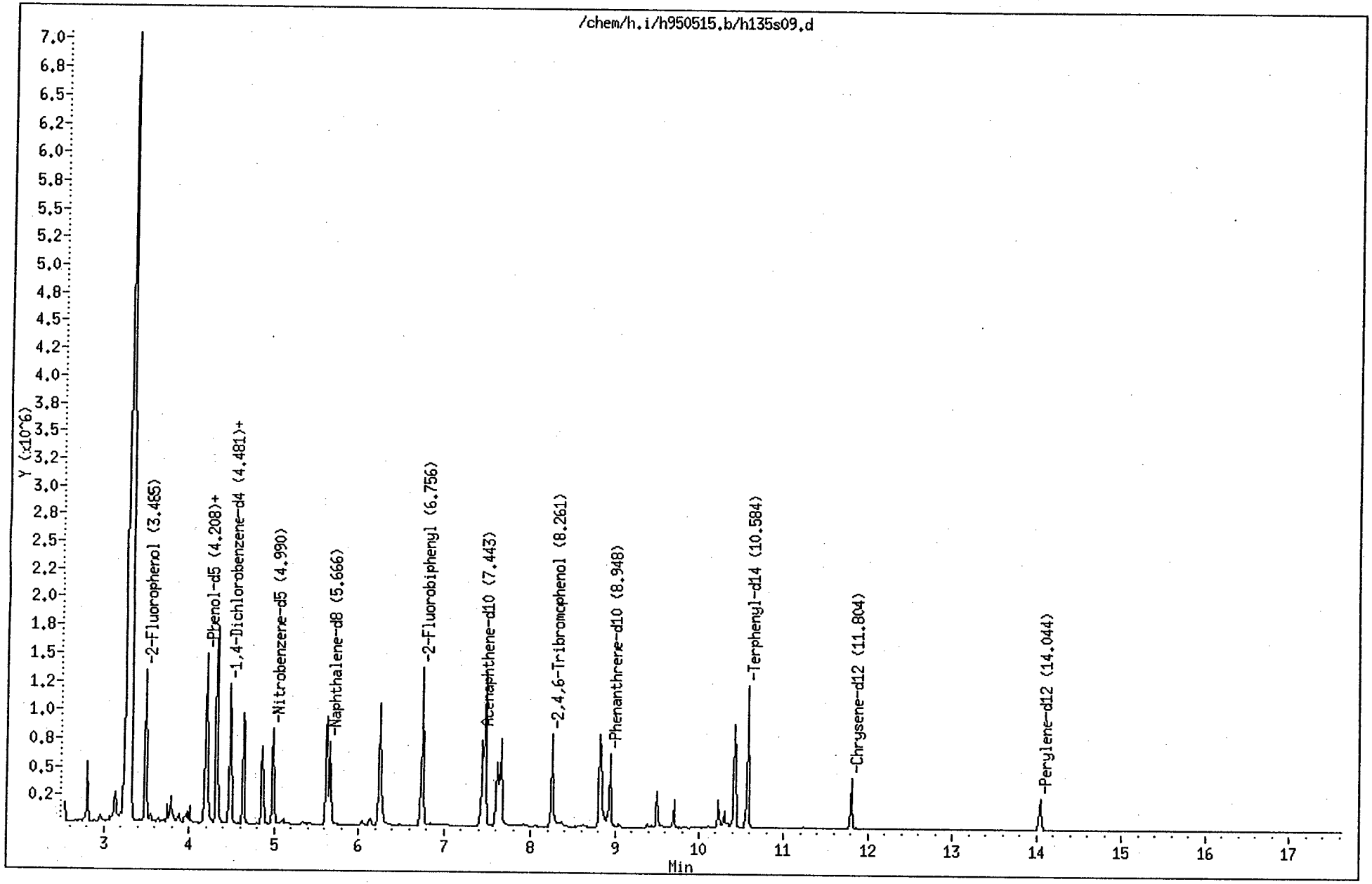
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.19
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.15
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.12
65 Phenanthrene-d10	8.95	8.45	9.45	8.95	0.04
76 Chrysene-d12	11.81	11.31	12.31	11.80	-0.07
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.06

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.

Data File: /chem/h.i/h950515.b/h135s09.d
Date : 15-MAY-1995 23:38
Client ID:
Sample Info: 9505164-12B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-13

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5 MSD

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 Analyzed by: JK Date: 05/12/95	05/12/95		
Cadmium, Total METHOD 6010 *** Analyzed by: JM Date: 05/17/95	101	8	mg/Kg
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 05/18/95	12	1	mg/Kg
Acid Digestion - Solids, GFAA METHOD 3050 *** Analyzed by: MM Date: 05/12/95	05/12/95		
Acid Digestion - Solids, ICP METHOD 3050 Analyzed by: MM Date: 05/12/95	05/12/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/15/95	6.5	0.4	mg/Kg

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-13

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5 MSD

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acetone	ND	100	ug/Kg
Benzene	49	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg
Bromomethane	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
Chlorobenzene	43	5	ug/Kg
Chloroethane	ND	10	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Chloroform	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
1,1-Dichloroethene	46	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
total-1,2-Dichloroethene	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Methylene Chloride	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Toluene	45	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
Trichloroethene	46	5	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Xylenes (total)	ND	5	ug/Kg

METHOD: 8240, Volatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-13

Operational Tech

SAMPLE ID: 026-001BH 9-9.5 MSD

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/Kg	102	70	121
Toluene-d8	50 ug/Kg	98	84	138
4-Bromofluorobenzene	50 ug/Kg	100	59	113

ANALYZED BY: HLW DATE/TIME: 05/09/95 15:09:00
METHOD: 8240, Volatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-13

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

05/22/95

PROJECT: Duluth ANGB/DULUTH SI
SITE: IRP Site 26
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001BH 9-9.5 MSD

PROJECT NO: 1315-197
MATRIX: SOIL
DATE SAMPLED: 05/03/95 13:35:00
DATE RECEIVED: 05/04/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	1200	330	ug/Kg
Acenaphthylene	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Benzo(a)Anthracene	ND	330	ug/Kg
Benzo(b)Fluoranthene	ND	330	ug/Kg
Benzo(k)Fluoranthene	ND	330	ug/Kg
Benzo(a)Pyrene	ND	330	ug/Kg
Benzoic Acid	ND	1600	ug/Kg
Benzo(g,h,i)Perylene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
4-Bromophenylphenyl ether	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
di-n-Butyl phthalate	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
bis(2-Chloroethoxy)Methane	ND	330	ug/Kg
bis(2-Chloroethyl)Ether	ND	330	ug/Kg
bis(2-Chloroisopropyl)Ether	ND	330	ug/Kg
4-Chloro-3-Methylphenol	2200	330	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Chlorophenol	1600	330	ug/Kg
4-Chlorophenylphenyl ether	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
Dibenz(a,h)Anthracene	ND	330	ug/Kg
Dibenzofuran	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	1200	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Dimethyl Phthalate	ND	330	ug/Kg
4,6-Dinitro-2-Methylphenol	ND	800	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
2,4-Dinitrotoluene	1600	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-13

Operational Tech

SAMPLE ID: 026-001BH 9-9.5 MSD

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	330	ug/Kg
bis(2-Ethylhexyl)Phthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
Indeno(1,2,3-cd)Pyrene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
Nitrobenzene	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
4-Nitrophenol	3700	800	ug/Kg
N-Nitrosodiphenylamine (1)	ND	330	ug/Kg
N-Nitroso-Di-n-Propylamine	1700	330	ug/Kg
Di-n-Octyl Phthalate	ND	330	ug/Kg
Pentachlorophenol	2400	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Phenol	1200	330	ug/Kg
Pyrene	1000	330	ug/Kg
Pyridine	ND	330	ug/Kg
1,2,4-Trichlorobenzene	1400	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg

METHOD: 8270, Semivolatile Organics - Soil

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505164-13

Operational Tech

SAMPLE ID: 026-001BH 9-9.5 MSD

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	1600 ug/Kg	90	23	120
2-Fluorobiphenyl	1600 ug/Kg	88	30	115
Terphenyl-d14	1600 ug/Kg	83	18	137
Phenol-d5	2500 ug/Kg	60	24	113
2-Fluorophenol	2500 ug/Kg	58	25	121
2,4,6-Tribromophenol	2500 ug/Kg	110	19	122

ANALYZED BY: LH DATE/TIME: 05/16/95 00:03:00
EXTRACTED BY: JK DATE/TIME: 05/12/95
METHOD: 8270, Semivolatile Organics - Soil
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129s06.d
Lab Smp Id: 9505164-13A-8240S/1X
Inj Date : 09-MAY-1995 15:09
Operator : HLW Inst ID: k.i
Smp Info : 9505164-13A-8240S/1X
Misc Info : K129S1/K129B02/K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 12-May-1995 10:45 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 19
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: lcs.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
*	20 Bromochloromethane	128.00	2.108	2.123	(1.000)	83258	250	
*	31 1,4-Difluorobenzene	114.00	2.790	2.789	(1.000)	527743	250	
*	51 Chlorobenzene-d5	117.00	6.760	6.759	(1.000)	393747	250	
$	23 1,2-Dichloroethane-d4	102.00	2.366	2.365	(1.122)	37273	250	51
$	40 Toluene-d8	98.00	4.532	4.532	(0.670)	595871	240	49
$	61 Bromofluorobenzene	95.00	8.866	8.865	(1.312)	214842	250	50
	10 1,1-Dichloroethene	96.00	1.608	1.623	(0.763)	145439	230	46
	27 Benzene	78.00	2.547	2.547	(0.913)	759113	250	49
	34 Trichloroethene	130.00	3.093	3.092	(1.109)	161517	230	46
	43 Toluene	92.00	4.638	4.638	(0.686)	416967	220	45
	52 Chlorobenzene	112.00	6.805	6.805	(1.007)	376794	210	43

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129s06.d
Lab Smp Id: 9505164-13A-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1/K129B02/K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	83258	-3.72
31 1,4-Difluorobenzene	552052	276026	1104104	527743	-4.40
51 Chlorobenzene-d5	389031	194516	778062	393747	1.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.11	-0.69
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.02
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.01

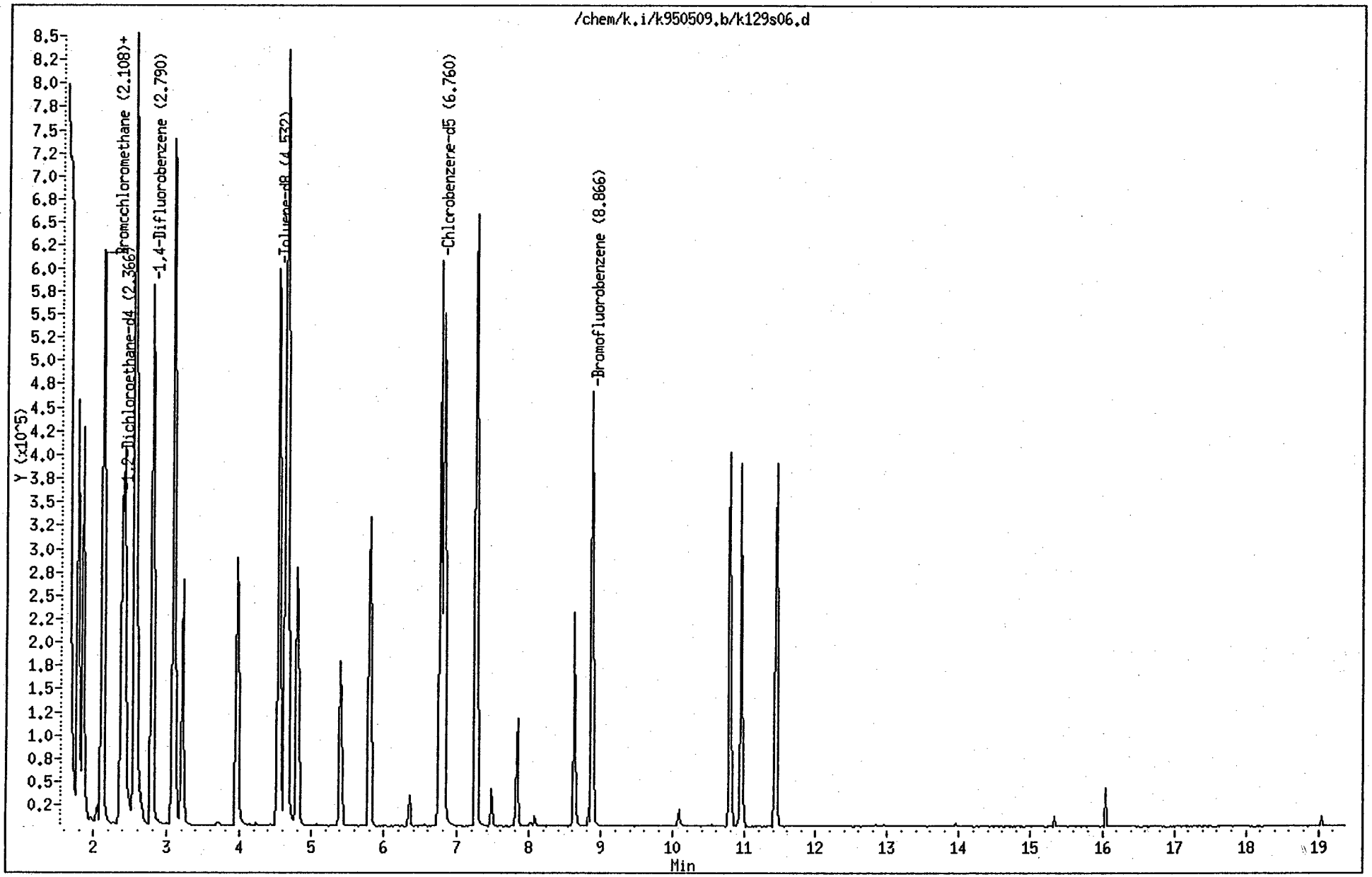
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129s06.d
Date : 09-MAY-1995 15:09
Client ID:
Sample Info: 9505164-13A-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Houston Labs

Data file : /chem/h.i/h950515.b/h135s10.d
Lab Smp Id:
Inj Date : 16-MAY-1995 00:03
Operator : LH
Smp Info : 9505164-13B-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping
Cal Date : 15-MAY-1995 15:26
Als bottle: 19
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h135cc1.d
QC Sample: MS

Compound Sublist: 8270.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	5 Phenol	94.00	4.208	4.205	(0.942)	439538	75	1200
	9 2-Chlorophenol	128.00	4.327	4.323	(0.968)	442721	96	1600
	12 1,4-Dichlorobenzene	146.00	4.493	4.489	(1.005)	365899	73	1200
	21 N-Nitroso-di-n-propylamine	70.00	4.860	4.869	(1.087)	224853	100	1700
	31 1,2,4-Trichlorobenzene	180.00	5.630	5.639	(0.994)	368386	81	1400
	36 4-Chloro-3-methylphenol	107.00	6.247	6.255	(1.102)	518715	130	2200
	49 Acenaphthene	153.00	7.479	7.476	(1.005)	599464	74	1200
	51 4-Nitrophenol	109.00	7.621	7.618	(1.024)	204815	220	3700(QR)
	53 2,4-Dinitrotoluene	165.00	7.669	7.665	(1.030)	290925	93	1600(QR)
	64 Pentachlorophenol	265.50	8.830	8.827	(0.987)	263451	140	2400
	71 Pyrene	202.00	10.430	10.414	(0.884)	765694	62	1000
*	11 1,4-Dichlorobenzene-d4	152.00	4.469	4.477	(1.000)	137164	40	
*	32 Naphthalene-d8	136.00	5.666	5.674	(1.000)	577477	40	
*	48 Acenaphthene-d10	164.00	7.444	7.452	(1.000)	287643	40	
*	65 Phenanthrene-d10	188.00	8.949	8.945	(1.000)	429462	40	
*	76 Chrysene-d12	240.00	11.805	11.813	(1.000)	309797	40	
*	83 Perylene-d12	264.00	14.044	14.053	(1.000)	210382	40	
$	23 Nitrobenzene-d5	82.00	4.991	4.999	(0.881)	393820	86	1400
$	41 2-Fluorobiphenyl	172.00	6.756	6.765	(0.908)	792350	84	1400
$	72 Terphenyl-d14	244.00	10.584	10.580	(0.897)	663257	79	1300
$	4 Phenol-d5	99.00	4.197	4.193	(0.939)	478045	90	1500(Q)
$	3 2-Fluorophenol	112.00	3.486	3.458	(0.780)	421261	88	1500
$	61 2,4,6-Tribromophenol	329.70	8.261	8.258	(0.923)	242605	160	2700

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h135s10.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	137164	11.49
32 Naphthalene-d8	418440	209220	836880	577477	38.01
48 Acenaphthene-d10	198324	99162	396648	287643	45.04
65 Phenanthrene-d10	270386	135193	540772	429462	58.83
76 Chrysene-d12	175926	87963	351852	309797	76.10
83 Perylene-d12	106536	53268	213072	210382	97.48

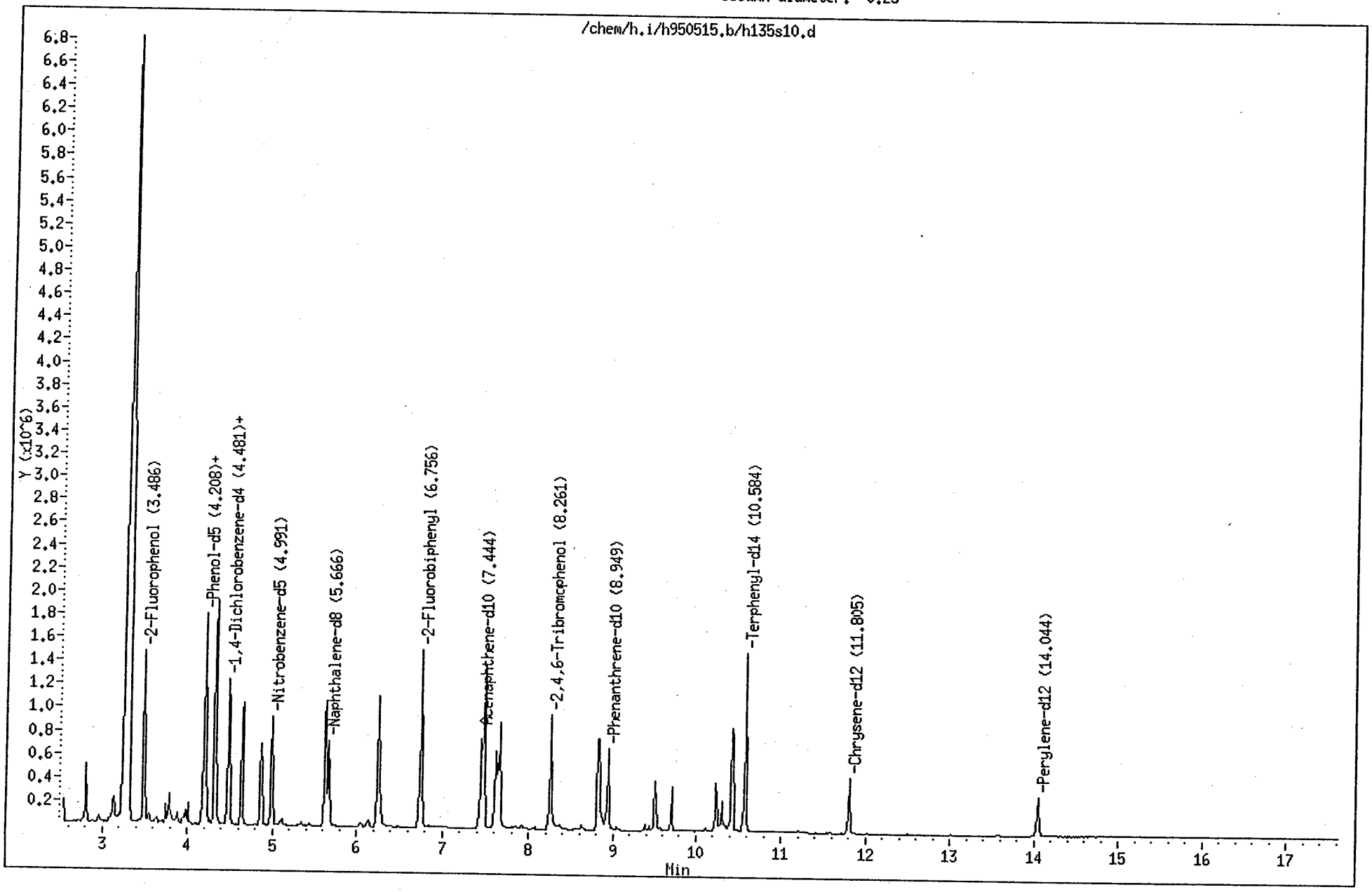
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.19
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.15
48 Acenaphthene-d10	7.45	6.95	7.95	7.44	-0.11
65 Phenanthrene-d10	8.95	8.45	9.45	8.95	0.04
76 Chrysene-d12	11.81	11.31	12.31	11.80	-0.07
83 Perylene-d12	14.05	13.55	14.55	14.04	-0.06

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.

Data File: /chem/h.i/h950515.b/h135s10.d
Date : 16-MAY-1995 00:03
Client ID:
Sample Info: 9505164-13B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95 - 05 - 164

Approved for release by:

M. Scott Sample

M. Scott Sample, Laboratory Director Date: 6/1/95

Karen Satterfield

Karen Satterfield, Project Manager Date: 5/31/95

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

CASE NARRATIVE

WORK ORDER NO.: 9505164

Southern Petroleum Laboratories (SPL) is pleased to present the results of laboratory analyses to Operational Technologies. The samples were received at our laboratory on May 04, 1995 at a temperature of 3 degrees Celsius. The following is a brief narrative of the laboratory analyses.

Sample 026-001BH 9-9.5 was chosen as the matrix spike and matrix spike duplicate for semi-volatiles. The spike recoveries of compounds 4-nitrophenol and 2,4-dinitrotoluene were outside the QC control limits. A laboratory control sample was analyzed as a QC check for sample preparation and the LCS was within the QC limits. This sample was also the matrix spike and matrix spike duplicated for chromium by method 7191. The recoveries were below SPL's quality assurance limits. A laboratory control sampel was also prepared within the digestion batch and exhibited excellent recoveries. Therefore, matrix interference is suspected.

If I can be of further assistance or answer any questions, please do not hesitate to contact me at (713)660-0901 ext 103.

Karen Satterfield
Project Manager

QUALITY CONTROL

DOCUMENTATION

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 504667 SAS No.: ___ SDG NO.: 505164

Matrix Spike - EPA Sample No.: 9504234-08C

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
1,1-Dichloroethene	50.0	0	50	100	61-145
Trichloroethene	50.0	0	48	96	71-120
Benzene	50.0	0	49	98	76-127
Toluene	50.0	0	47	94	76-125
Chlorobenzene	50.0	0	49	98	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
1,1-Dichloroethene	50.0	50	100	0	14	61-145
Trichloroethene	50.0	48	96	0	14	71-120
Benzene	50.0	50	100	2	11	76-127
Toluene	50.0	48	96	2	13	76-125
Chlorobenzene	50.0	49	98	0	13	75-130

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

* Values outside of QC Limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

FORM III VOA - 1

Idelis Williams, Q C Officer

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 505164 SAS No.: ___ SDG NO.: 505164

Matrix Spike - EPA Sample No.: 026-001BB 9-9.5

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMIT REC.
1,1-Dichloroethene	50.0	0	44	88	59-172
Trichloroethene	50.0	0	44	88	62-137
Benzene	50.0	0	47	94	66-142
Toluene	50.0	0	43	86	59-139
Chlorobenzene	50.0	0	41	82	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
1,1-Dichloroethene	50.0	46	92	4	22	59-172
Trichloroethene	50.0	46	92	4	24	62-137
Benzene	50.0	49	98	4	21	66-142
Toluene	50.0	45	90	5	21	59-139
Chlorobenzene	50.0	43	86	5	21	60-133

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

* Values outside of QC Limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

FORM III VOA - 2

Idelis Williams, QC Officer

SPL Blank QC Report

Matrix: Soil
Sample ID: BLANK
Batch: K950508094856

Reported on: 05/15/95 17:42
Analyzed on: 05/08/95 12:44
Analyst: HLW

METHOD 8240 **K128B02**

Compound	Result	Detection Limit	Units
1,2-Dichloroethene (total)	ND	5	ug/Kg
Xylene (Total)	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Chloroethane	ND	10	ug/Kg
Bromomethane	ND	10	ug/Kg
Acetone	ND	100	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
Methylene Chloride	ND	5	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Chloroform	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
Benzene	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: K950508094856

Reported on: 05/15/95 17:42
Analyzed on: 05/08/95 12:44
Analyst: HLW

METHOD 8240 **K128B02**

Compound	Result	Detection Limit	Units
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	92	70-121	% Recovery
Toluene-d8	105	84-138	% Recovery
Bromofluorobenzene	97	59-113	% Recovery

Samples in Batch 9505164-01 9505164-02 9505164-03 9505164-04 9505164-05 9505164-06

Notes
ND - Not detected.

Idelis Williams, QC Officer

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128b02.d
Lab Smp Id: BLANK-8240S/1X
Inj Date : 08-MAY-1995 12:44
Operator : HLW Inst ID: k.i
Smp Info : BLANK-8240S/1X
Misc Info : K128S1//K128CS2
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 08-May-1995 11:42 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.121	2.120	(1.000)	89552	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.379	2.378	(1.121)	37770	230	46
* 31 1,4-Difluorobenzene	114.00	2.803	2.802	(1.000)	508518	250	
$ 40 Toluene-d8	98.00	4.545	4.545	(0.673)	582353	260	52
* 51 Chlorobenzene-d5	117.00	6.758	6.772	(1.000)	366154	250	
$ 61 Bromofluorobenzene	95.00	8.879	8.878	(1.314)	194859	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128b02.d
Lab Smp Id: BLANK-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info: K128S1//K128CS2

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	89552	0.98
31 1,4-Difluorobenzene	553116	276558	1106232	508518	-8.06
51 Chlorobenzene-d5	397197	198598	794394	366154	-7.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.03
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	0.02
51 Chlorobenzene-d5	6.77	6.27	7.27	6.76	-0.21

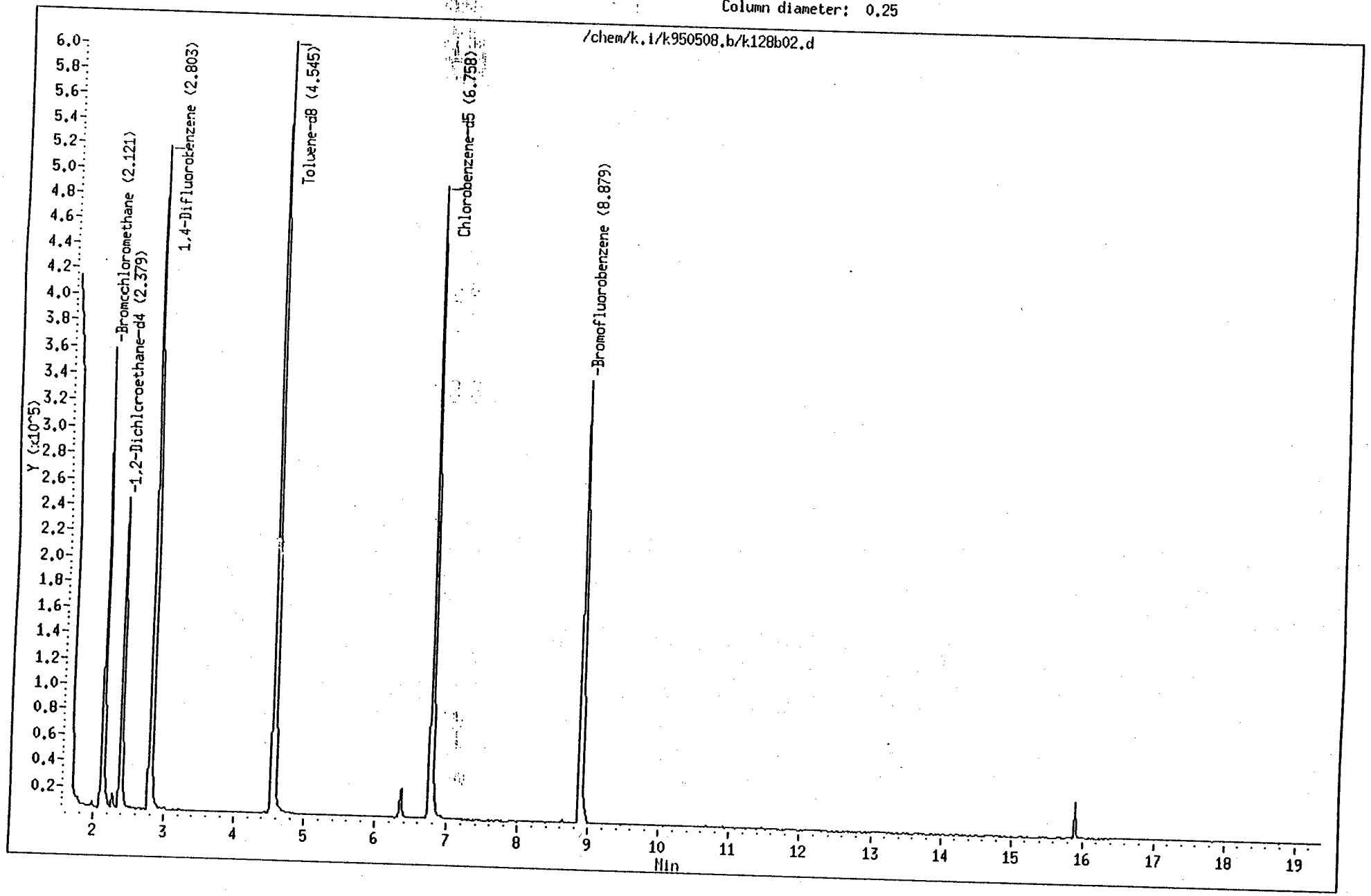
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128b02.d
Date : 08-MAY-1995 12:44
Client ID:
Sample Info: BLANK-8240S/1X

Instrument: k.i

Column phase: 30m,hp5ms,0.25u df

Operator: HLW
Column diameter: 0.25



Matrix: Soil
Sample ID: BLANK
Batch: K950509094856

Reported on: 05/15/95 17:42
Analyzed on: 05/09/95 12:29
Analyst: HLW

METHOD 8240S **K129B02**

Compound	Result	Detection Limit	Units
1,2-Dichloroethene (total)	ND	5	ug/Kg
Xylene (Total)	ND	5	ug/Kg
Chloromethane	ND	10	ug/Kg
Vinyl Chloride	ND	10	ug/Kg
Chloroethane	ND	10	ug/Kg
Bromomethane	ND	10	ug/Kg
Acetone	ND	100	ug/Kg
Trichlorofluoromethane	ND	5	ug/Kg
1,1-Dichloroethene	ND	5	ug/Kg
Methylene Chloride	ND	5	ug/Kg
Carbon Disulfide	ND	5	ug/Kg
1,1-Dichloroethane	ND	5	ug/Kg
2-Chloroethylvinylether	ND	10	ug/Kg
Vinyl Acetate	ND	10	ug/Kg
2-Butanone	ND	20	ug/Kg
Chloroform	ND	5	ug/Kg
1,1,1-Trichloroethane	ND	5	ug/Kg
1,2-Dichloroethane	ND	5	ug/Kg
Benzene	ND	5	ug/Kg
Carbon Tetrachloride	ND	5	ug/Kg
1,2-Dichloropropane	ND	5	ug/Kg
Trichloroethene	ND	5	ug/Kg
Bromodichloromethane	ND	5	ug/Kg
trans-1,3-Dichloropropene	ND	5	ug/Kg
4-Methyl-2-Pentanone	ND	10	ug/Kg
cis-1,3-Dichloropropene	ND	5	ug/Kg
Toluene	ND	5	ug/Kg
1,1,2-Trichloroethane	ND	5	ug/Kg
2-Hexanone	ND	10	ug/Kg
Dibromochloromethane	ND	5	ug/Kg
Tetrachloroethene	ND	5	ug/Kg
Chlorobenzene	ND	5	ug/Kg
Ethylbenzene	ND	5	ug/Kg
Bromoform	ND	5	ug/Kg

Notes
ND - Not detected.

Idelis Williams, QC Officer

SPL Blank QC Report

Matrix: Soil
Sample ID: BLANK
Batch: K950509094856

Reported on: 05/15/95 17:42
Analyzed on: 05/09/95 12:29
Analyst: HLW

METHOD 8240S **K129B02**

Compound	Result	Detection Limit	Units
Styrene	ND	5	ug/Kg
1,1,2,2-Tetrachloroethane	ND	5	ug/Kg

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	97	70-121	% Recovery
Toluene-d8	98	84-138	% Recovery
Bromofluorobenzene	97	59-113	% Recovery

Samples in Batch 9505164-07 9505164-08 9505164-09 9505164-10 9505164-12 9505164-13

Notes
ND - Not detected.

Idelis Williams, QC Officer

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129b02.d
Lab Smp Id: BLANK-8240S/1X
Inj Date : 09-MAY-1995 12:29
Operator : HLW Inst ID: k.i
Smp Info : BLANK-8240S/1X
Misc Info : K129S1//K129CS2
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 09-May-1995 11:38 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
* 20 Bromochloromethane	128.00	2.120	2.123	(1.000)	95890	250	
$ 23 1,2-Dichloroethane-d4	102.00	2.378	2.365	(1.121)	41030	240	48
* 31 1,4-Difluorobenzene	114.00	2.802	2.789	(1.000)	548254	250	
$ 40 Toluene-d8	98.00	4.545	4.532	(0.673)	622868	240	49
* 51 Chlorobenzene-d5	117.00	6.757	6.759	(1.000)	414533	250	
$ 61 Bromofluorobenzene	95.00	8.863	8.865	(1.312)	219572	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129b02.d
Lab Smp Id: BLANK-8240S/1X
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info: K129S1//K129CS2

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	95890	10.89
31 1,4-Difluorobenzene	552052	276026	1104104	548254	-0.69
51 Chlorobenzene-d5	389031	194516	778062	414533	6.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	-0.11
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.80	0.46
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	-0.03

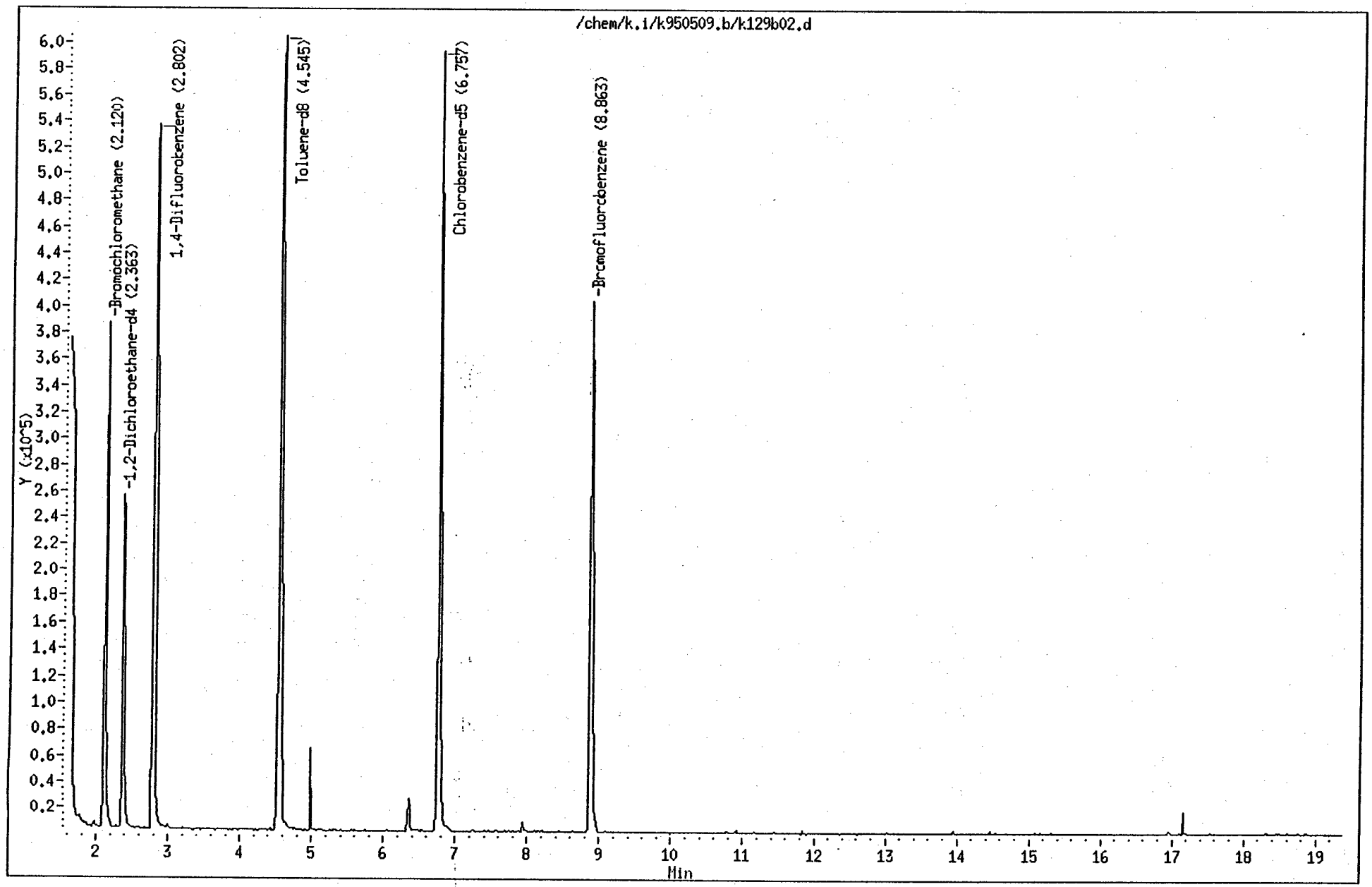
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129b02.d
Date : 09-MAY-1995 12:29
Client ID:
Sample Info: BLANK-8240S/1X

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



Matrix: Aqueous
Sample ID: BLANK
Batch: L950505104642

Reported on: 05/15/95 17:42
Analyzed on: 05/06/95 01:45
Analyst: JC

METHOD 8240/624 L125B02

Compound	Result	Detection Limit	Units
Chloromethane	ND	10	ug/L
Vinyl Chloride	ND	10	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Trichlorofluoromethane	ND	5	ug/L
Acetone	ND	100	ug/L
1,1-Dichloroethene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
Vinyl Acetate	ND	10	ug/L
2-Butanone	ND	20	ug/L
Chloroform	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
Benzene	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
2-Chloroethylvinylether	ND	10	ug/L
4-Methyl-2-Pentanone	ND	10	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
2-Hexanone	ND	10	ug/L
Dibromochloromethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Bromoform	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: L950505104642

Reported on: 05/15/95 17:42
Analyzed on: 05/06/95 01:45
Analyst: JC

METHOD 8240/624 L125B02

Compound	Result	Detection Limit	Units
Styrene	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	104	76-114	% Recovery
Toluene-d8	100	88-110	% Recovery
Bromofluorobenzene	96	86-115	% Recovery

Samples in Batch 9505164-11

Notes

ND - Not detected.

Idelis Williams, QC Officer

ata File: /chem/l.i/1950505.b/l125b02.d
eport Date: 06-May-1995 08:52

SPL Labs

Volatiles by 624/8240

ata file : /chem/l.i/1950505.b/l125b02.d
ab Smp Id:
nj Date : 06-MAY-1995 01:45
perator : JC Inst ID: l.i
mp Info : BLANK-8240W/1X
isc Info : L125W1//L124CW1
omment :
ethod : /chem/l.i/1950505.b/lvoclpw.m
eth Date : 06-May-1995 08:33 jimmy Quant Type: ISTD
al Date : 06-MAY-1995 01:18 Cal File: l125cw1.d
ls bottle: 20
il Factor: 1.000
ntegrator: HP RTE Compound Sublist: all.sub
arget Version: 3.10

mpounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
23 Bromochloromethane	128.00	5.226	5.223	(1.000)	46959	250	
26 1,2-Dichloroethane-d4	102.00	5.993	5.990	(1.147)	19520	260	52
32 1,4-Difluorobenzene	114.00	6.929	6.926	(1.000)	251022	250	
43 Toluene-d8	98.00	9.148	9.154	(0.824)	277671	250	50
50 Chlorobenzene-d5	117.00	11.100	11.097	(1.000)	202743	250	
61 Bromofluorobenzene	95.00	12.776	12.773	(1.151)	100693	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: l.i
ab File ID: l125b02.d
ab Smp Id:
nalysis Type: VOA
ant Type: ISTD
erator: JC
ethod File: /chem/l.i/1950505.b/lvoclpw.m
isc Info: L125W1//L124CW1

Calibration Date: 05/06/95
Calibration Time: 0118

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	48316	24158	96632	46959	-2.81
32 1,4-Difluorobenzene	248535	124268	497070	251022	1.00
0 Chlorobenzene-d5	204023	102012	408046	202743	-0.63

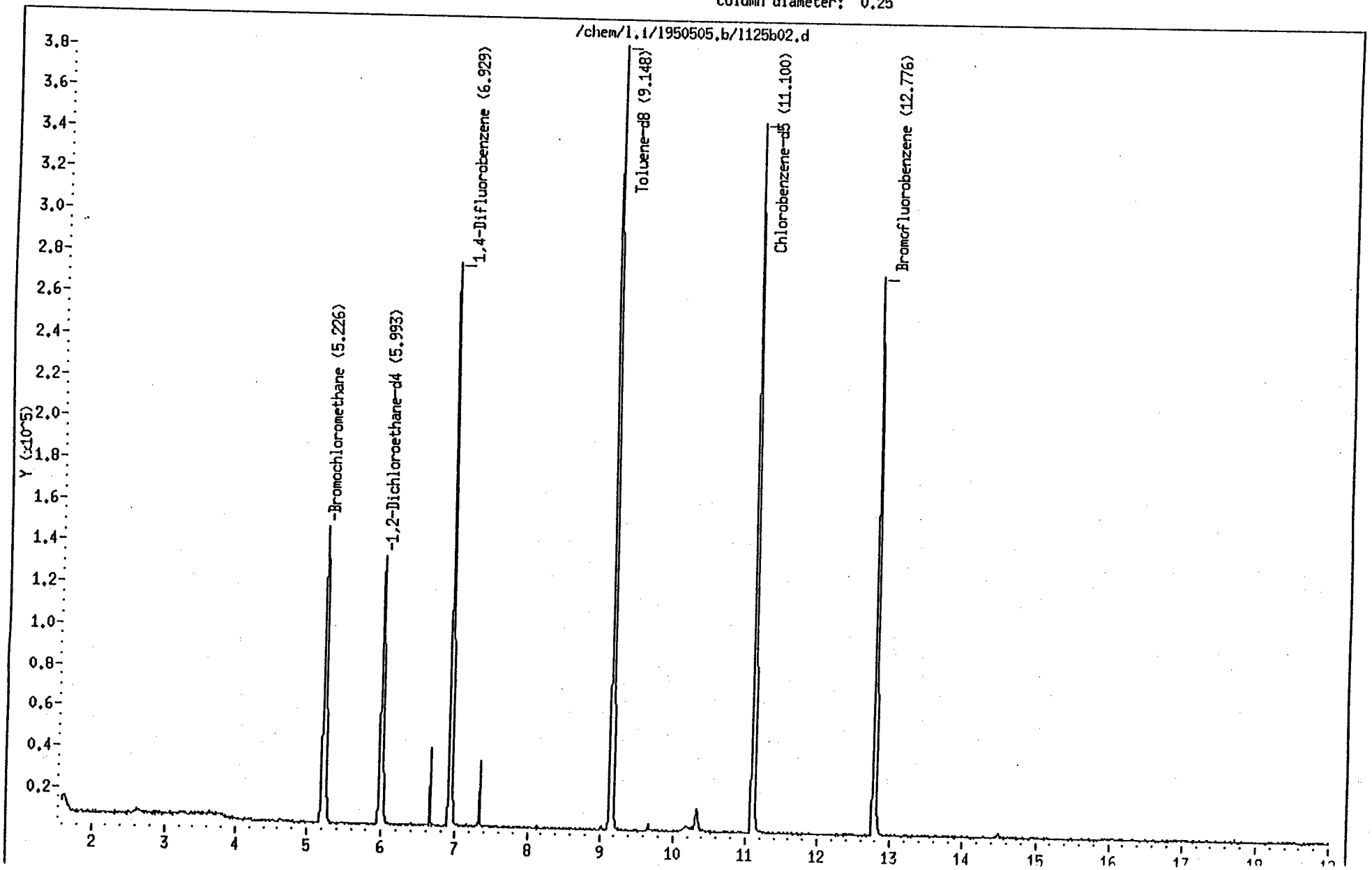
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
3 Bromochloromethane	5.22	4.72	5.72	5.23	0.06
32 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.05
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.03

REA UPPER LIMIT = +100% of internal standard area.
A LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950505.b/1125b02.d
Date : 06-MAY-1995 01:45
Client ID:
Sample Info: BLANK-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25

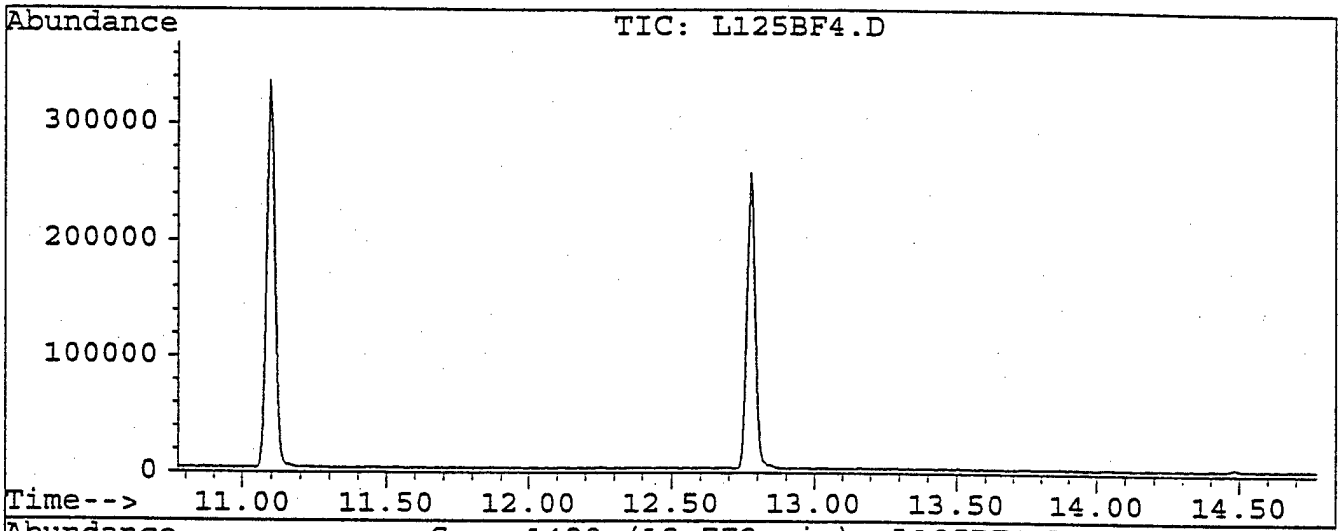


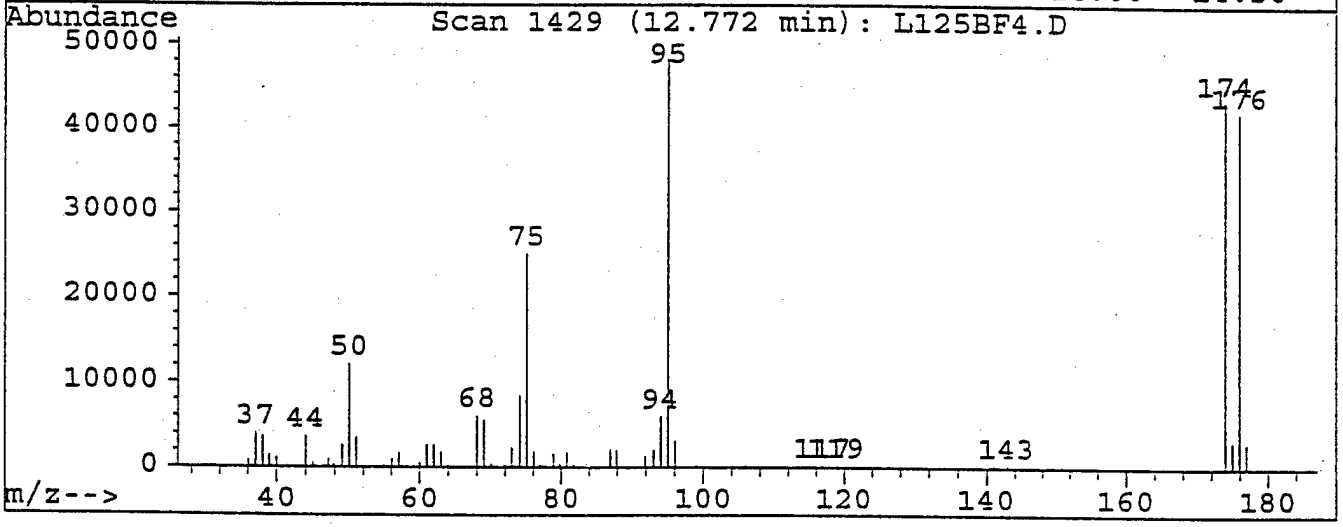
BFB

Data File : C:\HPCHEM\1\DATA\L950505\L125BF4.D
Acq On : 6 May 95 12:51 am
Sample : 50 NG BFB
Misc : PURGING INJECTION

Vial: 18
Operator:
Inst : 1
Multiplr: 1.00

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





Peak Apex is scan: 1429

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.3	12175	PASS
75	95	30	60	51.9	25016	PASS
95	95	100	100	100.0	48200	PASS
96	95	5	9	6.5	3139	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	90.0	43384	PASS
175	174	5	9	7.2	3127	PASS
176	174	95	101	96.7	41936	PASS
177	176	5	9	7.0	2935	PASS

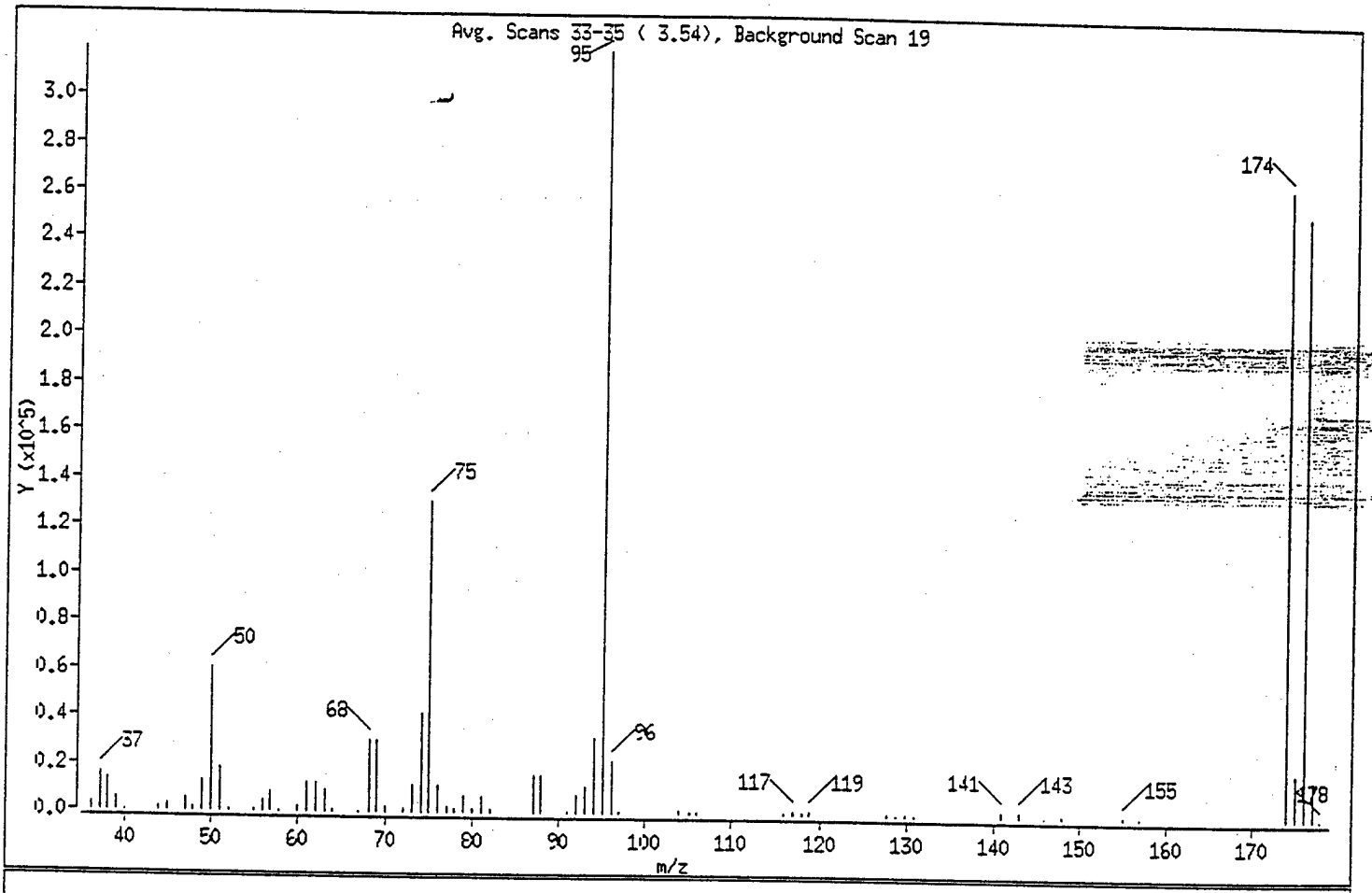
L125BF4.D ENVDEF.M Sat May 06 07:22:32 1995

Data File: /chem/k.i/k950508.b/k128bf1.d
Date : 08-MAY-95 10:02
Client ID:
Sample Info: BFB 50 NG

Instrument: k.i

Operator:
Column diameter: 2.00

Column phase:
1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.01
75	30.00 - 60.00% of mass 95	40.88
96	5.00 - 9.00% of mass 95	6.84
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	82.75
175	5.00 - 9.00% of mass 174	6.00 (7.26)
176	95.00 - 101.00% of mass 174	79.18 (95.69)
177	5.00 - 9.00% of mass 176	5.20 (6.57)

Data File: /chem/k.i/k950508.b/k128bf1.d

Date : 08-MAY-95 10:02

Client ID:

Instrument: k.i

Sample Info: BFB 50 NG

Operator:

Column phase:

Column diameter: 2.00

Data File: k128bf1.d

Spectrum : Avg. Scans 33-35 (3.54), Background Scan 19

Largest m/z: 95.10

Number of peaks: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	3114	61.05	12408	82.05	1197	128.85	185
37.10	16051	62.05	11938	87.05	15847	129.95	949
38.00	13478	63.05	8909	87.95	15761	131.00	168
39.00	5212	64.05	747	91.00	988	140.95	2047
40.00	135	66.95	340	92.10	7216	142.95	2186
44.05	1134	68.05	30440	93.00	11074	145.85	359
45.05	3112	69.05	29992	94.10	31624	147.95	514
47.05	4939	70.05	2202	95.10	319680	155.00	673
47.95	1786	72.00	1408	96.10	21848	156.90	221
49.05	12558	73.10	11236	97.10	611	174.00	264512
50.05	60768	74.10	41512	103.95	1146	175.00	19192
51.10	18016	75.10	130688	105.05	611	176.00	253120
52.10	681	76.10	11396	105.95	1059	177.00	16624
55.00	720	77.00	2038	115.90	593	177.90	235
56.00	4432	77.90	1438	116.90	1538		
57.00	8099	78.90	6856	118.00	687		
58.00	179	80.00	1880	118.90	1224		
60.00	2565	80.95	6832	127.85	1018		

Data File: /chem/k.i/k950508.b/k128bf1.d

Date : 08-MAY-95 10:02

Client ID:

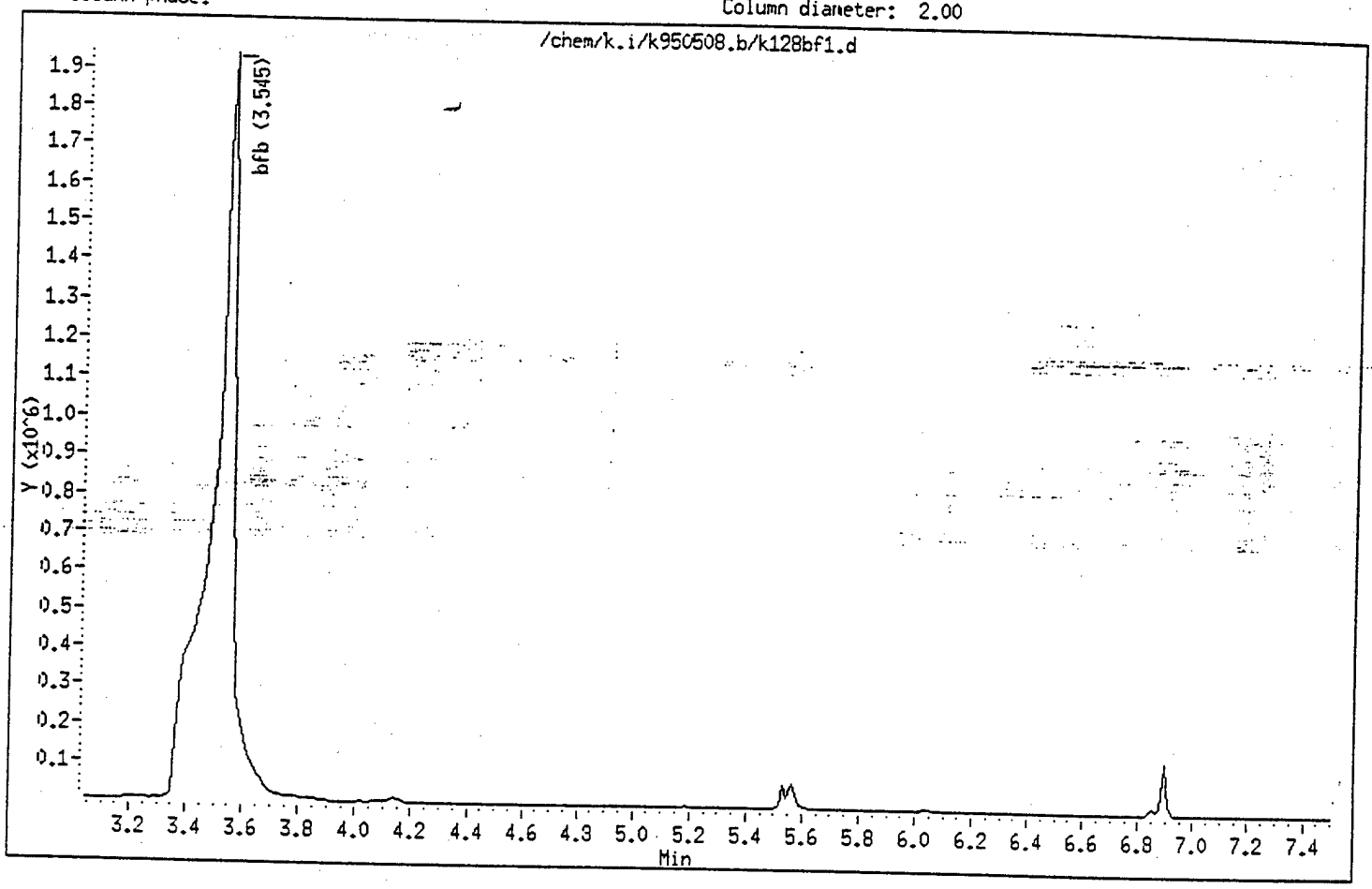
Sample Info: BFB 50 NG

Instrument: k.i

Operator:

Column phase:

Column diameter: 2.00



Data File: /chem/k.i/k950509.b/k129bf1.d

Date : 09-MAY-95 10:11

Client ID:

Sample Info: BFB 50 NG

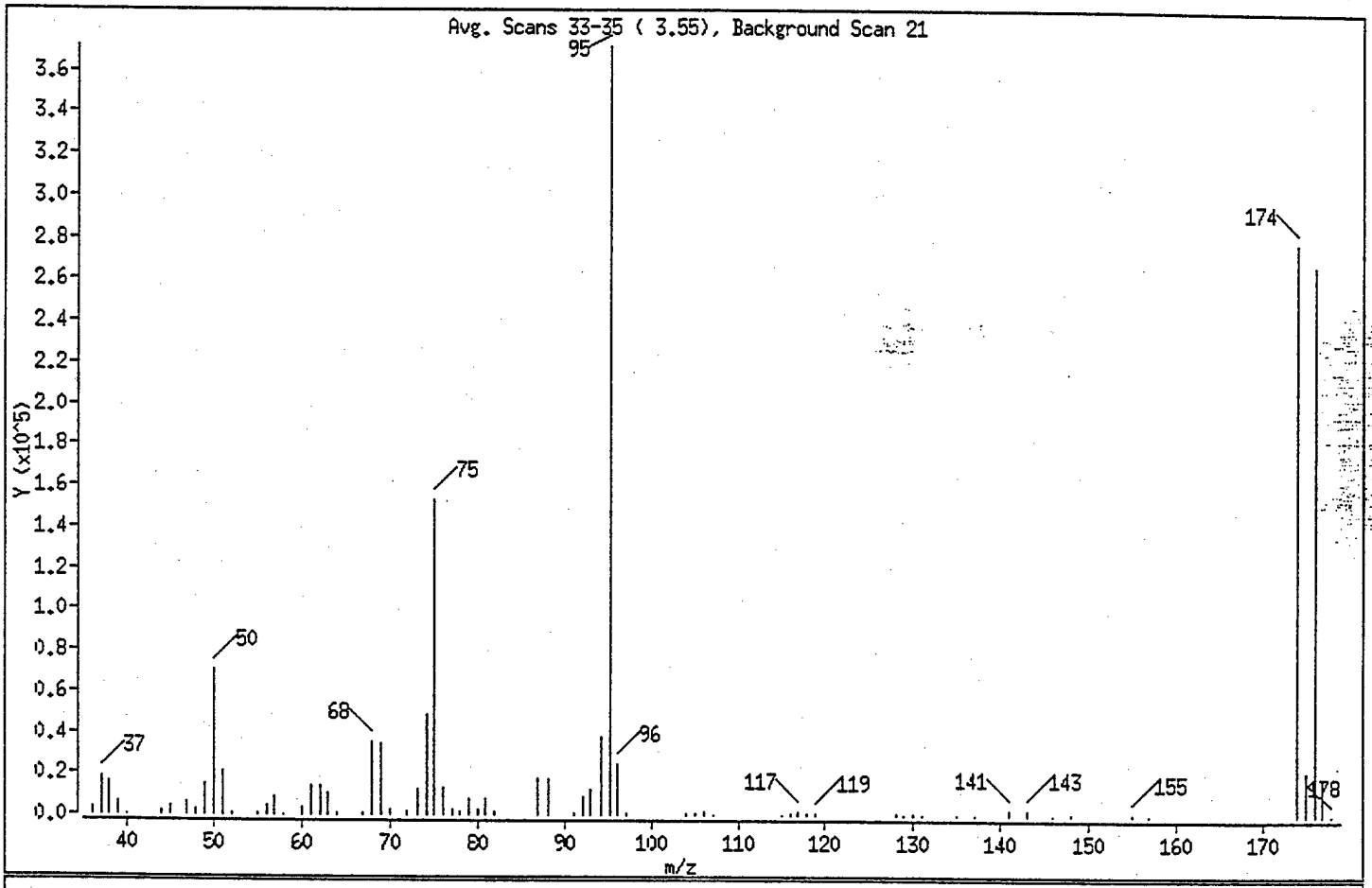
Instrument: k.i

Operator:

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.95
75	30.00 - 60.00% of mass 95	41.14
96	5.00 - 9.00% of mass 95	6.52
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	74.71
175	5.00 - 9.00% of mass 174	5.61 (7.51)
176	95.00 - 101.00% of mass 174	71.88 (96.22)
177	5.00 - 9.00% of mass 176	4.77 (6.64)

Data File: /chem/k.i/k950509.b/k129bf1.d
Date : 09-MAY-95 10:11
Client ID:
Sample Info: BFB 50 NG

Instrument: k.i
Operator:
Column phase:
Column diameter: 2.00

Data File: k129bf1.d
Spectrum : Avg. Scans 33-35 (3.55), Background Scan 21
Largest m/z: 95.10
Number of peaks: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.10	3803	62.05	13883	88.05	17792	129.95	1052
37.10	18904	63.05	10314	91.00	1259	131.00	181
38.10	16210	64.05	999	92.10	8673	135.00	245
39.10	6108	66.95	539	93.00	12683	136.90	212
40.00	96	68.05	35072	94.10	37624	140.95	2473
44.05	1612	69.05	34656	95.10	372096	142.95	2646
45.05	4027	70.05	2834	96.10	24272	145.95	223
47.05	6049	72.00	1832	97.10	808	147.95	834
47.95	2424	73.10	12557	103.95	1290	155.00	794
49.05	14547	74.10	48176	104.95	838	156.90	424
50.05	70512	75.10	153088	105.95	1346	174.00	277952
51.10	21104	76.10	13253	106.95	188	175.00	20872
52.10	1098	77.10	2474	115.00	171	176.00	267456
55.10	1039	78.00	1771	115.90	939	177.00	17752
56.00	4571	78.90	7822	116.90	1701	178.00	395
57.00	9122	80.00	2237	117.90	963		
58.00	215	80.95	8051	118.90	1280		
60.00	3258	81.95	1611	127.95	1081		
61.05	14489	86.95	17832	128.95	244		

Data File: /chem/k.i/k950509.b/k129bf1.d

Date : 09-MAY-95 10:11

Client ID:

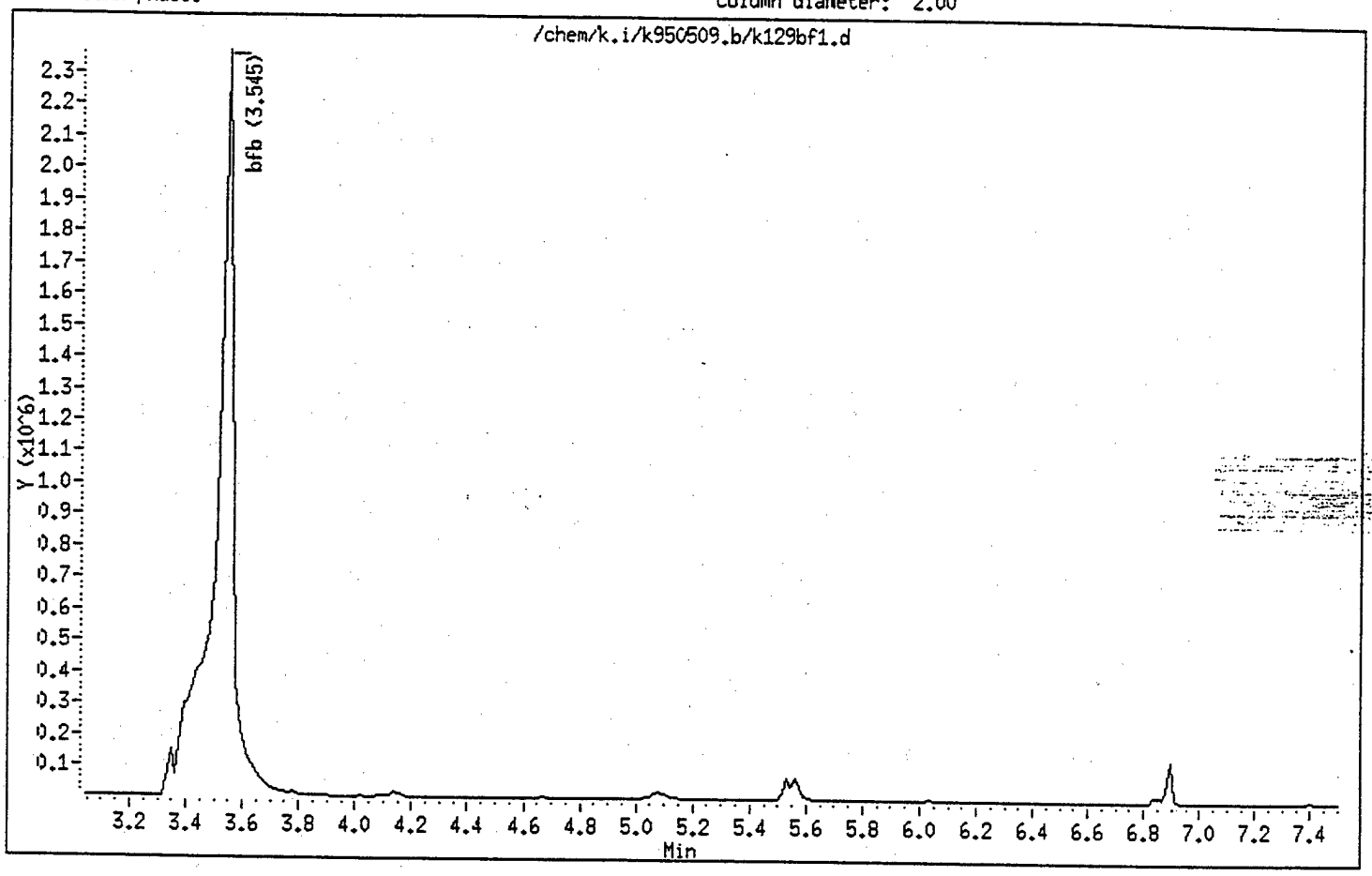
Sample Info: BFB 50 NG

Instrument: k.i

Operator:

Column phase:

Column diameter: 2.00



SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 20:30
End Cal Date : 02-MAY-1995 21:27
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/k.i/k950502.b/kvoclps.m
Cal Date : 03-May-1995 10:04 hillery
Curve Type : Average

Calibration File Names:
Level 1: /chem/k.i/k950502.b/k122is1e.d
Level 2: /chem/k.i/k950502.b/k122is2e.d
Level 3: /chem/k.i/k950502.b/k122cs7.d
Level 4: /chem/k.i/k950502.b/k122is4e.d
Level 5: /chem/k.i/k950502.b/k122is5e.d

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	4 Chloromethane	2.61598	2.81482	2.12233	2.24403	2.45830	2.45109	11.367
	5 Vinyl Chloride	2.65380	2.94683	2.27075	2.29473	2.52382	2.53798	10.993
	7 Bromomethane	2.11466	2.01524	1.61752	1.66188	1.78547	1.83895	11.862
	6 Chloroethane	1.70772	2.47252	1.96573	1.98068	2.14242	2.05381	13.687
	9 Trichlorofluoromethane	1.49304	2.08578	2.00085	1.92770	2.26966	1.95541	14.741
	8 Acetone	0.27178	0.26116	0.28834	0.18784	0.20866	0.24356	17.700
	10 1,1-Dichloroethene	1.85538	2.17717	2.01911	2.00216	2.12934	2.03663	6.147
	11 Methylene Chloride	2.38104	2.68890	2.40798	2.23657	2.35295	2.41349	6.930
M	1 1,2-Dichloroethene (total)	2.48786	2.60735	2.54327	2.57358	2.54340	2.55109	1.730
	12 Carbon Disulfide	7.61210	8.72426	7.92999	7.84861	8.50089	8.12317	5.767
	13 trans-1,2-Dichloroethene	2.45393	2.74754	2.54113	2.51774	2.65500	2.58307	4.537
	14 1,1-Dichloroethane	4.64531	5.12809	4.72981	4.78124	4.76879	4.81065	3.851
	16 Vinyl Acetate	4.39095	4.67428	4.62771	4.19908	3.81329	4.34106	8.099
	17 2-Butanone	2.07727	1.95040	2.25063	1.42863	1.46330	1.83405	20.182
	19 cis-1,2-Dichloroethene	2.52179	2.46715	2.54541	2.62942	2.43180	2.51911	3.022
	21 Chloroform	4.03686	4.22412	3.99063	3.86111	4.20345	4.06323	3.740
	24 1,1,1-Trichloroethane	3.10851	3.57553	3.17577	3.10886	3.55489	3.30471	7.247
	25 1,2-Dichloroethane	0.46771	0.44242	0.46820	0.45167	0.45093	0.45619	2.487
	27 Benzene	1.45923	1.42676	1.47373	1.47356	1.42845	1.45235	1.608
	28 Carbon Tetrachloride	0.37727	0.36450	0.38452	0.39331	0.40772	0.38546	4.232
	33 1,2-Dichloropropane	0.39723	0.37732	0.40855	0.37269	0.37777	0.38671	3.990
	34 Trichloroethene	0.33210	0.31444	0.34870	0.32128	0.32473	0.32825	3.986
	35 Bromodichloromethane	0.41562	0.40335	0.45507	0.41056	0.44324	0.42557	5.255
	15 2-Chloroethylvinylether	0.76056	0.69309	0.74966	0.77129	0.68699	0.73232	5.381
	38 4-Methyl-2-Pentanone	0.36838	0.41150	0.43019	0.23238	0.26823	0.34214	25.631
	42 cis-1,3-Dichloropropene	0.39013	0.36628	0.41665	0.38134	0.39805	0.39049	4.810
	37 trans-1,3-Dichloropropene	0.66711	0.74886	0.70980	0.62420	0.74084	0.69816	7.498

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 20:30
End Cal Date : 02-MAY-1995 21:27
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/k.i/k950502.b/kvoclps.m
Cal Date : 03-May-1995 10:04 hillery
Curve Type : Average

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	43 Toluene	1.22134	1.32245	1.18326	1.04139	1.17488	1.18866	8.504
	44 1,1,2-Trichloroethane	0.34616	0.33240	0.31910	0.27189	0.31178	0.31627	8.874
	45 2-Hexanone	0.35970	0.60509	0.51642	0.14372	0.31633	0.38825	46.295
	46 Dibromochloromethane	0.36006	0.38294	0.37802	0.33114	0.40668	0.37177	7.573
	48 Tetrachloroethene	0.41111	0.43522	0.40448	0.35990	0.40363	0.40287	6.757
	52 Chlorobenzene	1.13558	1.08935	1.14714	1.12095	1.06593	1.11179	3.019
M	2 Xylene (Total)	0.69398	0.81685	0.69844	0.69500	0.67635	0.71612	7.953
	53 Ethylbenzene	0.59157	0.65401	0.60740	0.59508	0.59898	0.60941	4.204
	54 m,p-Xylene(s)	0.71166	0.83335	0.73199	0.70548	0.65004	0.72650	9.222
	55 Bromoform	0.17950	0.21853	0.21733	0.20692	0.24260	0.21298	10.719
	57 Styrene	1.03398	1.23180	1.04130	1.08557	1.25174	1.12888	9.316
	58 o-Xylene	0.65863	0.78384	0.63135	0.67405	0.72897	0.69537	8.765
	59 1,1,2,2-Tetrachloroethane	0.36578	0.44209	0.33519	0.32841	0.31594	0.35748	14.192
S	23 1,2-Dichloroethane-d4	0.46776	0.54303	0.42892	0.45129	0.52086	0.48237	9.941
S	40 Toluene-d8	1.71636	1.89329	1.54687	1.47209	1.67607	1.66093	9.799
S	61 Bromofluorobenzene	0.65848	0.66793	0.55819	0.46477	0.53858	0.57759	14.826

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is1e.d
Lab Smp Id: 10 PPB STD 8240S
Inj Date : 02-MAY-1995 20:30
Operator : HLW Inst ID: k.i
Smp Info : 10 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 9
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10 Compound Sublist: normal.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	4 Chloromethane	50.00	1.348	1.392	(0.636)	43102	62	12
	5 Vinyl Chloride	62.00	1.394	1.422	(0.657)	43725	58	12 (Q)
	7 Bromomethane	94.00	1.424	1.437	(0.671)	34842	65	13
	6 Chloroethane	64.00	1.439	1.437	(0.679)	28137	43	9 (aQ)
	9 Trichlorofluoromethane	100.90	1.515	1.528	(0.714)	24600	37	7
	8 Acetone	58.00	1.515	1.513	(0.714)	4478	47	9 (aQM)
	10 1,1-Dichloroethene	96.00	1.621	1.619	(0.764)	30570	46	9
	11 Methylene Chloride	84.00	1.667	1.665	(0.786)	39231	49	10
M	1 1,2-Dichloroethene (total)	96.00				81982	98	20
	12 Carbon Disulfide	76.00	1.712	1.710	(0.807)	125420	48	10
	13 trans-1,2-Dichloroethene	96.00	1.773	1.786	(0.836)	40432	48	10
	14 1,1-Dichloroethane	63.00	1.848	1.846	(0.871)	76538	49	10
	16 Vinyl Acetate	43.00	1.863	1.862	(0.879)	72347	47	9 (a)
	17 2-Butanone	43.00	1.970	1.952	(0.929)	34226	46	9 (a)
	19 cis-1,2-Dichloroethene	96.00	2.045	2.043	(0.964)	41550	50	10
	21 Chloroform	83.00	2.121	2.119	(1.000)	66513	50	10
	24 1,1,1-Trichloroethane	97.00	2.394	2.392	(1.129)	51217	49	10
	25 1,2-Dichloroethane	62.00	2.409	2.407	(0.864)	47068	50	10
	27 Benzene	78.00	2.545	2.543	(0.913)	146848	50	10
	28 Carbon Tetrachloride	117.00	2.576	2.574	(0.924)	37966	49	10
	33 1,2-Dichloropropane	63.00	3.076	3.074	(1.103)	39975	49	10
	34 Trichloroethene	130.00	3.091	3.089	(1.109)	33421	48	10
	35 Bromodichloromethane	83.00	3.212	3.210	(1.152)	41826	46	9
	15 2-Chloroethylvinylether	63.00	1.848	1.846	(0.663)	76538	51	10
	38 4-Methyl-2-Pentanone	43.00	4.061	3.998	(1.457)	37072	43	8 (a)
	42 cis-1,3-Dichloropropene	75.00	4.651	4.634	(1.669)	39260	47	9
	37 trans-1,3-Dichloropropene	75.00	3.954	3.953	(0.587)	47187	47	9
	43 Toluene	92.00	4.636	4.634	(0.688)	86390	52	10
	44 1,1,2-Trichloroethane	83.00	4.788	4.771	(0.710)	24485	54	11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.424	5.347	(0.804)	25443	35	7(a)
	46 Dibromochloromethane	129.00	5.394	5.377	(0.800)	25468	48	10
	48 Tetrachloroethene	164.00	5.788	5.786	(0.858)	29079	51	10
	52 Chlorobenzene	112.00	6.803	6.801	(1.009)	80324	49	10
M	2 Xylene (Total)	106.00				147264	150	30
	53 Ethylbenzene	106.00	7.242	7.241	(1.074)	41844	49	10
	54 m,p-Xylene(s)	106.00	7.455	7.468	(1.106)	100677	97	19
	55 Bromoform	173.00	7.818	7.816	(1.160)	12697	41	8
	57 Styrene	104.00	8.015	8.013	(1.189)	73137	50	10
	58 o-Xylene	106.00	8.061	8.074	(1.196)	46587	52	10
	59 1,1,2,2-Tetrachloroethane	83.00	8.621	8.604	(1.279)	25873	54	11
*	20 Bromochloromethane	128.00	2.121	2.119	(1.000)	82382	250	
*	31 1,4-Difluorobenzene	114.00	2.788	2.786	(1.000)	503171	250	
*	51 Chlorobenzene-d5	117.00	6.742	6.756	(1.000)	353668	250	
$	23 1,2-Dichloroethane-d4	102.00	2.364	2.362	(1.114)	7707	54	11(R)
$	40 Toluene-d8	98.00	4.530	4.528	(0.672)	121404	55	11(R)
$	61 Bromofluorobenzene	95.00	8.864	8.847	(1.315)	46577	59	12(R)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is1e.d
Lab Smp Id: 10 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	77408	38704	154816	82382	6.43
31 1,4-Difluorobenzene	488350	244175	976700	503171	3.03
51 Chlorobenzene-d5	357839	178920	715678	353668	-1.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.10
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.07
51 Chlorobenzene-d5	6.76	6.26	7.26	6.74	-0.19

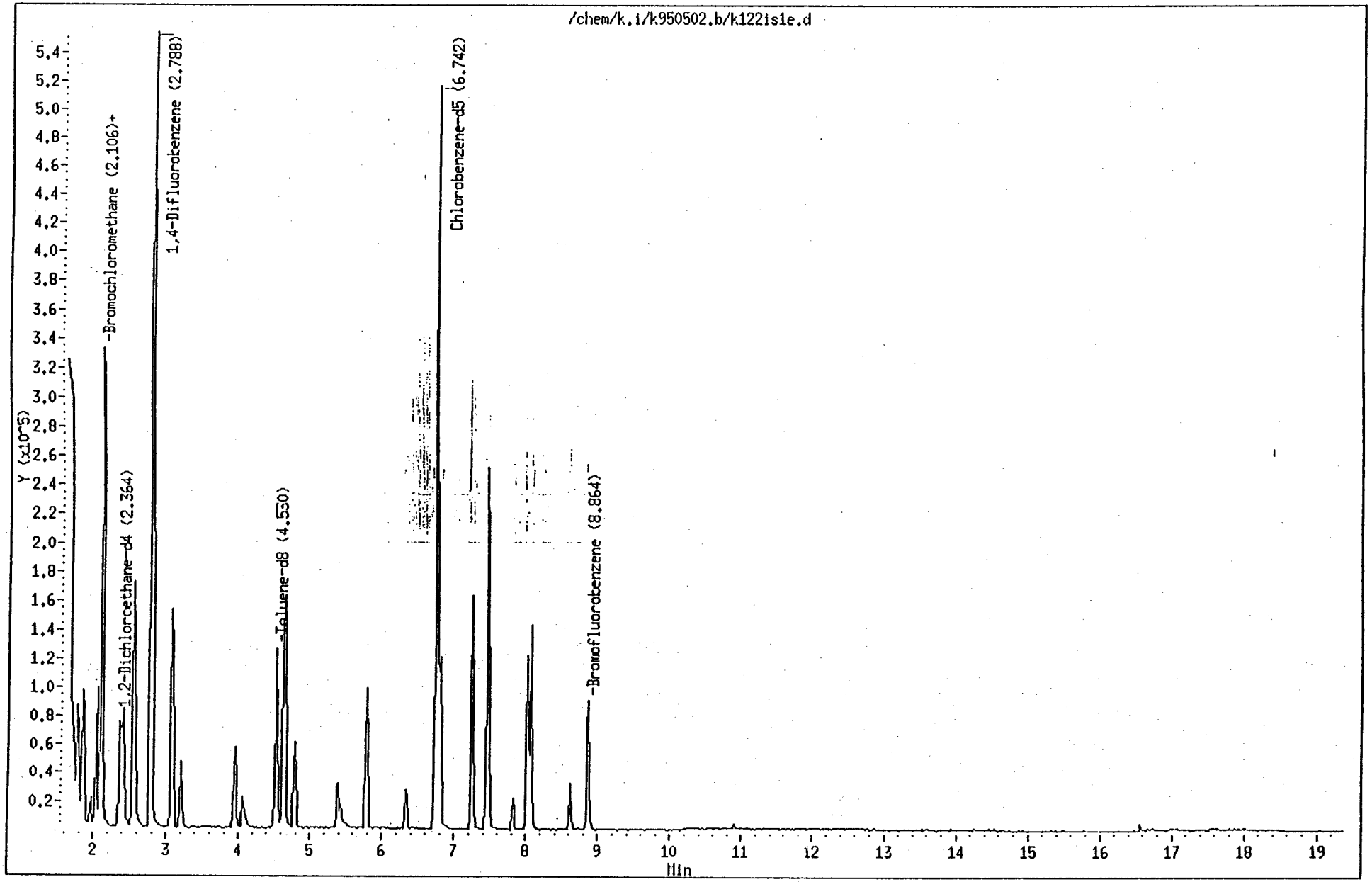
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is1e.d
Date : 02-MAY-1995 20:30
Client ID:
Sample Info: 10 PPB STD 8240S

Instrument: k.i

Operator: MLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is2e.d
Lab Smp Id: 20 PPB STD 8240S
Inj Date : 02-MAY-1995 19:54
Operator : HLW Inst ID: k.i
Smp Info : 20 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 8
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10 Compound Sublist: normal.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	4 Chloromethane	50.00	1.362	1.392	(0.643)	81838	130	26
	5 Vinyl Chloride	62.00	1.392	1.422	(0.657)	85676	130	26 (QM)
	7 Bromomethane	94.00	1.438	1.437	(0.678)	58591	120	25
	6 Chloroethane	64.00	1.453	1.437	(0.685)	71886	120	25 (Q)
	9 Trichlorofluoromethane	100.90	1.529	1.528	(0.721)	60642	100	21
	8 Acetone	58.00	1.514	1.513	(0.714)	7593	90	18 (aQM)
	10 1,1-Dichloroethene	96.00	1.620	1.619	(0.764)	63299	110	22
	11 Methylene Chloride	84.00	1.665	1.665	(0.786)	78177	110	22
M	1 1,2-Dichloroethene (total)	96.00				151612	200	41
	12 Carbon Disulfide	76.00	1.710	1.710	(0.807)	253649	110	22
	13 trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	79882	110	22
	14 1,1-Dichloroethane	63.00	1.847	1.846	(0.871)	149094	110	22
	16 Vinyl Acetate	43.00	1.862	1.862	(0.878)	135900	100	20
	17 2-Butanone	43.00	1.968	1.952	(0.928)	56706	87	17 (a)
	19 cis-1,2-Dichloroethene	96.00	2.044	2.043	(0.964)	71730	97	19
	21 Chloroform	83.00	2.120	2.119	(1.000)	122812	100	21
	24 1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	103955	110	22
	25 1,2-Dichloroethane	62.00	2.408	2.407	(0.864)	95170	94	19
	27 Benzene	78.00	2.544	2.543	(0.913)	306916	97	19
	28 Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	78408	95	19
	33 1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	81167	92	18
	34 Trichloroethene	130.00	3.089	3.089	(1.109)	67641	90	18
	35 Bromodichloromethane	83.00	3.211	3.210	(1.152)	86766	89	18
	15 2-Chloroethylvinylether	63.00	1.847	1.846	(0.663)	149094	92	18
	38 4-Methyl-2-Pentanone	43.00	4.029	3.998	(1.446)	88519	96	19
	42 cis-1,3-Dichloropropene	75.00	4.635	4.634	(1.663)	78792	88	18
	37 trans-1,3-Dichloropropene	75.00	3.953	3.953	(0.586)	99671	100	21
	43 Toluene	92.00	4.635	4.634	(0.688)	176014	110	22
	44 1,1,2-Trichloroethane	83.00	4.786	4.771	(0.710)	44241	100	21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
45	2-Hexanone	43.00	5.392	5.347	(0.800)	80536	120	23
46	Dibromochloromethane	129.00	5.392	5.377	(0.800)	50968	100	20
48	Tetrachloroethene	164.00	5.786	5.786	(0.858)	57926	110	22
52	Chlorobenzene	112.00	6.802	6.801	(1.009)	144990	95	19
M 2	Xylene (Total)	106.00				326160	350	70
53	Ethylbenzene	106.00	7.241	7.241	(1.074)	87047	110	22
54	m,p-Xylene(s)	106.00	7.453	7.468	(1.106)	221833	230	46
55	Bromoform	173.00	7.817	7.816	(1.160)	29086	100	20
57	Styrene	104.00	8.014	8.013	(1.189)	163949	120	24
58	o-Xylene	106.00	8.059	8.074	(1.196)	104327	120	25
59	1,1,2,2-Tetrachloroethane	83.00	8.605	8.604	(1.276)	58841	130	26
* 20	Bromochloromethane	128.00	2.120	2.119	(1.000)	72685	250	
* 31	1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	537784	250	
* 51	Chlorobenzene-d5	117.00	6.741	6.756	(1.000)	332743	250	
$ 23	1,2-Dichloroethane-d4	102.00	2.362	2.362	(1.114)	15788	130	25(R)
$ 40	Toluene-d8	98.00	4.529	4.528	(0.672)	251991	120	24(R)
$ 61	Bromofluorobenzene	95.00	8.862	8.847	(1.315)	88899	120	24(R)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is2e.d
Lab Smp Id: 20 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	207408	103704	414816	172685	-6.10
31 1,4-Difluorobenzene	488350	244175	976700	537784	10.12
51 Chlorobenzene-d5	357839	178920	715678	332743	-7.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.03
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.02
51 Chlorobenzene-d5	6.76	6.26	7.26	6.74	-0.22

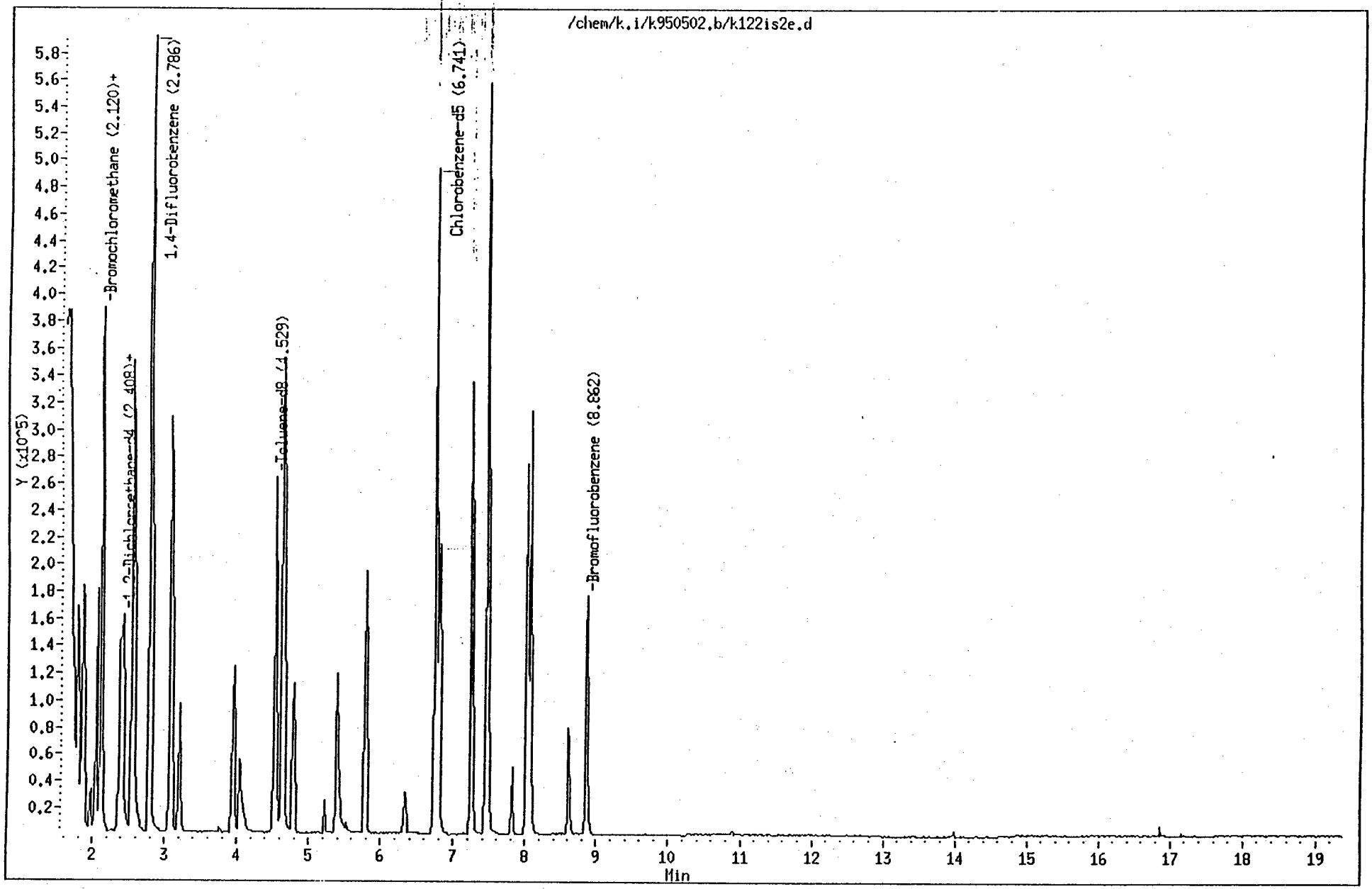
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is2e.d
Date : 02-MAY-1995 19:54
Client ID:
Sample Info: 20 PPB STD 8240S

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122cs7.d
Lab Smp Id: 50 PPB STD 8240S
Inj Date : 02-MAY-1995 18:00
Operator : HLW
Smp Info : 50 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery
Cal Date : 02-MAY-1995 18:00
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: k.i

Quant Type: ISTD
Cal File: k122cs7.d

Compound Sublist: normal.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
4	Chloromethane	50.00	1.361	1.392	(0.642)	164285	250	50
5	Vinyl Chloride	62.00	1.407	1.422	(0.664)	175774	250	50
7	Bromomethane	94.00	1.437	1.437	(0.678)	125209	250	50
6	Chloroethane	64.00	1.437	1.437	(0.678)	152163	250	50
9	Trichlorofluoromethane	100.90	1.528	1.528	(0.721)	154882	250	50
8	Acetone	58.00	1.513	1.513	(0.714)	22320	250	50(a)
10	1,1-Dichloroethene	96.00	1.619	1.619	(0.764)	156295	250	50
11	Methylene Chloride	84.00	1.665	1.665	(0.785)	186397	250	50
M 1	1,2-Dichloroethene (total)	96.00				393739	500	100
12	Carbon Disulfide	76.00	1.710	1.710	(0.807)	613845	250	50
13	trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	196704	250	50
14	1,1-Dichloroethane	63.00	1.846	1.846	(0.871)	366125	250	50
16	Vinyl Acetate	43.00	1.861	1.862	(0.878)	358222	250	50
17	2-Butanone	43.00	1.968	1.952	(0.928)	174217	250	50
19	cis-1,2-Dichloroethene	96.00	2.043	2.043	(0.964)	197035	250	50
21	Chloroform	83.00	2.119	2.119	(1.000)	308907	250	50
24	1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	245830	250	50
25	1,2-Dichloroethane	62.00	2.407	2.407	(0.864)	228647	250	50
27	Benzene	78.00	2.543	2.543	(0.913)	719698	250	50
28	Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	187782	250	50
33	1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	199516	250	50
34	Trichloroethene	130.00	3.089	3.089	(1.109)	170287	250	50
35	Bromodichloromethane	83.00	3.210	3.210	(1.152)	222234	250	50
15	2-Chloroethylvinylether	63.00	1.846	1.846	(0.663)	366096	250	50
38	4-Methyl-2-Pentanone	43.00	4.013	3.998	(1.441)	210082	250	50
42	cis-1,3-Dichloropropene	75.00	4.649	4.634	(1.669)	203470	250	50
37	trans-1,3-Dichloropropene	75.00	3.952	3.953	(0.585)	253995	250	50
43	Toluene	92.00	4.634	4.634	(0.686)	423416	250	50
44	1,1,2-Trichloroethane	83.00	4.786	4.771	(0.708)	114187	250	50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.377	5.347	(0.796)	184794	250	50
	46 Dibromochloromethane	129.00	5.392	5.377	(0.798)	135271	250	50
	48 Tetrachloroethene	164.00	5.801	5.786	(0.859)	144739	250	50
	52 Chlorobenzene	112.00	6.801	6.801	(1.007)	410492	250	50
M	2 Xylene (Total)	106.00				749788	750	150
	53 Ethylbenzene	106.00	7.240	7.241	(1.072)	217352	250	50
	54 m,p-Xylene(s)	106.00	7.468	7.468	(1.105)	523866	500	100
	55 Bromoform	173.00	7.816	7.816	(1.157)	77770	250	50
	57 Styrene	104.00	8.013	8.013	(1.186)	372618	250	50
	58 o-Xylene	106.00	8.074	8.074	(1.195)	225922	250	50
	59 1,1,2,2-Tetrachloroethane	83.00	8.604	8.604	(1.274)	119944	250	50
*	20 Bromochloromethane	128.00	2.119	2.119	(1.000)	77408	250	
*	31 1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	488350	250	
*	51 Chlorobenzene-d5	117.00	6.756	6.756	(1.000)	357839	250	
$	23 1,2-Dichloroethane-d4	102.00	2.361	2.362	(1.114)	33202	250	50
$	40 Toluene-d8	98.00	4.528	4.528	(0.670)	553531	250	50
$	61 Bromofluorobenzene	95.00	8.862	8.847	(1.312)	199743	250	50

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122cs7.d
Lab Smp Id: 50 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	77408	38704	154816	77408	0.00
31 1,4-Difluorobenzene	488350	244175	976700	488350	0.00
51 Chlorobenzene-d5	357839	178920	715678	357839	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.00
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

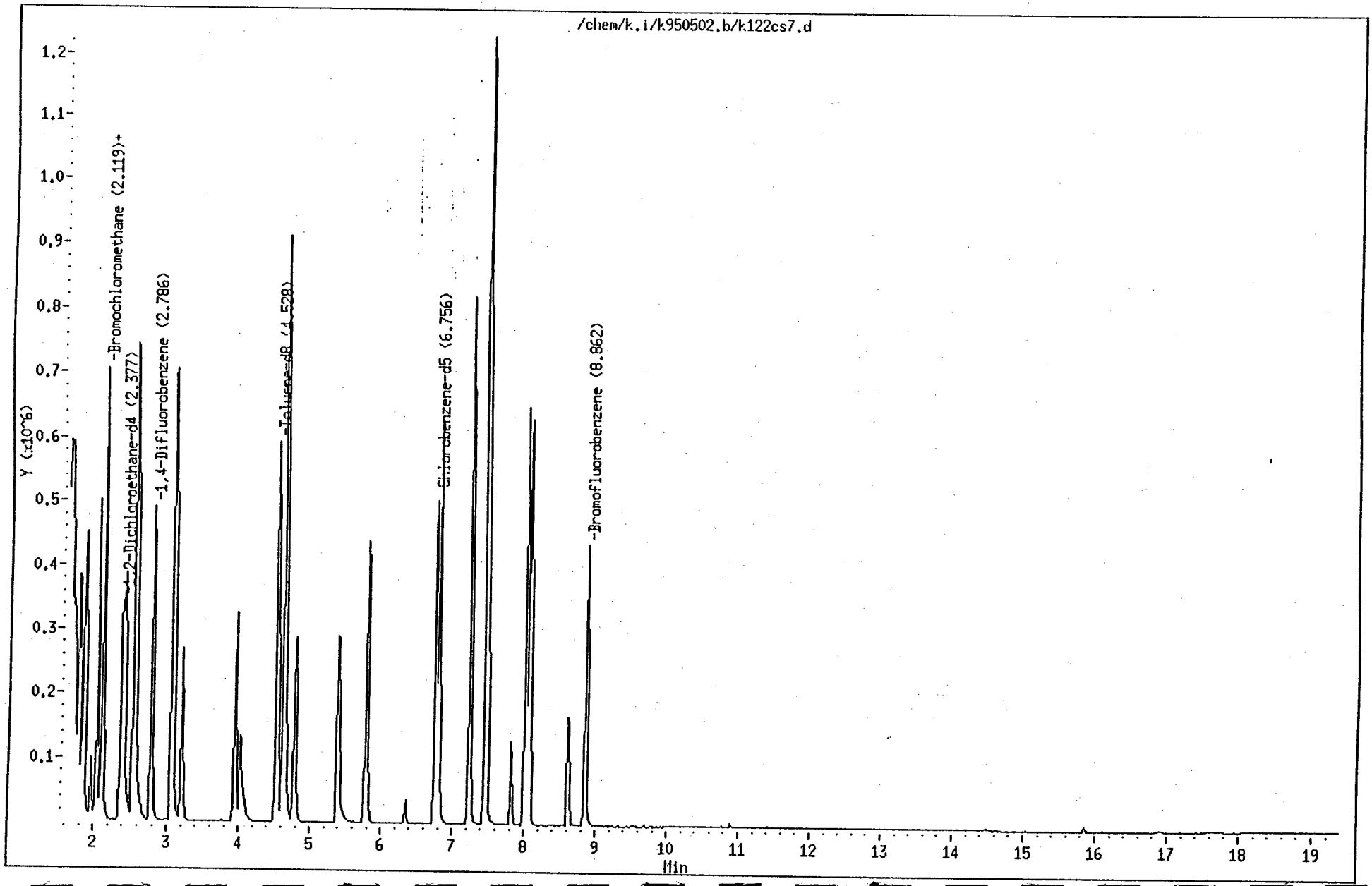
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122cs7.d
Date : 02-MAY-1995 18:00
Client ID:
Sample Info: 50 PPB STD 8240S

Column phase: 30m,hp5ms,0.25u df

Instrument: k.i

Operator: HLW
Column diameter: 0.25



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is4e.d
Lab Smp Id: 100 PPB STD 8240S
Inj Date : 02-MAY-1995 21:00
Operator : HLW Inst ID: k.i
Smp Info : 100 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 9
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
4	Chloromethane	50.00	1.377	1.392	(0.650)	363004	530	100
5	Vinyl Chloride	62.00	1.422	1.422	(0.671)	371205	500	100
7	Bromomethane	94.00	1.437	1.437	(0.678)	268832	510	100
6	Chloroethane	64.00	1.437	1.437	(0.678)	320402	500	100
9	Trichlorofluoromethane	100.90	1.528	1.528	(0.721)	311832	480	96
8	Acetone	58.00	1.513	1.513	(0.714)	30386	320	65(a)
10	1,1-Dichloroethene	96.00	1.619	1.619	(0.764)	323877	500	99
11	Methylene Chloride	84.00	1.665	1.665	(0.785)	361796	460	93
M 1	1,2-Dichloroethene (total)	96.00				832625	1000	200
12	Carbon Disulfide	76.00	1.725	1.710	(0.814)	1269622	490	99
13	trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	407280	500	99
14	1,1-Dichloroethane	63.00	1.847	1.846	(0.871)	773432	500	100
16	Vinyl Acetate	43.00	1.862	1.862	(0.878)	679260	450	91
17	2-Butanone	43.00	1.953	1.952	(0.921)	231101	320	63
19	cis-1,2-Dichloroethene	96.00	2.043	2.043	(0.964)	425345	520	100
21	Chloroform	83.00	2.119	2.119	(1.000)	624589	480	97
24	1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	502902	490	98
25	1,2-Dichloroethane	62.00	2.407	2.407	(0.864)	452921	480	96
27	Benzene	78.00	2.544	2.543	(0.913)	1477643	500	100
28	Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	394399	510	100
33	1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	373720	460	91
34	Trichloroethene	130.00	3.089	3.089	(1.109)	322170	460	92
35	Bromodichloromethane	83.00	3.210	3.210	(1.152)	411699	450	90
15	2-Chloroethylvinylether	63.00	1.847	1.846	(0.663)	773432	510	100
38	4-Methyl-2-Pentanone	43.00	4.013	3.998	(1.441)	233024	270	54
42	cis-1,3-Dichloropropene	75.00	4.635	4.634	(1.664)	382393	460	92
37	trans-1,3-Dichloropropene	75.00	3.953	3.953	(0.585)	481365	440	88
43	Toluene	92.00	4.635	4.634	(0.686)	803091	440	88
44	1,1,2-Trichloroethane	83.00	4.786	4.771	(0.708)	209676	430	85

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.377	5.347	(0.796)	110835	140	28
	46 Dibromochloromethane	129.00	5.392	5.377	(0.798)	255368	440	88
	48 Tetrachloroethene	164.00	5.786	5.786	(0.856)	277544	440	89
	52 Chlorobenzene	112.00	6.801	6.801	(1.007)	864442	490	98
M	2 Xylene (Total)	106.00				1607895	1500	300
	53 Ethylbenzene	106.00	7.241	7.241	(1.072)	458911	490	98
	54 m,p-Xylene(s)	106.00	7.453	7.468	(1.103)	1088090	960	190
	55 Bromoform	173.00	7.816	7.816	(1.157)	159567	480	95
	57 Styrene	104.00	8.013	8.013	(1.186)	837162	520	100
	58 o-Xylene	106.00	8.059	8.074	(1.193)	519805	530	110
	59 1,1,2,2-Tetrachloroethane	83.00	8.604	8.604	(1.274)	253257	490	98
*	20 Bromochloromethane	128.00	2.119	2.119	(1.000)	80882	250	
*	31 1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	501386	250	
*	51 Chlorobenzene-d5	117.00	6.756	6.756	(1.000)	385585	250	
$	23 1,2-Dichloroethane-d4	102.00	2.362	2.362	(1.114)	73003	530	100(R)
$	40 Toluene-d8	98.00	4.528	4.528	(0.670)	1135233	480	95(R)
$	61 Bromofluorobenzene	95.00	8.847	8.847	(1.310)	358413	420	83(R)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is4e.d
Lab Smp Id: 100 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	AREA LIMIT STANDARD	LOWER	UPPER	SAMPLE	%DIFF
20 Bromochloromethane	77408	38704	154816	80882	4.49
31 1,4-Difluorobenzene	488350	244175	976700	501386	2.67
51 Chlorobenzene-d5	357839	178920	715678	385585	7.75

COMPOUND	RT LIMIT STANDARD	LOWER	UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.01
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.01
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

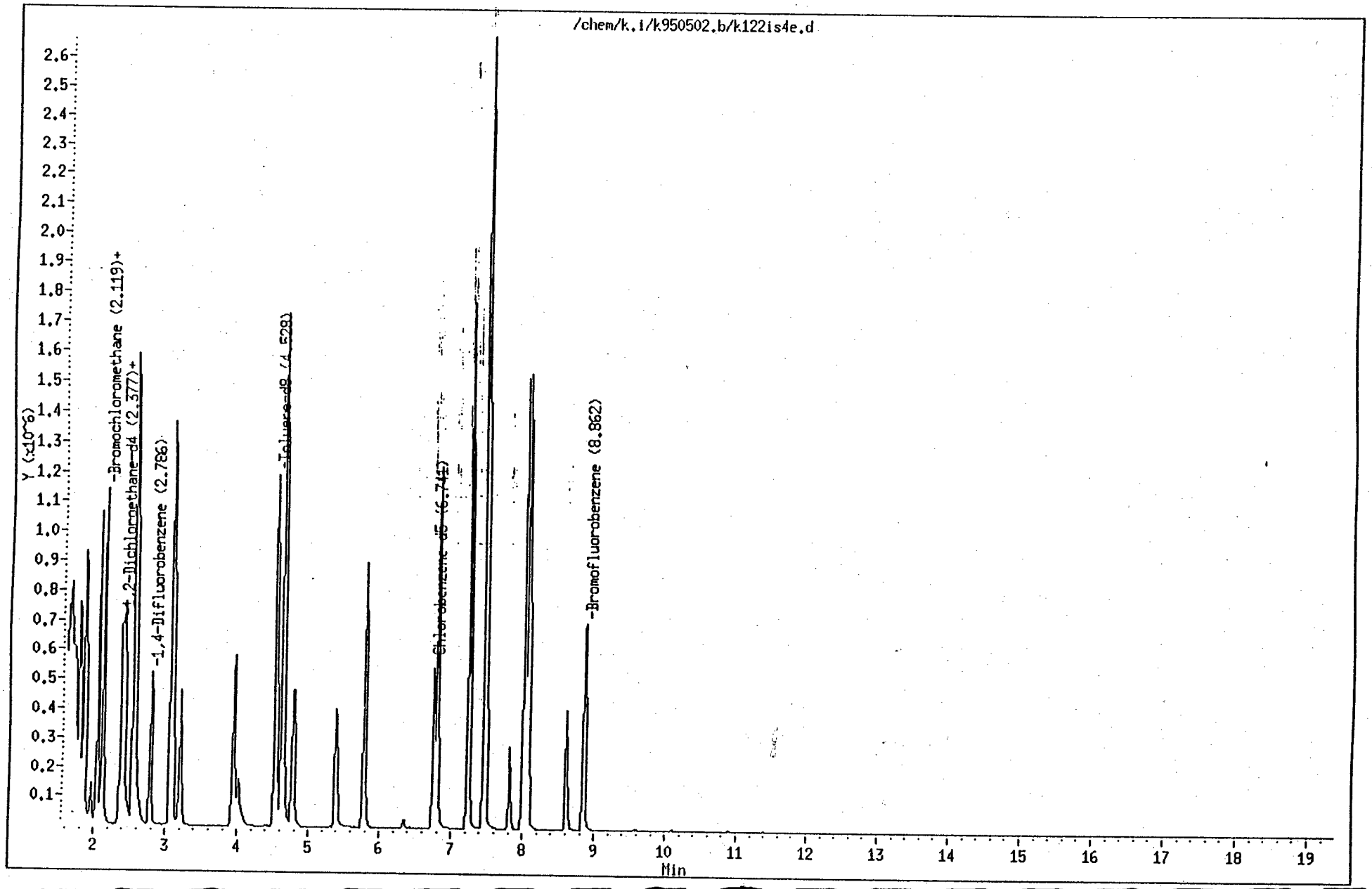
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is4e.d
Date : 02-MAY-1995 21:00
Client ID:
Sample Info: 100 PPB STD 8240S

Instrument: k.i

Operator: MLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950502.b/k122is5e.d
Lab Smp Id: 200 PPB STD 8240S
Inj Date : 02-MAY-1995 21:27
Operator : HLW Inst ID: k.i
Smp Info : 200 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950502.b/kvoclps.m
Meth Date : 10-May-1995 12:23 hillery Quant Type: ISTD
Cal Date : 02-MAY-1995 18:00 Cal File: k122cs7.d
Als bottle: 10
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
4	Chloromethane	50.00	1.392	1.392	(0.657)	685728	1200	230
5	Vinyl Chloride	62.00	1.422	1.422	(0.671)	704004	1100	220
7	Bromomethane	94.00	1.437	1.437	(0.678)	498045	1100	220
6	Chloroethane	64.00	1.437	1.437	(0.678)	597616	1100	220
9	Trichlorofluoromethane	100.90	1.528	1.528	(0.721)	633109	1100	230
8	Acetone	58.00	1.513	1.513	(0.714)	58205	720	140
10	1,1-Dichloroethene	96.00	1.619	1.619	(0.764)	593966	1000	210
11	Methylene Chloride	84 00	1.665	1.665	(0.785)	656340	980	200
M 1	1,2-Dichloroethene (total)	96.00				1418932	2000	400(A)
12	Carbon Disulfide	76.00	1.710	1.710	(0.807)	2371271	1100	210
13	trans-1,2-Dichloroethene	96.00	1.786	1.786	(0.843)	740595	1000	210
14	1,1-Dichloroethane	63.00	1.846	1.846	(0.871)	1330224	1000	200
16	Vinyl Acetate	43.00	1.862	1.862	(0.878)	1063693	820	160
17	2-Butanone	43.00	1.952	1.952	(0.921)	408178	650	130
19	cis-1,2-Dichloroethene	96.00	2.043	2.043	(0.964)	678337	960	190
21	Chloroform	83.00	2.119	2.119	(1.000)	1172526	1000	210
24	1,1,1-Trichloroethane	97.00	2.392	2.392	(1.129)	991614	1100	220
25	1,2-Dichloroethane	62.00	2.407	2.407	(0.864)	873142	960	190
27	Benzene	78.00	2.543	2.543	(0.913)	2765913	970	190
28	Carbon Tetrachloride	117.00	2.574	2.574	(0.924)	789468	1100	210
33	1,2-Dichloropropane	63.00	3.074	3.074	(1.103)	731473	920	180
34	Trichloroethene	130.00	3.089	3.089	(1.109)	628771	930	190
35	Bromodichloromethane	83.00	3.210	3.210	(1.152)	858246	970	190
15	2-Chloroethylvinylether	63.00	1.846	1.846	(0.663)	1330224	920	180
38	4-Methyl-2-Pentanone	43.00	3.998	3.998	(1.435)	519380	620	120
42	cis-1,3-Dichloropropene	75.00	4.634	4.634	(1.664)	770745	960	190
37	trans-1,3-Dichloropropene	75.00	3.953	3.953	(0.585)	993745	1000	210
43	Toluene	92.00	4.634	4.634	(0.686)	1575951	990	200
44	1,1,2-Trichloroethane	83.00	4.771	4.771	(0.706)	418215	980	200

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.347	5.347	(0.791)	424312	610	120
	46 Dibromochloromethane	129.00	5.377	5.377	(0.796)	545513	1100	220
	48 Tetrachloroethene	164.00	5.786	5.786	(0.856)	541413	1000	200
	52 Chlorobenzene	112.00	6.801	6.801	(1.007)	1429806	930	180
M	2 Xylene (Total)	106.00				2721696	2900	580
	53 Ethylbenzene	106.00	7.241	7.241	(1.072)	803456	990	200
	54 m,p-Xylene(s)	106.00	7.468	7.468	(1.105)	1743881	1800	360
	55 Bromoform	173.00	7.816	7.816	(1.157)	325417	1100	220
	57 Styrene	104.00	8.013	8.013	(1.186)	1679049	1200	240(A)
	58 o-Xylene	106.00	8.074	8.074	(1.195)	977815	1200	230
	59 1,1,2,2-Tetrachloroethane	83.00	8.604	8.604	(1.274)	423790	940	190
*	20 Bromochloromethane	128.00	2.119	2.119	(1.000)	69736	250	
*	31 1,4-Difluorobenzene	114.00	2.786	2.786	(1.000)	484077	250	
*	51 Chlorobenzene-d5	117.00	6.756	6.756	(1.000)	335343	250	
$	23 1,2-Dichloroethane-d4	102.00	2.362	2.362	(1.114)	145292	1200	240(AR)
$	40 Toluene-d8	98.00	4.528	4.528	(0.670)	2248228	1100	220(AR)
$	61 Bromofluorobenzene	95.00	8.847	8.847	(1.310)	722436	960	190(R)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k122is5e.d
Lab Smp Id: 200 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950502.b/kvoclps.m
Misc Info:

Calibration Date: 05/02/95
Calibration Time: 1800

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	77408	38704	154816	69736	-9.91
31 1,4-Difluorobenzene	488350	244175	976700	484077	-0.87
51 Chlorobenzene-d5	357839	178920	715678	335343	-6.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.01
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.00
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

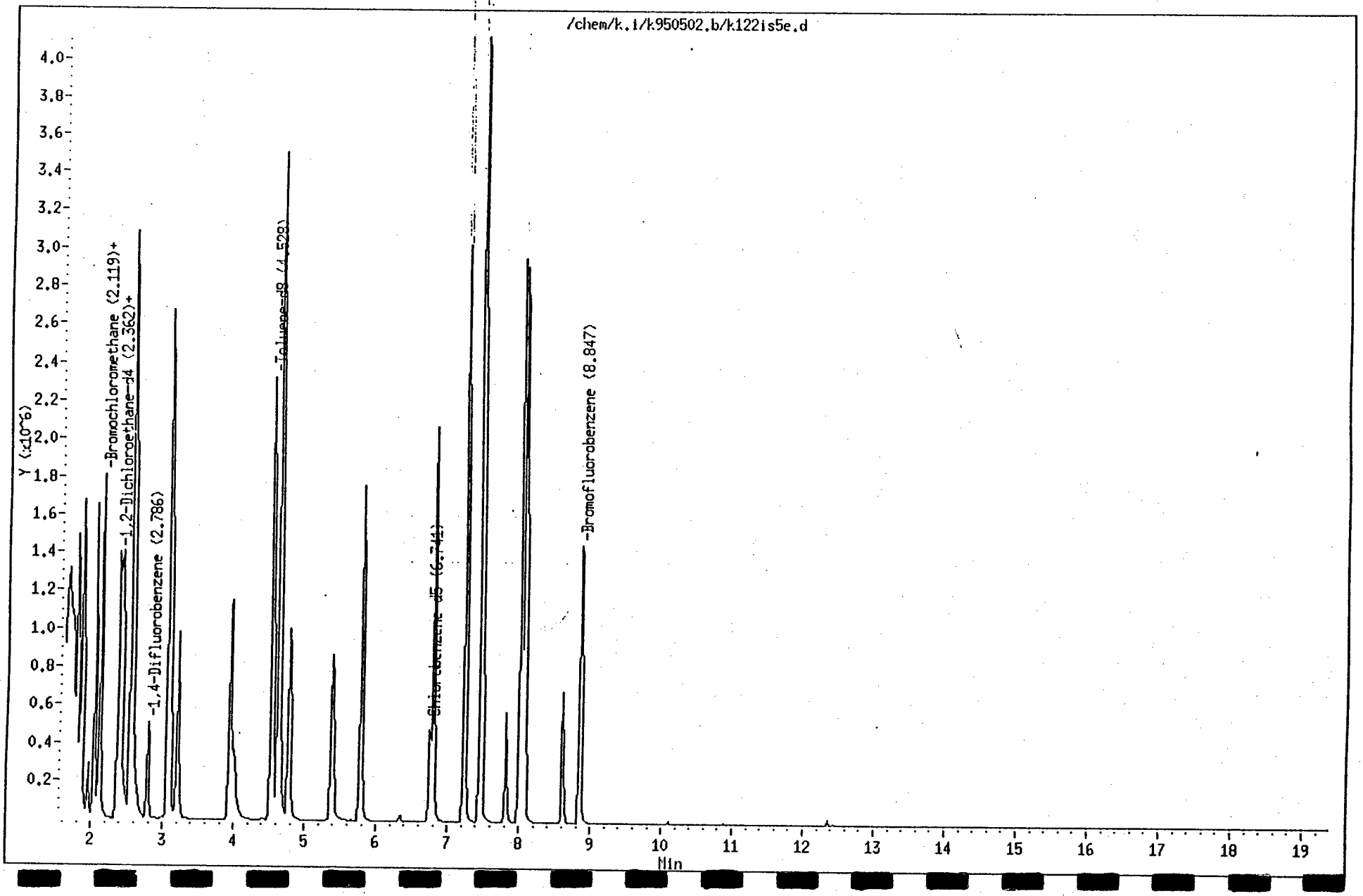
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950502.b/k122is5e.d
Date : 02-MAY-1995 21:27
Client ID:
Sample Info: 200 PPB STD 8240S

Column phase: 30m,hp5ms,0.25u df

Instrument: k.i

Operator: HLW
Column diameter: 0.25



SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 08:20
End Cal Date : 02-MAY-1995 10:09
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/1.i/1950502.b/lvoclpw.m
Cal Date : 02-May-1995 12:35 jimmy
Curve Type : Average

Calibration File Names:
Level 1: /chem/1.i/1950502.b/l122iw1.d
Level 2: /chem/1.i/1950502.b/l122iw2.d
Level 3: /chem/1.i/1950502.b/l122iw3.d
Level 4: /chem/1.i/1950502.b/l122iw4.d
Level 5: /chem/1.i/1950502.b/l122iw5.d

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	1 Chloromethane	2.18516	2.41369	2.34254	2.34459	2.27337	2.31187	3.741
	2 Vinyl Chloride	1.99513	2.04224	1.97343	1.82446	1.64612	1.89627	8.535
	3 Bromomethane	1.55227	1.52782	1.48024	1.46593	1.43200	1.49165	3.238
	4 Chloroethane	1.17376	1.21365	1.21946	1.22653	1.18917	1.20452	1.844
	7 Trichlorofluoromethane	1.08854	1.09152	1.22776	1.36602	1.69994	1.29475	19.599
	8 Acetone	0.39432	0.37258	0.36915	0.40432	0.37568	0.38321	3.992
	11 1,1-Dichloroethene	1.36223	1.40612	1.41890	1.45183	1.48326	1.42447	3.226
	13 Methylene Chloride	1.65671	1.69764	1.70739	1.71305	1.71653	1.69826	1.431
	14 Carbon Disulfide	5.47449	5.61112	5.70231	5.84509	5.92531	5.71166	3.155
	15 trans-1,2-Dichloroethene	1.71472	1.76561	1.76706	1.80241	1.83084	1.77613	2.462
	17 1,1-Dichloroethane	3.50970	3.57895	3.61300	3.70305	3.78693	3.63833	2.979
M	18 1,2-Dichloroethene (total)	1.79480	1.82876	1.86726	1.90995	1.94120	1.86839	3.168
	19 Vinyl Acetate	6.10564	6.03371	6.03145	5.75757	5.72555	5.93078	2.962
	20 2-Butanone	2.90135	2.80081	2.84705	2.72879	2.57111	2.76982	4.616
	21 cis-1,2-Dichloroethene	1.87487	1.89190	1.96746	2.01748	2.05156	1.96066	3.920
	24 Chloroform	3.27103	3.21705	3.24192	3.30903	3.36093	3.27999	1.730
	27 1,1,1-Trichloroethane	0.44253	0.44230	0.44548	0.43804	0.44744	0.44316	0.806
	28 1,2-Dichloroethane	2.68199	2.75053	2.74818	2.82655	2.81908	2.76527	2.147
	30 Benzene	1.43537	1.43397	1.45211	1.42255	1.43575	1.43595	0.734
	31 Carbon Tetrachloride	0.35583	0.35728	0.35871	0.36313	0.36740	0.36047	1.315
	34 1,2-Dichloropropane	0.38664	0.38497	0.39262	0.39181	0.39125	0.38946	0.878
	35 Trichloroethene	0.32287	0.32073	0.32503	0.32801	0.32640	0.32461	0.885
	37 Bromodichloromethane	0.44319	0.43773	0.43671	0.44976	0.44872	0.44322	1.361
	39 2-Chloroethylvinylether	0.08185	0.08605	0.09305	0.10062	0.10424	0.09316	10.137
	40 4-Methyl-2-Pentanone	0.66423	0.70332	0.71347	0.70841	0.67235	0.69236	3.242
	41 cis-1,3-Dichloropropene	0.53353	0.53817	0.54637	0.55710	0.55961	0.54696	2.087
	42 trans-1,3-Dichloropropene	0.47718	0.47459	0.48403	0.49488	0.50148	0.48643	2.365

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 02-MAY-1995 08:20
End Cal Date : 02-MAY-1995 10:09
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/l.i/l950502.b/lvoclpw.m
Cal Date : 02-May-1995 12:35 jimmy
Curve Type : Average

	Compound	50 Level 1	100 Level 2	250 Level 3	500 Level 4	1000 Level 5	RRF	% RSD
	44 Toluene	0.97364	0.98226	1.00040	1.00583	0.99789	0.99200	1.360
	45 1,1,2-Trichloroethane	0.26649	0.27347	0.26844	0.26731	0.26716	0.26858	1.052
	46 2-Hexanone	0.73012	0.78507	0.85353	0.86654	0.80964	0.80898	6.796
	47 Dibromochloromethane	0.30896	0.30152	0.30816	0.31520	0.32124	0.31102	2.409
	49 Tetrachloroethene	0.38483	0.37675	0.37992	0.37393	0.37735	0.37856	1.084
	52 Chlorobenzene	0.99206	0.99114	1.00706	1.00122	1.00558	0.99941	0.746
M	53 Xylene (Total)	0.62087	0.61750	0.63644	0.63397	0.63579	0.62891	1.432
	54 Ethylbenzene	0.50369	0.50586	0.51839	0.52425	0.52378	0.51520	1.906
	55 m,p-Xylene(s)	0.62893	0.61946	0.64133	0.64047	0.64189	0.63442	1.565
	56 Bromoform	0.31406	0.29539	0.31041	0.31825	0.32211	0.31204	3.300
	57 Styrene	0.86874	0.94132	1.02509	1.04868	1.06044	0.98886	8.263
	59 o-Xylene	0.60474	0.61359	0.62664	0.62097	0.62359	0.61791	1.425
	60 1,1,2,2-Tetrachloroethane	0.49941	0.48995	0.52208	0.50938	0.48460	0.50108	3.007
$	26 1,2-Dichloroethane-d4	0.41997	0.42049	0.41364	0.42322	0.42852	0.42117	1.283
$	43 Toluene-d8	1.42906	1.37537	1.39126	1.38068	1.38476	1.39222	1.537
$	61 Bromofluorobenzene	0.51077	0.50759	0.52461	0.52897	0.53300	0.52099	2.157

Data File: /chem/l.i/l950502.b/l122iw1.d
Report Date: 02-May-1995 11:42

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950502.b/l122iw1.d
Lab Smp Id:
Inj Date : 02-MAY-1995 08:20
Operator : JC
Smp Info : 10 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/l950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy
Cal Date : 02-MAY-1995 09:14
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l122iw3.d
Calibration Sample, Level: 1

Compound Sublist: normal.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
1 Chloromethane	50.00	1.760	1.760	(0.337)	23768	50	47(a)
2 Vinyl Chloride	62.00	1.876	1.876	(0.359)	21701	50	53
3 Bromomethane	94.00	2.116	2.116	(0.406)	16884	50	52
4 Chloroethane	64.00	2.188	2.188	(0.419)	12767	50	49
7 Trichlorofluoromethane	101.00	2.535	2.535	(0.486)	11840	50	42
8 Acetone	58.00	2.598	2.598	(0.498)	4289	50	51(a)
11 1,1-Dichloroethene	96.00	2.990	2.990	(0.573)	14817	50	48
13 Methylene Chloride	84.00	3.239	3.239	(0.621)	18020	50	49
18 1,2-Dichloroethene (total)	96.00				39044	100	96
14 Carbon Disulfide	76.00	3.355	3.355	(0.643)	59546	50	48
15 trans-1,2-Dichloroethene	96.00	3.819	3.819	(0.732)	18651	50	48
17 1,1-Dichloroethane	63.00	4.149	4.149	(0.795)	38175	50	48
19 Vinyl Acetate	43.00	4.247	4.247	(0.814)	66411	50	51
20 2-Butanone	43.00	4.612	4.612	(0.884)	31558	50	52(a)
21 cis-1,2-Dichloroethene	96.00	4.951	4.951	(0.949)	20393	50	48
24 Chloroform	83.00	5.227	5.227	(1.002)	35579	50	50
27 1,1,1-Trichloroethane	97.00	6.012	6.012	(0.869)	25362	50	50
28 1,2-Dichloroethane	62.00	6.101	6.101	(1.169)	29172	50	48
30 Benzene	78.00	6.466	6.466	(0.934)	82263	50	50
31 Carbon Tetrachloride	117.00	6.484	6.484	(0.937)	20393	50	49
34 1,2-Dichloropropane	63.00	7.447	7.447	(1.076)	22159	50	50
35 Trichloroethene	130.00	7.482	7.482	(1.081)	18504	50	50
37 Bromodichloromethane	83.00	7.670	7.670	(1.108)	25400	50	50
39 2-Chloroethylvinylether	63.00	8.276	8.276	(1.196)	4691	50	44(a)
40 4-Methyl-2-Pentanone	43.00	8.499	8.499	(1.228)	38068	50	48
41 cis-1,3-Dichloropropene	75.00	8.534	8.534	(1.233)	30577	50	49
42 trans-1,3-Dichloropropene	75.00	9.158	9.158	(1.323)	27348	50	49
44 Toluene	92.00	9.247	9.247	(0.833)	43464	50	49
45 1,1,2-Trichloroethane	83.00	9.337	9.337	(1.349)	15273	50	50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
6	2-Hexanone	43.00	9.702	9.702	(0.874)	32593	50	45 (a)
7	Dibromochloromethane	129.00	9.961	9.961	(1.439)	17707	50	50
49	Tetrachloroethene	164.00	10.308	10.308	(0.929)	17179	50	51
52	Chlorobenzene	112.00	11.146	11.146	(1.004)	44286	50	50
3	Xylene (Total)	106.00				83148	150	150
4	Ethylbenzene	106.00	11.449	11.449	(1.031)	22485	50	49
55	m,p-Xylene(s)	106.00	11.610	11.610	(1.046)	56152	100	99
56	Bromoform	173.00	12.029	12.029	(1.083)	14020	50	50
7	Styrene	104.00	12.082	12.082	(1.088)	38781	50	44
59	o-Xylene	106.00	12.136	12.136	(1.093)	26996	50	49
60	1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.124)	22294	50	50
8	Bromochloromethane	128.00	5.218	5.218	(1.000)	54385	250	
2	1,4-Difluorobenzene	114.00	6.921	6.921	(1.000)	286556	250	
50	Chlorobenzene-d5	117.00	11.101	11.101	(1.000)	223203	250	
26	1,2-Dichloroethane-d4	102.00	5.994	5.994	(1.149)	4568	50	50
8	Toluene-d8	98.00	9.149	9.149	(0.824)	63794	50	51
1	Bromofluorobenzene	95.00	12.777	12.777	(1.151)	22801	50	49

Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: l.i
ab File ID: l122iw1.d
ab Smp Id:
nalysis Type: VOA
)uant Type: ISTD
perator: JC
ethod File: /chem/l.i/l950502.b/lvoclpw.m
isc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	54385	-5.36
32 1,4-Difluorobenzene	309137	154568	618274	286556	-7.30
50 Chlorobenzene-d5	240326	120163	480652	223203	-7.12

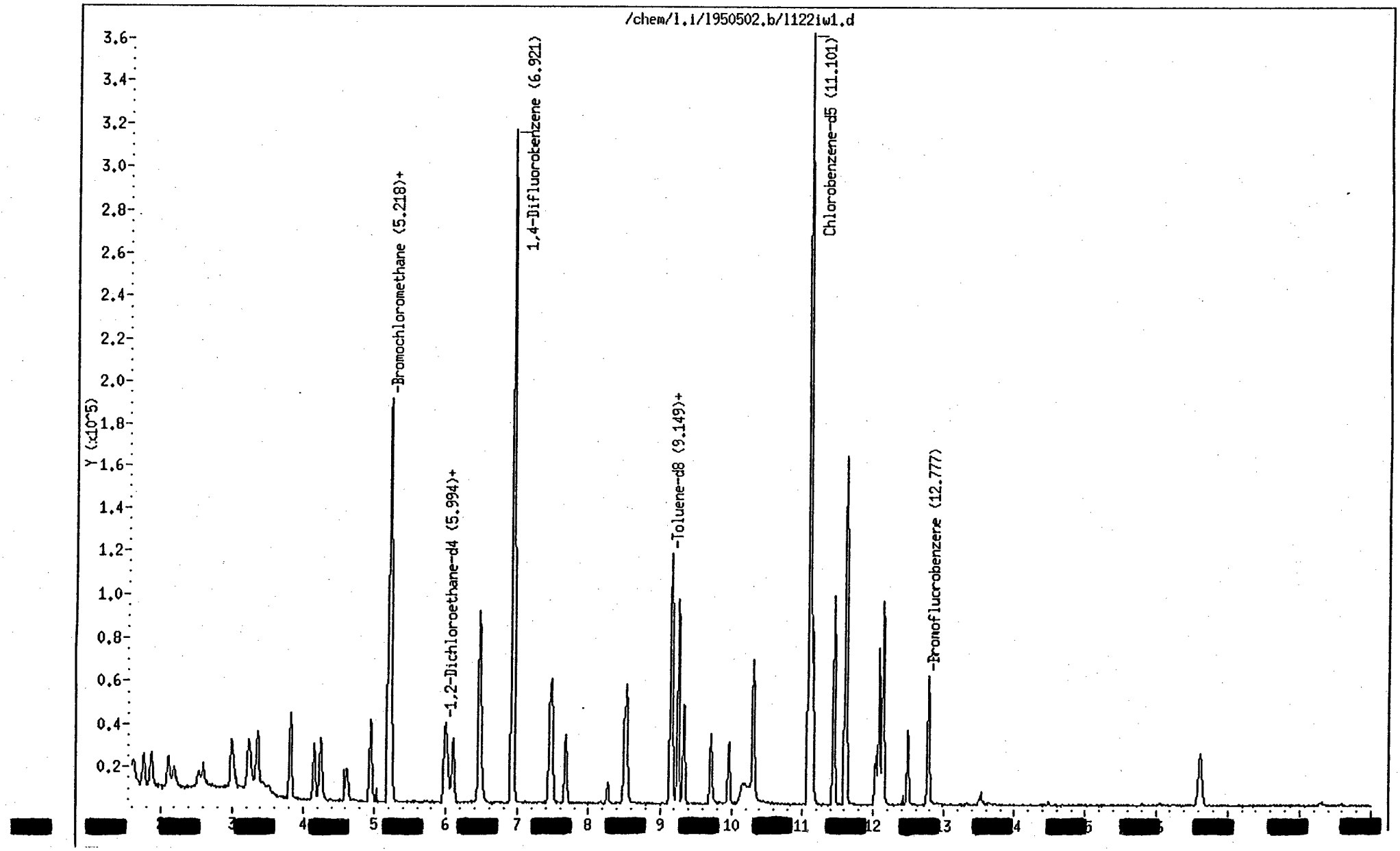
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.02
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.92	0.02
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.01

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950502.b/1122iw1.d
Date : 02-MAY-1995 08:20
Client ID:
Sample Info: 10 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



Data File: /chem/l.i/l950502.b/l122iw2.d
Report Date: 02-May-1995 11:42

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950502.b/l122iw2.d
Lab Smp Id:
Inj Date : 02-MAY-1995 08:47
Operator : JC
Smp Info : 20 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/l950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy
Cal Date : 02-MAY-1995 09:14
Vials bottle: 3
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l122iw3.d
Calibration Sample, Level: 2

Compound Sublist: normal.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1 Chloromethane	50.00	1.764	1.764	(0.338)	55117	100	100
2 Vinyl Chloride	62.00	1.880	1.880	(0.361)	46635	100	110
3 Bromomethane	94.00	2.112	2.112	(0.405)	34888	100	100
4 Chloroethane	64.00	2.183	2.183	(0.419)	27714	100	100
7 Trichlorofluoromethane	101.00	2.531	2.531	(0.485)	24925	100	84
8 Acetone	58.00	2.593	2.593	(0.497)	8508	100	97(a)
11 1,1-Dichloroethene	96.00	2.994	2.994	(0.574)	32109	100	99
13 Methylene Chloride	84.00	3.235	3.235	(0.620)	38766	100	100
18 1,2-Dichloroethene (total)	96.00				83520	200	200
14 Carbon Disulfide	76.00	3.360	3.360	(0.644)	128131	100	98
15 trans-1,2-Dichloroethene	96.00	3.814	3.814	(0.732)	40318	100	99
17 1,1-Dichloroethane	63.00	4.153	4.153	(0.797)	81726	100	98
19 Vinyl Acetate	43.00	4.251	4.251	(0.815)	137781	100	100
20 2-Butanone	43.00	4.617	4.617	(0.885)	63957	100	100
21 cis-1,2-Dichloroethene	96.00	4.955	4.955	(0.950)	43202	100	96
24 Chloroform	83.00	5.232	5.232	(1.003)	73462	100	98
27 1,1,1-Trichloroethane	97.00	6.016	6.016	(0.869)	54178	100	100
28 1,2-Dichloroethane	62.00	6.105	6.105	(1.171)	62809	100	99
30 Benzene	78.00	6.462	6.462	(0.933)	175650	100	100
31 Carbon Tetrachloride	117.00	6.489	6.489	(0.937)	43764	100	99
34 1,2-Dichloropropane	63.00	7.451	7.451	(1.076)	47156	100	99
35 Trichloroethene	130.00	7.478	7.478	(1.080)	39287	100	99
37 Bromodichloromethane	83.00	7.674	7.674	(1.108)	53619	100	99
39 2-Chloroethylvinylether	63.00	8.271	8.271	(1.194)	10541	100	92
40 4-Methyl-2-Pentanone	43.00	8.503	8.503	(1.228)	86151	100	100
41 cis-1,3-Dichloropropene	75.00	8.539	8.539	(1.233)	65921	100	98
42 trans-1,3-Dichloropropene	75.00	9.163	9.163	(1.323)	58133	100	98
44 Toluene	92.00	9.252	9.252	(0.834)	95391	100	99
45 1,1,2-Trichloroethane	83.00	9.332	9.332	(1.348)	33498	100	100

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
6 2-Hexanone	43.00	9.707	9.707	(0.875)	76241	100	97
7 Dibromochloromethane	129.00	9.956	9.956	(1.438)	36934	100	97
49 Tetrachloroethene	164.00	10.304	10.304	(0.928)	36588	100	100
52 Chlorobenzene	112.00	11.142	11.142	(1.004)	96253	100	99
1 3 Xylene (Total)	106.00				179904	300	290
4 Ethylbenzene	106.00	11.445	11.445	(1.031)	49126	100	98
55 m,p-Xylene(s)	106.00	11.614	11.614	(1.047)	120316	200	200
56 Bromoform	173.00	12.033	12.033	(1.084)	28686	100	95
7 Styrene	104.00	12.078	12.078	(1.088)	91415	100	95
59 o-Xylene	106.00	12.140	12.140	(1.094)	59588	100	99
60 1,1,2,2-Tetrachloroethane	83.00	12.488	12.488	(1.125)	47581	100	98
8 Bromochloromethane	128.00	5.214	5.214	(1.000)	57088	250	
2 1,4-Difluorobenzene	114.00	6.925	6.925	(1.000)	306230	250	
50 Chlorobenzene-d5	117.00	11.097	11.097	(1.000)	242784	250	
26 1,2-Dichloroethane-d4	102.00	5.989	5.989	(1.149)	9602	100	100
3 Toluene-d8	98.00	9.145	9.145	(0.824)	133567	100	99
1 Bromofluorobenzene	95.00	12.773	12.773	(1.151)	49294	100	97

Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

.nstrument ID: l.i
.ab File ID: l122iw2.d
.ab Smp Id:
.nalysis Type: VOA
)uant Type: ISTD
)perator: JC
.ethod File: /chem/l.i/l950502.b/lvoclpw.m
.isc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	57088	-0.66
32 1,4-Difluorobenzene	309137	154568	618274	306230	-0.94
50 Chlorobenzene-d5	240326	120163	480652	242784	1.02

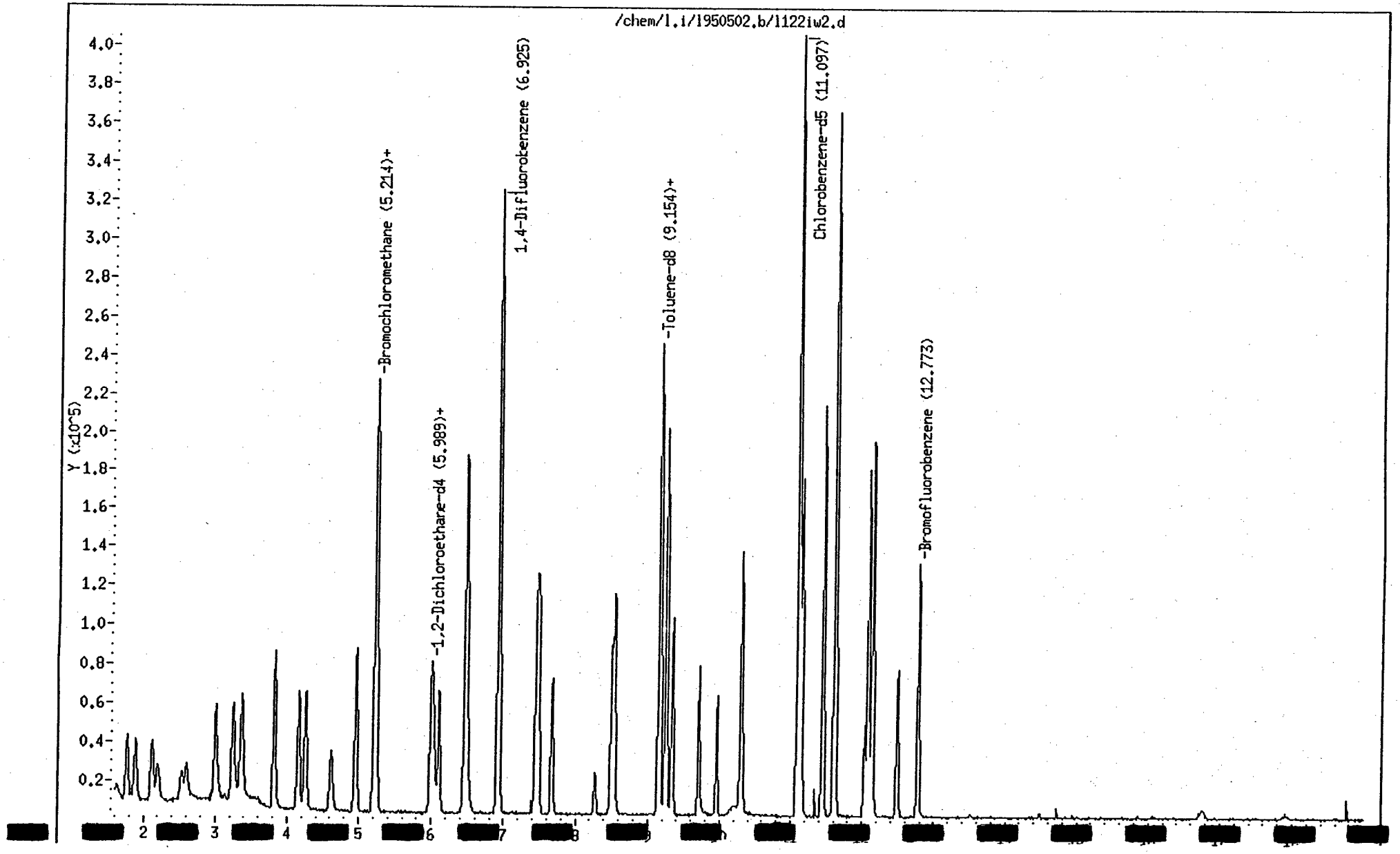
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.21	-0.06
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.93	0.08
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.03

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/l.i/1950502.b/l122iw2.d
Date : 02-MAY-1995 08:47
Client ID:
Sample Info: 20 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i

Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950502.b/l122iw3.d
Lab Smp Id:
Inj Date : 02-MAY-1995 09:14
Operator : JC Inst ID: l.i
Smp Info : 50 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/l950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy Quant Type: ISTD
Cal Date : 02-MAY-1995 09:14 Cal File: l122iw3.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1 Chloromethane	50.00	1.776	1.776	(0.340)	134614	250	250
2 Vinyl Chloride	62.00	1.883	1.883	(0.361)	113403	250	260
3 Bromomethane	94.00	2.115	2.115	(0.405)	85062	250	250
4 Chloroethane	64.00	2.195	2.195	(0.421)	70076	250	250
7 Trichlorofluoromethane	101.00	2.534	2.534	(0.486)	70553	250	240
8 Acetone	58.00	2.597	2.597	(0.498)	21213	250	240(a)
11 1,1-Dichloroethene	96.00	2.998	2.998	(0.575)	81537	250	250
13 Methylene Chloride	84.00	3.238	3.238	(0.621)	98115	250	250
18 1,2-Dichloroethene (total)	96.00				214604	500	500
14 Carbon Disulfide	76.00	3.363	3.363	(0.645)	327683	250	250
15 trans-1,2-Dichloroethene	96.00	3.818	3.818	(0.732)	101544	250	250
17 1,1-Dichloroethane	63.00	4.156	4.156	(0.797)	207621	250	250
19 Vinyl Acetate	43.00	4.246	4.246	(0.814)	346597	250	250
20 2-Butanone	43.00	4.611	4.611	(0.884)	163606	250	260
21 cis-1,2-Dichloroethene	96.00	4.959	4.959	(0.950)	113060	250	250
24 Chloroform	83.00	5.235	5.235	(1.003)	186297	250	250
27 1,1,1-Trichloroethane	97.00	6.019	6.019	(0.870)	137715	250	250
28 1,2-Dichloroethane	62.00	6.100	6.100	(1.169)	157924	250	250
30 Benzene	78.00	6.465	6.465	(0.934)	448900	250	250
31 Carbon Tetrachloride	117.00	6.492	6.492	(0.938)	110889	250	250
34 1,2-Dichloropropane	63.00	7.446	7.446	(1.076)	121374	250	250
35 Trichloroethene	130.00	7.481	7.481	(1.081)	100479	250	250
37 Bromodichloromethane	83.00	7.677	7.677	(1.109)	135002	250	250
39 2-Chloroethylvinylether	63.00	8.275	8.275	(1.196)	28765	250	250
40 4-Methyl-2-Pentanone	43.00	8.498	8.498	(1.228)	220559	250	260
41 cis-1,3-Dichloropropene	75.00	8.533	8.533	(1.233)	168904	250	250
42 trans-1,3-Dichloropropene	75.00	9.166	9.166	(1.325)	149633	250	250
44 Toluene	92.00	9.246	9.246	(0.833)	240421	250	250
45 1,1,2-Trichloroethane	83.00	9.327	9.327	(1.348)	82986	250	250

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
2-Hexanone	43.00	9.701	9.701	(0.874)	205126	250	260
Dibromochloromethane	129.00	9.959	9.959	(1.439)	95265	250	250
49 Tetrachloroethene	164.00	10.307	10.307	(0.929)	91305	250	250
52 Chlorobenzene	112.00	11.145	11.145	(1.004)	242022	250	250
Xylene (Total)	106.00				458856	750	760
Ethylbenzene	106.00	11.448	11.448	(1.031)	124583	250	250
55 m,p-Xylene(s)	106.00	11.609	11.609	(1.046)	308258	500	500
Bromoform	173.00	12.027	12.027	(1.083)	74600	250	250
Styrene	104.00	12.081	12.081	(1.088)	246356	250	260
59 o-Xylene	106.00	12.134	12.134	(1.093)	150598	250	250
60 1,1,2,2-Tetrachloroethane	83.00	12.482	12.482	(1.124)	125470	250	260
Bromochloromethane	128.00	5.217	5.217	(1.000)	57465	250	
1,4-Difluorobenzene	114.00	6.920	6.920	(1.000)	309137	250	
50 Chlorobenzene-d5	117.00	11.100	11.100	(1.000)	240326	250	
26 1,2-Dichloroethane-d4	102.00	5.993	5.993	(1.149)	23770	250	240
Toluene-d8	98.00	9.148	9.148	(0.824)	334357	250	250
Bromofluorobenzene	95.00	12.776	12.776	(1.151)	126078	250	250

Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l122iw3.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950502.b/lvoclpw.m
Misc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

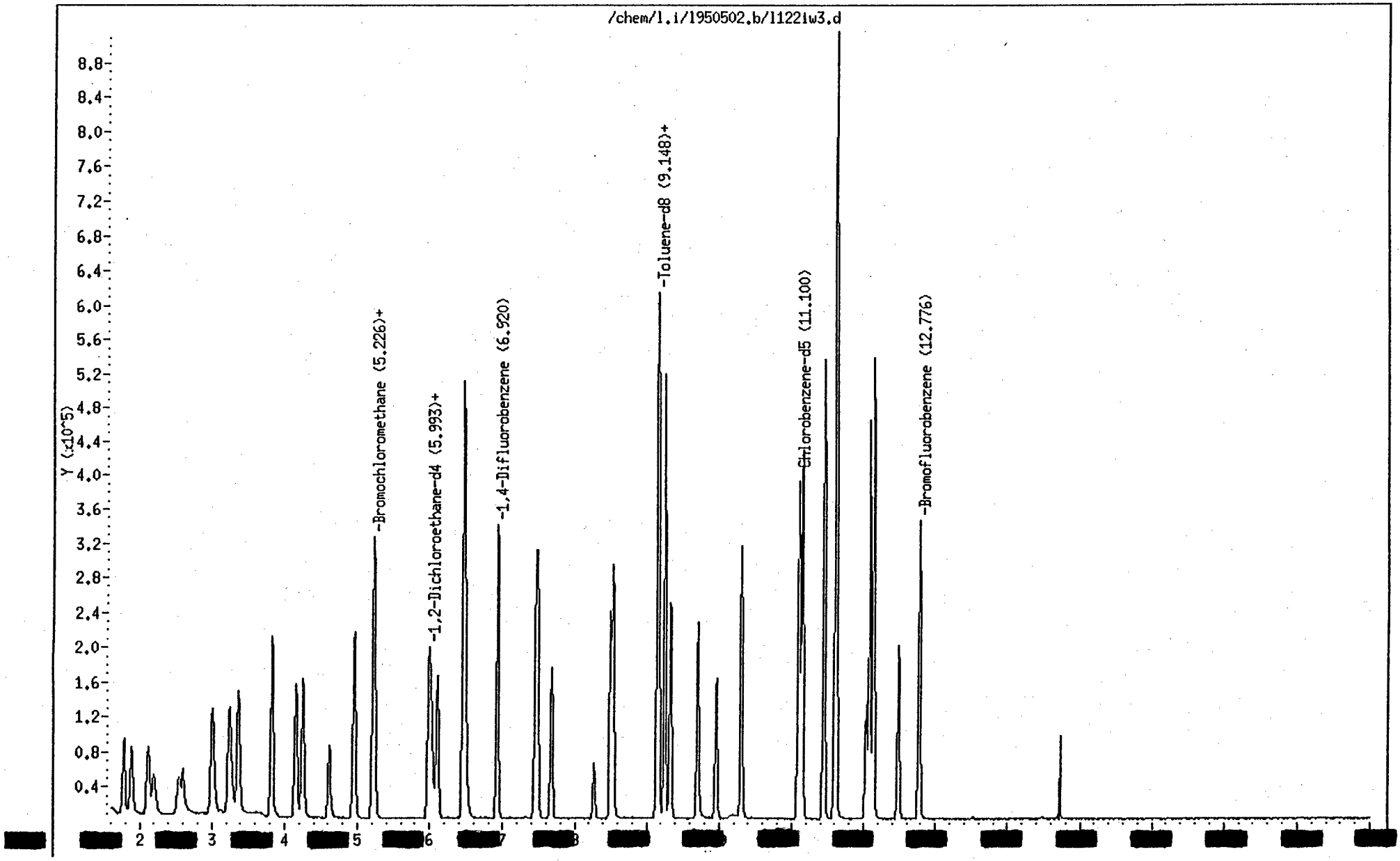
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	57465	0.00
32 1,4-Difluorobenzene	309137	154568	618274	309137	0.00
50 Chlorobenzene-d5	240326	120163	480652	240326	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.00
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.92	0.00
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/l.i/1950502.b/l122iw3.d
Date : 02-MAY-1995 09:14
Client ID:
Sample Info: 50 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i
Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950502.b/l122iw4.d
Lab Smp Id:
Inj Date : 02-MAY-1995 09:41
Operator : JC
Smp Info : 100 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/1950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:42 jimmy
Cal Date : 02-MAY-1995 09:14
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l122iw3.d
Calibration Sample, Level: 4

Compound Sublist: normal.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1	Chloromethane	50.00	1.776	1.776	(0.340)	267462	500	510
2	Vinyl Chloride	62.00	1.892	1.892	(0.362)	208127	500	480
3	Bromomethane	94.00	2.124	2.124	(0.406)	167228	500	490
4	Chloroethane	64.00	2.195	2.195	(0.420)	139918	500	510
7	Trichlorofluoromethane	101.00	2.552	2.552	(0.488)	155830	500	530
8	Acetone	58.00	2.605	2.605	(0.498)	46123	500	530
11	1,1-Dichloroethene	96.00	3.006	3.006	(0.575)	165619	500	510
13	Methylene Chloride	84.00	3.247	3.247	(0.621)	195418	500	500
18	1,2-Dichloroethene (total)	96.00				435758	1000	1000
14	Carbon Disulfide	76.00	3.372	3.372	(0.645)	666785	500	510
15	trans-1,2-Dichloroethene	96.00	3.826	3.826	(0.732)	205612	500	510
17	1,1-Dichloroethane	63.00	4.165	4.165	(0.797)	422429	500	510
19	Vinyl Acetate	43.00	4.254	4.254	(0.814)	656801	500	480
20	2-Butanone	43.00	4.620	4.620	(0.884)	311290	500	490
21	cis-1,2-Dichloroethene	96.00	4.967	4.967	(0.951)	230146	500	510
24	Chloroform	83.00	5.244	5.244	(1.003)	377481	500	500
27	1,1,1-Trichloroethane	97.00	6.028	6.028	(0.870)	274410	500	490
28	1,2-Dichloroethane	62.00	6.108	6.108	(1.169)	322441	500	510
30	Benzene	78.00	6.474	6.474	(0.934)	891151	500	500
31	Carbon Tetrachloride	117.00	6.492	6.492	(0.937)	227482	500	500
34	1,2-Dichloropropane	63.00	7.454	7.454	(1.076)	245448	500	500
35	Trichloroethene	130.00	7.490	7.490	(1.081)	205482	500	500
37	Bromodichloromethane	83.00	7.677	7.677	(1.108)	281748	500	510
39	2-Chloroethylvinylether	63.00	8.274	8.274	(1.194)	63033	500	540
40	4-Methyl-2-Pentanone	43.00	8.497	8.497	(1.226)	443781	500	510
41	cis-1,3-Dichloropropene	75.00	8.542	8.542	(1.233)	348996	500	510
42	trans-1,3-Dichloropropene	75.00	9.166	9.166	(1.323)	310015	500	510
44	Toluene	92.00	9.255	9.255	(0.834)	495230	500	510
45	1,1,2-Trichloroethane	83.00	9.335	9.335	(1.347)	167456	500	500

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
46 2-Hexanone	43.00	9.701	9.701	(0.874)	426649	500	540
7 Dibromochloromethane	129.00	9.959	9.959	(1.437)	197453	500	510
9 Tetrachloroethene	164.00	10.307	10.307	(0.929)	184108	500	490
52 Chlorobenzene	112.00	11.145	11.145	(1.004)	492961	500	500
3 Xylene (Total)	106.00				936418	1500	1500
4 Ethylbenzene	106.00	11.448	11.448	(1.031)	258120	500	510
5 m,p-Xylene(s)	106.00	11.617	11.617	(1.047)	630678	1000	1000
56 Bromoform	173.00	12.036	12.036	(1.084)	156693	500	510
7 Styrene	104.00	12.081	12.081	(1.088)	516328	500	530
9 o-Xylene	106.00	12.134	12.134	(1.093)	305740	500	500
60 1,1,2,2-Tetrachloroethane	83.00	12.482	12.482	(1.124)	250796	500	510
23 Bromochloromethane	128.00	5.226	5.226	(1.000)	57038	250	
2 1,4-Difluorobenzene	114.00	6.928	6.928	(1.000)	313223	250	
0 Chlorobenzene-d5	117.00	11.100	11.100	(1.000)	246179	250	
26 1,2-Dichloroethane-d4	102.00	5.992	5.992	(1.147)	48279	500	500
43 Toluene-d8	98.00	9.148	9.148	(0.824)	679788	500	500
1 Bromofluorobenzene	95.00	12.776	12.776	(1.151)	260441	500	510

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l122iw4.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950502.b/lvoclpw.m
Misc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

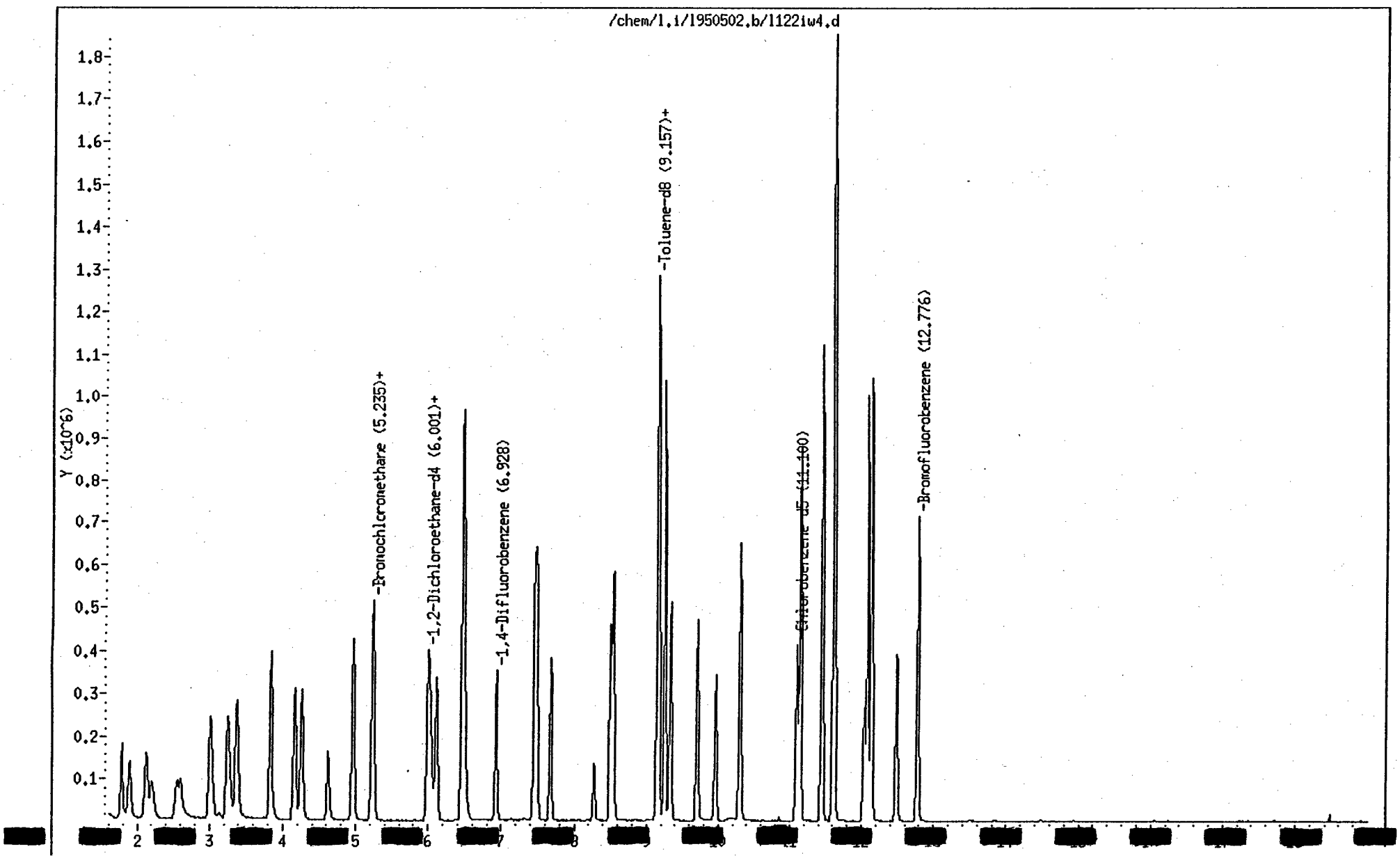
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	57038	-0.74
32 1,4-Difluorobenzene	309137	154568	618274	313223	1.32
50 Chlorobenzene-d5	240326	120163	480652	246179	2.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.23	0.16
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.93	0.12
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00

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.

Data File: /chem/1.i/1950502.b/1122iw4.d
Date : 02-MAY-1995 09:41
Client ID:
Sample Info: 100 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i
Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950502.b/l122iw5.d
Lab Smp Id:
Inj Date : 02-MAY-1995 10:09
Operator : JC
Inst ID: l.i
Smp Info : 200 UG-L STD-8240W/1X
Misc Info : L122W1//L122IW3
Comment :
Method : /chem/l.i/l950502.b/lvoclpw.m
Meth Date : 02-May-1995 11:43 jimmy
Quant Type: ISTD
Cal Date : 02-MAY-1995 09:14
Cal File: l122iw3.d
Als bottle: 6
Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: normal.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
1 Chloromethane	50.00	1.774	1.774	(0.340)	496676	1000	980
2 Vinyl Chloride	62.00	1.881	1.881	(0.360)	359637	1000	870
3 Bromomethane	94.00	2.122	2.122	(0.406)	312858	1000	960
4 Chloroethane	64.00	2.185	2.185	(0.418)	259806	1000	990
7 Trichlorofluoromethane	101.00	2.550	2.550	(0.488)	371395	1000	1300 (A)
8 Acetone	58.00	2.603	2.603	(0.498)	82078	1000	980
11 1,1-Dichloroethene	96.00	2.996	2.996	(0.573)	324057	1000	1000
13 Methylene Chloride	84.00	3.236	3.236	(0.619)	375020	1000	1000
18 1,2-Dichloroethene (total)	96.00				848211	2000	2100 (A)
14 Carbon Disulfide	76.00	3.361	3.361	(0.643)	1294538	1000	1000
15 trans-1,2-Dichloroethene	96.00	3.825	3.825	(0.732)	399994	1000	1000
17 1,1-Dichloroethane	63.00	4.154	4.154	(0.795)	827354	1000	1000
19 Vinyl Acetate	43.00	4.253	4.253	(0.814)	1250896	1000	960
20 2-Butanone	43.00	4.609	4.609	(0.882)	561725	1000	930
21 cis-1,2-Dichloroethene	96.00	4.957	4.957	(0.949)	448217	1000	1000
24 Chloroform	83.00	5.233	5.233	(1.002)	734283	1000	1000
27 1,1,1-Trichloroethane	97.00	6.018	6.018	(0.869)	543601	1000	1000
28 1,2-Dichloroethane	62.00	6.107	6.107	(1.169)	615902	1000	1000
30 Benzene	78.00	6.463	6.463	(0.933)	1744305	1000	1000
31 Carbon Tetrachloride	117.00	6.490	6.490	(0.937)	446359	1000	1000
34 1,2-Dichloropropane	63.00	7.453	7.453	(1.076)	475338	1000	1000
35 Trichloroethene	130.00	7.479	7.479	(1.080)	396546	1000	1000
37 Bromodichloromethane	83.00	7.676	7.676	(1.108)	545152	1000	1000
39 2-Chloroethylvinylether	63.00	8.273	8.273	(1.194)	126639	1000	1100
40 4-Methyl-2-Pentanone	43.00	8.496	8.496	(1.226)	816847	1000	970
41 cis-1,3-Dichloropropene	75.00	8.540	8.540	(1.233)	679880	1000	1000
42 trans-1,3-Dichloropropene	75.00	9.164	9.164	(1.323)	609260	1000	1000
44 Toluene	92.00	9.253	9.253	(0.834)	963192	1000	1000
45 1,1,2-Trichloroethane	83.00	9.333	9.333	(1.347)	324579	1000	990

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
	2-Hexanone	43.00	9.699	9.699	(0.874)	781487	1000	1000
	Dibromochloromethane	129.00	9.957	9.957	(1.438)	390277	1000	1000
49	Tetrachloroethene	164.00	10.305	10.305	(0.929)	364233	1000	1000
52	Chlorobenzene	112.00	11.143	11.143	(1.004)	970622	1000	1000
	Xylene (Total)	106.00				1841062	3000	3000
	Ethylbenzene	106.00	11.446	11.446	(1.031)	505573	1000	1000
55	m,p-Xylene(s)	106.00	11.615	11.615	(1.047)	1239149	2000	2000
56	Bromoform	173.00	12.034	12.034	(1.084)	310911	1000	1000
	Styrene	104.00	12.079	12.079	(1.088)	1023574	1000	1100
	o-Xylene	106.00	12.141	12.141	(1.094)	601913	1000	1000
60	1,1,2,2-Tetrachloroethane	83.00	12.480	12.480	(1.124)	467749	1000	970
	Bromochloromethane	128.00	5.224	5.224	(1.000)	54619	250	
	1,4-Difluorobenzene	114.00	6.927	6.927	(1.000)	303728	250	
50	Chlorobenzene-d5	117.00	11.098	11.098	(1.000)	241308	250	
26	1,2-Dichloroethane-d4	102.00	5.991	5.991	(1.147)	93621	1000	1000(A)
	Toluene-d8	98.00	9.146	9.146	(0.824)	1336610	1000	990
	Bromofluorobenzene	95.00	12.774	12.774	(1.151)	514468	1000	1000(A)

Q Flag Legend

- Target compound detected but, quantitated amount exceeded maximum amount.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l122iw5.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950502.b/lvoclpw.m
Misc Info: L122W1//L122IW3

Calibration Date: 05/02/95
Calibration Time: 0914

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	57465	28732	114930	54619	-4.95
32 1,4-Difluorobenzene	309137	154568	618274	303728	-1.75
50 Chlorobenzene-d5	240326	120163	480652	241308	0.41

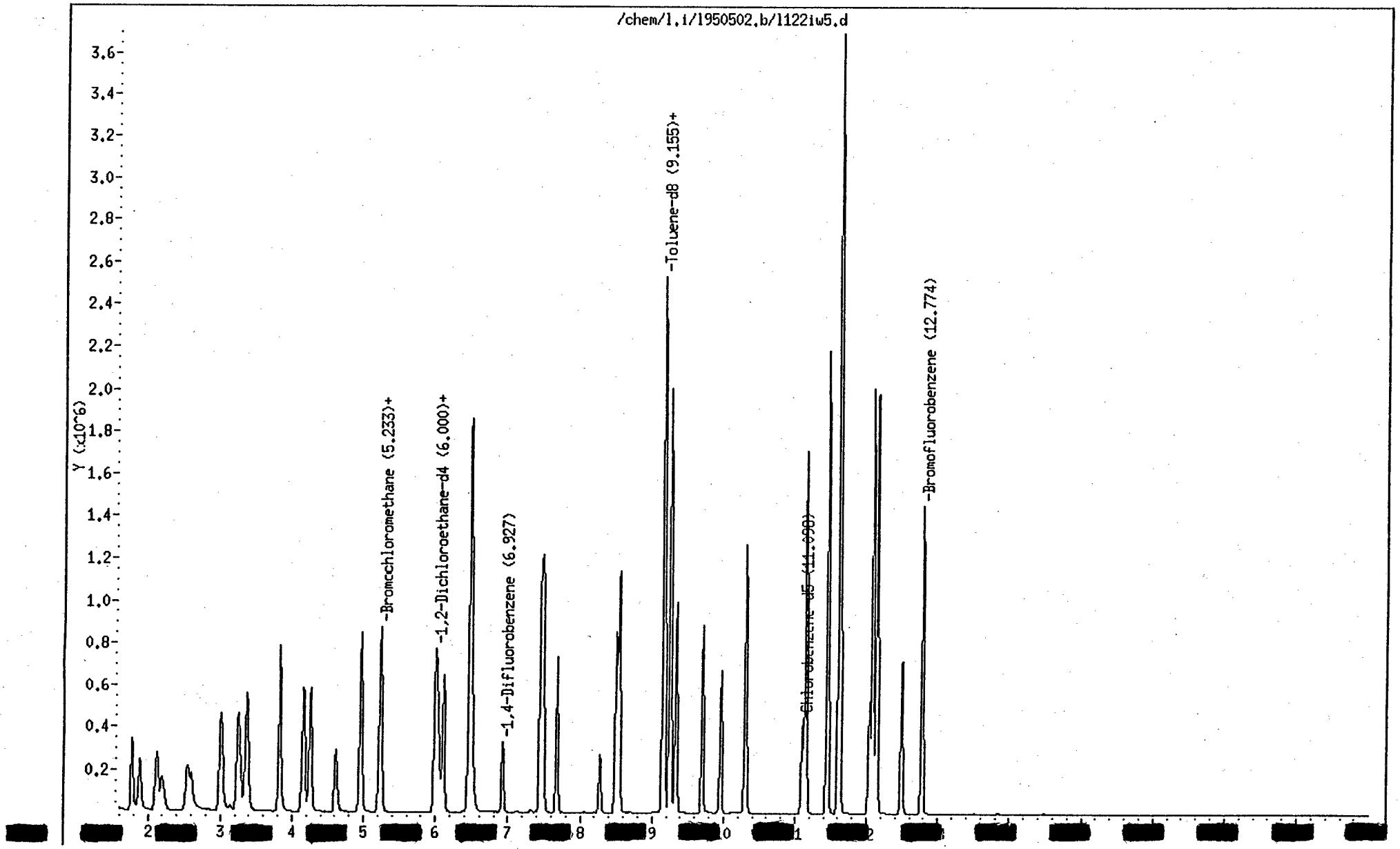
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.13
32 1,4-Difluorobenzene	6.92	6.42	7.42	6.93	0.10
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.02

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/l.i/1950502.b/l122iw5.d
Date : 02-MAY-1995 10:09
Client ID:
Sample Info: 200 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i

Operator: JC
Column diameter: 0.25



Data File: /chem/l.i/l950505.b/l125cw1.d
Report Date: 11-May-1995 16:30

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l125cw1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 06-MAY-1995 01:18
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 08:20 10:09
Method File: /chem/l.i/l950505.b/lvoclpw.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	1 Chloromethane	2.312	2.631	0.010	13.8	40.0
	2 Vinyl Chloride	1.896	2.323	0.100	22.5	25.0
	3 Bromomethane	1.492	1.558	0.100	4.4	25.0
	4 Chloroethane	1.205	1.354	0.010	12.4	40.0
	7 Trichlorofluoromethane	1.295	1.281	0.010	1.0	40.0
	8 Acetone	0.383	0.360	0.010	6.1	100.0
	11 1,1-Dichloroethene	1.424	1.423	0.100	0.1	25.0
	13 Methylene Chloride	1.698	1.760	0.010	3.6	40.0
M	18 1,2-Dichloroethene (total)	1.868	1.829	0.010	2.1	40.0
	14 Carbon Disulfide	5.712	5.797	0.010	1.5	40.0
	15 trans-1,2-Dichloroethene	1.776	1.723	0.010	3.0	40.0
	17 1,1-Dichloroethane	3.638	3.862	0.200	6.1	25.0
	19 Vinyl Acetate	5.931	3.721	0.010	37.3	100.0
	20 2-Butanone	2.770	2.517	0.010	9.1	100.0
	21 cis-1,2-Dichloroethene	1.961	1.935	0.010	1.3	25.0
	24 Chloroform	3.280	3.365	0.200	2.6	25.0
	27 1,1,1-Trichloroethane	0.443	0.455	0.100	2.6	25.0
	28 1,2-Dichloroethane	2.765	2.997	0.100	8.4	25.0
	30 Benzene	1.436	1.516	0.500	5.5	25.0
	31 Carbon Tetrachloride	0.360	0.373	0.100	3.5	25.0
	34 1,2-Dichloropropane	0.389	0.424	0.010	8.8	25.0
	35 Trichloroethene	0.325	0.357	0.300	10.1	25.0
	37 Bromodichloromethane	0.443	0.458	0.200	3.3	25.0
	39 2-Chloroethylvinylether	0.093	0.164	0.010	75.8	100.0
	40 4-Methyl-2-Pentanone	0.692	0.707	0.010	2.1	100.0
	41 cis-1,3-Dichloropropene	0.547	0.560	0.100	2.3	25.0
	42 trans-1,3-Dichloropropene	0.486	0.485	0.100	0.4	25.0
	44 Toluene	0.992	0.984	0.400	0.8	25.0
	45 1,1,2-Trichloroethane	0.269	0.289	0.100	7.6	25.0
	46 2-Hexanone	0.809	0.818	0.010	1.1	100.0
	47 Dibromochloromethane	0.311	0.312	0.100	0.3	25.0
	49 Tetrachloroethene	0.379	0.361	0.200	4.7	25.0
	52 Chlorobenzene	0.999	1.000	0.500	0.1	25.0
M	53 Xylene (Total)	0.629	0.634	0.300	0.8	25.0
	54 Ethylbenzene	0.515	0.507	0.100	1.6	25.0
	55 m,p-Xylene(s)	0.634	0.634	0.300	0.1	25.0
	56 Bromoform	0.312	0.291	0.100	6.6	25.0
	57 Styrene	0.989	1.017	0.300	2.9	25.0
	59 o-Xylene	0.618	0.635	0.300	2.8	25.0
	60 1,1,2,2-Tetrachloroethane	0.501	0.488	0.300	2.6	25.0

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l125cw1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 06-MAY-1995 01:18
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 08:20 10:09
Method File: /chem/l.i/l950505.b/lvoclpw.m

COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
$ 26 1,2-Dichloroethane-d4	0.421	0.401	0.010	4.8	40.0
$ 43 Toluene-d8	1.392	1.374	0.010	1.3	40.0
$ 61 Bromofluorobenzene	0.521	0.515	0.010	1.1	25.0

Data File: /chem/l.i/1950505.b/l125cw1.d
Report Date: 06-May-1995 08:32

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950505.b/l125cw1.d
Lab Smp Id:
Inj Date : 06-MAY-1995 01:18
Operator : JC
Smp Info : 50 UG-L STD-8240W/1X
Misc Info : L125W1//L124CW1
Comment :
Method : /chem/l.i/1950505.b/lvoclpw.m
Meth Date : 06-May-1995 08:32 jimmy
Cal Date : 06-MAY-1995 01:18
Vials bottle: 19
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l125cw1.d
Continuing Calibration Sample

Compound Sublist: normal.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
1 Chloromethane	50.00	1.773	1.773	(0.340)	127135	250	280
2 Vinyl Chloride	62.00	1.889	1.889	(0.362)	112242	250	310
3 Bromomethane	94.00	2.121	2.121	(0.406)	75277	250	260
4 Chloroethane	64.00	2.192	2.192	(0.420)	65421	250	280
7 Trichlorofluoromethane	101.00	2.549	2.549	(0.488)	61910	250	250
8 Acetone	58.00	2.611	2.611	(0.500)	17394	250	230(a)
11 1,1-Dichloroethene	96.00	3.012	3.012	(0.577)	68730	250	250
13 Methylene Chloride	84.00	3.244	3.244	(0.621)	85039	250	260
18 1,2-Dichloroethene (total)	96.00				176767	500	490
14 Carbon Disulfide	76.00	3.378	3.378	(0.647)	280088	250	250
15 trans-1,2-Dichloroethene	96.00	3.832	3.832	(0.734)	83265	250	240
17 1,1-Dichloroethane	63.00	4.162	4.162	(0.797)	186573	250	260
19 Vinyl Acetate	43.00	4.251	4.251	(0.814)	179778	250	160
20 2-Butanone	43.00	4.617	4.617	(0.884)	121621	250	230
21 cis-1,2-Dichloroethene	96.00	4.965	4.965	(0.951)	93502	250	250
24 Chloroform	83.00	5.241	5.241	(1.003)	162570	250	260
27 1,1,1-Trichloroethane	97.00	6.025	6.025	(0.870)	113009	250	260
28 1,2-Dichloroethane	62.00	6.105	6.105	(1.169)	144817	250	270
30 Benzene	78.00	6.471	6.471	(0.934)	376667	250	260
31 Carbon Tetrachloride	117.00	6.498	6.498	(0.938)	92728	250	260
34 1,2-Dichloropropane	63.00	7.451	7.451	(1.076)	105327	250	270
35 Trichloroethene	130.00	7.487	7.487	(1.081)	88816	250	280
37 Bromodichloromethane	83.00	7.674	7.674	(1.108)	113812	250	260
39 2-Chloroethylvinylether	63.00	8.280	8.280	(1.196)	40709	250	440
40 4-Methyl-2-Pentanone	43.00	8.503	8.503	(1.228)	175754	250	260
41 cis-1,3-Dichloropropene	75.00	8.539	8.539	(1.233)	139131	250	260
42 trans-1,3-Dichloropropene	75.00	9.163	9.163	(1.323)	120426	250	250
44 Toluene	92.00	9.252	9.252	(0.834)	200814	250	250
45 1,1,2-Trichloroethane	83.00	9.332	9.332	(1.348)	71797	250	270

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
46 2-Hexanone	43.00	9.707	9.707	(0.875)	166811	250	250
47 Dibromochloromethane	129.00	9.956	9.956	(1.438)	77505	250	250
49 Tetrachloroethene	164.00	10.304	10.304	(0.928)	73576	250	240
52 Chlorobenzene	112.00	11.142	11.142	(1.004)	204027	250	250
53 Xylene (Total)	106.00				388193	750	760
54 Ethylbenzene	106.00	11.445	11.445	(1.031)	103422	250	240
55 m,p-Xylene(s)	106.00	11.614	11.614	(1.047)	258640	500	500
56 Bromoform	173.00	12.033	12.033	(1.084)	59441	250	230
57 Styrene	104.00	12.078	12.078	(1.088)	207552	250	260
59 o-Xylene	106.00	12.140	12.140	(1.094)	129553	250	260
60 1,1,2,2-Tetrachloroethane	83.00	12.488	12.488	(1.125)	99610	250	240
63 Bromochloromethane	128.00	5.223	5.223	(1.000)	48316	250	
2 1,4-Difluorobenzene	114.00	6.926	6.926	(1.000)	248535	250	
50 Chlorobenzene-d5	117.00	11.097	11.097	(1.000)	204023	250	
26 1,2-Dichloroethane-d4	102.00	5.990	5.990	(1.147)	19374	250	240
8 Toluene-d8	98.00	9.154	9.154	(0.825)	280338	250	250
1 Bromofluorobenzene	95.00	12.773	12.773	(1.151)	105087	250	250

Flag Legend

- Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: 1.i
ab File ID: l125cw1.d
ab Smp Id:
nalysis Type: VOA
uant Type: ISTD
perator: JC
ethod File: /chem/1.i/1950505.b/lvoclpw.m
isc Info: L125W1//L124CW1

Calibration Date: 05/06/95
Calibration Time: 0118

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	48316	24158	96632	48316	0.00
32 1,4-Difluorobenzene	248535	124268	497070	248535	0.00
50 Chlorobenzene-d5	204023	102012	408046	204023	0.00

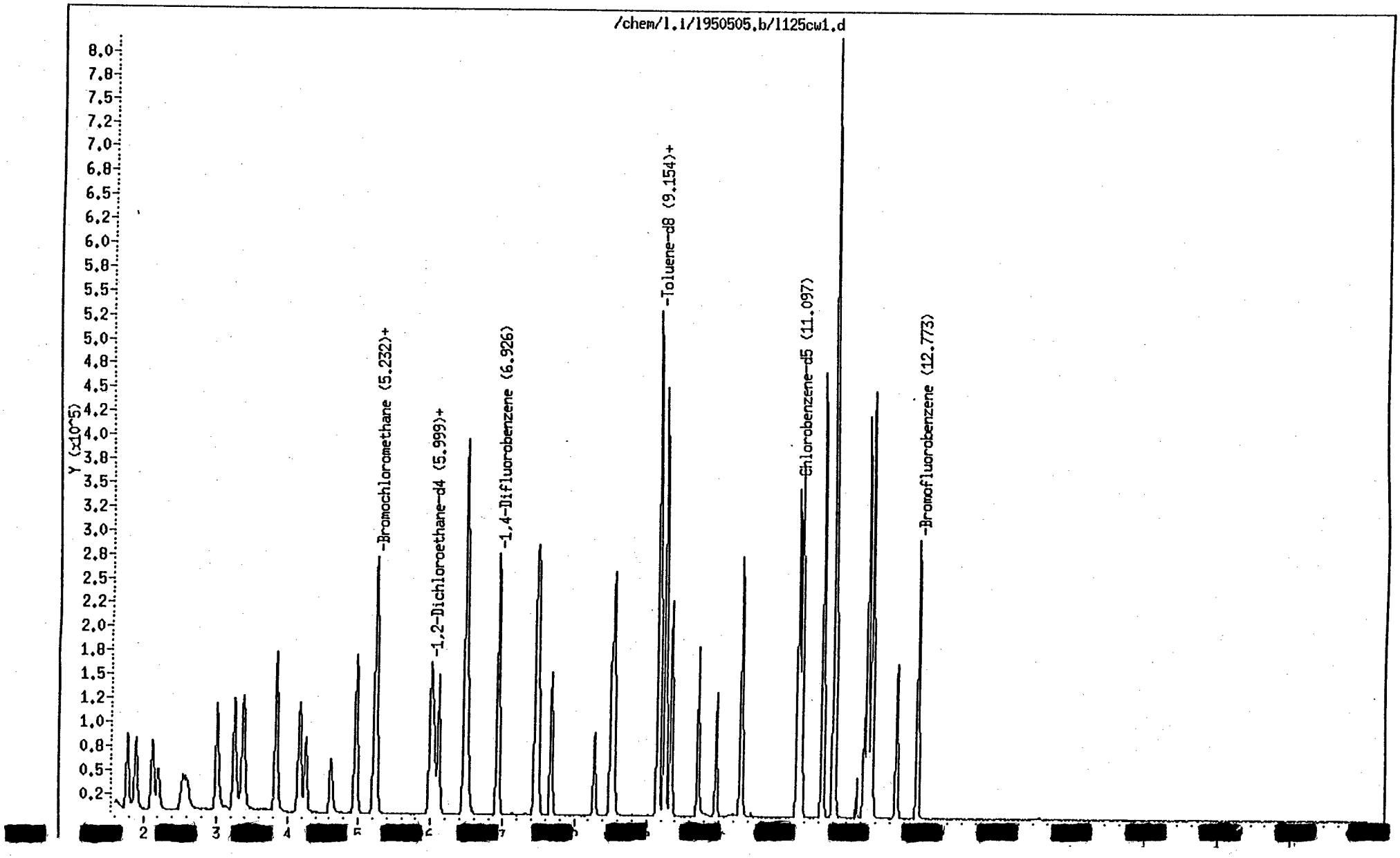
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
23 Bromochloromethane	5.22	4.72	5.72	5.22	0.00
32 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.00
50 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00

EA UPPER LIMIT = +100% of internal standard area.
EA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950505.b/1125cw1.d
Date : 06-MAY-1995 01:18
Client ID:
Sample Info: 50 UG-L STD-8240W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1

Operator: JC
Column diameter: 0.25



SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: k.i
Lab File ID: k128cs2.d
Analysis Type: SOIL
Lab Sample ID: 50 PPB STD 8240S
Quant Type: ISTD

Injection Date: 08-MAY-1995 11:24
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 20:30 21:27
Method File: /chem/k.i/k950508.b/kvoclps.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	4 Chloromethane	2.451	2.680	0.010	9.3	40.0
	5 Vinyl Chloride	2.538	2.670	0.100	5.2	25.0
	7 Bromomethane	1.839	1.875	0.100	2.0	25.0
	6 Chloroethane	2.054	2.349	0.010	14.4	40.0
	9 Trichlorofluoromethane	1.955	1.484	0.010	24.1	40.0
	8 Acetone	0.244	0.118	0.010	51.5	100.0
	10 1,1-Dichloroethene	2.037	1.905	0.100	6.5	25.0
	11 Methylene Chloride	2.413	2.293	0.010	5.0	40.0
M	1 1,2-Dichloroethene (total)	2.551	2.424	0.010	5.0	40.0
	12 Carbon Disulfide	8.123	7.318	0.010	9.9	40.0
	13 trans-1,2-Dichloroethene	2.583	2.353	0.010	8.9	40.0
	14 1,1-Dichloroethane	4.811	4.618	0.200	4.0	25.0
	16 Vinyl Acetate	4.341	3.595	0.010	17.2	100.0
	17 2-Butanone	1.834	1.358	0.010	26.0	100.0
	19 cis-1,2-Dichloroethene	2.519	2.495	0.010	1.0	40.0
	21 Chloroform	4.063	3.752	0.200	7.7	25.0
	24 1,1,1-Trichloroethane	3.305	2.785	0.100	15.7	25.0
	25 1,2-Dichloroethane	0.456	0.447	0.100	2.0	25.0
	27 Benzene	1.452	1.462	0.500	0.7	25.0
	28 Carbon Tetrachloride	0.385	0.347	0.100	10.1	25.0
	33 1,2-Dichloropropane	0.387	0.404	0.010	4.4	25.0
	34 Trichloroethene	0.328	0.326	0.300	0.8	25.0
	35 Bromodichloromethane	0.426	0.420	0.010	1.4	40.0
	15 2-Chloroethylvinylether	0.732	0.740	0.010	1.1	100.0
	38 4-Methyl-2-Pentanone	0.342	0.387	0.010	13.2	100.0
	42 cis-1,3-Dichloropropene	0.390	0.370	0.200	5.4	25.0
	37 trans-1,3-Dichloropropene	0.698	0.688	0.100	1.4	25.0
	43 Toluene	1.189	1.129	0.400	5.0	25.0
	44 1,1,2-Trichloroethane	0.316	0.307	0.100	2.9	25.0
	45 2-Hexanone	0.388	0.484	0.010	24.7	100.0
	46 Dibromochloromethane	0.372	0.350	0.100	5.7	25.0
	48 Tetrachloroethene	0.403	0.341	0.200	15.3	25.0
	52 Chlorobenzene	1.112	1.092	0.500	1.8	25.0
M	2 Xylene (Total)	0.716	0.680	0.300	5.1	25.0
	53 Ethylbenzene	0.609	0.600	0.300	1.6	25.0
	54 m,p-Xylene(s)	0.727	0.673	0.300	7.3	25.0
	55 Bromoform	0.213	0.202	0.100	5.2	25.0
	57 Styrene	1.129	1.063	0.300	5.8	25.0
	58 o-Xylene	0.695	0.692	0.300	0.5	25.0
	59 1,1,2,2-Tetrachloroethane	0.357	0.396	0.300	10.7	25.0

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: k.i
Lab File ID: k128cs2.d
Analysis Type: SOIL
Lab Sample ID: 50 PPB STD 8240S
Quant Type: ISTD

Injection Date: 08-MAY-1995 11:24
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 20:30 21:27
Method File: /chem/k.i/k950508.b/kvoclps.m

COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
$ 23 1,2-Dichloroethane-d4	0.482	0.460	0.010	4.6	40.0
$ 40 Toluene-d8	1.661	1.512	0.010	9.0	40.0
$ 61 Bromofluorobenzene	0.578	0.551	0.200	4.6	25.0

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950508.b/k128cs2.d
Lab Smp Id: 50 PPB STD 8240S
Inj Date : 08-MAY-1995 11:24
Operator : HLW Inst ID: k.i
Smp Info : 50 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950508.b/kvoclps.m
Meth Date : 08-May-1995 11:42 hillery Quant Type: ISTD
Cal Date : 08-MAY-1995 11:24 Cal File: k128cs2.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal:subind_sub1
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
4	Chloromethane	50.00	1.363	1.363	(0.643)	237663	250	50
5	Vinyl Chloride	62.00	1.408	1.408	(0.664)	236791	250	50
7	Bromomethane	94.00	1.438	1.438	(0.678)	166279	250	50
6	Chloroethane	64.00	1.454	1.454	(0.686)	208269	250	50
9	Trichlorofluoromethane	100.90	1.529	1.529	(0.721)	131589	250	50
8	Acetone	58.00	1.529	1.529	(0.721)	10480	250	50(a)
10	1,1-Dichloroethene	96.00	1.635	1.635	(0.771)	168931	250	50
11	Methylene Chloride	84.00	1.681	1.681	(0.793)	203347	250	50
M 1	1,2-Dichloroethene (total)	96.00				429848	500	100
12	Carbon Disulfide	76.00	1.726	1.726	(0.814)	648946	250	50
13	trans-1,2-Dichloroethene	96.00	1.787	1.787	(0.843)	208625	250	50
14	1,1-Dichloroethane	63.00	1.863	1.863	(0.878)	409505	250	50
16	Vinyl Acetate	43.00	1.878	1.878	(0.886)	318771	250	50
17	2-Butanone	43.00	1.969	1.969	(0.929)	120383	250	50
19	cis-1,2-Dichloroethene	96.00	2.045	2.045	(0.964)	221223	250	50
21	Chloroform	83.00	2.120	2.120	(1.000)	332747	250	50
24	1,1,1-Trichloroethane	97.00	2.393	2.393	(1.129)	246977	250	50
25	1,2-Dichloroethane	62.00	2.423	2.423	(0.865)	247176	250	50
27	Benzene	78.00	2.560	2.560	(0.913)	808721	250	50
28	Carbon Tetrachloride	117.00	2.575	2.575	(0.919)	191670	250	50
33	1,2-Dichloropropane	63.00	3.090	3.090	(1.103)	223412	250	50
34	Trichloroethene	130.00	3.105	3.105	(1.108)	180129	250	50
35	Bromodichloromethane	83.00	3.226	3.226	(1.151)	232168	250	50
15	2-Chloroethylvinylether	63.00	1.863	1.863	(0.665)	409535	250	50
38	4-Methyl-2-Pentanone	43.00	4.045	4.045	(1.443)	214235	250	50
42	cis-1,3-Dichloropropene	75.00	4.666	4.666	(1.665)	204404	250	50
37	trans-1,3-Dichloropropene	75.00	3.969	3.969	(0.586)	273329	250	50
43	Toluene	92.00	4.651	4.651	(0.687)	448302	250	50
44	1,1,2-Trichloroethane	83.00	4.802	4.802	(0.709)	121942	250	50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.393	5.393	(0.796)	192367	250	50
	46 Dibromochloromethane	129.00	5.408	5.408	(0.799)	139212	250	50
	48 Tetrachloroethene	164.00	5.802	5.802	(0.857)	135558	250	50
	52 Chlorobenzene	112.00	6.817	6.817	(1.007)	433563	250	50
M	2 Xylene (Total)	106.00				809708	750	150
	53 Ethylbenzene	106.00	7.257	7.257	(1.072)	238247	250	50
	54 m,p-Xylene(s)	106.00	7.469	7.469	(1.103)	534907	500	100
	55 Bromoform	173.00	7.833	7.833	(1.157)	80174	250	50
	57 Styrene	104.00	8.030	8.030	(1.186)	422417	250	50
	58 o-Xylene	106.00	8.075	8.075	(1.192)	274801	250	50
	59 1,1,2,2-Tetrachloroethane	83.00	8.621	8.621	(1.273)	157204	250	50
*	20 Bromochloromethane	128.00	2.120	2.120	(1.000)	88679	250	
*	31 1,4-Difluorobenzene	114.00	2.802	2.802	(1.000)	553116	250	
*	51 Chlorobenzene-d5	117.00	6.772	6.772	(1.000)	397197	250	
$	23 1,2-Dichloroethane-d4	102.00	2.378	2.378	(1.121)	40798	250	50
$	40 Toluene-d8	98.00	4.545	4.545	(0.671)	600664	250	50
$	61 Bromofluorobenzene	95.00	8.878	8.878	(1.311)	218818	250	50

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k128cs2.d
Lab Smp Id: 50 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950508.b/kvoclps.m
Misc Info:

Calibration Date: 05/08/95
Calibration Time: 1124

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	88679	44340	177358	88679	0.00
31 1,4-Difluorobenzene	553116	276558	1106232	553116	0.00
51 Chlorobenzene-d5	397197	198598	794394	397197	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.80	2.30	3.30	2.80	0.00
51 Chlorobenzene-d5	6.77	6.27	7.27	6.77	0.00

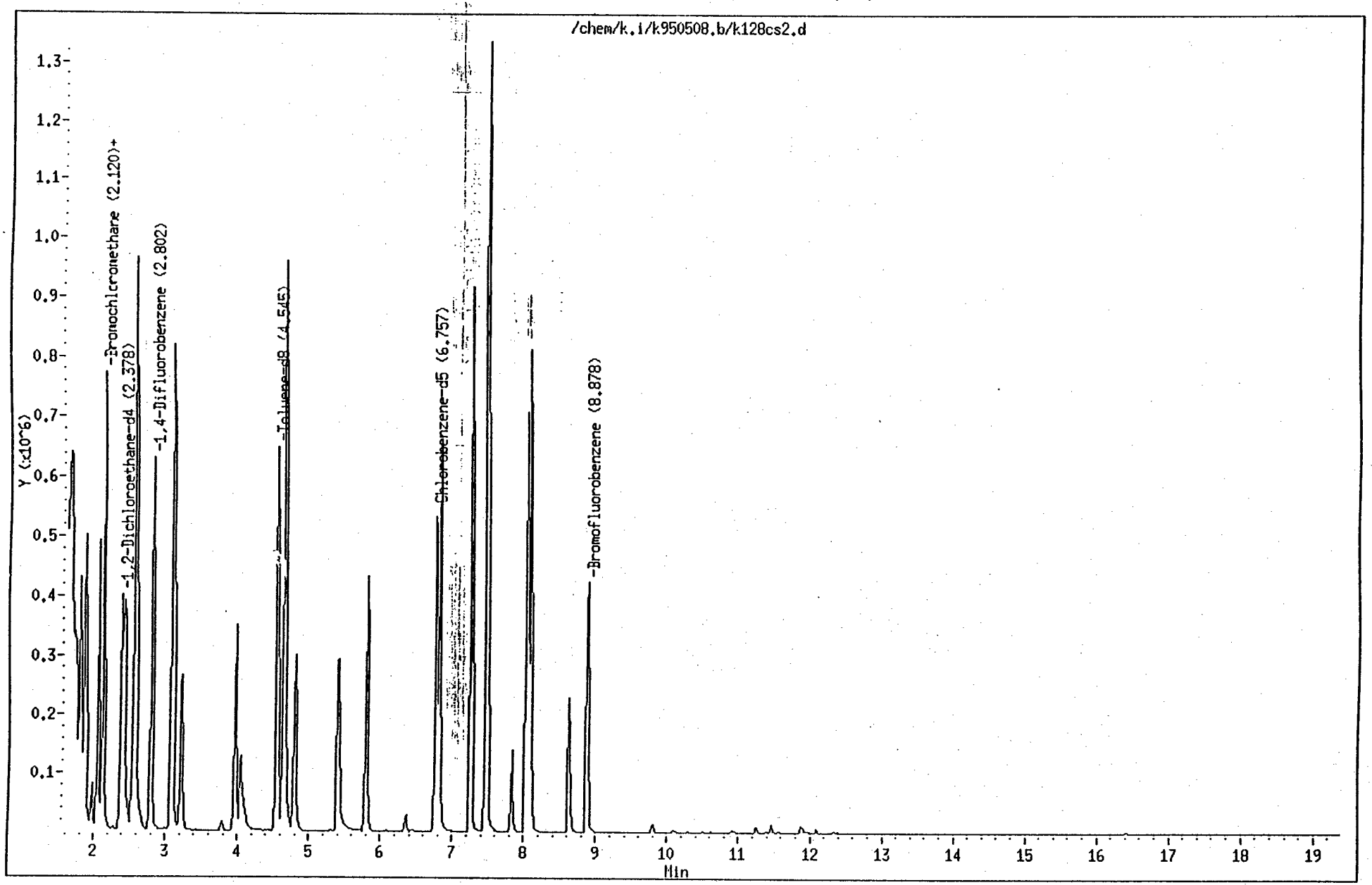
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950508.b/k128cs2.d
Date : 08-MAY-1995 11:24
Client ID:
Sample Info: 50 PPB STD 8240S

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



Data File: /chem/k.i/k950509.b/k129cs2.d
Report Date: 17-May-1995 11:32

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: k.i
Lab File ID: k129cs2.d
Analysis Type: SOIL
Lab Sample ID: 50 PPB STD 8240S
Quant Type: ISTD

Injection Date: 09-MAY-1995 11:08
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 20:30 21:27
Method File: /chem/k.i/k950509.b/kvoclps.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	4 Chloromethane	2.451	2.879	0.010	17.5	40.0
	5 Vinyl Chloride	2.538	2.838	0.100	11.8	25.0
	7 Bromomethane	1.839	1.907	0.100	3.7	25.0
	6 Chloroethane	2.054	2.393	0.010	16.5	40.0
	9 Trichlorofluoromethane	1.955	1.458	0.010	25.4	40.0
	8 Acetone	0.244	0.144	0.010	40.7	100.0
	10 1,1-Dichloroethene	2.037	1.899	0.100	6.8	25.0
	11 Methylene Chloride	2.413	2.147	0.010	11.1	40.0
M	1 1,2-Dichloroethene (total)	2.551	2.360	0.010	7.5	40.0
	12 Carbon Disulfide	8.123	7.391	0.010	9.0	40.0
	13 trans-1,2-Dichloroethene	2.583	2.208	0.010	14.5	40.0
	14 1,1-Dichloroethane	4.811	4.800	0.200	0.2	25.0
	16 Vinyl Acetate	4.341	3.238	0.010	25.4	40.0
	17 2-Butanone	1.834	1.074	0.010	41.4	40.0
	19 cis-1,2-Dichloroethene	2.519	2.511	0.010	0.3	40.0
	21 Chloroform	4.063	3.894	0.200	4.2	25.0
	24 1,1,1-Trichloroethane	3.305	2.914	0.100	11.8	25.0
	25 1,2-Dichloroethane	0.456	0.423	0.100	7.4	25.0
	27 Benzene	1.452	1.459	0.500	0.4	25.0
	28 Carbon Tetrachloride	0.385	0.350	0.100	9.3	25.0
	33 1,2-Dichloropropane	0.387	0.407	0.010	5.1	25.0
	34 Trichloroethene	0.328	0.334	0.300	1.9	25.0
	35 Bromodichloromethane	0.426	0.433	0.010	1.8	40.0
	15 2-Chloroethylvinylether	0.732	0.752	0.010	2.7	100.0
	38 4-Methyl-2-Pentanone	0.342	0.245	0.010	28.2	100.0
	42 cis-1,3-Dichloropropene	0.390	0.370	0.200	5.3	25.0
	37 trans-1,3-Dichloropropene	0.698	0.683	0.100	2.2	25.0
	43 Toluene	1.189	1.177	0.400	1.0	25.0
	44 1,1,2-Trichloroethane	0.316	0.302	0.100	4.6	25.0
	45 2-Hexanone	0.388	0.302	0.010	22.1	100.0
	46 Dibromochloromethane	0.372	0.356	0.100	4.2	25.0
	48 Tetrachloroethene	0.403	0.366	0.200	9.1	25.0
	52 Chlorobenzene	1.112	1.122	0.500	0.9	25.0
M	2 Xylene (Total)	0.716	0.734	0.300	2.5	25.0
	53 Ethylbenzene	0.609	0.596	0.300	2.3	25.0
	54 m,p-Xylene(s)	0.727	0.723	0.300	0.5	25.0
	55 Bromoform	0.213	0.203	0.100	4.9	25.0
	57 Styrene	1.129	1.195	0.300	5.9	25.0
	58 o-Xylene	0.695	0.755	0.300	8.6	25.0
	59 1,1,2,2-Tetrachloroethane	0.357	0.394	0.300	10.3	25.0

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: k.i
Lab File ID: k129cs2.d
Analysis Type: SOIL
Lab Sample ID: 50 PPB STD 8240S
Quant Type: ISTD

Injection Date: 09-MAY-1995 11:08
Init. Calibration Date(s): 05/02/95 05/02/95
Init. Calibration Times: 20:30 21:27
Method File: /chem/k.i/k950509.b/kvoclps.m

COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
$ 23 1,2-Dichloroethane-d4	0.482	0.441	0.010	8.6	40.0
$ 40 Toluene-d8	1.661	1.539	0.010	7.3	40.0
$ 61 Bromofluorobenzene	0.578	0.546	0.200	5.5	25.0

SPL Labs

Volatiles by 8240

Data file : /chem/k.i/k950509.b/k129cs2.d
Lab Smp Id: 50 PPB STD 8240S
Inj Date : 09-MAY-1995 11:08
Operator : HLW Inst ID: k.i
Smp Info : 50 PPB STD 8240S
Misc Info :
Comment :
Method : /chem/k.i/k950509.b/kvoclps.m
Meth Date : 09-May-1995 11:38 hillery Quant Type: ISTD
Cal Date : 09-MAY-1995 11:08 Cal File: k129cs2.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: normal.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
4	Chloromethane	50.00	1.365	1.365	(0.643)	248975	250	50
5	Vinyl Chloride	62.00	1.395	1.395	(0.657)	245411	250	50
7	Bromomethane	94.00	1.441	1.441	(0.679)	164865	250	50
6	Chloroethane	64.00	1.441	1.441	(0.679)	206967	250	50
9	Trichlorofluoromethane	100.90	1.517	1.517	(0.714)	126075	250	50
8	Acetone	58.00	1.517	1.517	(0.714)	12488	250	50(a)
10	1,1-Dichloroethene	96.00	1.623	1.623	(0.764)	164166	250	50
11	Methylene Chloride	84.00	1.668	1.668	(0.786)	185629	250	50
M 1	1,2-Dichloroethene (total)	96.00				408080	500	100
12	Carbon Disulfide	76.00	1.714	1.714	(0.807)	639149	250	50
13	trans-1,2-Dichloroethene	96.00	1.774	1.774	(0.836)	190950	250	50
14	1,1-Dichloroethane	63.00	1.850	1.850	(0.872)	415024	250	50
16	Vinyl Acetate	43.00	1.865	1.865	(0.879)	279989	250	50
17	2-Butanone	43.00	1.956	1.956	(0.921)	92900	250	50
19	cis-1,2-Dichloroethene	96.00	2.047	2.047	(0.964)	217130	250	50
21	Chloroform	83.00	2.123	2.123	(1.000)	336741	250	50
24	1,1,1-Trichloroethane	97.00	2.395	2.395	(1.128)	251956	250	50
25	1,2-Dichloroethane	62.00	2.411	2.411	(0.864)	233295	250	50
27	Benzene	78.00	2.547	2.547	(0.913)	805173	250	50
28	Carbon Tetrachloride	117.00	2.577	2.577	(0.924)	193109	250	50
33	1,2-Dichloropropane	63.00	3.077	3.077	(1.103)	224444	250	50
34	Trichloroethene	130.00	3.092	3.092	(1.109)	184595	250	50
35	Bromodichloromethane	83.00	3.214	3.214	(1.152)	239054	250	50
15	2-Chloroethylvinylether	63.00	1.850	1.850	(0.663)	415024	250	50
38	4-Methyl-2-Pentanone	43.00	4.032	4.032	(1.445)	135521	250	50
42	cis-1,3-Dichloropropene	75.00	4.653	4.653	(1.668)	204094	250	50
37	trans-1,3-Dichloropropene	75.00	3.956	3.956	(0.585)	265523	250	50
43	Toluene	92.00	4.638	4.638	(0.686)	457812	250	50
44	1,1,2-Trichloroethane	83.00	4.789	4.789	(0.709)	117329	250	50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
	45 2-Hexanone	43.00	5.396	5.396	(0.798)	117606	250	50
	46 Dibromochloromethane	129.00	5.396	5.396	(0.798)	138579	250	50
	48 Tetrachloroethene	164.00	5.805	5.805	(0.859)	142462	250	50
	52 Chlorobenzene	112.00	6.805	6.805	(1.007)	436573	250	50
M	2 Xylene (Total)	106.00				856274	750	150
	53 Ethylbenzene	106.00	7.244	7.244	(1.072)	231669	250	50
	54 m,p-Xylene(s)	106.00	7.471	7.471	(1.105)	562419	500	100
	55 Bromoform	173.00	7.835	7.835	(1.159)	78792	250	50
	57 Styrene	104.00	8.017	8.017	(1.186)	465072	250	50
	58 o-Xylene	106.00	8.077	8.077	(1.195)	293855	250	50
	59 1,1,2,2-Tetrachloroethane	83.00	8.623	8.623	(1.276)	153370	250	50
*	20 Bromochloromethane	128.00	2.123	2.123	(1.000)	86471	250	
*	31 1,4-Difluorobenzene	114.00	2.789	2.789	(1.000)	552052	250	
*	51 Chlorobenzene-d5	117.00	6.759	6.759	(1.000)	389031	250	
$	23 1,2-Dichloroethane-d4	102.00	2.365	2.365	(1.114)	38140	250	50
$	40 Toluene-d8	98.00	4.532	4.532	(0.670)	598801	250	50
$	61 Bromofluorobenzene	95.00	8.865	8.865	(1.312)	212343	250	50

QC Flag Legend

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: k.i
Lab File ID: k129cs2.d
Lab Smp Id: 50 PPB STD 8240S
Analysis Type: VOA
Quant Type: ISTD
Operator: HLW
Method File: /chem/k.i/k950509.b/kvoclps.m
Misc Info:

Calibration Date: 05/09/95
Calibration Time: 1108

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	86471	43236	172942	86471	0.00
31 1,4-Difluorobenzene	552052	276026	1104104	552052	0.00
51 Chlorobenzene-d5	389031	194516	778062	389031	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
20 Bromochloromethane	2.12	1.62	2.62	2.12	0.00
31 1,4-Difluorobenzene	2.79	2.29	3.29	2.79	0.00
51 Chlorobenzene-d5	6.76	6.26	7.26	6.76	0.00

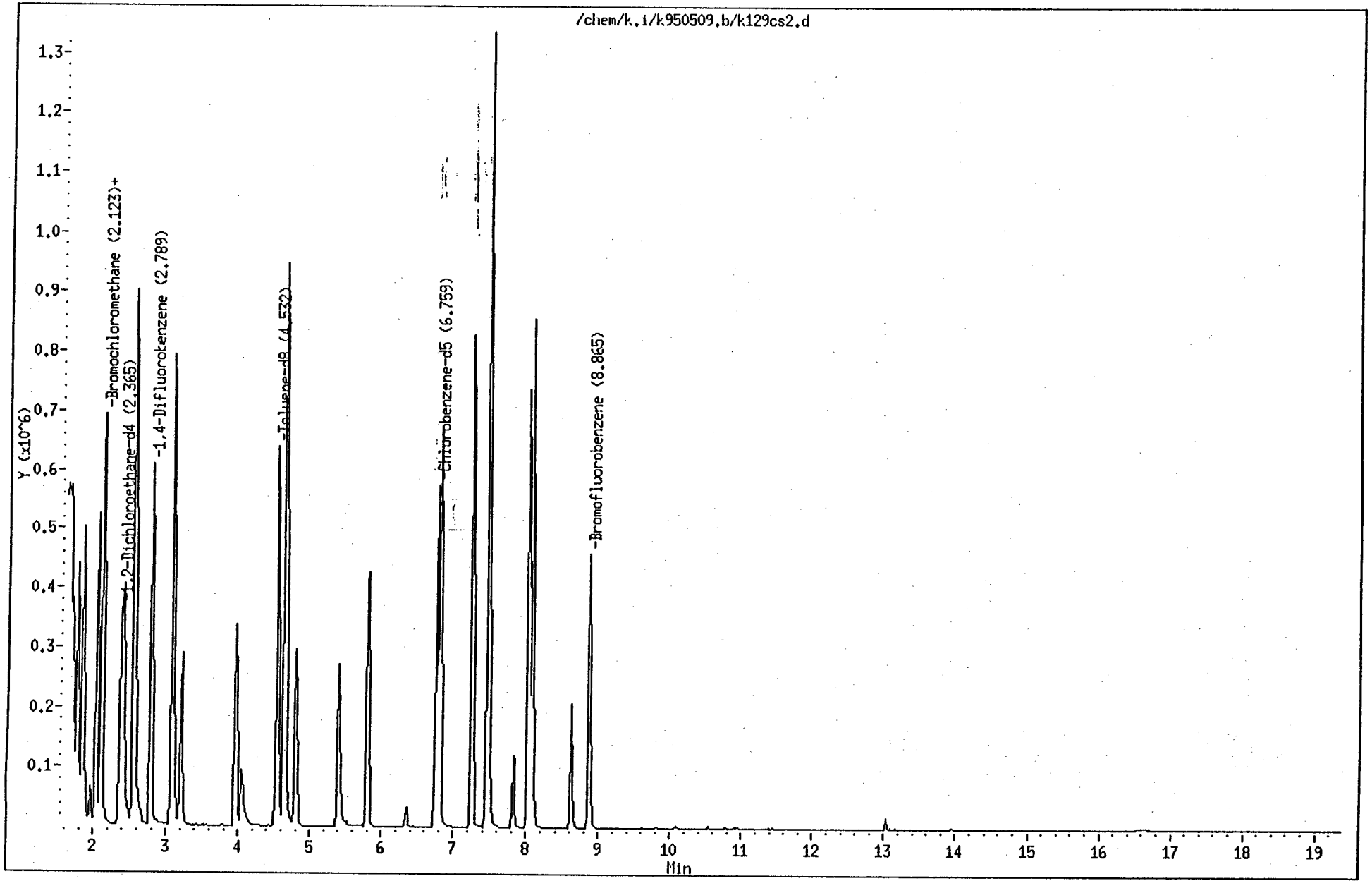
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/k.i/k950509.b/k129cs2.d
Date : 09-MAY-1995 11:08
Client ID:
Sample Info: 50 PPB STD 8240S

Instrument: k.i

Operator: HLW
Column diameter: 0.25

Column phase: 30m,hp5ms,0.25u df



3A

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: BLANK SAS No.: ___ SDG NO.: 505164

Matrix Spike - EPA Sample No.: BLK01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
Phenol	75	0	45	60	12-110
2-Chlorophenol	75	0	49	65	27-123
1,4-Dichlorobenzene	50	0	18	36	36- 97
N-Nitroso-di-n-propylamin	50	0	34	68	41-116
1,2,4-Trichlorobenzene	50	0	21	42	39- 98
4-Chloro-3-methylphenol	75	0	61	81	23- 97
Acenaphthene	50	0	32	64	46-118
4-Nitrophenol	75	0	48	64	10- 80
2,4-Dinitrotoluene	50	0	42	84	24- 96
Pentachlorophenol	75	0	44	59	9-103
Pyrene	50	0	32	64	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
Phenol	75	45	60	0	42	12-110
2-Chlorophenol	75	50	67	3	40	27-123
1,4-Dichlorobenzene	50	19	38	5	28	36- 97
N-Nitroso-di-n-propylamin	50	32	64	6	38	41-116
1,2,4-Trichlorobenzene	50	21	42	0	28	39- 98
4-Chloro-3-methylphenol	75	62	83	2	42	23- 97
Acenaphthene	50	33	66	3	31	46-118
4-Nitrophenol	75	51	68	6	50	10- 80
2,4-Dinitrotoluene	50	43	86	2	38	24- 96
Pentachlorophenol	75	46	61	3	50	9-103
Pyrene	50	30	60	6	31	26-127

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

* Values outside of QC Limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

FORM III SV - 1

Idelis Williams, QC Officer

Data File: /chem/h.i/h950515.b/h132kb2.d
Report Date: 16-May-1995 09:06

SPL Houston Labs

RECOVERY REPORT

Client Name:
Client SDG: h950515
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: LCS
Level: LOW
Operator: LH
Data Type: MS DATA
SampleType: BLANK
SpikeList File: 8270s.spk
Quant Type: ISTD
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
5 Phenol	2500	1000	40.44	26-90
9 2-Chlorophenol	2500	1200	46.75	25-102
12 1,4-Dichlorobenzen	1600	860	53.45	28-104
21 N-Nitroso-di-n-pro	1600	1100	70.37	41-126
31 1,2,4-Trichloroben	1600	930	57.96	38-107
36 4-Chloro-3-methylp	2500	1700	67.67	26-103
49 Acenaphthene	1600	930	58.26	31-137
51 4-Nitrophenol	2500	2200	90.05	11-114
53 2,4-Dinitrotoluene	1600	1200	73.91	28-89
64 Pentachlorophenol	2500	1800	73.89	17-109
71 Pyrene	1600	920	57.85	35-142

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 23 Nitrobenzene-d5	1600	990	61.83	23-120
$ 41 2-Fluorobiphenyl	1600	1000	62.39	30-115
$ 72 Terphenyl-d14	1600	1100	68.49	18-137
$ 3 2-Fluorophenol	2500	1100	44.79	25-121
$ 4 Phenol-d5	2500	1200	46.32	24-113
$ 61 2,4,6-Tribromophen	2500	2000	80.51	19-122

Idelis Williams, QC Officer

3B

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 505164 SAS No.: ___ SDG NO.: 505164

Matrix Spike - EPA Sample No.: 026-001BH 9-9.5

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC#	QC LIMIT REC.
Phenol	2500	0	1200	48	26- 90
2-Chlorophenol	2500	0	1500	60	25-102
1,4-Dichlorobenzene	1600	0	1100	69	28-104
N-Nitroso-di-n-prop.(1)	1600	0	1500	94	41-126
1,2,4-Trichlorobenzene	1600	0	1200	75	38-107
4-Chloro-3-methylphenol	2500	0	2100	84	26-103
Acenaphthene	1600	0	1200	75	31-137
4-Nitrophenol	2500	0	3300	132*	11-114
2,4-Dinitrotoluene	1600	0	1600	100*	28- 89
Pentachlorophenol	2500	0	2400	96	17-109
Pyrene	1600	0	1100	69	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
Phenol	2500	1200	48	0	35	26- 90
2-Chlorophenol	2500	1600	64	6	50	25-102
1,4-Dichlorobenzene	1600	1200	75	8	27	28-104
N-Nitroso-di-n-prop.(1)	1600	1700	106	12	38	41-126
1,2,4-Trichlorobenzene	1600	1400	88	16	23	38-107
4-Chloro-3-methylphenol	2500	2200	88	5	33	26-103
Acenaphthene	1600	1200	75	0	19	31-137
4-Nitrophenol	2500	3700	148*	11	50	11-114
2,4-Dinitrotoluene	1600	1600	100*	0	47	28- 89
Pentachlorophenol	2500	2400	96	0	47	17-109
Pyrene	1600	1000	63	9	36	35-142

(1) N-Nitroso-di-n-propylamine

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

* Values outside of QC Limits

RPD: 0 out of 11 outside limits

Spike Recovery: 4 out of 22 outside limits

FORM III SV - 2

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: E950512044703

Reported on: 05/18/95 13:27
Analyzed on: 05/15/95 18:42
Analyst: LH

METHOD 8270 BLANK H132B02

Compound	Result	Detection Limit	Units
Pyridine	ND	330	ug/Kg
Phenol	ND	330	ug/Kg
Aniline	ND	330	ug/Kg
bis(2-Chloroethyl)ether	ND	330	ug/Kg
2-Chlorophenol	ND	330	ug/Kg
1,3-Dichlorobenzene	ND	330	ug/Kg
1,4-Dichlorobenzene	ND	330	ug/Kg
Benzyl alcohol	ND	330	ug/Kg
1,2-Dichlorobenzene	ND	330	ug/Kg
2-Methylphenol	ND	330	ug/Kg
bis(2-chloroisopropyl)ethe	ND	330	ug/Kg
4-Methylphenol	ND	330	ug/Kg
N-Nitroso-di-n-propylamine	ND	330	ug/Kg
Hexachloroethane	ND	330	ug/Kg
Nitrobenzene	ND	330	ug/Kg
Isophorone	ND	330	ug/Kg
2-Nitrophenol	ND	330	ug/Kg
2,4-Dimethylphenol	ND	330	ug/Kg
Benzoic acid	ND	1600	ug/Kg
bis(2-Chloroethoxy)methane	ND	330	ug/Kg
2,4-Dichlorophenol	ND	330	ug/Kg
1,2,4-Trichlorobenzene	ND	330	ug/Kg
Naphthalene	ND	330	ug/Kg
4-Chloroaniline	ND	330	ug/Kg
Hexachlorobutadiene	ND	330	ug/Kg
4-Chloro-3-methylphenol	ND	330	ug/Kg
2-Methylnaphthalene	ND	330	ug/Kg
Hexachlorocyclopentadiene	ND	330	ug/Kg
2,4,6-Trichlorophenol	ND	330	ug/Kg
2,4,5-Trichlorophenol	ND	800	ug/Kg
2-Chloronaphthalene	ND	330	ug/Kg
2-Nitroaniline	ND	800	ug/Kg
Dimethylphthalate	ND	330	ug/Kg
2,6-Dinitrotoluene	ND	330	ug/Kg

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: E950512044703

Reported on: 05/18/95 13:27
Analyzed on: 05/15/95 18:42
Analyst: LH

METHOD 8270 BLANK H132B02

Compound	Result	Detection Limit	Units
Acenaphthylene	ND	330	ug/Kg
3-Nitroaniline	ND	800	ug/Kg
Acenaphthene	ND	330	ug/Kg
2,4-Dinitrophenol	ND	800	ug/Kg
4-Nitrophenol	ND	800	ug/Kg
Dibenzofuran	ND	330	ug/Kg
2,4-Dinitrotoluene	ND	330	ug/Kg
Diethylphthalate	ND	330	ug/Kg
4-Chlorophenyl-phenylether	ND	330	ug/Kg
Fluorene	ND	330	ug/Kg
4-Nitroaniline	ND	800	ug/Kg
4,6-Dinitro-2-methylphenol	ND	800	ug/Kg
n-Nitrosodiphenylamine	ND	330	ug/Kg
1,2-Diphenylhydrazine	ND	330	ug/Kg
4-Bromophenyl-phenylether	ND	330	ug/Kg
Hexachlorobenzene	ND	330	ug/Kg
Pentachlorophenol	ND	800	ug/Kg
Phenanthrene	ND	330	ug/Kg
Anthracene	ND	330	ug/Kg
Carbazole	ND	330	ug/Kg
Di-n-butylphthalate	ND	330	ug/Kg
Fluoranthene	ND	330	ug/Kg
Pyrene	ND	330	ug/Kg
Butylbenzylphthalate	ND	330	ug/Kg
3,3'-Dichlorobenzidine	ND	330	ug/Kg
Benzo[a]anthracene	ND	330	ug/Kg
Chrysene	ND	330	ug/Kg
bis(2-Ethylhexyl)phthalate	ND	330	ug/Kg
Di-n-octylphthalate	ND	330	ug/Kg
Benzo[b]fluoranthene	ND	330	ug/Kg
Benzo[k]fluoranthene	ND	330	ug/Kg
Benzo[a]pyrene	ND	330	ug/Kg
Indeno[1,2,3-cd]pyrene	ND	330	ug/Kg
Dibenz[a,h]anthracene	ND	330	ug/Kg

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Soil
Sample ID: BLANK
Batch: E950512044703

Reported on: 05/18/95 13:27
Analyzed on: 05/15/95 18:42
Analyst: LH

METHOD 8270 BLANK H132B02

Compound	Result	Detection Limit	Units
Benzo[g,h,i]perylene	ND	330	ug/Kg

Surrogate	Result	QC Criteria	Units
2-Fluorophenol	45	25-121	% Recovery
Phenol-d5	54	24-113	% Recovery
Nitrobenzene-d5	70	23-120	% Recovery
2-Fluorobiphenyl	71	30-115	% Recovery
2,4,6-Tribromophenol	88	19-122	% Recovery
Terphenyl-d14	86	18-137	% Recovery

Samples in Batch 9505164-01 9505164-02 9505164-03 9505164-04
9505164-05 9505164-06 9505164-07 9505164-08
9505164-09 9505164-10 9505164-12 9505164-13

Notes
ND - Not detected.

Idelis Williams, QC Officer

SPL Houston Labs

Data file : /chem/h.i/h950515.b/h132b02.d
Lab Smp Id:
Inj Date : 15-MAY-1995 18:42
Operator : LH
Inst ID: h.i
Smp Info : BLANK-8270S/1X
Misc Info : E132S1/H132B02/H135CC1
Comment :
Method : /chem/h.i/h950515.b/hclps.m
Meth Date : 16-May-1995 11:41 liping
Quant Type: ISTD
Cal Date : 15-MAY-1995 15:26
Cal File: h135cc1.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: blk.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/Kg)
$ 3 2-Fluorophenol	112.00	3.489	3.458	(0.780)	458931	68	1100
$ 4 Phenol-d5	99.00	4.188	4.193	(0.936)	598458	80	1300
* 11 1,4-Dichlorobenzene-d4	152.00	4.472	4.477	(1.000)	193111	40	
$ 23 Nitrobenzene-d5	82.00	4.982	4.999	(0.879)	382000	68	1100
* 32 Naphthalene-d8	136.00	5.669	5.674	(1.000)	711630	40	
$ 41 2-Fluorobiphenyl	172.00	6.759	6.765	(0.908)	768337	68	1100
* 48 Acenaphthene-d10	164.00	7.447	7.452	(1.000)	344724	40	
$ 61 2,4,6-Tribromophenol	329.70	8.264	8.258	(0.924)	215471	130	2200
* 65 Phenanthrene-d10	188.00	8.940	8.945	(1.000)	477181	40	
$ 72 Terphenyl-d14	244.00	10.575	10.580	(0.896)	688994	82	1400
* 76 Chrysene-d12	240.00	11.808	11.813	(1.000)	311102	40	
* 83 Perylene-d12	264.00	14.047	14.053	(1.000)	194677	40	

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h132b02.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950515.b/hclps.m
Misc Info: E132S1/H132B02/H135CC1

Calibration Date: 05/15/95
Calibration Time: 1526

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	123023	61512	246046	193111	56.97
32 Naphthalene-d8	418440	209220	836880	711630	70.07
48 Acenaphthene-d10	198324	99162	396648	344724	73.82
65 Phenanthrene-d10	270386	135193	540772	477181	76.48
76 Chrysene-d12	175926	87963	351852	311102	76.84
83 Perylene-d12	106536	53268	213072	194677	82.73

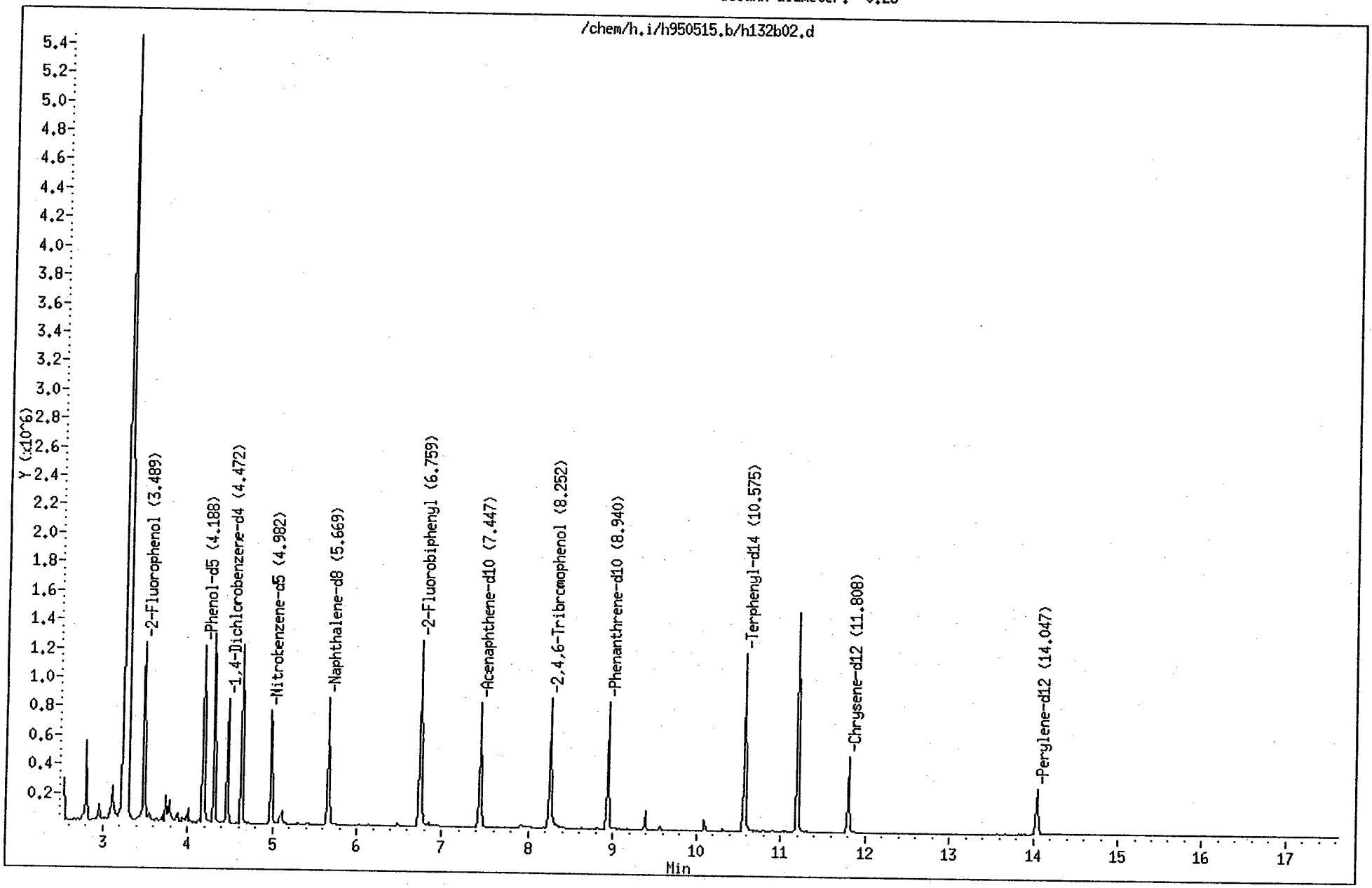
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.48	3.98	4.98	4.47	-0.12
32 Naphthalene-d8	5.67	5.17	6.17	5.67	-0.09
48 Acenaphthene-d10	7.45	6.95	7.95	7.45	-0.07
65 Phenanthrene-d10	8.95	8.45	9.45	8.94	-0.06
76 Chrysene-d12	11.81	11.31	12.31	11.81	-0.04
83 Perylene-d12	14.05	13.55	14.55	14.05	-0.04

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.

Data File: /chem/h.i/h950515.b/h132b02.d
Date : 15-MAY-1995 18:42
Client ID:
Sample Info: BLANK-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Matrix: Aqueous
Sample ID: BLANK
Batch: E950509041714

Reported on: 05/18/95 14:33
Analyzed on: 05/16/95 14:22
Analyst: PC

METHOD 8270

Compound	Result	Detection Limit	Units
Pyridine	ND	5	ug/L
Phenol	ND	5	ug/L
Aniline	ND	5	ug/L
bis(2-Chloroethyl)ether	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
bis(2-chloroisopropyl)ethe	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
N-Nitroso-di-n-propylamine	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Nitrobenzene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Benzoic acid	ND	25	ug/L
bis(2-Chloroethoxy)methane	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
4-Chloro-3-methylphenol	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
Dimethylphthalate	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950509041714

Reported on: 05/18/95 14:33
Analyzed on: 05/16/95 14:22
Analyst: PC

METHOD 8270

Compound	Result	Detection Limit	Units
Acenaphthylene	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
Acenaphthene	ND	5	ug/L
2,4-Dinitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
Dibenzofuran	ND	5	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
4-Chlorophenyl-phenylether	ND	5	ug/L
Fluorene	ND	5	ug/L
4-Nitroaniline	ND	25	ug/L
4,6-Dinitro-2-methylphenol	ND	25	ug/L
n-Nitrosodiphenylamine	ND	5	ug/L
1,2-Diphenylhydrazine	ND	5	ug/L
4-Bromophenyl-phenylether	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Anthracene	ND	5	ug/L
Carbazole	ND	5	ug/L
Di-n-butylphthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Pyrene	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
Benzo[a]anthracene	ND	5	ug/L
Chrysene	ND	5	ug/L
bis(2-Ethylhexyl)phthalate	ND	5	ug/L
Di-n-octylphthalate	ND	5	ug/L
Benzo[b]fluoranthene	ND	5	ug/L
Benzo[k]fluoranthene	ND	5	ug/L
Benzo[a]pyrene	ND	5	ug/L
Indeno[1,2,3-cd]pyrene	ND	5	ug/L
Dibenz[a,h]anthracene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950509041714

Reported on: 05/18/95 14:33
Analyzed on: 05/16/95 14:22
Analyst: PC

METHOD 8270

Compound	Result	Detection Limit	Units
Benzo[g,h,i]perylene	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
2-Fluorophenol	66	21-110	% Recovery
Phenol-d5	70	10-110	% Recovery
Nitrobenzene-d5	65	35-114	% Recovery
2-Fluorobiphenyl	61	43-116	% Recovery
2,4,6-Tribromophenol	63	10-123	% Recovery
Terphenyl-d14	75	33-141	% Recovery

Samples in Batch 9505164-11

Notes

ND - Not detected.

Idelis Williams, QC Officer

SPL Houston Labs

Data file : /chem/j.i/j950516.b/j129b01.d
Lab Smp Id:
Inj Date : 16-MAY-1995 14:22
Operator : PC
Smp Info : BLANK-8270W/1X
Misc Info : E129C1/J129B01a/J136CC1
Comment :
Method : /chem/j.i/j950516.b/jclpw.m
Meth Date : 17-May-1995 09:54 patti
Cal Date : 16-MAY-1995 13:36
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: j.i

Quant Type: ISTD
Cal File: j136cc1.d

Compound Sublist: BLK.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
$ 3 2-Fluorophenol	112.00	5.833	5.843	(0.724)	501427	99	50 (Q)
$ 4 Phenol-d5	99.00	7.445	7.451	(0.924)	1252051	100	53
* 11 1,4-Dichlorobenzene-d4	152.00	8.055	8.051	(1.000)	308234	40	
$ 23 Nitrobenzene-d5	82.00	9.265	9.274	(0.854)	802677	65	32
* 32 Naphthalene-d8	136.00	10.855	10.855	(1.000)	1317031	40	
$ 41 2-Fluorobiphenyl	172.00	13.491	13.495	(0.893)	1592569	61	30
* 48 Acenaphthene-d10	164.00	15.115	15.121	(1.000)	800572	40	
$ 61 2,4,6-Tribromophenol	329.70	17.096	17.100	(0.912)	358018	95	47
* 65 Phenanthrene-d10	188.00	18.740	18.738	(1.000)	1236696	40	
$ 72 Terphenyl-d14	244.00	22.711	22.709	(0.893)	1960106	75	37
* 76 Chrysene-d12	240.00	25.433	25.435	(1.000)	1056137	40	
* 83 Perylene-d12	264.00	29.954	29.953	(1.000)	695497	40	

QC Flag Legend

Q - Qualifier signal failed the ratio test.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: j.i
Lab File ID: j129b01.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: PC
Method File: /chem/j.i/j950516.b/jclpw.m
Misc Info: E129C1/J129B01a/J136CC1

Calibration Date: 05/16/95
Calibration Time: 1336

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	289308	144654	578616	308234	6.54
2 Naphthalene-d8	1152470	576235	2304940	1317031	14.28
8 Acenaphthene-d10	670048	335024	1340096	800572	19.48
65 Phenanthrene-d10	991595	495798	1983190	1236696	24.72
6 Chrysene-d12	817574	408787	1635148	1056137	29.18
3 Perylene-d12	498000	249000	996000	695497	39.66

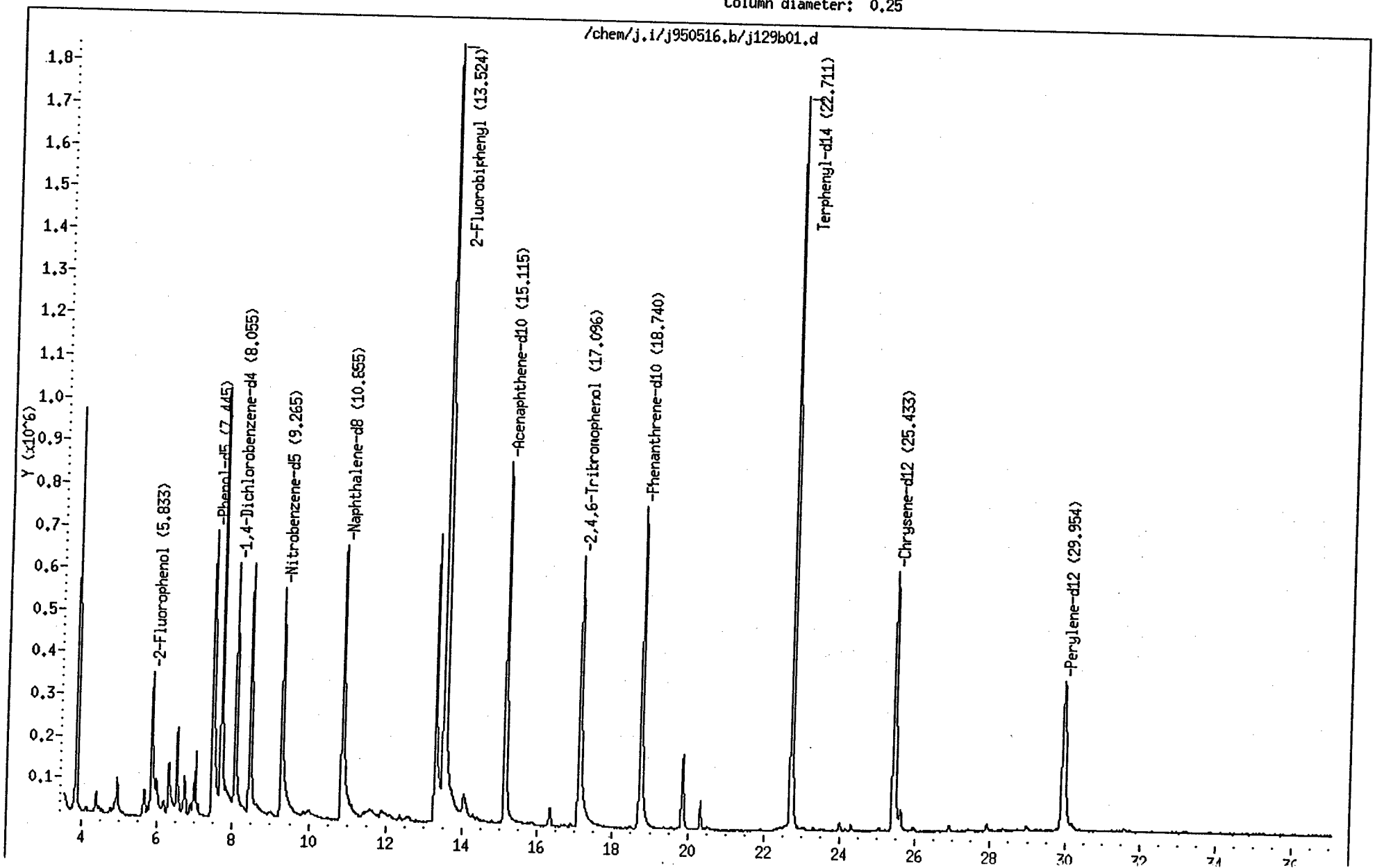
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	8.05	7.55	8.55	8.06	0.05
2 Naphthalene-d8	10.85	10.35	11.35	10.85	0.00
8 Acenaphthene-d10	15.12	14.62	15.62	15.12	-0.04
65 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.01
6 Chrysene-d12	25.44	24.94	25.94	25.43	-0.01
3 Perylene-d12	29.95	29.45	30.45	29.95	0.00

EA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/j.i/j950516.b/j129b01.d
Date : 16-MAY-1995 14:22
Client ID:
Sample Info: BLANK-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: j.i

Operator: PC
Column diameter: 0.25

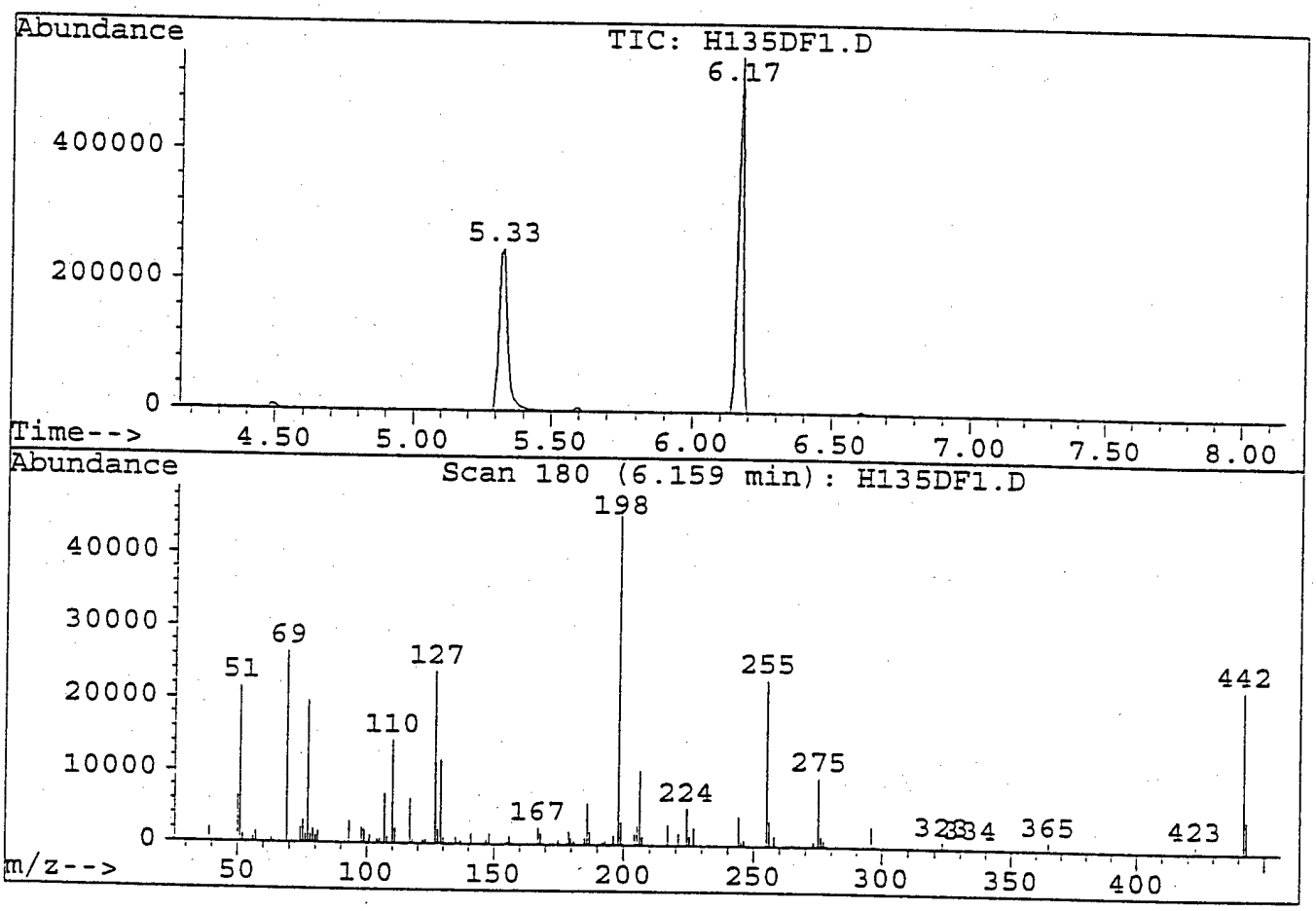


DFTPP

Data File : C:\HPCHEM\1\DATA\H950515\H135DF1.D
Acq On : 15 May 95 3:15 pm
Sample : 50 NG DFTPP
Misc : 950515 50NG DFTPP

Vial: 1
Operator: LH
Inst : h
Multiplr: 1.00

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



Peak Apex is scan: 180

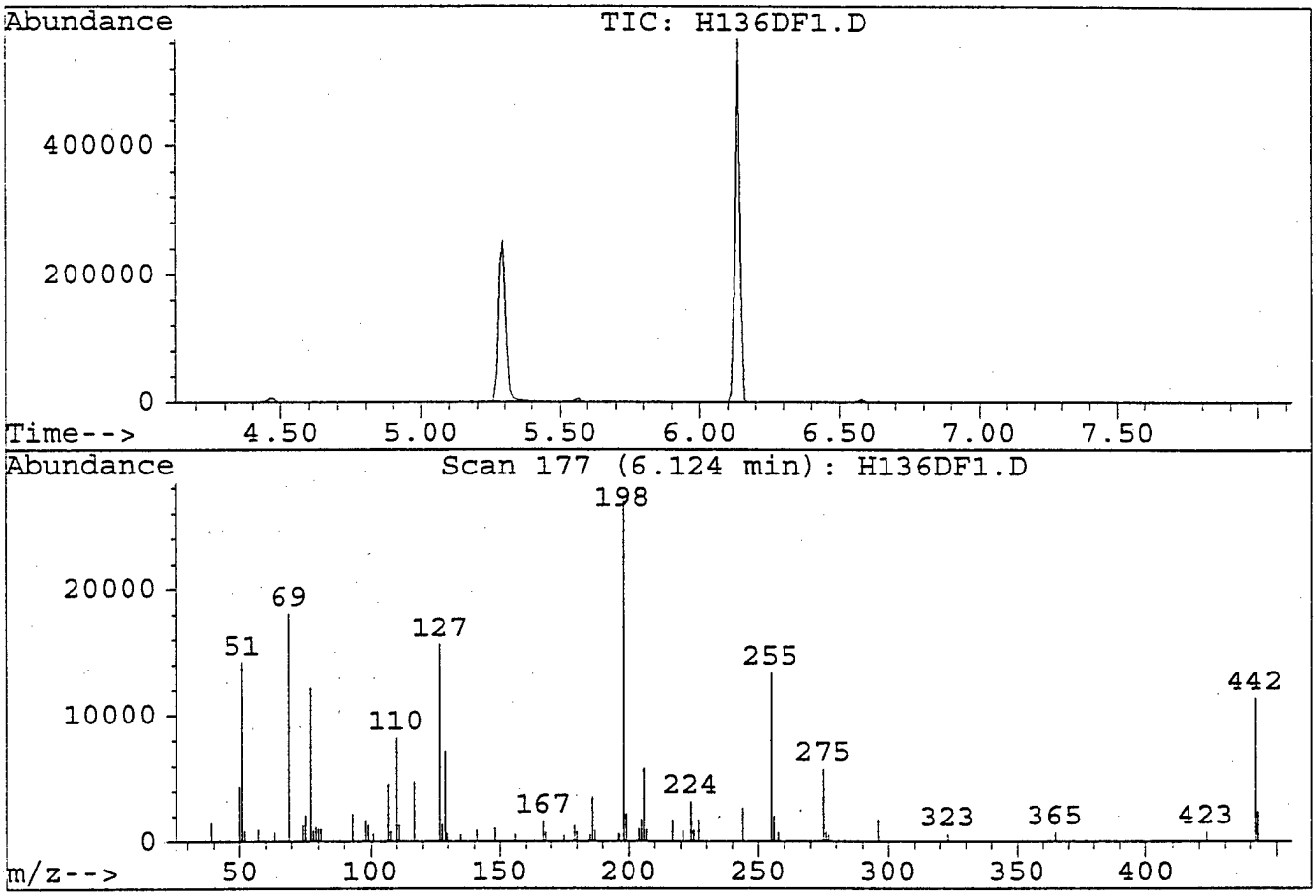
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.1	21560	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	56.4	26400	PASS
70	69	0	2	0.0	0	PASS
127	198	40	60	51.0	23840	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	46768	PASS
199	198	5	9	7.0	3269	PASS
275	198	10	30	20.6	9621	PASS
365	198	1	100	2.5	1187	PASS
441	443	0	100	0.0	0	PASS
442	198	40	100	48.2	22536	PASS
443	442	17	23	20.3	4578	PASS

DFTPP

Data File : C:\HPCHEM\1\DATA\H950516\H136DF1.D
Acq On : 16 May 95 11:38 am
Sample : 50 NG DFTPP
Misc : 950516 50NG DFTPP

Vial: 1
Operator: LH
Inst : h
Multiplr: 1.00

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



Peak Apex is scan: 177

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	52.5	14211	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	66.8	18088	PASS
70	69	0	2	0.0	0	PASS
127	198	40	60	57.8	15657	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	27088	PASS
199	198	5	9	8.2	2212	PASS
275	198	10	30	21.4	5796	PASS
365	198	1	100	2.6	706	PASS
441	443	0	100	0.0	0	PASS
442	198	40	100	42.1	11400	PASS
443	442	17	23	20.9	2388	PASS

H136DF1.D ENVDEF.M Tue May 16 12:53:56 1995

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-1995 09:16
End Cal Date : 09-MAY-1995 10:40
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950509.b/hclpw.m
Cal Date : 09-May-1995 11:30 liping
Curve Type : Average

Calibration File Names:
Level 1: /chem/h.i/h950509.b/h129ic5.d
Level 2: /chem/h.i/h950509.b/h129ic1.d
Level 3: /chem/h.i/h950509.b/h129ic4.d
Level 4: /chem/h.i/h950509.b/h129ic3.d
Level 5: /chem/h.i/h950509.b/h129ic2.d

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
2 Pyridine	2.41006	2.40386	2.38907	2.47800	2.41269	2.41874	1.421
5 Phenol	2.39101	2.31312	2.07640	1.95389	1.78818	2.10452	11.859
6 Aniline	2.83064	2.99908	2.59872	3.02862	3.12438	2.91629	7.089
7 bis(2-Chloroethyl)ether	2.31651	2.14323	2.29231	1.95672	2.17767	2.17729	6.593
9 2-Chlorophenol	1.66747	1.58616	1.45662	1.30849	1.20333	1.44441	13.254
10 1,3-Dichlorobenzene	1.64128	1.68639	1.50871	1.41113	1.26864	1.50323	11.336
12 1,4-Dichlorobenzene	1.64899	1.54700	1.45540	1.27374	1.16486	1.41800	13.940
13 Benzyl alcohol	1.12279	1.12036	1.06323	1.05735	1.03608	1.07996	3.640
15 1,2-Dichlorobenzene	1.53606	1.40289	1.24634	1.05666	0.91982	1.23236	20.289
16 2-Methylphenol	1.56309	1.53501	1.40501	1.28817	1.20746	1.39975	10.977
17 ortho-Cresol	1.56309	1.53501	1.40501	1.28817	1.20746	1.39975	10.977
18 bis(2-chloroisopropyl)ether	3.44894	3.57470	3.13493	2.90941	2.78033	3.16966	10.729
19 4-Methylphenol	1.62352	1.61320	1.52086	1.52256	1.54556	1.56514	3.174
20 meta,para-Cresol	1.62352	1.61320	1.52086	1.52256	1.54556	1.56514	3.174
21 N-Nitroso-di-n-propylamine	1.35750	1.39064	1.22699	1.12146	1.05780	1.23088	11.738
22 Hexachloroethane	0.70340	0.67436	0.64835	0.57522	0.52191	0.62465	11.935
24 Nitrobenzene	0.45839	0.44288	0.39645	0.36602	0.33918	0.40058	12.552
25 Isophorone	0.99209	0.96473	0.87435	0.86122	0.83731	0.90594	7.524
26 2-Nitrophenol	0.20455	0.19477	0.20163	0.18895	0.19085	0.19615	3.442
27 2,4-Dimethylphenol	0.40898	0.39478	0.35346	0.33046	0.33052	0.36364	10.036
28 Benzoic acid	0.18147	0.19326	0.19055	0.18544	0.24498	0.19914	13.070
29 bis(2-Chloroethoxy)methane	0.57521	0.55410	0.48552	0.45397	0.42182	0.49812	13.090
30 2,4-Dichlorophenol	0.27972	0.26877	0.26126	0.24621	0.23582	0.25835	6.783
31 1,2,4-Trichlorobenzene	0.29016	0.27745	0.26631	0.24217	0.23137	0.26149	9.328
33 Naphthalene	1.12718	1.03054	0.92096	0.80596	0.72709	0.92235	17.594
34 4-Chloroaniline	0.47387	0.45534	0.41045	0.38358	0.37649	0.41995	10.285

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-1995 09:16
End Cal Date : 09-MAY-1995 10:40
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950509.b/hclpw.m
Cal Date : 09-May-1995 11:30 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
35 Hexachlorobutadiene	0.13613	0.13345	0.12712	0.11827	0.11250	0.12550	7.967
36 4-Chloro-3-methylphenol	0.32164	0.30868	0.28273	0.26113	0.24831	0.28450	10.867
37 2-Methylnaphthalene	0.68230	0.62928	0.56896	0.48611	0.46235	0.56580	16.453
38 Hexachlorocyclopentadiene	0.35360	0.35554	0.36464	0.34117	0.33405	0.34980	3.472
39 2,4,6-Trichlorophenol	0.41846	0.37763	0.37231	0.41091	0.34892	0.38564	7.455
40 2,4,5-Trichlorophenol	0.39259	0.41530	0.43704	0.35702	0.36256	0.39290	8.685
42 2-Chloronaphthalene	1.28238	1.20163	1.11786	0.99704	0.92962	1.10571	13.057
43 2-Nitroaniline	0.47721	0.47177	0.45468	0.43652	0.42818	0.45367	4.710
44 Dimethylphthalate	1.46192	1.38199	1.32410	1.20519	1.13557	1.30175	10.128
45 2,6-Dinitrotoluene	0.30264	0.28891	0.30839	0.29307	0.28174	0.29495	3.613
46 Acenaphthylene	2.16295	1.99850	1.85335	1.63282	1.42728	1.81498	16.057
47 3-Nitroaniline	0.39441	0.38127	0.38162	0.36979	0.34779	0.37498	4.672
49 Acenaphthene	1.26682	1.15930	1.07599	0.92652	0.82173	1.05007	16.968
50 2,4-Dinitrophenol	0.09054	0.10351	0.13894	0.13956	0.13808	0.12213	19.142
51 4-Nitrophenol	0.11110	0.11550	0.12239	0.11928	0.11548	0.11675	3.667
52 Dibenzofuran	1.71552	1.58530	1.47864	1.25899	1.14726	1.43714	16.204
53 2,4-Dinitrotoluene	0.35257	0.34187	0.35133	0.31997	0.28887	0.33092	8.127
54 Diethylphthalate	1.52452	1.43618	1.34076	1.17235	1.06099	1.30696	14.507
55 4-Chlorophenyl-phenylether	0.57081	0.52399	0.48068	0.39129	0.36517	0.46639	18.665
56 Fluorene	1.27259	1.13363	1.04676	0.84787	0.77646	1.01546	20.077
57 4-Nitroaniline	0.37758	0.35764	0.36677	0.34143	0.32768	0.35422	5.616
58 4,6-Dinitro-2-methylphenol	0.11438	0.12611	0.15630	0.16224	0.15720	0.14325	15.025
59 n-Nitrosodiphenylamine	0.63052	0.62045	0.61510	0.56992	0.56742	0.60068	4.954
60 1,2-Diphenylhydrazine	2.99720	2.79410	2.17962	2.05431	1.92626	2.39030	19.888
62 4-Bromophenyl-phenylether	0.24302	0.24794	0.24045	0.22628	0.23240	0.23802	3.631
63 Hexachlorobenzene	0.27435	0.27465	0.27505	0.25612	0.25445	0.26692	3.987
64 Pentachlorophenol	0.14566	0.15130	0.16365	0.16382	0.16618	0.15812	5.743
66 Phenanthrene	1.29728	1.26559	1.15725	1.05110	1.03326	1.16089	10.366
67 Anthracene	1.29922	1.23640	1.14592	1.02890	0.98471	1.13903	11.708
68 Carbazole	1.20614	1.16288	1.12200	1.05786	1.01303	1.11238	7.003
69 Di-n-butylphthalate	1.90556	1.85945	1.74038	1.53164	1.48600	1.70461	11.105
70 Fluoranthene	1.05953	1.01745	1.00967	0.95799	0.89059	0.98705	6.573
71 Pyrene	1.75360	1.68190	1.45578	1.33653	1.32945	1.51145	13.003
73 Butylbenzylphthalate	1.06470	1.08240	1.01807	0.90866	0.94707	1.00418	7.445

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-1995 09:16
End Cal Date : 09-MAY-1995 10:40
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950509.b/hclpw.m
Cal Date : 09-May-1995 11:30 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	___ RRF	% RSD
74 3,3'-Dichlorobenzidine	0.44121	0.46249	0.49243	0.46831	0.46696	0.46628	3.912
75 Benzo[a]anthracene	1.22290	1.21720	1.22069	1.16626	1.15581	1.19657	2.734
77 Chrysene	1.11974	1.14332	1.01521	0.91533	0.89590	1.01790	11.149
78 bis(2-Ethylhexyl)phthalate	1.45828	1.40387	1.24000	1.02495	1.05184	1.23579	15.983
79 Di-n-octylphthalate	3.52113	3.69192	3.47991	3.09653	3.40536	3.43897	6.351
80 Benzo[b]fluoranthene	1.51946	1.54611	1.62811	1.82076	1.53453	1.60979	7.779
81 Benzo[k]fluoranthene	1.84621	1.90393	1.70062	1.40311	1.84671	1.74011	11.657
82 Benzo[a]pyrene	1.38484	1.36102	1.41258	1.34400	1.36639	1.37377	1.902
84 Indeno[1,2,3-cd]pyrene	1.68621	1.55947	1.75364	1.60745	1.56791	1.63494	5.086
85 Dibenz[a,h]anthracene	1.42134	1.29988	1.48445	1.33260	1.30268	1.36819	5.956
86 Benzo[g,h,i]perylene	1.34573	1.26579	1.43110	1.33526	1.29319	1.33422	4.723
96 Benzidine	0.03245	0.02965	0.02654	0.02518	0.02562	0.02789	11.086
$ 3 2-Fluorophenol	1.69211	1.65043	1.61375	1.53846	1.41293	1.58154	6.948
$ 4 Phenol-d5	2.19069	2.16877	1.98908	1.84375	1.72833	1.98412	10.140
$ 23 Nitrobenzene-d5	0.46273	0.43969	0.41626	0.38840	0.38088	0.41759	8.232
$ 41 2-Fluorobiphenyl	1.41509	1.32452	1.26278	1.09777	1.02145	1.22432	13.239
$ 61 2,4,6-Tribromophenol	0.13260	0.13493	0.14361	0.13882	0.14604	0.13920	4.067
$ 72 Terphenyl-d14	1.11232	1.09225	0.94628	0.85028	0.89891	0.98001	11.927

SPL Houston Labs

Data file : /chem/h.i/h950509.b/h129ic5.d
Lab Smp Id:
Inj Date : 09-MAY-1995 11:05
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950509 STD020
Comment :
Method : /chem/h.i/h950509.b/hclpw.m
Meth Date : 09-May-1995 11:38 liping Quant Type: ISTD
Cal Date : 09-MAY-1995 09:16 Cal File: h129ic1.d
Als bottle: 6 Calibration Sample, Level: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
2 Pyridine	79.00	2.897	2.897	(0.600)	525408	20	20
5 Phenol	94.00	4.497	4.497	(0.931)	521255	20	23
6 Aniline	93.00	4.556	4.556	(0.944)	617097	20	19
7 bis(2-Chloroethyl)ether	93.00	4.592	4.592	(0.951)	505015	20	21
9 2-Chlorophenol	128.00	4.663	4.663	(0.966)	363520	20	23
10 1,3-Dichlorobenzene	146.00	4.793	4.793	(0.993)	357810	20	22
12 1,4-Dichlorobenzene	146.00	4.841	4.841	(1.002)	359490	20	23
13 Benzyl alcohol	108.00	4.935	4.935	(1.022)	244776	20	21
15 1,2-Dichlorobenzene	146.00	5.007	5.007	(1.037)	334872	20	25
16 2-Methylphenol	108.00	5.042	5.042	(1.044)	340763	20	22
18 bis(2-chloroisopropyl)ether	45.00	5.089	5.089	(1.054)	751892	20	22
19 4-Methylphenol	108.00	5.172	5.172	(1.071)	353937	20	21
21 N-Nitroso-di-n-propylamine	70.00	5.208	5.208	(1.079)	295943	20	22
22 Hexachloroethane	117.00	5.303	5.303	(1.098)	153345	20	22
24 Nitrobenzene	77.00	5.362	5.362	(0.888)	369061	20	23
25 Isophorone	82.00	5.575	5.575	(0.923)	798760	20	22
26 2-Nitrophenol	139.00	5.670	5.670	(0.939)	164687	20	21(a)
27 2,4-Dimethylphenol	107.00	5.682	5.682	(0.941)	329281	20	22
28 Benzoic acid	122.00	5.777	5.777	(0.957)	146104	20	18(a)
29 bis(2-Chloroethoxy)methane	93.00	5.777	5.777	(0.957)	463121	20	23
30 2,4-Dichlorophenol	162.00	5.895	5.895	(0.976)	225208	20	22
31 1,2,4-Trichlorobenzene	180.00	5.990	5.990	(0.992)	233615	20	22
33 Naphthalene	128.00	6.049	6.049	(1.002)	907530	20	24
34 4-Chloroaniline	127.00	6.097	6.097	(1.010)	381531	20	22
35 Hexachlorobutadiene	225.00	6.227	6.227	(1.031)	109599	20	22
36 4-Chloro-3-methylphenol	107.00	6.559	6.559	(1.086)	258962	20	23
37 2-Methylnaphthalene	142.00	6.737	6.737	(1.116)	549342	20	24
38 Hexachlorocyclopentadiene	237.00	6.962	6.962	(0.891)	119424	20	20
39 2,4,6-Trichlorophenol	196.00	7.033	7.033	(0.900)	141331	20	22

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng)	ON-COL (ng)
	40	2,4,5-Trichlorophenol	196.00	7.068	7.068	(0.904)	132594	20	20
	42	2-Chloronaphthalene	162.00	7.223	7.223	(0.924)	433114	20	23
	43	2-Nitroaniline	65.00	7.329	7.329	(0.938)	161174	20	21(a)
	44	Dimethylphthalate	163.00	7.542	7.542	(0.965)	493751	20	22
	45	2,6-Dinitrotoluene	165.00	7.614	7.614	(0.974)	102213	20	20
	46	Acenaphthylene	152.00	7.649	7.649	(0.979)	730517	20	24
	47	3-Nitroaniline	138.00	7.756	7.756	(0.992)	133210	20	21(a)
	49	Acenaphthene	153.00	7.839	7.839	(1.003)	427857	20	24
	50	2,4-Dinitrophenol	184.00	7.862	7.862	(1.006)	30578	20	15(aQ)
	51	4-Nitrophenol	109.00	7.898	7.898	(1.011)	37524	20	19(a)
	52	Dibenzofuran	168.00	8.005	8.005	(1.024)	579402	20	24
	53	2,4-Dinitrotoluene	165.00	8.017	8.017	(1.026)	119076	20	21
	54	Diethylphthalate	149.00	8.265	8.265	(1.058)	514893	20	23
	55	4-Chlorophenyl-phenylether	204.00	8.336	8.336	(1.067)	192787	20	24
	56	Fluorene	166.00	8.348	8.348	(1.068)	429807	20	25
	57	4-Nitroaniline	138.00	8.372	8.372	(1.071)	127525	20	21(a)
	58	4,6-Dinitro-2-methylphenol	198.00	8.431	8.431	(0.906)	47897	20	16(a)
	59	n-Nitrosodiphenylamine	169.00	8.467	8.467	(0.910)	264023	20	21
	60	1,2-Diphenylhydrazine	77.00	8.502	8.502	(0.913)	1255050	20	25
	62	4-Bromophenyl-phenylether	248.00	8.834	8.834	(0.949)	101762	20	20
	63	Hexachlorobenzene	283.70	9.000	9.000	(0.967)	114880	20	20
	64	Pentachlorophenol	265.50	9.178	9.178	(0.986)	60993	20	18(a)
	66	Phenanthrene	178.00	9.332	9.332	(1.003)	543224	20	22
	67	Anthracene	178.00	9.379	9.379	(1.008)	544035	20	23
	68	Carbazole	167.00	9.533	9.533	(1.024)	505058	20	22
	69	Di-n-butylphthalate	149.00	9.913	9.913	(1.065)	797937	20	22
	70	Fluoranthene	202.00	10.552	10.552	(1.134)	443667	20	21
	71	Pyrene	202.00	10.789	10.789	(0.878)	448814	20	23
	73	Butylbenzylphthalate	149.00	11.524	11.524	(0.938)	272498	20	21
	74	3,3'-Dichlorobenzidine	252.00	12.211	12.211	(0.994)	112924	20	19
	75	Benzo[a]anthracene	228.00	12.259	12.259	(0.998)	312988	20	20
	77	Chrysene	228.00	12.318	12.318	(1.003)	286584	20	22
	78	bis(2-Ethylhexyl)phthalate	149.00	12.318	12.318	(1.003)	373230	20	24
	79	Di-n-octylphthalate	149.00	13.290	13.290	(0.907)	590658	20	20
	80	Benzo[b]fluoranthene	252.00	14.001	14.001	(0.956)	254884	20	19
	81	Benzo[k]fluoranthene	252.00	14.036	14.036	(0.958)	309695	20	21
	82	Benzo[a]pyrene	252.00	14.546	14.546	(0.993)	232302	20	20
	84	Indeno[1,2,3-cd]pyrene	276.00	16.845	16.845	(1.150)	282855	20	21
	85	Dibenz[a,h]anthracene	278.00	16.881	16.881	(1.152)	238424	20	21
	86	Benzo[g,h,i]perylene	276.00	17.473	17.473	(1.192)	225742	20	20
$	3	2-Fluorophenol	112.00	3.774	3.774	(0.782)	368892	20	21
$	4	Phenol-d5	99.00	4.497	4.497	(0.931)	477585	20	22
$	61	2,4,6-Tribromophenol	329.70	8.621	8.621	(0.926)	55527	20	19
$	23	Nitrobenzene-d5	82.00	5.338	5.338	(0.884)	372555	20	22
$	41	2-Fluorobiphenyl	172.00	7.116	7.116	(0.911)	477934	20	23
$	72	Terphenyl-d14	244.00	10.944	10.944	(0.891)	284685	20	23
*	11	1,4-Dichlorobenzene-d4	152.00	4.829	4.829	(1.000)	436013	40	
*	32	Naphthalene-d8	136.00	6.037	6.037	(1.000)	1610264	40	
*	48	Acenaphthene-d10	164.00	7.815	7.815	(1.000)	675483	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 65 Phenanthrene-d10	188.00	9.308	9.308	(1.000)	837481	40	
* 76 Chrysene-d12	240.00	12.283	12.283	(1.000)	511878	40	
* 83 Perylene-d12	264.00	14.653	14.653	(1.000)	335493	40	
17 ortho-Cresol	108.00	5.042	5.042	(1.044)	340763	20	22
20 meta,para-Cresol	108.00	5.172	5.172	(1.071)	353937	20	21
96 Benzidine	184.00	10.007	10.007	(0.815)	8306	20	23

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h129ic5.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950509.b/hclpw.m
Misc Info: 950509 STD020

Calibration Date: 05/09/95
Calibration Time: 0916

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	357593	178796	715186	436013	21.93
32 Naphthalene-d8	1345059	672530	2690118	1610264	19.72
48 Acenaphthene-d10	554554	277277	1109108	675483	21.81
65 Phenanthrene-d10	652753	326376	1305506	837481	28.30
76 Chrysene-d12	397498	198749	794996	511878	28.77
83 Perylene-d12	265183	132592	530366	335493	26.51

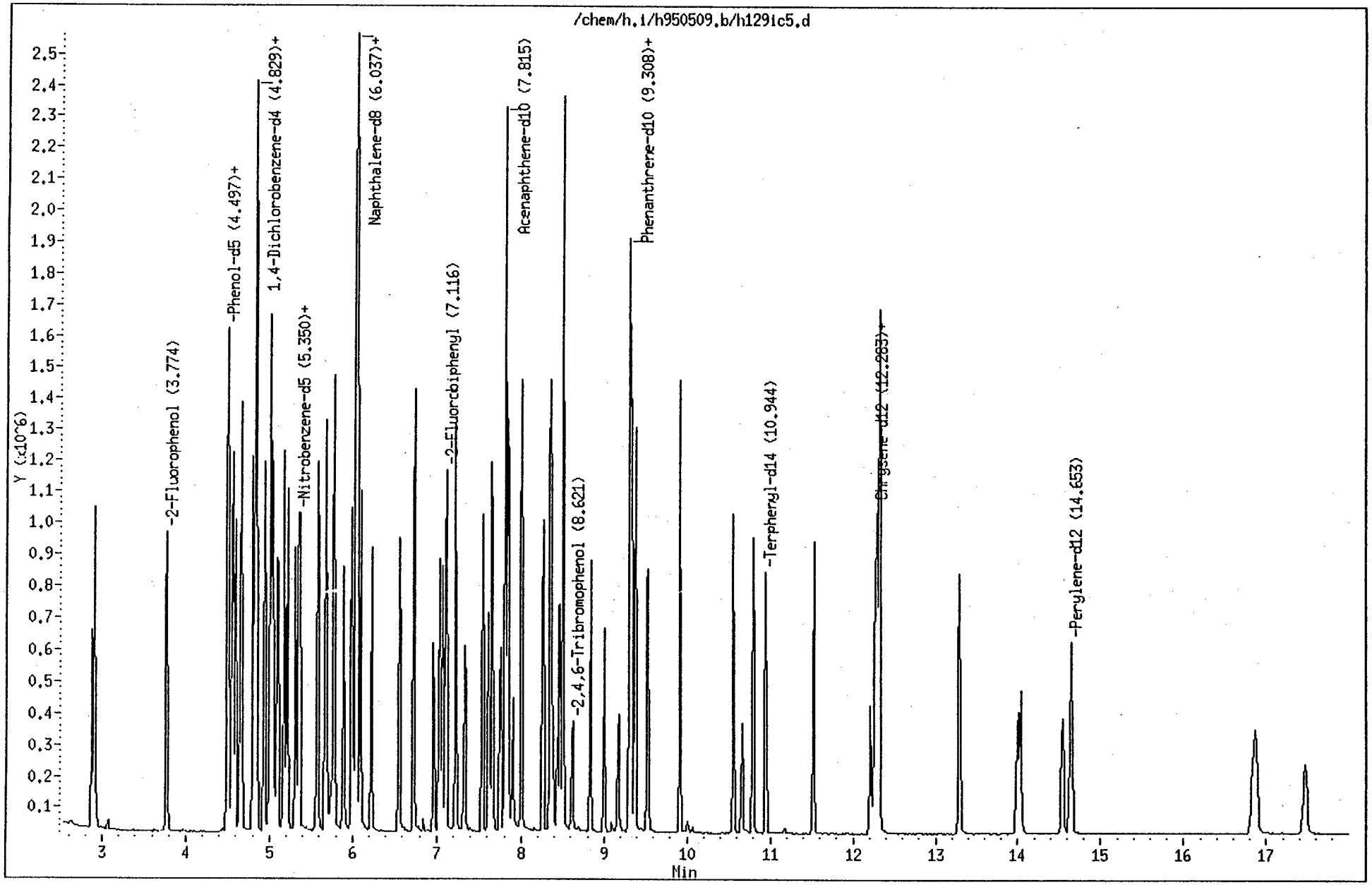
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.83	4.33	5.33	4.83	0.07
32 Naphthalene-d8	6.03	5.53	6.53	6.04	0.05
48 Acenaphthene-d10	7.81	7.31	8.31	7.82	0.04
65 Phenanthrene-d10	9.32	8.82	9.82	9.31	-0.09
76 Chrysene-d12	12.29	11.79	12.79	12.28	-0.07
83 Perylene-d12	14.65	14.15	15.15	14.65	0.02

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.

Data File: /chem/h.i/h950509.b/h129ic5.d
Date : 09-MAY-95 11:05
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950509.b/h129ic1.d
Lab Smp Id:
Inj Date : 09-MAY-1995 09:16
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950509 STD050
Comment :
Method : /chem/h.i/h950509.b/hclpw.m
Meth Date : 09-May-1995 11:38 liping Quant Type: ISTD
Cal Date : 09-MAY-1995 09:16 Cal File: h129ic1.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
2	Pyridine	79.00	2.906	2.906	(0.602)	1074503	50	50
5	Phenol	94.00	4.506	4.506	(0.934)	1033945	50	55
6	Aniline	93.00	4.553	4.553	(0.944)	1340564	50	51
7	bis(2-Chloroethyl)ether	93.00	4.589	4.589	(0.951)	958006	50	49
9	2-Chlorophenol	128.00	4.671	4.671	(0.968)	708998	50	55
10	1,3-Dichlorobenzene	146.00	4.802	4.802	(0.995)	753802	50	56
12	1,4-Dichlorobenzene	146.00	4.837	4.837	(1.002)	691496	50	54
13	Benzyl alcohol	108.00	4.944	4.944	(1.025)	500791	50	52
15	1,2-Dichlorobenzene	146.00	5.015	5.015	(1.039)	627080	50	57
16	2-Methylphenol	108.00	5.039	5.039	(1.044)	686134	50	55
18	bis(2-chloroisopropyl)ether	45.00	5.086	5.086	(1.054)	1597859	50	56
19	4-Methylphenol	108.00	5.181	5.181	(1.074)	721085	50	52
21	N-Nitroso-di-n-propylamine	70.00	5.217	5.217	(1.081)	621605	50	56
22	Hexachloroethane	117.00	5.300	5.300	(1.098)	301431	50	54
24	Nitrobenzene	77.00	5.371	5.371	(0.890)	744623	50	55
25	Isophorone	82.00	5.584	5.584	(0.925)	1622021	50	53
26	2-Nitrophenol	139.00	5.667	5.667	(0.939)	327473	50	50
27	2,4-Dimethylphenol	107.00	5.691	5.691	(0.943)	663756	50	54
28	Benzoic acid	122.00	5.809	5.809	(0.963)	324934	50	48(a)
29	bis(2-Chloroethoxy)methane	93.00	5.785	5.785	(0.959)	931625	50	56
30	2,4-Dichlorophenol	162.00	5.892	5.892	(0.976)	451886	50	52
31	1,2,4-Trichlorobenzene	180.00	5.987	5.987	(0.992)	466477	50	53
33	Naphthalene	128.00	6.058	6.058	(1.004)	1732678	50	56
34	4-Chloroaniline	127.00	6.105	6.105	(1.012)	765566	50	54
35	Hexachlorobutadiene	225.00	6.236	6.236	(1.033)	224375	50	53
36	4-Chloro-3-methylphenol	107.00	6.568	6.568	(1.088)	518999	50	54
37	2-Methylnaphthalene	142.00	6.733	6.733	(1.116)	1058020	50	56
38	Hexachlorocyclopentadiene	237.00	6.970	6.970	(0.892)	246461	50	51
39	2,4,6-Trichlorophenol	196.00	7.042	7.042	(0.901)	261768	50	49

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	40 2,4,5-Trichlorophenol	196.00	7.077	7.077	(0.906)	287882	50	53
	42 2-Chloronaphthalene	162.00	7.231	7.231	(0.926)	832959	50	54
	43 2-Nitroaniline	65.00	7.338	7.338	(0.939)	327026	50	52
	44 Dimethylphthalate	163.00	7.551	7.551	(0.967)	957987	50	53
	45 2,6-Dinitrotoluene	165.00	7.622	7.622	(0.976)	200267	50	49
	46 Acenaphthylene	152.00	7.658	7.658	(0.980)	1385346	50	55
	47 3-Nitroaniline	138.00	7.764	7.764	(0.994)	264292	50	51
	49 Acenaphthene	153.00	7.847	7.847	(1.005)	803619	50	55
	50 2,4-Dinitrophenol	184.00	7.859	7.859	(1.006)	71750	50	42(a)
	51 4-Nitrophenol	109.00	7.907	7.907	(1.012)	80065	50	49
	52 Dibenzofuran	168.00	8.001	8.001	(1.024)	1098917	50	55
	53 2,4-Dinitrotoluene	165.00	8.013	8.013	(1.026)	236980	50	52(M)
	54 Diethylphthalate	149.00	8.274	8.274	(1.059)	995548	50	55
	55 4-Chlorophenyl-phenylether	204.00	8.345	8.345	(1.068)	363229	50	56
	56 Fluorene	166.00	8.357	8.357	(1.070)	785822	50	56
	57 4-Nitroaniline	138.00	8.392	8.392	(1.074)	247912	50	50
	58 4,6-Dinitro-2-methylphenol	198.00	8.440	8.440	(0.906)	102898	50	44(a)
	59 n-Nitrosodiphenylamine	169.00	8.475	8.475	(0.910)	506252	50	52
	60 1,2-Diphenylhydrazine	77.00	8.511	8.511	(0.913)	2279818	50	58
	62 4-Bromophenyl-phenylether	248.00	8.843	8.843	(0.949)	202302	50	52
	63 Hexachlorobenzene	283.70	9.009	9.009	(0.967)	224099	50	51
	64 Pentachlorophenol	265.50	9.175	9.175	(0.985)	123452	50	48(a)
	66 Phenanthrene	178.00	9.341	9.341	(1.003)	1032649	50	54
	67 Anthracene	178.00	9.388	9.388	(1.008)	1008829	50	54
	68 Carbazole	167.00	9.530	9.530	(1.023)	948842	50	52
	69 Di-n-butylphthalate	149.00	9.921	9.921	(1.065)	1517202	50	54
	70 Fluoranthene	202.00	10.561	10.561	(1.134)	830177	50	52
	71 Pyrene	202.00	10.798	10.798	(0.879)	835689	50	56
	73 Butylbenzylphthalate	149.00	11.533	11.533	(0.938)	537817	50	54
	74 3,3'-Dichlorobenzidine	252.00	12.220	12.220	(0.994)	229798	50	50
	75 Benzo[a]anthracene	228.00	12.268	12.268	(0.998)	604795	50	51
	77 Chrysene	228.00	12.327	12.327	(1.003)	568084	50	56
	78 bis(2-Ethylhexyl)phthalate	149.00	12.327	12.327	(1.003)	697543	50	57
	79 Di-n-octylphthalate	149.00	13.299	13.299	(0.908)	1223792	50	54
	80 Benzo[b]fluoranthene	252.00	14.010	14.010	(0.956)	512501	50	48
	81 Benzo[k]fluoranthene	252.00	14.045	14.045	(0.959)	631111	50	55
	82 Benzo[a]pyrene	252.00	14.555	14.555	(0.994)	451150	50	50
	84 Indeno[1,2,3-cd]pyrene	276.00	16.854	16.854	(1.150)	516931	50	48
	85 Dibenz[a,h]anthracene	278.00	16.889	16.889	(1.153)	430882	50	48
	86 Benzo[g,h,i]perylene	276.00	17.494	17.494	(1.194)	419581	50	47
$	3 2-Fluorophenol	112.00	3.771	3.771	(0.781)	737729	50	52
$	4 Phenol-d5	99.00	4.494	4.494	(0.931)	969420	50	55
$	61 2,4,6-Tribromophenol	329.70	8.629	8.629	(0.926)	110093	50	48
$	23 Nitrobenzene-d5	82.00	5.347	5.347	(0.886)	739261	50	53
$	41 2-Fluorobiphenyl	172.00	7.113	7.113	(0.910)	918147	50	54
$	72 Terphenyl-d14	244.00	10.952	10.952	(0.891)	542711	50	56
*	11 1,4-Dichlorobenzene-d4	152.00	4.826	4.826	(1.000)	357593	40	
*	32 Naphthalene-d8	136.00	6.034	6.034	(1.000)	1345059	40	
*	48 Acenaphthene-d10	164.00	7.812	7.812	(1.000)	554554	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 65 Phenanthrene-d10	188.00	9.317	9.317	(1.000)	652753	40	
76 Chrysene-d12	240.00	12.291	12.291	(1.000)	397498	40	
83 Perylene-d12	264.00	14.649	14.649	(1.000)	265183	40	
17 ortho-Cresol	108.00	5.039	5.039	(1.044)	686134	50	55
20 meta,para-Cresol	108.00	5.181	5.181	(1.074)	721085	50	52
96 Benzidine	184.00	10.016	10.016	(0.815)	14734	50	53

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: /chem/h.i/h950509.b/h129ic1.d
Report Date: 13-May-1995 17:15

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h129ic1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950509.b/hclpw.m
Misc Info: 950509 STD050

Calibration Date: 05/09/95
Calibration Time: 0916

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	357593	178796	715186	357593	0.00
32 Naphthalene-d8	1345059	672530	2690118	1345059	0.00
48 Acenaphthene-d10	554554	277277	1109108	554554	0.00
65 Phenanthrene-d10	652753	326376	1305506	652753	0.00
76 Chrysene-d12	397498	198749	794996	397498	0.00
83 Perylene-d12	265183	132592	530366	265183	0.00

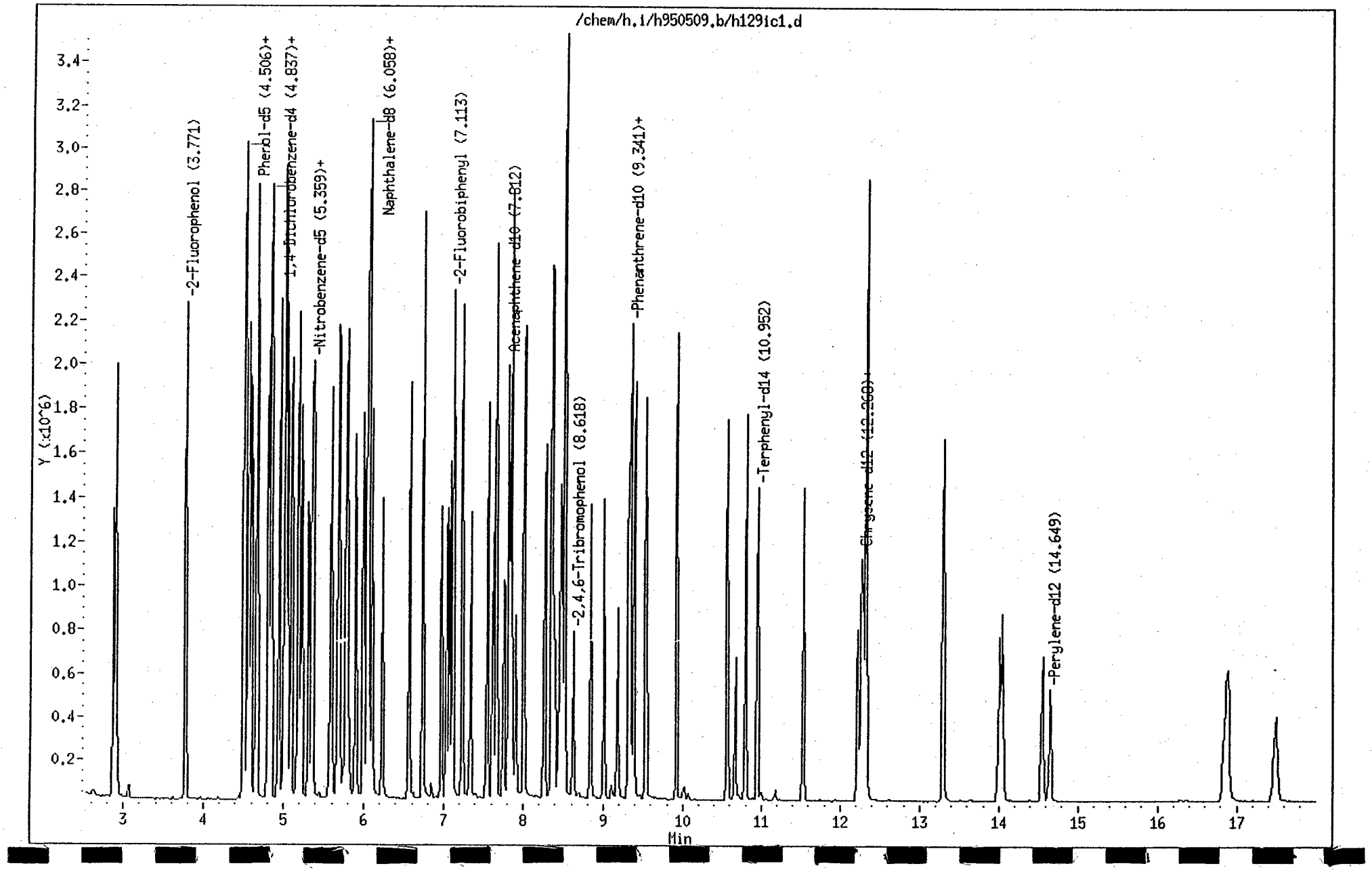
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.83	4.33	5.33	4.83	0.00
32 Naphthalene-d8	6.03	5.53	6.53	6.03	0.00
48 Acenaphthene-d10	7.81	7.31	8.31	7.81	0.00
65 Phenanthrene-d10	9.32	8.82	9.82	9.32	0.00
76 Chrysene-d12	12.29	11.79	12.79	12.29	0.00
83 Perylene-d12	14.65	14.15	15.15	14.65	0.00

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.

Data File: /chem/h.i/h950509.b/h129ic1.d
Date : 09-MAY-95 09:16
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950509.b/h129ic4.d
Lab Smp Id:
Inj Date : 09-MAY-1995 10:40
Operator : LH
Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950509 STD080
Comment :
Method : /chem/h.i/h950509.b/hclpw.m
Meth Date : 09-May-1995 11:38 liping
Quant Type: ISTD
Cal Date : 09-MAY-1995 09:16
Cal File: h129ic1.d
Als bottle: 5
Calibration Sample, Level: 3
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
2 Pyridine	79.00	2.893	2.893	(0.600)	1531069	80	79
5 Phenol	94.00	4.517	4.517	(0.936)	1330688	80	79
6 Aniline	93.00	4.564	4.564	(0.946)	1665428	80	71
7 bis(2-Chloroethyl)ether	93.00	4.600	4.600	(0.953)	1469057	80	84
9 2-Chlorophenol	128.00	4.671	4.671	(0.968)	933495	80	81
10 1,3-Dichlorobenzene	146.00	4.801	4.801	(0.995)	966876	80	80
12 1,4-Dichlorobenzene	146.00	4.849	4.849	(1.005)	932712	80	82
13 Benzyl alcohol	108.00	4.944	4.944	(1.025)	681386	80	79
15 1,2-Dichlorobenzene	146.00	5.015	5.015	(1.039)	798735	80	81
16 2-Methylphenol	108.00	5.050	5.050	(1.047)	900423	80	80
18 bis(2-chloroisopropyl)ether	45.00	5.086	5.086	(1.054)	2009066	80	79
19 4-Methylphenol	108.00	5.181	5.181	(1.074)	974667	80	78
21 N-Nitroso-di-n-propylamine	70.00	5.228	5.228	(1.083)	786336	80	80
22 Hexachloroethane	117.00	5.311	5.311	(1.101)	415501	80	83
24 Nitrobenzene	77.00	5.370	5.370	(0.890)	943215	80	79
25 Isophorone	82.00	5.595	5.595	(0.927)	2080242	80	77
26 2-Nitrophenol	139.00	5.678	5.678	(0.941)	479715	80	82
27 2,4-Dimethylphenol	107.00	5.690	5.690	(0.943)	840939	80	78
28 Benzoic acid	122.00	5.832	5.832	(0.967)	453359	80	76 (M)
29 bis(2-Chloroethoxy)methane	93.00	5.785	5.785	(0.959)	1155143	80	78
30 2,4-Dichlorophenol	162.00	5.903	5.903	(0.978)	621576	80	81
31 1,2,4-Trichlorobenzene	180.00	5.998	5.998	(0.994)	633592	80	81
33 Naphthalene	128.00	6.057	6.057	(1.004)	2191124	80	80
34 4-Chloroaniline	127.00	6.105	6.105	(1.012)	976525	80	78
35 Hexachlorobutadiene	225.00	6.235	6.235	(1.033)	302447	80	81
36 4-Chloro-3-methylphenol	107.00	6.567	6.567	(1.088)	672673	80	80
37 2-Methylnaphthalene	142.00	6.745	6.745	(1.118)	1353663	80	80
38 Hexachlorocyclopentadiene	237.00	6.970	6.970	(0.892)	346967	80	83
39 2,4,6-Trichlorophenol	196.00	7.041	7.041	(0.901)	354261	80	77

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
40	2,4,5-Trichlorophenol	196.00	7.077	7.077	(0.906)	415854	80	89
42	2-Chloronaphthalene	162.00	7.231	7.231	(0.926)	1063680	80	81
43	2-Nitroaniline	65.00	7.337	7.337	(0.939)	432639	80	80
44	Dimethylphthalate	163.00	7.551	7.551	(0.967)	1259921	80	81
45	2,6-Dinitrotoluene	165.00	7.622	7.622	(0.976)	293443	80	84
46	Acenaphthylene	152.00	7.657	7.657	(0.980)	1763516	80	82
47	3-Nitroaniline	138.00	7.764	7.764	(0.994)	363124	80	81
49	Acenaphthene	153.00	7.847	7.847	(1.005)	1023838	80	82
50	2,4-Dinitrophenol	184.00	7.871	7.871	(1.008)	132206	80	91(Q)
51	4-Nitrophenol	109.00	7.918	7.918	(1.014)	116458	80	84
52	Dibenzofuran	168.00	8.013	8.013	(1.026)	1406973	80	82
53	2,4-Dinitrotoluene	165.00	8.025	8.025	(1.027)	334298	80	85
54	Diethylphthalate	149.00	8.273	8.273	(1.059)	1275778	80	82
55	4-Chlorophenyl-phenylether	204.00	8.345	8.345	(1.068)	457383	80	82
56	Fluorene	166.00	8.356	8.356	(1.070)	996022	80	82
57	4-Nitroaniline	138.00	8.392	8.392	(1.074)	348990	80	83
58	4,6-Dinitro-2-methylphenol	198.00	8.451	8.451	(0.907)	172733	80	87
59	n-Nitrosodiphenylamine	169.00	8.475	8.475	(0.910)	679753	80	82
60	1,2-Diphenylhydrazine	77.00	8.510	8.510	(0.913)	2408725	80	73
62	4-Bromophenyl-phenylether	248.00	8.842	8.842	(0.949)	265724	80	81
63	Hexachlorobenzene	283.70	9.008	9.008	(0.967)	303961	80	82
64	Pentachlorophenol	265.50	9.186	9.186	(0.986)	180851	80	83
66	Phenanthrene	178.00	9.340	9.340	(1.003)	1278888	80	80
67	Anthracene	178.00	9.387	9.387	(1.008)	1266364	80	80
68	Carbazole	167.00	9.530	9.530	(1.023)	1239930	80	81
69	Di-n-butylphthalate	149.00	9.921	9.921	(1.065)	1923310	80	82
70	Fluoranthene	202.00	10.561	10.561	(1.134)	1115799	80	82
71	Pyrene	202.00	10.798	10.798	(0.878)	1140541	80	77
73	Butylbenzylphthalate	149.00	11.532	11.532	(0.938)	797614	80	81
74	3,3'-Dichlorobenzidine	252.00	12.220	12.220	(0.994)	385799	80	84
75	Benzo[a]anthracene	228.00	12.267	12.267	(0.998)	956361	80	82
77	Chrysene	228.00	12.338	12.338	(1.004)	795378	80	80
78	bis(2-Ethylhexyl)phthalate	149.00	12.326	12.326	(1.003)	971489	80	80
79	Di-n-octylphthalate	149.00	13.298	13.298	(0.908)	1993743	80	81
80	Benzo[b]fluoranthene	252.00	14.009	14.009	(0.956)	932791	80	81
81	Benzo[k]fluoranthene	252.00	14.056	14.056	(0.960)	974335	80	78
82	Benzo[a]pyrene	252.00	14.566	14.566	(0.994)	809309	80	82
84	Indeno[1,2,3-cd]pyrene	276.00	16.877	16.877	(1.152)	1004714	80	86
85	Dibenz[a,h]anthracene	278.00	16.912	16.912	(1.155)	850485	80	87
86	Benzo[g,h,i]perylene	276.00	17.517	17.517	(1.196)	819921	80	86
$ 3	2-Fluorophenol	112.00	3.770	3.770	(0.781)	1034192	80	82
$ 4	Phenol-d5	99.00	4.505	4.505	(0.934)	1274731	80	80
$ 61	2,4,6-Tribromophenol	329.70	8.629	8.629	(0.926)	158710	80	82
$ 23	Nitrobenzene-d5	82.00	5.346	5.346	(0.886)	990370	80	80
$ 41	2-Fluorobiphenyl	172.00	7.124	7.124	(0.912)	1201572	80	82
$ 72	Terphenyl-d14	244.00	10.952	10.952	(0.891)	741370	80	77
* 11	1,4-Dichlorobenzene-d4	152.00	4.825	4.825	(1.000)	320432	40	
* 32	Naphthalene-d8	136.00	6.034	6.034	(1.000)	1189591	40	
* 48	Acenaphthene-d10	164.00	7.811	7.811	(1.000)	475765	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 65 Phenanthrene-d10	188.00	9.316	9.316	(1.000)	552555	40	
* 76 Chrysene-d12	240.00	12.291	12.291	(1.000)	391729	40	
* 83 Perylene-d12	264.00	14.649	14.649	(1.000)	286465	40	
17 ortho-Cresol	108.00	5.050	5.050	(1.047)	900423	80	80
20 meta,para-Cresol	108.00	5.181	5.181	(1.074)	974667	80	78
96 Benzidine	184.00	10.015	10.015	(0.815)	20794	80	76

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h129ic4.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950509.b/hclpw.m
Misc Info: 950509 STD080

Calibration Date: 05/09/95
Calibration Time: 0916

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	357593	178796	715186	320432	-10.39
32 Naphthalene-d8	1345059	672530	2690118	1189591	-11.56
48 Acenaphthene-d10	554554	277277	1109108	475765	-14.21
65 Phenanthrene-d10	652753	326376	1305506	552555	-15.35
76 Chrysene-d12	397498	198749	794996	391729	-1.45
83 Perylene-d12	265183	132592	530366	286465	8.03

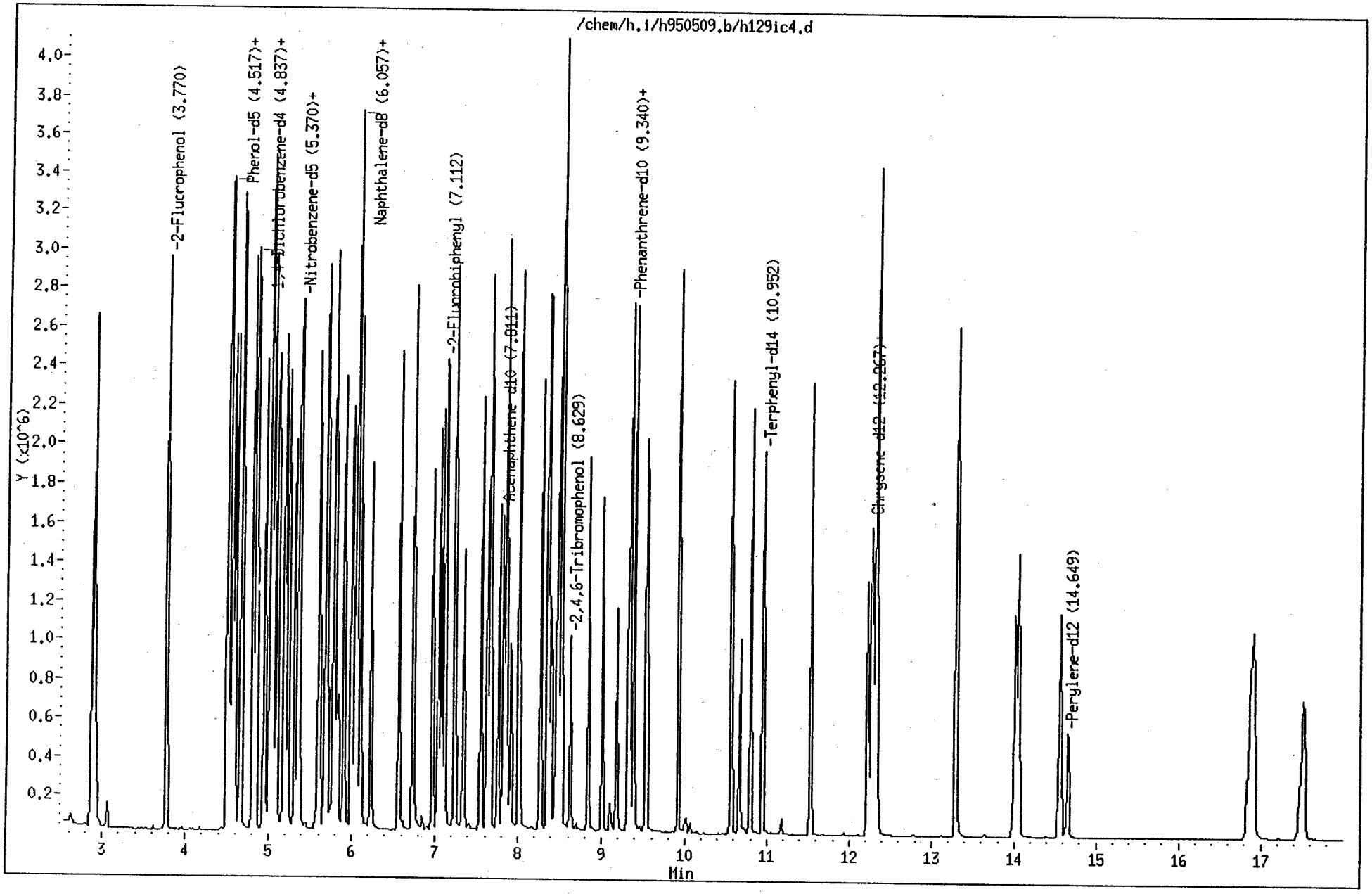
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.83	4.33	5.33	4.83	-0.01
32 Naphthalene-d8	6.03	5.53	6.53	6.03	-0.01
48 Acenaphthene-d10	7.81	7.31	8.31	7.81	-0.01
65 Phenanthrene-d10	9.32	8.82	9.82	9.32	-0.01
76 Chrysene-d12	12.29	11.79	12.79	12.29	0.00
83 Perylene-d12	14.65	14.15	15.15	14.65	0.00

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.

Data File: /chem/h.i/h950509.b/h129ic4.d
Date : 09-MAY-95 10:40
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950509.b/h129ic3.d
Lab Smp Id:
Inj Date : 09-MAY-1995 10:14
Operator : LH
Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950509 STD120
Comment :
Method : /chem/h.i/h950509.b/hclpw.m
Meth Date : 09-May-1995 11:38 liping
Quant Type: ISTD
Cal Date : 09-MAY-1995 09:16
Cal File: h129ic1.d
Als bottle: 4
Calibration Sample, Level: 4
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
2 Pyridine	79.00	2.897	2.897	(0.600)	2535101	120	120
5 Phenol	94.00	4.532	4.532	(0.939)	1998916	120	110
6 Aniline	93.00	4.568	4.568	(0.946)	3098401	120	120
7 bis(2-Chloroethyl)ether	93.00	4.604	4.604	(0.953)	2001810	120	110(QM)
9 2-Chlorophenol	128.00	4.675	4.675	(0.968)	1338645	120	110
10 1,3-Dichlorobenzene	146.00	4.805	4.805	(0.995)	1443643	120	110
12 1,4-Dichlorobenzene	146.00	4.852	4.852	(1.005)	1303094	120	110
13 Benzyl alcohol	108.00	4.959	4.959	(1.027)	1081718	120	120
15 1,2-Dichlorobenzene	146.00	5.018	5.018	(1.039)	1081011	120	100
16 2-Methylphenol	108.00	5.054	5.054	(1.047)	1317852	120	110
18 bis(2-chloroisopropyl)ether	45.00	5.089	5.089	(1.054)	2976452	120	110
19 4-Methylphenol	108.00	5.196	5.196	(1.076)	1557638	120	120
21 N-Nitroso-di-n-propylamine	70.00	5.243	5.243	(1.086)	1147303	120	110
22 Hexachloroethane	117.00	5.303	5.303	(1.098)	588476	120	110
24 Nitrobenzene	77.00	5.374	5.374	(0.890)	1405037	120	110
25 Isophorone	82.00	5.611	5.611	(0.929)	3305996	120	110
26 2-Nitrophenol	139.00	5.682	5.682	(0.941)	725313	120	120
27 2,4-Dimethylphenol	107.00	5.706	5.706	(0.945)	1268535	120	110
28 Benzoic acid	122.00	5.860	5.860	(0.971)	711848	120	110(M)
29 bis(2-Chloroethoxy)methane	93.00	5.789	5.789	(0.959)	1742670	120	110
30 2,4-Dichlorophenol	162.00	5.907	5.907	(0.978)	945137	120	110
31 1,2,4-Trichlorobenzene	180.00	6.002	6.002	(0.994)	929621	120	110
33 Naphthalene	128.00	6.061	6.061	(1.004)	3093873	120	100
34 4-Chloroaniline	127.00	6.109	6.109	(1.012)	1472464	120	110
35 Hexachlorobutadiene	225.00	6.239	6.239	(1.033)	454014	120	110
36 4-Chloro-3-methylphenol	107.00	6.571	6.571	(1.088)	1002411	120	110
37 2-Methylnaphthalene	142.00	6.748	6.748	(1.118)	1866028	120	100
38 Hexachlorocyclopentadiene	237.00	6.974	6.974	(0.892)	519025	120	120
39 2,4,6-Trichlorophenol	196.00	7.045	7.045	(0.901)	625108	120	130

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
40	2,4,5-Trichlorophenol	196.00	7.080	7.080	(0.906)	543135	120	110
42	2-Chloronaphthalene	162.00	7.234	7.234	(0.926)	1516794	120	110
43	2-Nitroaniline	65.00	7.353	7.353	(0.941)	664067	120	120
44	Dimethylphthalate	163.00	7.554	7.554	(0.967)	1833440	120	110
45	2,6-Dinitrotoluene	165.00	7.637	7.637	(0.977)	445844	120	120
46	Acenaphthylene	152.00	7.661	7.661	(0.980)	2483993	120	110
47	3-Nitroaniline	138.00	7.768	7.768	(0.994)	562563	120	120
49	Acenaphthene	153.00	7.851	7.851	(1.005)	1409509	120	100
50	2,4-Dinitrophenol	184.00	7.874	7.874	(1.008)	212317	120	140 (Q)
51	4-Nitrophenol	109.00	7.922	7.922	(1.014)	181466	120	120
52	Dibenzofuran	168.00	8.016	8.016	(1.026)	1915293	120	100
53	2,4-Dinitrotoluene	165.00	8.028	8.028	(1.027)	486760	120	120
54	Diethylphthalate	149.00	8.277	8.277	(1.059)	1783479	120	110
55	4-Chlorophenyl-phenylether	204.00	8.348	8.348	(1.068)	595266	120	100
56	Fluorene	166.00	8.360	8.360	(1.070)	1289862	120	100
57	4-Nitroaniline	138.00	8.408	8.408	(1.076)	519407	120	120
58	4,6-Dinitro-2-methylphenol	198.00	8.467	8.467	(0.908)	271708	120	140
59	n-Nitrosodiphenylamine	169.00	8.479	8.479	(0.910)	954445	120	110
60	1,2-Diphenylhydrazine	77.00	8.514	8.514	(0.914)	3440364	120	100
62	4-Bromophenyl-phenylether	248.00	8.846	8.846	(0.949)	378945	120	110
63	Hexachlorobenzene	283.70	9.012	9.012	(0.967)	428932	120	120
64	Pentachlorophenol	265.50	9.178	9.178	(0.985)	274351	120	120
66	Phenanthrene	178.00	9.344	9.344	(1.003)	1760275	120	110
67	Anthracene	178.00	9.391	9.391	(1.008)	1723112	120	110
68	Carbazole	167.00	9.545	9.545	(1.024)	1771608	120	110
69	Di-n-butylphthalate	149.00	9.924	9.924	(1.065)	2565053	120	110
70	Fluoranthene	202.00	10.564	10.564	(1.133)	1604359	120	120
71	Pyrene	202.00	10.801	10.801	(0.879)	1662242	120	110
73	Butylbenzylphthalate	149.00	11.536	11.536	(0.938)	1130110	120	110
74	3,3'-Dichlorobenzidine	252.00	12.235	12.235	(0.995)	582437	120	120
75	Benzo[a]anthracene	228.00	12.271	12.271	(0.998)	1450477	120	120
77	Chrysene	228.00	12.342	12.342	(1.004)	1138398	120	110
78	bis(2-Ethylhexyl)phthalate	149.00	12.330	12.330	(1.003)	1274729	120	100
79	Di-n-octylphthalate	149.00	13.302	13.302	(0.907)	2850610	120	110
80	Benzo[b]fluoranthene	252.00	14.025	14.025	(0.956)	1676163	120	140
81	Benzo[k]fluoranthene	252.00	14.072	14.072	(0.960)	1291677	120	97
82	Benzo[a]pyrene	252.00	14.570	14.570	(0.994)	1237260	120	120
84	Indeno[1,2,3-cd]pyrene	276.00	16.892	16.892	(1.152)	1479794	120	120
85	Dibenz[a,h]anthracene	278.00	16.928	16.928	(1.154)	1226765	120	120
86	Benzo[g,h,i]perylene	276.00	17.544	17.544	(1.196)	1229222	120	120
$ 3	2-Fluorophenol	112.00	3.774	3.774	(0.782)	1573910	120	120
$ 4	Phenol-d5	99.00	4.509	4.509	(0.934)	1886233	120	110
$ 61	2,4,6-Tribromophenol	329.70	8.633	8.633	(0.926)	232479	120	120
$ 23	Nitrobenzene-d5	82.00	5.362	5.362	(0.888)	1490971	120	110
$ 41	2-Fluorobiphenyl	172.00	7.128	7.128	(0.912)	1670024	120	110
$ 72	Terphenyl-d14	244.00	10.955	10.955	(0.891)	1057493	120	100
* 11	1,4-Dichlorobenzene-d4	152.00	4.829	4.829	(1.000)	341014	40	
* 32	Naphthalene-d8	136.00	6.037	6.037	(1.000)	1279576	40	
* 48	Acenaphthene-d10	164.00	7.815	7.815	(1.000)	507097	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 65 Phenanthrene-d10	188.00	9.320	9.320	(1.000)	558235	40	
76 Chrysene-d12	240.00	12.294	12.294	(1.000)	414568	40	
83 Perylene-d12	264.00	14.664	14.664	(1.000)	306861	40	
17 ortho-Cresol	108.00	5.054	5.054	(1.047)	1317852	120	110
20 meta,para-Cresol	108.00	5.196	5.196	(1.076)	1557638	120	120
96 Benzidine	184.00	10.007	10.007	(0.814)	31315	120	110

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h129ic3.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950509.b/hclpw.m
Misc Info: 950509 STD120

Calibration Date: 05/09/95
Calibration Time: 0916

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	357593	178796	715186	341014	-4.64
32 Naphthalene-d8	1345059	672530	2690118	1279576	-4.87
48 Acenaphthene-d10	554554	277277	1109108	507097	-8.56
65 Phenanthrene-d10	652753	326376	1305506	558235	-14.48
76 Chrysene-d12	397498	198749	794996	414568	4.29
83 Perylene-d12	265183	132592	530366	306861	15.72

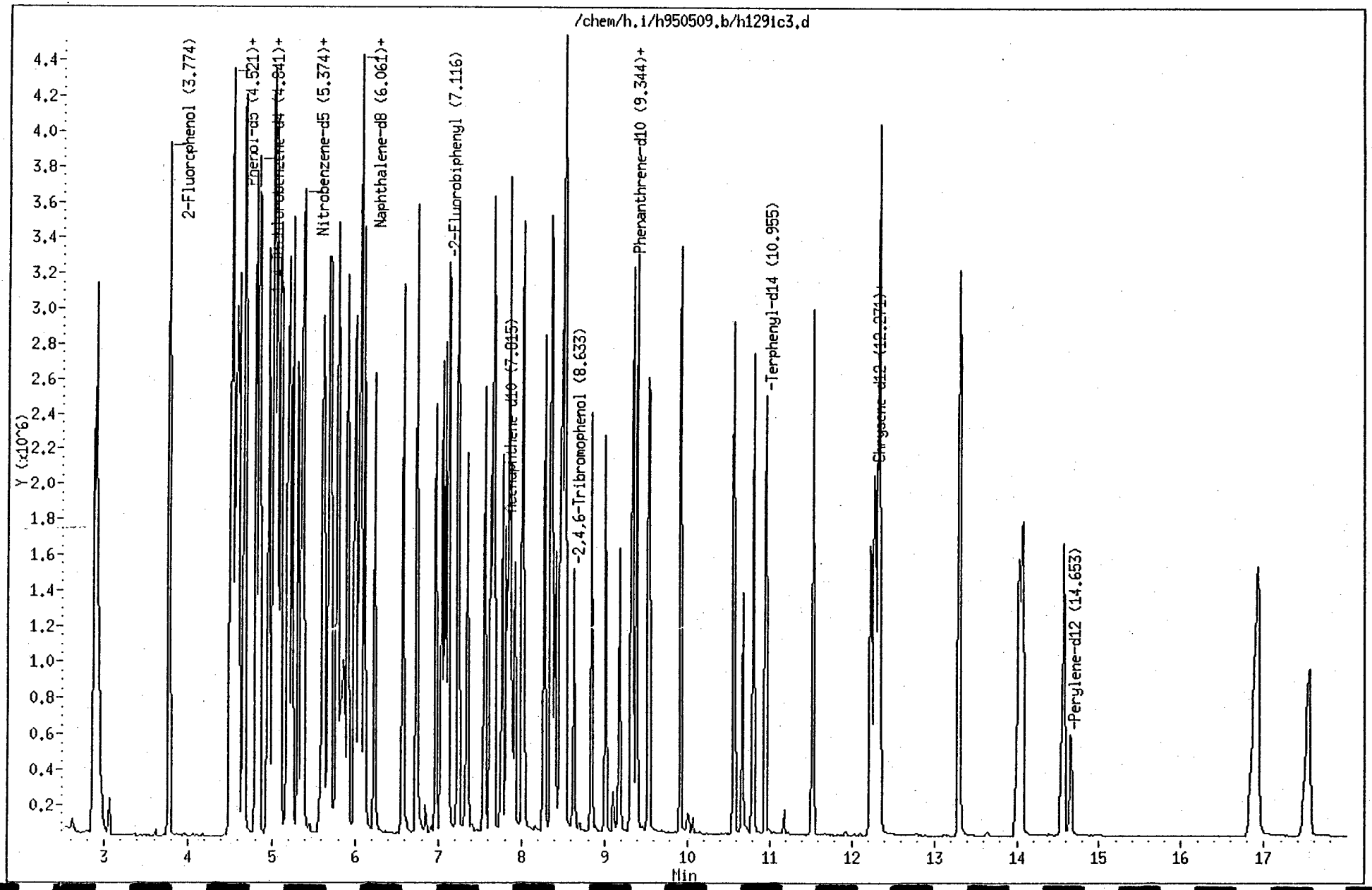
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.83	4.33	5.33	4.83	0.07
32 Naphthalene-d8	6.03	5.53	6.53	6.04	0.05
48 Acenaphthene-d10	7.81	7.31	8.31	7.82	0.04
65 Phenanthrene-d10	9.32	8.82	9.82	9.32	0.03
76 Chrysene-d12	12.29	11.79	12.79	12.29	0.03
83 Perylene-d12	14.65	14.15	15.15	14.66	0.10

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.

Data File: /chem/h.i/h950509.b/h129ic3.d
Date : 09-MAY-95 10:14
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950509.b/h129ic2.d
Lab Smp Id:
Inj Date : 09-MAY-1995 09:49
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950509 STD160
Comment :
Method : /chem/h.i/h950509.b/hclpw.m
Meth Date : 09-May-1995 11:38 liping Quant Type: ISTD
Cal Date : 09-MAY-1995 09:16 Cal File: h129ic1.d
Als bottle: 3 Calibration Sample, Level: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
2	Pyridine	79.00	2.893	2.893	(0.598)	3113270	160	160
5	Phenol	94.00	4.540	4.540	(0.939)	2307416	160	140
6	Aniline	93.00	4.576	4.576	(0.946)	4031608	160	170
7	bis(2-Chloroethyl)ether	93.00	4.611	4.611	(0.953)	2810001	160	160(QM)
9	2-Chlorophenol	128.00	4.682	4.682	(0.968)	1552741	160	130
10	1,3-Dichlorobenzene	146.00	4.801	4.801	(0.993)	1637014	160	140
12	1,4-Dichlorobenzene	146.00	4.848	4.848	(1.002)	1503100	160	130
13	Benzyl alcohol	108.00	4.967	4.967	(1.027)	1336933	160	150
15	1,2-Dichlorobenzene	146.00	5.026	5.026	(1.039)	1186915	160	120
16	2-Methylphenol	108.00	5.062	5.062	(1.047)	1558068	160	140
18	bis(2-chloroisopropyl)ether	45.00	5.097	5.097	(1.054)	3587666	160	140
19	4-Methylphenol	108.00	5.204	5.204	(1.076)	1994351	160	160
21	N-Nitroso-di-n-propylamine	70.00	5.251	5.251	(1.086)	1364951	160	140
22	Hexachloroethane	117.00	5.310	5.310	(1.098)	673461	160	130
24	Nitrobenzene	77.00	5.382	5.382	(0.890)	1640575	160	140
25	Isophorone	82.00	5.619	5.619	(0.929)	4050003	160	150
26	2-Nitrophenol	139.00	5.678	5.678	(0.939)	923145	160	160
27	2,4-Dimethylphenol	107.00	5.713	5.713	(0.945)	1598687	160	140
28	Benzoic acid	122.00	5.891	5.891	(0.975)	1184939	160	200(M)
29	bis(2-Chloroethoxy)methane	93.00	5.796	5.796	(0.959)	2040305	160	140
30	2,4-Dichlorophenol	162.00	5.915	5.915	(0.978)	1140632	160	150
31	1,2,4-Trichlorobenzene	180.00	5.998	5.998	(0.992)	1119141	160	140
33	Naphthalene	128.00	6.069	6.069	(1.004)	3516873	160	130
34	4-Chloroaniline	127.00	6.116	6.116	(1.012)	1821073	160	140
35	Hexachlorobutadiene	225.00	6.235	6.235	(1.031)	544175	160	140
36	4-Chloro-3-methylphenol	107.00	6.578	6.578	(1.088)	1201032	160	140
37	2-Methylnaphthalene	142.00	6.744	6.744	(1.116)	2236336	160	130
38	Hexachlorocyclopentadiene	237.00	6.970	6.970	(0.891)	648660	160	150
39	2,4,6-Trichlorophenol	196.00	7.052	7.052	(0.902)	677522	160	140

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	40 2,4,5-Trichlorophenol	196.00	7.088	7.088	(0.906)	704008	160	150
	42 2-Chloronaphthalene	162.00	7.242	7.242	(0.926)	1805133	160	130
	43 2-Nitroaniline	65.00	7.349	7.349	(0.939)	831444	160	150
	44 Dimethylphthalate	163.00	7.562	7.562	(0.967)	2205044	160	140
	45 2,6-Dinitrotoluene	165.00	7.633	7.633	(0.976)	547087	160	150
	46 Acenaphthylene	152.00	7.669	7.669	(0.980)	2771478	160	120
	47 3-Nitroaniline	138.00	7.775	7.775	(0.994)	675330	160	150
	49 Acenaphthene	153.00	7.858	7.858	(1.005)	1595634	160	120
	50 2,4-Dinitrophenol	184.00	7.882	7.882	(1.008)	268122	160	180(Q)
	51 4-Nitrophenol	109.00	7.929	7.929	(1.014)	224237	160	160
	52 Dibenzofuran	168.00	8.012	8.012	(1.024)	2227749	160	130
	53 2,4-Dinitrotoluene	165.00	8.036	8.036	(1.027)	560924	160	140
	54 Diethylphthalate	149.00	8.285	8.285	(1.059)	2060214	160	130
	55 4-Chlorophenyl-phenylether	204.00	8.356	8.356	(1.068)	709076	160	120
	56 Fluorene	166.00	8.368	8.368	(1.070)	1507722	160	120
	57 4-Nitroaniline	138.00	8.415	8.415	(1.076)	636286	160	150
	58 4,6-Dinitro-2-methylphenol	198.00	8.475	8.475	(0.910)	312227	160	180
	59 n-Nitrosodiphenylamine	169.00	8.486	8.486	(0.911)	1126971	160	150
	60 1,2-Diphenylhydrazine	77.00	8.522	8.522	(0.915)	3825791	160	130
	62 4-Bromophenyl-phenylether	248.00	8.854	8.854	(0.950)	461572	160	160
	63 Hexachlorobenzene	283.70	9.020	9.020	(0.968)	505367	160	150
	64 Pentachlorophenol	265.50	9.186	9.186	(0.986)	330061	160	170
	66 Phenanthrene	178.00	9.351	9.351	(1.004)	2052174	160	140
	67 Anthracene	178.00	9.399	9.399	(1.009)	1955748	160	140
	68 Carbazole	167.00	9.541	9.541	(1.024)	2012010	160	140
	69 Di-n-butylphthalate	149.00	9.920	9.920	(1.065)	2951389	160	140
	70 Fluoranthene	202.00	10.572	10.572	(1.135)	1768832	160	140
	71 Pyrene	202.00	10.809	10.809	(0.879)	1803929	160	140
	73 Butylbenzylphthalate	149.00	11.532	11.532	(0.937)	1285073	160	150
	74 3,3'-Dichlorobenzidine	252.00	12.231	12.231	(0.994)	633618	160	160
	75 Benzo[a]anthracene	228.00	12.278	12.278	(0.998)	1568325	160	150
	77 Chrysene	228.00	12.350	12.350	(1.004)	1215647	160	140
	78 bis(2-Ethylhexyl)phthalate	149.00	12.338	12.338	(1.003)	1427247	160	140
	79 Di-n-octylphthalate	149.00	13.309	13.309	(0.908)	3137153	160	160
	80 Benzo[b]fluoranthene	252.00	14.032	14.032	(0.957)	1413672	160	150(M)
	81 Benzo[k]fluoranthene	252.00	14.080	14.080	(0.960)	1701265	160	170(M)
	82 Benzo[a]pyrene	252.00	14.577	14.577	(0.994)	1258774	160	160
	84 Indeno[1,2,3-cd]pyrene	276.00	16.900	16.900	(1.153)	1444419	160	150
	85 Dibenz[a,h]anthracene	278.00	16.936	16.936	(1.155)	1200085	160	150
	86 Benzo[g,h,i]perylene	276.00	17.552	17.552	(1.197)	1191341	160	160
$	3 2-Fluorophenol	112.00	3.770	3.770	(0.779)	1823209	160	140
$	4 Phenol-d5	99.00	4.516	4.516	(0.934)	2230188	160	140
$	61 2,4,6-Tribromophenol	329.70	8.640	8.640	(0.927)	290059	160	170
$	23 Nitrobenzene-d5	82.00	5.358	5.358	(0.886)	1842289	160	140
$	41 2-Fluorobiphenyl	172.00	7.124	7.124	(0.911)	1983439	160	130
$	72 Terphenyl-d14	244.00	10.963	10.963	(0.891)	1219729	160	150
*	11 1,4-Dichlorobenzene-d4	152.00	4.836	4.836	(1.000)	322593	40	
*	32 Naphthalene-d8	136.00	6.045	6.045	(1.000)	1209230	40	
*	48 Acenaphthene-d10	164.00	7.823	7.823	(1.000)	485448	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 65 Phenanthrene-d10	188.00	9.316	9.316	(1.000)	496531	40	
* 76 Chrysene-d12	240.00	12.302	12.302	(1.000)	339225	40	
* 83 Perylene-d12	264.00	14.660	14.660	(1.000)	230310	40	
17 ortho-Cresol	108.00	5.062	5.062	(1.047)	1558068	160	140
20 meta,para-Cresol	108.00	5.204	5.204	(1.076)	1994351	160	150
96 Benzidine	184.00	10.015	10.015	(0.814)	34769	160	150

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h129ic2.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950509.b/hclpw.m
Misc Info: 950509 STD160

Calibration Date: 05/09/95
Calibration Time: 0916

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	357593	178796	715186	322593	-9.79
32 Naphthalene-d8	1345059	672530	2690118	1209230	-10.10
48 Acenaphthene-d10	554554	277277	1109108	485448	-12.46
65 Phenanthrene-d10	652753	326376	1305506	496531	-23.93
76 Chrysene-d12	397498	198749	794996	339225	-14.66
83 Perylene-d12	265183	132592	530366	230310	-13.15

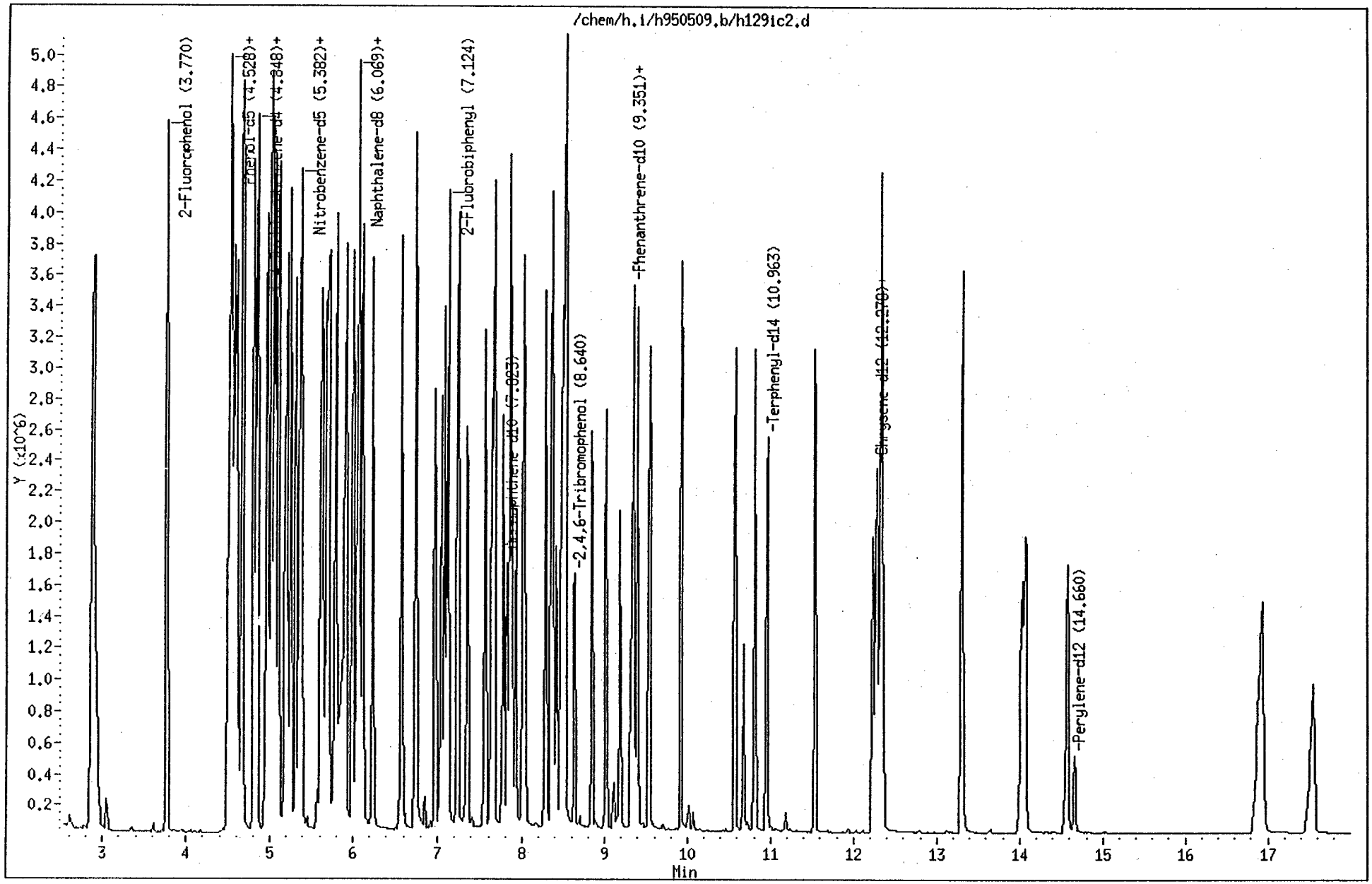
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.83	4.33	5.33	4.84	0.23
32 Naphthalene-d8	6.03	5.53	6.53	6.05	0.18
48 Acenaphthene-d10	7.81	7.31	8.31	7.82	0.14
65 Phenanthrene-d10	9.32	8.82	9.82	9.32	-0.01
76 Chrysene-d12	12.29	11.79	12.79	12.30	0.09
83 Perylene-d12	14.65	14.15	15.15	14.66	0.07

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.

Data File: /chem/h.i/h950509.b/h129ic2.d
Date : 09-MAY-95 09:49
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-1995 11:52
End Cal Date : 16-MAY-1995 13:52
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950516.b/hclpw.m
Cal Date : 16-May-1995 15:06 liping
Curve Type : Average

Calibration File Names:
Level 1: /chem/h.i/h950516.b/h136ic5.d
Level 2: /chem/h.i/h950516.b/h136ic1.d
Level 3: /chem/h.i/h950516.b/h136ic4.d
Level 4: /chem/h.i/h950516.b/h136ic3.d
Level 5: /chem/h.i/h950516.b/h136ic2.d

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	___ RRF	% RSD
2 Pyridine	0.93085	1.13643	0.91995	0.91370	0.95641	0.97147	9.640
5 Phenol	1.53843	1.59148	1.34245	1.13600	1.09025	1.33972	16.964
6 Aniline	1.23826	1.29266	1.24247	1.22638	1.06134	1.21222	7.266
7 bis(2-Chloroethyl)ether	1.37570	1.42358	1.23271	1.08935	1.08904	1.24208	12.578
9 2-Chlorophenol	1.32738	1.35636	1.26991	1.13220	1.11061	1.23929	9.060
10 1,3-Dichlorobenzene	1.59187	1.56769	1.45432	1.28242	1.27962	1.43518	10.452
12 1,4-Dichlorobenzene	1.59811	1.50446	1.42332	1.24664	1.29165	1.41284	10.326
13 Benzyl alcohol	0.19961	0.23473	0.23987	0.21461	0.19584	0.21693	9.199
15 1,2-Dichlorobenzene	1.47536	1.40280	1.25252	1.09731	1.07837	1.26127	14.087
16 2-Methylphenol	1.27262	1.34079	1.24523	1.23090	1.09154	1.23622	7.381
17 ortho-Cresol	1.27262	1.34079	1.24523	1.23090	1.09154	1.23622	7.381
18 bis(2-chloroisopropyl)ether	0.83661	0.84555	0.74673	0.67024	0.63736	0.74730	12.634
19 4-Methylphenol	1.26053	1.30180	1.14902	0.98135	0.91026	1.12059	15.253
20 meta,para-Cresol	1.26053	1.30180	1.14902	0.98135	0.91026	1.12059	15.253
21 N-Nitroso-di-n-propylamine	0.68927	0.62395	0.60583	0.54622	0.50082	0.59322	12.236
22 Hexachloroethane	0.57602	0.54593	0.53691	0.49558	0.49311	0.52951	6.653
24 Nitrobenzene	0.31606	0.31105	0.29906	0.27412	0.27725	0.29551	6.481
25 Isophorone	0.59718	0.58785	0.54895	0.53379	0.51024	0.55560	6.580
26 2-Nitrophenol	0.21514	0.21865	0.21321	0.19960	0.19772	0.20886	4.569
27 2,4-Dimethylphenol	0.37998	0.36719	0.38461	0.35979	0.36318	0.37095	2.914
28 Benzoic acid	0.16594	0.16428	0.18636	0.20212	0.19758	0.18326	9.572
29 bis(2-Chloroethoxy)methane	0.33468	0.32954	0.29378	0.26651	0.25444	0.29579	12.215
30 2,4-Dichlorophenol	0.31747	0.29926	0.29605	0.27144	0.26632	0.29011	7.276
31 1,2,4-Trichlorobenzene	0.35006	0.33579	0.31664	0.28782	0.28929	0.31592	8.755
33 Naphthalene	1.06068	1.00233	0.89613	0.80192	0.79364	0.91094	13.063
34 4-Chloroaniline	0.35817	0.33131	0.35020	0.32001	0.31213	0.33436	5.844

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INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-1995 11:52
End Cal Date : 16-MAY-1995 13:52
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950516.b/hclpw.m
Cal Date : 16-May-1995 15:06 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
35 Hexachlorobutadiene	0.21398	0.19573	0.20536	0.19152	0.19523	0.20036	4.577
36 4-Chloro-3-methylphenol	0.29595	0.29088	0.31411	0.29798	0.28845	0.29748	3.380
37 2-Methylnaphthalene	0.71300	0.64446	0.62305	0.55148	0.54250	0.61490	11.450
38 Hexachlorocyclopentadiene	0.37919	0.39660	0.43470	0.42490	0.41843	0.41076	5.483
39 2,4,6-Trichlorophenol	0.38408	0.38338	0.36360	0.35323	0.33013	0.36288	6.217
40 2,4,5-Trichlorophenol	0.42915	0.47626	0.49058	0.45000	0.45103	0.45940	5.253
42 2-Chloronaphthalene	1.24587	1.19399	1.09819	1.01038	0.98522	1.10673	10.212
43 2-Nitroaniline	0.27572	0.28129	0.29019	0.27612	0.26502	0.27767	3.302
44 Dimethylphthalate	1.52943	1.43407	1.33343	1.20273	1.15637	1.33121	11.695
45 2,6-Dinitrotoluene	0.34440	0.33611	0.34434	0.29981	0.28983	0.32290	8.081
46 Acenaphthylene	2.00977	1.90998	1.76946	1.56597	1.51402	1.75384	12.193
47 3-Nitroaniline	0.30305	0.31102	0.32858	0.29389	0.28390	0.30409	5.601
49 Acenaphthene	1.20408	1.10783	1.03238	0.93600	0.89012	1.03408	12.298
50 2,4-Dinitrophenol	0.08347	0.14121	0.18883	0.18438	0.17488	0.15455	28.404
51 4-Nitrophenol	0.11681	0.14065	0.18665	0.17400	0.16216	0.15605	17.761
52 Dibenzofuran	1.73808	1.64776	1.50165	1.31579	1.27640	1.49594	13.468
53 2,4-Dinitrotoluene	0.42188	0.42595	0.42345	0.37219	0.35678	0.40005	8.237
54 Diethylphthalate	1.60277	1.41407	1.40290	1.20996	1.16152	1.35824	13.046
55 4-Chlorophenyl-phenylether	0.65696	0.58783	0.54472	0.46371	0.46280	0.54320	15.325
56 Fluorene	1.24090	1.09432	1.00295	0.85706	0.83676	1.00640	16.761
57 4-Nitroaniline	0.27489	0.28723	0.30775	0.26888	0.24903	0.27756	7.854
58 4,6-Dinitro-2-methylphenol	0.12365	0.16323	0.18611	0.18070	0.17537	0.16581	15.106
59 n-Nitrosodiphenylamine	0.60285	0.59232	0.55700	0.52471	0.51684	0.55874	6.925
60 1,2-Diphenylhydrazine	1.60393	1.43768	1.33184	1.30555	1.37953	1.41170	8.404
62 4-Bromophenyl-phenylether	0.30495	0.28562	0.27457	0.25874	0.25716	0.27621	7.209
63 Hexachlorobenzene	0.37036	0.35104	0.33159	0.31889	0.32230	0.33884	6.376
64 Pentachlorophenol	0.13935	0.18792	0.20474	0.20590	0.20356	0.18830	15.044
66 Phenanthrene	1.27668	1.17458	1.11186	0.98722	0.99280	1.10863	11.117
67 Anthracene	1.21519	1.20088	1.06904	0.98974	0.98672	1.09231	10.143
68 Carbazole	1.01709	0.97877	0.93805	0.85389	0.82960	0.92348	8.678
69 Di-n-butylphthalate	1.72436	1.51736	1.37624	1.27961	1.25811	1.43113	13.501
70 Fluoranthene	1.09653	0.99165	0.98804	0.89018	0.87376	0.96803	9.300
71 Pyrene	1.58611	1.58875	1.54509	1.38185	1.33160	1.48668	8.152
73 Butylbenzylphthalate	0.78611	0.80246	0.78933	0.74112	0.76341	0.77649	3.125

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INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-1995 11:52
End Cal Date : 16-MAY-1995 13:52
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950516.b/hclpw.m
Cal Date : 16-May-1995 15:06 liping
Curve Type : Average

	Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	___ RRF	% RSD
	74 3,3'-Dichlorobenzidine	0.40237	0.42551	0.42614	0.43275	0.44333	0.42602	3.530
	75 Benzo[a]anthracene	1.20649	1.20060	1.19582	1.09984	1.09824	1.16020	4.823
	77 Chrysene	1.11479	1.09687	1.05851	1.00840	1.01174	1.05806	4.566
	78 bis(2-Ethylhexyl)phthalate	1.00490	1.02970	0.93553	0.89374	0.93701	0.96017	5.797
	79 Di-n-octylphthalate	2.25909	2.50708	2.41641	2.45528	2.29662	2.38690	4.418
	80 Benzo[b]fluoranthene	1.58278	1.59993	1.79840	1.59058	1.69843	1.65402	5.643
	81 Benzo[k]fluoranthene	1.88456	2.04899	1.68314	1.59707	1.44851	1.73245	13.681
	82 Benzo[a]pyrene	1.33619	1.38455	1.38442	1.32997	1.32330	1.35169	2.241
	84 Indeno[1,2,3-cd]pyrene	1.24911	1.30200	1.30952	1.37565	1.42483	1.33222	5.146
	85 Dibenz[a,h]anthracene	1.01868	1.04135	1.05638	1.13636	1.15045	1.08065	5.465
	86 Benzo[g,h,i]perylene	1.02385	1.02821	1.06118	1.11289	1.12912	1.07105	4.498
	96 Benzidine	0.01623	0.01164	0.01311	0.01324	0.01420	0.01369	12.373
$	3 2-Fluorophenol	1.24714	1.35552	1.24210	1.15771	1.14358	1.22921	6.913
$	4 Phenol-d5	1.39429	1.45505	1.26936	1.12905	1.07570	1.26469	12.943
$	23 Nitrobenzene-d5	0.33050	0.32715	0.31698	0.30321	0.30369	0.31631	4.031
$	41 2-Fluorobiphenyl	1.42162	1.31597	1.16657	1.05235	1.01483	1.19427	14.479
$	61 2,4,6-Tribromophenol	0.15937	0.16154	0.15931	0.15670	0.18113	0.16361	6.077
$	72 Terphenyl-d14	1.15424	1.11113	1.08546	0.98061	0.98490	1.06326	7.290

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Data file : /chem/h.i/h950516.b/h136ic5.d
Lab Smp Id:
Inj Date : 16-MAY-1995 13:52
Operator : LH
Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD020
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping
Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52
Cal File: h136ic1.d
Als bottle: 6
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.550	2.546	(0.574)	40258	16	8
5 Phenol	94.00	4.162	4.170	(0.936)	66535	19	10
6 Aniline	93.00	4.185	4.193	(0.941)	53553	19	10
7 bis(2-Chloroethyl)ether	93.00	4.221	4.217	(0.949)	59497	19	10
9 2-Chlorophenol	128.00	4.292	4.300	(0.965)	57407	20	10
10 1,3-Dichlorobenzene	146.00	4.422	4.418	(0.995)	68846	20	10
12 1,4-Dichlorobenzene	146.00	4.458	4.466	(1.003)	69116	21	11
13 Benzyl alcohol	108.00	4.742	4.679	(1.067)	8633	17	8 (QM)
15 1,2-Dichlorobenzene	146.00	4.636	4.632	(1.043)	63807	21	10
16 2-Methylphenol	108.00	4.695	4.703	(1.056)	55039	19	9
18 bis(2-chloroisopropyl)ether	45.00	4.707	4.715	(1.059)	36182	20	10 (Q)
19 4-Methylphenol	108.00	4.825	4.833	(1.085)	54516	19	10
21 N-Nitroso-di-n-propylamine	70.00	4.837	4.845	(1.088)	29810	22	11
22 Hexachloroethane	117.00	4.920	4.916	(1.107)	24912	21	10
24 Nitrobenzene	77.00	4.979	4.987	(0.882)	46822	20	10
25 Isophorone	82.00	5.204	5.201	(0.922)	88468	20	10
26 2-Nitrophenol	139.00	5.287	5.295	(0.937)	31872	20	10 (a)
27 2,4-Dimethylphenol	107.00	5.335	5.331	(0.945)	56291	21	10
28 Benzoic acid	122.00	5.406	5.449	(0.958)	24583	20	10 (aQM)
29 bis(2-Chloroethoxy)methane	93.00	5.406	5.414	(0.958)	49580	20	10
30 2,4-Dichlorophenol	162.00	5.536	5.532	(0.981)	47031	21	11
31 1,2,4-Trichlorobenzene	180.00	5.607	5.603	(0.994)	51859	21	10
33 Naphthalene	128.00	5.667	5.675	(1.004)	157132	21	10
34 4-Chloroaniline	127.00	5.726	5.734	(1.015)	53060	22	11
35 Hexachlorobutadiene	225.00	5.844	5.852	(1.036)	31699	22	11
36 4-Chloro-3-methylphenol	107.00	6.235	6.232	(1.105)	43843	20	10
37 2-Methylnaphthalene	142.00	6.342	6.350	(1.124)	105625	22	11
38 Hexachlorocyclopentadiene	237.00	6.579	6.587	(0.887)	29816	19	10
39 2,4,6-Trichlorophenol	196.00	6.662	6.658	(0.898)	30201	20	10

	Compounds	CUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.709	6.717	(0.904)	33745	18	9(a)
42	2-Chloronaphthalene	162.00	6.840	6.836	(0.922)	97965	21	10
43	2-Nitroaniline	65.00	6.958	6.966	(0.938)	21680	20	10(a)
44	Dimethylphthalate	163.00	7.171	7.168	(0.966)	120261	21	11
45	2,6-Dinitrotoluene	165.00	7.231	7.239	(0.974)	27081	20	10
46	Acenaphthylene	152.00	7.266	7.263	(0.979)	158031	21	10
47	3-Nitroaniline	138.00	7.373	7.381	(0.994)	23829	19	10(a)
49	Acenaphthene	153.00	7.456	7.452	(1.005)	94679	22	11
50	2,4-Dinitrophenol	184.00	7.480	7.488	(1.008)	6563	12	6(aQ)
51	4-Nitrophenol	109.00	7.598	7.582	(1.024)	9185	17	8(a)
52	Dibenzofuran	168.00	7.610	7.618	(1.026)	136668	21	10
53	2,4-Dinitrotoluene	165.00	7.634	7.630	(1.029)	33173	20	10
54	Diethylphthalate	149.00	7.883	7.891	(1.062)	126028	23	11
55	4-Chlorophenyl-phenylether	204.00	7.954	7.962	(1.072)	51658	22	11
56	Fluorene	166.00	7.965	7.962	(1.073)	97574	23	11
57	4-Nitroaniline	138.00	8.001	8.009	(1.078)	21615	19	10(a)
58	4,6-Dinitro-2-methylphenol	198.00	8.048	8.056	(0.903)	13083	15	8(a)
59	n-Nitrosodiphenylamine	169.00	8.084	8.080	(0.907)	63785	20	10
60	1,2-Diphenylhydrazine	77.00	8.108	8.116	(0.910)	169706	22	11
62	4-Bromophenyl-phenylether	248.00	8.451	8.448	(0.948)	32266	21	11
63	Hexachlorobenzene	283.70	8.605	8.613	(0.965)	39187	21	10
64	Pentachlorophenol	265.50	8.795	8.791	(0.987)	14744	15	7(a)
66	Phenanthrene	178.00	8.937	8.945	(1.003)	135081	22	11
67	Anthracene	178.00	8.985	8.981	(1.008)	128575	20	10
68	Carbazole	167.00	9.139	9.147	(1.025)	107615	21	10
69	Di-n-butylphthalate	149.00	9.542	9.538	(1.070)	182448	23	11
70	Fluoranthene	202.00	10.158	10.166	(1.140)	116020	22	11
71	Pyrene	202.00	10.383	10.391	(0.882)	114502	20	10
73	Butylbenzylphthalate	149.00	11.094	11.090	(0.943)	56750	20	10
74	3,3'-Dichlorobenzidine	252.00	11.722	11.718	(0.996)	29047	19	9
75	Benzo[a]anthracene	228.00	11.746	11.754	(0.998)	87097	20	10
77	Chrysene	228.00	11.793	11.801	(1.002)	80477	20	10
78	bis(2-Ethylhexyl)phthalate	149.00	11.829	11.837	(1.005)	72544	20	10
79	Di-n-octylphthalate	149.00	12.717	12.725	(0.909)	99704	18	9
80	Benzo[b]fluoranthene	252.00	13.357	13.365	(0.955)	69855	20	10
81	Benzo[k]fluoranthene	252.00	13.393	13.401	(0.958)	83174	18	9
82	Benzo[a]pyrene	252.00	13.891	13.899	(0.993)	58972	19	10
84	Indeno[1,2,3-cd]pyrene	276.00	15.905	15.925	(1.137)	55129	19	10
85	Dibenz[a,h]anthracene	278.00	15.941	15.949	(1.140)	44959	20	10
86	Benzo[g,h,i]perylene	276.00	16.450	16.458	(1.176)	45187	20	10
$ 3	2-Fluorophenol	112.00	3.427	3.423	(0.771)	53937	18	9(R)
$ 4	Phenol-d5	99.00	4.162	4.158	(0.936)	60301	19	10
$ 61	2,4,6-Tribromophenol	329.70	8.226	8.234	(0.923)	16862	20	10
$ 23	Nitrobenzene-d5	82.00	4.967	4.964	(0.880)	48961	20	10(R)
$ 41	2-Fluorobiphenyl	172.00	6.733	6.729	(0.907)	111784	22	11(R)
$ 72	Terphenyl-d14	244.00	10.537	10.545	(0.895)	83325	21	10(R)
* 11	1,4-Dichlorobenzene-d4	152.00	4.446	4.454	(1.000)	86497	40	
* 32	Naphthalene-d8	136.00	5.643	5.651	(1.000)	296285	40	
* 48	Acenaphthene-d10	164.00	7.420	7.417	(1.000)	157263	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.913	8.922	1.000)	211613	40	
* 76 Chrysene-d12	240.00	11.769	11.777	(1.000)	144381	40	
* 83 Perylene-d12	264.00	13.985	13.993	(1.000)	88269	40	
17 ortho-Cresol	108.00	4.695	4.703	(1.056)	55039	19	9
20 meta,para-Cresol	108.00	4.825	4.833	(1.085)	54516	19	10
96 Benzidine	184.00	10.537	10.770	(0.895)	1172	28	14

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic5.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD020

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	86497	-16.17
32 Naphthalene-d8	348029	174014	696058	296285	-14.87
48 Acenaphthene-d10	171424	85712	342848	157263	-8.26
65 Phenanthrene-d10	222794	111397	445588	211613	-5.02
76 Chrysene-d12	137788	68894	275576	144381	4.78
83 Perylene-d12	83290	41645	166580	88269	5.98

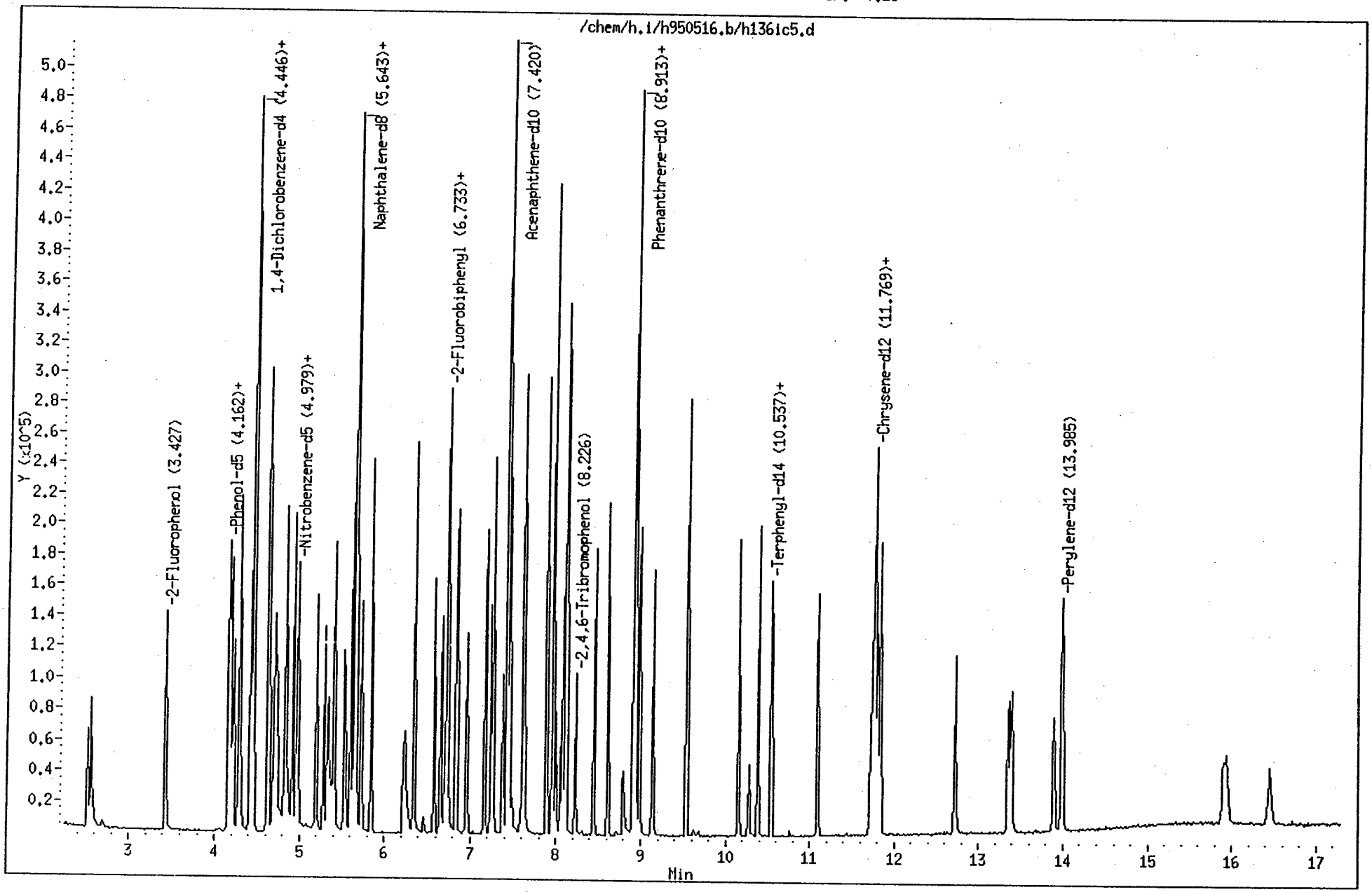
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.45	-0.18
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.14
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.05
65 Phenanthrene-d10	8.92	8.42	9.42	8.91	-0.09
76 Chrysene-d12	11.78	11.28	12.28	11.77	-0.07
83 Perylene-d12	13.99	13.49	14.49	13.99	-0.06

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.

Data File: /chem/h.i/h950516.b/h136ic5.d
Date : 16-MAY-95 13:52
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic1.d
Lab Smp Id:
Inj Date : 16-MAY-1995 11:52
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD050
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.546	2.546	(0.572)	146575	50	25
5 Phenol	94.00	4.170	4.170	(0.936)	205267	50	25
6 Aniline	93.00	4.193	4.193	(0.941)	166726	50	25
7 bis(2-Chloroethyl)ether	93.00	4.217	4.217	(0.947)	183611	50	25
9 2-Chlorophenol	128.00	4.300	4.300	(0.965)	174942	50	25
10 1,3-Dichlorobenzene	146.00	4.418	4.418	(0.992)	202199	50	25
12 1,4-Dichlorobenzene	146.00	4.466	4.466	(1.003)	194044	50	25
13 Benzyl alcohol	108.00	4.679	4.679	(1.051)	30275	50	25 (M)
15 1,2-Dichlorobenzene	146.00	4.632	4.632	(1.040)	180932	50	25
16 2-Methylphenol	108.00	4.703	4.703	(1.056)	172933	50	25
18 bis(2-chloroisopropyl)ether	45.00	4.715	4.715	(1.059)	109058	50	25
19 4-Methylphenol	108.00	4.833	4.833	(1.085)	167905	50	25
21 N-Nitroso-di-n-propylamine	70.00	4.845	4.845	(1.088)	80476	50	25
22 Hexachloroethane	117.00	4.916	4.916	(1.104)	70413	50	25
24 Nitrobenzene	77.00	4.987	4.987	(0.883)	135316	50	25
25 Isophorone	82.00	5.201	5.201	(0.920)	255738	50	25
26 2-Nitrophenol	139.00	5.295	5.295	(0.937)	95121	50	25
27 2,4-Dimethylphenol	107.00	5.331	5.331	(0.943)	159742	50	25
28 Benzoic acid	122.00	5.449	5.449	(0.964)	71466	50	25
29 bis(2-Chloroethoxy)methane	93.00	5.414	5.414	(0.958)	143361	50	25
30 2,4-Dichlorophenol	162.00	5.532	5.532	(0.979)	130189	50	25
31 1,2,4-Trichlorobenzene	180.00	5.603	5.603	(0.992)	146082	50	25
33 Naphthalene	128.00	5.675	5.675	(1.004)	436051	50	25
34 4-Chloroaniline	127.00	5.734	5.734	(1.015)	144131	50	25
35 Hexachlorobutadiene	225.00	5.852	5.852	(1.036)	85151	50	25
36 4-Chloro-3-methylphenol	107.00	6.232	6.232	(1.103)	126545	50	25
37 2-Methylnaphthalene	142.00	6.350	6.350	(1.124)	280364	50	25
38 Hexachlorocyclopentadiene	237.00	6.587	6.587	(0.888)	84983	50	25
39 2,4,6-Trichlorophenol	196.00	6.658	6.658	(0.898)	82150	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.717	6.717	(0.906)	102052	50	25
42	2-Chloronaphthalene	162.00	6.836	6.836	(0.922)	255849	50	25
43	2-Nitroaniline	65.00	6.966	6.966	(0.939)	60275	50	25
44	Dimethylphthalate	163.00	7.168	7.168	(0.966)	307292	50	25
45	2,6-Dinitrotoluene	165.00	7.239	7.239	(0.976)	72022	50	25
46	Acenaphthylene	152.00	7.263	7.263	(0.979)	409270	50	25
47	3-Nitroaniline	138.00	7.381	7.381	(0.995)	66646	50	25
49	Acenaphthene	153.00	7.452	7.452	(1.005)	237386	50	25
50	2,4-Dinitrophenol	184.00	7.488	7.488	(1.010)	30259	50	25
51	4-Nitrophenol	109.00	7.582	7.582	(1.022)	30138	50	25
52	Dibenzofuran	168.00	7.618	7.618	(1.027)	353082	50	25
53	2,4-Dinitrotoluene	165.00	7.630	7.630	(1.029)	91273	50	25
54	Diethylphthalate	149.00	7.891	7.891	(1.064)	303006	50	25
55	4-Chlorophenyl-phenylether	204.00	7.962	7.962	(1.073)	125960	50	25
56	Fluorene	166.00	7.962	7.962	(1.073)	234490	50	25
57	4-Nitroaniline	138.00	8.009	8.009	(1.080)	61548	50	25
58	4,6-Dinitro-2-methylphenol	198.00	8.056	8.056	(0.903)	45458	50	25
59	n-Nitrosodiphenylamine	169.00	8.080	8.080	(0.906)	164956	50	25
60	1,2-Diphenylhydrazine	77.00	8.116	8.116	(0.910)	400382	50	25
62	4-Bromophenyl-phenylether	248.00	8.448	8.448	(0.947)	79542	50	25
63	Hexachlorobenzene	283.70	8.613	8.613	(0.965)	97763	50	25
64	Pentachlorophenol	265.50	8.791	8.791	(0.985)	52335	50	25
66	Phenanthrene	178.00	8.945	8.945	(1.003)	327111	50	25
67	Anthracene	178.00	8.981	8.981	(1.007)	334435	50	25
68	Carbazole	167.00	9.147	9.147	(1.025)	272581	50	25
69	Di-n-butylphthalate	149.00	9.538	9.538	(1.069)	422572	50	25
70	Fluoranthene	202.00	10.166	10.166	(1.139)	276166	50	25
71	Pyrene	202.00	10.391	10.391	(0.882)	273639	50	25
73	Butylbenzylphthalate	149.00	11.090	11.090	(0.942)	138212	50	25
74	3,3'-Dichlorobenzidine	252.00	11.718	11.718	(0.995)	73287	50	25
75	Benzo[a]anthracene	228.00	11.754	11.754	(0.998)	206785	50	25
77	Chrysene	228.00	11.801	11.801	(1.002)	188920	50	25
78	bis(2-Ethylhexyl)phthalate	149.00	11.837	11.837	(1.005)	177351	50	25
79	Di-n-octylphthalate	149.00	12.725	12.725	(0.909)	261018	50	25
80	Benzo[b]fluoranthene	252.00	13.365	13.365	(0.955)	166573	50	25
81	Benzo[k]fluoranthene	252.00	13.401	13.401	(0.958)	213325	50	25
82	Benzo[a]pyrene	252.00	13.899	13.899	(0.993)	144149	50	25
84	Indeno[1,2,3-cd]pyrene	276.00	15.925	15.925	(1.138)	135554	50	25
85	Dibenz[a,h]anthracene	278.00	15.949	15.949	(1.140)	108418	50	25
86	Benzo[g,h,i]perylene	276.00	16.458	16.458	(1.176)	107050	50	25
$ 3	2-Fluorophenol	112.00	3.423	3.423	(0.769)	174833	50	25
$ 4	Phenol-d5	99.00	4.158	4.158	(0.933)	187670	50	25
$ 61	2,4,6-Tribromophenol	329.70	8.234	8.234	(0.923)	44987	50	25
$ 23	Nitrobenzene-d5	82.00	4.964	4.964	(0.878)	142323	50	25
$ 41	2-Fluorobiphenyl	172.00	6.729	6.729	(0.907)	281986	50	25
$ 72	Terphenyl-d14	244.00	10.545	10.545	(0.895)	191375	50	25
* 11	1,4-Dichlorobenzene-d4	152.00	4.454	4.454	(1.000)	103183	40	
* 32	Naphthalene-d8	136.00	5.651	5.651	(1.000)	348029	40	
* 48	Acenaphthene-d10	164.00	7.417	7.417	(1.000)	171424	40	

Compounds	QUANT SIG MASS	RT	FXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.922	8.922	(1.000)	222794	40	
76 Chrysene-d12	240.00	11.777	11.777	(1.000)	137788	40	
83 Perylene-d12	264.00	13.993	13.993	(1.000)	83290	40	
17 ortho-Cresol	108.00	4.703	4.703	(1.056)	172933	50	25
20 meta,para-Cresol	108.00	4.833	4.833	(1.085)	167905	50	25
96 Benzidine	184.00	10.770	10.770	(0.914)	2005	50	25

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD050

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	103183	0.00
32 Naphthalene-d8	348029	174014	696058	348029	0.00
48 Acenaphthene-d10	171424	85712	342848	171424	0.00
65 Phenanthrene-d10	222794	111397	445588	222794	0.00
76 Chrysene-d12	137788	68894	275576	137788	0.00
83 Perylene-d12	83290	41645	166580	83290	0.00

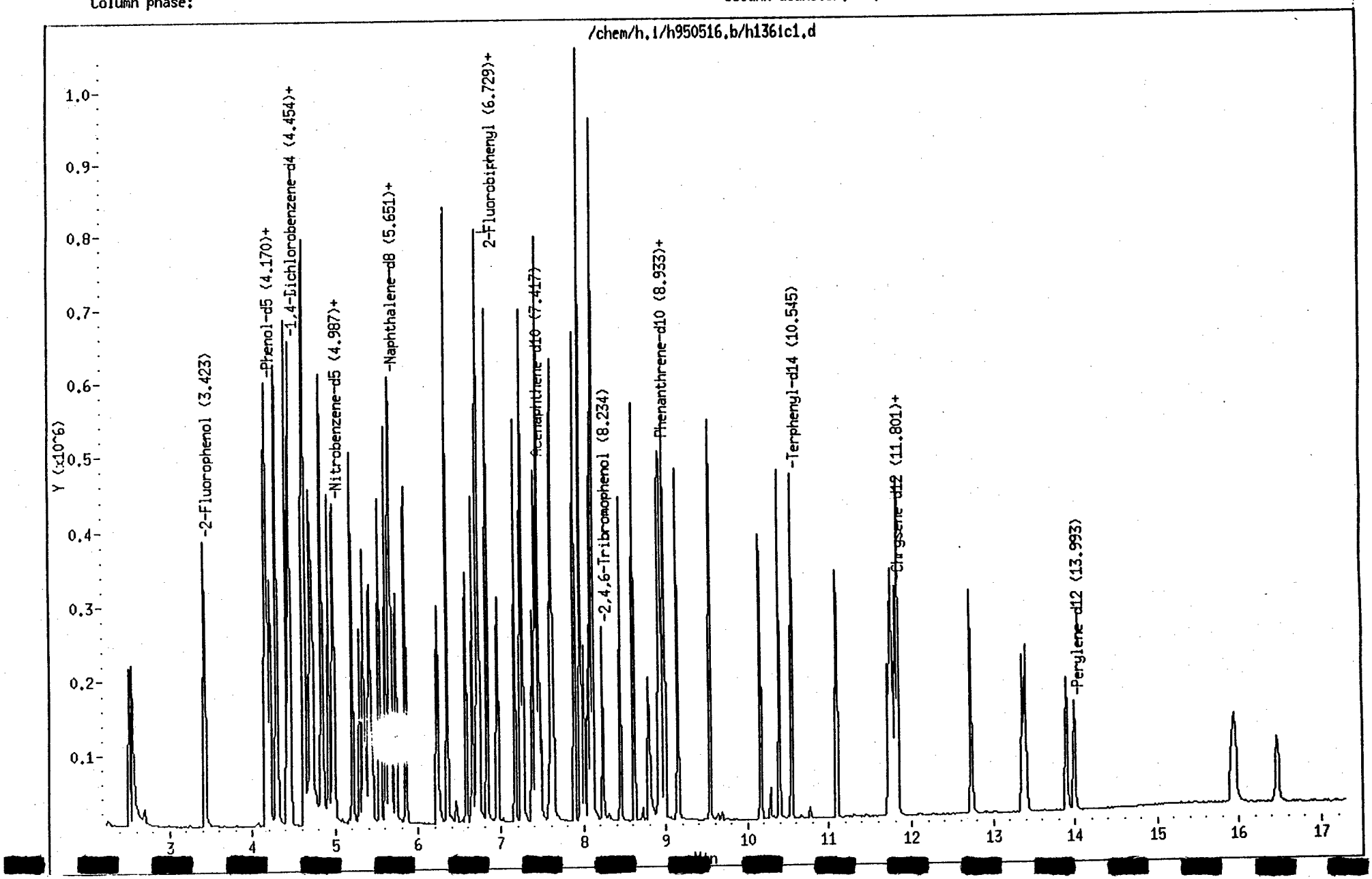
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.45	0.00
32 Naphthalene-d8	5.65	5.15	6.15	5.65	0.00
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.00
65 Phenanthrene-d10	8.92	8.42	9.42	8.92	0.00
76 Chrysene-d12	11.78	11.28	12.28	11.78	0.00
83 Perylene-d12	13.99	13.49	14.49	13.99	0.00

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.

Data File: /chem/h.i/h950516.b/h136ic1.d
Date : 16-MAY-95 11:52
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic4.d
Lab Smp Id:
Inj Date : 16-MAY-1995 14:16
Operator : LH
Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD080
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping
Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52
Cal File: h136ic1.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.548	2.546	(0.573)	188941	65	32
5 Phenol	94.00	4.171	4.170	(0.939)	275716	67	34
6 Aniline	93.00	4.195	4.193	(0.944)	255180	77	38
7 bis(2-Chloroethyl)ether	93.00	4.219	4.217	(0.949)	253177	69	35
9 2-Chlorophenol	128.00	4.302	4.300	(0.968)	260817	75	37
10 1,3-Dichlorobenzene	146.00	4.420	4.418	(0.995)	298691	74	37
12 1,4-Dichlorobenzene	146.00	4.456	4.466	(1.003)	292325	76	38
13 Benzyl alcohol	108.00	4.788	4.679	(1.077)	49264	82	41(QM)
15 1,2-Dichlorobenzene	146.00	4.634	4.632	(1.043)	257245	71	36
16 2-Methylphenol	108.00	4.693	4.703	(1.056)	255747	74	37
18 bis(2-chloroisopropyl)ether	45.00	4.717	4.715	(1.061)	153364	71	35
19 4-Methylphenol	108.00	4.835	4.833	(1.088)	235987	71	35
21 N-Nitroso-di-n-propylamine	70.00	4.847	4.845	(1.091)	124427	78	39
22 Hexachloroethane	117.00	4.918	4.916	(1.107)	110271	79	39
24 Nitrobenzene	77.00	4.989	4.987	(0.884)	212202	77	38
25 Isophorone	82.00	5.202	5.201	(0.922)	389517	75	37
26 2-Nitrophenol	139.00	5.285	5.295	(0.937)	151284	78	39
27 2,4-Dimethylphenol	107.00	5.333	5.331	(0.945)	272911	84	42
28 Benzoic acid	122.00	5.475	5.449	(0.971)	132238	91	45
29 bis(2-Chloroethoxy)methane	93.00	5.404	5.414	(0.958)	208455	71	36
30 2,4-Dichlorophenol	162.00	5.534	5.532	(0.981)	210066	79	40
31 1,2,4-Trichlorobenzene	180.00	5.605	5.603	(0.994)	224678	75	38
33 Naphthalene	128.00	5.665	5.675	(1.004)	635864	72	36
34 4-Chloroaniline	127.00	5.724	5.734	(1.015)	248494	84	42
35 Hexachlorobutadiene	225.00	5.842	5.852	(1.036)	145720	84	42
36 4-Chloro-3-methylphenol	107.00	6.233	6.232	(1.105)	222884	86	43
37 2-Methylnaphthalene	142.00	6.352	6.350	(1.126)	442101	77	39
38 Hexachlorocyclopentadiene	237.00	6.577	6.587	(0.887)	162874	88	44
39 2,4,6-Trichlorophenol	196.00	6.660	6.658	(0.898)	136235	76	38

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.707	6.717	(0.904)	183810	82	41
	42 2-Chloronaphthalene	162.00	6.838	6.836	(0.922)	411469	74	37
	43 2-Nitroaniline	65.00	6.956	6.966	(0.938)	108730	82	41
	44 Dimethylphthalate	163.00	7.170	7.168	(0.966)	499610	74	37
	45 2,6-Dinitrotoluene	165.00	7.241	7.239	(0.976)	129019	82	41
	46 Acenaphthylene	152.00	7.264	7.263	(0.979)	662983	74	37
	47 3-Nitroaniline	138.00	7.383	7.381	(0.995)	123112	84	42
	49 Acenaphthene	153.00	7.454	7.452	(1.005)	386814	74	37
	50 2,4-Dinitrophenol	184.00	7.478	7.488	(1.008)	70750	110	53
	51 4-Nitrophenol	109.00	7.584	7.582	(1.022)	69934	110	53
	52 Dibenzofuran	168.00	7.608	7.618	(1.026)	562640	73	36
	53 2,4-Dinitrotoluene	165.00	7.632	7.630	(1.029)	158658	80	40
	54 Diethylphthalate	149.00	7.892	7.891	(1.064)	525637	79	40
	55 4-Chlorophenyl-phenylether	204.00	7.952	7.962	(1.072)	204094	74	37
	56 Fluorene	166.00	7.964	7.962	(1.073)	375787	73	37
	57 4-Nitroaniline	138.00	8.011	8.009	(1.080)	115306	86	43
	58 4,6-Dinitro-2-methylphenol	198.00	8.058	8.056	(0.904)	96206	91	46
	59 n-Nitrosodiphenylamine	169.00	8.082	8.080	(0.907)	287922	75	38
	60 1,2-Diphenylhydrazine	77.00	8.118	8.116	(0.911)	688452	74	37
	62 4-Bromophenyl-phenylether	248.00	8.449	8.448	(0.948)	141928	77	38
	63 Hexachlorobenzene	283.70	8.603	8.613	(0.965)	171407	76	38
	64 Pentachlorophenol	265.50	8.793	8.791	(0.987)	105835	87	44
	66 Phenanthrene	178.00	8.935	8.945	(1.003)	574740	76	38
	67 Anthracene	178.00	8.983	8.981	(1.008)	552606	71	36
	68 Carbazole	167.00	9.137	9.147	(1.025)	484893	77	38
	69 Di-n-butylphthalate	149.00	9.528	9.538	(1.069)	711404	72	36
	70 Fluoranthene	202.00	10.156	10.166	(1.140)	510736	80	40
	71 Pyrene	202.00	10.381	10.391	(0.883)	493428	78	39
	73 Butylbenzylphthalate	149.00	11.080	11.090	(0.943)	252074	79	39
	74 3,3'-Dichlorobenzidine	252.00	11.708	11.718	(0.996)	136090	80	40
	75 Benzo[a]anthracene	228.00	11.732	11.754	(0.998)	381888	80	40
	77 Chrysene	228.00	11.791	11.801	(1.003)	338037	77	39
	78 bis(2-Ethylhexyl)phthalate	149.00	11.815	11.837	(1.005)	298762	73	36
	79 Di-n-octylphthalate	149.00	12.704	12.725	(0.909)	468657	77	38
	80 Benzo[b]fluoranthene	252.00	13.344	13.365	(0.955)	348797	90	45
	81 Benzo[k]fluoranthene	252.00	13.391	13.401	(0.958)	326441	66	33
	82 Benzo[a]pyrene	252.00	13.877	13.899	(0.993)	268506	80	40
	84 Indeno[1,2,3-cd]pyrene	276.00	15.891	15.925	(1.137)	253979	80	40
	85 Dibenz[a,h]anthracene	278.00	15.927	15.949	(1.140)	204883	81	40
	86 Benzo[g,h,i]perylene	276.00	16.436	16.458	(1.176)	205814	82	41
$	3 2-Fluorophenol	112.00	3.425	3.423	(0.771)	255106	73	37
$	4 Phenol-d5	99.00	4.160	4.158	(0.936)	260704	70	35
$	61 2,4,6-Tribromophenol	329.70	8.224	8.234	(0.923)	82352	79	39
$	23 Nitrobenzene-d5	82.00	4.965	4.964	(0.880)	224916	78	39
$	41 2-Fluorobiphenyl	172.00	6.731	6.729	(0.907)	437090	71	35
$	72 Terphenyl-d14	244.00	10.535	10.545	(0.896)	346643	78	39
*	11 1,4-Dichlorobenzene-d4	152.00	4.444	4.454	(1.000)	102691	40	
*	32 Naphthalene-d8	136.00	5.641	5.651	(1.000)	354785	40	
*	48 Acenaphthene-d10	164.00	7.418	7.417	(1.000)	187340	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.912	8.922	(1.000)	258459	40	
* 76 Chrysene-d12	240.00	11.756	11.777	(1.000)	159676	40	
* 83 Perylene-d12	264.00	13.972	13.993	(1.000)	96974	40	
17 ortho-Cresol	108.00	4.693	4.703	(1.056)	255747	74	37
20 meta,para-Cresol	108.00	4.835	4.833	(1.088)	235987	71	35
96 Benzidine	184.00	10.760	10.770	(0.915)	4187	90	45

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic4.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD080

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	102691	-0.48
32 Naphthalene-d8	348029	174014	696058	354785	1.94
48 Acenaphthene-d10	171424	85712	342848	187340	9.28
65 Phenanthrene-d10	222794	111397	445588	258459	16.01
76 Chrysene-d12	137788	68894	275576	159676	15.89
83 Perylene-d12	83290	41645	166580	96974	16.43

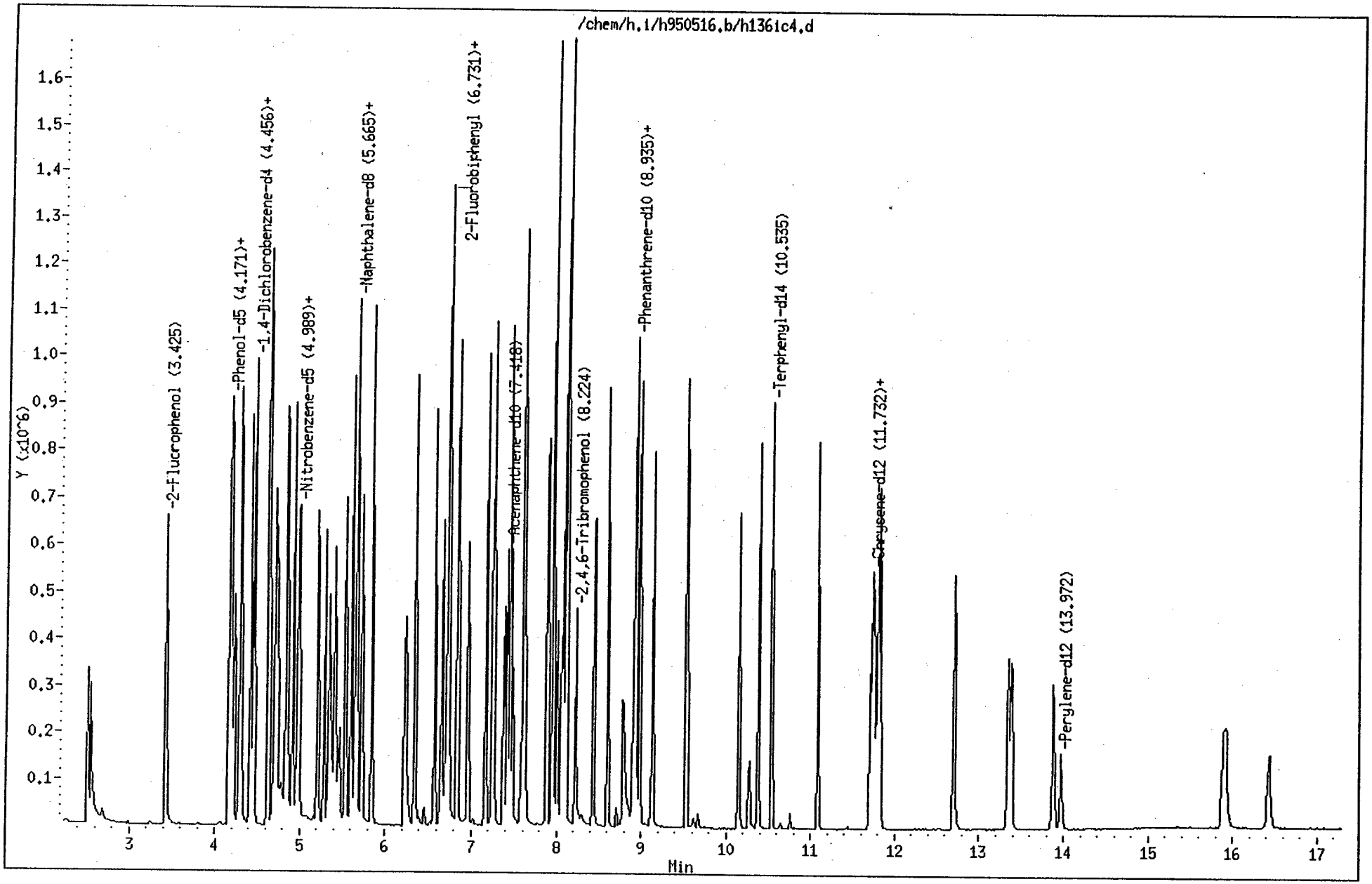
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.22
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.18
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.02
65 Phenanthrene-d10	8.92	8.42	9.42	8.91	-0.11
76 Chrysene-d12	11.78	11.28	12.28	11.76	-0.19
83 Perylene-d12	13.99	13.49	14.49	13.97	-0.16

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.

Data File: /chem/h.i/h950516.b/h136ic4.d
Date : 16-MAY-95 14:16
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic3.d
Lab Smp Id:
Inj Date : 16-MAY-1995 12:41
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD120
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	2.547	2.546	(0.572)	313371	96	48
5	Phenol	94.00	4.183	4.170	(0.939)	389614	86	43(Q)
6	Aniline	93.00	4.195	4.193	(0.941)	420610	110	57
7	bis(2-Chloroethyl)ether	93.00	4.230	4.217	(0.949)	373614	92	46
9	2-Chlorophenol	128.00	4.313	4.300	(0.968)	388309	100	50
10	1,3-Dichlorobenzene	146.00	4.420	4.418	(0.992)	439830	98	49
12	1,4-Dichlorobenzene	146.00	4.467	4.466	(1.003)	427559	99	50
13	Benzyl alcohol	108.00	4.740	4.679	(1.064)	73603	110	55(QM)
15	1,2-Dichlorobenzene	146.00	4.633	4.632	(1.040)	376343	94	47
16	2-Methylphenol	108.00	4.704	4.703	(1.056)	422160	110	55
18	bis(2-chloroisopropyl)ether	45.00	4.716	4.715	(1.058)	229872	95	48
19	4-Methylphenol	108.00	4.846	4.833	(1.088)	336572	90	45
21	N-Nitroso-di-n-propylamine	70.00	4.858	4.845	(1.090)	187335	100	52
22	Hexachloroethane	117.00	4.917	4.916	(1.104)	169968	110	54
24	Nitrobenzene	77.00	5.000	4.987	(0.885)	324480	100	53
25	Isophorone	82.00	5.226	5.201	(0.925)	631868	110	54
26	2-Nitrophenol	139.00	5.297	5.295	(0.937)	236270	110	55
27	2,4-Dimethylphenol	107.00	5.344	5.331	(0.945)	425892	120	59
28	Benzoic acid	122.00	5.510	5.449	(0.975)	239260	150	74
29	bis(2-Chloroethoxy)methane	93.00	5.415	5.414	(0.958)	315477	97	48
30	2,4-Dichlorophenol	162.00	5.546	5.532	(0.981)	321306	110	54
31	1,2,4-Trichlorobenzene	180.00	5.617	5.603	(0.994)	340696	100	51
33	Naphthalene	128.00	5.676	5.675	(1.004)	949251	96	48
34	4-Chloroaniline	127.00	5.735	5.734	(1.015)	378800	120	58
35	Hexachlorobutadiene	225.00	5.854	5.852	(1.036)	226704	120	59
36	4-Chloro-3-methylphenol	107.00	6.233	6.232	(1.103)	352731	120	61
37	2-Methylnaphthalene	142.00	6.351	6.350	(1.124)	652800	100	51
38	Hexachlorocyclopentadiene	237.00	6.588	6.587	(0.887)	256398	130	64
39	2,4,6-Trichlorophenol	196.00	6.671	6.658	(0.898)	213151	110	55

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.719	6.717	(0.904)	271545	110	57
42	2-Chloronaphthalene	162.00	6.849	6.836	(0.922)	609702	100	51
43	2-Nitroaniline	65.00	6.968	6.966	(0.938)	166624	120	59
44	Dimethylphthalate	163.00	7.181	7.168	(0.967)	725772	100	50
45	2,6-Dinitrotoluene	165.00	7.252	7.239	(0.976)	180916	110	54
46	Acenaphthylene	152.00	7.276	7.263	(0.979)	944965	98	49
47	3-Nitroaniline	138.00	7.394	7.381	(0.995)	177344	110	57
49	Acenaphthene	153.00	7.465	7.452	(1.005)	564816	100	51
50	2,4-Dinitrophenol	184.00	7.489	7.488	(1.008)	111259	160	78
51	4-Nitrophenol	109.00	7.596	7.582	(1.022)	104999	150	74 (Q)
52	Dibenzofuran	168.00	7.619	7.618	(1.026)	793997	96	48
53	2,4-Dinitrotoluene	165.00	7.643	7.630	(1.029)	224595	100	52
54	Diethylphthalate	149.00	7.904	7.891	(1.064)	730138	100	51
55	4-Chlorophenyl-phenylether	204.00	7.963	7.962	(1.072)	279818	95	47
56	Fluorene	166.00	7.975	7.962	(1.073)	517183	94	47
57	4-Nitroaniline	138.00	8.022	8.009	(1.080)	162254	110	56
58	4,6-Dinitro-2-methylphenol	198.00	8.070	8.056	(0.904)	135735	130	66
59	n-Nitrosodiphenylamine	169.00	8.093	8.080	(0.907)	394150	110	53
60	1,2-Diphenylhydrazine	77.00	8.129	8.116	(0.911)	980691	110	54
62	4-Bromophenyl-phenylether	248.00	8.461	8.448	(0.948)	194355	110	54
63	Hexachlorobenzene	283.70	8.615	8.613	(0.965)	239544	110	54
64	Pentachlorophenol	265.50	8.804	8.791	(0.987)	154669	130	66
66	Phenanthrene	178.00	8.947	8.945	(1.003)	741575	100	50
67	Anthracene	178.00	8.994	8.981	(1.008)	743469	99	49
68	Carbazole	167.00	9.160	9.147	(1.027)	641416	100	52
69	Di-n-butylphthalate	149.00	9.551	9.538	(1.070)	961210	100	50
70	Fluoranthene	202.00	10.167	10.166	(1.139)	668680	110	54
71	Pyrene	202.00	10.392	10.391	(0.882)	640318	100	52
73	Butylbenzylphthalate	149.00	11.103	11.090	(0.943)	343416	110	55
74	3,3'-Dichlorobenzidine	252.00	11.731	11.718	(0.996)	200527	120	61
75	Benzo[a]anthracene	228.00	11.755	11.754	(0.998)	509641	110	55
77	Chrysene	228.00	11.814	11.801	(1.003)	467268	110	55
78	bis(2-Ethylhexyl)phthalate	149.00	11.838	11.837	(1.005)	414137	100	52
79	Di-n-octylphthalate	149.00	12.727	12.725	(0.909)	697804	120	59
80	Benzo[b]fluoranthene	252.00	13.367	13.365	(0.955)	452050	120	60
81	Benzo[k]fluoranthene	252.00	13.414	13.401	(0.959)	453894	94	47
82	Benzo[a]pyrene	252.00	13.912	13.899	(0.994)	377984	120	58
84	Indeno[1,2,3-cd]pyrene	276.00	15.938	15.925	(1.139)	390966	130	63
85	Dibenz[a,h]anthracene	278.00	15.962	15.949	(1.141)	322959	130	65
86	Benzo[g,h,i]perylene	276.00	16.483	16.458	(1.178)	316289	130	65
$ 3	2-Fluorophenol	112.00	3.436	3.423	(0.771)	397060	100	51
$ 4	Phenol-d5	99.00	4.171	4.158	(0.936)	387229	93	46
$ 61	2,4,6-Tribromophenol	329.70	8.236	8.234	(0.923)	117707	120	58
$ 23	Nitrobenzene-d5	82.00	4.977	4.964	(0.880)	358924	110	56
$ 41	2-Fluorobiphenyl	172.00	6.742	6.729	(0.907)	635030	96	48
$ 72	Terphenyl-d14	244.00	10.546	10.545	(0.895)	454390	100	53
* 11	1,4-Dichlorobenzene-d4	152.00	4.455	4.454	(1.000)	114323	40	
* 32	Naphthalene-d8	136.00	5.652	5.651	(1.000)	394576	40	
* 48	Acenaphthene-d10	164.00	7.430	7.417	(1.000)	201146	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.923	8.922	(1.000)	250391	40	
* 76 Chrysene-d12	240.00	11.779	11.777	(1.000)	154459	40	
* 83 Perylene-d12	264.00	13.995	13.993	(1.000)	94735	40	
17 ortho-Cresol	108.00	4.704	4.703	(1.056)	422160	110	55
20 meta,para-Cresol	108.00	4.846	4.833	(1.088)	336572	90	45
96 Benzidine	184.00	10.771	10.770	(0.914)	6137	140	68

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic3.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD120

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	114323	10.80
32 Naphthalene-d8	348029	174014	696058	394576	13.37
48 Acenaphthene-d10	171424	85712	342848	201146	17.34
65 Phenanthrene-d10	222794	111397	445588	250391	12.39
76 Chrysene-d12	137788	68894	275576	154459	12.10
83 Perylene-d12	83290	41645	166580	94735	13.74

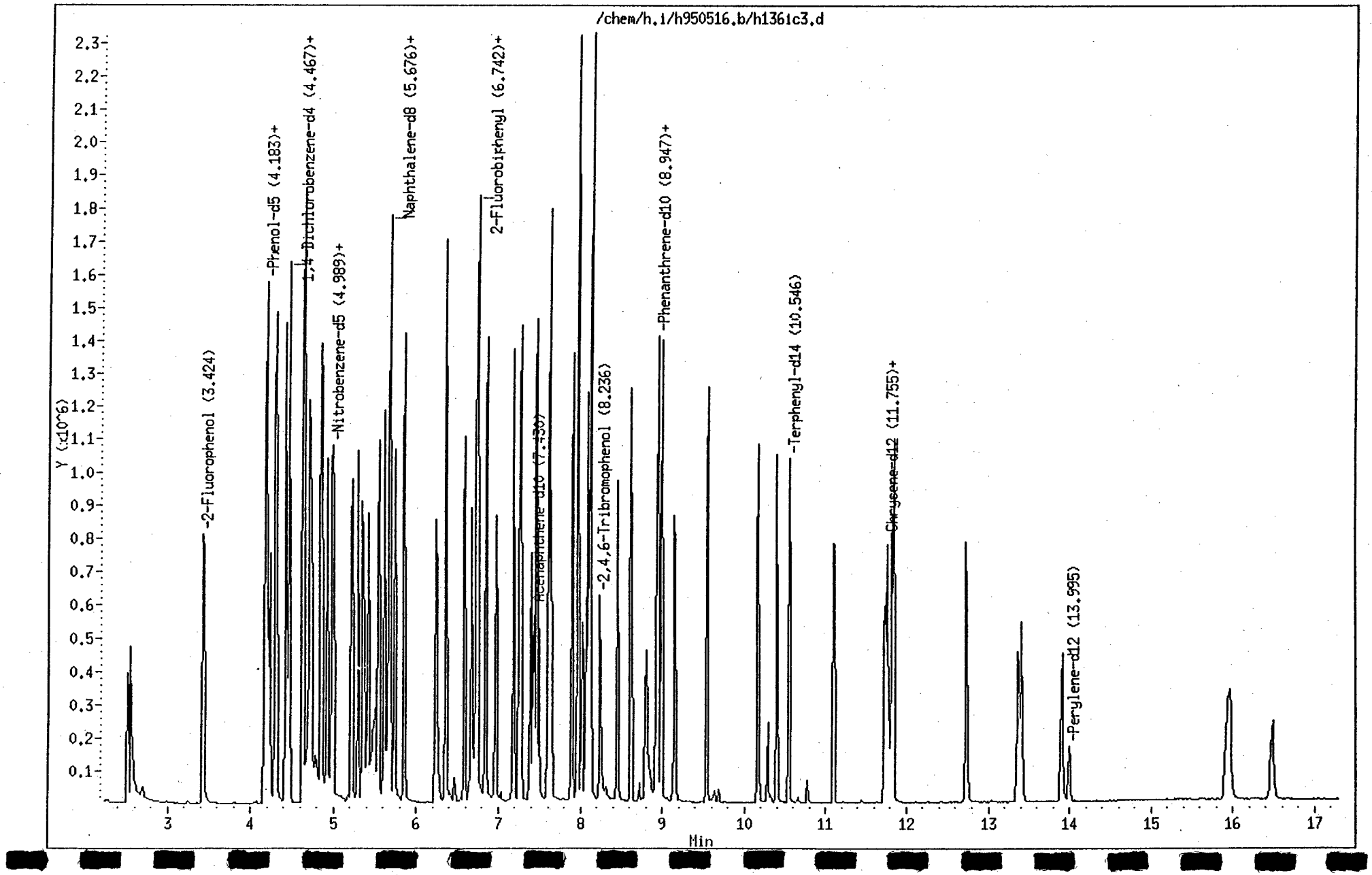
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.46	0.03
32 Naphthalene-d8	5.65	5.15	6.15	5.65	0.02
48 Acenaphthene-d10	7.42	6.92	7.92	7.43	0.18
65 Phenanthrene-d10	8.92	8.42	9.42	8.92	0.01
76 Chrysene-d12	11.78	11.28	12.28	11.78	0.01
83 Perylene-d12	13.99	13.49	14.49	13.99	0.01

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.

Data File: /chem/h.i/h950516.b/h136ic3.d
Date : 16-MAY-95 12:41
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic2.d
Lab Smp Id:
Inj Date : 16-MAY-1995 14:41
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950516 STD160
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping
Cal Date : 16-MAY-1995 11:52
Als bottle: 3
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h136ic1.d

Compound Sublist: std.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.546	2.546	(0.573)	329510	130	67
5 Phenol	94.00	4.182	4.170	(0.941)	375622	110	55(Q)
6 Aniline	93.00	4.193	4.193	(0.944)	365661	130	66
7 bis(2-Chloroethyl)ether	93.00	4.217	4.217	(0.949)	375204	120	61
9 2-Chlorophenol	128.00	4.300	4.300	(0.968)	382636	130	66
10 1,3-Dichlorobenzene	146.00	4.419	4.418	(0.995)	440865	130	65
12 1,4-Dichlorobenzene	146.00	4.454	4.466	(1.003)	445009	140	69
13 Benzyl alcohol	108.00	4.786	4.679	(1.077)	67471	130	67(QM)
15 1,2-Dichlorobenzene	146.00	4.632	4.632	(1.043)	371528	120	61
16 2-Methylphenol	108.00	4.691	4.703	(1.056)	376067	130	65
18 bis(2-chloroisopropyl)ether	45.00	4.703	4.715	(1.059)	219587	120	60
19 4-Methylphenol	108.00	4.833	4.833	(1.088)	313610	110	56
21 N-Nitroso-di-n-propylamine	70.00	4.845	4.845	(1.091)	172548	130	64(Q)
22 Hexachloroethane	117.00	4.916	4.916	(1.107)	169889	140	72
24 Nitrobenzene	77.00	4.987	4.987	(0.884)	312306	140	71
25 Isophorone	82.00	5.213	5.201	(0.924)	574751	140	69
26 2-Nitrophenol	139.00	5.284	5.295	(0.937)	222713	140	72
27 2,4-Dimethylphenol	107.00	5.343	5.331	(0.947)	409095	160	79
28 Benzoic acid	122.00	5.485	5.449	(0.973)	222556	190	96
29 bis(2-Chloroethoxy)methane	93.00	5.402	5.414	(0.958)	286611	120	62
30 2,4-Dichlorophenol	162.00	5.533	5.532	(0.981)	299989	140	71
31 1,2,4-Trichlorobenzene	180.00	5.604	5.603	(0.994)	325869	140	69
33 Naphthalene	128.00	5.663	5.675	(1.004)	893982	130	63
34 4-Chloroaniline	127.00	5.722	5.734	(1.015)	351590	150	75
35 Hexachlorobutadiene	225.00	5.841	5.852	(1.036)	219914	160	80
36 4-Chloro-3-methylphenol	107.00	6.220	6.232	(1.103)	324914	160	79
37 2-Methylnaphthalene	142.00	6.338	6.350	(1.124)	611089	130	67
38 Hexachlorocyclopentadiene	237.00	6.575	6.587	(0.888)	238578	170	84
39 2,4,6-Trichlorophenol	196.00	6.658	6.658	(0.899)	188233	140	69

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng)	FINAL (ug/L)
	==========	====	==	======	======	========	=======	=======
	40 2,4,5-Trichlorophenol	196.00	6.706	6.717	(0.906)	237166	150	76
	42 2-Chloronaphthalene	162.00	6.824	6.836	(0.922)	561754	130	66
	43 2-Nitroaniline	65.00	6.955	6.966	(0.939)	151110	150	75
	44 Dimethylphthalate	163.00	7.168	7.168	(0.968)	659341	130	64
	45 2,6-Dinitrotoluene	165.00	7.239	7.239	(0.978)	165254	140	69
	46 Acenaphthylene	152.00	7.251	7.263	(0.979)	863263	130	63
	47 3-Nitroaniline	138.00	7.381	7.381	(0.997)	161876	150	73
	49 Acenaphthene	153.00	7.440	7.452	(1.005)	507530	130	64
	50 2,4-Dinitrophenol	184.00	7.476	7.488	(1.010)	99712	200	99
	51 4-Nitrophenol	109.00	7.583	7.582	(1.024)	92459	180	92 (Q)
	52 Dibenzofuran	168.00	7.606	7.618	(1.027)	727775	120	62
	53 2,4-Dinitrotoluene	165.00	7.630	7.630	(1.030)	203427	130	67
	54 Diethylphthalate	149.00	7.879	7.891	(1.064)	662276	130	66
	55 4-Chlorophenyl-phenylether	204.00	7.950	7.962	(1.074)	263879	120	63
	56 Fluorene	166.00	7.950	7.962	(1.074)	477106	120	61
	57 4-Nitroaniline	138.00	8.009	8.009	(1.082)	141993	140	69
	58 4,6-Dinitro-2-methylphenol	198.00	8.057	8.056	(0.905)	119211	170	86
	59 n-Nitrosodiphenylamine	169.00	8.080	8.080	(0.908)	351323	140	70
	60 1,2-Diphenylhydrazine	77.00	8.104	8.116	(0.911)	937736	150	77
	62 4-Bromophenyl-phenylether	248.00	8.436	8.448	(0.948)	174803	140	72
	63 Hexachlorobenzene	283.70	8.602	8.613	(0.967)	219083	150	73
	64 Pentachlorophenol	265.50	8.780	8.791	(0.987)	138373	170	87
	66 Phenanthrene	178.00	8.922	8.945	(1.003)	6'4857	140	68
	67 Anthracene	178.00	8.969	8.981	(1.008)	670722	130	66
	68 Carbazole	167.00	9.135	9.147	(1.027)	563919	140	68
	69 Di-n-butylphthalate	149.00	9.526	9.538	(1.071)	855201	130	66
	70 Fluoranthene	202.00	10.142	10.166	(1.140)	593938	140	70
	71 Pyrene	202.00	10.367	10.391	(0.882)	581341	130	67
	73 Butylbenzylphthalate	149.00	11.078	11.090	(0.943)	333282	150	76
	74 3,3'-Dichlorobenzidine	252.00	11.707	11.718	(0.996)	193546	170	83
	75 Benzo[a]anthracene	228.00	11.730	11.754	(0.998)	479463	150	73
	77 Chrysene	228.00	11.789	11.801	(1.003)	441697	150	74
	78 bis(2-Ethylhexyl)phthalate	149.00	11.813	11.837	(1.005)	409071	140	73
	79 Di-n-octylphthalate	149.00	12.702	12.725	(0.909)	688326	150	73
	80 Benzo[b]fluoranthene	252.00	13.342	13.365	(0.955)	509041	170	85
	81 Benzo[k]fluoranthene	252.00	13.377	13.401	(0.958)	434137	110	56
	82 Benzo[a]pyrene	252.00	13.875	13.899	(0.993)	396609	150	76
	84 Indeno[1,2,3-cd]pyrene	276.00	15.890	15.925	(1.137)	427038	180	88
	85 Dibenz[a,h]anthracene	278.00	15.925	15.949	(1.140)	344805	180	88
	86 Benzo[g,h,i]perylene	276.00	16.447	16.458	(1.177)	338410	180	88
$	3 2-Fluorophenol	112.00	3.423	3.423	(0.771)	393997	130	67
$	4 Phenol-d5	99.00	4.170	4.158	(0.939)	370609	120	59
$	61 2,4,6-Tribromophenol	329.70	8.223	8.234	(0.924)	123123	180	90
$	23 Nitrobenzene-d5	82.00	4.964	4.964	(0.880)	3 2080	150	74 (R)
$	41 2-Fluorobiphenyl	172.00	6.729	6.729	(0.909)	578635	120	62 (R)
$	72 Terphenyl-d14	244.00	10.533	10.545	(0.896)	429978	140	71 (R)
*	11 1,4-Dichlorobenzene-d4	152.00	4.442	4.454	(1.000)	86132	40	
*	32 Naphthalene-d8	136.00	5.639	5.651	(1.000)	281607	40	
*	48 Acenaphthene-d10	164.00	7.405	7.417	(1.000)	142545	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.898	8.922	(1.000)	169938	40	
* 76 Chrysene-d12	240.00	11.754	11.777	(1.000)	109143	40	
* 83 Perylene-d12	264.00	13.970	13.993	(1.000)	74928	40	
17 ortho-Cresol	108.00	4.691	4.703	(1.056)	376067	130	65
20 meta,para-Cresol	108.00	4.833	4.833	(1.088)	313610	110	56
96 Benzidine	184.00	10.747	10.770	(0.914)	6200	200	98

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic2.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD160

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	86132	-16.53
32 Naphthalene-d8	348029	174014	696058	281607	-19.09
48 Acenaphthene-d10	171424	85712	342848	142545	-16.85
65 Phenanthrene-d10	222794	111397	445588	169938	-23.72
76 Chrysene-d12	137788	68894	275576	109143	-20.79
83 Perylene-d12	83290	41645	166580	74928	-10.04

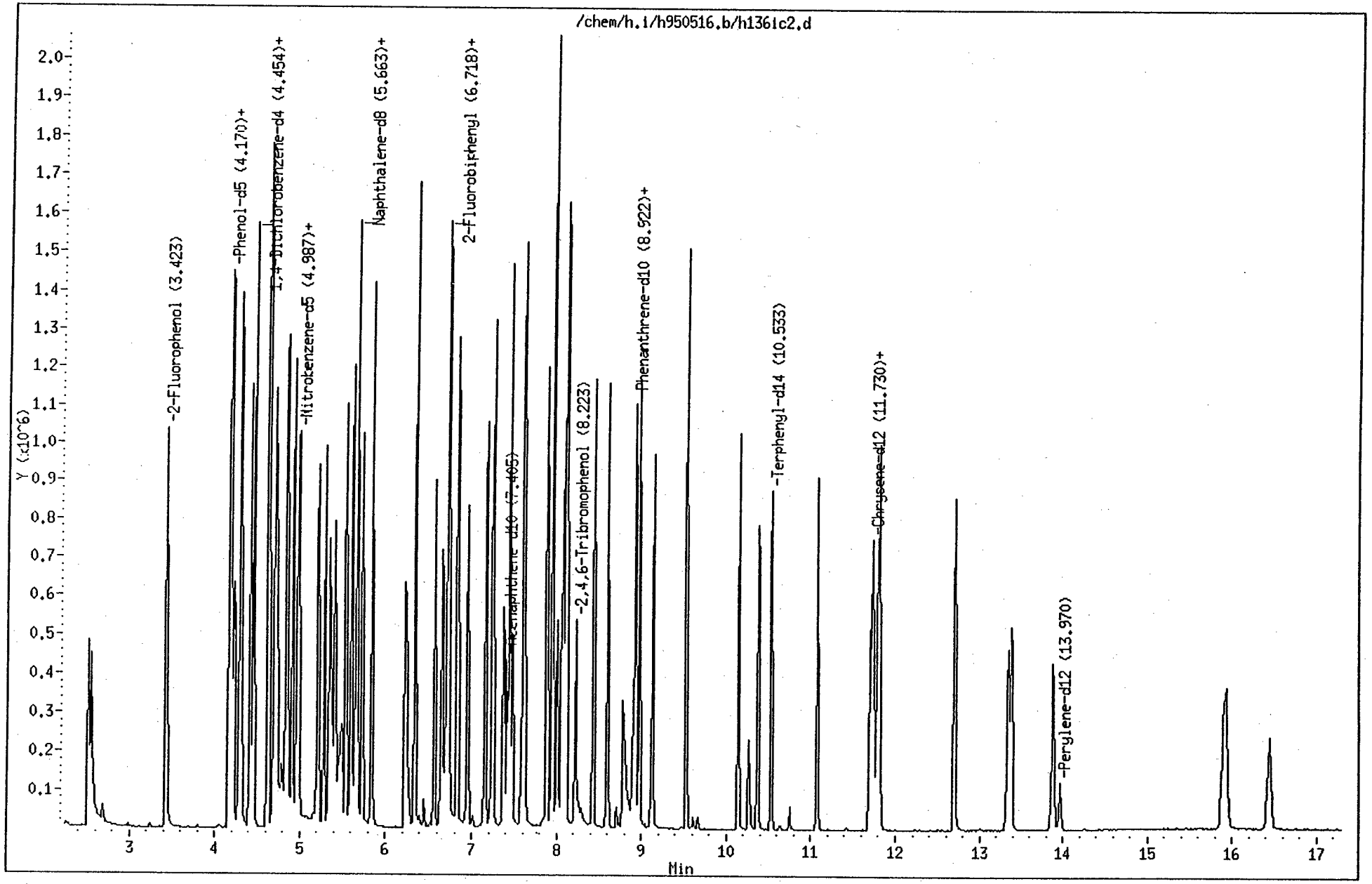
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.26
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.21
48 Acenaphthene-d10	7.42	6.92	7.92	7.40	-0.16
65 Phenanthrene-d10	8.92	8.42	9.42	8.90	-0.26
76 Chrysene-d12	11.78	11.28	12.28	11.75	-0.20
83 Perylene-d12	13.99	13.49	14.49	13.97	-0.17

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.

Data File: /chem/h.i/h950516.b/h136ic2.d
Date : 16-MAY-95 14:41
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950515.b/h135cc1.d
Report Date: 26-May-1995 19:27

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h135cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 15-MAY-1995 15:26
Init. Calibration Date(s): 05/09/95 05/09/95
Init. Calibration Times: 09:16 09:49
Method File: /chem/h.i/h950515.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
2	Pyridine	2.419	1.433	0.010	40.7	50.0
5	Phenol	2.105	1.704	0.800	19.0	30.0
6	Aniline	2.916	0.871	0.010	70.1	100.0
7	bis(2-Chloroethyl)ether	2.177	2.114	0.700	2.9	25.0
9	2-Chlorophenol	1.444	1.344	0.800	7.0	25.0
10	1,3-Dichlorobenzene	1.503	1.498	0.600	0.3	25.0
12	1,4-Dichlorobenzene	1.418	1.466	0.500	3.4	30.0
13	Benzyl alcohol	1.080	0.246	0.010	77.2	100.0
15	1,2-Dichlorobenzene	1.232	1.365	0.400	10.8	25.0
16	2-Methylphenol	1.400	1.426	0.700	1.9	40.0
18	bis(2-chloroisopropyl)ether	3.170	1.003	0.010	68.3	100.0
19	4-Methylphenol	1.565	1.194	0.600	23.7	25.0
21	N-Nitroso-di-n-propylamine	1.231	0.645	0.050	47.6	50.0
22	Hexachloroethane	0.625	0.540	0.300	13.5	25.0
24	Nitrobenzene	0.401	0.298	0.200	25.7	25.0
25	Isophorone	0.906	0.605	0.400	33.2	50.0
26	2-Nitrophenol	0.196	0.190	0.100	3.1	30.0
27	2,4-Dimethylphenol	0.364	0.344	0.200	5.5	25.0
28	Benzoic acid	0.199	0.159	0.010	20.1	40.0
29	bis(2-Chloroethoxy)methane	0.498	0.366	0.300	26.6	40.0
30	2,4-Dichlorophenol	0.258	0.284	0.200	10.0	30.0
31	1,2,4-Trichlorobenzene	0.261	0.314	0.200	20.0	25.0
33	Naphthalene	0.922	1.006	0.700	9.1	25.0
34	4-Chloroaniline	0.420	0.307	0.010	26.8	40.0
35	Hexachlorobutadiene	0.125	0.163	0.010	29.6	30.0
36	4-Chloro-3-methylphenol	0.284	0.273	0.200	4.1	30.0
37	2-Methylnaphthalene	0.566	0.636	0.400	12.3	25.0
38	Hexachlorocyclopentadiene	0.350	0.362	0.050	3.6	40.0
39	2,4,6-Trichlorophenol	0.386	0.378	0.200	1.9	30.0
40	2,4,5-Trichlorophenol	0.393	0.448	0.200	14.0	25.0
42	2-Chloronaphthalene	1.106	1.209	0.800	9.4	25.0
43	2-Nitroaniline	0.454	0.294	0.010	35.1	40.0
44	Dimethylphthalate	1.302	1.387	0.010	6.5	40.0
45	2,6-Dinitrotoluene	0.295	0.332	0.200	12.6	25.0
46	Acenaphthylene	1.815	1.970	1.300	8.5	25.0
47	3-Nitroaniline	0.375	0.319	0.010	14.9	40.0
49	Acenaphthene	1.050	1.126	0.800	7.3	30.0
50	2,4-Dinitrophenol	0.122	0.150	0.050	22.6	40.0
51	4-Nitrophenol	0.117	0.128	0.050	9.4	40.0
52	Dibenzofuran	1.437	1.662	0.800	15.6	25.0

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h135cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 15-MAY-1995 15:26
Init. Calibration Date(s): 05/09/95 05/09/95
Init. Calibration Times: 09:16 09:49
Method File: /chem/h.i/h950515.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	53 2,4-Dinitrotoluene	0.331	0.434	0.200	31.2	40.0
	54 Diethylphthalate	1.307	1.342	0.010	2.7	40.0
	55 4-Chlorophenyl-phenylether	0.466	0.561	0.400	20.2	25.0
	56 Fluorene	1.015	1.131	0.900	11.4	40.0
	57 4-Nitroaniline	0.354	0.319	0.010	9.8	40.0
	58 4,6-Dinitro-2-methylphenol	0.143	0.160	0.010	11.5	50.0
	59 n-Nitrosodiphenylamine	0.601	0.570	0.010	5.1	30.0
	60 1,2-Diphenylhydrazine	2.390	1.448	0.010	39.4	40.0
	62 4-Bromophenyl-phenylether	0.238	0.260	0.100	9.1	25.0
	63 Hexachlorobenzene	0.267	0.306	0.100	14.7	25.0
	64 Pentachlorophenol	0.158	0.171	0.050	8.1	30.0
	66 Phenanthrene	1.161	1.191	0.700	2.6	25.0
	67 Anthracene	1.139	1.169	0.700	2.6	25.0
	68 Carbazole	1.112	1.055	0.010	5.2	40.0
	69 Di-n-butylphthalate	1.705	1.460	0.010	14.4	40.0
	70 Fluoranthene	0.987	1.053	0.600	6.6	30.0
	71 Pyrene	1.511	1.599	0.600	5.8	40.0
	73 Butylbenzylphthalate	1.004	0.769	0.010	23.4	40.0
	74 3,3'-Dichlorobenzidine	0.466	0.375	0.010	19.7	40.0
	75 Benzo[a]anthracene	1.197	1.169	0.800	2.3	25.0
	77 Chrysene	1.018	1.103	0.700	8.4	25.0
	78 bis(2-Ethylhexyl)phthalate	1.236	0.981	0.010	20.6	40.0
	79 Di-n-octylphthalate	3.439	2.424	0.010	29.5	30.0
	80 Benzo[b]fluoranthene	1.610	1.701	0.700	5.6	25.0
	81 Benzo[k]fluoranthene	1.740	1.749	0.700	0.5	25.0
	82 Benzo[a]pyrene	1.374	1.388	0.700	1.0	30.0
	84 Indeno[1,2,3-cd]pyrene	1.635	1.372	0.500	16.1	40.0
	85 Dibenz[a,h]anthracene	1.368	1.098	0.400	19.7	40.0
	86 Benzo[g,h,i]perylene	1.334	1.152	0.500	13.7	40.0
$	3 2-Fluorophenol	1.582	1.400	0.600	11.5	25.0
$	4 Phenol-d5	1.984	1.540	0.800	22.4	25.0
$	61 2,4,6-Tribromophenol	0.139	0.137	0.010	1.4	40.0
$	23 Nitrobenzene-d5	0.418	0.317	0.200	24.0	25.0
$	41 2-Fluorobiphenyl	1.224	1.308	0.700	6.8	25.0
$	72 Terphenyl-d14	0.980	1.078	0.500	10.0	25.0
	17 ortho-Cresol	1.400	1.402	0.700	0.2	40.0
	20 meta,para-Cresol	1.565	1.194	0.600	23.7	25.0
	96 Benzidine	0.028	0.010	0.010	63.3	100.0

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Data file : /chem/h.i/h950515.b/h135cc1.d
Lab Smp Id:
Inj Date : 15-MAY-1995 15:26
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950515 STD050
Comment :
Method : /chem/h.i/h950515.b/hclpw.m
Meth Date : 15-May-1995 16:14 liping
Cal Date : 15-MAY-1995 15:26
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h135cc1.d
Continuing Calibration Sample

Compound Sublist: std.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
2	Pyridine	79.00	2.593	2.593	(0.579)	220395	50	30
5	Phenol	94.00	4.205	4.205	(0.939)	262040	50	40
6	Aniline	93.00	4.229	4.229	(0.944)	134017	50	15 (M)
7	bis(2-Chloroethyl)ether	93.00	4.252	4.252	(0.950)	325062	50	48 (M)
9	2-Chlorophenol	128.00	4.323	4.323	(0.966)	206652	50	46
10	1,3-Dichlorobenzene	146.00	4.442	4.442	(0.992)	230437	50	50
12	1,4-Dichlorobenzene	146.00	4.489	4.489	(1.003)	225465	50	52
13	Benzyl alcohol	108.00	4.703	4.703	(1.050)	37795	50	11 (M)
15	1,2-Dichlorobenzene	146.00	4.655	4.655	(1.040)	209883	50	55
16	2-Methylphenol	108.00	4.726	4.726	(1.056)	219343	50	51 (M)
18	bis(2-chloroisopropyl)ether	45.00	4.738	4.738	(1.058)	154308	50	16
19	4-Methylphenol	108.00	4.857	4.857	(1.085)	183663	50	38
21	N-Nitroso-di-n-propylamine	70.00	4.869	4.869	(1.087)	99160	50	26
22	Hexachloroethane	117.00	4.952	4.952	(1.106)	83104	50	43
24	Nitrobenzene	77.00	5.011	5.011	(0.883)	155624	50	37
25	Isophorone	82.00	5.236	5.236	(0.923)	316333	50	33
26	2-Nitrophenol	139.00	5.319	5.319	(0.937)	99398	50	48 (a)
27	2,4-Dimethylphenol	107.00	5.366	5.366	(0.946)	179744	50	47
28	Benzoic acid	122.00	5.473	5.473	(0.964)	83253	50	40 (a)
29	bis(2-Chloroethoxy)methane	93.00	5.437	5.437	(0.958)	191347	50	37
30	2,4-Dichlorophenol	162.00	5.556	5.556	(0.979)	148677	50	55
31	1,2,4-Trichlorobenzene	180.00	5.639	5.639	(0.994)	164164	50	60
33	Naphthalene	128.00	5.698	5.698	(1.004)	526201	50	54
34	4-Chloroaniline	127.00	5.757	5.757	(1.015)	160826	50	37
35	Hexachlorobutadiene	225.00	5.876	5.876	(1.036)	85082	50	65 (M)
36	4-Chloro-3-methylphenol	107.00	6.255	6.255	(1.102)	142684	50	48
37	2-Methylnaphthalene	142.00	6.374	6.374	(1.123)	332480	50	56
38	Hexachlorocyclopentadiene	237.00	6.611	6.611	(0.887)	89852	50	52
39	2,4,6-Trichlorophenol	196.00	6.694	6.694	(0.898)	93774	50	49

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
40	2,4,5-Trichlorophenol	196.00	6.741	6.741	(0.905)	111037	50	57
42	2-Chloronaphthalene	162.00	6.859	6.859	(0.920)	299778	50	55
43	2-Nitroaniline	65.00	6.990	6.990	(0.938)	72942	50	32(a)
44	Dimethylphthalate	163.00	7.203	7.203	(0.967)	343828	50	53
45	2,6-Dinitrotoluene	165.00	7.262	7.262	(0.975)	82312	50	56
46	Acenaphthylene	152.00	7.286	7.286	(0.978)	488353	50	54
47	3-Nitroaniline	138.00	7.405	7.405	(0.994)	79069	50	42(a)
49	Acenaphthene	153.00	7.476	7.476	(1.003)	279258	50	54
50	2,4-Dinitrophenol	184.00	7.511	7.511	(1.008)	37105	50	61
51	4-Nitrophenol	109.00	7.618	7.618	(1.022)	31673	50	55
52	Dibenzofuran	168.00	7.642	7.642	(1.025)	411992	50	58
53	2,4-Dinitrotoluene	165.00	7.665	7.665	(1.029)	107663	50	66
54	Diethylphthalate	149.00	7.914	7.914	(1.062)	332588	50	51
55	4-Chlorophenyl-phenylether	204.00	7.985	7.985	(1.072)	138978	50	60
56	Fluorene	166.00	7.997	7.997	(1.073)	280483	50	56
57	4-Nitroaniline	138.00	8.033	8.033	(1.078)	79202	50	45(a)
58	4,6-Dinitro-2-methylphenol	198.00	8.080	8.080	(0.903)	53979	50	56
59	n-Nitrosodiphenylamine	169.00	8.116	8.116	(0.907)	192595	50	47
60	1,2-Diphenylhydrazine	77.00	8.139	8.139	(0.910)	489281	50	30
62	4-Bromophenyl-phenylether	248.00	8.483	8.483	(0.948)	87768	50	54
63	Hexachlorobenzene	283.70	8.637	8.637	(0.966)	103518	50	57
64	Pentachlorophenol	265.50	8.827	8.827	(0.987)	57795	50	54
66	Phenanthrene	178.00	8.969	8.969	(1.003)	402608	50	51
67	Anthracene	178.00	9.016	9.016	(1.008)	395020	50	51
68	Carbazole	167.00	9.182	9.182	(1.026)	356477	50	47
69	Di-n-butylphthalate	149.00	9.573	9.573	(1.070)	493399	50	43
70	Fluoranthene	202.00	10.189	10.189	(1.139)	355753	50	53
71	Pyrene	202.00	10.414	10.414	(0.882)	351544	50	53
73	Butylbenzylphthalate	149.00	11.126	11.126	(0.942)	169089	50	38
74	3,3'-Dichlorobenzidine	252.00	11.765	11.765	(0.996)	82382	50	40
75	Benzo[a]anthracene	228.00	11.789	11.789	(0.998)	257054	50	49
77	Chrysene	228.00	11.848	11.848	(1.003)	242540	50	54
78	bis(2-Ethylhexyl)phthalate	149.00	11.872	11.872	(1.005)	215809	50	40
79	Di-n-octylphthalate	149.00	12.773	12.773	(0.909)	322823	50	35
80	Benzo[b]fluoranthene	252.00	13.413	13.413	(0.954)	226468	50	53
81	Benzo[k]fluoranthene	252.00	13.460	13.460	(0.958)	232877	50	50
82	Benzo[a]pyrene	252.00	13.958	13.958	(0.993)	184817	50	50
84	Indeno[1,2,3-cd]pyrene	276.00	15.996	15.996	(1.138)	182675	50	42
85	Dibenz[a,h]anthracene	278.00	16.032	16.032	(1.141)	146260	50	40
86	Benzo[g,h,i]perylene	276.00	16.553	16.553	(1.178)	153356	50	43
$ 3	2-Fluorophenol	112.00	3.458	3.458	(0.772)	215241	50	44
$ 4	Phenol-d5	99.00	4.193	4.193	(0.936)	236818	50	39
$ 61	2,4,6-Tribromophenol	329.70	8.258	8.258	(0.923)	46377	50	49
$ 23	Nitrobenzene-d5	82.00	4.999	4.999	(0.881)	166049	50	38
$ 41	2-Fluorobiphenyl	172.00	6.765	6.765	(0.908)	324142	50	53
$ 72	Terphenyl-d14	244.00	10.580	10.580	(0.896)	237121	50	55
* 11	1,4-Dichlorobenzene-d4	152.00	4.477	4.477	(1.000)	123023	40	
* 32	Naphthalene-d8	136.00	5.674	5.674	(1.000)	418440	40	
* 48	Acenaphthene-d10	164.00	7.452	7.452	(1.000)	198324	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
* 65 Phenanthrene-d10	188.00	8.945	8.945	(1.000)	270386	40	
* 76 Chrysene-d12	240.00	11.813	11.813	(1.000)	175926	40	
* 83 Perylene-d12	264.00	14.053	14.053	(1.000)	106536	40	
17 ortho-Cresol	108.00	4.726	4.726	(1.056)	215586	50	50(M)
20 meta,para-Cresol	108.00	4.857	4.857	(1.085)	183663	50	38
96 Benzidine	184.00	10.794	10.794	(0.914)	2253	50	18(a)

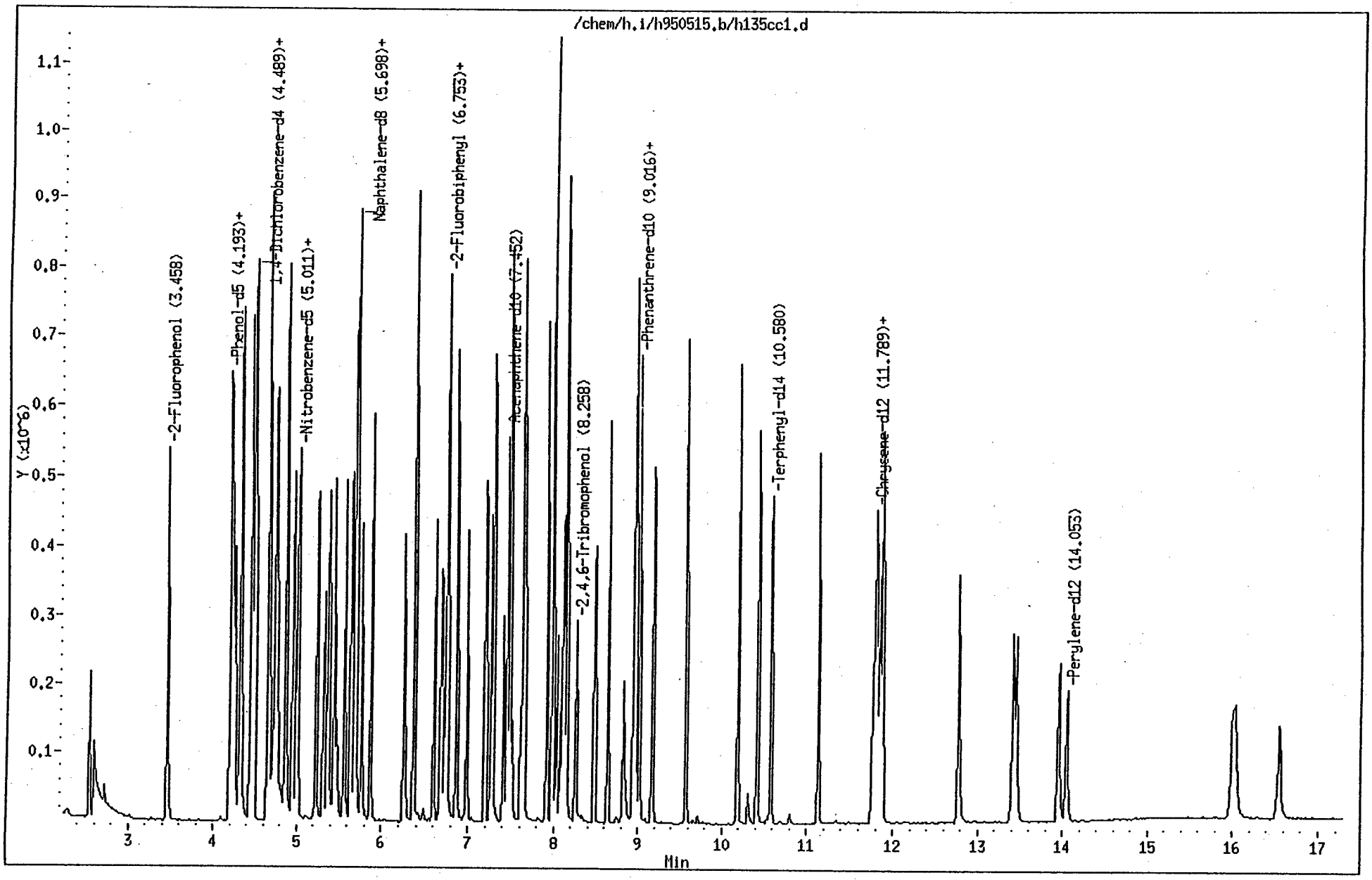
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: /chem/h.i/h950515.b/h135cc1.d
Date : 15-MAY-95 15:26
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950516.b/h136ic1.d
Report Date: 26-May-1995 19:35

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h136ic1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 16-MAY-1995 11:52
Init. Calibration Date(s): 05/16/95 05/16/95
Init. Calibration Times: 11:52 13:52
Method File: /chem/h.i/h950516.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
2	Pyridine	0.971	1.136	0.010	17.0	50.0
5	Phenol	1.340	1.591	0.800	18.8	25.0
6	Aniline	1.212	1.293	0.010	6.6	100.0
7	bis(2-Chloroethyl)ether	1.242	1.424	0.700	14.6	25.0
9	2-Chlorophenol	1.239	1.356	0.800	9.4	25.0
10	1,3-Dichlorobenzene	1.435	1.568	0.600	9.2	25.0
12	1,4-Dichlorobenzene	1.413	1.504	0.500	6.5	25.0
13	Benzyl alcohol	0.217	0.235	0.010	8.2	100.0
15	1,2-Dichlorobenzene	1.261	1.403	0.400	11.2	25.0
16	2-Methylphenol	1.236	1.341	0.700	8.5	25.0
18	bis(2-chloroisopropyl)ether	0.747	0.846	0.010	13.1	100.0
19	4-Methylphenol	1.121	1.302	0.600	16.2	25.0
21	N-Nitroso-di-n-propylamine	0.593	0.624	0.500	5.2	25.0
22	Hexachloroethane	0.530	0.546	0.300	3.1	25.0
24	Nitrobenzene	0.296	0.311	0.200	5.3	25.0
25	Isophorone	0.556	0.588	0.400	5.8	50.0
26	2-Nitrophenol	0.209	0.219	0.100	4.7	25.0
27	2,4-Dimethylphenol	0.371	0.367	0.200	1.0	25.0
28	Benzoic acid	0.183	0.164	0.010	10.4	40.0
29	bis(2-Chloroethoxy)methane	0.296	0.330	0.300	11.4	25.0
30	2,4-Dichlorophenol	0.290	0.299	0.200	3.2	25.0
31	1,2,4-Trichlorobenzene	0.316	0.336	0.200	6.3	25.0
33	Naphthalene	0.911	1.002	0.700	10.0	25.0
34	4-Chloroaniline	0.334	0.331	0.010	0.9	40.0
35	Hexachlorobutadiene	0.200	0.196	0.010	2.3	40.0
36	4-Chloro-3-methylphenol	0.297	0.291	0.200	2.2	25.0
37	2-Methylnaphthalene	0.615	0.644	0.400	4.8	25.0
38	Hexachlorocyclopentadiene	0.411	0.397	0.010	3.4	40.0
39	2,4,6-Trichlorophenol	0.363	0.383	0.200	5.6	25.0
40	2,4,5-Trichlorophenol	0.459	0.476	0.200	3.7	25.0
42	2-Chloronaphthalene	1.107	1.194	0.800	7.9	25.0
43	2-Nitroaniline	0.278	0.281	0.010	1.3	40.0
44	Dimethylphthalate	1.331	1.434	0.010	7.7	40.0
45	2,6-Dinitrotoluene	0.323	0.336	0.200	4.1	25.0
46	Acenaphthylene	1.754	1.910	1.300	8.9	25.0
47	3-Nitroaniline	0.304	0.311	0.010	2.3	40.0
49	Acenaphthene	1.034	1.108	0.800	7.1	25.0
50	2,4-Dinitrophenol	0.155	0.141	0.010	8.6	40.0
51	4-Nitrophenol	0.156	0.141	0.010	9.9	40.0
52	Dibenzofuran	1.496	1.648	0.800	10.1	25.0

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h136ic1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 16-MAY-1995 11:52
Init. Calibration Date(s): 05/16/95 05/16/95
Init. Calibration Times: 11:52 13:52
Method File: /chem/h.i/h950516.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	53 2,4-Dinitrotoluene	0.400	0.426	0.200	6.5	40.0
	54 Diethylphthalate	1.358	1.414	0.010	4.1	40.0
	55 4-Chlorophenyl-phenylether	0.543	0.588	0.400	8.2	25.0
	56 Fluorene	1.006	1.094	0.900	8.7	25.0
	57 4-Nitroaniline	0.278	0.287	0.010	3.5	40.0
	58 4,6-Dinitro-2-methylphenol	0.166	0.163	0.010	1.6	50.0
	59 n-Nitrosodiphenylamine	0.559	0.592	0.010	6.0	40.0
	60 1,2-Diphenylhydrazine	1.412	1.438	0.010	1.8	40.0
	62 4-Bromophenyl-phenylether	0.276	0.286	0.100	3.4	25.0
	63 Hexachlorobenzene	0.339	0.351	0.100	3.6	25.0
	64 Pentachlorophenol	0.188	0.188	0.050	0.2	25.0
	66 Phenanthrene	1.109	1.175	0.700	5.9	25.0
	67 Anthracene	1.092	1.201	0.700	9.9	25.0
	68 Carbazole	0.923	0.979	0.010	6.0	40.0
	69 Di-n-butylphthalate	1.431	1.517	0.010	6.0	40.0
	70 Fluoranthene	0.968	0.992	0.600	2.4	25.0
	71 Pyrene	1.487	1.589	0.600	6.9	25.0
	73 Butylbenzylphthalate	0.776	0.802	0.010	3.3	40.0
	74 3,3'-Dichlorobenzidine	0.426	0.426	0.010	0.1	40.0
	75 Benzo[a]anthracene	1.160	1.201	0.800	3.5	25.0
	77 Chrysene	1.058	1.097	0.700	3.7	25.0
	78 bis(2-Ethylhexyl)phthalate	0.960	1.030	0.010	7.2	40.0
	79 Di-n-octylphthalate	2.387	2.507	0.010	5.0	40.0
	80 Benzo[b]fluoranthene	1.654	1.600	0.700	3.3	25.0
	81 Benzo[k]fluoranthene	1.732	2.049	0.700	18.3	25.0
	82 Benzo[a]pyrene	1.352	1.385	0.700	2.4	25.0
	84 Indeno[1,2,3-cd]pyrene	1.332	1.302	0.500	2.3	25.0
	85 Dibenz[a,h]anthracene	1.081	1.041	0.400	3.6	25.0
	86 Benzo[g,h,i]perylene	1.071	1.028	0.500	4.0	25.0
$	3 2-Fluorophenol	1.229	1.356	0.600	10.3	25.0
$	4 Phenol-d5	1.265	1.455	0.800	15.1	25.0
$	61 2,4,6-Tribromophenol	0.164	0.162	0.010	1.3	40.0
$	23 Nitrobenzene-d5	0.316	0.327	0.200	3.4	25.0
$	41 2-Fluorobiphenyl	1.194	1.316	0.700	10.2	25.0
$	72 Terphenyl-d14	1.063	1.111	0.500	4.5	25.0
	17 ortho-Cresol	1.236	1.341	0.700	8.5	25.0
	20 meta,para-Cresol	1.121	1.302	0.600	16.2	25.0
	96 Benzidine	0.014	0.012	0.010	14.9	100.0

SPL Houston Labs

Data file : /chem/h.i/h950516.b/h136ic1.d
Lab Smp Id:
Inj Date : 16-MAY-1995 11:52
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950516 STD050
Comment :
Method : /chem/h.i/h950516.b/hclpw.m
Meth Date : 16-May-1995 15:10 liping Quant Type: ISTD
Cal Date : 16-MAY-1995 11:52 Cal File: h136ic1.d
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	2.546	2.546	(0.572)	146575	50	25
5	Phenol	94.00	4.170	4.170	(0.936)	205267	50	25
6	Aniline	93.00	4.193	4.193	(0.941)	166726	50	25
7	bis(2-Chloroethyl)ether	93.00	4.217	4.217	(0.947)	183611	50	25
9	2-Chlorophenol	128.00	4.300	4.300	(0.965)	174942	50	25
10	1,3-Dichlorobenzene	146.00	4.418	4.418	(0.992)	202199	50	25
12	1,4-Dichlorobenzene	146.00	4.466	4.466	(1.003)	194044	50	25
13	Benzyl alcohol	108.00	4.679	4.679	(1.051)	30275	50	25(M)
15	1,2-Dichlorobenzene	146.00	4.632	4.632	(1.040)	180932	50	25
16	2-Methylphenol	108.00	4.703	4.703	(1.056)	172933	50	25
18	bis(2-chloroisopropyl)ether	45.00	4.715	4.715	(1.059)	109058	50	25
19	4-Methylphenol	108.00	4.833	4.833	(1.085)	167905	50	25
21	N-Nitroso-di-n-propylamine	70.00	4.845	4.845	(1.088)	80476	50	25
22	Hexachloroethane	117.00	4.916	4.916	(1.104)	70413	50	25
24	Nitrobenzene	77.00	4.987	4.987	(0.883)	135316	50	25
25	Isophorone	82.00	5.201	5.201	(0.920)	255738	50	25
26	2-Nitrophenol	139.00	5.295	5.295	(0.937)	95121	50	25
27	2,4-Dimethylphenol	107.00	5.331	5.331	(0.943)	159742	50	25
28	Benzoic acid	122.00	5.449	5.449	(0.964)	71466	50	25
29	bis(2-Chloroethoxy)methane	93.00	5.414	5.414	(0.958)	143361	50	25
30	2,4-Dichlorophenol	162.00	5.532	5.532	(0.979)	130189	50	25
31	1,2,4-Trichlorobenzene	180.00	5.603	5.603	(0.992)	146082	50	25
33	Naphthalene	128.00	5.675	5.675	(1.004)	436051	50	25
34	4-Chloroaniline	127.00	5.734	5.734	(1.015)	144131	50	25
35	Hexachlorobutadiene	225.00	5.852	5.852	(1.036)	85151	50	25
36	4-Chloro-3-methylphenol	107.00	6.232	6.232	(1.103)	126545	50	25
37	2-Methylnaphthalene	142.00	6.350	6.350	(1.124)	280364	50	25
38	Hexachlorocyclopentadiene	237.00	6.587	6.587	(0.888)	84983	50	25
39	2,4,6-Trichlorophenol	196.00	6.658	6.658	(0.898)	82150	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.717	6.717	(0.906)	102052	50	25
42	2-Chloronaphthalene	162.00	6.836	6.836	(0.922)	255849	50	25
43	2-Nitroaniline	65.00	6.966	6.966	(0.939)	60275	50	25
44	Dimethylphthalate	163.00	7.168	7.168	(0.966)	307292	50	25
45	2,6-Dinitrotoluene	165.00	7.239	7.239	(0.976)	72022	50	25
46	Acenaphthylene	152.00	7.263	7.263	(0.979)	409270	50	25
47	3-Nitroaniline	138.00	7.381	7.381	(0.995)	66646	50	25
49	Acenaphthene	153.00	7.452	7.452	(1.005)	237386	50	25
50	2,4-Dinitrophenol	184.00	7.488	7.488	(1.010)	30259	50	25
51	4-Nitrophenol	109.00	7.582	7.582	(1.022)	30138	50	25
52	Dibenzofuran	168.00	7.618	7.618	(1.027)	353082	50	25
53	2,4-Dinitrotoluene	165.00	7.630	7.630	(1.029)	91273	50	25
54	Diethylphthalate	149.00	7.891	7.891	(1.064)	303006	50	25
55	4-Chlorophenyl-phenylether	204.00	7.962	7.962	(1.073)	125960	50	25
56	Fluorene	166.00	7.962	7.962	(1.073)	234490	50	25
57	4-Nitroaniline	138.00	8.009	8.009	(1.080)	61548	50	25
58	4,6-Dinitro-2-methylphenol	198.00	8.056	8.056	(0.903)	45458	50	25
59	n-Nitrosodiphenylamine	169.00	8.080	8.080	(0.906)	164956	50	25
60	1,2-Diphenylhydrazine	77.00	8.116	8.116	(0.910)	400382	50	25
62	4-Bromophenyl-phenylether	248.00	8.448	8.448	(0.947)	79542	50	25
63	Hexachlorobenzene	283.70	8.613	8.613	(0.965)	97763	50	25
64	Pentachlorophenol	265.50	8.791	8.791	(0.985)	52335	50	25
66	Phenanthrene	178.00	8.945	8.945	(1.003)	327111	50	25
67	Anthracene	178.00	8.981	8.981	(1.007)	334435	50	25
68	Carbazole	167.00	9.147	9.147	(1.025)	272581	50	25
69	Di-n-butylphthalate	149.00	9.538	9.538	(1.069)	422572	50	25
70	Fluoranthene	202.00	10.166	10.166	(1.139)	276166	50	25
71	Pyrene	202.00	10.391	10.391	(0.882)	273639	50	25
73	Butylbenzylphthalate	149.00	11.090	11.090	(0.942)	138212	50	25
74	3,3'-Dichlorobenzidine	252.00	11.718	11.718	(0.995)	73287	50	25
75	Benzo[a]anthracene	228.00	11.754	11.754	(0.998)	206785	50	25
77	Chrysene	228.00	11.801	11.801	(1.002)	188920	50	25
78	bis(2-Ethylhexyl)phthalate	149.00	11.837	11.837	(1.005)	177351	50	25
79	Di-n-octylphthalate	149.00	12.725	12.725	(0.909)	261018	50	25
80	Benzo[b]fluoranthene	252.00	13.365	13.365	(0.955)	166573	50	25
81	Benzo[k]fluoranthene	252.00	13.401	13.401	(0.958)	213325	50	25
82	Benzo[a]pyrene	252.00	13.899	13.899	(0.993)	144149	50	25
84	Indeno[1,2,3-cd]pyrene	276.00	15.925	15.925	(1.138)	135554	50	25
85	Dibenz[a,h]anthracene	278.00	15.949	15.949	(1.140)	108418	50	25
86	Benzo[g,h,i]perylene	276.00	16.458	16.458	(1.176)	107050	50	25
$ 3	2-Fluorophenol	112.00	3.423	3.423	(0.769)	174833	50	25
$ 4	Phenol-d5	99.00	4.158	4.158	(0.933)	187670	50	25
$ 61	2,4,6-Tribromophenol	329.70	8.234	8.234	(0.923)	44987	50	25
$ 23	Nitrobenzene-d5	82.00	4.964	4.964	(0.878)	142323	50	25
$ 41	2-Fluorobiphenyl	172.00	6.729	6.729	(0.907)	281986	50	25
$ 72	Terphenyl-d14	244.00	10.545	10.545	(0.895)	191375	50	25
* 11	1,4-Dichlorobenzene-d4	152.00	4.454	4.454	(1.000)	103183	40	
* 32	Naphthalene-d8	136.00	5.651	5.651	(1.000)	348029	40	
* 48	Acenaphthene-d10	164.00	7.417	7.417	(1.000)	171424	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.922	8.922	(1.000)	222794	40	
* 76 Chrysene-d12	240.00	11.777	11.777	(1.000)	137788	40	
* 83 Perylene-d12	264.00	13.993	13.993	(1.000)	83290	40	
17 ortho-Cresol	108.00	4.703	4.703	(1.056)	172933	50	25
20 meta,para-Cresol	108.00	4.833	4.833	(1.085)	167905	50	25
96 Benzidine	184.00	10.770	10.770	(0.914)	2005	50	25

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136ic1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclpw.m
Misc Info: 950516 STD050

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	103183	0.00
32 Naphthalene-d8	348029	174014	696058	348029	0.00
48 Acenaphthene-d10	171424	85712	342848	171424	0.00
65 Phenanthrene-d10	222794	111397	445588	222794	0.00
76 Chrysene-d12	137788	68894	275576	137788	0.00
83 Perylene-d12	83290	41645	166580	83290	0.00

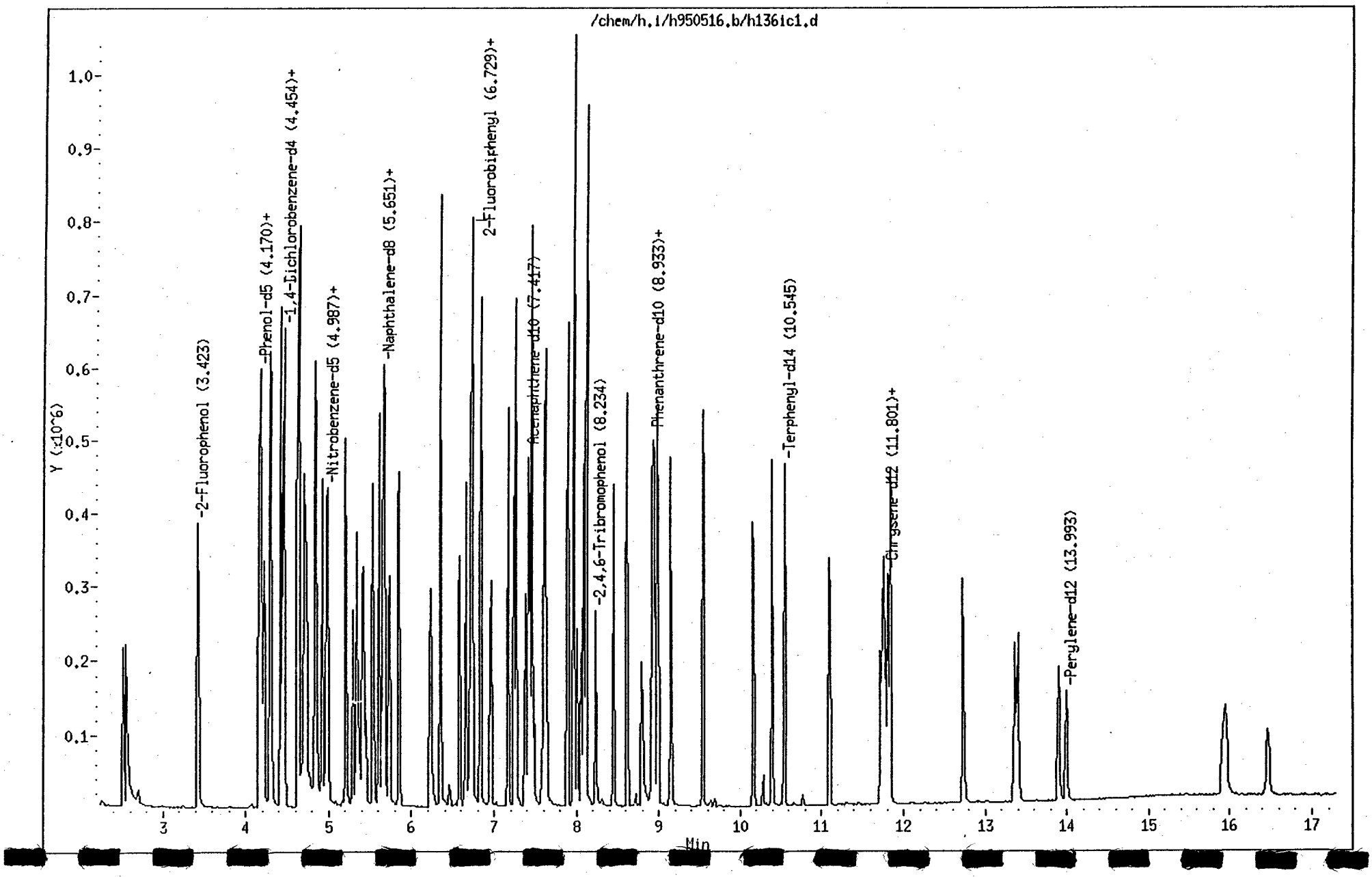
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.45	0.00
32 Naphthalene-d8	5.65	5.15	6.15	5.65	0.00
48 Acenaphthene-d10	7.42	6.92	7.92	7.42	0.00
65 Phenanthrene-d10	8.92	8.42	9.42	8.92	0.00
76 Chrysene-d12	11.78	11.28	12.28	11.78	0.00
83 Perylene-d12	13.99	13.49	14.49	13.99	0.00

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.

Data File: /chem/h.i/h950516.b/h136ic1.d
Date : 16-MAY-95 11:52
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h136s13.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950516.b/hclps.m
Misc Info: E132S1/H132B02/H136IC1

Calibration Date: 05/16/95
Calibration Time: 1152

Level: LOW
Sample Type: SOIL

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	103183	51592	206366	137962	33.71
32 Naphthalene-d8	348029	174014	696058	501891	44.21
48 Acenaphthene-d10	171424	85712	342848	234319	36.69
65 Phenanthrene-d10	222794	111397	445588	283903	27.43
76 Chrysene-d12	137788	68894	275576	153893	11.69
83 Perylene-d12	83290	41645	166580	97228	16.73

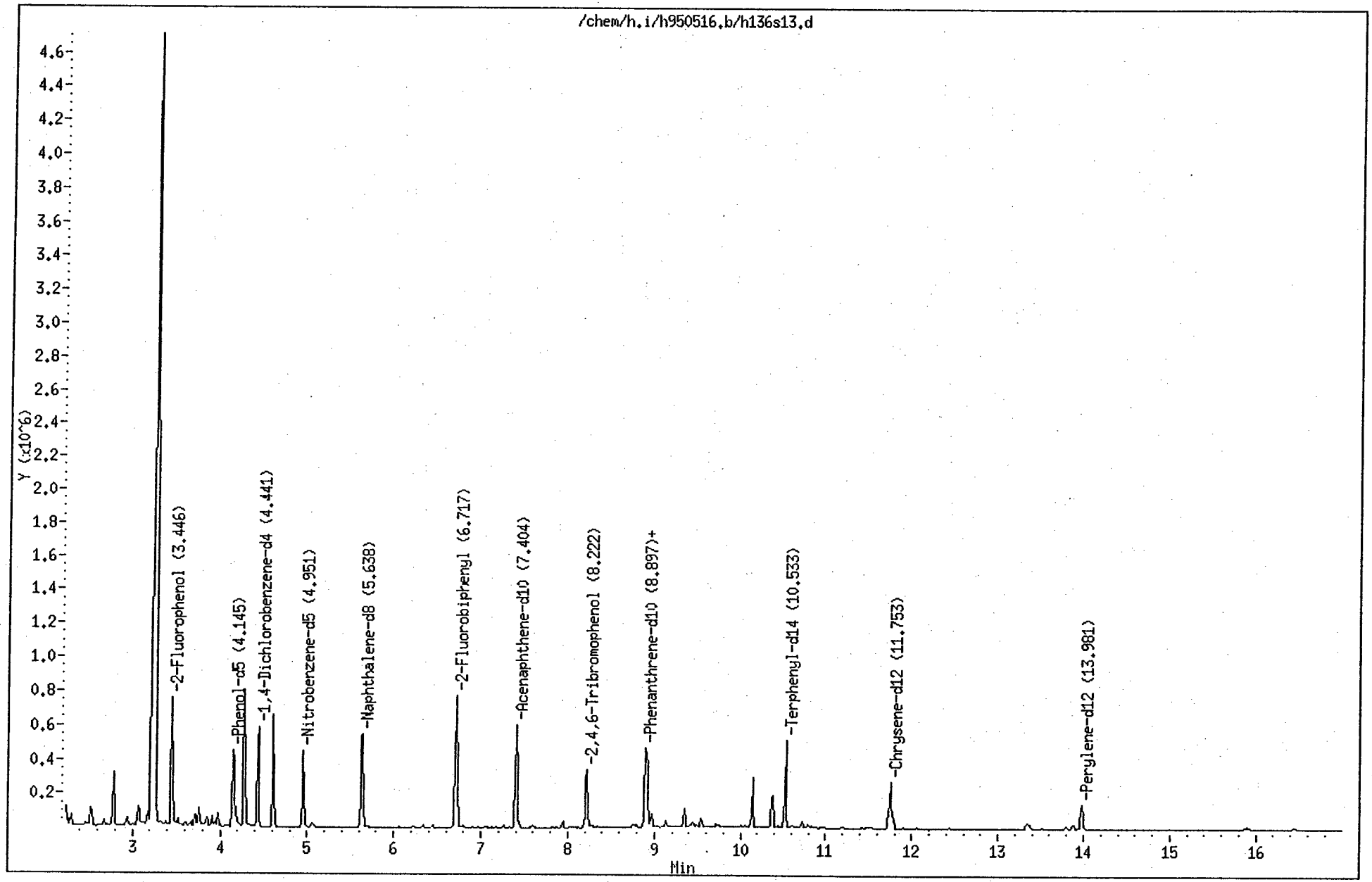
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.45	3.95	4.95	4.44	-0.28
32 Naphthalene-d8	5.65	5.15	6.15	5.64	-0.22
48 Acenaphthene-d10	7.42	6.92	7.92	7.40	-0.17
65 Phenanthrene-d10	8.92	8.42	9.42	8.90	-0.27
76 Chrysene-d12	11.78	11.28	12.28	11.75	-0.21
83 Perylene-d12	13.99	13.49	14.49	13.98	-0.09

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.

Data File: /chem/h.i/h950516.b/h136s13.d
Date : 16-MAY-1995 19:57
Client ID:
Sample Info: 9505164-08B-8270S/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



ICP Spectroscopy Method 6010 Quality Control Report

Matrix: Water Units: mg/L Analyst: DQ

Date:050995 Time:0855 File Name:050995DQ Checked: 5/10/95

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver	ND	2.00	1.937	97	1.60	2.40
Aluminum						
Arsenic	ND	2.00	2.070	103	1.60	2.40
Barium	ND	2.00	1.984	99	1.60	2.40
Beryllium	ND	2.00	2.066	103	1.60	2.40
Calcium						
Cadmium	ND	2.00	2.006	100	1.60	2.40
Cobalt	ND	2.00	2.044	102	1.60	2.40
Chromium	ND	2.00	2.045	102	1.60	2.40
Copper						
Iron						
Potassium						
Magnesium						
Manganese						
Sodium						
Nickel	ND	2.00	2.075	104	1.60	2.40
Lead	ND	2.00	2.084	104	1.60	2.40
Antimony	ND	2.00	2.093	105	1.60	2.40
Selenium	ND	2.00	1.988	99	1.60	2.40
Thallium						
Vanadium	ND	2.00	1.934	97	1.60	2.40
Zinc	ND	2.00	1.985	99	1.60	2.40

Work Orders in Batch

Work Order	Fractions
95-04-362	30D
95-05-160	03A
95-05-164	11D, 11E
95-04-363	26D

Matrix Spike - Spike Duplicate Results

Work Order Spiked: 95-04-362 30D

Element	Sample Result	Spike Added	Matrix Spike Result	Matrix Spike Recovery	Matrix Spike Duplicate Result	Matrix Spike Duplicate Recovery	QC Limits % Recovery		Spike RPD %	QC Limits %
Silver	ND	1.0	0.946	95	0.959	96	80	120	1.4	20.0
Aluminum										
Arsenic	ND	2.0	2.043	102	2.086	104	80	120	2.1	20.0
Barium	ND	2.0	1.925	96	1.917	96	80	120	0.4	20.0
Beryllium	ND	1.0	1.057	106	1.026	103	80	120	3.0	20.0
Calcium										
Cadmium	ND	1.0	1.000	100	1.015	101	80	120	1.5	20.0
Cobalt	ND	1.0	1.024	102	1.036	104	80	120	1.2	20.0
Chromium	ND	1.0	1.017	102	1.022	102	80	120	0.5	20.0
Copper										
Iron										
Potassium										
Magnesium										
Manganese										
Sodium										
Nickel	ND	1.0	1.051	105	1.059	106	80	120	0.8	20.0
Lead	ND	1.0	1.049	105	1.067	107	80	120	1.7	20.0
Antimony	ND	1.0	1.033	103	1.072	107	80	120	3.7	20.0
Selenium	ND	2.0	1.973	99	1.935	97	80	120	1.9	20.0
Thallium										
Vanadium	ND	1.0	0.963	96	0.964	96	80	120	0.1	20.0
Zinc	0.159	1.0	1.061	90	1.036	88	80	120	2.8	20.0

Idelis Williams, QC Officer 5/10/95

HOUSTON ENVIRONMENTAL

ICPQAQC.RC REV.4/94

ICP SPECTROSCOPY
QUALITY ASSURANCE AND CONTROL REPORT

Date of Analysis: 5/17/95 Time: 8:50 Analyst: JM Units: mg/L

Inst. ☐ Thermo-Jarrell Ash 61E ☑ Perkin Elmer Plasma 40 File #: 0517A Method: ☐ 200.7 ☑ 6010 Matrix: ☑ Soil ☐ Water ☐ Other ☐ Oil ☐ Leachate

Digest: P3050P TCLP: ☐ Water ☐ Soil

SPL Sample #'s In Batch:

9505164-1C-10C, 12C,	13C		
9505209-1C-5C			

SPL QA/QC Sample ID: #1 9505164-10C #2 _____ #3 _____

Blank and Check Standard				QA/QC	Matrix Spike and Spike Duplicate Data					
Elem.	Method Blank	LCS Theoret.	LCS Rec. (±20%)	Sample Conc.	Spike Added	Spike Conc.	Spk. Dup. Conc.	Spike % Rec.	Spk. Dup. % Rec.	MS-MSD % RPD
Cd	ND	~~0.502~~ 0.469	107.0	ND	1.00	1.025	1.006	102.5	100.6	2

Flags ☐ MS or MSD Out of QA Limits (±25%)
☐ Spike RPD Out of QA Limits (±20%)
☐ See Case Narrative
☐ Within Soil LCS Limits _____

Supervisor Approval _____ Date 5-17-95

Analyst Joan Marroquin

QA/QC Approval _____ Date 5-17-95

Idelis Williams, QC Officer

SPL QUALITY CONTROL SUMMARY

Rev. 4/94

Atomic Absorption Analysis

Element: CR
Test Code: CRSG
Method: P3050G
Instrument: B

Date: 5/18/95
Time: 08:09
File #: 0518A

Analyst WFC
Matrix: Soil ☑ Water ☐
Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Units mg/kg

Sample #'s in Batch

05164f-1c-	10c, 12c, 13c			
05209-1c-5c				

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
*05164-10c	ND	115.0	91.3%	12.1	20.0	22.9	23.3	54.0%*	56.0%*	4f
LCS 5/15	ND	167.0	61.1%	NA	20.0					

• FLAGS •

- ☑ • = Values Outside QC Range
- ☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)
- ☐ RPD out of QA/QC Limits (20 %)
- ☑ Soil LCS % Rec. Range 54.2% - 141.7%
- ☐ Sample used for QA/QC only
- ☑ See Case Narrative

Analyst Wally F. Lawal Date 5/18/95

Approved By [signature] Date 5-18-95

[signature] Date 5/18/95

Idells Williams, QC Officer

SPL QUALITY CONTROL SUMMARY

Rev. 4/94

Atomic Absorption Analysis

Element: Pb

Test Code: PBSGX

Method: P3050GB

Instrument:

Date: 5/15/95

Time: 10:36

File #: 0515A

Analyst WFC

Matrix: Soil ☑ Water ☐

Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Units mg/kg

Sample #'s in Batch

04425-3A-	5A, 10A			
04702-2A-	4A			
04800-1B	-13B, 14B, 15B			
05164-1C	-10C, 12C-13B WFC			
05332-1A-	5A			

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
04425-4A	MB	52.4	82.8%	30.6	50.0	68.9	68.4	76.6%	75.6%	1
04800-13B	MB	52.4	82.8%	33.0	50.0	83.5	83.2	101.0%	100.4%	1
05164-10C	MB	52.4	84.4%	24.6	50.0	64.7	65.2	80.2%	81.2%	1
*05332-2A	MB	52.4	84.4%	35.0	50.0	64.0	64.4	58.0%*	58.8%*	1

• FLAGS •

- • = Values Outside QC Range
- ☑ MS or MSD out of QA/QC Limits (% Rec. 75-125)
- ☐ RPD out of QA/QC Limits (20 %)
- ☑ Soil LCS % Rec. Range 53.1% - 142.0%
- ☐ Sample used for QA/QC only
- ☐ See Case Narrative

Analyst Wally F. Caudill Date 5/15/95

Approved By Dana Dahlstrom Date 5-15-95

Ida Williams QC Officer Date 5-16-95

SPL QUALITY CONTROL SUMMARY

Rev. 4/94

Atomic Absorption Analysis

Element: PB
Test Code: PBQG
Method: P3020
Instrument: B

Date: 5/8/95
Time: 10:29
File #: 0508A

Analyst WFC
Matrix: Soil ☐ Water ☑
Units ug/L

Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Sample #'s in Batch

05164-11c				

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
05164-11c	ND	50.0	104.4%	ND	50.0	53.7	53.8	107.4%	107.6%	0

• FLAGS •

- • = Values Outside QC Range
- ☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)
- ☐ RPD out of QA/QC Limits (20 %)
- ☐ Soil LCS % Rec. Range _____
- ☐ Sample used for QA/QC only
- ☐ See Case Narrative

Analyst Wallace F Edwards Date 5/8/95

Approved By _____ Date 5/8/95

_____ Date 5/8/95

Idelis Williams, QC Officer

WETDUPCA.RC Rev. 4/94

Wet Chemistry QA/QC Validation Report

Test Name: MOISTURE

Test Code: MOISED | Date: 5/10/95 | Analyst: CA/ST

Method CLP | Time: 8 SCAN | Matrix ☐ Liquid ☒ Soil ☐ Other

# of Samples in Batch: 51 | Reporting Units: % WET

SPL Sample #'s in Batch:

9504725-3A→27 10A	95C516.4-1B→1CB	
9504702-21A→24A	95C5175-1CA→19A	
95C5306-1B	95C5332-11A→25A	
95C5344-2B→4B	95C4965-11A→15A	

Standards	Actual Concentration	Theoretical Concentration	Percent Recovery	QC Limits (**) (Mandatory) Upper Limit	Lower Limit
Blank					
Check Standard 1					
Check Standard 2					
Check Standard 3					
LCS (Outside Source)					

DUPLICATES

QA/QC Duplicate SPL Sample ID	Sample Result <1>	Sample Result <2>	Relative Percent Difference	QC LIMITS (**) (Advisory) Relative Percent Difference Max.	
9504702-4A	17	17	0	23.0	
95C5306-11B	18	18	0		
95C5344-2B	12	12	0		
95C516.4-6B	10	9	10.5		
95C5175-14A	11	14	13.5		
95C5332-5A	25	26	3.9		

Relative Percent Difference (RPD) Calculation:

$$RPD = \frac{|<1> - <2>|}{(<1> + <2>) \times 0.5} \times 100$$

(**) = Source: SPL Houston Historical Data

* = Indicates Value Outside QA/QC Range

Approved By: [signature] Date: 5/11/95

Reviewed By: [signature] Date: 5/11/95

[signature]
Idelis Williams, QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/09/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-002-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 11:30:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	MDL*	UNITS
Benzene	ND	1	ug/L
Bromobenzene	ND	1	ug/L
Bromochloromethane	ND	1	ug/L
Bromodichloromethane	ND	1	ug/L
Bromoform	ND	1	ug/L
Bromomethane	ND	2	ug/L
n-Butylbenzene	ND	1	ug/L
sec-Butylbenzene	ND	1	ug/L
tert-Butylbenzene	ND	1	ug/L
Carbon tetrachloride	ND	1	ug/L
Chlorobenzene	ND	1	ug/L
Chlorodibromomethane	ND	1	ug/L
Chloroethane	ND	4	ug/L
Chloroform	ND	1	ug/L
Chloromethane	ND	1	ug/L
2-Chlorotoluene	ND	1	ug/L
4-Chlorotoluene	ND	1	ug/L
1,2-Dibromo-3-chloropropane	ND	1	ug/L
1,2-Dibromoethane	ND	1	ug/L
Dibromomethane	ND	1	ug/L
1,2-Dichlorobenzene	ND	1	ug/L
1,3-Dichlorobenzene	ND	1	ug/L
1,4-Dichlorobenzene	ND	1	ug/L
Dichlorodifluoromethane	ND	1	ug/L
1,1-Dichloroethane	ND	1	ug/L
1,2-Dichloroethane	ND	1	ug/L
1,1-Dichloroethene	ND	1	ug/L
1,2-Dichloropropane	ND	1	ug/L
1,3-Dichloropropane	ND	1	ug/L
2,2-Dichloropropane	ND	1	ug/L
1,1-Dichloropropene	ND	1	ug/L
Ethylbenzene	ND	1	ug/L
Hexachlorobutadiene	ND	1	ug/L
Isopropylbenzene	ND	1	ug/L
p-Isopropyltoluene	ND	1	ug/L
Methylene chloride	ND	1	ug/L
Naphthalene	ND	1	ug/L
n-Propylbenzene	ND	1	ug/L

METHOD: 8260 Water, Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-01

Operational Tech

SAMPLE ID: 026-002-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	MDL*	UNITS
Styrene	ND	1	ug/L
1,1,1,2-Tetrachloroethane	ND	1	ug/L
1,1,2,2-Tetrachloroethane	ND	1	ug/L
Tetrachloroethene	ND	1	ug/L
Toluene	ND	1	ug/L
1,2,3-Trichlorobenzene	ND	1	ug/L
1,2,4-Trichlorobenzene	ND	1	ug/L
1,1,1-Trichloroethane	ND	1	ug/L
1,1,2-Trichloroethane	ND	1	ug/L
Trichloroethene	ND	1	ug/L
Trichlorofluoromethane	ND	1	ug/L
1,2,3-Trichloropropane	ND	1	ug/L
1,2,4-Trimethylbenzene	ND	1	ug/L
1,3,5-Trimethylbenzene	ND	1	ug/L
Vinyl chloride	ND	1	ug/L
Xylenes (total)	ND	1	ug/L
1,2-Dichloroethene (total)	ND	1	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	98	76	114
Toluene-d8	50	98	88	110
4-Bromofluorobenzene	50	96	86	115

ANALYZED BY: JC DATE/TIME: 05/25/95 01:22:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Method Detection Limit ND - Not Detected
NA - Not Analyzed D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-002-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 11:30:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-01

Operational Tech

SAMPLE ID: 026-002-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-01

Operational Tech

SAMPLE ID: 026-002-MW-GW1

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	94	35	114
2-Fluorobiphenyl	50 ug/L	84	43	116
Terphenyl-d14	50 ug/L	72	33	141
Phenol-d5	75 ug/L	81	10	110
2-Fluorophenol	75 ug/L	74	21	110
2,4,6-Tribromophenol	75 ug/L	90	10	123

ANALYZED BY: LH
DATE/TIME: 06/01/95 11:04:00
EXTRACTED BY: RS
DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144s11.d
Lab Smp Id:
Inj Date : 25-MAY-1995 01:22
Operator : JC Inst ID: l.i
Smp Info : 9505714-01A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 21
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 2 Pentafluorobenzene	168.00	5.833	5.820	(1.000)	210449	250	
* 24 1,4-Difluorobenzene	114.00	6.938	6.925	(1.000)	269431	250	
* 38 Chlorobenzene-d5	117.00	11.110	11.106	(1.000)	212751	250	
* 48 1,4-Dichlorobenzene-d4	152.00	14.488	14.493	(1.000)	105634	250	
$ 19 1,2-Dichloroethane-d4	102.00	6.011	5.990	(0.866)	20526	250	49
$ 32 Toluene-d8	98.00	9.158	9.154	(1.320)	284975	240	49
$ 47 Bromofluorobenzene	95.00	12.777	12.782	(1.842)	119855	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144s11.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	210449	14.33
24 1,4-Difluorobenzene	239653	119826	479306	269431	12.43
38 Chlorobenzene-d5	191926	95963	383852	212751	10.85
48 1,4-Dichlorobenzene-	101540	50770	203080	105634	4.03

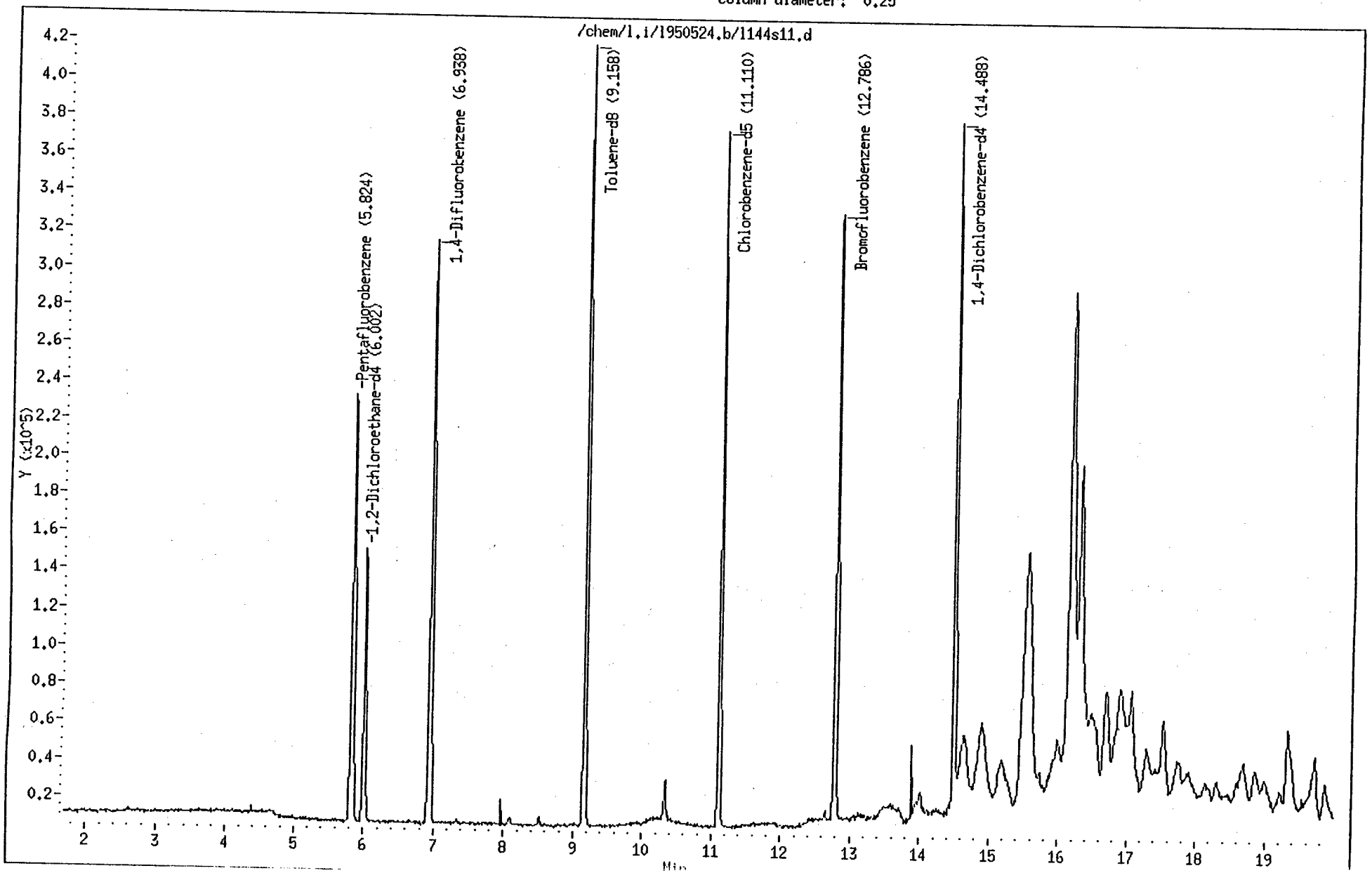
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.83	0.21
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.94	0.18
38 Chlorobenzene-d5	11.11	10.61	11.61	11.11	0.03
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	-0.04

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.

Data File: /chem/l.i/l950524.b/l144s11.d
Date : 25-MAY-1995 01:22
Client ID:
Sample Info: 9505714-01A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i

Operator: JC
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950601.b/h152s01.d
Lab Smp Id:
Inj Date : 01-JUN-1995 11:04
Operator : LH Inst ID: h.i
Smp Info : 9505714-01B-8270W/1X
Misc Info : E142C1/J142B01/H152CC1
Comment :
Method : /chem/h.i/h950601.b/hclpw.m
Meth Date : 01-Jun-1995 11:17 jimmy Quant Type: ISTD
Cal Date : 01-JUN-1995 09:55 Cal File: h152cc1.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	11 1,4-Dichlorobenzene-d4	152.00	3.780	3.791	(1.000)	214058	40	
*	32 Naphthalene-d8	136.00	4.954	4.952	(1.000)	690310	40	
*	48 Acenaphthene-d10	164.00	6.684	6.683	(1.000)	315574	40	
*	65 Phenanthrene-d10	188.00	8.154	8.152	(1.000)	326875	40	
*	76 Chrysene-d12	240.00	10.844	10.843	(1.000)	137513	40	
*	83 Perylene-d12	264.00	12.681	12.680	(1.000)	71253	40	
$	23 Nitrobenzene-d5	82.00	4.290	4.288	(0.866)	819289	94	47
$	41 2-Fluorobiphenyl	172.00	6.020	6.019	(0.901)	837531	84	42
$	72 Terphenyl-d14	244.00	9.777	9.788	(0.902)	284251	72	36
$	4 Phenol-d5	99.00	3.531	3.530	(0.934)	1304691	120	61
$	3 2-Fluorophenol	112.00	2.820	2.819	(0.746)	893039	110	56
$	61 2,4,6-Tribromophenol	329.70	7.490	7.489	(0.919)	108467	140	68

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h152s01.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950601.b/hclpw.m
Misc Info: E142C1/J142B01/H152CC1

Calibration Date: 06/01/95
Calibration Time: 0955

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	201362	100681	402724	214058	6.31
32 Naphthalene-d8	726976	363488	1453952	690310	-5.04
48 Acenaphthene-d10	300745	150372	601490	315574	4.93
65 Phenanthrene-d10	319648	159824	639296	326875	2.26
76 Chrysene-d12	175171	87586	350342	137513	-21.50
83 Perylene-d12	75734	37867	151468	71253	-5.92

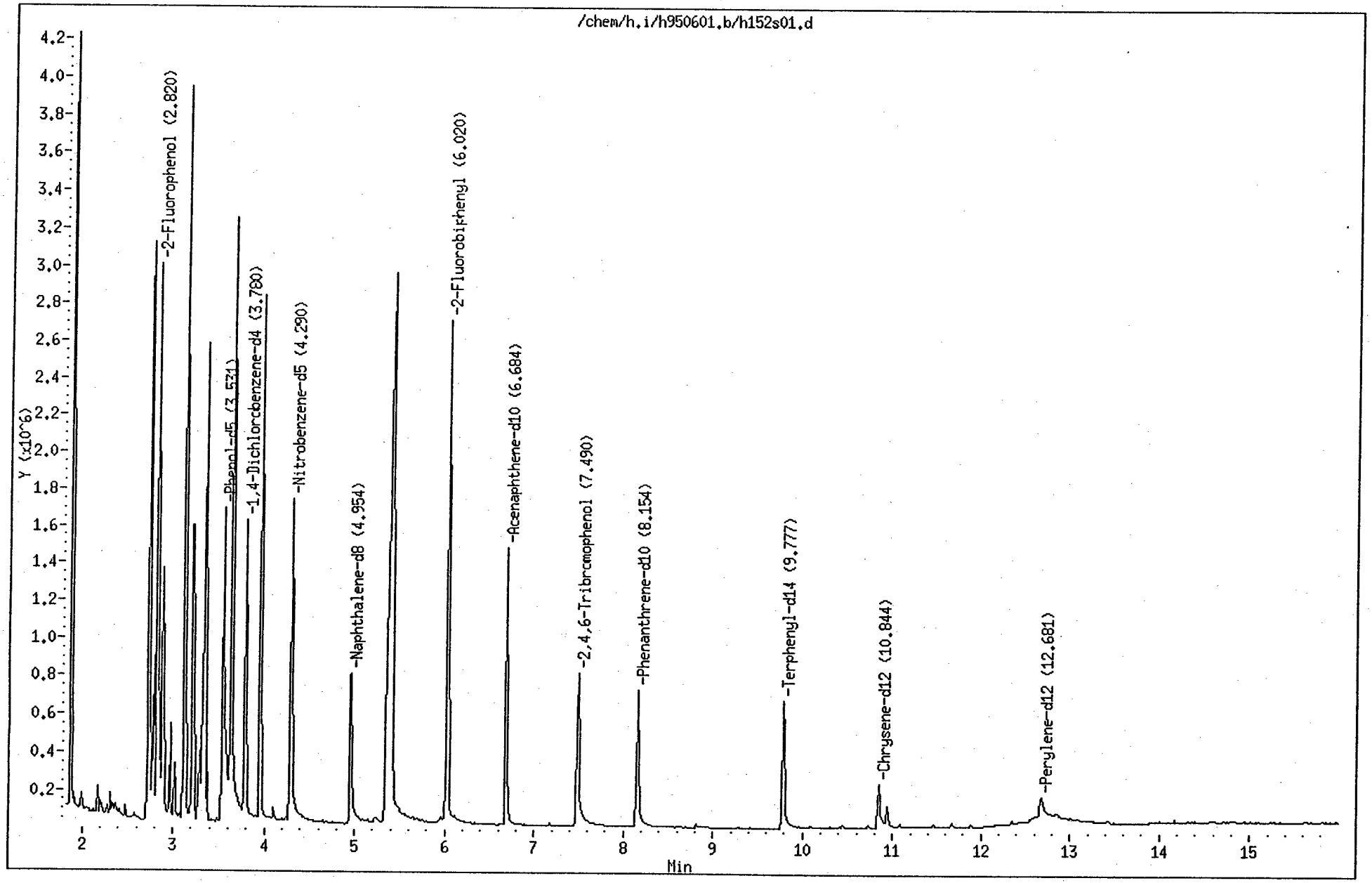
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.79	3.29	4.29	3.78	-0.28
32 Naphthalene-d8	4.95	4.45	5.45	4.95	0.03
48 Acenaphthene-d10	6.68	6.18	7.18	6.68	0.02
65 Phenanthrene-d10	8.15	7.65	8.65	8.15	0.02
76 Chrysene-d12	10.84	10.34	11.34	10.84	0.01
83 Perylene-d12	12.68	12.18	13.18	12.68	0.01

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.

Data File: /chem/h.i/h950601.b/h152s01.d
Date : 01-JUN-1995 11:04
Client ID:
Sample Info: 9505714-01B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/09/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-003A-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 13:45:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	MDL*	UNITS
Benzene	ND	1	ug/L
Bromobenzene	ND	1	ug/L
Bromochloromethane	ND	1	ug/L
Bromodichloromethane	ND	1	ug/L
Bromoform	ND	1	ug/L
Bromomethane	ND	2	ug/L
n-Butylbenzene	ND	1	ug/L
sec-Butylbenzene	ND	1	ug/L
tert-Butylbenzene	ND	1	ug/L
Carbon tetrachloride	ND	1	ug/L
Chlorobenzene	ND	1	ug/L
Chlorodibromomethane	ND	1	ug/L
Chloroethane	ND	4	ug/L
Chloroform	ND	1	ug/L
Chloromethane	ND	1	ug/L
2-Chlorotoluene	ND	1	ug/L
4-Chlorotoluene	ND	1	ug/L
1,2-Dibromo-3-chloropropane	ND	1	ug/L
1,2-Dibromoethane	ND	1	ug/L
Dibromomethane	ND	1	ug/L
1,2-Dichlorobenzene	ND	1	ug/L
1,3-Dichlorobenzene	ND	1	ug/L
1,4-Dichlorobenzene	ND	1	ug/L
Dichlorodifluoromethane	ND	1	ug/L
1,1-Dichloroethane	ND	1	ug/L
1,2-Dichloroethane	ND	1	ug/L
1,1-Dichloroethene	ND	1	ug/L
1,2-Dichloropropane	ND	1	ug/L
1,3-Dichloropropane	ND	1	ug/L
2,2-Dichloropropane	ND	1	ug/L
1,1-Dichloropropene	ND	1	ug/L
Ethylbenzene	ND	1	ug/L
Hexachlorobutadiene	ND	1	ug/L
Isopropylbenzene	ND	1	ug/L
p-Isopropyltoluene	ND	1	ug/L
Methylene chloride	ND	1	ug/L
Naphthalene	ND	1	ug/L
n-Propylbenzene	ND	1	ug/L

METHOD: 8260 Water, Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-02

Operational Tech

SAMPLE ID: 026-003A-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	MDL*		UNITS
Styrene	ND	1		ug/L
1,1,1,2-Tetrachloroethane	ND	1		ug/L
1,1,2,2-Tetrachloroethane	ND	1		ug/L
Tetrachloroethene	ND	1		ug/L
Toluene	ND	1		ug/L
1,2,3-Trichlorobenzene	ND	1		ug/L
1,2,4-Trichlorobenzene	ND	1		ug/L
1,1,1-Trichloroethane	ND	1		ug/L
1,1,2-Trichloroethane	ND	1		ug/L
Trichloroethene	ND	1		ug/L
Trichlorofluoromethane	ND	1		ug/L
1,2,3-Trichloropropane	ND	1		ug/L
1,2,4-Trimethylbenzene	ND	1		ug/L
1,3,5-Trimethylbenzene	ND	1		ug/L
Vinyl chloride	ND	1		ug/L
Xylenes (total)	ND	1		ug/L
1,2-Dichloroethene (total)	ND	1		ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	98	76	114
Toluene-d8	50	100	88	110
4-Bromofluorobenzene	50	96	86	115

ANALYZED BY: JC
DATE/TIME: 05/25/95 01:51:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Method Detection Limit
NA - Not Analyzed
ND - Not Detected
D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-003A-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 13:45:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-02

Operational Tech

SAMPLE ID: 026-003A-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-02

Operational Tech

SAMPLE ID: 026-003A-MW-GW1

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	83	35	114
2-Fluorobiphenyl	50 ug/L	84	43	116
Terphenyl-d14	50 ug/L	83	33	141
Phenol-d5	75 ug/L	78	10	110
2-Fluorophenol	75 ug/L	66	21	110
2,4,6-Tribromophenol	75 ug/L	118	10	123

ANALYZED BY: LH
DATE/TIME: 05/31/95 17:54:00
EXTRACTED BY: RS
DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950524.b/l144s12.d
Lab Smp Id:
Inj Date : 25-MAY-1995 01:51
Operator : JC Inst ID: l.i
Smp Info : 9505714-02A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/1950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 22
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	2 Pentafluorobenzene	168.00	5.813	5.820	(1.000)	204950	250	
*	24 1,4-Difluorobenzene	114.00	6.928	6.925	(1.000)	258670	250	
*	38 Chlorobenzene-d5	117.00	11.099	11.106	(1.000)	205678	250	
	48 1,4-Dichlorobenzene-d4	152.00	14.487	14.493	(1.000)	102161	250	
	19 1,2-Dichloroethane-d4	102.00	5.992	5.990	(0.865)	19629	240	49
S	32 Toluene-d8	98.00	9.156	9.154	(1.322)	280279	250	50
	47 Bromofluorobenzene	95.00	12.775	12.782	(1.844)	115833	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144s12.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	204950	11.34
24 1,4-Difluorobenzene	239653	119826	479306	258670	7.94
38 Chlorobenzene-d5	191926	95963	383852	205678	7.17
48 1,4-Dichlorobenzene-	101540	50770	203080	102161	0.61

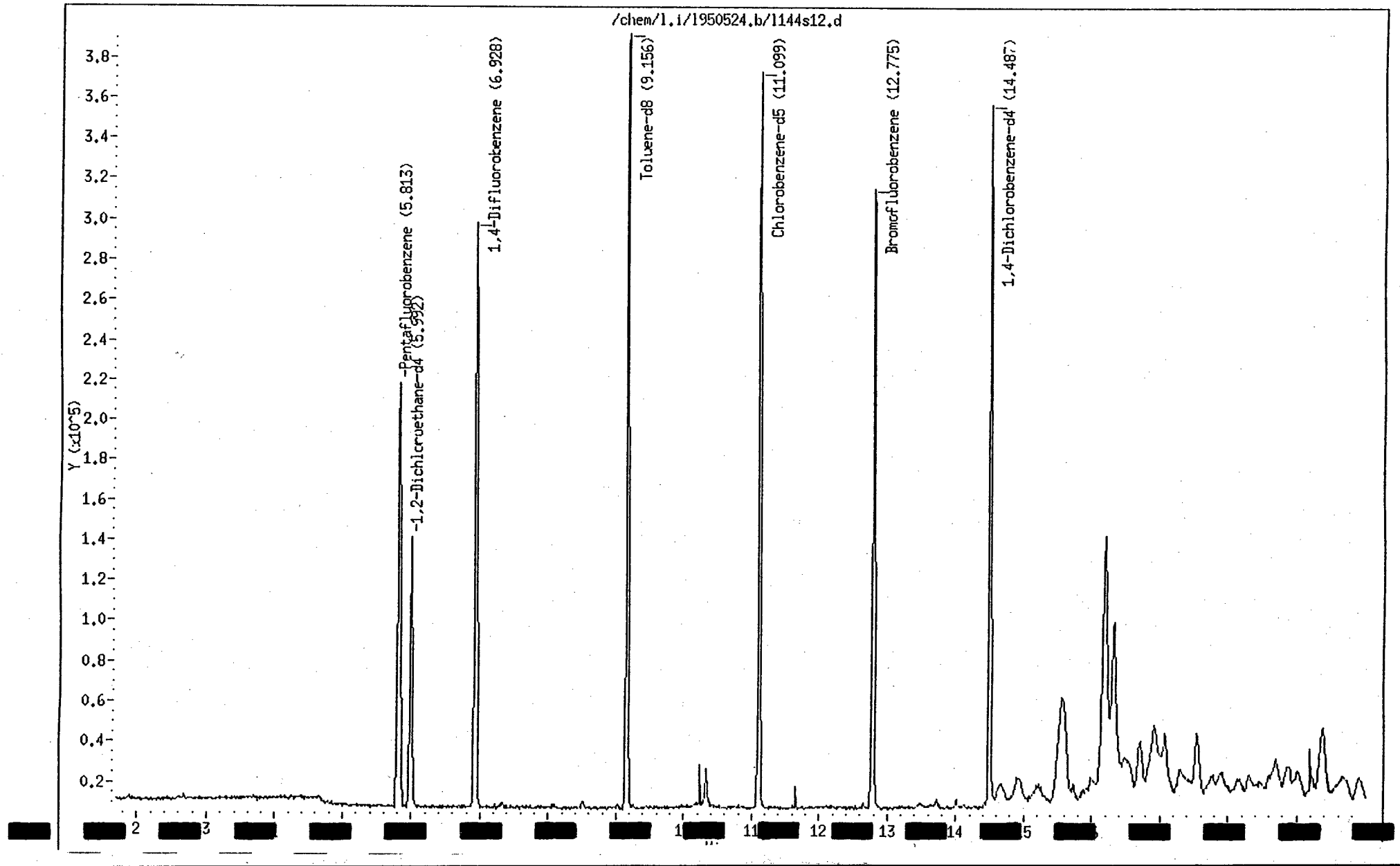
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.81	-0.12
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.03
38 Chlorobenzene-d5	11.11	10.61	11.61	11.10	-0.06
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	-0.05

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.

Data File: /chem/1.i/1950524.b/1144s12.d
Date : 25-MAY-1995 01:51
Client ID:
Sample Info: 9505714-02A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151s04.d
Lab Smp Id:
Inj Date : 31-MAY-1995 17:54
Operator : LH
Smp Info : 9505714-02B-8270W/1X
Misc Info : E142C1/J142B01/H151IC6
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 01-Jun-1995 11:58 liping
Cal Date : 31-MAY-1995 15:09
Als bottle: 4
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h151ic6.d

Compound Sublist: 8270.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 11 1,4-Dichlorobenzene-d4	152.00	3.802	3.805	(1.000)	183182	40	
* 32 Naphthalene-d8	136.00	4.975	4.979	(1.000)	678364	40	
* 48 Acenaphthene-d10	164.00	6.729	6.721	(1.000)	291991	40	
* 65 Phenanthrene-d10	188.00	8.211	8.202	(1.000)	337785	40	
* 76 Chrysene-d12	240.00	10.912	10.916	(1.000)	192286	40	
* 83 Perylene-d12	264.00	12.785	12.788	(1.000)	92737	40	
$ 23 Nitrobenzene-d5	82.00	4.312	4.315	(0.867)	675800	83	41
$ 41 2-Fluorobiphenyl	172.00	6.066	6.057	(0.901)	758162	84	42
$ 72 Terphenyl-d14	244.00	9.846	9.849	(0.902)	400494	83	41
$ 4 Phenol-d5	99.00	3.542	3.533	(0.931)	1116206	120	58
$ 3 2-Fluorophenol	112.00	2.819	2.822	(0.741)	735274	99	50
$ 61 2,4,6-Tribromophenol	329.70	7.535	7.538	(0.918)	148493	180	88

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151s04.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: E142C1/J142B01/H151IC6

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	183182	60.30
32 Naphthalene-d8	440783	220392	881566	678364	53.90
48 Acenaphthene-d10	201424	100712	402848	291991	44.96
65 Phenanthrene-d10	261616	130808	523232	337785	29.11
76 Chrysene-d12	195160	97580	390320	192286	-1.47
83 Perylene-d12	123342	61671	246684	92737	-24.81

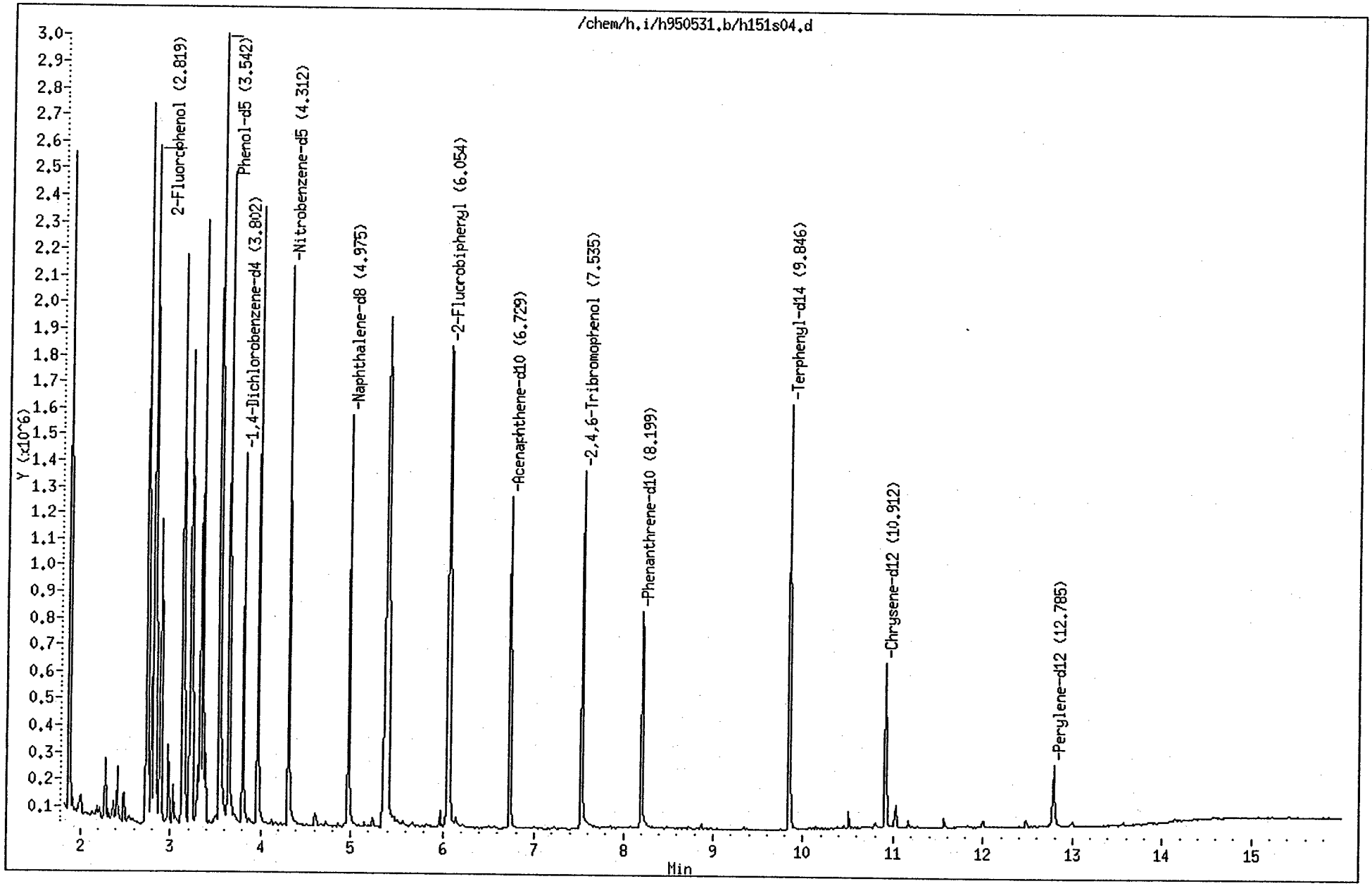
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.08
32 Naphthalene-d8	4.98	4.48	5.48	4.98	-0.06
48 Acenaphthene-d10	6.72	6.22	7.22	6.73	0.13
65 Phenanthrene-d10	8.20	7.70	8.70	8.21	0.11
76 Chrysene-d12	10.92	10.42	11.42	10.91	-0.03
83 Perylene-d12	12.79	12.29	13.29	12.78	-0.03

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.

Data File: /chem/h.i/h950531.b/h151s04.d
Date : 31-MAY-1995 17:54
Client ID:
Sample Info: 9505714-02B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/09/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 10:12:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	MDL*	UNITS
Benzene	ND	1	ug/L
Bromobenzene	ND	1	ug/L
Bromochloromethane	ND	1	ug/L
Bromodichloromethane	ND	1	ug/L
Bromoform	ND	1	ug/L
Bromomethane	ND	2	ug/L
n-Butylbenzene	ND	1	ug/L
sec-Butylbenzene	ND	1	ug/L
tert-Butylbenzene	ND	1	ug/L
Carbon tetrachloride	ND	1	ug/L
Chlorobenzene	ND	1	ug/L
Chlorodibromomethane	ND	1	ug/L
Chloroethane	ND	4	ug/L
Chloroform	ND	1	ug/L
Chloromethane	ND	1	ug/L
2-Chlorotoluene	ND	1	ug/L
4-Chlorotoluene	ND	1	ug/L
1,2-Dibromo-3-chloropropane	ND	1	ug/L
1,2-Dibromoethane	ND	1	ug/L
Dibromomethane	ND	1	ug/L
1,2-Dichlorobenzene	ND	1	ug/L
1,3-Dichlorobenzene	ND	1	ug/L
1,4-Dichlorobenzene	ND	1	ug/L
Dichlorodifluoromethane	ND	1	ug/L
1,1-Dichloroethane	ND	1	ug/L
1,2-Dichloroethane	ND	1	ug/L
1,1-Dichloroethene	ND	1	ug/L
1,2-Dichloropropane	ND	1	ug/L
1,3-Dichloropropane	ND	1	ug/L
2,2-Dichloropropane	ND	1	ug/L
1,1-Dichloropropene	ND	1	ug/L
Ethylbenzene	ND	1	ug/L
Hexachlorobutadiene	ND	1	ug/L
Isopropylbenzene	ND	1	ug/L
p-Isopropyltoluene	ND	1	ug/L
Methylene chloride	ND	1	ug/L
Naphthalene	ND	1	ug/L
n-Propylbenzene	ND	1	ug/L

METHOD: 8260 Water, Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-03

Operational Tech

SAMPLE ID: 026-001-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	MDL*	UNITS
Styrene	ND	1	ug/L
1,1,1,2-Tetrachloroethane	ND	1	ug/L
1,1,2,2-Tetrachloroethane	ND	1	ug/L
Tetrachloroethene	ND	1	ug/L
Toluene	ND	1	ug/L
1,2,3-Trichlorobenzene	ND	1	ug/L
1,2,4-Trichlorobenzene	ND	1	ug/L
1,1,1-Trichloroethane	ND	1	ug/L
1,1,2-Trichloroethane	ND	1	ug/L
Trichloroethene	ND	1	ug/L
Trichlorofluoromethane	ND	1	ug/L
1,2,3-Trichloropropane	ND	1	ug/L
1,2,4-Trimethylbenzene	ND	1	ug/L
1,3,5-Trimethylbenzene	ND	1	ug/L
Vinyl chloride	ND	1	ug/L
Xylenes (total)	ND	1	ug/L
1,2-Dichloroethene (total)	ND	1	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	94	76	114
Toluene-d8	50	98	88	110
4-Bromofluorobenzene	50	96	86	115

ANALYZED BY: JC
DATE/TIME: 05/25/95 02:20:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Method Detection Limit
ND - Not Detected
NA - Not Analyzed
D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-001-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 10:12:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-03

Operational Tech

SAMPLE ID: 026-001-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	25	ug/L
2-Nitrophenol	ND	5	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	25	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	5	ug/L
Phenanthrene	ND	25	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	5	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-03

Operational Tech

SAMPLE ID: 026-001-MW-GW1

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	84	35	114
2-Fluorobiphenyl	50 ug/L	87	43	116
Terphenyl-d14	50 ug/L	67	33	141
Phenol-d5	75 ug/L	75	10	110
2-Fluorophenol	75 ug/L	68	21	110
2,4,6-Tribromophenol	75 ug/L	106	10	123

ANALYZED BY: LH DATE/TIME: 05/31/95 18:17:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144s13.d
Lab Smp Id:
Inj Date : 25-MAY-1995 02:20
Operator : JC
Smp Info : 9505714-03A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy
Cal Date : 24-MAY-1995 20:04
Als bottle: 23
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l144cw3.d

Compound Sublist: 8260.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 2 Pentafluorobenzene	168.00	5.811	5.820	(1.000)	194722	250	
24 1,4-Difluorobenzene	114.00	6.925	6.925	(1.000)	252730	250	
* 38 Chlorobenzene-d5	117.00	11.106	11.106	(1.000)	198052	250	
* 48 1,4-Dichlorobenzene-d4	152.00	14.484	14.493	(1.000)	96121	250	
19 1,2-Dichloroethane-d4	102.00	5.990	5.990	(0.865)	18213	230	47
32 Toluene-d8	98.00	9.154	9.154	(1.322)	269661	250	49
47 Bromofluorobenzene	95.00	12.773	12.782	(1.844)	112308	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Data File ID: l144s13.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	194722	5.79
24 1,4-Difluorobenzene	239653	119826	479306	252730	5.46
38 Chlorobenzene-d5	191926	95963	383852	198052	3.19
8 1,4-Dichlorobenzene-	101540	50770	203080	96121	-5.34

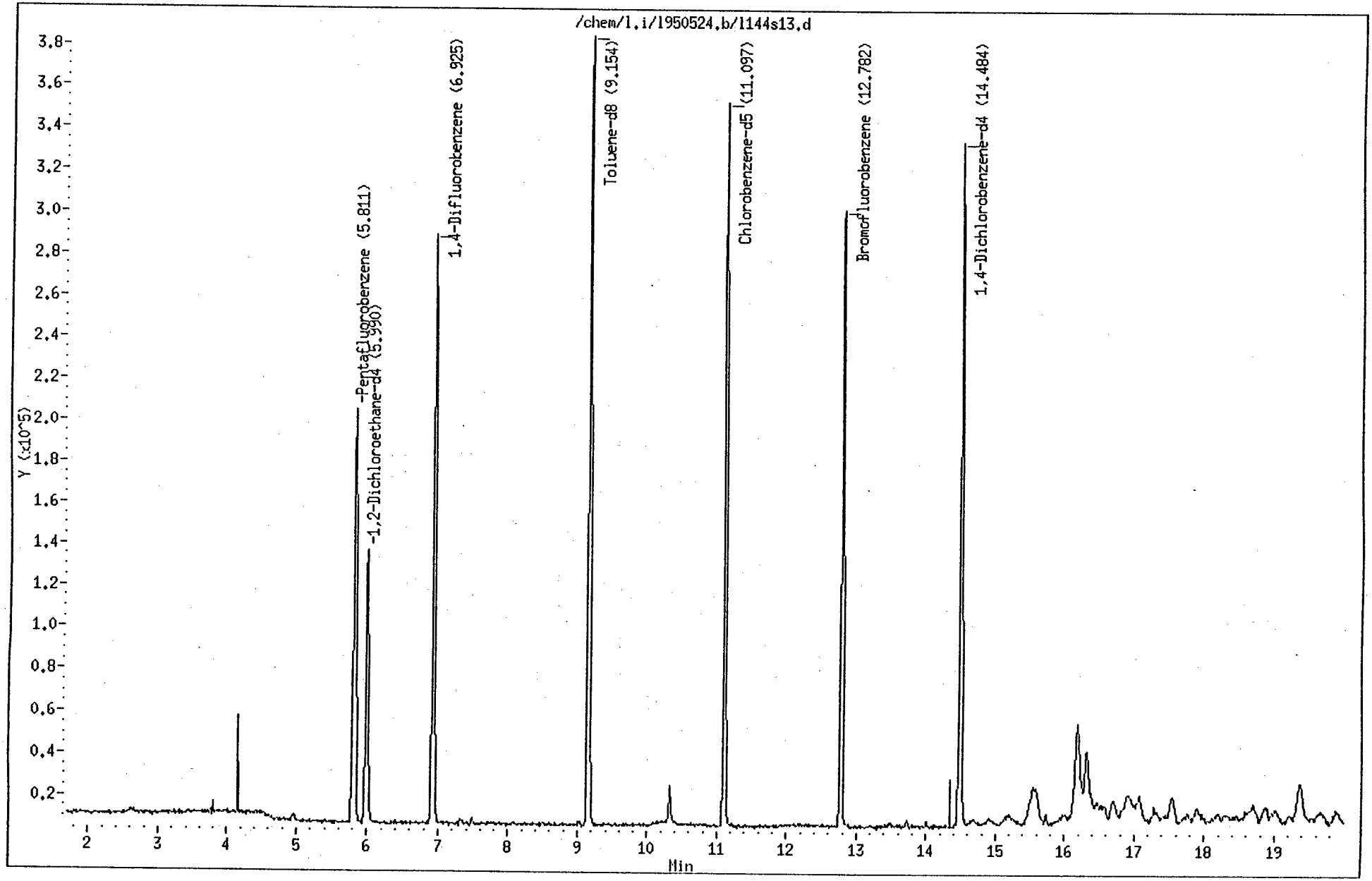
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.81	-0.15
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.00
38 Chlorobenzene-d5	11.11	10.61	11.61	11.11	0.00
8 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.48	-0.06

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.

Data File: /chem/l.i/1950524.b/l144s13.d
Date : 25-MAY-1995 02:20
Client ID:
Sample Info: 9505714-03A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i

Operator: JC
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151s05.d
Lab Smp Id:
Inj Date : 31-MAY-95 18:17
Operator : LH
Inst ID: h.i
Smp Info : 9505714-03B-8270W/1X
Misc Info : E142C1/J142B01/H151IC6
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 01-Jun-1995 11:58 liping
Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09
Cal File: h151ic6.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
*	11 1,4-Dichlorobenzene-d4	152.00	3.802	3.805	(1.000)	226920	40	
*	32 Naphthalene-d8	136.00	4.975	4.979	(1.000)	735914	40	
*	48 Acenaphthene-d10	164.00	6.729	6.721	(1.000)	282230	40	
*	65 Phenanthrene-d10	188.00	8.210	8.202	(1.000)	303225	40	
*	76 Chrysene-d12	240.00	10.912	10.916	(1.000)	174227	40	
*	83 Perylene-d12	264.00	12.784	12.788	(1.000)	109903	40	
$	23 Nitrobenzene-d5	82.00	4.311	4.315	(0.867)	747122	84	42
$	41 2-Fluorobiphenyl	172.00	6.065	6.057	(0.901)	756769	87	44
$	72 Terphenyl-d14	244.00	9.845	9.849	(0.902)	294755	67	34
$	4 Phenol-d5	99.00	3.541	3.533	(0.931)	1330102	110	56
$	3 2-Fluorophenol	112.00	2.818	2.822	(0.741)	944850	100	51
$	61 2,4,6-Tribromophenol	329.70	7.535	7.538	(0.918)	120183	160	80

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151s05.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: E142C1/J142B01/H151IC6

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

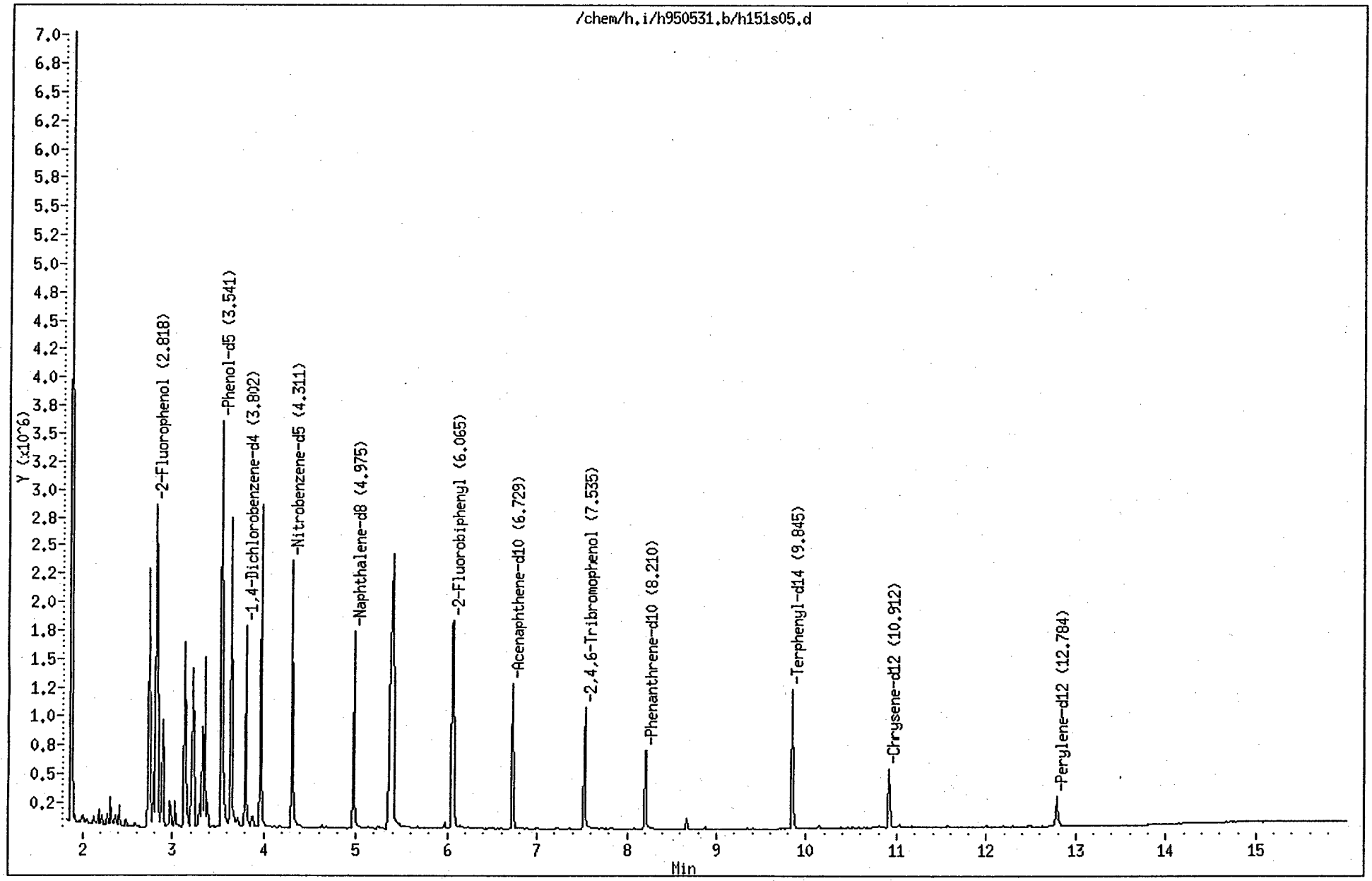
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	226920	98.57
32 Naphthalene-d8	440783	220392	881566	735914	66.96
48 Acenaphthene-d10	201424	100712	402848	282230	40.12
65 Phenanthrene-d10	261616	130808	523232	303225	15.90
76 Chrysene-d12	195160	97580	390320	174227	-10.73
83 Perylene-d12	123342	61671	246684	109903	-10.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.10
32 Naphthalene-d8	4.98	4.48	5.48	4.97	-0.07
48 Acenaphthene-d10	6.72	6.22	7.22	6.73	0.12
65 Phenanthrene-d10	8.20	7.70	8.70	8.21	0.10
76 Chrysene-d12	10.92	10.42	11.42	10.91	-0.03
83 Perylene-d12	12.79	12.29	13.29	12.78	-0.03

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.

Data File: /chem/h.i/h950531.b/h151s05.d
Date : 31-MAY-95 18:17
Client ID:
Sample Info: 9505714-03B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/09/9

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-003-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 13:34:0
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	MDL*	UNITS
Benzene	ND	1	ug/L
Bromobenzene	ND	1	ug/L
Bromochloromethane	ND	1	ug/L
Bromodichloromethane	ND	1	ug/L
Bromoform	ND	1	ug/L
Bromomethane	ND	2	ug/L
n-Butylbenzene	ND	1	ug/L
sec-Butylbenzene	ND	1	ug/L
tert-Butylbenzene	ND	1	ug/L
Carbon tetrachloride	ND	1	ug/L
Chlorobenzene	ND	1	ug/L
Chlorodibromomethane	ND	1	ug/L
Chloroethane	ND	4	ug/L
Chloroform	ND	1	ug/L
Chloromethane	ND	1	ug/L
2-Chlorotoluene	ND	1	ug/L
4-Chlorotoluene	ND	1	ug/L
1,2-Dibromo-3-chloropropane	ND	1	ug/L
1,2-Dibromoethane	ND	1	ug/L
Dibromomethane	ND	1	ug/L
1,2-Dichlorobenzene	ND	1	ug/L
1,3-Dichlorobenzene	ND	1	ug/L
1,4-Dichlorobenzene	ND	1	ug/L
Dichlorodifluoromethane	ND	1	ug/L
1,1-Dichloroethane	ND	1	ug/L
1,2-Dichloroethane	ND	1	ug/L
1,1-Dichloroethene	ND	1	ug/L
1,2-Dichloropropane	ND	1	ug/L
1,3-Dichloropropane	ND	1	ug/L
2,2-Dichloropropane	ND	1	ug/L
1,1-Dichloropropene	ND	1	ug/L
Ethylbenzene	ND	1	ug/L
Hexachlorobutadiene	ND	1	ug/L
Isopropylbenzene	ND	1	ug/L
p-Isopropyltoluene	ND	1	ug/L
Methylene chloride	ND	1	ug/L
Naphthalene	ND	1	ug/L
n-Propylbenzene	ND	1	ug/L

METHOD: 8260 Water, Volatile Organics
(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-04

Operational Tech

SAMPLE ID: 026-003-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	MDL*	UNITS
Styrene	ND	1	ug/L
1,1,1,2-Tetrachloroethane	ND	1	ug/L
1,1,2,2-Tetrachloroethane	ND	1	ug/L
Tetrachloroethene	ND	1	ug/L
Toluene	ND	1	ug/L
1,2,3-Trichlorobenzene	ND	1	ug/L
1,2,4-Trichlorobenzene	ND	1	ug/L
1,1,1-Trichloroethane	ND	1	ug/L
1,1,2-Trichloroethane	ND	1	ug/L
Trichloroethene	ND	1	ug/L
Trichlorofluoromethane	ND	1	ug/L
1,2,3-Trichloropropane	ND	1	ug/L
1,2,4-Trimethylbenzene	ND	1	ug/L
1,3,5-Trimethylbenzene	ND	1	ug/L
Vinyl chloride	ND	1	ug/L
Xylenes (total)	ND	1	ug/L
1,2-Dichloroethene (total)	ND	1	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	96	76	114
Toluene-d8	50	100	88	110
4-Bromofluorobenzene	50	96	86	115

ANALYZED BY: JC DATE/TIME: 05/25/95 02:49:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Method Detection Limit ND - Not Detected
NA - Not Analyzed D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-003-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 13:34:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-04

Operational Tech

SAMPLE ID: 026-003-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-04

Operational Tech

SAMPLE ID: 026-003-MW-GW1

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	77	35	114
2-Fluorobiphenyl	50 ug/L	84	43	116
Terphenyl-d14	50 ug/L	87	33	141
Phenol-d5	75 ug/L	66	10	110
2-Fluorophenol	75 ug/L	61	21	110
2,4,6-Tribromophenol	75 ug/L	107	10	123

ANALYZED BY: LH DATE/TIME: 05/31/95 18:40:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Data File: /chem/l.i/l950524.b/l144s14.d
Report Date: 25-May-1995 07:02

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144s14.d
Lab Smp Id:
Inj Date : 25-MAY-1995 02:49
Operator : JC
Smp Info : 9505714-04A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy
Cal Date : 24-MAY-1995 20:04
Als bottle: 24
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i
Quant Type: ISTD
Cal File: l144cw3.d
Compound Sublist: 8260.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pentafluorobenzene	168.00	5.823	5.820	(1.000)	203357	250	
24	1,4-Difluorobenzene	114.00	6.937	6.925	(1.000)	263721	250	
[illegible]8	Chlorobenzene-d5	117.00	11.109	11.106	(1.000)	206700	250	
[illegible]3	1,4-Dichlorobenzene-d4	152.00	14.487	14.493	(1.000)	101561	250	
19	1,2-Dichloroethane-d4	102.00	6.001	5.990	(0.865)	19772	240	48
[illegible]2	Toluene-d8	98.00	9.157	9.154	(1.320)	285786	250	50
[illegible]7	Bromofluorobenzene	95.00	12.776	12.782	(1.842)	118089	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144s14.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

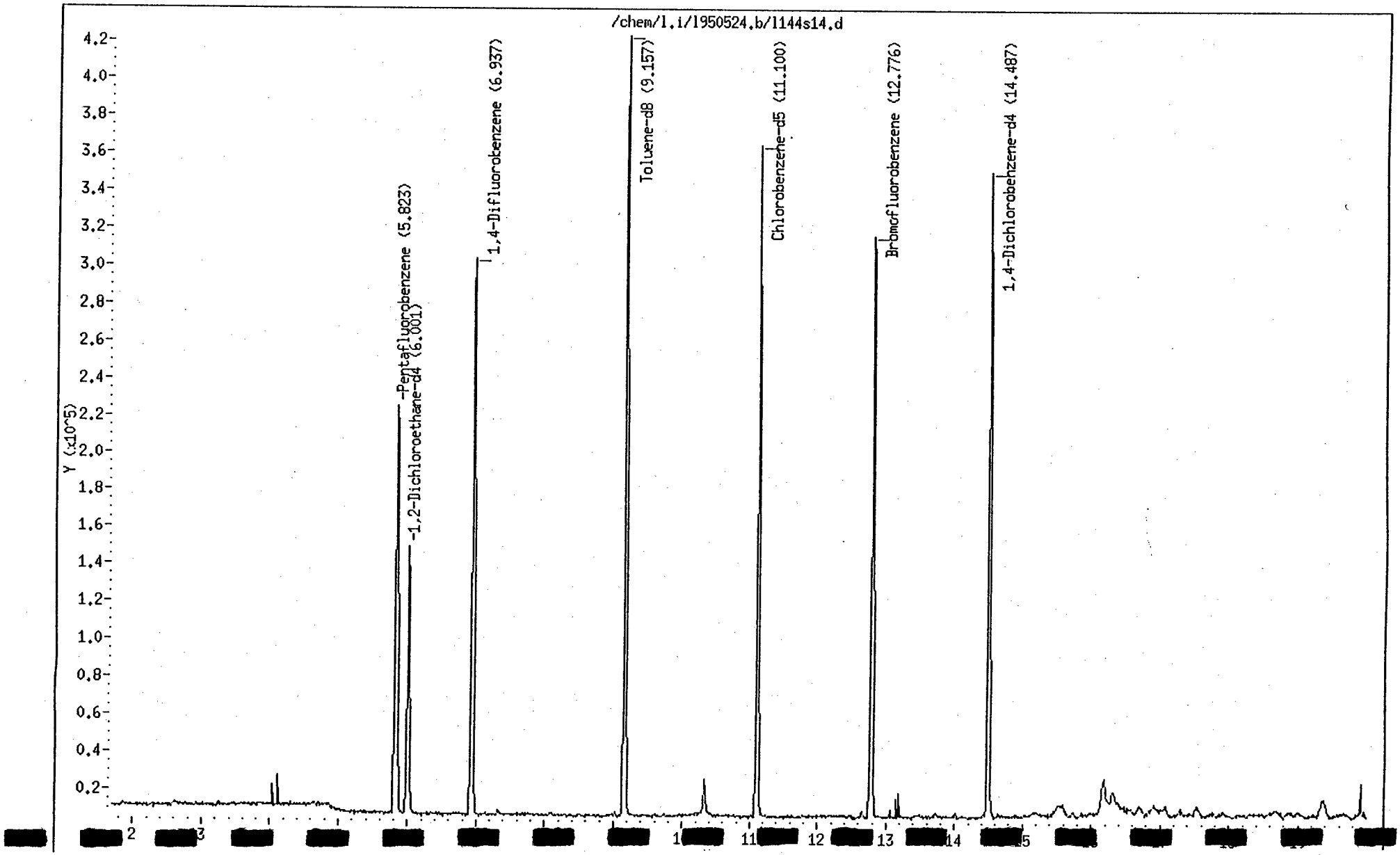
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	203357	10.48
24 1,4-Difluorobenzene	239653	119826	479306	263721	10.04
38 Chlorobenzene-d5	191926	95963	383852	206700	7.70
48 1,4-Dichlorobenzene-	101540	50770	203080	101561	0.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.82	0.05
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.94	0.17
38 Chlorobenzene-d5	11.11	10.61	11.61	11.11	0.02
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	-0.04

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950524.b/1144s14.d
Date : 25-MAY-1995 02:49
Client ID:
Sample Info: 9505714-04A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i
Operator: JC
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151s06.d
Lab Smp Id:
Inj Date : 31-MAY-1995 18:40
Operator : LH
Inst ID: h.i
Smp Info : 9505714-04B-8270W/1X
Misc Info : E142C1/J142B01/H151IC6
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 01-Jun-1995 11:58 liping
Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09
Cal File: h151ic6.d
Als bottle: 6
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	78 bis(2-Ethylhexyl)phthalate	149.00	11.032	11.034	(1.011)	30859	5	2(a)
*	11 1,4-Dichlorobenzene-d4	152.00	3.804	3.805	(1.000)	222626	40	
*	32 Naphthalene-d8	136.00	4.977	4.979	(1.000)	653949	40	
*	48 Acenaphthene-d10	164.00	6.731	6.721	(1.000)	234697	40	
*	65 Phenanthrene-d10	188.00	8.200	8.202	(1.000)	241294	40	
*	76 Chrysene-d12	240.00	10.914	10.916	(1.000)	152789	40	
*	83 Perylene-d12	264.00	12.786	12.788	(1.000)	96591	40	
$	23 Nitrobenzene-d5	82.00	4.313	4.315	(0.867)	608045	77	39
$	41 2-Fluorobiphenyl	172.00	6.055	6.057	(0.900)	609945	84	42
$	72 Terphenyl-d14	244.00	9.847	9.849	(0.902)	333193	87	43
$	4 Phenol-d5	99.00	3.543	3.533	(0.931)	1155674	100	50
$	3 2-Fluorophenol	112.00	2.820	2.822	(0.741)	827454	92	46
$	61 2,4,6-Tribromophenol	329.70	7.536	7.538	(0.919)	96740	160	80

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151s06.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: E142C1/J142B01/H151IC6

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	222626	94.81
32 Naphthalene-d8	440783	220392	881566	653949	48.36
48 Acenaphthene-d10	201424	100712	402848	234697	16.52
65 Phenanthrene-d10	261616	130808	523232	241294	-7.77
76 Chrysene-d12	195160	97580	390320	152789	-21.71
83 Perylene-d12	123342	61671	246684	96591	-21.69

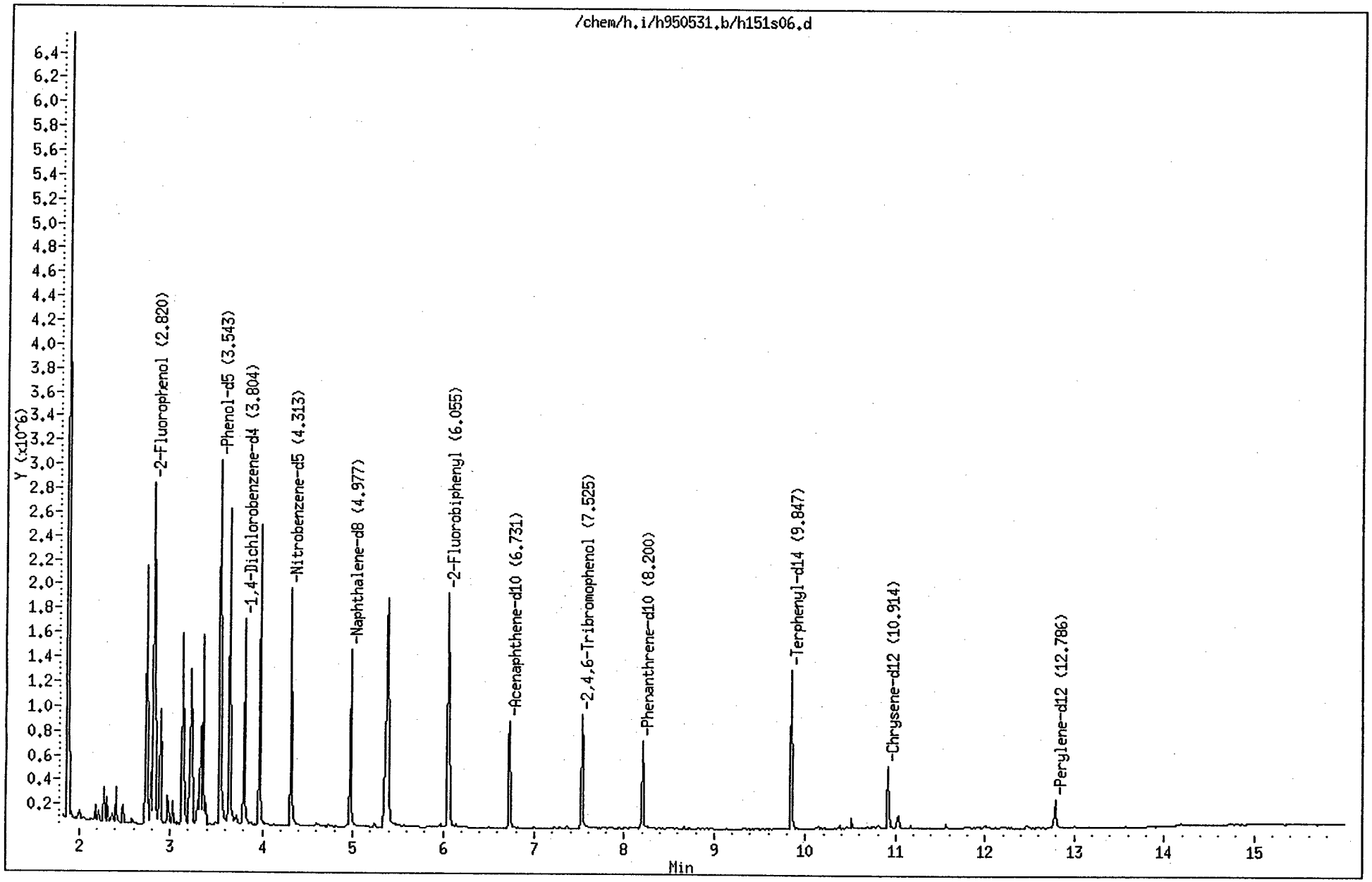
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.05
32 Naphthalene-d8	4.98	4.48	5.48	4.98	-0.04
48 Acenaphthene-d10	6.72	6.22	7.22	6.73	0.15
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	-0.02
76 Chrysene-d12	10.92	10.42	11.42	10.91	-0.02
83 Perylene-d12	12.79	12.29	13.29	12.79	-0.01

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.

Data File: /chem/h.i/h950531.b/h151s06.d
Date : 31-MAY-1995 18:40
Client ID:
Sample Info: 9505714-04B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

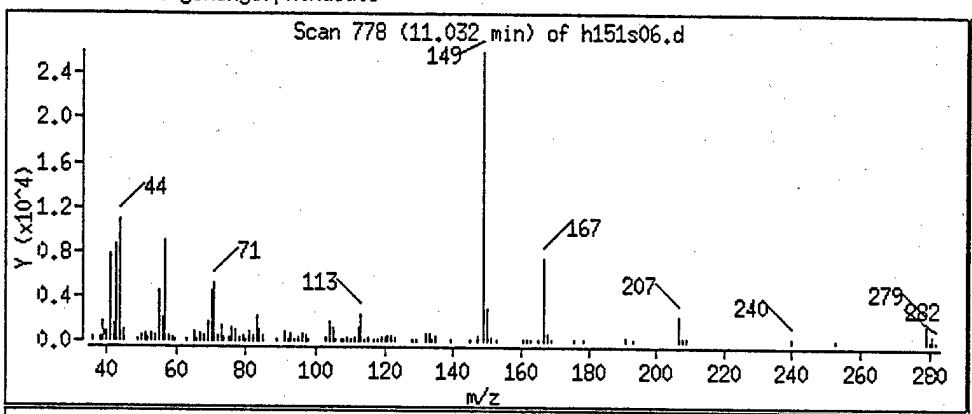
Operator: LH
Column diameter: 0.25

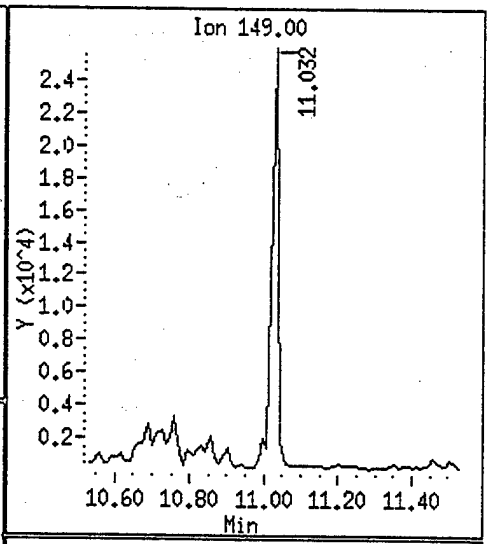


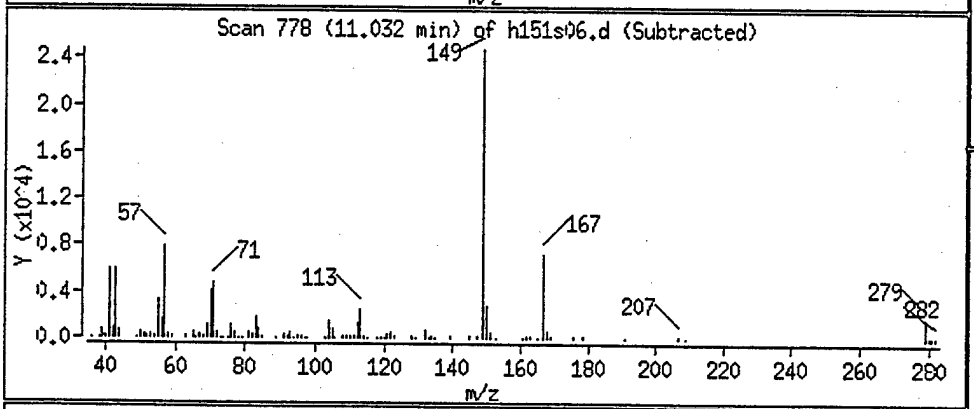
Data File: /chem/h.i/h950531.b/h151s06.d
Date : 31-MAY-1995 18:40
Client ID:
Sample Info: 9505714-04B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

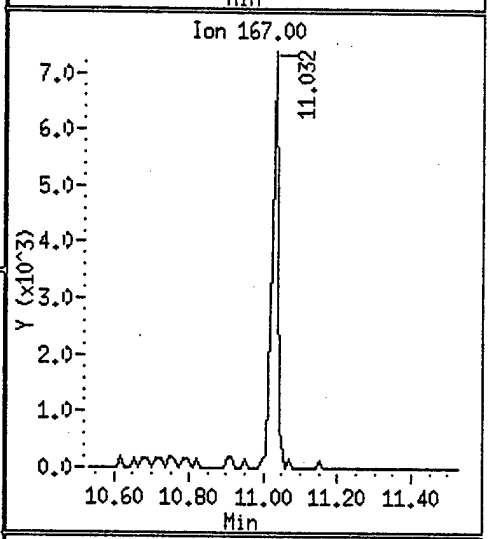
Instrument: h.i
Operator: LH
Column diameter: 0.25

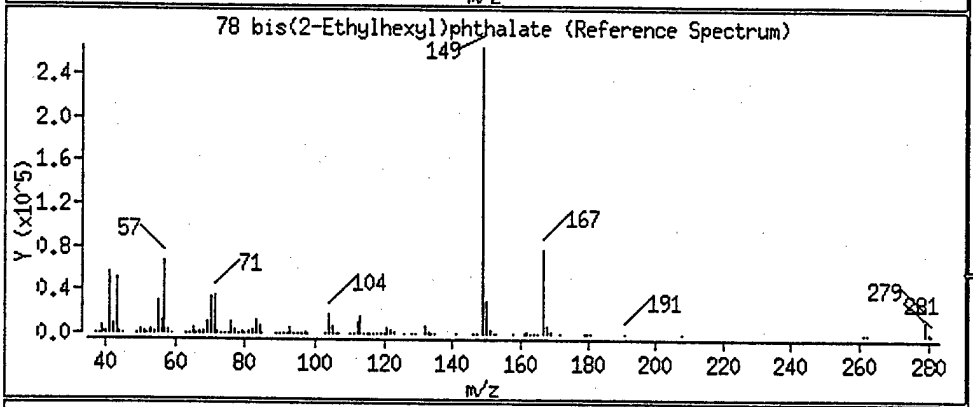
78 bis(2-Ethylhexyl)phthalate

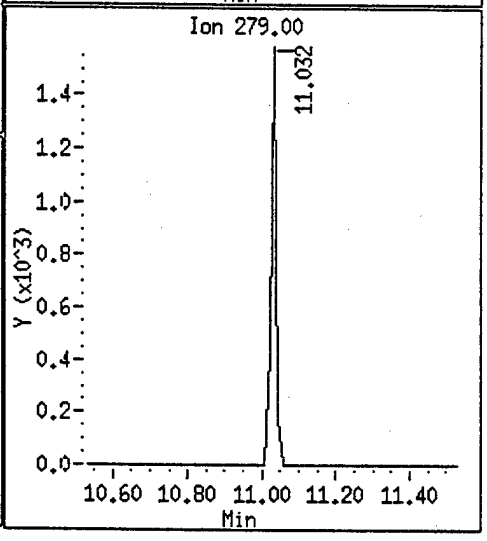


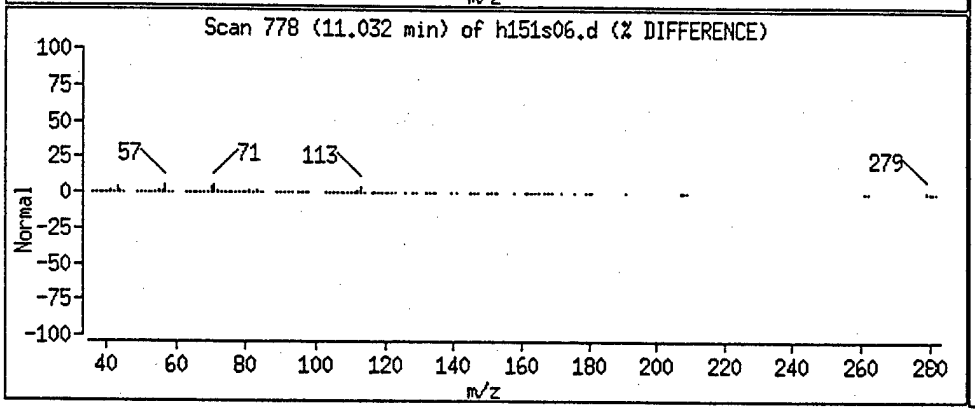












HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

DATE: 06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: SI-001-FB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 09:53:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Cadmium, Total METHOD 6010 *** Analyzed by: RSC Date: 05/31/95	ND	0.005	mg/L
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 06/01/95	ND	0.002	mg/L
Mercury, Total METHOD 7470 *** Analyzed by: PB Date: 06/02/95	ND	0.0004	mg/L
Nickel, Total METHOD 6010 *** Analyzed by: RSC Date: 05/31/95	ND	0.02	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/22/95	05/22/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

DATE: 06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: SI-001-FB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 09:53:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: AM Date: 05/22/95	05/22/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/24/95	ND	0.004	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/09/9

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: SI-001-FB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 09:53:0(
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	MDL*	UNITS
Benzene	ND	1	ug/L
Bromobenzene	ND	1	ug/L
Bromochloromethane	ND	1	ug/L
Bromodichloromethane	ND	1	ug/L
Bromoform	ND	1	ug/L
Bromomethane	ND	2	ug/L
n-Butylbenzene	ND	1	ug/L
sec-Butylbenzene	ND	1	ug/L
tert-Butylbenzene	ND	1	ug/L
Carbon tetrachloride	ND	1	ug/L
Chlorobenzene	ND	1	ug/L
Chlorodibromomethane	ND	1	ug/L
Chloroethane	ND	4	ug/L
Chloroform	5	1	ug/L
Chloromethane	ND	1	ug/L
2-Chlorotoluene	ND	1	ug/L
4-Chlorotoluene	ND	1	ug/L
1,2-Dibromo-3-chloropropane	ND	1	ug/L
1,2-Dibromoethane	ND	1	ug/L
Dibromomethane	ND	1	ug/L
1,2-Dichlorobenzene	ND	1	ug/L
1,3-Dichlorobenzene	ND	1	ug/L
1,4-Dichlorobenzene	ND	1	ug/L
Dichlorodifluoromethane	ND	1	ug/L
1,1-Dichloroethane	ND	1	ug/L
1,2-Dichloroethane	ND	1	ug/L
1,1-Dichloroethene	ND	1	ug/L
1,2-Dichloropropane	ND	1	ug/L
1,3-Dichloropropane	ND	1	ug/L
2,2-Dichloropropane	ND	1	ug/L
1,1-Dichloropropene	ND	1	ug/L
Ethylbenzene	ND	1	ug/L
Hexachlorobutadiene	ND	1	ug/L
Isopropylbenzene	ND	1	ug/L
p-Isopropyltoluene	ND	1	ug/L
Methylene chloride	4	1	ug/L
Naphthalene	ND	1	ug/L
n-Propylbenzene	ND	1	ug/L

METHOD: 8260 Water, Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-05

Operational Tech

SAMPLE ID: SI-001-FB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	MDL*	UNITS
Styrene	ND	1	ug/L
1,1,1,2-Tetrachloroethane	ND	1	ug/L
1,1,2,2-Tetrachloroethane	ND	1	ug/L
Tetrachloroethene	ND	1	ug/L
Toluene	ND	1	ug/L
1,2,3-Trichlorobenzene	ND	1	ug/L
1,2,4-Trichlorobenzene	ND	1	ug/L
1,1,1-Trichloroethane	ND	1	ug/L
1,1,2-Trichloroethane	ND	1	ug/L
Trichloroethene	ND	1	ug/L
Trichlorofluoromethane	ND	1	ug/L
1,2,3-Trichloropropane	ND	1	ug/L
1,2,4-Trimethylbenzene	ND	1	ug/L
1,3,5-Trimethylbenzene	ND	1	ug/L
Vinyl chloride	ND	1	ug/L
Xylenes (total)	ND	1	ug/L
1,2-Dichloroethene (total)	ND	1	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	94	76	114
Toluene-d8	50	100	88	110
4-Bromofluorobenzene	50	98	86	115

ANALYZED BY: JC DATE/TIME: 05/25/95 03:18:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Method Detection Limit ND - Not Detected
NA - Not Analyzed D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: SI-001-FB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 09:53:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	5	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-05

Operational Tech

SAMPLE ID: SI-001-FB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-05

Operational Tech

SAMPLE ID: SI-001-FB

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	81	35	114
2-Fluorobiphenyl	50 ug/L	79	43	116
Terphenyl-d14	50 ug/L	112	33	141
Phenol-d5	75 ug/L	67	10	110
2-Fluorophenol	75 ug/L	67	21	110
2,4,6-Tribromophenol	75 ug/L	109	10	123

ANALYZED BY: LH
EXTRACTED BY: RS
DATE/TIME: 05/31/95 19:04:00
DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit
NA - Not Analyzed
ND - Not Detected

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

Data File: /chem/l.i/l950524.b/l144s15.d
Report Date: 25-May-1995 07:02

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144s15.d
Lab Smp Id:
Inj Date : 25-MAY-1995 03:18
Operator : JC Inst ID: l.i
Smp Info : 9505714-05A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 25
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
18	Chloroform	83.00	5.233	5.241	(0.900)	16610	24	5
	Methylene Chloride	84.00	3.245	3.244	(0.558)	5960	19	4(a)
	Pentafluorobenzene	168.00	5.812	5.820	(1.000)	194093	250	
24	1,4-Difluorobenzene	114.00	6.927	6.925	(1.000)	249959	250	
38	Chlorobenzene-d5	117.00	11.098	11.106	(1.000)	197064	250	
	1,4-Dichlorobenzene-d4	152.00	14.486	14.493	(1.000)	96302	250	
	1,2-Dichloroethane-d4	102.00	5.991	5.990	(0.865)	18243	240	47
32	Toluene-d8	98.00	9.155	9.154	(1.322)	270356	250	50
47	Bromofluorobenzene	95.00	12.774	12.782	(1.844)	113223	240	49

Q Flag Legend

a Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144s15.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	194093	5.45
24 1,4-Difluorobenzene	239653	119826	479306	249959	4.30
38 Chlorobenzene-d5	191926	95963	383852	197064	2.68
48 1,4-Dichlorobenzene-	101540	50770	203080	96302	-5.16

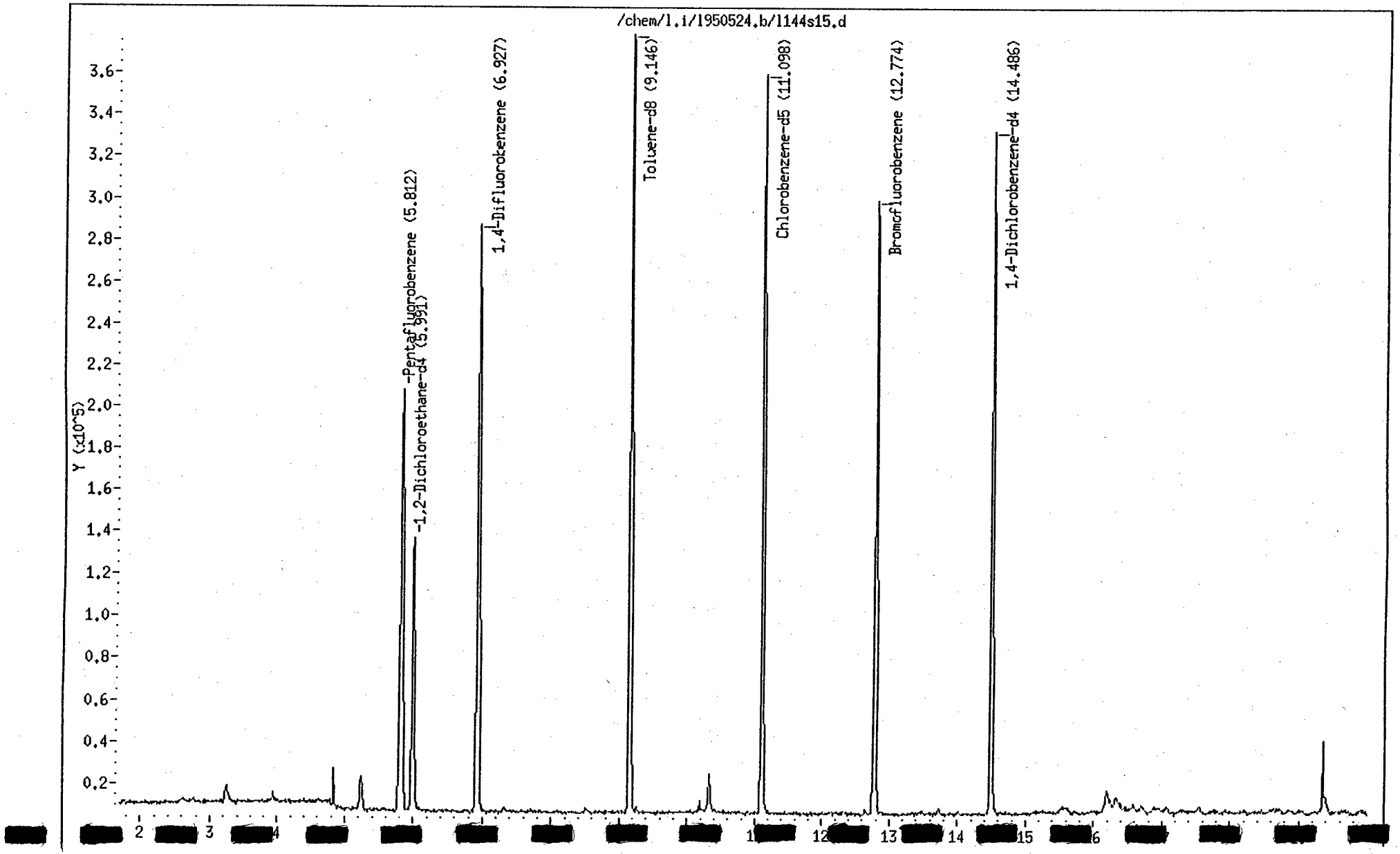
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.81	-0.13
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.02
38 Chlorobenzene-d5	11.11	10.61	11.61	11.10	-0.07
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	-0.05

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.

Data File: /chem/l.i/1950524.b/l144s15.d
Date : 25-MAY-1995 03:18
Client ID:
Sample Info: 9505714-05A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i

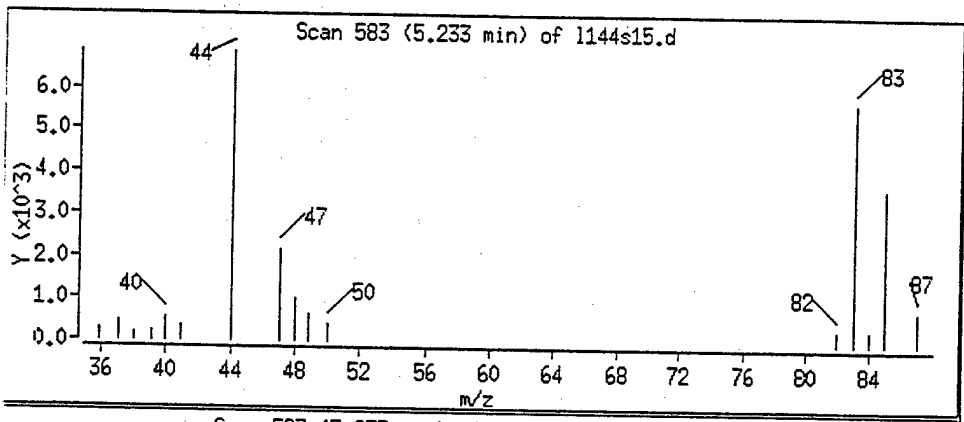
Operator: JC
Column diameter: 0.25

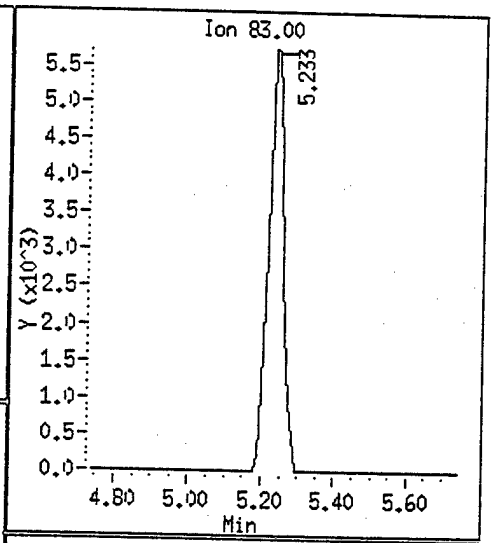


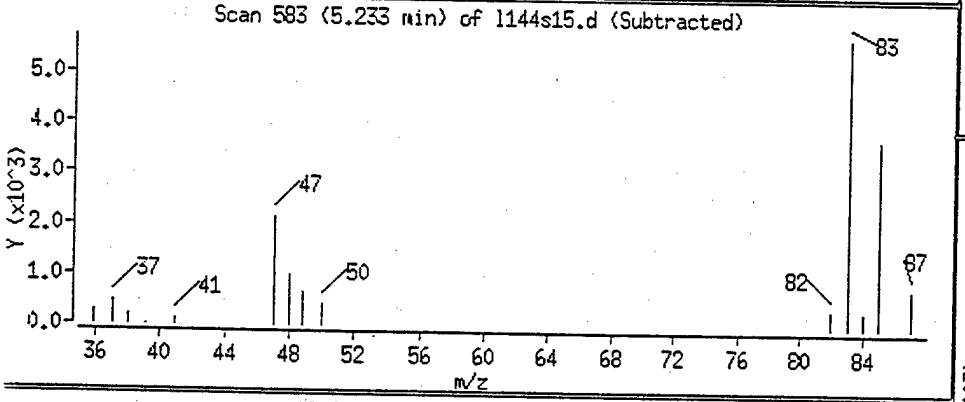
Data File: /chem/l.i/1950524.b/l144s15.d
Date : 25-MAY-1995 03:18
Client ID:
Sample Info: 9505714-05A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

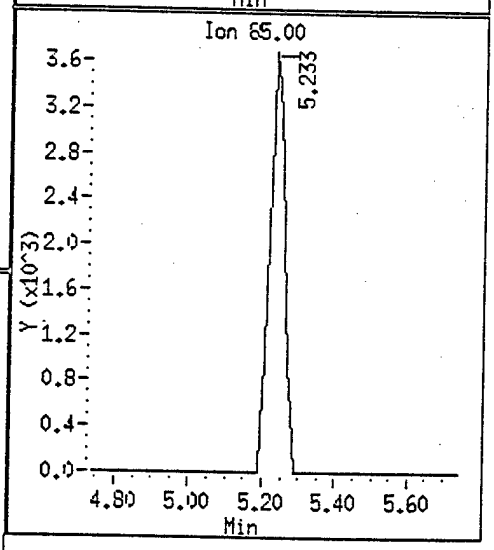
Instrument: l.i
Operator: JC
Column diameter: 0.25

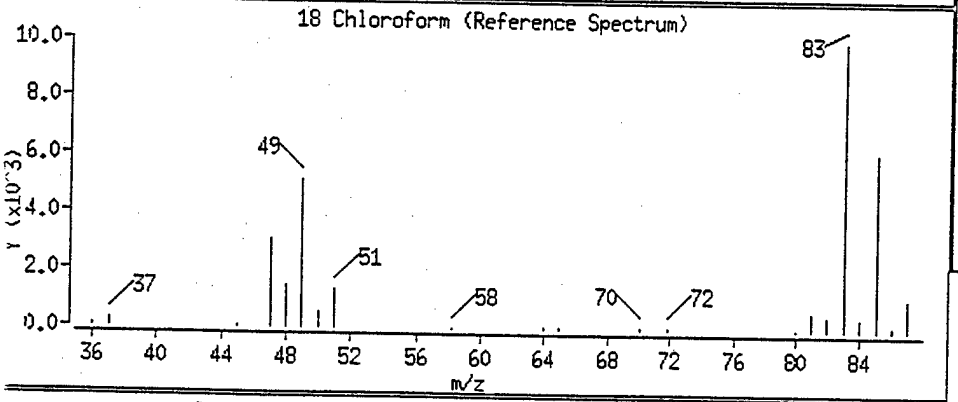
18 Chloroform

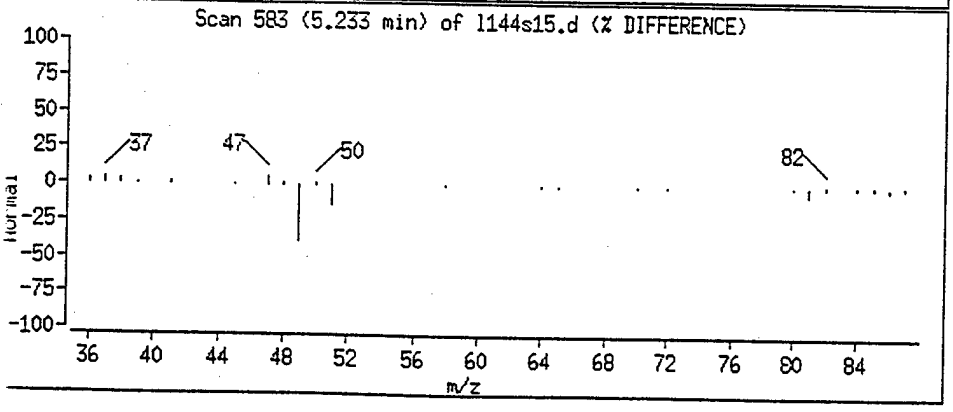






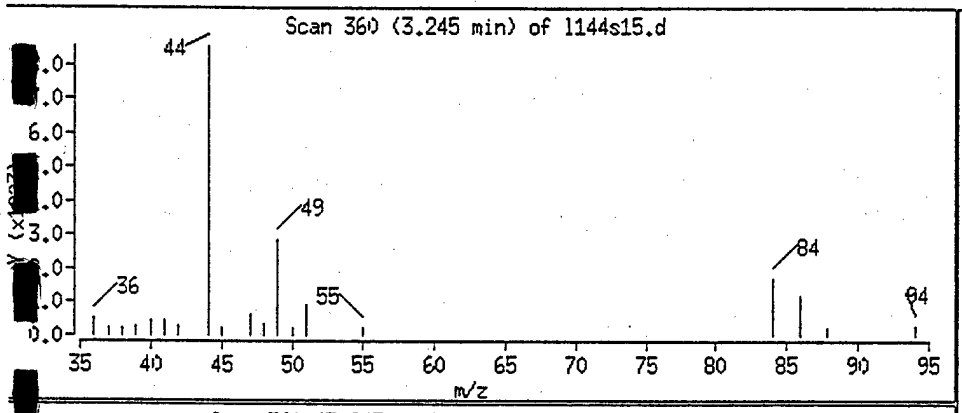


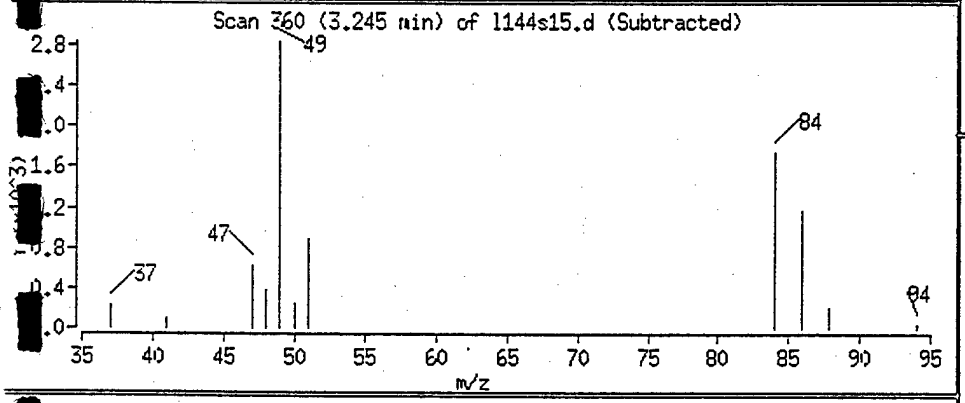


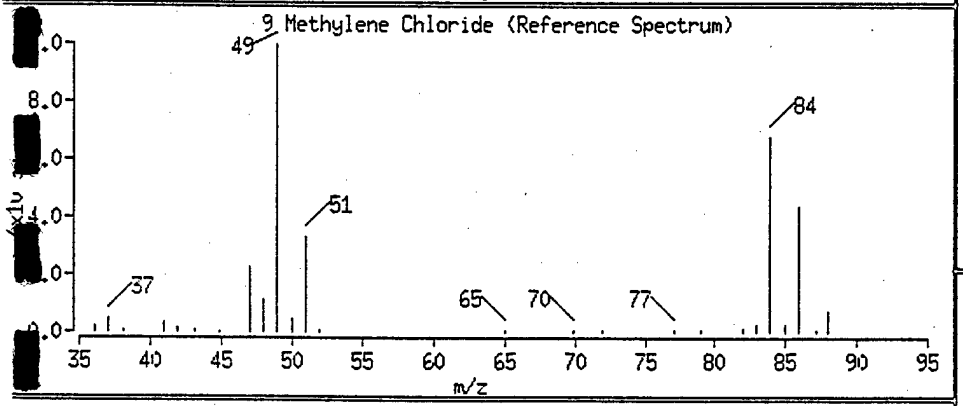


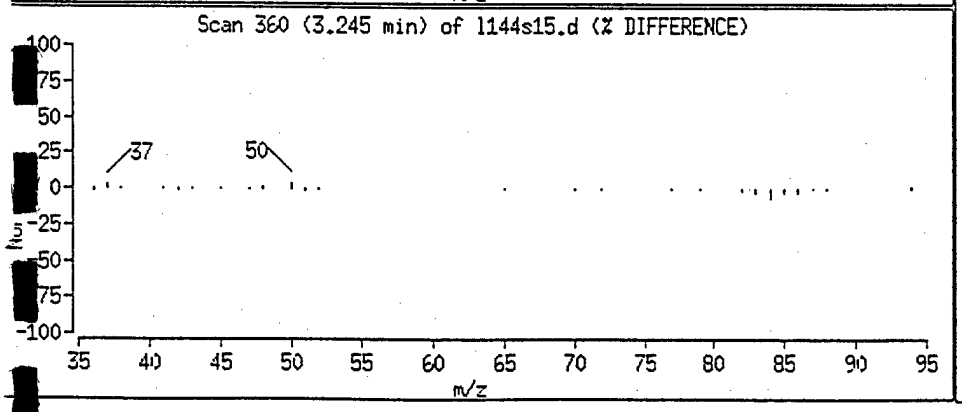
Data File: /chem/1.i/1950524.b/1144s15.d
Date : 25-MAY-1995 03:18
Client ID:
Instrument: 1.i
Sample Info: 9505714-05A-8260W/1X
Purge Volume: 5.0
Operator: JC
Column phase: 30m,hp5ms,0.25u df
Column diameter: 0.25

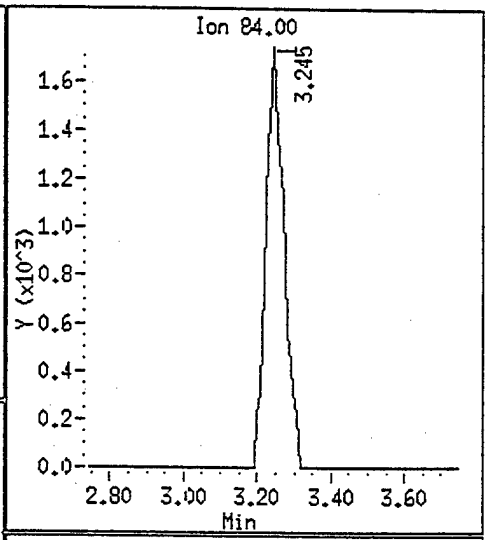
9 Methylene Chloride

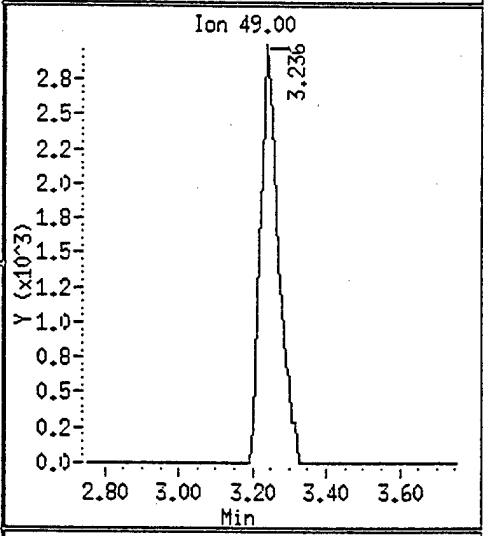


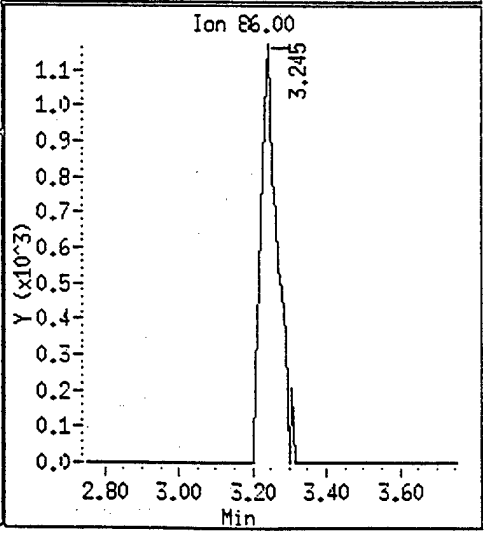












SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151s07.d
Lab Smp Id:
Inj Date : 31-MAY-1995 19:04
Operator : LH
Inst ID: h.i
Smp Info : 9505714-05B-8270W/1X
Misc Info : E142C1/J142B01/H151IC6
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 01-Jun-1995 11:58 liping
Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09
Cal File: h151ic6.d
Als bottle: 7
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	69 Di-n-butylphthalate	149.00	8.874	8.877	(1.082)	138602	10	5
*	11 1,4-Dichlorobenzene-d4	152.00	3.802	3.805	(1.000)	122296	40	
*	32 Naphthalene-d8	136.00	4.975	4.979	(1.000)	457807	40	
*	48 Acenaphthene-d10	164.00	6.729	6.721	(1.000)	211366	40	
*	65 Phenanthrene-d10	188.00	8.198	8.202	(1.000)	268604	40	
*	76 Chrysene-d12	240.00	10.912	10.916	(1.000)	166600	40	
*	83 Perylene-d12	264.00	12.784	12.788	(1.000)	98171	40	
$	23 Nitrobenzene-d5	82.00	4.311	4.315	(0.867)	447108	81	41
$	41 2-Fluorobiphenyl	172.00	6.053	6.057	(0.900)	517029	79	40
$	72 Terphenyl-d14	244.00	9.845	9.849	(0.902)	469496	110	56
$	4 Phenol-d5	99.00	3.541	3.533	(0.931)	639655	100	50
$	3 2-Fluorophenol	112.00	2.818	2.822	(0.741)	499519	100	50
$	61 2,4,6-Tribromophenol	329.70	7.534	7.538	(0.919)	109177	160	82

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151s07.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: E142C1/J142B01/H151IC6

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	122296	7.02
32 Naphthalene-d8	440783	220392	881566	457807	3.86
48 Acenaphthene-d10	201424	100712	402848	211366	4.94
65 Phenanthrene-d10	261616	130808	523232	268604	2.67
76 Chrysene-d12	195160	97580	390320	166600	-14.63
83 Perylene-d12	123342	61671	246684	98171	-20.41

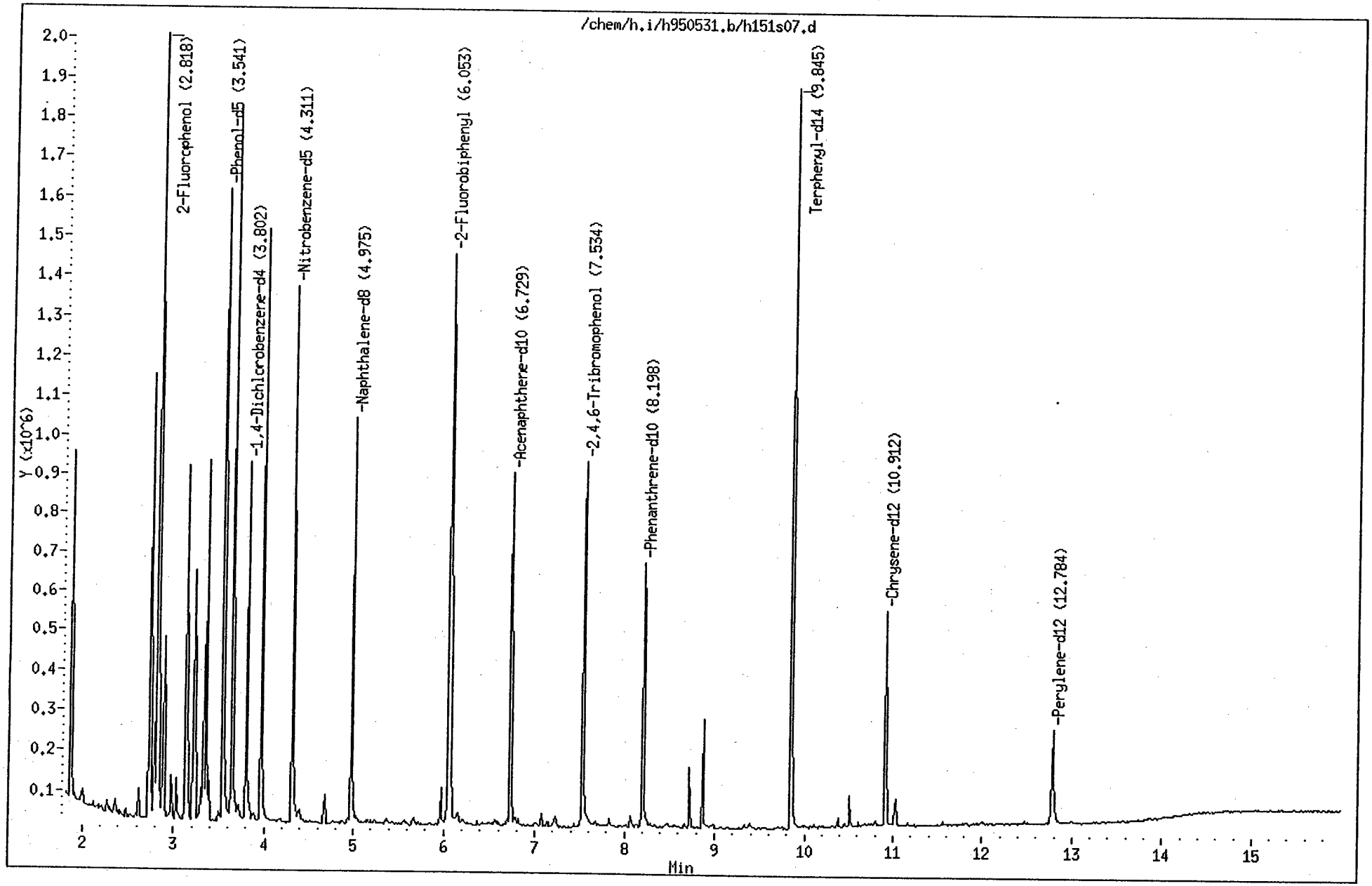
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.10
32 Naphthalene-d8	4.98	4.48	5.48	4.97	-0.08
48 Acenaphthene-d10	6.72	6.22	7.22	6.73	0.12
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	-0.05
76 Chrysene-d12	10.92	10.42	11.42	10.91	-0.03
83 Perylene-d12	12.79	12.29	13.29	12.78	-0.03

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.

Data File: /chem/h.i/h950531.b/h151s07.d
Date : 31-MAY-1995 19:04
Client ID:
Sample Info: 9505714-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

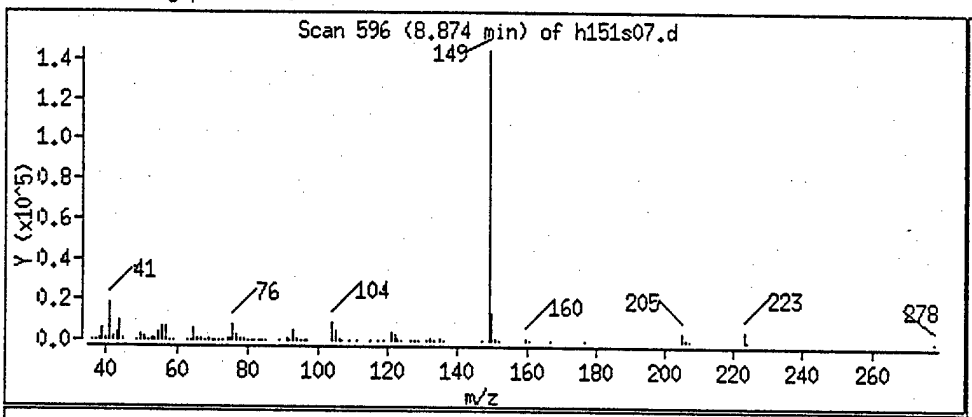
Operator: LH
Column diameter: 0.25

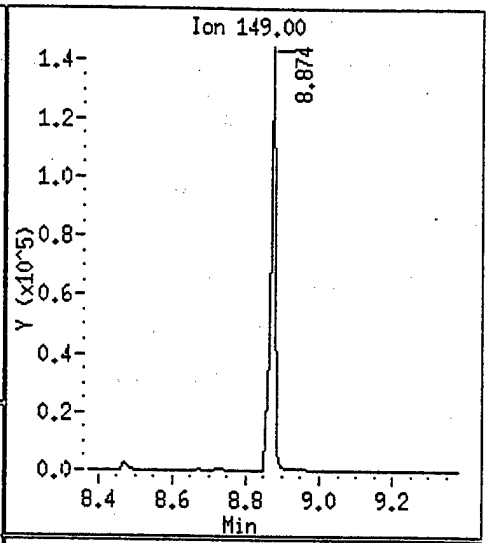


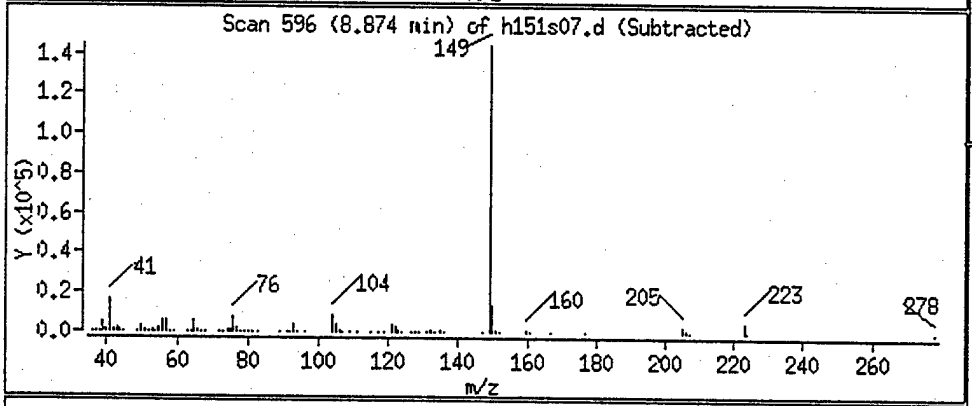
Data File: /chem/h.i/h950531.b/h151s07.d
Date : 31-MAY-1995 19:04
Client ID:
Sample Info: 9505714-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

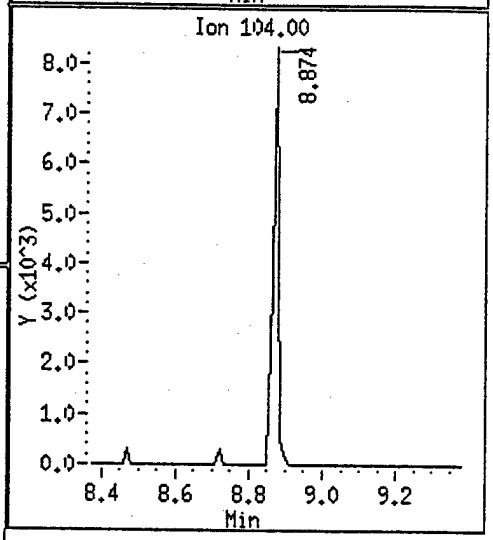
Instrument: h.i
Operator: LH
Column diameter: 0.25

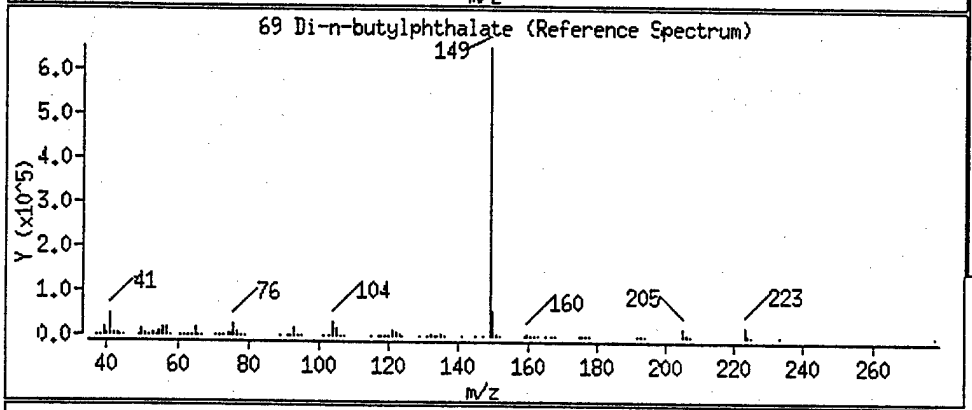
69 Di-n-butylphthalate

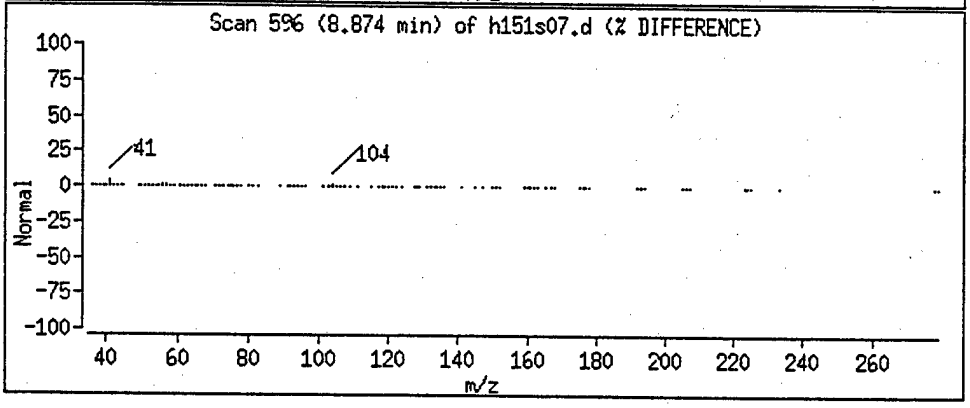












HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/09/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Provided by SPL
SAMPLE ID: SI-001-TB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/08/95
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	MDL*	UNITS
Benzene	ND	1	ug/L
Bromobenzene	ND	1	ug/L
Bromochloromethane	ND	1	ug/L
Bromodichloromethane	ND	1	ug/L
Bromoform	ND	1	ug/L
Bromomethane	ND	2	ug/L
n-Butylbenzene	ND	1	ug/L
sec-Butylbenzene	ND	1	ug/L
tert-Butylbenzene	ND	1	ug/L
Carbon tetrachloride	ND	1	ug/L
Chlorobenzene	ND	1	ug/L
Chlorodibromomethane	ND	1	ug/L
Chloroethane	ND	4	ug/L
Chloroform	ND	1	ug/L
Chloromethane	ND	1	ug/L
2-Chlorotoluene	ND	1	ug/L
4-Chlorotoluene	ND	1	ug/L
1,2-Dibromo-3-chloropropane	ND	1	ug/L
1,2-Dibromoethane	ND	1	ug/L
Dibromomethane	ND	1	ug/L
1,2-Dichlorobenzene	ND	1	ug/L
1,3-Dichlorobenzene	ND	1	ug/L
1,4-Dichlorobenzene	ND	1	ug/L
Dichlorodifluoromethane	ND	1	ug/L
1,1-Dichloroethane	ND	1	ug/L
1,2-Dichloroethane	ND	1	ug/L
1,1-Dichloroethene	ND	1	ug/L
1,2-Dichloropropane	ND	1	ug/L
1,3-Dichloropropane	ND	1	ug/L
2,2-Dichloropropane	ND	1	ug/L
1,1-Dichloropropene	ND	1	ug/L
Ethylbenzene	ND	1	ug/L
Hexachlorobutadiene	ND	1	ug/L
Isopropylbenzene	ND	1	ug/L
p-Isopropyltoluene	ND	1	ug/L
Methylene chloride	ND	1	ug/L
Naphthalene	ND	1	ug/L
n-Propylbenzene	ND	1	ug/L

METHOD: 8260 Water, Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-06

Operational Tech

SAMPLE ID: SI-001-TB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	MDL*		UNITS
Styrene	ND	1		ug/L
1,1,1,2-Tetrachloroethane	ND	1		ug/L
1,1,2,2-Tetrachloroethane	ND	1		ug/L
Tetrachloroethene	ND	1		ug/L
Toluene	ND	1		ug/L
1,2,3-Trichlorobenzene	ND	1		ug/L
1,2,4-Trichlorobenzene	ND	1		ug/L
1,1,1-Trichloroethane	ND	1		ug/L
1,1,2-Trichloroethane	ND	1		ug/L
Trichloroethene	ND	1		ug/L
Trichlorofluoromethane	ND	1		ug/L
1,2,3-Trichloropropane	ND	1		ug/L
1,2,4-Trimethylbenzene	ND	1		ug/L
1,3,5-Trimethylbenzene	ND	1		ug/L
Vinyl chloride	ND	1		ug/L
Xylenes (total)	ND	1		ug/L
1,2-Dichloroethene (total)	ND	1		ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	96	76	114
Toluene-d8	50	100	88	110
4-Bromofluorobenzene	50	96	86	115

ANALYZED BY: JC DATE/TIME: 05/25/95 03:47:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Method Detection Limit ND - Not Detected
NA - Not Analyzed D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144s16.d
Lab Smp Id:
Inj Date : 25-MAY-1995 03:47
Operator : JC Inst ID: l.i
Smp Info : 9505714-06A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 26
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 2 Pentafluorobenzene	168.00	5.812	5.820	(1.000)	187187	250	
* 24 1,4-Difluorobenzene	114.00	6.926	6.925	(1.000)	248092	250	
* 38 Chlorobenzene-d5	117.00	11.106	11.106	(1.000)	196909	250	
* 48 1,4-Dichlorobenzene-d4	152.00	14.485	14.493	(1.000)	94414	250	
S 19 1,2-Dichloroethane-d4	102.00	5.990	5.990	(0.865)	18192	240	48
S 32 Toluene-d8	98.00	9.154	9.154	(1.322)	269595	250	50
S 47 Bromofluorobenzene	95.00	12.782	12.782	(1.846)	110833	240	48

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144s16.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184063	92034	368136	187187	1.69
24 1,4-Difluorobenzene	239653	119826	479306	248092	3.52
38 Chlorobenzene-d5	191926	95963	383852	196909	2.60
48 1,4-Dichlorobenzene-	101540	50770	203080	94414	-7.02

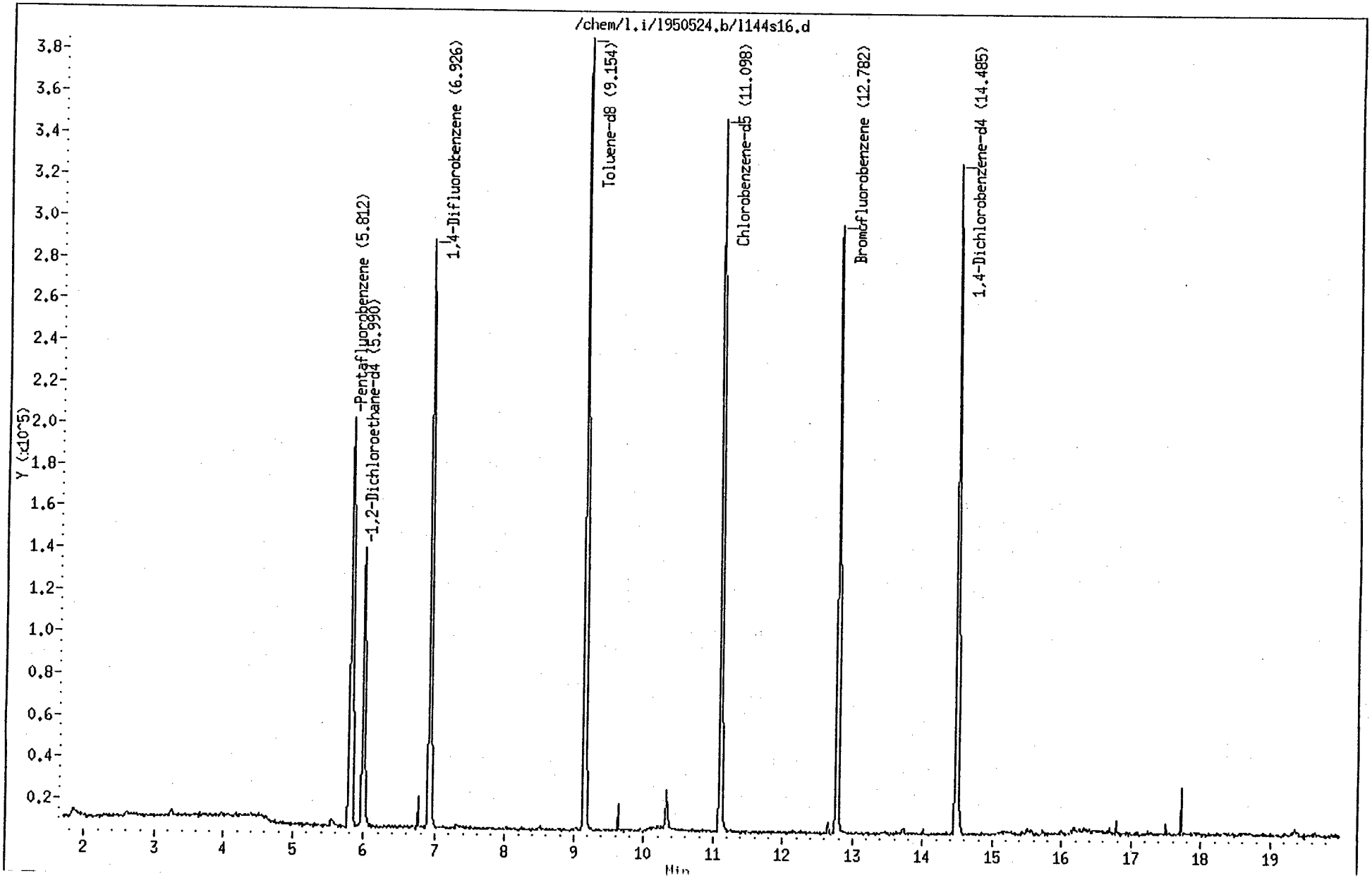
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.81	-0.15
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.00
38 Chlorobenzene-d5	11.11	10.61	11.61	11.11	0.00
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.48	-0.06

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.

Data File: /chem/l.i/1950524.b/l144s16.d
Date : 25-MAY-1995 03:47
Client ID:
Sample Info: 9505714-06A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i

Operator: JC
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-07

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/09/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-003-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 12:12:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	MDL*	UNITS
Benzene	ND	1	ug/L
Bromobenzene	ND	1	ug/L
Bromochloromethane	ND	1	ug/L
Bromodichloromethane	ND	1	ug/L
Bromoform	ND	1	ug/L
Bromomethane	ND	2	ug/L
n-Butylbenzene	ND	1	ug/L
sec-Butylbenzene	ND	1	ug/L
tert-Butylbenzene	ND	1	ug/L
Carbon tetrachloride	ND	1	ug/L
Chlorobenzene	ND	1	ug/L
Chlorodibromomethane	ND	1	ug/L
Chloroethane	ND	4	ug/L
Chloroform	4	1	ug/L
Chloromethane	ND	1	ug/L
2-Chlorotoluene	ND	1	ug/L
4-Chlorotoluene	ND	1	ug/L
1,2-Dibromo-3-chloropropane	ND	1	ug/L
1,2-Dibromoethane	ND	1	ug/L
Dibromomethane	ND	1	ug/L
1,2-Dichlorobenzene	ND	1	ug/L
1,3-Dichlorobenzene	ND	1	ug/L
1,4-Dichlorobenzene	ND	1	ug/L
Dichlorodifluoromethane	ND	1	ug/L
1,1-Dichloroethane	ND	1	ug/L
1,2-Dichloroethane	ND	1	ug/L
1,1-Dichloroethene	ND	1	ug/L
1,2-Dichloropropane	ND	1	ug/L
1,3-Dichloropropane	ND	1	ug/L
2,2-Dichloropropane	ND	1	ug/L
1,1-Dichloropropene	ND	1	ug/L
Ethylbenzene	ND	1	ug/L
Hexachlorobutadiene	ND	1	ug/L
Isopropylbenzene	ND	1	ug/L
p-Isopropyltoluene	ND	1	ug/L
Methylene chloride	3	1	ug/L
Naphthalene	ND	1	ug/L
n-Propylbenzene	ND	1	ug/L

METHOD: 8260 Water, Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-07

Operational Tech

SAMPLE ID: 026-003-RB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	MDL*		UNITS
Styrene	ND	1		ug/L
1,1,1,2-Tetrachloroethane	ND	1		ug/L
1,1,2,2-Tetrachloroethane	ND	1		ug/L
Tetrachloroethene	ND	1		ug/L
Toluene	ND	1		ug/L
1,2,3-Trichlorobenzene	ND	1		ug/L
1,2,4-Trichlorobenzene	ND	1		ug/L
1,1,1-Trichloroethane	ND	1		ug/L
1,1,2-Trichloroethane	ND	1		ug/L
Trichloroethene	ND	1		ug/L
Trichlorofluoromethane	ND	1		ug/L
1,2,3-Trichloropropane	ND	1		ug/L
1,2,4-Trimethylbenzene	ND	1		ug/L
1,3,5-Trimethylbenzene	ND	1		ug/L
Vinyl chloride	ND	1		ug/L
Xylenes (total)	ND	1		ug/L
1,2-Dichloroethene (total)	ND	1		ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	96	76	114
Toluene-d8	50	98	88	110
4-Bromofluorobenzene	50	96	86	115

ANALYZED BY: JC DATE/TIME: 05/25/95 04:16:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Method Detection Limit ND - Not Detected
NA - Not Analyzed D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-07

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 026-003-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 12:12:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-07

Operational Tech

SAMPLE ID: 026-003-RB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-07

Operational Tech

SAMPLE ID: 026-003-RB

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	98	35	114
2-Fluorobiphenyl	50 ug/L	87	43	116
Terphenyl-d14	50 ug/L	108	33	141
Phenol-d5	75 ug/L	77	10	110
2-Fluorophenol	75 ug/L	78	21	110
2,4,6-Tribromophenol	75 ug/L	107	10	123

ANALYZED BY: LH DATE/TIME: 06/01/95 14:04:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144s17.d
Lab Smp Id:
Inj Date : 25-MAY-1995 04:16
Operator : JC Inst ID: l.i
Smp Info : 9505714-07A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 27
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	18 Chloroform	83.00	5.244	5.241	(0.900)	14860	21	4(a)
	9 Methylene Chloride	84.00	3.247	3.244	(0.558)	5222	16	3(a)
*	2 Pentafluorobenzene	168.00	5.823	5.820	(1.000)	197269	250	
*	24 1,4-Difluorobenzene	114.00	6.929	6.925	(1.000)	257102	250	
*	38 Chlorobenzene-d5	117.00	11.100	11.106	(1.000)	200649	250	
*	48 1,4-Dichlorobenzene-d4	152.00	14.488	14.493	(1.000)	96272	250	
$	19 1,2-Dichloroethane-d4	102.00	6.002	5.990	(0.866)	19047	240	48
$	32 Toluene-d8	98.00	9.157	9.154	(1.322)	274422	250	49
$	47 Bromofluorobenzene	95.00	12.776	12.782	(1.844)	113515	240	48

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144s17.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/1950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	197269	7.17
24 1,4-Difluorobenzene	239653	119826	479306	257102	7.28
38 Chlorobenzene-d5	191926	95963	383852	200649	4.54
48 1,4-Dichlorobenzene-	101540	50770	203080	96272	-5.19

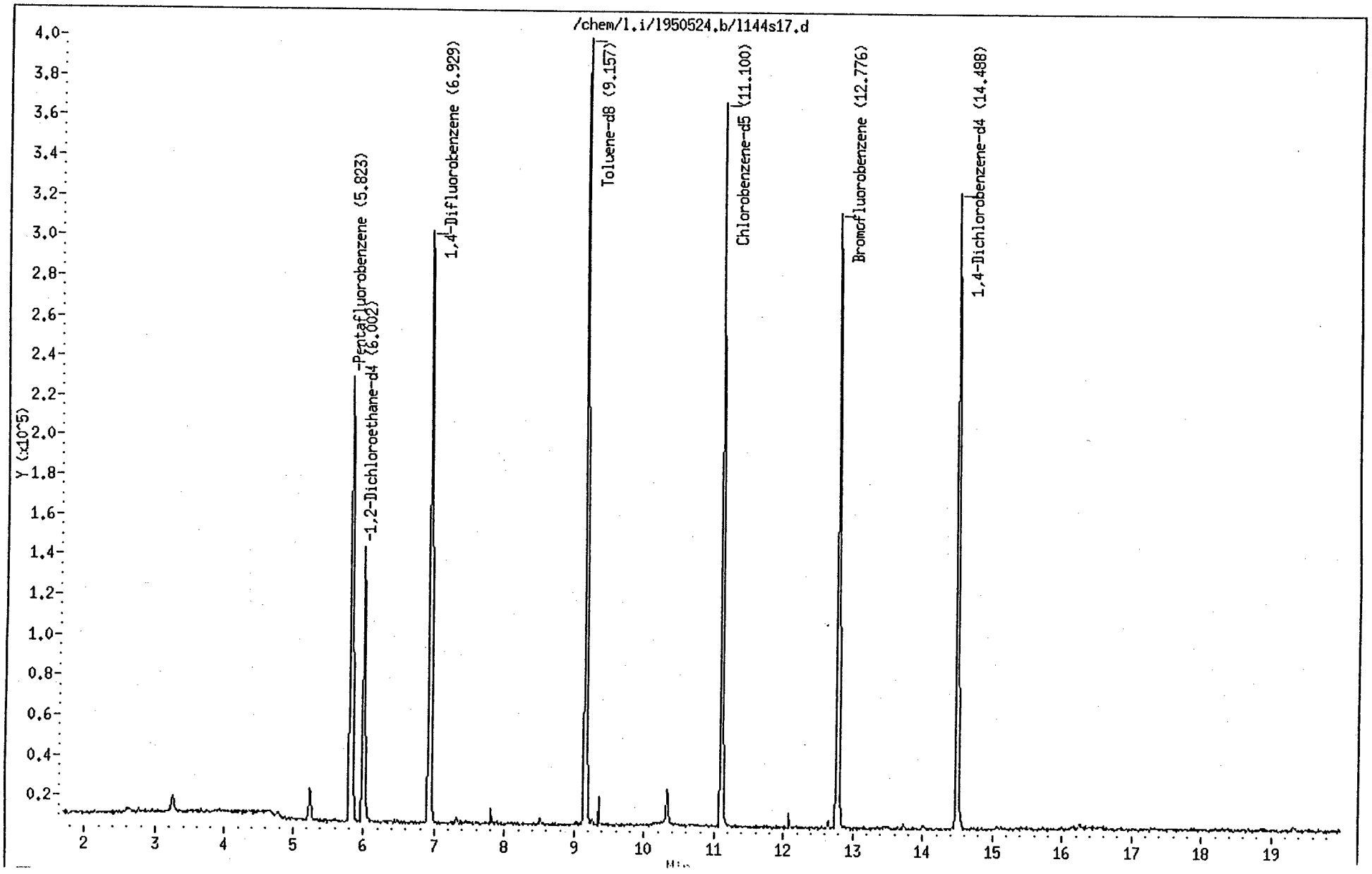
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.82	0.05
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.05
38 Chlorobenzene-d5	11.11	10.61	11.61	11.10	-0.05
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	-0.04

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.

Data File: /chem/l.i/1950524.b/l144s17.d
Date : 25-MAY-1995 04:16
Client ID:
Sample Info: 9505714-07A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i

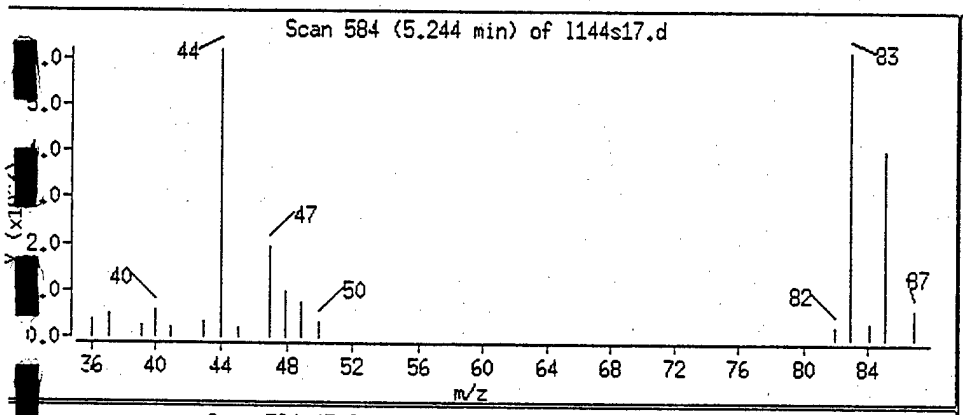
Operator: JC
Column diameter: 0.25

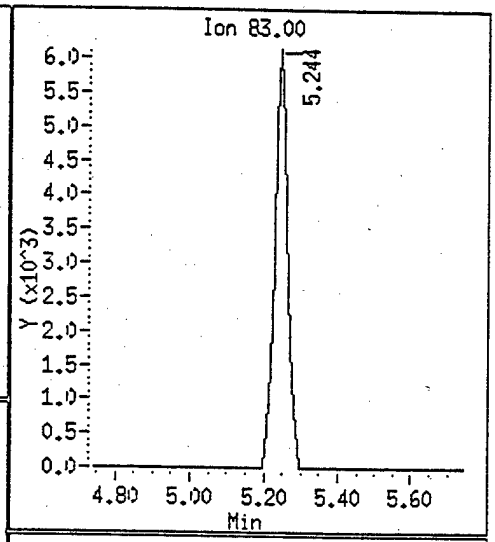


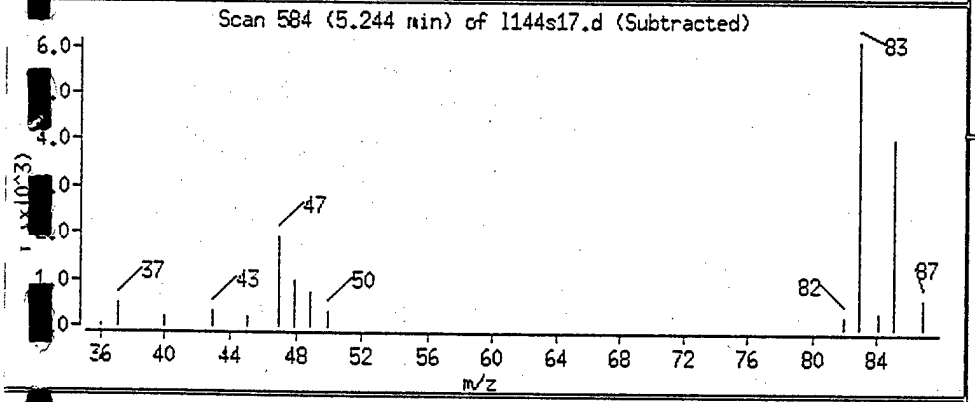
Data File: /chem/l.i/1950524.b/l144s17.d
Date : 25-MAY-1995 04:16
Client ID:
Sample Info: 9505714-07A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

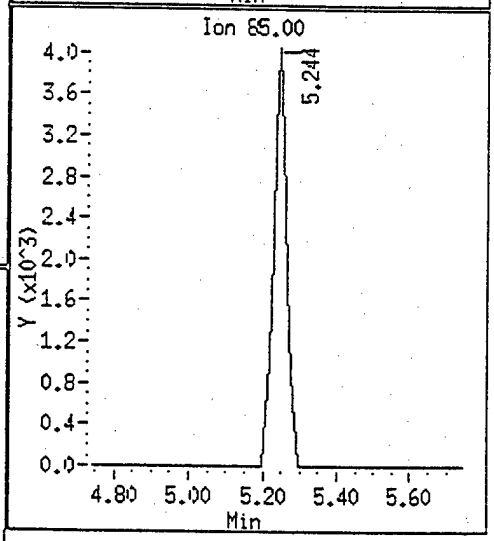
Instrument: l.i
Operator: JC
Column diameter: 0.25

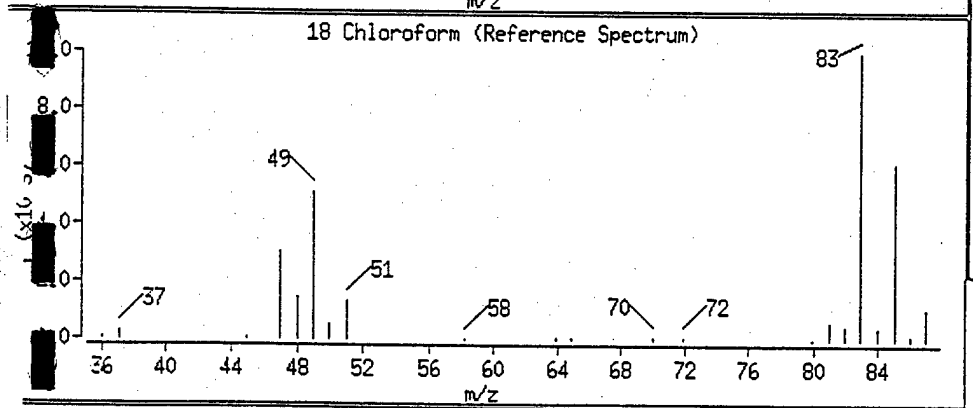
18 Chloroform

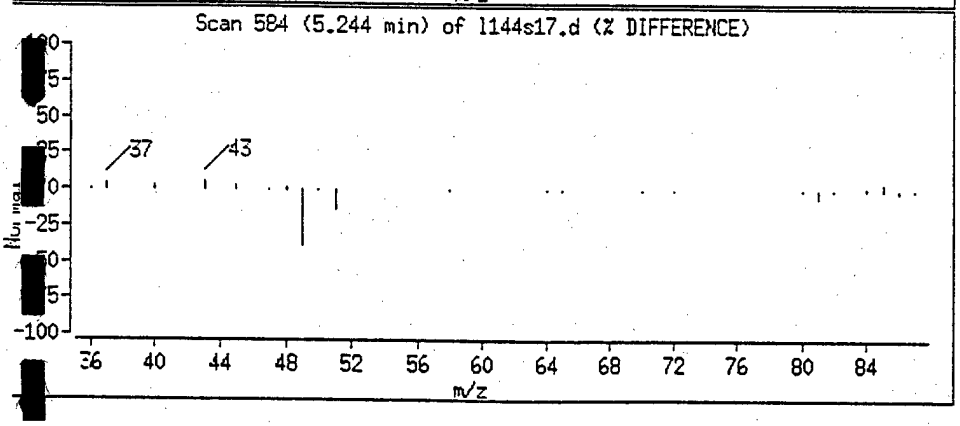








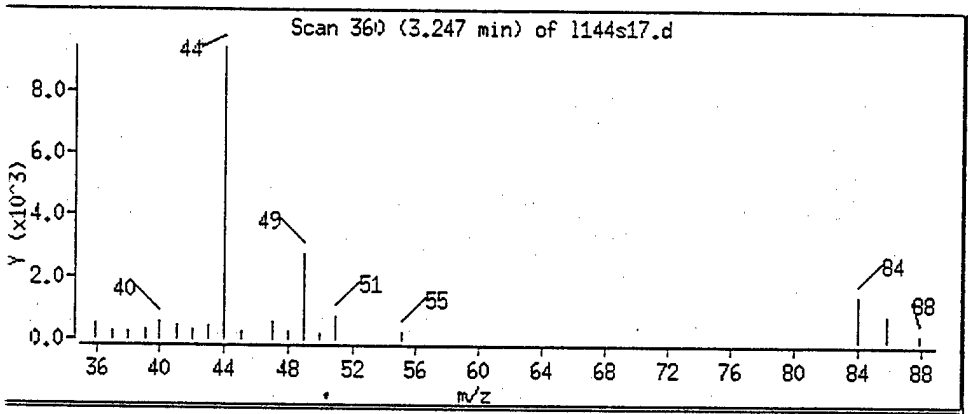


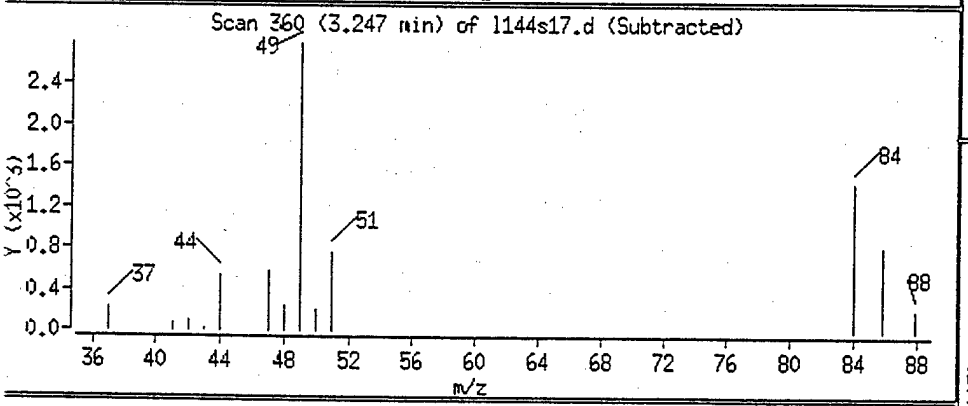


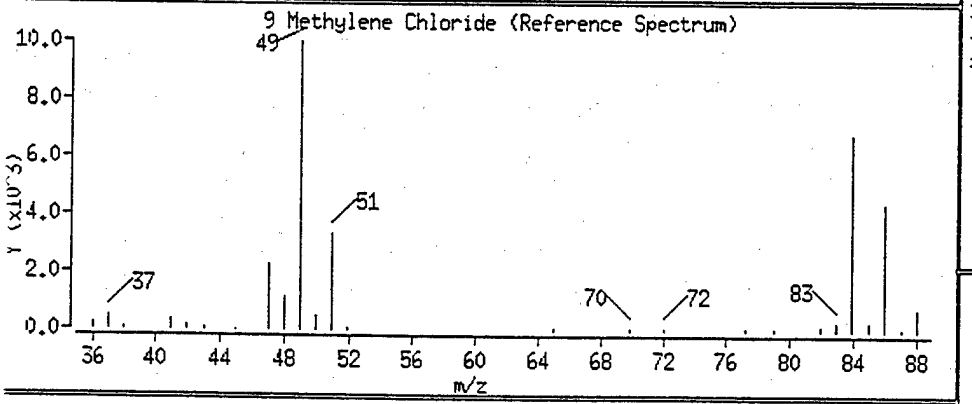
Data File: /chem/l.i/1950524.b/l144s17.d
Date : 25-MAY-1995 04:16
Client ID:
Sample Info: 9505714-07A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

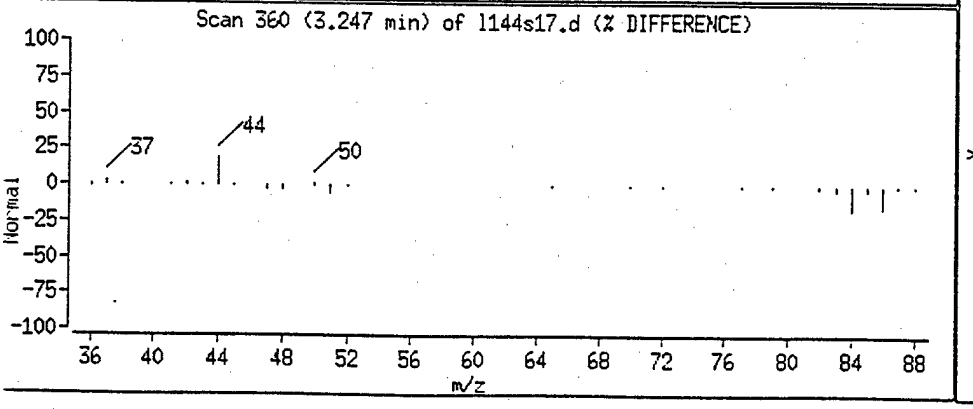
Instrument: l.i
Operator: JC
Column diameter: 0.25

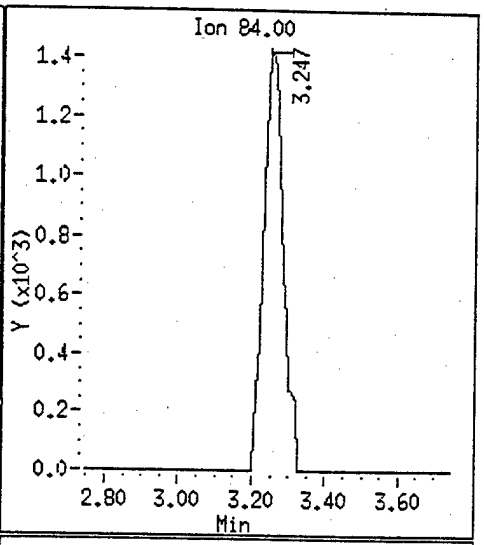
9 Methylene Chloride

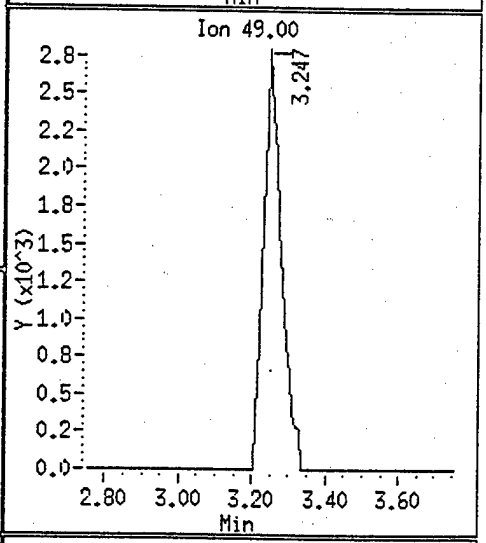


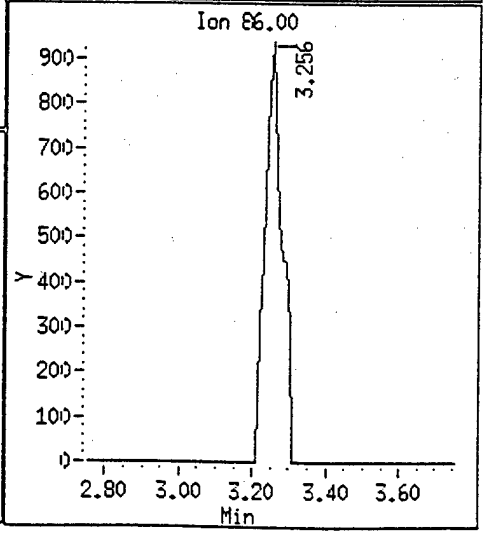












SPL Houston Labs

Data file : /chem/h.i/h950601.b/h152s02.d
Lab Smp Id:
Inj Date : 01-JUN-1995 14:04
Operator : LH
Smp Info : 9505714-07B-8270W/1X
Misc Info : E142C1/J142B01/H152CC1
Comment :
Method : /chem/h.i/h950601.b/hclpw.m
Meth Date : 01-Jun-1995 13:56 liping
Cal Date : 01-JUN-1995 09:55
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h152cc1.d

Compound Sublist: 8270.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
69 Di-n-butylphthalate	149.00	8.816	8.816	(1.081)	159938	6	3(a)
* 11 1,4-Dichlorobenzene-d4	152.00	3.791	3.791	(1.000)	281513	40	
* 32 Naphthalene-d8	136.00	4.953	4.952	(1.000)	859786	40	
* 48 Acenaphthene-d10	164.00	6.683	6.683	(1.000)	394217	40	
* 65 Phenanthrene-d10	188.00	8.153	8.152	(1.000)	447199	40	
* 76 Chrysene-d12	240.00	10.843	10.843	(1.000)	211334	40	
* 83 Perylene-d12	264.00	12.669	12.680	(1.000)	86253	40	
$ 23 Nitrobenzene-d5	82.00	4.301	4.288	(0.868)	1073550	98	49
$ 41 2-Fluorobiphenyl	172.00	6.019	6.019	(0.901)	1079146	87	44
$ 72 Terphenyl-d14	244.00	9.788	9.788	(0.903)	650201	110	54
$ 4 Phenol-d5	99.00	3.542	3.530	(0.934)	1628471	120	58
$ 3 2-Fluorophenol	112.00	2.831	2.819	(0.747)	1237167	120	59
$ 61 2,4,6-Tribromophenol	329.70	7.489	7.489	(0.919)	176039	160	80

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h152s02.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950601.b/hclpw.m
Misc Info: E142C1/J142B01/H152CC1

Calibration Date: 06/01/95
Calibration Time: 0955

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	201362	100681	402724	281513	39.80
32 Naphthalene-d8	726976	363488	1453952	859786	18.27
48 Acenaphthene-d10	300745	150372	601490	394217	31.08
65 Phenanthrene-d10	319648	159824	639296	447199	39.90
76 Chrysene-d12	175171	87586	350342	211334	20.64
83 Perylene-d12	75734	37867	151468	86253	13.89

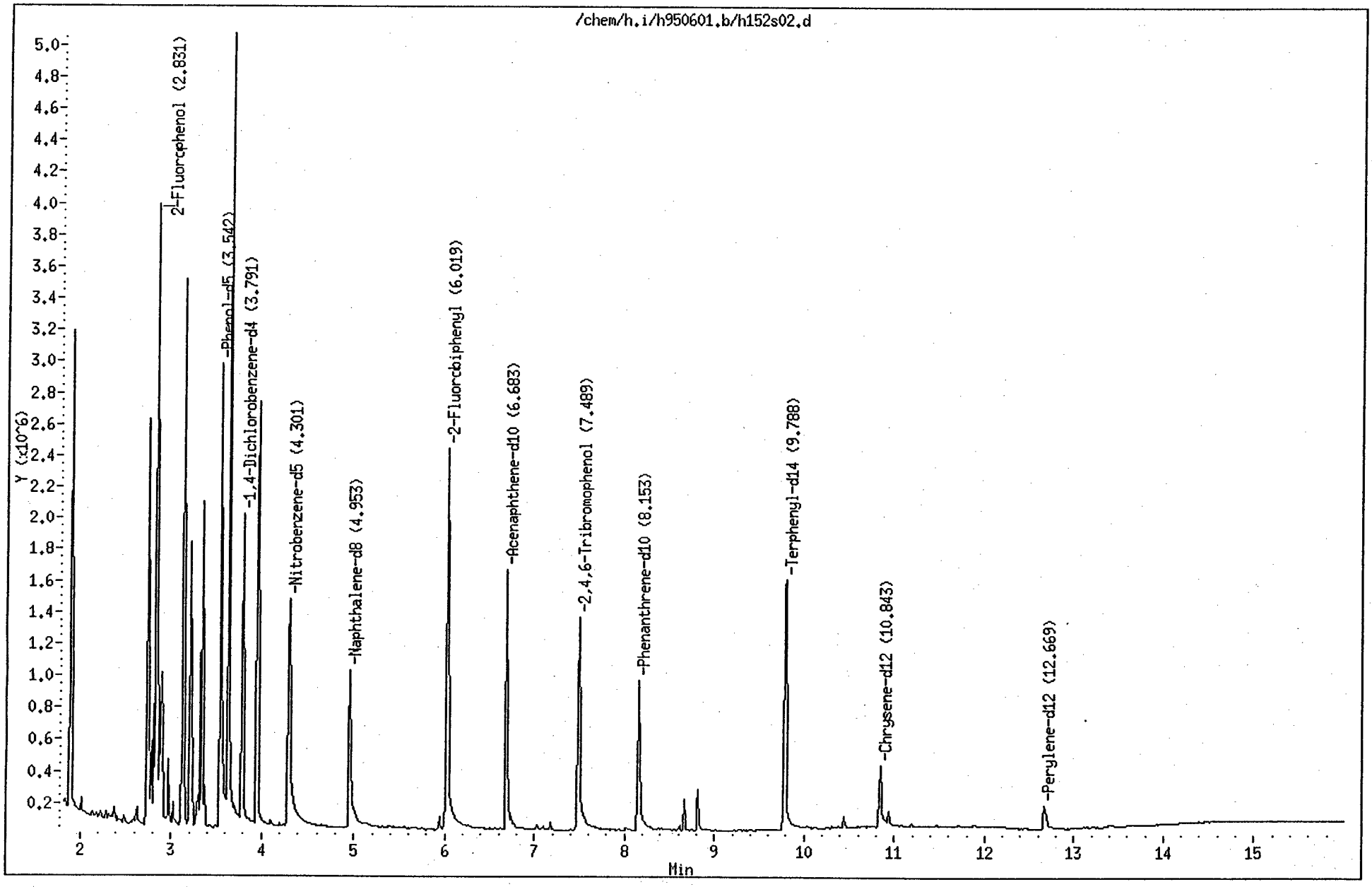
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.79	3.29	4.29	3.79	0.01
32 Naphthalene-d8	4.95	4.45	5.45	4.95	0.01
48 Acenaphthene-d10	6.68	6.18	7.18	6.68	0.01
65 Phenanthrene-d10	8.15	7.65	8.65	8.15	0.01
76 Chrysene-d12	10.84	10.34	11.34	10.84	0.00
83 Perylene-d12	12.68	12.18	13.18	12.67	-0.09

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.

Data File: /chem/h.i/h950601.b/h152s02.d
Date : 01-JUN-1995 14:04
Client ID:
Sample Info: 9505714-07B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950601.b/h152s02.d

Date : 01-JUN-1995 14:04

Client ID:

Instrument: h.i

Sample Info: 9505714-07B-8270W/1X

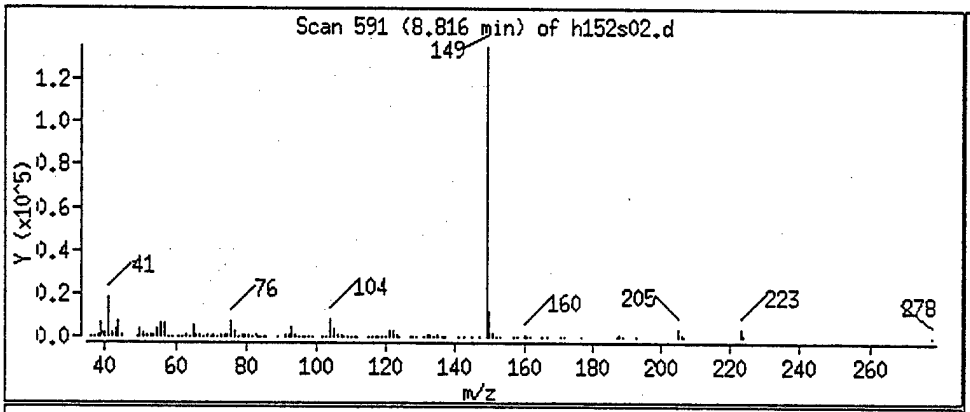
Volume Injected (uL): 2.0

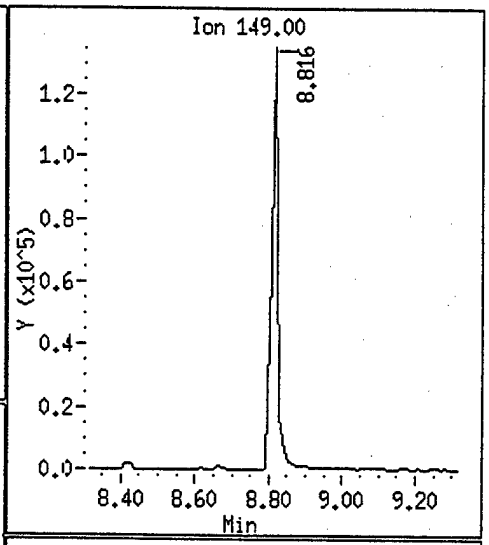
Operator: LH

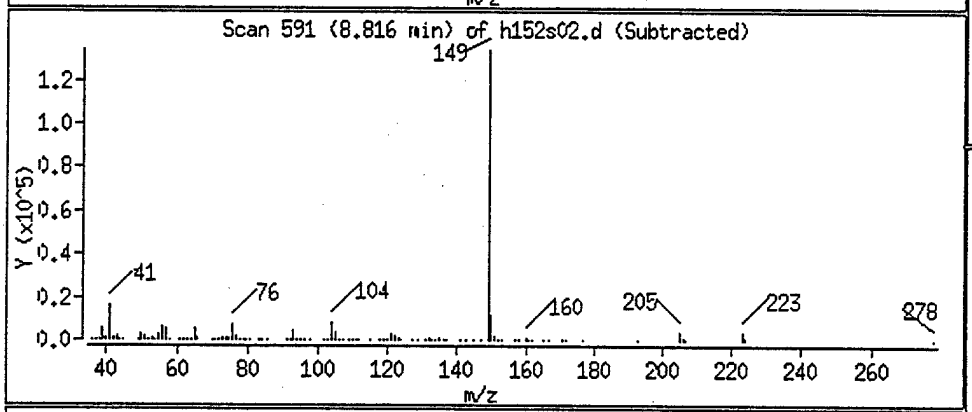
Column phase:

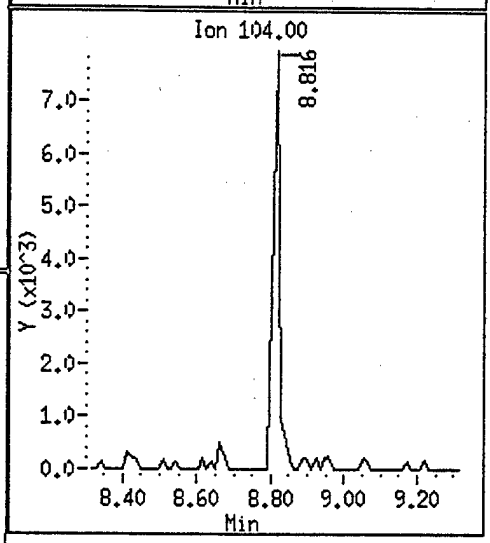
Column diameter: 0.25

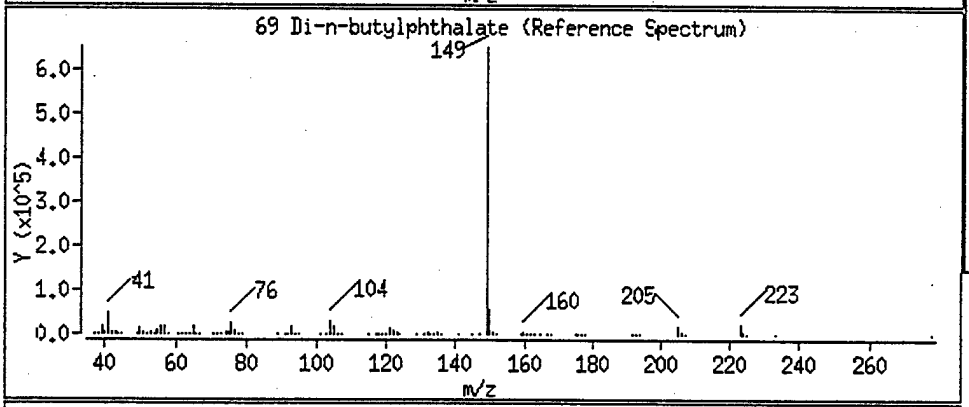
69 Di-n-butylphthalate

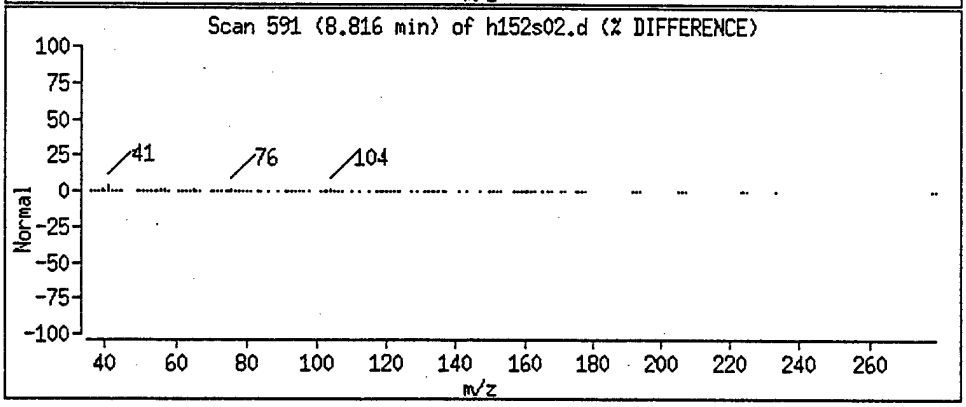












HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-08

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

DATE: 06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-002-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 17:00:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	1	1 P	µg/L
TOLUENE	ND	1 P	µg/L
ETHYLBENZENE	ND	1 P	µg/L
TOTAL XYLENE	ND	1 P	µg/L
TOTAL BTEX	1		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	109		
4-Bromofluorobenzene	101		
METHOD 5030/8020 ***			
Analyzed by: YN			
Date: 05/25/95			
Cadmium, Total	ND	0.005	mg/L
METHOD 6010 ***			
Analyzed by: RSC			
Date: 05/31/95			
Chromium, Total	0.011	0.002	mg/L
METHOD 7191 ***			
Analyzed by: WFL			
Date: 06/01/95			
Mercury, Total	ND	0.0004	mg/L
METHOD 7470 ***			
Analyzed by: PB			
Date: 06/02/95			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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DATE: 06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-002-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 17:00:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Nickel, Total METHOD 6010 *** Analyzed by: RSC Date: 05/31/95	0.03	0.02	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/22/95	05/22/95		
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: AM Date: 05/22/95	05/22/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/24/95	ND	0.004	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9505714-08

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-002-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 17:00:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	1	µg/L
Chloromethane	ND	1	µg/L
Vinyl chloride	ND	1	µg/L
Bromomethane	ND	1	µg/L
Chloroethane	ND	1	µg/L
Trichlorofluoromethane	ND	1	µg/L
1,1-Dichloroethene	ND	1	µg/L
Methylene chloride	ND	1	µg/L
Trans-1,2-Dichloroethene	ND	1	µg/L
1,1-Dichloroethane	ND	1	µg/L
Chloroform	ND	1	µg/L
1,1,1-Trichloroethane	ND	1	µg/L
Carbon tetrachloride	ND	1	µg/L
1,2-Dichloroethane	11	1	µg/L
2-Chloroethylvinyl ether	ND	1	µg/L
Trichloroethene	ND	1	µg/L
1,2-Dichloropropane	ND	1	µg/L
Bromodichloromethane	ND	1	µg/L
cis-1,3-Dichloropropene	ND	1	µg/L
trans-1,3-Dichloropropene	ND	1	µg/L
1,1,2-Trichloroethane	ND	1	µg/L
Tetrachloroethene	ND	1	µg/L
Dibromochloromethane	ND	1	µg/L
Chlorobenzene	ND	1	µg/L
Bromoform	ND	1	µg/L
1,1,2,2-Tetrachloroethane	ND	1	µg/L
1,3-Dichlorobenzene	ND	1	µg/L
1,4-Dichlorobenzene	ND	1	µg/L
1,2-Dichlorobenzene	ND	1	µg/L

METHOD: 8010, Halogenated Volatile Organics

(continued on next page)

HOUSTON LABORATORY
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PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-08

Operational Tech

SAMPLE ID: 025-002-MW-GW1

SURROGATES	**% RECOVERY**
1-Chloro-2-Fluorobenzene	89

ANALYZED BY: JZL DATE/TIME: 05/27/95 03:56:00
METHOD: 8010, Halogenated Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9505714-08

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathyrn Pritchett

06/08/95

PROJECT: DANGB/Duluth SI
SITE: Site 26 & 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-002-MW-GW1

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/18/95 17:00:00
DATE RECEIVED: 05/19/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-08

Operational Tech

SAMPLE ID: 025-002-MW-GW1

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl) Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd) Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	25	ug/L
2-Nitrophenol	ND	5	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	25	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	5	ug/L
Phenanthrene	ND	25	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	5	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505714-08

Operational Tech

SAMPLE ID: 025-002-MW-GW1

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	79	35	114
2-Fluorobiphenyl	50 ug/L	95	43	116
Terphenyl-d14	50 ug/L	76	33	141
Phenol-d5	75 ug/L	67	10	110
2-Fluorophenol	75 ug/L	65	21	110
2,4,6-Tribromophenol	75 ug/L	111	10	123

ANALYZED BY: LH DATE/TIME: 06/01/95 12:14:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Houston Labs

Data file : /chem/h.i/h950601.b/h152s03.d
Lab Smp Id:
Inj Date : 01-JUN-1995 12:14
Operator : LH Inst ID: h.i
Smp Info : 9505714-08B-8270W/1X
Misc Info : E142C1/J142B01/H152CC1
Comment :
Method : /chem/h.i/h950601.b/hclpw.m
Meth Date : 01-Jun-1995 11:17 jimmy Quant Type: ISTD
Cal Date : 01-JUN-1995 09:55 Cal File: h152cc1.d
Als bottle: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 11	1,4-Dichlorobenzene-d4	152.00	3.782	3.791	(1.000)	198342	40	
* 32	Naphthalene-d8	136.00	4.943	4.952	(1.000)	597230	40	
* 48	Acenaphthene-d10	164.00	6.686	6.683	(1.000)	239871	40	
* 65	Phenanthrene-d10	188.00	8.155	8.152	(1.000)	199834	40	
* 76	Chrysene-d12	240.00	10.834	10.843	(1.000)	96279	40	
* 83	Perylene-d12	264.00	12.671	12.680	(1.000)	52992	40	
$ 23	Nitrobenzene-d5	82.00	4.291	4.288	(0.868)	601815	79	40
$ 41	2-Fluorobiphenyl	172.00	6.022	6.019	(0.901)	718877	95	48
$ 72	Terphenyl-d14	244.00	9.779	9.788	(0.903)	210274	76	38
$ 4	Phenol-d5	99.00	3.533	3.530	(0.934)	1003265	100	50
$ 3	2-Fluorophenol	112.00	2.822	2.819	(0.746)	726589	98	49
$ 61	2,4,6-Tribromophenol	329.70	7.492	7.489	(0.919)	81598	170	83

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h152s03.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950601.b/hclpw.m
Misc Info: E142C1/J142B01/H152CC1

Calibration Date: 06/01/95
Calibration Time: 0955

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	201362	100681	402724	198342	-1.50
32 Naphthalene-d8	726976	363488	1453952	597230	-17.85
48 Acenaphthene-d10	300745	150372	601490	239871	-20.24
65 Phenanthrene-d10	319648	159824	639296	199834	-37.48
76 Chrysene-d12	175171	87586	350342	96279	-45.04
83 Perylene-d12	75734	37867	151468	52992	-30.03

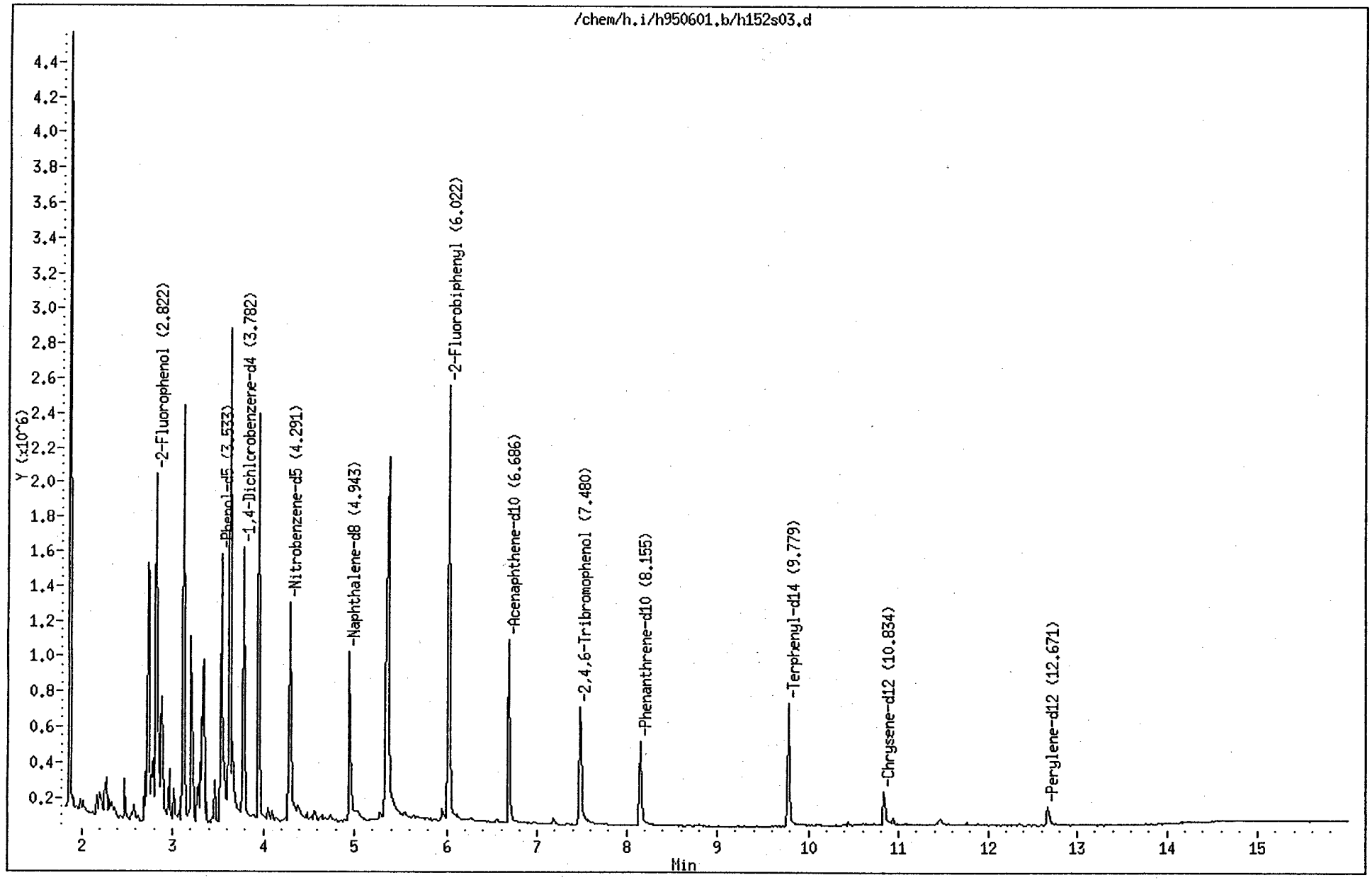
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.79	3.29	4.29	3.78	-0.23
32 Naphthalene-d8	4.95	4.45	5.45	4.94	-0.18
48 Acenaphthene-d10	6.68	6.18	7.18	6.69	0.04
65 Phenanthrene-d10	8.15	7.65	8.65	8.16	0.04
76 Chrysene-d12	10.84	10.34	11.34	10.83	-0.08
83 Perylene-d12	12.68	12.18	13.18	12.67	-0.07

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.

Data File: /chem/h.i/h950601.b/h152s03.d
Date : 01-JUN-1995 12:14
Client ID:
Sample Info: 9505714-08B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



e Version: 3.2 <16C20>
le Name : 0505714-08C Time : 05/25/95 18:54
le Number: SC ;W;1 Study : BTEXW;1
er : YN

ent : HP_J Channel : A A/D mV Range : 1000
Sampler : NONE
k/Vial : 0/0

ce Serial # : 1092573380 Data Acquisition Time: 05/25/95 18:36
Time : 0.00 min.
Time : 17.33 min.
g Rate : 2.0000 pts/sec

a File : l:\data\tchrom\btex\varj\J___279.raw
lt File : l:\data\tchrom\btex\varj\J___279.rst
trument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
ence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

lume : 2 ul Area Reject : 300.00
Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

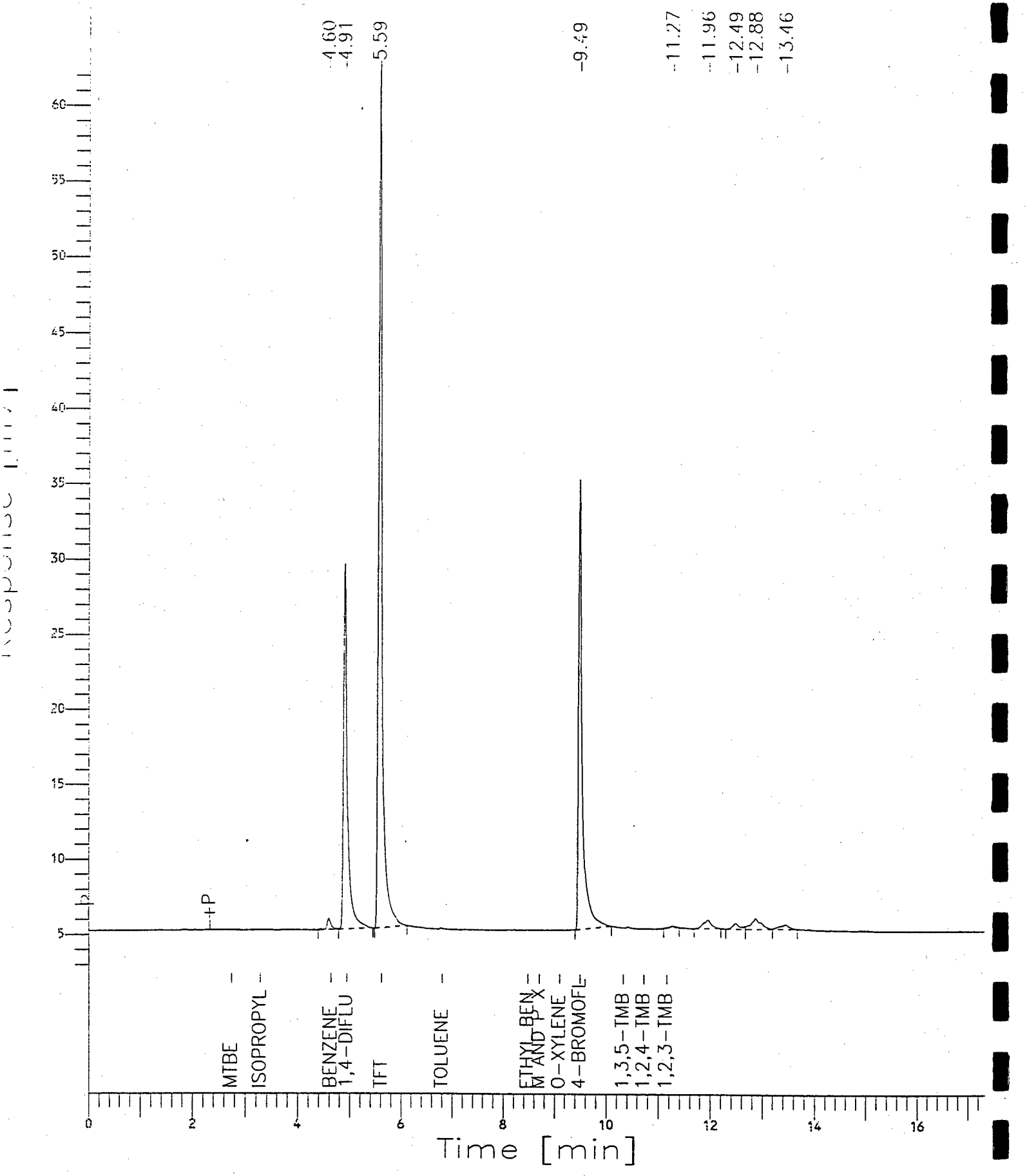
Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
4.603	3914.00	743.62	BB	2700.6460	0.0137	1.4493	Benzene	1.4493	-0.0384
4.914	128398.00	24457.98	BB	1176.9385	0.4484	109.0949	1,4-DIFLUOROBENZENE	109.0949	-0.0354
5.589	286341.25	57191.57	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0326
9.492	156050.50	30013.73	BB	1548.9191	0.5450	100.7480	4-BROMOFLUOROBENZENE	100.7480	-0.0096
1.268	962.50	121.29	BB	1518.4572	0.0034	0.6339	1,2,3-TMB	0.6339	0.1065
1.960	6341.50	569.35	BB	9.9999e5	----------	0.0063		0.0063	0.0000
12.494	3788.09	376.95	BV	1.0000e6	----------	0.0038		0.0038	0.0000
12.875	9776.17	721.69	VV	9.9999e5	----------	0.0098		0.0098	0.0000
3.460	4039.23	315.75	VB	1.0000e6	----------	0.0040		0.0040	0.0000
	599611.25	114511.91				211.9500		211.9500	-0.0096

Stored in ASCII File: l:\data\tchrom\btex\varj\J___279.TXO

Chromatogram

mple Name : 0505714-08C
leName : l:\data\tchrom\btex\varj\J___279.raw
thod : HP_J.ins
art Time : 0.00 min End Time : 17.33 min
ale Factor: 1 Plot Offset: 2 mV

Sample #: SC ;W;1 Page 1 of 1
Date : 05/25/95 18:54
Time of Injection: 05/25/95 18:36
Low Point : 2.40 mV High Point : 62.41 mV
Plot Scale: 60 mV



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95 - 05 - 714

Approved for release by:

M. Scott Sample

M. Scott Sample, Laboratory Director *Date:* 6/9/95

Karen Satterfield

Karen Satterfield, Project Manager *Date:* 6/8/95

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

CASE NARRATIVE

WORK ORDER NO.: 9505714

Southern Petroleum Laboratories (SPL) is pleased to present the results of laboratory analyses to Operational Technologies. The samples were received at our laboratory on May 18, 1995 at a temperature of 3 degrees Celsius. The following is a brief narrative of the laboratory analyses.

For method 8260 all compounds are reported at 1 ppb with the exception of bromomethane and chloroethane. The detection limits of these two compounds are the MDL.

If I can be of further assistance or answer any questions, please do not hesitate to contact me at (713)660-0901 ext 103.

Karen Satterfield
Project Manager

QUALITY CONTROL

DOCUMENTATION

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 505714 SAS No.: ____ SDG NO.: 505714

Matrix Spike - EPA Sample No.: 026-003-RB

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
1,1-Dichloroethene	50.0	0	50	100	61-145
Trichloroethene	50.0	0	50	100	71-120
Benzene	50.0	0	48	96	76-127
Toluene	50.0	0	49	98	76-125
Chlorobenzene	50.0	0	48	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
1,1-Dichloroethene	50.0	48	96	4	14	61-145
Trichloroethene	50.0	49	98	2	14	71-120
Benzene	50.0	47	94	2	11	76-127
Toluene	50.0	47	94	4	13	76-125
Chlorobenzene	50.0	47	94	2	13	75-130

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

* Values outside of QC Limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

FORM III VOA - 1

Idelis Williams, Q C Officer

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144b03.d
Lab Smp Id:
Inj Date : 24-MAY-95 22:00
Operator : JC Inst ID: l.i
Smp Info : BLANK-8260W/1X
Misc Info : L144W2//L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 14
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pentafluorobenzene	168.00	5.812	5.820	(1.000)	187139	250	
24	1,4-Difluorobenzene	114.00	6.926	6.925	(1.000)	241511	250	
[illegible]	Chlorobenzene-d5	117.00	11.098	11.106	(1.000)	192906	250	
[illegible]	1,4-Dichlorobenzene-d4	152.00	14.485	14.493	(1.000)	92545	250	
19	1,2-Dichloroethane-d4	102.00	5.990	5.990	(0.865)	18166	240	49
32	Toluene-d8	98.00	9.154	9.154	(1.322)	266347	250	51
[illegible]	Bromofluorobenzene	95.00	12.773	12.782	(1.844)	108967	240	49

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144b03.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2//L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

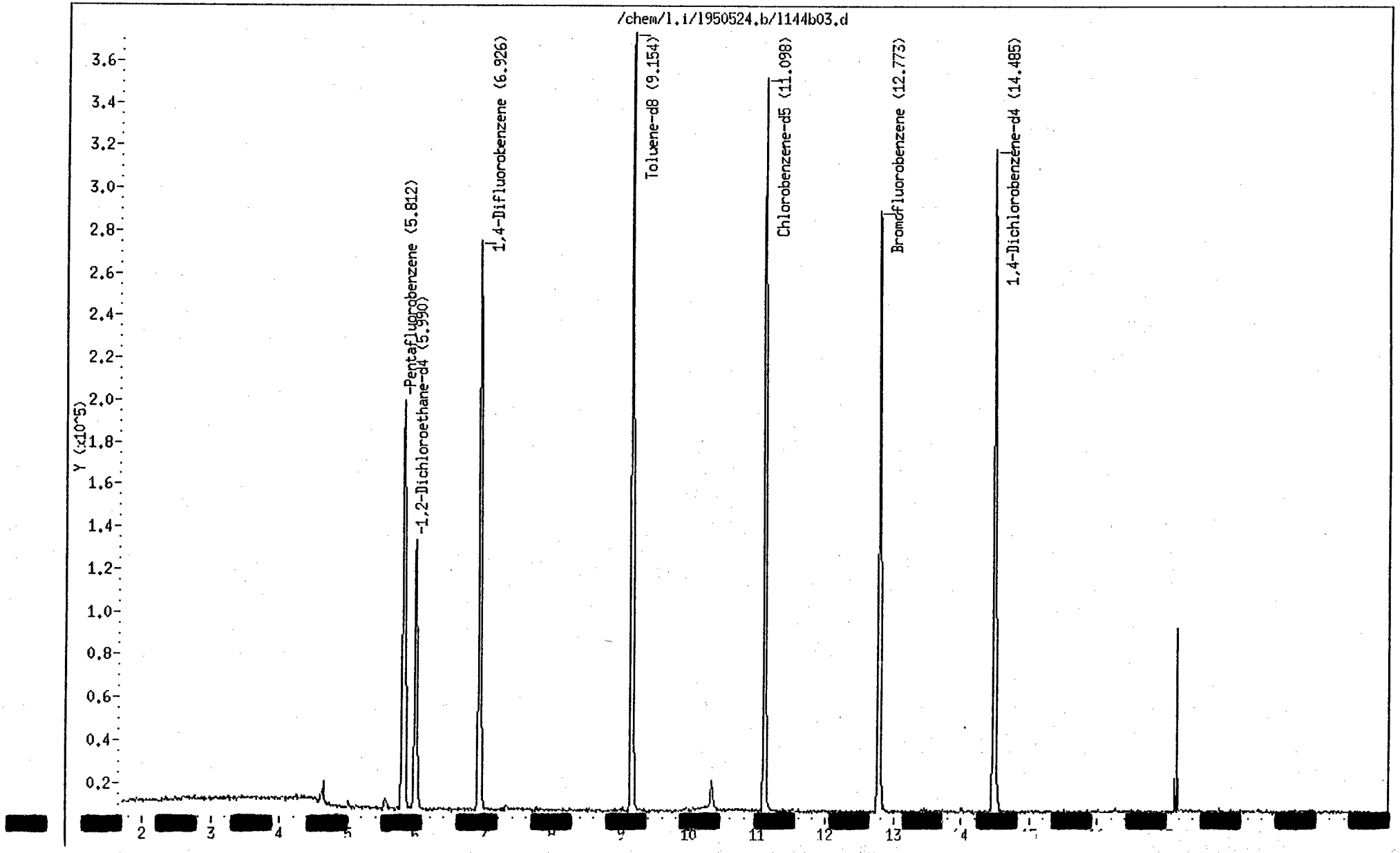
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	187139	1.67
24 1,4-Difluorobenzene	239653	119826	479306	241511	0.78
38 Chlorobenzene-d5	191926	95963	383852	192906	0.51
48 1,4-Dichlorobenzene-	101540	50770	203080	92545	-8.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.81	-0.15
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.01
38 Chlorobenzene-d5	11.11	10.61	11.61	11.10	-0.08
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.48	-0.06

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.

Data File: /chem/1.i/1950524.b/1144b03.d
Date : 24-MAY-95 22:00
Client ID:
Sample Info: BLANK-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i
Operator: JC
Column diameter: 0.25



Data File: /chem/1.i/1950524.b/1144bf4.d

Date : 24-MAY-95 19:22

Client ID:

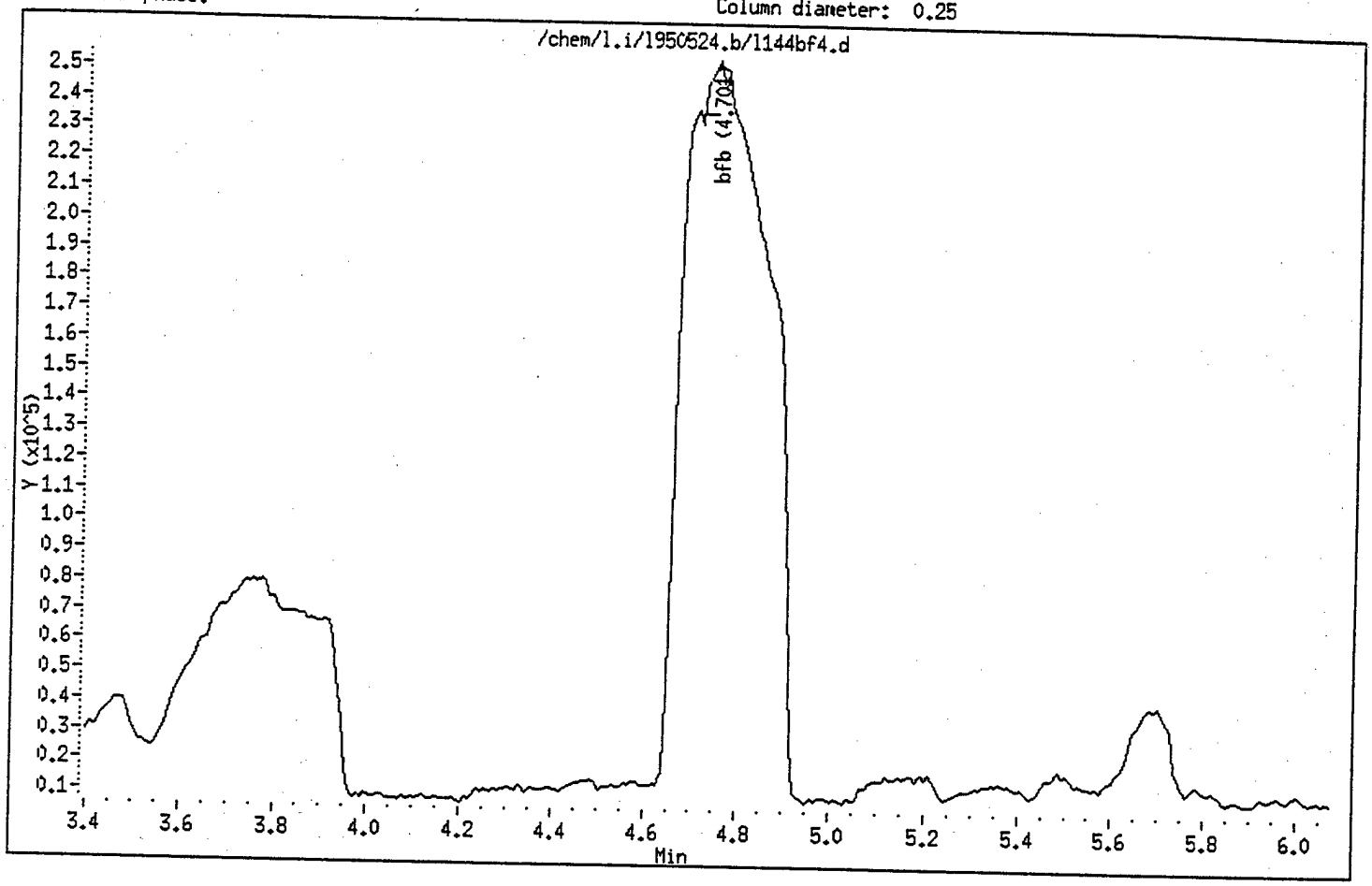
Sample Info: 50 NG BFB

Instrument: 1.i

Operator:

Column phase:

Column diameter: 0.25



Data File: /chem/1.i/1950524.b/1144bf4.d

Date : 24-MAY-95 19:22

Client ID:

Instrument: 1.i

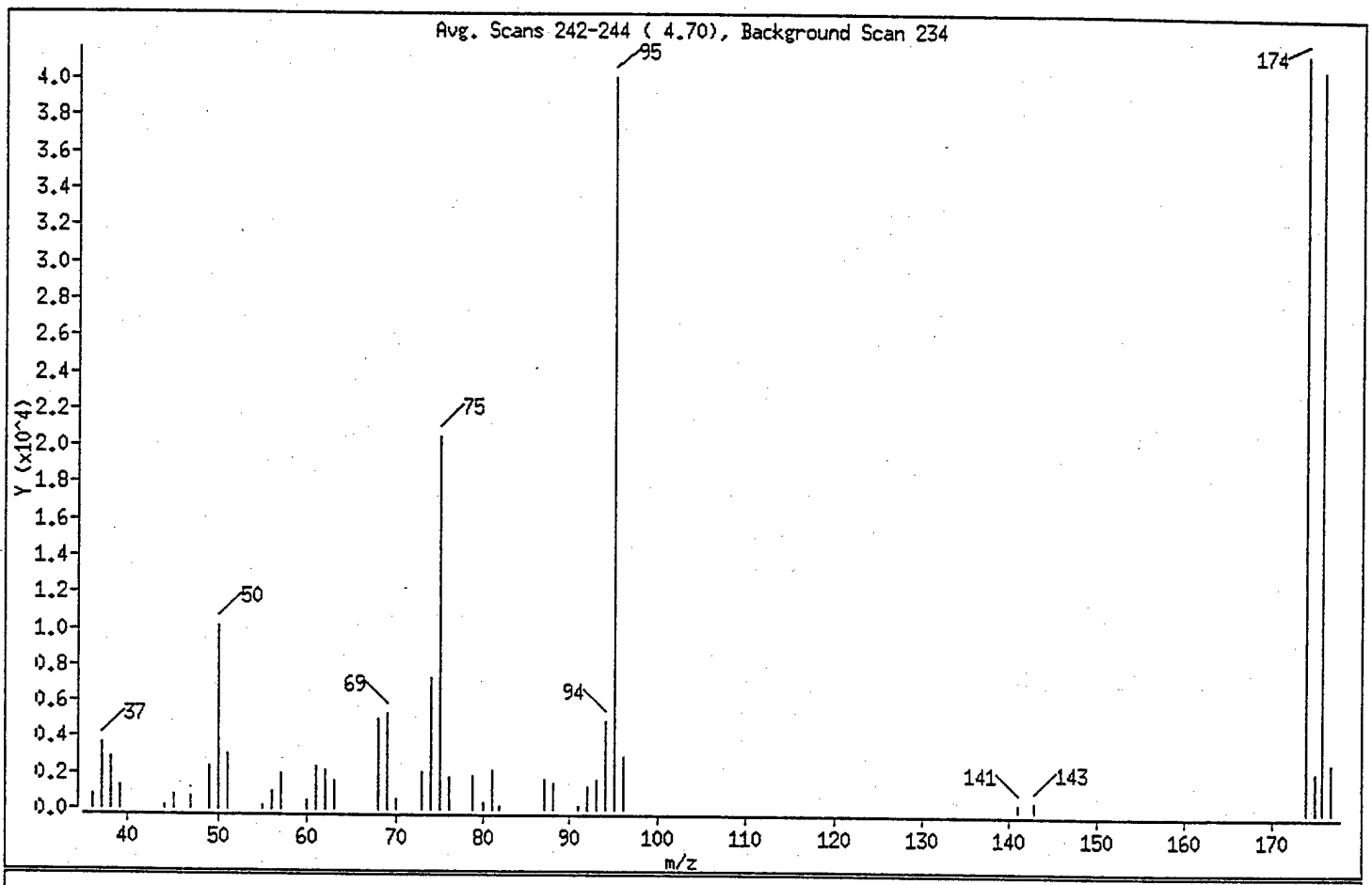
Sample Info: 50 NG BFB

Operator:

Column phase:

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	25.36
75	30.00 - 60.00% of mass 95	50.97
96	5.00 - 9.00% of mass 95	7.33
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	103.80
175	5.00 - 9.00% of mass 174	5.53 (5.33)
176	95.00 - 101.00% of mass 174	101.68 (97.95)
177	5.00 - 9.00% of mass 176	6.75 (6.64)

Data File: /chem/1.i/1950524.b/l144bf4.d
Date : 24-MAY-95 19:22
Client ID:
Sample Info: 50 NG BFB

Instrument: 1.i
Operator:
Column phase:
Column diameter: 0.25

Data File: l144bf4.d
Spectrum : Avg. Scans 242-244 (4.70), Background Scan 234
Largest m/z: 173.95
Number of peaks: 42

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.95	833	55.95	988	75.05	20472	94.05	4885
37.05	3604	57.05	1931	76.05	1763	95.05	40168
38.05	2825	60.05	539	78.85	1907	96.05	2946
39.05	1299	60.95	2342	79.95	379	140.95	362
44.00	156	62.05	2126	80.95	2124	142.85	521
45.00	805	63.05	1592	81.85	174	173.95	41696
47.00	675	68.00	5046	87.00	1679	175.05	2222
49.00	2346	69.00	5309	88.00	1495	175.95	40840
50.00	10186	70.00	553	90.90	150	176.95	2713
51.00	3067	73.00	2065	92.00	1271		
54.95	206	74.05	7252	93.00	1680		

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1995 15:28
End Cal Date : 22-MAR-1995 17:22
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/1.i/1950322.b/l8260w.m
Cal Date : 22-Mar-1995 17:49 jimmy
Curve Type : Average

Calibration File Names:
Level 1: /chem/1.i/1950322.b/1081iw1.d
Level 2: /chem/1.i/1950322.b/1081iw2.d
Level 3: /chem/1.i/1950322.b/1081iw3.d
Level 4: /chem/1.i/1950322.b/1081iw4.d
Level 5: /chem/1.i/1950322.b/1081iw5.d

	Compound	100 Level 1	250 Level 2	500 Level 3	750 Level 4	1000 Level 5	RRF	% RSD
	1 Chloromethane	0.76177	0.72128	0.69719	0.67441	0.67004	0.70494	5.358
	3 Vinyl Chloride	0.59622	0.55286	0.52514	0.49130	0.46295	0.52569	9.899
	4 Bromomethane	0.47697	0.43193	0.43699	0.42903	0.41859	0.43870	5.112
	5 Chloroethane	0.34545	0.34162	0.33705	0.32975	0.32280	0.33533	2.722
	6 Trichlorofluoromethane	0.47357	0.52156	0.55996	0.56981	0.58923	0.54283	8.454
	8 1,1-Dichloroethene	0.40958	0.41559	0.41335	0.40892	0.41184	0.41186	0.666
	9 Methylene Chloride	0.48322	0.47544	0.47829	0.47530	0.47249	0.47695	0.852
	11 trans-1,2-Dichloroethene	0.48164	0.47961	0.47852	0.48889	0.48199	0.48213	0.838
	12 1,1-Dichloroethane	1.03799	1.03113	1.03061	1.02631	1.01669	1.02855	0.762
M	13 1,2-Dichloroethene (total)	0.49724	0.49844	0.49998	0.50487	0.49959	0.50002	0.582
	16 cis-1,2-Dichloroethene	0.51285	0.51727	0.52145	0.52084	0.51719	0.51792	0.667
	17 Bromochloromethane	0.25991	0.26488	0.26035	0.26137	0.25642	0.26059	1.165
	18 Chloroform	0.96113	0.94872	0.95368	0.93858	0.93368	0.94716	1.175
	20 1,1,1-Trichloroethane	0.52217	0.51445	0.51180	0.50409	0.50647	0.51180	1.390
	21 1,2-Dichloroethane	0.83286	0.83585	0.83062	0.82841	0.81300	0.82815	1.075
	22 Benzene	1.49126	1.48025	1.45491	1.43053	1.44620	1.46063	1.702
	23 Carbon Tetrachloride	0.39652	0.40203	0.40418	0.40450	0.41347	0.40414	1.514
	25 1,2-Dichloropropane	0.41738	0.42173	0.42179	0.40862	0.41563	0.41703	1.299
	26 Trichloroethene	0.34851	0.33945	0.34285	0.34399	0.33896	0.34275	1.129
	27 Bromodichloromethane	0.48781	0.49428	0.49366	0.48939	0.50181	0.49339	1.105
	30 cis-1,3-Dichloropropene	0.55709	0.57567	0.57860	0.57148	0.58845	0.57446	2.001
	31 trans-1,3-Dichloropropene	0.51163	0.53559	0.54539	0.54026	0.54957	0.53649	2.770
	33 Toluene	0.80520	0.81364	0.81320	0.80581	0.81654	0.81088	0.626
	34 1,1,2-Trichloroethane	0.29439	0.29531	0.28996	0.28548	0.28747	0.29052	1.470
	36 Dibromochloromethane	0.38175	0.39620	0.40295	0.41275	0.41561	0.40185	3.397
	37 Tetrachloroethene	0.36483	0.36231	0.35299	0.35869	0.35843	0.35945	1.248
	39 Chlorobenzene	1.03103	1.03167	1.03273	1.03233	1.00728	1.02701	1.076

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1995 15:28
End Cal Date : 22-MAR-1995 17:22
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/1.i/1950322.b/18260w.m
Cal Date : 22-Mar-1995 17:49 jimmy
Curve Type : Average

	Compound	100 Level 1	250 Level 2	500 Level 3	750 Level 4	1000 Level 5	RRF	% RSD
M	40 Xylene (Total)	0.54004	0.66417	0.66867	0.66384	0.66286	0.65992	1.718
	41 Ethylbenzene	0.52587	0.52654	0.54030	0.54255	0.54397	0.53585	1.661
	42 m,p-Xylene(s)	0.64283	0.66699	0.67089	0.66475	0.66325	0.66174	1.656
	43 Bromoform	0.26128	0.28189	0.29823	0.30629	0.31234	0.29201	7.065
	44 Styrene	1.01955	1.09351	1.13113	1.13805	1.13989	1.10443	4.622
	45 o-Xylene	0.63444	0.65854	0.66422	0.66203	0.66207	0.65626	1.884
	46 1,1,2,2-Tetrachloroethane	0.51501	0.53748	0.54162	0.51224	0.53821	0.52891	2.661
	60 Dichlorodifluoromethane	0.67018	0.64801	0.65402	0.66131	0.66783	0.66027	1.408
	74 2,2-Dichloropropane	0.58486	0.59050	0.59475	0.57859	0.57118	0.58398	1.606
	75 1,2,3-Trichloropropane	0.48423	0.49631	0.49378	0.49657	0.49075	0.49233	1.036
	78 1,1,1,2-Tetrachloroethane	0.35627	0.35959	0.35863	0.36132	0.36443	0.36005	0.848
	80 2-Chlorotoluene	3.74958	3.91323	3.98445	4.04541	3.99748	3.93803	2.933
	81 4-Chlorotoluene	1.47743	1.52373	1.56935	1.58954	1.57421	1.54685	2.968
	84 1,2-Dibromoethane	0.34429	0.34052	0.33916	0.33602	0.34448	0.34089	1.051
	87 Isopropylbenzene	2.89349	2.90827	2.91253	2.96153	2.91903	2.91897	0.876
	88 N-Propylbenzene	6.56891	6.49736	6.45726	6.61133	6.43760	6.51449	1.134
	89 1,3,5-Trimethylbenzene	2.52281	2.52915	2.55901	2.60760	2.55685	2.55508	1.311
	90 1,2,4-Trimethylbenzene	2.58456	2.60031	2.62575	2.63909	2.57824	2.60559	1.006
	91 tert-Butylbenzene	2.38278	2.38451	2.38024	2.43369	2.39398	2.39504	0.928
	92 sec-Butylbenzene	2.58456	2.60031	2.62575	2.63909	2.57824	2.60559	1.006
	93 p-Isopropyltoluene	2.49674	2.52419	2.57626	2.62662	2.59611	2.56398	2.065
	94 n-Butylbenzene	2.66372	2.68132	2.78065	2.84023	2.81168	2.75552	2.963
	95 1,3-Dichlorobenzene	1.59262	1.55169	1.57973	1.59976	1.56298	1.57736	1.270
	96 1,4-Dichlorobenzene	1.62724	1.59414	1.61184	1.63353	1.61140	1.61563	0.953
	97 1,2-Dichlorobenzene	1.52318	1.48869	1.52047	1.54229	1.50668	1.51626	1.317
	98 1,2,4-Trichlorobenzene	0.85036	0.88682	0.95990	1.00768	0.99019	0.93899	7.214
	106 1,3-Dichloropropane	0.80726	0.80855	0.80763	0.81172	0.80246	0.80752	0.412
	108 1,2-Dibromo-3-Chloropropane	0.10181	0.09750	0.10464	0.10435	0.10676	0.10305	3.492
	112 Dibromomethane	0.36427	0.36874	0.37027	0.37349	0.36792	0.36894	0.913
	114 Bromobenzene	0.91993	0.89187	0.88944	0.90537	0.89741	0.90080	1.368
	115 1,1-Dichloropropene	0.68647	0.70097	0.70834	0.72235	0.70550	0.70472	1.838
	116 Hexachlorobutadiene	0.45102	0.44617	0.46800	0.47735	0.46702	0.46191	2.798
	117 Naphthalene	1.67144	1.88063	2.06328	2.19418	2.20563	2.00303	11.334
	118 1,2,3-Trichlorobenzene	0.91339	0.98168	1.05912	1.11328	1.10767	1.03503	8.314

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1995 15:28
End Cal Date : 22-MAR-1995 17:22
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/1.i/1950322.b/18260w.m
Cal Date : 22-Mar-1995 17:49 jimmy
Curve Type : Average

	Compound	100 Level 1	250 Level 2	500 Level 3	750 Level 4	1000 Level 5	RRF	% RSD
	19 1.2-Dichloroethane-d4	0.07637	0.08118	0.08097	0.07816	0.07731	0.07880	2.758
S	32 Toluene-d8	1.06322	1.10086	1.11380	1.08328	1.09473	1.09118	1.752
S	47 Bromofluorobenzene	0.47273	0.47023	0.48760	0.48048	0.48155	0.47852	1.469

SPL Labs

Volatiles by 624/8240

ta file : /chem/l.i/1950322.b/l081iw1.d
b Smp Id:
j Date : 22-MAR-1995 15:28
erator : JC Inst ID: l.i
p Info : 20 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/l.i/1950322.b/l8260w.m
th Date : 22-Mar-1995 17:50 jimmy Quant Type: ISTD
l Date : 22-MAR-1995 15:57 Cal File: l081iw2.d
s bottle: 2 Calibration Sample, Level: 1
l Factor: 1.000
tegrator: HP RTE Compound Sublist: 8260.sub
rget Version: 3.10

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
7 Bromochloromethane	128.00	5.234	5.234	(0.898)	17049	100	100
4 Bromomethane	94.00	2.122	2.122	(0.364)	31287	100	110
5 Chloroethane	64.00	2.193	2.193	(0.376)	22660	100	100
3 Chloroform	83.00	5.243	5.243	(0.899)	63045	100	100
1 Chloromethane	50.00	1.774	1.774	(0.304)	49968	100	110
0 Dichlorodifluoromethane	85.00	1.694	1.694	(0.290)	43960	100	100
2 1,1-Dichloroethane	63.00	4.173	4.173	(0.716)	68087	100	100
8 1,1-Dichloroethene	96.00	3.005	3.005	(0.515)	26866	100	99
6 cis-1,2-Dichloroethene	96.00	4.967	4.967	(0.852)	33640	100	99
trans-1,2-Dichloroethene	96.00	3.834	3.834	(0.657)	31593	100	100
3 1,2-Dichloroethene (total)	96.00				65233	200	200
4 2,2-Dichloropropane	77.00	5.154	5.154	(0.884)	38364	100	100
Methylene Chloride	84.00	3.246	3.246	(0.557)	31697	100	100
1,1,1-Trichloroethane	97.00	6.028	6.028	(0.869)	46960	100	100
Trichlorofluoromethane	100.90	2.550	2.550	(0.437)	31064	100	87
Vinyl Chloride	62.00	1.881	1.881	(0.323)	39109	100	110
Benzene	78.00	6.474	6.474	(0.933)	134113	100	100
Bromodichloromethane	83.00	7.687	7.687	(1.108)	43870	100	99
Carbon Tetrachloride	117.00	6.501	6.501	(0.937)	35660	100	98
1,2-Dibromoethane	107.00	10.228	10.228	(1.474)	30963	100	100
Dibromomethane	93.00	7.553	7.553	(1.295)	23894	100	99
1,2-Dichloroethane	62.00	6.117	6.117	(1.049)	54631	100	100
1,2-Dichloropropane	63.00	7.464	7.464	(1.076)	37536	100	100
1,1-Dichloropropene	75.00	6.313	6.313	(1.083)	45029	100	97
cis-1,3-Dichloropropene	75.00	8.543	8.543	(1.231)	50100	100	97
trans-1,3-Dichloropropene	75.00	9.167	9.167	(1.321)	46012	100	95
Toluene	92.00	9.256	9.256	(1.334)	72414	100	99
1,1,2-Trichloroethane	83.00	9.336	9.336	(1.346)	26475	100	100
Trichloroethene	130.00	7.490	7.490	(1.080)	31342	100	100

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
romoform	173.00	12.029	12.029	(1.084)	18963	100	89
ibromochloromethane	129.00	9.960	9.960	(0.897)	27706	100	95
Chlorobenzene	112.00	11.146	11.146	(1.004)	74829	100	100
1,3-Dichloropropane	76.00	9.657	9.657	(1.656)	52952	100	100
hylbenzene	106.00	11.450	11.450	(1.031)	38166	100	98
yrene	104.00	12.083	12.083	(1.088)	73996	100	92
1,1,1,2-Tetrachloroethane	131.00	11.200	11.200	(1.009)	25857	100	99
etrachloroethene	164.00	10.308	10.308	(0.928)	26478	100	100
-Xylene	106.00	12.136	12.136	(1.093)	46046	100	97
m,p-Xylene(s)	106.00	11.610	11.610	(1.046)	93310	200	190
Xylene (Total)	106.00				139356	300	290
romobenzene	156.00	12.983	12.983	(0.897)	34444	100	100
-Butylbenzene	91.00	15.213	15.213	(1.050)	99735	100	97
sec-Butylbenzene	105.00	14.107	14.107	(0.974)	96771	100	99
tert-Butylbenzene	119.00	14.089	14.089	(0.973)	89216	100	99
Chlorotoluene	91.00	13.340	13.340	(2.288)	245953	100	95
Chlorotoluene	91.00	13.447	13.447	(2.306)	96912	100	96
1,2-Dibromo-3-Chloropropane	75.00	15.784	15.784	(2.707)	6678	100	99
2-Dichlorobenzene	146.00	14.972	14.972	(1.034)	57031	100	100
3-Dichlorobenzene	146.00	14.401	14.401	(0.994)	59631	100	100
4-Dichlorobenzene	146.00	14.517	14.517	(1.002)	60927	100	100
Hexachlorobutadiene	225.00	17.736	17.736	(1.225)	16887	100	98
opropylbenzene	105.00	12.752	12.752	(0.881)	108338	100	99
Isopropyltoluene	119.00	14.642	14.642	(1.011)	93483	100	97
Naphthalene	128.00	17.353	17.353	(1.198)	62582	100	83
N-Propylbenzene	91.00	13.340	13.340	(0.921)	245953	100	100
1,2,2-Tetrachloroethane	83.00	12.484	12.484	(1.125)	37378	100	97
2,3-Trichlorobenzene	180.00	17.184	17.184	(1.187)	34199	100	88
1,2,4-Trichlorobenzene	180.00	17.790	17.790	(1.228)	31839	100	90
1,2,3-Trichloropropane	75.00	12.645	12.645	(2.168)	31763	100	98
2,4-Trimethylbenzene	105.00	14.107	14.107	(0.974)	96771	100	99
3,5-Trimethylbenzene	105.00	13.599	13.599	(0.939)	94459	100	99
Pentafluorobenzene	168.00	5.832	5.832	(1.000)	163987	250	
4-Difluorobenzene	114.00	6.937	6.937	(1.000)	224831	250	
lorobenzene-d5	117.00	11.102	11.102	(1.000)	181443	250	
1,4-Dichlorobenzene-d4	152.00	14.482	14.482	(1.000)	93605	250	
1,2-Dichloroethane-d4	102.00	6.001	6.001	(0.865)	6868	100	97
luene-d8	98.00	9.158	9.158	(1.320)	95618	100	97
omofluorobenzene	95.00	12.769	12.769	(1.841)	42514	100	99

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

strument ID: l.i
o File ID: 1081iw1.d
o Smp Id:
alysis Type: VOA
ant Type: ISTD
erator: JC
thod File: /chem/l.i/1950322.b/18260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	163987	0.28
4 1,4-Difluorobenzene	224833	112416	449666	224831	0.00
8 Chlorobenzene-d5	182201	91100	364402	181443	-0.42
8 1,4-Dichlorobenzene-	98492	49246	196984	93605	-4.96

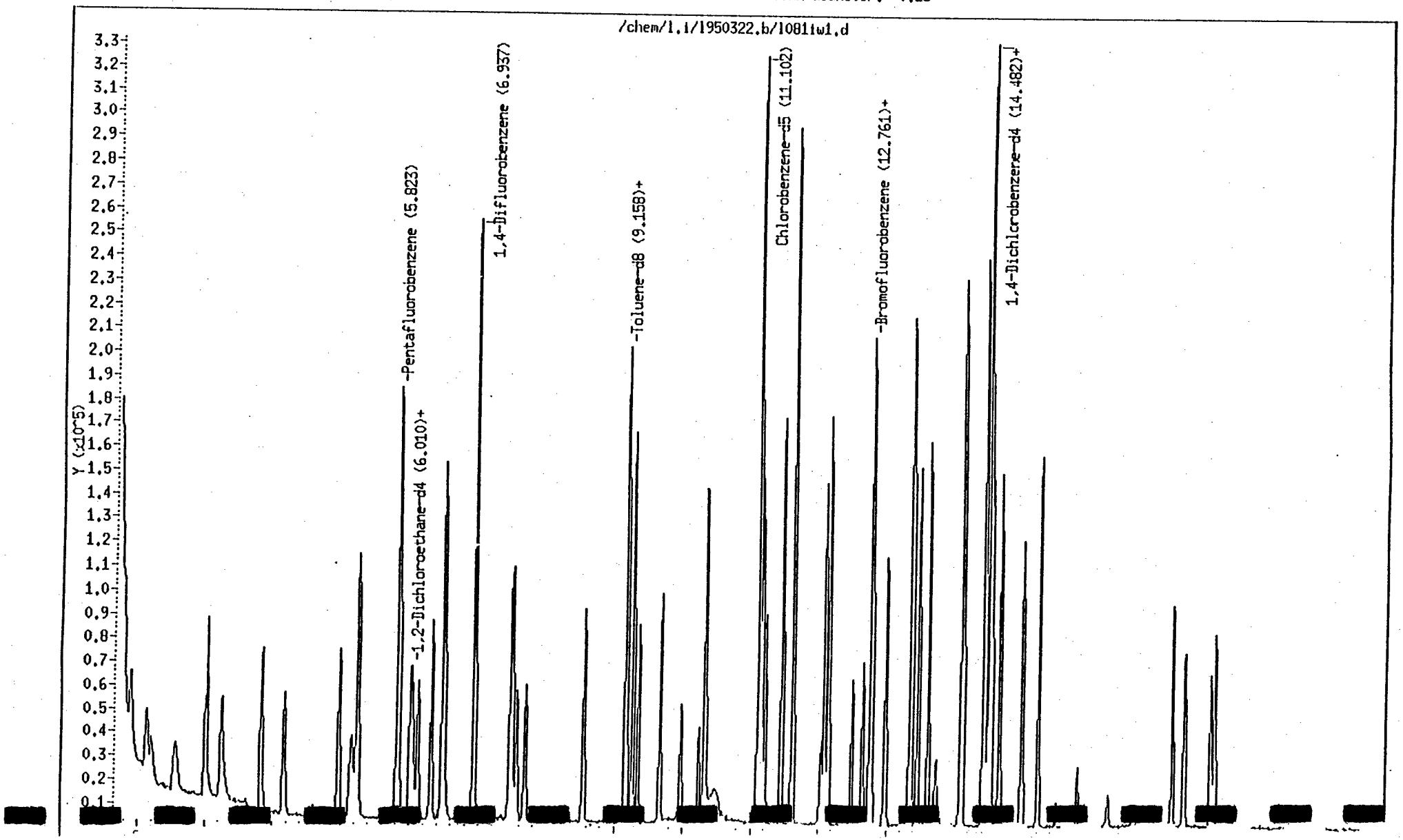
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.16
4 1,4-Difluorobenzene	6.95	6.45	7.45	6.94	-0.13
8 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00
8 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	0.00

A UPPER LIMIT = +100% of internal standard area.
A LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/1081lw1.d
Date : 22-MAR-1995 15:28
Client ID:
Sample Info: 20 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1

Operator: JC
Column diameter: 0.25



ta File: /chem/l.i/1950322.b/l081iw2.d
port Date: 22-Mar-1995 17:51

SPL Labs

Volatiles by 624/8240

ta file : /chem/l.i/1950322.b/l081iw2.d
o Smp Id:
j Date : 22-MAR-1995 15:57
erator : JC
o Info : 50 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/l.i/1950322.b/18260w.m
th Date : 22-Mar-1995 17:50 jimmy
l Date : 22-MAR-1995 15:57
s bottle: 3
Factor: 1.000
tegrator: HP RTE
rget Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l081iw2.d
Calibration Sample, Level: 2

Compound Sublist: 8260.sub

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromochloromethane	128.00	5.243	5.243	(0.898)	43316	250	250
Bromomethane	94.00	2.122	2.122	(0.363)	70634	250	250
Chloroethane	64.00	2.194	2.194	(0.376)	55866	250	250
Chloroform	83.00	5.252	5.252	(0.899)	155146	250	250
Chloromethane	50.00	1.783	1.783	(0.305)	117953	250	260
Dichlorodifluoromethane	85.00	1.685	1.685	(0.289)	105970	250	240
1,1-Dichloroethane	63.00	4.182	4.182	(0.716)	168622	250	250
1,1-Dichloroethene	96.00	3.014	3.014	(0.516)	67963	250	250
cis-1,2-Dichloroethene	96.00	4.985	4.985	(0.853)	84590	250	250
trans-1,2-Dichloroethene	96.00	3.843	3.843	(0.658)	78431	250	250
1,2-Dichloroethene (total)	96.00				163021	500	500
2,2-Dichloropropane	77.00	5.163	5.163	(0.884)	96565	250	250
Methylene Chloride	84.00	3.246	3.246	(0.556)	77749	250	250
1,1,1-Trichloroethane	97.00	6.037	6.037	(0.869)	115665	250	250
Trichlorofluoromethane	100.90	2.559	2.559	(0.438)	85291	250	240
Vinyl Chloride	62.00	1.890	1.890	(0.324)	90410	250	260
Benzene	78.00	6.483	6.483	(0.933)	332809	250	250
Bromodichloromethane	83.00	7.687	7.687	(1.107)	111131	250	250
Carbon Tetrachloride	117.00	6.510	6.510	(0.937)	90390	250	250
1,2-Dibromoethane	107.00	10.228	10.228	(1.472)	76560	250	250
Dibromomethane	93.00	7.562	7.562	(1.295)	60301	250	250
1,2-Dichloroethane	62.00	6.126	6.126	(1.049)	136689	250	250
1,2-Dichloropropane	63.00	7.464	7.464	(1.074)	94818	250	250
1,1-Dichloropropene	75.00	6.322	6.322	(1.082)	114631	250	250
cis-1,3-Dichloropropene	75.00	8.552	8.552	(1.231)	129654	250	250
trans-1,3-Dichloropropene	75.00	9.176	9.176	(1.321)	120418	250	250
Toluene	92.00	9.256	9.256	(1.332)	182933	250	250
1,1,2-Trichloroethane	83.00	9.345	9.345	(1.345)	66396	250	250
Trichloroethene	130.00	7.499	7.499	(1.080)	76320	250	250

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
romoform	173.00	12.038	12.038	(1.084)	51361	250	240
ibromochloromethane	129.00	9.970	9.970	(0.898)	72188	250	250
9 Chlorobenzene	112.00	11.147	11.147	(1.004)	187971	250	250
,3-Dichloropropane	76.00	9.666	9.666	(1.655)	132223	250	250
thylbenzene	106.00	11.450	11.450	(1.031)	95937	250	240
4 Styrene	104.00	12.083	12.083	(1.088)	199238	250	250
78 1,1,1,2-Tetrachloroethane	131.00	11.209	11.209	(1.010)	65517	250	250
etrachloroethene	164.00	10.308	10.308	(0.928)	66014	250	250
-Xylene	106.00	12.136	12.136	(1.093)	119986	250	250
2 m,p-Xylene(s)	106.00	11.619	11.619	(1.047)	243052	500	500
0 Xylene (Total)	106.00				363038	750	750
romobenzene	156.00	12.984	12.984	(0.897)	87842	250	250
-Butylbenzene	91.00	15.213	15.213	(1.050)	264089	250	240
2 sec-Butylbenzene	105.00	14.107	14.107	(0.974)	256110	250	250
ert-Butylbenzene	119.00	14.089	14.089	(0.973)	234855	250	250
-Chlorotoluene	91.00	13.340	13.340	(2.284)	639938	250	250
-Chlorotoluene	91.00	13.447	13.447	(2.302)	249179	250	250
8 1,2-Dibromo-3-Chloropropane	75.00	15.784	15.784	(2.702)	15945	250	240
,2-Dichlorobenzene	146.00	14.972	14.972	(1.034)	146624	250	240
,3-Dichlorobenzene	146.00	14.402	14.402	(0.994)	152829	250	240
5 1,4-Dichlorobenzene	146.00	14.517	14.517	(1.002)	157010	250	250
6 Hexachlorobutadiene	225.00	17.737	17.737	(1.225)	43944	250	240
sopropylbenzene	105.00	12.761	12.761	(0.881)	286441	250	250
-Isopropyltoluene	119.00	14.642	14.642	(1.011)	248613	250	250
7 Naphthalene	128.00	17.353	17.353	(1.198)	185227	250	230
8 N-Propylbenzene	91.00	13.340	13.340	(0.921)	639938	250	250
,1,2,2-Tetrachloroethane	83.00	12.484	12.484	(1.124)	97930	250	250
,2,3-Trichlorobenzene	180.00	17.184	17.184	(1.187)	96688	250	240
8 1,2,4-Trichlorobenzene	180.00	17.790	17.790	(1.228)	87345	250	240
,2,3-Trichloropropane	75.00	12.645	12.645	(2.165)	81163	250	250
,2,4-Trimethylbenzene	105.00	14.107	14.107	(0.974)	256110	250	250
1,3,5-Trimethylbenzene	105.00	13.599	13.599	(0.939)	249101	250	250
2 Pentafluorobenzene	168.00	5.841	5.841	(1.000)	163532	250	
,4-Difluorobenzene	114.00	6.947	6.947	(1.000)	224833	250	
lorobenzene-d5	117.00	11.102	11.102	(1.000)	182201	250	
1,4-Dichlorobenzene-d4	152.00	14.482	14.482	(1.000)	98492	250	
1,2-Dichloroethane-d4	102.00	6.010	6.010	(0.865)	18251	250	260
oluene-d8	98.00	9.158	9.158	(1.318)	247509	250	250
romofluorobenzene	95.00	12.779	12.779	(1.840)	105724	250	240

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

strument ID: l.i
b File ID: l081iw2.d
b Smp Id:
alysis Type: VOA
ant Type: ISTD
erator: JC
thod File: /chem/l.i/l950322.b/l8260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	163532	0.00
24 1,4-Difluorobenzene	224833	112416	449666	224833	0.00
38 Chlorobenzene-d5	182201	91100	364402	182201	0.00
48 1,4-Dichlorobenzene-	98492	49246	196984	98492	0.00

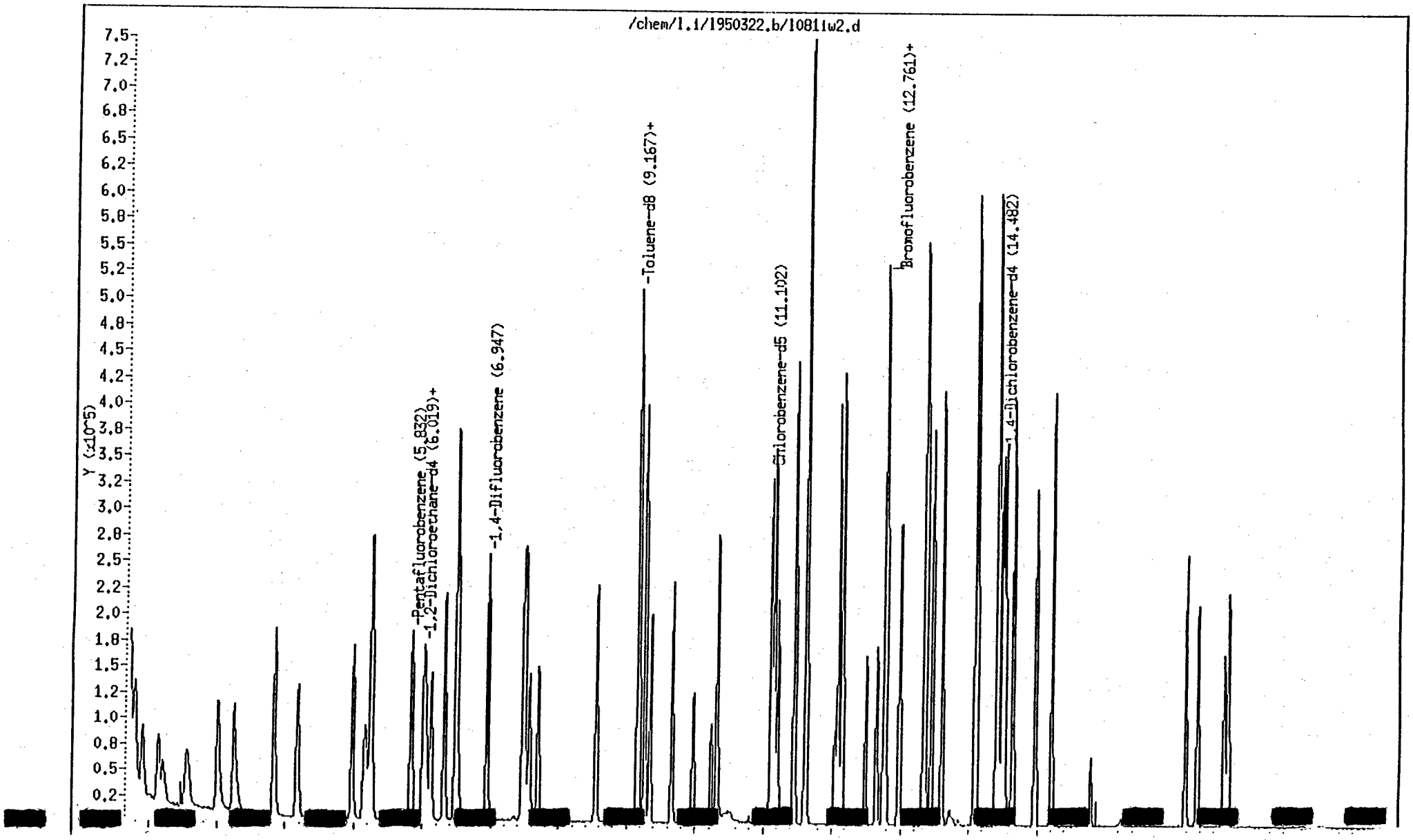
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.84	0.00
24 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	0.00
38 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00
48 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	0.00

LA UPPER LIMIT = +100% of internal standard area.
LA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/10811w2.d
Date : 22-MAR-1995 15:57
Client ID:
Sample Info: 50 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1

Operator: JC
Column diameter: 0.25



ta File: /chem/l.i/1950322.b/l081iw3.d
port Date: 22-Mar-1995 17:51

SPL Labs

Volatiles by 624/8240

ta file : /chem/l.i/1950322.b/l081iw3.d
b Smp Id:
j Date : 22-MAR-1995 16:25
erator : JC
p Info : 100 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/l.i/1950322.b/18260w.m
th Date : 22-Mar-1995 17:51 jimmy
l Date : 22-MAR-1995 15:57
s bottle: 4
. Factor: 1.000
tegrator: HP RTE
rget Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l081iw2.d
Calibration Sample, Level: 3

Compound Sublist: 8260.sub

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromochloromethane	128.00	5.233	5.233	(0.898)	85590	500	500
Bromomethane	94.00	2.121	2.121	(0.364)	143660	500	500
Chloroethane	64.00	2.192	2.192	(0.376)	110805	500	500
Chloroform	83.00	5.251	5.251	(0.901)	313520	500	500
Chloromethane	50.00	1.782	1.782	(0.306)	229199	500	490
Dichlorodifluoromethane	85.00	1.684	1.684	(0.289)	215007	500	500
1,1-Dichloroethane	63.00	4.172	4.172	(0.716)	338812	500	500
1,1-Dichloroethene	96.00	3.013	3.013	(0.517)	135889	500	500
cis-1,2-Dichloroethene	96.00	4.975	4.975	(0.853)	171425	500	500
trans-1,2-Dichloroethene	96.00	3.833	3.833	(0.657)	157312	500	500
1,2-Dichloroethene (total)	96.00				328737	1000	1000
2,2-Dichloropropane	77.00	5.162	5.162	(0.885)	195523	500	510
Methylene Chloride	84.00	3.245	3.245	(0.556)	157236	500	500
1,1,1-Trichloroethane	97.00	6.045	6.045	(0.870)	232267	500	500
Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	184087	500	520
Vinyl Chloride	62.00	1.889	1.889	(0.324)	172640	500	500
Benzene	78.00	6.482	6.482	(0.933)	660275	500	500
Bromodichloromethane	83.00	7.685	7.685	(1.107)	224034	500	500
Carbon Tetrachloride	117.00	6.508	6.508	(0.937)	183426	500	500
1,2-Dibromoethane	107.00	10.236	10.236	(1.474)	153917	500	500
Dibromomethane	93.00	7.561	7.561	(1.297)	121725	500	500
1,2-Dichloroethane	62.00	6.125	6.125	(1.050)	273066	500	500
1,2-Dichloropropane	63.00	7.462	7.462	(1.074)	191420	500	500
1,1-Dichloropropene	75.00	6.321	6.321	(1.084)	232864	500	500
cis-1,3-Dichloropropene	75.00	8.550	8.550	(1.231)	262581	500	500
trans-1,3-Dichloropropene	75.00	9.175	9.175	(1.321)	247511	500	510
Toluene	92.00	9.255	9.255	(1.333)	369048	500	500
1,1,2-Trichloroethane	83.00	9.344	9.344	(1.345)	131589	500	500
Trichloroethene	130.00	7.498	7.498	(1.080)	155595	500	500

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
[redacted]Bromoform	173.00	12.037	12.037	(1.084)	109402	500	510
[redacted]Dibromochloromethane	129.00	9.968	9.968	(0.898)	147816	500	500
39 Chlorobenzene	112.00	11.145	11.145	(1.004)	378843	500	500
06 1,3-Dichloropropane	76.00	9.665	9.665	(1.658)	265508	500	500
[redacted]Ethylbenzene	106.00	11.449	11.449	(1.031)	198202	500	500
[redacted]Styrene	104.00	12 082	12.082	(1.088)	414939	500	510
78 1,1,1,2-Tetrachloroethane	131.00	11.208	11.208	(1.010)	131559	500	500
3[redacted]Tetrachloroethene	164.00	10.307	10.307	(0.928)	129488	500	490
[redacted]o-Xylene	106.00	12.135	12.135	(1.093)	243660	500	510
2 m,p-Xylene(s)	106.00	11.618	11.618	(1.047)	492216	1000	1000
40 Xylene (Total)	106.00				735876	1500	1500
1[redacted]Bromobenzene	156.00	12.982	12.982	(0.897)	180427	500	490
[redacted]n-Butylbenzene	91.00	15.212	15.212	(1.050)	564065	500	500
2 sec-Butylbenzene	105.00	14.106	14.106	(0.974)	532643	500	500
91 tert-Butylbenzene	119.00	14.088	14.088	(0.973)	482841	500	500
[redacted]-Chlorotoluene	91.00	13.339	13.339	(2.288)	1309881	500	500
[redacted]-Chlorotoluene	91.00	13.446	13.446	(2.306)	515922	500	510
08 1,2-Dibromo-3-Chloropropane	75.00	15.782	15.782	(2.707)	34400	500	510
37[redacted]1,2-Dichlorobenzene	146.00	14.971	14.971	(1.034)	308433	500	500
5[redacted]1,3-Dichlorobenzene	146.00	14.409	14.409	(0.995)	320454	500	500
5[redacted]1,4-Dichlorobenzene	146.00	14.516	14.516	(1.002)	326969	500	500
16 Hexachlorobutadiene	225.00	17.735	17.735	(1.225)	94935	500	510
87[redacted]sopropylbenzene	105.00	12.759	12.759	(0.881)	590819	500	500
3[redacted]-Isopropyltoluene	119.00	14.641	14.641	(1.011)	522605	500	500
[redacted]Naphthalene	128.00	17.352	17.352	(1.198)	418544	500	520
38 N-Propylbenzene	91.00	13.339	13.339	(0.921)	1309881	500	500
46[redacted]1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.125)	198687	500	510
8[redacted]1,2,3-Trichlorobenzene	180.00	17.182	17.182	(1.187)	214847	500	510
3 1,2,4-Trichlorobenzene	180.00	17.798	17.798	(1.229)	194720	500	510
5 1,2,3-Trichloropropane	75.00	12.643	12.643	(2.168)	162330	500	500
[redacted]1,2,4-Trimethylbenzene	105.00	14.106	14.106	(0.974)	532643	500	500
[redacted]1,3,5-Trimethylbenzene	105.00	13.607	13.607	(0.940)	519106	500	500
2 Pentafluorobenzene	168.00	5.831	5.831	(1.000)	164374	250	
4[redacted]4-Difluorobenzene	114.00	6.945	6.945	(1.000)	226912	250	
[redacted]lorobenzene-d5	117.00	11.101	11.101	(1.000)	183418	250	
1,4-Dichlorobenzene-d4	152.00	14.480	14.480	(1.000)	101427	250	
9 1,2-Dichloroethane-d4	102.00	6.009	6.009	(0.865)	36748	500	510
2[redacted]luene-d8	98.00	9.157	9.157	(1.318)	505469	500	510
[redacted]omofluorobenzene	95.00	12.777	12.777	(1.840)	221286	500	510

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

strument ID: l.i
b File ID: 1081iw3.d
b Smp Id:
alysis Type: VOA
ant Type: ISTD
erator: JC
thod File: /chem/l.i/1950322.b/18260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

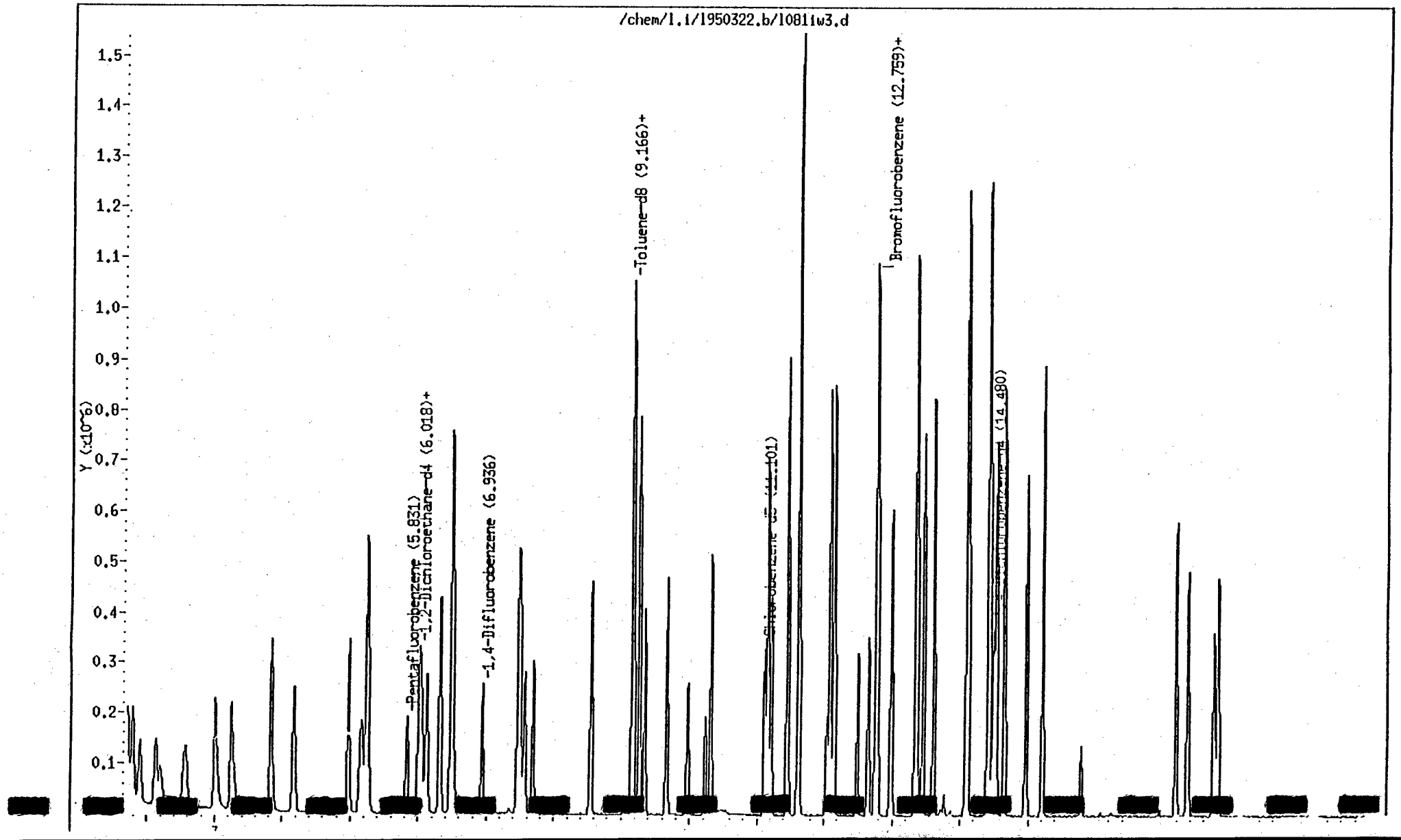
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	164374	0.51
24 1,4-Difluorobenzene	224833	112416	449666	226912	0.92
38 Chlorobenzene-d5	182201	91100	364402	183418	0.67
48 1,4-Dichlorobenzene-	98492	49246	196984	101427	2.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.17
24 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	-0.02
38 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.01
48 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	-0.01

EA UPPER LIMIT = +100% of internal standard area.
EA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950322.b/10811w3.d
Date : 22-MAR-1995 16:25
Client ID:
Sample Info: 100 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i
Operator: JC
Column diameter: 0.25



ta File: /chem/l.i/l950322.b/l081iw4.d
port Date: 22-Mar-1995 17:51

SPL Labs

Volatiles by 624/8240

ta file : /chem/l.i/l950322.b/l081iw4.d
b Smp Id:
j Date : 22-MAR-1995 16:54
erator : JC Inst ID: l.i
p Info : 150 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/l.i/l950322.b/l8260w.m
th Date : 22-Mar-1995 17:51 jimmy Quant Type: ISTD
l Date : 22-MAR-1995 15:57 Cal File: l081iw2.d
s bottle: 5 Calibration Sample, Level: 4
l Factor: 1.000
tegrator: HP RTE Compound Sublist: 8260.sub
rget Version: 3.10

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
7 Bromochloromethane	128.00	5.233	5.233	(0.898)	130192	750	750
4 Bromomethane	94.00	2.130	2.130	(0.365)	213704	750	730
5 Chloroethane	64.00	2.192	2.192	(0.376)	164249	750	740
8 Chloroform	83.00	5.251	5.251	(0.901)	467515	750	740
1 Chloromethane	50.00	1.782	1.782	(0.306)	335927	750	720
0 Dichlorodifluoromethane	85.00	1.693	1.693	(0.290)	329402	750	750
2 1,1-Dichloroethane	63.00	4.172	4.172	(0.716)	511212	750	750
8 1,1-Dichloroethene	96.00	3.013	3.013	(0.517)	203685	750	740
6 cis-1,2-Dichloroethene	96.00	4.974	4.974	(0.853)	259437	750	750
1 trans-1,2-Dichloroethene	96.00	3.842	3.842	(0.659)	243518	750	760
3 1,2-Dichloroethene (total)	96.00				502955	1500	1500 (A)
4 2,2-Dichloropropane	77.00	5.162	5.162	(0.885)	288202	750	740
9 Methylene Chloride	84.00	3.245	3.245	(0.556)	236750	750	750
0 1,1,1-Trichloroethane	97.00	6.036	6.036	(0.869)	352865	750	740
6 Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	283827	750	790
3 Vinyl Chloride	62.00	1.889	1.889	(0.324)	244719	750	700
2 Benzene	78.00	6.482	6.482	(0.933)	1001375	750	730
7 Bromodichloromethane	83.00	7.685	7.685	(1.107)	342574	750	740
3 Carbon Tetrachloride	117.00	6.508	6.508	(0.937)	283152	750	750
4 1,2-Dibromoethane	107.00	10.227	10.227	(1.472)	235217	750	740
2 Dibromomethane	93.00	7.561	7.561	(1.297)	186036	750	760
1 1,2-Dichloroethane	62.00	6.125	6.125	(1.050)	412636	750	750
5 1,2-Dichloropropane	63.00	7.462	7.462	(1.074)	286039	750	730
3 1,1-Dichloropropene	75.00	6.312	6.312	(1.083)	359806	750	770
0 cis-1,3-Dichloropropene	75.00	8.550	8.550	(1.231)	400039	750	750
1 trans-1,3-Dichloropropene	75.00	9.175	9.175	(1.321)	378184	750	760
3 Toluene	92.00	9.264	9.264	(1.334)	564071	750	740
4 1,1,2-Trichloroethane	83.00	9.344	9.344	(1.345)	199838	750	740
5 Trichloroethene	130.00	7.498	7.498	(1.080)	240797	750	750

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromoform	173.00	12.037	12.037	(1.084)	171974	750	790
Dibromochloromethane	129.00	9.968	9.968	(0.898)	231751	750	770
9 Chlorobenzene	112.00	11.154	11.154	(1.005)	579635	750	750
1,3-Dichloropropane	76.00	9.665	9.665	(1.658)	404322	750	750
Ethylbenzene	106.00	11.449	11.449	(1.031)	304630	750	760
4 Styrene	104.00	12.082	12.082	(1.088)	638997	750	770
78 1,1,1,2-Tetrachloroethane	131.00	11.208	11.208	(1.010)	202876	750	750
3 Tetrachloroethene	164.00	10.307	10.307	(0.928)	201398	750	750
o-Xylene	106.00	12.144	12.144	(1.094)	371720	750	760
2 m,p-Xylene(s)	106.00	11.618	11.618	(1.047)	746492	1500	1500
40 Xylene (Total)	106.00				1118212	2200	2300
Bromobenzene	156.00	12.982	12.982	(0.897)	275947	750	750
n-Butylbenzene	91.00	15.212	15.212	(1.050)	865669	750	770
2 sec-Butylbenzene	105.00	14.106	14.106	(0.974)	804362	750	760
91 tert-Butylbenzene	119.00	14.088	14.088	(0.973)	741759	750	760
2-Chlorotoluene	91.00	13.339	13.339	(2.288)	2015053	750	770
4-Chlorotoluene	91.00	13.455	13.455	(2.308)	791764	750	770
08 1,2-Dibromo-3-Chloropropane	75.00	15.782	15.782	(2.707)	51978	750	760
97 1,2-Dichlorobenzene	146.00	14.971	14.971	(1.034)	470070	750	760
5 1,3-Dichlorobenzene	146.00	14.409	14.409	(0.995)	487588	750	760
6 1,4-Dichlorobenzene	146.00	14.516	14.516	(1.002)	497880	750	760
16 Hexachlorobutadiene	225.00	17.735	17.735	(1.225)	145492	750	780
37 Isopropylbenzene	105.00	12.759	12.759	(0.881)	902639	750	760
3 p-Isopropyltoluene	119.00	14.641	14.641	(1.011)	800562	750	770
7 Naphthalene	128.00	17.352	17.352	(1.198)	668759	750	820
38 N-Propylbenzene	91.00	13.339	13.339	(0.921)	2015053	750	760
1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.125)	287615	750	730
3 1,2,3-Trichlorobenzene	180.00	17.182	17.182	(1.187)	339314	750	810
8 1,2,4-Trichlorobenzene	180.00	17.798	17.798	(1.229)	307129	750	800
75 1,2,3-Trichloropropane	75.00	12.643	12.643	(2.168)	247345	750	760
1,2,4-Trimethylbenzene	105.00	14.106	14.106	(0.974)	804362	750	760
1,3,5-Trimethylbenzene	105.00	13.607	13.607	(0.940)	794766	750	760
2 Pentafluorobenzene	168.00	5.831	5.831	(1.000)	166036	250	
24 1,4-Difluorobenzene	114.00	6.945	6.945	(1.000)	233335	250	
Chlorobenzene-d5	117.00	11.101	11.101	(1.000)	187161	250	
1,4-Dichlorobenzene-d4	152.00	14.480	14.480	(1.000)	101596	250	
9 1,2-Dichloroethane-d4	102.00	6.009	6.009	(0.865)	54714	750	740
2 Toluene-d8	98.00	9.157	9.157	(1.318)	758302	750	740
Bromofluorobenzene	95.00	12.777	12.777	(1.840)	336337	750	750

Flag Legend

- Target compound detected but, quantitated amount exceeded maximum amount.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

trument ID: l.i
File ID: 1081iw4.d
Smp Id:
lysis Type: VOA
nt Type: ISTD
rator: JC
hod File: /chem/l.i/1950322.b/18260w.m
c Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

OMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	166036	1.53
4 1,4-Difluorobenzene	224833	112416	449666	233335	3.78
8 Chlorobenzene-d5	182201	91100	364402	187161	2.72
8 1,4-Dichlorobenzene-	98492	49246	196984	101596	3.15

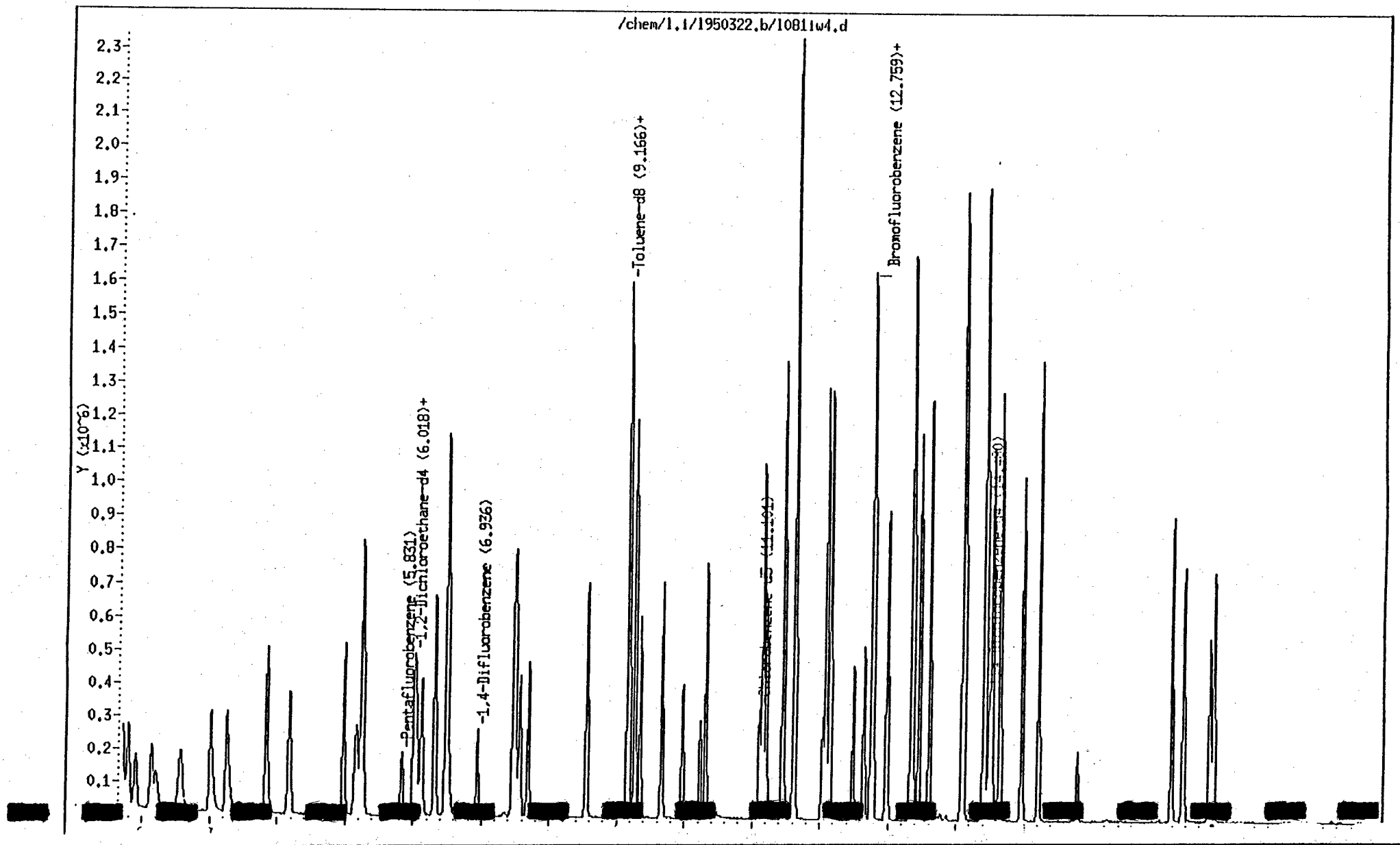
MPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.17
4 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	-0.02
8 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.01
1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	-0.01

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.
PPER LIMIT = + 0.50 minutes of internal standard RT.
OWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950322.b/10811w4.d
Date : 22-MAR-1995 16:54
Client ID:
Sample Info: 150 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



a File: /chem/l.i/l950322.b/l081iw5.d
ort Date: 22-Mar-1995 17:51

SPL Labs

Volatiles by 624/8240

a file : /chem/l.i/1950322.b/l081iw5.d
Smp Id:
Date : 22-MAR-1995 17:22
rator : JC Inst ID: l.i
Info : 200 UG-L STD-8260W/1X
c Info : L081W2//L081CW2
ment :
hod : /chem/l.i/1950322.b/l8260w.m
h Date : 22-Mar-1995 17:51 jimmy Quant Type: ISTD
Date : 22-MAR-1995 15:57 Cal File: l081iw2.d
bottle: 6 Calibration Sample, Level: 5
Factor: 1.000
egrator: HP RTE Compound Sublist: 8260.sub
get Version: 3.10

	QUANT SIG					AMOUNTS	
						CAL-AMT	ON-COL
unds	MASS	RT	EXP RT	REL RT	RESPONSE	(ng)	(ng)
Bromochloromethane	128.00	5.233	5.233	(0.898)	176233	1000	980
Bromomethane	94.00	2.130	2.130	(0.365)	287687	1000	950
Chloroethane	64.00	2.192	2.192	(0.376)	221852	1000	960
Chloroform	83.00	5.251	5.251	(0.901)	641700	1000	980
Chloromethane	50.00	1.782	1.782	(0.306)	460508	1000	950
Dichlorodifluoromethane	85.00	1.693	1.693	(0.290)	458983	1000	1000
1,1-Dichloroethane	63.00	4.181	4.181	(0.717)	698752	1000	990
1,1-Dichloroethene	96.00	3.012	3.012	(0.517)	283050	1000	1000
cis-1,2-Dichloroethene	96.00	4.974	4.974	(0.853)	355455	1000	1000
trans-1,2-Dichloroethene	96.00	3.842	3.842	(0.659)	331260	1000	1000
1,2-Dichloroethene (total)	96.00				686715	2000	2000 (A)
2,2-Dichloropropane	77.00	5.162	5.162	(0.885)	392563	1000	980
Methylene Chloride	84.00	3.244	3.244	(0.556)	324734	1000	990
1,1,1-Trichloroethane	97.00	6.035	6.035	(0.869)	478488	1000	990
Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	404964	1000	1100
Vinyl Chloride	62.00	1.889	1.889	(0.324)	318176	1000	880
Benzene	78.00	6.481	6.481	(0.933)	1366293	1000	990
Bromodichloromethane	83.00	7.685	7.685	(1.107)	474086	1000	1000
Carbon Tetrachloride	117.00	6.508	6.508	(0.937)	390625	1000	1000
1,2-Dibromoethane	107.00	10.236	10.236	(1.474)	325449	1000	1000
Dibromomethane	93.00	7.560	7.560	(1.297)	252867	1000	1000
1,2-Dichloroethane	62.00	6.125	6.125	(1.050)	558760	1000	980
1,2-Dichloropropane	63.00	7.462	7.462	(1.074)	392669	1000	1000
1,1-Dichloropropene	75.00	6.312	6.312	(1.083)	484875	1000	1000
cis-1,3-Dichloropropene	75.00	8.550	8.550	(1.231)	555940	1000	1000
trans-1,3-Dichloropropene	75.00	9.174	9.174	(1.321)	519206	1000	1000
Toluene	92.00	9.264	9.264	(1.334)	771429	1000	1000
1,1,2-Trichloroethane	83.00	9.344	9.344	(1.345)	271588	1000	990
Trichloroethene	130.00	7.498	7.498	(1.080)	320231	1000	990

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
Bromoform	173.00	12.037	12.037	(1.084)	240168	1000	1100
Dibromochloromethane	129.00	9.968	9.968	(0.898)	319581	1000	1000
39 Chlorobenzene	112.00	11.145	11.145	(1.004)	774531	1000	980
1,3-Dichloropropane	76.00	9.665	9.665	(1.658)	551516	1000	990
Ethylbenzene	106.00	11.448	11.448	(1.031)	418276	1000	1000
Styrene	104.00	12.082	12.082	(1.088)	876504	1000	1000
78 1,1,1,2-Tetrachloroethane	131.00	11.208	11.208	(1.010)	280220	1000	1000
Tetrachloroethene	164.00	10.307	10.307	(0.928)	275613	1000	1000
o-Xylene	106.00	12.135	12.135	(1.093)	509088	1000	1000
2 m,p-Xylene(s)	106.00	11.618	11.618	(1.047)	1019994	2000	2000
40 Xylene (Total)	106.00				1529082	3000	3000
Bromobenzene	156.00	12.982	12.982	(0.897)	382988	1000	1000
n-Butylbenzene	91.00	15.212	15.212	(1.050)	1199945	1000	1000
2 sec-Butylbenzene	105.00	14.106	14.106	(0.974)	1100319	1000	990
91 tert-Butylbenzene	119.00	14.088	14.088	(0.973)	1021683	1000	1000
2-Chlorotoluene	91.00	13.339	13.339	(2.288)	2747389	1000	1000
4-Chlorotoluene	91.00	13.455	13.455	(2.308)	1081923	1000	1000
8 1,2-Dibromo-3-Chloropropane	75.00	15.782	15.782	(2.707)	73510	1000	1000
1,2-Dichlorobenzene	146.00	14.971	14.971	(1.034)	643009	1000	990
1,3-Dichlorobenzene	146.00	14.409	14.409	(0.995)	667038	1000	990
6 1,4-Dichlorobenzene	146.00	14.516	14.516	(1.002)	687701	1000	1000
16 Hexachlorobutadiene	225.00	17.735	17.735	(1.225)	199312	1000	1000
37 Isopropylbenzene	105.00	12.759	12.759	(0.881)	1245760	1000	1000
4-Isopropyltoluene	119.00	14.641	14.641	(1.011)	1107945	1000	1100
7 Naphthalene	128.00	17.352	17.352	(1.198)	941299	1000	990
38 N-Propylbenzene	91.00	13.339	13.339	(0.921)	2747389	1000	1000
46 1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.125)	413848	1000	1100
1,2,3-Trichlorobenzene	180.00	17.182	17.182	(1.187)	472721	1000	1000
3 1,2,4-Trichlorobenzene	180.00	17.789	17.789	(1.228)	422586	1000	1000
75 1,2,3-Trichloropropane	75.00	12.643	12.643	(2.169)	337282	1000	990
1,2,4-Trimethylbenzene	105.00	14.106	14.106	(0.974)	1100319	1000	1000
1,3,5-Trimethylbenzene	105.00	13.606	13.606	(0.940)	1091192	1000	1000
2 Pentafluorobenzene	168.00	5.830	5.830	(1.000)	171820	250	
34 1,4-Difluorobenzene	114.00	6.945	6.945	(1.000)	236187	250	
Chlorobenzene-d5	117.00	11.101	11.101	(1.000)	192234	250	
1 1,4-Dichlorobenzene-d4	152.00	14.480	14.480	(1.000)	106693	250	
19 1,2-Dichloroethane-d4	102.00	6.009	6.009	(0.865)	73043	1000	980
2 Toluene-d8	98.00	9.157	9.157	(1.318)	1034245	1000	1000
Bromofluorobenzene	95.00	12.777	12.777	(1.840)	454943	1000	1000

Flag Legend

Target compound detected but, quantitated amount exceeded maximum amount.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

strument ID: l.i
o File ID: l081iw5.d
o Smp Id:
alysis Type: VOA
ant Type: ISTD
erator: JC
thod File: /chem/l.i/1950322.b/18260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 15:7

Level: LOW
Sample Type: WATER

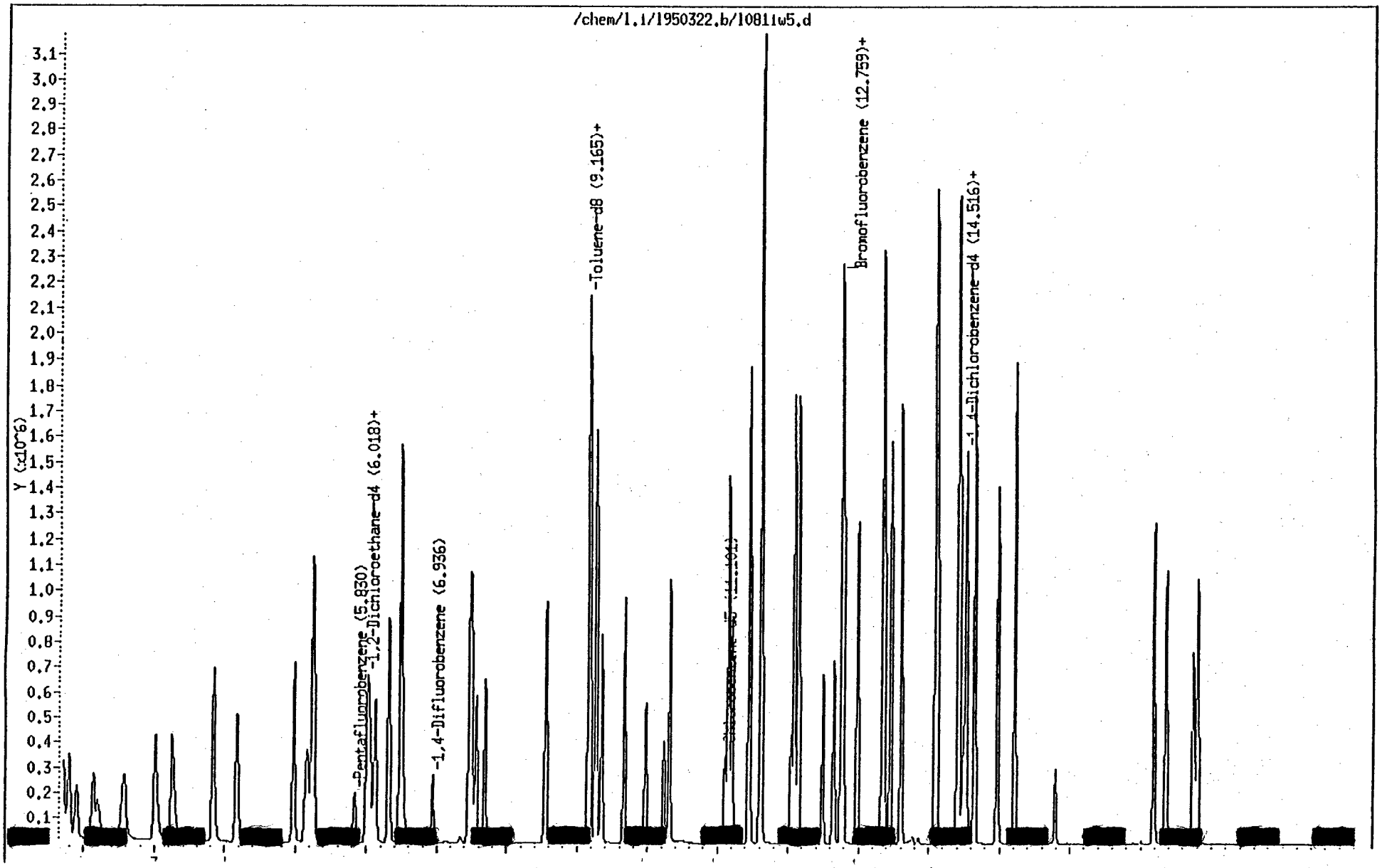
OMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	171820	5.07
4 1,4-Difluorobenzene	224833	112416	449666	236187	5.05
8 Chlorobenzene-d5	182201	91100	364402	192234	5.51
8 1,4-Dichlorobenzene-	98492	49246	196984	106693	8.33

OMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.18
4 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	-0.02
8 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.01
3 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	-0.01

A UPPER LIMIT = +100% of internal standard area.
A LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/10811w5.d
Date : 22-MAR-1995 17:22
Client ID:
Sample Info: 200 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1
Operator: JC
Column diameter: 0.25



SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l144cw3.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 24-MAY-1995 20:04
Init. Calibration Date(s): 03/22/95 03/22/95
Init. Calibration Times: 15:28 17:22
Method File: /chem/l.i/1950524.b/18260w.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	17 Bromochloromethane	0.261	0.233	0.010	10.5	40.0
	4 Bromomethane	0.439	0.377	0.100	14.1	40.0
	5 Chloroethane	0.335	0.329	0.010	1.9	40.0
	18 Chloroform	0.947	0.876	0.200	7.5	25.0
	1 Chloromethane	0.705	0.679	0.300	3.7	40.0
	60 Dichlorodifluoromethane	0.660	0.495	0.010	25.0	40.0
	12 1,1-Dichloroethane	1.029	0.829	0.300	19.4	40.0
	8 1,1-Dichloroethene	0.412	0.366	0.100	11.2	25.0
	16 cis-1,2-Dichloroethene	0.518	0.489	0.010	5.6	40.0
	11 trans-1,2-Dichlcroethene	0.482	0.383	0.010	20.5	40.0
M	13 1,2-Dichloroethene (total)	0.500	0.436	0.010	12.8	40.0
	74 2,2-Dichloropropane	0.584	0.594	0.010	1.6	40.0
	9 Methylene Chloride	0.477	0.404	0.010	15.4	40.0
	20 1,1,1-Trichloroethane	0.512	0.551	0.100	7.6	40.0
	6 Trichlorofluoromethane	0.543	0.528	0.010	2.7	40.0
	3 Vinyl Chloride	0.526	0.562	0.100	6.8	25.0
	22 Benzene	1.461	1.410	0.100	3.5	40.0
	27 Bromodichloromethane	0.493	0.474	0.200	4.0	40.0
	23 Carbon Tetrachloride	0.404	0.427	0.100	5.7	40.0
	84 1,2-Dibromoethane	0.341	0.353	0.010	3.6	40.0
	112 Dibromomethane	0.369	0.363	0.010	1.6	40.0
	21 1,2-Dichloroethane	0.828	0.871	0.100	5.2	40.0
	25 1,2-Dichloropropane	0.417	0.427	0.010	2.4	25.0
	115 1,1-Dichloropropene	0.705	0.667	0.010	5.4	40.0
	30 cis-1,3-Dichloropropene	0.574	0.573	0.100	0.2	40.0
	31 trans-1,3-Dichloropropene	0.536	0.541	0.100	0.8	40.0
	33 Toluene	0.811	0.799	0.400	1.4	25.0
	34 1,1,2-Trichloroethane	0.291	0.275	0.100	5.3	40.0
	26 Trichloroethene	0.343	0.332	0.100	3.1	40.0
	43 Bromoform	0.292	0.267	0.250	8.7	40.0
	36 Dibromochloromethane	0.402	0.371	0.100	7.6	40.0
	39 Chlorobenzene	1.027	1.051	0.300	2.3	40.0
	106 1,3-Dichloropropane	0.808	0.740	0.010	8.3	40.0
	41 Ethylbenzene	0.536	0.548	0.100	2.3	25.0
	44 Styrene	1.104	1.101	0.300	0.3	40.0
	78 1,1,1,2-Tetrachloroethane	0.360	0.349	0.010	3.1	40.0
	37 Tetrachloroethene	0.359	0.396	0.200	10.2	40.0
	45 o-Xylene	0.656	0.663	0.300	1.0	40.0
	42 m,p-Xylene(s)	0.662	0.664	0.300	0.3	40.0
M	40 Xylene (Total)	0.660	0.663	0.300	0.5	40.0

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l144cw3.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 24-MAY-1995 20:04
Init. Calibration Date(s): 03/22/95 03/22/95
Init. Calibration Times: 15:28 17:22
Method File: /chem/l.i/l950524.b/l8260w.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	114 Bromobenzene	0.901	1.002	0.010	11.2	40.0
	94 n-Butylbenzene	2.756	2.356	0.010	14.5	40.0
	92 sec-Butylbenzene	2.606	2.624	0.010	0.7	40.0
	91 tert-Butylbenzene	2.395	2.319	0.010	3.2	40.0
	80 2-Chlorotoluene	3.938	3.508	0.010	10.9	40.0
	81 4-Chlorotoluene	1.547	1.420	0.010	8.2	40.0
	108 1,2-Dibromo-3-Chloropropane	0.103	0.079	0.010	23.5	40.0
	97 1,2-Dichlorobenzene	1.516	1.494	0.010	1.4	40.0
	95 1,3-Dichlorobenzene	1.577	1.554	0.010	1.5	40.0
	96 1,4-Dichlorobenzene	1.616	1.596	0.010	1.2	40.0
	116 Hexachlorobutadiene	0.462	0.371	0.010	19.7	40.0
	87 Isopropylbenzene	2.919	3.044	0.010	4.3	40.0
	93 p-Isopropyltoluene	2.564	2.357	0.010	8.1	40.0
	117 Naphthalene	2.003	1.792	0.010	10.5	40.0
	88 N-Propylbenzene	6.514	6.359	0.010	2.4	40.0
	46 1,1,2,2-Tetrachloroethane	0.529	0.482	0.300	8.8	40.0
	118 1,2,3-Trichlorobenzene	1.035	0.982	0.010	5.1	40.0
	98 1,2,4-Trichlorobenzene	0.939	0.846	0.010	9.9	40.0
	75 1,2,3-Trichloropropane	0.492	0.447	0.010	9.2	40.0
	90 1,2,4-Trimethylbenzene	2.606	2.624	0.010	0.7	40.0
	89 1,3,5-Trimethylbenzene	2.555	2.624	0.010	2.7	40.0
$	19 1,2-Dichloroethane-d4	0.079	0.077	0.010	2.1	40.0
$	32 Toluene-d8	1.091	1.081	0.010	0.9	40.0
$	47 Bromofluorobenzene	0.479	0.463	0.010	3.2	40.0

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144cw3.d
Lab Smp Id:
Inj Date : 24-MAY-1995 20:04
Operator : JC
Smp Info : 50 UG-L STD-8260W/1X
Misc Info : L144W2//L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy
Cal Date : 24-MAY-1995 20:04
Vls bottle: 10
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l144cw3.d
Continuing Calibration Sample

Compound Sublist: 8260.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
17 Bromochloromethane	128.00	5.232	5.232	(0.899)	42921	250	220
4 Bromomethane	94.00	2.130	2.130	(0.366)	69387	250	210
5 Chloroethane	64.00	2.201	2.201	(0.378)	60581	250	240
18 Chloroform	83.00	5.241	5.241	(0.900)	161268	250	230
1 Chloromethane	50.00	1.791	1.791	(0.308)	124984	250	240
60 Dichlorodifluoromethane	85.00	1.711	1.711	(0.294)	91137	250	190
12 1,1-Dichloroethane	63.00	4.171	4.171	(0.717)	152593	250	200
8 1,1-Dichloroethene	96.00	3.012	3.012	(0.518)	67313	250	220
16 cis-1,2-Dichloroethene	96.00	4.964	4.964	(0.853)	90009	250	240
11 trans-1,2-Dichloroethene	96.00	3.832	3.832	(0.658)	70547	250	200
13 1,2-Dichloroethene (total)	96.00				160556	500	440
74 2,2-Dichloropropane	77.00	5.161	5.161	(0.887)	109245	250	250
9 Methylene Chloride	84.00	3.244	3.244	(0.557)	74301	250	210
20 1,1,1-Trichloroethane	97.00	6.034	6.034	(0.871)	131999	250	270
6 Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	97195	250	240
3 Vinyl Chloride	62.00	1.898	1.898	(0.326)	103359	250	270
22 Benzene	78.00	6.471	6.471	(0.934)	337802	250	240
27 Bromodichloromethane	83.00	7.674	7.674	(1.108)	113541	250	240
23 Carbon Tetrachloride	117.00	6.498	6.498	(0.938)	102375	250	260
84 1,2-Dibromoethane	107.00	10.233	10.233	(1.478)	84648	250	260
112 Dibromomethane	93.00	7.549	7.549	(1.297)	66844	250	250
21 1,2-Dichloroethane	62.00	6.105	6.105	(1.049)	160405	250	260
25 1,2-Dichloropropane	63.00	7.451	7.451	(1.076)	102342	250	260
115 1,1-Dichloropropene	75.00	6.302	6.302	(1.083)	122714	250	240
30 cis-1,3-Dichloropropene	75.00	8.539	8.539	(1.233)	137354	250	250
31 trans-1,3-Dichloropropene	75.00	9.172	9.172	(1.324)	129625	250	250
33 Toluene	92.00	9.252	9.252	(1.336)	191593	250	250
34 1,1,2-Trichloroethane	83.00	9.341	9.341	(1.349)	65949	250	240
26 Trichloroethene	130.00	7.487	7.487	(1.081)	79635	250	240

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
	Bromoform	173.00	12.033	12.033	(1.083)	51178	250	230
	Dibromochloromethane	129.00	9.965	9.965	(0.897)	71228	250	230
39	Chlorobenzene	112.00	11.151	11.151	(1.004)	201655	250	260
106	1,3-Dichloropropane	76.00	9.662	9.662	(1.660)	136262	250	230
	Ethylbenzene	106.00	11.454	11.454	(1.031)	105240	250	260
	Styrene	104.00	12.087	12.087	(1.088)	211308	250	250
78	1,1,1,2-Tetrachloroethane	131.00	11.204	11.204	(1.009)	66977	250	240
37	Tetrachloroethene	164.00	10.313	10.313	(0.929)	76042	250	280
	o-Xylene	106.00	12.140	12.140	(1.093)	127164	250	250
	m,p-Xylene(s)	106.00	11.623	11.623	(1.047)	254843	500	500
40	Xylene (Total)	106.00				382007	750	750
11	Bromobenzene	156.00	12.987	12.987	(0.896)	101699	250	280
	n-Butylbenzene	91.00	15.224	15.224	(1.050)	239179	250	210
	sec-Butylbenzene	105.00	14.110	14.110	(0.974)	266423	250	250
91	tert-Butylbenzene	119.00	14.092	14.092	(0.972)	235430	250	240
	2-Chlorotoluene	91.00	13.344	13.344	(2.293)	645697	250	220
	4-Chlorotoluene	91.00	13.459	13.459	(2.313)	261431	250	230
08	1,2-Dibromo-3-Chloropropane	75.00	15.795	15.795	(2.714)	14519	250	190
97	1,2-Dichlorobenzene	146.00	14.975	14.975	(1.033)	151745	250	250
	1,3-Dichlorobenzene	146.00	14.413	14.413	(0.994)	157831	250	250
	1,4-Dichlorobenzene	146.00	14.529	14.529	(1.002)	162108	250	250
16	Hexachlorobutadiene	225.00	17.747	17.747	(1.224)	37656	250	200
87	Isopropylbenzene	105.00	12.764	12.764	(0.881)	309107	250	260
	p-Isopropyltoluene	119.00	14.654	14.654	(1.011)	239358	250	230
	Naphthalene	128.00	17.364	17.364	(1.198)	181981	250	220
88	N-Propylbenzene	91.00	13.344	13.344	(0.921)	645697	250	240
	1,1,2,2-Tetrachloroethane	83.00	12.488	12.488	(1.124)	92592	250	230
	1,2,3-Trichlorobenzene	180.00	17.194	17.194	(1.186)	99737	250	240
98	1,2,4-Trichlorobenzene	180.00	17.809	17.809	(1.229)	85865	250	220
75	1,2,3-Trichloropropane	75.00	12.648	12.648	(2.173)	82294	250	230
	1,2,4-Trimethylbenzene	105.00	14.110	14.110	(0.974)	266423	250	250
	1,3,5-Trimethylbenzene	105.00	13.611	13.611	(0.939)	266483	250	260
2	Pentafluorobenzene	168.00	5.820	5.820	(1.000)	184068	250	
24	1,4-Difluorobenzene	114.00	6.925	6.925	(1.000)	239653	250	
	Chlorobenzene-d5	117.00	11.106	11.106	(1.000)	191926	250	
	1,4-Dichlorobenzene-d4	152.00	14.493	14.493	(1.000)	101540	250	
19	1,2-Dichloroethane-d4	102.00	5.990	5.990	(0.865)	18494	250	240
32	Toluene-d8	98.00	9.154	9.154	(1.322)	259148	250	250
	Bromofluorobenzene	95.00	12.782	12.782	(1.846)	111041	250	240

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144cw3.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2//L144CW3

Calibration Date: 05/24/95
Calibration Time: 1935

Level: LOW
Sample Type: WATER

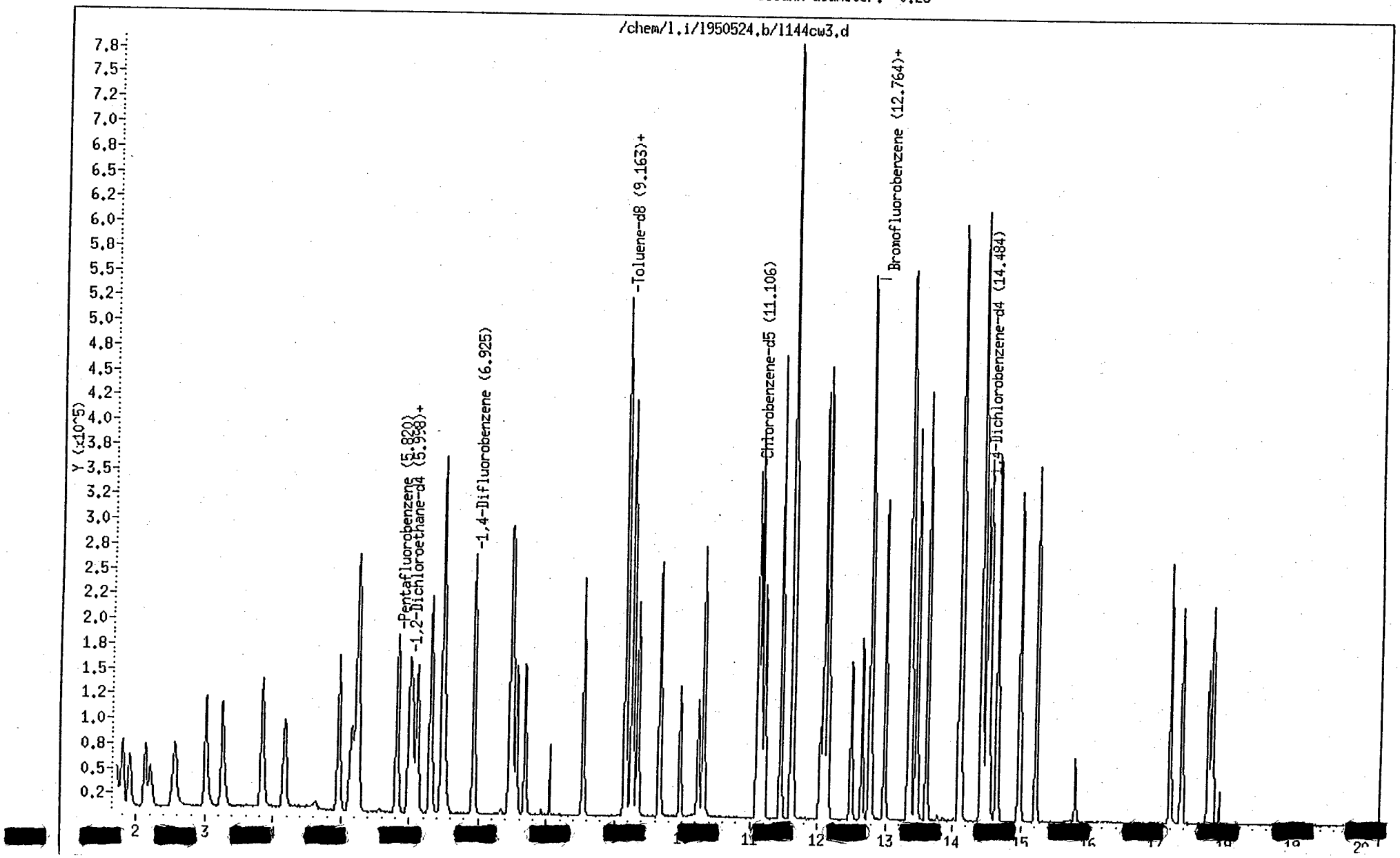
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	176785	88392	353570	184068	4.12
24 1,4-Difluorobenzene	221248	110624	442496	239653	8.32
38 Chlorobenzene-d5	184507	92254	369014	191926	4.02
48 1,4-Dichlorobenzene-	101512	50756	203024	101540	0.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.83	5.33	6.33	5.82	-0.15
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	-0.13
38 Chlorobenzene-d5	11.11	10.61	11.61	11.11	0.00
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	0.00

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.

Data File: /chem/l.i/1950524.b/l144cw3.d
Date : 24-MAY-1995 20:04
Client ID:
Sample Info: 50 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i
Operator: JC
Column diameter: 0.25



3A

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: BLANK SAS No.: ___ SDG NO.: 505714

Matrix Spike - EPA Sample No.: BLK01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
Phenol	75	0	47	63	12-110
2-Chlorophenol	75	0	53	71	27-123
1,4-Dichlorobenzene	50	0	33	66	36- 97
N-Nitroso-di-n-propylamin	50	0	33	66	41-116
1,2,4-Trichlorobenzene	50	0	36	72	39- 98
4-Chloro-3-methylphenol	75	0	56	75	23- 97
Acenaphthene	50	0	35	70	46-118
4-Nitrophenol	75	0	56	75	10- 80
2,4-Dinitrotoluene	50	0	35	70	24- 96
Pentachlorophenol	75	0	23	31	9-103
Pyrene	50	0	32	64	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
Phenol	75	48	64	2	42	12-110
2-Chlorophenol	75	53	71	0	40	27-123
1,4-Dichlorobenzene	50	33	66	0	28	36- 97
N-Nitroso-di-n-propylamin	50	32	64	3	38	41-116
1,2,4-Trichlorobenzene	50	35	70	3	28	39- 98
4-Chloro-3-methylphenol	75	58	77	3	42	23- 97
Acenaphthene	50	35	70	0	31	46-118
4-Nitrophenol	75	47	63	17	50	10- 80
2,4-Dinitrotoluene	50	35	70	0	38	24- 96
Pentachlorophenol	75	24	32	3	50	9-103
Pyrene	50	31	62	3	31	26-127

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

* Values outside of QC Limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

FORM III SV - 1

Idelis Williams, QC Officer

SPL Blank QC Report

Matrix: Aqueous
Sample ID: BLANK
Batch: E950522041714

Reported on: 06/01/95 17:13
Analyzed on: 05/26/95 15:48
Analyst: PC

METHOD 8270/625 J142B01

Compound	Result	Detection Limit	Units
Pyridine	ND	5	ug/L
Phenol	ND	5	ug/L
Aniline	ND	5	ug/L
bis(2-Chloroethyl)ether	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
bis(2-chloroisopropyl)ethe	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
N-Nitroso-di-n-propylamine	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Nitrobenzene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Benzoic acid	ND	25	ug/L
bis(2-Chloroethoxy)methane	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
4-Chloro-3-methylphenol	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
Dimethylphthalate	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950522041714

Reported on: 06/01/95 17:13
Analyzed on: 05/26/95 15:48
Analyst: PC

METHOD 8270/625 J142B01

Compound	Result	Detection Limit	Units
Acenaphthylene	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
Acenaphthene	ND	5	ug/L
2,4-Dinitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
Dibenzofuran	ND	5	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
4-Chlorophenyl-phenylether	ND	5	ug/L
Fluorene	ND	5	ug/L
4-Nitroaniline	ND	25	ug/L
4,6-Dinitro-2-methylphenol	ND	25	ug/L
n-Nitrosodiphenylamine	ND	5	ug/L
1,2-Diphenylhydrazine	ND	5	ug/L
4-Bromophenyl-phenylether	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Anthracene	ND	5	ug/L
Carbazole	ND	5	ug/L
Di-n-butylphthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Pyrene	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
Benzo[a]anthracene	ND	5	ug/L
Chrysene	ND	5	ug/L
bis(2-Ethylhexyl)phthalate	ND	5	ug/L
Di-n-octylphthalate	ND	5	ug/L
Benzo[b]fluoranthene	ND	5	ug/L
Benzo[k]fluoranthene	ND	5	ug/L
Benzo[a]pyrene	ND	5	ug/L
Indeno[1,2,3-cd]pyrene	ND	5	ug/L
Dibenz[a,h]anthracene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950522041714

Reported on: 06/01/95 17:13
Analyzed on: 05/26/95 15:48
Analyst: PC

METHOD 8270/625 J142B01

Compound	Result	Detection Limit	Units
Benzo[g,h,i]perylene	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
2-Fluorophenol	83	21-110	% Recovery
Phenol-d5	74	10-110	% Recovery
Nitrobenzene-d5	76	35-114	% Recovery
2-Fluorobiphenyl	69	43-116	% Recovery
2,4,6-Tribromophenol	64	10-123	% Recovery
Terphenyl-d14	79	33-141	% Recovery

Samples in Batch 9505714-01 9505714-02 9505714-03 9505714-04 9505714-05 9505714-07 9505714-08

Notes
ND - Not detected.

Idelis Williams, QC Officer

ata File: /chem/j.i/j950526.b/j142b01.d
eport Date: 26-May-1995 16:43

SPL Houston Labs

ata file : /chem/j.i/j950526.b/j142b01.d
ab Smp Id:
nj Date : 26-MAY-1995 15:48
perator : PC pc
mp Info : BLANK-8270W/1X
isc Info : E142C1/J142B01/J146CC1
omment :
ethod : /chem/j.i/j950526.b/jclpw.m
eth Date : 26-May-1995 16:37 patti
il Date : 26-MAY-1995 15:03
.s bottle: 1
.l Factor: 1.000
itegrator: HP RTE
.rget Version: 3.10

Inst ID: j.i

Quant Type: ISTD
Cal File: j146cc1.d

Compound Sublist: BLK.sub

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
3 2-Fluorophenol	112.00	5.511	5.523	(0.715)	1124528	120	62
4 Phenol-d5	99.00	7.123	7.123	(0.924)	1560748	110	56
11 1,4-Dichlorobenzene-d4	152.00	7.712	7.701	(1.000)	370297	40	
23 Nitrobenzene-d5	82.00	8.910	8.913	(0.851)	929133	76	38
32 Naphthalene-d8	136.00	10.476	10.472	(1.000)	1237294	40	
41 2-Fluorobiphenyl	172.00	13.106	13.101	(0.891)	1628431	69	35
48 Acenaphthene-d10	164.00	14.716	14.706	(1.000)	692710	40	
61 2,4,6-Tribromophenol	329.70	16.682	16.684	(0.911)	280640	96	48
65 Phenanthrene-d10	188.00	18.314	18.311	(1.000)	1026801	40	
72 Terphenyl-d14	244.00	22.290	22.270	(0.894)	1789430	79	39
76 Chrysene-d12	240.00	24.922	24.930	(1.000)	866569	40	
83 Perylene-d12	264.00	29.256	29.251	(1.000)	576932	40	

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: j.i
Data File ID: j142b01.d
Lab Smp Id:
Analysis Type: SV
Client Type: ISTD
Operator: PC
Method File: /chem/j.i/j950526.b/jclpw.m
Misc Info: E142C1/J142B01/J146CC1

Calibration Date: 05/26/95
Calibration Time: 1503

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
1,4-Dichlorobenzene-	330816	165408	661632	370297	11.93
Naphthalene-d8	1173298	586649	2346596	1237294	5.45
Acenaphthene-d10	628204	314102	1256408	692710	10.27
Phenanthrene-d10	927125	463562	1854250	1026801	10.75
Chrysene-d12	703759	351880	1407518	866569	23.13
Perylene-d12	450683	225342	901366	576932	28.01

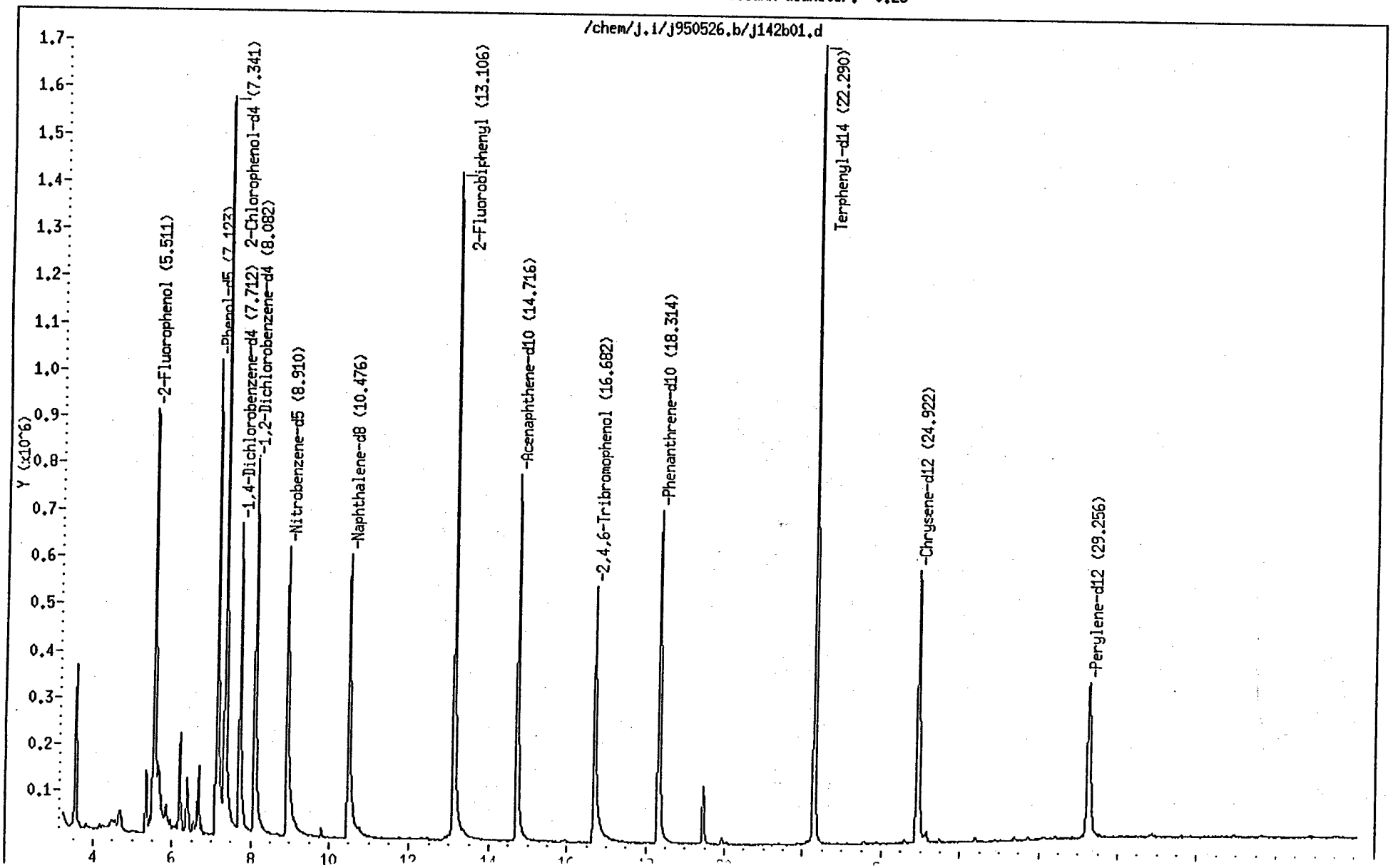
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
1,4-Dichlorobenzene-	7.70	7.20	8.20	7.71	0.14
Naphthalene-d8	10.47	9.97	10.97	10.48	0.04
Acenaphthene-d10	14.71	14.21	15.21	14.72	0.07
Phenanthrene-d10	18.31	17.81	18.81	18.31	0.01
Chrysene-d12	24.93	24.43	25.43	24.92	-0.03
Perylene-d12	29.25	28.75	29.75	29.26	0.02

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.

Data File: /chem/j.i/j950526.b/j142b01.d
Date : 26-MAY-1995 15:48
Client ID:
Sample Info: BLANK-8270W/1X
Volume Injected (uL): 2.0
Column phase:

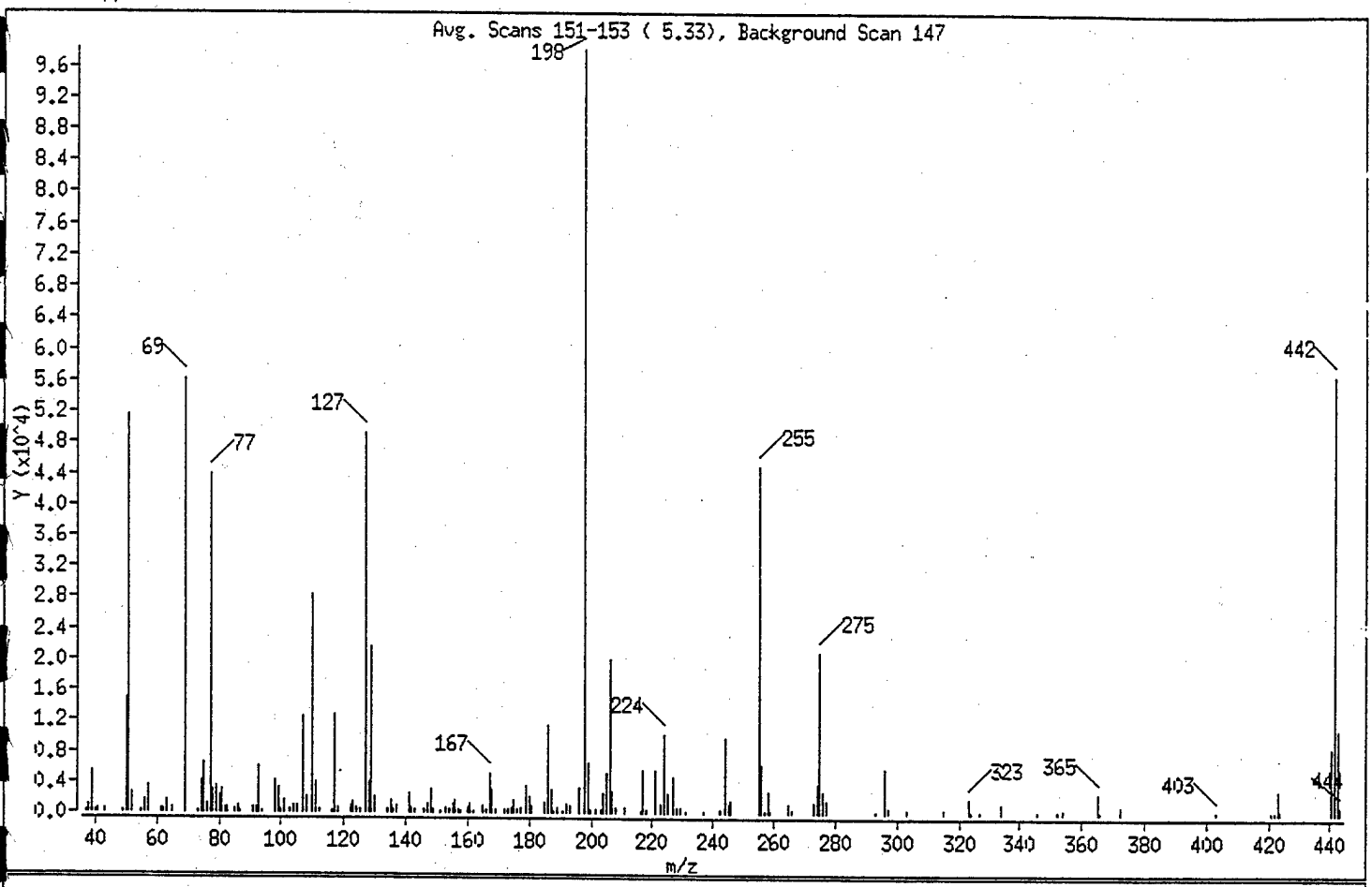
Instrument: j.i

Operator: PC
Column diameter: 0.25



Data File: /chem/h.i/h950531.b/h151df12.d
Date : 31-MAY-95 13:08
Client ID:
Sample Info: 50 NG DFTPP
Volume Injected (uL): 2.0
Column phase:
1 dftpp

Instrument: h.i
Operator: LH
Column diameter: 2.00



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	52.38
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	57.15
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	50.21
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.61
275	10.00 - 30.00% of mass 198	21.20
365	Greater than 1.00% of mass 198	2.66
441	Present, but less than mass 443	8.72
442	40.00 - 110.00% of mass 198	57.93
443	17.00 - 23.00% of mass 442	11.21 (19.35)

Data File: /chem/h.i/h950531.b/h151df12.d

Date : 31-MAY-95 13:08

Client ID:

Sample Info: 50 NG DFTPP

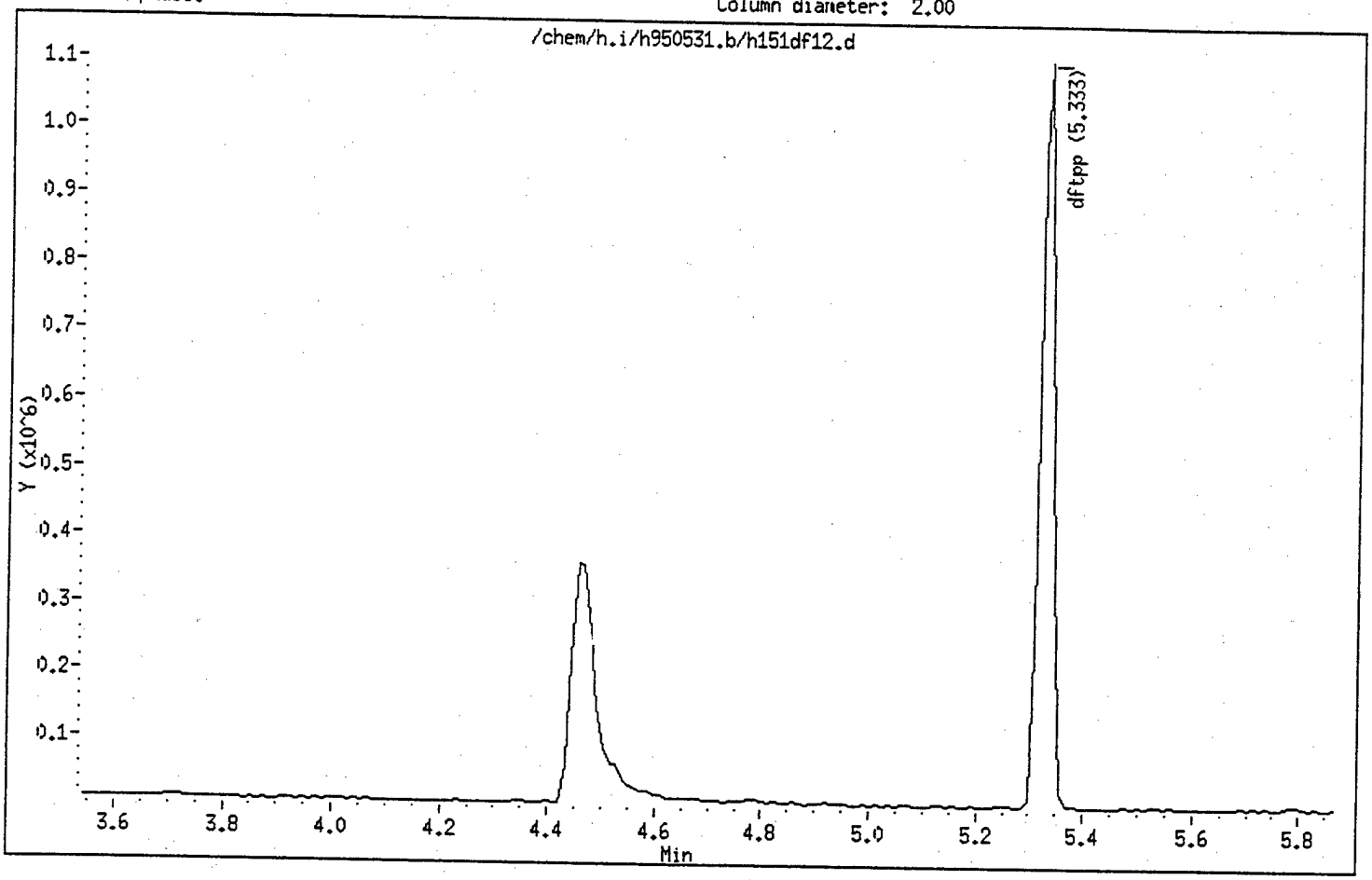
Volume Injected (uL): 2.0

Column phase:

Instrument: h.i

Operator: LH

Column diameter: 2.00



Data File: /chem/h.i/h950531.b/h151df12.d

Date : 31-MAY-95 13:08

Client ID:

Instrument: h.i

Sample Info: 50 NG DFTPP

Volume Injected (uL): 2.0

Operator: LH

Column phase:

Column diameter: 2.00

Data File: h151df12.d

Spectrum : Avg. Scans 151-153 (5.33), Background Scan 147

Largest m/z: 197.90

Number of peaks: 166

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.85	187	104.95	899	168.95	425	241.95	498
37.85	994	106.95	12568	171.85	382	243.95	9789
38.95	5245	107.95	2023	172.85	385	244.95	1275
39.85	120	109.95	28264	173.95	792	245.85	1605
40.85	401	110.95	3957	174.95	1713	254.95	45056
43.05	416	111.95	518	175.85	477	255.95	6338
48.90	279	115.85	337	176.95	712	256.95	199
49.90	14838	116.95	12799	178.85	3507	257.95	2784
50.90	51448	117.95	798	179.95	2180	258.85	174
51.90	2638	121.90	843	180.95	1014	264.95	1122
54.90	175	122.90	1333	184.95	1505	265.85	375
55.90	1600	123.90	603	185.95	11402	272.90	1398
56.90	3405	124.90	466	186.95	3068	273.90	3755
61.00	562	126.90	49320	187.85	197	274.90	20824
61.90	547	127.90	3832	188.95	663	275.90	2869
62.90	1711	128.90	21648	190.95	177	276.90	1716
65.00	717	129.90	2013	191.95	1148	292.90	176
68.90	56136	133.80	567	192.95	873	295.90	5731
73.00	210	134.90	1528	195.95	3147	296.90	655
74.00	4203	135.90	519	197.90	98224	303.00	528
74.90	6584	137.00	813	198.90	6492	314.85	460
76.00	1160	140.90	2482	199.90	437	322.95	1920
77.00	43904	141.90	725	201.30	463	323.85	173
78.00	3088	142.90	506	202.90	511	326.85	185
78.90	3426	146.00	424	203.90	2642	333.95	1063
79.90	2413	146.90	1046	204.90	5184	345.85	205
80.90	3104	147.90	3023	205.90	19912	351.90	315
81.85	714	148.90	480	206.90	2732	354.00	457
82.85	717	151.00	171	207.90	602	364.90	2615
84.85	414	152.90	644	211.00	679	365.90	167
85.85	952	153.90	509	215.90	232	372.00	964
86.95	191	155.00	1125	216.90	5553	402.95	256
90.95	621	156.00	1738	217.90	578	420.95	216
91.95	740	157.00	380	221.00	5485	422.05	199
92.85	6077	157.90	189	222.90	1204	423.05	3084

Data File: /chem/h.i/h950531.b/h151df12.d

Date : 31-MAY-95 13:08

Client ID:

Instrument: h.i

Sample Info: 50 NG DFTPP

Volume Injected (uL): 2.0

Operator: LH

Column phase:

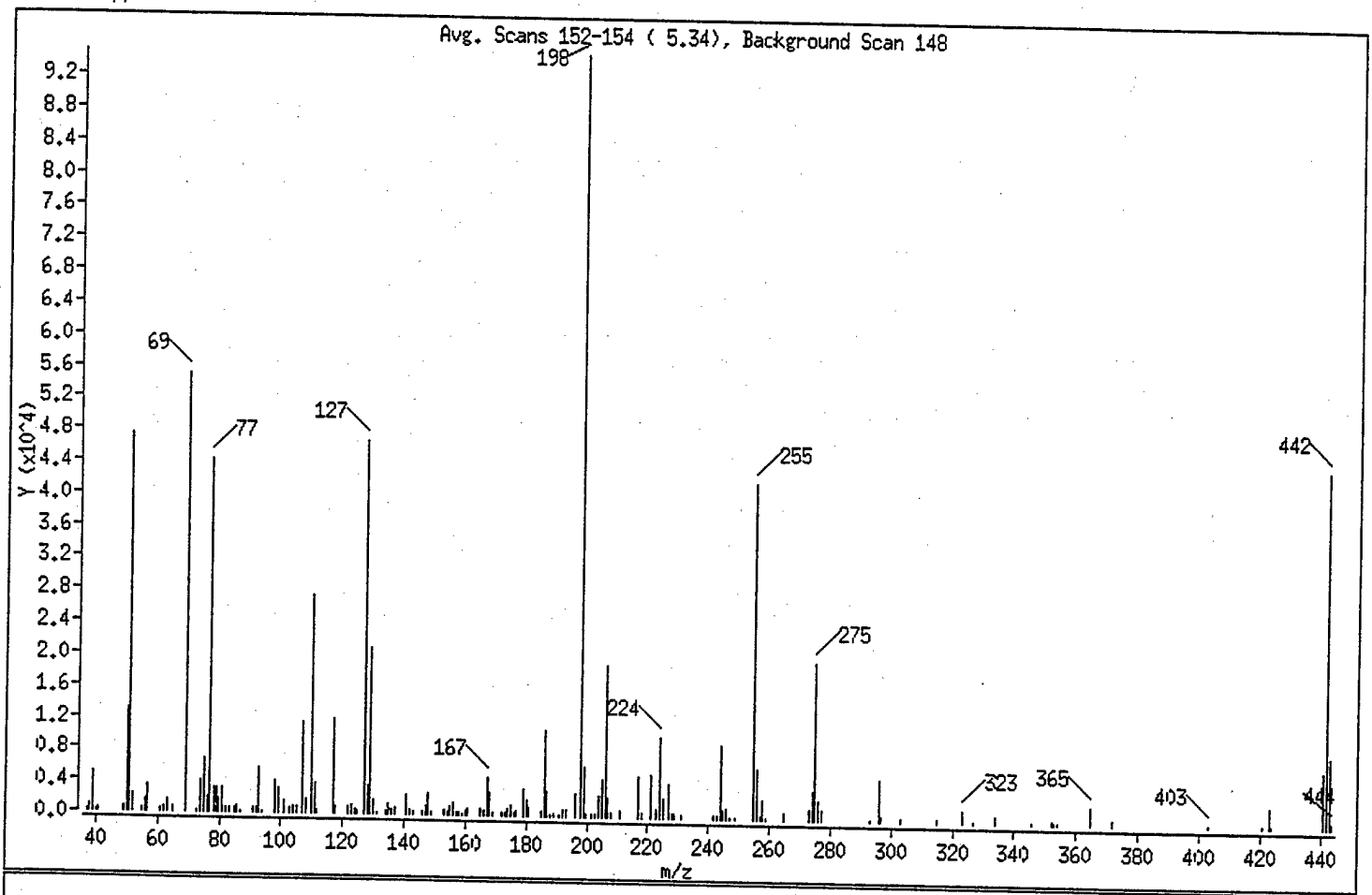
Column diameter: 2.00

Data File: h151df12.d
Spectrum : Avg. Scans 151-153 (5.33), Background Scan 147
Largest m/z: 197.90
Number of peaks: 166

m/z	Y	m/z	Y	m/z	Y	m/z	Y
93.95	236	159.85	689	224.00	10252	423.95	488
97.95	4194	160.85	1081	225.00	2655	441.10	8568
98.85	3274	161.95	177	226.90	4622	442.00	56896
99.85	366	164.85	992	227.90	616	443.00	11013
100.85	1568	165.85	577	229.00	683	444.00	929
102.85	499	166.95	5116	231.00	195		
103.95	874	167.85	2979	236.85	217		

Data File: /chem/h.i/h950601.b/h152df02.d
Date : 01-JUN-1995 09:44
Client ID:
Sample Info: 50 NG DFTPP
Volume Injected (uL): 2.0
Column phase:
1 dftpp

Instrument: h.i
Operator: LH
Column diameter: 2.00



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	49.79
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	57.81
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	49.16
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.61
275	10.00 - 30.00% of mass 198	20.70
365	Greater than 1.00% of mass 198	2.25
441	Present, but less than mass 443	7.35
442	40.00 - 110.00% of mass 198	46.88
443	17.00 - 23.00% of mass 442	9.11 (19.44)

Data File: /chem/h.i/h950601.b/h152df02.d

Date : 01-JUN-1995 09:44

Client ID:

Instrument: h.i

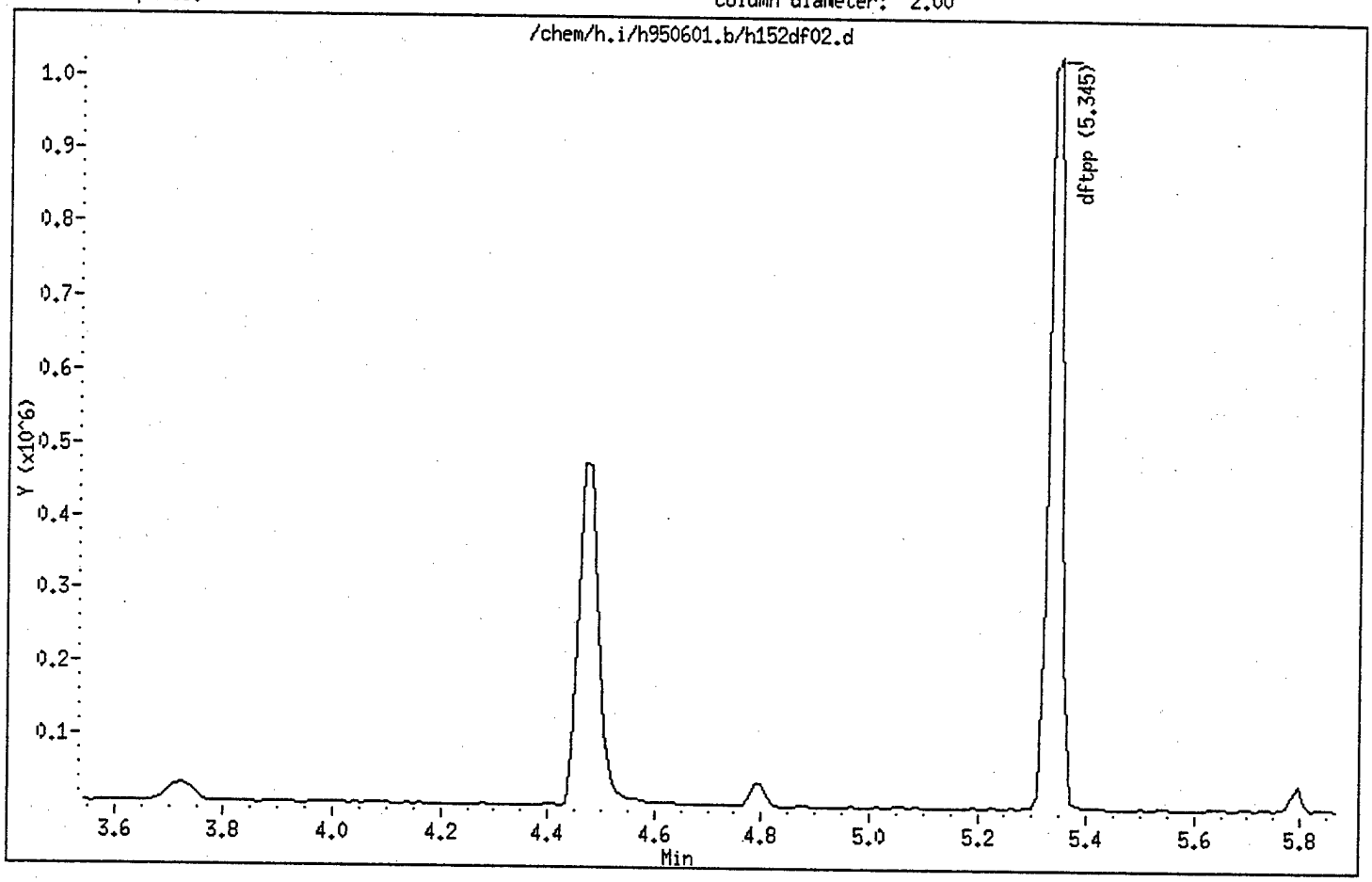
Sample Info: 50 NG DFTPP

Volume Injected (uL): 2.0

Operator: LH

Column phase:

Column diameter: 2.00



Data File: /chem/h.i/h950601.b/h152df02.d
Date : 01-JUN-1995 09:44
Client ID:
Sample Info: 50 NG DFTPP
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 2.00

Data File: h152df02.d
Spectrum : Avg. Scans 152-154 (5.34), Background Scan 148
Largest m/z: 197.90
Number of peaks: 161

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.95	197	106.90	11520	171.80	384	244.00	9158
37.90	904	107.90	1823	173.00	378	244.90	1044
38.90	4919	109.90	27328	173.90	835	245.90	1365
39.80	229	110.90	3789	174.90	1337	246.90	167
40.90	385	111.90	424	175.90	509	248.90	173
48.90	588	116.90	11888	176.80	651	254.90	41976
49.90	13013	117.80	950	178.90	3436	255.90	6177
50.90	47288	121.90	878	179.90	1938	257.00	422
51.90	2221	122.90	1149	180.80	1064	257.90	2419
54.90	461	123.90	590	185.00	649	258.90	198
55.90	1622	124.90	518	185.90	10814	264.85	957
56.90	3264	126.90	46688	186.90	3054	272.95	1316
60.90	442	127.90	3660	187.80	167	273.95	3587
61.90	586	128.90	20824	188.90	555	274.95	19656
63.00	1533	129.90	1739	190.90	169	275.95	2567
65.00	720	130.90	214	191.90	881	276.85	1408
68.90	54904	133.80	453	192.90	881	292.95	240
72.85	183	134.85	1320	196.00	2972	295.95	5208
73.95	3987	135.85	567	197.90	94968	296.90	635
74.85	6640	136.85	821	198.90	6279	302.90	490
75.95	1996	140.85	2428	199.85	415	314.90	526
76.95	44256	141.85	760	201.55	431	323.00	1656
77.95	3127	142.85	512	202.85	462	326.90	208
78.95	3096	145.95	440	203.95	2772	333.95	831
79.95	1864	146.85	1019	204.95	4793	345.85	186
80.95	3099	147.85	2799	205.95	19024	351.95	420
81.95	686	148.85	549	206.95	2471	352.85	199
82.95	653	152.95	573	207.85	578	353.85	246
84.85	635	153.95	494	210.85	786	364.80	2133
85.85	975	154.95	1177	216.85	5079	371.90	682
86.85	203	155.95	1515	217.95	586	402.85	187
90.95	712	156.85	362	220.95	5326	420.95	168
91.95	668	157.85	400	222.85	1012	422.95	2488
92.95	5566	158.95	176	223.95	10070	423.95	191
93.95	207	159.95	571	224.95	2535	441.00	6977

Data File: /chem/h.i/h950601.b/h152df02.d
Date : 01-JUN-1995 09:44
Client ID:
Sample Info: 50 NG DFTPP
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 2.00

Data File: h152df02.d
Spectrum : Avg. Scans 152-154 (5.34), Background Scan 148
Largest m/z: 197.90
Number of peaks: 161

m/z	Y	m/z	Y	m/z	Y	m/z	Y
97.95	4015	160.95	940	226.95	4188	441.90	44528
98.95	3237	164.95	830	227.85	625	443.00	8655
100.95	1667	166.05	578	228.85	780	444.00	765
102.80	621	166.90	4820	230.95	401		
103.90	990	167.80	2911	241.90	495		
104.90	812	168.90	405	243.00	363		

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-1995 11:56
End Cal Date : 26-MAY-1995 14:10
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/j.i/j950531.b/jclpw.m
Cal Date : 31-May-1995 14:00 patti
Curve Type : Average

Calibration File Names:
Level 1: /chem/j.i/j950526.b/j146ic1.d
Level 2: /chem/j.i/j950526.b/j146ic2.d
Level 3: /chem/j.i/j950526.b/j146ic3.d
Level 4: /chem/j.i/j950526.b/j146ic4.d
Level 5: /chem/j.i/j950526.b/j146ic5.d

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
2 Pyridine	0.77992	1.05510	1.08459	1.22340	1.29302	1.08721	18.186
5 Phenol	1.68549	1.83563	1.67620	1.77861	1.86410	1.76800	4.829
6 Aniline	1.38704	1.74462	1.59096	1.78273	1.92342	1.68575	12.142
7 bis(2-Chloroethyl)ether	1.60453	1.72947	1.40095	1.41415	1.34975	1.49977	10.717
9 2-Chlorophenol	1.24004	1.29070	1.21088	1.23794	1.23382	1.24268	2.355
10 1,3-Dichlorobenzene	1.33097	1.45539	1.36648	1.42455	1.44254	1.40398	3.784
12 1,4-Dichlorobenzene	1.62294	1.63329	1.51281	1.52990	1.51502	1.56279	3.846
13 Benzyl alcohol	0.34822	0.68019	0.67544	0.79273	0.80726	0.66077	28.023
15 1,2-Dichlorobenzene	1.30670	1.42197	1.29617	1.35185	1.33196	1.34173	3.715
16 2-Methylphenol	0.98761	1.20306	1.10316	1.20029	1.21259	1.14134	8.478
17 ortho-Cresol	0.98761	1.20306	1.10316	1.20029	1.21259	1.14134	8.478
18 bis(2-chloroisopropyl)ether	1.62770	1.67757	1.51742	1.59891	1.60667	1.60565	3.617
19 4-Methylphenol	0.83847	1.10927	1.03746	1.25876	1.28422	1.10564	16.391
20 meta,para-Cresol	0.83847	1.10927	1.03746	1.25876	1.28422	1.10564	16.391
21 N-Nitroso-di-n-propylamine	0.80015	0.89792	0.87702	0.95102	0.80492	0.86621	7.400
22 Hexachloroethane	0.59377	0.62790	0.58272	0.60267	0.60124	0.60166	2.770
24 Nitrobenzene	0.34335	0.38715	0.36852	0.38493	0.39974	0.37674	5.766
25 Isophorone	0.69882	0.77691	0.76797	0.78824	0.82380	0.77115	5.921
26 2-Nitrophenol	0.17858	0.20501	0.20068	0.20867	0.21612	0.20181	7.020
27 2,4-Dimethylphenol	0.30957	0.35400	0.34236	0.35178	0.36535	0.34461	6.161
28 Benzoic acid	0.01265	0.04105	0.02247	0.01335	0.03242	0.02439	50.451
29 bis(2-Chloroethoxy)methane	0.39611	0.43120	0.41412	0.42822	0.44771	0.42347	4.581
30 2,4-Dichlorophenol	0.22910	0.28035	0.27801	0.29268	0.30842	0.27771	10.707
31 1,2,4-Trichlorobenzene	0.31047	0.33025	0.30478	0.31199	0.31884	0.31527	3.096
33 Naphthalene	0.98942	1.03363	0.95453	0.97634	1.00512	0.99181	3.008
34 4-Chloroaniline	0.32735	0.40091	0.39015	0.40484	0.41757	0.38816	9.115

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-1995 11:56
End Cal Date : 26-MAY-1995 14:10
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/j.i/j950531.b/jclpw.m
Cal Date : 31-May-1995 14:00 patti
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
35 Hexachlorobutadiene	0.17250	0.18101	0.16894	0.17065	0.17693	0.17401	2.827
36 4-Chloro-3-methylphenol	0.25654	0.30684	0.29334	0.30764	0.31872	0.29662	8.139
37 2-Methylnaphthalene	0.63049	0.69747	0.67904	0.68333	0.71085	0.68024	4.483
38 Hexachlorocyclopentadiene	0.10728	0.18985	0.20312	0.24621	0.27198	0.20369	31.010
39 2,4,6-Trichlorophenol	0.28894	0.35501	0.34071	0.37814	0.41048	0.35465	12.752
40 2,4,5-Trichlorophenol	0.35915	0.36892	0.39052	0.37402	0.40556	0.37963	4.851
42 2-Chloronaphthalene	1.10532	1.18410	1.09875	1.13526	1.14655	1.13400	3.034
43 2-Nitroaniline	0.31997	0.39121	0.37206	0.39453	0.40690	0.37694	9.075
44 Dimethylphthalate	1.31376	1.44367	1.34783	1.38103	1.18218	1.33370	7.297
45 2,6-Dinitrotoluene	0.28992	0.33519	0.31617	0.31721	0.29076	0.30985	6.245
46 Acenaphthylene	1.82987	1.96176	1.80184	1.86697	1.89308	1.87071	3.297
47 3-Nitroaniline	0.27509	0.33533	0.31284	0.34823	0.32914	0.32013	8.813
49 Acenaphthene	1.08781	1.14783	1.05987	1.08897	1.10260	1.09742	2.932
50 2,4-Dinitrophenol	0.05231	0.13526	0.11093	0.18839	0.20167	0.13771	43.983
51 4-Nitrophenol	0.11765	0.11685	0.10914	0.10637	0.14659	0.11932	13.410
52 Dibenzofuran	1.56653	1.69218	1.58664	1.63407	1.66308	1.62850	3.202
53 2,4-Dinitrotoluene	0.36593	0.44679	0.42498	0.45136	0.46146	0.43010	8.897
54 Diethylphthalate	1.29072	1.22744	1.11761	1.11437	1.11299	1.17262	6.997
55 4-Chlorophenyl-phenylether	0.60691	0.64934	0.59698	0.62112	0.63694	0.62226	3.432
56 Fluorene	1.27027	1.35186	1.24161	1.27347	1.29177	1.28579	3.194
57 4-Nitroaniline	0.31054	0.28312	0.27505	0.27771	0.28785	0.28685	4.927
58 4,6-Dinitro-2-methylphenol	0.09365	0.11168	0.12473	0.13101	0.16344	0.12490	20.701
59 n-Nitrosodiphenylamine	0.51751	0.55661	0.50542	0.45172	0.51535	0.50932	7.394
60 1,2-Diphenylhydrazine	2.11639	2.25530	2.04605	2.13042	2.46941	2.20351	7.564
62 4-Bromophenyl-phenylether	0.21555	0.23813	0.21945	0.22605	0.24014	0.22786	4.816
63 Hexachlorobenzene	0.24870	0.26169	0.24101	0.25437	0.29717	0.26059	8.370
64 Pentachlorophenol	0.07356	0.09252	0.11823	0.10296	0.13512	0.10448	22.595
66 Phenanthrene	1.22071	1.37992	1.27577	1.35915	1.55210	1.35753	9.301
67 Anthracene	1.20822	1.21851	1.07831	1.08610	1.25533	1.16929	6.966
68 Carbazole	0.85415	1.00880	0.85410	0.93476	1.09291	0.94894	10.861
69 Di-n-butylphthalate	1.37355	1.46386	1.34546	1.40227	1.59573	1.43617	6.921
70 Fluoranthene	1.13518	1.13291	1.04650	1.08960	1.26260	1.13336	7.136
71 Pyrene	1.36490	1.50002	1.42034	1.39482	1.44048	1.42411	3.582
73 Butylbenzylphthalate	0.74177	0.80787	0.75669	0.76528	0.78793	0.77191	3.387

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INITIAL CALIBRATION DATA

Start Cal Date : 26-MAY-1995 11:56
End Cal Date : 26-MAY-1995 14:10
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/j.i/j950531.b/jclpw.m
Cal Date : 31-May-1995 14:00 patti
Curve Type : Average

	Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
74	3,3'-Dichlorobenzidine	0.36960	0.41264	0.37440	0.43446	0.44697	0.40761	8.536
75	Benzo[a]anthracene	1.21589	1.27531	1.16962	1.22308	1.25168	1.22712	3.253
77	Chrysene	1.11474	1.18861	1.13136	1.15461	1.16676	1.15122	2.524
78	bis(2-Ethylhexyl)phthalate	1.03828	1.10640	0.99426	1.00901	1.04135	1.03786	4.156
79	Di-n-octylphthalate	2.65101	2.89542	2.77873	3.02553	3.28910	2.92796	8.365
80	Benzo[b]fluoranthene	1.52396	1.82303	2.00794	1.82066	1.98171	1.83146	10.519
81	Benzo[k]fluoranthene	1.87627	1.87065	1.45400	1.80557	1.83545	1.76839	10.069
82	Benzo[a]pyrene	1.43549	1.55226	1.45350	1.52725	1.54369	1.50244	3.596
84	Indeno[1,2,3-cd]pyrene	1.34641	1.46307	1.22212	1.28163	1.33992	1.33063	6.727
85	Dibenz[a,h]anthracene	1.12777	1.20045	1.04406	1.09377	1.13599	1.12041	5.135
86	Benzo[g,h,i]perylene	1.06003	1.13081	0.97426	1.01119	1.06424	1.04811	5.657
96	Benzidine	0.17113	0.30425	0.28642	0.32556	0.33233	0.28394	23.107
$ 3	2-Fluorophenol	1.17076	1.02124	0.99437	1.07619	1.04647	1.06181	6.406
$ 4	Phenol-d5	1.39906	1.53868	1.42866	1.52988	1.62407	1.50407	6.037
$ 8	2-Chlorophenol-d4	1.16753	1.35318	1.15438	1.18670	1.19006	1.21037	6.704
$ 14	1,2-Dichlorobenzene-d4	0.43750	0.50606	0.43365	0.44246	0.44438	0.45281	6.640
$ 23	Nitrobenzene-d5	0.36062	0.38916	0.36507	0.38223	0.39756	0.37893	4.151
$ 41	2-Fluorobiphenyl	1.25776	1.36863	1.25835	1.31831	1.34682	1.30998	3.866
$ 61	2,4,6-Tribromophenol	0.10651	0.11892	0.11151	0.12031	0.12501	0.11645	6.333
$ 72	Terphenyl-d14	0.93856	1.04479	0.98847	0.98450	1.00241	0.99174	3.846

SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic5.d
Lab Smp Id:
Inj Date : 31-MAY-1995 14:48
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD020
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 6
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	1.990	1.980	(0.523)	158008	16	8
5 Phenol	94.00	3.543	3.545	(0.931)	171788	20	10
6 Aniline	93.00	3.543	3.545	(0.931)	193558	21	10
7 bis(2-Chloroethyl)ether	93.00	3.590	3.592	(0.944)	152625	19	9
9 2-Chlorophenol	128.00	3.649	3.651	(0.959)	113849	20	10
10 1,3-Dichlorobenzene	146.00	3.768	3.770	(0.991)	116977	20	10
12 1,4-Dichlorobenzene	146.00	3.815	3.817	(1.003)	111248	19	10
13 Benzyl alcohol	108.00	3.934	3.936	(1.034)	77985	20	10
15 1,2-Dichlorobenzene	146.00	3.981	3.983	(1.047)	106559	19	10
16 2-Methylphenol	108.00	4.052	4.054	(1.065)	108450	20	10
18 bis(2-chloroisopropyl)ether	45.00	4.076	4.078	(1.072)	239784	20	10
19 4-Methylphenol	108.00	4.183	4.185	(1.100)	109632	21	10
21 N-Nitroso-di-n-propylamine	70.00	4.194	4.196	(1.103)	103655	20	10
22 Hexachloroethane	117.00	4.254	4.256	(1.118)	59240	20	10
24 Nitrobenzene	77.00	4.325	4.327	(0.869)	143073	19	10
25 Isophorone	82.00	4.538	4.552	(0.912)	279407	20	10
26 2-Nitrophenol	139.00	4.633	4.623	(0.931)	48104	19	10(a)
27 2,4-Dimethylphenol	107.00	4.680	4.682	(0.940)	117972	19	10
28 Benzoic acid	122.00	4.775	4.801	(0.960)	18154	15	8(a)
29 bis(2-Chloroethoxy)methane	93.00	4.763	4.765	(0.957)	156914	20	10
30 2,4-Dichlorophenol	162.00	4.858	4.860	(0.976)	72389	19	10
31 1,2,4-Trichlorobenzene	180.00	4.941	4.943	(0.993)	70204	19	9
33 Naphthalene	128.00	4.988	4.990	(1.002)	303245	20	10
34 4-Chloroaniline	127.00	5.059	5.062	(1.017)	120724	20	10
35 Hexachlorobutadiene	225.00	5.178	5.180	(1.040)	36228	19	10
36 4-Chloro-3-methylphenol	107.00	5.557	5.559	(1.117)	96705	19	10
37 2-Methylnaphthalene	142.00	5.664	5.666	(1.138)	178524	19	10
38 Hexachlorocyclopentadiene	237.00	5.901	5.903	(0.877)	26337	16	8
39 2,4,6-Trichlorophenol	196.00	5.984	5.986	(0.889)	36325	18	9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.031	6.021	(0.896)	45463	19	9 (a)
42	2-Chloronaphthalene	162.00	6.150	6.152	(0.914)	149685	19	9
43	2-Nitroaniline	65.00	6.280	6.282	(0.933)	72306	18	9 (a)
44	Dimethylphthalate	163.00	6.505	6.507	(0.967)	190286	19	10
45	2,6-Dinitrotoluene	165.00	6.564	6.567	(0.975)	39746	18	9
46	Acenaphthylene	152.00	6.564	6.567	(0.975)	265160	20	10
47	3-Nitroaniline	138.00	6.695	6.697	(0.995)	51269	19	10 (a)
49	Acenaphthene	153.00	6.754	6.756	(1.004)	156473	19	10
51	4-Nitrophenol	109.00	6.908	6.910	(1.026)	24033	19	10 (aQM)
52	Dibenzofuran	168.00	6.920	6.922	(1.028)	208482	19	10
53	2,4-Dinitrotoluene	165.00	6.956	6.958	(1.033)	47208	18	9
54	Diethylphthalate	149.00	7.216	7.218	(1.072)	208938	20	10
55	4-Chlorophenyl-phenylether	204.00	7.275	7.278	(1.081)	64354	19	10
56	Fluorene	166.00	7.264	7.266	(1.079)	166505	19	10
57	4-Nitroaniline	138.00	7.311	7.325	(1.086)	46274	17	9 (a)
58	4,6-Dinitro-2-methylphenol	198.00	7.382	7.384	(0.900)	6801	12	6 (aM)
59	n-Nitrosodiphenylamine	169.00	7.394	7.396	(0.902)	99124	20	10
60	1,2-Diphenylhydrazine	77.00	7.430	7.432	(0.906)	612085	20	10
62	4-Bromophenyl-phenylether	248.00	7.761	7.763	(0.947)	34862	19	10
63	Hexachlorobenzene	283.70	7.904	7.906	(0.964)	39002	20	10
64	Pentachlorophenol	265.50	8.105	8.095	(0.988)	8202	12	6 (aM)
66	Phenanthrene	178.00	8.223	8.226	(1.003)	212146	20	10
67	Anthracene	178.00	8.271	8.273	(1.009)	211644	19	10
68	Carbazole	167.00	8.437	8.451	(1.029)	190167	19	10
69	Di-n-butylphthalate	149.00	8.875	8.877	(1.082)	351473	20	10
70	Fluoranthene	202.00	9.432	9.434	(1.150)	181796	19	9
71	Pyrene	202.00	9.657	9.659	(0.885)	186938	21	10
73	Butylbenzylphthalate	149.00	10.380	10.382	(0.951)	150631	20	10
74	3,3'-Dichlorobenzidine	252.00	10.890	10.892	(0.998)	49869	19	10
75	Benzo[a]anthracene	228.00	10.902	10.904	(0.999)	142715	20	10
77	Chrysene	228.00	10.949	10.951	(1.003)	124479	20	10
78	bis(2-Ethylhexyl)phthalate	149.00	11.032	11.034	(1.011)	204172	21	10
79	Di-n-octylphthalate	149.00	11.779	11.781	(0.921)	317442	19	10
80	Benzo[b]fluoranthene	252.00	12.241	12.243	(0.957)	136306	20	10
81	Benzo[k]fluoranthene	252.00	12.276	12.278	(0.960)	126303	19	9
82	Benzo[a]pyrene	252.00	12.703	12.705	(0.994)	104704	20	10
84	Indeno[1,2,3-cd]pyrene	276.00	14.445	14.447	(1.130)	106223	20	10
85	Dibenz[a,h]anthracene	278.00	14.480	14.483	(1.133)	89606	20	10
86	Benzo[g,h,i]perylene	276.00	14.860	14.862	(1.162)	88355	19	10
$ 3	2-Fluorophenol	112.00	2.820	2.822	(0.741)	122127	20	10 (R)
$ 4	Phenol-d5	99.00	3.531	3.533	(0.928)	159662	21	10
$ 61	2,4,6-Tribromophenol	329.70	7.536	7.538	(0.919)	15152	18	9
$ 23	Nitrobenzene-d5	82.00	4.313	4.315	(0.867)	134065	19	10 (R)
$ 41	2-Fluorobiphenyl	172.00	6.055	6.057	(0.900)	157492	19	9 (R)
$ 72	Terphenyl-d14	244.00	9.847	9.849	(0.902)	117904	20	10 (R)
* 11	1,4-Dichlorobenzene-d4	152.00	3.803	3.805	(1.000)	146881	40	
* 32	Naphthalene-d8	136.00	4.977	4.979	(1.000)	577597	40	
* 48	Acenaphthene-d10	164.00	6.730	6.721	(1.000)	272047	40	
* 65	Phenanthrene-d10	188.00	8.200	8.202	(1.000)	342929	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 76 Chrysene-d12	240.00	10.914	10.916	(1.000)	236546	40	
* 83 Perylene-d12	264.00	12.786	12.788	(1.000)	153895	40	
17 ortho-Cresol	108.00	4.052	4.054	(1.065)	108450	20	10
20 meta,para-Cresol	108.00	4.183	4.185	(1.100)	109622	21	10
96 Benzidine	184.00	9.574	9.577	(0.877)	72798	21	10

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic5.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD020

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	146881	28.53
32 Naphthalene-d8	440783	220392	881566	577597	31.04
48 Acenaphthene-d10	201424	100712	402848	272047	35.06
65 Phenanthrene-d10	261616	130808	523232	342929	31.08
76 Chrysene-d12	195160	97580	390320	236546	21.21
83 Perylene-d12	123342	61671	246684	153895	24.77

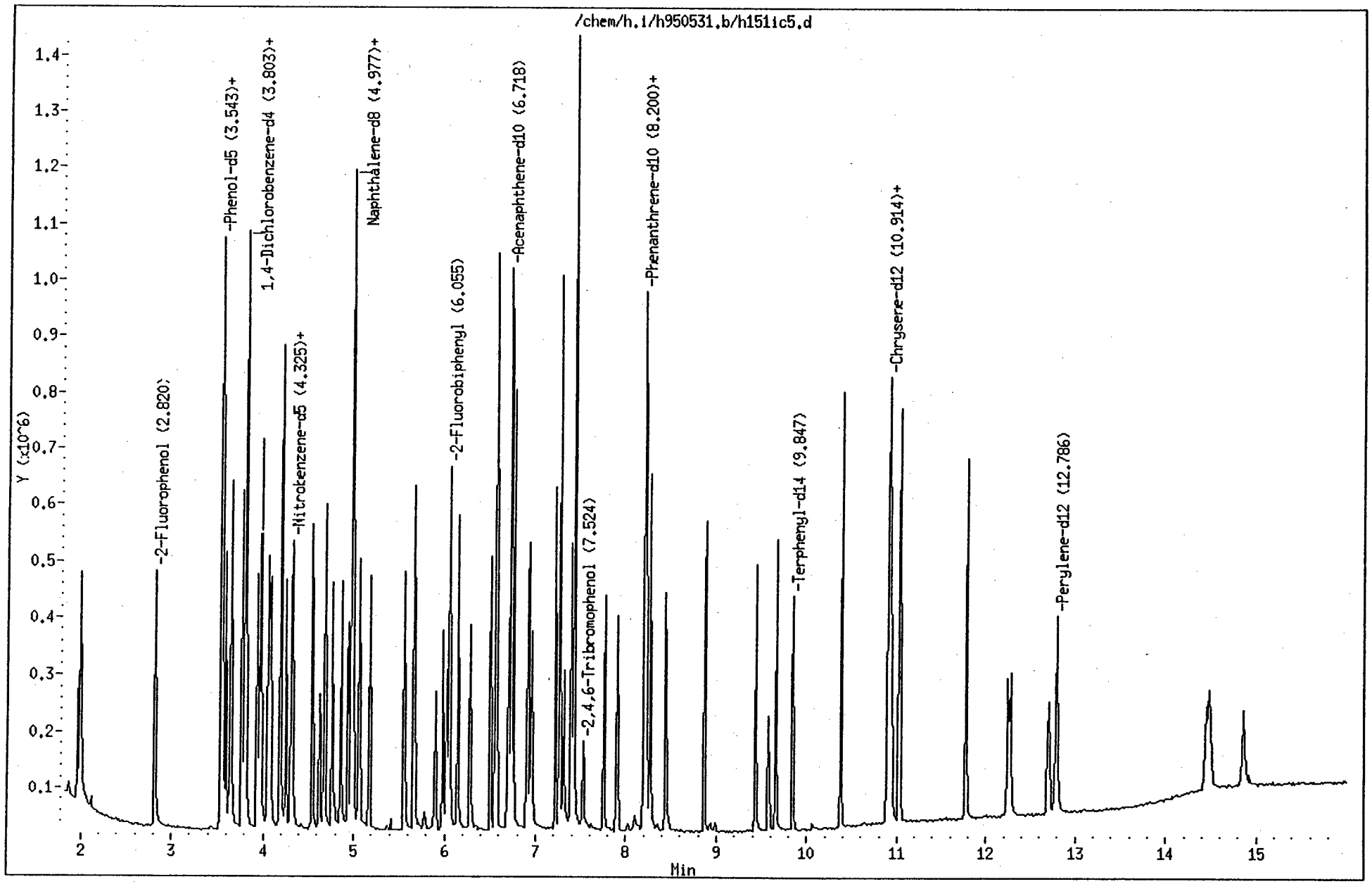
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.05
32 Naphthalene-d8	4.98	4.48	5.48	4.98	-0.04
48 Acenaphthene-d10	6.72	6.22	7.22	6.73	0.15
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	-0.03
76 Chrysene-d12	10.92	10.42	11.42	10.91	-0.02
83 Perylene-d12	12.79	12.29	13.29	12.79	-0.02

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.

Data File: /chem/h.i/h950531.b/h151ic5.d
Date : 31-MAY-95 14:48
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic6.d
Lab Smp Id:
Inj Date : 31-MAY-1995 15:09
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD050
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	1.980	1.980	(0.520)	381957	50	25
5 Phenol	94.00	3.545	3.545	(0.931)	339871	50	25
6 Aniline	93.00	3.545	3.545	(0.931)	363825	50	25
7 bis(2-Chloroethyl)ether	93.00	3.592	3.592	(0.944)	313152	50	25
9 2-Chlorophenol	128.00	3.651	3.651	(0.960)	225798	50	25
10 1,3-Dichlorobenzene	146.00	3.770	3.770	(0.991)	230091	50	25
12 1,4-Dichlorobenzene	146.00	3.817	3.817	(1.003)	222401	50	25
13 Benzyl alcohol	108.00	3.936	3.936	(1.034)	151878	50	25
15 1,2-Dichlorobenzene	146.00	3.983	3.983	(1.047)	213746	50	25
16 2-Methylphenol	108.00	4.054	4.054	(1.065)	211218	50	25
18 bis(2-chloroisopropyl)ether	45.00	4.078	4.078	(1.072)	471874	50	25
19 4-Methylphenol	108.00	4.185	4.185	(1.100)	205508	50	25
21 N-Nitroso-di-n-propylamine	70.00	4.196	4.196	(1.103)	204007	50	25
22 Hexachloroethane	117.00	4.256	4.256	(1.118)	117904	50	25
24 Nitrobenzene	77.00	4.327	4.327	(0.869)	283127	50	25
25 Isophorone	82.00	4.552	4.552	(0.914)	540834	50	25
26 2-Nitrophenol	139.00	4.623	4.623	(0.929)	96524	50	25
27 2,4-Dimethylphenol	107.00	4.682	4.682	(0.940)	231433	50	25
28 Benzoic acid	122.00	4.801	4.801	(0.964)	45166	50	25
29 bis(2-Chloroethoxy)methane	93.00	4.765	4.765	(0.957)	305804	50	25
30 2,4-Dichlorophenol	162.00	4.860	4.860	(0.976)	142725	50	25
31 1,2,4-Trichlorobenzene	180.00	4.943	4.943	(0.993)	143025	50	25
33 Naphthalene	128.00	4.990	4.990	(1.002)	584560	50	25
34 4-Chloroaniline	127.00	5.062	5.062	(1.017)	235323	50	25
35 Hexachlorobutadiene	225.00	5.180	5.180	(1.040)	70919	50	25
36 4-Chloro-3-methylphenol	107.00	5.559	5.559	(1.117)	190207	50	25
37 2-Methylnaphthalene	142.00	5.666	5.666	(1.138)	349367	50	25
38 Hexachlorocyclopentadiene	237.00	5.903	5.903	(0.878)	60387	50	25
39 2,4,6-Trichlorophenol	196.00	5.986	5.986	(0.891)	73501	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.021	6.021	(0.896)	89453	50	25
	42 2-Chloronaphthalene	162.00	6.152	6.152	(0.915)	295802	50	25
	43 2-Nitroaniline	65.00	6.282	6.282	(0.935)	145379	50	25
	44 Dimethylphthalate	163.00	6.507	6.507	(0.968)	365363	50	25
	45 2,6-Dinitrotoluene	165.00	6.567	6.567	(0.977)	79786	50	25
	46 Acenaphthylene	152.00	6.567	6.567	(0.977)	499162	50	25
	47 3-Nitroaniline	138.00	6.697	6.697	(0.996)	98902	50	25
	49 Acenaphthene	153.00	6.756	6.756	(1.005)	297851	50	25
	50 2,4-Dinitrophenol	184.00	6.815	6.815	(1.014)	6383	50	25 (M)
	51 4-Nitrophenol	109.00	6.910	6.910	(1.028)	45806	50	25
	52 Dibenzofuran	168.00	6.922	6.922	(1.030)	402130	50	25
	53 2,4-Dinitrotoluene	165.00	6.958	6.958	(1.035)	95419	50	25
	54 Diethylphthalate	149.00	7.218	7.218	(1.074)	393874	50	25
	55 4-Chlorophenyl-phenylether	204.00	7.278	7.278	(1.083)	123652	50	25
	56 Fluorene	166.00	7.266	7.266	(1.081)	323624	50	25
	57 4-Nitroaniline	138.00	7.325	7.325	(1.090)	98042	50	25
	58 4,6-Dinitro-2-methylphenol	198.00	7.384	7.384	(0.900)	21106	50	25 (M)
	59 n-Nitrosodiphenylamine	169.00	7.396	7.396	(0.902)	184449	50	25
	60 1,2-Diphenylhydrazine	77.00	7.432	7.432	(0.906)	1155693	50	25
	62 4-Bromophenyl-phenylether	248.00	7.763	7.763	(0.947)	68283	50	25
	63 Hexachlorobenzene	283.70	7.906	7.906	(0.964)	74795	50	25
	64 Pentachlorophenol	265.50	8.095	8.095	(0.987)	26129	50	25 (M)
	66 Phenanthrene	178.00	8.226	8.226	(1.003)	409912	50	25
	67 Anthracene	178.00	8.273	8.273	(1.009)	423089	50	25
	68 Carbazole	167.00	8.451	8.451	(1.030)	378067	50	25
	69 Di-n-butylphthalate	149.00	8.877	8.877	(1.082)	673666	50	25
	70 Fluoranthene	202.00	9.434	9.434	(1.150)	365338	50	25
	71 Pyrene	202.00	9.659	9.659	(0.885)	374033	50	25
	73 Butylbenzylphthalate	149.00	10.382	10.382	(0.951)	304084	50	25
	74 3,3'-Dichlorobenzidine	252.00	10.892	10.892	(0.998)	106972	50	25
	75 Benzo[a]anthracene	228.00	10.904	10.904	(0.999)	296729	50	25
	77 Chrysene	228.00	10.951	10.951	(1.003)	258173	50	25
	78 bis(2-Ethylhexyl)phthalate	149.00	11.034	11.034	(1.011)	402654	50	25
	79 Di-n-octylphthalate	149.00	11.781	11.781	(0.921)	658002	50	25
	80 Benzo[b]fluoranthene	252.00	12.243	12.243	(0.957)	277456	50	25
	81 Benzo[k]fluoranthene	252.00	12.278	12.278	(0.960)	269838	50	25
	82 Benzo[a]pyrene	252.00	12.705	12.705	(0.994)	213543	50	25
	84 Indeno[1,2,3-cd]pyrene	276.00	14.447	14.447	(1.130)	218143	50	25
	85 Dibenz[a,h]anthracene	278.00	14.483	14.483	(1.133)	181511	50	25
	86 Benzo[g,h,i]perylene	276.00	14.862	14.862	(1.162)	182378	50	25
$	3 2-Fluorophenol	112.00	2.822	2.822	(0.742)	231511	50	25
$	4 Phenol-d5	99.00	3.533	3.533	(0.928)	297261	50	25
$	61 2,4,6-Tribromophenol	329.70	7.538	7.538	(0.919)	32558	50	25
$	23 Nitrobenzene-d5	82.00	4.315	4.315	(0.867)	264640	50	25
$	41 2-Fluorobiphenyl	172.00	6.057	6.057	(0.901)	310387	50	25
$	72 Terphenyl-d14	244.00	9.849	9.849	(0.902)	245238	50	25
*	11 1,4-Dichlorobenzene-d4	152.00	3.805	3.805	(1.000)	114276	40	
*	32 Naphthalene-d8	136.00	4.979	4.979	(1.000)	440783	40	
*	48 Acenaphthene-d10	164.00	6.721	6.721	(1.000)	201424	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.202	8.202	(1.000)	261616	40	
76 Chrysene-d12	240.00	10.916	10.916	(1.000)	195160	40	
83 Perylene-d12	264.00	12.788	12.788	(1.000)	123342	40	
17 ortho-Cresol	108.00	4.054	4.054	(1.065)	211218	50	25
20 meta,para-Cresol	108.00	4.185	4.185	(1.100)	205508	50	25
96 Benzidine	184.00	9.577	9.577	(0.877)	144034	50	25

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic6.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531 b/hclpw.m
Misc Info: 950531 STD050

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	114276	0.00
32 Naphthalene-d8	440783	220392	881566	440783	0.00
48 Acenaphthene-d10	201424	100712	402848	201424	0.00
65 Phenanthrene-d10	261616	130808	523232	261616	0.00
76 Chrysene-d12	195160	97580	390320	195160	0.00
83 Perylene-d12	123342	61671	246684	123342	0.00

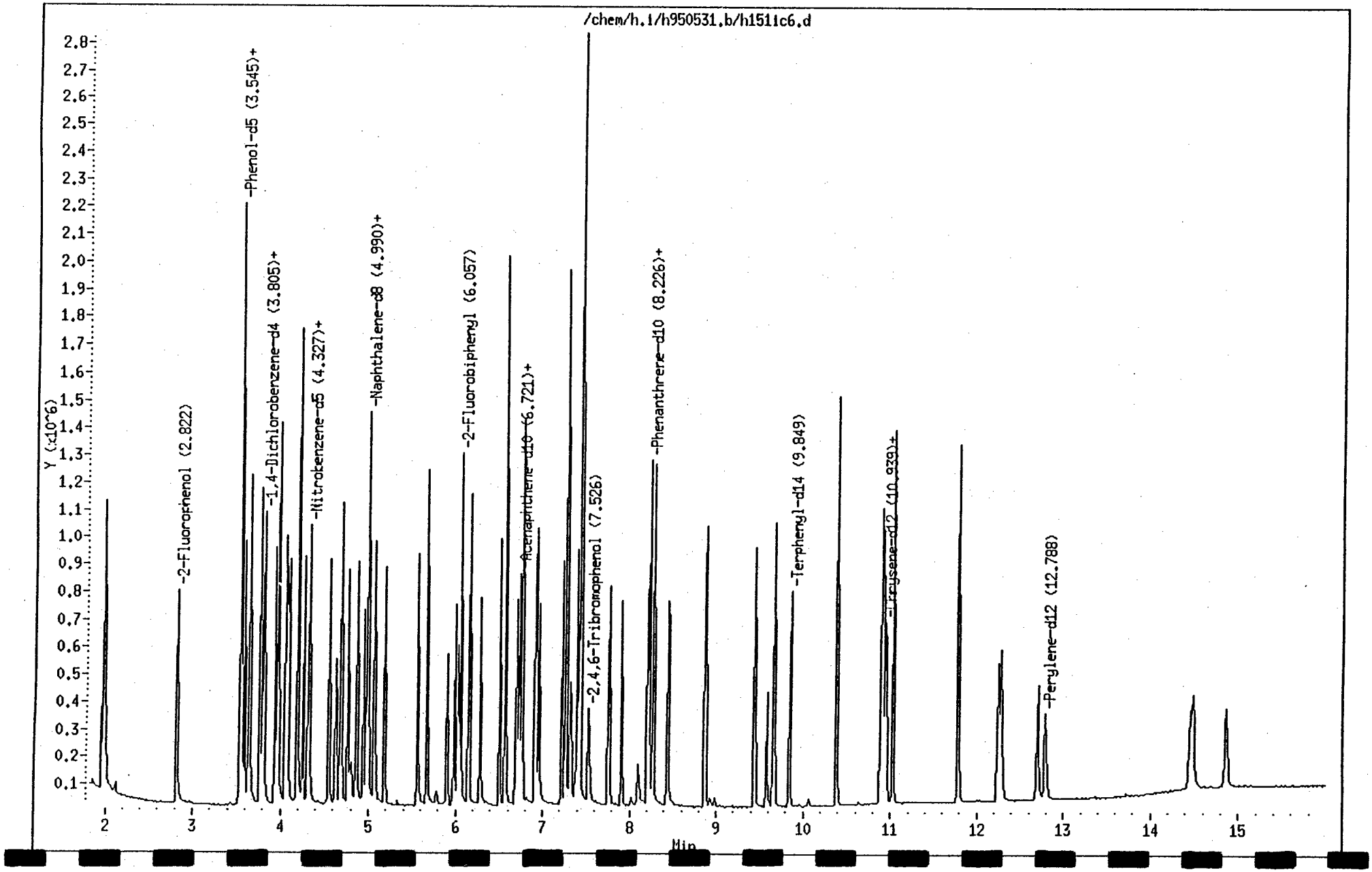
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.81	0.00
32 Naphthalene-d8	4.98	4.48	5.48	4.98	0.00
48 Acenaphthene-d10	6.72	6.22	7.22	6.72	0.00
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	0.00
76 Chrysene-d12	10.92	10.42	11.42	10.92	0.00
83 Perylene-d12	12.79	12.29	13.29	12.79	0.00

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.

Data File: /chem/h.1/h950531.b/h1511c6.d
Date : 31-MAY-95 15:09
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.1

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic2.d
Lab Smp Id:
Inj Date : 31-MAY-1995 13:39
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD080
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	1.994	1.980	(0.524)	415953	65	32
5 Phenol	94.00	3.546	3.545	(0.931)	452360	79	40
6 Aniline	93.00	3.546	3.545	(0.931)	477001	78	39
7 bis(2-Chloroethyl)ether	93.00	3.593	3.592	(0.944)	401085	76	38
9 2-Chlorophenol	128.00	3.653	3.651	(0.960)	300575	79	40
10 1,3-Dichlorobenzene	146.00	3.771	3.770	(0.991)	312036	81	40
12 1,4-Dichlorobenzene	146.00	3.819	3.817	(1.003)	298630	80	40
13 Benzyl alcohol	108.00	3.937	3.936	(1.034)	186862	73	37
15 1,2-Dichlorobenzene	146.00	3.973	3.983	(1.044)	278099	78	39
16 2-Methylphenol	108.00	4.056	4.054	(1.065)	270133	76	38
18 bis(2-chloroisopropyl)ether	45.00	4.079	4.078	(1.072)	631030	80	40
19 4-Methylphenol	108.00	4.186	4.185	(1.100)	271793	79	39
21 N-Nitroso-di-n-propylamine	70.00	4.198	4.196	(1.103)	278803	82	41
22 Hexachloroethane	117.00	4.257	4.256	(1.118)	152901	77	39
24 Nitrobenzene	77.00	4.328	4.327	(0.871)	369220	78	39
25 Isophorone	82.00	4.541	4.552	(0.914)	707619	78	39
26 2-Nitrophenol	139.00	4.624	4.623	(0.931)	129809	80	40
27 2,4-Dimethylphenol	107.00	4.684	4.682	(0.943)	293210	76	38
28 Benzoic acid	122.00	4.802	4.801	(0.967)	74781	99	50
29 bis(2-Chloroethoxy)methane	93.00	4.755	4.765	(0.957)	395688	78	39
30 2,4-Dichlorophenol	162.00	4.861	4.860	(0.979)	189287	79	40
31 1,2,4-Trichlorobenzene	180.00	4.932	4.943	(0.993)	185827	78	39
33 Naphthalene	128.00	4.992	4.990	(1.005)	778645	80	40
34 4-Chloroaniline	127.00	5.063	5.062	(1.019)	308239	78	39
35 Hexachlorobutadiene	225.00	5.181	5.180	(1.043)	87978	74	37
36 4-Chloro-3-methylphenol	107.00	5.561	5.559	(1.119)	228043	72	36
37 2-Methylnaphthalene	142.00	5.667	5.666	(1.141)	469474	80	40
38 Hexachlorocyclopentadiene	237.00	5.904	5.903	(0.878)	76999	78	39
39 2,4,6-Trichlorophenol	196.00	5.975	5.986	(0.889)	93939	78	39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.023	6.021	(0.896)	121060	83	41
42	2-Chloronaphthalene	162.00	6.141	6.152	(0.914)	368554	76	38
43	2-Nitroaniline	65.00	6.272	6.282	(0.933)	189384	80	40
44	Dimethylphthalate	163.00	6.497	6.507	(0.967)	448981	75	38
45	2,6-Dinitrotoluene	165.00	6.556	6.567	(0.975)	99331	76	38
46	Acenaphthylene	152.00	6.568	6.567	(0.977)	662344	81	41
47	3-Nitroaniline	138.00	6.698	6.697	(0.996)	123741	77	38
49	Acenaphthene	153.00	6.746	6.756	(1.004)	387555	80	40
50	2,4-Dinitrophenol	184.00	6.817	6.815	(1.014)	6928	66	33 (M)
51	4-Nitrophenol	109.00	6.900	6.910	(1.026)	65329	87	44
52	Dibenzofuran	168.00	6.911	6.922	(1.028)	533414	81	41
53	2,4-Dinitrotoluene	165.00	6.947	6.958	(1.033)	121112	78	39
54	Diethylphthalate	149.00	7.220	7.218	(1.074)	530199	82	41
55	4-Chlorophenyl-phenylether	204.00	7.267	7.278	(1.081)	174721	86	43
56	Fluorene	166.00	7.255	7.266	(1.079)	420891	80	40
57	4-Nitroaniline	138.00	7.314	7.325	(1.088)	116367	73	36
58	4,6-Dinitro-2-methylphenol	198.00	7.374	7.384	(0.900)	22333	67	34 (M)
59	n-Nitrosodiphenylamine	169.00	7.397	7.396	(0.903)	244111	84	42
60	1,2-Diphenylhydrazine	77.00	7.421	7.432	(0.906)	1459953	80	40
62	4-Bromophenyl-phenylether	248.00	7.753	7.763	(0.946)	91961	86	43
63	Hexachlorobenzene	283.70	7.895	7.906	(0.964)	96450	82	41
64	Pentachlorophenol	265.50	8.085	8.095	(0.987)	30919	75	38 (M)
66	Phenanthrene	178.00	8.215	8.226	(1.003)	523738	81	41
67	Anthracene	178.00	8.262	8.273	(1.009)	558586	84	42
68	Carbazole	167.00	8.428	8.451	(1.029)	473529	80	40
69	Di-n-butylphthalate	149.00	8.855	8.877	(1.081)	928397	88	44
70	Fluoranthene	202.00	9.412	9.434	(1.149)	463439	81	40
71	Pyrene	202.00	9.637	9.659	(0.888)	469113	83	42
73	Butylbenzylphthalate	149.00	10.336	10.382	(0.952)	394828	86	43
74	3,3'-Dichlorobenzidine	252.00	10.834	10.892	(0.998)	128677	80	40
75	Benzo[a]anthracene	228.00	10.846	10.904	(0.999)	373049	84	42
77	Chrysene	228.00	10.893	10.951	(1.003)	328185	85	42
78	bis(2-Ethylhexyl)phthalate	149.00	10.964	11.034	(1.010)	515072	85	42
79	Di-n-octylphthalate	149.00	11.699	11.781	(0.922)	859115	87	44
80	Benzo[b]fluoranthene	252.00	12.161	12.243	(0.958)	291949	70	35
81	Benzo[k]fluoranthene	252.00	12.197	12.278	(0.961)	364490	90	45
82	Benzo[a]pyrene	252.00	12.611	12.705	(0.993)	253320	79	40
84	Indeno[1,2,3-cd]pyrene	276.00	14.342	14.447	(1.130)	257312	79	39
85	Dibenz[a,h]anthracene	278.00	14.365	14.483	(1.132)	213972	78	39
86	Benzo[g,h,i]perylene	276.00	14.733	14.862	(1.161)	211377	77	39
$ 3	2-Fluorophenol	112.00	2.823	2.822	(0.742)	331776	86	43
$ 4	Phenol-d5	99.00	3.534	3.533	(0.928)	390302	78	39
$ 61	2,4,6-Tribromophenol	329.70	7.528	7.538	(0.919)	44633	87	44
$ 23	Nitrobenzene-d5	82.00	4.304	4.315	(0.866)	360033	81	41
$ 41	2-Fluorobiphenyl	172.00	6.058	6.057	(0.901)	395240	78	39
$ 72	Terphenyl-d14	244.00	9.815	9.849	(0.904)	310442	84	42
* 11	1,4-Dichlorobenzene-d4	152.00	3.807	3.805	(1.000)	95746	40	
* 32	Naphthalene-d8	136.00	4.968	4.979	(1.000)	367914	40	
* 48	Acenaphthene-d10	164.00	6.722	6.721	(1.000)	164365	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.191	8.202	(1.000)	205720	40	
* 76 Chrysene-d12	240.00	10.858	10.916	(1.000)	146610	40	
* 83 Perylene-d12	264.00	12.694	12.788	(1.000)	92503	40	
17 ortho-Cresol	108.00	4.056	4.054	(1.065)	270133	76	38
20 meta,para-Cresol	108.00	4.186	4.185	(1.100)	271793	79	39
96 Benzidine	184.00	9.542	9.577	(0.879)	161688	75	37

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic2.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD080

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	95746	-16.22
32 Naphthalene-d8	440783	220392	881566	367914	-16.53
48 Acenaphthene-d10	201424	100712	402848	164365	-18.40
65 Phenanthrene-d10	261616	130808	523232	205720	-21.37
76 Chrysene-d12	195160	97580	390320	146610	-24.88
83 Perylene-d12	123342	61671	246684	92503	-25.00

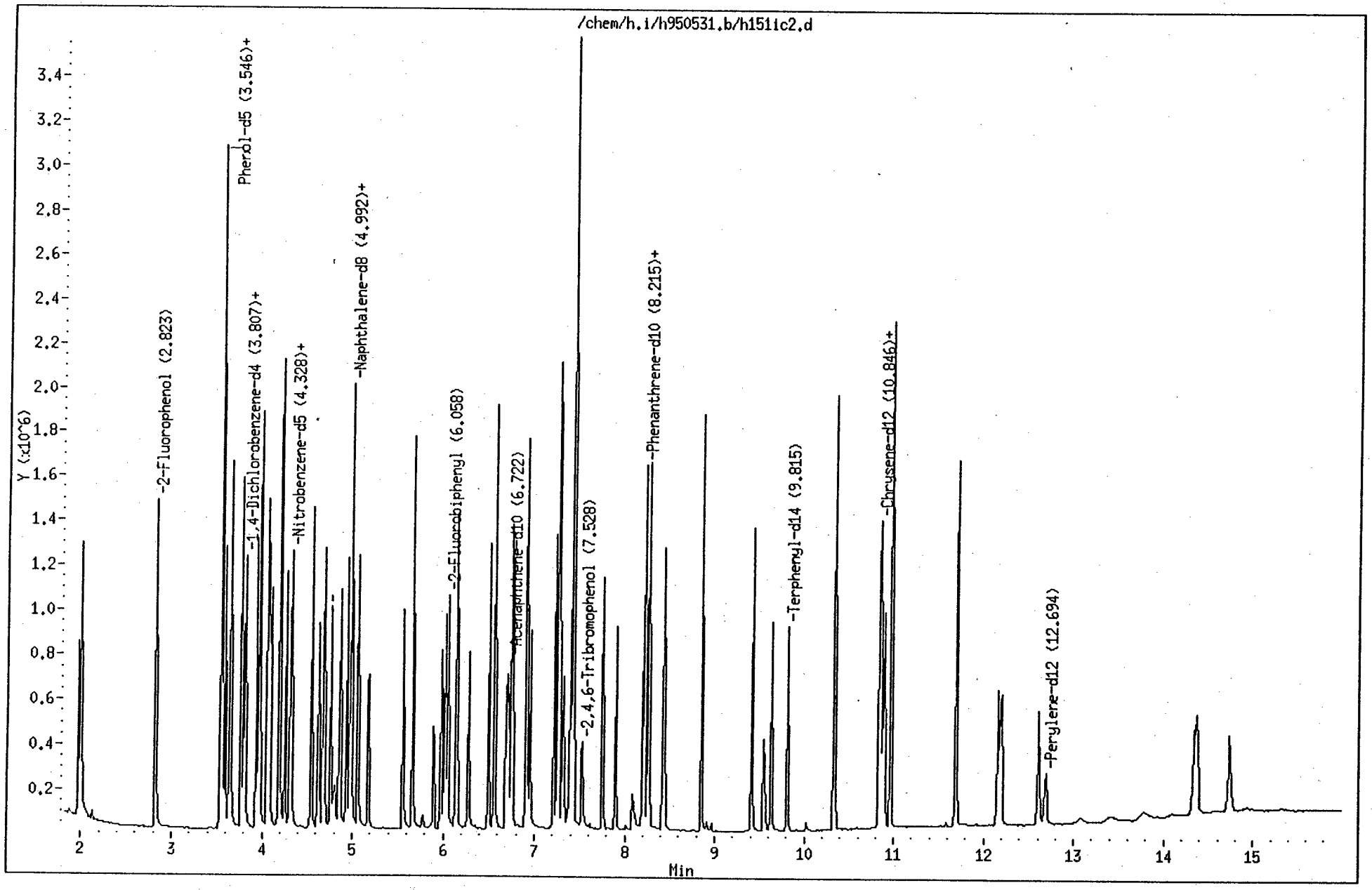
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.81	0.03
32 Naphthalene-d8	4.98	4.48	5.48	4.97	-0.21
48 Acenaphthene-d10	6.72	6.22	7.22	6.72	0.02
65 Phenanthrene-d10	8.20	7.70	8.70	8.19	-0.13
76 Chrysene-d12	10.92	10.42	11.42	10.86	-0.53
83 Perylene-d12	12.79	12.29	13.29	12.69	-0.73

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.

Data File: /chem/h.i/h950531.b/h151ic2.d
Date : 31-MAY-95 13:39
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic3.d
Lab Smp Id:
Inj Date : 31-MAY-1995 14:03
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD120
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	1.977	1.980	(0.520)	1448925	140	68
5	Phenol	94.00	3.553	3.545	(0.935)	1157643	120	61
6	Aniline	93.00	3.553	3.545	(0.935)	1273478	130	63
7	bis(2-Chloroethyl)ether	93.00	3.601	3.592	(0.947)	949420	110	54
9	2-Chlorophenol	128.00	3.648	3.651	(0.959)	803467	130	64
10	1,3-Dichlorobenzene	146.00	3.767	3.770	(0.991)	916193	140	72
12	1,4-Dichlorobenzene	146.00	3.814	3.817	(1.003)	940975	150	76
13	Benzyl alcohol	108.00	3.933	3.936	(1.034)	437407	100	52
15	1,2-Dichlorobenzene	146.00	3.980	3.983	(1.047)	798912	130	67
16	2-Methylphenol	108.00	4.051	4.054	(1.065)	645711	110	55
18	bis(2-chloroisopropyl)ether	45.00	4.087	4.078	(1.075)	1463198	110	56
19	4-Methylphenol	108.00	4.193	4.185	(1.103)	622430	110	54
21	N-Nitroso-di-n-propylamine	70.00	4.193	4.196	(1.103)	504947	89	44
22	Hexachloroethane	117.00	4.253	4.256	(1.118)	392199	120	60
24	Nitrobenzene	77.00	4.324	4.327	(0.871)	827718	140	69
25	Isophorone	82.00	4.549	4.552	(0.916)	1241155	110	54
26	2-Nitrophenol	139.00	4.620	4.623	(0.931)	300185	150	74
27	2,4-Dimethylphenol	107.00	4.679	4.682	(0.943)	607678	120	62
28	Benzoic acid	122.00	4.821	4.801	(0.971)	156445	160	82(M)
29	bis(2-Chloroethoxy)methane	93.00	4.750	4.765	(0.957)	748207	120	58
30	2,4-Dichlorophenol	162.00	4.857	4.860	(0.979)	372649	120	62
31	1,2,4-Trichlorobenzene	180.00	4.928	4.943	(0.993)	429131	140	71
33	Naphthalene	128.00	4.987	4.990	(1.005)	1666249	140	68
34	4-Chloroaniline	127.00	5.058	5.062	(1.019)	587433	120	59
35	Hexachlorobutadiene	225.00	5.165	5.180	(1.041)	212862	140	71
36	4-Chloro-3-methylphenol	107.00	5.544	5.559	(1.117)	431022	110	54
37	2-Methylnaphthalene	142.00	5.651	5.666	(1.138)	847470	120	58
38	Hexachlorocyclopentadiene	237.00	5.888	5.903	(0.878)	177232	200	100
39	2,4,6-Trichlorophenol	196.00	5.971	5.986	(0.890)	156095	150	74

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.006	6.021	(0.896)	202363	160	79
	42 2-Chloronaphthalene	162.00	6.137	6.152	(0.915)	620589	150	73
	43 2-Nitroaniline	65.00	6.267	6.282	(0.935)	277799	130	66
	44 Dimethylphthalate	163.00	6.480	6.507	(0.966)	597970	110	57
	45 2,6-Dinitrotoluene	165.00	6.540	6.567	(0.975)	143979	120	63
	46 Acenaphthylene	152.00	6.551	6.567	(0.977)	1015816	140	71
	47 3-Nitroaniline	138.00	6.682	6.697	(0.996)	181497	130	64
	49 Acenaphthene	153.00	6.729	6.756	(1.004)	572581	130	67
	50 2,4-Dinitrophenol	184.00	6.788	6.815	(1.012)	15749	170	86 (QM)
	51 4-Nitrophenol	109.00	6.883	6.910	(1.026)	97350	150	74
	52 Dibenzofuran	168.00	6.895	6.922	(1.028)	783292	140	68
	53 2,4-Dinitrotoluene	165.00	6.931	6.958	(1.034)	164423	120	60
	54 Diethylphthalate	149.00	7.191	7.218	(1.072)	640423	110	57
	55 4-Chlorophenyl-phenylether	204.00	7.239	7.278	(1.080)	231529	130	65
	56 Fluorene	166.00	7.239	7.266	(1.080)	615057	130	66
	57 4-Nitroaniline	138.00	7.298	7.325	(1.088)	170213	120	60
	58 4,6-Dinitro-2-methylphenol	198.00	7.357	7.384	(0.900)	36225	150	74 (M)
	59 n-Nitrosodiphenylamine	169.00	7.369	7.396	(0.901)	317129	150	74
	60 1,2-Diphenylhydrazine	77.00	7.405	7.432	(0.906)	1987407	150	74
	62 4-Bromophenyl-phenylether	248.00	7.725	7.763	(0.945)	113468	140	71
	63 Hexachlorobenzene	283.70	7.879	7.906	(0.964)	136449	160	78
	64 Pentachlorophenol	265.50	8.068	8.095	(0.987)	36030	120	59 (M)
	66 Phenanthrene	178.00	8.199	8.226	(1.003)	675036	140	71 (M)
	67 Anthracene	178.00	8.234	8.273	(1.007)	672079	140	68
	68 Carbazole	167.00	8.412	8.451	(1.029)	649857	150	74
	69 Di-n-butylphthalate	149.00	8.827	8.877	(1.080)	1057657	130	67
	70 Fluoranthene	202.00	9.396	9.434	(1.149)	613788	140	72
	71 Pyrene	202.00	9.621	9.659	(0.886)	637426	140	69
	73 Butylbenzylphthalate	149.00	10.332	10.382	(0.952)	499095	130	66
	74 3,3'-Dichlorobenzidine	252.00	10.829	10.892	(0.998)	194700	150	74
	75 Benzo[a]anthracene	228.00	10.841	10.904	(0.999)	537034	150	73
	77 Chrysene	228.00	10.889	10.951	(1.003)	460067	140	72
	78 bis(2-Ethylhexyl)phthalate	149.00	10.960	11.034	(1.010)	672930	140	68
	79 Di-n-octylphthalate	149.00	11.695	11.781	(0.922)	1145478	140	69
	80 Benzo[b]fluoranthene	252.00	12.157	12.243	(0.958)	486511	140	69
	81 Benzo[k]fluoranthene	252.00	12.192	12.278	(0.961)	442217	130	65
	82 Benzo[a]pyrene	252.00	12.607	12.705	(0.993)	384187	140	71
	84 Indeno[1,2,3-cd]pyrene	276.00	14.337	14.447	(1.130)	389966	140	71
	85 Dibenz[a,h]anthracene	278.00	14.373	14.483	(1.133)	327246	140	71
	86 Benzo[g,h,i]perylene	276.00	14.740	14.862	(1.162)	315900	140	68
$	3 2-Fluorophenol	112.00	2.819	2.822	(0.741)	981645	150	76
$	4 Phenol-d5	99.00	3.542	3.533	(0.931)	1044464	130	63
$	61 2,4,6-Tribromophenol	329.70	7.500	7.538	(0.917)	57995	150	76
$	23 Nitrobenzene-d5	82.00	4.312	4.315	(0.869)	811562	140	73 (R)
$	41 2-Fluorobiphenyl	172.00	6.042	6.057	(0.901)	691219	160	78 (R)
$	72 Terphenyl-d14	244.00	9.798	9.849	(0.903)	429449	140	71 (R)
*	11 1,4-Dichlorobenzene-d4	152.00	3.802	3.805	(1.000)	158656	40	
*	32 Naphthalene-d8	136.00	4.964	4.979	(1.000)	464166	40	
*	48 Acenaphthene-d10	164.00	6.706	6.721	(1.000)	144638	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.175	8.202	(1.000)	152127	40	
* 76 Chrysene-d12	240.00	10.853	10.916	(1.000)	120301	40	
* 83 Perylene-d12	264.00	12.690	12.788	(1.000)	78009	40	
17 ortho-Cresol	108.00	4.051	4.054	(1.065)	645711	110	55
20 meta,para-Cresol	108.00	4.193	4.185	(1.103)	622430	110	54
96 Benzidine	184.00	9.538	9.577	(0.879)	238007	130	67

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic3.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD120

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	158656	38.84
32 Naphthalene-d8	440783	220392	881566	464166	5.30
48 Acenaphthene-d10	201424	100712	402848	144638	-28.19
65 Phenanthrene-d10	261616	130808	523232	152127	-41.85
76 Chrysene-d12	195160	97580	390320	120301	-38.36
83 Perylene-d12	123342	61671	246684	78009	-36.75

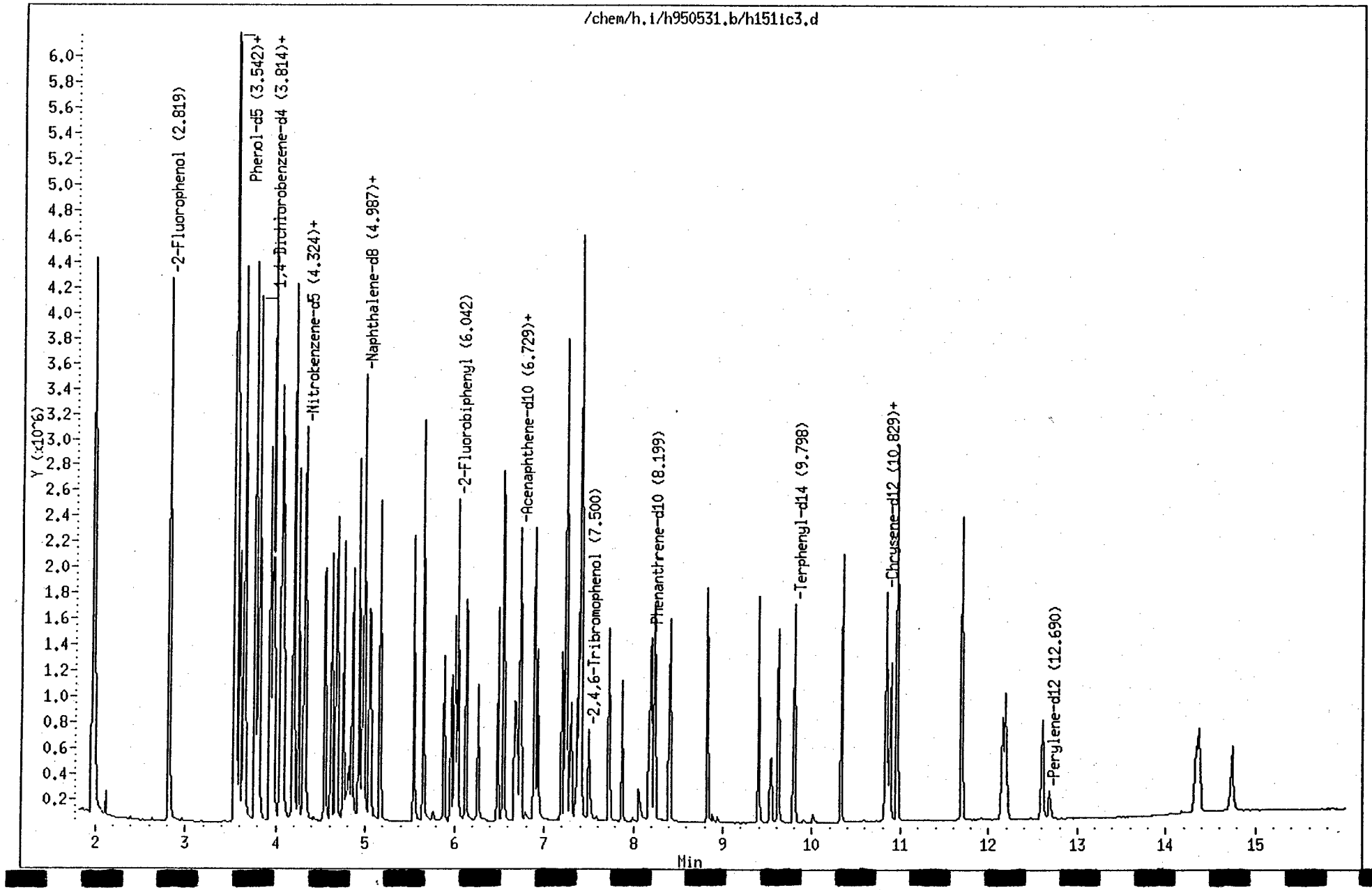
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.08
32 Naphthalene-d8	4.98	4.48	5.48	4.96	-0.30
48 Acenaphthene-d10	6.72	6.22	7.22	6.71	-0.22
65 Phenanthrene-d10	8.20	7.70	8.70	8.17	-0.33
76 Chrysene-d12	10.92	10.42	11.42	10.85	-0.57
83 Perylene-d12	12.79	12.29	13.29	12.69	-0.77

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.

Data File: /chem/h.i/h950531.b/h151ic3.d
Date : 31-MAY-95 14:03
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic4.d
Lab Smp Id:
Inj Date : 31-MAY-1995 14:26
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD160
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	1.978	1.980	(0.520)	1770116	130	66
5 Phenol	94.00	3.554	3.545	(0.935)	1628285	140	69
6 Aniline	93.00	3.554	3.545	(0.935)	1815840	140	72
7 bis(2-Chloroethyl)ether	93.00	3.601	3.592	(0.947)	1493001	140	68
9 2-Chlorophenol	128.00	3.661	3.651	(0.963)	1242681	160	79
10 1,3-Dichlorobenzene	146.00	3.767	3.770	(0.991)	1288440	160	80
12 1,4-Dichlorobenzene	146.00	3.815	3.817	(1.003)	1385625	180	89
13 Benzyl alcohol	108.00	3.945	3.936	(1.037)	796541	150	75
15 1,2-Dichlorobenzene	146.00	3.981	3.983	(1.047)	1293350	170	87
16 2-Methylphenol	108.00	4.064	4.054	(1.069)	1093871	150	74
18 bis(2-chloroisopropyl)ether	45.00	4.075	4.078	(1.072)	2481850	150	75
19 4-Methylphenol	108.00	4.194	4.185	(1.103)	1101739	150	77
21 N-Nitroso-di-n-propylamine	70.00	4.206	4.196	(1.106)	991970	140	70
22 Hexachloroethane	117.00	4.253	4.256	(1.118)	575708	140	70
24 Nitrobenzene	77.00	4.324	4.327	(0.871)	1382695	150	73
25 Isophorone	82.00	4.549	4.552	(0.916)	2797873	150	77
26 2-Nitrophenol	139.00	4.620	4.623	(0.931)	566401	180	88
27 2,4-Dimethylphenol	107.00	4.680	4.682	(0.943)	1139556	150	74
28 Benzoic acid	122.00	4.857	4.801	(0.979)	365421	240	120(M)
29 bis(2-Chloroethoxy)methane	93.00	4.763	4.765	(0.959)	1564817	150	76
30 2,4-Dichlorophenol	162.00	4.857	4.860	(0.979)	787253	160	82
31 1,2,4-Trichlorobenzene	180.00	4.929	4.943	(0.993)	793200	160	83
33 Naphthalene	128.00	4.988	4.990	(1.005)	3228741	160	83
34 4-Chloroaniline	127.00	5.059	5.062	(1.019)	1284076	160	82
35 Hexachlorobutadiene	225.00	5.166	5.180	(1.041)	382991	160	81
36 4-Chloro-3-methylphenol	107.00	5.545	5.559	(1.117)	878549	140	69
37 2-Methylnaphthalene	142.00	5.663	5.666	(1.141)	2017891	170	86
38 Hexachlorocyclopentadiene	237.00	5.888	5.903	(0.878)	436411	230	110
39 2,4,6-Trichlorophenol	196.00	5.971	5.986	(0.890)	446516	190	95

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.019	6.021	(0.897)	423243	150	74
	42 2-Chloronaphthalene	162.00	6.137	6.152	(0.915)	1657720	180	88
	43 2-Nitroaniline	65.00	6.268	6.282	(0.935)	710475	150	76
	44 Dimethylphthalate	163.00	6.493	6.507	(0.968)	1785673	150	76
	45 2,6-Dinitrotoluene	165.00	6.552	6.567	(0.977)	428364	170	84 (Q)
	46 Acenaphthylene	152.00	6.552	6.567	(0.977)	2580517	160	81
	47 3-Nitroaniline	138.00	6.694	6.697	(0.998)	506352	160	80
	49 Acenaphthene	153.00	6.742	6.756	(1.005)	1648029	170	87
	50 2,4-Dinitrophenol	184.00	6.801	6.815	(1.014)	69896	340	170 (QM)
	51 4-Nitrophenol	109.00	6.884	6.910	(1.026)	239846	160	82
	52 Dibenzofuran	168.00	6.896	6.922	(1.028)	2049719	160	80
	53 2,4-Dinitrotoluene	165.00	6.943	6.958	(1.035)	496648	160	82
	54 Diethylphthalate	149.00	7.204	7.218	(1.074)	1813072	140	72
	55 4-Chlorophenyl-phenylether	204.00	7.251	7.278	(1.081)	738019	190	94
	56 Fluorene	166.00	7.239	7.266	(1.079)	1620793	160	78
	57 4-Nitroaniline	138.00	7.311	7.325	(1.090)	429522	140	69
	58 4,6-Dinitro-2-methylphenol	198.00	7.370	7.384	(0.901)	152927	270	130 (M)
	59 n-Nitrosodiphenylamine	169.00	7.382	7.396	(0.903)	906859	180	91
	60 1,2-Diphenylhydrazine	77.00	7.417	7.432	(0.907)	4752929	150	76
	62 4-Bromophenyl-phenylether	248.00	7.737	7.763	(0.946)	377620	200	100
	63 Hexachlorobenzene	283.70	7.879	7.906	(0.964)	372680	180	92
	64 Pentachlorophenol	265.50	8.069	8.095	(0.987)	141415	200	100 (M)
	66 Phenanthrene	178.00	8.199	8.226	(1.003)	2030552	180	92
	67 Anthracene	178.00	8.247	8.273	(1.009)	2085842	180	91
	68 Carbazole	167.00	8.413	8.451	(1.029)	1742614	170	85
	69 Di-n-butylphthalate	149.00	8.839	8.877	(1.081)	3152542	170	87
	70 Fluoranthene	202.00	9.396	9.434	(1.149)	1570134	160	80
	71 Pyrene	202.00	9.621	9.659	(0.885)	1612220	190	94
	73 Butylbenzylphthalate	149.00	10.332	10.382	(0.951)	1130735	160	82
	74 3,3'-Dichlorobenzidine	252.00	10.842	10.892	(0.998)	474785	190	97
	75 Benzo[a]anthracene	228.00	10.889	10.904	(1.002)	1033122	150	76
	77 Chrysene	228.00	10.889	10.951	(1.002)	1033122	180	88
	78 bis(2-Ethylhexyl)phthalate	149.00	10.960	11.034	(1.009)	1453374	160	79
	79 Di-n-octylphthalate	149.00	11.695	11.781	(0.922)	2323993	170	85
	80 Benzo[b]fluoranthene	252.00	12.169	12.243	(0.959)	896425	150	77
	81 Benzo[k]fluoranthene	252.00	12.169	12.278	(0.959)	896425	160	80
	82 Benzo[a]pyrene	252.00	12.619	12.705	(0.994)	780408	180	88
	84 Indeno[1,2,3-cd]pyrene	276.00	14.350	14.447	(1.131)	787019	170	86
	85 Dibenz[a,h]anthracene	278.00	14.385	14.483	(1.134)	678554	180	90
	86 Benzo[g,h,i]perylene	276.00	14.752	14.862	(1.162)	625258	160	82
$	3 2-Fluorophenol	112.00	2.819	2.822	(0.741)	1261695	160	78
$	4 Phenol-d5	99.00	3.542	3.533	(0.931)	1484456	140	72
$	61 2,4,6-Tribromophenol	329.70	7.512	7.538	(0.919)	197885	220	110 (R)
$	23 Nitrobenzene-d5	82.00	4.312	4.315	(0.869)	1431210	160	81 (R)
$	41 2-Fluorobiphenyl	172.00	6.043	6.057	(0.901)	1635257	160	82 (R)
$	72 Terphenyl-d14	244.00	9.799	9.849	(0.902)	1042653	190	93 (R)
*	11 1,4-Dichlorobenzene-d4	152.00	3.803	3.805	(1.000)	199114	40	
*	32 Naphthalene-d8	136.00	4.964	4.979	(1.000)	736441	40	
*	48 Acenaphthene-d10	164.00	6.706	6.721	(1.000)	321401	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.176	8.202	(1.000)	352944	40	
* 76 Chrysene-d12	240.00	10.866	10.916	(1.000)	222549	40	
* 83 Perylene-d12	264.00	12.691	12.788	(1.000)	128599	40	
17 ortho-Cresol	108.00	4.064	4.054	(1.069)	1093871	150	74
20 meta,para-Cresol	108.00	4.194	4.185	(1.103)	1101739	150	77
96 Benzidine	184.00	9.538	9.577	(0.878)	525753	160	80

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic4.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD160

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	199114	74.24
32 Naphthalene-d8	440783	220392	881566	736441	67.08
48 Acenaphthene-d10	201424	100712	402848	321401	59.56
65 Phenanthrene-d10	261616	130808	523232	352944	34.91
76 Chrysene-d12	195160	97580	390320	222549	14.03
83 Perylene-d12	123342	61671	246684	128599	4.26

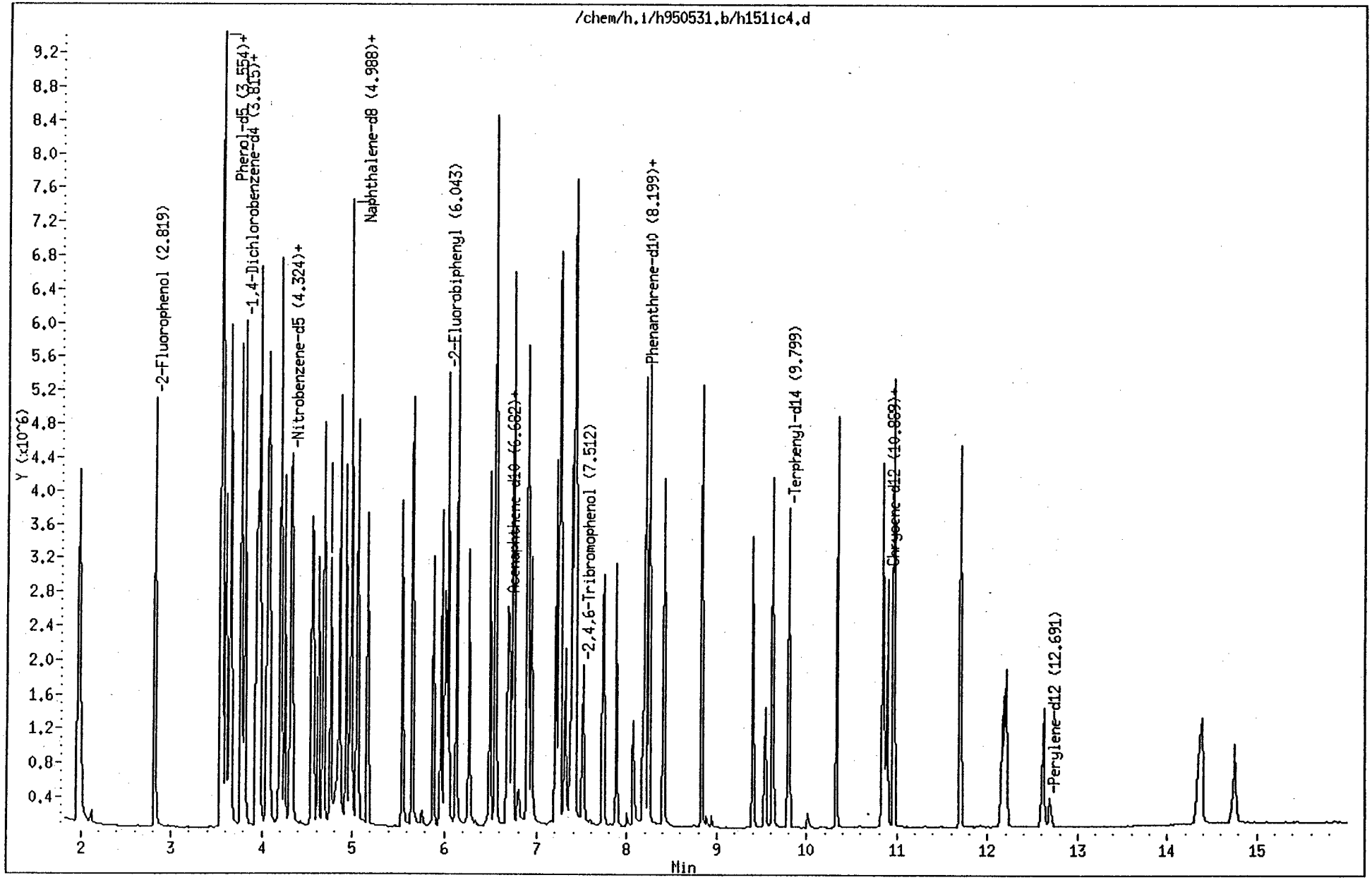
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.07
32 Naphthalene-d8	4.98	4.48	5.48	4.96	-0.29
48 Acenaphthene-d10	6.72	6.22	7.22	6.71	-0.22
65 Phenanthrene-d10	8.20	7.70	8.70	8.18	-0.32
76 Chrysene-d12	10.92	10.42	11.42	10.87	-0.46
83 Perylene-d12	12.79	12.29	13.29	12.69	-0.76

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.

Data File: /chem/h.i/h950531.b/h151ic4.d
Date : 31-MAY-95 14:26
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950531.b/h151ic6.d
Report Date: 03-Jun-1995 17:22

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h151ic6.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 31-MAY-1995 15:09
Init. Calibration Date(s): 05/31/95 05/31/95
Init. Calibration Times: 13:39 14:03
Method File: /chem/h.i/h950531.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
2	Pyridine	2.453	2.674	0.010	9.0	40.0
5	Phenol	2.311	2.379	0.800	2.9	25.0
6	Aniline	2.526	2.547	0.010	0.8	40.0
7	bis(2-Chloroethyl)ether	2.047	2.192	0.700	7.1	25.0
9	2-Chlorophenol	1.590	1.581	0.800	0.6	25.0
10	1,3-Dichlorobenzene	1.675	1.611	0.600	3.8	25.0
12	1,4-Dichlorobenzene	1.670	1.557	0.500	6.7	25.0
13	Benzyl alcohol	1.004	1.063	0.010	5.9	40.0
15	1,2-Dichlorobenzene	1.540	1.496	0.400	2.9	25.0
16	2-Methylphenol	1.419	1.479	0.700	4.2	25.0
18	bis(2-chloroisopropyl)ether	3.211	3.303	0.010	2.9	40.0
19	4-Methylphenol	1.408	1.439	0.600	2.2	25.0
21	N-Nitroso-di-n-propylamine	1.320	1.428	0.500	8.2	25.0
22	Hexachloroethane	0.795	0.825	0.300	3.8	25.0
24	Nitrobenzene	0.515	0.514	0.200	0.2	25.0
25	Isophorone	0.950	0.982	0.400	3.3	25.0
26	2-Nitrophenol	0.185	0.175	0.100	5.4	25.0
27	2,4-Dimethylphenol	0.410	0.420	0.200	2.4	25.0
28	Benzoic acid	0.097	0.082	0.010	15.1	40.0
29	bis(2-Chloroethoxy)methane	0.541	0.555	0.300	2.6	25.0
30	2,4-Dichlorophenol	0.260	0.259	0.200	0.5	25.0
31	1,2,4-Trichlorobenzene	0.267	0.260	0.200	2.6	25.0
33	Naphthalene	1.092	1.061	0.700	2.9	25.0
34	4-Chloroaniline	0.424	0.427	0.010	0.6	40.0
35	Hexachlorobutadiene	0.131	0.129	0.010	2.0	40.0
36	4-Chloro-3-methylphenol	0.320	0.345	0.200	8.0	25.0
37	2-Methylnaphthalene	0.637	0.634	0.400	0.4	25.0
38	Hexachlorocyclopentadiene	0.283	0.240	0.010	15.3	40.0
39	2,4,6-Trichlorophenol	0.310	0.292	0.200	5.9	25.0
40	2,4,5-Trichlorophenol	0.371	0.355	0.200	4.2	25.0
42	2-Chloronaphthalene	1.223	1.175	0.800	4.0	25.0
43	2-Nitroaniline	0.576	0.577	0.010	0.3	40.0
44	Dimethylphthalate	1.397	1.451	0.010	3.9	40.0
45	2,6-Dinitrotoluene	0.315	0.317	0.200	0.5	25.0
46	Acenaphthylene	2.059	1.983	1.300	3.7	25.0
47	3-Nitroaniline	0.392	0.393	0.010	0.3	40.0
49	Acenaphthene	1.223	1.183	0.800	3.3	25.0
50	2,4-Dinitrophenol	0.034	0.025	0.010	26.0	40.0
51	4-Nitrophenol	0.194	0.182	0.010	6.1	40.0
52	Dibenzofuran	1.630	1.597	0.800	2.0	25.0

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h151ic6.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 31-MAY-1995 15:09
Init. Calibration Date(s): 05/31/95 05/31/95
Init. Calibration Times: 13:39 14:03
Method File: /chem/h.i/h950531.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	53 2,4-Dinitrotoluene	0.372	0.379	0.200	1.9	25.0
	54 Diethylphthalate	1.520	1.564	0.010	2.9	40.0
	55 4-Chlorophenyl-phenylether	0.521	0.491	0.400	5.7	25.0
	56 Fluorene	1.294	1.285	0.900	0.6	25.0
	57 4-Nitroaniline	0.362	0.389	0.010	7.6	40.0
	58 4,6-Dinitro-2-methylphenol	0.069	0.065	0.010	6.8	100.0
	59 n-Nitrosodiphenylamine	0.615	0.564	0.010	8.2	40.0
	60 1,2-Diphenylhydrazine	3.675	3.534	0.010	3.8	40.0
	62 4-Bromophenyl-phenylether	0.230	0.209	0.100	9.4	25.0
	63 Hexachlorobenzene	0.251	0.229	0.100	8.8	25.0
	64 Pentachlorophenol	0.076	0.080	0.050	4.6	25.0
	66 Phenanthrene	1.336	1.253	0.700	6.2	25.0
	67 Anthracene	1.367	1.294	0.700	5.4	25.0
	68 Carbazole	1.215	1.156	0.010	4.8	40.0
	69 Di-n-butylphthalate	2.183	2.060	0.010	5.6	40.0
	70 Fluoranthene	1.152	1.117	0.600	3.0	25.0
	71 Pyrene	1.658	1.533	0.600	7.5	25.0
	73 Butylbenzylphthalate	1.304	1.247	0.010	4.4	40.0
	74 3,3'-Dichlorobenzidine	0.474	0.438	0.010	7.6	40.0
	75 Benzo[a]anthracene	1.269	1.216	0.800	4.1	25.0
	77 Chrysene	1.133	1.058	0.700	6.6	25.0
	78 bis(2-Ethylhexyl)phthalate	1.726	1.651	0.010	4.4	40.0
	79 Di-n-octylphthalate	4.490	4.268	0.010	4.9	100.0
	80 Benzo[b]fluoranthene	1.794	1.800	0.700	0.3	25.0
	81 Benzo[k]fluoranthene	1.799	1.750	0.700	2.7	25.0
	82 Benzo[a]pyrene	1.455	1.385	0.700	4.8	25.0
	84 Indeno[1,2,3-cd]pyrene	1.476	1.415	0.500	4.2	25.0
	85 Dibenz[a,h]anthracene	1.243	1.177	0.400	5.3	25.0
	86 Benzo[g,h,i]perylene	1.208	1.183	0.500	2.1	25.0
$	3 2-Fluorophenol	1.733	1.621	0.600	6.5	25.0
$	4 Phenol-d5	2.070	2.081	0.800	0.5	25.0
$	61 2,4,6-Tribromophenol	0.113	0.100	0.010	11.7	40.0
$	23 Nitrobenzene-d5	0.500	0.480	0.200	4.0	25.0
$	41 2-Fluorobiphenyl	1.292	1.233	0.700	4.6	25.0
$	72 Terphenyl-d14	1.084	1.005	0.500	7.3	25.0
	17 ortho-Cresol	1.419	1.479	0.700	4.2	25.0
	20 meta,para-Cresol	1.408	1.439	0.600	2.2	25.0
	96 Benzidine	0.601	0.590	0.010	1.8	40.0

SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic6.d
Lab Smp Id:
Inj Date : 31-MAY-1995 15:09
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD050
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	1.980	1.980	(0.520)	381957	50	25
5	Phenol	94.00	3.545	3.545	(0.931)	339871	50	25
6	Aniline	93.00	3.545	3.545	(0.931)	363825	50	25
7	bis(2-Chloroethyl)ether	93.00	3.592	3.592	(0.944)	313152	50	25
9	2-Chlorophenol	128.00	3.651	3.651	(0.960)	225798	50	25
10	1,3-Dichlorobenzene	146.00	3.770	3.770	(0.991)	230091	50	25
12	1,4-Dichlorobenzene	146.00	3.817	3.817	(1.003)	222401	50	25
13	Benzyl alcohol	108.00	3.936	3.936	(1.034)	151878	50	25
15	1,2-Dichlorobenzene	146.00	3.983	3.983	(1.047)	213746	50	25
16	2-Methylphenol	108.00	4.054	4.054	(1.065)	211218	50	25
18	bis(2-chloroisopropyl)ether	45.00	4.078	4.078	(1.072)	471874	50	25
19	4-Methylphenol	108.00	4.185	4.185	(1.100)	205508	50	25
21	N-Nitroso-di-n-propylamine	70.00	4.196	4.196	(1.103)	204007	50	25
22	Hexachloroethane	117.00	4.256	4.256	(1.118)	117904	50	25
24	Nitrobenzene	77.00	4.327	4.327	(0.869)	283127	50	25
25	Isophorone	82.00	4.552	4.552	(0.914)	540834	50	25
26	2-Nitrophenol	139.00	4.623	4.623	(0.929)	96524	50	25
27	2,4-Dimethylphenol	107.00	4.682	4.682	(0.940)	231433	50	25
28	Benzoic acid	122.00	4.801	4.801	(0.964)	45166	50	25
29	bis(2-Chloroethoxy)methane	93.00	4.765	4.765	(0.957)	305804	50	25
30	2,4-Dichlorophenol	162.00	4.860	4.860	(0.976)	142725	50	25
31	1,2,4-Trichlorobenzene	180.00	4.943	4.943	(0.993)	143025	50	25
33	Naphthalene	128.00	4.990	4.990	(1.002)	584560	50	25
34	4-Chloroaniline	127.00	5.062	5.062	(1.017)	235323	50	25
35	Hexachlorobutadiene	225.00	5.180	5.180	(1.040)	70919	50	25
36	4-Chloro-3-methylphenol	107.00	5.559	5.559	(1.117)	190207	50	25
37	2-Methylnaphthalene	142.00	5.666	5.666	(1.138)	349367	50	25
38	Hexachlorocyclopentadiene	237.00	5.903	5.903	(0.878)	60387	50	25
39	2,4,6-Trichlorophenol	196.00	5.986	5.986	(0.891)	73501	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.021	6.021	(0.896)	89453	50	25
	42 2-Chloronaphthalene	162.00	6.152	6.152	(0.915)	295802	50	25
	43 2-Nitroaniline	65.00	6.282	6.282	(0.935)	145379	50	25
	44 Dimethylphthalate	163.00	6.507	6.507	(0.968)	365363	50	25
	45 2,6-Dinitrotoluene	165.00	6.567	6.567	(0.977)	79786	50	25
	46 Acenaphthylene	152.00	6.567	6.567	(0.977)	499162	50	25
	47 3-Nitroaniline	138.00	6.697	6.697	(0.996)	98902	50	25
	49 Acenaphthene	153.00	6.756	6.756	(1.005)	297851	50	25
	50 2,4-Dinitrophenol	184.00	6.815	6.815	(1.014)	6383	50	25 (M)
	51 4-Nitrophenol	109.00	6.910	6.910	(1.028)	45806	50	25
	52 Dibenzofuran	168.00	6.922	6.922	(1.030)	402130	50	25
	53 2,4-Dinitrotoluene	165.00	6.958	6.958	(1.035)	95419	50	25
	54 Diethylphthalate	149.00	7.218	7.218	(1.074)	393874	50	25
	55 4-Chlorophenyl-phenylether	204.00	7.278	7.278	(1.083)	123652	50	25
	56 Fluorene	166.00	7.266	7.266	(1.081)	323624	50	25
	57 4-Nitroaniline	138.00	7.325	7.325	(1.090)	98042	50	25
	58 4,6-Dinitro-2-methylphenol	198.00	7.384	7.384	(0.900)	21106	50	25 (M)
	59 n-Nitrosodiphenylamine	169.00	7.396	7.396	(0.902)	184449	50	25
	60 1,2-Diphenylhydrazine	77.00	7.432	7.432	(0.906)	1155693	50	25
	62 4-Bromophenyl-phenylether	248.00	7.763	7.763	(0.947)	68283	50	25
	63 Hexachlorobenzene	283.70	7.906	7.906	(0.964)	74795	50	25
	64 Pentachlorophenol	265.50	8.095	8.095	(0.987)	26129	50	25 (M)
	66 Phenanthrene	178.00	8.226	8.226	(1.003)	409912	50	25
	67 Anthracene	178.00	8.273	8.273	(1.009)	423089	50	25
	68 Carbazole	167.00	8.451	8.451	(1.030)	378067	50	25
	69 Di-n-butylphthalate	149.00	8.877	8.877	(1.082)	673666	50	25
	70 Fluoranthene	202.00	9.434	9.434	(1.150)	365338	50	25
	71 Pyrene	202.00	9.659	9.659	(0.885)	374033	50	25
	73 Butylbenzylphthalate	149.00	10.382	10.382	(0.951)	304084	50	25
	74 3,3'-Dichlorobenzidine	252.00	10.892	10.892	(0.998)	106972	50	25
	75 Benzo[a]anthracene	228.00	10.904	10.904	(0.999)	296729	50	25
	77 Chrysene	228.00	10.951	10.951	(1.003)	258173	50	25
	78 bis(2-Ethylhexyl)phthalate	149.00	11.034	11.034	(1.011)	402654	50	25
	79 Di-n-octylphthalate	149.00	11.781	11.781	(0.921)	658002	50	25
	80 Benzo[b]fluoranthene	252.00	12.243	12.243	(0.957)	277456	50	25
	81 Benzo[k]fluoranthene	252.00	12.278	12.278	(0.960)	269838	50	25
	82 Benzo[a]pyrene	252.00	12.705	12.705	(0.994)	213543	50	25
	84 Indeno[1,2,3-cd]pyrene	276.00	14.447	14.447	(1.130)	218143	50	25
	85 Dibenz[a,h]anthracene	278.00	14.483	14.483	(1.133)	181511	50	25
	86 Benzo[g,h,i]perylene	276.00	14.862	14.862	(1.162)	182378	50	25
$	3 2-Fluorophenol	112.00	2.822	2.822	(0.742)	231511	50	25
$	4 Phenol-d5	99.00	3.533	3.533	(0.928)	297261	50	25
$	61 2,4,6-Tribromophenol	329.70	7.538	7.538	(0.919)	32558	50	25
$	23 Nitrobenzene-d5	82.00	4.315	4.315	(0.867)	264640	50	25
$	41 2-Fluorobiphenyl	172.00	6.057	6.057	(0.901)	310387	50	25
$	72 Terphenyl-d14	244.00	9.849	9.849	(0.902)	245238	50	25
*	11 1,4-Dichlorobenzene-d4	152.00	3.805	3.805	(1.000)	114276	40	
*	32 Naphthalene-d8	136.00	4.979	4.979	(1.000)	440783	40	
*	48 Acenaphthene-d10	164.00	6.721	6.721	(1.000)	201424	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.202	8.202	(1.000)	261616	40	
* 76 Chrysene-d12	240.00	10.916	10.916	(1.000)	195160	40	
* 83 Perylene-d12	264.00	12.788	12.788	(1.000)	123342	40	
17 ortho-Cresol	108.00	4.054	4.054	(1.065)	211218	50	25
20 meta,para-Cresol	108.00	4.185	4.185	(1.100)	205508	50	25
96 Benzidine	184.00	9.577	9.577	(0.877)	144034	50	25

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic6.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531 b/hclpw.m
Misc Info: 950531 STD050

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	114276	0.00
32 Naphthalene-d8	440783	220392	881566	440783	0.00
48 Acenaphthene-d10	201424	100712	402848	201424	0.00
65 Phenanthrene-d10	261616	130808	523232	261616	0.00
76 Chrysene-d12	195160	97580	390320	195160	0.00
83 Perylene-d12	123342	61671	246684	123342	0.00

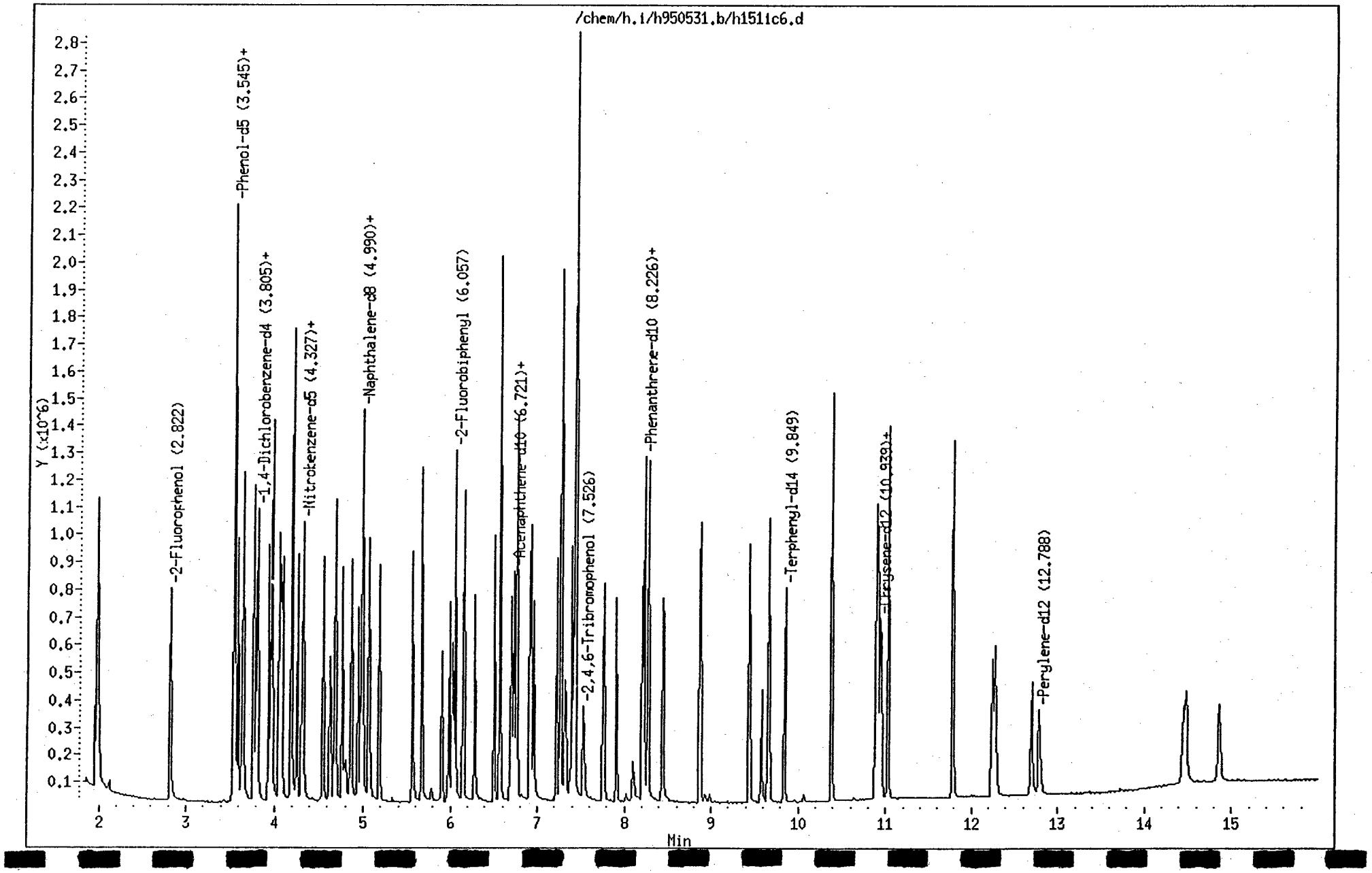
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.81	0.00
32 Naphthalene-d8	4.98	4.48	5.48	4.98	0.00
48 Acenaphthene-d10	6.72	6.22	7.22	6.72	0.00
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	0.00
76 Chrysene-d12	10.92	10.42	11.42	10.92	0.00
83 Perylene-d12	12.79	12.29	13.29	12.79	0.00

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.

Data File: /chem/h.i/h950531.b/h151ic6.d
Date : 31-MAY-95 15:09
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950601.b/h152cc1.d
Report Date: 03-Jun-1995 17:23

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h152cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 01-JUN-1995 09:55
Init. Calibration Date(s): 05/31/95 05/31/95
Init. Calibration Times: 13:39 14:03
Method File: /chem/h.i/h950601.b/hclpw.m

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
2 Pyridine	2.453	2.339	0.010	4.6	40.0
5 Phenol	2.311	2.456	0.800	6.3	25.0
6 Aniline	2.526	2.554	0.010	1.1	40.0
7 bis(2-Chloroethyl)ether	2.047	1.923	0.700	6.1	25.0
9 2-Chlorophenol	1.590	1.401	0.800	11.9	25.0
10 1,3-Dichlorobenzene	1.675	1.604	0.600	4.3	25.0
12 1,4-Dichlorobenzene	1.670	1.557	0.500	6.7	25.0
13 Benzyl alcohol	1.004	0.944	0.010	6.0	40.0
15 1,2-Dichlorobenzene	1.540	1.483	0.400	3.7	25.0
16 2-Methylphenol	1.419	1.383	0.700	2.6	25.0
18 bis(2-chloroisopropyl)ether	3.211	3.114	0.010	3.0	40.0
19 4-Methylphenol	1.408	1.465	0.600	4.0	25.0
21 N-Nitroso-di-n-propylamine	1.320	1.243	0.500	5.9	25.0
22 Hexachloroethane	0.795	0.721	0.300	9.4	25.0
24 Nitrobenzene	0.515	0.526	0.200	2.2	25.0
25 Isophorone	0.950	0.887	0.400	6.7	25.0
26 2-Nitrophenol	0.185	0.204	0.100	10.0	25.0
27 2,4-Dimethylphenol	0.410	0.400	0.200	2.4	25.0
28 Benzoic acid	0.097	0.087	0.010	10.1	40.0
29 bis(2-Chloroethoxy)methane	0.541	0.567	0.300	4.9	25.0
30 2,4-Dichlorophenol	0.260	0.232	0.200	10.9	25.0
31 1,2,4-Trichlorobenzene	0.267	0.261	0.200	2.2	25.0
33 Naphthalene	1.092	1.056	0.700	3.3	25.0
34 4-Chloroaniline	0.424	0.386	0.010	9.0	40.0
35 Hexachlorobutadiene	0.131	0.124	0.010	5.3	40.0
36 4-Chloro-3-methylphenol	0.320	0.291	0.200	9.0	25.0
37 2-Methylnaphthalene	0.637	0.640	0.400	0.5	25.0
38 Hexachlorocyclopentadiene	0.283	0.259	0.010	8.7	40.0
39 2,4,6-Trichlorophenol	0.310	0.288	0.200	7.1	25.0
40 2,4,5-Trichlorophenol	0.371	0.347	0.200	6.4	25.0
42 2-Chloronaphthalene	1.223	1.169	0.800	4.5	25.0
43 2-Nitroaniline	0.576	0.549	0.010	4.6	40.0
44 Dimethylphthalate	1.397	1.227	0.010	12.1	40.0
45 2,6-Dinitrotoluene	0.315	0.305	0.200	3.4	25.0
46 Acenaphthylene	2.059	1.967	1.300	4.5	25.0
47 3-Nitroaniline	0.392	0.341	0.010	13.0	40.0
49 Acenaphthene	1.223	1.239	0.800	1.3	25.0
50 2,4-Dinitrophenol	0.034	0.045	0.010	31.1	40.0
51 4-Nitrophenol	0.194	0.130	0.010	32.8	40.0
52 Dibenzofuran	1.630	1.440	0.800	11.7	25.0

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h152cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 01-JUN-1995 09:55
Init. Calibration Date(s): 05/31/95 05/31/95
Init. Calibration Times: 13:39 14:03
Method File: /chem/h.i/h950601.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	53 2,4-Dinitrotoluene	0.372	0.348	0.200	6.5	25.0
	54 Diethylphthalate	1.520	1.331	0.010	12.4	40.0
	55 4-Chlorophenyl-phenylether	0.521	0.535	0.400	2.8	25.0
	56 Fluorene	1.294	1.283	0.900	0.8	25.0
	57 4-Nitroaniline	0.362	0.272	0.010	25.0	40.0
	58 4,6-Dinitro-2-methylphenol	0.069	0.102	0.010	47.1	100.0
	59 n-Nitrosodiphenylamine	0.615	0.619	0.010	0.7	40.0
	60 1,2-Diphenylhydrazine	3.675	3.836	0.010	4.4	40.0
	62 4-Bromophenyl-phenylether	0.230	0.220	0.100	4.4	25.0
	63 Hexachlorobenzene	0.251	0.234	0.100	6.6	25.0
	64 Pentachlorophenol	0.076	0.081	0.050	6.4	25.0
	66 Phenanthrene	1.336	1.230	0.700	7.9	25.0
	67 Anthracene	1.367	1.458	0.700	6.6	25.0
	68 Carbazole	1.215	0.984	0.010	19.0	40.0
	69 Di-n-butylphthalate	2.183	2.201	0.010	0.8	40.0
	70 Fluoranthene	1.152	0.986	0.600	14.4	25.0
	71 Pyrene	1.658	1.773	0.600	7.0	25.0
	73 Butylbenzylphthalate	1.304	1.302	0.010	0.2	40.0
	74 3,3'-Dichlorobenzidine	0.474	0.323	0.010	31.9	40.0
	75 Benzo[a]anthracene	1.269	1.110	0.800	12.5	25.0
	77 Chrysene	1.133	1.220	0.700	7.6	25.0
	78 bis(2-Ethylhexyl)phthalate	1.726	2.189	0.010	26.8	40.0
	79 Di-n-octylphthalate	4.490	6.899	0.010	53.7	100.0
	80 Benzo[b]fluoranthene	1.794	1.378	0.700	23.2	25.0
	81 Benzo[k]fluoranthene	1.799	2.346	0.700	30.4	25.0
	82 Benzo[a]pyrene	1.455	1.398	0.700	3.9	25.0
	84 Indeno[1,2,3-cd]pyrene	1.476	1.294	0.500	12.4	25.0
	85 Dibenz[a,h]anthracene	1.243	1.020	0.400	18.0	25.0
	86 Benzo[g,h,i]perylene	1.208	0.945	0.500	21.7	25.0
$	3 2-Fluorophenol	1.733	1.496	0.600	13.6	25.0
$	4 Phenol-d5	2.070	2.010	0.800	2.9	25.0
$	61 2,4,6-Tribromophenol	0.113	0.098	0.010	13.1	40.0
$	23 Nitrobenzene-d5	0.500	0.508	0.200	1.4	25.0
$	41 2-Fluorobiphenyl	1.292	1.258	0.700	2.6	25.0
$	72 Terphenyl-d14	1.084	1.141	0.500	5.2	25.0
	17 ortho-Cresol	1.419	1.383	0.700	2.6	25.0
	20 meta,para-Cresol	1.408	1.465	0.600	4.0	25.0
	96 Benzidine	0.601	0.387	0.010	35.6	40.0

SPL Houston Labs

Data file : /chem/h.i/h950601.b/h152cc1.d
Lab Smp Id:
Inj Date : 01-JUN-1995 09:55
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950601 STD050
Comment :
Method : /chem/h.i/h950601.b/hclpw.m
Meth Date : 01-Jun-1995 13:56 liping
Cal Date : 01-JUN-1995 09:55
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h152cc1.d
Continuing Calibration Sample

Compound Sublist: std.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
2 Pyridine	79.00	1.977	1.977	(0.522)	588809	50	48
5 Phenol	94.00	3.542	3.542	(0.934)	618212	50	53
6 Aniline	93.00	3.542	3.542	(0.934)	642904	50	50
7 bis(2-Chloroethyl)ether	93.00	3.577	3.577	(0.944)	483903	50	47
9 2-Chlorophenol	128.00	3.648	3.648	(0.962)	352523	50	44
10 1,3-Dichlorobenzene	146.00	3.755	3.755	(0.991)	403704	50	48
12 1,4-Dichlorobenzene	146.00	3.803	3.803	(1.003)	391936	50	47
13 Benzyl alcohol	108.00	3.933	3.933	(1.038)	237551	50	47
15 1,2-Dichlorobenzene	146.00	3.957	3.957	(1.044)	373354	50	48
16 2-Methylphenol	108.00	4.051	4.051	(1.069)	348033	50	49
18 bis(2-chloroisopropyl)ether	45.00	4.051	4.051	(1.069)	783924	50	48
19 4-Methylphenol	108.00	4.182	4.182	(1.103)	368675	50	52
21 N-Nitroso-di-n-propylamine	70.00	4.182	4.182	(1.103)	312782	50	47
22 Hexachloroethane	117.00	4.229	4.229	(1.116)	181382	50	45
24 Nitrobenzene	77.00	4.312	4.312	(0.871)	478166	50	51
25 Isophorone	82.00	4.526	4.526	(0.914)	805673	50	47
26 2-Nitrophenol	139.00	4.608	4.608	(0.931)	185149	50	55
27 2,4-Dimethylphenol	107.00	4.668	4.668	(0.943)	363786	50	49
28 Benzoic acid	122.00	4.810	4.810	(0.971)	78873	50	45(aM)
29 bis(2-Chloroethoxy)methane	93.00	4.739	4.739	(0.957)	515692	50	52
30 2,4-Dichlorophenol	162.00	4.846	4.846	(0.978)	210779	50	44
31 1,2,4-Trichlorobenzene	180.00	4.917	4.917	(0.993)	236755	50	49
33 Naphthalene	128.00	4.964	4.964	(1.002)	959483	50	48
34 4-Chloroaniline	127.00	5.047	5.047	(1.019)	351081	50	46
35 Hexachlorobutadiene	225.00	5.154	5.154	(1.041)	113010	50	47
36 4-Chloro-3-methylphenol	107.00	5.545	5.545	(1.120)	264382	50	46
37 2-Methylnaphthalene	142.00	5.640	5.640	(1.139)	581644	50	50
38 Hexachlorocyclopentadiene	237.00	5.865	5.865	(0.878)	97180	50	46
39 2,4,6-Trichlorophenol	196.00	5.960	5.960	(0.892)	108374	50	46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
40	2,4,5-Trichlorophenol	196.00	6.007	6.007	(0.899)	130365	50	47
42	2-Chloronaphthalene	162.00	6.114	6.114	(0.915)	439326	50	48
43	2-Nitroaniline	65.00	6.256	6.256	(0.936)	206393	50	48 (a)
44	Dimethylphthalate	163.00	6.469	6.469	(0.968)	461282	50	44
45	2,6-Dinitrotoluene	165.00	6.529	6.529	(0.977)	114543	50	48
46	Acenaphthylene	152.00	6.529	6.529	(0.977)	739447	50	48
47	3-Nitroaniline	138.00	6.683	6.683	(1.000)	128065	50	43 (a)
49	Acenaphthene	153.00	6.718	6.718	(1.005)	465600	50	51
50	2,4-Dinitrophenol	184.00	6.789	6.789	(1.016)	16889	50	66
51	4-Nitrophenol	109.00	6.920	6.920	(1.035)	48934	50	34 (aM)
52	Dibenzofuran	168.00	6.884	6.884	(1.030)	541164	50	44
53	2,4-Dinitrotoluene	165.00	6.920	6.920	(1.035)	130705	50	47
54	Diethylphthalate	149.00	7.180	7.180	(1.074)	500450	50	44
55	4-Chlorophenyl-phenylether	204.00	7.228	7.228	(1.082)	201277	50	51
56	Fluorene	166.00	7.228	7.228	(1.082)	482312	50	50
57	4-Nitroaniline	138.00	7.299	7.299	(1.092)	102081	50	38 (a)
58	4,6-Dinitro-2-methylphenol	198.00	7.335	7.335	(0.900)	40688	50	74
59	n-Nitrosodiphenylamine	169.00	7.358	7.358	(0.903)	247297	50	50
60	1,2-Diphenylhydrazine	77.00	7.382	7.382	(0.905)	1532682	50	52
62	4-Bromophenyl-phenylether	248.00	7.714	7.714	(0.946)	87991	50	48
63	Hexachlorobenzene	283.70	7.856	7.856	(0.964)	93519	50	47
64	Pentachlorophenol	265.50	8.046	8.046	(0.987)	32475	50	53 (M)
66	Phenanthrene	178.00	8.176	8.176	(1.003)	491641	50	46 (M)
67	Anthracene	178.00	8.223	8.223	(1.009)	582578	50	53
68	Carbazole	167.00	8.413	8.413	(1.032)	393177	50	40
69	Di-n-butylphthalate	149.00	8.816	8.816	(1.081)	879569	50	50
70	Fluoranthene	202.00	9.385	9.385	(1.151)	393974	50	43
71	Pyrene	202.00	9.598	9.598	(0.885)	388322	50	53
73	Butylbenzylphthalate	149.00	10.309	10.309	(0.951)	285044	50	50
74	3,3'-Dichlorobenzidine	252.00	10.843	10.843	(1.000)	70776	50	34
75	Benzo[a]anthracene	228.00	10.831	10.831	(0.999)	242961	50	44
77	Chrysene	228.00	10.878	10.878	(1.003)	267057	50	54
78	bis(2-Ethylhexyl)phthalate	149.00	10.950	10.950	(1.010)	479299	50	63
79	Di-n-octylphthalate	149.00	11.672	11.672	(0.921)	653139	50	77
80	Benzo[b]fluoranthene	252.00	12.147	12.147	(0.958)	130476	50	38
81	Benzo[k]fluoranthene	252.00	12.182	12.182	(0.961)	222080	50	65 (M)
82	Benzo[a]pyrene	252.00	12.597	12.597	(0.993)	132390	50	48
84	Indeno[1,2,3-cd]pyrene	276.00	14.327	14.327	(1.130)	122502	50	44
85	Dibenz[a,h]anthracene	278.00	14.363	14.363	(1.133)	96539	50	41
86	Benzo[g,h,i]perylene	276.00	14.730	14.730	(1.162)	89482	50	39 (M)
$ 3	2-Fluorophenol	112.00	2.819	2.819	(0.744)	376617	50	43
$ 4	Phenol-d5	99.00	3.530	3.530	(0.931)	505907	50	48
$ 61	2,4,6-Tribromophenol	329.70	7.489	7.489	(0.919)	39142	50	43
$ 23	Nitrobenzene-d5	82.00	4.288	4.288	(0.866)	461216	50	51
$ 41	2-Fluorobiphenyl	172.00	6.019	6.019	(0.901)	473083	50	49
$ 72	Terphenyl-d14	244.00	9.788	9.788	(0.903)	249776	50	52
* 11	1,4-Dichlorobenzene-d4	152.00	3.791	3.791	(1.000)	201362	40	
* 32	Naphthalene-d8	136.00	4.952	4.952	(1.000)	726976	40	
* 48	Acenaphthene-d10	164.00	6.683	6.683	(1.000)	300745	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
* 65 Phenanthrene-d10	188.00	8.152	8.152	(1.000)	319648	40	
* 76 Chrysene-d12	240.00	10.843	10.843	(1.000)	175171	40	
* 83 Perylene-d12	264.00	12.680	12.680	(1.000)	75734	40	
17 ortho-Cresol	108.00	4.051	4.051	(1.069)	348033	50	49
20 meta,para-Cresol	108.00	4.182	4.182	(1.103)	368675	50	52
96 Benzidine	184.00	9.551	9.551	(0.881)	84806	50	32

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h152cc1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950601.b/hclpw.m
Misc Info: 950601 STD050

Calibration Date: 06/01/95
Calibration Time: 0955

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	201362	100681	402724	201362	0.00
32 Naphthalene-d8	726976	363488	1453952	726976	0.00
48 Acenaphthene-d10	300745	150372	601490	300745	0.00
65 Phenanthrene-d10	319648	159824	639296	319648	0.00
76 Chrysene-d12	175171	87586	350342	175171	0.00
83 Perylene-d12	75734	37867	151468	75734	0.00

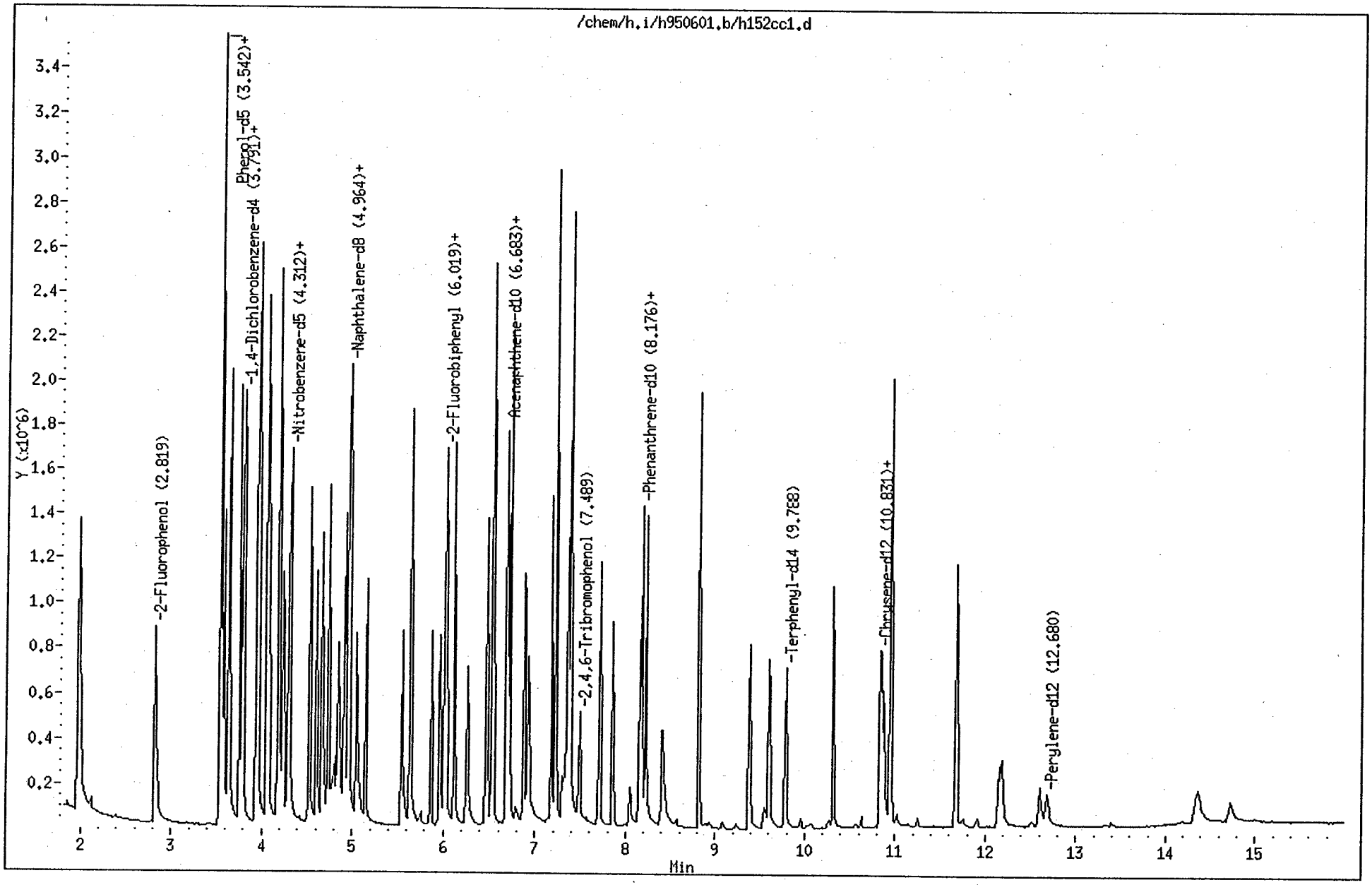
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.79	3.29	4.29	3.79	0.00
32 Naphthalene-d8	4.95	4.45	5.45	4.95	0.00
48 Acenaphthene-d10	6.68	6.18	7.18	6.68	0.00
65 Phenanthrene-d10	8.15	7.65	8.65	8.15	0.00
76 Chrysene-d12	10.84	10.34	11.34	10.84	0.00
83 Perylene-d12	12.68	12.18	13.18	12.68	0.00

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.

Data File: /chem/h.i/h950601.b/h152cc1.d
Date : 01-JUN-1995 09:55
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601 *

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950525135200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Dichlorodifluoromethane	ND	20	12	60.0	1 - 200
Chloromethane	ND	20	15	75.0	1 - 193
Vinyl chloride	ND	20	15	75.0	28 - 163
Bromomethane	ND	20	15	75.0	1 - 144
Chloroethane	ND	20	17	85.0	46 - 137
Trichlorofluoromethane	ND	20	17	85.0	21 - 156
1,1-Dichloroethene	ND	20	14	70.0	28 - 167
Methylene chloride	ND	20	25	125	25 - 162
Trans-1,2-Dichloroethene	ND	20	20	100	38 - 155
1,1-Dichloroethane	ND	20	22	110	34 - 132
Chloroform	ND	20	24	120	49 - 133
1,1,1-Trichloroethane	ND	20	22	110	41 - 138
Carbon tetrachloride	ND	20	22	110	43 - 143
1,2-Dichloroethane	ND	20	23	115	51 - 147
2-Chloroethylvinyl ether	ND	20	21	105	14 - 186
Trichloroethene	ND	20	24	120	35 - 146
1,2-Dichloropropane	ND	20	23	115	44 - 156
Bromodichloromethane	ND	20	22	110	42 - 172
cis-1,3-Dichloropropene	ND	20	26	130	22 - 178
trans-1,3-Dichloropropene	ND	20	23	115	33 - 178
1,1,2-Trichloroethane	ND	20	26	130	39 - 136
Tetrachloroethene	ND	20	25	125	26 - 162
Dibromochloromethane	ND	20	24	120	24 - 191
Chlorobenzene	ND	20	25	125	38 - 150
Bromoform	ND	20	23	115	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	25	125	8 - 184
1,3-Dichlorobenzene	ND	20	25	125	7 - 187
1,4-Dichlorobenzene	ND	20	25	125	42 - 143
1,2-Dichlorobenzene	ND	20	26	130	1 - 208

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Dichlorodifluoromethane	ND	20	20	100	19	95.0	5.13	20	1 - 100

SAMPLES IN BATCH(SPL ID):

9505700-05A 9505776-04A 9505679-01A 9505679-02A
9505767-03E 9505767-01E 9505714-08A 9505791-04B
9505791-03B 9505792-01A 9505767-05E 9505767-06E
9505791-02B 9505791-01B 9505719-01A 9505791-05B
9505029-24A 9505029-23A

Idelis Williams, QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601 *

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950525135200

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Chloromethane	ND	20	24	120	21	105	13.3	20	1 - 193
Vinyl chloride	ND	20	22	110	22	110	0	20	28 - 163
Bromomethane	ND	20	23	115	22	110	4.44	20	1 - 144
Chloroethane	ND	20	25	125	25	125	0	20	46 - 137
Trichlorofluoromethane	ND	20	23	115	21	105	9.09	20	21 - 156
1,1-Dichloroethene	ND	20	20	100	19	95.0	5.13	20	28 - 167
Methylene chloride	ND	20	20	100	19	95.0	5.13	20	25 - 162
Trans-1,2-Dichloroethene	ND	20	20	100	19	95.0	5.13	20	38 - 155
1,1-Dichloroethane	ND	20	20	100	19	95.0	5.13	20	47 - 132
Chloroform	ND	20	20	100	19	95.0	5.13	20	49 - 133
1,1,1-Trichloroethane	ND	20	20	100	20	100	0	20	41 - 138
Carbon tetrachloride	ND	20	20	100	20	100	0	20	43 - 143
1,2-Dichloroethane	ND	20	19	95.0	18	90.0	5.41	20	51 - 147
2-Chloroethylvinyl ether	ND	20	18	90.0	18	90.0	0	20	14 - 186
Trichloroethene	ND	20	22	110	21	105	4.65	20	35 - 146
1,2-Dichloropropane	ND	20	19	95.0	19	95.0	0	20	44 - 156
Bromodichloromethane	ND	20	19	95.0	19	95.0	0	20	42 - 172
cis-1,3-Dichloropropene	ND	20	19	95.0	19	95.0	0	20	22 - 178
trans-1,3-Dichloropropene	ND	20	19	95.0	19	95.0	0	20	33 - 178
1,1,2-Trichloroethane	ND	20	20	100	19	95.0	5.13	20	39 - 136
Tetrachloroethene	1	20	22	105	21	100	4.88	20	26 - 162
Dibromochloromethane	ND	20	19	95.0	18	90.0	5.41	20	24 - 191
Chlorobenzene	ND	20	19	95.0	19	95.0	0	20	38 - 150
Bromoform	ND	20	17	85.0	17	85.0	0	20	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	17	85.0	17	85.0	0	20	8 - 184
1,3-Dichlorobenzene	ND	20	18	90.0	18	90.0	0	20	7 - 187
1,4-Dichlorobenzene	ND	20	18	90.0	17	85.0	5.71	20	42 - 143
1,2-Dichlorobenzene	ND	20	18	90.0	18	90.0	0	20	1 - 208

Analyst: JZL
Sequence Date: 05/26/95
SPL ID of sample spiked: 9505719-01A
Sample File ID: FF__836.TX0
Method Blank File ID:
Blank Spike File ID: FF__844.TX0
Matrix Spike File ID: FF__947.TX0
Matrix Spike Duplicate File ID: FF__948.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: 601, Table 2
(***) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID):

9505700-05A 9505776-04A 9505679-01A 9505679-02A
9505767-03E 9505767-01E 9505714-08A 9505791-04B
9505791-03B 9505792-01A 9505767-05E 9505767-06E
9505791-02B 9505791-01B 9505719-01A 9505791-05B
9505029-24A 9505029-23A

Idelis Williams, QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **

METHOD 8020

Matrix: Aqueous

Units: µg/L

Batch Id: HP_J950525074400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits (**) (Mandatory) % Recovery Range
Benzene	ND	50	44	88.0	61 - 123
Toluene	ND	50	44	88.0	62 - 122
EthylBenzene	ND	50	45	90.0	56 - 119
O Xylene	ND	50	47	94.0	32 - 160
M & P Xylene	ND	100	100	100	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits (***) (Advisory) RPD Max.	QC Limits (***) (Advisory) Recovery Range
Benzene	ND	20	22	110	20	100	9.52	25	39 - 150
Toluene	ND	20	20	100	19	95.0	5.13	26	56 - 134
EthylBenzene	ND	20	20	100	18	90.0	10.5	38	61 - 128
O Xylene	ND	20	20	100	18	90.0	10.5	20	40 - 130
M & P Xylene	ND	40	42	105	37	92.5	12.7	20	43 - 152

Analyst: YN

Sequence Date: 05/25/95

SPL ID of sample spiked: 9505840-01A

Sample File ID: J___260.TX0

Method Blank File ID:

Blank Spike File ID: J___257.TX0

Matrix Spike File ID: J___282.TX0

Matrix Spike Duplicate File ID: J___283.TX0

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5>| / [(<4> + <5>) x 0.5] x 100

(**) = Source: SPL-Houston Historical Data

(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9505715-02A	9505771-02A	9505714-08C	9505771-01A
9505775-11A	9505750-07A	9505841-02A	9505907-01A
9505906-01A	9505903-01A	9505876-02A	9505877-03A
9505715-04A	9505892-01A	9505892-03A	9505775-10A
9505775-09A	9505775-08A	9505775-07A	9505840-01A

Idelis Williams, QC Officer

ICP Spectroscopy Method 6010 Quality Control Report

Matrix: Water Units: mg/L Analyst: RSC

Date: 053195 Time: 0817 File Name: 053195RC Checked: J. Marroquin 5/31/95

Laboratory Control Sample

ement	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
inum	ND	4.00	3.916	98	3.20	4.80
m	ND	4.00	3.816	95	3.20	4.80
nium	ND	2.00	1.957	98	1.60	2.40
per	ND	2.00	1.939	97	1.60	2.40
	ND	2.00	1.955	98	1.60	2.40
el	ND	2.00	1.977	99	1.60	2.40
	ND	2.00	1.922	96	1.60	2.40

Work Orders in Batch

Work Order	Fractions
95-05-694	01E, 02E. 03E
95-05-714	05C, 08D
95-05-737 [QA/QC Only]	01D

rix Spike - Spike Duplicate Results

Work Order Spiked: 95-05-737 (01D)

ement	Sample Result	Spike Added	Matrix Spike Result	Matrix Spike Recovery	Matrix Spike Duplicate Result	Matrix Spike Duplicate Recovery	QC Limits % Recovery		Spike RPD %	QC Limits %
inum	ND	2.0	2.027	101	2.073	103.650	80	120	2.2	20.0
um	0.3974	2.0	2.301	95	2.322	96	80	120	1.1	20.0
mium	ND	1.0	0.9789	98	0.9736	97	80	120	0.5	20.0
per	ND	1.0	0.9677	97	0.9778	98	80	120	1.0	20.0
	0.594	1.0	1.56	97	1.57	98	80	120	1.0	20.0
el	ND	1.0	0.97	97	0.9816	98	80	120	1.2	20.0
	0.038	1.0	0.9934	96	0.9833	95	80	120	1.1	20.0

I. Williams 6/1/95

Idelis Williams, QC Officer

SPL QUALITY CONTROL SUMMARY

Rev. 4/94

Atomic Absorption Analysis

Element: PB

Test Code: PBQG

Method: P3020 B

Instrument:

Date: 5/24/95

Time: 08:13

File #: 0524A

Analyst WFC

Matrix: Soil ☐ Water ☑

Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Units ug/L

Sample #'s in Batch

05709-lc	05714-5c, SD			
05710-lc				
05711-lc				
05754-lc				
05694-15-3F				

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
05709-lc	ND	50.0	103.4%	ND	50.0	49.5	48.9	99.0%	97.8%	1

• FLAGS •

• = Values Outside QC Range

☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)

☐ RPD out of QA/QC Limits (20 %)

☐ Soil LCS % Rec. Range _____

☐ Sample used for QA only

Analyst Walley Fawal Date 5/24/95

Approved By [illegible] Date 5/24/95

Date 5/24/95

[illegible] QC Officer

SPL QUALITY CONTROL SUMMARY

Atomic Absorption Analysis

Rev. 4/91

Element: Hg
Test Code: HgQC
Method: 7470
Instrument: 3030B

Date: 6/2/95
Time: 07:51
File #: 0602A

Analyst: D.B.

Matrix: Soil ☐ Water ☑

Units: mg/L

Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Sample #'s in Batch

9505673-16	9505694-1E-3E	9505714-5; 8D	9505766-1B	

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
05766-1B	[3] ND	2.00	[3] 98.0	ND	2.00	1.83	1.89	91.5	94.5	3

* FLAGS *

* = Values Outside QC Range

☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)

☐ RPD out of QA/QC Limits (20 %)

☐ Soil LCS % Rec. Range _____

☐ Sample used for QA/QC only

☐ See Case Narrative

Analyst: [signature] Date: 6/2/95

Approved By: [signature] Date: 6/2/95

[signature] Date: 6/2/95

Idelis Williams, QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:32:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1 P	µg/L
TOLUENE	ND	1 P	µg/L
ETHYLBENZENE	ND	1 P	µg/L
TOTAL XYLENE	ND	1 P	µg/L
TOTAL BTEX	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	108		
4-Bromofluorobenzene	96		
METHOD 5030/8020 ***			
Analyzed by: YN			
Date: 05/27/95			
Cadmium, Total	ND	0.005	mg/L
METHOD 6010 ***			
Analyzed by: DQ			
Date: 06/05/95			
Chromium, Total	ND	0.002	mg/L
METHOD 7191 ***			
Analyzed by: WFL			
Date: 06/01/95			
Mercury, Total	ND	0.0004	mg/L
METHOD 7470 ***			
Analyzed by: PB			
Date: 06/06/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:32:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Nickel, Total METHOD 6010 *** Analyzed by: DQ Date: 06/05/95	ND	0.02	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/31/95	ND	0.004	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:32:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-01

Operational Tech

SAMPLE ID: 025-003-RB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	25	ug/L
2-Nitrophenol	ND	5	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	25	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	5	ug/L
Phenanthrene	ND	25	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	5	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-01

Operational Tech

SAMPLE ID: 025-003-RB

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	99	35	114
2-Fluorobiphenyl	50 ug/L	85	43	116
Terphenyl-d14	50 ug/L	95	33	141
Phenol-d5	75 ug/L	50	10	110
2-Fluorophenol	75 ug/L	46	21	110
2,4,6-Tribromophenol	75 ug/L	61	10	123

ANALYZED BY: LH DATE/TIME: 05/27/95 01:03:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-01

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-RB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:32:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	1	µg/L
Chloromethane	ND	1	µg/L
Vinyl chloride	ND	1	µg/L
Bromomethane	ND	1	µg/L
Chloroethane	ND	1	µg/L
Trichlorofluoromethane	ND	1	µg/L
1,1-Dichloroethene	ND	1	µg/L
Methylene chloride	4	1	µg/L
Trans-1,2-Dichloroethene	ND	1	µg/L
1,1-Dichloroethane	ND	1	µg/L
Chloroform	5	1	µg/L
1,1,1-Trichloroethane	ND	1	µg/L
Carbon tetrachloride	ND	1	µg/L
1,2-Dichloroethane	ND	1	µg/L
2-Chloroethylvinyl ether	ND	1	µg/L
Trichloroethene	ND	1	µg/L
1,2-Dichloropropane	ND	1	µg/L
Bromodichloromethane	ND	1	µg/L
cis-1,3-Dichloropropene	ND	1	µg/L
trans-1,3-Dichloropropene	ND	1	µg/L
1,1,2-Trichloroethane	ND	1	µg/L
Tetrachloroethene	ND	1	µg/L
Dibromochloromethane	ND	1	µg/L
Chlorobenzene	ND	1	µg/L
Bromoform	ND	1	µg/L
1,1,2,2-Tetrachloroethane	ND	1	µg/L
1,3-Dichlorobenzene	ND	1	µg/L
1,4-Dichlorobenzene	ND	1	µg/L
1,2-Dichlorobenzene	ND	1	µg/L

METHOD: 8010, Halogenated Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-01

Operational Tech

SAMPLE ID: 025-003-RB

SURROGATES	**% RECOVERY**
1-Chloro-2-Fluorobenzene	92

ANALYZED BY: JZL DATE/TIME: 05/27/95 05:07:00
METHOD: 8010, Halogenated Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Houston Labs

Data file : /chem/h.i/h950526.b/h146s17.d
Lab Smp Id:
Inj Date : 27-MAY-95 01:03
Operator : LH
Smp Info : 9505767-01B-8270W/1X
Misc Info : E142C1/J142B01/H146CC1
Comment :
Method : /chem/h.i/h950526.b/hclpw.m
Meth Date : 30-May-1995 09:24 liping
Cal Date : 26-MAY-1995 13:43
Als bottle: 25
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h146cc1.d

Compound Sublist: 8270.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 11 1,4-Dichlorobenzene-d4	152.00	4.092	4.080	(1.000)	248266	40	
* 32 Naphthalene-d8	136.00	5.277	5.265	(1.000)	651927	40	
* 48 Acenaphthene-d10	164.00	7.031	7.019	(1.000)	297841	40	
* 65 Phenanthrene-d10	188.00	8.524	8.512	(1.000)	295739	40	
* 76 Chrysene-d12	240.00	11.297	11.273	(1.000)	97954	40	
* 83 Perylene-d12	264.00	13.347	13.323	(1.000)	53356	40	
$ 23 Nitrobenzene-d5	82.00	4.613	4.590	(0.874)	625207	99	49
$ 41 2-Fluorobiphenyl	172.00	6.355	6.343	(0.904)	885300	85	42
$ 72 Terphenyl-d14	244.00	10.159	10.147	(0.899)	260150	95	47
$ 4 Phenol-d5	99.00	3.831	3.807	(0.936)	866615	75	38
$ 3 2-Fluorophenol	112.00	3.108	3.085	(0.760)	763744	68	34
$ 61 2,4,6-Tribromophenol	329.70	7.848	7.837	(0.921)	65075	92	46(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h146s17.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950526.b/hclpw.m
Misc Info: E142C1/J142B01/H146CC1

Calibration Date: 05/26/95
Calibration Time: 1343

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	248407	124204	496814	248266	-0.06
32 Naphthalene-d8	844661	422330	1689322	651927	-22.82
48 Acenaphthene-d10	317019	158510	634038	297841	-6.05
65 Phenanthrene-d10	323627	161814	647254	295739	-8.62
76 Chrysene-d12	135631	67816	271262	97954	-27.78
83 Perylene-d12	74718	37359	149436	53356	-28.59

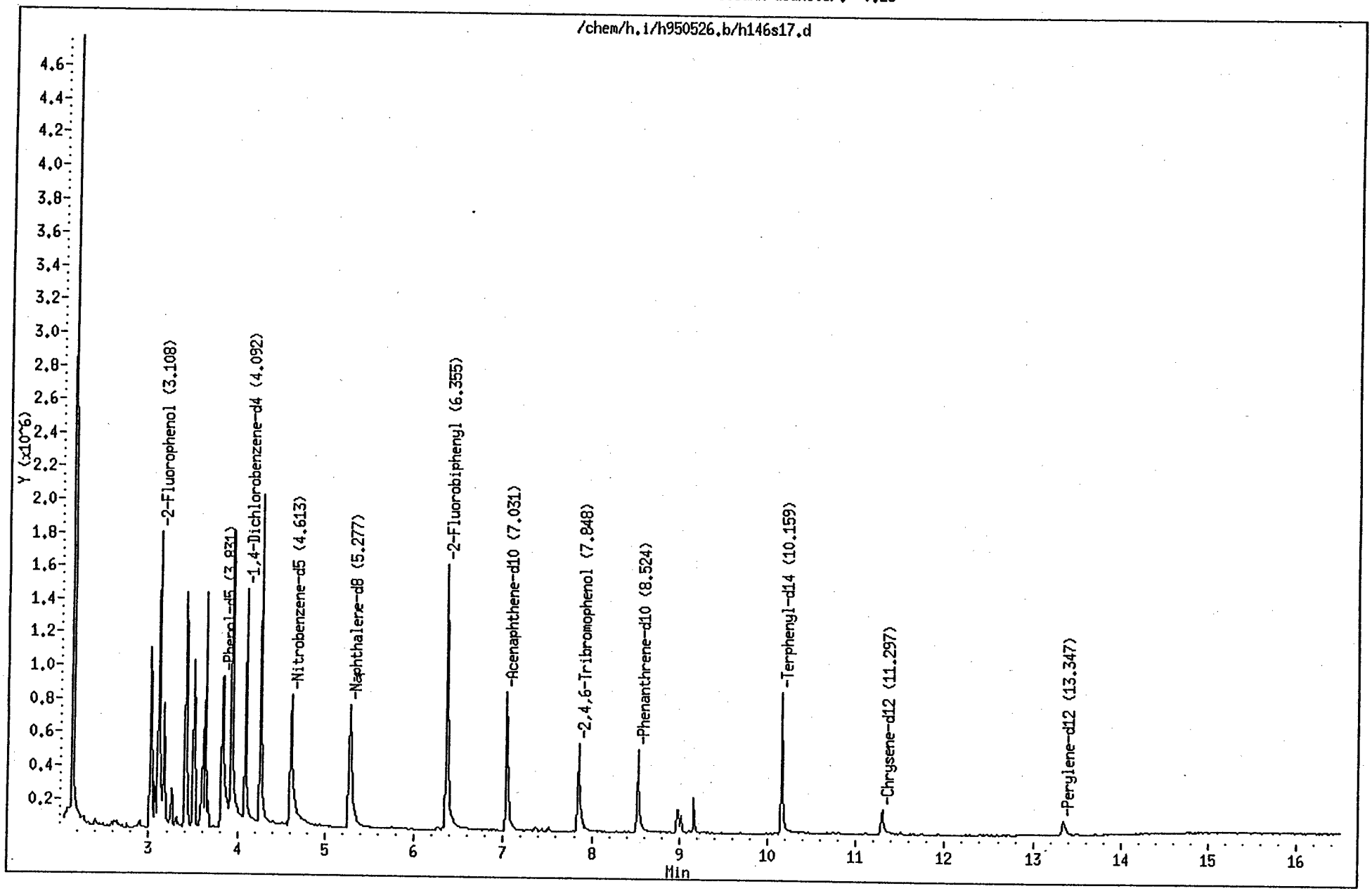
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.08	3.58	4.58	4.09	0.29
32 Naphthalene-d8	5.27	4.77	5.77	5.28	0.22
48 Acenaphthene-d10	7.02	6.52	7.52	7.03	0.17
65 Phenanthrene-d10	8.51	8.01	9.01	8.52	0.14
76 Chrysene-d12	11.27	10.77	11.77	11.30	0.21
83 Perylene-d12	13.32	12.82	13.82	13.35	0.18

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.

Data File: /chem/h.i/h950526.b/h146s17.d
Date : 27-MAY-95 01:03
Client ID:
Sample Info: 9505767-01B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Version: 3.2 <16C20>
Name : 9505767-01D Time : 05/27/95 14:25
Number: SC ;W;1 Study : BTEXW;1
: YN

nt : HP_J Channel : A A/D mV Range : 1000
Sampler : NONE
Vial : 0/0

e Serial # : 1092573380 Data Acquisition Time: 05/27/95 14:08
Time : 0.00 min.
Time : 17.33 min.
Rate : 2.0000 pts/sec

File : l:\data\tchrom\btex\varj\J___363.raw
lt File : l:\data\tchrom\btex\varj\J___363.rst
rument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ile : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
ence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

ume : 2 ul Area Reject : 300.00
mount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

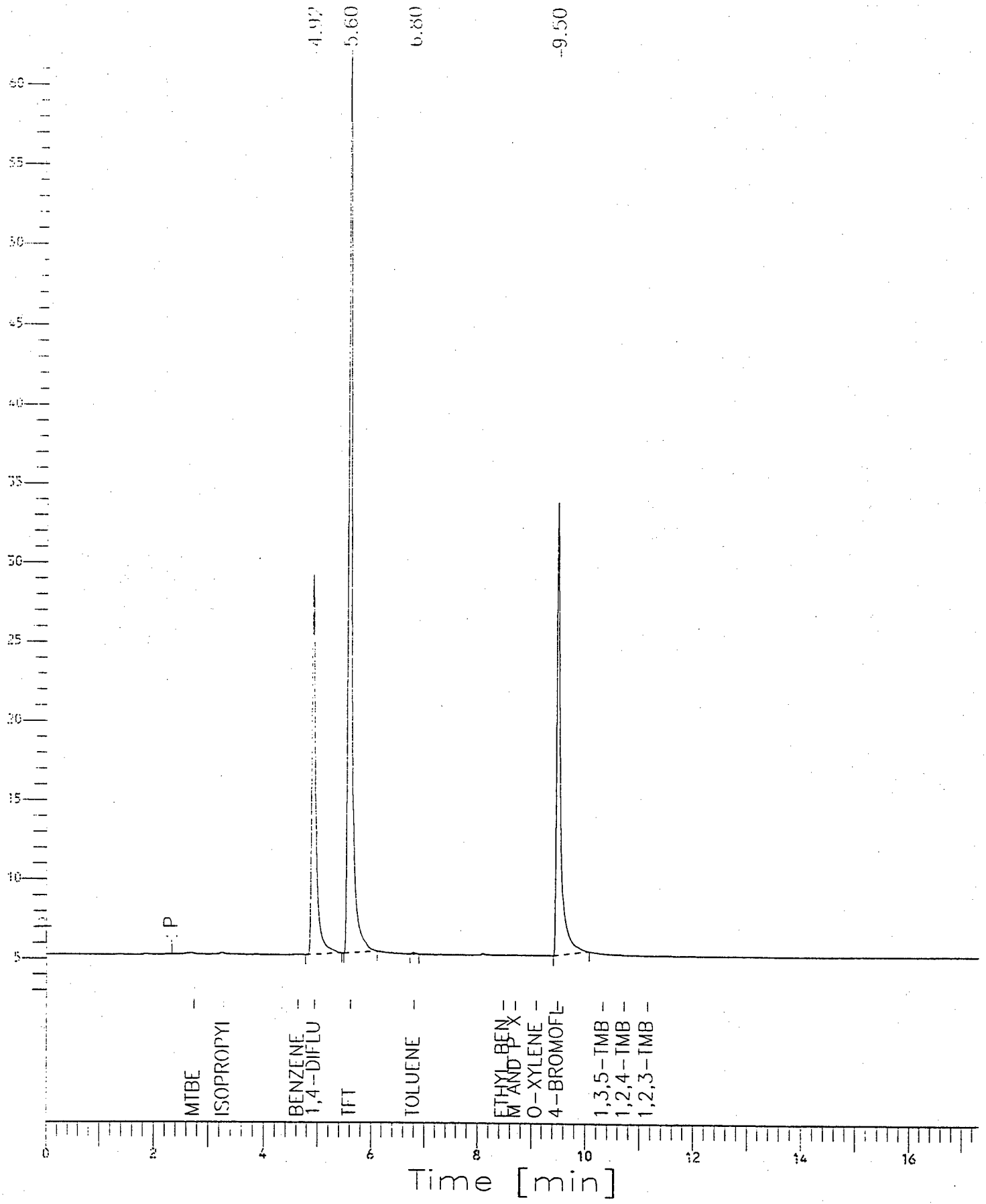
Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
.924	122892.50	23972.33	BB	1133.0460	0.4458	108.4621	1,4-DIFLUOROBENZENE	108.4621	-0.0259
.598	275662.50	56521.89	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0240
6.798	455.50	120.41	BB	2392.8377	0.0017	0.1904	Toluene	0.1904	-0.0149
.500	142536.75	28566.91	BB	1491.1541	0.5171	95.5882	4-BROMOFLUOROBENZENE	95.5882	-0.0025
	541547.25	109181.53				204.2406		204.2406	-0.0673

tored in ASCII File: l:\data\tchrom\btex\varj\J___363.TXO

Chromatogram

ole Name : 9505767-01D
eName : l:\data\tchrom\btex\varj\J___363.raw
nod : HP_J.ins
t Time : 0.00 min End Time : 17.33 min
e Factor: 1 Plot Offset: 2 mV

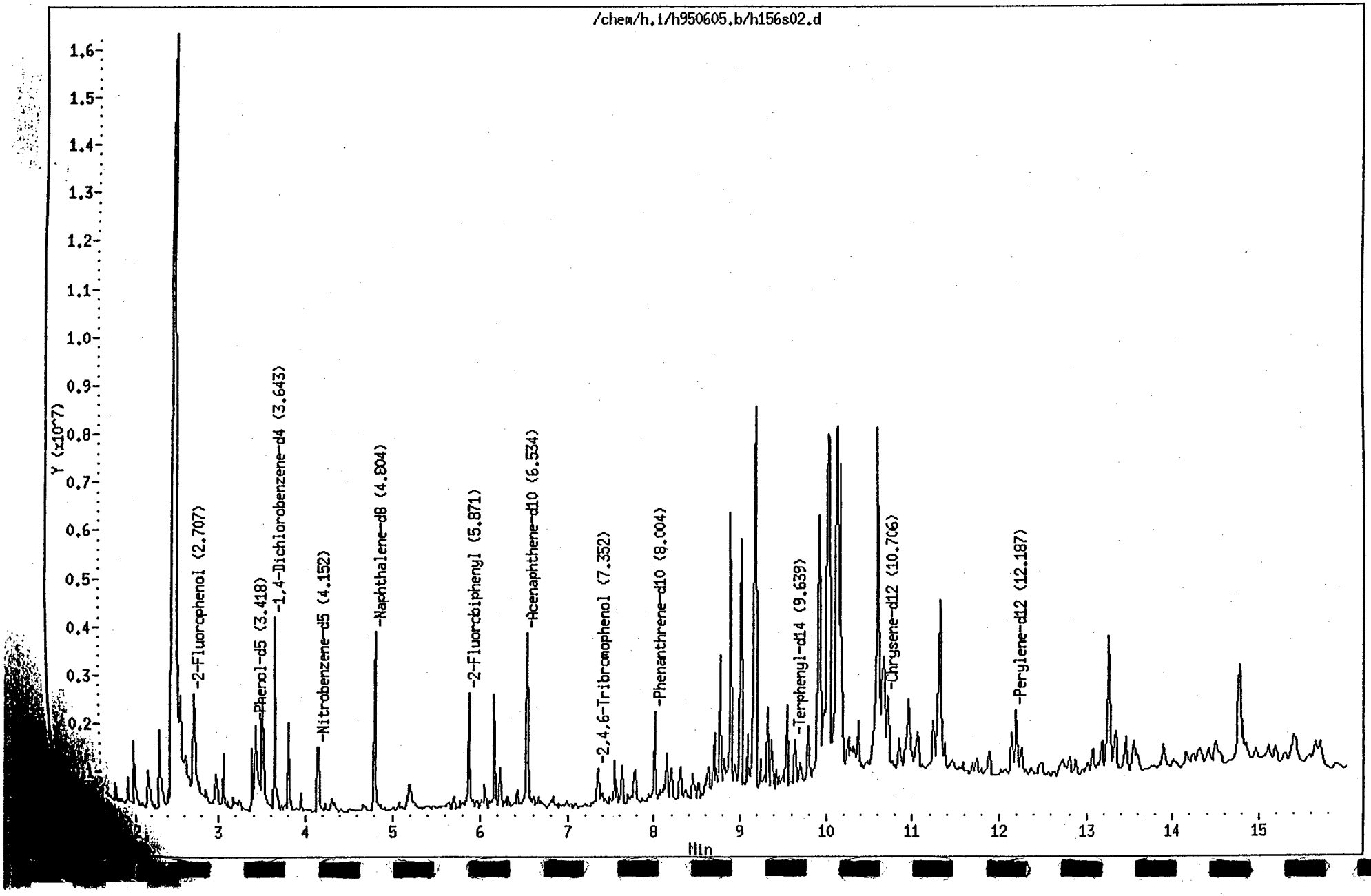
Sample #: SC ;W;1
Date : 05/27/95 14:26
Time of Injection: 05/27/95 14:08
Low Point : 2.43 mV High Point : 61.76 mV
Plot Scale: 59 mV



Data File: /chem/h.i/h950605.b/h156s02.d
Date : 05-JUN-1995 17:00
Client ID:
Sample Info: 9505766-06A-8270S/3X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: SI-002FB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 14:25:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Cadmium, Total METHOD 6010 *** Analyzed by: DQ Date: 06/05/95	ND	0.005	mg/L
Chromium, Total METHOD 7191 *** Analyzed by: WFL Date: 06/01/95	ND	0.002	mg/L
Mercury, Total METHOD 7470 *** Analyzed by: PB Date: 06/06/95	ND	0.0004	mg/L
Nickel, Total METHOD 6010 *** Analyzed by: DQ Date: 06/05/95	ND	0.02	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/24/95	05/24/95		

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: SI-002FB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 14:25:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/31/95	ND	0.004	mg/L

ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-02

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/9

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: SI-002FB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 14:25:0
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	ug/L
Bromobenzene	ND	5	ug/L
Bromochloromethane	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	10	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
Carbon tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chlorodibromomethane	ND	5	ug/L
Chloroethane	ND	10	ug/L
Chloroform	6	5	ug/L
Chloromethane	ND	10	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-chloropropane	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Methylene chloride	ND	5	ug/L
Naphthalene	ND	5	ug/L
n-Propylbenzene	ND	5	ug/L

METHOD: 8260 Water, Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-02

Operational Tech

SAMPLE ID: SI-002FB

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L
Vinyl chloride	ND	10	ug/L
Xylenes (total)	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50	96	76	114
Toluene-d8	50	96	88	110
4-Bromofluorobenzene	50	96	86	115

ANALYZED BY: JC DATE/TIME: 05/25/95 00:53:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed D - Surr. diluted out.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Labs

Volatiles by 624/8240

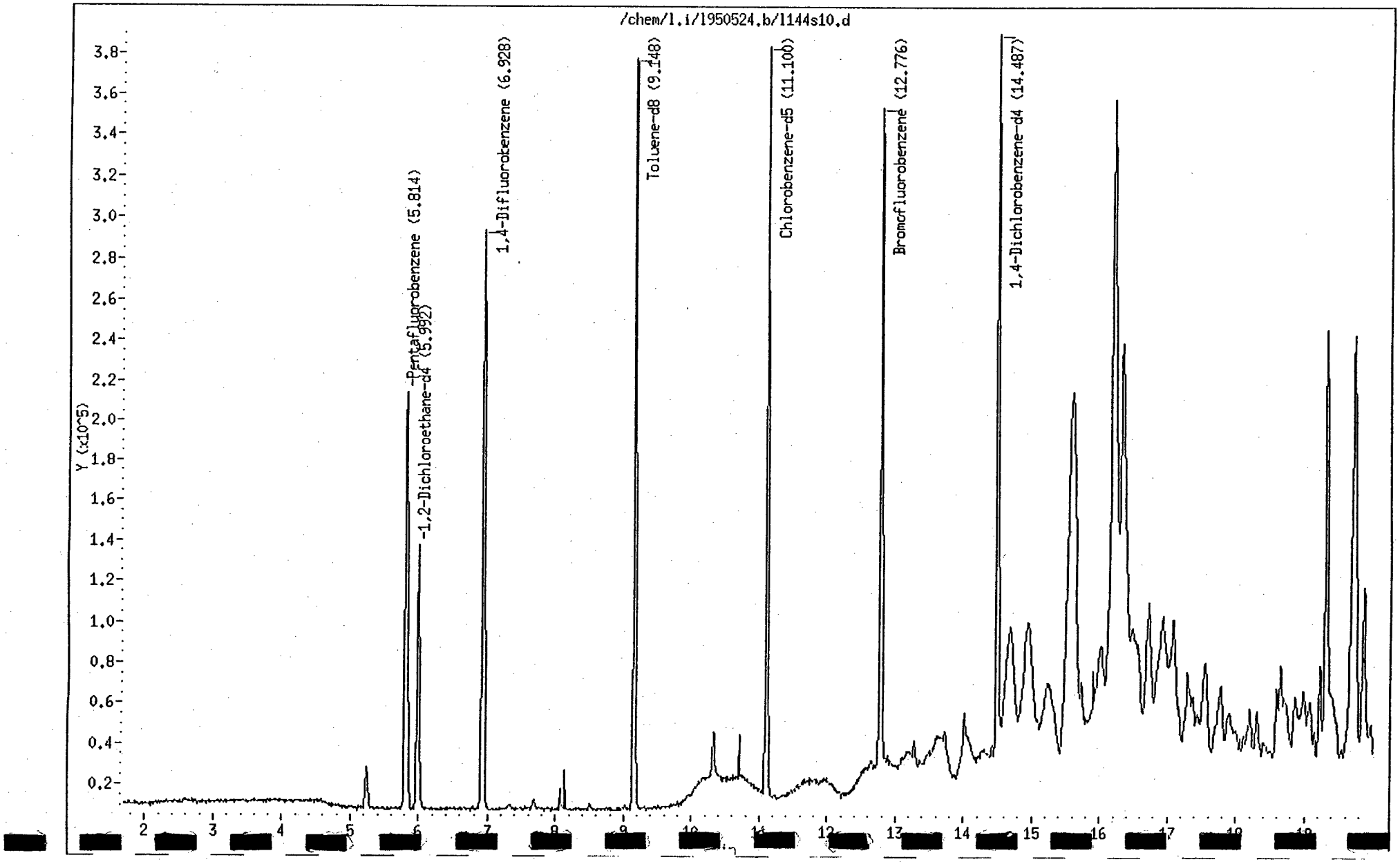
Data file : /chem/l.i/l950524.b/l144s10.d
Lab Smp Id:
Inj Date : 25-MAY-1995 00:53
Operator : JC Inst ID: l.i
Smp Info : 9505767-02A-8260W/1X
Misc Info : L144W2/L144B03/L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 20
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
18	Chloroform	83.00	5.235	5.241	(0.900)	22874	32	6
2	Pentafluorobenzene	168.00	5.814	5.820	(1.000)	205422	250	
24	1,4-Difluorobenzene	114.00	6.928	6.925	(1.000)	258467	250	
38	Chlorobenzene-d5	117.00	11.100	11.106	(1.000)	206228	250	
48	1,4-Dichlorobenzene-d4	152.00	14.487	14.493	(1.000)	105832	250	
19	1,2-Dichloroethane-d4	102.00	5.992	5.990	(0.865)	19240	240	48
32	Toluene-d8	98.00	9.157	9.154	(1.322)	270895	240	48
47	Bromofluorobenzene	95.00	12.776	12.782	(1.844)	116003	240	48

Data File: /chem/1.i/1950524.b/1144s10.d
Date : 25-MAY-1995 00:53
Client ID:
Sample Info: 9505767-02A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

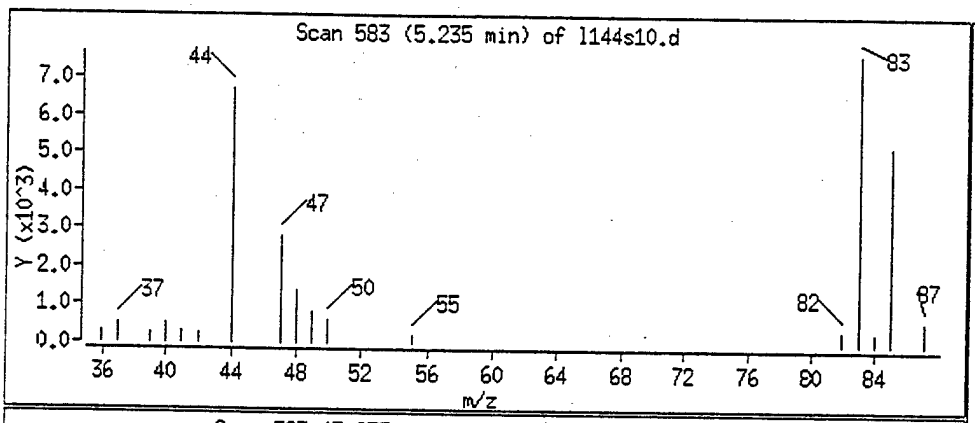
Operator: JC
Column diameter: 0.25

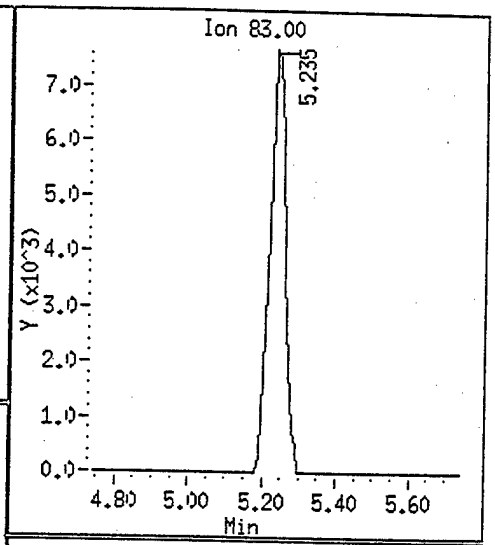


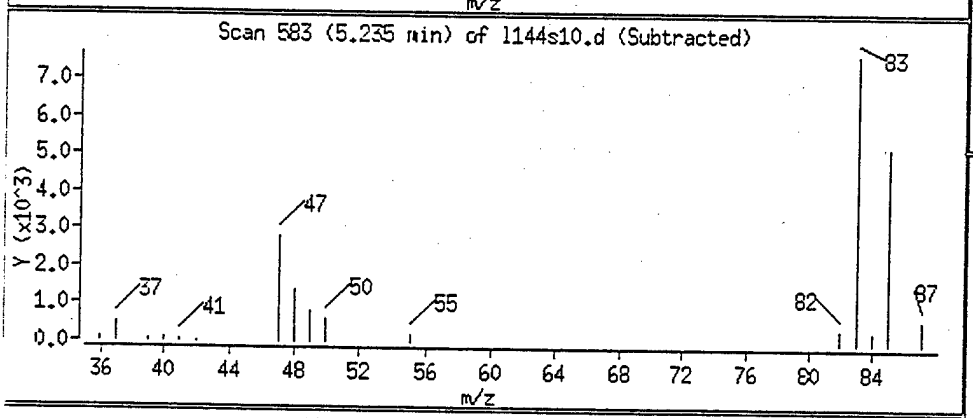
Data File: /chem/1.i/1950524.b/1144s10.d
Date : 25-MAY-1995 00:53
Client ID:
Sample Info: 9505767-02A-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

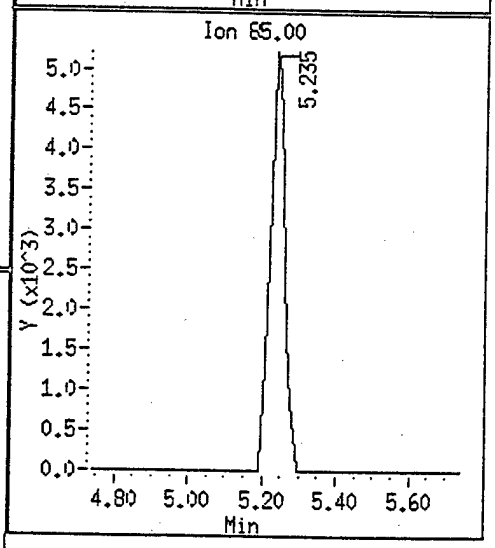
Instrument: 1.i
Operator: JC
Column diameter: 0.25

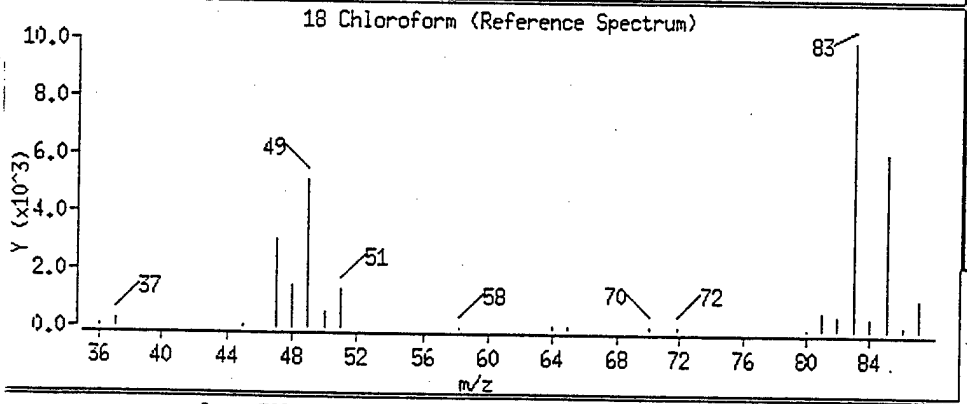
18 Chloroform

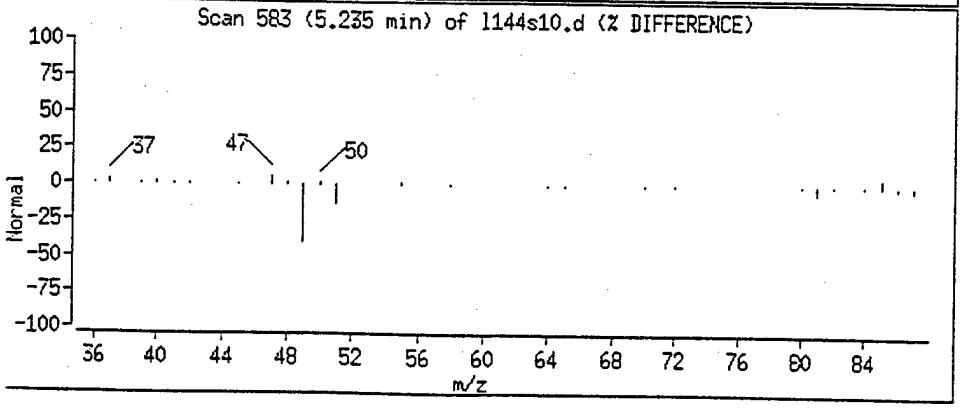












HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-001-MW-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:00:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1 P	µg/L
TOLUENE	ND	1 P	µg/L
ETHYLBENZENE	ND	1 P	µg/L
TOTAL XYLENE	ND	1 P	µg/L
TOTAL BTEX	ND		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	109		
4-Bromofluorobenzene	101		
METHOD 5030/8020 ***			
Analyzed by: YN			
Date: 05/28/95			
Cadmium, Total	ND	0.005	mg/L
METHOD 6010 ***			
Analyzed by: DQ			
Date: 06/05/95			
Chromium, Total	0.036	0.002	mg/L
METHOD 7191 ***			
Analyzed by: WFL			
Date: 06/01/95			
Mercury, Total	ND	0.0004	mg/L
METHOD 7470 ***			
Analyzed by: PB			
Date: 06/06/95			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-001-MW-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:00:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Nickel, Total METHOD 6010 *** Analyzed by: DQ Date: 06/05/95	0.07	0.02	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/31/95	0.008	0.004	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9505767-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-001-MW-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:00:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	1	µg/L
Chloromethane	ND	1	µg/L
Vinyl chloride	ND	1	µg/L
Bromomethane	ND	1	µg/L
Chloroethane	ND	1	µg/L
Trichlorofluoromethane	ND	1	µg/L
1,1-Dichloroethene	ND	1	µg/L
Methylene chloride	ND	1	µg/L
Trans-1,2-Dichloroethene	ND	1	µg/L
1,1-Dichloroethane	ND	1	µg/L
Chloroform	ND	1	µg/L
1,1,1-Trichloroethane	ND	1	µg/L
Carbon tetrachloride	ND	1	µg/L
1,2-Dichloroethane	ND	1	µg/L
2-Chloroethylvinyl ether	ND	1	µg/L
Trichloroethene	ND	1	µg/L
1,2-Dichloropropane	ND	1	µg/L
Bromodichloromethane	ND	1	µg/L
cis-1,3-Dichloropropene	ND	1	µg/L
trans-1,3-Dichloropropene	ND	1	µg/L
1,1,2-Trichloroethane	ND	1	µg/L
Tetrachloroethene	ND	1	µg/L
Dibromochloromethane	ND	1	µg/L
Chlorobenzene	ND	1	µg/L
Bromoform	ND	1	µg/L
1,1,2,2-Tetrachloroethane	ND	1	µg/L
1,3-Dichlorobenzene	ND	1	µg/L
1,4-Dichlorobenzene	ND	1	µg/L
1,2-Dichlorobenzene	ND	1	µg/L

METHOD: 8010, Halogenated Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-03

Operational Tech

SAMPLE ID: 025-001-MW-GW01

SURROGATES	% RECOVERY
1-Chloro-2-Fluorobenzene	90

ANALYZED BY: JZL DATE/TIME: 05/27/95 06:18:00
METHOD: 8010, Halogenated Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-03

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-001-MW-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 15:00:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-03

Operational Tech

SAMPLE ID: 025-001-MW-GW01

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
Naphthalene	ND	5	ug/L
2-Nitroaniline	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	25	ug/L
2-Nitrophenol	ND	5	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	25	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	5	ug/L
Phenanthrene	ND	25	ug/L
Phenol	ND	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	5	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-03

Operational Tech

SAMPLE ID: 025-001-MW-GW01

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	90	35	114
2-Fluorobiphenyl	50 ug/L	80	43	116
Terphenyl-d14	50 ug/L	82	33	141
Phenol-d5	75 ug/L	47	10	110
2-Fluorophenol	75 ug/L	43	21	110
2,4,6-Tribromophenol	75 ug/L	53	10	123

ANALYZED BY: LH DATE/TIME: 05/27/95 00:39:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS: *SP* for Target Compound List

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Houston Labs

Data file : /chem/h.i/h950526.b/h146s16.d
Lab Smp Id:
Inj Date : 27-MAY-95 00:39
Operator : LH S ME
Smp Info : 9505767-02B-8270W/1X
Misc Info : E142C1/J142B01/H146CC1
Comment :
Method : /chem/h.i/h950526.b/hclpw.m
Meth Date : 30-May-1995 09:24 liping
Cal Date : 26-MAY-1995 13:43
Als bottle: 24
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h146cc1.d

Compound Sublist: 8270.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 11 1,4-Dichlorobenzene-d4	152.00	4.091	4.080	(1.000)	192929	40	
* 32 Naphthalene-d8	136.00	5.276	5.265	(1.000)	536539	40	
* 48 Acenaphthene-d10	164.00	7.030	7.019	(1.000)	248774	40	
* 65 Phenanthrene-d10	188.00	8.523	8.512	(1.000)	246496	40	
* 76 Chrysene-d12	240.00	11.296	11.273	(1.000)	85999	40	
* 83 Perylene-d12	264.00	13.347	13.323	(1.000)	46650	40	
$ 23 Nitrobenzene-d5	82.00	4.613	4.590	(0.874)	467439	90	45
$ 41 2-Fluorobiphenyl	172.00	6.355	6.343	(0.904)	694225	80	40
$ 72 Terphenyl-d14	244.00	10.159	10.147	(0.899)	197241	82	41
$ 4 Phenol-d5	99.00	3.831	3.807	(0.936)	629311	70	35
$ 3 2-Fluorophenol	112.00	3.108	3.085	(0.760)	559583	64	32
$ 61 2,4,6-Tribromophenol	329.70	7.848	7.837	(0.921)	46779	79	40(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h146s16.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950526.b/hclpw.m
Misc Info: E142C1/J142B01/H146CC1

Calibration Date: 05/26/95
Calibration Time: 1343

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	248407	124204	496814	192929	-22.33
32 Naphthalene-d8	844661	422330	1689322	536539	-36.48
48 Acenaphthene-d10	317019	158510	634038	248774	-21.53
65 Phenanthrene-d10	323627	161814	647254	246496	-23.83
76 Chrysene-d12	135631	67816	271262	85999	-36.59
83 Perylene-d12	74718	37359	149436	46650	-37.57

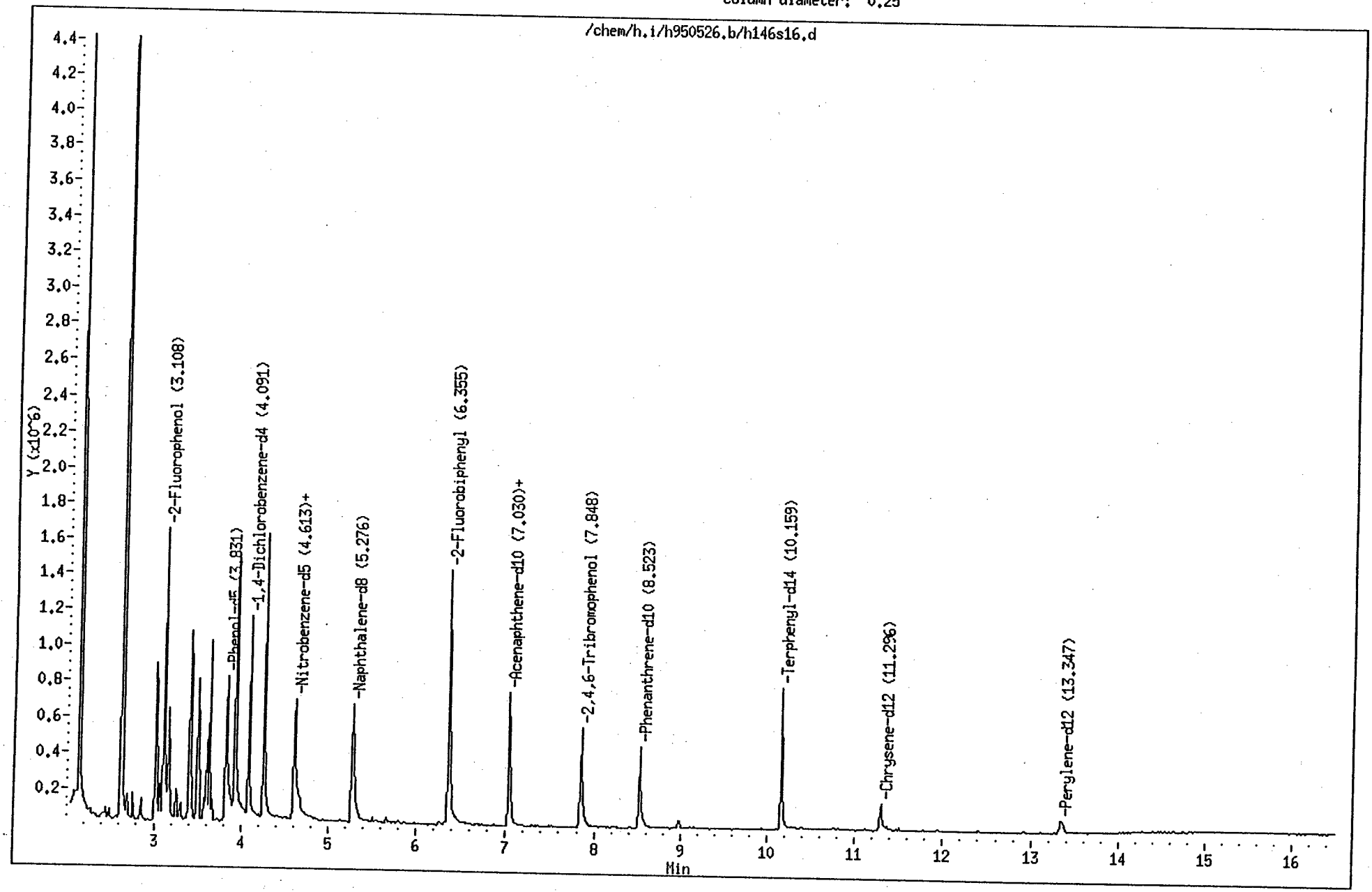
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.08	3.58	4.58	4.09	0.28
32 Naphthalene-d8	5.27	4.77	5.77	5.28	0.22
48 Acenaphthene-d10	7.02	6.52	7.52	7.03	0.16
65 Phenanthrene-d10	8.51	8.01	9.01	8.52	0.13
76 Chrysene-d12	11.27	10.77	11.77	11.30	0.21
83 Perylene-d12	13.32	12.82	13.82	13.35	0.17

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.

Data File: /chem/h.i/h950526.b/h146s16.d
Date : 27-MAY-95 00:39
Client ID:
Sample Info: 9505767-02B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



[redacted]
e Version: 3.2 <16C20>
[redacted] Name : 9505767-03D Time : 05/28/95 03:44
[redacted]le Number: SC,;W;1 Study : BTEXW;1
[redacted]r : YN

[redacted]ment : HP_J Channel : A A/D mV Range : 1000
[redacted]Sampler : NONE
[redacted]/Vial : 0/0

[redacted]ce Serial # : 1092573380 Data Acquisition Time: 05/28/95 03:27
[redacted]y Time : 0.00 min.
Time : 17.33 min.
[redacted]g Rate : 2.0000 pts/sec

[redacted]a File : l:\data\tchrom\btex\varj\J___394.raw
[redacted]t File : l:\data\tchrom\btex\varj\J___394.rst
[redacted]ment File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
[redacted] File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
[redacted] File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
[redacted]ence File : L:\DATA\TCHROM\BTEX\METHODS\JTEXJ.seq

[redacted]lume : 2 ul Area Reject : 300.00
[redacted] Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
[redacted]4.920	118668.77	23444.50	BB	1090.4821	0.4473	108.8223	1,4-DIFLUOROBENZENE	108.8223	-0.0302
[redacted]5.594	265307.00	55016.37	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0282
9.493	144835.75	29822.09	BB	1435.1375	0.5459	100.9212	4-BROMOFLUOROBENZENE	100.9212	-0.0090
[redacted]	528811.50	108282.96				209.7435		209.7435	-0.0675

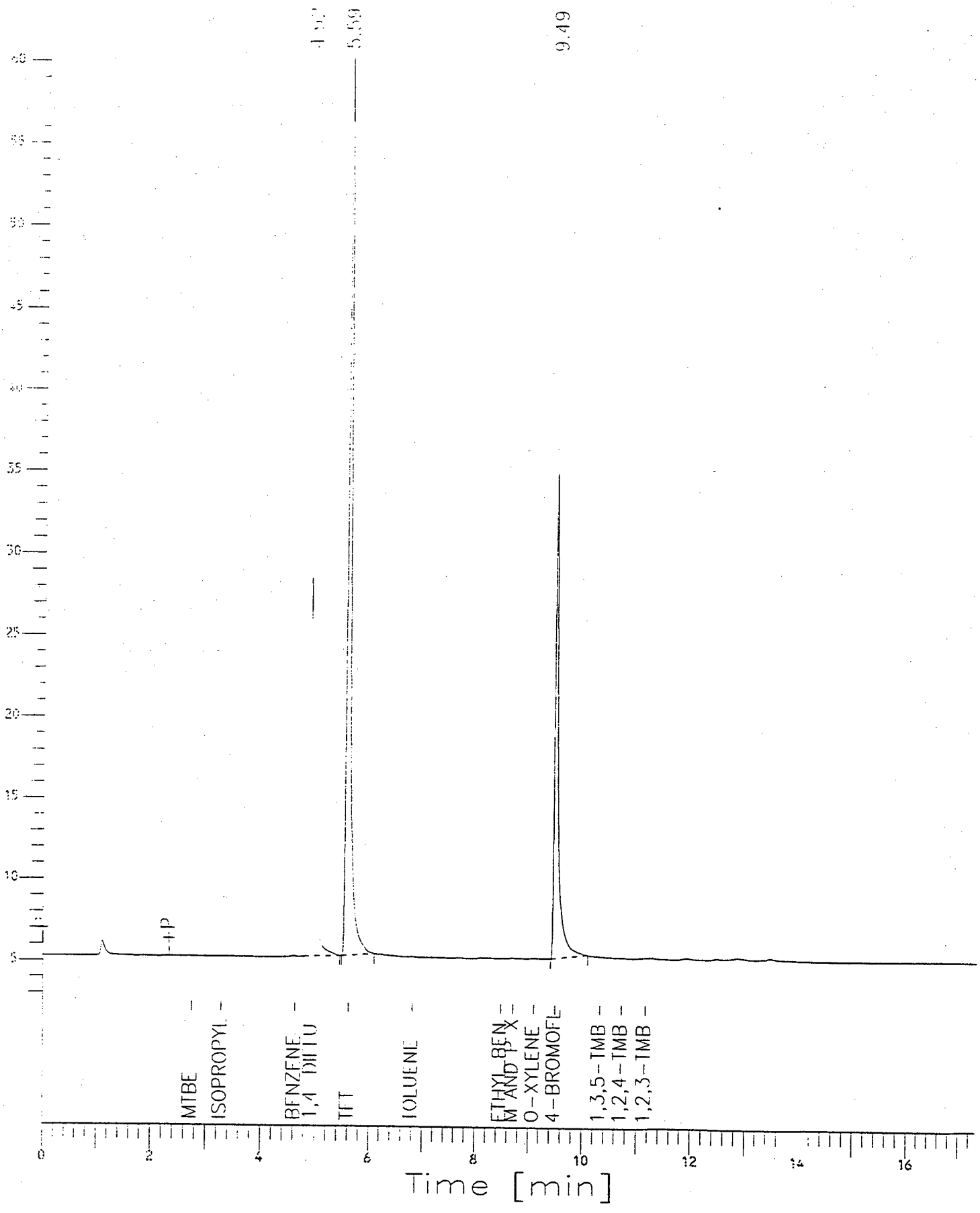
[redacted]
[redacted]

[redacted]Stored in ASCII File: l:\data\tchrom\btex\varj\J___394.TXO

Chromatogram

mple Name : 9505767-03D
ieName : l:\data\tchrom\btex\varj\J___394.raw
thod : HP_J.ins
art Time : 0.00 min End Time : 17.33 min
ale Factor: 1 Plot Offset: 3 mV

Sample #: SC ;W;1 Page 1 of 1
Date : 05/28/95 03:44
Time of Injection: 05/28/95 03:27
Low Point : 2.51 mV High Point : 60.28 mV
Plot Scale: 58 mV



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Provided by SPL
SAMPLE ID: 025-TB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	1 P	µg/L
TOLUENE	ND	1 P	µg/L
ETHYLBENZENE	ND	1 P	µg/L
TOTAL XYLENE	ND	1 P	µg/L
TOTAL BTEX	ND		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	109
4-Bromofluorobenzene	98

METHOD 5030/8020 ***
Analyzed by: YN
Date: 05/27/95

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-04

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Provided by SPLhnology
SAMPLE ID: 025-TB

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	1	µg/L
Chloromethane	ND	1	µg/L
Vinyl chloride	ND	1	µg/L
Bromomethane	ND	1	µg/L
Chloroethane	ND	1	µg/L
Trichlorofluoromethane	ND	1	µg/L
1,1-Dichloroethene	ND	1	µg/L
Methylene chloride	B 3	1	µg/L
Trans-1,2-Dichloroethene	ND	1	µg/L
1,1-Dichloroethane	ND	1	µg/L
Chloroform	ND	1	µg/L
1,1,1-Trichloroethane	ND	1	µg/L
Carbon tetrachloride	ND	1	µg/L
1,2-Dichloroethane	ND	1	µg/L
2-Chloroethylvinyl ether	ND	1	µg/L
Trichloroethene	ND	1	µg/L
1,2-Dichloropropane	ND	1	µg/L
Bromodichloromethane	ND	1	µg/L
cis-1,3-Dichloropropene	ND	1	µg/L
trans-1,3-Dichloropropene	ND	1	µg/L
1,1,2-Trichloroethane	ND	1	µg/L
Tetrachloroethene	ND	1	µg/L
Dibromochloromethane	ND	1	µg/L
Chlorobenzene	ND	1	µg/L
Bromoform	ND	1	µg/L
1,1,2,2-Tetrachloroethane	ND	1	µg/L
1,3-Dichlorobenzene	ND	1	µg/L
1,4-Dichlorobenzene	ND	1	µg/L
1,2-Dichlorobenzene	ND	1	µg/L

METHOD: 8010, Halogenated Volatile Organics
(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-04

Operational Tech

SAMPLE ID: 025-TB

SURROGATES	**% RECOVERY**
1-Chloro-2-Fluorobenzene	84

ANALYZED BY: JZL DATE/TIME: 05/28/95 17:34:00
METHOD: 8010, Halogenated Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
B = Compound present in Method Blank

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

```
ftware Version: 3.2 <16C20>
mple Name  : 9505767-04D                Time         : 05/27/95  04:15
mple Number: SC ;W;1                    Study        : BTEXW;1
erator     : YN

strument   : HP_J                       Channel : A     A/D mV Range : 1000
toSampler  : NONE
ck/Vial    : 0/0

terface Serial # : 1092573380   Data Acquisition Time: 05/27/95  03:57
lay Time     : 0.00   min.
d Time       : 17.33  min.
mpling Rate  : 2.0000   pts/sec

v Data File  : l:\data\tchrom\btex\varj\J___346.raw
sult File    : l:\data\tchrom\btex\varj\J___346.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

. Volume     : 2 ul                     Area Reject      : 300.00
mple Amount  : 1.0000                   Dilution Factor  : 1.00
```

BTEX Area Percent Report

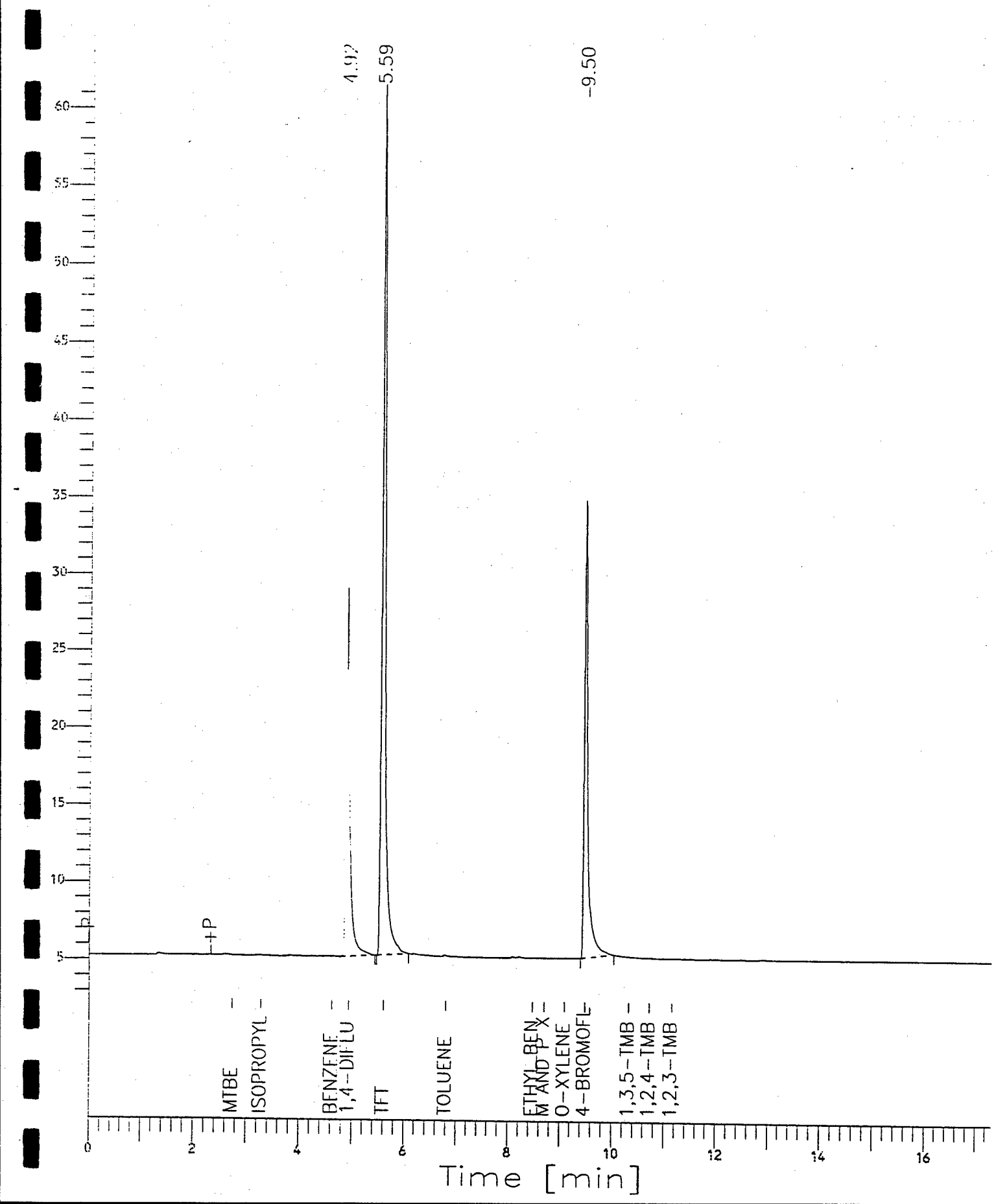
ak Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
4.918	119856.00	23929.68	BB	1095.3384	0.4498	109.4237	1,4-DIFLUOROBENZENE	109.4237	-0.0317
5.593	266488.50	55761.89	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0287
9.495	141641.75	30139.72	BB	1441.5288	0.5315	98.2580	4-BROMOFLUOROBENZENE	98.2580	-0.0068
	527986.25	109831.28				207.6817		207.6817	-0.0671

```
ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___346.TXO
```

Chromatogram

Le Name : 9505767-04D
eName : l:\data\tchrom\btex\varj\J___346.raw
h : HP_J.ins
Time : 0.00 min End Time : 17.33 min
e Factor: 1 Plot Offset: 3 mV

Sample #: SC ;W;1
Date : 05/27/95 04:15
Time of Injection: 05/27/95 03:57
Low Point : 2.47 mV High Point : 61.07 mV
Plot Scale: 59 mV



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-MW-GW04

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:05:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	2600	5 P	µg/L
TOLUENE	1300	5 P	µg/L
ETHYLBENZENE	570	5 P	µg/L
TOTAL XYLENE	1450	5 P	µg/L
TOTAL BTEX	5920		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	147		
4-Bromofluorobenzene	119		
METHOD 5030/8020 ***			
Analyzed by: YN			
Date: 05/28/95			
Cadmium, Total	ND	0.005	mg/L
METHOD 6010 ***			
Analyzed by: DQ			
Date: 06/05/95			
Chromium, Total	0.015	0.002	mg/L
METHOD 7191 ***			
Analyzed by: WFL			
Date: 06/01/95			
Mercury, Total	ND	0.0004	mg/L
METHOD 7470 ***			
Analyzed by: PB			
Date: 06/06/95			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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Certificate of Analysis No. H9-9505767-05

Operational Tech
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San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-MW-GW04

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:05:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Nickel, Total METHOD 6010 *** Analyzed by: DQ Date: 06/05/95	0.03	0.02	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/31/95	0.005	0.004	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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Operational Tech
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San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-MW-GW04

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:05:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-05

Operational Tech

SAMPLE ID: 025-003-MW-GW04

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	11	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	9	5	ug/L
Naphthalene	75	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	15	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-05

Operational Tech

SAMPLE ID: 025-003-MW-GW04

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	83	35	114
2-Fluorobiphenyl	50 ug/L	90	43	116
Terphenyl-d14	50 ug/L	49	33	141
Phenol-d5	75 ug/L	65	10	110
2-Fluorophenol	75 ug/L	36	21	110
2,4,6-Tribromophenol	75 ug/L	121	10	123

ANALYZED BY: LH DATE/TIME: 05/31/95 16:22:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-05

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003-MW-GW04

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:05:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	25	µg/L
Chloromethane	ND	25	µg/L
Vinyl chloride	ND	25	µg/L
Bromomethane	ND	25	µg/L
Chloroethane	ND	25	µg/L
Trichlorofluoromethane	ND	25	µg/L
1,1-Dichloroethene	ND	25	µg/L
Methylene chloride	30	25	µg/L
Trans-1,2-Dichloroethene	ND	25	µg/L
1,1-Dichloroethane	ND	25	µg/L
Chloroform	ND	25	µg/L
1,1,1-Trichloroethane	ND	25	µg/L
Carbon tetrachloride	ND	25	µg/L
1,2-Dichloroethane	ND	25	µg/L
2-Chloroethylvinyl ether	ND	25	µg/L
Trichloroethene	ND	25	µg/L
1,2-Dichloropropane	ND	25	µg/L
Bromodichloromethane	ND	25	µg/L
cis-1,3-Dichloropropene	ND	25	µg/L
trans-1,3-Dichloropropene	ND	25	µg/L
1,1,2-Trichloroethane	ND	25	µg/L
Tetrachloroethene	ND	25	µg/L
Dibromochloromethane	ND	25	µg/L
Chlorobenzene	ND	25	µg/L
Bromoform	ND	25	µg/L
1,1,2,2-Tetrachloroethane	ND	25	µg/L
1,3-Dichlorobenzene	ND	25	µg/L
1,4-Dichlorobenzene	ND	25	µg/L
1,2-Dichlorobenzene	ND	25	µg/L

METHOD: 8010, Halogenated Volatile Organics

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-05

Operational Tech

SAMPLE ID: 025-003-MW-GW04

SURROGATES	**% RECOVERY**
1-Chloro-2-Fluorobenzene	96

ANALYZED BY: JZL DATE/TIME: 05/26/95 07:43:00
METHOD: 8010, Halogenated Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151s01.d
Lab Smp Id:
Inj Date : 31-MAY-1995 16:22
Operator : LH Inst ID: h.i
Smp Info : 9505767-05B-8270W/1X
Misc Info : E142C1/J142B01/H151IC6
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:24 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.10

			QUANT SIG						CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng)	FINAL (ug/L)	
	5	Phenol	94.00	3.556	3.545	(0.935)	389596	31	15	(Q)
	16	2-Methylphenol	108.00	4.065	4.054	(1.069)	49205	6	3	(aH)
	19	4-Methylphenol	108.00	4.196	4.185	(1.103)	135719	18	9	
	33	Naphthalene	128.00	5.002	4.990	(1.005)	2439907	150	75	
	37	2-Methylnaphthalene	142.00	5.677	5.666	(1.140)	221457	23	11	
*	11	1,4-Dichlorobenzene-d4	152.00	3.805	3.805	(1.000)	212256	40		
*	32	Naphthalene-d8	136.00	4.978	4.979	(1.000)	613403	40		
*	48	Acenaphthene-d10	164.00	6.732	6.721	(1.000)	208505	40		
*	65	Phenanthrene-d10	188.00	8.201	8.202	(1.000)	219170	40		
*	76	Chrysene-d12	240.00	10.915	10.916	(1.000)	132755	40		
*	83	Perylene-d12	264.00	12.787	12.788	(1.000)	102867	40		
$	23	Nitrobenzene-d5	82.00	4.314	4.315	(0.867)	609600	83	41	
$	41	2-Fluorobiphenyl	172.00	6.056	6.057	(0.900)	577831	90	45	
$	72	Terphenyl-d14	244.00	9.848	9.849	(0.902)	163376	49	24	
$	4	Phenol-d5	99.00	3.556	3.533	(0.935)	1081927	98	49	
$	3	2-Fluorophenol	112.00	2.845	2.822	(0.748)	469020	54	27	
$	61	2,4,6-Tribromophenol	329.70	7.538	7.538	(0.919)	98964	180	91	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151s01.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: E142C1/J142B01/H151IC6

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	212256	85.74
32 Naphthalene-d8	440783	220392	881566	613403	39.16
48 Acenaphthene-d10	201424	100712	402848	208505	3.52
65 Phenanthrene-d10	261616	130808	523232	219170	-16.22
76 Chrysene-d12	195160	97580	390320	132755	-31.98
83 Perylene-d12	123342	61671	246684	102867	-16.60

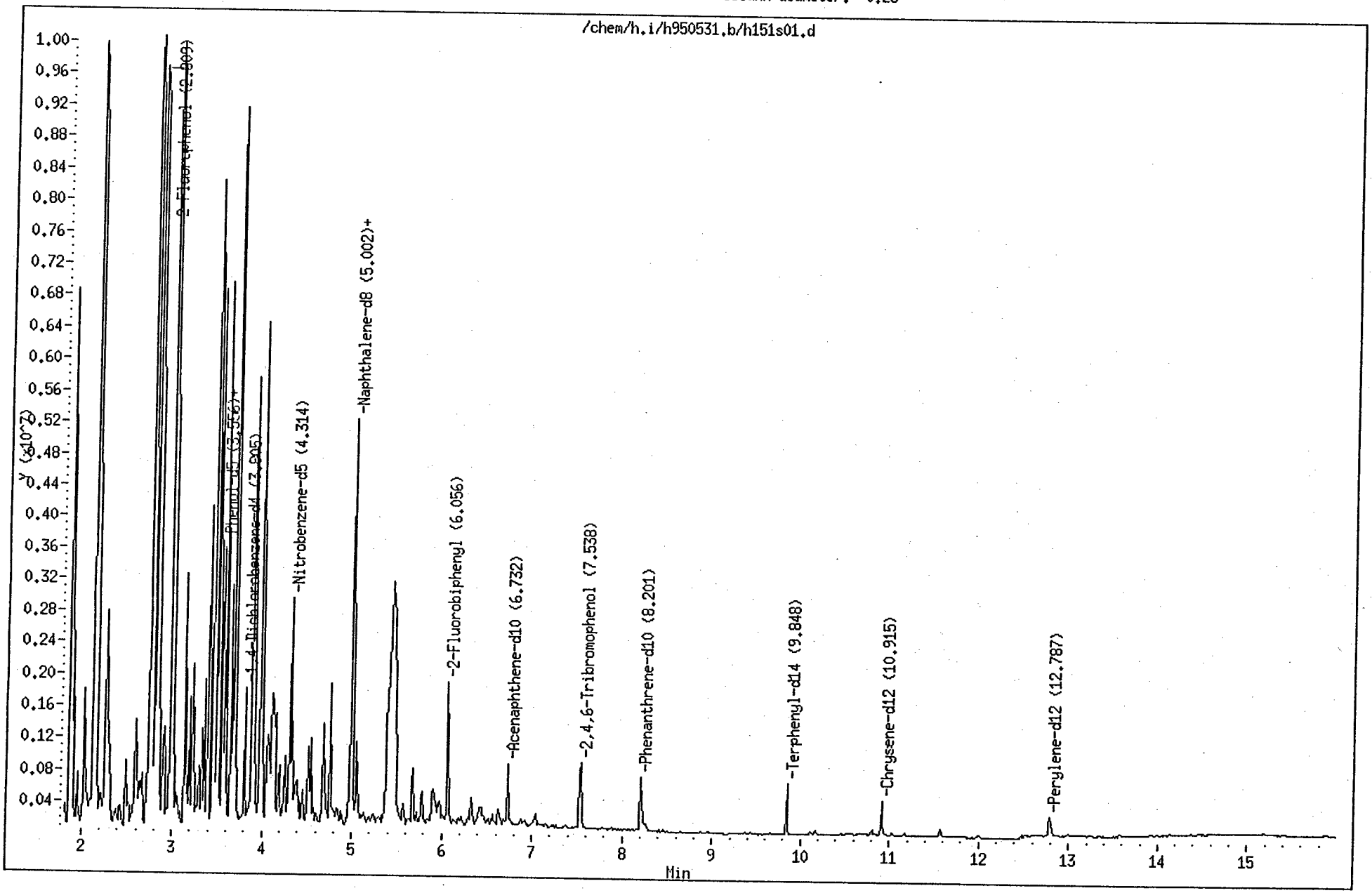
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.02
32 Naphthalene-d8	4.98	4.48	5.48	4.98	-0.01
48 Acenaphthene-d10	6.72	6.22	7.22	6.73	0.17
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	-0.01
76 Chrysene-d12	10.92	10.42	11.42	10.91	-0.01
83 Perylene-d12	12.79	12.29	13.29	12.79	-0.01

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.

Data File: /chem/h.i/h950531.b/h151s01.d
Date : 31-MAY-1995 16:22
Client ID:
Sample Info: 9505767-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

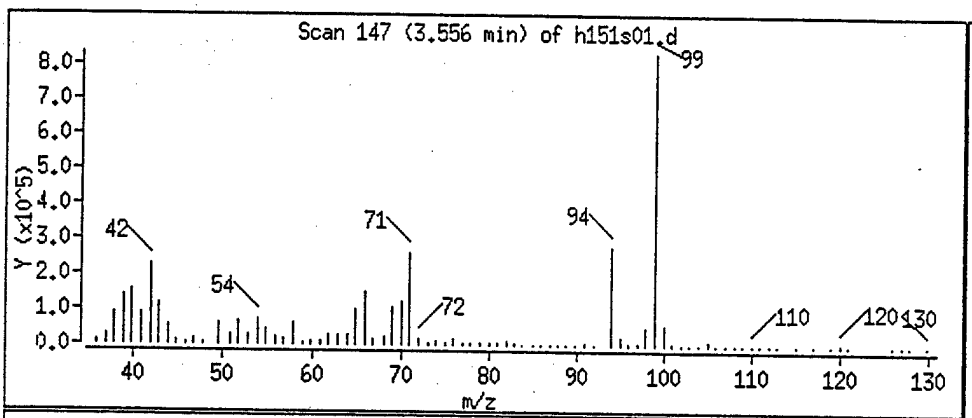
Operator: LH
Column diameter: 0.25

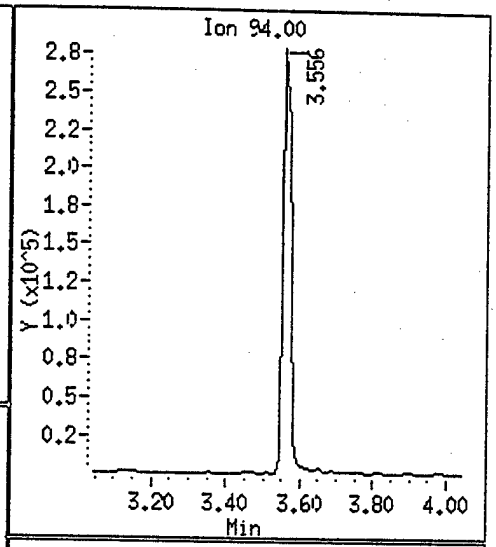


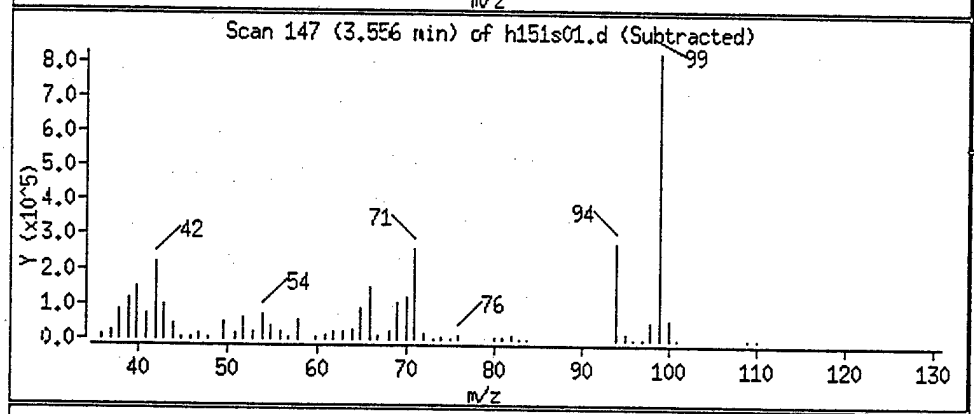
Data File: /chem/h.i/h950531.b/h151s01.d
Date : 31-MAY-1995 16:22
Client ID:
Sample Info: 9505767-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

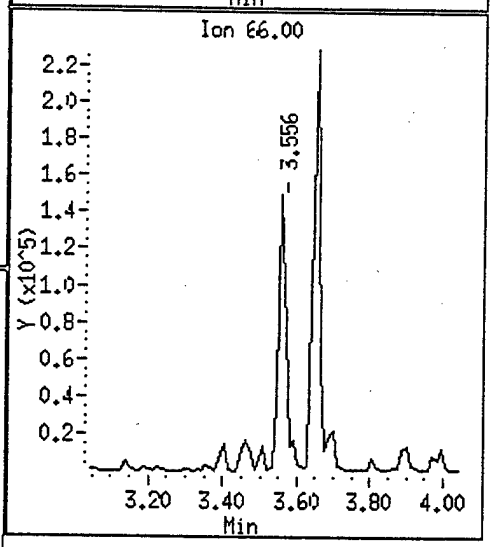
Instrument: h.i
Operator: LH
Column diameter: 0.25

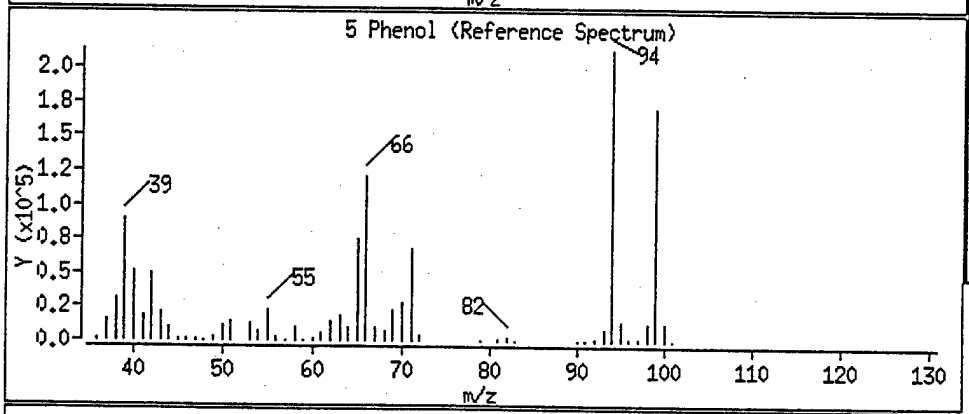
5 Phenol

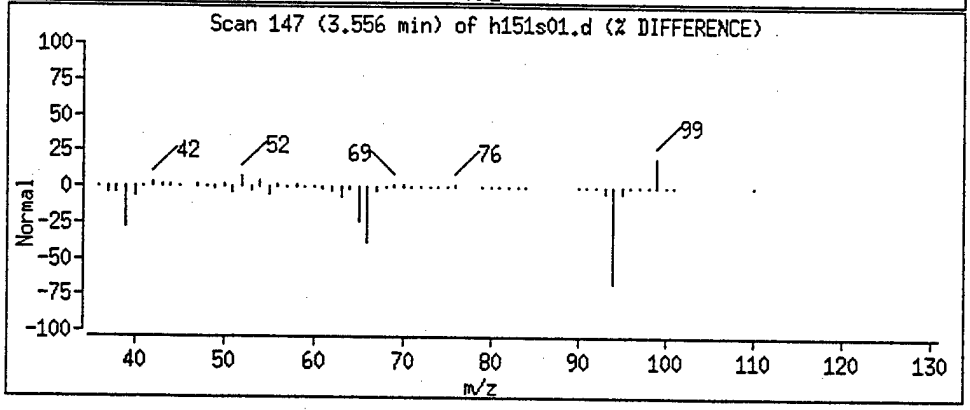








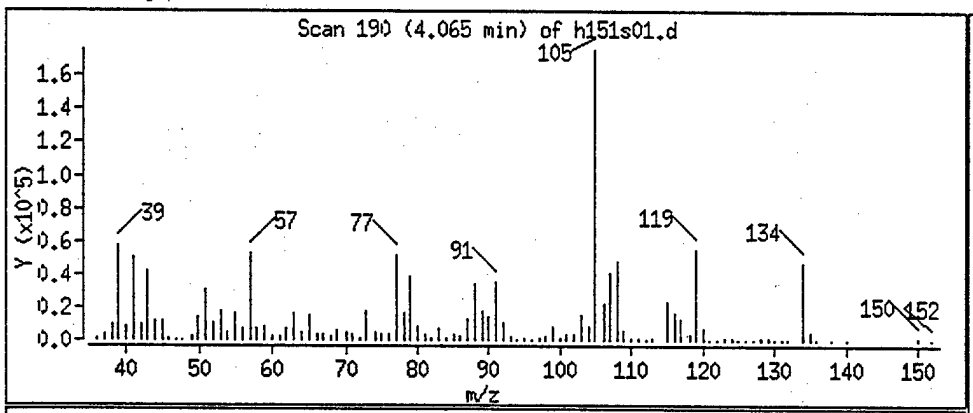


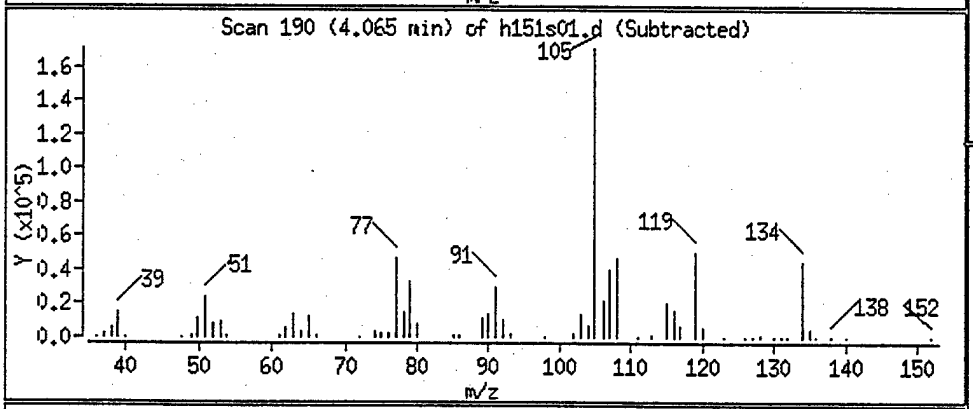


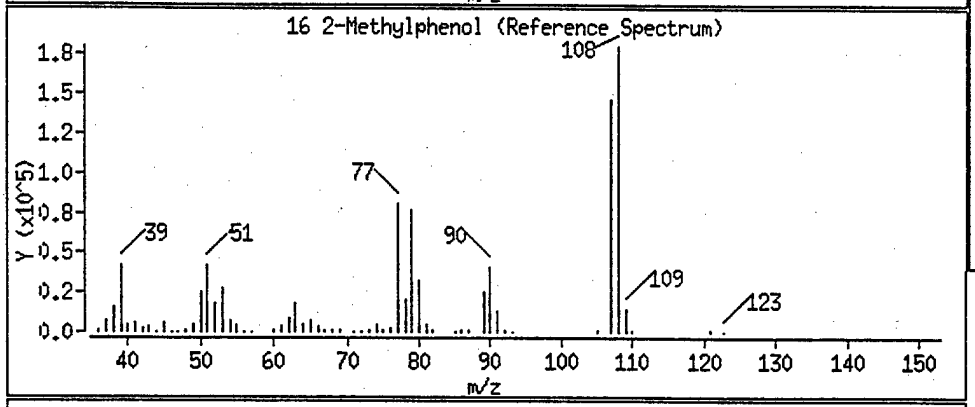
Data File: /chem/h.i/h950531.b/h151s01.d
Date : 31-MAY-1995 16:22
Client ID:
Sample Info: 9505767-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

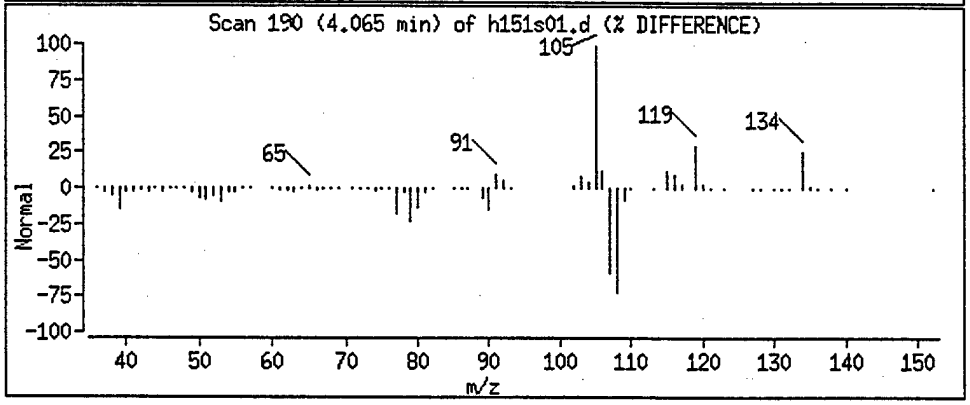
Instrument: h.i
Operator: LH
Column diameter: 0.25

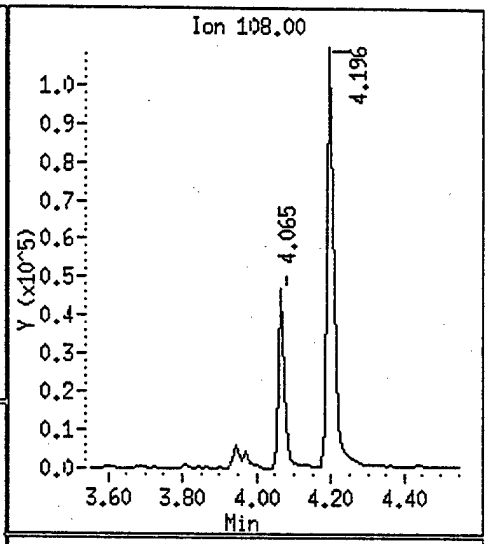
16 2-Methylphenol

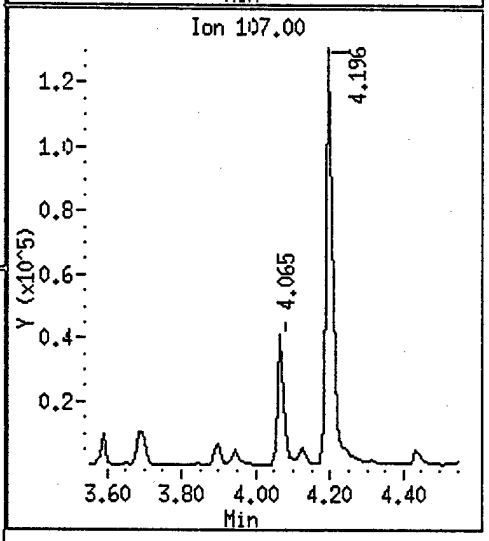








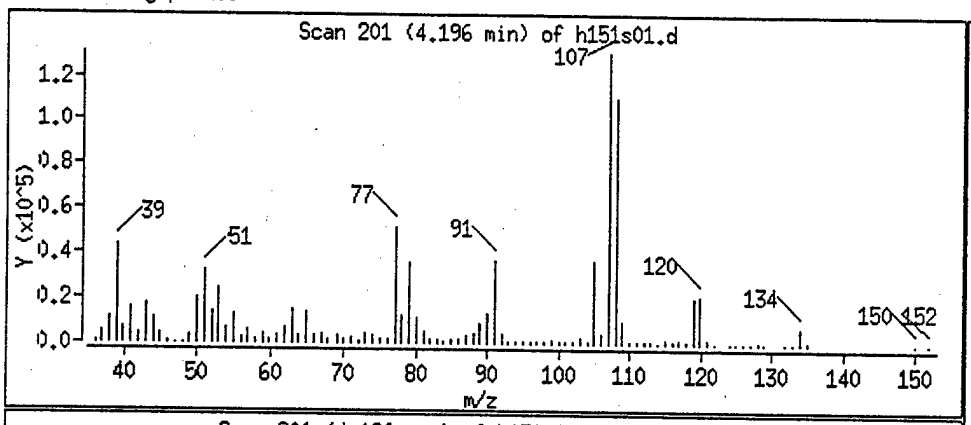


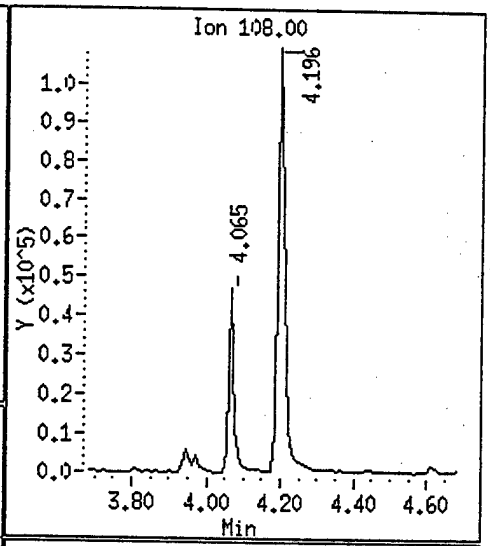


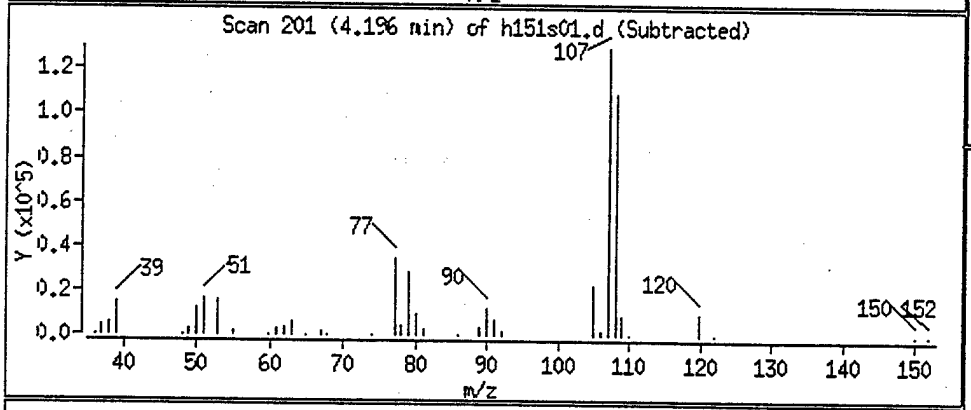
Data File: /chem/h.i/h950531.b/h151s01.d
Date : 31-MAY-1995 16:22
Client ID:
Sample Info: 9505767-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

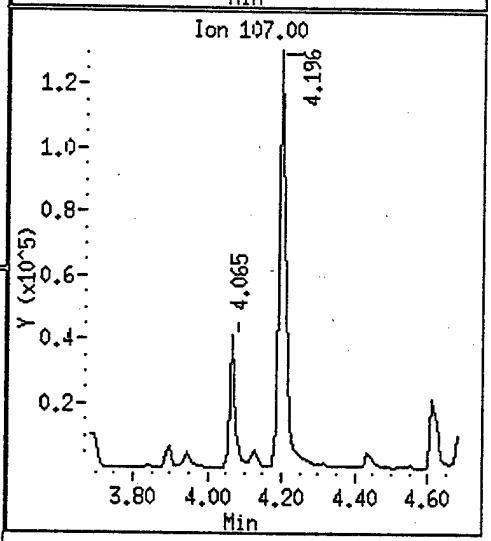
Instrument: h.i
Operator: LH
Column diameter: 0.25

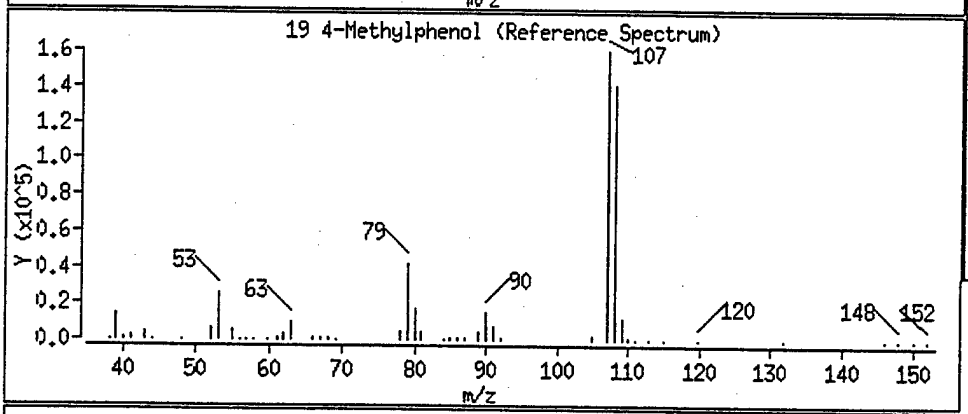
19 4-Methylphenol

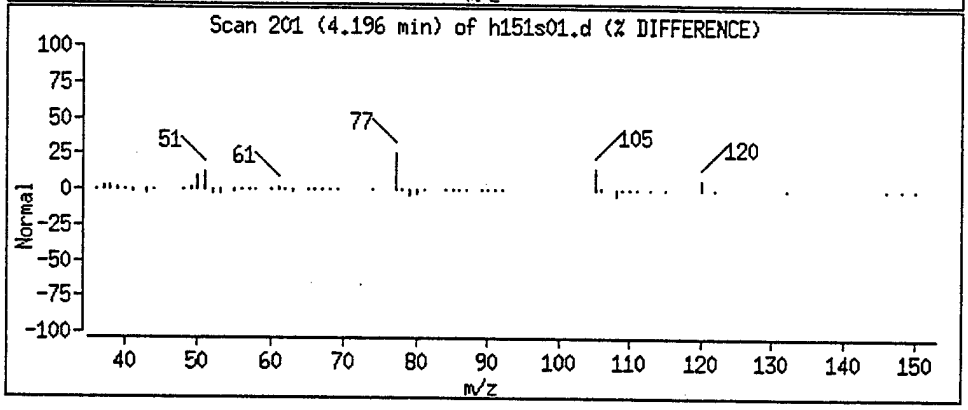








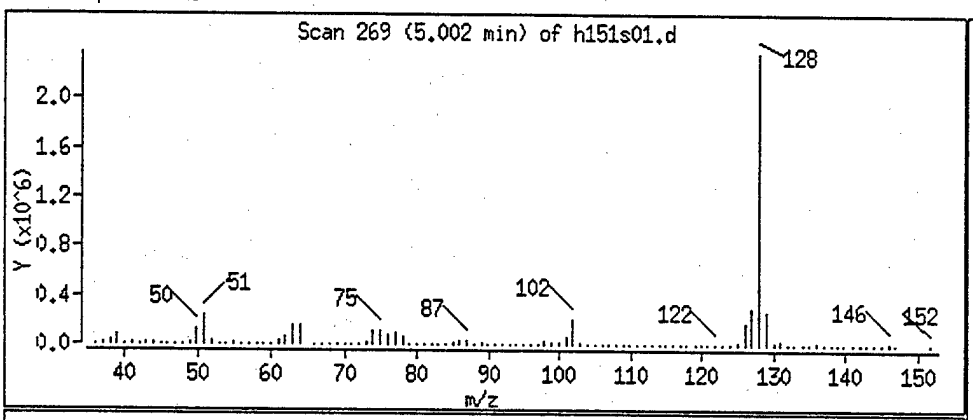


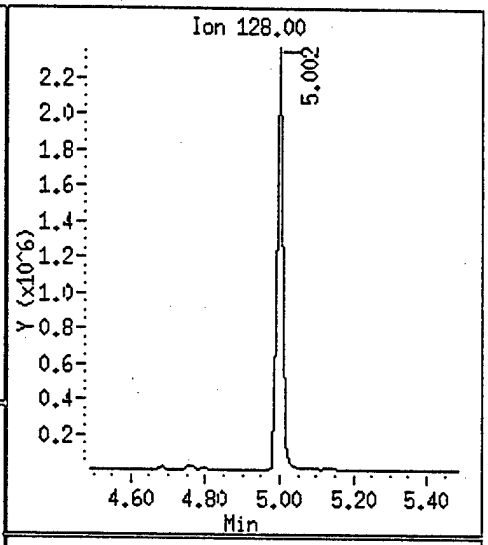


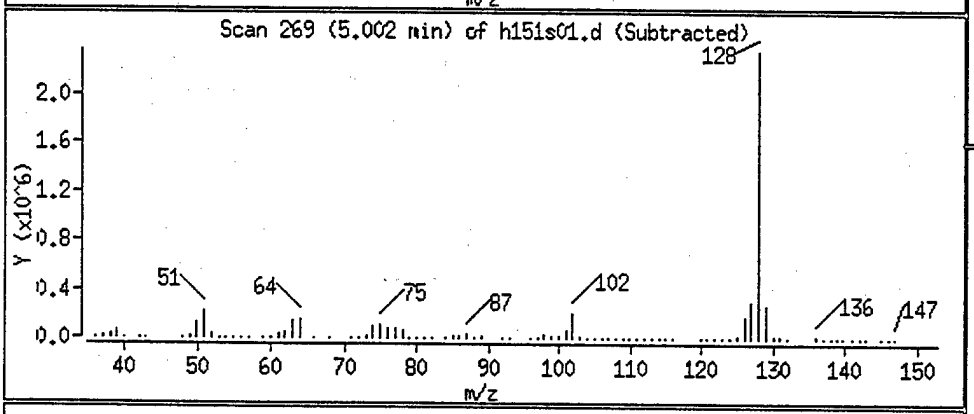
Data File: /chem/h.i/h950531.b/h151s01.d
Date : 31-MAY-1995 16:22
Client ID:
Sample Info: 9505767-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

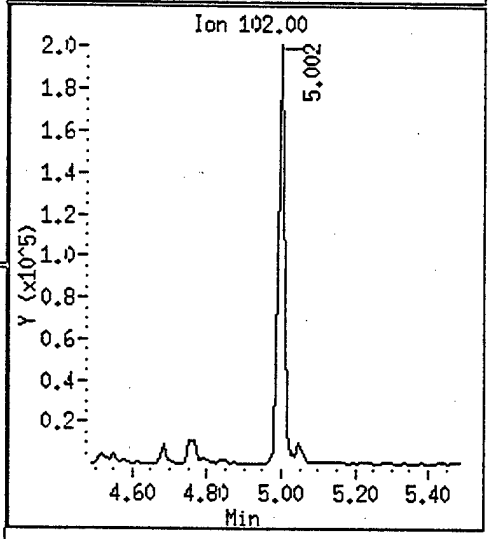
Instrument: h.i
Operator: LH
Column diameter: 0.25

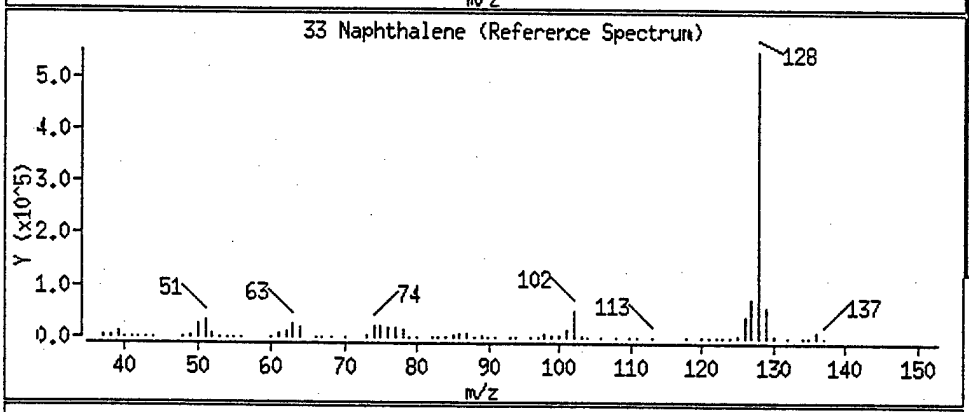
33 Naphthalene

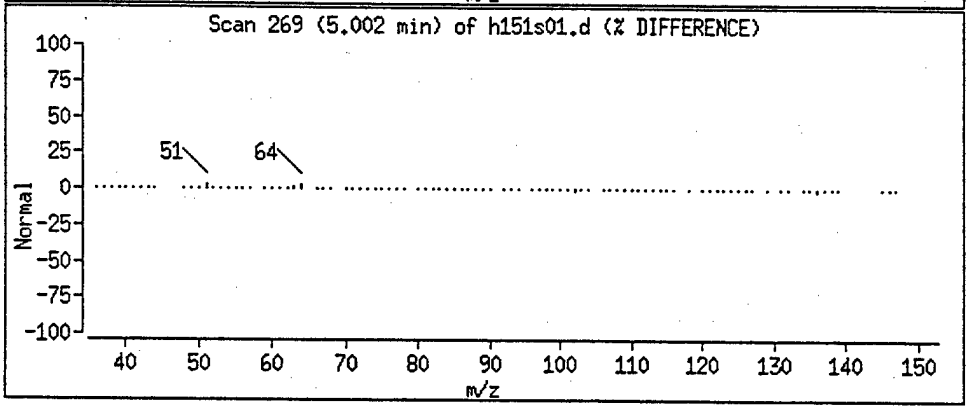








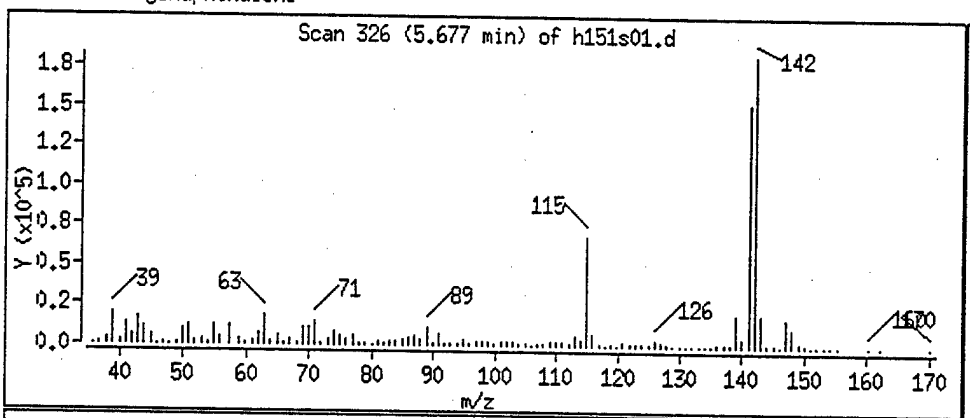


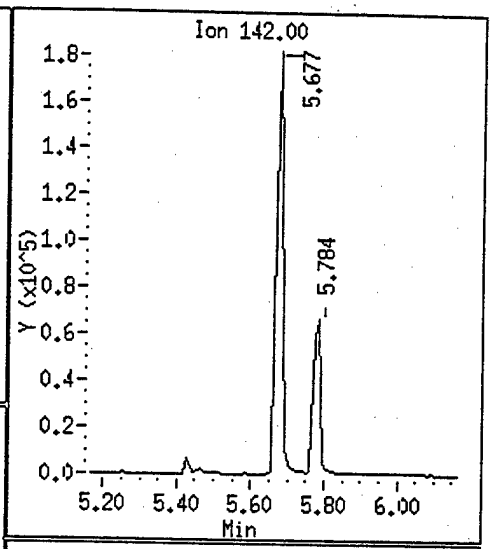


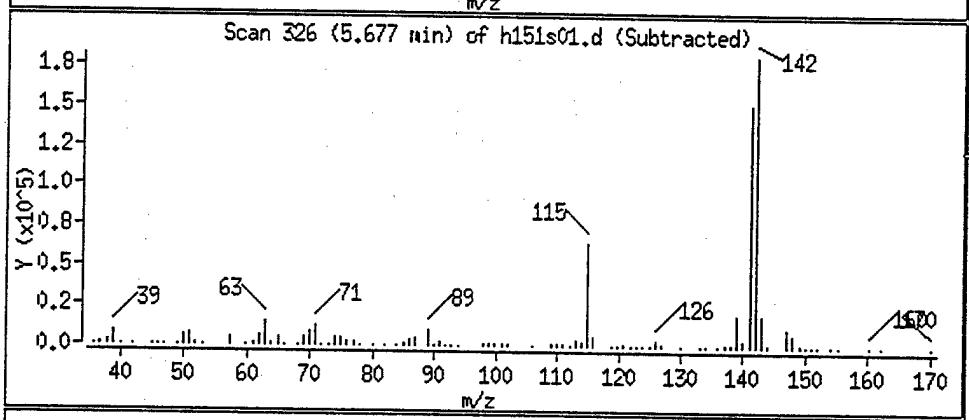
Data File: /chem/h.i/h950531.b/h151s01.d
Date : 31-MAY-1995 16:22
Client ID:
Sample Info: 9505767-05B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

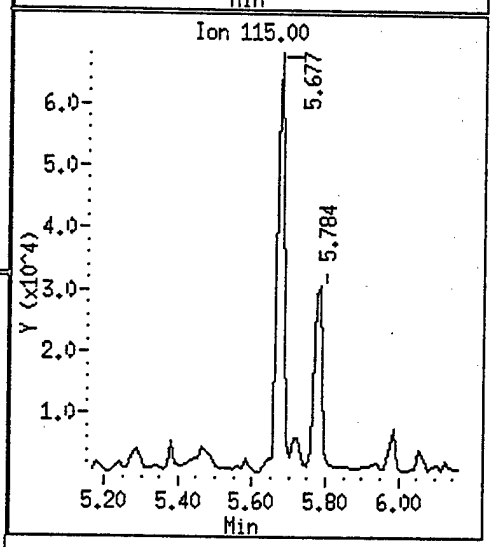
Instrument: h.i
Operator: LH
Column diameter: 0.25

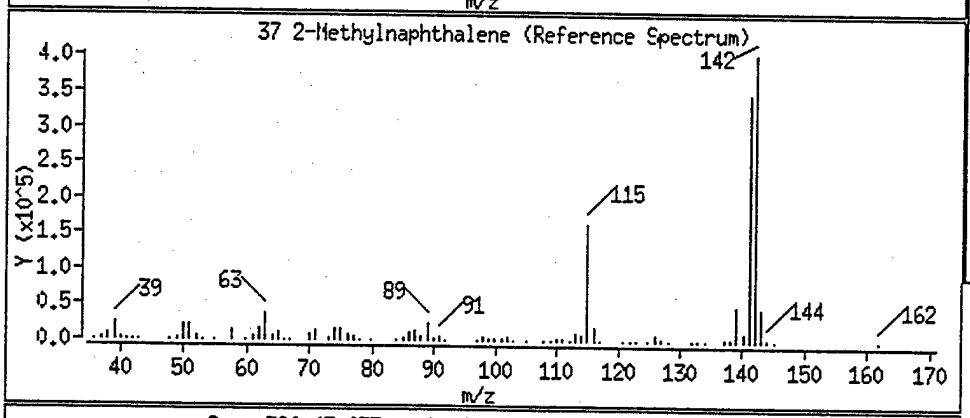
37 2-Methylnaphthalene

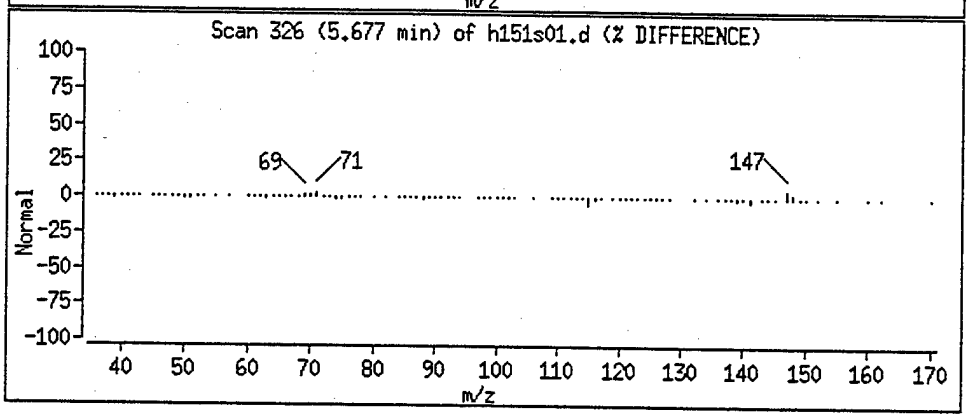












[redacted]e Version: 3.2 <16C20>
[redacted]le Name : 9505767-05D Time : 05/28/95 11:33
[redacted]le Number: SC ;W;5 Study : BTEXW;1
[redacted]r : YN

[redacted]rument : HP_J Channel : A A/D mV Range : 1000
[redacted]Sampler : NONE
[redacted]al : 0/0

[redacted]face Serial # : 1092573380 Data Acquisition Time: 05/28/95 11:16
[redacted]y Time : 0.00 min.
[redacted]Time : 17.33 min.
[redacted]g Rate : 2.0000 pts/sec

[redacted] Data File : l:\data\tchrom\btex\varj\J___407.raw
[redacted]lt File : l:\data\tchrom\btex\varj\J___407.rst
[redacted]ent File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
[redacted] File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
[redacted] File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
[redacted]ence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

[redacted]lume : 2 ul Area Reject : 300.00
[redacted]Amount : 1.0000 Dilution Factor : 5.00

BTEX Area Percent Report

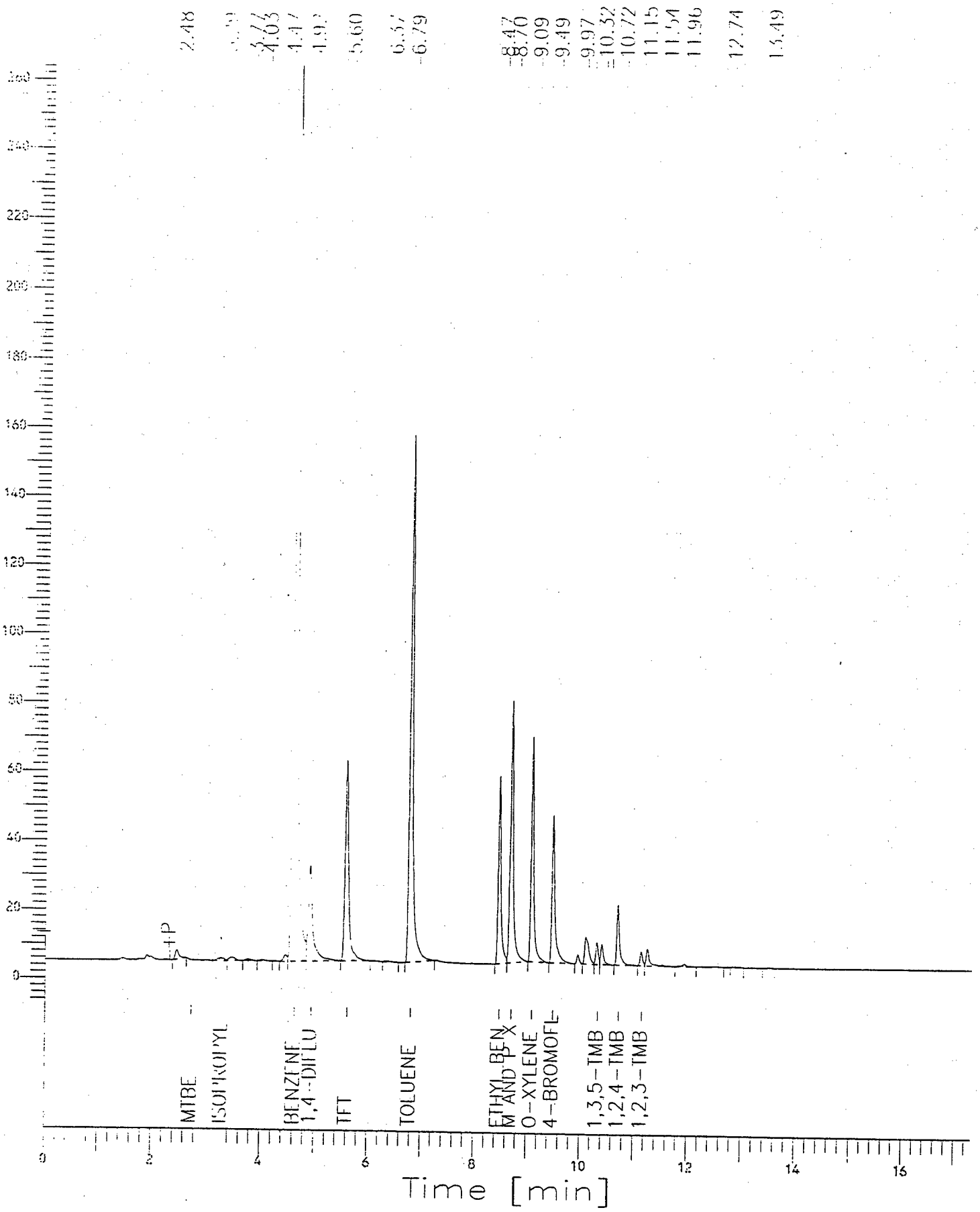
Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
[redacted]2.477	13323.50	2670.44	BB	1.0000e6	----------	0.0666		0.0133	0.0000
3.291	6485.35	758.11	BV	1294.1476	0.0236	25.0565	Isopropylether	5.0113	-0.0040
[redacted]3.477	8008.50	1017.22	VV	1.0000e6	----------	0.0400		0.0080	0.0000
[redacted]3.767	3820.57	568.77	VV	1.0000e6	----------	0.0191		0.0038	0.0000
[redacted]4.030	2557.07	400.23	VB	1.0000e6	----------	0.0128		0.0026	0.0000
4.468	8797.85	1856.66	BV	1.0000e6	----------	0.0440		0.0088	0.0000
4.613	1336922.38	261706.09	VV	2590.5842	4.8674	2580.3491	Benzene	516.0698	-0.0287
[redacted]4.921	165593.30	27867.56	VB	1128.9738	0.6029	733.3798	1,4-DIFLUOROBENZENE	146.6760	-0.0292
[redacted]5.595	274671.75	58322.39	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0271
[redacted]6.374	1923.50	294.13	BB	1.0000e6	----------	0.0096		0.0019	0.0000
6.793	624533.25	153484.38	BB	2384.2373	2.2737	1309.7129	Toluene	261.9426	-0.0197
[redacted]8.474	203841.97	54547.08	BV	1783.7131	0.7421	571.3978	Ethyl_Benzene	114.2796	-0.0154
[redacted]8.699	301541.28	76331.87	VB	1898.9424	1.0978	793.9716	m and p Xylene	158.7943	-0.0130
[redacted]9.092	240752.00	65403.32	BB	1815.0874	0.8765	663.1967	o-Xylene	132.6393	-0.0142
9.491	176422.34	42775.94	BV	1485.7947	0.6423	593.6969	4-BROMOFLUOROBENZENE	118.7394	-0.0115
9.965	9268.97	2635.84	VV	1.0000e6	----------	0.0463		0.0093	0.0000
[redacted]0.118	43885.27	7974.86	VV	1.0000e6	----------	0.2194		0.0439	0.0000
[redacted]0.323	22190.70	6503.70	VV	1714.7459	0.0808	64.7055	1,3,5-TMB	12.9411	-0.0180
[redacted]0.421	23339.95	5956.28	VB	1.0000e6	----------	0.1167		0.0233	0.0000
10.716	66460.38	17439.16	BV	1518.5447	0.2420	218.8292	1,2,4-TMB	43.7658	-0.0179
11.145	13935.50	4154.58	VV	1456.5742	0.0507	47.8366	1,2,3-TMB	9.5673	-0.0169
[redacted]1.264	22093.50	5052.95	VE	1.0000e6	----------	0.1105		0.0221	0.0000
[redacted]1.542	2170.50	404.76	EB	9.9999e5	----------	0.0109		0.0022	0.0000
11.959	4834.50	771.18	BB	1.0000e6	----------	0.0242		0.0048	0.0000
12.736	343.06	108.40	BV	9.9999e5	----------	0.0017		0.0003	0.0000
[redacted]2.880	863.95	203.40	VB	1.0000e6	----------	0.0043		0.0009	0.0000
[redacted]3.487	882.25	168.89	BB	1.0000e6	----------	0.0044		0.0009	0.0000
	3579463.25	799378.00				7602.8633		1520.5728	-0.2156

[redacted]t Stored in ASCII File: l:\data\tchrom\btex\varj\J___407.TXO

Chromatogram

mple Name : 9505767-05D
leName : l:\data\tchrom\btex\varj\J___407.raw
thod : HP_J.ins
art Time : 0.00 min End Time : 17.33 min
ale Factor: 1 Plot Offset: -8 mV

Sample #: SC ;W;5 Page 1 of 1
Date : 05/28/95 11:33
Time of Injection: 05/28/95 11:16
Low Point : -7.75 mV High Point : 265.31 mV
Plot Scale: 273 mV



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

DATE: 06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003A-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:15:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	2300	5 P	µg/L
TOLUENE	1300	5 P	µg/L
ETHYLBENZENE	540	5 P	µg/L
TOTAL XYLENE	1390	5 P	µg/L
TOTAL BTEX	5530		µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	140		
4-Bromofluorobenzene	120		
METHOD 5030/8020 ***			
Analyzed by: YN			
Date: 05/28/95			
Cadmium, Total	ND	0.005	mg/L
METHOD 6010 ***			
Analyzed by: DQ			
Date: 06/05/95			
Chromium, Total	0.019	0.002	mg/L
METHOD 7191 ***			
Analyzed by: WFL			
Date: 06/01/95			
Mercury, Total	ND	0.0004	mg/L
METHOD 7470 ***			
Analyzed by: PB			
Date: 06/06/95			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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DATE: 06/08/95

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SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003A-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:15:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Nickel, Total METHOD 6010 *** Analyzed by: DQ Date: 06/05/95	0.04	0.02	mg/L
Acid Digestion-Aqueous, ICP METHOD 3010 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Acid Digestion-Aqueous, GF METHOD 3020 *** Analyzed by: AM Date: 05/24/95	05/24/95		
Lead, Total METHOD 7421 *** Analyzed by: WFL Date: 05/31/95	0.007	0.004	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
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San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003A-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:15:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Acenaphthene	ND	5	ug/L
Acenaphthylene	ND	5	ug/L
Aniline	ND	5	ug/L
Anthracene	ND	5	ug/L
Benzo(a)Anthracene	ND	5	ug/L
Benzo(b)Fluoranthene	ND	5	ug/L
Benzo(k)Fluoranthene	ND	5	ug/L
Benzo(a)Pyrene	ND	5	ug/L
Benzoic Acid	ND	25	ug/L
Benzo(g,h,i)Perylene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
4-Bromophenylphenyl ether	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
di-n-Butyl phthalate	ND	5	ug/L
Carbazole	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
bis(2-Chloroethoxy)Methane	ND	5	ug/L
bis(2-Chloroethyl)Ether	ND	5	ug/L
bis(2-Chloroisopropyl)Ether	ND	5	ug/L
4-Chloro-3-Methylphenol	ND	5	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
4-Chlorophenylphenyl ether	ND	5	ug/L
Chrysene	ND	5	ug/L
Dibenz(a,h)Anthracene	ND	5	ug/L
Dibenzofuran	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Dimethyl Phthalate	ND	5	ug/L
4,6-Dinitro-2-Methylphenol	ND	25	ug/L
2,4-Dinitrophenol	ND	25	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-06

Operational Tech

SAMPLE ID: 025-003A-GW01

ANALYTICAL DATA (continued)

PARAMETER	RESULTS	PQL*	UNITS
1,2-Diphenylhydrazine	ND	5	ug/L
bis(2-Ethylhexyl)Phthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Fluorene	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
Indeno(1,2,3-cd)Pyrene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Methylnaphthalene	8	5	ug/L
2-Methylphenol	ND	5	ug/L
4-Methylphenol	8	5	ug/L
Naphthalene	51	5	ug/L
2-Nitroaniline	ND	25	ug/L
3-Nitroaniline	ND	25	ug/L
4-Nitroaniline	ND	25	ug/L
Nitrobenzene	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
N-Nitrosodiphenylamine (1)	ND	5	ug/L
N-Nitroso-Di-n-Propylamine	ND	5	ug/L
Di-n-Octyl Phthalate	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Phenol	12	5	ug/L
Pyrene	ND	5	ug/L
Pyridine	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L

METHOD: 8270, Semivolatile Organics - Water

(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-06

Operational Tech

SAMPLE ID: 025-003A-GW01

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Nitrobenzene-d5	50 ug/L	80	35	114
2-Fluorobiphenyl	50 ug/L	76	43	116
Terphenyl-d14	50 ug/L	30 «	33	141
Phenol-d5	75 ug/L	72	10	110
2-Fluorophenol	75 ug/L	63	21	110
2,4,6-Tribromophenol	75 ug/L	103	10	123

ANALYZED BY: LH DATE/TIME: 05/31/95 16:44:00
EXTRACTED BY: RS DATE/TIME: 05/22/95
METHOD: 8270, Semivolatile Organics - Water
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
« - Recovery outside of control limits.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-06

Operational Tech
4100 N.W. Loop 410 Ste. 230
San Antonio, TX 78229
ATTN: Kathryn Pritchett

06/08/95

PROJECT: Duluth ANG/Duluth SI
SITE: Site 25
SAMPLED BY: Operational Technology
SAMPLE ID: 025-003A-GW01

PROJECT NO: 1315-197
MATRIX: WATER
DATE SAMPLED: 05/19/95 17:15:00
DATE RECEIVED: 05/20/95

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	25	µg/L
Chloromethane	ND	25	µg/L
Vinyl chloride	ND	25	µg/L
Bromomethane	ND	25	µg/L
Chloroethane	ND	25	µg/L
Trichlorofluoromethane	ND	25	µg/L
1,1-Dichloroethene	ND	25	µg/L
Methylene chloride	ND	25	µg/L
Trans-1,2-Dichloroethene	ND	25	µg/L
1,1-Dichloroethane	ND	25	µg/L
Chloroform	ND	25	µg/L
1,1,1-Trichloroethane	ND	25	µg/L
Carbon tetrachloride	ND	25	µg/L
1,2-Dichloroethane	ND	25	µg/L
2-Chloroethylvinyl ether	ND	25	µg/L
Trichloroethene	ND	25	µg/L
1,2-Dichloropropane	ND	25	µg/L
Bromodichloromethane	ND	25	µg/L
cis-1,3-Dichloropropene	ND	25	µg/L
trans-1,3-Dichloropropene	ND	25	µg/L
1,1,2-Trichloroethane	ND	25	µg/L
Tetrachloroethene	ND	25	µg/L
Dibromochloromethane	ND	25	µg/L
Chlorobenzene	ND	25	µg/L
Bromoform	ND	25	µg/L
1,1,2,2-Tetrachloroethane	ND	25	µg/L
1,3-Dichlorobenzene	ND	25	µg/L
1,4-Dichlorobenzene	ND	25	µg/L
1,2-Dichlorobenzene	ND	25	µg/L

METHOD: 8010, Halogenated Volatile Organics
(continued on next page)

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9505767-06

Operational Tech

SAMPLE ID: 025-003A-GW01

SURROGATES	% RECOVERY
1-Chloro-2-Fluorobenzene	99

ANALYZED BY: JZL DATE/TIME: 05/26/95 06:32:00
METHOD: 8010, Halogenated Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151s02.d
Lab Smp Id:
Inj Date : 31-MAY-1995 16:44
Operator : LH
Smp Info : 9505767-06B-8270W/1X
Misc Info : E142C1/J142B01/H151IC6
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:24 liping
Cal Date : 31-MAY-1995 15:09
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h151ic6.d

Compound Sublist: 8270.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	5 Phenol	94.00	3.553	3.545	(0.935)	157693	23	12(Q)
	19 4-Methylphenol	108.00	4.193	4.185	(1.103)	66796	16	8
	33 Naphthalene	128.00	4.999	4.990	(1.005)	1125343	100	51
	37 2-Methylnaphthalene	142.00	5.674	5.666	(1.141)	108728	16	8
*	11 1,4-Dichlorobenzene-d4	152.00	3.802	3.805	(1.000)	113345	40	
*	32 Naphthalene-d8	136.00	4.975	4.979	(1.000)	413469	40	
*	48 Acenaphthene-d10	164.00	6.729	6.721	(1.000)	192538	40	
*	65 Phenanthrene-d10	188.00	8.210	8.202	(1.000)	232520	40	
*	76 Chrysene-d12	240.00	10.912	10.916	(1.000)	135481	40	
*	83 Perylene-d12	264.00	12.784	12.788	(1.000)	116024	40	
$	23 Nitrobenzene-d5	82.00	4.311	4.315	(0.867)	398844	80	40
$	41 2-Fluorobiphenyl	172.00	6.065	6.057	(0.901)	449263	76	38
$	72 Terphenyl-d14	244.00	9.846	9.849	(0.902)	103109	30	15(R)
$	4 Phenol-d5	99.00	3.541	3.533	(0.931)	639120	110	54
$	3 2-Fluorophenol	112.00	2.830	2.822	(0.744)	433825	94	47
$	61 2,4,6-Tribromophenol	329.70	7.535	7.538	(0.918)	89378	150	77

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Data File: /chem/h.i/h950531.b/h151s02.d

Date : 31-MAY-1995 16:44

Client ID:

Instrument: h.i

Sample Info: 9505767-06B-8270W/1X

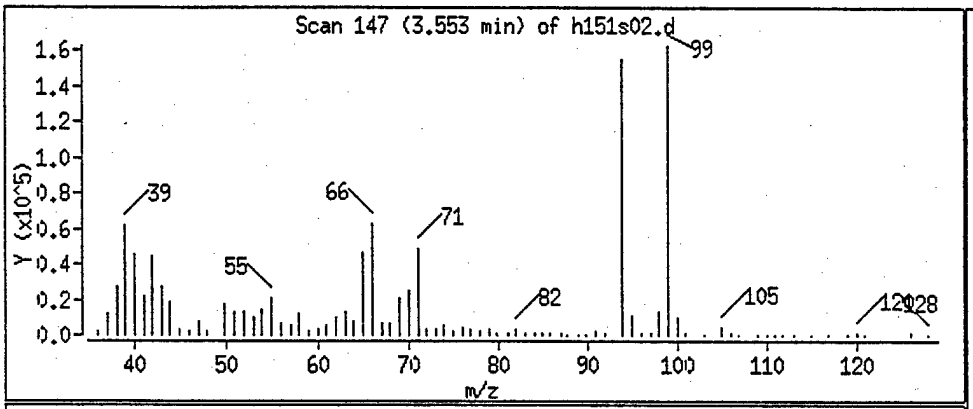
Volume Injected (uL): 2.0

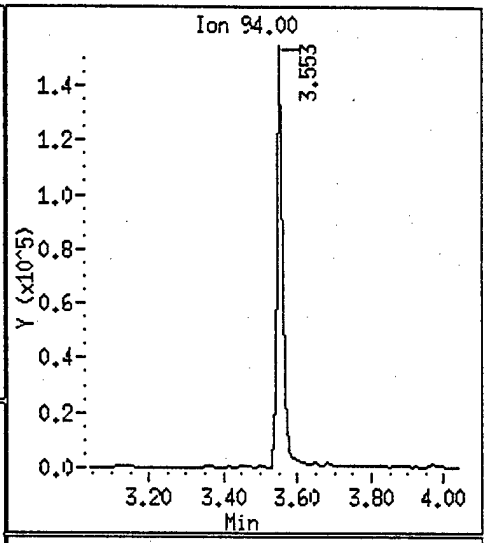
Operator: LH

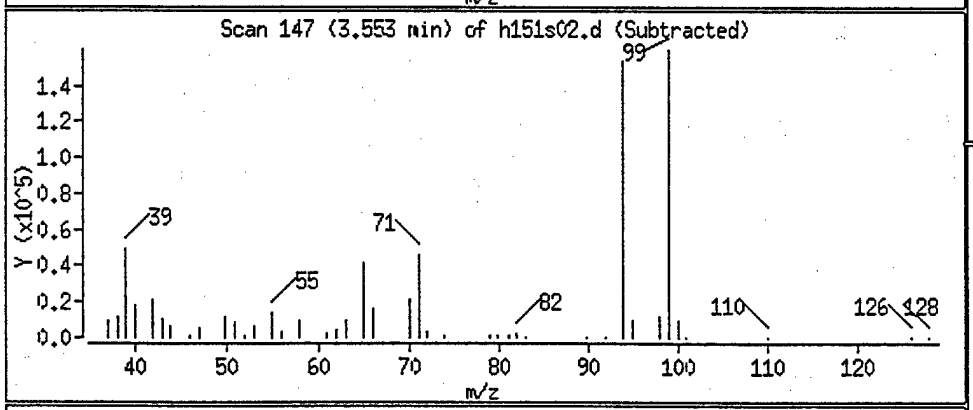
Column phase:

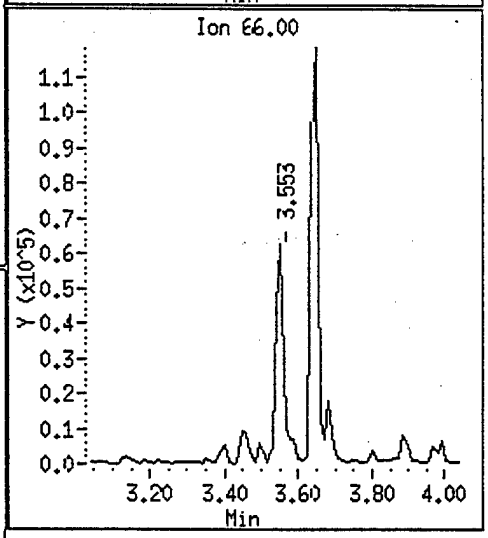
Column diameter: 0.25

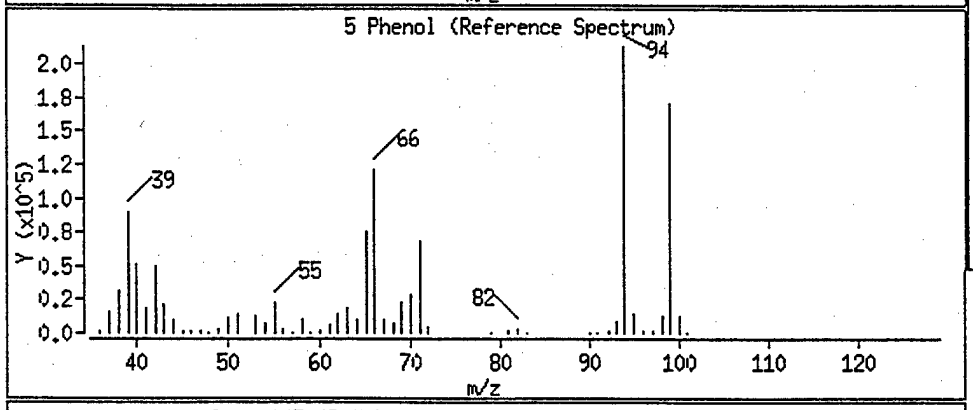
5 Phenol

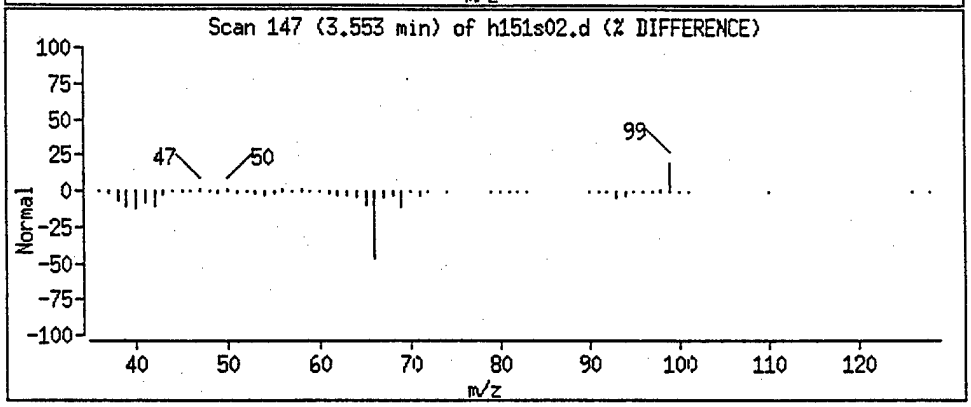








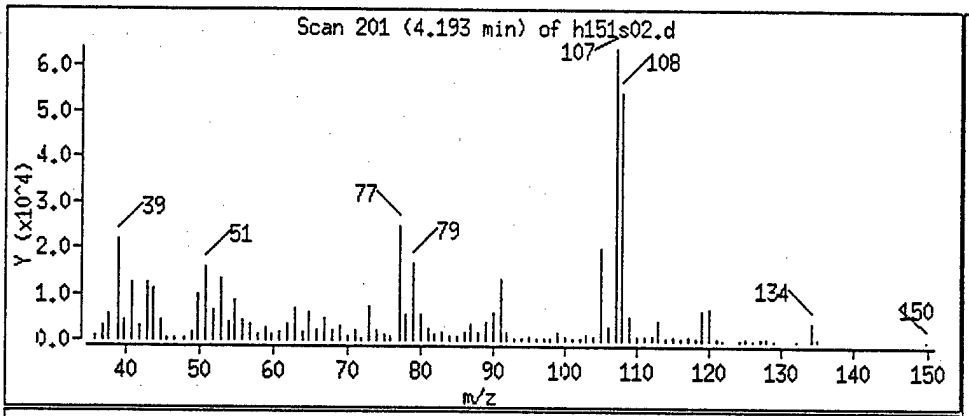


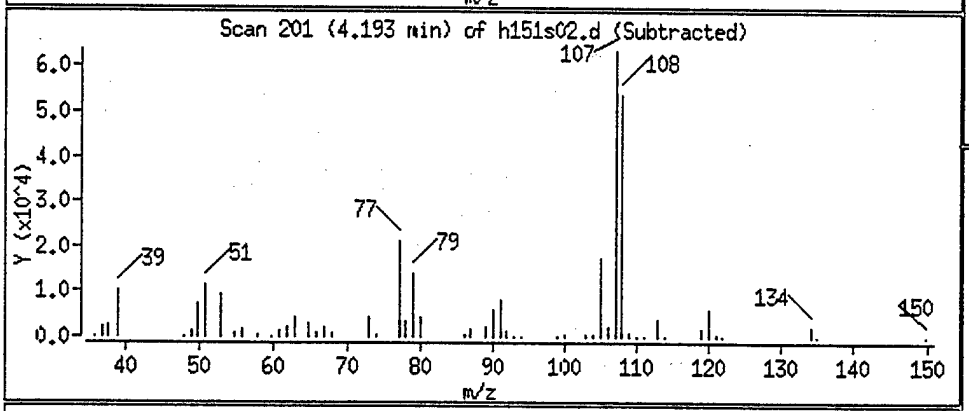


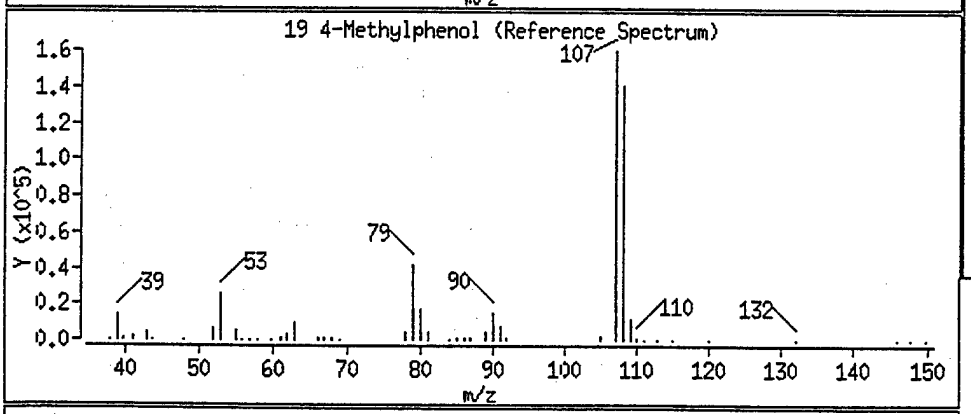
Data File: /chem/h.i/h950531.b/h151s02.d
Date : 31-MAY-1995 16:44
Client ID:
Sample Info: 9505767-06B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

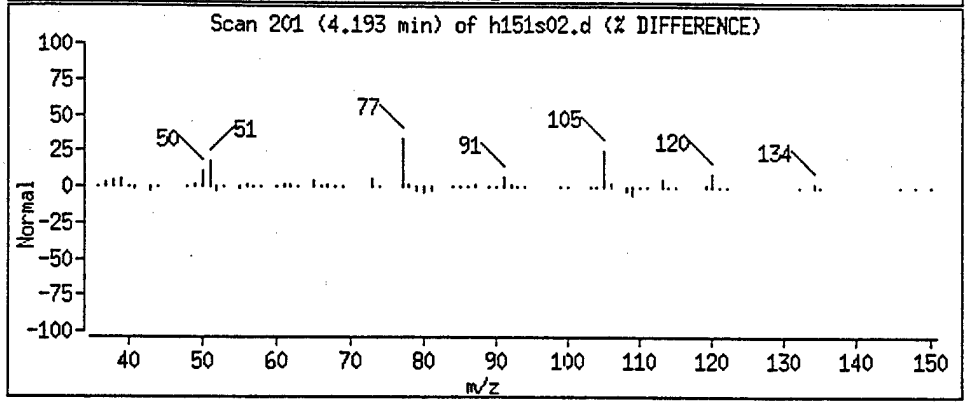
Instrument: h.i
Operator: LH
Column diameter: 0.25

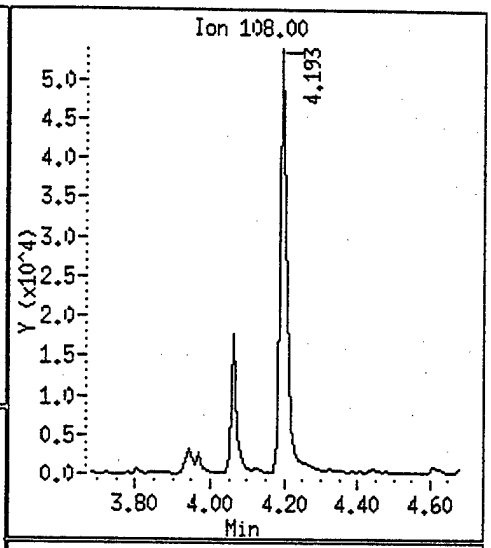
19 4-Methylphenol

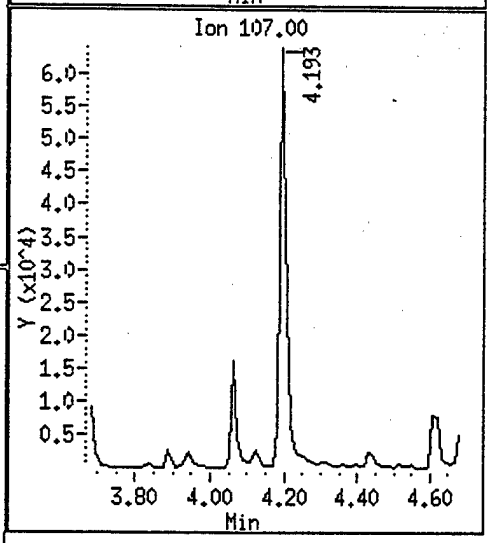








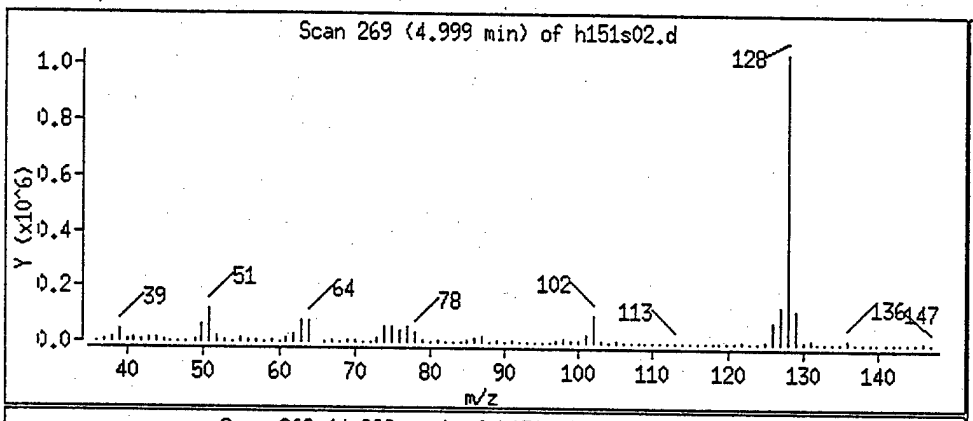


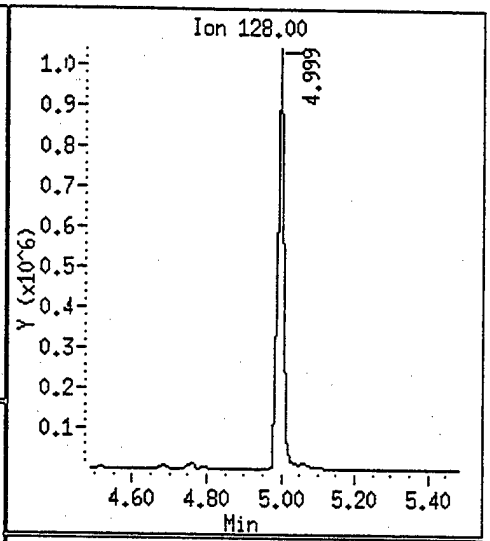


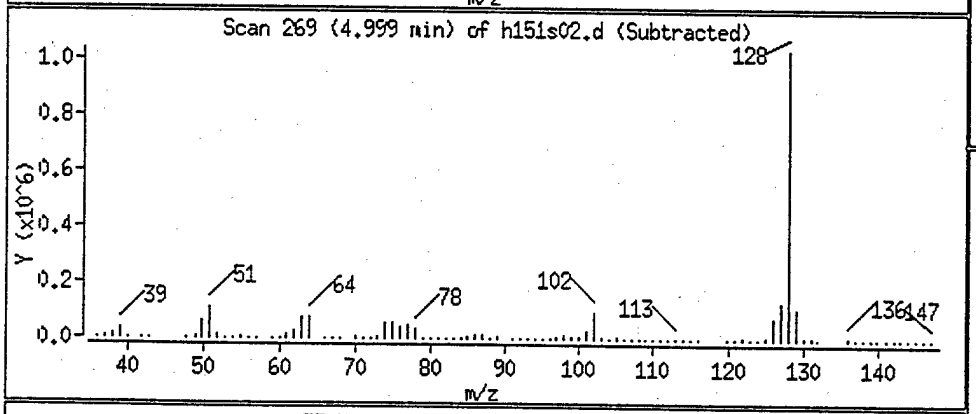
Data File: /chem/h.i/h950531.b/h151s02.d
Date : 31-MAY-1995 16:44
Client ID:
Sample Info: 9505767-06B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

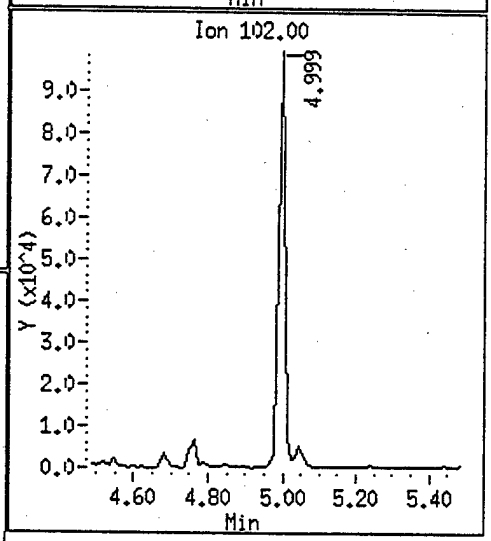
Instrument: h.i
Operator: LH
Column diameter: 0.25

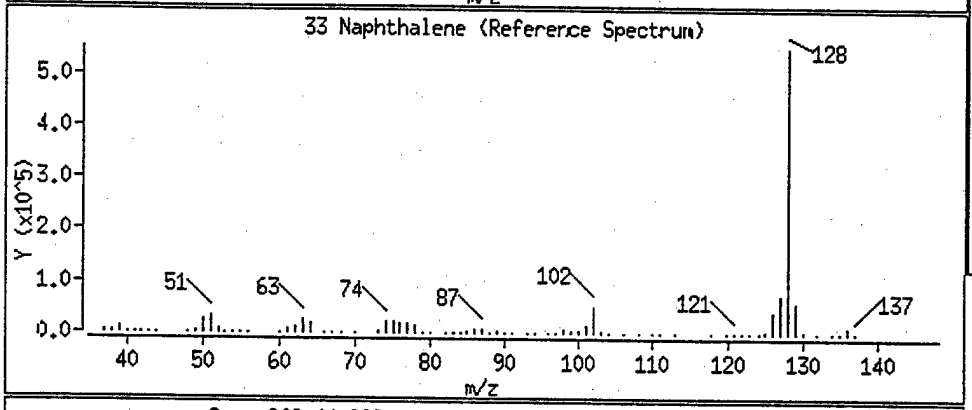
33 Naphthalene

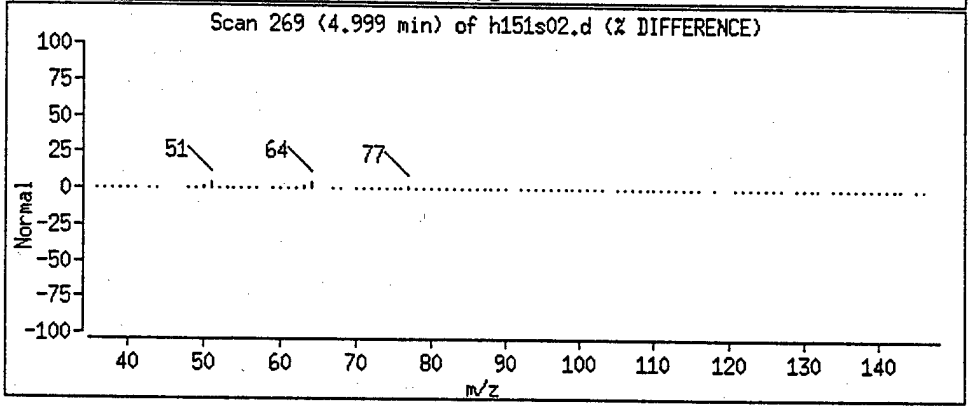








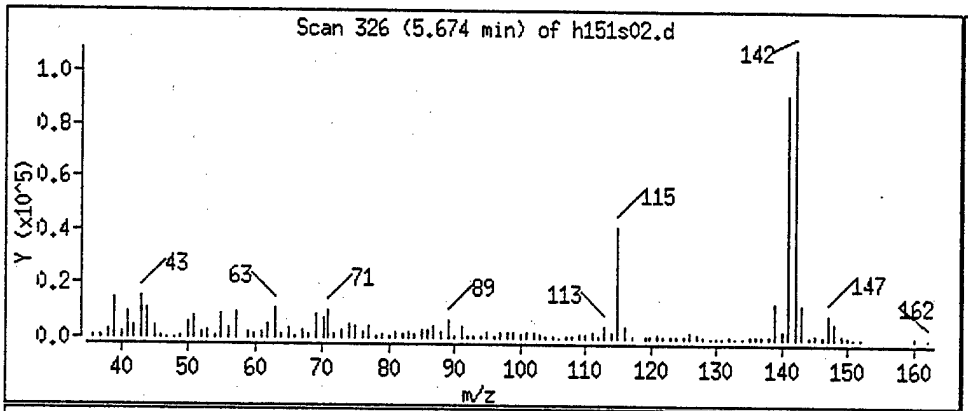


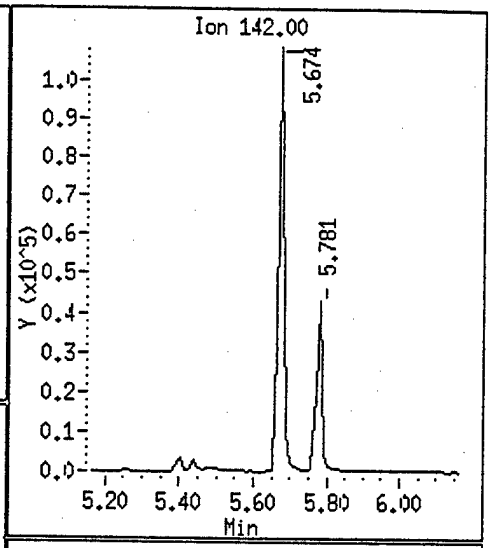


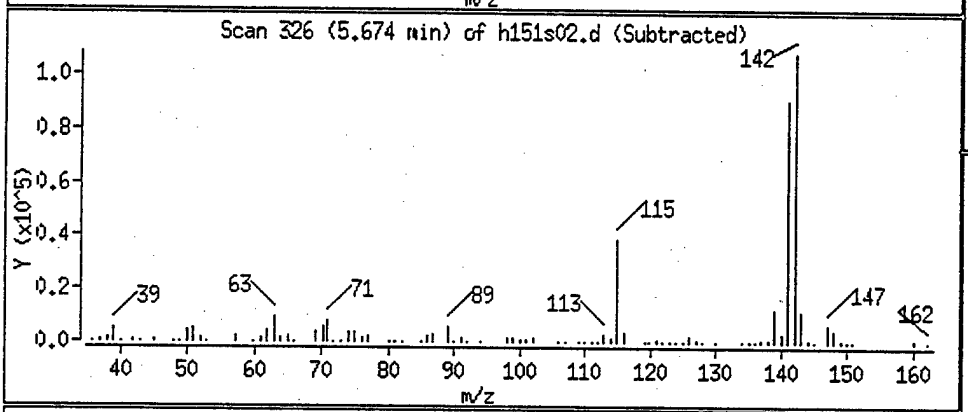
Data File: /chem/h.i/h950531.b/h151s02.d
Date : 31-MAY-1995 16:44
Client ID:
Sample Info: 9505767-06B-8270W/1X
Volume Injected (uL): 2.0
Column phase:

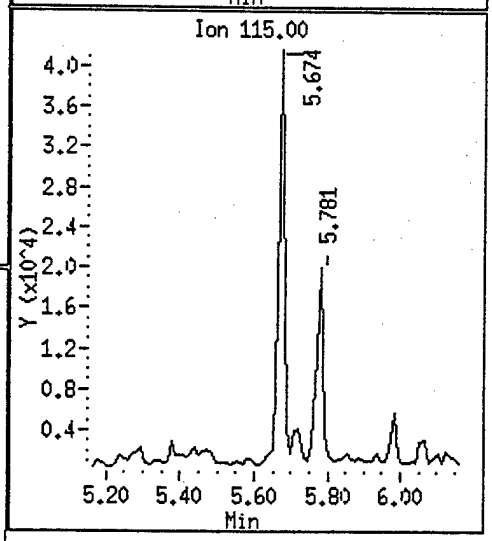
Instrument: h.i
Operator: LH
Column diameter: 0.25

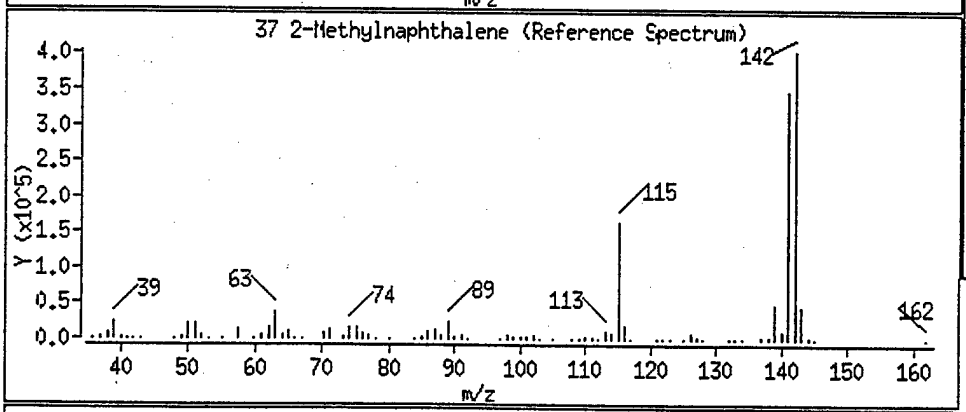
37 2-Methylnaphthalene

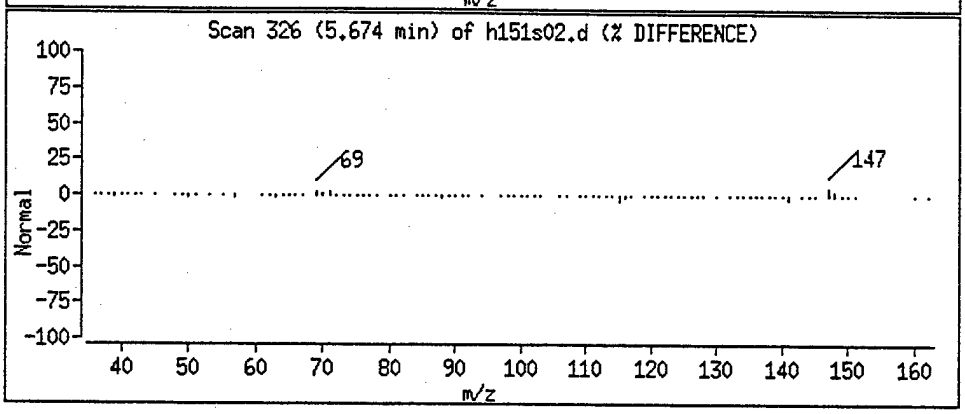












[redacted] Version: 3.2 <16C20>
[redacted] Name : 9505767-06D Time : 05/28/95 04:35
[redacted]ple Number: SC ;W;5 Study : BTEXW;1
[redacted]erator : YN

[redacted]ment : HP_J Channel : A A/D mV Range : 1000
[redacted]oSampler : NONE
[redacted]ck/Vial : 0/0

[redacted]face Serial # : 1092573380 Data Acquisition Time: 05/28/95 04:17
[redacted]ay Time : 0.00 min.
[redacted] Time : 17.33 min.
[redacted]mpling Rate : 2.0000 pts/sec

[redacted]a File : l:\data\tchrom\btex\varj\J___396.raw
[redacted]ult File : l:\data\tchrom\btex\varj\J___396.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
[redacted] File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
[redacted] File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
[redacted]uence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

[redacted] Volume : 2 ul Area Reject : 300.00
[redacted] Amount : 1.0000 Dilution Factor : 5.00

BTEX Area Percent Report

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
[redacted]2.467	10513.00	2057.20	BB	1.0000e6	----------	0.0526		0.0105	0.0000
[redacted]3.279	4473.92	521.90	BV	1267.9053	0.0166	17.6430	Isopropylether	3.5286	-0.0158
3.466	5350.38	705.95	VV	1.0000e6	----------	0.0268		0.0054	0.0000
[redacted]3.759	2595.37	352.56	VV	1.0000e6	----------	0.0130		0.0026	0.0000
[redacted]4.021	2212.08	361.09	VB	1.0000e6	----------	0.0111		0.0022	0.0000
[redacted]4.605	1187786.88	237622.81	BV	2538.0532	4.4139	2339.9565	Benzene	467.9913	-0.0372
[redacted]4.914	154380.66	26947.70	VB	1106.0806	0.5737	697.8726	1,4-DIFLUOROBENZENE	139.5745	-0.0361
5.589	269102.03	57964.61	BV	----------	1.0000	0.0000	TFT	0.0000	-0.0325
[redacted]6.367	1897.46	263.82	VB	1.0000e6	----------	0.0095		0.0019	0.0000
[redacted]6.789	603041.50	152894.95	BB	2335.8906	2.2409	1290.8171	Toluene	258.1634	-0.0237
[redacted]8.470	187055.61	51828.21	BV	1747.5435	0.6951	535.1959	Ethyl_Benzene	107.0392	-0.0188
8.696	284046.38	75191.82	VB	1860.4362	1.0555	763.3865	m and p Xylene	152.6773	-0.0164
9.088	224720.50	63734.85	BB	1778.2815	0.8351	631.8474	o-Xylene	126.3695	-0.0177
[redacted]9.487	174838.22	44479.22	BV	1455.6663	0.6497	600.5436	4-BROMOFLUOROBENZENE	120.1087	-0.0154
[redacted]9.960	8507.03	2418.11	VV	1.0000e6	----------	0.0425		0.0085	0.0000
10.113	40066.51	7511.20	VV	1.0000e6	----------	0.2003		0.0401	0.0000
10.319	19408.32	5920.17	VV	1679.9746	0.0721	57.7637	1,3,5-TMB	11.5528	-0.0224
[redacted]0.416	20374.68	5365.42	VB	1.0000e6	----------	0.1019		0.0204	0.0000
[redacted]0.711	59853.50	16558.93	BB	1487.7522	0.2224	201.1541	1,2,4-TMB	40.2308	-0.0231
[redacted]1.140	12689.20	3842.63	BV	1427.0382	0.0472	44.4599	1,2,3-TMB	8.8920	-0.0218
11.259	19434.88	4751.64	VE	1.0000e6	----------	0.0972		0.0194	0.0000
11.538	1633.00	322.47	EB	1.0000e6	----------	0.0082		0.0016	0.0000
[redacted]1.954	4144.50	676.90	BB	1.0000e6	----------	0.0207		0.0041	0.0000
[redacted]2.534	963.01	137.28	BB	1.0000e6	----------	0.0048		0.0010	0.0000
12.874	850.75	191.48	BB	1.0000e6	----------	0.0043		0.0009	0.0000
13.480	813.50	167.96	BB	1.0000e6	----------	0.0041		0.0008	0.0000
[redacted]	3300752.75	762790.75				7181.2373		1436.2474	-0.2808

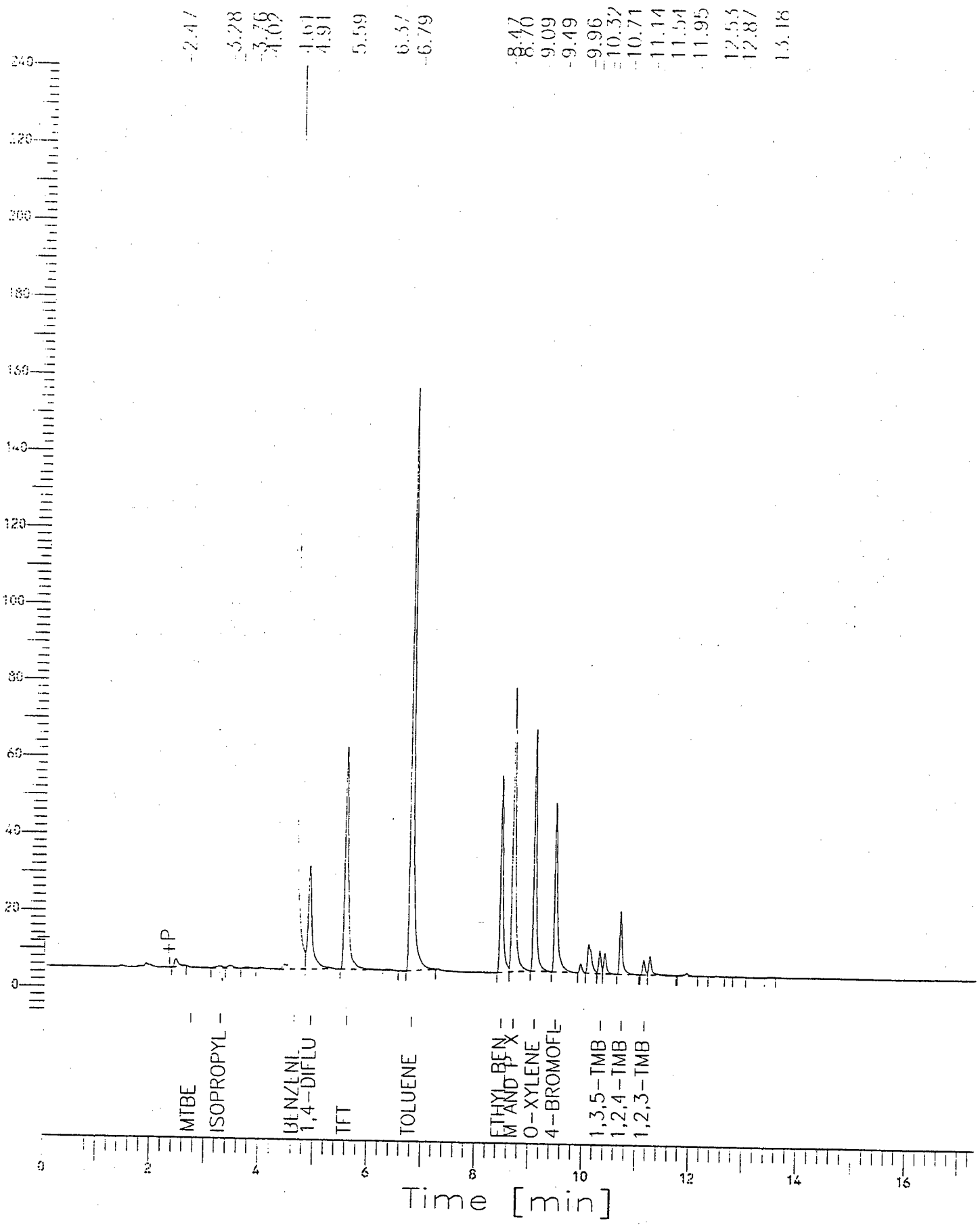
[redacted]Stored in ASCII File: l:\data\tchrom\btex\varj\J___396.TXO

Chromatogram

ple Name : 9505767-06D
Name : l:\data\tchrom\btex\varj\J___396.raw
od : HP_J.ins
t Time : 0.00 min
e Factor: 1

End Time : 17.33 min
Plot Offset: -7 mV

Sample #: SC ;W;5
Date : 05/28/95 04:35
Time of Injection: 05/28/95 04:17
Low Point : -6.52 mV
Plot Scale: 248 mV



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95 - 05 - 767

Approved for release by:

M. Scott Sample

M. Scott Sample, Laboratory Director *Date:* 6/9/95

Karen Satterfield

Karen Satterfield, Project Manager *Date:* 6/8/95

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

June 8, 1995

Kathryn Pritchett
OPERATIONAL TECHNOLOGY
4100 N.W. Loop 410
Suite 230
San Antonio, TX 78229

Dear Ms. Pritchett:

Southern Petroleum Laboratories (SPL) is pleased to present the results of laboratory analysis to Operational Technology. Six water samples were received at our laboratory on May 20, 1995 at a temperature of 4 degrees Celsius. The following is a brief narrative of the laboratory analysis.

For water Sample "SI-002FB" (SPL ID# 9505767-02), one of the liter water bottles arrived at the laboratory broken. The client was notified, at the client's request this sample was analyzed for all the analyses listed on the Chain of Custody except for Semi-volatile Organics.

Water sample "025-003A-GW01" (SPL ID# 9505767-06) was analyzed for Semi-Volatile Organics by SW-846 method 8270. All QC was within control limits except for the surrogate Terphenyl-d14.

All other quality control data was within acceptance limits.

Please refer to this project by 9505767 to expedite any further discussions. I will be happy to address any questions or concerns you may have.

SOUTHERN PETROLEUM LABORATORIES

Karen Satterfield
Project Manager

QUALITY CONTROL

DOCUMENTATION

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: 505714 SAS No.: ___ SDG NO.: 505767

Matrix Spike - EPA Sample No.: 026-003-RB

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
1,1-Dichloroethene	50.0	0	50	100	61-145
Trichloroethene	50.0	0	50	100	71-120
Benzene	50.0	0	48	96	76-127
Toluene	50.0	0	49	98	76-125
Chlorobenzene	50.0	0	48	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
1,1-Dichloroethene	50.0	48	96	4	14	61-145
Trichloroethene	50.0	49	98	2	14	71-120
Benzene	50.0	47	94	2	11	76-127
Toluene	50.0	47	94	4	13	76-125
Chlorobenzene	50.0	47	94	2	13	75-130

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

* Values outside of QC Limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

FORM III VOA - 1

Idelis Williams, Q C Officer

SPL Blank QC Report

Matrix: Aqueous
Sample ID: BLANK
Batch: L950524104646

Reported on: 05/25/95 18:15
Analyzed on: 05/24/95 22:00
Analyst: JC

METHOD 8260 L144B03

Compound	Result	Detection Limit	Units
Bromochloromethane	ND	5	ug/L
Bromomethane	ND	10	ug/L
Chloroethane	ND	10	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	10	ug/L
Dichlorodifluoromethane	ND	10	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
1,2-Dichloroethene (total)	ND	5	ug/L
2,2-Dichloropropane	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
1,1,1-Trichloroethane	ND	5	ug/L
Trichlorofluoromethane	ND	5	ug/L
Vinyl Chloride	ND	10	ug/L
Benzene	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
Dibromomethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,1-Dichloropropene	ND	5	ug/L
Toluene	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Bromoform	ND	5	ug/L
Dibromochloromethane	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
1,3-Dichloropropane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
Styrene	ND	5	ug/L
1,1,1,2-Tetrachloroethane	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Xylene (Total)	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: L950524104646

Reported on: 05/25/95 18:15
Analyzed on: 05/24/95 22:00
Analyst: JC

METHOD 8260 L144B03

Compound	Result	Detection Limit	Units
Bromobenzene	ND	5	ug/L
n-Butylbenzene	ND	5	ug/L
sec-Butylbenzene	ND	5	ug/L
tert-Butylbenzene	ND	5	ug/L
2-Chlorotoluene	ND	5	ug/L
4-Chlorotoluene	ND	5	ug/L
1,2-Dibromo-3-Chloropropan	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
Isopropylbenzene	ND	5	ug/L
p-Isopropyltoluene	ND	5	ug/L
Naphthalene	ND	5	ug/L
N-Propylbenzene	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,2,3-Trichlorobenzene	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
1,2,3-Trichloropropane	ND	5	ug/L
1,2,4-Trimethylbenzene	ND	5	ug/L
1,3,5-Trimethylbenzene	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	97	76-114	% Recovery
Toluene-d8	102	88-110	% Recovery
Bromofluorobenzene	97	86-115	% Recovery

Samples in Batch 9505767-02

Notes

ND - Not detected.

Idelis Williams, QC Officer

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/l950524.b/l144b03.d
Lab Smp Id:
Inj Date : 24-MAY-95 22:00
Operator : JC Inst ID: l.i
Smp Info : BLANK-8260W/1X
Misc Info : L144W2//L144CW3
Comment :
Method : /chem/l.i/l950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy Quant Type: ISTD
Cal Date : 24-MAY-1995 20:04 Cal File: l144cw3.d
Als bottle: 14
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: 8260.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
2	Pentafluorobenzene	168.00	5.812	5.820	(1.000)	187139	250	
24	1,4-Difluorobenzene	114.00	6.926	6.925	(1.000)	241511	250	
[illegible]	Chlorobenzene-d5	117.00	11.098	11.106	(1.000)	192906	250	
[illegible]	1,4-Dichlorobenzene-d4	152.00	14.485	14.493	(1.000)	92545	250	
19	1,2-Dichloroethane-d4	102.00	5.990	5.990	(0.865)	18166	240	49
[illegible]	Toluene-d8	98.00	9.154	9.154	(1.322)	266347	250	51
[illegible]	Bromofluorobenzene	95.00	12.773	12.782	(1.844)	108967	240	49

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144b03.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/18260w.m
Misc Info: L144W2//L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	187139	1.67
24 1,4-Difluorobenzene	239653	119826	479306	241511	0.78
38 Chlorobenzene-d5	191926	95963	383852	192906	0.51
48 1,4-Dichlorobenzene-	101540	50770	203080	92545	-8.86

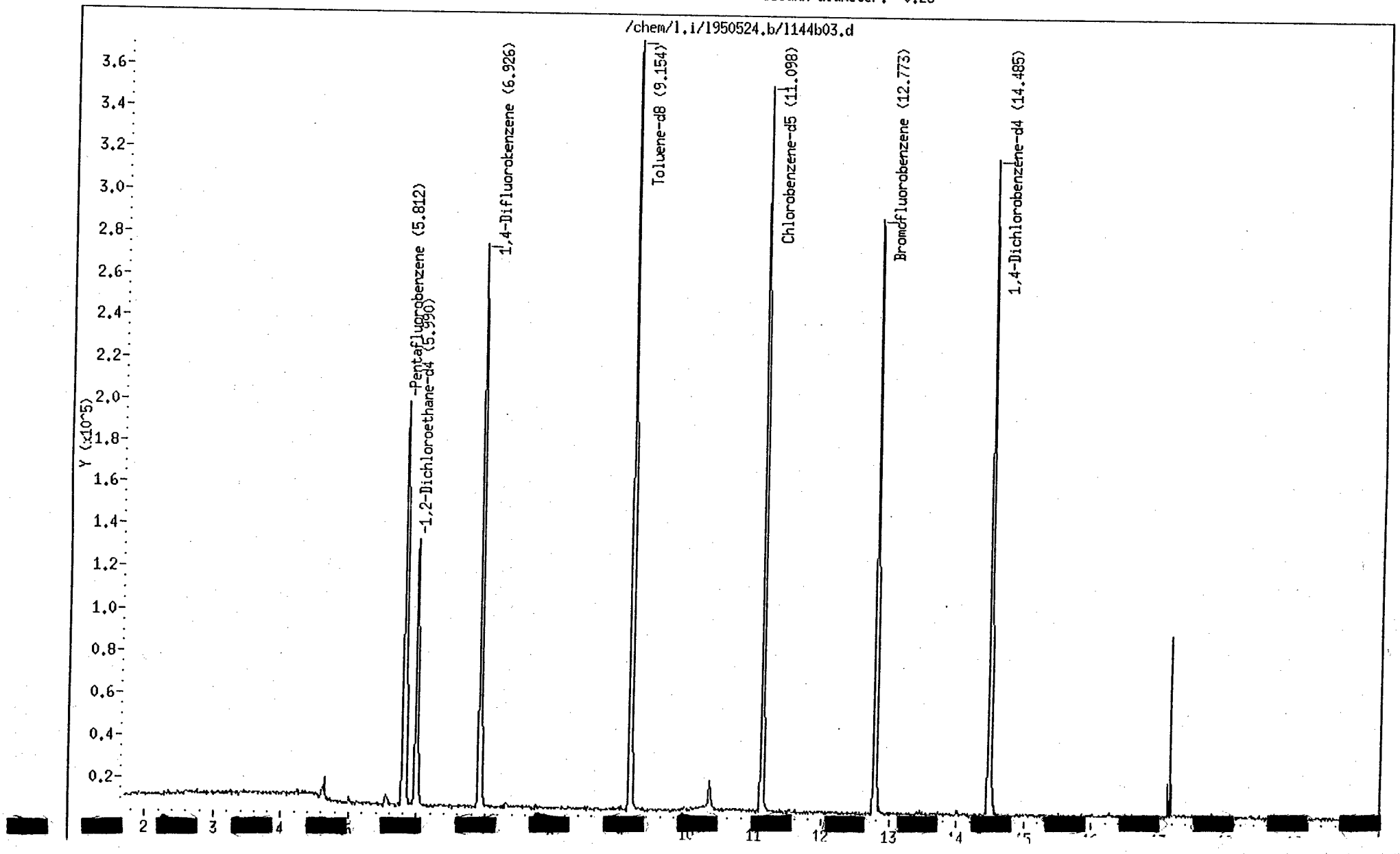
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.81	-0.15
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.01
38 Chlorobenzene-d5	11.11	10.61	11.61	11.10	-0.08
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.48	-0.06

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.i/1950524.b/1144b03.d
Date : 24-MAY-95 22:00
Client ID:
Sample Info: BLANK-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.i

Operator: JC
Column diameter: 0.25



Data File: /chem/1.i/1950524.b/1144bf4.d

Date : 24-MAY-95 19:22

Client ID:

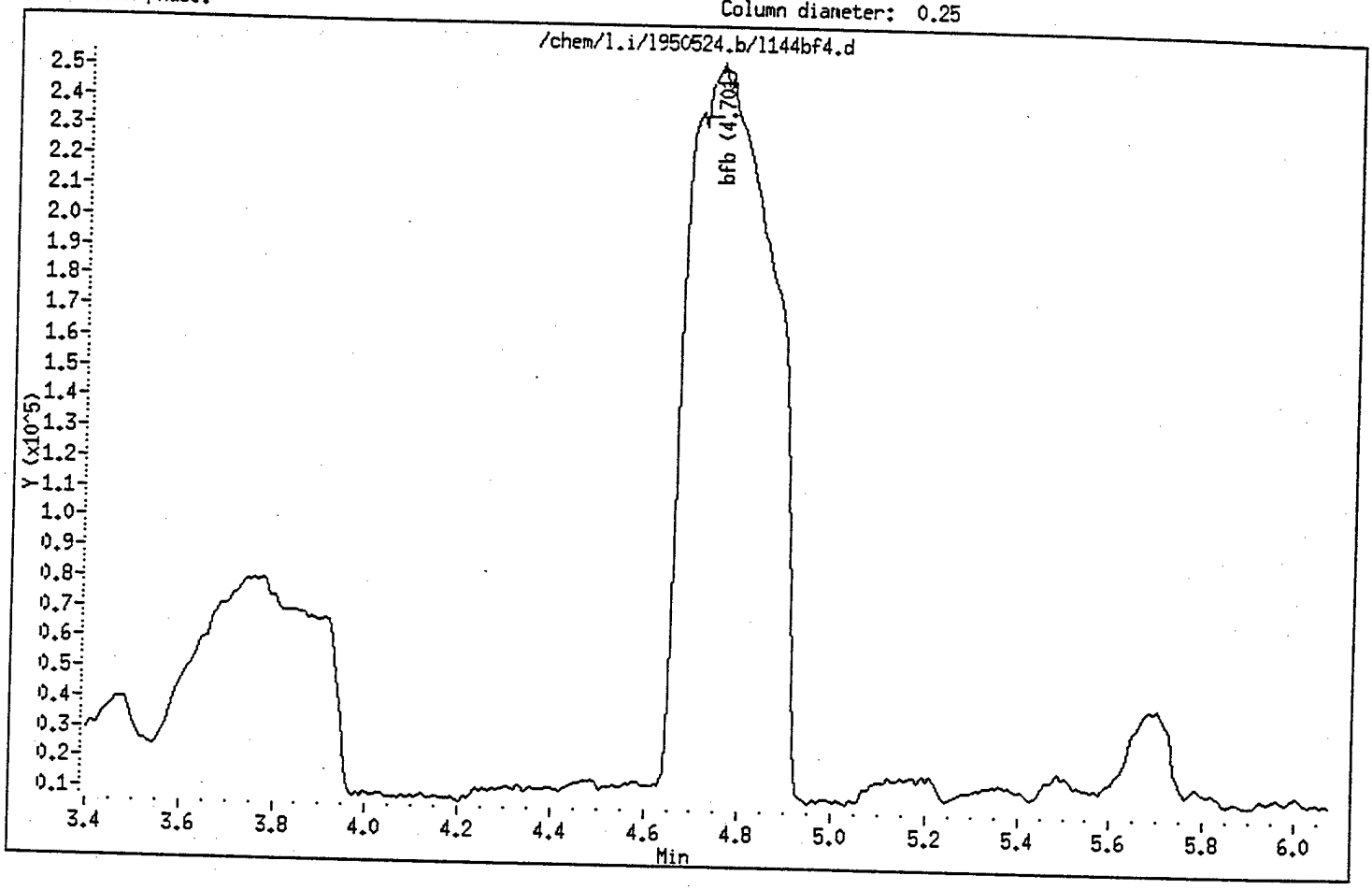
Sample Info: 50 NG BFB

Instrument: 1.i

Operator:

Column phase:

Column diameter: 0.25

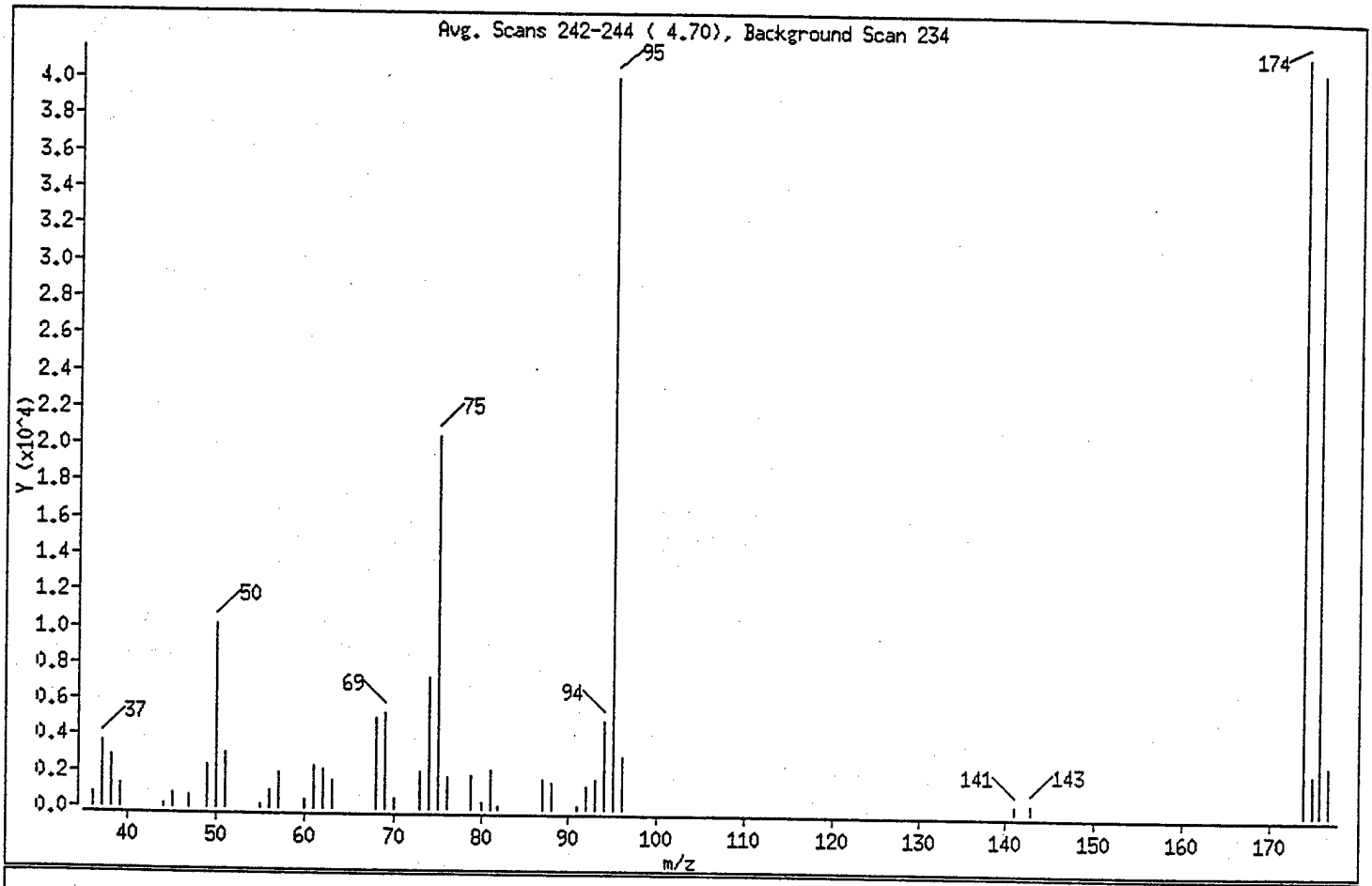


Data File: /chem/l.i/1950524.b/1144bf4.d
Date : 24-MAY-95 19:22
Client ID:
Sample Info: 50 NG BFB

Instrument: l.i

Operator:
Column diameter: 0.25

Column phase:
1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	25.36
75	30.00 - 60.00% of mass 95	50.97
96	5.00 - 9.00% of mass 95	7.33
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	103.80
175	5.00 - 9.00% of mass 174	5.53 (5.33)
176	95.00 - 101.00% of mass 174	101.68 (97.95)
177	5.00 - 9.00% of mass 176	6.75 (6.64)

Data File: /chem/1.i/1950524.b/1144bf4.d
Date : 24-MAY-95 19:22
Client ID:
Sample Info: 50 NG BFB

Instrument: 1.i
Operator:
Column phase:
Column diameter: 0.25

Data File: 1144bf4.d
Spectrum : Avg. Scans 242-244 (4.70), Background Scan 234
Largest m/z: 173.95
Number of peaks: 42

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.95	833	55.95	988	75.05	20472	94.05	4885
37.05	3604	57.05	1931	76.05	1763	95.05	40168
38.05	2825	60.05	539	78.85	1907	96.05	2946
39.05	1299	60.95	2342	79.95	379	140.95	362
44.00	156	62.05	2126	80.95	2124	142.85	521
45.00	805	63.05	1592	81.85	174	173.95	41696
47.00	675	68.00	5046	87.00	1679	175.05	2222
49.00	2346	69.00	5309	88.00	1495	175.95	40840
50.00	10186	70.00	553	90.90	150	176.95	2713
51.00	3067	73.00	2065	92.00	1271		
54.95	206	74.05	7252	93.00	1680		

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1995 15:28
End Cal Date : 22-MAR-1995 17:22
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/1.i/1950322.b/18260w.m
Cal Date : 22-Mar-1995 17:49 jimmy
Curve Type : Average

Calibration File Names:
Level 1: /chem/1.i/1950322.b/1081iw1.d
Level 2: /chem/1.i/1950322.b/1081iw2.d
Level 3: /chem/1.i/1950322.b/1081iw3.d
Level 4: /chem/1.i/1950322.b/1081iw4.d
Level 5: /chem/1.i/1950322.b/1081iw5.d

	Compound	100 Level 1	250 Level 2	500 Level 3	750 Level 4	1000 Level 5	RRF	% RSD
	1 Chloromethane	0.76177	0.72128	0.69719	0.67441	0.67004	0.70494	5.358
	3 Vinyl Chloride	0.59622	0.55286	0.52514	0.49130	0.46295	0.52569	9.899
	4 Bromomethane	0.47697	0.43193	0.43699	0.42903	0.41859	0.43870	5.112
	5 Chloroethane	0.34545	0.34162	0.33705	0.32975	0.32280	0.33533	2.722
	6 Trichlorofluoromethane	0.47357	0.52156	0.55996	0.56981	0.58923	0.54283	8.454
	8 1,1-Dichloroethene	0.40958	0.41559	0.41335	0.40892	0.41184	0.41186	0.666
	9 Methylene Chloride	0.48322	0.47544	0.47829	0.47530	0.47249	0.47695	0.852
	11 trans-1,2-Dichloroethene	0.48164	0.47961	0.47852	0.48889	0.48199	0.48213	0.838
	12 1,1-Dichloroethane	1.03799	1.03113	1.03061	1.02631	1.01669	1.02855	0.762
M	13 1,2-Dichloroethene (total)	0.49724	0.49844	0.49998	0.50487	0.49959	0.50002	0.582
	16 cis-1,2-Dichloroethene	0.51285	0.51727	0.52145	0.52084	0.51719	0.51792	0.667
	17 Bromochloromethane	0.25991	0.26488	0.26035	0.26137	0.25642	0.26059	1.165
	18 Chloroform	0.96113	0.94872	0.95368	0.93858	0.93368	0.94716	1.175
	20 1,1,1-Trichloroethane	0.52217	0.51445	0.51180	0.50409	0.50647	0.51180	1.390
	21 1,2-Dichloroethane	0.83286	0.83585	0.83062	0.82841	0.81300	0.82815	1.075
	22 Benzene	1.49126	1.48025	1.45491	1.43053	1.44620	1.46063	1.702
	23 Carbon Tetrachloride	0.39652	0.40203	0.40418	0.40450	0.41347	0.40414	1.514
	25 1,2-Dichloropropane	0.41738	0.42173	0.42179	0.40862	0.41563	0.41703	1.299
	26 Trichloroethene	0.34851	0.33945	0.34285	0.34399	0.33896	0.34275	1.129
	27 Bromodichloromethane	0.48781	0.49428	0.49366	0.48939	0.50181	0.49339	1.105
	30 cis-1,3-Dichloropropene	0.55709	0.57567	0.57860	0.57148	0.58845	0.57446	2.001
	31 trans-1,3-Dichloropropene	0.51163	0.53559	0.54539	0.54026	0.54957	0.53649	2.770
	33 Toluene	0.80520	0.81364	0.81320	0.80581	0.81654	0.81088	0.626
	34 1,1,2-Trichloroethane	0.29439	0.29531	0.28996	0.28548	0.28747	0.29052	1.470
	36 Dibromochloromethane	0.38175	0.39620	0.40295	0.41275	0.41561	0.40185	3.397
	37 Tetrachloroethene	0.36483	0.36231	0.35299	0.35869	0.35843	0.35945	1.248
	39 Chlorobenzene	1.03103	1.03167	1.03273	1.03233	1.00728	1.02701	1.076

SPL Labs

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1995 15:28
End Cal Date : 22-MAR-1995 17:22
Quant Method : ISTD
Origin : Included
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/1.i/1950322.b/18260w.m
Cal Date : 22-Mar-1995 17:49 jimmy
Curve Type : Average

	Compound	100 Level 1	250 Level 2	500 Level 3	750 Level 4	1000 Level 5	RRF	% RSD
M	40 Xylene (Total)	0.64004	0.66417	0.66867	0.66384	0.66286	0.65992	1.718
	41 Ethylbenzene	0.52587	0.52654	0.54030	0.54255	0.54397	0.53585	1.661
	42 m,p-Xylene(s)	0.64283	0.66699	0.67089	0.66475	0.66325	0.66174	1.656
	43 Bromoform	0.26128	0.28189	0.29823	0.30629	0.31234	0.29201	7.065
	44 Styrene	1.01955	1.09351	1.13113	1.13805	1.13989	1.10443	4.622
	45 o-Xylene	0.63444	0.65854	0.66422	0.66203	0.66207	0.65626	1.884
	46 1,1,2,2-Tetrachloroethane	0.51501	0.53748	0.54162	0.51224	0.53821	0.52891	2.661
	60 Dichlorodifluoromethane	0.67018	0.64801	0.65402	0.66131	0.66783	0.66027	1.408
	74 2,2-Dichloropropane	0.58486	0.59050	0.59475	0.57859	0.57118	0.58398	1.606
	75 1,2,3-Trichloropropane	0.48423	0.49631	0.49378	0.49657	0.49075	0.49233	1.036
	78 1,1,1,2-Tetrachloroethane	0.35627	0.35959	0.35863	0.36132	0.36443	0.36005	0.848
	80 2-Chlorotoluene	3.74958	3.91323	3.98445	4.04541	3.99748	3.93803	2.933
	81 4-Chlorotoluene	1.47743	1.52373	1.56935	1.58954	1.57421	1.54685	2.968
	84 1,2-Dibromoethane	0.34429	0.34052	0.33916	0.33602	0.34448	0.34089	1.051
	87 Isopropylbenzene	2.89349	2.90827	2.91253	2.96153	2.91903	2.91897	0.876
	88 N-Propylbenzene	6.56891	6.49736	6.45726	6.61133	6.43760	6.51449	1.134
	89 1,3,5-Trimethylbenzene	2.52281	2.52915	2.55901	2.60760	2.55685	2.55508	1.311
	90 1,2,4-Trimethylbenzene	2.58456	2.60031	2.62575	2.63909	2.57824	2.60559	1.006
	91 tert-Butylbenzene	2.38278	2.38451	2.38024	2.43369	2.39398	2.39504	0.928
	92 sec-Butylbenzene	2.58456	2.60031	2.62575	2.63909	2.57824	2.60559	1.006
	93 p-Isopropyltoluene	2.49674	2.52419	2.57626	2.62662	2.59611	2.56398	2.065
	94 n-Butylbenzene	2.66372	2.68132	2.78065	2.84023	2.81168	2.75552	2.863
	95 1,3-Dichlorobenzene	1.59262	1.55169	1.57973	1.59976	1.56298	1.57736	1.270
	96 1,4-Dichlorobenzene	1.62724	1.59414	1.61184	1.63353	1.61140	1.61563	0.953
	97 1,2-Dichlorobenzene	1.52318	1.48869	1.52047	1.54229	1.50668	1.51626	1.317
	98 1,2,4-Trichlorobenzene	0.85036	0.88682	0.95990	1.00768	0.99019	0.93899	7.214
	106 1,3-Dichloropropane	0.80726	0.80855	0.80763	0.81172	0.80246	0.80752	0.412
	108 1,2-Dibromo-3-Chloropropane	0.10181	0.09750	0.10464	0.10435	0.10676	0.10305	3.492
	112 Dibromomethane	0.36427	0.36874	0.37027	0.37349	0.36792	0.36894	0.913
	114 Bromobenzene	0.91993	0.89187	0.88944	0.90537	0.89741	0.90080	1.368
	115 1,1-Dichloropropene	0.68647	0.70097	0.70834	0.72235	0.70550	0.70472	1.838
	116 Hexachlorobutadiene	0.45102	0.44617	0.46800	0.47735	0.46702	0.46191	2.798
	117 Naphthalene	1.67144	1.88063	2.06328	2.19418	2.20563	2.00303	11.334
	118 1,2,3-Trichlorobenzene	0.91339	0.98168	1.05912	1.11328	1.10767	1.03503	8.314

SPL Labs

INITIAL CALIBRATION DATA

tart Cal Date : 22-MAR-1995 15:28
End Cal Date : 22-MAR-1995 17:22
Quant Method : ISTD
rigin : Included
arget Version : 3.10
Integrator : HP RTE
ethod file : /chem/1.i/1950322.b/18260w.m
al Date : 22-Mar-1995 17:49 jimmy
urve Type : Average

Compound	100 Level 1	250 Level 2	500 Level 3	750 Level 4	1000 Level 5	RRF	% RSD
19 1,2-Dichloroethane-d4	0.07637	0.08118	0.08097	0.07816	0.07731	0.07880	2.758
$ 32 Toluene-d8	1.06322	1.10086	1.11380	1.08328	1.09473	1.09118	1.752
$ 47 Bromofluorobenzene	0.47273	0.47023	0.48760	0.48048	0.48155	0.47852	1.469

ta File: /chem/1.i/1950322.b/1081iw1.d
port Date: 22-Mar-1995 17:50

SPL Labs

Volatiles by 624/8240

ta file : /chem/1.i/1950322.b/1081iw1.d
b Smp Id:
j Date : 22-MAR-1995 15:28
erator : JC
p Info : 20 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/1.i/1950322.b/18260w.m
ch Date : 22-Mar-1995 17:50 jimmy
l Date : 22-MAR-1995 15:57
s bottle: 2
Factor: 1.000
tegrator: HP RTE
rget Version: 3.10

Inst ID: 1.i

Quant Type: ISTD
Cal File: 1081iw2.d
Calibration Sample, Level: 1

Compound Sublist: 8260.sub

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
Bromochloromethane	128.00	5.234	5.234	(0.898)	17049	100	100
Bromomethane	94.00	2.122	2.122	(0.364)	31287	100	110
Chloroethane	64.00	2.193	2.193	(0.376)	22660	100	100
Chloroform	83.00	5.243	5.243	(0.899)	63045	100	100
Chloromethane	50.00	1.774	1.774	(0.304)	49968	100	110
Dichlorodifluoromethane	85.00	1.694	1.694	(0.290)	43960	100	100
1,1-Dichloroethane	63.00	4.173	4.173	(0.716)	68087	100	100
1,1-Dichloroethene	96.00	3.005	3.005	(0.515)	26866	100	99
cis-1,2-Dichloroethene	96.00	4.967	4.967	(0.852)	33640	100	99
trans-1,2-Dichloroethene	96.00	3.834	3.834	(0.657)	31593	100	100
1,2-Dichloroethene (total)	96.00				65233	200	200
2,2-Dichloropropane	77.00	5.154	5.154	(0.884)	38364	100	100
Methylene Chloride	84.00	3.246	3.246	(0.557)	31697	100	100
1,1,1-Trichloroethane	97.00	6.028	6.028	(0.869)	46960	100	100
Trichlorofluoromethane	100.90	2.550	2.550	(0.437)	31064	100	87
Vinyl Chloride	62.00	1.881	1.881	(0.323)	39109	100	110
Benzene	78.00	6.474	6.474	(0.933)	134113	100	100
Bromodichloromethane	83.00	7.687	7.687	(1.108)	43870	100	99
Carbon Tetrachloride	117.00	6.501	6.501	(0.937)	35660	100	98
1,2-Dibromoethane	107.00	10.228	10.228	(1.474)	30963	100	100
Dibromomethane	93.00	7.553	7.553	(1.295)	23894	100	99
1,2-Dichloroethane	62.00	6.117	6.117	(1.049)	54631	100	100
1,2-Dichloropropane	63.00	7.464	7.464	(1.076)	37536	100	100
1,1-Dichloropropene	75.00	6.313	6.313	(1.083)	45029	100	97
cis-1,3-Dichloropropene	75.00	8.543	8.543	(1.231)	50100	100	97
trans-1,3-Dichloropropene	75.00	9.167	9.167	(1.321)	46012	100	95
Toluene	92.00	9.256	9.256	(1.334)	72414	100	99
1,1,2-Trichloroethane	83.00	9.336	9.336	(1.346)	26475	100	100
Trichloroethene	130.00	7.490	7.490	(1.080)	31342	100	100

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromoform	173.00	12.029	12.029	(1.084)	18963	100	89
Dibromochloromethane	129.00	9.960	9.960	(0.897)	27706	100	95
Chlorobenzene	112.00	11.146	11.146	(1.004)	74829	100	100
1,3-Dichloropropane	76.00	9.657	9.657	(1.656)	52952	100	100
Ethylbenzene	106.00	11.450	11.450	(1.031)	38166	100	98
Styrene	104.00	12.083	12.083	(1.088)	73996	100	92
1,1,1,2-Tetrachloroethane	131.00	11.200	11.200	(1.009)	25857	100	99
Tetrachloroethene	164.00	10.308	10.308	(0.928)	26478	100	100
o-Xylene	106.00	12.136	12.136	(1.093)	46046	100	97
m,p-Xylene(s)	106.00	11.610	11.610	(1.046)	93310	200	190
Xylene (Total)	106.00				139356	300	290
Bromobenzene	156.00	12.983	12.983	(0.897)	34444	100	100
n-Butylbenzene	91.00	15.213	15.213	(1.050)	99735	100	97
sec-Butylbenzene	105.00	14.107	14.107	(0.974)	96771	100	99
tert-Butylbenzene	119.00	14.089	14.089	(0.973)	89216	100	99
2-Chlorotoluene	91.00	13.340	13.340	(2.288)	245953	100	95
4-Chlorotoluene	91.00	13.447	13.447	(2.306)	96912	100	96
1,2-Dibromo-3-Chloropropane	75.00	15.784	15.784	(2.707)	6678	100	99
1,2-Dichlorobenzene	146.00	14.972	14.972	(1.034)	57031	100	100
1,3-Dichlorobenzene	146.00	14.401	14.401	(0.994)	59631	100	100
1,4-Dichlorobenzene	146.00	14.517	14.517	(1.002)	60927	100	100
Hexachlorobutadiene	225.00	17.736	17.736	(1.225)	16887	100	98
Isopropylbenzene	105.00	12.752	12.752	(0.881)	108338	100	99
p-Isopropyltoluene	119.00	14.642	14.642	(1.011)	93483	100	97
Naphthalene	128.00	17.353	17.353	(1.198)	62582	100	83
N-Propylbenzene	91.00	13.340	13.340	(0.921)	245953	100	100
1,1,2,2-Tetrachloroethane	83.00	12.484	12.484	(1.125)	37378	100	97
1,2,3-Trichlorobenzene	180.00	17.184	17.184	(1.187)	34199	100	88
1,2,4-Trichlorobenzene	180.00	17.790	17.790	(1.228)	31839	100	90
1,2,3-Trichloropropane	75.00	12.645	12.645	(2.168)	31763	100	98
1,2,4-Trimethylbenzene	105.00	14.107	14.107	(0.974)	96771	100	99
1,3,5-Trimethylbenzene	105.00	13.599	13.599	(0.939)	94459	100	99
Pentafluorobenzene	168.00	5.832	5.832	(1.000)	163987	250	
1,4-Difluorobenzene	114.00	6.937	6.937	(1.000)	224831	250	
Chlorobenzene-d5	117.00	11.102	11.102	(1.000)	181443	250	
1,4-Dichlorobenzene-d4	152.00	14.482	14.482	(1.000)	93605	250	
1,2-Dichloroethane-d4	102.00	6.001	6.001	(0.865)	6868	100	97
Toluene-d8	98.00	9.158	9.158	(1.320)	95618	100	97
Bromofluorobenzene	95.00	12.769	12.769	(1.841)	42514	100	99

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

strument ID: l.i
b File ID: 1081iw1.d
b Smp Id:
alysis Type: VOA
ant Type: ISTD
erator: JC
thod File: /chem/l.i/1950322.b/18260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

COMPOUND	AREA LIMIT STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	163987	0.28
4 1,4-Difluorobenzene	224833	112416	449666	224831	0.00
8 Chlorobenzene-d5	182201	91100	364402	181443	-0.42
8 1,4-Dichlorobenzene-	98492	49246	196984	93605	-4.96

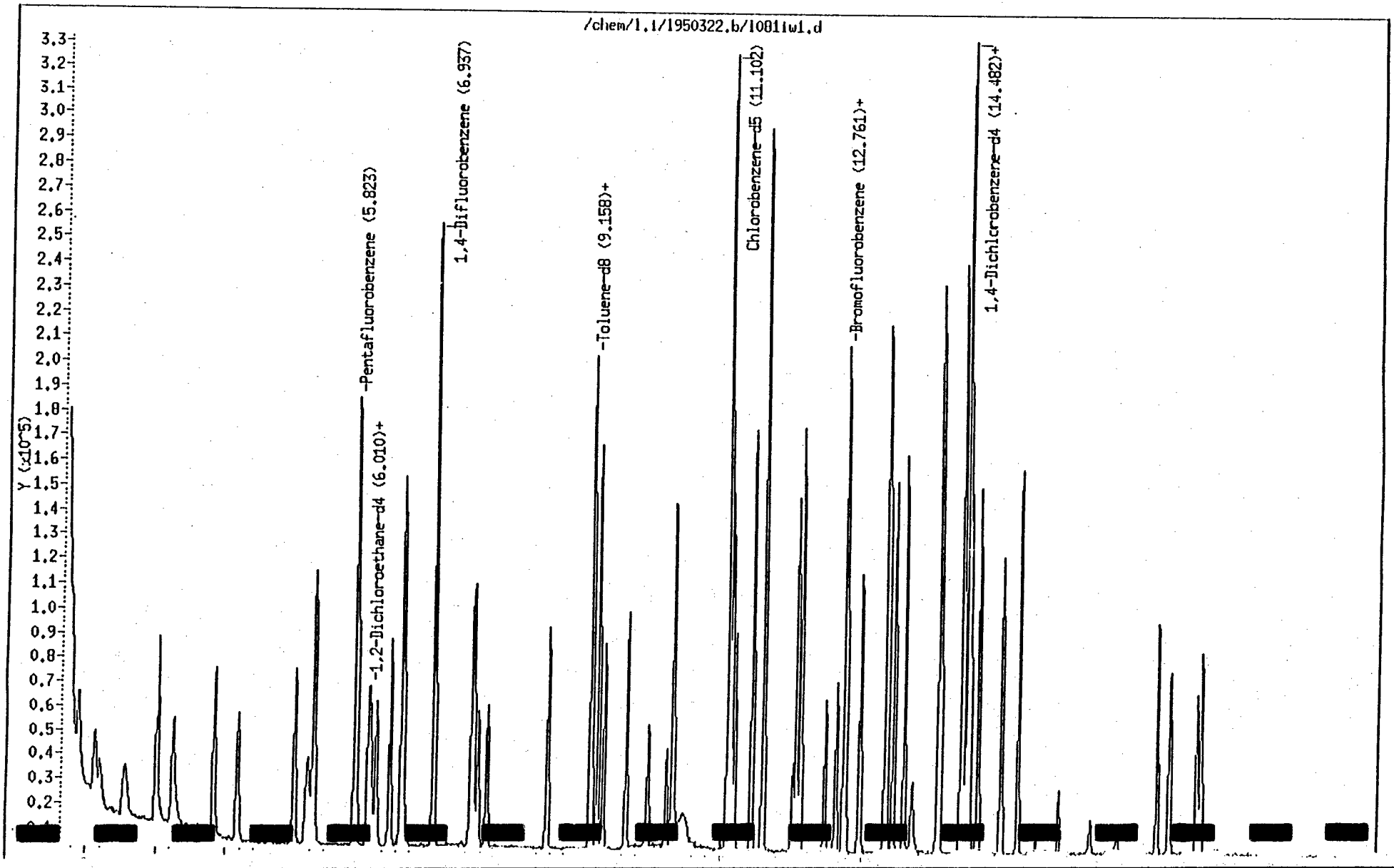
OMPOUND	RT LIMIT STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.16
4 1,4-Difluorobenzene	6.95	6.45	7.45	6.94	-0.13
8 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00
8 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	0.00

A UPPER LIMIT = +100% of internal standard area.
A LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/10811w1.d
Date : 22-MAR-1995 15:28
Client ID:
Sample Info: 20 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1

Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

ta file : /chem/l.i/1950322.b/1081iw2.d
o Smp Id:
j Date : 22-MAR-1995 15:57
erator : JC Inst ID: l.i
o Info : 50 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/l.i/1950322.b/18260w.m
th Date : 22-Mar-1995 17:50 jimmy Quant Type: ISTD
. Date : 22-MAR-1995 15:57 Cal File: 1081iw2.d
s bottle: 3 Calibration Sample, Level: 2
. Factor: 1.000
tegrator: HP RTE Compound Sublist: 8260.sub
rget Version: 3.10

	QUANT SIG					AMOUNTS	
						CAL-AMT	ON-COL
ounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ng)	(ng)
Bromochloromethane	128.00	5.243	5.243	(0.898)	43316	250	250
Bromomethane	94.00	2.122	2.122	(0.363)	70634	250	250
Chloroethane	64.00	2.194	2.194	(0.376)	55866	250	250
Chloroform	83.00	5.252	5.252	(0.899)	155146	250	250
Chloromethane	50.00	1.783	1.783	(0.305)	117953	250	260
Dichlorodifluoromethane	85.00	1.685	1.685	(0.289)	105970	250	240
1,1-Dichloroethane	63.00	4.182	4.182	(0.716)	168622	250	250
1,1-Dichloroethene	96.00	3.014	3.014	(0.516)	67963	250	250
cis-1,2-Dichloroethene	96.00	4.985	4.985	(0.853)	84590	250	250
trans-1,2-Dichloroethene	96.00	3.843	3.843	(0.658)	78431	250	250
1,2-Dichloroethene (total)	96.00				163021	500	500
2,2-Dichloropropane	77.00	5.163	5.163	(0.884)	96565	250	250
Methylene Chloride	84.00	3.246	3.246	(0.556)	77749	250	250
1,1,1-Trichloroethane	97.00	6.037	6.037	(0.869)	115665	250	250
Trichlorofluoromethane	100.90	2.559	2.559	(0.438)	85291	250	240
Vinyl Chloride	62.00	1.890	1.890	(0.324)	90410	250	260
Benzene	78.00	6.483	6.483	(0.933)	332809	250	250
Bromodichloromethane	83.00	7.687	7.687	(1.107)	111131	250	250
Carbon Tetrachloride	117.00	6.510	6.510	(0.937)	90390	250	250
1,2-Dibromoethane	107.00	10.228	10.228	(1.472)	76560	250	250
Dibromomethane	93.00	7.562	7.562	(1.295)	60301	250	250
1,2-Dichloroethane	62.00	6.126	6.126	(1.049)	136689	250	250
1,2-Dichloropropane	63.00	7.464	7.464	(1.074)	94818	250	250
1,1-Dichloropropene	75.00	6.322	6.322	(1.082)	114631	250	250
cis-1,3-Dichloropropene	75.00	8.552	8.552	(1.231)	129654	250	250
trans-1,3-Dichloropropene	75.00	9.176	9.176	(1.321)	120418	250	250
Toluene	92.00	9.256	9.256	(1.332)	182933	250	250
1,1,2-Trichloroethane	83.00	9.345	9.345	(1.345)	66396	250	250
Trichloroethene	130.00	7.499	7.499	(1.080)	76320	250	250

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
Bromoform	173.00	12.038	12.038	(1.084)	51361	250	240
Dibromochloromethane	129.00	9.970	9.970	(0.898)	72188	250	250
39 Chlorobenzene	112.00	11.147	11.147	(1.004)	187971	250	250
1,3-Dichloropropane	76.00	9.666	9.666	(1.655)	132223	250	250
Ethylbenzene	106.00	11.450	11.450	(1.031)	95937	250	240
Styrene	104.00	12.083	12.083	(1.088)	199238	250	250
78 1,1,1,2-Tetrachloroethane	131.00	11.209	11.209	(1.010)	65517	250	250
Tetrachloroethene	164.00	10.308	10.308	(0.928)	66014	250	250
o-Xylene	106.00	12.136	12.136	(1.093)	119986	250	250
2 m,p-Xylene(s)	106.00	11.619	11.619	(1.047)	243052	500	500
40 Xylene (Total)	106.00				363038	750	750
Bromobenzene	156.00	12.984	12.984	(0.897)	87842	250	250
n-Butylbenzene	91.00	15.213	15.213	(1.050)	264089	250	240
2 sec-Butylbenzene	105.00	14.107	14.107	(0.974)	256110	250	250
91 tert-Butylbenzene	119.00	14.089	14.089	(0.973)	234855	250	250
2-Chlorotoluene	91.00	13.340	13.340	(2.284)	639938	250	250
4-Chlorotoluene	91.00	13.447	13.447	(2.302)	249179	250	250
8 1,2-Dibromo-3-Chloropropane	75.00	15.784	15.784	(2.702)	15945	250	240
1,2-Dichlorobenzene	146.00	14.972	14.972	(1.034)	146624	250	240
1,3-Dichlorobenzene	146.00	14.402	14.402	(0.994)	152829	250	240
1,4-Dichlorobenzene	146.00	14.517	14.517	(1.002)	157010	250	250
6 Hexachlorobutadiene	225.00	17.737	17.737	(1.225)	43944	250	240
Isopropylbenzene	105.00	12.761	12.761	(0.881)	286441	250	250
p-Isopropyltoluene	119.00	14.642	14.642	(1.011)	248613	250	250
Naphthalene	128.00	17.353	17.353	(1.198)	185227	250	230
38 N-Propylbenzene	91.00	13.340	13.340	(0.921)	639938	250	250
1,1,2,2-Tetrachloroethane	83.00	12.484	12.484	(1.124)	97930	250	250
1,2,3-Trichlorobenzene	180.00	17.184	17.184	(1.187)	96688	250	240
1,2,4-Trichlorobenzene	180.00	17.790	17.790	(1.228)	87345	250	240
1,2,3-Trichloropropane	75.00	12.645	12.645	(2.165)	81163	250	250
1,2,4-Trimethylbenzene	105.00	14.107	14.107	(0.974)	256110	250	250
1,3,5-Trimethylbenzene	105.00	13.599	13.599	(0.939)	249101	250	250
Pentafluorobenzene	168.00	5.841	5.841	(1.000)	163532	250	
1,4-Difluorobenzene	114.00	6.947	6.947	(1.000)	224833	250	
Chlorobenzene-d5	117.00	11.102	11.102	(1.000)	182201	250	
1,4-Dichlorobenzene-d4	152.00	14.482	14.482	(1.000)	98492	250	
9 1,2-Dichloroethane-d4	102.00	6.010	6.010	(0.865)	18251	250	260
2 oluene-d8	98.00	9.158	9.158	(1.318)	247509	250	250
romofluorobenzene	95.00	12.779	12.779	(1.840)	105724	250	240

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

istrument ID: l.i
.b File ID: l081iw2.d
.b Smp Id:
.alysis Type: VOA
.ant Type: ISTD
erator: JC
thod File: /chem/l.i/1950322.b/18260w.m
.sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	163532	0.00
24 1,4-Difluorobenzene	224833	112416	449666	224833	0.00
38 Chlorobenzene-d5	182201	91100	364402	182201	0.00
48 1,4-Dichlorobenzene-	98492	49246	196984	98492	0.00

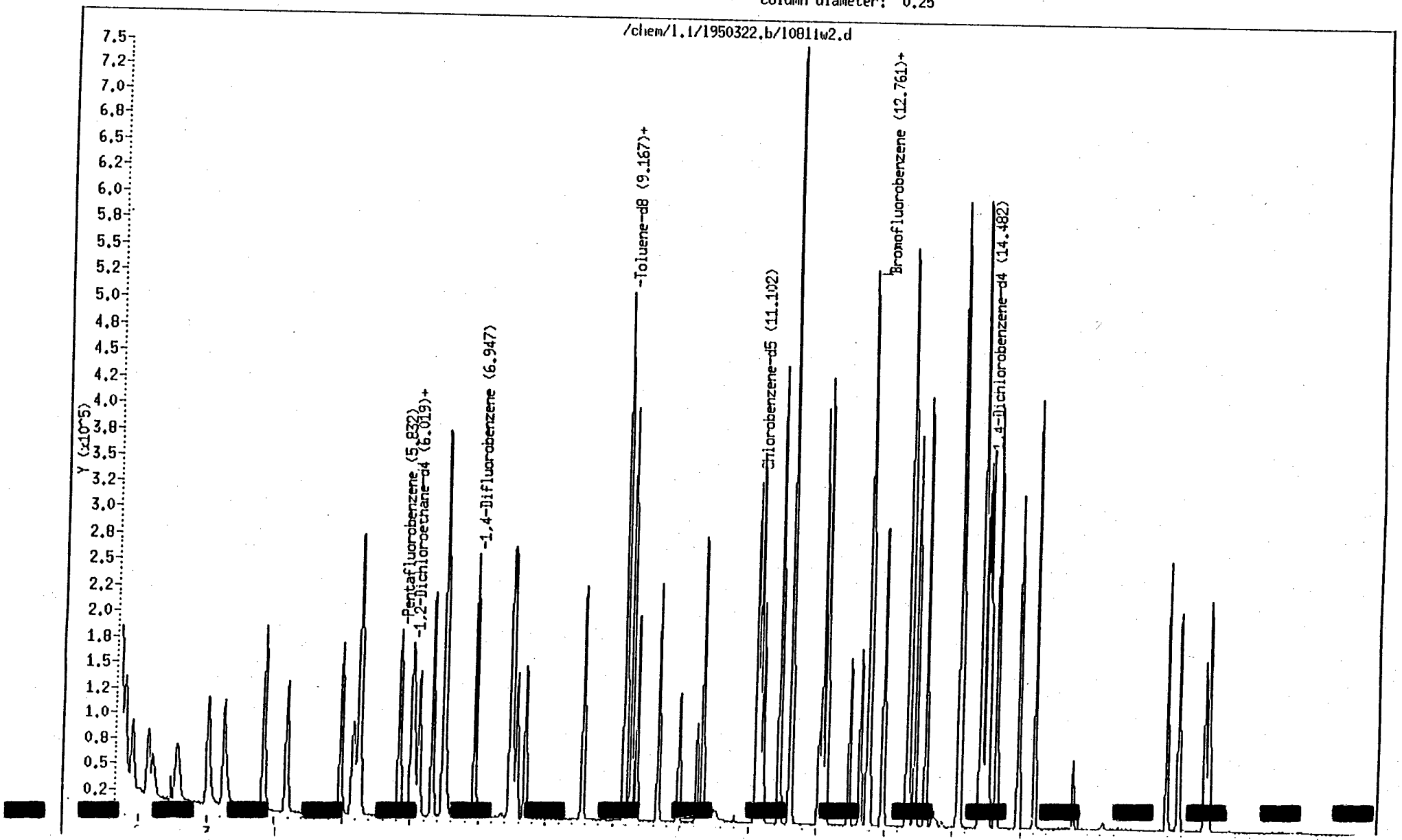
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.84	0.00
24 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	0.00
38 Chlorobenzene-d5	11.10	10.60	11.60	11.10	0.00
48 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	0.00

EA UPPER LIMIT = +100% of internal standard area.
EA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/1081lw2.d
Date : 22-MAR-1995 15:57
Client ID:
Sample Info: 50 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1

Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

:a file : /chem/1.i/1950322.b/1081iw3.d
) Smp Id:
Date : 22-MAR-1995 16:25
:rator : JC
) Info : 100 UG-L STD-8260W/1X
3c Info : L081W2//L081CW2
ument :
hod : /chem/1.i/1950322.b/18260w.m
h Date : 22-Mar-1995 17:51 jimmy
Date : 22-MAR-1995 15:57
bottle: 4
Factor: 1.000
egrator: HP RTE
get Version: 3.10

Inst ID: 1.i

Quant Type: ISTD
Cal File: 1081iw2.d
Calibration Sample, Level: 3

Compound Sublist: 8260.sub

unds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromochloromethane	128.00	5.233	5.233	(0.898)	85590	500	500
Bromomethane	94.00	2.121	2.121	(0.364)	143660	500	500
Chloroethane	64.00	2.192	2.192	(0.376)	110805	500	500
Chloroform	83.00	5.251	5.251	(0.901)	313520	500	500
Chloromethane	50.00	1.782	1.782	(0.306)	229199	500	490
Dichlorodifluoromethane	85.00	1.684	1.684	(0.289)	215007	500	500
1,1-Dichloroethane	63.00	4.172	4.172	(0.716)	338812	500	500
1,1-Dichloroethene	96.00	3.013	3.013	(0.517)	135889	500	500
cis-1,2-Dichloroethene	96.00	4.975	4.975	(0.853)	171425	500	500
trans-1,2-Dichloroethene	96.00	3.833	3.833	(0.657)	157312	500	500
1,2-Dichloroethene (total)	96.00				328737	1000	1000
2,2-Dichloropropane	77.00	5.162	5.162	(0.885)	195523	500	510
Methylene Chloride	84.00	3.245	3.245	(0.556)	157236	500	500
1,1,1-Trichloroethane	97.00	6.045	6.045	(0.870)	232267	500	500
Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	184087	500	520
Vinyl Chloride	62.00	1.889	1.889	(0.324)	172640	500	500
Benzene	78.00	6.482	6.482	(0.933)	660275	500	500
Bromodichloromethane	83.00	7.685	7.685	(1.107)	224034	500	500
Carbon Tetrachloride	117.00	6.508	6.508	(0.937)	183426	500	500
1,2-Dibromoethane	107.00	10.236	10.236	(1.474)	153917	500	500
Dibromomethane	93.00	7.561	7.561	(1.297)	121725	500	500
1,2-Dichloroethane	62.00	6.125	6.125	(1.050)	273066	500	500
1,2-Dichloropropane	63.00	7.462	7.462	(1.074)	191420	500	500
1,1-Dichloropropene	75.00	6.321	6.321	(1.084)	232864	500	500
cis-1,3-Dichloropropene	75.00	8.550	8.550	(1.231)	262581	500	500
trans-1,3-Dichloropropene	75.00	9.175	9.175	(1.321)	247511	500	510
Toluene	92.00	9.255	9.255	(1.333)	369048	500	500
1,1,2-Trichloroethane	83.00	9.344	9.344	(1.345)	131589	500	500
Trichloroethene	130.00	7.498	7.498	(1.080)	155595	500	500

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
Bromoform	173.00	12.037	12.037	(1.084)	109402	500	510
Dibromochloromethane	129.00	9.968	9.968	(0.898)	147816	500	500
Chlorobenzene	112.00	11.145	11.145	(1.004)	378843	500	500
1,3-Dichloropropane	76.00	9.665	9.665	(1.658)	265508	500	500
Ethylbenzene	106.00	11.449	11.449	(1.031)	198202	500	500
Styrene	104.00	12 082	12.082	(1.088)	414939	500	510
1,1,1,2-Tetrachloroethane	131.00	11.208	11.208	(1.010)	131559	500	500
Tetrachloroethene	164.00	10.307	10.307	(0.928)	129488	500	490
o-Xylene	106.00	12.135	12.135	(1.093)	243660	500	510
m,p-Xylene(s)	106.00	11.618	11.618	(1.047)	492216	1000	1000
Xylene (Total)	106.00				735876	1500	1500
Bromobenzene	156.00	12.982	12.982	(0.897)	180427	500	490
n-Butylbenzene	91.00	15.212	15.212	(1.050)	564065	500	500
sec-Butylbenzene	105.00	14.106	14.106	(0.974)	532643	500	500
tert-Butylbenzene	119.00	14.088	14.088	(0.973)	482841	500	500
2-Chlorotoluene	91.00	13.339	13.339	(2.288)	1309881	500	500
4-Chlorotoluene	91.00	13.446	13.446	(2.306)	515922	500	510
1,2-Dibromo-3-Chloropropane	75.00	15.782	15.782	(2.707)	34400	500	510
1,2-Dichlorobenzene	146.00	14.971	14.971	(1.034)	308433	500	500
1,3-Dichlorobenzene	146.00	14.409	14.409	(0.995)	320454	500	500
1,4-Dichlorobenzene	146.00	14.516	14.516	(1.002)	326969	500	500
Hexachlorobutadiene	225.00	17.735	17.735	(1.225)	94935	500	510
Isopropylbenzene	105.00	12.759	12.759	(0.881)	590819	500	500
p-Isopropyltoluene	119.00	14.641	14.641	(1.011)	522605	500	500
Naphthalene	128.00	17.352	17.352	(1.198)	418544	500	520
n-Propylbenzene	91.00	13.339	13.339	(0.921)	1309881	500	500
1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.125)	198687	500	510
1,2,3-Trichlorobenzene	180.00	17.182	17.182	(1.187)	214847	500	510
1,2,4-Trichlorobenzene	180.00	17.798	17.798	(1.229)	194720	500	510
1,2,3-Trichloropropane	75.00	12.643	12.643	(2.168)	162330	500	500
1,2,4-Trimethylbenzene	105.00	14.106	14.106	(0.974)	532643	500	500
1,3,5-Trimethylbenzene	105.00	13.607	13.607	(0.940)	519106	500	500
Pentafluorobenzene	168.00	5.831	5.831	(1.000)	164374	250	
1,4-Difluorobenzene	114.00	6.945	6.945	(1.000)	226912	250	
Chlorobenzene-d5	117.00	11.101	11.101	(1.000)	183418	250	
1,4-Dichlorobenzene-d4	152.00	14.480	14.480	(1.000)	101427	250	
1,2-Dichloroethane-d4	102.00	6.009	6.009	(0.865)	36748	500	510
Toluene-d8	98.00	9.157	9.157	(1.318)	505469	500	510
Bromofluorobenzene	95.00	12.777	12.777	(1.840)	221286	500	510

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: l.i
ab File ID: 1081iw3.d
ab Smp Id:
nalysis Type: VOA
ant Type: ISTD
perator: JC
ethod File: /chem/l.i/1950322.b/18260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

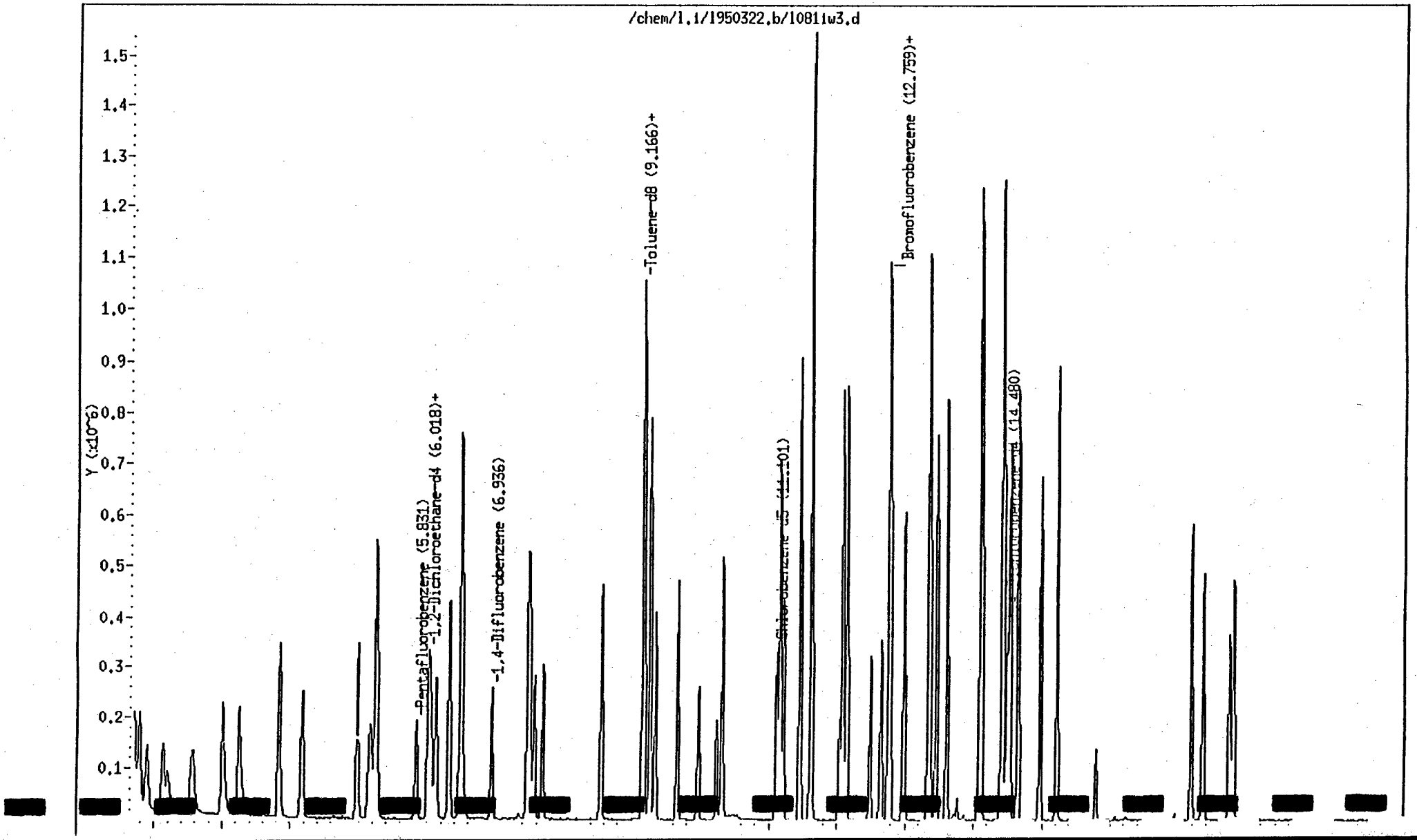
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	164374	0.51
24 1,4-Difluorobenzene	224833	112416	449666	226912	0.92
38 Chlorobenzene-d5	182201	91100	364402	183418	0.67
48 1,4-Dichlorobenzene-	98492	49246	196984	101427	2.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.17
24 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	-0.02
38 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.01
48 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	-0.01

EA UPPER LIMIT = +100% of internal standard area.
EA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/1081iw3.d
Date : 22-MAR-1995 16:25
Client ID:
Sample Info: 100 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1
Operator: JC
Column diameter: 0.25



ta File: /chem/l.i/1950322.b/l081iw4.d
port Date: 22-Mar-1995 17:51

SPL Labs

Volatiles by 624/8240

ta file : /chem/l.i/1950322.b/l081iw4.d
b Smp Id:
j Date : 22-MAR-1995 16:54
erator : JC
p Info : 150 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/l.i/1950322.b/18260w.m
th Date : 22-Mar-1995 17:51 jimmy
l Date : 22-MAR-1995 15:57
s bottle: 5
l Factor: 1.000
tegrator: HP RTE
rget Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l081iw2.d
Calibration Sample, Level: 4

Compound Sublist: 8260.sub

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
7 Bromochloromethane	128.00	5.233	5.233	(0.898)	130192	750	750
4 Bromomethane	94.00	2.130	2.130	(0.365)	213704	750	730
5 Chloroethane	64.00	2.192	2.192	(0.376)	164249	750	740
3 Chloroform	83.00	5.251	5.251	(0.901)	467515	750	740
1 Chloromethane	50.00	1.782	1.782	(0.306)	335927	750	720
0 Dichlorodifluoromethane	85.00	1.693	1.693	(0.290)	329402	750	750
1,1-Dichloroethane	63.00	4.172	4.172	(0.716)	511212	750	750
1,1-Dichloroethene	96.00	3.013	3.013	(0.517)	203685	750	740
cis-1,2-Dichloroethene	96.00	4.974	4.974	(0.853)	259437	750	750
trans-1,2-Dichloroethene	96.00	3.842	3.842	(0.659)	243518	750	760
1,2-Dichloroethene (total)	96.00				502955	1500	1500(A)
2,2-Dichloropropane	77.00	5.162	5.162	(0.885)	288202	750	740
Methylene Chloride	84.00	3.245	3.245	(0.556)	236750	750	750
1,1,1-Trichloroethane	97.00	6.036	6.036	(0.869)	352865	750	740
Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	283827	750	790
Vinyl Chloride	62.00	1.889	1.889	(0.324)	244719	750	700
Benzene	78.00	6.482	6.482	(0.933)	1001375	750	730
Bromodichloromethane	83.00	7.685	7.685	(1.107)	342574	750	740
Carbon Tetrachloride	117.00	6.508	6.508	(0.937)	283152	750	750
1,2-Dibromoethane	107.00	10.227	10.227	(1.472)	235217	750	740
Dibromomethane	93.00	7.561	7.561	(1.297)	186036	750	760
1,2-Dichloroethane	62.00	6.125	6.125	(1.050)	412636	750	750
1,2-Dichloropropane	63.00	7.462	7.462	(1.074)	286039	750	730
1,1-Dichloropropene	75.00	6.312	6.312	(1.083)	359806	750	770
cis-1,3-Dichloropropene	75.00	8.550	8.550	(1.231)	400039	750	750
trans-1,3-Dichloropropene	75.00	9.175	9.175	(1.321)	378184	750	760
Toluene	92.00	9.264	9.264	(1.334)	564071	750	740
1,1,2-Trichloroethane	83.00	9.344	9.344	(1.345)	199838	750	740
Trichloroethene	130.00	7.498	7.498	(1.080)	240797	750	750

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromoform	173.00	12.037	12.037	(1.084)	171974	750	790
Dibromochloromethane	129.00	9.968	9.968	(0.898)	231751	750	770
Chlorobenzene	112.00	11.154	11.154	(1.005)	579635	750	750
1,3-Dichloropropane	76.00	9.665	9.665	(1.658)	404322	750	750
Ethylbenzene	106.00	11.449	11.449	(1.031)	304630	750	760
Styrene	104.00	12.082	12.082	(1.088)	638997	750	770
1,1,1,2-Tetrachloroethane	131.00	11.208	11.208	(1.010)	202876	750	750
Tetrachloroethene	164.00	10.307	10.307	(0.928)	201398	750	750
o-Xylene	106.00	12.144	12.144	(1.094)	371720	750	760
m,p-Xylene(s)	106.00	11.618	11.618	(1.047)	746492	1500	1500
Xylene (Total)	106.00				1118212	2200	2300
Bromobenzene	156.00	12.982	12.982	(0.897)	275947	750	750
n-Butylbenzene	91.00	15.212	15.212	(1.050)	865669	750	770
sec-Butylbenzene	105.00	14.106	14.106	(0.974)	804362	750	760
tert-Butylbenzene	119.00	14.088	14.088	(0.973)	741759	750	760
2-Chlorotoluene	91.00	13.339	13.339	(2.288)	2015053	750	770
4-Chlorotoluene	91.00	13.455	13.455	(2.308)	791764	750	770
1,2-Dibromo-3-Chloropropane	75.00	15.782	15.782	(2.707)	51978	750	760
1,2-Dichlorobenzene	146.00	14.971	14.971	(1.034)	470070	750	760
1,3-Dichlorobenzene	146.00	14.409	14.409	(0.995)	487588	750	760
1,4-Dichlorobenzene	146.00	14.516	14.516	(1.002)	497880	750	760
Hexachlorobutadiene	225.00	17.735	17.735	(1.225)	145492	750	780
Isopropylbenzene	105.00	12.759	12.759	(0.881)	902639	750	760
p-Isopropyltoluene	119.00	14.641	14.641	(1.011)	800562	750	770
Naphthalene	128.00	17.352	17.352	(1.198)	668759	750	820
n-Propylbenzene	91.00	13.339	13.339	(0.921)	2015053	750	760
1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.125)	287615	750	730
1,2,3-Trichlorobenzene	180.00	17.182	17.182	(1.187)	339314	750	810
1,2,4-Trichlorobenzene	180.00	17.798	17.798	(1.229)	307129	750	800
1,2,3-Trichloropropane	75.00	12.643	12.643	(2.168)	247345	750	760
1,2,4-Trimethylbenzene	105.00	14.106	14.106	(0.974)	804362	750	760
1,3,5-Trimethylbenzene	105.00	13.607	13.607	(0.940)	794766	750	760
Pentafluorobenzene	168.00	5.831	5.831	(1.000)	166036	250	
1,4-Difluorobenzene	114.00	6.945	6.945	(1.000)	233335	250	
Chlorobenzene-d5	117.00	11.101	11.101	(1.000)	187161	250	
1,4-Dichlorobenzene-d4	152.00	14.480	14.480	(1.000)	101596	250	
1,2-Dichloroethane-d4	102.00	6.009	6.009	(0.865)	54714	750	740
Toluene-d8	98.00	9.157	9.157	(1.318)	758302	750	740
Bromofluorobenzene	95.00	12.777	12.777	(1.840)	336337	750	750

Flag Legend

Target compound detected but, quantitated amount exceeded maximum amount.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

strument ID: l.i
b File ID: 1081iw4.d
b Smp Id:
alysis Type: VOA
ant Type: ISTD
erator: JC
thod File: /chem/l.i/1950322.b/18260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	166036	1.53
24 1,4-Difluorobenzene	224833	112416	449666	233335	3.78
38 Chlorobenzene-d5	182201	91100	364402	187161	2.72
48 1,4-Dichlorobenzene-	98492	49246	196984	101596	3.15

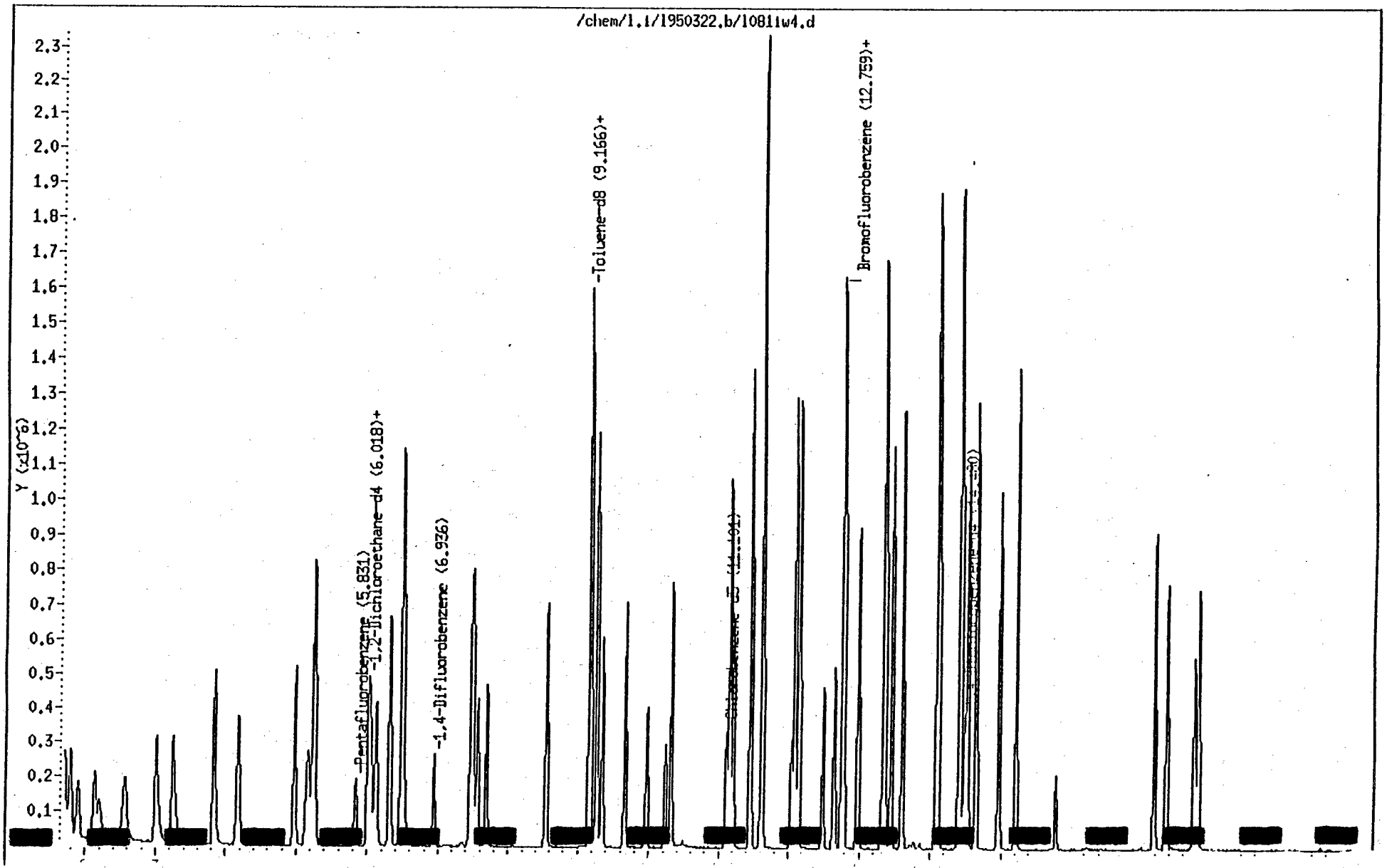
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.17
4 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	-0.02
8 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.01
8 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	-0.01

A UPPER LIMIT = +100% of internal standard area.
A LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/10811w4.d
Date : 22-MAR-1995 16:54
Client ID:
Sample Info: 150 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1

Operator: JC
Column diameter: 0.25



SPL Labs

Volatiles by 624/8240

ta file : /chem/l.i/1950322.b/l081iw5.d
Smp Id:
j Date : 22-MAR-1995 17:22
erator : JC Inst ID: l.i
Info : 200 UG-L STD-8260W/1X
sc Info : L081W2//L081CW2
mment :
thod : /chem/l.i/1950322.b/l8260w.m
th Date : 22-Mar-1995 17:51 jimmy Quant Type: ISTD
Date : 22-MAR-1995 15:57 Cal File: l081iw2.d
bottle: 6 Calibration Sample, Level: 5
Factor: 1.000
egrator: HP RTE Compound Sublist: 8260.sub
get Version: 3.10

unds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromochloromethane	128.00	5.233	5.233	(0.898)	176233	1000	980
Bromomethane	94.00	2.130	2.130	(0.365)	287687	1000	950
Chloroethane	64.00	2.192	2.192	(0.376)	221852	1000	960
Chloroform	83.00	5.251	5.251	(0.901)	641700	1000	980
Chloromethane	50.00	1.782	1.782	(0.306)	460508	1000	950
Dichlorodifluoromethane	85.00	1.693	1.693	(0.290)	458983	1000	1000
1,1-Dichloroethane	63.00	4.181	4.181	(0.717)	698752	1000	990
1,1-Dichloroethene	96.00	3.012	3.012	(0.517)	283050	1000	1000
cis-1,2-Dichloroethene	96.00	4.974	4.974	(0.853)	355455	1000	1000
trans-1,2-Dichloroethene	96.00	3.842	3.842	(0.659)	331260	1000	1000
1,2-Dichloroethene (total)	96.00				686715	2000	2000 (A)
2,2-Dichloropropane	77.00	5.162	5.162	(0.885)	392563	1000	980
Methylene Chloride	84.00	3.244	3.244	(0.556)	324734	1000	990
1,1,1-Trichloroethane	97.00	6.035	6.035	(0.869)	478488	1000	990
Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	404964	1000	1100
Vinyl Chloride	62.00	1.889	1.889	(0.324)	318176	1000	880
Benzene	78.00	6.481	6.481	(0.933)	1366293	1000	990
Bromodichloromethane	83.00	7.685	7.685	(1.107)	474086	1000	1000
Carbon Tetrachloride	117.00	6.508	6.508	(0.937)	390625	1000	1000
1,2-Dibromoethane	107.00	10.236	10.236	(1.474)	325449	1000	1000
Dibromomethane	93.00	7.560	7.560	(1.297)	252867	1000	1000
1,2-Dichloroethane	62.00	6.125	6.125	(1.050)	558760	1000	980
1,2-Dichloropropane	63.00	7.462	7.462	(1.074)	392669	1000	1000
1,1-Dichloropropene	75.00	6.312	6.312	(1.083)	484875	1000	1000
cis-1,3-Dichloropropene	75.00	8.550	8.550	(1.231)	555940	1000	1000
trans-1,3-Dichloropropene	75.00	9.174	9.174	(1.321)	519206	1000	1000
Toluene	92.00	9.264	9.264	(1.334)	771429	1000	1000
1,1,2-Trichloroethane	83.00	9.344	9.344	(1.345)	271588	1000	990
Trichloroethene	130.00	7.498	7.498	(1.080)	320231	1000	990

ounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
Bromoform	173.00	12.037	12.037	(1.084)	240168	1000	1100
Dibromochloromethane	129.00	9.968	9.968	(0.898)	319581	1000	1000
9 Chlorobenzene	112.00	11.145	11.145	(1.004)	774531	1000	980
106 1,3-Dichloropropane	76.00	9.665	9.665	(1.658)	551516	1000	990
Ethylbenzene	106.00	11.448	11.448	(1.031)	418276	1000	1000
Styrene	104.00	12.082	12.082	(1.088)	876504	1000	1000
8 1,1,1,2-Tetrachloroethane	131.00	11.208	11.208	(1.010)	280220	1000	1000
37 Tetrachloroethene	164.00	10.307	10.307	(0.928)	275613	1000	1000
-Xylene	106.00	12.135	12.135	(1.093)	509088	1000	1000
,p-Xylene(s)	106.00	11.618	11.618	(1.047)	1019994	2000	2000
40 Xylene (Total)	106.00				1529082	3000	3000
romobenzene	156.00	12.982	12.982	(0.897)	382988	1000	1000
-Butylbenzene	91.00	15.212	15.212	(1.050)	1199945	1000	1000
2 sec-Butylbenzene	105.00	14.106	14.106	(0.974)	1100319	1000	990
91 tert-Butylbenzene	119.00	14.088	14.088	(0.973)	1021683	1000	1000
80 -Chlorotoluene	91.00	13.339	13.339	(2.288)	2747389	1000	1000
-Chlorotoluene	91.00	13.455	13.455	(2.308)	1081923	1000	1000
8 1,2-Dibromo-3-Chloropropane	75.00	15.782	15.782	(2.707)	73510	1000	1000
37 1,2-Dichlorobenzene	146.00	14.971	14.971	(1.034)	643009	1000	990
3-Dichlorobenzene	146.00	14.409	14.409	(0.995)	667038	1000	990
4-Dichlorobenzene	146.00	14.516	14.516	(1.002)	687701	1000	1000
Hexachlorobutadiene	225.00	17.735	17.735	(1.225)	199312	1000	1000
37 Isopropylbenzene	105.00	12.759	12.759	(0.881)	1245760	1000	1000
Isopropyltoluene	119.00	14.641	14.641	(1.011)	1107945	1000	1000
Naphthalene	128.00	17.352	17.352	(1.198)	941299	1000	1100
38 N-Propylbenzene	91.00	13.339	13.339	(0.921)	2747389	1000	990
46 1,1,2,2-Tetrachloroethane	83.00	12.483	12.483	(1.125)	413848	1000	1000
2,3-Trichlorobenzene	180.00	17.182	17.182	(1.187)	472721	1000	1100
1,2,4-Trichlorobenzene	180.00	17.789	17.789	(1.228)	422586	1000	1000
5 1,2,3-Trichloropropane	75.00	12.643	12.643	(2.169)	337282	1000	1000
0 2,4-Trimethylbenzene	105.00	14.106	14.106	(0.974)	1100319	1000	990
3,5-Trimethylbenzene	105.00	13.606	13.606	(0.940)	1091192	1000	1000
- Pentafluorobenzene	168.00	5.830	5.830	(1.000)	171820	250	
4 -Difluorobenzene	114.00	6.945	6.945	(1.000)	236187	250	
orobenzene-d5	117.00	11.101	11.101	(1.000)	192234	250	
-Dichlorobenzene-d4	152.00	14.480	14.480	(1.000)	106693	250	
9 1,2-Dichloroethane-d4	102.00	6.009	6.009	(0.865)	73043	1000	980
2 uene-d8	98.00	9.157	9.157	(1.318)	1034245	1000	1000
omofluorobenzene	95.00	12.777	12.777	(1.840)	454943	1000	1000

Flag Legend

Target compound detected but, quantitated amount exceeded maximum amount.

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

strument ID: l.i
b File ID: 1081iw5.d
b Smp Id:
alysis Type: VOA
ant Type: ISTD
erator: JC
thod File: /chem/l.i/1950322.b/18260w.m
sc Info: L081W2//L081CW2

Calibration Date: 03/22/95
Calibration Time: 1557

Level: LOW
Sample Type: WATER

COMPOUND	AREA LIMIT STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	163532	81766	327064	171820	5.07
24 1,4-Difluorobenzene	224833	112416	449666	236187	5.05
38 Chlorobenzene-d5	182201	91100	364402	192234	5.51
48 1,4-Dichlorobenzene-	98492	49246	196984	106693	8.33

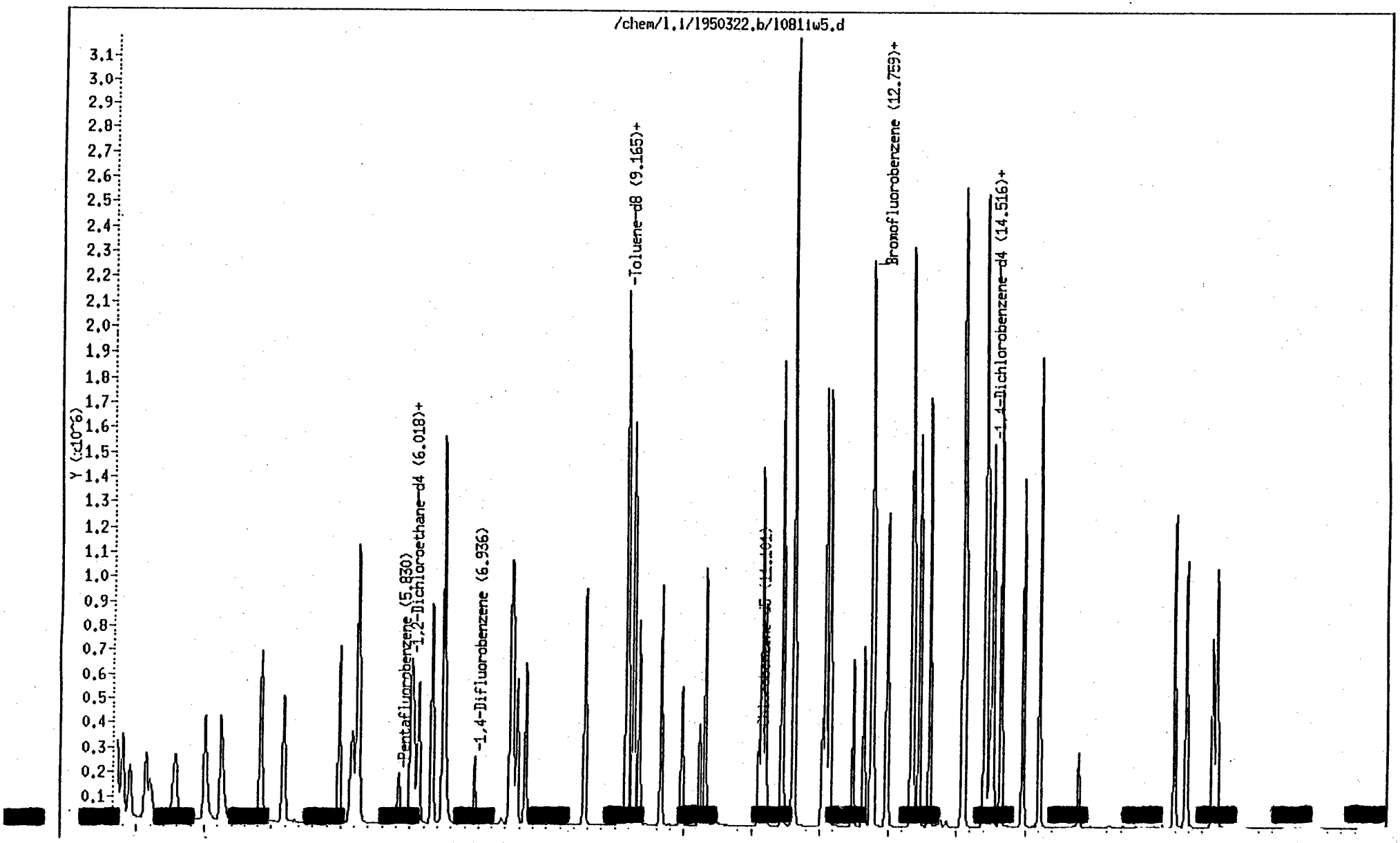
COMPOUND	RT LIMIT STANDARD	LOWER	UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.84	5.34	6.34	5.83	-0.18
24 1,4-Difluorobenzene	6.95	6.45	7.45	6.95	-0.02
38 Chlorobenzene-d5	11.10	10.60	11.60	11.10	-0.01
48 1,4-Dichlorobenzene-	14.48	13.98	14.98	14.48	-0.01

EA UPPER LIMIT = +100% of internal standard area.
EA LOWER LIMIT = - 50% of internal standard area.
UPPER LIMIT = + 0.50 minutes of internal standard RT.
LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem/1.1/1950322.b/10811w5.d
Date : 22-MAR-1995 17:22
Client ID:
Sample Info: 200 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: 1.1

Operator: JC
Column diameter: 0.25



Data File: /chem/l.i/l950524.b/l144cw3.d
Report Date: 24-May-1995 20:30

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l144cw3.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 24-MAY-1995 20:04
Init. Calibration Date(s): 03/22/95 03/22/95
Init. Calibration Times: 15:28 17:22
Method File: /chem/l.i/l950524.b/18260w.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	17 Bromochloromethane	0.261	0.233	0.010	10.5	40.0
	4 Bromomethane	0.439	0.377	0.100	14.1	40.0
	5 Chloroethane	0.335	0.329	0.010	1.9	40.0
	18 Chloroform	0.947	0.876	0.200	7.5	25.0
	1 Chloromethane	0.705	0.679	0.300	3.7	40.0
	60 Dichlorodifluoromethane	0.660	0.495	0.010	25.0	40.0
	12 1,1-Dichloroethane	1.029	0.829	0.300	19.4	40.0
	8 1,1-Dichloroethene	0.412	0.366	0.100	11.2	25.0
	16 cis-1,2-Dichloroethene	0.518	0.489	0.010	5.6	40.0
	11 trans-1,2-Dichloroethene	0.482	0.383	0.010	20.5	40.0
M	13 1,2-Dichloroethene (total)	0.500	0.436	0.010	12.8	40.0
	74 2,2-Dichloropropane	0.584	0.594	0.010	1.6	40.0
	9 Methylene Chloride	0.477	0.404	0.010	15.4	40.0
	20 1,1,1-Trichloroethane	0.512	0.551	0.100	7.6	40.0
	6 Trichlorofluoromethane	0.543	0.528	0.010	2.7	40.0
	3 Vinyl Chloride	0.526	0.562	0.100	6.8	25.0
	22 Benzene	1.461	1.410	0.100	3.5	40.0
	27 Bromodichloromethane	0.493	0.474	0.200	4.0	40.0
	23 Carbon Tetrachloride	0.404	0.427	0.100	5.7	40.0
	84 1,2-Dibromoethane	0.341	0.353	0.010	3.6	40.0
	112 Dibromomethane	0.369	0.363	0.010	1.6	40.0
	21 1,2-Dichloroethane	0.828	0.871	0.100	5.2	40.0
	25 1,2-Dichloropropane	0.417	0.427	0.010	2.4	25.0
	115 1,1-Dichloropropene	0.705	0.667	0.010	5.4	40.0
	30 cis-1,3-Dichloropropene	0.574	0.573	0.100	0.2	40.0
	31 trans-1,3-Dichloropropene	0.536	0.541	0.100	0.8	40.0
	33 Toluene	0.811	0.799	0.400	1.4	25.0
	34 1,1,2-Trichloroethane	0.291	0.275	0.100	5.3	40.0
	26 Trichloroethene	0.343	0.332	0.100	3.1	40.0
	43 Bromoform	0.292	0.267	0.250	8.7	40.0
	36 Dibromochloromethane	0.402	0.371	0.100	7.6	40.0
	39 Chlorobenzene	1.027	1.051	0.300	2.3	40.0
	106 1,3-Dichloropropane	0.808	0.740	0.010	8.3	40.0
	41 Ethylbenzene	0.536	0.548	0.100	2.3	25.0
	44 Styrene	1.104	1.101	0.300	0.3	40.0
	78 1,1,1,2-Tetrachloroethane	0.360	0.349	0.010	3.1	40.0
	37 Tetrachloroethene	0.359	0.396	0.200	10.2	40.0
	45 o-Xylene	0.656	0.663	0.300	1.0	40.0
	42 m,p-Xylene(s)	0.662	0.664	0.300	0.3	40.0
M	40 Xylene (Total)	0.660	0.663	0.300	0.5	40.0

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: l.i
Lab File ID: l144cw3.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 24-MAY-1995 20:04
Init. Calibration Date(s): 03/22/95 03/22/95
Init. Calibration Times: 15:28 17:22
Method File: /chem/l.i/l950524.b/l8260w.m

	COMPOUND	RRF	RF250	MIN RRF	%D	MAX %D
	114 Bromobenzene	0.901	1.002	0.010	11.2	40.0
	94 n-Butylbenzene	2.756	2.356	0.010	14.5	40.0
	92 sec-Butylbenzene	2.606	2.624	0.010	0.7	40.0
	91 tert-Butylbenzene	2.395	2.319	0.010	3.2	40.0
	80 2-Chlorotoluene	3.938	3.508	0.010	10.9	40.0
	81 4-Chlorotoluene	1.547	1.420	0.010	8.2	40.0
	108 1,2-Dibromo-3-Chloropropane	0.103	0.079	0.010	23.5	40.0
	97 1,2-Dichlorobenzene	1.516	1.494	0.010	1.4	40.0
	95 1,3-Dichlorobenzene	1.577	1.554	0.010	1.5	40.0
	96 1,4-Dichlorobenzene	1.616	1.596	0.010	1.2	40.0
	116 Hexachlorobutadiene	0.462	0.371	0.010	19.7	40.0
	87 Isopropylbenzene	2.919	3.044	0.010	4.3	40.0
	93 p-Isopropyltoluene	2.564	2.357	0.010	8.1	40.0
	117 Naphthalene	2.003	1.792	0.010	10.5	40.0
	88 N-Propylbenzene	6.514	6.359	0.010	2.4	40.0
	46 1,1,2,2-Tetrachloroethane	0.529	0.482	0.300	8.8	40.0
	118 1,2,3-Trichlorobenzene	1.035	0.982	0.010	5.1	40.0
	98 1,2,4-Trichlorobenzene	0.939	0.846	0.010	9.9	40.0
	75 1,2,3-Trichloropropane	0.492	0.447	0.010	9.2	40.0
	90 1,2,4-Trimethylbenzene	2.606	2.624	0.010	0.7	40.0
	89 1,3,5-Trimethylbenzene	2.555	2.624	0.010	2.7	40.0
$	19 1,2-Dichloroethane-d4	0.079	0.077	0.010	2.1	40.0
$	32 Toluene-d8	1.091	1.081	0.010	0.9	40.0
$	47 Bromofluorobenzene	0.479	0.463	0.010	3.2	40.0

SPL Labs

Volatiles by 624/8240

Data file : /chem/l.i/1950524.b/l144cw3.d
Lab Smp Id:
Inj Date : 24-MAY-1995 20:04
Operator : JC
Smp Info : 50 UG-L STD-8260W/1X
Misc Info : L144W2//L144CW3
Comment :
Method : /chem/l.i/1950524.b/l8260w.m
Meth Date : 24-May-1995 20:31 jimmy
Cal Date : 24-MAY-1995 20:04
Als bottle: 10
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: l.i

Quant Type: ISTD
Cal File: l144cw3.d
Continuing Calibration Sample

Compound Sublist: 8260.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)
17 Bromochloromethane	128.00	5.232	5.232	(0.899)	42921	250	220
4 Bromomethane	94.00	2.130	2.130	(0.366)	69387	250	210
5 Chloroethane	64.00	2.201	2.201	(0.378)	60581	250	240
18 Chloroform	83.00	5.241	5.241	(0.900)	161268	250	230
1 Chloromethane	50.00	1.791	1.791	(0.308)	124984	250	240
60 Dichlorodifluoromethane	85.00	1.711	1.711	(0.294)	91137	250	190
12 1,1-Dichloroethane	63.00	4.171	4.171	(0.717)	152593	250	200
8 1,1-Dichloroethene	96.00	3.012	3.012	(0.518)	67313	250	220
16 cis-1,2-Dichloroethene	96.00	4.964	4.964	(0.853)	90009	250	240
11 trans-1,2-Dichloroethene	96.00	3.832	3.832	(0.658)	70547	250	200
13 1,2-Dichloroethene (total)	96.00				160556	500	440
74 2,2-Dichloropropane	77.00	5.161	5.161	(0.887)	109245	250	250
9 Methylene Chloride	84.00	3.244	3.244	(0.557)	74301	250	210
20 1,1,1-Trichloroethane	97.00	6.034	6.034	(0.871)	131999	250	270
6 Trichlorofluoromethane	100.90	2.558	2.558	(0.439)	97195	250	240
3 Vinyl Chloride	62.00	1.898	1.898	(0.326)	103359	250	270
22 Benzene	78.00	6.471	6.471	(0.934)	337802	250	240
27 Bromodichloromethane	83.00	7.674	7.674	(1.108)	113541	250	240
23 Carbon Tetrachloride	117.00	6.498	6.498	(0.938)	102375	250	260
84 1,2-Dibromoethane	107.00	10.233	10.233	(1.478)	84648	250	260
112 Dibromomethane	93.00	7.549	7.549	(1.297)	66844	250	250
21 1,2-Dichloroethane	62.00	6.105	6.105	(1.049)	160405	250	260
25 1,2-Dichloropropane	63.00	7.451	7.451	(1.076)	102342	250	260
115 1,1-Dichloropropene	75.00	6.302	6.302	(1.083)	122714	250	240
30 cis-1,3-Dichloropropene	75.00	8.539	8.539	(1.233)	137354	250	250
31 trans-1,3-Dichloropropene	75.00	9.172	9.172	(1.324)	129625	250	250
33 Toluene	92.00	9.252	9.252	(1.336)	191593	250	250
34 1,1,2-Trichloroethane	83.00	9.341	9.341	(1.349)	65949	250	240
26 Trichloroethene	130.00	7.487	7.487	(1.081)	79635	250	240

	pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
43	Bromoform	173.00	12.033	12.033	(1.083)	51178	250	230
	Dibromochloromethane	129.00	9.965	9.965	(0.897)	71228	250	230
	Chlorobenzene	112.00	11.151	11.151	(1.004)	201655	250	260
106	1,3-Dichloropropane	76.00	9.662	9.662	(1.660)	136262	250	230
	Ethylbenzene	106.00	11.454	11.454	(1.031)	105240	250	260
	Styrene	104.00	12.087	12.087	(1.088)	211308	250	250
78	1,1,1,2-Tetrachloroethane	131.00	11.204	11.204	(1.009)	66977	250	240
37	Tetrachloroethene	164.00	10.313	10.313	(0.929)	76042	250	280
	o-Xylene	106.00	12.140	12.140	(1.093)	127164	250	250
	m,p-Xylene(s)	106.00	11.623	11.623	(1.047)	254843	500	500
40	Xylene (Total)	106.00				382007	750	750
114	Bromobenzene	156.00	12.987	12.987	(0.896)	101699	250	280
	n-Butylbenzene	91.00	15.224	15.224	(1.050)	239179	250	210
	sec-Butylbenzene	105.00	14.110	14.110	(0.974)	266423	250	250
91	tert-Butylbenzene	119.00	14.092	14.092	(0.972)	235430	250	240
	2-Chlorotoluene	91.00	13.344	13.344	(2.293)	645697	250	220
	4-Chlorotoluene	91.00	13.459	13.459	(2.313)	261431	250	230
	1,2-Dibromo-3-Chloropropane	75.00	15.795	15.795	(2.714)	14519	250	190
97	1,2-Dichlorobenzene	146.00	14.975	14.975	(1.033)	151745	250	250
	1,3-Dichlorobenzene	146.00	14.413	14.413	(0.994)	157831	250	250
	1,4-Dichlorobenzene	146.00	14.529	14.529	(1.002)	162108	250	250
16	Hexachlorobutadiene	225.00	17.747	17.747	(1.224)	37656	250	200
87	Isopropylbenzene	105.00	12.764	12.764	(0.881)	309107	250	260
	p-Isopropyltoluene	119.00	14.654	14.654	(1.011)	239358	250	230
	Naphthalene	128.00	17.364	17.364	(1.198)	181981	250	220
88	N-Propylbenzene	91.00	13.344	13.344	(0.921)	645697	250	240
46	1,1,2,2-Tetrachloroethane	83.00	12.488	12.488	(1.124)	92592	250	230
	1,2,3-Trichlorobenzene	180.00	17.194	17.194	(1.186)	99737	250	240
	1,2,4-Trichlorobenzene	180.00	17.809	17.809	(1.229)	85865	250	220
75	1,2,3-Trichloropropane	75.00	12.648	12.648	(2.173)	82294	250	230
	1,2,4-Trimethylbenzene	105.00	14.110	14.110	(0.974)	266423	250	250
	1,3,5-Trimethylbenzene	105.00	13.611	13.611	(0.939)	266483	250	260
2	Pentafluorobenzene	168.00	5.820	5.820	(1.000)	184068	250	
24	1,4-Difluorobenzene	114.00	6.925	6.925	(1.000)	239653	250	
	Chlorobenzene-d5	117.00	11.106	11.106	(1.000)	191926	250	
	1,4-Dichlorobenzene-d4	152.00	14.493	14.493	(1.000)	101540	250	
19	1,2-Dichloroethane-d4	102.00	5.990	5.990	(0.865)	18494	250	240
32	Toluene-d8	98.00	9.154	9.154	(1.322)	259148	250	250
	Bromofluorobenzene	95.00	12.782	12.782	(1.846)	111041	250	240

SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144cw3.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2//L144CW3

Calibration Date: 05/24/95
Calibration Time: 1935

Level: LOW
Sample Type: WATER

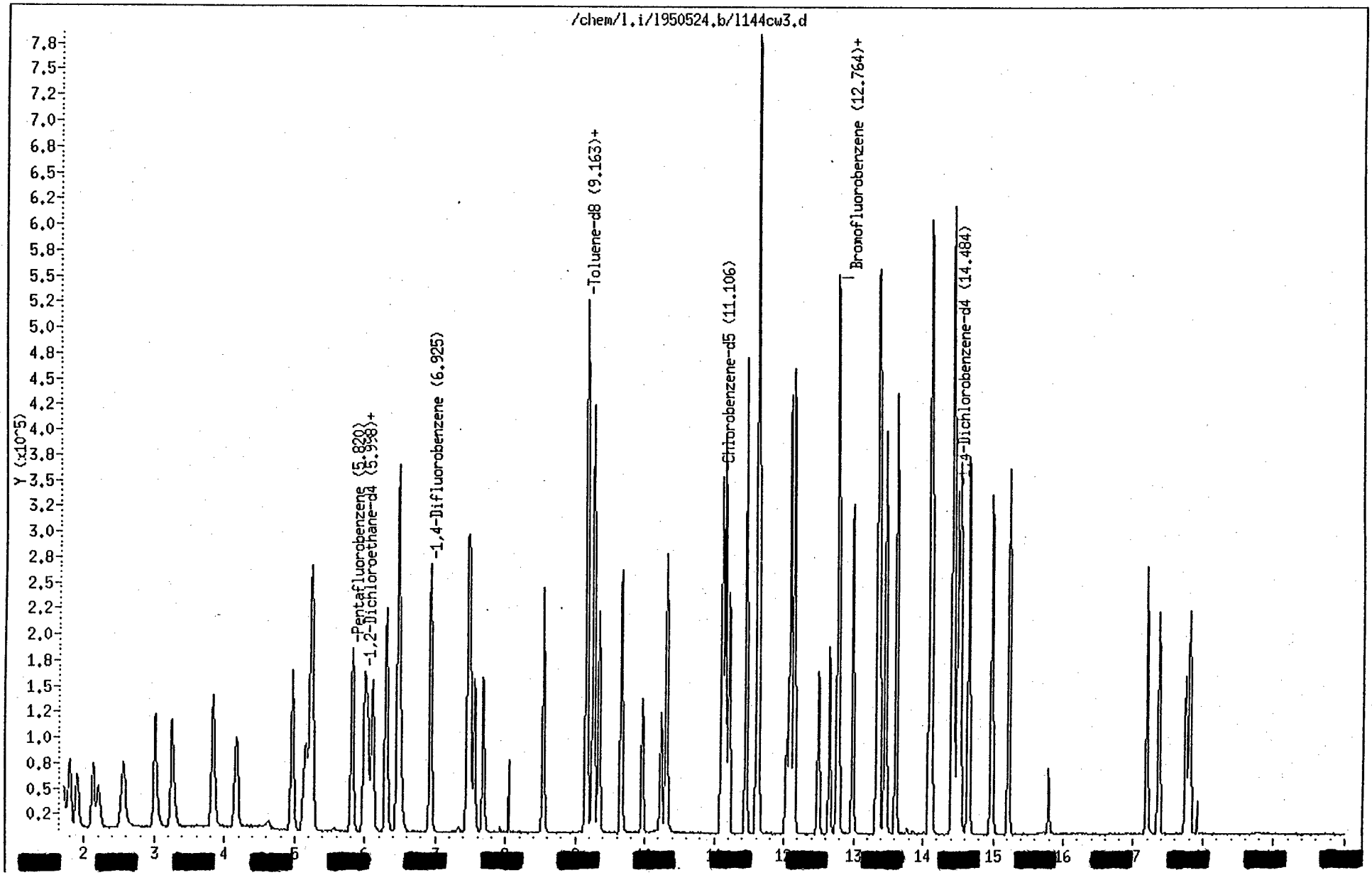
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	176785	88392	353570	184068	4.12
24 1,4-Difluorobenzene	221248	110624	442496	239653	8.32
38 Chlorobenzene-d5	184507	92254	369014	191926	4.02
48 1,4-Dichlorobenzene-	101512	50756	203024	101540	0.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.83	5.33	6.33	5.82	-0.15
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	-0.13
38 Chlorobenzene-d5	11.11	10.61	11.61	11.11	0.00
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	0.00

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.

Data File: /chem/l.i/1950524.b/l144cw3.d
Date : 24-MAY-1995 20:04
Client ID:
Sample Info: 50 UG-L STD-8260W/1X
Purge Volume: 5.0
Column phase: 30m,hp5ms,0.25u df

Instrument: l.i
Operator: JC
Column diameter: 0.25



SPL Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: l.i
Lab File ID: l144s10.d
Lab Smp Id:
Analysis Type: VOA
Quant Type: ISTD
Operator: JC
Method File: /chem/l.i/l950524.b/l8260w.m
Misc Info: L144W2/L144B03/L144CW3

Calibration Date: 05/24/95
Calibration Time: 2004

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	184068	92034	368136	205422	11.60
24 1,4-Difluorobenzene	239653	119826	479306	258467	7.85
38 Chlorobenzene-d5	191926	95963	383852	206228	7.45
48 1,4-Dichlorobenzene-	101540	50770	203080	105832	4.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
2 Pentafluorobenzene	5.82	5.32	6.32	5.81	-0.11
24 1,4-Difluorobenzene	6.93	6.43	7.43	6.93	0.04
38 Chlorobenzene-d5	11.11	10.61	11.61	11.10	-0.06
48 1,4-Dichlorobenzene-	14.49	13.99	14.99	14.49	-0.04

REA UPPER LIMIT = +100% of internal standard area.
REA LOWER LIMIT = - 50% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

3A

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL HOUSTON Contract: _____

Lab Code: SPL Case No.: BLANK SAS No.: ___ SDG NO.: 505767

Matrix Spike - EPA Sample No.: BLK02

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC#	QC LIMIT REC.
Phenol	75	0	42	56	12-110
2-Chlorophenol	75	0	47	63	27-123
1,4-Dichlorobenzene	50	0	31	62	36- 97
N-Nitroso-di-n-propylamin	50	0	23	46	41-116
1,2,4-Trichlorobenzene	50	0	33	66	39- 98
4-Chloro-3-methylphenol	75	0	44	59	23- 97
Acenaphthene	50	0	35	70	46-118
4-Nitrophenol	75	0	41	55	10- 80
2,4-Dinitrotoluene	50	0	32	64	24- 96
Pentachlorophenol	75	0	14	19	9-103
Pyrene	50	0	29	58	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC#	% RPD	QC LIMIT RPD	QC LIMIT REC.
Phenol	75	46	61	9	42	12-110
2-Chlorophenol	75	48	64	2	40	27-123
1,4-Dichlorobenzene	50	31	62	0	28	36- 97
N-Nitroso-di-n-propylamin	50	32	64	33	38	41-116
1,2,4-Trichlorobenzene	50	32	64	3	28	39- 98
4-Chloro-3-methylphenol	75	49	65	10	42	23- 97
Acenaphthene	50	34	68	3	31	46-118
4-Nitrophenol	75	42	56	2	50	10- 80
2,4-Dinitrotoluene	50	32	64	0	38	24- 96
Pentachlorophenol	75	14	19	0	50	9-103
Pyrene	50	28	56	4	31	26-127

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

* Values outside of QC Limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

FORM III SV - 1

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950522041714

Reported on: 06/05/95 11:32
Analyzed on: 05/26/95 15:48
Analyst: PC

METHOD 8270/625. J142B01

Compound	Result	Detection Limit	Units
Pyridine	ND	5	ug/L
Phenol	ND	5	ug/L
Aniline	ND	5	ug/L
bis(2-Chloroethyl)ether	ND	5	ug/L
2-Chlorophenol	ND	5	ug/L
1,3-Dichlorobenzene	ND	5	ug/L
1,4-Dichlorobenzene	ND	5	ug/L
Benzyl alcohol	ND	5	ug/L
1,2-Dichlorobenzene	ND	5	ug/L
2-Methylphenol	ND	5	ug/L
bis(2-chloroisopropyl)ethe	ND	5	ug/L
4-Methylphenol	ND	5	ug/L
N-Nitroso-di-n-propylamine	ND	5	ug/L
Hexachloroethane	ND	5	ug/L
Nitrobenzene	ND	5	ug/L
Isophorone	ND	5	ug/L
2-Nitrophenol	ND	25	ug/L
2,4-Dimethylphenol	ND	5	ug/L
Benzoic acid	ND	25	ug/L
bis(2-Chloroethoxy)methane	ND	5	ug/L
2,4-Dichlorophenol	ND	5	ug/L
1,2,4-Trichlorobenzene	ND	5	ug/L
Naphthalene	ND	5	ug/L
4-Chloroaniline	ND	5	ug/L
Hexachlorobutadiene	ND	5	ug/L
4-Chloro-3-methylphenol	ND	5	ug/L
2-Methylnaphthalene	ND	5	ug/L
Hexachlorocyclopentadiene	ND	5	ug/L
2,4,6-Trichlorophenol	ND	5	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	5	ug/L
2-Nitroaniline	ND	25	ug/L
Dimethylphthalate	ND	5	ug/L
2,6-Dinitrotoluene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950522041714

Reported on: 06/05/95 11:32
Analyzed on: 05/26/95 15:48
Analyst: PC

METHOD 8270/625 - J142B01

Compound	Result	Detection Limit	Units
Acenaphthylene	ND	5	ug/L
3-Nitroaniline	ND	25	ug/L
Acenaphthene	ND	5	ug/L
2,4-Dinitrophenol	ND	25	ug/L
4-Nitrophenol	ND	25	ug/L
Dibenzofuran	ND	5	ug/L
2,4-Dinitrotoluene	ND	5	ug/L
Diethylphthalate	ND	5	ug/L
4-Chlorophenyl-phenylether	ND	5	ug/L
Fluorene	ND	5	ug/L
4-Nitroaniline	ND	25	ug/L
4,6-Dinitro-2-methylphenol	ND	25	ug/L
n-Nitrosodiphenylamine	ND	5	ug/L
1,2-Diphenylhydrazine	ND	5	ug/L
4-Bromophenyl-phenylether	ND	5	ug/L
Hexachlorobenzene	ND	5	ug/L
Pentachlorophenol	ND	25	ug/L
Phenanthrene	ND	5	ug/L
Anthracene	ND	5	ug/L
Carbazole	ND	5	ug/L
Di-n-butylphthalate	ND	5	ug/L
Fluoranthene	ND	5	ug/L
Pyrene	ND	5	ug/L
Butylbenzylphthalate	ND	5	ug/L
3,3'-Dichlorobenzidine	ND	5	ug/L
Benzo[a]anthracene	ND	5	ug/L
Chrysene	ND	5	ug/L
bis(2-Ethylhexyl)phthalate	ND	5	ug/L
Di-n-octylphthalate	ND	5	ug/L
Benzo[b]fluoranthene	ND	5	ug/L
Benzo[k]fluoranthene	ND	5	ug/L
Benzo[a]pyrene	ND	5	ug/L
Indeno[1,2,3-cd]pyrene	ND	5	ug/L
Dibenz[a,h]anthracene	ND	5	ug/L

Notes
ND - Not detected.

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: BLANK
Batch: E950522041714

Reported on: 06/05/95 11:32
Analyzed on: 05/26/95 15:48
Analyst: PC

METHOD 8270/625 · J142B01

Compound	Result	Detection Limit	Units
Benzo[g,h,i]perylene	ND	5	ug/L

Surrogate	Result	QC Criteria	Units
2-Fluorophenol	83	21-110	% Recovery
Phenol-d5	74	10-110	% Recovery
Nitrobenzene-d5	76	35-114	% Recovery
2-Fluorobiphenyl	69	43-116	% Recovery
2,4,6-Tribromophenol	64	10-123	% Recovery
Terphenyl-d14	79	33-141	% Recovery

Samples in Batch 9505767-01 9505767-02 9505767-05 9505767-06

Notes
ND - Not detected.

Idelis Williams, QC Officer

a File: /chem/j.i/j950526.b/j142b01.d
ort Date: 26-May-1995 16:43

SPL Houston Labs

a file : /chem/j.i/j950526.b/j142b01.d
ab Smp Id:
Date : 26-MAY-1995 15:48
rator : PC pc Inst ID: j.i
p Info : BLANK-8270W/1X
ic Info : E142C1/J142B01/J146CC1
ment :
thod : /chem/j.i/j950526.b/jclpw.m
th Date : 26-May-1995 16:37 patti Quant Type: ISTD
Date : 26-MAY-1995 15:03 Cal File: j146cc1.d
bottle: 1
l Factor: 1.000
egrator: HP RTE Compound Sublist: BLK.sub
get Version: 3.10

pounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
2-Fluorophenol	112.00	5.511	5.523	(0.715)	1124528	120	62
4 Phenol-d5	99.00	7.123	7.123	(0.924)	1560748	110	56
1,4-Dichlorobenzene-d4	152.00	7.712	7.701	(1.000)	370297	40	
Nitrobenzene-d5	82.00	8.910	8.913	(0.851)	929133	76	38
2 Naphthalene-d8	136.00	10.476	10.472	(1.000)	1237294	40	
2-Fluorobiphenyl	172.00	13.106	13.101	(0.891)	1628431	69	35
Acenaphthene-d10	164.00	14.716	14.706	(1.000)	692710	40	
2,4,6-Tribromophenol	329.70	16.682	16.684	(0.911)	280640	96	48
Phenanthrene-d10	188.00	18.314	18.311	(1.000)	1026801	40	
Terphenyl-d14	244.00	22.290	22.270	(0.894)	1789430	79	39
Chrysene-d12	240.00	24.922	24.930	(1.000)	866569	40	
3 Perylene-d12	264.00	29.256	29.251	(1.000)	576932	40	

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: j.i
Lab File ID: j142b01.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: PC
Method File: /chem/j.i/j950526.b/jclpw.m
Misc Info: E142C1/J142B01/J146CC1

Calibration Date: 05/26/95
Calibration Time: 1503

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	330816	165408	661632	370297	11.93
32 Naphthalene-d8	1173298	586649	2346596	1237294	5.45
48 Acenaphthene-d10	628204	314102	1256408	692710	10.27
65 Phenanthrene-d10	927125	463562	1854250	1026801	10.75
76 Chrysene-d12	703759	351880	1407518	866569	23.13
83 Perylene-d12	450683	225342	901366	576932	28.01

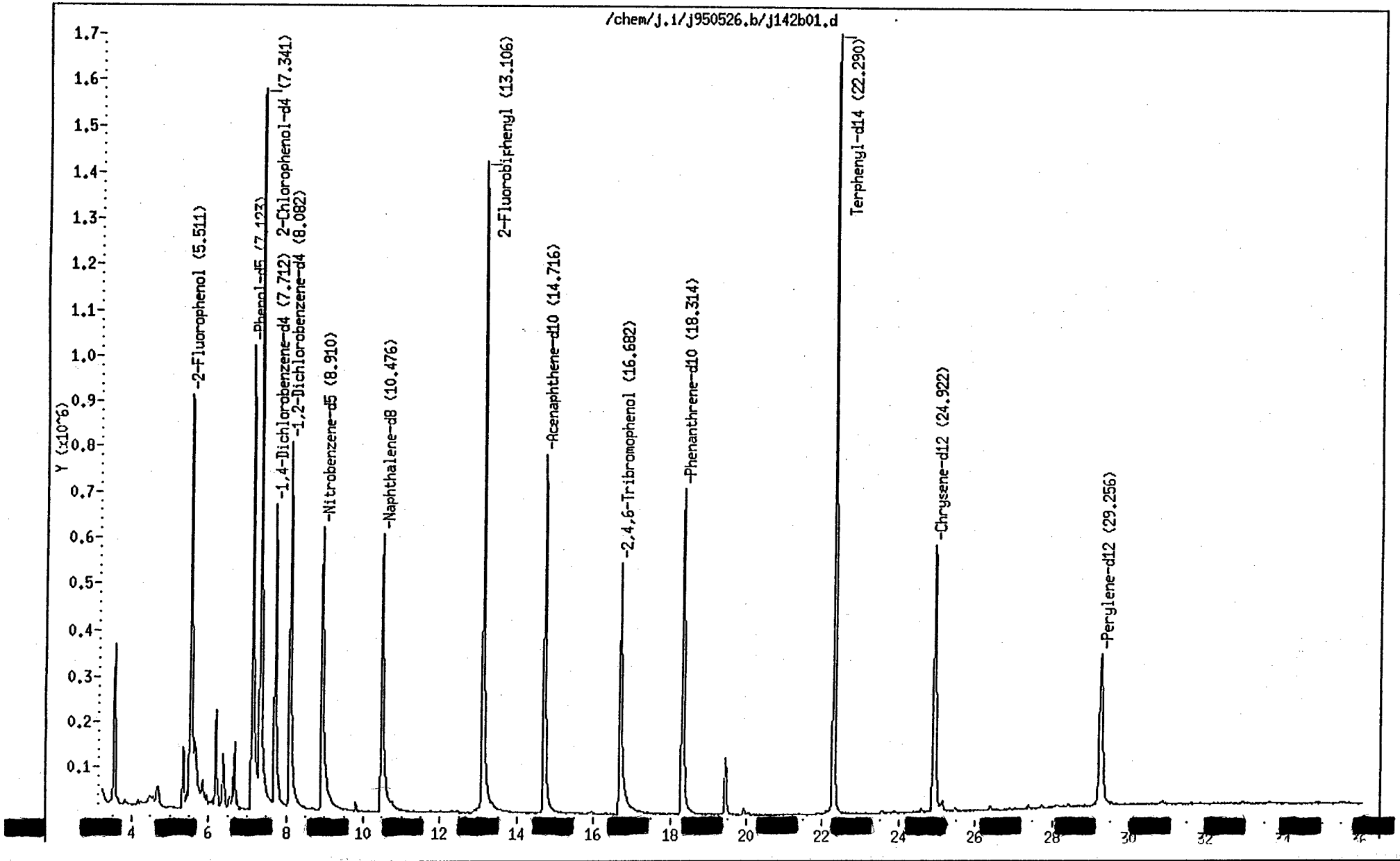
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	7.70	7.20	8.20	7.71	0.14
32 Naphthalene-d8	10.47	9.97	10.97	10.48	0.04
48 Acenaphthene-d10	14.71	14.21	15.21	14.72	0.07
65 Phenanthrene-d10	18.31	17.81	18.81	18.31	0.01
76 Chrysene-d12	24.93	24.43	25.43	24.92	-0.03
83 Perylene-d12	29.25	28.75	29.75	29.26	0.02

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.

Data File: /chem/j.i/j950526.b/j142b01.d
Date : 26-MAY-1995 15:48
Client ID:
Sample Info: BLANK-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: j.i

Operator: PC
Column diameter: 0.25

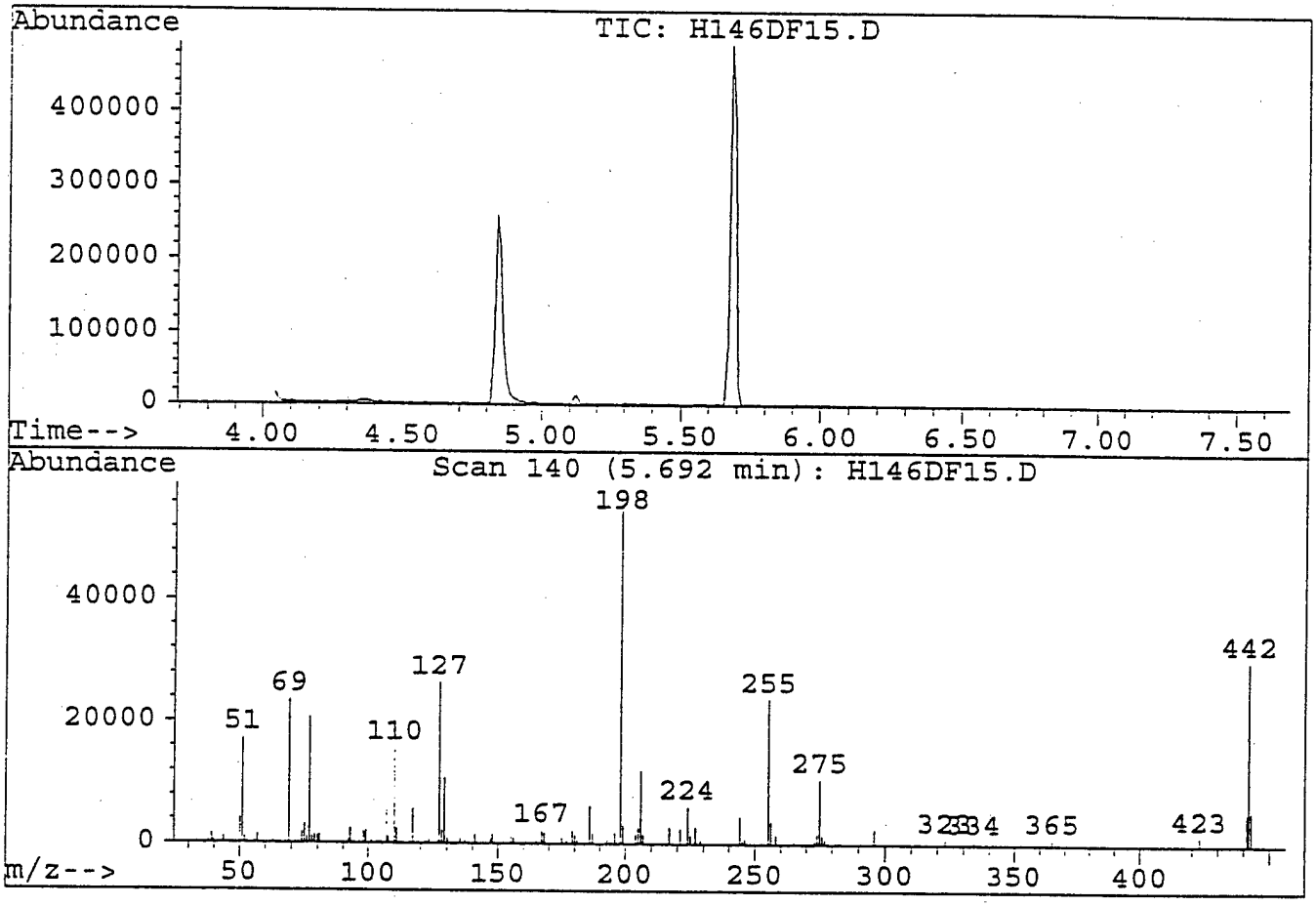


DFTPP

Data File : C:\HPCHEM\1\DATA\H950526\H146DF15.D
Acq On : 26 May 95 1:30 pm
Sample : 50 NG DFTPP
Misc : 950526 50NG DFTPP

Vial: 1
Operator: LH
Inst : h
Multiplr: 1.00

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



Peak Apex is scan: 140

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.5	17184	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	41.8	23528	PASS
70	69	0	2	0.0	0	PASS
127	198	40	60	47.0	26440	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	56280	PASS
199	198	5	9	5.5	3091	PASS
275	198	10	30	19.0	10675	PASS
365	198	1	100	1.5	865	PASS
441	443	0	100	94.5	5304	PASS
442	198	40	100	53.8	30304	PASS
443	442	17	23	18.5	5612	PASS

H146DF15.D ENVDEF.M Fri May 26 13:38:40 1995

Data File: /chem/h.i/h950531.b/h151df12.d

Date : 31-MAY-95 13:08

Client ID:

Instrument: h.i

Sample Info: 50 NG DFTPP

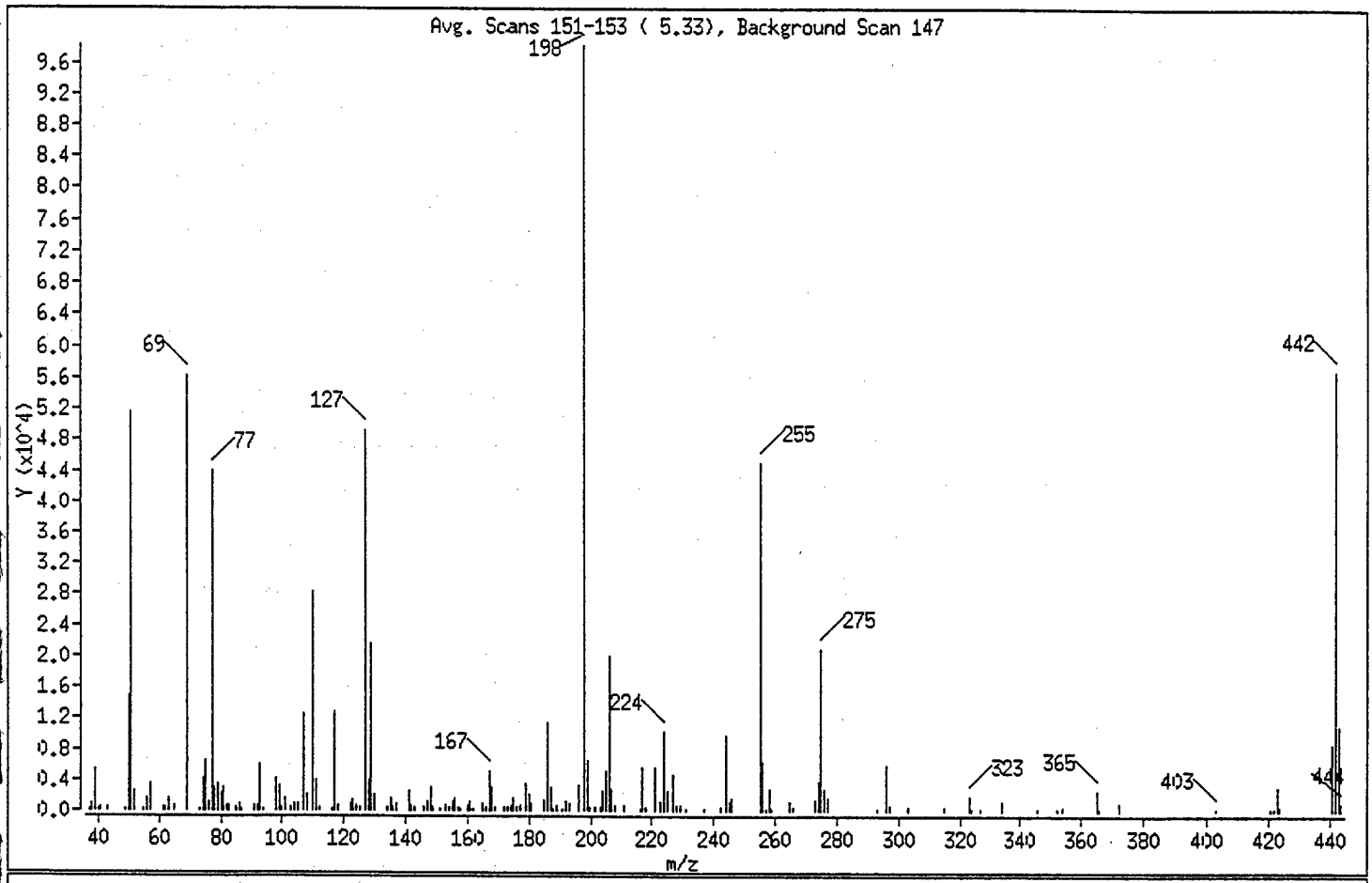
Volume Injected (uL): 2.0

Operator: LH

Column phase:

Column diameter: 2.00

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	52.38
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	57.15
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	50.21
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.61
275	10.00 - 30.00% of mass 198	21.20
365	Greater than 1.00% of mass 198	2.66
441	Present, but less than mass 443	8.72
442	40.00 - 110.00% of mass 198	57.93
443	17.00 - 23.00% of mass 442	11.21 (19.35)

Data File: /chem/h.i/h950531.b/h151df12.d

Date : 31-MAY-95 13:08

Client ID:

Instrument: h.i

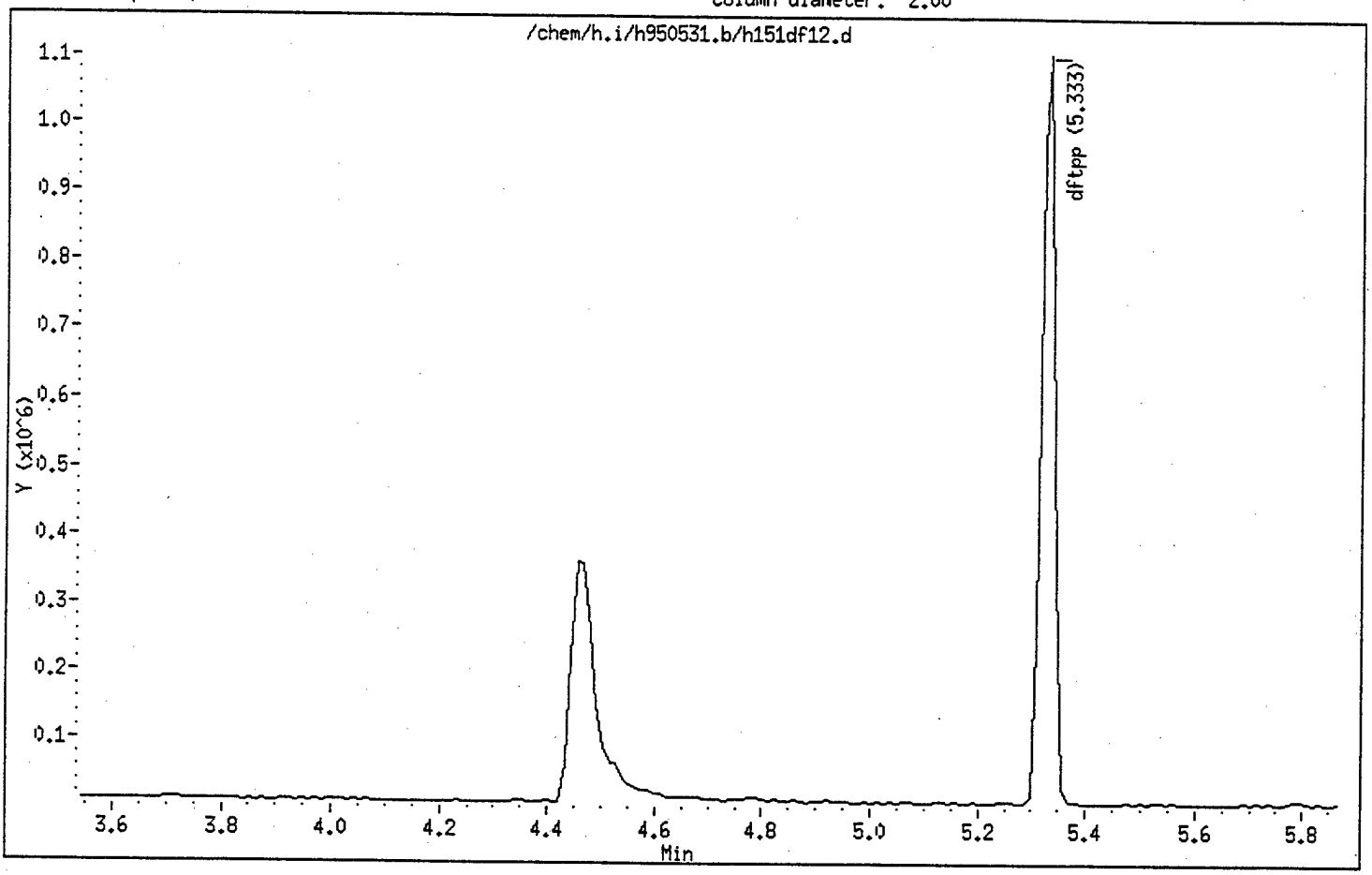
Sample Info: 50 NG DFTPP

Volume Injected (uL): 2.0

Operator: LH

Column phase:

Column diameter: 2.00



Data File: /chem/h.i/h950531.b/h151df12.d

Date : 31-MAY-95 13:08

Client ID:

Instrument: h.i

Sample Info: 50 NG DFTPP

Volume Injected (uL): 2.0

Operator: LH

Column phase:

Column diameter: 2.00

Data File: h151df12.d

Spectrum : Avg. Scans 151-153 (5.33), Background Scan 147

Largest m/z: 197.90

Number of peaks: 166

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.85	187	104.95	899	168.95	425	241.95	498
37.85	994	106.95	12568	171.85	382	243.95	9789
38.95	5245	107.95	2023	172.85	385	244.95	1275
39.85	120	109.95	28264	173.95	792	245.85	1605
40.85	401	110.95	3957	174.95	1713	254.95	45056
43.05	416	111.95	518	175.85	477	255.95	6338
48.90	279	115.85	337	176.95	712	256.95	199
49.90	14838	116.95	12799	178.85	3507	257.95	2784
50.90	51448	117.95	798	179.95	2180	258.85	174
51.90	2638	121.90	843	180.95	1014	264.95	1122
54.90	175	122.90	1333	184.95	1505	265.85	375
55.90	1600	123.90	603	185.95	11402	272.90	1398
56.90	3405	124.90	466	186.95	3068	273.90	3755
61.00	562	126.90	49320	187.85	197	274.90	20824
61.90	547	127.90	3832	188.95	663	275.90	2869
62.90	1711	128.90	21648	190.95	177	276.90	1716
65.00	717	129.90	2013	191.95	1148	292.90	176
68.90	56136	133.80	567	192.95	873	295.90	5731
73.00	210	134.90	1528	195.95	3147	296.90	655
74.00	4203	135.90	519	197.90	98224	303.00	528
74.90	6584	137.00	813	198.90	6492	314.85	460
76.00	1160	140.90	2482	199.90	437	322.95	1920
77.00	43904	141.90	725	201.30	463	323.85	173
78.00	3088	142.90	506	202.90	511	326.85	185
78.90	3426	146.00	424	203.90	2642	333.95	1063
79.90	2413	146.90	1046	204.90	5184	345.85	205
80.90	3104	147.90	3023	205.90	19912	351.90	315
81.85	714	148.90	480	206.90	2732	354.00	457
82.85	717	151.00	171	207.90	602	364.90	2615
84.85	414	152.90	644	211.00	679	365.90	167
85.85	952	153.90	509	215.90	232	372.00	964
86.95	191	155.00	1125	216.90	5553	402.95	256
90.95	621	156.00	1738	217.90	578	420.95	216
91.95	740	157.00	380	221.00	5485	422.05	199
92.85	6077	157.90	189	222.90	1204	423.05	3084

Data File: /chem/h.i/h950531.b/h151df12.d
Date : 31-MAY-95 13:08
Client ID:
Sample Info: 50 NG DFTPP
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i
Operator: LH
Column diameter: 2.00

Data File: h151df12.d
Spectrum : Avg. Scans 151-153 (5.33), Background Scan 147
Largest m/z: 197.90
Number of peaks: 166

m/z	Y	m/z	Y	m/z	Y	m/z	Y
93.95	236	159.85	689	224.00	10252	423.95	488
97.95	4194	160.85	1081	225.00	2655	441.10	8568
98.85	3274	161.95	177	226.90	4622	442.00	56896
99.85	366	164.85	992	227.90	616	443.00	11013
100.85	1568	165.85	577	229.00	683	444.00	929
102.85	499	166.95	5116	231.00	195		
103.95	874	167.85	2979	236.85	217		

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INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-1995 15:37
End Cal Date : 24-MAY-1995 17:27
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950524.b/hclpw.m
Cal Date : 25-May-1995 11:24 liping
Curve Type : Average

Calibration File Names:
Level 1: /chem/h.i/h950524.b/h144ic5.d
Level 2: /chem/h.i/h950524.b/h144ic1.d
Level 3: /chem/h.i/h950524.b/h144ic4.d
Level 4: /chem/h.i/h950524.b/h144ic3.d
Level 5: /chem/h.i/h950524.b/h144ic2.d

	20	50	80	120	160	___	
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
2 Pyridine	2.28163	2.28935	2.34936	2.03309	2.27949	2.24659	5.464
5 Phenol	2.15885	2.33902	2.29608	2.19533	1.96442	2.19074	6.667
6 Aniline	2.10403	2.21855	2.21002	2.12645	2.08007	2.14782	2.930
7 bis(2-Chloroethyl)ether	1.77650	1.94108	2.14610	1.97130	1.73803	1.91460	8.573
9 2-Chlorophenol	1.43628	1.54078	1.55090	1.45120	1.41062	1.47795	4.313
10 1,3-Dichlorobenzene	1.60259	1.57654	1.61540	1.56002	1.48290	1.56749	3.318
12 1,4-Dichlorobenzene	1.59348	1.66011	1.60455	1.50189	1.51123	1.57425	4.246
13 Benzyl alcohol	0.60744	1.04660	0.94143	0.91747	0.80948	0.86448	19.269
15 1,2-Dichlorobenzene	1.40817	1.47891	1.47631	1.39469	1.31210	1.41403	4.859
16 2-Methylphenol	1.31226	1.49853	1.55538	1.54560	1.29242	1.44084	8.914
17 ortho-Cresol	1.31226	1.49853	1.55538	1.54560	1.25483	1.43332	9.760
18 bis(2-chloroisopropyl)ether	2.27146	2.78240	2.78511	2.64464	2.22931	2.54258	10.742
19 4-Methylphenol	1.12841	1.51334	1.50445	1.51665	1.20425	1.37342	13.906
20 meta,para-Cresol	1.12841	1.51334	1.50445	1.51665	1.20425	1.37342	13.906
21 N-Nitroso-di-n-propylamine	0.78994	1.23508	1.24076	1.19516	0.88553	1.06929	20.087
22 Hexachloroethane	0.67327	0.70873	0.70054	0.67277	0.64458	0.67998	3.749
24 Nitrobenzene	0.45435	0.44441	0.44707	0.43117	0.42986	0.44137	2.394
25 Isophorone	0.70168	0.93206	0.94179	0.91291	0.76885	0.85146	12.824
26 2-Nitrophenol	0.18614	0.20309	0.21825	0.20917	0.20607	0.20454	5.746
27 2,4-Dimethylphenol	0.36264	0.38493	0.39825	0.38415	0.36478	0.37895	3.963
28 Benzoic acid	0.05088	0.09164	0.08413	0.12394	0.11486	0.09309	30.808
29 bis(2-Chloroethoxy)methane	0.44732	0.55675	0.56815	0.53768	0.49086	0.52015	9.667
30 2,4-Dichlorophenol	0.23288	0.25184	0.25953	0.25752	0.24359	0.24907	4.401
31 1,2,4-Trichlorobenzene	0.26784	0.26441	0.26150	0.25058	0.25914	0.26069	2.503
33 Naphthalene	1.07847	1.11273	1.07983	1.04880	1.01613	1.06719	3.413
34 4-Chloroaniline	0.35385	0.37402	0.39411	0.39719	0.35376	0.37459	5.593

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-1995 15:37
End Cal Date : 24-MAY-1995 17:27
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950524.b/hclpw.m
Cal Date : 25-May-1995 11:24 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
35 Hexachlorobutadiene	0.11480	0.11122	0.10532	0.10308	0.11161	0.10921	4.434
36 4-Chloro-3-methylphenol	0.23777	0.29945	0.32905	0.32624	0.27691	0.29388	12.904
37 2-Methylnaphthalene	0.51928	0.63985	0.65227	0.63550	0.55996	0.60137	9.728
38 Hexachlorocyclopentadiene	0.24604	0.24463	0.23977	0.23190	0.28446	0.24936	8.175
39 2,4,6-Trichlorophenol	0.29102	0.30603	0.33802	0.31234	0.33975	0.31743	6.637
40 2,4,5-Trichlorophenol	0.35022	0.35167	0.36376	0.37569	0.39340	0.36695	4.912
42 2-Chloronaphthalene	1.28826	1.18699	1.18506	1.14313	1.24265	1.20922	4.680
43 2-Nitroaniline	0.47938	0.43179	0.51679	0.51697	0.49926	0.48884	7.250
44 Dimethylphthalate	1.26769	1.47156	1.47318	1.39440	1.34890	1.39115	6.249
45 2,6-Dinitrotoluene	0.31500	0.33018	0.36346	0.36531	0.33405	0.34160	6.439
46 Acenaphthylene	2.01280	2.04850	2.08995	2.02574	2.01404	2.03821	1.584
47 3-Nitroaniline	0.38229	0.31580	0.37685	0.41785	0.41291	0.38114	10.694
49 Acenaphthene	1.22600	1.22493	1.23998	1.19998	1.17659	1.21350	2.074
50 2,4-Dinitrophenol	+++++	0.06279	0.06761	0.09797	0.11445	0.08570	28.812
51 4-Nitrophenol	0.12220	0.11034	0.13989	0.17829	0.17099	0.14434	20.578
52 Dibenzofuran	1.59396	1.47503	1.60149	1.60354	1.59367	1.57354	3.511
53 2,4-Dinitrotoluene	0.35659	0.37904	0.44609	0.47693	0.44583	0.42090	12.046
54 Diethylphthalate	1.32981	1.45455	1.57480	1.55118	1.40770	1.46361	6.929
55 4-Chlorophenyl-phenylether	0.46727	0.47953	0.52550	0.50777	0.45354	0.48672	6.058
56 Fluorene	1.15997	1.19786	1.24985	1.23108	1.09954	1.18766	5.050
57 4-Nitroaniline	0.33427	0.24827	0.34776	0.40565	0.40250	0.34769	18.432
58 4,6-Dinitro-2-methylphenol	0.04969	0.13351	0.15528	0.17318	0.16787	0.13591	37.204
59 n-Nitrosodiphenylamine	0.60541	0.66638	0.63817	0.58939	0.60271	0.62041	5.051
60 1,2-Diphenylhydrazine	3.34058	3.34696	3.04960	2.48399	2.51876	2.94798	14.423
62 4-Bromophenyl-phenylether	0.17214	0.19808	0.19637	0.17718	0.19136	0.18703	6.251
63 Hexachlorobenzene	0.16823	0.19438	0.18883	0.17199	0.18593	0.18187	6.178
64 Pentachlorophenol	0.04472	0.08025	0.09620	0.09782	0.10504	0.08481	28.497
66 Phenanthrene	1.31908	1.35092	1.38235	1.33519	1.27360	1.33223	3.021
67 Anthracene	1.26005	1.20713	1.25176	1.25538	1.27109	1.24908	1.966
68 Carbazole	1.23511	1.04712	1.08204	1.19107	1.20507	1.15208	7.150
69 Di-n-butylphthalate	1.92346	2.39617	2.28402	2.09315	1.87674	2.11471	10.615
70 Fluoranthene	1.00415	0.96239	0.97113	1.08519	1.05453	1.01548	5.234
71 Pyrene	1.84559	2.14910	2.51281	1.83018	2.06973	2.08148	13.365
73 Butylbenzylphthalate	1.18449	1.55517	1.78750	1.29790	1.32604	1.43022	16.839

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 24-MAY-1995 15:37
End Cal Date : 24-MAY-1995 17:27
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950524.b/hclpw.m
Cal Date : 25-May-1995 11:24 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
74 3,3'-Dichlorobenzidine	0.36901	0.35015	0.35212	0.42264	0.43086	0.38496	10.120
75 Benzo[a]anthracene	1.22512	1.30810	1.29249	1.26276	1.31563	1.28082	2.901
77 Chrysene	1.12139	1.17058	1.15553	1.16769	1.17767	1.15857	1.922
78 bis(2-Ethylhexyl)phthalate	1.61321	2.27355	2.55927	1.80086	1.73308	1.99599	20.166
79 Di-n-octylphthalate	4.59916	6.32942	8.10606	5.41092	5.14095	5.91730	23.229
80 Benzo[b]fluoranthene	1.73562	1.91285	1.97460	1.94104	2.01785	1.91639	5.655
81 Benzo[k]fluoranthene	1.91354	1.93392	2.12893	1.94650	1.89006	1.96259	4.862
82 Benzo[a]pyrene	1.46907	1.50773	1.55629	1.57007	1.59528	1.53969	3.295
84 Indeno[1,2,3-cd]pyrene	1.36877	1.14554	1.31602	1.36987	1.48429	1.33690	9.228
85 Dibenz[a,h]anthracene	1.10842	0.92782	1.09172	1.13520	1.21562	1.09576	9.604
86 Benzo[g,h,i]perylene	1.14279	0.95007	1.07152	1.06231	1.18715	1.08277	8.344
96 Benzidine	0.02577	0.01491	0.01195	0.01354	0.01484	0.01620	33.844
$ 3 2-Fluorophenol	1.65905	1.65493	1.53384	1.38758	1.57348	1.56178	7.116
$ 4 Phenol-d5	1.96888	2.11810	2.06782	2.00217	1.81107	1.99361	5.882
$ 23 Nitrobenzene-d5	0.44882	0.44555	0.45212	0.44167	0.42865	0.44336	2.050
$ 41 2-Fluorobiphenyl	1.35668	1.31934	1.32347	1.24625	1.30201	1.30955	3.096
$ 61 2,4,6-Tribromophenol	0.05928	0.06982	0.07427	0.06839	0.07684	0.06972	9.679
$ 72 Terphenyl-d14	0.95812	1.13018	1.35023	1.01533	1.08714	1.10820	13.584

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Data file : /chem/h.i/h950524.b/h144ic5.d
Lab Smp Id:
Inj Date : 24-MAY-1995 17:27
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950524 STD020
Comment :
Method : /chem/h.i/h950524.b/hclpw.m
Meth Date : 25-May-1995 11:25 liping Quant Type: ISTD
Cal Date : 24-MAY-1995 15:37 Cal File: h144ic1.d
Als bottle: 6
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

						CONCENTRATIONS	
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng)	FINAL (ug/L)
2 Pyridine	79.00	2.326	2.305	(0.557)	254620	20	10
5 Phenol	94.00	3.902	3.905	(0.935)	240918	18	9
6 Aniline	93.00	3.926	3.916	(0.940)	234800	19	9(Q)
7 bis(2-Chloroethyl)ether	93.00	3.962	3.964	(0.949)	198249	18	9
9 2-Chlorophenol	128.00	4.021	4.023	(0.963)	160282	19	9
10 1,3-Dichlorobenzene	146.00	4.151	4.142	(0.994)	178842	20	10
12 1,4-Dichlorobenzene	146.00	4.187	4.189	(1.003)	177825	19	10
13 Benzyl alcohol	108.00	4.305	4.307	(1.031)	67788	12	6(Q)
15 1,2-Dichlorobenzene	146.00	4.364	4.355	(1.045)	157145	19	10
16 2-Methylphenol	108.00	4.424	4.426	(1.060)	146442	18	9
18 bis(2-chloroisopropyl)ether	45.00	4.447	4.450	(1.065)	253485	16	8
19 4-Methylphenol	108.00	4.554	4.556	(1.091)	125926	15	7
21 N-Nitroso-di-n-propylamine	70.00	4.566	4.568	(1.094)	88154	13	6
22 Hexachloroethane	117.00	4.637	4.639	(1.111)	75134	19	9
24 Nitrobenzene	77.00	4.708	4.710	(0.878)	136157	20	10
25 Isophorone	82.00	4.921	4.924	(0.918)	210273	15	8
26 2-Nitrophenol	139.00	5.016	5.018	(0.936)	55780	18	9(a)
27 2,4-Dimethylphenol	107.00	5.052	5.054	(0.943)	108673	19	9
28 Benzoic acid	122.00	5.087	5.149	(0.949)	15247	11	6(aQM)
29 bis(2-Chloroethoxy)methane	93.00	5.135	5.137	(0.958)	134049	16	8
30 2,4-Dichlorophenol	162.00	5.241	5.244	(0.978)	69787	18	9
31 1,2,4-Trichlorobenzene	180.00	5.324	5.327	(0.993)	80264	20	10
33 Naphthalene	128.00	5.384	5.386	(1.004)	323189	19	10
34 4-Chloroaniline	127.00	5.443	5.445	(1.015)	106039	19	9
35 Hexachlorobutadiene	225.00	5.561	5.564	(1.038)	34402	21	10
36 4-Chloro-3-methylphenol	107.00	5.941	5.943	(1.108)	71252	16	8
37 2-Methylnaphthalene	142.00	6.059	6.061	(1.130)	155614	16	8
38 Hexachlorocyclopentadiene	237.00	6.296	6.298	(0.884)	22075	20	10(M)
39 2,4,6-Trichlorophenol	196.00	6.367	6.381	(0.894)	26111	19	10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.415	6.417	(0.900)	31422	20	10
	42 2-Chloronaphthalene	162.00	6.545	6.547	(0.918)	115585	22	11
	43 2-Nitroaniline	65.00	6.663	6.678	(0.935)	43011	22	11(a)
	44 Dimethylphthalate	163.00	6.877	6.891	(0.965)	113740	17	9
	45 2,6-Dinitrotoluene	165.00	6.948	6.950	(0.975)	28262	19	10
	46 Acenaphthylene	152.00	6.972	6.974	(0.978)	180592	20	10
	47 3-Nitroaniline	138.00	7.090	7.092	(0.995)	34300	24	12(a)
	49 Acenaphthene	153.00	7.149	7.163	(1.003)	109999	20	10
	51 4-Nitrophenol	109.00	7.303	7.294	(1.025)	10964	22	11(aQ)
	52 Dibenzofuran	168.00	7.315	7.317	(1.027)	143013	22	11
	53 2,4-Dinitrotoluene	165.00	7.339	7.353	(1.030)	31994	19	9(Q)
	54 Diethylphthalate	149.00	7.600	7.602	(1.067)	119313	18	9
	55 4-Chlorophenyl-phenylether	204.00	7.659	7.673	(1.075)	41924	19	10
	56 Fluorene	166.00	7.659	7.673	(1.075)	104075	19	10
	57 4-Nitroaniline	138.00	7.706	7.720	(1.081)	29991	27	13(a)
	58 4,6-Dinitro-2-methylphenol	198.00	7.777	7.768	(0.904)	5043	7	4(a)
	59 n-Nitrosodiphenylamine	169.00	7.789	7.791	(0.905)	61448	18	9
	60 1,2-Diphenylhydrazine	77.00	7.813	7.827	(0.908)	339062	20	10
	62 4-Bromophenyl-phenylether	248.00	8.157	8.159	(0.948)	17472	17	9
	63 Hexachlorobenzene	283.70	8.311	8.313	(0.966)	17075	17	9
	64 Pentachlorophenol	265.50	8.500	8.502	(0.988)	4539	11	6(aM)
	66 Phenanthrene	178.00	8.631	8.645	(1.003)	133884	20	10
	67 Anthracene	178.00	8.678	8.692	(1.008)	127893	21	10
	68 Carbazole	167.00	8.844	8.846	(1.028)	125361	24	12
	69 Di-n-butylphthalate	149.00	9.247	9.261	(1.074)	195227	16	8
	70 Fluoranthene	202.00	9.851	9.853	(1.145)	101919	21	10
	71 Pyrene	202.00	10.076	10.090	(0.885)	106701	17	8
	73 Butylbenzylphthalate	149.00	10.775	10.790	(0.946)	68480	15	8
	74 3,3'-Dichlorobenzidine	252.00	11.344	11.370	(0.996)	21334	21	10
	75 Benzo[a]anthracene	228.00	11.368	11.382	(0.998)	70829	19	9
	77 Chrysene	228.00	11.415	11.441	(1.002)	64832	19	10
	78 bis(2-Ethylhexyl)phthalate	149.00	11.475	11.489	(1.007)	93266	14	7
	79 Di-n-octylphthalate	149.00	12.304	12.318	(0.913)	148146	14	7
	80 Benzo[b]fluoranthene	252.00	12.861	12.887	(0.954)	55907	18	9
	81 Benzo[k]fluoranthene	252.00	12.897	12.923	(0.957)	61638	20	10
	82 Benzo[a]pyrene	252.00	13.383	13.409	(0.993)	47321	19	10
	84 Indeno[1,2,3-cd]pyrene	276.00	15.255	15.293	(1.132)	44090	24	12
	85 Dibenz[a,h]anthracene	278.00	15.290	15.316	(1.135)	35704	24	12
	86 Benzo[g,h,i]perylene	276.00	15.741	15.779	(1.168)	36811	24	12
$	3 2-Fluorophenol	112.00	3.179	3.170	(0.762)	185143	20	10(R)
$	4 Phenol-d5	99.00	3.890	3.893	(0.932)	219718	18	9
	61 2,4,6-Tribromophenol	329.70	7.931	7.934	(0.922)	6017	17	8
$	23 Nitrobenzene-d5	82.00	4.684	4.687	(0.874)	134499	20	10(R)
$	41 2-Fluorobiphenyl	172.00	6.438	6.452	(0.904)	121724	20	10(R)
	72 Terphenyl-d14	244.00	10.242	10.256	(0.899)	55393	17	8(R)
	11 1,4-Dichlorobenzene-d4	152.00	4.175	4.177	(1.000)	223191	40	
*	32 Naphthalene-d8	136.00	5.360	5.362	(1.000)	599345	40	
*	48 Acenaphthene-d10	164.00	7.126	7.128	(1.000)	179444	40	
	65 Phenanthrene-d10	188.00	8.607	8.621	(1.000)	202996	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 76 Chrysene-d12	240.00	11.392	11.406	(1.000)	115628	40	
* 83 Perylene-d12	264.00	13.477	13.503	(1.000)	64423	40	
17 ortho-Cresol	108.00	4.424	4.426	(1.060)	146442	18	9
20 meta,para-Cresol	108.00	4.554	4.556	(1.091)	125926	15	7(a)
96 Benzidine	184.00	10.242	10.481	(0.899)	1490	34	17

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h144ic5.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950524.b/hclpw.m
Misc Info: 950524 STD020

Calibration Date: 05/24/95
Calibration Time: 1537

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	212958	106479	425916	223191	4.81
32 Naphthalene-d8	774451	387226	1548902	599345	-22.61
48 Acenaphthene-d10	331554	165777	663108	179444	-45.88
65 Phenanthrene-d10	334831	167416	669662	202996	-39.37
76 Chrysene-d12	151179	75590	302358	115628	-23.52
83 Perylene-d12	75826	37913	151652	64423	-15.04

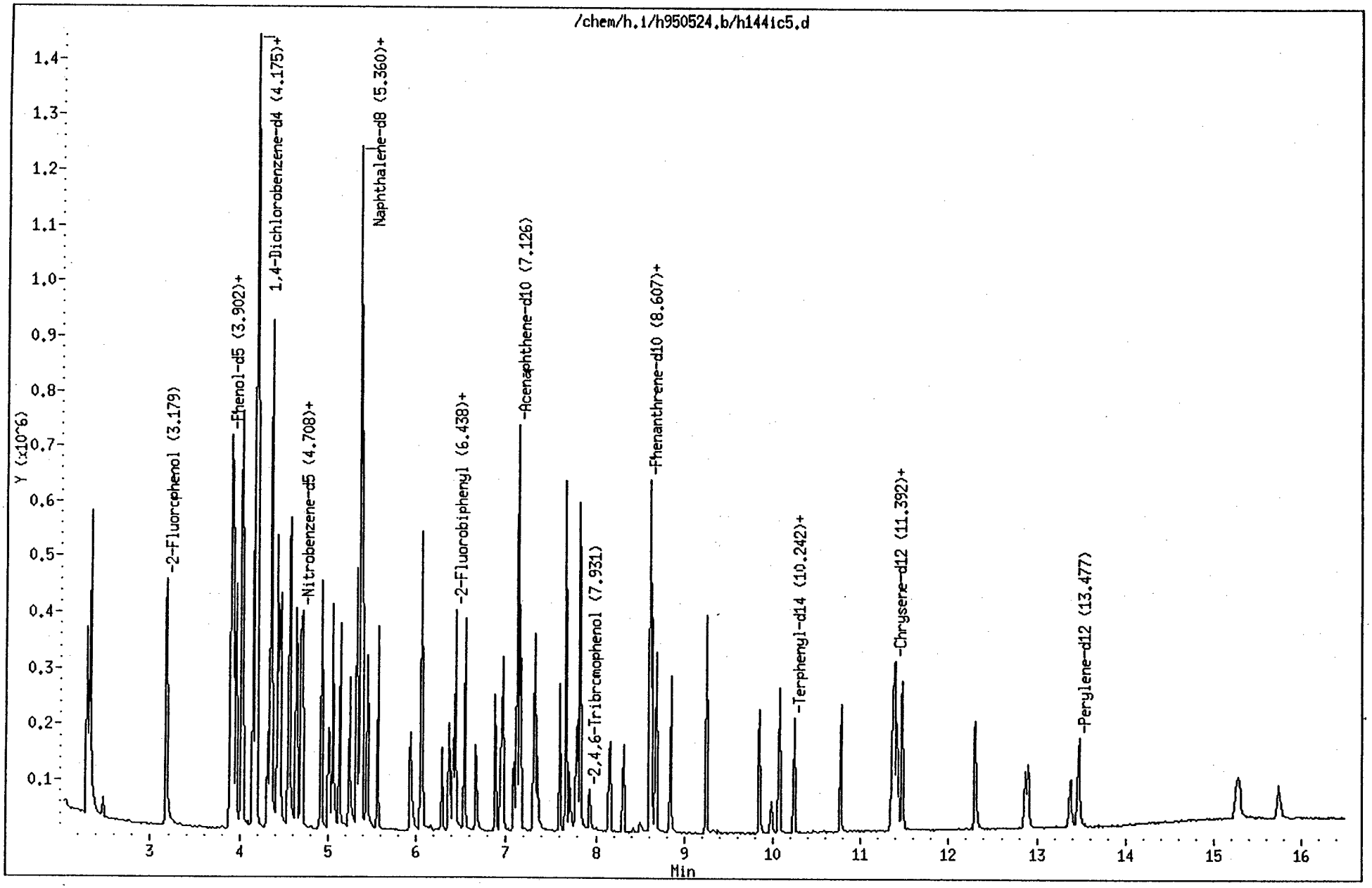
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.18	3.68	4.68	4.17	-0.05
32 Naphthalene-d8	5.36	4.86	5.86	5.36	-0.04
48 Acenaphthene-d10	7.13	6.63	7.63	7.13	-0.03
65 Phenanthrene-d10	8.62	8.12	9.12	8.61	-0.16
76 Chrysene-d12	11.41	10.91	11.91	11.39	-0.12
83 Perylene-d12	13.50	13.00	14.00	13.48	-0.19

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.

Data File: /chem/h.i/h950524.b/h144ic5.d
Date : 24-MAY-95 17:27
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950524.b/h144ic1.d
Report Date: 25-May-1995 11:26

SPL Houston Labs

Data file : /chem/h.i/h950524.b/h144ic1.d
Lab Smp Id:
Inj Date : 24-MAY-1995 15:37
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950524 STD050
Comment :
Method : /chem/h.i/h950524.b/hclpw.m
Meth Date : 25-May-1995 11:25 liping
Cal Date : 24-MAY-1995 15:37
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h144ic1.d

Compound Sublist: std.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.305	2.305	(0.552)	609419	50	25
5 Phenol	94.00	3.905	3.905	(0.935)	622641	50	25
6 Aniline	93.00	3.916	3.916	(0.938)	590572	50	25 (M)
7 bis(2-Chloroethyl)ether	93.00	3.964	3.964	(0.949)	516710	50	25
9 2-Chlorophenol	128.00	4.023	4.023	(0.963)	410151	50	25
10 1,3-Dichlorobenzene	146.00	4.142	4.142	(0.991)	419672	50	25
12 1,4-Dichlorobenzene	146.00	4.189	4.189	(1.003)	441918	50	25
13 Benzyl alcohol	108.00	4.307	4.307	(1.031)	278601	50	25 (M)
15 1,2-Dichlorobenzene	146.00	4.355	4.355	(1.043)	393681	50	25
16 2-Methylphenol	108.00	4.426	4.426	(1.060)	398904	50	25
18 bis(2-chloroisopropyl)ether	45.00	4.450	4.450	(1.065)	740668	50	25
19 4-Methylphenol	108.00	4.556	4.556	(1.091)	402848	50	25
21 N-Nitroso-di-n-propylamine	70.00	4.568	4.568	(1.094)	328774	50	25
22 Hexachloroethane	117.00	4.639	4.639	(1.111)	188661	50	25
24 Nitrobenzene	77.00	4.710	4.710	(0.878)	430216	50	25
25 Isophorone	82.00	4.924	4.924	(0.918)	902290	50	25
26 2-Nitrophenol	139.00	5.018	5.018	(0.936)	196603	50	25
27 2,4-Dimethylphenol	107.00	5.054	5.054	(0.943)	372635	50	25
28 Benzoic acid	122.00	5.149	5.149	(0.960)	88715	50	25 (M)
29 bis(2-Chloroethoxy)methane	93.00	5.137	5.137	(0.958)	538967	50	25
30 2,4-Dichlorophenol	162.00	5.244	5.244	(0.978)	243799	50	25
31 1,2,4-Trichlorobenzene	180.00	5.327	5.327	(0.993)	255968	50	25
33 Naphthalene	128.00	5.386	5.386	(1.004)	1077195	50	25
34 4-Chloroaniline	127.00	5.445	5.445	(1.015)	362080	50	25
35 Hexachlorobutadiene	225.00	5.564	5.564	(1.038)	107667	50	25
36 4-Chloro-3-methylphenol	107.00	5.943	5.943	(1.108)	289887	50	25
37 2-Methylnaphthalene	142.00	6.061	6.061	(1.130)	619413	50	25
38 Hexachlorocyclopentadiene	237.00	6.298	6.298	(0.884)	101385	50	25 (M)
39 2,4,6-Trichlorophenol	196.00	6.381	6.381	(0.895)	126832	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.417	6.417	(0.900)	145749	50	25
	42 2-Chloronaphthalene	162.00	6.547	6.547	(0.919)	491938	50	25
	43 2-Nitroaniline	65.00	6.678	6.678	(0.937)	178954	50	25
	44 Dimethylphthalate	163.00	6.891	6.891	(0.967)	609879	50	25
	45 2,6-Dinitrotoluene	165.00	6.950	6.950	(0.975)	136840	50	25
	46 Acenaphthylene	152.00	6.974	6.974	(0.978)	848986	50	25
	47 3-Nitroaniline	138.00	7.092	7.092	(0.995)	130882	50	25
	49 Acenaphthene	153.00	7.163	7.163	(1.005)	507662	50	25
	50 2,4-Dinitrophenol	184.00	7.258	7.258	(1.018)	26021	50	25 (M)
	51 4-Nitrophenol	109.00	7.294	7.294	(1.023)	45729	50	25
	52 Dibenzofuran	168.00	7.317	7.317	(1.027)	611317	50	25
	53 2,4-Dinitrotoluene	165.00	7.353	7.353	(1.032)	157090	50	25
	54 Diethylphthalate	149.00	7.602	7.602	(1.066)	602826	50	25
	55 4-Chlorophenyl-phenylether	204.00	7.673	7.673	(1.076)	198738	50	25
	56 Fluorene	166.00	7.673	7.673	(1.076)	496445	50	25
	57 4-Nitroaniline	138.00	7.720	7.720	(1.083)	102895	50	25
	58 4,6-Dinitro-2-methylphenol	198.00	7.768	7.768	(0.901)	55879	50	25
	59 n-Nitrosodiphenylamine	169.00	7.791	7.791	(0.904)	278904	50	25
	60 1,2-Diphenylhydrazine	77.00	7.827	7.827	(0.908)	1400832	50	25
	62 4-Bromophenyl-phenylether	248.00	8.159	8.159	(0.946)	82905	50	25
	63 Hexachlorobenzene	283.70	8.313	8.313	(0.964)	81356	50	25
	64 Pentachlorophenol	265.50	8.502	8.502	(0.986)	33588	50	25
	66 Phenanthrene	178.00	8.645	8.645	(1.003)	565411	50	25
	67 Anthracene	178.00	8.692	8.692	(1.008)	505232	50	25
	68 Carbazole	167.00	8.846	8.846	(1.026)	438260	50	25
	69 Di-n-butylphthalate	149.00	9.261	9.261	(1.074)	1002890	50	25
	70 Fluoranthene	202.00	9.853	9.853	(1.143)	402796	50	25
	71 Pyrene	202.00	10.090	10.090	(0.885)	406123	50	25
	73 Butylbenzylphthalate	149.00	10.790	10.790	(0.946)	293886	50	25
	74 3,3'-Dichlorobenzidine	252.00	11.370	11.370	(0.997)	66169	50	25
	75 Benzo[a]anthracene	228.00	11.382	11.382	(0.998)	247196	50	25
	77 Chrysene	228.00	11.441	11.441	(1.003)	221209	50	25
	78 bis(2-Ethylhexyl)phthalate	149.00	11.489	11.489	(1.007)	429641	50	25
	79 Di-n-octylphthalate	149.00	12.318	12.318	(0.912)	599918	50	25
	80 Benzo[b]fluoranthene	252.00	12.887	12.887	(0.954)	181305	50	25
	81 Benzo[k]fluoranthene	252.00	12.923	12.923	(0.957)	183302	50	25
	82 Benzo[a]pyrene	252.00	13.409	13.409	(0.993)	142906	50	25
	84 Indeno[1,2,3-cd]pyrene	276.00	15.293	15.293	(1.133)	108577	50	25
	85 Dibenz[a,h]anthracene	278.00	15.316	15.316	(1.134)	87941	50	25
	86 Benzo[g,h,i]perylene	276.00	15.779	15.779	(1.168)	90050	50	25
$	3 2-Fluorophenol	112.00	3.170	3.170	(0.759)	440538	50	25
$	4 Phenol-d5	99.00	3.893	3.893	(0.932)	563834	50	25
$	61 2,4,6-Tribromophenol	329.70	7.934	7.934	(0.920)	29221	50	25
$	23 Nitrobenzene-d5	82.00	4.687	4.687	(0.874)	31318	50	25
$	41 2-Fluorobiphenyl	172.00	6.452	6.452	(0.905)	546791	50	25
$	72 Terphenyl-d14	244.00	10.256	10.256	(0.899)	213575	50	25
*	11 1,4-Dichlorobenzene-d4	152.00	4.177	4.177	(1.000)	212958	40	
*	32 Naphthalene-d8	136.00	5.362	5.362	(1.000)	774451	40	
*	48 Acenaphthene-d10	164.00	7.128	7.128	(1.000)	331554	40	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	65 Phenanthrene-d10	188.00	8.621	8.621	(1.000)	334831	40	
*	76 Chrysene-d12	240.00	11.406	11.406	(1.000)	151179	40	
	83 Perylene-d12	264.00	13.503	13.503	(1.000)	75826	40	
	17 ortho-Cresol	108.00	4.426	4.426	(1.060)	398904	50	25
	20 meta,para-Cresol	108.00	4.556	4.556	(1.091)	402848	50	25
	96 Benzidine	184.00	10.481	10.481	(0.919)	2817	50	25

QC Flag Legend

* - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h144ic1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950524.b/hclpw.m
Misc Info: 950524 STD050

Calibration Date: 05/24/95
Calibration Time: 1537

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	212958	106479	425916	212958	0.00
32 Naphthalene-d8	774451	387226	1548902	774451	0.00
48 Acenaphthene-d10	331554	165777	663108	331554	0.00
65 Phenanthrene-d10	334831	167416	669662	334831	0.00
76 Chrysene-d12	151179	75590	302358	151179	0.00
83 Perylene-d12	75826	37913	151652	75826	0.00

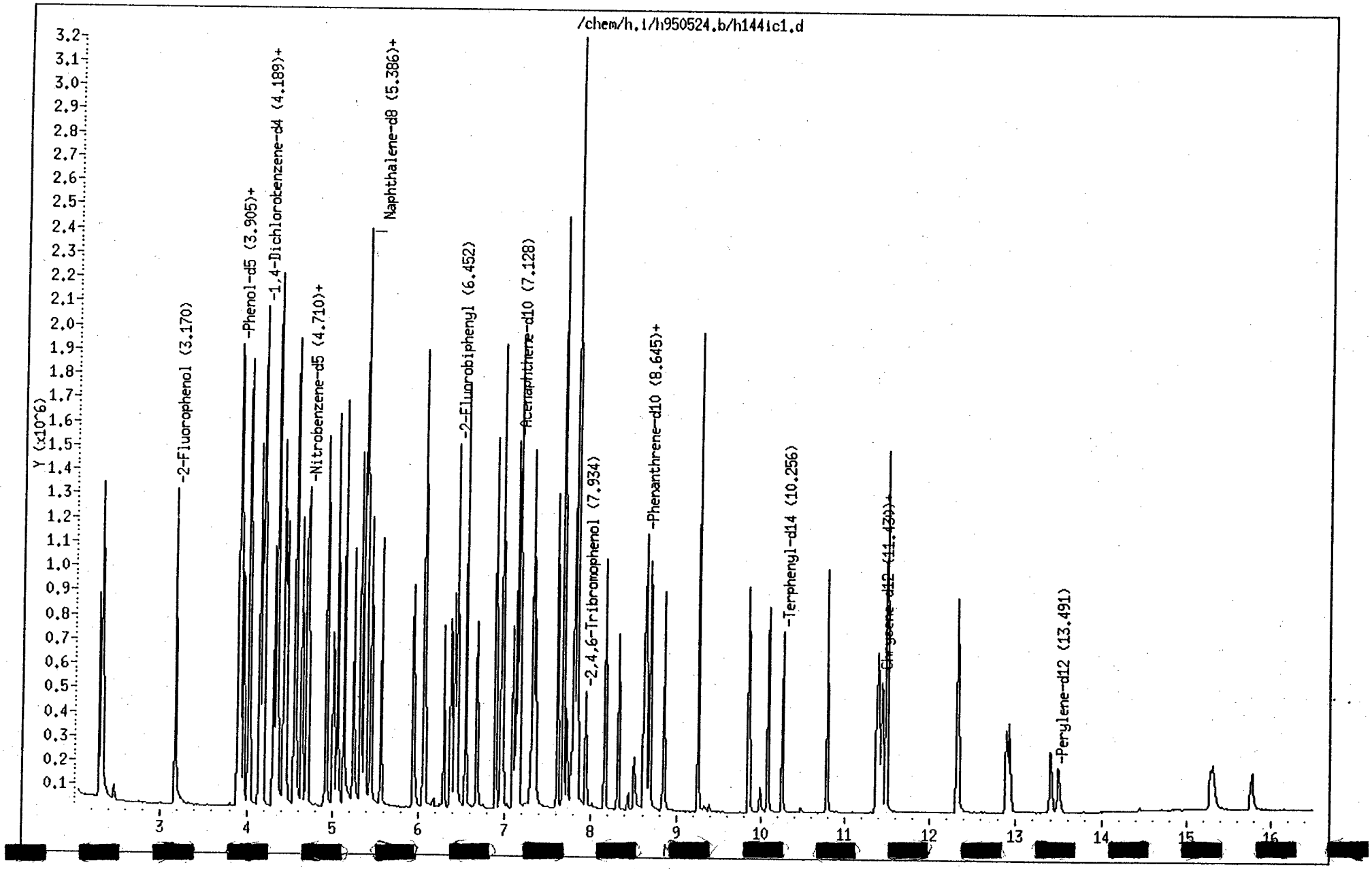
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.18	3.68	4.68	4.18	0.00
32 Naphthalene-d8	5.36	4.86	5.86	5.36	0.00
48 Acenaphthene-d10	7.13	6.63	7.63	7.13	0.00
65 Phenanthrene-d10	8.62	8.12	9.12	8.62	0.00
76 Chrysene-d12	11.41	10.91	11.91	11.41	0.00
83 Perylene-d12	13.50	13.00	14.00	13.50	0.00

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.

Data File: /chem/h.i/h950524.b/h144ic1.d
Date : 24-MAY-1995 15:37
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950524.b/h144ic4.d
Lab Smp Id:
Inj Date : 24-MAY-1995 16:45
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950524 STD080
Comment :
Method : /chem/h.i/h950524.b/hclpw.m
Meth Date : 25-May-1995 11:25 liping
Cal Date : 24-MAY-1995 15:37
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h144ic1.d

Compound Sublist: std.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.313	2.305	(0.554)	719493	82	41
5 Phenol	94.00	3.901	3.905	(0.935)	703173	78	39
6 Aniline	93.00	3.925	3.916	(0.940)	676820	80	40(Q)
7 bis(2-Chloroethyl)ether	93.00	3.960	3.964	(0.949)	657242	88	44
9 2-Chlorophenol	128.00	4.031	4.023	(0.966)	474963	80	40
10 1,3-Dichlorobenzene	146.00	4.150	4.142	(0.994)	494717	82	41
12 1,4-Dichlorobenzene	146.00	4.197	4.189	(1.006)	491394	77	39
13 Benzyl alcohol	108.00	4.304	4.307	(1.031)	288314	72	36(Q)
15 1,2-Dichlorobenzene	146.00	4.363	4.355	(1.045)	452119	80	40
16 2-Methylphenol	108.00	4.422	4.426	(1.060)	476336	83	42
18 bis(2-chloroisopropyl)ether	45.00	4.446	4.450	(1.065)	852941	80	40
19 4-Methylphenol	108.00	4.553	4.556	(1.091)	460739	80	40
21 N-Nitroso-di-n-propylamine	70.00	4.576	4.568	(1.097)	379982	80	40
22 Hexachloroethane	117.00	4.636	4.639	(1.111)	214539	79	40
24 Nitrobenzene	77.00	4.707	4.710	(0.876)	516409	80	40
25 Isophorone	82.00	4.932	4.924	(0.918)	1087863	81	40
26 2-Nitrophenol	139.00	5.015	5.018	(0.934)	252098	86	43
27 2,4-Dimethylphenol	107.00	5.050	5.054	(0.940)	460021	83	41
28 Benzoic acid	122.00	5.157	5.149	(0.960)	97175	73	37(M)
29 bis(2-Chloroethoxy)methane	93.00	5.133	5.137	(0.956)	656270	82	41
30 2,4-Dichlorophenol	162.00	5.252	5.244	(0.978)	299781	82	41
31 1,2,4-Trichlorobenzene	180.00	5.323	5.327	(0.991)	302057	79	40
33 Naphthalene	128.00	5.382	5.386	(1.002)	1247316	78	39
34 4-Chloroaniline	127.00	5.453	5.445	(1.015)	455235	84	42
35 Hexachlorobutadiene	225.00	5.560	5.564	(1.035)	121657	76	38
36 4-Chloro-3-methylphenol	107.00	5.939	5.943	(1.106)	380091	88	44
37 2-Methylnaphthalene	142.00	6.058	6.061	(1.128)	753441	82	41
38 Hexachlorocyclopentadiene	237.00	6.295	6.298	(0.884)	126317	78	39
39 2,4,6-Trichlorophenol	196.00	6.378	6.381	(0.895)	178079	88	44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.413	6.417	(0.900)	191639	83	41
42	2-Chloronaphthalene	162.00	6.544	6.547	(0.918)	624323	80	40
43	2-Nitroaniline	65.00	6.674	6.678	(0.937)	272259	96	48
44	Dimethylphthalate	163.00	6.887	6.891	(0.967)	776115	80	40
45	2,6-Dinitrotoluene	165.00	6.958	6.950	(0.977)	191482	88	44
46	Acenaphthylene	152.00	6.970	6.974	(0.978)	1101046	82	41
47	3-Nitroaniline	138.00	7.089	7.092	(0.995)	198538	95	48
49	Acenaphthene	153.00	7.160	7.163	(1.005)	653261	81	40
50	2,4-Dinitrophenol	184.00	7.207	7.258	(1.012)	35620	86	43 (QM)
51	4-Nitrophenol	109.00	7.290	7.294	(1.023)	73698	100	51
52	Dibenzofuran	168.00	7.314	7.317	(1.027)	843714	87	43
53	2,4-Dinitrotoluene	165.00	7.349	7.353	(1.032)	235014	94	47
54	Diethylphthalate	149.00	7.610	7.602	(1.068)	829650	87	43
55	4-Chlorophenyl-phenylether	204.00	7.669	7.673	(1.077)	276849	88	44
56	Fluorene	166.00	7.669	7.673	(1.077)	658457	83	42
57	4-Nitroaniline	138.00	7.717	7.720	(1.083)	183209	110	56
58	4,6-Dinitro-2-methylphenol	198.00	7.764	7.768	(0.901)	95252	93	46
59	n-Nitrosodiphenylamine	169.00	7.788	7.791	(0.904)	391473	77	38
60	1,2-Diphenylhydrazine	77.00	7.823	7.827	(0.908)	1870702	73	36
62	4-Bromophenyl-phenylether	248.00	8.155	8.159	(0.946)	120456	79	40
63	Hexachlorobenzene	283.70	8.309	8.313	(0.964)	115831	78	39
64	Pentachlorophenol	265.50	8.499	8.502	(0.986)	59009	96	48 (M)
66	Phenanthrene	178.00	8.641	8.645	(1.003)	847969	82	41
67	Anthracene	178.00	8.677	8.692	(1.007)	767862	83	41
68	Carbazole	167.00	8.842	8.846	(1.026)	663754	83	41
69	Di-n-butylphthalate	149.00	9.257	9.261	(1.074)	1401079	76	38
70	Fluoranthene	202.00	9.850	9.853	(1.143)	595718	81	40
71	Pyrene	202.00	10.075	10.090	(0.885)	580132	94	47
73	Butylbenzylphthalate	149.00	10.774	10.790	(0.946)	412680	92	46
74	3,3'-Dichlorobenzidine	252.00	11.355	11.370	(0.997)	81294	80	40
75	Benzo[a]anthracene	228.00	11.378	11.382	(0.999)	298398	79	40
77	Chrysene	228.00	11.426	11.441	(1.003)	266777	79	39
78	bis(2-Ethylhexyl)phthalate	149.00	11.473	11.489	(1.007)	590859	90	45
79	Di-n-octylphthalate	149.00	12.303	12.318	(0.913)	765715	100	51
80	Benzo[b]fluoranthene	252.00	12.872	12.887	(0.955)	186525	82	41
81	Benzo[k]fluoranthene	252.00	12.907	12.923	(0.958)	201103	88	44
82	Benzo[a]pyrene	252.00	13.393	13.409	(0.994)	147010	82	41
84	Indeno[1,2,3-cd]pyrene	276.00	15.265	15.293	(1.133)	124314	92	46
85	Dibenz[a,h]anthracene	278.00	15.301	15.316	(1.135)	103126	94	47
86	Benzo[g,h,i]perylene	276.00	15.751	15.779	(1.169)	101218	90	45
S 3	2-Fluorophenol	112.00	3.178	3.170	(0.761)	469738	74	37
S 4	Phenol-d5	99.00	3.889	3.893	(0.932)	633271	78	39
S 61	2,4,6-Tribromophenol	329.70	7.930	7.934	(0.920)	45561	85	42
S 23	Nitrobenzene-d5	82.00	4.695	4.687	(0.874)	522241	81	40
S 41	2-Fluorobiphenyl	172.00	6.449	6.452	(0.905)	697245	80	40
S 72	Terphenyl-d14	244.00	10.241	10.256	(0.899)	311727	96	48
* 11	1,4-Dichlorobenzene-d4	152.00	4.173	4.177	(1.000)	153125	40	
* 32	Naphthalene-d8	136.00	5.370	5.362	(1.000)	577552	40	
48	Acenaphthene-d10	164.00	7.124	7.128	(1.000)	263415	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.617	8.621	(1.000)	306713	40	
* 76 Chrysene-d12	240.00	11.390	11.406	(1.000)	115435	40	
* 83 Perylene-d12	264.00	13.476	13.503	(1.000)	47231	40	
17 ortho-Cresol	108.00	4.422	4.426	(1.060)	476336	83	42
20 meta,para-Cresol	108.00	4.553	4.556	(1.091)	460739	80	40
96 Benzidine	184.00	10.466	10.481	(0.919)	2760	64	32

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h144ic4.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950524.b/hclpw.m
Misc Info: 950524 STD080

Calibration Date: 05/24/95
Calibration Time: 1537

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	212958	106479	425916	153125	-28.10
32 Naphthalene-d8	774451	387226	1548902	577552	-25.42
48 Acenaphthene-d10	331554	165777	663108	263415	-20.55
65 Phenanthrene-d10	334831	167416	669662	306713	-8.40
76 Chrysene-d12	151179	75590	302358	115435	-23.64
83 Perylene-d12	75826	37913	151652	47231	-37.71

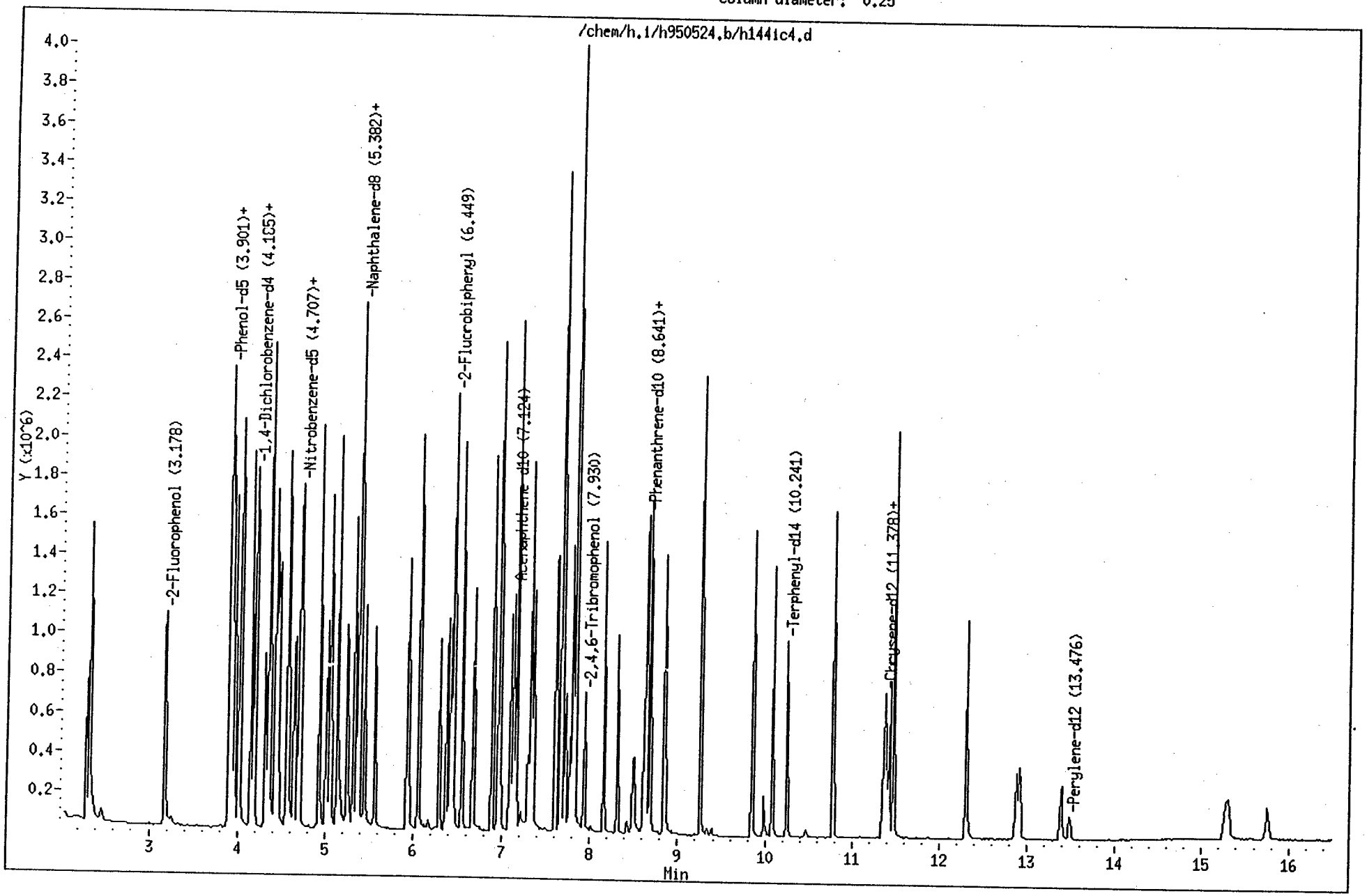
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.18	3.68	4.68	4.17	-0.09
32 Naphthalene-d8	5.36	4.86	5.86	5.37	0.15
48 Acenaphthene-d10	7.13	6.63	7.63	7.12	-0.05
65 Phenanthrene-d10	8.62	8.12	9.12	8.62	-0.04
76 Chrysene-d12	11.41	10.91	11.91	11.39	-0.14
83 Perylene-d12	13.50	13.00	14.00	13.48	-0.20

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.

Data File: /chem/h.i/h950524.b/h144ic4.d
Date : 24-MAY-95 16:45
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950524.b/h144ic3.d
Lab Smp Id:
Inj Date : 24-MAY-1995 16:25
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950524 STD120
Comment :
Method : /chem/h.i/h950524.b/hclpw.m
Meth Date : 25-May-1995 11:25 liping Quant Type: ISTD
Cal Date : 24-MAY-1995 15:37 Cal File: h144ic1.d
Als bottle: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.316	2.305	(0.555)	850581	110	53
5 Phenol	94.00	3.904	3.905	(0.935)	918457	110	56
6 Aniline	93.00	3.928	3.916	(0.940)	889637	120	58 (Q)
7 bis(2-Chloroethyl)ether	93.00	3.963	3.964	(0.949)	824728	120	61
9 2-Chlorophenol	128.00	4.034	4.023	(0.966)	607134	110	56
10 1,3-Dichlorobenzene	146.00	4.153	4.142	(0.994)	652661	120	59
12 1,4-Dichlorobenzene	146.00	4.188	4.189	(1.003)	628341	110	54
13 Benzyl alcohol	108.00	4.307	4.307	(1.031)	383839	100	52 (Q)
15 1,2-Dichlorobenzene	146.00	4.354	4.355	(1.043)	583492	110	56
16 2-Methylphenol	108.00	4.425	4.426	(1.060)	646631	120	62
18 bis(2-chloroisopropyl)ether	45.00	4.449	4.450	(1.065)	1106432	110	57
19 4-Methylphenol	108.00	4.556	4.556	(1.091)	634519	120	60
21 N-Nitroso-di-n-propylamine	70.00	4.580	4.568	(1.096)	500018	120	58
22 Hexachloroethane	117.00	4.639	4.639	(1.111)	281466	110	57
24 Nitrobenzene	77.00	4.710	4.710	(0.878)	685948	120	58
25 Isophorone	82.00	4.935	4.924	(0.920)	1452329	120	59
26 2-Nitrophenol	139.00	5.018	5.018	(0.936)	332764	120	62
27 2,4-Dimethylphenol	107.00	5.054	5.054	(0.943)	611132	120	60
28 Benzoic acid	122.00	5.184	5.149	(0.967)	197173	160	81 (M)
29 bis(2-Chloroethoxy)methane	93.00	5.136	5.137	(0.958)	855392	120	58
30 2,4-Dichlorophenol	162.00	5.243	5.244	(0.978)	409676	120	61
31 1,2,4-Trichlorobenzene	180.00	5.326	5.327	(0.993)	398642	110	57
33 Naphthalene	128.00	5.385	5.386	(1.004)	1668516	110	56
34 4-Chloroaniline	127.00	5.445	5.445	(1.015)	631877	130	64
35 Hexachlorobutadiene	225.00	5.563	5.564	(1.038)	163982	110	56
36 4-Chloro-3-methylphenol	107.00	5.942	5.943	(1.108)	519010	130	65
37 2-Methylnaphthalene	142.00	6.061	6.061	(1.130)	1011007	120	60
38 Hexachlorocyclopentadiene	237.00	6.298	6.298	(0.884)	174882	110	57
39 2,4,6-Trichlorophenol	196.00	6.381	6.381	(0.895)	235536	120	61

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.416	6.417	(0.900)	283110	130	64
	42 2-Chloronaphthalene	162.00	6.547	6.547	(0.919)	862049	120	58
	43 2-Nitroaniline	65.00	6.677	6.678	(0.937)	389856	140	72
	44 Dimethylphthalate	163.00	6.890	6.891	(0.967)	1051536	110	57
	45 2,6-Dinitrotoluene	165.00	6.961	6.950	(0.977)	275484	130	66
	46 Acenaphthylene	152.00	6.973	6.974	(0.978)	1527640	120	59
	47 3-Nitroaniline	138.00	7.092	7.092	(0.995)	315103	160	79
	49 Acenaphthene	153.00	7.163	7.163	(1.005)	904920	120	59
	50 2,4-Dinitrophenol	184.00	7.210	7.258	(1.012)	73878	190	94 (Q)
	51 4-Nitrophenol	109.00	7.293	7.294	(1.023)	134448	190	97 (Q)
	52 Dibenzofuran	168.00	7.317	7.317	(1.027)	1209249	130	65
	53 2,4-Dinitrotoluene	165.00	7.352	7.353	(1.032)	359657	150	75
	54 Diethylphthalate	149.00	7.613	7.602	(1.068)	1169764	130	64
	55 4-Chlorophenyl-phenylether	204.00	7.672	7.673	(1.076)	382917	130	64
	56 Fluorene	166.00	7.672	7.673	(1.076)	928371	120	62
	57 4-Nitroaniline	138.00	7.720	7.720	(1.083)	305905	200	98
	58 4,6-Dinitro-2-methylphenol	198.00	7.779	7.768	(0.902)	175211	160	78
	59 n-Nitrosodiphenylamine	169.00	7.803	7.791	(0.905)	596302	110	53
	60 1,2-Diphenylhydrazine	77.00	7.827	7.827	(0.908)	2513124	89	44
	62 4-Bromophenyl-phenylether	248.00	8.158	8.159	(0.946)	179258	110	54
	63 Hexachlorobenzene	283.70	8.312	8.313	(0.964)	174010	110	53
	64 Pentachlorophenol	265.50	8.502	8.502	(0.986)	98968	150	73 (M)
	66 Phenanthrene	178.00	8.644	8.645	(1.003)	1350846	120	59
	67 Anthracene	178.00	8.692	8.692	(1.008)	1270103	120	62
	68 Carbazole	167.00	8.846	8.846	(1.026)	1205041	140	68
	69 Di-n-butylphthalate	149.00	9.260	9.261	(1.074)	2117698	100	52
	70 Fluoranthene	202.00	9.853	9.853	(1.143)	1097914	140	68
	71 Pyrene	202.00	10.090	10.090	(0.885)	1148953	100	51
	73 Butylbenzylphthalate	149.00	10.777	10.790	(0.945)	814799	100	50
	74 3,3'-Dichlorobenzidine	252.00	11.358	11.370	(0.996)	265326	140	72
	75 Benzo[a]anthracene	228.00	11.382	11.382	(0.998)	792738	120	58
	77 Chrysene	228.00	11.441	11.441	(1.003)	733054	120	60
	78 bis(2-Ethylhexyl)phthalate	149.00	11.476	11.489	(1.006)	1130547	95	48
	79 Di-n-octylphthalate	149.00	12.318	12.318	(0.913)	1827224	100	51
	80 Benzo[b]fluoranthene	252.00	12.887	12.887	(0.955)	655473	120	61
	81 Benzo[k]fluoranthene	252.00	12.934	12.923	(0.959)	657318	120	60
	82 Benzo[a]pyrene	252.00	13.408	13.409	(0.994)	530199	120	62
	84 Indeno[1,2,3-cd]pyrene	276.00	15.292	15.293	(1.133)	462594	140	72
	85 Dibenz[a,h]anthracene	278.00	15.328	15.316	(1.136)	383348	150	73
	86 Benzo[g,h,i]perylene	276.00	15.778	15.779	(1.170)	358732	130	67
$	3 2-Fluorophenol	112.00	3.169	3.170	(0.759)	580520	100	50
$	4 Phenol-d5	99.00	3.892	3.893	(0.932)	837643	110	57
$	61 2,4,6-Tribromophenol	329.70	7.933	7.934	(0.920)	69197	120	59
$	23 Nitrobenzene-d5	82.00	4.698	4.687	(0.876)	702677	120	59 (R)
$	41 2-Fluorobiphenyl	172.00	6.452	6.452	(0.905)	939812	110	57
$	72 Terphenyl-d14	244.00	10.256	10.256	(0.899)	637408	110	54
*	11 1,4-Dichlorobenzene-d4	152.00	4.177	4.177	(1.000)	139456	40	
*	32 Naphthalene-d8	136.00	5.362	5.362	(1.000)	530294	40	
*	48 Acenaphthene-d10	164.00	7.127	7.128	(1.000)	251371	40	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	65 Phenanthrene-d10	188.00	8.620	8.621	(1.000)	337243	40	
	76 Chrysene-d12	240.00	11.405	11.406	(1.000)	209261	40	
	83 Perylene-d12	264.00	13.491	13.503	(1.000)	112564	40	
	17 ortho-Cresol	108.00	4.425	4.426	(1.060)	646631	120	62
	20 meta,para-Cresol	108.00	4.556	4.556	(1.091)	634519	120	60
	96 Benzidine	184.00	10.469	10.481	(0.918)	8499	110	54

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h144ic3.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950524.b/hclpw.m
Misc Info: 950524 STD120

Calibration Date: 05/24/95
Calibration Time: 1537

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	212958	106479	425916	139456	-34.51
32 Naphthalene-d8	774451	387226	1548902	530294	-31.53
48 Acenaphthene-d10	331554	165777	663108	251371	-24.18
65 Phenanthrene-d10	334831	167416	669662	337243	0.72
76 Chrysene-d12	151179	75590	302358	209261	38.42
83 Perylene-d12	75826	37913	151652	112564	48.45

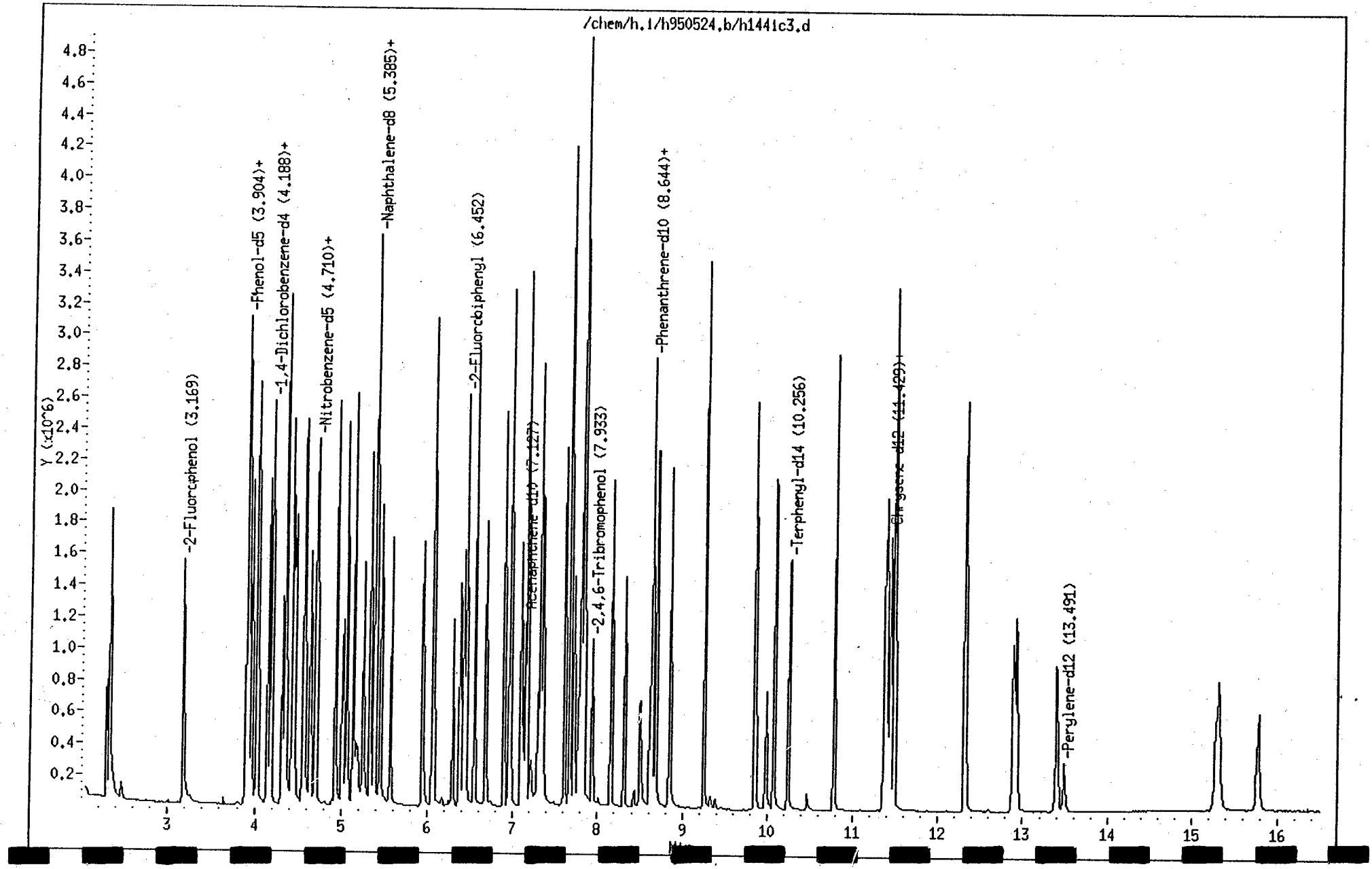
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.18	3.68	4.68	4.18	-0.01
32 Naphthalene-d8	5.36	4.86	5.86	5.36	-0.01
48 Acenaphthene-d10	7.13	6.63	7.63	7.13	-0.01
65 Phenanthrene-d10	8.62	8.12	9.12	8.62	-0.01
76 Chrysene-d12	11.41	10.91	11.91	11.41	0.00
83 Perylene-d12	13.50	13.00	14.00	13.49	-0.09

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.

Data File: /chem/h.i/h950524.b/h144ic3.d
Date : 24-MAY-95 16:25
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950524.b/h144ic2.d
Lab Smp Id:
Inj Date : 24-MAY-1995 16:03
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950524 STD160
Comment :
Method : /chem/h.i/h950524.b/hclpw.m
Meth Date : 25-May-1995 11:25 liping
Cal Date : 24-MAY-1995 15:37
Als bottle: 3
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h144ic1.d

Compound Sublist: std.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	2.301	2.305	(0.551)	1909241	160	80
5 Phenol	94.00	3.912	3.905	(0.938)	1645342	130	67
6 Aniline	93.00	3.924	3.916	(0.940)	1742206	150	75 (Q)
7 bis(2-Chloroethyl)ether	93.00	3.960	3.964	(0.949)	1455727	140	72
9 2-Chlorophenol	128.00	4.031	4.023	(0.966)	1181499	150	73
10 1,3-Dichlorobenzene	146.00	4.149	4.142	(0.994)	1242033	150	75
12 1,4-Dichlorobenzene	146.00	4.197	4.189	(1.006)	1265767	140	73
13 Benzyl alcohol	108.00	4.315	4.307	(1.034)	677995	120	62 (Q)
15 1,2-Dichlorobenzene	146.00	4.363	4.355	(1.045)	1098980	140	71
16 2-Methylphenol	108.00	4.422	4.426	(1.060)	1082492	140	69 (M)
18 bis(2-chloroisopropyl)ether	45.00	4.446	4.450	(1.065)	1867208	130	64
19 4-Methylphenol	108.00	4.564	4.556	(1.094)	1008650	130	64
21 N-Nitroso-di-n-propylamine	70.00	4.576	4.568	(1.097)	741696	110	57
22 Hexachloroethane	117.00	4.647	4.639	(1.114)	539878	140	73
24 Nitrobenzene	77.00	4.718	4.710	(0.879)	1117037	150	77
25 Isophorone	82.00	4.931	4.924	(0.918)	1997952	130	66
26 2-Nitrophenol	139.00	5.014	5.018	(0.934)	535500	160	81
27 2,4-Dimethylphenol	107.00	5.062	5.054	(0.943)	947924	150	76
28 Benzoic acid	122.00	5.204	5.149	(0.969)	298491	200	100 (M)
29 bis(2-Chloroethoxy)methane	93.00	5.145	5.137	(0.958)	1275569	140	70
30 2,4-Dichlorophenol	162.00	5.251	5.244	(0.978)	632996	150	77
31 1,2,4-Trichlorobenzene	180.00	5.334	5.327	(0.993)	673406	160	78
33 Naphthalene	128.00	5.394	5.386	(1.004)	2640558	150	73
34 4-Chloroaniline	127.00	5.453	5.445	(1.015)	919289	150	76
35 Hexachlorobutadiene	225.00	5.571	5.564	(1.038)	290035	160	80
36 4-Chloro-3-methylphenol	107.00	5.939	5.943	(1.106)	719584	150	74
37 2-Methylnaphthalene	142.00	6.069	6.061	(1.130)	1455124	140	70
38 Hexachlorocyclopentadiene	237.00	6.294	6.298	(0.884)	269159	190	93
39 2,4,6-Trichlorophenol	196.00	6.377	6.381	(0.895)	321472	180	89

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.425	6.417	(0.902)	372241	180	89
42	2-Chloronaphthalene	162.00	6.555	6.547	(0.920)	1175806	170	84
43	2-Nitroaniline	65.00	6.673	6.678	(0.937)	472406	180	92
44	Dimethylphthalate	163.00	6.899	6.891	(0.968)	1276345	150	73
45	2,6-Dinitrotoluene	165.00	6.958	6.950	(0.977)	316086	160	81
46	Acenaphthylene	152.00	6.982	6.974	(0.980)	1905708	160	79
47	3-Nitroaniline	138.00	7.100	7.092	(0.997)	390697	210	100
49	Acenaphthene	153.00	7.159	7.163	(1.005)	1113306	150	77
50	2,4-Dinitrophenol	184.00	7.207	7.258	(1.012)	108292	290	140 (QM)
51	4-Nitrophenol	109.00	7.290	7.294	(1.023)	161796	250	120
52	Dibenzofuran	168.00	7.325	7.317	(1.028)	1507952	170	86
53	2,4-Dinitrotoluene	165.00	7.361	7.353	(1.033)	421849	190	94
54	Diethylphthalate	149.00	7.610	7.602	(1.068)	1331983	150	77
55	4-Chlorophenyl-phenylether	204.00	7.669	7.673	(1.077)	429146	150	76
56	Fluorene	166.00	7.669	7.673	(1.077)	1040402	150	73
57	4-Nitroaniline	138.00	7.728	7.720	(1.085)	380854	260	130
58	4,6-Dinitro-2-methylphenol	198.00	7.776	7.768	(0.902)	191463	200	100
59	n-Nitrosodiphenylamine	169.00	7.799	7.791	(0.905)	687408	140	72
60	1,2-Diphenylhydrazine	77.00	7.835	7.827	(0.909)	2872700	120	60
62	4-Bromophenyl-phenylether	248.00	8.167	8.159	(0.948)	218252	150	77
63	Hexachlorobenzene	283.70	8.321	8.313	(0.966)	212055	150	76
64	Pentachlorophenol	265.50	8.498	8.502	(0.986)	119800	210	100 (M)
66	Phenanthrene	178.00	8.641	8.645	(1.003)	1452564	150	75
67	Anthracene	178.00	8.688	8.692	(1.008)	1449698	170	84
68	Carbazole	167.00	8.854	8.846	(1.028)	1374403	180	92
69	Di-n-butylphthalate	149.00	9.257	9.261	(1.074)	2140454	120	63
70	Fluoranthene	202.00	9.861	9.853	(1.144)	1202709	180	88
71	Pyrene	202.00	10.086	10.090	(0.885)	1203083	150	77
73	Butylbenzylphthalate	149.00	10.786	10.790	(0.946)	770795	140	68
74	3,3'-Dichlorobenzidine	252.00	11.366	11.370	(0.997)	250447	200	98
75	Benzo[a]anthracene	228.00	11.390	11.382	(0.999)	764746	160	80
77	Chrysene	228.00	11.437	11.441	(1.003)	684552	160	80
78	bis(2-Ethylhexyl)phthalate	149.00	11.485	11.489	(1.007)	1007398	120	61
79	Di-n-octylphthalate	149.00	12.326	12.318	(0.913)	1564495	130	65
80	Benzo[b]fluoranthene	252.00	12.895	12.887	(0.955)	614073	170	84
81	Benzo[k]fluoranthene	252.00	12.930	12.923	(0.958)	575182	160	78
82	Benzo[a]pyrene	252.00	13.416	13.409	(0.994)	485476	170	85
84	Indeno[1,2,3-cd]pyrene	276.00	15.300	15.293	(1.133)	451699	210	100
85	Dibenz[a,h]anthracene	278.00	15.324	15.316	(1.135)	369936	210	100
86	Benzo[g,h,i]perylene	276.00	15.786	15.779	(1.169)	361273	200	100
$ 3	2-Fluorophenol	112.00	3.166	3.170	(0.759)	1317902	150	76
4	Phenol-d5	99.00	3.901	3.893	(0.935)	1516902	140	68
61	2,4,6-Tribromophenol	329.70	7.941	7.934	(0.922)	87640	180	88
$ 23	Nitrobenzene-d5	82.00	4.694	4.687	(0.874)	1113905	150	77 (R)
41	2-Fluorobiphenyl	172.00	6.448	6.452	(0.905)	1231974	160	79 (R)
72	Terphenyl-d14	244.00	10.252	10.256	(0.899)	631926	150	77 (R)
* 11	1,4-Dichlorobenzene-d4	152.00	4.173	4.177	(1.000)	209393	40	
* 32	Naphthalene-d8	136.00	5.370	5.362	(1.000)	649658	40	
48	Acenaphthene-d10	164.00	7.124	7.128	(1.000)	236553	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.617	8.621	(1.000)	285130	40	
* 76 Chrysene-d12	240.00	11.402	11.406	(1.000)	145319	40	
* 83 Perylene-d12	264.00	13.499	13.503	(1.000)	76080	40	
17 ortho-Cresol	108.00	4.422	4.426	(1.060)	1051008	130	67 (M)
20 meta,para-Cresol	108.00	4.564	4.556	(1.094)	1008650	130	64
96 Benzidine	184.00	10.477	10.481	(0.919)	8624	160	80

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h144ic2.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950524.b/hclpw.m
Misc Info: 950524 STD160

Calibration Date: 05/24/95
Calibration Time: 1537

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	212958	106479	425916	209393	-1.67
32 Naphthalene-d8	774451	387226	1548902	649658	-16.11
48 Acenaphthene-d10	331554	165777	663108	236553	-28.65
65 Phenanthrene-d10	334831	167416	669662	285130	-14.84
76 Chrysene-d12	151179	75590	302358	145319	-3.88
83 Perylene-d12	75826	37913	151652	76080	0.33

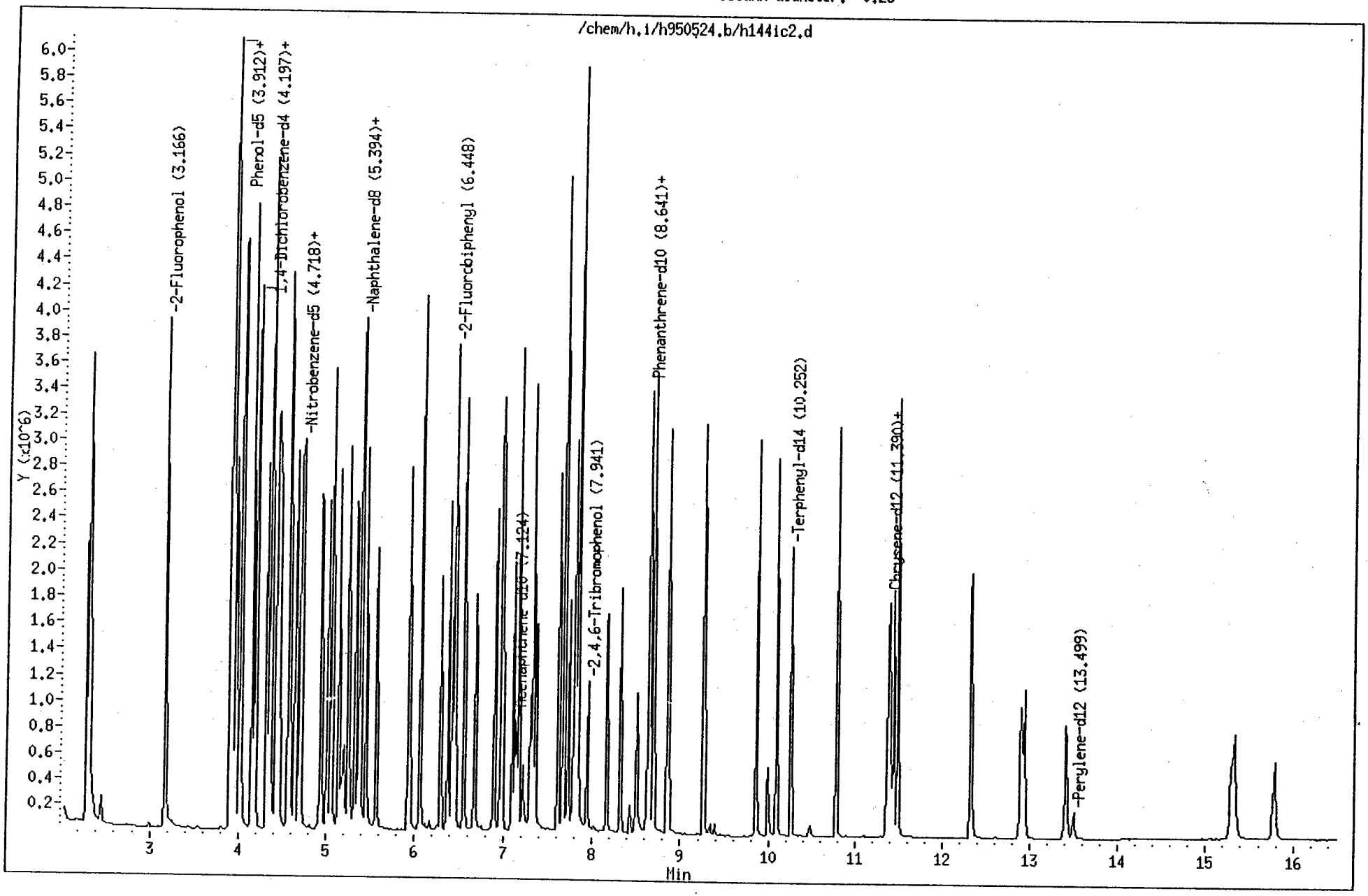
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.18	3.68	4.68	4.17	-0.10
32 Naphthalene-d8	5.36	4.86	5.86	5.37	0.15
48 Acenaphthene-d10	7.13	6.63	7.63	7.12	-0.06
65 Phenanthrene-d10	8.62	8.12	9.12	8.62	-0.05
76 Chrysene-d12	11.41	10.91	11.91	11.40	-0.04
83 Perylene-d12	13.50	13.00	14.00	13.50	-0.03

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.

Data File: /chem/h.i/h950524.b/h144ic2.d
Date : 24-MAY-95 16:03
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 31-MAY-1995 13:39
End Cal Date : 31-MAY-1995 14:03
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950531.b/hclpw.m
Cal Date : 31-May-1995 15:35 liping
Curve Type : Average

Calibration File Names:
Level 1: /chem/h.i/h950531.b/h151ic5.d
Level 2: /chem/h.i/h950531.b/h151ic6.d
Level 3: /chem/h.i/h950531.b/h151ic2.d
Level 4: /chem/h.i/h950531.b/h151ic3.d
Level 5: /chem/h.i/h950531.b/h151ic4.d

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	___ RRF	% RSD
2 Pyridine	2.15151	2.67393	2.17217	3.04416	2.22249	2.45285	16.066
5 Phenol	2.33915	2.37930	2.36229	2.43219	2.04441	2.31147	6.626
6 Aniline	2.63558	2.54699	2.49097	2.67555	2.27990	2.52580	6.153
7 bis(2-Chloroethyl)ether	2.07821	2.19225	2.09453	1.99471	1.87456	2.04685	5.822
9 2-Chlorophenol	1.55022	1.58072	1.56965	1.68807	1.56026	1.58978	3.528
10 1,3-Dichlorobenzene	1.59281	1.61077	1.62950	1.92490	1.61772	1.67514	8.373
12 1,4-Dichlorobenzene	1.51480	1.55694	1.55949	1.97697	1.73974	1.66959	11.528
13 Benzyl alcohol	1.06188	1.06324	0.97582	0.91898	1.00011	1.00401	6.078
15 1,2-Dichlorobenzene	1.45096	1.49635	1.45227	1.67850	1.62388	1.54039	6.789
16 2-Methylphenol	1.47671	1.47865	1.41068	1.35663	1.37342	1.41922	4.005
17 ortho-Cresol	1.47671	1.47865	1.41068	1.35663	1.37342	1.41922	4.005
18 bis(2-chloroisopropyl)ether	3.26501	3.30340	3.29533	3.07415	3.11612	3.21080	3.351
19 4-Methylphenol	1.49280	1.43868	1.41934	1.30771	1.38330	1.40837	4.884
20 meta,para-Cresol	1.49280	1.43868	1.41934	1.30771	1.38330	1.40837	4.884
21 N-Nitroso-di-n-propylamine	1.41141	1.42817	1.45595	1.06088	1.24548	1.32038	12.630
22 Hexachloroethane	0.80664	0.82540	0.79847	0.82400	0.72284	0.79547	5.303
24 Nitrobenzene	0.49541	0.51386	0.50177	0.59441	0.46938	0.51497	9.184
25 Isophorone	0.96748	0.98159	0.96166	0.89132	0.94980	0.95037	3.676
26 2-Nitrophenol	0.16657	0.17519	0.17641	0.21557	0.19228	0.18520	10.447
27 2,4-Dimethylphenol	0.40849	0.42004	0.39848	0.43639	0.38685	0.41005	4.673
28 Benzoic acid	0.06286	0.08197	0.10163	0.11235	0.12405	0.09657	25.253
29 bis(2-Chloroethoxy)methane	0.54333	0.55502	0.53775	0.53731	0.53121	0.54092	1.659
30 2,4-Dichlorophenol	0.25066	0.25904	0.25724	0.26761	0.26725	0.26036	2.754
31 1,2,4-Trichlorobenzene	0.24309	0.25958	0.25254	0.30817	0.26927	0.26653	9.445
33 Naphthalene	1.05002	1.06095	1.05819	1.19659	1.09606	1.09236	5.573
34 4-Chloroaniline	0.41802	0.42710	0.41890	0.42186	0.43591	0.42436	1.736

SPL Houston Labs

INITIAL CALIBRATION DATA

Start Cal Date : 31-MAY-1995 13:39
End Cal Date : 31-MAY-1995 14:03
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950531.b/hclpw.m
Cal Date : 31-May-1995 15:35 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD	
35 Hexachlorobutadiene	0.12544	0.12871	0.11956	0.15286	0.13001	0.13132	9.673	
36 4-Chloro-3-methylphenol	0.33485	0.34522	0.30991	0.30953	0.29824	0.31955	6.141	
37 2-Methylnaphthalene	0.61816	0.63408	0.63802	0.60860	0.68501	0.63678	4.630	
38 Hexachlorocyclopentadiene	0.19362	0.23984	0.23423	0.40845	0.33946	0.28312	31.172	
39 2,4,6-Trichlorophenol	0.26705	0.29193	0.28576	0.35974	0.34732	0.31036	13.113	
40 2,4,5-Trichlorophenol	0.33423	0.35528	0.36827	0.46637	0.32922	0.37067	15.049	
42 2-Chloronaphthalene	1.10043	1.17484	1.12115	1.43021	1.28945	1.22322	11.199	
43 2-Nitroaniline	0.53157	0.57740	0.57611	0.64022	0.55264	0.57559	7.081	
44 Dimethylphthalate	1.39892	1.45112	1.36580	1.37808	1.38898	1.39658	2.355	
45 2,6-Dinitrotoluene	0.29220	0.31689	0.30217	0.33181	0.33320	0.31525	5.722	
46 Acenaphthylene	1.94937	1.98253	2.01486	2.34105	2.00724	2.05901	7.757	
47 3-Nitroaniline	0.37691	0.39281	0.37642	0.41828	0.39386	0.39166	4.356	
49 Acenaphthene	1.15034	1.18298	1.17895	1.31957	1.28191	1.22275	6.012	
50 2,4-Dinitrophenol	+++++	0.02535	0.02108	0.03630	0.05437	0.03427	43.333	<-
51 4-Nitrophenol	0.17668	0.18193	0.19873	0.22435	0.18656	0.19365	9.811	
52 Dibenzofuran	1.53269	1.59715	1.62265	1.80518	1.59436	1.63041	6.327	
53 2,4-Dinitrotoluene	0.34706	0.37898	0.36842	0.37893	0.38631	0.37194	4.114	
54 Diethylphthalate	1.53604	1.56436	1.61287	1.47592	1.41029	1.51990	5.184	
55 4-Chlorophenyl-phenylether	0.47311	0.49111	0.53150	0.53358	0.57406	0.52067	7.604	
56 Fluorene	1.22409	1.28534	1.28035	1.41746	1.26072	1.29360	5.667	
57 4-Nitroaniline	0.34019	0.38940	0.35399	0.39227	0.33410	0.36199	7.547	
58 4,6-Dinitro-2-methylphenol	0.03966	0.06454	0.05428	0.07937	0.10832	0.06924	37.876	
59 n-Nitrosodiphenylamine	0.57810	0.56403	0.59331	0.69488	0.64235	0.61453	8.747	
60 1,2-Diphenylhydrazine	3.56975	3.53401	3.54840	4.35471	3.36663	3.67470	10.575	
62 4-Bromophenyl-phenylether	0.20332	0.20880	0.22351	0.24863	0.26748	0.23035	11.798	
63 Hexachlorobenzene	0.22746	0.22872	0.23442	0.29898	0.26398	0.25071	12.287	
64 Pentachlorophenol	0.04783	0.07990	0.07515	0.07895	0.10017	0.07640	24.498	<-
66 Phenanthrene	1.23726	1.25348	1.27294	1.47911	1.43830	1.33622	8.490	
67 Anthracene	1.23433	1.29377	1.35764	1.47263	1.47746	1.36717	7.879	
68 Carbazole	1.10908	1.15610	1.15091	1.42394	1.23434	1.21487	10.316	
69 Di-n-butylphthalate	2.04983	2.06001	2.25646	2.31749	2.23303	2.18336	5.555	
70 Fluoranthene	1.06025	1.11717	1.12638	1.34490	1.11217	1.15218	9.614	
71 Pyrene	1.58056	1.53324	1.59987	1.76620	1.81108	1.65819	7.391	
73 Butylbenzylphthalate	1.27359	1.24650	1.34652	1.38291	1.27021	1.30395	4.440	

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INITIAL CALIBRATION DATA

Start Cal Date : 31-MAY-1995 13:39
End Cal Date : 31-MAY-1995 14:03
Quant Method : ISTD
Target Version : 3.10
Integrator : HP RTE
Method file : /chem/h.i/h950531.b/hclpw.m
Cal Date : 31-May-1995 15:35 liping
Curve Type : Average

Compound	20 Level 1	50 Level 2	80 Level 3	120 Level 4	160 Level 5	RRF	% RSD
74 3,3'-Dichlorobenzidine	0.42164	0.43850	0.43884	0.53948	0.53335	0.47436	12.040
75 Benzo[a]anthracene	1.20666	1.21635	1.27225	1.48803	1.16056	1.26877	10.155
77 Chrysene	1.05247	1.05830	1.11924	1.27477	1.16056	1.13307	8.030
78 bis(2-Ethylhexyl)phthalate	1.72628	1.65056	1.75661	1.86457	1.63264	1.72613	5.384
79 Di-n-octylphthalate	4.12544	4.26782	4.64371	4.89464	4.51791	4.48990	6.778
80 Benzo[b]fluoranthene	1.77142	1.79959	1.57805	2.07887	1.74267	1.79412	10.085
81 Benzo[k]fluoranthene	1.64142	1.75018	1.97015	1.88960	1.74267	1.79880	7.242
82 Benzo[a]pyrene	1.36072	1.38505	1.36925	1.64164	1.51713	1.45476	8.407
84 Indeno[1,2,3-cd]pyrene	1.38046	1.41488	1.39083	1.66633	1.52999	1.47650	8.243
85 Dibenz[a,h]anthracene	1.16451	1.17729	1.15657	1.39833	1.31913	1.24316	8.800
86 Benzo[g,h,i]perylene	1.14825	1.18291	1.14254	1.34984	1.21552	1.20781	7.008
96 Benzidine	0.61551	0.59042	0.55142	0.65948	0.59060	0.60149	6.602
$ 3 2-Fluorophenol	1.66294	1.62071	1.73258	2.06242	1.58414	1.73256	11.110
$ 4 Phenol-d5	2.17403	2.08100	2.03822	2.19440	1.86383	2.07030	6.387
$ 23 Nitrobenzene-d5	0.46422	0.48031	0.48929	0.58281	0.48585	0.50050	9.392
$ 41 2-Fluorobiphenyl	1.15783	1.23277	1.20232	1.59299	1.27198	1.29158	13.441
$ 61 2,4,6-Tribromophenol	0.08837	0.09956	0.10848	0.12708	0.14017	0.11273	18.521
$ 72 Terphenyl-d14	0.99688	1.00528	1.05873	1.18993	1.17126	1.08442	8.409

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Data file : /chem/h.i/h950531.b/h151ic5.d
Lab Smp Id:
Inj Date : 31-MAY-1995 14:48
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD020
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 6
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	1.990	1.980	(0.523)	158008	16	8
5	Phenol	94.00	3.543	3.545	(0.931)	171788	20	10
6	Aniline	93.00	3.543	3.545	(0.931)	193558	21	10
7	bis(2-Chloroethyl)ether	93.00	3.590	3.592	(0.944)	152625	19	9
9	2-Chlorophenol	128.00	3.649	3.651	(0.959)	113849	20	10
10	1,3-Dichlorobenzene	146.00	3.768	3.770	(0.991)	116977	20	10
12	1,4-Dichlorobenzene	146.00	3.815	3.817	(1.003)	111248	19	10
13	Benzyl alcohol	108.00	3.934	3.936	(1.034)	77985	20	10
15	1,2-Dichlorobenzene	146.00	3.981	3.983	(1.047)	106559	19	10
16	2-Methylphenol	108.00	4.052	4.054	(1.065)	108450	20	10
18	bis(2-chloroisopropyl)ether	45.00	4.076	4.078	(1.072)	239784	20	10
19	4-Methylphenol	108.00	4.183	4.185	(1.100)	109632	21	10
21	N-Nitroso-di-n-propylamine	70.00	4.194	4.196	(1.103)	103655	20	10
22	Hexachloroethane	117.00	4.254	4.256	(1.118)	59240	20	10
24	Nitrobenzene	77.00	4.325	4.327	(0.869)	143073	19	10
25	Isophorone	82.00	4.538	4.552	(0.912)	279407	20	10
26	2-Nitrophenol	139.00	4.633	4.623	(0.931)	48104	19	10(a)
27	2,4-Dimethylphenol	107.00	4.680	4.682	(0.940)	117972	19	10
28	Benzoic acid	122.00	4.775	4.801	(0.960)	18154	15	8(a)
29	bis(2-Chloroethoxy)methane	93.00	4.763	4.765	(0.957)	156914	20	10
30	2,4-Dichlorophenol	162.00	4.858	4.860	(0.976)	72389	19	10
31	1,2,4-Trichlorobenzene	180.00	4.941	4.943	(0.993)	70204	19	9
33	Naphthalene	128.00	4.988	4.990	(1.002)	303245	20	10
34	4-Chloroaniline	127.00	5.059	5.062	(1.017)	120724	20	10
35	Hexachlorobutadiene	225.00	5.178	5.180	(1.040)	36228	19	10
36	4-Chloro-3-methylphenol	107.00	5.557	5.559	(1.117)	96705	19	10
37	2-Methylnaphthalene	142.00	5.664	5.666	(1.138)	178524	19	10
38	Hexachlorocyclopentadiene	237.00	5.901	5.903	(0.877)	26337	16	8
39	2,4,6-Trichlorophenol	196.00	5.984	5.986	(0.889)	36325	18	9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.031	6.021	(0.896)	45463	19	9(a)
	42 2-Chloronaphthalene	162.00	6.150	6.152	(0.914)	149685	19	9
	43 2-Nitroaniline	65.00	6.280	6.282	(0.933)	72306	18	9(a)
	44 Dimethylphthalate	163.00	6.505	6.507	(0.967)	190286	19	10
	45 2,6-Dinitrotoluene	165.00	6.564	6.567	(0.975)	39746	18	9
	46 Acenaphthylene	152.00	6.564	6.567	(0.975)	265160	20	10
	47 3-Nitroaniline	138.00	6.695	6.697	(0.995)	51269	19	10(a)
	49 Acenaphthene	153.00	6.754	6.756	(1.004)	156473	19	10
	51 4-Nitrophenol	109.00	6.908	6.910	(1.026)	24033	19	10(aQM)
	52 Dibenzofuran	168.00	6.920	6.922	(1.028)	208482	19	10
	53 2,4-Dinitrotoluene	165.00	6.956	6.958	(1.033)	47208	18	9
	54 Diethylphthalate	149.00	7.216	7.218	(1.072)	208938	20	10
	55 4-Chlorophenyl-phenylether	204.00	7.275	7.278	(1.081)	64354	19	10
	56 Fluorene	166.00	7.264	7.266	(1.079)	166505	19	10
	57 4-Nitroaniline	138.00	7.311	7.325	(1.086)	46274	17	9(a)
	58 4,6-Dinitro-2-methylphenol	198.00	7.382	7.384	(0.900)	6801	12	6(aM)
	59 n-Nitrosodiphenylamine	169.00	7.394	7.396	(0.902)	99124	20	10
	60 1,2-Diphenylhydrazine	77.00	7.430	7.432	(0.906)	612085	20	10
	62 4-Bromophenyl-phenylether	248.00	7.761	7.763	(0.947)	34862	19	10
	63 Hexachlorobenzene	283.70	7.904	7.906	(0.964)	39002	20	10
	64 Pentachlorophenol	265.50	8.105	8.095	(0.988)	8202	12	6(aM)
	66 Phenanthrene	178.00	8.223	8.226	(1.003)	212146	20	10
	67 Anthracene	178.00	8.271	8.273	(1.009)	211644	19	10
	68 Carbazole	167.00	8.437	8.451	(1.029)	190167	19	10
	69 Di-n-butylphthalate	149.00	8.875	8.877	(1.082)	351473	20	10
	70 Fluoranthene	202.00	9.432	9.434	(1.150)	181796	19	9
	71 Pyrene	202.00	9.657	9.659	(0.885)	186938	21	10
	73 Butylbenzylphthalate	149.00	10.380	10.382	(0.951)	150631	20	10
	74 3,3'-Dichlorobenzidine	252.00	10.890	10.892	(0.998)	49869	19	10
	75 Benzo[a]anthracene	228.00	10.902	10.904	(0.999)	142715	20	10
	77 Chrysene	228.00	10.949	10.951	(1.003)	124479	20	10
	78 bis(2-Ethylhexyl)phthalate	149.00	11.032	11.034	(1.011)	204172	21	10
	79 Di-n-octylphthalate	149.00	11.779	11.781	(0.921)	317442	19	10
	80 Benzo[b]fluoranthene	252.00	12.241	12.243	(0.957)	136306	20	10
	81 Benzo[k]fluoranthene	252.00	12.276	12.278	(0.960)	126303	19	9
	82 Benzo[a]pyrene	252.00	12.703	12.705	(0.994)	104704	20	10
	84 Indeno[1,2,3-cd]pyrene	276.00	14.445	14.447	(1.130)	106223	20	10
	85 Dibenz[a,h]anthracene	278.00	14.480	14.483	(1.133)	89606	20	10
	86 Benzo[g,h,i]perylene	276.00	14.860	14.862	(1.162)	88355	19	10
$	3 2-Fluorophenol	112.00	2.820	2.822	(0.741)	122127	20	10(R)
$	4 Phenol-d5	99.00	3.531	3.533	(0.928)	159662	21	10
$	61 2,4,6-Tribromophenol	329.70	7.536	7.538	(0.919)	15152	18	9
$	23 Nitrobenzene-d5	82.00	4.313	4.315	(0.867)	134065	19	10(R)
$	41 2-Fluorobiphenyl	172.00	6.055	6.057	(0.900)	157492	19	9(R)
$	72 Terphenyl-d14	244.00	9.847	9.849	(0.902)	117904	20	10(R)
*	11 1,4-Dichlorobenzene-d4	152.00	3.803	3.805	(1.000)	146881	40	
*	32 Naphthalene-d8	136.00	4.977	4.979	(1.000)	577597	40	
*	48 Acenaphthene-d10	164.00	6.730	6.721	(1.000)	272047	40	
*	65 Phenanthrene-d10	188.00	8.200	8.202	(1.000)	342929	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 76 Chrysene-d12	240.00	10.914	10.916	(1.000)	236546	40	
* 83 Perylene-d12	264.00	12.786	12.788	(1.000)	153895	40	
17 ortho-Cresol	108.00	4.052	4.054	(1.065)	108450	20	10
20 meta,para-Cresol	108.00	4.183	4.185	(1.100)	109632	21	10
96 Benzidine	184.00	9.574	9.577	(0.877)	72798	21	10

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic5.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD020

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	146881	28.53
32 Naphthalene-d8	440783	220392	881566	577597	31.04
48 Acenaphthene-d10	201424	100712	402848	272047	35.06
65 Phenanthrene-d10	261616	130808	523232	342929	31.08
76 Chrysene-d12	195160	97580	390320	236546	21.21
83 Perylene-d12	123342	61671	246684	153895	24.77

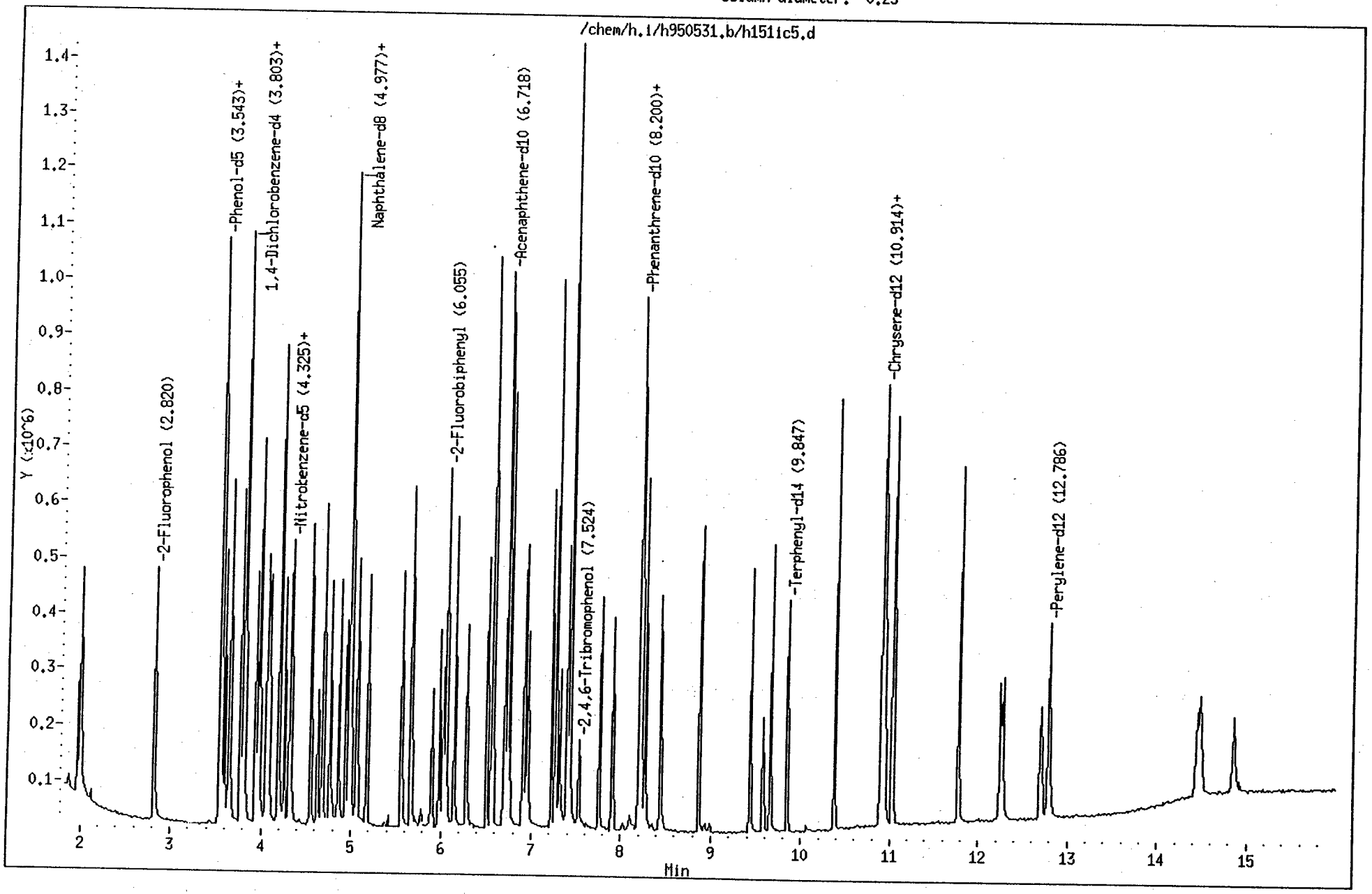
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.05
32 Naphthalene-d8	4.98	4.48	5.48	4.98	-0.04
48 Acenaphthene-d10	6.72	6.22	7.22	6.73	0.15
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	-0.03
76 Chrysene-d12	10.92	10.42	11.42	10.91	-0.02
83 Perylene-d12	12.79	12.29	13.29	12.79	-0.02

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.

Data File: /chem/h.i/h950531.b/h151ic5.d
Date : 31-MAY-95 14:48
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



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Data file : /chem/h.i/h950531.b/h151ic6.d
Lab Smp Id:
Inj Date : 31-MAY-1995 15:09
Operator : LH
Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD050
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping
Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09
Cal File: h151ic6.d
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	1.980	1.980	(0.520)	381957	50	25
5 Phenol	94.00	3.545	3.545	(0.931)	339871	50	25
6 Aniline	93.00	3.545	3.545	(0.931)	363825	50	25
7 bis(2-Chloroethyl)ether	93.00	3.592	3.592	(0.944)	313152	50	25
9 2-Chlorophenol	128.00	3.651	3.651	(0.960)	225798	50	25
10 1,3-Dichlorobenzene	146.00	3.770	3.770	(0.991)	230091	50	25
12 1,4-Dichlorobenzene	146.00	3.817	3.817	(1.003)	222401	50	25
13 Benzyl alcohol	108.00	3.936	3.936	(1.034)	151878	50	25
15 1,2-Dichlorobenzene	146.00	3.983	3.983	(1.047)	213746	50	25
16 2-Methylphenol	108.00	4.054	4.054	(1.065)	211218	50	25
18 bis(2-chloroisopropyl)ether	45.00	4.078	4.078	(1.072)	471874	50	25
19 4-Methylphenol	108.00	4.185	4.185	(1.100)	205508	50	25
21 N-Nitroso-di-n-propylamine	70.00	4.196	4.196	(1.103)	204007	50	25
22 Hexachloroethane	117.00	4.256	4.256	(1.118)	117904	50	25
24 Nitrobenzene	77.00	4.327	4.327	(0.869)	283127	50	25
25 Isophorone	82.00	4.552	4.552	(0.914)	540834	50	25
26 2-Nitrophenol	139.00	4.623	4.623	(0.929)	96524	50	25
27 2,4-Dimethylphenol	107.00	4.682	4.682	(0.940)	231433	50	25
28 Benzoic acid	122.00	4.801	4.801	(0.964)	45166	50	25
29 bis(2-Chloroethoxy)methane	93.00	4.765	4.765	(0.957)	305804	50	25
30 2,4-Dichlorophenol	162.00	4.860	4.860	(0.976)	142725	50	25
31 1,2,4-Trichlorobenzene	180.00	4.943	4.943	(0.993)	143025	50	25
33 Naphthalene	128.00	4.990	4.990	(1.002)	584560	50	25
34 4-Chloroaniline	127.00	5.062	5.062	(1.017)	235323	50	25
35 Hexachlorobutadiene	225.00	5.180	5.180	(1.040)	70919	50	25
36 4-Chloro-3-methylphenol	107.00	5.559	5.559	(1.117)	190207	50	25
37 2-Methylnaphthalene	142.00	5.666	5.666	(1.138)	349367	50	25
38 Hexachlorocyclopentadiene	237.00	5.903	5.903	(0.878)	60387	50	25
39 2,4,6-Trichlorophenol	196.00	5.986	5.986	(0.891)	73501	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.021	6.021	(0.896)	89453	50	25
42	2-Chloronaphthalene	162.00	6.152	6.152	(0.915)	295802	50	25
43	2-Nitroaniline	65.00	6.282	6.282	(0.935)	145379	50	25
44	Dimethylphthalate	163.00	6.507	6.507	(0.968)	365363	50	25
45	2,6-Dinitrotoluene	165.00	6.567	6.567	(0.977)	79786	50	25
46	Acenaphthylene	152.00	6.567	6.567	(0.977)	499162	50	25
47	3-Nitroaniline	138.00	6.697	6.697	(0.996)	98902	50	25
49	Acenaphthene	153.00	6.756	6.756	(1.005)	297851	50	25
50	2,4-Dinitrophenol	184.00	6.815	6.815	(1.014)	6383	50	25 (M)
51	4-Nitrophenol	109.00	6.910	6.910	(1.028)	45806	50	25
52	Dibenzofuran	168.00	6.922	6.922	(1.030)	402130	50	25
53	2,4-Dinitrotoluene	165.00	6.958	6.958	(1.035)	95419	50	25
54	Diethylphthalate	149.00	7.218	7.218	(1.074)	393874	50	25
55	4-Chlorophenyl-phenylether	204.00	7.278	7.278	(1.083)	123652	50	25
56	Fluorene	166.00	7.266	7.266	(1.081)	323624	50	25
57	4-Nitroaniline	138.00	7.325	7.325	(1.090)	98042	50	25
58	4,6-Dinitro-2-methylphenol	198.00	7.384	7.384	(0.900)	21106	50	25 (M)
59	n-Nitrosodiphenylamine	169.00	7.396	7.396	(0.902)	184449	50	25
60	1,2-Diphenylhydrazine	77.00	7.432	7.432	(0.906)	1155693	50	25
62	4-Bromophenyl-phenylether	248.00	7.763	7.763	(0.947)	68283	50	25
63	Hexachlorobenzene	283.70	7.906	7.906	(0.964)	74795	50	25
64	Pentachlorophenol	265.50	8.095	8.095	(0.987)	26129	50	25 (M)
66	Phenanthrene	178.00	8.226	8.226	(1.003)	409912	50	25
67	Anthracene	178.00	8.273	8.273	(1.009)	423089	50	25
68	Carbazole	167.00	8.451	8.451	(1.030)	378067	50	25
69	Di-n-butylphthalate	149.00	8.877	8.877	(1.082)	673666	50	25
70	Fluoranthene	202.00	9.434	9.434	(1.150)	365338	50	25
71	Pyrene	202.00	9.659	9.659	(0.885)	374033	50	25
73	Butylbenzylphthalate	149.00	10.382	10.382	(0.951)	304084	50	25
74	3,3'-Dichlorobenzidine	252.00	10.892	10.892	(0.998)	106972	50	25
75	Benzo[a]anthracene	228.00	10.904	10.904	(0.999)	296729	50	25
77	Chrysene	228.00	10.951	10.951	(1.003)	258173	50	25
78	bis(2-Ethylhexyl)phthalate	149.00	11.034	11.034	(1.011)	402654	50	25
79	Di-n-octylphthalate	149.00	11.781	11.781	(0.921)	658002	50	25
80	Benzo[b]fluoranthene	252.00	12.243	12.243	(0.957)	277456	50	25
81	Benzo[k]fluoranthene	252.00	12.278	12.278	(0.960)	269838	50	25
82	Benzo[a]pyrene	252.00	12.705	12.705	(0.994)	213543	50	25
84	Indeno[1,2,3-cd]pyrene	276.00	14.447	14.447	(1.130)	218143	50	25
85	Dibenz[a,h]anthracene	278.00	14.483	14.483	(1.133)	181511	50	25
86	Benzo[g,h,i]perylene	276.00	14.862	14.862	(1.162)	182378	50	25
$ 3	2-Fluorophenol	112.00	2.822	2.822	(0.742)	231511	50	25
$ 4	Phenol-d5	99.00	3.533	3.533	(0.928)	297261	50	25
$ 61	2,4,6-Tribromophenol	329.70	7.538	7.538	(0.919)	32558	50	25
$ 23	Nitrobenzene-d5	82.00	4.315	4.315	(0.867)	264640	50	25
$ 41	2-Fluorobiphenyl	172.00	6.057	6.057	(0.901)	310387	50	25
$ 72	Terphenyl-d14	244.00	9.849	9.849	(0.902)	245238	50	25
* 11	1,4-Dichlorobenzene-d4	152.00	3.805	3.805	(1.000)	114276	40	
* 32	Naphthalene-d8	136.00	4.979	4.979	(1.000)	440783	40	
* 48	Acenaphthene-d10	164.00	6.721	6.721	(1.000)	201424	40	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
*	65 Phenanthrene-d10	188.00	8.202	8.202	(1.000)	261616	40	
	76 Chrysene-d12	240.00	10.916	10.916	(1.000)	195160	40	
	83 Perylene-d12	264.00	12.788	12.788	(1.000)	123342	40	
	17 ortho-Cresol	108.00	4.054	4.054	(1.065)	211219	50	25
	20 meta,para-Cresol	108.00	4.185	4.185	(1.100)	205508	50	25
	96 Benzidine	184.00	9.577	9.577	(0.877)	144034	50	25

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic6.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD050

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	114276	0.00
32 Naphthalene-d8	440783	220392	881566	440783	0.00
48 Acenaphthene-d10	201424	100712	402848	201424	0.00
65 Phenanthrene-d10	261616	130808	523232	261616	0.00
76 Chrysene-d12	195160	97580	390320	195160	0.00
83 Perylene-d12	123342	61671	246684	123342	0.00

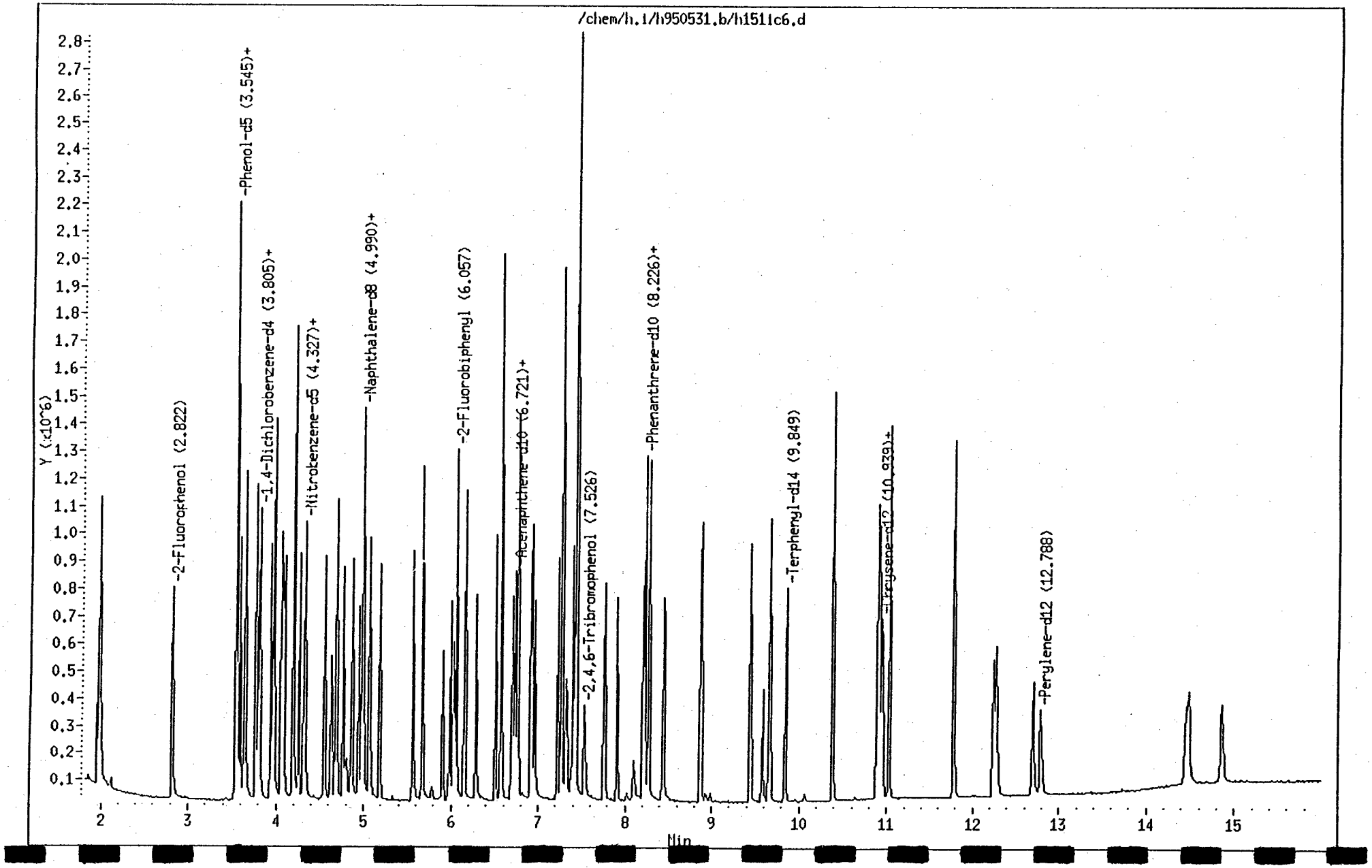
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.81	0.00
32 Naphthalene-d8	4.98	4.48	5.48	4.98	0.00
48 Acenaphthene-d10	6.72	6.22	7.22	6.72	0.00
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	0.00
76 Chrysene-d12	10.92	10.42	11.42	10.92	0.00
83 Perylene-d12	12.79	12.29	13.29	12.79	0.00

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.

Data File: /chem/h.i/h950531.b/h151ic6.d
Date : 31-MAY-95 15:09
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic2.d
Lab Smp Id:
Inj Date : 31-MAY-1995 13:39
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD080
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 3
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	1.994	1.980	(0.524)	415953	65	32
5	Phenol	94.00	3.546	3.545	(0.931)	452360	79	40
6	Aniline	93.00	3.546	3.545	(0.931)	477001	78	39
7	bis(2-Chloroethyl)ether	93.00	3.593	3.592	(0.944)	401085	76	38
9	2-Chlorophenol	128.00	3.653	3.651	(0.960)	300575	79	40
10	1,3-Dichlorobenzene	146.00	3.771	3.770	(0.991)	312036	81	40
12	1,4-Dichlorobenzene	146.00	3.819	3.817	(1.003)	298630	80	40
13	Benzyl alcohol	108.00	3.937	3.936	(1.034)	186862	73	37
15	1,2-Dichlorobenzene	146.00	3.973	3.983	(1.044)	278099	78	39
16	2-Methylphenol	108.00	4.056	4.054	(1.065)	270133	76	38
18	bis(2-chloroisopropyl)ether	45.00	4.079	4.078	(1.072)	631030	80	40
19	4-Methylphenol	108.00	4.186	4.185	(1.100)	271793	79	39
21	N-Nitroso-di-n-propylamine	70.00	4.198	4.196	(1.103)	278803	82	41
22	Hexachloroethane	117.00	4.257	4.256	(1.118)	152901	77	39
24	Nitrobenzene	77.00	4.328	4.327	(0.871)	369220	78	39
25	Isophorone	82.00	4.541	4.552	(0.914)	707619	78	39
26	2-Nitrophenol	139.00	4.624	4.623	(0.931)	129809	80	40
27	2,4-Dimethylphenol	107.00	4.684	4.682	(0.943)	293210	76	38
28	Benzoic acid	122.00	4.802	4.801	(0.967)	74781	99	50
29	bis(2-Chloroethoxy)methane	93.00	4.755	4.765	(0.957)	395688	78	39
30	2,4-Dichlorophenol	162.00	4.861	4.860	(0.979)	189287	79	40
31	1,2,4-Trichlorobenzene	180.00	4.932	4.943	(0.993)	185827	78	39
33	Naphthalene	128.00	4.992	4.990	(1.005)	778645	80	40
34	4-Chloroaniline	127.00	5.063	5.062	(1.019)	308239	78	39
35	Hexachlorobutadiene	225.00	5.181	5.180	(1.043)	87978	74	37
36	4-Chloro-3-methylphenol	107.00	5.561	5.559	(1.119)	228043	72	36
37	2-Methylnaphthalene	142.00	5.667	5.666	(1.141)	469474	80	40
38	Hexachlorocyclopentadiene	237.00	5.904	5.903	(0.878)	76999	78	39
39	2,4,6-Trichlorophenol	196.00	5.975	5.986	(0.889)	93939	78	39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS CN-COLUMN (ng)	FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.023	6.021	(0.896)	121060	83	41
42	2-Chloronaphthalene	162.00	6.141	6.152	(0.914)	368554	76	38
43	2-Nitroaniline	65.00	6.272	6.282	(0.933)	189384	80	40
44	Dimethylphthalate	163.00	6.497	6.507	(0.967)	448981	75	38
45	2,6-Dinitrotoluene	165.00	6.556	6.567	(0.975)	99331	76	38
46	Acenaphthylene	152.00	6.568	6.567	(0.977)	662344	81	41
47	3-Nitroaniline	138.00	6.698	6.697	(0.996)	123741	77	38
49	Acenaphthene	153.00	6.746	6.756	(1.004)	387555	80	40
50	2,4-Dinitrophenol	184.00	6.817	6.815	(1.014)	6928	66	33 (M)
51	4-Nitrophenol	109.00	6.900	6.910	(1.026)	65329	87	44
52	Dibenzofuran	168.00	6.911	6.922	(1.028)	533414	81	41
53	2,4-Dinitrotoluene	165.00	6.947	6.958	(1.033)	121112	78	39
54	Diethylphthalate	149.00	7.220	7.218	(1.074)	530199	82	41
55	4-Chlorophenyl-phenylether	204.00	7.267	7.278	(1.081)	174721	86	43
56	Fluorene	166.00	7.255	7.266	(1.079)	420891	80	40
57	4-Nitroaniline	138.00	7.314	7.325	(1.088)	116367	73	36
58	4,6-Dinitro-2-methylphenol	198.00	7.374	7.384	(0.900)	22333	67	34 (M)
59	n-Nitrosodiphenylamine	169.00	7.397	7.396	(0.903)	244111	84	42
60	1,2-Diphenylhydrazine	77.00	7.421	7.432	(0.906)	1459953	80	40
62	4-Bromophenyl-phenylether	248.00	7.753	7.763	(0.946)	91961	86	43
63	Hexachlorobenzene	283.70	7.895	7.906	(0.964)	96450	82	41
64	Pentachlorophenol	265.50	8.085	8.095	(0.987)	30919	75	38 (M)
66	Phenanthrene	178.00	8.215	8.226	(1.003)	523738	81	41
67	Anthracene	178.00	8.262	8.273	(1.009)	558586	84	42
68	Carbazole	167.00	8.428	8.451	(1.029)	473529	80	40
69	Di-n-butylphthalate	149.00	8.855	8.877	(1.081)	928397	88	44
70	Fluoranthene	202.00	9.412	9.434	(1.149)	463439	81	40
71	Pyrene	202.00	9.637	9.659	(0.888)	469113	83	42
73	Butylbenzylphthalate	149.00	10.336	10.382	(0.952)	394828	86	43
74	3,3'-Dichlorobenzidine	252.00	10.834	10.892	(0.998)	128677	80	40
75	Benzo[a]anthracene	228.00	10.846	10.904	(0.999)	373049	84	42
77	Chrysene	228.00	10.893	10.951	(1.003)	328185	85	42
78	bis(2-Ethylhexyl)phthalate	149.00	10.964	11.034	(1.010)	515072	85	42
79	Di-n-octylphthalate	149.00	11.699	11.781	(0.922)	859115	87	44
80	Benzo[b]fluoranthene	252.00	12.161	12.243	(0.958)	291949	70	35
81	Benzo[k]fluoranthene	252.00	12.197	12.278	(0.961)	364490	90	45
82	Benzo[a]pyrene	252.00	12.611	12.705	(0.993)	253320	79	40
84	Indeno[1,2,3-cd]pyrene	276.00	14.342	14.447	(1.130)	257312	79	39
85	Dibenz[a,h]anthracene	278.00	14.365	14.483	(1.132)	213972	78	39
86	Benzo[g,h,i]perylene	276.00	14.733	14.862	(1.161)	211377	77	39
$ 3	2-Fluorophenol	112.00	2.823	2.822	(0.742)	331776	86	43
$ 4	Phenol-d5	99.00	3.534	3.533	(0.928)	390302	78	39
$ 61	2,4,6-Tribromophenol	329.70	7.528	7.538	(0.919)	44633	87	44
$ 23	Nitrobenzene-d5	82.00	4.304	4.315	(0.866)	360033	81	41
$ 41	2-Fluorobiphenyl	172.00	6.058	6.057	(0.901)	395240	78	39
$ 72	Terphenyl-d14	244.00	9.815	9.849	(0.904)	310442	84	42
* 11	1,4-Dichlorobenzene-d4	152.00	3.807	3.805	(1.000)	95746	40	
* 32	Naphthalene-d8	136.00	4.968	4.979	(1.000)	367914	40	
* 48	Acenaphthene-d10	164.00	6.722	6.721	(1.000)	164365	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.191	8.202	(1.000)	205720	40	
* 76 Chrysene-d12	240.00	10.858	10.916	(1.000)	146610	40	
* 83 Perylene-d12	264.00	12.694	12.788	(1.000)	92503	40	
17 ortho-Cresol	108.00	4.056	4.054	(1.065)	270133	76	38
20 meta,para-Cresol	108.00	4.186	4.185	(1.100)	271793	79	39
96 Benzidine	184.00	9.542	9.577	(0.879)	161688	75	37

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic2.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD080

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	95746	-16.22
32 Naphthalene-d8	440783	220392	881566	367914	-16.53
48 Acenaphthene-d10	201424	100712	402848	164365	-18.40
65 Phenanthrene-d10	261616	130808	523232	205720	-21.37
76 Chrysene-d12	195160	97580	390320	146610	-24.88
83 Perylene-d12	123342	61671	246684	92503	-25.00

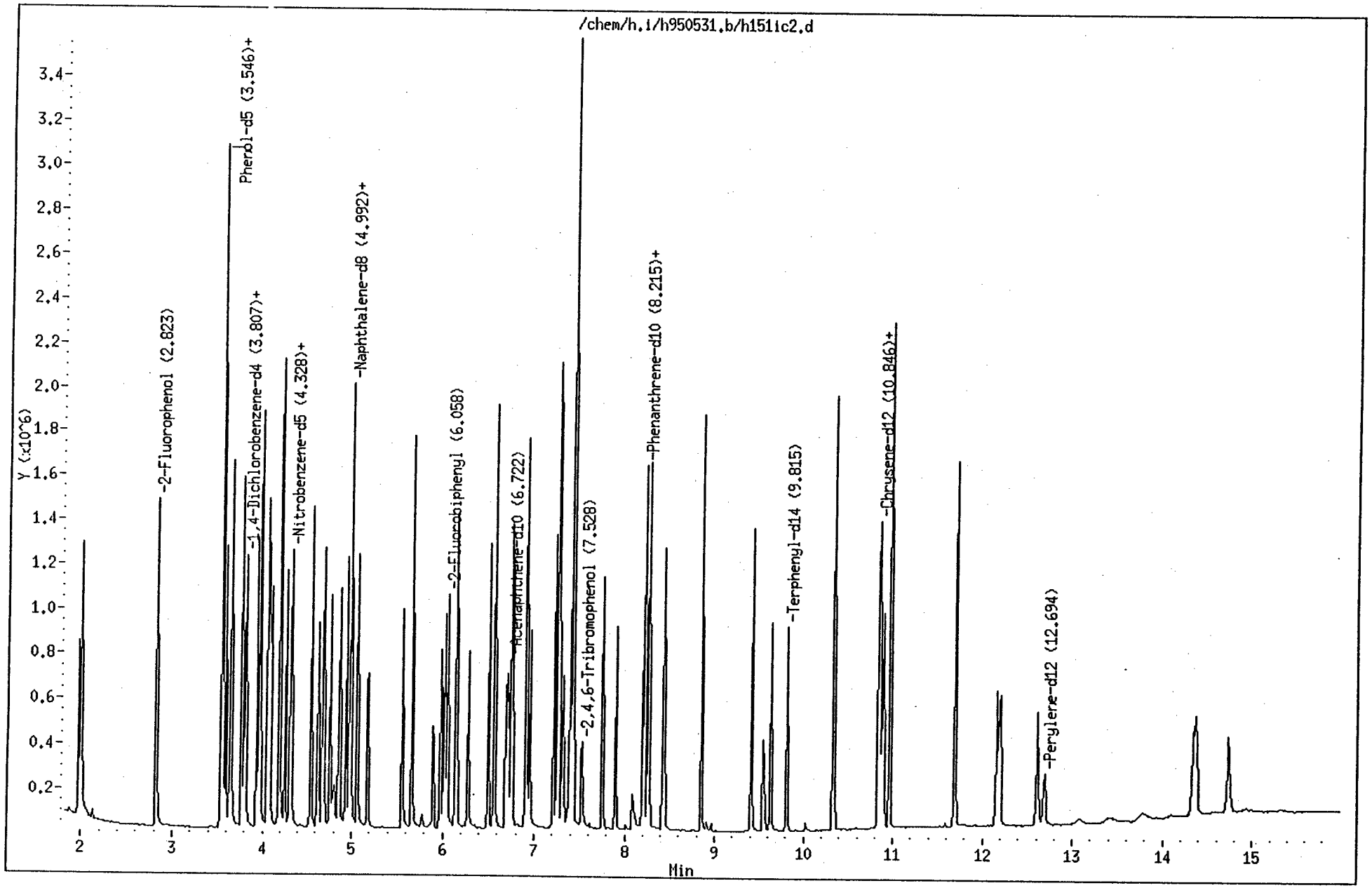
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.81	0.03
32 Naphthalene-d8	4.98	4.48	5.48	4.97	-0.21
48 Acenaphthene-d10	6.72	6.22	7.22	6.72	0.02
65 Phenanthrene-d10	8.20	7.70	8.70	8.19	-0.13
76 Chrysene-d12	10.92	10.42	11.42	10.86	-0.53
83 Perylene-d12	12.79	12.29	13.29	12.69	-0.73

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.

Data File: /chem/h.i/h950531.b/h151ic2.d
Date : 31-MAY-95 13:39
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic3.d
Lab Smp Id:
Inj Date : 31-MAY-1995 14:03
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD120
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 4
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2	Pyridine	79.00	1.977	1.980	(0.520)	1448925	140	68
5	Phenol	94.00	3.553	3.545	(0.935)	1157643	120	61
6	Aniline	93.00	3.553	3.545	(0.935)	1273478	130	63
7	bis(2-Chloroethyl)ether	93.00	3.601	3.592	(0.947)	949420	110	54
9	2-Chlorophenol	128.00	3.648	3.651	(0.959)	803467	130	64
10	1,3-Dichlorobenzene	146.00	3.767	3.770	(0.991)	916193	140	72
12	1,4-Dichlorobenzene	146.00	3.814	3.817	(1.003)	940975	150	76
13	Benzyl alcohol	108.00	3.933	3.936	(1.034)	437407	100	52
15	1,2-Dichlorobenzene	146.00	3.980	3.983	(1.047)	798912	130	67
16	2-Methylphenol	108.00	4.051	4.054	(1.065)	645711	110	55
18	bis(2-chloroisopropyl)ether	45.00	4.087	4.078	(1.075)	1463198	110	56
19	4-Methylphenol	108.00	4.193	4.185	(1.103)	622430	110	54
21	N-Nitroso-di-n-propylamine	70.00	4.193	4.196	(1.103)	504947	89	44
22	Hexachloroethane	117.00	4.253	4.256	(1.118)	392199	120	60
24	Nitrobenzene	77.00	4.324	4.327	(0.871)	827718	140	69
25	Isophorone	82.00	4.549	4.552	(0.916)	1241155	110	54
26	2-Nitrophenol	139.00	4.620	4.623	(0.931)	300185	150	74
27	2,4-Dimethylphenol	107.00	4.679	4.682	(0.943)	607678	120	62
28	Benzoic acid	122.00	4.821	4.801	(0.971)	156445	160	82(M)
29	bis(2-Chloroethoxy)methane	93.00	4.750	4.765	(0.957)	748207	120	58
30	2,4-Dichlorophenol	162.00	4.857	4.860	(0.979)	372649	120	62
31	1,2,4-Trichlorobenzene	180.00	4.928	4.943	(0.993)	429131	140	71
33	Naphthalene	128.00	4.987	4.990	(1.005)	1666?9	140	68
34	4-Chloroaniline	127.00	5.058	5.062	(1.019)	587433	120	59
35	Hexachlorobutadiene	225.00	5.165	5.180	(1.041)	212862	140	71
36	4-Chloro-3-methylphenol	107.00	5.544	5.559	(1.117)	431022	110	54
37	2-Methylnaphthalene	142.00	5.651	5.666	(1.138)	847470	120	58
38	Hexachlorocyclopentadiene	237.00	5.888	5.903	(0.878)	177232	200	100
39	2,4,6-Trichlorophenol	196.00	5.971	5.986	(0.890)	156095	150	74

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
	40 2,4,5-Trichlorophenol	196.00	6.006	6.021	(0.896)	202363	160	79
	42 2-Chloronaphthalene	162.00	6.137	6.152	(0.915)	620589	150	73
	43 2-Nitroaniline	65.00	6.267	6.282	(0.935)	277799	130	66
	44 Dimethylphthalate	163.00	6.480	6.507	(0.966)	597970	110	57
	45 2,6-Dinitrotoluene	165.00	6.540	6.567	(0.975)	143979	120	63
	46 Acenaphthylene	152.00	6.551	6.567	(0.977)	1015816	140	71
	47 3-Nitroaniline	138.00	6.682	6.697	(0.996)	181497	130	64
	49 Acenaphthene	153.00	6.729	6.756	(1.004)	572581	130	67
	50 2,4-Dinitrophenol	184.00	6.788	6.815	(1.012)	15749	170	86 (QM)
	51 4-Nitrophenol	109.00	6.883	6.910	(1.026)	97350	150	74
	52 Dibenzofuran	168.00	6.895	6.922	(1.028)	783292	140	68
	53 2,4-Dinitrotoluene	165.00	6.931	6.958	(1.034)	164423	120	60
	54 Diethylphthalate	149.00	7.191	7.218	(1.072)	640423	110	57
	55 4-Chlorophenyl-phenylether	204.00	7.239	7.278	(1.080)	231529	130	65
	56 Fluorene	166.00	7.239	7.266	(1.080)	615057	130	66
	57 4-Nitroaniline	138.00	7.298	7.325	(1.088)	170213	120	60
	58 4,6-Dinitro-2-methylphenol	198.00	7.357	7.384	(0.900)	36225	150	74 (M)
	59 n-Nitrosodiphenylamine	169.00	7.369	7.396	(0.901)	317129	150	74
	60 1,2-Diphenylhydrazine	77.00	7.405	7.432	(0.906)	1987407	150	74
	62 4-Bromophenyl-phenylether	248.00	7.725	7.763	(0.945)	113468	140	71
	63 Hexachlorobenzene	283.70	7.879	7.906	(0.964)	136449	160	78
	64 Pentachlorophenol	265.50	8.068	8.095	(0.987)	36030	120	59 (M)
	66 Phenanthrene	178.00	8.199	8.226	(1.003)	675036	140	71 (M)
	67 Anthracene	178.00	8.234	8.273	(1.007)	672079	140	68
	68 Carbazole	167.00	8.412	8.451	(1.029)	649857	150	74
	69 Di-n-butylphthalate	149.00	8.827	8.877	(1.080)	1057657	130	67
	70 Fluoranthene	202.00	9.396	9.434	(1.149)	613788	140	72
	71 Pyrene	202.00	9.621	9.659	(0.886)	637426	140	69
	73 Butylbenzylphthalate	149.00	10.332	10.382	(0.952)	499095	130	66
	74 3,3'-Dichlorobenzidine	252.00	10.829	10.892	(0.998)	194700	150	74
	75 Benzo[a]anthracene	228.00	10.841	10.904	(0.999)	537034	150	73
	77 Chrysene	228.00	10.889	10.951	(1.003)	460067	140	72
	78 bis(2-Ethylhexyl)phthalate	149.00	10.960	11.034	(1.010)	672930	140	68
	79 Di-n-octylphthalate	149.00	11.695	11.781	(0.922)	1145478	140	69
	80 Benzo[b]fluoranthene	252.00	12.157	12.243	(0.958)	486511	140	69
	81 Benzo[k]fluoranthene	252.00	12.192	12.278	(0.961)	442217	130	65
	82 Benzo[a]pyrene	252.00	12.607	12.705	(0.993)	384187	140	71
	84 Indeno[1,2,3-cd]pyrene	276.00	14.337	14.447	(1.130)	389966	140	71
	85 Dibenz[a,h]anthracene	278.00	14.373	14.483	(1.133)	327246	140	71
	86 Benzo[g,h,i]perylene	276.00	14.740	14.862	(1.162)	315900	140	68
$	3 2-Fluorophenol	112.00	2.819	2.822	(0.741)	981645	150	76
$	4 Phenol-d5	99.00	3.542	3.533	(0.931)	1044464	130	63
$	61 2,4,6-Tribromophenol	329.70	7.500	7.538	(0.917)	57995	150	76
$	23 Nitrobenzene-d5	82.00	4.312	4.315	(0.869)	811562	140	73 (R)
$	41 2-Fluorobiphenyl	172.00	6.042	6.057	(0.901)	691219	160	78 (R)
$	72 Terphenyl-d14	244.00	9.798	9.849	(0.903)	429449	140	71 (R)
*	11 1,4-Dichlorobenzene-d4	152.00	3.802	3.805	(1.000)	158656	40	
*	32 Naphthalene-d8	136.00	4.964	4.979	(1.000)	464166	40	
*	48 Acenaphthene-d10	164.00	6.706	6.721	(1.000)	144638	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.175	8.202	(1.000)	152127	40	
* 76 Chrysene-d12	240.00	10.853	10.916	(1.000)	120301	40	
* 83 Perylene-d12	264.00	12.690	12.788	(1.000)	78009	40	
17 ortho-Cresol	108.00	4.051	4.054	(1.065)	645711	110	55
20 meta,para-Cresol	108.00	4.193	4.185	(1.103)	622430	110	54
96 Benzidine	184.00	9.538	9.577	(0.879)	238007	130	67

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic3.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD120

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	158656	38.84
32 Naphthalene-d8	440783	220392	881566	464166	5.30
48 Acenaphthene-d10	201424	100712	402848	144638	-28.19
65 Phenanthrene-d10	261616	130808	523232	152127	-41.85
76 Chrysene-d12	195160	97580	390320	120301	-38.36
83 Perylene-d12	123342	61671	246684	78009	-36.75

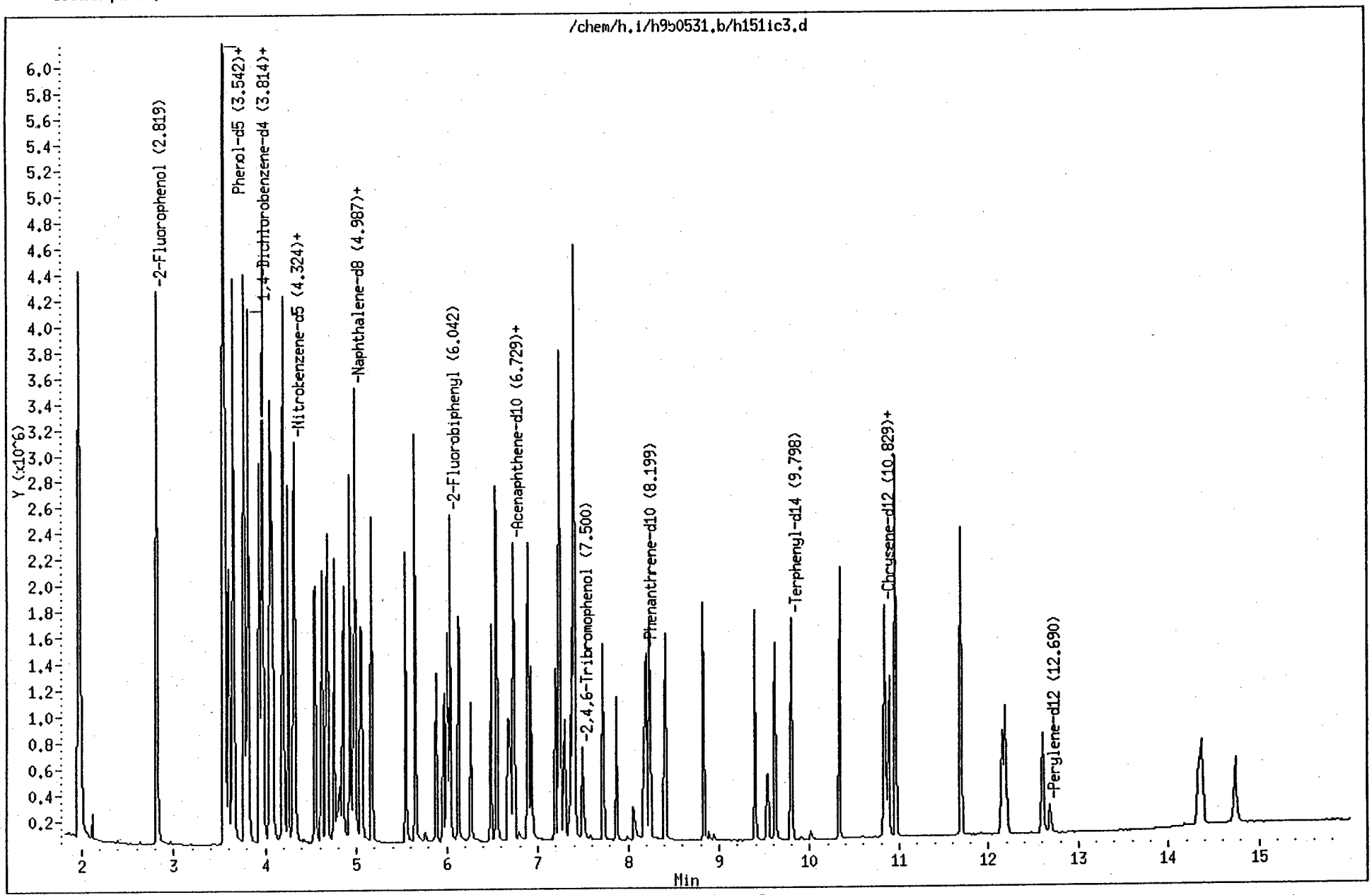
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.08
32 Naphthalene-d8	4.98	4.48	5.48	4.96	-0.30
48 Acenaphthene-d10	6.72	6.22	7.22	6.71	-0.22
65 Phenanthrene-d10	8.20	7.70	8.70	8.17	-0.33
76 Chrysene-d12	10.92	10.42	11.42	10.85	-0.57
83 Perylene-d12	12.79	12.29	13.29	12.69	-0.77

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.

Data File: /chem/h.i/h950531.b/h151ic3.d
Date : 31-MAY-95 14:03
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic4.d
Lab Smp Id:
Inj Date : 31-MAY-1995 14:26
Operator : LH Inst ID: h.i
Smp Info : STD-8270W/1X
Misc Info : 950531 STD160
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping Quant Type: ISTD
Cal Date : 31-MAY-1995 15:09 Cal File: h151ic6.d
Als bottle: 5
Dil Factor: 1.000
Integrator: HP RTE Compound Sublist: std.sub
Target Version: 3.10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
2 Pyridine	79.00	1.978	1.980	(0.520)	1770116	130	66
5 Phenol	94.00	3.554	3.545	(0.935)	1628285	140	69
6 Aniline	93.00	3.554	3.545	(0.935)	1815840	140	72
7 bis(2-Chloroethyl)ether	93.00	3.601	3.592	(0.947)	1493001	140	68
9 2-Chlorophenol	128.00	3.661	3.651	(0.963)	1242681	160	79
10 1,3-Dichlorobenzene	146.00	3.767	3.770	(0.991)	1288440	160	80
12 1,4-Dichlorobenzene	146.00	3.815	3.817	(1.003)	1385625	180	89
13 Benzyl alcohol	108.00	3.945	3.936	(1.037)	796541	150	75
15 1,2-Dichlorobenzene	146.00	3.981	3.983	(1.047)	1293350	170	87
16 2-Methylphenol	108.00	4.064	4.054	(1.069)	1093871	150	74
18 bis(2-chloroisopropyl)ether	45.00	4.075	4.078	(1.072)	2481850	150	75
19 4-Methylphenol	108.00	4.194	4.185	(1.103)	1101739	150	77
21 N-Nitroso-di-n-propylamine	70.00	4.206	4.196	(1.106)	991970	140	70
22 Hexachloroethane	117.00	4.253	4.256	(1.118)	575708	140	70
24 Nitrobenzene	77.00	4.324	4.327	(0.871)	1382695	150	73
25 Isophorone	82.00	4.549	4.552	(0.916)	2797873	150	77
26 2-Nitrophenol	139.00	4.620	4.623	(0.931)	566401	180	88
27 2,4-Dimethylphenol	107.00	4.680	4.682	(0.943)	1139556	150	74
28 Benzoic acid	122.00	4.857	4.801	(0.979)	365421	240	120(M)
29 bis(2-Chloroethoxy)methane	93.00	4.763	4.765	(0.959)	1564817	150	76
30 2,4-Dichlorophenol	162.00	4.857	4.860	(0.979)	787253	160	82
31 1,2,4-Trichlorobenzene	180.00	4.929	4.943	(0.993)	793200	160	83
33 Naphthalene	128.00	4.988	4.990	(1.005)	3228741	160	83
34 4-Chloroaniline	127.00	5.059	5.062	(1.019)	1284076	160	82
35 Hexachlorobutadiene	225.00	5.166	5.180	(1.041)	382991	160	81
36 4-Chloro-3-methylphenol	107.00	5.545	5.559	(1.117)	878549	140	69
37 2-Methylnaphthalene	142.00	5.663	5.666	(1.141)	2017891	170	86
38 Hexachlorocyclopentadiene	237.00	5.888	5.903	(0.878)	436411	230	110
39 2,4,6-Trichlorophenol	196.00	5.971	5.986	(0.890)	446516	190	95

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.019	6.021	(0.897)	423243	150	74
42	2-Chloronaphthalene	162.00	6.137	6.152	(0.915)	1657720	180	88
43	2-Nitroaniline	65.00	6.268	6.282	(0.935)	710475	150	76
44	Dimethylphthalate	163.00	6.493	6.507	(0.968)	1785673	150	76
45	2,6-Dinitrotoluene	165.00	6.552	6.567	(0.977)	428364	170	84(Q)
46	Acenaphthylene	152.00	6.552	6.567	(0.977)	2580517	160	81
47	3-Nitroaniline	138.00	6.694	6.697	(0.998)	506352	160	80
49	Acenaphthene	153.00	6.742	6.756	(1.005)	1648029	170	87
50	2,4-Dinitrophenol	184.00	6.801	6.815	(1.014)	69896	340	170(QM)
51	4-Nitrophenol	109.00	6.884	6.910	(1.026)	239846	160	82
52	Dibenzofuran	168.00	6.896	6.922	(1.028)	2049719	160	80
53	2,4-Dinitrotoluene	165.00	6.943	6.958	(1.035)	496648	160	82
54	Diethylphthalate	149.00	7.204	7.218	(1.074)	1813072	140	72
55	4-Chlorophenyl-phenylether	204.00	7.251	7.278	(1.081)	738019	190	94
56	Fluorene	166.00	7.239	7.266	(1.079)	1620793	160	78
57	4-Nitroaniline	138.00	7.311	7.325	(1.090)	429522	140	69
58	4,6-Dinitro-2-methylphenol	198.00	7.370	7.384	(0.901)	152927	270	130(M)
59	n-Nitrosodiphenylamine	169.00	7.382	7.396	(0.903)	906859	180	91
60	1,2-Diphenylhydrazine	77.00	7.417	7.432	(0.907)	4752929	150	76
62	4-Bromophenyl-phenylether	248.00	7.737	7.763	(0.946)	377620	200	100
63	Hexachlorobenzene	283.70	7.879	7.906	(0.964)	372680	180	92
64	Pentachlorophenol	265.50	8.069	8.095	(0.987)	141415	200	100(M)
66	Phenanthrene	178.00	8.199	8.226	(1.003)	2030552	180	92
67	Anthracene	178.00	8.247	8.273	(1.009)	2085842	180	91
68	Carbazole	167.00	8.413	8.451	(1.029)	1742614	170	85
69	Di-n-butylphthalate	149.00	8.839	8.877	(1.081)	3152542	170	87
70	Fluoranthene	202.00	9.396	9.434	(1.149)	1570134	160	80
71	Pyrene	202.00	9.621	9.659	(0.885)	1612220	190	94
73	Butylbenzylphthalate	149.00	10.332	10.382	(0.951)	1130735	160	82
74	3,3'-Dichlorobenzidine	252.00	10.842	10.892	(0.998)	474785	190	97
75	Benzo[a]anthracene	228.00	10.889	10.904	(1.002)	1033122	150	76
77	Chrysene	228.00	10.889	10.951	(1.002)	1033122	180	88
78	bis(2-Ethylhexyl)phthalate	149.00	10.960	11.034	(1.009)	1453374	160	79
79	Di-n-octylphthalate	149.00	11.695	11.781	(0.922)	2323993	170	85
80	Benzo[b]fluoranthene	252.00	12.169	12.243	(0.959)	896425	150	77
81	Benzo[k]fluoranthene	252.00	12.169	12.278	(0.959)	896425	160	80
82	Benzo[a]pyrene	252.00	12.619	12.705	(0.994)	780408	180	88
84	Indeno[1,2,3-cd]pyrene	276.00	14.350	14.447	(1.131)	787019	170	86
85	Dibenz[a,h]anthracene	278.00	14.385	14.483	(1.134)	678554	180	90
86	Benzo[g,h,i]perylene	276.00	14.752	14.862	(1.162)	625258	160	82
$ 3	2-Fluorophenol	112.00	2.819	2.822	(0.741)	1261695	160	78
$ 4	Phenol-d5	99.00	3.542	3.533	(0.931)	1484456	140	72
$ 61	2,4,6-Tribromophenol	329.70	7.512	7.538	(0.919)	197885	220	110(R)
$ 23	Nitrobenzene-d5	82.00	4.312	4.317	(0.869)	1431210	160	81(R)
$ 41	2-Fluorobiphenyl	172.00	6.043	6.057	(0.901)	1635257	160	82(R)
$ 72	Terphenyl-d14	244.00	9.799	9.849	(0.902)	1042653	190	93(R)
* 11	1,4-Dichlorobenzene-d4	152.00	3.803	3.805	(1.000)	199114	40	
* 32	Naphthalene-d8	136.00	4.964	4.979	(1.000)	736441	40	
* 48	Acenaphthene-d10	164.00	6.706	6.721	(1.000)	321401	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.176	8.202	(1.000)	352944	40	
* 76 Chrysene-d12	240.00	10.866	10.916	(1.000)	222549	40	
* 83 Perylene-d12	264.00	12.691	12.788	(1.000)	128599	40	
17 ortho-Cresol	108.00	4.064	4.054	(1.069)	1093871	150	74
20 meta,para-Cresol	108.00	4.194	4.185	(1.103)	1101739	150	77
96 Benzidine	184.00	9.538	9.577	(0.878)	525753	160	80

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic4.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD160

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	199114	74.24
32 Naphthalene-d8	440783	220392	881566	736441	67.08
48 Acenaphthene-d10	201424	100712	402848	321401	59.56
65 Phenanthrene-d10	261616	130808	523232	352944	34.91
76 Chrysene-d12	195160	97580	390320	222549	14.03
83 Perylene-d12	123342	61671	246684	128599	4.26

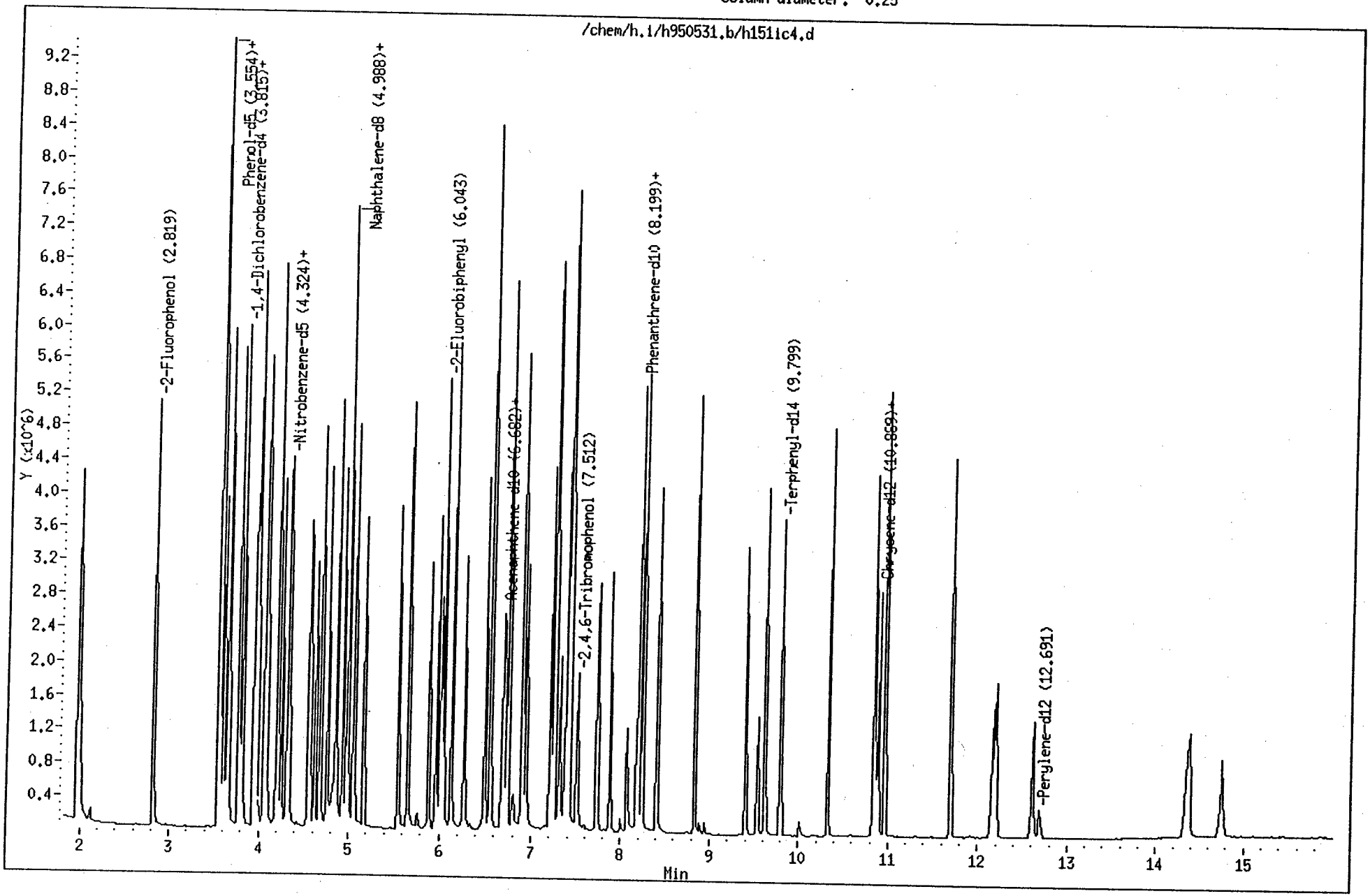
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.80	-0.07
32 Naphthalene-d8	4.98	4.48	5.48	4.96	-0.29
48 Acenaphthene-d10	6.72	6.22	7.22	6.71	-0.22
65 Phenanthrene-d10	8.20	7.70	8.70	8.18	-0.32
76 Chrysene-d12	10.92	10.42	11.42	10.87	-0.46
83 Perylene-d12	12.79	12.29	13.29	12.69	-0.76

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.

Data File: /chem/h.i/h950531.b/h151ic4.d
Date : 31-MAY-95 14:26
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h146cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 26-MAY-1995 13:43
Init. Calibration Date(s): 05/24/95 05/24/95
Init. Calibration Times: 15:37 17:27
Method File: /chem/h.i/h950526.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
2	Pyridine	2.247	1.860	0.010	17.2	40.0
5	Phenol	2.191	1.962	0.800	10.5	25.0
6	Aniline	2.148	1.839	0.010	14.4	40.0
7	bis(2-Chloroethyl)ether	1.915	1.667	0.700	12.9	25.0
9	2-Chlorophenol	1.478	1.499	0.800	1.4	25.0
10	1,3-Dichlorobenzene	1.567	1.578	0.600	0.7	25.0
12	1,4-Dichlorobenzene	1.574	1.566	0.500	0.5	25.0
13	Benzyl alcohol	0.864	0.957	0.010	10.7	40.0
15	1,2-Dichlorobenzene	1.414	1.383	0.400	2.2	25.0
16	2-Methylphenol	1.441	1.379	0.700	4.3	25.0
18	bis(2-chloroisopropyl)ether	2.543	1.367	0.010	46.2	100.0
19	4-Methylphenol	1.373	1.288	0.600	6.2	25.0
21	N-Nitroso-di-n-propylamine	1.069	0.795	0.500	25.6	25.0
22	Hexachloroethane	0.680	0.663	0.300	2.5	25.0
24	Nitrobenzene	0.441	0.365	0.200	17.3	25.0
25	Isophorone	0.851	0.739	0.400	13.2	25.0
26	2-Nitrophenol	0.205	0.237	0.100	16.1	25.0
27	2,4-Dimethylphenol	0.379	0.404	0.200	6.5	25.0
28	Benzoic acid	0.093	0.203	0.010	118.5	100.0
29	bis(2-Chloroethoxy)methane	0.520	0.434	0.300	16.5	25.0
30	2,4-Dichlorophenol	0.249	0.277	0.200	11.1	25.0
31	1,2,4-Trichlorobenzene	0.261	0.274	0.200	5.2	25.0
33	Naphthalene	1.067	1.026	0.700	3.8	25.0
34	4-Chloroaniline	0.375	0.397	0.010	6.0	40.0
35	Hexachlorobutadiene	0.109	0.129	0.010	17.9	40.0
36	4-Chloro-3-methylphenol	0.294	0.298	0.200	1.5	25.0
37	2-Methylnaphthalene	0.601	0.605	0.400	0.7	25.0
38	Hexachlorocyclopentadiene	0.249	0.273	0.010	9.6	40.0
39	2,4,6-Trichlorophenol	0.317	0.372	0.200	17.3	25.0
40	2,4,5-Trichlorophenol	0.367	0.382	0.200	4.1	25.0
42	2-Chloronaphthalene	1.209	1.251	0.800	3.5	25.0
43	2-Nitroaniline	0.489	0.363	0.010	25.7	40.0
44	Dimethylphthalate	1.391	1.371	0.010	1.4	40.0
45	2,6-Dinitrotoluene	0.342	0.356	0.200	4.4	25.0
46	Acenaphthylene	2.038	2.030	1.300	0.4	25.0
47	3-Nitroaniline	0.381	0.356	0.010	6.7	40.0
49	Acenaphthene	1.213	1.174	0.800	3.2	25.0
50	2,4-Dinitrophenol	0.086	0.116	0.010	34.9	40.0
51	4-Nitrophenol	0.144	0.152	0.010	5.1	40.0
52	Dibenzofuran	1.574	1.514	0.800	3.8	25.0

SPL Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h146cc1.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 26-MAY-1995 13:43
Init. Calibration Date(s): 05/24/95 05/24/95
Init. Calibration Times: 15:37 17:27
Method File: /chem/h.i/h950526.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	53 2,4-Dinitrotoluene	0.421	0.406	0.200	3.6	25.0
	54 Diethylphthalate	1.464	1.367	0.010	6.6	40.0
	55 4-Chlorophenyl-phenylether	0.487	0.425	0.400	12.7	25.0
	56 Fluorene	1.188	0.990	0.900	16.6	25.0
	57 4-Nitroaniline	0.348	0.271	0.010	21.9	40.0
	58 4,6-Dinitro-2-methylphenol	0.136	0.173	0.010	27.6	40.0
	59 n-Nitrosodiphenylamine	0.620	0.638	0.010	2.9	40.0
	60 1,2-Diphenylhydrazine	2.948	2.261	0.010	23.3	40.0
	62 4-Bromophenyl-phenylether	0.187	0.214	0.100	14.5	25.0
	63 Hexachlorobenzene	0.182	0.206	0.100	13.1	25.0
	64 Pentachlorophenol	0.085	0.098	0.050	15.0	25.0
	66 Phenanthrene	1.332	1.238	0.700	7.1	25.0
	67 Anthracene	1.249	1.134	0.700	9.2	25.0
	68 Carbazole	1.152	0.977	0.010	15.2	40.0
	69 Di-n-butylphthalate	2.115	1.802	0.010	14.8	40.0
	70 Fluoranthene	1.015	0.825	0.600	18.7	25.0
	71 Pyrene	2.081	1.913	0.600	8.1	25.0
	73 Butylbenzylphthalate	1.430	1.398	0.010	2.3	40.0
	74 3,3'-Dichlorobenzidine	0.385	0.420	0.010	9.1	40.0
	75 Benzo[a]anthracene	1.281	1.317	0.800	2.8	25.0
	77 Chrysene	1.159	1.114	0.700	3.9	25.0
	78 bis(2-Ethylhexyl)phthalate	1.996	1.802	0.010	9.7	40.0
	79 Di-n-octylphthalate	5.917	4.725	0.010	20.2	40.0
	80 Benzo[b]fluoranthene	1.916	1.791	0.700	6.5	25.0
	81 Benzo[k]fluoranthene	1.963	1.787	0.700	8.9	25.0
	82 Benzo[a]pyrene	1.540	1.397	0.700	9.3	25.0
	84 Indeno[1,2,3-cd]pyrene	1.337	1.276	0.500	4.5	25.0
	85 Dibenz[a,h]anthracene	1.096	1.080	0.400	1.4	25.0
	86 Benzo[g,h,i]perylene	1.083	1.056	0.500	2.5	25.0
$	3 2-Fluorophenol	1.562	1.799	0.600	15.2	25.0
$	4 Phenol-d5	1.994	1.853	0.800	7.0	25.0
$	61 2,4,6-Tribromophenol	0.070	0.096	0.010	37.1	40.0
$	23 Nitrobenzene-d5	0.443	0.388	0.200	12.4	25.0
$	41 2-Fluorobiphenyl	1.310	1.396	0.700	6.6	25.0
$	72 Terphenyl-d14	1.108	1.122	0.500	1.3	25.0
	17 ortho-Cresol	1.433	1.379	0.700	3.8	25.0
	20 meta,para-Cresol	1.373	1.288	0.600	6.2	25.0
	96 Benzidine	0.016	0.019	0.010	20.2	40.0

SPL Houston Labs

Data file : /chem/h.i/h950526.b/h146cc1.d
Lab Smp Id:
Inj Date : 26-MAY-1995 13:43
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950526 STD050
Comment :
Method : /chem/h.i/h950526.b/hclpw.m
Meth Date : 26-May-1995 14:06 liping
Cal Date : 26-MAY-1995 13:43
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h146cc1.d
Continuing Calibration Sample

Compound Sublist: std.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
2	Pyridine	79.00	2.220	2.220	(0.544)	577494	50	41
5	Phenol	94.00	3.819	3.819	(0.936)	609090	50	45
6	Aniline	93.00	3.819	3.819	(0.936)	570875	50	43 (M)
7	bis(2-Chloroethyl)ether	93.00	3.855	3.855	(0.945)	517675	50	44
9	2-Chlorophenol	128.00	3.926	3.926	(0.962)	465309	50	51
10	1,3-Dichlorobenzene	146.00	4.044	4.044	(0.991)	490052	50	50
12	1,4-Dichlorobenzene	146.00	4.092	4.092	(1.003)	486142	50	50
13	Benzyl alcohol	108.00	4.210	4.210	(1.032)	297173	50	55
15	1,2-Dichlorobenzene	146.00	4.258	4.258	(1.044)	429401	50	49
16	2-Methylphenol	108.00	4.341	4.341	(1.064)	428127	50	48
18	bis(2-chloroisopropyl)ether	45.00	4.341	4.341	(1.064)	424486	50	27
19	4-Methylphenol	108.00	4.471	4.471	(1.096)	399851	50	47
21	N-Nitroso-di-n-propylamine	70.00	4.471	4.471	(1.096)	246914	50	37
22	Hexachloroethane	117.00	4.530	4.530	(1.110)	205780	50	49
24	Nitrobenzene	77.00	4.613	4.613	(0.876)	385216	50	41
25	Isophorone	82.00	4.827	4.827	(0.917)	779888	50	43
26	2-Nitrophenol	139.00	4.910	4.910	(0.932)	250721	50	58
27	2,4-Dimethylphenol	107.00	4.957	4.957	(0.941)	426043	50	53
28	Benzoic acid	122.00	5.111	5.111	(0.971)	214739	50	110
29	bis(2-Chloroethoxy)methane	93.00	5.028	5.028	(0.955)	458503	50	42
30	2,4-Dichlorophenol	162.00	5.158	5.158	(0.980)	292089	50	56
31	1,2,4-Trichlorobenzene	180.00	5.218	5.218	(0.991)	289467	50	52
33	Naphthalene	128.00	5.277	5.277	(1.002)	1083554	50	48
34	4-Chloroaniline	127.00	5.348	5.348	(1.016)	419391	50	53
35	Hexachlorobutadiene	225.00	5.455	5.455	(1.036)	135906	50	59
36	4-Chloro-3-methylphenol	107.00	5.846	5.846	(1.110)	314876	50	51
37	2-Methylnaphthalene	142.00	5.964	5.964	(1.133)	639156	50	50
38	Hexachlorocyclopentadiene	237.00	6.189	6.189	(0.882)	108292	50	55
39	2,4,6-Trichlorophenol	196.00	6.272	6.272	(0.894)	147579	50	59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)
40	2,4,5-Trichlorophenol	196.00	6.332	6.332	(0.902)	151302	50	52
42	2-Chloronaphthalene	162.00	6.438	6.438	(0.917)	495864	50	52
43	2-Nitroaniline	65.00	6.569	6.569	(0.936)	143834	50	37(a)
44	Dimethylphthalate	163.00	6.782	6.782	(0.966)	543378	50	49
45	2,6-Dinitrotoluene	165.00	6.853	6.853	(0.976)	141261	50	52
46	Acenaphthylene	152.00	6.865	6.865	(0.978)	804551	50	50
47	3-Nitroaniline	138.00	6.995	6.995	(0.997)	140946	50	47(a)
49	Acenaphthene	153.00	7.054	7.054	(1.005)	465417	50	48
50	2,4-Dinitrophenol	184.00	7.114	7.114	(1.014)	45824	50	67(M)
51	4-Nitrophenol	109.00	7.220	7.220	(1.029)	60095	50	52
52	Dibenzofuran	168.00	7.208	7.208	(1.027)	599973	50	48
53	2,4-Dinitrotoluene	165.00	7.256	7.256	(1.034)	160779	50	48
54	Diethylphthalate	149.00	7.505	7.505	(1.069)	541836	50	47
55	4-Chlorophenyl-phenylether	204.00	7.564	7.564	(1.078)	168476	50	44
56	Fluorene	166.00	7.564	7.564	(1.078)	392442	50	42
57	4-Nitroaniline	138.00	7.623	7.623	(1.086)	107553	50	39(a)
58	4,6-Dinitro-2-methylphenol	198.00	7.683	7.683	(0.898)	70161	50	64
59	n-Nitrosodiphenylamine	169.00	7.694	7.694	(0.899)	258230	50	51
60	1,2-Diphenylhydrazine	77.00	7.718	7.718	(0.902)	914727	50	38
62	4-Bromophenyl-phenylether	248.00	8.050	8.050	(0.940)	86646	50	57
63	Hexachlorobenzene	283.70	8.216	8.216	(0.960)	83228	50	56
64	Pentachlorophenol	265.50	8.405	8.405	(0.987)	39459	50	58(M)
66	Phenanthrene	178.00	8.536	8.536	(1.003)	500860	50	46(M)
67	Anthracene	178.00	8.583	8.583	(1.003)	458643	50	45
68	Carbazole	167.00	8.749	8.749	(1.022)	395170	50	42
69	Di-n-butylphthalate	149.00	9.152	9.152	(1.069)	728896	50	43
70	Fluoranthene	202.00	9.744	9.744	(1.138)	333862	50	41
71	Pyrene	202.00	9.981	9.981	(0.885)	324258	50	46
73	Butylbenzylphthalate	149.00	10.669	10.669	(0.946)	236973	50	49
74	3,3'-Dichlorobenzidine	252.00	11.238	11.238	(0.997)	71185	50	54
75	Benzo[a]anthracene	228.00	11.261	11.261	(0.999)	223306	50	51(M)
77	Chrysene	228.00	11.309	11.309	(1.003)	188823	50	48
78	bis(2-Ethylhexyl)phthalate	149.00	11.356	11.356	(1.007)	305476	50	45
79	Di-n-octylphthalate	149.00	12.162	12.162	(0.913)	441289	50	40
80	Benzo[b]fluoranthene	252.00	12.731	12.731	(0.956)	167281	50	47
81	Benzo[k]fluoranthene	252.00	12.766	12.766	(0.958)	166945	50	46
82	Benzo[a]pyrene	252.00	13.228	13.228	(0.993)	130489	50	45
84	Indeno[1,2,3-cd]pyrene	276.00	15.089	15.089	(1.133)	119186	50	48
85	Dibenz[a,h]anthracene	278.00	15.113	15.113	(1.134)	100897	50	49
86	Benzo[g,h,i]perylene	276.00	15.551	15.551	(1.167)	98648	50	49
$ 3	2-Fluorophenol	112.00	3.085	3.085	(0.756)	558461	50	58
$ 4	Phenol-d5	99.00	3.807	3.807	(0.933)	575406	50	46
$ 61	2,4,6-Tribromophenol	329.70	7.837	7.837	(0.916)	38656	50	68
$ 23	Nitrobenzene-d5	82.00	4.590	4.590	(0.872)	410068	50	44
$ 41	2-Fluorobiphenyl	172.00	6.343	6.343	(0.904)	553246	50	53
$ 72	Terphenyl-d14	244.00	10.147	10.147	(0.900)	190256	50	51
* 11	1,4-Dichlorobenzene-d4	152.00	4.080	4.080	(1.000)	248407	40	
* 32	Naphthalene-d8	136.00	5.265	5.265	(1.000)	844661	40	
* 48	Acenaphthene-d10	164.00	7.019	7.019	(1.000)	317019	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng)	ON-COL (ng)	
* 65 Phenanthrene-d10	188.00	8.512	8.512	(1.000)	323627	40		(M)
* 76 Chrysene-d12	240.00	11.273	11.273	(1.000)	135631	40		
* 83 Perylene-d12	264.00	13.323	13.323	(1.000)	74718	40		
17 ortho-Cresol	108.00	4.341	4.341	(1.064)	428127	50	48	
20 meta,para-Cresol	108.00	4.471	4.471	(1.096)	399851	50	47	
96 Benzidine	184.00	10.373	10.373	(0.920)	3303	50	50	(M)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h146cc1.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950526.b/hclps.m
Misc Info: 950526 STD050

Calibration Date: 05/26/95
Calibration Time: 1343

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	248407	124204	496814	248407	0.00
32 Naphthalene-d8	844661	422330	1689322	844661	0.00
48 Acenaphthene-d10	317019	158510	634038	317019	0.00
65 Phenanthrene-d10	323627	161814	647254	323627	0.00
76 Chrysene-d12	135631	67816	271262	135631	0.00
83 Perylene-d12	74718	37359	149436	74718	0.00

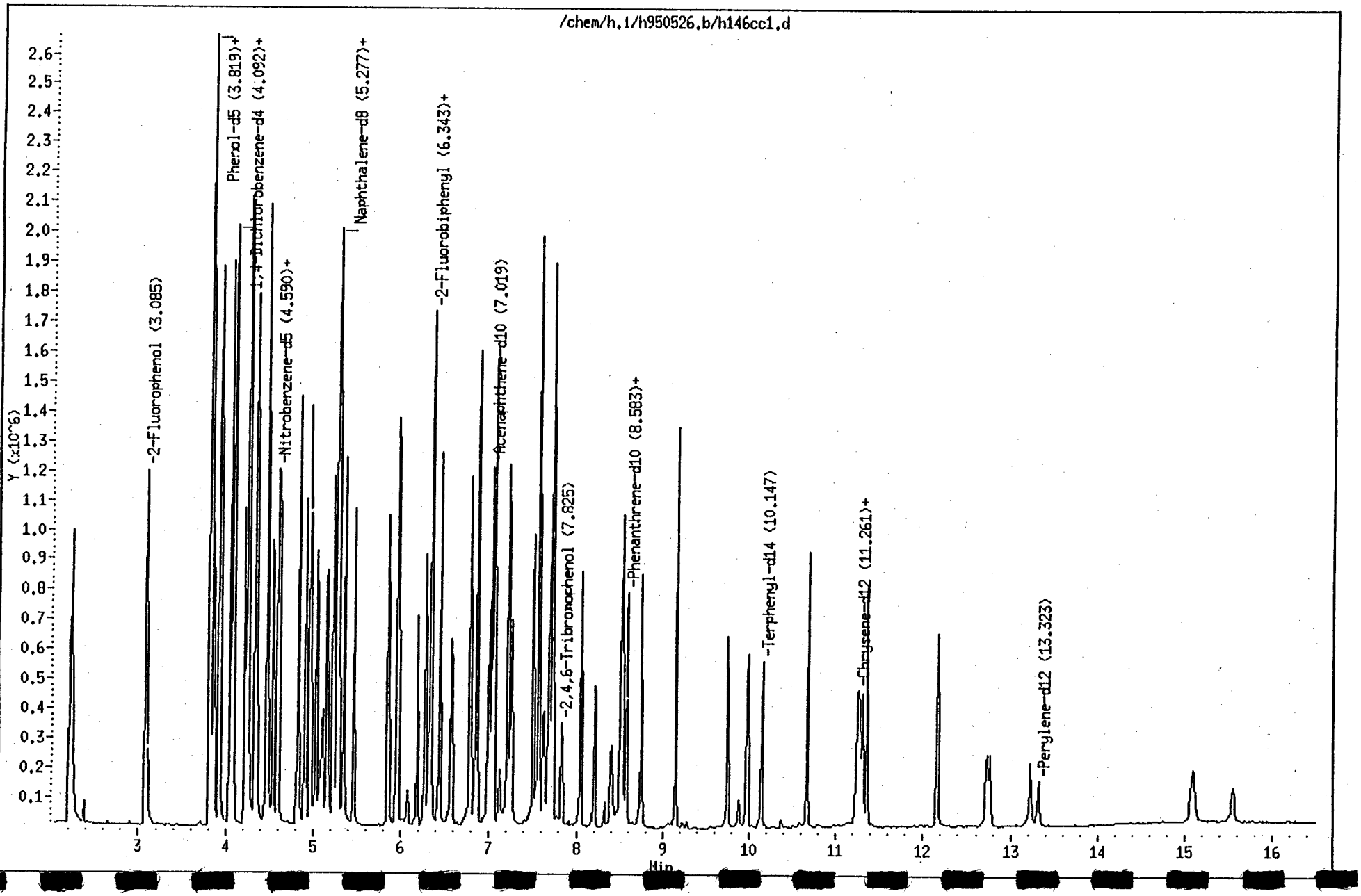
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	4.08	3.58	4.58	4.08	0.00
32 Naphthalene-d8	5.27	4.77	5.77	5.27	0.00
48 Acenaphthene-d10	7.02	6.52	7.52	7.02	0.00
65 Phenanthrene-d10	8.51	8.01	9.01	8.51	0.00
76 Chrysene-d12	11.27	10.77	11.77	11.27	0.00
83 Perylene-d12	13.32	12.82	13.82	13.32	0.00

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.

Data File: /chem/h.i/h950526.b/h146cc1.d
Date : 26-MAY-95 13:43
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



Data File: /chem/h.i/h950531.b/h151ic6.d
Report Date: 03-Jun-1995 17:22

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h151ic6.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 31-MAY-1995 15:09
Init. Calibration Date(s): 05/31/95 05/31/95
Init. Calibration Times: 13:39 14:03
Method File: /chem/h.i/h950531.b/hclpw.m

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
2 Pyridine	2.453	2.674	0.010	9.0	40.0
5 Phenol	2.311	2.379	0.800	2.9	25.0
6 Aniline	2.526	2.547	0.010	0.8	40.0
7 bis(2-Chloroethyl)ether	2.047	2.192	0.700	7.1	25.0
9 2-Chlorophenol	1.590	1.581	0.800	0.6	25.0
10 1,3-Dichlorobenzene	1.675	1.611	0.600	3.8	25.0
12 1,4-Dichlorobenzene	1.670	1.557	0.500	6.7	25.0
13 Benzyl alcohol	1.004	1.063	0.010	5.9	40.0
15 1,2-Dichlorobenzene	1.540	1.496	0.400	2.9	25.0
16 2-Methylphenol	1.419	1.479	0.700	4.2	25.0
18 bis(2-chloroisopropyl)ether	3.211	3.303	0.010	2.9	40.0
19 4-Methylphenol	1.408	1.439	0.600	2.2	25.0
21 N-Nitroso-di-n-propylamine	1.320	1.428	0.500	8.2	25.0
22 Hexachloroethane	0.795	0.825	0.300	3.8	25.0
24 Nitrobenzene	0.515	0.514	0.200	0.2	25.0
25 Isophorone	0.950	0.982	0.400	3.3	25.0
26 2-Nitrophenol	0.185	0.175	0.100	5.4	25.0
27 2,4-Dimethylphenol	0.410	0.420	0.200	2.4	25.0
28 Benzoic acid	0.097	0.082	0.010	15.1	40.0
29 bis(2-Chloroethoxy)methane	0.541	0.555	0.300	2.6	25.0
30 2,4-Dichlorophenol	0.260	0.259	0.200	0.5	25.0
31 1,2,4-Trichlorobenzene	0.267	0.260	0.200	2.6	25.0
33 Naphthalene	1.092	1.061	0.700	2.9	25.0
34 4-Chloroaniline	0.424	0.427	0.010	0.6	40.0
35 Hexachlorobutadiene	0.131	0.129	0.010	2.0	40.0
36 4-Chloro-3-methylphenol	0.320	0.345	0.200	8.0	25.0
37 2-Methylnaphthalene	0.637	0.634	0.400	0.4	25.0
38 Hexachlorocyclopentadiene	0.283	0.240	0.010	15.3	40.0
39 2,4,6-Trichlorophenol	0.310	0.292	0.200	5.9	25.0
40 2,4,5-Trichlorophenol	0.371	0.355	0.200	4.2	25.0
42 2-Chloronaphthalene	1.223	1.175	0.800	4.0	25.0
43 2-Nitroaniline	0.576	0.577	0.010	0.3	40.0
44 Dimethylphthalate	1.397	1.451	0.010	3.9	40.0
45 2,6-Dinitrotoluene	0.315	0.317	0.200	0.5	25.0
46 Acenaphthylene	2.059	1.983	1.300	3.7	25.0
47 3-Nitroaniline	0.392	0.393	0.010	0.3	40.0
49 Acenaphthene	1.223	1.183	0.800	3.3	25.0
50 2,4-Dinitrophenol	0.034	0.025	0.010	26.0	40.0
51 4-Nitrophenol	0.194	0.182	0.010	6.1	40.0
52 Dibenzofuran	1.630	1.597	0.800	2.0	25.0

SPL Houston Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: h.i
Lab File ID: h151ic6.d
Analysis Type: WATER
Lab Sample ID:
Quant Type: ISTD

Injection Date: 31-MAY-1995 15:09
Init. Calibration Date(s): 05/31/95 05/31/95
Init. Calibration Times: 13:39 14:03
Method File: /chem/h.i/h950531.b/hclpw.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	53 2,4-Dinitrotoluene	0.372	0.379	0.200	1.9	25.0
	54 Diethylphthalate	1.520	1.564	0.010	2.9	40.0
	55 4-Chlorophenyl-phenylether	0.521	0.491	0.400	5.7	25.0
	56 Fluorene	1.294	1.285	0.900	0.6	25.0
	57 4-Nitroaniline	0.362	0.389	0.010	7.6	40.0
	58 4,6-Dinitro-2-methylphenol	0.069	0.065	0.010	6.8	100.0
	59 n-Nitrosodiphenylamine	0.615	0.564	0.010	8.2	40.0
	60 1,2-Diphenylhydrazine	3.675	3.534	0.010	3.8	40.0
	62 4-Bromophenyl-phenylether	0.230	0.209	0.100	9.4	25.0
	63 Hexachlorobenzene	0.251	0.229	0.100	8.8	25.0
	64 Pentachlorophenol	0.076	0.080	0.050	4.6	25.0
	66 Phenanthrene	1.336	1.253	0.700	6.2	25.0
	67 Anthracene	1.367	1.294	0.700	5.4	25.0
	68 Carbazole	1.215	1.156	0.010	4.8	40.0
	69 Di-n-butylphthalate	2.183	2.060	0.010	5.6	40.0
	70 Fluoranthene	1.152	1.117	0.600	3.0	25.0
	71 Pyrene	1.658	1.533	0.600	7.5	25.0
	73 Butylbenzylphthalate	1.304	1.247	0.010	4.4	40.0
	74 3,3'-Dichlorobenzidine	0.474	0.438	0.010	7.6	40.0
	75 Benzo[a]anthracene	1.269	1.216	0.800	4.1	25.0
	77 Chrysene	1.133	1.058	0.700	6.6	25.0
	78 bis(2-Ethylhexyl)phthalate	1.726	1.651	0.010	4.4	40.0
	79 Di-n-octylphthalate	4.490	4.268	0.010	4.9	100.0
	80 Benzo[b]fluoranthene	1.794	1.800	0.700	0.3	25.0
	81 Benzo[k]fluoranthene	1.799	1.750	0.700	2.7	25.0
	82 Benzo[a]pyrene	1.455	1.385	0.700	4.8	25.0
	84 Indeno[1,2,3-cd]pyrene	1.476	1.415	0.500	4.2	25.0
	85 Dibenz[a,h]anthracene	1.243	1.177	0.400	5.3	25.0
	86 Benzo[g,h,i]perylene	1.208	1.183	0.500	2.1	25.0
$	3 2-Fluorophenol	1.733	1.621	0.600	6.5	25.0
$	4 Phenol-d5	2.070	2.081	0.800	0.5	25.0
$	61 2,4,6-Tribromophenol	0.113	0.100	0.010	11.7	40.0
$	23 Nitrobenzene-d5	0.500	0.480	0.200	4.0	25.0
$	41 2-Fluorobiphenyl	1.292	1.233	0.700	4.6	25.0
$	72 Terphenyl-d14	1.084	1.005	0.500	7.3	25.0
	17 ortho-Cresol	1.419	1.479	0.700	4.2	25.0
	20 meta,para-Cresol	1.408	1.439	0.600	2.2	25.0
	96 Benzidine	0.601	0.590	0.010	1.8	40.0

SPL Houston Labs

Data file : /chem/h.i/h950531.b/h151ic6.d
Lab Smp Id:
Inj Date : 31-MAY-1995 15:09
Operator : LH
Smp Info : STD-8270W/1X
Misc Info : 950531 STD050
Comment :
Method : /chem/h.i/h950531.b/hclpw.m
Meth Date : 31-May-1995 16:05 liping
Cal Date : 31-MAY-1995 15:09
Als bottle: 2
Dil Factor: 1.000
Integrator: HP RTE
Target Version: 3.10

Inst ID: h.i

Quant Type: ISTD
Cal File: h151ic6.d

Compound Sublist: std.sub

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
2 Pyridine	79.00	1.980	1.980	(0.520)	381957	50	25
5 Phenol	94.00	3.545	3.545	(0.931)	339871	50	25
6 Aniline	93.00	3.545	3.545	(0.931)	363825	50	25
7 bis(2-Chloroethyl)ether	93.00	3.592	3.592	(0.944)	313152	50	25
9 2-Chlorophenol	128.00	3.651	3.651	(0.960)	225798	50	25
10 1,3-Dichlorobenzene	146.00	3.770	3.770	(0.991)	230091	50	25
12 1,4-Dichlorobenzene	146.00	3.817	3.817	(1.003)	222401	50	25
13 Benzyl alcohol	108.00	3.936	3.936	(1.034)	151878	50	25
15 1,2-Dichlorobenzene	146.00	3.983	3.983	(1.047)	213746	50	25
16 2-Methylphenol	108.00	4.054	4.054	(1.065)	211218	50	25
18 bis(2-chloroisopropyl)ether	45.00	4.078	4.078	(1.072)	471874	50	25
19 4-Methylphenol	108.00	4.185	4.185	(1.100)	205508	50	25
21 N-Nitroso-di-n-propylamine	70.00	4.196	4.196	(1.103)	204007	50	25
22 Hexachloroethane	117.00	4.256	4.256	(1.118)	117904	50	25
24 Nitrobenzene	77.00	4.327	4.327	(0.869)	283127	50	25
25 Isophorone	82.00	4.552	4.552	(0.914)	540834	50	25
26 2-Nitrophenol	139.00	4.623	4.623	(0.929)	96524	50	25
27 2,4-Dimethylphenol	107.00	4.682	4.682	(0.940)	231433	50	25
28 Benzoic acid	122.00	4.801	4.801	(0.964)	45166	50	25
29 bis(2-Chloroethoxy)methane	93.00	4.765	4.765	(0.957)	305804	50	25
30 2,4-Dichlorophenol	162.00	4.860	4.860	(0.976)	142725	50	25
31 1,2,4-Trichlorobenzene	180.00	4.943	4.943	(0.993)	143025	50	25
33 Naphthalene	128.00	4.990	4.990	(1.002)	584560	50	25
34 4-Chloroaniline	127.00	5.062	5.062	(1.017)	235323	50	25
35 Hexachlorobutadiene	225.00	5.180	5.180	(1.040)	70919	50	25
36 4-Chloro-3-methylphenol	107.00	5.559	5.559	(1.117)	190207	50	25
37 2-Methylnaphthalene	142.00	5.666	5.666	(1.138)	349367	50	25
38 Hexachlorocyclopentadiene	237.00	5.903	5.903	(0.878)	60387	50	25
39 2,4,6-Trichlorophenol	196.00	5.986	5.986	(0.891)	73501	50	25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
40	2,4,5-Trichlorophenol	196.00	6.021	6.021	(0.896)	89453	50	25
42	2-Chloronaphthalene	162.00	6.152	6.152	(0.915)	295802	50	25
43	2-Nitroaniline	65.00	6.282	6.282	(0.935)	145379	50	25
44	Dimethylphthalate	163.00	6.507	6.507	(0.968)	365363	50	25
45	2,6-Dinitrotoluene	165.00	6.567	6.567	(0.977)	79786	50	25
46	Acenaphthylene	152.00	6.567	6.567	(0.977)	499162	50	25
47	3-Nitroaniline	138.00	6.697	6.697	(0.996)	98902	50	25
49	Acenaphthene	153.00	6.756	6.756	(1.005)	297851	50	25
50	2,4-Dinitrophenol	184.00	6.815	6.815	(1.014)	6383	50	25 (M)
51	4-Nitrophenol	109.00	6.910	6.910	(1.028)	45806	50	25
52	Dibenzofuran	168.00	6.922	6.922	(1.030)	402130	50	25
53	2,4-Dinitrotoluene	165.00	6.958	6.958	(1.035)	95419	50	25
54	Diethylphthalate	149.00	7.218	7.218	(1.074)	393874	50	25
55	4-Chlorophenyl-phenylether	204.00	7.278	7.278	(1.083)	123652	50	25
56	Fluorene	166.00	7.266	7.266	(1.081)	323624	50	25
57	4-Nitroaniline	138.00	7.325	7.325	(1.090)	98042	50	25
58	4,6-Dinitro-2-methylphenol	198.00	7.384	7.384	(0.900)	21106	50	25 (M)
59	n-Nitrosodiphenylamine	169.00	7.396	7.396	(0.902)	184449	50	25
60	1,2-Diphenylhydrazine	77.00	7.432	7.432	(0.906)	1155693	50	25
62	4-Bromophenyl-phenylether	248.00	7.763	7.763	(0.947)	68283	50	25
63	Hexachlorobenzene	283.70	7.906	7.906	(0.964)	74795	50	25
64	Pentachlorophenol	265.50	8.095	8.095	(0.987)	26129	50	25 (M)
66	Phenanthrene	178.00	8.226	8.226	(1.003)	409912	50	25
67	Anthracene	178.00	8.273	8.273	(1.009)	423089	50	25
68	Carbazole	167.00	8.451	8.451	(1.030)	378067	50	25
69	Di-n-butylphthalate	149.00	8.877	8.877	(1.082)	673666	50	25
70	Fluoranthene	202.00	9.434	9.434	(1.150)	365338	50	25
71	Pyrene	202.00	9.659	9.659	(0.885)	374033	50	25
73	Butylbenzylphthalate	149.00	10.382	10.382	(0.951)	304084	50	25
74	3,3'-Dichlorobenzidine	252.00	10.892	10.892	(0.998)	106972	50	25
75	Benzo[a]anthracene	228.00	10.904	10.904	(0.999)	296729	50	25
77	Chrysene	228.00	10.951	10.951	(1.003)	258173	50	25
78	bis(2-Ethylhexyl)phthalate	149.00	11.034	11.034	(1.011)	402654	50	25
79	Di-n-octylphthalate	149.00	11.781	11.781	(0.921)	658002	50	25
80	Benzo[b]fluoranthene	252.00	12.243	12.243	(0.957)	277456	50	25
81	Benzo[k]fluoranthene	252.00	12.278	12.278	(0.960)	269838	50	25
82	Benzo[a]pyrene	252.00	12.705	12.705	(0.994)	213543	50	25
84	Indeno[1,2,3-cd]pyrene	276.00	14.447	14.447	(1.130)	218143	50	25
85	Dibenz[a,h]anthracene	278.00	14.483	14.483	(1.133)	181511	50	25
86	Benzo[g,h,i]perylene	276.00	14.862	14.862	(1.162)	182378	50	25
$ 3	2-Fluorophenol	112.00	2.822	2.822	(0.742)	231511	50	25
$ 4	Phenol-d5	99.00	3.533	3.533	(0.928)	297261	50	25
$ 61	2,4,6-Tribromophenol	329.70	7.538	7.538	(0.919)	32558	50	25
$ 23	Nitrobenzene-d5	82.00	4.315	4.315	(0.867)	264640	50	25
$ 41	2-Fluorobiphenyl	172.00	6.057	6.057	(0.901)	310387	50	25
$ 72	Terphenyl-d14	244.00	9.849	9.849	(0.902)	245238	50	25
* 11	1,4-Dichlorobenzene-d4	152.00	3.805	3.805	(1.000)	114276	40	
* 32	Naphthalene-d8	136.00	4.979	4.979	(1.000)	440783	40	
* 48	Acenaphthene-d10	164.00	6.721	6.721	(1.000)	201424	40	

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	CONCENTRATIONS FINAL (ug/L)
* 65 Phenanthrene-d10	188.00	8.202	8.202	(1.000)	261616	40	
* 76 Chrysene-d12	240.00	10.916	10.916	(1.000)	195160	40	
* 83 Perylene-d12	264.00	12.788	12.788	(1.000)	123342	40	
17 ortho-Cresol	108.00	4.054	4.054	(1.065)	211218	50	25
20 meta,para-Cresol	108.00	4.185	4.185	(1.100)	205508	50	25
96 Benzidine	184.00	9.577	9.577	(0.877)	144034	50	25

QC Flag Legend

M - Compound response manually integrated.

SPL Houston Labs

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: h.i
Lab File ID: h151ic6.d
Lab Smp Id:
Analysis Type: SV
Quant Type: ISTD
Operator: LH
Method File: /chem/h.i/h950531.b/hclpw.m
Misc Info: 950531 STD050

Calibration Date: 05/31/95
Calibration Time: 1509

Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	114276	57138	228552	114276	0.00
32 Naphthalene-d8	440783	220392	881566	440783	0.00
48 Acenaphthene-d10	201424	100712	402848	201424	0.00
65 Phenanthrene-d10	261616	130808	523232	261616	0.00
76 Chrysene-d12	195160	97580	390320	195160	0.00
83 Perylene-d12	123342	61671	246684	123342	0.00

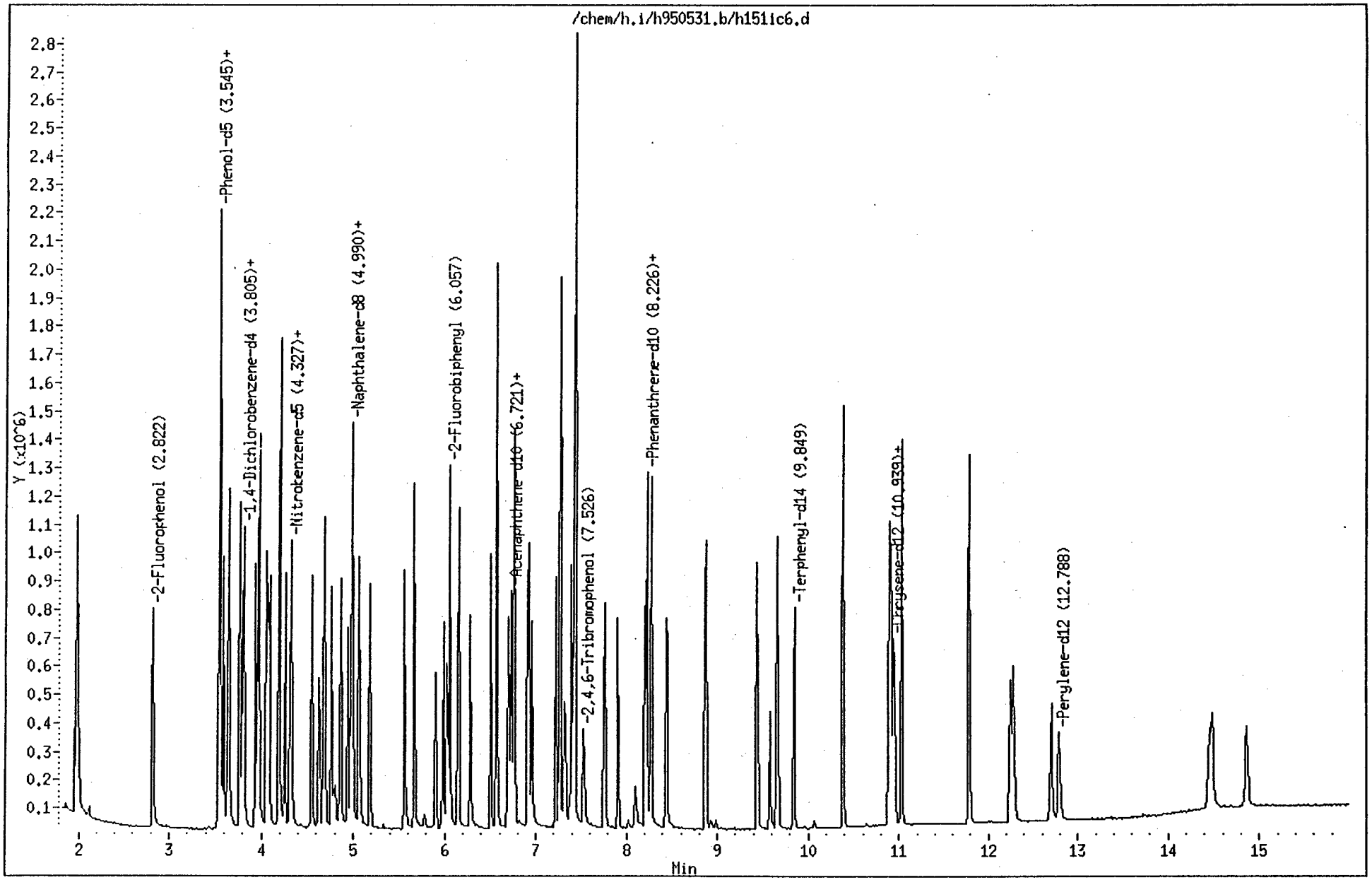
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	% DIFF
11 1,4-Dichlorobenzene-	3.81	3.31	4.31	3.81	0.00
32 Naphthalene-d8	4.98	4.48	5.48	4.98	0.00
48 Acenaphthene-d10	6.72	6.22	7.22	6.72	0.00
65 Phenanthrene-d10	8.20	7.70	8.70	8.20	0.00
76 Chrysene-d12	10.92	10.42	11.42	10.92	0.00
83 Perylene-d12	12.79	12.29	13.29	12.79	0.00

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.

Data File: /chem/h.i/h950531.b/h151ic6.d
Date : 31-MAY-95 15:09
Client ID:
Sample Info: STD-8270W/1X
Volume Injected (uL): 2.0
Column phase:

Instrument: h.i

Operator: LH
Column diameter: 0.25



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601 *

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950525135200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits (**) (Mandatory) % Recovery Range
Dichlorodifluoromethane	ND	20	12	60.0	1 - 200
Chloromethane	ND	20	15	75.0	1 - 193
Vinyl chloride	ND	20	15	75.0	28 - 163
Bromomethane	ND	20	15	75.0	1 - 144
Chloroethane	ND	20	17	85.0	46 - 137
Trichlorofluoromethane	ND	20	17	85.0	21 - 156
1,1-Dichloroethene	ND	20	14	70.0	28 - 167
Methylene chloride	ND	20	25	125	25 - 162
Trans-1,2-Dichloroethene	ND	20	20	100	38 - 155
1,1-Dichloroethane	ND	20	22	110	34 - 132
Chloroform	ND	20	24	120	49 - 133
1,1,1-Trichloroethane	ND	20	22	110	41 - 138
Carbon tetrachloride	ND	20	22	110	43 - 143
1,2-Dichloroethane	ND	20	23	115	51 - 147
2-Chloroethylvinyl ether	ND	20	21	105	14 - 186
Trichloroethene	ND	20	24	120	35 - 146
1,2-Dichloropropane	ND	20	23	115	44 - 156
Bromodichloromethane	ND	20	22	110	42 - 172
cis-1,3-Dichloropropene	ND	20	26	130	22 - 178
trans-1,3-Dichloropropene	ND	20	23	115	33 - 178
1,1,2-Trichloroethane	ND	20	26	130	39 - 136
Tetrachloroethene	ND	20	25	125	26 - 162
Dibromochloromethane	ND	20	24	120	24 - 191
Chlorobenzene	ND	20	25	125	38 - 150
Bromoform	ND	20	23	115	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	25	125	8 - 184
1,3-Dichlorobenzene	ND	20	25	125	7 - 187
1,4-Dichlorobenzene	ND	20	25	125	42 - 143
1,2-Dichlorobenzene	ND	20	26	130	1 - 208

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits (***) (Advisory) RPD Max.	QC Limits (***) (Advisory) Recovery Range
Dichlorodifluoromethane	ND	20	20	100	19	95.0	5.13	20	1 - 200

SAMPLES IN BATCH(SPL ID):

9505700-05A 9505776-04A 9505679-01A 9505679-02A
9505767-03E 9505767-01E 9505714-08A 9505791-04B
9505791-03B 9505792-01A 9505767-05E 9505767-06E
9505791-02B 9505791-01B 9505719-01A 9505791-05B
9505029-24A 9505029-23A

Idelis Williams, QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601 *

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950525135200

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Chloromethane	ND	20	24	120	21	105	13.3	20	1 - 193
Vinyl chloride	ND	20	22	110	22	110	0	20	28 - 163
Bromomethane	ND	20	23	115	22	110	4.44	20	1 - 144
Chloroethane	ND	20	25	125	25	125	0	20	46 - 137
Trichlorofluoromethane	ND	20	23	115	21	105	9.09	20	21 - 156
1,1-Dichloroethene	ND	20	20	100	19	95.0	5.13	20	28 - 167
Methylene chloride	ND	20	20	100	19	95.0	5.13	20	25 - 162
Trans-1,2-Dichloroethene	ND	20	20	100	19	95.0	5.13	20	38 - 155
1,1-Dichloroethane	ND	20	20	100	19	95.0	5.13	20	47 - 132
Chloroform	ND	20	20	100	19	95.0	5.13	20	49 - 133
1,1,1-Trichloroethane	ND	20	20	100	20	100	0	20	41 - 138
Carbon tetrachloride	ND	20	20	100	20	100	0	20	43 - 143
1,2-Dichloroethane	ND	20	19	95.0	18	90.0	5.41	20	51 - 147
2-Chloroethylvinyl ether	ND	20	18	90.0	18	90.0	0	20	14 - 186
Trichloroethene	ND	20	22	110	21	105	4.65	20	35 - 146
1,2-Dichloropropane	ND	20	19	95.0	19	95.0	0	20	44 - 156
Bromodichloromethane	ND	20	19	95.0	19	95.0	0	20	42 - 172
cis-1,3-Dichloropropene	ND	20	19	95.0	19	95.0	0	20	22 - 178
trans-1,3-Dichloropropene	ND	20	19	95.0	19	95.0	0	20	33 - 178
1,1,2-Trichloroethane	ND	20	20	100	19	95.0	5.13	20	39 - 136
Tetrachloroethene	1	20	22	105	21	100	4.88	20	26 - 162
Dibromochloromethane	ND	20	19	95.0	18	90.0	5.41	20	24 - 191
Chlorobenzene	ND	20	19	95.0	19	95.0	0	20	38 - 150
Bromoform	ND	20	17	85.0	17	85.0	0	20	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	17	85.0	17	85.0	0	20	8 - 184
1,3-Dichlorobenzene	ND	20	18	90.0	18	90.0	0	20	7 - 187
1,4-Dichlorobenzene	ND	20	18	90.0	17	85.0	5.71	20	42 - 143
1,2-Dichlorobenzene	ND	20	18	90.0	18	90.0	0	20	1 - 208

Analyst: JZL
Sequence Date: 05/26/95
SPL ID of sample spiked: 9505719-01A
Sample File ID: FF__836.TX0
Method Blank File ID:
Blank Spike File ID: FF__844.TX0
Matrix Spike File ID: FF__947.TX0
Matrix Spike Duplicate File ID: FF__948.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: 601, Table 2
(***) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID):

9505700-05A 9505776-04A 9505679-01A 9505679-02A
9505767-03E 9505767-01E 9505714-08A 9505791-04B
9505791-03B 9505792-01A 9505767-05E 9505767-06E
9505791-02B 9505791-01B 9505719-01A 9505791-05B
9505029-24A 9505029-23A

Idelis Williams, QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601 *

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950528113800

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Dichlorodifluoromethane	ND	20	15	75.0	1 - 200
Chloromethane	ND	20	19	95.0	1 - 193
Vinyl chloride	ND	20	18	90.0	28 - 163
Bromomethane	ND	20	20	100	1 - 144
Chloroethane	ND	20	25	125	46 - 137
Trichlorofluoromethane	ND	20	20	100	21 - 156
1,1-Dichloroethene	ND	20	13	65.0	28 - 167
Methylene chloride	1	20	22	110	25 - 162
Trans-1,2-Dichloroethene	ND	20	18	90.0	38 - 155
1,1-Dichloroethane	ND	20	20	100	34 - 132
Chloroform	ND	20	21	105	49 - 133
1,1,1-Trichloroethane	ND	20	20	100	41 - 138
Carbon tetrachloride	ND	20	21	105	43 - 143
1,2-Dichloroethane	ND	20	21	105	51 - 147
2-Chloroethylvinyl ether	ND	20	19	95.0	14 - 186
Trichloroethene	ND	20	24	120	35 - 146
1,2-Dichloropropane	ND	20	22	110	44 - 156
Bromodichloromethane	ND	20	20	100	42 - 172
cis-1,3-Dichloropropene	ND	20	21	105	22 - 178
trans-1,3-Dichloropropene	ND	20	18	90.0	33 - 178
1,1,2-Trichloroethane	ND	20	23	115	39 - 136
Tetrachloroethene	ND	20	22	110	26 - 162
Dibromochloromethane	ND	20	21	105	24 - 191
Chlorobenzene	ND	20	22	110	38 - 150
Bromoform	ND	20	20	100	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	21	105	8 - 184
1,3-Dichlorobenzene	ND	20	23	115	7 - 187
1,4-Dichlorobenzene	ND	20	23	115	42 - 143
1,2-Dichlorobenzene	ND	20	24	120	1 - 208

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Dichlorodifluoromethane	ND	20	15	75.0	14	70.0	6.90	20	1 - 200

SAMPLES IN BATCH(SPL ID):

9505858-05B 9505858-04B 9505858-03B 9505858-02B
9505858-01B 9505923-13A 9505923-12A 9505894-11A
9505894-08A 9505894-01A 9505894-05A 9505894-04A
9505894-03A 9505894-06A 9505894-02A 9505894-10A
9505894-09A 9505894-07A 9505934-01A 9505767-04E

Idelis Williams, QC Officer

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 601 *

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950528113800

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits (***) (Advisory) RPD Max.	QC Limits (***) (Advisory) Recovery Range
Chloromethane	ND	20	17	85.0	20	100	16.2	20	1 - 193
Vinyl chloride	ND	20	17	85.0	18	90.0	5.71	20	28 - 163
Bromomethane	ND	20	21	105	20	100	4.88	20	1 - 144
Chloroethane	ND	20	22	110	23	115	4.44	20	46 - 137
Trichlorofluoromethane	ND	20	17	85.0	19	95.0	11.1	20	21 - 156
1,1-Dichloroethene	ND	20	20	100	20	100	0	20	28 - 167
Methylene chloride	ND	20	20	100	20	100	0	20	25 - 162
Trans-1,2-Dichloroethene	ND	20	20	100	20	100	0	20	38 - 155
1,1-Dichloroethane	ND	20	20	100	20	100	0	20	47 - 132
Chloroform	ND	20	20	100	20	100	0	20	49 - 133
1,1,1-Trichloroethane	ND	20	20	100	20	100	0	20	41 - 138
Carbon tetrachloride	ND	20	20	100	20	100	0	20	43 - 143
1,2-Dichloroethane	ND	20	19	95.0	19	95.0	0	20	51 - 147
2-Chloroethylvinyl ether	ND	20	23	115	23	115	0	20	14 - 186
Trichloroethene	ND	20	21	105	21	105	0	20	35 - 146
1,2-Dichloropropane	ND	20	19	95.0	19	95.0	0	20	44 - 156
Bromodichloromethane	ND	20	19	95.0	19	95.0	0	20	42 - 172
cis-1,3-Dichloropropene	ND	20	19	95.0	19	95.0	0	20	22 - 178
trans-1,3-Dichloropropene	ND	20	19	95.0	19	95.0	0	20	33 - 178
1,1,2-Trichloroethane	ND	20	20	100	20	100	0	20	39 - 136
Tetrachloroethene	ND	20	20	100	20	100	0	20	26 - 162
Dibromochloromethane	ND	20	19	95.0	19	95.0	0	20	24 - 191
Chlorobenzene	ND	20	19	95.0	19	95.0	0	20	38 - 150
Bromoform	ND	20	18	90.0	18	90.0	0	20	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	18	90.0	18	90.0	0	20	8 - 184
1,3-Dichlorobenzene	ND	20	18	90.0	18	90.0	0	20	7 - 187
1,4-Dichlorobenzene	ND	20	18	90.0	17	85.0	5.71	20	42 - 143
1,2-Dichlorobenzene	ND	20	19	95.0	18	90.0	5.41	20	1 - 208

Analyst: JZL
Sequence Date: 05/27/95
SPL ID of sample spiked: 9505934-01A
Sample File ID: FF__978.TX0
Method Blank File ID:
Blank Spike File ID: FF__970.TX0
Matrix Spike File ID: FF__974.TX0
Matrix Spike Duplicate File ID: FF__975.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: 601, Table 2
(***) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID):

9505858-05B 9505858-04B 9505858-03B 9505858-02B
9505858-01B 9505923-13A 9505923-12A 9505894-11A
9505894-08A 9505894-01A 9505894-05A 9505894-04A
9505894-03A 9505894-06A 9505894-02A 9505894-10A
9505894-09A 9505894-07A 9505934-01A 9505767-04E

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8010***

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950602120500

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Dichlorodifluoromethane	ND	20	11	55.0	1 - 200
Chloromethane	ND	20	15	75.0	1 - 193
Vinyl chloride	ND	20	14	70.0	28 - 163
Bromomethane	ND	20	15	75.0	1 - 144
Chloroethane	ND	20	17	85.0	46 - 137
Trichlorofluoromethane	ND	20	17	85.0	21 - 156
1,1-Dichloroethene	ND	20	13	65.0	28 - 167
Methylene chloride	ND	20	27	135	25 - 162
Trans-1,2-Dichloroethene	ND	20	20	100	38 - 155
1,1-Dichloroethane	ND	20	22	110	47 - 132
Chloroform	ND	20	23	115	49 - 133
1,1,1-Trichloroethane	ND	20	22	110	41 - 138
Carbon tetrachloride	ND	20	22	110	43 - 143
1,2-Dichloroethane	ND	20	22	110	51 - 147
2-Chloroethylvinyl ether	ND	20	20	100	14 - 186
Trichloroethene	ND	20	25	125	35 - 146
1,2-Dichloropropane	ND	20	23	115	44 - 156
Bromodichloromethane	ND	20	22	110	42 - 172
cis-1,3-Dichloropropene	ND	20	26	130	22 - 178
trans-1,3-Dichloropropene	ND	20	23	115	33 - 178
1,1,2-Trichloroethane	ND	20	26	130	39 - 136
Tetrachloroethene	ND	20	26	130	26 - 162
Dibromochloromethane	ND	20	25	125	24 - 191
Chlorobenzene	ND	20	25	125	38 - 150
Bromoform	ND	20	24	120	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	23	115	8 - 184
1,3-Dichlorobenzene	ND	20	26	130	7 - 187
1,4-Dichlorobenzene	ND	20	26	130	42 - 143
1,2-Dichlorobenzene	ND	20	27	135	1 - 208

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Dichlorodifluoromethane	ND	20	10	50.0	11	55.0	9.52	20	1 - 200

SAMPLES IN BATCH(SPL ID): 9505960-03B 9505960-06B 9505960-05B 9506115-02A
9506115-01A 9505960-04B 9505858-07B 9505858-06B

Idelis Williams, QC Officer

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8010***

Matrix: Aqueous
Units: µg/L

Batch Id: HP_F950602120500

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits (***) (Advisory) RPD Max.	QC Limits (***) (Advisory) Recovery Range
Chloromethane	ND	20	16	80.0	15	75.0	6.45	20	1 - 193
Vinyl chloride	ND	20	14	70.0	15	75.0	6.90	20	28 - 163
Bromomethane	ND	20	14	70.0	16	80.0	13.3	20	1 - 144
Chloroethane	ND	20	16	80.0	17	85.0	6.06	20	46 - 137
Trichlorofluoromethane	ND	20	16	80.0	16	80.0	0	20	21 - 156
1,1-Dichloroethene	ND	20	23	115	22	110	4.44	20	28 - 167
Methylene chloride	ND	20	27	135	23	115	16.0	20	25 - 162
Trans-1,2-Dichloroethene	ND	20	26	130	26	130	0	20	38 - 155
1,1-Dichloroethane	ND	20	26	130	26	130	0	20	47 - 132
Chloroform	ND	20	25	125	26	130	3.92	20	49 - 133
1,1,1-Trichloroethane	ND	20	26	130	26	130	0	20	41 - 138
Carbon tetrachloride	ND	20	27	135	26	130	3.77	20	43 - 143
1,2-Dichloroethane	ND	20	25	125	25	125	0	20	51 - 147
2-Chloroethylvinyl ether	ND	20	19	95.0	19	95.0	0	20	14 - 186
Trichloroethene	ND	20	27	135	27	135	0	20	35 - 146
1,2-Dichloropropane	ND	20	26	130	26	130	0	20	44 - 156
Bromodichloromethane	ND	20	26	130	26	130	0	20	42 - 172
cis-1,3-Dichloropropene	ND	20	27	135	27	135	0	20	22 - 178
trans-1,3-Dichloropropene	ND	20	26	130	27	135	3.77	20	33 - 178
1,1,2-Trichloroethane	ND	20	26	130	27	135	3.77	20	39 - 136
Tetrachloroethene	ND	20	28	140	29	145	3.51	20	26 - 162
Dibromochloromethane	ND	20	26	130	27	135	3.77	20	24 - 191
Chlorobenzene	ND	20	26	130	26	130	0	20	38 - 150
Bromoform	ND	20	26	130	24	120	8.00	20	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	25	125	25	125	0	20	8 - 184
1,3-Dichlorobenzene	ND	20	25	125	25	125	0	20	7 - 187
1,4-Dichlorobenzene	ND	20	24	120	25	125	4.08	20	42 - 143
1,2-Dichlorobenzene	ND	20	25	125	25	125	0	20	1 - 208

Analyst: JZL
Sequence Date: 06/02/95
SPL ID of sample spiked: 9506115-01A
Sample File ID: FF__122.TX0
Method Blank File ID:
Blank Spike File ID: FF__069.TX0
Matrix Spike File ID: FF__119.TX0
Matrix Spike Duplicate File ID: FF__120.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: 8010, Table 3
(***) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID): 9505960-03B 9505960-06B 9505960-05B 9506115-02A 9506115-01A 9505960-04B 9505858-07B 9505858-06B

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_J950527021600

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits (**) (Mandatory) % Recovery Range
MTBE	ND	50	46	92.0	56 - 135
Benzene	ND	50	44	88.0	61 - 123
Toluene	ND	50	44	88.0	62 - 122
EthylBenzene	ND	50	46	92.0	56 - 119
O Xylene	ND	50	46	92.0	32 - 160
M & P Xylene	ND	100	100	100	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits (***) (Advisory) RPD Max.	QC Limits (***) (Advisory) Recovery Range
MTBE	ND	20	21	105	21	105	0	20	39 - 150
Benzene	ND	20	21	105	22	110	4.65	33	39 - 150
Toluene	ND	20	20	100	20	100	0	35	56 - 134
EthylBenzene	ND	20	19	95.0	20	100	5.13	40	61 - 128
O Xylene	ND	20	19	95.0	19	95.0	0	29	40 - 130
M & P Xylene	ND	40	37	92.5	39	97.5	5.26	20	43 - 152

Analyst: YN
Sequence Date: 05/27/95
SPL ID of sample spiked: 9505887-04A
Sample File ID: J___347.TX0
Method Blank File ID:
Blank Spike File ID: J___341.TX0
Matrix Spike File ID: J___368.TX0
Matrix Spike Duplicate File ID: J___369.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9505858-07A 9505858-06A 9505858-08A 9505826-03A
9505767-01D 9505776-04B 9505812-01A 9505858-09A
9505887-03A 9505887-02A 9505887-01A 9505858-04A
9505858-03A 9505858-02A 9505858-01A 9505801-07A
9505887-04A 9505767-04D 9505826-05A

Idelis Williams, QC Officer

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_J950527174300

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	43	86.0	56 - 135
Benzene	ND	50	42	84.0	61 - 123
Toluene	ND	50	42	84.0	62 - 122
EthylBenzene	ND	50	44	88.0	56 - 119
O Xylene	ND	50	45	90.0	32 - 160
M & P Xylene	ND	100	97	97.0	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	21	105	21	105	0	20	39 - 150
Benzene	ND	20	22	110	22	110	0	33	39 - 150
Toluene	ND	20	21	105	20	100	4.88	35	56 - 134
EthylBenzene	ND	20	20	100	20	100	0	40	61 - 128
O Xylene	ND	20	19	95.0	19	95.0	0	29	40 - 130
M & P Xylene	ND	40	40	100	39	97.5	2.53	20	43 - 152

Analyst: YN
Sequence Date: 05/27/95
SPL ID of sample spiked: 9505858-05A
Sample File ID: J___383.TX0
Method Blank File ID:
Blank Spike File ID: J___370.TX0
Matrix Spike File ID: J___373.TX0
Matrix Spike Duplicate File ID: J___374.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9505778-01A 9505768-03A 9505767-06D 9505826-01A
9505767-03D 9505778-03A 9505899-02A 9505858-10A
9505700-05B 9505772-02A 9505858-05A 9505826-04A
9505800-05A 9505715-05A

Idelis Williams, QC Officer

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 602/8020

Matrix: Aqueous
Units: ug/L

Batch Id: HP_J950528080300

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	37	74.0	56 - 135
Benzene	ND	50	37	74.0	61 - 123
Toluene	ND	50	39	78.0	62 - 122
EthylBenzene	ND	50	42	84.0	56 - 119
O Xylene	ND	50	44	88.0	32 - 160
M & P Xylene	ND	100	94	94.0	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	75	20	100	125	100	125	0	20	39 - 150
Benzene	ND	20	23	115	23	115	0	25	39 - 150
Toluene	ND	20	21	105	21	105	0	26	56 - 134
EthylBenzene	ND	20	21	105	21	105	0	38	61 - 128
O Xylene	ND	20	21	105	20	100	4.88	29	40 - 130
M & P Xylene	ND	40	43	108	42	105	2.82	20	43 - 152

Analyst: YN
Sequence Date: 05/28/95
SPL ID of sample spiked: 9505884-03A
Sample File ID: J___403.TX0
Method Blank File ID:
Blank Spike File ID: J___399.TX0
Matrix Spike File ID: J___424.TX0
Matrix Spike Duplicate File ID: J___425.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9505844-07A 9505844-09A 9505844-04A 9505844-02A
9505844-06A 9505844-01A 9505715-08A 9505826-02A
9505899-03A 9505800-04A 9505800-01A 9505690-03B
9505690-01B 9505767-05D 9505777-02A 9505777-01A
9505772-01A 9505884-03A 9505800-06A

Idelis Williams, QC Officer

ICP Spectroscopy Method 6010 Quality Control Report

Matrix: Water Units: mg/L Analyst: DQ

Date:060595 Time:1010 File Name:060595DQ Checked: J. Marrero 6/6/95

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver						
Aluminum						
Arsenic						
Barium						
Beryllium						
Calcium						
Cadmium	ND	2.00	1.934	97	1.60	2.40
Cobalt						
Chromium						
Copper	ND	2.00	2.042	102	1.60	2.40
Iron						
Potassium						
Magnesium						
Manganese						
Sodium						
Nickel	ND	2.00	1.938	97	1.60	2.40
Lead						
Antimony						
Selenium						
Thallium						
Vanadium						
Zinc						

Work Orders in Batch

Work Order	Fractions
95-05-767	01C-03C
	05C, 06C
95-05-842	01A, 02A

Matrix Spike - Spike Duplicate Results

Work Order Spiked: 95-05-767 01C

Element	Sample Result	Spike Added	Matrix Spike Result	Matrix Spike Recovery	Matrix Spike Duplicate Result	Matrix Spike Duplicate Recovery	QC Limits % Recovery		Spike RPD %	QC Limits %
Silver										
Aluminum										
Arsenic										
Barium										
Beryllium										
Calcium										
Cadmium	ND	1.0	0.9464	95	0.9686	97	80	120	2.3	20.0
Cobalt										
Chromium										
Copper	ND	1.0	1.008	101	1.021	102	80	120	1.3	20.0
Iron										
Potassium										
Magnesium										
Manganese										
Sodium										
Nickel	ND	1.0	0.9588	96	0.9798	98	80	120	2.2	20.0
Lead										
Antimony										
Selenium										
Thallium										
Vanadium										
Zinc										

Idelis Williams, QC Officer 6/6/95

SPL QUALITY CONTROL SUMMARY

Rev. 4/94

Atomic Absorption Analysis

Element: PB

Test Code: PBQG

Method: P3020

Instrument: B

Date: 5/31/95

Time: 07:14

File #: 0531A

Analyst WFC

Units ug/L

Matrix: Soil ☐ Water ☑

Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Sample #'s in Batch

05767-1c-3c, 5c, 6c				
05A04-1c				
05903-1c				
05906-1c				
05907-1c				

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
05A04-1c	ND	50.0	96.8%	ND	50.0	48.2	51.4	96.4%	102.8%	6
LCS 5/30	ND	50.0	106.4%	NA	50.0	—				—

Analyst Walley F Sawyer Date 5/31/95

Approved By [signature] Date 5/31/95

• FLAGS •

• = Values Outside QC Range

☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)

☐ RPD out of QA/QC Limits (20 %)

☐ [illegible] Range

5/31/95

SPL QUALITY CONTROL SUMMARY

Rev. 4/91

Atomic Absorption Analysis

Element: CR Date: 6/1/95 Analyst WFC Units ug/L

Test Code: CRQG Time: 09:29 Matrix: Soil ☐ Water ☑

Method: P3020 File #: 0601A Leachate: ☐ Water ☐ Soil

Instrument: A ☐ Oil ☐ Other

Sample #'s in Batch

05767-1c-3c,5c,6c				
05694-1F-3R				

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
* 05709-1c	MB	20.0	96.5%	MB	20.0	19.4	21.1	97.0%	105.5%	8
LCS 5/22	MB	20.0	95.0%	NA	20.0					

• FLAGS •

• = Values Outside QC Range

☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)

☐ RPD out of QA/QC Limits (20 %)

☐ Soil LCS % Rec. Range _____

* ☑ Sample used for QA/QC only

Analyst Walley F Gavel Date 6/1/95

Approved By R Chulet Date 6/1/95

R.2 Mm Date 6/1/95

SPL QUALITY CONTROL SUMMARY

Atomic Absorption Analysis

Rev. 4/94

Element: Hg
Test Code: Hg CC
Method: 7470
Instrument: 3030B

Date: 6/6/95
Time: 12:15
File #: 060604A

Analyst: B.B.
Matrix: Soil ☐ Water ☑
Leachate: ☐ Water ☐ Soil ☐ Oil ☐ Other

Units: mg/L

Sample #'s in Batch

9505767-1C-CC	9505A31-1J	9506141-1C	9506013-1C-5C	

Blank and Check Standard					Matrix Spike and Spike Duplicate Data					
Sample ID	Method Blank	LCS Conc. Theoretical	LCS % Recovery	Sample Conc.	Spike Added	Spike Conc.	Spike Dup. Conc.	Spike % Rec.	Spike Dup. % Rec	% RPD
0603-1C	#1 ND	2.00	#1 99.5	ND	2.00	1.96	2.01	98.0	100.5	3
05767-1C	#2 ↓	↓	#2 100.5	↓	↓	1.94	1.97	97.0	98.5	2

• FLAGS •

• = Values Outside QC Range

- ☐ MS or MSD out of QA/QC Limits (% Rec. 75-125)
- ☐ RPD out of QA/QC Limits (20 %)
- ☐ Soil LCS % Rec. Range _____
- ☐ Sample used for QA/QC only
- ☐ See Case Narrative

Analyst: [signature] Date: 6/6/95

Approved By: [signature] Date: 6/6/95

[signature] Date: 6/6/95

Idelis Williams, QC Officer

********** CALIBRATION CURVE % RSD *********

Sample Name	File Name	MTBE Custom Expression	Isoprpopylether Custom Expression	Benzene Custom Expression	Toluene Custom Expression	Ethyl_Benzene Custom Expression
5	U___519.rs	18.0289	10.4000	4.5821	4.9126	6.8103
10	U___520.rs	19.7254	10.8768	5.0774	5.3416	7.8577
5	U___521.rs	19.8032	11.2039	5.0189	5.4857	7.7313
0	U___522.rs	19.9495	11.2395	5.0310	5.5026	7.7783
00	U___523.rs	20.8888	11.3814	5.0394	5.2651	7.3053
200	U___524.rs	22.7563	11.1905	5.1646	5.4669	7.2915
0	U___525.rs	24.4992	11.1162	5.1067	5.4140	7.3559
0	U___526.rs	25.2171	10.8977	5.1210	5.4138	7.3483
Averages		21.3585	11.0382	5.0176	5.3503	7.4348
%R		11.88	2.80	3.65	3.62	4.62

Sample Name	File Name	m and p Xylene Custom Expression	o-Xylene Custom Expression
	U___519.rs	2.8057	9.5703
0	U___520.rs	3.1543	7.9416
5	U___521.rs	3.0846	7.6730
0	U___522.rs	3.0099	7.2908
0	U___523.rs	2.9159	6.9053
0	U___524.rs	2.9837	6.9654
00	U___525.rs	2.9345	6.7683
00	U___526.rs	2.8729	6.3207
Averages		2.9702	7.4294
%SD		3.81	13.54

SCAN File Created Successfully - Stored in: l:\data\tchrom\btex\hp_p\601SUMM.prn

5/19/97

Sample File : L:\DATA\TCHROM\BTEX\METHODS\US051995.SMP
Created by : on : 04/12/90 13:41
Edited by : on : 05/19/95 14:26
Number Of Times Edited : 157

ample Description :
Default Injection Volume = 2.0000 ul
An Internal Standard Calibration Will Be Used
Unknown Peaks Will Be Quantitated Using A Response Factor of 1000000.000000

omponent Information :
MTBE
Retention Time : 2.086 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : MTBE
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level	Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1		5.0000	2773.33	370.70	0.02570	0.05000	1
2		10.0000	5069.62	668.20	0.04698	0.10000	1
3		25.0000	12624.23	1669.24	0.11699	0.25000	1
4		50.0000	25063.34	3327.10	0.23226	0.50000	1
5		100.0000	47872.52	6402.23	0.44363	1.00000	1
6		200.0000	87887.83	11750.19	0.81444	2.00000	1
7		400.0000	163270.67	21764.61	1.51300	4.00000	1
8		500.0000	198277.84	25991.61	1.83741	5.00000	1

Calibration Curve : y = (0.000000) + (0.376965)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996228

Isoprpopylether
Retention Time : 2.379 min Search Window: 5.00 sec, 5.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level	Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1		5.0000	4807.69	586.68	0.04455	0.05000	1
2		10.0000	9193.91	1077.43	0.08520	0.10000	1
3		25.0000	22313.77	2702.76	0.20678	0.25000	1
4		50.0000	44486.16	5453.70	0.41225	0.50000	1
5		100.0000	87862.48	10967.03	0.81421	1.00000	1
6		200.0000	178723.16	21316.41	1.65620	2.00000	1
7		400.0000	359836.41	41647.52	3.33454	4.00000	1
8		500.0000	458811.16	52302.23	4.25172	5.00000	1

Calibration Curve : y = (0.000000) + (0.841704)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999753

Benzene
Retention Time : 3.927 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : BENZENE
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level	Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1		5.0000	10912.13	1460.94	0.10112	0.05000	1
2		10.0000	19695.06	2639.92	0.18251	0.10000	1
3		25.0000	49811.77	6531.47	0.46160	0.25000	1
4		50.0000	99382.95	13015.51	0.92097	0.50000	1
5		100.0000	198437.84	25850.88	1.83889	1.00000	1
6		200.0000	387253.19	49637.88	3.58861	2.00000	1
7		400.0000	783281.75	97171.72	7.25854	4.00000	1

8	500.0000	976373.81	120059.88	9.04789	5.00000	1

Calibration Curve : y = (0.000000) + (1.810877)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999969

1,4-DIFLUOROBENZENE
Retention Time : 4.323 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : 1,4-DIFLUOROBENZENE
Calibrating Area Ratio versus Amount Ratio Using a Pt. to Pt. Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
4	100.0000	50153.30	6162.71	0.46476	1.00000	1

TFT
Retention Time : 4.882 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : INTERNAL STANDARD
Calibrating Area Ratio versus Amount Ratio Using a Pt. to Pt. Fit
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
4	100.0000	107911.78	10777.63	1.00000	1.00000	1

Toluene
Retention Time : 6.994 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : TOLUENE
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1	5.0000	10178.00	1045.15	0.09432	0.05000	1
2	10.0000	18721.00	1839.81	0.17348	0.10000	1
3	25.0000	45573.00	4565.37	0.42232	0.25000	1
4	50.0000	90866.00	9302.96	0.84204	0.50000	1
5	100.0000	189928.50	19382.90	1.76004	1.00000	1
6	200.0000	365841.00	38097.71	3.39019	2.00000	1
7	400.0000	738827.00	75079.17	6.84658	4.00000	1
8	500.0000	923563.00	92905.38	8.55850	5.00000	1

Calibration Curve : y = (0.000000) + (1.711126)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999950

Ethyl_Benzene
Retention Time : 11.020 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : Ethyl Benzene
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1	5.0000	7341.84	628.64	0.06804	0.05000	1
2	10.0000	12726.43	1102.67	0.11793	0.10000	1
3	25.0000	32336.02	2815.16	0.29965	0.25000	1
4	50.0000	64281.64	5822.13	0.59569	0.50000	1
5	100.0000	136886.16	12415.47	1.26850	1.00000	1
6	200.0000	274292.25	24917.12	2.54182	2.00000	1
7	400.0000	543784.06	49850.36	5.03915	4.00000	1
8	500.0000	680428.63	61499.64	6.30542	5.00000	1

Calibration Curve : y = (0.000000) + (1.261172)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999951

m and p Xylene
Retention Time : 11.330 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : meta and para Xylene
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1	10.0000	17820.66	855.44	0.16514	0.10000	1
2	20.0000	31702.59	1509.92	0.29378	0.20000	1
3	50.0000	81048.97	4047.73	0.75107	0.50000	1
4	100.0000	166120.88	9055.90	1.53941	1.00000	1
5	200.0000	342944.81	21279.56	3.17801	2.00000	1
6	400.0000	670307.75	46437.69	6.21163	4.00000	1
7	800.0000	1363092.00	100938.92	12.63154	8.00000	1
8	1000.0000	1740380.25	127237.54	16.12781	10.00000	1

Calibration Curve : y = (0.000000) + (1.594836)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999685

o-Xylene
Retention Time : 12.972 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : ortho-Xylene
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1	5.0000	5224.50	275.83	0.04842	0.05000	1
2	10.0000	12592.00	565.86	0.11669	0.10000	1
3	25.0000	32582.00	1496.39	0.30193	0.25000	1
4	50.0000	68579.99	3345.66	0.63552	0.50000	1
5	100.0000	144816.91	7816.90	1.34199	1.00000	1
6	200.0000	287132.50	17161.16	2.66081	2.00000	1
7	400.0000	590991.75	37492.55	5.47662	4.00000	1
8	500.0000	791052.00	48355.70	7.33054	5.00000	1

Calibration Curve : y = (0.000000) + (1.416733)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.997327

4-BROMOFLUOROBENZENE
Retention Time : 14.251 min Search Window: 5.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : TFT
Group Name : 4-BROMOFLUOROBENZENE
Calibrating Area Ratio versus Amount Ratio Using a Pt. to Pt. Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
4	100.0000	68506.00	14895.56	0.63483	1.00000	1

oftware Version: 3.2 <16C20>
ample Name : 5 Time : 5/19/95 13:27
e Number: TC ;S;1 Study : BTEXS6;1;PQL
tor : RR

nstrument : HP_U Channel : A A/D mV Range : 1000
ut Sampler : NONE
Vial : 0/0

nterface Serial # : 4153271317 Data Acquisition Time: 5/19/95 10:52
elay Time : 0.00 min.
ime : 21.57 min.
ing Rate : 1.0000 pts/sec

aw Data File : l:\data\tchrom\btex\hp_u\U___519.raw
esult File : l:\data\tchrom\btex\hp_u\U___519.rst
ument File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
ess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
ample File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
equence File : l:\data\tchrom\btex\methods\btexu.seq

Volume : 2 ul Area Reject : 300.00
mple Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

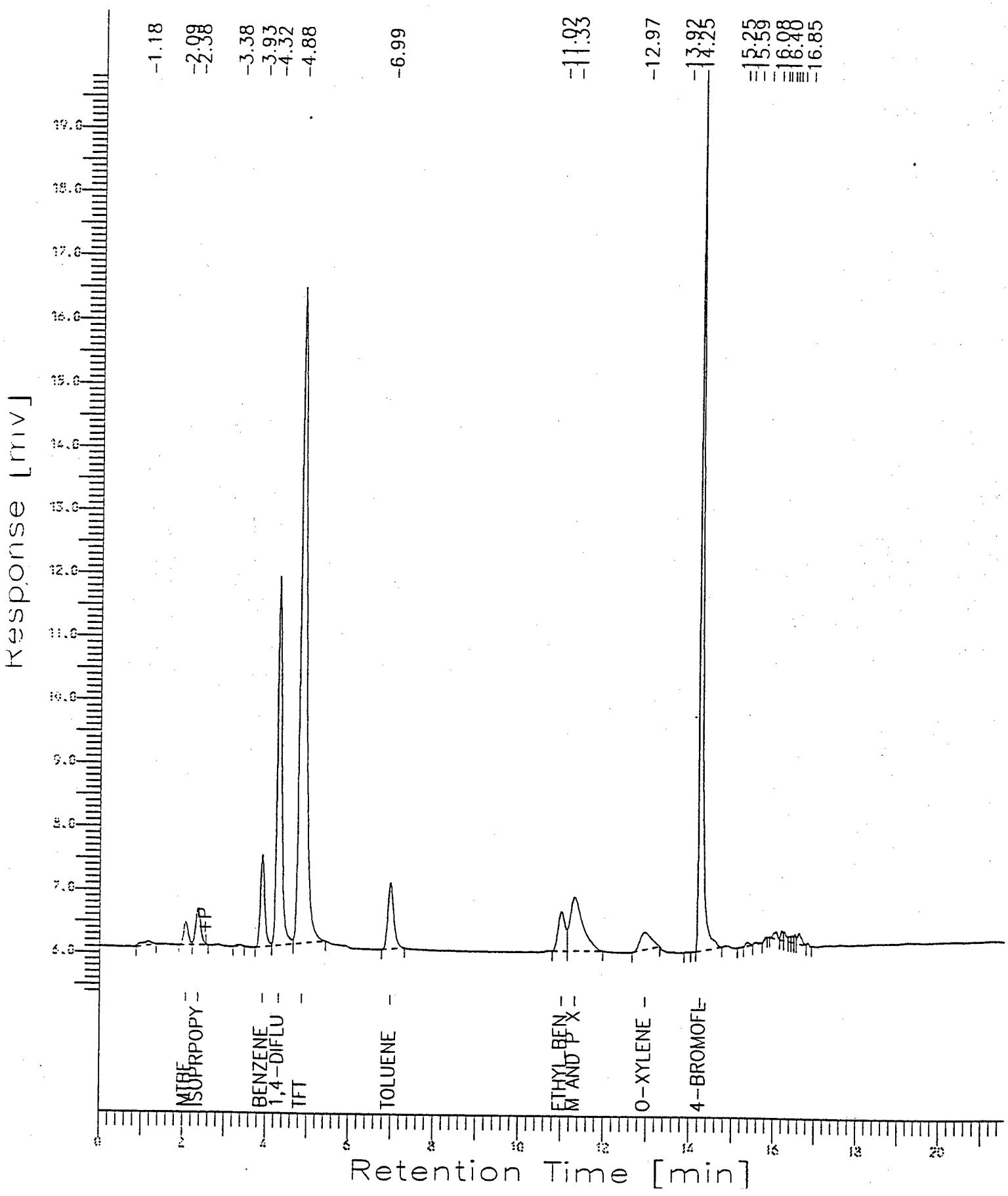
eak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
	1.179	1130.50	62.13	BB	1.0000e6	----------	0.0002		0.0002	0.0000
2	2.086	2773.33	370.70	BV	83.3552	0.0263	6.6542	MTBE	6.6542	0.0004
3	2.379	4807.69	586.68	VB	463.6803	0.0456	2.0737	Isoprpopylether	2.0737	0.0002
	3.927	10912.13	1460.94	BV	1153.4324	0.1035	1.8921	Benzene	1.8921	0.0004
	4.323	45300.44	5861.60	VV	409.1173	0.4295	22.1455	1,4-DIFLUOROBENZENE	22.1455	-0.0005
7	4.882	105478.44	10337.82	VB	----------	1.0000	0.0000	TFT	0.0000	0.0002
8	6.994	10178.00	1045.15	BB	1075.9833	0.0965	1.8919	Toluene	1.8919	0.0001
	11.020	7341.84	628.64	BV	778.7115	0.0696	1.8856	Ethyl_Benzene	1.8856	0.0002
	11.330	17820.66	855.44	VB	1001.2238	0.1690	3.5598	m and p Xylene	3.5598	-0.0001
	12.972	5224.50	275.83	BB	811.1704	0.0495	1.2881	o-Xylene	1.2881	-0.0003
3	14.251	67124.50	13737.32	BB	627.2536	0.6364	21.4027	4-BROMOFLUOROBENZENE	21.4027	0.0003
5	15.393	462.43	61.83	VV	1.0000e6	----------	0.0001		0.0001	0.0000
	16.078	774.95	121.31	BV	1.0000e6	----------	0.0002		0.0002	0.0000
	16.217	636.46	161.79	VV	9.9999e5	----------	0.0001		0.0001	0.0000
0	16.280	697.02	152.13	VV	1.0000e6	----------	0.0001		0.0001	0.0000
1	16.400	326.74	94.88	VV	1.0000e6	----------	0.0001		0.0001	0.0000
	16.469	383.77	108.92	VV	1.0000e6	----------	0.0001		0.0001	0.0000
	16.533	454.80	149.92	VV	1.0000e6	----------	0.0001		0.0001	0.0000
	16.641	1245.82	179.84	VV	1.0000e6	----------	0.0003		0.0003	0.0000
		283074.03	36252.86				62.7948		62.7948	0.0007

ort Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___519.TXO

Chromatogram

Sample Name : 5
FileName : l:\data\tchrom\btex\hp_u\U___519.raw
Method : BTEXU.ins
Start Time : 0.00 min End Time : 21.57 min
Scale Factor: 1 Plot Offset: 5 mV

Sample #: TC ;S;1 Page 1 of 1
Date : 5/19/95 13:27
Time of Injection: 5/19/95 10:52
Low Point : 5.39 mV High Point : 19.85 mV
Plot Scale: 15 mV



Software Version: 3.2 <16C20>
Sample Name : 10 Time : 5/19/95 13:27
Sample Number: TC ;S;1 Study : BTEXS6;1;PQL
Operator : RR

Instrument : HP_U Channel : A A/D mV Range : 1000
AutoSampler : NONE
Tray/Vial : 0/0

Interface Serial # : 4153271317 Data Acquisition Time: 5/19/95 11:19
Delay Time : 0.00 min.
End Time : 21.57 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : l:\data\tchrom\btex\hp_u\U___520.raw
Result File : l:\data\tchrom\btex\hp_u\U___520.rst
Instrument File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
Process File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
Sample File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
Sequence File : l:\data\tchrom\btex\methods\btexu.seq

Inj Volume : 2 ul Area Reject : 300.00
Sample Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

Peak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	1.190	1097.00	70.97	BB	1.0000e6	----------	0.0001		0.0001	0.0000
2	2.087	5069.62	668.20	BV	81.6440	0.0491	6.2094	MTBE	6.2094	0.0007
3	2.378	9193.91	1077.43	VV	454.1611	0.0890	2.0244	Isoprpopylether	2.0244	-0.0008
6	3.930	19695.06	2639.92	BV	1129.7528	0.1906	1.7433	Benzene	1.7433	0.0034
7	4.326	43919.44	5707.85	VB	400.7182	0.4251	10.9602	1,4-DIFLUOROBENZENE	10.9602	0.0027
8	4.885	103313.00	10011.95	BB	----------	1.0000	0.0000	TFT	0.0000	0.0033
9	6.999	18721.00	1839.81	BB	1053.8936	0.1812	1.7764	Toluene	1.7764	0.0046
10	11.029	12726.43	1102.67	BV	762.7248	0.1232	1.6686	Ethyl_Benzene	1.6686	0.0090
11	11.334	31702.59	1509.92	VB	980.6691	0.3069	3.2328	m and p Xylene	3.2328	0.0036
12	12.972	12592.00	565.86	BB	794.5173	0.1219	1.5849	o-Xylene	1.5849	0.0004
13	14.253	65252.50	13302.43	BB	614.3763	0.6316	10.6209	4-BROMOFLUOROBENZENE	10.6209	0.0018
16	16.083	930.00	72.67	BB	1.0000e6	----------	0.0001		0.0001	0.0000
19	16.649	404.00	83.80	BB	1.0000e6	----------	0.0000		0.0000	0.0000
		324616.56	38653.47				39.8210		39.8210	0.0287

Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___520.TXO

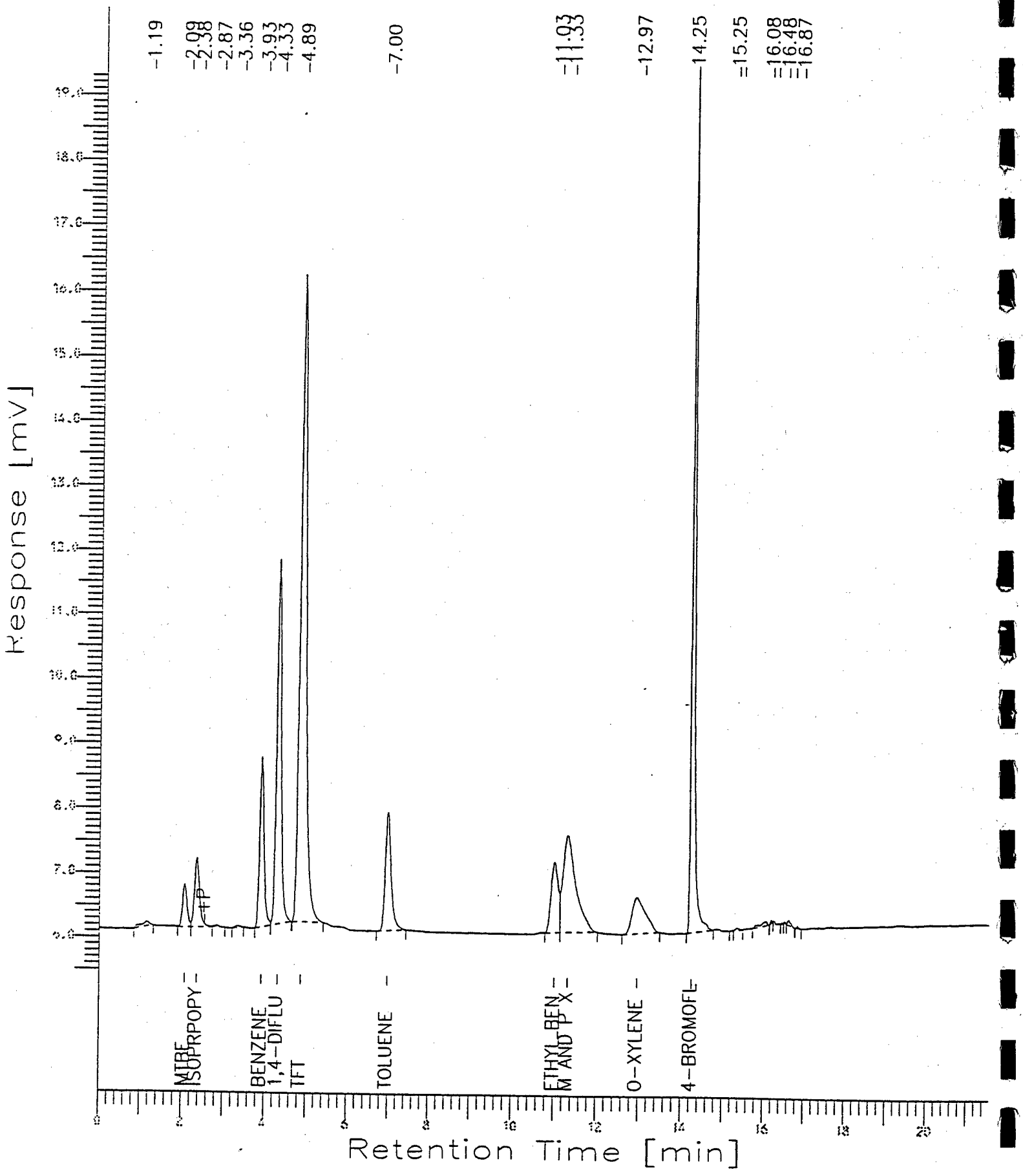
Chromatogram

Sample Name : 10
FileName : l:\data\tchrom\btex\hp_u\U___520.raw
Method : BTEXU.ins
Start Time : 0.00 min
Scale Factor: 1

End Time : 21.57 min
Plot Offset: 5 mV

Sample #: TC ;S;1
Date : 5/19/95 13:27
Time of Injection: 5/19/95 11:19
Low Point : 5.44 mV
Plot Scale: 14 mV

High Point : 19.39 mV



oftware Version: 3.2 <16C20>
Sample Name : 25 Time : 5/19/95 13:27
Sample Number: TC ;S;1 Study : BTEXS6;1;PQL
Operator : RR

Instrument : HP_U Channel : A A/D mV Range : 1000
AutoSampler : NONE
Rack/Vial : 0/0

Interface Serial # : 4153271317 Data Acquisition Time: 5/19/95 11:47
Delay Time : 0.00 min.
End Time : 21.57 min.
Sampling Rate : 1.0000 pts/sec

Raw Data File : l:\data\tchrom\btex\hp_u\U___521.raw
Result File : l:\data\tchrom\btex\hp_u\U___521.rst
Instrument File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
Process File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
Sample File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
Sequence File : l:\data\tchrom\btex\methods\btexu.seq

Inj Volume : 2 ul Area Reject : 300.00
Inj Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

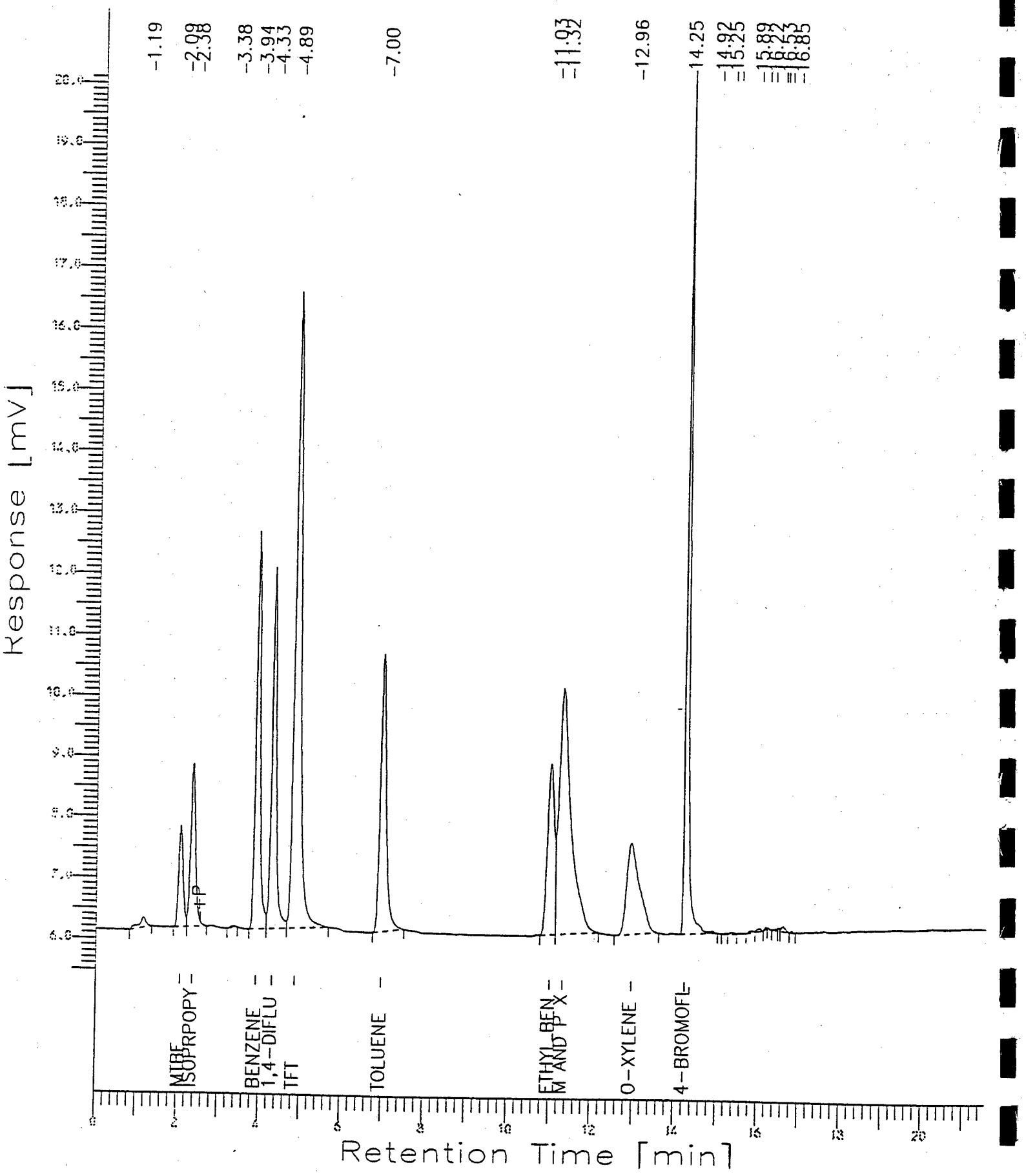
Peak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	1.192	1980.00	170.95	BB	1.0000e6	----------	0.0001		0.0001	0.0000
2	2.087	12624.23	1669.24	BV	85.7494	0.1163	5.8889	MTBE	5.8889	0.0014
3	2.376	22313.77	2702.76	VB	476.9986	0.2056	1.8712	Isoprpopylether	1.8712	-0.0028
5	3.935	49811.77	6531.47	BV	1186.5625	0.4591	1.6792	Benzene	1.6792	0.0077
6	4.328	48002.16	5966.33	VV	420.8684	0.4424	4.5622	1,4-DIFLUOROBENZENE	4.5622	0.0053
7	4.885	108508.09	10442.60	VB	----------	1.0000	0.0000	TFT	0.0000	0.0033
8	7.000	45573.00	4565.37	BB	1106.8888	0.4200	1.6469	Toluene	1.6469	0.0056
9	11.028	32336.02	2815.16	BV	801.0784	0.2980	1.6146	Ethyl_Benzene	1.6146	0.0076
10	11.318	81048.97	4047.73	VB	1029.9819	0.7469	3.1476	m and p Xylene	3.1476	-0.0121
11	12.958	32582.00	1496.39	BB	834.4696	0.3003	1.5618	o-Xylene	1.5618	-0.0137
12	14.252	68003.99	14039.51	BE	645.2703	0.6267	4.2155	4-BROMOFLUOROBENZENE	4.2155	0.0012
17	16.077	395.36	54.61	VB	1.0000e6	----------	0.0000		0.0000	0.0000
18	16.632	582.18	89.93	VB	1.0000e6	----------	0.0000		0.0000	0.0000
		503761.50	54592.04				26.1880		26.1880	0.0035

Data Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___521.TXO

Chromatogram

Sample Name : 25
FileName : l:\data\tchrom\btex\hp_u\U___521.raw
Method : BTEXU.ins
Start Time : 0.00 min End Time : 21.57 min
Scale Factor: 1 Plot Offset: 5 mV

Sample #: TC ;S;1
Date : 5/19/95 13:27
Time of Injection: 5/19/95 11:47
Low Point : 5.43 mV High Point : 20.20 mV
Plot Scale: 15 mV



oftware Version: 3.2 <16C20>
ample Name : 50
ple Number: TC ;S;1
rator : RR

Time : 5/19/95 13:27
Study : BTEXS6;1;PQL

strument : HP_U
Sampler : NONE
/Vial : 0/0

Channel : A A/D mV Range : 1000

terface Serial # : 4153271317 Data Acquisition Time: 5/19/95 12:15
elay Time : 0.00 min.
Time : 21.57 min.
ling Rate : 1.0000 pts/sec

w Data File : l:\data\tchrom\btex\hp_u\U___522.raw
lt File : l:\data\tchrom\btex\hp_u\U___522.rst
rument File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
ess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
mple File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
equence File : l:\data\tchrom\btex\methods\btexu.seq

Volume : 2 ul
mple Amount : 1.0000

Area Reject : 300.00
Dilution Factor : 1.00

BTEX Area Percent Report

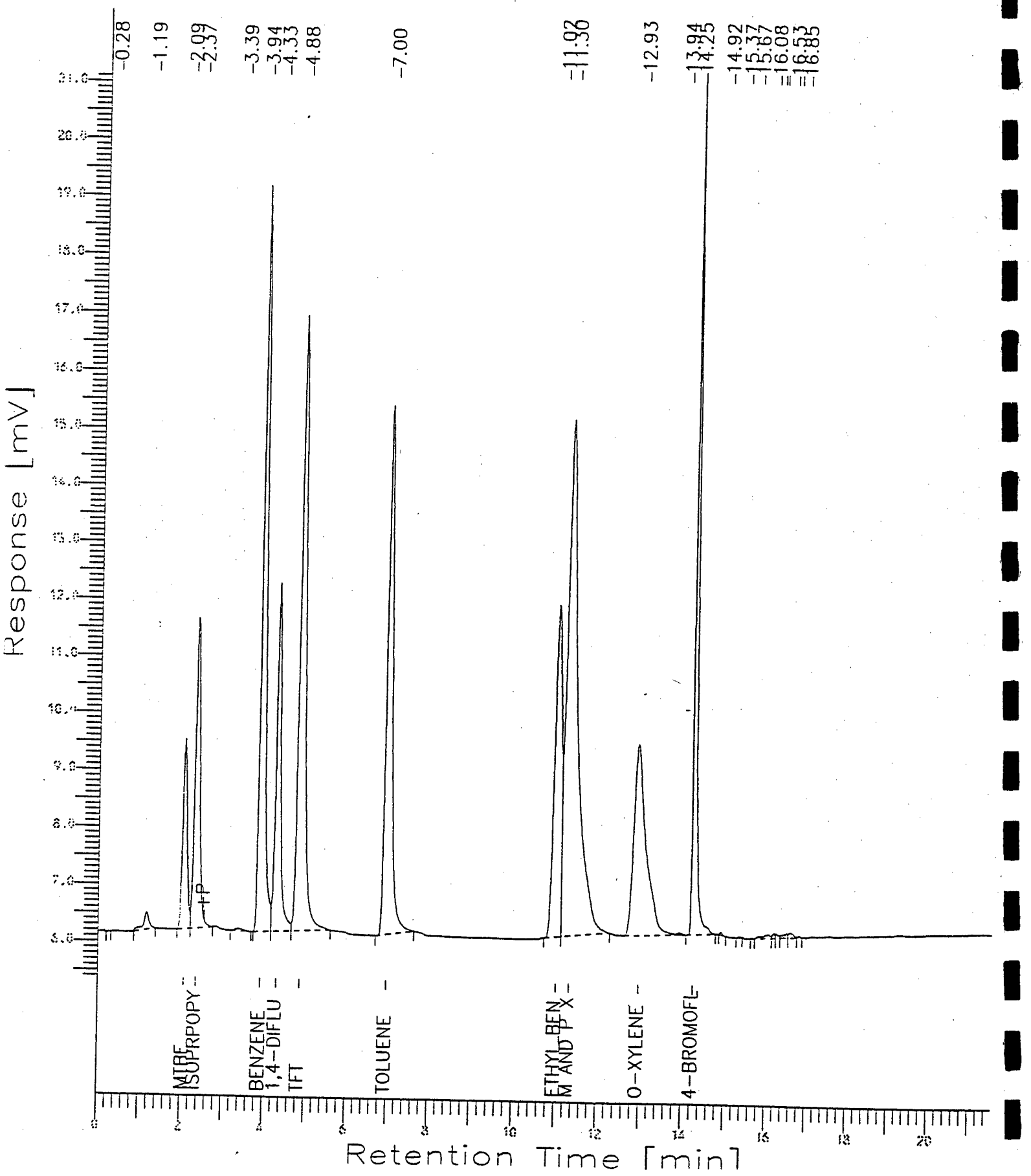
ak	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
	1.192	2910.00	311.31	BB	1.0000e6	----------	0.0001		0.0001	0.0000
	2.086	25063.34	3327.10	BV	85.2782	0.2323	5.8780	MTBE	5.8780	-0.0003
	2.372	44486.16	5453.70	VB	474.3772	0.4123	1.8756	Isoprpopylether	1.8756	-0.0071
	3.392	615.00	41.59	BB	9.9999e5	----------	0.0000		0.0000	0.0000
	3.935	99382.95	13015.51	BV	1180.0416	0.9210	1.6844	Benzene	1.6844	0.0076
	4.326	50153.30	6162.71	VV	418.5555	0.4648	2.3965	1,4-DIFLUOROBENZENE	2.3965	0.0029
	4.879	107911.78	10777.63	VB	----------	1.0000	0.0000	TFT	0.0000	-0.0028
	6.995	90866.00	9302.96	BB	1100.8058	0.8420	1.6509	Toluene	1.6509	0.0008
	11.019	64281.64	5822.13	BV	796.6760	0.5957	1.6138	Ethyl_Benzene	1.6138	-0.0009
	11.300	166120.88	9055.90	VB	1024.3217	1.5394	3.2435	m and p Xylene	3.2435	-0.0300
	12.933	68579.99	3345.66	BE	829.8837	0.6355	1.6528	o-Xylene	1.6528	-0.0386
	14.250	68506.00	14895.56	BB	641.7241	0.6348	2.1351	4-BROMOFLUOROBENZENE	2.1351	-0.0008
	16.079	1000.78	72.32	VV	1.0000e6	----------	0.0000		0.0000	0.0000
	16.215	417.27	91.20	VV	1.0000e6	----------	0.0000		0.0000	0.0000
	16.280	426.14	84.95	VV	1.0000e6	----------	0.0000		0.0000	0.0000
	16.533	732.27	86.51	VV	1.0000e6	----------	0.0000		0.0000	0.0000
	16.636	795.68	98.83	VV	1.0000e6	----------	0.0000		0.0000	0.0000
		792249.19	81945.57				22.1306		22.1306	-0.0692

Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___522.TXO

Chromatogram

Sample Name : 50
FileName : l:\data\tchrom\btex\hp_u\U___522.raw
Method : BTEXU.ins
Start Time : 0.00 min
End Time : 21.57 min
Scale Factor: 1
Plot Offset: 5 mV

Sample #: TC ;S;1
Date : 5/19/95 13:27
Time of Injection: 5/19/95 12:15
Low Point : 5.40 mV
High Point : 21.18 mV
Plot Scale: 16 mV



oftware Version: 3.2 <16C20>
Sample Name : 100 Time : 5/19/95 13:27
Sample Number: TC ;S;1 Study : BTEXS6;1;PQL
rator : RR

nstrument : HP_U Channel : A A/D mV Range : 1000
Sampler : NONE
/Vial : 0/0

nterface Serial # : 4153271317 Data Acquisition Time: 5/19/95 12:42
y Time : 0.00 min.
Time : 21.57 min.
ling Rate : 1.0000 pts/sec

aw Data File : l:\data\tchrom\btex\hp_u\U___523.raw
lt File : l:\data\tchrom\btex\hp_u\U___523.rst
rument File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
ocess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
mple File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
ence File : l:\data\tchrom\btex\methods\btexu.seq

Volume : 2 ul Area Reject : 300.00
mple Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

eak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	1.201	5694.50	670.96	BB	1.0000e6	----------	0.0001		0.0001	0.0000
2	2.091	47872.52	6402.23	BV	85.7712	0.4411	5.5814	MTBE	5.5814	0.0049
3	2.373	87862.48	10967.03	VB	477.1197	0.8095	1.8415	Isoprpopylether	1.8415	-0.0060
4	3.461	805.00	60.60	BB	1.0000e6	----------	0.0000		0.0000	0.0000
5	3.940	198437.84	25850.88	BV	1186.8634	1.8283	1.6720	Benzene	1.6720	0.0128
6	4.327	54912.55	6618.80	VV	420.9751	0.5059	1.3044	1,4-DIFLUOROBENZENE	1.3044	0.0041
7	4.876	108535.63	11451.76	VB	----------	1.0000	0.0000	TFT	0.0000	-0.0065
8	6.992	189928.50	19382.90	BB	1107.1696	1.7499	1.7154	Toluene	1.7154	-0.0018
9	11.012	136886.16	12415.47	BV	801.2817	1.2612	1.7083	Ethyl_Benzene	1.7083	-0.0084
10	11.286	342944.81	21279.56	VB	1030.2433	3.1597	3.3288	m and p Xylene	3.3288	-0.0437
11	12.916	144816.91	7816.90	BE	834.6813	1.3343	1.7350	o-Xylene	1.7350	-0.0558
12	13.935	3100.00	181.89	EV	1.0000e6	----------	0.0000		0.0000	0.0000
13	14.247	72425.71	16550.50	VE	645.4340	0.6673	1.1221	4-BROMOFLUOROBENZENE	1.1221	-0.0045
14	14.547	2266.00	202.32	EV	1.0000e6	----------	0.0000		0.0000	0.0000
15	14.913	2310.85	232.30	VE	1.0000e6	----------	0.0000		0.0000	0.0000
16	16.625	645.27	69.49	VV	1.0000e6	----------	0.0000		0.0000	0.0000
		1399444.75	140153.55				20.0091		20.0091	-0.1049

Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___523.TXO

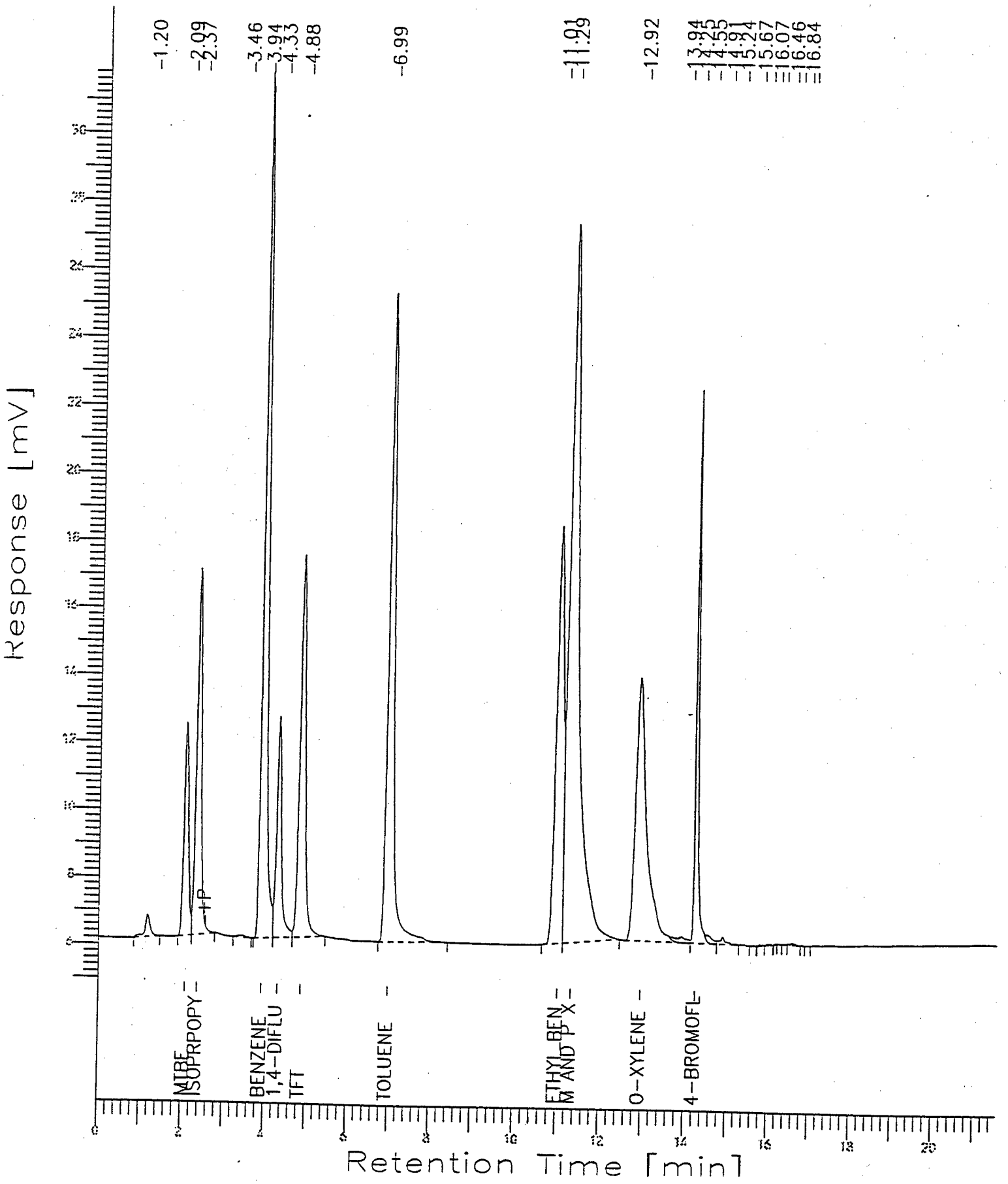
Chromatogram

Sample Name : 100
FileName : l:\data\tchrom\btex\hp_u\U___523.raw
Method : BTEXU.ins
Start Time : 0.00 min
Scale Factor: 1

End Time : 21.57 min
Plot Offset: 5 mV

Sample #: TC ;S;1
Date : 5/19/95 13:27
Time of Injection: 5/19/95 12:42
Low Point : 4.89 mV
Plot Scale: 27 mV

High Point : 31.86 mV



ftware Version: 3.2 <16C20>
ample Name : 200 Time : 05/19/95 13:32
amp Number: TC ;S;1 Study : BTEXS6;1;PQL
er or : RR

strument : HP_U Channel : A A/D mV Range : 1000
uto ampler : NONE
ack ial : 0/0

terface Serial # : 4153271317 Data Acquisition Time: 05/19/95 13:10
ay Time : 0.00 min.
d me : 21.57 min.
amp ng Rate : 1.0000 pts/sec

Data File : l:\data\tchrom\btex\hp_u\U___524.raw
esu File : l:\data\tchrom\btex\hp_u\U___524.rst
nst ment File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
ic s File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
ple File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
quence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.seq

i. olume : 2 ul Area Reject : 300.00
pte Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
	1.210	12218.00	1452.54	BB	1.0000e6	----------	0.0001		0.0001	0.0000
	2.095	87887.83	11750.19	BV	87.0534	0.7978	5.0479	MTBE	5.0479	0.0087
3	2.369	178723.16	21316.41	VE	484.2525	1.6224	1.8454	Isoprpopylether	1.8454	-0.0097
4	3.463	1943.00	123.90	EB	1.0000e6	----------	0.0000		0.0000	0.0000
	3.944	387253.19	49637.88	BV	1204.6069	3.5154	1.6074	Benzene	1.6074	0.0174
	4.325	64975.61	7103.27	VV	427.2687	0.5898	0.7604	1,4-DIFLUOROBENZENE	0.7604	0.0021
	4.871	110158.22	11783.89	VB	----------	1.0000	0.0000	TFT	0.0000	-0.0113
3	6.990	365841.00	38097.71	BB	1123.7216	3.3211	1.6278	Toluene	1.6278	-0.0043
3	1.009	274292.25	24917.12	BV	813.2607	2.4900	1.6864	Ethyl_Benzene	1.6864	-0.0111
	11.283	670307.75	46437.69	VB	1045.6453	6.0850	3.2052	m and p Xylene	3.2052	-0.0473
	12.907	287132.50	17161.16	BE	847.1597	2.6066	1.6947	o-Xylene	1.6947	-0.0648
	13.930	6594.00	383.33	EV	1.0000e6	----------	0.0000		0.0000	0.0000
	14.245	72501.91	17119.15	VE	655.0832	0.6582	0.5534	4-BROMOFLUOROBENZENE	0.5534	-0.0062
	14.547	3221.00	289.07	EV	1.0000e6	----------	0.0000		0.0000	0.0000
	14.907	3660.11	534.91	VB	1.0000e6	----------	0.0000		0.0000	0.0000
	16.644	409.39	63.42	VB	1.0000e6	----------	0.0000		0.0000	0.0000
		2527119.00	248171.63				18.0286		18.0286	-0.1265

Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___524.TXO

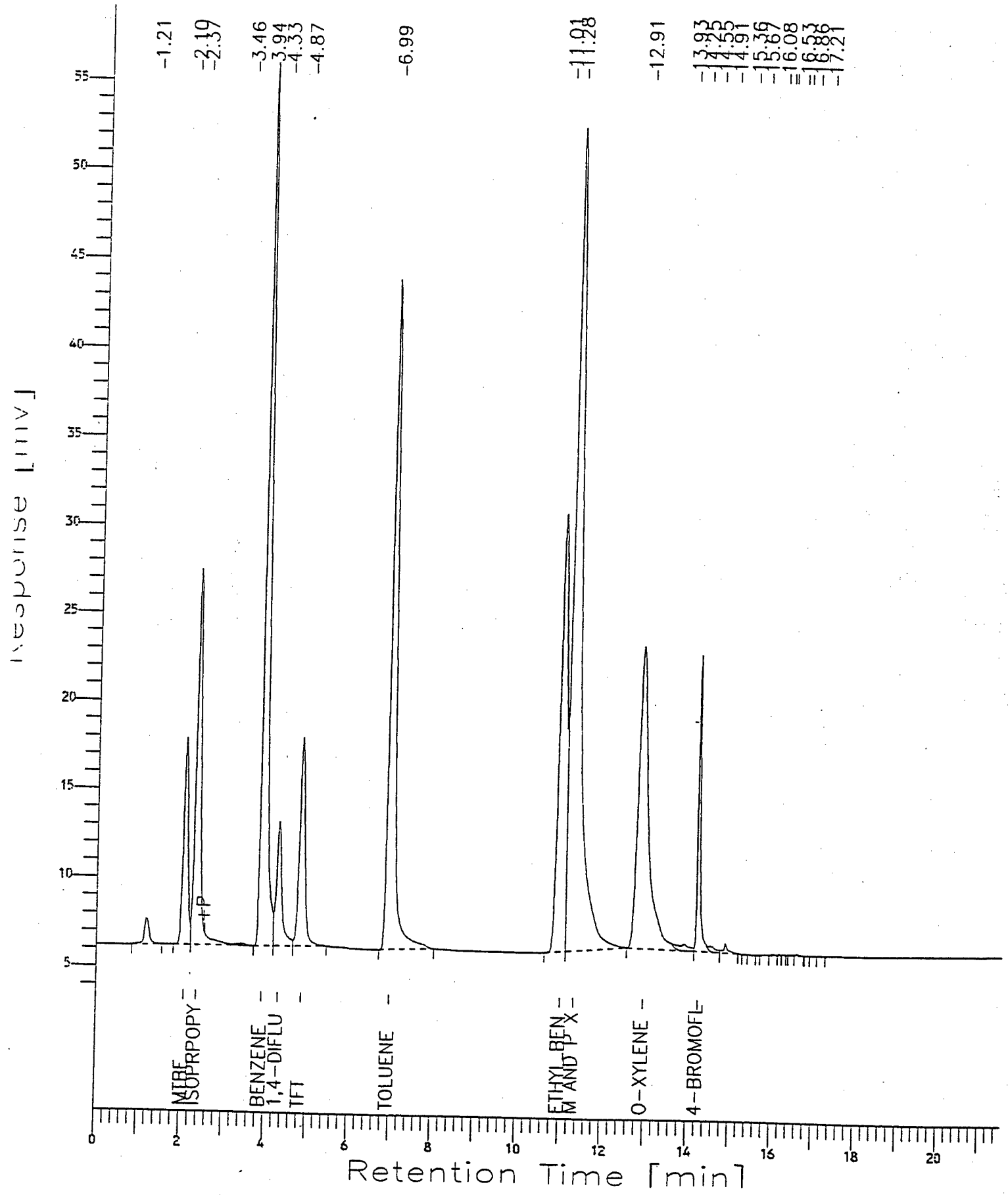
Chromatogram

Sample Name : 200
FileName : l:\data\tchrom\btex\hp_u\U___524.raw
Method : BTEXU.ins
Start Time : 0.00 min
Scale Factor: 1

End Time : 21.57 min
Plot Offset: 4 mV

Sample #: TC ;S;1
Date : 05/19/95 13:32
Time of Injection: 05/19/95 13:10
Low Point : 3.71 mV
Plot Scale: 52 mV

High Point : 55.61 mV



oftware Version: 3.2 <16C20>
Sample Name : 400 Time : 05/19/95 13:59
S ple Number: TC ;S;1 Study : BTEXS6;1;PQL
rator : RR

.nstrument : HP_U Channel : A A/D mV Range : 1000
Sampler : NONE
k/Vial : 0/0

nterface Serial # : 4153271317 Data Acquisition Time: 05/19/95 13:38
Delay Time : 0.00 min.
Time : 21.57 min.
pling Rate : 1.0000 pts/sec

.aw Data File : l:\data\tchrom\btex\hp_u\U___525.raw
ult File : l:\data\tchrom\btex\hp_u\U___525.rst
trument File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
cess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
ample File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
Sequence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.seq

Volume : 2 ul Area Reject : 300.00
ample Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

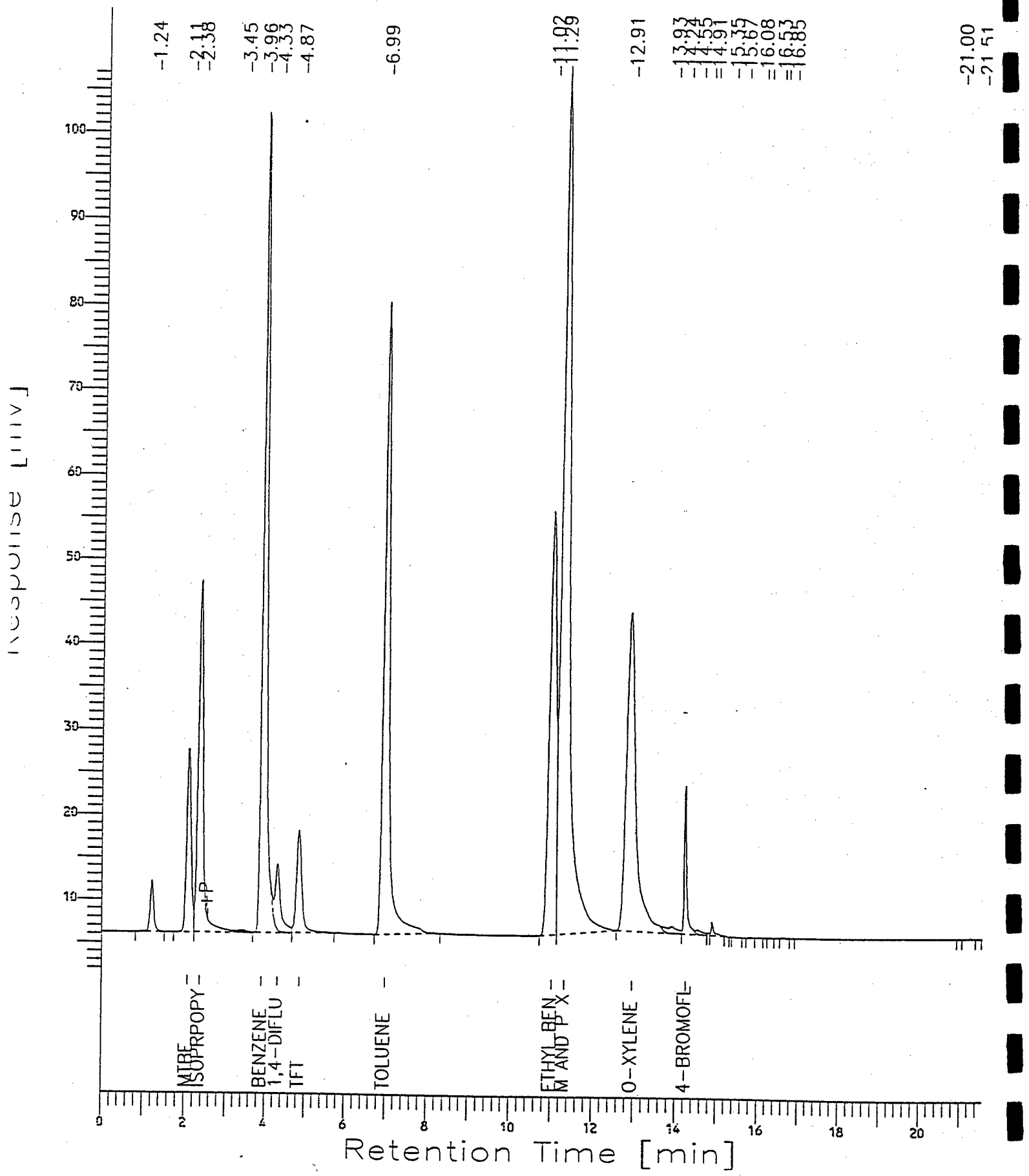
eak	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	1.238	37118.00	6087.75	BB	1.0000e6	----------	0.0001		0.0001	0.0000
2	2.108	163270.67	21764.61	BV	92.3719	1.3968	4.4188	MTBE	4.4188	0.0224
	2.376	359836.41	41647.52	VE	513.8373	3.0785	1.7507	Isoprpopylether	1.7507	-0.0027
	3.452	4484.00	267.42	EV	9.9999e5	----------	0.0000		0.0000	0.0000
	3.957	783281.75	97171.72	VE	1278.2007	6.7011	1.5320	Benzene	1.5320	0.0304
6	4.329	76087.00	7729.04	EV	453.3721	0.6509	0.4196	1,4-DIFLUOROBENZENE	0.4196	0.0055
7	4.870	116888.19	12031.32	VB	----------	1.0000	0.0000	TFT	0.0000	-0.0124
	6.992	738827.00	75079.17	BB	1192.3739	6.3208	1.5491	Toluene	1.5491	-0.0020
	11.016	543784.06	49850.36	BV	862.9457	4.6522	1.5754	Ethyl_Benzene	1.5754	-0.0044
0	11.295	1363092.00	100938.92	VB	1109.5276	11.6615	3.0713	m and p Xylene	3.0713	-0.0354
.1	12.911	590991.75	37492.55	BE	898.9158	5.0560	1.6436	o-Xylene	1.6436	-0.0610
1	13.925	14658.00	862.24	EV	1.0000e6	----------	0.0000		0.0000	0.0000
1	14.243	77072.89	18113.63	VE	695.1046	0.6594	0.2772	4-BROMOFLUORBENZENE	0.2772	-0.0083
	14.546	5550.00	530.78	EV	1.0000e6	----------	0.0000		0.0000	0.0000
5	14.800	1138.23	243.38	VV	1.0000e6	----------	0.0000		0.0000	0.0000
1	14.905	7393.14	1596.54	VB	1.0000e6	----------	0.0000		0.0000	0.0000
2	16.631	408.74	58.82	VV	1.0000e6	----------	0.0000		0.0000	0.0000
		4883881.50	471465.75				16.2379		16.2379	-0.0678

t Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___525.TXO

Chromatogram

ample Name : 400
ileName : l:\data\tchrom\btex\hp_u\U___525.raw
ethod : BTEXU.ins
tart Time : 0.00 min End Time : 21.57 min
cale Factor: 1 Plot Offset: 1 mV

Sample #: TC ;S;1 Page 1 of 1
Date : 05/19/95 13:59
Time of Injection: 05/19/95 13:38
Low Point : 1.14 mV High Point : 107.21 mV
Plot Scale: 106 mV



[redacted]are Version: 3.2 <16C20>
[redacted]ple Name : 500 Time : 05/19/95 14:23
[redacted]ple Number: TC ;S;1 Study : BTEXS6;1;PQL
[redacted]tor : RR

[redacted]trument : HP_U Channel : A A/D mV Range : 1000
[redacted]toSampler : NONE
[redacted]c Vial : 0/0

[redacted]face Serial # : 4153271317 Data Acquisition Time: 05/19/95 14:05
[redacted]ay Time : 0.00 min.
[redacted]d Time : 18.33 min.
[redacted]ng Rate : 1.0000 pts/sec

[redacted]Data File : l:\data\tchrom\btex\hp_u\U___526.raw
[redacted]sult File : l:\data\tchrom\btex\hp_u\U___526.rst
[redacted]ument File: L:\DATA\TCHROM\BTEX\METHODS\BTEXU.ins
[redacted]ss File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.prc
[redacted]e File : L:\DATA\TCHROM\BTEX\METHODS\US051995.smp
[redacted]uence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXU.seq

[redacted]olume : 2 ul Area Reject : 300.00
[redacted]Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

[redacted] Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1.234	52441.00	9346.67	BB	1.0000e6	----------	0.0001		0.0001	0.0000
2.110	198277.84	25991.61	BV	423.2761	1.6401	0.9369	MTBE	0.9369	0.0245
2.375	458811.16	52302.23	VE	490.6613	3.7951	1.8702	Isoprpopylether	1.8702	-0.0042
3.451	6918.00	359.80	EV	1.0000e6	----------	0.0000		0.0000	0.0000
3.959	976373.81	120059.88	VE	1074.3219	8.0761	1.8177	Benzene	1.8177	0.0320
4.326	86214.00	8361.93	EV	561.8795	0.7131	0.3069	1,4-DIFLUOROBENZENE	0.3069	0.0033
4.866	120896.19	12163.88	VB	----------	1.0000	0.0000	TFT	0.0000	-0.0160
6.990	923563.00	92905.38	BB	1013.0781	7.6393	1.8233	Toluene	1.8233	-0.0042
[redacted]1.015	680428.63	61499.64	BV	745.5363	5.6282	1.8253	Ethyl_Benzene	1.8253	-0.0048
[redacted]1.296	1740380.25	127237.54	VV	930.2191	14.3957	3.7419	m and p Xylene	3.7419	-0.0336
12.909	791052.00	48355.70	VE	799.1594	6.5432	1.9797	o-Xylene	1.9797	-0.0628
13.927	31991.00	1552.58	EV	9.9999e5	----------	0.0001		0.0001	0.0000
[redacted]4.241	89420.91	19250.01	VE	767.4894	0.7397	0.2330	4-BROMOFLUOROBENZENE	0.2330	-0.0101
[redacted]4.545	10676.00	849.95	EV	1.0000e6	----------	0.0000		0.0000	0.0000
[redacted]4.800	2664.07	550.79	VV	1.0000e6	----------	0.0000		0.0000	0.0000
14.904	14597.23	2412.42	VB	1.0000e6	----------	0.0000		0.0000	0.0000
[redacted]6.646	372.55	55.16	VB	1.0000e6	----------	0.0000		0.0000	0.0000
[redacted]	6185077.50	583255.19				14.5350		14.5350	-0.0758

[redacted]Stored in ASCII File: l:\data\tchrom\btex\hp_u\U___526.TXO

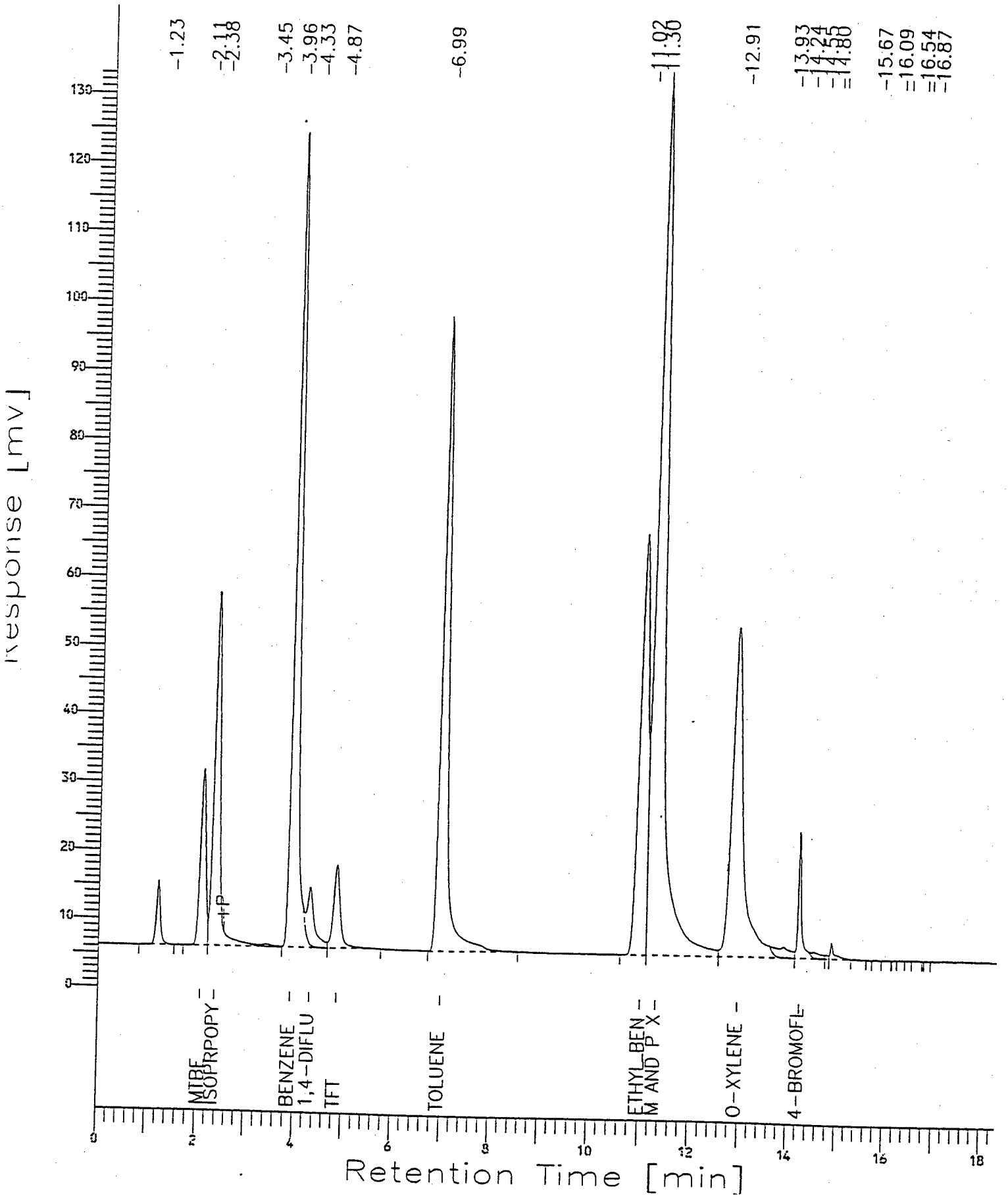
Chromatogram

Sample Name : 500
FileName : l:\data\tchrom\btex\hp_u\U___526.raw
Method : BTEXU.ins
Start Time : 0.00 min
Scale Factor: 1

End Time : 18.33 min
Plot Offset: 0 mV

Sample #: TC ;S;1
Date : 05/19/95 14:24
Time of Injection: 05/19/95 14:05
Low Point : -0.17 mV
Plot Scale: 134 mV

High Point : 133.45 mV



Sample File : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
Created by : on : 04/12/90 07:45
Edited by : on : 05/23/95 08:36
Number Of Times Edited : 68

ple Description :
Default Injection Volume = 2.0000 ul
An Internal Standard Calibration Will Be Used
Unknown Peaks Will Be Quantitated Using A Response Factor of 1000000.000000

nponent Information :
Dichlorodifluorometh
Retention Time : 6.970 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Dichlorodifluorometh
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	590980.00	68091.93	0.13004	0.50000	1
3	20.0000	1100010.00	121912.09	0.24204	1.00000	1
4	40.0000	2008525.00	241402.45	0.44194	2.00000	1
5	60.0000	3014525.00	336700.59	0.66330	3.00000	1
6	80.0000	3585190.00	444028.94	0.78886	4.00000	1
7	100.0000	4538285.00	521125.81	0.99857	5.00000	1

Calibration Curve : y = (0.000000) + (0.205052)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.987088

Chloromethane
Retention Time : 7.944 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Chloromethane
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	340226.16	38895.06	0.07486	0.50000	1
3	20.0000	635121.81	72059.74	0.13975	1.00000	1
4	40.0000	1138141.50	125454.48	0.25043	2.00000	1
5	60.0000	1726689.88	188845.50	0.37993	3.00000	1
7	100.0000	2742510.50	324132.41	0.60344	5.00000	1

Calibration Curve : y = (0.000000) + (0.123186)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.995869

Vinyl Chloride
Retention Time : 8.451 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Vinyl Chloride
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	779093.81	77252.28	0.17143	0.50000	1
3	20.0000	1429565.25	128138.31	0.31455	1.00000	1
4	40.0000	2706658.50	269680.78	0.59556	2.00000	1
5	60.0000	4095170.00	391100.66	0.90107	3.00000	1
6	80.0000	5129597.00	512954.28	1.12868	4.00000	1
7	100.0000	6211549.50	593781.38	1.36675	5.00000	1

Calibration Curve : y = (0.000000) + (0.283132)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.992862

Bromomethane

Retention Time : 10.438 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Bromomethane
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	279038.50	29090.65	0.06140	0.50000	1
3	20.0000	596979.00	58669.34	0.13136	1.00000	1
4	40.0000	1137808.75	117068.88	0.25036	2.00000	1
5	60.0000	1732708.13	175675.66	0.38125	3.00000	1
7	100.0000	2831687.50	287414.75	0.62307	5.00000	1

Calibration Curve : y = (0.000000) + (0.125398)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999605

Chloroethane
Retention Time : 10.826 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Chloroethane
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	762871.50	62705.35	0.16786	0.50000	1
3	20.0000	1369280.88	108935.13	0.30129	1.00000	1
4	40.0000	2765451.25	218152.95	0.60849	2.00000	1
5	60.0000	3877711.75	312375.63	0.85323	3.00000	1
6	80.0000	4971038.00	399809.44	1.09379	4.00000	1
7	100.0000	6623132.50	498939.03	1.45731	5.00000	1

Calibration Curve : y = (0.000000) + (0.286400)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.995406

Trichlorofluorometha
Retention Time : 12.026 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Trichlorofluorometha
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	1114175.00	82713.53	0.24516	0.50000	1
3	20.0000	2066000.00	155777.13	0.45459	1.00000	1
4	40.0000	3933630.00	285010.38	0.86553	2.00000	1
5	60.0000	5542720.00	407869.50	1.21958	3.00000	1
6	80.0000	7270320.00	512396.53	1.59971	4.00000	1
7	100.0000	9286430.00	646033.69	2.04332	5.00000	1

Calibration Curve : y = (0.000000) + (0.408732)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996869

1,1-Dichloroethene
Retention Time : 14.758 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : 1.1-Dichloroethene
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	833214.81	78851.46	0.18334	0.50000	1
3	20.0000	1701080.00	148223.98	0.37429	1.00000	1
4	40.0000	3293890.00	276600.16	0.72477	2.00000	1

5	60.0000	4708260.00	400188.72	1.03597	3.00000	1
6	80.0000	5976335.00	492886.22	1.31499	4.00000	1
7	100.0000	6939304.50	623066.19	1.52688	5.00000	1

Calibration Curve : y = (0.000000) + (0.324303)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.984229

Methylene Chloride
Retention Time : 16.781 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Methylene Chloride
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	1054660.00	99357.09	0.23206	0.50000	1
3	20.0000	1720425.00	153435.00	0.37855	1.00000	1
4	40.0000	2639150.00	250715.88	0.58070	2.00000	1
5	60.0000	3848051.25	356747.97	0.84670	3.00000	1
7	100.0000	6509183.50	560778.69	1.43224	5.00000	1

Calibration Curve : y = (0.087479) + (0.263726)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.995766

trans-1,2-Dichlethen
Retention Time : 18.033 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : trans-1,2-Dichlethen
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	984275.00	104108.86	0.21657	0.50000	1
3	20.0000	1967330.00	204008.86	0.43288	1.00000	1
4	40.0000	3772675.00	373786.91	0.83011	2.00000	1
5	60.0000	5639198.50	546862.44	1.24081	3.00000	1
7	100.0000	9033516.00	853369.50	1.98767	5.00000	1

Calibration Curve : y = (0.000000) + (0.404132)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.998279

1,1-Dichloroethane
Retention Time : 19.687 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : 1,1-Dichloroethane
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	991040.00	102566.38	0.21806	0.50000	1
3	20.0000	2014735.00	203501.47	0.44331	1.00000	1
4	40.0000	3702295.00	363250.06	0.81463	2.00000	1
5	60.0000	5476970.00	534950.88	1.20512	3.00000	1
7	100.0000	8800640.00	832694.94	1.93643	5.00000	1

Calibration Curve : y = (0.000000) + (0.394372)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.997161

Chloroform
Retention Time : 22.567 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Chloroform
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1

Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	1098335.00	123334.20	0.24167	0.50000	1
3	20.0000	2244380.00	246025.50	0.49384	1.00000	1
4	40.0000	3896775.00	421242.00	0.85742	2.00000	1
5	60.0000	6024840.00	622682.50	1.32566	3.00000	1
7	100.0000	9590860.00	974742.19	2.11031	5.00000	1

Calibration Curve : y = (0.000000) + (0.429504)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996516

1,1,1-Trichloroethan
Retention Time : 24.040 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : 1,1,1-Trichloroethan
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	1290640.00	126820.86	0.28398	0.50000	1
3	20.0000	2475400.00	235396.27	0.54467	1.00000	1
4	40.0000	4612260.00	431662.63	1.01485	2.00000	1
5	60.0000	6929870.00	633225.31	1.52480	3.00000	1
6	80.0000	8241180.00	752065.13	1.81333	4.00000	1
7	100.0000	10888040.00	958077.50	2.39573	5.00000	1

Calibration Curve : y = (0.000000) + (0.480050)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.991314

Carbon Tetrachloride - wx RF
Retention Time : 24.970 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Carbon Tetrachloride
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	1451786.88	147784.64	0.31944	0.50000	1
3	20.0000	2794042.50	275276.97	0.61478	1.00000	1
4	40.0000	5197069.50	503806.06	1.14353	2.00000	1
5	60.0000	7723500.00	744714.06	1.69943	3.00000	1
6	80.0000	9205720.00	876056.56	2.02556	4.00000	1
7	100.0000	11902950.00	1.11e6	2.61904	5.00000	1

Calibration Curve : y = (0.000000) + (0.531354)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.989814

1,2-Dichloroethane
Retention Time : 25.495 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	457993.19	53302.37	0.10077	0.50000	1
3	20.0000	1070077.50	118713.65	0.23545	1.00000	1
4	40.0000	1717420.25	190974.48	0.37789	2.00000	1
5	60.0000	2684580.00	296567.72	0.59070	3.00000	1
7	100.0000	4613210.00	476495.69	1.01506	5.00000	1

Calibration Curve : y = (0.000000) + (0.200994)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996048

Trichloroethene

Retention Time : 27.685 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Trichloroethene
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

use RF

Level	Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2		10.0000	1284913.00	139747.38	0.28272	0.50000	1
3		20.0000	2646005.50	283607.97	0.58221	1.00000	1
4		40.0000	4522198.50	484216.72	0.99503	2.00000	1
5		60.0000	6724703.50	720184.69	1.47966	3.00000	1
6		80.0000	8062941.00	851126.56	1.77411	4.00000	1
7		100.0000	10473555.00	1.11e6	2.30453	5.00000	1

Calibration Curve : y = (0.000000) + (0.466456)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.987752

1,2-Dichloropropane
Retention Time : 28.351 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level	Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2		10.0000	717767.00	77712.95	0.15793	0.50000	1
3		20.0000	1544304.50	164492.95	0.33980	1.00000	1
4		40.0000	2658146.25	276362.84	0.58488	2.00000	1
5		60.0000	4022636.25	416887.50	0.88511	3.00000	1
7		100.0000	6440764.50	638854.00	1.41718	5.00000	1

Calibration Curve : y = (0.000000) + (0.288657)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996026

Bromodichloromethane
Retention Time : 29.279 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Bromodichloromethane
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level	Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2		10.0000	557550.00	59372.66	0.12268	0.50000	1
3		20.0000	1234019.88	127855.32	0.27153	1.00000	1
4		40.0000	2133550.00	216720.77	0.46945	2.00000	1
5		60.0000	3272835.00	330157.00	0.72013	3.00000	1
7		100.0000	5229240.00	521309.03	1.15061	5.00000	1

Calibration Curve : y = (0.000000) + (0.234018)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996728

2-chlorethvinylether
Retention Time : 30.429 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level	Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
1		5.0000	14565.00	1819.83	0.00321	0.25000	1
2		10.0000	35600.00	4041.11	0.00783	0.50000	1
3		20.0000	77450.00	8911.25	0.01704	1.00000	1
4		40.0000	239350.00	26944.27	0.05267	2.00000	1
5		60.0000	343870.00	38568.75	0.07566	3.00000	1

6	80.0000	497849.91	56135.77	0.10954	4.00000	1
7	100.0000	605950.88	69186.08	0.13333	5.00000	1

Calibration Curve : y = (-0.006415) + (0.028202)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996582

cis-1,3-Dichloroprop
Retention Time : 31.608 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : cis-1,3-Dichloroprop
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	492254.91	46525.84	0.10831	0.50000	1
3	20.0000	1107765.00	103023.26	0.24375	1.00000	1
4	40.0000	1906620.00	176268.53	0.41952	2.00000	1
5	60.0000	2881565.00	270762.81	0.63404	3.00000	1
7	100.0000	4539200.00	426264.22	0.99877	5.00000	1

Calibration Curve : y = (0.000000) + (0.204661)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.994554

trans-1,3-Dichloropr
Retention Time : 33.904 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : trans-1,3-Dichloropr
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	318350.00	28748.90	0.07005	0.50000	1
3	20.0000	723081.31	66392.11	0.15910	1.00000	1
4	40.0000	1235790.50	113301.25	0.27192	2.00000	1
5	60.0000	1884480.00	175802.30	0.41465	3.00000	1
7	100.0000	3011490.25	288230.59	0.66263	5.00000	1

Calibration Curve : y = (0.000000) + (0.134905)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996142

1,1,2-Trichloroethan
Retention Time : 34.613 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	369180.00	38594.93	0.08123	0.50000	1
3	20.0000	837138.56	87160.62	0.18420	1.00000	1
4	40.0000	1375979.63	142317.17	0.30276	2.00000	1
5	60.0000	2114980.00	219026.98	0.46537	3.00000	1
7	100.0000	3368389.75	352447.69	0.74116	5.00000	1

Calibration Curve : y = (0.000000) + (0.151139)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.994483

Tetrachloroethene
Retention Time : 36.164 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1

Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	1185310.00	128191.17	0.26081	0.50000	1
3	20.0000	2462070.00	263066.41	0.54174	1.00000	1
4	40.0000	4372116.50	456555.59	0.96201	2.00000	1
5	60.0000	6450266.00	660069.63	1.41927	3.00000	1
7	100.0000	9900765.00	1.00e6	2.17850	5.00000	1

Calibration Curve : y = (0.000000) + (0.452139)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.989864

Dibromochloromethane
Retention Time : 36.961 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	248640.00	26751.33	0.05471	0.50000	1
3	20.0000	577335.00	60508.99	0.12703	1.00000	1
4	40.0000	975253.38	99433.06	0.21459	2.00000	1
5	60.0000	1550878.75	156384.52	0.34125	3.00000	1
7	100.0000	2465895.25	251229.08	0.54258	5.00000	1

Calibration Curve : y = (0.000000) + (0.110069)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996622

chlorobenzene
Retention Time : 39.744 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	374754.97	44027.40	0.08246	0.50000	1
3	20.0000	755760.00	87755.27	0.16629	1.00000	1
4	40.0000	1308510.00	151869.95	0.28792	2.00000	1
5	60.0000	2015070.13	234288.92	0.44338	3.00000	1
7	100.0000	3228780.00	372302.03	0.71044	5.00000	1

Calibration Curve : y = (0.000000) + (0.144349)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.996671

1-CHLORO-2-FLUOROB
Retention Time : 40.727 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : INTERNAL STD
Calibrating Area Ratio versus Amount Ratio Using a Pt. to Pt. Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
3	20.0000	4544770.00	505925.03	1.00000	1.00000	1

romoform
Retention Time : 43.740 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : Bromoform
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	#'Replicates
2	10.0000	69090.00	8526.15	0.01520	0.50000	1
3	20.0000	200469.95	23761.81	0.04411	1.00000	1
4	40.0000	323269.88	37511.35	0.07113	2.00000	1
5	60.0000	533237.88	59123.03	0.11733	3.00000	1
7	100.0000	873541.25	96709.63	0.19221	5.00000	1

Calibration Curve : y = (0.000000) + (0.038395)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.995563

1,1,2,2-Tetrachloroe
Retention Time : 44.392 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

use RF

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	94020.04	12107.91	0.02069	0.50000	1
3	20.0000	260869.95	33421.41	0.05740	1.00000	1
4	40.0000	384170.00	49065.76	0.08453	2.00000	1
5	60.0000	584282.00	74372.27	0.12856	3.00000	1
7	100.0000	956419.00	120345.29	0.21044	5.00000	1

Calibration Curve : y = (0.000000) + (0.042668)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.989381

1,3-Dichlorobenzene
Retention Time : 49.415 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name : 2-Chlorotoluene
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	282313.16	40760.02	0.06212	0.50000	1
3	20.0000	598782.50	85739.61	0.13175	1.00000	1
4	40.0000	1087170.63	154699.78	0.23921	2.00000	1
5	60.0000	1610903.38	229577.83	0.35445	3.00000	1
7	100.0000	2636333.50	364431.78	0.58008	5.00000	1

Calibration Curve : y = (0.000000) + (0.117325)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.998259

1,4-Dichlorobenzene
Retention Time : 49.841 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB
Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	239226.88	36148.00	0.05264	0.50000	1
3	20.0000	514817.53	76347.79	0.11328	1.00000	1
4	40.0000	931659.38	137049.95	0.20500	2.00000	1
5	60.0000	1417836.50	209430.56	0.31197	3.00000	1
7	100.0000	2342509.75	334336.28	0.51543	5.00000	1

Calibration Curve : y = (0.000000) + (0.103507)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999199

1,2-Dichlorobenzene
Retention Time : 51.336 min Search Window: 20.00 sec, 0.00 %
Reference Component: (Find Closest Peak)
Internal Standard : 1-CHLORO-2-FLUOROB

Group Name :
Calibrating Area Ratio versus Amount Ratio Using a 1st Order Fit
Curve Will Be Forced Through The Origin
Amounts Will Not Be Scaled Prior To The Regression
Weighting Factor For the Regression: 1
Calibration Levels:

Level Name	Amount	Area	Height	ISTD Resp.	ISTD Amt.	# Replicates
2	10.0000	211955.03	31520.67	0.04664	0.50000	1
3	20.0000	462045.06	67882.03	0.10167	1.00000	1
4	40.0000	791589.94	115420.74	0.17418	2.00000	1
5	60.0000	1226850.13	178257.98	0.26995	3.00000	1
7	100.0000	2026050.00	286890.91	0.44580	5.00000	1

Calibration Curve : y = (0.000000) + (0.089482)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.998182

********** CALIBRATION CURVE % RSD **********

ample Name	File Name	Dichlorodifluorometh Custom Expression	Chloromethane Custom Expression	Vinyl Chloride Custom Expression	Bromomethane Custom Expression	Chloroethane Custom Expression
TD_10	ff__773.rs	0.1692	0.2939	0.1284	0.3584	0.1311
TD_20	ff__774.rs	0.1818	0.3149	0.1399	0.3350	0.1461
TD_40	ff__775.rs	0.1992	0.3515	0.1478	0.3516	0.1446
TD_60	ff__776.rs	0.1990	0.3475	0.1465	0.3463	0.1547
TD_100	ff__778.rs	0.2204	0.3646	0.1610	0.3532	0.1510
verages		0.1939	0.3345	0.1447	0.3489	0.1455
SD		10.02	8.71	8.24	2.54	6.19

ample Name	File Name	Trichlorofluorometha Custom Expression	1,1-Dichloroethene Custom Expression	Methylene Chloride Custom Expression	trans-1,2-Dichlethen Custom Expression	1,1-Dichloroethane Custom Expression
TD_10	ff__773.rs	0.0898	0.1200	0.0948	0.1016	0.1009
TD_20	ff__774.rs	0.0968	0.1176	0.1163	0.1017	0.0993
TD_40	ff__775.rs	0.1017	0.1214	0.1516	0.1060	0.1080
TD_60	ff__776.rs	0.1083	0.1274	0.1559	0.1064	0.1096
TD_100	ff__778.rs	0.1077	0.1441	0.1536	0.1107	0.1136
verages		0.1008	0.1261	0.1344	0.1053	0.1063
SD		7.71	8.48	20.45	3.61	5.68

mple Name	File Name	Chloroform Custom Expression	1,1,1-Trichloroethan Custom Expression	Carbon Tetrachloride Custom Expression	1,2-Dichloroethane Custom Expression	Trichloroethene Custom Expression
D_10	ff__773.rs	0.0911	0.0775	0.0689	0.2183	0.0778
D_20	ff__774.rs	0.0891	0.0808	0.0716	0.1869	0.0756
D_40	ff__775.rs	0.1027	0.0867	0.0770	0.2329	0.0885
D_60	ff__776.rs	0.0996	0.0866	0.0777	0.2235	0.0892
D_100	ff__778.rs	0.1043	0.0918	0.0840	0.2168	0.0955
erages		0.0973	0.0847	0.0758	0.2157	0.0853
SD		7.05	6.63	7.75	8.01	9.79

mple Name	File Name	1,2-Dichloropropane Custom Expression	Bromodichloromethane Custom Expression	2-chlorethvinylether Custom Expression	cis-1,3-Dichloroprop Custom Expression	trans-1,3-Dichloropr Custom Expression
D_10	ff__773.rs	0.1393	0.1794	----------	0.2032	0.3141
D_20	ff__774.rs	0.1295	0.1621	----------	0.1805	0.2766
D_40	ff__775.rs	0.1505	0.1875	----------	0.2098	0.3237
D_60	ff__776.rs	0.1492	0.1833	----------	0.2082	0.3184
D_100	ff__778.rs	0.1553	0.1912	----------	0.2203	0.3321
erages		0.1448	0.1807	----------	0.2044	0.3130
SD		7.12	6.27	----------	7.20	6.84

mple Name	File Name	1,1,2-Trichloroethan Custom Expression	Tetrachloroethene Custom Expression	Dibromochloromethane Custom Expression	chlorobenzene Custom Expression	Bromoform Custom Expression
_10	ff__773.rs	0.2709	0.0844	0.4022	0.2668	1.4474
_20	ff__774.rs	0.2389	0.0812	0.3464	0.2646	0.9977
_40	ff__775.rs	0.2907	0.0915	0.4102	0.3057	1.2374
_60	ff__776.rs	0.2837	0.0930	0.3869	0.2978	1.1252
_100	ff__778.rs	0.2969	0.1010	0.4055	0.3097	1.1448
rages		0.2762	0.0902	0.3902	0.2889	1.1905
D		8.32	8.60	6.66	7.48	14.04

ple Name	File Name	1,1,2,2-Tetrachloroe Custom Expression	1,3-Dichlorobenzene Custom Expression	1,4-Dichlorobenzene Custom Expression	1,2-Dichlorobenzene Custom Expression
_10	ff__773.rs	1.0636	0.3542	0.4180	0.4718
_20	ff__774.rs	0.7667	0.3340	0.3885	0.4329
_40	ff__775.rs	1.0412	0.3679	0.4293	0.5053
_60	ff__776.rs	1.0269	0.3725	0.4232	0.4891
_100	ff__778.rs	1.0456	0.3793	0.4269	0.4936
rages		0.9888	0.3616	0.4172	0.4785
D		12.63	4.96	3.98	5.90

II File Created Successfully - Stored in: l:\data\tchrom\btex\hp_p\601SUMMF.prn

re Version: 3.2 <16C20>
ple Name : STD_5 Time : 05/22/95 23:41
ple Number: TC ;S; Study : 8010S;1;PQL
er or : JZL

trument : HP_F Channel : B A/D mV Range : 10000
Sampler : OTHER TYPE
/Vial : 0/0

ace Serial # : 1092573379 Data Acquisition Time: 05/22/95 22:37
y Time : 0.00 min.
Time : 63.00 min.
g Rate : 1.0000 pts/sec

Data File : l:\data\tchrom\btex\varf\FF__772.raw
lt File : l:\data\tchrom\btex\varf\FF__772.rst
ment File: L:\DATA\TCHROM\BTEX\METHODS\601F.ins
File : L:\DATA\TCHROM\BTEX\METHODS\601F.prc
File : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
ence File : L:\DATA\TCHROM\BTEX\METHODS\8010S.seq

lume : 2 ul Area Reject : 300.00
Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L
6.017	186650.00	20201.23	BB	1.0000e6	----------	0.0373		0.0373
6.819	113565.00	17860.34	BB	2284.3774	0.1982	9.9428	Dichlorodifluorometh	9.9428
7.840	35485.00	5696.44	BB	5763.3877	0.0619	1.2314	Chloromethane	1.2314
8.337	137525.00	18681.28	BB	6253.4116	0.2400	4.3984	Vinyl Chloride	4.3984
0.370	16410.90	1987.03	BV	3368.1609	0.0286	0.9745	Bromomethane	0.9745
0.737	104469.10	11287.72	VB	7821.4981	0.1823	2.6713	Chloroethane	2.6713
11.977	226570.00	17720.59	BB	10119.9375	0.3953	4.4777	Trichlorofluorometha	4.4777
14.730	155475.00	15050.60	BB	10061.5020	0.2713	3.0905	1,1-Dichloroethene	3.0905
6.764	99740.00	11286.97	BB	-2519.4150	0.1740	-7.9177	Methylene Chloride	-7.9177
8.024	121960.00	13212.19	BB	11162.6084	0.2128	2.1852	trans-1,2-Dichlethen	2.1852
9.674	98875.00	10643.06	BB	11128.3779	0.1725	1.7770	1,1-Dichloroethane	1.7770
22.554	87750.00	10319.71	BB	7587.7349	0.1531	2.3129	Chloroform	2.3129
24.018	199360.00	20374.08	BB	13066.2959	0.3478	3.0515	1,1,1-Trichloroethan	3.0515
4.949	246485.00	26076.40	BB	14504.2891	0.4301	3.3988	Carbon Tetrachloride	3.3988
7.694	143140.00	16319.38	BB	12675.2256	0.2498	2.2586	Trichloroethene	2.2586
28.323	37400.00	4401.81	BB	7538.6382	0.0653	0.9922	1,2-Dichloropropane	0.9922
29.256	18250.00	2264.07	BB	4799.3081	0.0318	0.7605	Bromodichloromethane	0.7605
6.163	156870.03	17294.01	BB	12218.3574	0.2737	2.5678	Tetrachloroethene	2.5678
0.768	573135.00	63250.97	BB	----------	1.0000	0.0000	1-CHLORO-2-FLUOROB	0.0000
	2759115.00	303927.88				38.2106		38.2106

t Stored in ASCII File: l:\data\tchrom\btex\varf\FF__772.TXO

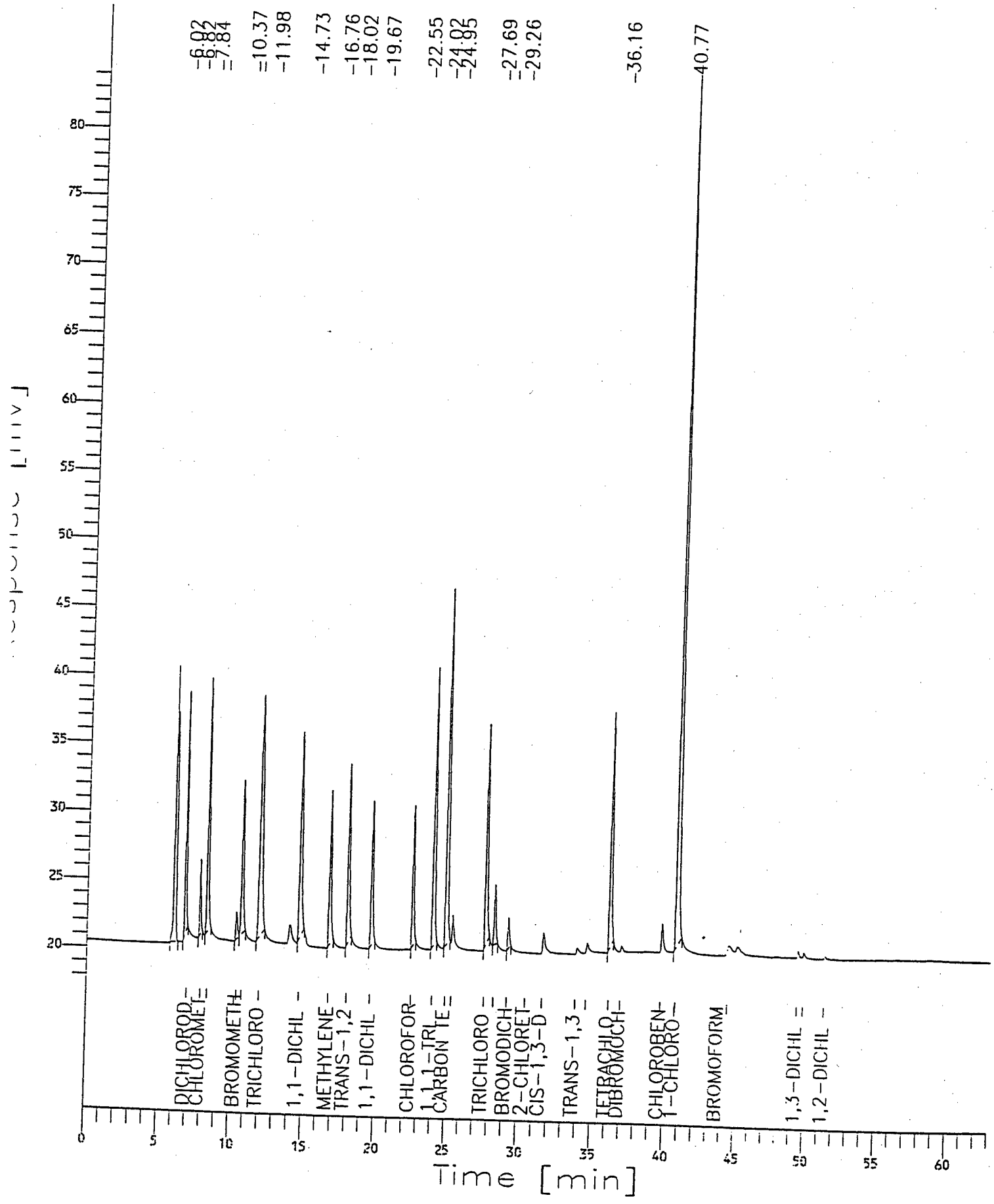
Chromatogram

Sample Name : STD_5
FileName : l:\data\tchrom\btex\varf\FF__772.raw
Method : 601F.ins
Start Time : 0.00 min
Scale Factor: 1

End Time : 63.00 min
Plot Offset: 17 mV

Sample #: TC ;S;
Date : 05/22/95 23:41
Time of Injection: 05/22/95 22:37
Low Point : 17.20 mV
Plot Scale: 67 mV

High Point : 84.46 mV



ware Version: 3.2 <16C20>
ple Name : STD_10 Time : 05/23/95 12:50
ample Number: TC ;S; Study : 8010S;1;PQL
Operator : JZL

rument : HP_F Channel : B A/D mV Range : 10000
utoSampler : OTHER TYPE
ack/Vial : 0/0

rface Serial # : 1092573379 Data Acquisition Time: 05/22/95 23:47
y Time : 0.00 min.
id Time : 63.00 min.
Sampling Rate : 1.0000 pts/sec

Data File : l:\data\tchrom\btex\varf\FF__773.raw
sult File : l:\data\tchrom\btex\varf\FF__773.rst
nstrument File: L:\DATA\TCHROM\BTEX\METHODS\601F.ins
ess File : L:\DATA\TCHROM\BTEX\METHODS\601F.prc
le File : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
ence File : L:\DATA\TCHROM\BTEX\METHODS\8010S.seq

nj. Volume : 2 ul Area Reject : 300.00
le Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

#	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L
	6.970	590980.00	68091.93	BB	18547.3848	0.1270	3.1863	Dichlorodifluorometh	3.1863
	7.950	340226.16	38895.06	BV	46794.2734	0.0731	0.7271	Chloromethane	0.7271
3	8.463	779093.81	77252.28	VB	50772.8906	0.1674	1.5345	Vinyl Chloride	1.5345
4	10.445	279038.50	29090.65	BV	27346.8750	0.0600	1.0204	Bromomethane	1.0204
	10.837	762871.50	62705.35	VB	63504.5430	0.1639	1.2013	Chloroethane	1.2013
	12.036	1114175.00	82713.53	BB	82166.1016	0.2394	1.3560	Trichlorofluorometha	1.3560
	14.094	50960.00	3843.93	BB	1.0000e6	----------	0.0051		0.0051
8	14.767	833214.81	78851.46	BB	81691.6563	0.1791	1.0200	1,1-Dichloroethene	1.0200
9	16.812	1054660.00	99357.09	BB	-3.3776e4	0.2266	-3.1224	Methylene Chloride	-3.1224
10	18.044	984275.00	104108.86	BB	90631.7813	0.2115	1.0860	trans-1,2-Dichlethen	1.0860
	19.687	991040.00	102566.38	BB	90353.8672	0.2130	1.0968	1,1-Dichloroethane	1.0968
2	22.549	1098335.00	123334.20	BB	61606.5664	0.2360	1.7828	Chloroform	1.7828
3	24.011	1290640.00	126820.86	BB	1.0608e5	0.2774	1.2166	1,1,1-Trichloroethan	1.2166
	24.941	1451786.88	147784.64	BV	1.1776e5	0.3120	1.2328	Carbon Tetrachloride	1.2328
	25.406	457993.19	53302.37	VB	36198.8086	0.0984	1.2652	1,2-Dichloroethane	1.2652
7	27.695	1284913.00	139747.38	BV	1.0291e5	0.2761	1.2485	Trichloroethene	1.2485
18	28.328	717767.00	77712.95	VB	61207.9492	0.1543	1.1727	1,2-Dichloropropane	1.1727
19	29.257	557550.00	59372.66	BB	38966.6836	0.1198	1.4308	Bromodichloromethane	1.4308
	31.622	492254.91	46525.84	BB	33590.5742	0.1058	1.4655	cis-1,3-Dichloroprop	1.4655
	33.917	318350.00	28748.90	BB	23684.7481	0.0684	1.3441	trans-1,3-Dichloropr	1.3441
1	34.628	369180.00	38594.93	BB	28874.6699	0.0793	1.2786	1,1,2-Trichloroethan	1.2786
2	36.173	1185310.00	128191.17	BB	99203.6641	0.2547	1.1948	Tetrachloroethene	1.1948
3	36.987	248640.00	26751.33	BB	21732.7637	0.0534	1.1441	Dibromochloromethane	1.1441
4	39.755	374754.97	44027.40	BB	22177.0508	0.0805	1.6898	chlorobenzene	1.6898
5	40.744	4653415.00	515723.00	BB	----------	1.0000	0.0000	1-CHLORO-2-FLUOROB	0.0000
6	43.768	69090.00	8526.15	BB	8841.4150	0.0149	0.7814	Bromoform	0.7814
7	44.408	94020.04	12107.91	BB	9033.3604	0.0202	1.0408	1,1,2,2-Tetrachloroe	1.0408
8	49.426	282313.16	40760.02	BV	33139.2383	0.0607	0.8519	1,3-Dichlorobenzene	0.8519
	49.851	239226.88	36148.00	VB	26720.0859	0.0514	0.8953	1,4-Dichlorobenzene	0.8953
0	51.347	211955.03	31520.67	BB	18141.4844	0.0456	1.1683	1,2-Dichlorobenzene	1.1683
		23178030.00	2.43e6				31.3151		31.3151

D

Report Stored in ASCII File: l:\data\tchrom\btex\varf\FF__773.TXO

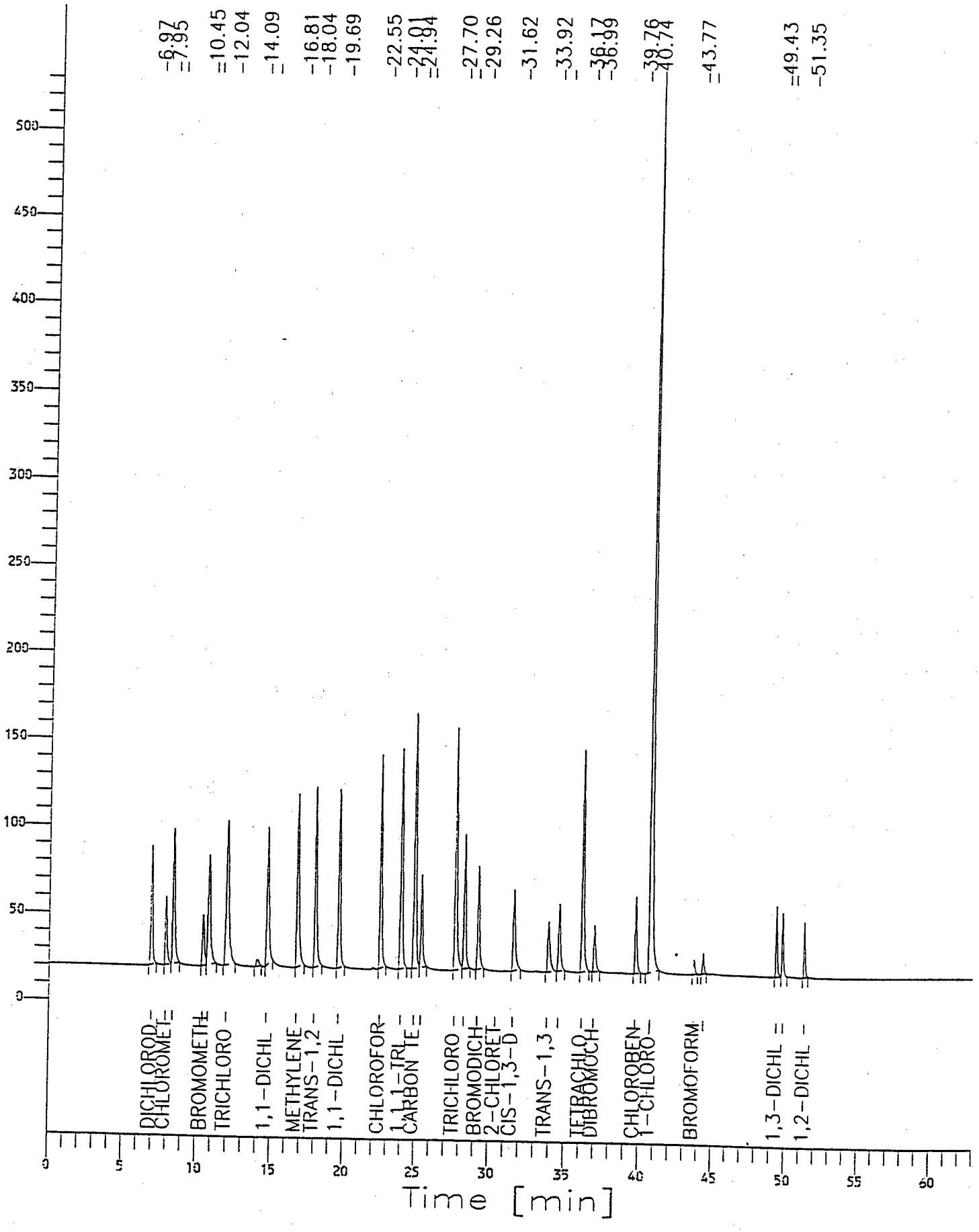
Chromatogram

ample Name : STD_10
ileName : l:\data\tchrom\btex\varf\FF__773.raw
ethod : 601F.ins
tart Time : 0.00 min
cale Factor: 1

End Time : 63.00 min
Plot Offset: -5 mV

Sample #: TC ;S;
Date : 05/23/95 12:50
Time of Injection: 05/22/95 23:47
Low Point : -5.31 mV
Plot Scale: 540 mV

High Point : 534.25 mV



[redacted]are Version: 3.2 <16C20>
[redacted]ple Name : STD_20 Time : 05/23/95 02:00
[redacted]ple Number: TC ;S; Study : 8010S;1;PQL
[redacted]erator : JZL

[redacted]ument : HP_F Channel : B A/D mV Range : 10000
[redacted]toSampler : OTHER TYPE
[redacted]ck/Vial : 0/0

[redacted]face Serial # : 1092573379 Data Acquisition Time: 05/23/95 12:57
[redacted] Time : 0.00 min.
[redacted] Time : 63.00 min.
[redacted]pling Rate : 1.0000 pts/sec

[redacted]ata File : l:\data\tchrom\btex\varf\FF__774.raw
[redacted]ult File : l:\data\tchrom\btex\varf\FF__774.rst
[redacted]trument File: L:\DATA\TCHROM\BTEX\METHODS\601F.ins
[redacted]ss File : L:\DATA\TCHROM\BTEX\METHODS\601F.prc
[redacted]e File : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
[redacted]nce File : L:\DATA\TCHROM\BTEX\METHODS\8010S.seq

[redacted] Volume : 2 ul Area Reject : 300.00
[redacted]e Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

[redacted]ket Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L
[redacted]6.971	1100010.00	121912.09	BB	18114.3535	0.2420	3.0363	Dichlorodifluorometh	3.0363
7.944	635121.81	72059.74	BV	45701.7500	0.1398	0.6949	Chloromethane	0.6949
8.456	1429565.25	128138.31	VB	49587.4805	0.3146	1.4415	Vinyl Chloride	1.4415
[redacted]10.438	596979.00	58669.34	BV	26708.3984	0.1314	1.1176	Bromomethane	1.1176
[redacted]10.824	1369280.88	108935.13	VB	62021.8711	0.3013	1.1039	Chloroethane	1.1039
[redacted]12.026	2066000.00	155777.13	BB	80247.7422	0.4546	1.2873	Trichlorofluorometha	1.2873
[redacted]14.075	46885.00	3663.95	BB	1.0000e6	----------	0.0023		0.0023
14.751	1701080.00	148223.98	BB	79784.3594	0.3743	1.0661	1,1-Dichloroethene	1.0661
[redacted]16.781	1720425.00	153435.00	BB	-2.4313e5	0.3786	-0.3538	Methylene Chloride	-0.3538
[redacted]18.034	1967330.00	204008.86	BB	88515.7656	0.4329	1.1113	trans-1,2-Dichlethen	1.1113
[redacted]19.687	2014735.00	203501.47	BB	88244.3359	0.4433	1.1416	1,1-Dichloroethane	1.1416
22.004	20270.00	2781.17	BB	1.0000e6	----------	0.0010		0.0010
[redacted]22.567	2244380.00	246025.50	BB	60168.2109	0.4938	1.8651	Chloroform	1.8651
[redacted]24.040	2475400.00	235396.27	BB	1.0361e5	0.5447	1.1946	1,1,1-Trichloroethan	1.1946
[redacted]24.970	2794042.50	275276.97	BV	1.1501e5	0.6148	1.2147	Carbon Tetrachloride	1.2147
25.432	1070077.50	118713.65	VB	35353.6602	0.2355	1.5134	1,2-Dichloroethane	1.5134
27.718	2646005.50	283607.97	BV	1.0051e5	0.5822	1.3163	Trichloroethene	1.3163
[redacted]28.351	1544304.50	164492.95	VB	59778.9023	0.3398	1.2917	1,2-Dichloropropane	1.2917
[redacted]29.279	1234019.88	127855.32	BB	38056.9180	0.2715	1.6213	Bromodichloromethane	1.6213
[redacted]31.629	1107765.00	103023.26	BB	32806.3203	0.2438	1.6883	cis-1,3-Dichloroprop	1.6883
33.905	723081.31	66392.11	BV	23131.7734	0.1591	1.5630	trans-1,3-Dichloropr	1.5630
[redacted]34.615	837138.56	87160.62	VB	28200.5215	0.1842	1.4843	1,1,2-Trichloroethan	1.4843
[redacted]36.154	2462070.00	263066.41	BB	96887.5156	0.5417	1.2706	Tetrachloroethene	1.2706
[redacted]36.961	577335.00	60508.99	BB	21225.3633	0.1270	1.3600	Dibromochloromethane	1.3600
[redacted]39.734	755760.00	87755.27	BB	21659.2754	0.1663	1.7447	chlorobenzene	1.7447
40.727	4544770.00	505925.03	BB	----------	1.0000	0.0000	1-CHLORO-2-FLUOROB	0.0000
[redacted]43.740	200469.95	23761.81	BB	8634.9912	0.0441	1.1608	Bromoform	1.1608
[redacted]44.392	260869.95	33421.41	BB	8822.4551	0.0574	1.4784	1,1,2,2-Tetrachloroe	1.4784
[redacted]49.423	598782.50	85739.61	BV	32365.5176	0.1318	0.9250	1,3-Dichlorobenzene	0.9250
49.852	514817.53	76347.79	VB	26096.2422	0.1133	0.9864	1,4-Dichlorobenzene	0.9864
51.356	462045.06	67882.03	BB	17717.9297	0.1017	1.3039	1,2-Dichlorobenzene	1.3039
[redacted]56.525	12880.00	1998.83	BB	1.0000e6	----------	0.0006		0.0006
	41733692.00	4.27e6				36.6327		36.6327

[redacted] Stored in ASCII File: l:\data\tchrom\btex\varf\FF__774.TXO

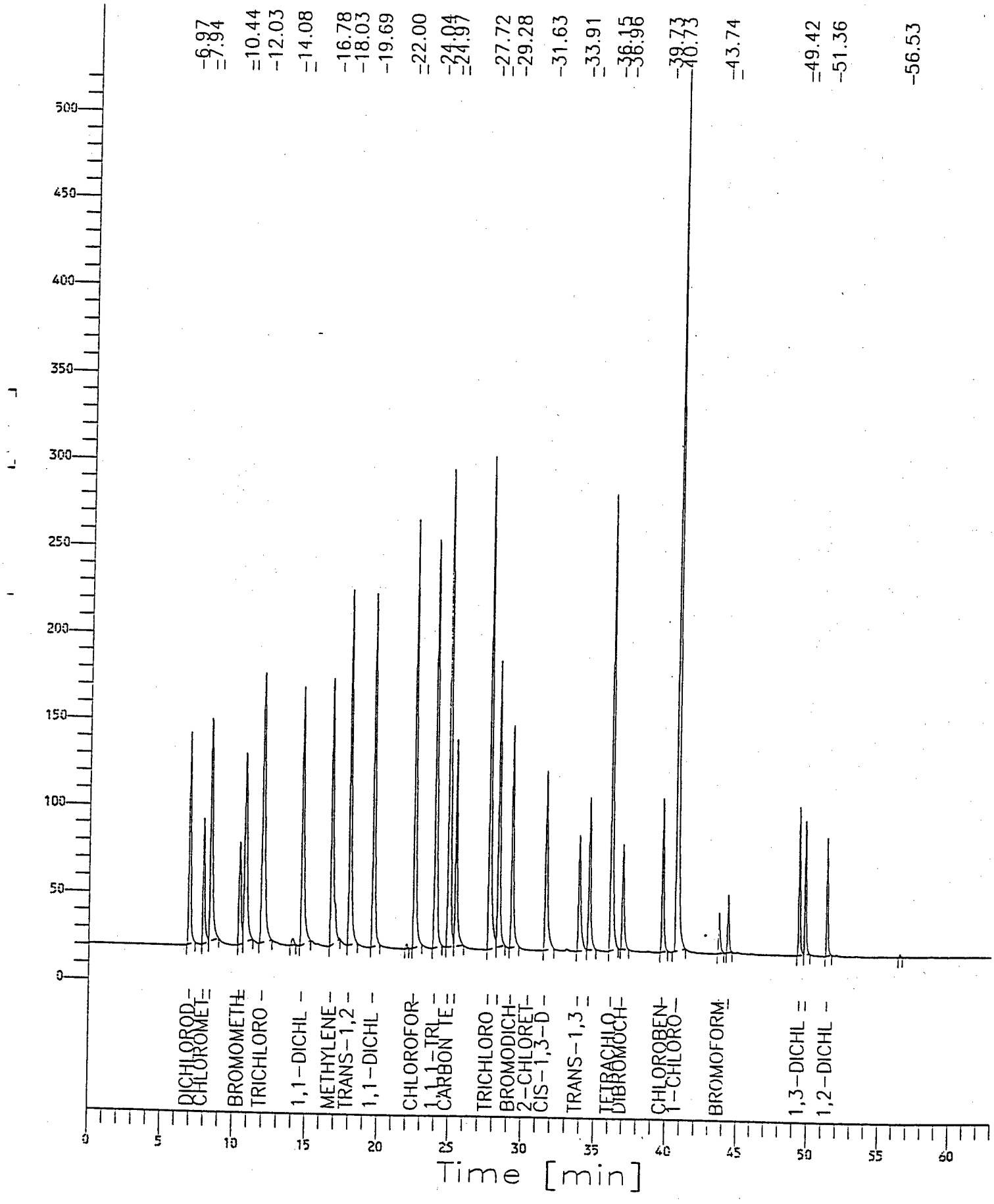
Chromatogram

mple Name : STD_20
leName : l:\data\tchrom\btex\varf\FF__774.raw
thod : 601F.ins
art Time : 0.00 min
ale Factor: 1

End Time : 63.00 min
Plot Offset: -5 mV

Sample #: TC ;S;
Date : 05/23/95 02:00
Time of Injection: 05/23/95 12:57
Low Point : -4.87 mV
Plot Scale: 530 mV

High Point : 524.86 mV



[redacted]

are Version: 3.2 <16C20>
[redacted]ple Name : STD_40 Time : 05/23/95 03:11
ple Number: TC ;S; Study : 8010S;1;PQL
[redacted]ator : JZL

[redacted]ument : HP_F Channel : B A/D mV Range : 10000
oSampler : OTHER TYPE
[redacted]k/Vial : 0/0

[redacted]face Serial # : 1092573379 Data Acquisition Time: 05/23/95 02:07
[redacted] Time : 0.00 min.
[redacted] Time : 63.00 min.
[redacted]ling Rate : 1.0000 pts/sec

[redacted]ata File : l:\data\tchrom\btex\varf\FF__775.raw
[redacted]lt File : l:\data\tchrom\btex\varf\FF__775.rst
[redacted]trument File: L:\DATA\TCHROM\BTEX\METHODS\601F.ins
[redacted]ss File : L:\DATA\TCHROM\BTEX\METHODS\601F.prc
[redacted]e File : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
[redacted]nce File : L:\DATA\TCHROM\BTEX\METHODS\8010S.seq

[redacted] Volume : 2 ul Area Reject : 300.00
[redacted]e Amount : 1.0000 Dilution Factor : 1.00

[redacted]

BTEX Area Percent Report

[redacted]

[redacted]Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L
1[redacted] 6.945	2008525.00	241402.45	BB	16792.9941	0.4767	2.9901	Dichlorodifluorometh	2.9901
[redacted] 7.928	1138141.50	125454.48	BV	42368.0195	0.2701	0.6716	Chloromethane	0.6716
8.440	2706658.50	269680.78	VB	45970.3047	0.6424	1.4720	Vinyl Chloride	1.4720
10.420	1137808.75	117068.88	BV	24760.1426	0.2701	1.1488	Bromomethane	1.1488
5 10.813	2765451.25	218152.95	VB	57497.6680	0.6564	1.2024	Chloroethane	1.2024
4[redacted] 12.020	3933630.00	285010.38	BB	74394.0313	0.9336	1.3219	Trichlorofluorometha	1.3219
14.076	44980.00	3511.01	BB	1.0000e6	----------	0.0011		0.0011
14.751	3293890.00	276600.16	BB	73964.4609	0.7818	1.1133	1,1-Dichloroethene	1.1133
9 16.775	2639150.00	250715.88	BB	81651.2422	0.6264	0.8081	Methylene Chloride	0.8081
0[redacted] 18.025	3772675.00	373786.91	BB	82058.9453	0.8954	1.1494	trans-1,2-Dichlethen	1.1494
19.675	3702295.00	363250.06	BB	81807.3203	0.8787	1.1314	1,1-Dichloroethane	1.1314
21.975	46910.00	5601.37	BB	1.0000e6	----------	0.0012		0.0012
22.542	3896775.00	421242.00	BB	55779.2188	0.9249	1.7465	Chloroform	1.7465
[redacted] 24.005	4612260.00	431662.63	BB	96053.4141	1.0947	1.2004	1,1,1-Trichloroethan	1.2004
[redacted] 24.930	5197069.50	503806.06	BV	1.0662e5	1.2335	1.2186	Carbon Tetrachloride	1.2186
25.388	1717420.25	190974.48	VB	32774.7734	0.4076	1.3100	1,2-Dichloroethane	1.3100
27.666	4522198.50	484216.72	BV	93178.5703	1.0733	1.2133	Trichloroethene	1.2133
8 28.297	2658146.25	276362.84	VB	55418.3008	0.6309	1.1991	1,2-Dichloropropane	1.1991
9[redacted] 29.219	2133550.00	216720.77	BB	35280.8398	0.5064	1.5118	Bromodichloromethane	1.5118
[redacted] 31.571	1906620.00	176268.53	BB	30413.2539	0.4525	1.5673	cis-1,3-Dichloroprop	1.5673
33.001	25900.00	2744.77	BB	1.0000e6	----------	0.0007		0.0007
[redacted] 33.856	1235790.50	113301.25	BV	21444.4141	0.2933	1.4407	trans-1,3-Dichloropr	1.4407
[redacted] 34.572	1375979.63	142317.17	VB	26143.4258	0.3266	1.3158	1,1,2-Trichloroethan	1.3158
[redacted] 36.121	4372116.50	456555.59	BV	89820.0156	1.0377	1.2169	Tetrachloroethene	1.2169
36.925	975253.38	99433.06	VB	19677.0703	0.2315	1.2391	Dibromochloromethane	1.2391
39.705	1308510.00	151869.95	BB	20079.3320	0.3106	1.6292	chlorobenzene	1.6292
[redacted] 40.698	4213250.00	478019.97	BB	----------	1.0000	0.0000	1-CHLORO-2-FLUOROB	0.0000
[redacted] 43.717	323269.88	37511.35	BB	8005.1079	0.0767	1.0096	Bromoform	1.0096
[redacted] 44.376	384170.00	49065.76	BB	8178.8975	0.0912	1.1743	1,1,2,2-Tetrachloroe	1.1743
49.419	1087170.63	154699.78	BV	30004.6055	0.2580	0.9058	1,3-Dichlorobenzene	0.9058
49.847	931659.38	137049.95	VB	24192.6406	0.2211	0.9628	1,4-Dichlorobenzene	0.9628
[redacted] 51.353	791589.94	115420.74	BB	16425.4863	0.1879	1.2048	1,2-Dichlorobenzene	1.2048
	70858808.00	7.16e6				36.0779		36.0779

[redacted]

[redacted]

[redacted] Stored in ASCII File: l:\data\tchrom\btex\varf\FF__775.TXO

[redacted]

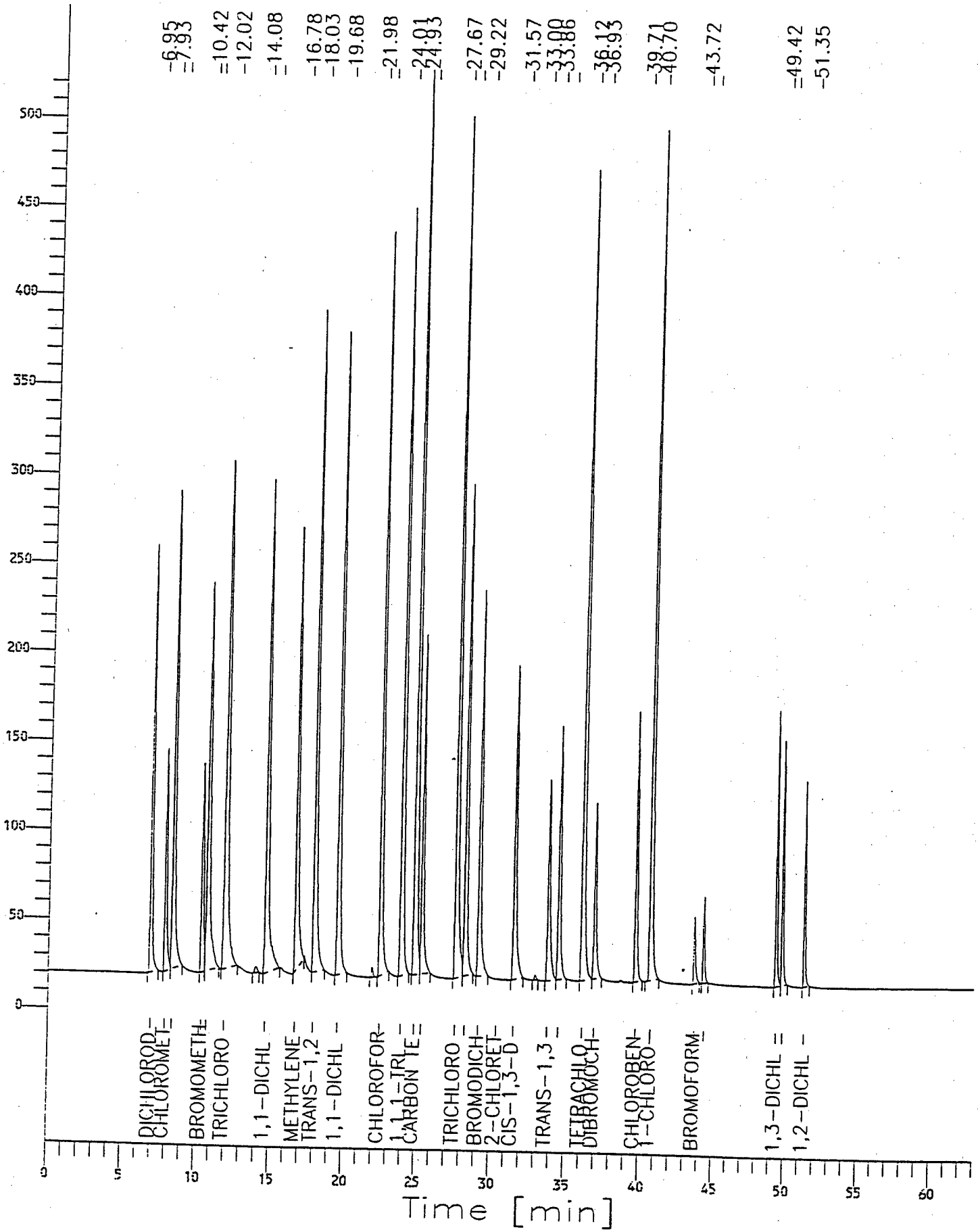
Chromatogram

ample Name : STD_40
ileName : l:\data\tchrom\btex\varf\FF__775.raw
ethod : 601F.ins
tart Time : 0.00 min
cale Factor: 1

End Time : 63.00 min
Plot Offset: -5 mV

Sample #: TC ;S;
Date : 05/23/95 03:11
Time of Injection: 05/23/95 02:07
Low Point : -4.95 mV
Plot Scale: 531 mV

High Point : 526.25 mV



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Version: 3.2 <16C20>
ame  : STD_60                    Time        : 05/23/95  04:20
Number: TC ;S;                   Study       : 8010S;1;PQL
tor     : JZL

nt    : HP_F                     Channel : B     A/D mV Range : 10000
ler   : OTHER TYPE
Vial    : 0/0

e Serial # : 1092573379   Data Acquisition Time: 05/23/95  03:17
me      : 0.00   min.
        : 63.00  min.
ing Rate  : 1.0000   pts/sec

File  : l:\data\tchrom\btex\varf\FF__776.raw
ile     : l:\data\tchrom\btex\varf\FF__776.rst
ment File: L:\DATA\TCHROM\BTEX\METHODS\601F.ins
ess File   : L:\DATA\TCHROM\BTEX\METHODS\601F.prc
le ile     : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
  File  : L:\DATA\TCHROM\BTEX\METHODS\8010S.seq

olume     : 2 ul                 Area Reject      : 300.00
le Amount  : 1.0000               Dilution Factor  : 1.00
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BTEX Area Percent Report

Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L
.953	3014525.00	336700.59	BB	17746.6270	0.6770	2.8311	Dichlorodifluorometh	2.8311
.934	1726689.88	188845.50	BV	44773.9883	0.3878	0.6427	Chloromethane	0.6427
.448	4095170.00	391100.66	VB	48580.8398	0.9197	1.4049	Vinyl Chloride	1.4049
10.432	1732708.13	175675.66	BV	26166.2070	0.3892	1.1037	Bromomethane	1.1037
10.823	3877711.75	312375.63	VB	60762.8164	0.8709	1.0636	Chloroethane	1.0636
.027	5542720.00	407869.50	BB	78618.6953	1.2449	1.1750	Trichlorofluorometha	1.1750
.079	60945.00	4310.70	BB	1.0000e6	----------	0.0010		0.0010
.750	4708260.00	400188.72	BB	78164.7188	1.0574	1.0039	1,1-Dichloroethene	1.0039
16.766	3848051.25	356747.97	BE	54868.5469	0.8642	1.1689	Methylene Chloride	1.1689
.352	291060.00	14819.88	EV	1.0000e6	----------	0.0049		0.0049
.011	5639198.50	546862.44	VB	86718.8750	1.2665	1.0838	trans-1,2-Dichlethen	1.0838
.656	5476970.00	534950.88	BB	86452.9531	1.2301	1.0559	1,1-Dichloroethane	1.0559
21.952	77515.00	9116.46	BB	1.0000e6	----------	0.0013		0.0013
22.521	6024840.00	622682.50	BB	58946.7773	1.3531	1.7035	Chloroform	1.7035
.989	6929870.00	633225.31	BB	1.0150e5	1.5564	1.1378	1,1,1-Trichloroethan	1.1378
.918	7723500.00	744714.06	BV	1.1267e5	1.7346	1.1424	Carbon Tetrachloride	1.1424
.375	2684580.00	296567.72	VB	34635.9727	0.6029	1.2918	1,2-Dichloroethane	1.2918
27.658	6724703.50	720184.69	BV	98469.9453	1.5103	1.1382	Trichloroethene	1.1382
.288	4022636.25	416887.50	VB	58565.3750	0.9035	1.1448	1,2-Dichloropropane	1.1448
.207	3272835.00	330157.00	BB	37284.3516	0.7351	1.4630	Bromodichloromethane	1.4630
.553	2881565.00	270762.81	BB	32140.3496	0.6472	1.4943	cis-1,3-Dichloroprop	1.4943
32.981	44675.00	4654.45	BB	1.0000e6	----------	0.0007		0.0007
33.835	1884480.00	175802.30	BV	22662.1914	0.4232	1.3859	trans-1,3-Dichloropr	1.3859
.554	2114980.00	219026.98	VB	27628.0449	0.4750	1.2759	1,1,2-Trichloroethan	1.2759
.109	6450266.00	660069.63	BV	94920.6797	1.4487	1.1326	Tetrachloroethene	1.1326
36.918	1550878.75	156384.52	VB	20794.4805	0.3483	1.2430	Dibromochloromethane	1.2430
38.707	17140.00	2076.57	BB	1.0000e6	----------	0.0003		0.0003
.718	2015070.13	234288.92	BB	21219.5879	0.4526	1.5827	chlorobenzene	1.5827
.718	4452510.00	507178.50	BB	----------	1.0000	0.0000	1-CHLORO-2-FLUOROB	0.0000
.737	533237.88	59123.03	BV	8459.6992	0.1198	1.0506	Bromoform	1.0506
44.397	584282.00	74372.27	VB	8643.3565	0.1312	1.1267	1,1,2,2-Tetrachloroe	1.1267
49.412	1610903.38	229577.83	BV	31708.4941	0.3618	0.8467	1,3-Dichlorobenzene	0.8467
.837	1417836.50	209430.56	VB	25566.4824	0.3184	0.9243	1,4-Dichlorobenzene	0.9243
.333	1226850.13	178257.98	BB	17358.2481	0.2755	1.1780	1,2-Dichlorobenzene	1.1780
	1.04e8	1.04e7				34.8037		34.8037

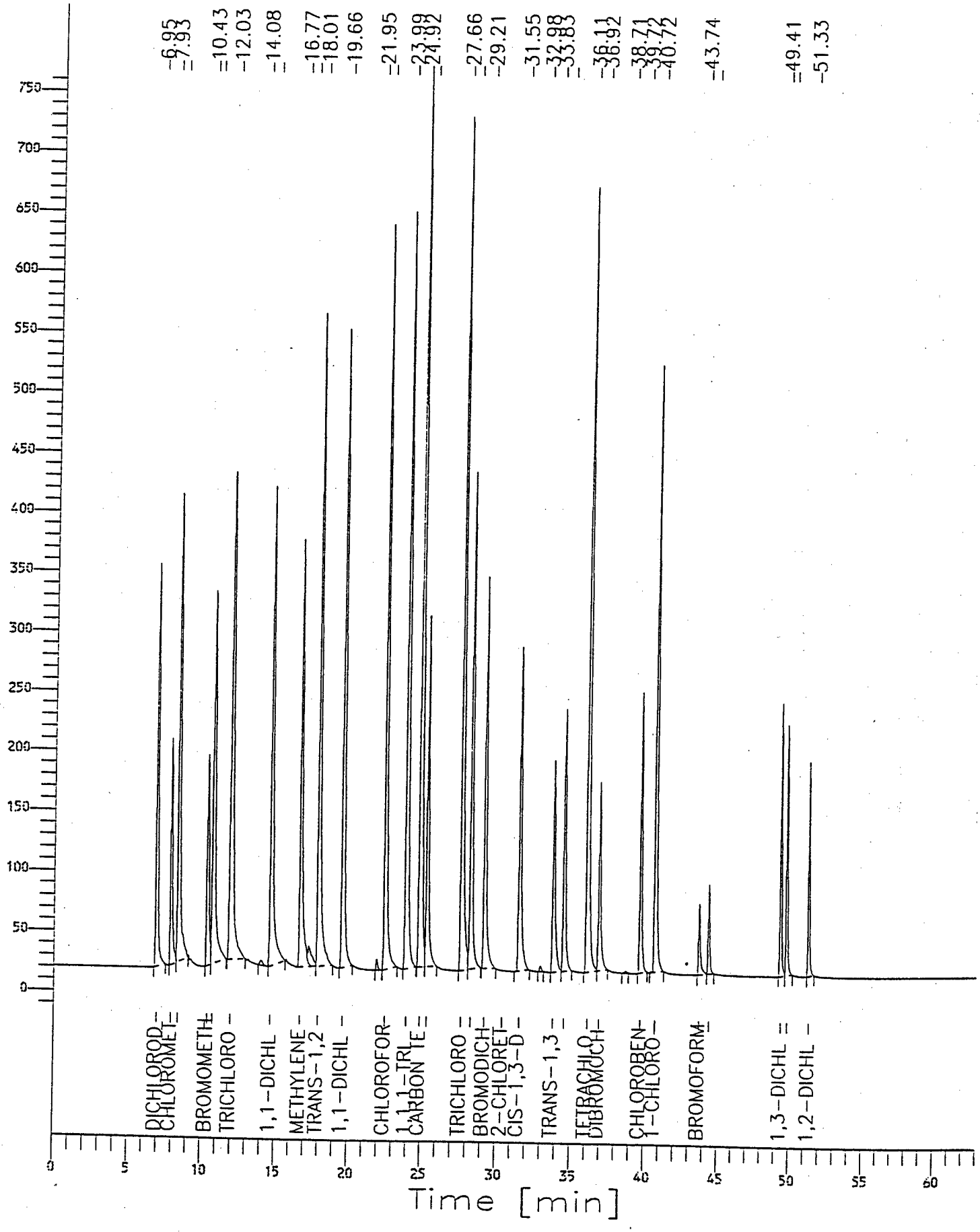
Stored in ASCII File: l:\data\tchrom\btex\varf\FF__776.TXO

Chromatogram

mple Name : STD_60
leName : l:\data\tchrom\btex\varf\FF__776.raw
thod : 601F.ins
art Time : 0.00 min
ale Factor: 1

End Time : 63.00 min
Plot Offset: -17 mV

Sample #: TC ;S;
Date : 05/23/95 04:21
Time of Injection: 05/23/95 03:17
Low Point : -17.09 mV
Plot Scale: 786 mV



```
ware Version: 3.2 <16C20>
e Name  : STD_80                    Time        : 05/23/95  05:30
mple Number: TC ;S;                 Study       : 8010S;1;PQL
erator      : JZL

ns ument    : HP_F                  Channel : B     A/D mV Range : 10000
 ampler     : OTHER TYPE
ck/Vial     : 0/0

nt face Serial # : 1092573379   Data Acquisition Time: 05/23/95  04:27
 Time       : 0.00   min.
 Time       : 63.00  min.
mpling Rate : 1.0000   pts/sec

aw ata File  : l:\data\tchrom\btex\varf\FF__777.raw
 t File      : l:\data\tchrom\btex\varf\FF__777.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\601F.ins
ocess File   : L:\DATA\TCHROM\BTEX\METHODS\601F.prc
am e File    : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
 nce File    : L:\DATA\TCHROM\BTEX\METHODS\8010S.seq

 . Volume    : 2 ul                  Area Reject      : 300.00
am e Amount  : 1.0000                Dilution Factor  : 1.00
```

BTEX Area Percent Report

et Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L
6.937	3585190.00	444028.94	BB	14737.5000	0.9696	3.0409	Dichlorodifluorometh	3.0409
7.919	1974127.75	224696.52	BV	37182.0898	0.5339	0.6637	Chloromethane	0.6637
8.424	5129597.00	512954.28	VB	40343.4492	1.3873	1.5894	Vinyl Chloride	1.5894
10.401	2016137.13	209470.41	BV	21729.4512	0.5453	1.1598	Bromomethane	1.1598
10.790	4971038.00	399809.44	VB	50459.8359	1.3444	1.2314	Chloroethane	1.2314
12.000	7270320.00	512396.53	BB	65288.0625	1.9663	1.3920	Trichlorofluorometha	1.3920
14.043	56810.00	3767.15	BB	1.0000e6	----------	0.0007		0.0007
14.721	5976335.00	492886.22	BB	64911.0664	1.6163	1.1509	1,1-Dichloroethene	1.1509
16.743	4312050.00	377335.34	BB	36501.9766	1.1662	1.4767	Methylene Chloride	1.4767
17.997	6480380.00	631280.81	BB	72014.7813	1.7526	1.1248	trans-1,2-Dichlethen	1.1248
19.646	6098400.00	582290.31	BB	71793.9531	1.6493	1.0618	1,1-Dichloroethane	1.0618
21.942	83770.00	10045.78	BB	1.0000e6	----------	0.0011		0.0011
22.510	6504415.00	682425.94	BB	48951.7305	1.7591	1.6609	Chloroform	1.6609
23.976	8241180.00	752065.13	BB	84296.2891	2.2288	1.2221	1,1,1-Trichloroethan	1.2221
24.904	9205720.00	876056.56	BV	93573.4063	2.4897	1.2298	Carbon Tetrachloride	1.2298
25.360	2804749.25	297733.75	VB	28763.0781	0.7585	1.2189	1,2-Dichloroethane	1.2189
27.643	8062941.00	851126.56	BV	81773.3281	2.1806	1.2325	Trichloroethene	1.2325
28.277	4439709.00	447496.28	VB	48634.9922	1.2007	1.1411	1,2-Dichloropropane	1.1411
29.200	3470680.00	349890.22	BB	30962.3965	0.9387	1.4012	Bromodichloromethane	1.4012
31.559	2996240.00	280638.66	BB	26690.6133	0.8103	1.4032	cis-1,3-Dichloroprop	1.4032
32.995	58620.00	5996.75	BB	1.0000e6	----------	0.0007		0.0007
33.853	1851050.88	173286.47	BV	18819.5781	0.5006	1.2295	trans-1,3-Dichloropr	1.2295
34.573	2019124.25	211440.27	VB	22943.4199	0.5461	1.1001	1,1,2-Trichloroethan	1.1001
36.130	7505317.50	765799.31	BV	78825.8750	2.0298	1.1902	Tetrachloroethene	1.1902
36.935	1457057.13	146142.70	VB	17268.5606	0.3941	1.0547	Dibromochloromethane	1.0547
39.719	2121605.00	245987.89	BB	17621.5820	0.5738	1.5050	chlorobenzene	1.5050
40.714	3697540.00	426109.22	BB	----------	1.0000	0.0000	1-CHLORO-2-FLUOROB	0.0000
43.712	448915.16	52556.94	BB	7025.2681	0.1214	0.7988	Bromoform	0.7988
44.371	485280.00	62410.22	BB	7177.7837	0.1312	0.8451	1,1,2,2-Tetrachloroe	0.8451
49.391	1544705.88	218181.86	BV	26331.9844	0.4178	0.7333	1,3-Dichlorobenzene	0.7333
49.817	1320313.88	194605.94	VB	21231.4141	0.3571	0.7773	1,4-Dichlorobenzene	0.7773
51.316	1081689.88	157682.14	BB	14414.9756	0.2925	0.9380	1,2-Dichlorobenzene	0.9380
	1.17e8	1.15e7				34.5752		34.5752

```
r Stored in ASCII File: l:\data\tchrom\btex\varf\FF__777.TXO
```

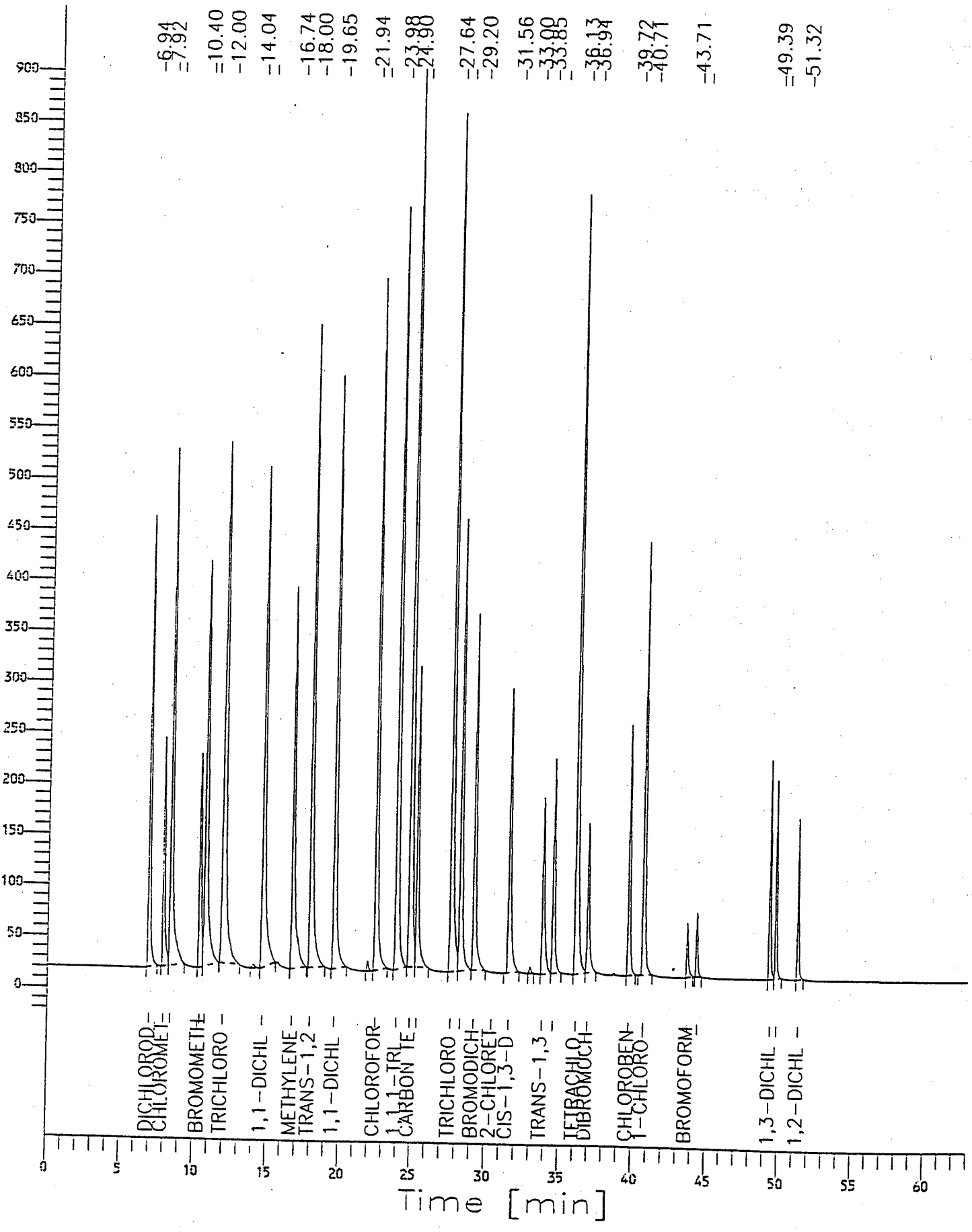
Chromatogram

Sample Name : STD_80
FileName : l:\data\tchrom\btex\varf\FF__777.raw
Method : 601F.ins
Start Time : 0.00 min
Scale Factor: 1

End Time : 63.00 min
Plot Offset: -24 mV

Sample #: TC ;S;
Date : 05/23/95 05:31
Time of Injection: 05/23/95 04:27
Low Point : -23.61 mV
Plot Scale: 924 mV

High Point : 900.04 mV



Software Version: 3.2 <16C20>
Sample Name : STD_100 Time : 05/23/95 06:40
Sample Number: TC ;S; Study : 8010S;1;PQL
Operator : JZL

Instrument : HP_F Channel : B A/D mV Range : 10000
Autosampler : OTHER TYPE
Tray/Vial : 0/0

Interface Serial # : 1092573379 Data Acquisition Time: 05/23/95 05:37
Delay Time : 0.00 min.
Run Time : 63.00 min.
Sampling Rate : 1.0000 pts/sec

Data File : l:\data\tchrom\btex\varf\FF__778.raw
Result File : l:\data\tchrom\btex\varf\FF__778.rst
Instrument File: L:\DATA\TCHROM\BTEX\METHODS\601F.ins
Process File : L:\DATA\TCHROM\BTEX\METHODS\601F.prc
Sample File : L:\DATA\TCHROM\BTEX\METHODS\8010S522.smp
Sequence File : L:\DATA\TCHROM\BTEX\METHODS\8010S.seq

Inj. Volume : 2 ul Area Reject : 300.00
Sample Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L
6.946	4538285.00	521125.81	BB	17898.6621	1.0106	2.5355	Dichlorodifluorometh	2.5355
7.921	2742510.50	324132.41	BV	45157.5742	0.6107	0.6073	Chloromethane	0.6073
8.434	6211549.50	593781.38	VB	48997.0352	1.3832	1.2677	Vinyl Chloride	1.2677
10.412	2831687.50	287414.75	BV	26390.3770	0.6306	1.0730	Bromomethane	1.0730
10.801	6623132.50	498939.03	VB	61283.3711	1.4749	1.0807	Chloroethane	1.0807
12.002	9286430.00	646033.69	BB	79292.2188	2.0680	1.1712	Trichlorofluorometha	1.1712
14.048	50980.04	3914.66	BB	1.0000e6	----------	0.0005		0.0005
14.716	6939304.50	623066.19	BB	78834.3672	1.5453	0.8802	1,1-Dichloroethene	0.8802
15.740	24714.84	3655.46	BB	1.0000e6	----------	0.0003		0.0003
16.738	6509183.50	560778.69	BV	39892.7656	1.4495	1.6317	Methylene Chloride	1.6317
17.984	9033516.00	853369.50	VB	87461.7969	2.0116	1.0329	trans-1,2-Dichlethen	1.0329
19.632	8800640.00	832694.94	BB	87193.6094	1.9598	1.0093	1,1-Dichloroethane	1.0093
21.938	132360.00	15430.40	BB	1.0000e6	----------	0.0013		0.0013
22.511	9590860.00	974742.19	BB	59451.7891	2.1357	1.6132	Chloroform	1.6132
23.987	10888040.00	958077.50	BB	1.0237e5	2.4246	1.0635	1,1,1-Trichloroethan	1.0635
24.923	11902950.00	1.11e6	BV	1.1364e5	2.6506	1.0474	Carbon Tetrachloride	1.0474
25.381	4613210.00	476495.69	VB	34932.7031	1.0273	1.3206	1,2-Dichloroethane	1.3206
27.673	10473555.00	1.11e6	BV	99313.5391	2.3323	1.0546	Trichloroethene	1.0546
28.309	6440764.50	638854.00	VB	59067.1055	1.4343	1.0904	1,2-Dichloropropane	1.0904
29.230	5229240.00	521309.03	BB	37603.7695	1.1645	1.3906	Bromodichloromethane	1.3906
31.582	4539200.00	426264.22	BB	32415.6953	1.0108	1.4003	cis-1,3-Dichloroprop	1.4003
33.010	81450.00	8186.67	BB	1.0000e6	----------	0.0008		0.0008
33.853	3011490.25	288230.59	BV	22856.3398	0.6706	1.3176	trans-1,3-Dichloropr	1.3176
34.570	3368389.75	352447.69	VB	27864.7363	0.7501	1.2088	1,1,2-Trichloroethan	1.2088
36.112	9900765.00	1.00e6	BV	95733.8594	2.2048	1.0342	Tetrachloroethene	1.0342
36.915	2465895.25	251229.08	VB	20972.6309	0.5491	1.1758	Dibromochloromethane	1.1758
38.687	32640.00	4034.48	BB	1.0000e6	----------	0.0003		0.0003
39.694	3228780.00	372302.03	BB	21401.3750	0.7190	1.5087	chlorobenzene	1.5087
40.419	16534.92	2446.71	BV	9.9999e5	----------	0.0002		0.0002
40.689	4490655.00	516181.88	VB	----------	1.0000	0.0000	1-CHLORO-2-FLUOROB	0.0000
43.692	873541.25	96709.63	BV	8532.1729	0.1945	1.0238	Bromoform	1.0238
44.352	956419.00	120345.29	VB	8717.4053	0.2130	1.0971	1,1,2,2-Tetrachloroe	1.0971
49.382	2636333.50	364431.78	BV	31980.1406	0.5871	0.8244	1,3-Dichlorobenzene	0.8244
49.809	2342509.75	334336.28	VB	25785.5137	0.5216	0.9085	1,4-Dichlorobenzene	0.9085
51.311	2026050.00	286890.91	BB	17506.9590	0.4512	1.1573	1,2-Dichlorobenzene	1.1573
	1.62e8	1.59e7				33.5297		33.5297

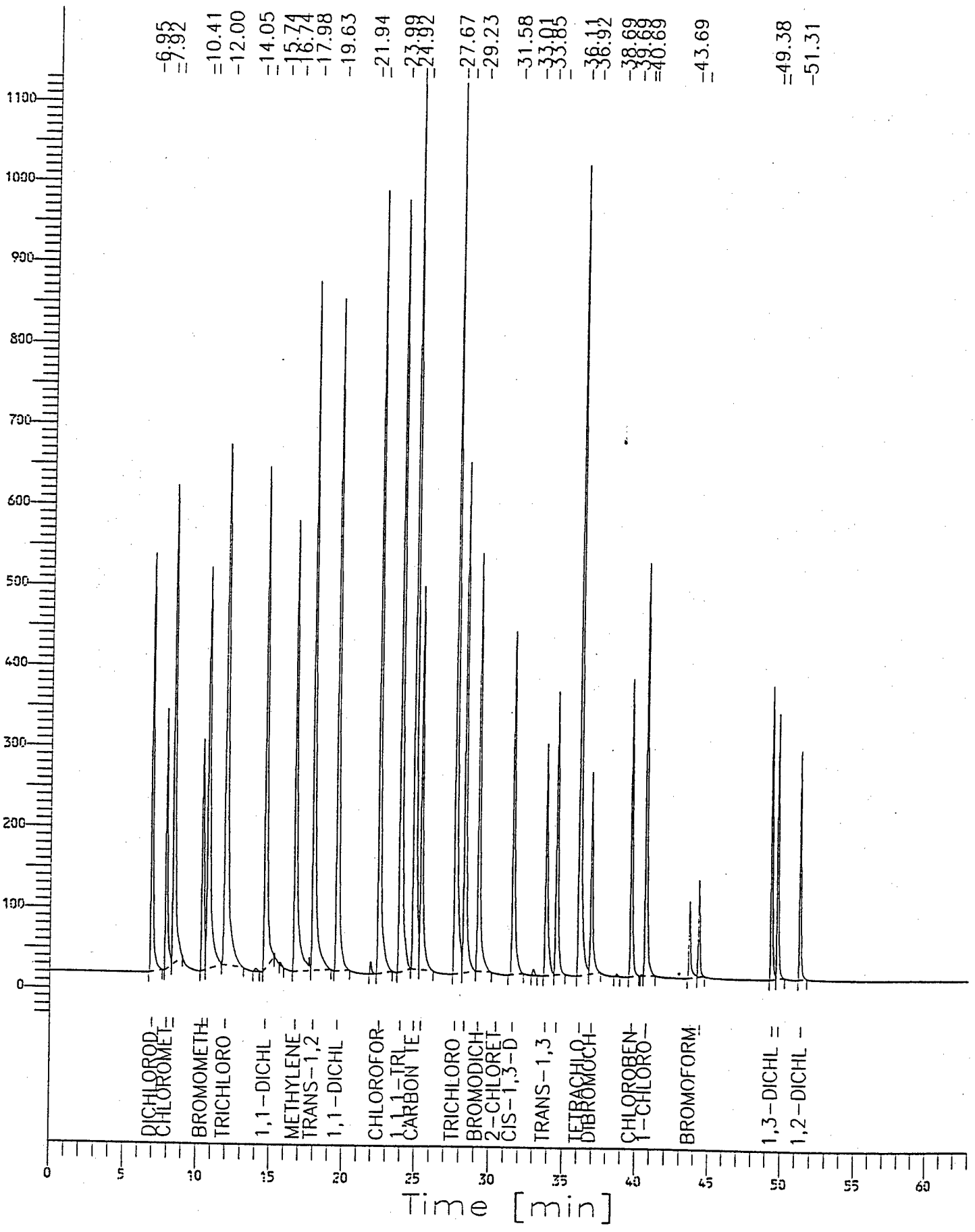
Report Stored in ASCII File: l:\data\tchrom\btex\varf\FF__778.TXO

mple Name : STD_100
leName : l:\data\tchrom\btex\varf\FF__778.raw
thod : 601F.ins
art Time : 0.00 min
ale Factor: 1

End Time : 63.00 min
Plot Offset: -35 mV

Sample #: TC ;S;
Date : 05/23/95 06:41
Time of Injection: 05/23/95 05:37
Low Point : -35.42 mV
Plot Scale: 1171 mV

High Point : 1135.73 mV



[redacted]

Version: 3.2 <16C20>
e Name : STD-50 Time : 05/28/95 08:20
Number: TC ;W;1 Study : B602MW;1
: YN

ument : HP_J Channel : A A/D mV Range : 1000
Sampler : NONE
/ : 0/0

ace Serial # : 1092573380 Data Acquisition Time: 05/28/95 08:03
Time : 0.00 min.
Time : 17.33 min.
Rate : 2.0000 pts/sec

ata File : l:\data\tchrom\btex\varj\J___400.raw
t File : l:\data\tchrom\btex\varj\J___400.rst
ent File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
nce File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

ume : 2 ul Area Reject : 300.00
Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

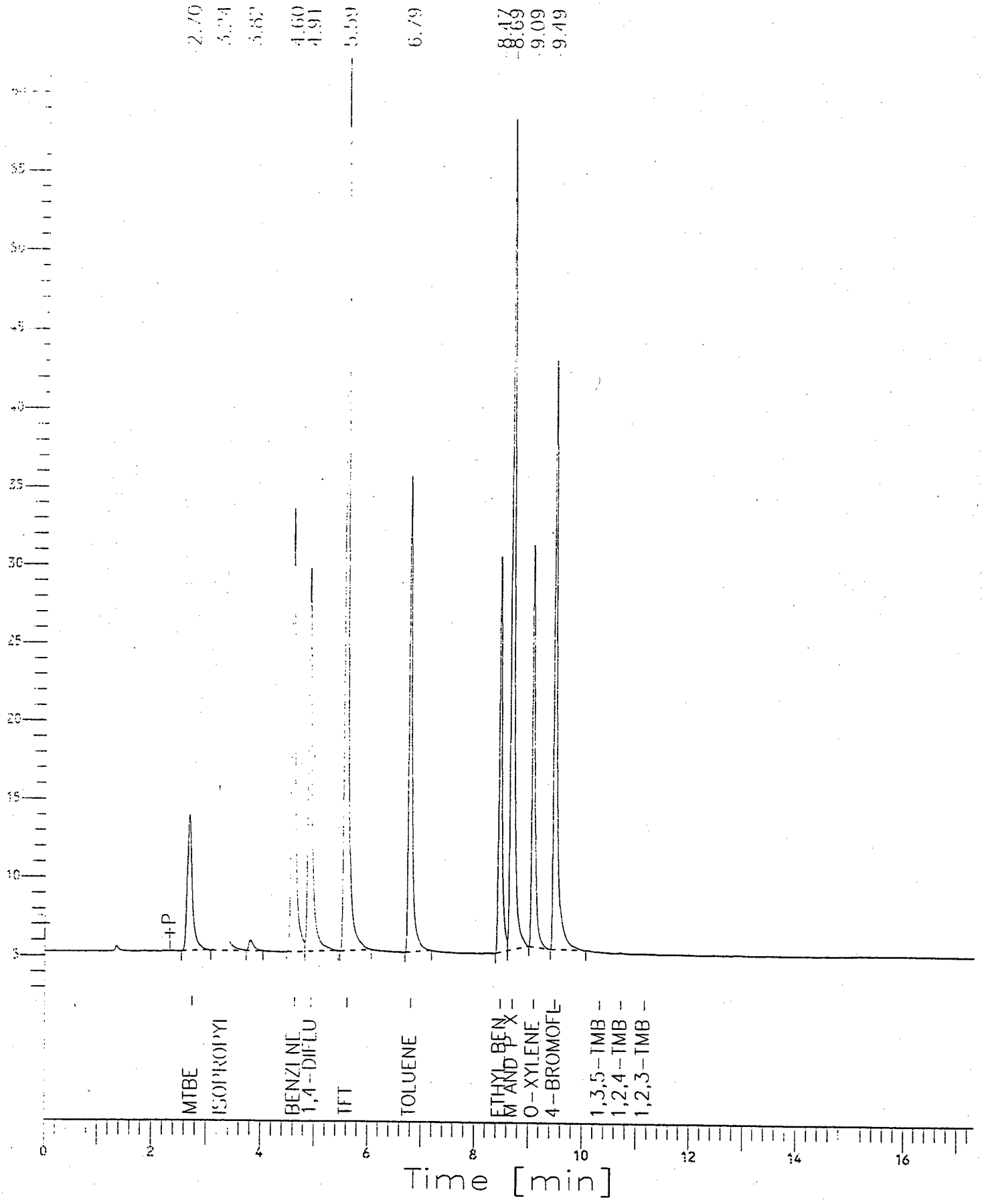
Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.697	55918.50	8725.98	BB	1021.9927	0.2115	54.7152	MTBE	54.7152	-0.0514
3.244	72157.00	10709.26	BV	1245.5204	0.2730	57.9332	Isopropylether	57.9332	-0.0503
3.818	4202.50	668.98	VB	1.0000e6	----------	0.0042		0.0042	0.0000
.601	139825.63	28378.10	BV	2493.2437	0.5289	56.0818	Benzene	56.0818	-0.0404
.913	123039.39	24687.43	VB	1086.5527	0.4654	113.2383	1,4-DIFLUOROBENZENE	113.2383	-0.0365
5.589	264351.00	57207.93	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0329
6.787	125028.50	30813.12	BB	2294.6502	0.4730	54.4870	Toluene	54.4870	-0.0262
.470	95637.50	25589.89	BV	1716.6903	0.3618	55.7104	Ethyl_Benzene	55.7104	-0.0194
.693	210011.50	53051.70	VB	1827.5897	0.7944	114.9117	m and p Xylene	114.9117	-0.0192
9.087	95746.02	26081.95	BB	1746.8857	0.3622	54.8096	o-Xylene	54.8096	-0.0191
9.487	161386.50	38233.21	BB	1429.9662	0.6105	112.8604	4-BROMOFLUOROBENZENE	112.8604	-0.0151
	1347304.00	304147.56				674.7517		674.7517	-0.3106

Stored in ASCII File: l:\data\tchrom\btex\varj\J___400.TXO

Chromatogram

ple Name : STD-50
eName : l:\data\tchrom\btex\varj\J___400.raw
hod : HP_J.ins
rt Time : 0.00 min End Time : 17.33 min
.e Factor: 1 Plot Offset: 2 mV

Sample #: TC ;W;1 Page 1 of 1
Date : 05/28/95 08:20
Time of Injection: 05/28/95 08:03
Low Point : 2.41 mV High Point : 62.32 mV
Plot Scale: 60 mV



re Version: 3.2 <16C20>
le Name : LCS-50 Time : 05/28/95 07:55
ple Number: TL ;W;1 Study : B602MW;1
or : YN

rument : HP_J Channel : A A/D mV Range : 1000
oSampler : NONE
ial : 0/0

face Serial # : 1092573380 Data Acquisition Time: 05/28/95 07:37
y Time : 0.00 min.
Time : 17.33 min.
ng Rate : 2.0000 pts/sec

Data File : l:\data\tchrom\btex\varj\J___399.raw
ult File : l:\data\tchrom\btex\varj\J___399.rst
ment File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
s File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
te File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
ence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

olume : 2 ul Area Reject : 300.00
Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.699	37937.00	5868.10	BB	1031.8569	0.1421	36.7658	MTBE	36.7658	-0.0494
3.244	6094.01	940.66	BB	1257.5420	0.0228	4.8460	Isopropylether	4.8460	-0.0507
3.820	3829.75	641.42	BB	1.0000e6	----------	0.0038		0.0038	0.0000
4.604	92715.31	18769.38	BV	2517.3084	0.3474	36.8311	Benzene	36.8311	-0.0379
4.916	123060.69	24952.81	VB	1097.0400	0.4611	112.1752	1,4-DIFLUOROBENZENE	112.1752	-0.0341
5.591	266902.50	58409.18	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0308
6.788	90903.75	22535.34	BB	2316.7981	0.3406	39.2368	Toluene	39.2368	-0.0248
8.470	73551.29	19909.93	BV	1733.2599	0.2756	42.4352	Ethyl_Benzene	42.4352	-0.0191
8.694	173290.45	44531.80	VB	1845.2295	0.6493	93.9127	m and p Xylene	93.9127	-0.0183
9.087	76867.00	21253.35	BB	1763.7466	0.2880	43.5817	o-Xylene	43.5817	-0.0189
9.486	169362.14	41332.08	BV	1443.7682	0.6346	117.3056	4-BROMOFLUOROBENZENE	117.3056	-0.0158
9.961	2875.53	594.66	VV	1.0000e6	----------	0.0029		0.0029	0.0000
10.118	4337.46	646.98	VV	1.0000e6	----------	0.0043		0.0043	0.0000
10.320	2296.91	642.91	VV	1666.2433	0.0086	1.3785	1,3,5-TMB	1.3785	-0.0205
10.417	1906.95	489.47	VB	1.0000e6	----------	0.0019		0.0019	0.0000
10.714	7023.75	1808.07	BB	1475.5918	0.0263	4.7600	1,2,4-TMB	4.7600	-0.0201
11.142	1071.50	361.86	BB	1415.3743	0.0040	0.7570	1,2,3-TMB	0.7570	-0.0196
11.261	1596.50	553.10	BB	1.0000e6	----------	0.0016		0.0016	0.0000
11.953	1509.00	280.92	BB	1.0000e6	----------	0.0015		0.0015	0.0000
	1137131.50	264522.03				534.0015		534.0015	-0.3600

rt Stored in ASCII File: l:\data\tchrom\btex\varj\J___399.TXO

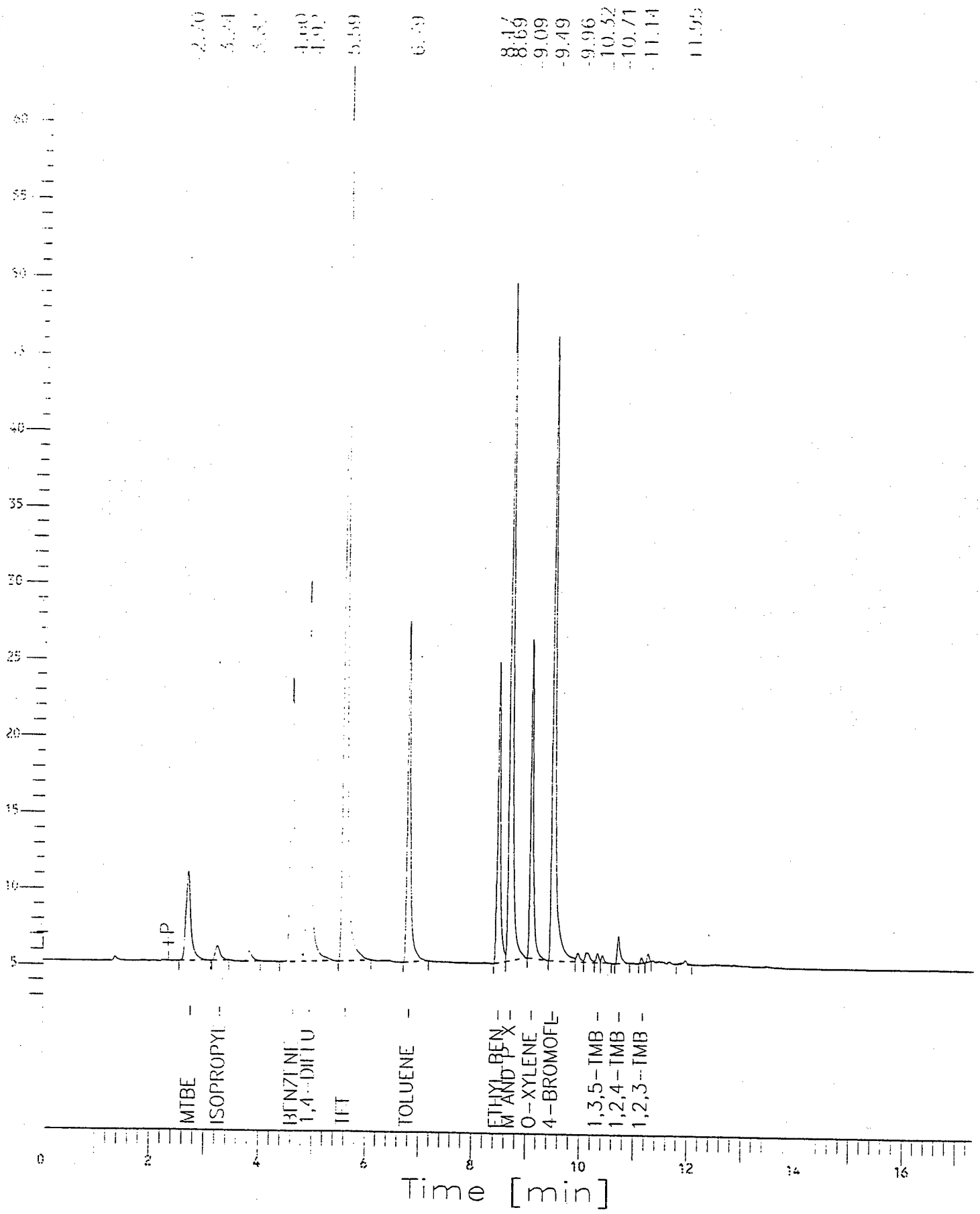
Chromatogram

ample Name : LCS-50
ileName : l:\data\tchrom\btex\varj\J___399.raw
ethod : HP_J.ins
tart Time : 0.00 min
cale Factor: 1

End Time : 17.33 min
Plot Offset: 2 mV

Sample #: TL ;W;1
Date : 05/28/95 07:55
Time of Injection: 05/28/95 07:37
Low Point : 2.33 mV
Plot Scale: 62 mV

High Point : 63.80 mV



[redacted]

[redacted] Version: 3.2 <16C20>
[redacted]e Name : 9505884-03A MS Time : 05/28/95 19:11
[redacted]le Number: KM ;W;1 Study : B602MW;1
[redacted] : YN

[redacted]ument : HP_J Channel : A A/D mV Range : 1000
[redacted]Sampler : NONE
[redacted] : 0/0

[redacted]face Serial # : 1092573380 Data Acquisition Time: 05/28/95 18:53
[redacted], Time : 0.00 min.
[redacted] : 17.33 min.
[redacted] Rate : 2.0000 pts/sec

[redacted]ata File : l:\data\tchrom\btex\varj\J___424.raw
[redacted]lt File : l:\data\tchrom\btex\varj\J___424.rst
[redacted]ent File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
[redacted] File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
[redacted]e File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
[redacted]ence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

[redacted]ume : 2 ul Area Reject : 300.00
[redacted]Amount : 1.0000 Dilution Factor : 1.00

[redacted]

BTEX Area Percent Report

[redacted]

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
[redacted]2.700	106862.55	16325.88	BV	1045.7632	0.3951	102.1862	MTBE	102.1862	-0.0482
3.249	28253.72	4189.49	VB	1274.4896	0.1045	22.1687	Isopropylether	22.1687	-0.0455
[redacted]4.606	57445.12	11225.53	BV	2551.2334	0.2124	22.5166	Benzene	22.5166	-0.0357
[redacted]5.918	122309.38	24558.86	VB	1111.8246	0.4522	110.0078	1,4-DIFLUOROBENZENE	110.0078	-0.0321
[redacted]6.593	270499.50	57557.09	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0291
6.792	49004.00	11750.00	BB	2348.0212	0.1812	20.8703	Toluene	20.8703	-0.0212
8.474	37037.17	9407.15	BV	1756.6185	0.1369	21.0844	Ethyl_Benzene	21.0844	-0.0146
[redacted]8.697	80135.82	19090.15	VB	1870.0974	0.2963	42.8512	m and p Xylene	42.8512	-0.0146
[redacted]9.092	36758.01	9594.93	BB	1787.5160	0.1359	20.5637	o-Xylene	20.5637	-0.0143
[redacted]9.492	158280.00	35991.18	BB	1463.2257	0.5851	108.1720	4-BROMOFLUOROBENZENE	108.1720	-0.0105
11.268	1253.25	329.81	BB	1434.4489	0.0046	0.8737	1,2,3-TMB	0.8737	0.1066
[redacted]	947838.50	200020.06				471.2944		471.2944	-0.1591

[redacted]

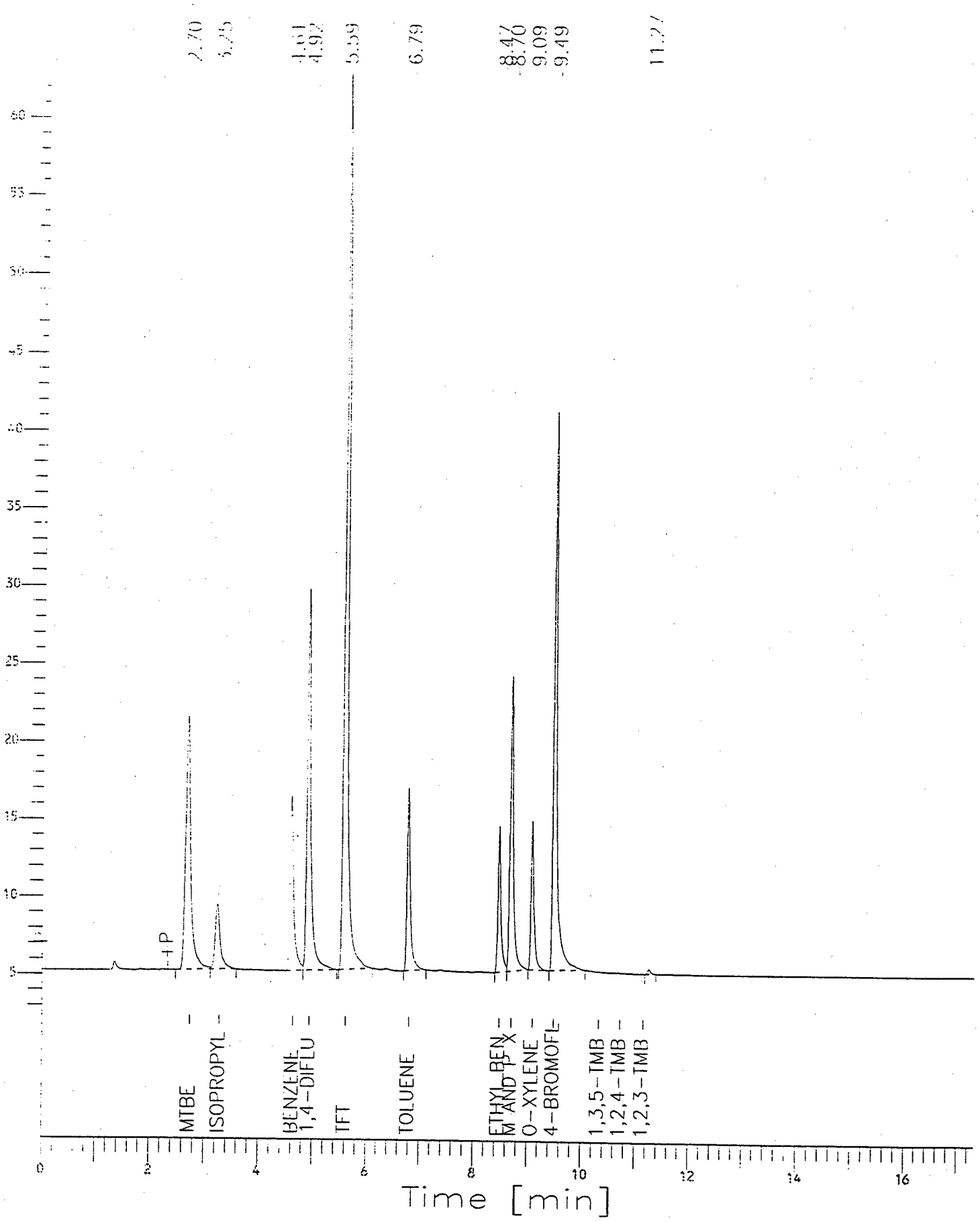
[redacted]

[redacted]Stored in ASCII File: l:\data\tchrom\btex\varj\J___424.TXO

Chromatogram

mple Name : 9505884-03A MS
leName : l:\data\tchrom\btex\varj\J___424.raw
thod : HP_J.ins
art Time : 0.00 min End Time : 17.33 min
ale Factor: 1 Plot Offset: 2 mV

Sample #: KM ;W;1 Page 1 of 1
Date : 05/28/95 19:11
Time of Injection: 05/28/95 18:53
Low Point : 2.38 mV High Point : 62.91 mV
Plot Scale: 61 mV



ware Version: 3.2 <16C20>
le Name : 9505884-03A MSD Time : 05/28/95 19:37
Number: KMD;W;1 Study : B602MW;1
or : YN

rument : HP_J Channel : A A/D mV Range : 1000
Sampler : NONE
al : 0/0

rface Serial # : 1092573380 Data Acquisition Time: 05/28/95 19:19
y Time : 0.00 min.
ne : 17.33 min.
ng Rate : 2.0000 pts/sec

Data File : l:\data\tchrom\btex\varj\J___425.raw
File : l:\data\tchrom\btex\varj\J___425.rst
ment File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
s File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
le File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
ence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

olume : 2 ul Area Reject : 300.00
le Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.700	104595.05	16011.13	BV	1031.8068	0.3919	101.3708	MTBE	101.3708	-0.0480
3.249	28329.97	4200.91	VB	1257.4807	0.1062	22.5292	Isopropylether	22.5292	-0.0449
4.606	56727.13	11070.18	BV	2517.1856	0.2126	22.5359	Benzene	22.5359	-0.0357
4.918	121158.38	24351.38	VB	1096.9867	0.4540	110.4465	1,4-DIFLUOROBENZENE	110.4465	-0.0323
5.592	266889.50	56634.87	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0296
6.791	48070.50	11489.03	BB	2316.6853	0.1801	20.7497	Toluene	20.7497	-0.0218
8.474	35949.71	8966.48	BV	1733.1754	0.1347	20.7421	Ethyl_Benzene	20.7421	-0.0146
8.698	77437.79	18236.42	VB	1845.1398	0.2902	41.9685	m and p Xylene	41.9685	-0.0145
9.092	35700.51	9185.86	BB	1763.6605	0.1338	20.2423	o-Xylene	20.2423	-0.0139
9.492	153086.00	33842.89	BB	1443.6978	0.5736	106.0374	4-BROMOFLUOROBENZENE	106.0374	-0.0096
11.269	1144.00	293.29	BB	1415.3052	0.0043	0.8083	1,2,3-TMB	0.8083	0.1077
	929088.50	194282.45				467.4308		467.4308	-0.1572

Stored in ASCII File: l:\data\tchrom\btex\varj\J___425.TXO

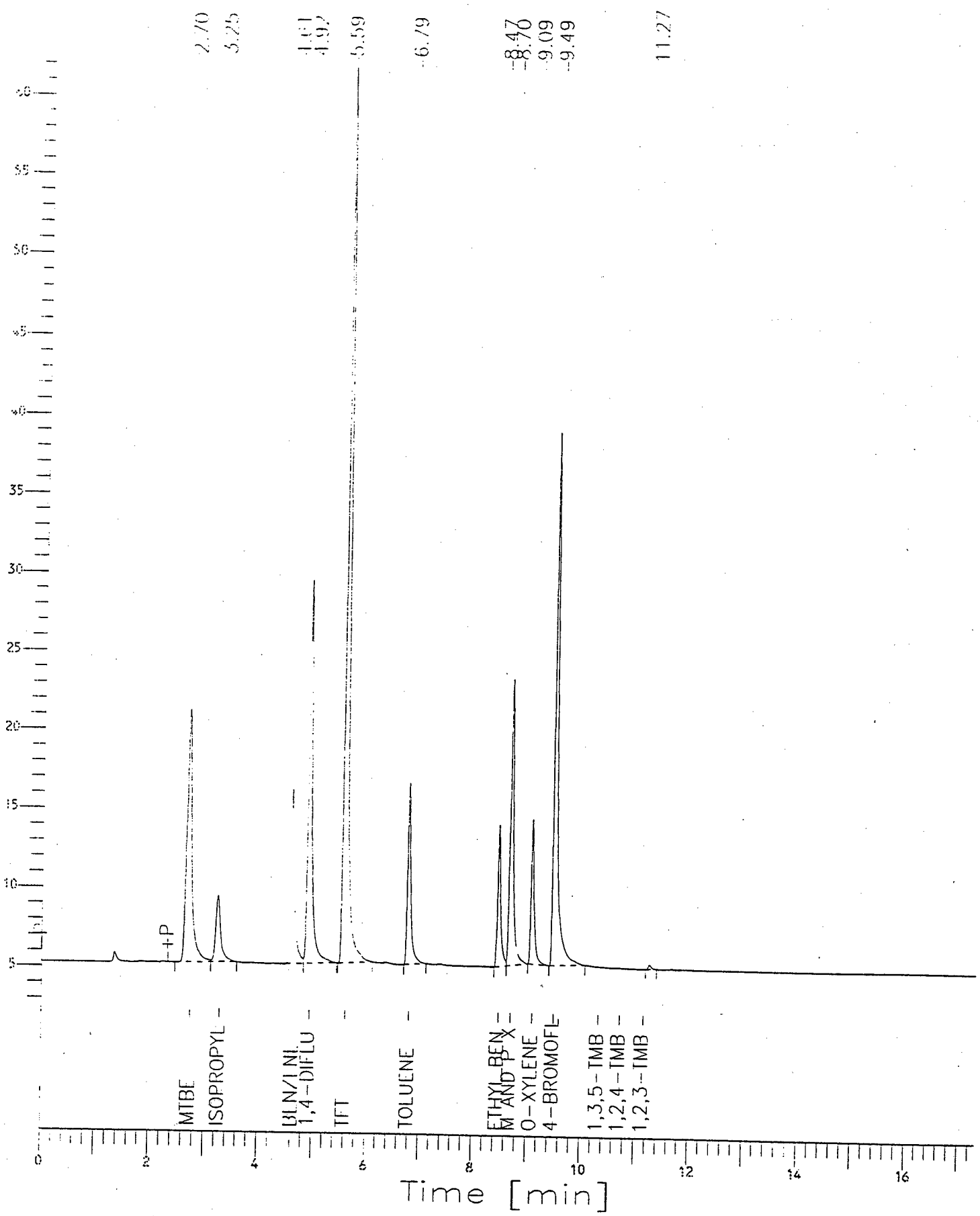
Chromatogram

mple Name : 9505884-03A MSD
leName : l:\data\tchrom\btex\varj\J___425.raw
thod : HP_J.ins
art Time : 0.00 min
ale Factor: 1

End Time : 17.33 min
Plot Offset: 2 mV

Sample #: KMD;W;1
Date : 05/28/95 19:37
Time of Injection: 05/28/95 19:19
Low Point : 2.42 mV
Plot Scale: 60 mV

High Point : 62.02 mV



****** S U M M A R Y L I S T******

Work Order: 9505714

ANALYTICAL RUN DEFINITION
E950522041714
HP_F950525135200
HP_J950525074400
L950524104646

ftware Version: 3.2 <16C20>
mple Name : BLANK Time : 05/25/95 09:51
mple Number: B ;W;1 Study : B602W;1
erator : YN

strument : HP_J Channel : A A/D mV Range : 1000
toSampler : NONE
ck/Vial : 0/0

terface Serial # : 1092573380 Data Acquisition Time: 05/25/95 09:34
lay Time : 0.00 min.
d Time : 17.33 min.
mpling Rate : 2.0000 pts/sec

w Data File : l:\data\tchrom\btex\varj\J___259.raw
sult File : l:\data\tchrom\btex\varj\J___259.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume : 2 ul Area Reject : 300.00
mple Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

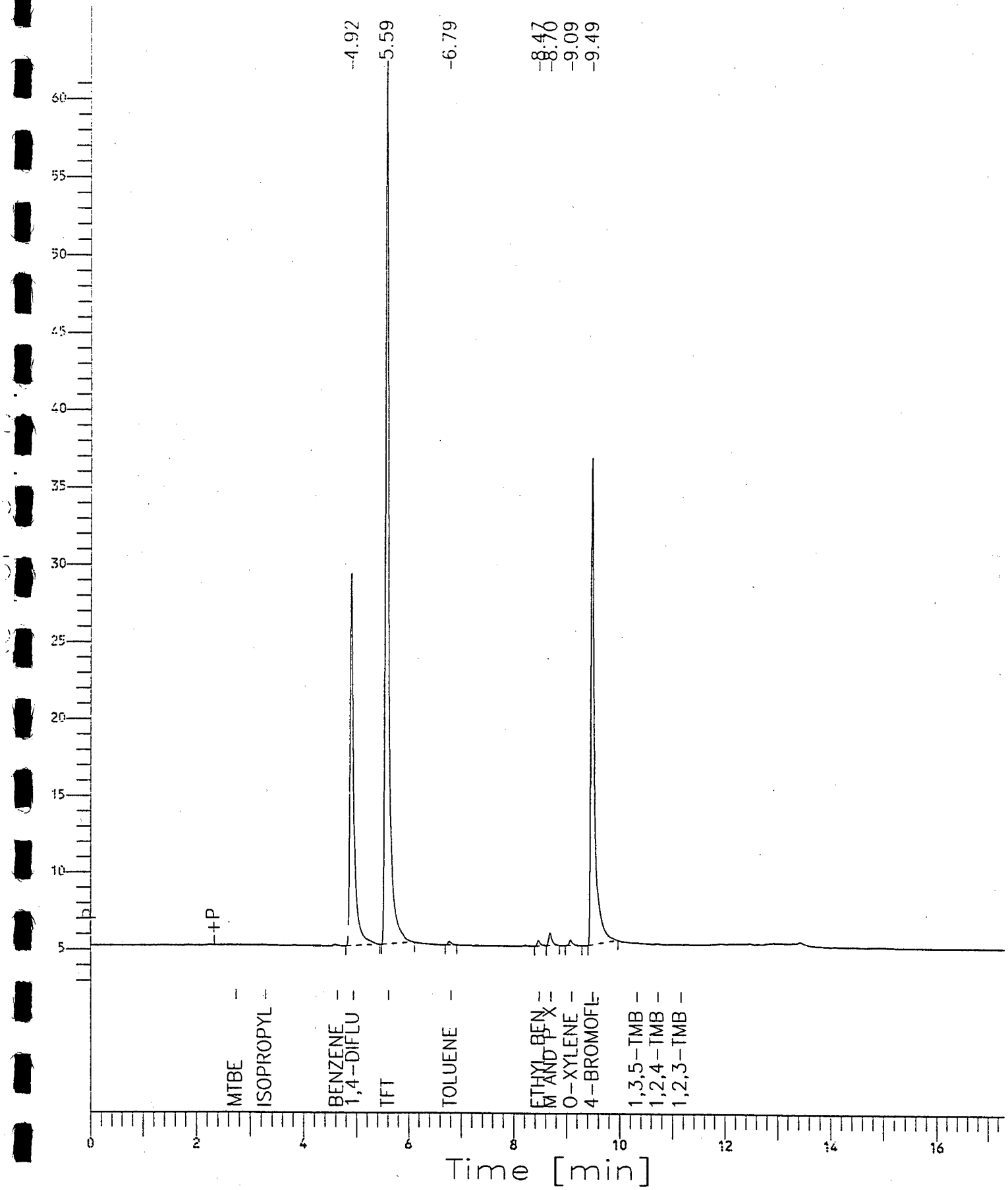
ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
	4.915	124919.00	24211.92	BB	1149.7532	0.4466	108.6485	1,4-DIFLUOROBENZENE	108.6485	-0.0348
	5.589	279727.25	56687.52	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0326
	6.789	1033.50	256.29	BB	2428.1209	0.0037	0.4256	Toluene	0.4256	-0.0241
	8.472	1534.56	366.28	BV	1816.5433	0.0055	0.8448	Ethyl_Benzene	0.8448	-0.0171
	8.696	3728.18	841.80	VB	1933.8934	0.0133	1.9278	m and p Xylene	1.9278	-0.0158
	9.089	1670.51	380.63	BB	1848.4951	0.0060	0.9037	o-Xylene	0.9037	-0.0166
	9.489	153161.00	31740.11	BB	1513.1417	0.5475	101.2205	4-BROMOFLUOROBENZENE	101.2205	-0.0129
		565774.00	114484.56				213.9710		213.9710	-0.1537

ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___259.TXO

Chromatogram

ple Name : BLANK
leName : l:\data\tchrom\btex\varj\J___259.raw
th : HP_J.ins
Time : 0.00 min End Time : 17.33 min
le Factor: 1 Plot Offset: 2 mV

Sample #: B ;W;1 Page 1 of 1
Date : 05/25/95 09:51
Time of Injection: 05/25/95 09:34
Low Point : 2.42 mV High Point : 61.90 mV
Plot Scale: 60 mV



```
==========================================================================
oftware Version: 3.2 <16C20>
ample Name  : LCS_50                    Time         : 05/25/95  07:37
ample Number: TL ;W;1                   Study        : BENZG;1
perator     : DAO

nstrument   : HP_J                      Channel : A     A/D mV Range : 1000
utoSampler  : NONE
ack/Vial    : 0/0

nterface Serial # : 1092573380   Data Acquisition Time: 05/25/95  07:19
elay Time   : 0.00   min.
nd Time     : 17.33  min.
ampling Rate : 2.0000   pts/sec

aw Data File  : l:\data\tchrom\btex\varj\J___257.raw
esult File    : l:\data\tchrom\btex\varj\J___257.rst
nstrument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
rocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ample File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
equence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

nj. Volume    : 2 ul                    Area Reject      : 300.00
mple Amount   : 1.0000                  Dilution Factor  : 1.00

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BTEX Area Percent Report

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ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	2.698	50244.00	7748.25	BB	1061.6217	0.1830	47.3276	MTBE	47.3276	-0.0504
2	3.246	3568.50	582.35	BB	1293.8168	0.0130	2.7581	Isopropylether	2.7581	-0.0484
3	4.603	113661.49	22425.59	BV	2589.9219	0.4139	43.8861	Benzene	43.8861	-0.0383
4	4.916	127350.48	24833.48	VB	1128.6849	0.4638	112.8309	1,4-DIFLUOROBENZENE	112.8309	-0.0342
5	5.590	274601.50	57776.51	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0321
6	6.788	104310.00	24604.51	BB	2383.6279	0.3799	43.7610	Toluene	43.7610	-0.0249
7	8.471	80690.91	20360.12	BV	1783.2570	0.2939	45.2492	Ethyl_Benzene	45.2492	-0.0177
8	8.695	192669.58	45216.40	VV	1898.4567	0.7016	101.4875	m and p Xylene	101.4875	-0.0168
9	9.090	86086.02	21671.68	VB	1814.6232	0.3135	47.4402	o-Xylene	47.4402	-0.0158
0	9.490	164014.52	36444.74	BB	1485.4147	0.5973	110.4167	4-BROMOFLUOROBENZENE	110.4167	-0.0121
1	13.487	968.00	139.41	BB	1.0000e6	----------	0.0010		0.0010	0.0000
		1198165.00	261803.05				555.1581		555.1581	-0.2905

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D
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ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___257.TXO
```
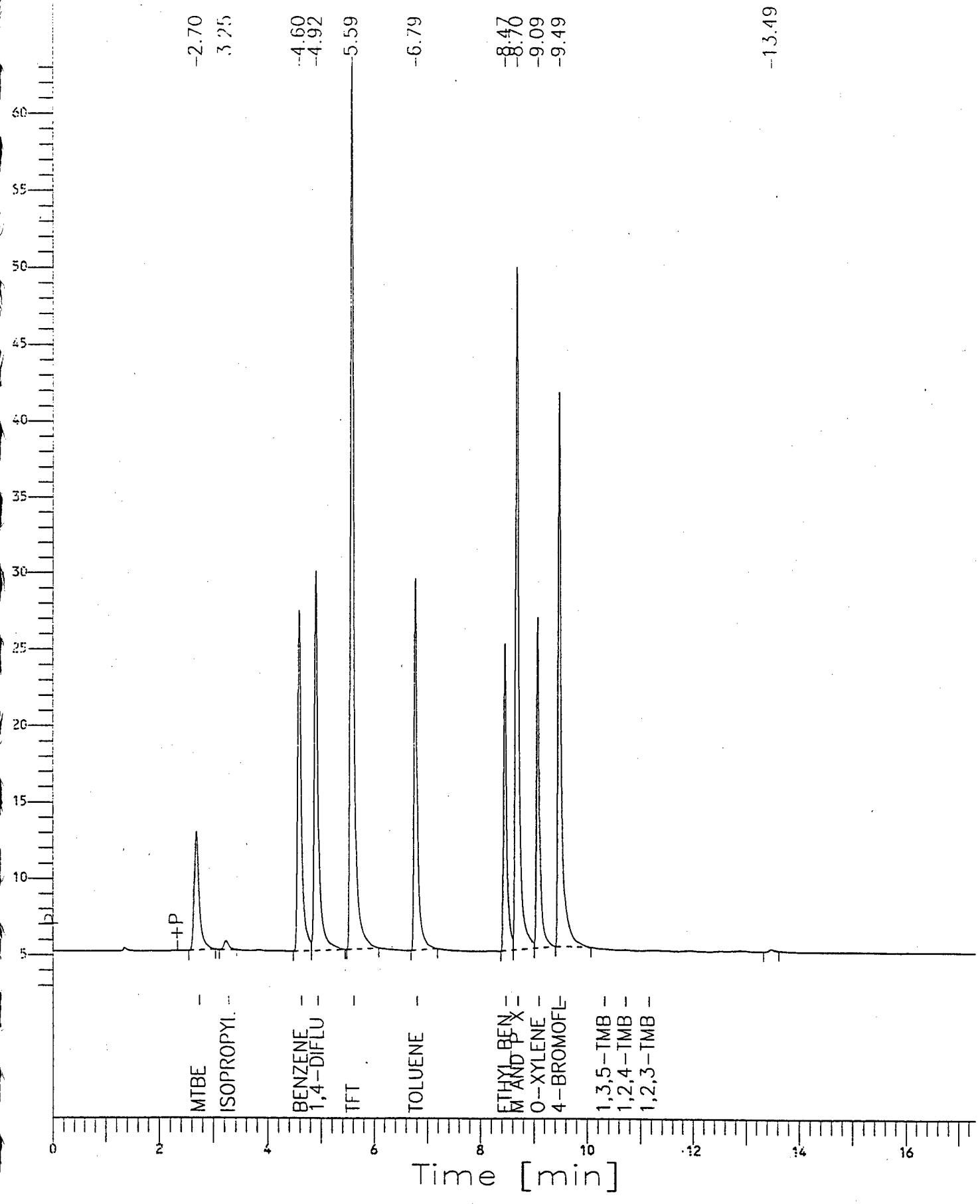

Chromatogram

le Name : LCS_50
eName : l:\data\tchrom\btex\varj\J___257.raw
ho : HP_J.ins
Time : 0.00 min End Time : 17.33 min
e Factor: 1 Plot Offset: 2 mV

Sample #: TL ;W;1 Page 1 of 1
Date : 05/25/95 07:37
Time of Injection: 05/25/95 07:19
Low Point : 2.37 mV High Point : 63.07 mV
Plot Scale: 61 mV



ftware Version: 3.2 <16C20>
mple Name : STD_50 Time : 05/25/95 08:02
mple Number: TC ;W;1 Study : BENZG;1
erator : DAO

strument : HP_J Channel : A A/D mV Range : 1000
toSampler : NONE
ck/Vial : 0/0

terface Serial # : 1092573380 Data Acquisition Time: 05/25/95 07:44
lay Time : 0.00 min.
d Time : 17.33 min.
mpling Rate : 2.0000 pts/sec

w Data File : l:\data\tchrom\btex\varj\J___258.raw
sult File : l:\data\tchrom\btex\varj\J___258.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume : 2 ul Area Reject : 300.00
mple Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

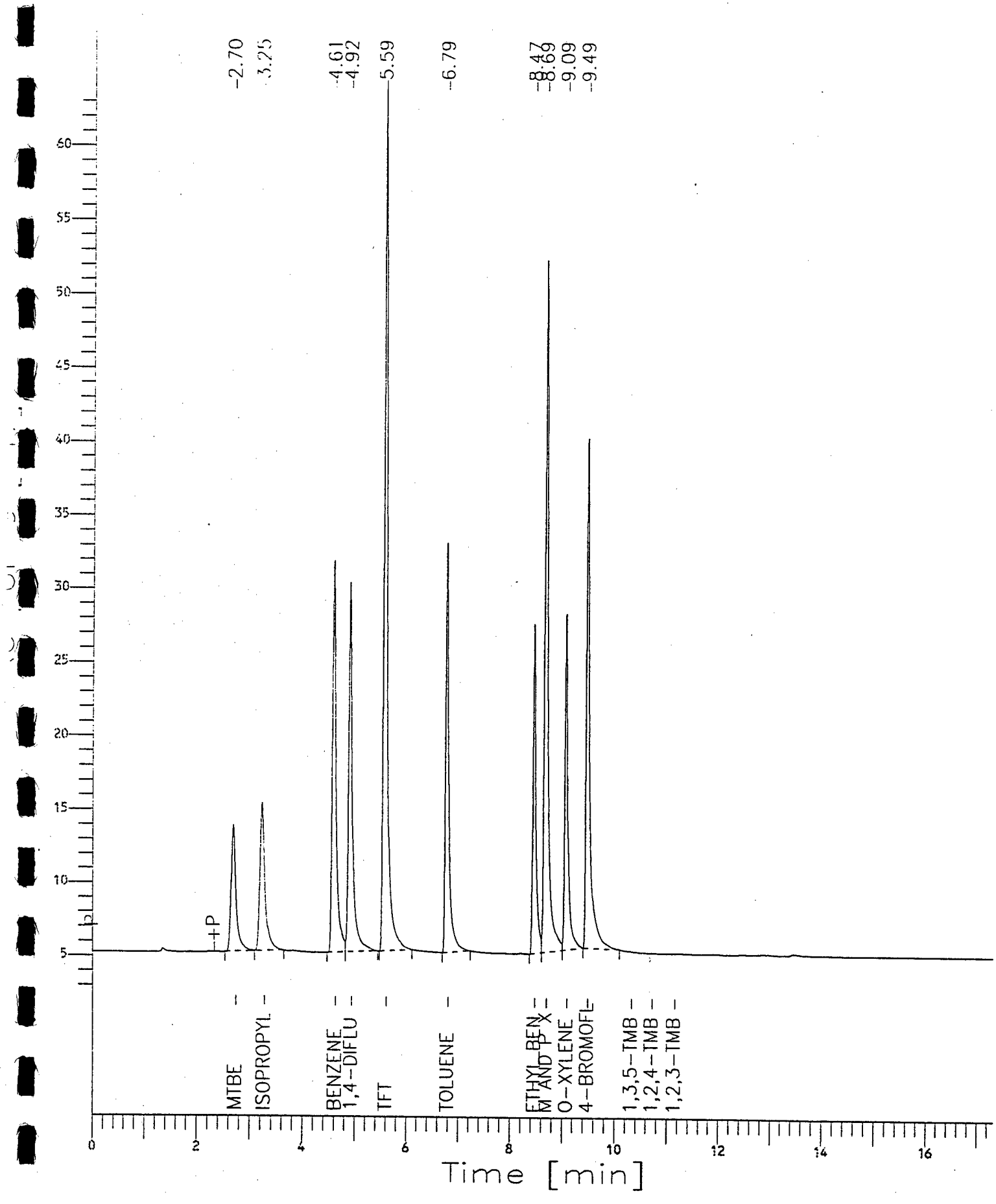
ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
	2.701	56956.45	8627.97	BV	1091.2192	0.2018	52.1952	MTBE	52.1952	-0.0475
	3.248	68229.78	10106.46	VB	1329.8876	0.2417	51.3049	Isopropylether	51.3049	-0.0460
	4.605	137509.59	26820.39	BV	2662.1274	0.4872	51.6540	Benzene	51.6540	-0.0365
	4.917	131337.41	25109.17	VB	1160.1521	0.4653	113.2071	1,4-DIFLUOROBENZENE	113.2071	-0.0331
	5.591	282257.25	58401.00	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0308
	6.788	122404.50	28183.28	BB	2450.0820	0.4337	49.9594	Toluene	49.9594	-0.0250
	8.470	90109.89	22614.78	BV	1832.9731	0.3193	49.1605	Ethyl_Benzene	49.1605	-0.0191
	8.693	206005.22	47157.02	VV	1951.3846	0.7299	105.5687	m and p Xylene	105.5687	-0.0186
	9.088	94640.64	23150.70	VB	1865.2140	0.3353	50.7398	o-Xylene	50.7398	-0.0182
	9.488	163131.52	35070.36	BB	1526.8274	0.5780	106.8435	4-BROMOFLUOROBENZENE	106.8435	-0.0141
		1352582.25	285241.13				630.6331		630.6331	-0.2889

ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___258.TXO

Chromatogram

ple Name : STD_50
leName : l:\data\tchrom\btex\varj\J___258.raw
t : HP_J.ins
Time : 0.00 min End Time : 17.33 min
le Factor: 1 Plot Offset: 2 mV

Sample #: TC ;W;1 Page 1 of 1
Date : 05/25/95 08:02
Time of Injection: 05/25/95 07:44
Low Point : 2.33 mV High Point : 63.84 mV
Plot Scale: 62 mV



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==========================================================================
oftware Version: 3.2 <16C20>
ample Name  : 9505840-01A MS          Time        : 05/25/95  20:10
ample Number: KM ;W;1                Study       : BTEXW;1
perator     : YN

nstrument   : HP_J                   Channel : A     A/D mV Range : 1000
utoSampler  : NONE
ack/Vial    : 0/0

nterface Serial # : 1092573380   Data Acquisition Time: 05/25/95  19:52
elay Time   : 0.00   min.
nd Time     : 17.33  min.
ampling Rate : 2.0000   pts/sec

aw Data File  : l:\data\tchrom\btex\varj\J___282.raw
esult File    : l:\data\tchrom\btex\varj\J___282.rst
nstrument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
rocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ample File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
equence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

nj. Volume    : 2 ul                 Area Reject      : 300.00
ample Amount  : 1.0000               Dilution Factor  : 1.00

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BTEX Area Percent Report

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ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	2.697	24475.75	3751.62	BB	1082.7080	0.0874	22.6061	MTBE	22.6061	-0.0507
2	3.245	27399.75	4016.68	BB	1319.5151	0.0978	20.7650	Isopropylether	20.7650	-0.0489
3	4.033	953.50	149.61	BB	1.0000e6	----------	0.0010		0.0010	0.0000
4	4.603	57624.50	10866.58	BV	2641.3640	0.2058	21.8162	Benzene	21.8162	-0.0390
5	4.914	127643.00	24505.22	VB	1151.1033	0.4558	110.8875	1,4-DIFLUOROBENZENE	110.8875	-0.0356
6	5.590	280055.75	57451.64	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0319
7	6.371	902.00	196.13	BB	1.0000e6	----------	0.0009		0.0009	0.0000
8	6.788	49350.00	11134.01	BB	2430.9724	0.1762	20.3005	Toluene	20.3005	-0.0248
9	8.470	35933.77	8666.11	BV	1818.6766	0.1283	19.7582	Ethyl_Benzene	19.7582	-0.0193
0	8.693	81834.21	17934.47	VV	1936.1646	0.2922	42.2661	m and p Xylene	42.2661	-0.0192
1	9.086	37586.52	8893.95	VB	1850.6659	0.1342	20.3097	o-Xylene	20.3097	-0.0198
2	9.486	159440.00	33783.93	BB	1514.9188	0.5693	105.2466	4-BROMOFLUOROBENZENE	105.2466	-0.0157
3	11.260	2919.50	292.17	BB	1485.1254	0.0104	1.9658	1,2,3-TMB	1.9658	0.0991
4	11.944	3889.50	348.93	BB	1.0000e6	----------	0.0039		0.0039	0.0000
5	12.481	2885.59	338.87	BV	1.0000e6	----------	0.0029		0.0029	0.0000
6	12.858	4727.41	337.15	VB	9.9999e5	----------	0.0047		0.0047	0.0000
		897620.63	182667.09				385.9351		385.9351	-0.2057

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==========================================================================
)
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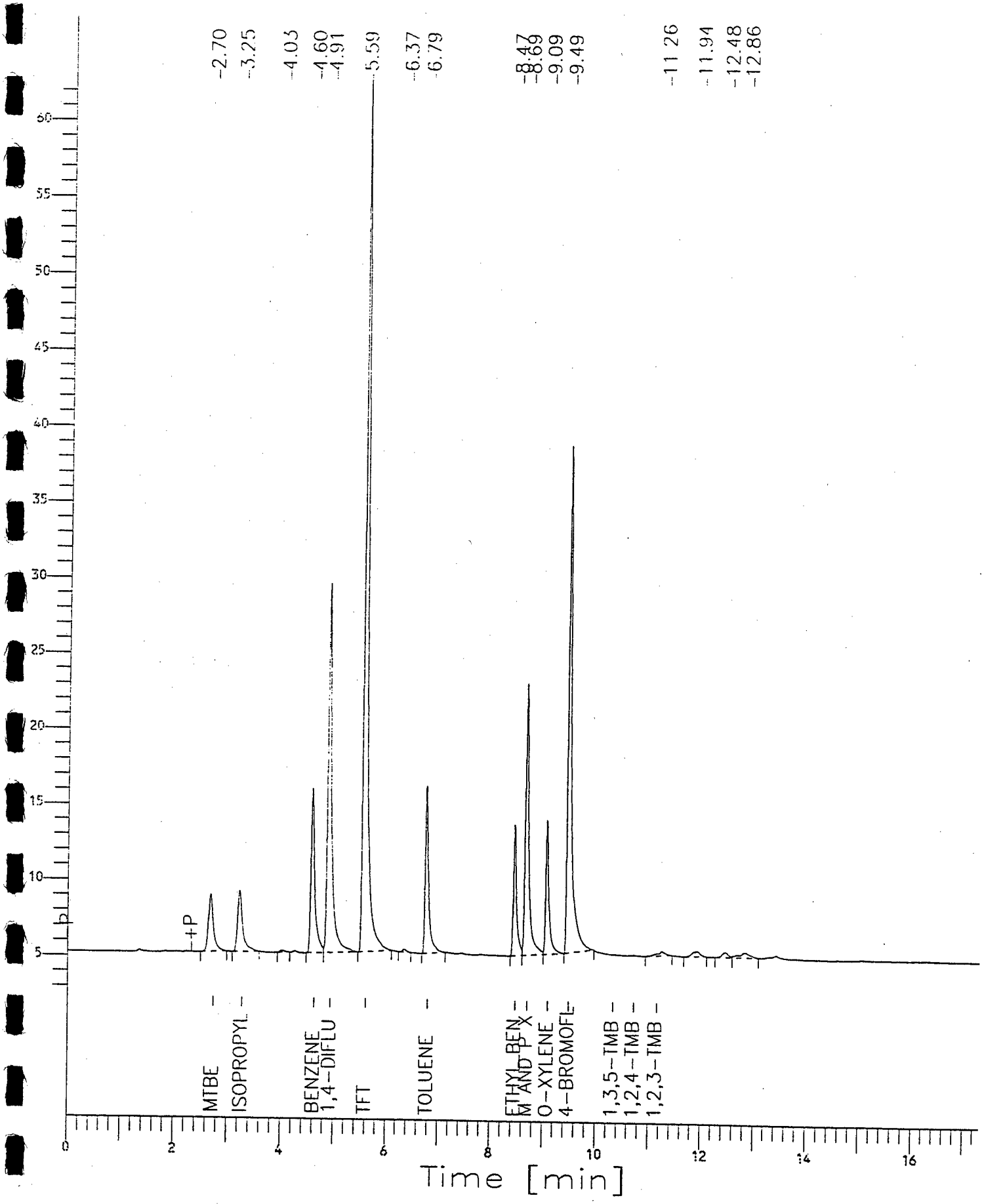
port Stored in ASCII File: l:\data\tchrom\btex\varj\J___282.TXO
```

Chromatogram

le Name : 9505840-01A MS
eName : l:\data\tchrom\btex\varj\J___282.raw
: HP_J.ins
Time : 0.00 min End Time : 17.33 min
Factor: 1 Plot Offset: 2 mV

Sample #: KM ;W;1
Date : 05/25/95 20:10
Time of Injection: 05/25/95 19:52
Low Point : 2.38 mV High Point : 62.79 mV
Plot Scale: 60 mV



```
================================================================================
tware Version: 3.2 <16C20>
ple Name  : 9505840-01A MSD          Time         : 05/25/95  20:35
ple Number: KMD;W;1                 Study        : BTEXW;1
erator    : YN

trument   : HP_J                    Channel : A     A/D mV Range : 1000
oSampler  : NONE
k/Vial    : 0/0

erface Serial # : 1092573380   Data Acquisition Time: 05/25/95  20:18
ay Time     : 0.00   min.
l Time      : 17.33  min.
pling Rate  : 2.0000   pts/sec

Data File  : l:\data\tchrom\btex\varj\J___283.raw
ult File   : l:\data\tchrom\btex\varj\J___283.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ple File     : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

. Volume    : 2 ul                  Area Reject      : 300.00
ple Amount  : 1.0000                Dilution Factor  : 1.00

================================================================================


                                          BTEX Area Percent Report
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k #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
	2.697	24962.50	3794.30	BB	1098.4941	0.0879	22.7243	MTBE	22.7243	-0.0508
2	3.245	26971.50	3955.93	BB	1338.7538	0.0949	20.1467	Isopropylether	20.1467	-0.0497
	4.032	1043.50	164.76	BB	1.0000e6	----------	0.0010		0.0010	0.0000
4	4.600	54505.77	10318.27	BV	2679.8755	0.1918	20.3389	Benzene	20.3389	-0.0417
5	4.911	128789.73	25139.96	VB	1167.8866	0.4533	110.2759	1,4-DIFLUOROBENZENE	110.2759	-0.0384
6	5.586	284139.00	58720.40	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0358
7	6.368	759.00	170.08	BB	1.0000e6	----------	0.0008		0.0008	0.0000
8	6.785	46159.00	10538.73	BB	2466.4165	0.1625	18.7150	Toluene	18.7150	-0.0280
9	8.469	33109.42	8002.21	BV	1845.1932	0.1165	17.9436	Ethyl_Benzene	17.9436	-0.0197
	8.693	72705.08	16402.67	VB	1964.3942	0.2559	37.0115	m and p Xylene	37.0115	-0.0192
	9.087	32878.00	8136.95	BB	1877.6488	0.1157	17.5102	o-Xylene	17.5102	-0.0192
1	9.488	158480.02	33026.10	BB	1537.0064	0.5578	103.1095	4-BROMOFLUOROBENZENE	103.1095	-0.0141
		864502.50	178370.34				367.7774		367.7774	-0.3164

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================================================================================
)
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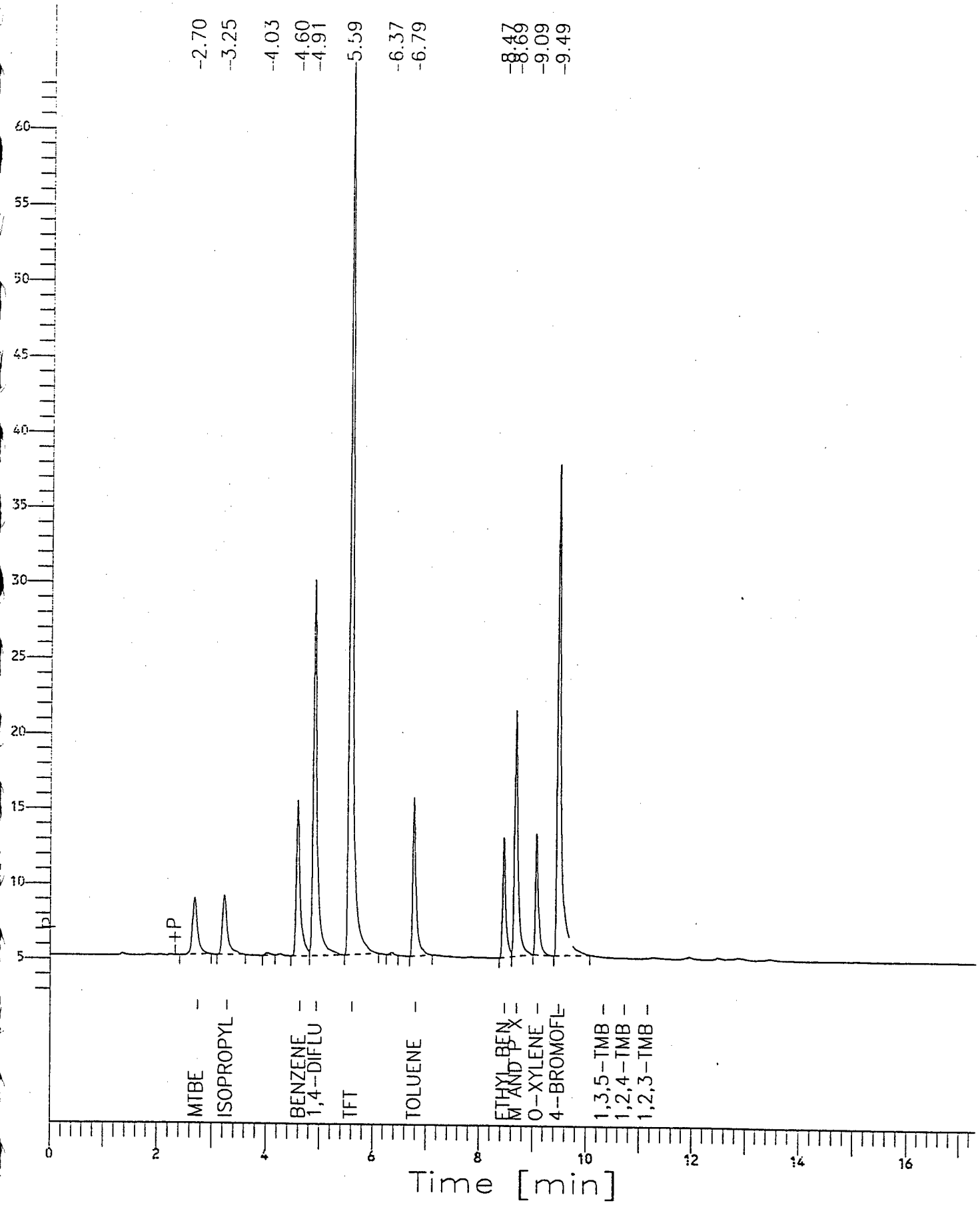
ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___283.TXO
```

Chromatogram

ple Name : 9505840-01A MSD
leName : l:\data\tchrom\btex\varj\J___283.raw
th : HP_J.ins
Time : 0.00 min End Time : 17.33 min
e Factor: 1 Plot Offset: 2 mV

Sample #: KMD;W;1 Page 1 of 1
Date : 05/25/95 20:35
Time of Injection: 05/25/95 20:18
Low Point : 2.33 mV High Point : 63.88 mV
Plot Scale: 62 mV



ftware Version: 3.2 <16C20>
mple Name : BLANK Time : 05/27/95 19:42
mple Number: B ;W;1 Study : BTEXW6;1
erator : YN

strument : HP_J Channel : A A/D mV Range : 1000
toSampler : NONE
ck/Vial : 0/0

terface Serial # : 1092573380 Data Acquisition Time: 05/27/95 19:25
lay Time : 0.00 min.
d Time : 17.33 min.
mpling Rate : 2.0000 pts/sec

w Data File : l:\data\tchrom\btex\varj\J___375.raw
sult File : l:\data\tchrom\btex\varj\J___375.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume : 2 ul Area Reject : 300.00
mple Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	3.234	1150.00	190.06	BB	1253.8928	0.0043	0.9171	Isopropylether	0.9171	-0.0596
2	3.833	1206.00	216.17	BB	1.0000e6	----------	0.0012		0.0012	0.0000
3	4.919	119148.50	23588.39	BB	1093.8566	0.4477	108.9252	1,4-DIFLUOROBENZENE	108.9252	-0.0308
4	5.594	266128.00	55169.65	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0282
5	9.495	139946.50	28886.30	BB	1439.5786	0.5259	97.2135	4-BROMOFLUOROBENZENE	97.2135	-0.0075
		527579.00	108050.58				207.0570		207.0570	-0.1261

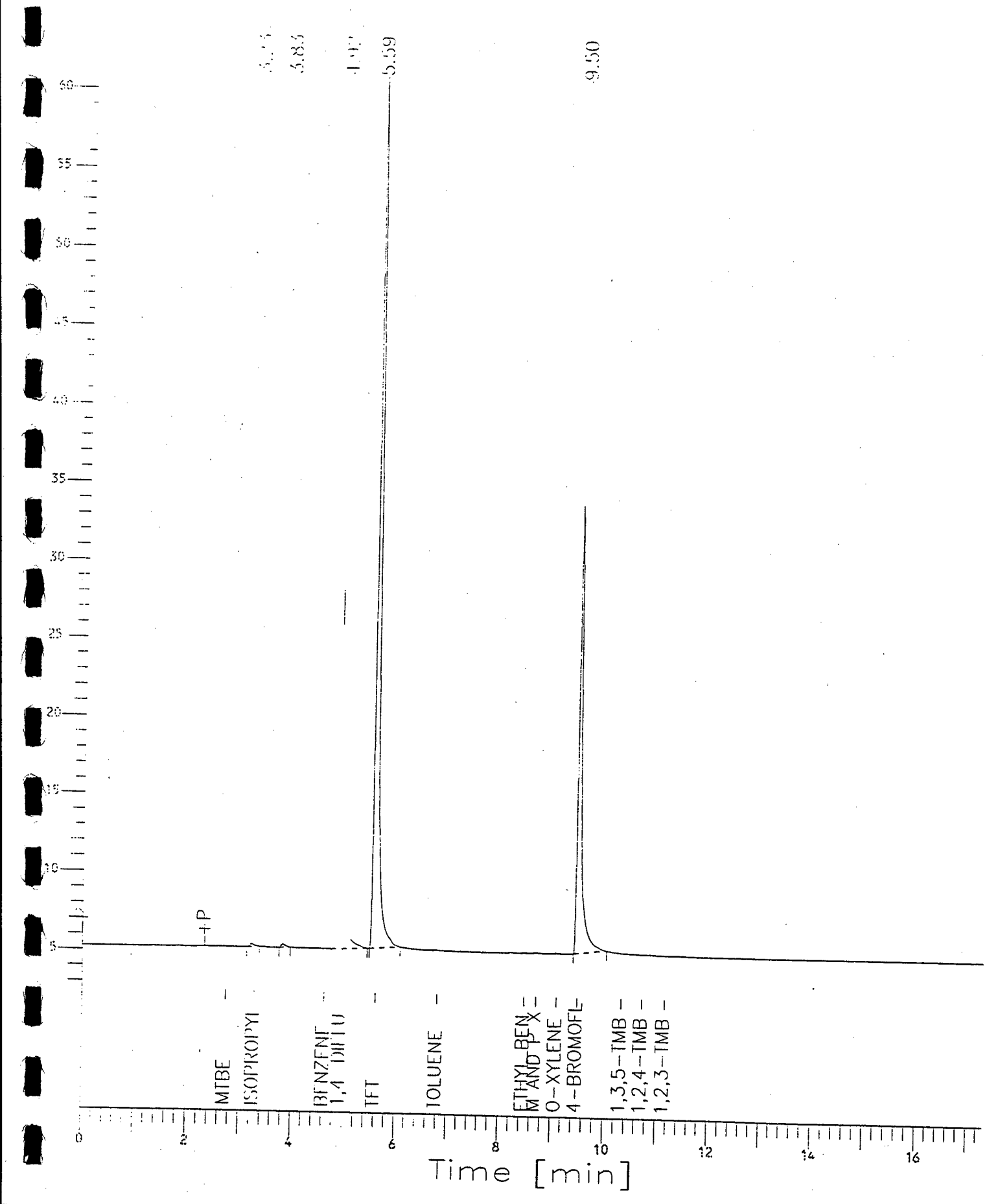
ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___375.TXO

Chromatogram

nple Name : BLANK
eName : l:\data\tchrom\btex\varj\J___375.raw
th : HP_J.ins
n Time : 0.00 min
Factor: 1

End Time : 17.33 min
Plot Offset: 3 mV

Sample #: B ;W;1
Date : 05/27/95 19:42
Time of Injection: 05/27/95 19:25
Low Point : 2.50 mV
Plot Scale: 58 mV



ftware Version: 3.2 <16C20>
mple Name : LCS-50 Time : 05/27/95 17:36
mple Number: TL ;W;1 Study : BTEXW6;1
erator : YN

strument : HP_J Channel : A A/D mV Range : 1000
toSampler : NONE
ck/Vial : 0/0

terface Serial # : 1092573380 Data Acquisition Time: 05/27/95 17:18
lay Time : 0.00 min.
d Time : 17.33 min.
mpling Rate : 2.0000 pts/sec

w Data File : l:\data\tchrom\btex\varj\J___370.raw
sult File : l:\data\tchrom\btex\varj\J___370.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume : 2 ul Area Reject : 300.00
mple Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

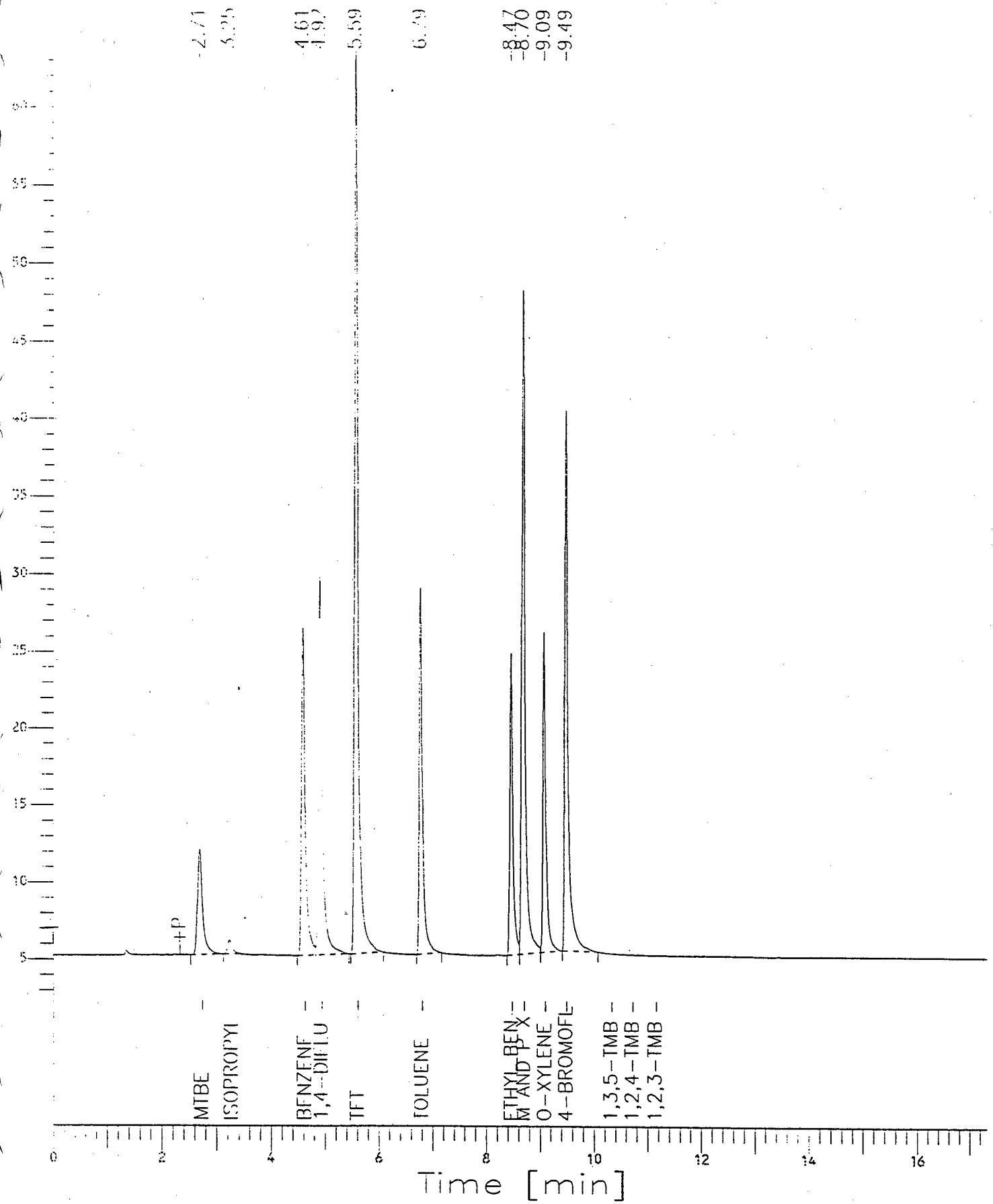
ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
	2.705	45252.70	6876.90	BV	1048.7478	0.1668	43.1493	MTBE	43.1493	-0.0431
	3.254	5527.81	900.80	VB	1278.1271	0.0204	4.3249	Isopropylether	4.3249	-0.0403
	4.609	106996.88	21266.39	BV	2558.5149	0.3944	41.8199	Benzene	41.8199	-0.0330
	4.920	125049.95	24627.38	VB	1114.9978	0.4610	112.1527	1,4-DIFLUOROBENZENE	112.1527	-0.0302
	5.593	271271.50	57761.27	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0285
	6.790	98994.00	23827.34	BB	2354.7222	0.3649	42.0406	Toluene	42.0406	-0.0229
	8.473	77000.05	19735.72	BV	1761.6318	0.2839	43.7095	Ethyl_Benzene	43.7095	-0.0165
	8.696	181827.50	43648.61	VV	1875.4346	0.6703	96.9522	m and p Xylene	96.9522	-0.0162
	9.090	81166.69	20847.45	VB	1792.6178	0.2992	45.2783	o-Xylene	45.2783	-0.0158
	9.491	154363.75	34999.03	BB	1467.4016	0.5690	105.1953	4-BROMOFLUOROBENZENE	105.1953	-0.0110
		1147450.88	254490.89				534.6227		534.6227	-0.2575

ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___370.TXO

Chromatogram

ıle Name : LCS-50
eName : l:\data\tchrom\btex\varj\J___370.raw
nc : HP_J.ins
t Time : 0.00 min End Time : 17.33 min
e Factor: 1 Plot Offset: 2 mV

Sample #: TL ;W;1 Page 1 of 1
Date : 05/27/95 17:36
Time of Injection: 05/27/95 17:18
Low Point : 2.37 mV High Point : 63.05 mV
Plot Scale: 61 mV



```
==========================================================================
oftware Version: 3.2 <16C20>
ample Name  : STD-50                    Time         : 05/27/95  18:01
ample Number: TC ;W;1                   Study        : BTEXW6;1
perator     : YN

nstrument   : HP_J                      Channel : A     A/D mV Range : 1000
utoSampler  : NONE
ack/Vial    : 0/0

nterface Serial # : 1092573380   Data Acquisition Time: 05/27/95  17:43
elay Time   : 0.00   min.
nd Time     : 17.33  min.
ampling Rate : 2.0000   pts/sec

aw Data File  : l:\data\tchrom\btex\varj\J___371.raw
esult File    : l:\data\tchrom\btex\varj\J___371.rst
nstrument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
rocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File     : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
equence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume   : 2 ul                      Area Reject      : 300.00
mple Amount : 1.0000                    Dilution Factor  : 1.00

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BTEX Area Percent Report

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ak Ret Time # [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.701	54961.27	8458.87	BV	1053.2148	0.2018	52.1843	MTBE	52.1843	-0.0475
3.249	66587.22	10036.54	VB	1283.5713	0.2444	51.8765	Isopropylether	51.8765	-0.0456
4.605	134478.25	26952.77	BV	2569.4128	0.4936	52.3381	Benzene	52.3381	-0.0366
4.917	126563.75	25102.06	VB	1119.7472	0.4646	113.0289	1,4-DIFLUOROBENZENE	113.0289	-0.0331
5.592	272427.00	58179.31	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0300
6.788	120588.00	29140.53	BB	2364.7524	0.4426	50.9939	Toluene	50.9939	-0.0246
8.470	90146.59	23712.40	BV	1769.1357	0.3309	50.9552	Ethyl_Benzene	50.9552	-0.0191
8.693	198470.66	49387.59	VB	1883.4232	0.7285	105.3776	m and p Xylene	105.3776	-0.0190
9.087	89902.75	24155.52	BB	1800.2537	0.3300	49.9389	o-Xylene	49.9389	-0.0189
9.488	161417.00	36986.49	BB	1473.6521	0.5925	109.5354	4-BROMOFLUOROBENZENE	109.5354	-0.0145
	1315542.50	292112.06				636.2288		636.2288	-0.2888

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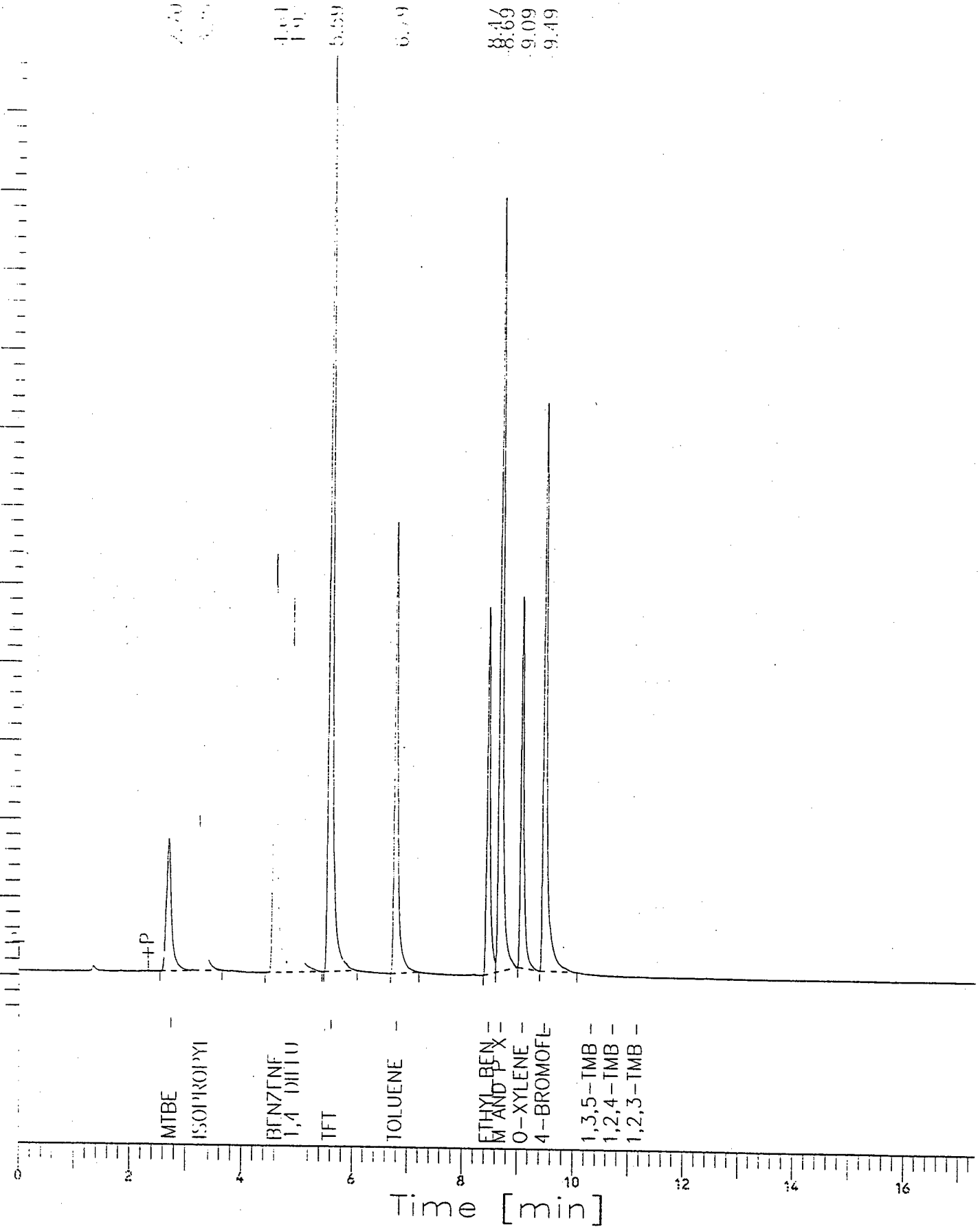
ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___371.TXO
```

Chromatogram

e Name : STD-50
Name : l:\data\tchrom\btex\varj\J___371.raw
: HP_J.ins
ime : 0.00 min End Time : 17.33 min
actor: 1 Plot Offset: 2 mV

Sample #: TC ;W;1 Page 1 of 1
Date : 05/27/95 18:01
Time of Injection: 05/27/95 17:43
Low Point : 2.34 mV High Point : 63.59 mV
Plot Scale: 61 mV



```
tware Version: 3.2 <16C20>
ple Name  : 9595858--05A MS              Time          : 05/27/95  18:51
ple Number: KM ;W;1                     Study         : BTEXW6;1
rator     : YN

trument   : HP_J                        Channel : A     A/D mV Range : 1000
pSampler  : NONE
K/Vial    : 0/0

erface Serial # : 1092573380   Data Acquisition Time: 05/27/95  18:34
ay Time     : 0.00   min.
 Time       : 17.33  min.
pling Rate  : 2.0000   pts/sec

 Data File  : L:\data\tchrom\btex\varj\J___373.raw
ult File    : L:\data\tchrom\btex\varj\J___373.rst
trument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
cess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ple File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
uence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

. Volume    : 2 ul                      Area Reject      : 300.00
ple Amount  : 1.0000                    Dilution Factor  : 1.00
```

BTEX Area Percent Report

Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.703	21602.00	3352.79	BB	1034.3294	0.0807	20.8850	MTBE	20.8850	-0.0457
3.251	26642.25	4002.44	BB	1260.5549	0.0996	21.1353	Isopropylether	21.1353	-0.0431
4.608	55439.03	10890.85	BV	2523.3398	0.2072	21.9705	Benzene	21.9705	-0.0339
4.920	121812.70	24147.50	VB	1099.6686	0.4553	110.7722	1,4-DIFLUOROBENZENE	110.7722	-0.0303
5.594	267542.00	56166.65	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0274
6.792	47625.00	11149.70	BB	2322.3491	0.1780	20.5073	Toluene	20.5073	-0.0214
8.473	35011.44	8611.10	BV	1737.4126	0.1309	20.1515	Ethyl_Benzene	20.1515	-0.0158
8.696	73275.06	16967.49	VB	1849.6506	0.2739	39.6156	m and p Xylene	39.6156	-0.0157
9.091	33490.50	8466.85	BB	1767.9725	0.1252	18.9429	o-Xylene	18.9429	-0.0151
9.492	147771.50	31994.29	BB	1447.2277	0.5523	102.1066	4-BROMOFLUOROBENZENE	102.1066	-0.0103
	830211.50	175749.66				376.0869		376.0869	-0.2588

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t Stored in ASCII File: l:\data\tchrom\btex\varj\J___373.TXO
```

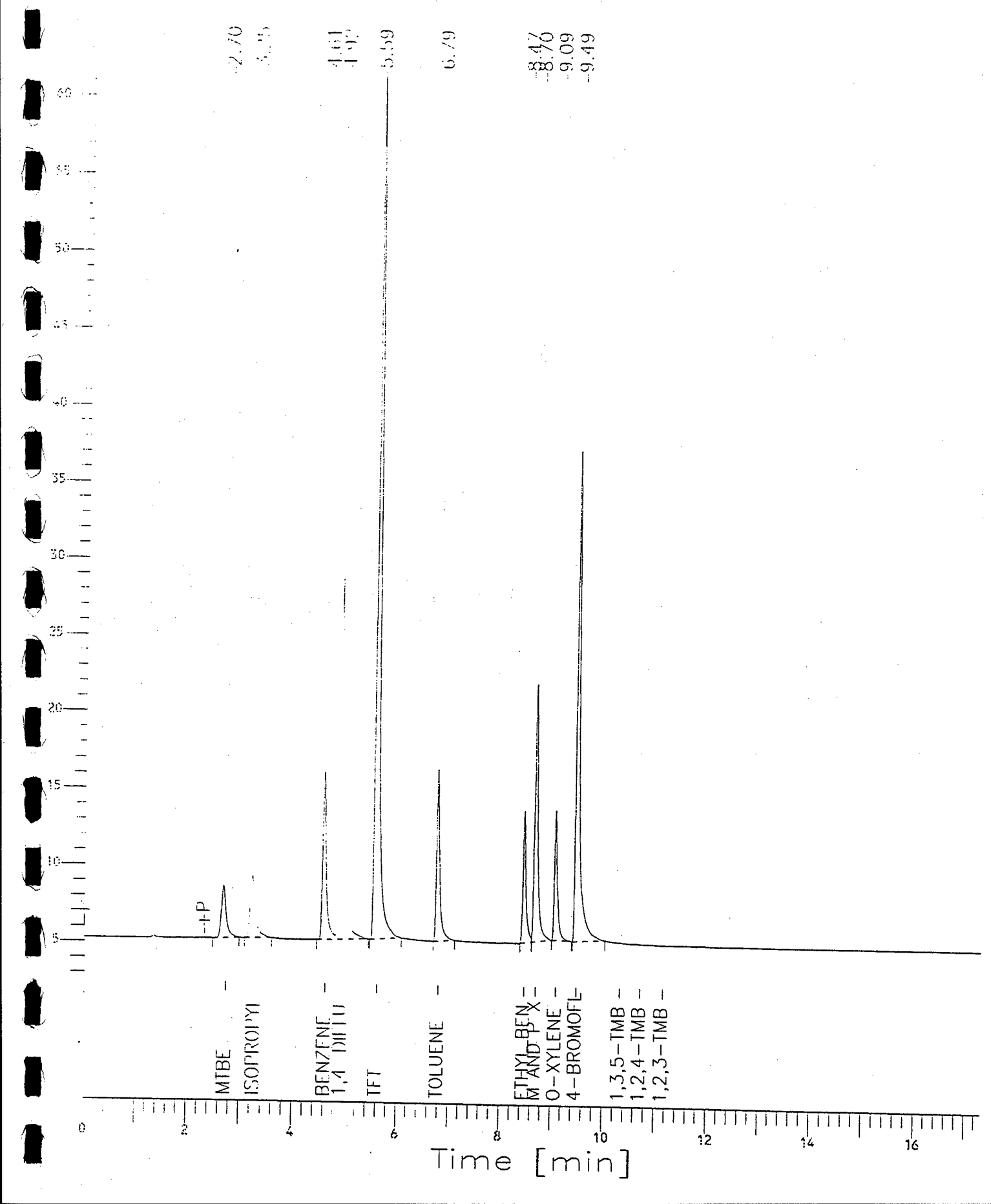
Chromatogram

[redacted] Name : 9595858--05A MS
[redacted]eName : [redacted]:\data\tchrom\btex\varj\J___373.raw
[redacted]thod : HP_J.ins
[redacted]rt Time : 0.00 min
[redacted] Factor: 1

End Time : 17.33 min
Plot Offset: 3 mV

Sample #: KM ;W;1
Date : 05/27/95 18:52
Time of Injection: 05/27/95 18:34
Low Point : 2.46 mV
Plot Scale: 59 mV

High Point : 61.29 mV



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==========================================================================
tware Version: 3.2 <16C20>
nple Name  : 9505858-05A MSD          Time        : 05/27/95  19:17
nple Number: KMD;W;1                  Study       : BTEXW6;1
erator     : YN

trument    : HP_J                     Channel : A     A/D mV Range : 1000
oSampler   : NONE
k/Vial     : 0/0

erface Serial # : 1092573380   Data Acquisition Time: 05/27/95  18:59
ay Time    : 0.00   min.
 Time      : 17.33  min.
pling Rate : 2.0000   pts/sec

 Data File : l:\data\tchrom\btex\varj\J___374.raw
ult File   : l:\data\tchrom\btex\varj\J___374.rst
trument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
cess File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ple File   : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
uence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

. Volume   : 2 ul                     Area Reject      : 300.00
ple Amount : 1.0000                   Dilution Factor  : 1.00

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BTEX Area Percent Report

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< Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.703	21483.50	3346.66	BB	1032.2009	0.0805	20.8133	MTBE	20.8133	-0.0457
3.251	26442.50	3987.81	BB	1257.9613	0.0990	21.0201	Isopropylether	21.0201	-0.0432
4.606	54628.05	10794.17	BV	2518.1477	0.2046	21.6937	Benzene	21.6937	-0.0354
4.918	121081.45	24163.90	VB	1097.4059	0.4535	110.3343	1,4-DIFLUOROBENZENE	110.3343	-0.0322
5.592	266991.50	56655.78	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0299
6.789	46985.50	11090.37	BB	2317.5706	0.1760	20.2736	Toluene	20.2736	-0.0235
8.473	34564.73	8583.96	BV	1733.8378	0.1295	19.9354	Ethyl_Benzene	19.9354	-0.0159
8.696	71524.52	16645.59	VB	1845.8449	0.2679	38.7489	m and p Xylene	38.7489	-0.0160
9.091	32892.00	8406.51	BB	1764.3347	0.1232	18.6427	o-Xylene	18.6427	-0.0153
9.491	149150.25	32803.36	BB	1444.2496	0.5586	103.2718	4-BROMOFLUOROBENZENE	103.2718	-0.0109
	825744.00	176478.13				374.7339		374.7339	-0.2680

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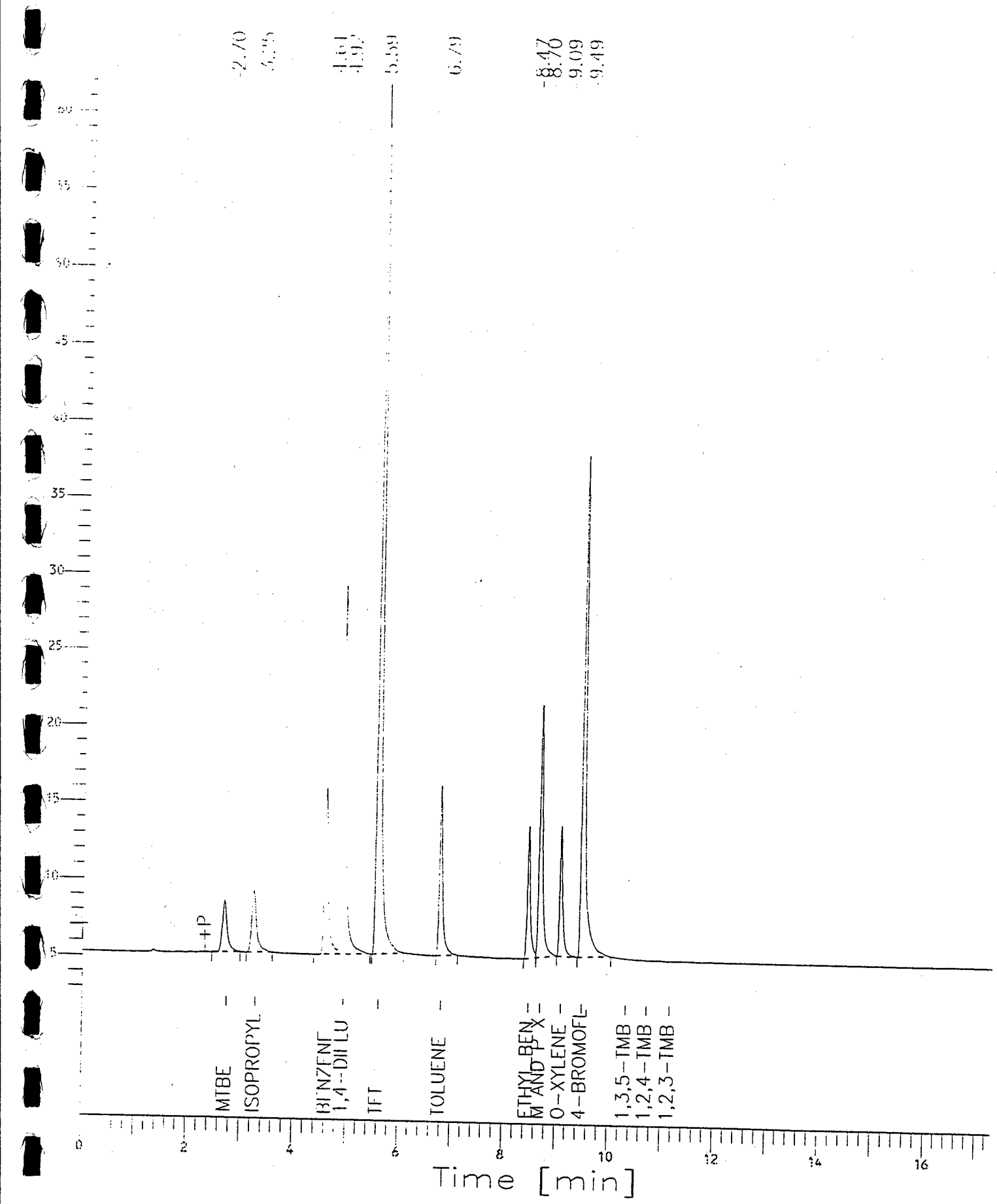
rt Stored in ASCII File: l:\data\tchrom\btex\varj\J___374.TXO
```

Chromatogram

[redacted] Name : 9505858-05A MSD
[redacted]Name : l:\data\tchrom\btex\varj\J___374.raw
[redacted] : HP_J.ins
[redacted]Time : 0.00 min End Time : 17.33 min
[redacted]Factor: 1 Plot Offset: 2 mV

Sample #: KMD;W;1
Date : 05/27/95 19:17
Time of Injection: 05/27/95 18:59
Low Point : 2.42 mV High Point : 62.06 mV
Plot Scale: 60 mV



```
==========================================================================
:ware Version: 3.2 <16C20>
ple Name  : 9505768-03A              Time         : 05/28/95  05:00
ple Number: SC ;W;25                Study        : BTEXW;1
rator     : YN

:rument   : HP_J                    Channel : A     A/D mV Range : 1000
pSampler  : NONE
k/Vial    : 0/0

erface Serial # : 1092573380   Data Acquisition Time: 05/28/95  04:43
ay Time     : 0.00   min.
 Time       : 17.33  min.
pling Rate  : 2.0000   pts/sec

 Data File  : l:\data\tchrom\btex\varj\J___397.raw
ult File    : l:\data\tchrom\btex\varj\J___397.rst
:rument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
cess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ple File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
uence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

. Volume    : 2 ul                  Area Reject      : 300.00
ple Amount  : 1.0000                Dilution Factor  : 25.00

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BTEX Area Percent Report

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< Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.468	5553.33	1108.37	BV	1.0000e6	----------	0.1388		0.0056	0.0000
2.696	285438.94	43467.62	VE	1044.9241	1.0561	6829.1787	MTBE	273.1671	-0.0522
3.321	5906.00	493.75	EV	1273.4672	0.0219	115.9433	Isopropylether	4.6377	0.0260
3.451	4941.79	660.78	VV	9.9999e5	----------	0.1235		0.0049	0.0000
3.613	1524.41	287.42	VB	1.0000e6	----------	0.0381		0.0015	0.0000
4.022	609.75	120.06	BB	1.0000e6	----------	0.0152		0.0006	0.0000
4.280	1400.00	321.20	BB	1.0000e6	----------	0.0350		0.0014	0.0000
4.604	51781.03	10374.61	BV	2549.1870	0.1916	507.8191	Benzene	20.3128	-0.0377
4.915	122944.22	24980.67	VB	1110.9327	0.4549	2766.6892	1,4-DIFLUOROBENZENE	110.6676	-0.0348
5.590	270282.50	59248.81	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0316
6.370	4202.25	713.98	BB	1.0000e6	----------	0.1051		0.0042	0.0000
6.788	144283.50	35998.90	BB	2346.1375	0.5338	1537.4579	Toluene	61.4983	-0.0249
7.298	1073.50	336.51	BB	1.0000e6	----------	0.0268		0.0011	0.0000
8.471	13594.00	3829.61	BB	1755.2094	0.0503	193.6236	Ethyl_Benzene	7.7450	-0.0179
8.692	444837.00	118988.49	BB	1868.5973	1.6458	5951.4834	m and p Xylene	238.0593	-0.0201
9.088	276284.00	78107.31	BB	1786.0824	1.0222	3867.1787	o-Xylene	154.6872	-0.0178
9.487	175436.89	45079.22	BV	1462.0518	0.6491	2999.8408	4-BROMOFLUOROBENZENE	119.9936	-0.0153
9.961	3077.86	982.91	VB	1.0000e6	----------	0.0770		0.0031	0.0000
10.113	104713.70	22939.71	BV	1.0000e6	----------	2.6178		0.1047	0.0000
10.319	58480.97	17668.52	VV	1687.3441	0.2164	866.4647	1,3,5-TMB	34.6586	-0.0216
10.417	45581.34	12319.73	VB	1.0000e6	----------	1.1395		0.0456	0.0000
10.712	146503.50	42341.57	BB	1494.2783	0.5420	2451.0745	1,2,4-TMB	98.0430	-0.0218
11.141	38977.40	12254.32	BV	1433.2981	0.1442	679.8550	1,2,3-TMB	27.1942	-0.0212
11.260	37016.34	10374.91	VE	1.0000e6	----------	0.9254		0.0370	0.0000
11.458	3136.00	966.49	EB	1.0000e6	----------	0.0784		0.0031	0.0000
11.661	1118.25	420.10	BB	1.0000e6	----------	0.0280		0.0011	0.0000
11.876	3842.24	739.84	BB	1.0000e6	----------	0.0961		0.0038	0.0000
12.255	1421.25	446.23	BB	9.9999e5	----------	0.0355		0.0014	0.0000
12.539	9097.50	1797.86	BV	1.0000e6	----------	0.2274		0.0091	0.0000
12.729	3624.41	1022.95	VV	1.0000e6	----------	0.0906		0.0036	0.0000
12.874	6844.95	1797.26	VV	1.0000e6	----------	0.1711		0.0068	0.0000
12.985	3414.16	588.34	VB	1.0000e6	----------	0.0854		0.0034	0.0000
13.476	3460.50	751.49	BB	1.0000e6	----------	0.0865		0.0035	0.0000
	2280403.75	551529.56				28772.7481		1150.9100	-0.2909

```
==========================================================================

==========================================================================

ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___397.TXO
```

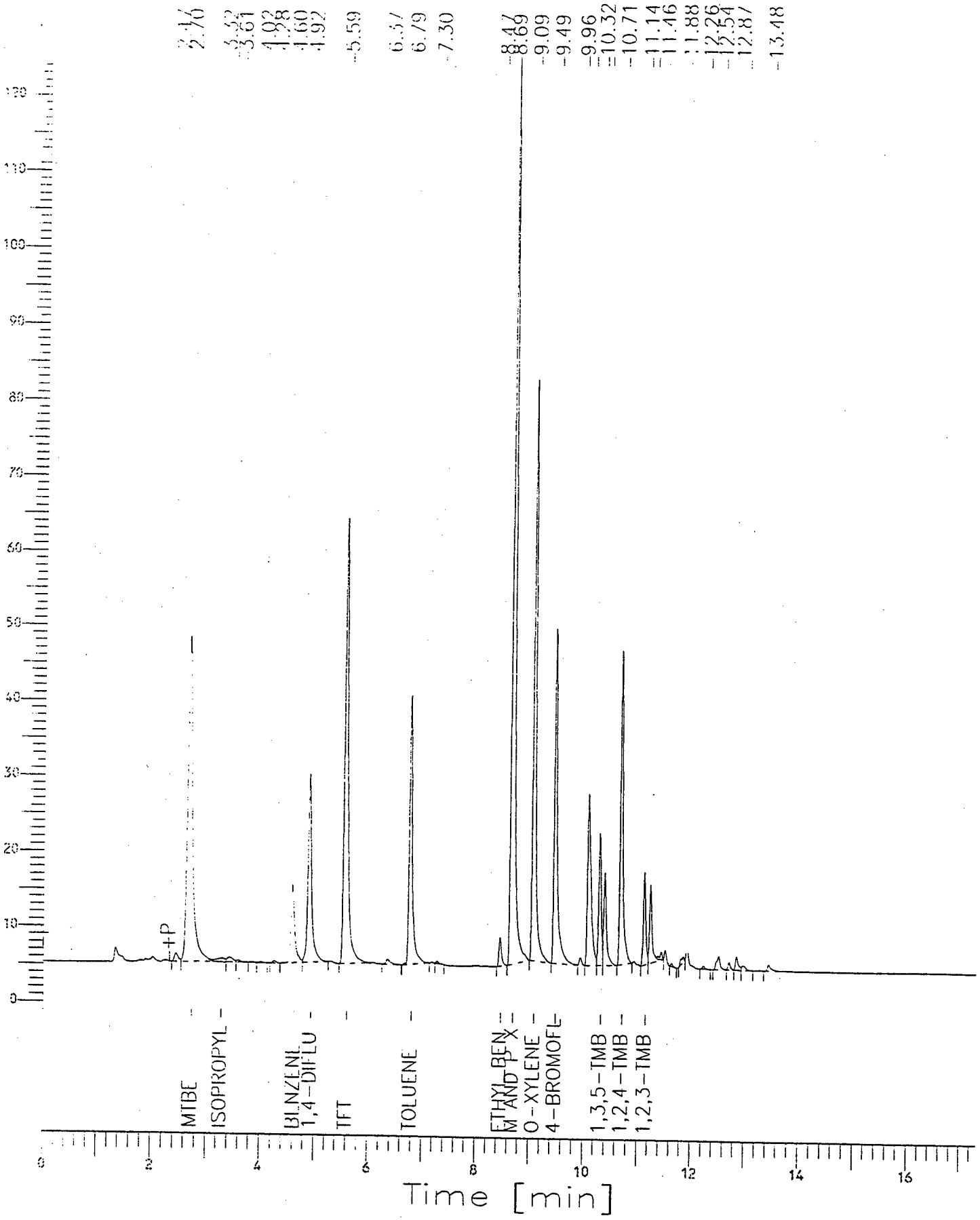
Chromatogram

Sample Name : 9505768-03A
FileName : l:\data\tchrom\btex\varj\J___397.raw
Method : HP_J.ins
Start Time : 0.00 min
Scale Factor: 1

End Time : 17.33 min
Plot Offset: -1 mV

Sample #: SC ;W;25
Date : 05/28/95 05:00
Time of Injection: 05/28/95 04:43
Low Point : -0.71 mV
Plot Scale: 125 mV

High Point : 124.72 mV



```
==========================================================================
tware Version: 3.2 <16C20>
ple Name  : BLANK                    Time         : 05/27/95  03:24
ple Number: B  ;W;1                  Study        : BTEXW6;1
rator     : YN

trument   : HP_J                     Channel : A     A/D mV Range : 1000
oSampler  : NONE
k/Vial    : 0/0

erface Serial # : 1092573380   Data Acquisition Time: 05/27/95  03:07
ay Time     : 0.00   min.
. Time      : 17.33  min.
pling Rate  : 2.0000   pts/sec

 Data File  : l:\data\tchrom\btex\varj\J___344.raw
ult File    : l:\data\tchrom\btex\varj\J___344.rst
trument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
cess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
ple File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
uence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

. Volume    : 2 ul                   Area Reject      : 300.00
ple Amount  : 1.0000                 Dilution Factor  : 1.00

==========================================================================


                                              BTEX Area Percent Report
==========================================================================
==========================================================================
```

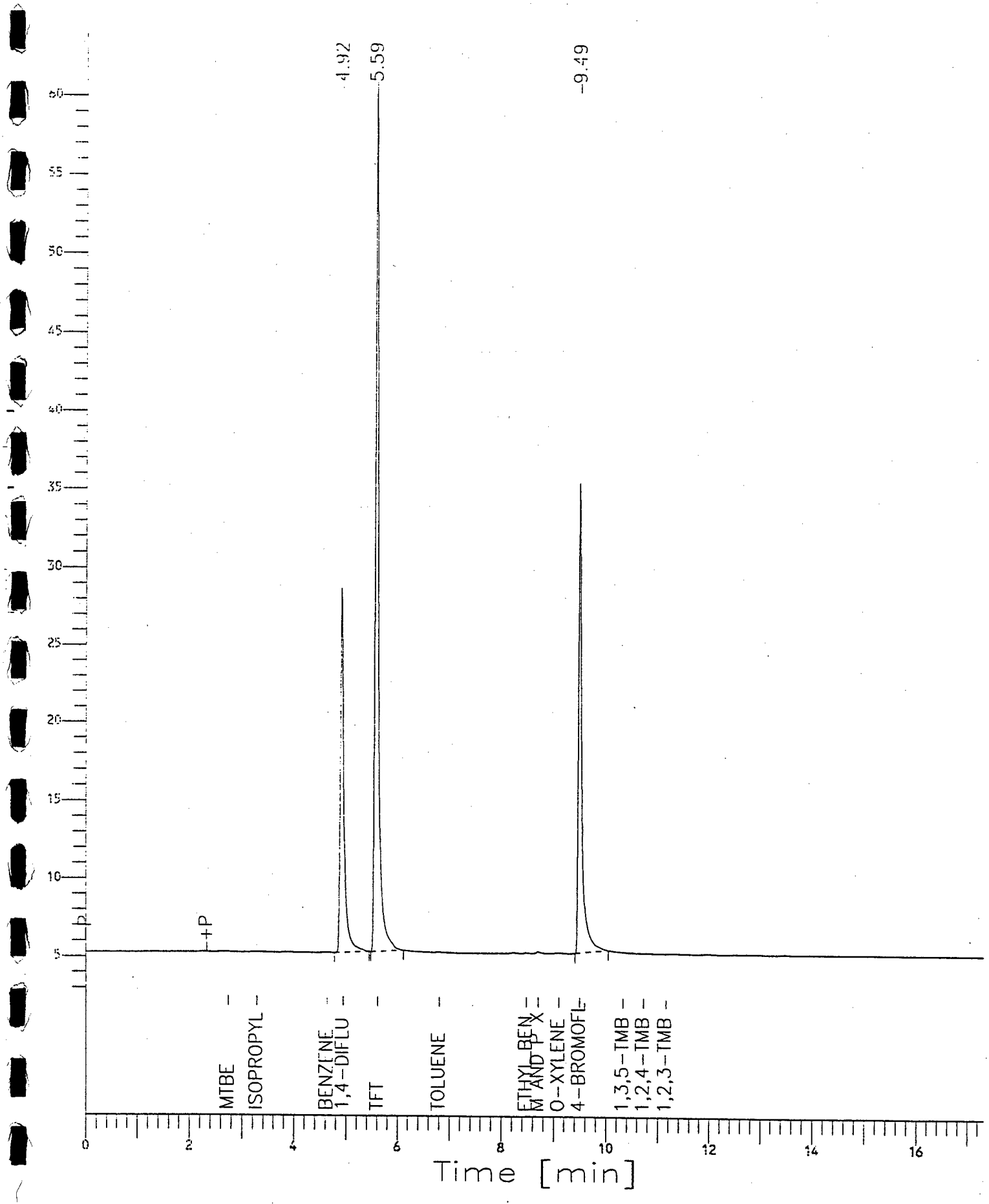
k Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
4.919	117046.00	23482.26	BB	1075.1477	0.4475	108.8650	1,4-DIFLUOROBENZENE	108.8650	-0.0312
5.593	261576.25	55060.00	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0285
9.494	141465.75	30302.30	BB	1414.9568	0.5408	99.9789	4-BROMOFLUOROBENZENE	99.9789	-0.0081
	520088.00	108844.56				208.8439		208.8439	-0.0677

```
==========================================================================

==========================================================================


ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___344.TXO
```

Chromatogram

mple Name : BLANK
leName : l:\data\tchrom\btex\varj\J___344.raw
t : HP_J.ins
a Time : 0.00 min End Time : 17.33 min
a Factor: 1 Plot Offset: 3 mV

Sample #: B ;W;1 Page 1 of 1
Date : 05/27/95 03:24
Time of Injection: 05/27/95 03:07
Low Point : 2.51 mV High Point : 60.33 mV
Plot Scale: 58 mV



ftware Version: 3.2 <16C20>
mple Name : LCS_50 Time : 05/27/95 02:08
mple Number: TL ;W;1 Study : BTEXW6;1
erator : YN

strument : HP_J Channel : A A/D mV Range : 1000
toSampler : NONE
ck/Vial : 0/0

terface Serial # : 1092573380 Data Acquisition Time: 05/27/95 01:51
lay Time : 0.00 min.
d Time : 17.33 min.
mpling Rate : 2.0000 pts/sec

w Data File : l:\data\tchrom\btex\varj\J___341.raw
sult File : l:\data\tchrom\btex\varj\J___341.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

. Volume : 2 ul Area Reject : 300.00
mple Amount : 1.0000 Dilution Factor : 1.00

BTEX Area Percent Report

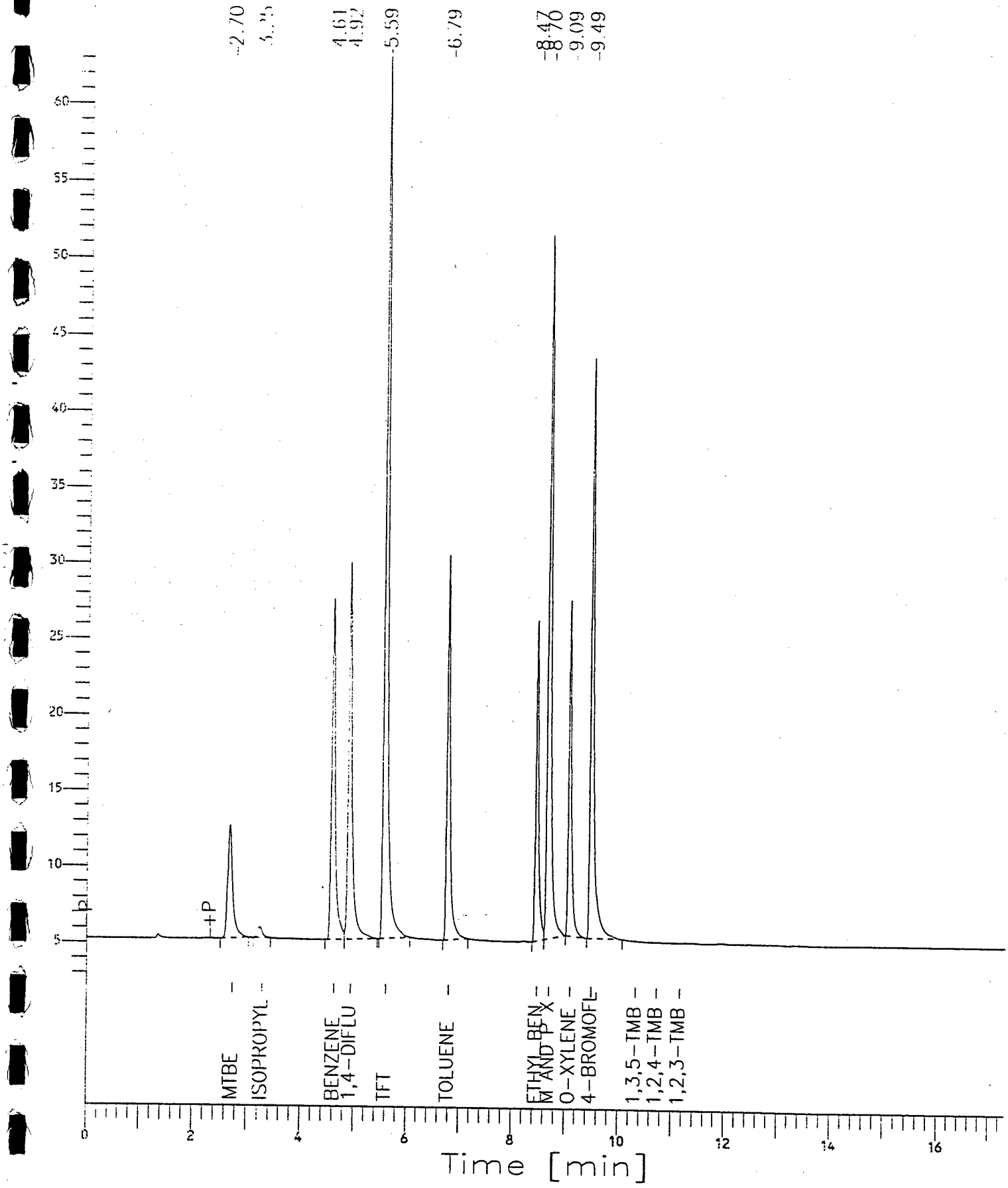
ak Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.702	47676.75	7430.31	BB	1031.9971	0.1786	46.1985	MTBE	46.1985	-0.0464
3.251	4391.25	727.80	BB	1257.7127	0.0165	3.4915	Isopropylether	3.4915	-0.0431
4.608	110932.42	22404.12	BV	2517.6504	0.4156	44.0619	Benzene	44.0619	-0.0340
4.919	123507.33	24887.36	VB	1097.1890	0.4627	112.5671	1,4-DIFLUOROBENZENE	112.5671	-0.0309
5.594	266938.75	57877.61	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0281
6.791	102820.50	25326.23	BB	2317.1128	0.3852	44.3744	Toluene	44.3744	-0.0216
8.472	80005.16	21286.82	BV	1733.4951	0.2997	46.1525	Ethyl_Benzene	46.1525	-0.0172
8.695	185617.34	46717.08	VB	1845.4802	0.6954	100.5794	m and p Xylene	100.5794	-0.0169
9.089	81722.50	22202.23	BB	1763.9861	0.3062	46.3283	o-Xylene	46.3283	-0.0168
9.489	163575.00	38526.61	BB	1443.9642	0.6128	113.2819	4-BROMOFLUOROBENZENE	113.2819	-0.0131
	1167187.00	267386.19				557.0355		557.0355	-0.2682

ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___341.TXO

Chromatogram

ple Name : LCS_50
leName : l:\data\tchrom\btex\varj\J___341.raw
d : HP_J.ins
Time : 0.00 min End Time : 17.33 min
le Factor: 1 Plot Offset: 2 mV

Sample #: TL ;W;1 Page 1 of 1
Date : 05/27/95 02:08
Time of Injection: 05/27/95 01:51
Low Point : 2.38 mV High Point : 63.10 mV
Plot Scale: 61 mV



```
ftware Version: 3.2 <16C20>
mple Name  : STD-50                    Time         : 05/27/95  02:34
mple Number: TC ;W;1                   Study        : BTEXW6;1
erator     : YN

strument   : HP_J                      Channel : A     A/D mV Range : 1000
toSampler  : NONE
ck/Vial    : 0/0

terface Serial # : 1092573380   Data Acquisition Time: 05/27/95  02:16
lay Time     : 0.00   min.
d Time         17.33  min.
mpling Rate  : 2.0000   pts/sec

w Data File  : l:\data\tchrom\btex\varj\J___342.raw
sult File    : l:\data\tchrom\btex\varj\J___342.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume    : 2 ul                    Area Reject      : 300.00
mple Amount  : 1.0000                  Dilution Factor  : 1.00
```

BTEX Area Percent Report

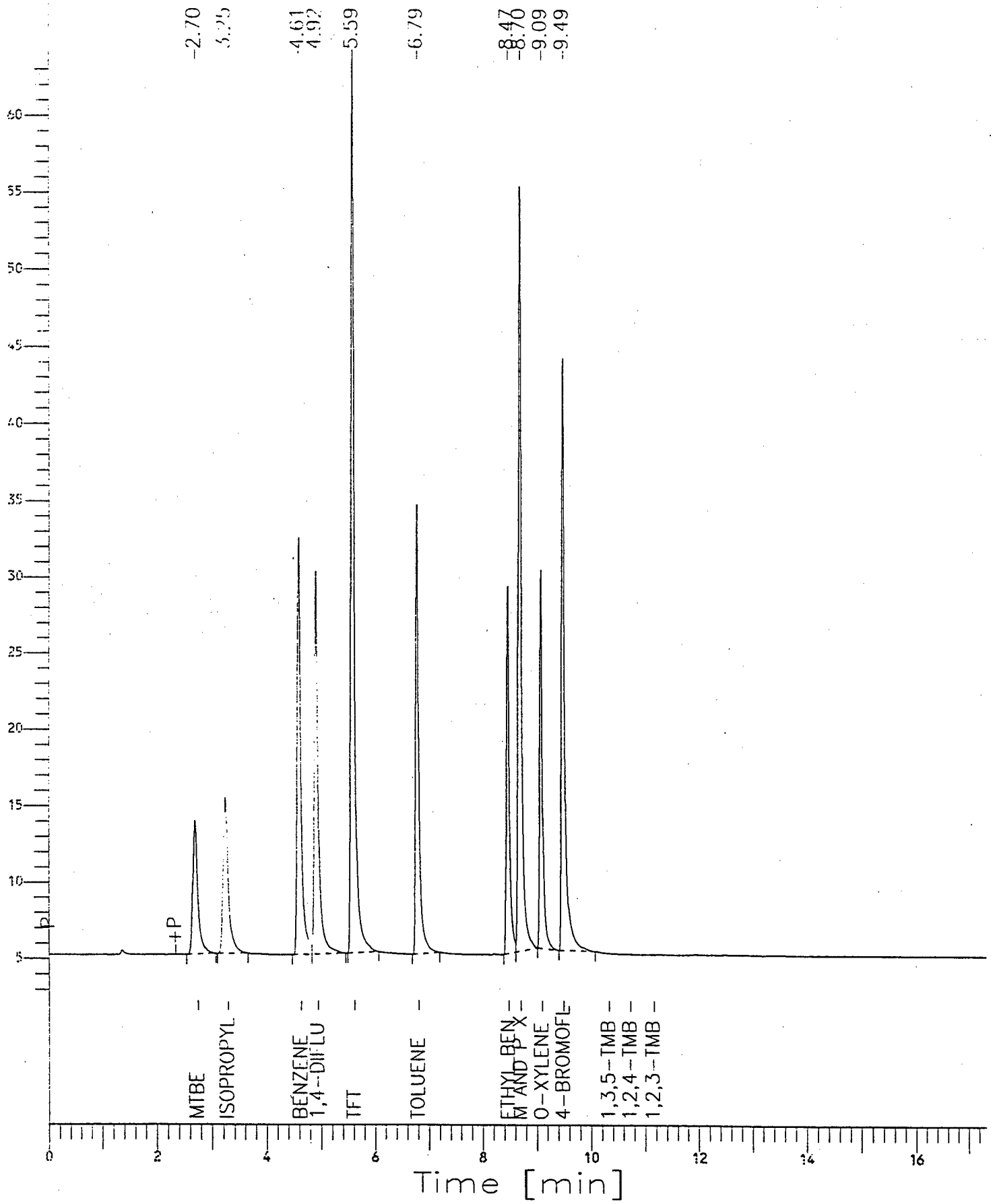
k Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
2.701	56070.00	8734.13	BB	1037.5516	0.2089	54.0407	MTBE	54.0407	-0.0468
3.249	67044.25	10178.61	BB	1264.4821	0.2498	53.0211	Isopropylether	53.0211	-0.0452
4.606	135383.50	27374.13	BV	2531.2009	0.5045	53.4859	Benzene	53.4859	-0.0355
4.918	124659.75	25097.76	VB	1103.0945	0.4645	113.0091	1,4-DIFLUOROBENZENE	113.0091	-0 0320
5.593	268375.50	58249.33	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0292
6.790	120191.25	29512.28	BB	2329.5842	0.4479	51.5934	Toluene	51.5934	-0.0229
8.472	90720.12	24319.96	BV	1742.8254	0.3380	52.0535	Ethyl_Benzene	52.0535	-0.0170
8.695	199017.38	50430.31	VB	1855.4132	0.7416	107.2631	m and p Xylene	107.2631	-0.0170
9.089	91562.23	24984.28	BB	1773.4805	0.3412	51.6286	o-Xylene	51.6286	-0.0172
9.489	165734.50	39056.55	BB	1451.7362	0.6176	114.1630	4-BROMOFLUOROBENZENE	114.1630	-0.0135
	1318758.50	297937.31				650.2583		650.2583	-0.2762

```
ort Stored in ASCII File: l:\data\tchrom\btex\varj\J___342.TXO
```

Chromatogram

ple Name : STD-50
eName : l:\data\tchrom\btex\varj\J___342.raw
: HP_J.ins
Time : 0.00 min End Time : 17.33 min
le Factor: 1 Plot Offset: 2 mV

Sample #: TC ;W;1 Page 1 of 1
Date : 05/27/95 02:34
Time of Injection: 05/27/95 02:16
Low Point : 2.35 mV High Point : 63.63 mV
Plot Scale: 61 mV



```
==========================================================================
ftware Version: 3.2 <16C20>
mple Name  : 9505887-04A MS          Time         : 05/27/95  16:32
mple Number: KM ;W;1                 Study        : BTEXW6;1
erator     : YN

strument   : HP_J                    Channel : A     A/D mV Range : 1000
toSampler  : NONE
ck/Vial    : 0/0

terface Serial # : 1092573380   Data Acquisition Time: 05/27/95  16:15
lay Time   : 0.00   min.
d Time     : 17.33  min.
mpling Rate : 2.0000   pts/sec

w Data File  : l:\data\tchrom\btex\varj\J___368.raw
sult File    : l:\data\tchrom\btex\varj\J___368.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume    : 2 ul                  Area Reject      : 300.00
mple Amount  : 1.0000                Dilution Factor  : 1.00

==========================================================================


                                        BTEX Area Percent Report
==========================================================================
==========================================================================
```

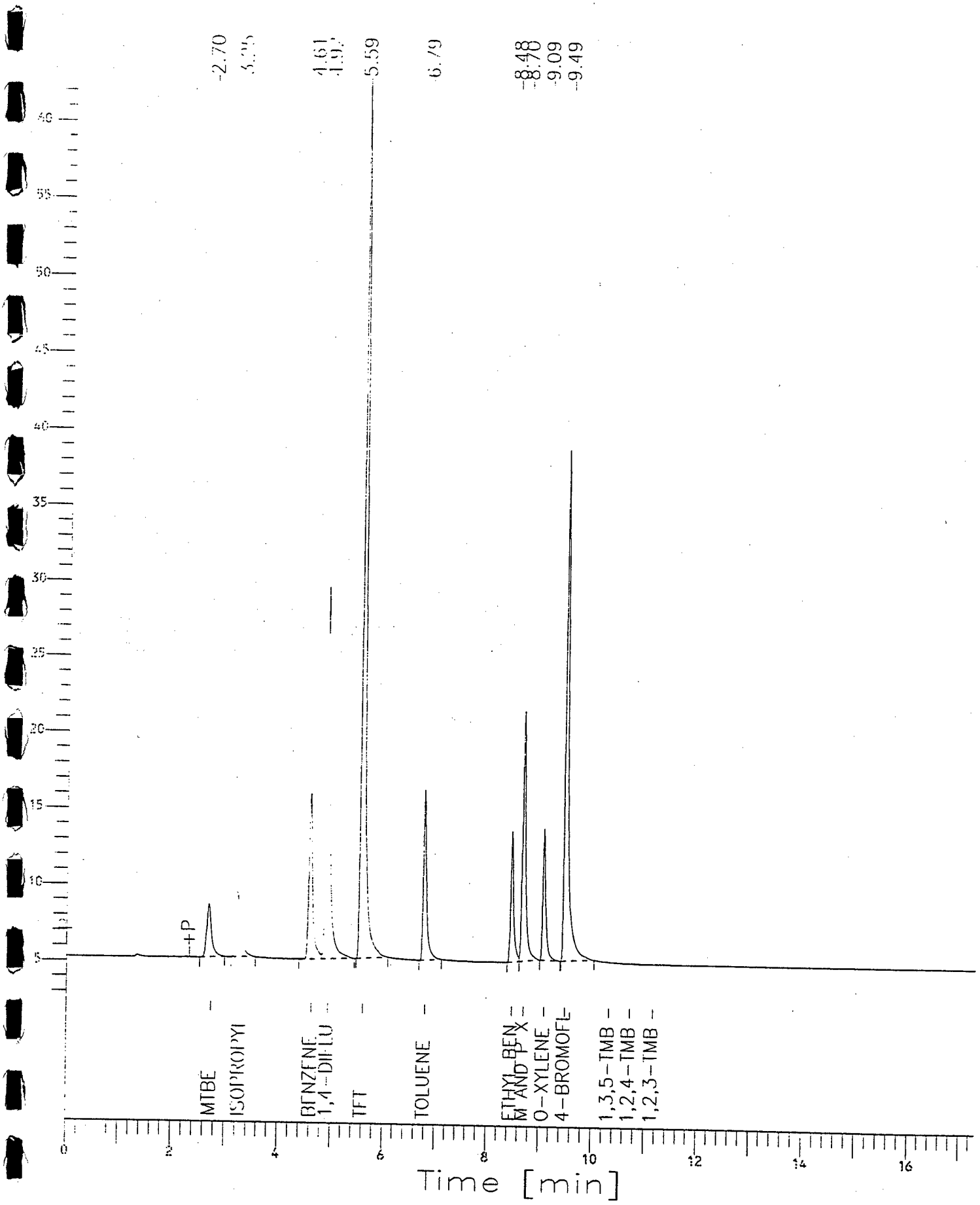
ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	2.703	21981.50	3433.45	BB	1037.3467	0.0819	21.1901	MTBE	21.1901	-0.0451
2	3.252	26380.00	4027.65	BB	1264.2324	0.0983	20.8664	Isopropylether	20.8664	-0.0429
3	4.607	54260.67	10781.56	BV	2530.7009	0.2022	21.4410	Benzene	21.4410	-0.0346
4	4.919	122215.84	24532.39	VB	1102.8766	0.4555	110.8155	1,4-DIFLUOROBENZENE	110.8155	-0.0312
5	5.594	268322.50	57200.85	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0283
6	6.792	46683.00	11121.12	BB	2329.1240	0.1740	20.0432	Toluene	20.0432	-0.0209
7	8.476	33863.47	8514.04	BV	1742.4812	0.1262	19.4341	Ethyl_Benzene	19.4341	-0.0128
8	8.699	69468.53	16396.06	VB	1855.0468	0.2589	37.4484	m and p Xylene	37.4484	-0.0134
9	9.093	33297.50	8579.08	BB	1773.1303	0.1241	18.7789	o-Xylene	18.7789	-0.0128
10	9.494	151111.00	33730.23	BB	1451.4496	0.5632	104.1104	4-BROMOFLUOROBENZENE	104.1104	-0.0084
		827584.00	178316.44				374.1280		374.1280	-0.2502

```
==========================================================================
)
==========================================================================


port Stored in ASCII File: l:\data\tchrom\btex\varj\J___368.TXO
```

Chromatogram

Sample Name : 9505887-04A MS
FileName : l:\data\tchrom\btex\varj\J___368.raw
Method : HP_J.ins
Start Time : 0.00 min End Time : 17.33 min
Multiplier Factor: 1 Plot Offset: 2 mV

Sample #: KM ;W;1
Date : 05/27/95 16:32
Time of Injection: 05/27/95 16:15
Low Point : 2.40 mV High Point : 62.45 mV
Plot Scale: 60 mV



```
ftware Version: 3.2 <16C20>
mple Name  : 9505887-04A MSD          Time        : 05/27/95  16:58
mple Number: KMD;W;1                 Study       : BTEXW6;1
erator     : YN

strument   : HP_J                    Channel : A     A/D mV Range : 1000
toSampler  : NONE
ck/Vial    : 0/0

terface Serial # : 1092573380   Data Acquisition Time: 05/27/95  16:40
lay Time     : 0.00   min.
d Time       : 1.33   min.
mpling Rate  : 2.0000   pts/sec

w Data File  : l:\data\tchrom\btex\varj\J___369.raw
sult File    : l:\data\tchrom\btex\varj\J___369.rst
strument File: L:\DATA\TCHROM\BTEX\METHODS\HP_J.ins
ocess File   : L:\DATA\TCHROM\BTEX\METHODS\BTEXJI.prc
mple File    : L:\DATA\TCHROM\BTEX\METHODS\JW042695.smp
quence File  : L:\DATA\TCHROM\BTEX\METHODS\BTEXJ.seq

j. Volume    : 2 ul                  Area Reject      : 300.00
mple Amount  : 1.0000                Dilution Factor  : 1.00
```

BTEX Area Percent Report

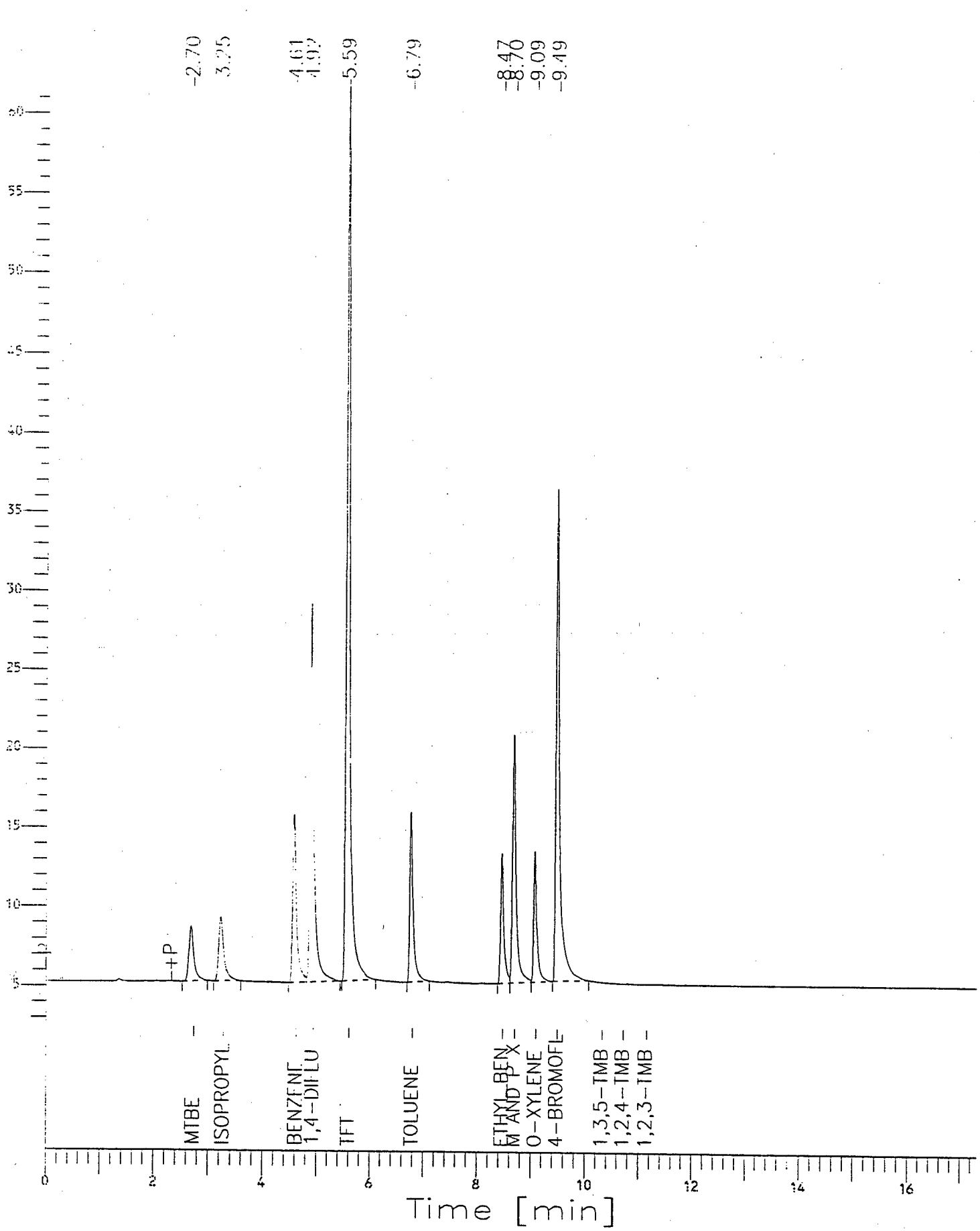
ak #	Ret Time [min]	Area [uV-sec]	Height [uV]	BL	Area/ Amount	ISTD Resp Ratio	Amount ug/l	Component Name	RAW AMOUNT ug/L	RT SHIFT MIN
1	2.701	22345.00	3456.40	BB	1047.2178	0.0825	21.3375	MTBE	21.3375	-0.0471
2	3.249	26807.50	4010.47	BB	1276.2623	0.0990	21.0047	Isopropylether	21.0047	-0.0453
3	4.605	55173.23	10690.05	BV	2554.7820	0.2037	21.5961	Benzene	21.5961	-0.0371
4	4.916	123052.78	23936.15	VB	1113.3711	0.4543	110.5227	1,4-DIFLUOROBENZENE	110.5227	-0.0338
5	5.590	270875.75	56281.32	BB	----------	1.0000	0.0000	TFT	0.0000	-0.0315
6	6.788	47256.00	10844.24	BB	2351.2874	0.1745	20.0979	Toluene	20.0979	-0.0248
7	8.473	34411.02	8235.03	BV	1759.0618	0.1270	19.5621	Ethyl_Benzene	19.5621	-0.0164
8	8.696	72630.49	15883.50	VV	1872.6987	0.2681	38.7839	m and p Xylene	38.7839	-0.0161
9	9.091	34731.00	8247.85	VB	1790.0026	0.1282	19.4028	o-Xylene	19.4028	-0.0152
10	9.492	149486.50	31174.11	BB	1465.2610	0.5519	102.0204	4-BROMOFLUOROBENZENE	102.0204	-0.0099
		836769.25	172759.09				374.3280		374.3280	-0.2771

```
.D
```

Chromatogram

ole Name : 9505887-04A MSD
eName : l:\data\tchrom\btex\varj\J___369.raw
: HP_J.ins
ime : 0.00 min End Time : 17.33 min
.e Factor: 1 Plot Offset: 2 mV

Sample #: KMD;W;1 Page 1 of 1
Date : 05/27/95 16:58
Time of Injection: 05/27/95 16:40
Low Point : 2.44 mV High Point : 61.62 mV
Plot Scale: 59 mV



WORK ORDER # 9505512

TEST: S.V.

SAMPLE	DATE	AMOUNT (wt. or vol.)	SURR. LCS #	AMOUNT (wt.)	SPIKE LCS #	AMOUNT (wt.)	FINAL VOL. (ml)	TECH.	COMMENTS
02B	05/15	30.0	10-17	1.0	~	~	1.0	JK	
03B									
04B									
05B									
06B							↓		
07B							10.0		
08B							3.0		
09B							1.0		
10B									
11B									
12B									
13B					↓	↓			
14A 02Bms					10-11	1.0			
15A 02BmsD	↓	↓	↓	↓	10-11	1.0	↓	↓	

Q.C. BATCH INFORMATION

BLANK	950515 - SNB1
LCS	SNLCS
MATRIX SPIKE	9505512 - 02Bms
MATRIX SPIKE DUP.	02BmSD

FLY AWAY

WORK ORDER # 9505209-

TEST: S.V.

SAMPLE	DATE	AMOUNT (mL or GRAMS)	SURR. LVL #	AMOUNT (mL's)	SPIKE LVL #	AMOUNT (mL's)	FINAL VOL. (mL's)	TECH.	COMMENTS
01B	05/12	30.0	10.17	1.0	~	~	2.0	JRDBK	
02B	↓	↓	↓	↓	↓	↓	1.0	↓	
03B							1.0		
04B							1.0		
05B							1.0		

Q.C. BATCH INFORMATION

BLANK	950512-SNB1
LCS	SNLCS
MATRIX SPIKE	9505204-05Ams
MATRIX SPIKE DUP.	05AmsD