ETC ENVIRONMENTAL TESTING and CERTIFICATION

Technical Report

for

NJDEP-DIVISION OF WASTE MGMT.

CONTRACT X-029

Chain of Custody Data Required for ETC Data Management Summary Reports						
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	0001
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 16, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

NPDES Number	Compound (Acrolein and Acrylonitrile values are screen only.)	Results: Sample Concen. ug/kg	Results: MDL ug/kg[A]	QC Replicate: First ug/kg	QC Replicate: Second ug/kg	QC Blank and Spiked Blank: Blank Data ug/kg	QC Blank and Spiked Blank: Concen. Added ug/kg	QC Blank and Spiked Blank: % Recov	QC Matrix Spike: Unspiked Sample ug/kg	QC Matrix Spike: Concen. Added ug/kg	QC Matrix Spike: % Recov
1V	Acrolein	ND	5000.0	ND	ND	ND	800	82	ND	800	163[B]
2V	Acrylonitrile	ND	5000.0	ND	ND	ND	80	98	ND	80	184[B]
3V	Benzene	16960.7	220.0	ND	ND	ND	18	99	46	18	21[C]
4V	bis(Chloromethyl)ether	ND	500.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	235.0	ND	ND	ND	18	94	ND	18	69
6V	Carbon tetrachloride	ND	140.0	ND	ND	ND	18	100	ND	18	94
7V	Chlorobenzene	ND	300.0	ND	ND	ND	18	101	ND	18	109
8V	Chlorodibromomethane	ND	155.0	ND	ND	ND	18	95	ND	18	87
9V	Chloroethane	ND	500.0	ND	ND	ND	18	100	ND	18	154[B]
10V	2-Chloroethylvinyl ether	ND	500.0	ND	ND	ND	18	119	ND	18	102
11V	Chloroform	ND	80.0	ND	ND	ND	18	104	ND	18	132
12V	Dichlorobromomethane	ND	110.0	ND	ND	ND	18	101	ND	18	101
13V	Dichlorodifluoromethane	ND	500.0	ND	ND	ND	18	106	ND	18	145
14V	1,1-Dichloroethane	942.1	235.0	ND	ND	ND	18	101	21	18	92
15V	1,2-Dichloroethane	295.5	140.0	ND	ND	ND	18	103	ND	18	137
16V	1,1-Dichloroethylene	ND	140.0	ND	ND	ND	18	100	ND	18	129
17V	1,2-Dichloropropane	ND	300.0	ND	ND	ND	18	95	ND	18	125
18V	cis-1,3-Dichloropropylene	ND	250.0	ND	ND	ND	18	94	ND	18	95
19V	Ethylbenzene	6020.4	360.0	ND	ND	BMDL	18	99	14	18	37[B]
20V	Methyl bromide	ND	500.0	ND	ND	ND	18	101	ND	18	118
21V	Methyl chloride	ND	500.0	ND	ND	ND	18	102	ND	18	156[B]
22V	Methylene chloride	290.0	140.0	24	1	9	18	76	18	18	98
23V	1,1,2,2-Tetrachloroethane	ND	345.0	ND	ND	ND	18	99	ND	18	125
24V	Tetrachloroethylene	4491.4	205.0	ND	ND	ND	18	100	19	18	43
25V	Toluene	40520.4	300.0	ND	ND	ND	18	102	95	18	0[C]
26V	1,2-Trans-dichloroethylene	7644.5	80.0	ND	ND	ND	18	100	87	18	0[C]
27V	1,1,1-Trichloroethane	770.0	190.0	ND	ND	ND	18	111	13	18	83
28V	1,1,2-Trichloroethane	ND	250.0	ND	ND	ND	18	98	ND	18	109
29V	Trichloroethylene	1613.2	95.0	ND	ND	3	18	85	13	18	51
30V	Trichlorofluoromethane	BMDL	500.0	5	3	ND	18	102	ND	18	124
31V	Vinyl chloride	ND	500.0	ND	ND	ND	18	103	3	18	149[B]
18V	trans-1,3-Dichloropropylene	ND	500.0	ND	ND	ND	18	94	ND	18	97

A ETC established Method Detection Limit for this particular sample.

B Recovery variable due to sample matrix interference.

C Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 30, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg[A]	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov [B]	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	21780.0	ND	ND	ND	0	-	ND	33333	74
2A	2,4-Dichlorophenol	ND	17820.0	ND	ND	ND	0	-	ND	33333	96
3A	2,4-Dimethylphenol	ND	17820.0	ND	ND	ND	0	-	ND	33333	82
4A	4,6-Dinitro-o-cresol	ND	158400	ND	ND	ND	0	-	ND	33333	34
5A	2,4-Dinitrophenol	ND	277200	ND	ND	ND	0	-	ND	33333	21
6A	2-Nitrophenol	ND	23760.0	ND	ND	ND	0	-	ND	33333	99
7A	4-Nitrophenol	ND	15840.0	ND	ND	ND	0	-	ND	33333	99
8A	p-Chloro-m-cresol	ND	19800.0	ND	ND	ND	0	-	ND	33333	90
9A	Pentachlorophenol	ND	23760.0	ND	ND	ND	0	-	ND	33333	91
10A	Phenol	ND	9900.0	ND	ND	ND	0	-	ND	33333	83
11A	2,4,6-Trichlorophenol	ND	17820.0	ND	ND	ND	0	-	ND	33333	108

A ETC established Method Detection Limit for this particular sample.

B Reagent Blank. Spiked Blank cannot be performed for this sample matrix.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 30, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

BASE/NEUTRAL COMPOUNDS - GC/MS ANALYSIS DATA (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	119000	12540	ND	ND	ND	0	-	ND	33333	110
2B	Acenaphthylene	691000	23100	ND	ND	ND	0	-	ND	33333	114
3B	Anthracene	384000	12540	ND	ND	ND	0	-	ND	33333	112
4B	Benzidine	ND	290400	ND	ND	ND	0	-	ND	33333	0
5B	Benzo(a)anthracene	443000	51480	ND	ND	ND	0	-	ND	33333	118
6B	Benzo(a)pyrene	358000	16500	ND	ND	ND	0	-	ND	33333	99
7B	Benzo(b)fluoroanthene	314000	31680	ND	ND	ND	0	-	ND	33333	107
8B	Benzo(ghi)perylene	ND	27060	ND	ND	ND	0	-	ND	0	-
9B	Benzo(k)fluoranthene	91400	16500	ND	ND	ND	0	-	ND	33333	77
10B	bis(2-Chloroethoxy)methane	ND	34980	ND	ND	ND	0	-	ND	33333	101
11B	bis(2-Chloroethyl) ether	ND	37620	ND	ND	ND	0	-	ND	33333	97
12B	bis(2-Chloroisopropyl)ether	ND	37620	ND	ND	ND	0	-	ND	33333	96
13B	bis(2-Ethylhexyl)phthalate	248000	66000	ND	ND	ND	0	-	ND	33333	98
14B	4-Bromophenyl phenyl ether	ND	12540	ND	ND	ND	0	-	ND	33333	108
15B	Butyl benzyl phthalate	ND	66000	ND	ND	ND	0	-	ND	33333	107
16B	2-Chloronaphthalene	ND	12540	ND	ND	ND	0	-	ND	33333	114
17B	4-Chlorophenyl phenyl ether	ND	27720	ND	ND	ND	0	-	ND	33333	109
18B	Chrysene	219000	16500	ND	ND	ND	0	-	ND	33333	92
19B	Dibenzo(a,h)anthracene	ND	16500	ND	ND	ND	0	-	ND	0	-
20B	1,2-Dichlorobenzene	ND	12540	ND	ND	ND	0	-	ND	33333	91
21B	1,3-Dichlorobenzene	22600	12540	ND	ND	ND	0	-	ND	33333	89
22B	1,4-Dichlorobenzene	ND	29040	ND	ND	ND	0	-	ND	33333	87
23B	3,3'-Dichlorobenzidine	ND	108900	ND	ND	ND	0	-	ND	33333	0
24B	Diethyl phthalate	ND	66000	ND	ND	ND	0	-	ND	33333	113
25B	Dimethyl phthalate	ND	66000	ND	ND	ND	0	-	ND	33333	110
26B	Di-n-butyl phthalate	ND	66000	ND	ND	ND	0	-	ND	33333	114
27B	2,4-Dinitrotoluene	ND	37620	ND	ND	ND	0	-	ND	33333	111
28B	2,6-Dinitrotoluene	ND	12540	ND	ND	ND	0	-	ND	33333	109
29B	Di-n-octyl phthalate	ND	66000	ND	ND	ND	0	-	ND	33333	105
30B	1,2-Diphenylhydrazine	ND	66000	ND	ND	ND	0	-	ND	33333	114
31B	Fluoranthene	601000	14520	ND	ND	ND	0	-	ND	33333	128
32B	Fluorene	365000	12540	ND	ND	ND	0	-	ND	33333	113

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 30, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

BASE/NEUTRAL COMPOUNDS - GC/MS ANALYSIS DATA (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SS0IL3	850501	1025	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg[A]	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov [B]	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	ND	12540	ND	ND	ND	0	-	ND	33333	80
34B	Hexachlorobutadiene	ND	5940	ND	ND	ND	0	-	ND	33333	96
35B	Hexachlorocyclopentadiene	ND	10.0	ND	ND	ND	0	-	ND	0	-
36B	Hexachloroethane	ND	10560	ND	ND	ND	0	-	ND	33333	93
37B	Indeno(1,2,3-c,d)pyrene	124000	24420	ND	ND	ND	0	-	ND	0	-
38B	Isophorone	ND	14520	ND	ND	ND	0	-	ND	33333	102
39B	Naphthalene	1446000	10560	ND	ND	ND	0	-	ND	33333	105
40B	Nitrobenzene	ND	12540	ND	ND	ND	0	-	ND	33333	92
41B	N-Nitrosodimethylamine	ND	66000	ND	ND	ND	0	-	ND	0	-
42B	N-Nitrosodi-n-propylamine	ND	66000	ND	ND	ND	0	-	ND	33333	100
43B	N-Nitrosodiphenylamine	ND	12540	ND	ND	ND	0	-	ND	33333	116
44B	Phenanthrene	1487000	35640	ND	ND	ND	0	-	ND	33333	115
45B	Pyrene	1130000	12540	ND	ND	ND	0	-	ND	33333	131
46B	1,2,4-Trichlorobenzene	69564	12540	ND	ND	ND	0	-	ND	33333	99

A ETC established Method Detection Limit for this particular sample.

B Reagent Blank. Spiked Blank cannot be performed for this sample matrix.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 21, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide Compounds - GC Analysis Data (QR32)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg[A]	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov [B]	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1P	Aldrin	ND	45000	ND	ND	ND	0	-	ND	460	93
2P	Alpha-BHC	ND	45000	150	ND	ND	0	-	ND	460	84
3P	Beta-BHC	ND	45000	ND	ND	ND	0	-	ND	460	84
4P	Gamma-BHC	ND	45000	ND	ND	ND	0	-	ND	460	84
5P	Delta-BHC	ND	45000	ND	ND	ND	0	-	ND	460	100
6P	Chlordane	ND	450000	ND	ND	ND	0	-	ND	5000	81
7P	4,4'-DDT	ND	45000	ND	ND	ND	0	-	ND	460	190[C]
8P	4,4'-DDE	ND	45000	ND	ND	ND	0	-	ND	460	110
9P	4,4'-DDD	ND	45000	2400	ND	ND	0	-	ND	460	130
10P	Dieldrin	ND	45000	ND	ND	ND	0	-	ND	460	110
11P	Endosulfan I	ND	45000	ND	ND	ND	0	-	ND	460	100
12P	Endosulfan II	ND	45000	ND	ND	ND	0	-	ND	460	110
13P	Endosulfan sulfate	ND	45000	ND	180	ND	0	-	ND	460	110
14P	Endrin	ND	45000	ND	ND	ND	0	-	ND	460	140
15P	Endrin aldehyde	ND	45000	600	ND	ND	0	-	ND	460	73
16P	Heptachlor	ND	45000	ND	ND	ND	0	-	ND	460	83
17P	Heptachlor epoxide	ND	45000	ND	ND	ND	0	-	ND	460	100
25P	Toxaphene	ND	450000	ND	ND	ND	0	-	ND	5000	-[D]

A ETC established Method Detection Limit for this particular sample.

B Reagent Blank. Spiked Blank cannot be performed for this sample matrix.

C Recovery variable due to sample matrix interference.

D Due to dilution of matrix spike toxaphene recovery could not be calculated.

006

ETC ENVIRONMENTAL TESTING and CERTIFICATION

JUN 6, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Metals, Cyanide and Phenols - Analysis Data (QR05)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

NPDES Number	Compound		Results Sample Concen.	Results MDL
1M	Antimony	ug/kg	20000	9000
2M	Arsenic	mg/kg	19	1
3M	Beryllium	ug/kg	500	50
4M	Cadmium	ug/kg	19000	300
5M	Chromium	mg/kg	430	2
6M	Copper	mg/kg	1600	.8
7M	Lead	mg/kg	17000	5
8M	Mercury	mg/kg	.6	.1
9M	Nickel	ug/kg	187000	1000
10M	Selenium	mg/kg	3.5	1
11M	Silver	ug/kg	92500	500
12M	Thallium	mg/kg	ND	1
13M	Zinc	mg/kg	3600	.6
14M	Cyanide, Total	ug/kg	1500	500
15M	Phenolics, Total	ug/kg	3100	100

007

ETC ENVIRONMENTAL TESTING and CERTIFICATION

June 6, 1985

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds – GC/MS Analysis Data – Volatile Fraction (QR06)

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Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SS0IL3	850501	1025	1

	Compound Name	Data: Scan Number	Data: Retention Time (Min)	Data: M.W.	Identifiers: CAS Number	Identifiers: Empirical Formula	Estimated Concen. ug/kg		
1	Ethane, 1,1,2-Trichloro-1,2,2-trifluoro	278	11.6	186	76131	$C_2Cl_3F_3$	340		
2	Cyclohexane	331	13.6	84	110827	C_6H_{12}	840		
3	Unknown	352	14.5	-	-	-	1100		
4	Cyclohexane, methyl	479	19.4	98	108872	C_7H_{14}	5900		
5	Pentane, 2,3-dimethyl	501	20.2	100	565593	C_7H_{16}	800		
6	Unknown	509	20.6	-	-	-	560		
7	Unknown	532	21.5	-	-	-	3600		
8	Unknown	562	22.6	-	-	-	4400		
9	Unknown	600	24.1	-	-	-	1900		
10	Unknown	627	25.2	-	-	-	1200		
11	Unknown	642	25.7	-	-	-	2100		
12	Unknown	694	27.8	-	-	-	2800		
13	Benzene, dimethyl	731	29.2	106	-	C_8H_{10}	22000		
14	Benzene, dimethyl	749	29.9	106	-	C_8H_{10}	13000		
15	Benzene, 1-ethyl-4-methyl	844	33.6	120	-	C_9H_{12}	4000		

ETC ENVIRONMENTAL TESTING and CERTIFICATION

May 31, 1985

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/Acid Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula	Estimated Concen. ug/kg		
1 1-methyl, Naphthalene	439	10.35	142	90120	$C_{11}H_{10}$	1910000		
2 2-methyl, Naphthalene	456	10.65	142	91576	$C_{11}H_{10}$	964000		
3 Alkane	536	12.08	-	-	C_nH_{2n+2}	1140000		
4 1,4-Dimethyl, Naphthalene	558	12.47	156	571584	$C_{12}H_{12}$	911000		
5 Alkane	626	13.68	-	-	C_nH_{2n+2}	1240000		
6 Alkane	712	15.22	-	-	C_nH_{2n+2}	1030000		
7 Alkane	793	16.67	-	-	C_nH_{2n+2}	1560000		
8 Alkane	798	16.76	-	-	C_nH_{2n+2}	990000		
9 Alkane	1012	20.59	-	-	C_nH_{2n+2}	904000		

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 19, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Aroclors - GC Analysis Data (QR14)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. mg/kg	MDL mg/kg[A]	First mg/kg	Second mg/kg	Blank Data mg/kg	Concen. Added mg/kg	% Recov [B]	Unspiked Sample mg/kg	Concen Added mg/kg	% Recov
Aroclor 1242	ND	5.0	ND	ND	ND	0	-	ND	0	-
Aroclor 1254	ND	5.0	ND	ND	ND	0	-	ND	0	-
Aroclor 1260	30 [C]	5.0	4.5	3.6	ND	0	-	ND	9.0	93
Aroclor 1248	ND	5.0	ND	ND	ND	0	-	ND	0	-
Aroclor 1232	ND	5.0	ND	ND	ND	0	-	ND	0	-
Aroclor 1221	ND	5.0	ND	ND	ND	0	-	ND	0	-
Aroclor 1016	ND	5.0	ND	ND	ND	0	-	ND	0	-

A MDL calculated for each sample matrix.

B Reagent Blank. Spiked Blank cannot be performed for this sample matrix.

C Confirmed on second column.

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May 30, 1985

TABLE 2: METHOD PERFORMANCE DATA

Surrogate Recovery Water- GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

H5673

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Compound	Amount Added ug	% Recovery	Control Limits *	
			Lower	Upper
VOLATILE FRACTION				
Toluene-D8	.250	106	50	160
Bromofluorobenzene	.250	114	50	160
1,2-Dichloroethane-D4	.250	90	50	160
ACID FRACTION				
Phenol-D5	100	94	20	140
2-Fluorophenol	100	76	20	140
2,4,6-Tribromophenol	100	24	10	140
BASE/NEUTRAL FRACTION				
Nitrobenzene-D5	50	0 **	20	140
2-Fluorobiphenyl	50	41	20	140
Terphenyl-D14	50	0 **	20	150

* IFB EPA Control Limits.
** See Comments

H5673

COMMENTS

Base/Neutrals: This sample was initially extracted at low level IFB Protocol . No extract could be achieved due to sample matrix. By reprepping at medium level protocol, the final volume of 1 ml. could not be achieved. In addition to achieving only a 10 ml. final volume. This sample was additionally diluted 1:2 . Due to these facts and the high levels of compounds present, surrogates had low and variable recoveries, and would most likely not improve upon re-extraction . Ms. Nancy Fox of NJDEP QA department was informed of these recoveries.

Methodology Summary
Based on October, 1984 version of ETC Standard Operating Procedures

NJDEP Contract 029

Aqueous Sample Preparation

Flame, ICP Sample Preparation	AA-001-1
Furnace Sample Preparation	AA-001-2
Mercury Sample Preparation	AA-001-3
Hexavalent Chromium Sample Preparation	AA-005-1

Non-Aqueous Extractions

Soil and Sediment Samples

Flame, ICP Sample Preparation	AA-002-1
Furnace Sample Preparation	AA-002-2
Mercury Sample Preparation	AA-002-3
Hexavalent Chromium Sample Preparation	AA-005-2

Sludge/Petroleum Based Samples

Flame, ICP Sample Preparation	AA-003-1 & 1A
Furnace Sample Preparation	AA-003-2 & 2A
Mercury Sample Preparation	AA-003-3
Hexavalent Chromium Sample Preparation	See AA-005-2

Flame AA or ICP

Aluminum	IM-1-001
Antimony	IM-1-002
Barium	IM-1-003
Beryllium	IM-1-004
Cadmium	IM-1-005
Chromium	IM-1-006
Cobalt	IM-1-007
Copper	IM-1-008
Iron	IM-1-009
Lead	IM-1-010
Manganese	IM-1-011
Molybdenum	IM-1-012
Nickel	IM-1-013
Potassium	IM-1-014
Silver	IM-1-015
Sodium	IM-1-016
Tin	IM-1-017
Vanadium	IM-1-018
Zinc	IM-1-019
Flame Operating Parameters	Table 1
ICP Operating Parameters	Table 2
ICP Interferents	Table 3

Furnace AA

Arsenic	IM-2-001
Selenium	IM-2-002
Thallium	IM-2-003
Furnace Operating Parameters	Table 1

Aqueous Methodologies

Organochlorine Pesticides and PCB's by Gas Chromatography	GC-1-001
Herbicides by Gas Chromatography	GC-1-002
Purgeable Organics by GC/MS	GC/MS-1-001
Base/Neutral, Acids and Pesticides by GC/MS	GC/MS-1-002
2,3,7,8-TCDD by GC/MS	GC/MS-1-003

Non-Aqueous Methodologies

Gas Chromatography/Mass Spectrometry for:

Purgeable Organics	GC/MS-2-001
Base/Neutral and Acid Extractables	GC/MS-2-002

Includes:
- Benzidines
- Chlorinated Hydrocarbons
- Haloethers
- Nitroaromatic and Cyclic Ketones
- Organochlorine Pesticides
- Polychlorinated Biphenyls
- Phthalate Esters
- Polynuclear Aromatic Hydrocarbons
- Nitrosamines
- Phenols

2,3,7,8-TCDD Screen	GC/MS-2-003
2,3,7,8-TCDD	GC/MS-2-004
PCB's	GC/MS-2-005

Non-Aqueous

pH measurement	C-2-001
Reactivity	C-2-002
Corrosivity	C-2-003
Ignitability	C-2-004
EP Toxicity Extraction	C-2-005

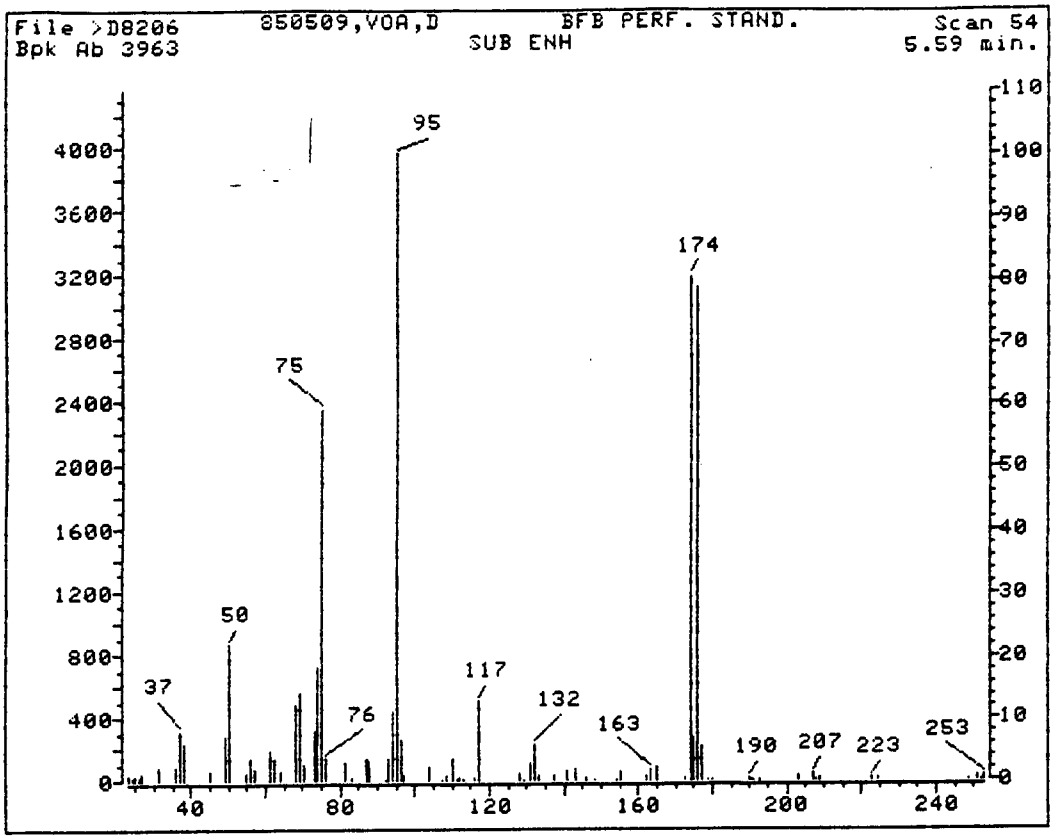


TABLE 2: METHOD PERFORMANCE DATA (QR21)

GC/MS Tuning Data - Bromofluorobenzene (BFB) for Volatiles Analysis

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	21.86	21.86	Ok
75	30-60% of mass 95	59.14	59.14	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.55	6.55	Ok
173	Less then 1% of mass 95	.46	.46	Ok
174	Greater then 50% of mass 95	80.65	80.65	Ok
175	5-9% of mass 174	6.72	8.34	Ok
176	95-101% of mass 174	78.90	97.83	Ok
177	5-9% of mass 176	5.43	6.88	Ok

Injection Date: 05/09/85 Analyst: [illegible]
Injection Time: 01:20 Processor: Pearl Trask
Run No: >D8206 QC Batch: QV 3241
Spectrun No: 54 Samples: H5671 - H5678 6

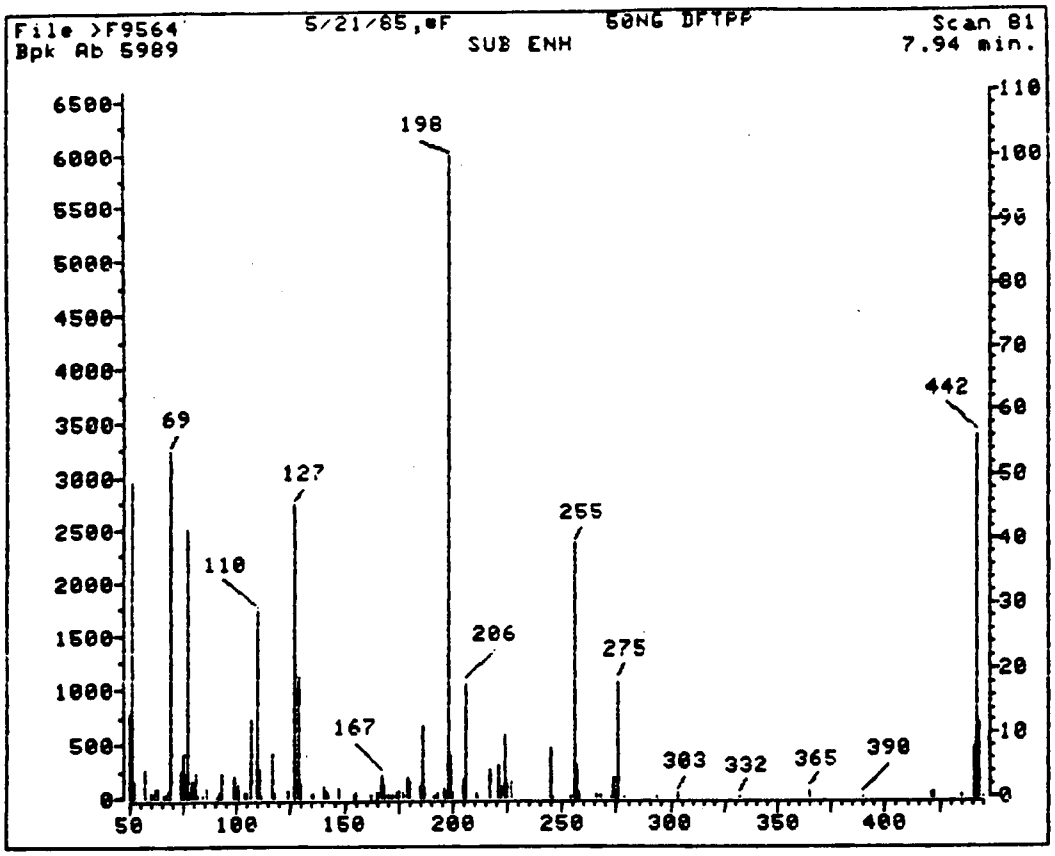


TABLE 2: METHOD PERFORMANCE DATA (QR22)

GC/MS Tuning Data - Decafluorotriphenylphospine (DFTPP) for Acids Analysis

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	49.30	49.30	Ok
68	Less then 2% of mass 69	1.02	1.89	Ok
69	(reference only)	54.03	54.03	Ok
70	Less then 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	45.57	45.57	Ok
197	Less then 1% of mass 198	.86	.86	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.37	6.37	Ok
275	10-30% of mass 198	18.03	18.03	Ok
365	Greater then 1% of mass 198	1.16	1.16	Ok
441	Less then mass 443	7.91	69.71	Ok
442	Greater then 40% of mass 198	56.11	56.11	Ok
443	17-23% of mass 442	11.35	20.23	Ok

Injection Date: 05/22/85 Analyst: [illegible]
Injection Time: 06:47 Processor: [illegible]
Run No: >F9564 QC Batch: QA 302
Spectrun No: 81 Samples: H5672, H5673, H4515

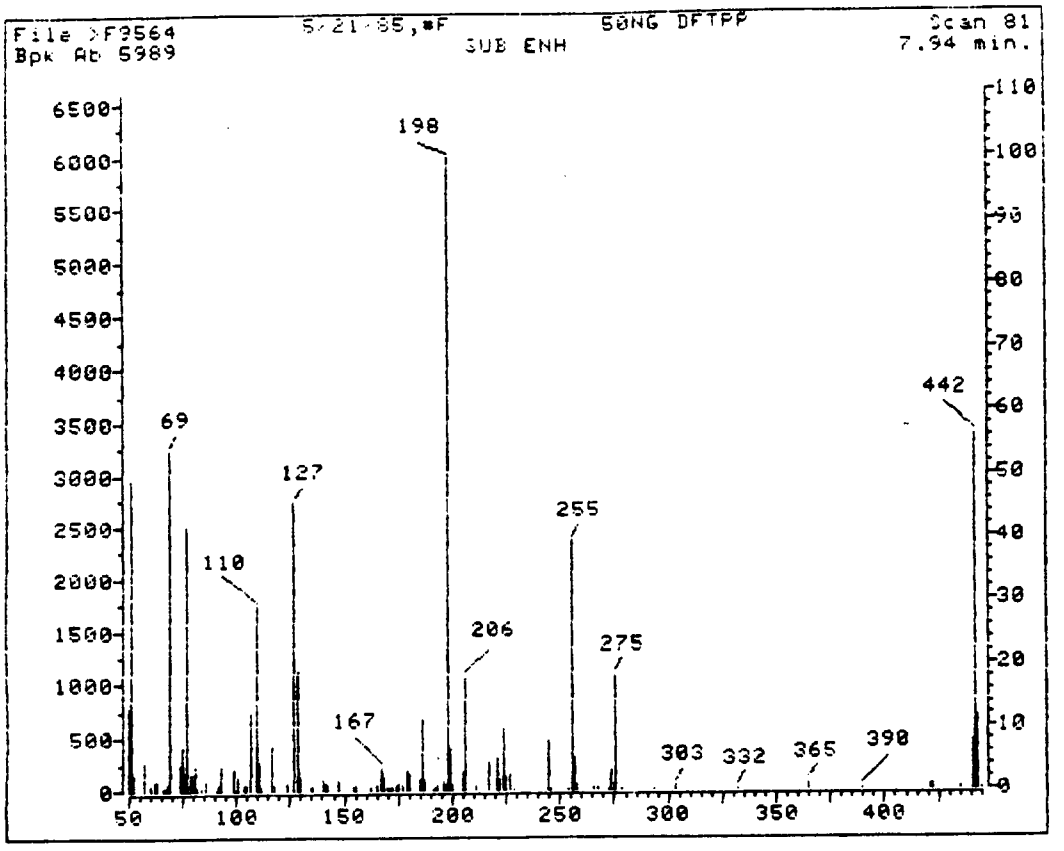


TABLE 2: METHOD PERFORMANCE DATA (QR22)

GC/MS Tuning Data - Decafluorotriphenylphospine (DFTPP) for ~~Acids Analysis~~ Base/Neutral

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	49.30	49.30	Ok
68	Less then 2% of mass 69	1.02	1.89	Ok
69	(reference only)	54.03	54.03	Ok
70	Less then 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	45.57	45.57	Ok
197	Less then 1% of mass 198	.86	.86	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.37	6.37	Ok
275	10-30% of mass 198	18.03	18.03	Ok
365	Greater then 1% of mass 198	1.16	1.16	Ok
441	Less then mass 443	7.91	69.71	Ok
442	Greater then 40% of mass 198	56.11	56.11	Ok
443	17-23% of mass 442	11.35	20.23	Ok

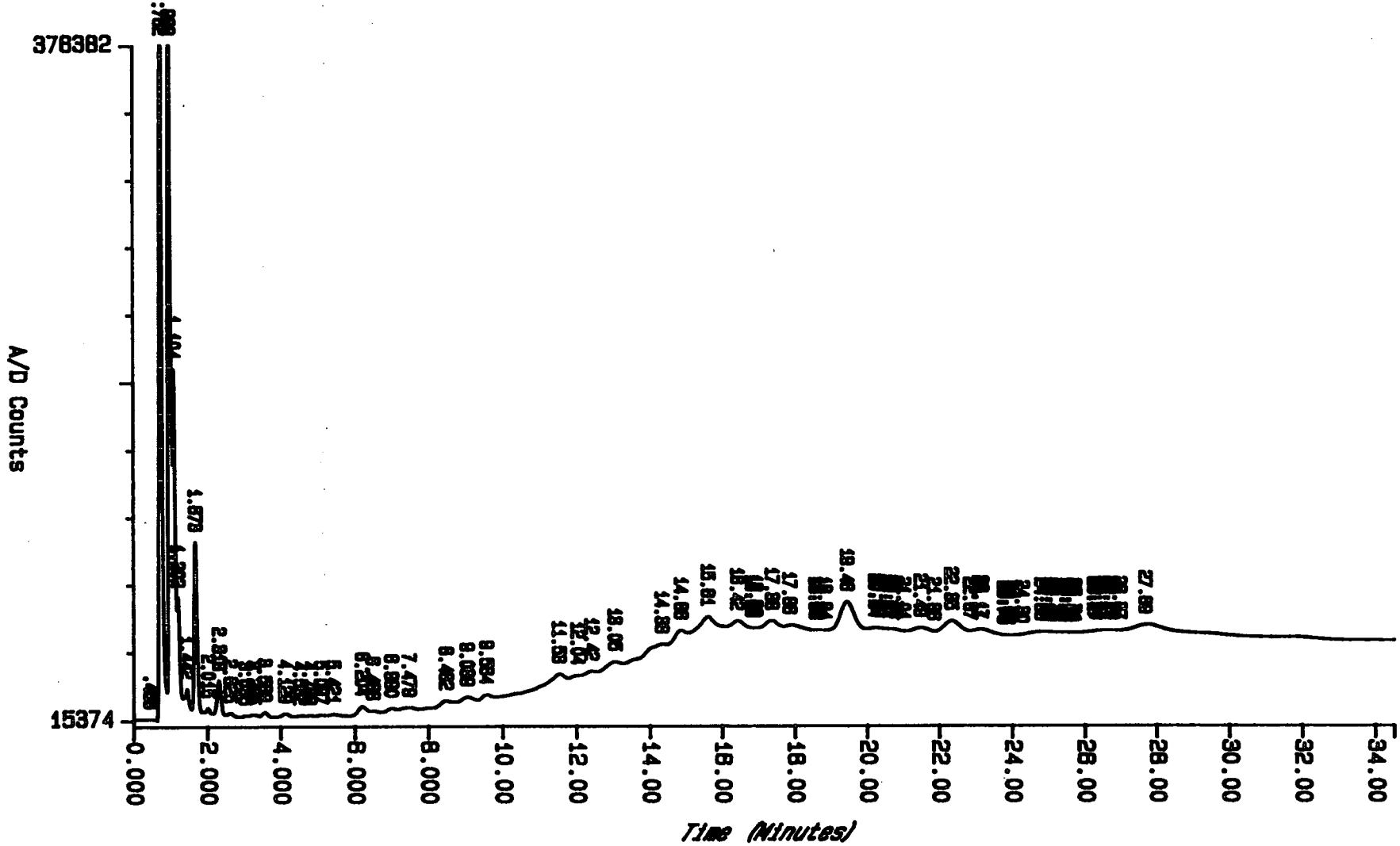
Injection Date: 05/22/85 Analyst: [signature]
Injection Time: 06:47 Processor: [signature]
Run No: >F9564 QC Batch: QB 3025
Spectrun No: 81 Samples: H5672, H5673, ~~H4515~~ H4515

Appendix A1

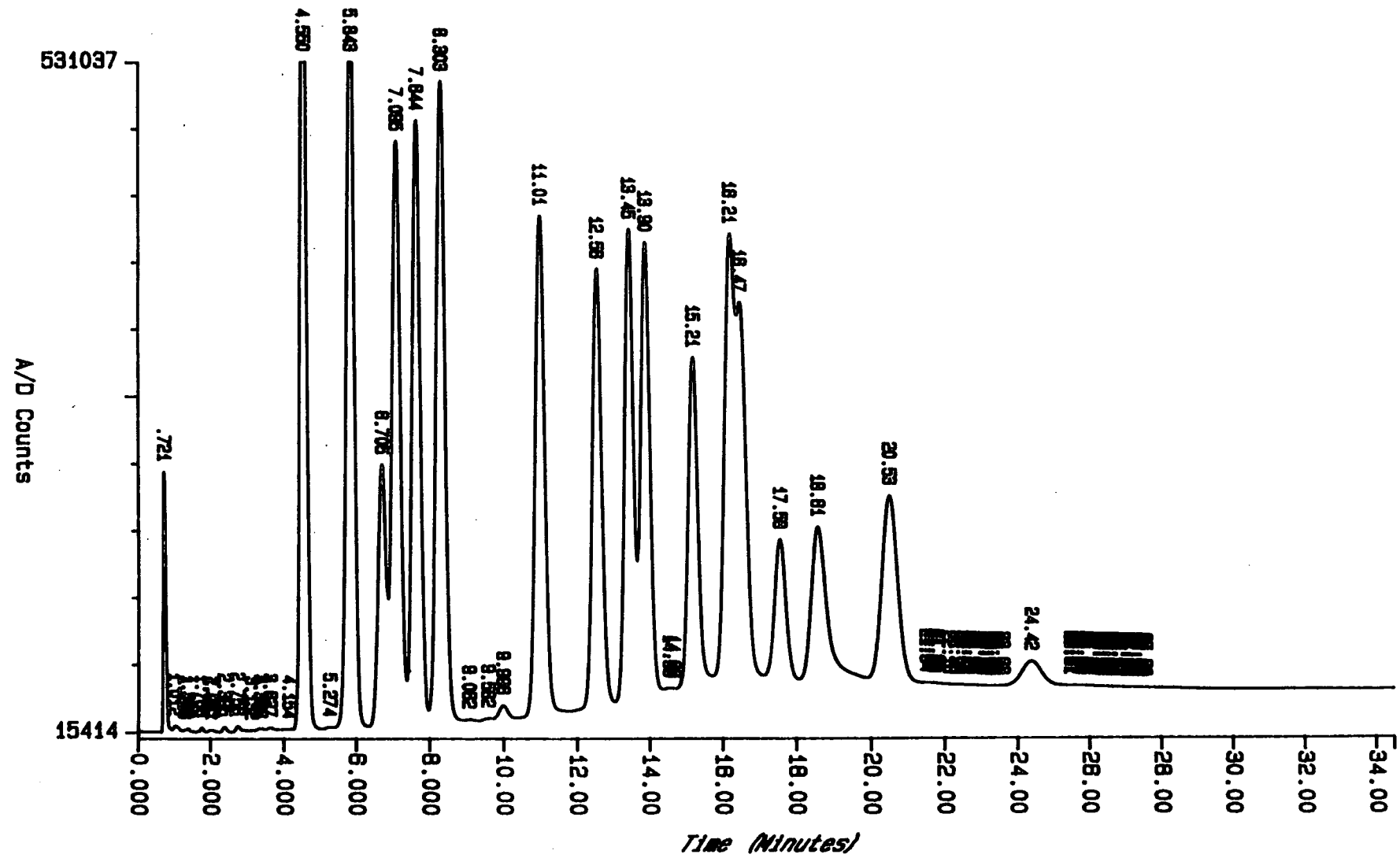
Gas Chromatographic Spectral Data for Quantitated Compounds

1) A reconstructed gas chromatogram for each sample analyzed by a GC instrument.

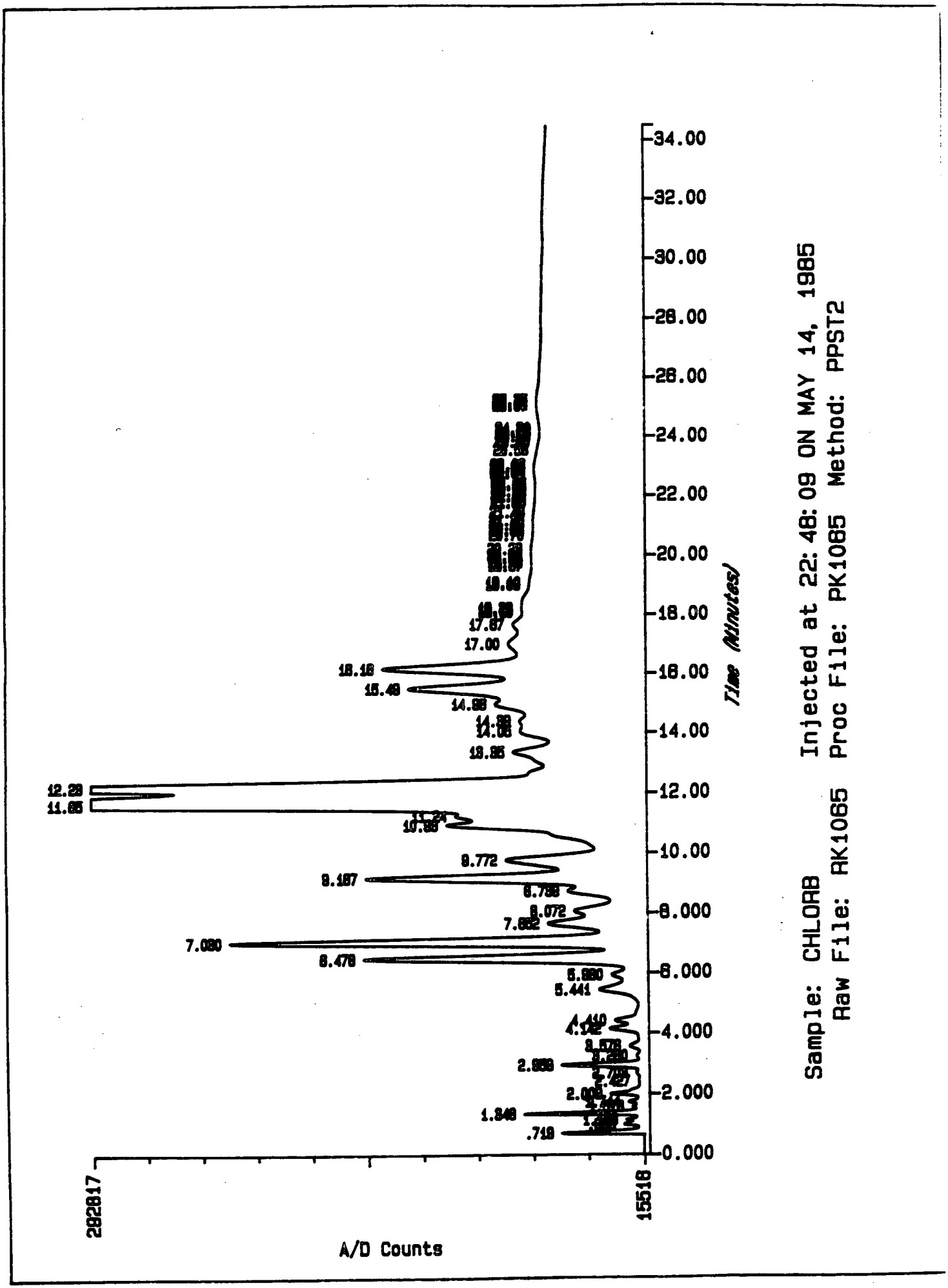
2) A reconstructed gas chromatogram for the appropriate standard compounds analyzed with the same GC under the same operating conditions.

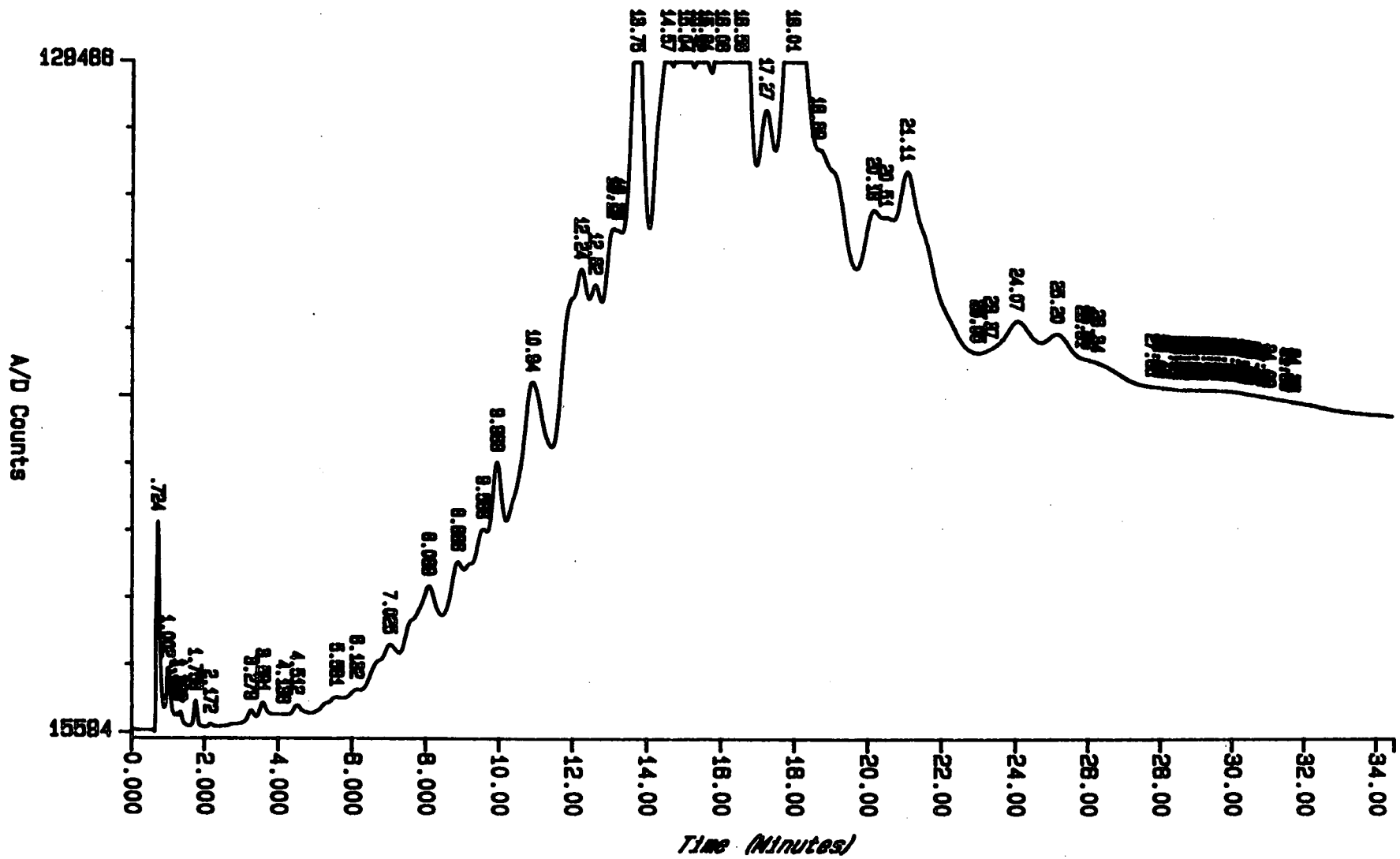


Sample: H5673 Injected at 12:28:09 ON MAY 15, 1985
Raw File: RK1085 Proc File: PK1085 Method: PPST2

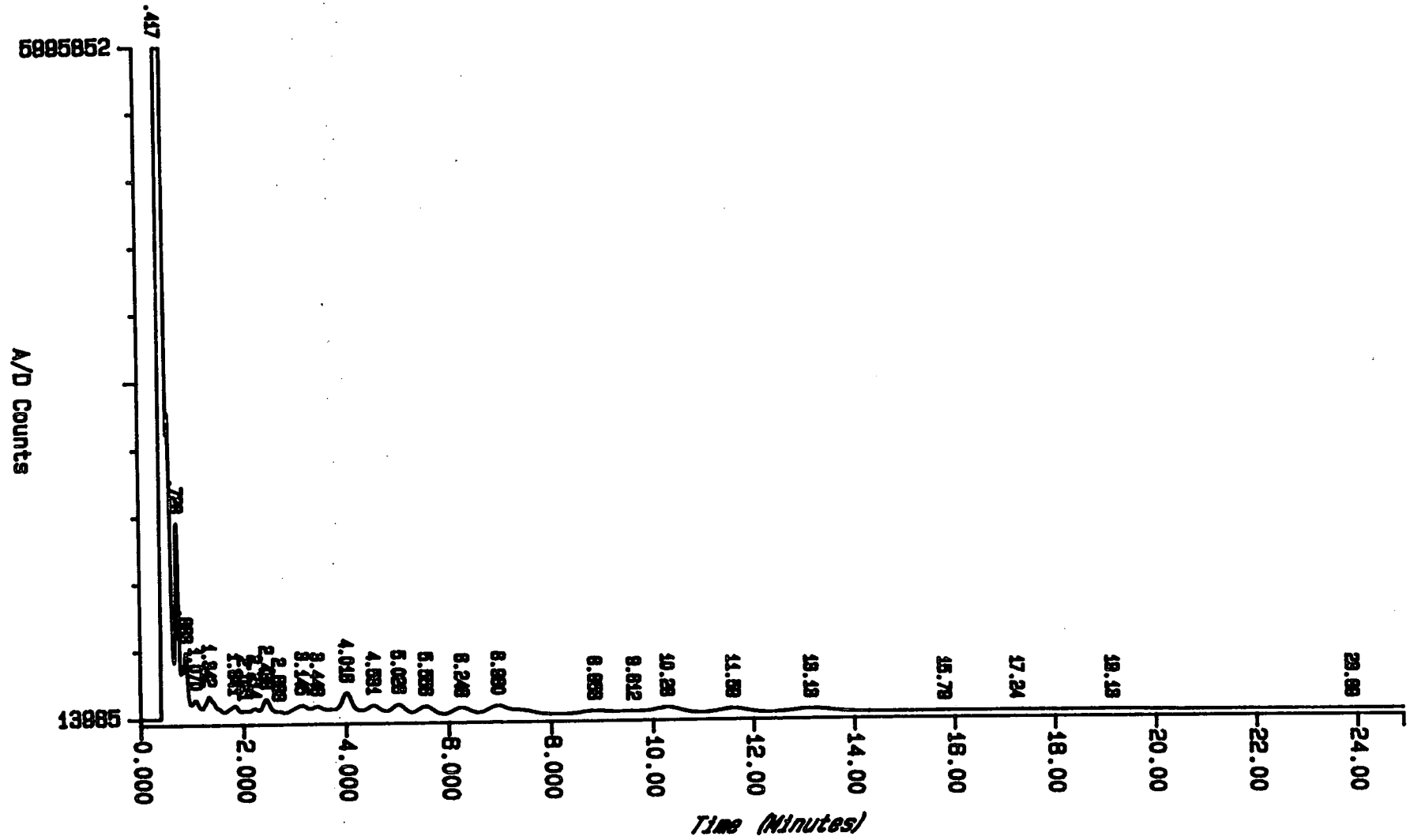


Sample: PPSTB Injected at 18:04:17 ON MAY 14, 1985
Raw File: RK1058 Proc File: PK1058 Method: PPST2


Sample: CHLORB
Raw File: RK1085
Injected at 22:48:09 ON MAY 14, 1985
Proc File: PK1085 Method: PPST2
Time (Minutes)
A/D Counts
282817
15518
34.00
32.00
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.000
6.000
4.000
2.000
0.000
17.67
17.00
16.16
15.49
14.99
13.95
12.29
11.85
10.99
9.772
9.187
8.788
8.072
7.862
7.080
6.478
5.441
2.869
1.848
.719

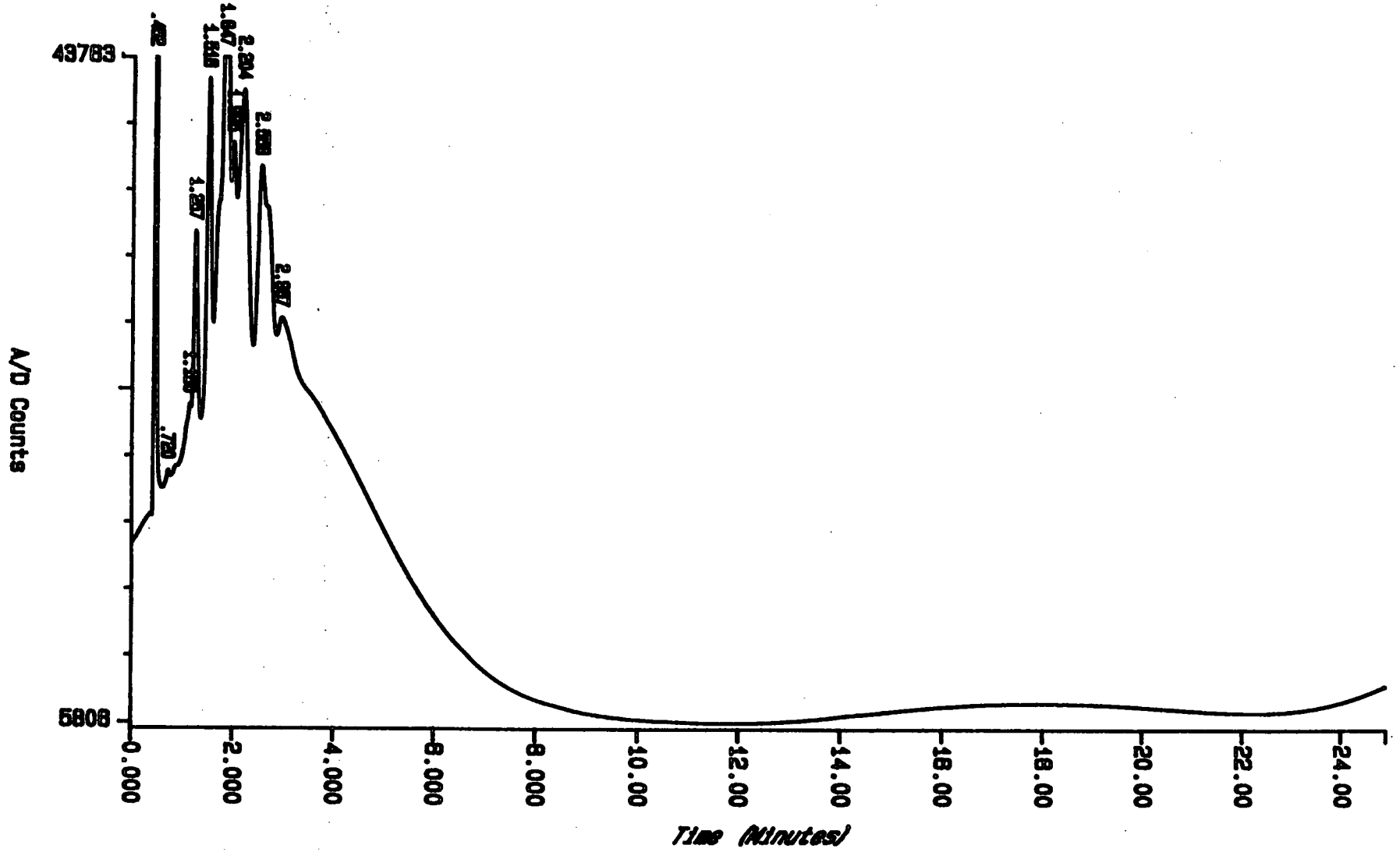


Sample: TOXB Injected at 22:07:30 ON MAY 14, 1985
Raw File: RK1064 Proc File: PK1064 Method: PPST2

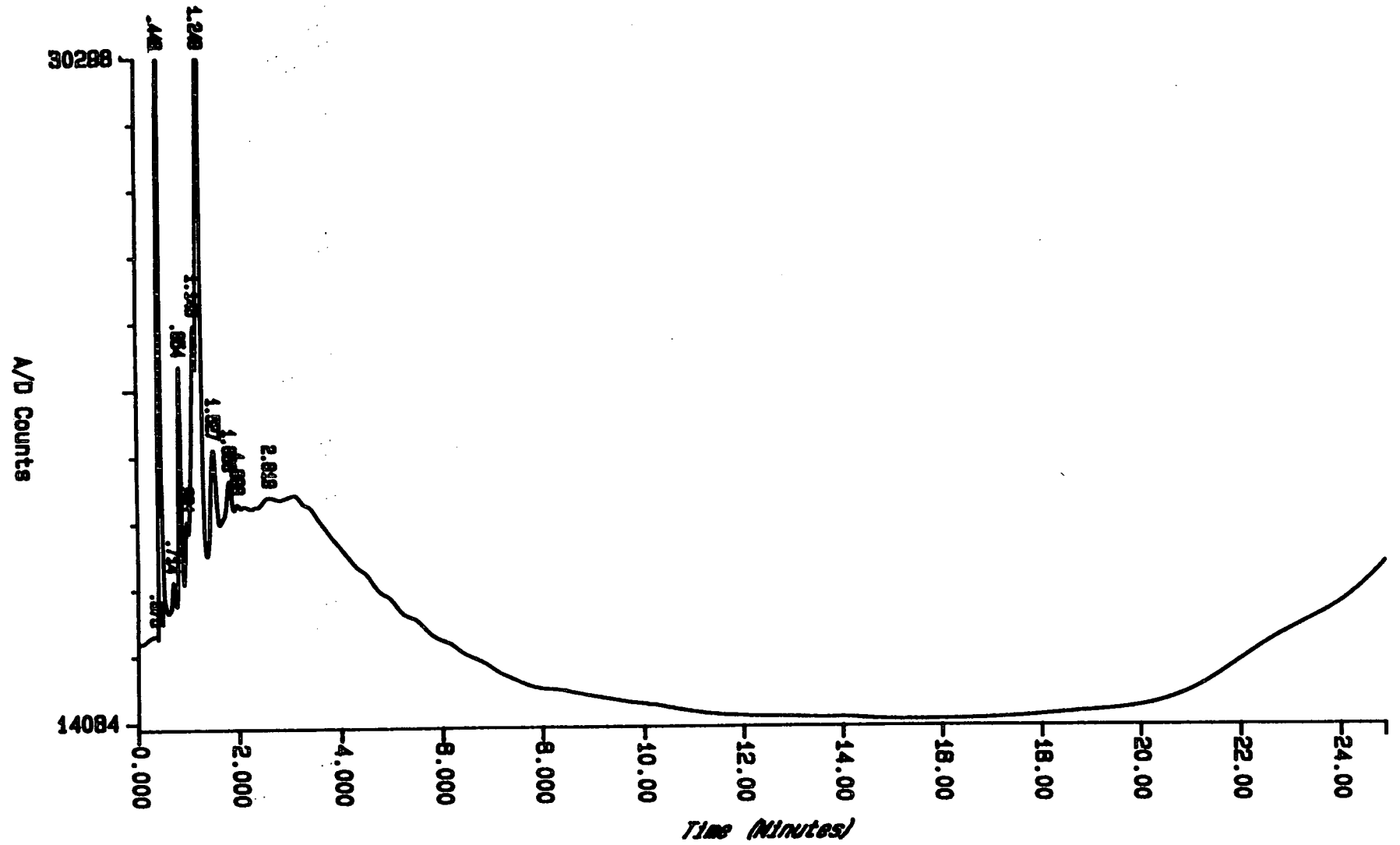


Sample: H5673 Injected at 22:23:45 ON MAY 7, 1985
Raw File: H5673H Proc File: H5673G Method: PCBB8

023

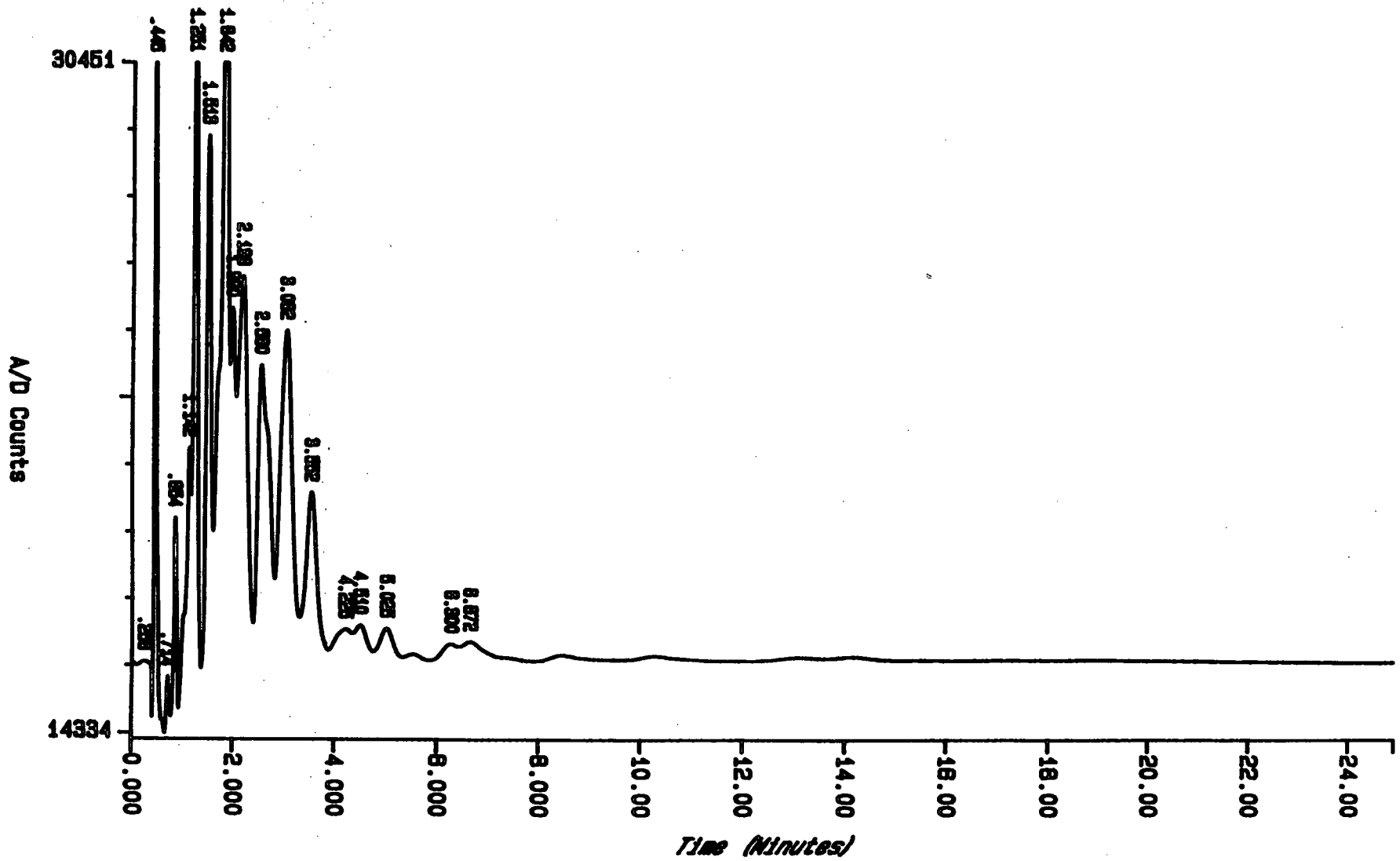


Sample: AR1016-1.0 Injected at 23:46:30 ON MAY 7, 1985
Raw File: RJ0484 Proc File: PJ0484 Method: PCBB8

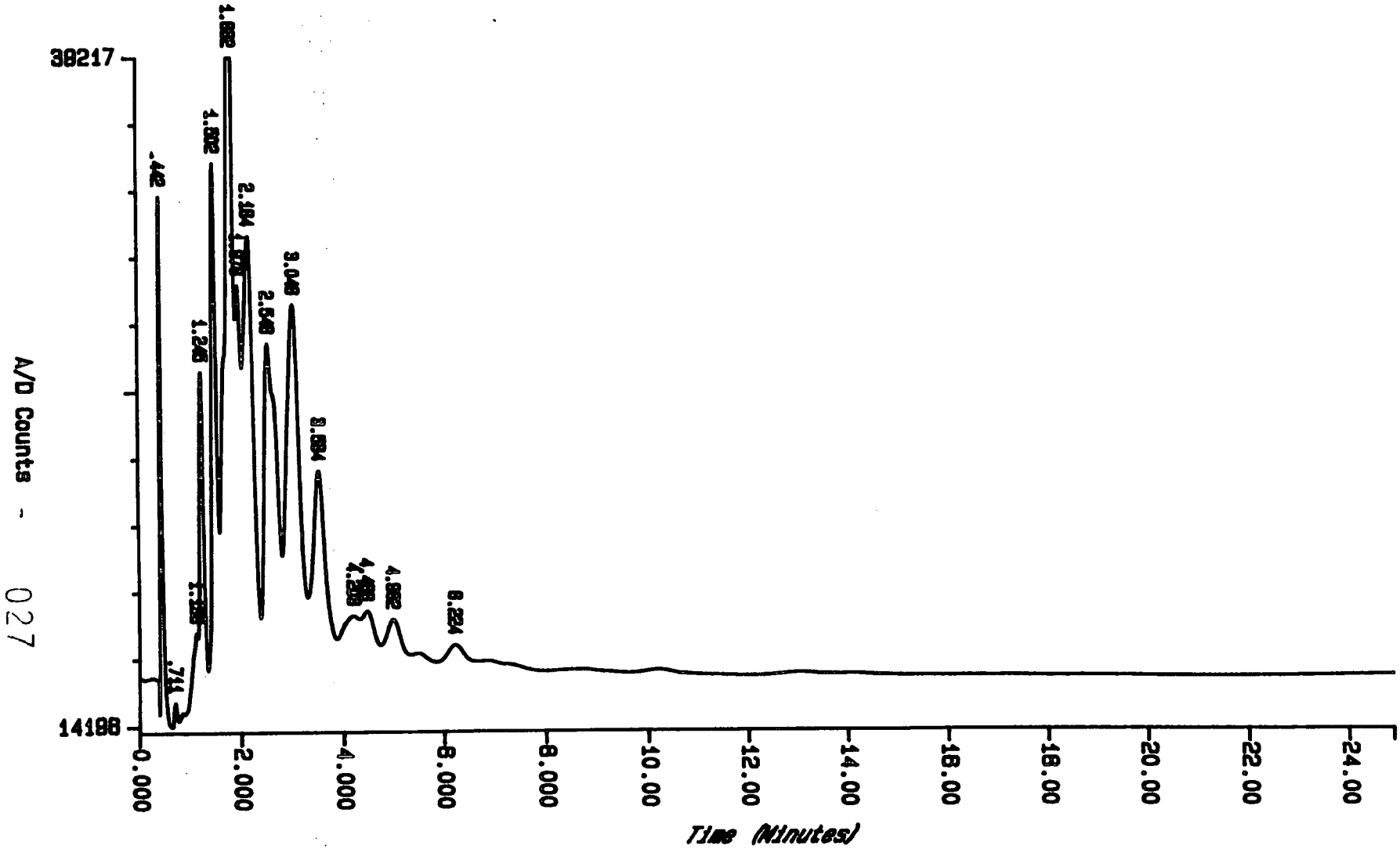


Sample: AR1221-1.0 Injected at 23:18:53 ON MAY 7, 1985
Raw File: RJ0483 Proc File: PJ0483 Method: PCBB8

025

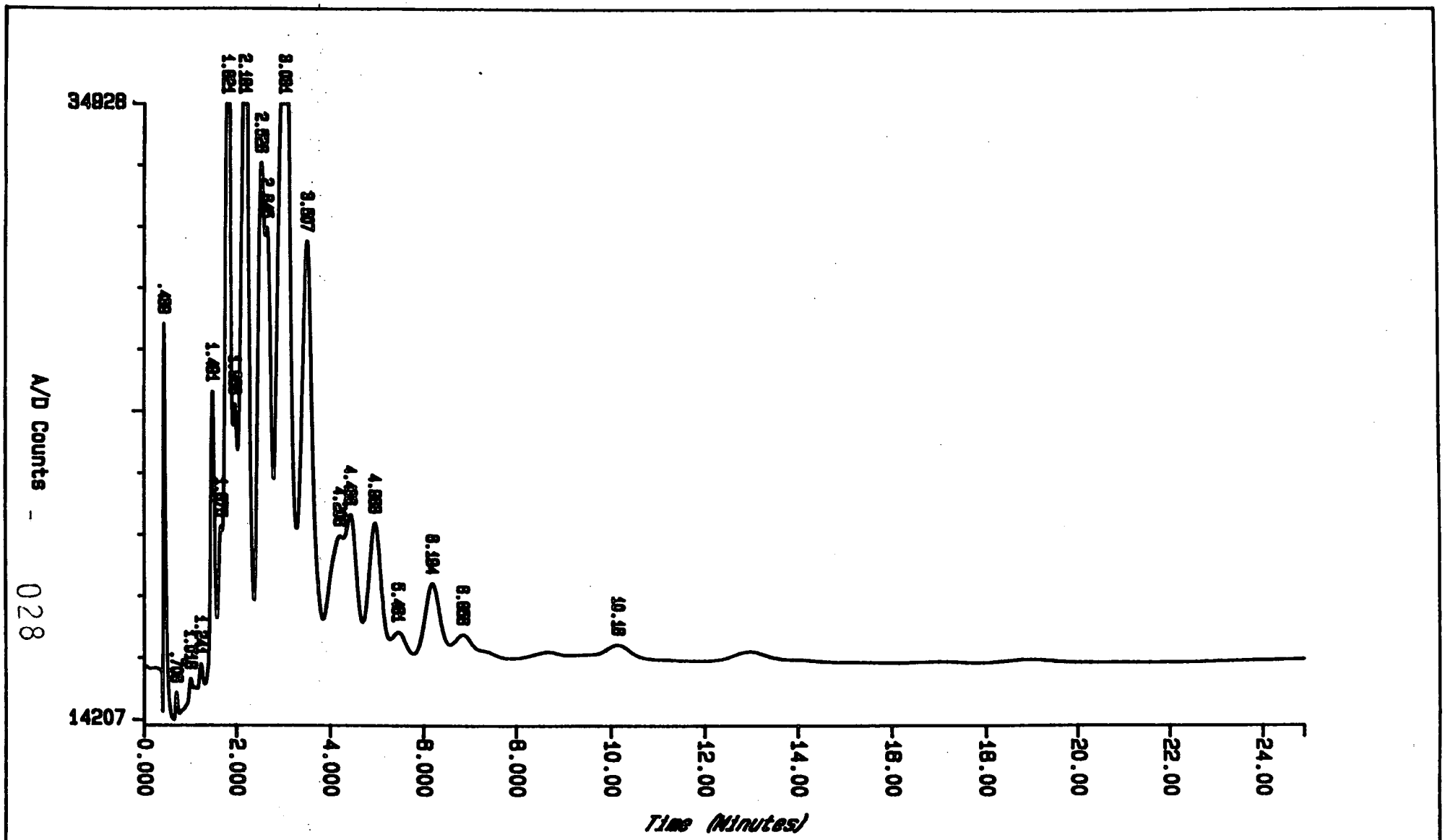


Sample: AR1232-1.0 Injected at 21:01:19 ON MAY 7, 1985
Raw File: RJ0482 Proc File: PJ0482 Method: PCBB8



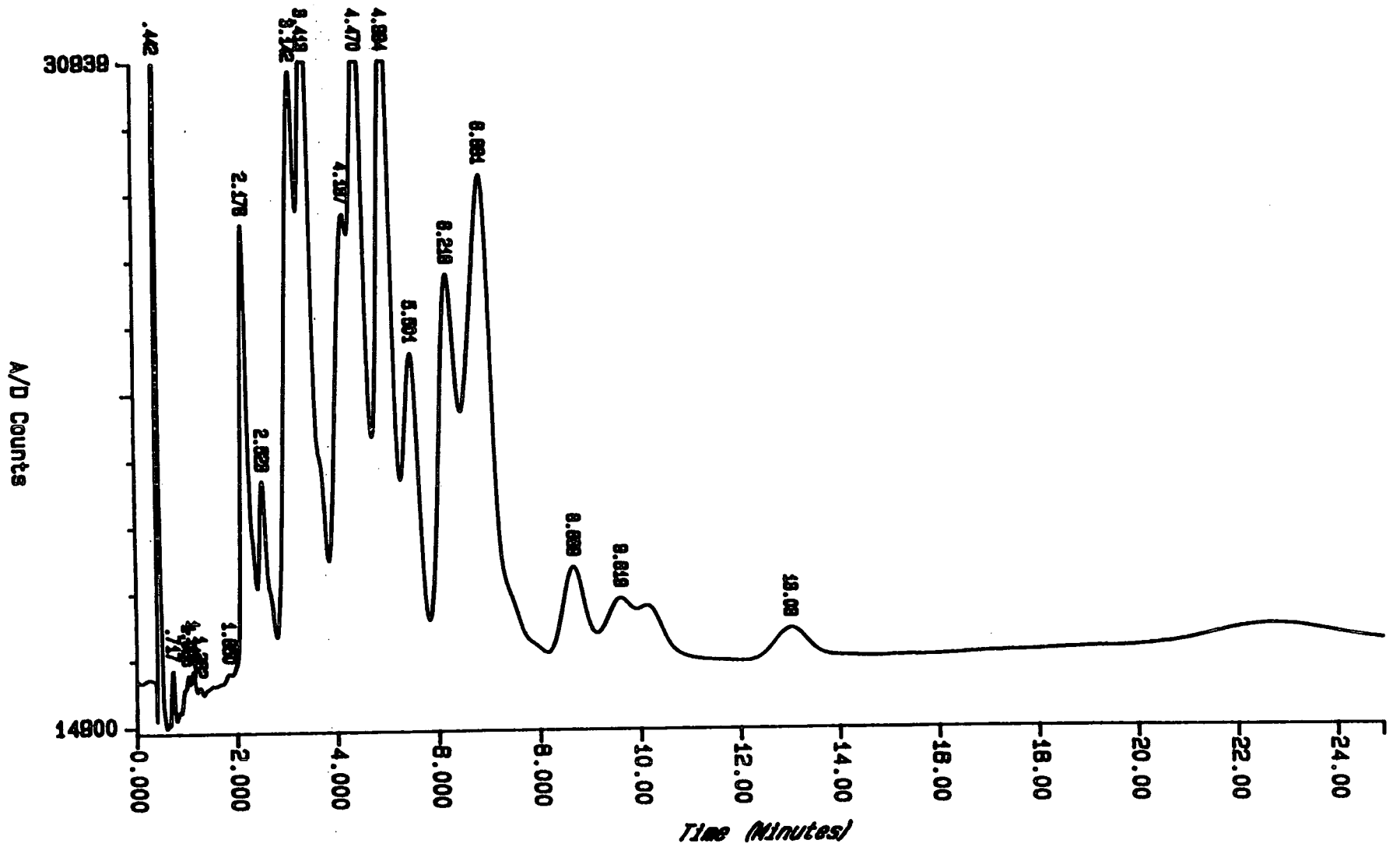
Sample: AR1242-1.0 Injected at 20:33:54 ON MAY 7, 1985
Raw File: RJ0481 Proc File: PJ0481 Method: PCBB8

027



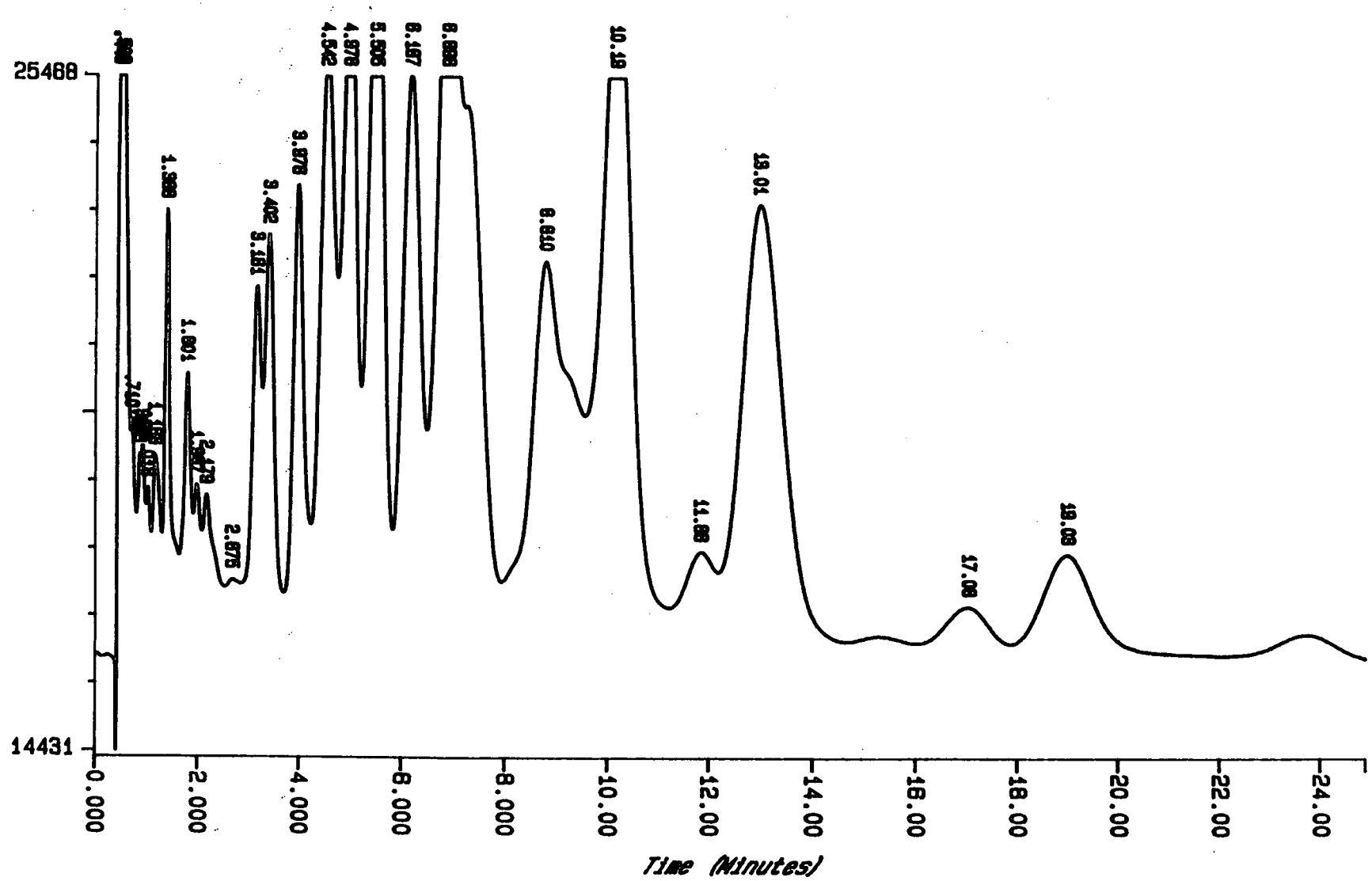
Sample: AR1248-1.0 Injected at 20:08:32 ON MAY 7, 1985
Raw File: RJ0480 Proc File: PJ0480 Method: PCBB8

028



Sample: AR1254-1.0 Injected at 19:39:13 ON MAY 7, 1985
Raw File: RJ0479 Proc File: PJ0479 Method: PCBB8

029



Sample: AR1260-1.0 Injected at 17:19:36 ON MAY 7, 1985
Raw File: RJ0476 Proc File: PJ0476 Method: PCBB8

Relative Percent Difference (RPD) for VOA

Job Number	Account Name	Facility	Source	Date	Time	
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

RPD Equation : RPD = (|(REP1 - REP2)| *2 / (REP1 + REP2)) * 100

Parameter	REP 1 ug/kg	REP 2 ug/kg	RPD
Acrolein	ND	ND	0
Acrylonitrile	ND	ND	0
Benzene	ND	ND	0
bis(Chloromethyl)ether	ND	ND	0
Bromoform	ND	ND	0
Carbon tetrachloride	ND	ND	0
Chlorobenzene	ND	ND	0
Chlorodibromomethane	ND	ND	0
Chloroethane	ND	ND	0
2-Chloroethylvinyl ether	ND	ND	0
Chloroform	ND	ND	0
Dichlorobromomethane	ND	ND	0
Dichlorodifluoromethane	ND	ND	0
1,1-Dichloroethane	ND	ND	0
1,2-Dichloroethane	ND	ND	0
1,1-Dichloroethylene	ND	ND	0
1,2-Dichloropropane	ND	ND	0
cis-1,3-Dichloropropylene	ND	ND	0
Ethylbenzene	ND	ND	0
Methyl bromide	ND	ND	0
Methyl chloride	ND	ND	0
Methylene chloride	24	1	184
1,1,2,2-Tetrachloroethane	ND	ND	0
Tetrachloroethylene	ND	ND	0
Toluene	ND	ND	0
1,2-Trans-dichloroethylene	ND	ND	0
1,1,1-Trichloroethane	ND	ND	0
1,1,2-Trichloroethane	ND	ND	0
Trichloroethylene	ND	ND	0
Trichlorofluoromethane	5	3	50
Vinyl chloride	ND	ND	0
meta-Xylene	ND	ND	0
ortho- and para-Xylenes	ND	ND	0
trans-1,3-Dichloropropylene	ND	ND	0

Relative Percent Difference (RPD) for ACID

Job Number	Account Name	Facility	Source	Date	Time	
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

RPD Equation : RPD = (|(REP1 - REP2)| *2 / (REP1 + REP2)) * 100

Parameter	REP 1 ug/kg	REP 2 ug/kg	RPD
2-Chlorophenol	ND	ND	0
2,4-Dichlorophenol	ND	ND	0
2,4-Dimethylphenol	ND	ND	0
4,6-Dinitro-o-cresol	ND	ND	0
2,4-Dinitrophenol	ND	ND	0
2-Nitrophenol	ND	ND	0
4-Nitrophenol	ND	ND	0
p-Chloro-m-cresol	ND	ND	0
Pentachlorophenol	ND	ND	0
Phenol	ND	ND	0
2,4,6-Trichlorophenol	ND	ND	0

Relative Percent Difference (RPD) for B/N

Job Number	Account Name	Facility	Source	Date	Time	
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

RPD Equation : RPD = (|(REP1 - REP2)| *2 / (REP1 + REP2)) * 100

Parameter	REP 1 ug/kg	REP 2 ug/kg	RPD
Acenaphthene	ND	ND	0
Acenaphthylene	ND	ND	0
Anthracene	ND	ND	0
Benzidine	ND	ND	0
Benzo(a)anthracene	ND	ND	0
Benzo(a)pyrene	ND	ND	0
Benzo(b)fluoroanthene	ND	ND	0
Benzo(ghi)perylene	ND	ND	0
Benzo(k)fluoranthene	ND	ND	0
bis(2-Chloroethoxy)methane	ND	ND	0
bis(2-Chloroethyl) ether	ND	ND	0
bis(2-Chloroisopropyl)ether	ND	ND	0
bis(2-Ethylhexyl)phthalate	ND	ND	0
4-Bromophenyl phenyl ether	ND	ND	0
Butyl benzyl phthalate	ND	ND	0
2-Chloronaphthalene	ND	ND	0
4-Chlorophenyl phenyl ether	ND	ND	0
Chrysene	ND	ND	0
Dibenzo(a,h)anthracene	ND	ND	0
1,2-Dichlorobenzene	ND	ND	0
1,3-Dichlorobenzene	ND	ND	0
1,4-Dichlorobenzene	ND	ND	0
3,3'-Dichlorobenzidine	ND	ND	0
Diethyl phthalate	ND	ND	0
Dimethyl phthalate	ND	ND	0
Di-n-butyl phthalate	ND	ND	0
2,4-Dinitrotoluene	ND	ND	0
2,6-Dinitrotoluene	ND	ND	0
Di-n-octyl phthalate	ND	ND	0
1,2-Diphenylhydrazine	ND	ND	0
Fluoranthene	ND	ND	0
Fluorene	ND	ND	0
Hexachlorobenzene	ND	ND	0
Hexachlorobutadiene	ND	ND	0
Hexachlorocyclopentadiene	ND	ND	0
Hexachloroethane	ND	ND	0
Indeno(1,2,3-c,d)pyrene	ND	ND	0
Isophorone	ND	ND	0
Naphthalene	ND	ND	0
Nitrobenzene	ND	ND	0
N-Nitrosodimethylamine	ND	ND	0
N-Nitrosodi-n-propylamine	ND	ND	0

N-Nitrosodiphenylamine	ND	ND	0
Phenanthrene	ND	ND	0
Pyrene	ND	ND	0
1,2,4-Trichlorobenzene	ND	ND	0

Relative Percent Difference (RPD) for PEST

Job Number	Account Name	Facility	Source	Date	Time	
H5673	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL3	850501	1025	1

RPD Equation : RPD = (|(REP1 - REP2)| *2 / (REP1 + REP2)) * 100

Parameter	REP 1	REP 2	RPD
Aldrin	ND	ND	0
Alpha-BHC	ND	ND	0
Beta-BHC	ND	ND	0
Gamma-BHC	ND	ND	0
Delta-BHC	ND	ND	0
Chlordane	ND	ND	0
4,4'-DDT	ND	ND	0
4,4'-DDE	ND	ND	0
4,4'-DDD	ND	ND	0
Dieldrin	ND	ND	0
Endosulfan I	ND	ND	0
Endosulfan II	ND	ND	0
Endosulfan sulfate	ND	ND	0
Endrin	ND	ND	0
Endrin aldehyde	ND	ND	0
Heptachlor	ND	ND	0
Heptachlor epoxide	ND	ND	0
PCB-1242	ND	ND	0
PCB-1254	ND	ND	0
PCB-1221	ND	ND	0
PCB-1232	ND	ND	0
PCB-1248	ND	ND	0
PCB-1260	ND	ND	0
PCB-1016	ND	ND	0
Toxaphene	ND	ND	0

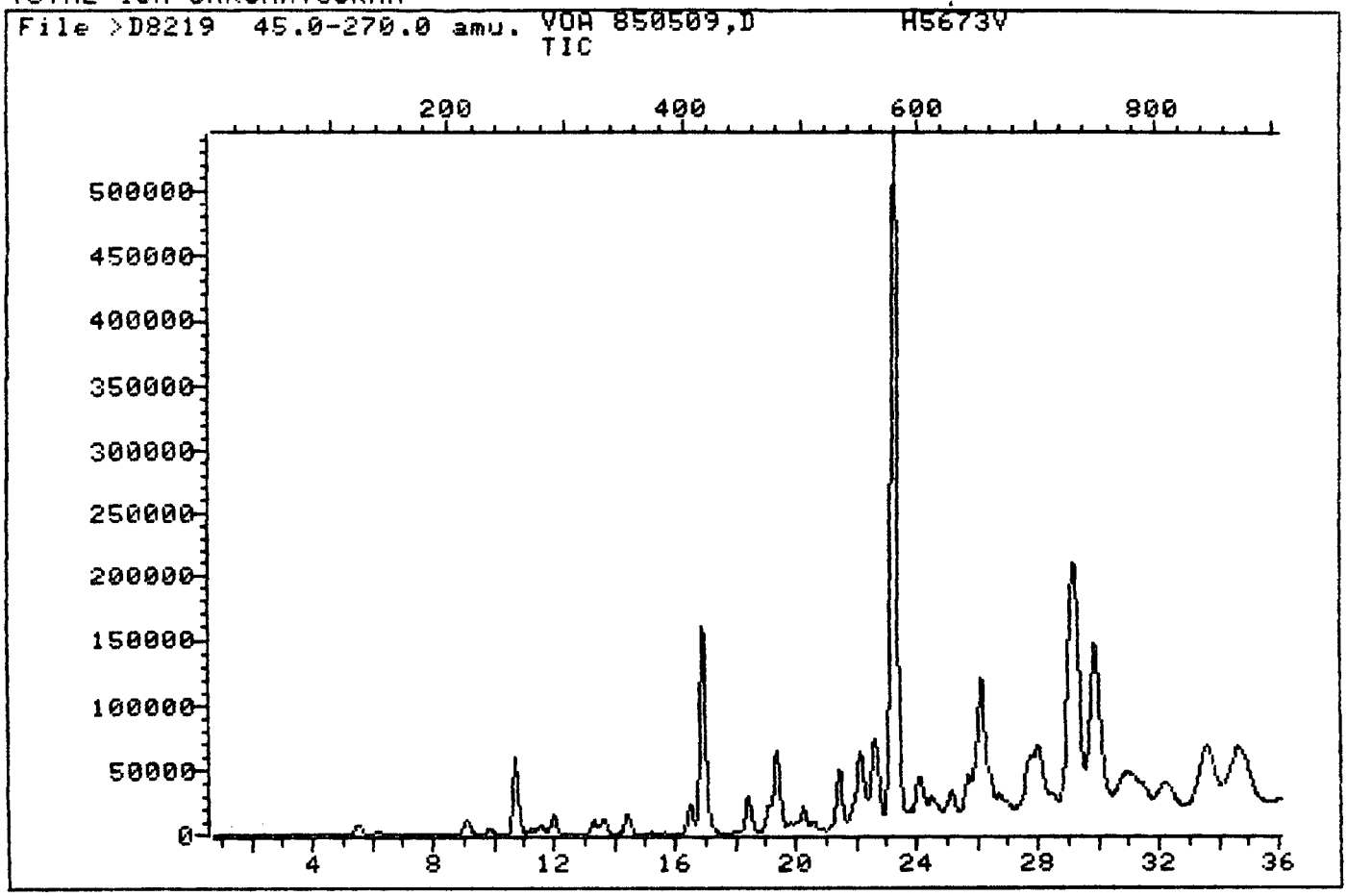
Appendix A

Mass Spectral Data for Quantitated Compounds

1) A total ion chromatogram for each sample analyzed by a GC/MS instrument.

2) A mass spectrum and a reference spectrum for each priority pollutant compound detected in the sample.

TOTAL ION CHROMATOGRAM



Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V

Id File: DVOA
Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, D, 831107, RL
Last Calibration: 850509 09:02

Operator ID: SJ3562
Quant Time: 850509 14:25
Injected at: 850509 13:48

QUANT REPORT

Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850509 14:25
Injected at: 850509 13:48
Data File: >D8219::U4 Dilution Factor: 1.00
Name: VOA 850509,D
Misc: H5673V

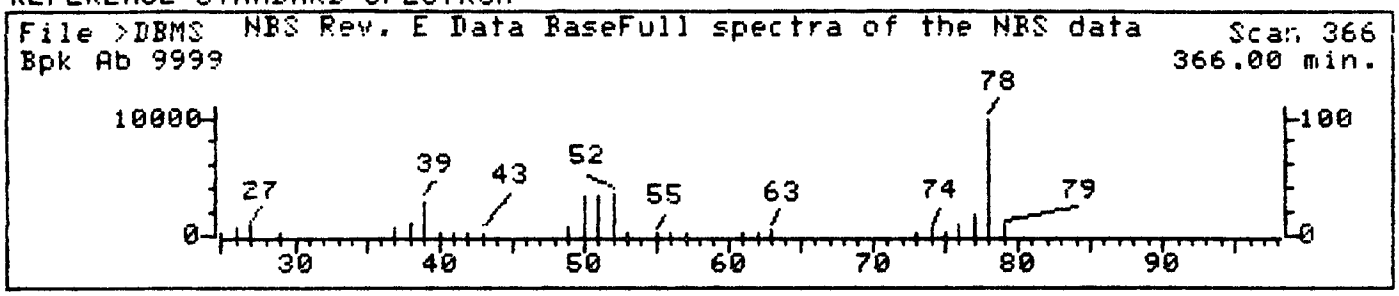
0.1g

ID File: DVOA
Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, D, 831107, RL
Last Calibration: 850509 09:02

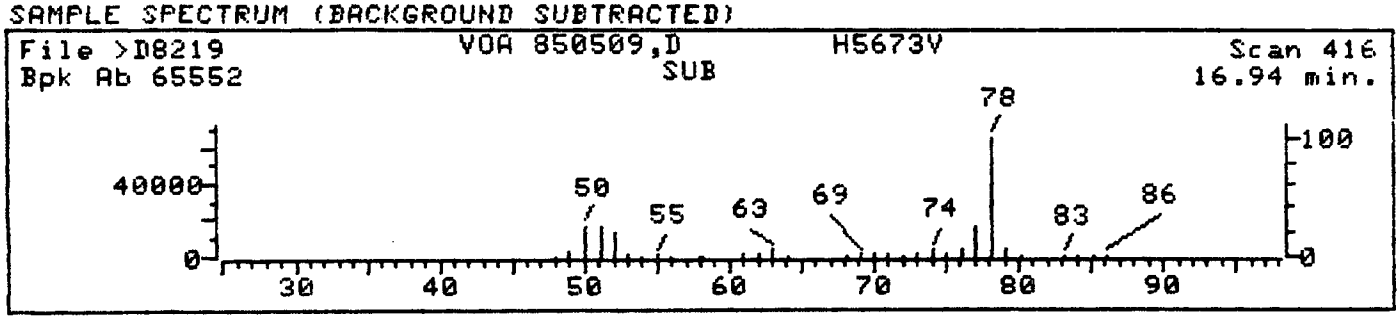
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane	18.41	454	53269	200.00	NG	95
2)	Acrolein	5.43	120	655	~~26.08~~	NG	100
2)	Acrolein	6.32	143	2687	~~106.97~~	~~NG~~	100
4)	Benzene	16.94	416	837603	1696.07	NG	89
5)	bis(Chloromethyl)ether	18.41	454	~~21758~~	~~178.09~~	NG	69
7)	Carbon tetrachloride	13.32	323	~~5326~~	~~13.66~~	NG	98
11)	2-Chloroethylvinyl ether	16.94	416	~~54682~~	~~976.82~~	~~NG~~	100
13)	Dichlorobromomethane	14.45	352	935	~~2.31~~	~~NG~~	72
15)	1,1-Dichloroethane	9.86	234	31719	94.21	NG	97
16)	1,2-Dichloroethane	12.08	291	11719	29.55	NG	89
20)	cis-1,3-Dichloropropylene	~~16.94~~	~~416~~	~~17653~~	~~69.55~~	~~NG~~	100
21)	Ethylbenzene	26.16	653	581535	602.04	NG	96
24)	Methylene chloride	5.54	123	26659	75.60	NG-47=29	79
25)	1,1,2,2-Tetrachloroethane	21.45	~~532~~	~~18289~~	~~75.66~~	~~NG~~	99
26)	Tetrachloroethylene	22.15	550	115024	449.14	NG	97
27)	Toluene	23.28	579	2629462	4052.04	NG	99
28)	1,2-Trans-dichloroethylene	10.71	256	270860	764.45	NG	95
29)	1,1,1-Trichloroethane	13.32	323	46232	94.79	NG-18=77	91
31)	Trichloroethylene	16.55	406	24554	161.32	NG	97
32)	Trichlorofluoromethane	7.72	179	1763	2.74	NG	9[illegible]
35)	1,2-Dichloroethane-D4	12.00	289	80607	225.89	NG	95
36)	Toluene-D8	22.65	563	1985	~~3.12~~	NG	7[illegible]
36)	Toluene-D8	23.12	575	168134	263.93	NG	88
37)	p-Bromofluorobenzene	28.03	701	112337	285.62	NG	80
38)	*1,4-Dichlorobutane	22.38	556	98236	200.00	NG	95

* Compound is ISTD

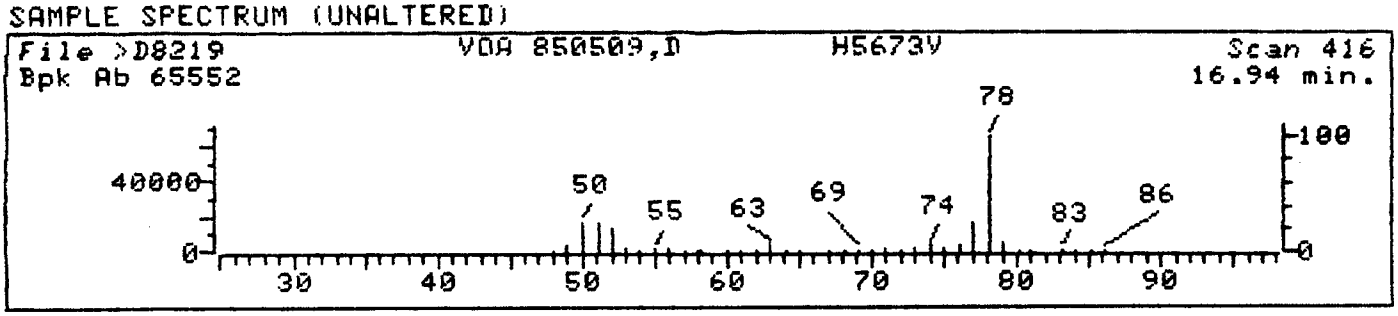
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



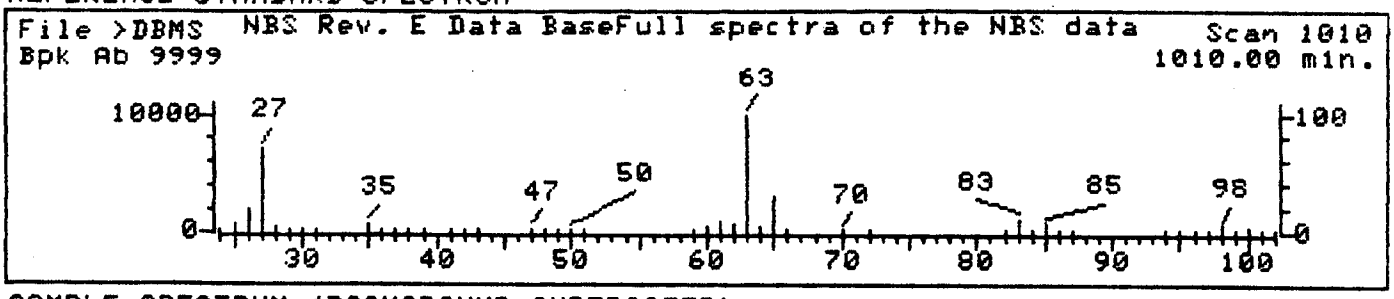
SAMPLE SPECTRUM (UNALTERED)



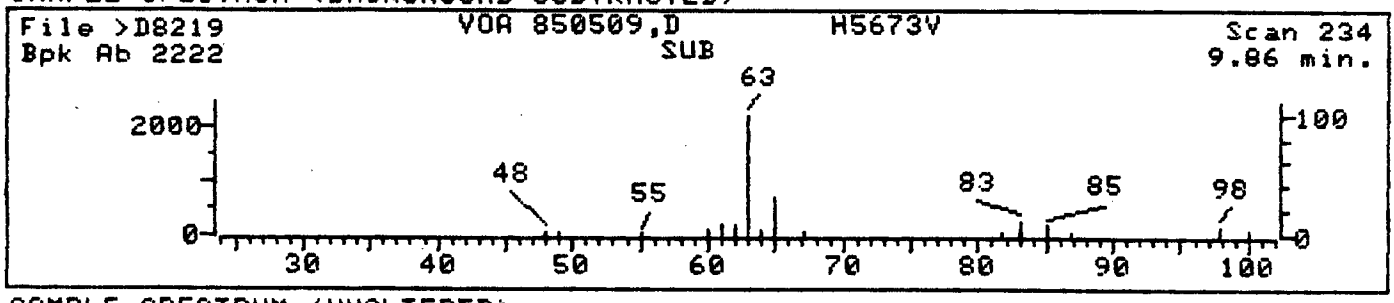
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 4
Compound Name: Benzene
Scan Number: 416
Retention Time: 16.94 min.
Area: 837603
Concentration: 1696.07 NG
q-value: 89

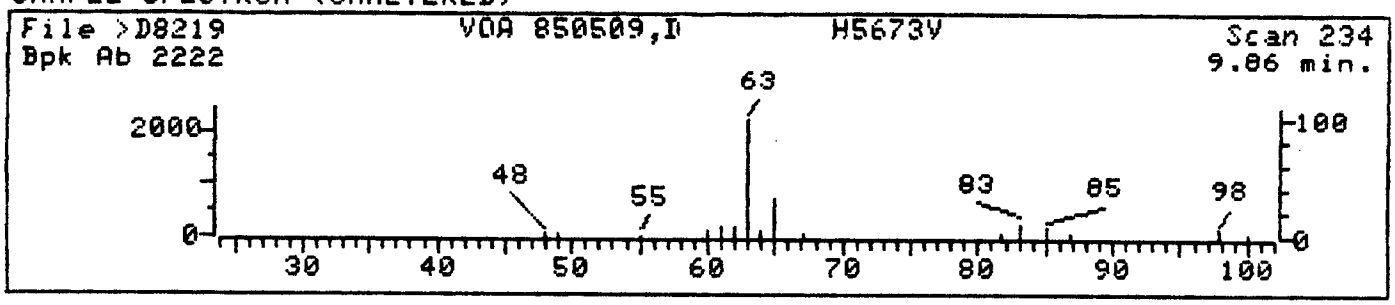
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



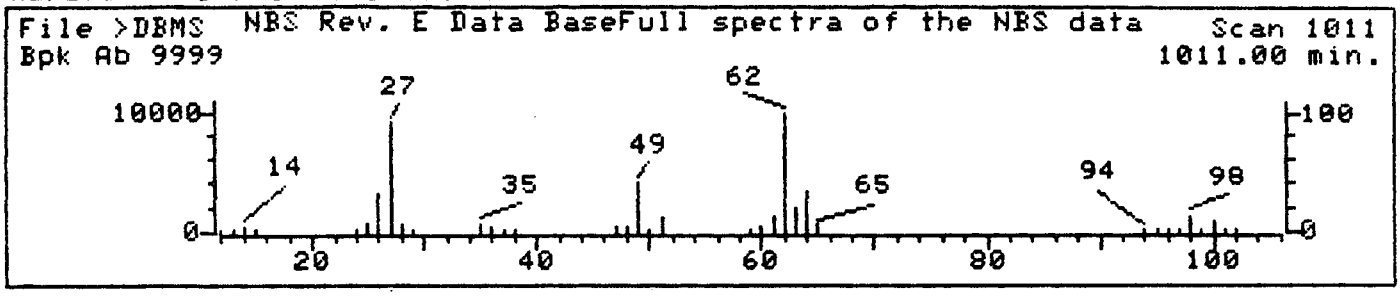
SAMPLE SPECTRUM (UNALTERED)



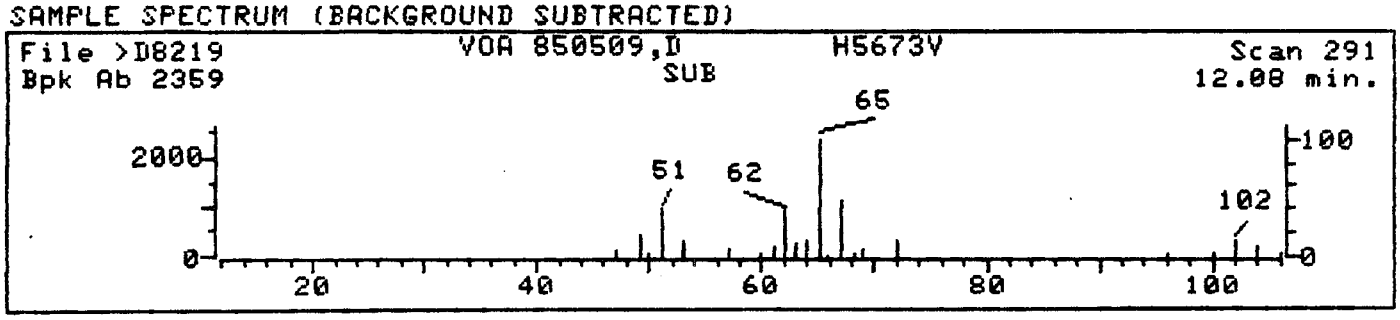
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 15
Compound Name: 1,1-Dichloroethane
Scan Number: 234
Retention Time: 9.86 min.
Area: 31719
Concentration: 94.21 NG
q-value: 97

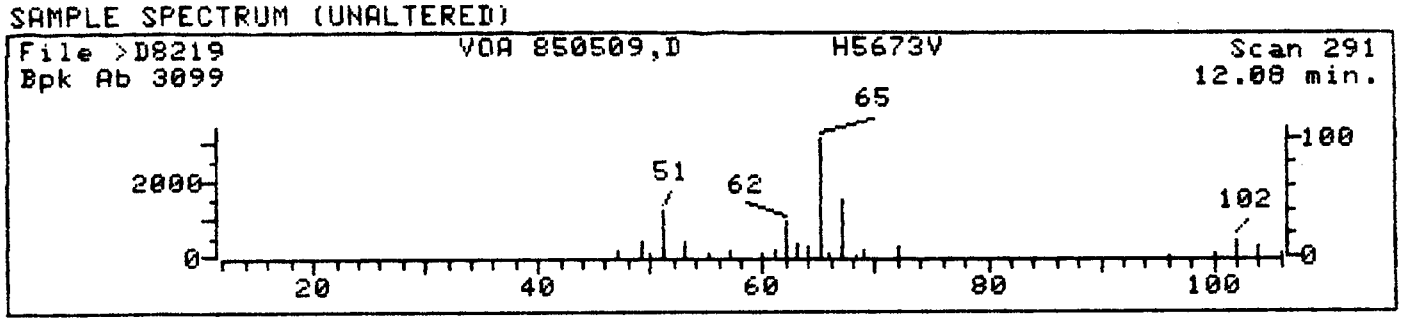
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



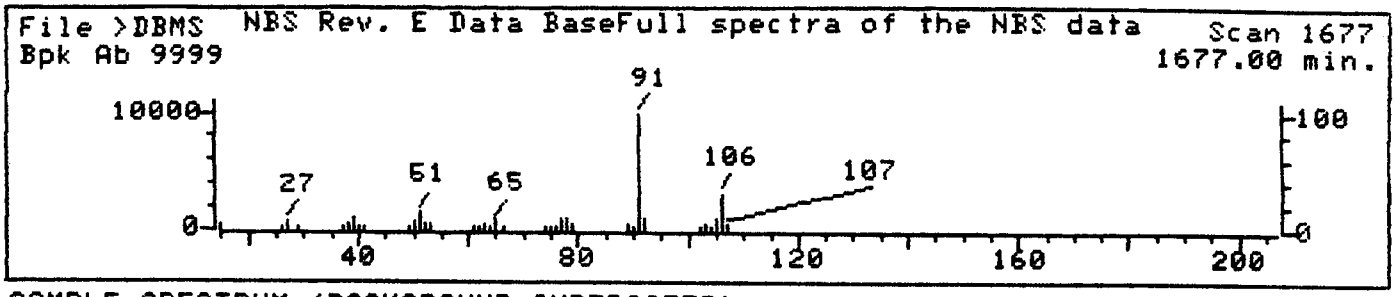
SAMPLE SPECTRUM (UNALTERED)



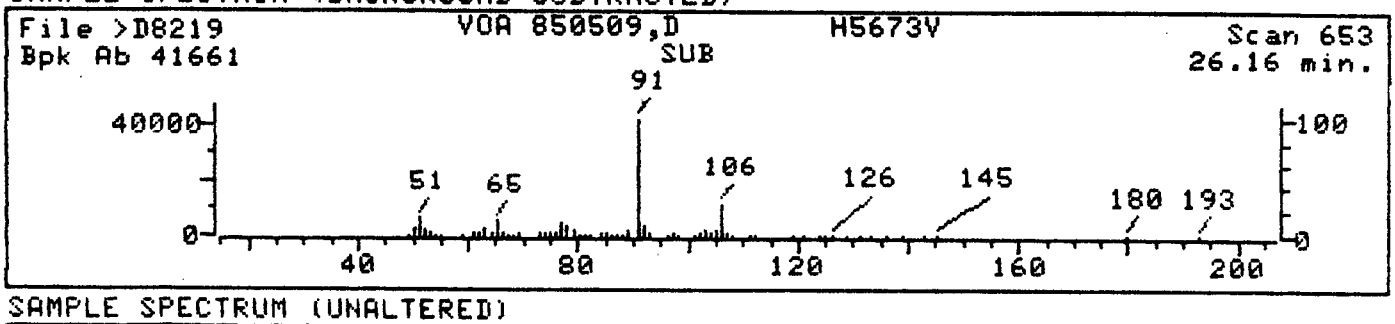
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 16
Compound Name: 1,2-Dichloroethane
Scan Number: 291
Retention Time: 12.08 min.
Area: 11719
Concentration: 29.55 NG
q-value: 89

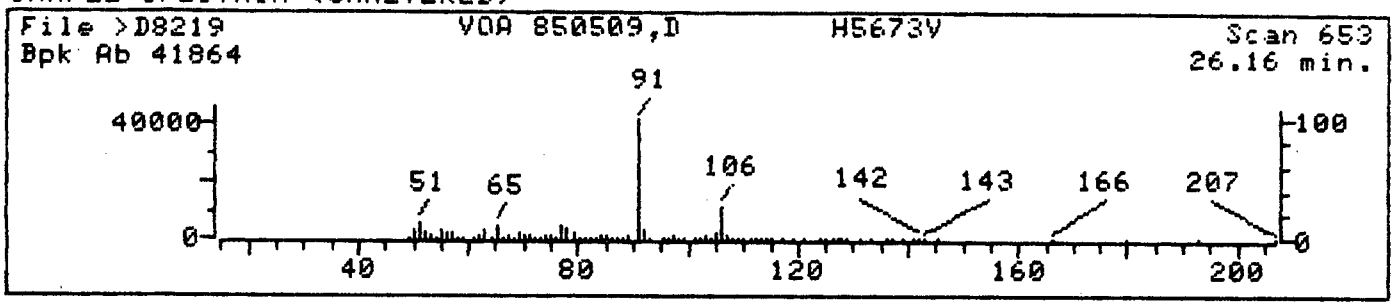
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



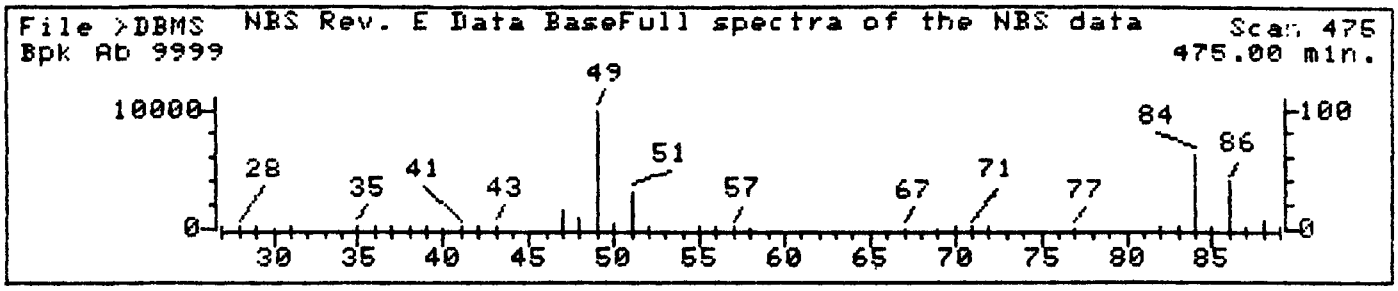
SAMPLE SPECTRUM (UNALTERED)



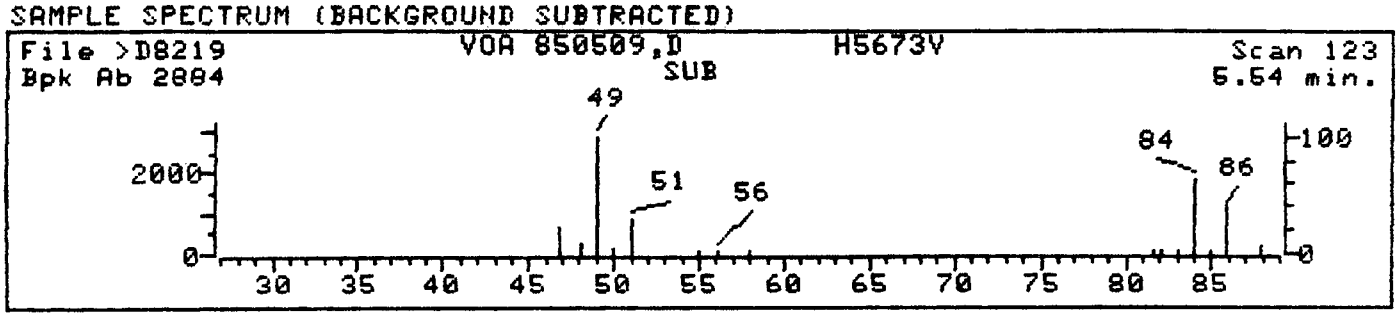
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 21
Compound Name: Ethylbenzene
Scan Number: 653
Retention Time: 26.16 min.
Area: 581535
Concentration: 602.04 NG
q-value: 96

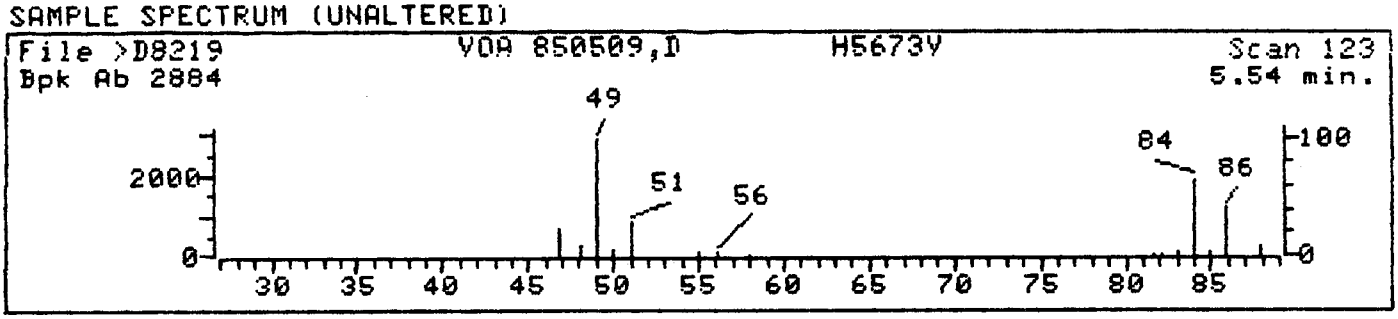
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



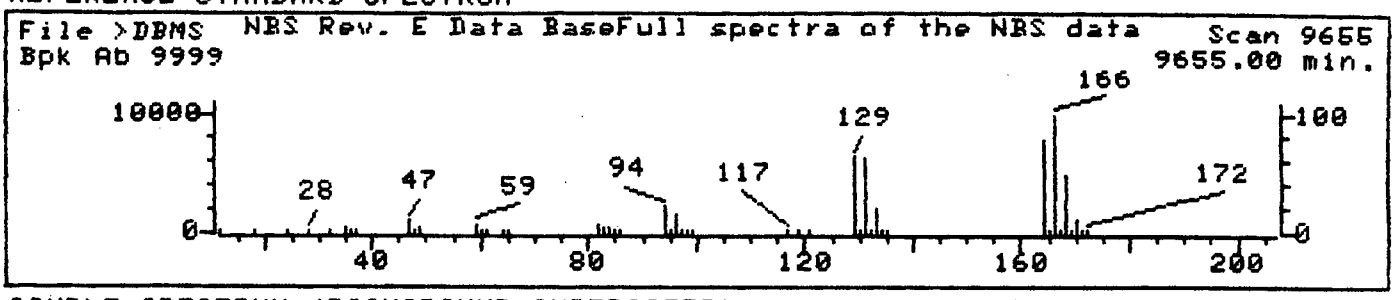
SAMPLE SPECTRUM (UNALTERED)



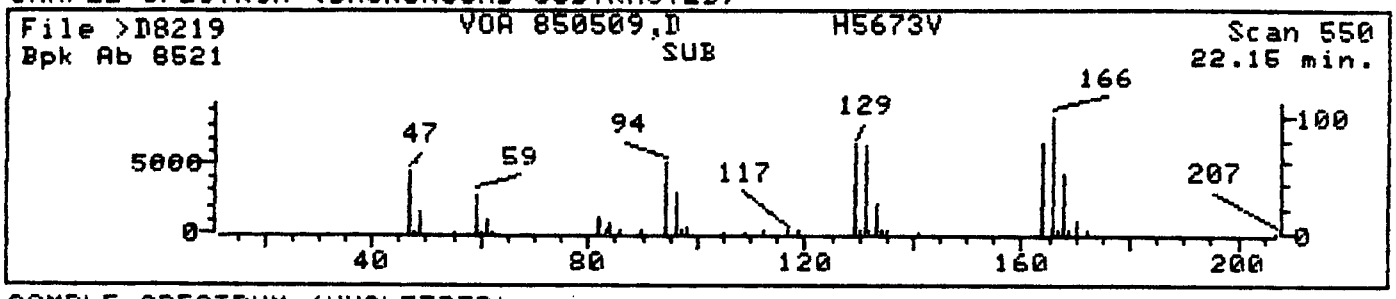
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 24
Compound Name: Methylene chloride
Scan Number: 123
Retention Time: 5.54 min.
Area: 26659
Concentration: 75.60 NG
q-value: 79

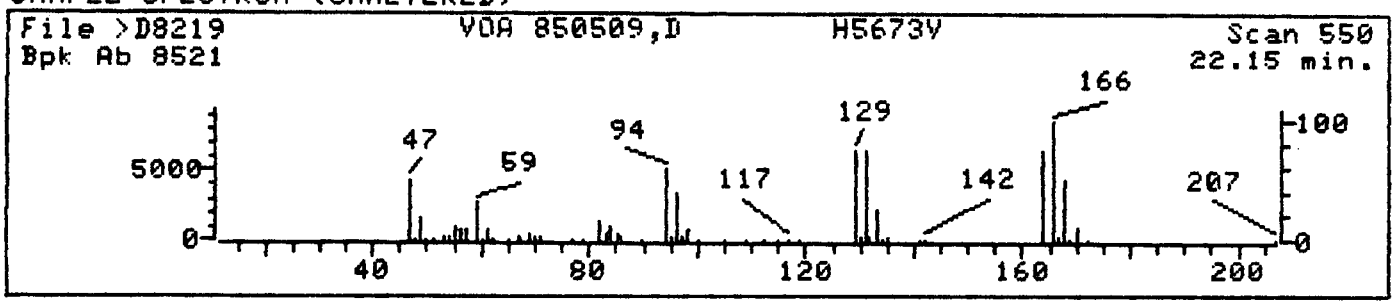
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



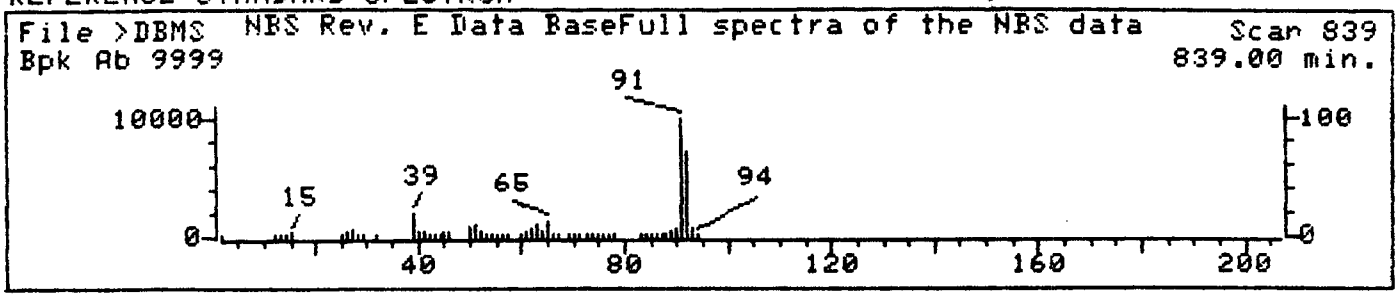
SAMPLE SPECTRUM (UNALTERED)



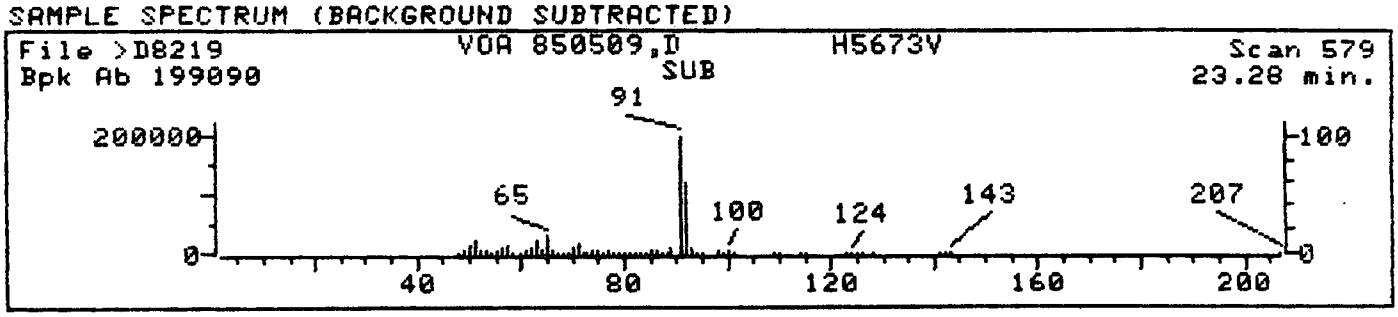
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 26
Compound Name: Tetrachloroethylene
Scan Number: 550
Retention Time: 22.15 min.
Area: 115024
Concentration: 449.14 NG
q-value: 97

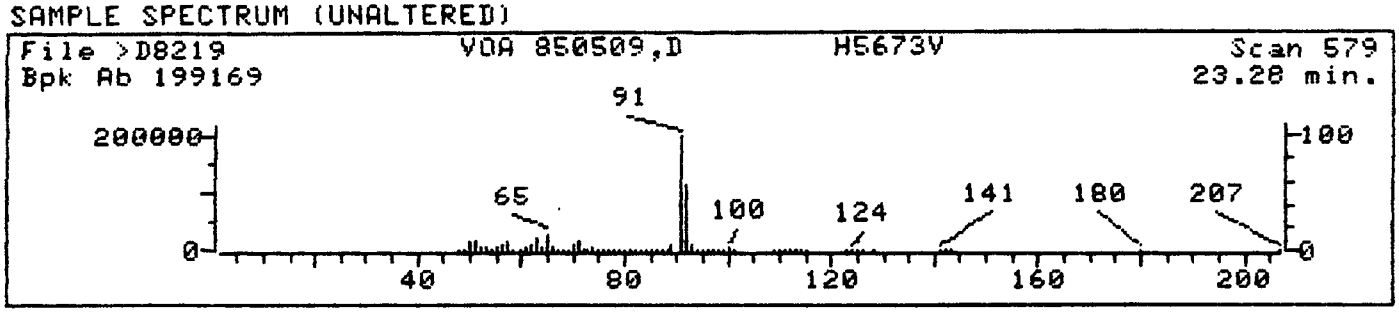
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



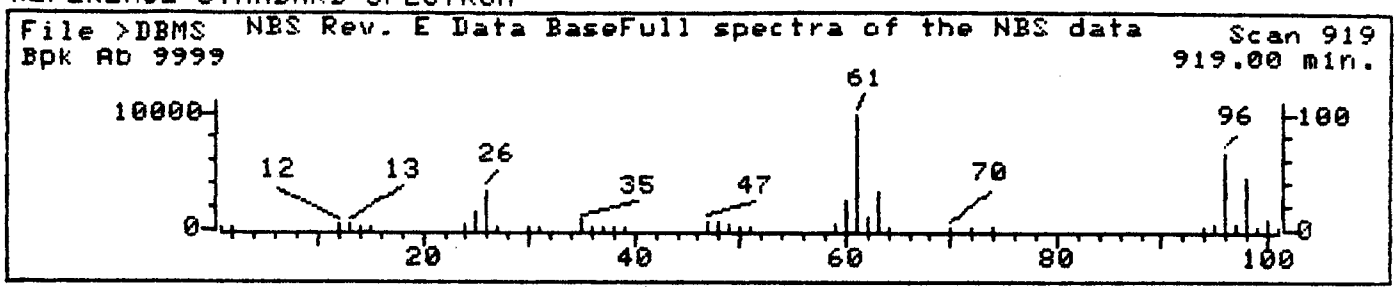
SAMPLE SPECTRUM (UNALTERED)



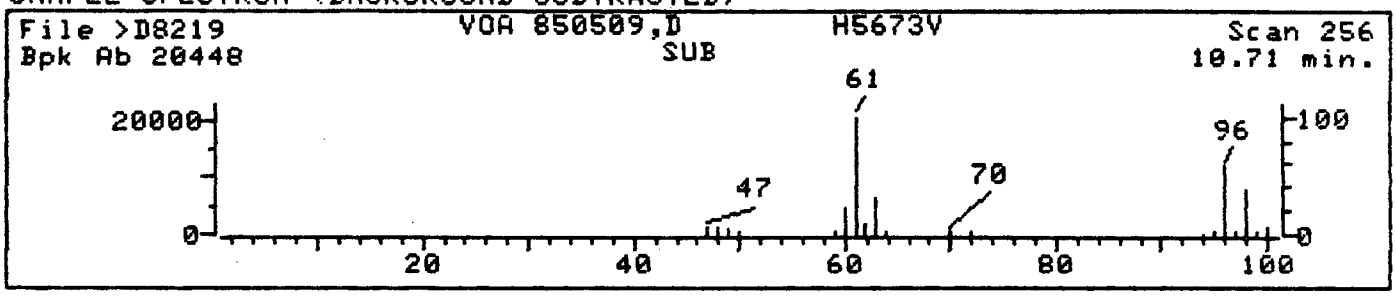
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 27
Compound Name: Toluene
Scan Number: 579
Retention Time: 23.28 min.
Area: 2629462
Concentration: 4052.04 NG
q-value: 99

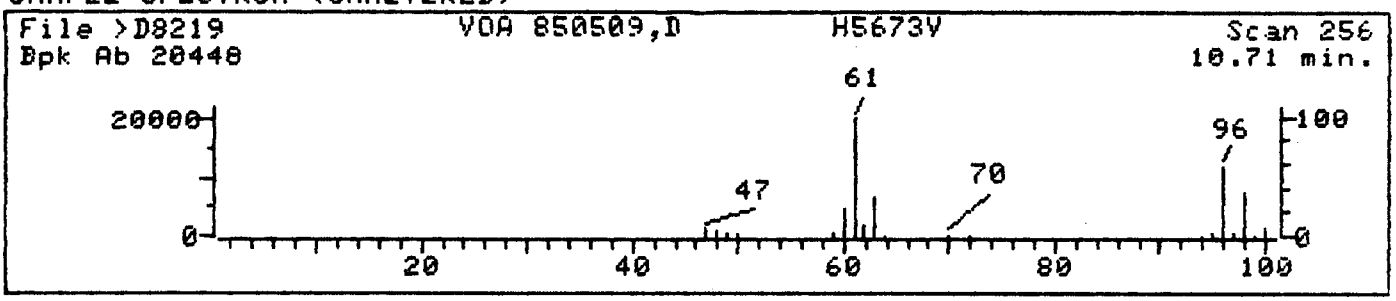
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



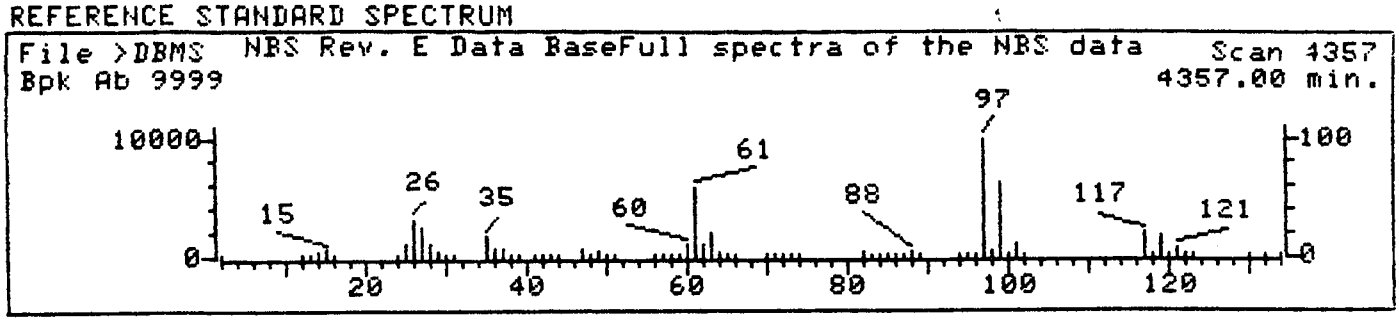
SAMPLE SPECTRUM (UNALTERED)



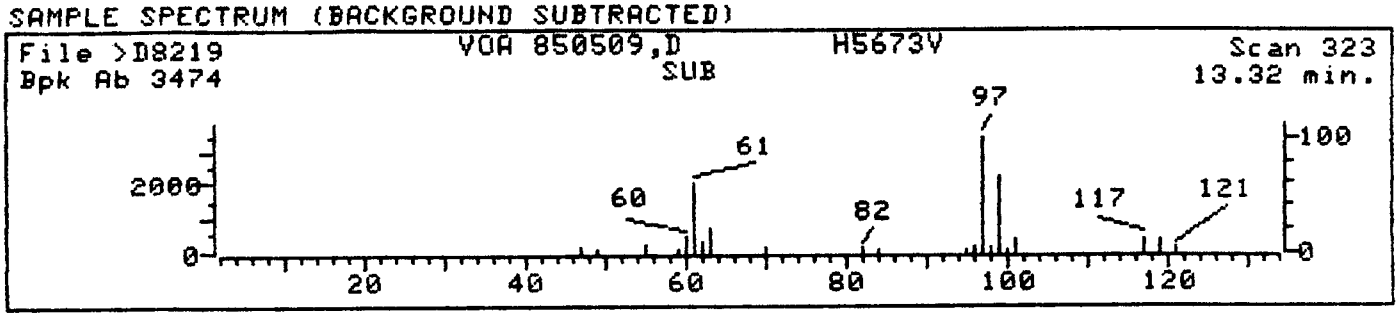
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 28
Compound Name: 1,2-Trans-dichloroethylene
Scan Number: 256
Retention Time: 10.71 min.
Area: 270860
Concentration: 764.45 NG
q-value: 95

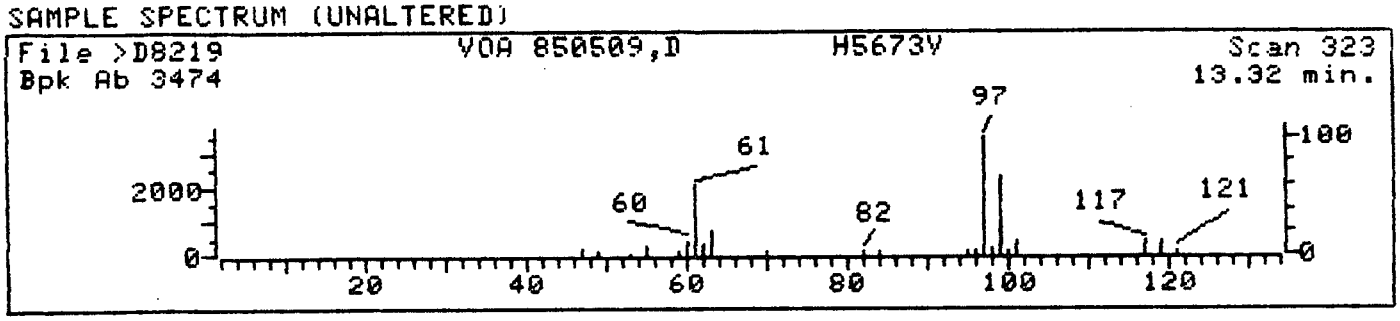
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



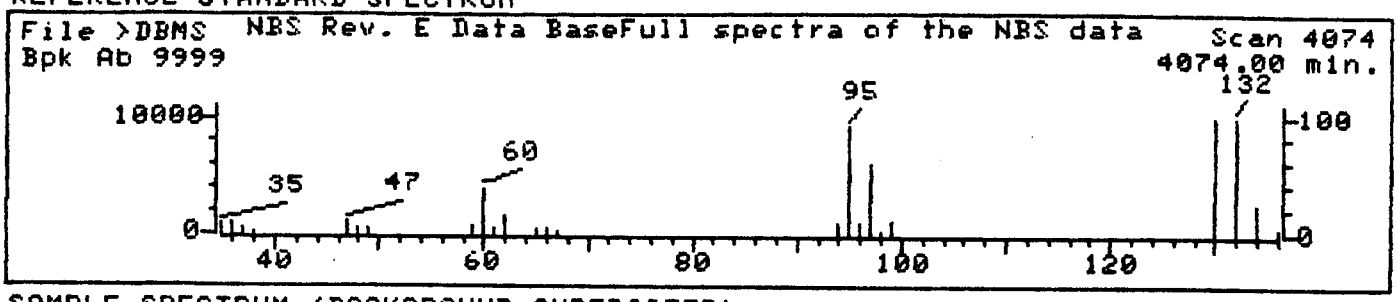
SAMPLE SPECTRUM (UNALTERED)



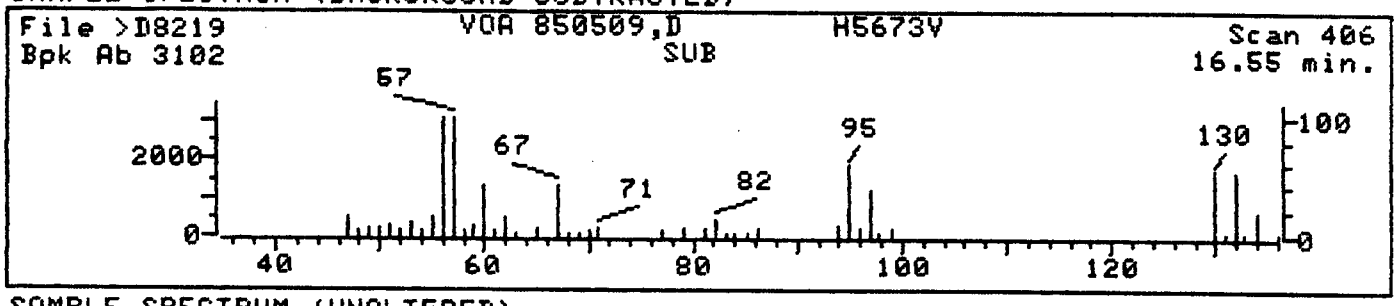
Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 29
Compound Name: 1,1,1-Trichloroethane
Scan Number: 323
Retention Time: 13.32 min.
Area: 46232
Concentration: 94.79 NG
q-value: 91

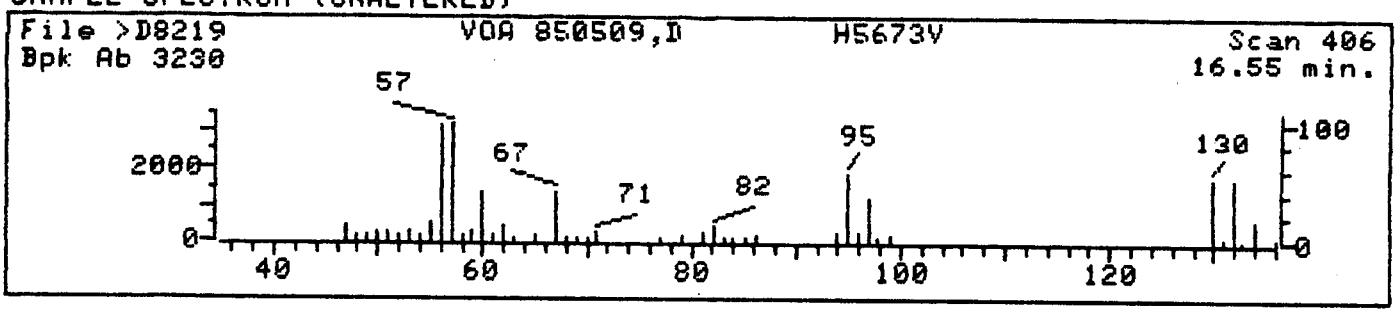
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



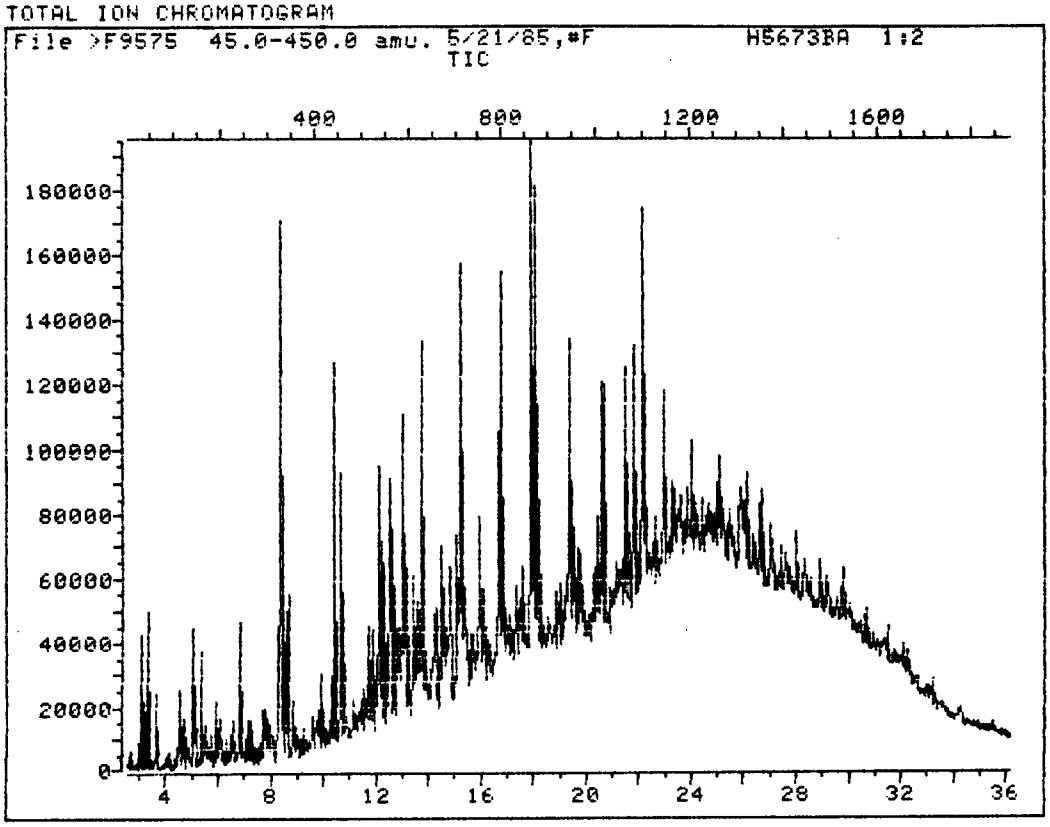
SAMPLE SPECTRUM (UNALTERED)



Data File: >D8219::U4
Name: VOA 850509,D
Misc: H5673V
Quant Time: 850509 14:25
Injected at: 850509 13:48

Compound No: 31
Compound Name: Trichloroethylene
Scan Number: 406
Retention Time: 16.55 min.
Area: 24554
Concentration: 161.32 NG
q-value: 97

TOTAL ION CHROMATOGRAM



Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2

BTL#34

Id File: FACID
Title: ACID ID FILE.....3/15/85,#F,WWC
Last Calibration: 850521 10:24

Operator ID: WW9928
Quant Time: 850522 14:05
Injected at: 850522 13:27

QUANT REPORT

Operator ID: WW9928 Quant Rev: 4 Quant Time: 850522 14:05
Output File: ^F9575::AQ Injected at: 850522 13:27
Data File: >F9575::U2 Dilution Factor: 1.00
Name: 5/21/85,#F
Misc: H5673BA 1:2 BTL#34

ID File: FACID
Title: ACID ID FILE.....3/15/85,#F,WWC
Last Calibration: 850521 10:24

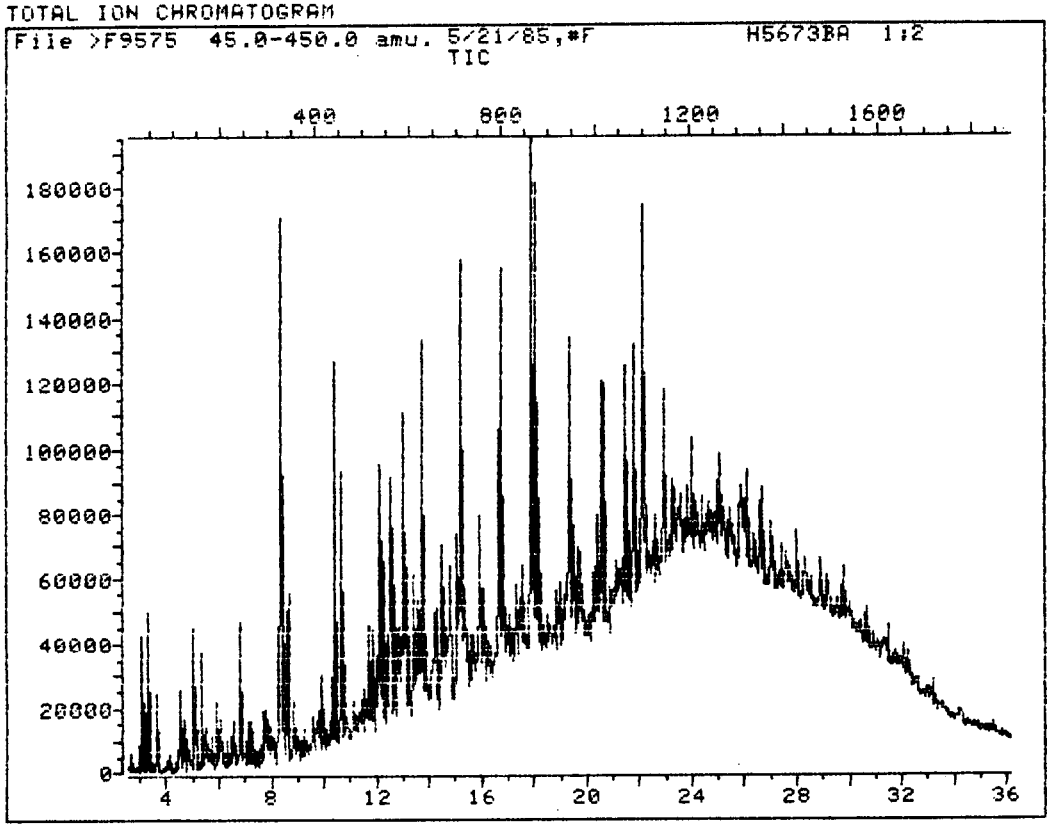
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.30	155	17605	40.00	UG/ML	90
3)	2-Fluorophenol	3.41	49	1121	3.82	UG/ML	96
5)	Phenol-D5	4.91	133	1571	4.70	UG/ML	81
6)	2-Methylphenol	6.52	224	337	~~.83 UG/ML~~		81
7)	4-Methylphenol	6.52	224	337	~~.75 UG/ML~~		92
9)	*d8-Naphthalene	8.32	325	45228	40.00	UG/ML	95
11)	2,4-Dimethylphenol	8.16	316	1314	~~3.68 UG/ML~~		57
14)	*d10-Acenaphthalene	13.44	612	27014	40.00	UG/ML	95
15)	4,6-Dinitro-o-cresol	16.72	796	845	~~4.25 UG/ML~~		42
16)	2,4-Dinitrophenol	15.27	715	5358	~~63.17~~	UG/ML	49
16)	2,4-Dinitrophenol	15.44	724	2673	~~31.51~~	UG/ML	38
16)	2,4-Dinitrophenol	15.63	735	2756	~~32.49~~	UG/ML	38
17)	4-Nitrophenol	14.49	671	544	~~3.79 UG/ML~~		52
20)	*d10-Phenanthrene	17.85	859	52316	40.00	UG/ML	99

* Compound is ISTD

check 2,4,6-Tribromophenol

113 × 40 / 52316 × .073 = 3.19 1.18

TOTAL ION CHROMATOGRAM



Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2

BTL#34

Id File: FBNP
Title: B/N+PEST ID FILE .....MASTER, 850119
Last Calibration: 850522 08:39

Operator ID: WW9928
Quant Time: 850522 16:34
Injected at: 850522 13:27

QUANT REPORT

Operator ID: WW9928 Quant Rev: 4 Quant Time: 850522 16:34
Output File: BF9575::AQ Injected at: 850522 13:27
Data File: >F9575::U2 Dilution Factor: 1.00
Name: 5/21/85,#F
Misc: H5673BA 1:2 BTL#34

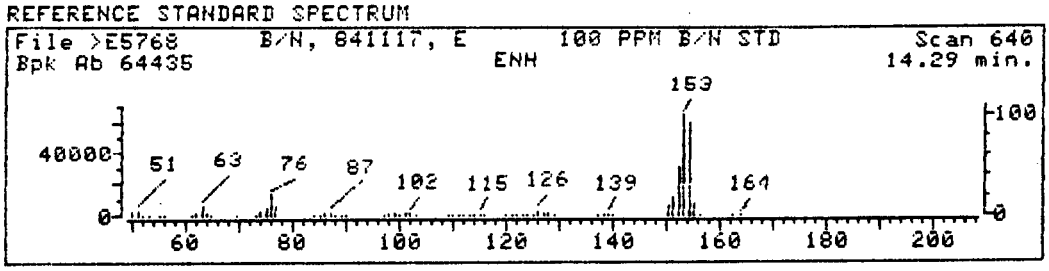
ID File: FBNP
Title: B/N+PEST ID FILE .....MASTER, 850119
Last Calibration: 850522 08:39

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.30	155	11480	40.00	UG/ML	98
4)	1,3-Dichlorobenzene	5.71	178	1149	3.42	UG/ML	93
5)	1,4-Dichlorobenzene	5.71	178	1149	~~3.15~~	~~UG/ML~~	92
6)	1,2-Dichlorobenzene	5.71	178	1149	~~3.29~~	~~UG/ML~~	89
8)	bis(2-Chloroisopropyl)ether	5.49	166	1674	~~32.31~~	~~UG/ML~~	81
8)	bis(2-Chloroisopropyl)ether	5.97	193	1416	~~27.33~~	~~UG/ML~~	62
8)	bis(2-Chloroisopropyl)ether	6.44	219	1483	~~28.63~~	~~UG/ML~~	89
8)	bis(2-Chloroisopropyl)ether	6.58	227	1425	~~27.51~~	~~UG/ML~~	57
9)	*d8-Naphthalene	8.32	325	45228	40.00	UG/ML	95
10)	2-Fluorobiphenyl	11.60	509	779	~~2.08~~	~~UG~~/ML	81
13)	Nitrobenzene	6.44	219	1483	~~3.26~~	~~UG/ML~~	42
13)	Nitrobenzene	7.11	257	948	~~2.09~~	~~UG~~/ML	37
16)	1,2,4-Trichlorobenzene	8.25	321	3143	10.54	UG/ML	98
17)	Naphthalene	7.88	300	4324	~~4.60~~	~~UG/ML~~	26
17)	Naphthalene	8.37	328	206017	219.10	UG/ML	95
19)	*d10-Acenaphthalene	13.44	612	27014	40.00	UG/ML	95
23)	Acenaphthylene	12.97	586	111269	104.68	UG/ML	96
23)	Acenaphthylene	13.67	625	2628	~~2.47~~	~~UG/ML~~	41
25)	Acenaphthene	13.52	617	13684	18.00	UG/ML	72
25)	Acenaphthene	13.83	634	2103	~~2.77~~	~~UG/ML~~	56
25)	Acenaphthene	14.11	650	1500	~~1.97~~	~~UG/ML~~	74
26)	2,4-Dinitrotoluene	13.52	617	3945	~~12.56~~	~~UG~~/ML	58
26)	2,4-Dinitrotoluene	14.77	687	16255	~~72.37~~	~~UG/ML~~	65
26)	2,4-Dinitrotoluene	14.97	698	12710	~~56.59~~	~~UG/ML~~	65
26)	2,4-Dinitrotoluene	15.24	713	2792	~~12.43~~	~~UG/ML~~	96
28)	Fluorene	14.99	699	12742	~~15.85~~	~~UG~~/ML	97
28)	Fluorene	15.06	703	44436	55.27	UG/ML	99
28)	Fluorene	15.70	739	9755	~~12.13~~	~~UG~~/ML	92
30)	N-Nitrosodiphenylamine	15.63	735	7777	~~14.97~~	~~UG~~/ML	70
32)	*d10-Phenanthrene	17.85	859	52316	40.00	UG/ML	97
35)	Phenanthrene	17.17	821	4612	~~4.41~~	~~UG/ML~~	92
35)	Phenanthrene	17.92	863	235878	225.35	UG/ML	96
35)	Phenanthrene	18.04	870	69798	~~66.68~~	~~UG/ML~~	97
36)	Anthracene	17.17	821	4249	~~3.55~~	~~UG~~/ML	90
36)	Anthracene	17.92	863	235878	~~196.92~~	~~UG~~/ML	96
36)	Anthracene	18.04	870	69798	58.27	UG/ML	99
37)	Di-n-butyl phthalate	20.05	982	1556	~~1.19~~	~~UG~~/ML	1
37)	Di-n-butyl phthalate	20.23	992	2950	2.26	UG/ML	49
38)	Fluoranthene	21.52	1064	103410	91.05	UG/ML	96
38)	Fluoranthene	21.80	1080	37749	~~33.24~~	~~UG/ML~~	95
38)	Fluoranthene	22.04	1093	14436	~~12.71~~	~~UG/ML~~	93
38)	Fluoranthene	22.14	1099	198866	175.10	UG/ML	97
40)	Pyrene	21.52	1064	103410	~~89.02~~	~~UG/ML~~	96
40)	Pyrene	21.80	1080	37749	~~32.50~~	~~UG/ML~~	95
40)	Pyrene	22.04	1093	14436	~~12.43~~	~~UG/ML~~	93
40)	Pyrene	22.14	1099	198866	171.19	UG/ML	97

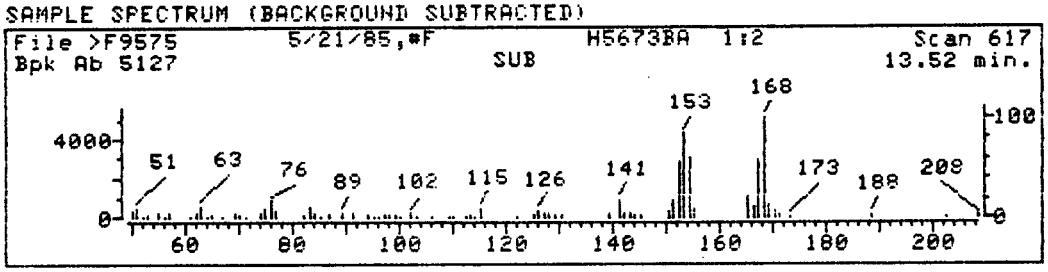
	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	~~Delta-BHC~~	18.56	899	1080	~~10.62~~	~~UG/ML~~	43
47)	*d12-Chrysene	25.87	1307	21570	40.00	UG/ML	100
53)	Endrin	22.61	1125	1054	~~13.04~~	~~UG/ML~~	78
56)	Endrin aldehyde	22.91	1142	697	~~4.37~~	~~UG/ML~~	68
56)	Endrin aldehyde	24.01	1203	958	~~6.00~~	~~UG/ML~~	75
56)	Endrin aldehyde	24.11	1209	896	5.61	UG/ML	73
60)	Butyl benzyl phthalate	24.67	1240	7726	17.62	UG/ML	95
61)	Benzo(a)anthracene	25.62	1293	954	~~2.23~~	~~UG/ML~~	74
61)	Benzo(a)anthracene	25.83	1305	27435	64.06	UG/ML	88
61)	Benzo(a)anthracene	25.94	1311	18433	~~43.04~~	~~UG/ML~~	96
62)	Chrysene	25.62	1293	954	~~1.72~~	UG/ML	74
62)	Chrysene	25.83	1305	27435	~~49.36~~	UG/ML	88
62)	Chrysene	25.94	1311	18433	33.16	UG/ML	96
64)	bis(2-Ethylhexyl)phthalate	26.62	1349	21636	37.50	UG/ML	99
65)	Di-n-octyl phthalate	27.86	1418	1402	~~2.12~~	~~UG/ML~~	1
66)	Benzo(b)fluoroanthene	28.95	1479	11756	47.64	UG/ML	96
66)	Benzo(b)fluoroanthene	~~29.25~~	~~1496~~	~~2873~~	~~11.64~~	~~UG/ML~~	87
66)	Benzo(b)fluoroanthene	29.64	~~1518~~	~~6604~~	~~26.76~~	~~UG/ML~~	85
66)	Benzo(b)fluoroanthene	29.79	~~1526~~	~~9649~~	~~39.10~~	~~UG/ML~~	93
67)	Benzo(k)fluoranthene	28.95	~~1479~~	~~11756~~	~~56.68~~	~~UG/ML~~	97
67)	Benzo(k)fluoranthene	29.25	1496	2873	13.85	UG/ML	88
67)	Benzo(k)fluoranthene	29.64	~~1518~~	~~6604~~	~~31.84~~	~~UG/ML~~	84
67)	Benzo(k)fluoranthene	29.79	1526	9649	~~46.52~~	~~UG/ML~~	92
68)	Benzo(a)pyrene	28.95	1479	11756	~~66.01~~	~~UG/ML~~	97
68)	Benzo(a)pyrene	29.25	1496	2873	~~16.13~~	~~UG/ML~~	86
68)	Benzo(a)pyrene	29.64	1518	6604	~~37.08~~	~~UG/ML~~	84
68)	Benzo(a)pyrene	29.79	1526	9649	54.18	UG/ML	94
69)	Indeno(1,2,3-c,d)pyrene	33.18	1716	3370	18.77	UG/ML	95
71)	Benzo(ghi)perylene	33.18	1716	3370	~~23.74~~	~~UG/ML~~	96

* Compound is ISTD

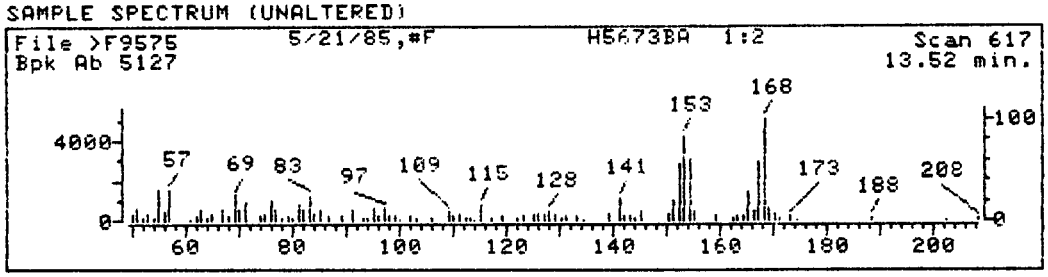
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



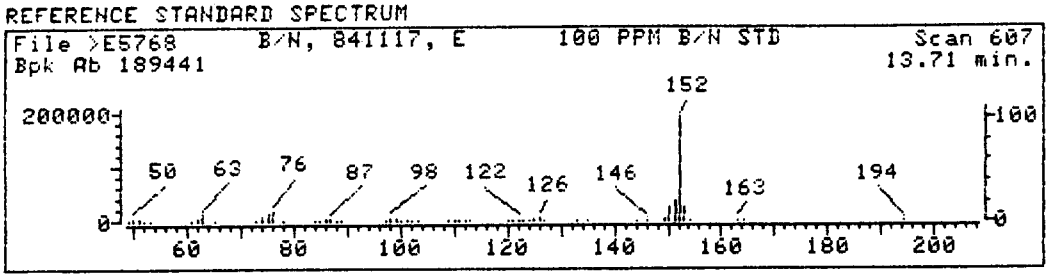
SAMPLE SPECTRUM (UNALTERED)



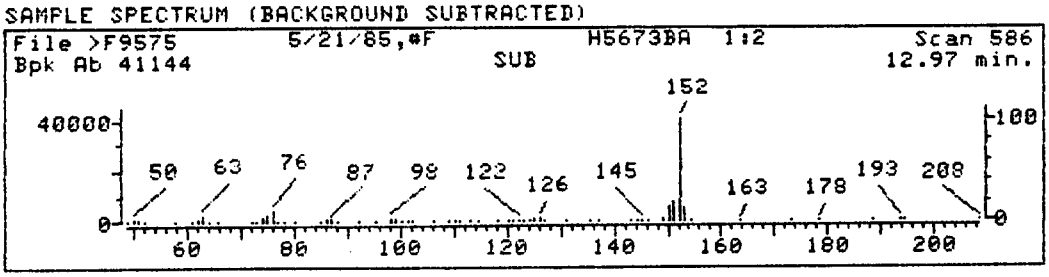
Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2 BTL#34
Quant Time: 850522 16:34
Injected at: 850522 13:27

Compound No: 25
Compound Name: Acenaphthene
Scan Number: 617
Retention Time: 13.52 min.
Area: 13684
Concentration: 18.00 UG/ML
q-value: 72

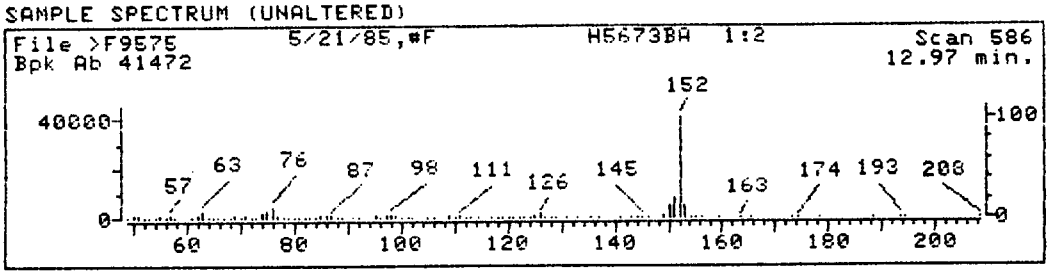
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

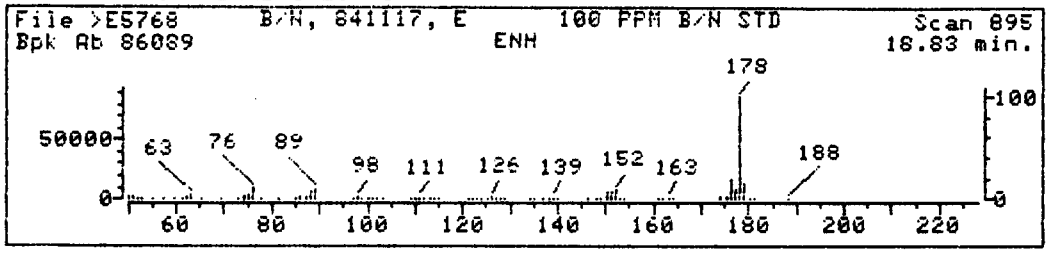


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

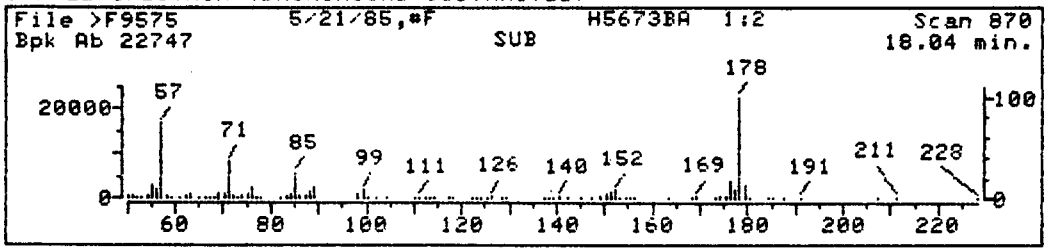
BTL#34

Compound No: 23
Compound Name: Acenaphthylene
Scan Number: 586
Retention Time: 12.97 min.
Area: 111269
Concentration: 104.68 UG/ML
q-value: 96

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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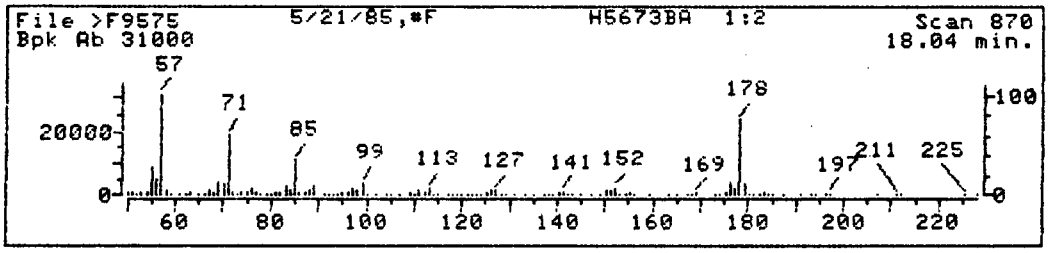
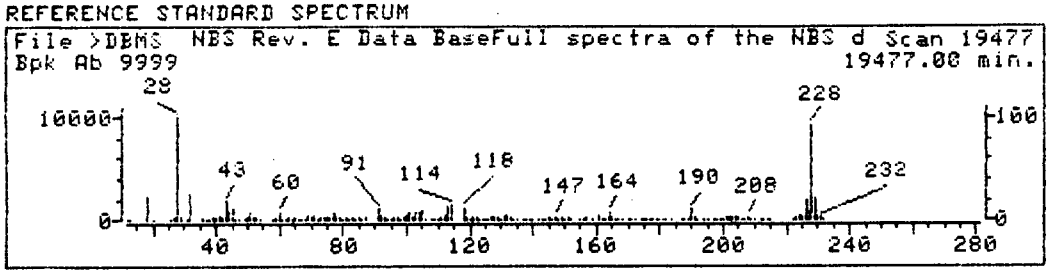


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2 BTL#34
Quant Time: 850522 16:34
Injected at: 850522 13:27

Compound No: 36
Compound Name: Anthracene
Scan Number: 870
Retention Time: 18.04 min.
Area: 69798
Concentration: 58.27 UG/ML
q-value: 99

REFERENCE STANDARD SPECTRUM



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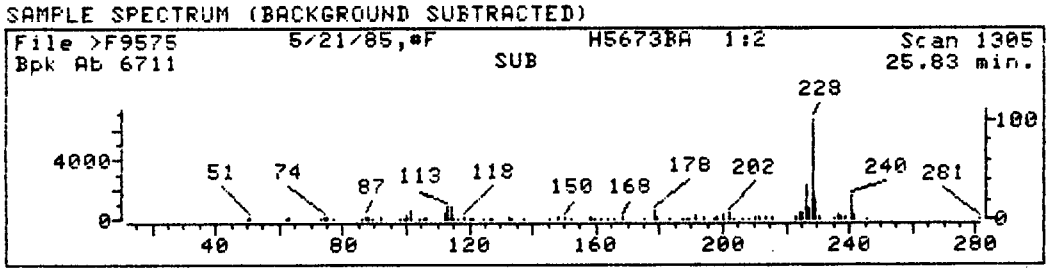

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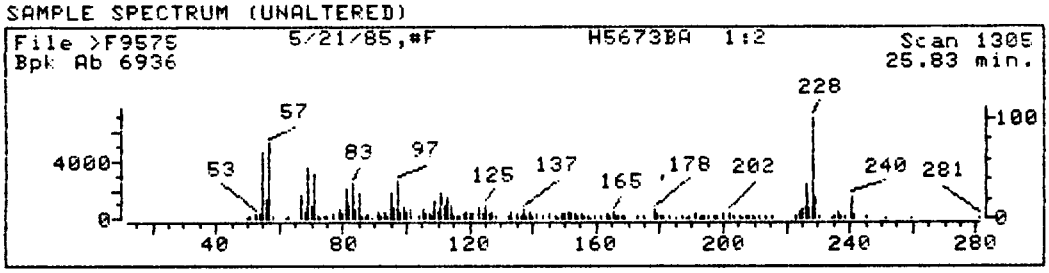
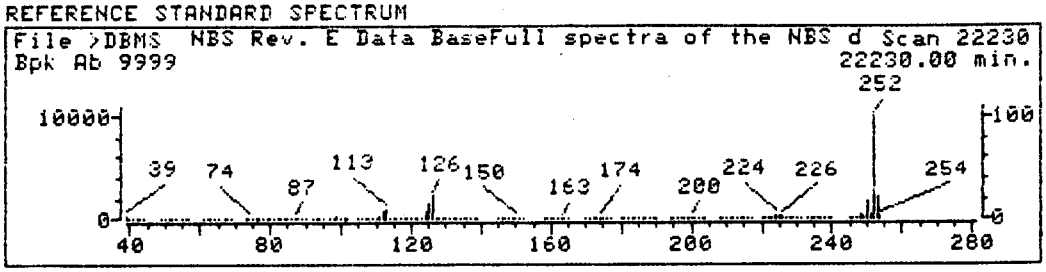


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

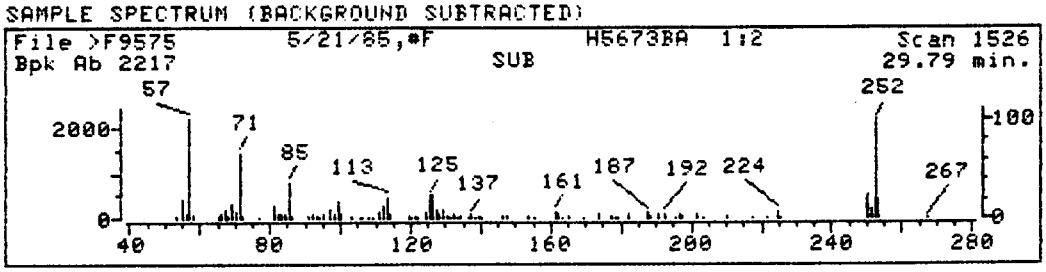
BTL#34

Compound No: 61
Compound Name: Benzo(a)anthracene
Scan Number: 1305
Retention Time: 25.83 min.
Area: 27435
Concentration: 64.06 UG/ML
q-value: 88

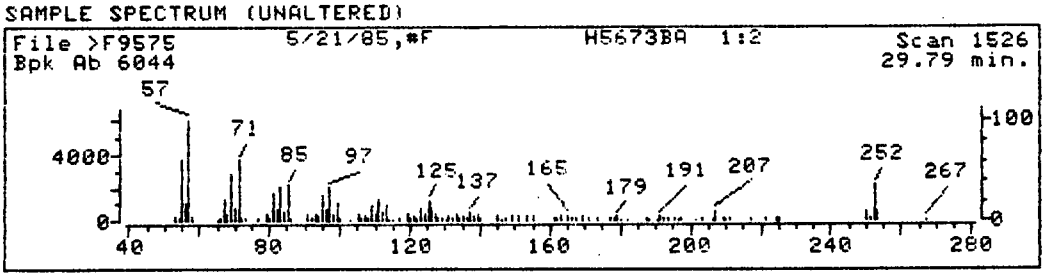
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

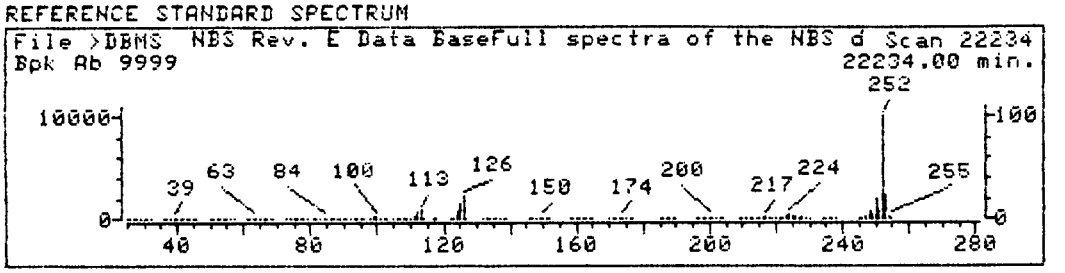


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

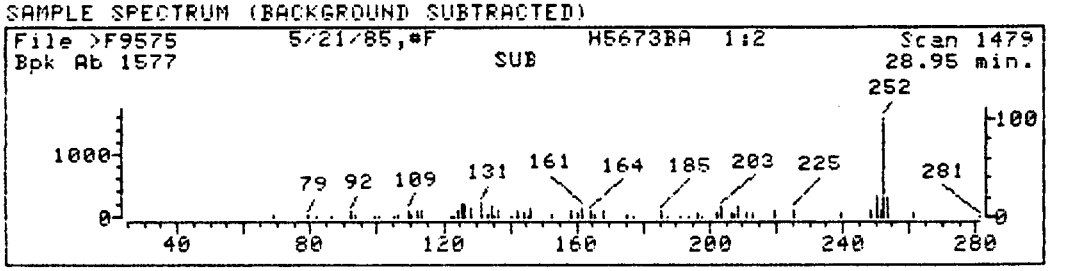
BTL#34

Compound No: 68
Compound Name: Benzo(a)pyrene
Scan Number: 1526
Retention Time: 29.79 min.
Area: 9649
Concentration: 54.18 UG/ML
q-value: 94

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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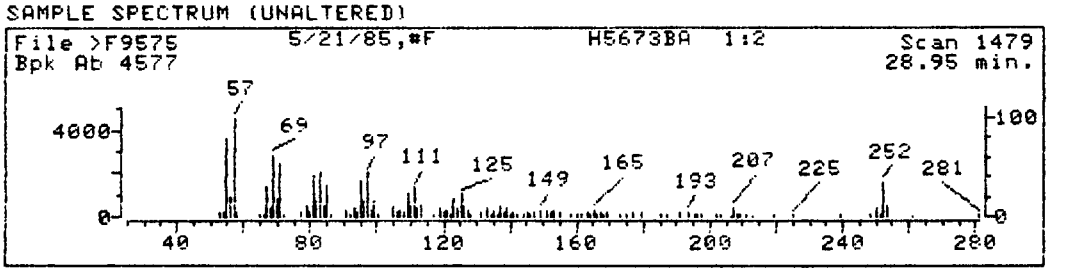
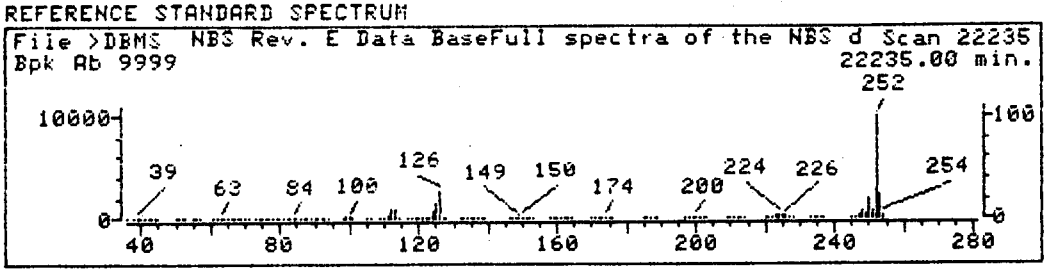


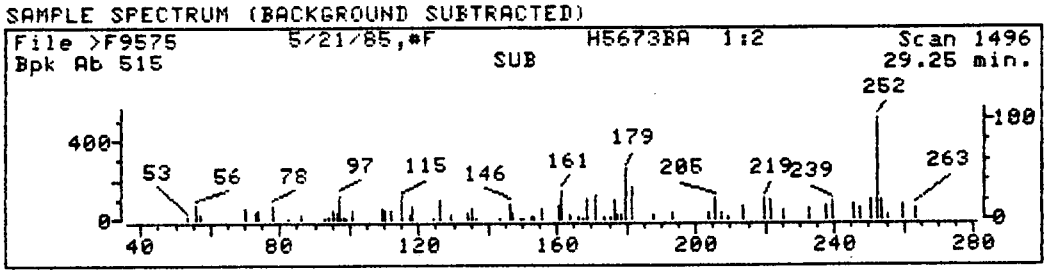
Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2 BTL#34
Quant Time: 850522 16:34
Injected at: 850522 13:27

Compound No: 66
Compound Name: Benzo(b)fluoroanthene
Scan Number: 1479
Retention Time: 28.95 min.
Area: 11756
Concentration: 47.64 UG/ML
q-value: 96

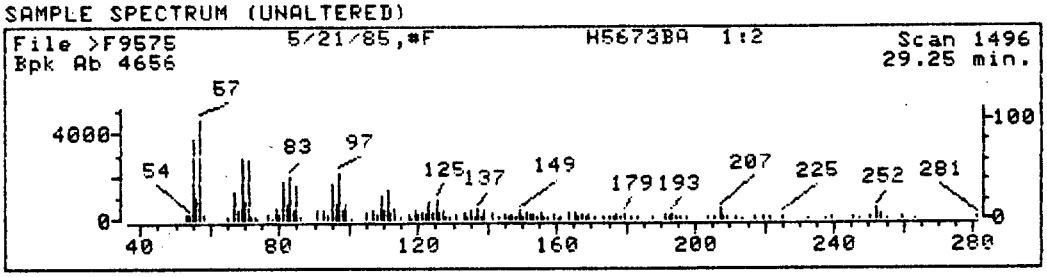
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

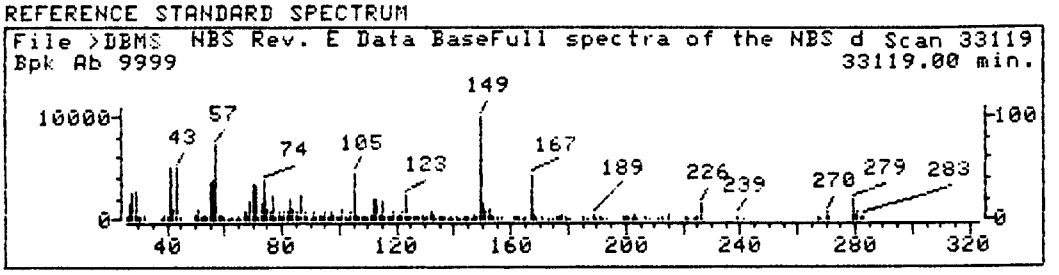


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

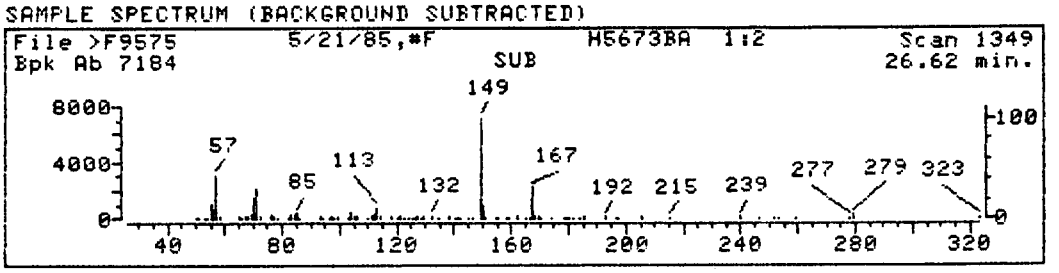
BTL#34

Compound No: 67
Compound Name: Benzo(k)fluoranthene
Scan Number: 1496
Retention Time: 29.25 min.
Area: 2873
Concentration: 13.85 UG/ML
q-value: 88

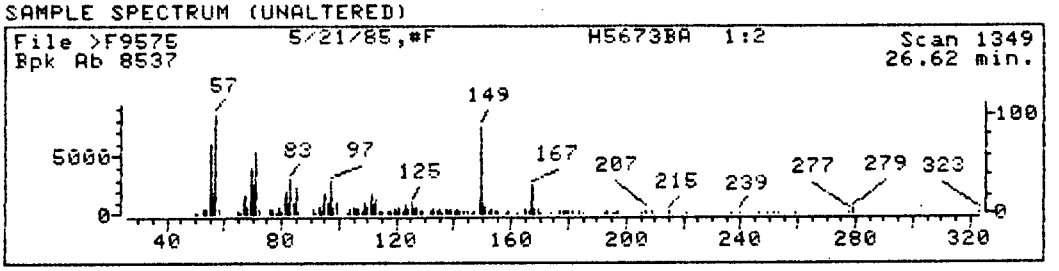
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

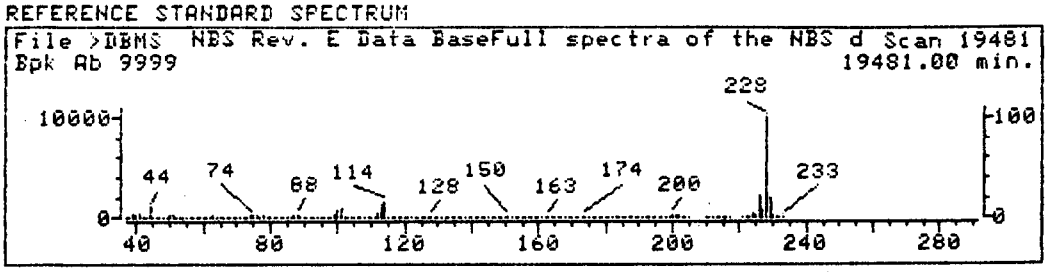


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

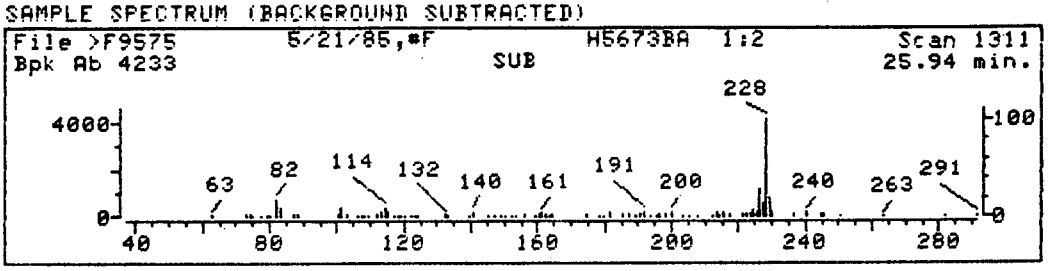
BTL#34

Compound No: 64
Compound Name: bis(2-Ethylhexyl)phthalate
Scan Number: 1349
Retention Time: 26.62 min.
Area: 21636
Concentration: 37.50 UG/ML
q-value: 99

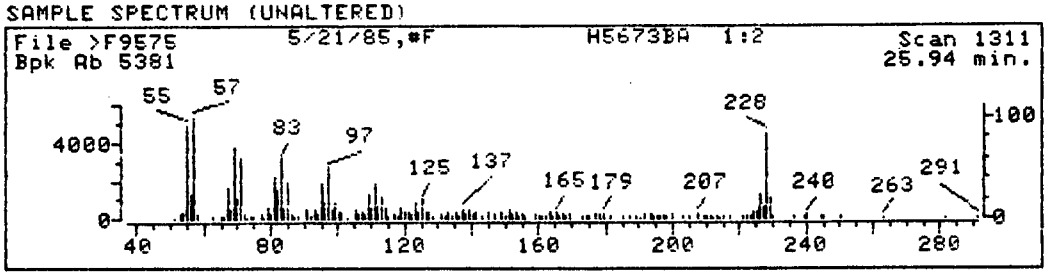
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



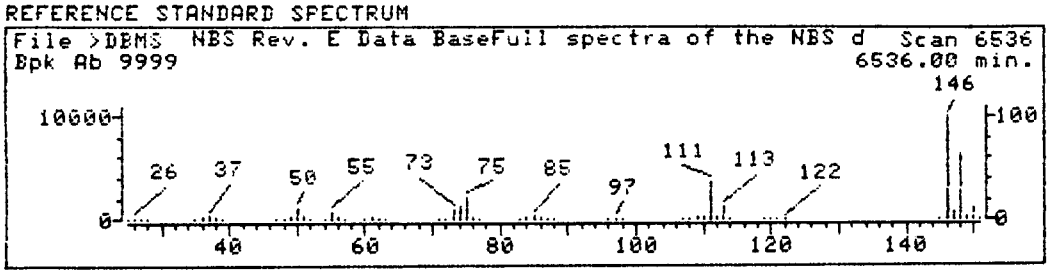
SAMPLE SPECTRUM (UNALTERED)



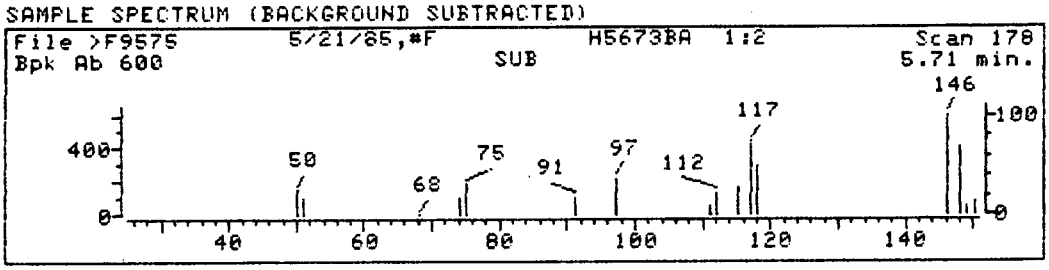
Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2 BTL#34
Quant Time: 850522 16:34
Injected at: 850522 13:27

Compound No: 62
Compound Name: Chrysene
Scan Number: 1311
Retention Time: 25.94 min.
Area: 18433
Concentration: 33.16 UG/ML
q-value: 96

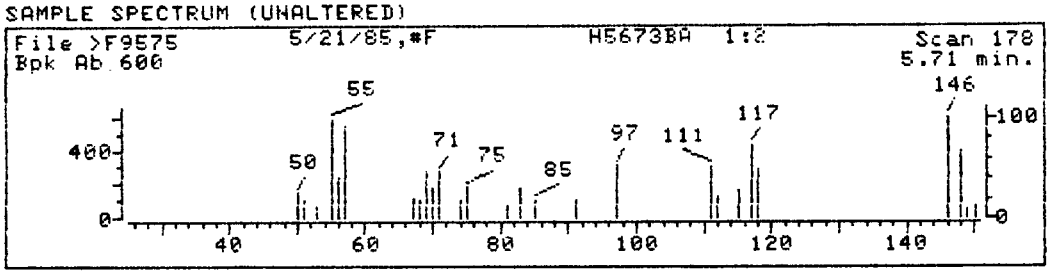
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

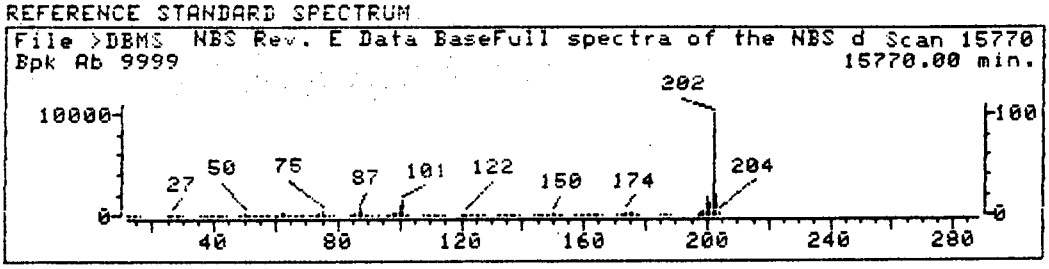


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

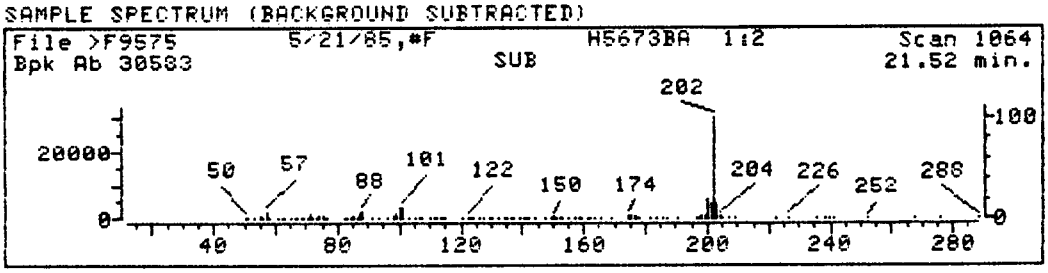
BTL#34

Compound No: 4
Compound Name: 1,3-Dichlorobenzene
Scan Number: 178
Retention Time: 5.71 min.
Area: 1149
Concentration: 3.42 UG/ML
q-value: 93

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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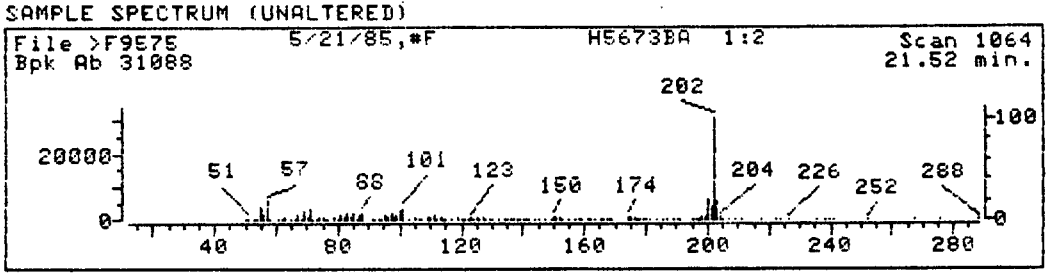
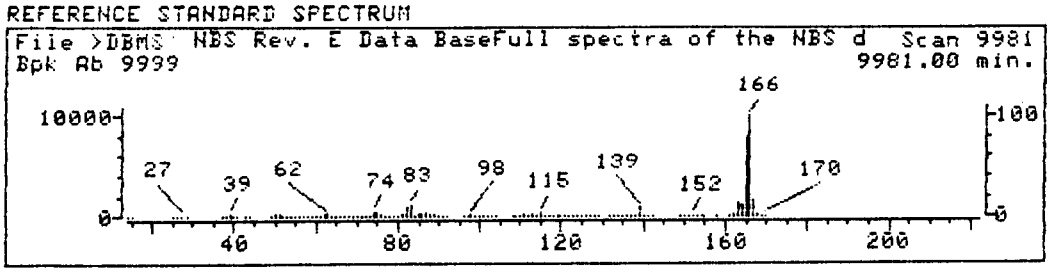


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

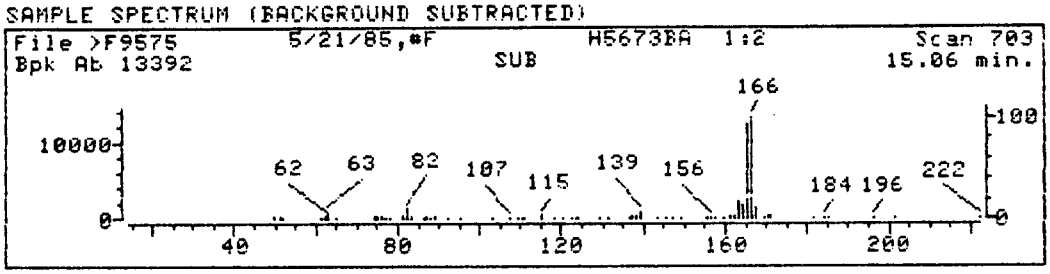
BTL#34

Compound No: 38
Compound Name: Fluoranthene
Scan Number: 1064
Retention Time: 21.52 min.
Area: 103410
Concentration: 91.05 UG/ML
q-value: 96

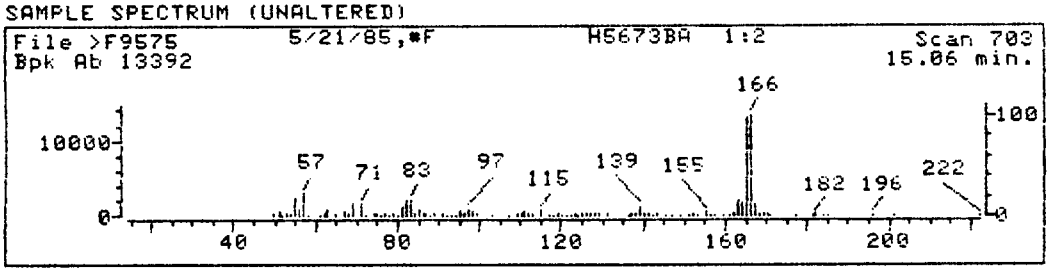
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

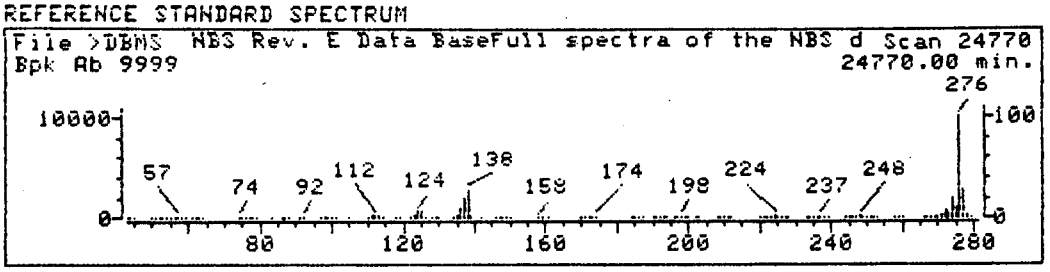


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

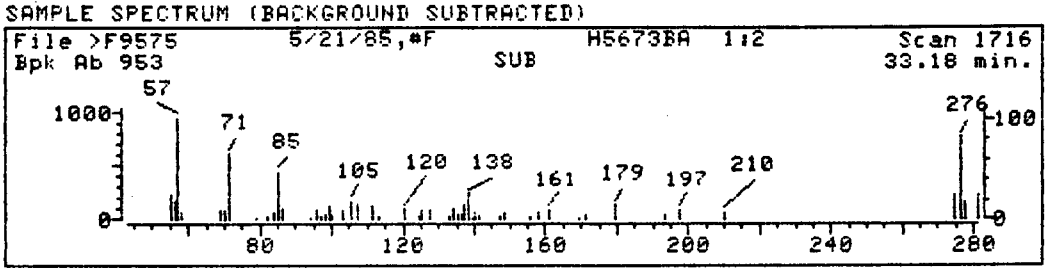
BTL#34

Compound No: 28
Compound Name: Fluorene
Scan Number: 703
Retention Time: 15.06 min.
Area: 44436
Concentration: 55.27 UG/ML
q-value: 99

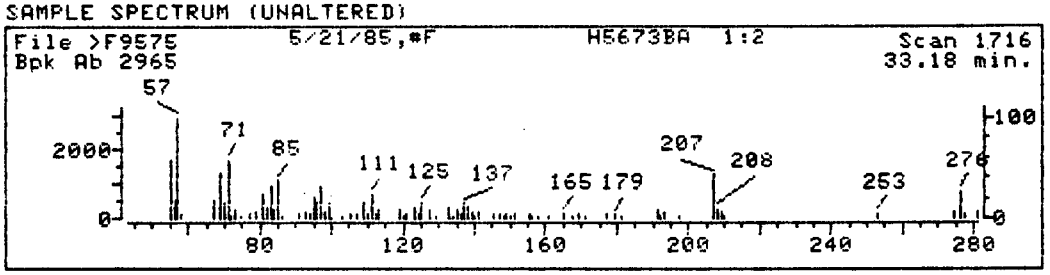
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

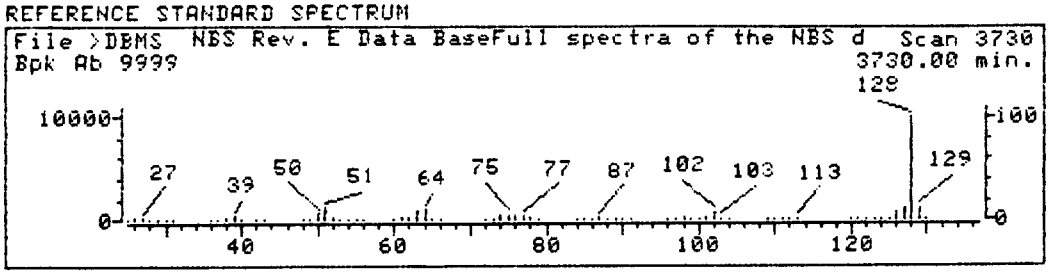


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

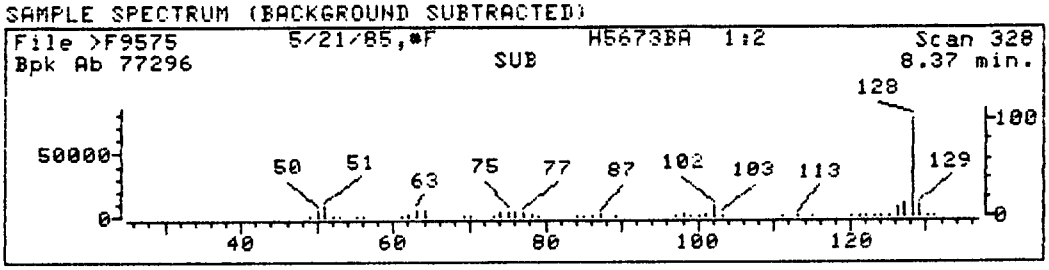
BTL#34

Compound No: 69
Compound Name: Indeno(1,2,3-c,d)pyrene
Scan Number: 1716
Retention Time: 33.18 min.
Area: 3370
Concentration: 18.77 UG/ML
q-value: 95

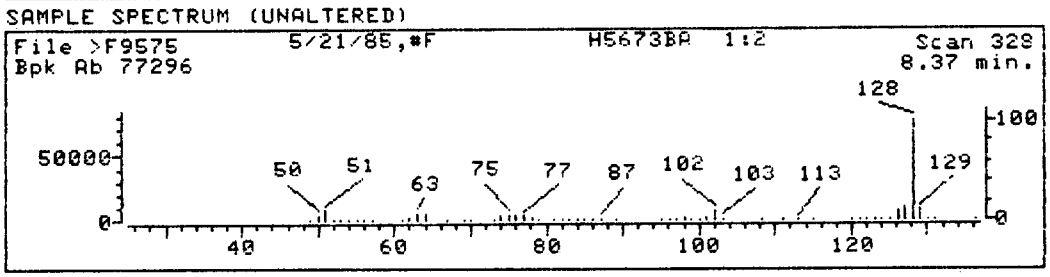
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

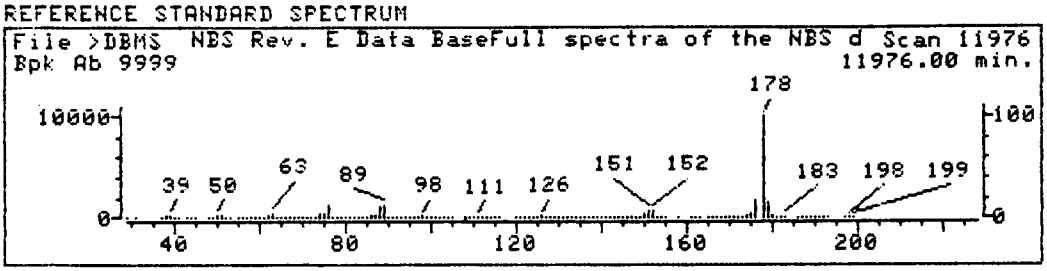


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

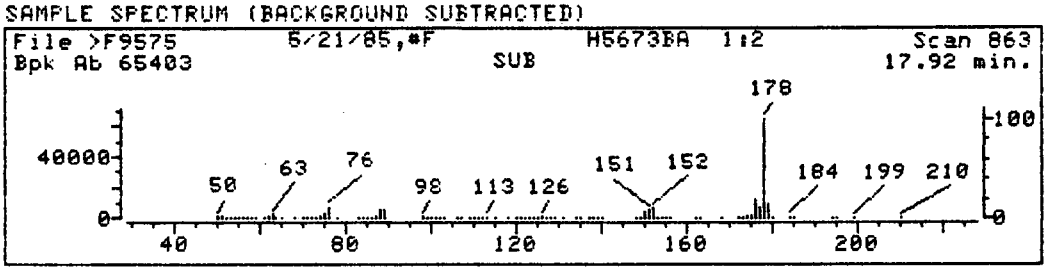
BTL#34

Compound No: 17
Compound Name: Naphthalene
Scan Number: 328
Retention Time: 8.37 min.
Area: 206017
Concentration: 219.10 UG/ML
q-value: 95

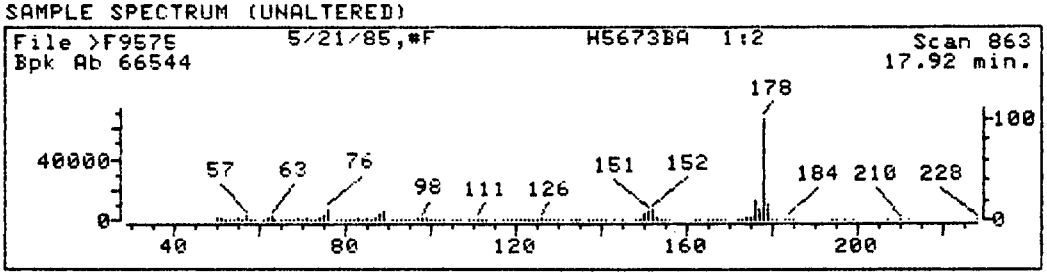
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

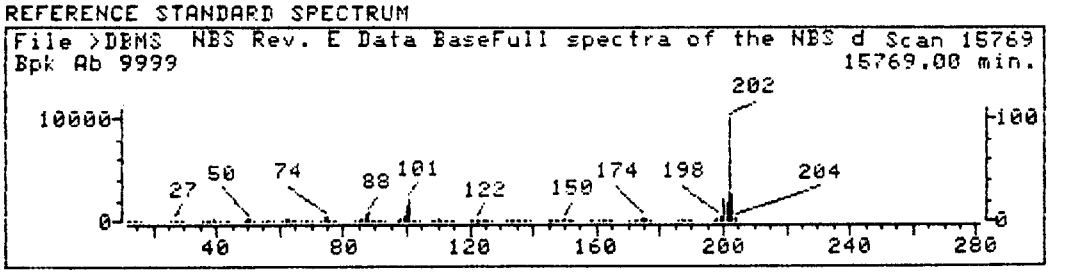


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

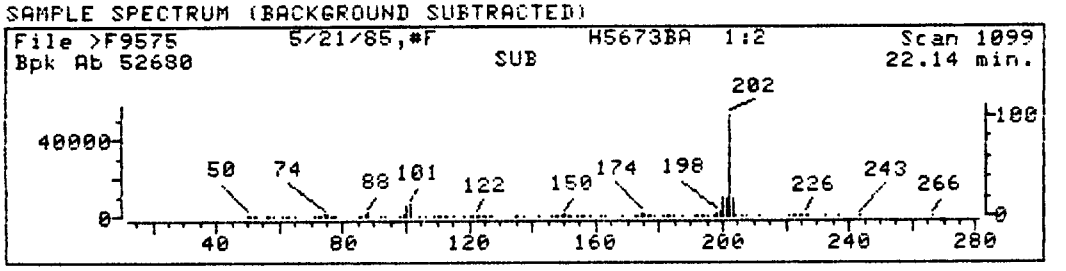
BTL#34

Compound No: 35
Compound Name: Phenanthrene
Scan Number: 863
Retention Time: 17.92 min.
Area: 235878
Concentration: 225.35 UG/ML
q-value: 96

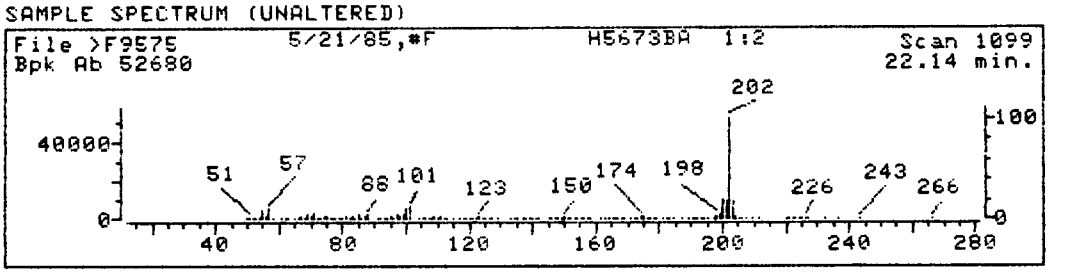
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

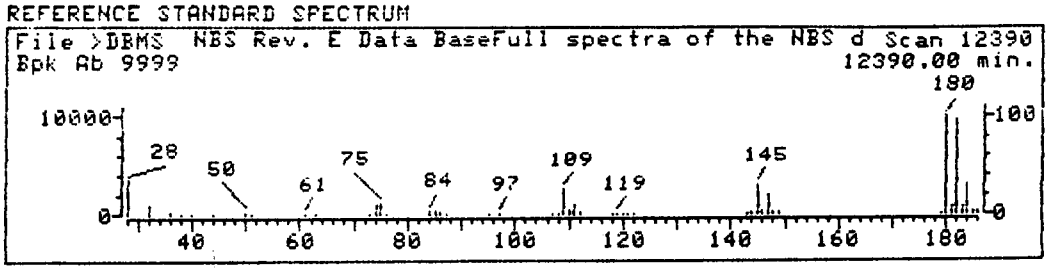


Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2
Quant Time: 850522 16:34
Injected at: 850522 13:27

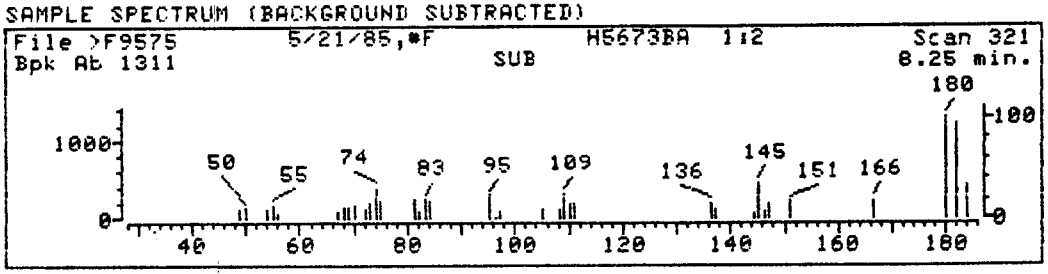
BTL#34

Compound No: 40
Compound Name: Pyrene
Scan Number: 1099
Retention Time: 22.14 min.
Area: 198866
Concentration: 171.19 UG/ML
q-value: 97

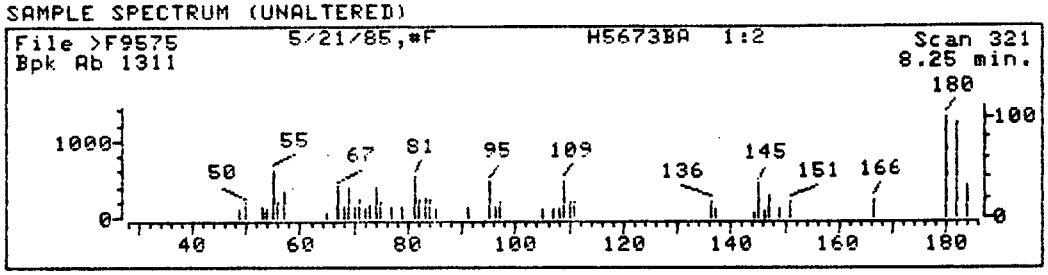
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >F9575::U2
Name: 5/21/85,#F
Misc: H5673BA 1:2 BTL#34
Quant Time: 850522 16:34
Injected at: 850522 13:27

Compound No: 16
Compound Name: 1,2,4-Trichlorobenzene
Scan Number: 321
Retention Time: 8.25 min.
Area: 3143
Concentration: 10.54 UG/ML
q-value: 98

Appendix B

GC/MS Calibration Data

Calibration Report

Title: INSTRUMENT D PP IDFILE
Calibrated: 850509 07:15

Compound	Files: >D8209 RF 90.00	>D8210 RF 180.00	>D8211 RF 540.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
Acrolein	.07706	.08623	.11963	.334	.09431	23.760	(Conc=4000.0,8000.0,24000.)
Acrylonitrile	.24086	.23378	.26527	.377	.24664	6.698	(Conc=400.0,800.0,2400.0)
Benzene	1.83731	1.89138	1.83382	.920	1.85417	1.740	
bis(Chloromethyl)ether	.82559	.40714	.14340	1.000	.45871	74.994	
Bromoform	.66768	.68375	.77896	1.079	.71013	8.470	
Carbon tetrachloride	1.46330	1.53486	1.39235	.744	1.46350	4.869	
Chlorobenzene	1.56327	1.55249	1.52292	1.327	1.54623	1.351	
Chlorodibromomethane	.96377	1.04029	1.04997	.933	1.01801	4.639	
Chloroethane	.80980	.86413	.75817	.192	.81070	6.536	
2-Chloroethylvinyl ether	.25112	.20533	.17408	.936	.21018	18.437	
Chloroform	2.00557	1.99953	1.79746	.615	1.93419	6.124	
Dichlorobromomethane	1.52618	1.53695	1.49243	.780	1.51852	1.530	
Dichlorodifluoromethane	1.29383	1.30226	1.05271	.149	1.21626	11.651	
1,1-Dichloroethane	1.27975	1.30834	1.20415	.536	1.26408	4.259	
1,2-Dichloroethane	1.52749	1.51192	1.42712	.655	1.48884	3.628	
1,1-Dichloroethylene	1.53875	1.62248	1.46817	.460	1.54313	5.006	
1,2-Dichloropropane	.65244	.72724	.69141	.850	.69037	5.419	
trans-1,3-Dichloropropylene	.97609	1.07906	1.07159	.867	1.04225	5.509	
cis-1,3-Dichloropropylene	.89630	.99280	.96985	.936	.95298	5.290	
Ethylbenzene	3.70384	3.65647	3.51959	1.422	3.62663	2.638	
Methyl bromide	.88050	.87157	-	.124	.87604	.721	
Methyl chloride	.92476	.97483	.81941	.088	.90634	8.753	
Methylene chloride	1.69746	1.31346	.96086	.298	1.32393	27.827	
1,1,2,2-Tetrachloroethane	.89599	.85550	.97123	1.202	.90758	6.471	
Tetrachloroethylene	.96579	.99978	.91899	1.203	.96152	4.218	
Toluene	2.47723	2.46673	2.36524	1.267	2.43640	2.539	
1,2-Trans-dichloroethylene	1.32966	1.38447	1.27680	.579	1.33031	4.047	
1,1,1-Trichloroethane	2.03146	1.89022	1.57185	.722	1.83117	12.856	
1,1,2-Trichloroethane	.46026	.46016	.49013	.937	.47019	3.674	
Trichloroethylene	.58870	.57654	.54917	.897	.57147	3.543	
Trichlorofluoromethane	2.46053	2.55178	2.23747	.417	2.41659	6.691	
Vinyl chloride	1.26890	1.30837	1.10464	.151	1.22730	8.804	
meta-Xylene	-	-	-	-	-	-	(Conc=75.0,150.0,450.0)
ortho-and-para-Xylene	-	-	-	-	-	-	(Conc=150.0,300.0,900.0)
Acetaldehyde	-	-	-	-	-	-	(Conc=90.0,180.0,540.0)
Butyl Acetate	-	-	-	-	-	-	(Conc=90.0,180.0,540.0)
Ethyl acetate	-	-	-	-	-	-	(Conc=90.0,180.0,540.0)
Vinyl acetate	-	-	-	-	-	-	(Conc=90.0,180.0,540.0)
1,2-Dichloroethane-D4	1.46923	1.48379	1.41241	.649	1.45514	2.592	(Conc=250.0,250.0,250.0)
Toluene-D8	2.54756	2.69965	2.42291	1.257	2.55671	5.421	(Conc=250.0,250.0,250.0)
p-Bromofluorobenzene	1.68316	1.62559	1.59777	1.525	1.63550	2.663	(Conc=250.0,250.0,250.0)
Methyl methacrylate	-	-	-	-	-	-	(Conc=500.0,500.0,500.0)

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: ACID ID FILE.....3/15/85,#F,WWC
Calibrated: 850521 10:23

Compound	Files: >F9523 RF 60.00	>F9522 RF 100.00	>F9521 RF 300.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
2-Chlorophenol	.69003	.83360	.61837	.941	.71400	15.350	
2-Fluorophenol	.59328	.73761	.66756	.637	.66615	10.834	(Conc=100.0,100.0,100.0)
Phenol	.84410	1.03644	.79137	.920	.89064	14.483	
Phenol-D5	.64297	.91921	.71764	.915	.75994	18.804	(Conc=100.0,100.0,100.0)
2-Methylphenol	.99010	.94714	.82311	1.145	.92011	9.424	
4-Methylphenol	1.13980	1.04320	.89806	1.214	1.02702	11.848	
Benzoic acid	.70189	.71563	.73560	1.583	.71771	2.362	
2,4-Dichlorophenol	.21429	.29543	.22565	.973	.24512	17.923	
2,4-Dimethylphenol	.30775	.37533	.28516	.931	.32275	14.538	
2-Nitrophenol	.14488	.19457	.14669	.894	.16204	17.390	
p-Chloro-m-cresol	.28219	.33450	.27022	1.241	.29564	11.564	
4,6-Dinitro-o-cresol	.25683	.32439	.30240	1.159	.29454	11.699	
2,4-Dinitrophenol	.08579	.11770	.17328	1.036	.12559	35.252	
4-Nitrophenol	.15285	.23706	.24720	1.079	.21237	24.388	
2,4,5-Trichlorophenol	.57494	.57129	.58110	.854	.57578	.861	
2,4,6-Trichlorophenol	.30346	.38929	.32529	.843	.33935	13.145	
2,4,6-Tribromophenol	.06569	.08305	.07086	.889	.07320	12.174	(Conc=100.0,100.0,100.0)
Pentachlorophenol	.07801	.10175	.09449	.986	.09142	13.308	

RF - Response Factor (Subscript is amount in UG/ML)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Check Report

Title: ACID ID FILE.....3/15/85,$F,WWC
Calibrated: 850521 10:23

Check Standard Data File: >F9551
Injection Time: 850521 21:47

Compound	$\overline{RF}$	RF	%Diff	Calib Meth
2-Chlorophenol	.71400	.78259	9.61	Average
2-Fluorophenol	.66615	.76010	14.10	Average
Phenol	.89064	.97433	9.40	Average
Phenol-D5	.75994	.87390	15.00	Average
2-Methylphenol	.92011	-	-	Average
4-Methylphenol	1.02702	-	-	Average
Benzoic acid	.71771	-	-	Average
2,4-Dichlorophenol	.24512	.30031	22.52	Average
2,4-Dimethylphenol	.32275	.35445	9.82	Average
2-Nitrophenol	.16204	.19503	20.36	Average
p-Chloro-m-cresol	.29564	.32529	10.03	Average
4,6-Dinitro-o-cresol	.29454	.30650	4.06	Average
2,4-Dinitrophenol	.12559	.08748	30.35	Average
4-Nitrophenol	.21237	.17615	17.05	Average
2,4,5-Trichlorophenol	.57578	.43117	25.12	Average
2,4,6-Trichlorophenol	.33935	.43117	27.06	Average
2,4,6-Tribromophenol	.07320	.08553	16.84	Average
Pentachlorophenol	.09142	.08953	2.07	Average

Calibration Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850522 08:36

Compound	Files: >F9550 RF 60.00	>F9549 RF 100.00	>F9548 RF 200.00	>F9426 RF 150.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
N-Nitrosodimethylamine	.98210	.87320	.83245	-	.469	.89592	8.636	
bis(2-Chloroethyl) ether	1.15691	1.10985	1.13897	-	.932	1.13524	2.092	
1,3-Dichlorobenzene	1.20578	1.14451	1.15930	-	.983	1.16986	2.733	
1,4-Dichlorobenzene	1.30915	1.26893	1.23094	-	1.006	1.26967	3.080	
1,2-Dichlorobenzene	1.22315	1.23051	1.20239	-	1.077	1.21868	1.196	
Nitrobenzene-d5	.99570	1.10155	1.20128	-	1.248	1.09951	9.350	(Conc=50.0,50.0,50.0,50.0)
bis(2-Chloroisopropyl)ether	.19961	.16833	.17358	-	1.145	.18091	9.278	
2-Fluorobiphenyl	.30804	.34607	.33944	-	1.396	.33118	6.134	(Conc=50.0,50.0,50.0,)
N-Nitrosodi-n-propylamine	.22921	.22947	.24060	-	.767	.23310	2.790	
Hexachloroethane	.12621	.12626	.12687	-	.762	.12644	.291	
Nitrobenzene	.39034	.41346	.40184	-	.800	.40188	2.876	
Isophorone	.46853	.47681	.47391	-	.870	.47308	.888	
bis(2-Chloroethoxy)methane	.32121	.32380	.34661	-	.957	.33054	4.228	
1,2,4-Trichlorobenzene	.26747	.26636	.25737	-	.991	.26374	2.102	
Naphthalene	.84218	.84143	.81123	-	1.006	.83161	2.123	
Hexachlorobutadiene	.16402	.16510	.15593	-	1.076	.16168	3.102	
Hexachlorocyclopentadiene	.13464	.14362	.20362	-	.819	.16063	23.349	
2-Chloronaphthalene	.98998	.92713	.93983	-	.872	.95232	3.490	
Dimethyl phthalate	1.17600	1.21165	1.23838	-	.973	1.20868	2.589	
Acenaphthylene	1.57957	1.56715	1.57506	-	.964	1.57393	.399	
2,6-Dinitrotoluene	.22246	.26123	.28549	-	.985	.25639	12.398	
Acenaphthene	1.17525	1.09039	1.11050	-	1.008	1.12538	3.940	
2,4-Dinitrotoluene	.27354	.33785	.38636	-	1.071	.33258	17.017	
Diethyl phthalate	1.15636	1.17039	1.23194	-	1.137	1.18623	3.389	
Fluorene	1.18898	1.20354	1.17890	-	1.122	1.19047	1.041	
4-Chlorophenyl phenyl ether	.55040	.55875	.56695	-	1.133	.55870	1.482	
N-Nitrosodiphenylamine	.78339	.78273	.74196	-	1.166	.76936	3.085	
1,2-Diphenylhydrazine	1.37017	1.37787	1.40690	-	1.168	1.38498	1.399	
4-Bromophenyl phenyl ether	.13088	.13346	.12609	-	.933	.13014	2.876	
Hexachlorobenzene	.13290	.13025	.13210	-	.950	.13175	1.032	
Phenanthrene	.81770	.79973	.78352	-	1.004	.80032	2.137	
Anthracene	.92771	.90722	.91263	-	1.011	.91585	1.159	
Di-n-butyl phthalate	1.03806	.94092	1.02074	-	1.133	.99991	5.182	
Fluoranthene	.90497	.87456	.82548	-	1.205	.86834	4.619	
Benzidine	.04320	.08210	.07350	-	1.235	.06627	30.836	
Pyrene	.92212	.88049	.86200	-	1.240	.88820	3.467	
Alpha-BHC	.09941	.10816	-	.13488	.940	.11415	16.186	
Beta-BHC	.06481	.07685	-	.08579	.986	.07582	13.886	
Gamma-BHC	.09732	.09012	-	.10953	.990	.09899	9.913	
Delta-BHC	.07551	.07777	-	.07990	1.030	.07772	2.822	
Heptachlor	.11153	.12263	-	.15842	1.092	.13086	18.724	
Aldrin	.13286	.13094	-	.13751	1.140	.13377	2.525	
Heptachlor epoxide	.56352	.08807	-	.48838	.826	.37999	67.262	

RF - Response Factor (Subscript is amount in UG/ML)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850522 08:36

Compound	Files: >F9550 RF 60.00	>F9549 RF 100.00	>F9548 RF 200.00	>F9426 RF 150.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
Chlordane	.04484	.05531	-	.07341	.848	.05785	24.976	(Conc=100.0,200.0,,500.0)
Endosulfan I	.29496	.14545	-	.30140	.860	.24727	35.686	
4,4'-DDE	.98516	.49533	-	.96982	.884	.81677	34.095	
Dieldrin	1.52523	.78511	-	1.35076	.884	1.22037	31.704	
Endrin	.15357	.14613	-	.14985	.905	.14985	2.483	
Endosulfan II	.12047	.13751	-	.14396	.913	.13398	9.057	
4,4'-DDD	1.34078	1.02176	-	1.79412	.922	1.38555	28.012	
Endrin aldehyde	-	-	-	.29605	.919	.29605	-	
4,4'-DDT	.55223	.40132	-	.63945	.955	.53100	22.688	
Endosulfan sulfate	.06154	.06740	-	.09787	.952	.07560	25.802	
Terphenyl-D14	.91266	1.00786	1.10740	-	.884	1.00931	9.648	(Conc=50.0,50.0,50.0,50.0)
Butyl benzyl phthalate	.75625	.82471	.85815	-	.954	.81304	6.388	
Benzo(a)anthracene	.74361	.75844	.88051	-	.998	.79419	9.459	
Chrysene	1.02713	.96974	1.09545	-	1.003	1.03077	6.105	
3,3'-Dichlorobenzidine	.04784	.05630	.08730	-	1.005	.06381	32.555	
bis(2-Ethylhexyl)phthalate	1.01105	1.06339	1.13555	-	1.029	1.07000	5.843	
Di-n-octyl phthalate	1.18710	1.20991	1.28187	-	1.097	1.22629	4.034	
Benzo(b)fluoroanthene	.43780	.41201	.52314	-	1.118	.45765	12.710	
Benzo(k)fluoranthene	.33454	.39806	.42120	-	1.121	.38460	11.666	
Benzo(a)pyrene	.26511	.32172	.40390	-	1.151	.33024	21.133	
Indeno(1,2,3-c,d)pyrene	.25503	.33609	.40755	-	1.258	.33289	22.923	
Dibenzo(a,h)anthracene	.18939	.27611	.30402	-	1.260	.23984	24.405	
Benzo(ghi)perylene	.20775	.28162	.30042	-	1.282	.26326	18.608	

RF - Response Factor (Subscript is amount in UG/ML)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Check Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850522 08:36

Check Standard Data File: >F9565
Injection Time: 850522 07:12

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
N-Nitrosodimethylamine	.89592	.7411	19	Average	
bis(2-Chloroethyl) ether	1.13524	1.36617	20.34	Average	
1,3-Dichlorobenzene	1.16986	1.35318	15.67	Average	
1,4-Dichlorobenzene	1.26967	1.56167	23.00	Average	
1,2-Dichlorobenzene	1.21868	1.47979	21.43	Average	
Nitrobenzene-d5	~~1.09951~~	~~1.75818~~	~~59.98~~	~~Average~~	~~(Conc=50.00)~~
bis(2-Chloroisopropyl)ether	.18051	.24438	35.39	Average	
2-Fluorobiphenyl	~~.33110~~	~~.64507~~	~~94.78~~	~~Average~~	~~(Conc=50.00)~~
N-Nitrosodi-n-propylamine	.23310	.24459	4.93	Average	
Hexachloroethane	.12644	.09915	21.59	Average	
Nitrobenzene	.40188	.43024	7.06	Average	
Isophorone	.47308	.57318	21.16	Average	
bis(2-Chloroethoxy)methane	.33054	.39589	19.77	Average	
1,2,4-Trichlorobenzene	.26374	.28311	7.35	Average	
Naphthalene	.83161	.93987	13.02	Average	
Hexachlorobutadiene	.16168	.16019	.92	Average	
Hexachlorocyclopentadiene	.16063	~~.05996~~ .0663	~~62.67~~	Average	29
2-Chloronaphthalene	.95232	.87422	8.20	Average	
Dimethyl phthalate	1.20868	1.48202	22.61	Average	
Acenaphthylene	1.57393	1.63070	3.61	Average	
2,6-Dinitrotoluene	.25639	.37941	47.98	Average	
Acenaphthene	1.12538	1.11228	1.16	Average	
2,4-Dinitrotoluene	.33258	.53579	61.10	Average	
Diethyl phthalate	1.18623	1.65252	39.31	Average	
Fluorene	1.19047	1.45430	22.16	Average	
4-Chlorophenyl phenyl ether	.55870	.67008	19.94	Average	
N-Nitrosodiphenylamine	.76936	.77501	.73	Average	
1,2-Diphenylhydrazine	1.38498	1.59142	14.91	Average	
4-Bromophenyl phenyl ether	.13014	.14930	14.72	Average	
Hexachlorobenzene	.13175	.15056	14.28	Average	
Phenanthrene	.80032	.82261	2.79	Average	
Anthracene	.91585	.91609	.03	Average	
Di-n-butyl phthalate	.99991	1.06160	6.17	Average	
Fluoranthene	.86834	.64890	25.27	Average	
Benzidine	.06627	~~.00541~~ .0631	~~91.83~~	Average	53
Pyrene	.88820	.56908	35.93	Average	
Alpha-BHC	~~.11415~~	~~.11003~~	~~3.61~~	~~Average~~	
Beta-BHC	~~.07582~~	~~.17163~~	~~126.38~~	~~Average~~	
Gamma-BHC	~~.09899~~	~~.17163~~	~~73.38~~	Average	
Delta-BHC	~~.07772~~	~~.08250~~	~~6.14~~	Average	
Heptachlor	~~.13086~~	~~.11984~~	~~8.42~~	~~Average~~	
Aldrin	~~.13377~~	~~.13473~~	~~.72~~	~~Average~~	
Heptachlor epoxide	~~.37999~~	~~.49168~~	~~29.39~~	Average	
Chlordane	.05785	~~.02068~~	~~22.17~~	Average	(Conc=200.00)

RF - Response Factor from daily standard file at 100.00 UG/ML

$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Calibration Check Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850522 08:36

Check Standard Data File: >F9565
Injection Time: 850522 07:12

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Endosulfan I	.24727	.31734	28.34	Average	
4,4'-DDE	.81677	1.13082	38.45	Average	
Dieldrin	1.22037	1.34637	10.33	Average	
Endrin	.14985	-	-	Average	
Endosulfan II	.13398	.20543	53.32	Average	
4,4'-DDD	1.38595	2.20813	59.37	Average	
Endrin aldehyde	.29605	-	-	Average	
4,4'-DDT	.53180	.53750	1.22	Average	
Endosulfan sulfate	.07560	.12117	60.27	Average	
Terphenyl-D14	1.00931	2.86911	184.27	Average	(Conc=50.00)
Butyl benzyl phthalate	.81304	1.06518	31.01	Average	
Benzo(a)anthracene	.79419	.90764	14.29	Average	
Chrysene	1.03077	1.18408	14.87	Average	
3,3'-Dichlorobenzidine	.06381	.02722	57.34	Average	60
bis(2-Ethylhexyl)phthalate	1.07000	1.18505	10.75	Average	
Di-n-octyl phthalate	1.22629	1.85777	51.45	Average	26
Benzo(b)fluoroanthene	.45765	.70883	54.41	Average	26
Benzo(k)fluoranthene	.38460	.80945	110.47	Average	33
Benzo(a)pyrene	.33024	.68539	107.54	Average	30
Indeno(1,2,3-c,d)pyrene	.33289	.76976	131.24	Average	25
Dibenzo(a,h)anthracene	.23984	.63030	162.83	Average	105
Benzo(ghi)perylene	.26326	.66045	150.87	Average	102

RF - Response Factor from daily standard file at 100.00 UG/ML

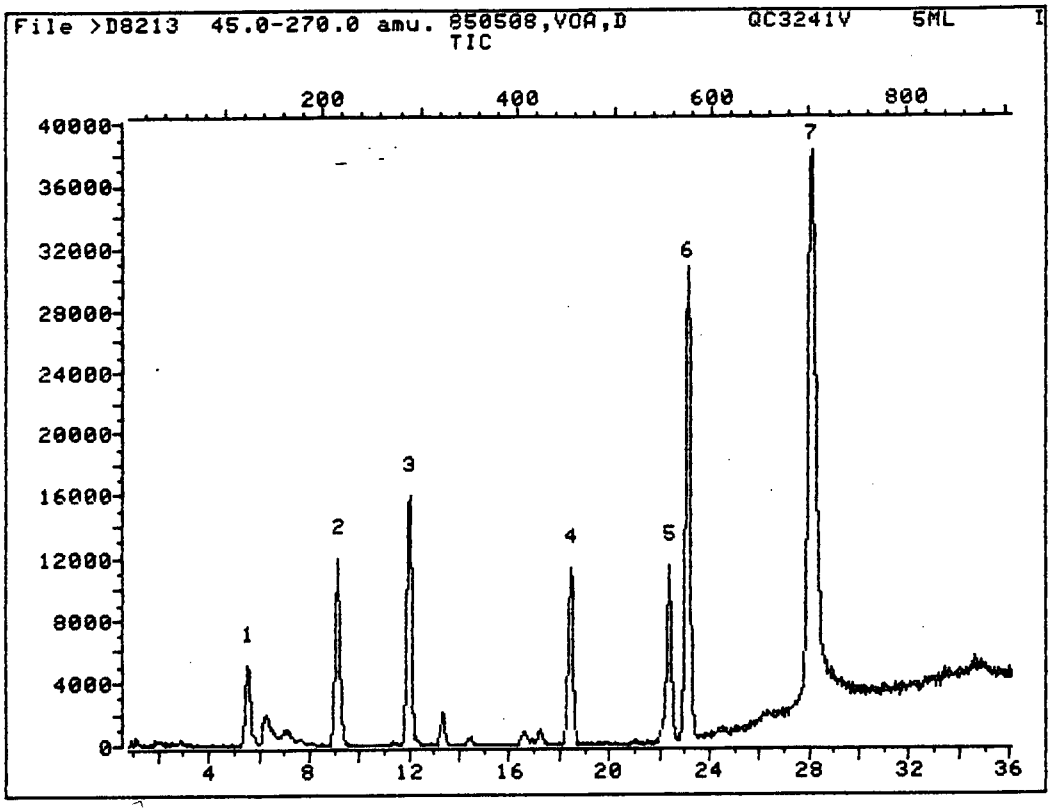
$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Appendix C1

GC/MS Subsidiary Data

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



Data File: >D8213::U4
Name: 850508,VOA,D
Misc Data: QC3241V 5ML IFBPREP SOIL

QUANT REPORT

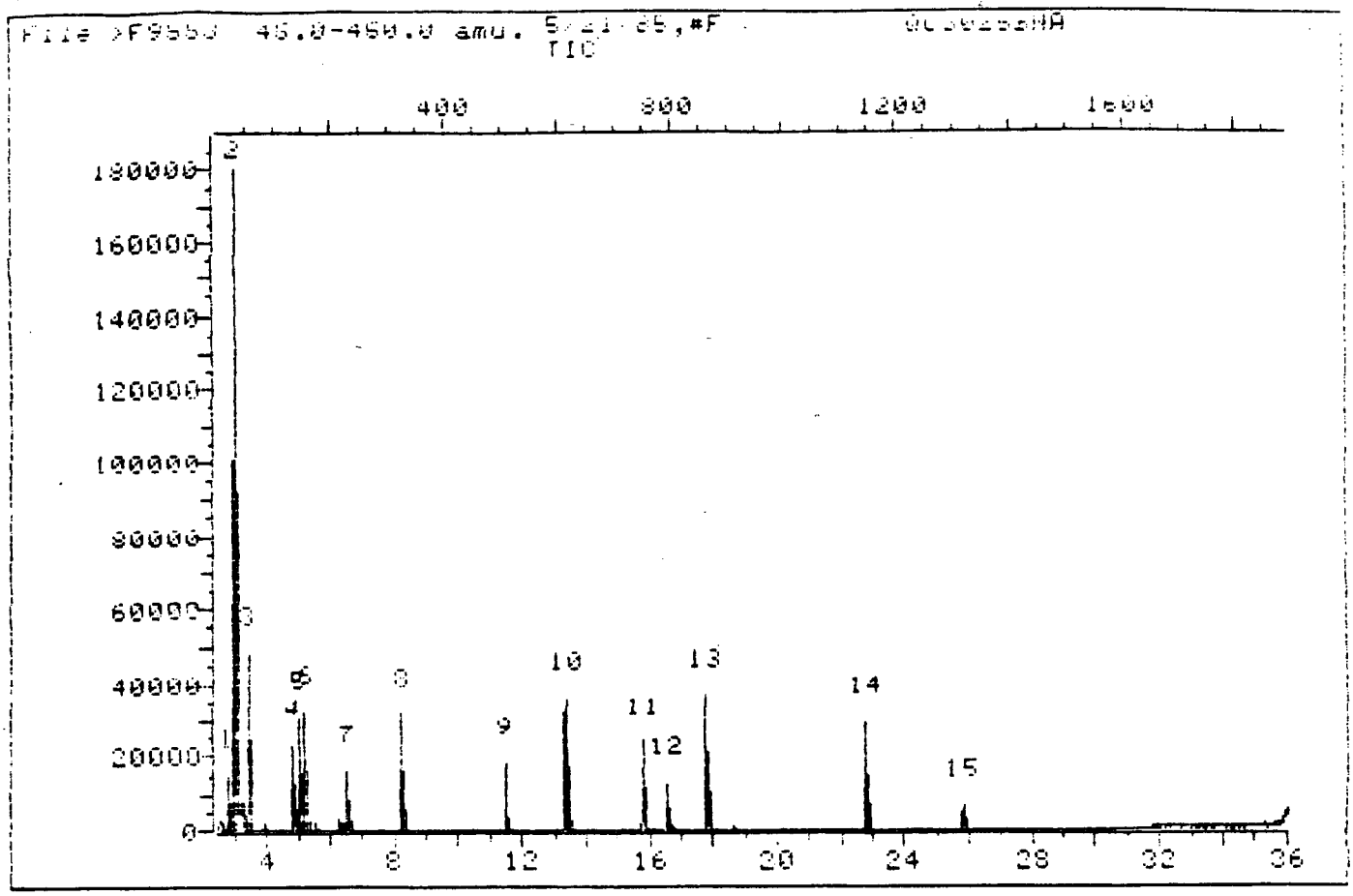
Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850509 09:03
Injected at: 850509 07:57
Data File:)D8213::U4 Dilution Factor: 1.00
Name: 850508,VOA,D
Misc: QC3241V 5ML IFBPREP SOIL

ID File: DVOA
Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, D, 831107, RL
Last Calibration: 850509 09:02

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane	18.45	455	51504	200.00	NG	99
2)	Acrolein	6.29	142	22012	~~906.37~~	NG	100
3)	Acrylonitrile	7.06	162	7729	~~121.69~~	NG	76
5)	bis(Chloromethyl)ether	18.41	454	18898	~~159.98~~	NG	66
11)	2-Chloroethylvinyl ether	17.21	423	2101	~~38.82~~	NG	100
12)	Chloroform	11.38	273	1767	~~3.55~~	NG	95
14)	Dichlorodifluoromethane	2.55	46	606	~~1.93~~	NG	100
21)	Ethylbenzene	26.15	653	2721	2.91	NG	92
24)	Methylene chloride	5.55	123	15881	46.58	NG	78
25)	1,1,2,2-Tetrachloroethane	22.11	549	3667	~~15.69~~	NG	96
27)	Toluene	23.35	581	3077	~~4.90~~	NG	95
29)	1,1,1-Trichloroethane	13.32	323	8713	~~18.48~~	NG	91
31)	Trichloroethylene	16.63	408	2404	16.34	NG	89
32)	Trichlorofluoromethane	7.65	177	1263	~~2.03~~	NG	91
35)	1,2-Dichloroethane-D4	12.00	289	86254	250.00	NG	91
36)	Toluene-D8	23.12	575	153982	250.00	NG	98
37)	p-Bromofluorobenzene	28.06	702	95068	250.00	NG	75
38)	*1,4-Dichlorobutane	22.38	556	58368	200.00	NG	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



Data File: >F9553.UF
Name: 5/21/85,#F
Misc Data: QC3025DNA

DTL#12

QUANT REPORT

Operator ID: WW9928
Output File: ^F9553::AQ
Data File: >F9553::U2
Name: 5/21/85,#F
Disc: QC3025BNA

Quant Rev: 4
Quant Time: 850521 23:17
Injected at: 850521 22:38
Dilution Factor: 1.00

BTL#12

ID File: FACID
Title: ACID ID FILE.....3/15/85,#F,WWC
Last Calibration: 850521 10:24

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.22	156	14834	40.00	UG/ML	93
3)	2-Fluorophenol	3.36	51	22880	92.62	UG/ML	94
5)	Phenol-D5	4.80	132	25921	91.98	UG/ML	98
9)	*d8-Naphthalene	8.20	324	36620	40.00	UG/ML	96
14)	*d10-Acenaphthalene	13.32	612	22206	40.00	UG/ML	95
20)	*d10-Phenanthrene	17.72	860	43052	40.00	UG/ML	99
21)	2,4,6-Tribromophenol	15.77	750	7251	92.04	UG/ML	99

* Compound is ISTD

QUANT REPORT

Operator ID: WW9928
Output File: BF9553::AQ
Data File: >F9553::U2
Name: 5/21/85,#F
Misc: QC3025BNA

Quant Rev: 4
Quant Time: 850522 09:09
Injected at: 850521 22:38
Dilution Factor: 1.00

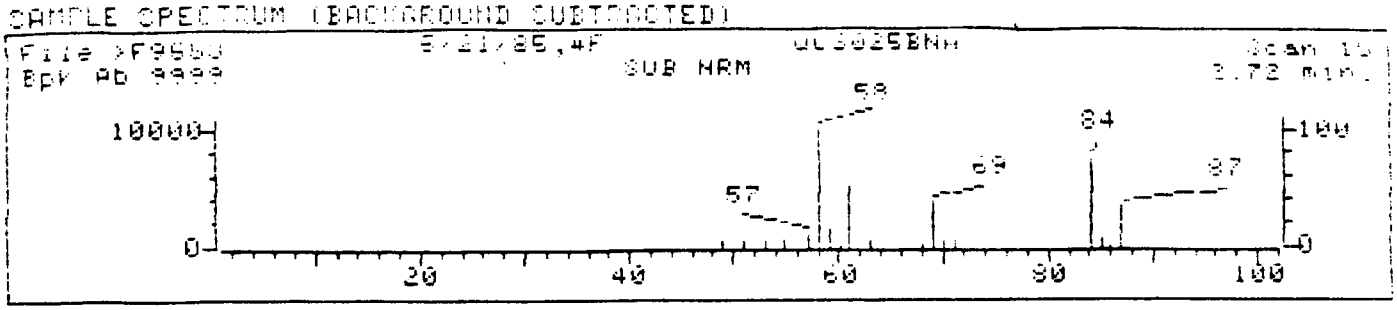
BTL#12

ID File: FBNP
Title: B/N+PEST ID FILE .....MASTER, 850119
Last Calibration: 850522 08:39

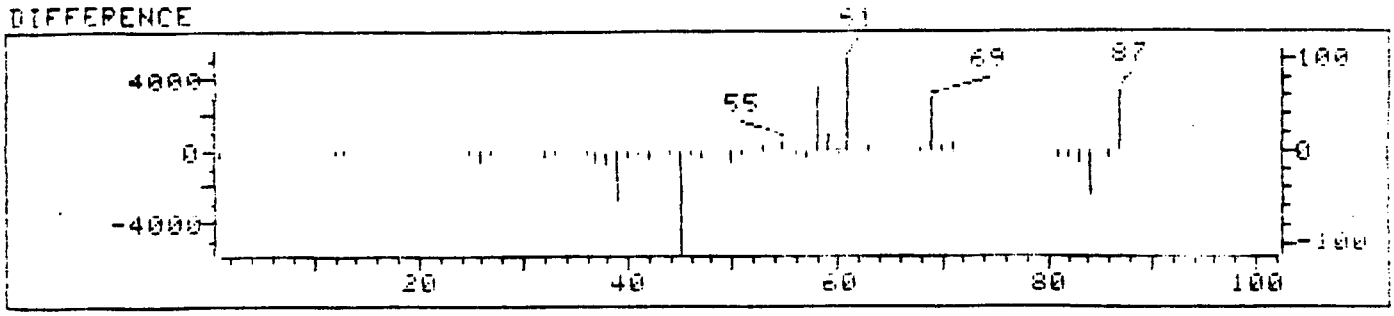
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.22	156	9613	40.00	UG/ML	98
7)	Nitrobenzene-d5	6.50	228	11452	43.34	UG/ML	86
9)	*d8-Naphthalene	8.20	324	36620	40.00	UG/ML	93
10)	2-Fluorobiphenyl	11.47	508	15705	51.80	UG/ML	97
19)	*d10-Acenaphthalene	13.32	612	22206	40.00	UG/ML	95
32)	*d10-Phenanthrene	17.72	860	43052	40.00	UG/ML	97
47)	*d12-Chrysene	25.76	1313	11105	40.00	UG/ML	100
59)	Terphenyl-D14	22.76	1144	25702	91.72	UG/ML	93

* Compound is ISTD

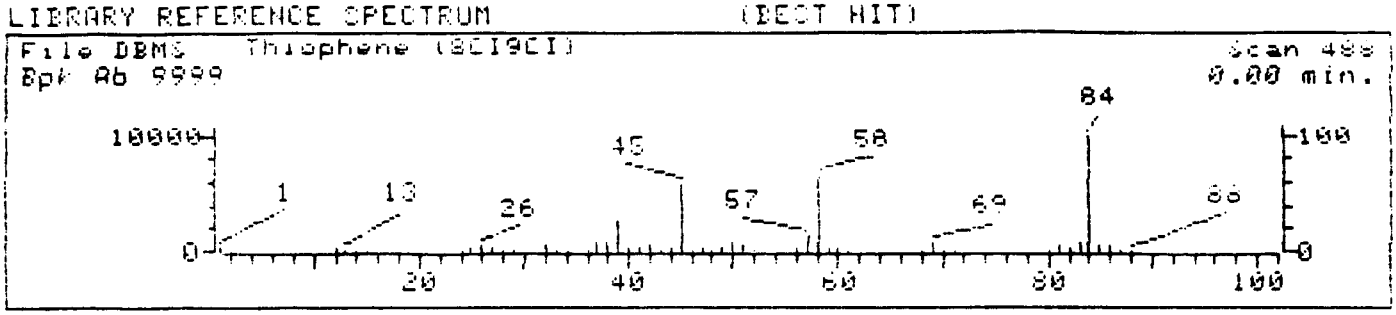
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



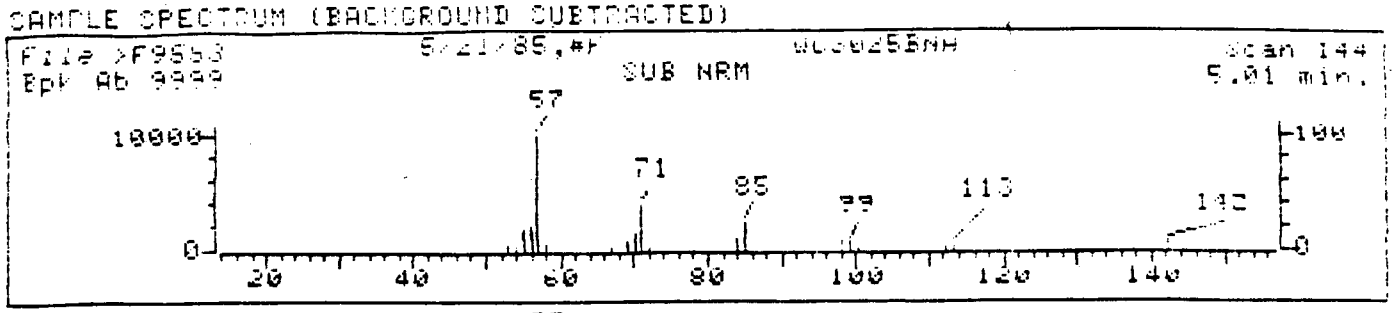
Data File >F9553..U2
Name 5/21/85,#F
Misc Data OC3025BNA DTL#12
RT (min). 3.72
Scan 15
Area 20116
Semi-quantitative Conc. 20.00 UG/ML

Data File >F9553 Scan Number: 15
Search Speed 2 Titling option: 0 Number of ion ranges searched. 59

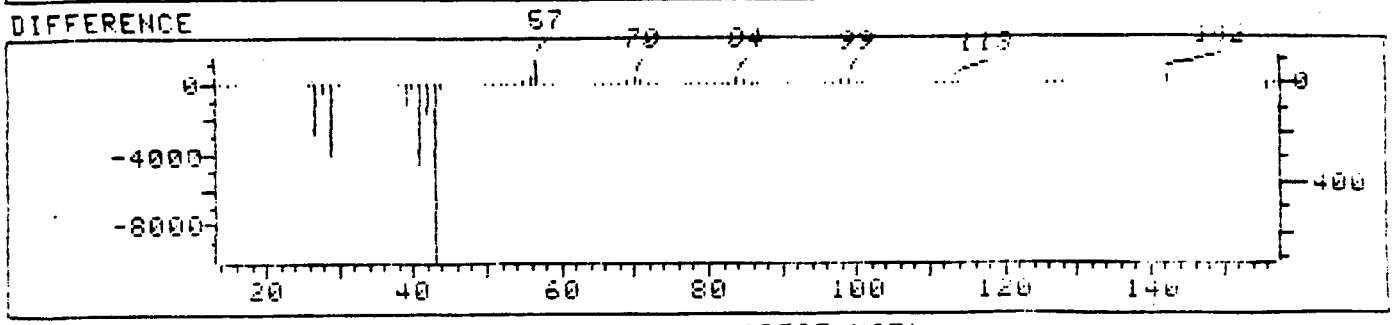
1. Thiophene (8CI9CI) 84 C4H4S
2. Cyclohexane(DOT (8CI9CI) 84 C6H12

	Prob.	Cas#	K	dK	#Flu	Tilt
1.	26	110021	27	71	2	0
2.	11	110827	25	68	3	0

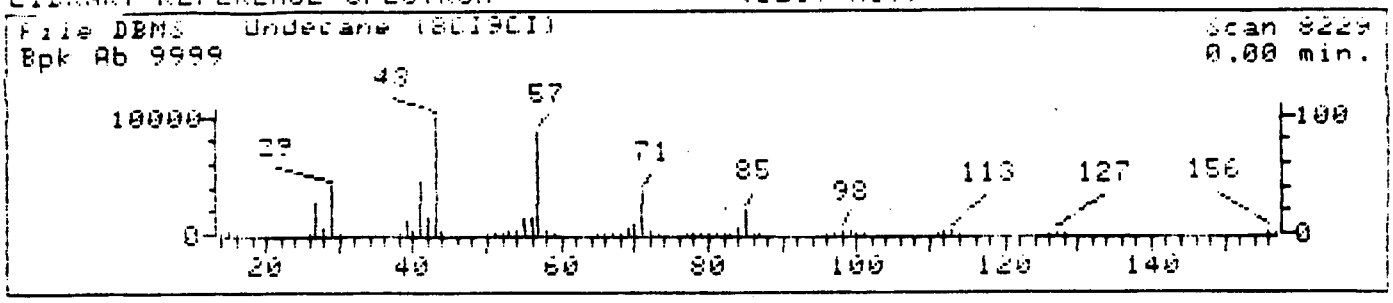
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



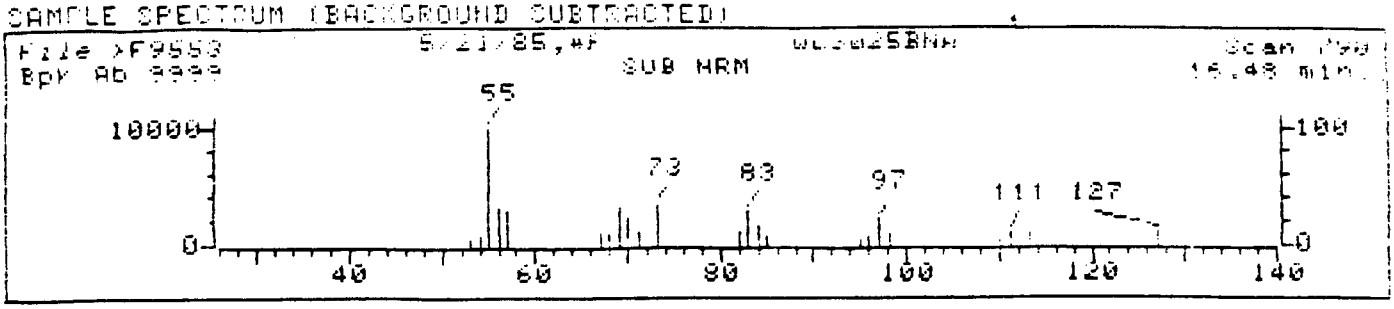
Data File: >F9553.U2
Name: 5/21/85,#F
Misc Data: 0C3025DNA DTL#12
RT (min): 5.01
Scan: 144
Area: 43197
Semi-quantitative Conc: 31.83 UG/ML

Data File: >F9553 Scan Number: 144
Search Speed: 2 Titling option: S Number of ion ranges searched: 63

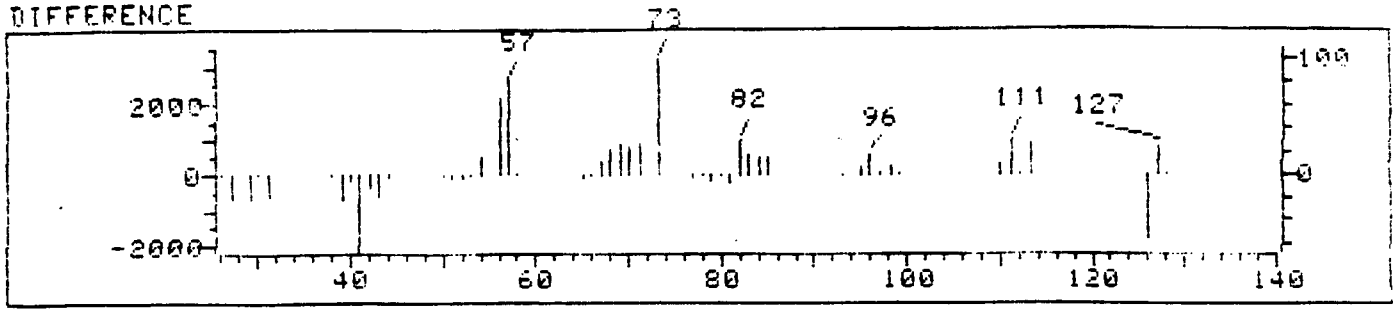
1. Undecane (8CI9CI) 156 C11H24
2. Nonane, 2-methyl- (8CI9CI) 142 C10H22
3. Octane, 2,7-dimethyl- (8CI9CI) 142 C10H22

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	1120214	63	34	2	0
2.	78	871830	38	58	2	0
3.	70	1072168	34	61	2	0

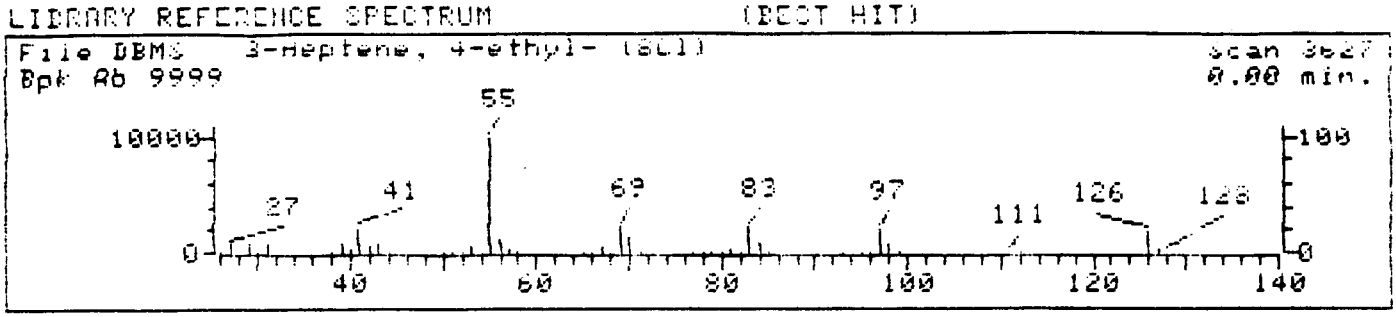
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >F9553..US
Name: 5/21/85,#F
Misc Data: QC3025DNA BTL#12
RT (min): 16.48
Scan: 790
Area: 28790
Semi-quantitative Conc. 21.07 UG/ML

Data File: >F9553 Scan Number: 790
Search Speed: 2 Titling option: S Number of ion ranges searched: 69

1. 3-Heptene, 4-ethyl- (SCI) 126 C9H18
2. 7-Hexadecene, (Z)- (SCI) 224 C16H32
3. Cyclopentane, 2-isopropyl-1,3-dimethyl (SCI) 140 C10H20

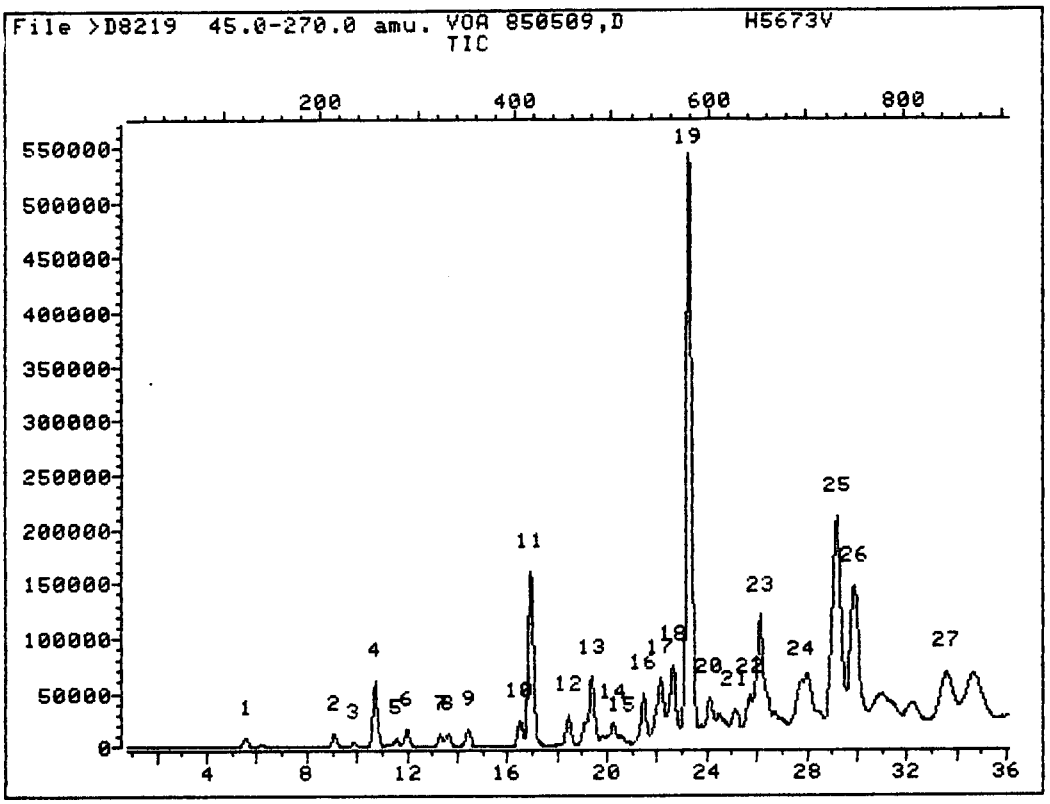
	Prob.	Cas#	K	dK	#Flg	Tilt
1.	38	33933743	44	48	1	0
2.	31	35507096	78	50	2	0
3.	30	32281859	31	79	3	0

Appendix C

Mass Spectral Data for Tentatively Identified Compounds

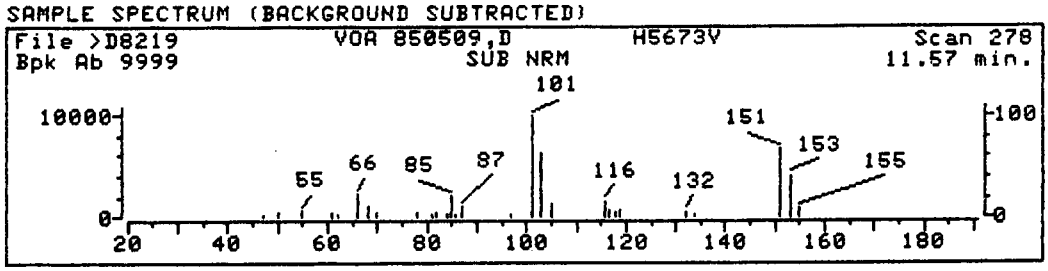
1) For each tentatively identified compound a mass spectrum of the detected compound, a reference mass spectrum for that compound and a plot of the spectral differences are provided.

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS

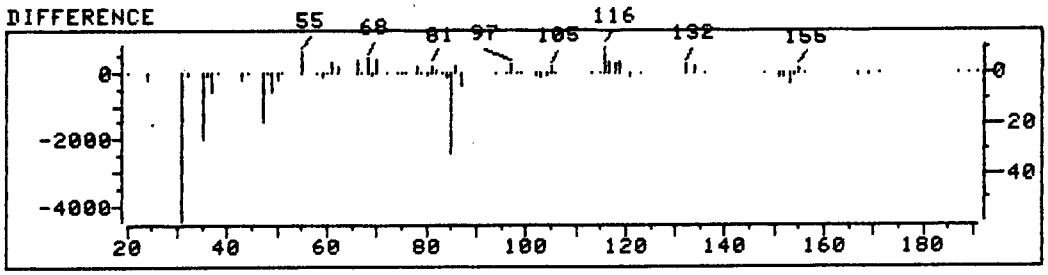


Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V

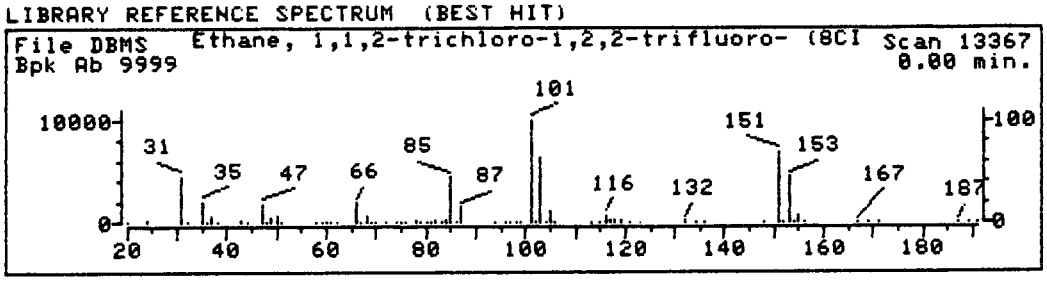
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



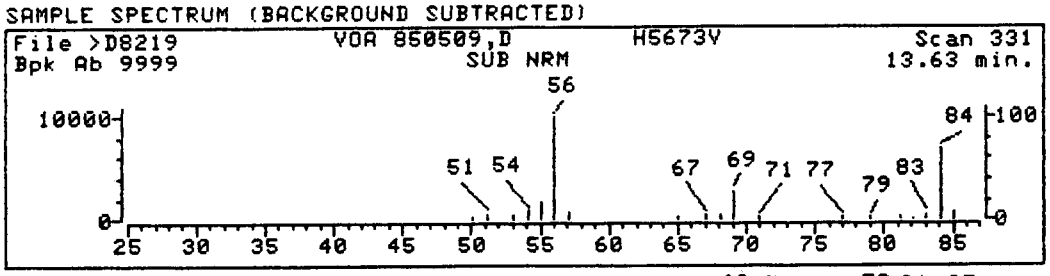
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 11.57
Scan: 278
Area: 69831
Semi-quantitative Conc: 34.17 NG

Data File: >D8219 Scan Number: 278
Search Speed: 2 Titling option: S Number of ion ranges searched: 57

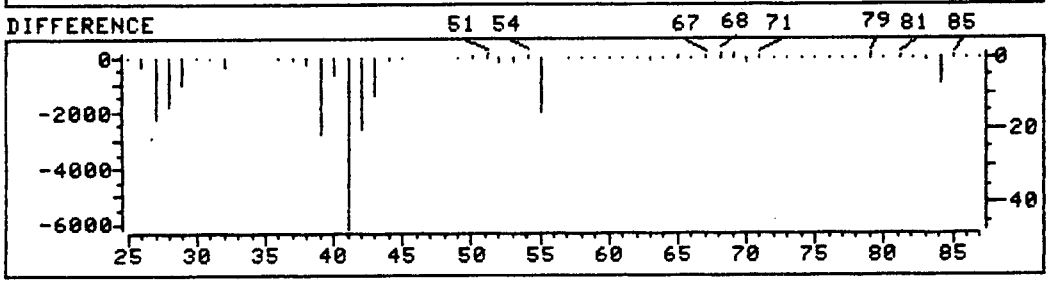
1. Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI9CI) 186 C2Cl3F3

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	70	76131	73	65	3	0

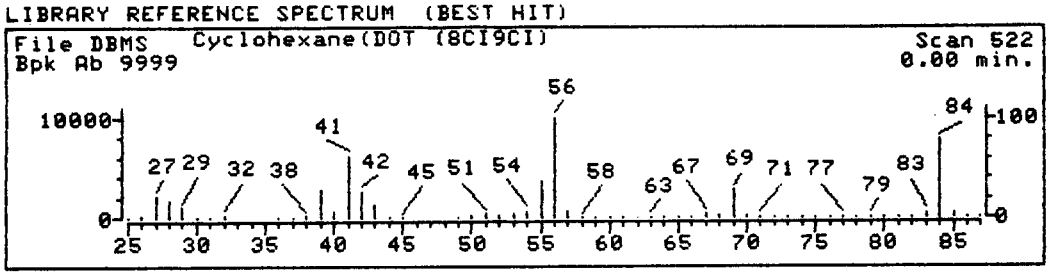
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



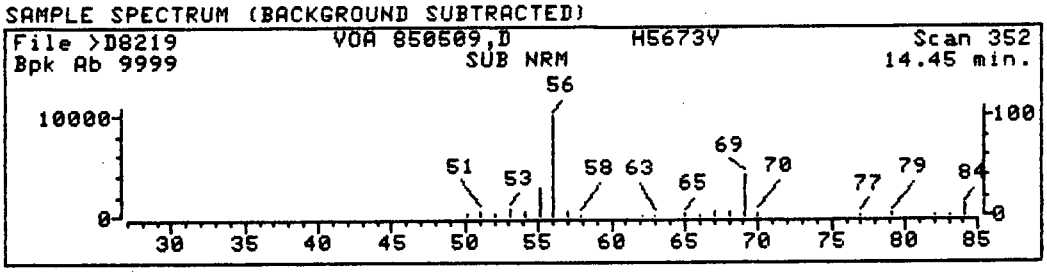
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 13.63
Scan: 331
Area: 171749
Semi-quantitative Conc: 84.04 NG

Data File: >D8219 Scan Number: 331
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

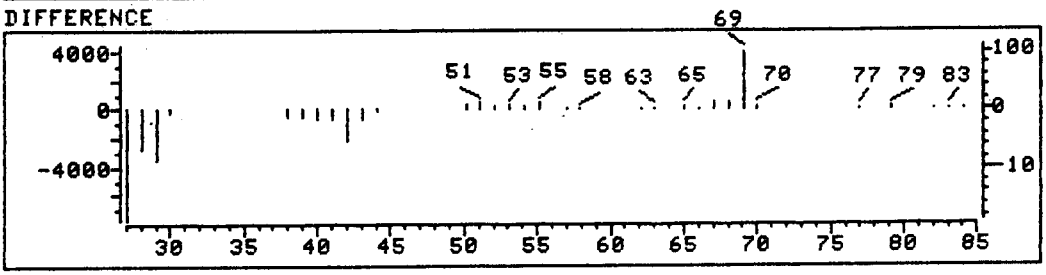
1. Cyclohexane(DOT (8CI9CI) 84 C6H12
2. 1-Pentene, 4-methyl- (8CI9CI) 84 C6H12
3. Cyclobutanone, 2-methyl- (8CI9CI) 84 C5H8O

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	86	110827	50	43	2	0
2.	46	691372	31	54	1	0
3.	43	1517153	23	39	1	0

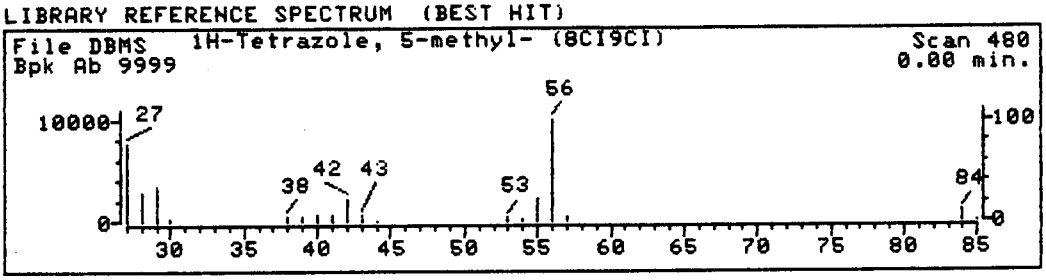
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



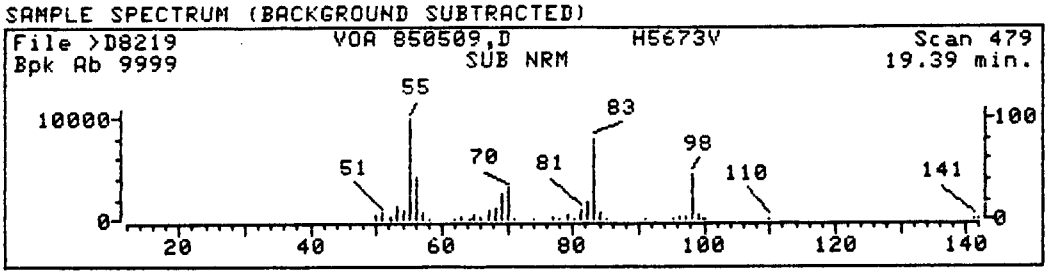
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 14.45
Scan: 352
Area: 228493
Semi-quantitative Conc: 111.81 NG

Data File: >D8219 Scan Number: 352
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

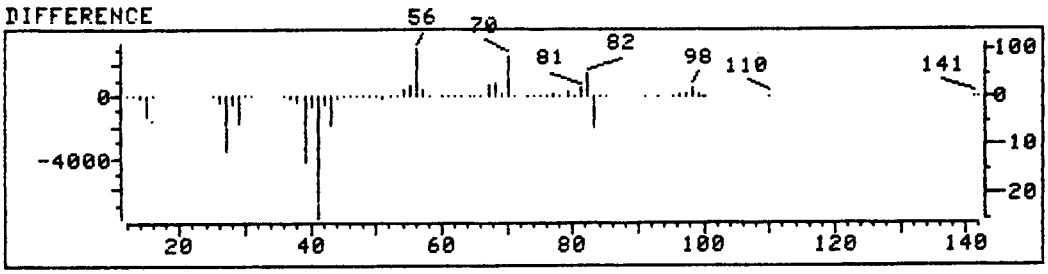
1.	1H-Tetrazole, 5-methyl- (8CI9CI)	84 C2H4N4
2.	Cyclobutane, ethyl- (8CI9CI)	84 C6H12
3.	Cyclopropane, (1-methylethyl)- (9CI)	84 C6H12

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	52	4076362	35	49	0	0
2.	49	4806615	32	51	0	0
3.	41	3638355	25	58	0	0

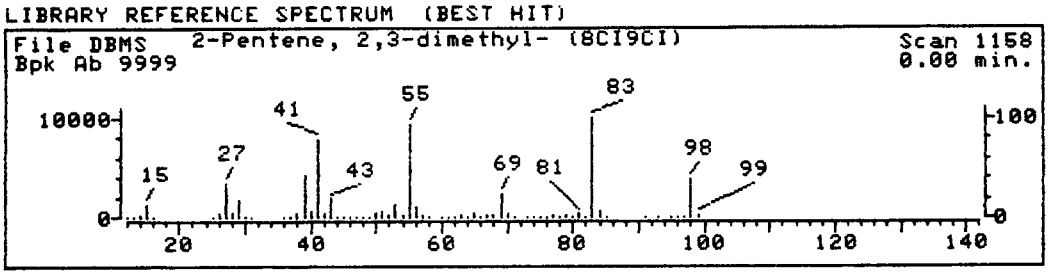
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



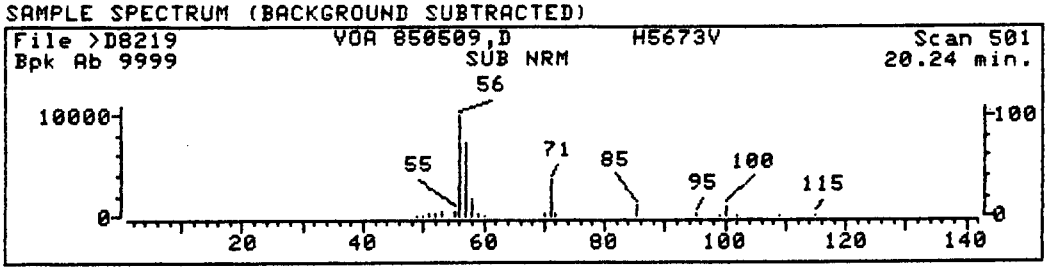
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 19.39
Scan: 479
Area: 1211221
Semi-quantitative Conc: 592.68 NG

Data File: >D8219 Scan Number: 479
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

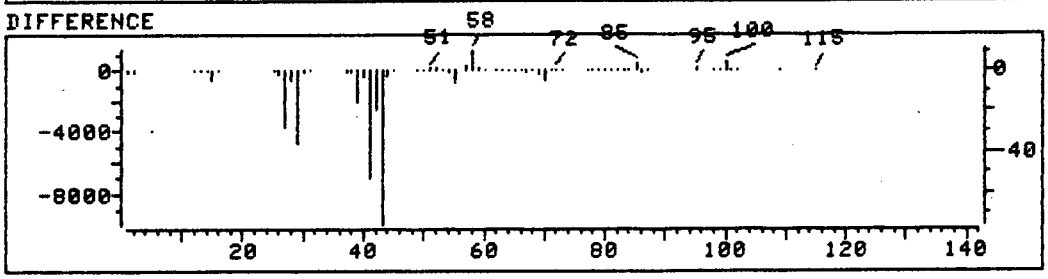
1. 2-Pentene, 2,3-dimethyl- (8CI9CI) 98 C7H14
2. Cyclohexane, methyl- (8CI9CI) 98 C7H14
3. 2-Pentene, 3,4-dimethyl-, (E)- (8CI9CI) 98 C7H14

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	73	10574375	54	47	0	0
2.	71	108872	57	46	0	0
3.	69	4914925	52	44	0	0

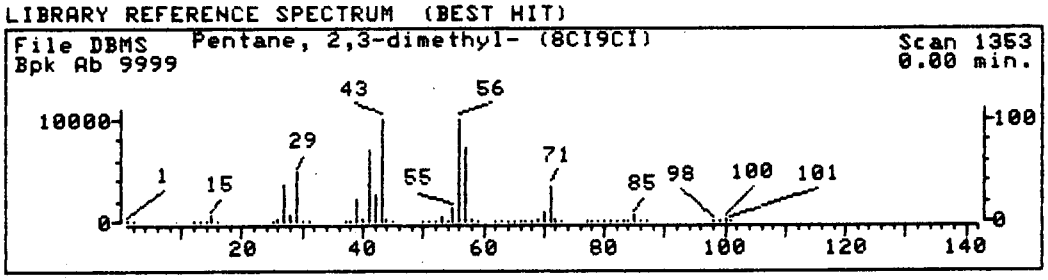
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



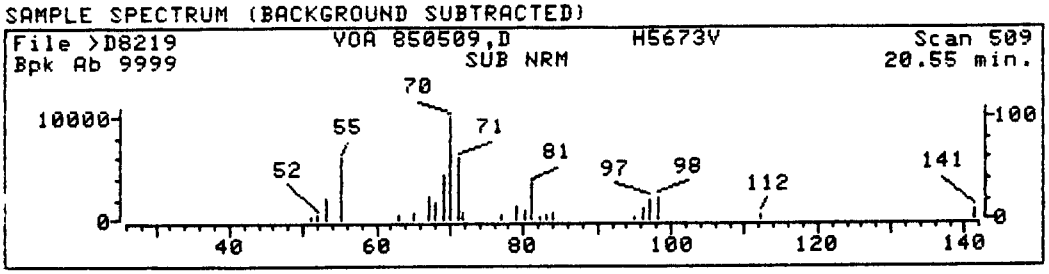
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 20.24
Scan: 501
Area: 163976
Semi-quantitative Conc: 80.24 NG

Data File: >D8219 Scan Number: 501
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

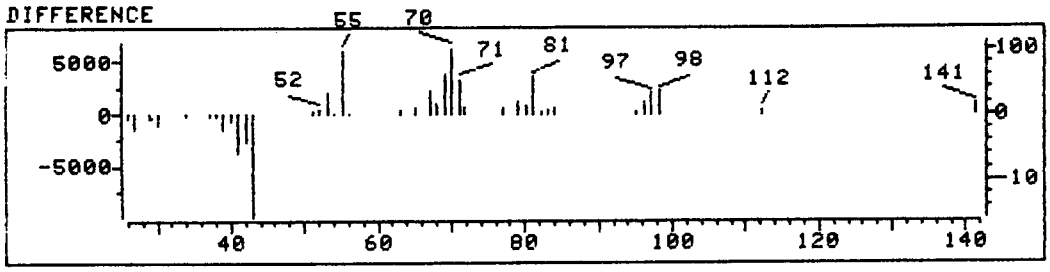
1. Pentane, 2,3-dimethyl- (8CI9CI) 100 C7H16
2. 2-Propen-1-ol (9CI) 58 C3H6O

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	76	565593	38	57	1	0
2.	15	107186	23	61	0	0

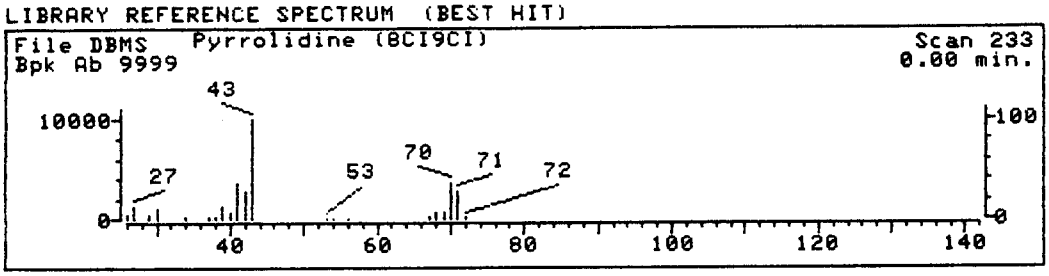
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



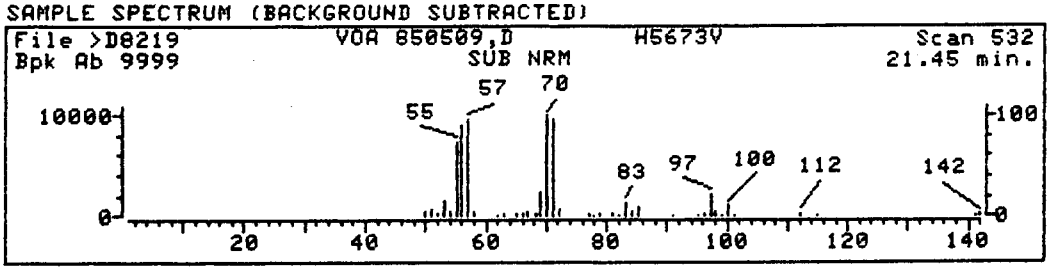
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 20.55
Scan: 509
Area: 114275
Semi-quantitative Conc: 55.92 NG

Data File: >D8219 Scan Number: 509
Search Speed: 2 Titling option: S Number of ion ranges searched: 61

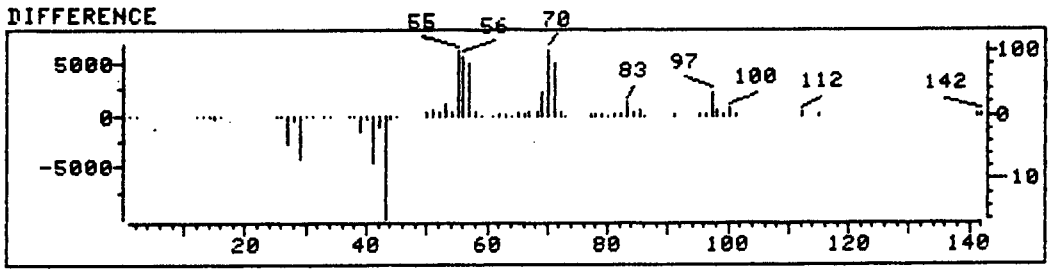
1.	Pyrrolidine (8CI9CI)	71	C4H9N
2.	1-Hexene, 4,5-dimethyl- (8CI9CI)	112	C8H16
3.	Cyclobutanone, 2,2-dimethyl- (8CI9CI)	98	C6H10O

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	26	123751	24	64	1	0
2.	25	16106595	22	65	2	0
3.	20	1192149	22	63	3	0

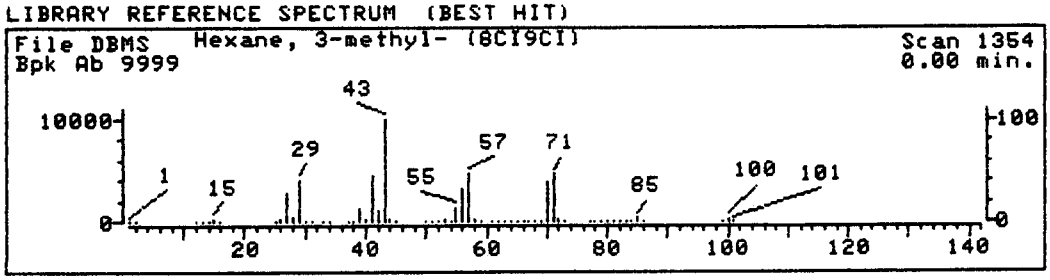
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



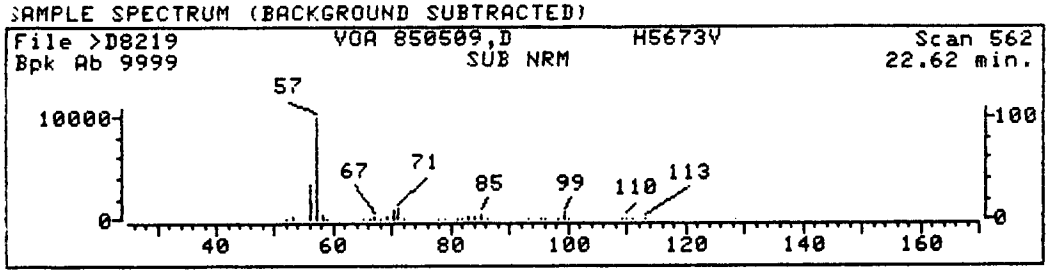
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 21.45
Scan: 532
Area: 732750
Semi-quantitative Conc: 358.55 NG

Data File: >D8219 Scan Number: 532
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

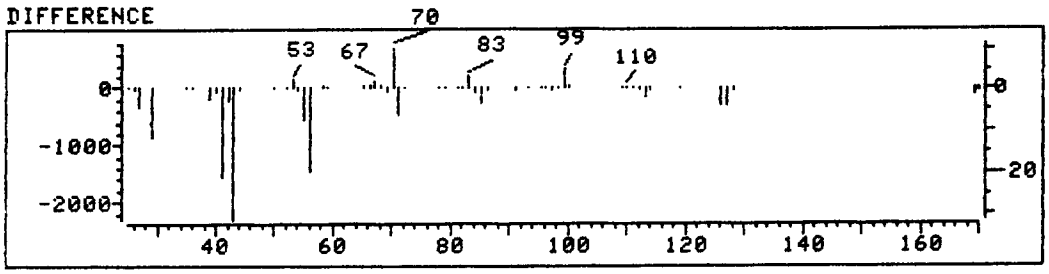
1. Hexane, 3-methyl- (8CI9CI) 100 C7H16
2. Octane, 4,5-dimethyl- (8CI9CI) 142 C10H22
3. Cyclobutane, 1,2-diethyl-, trans- (8CI) 112 C8H16

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	73	589344	50	43	0	0
2.	25	15869962	31	54	1	0
3.	20	19341981	32	65	2	0

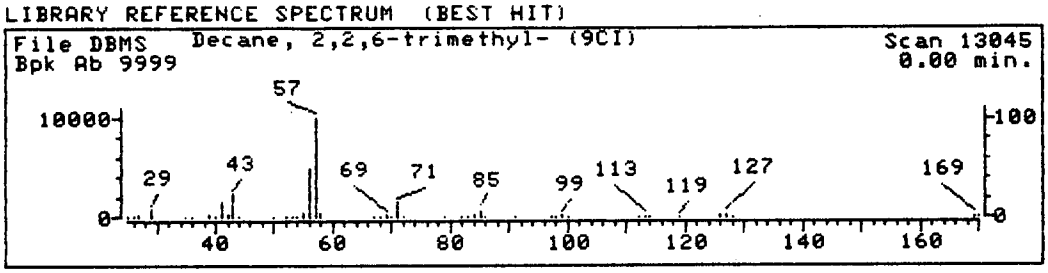
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



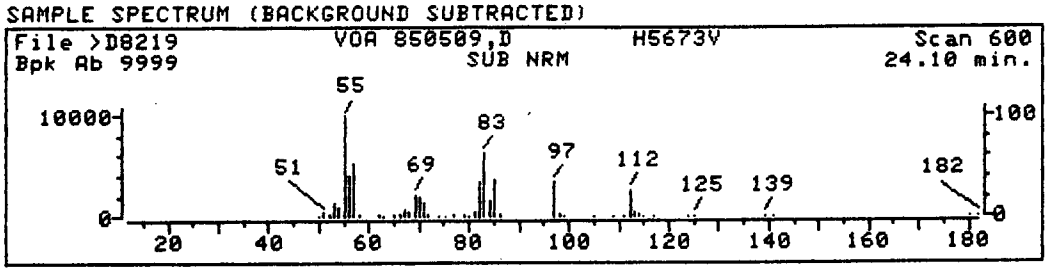
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 22.62
Scan: 562
Area: 898106
Semi-quantitative Conc: 439.47 NG

Data File: >D8219 Scan Number: 562
Search Speed: 2 Titling option: S Number of ion ranges searched: 62

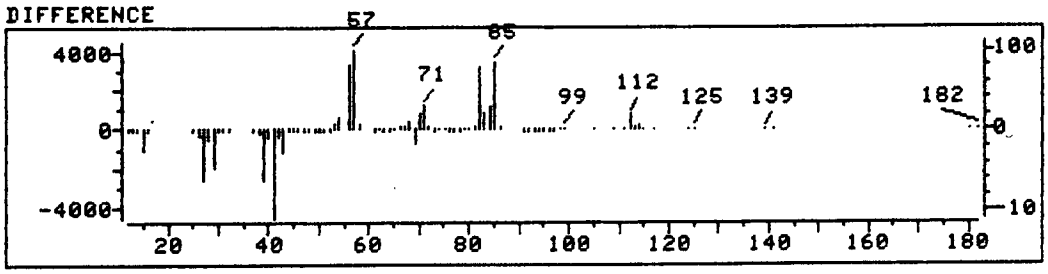
1. Decane, 2,2,6-trimethyl- (9CI) 184 C13H28
2. Decane, 2,2-dimethyl- (8CI9CI) 170 C12H26
3. Heptane, 2,2,4,6,6-pentamethyl- (8CI9CI) 170 C12H26

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	70	62237972	41	46	2	0
2.	70	17302373	38	37	2	0
3.	70	13475826	38	37	2	0

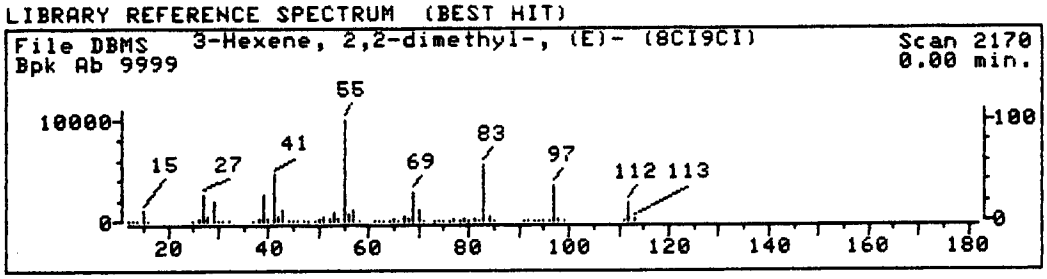
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



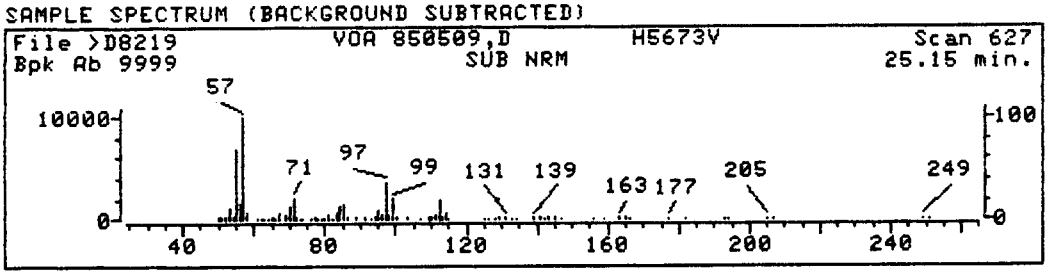
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 24.10
Scan: 600
Area: 381797
Semi-quantitative Conc: 186.82 NG

Data File: >D8219 Scan Number: 600
Search Speed: 2 Titling option: S Number of ion ranges searched: 64

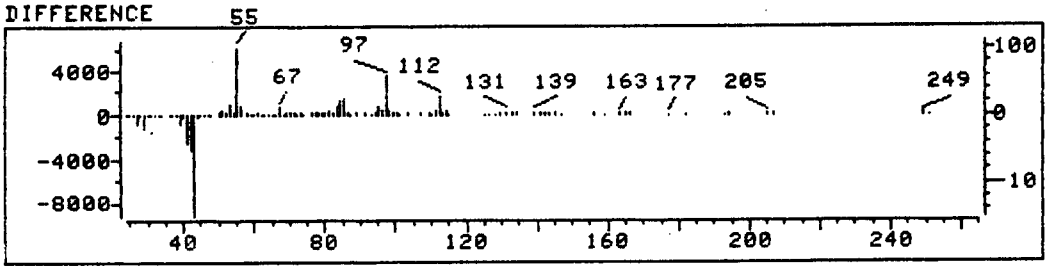
1.	3-Hexene, 2,2-dimethyl-, (E)- (8CI9CI)	112 C8H16
2.	Cyclopentane, 1-ethyl-3-methyl- (8CI)	112 C8H16
3.	3-Hexene, 2,2-dimethyl-, (Z)- (8CI9CI)	112 C8H16

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	53	690937	53	46	1	0
2.	43	3726474	32	75	2	0
3.	42	690926	36	63	0	0

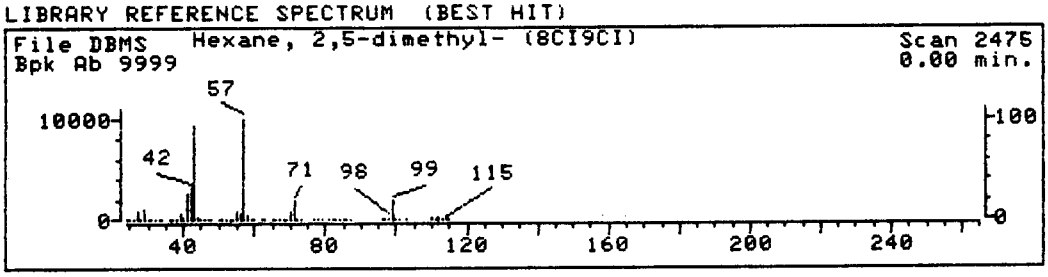
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



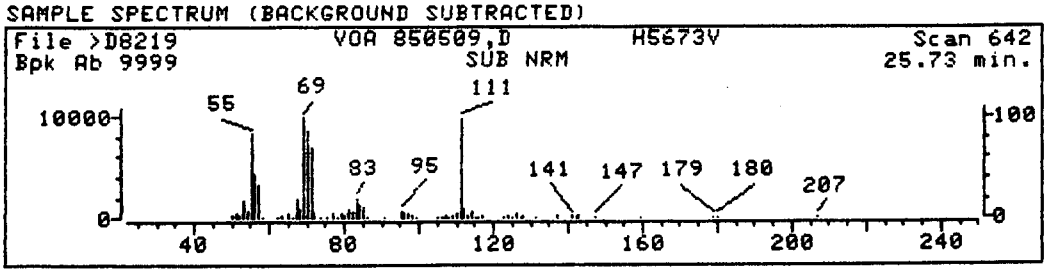
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 25.15
Scan: 627
Area: 247977
Semi-quantitative Conc: 121.34 NG

Data File: >D8219 Scan Number: 627
Search Speed: 2 Titling option: S Number of ion ranges searched: 67

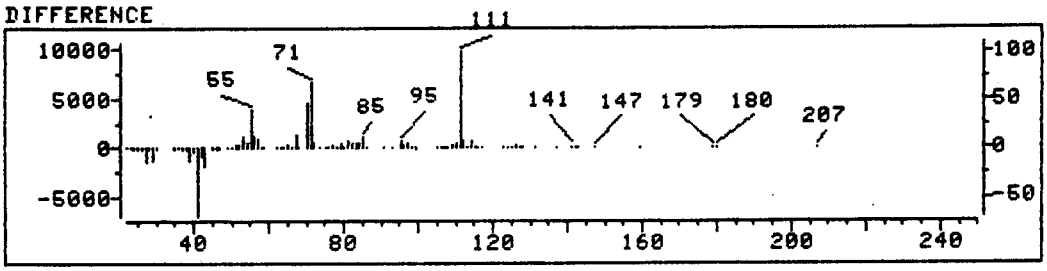
1.	Hexane, 2,5-dimethyl- (8CI9CI)	114 C8H18
2.	Heptane, 2-methyl- (8CI9CI)	114 C8H18
3.	1-Hexene, 3,5,5-trimethyl- (8CI9CI)	126 C9H18

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	59	592132	55	35	1	0
2.	43	592278	46	47	2	0
3.	35	4316658	46	44	2	0

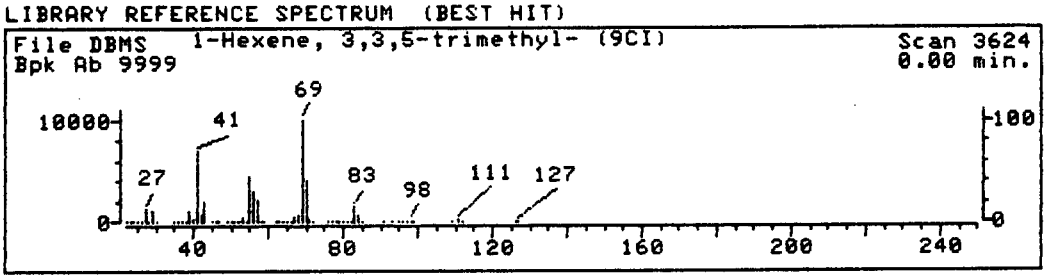
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



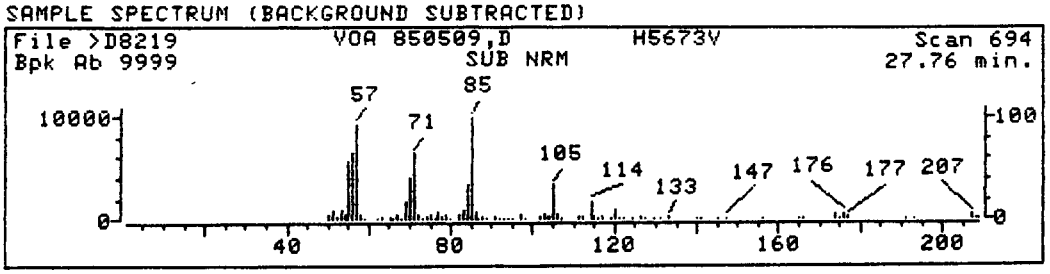
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 25.73
Scan: 642
Area: 423295
Semi-quantitative Conc: 207.13 NG

Data File: >D8219 Scan Number: 642
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

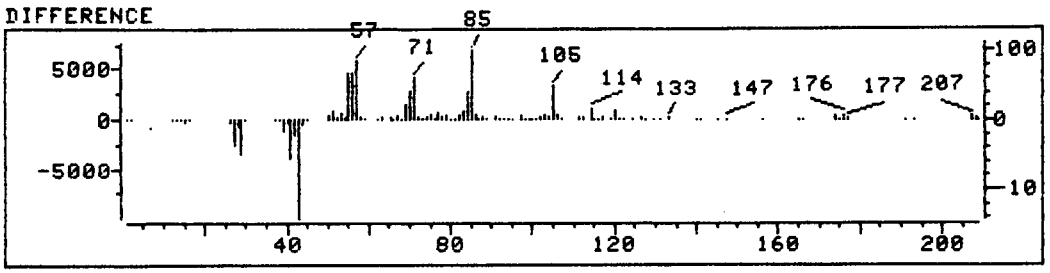
1.	1-Hexene, 3,3,5-trimethyl- (9CI)	126	C9H18
2.	Cyclohexane, 1,1,2-trimethyl- (8CI9CI)	126	C9H18
3.	Cyclohexane, 1-ethyl-2,3-dimethyl- (8CI)	140	C10H20

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	35	13427435	39	54	0	0
2.	35	7094260	38	70	0	0
3.	29	7058051	60	41	2	0

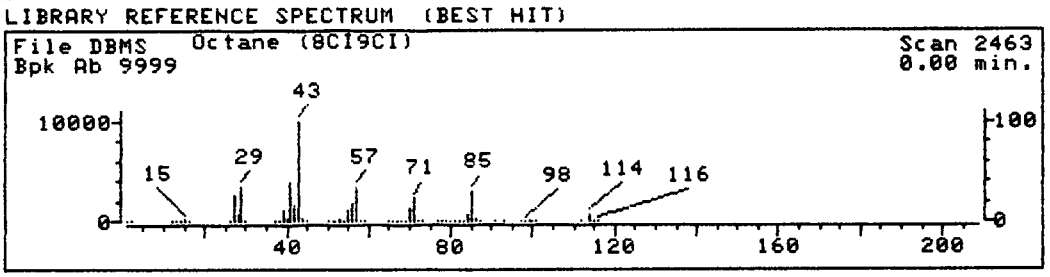
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



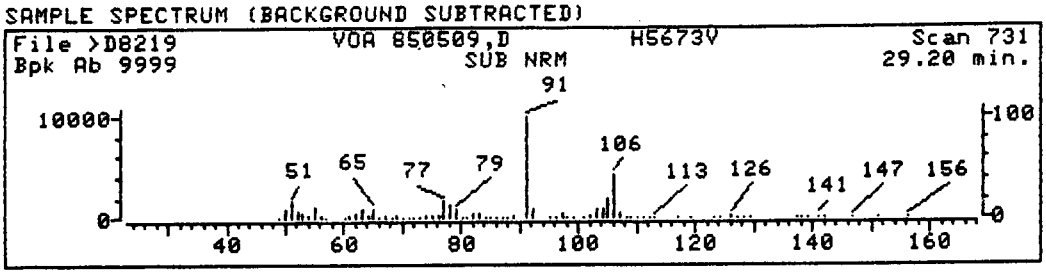
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 27.76
Scan: 694
Area: 576115
Semi-quantitative Conc: 281.91 NG

Data File: >D8219 Scan Number: 694
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

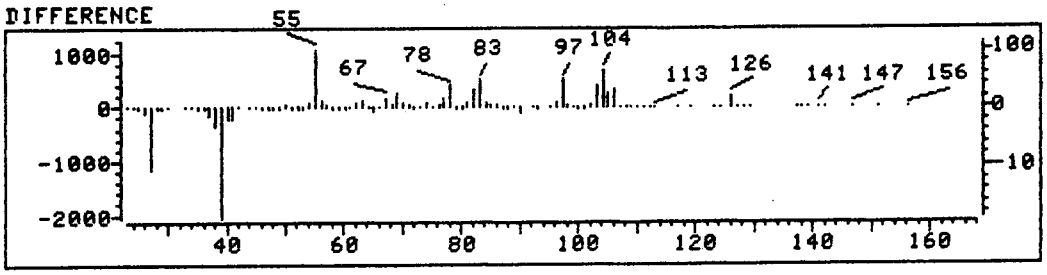
1.	Octane (8CI9CI)	114	C8H18
2.	Heptane, 2,4-dimethyl- (8CI9CI)	128	C9H20
3.	Hexane, 2,3,4-trimethyl- (8CI9CI)	128	C9H20

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	79	111659	56	37	0	0
2.	63	2213232	55	37	0	0
3.	45	921471	41	49	0	0

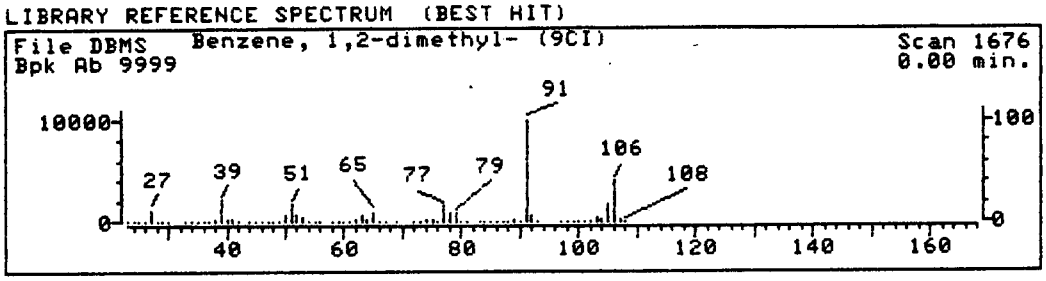
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



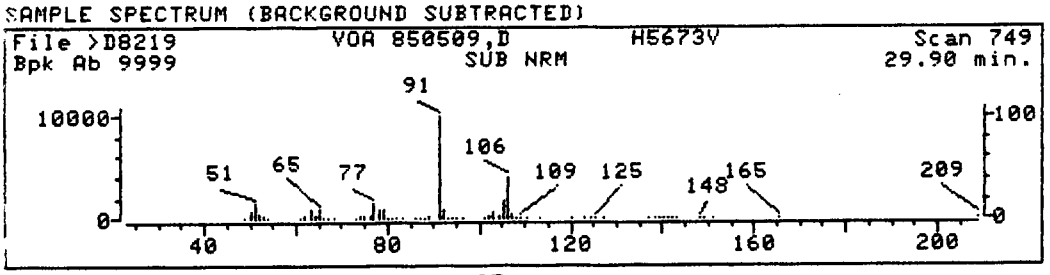
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 29.20
Scan: 731
Area: 4481420
Semi-quantitative Conc: 2192.88 NG

Data File: >D8219 Scan Number: 731
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

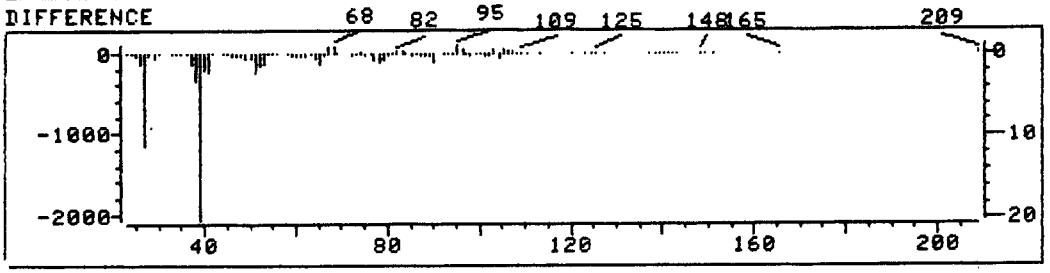
1. Benzene, 1,2-dimethyl- (9CI)	106	C8H10
2. Benzene, 1,4-dimethyl- (9CI)	106	C8H10
3. Benzene, ethyl- (8CI9CI)	106	C8H10

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	87	95476	75	17	1	0
2.	71	106423	53	40	2	1
3.	66	100414	52	32	1	0

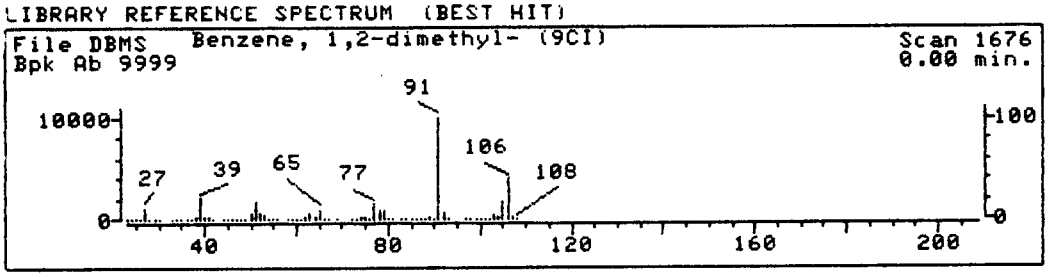
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



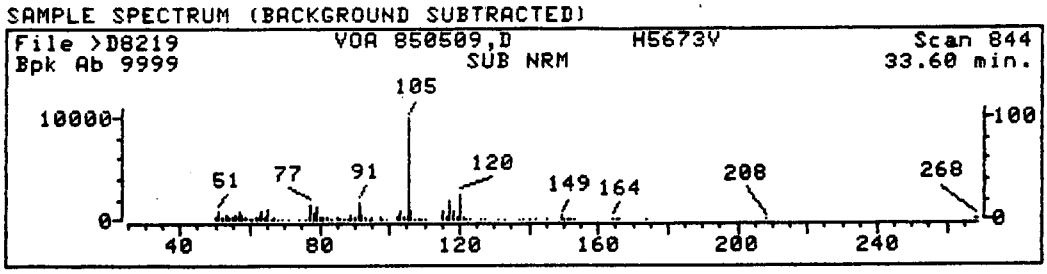
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 29.90
Scan: 749
Area: 2630938
Semi-quantitative Conc: 1287.39 NG

Data File: >D8219 Scan Number: 749
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

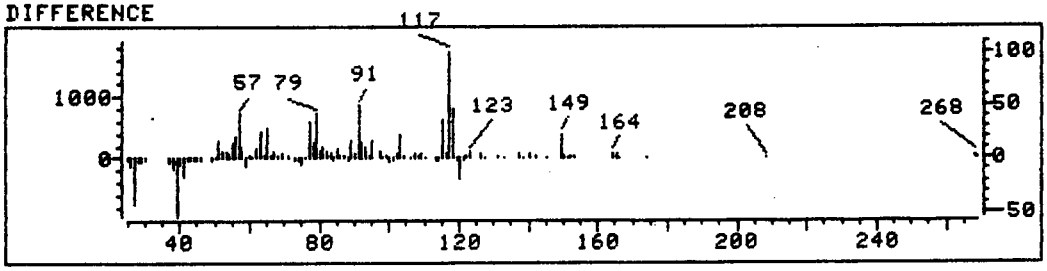
1. Benzene, 1,2-dimethyl- (9CI) 106 C8H10
2. Benzene, ethyl- (8CI9CI) 106 C8H10
3. Benzene, 1,3-dimethyl- (9CI) 106 C8H10

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	95	95476	79	13	1	0
2.	88	100414	63	21	2	0
3.	86	108383	69	23	0	0

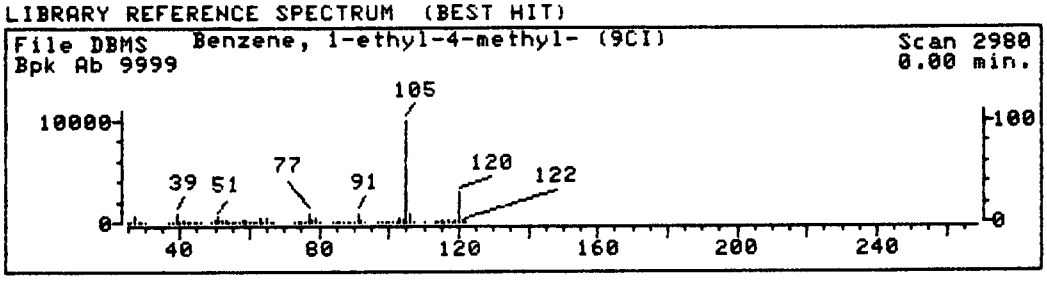
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



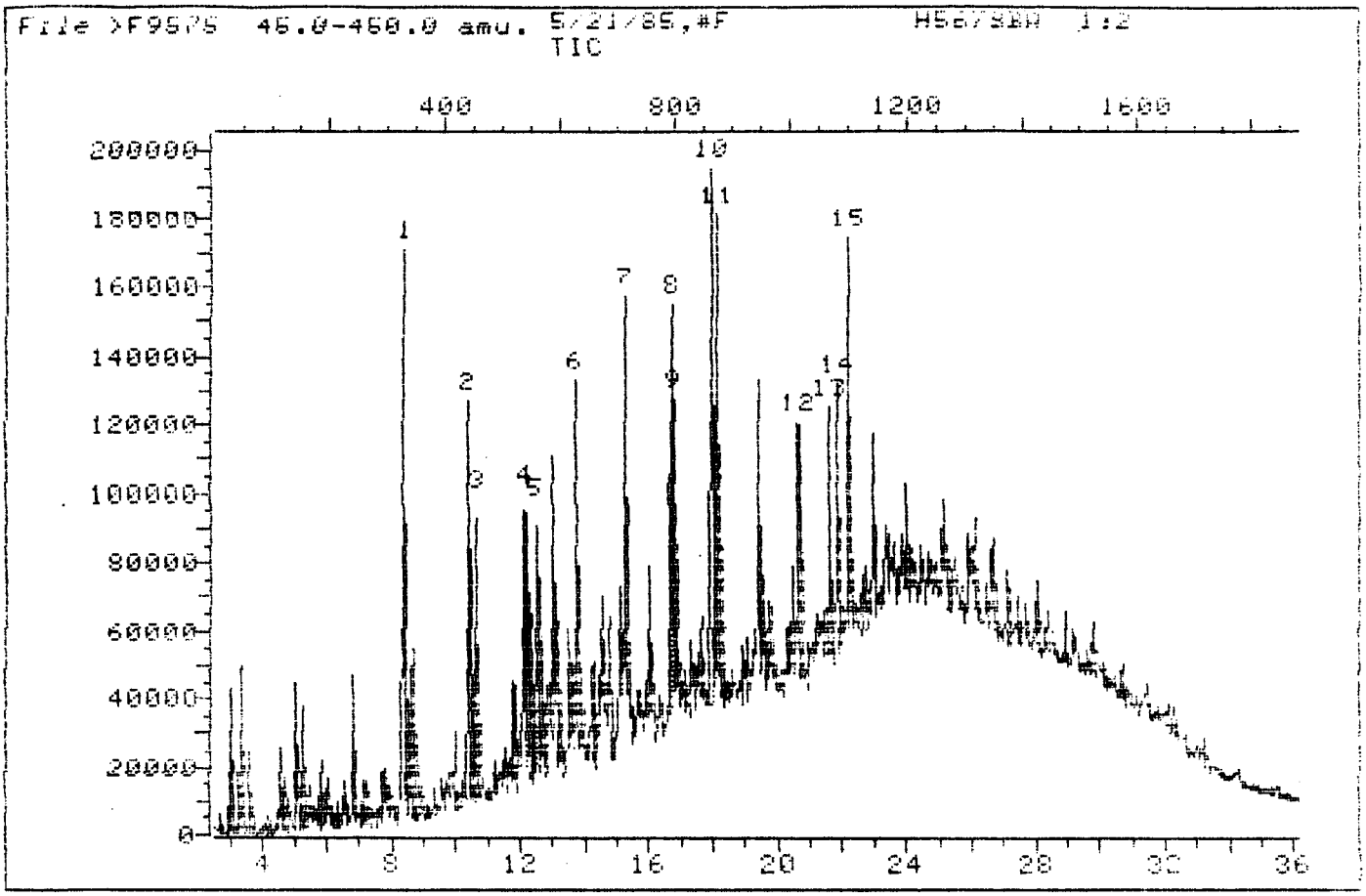
Data File: >D8219::U4
Name: VOA 850509,D
Misc Data: H5673V
RT (min): 33.60
Scan: 844
Area: 822215
Semi-quantitative Conc: 402.33 NG

Data File: >D8219 Scan Number: 844
Search Speed: 2 Titling option: S Number of ion ranges searched: 64

1. Benzene, 1-ethyl-4-methyl- (9CI) 120 C9H12
2. Benzene, 1-ethyl-2-methyl- (9CI) 120 C9H12
3. Cyclohexane, 1,2,4-tris(methylene)- (8CI9CI) 120 C9H12

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	93	622968	74	11	0	2
2.	86	611143	68	17	0	2
3.	83	14296812	53	57	1	-1

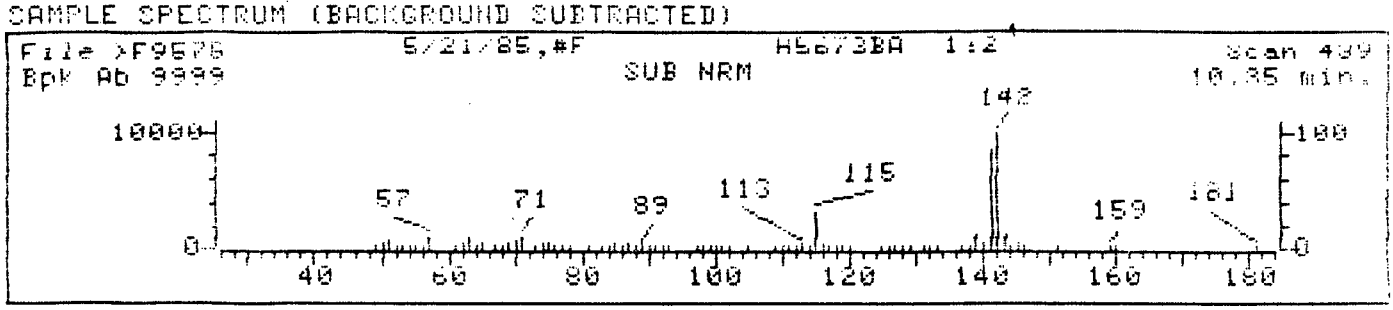
TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



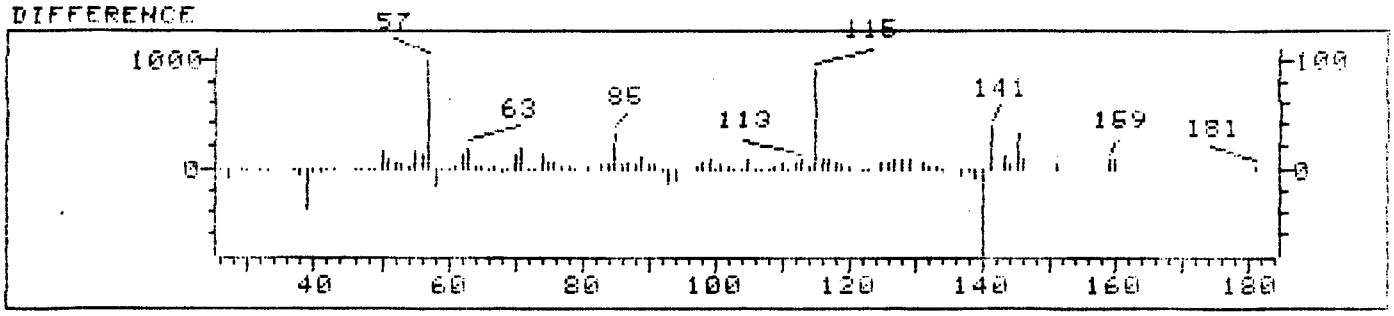
Data File: >F9575.UQ
Name: 5/21/85,#F
Misc Data: H5673BA 1:2

BTL#34

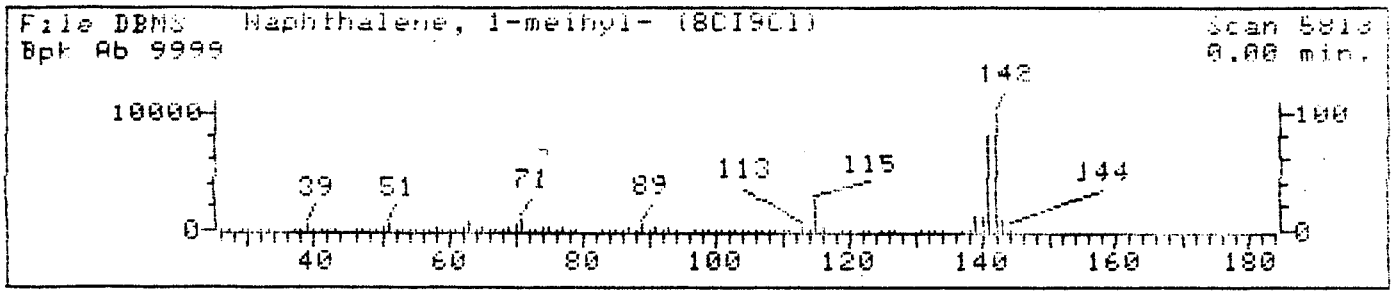
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (HIT # 2)



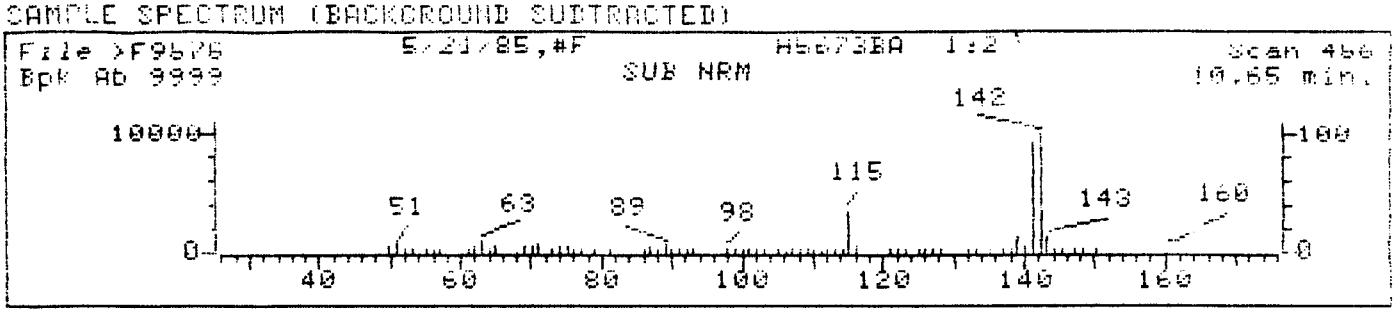
Data File: >F9575::U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 10.35
Scan: 439
Area: 484697
Semi-quantitative Conc: 289.01 UG/ML

Data File: >F9575 Scan Number: 439
Search Speed: 2 Titling option: S Number of ion ranges searched: 50

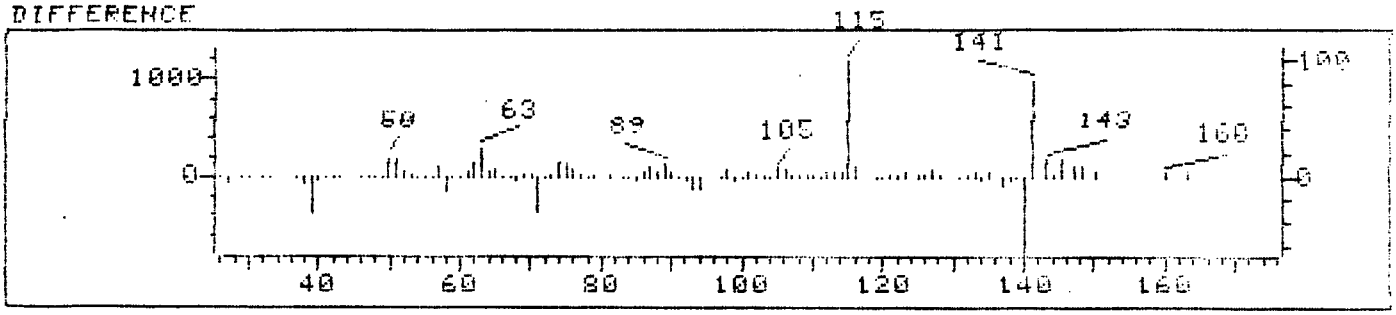
1. 1H-Indene, 1-ethylidene- (9CI) 142 C11H10
2. Naphthalene, 1-methyl- (8CI9CI) 142 C11H10
3. Naphthalene, 2-methyl- (8CI9CI) 142 C11H10

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	94	2471832	86	14	0	0
2.	88	90120	76	24	2	0
3.	83	91576	70	28	2	0

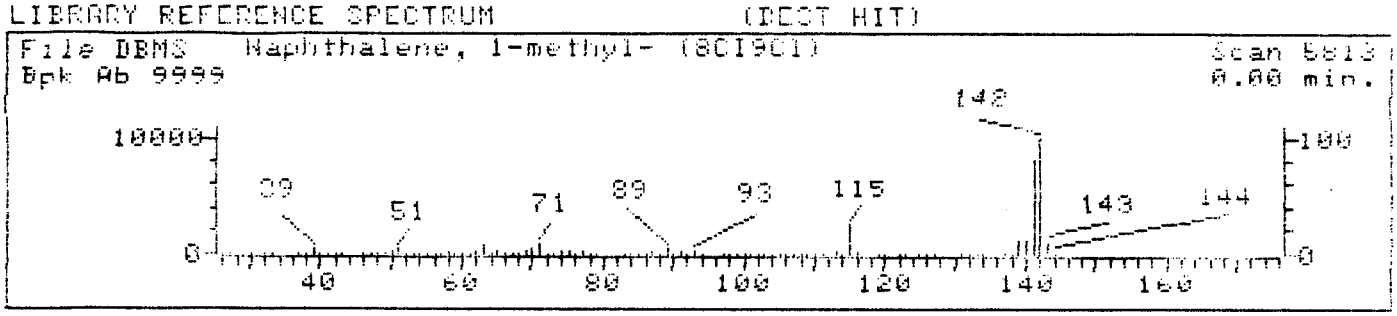
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



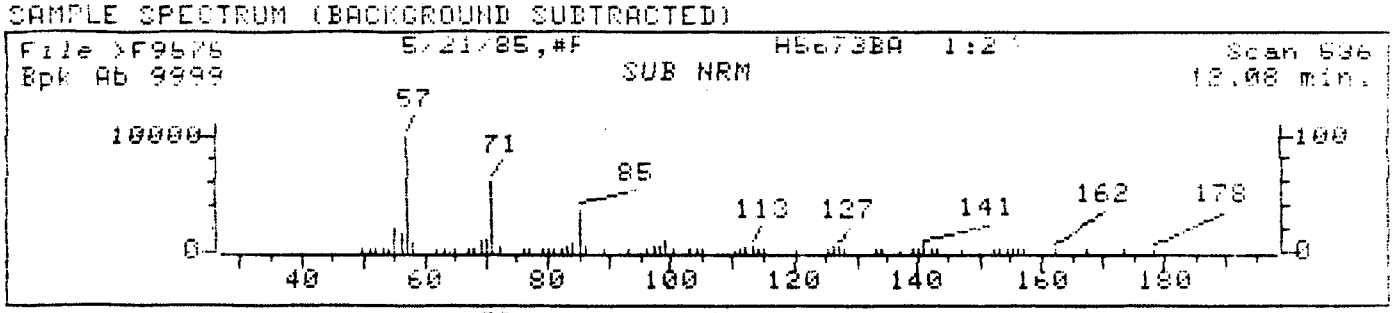
Data File: >F9575::U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 10.65
Scan: 456
Area: 244217
Semi-quantitative Conc: 146.02 UG/ML

Data File: >F9575 Scan Number: 456
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

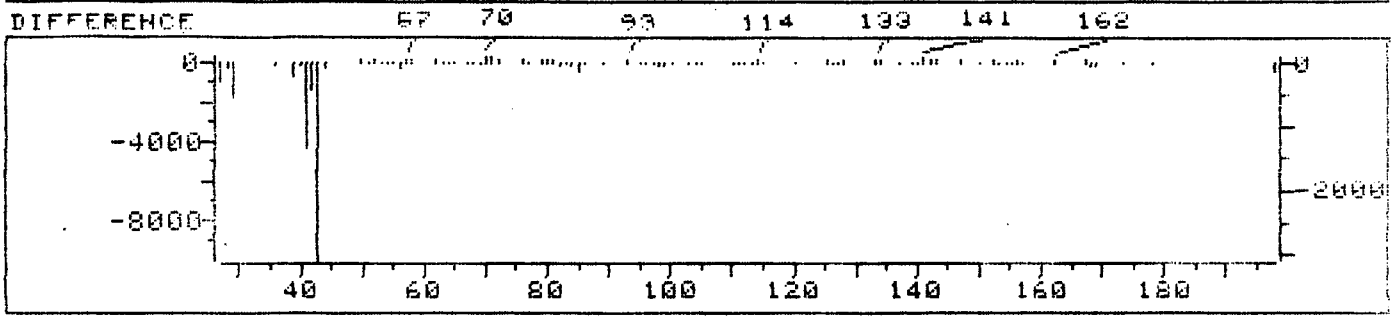
1. Naphthalene, 1-methyl- (8CI9CI) 142 C11H10
2. Naphthalene, 2-methyl- (8CI9CI) 142 C11H10
3. 1H-Indene, 1-ethylidene- (9CI) 142 C11H10

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	88	90120	70	30	2	0
2.	87	91576	64	34	2	1
3.	79	2471832	68	32	0	0

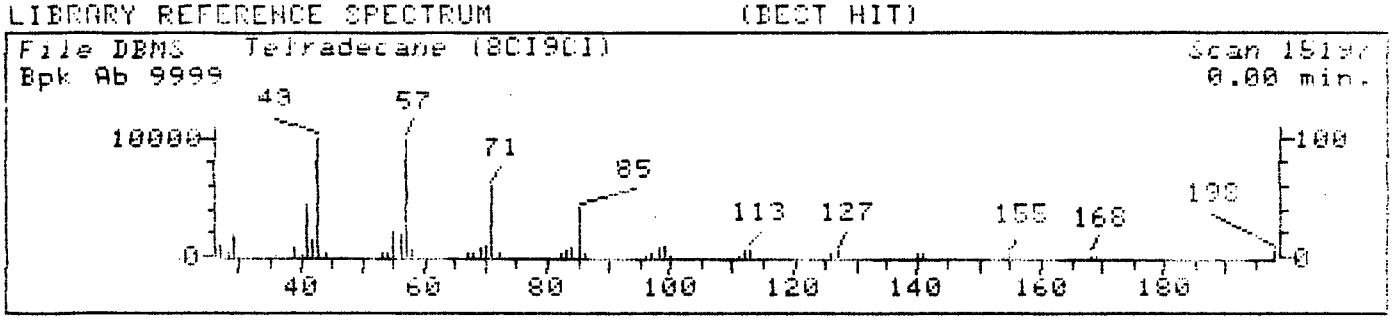
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



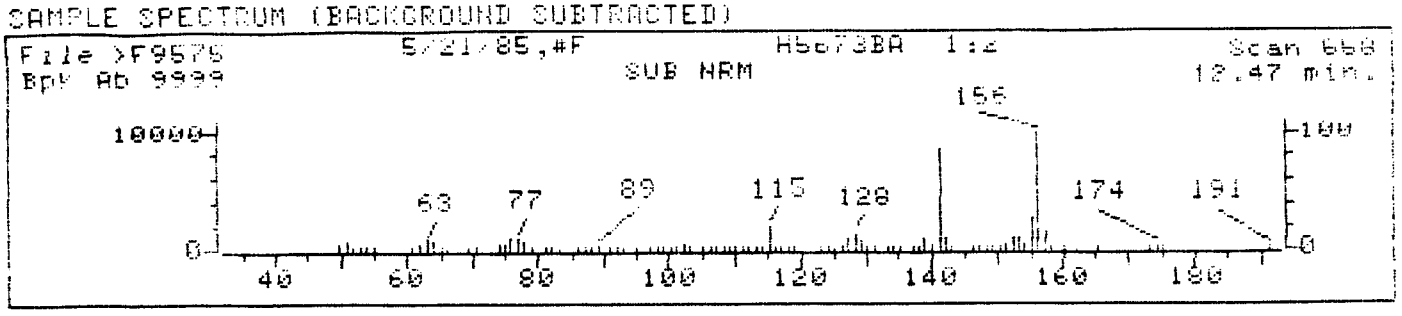
Data File: >F9575:U2
Name: 5/21/85,#F
Misc Data: H5673BA 1.2 BTL#34
RT (min): 12.08
Scan: 536
Area: 286956
Semi-quantitative Conc. 171.50 UG/ML

Data File: >F9575 Scan Number: 536
Search Speed: 2 Titling option: S Number of ion ranges searched: 63

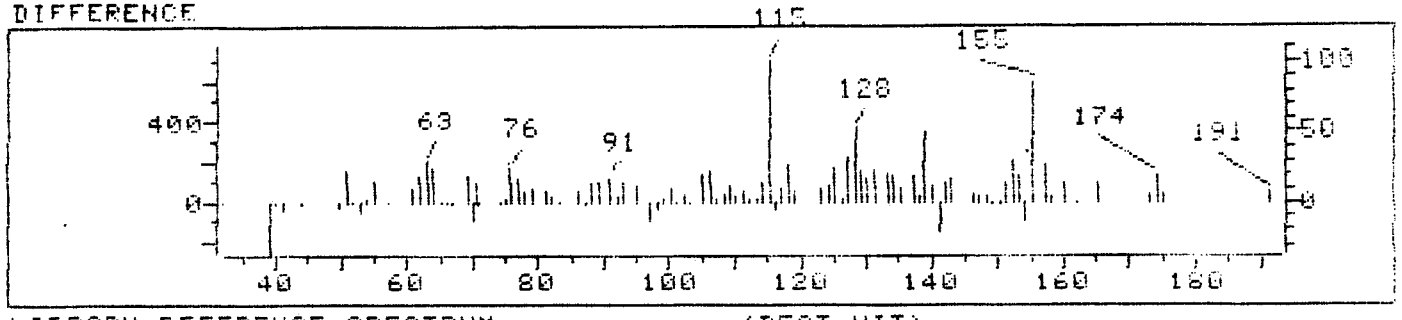
1. Tetradecane (8CI9CI) 198 C14H30
2. Pentadecane (8CI9CI) 212 C15H32
3. Decane, 2,3,5-trimethyl- (9CI) 184 C13H28

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	93	629594	86	32	1	0
2.	87	629629	91	29	1	0
3.	86	62238113	93	10	0	4

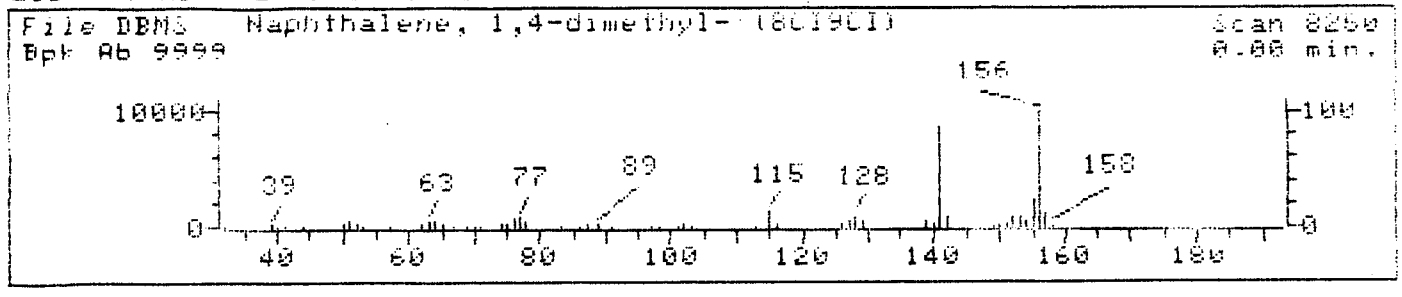
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



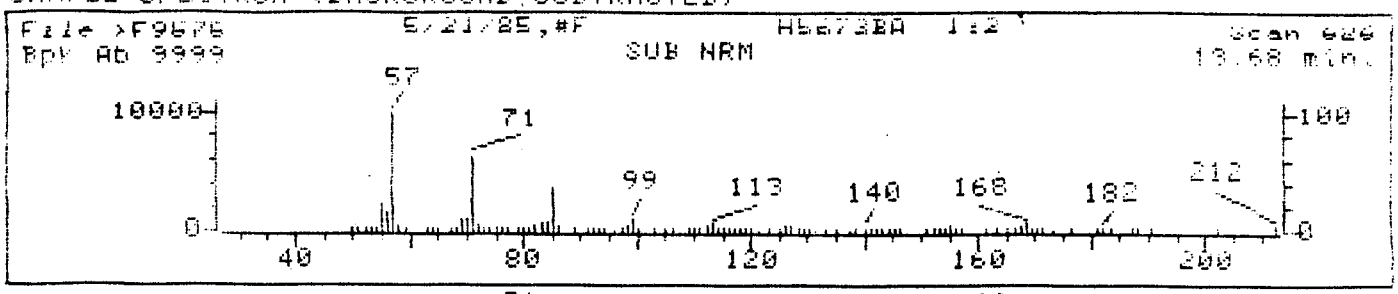
Data File: >F9575::U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 12.47
Scan: 550
Area: 230031
Semi-quantitative Conc: 130.02 UG/ML

Data File: >F9575 Scan Number: 550
Search Speed: 2 Titling option: 0 Number of ion ranges searched: 60

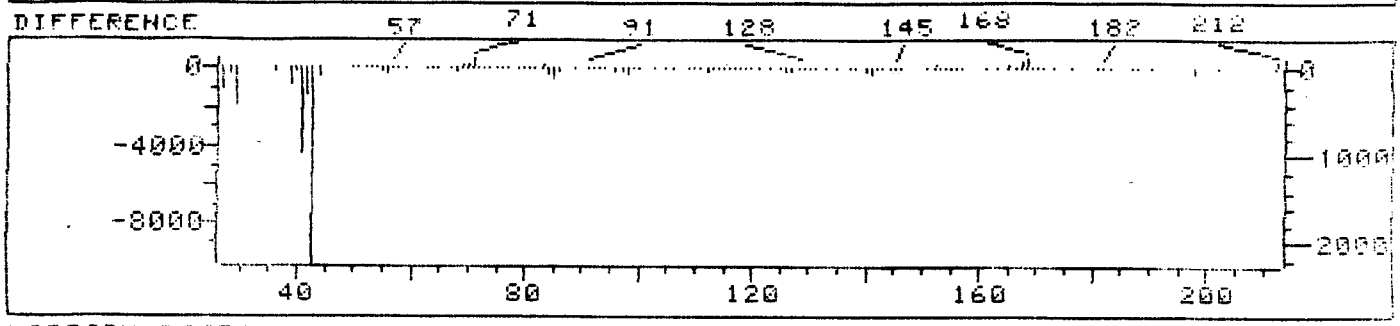
1. Naphthalene, 1,4-dimethyl- (8CI9CI) 156 C12H12
2. Naphthalene, 1,8-dimethyl- (8CI9CI) 156 C12H12
3. Naphthalene, 2,3-dimethyl- (8CI9CI) 156 C12H12

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	95	571584	101	7	1	1
2.	95	569415	96	14	1	0
3.	95	581408	93	13	1	0

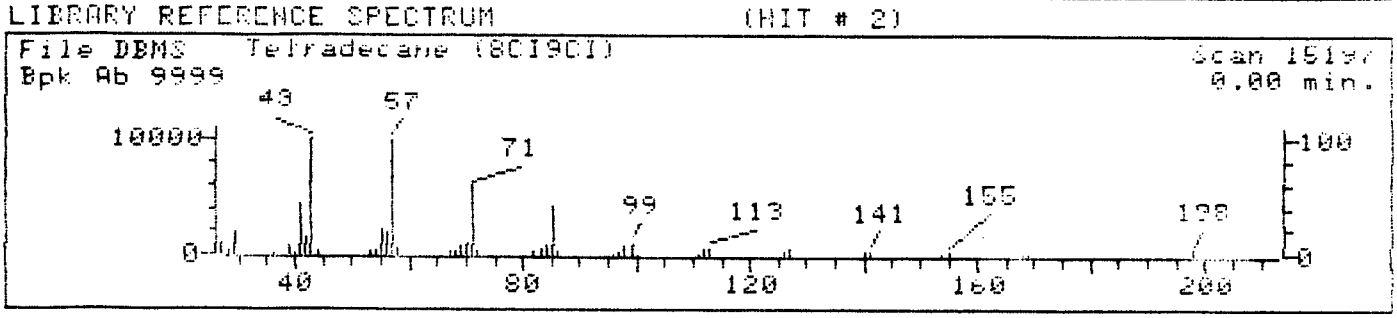
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (HIT # 2)



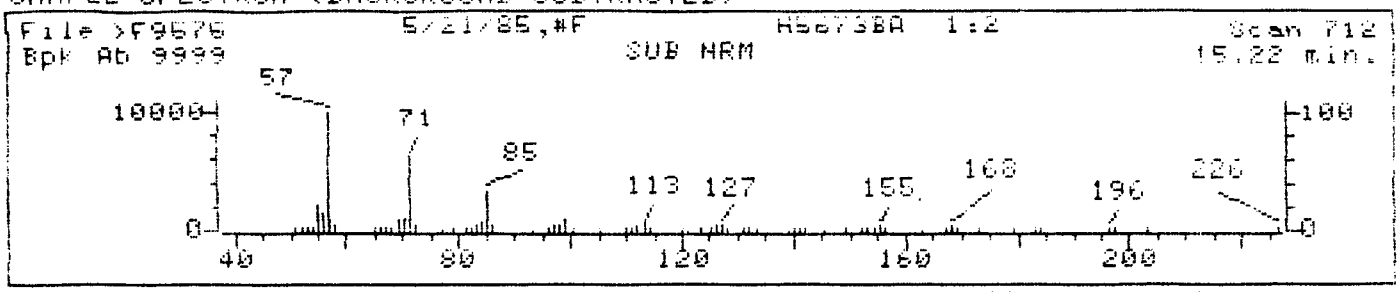
Data File: >F9575::U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 13.68
Scan: 626
Area: 314631
Semi-quantitative Conc: 188.14 UG/ML

Data File: >F9575 Scan Number: 626
Search Speed: 2 Titling option: S Number of ion ranges searched: 63

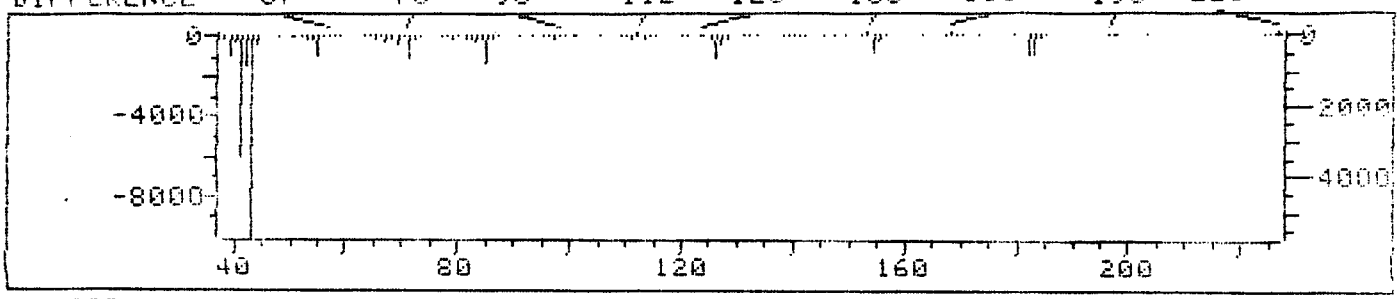
1. Thiazole, 4-propyl- (9CI) 127 C6H9NS
2. Tetradecane (8CI9CI) 198 C14H30
3. Octacosane (8CI9CI) 394 C28H58

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	86	41981606	58	49	1	-3
2.	83	629594	70	48	1	0
3.	78	630024	65	72	2	0

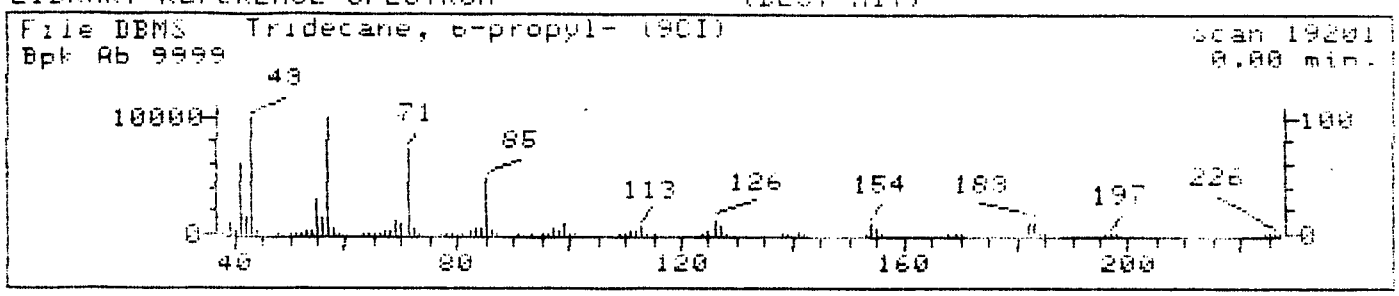
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



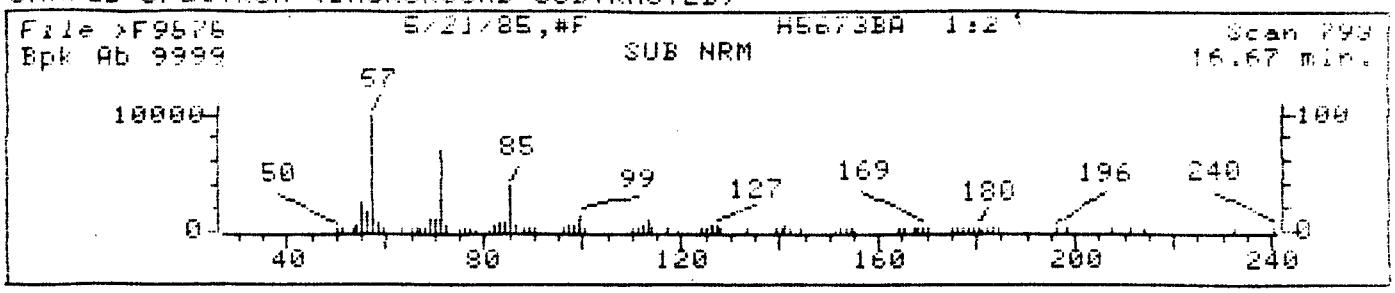
Data File: >F9575::U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 15.22
Scan: 712
Area: 260932
Semi-quantitative Conc: 156.02 UG/ML

Data File: >F9575 Scan Number: 712
Search Speed: 2 Titling option: S Number of ion ranges searched: 62

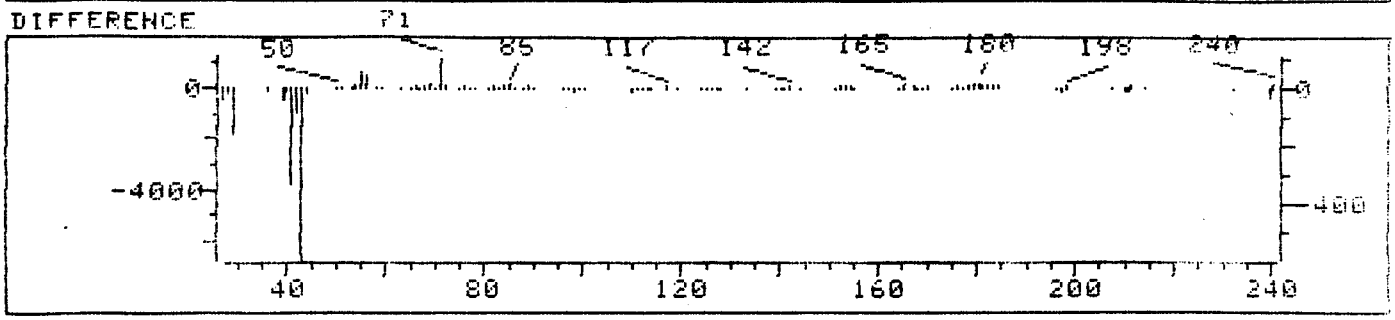
1. Tridecane, 6-propyl- (9CI) 226 C16H34
2. Dodecane, 2-methyl-8-propyl- (9CI) 226 C16H34
3. Heptadecane (8CI9CI) 240 C17H36

	Prob.	Cas#	K	dK	#Fly	Tilt
1.	86	55045108	61	68	2	0
2.	83	55045073	52	76	2	0
3.	83	629787	87	34	2	2

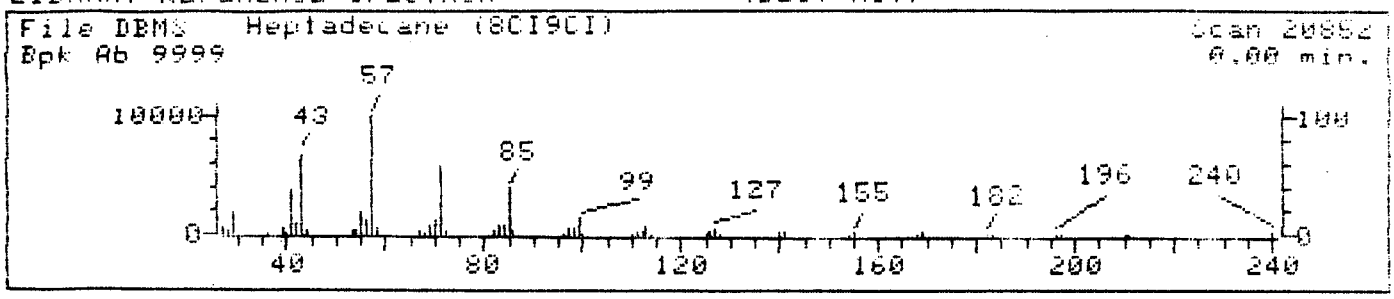
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



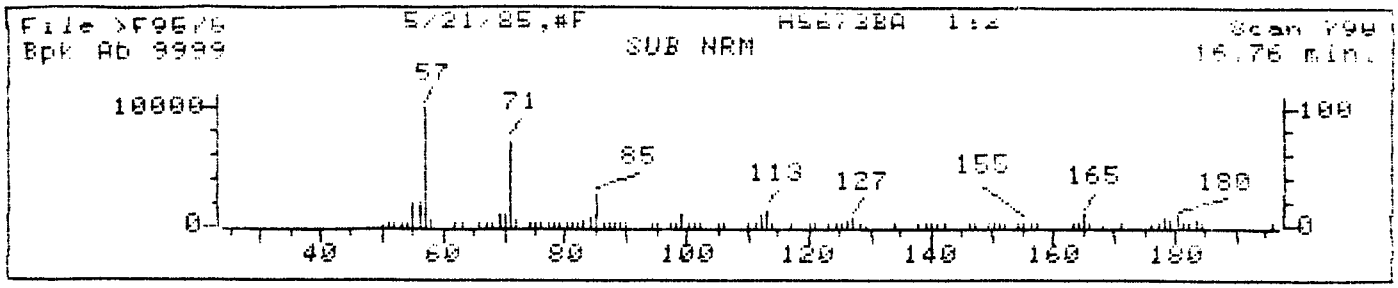
Data File: >F9575:.U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 16.67
Scan: 793
Area: 396330
Semi-quantitative Conc. 236.97 UG/ML

Data File: >F9575 Scan Number: 793
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

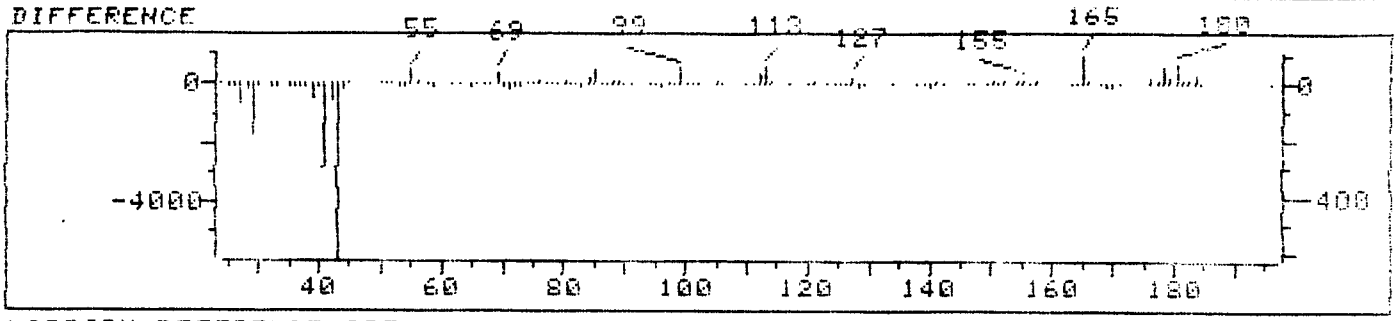
1. Heptadecane (8CI9CI) 240 $C_{17}H_{36}$
2. Hexadecane, 2-methyl- (8CI9CI) 240 $C_{17}H_{36}$
3. Iron, tricarbonyl[N-(phenyl-2-pyridinylmethylene)benzenamine-N,N'1- (9CI) 398 $C_{21}H_{14}FeN_2O_3$

	Prob.	Cas#	K	dK	%Flg	Tilt
1.	89	629787	77	44	1	0
2.	87	1560925	64	67	2	0
3.	87	74764117	111	26	2	2

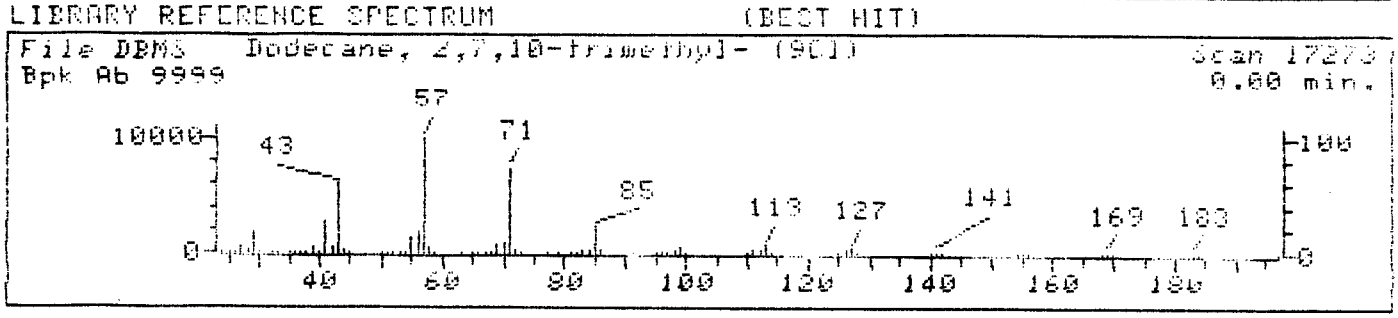
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



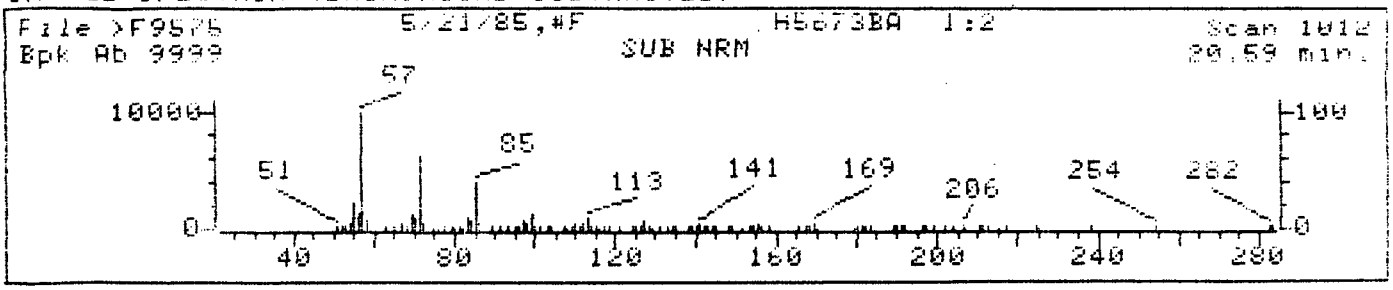
Data File: >F9575::U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 16.76
Scan: 798
Area: 253062
Semi-quantitative Conc. 151.31 UG/ML

Data File: >F9575 Scan Number: 798
Search Speed: 2 Titling option: S Number of ion ranges searched: 67

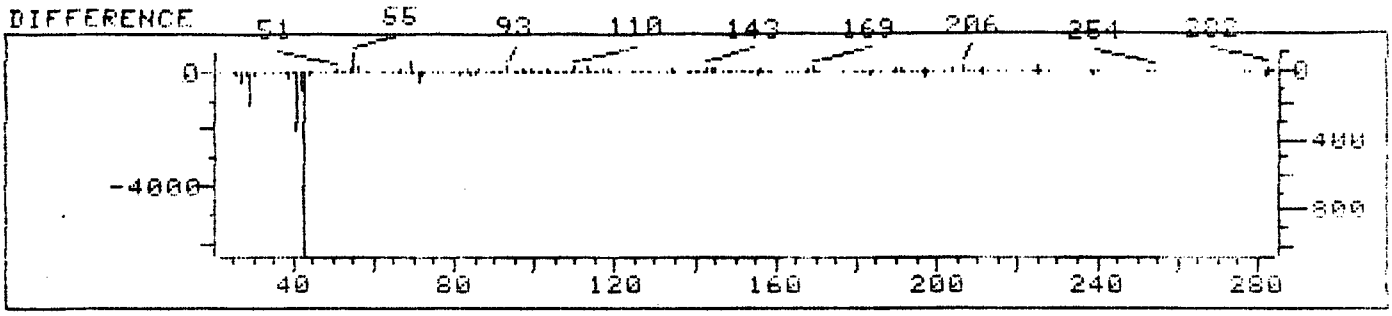
1. Dodecane, 2,7,10-trimethyl- (9CI) 212 C15H32
2. Dodecane, 2-methyl-8-propyl- (9CI) 226 C16H34
3. Nonane, 3,7-dimethyl- (8CI9CI) 156 C11H24

	Prob.	Cas#	K	dK	#Flq	Tilt
1.	86	74645900	97	12	0	0
2.	70	55015073	60	68	2	0
3.	70	17302328	58	28	1	0

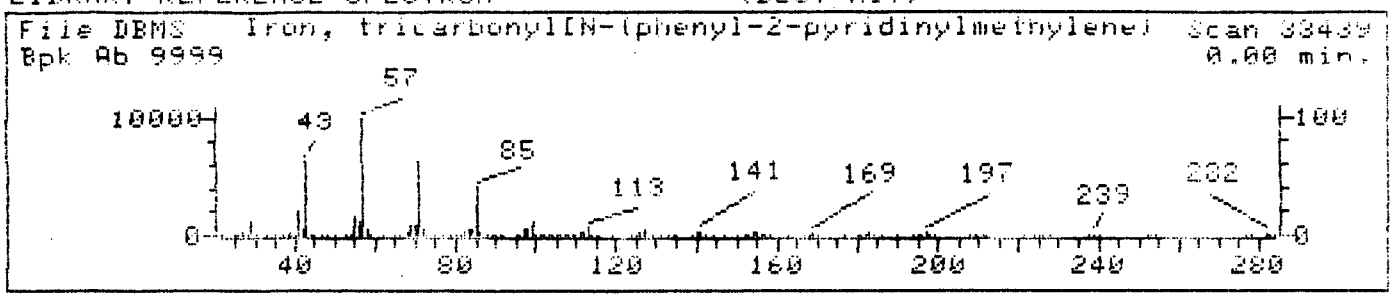
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >F9575::U2
Name: 5/21/85,#F
Misc Data: H5673BA 1:2 BTL#34
RT (min): 20.59
Scan: 1012
Area: 229262
Semi-quantitative Conc. 137.08 UG/ML

Data File: >F9575 Scan Number: 1012
Search Speed: 2 Titling option: S Number of ion ranges searched: 61

1. Iron, tricarbonyl[N-(phenyl-2-pyridinylmethylene)ben 398 C21H14FeN2O3
zenamine-N,N'1- (9CI)
2. Hexadecane, 5-butyl- (8CI) 282 C20H42
3. Heptadecane, 3-methyl- (CCI9CI) 254 C18H38

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	89	74764117	116	21	1	0
2.	87	6912078	68	75	2	0
3.	86	6418446	65	64	3	0

Appendix D
Subcontractor's Data

1) A copy of the originating subcontractor's report is included for all data not generated within ETC's laboratory.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

Subcontracted Analytical Results

REV. 1

ETC Job # 1H15161731

Lab ID: L85392-A3

Submitted by: HW CHYUN

Date: 5/31/85

Facility: (Facility Code)

Sample Point: (Source Code) — (Sample Point ID)

Date Sampled: (Y Y M M D D)

Time Sampled: (H H : M M)

RECEIVED JUN 04 1985

Line No.	Parameter	Table	Units Of Measure	Value	MDL	Comments
CONVENTIONALS						
1	Chloride	QR 10	mg/l			
2	Fluoride	QR 10	mg/l			
3	Nitrate as N	QR 10	mg/l			
4	Sulfate as SO4	QR 10	mg/l			
5	Phenolics, Total	QR 10	mg/Kg	3.1	0.1	
6	Total Organic Halides (TOX)	QR 10	ug/l			
	Total Organic Halides (TOX)	QR 10	ug/l			
	Total Organic Halides (TOX)	QR 10	ug/l			
	Total Organic Halides (TOX)	QR 10	ug/l			
7	Total Organic Carbon	QR 10	mg/l			
	Total Organic Carbon	QR 10	mg/l			
	Total Organic Carbon	QR 10	mg/l			
	Total Organic Carbon	QR 10	mg/l			
8	Specific Conductance (Lab)	QR 10	um/cm			
	Specific Conductance (Lab)	QR 10	um/cm			
	Specific Conductance (Lab)	QR 10	um/cm			
	Specific Conductance (Lab)	QR 10	um/cm			
9	pH (Lab)	QR 10	std			
	pH (Lab)	QR 10	std			
	pH (Lab)	QR 10	std			
	pH (Lab)	QR 10	std			
10	Coliform, Total	QR 10	C/100			
11	Coliform, Fecal	QR 10	C/100			
12	Gross Alpha	QR 10	PCi/l			
13	Gross Beta	QR 10	pCi/l			
14	Acidity as CaCO3		mg/l			
15	Alkalinity as CaCO3		mg/l			
16	Ammonia as N		mg/l			
17	Bicarbonate as CaCO3		mg/l			
18	Biochemical Oxygen Demand		mg/l			
19	Carbonate as CaCO3		mg/l			
20	Chemical Oxygen Demand		mg/l			
21	Color, Apparent (Lab)		Pt/Co			
22	Cyanide, Total		mg/Kg	1.5	0.5	
23	Hardness as CaCO3		mg/l			
24	Nitrite as N		mg/l			
25	Nitrogen Total Kjeldahl (TKN)		mg/l			
26	Nitrogen, Total Organic		mg/l			
27	Odor (Lab)		TON			
28	Oil and Grease (grav, IR)		mg/l			
29	Phosphate, ortho		mg/l			
30	Phosphate, Total		mg/l			
31	Solids, Total		mg/l			
32	Solids, Total Dissolved (ROE) 180°		mg/l			
33	Solids, Total Suspended		mg/l			
34	Sulfide as S		mg/l			
35	Surfactants (MBAS/LAS)		mg/l			
36	Turbidity (Lab)		NTU			

Appendix E

Chain-of Custody Forms

1) A field Chain-of-Custody form (CC1) is included for all samples shipped by ETC shuttle.

2) An in-house sample Chain-of Custody form is included for the period the sample was in ETC's possession.

3) A subcontractor's Chain-of-Custody form is included for any analytical work not performed within ETC's laboratory.

4) Any additional Chain-of-Custody material provided by a client or by a client's sampling agent is also included.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

CHAIN OF CUSTODY FORM (CC1)

Seal No. 34533 ETC Job # H5673

Date Sealed 4/30/85 By: Weber

Company: NJ DEP

Attn.: Al Pleva

Facility/Site: Diamond Head

Phone: (609) 984-3015

Address: Trenton NJ 08625

SAMPLE IDENTIFICATION

Facility: Diamond Head (Facility/Site Code)

Sample Point: S - Soil #3 (Source Code (from below); Your Sample Point ID (left justify))

(Optional Sample Point Descriptions): 850501 (Start Date (YY/MM/DD)); 1012 (Start Time (2400 hr. clock)); 012 (Elapsed Hours (composite))

Source Codes:
Well ..(W) Outfall.....(O) Bottom Sediment....(B) Surface Impoundment....(I) Leachate Collection Sys.....(C) Other .....(X)
Soil ...(S) River/Stream..(R) Generation Point ....(G) Treatment Facility .....(T) Lake/Ocean .....(L) Specify _____

SHUTTLE CONTENTS

531
5

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Fill (Y/N)	SAMPLER Observations	LAB Observations
1	E	1L	Baked	Extb			/
2	V	40ml	Baked	VOA			/

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) D Mazur Date: 5-1-85 Time: 1012
   Signature: Deborah Mazur Seal #: 0034533 Intact: yes

2. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) H Tirth Date: 5-1-85 Time: 1300
   Signature: [illegible] Seal #: 0034534 Intact: yes

ETC USE ONLY Opened By: Khanna Date: 5/2/85 Time: 11:00

Seal #: 34534 Condition: ok

ETC ENVIRONMENTAL TESTING and CERTIFICATION

FIELD PARAMETER FORM (CC2)

ETC JOB # H5673

Sample Point [S] [S01H3] (Source Code / Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD) | START PURGE (2400 Hr Clock) | ELAPSED HRS | WATER VOL IN CASING (Gallons) | VOLUME PURGED (Gallons)

SAMPLING METHOD:

Sampler Type [F] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [B] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl)

Depth to Ground water (ft)

Groundwater Elevation (ft msl)

Well Depth (ft)

Sample Depth (non-well) (ft) 0.50

	ph		spec. cond. (um/cm at 25°C)		(other parameter)	value	units
1st		(STD)		1st			
2nd		(STD)		2nd			
3rd		(STD)		3rd			
4th		(STD)		4th			

Sample Temp (°C) | Turbidity NTU

FIELD COMMENTS

Sample Appearance: Blk silty soil

Weather Conditions: 75°F Sunny

Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: Neil Tionk (Print) Employer: NJDEP

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

5/18/95 (Date) (Signature)

Form DWM-026
6/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAIN OF CUSTODY RECORD

Use One Form for Each Sample — *Shaded Areas for DEP Field Use Only*

NAME OF UNIT AND ADDRESS: Diamond Head Site NJDEP 65 Prospect ST. Trenton NJ

Name of Person(s) Preparing Container(s) for Sample Shuttle

Name _____ Title _____ Agency _____

Name _____ Title _____ Agency _____

Date above-mentioned Person(s) Placed Container(s) in Sample Shuttle ___/___/___ | Military Time _____ | Laboratory Affixed Sample Shuttle Seal No. _____

Name of Person(s) Breaking Laboratory Seal on Sample Shuttle and Taking Field Sample
Name: Deborah Mazur Title: Env Specialist
Name: Neil Jiorle Title: Sr. Env. Spec.
Name: _____ Title: _____

Date Laboratory Sample Shuttle Seal No. 5/1/85 0034533 Broken 5/1/85 | Time (Mil) Seal Broken and Sampling Begun 1012

FIELD SAMPLE NUMBER	CONTAINER NUMBER(S)	VOLUME OF CONTAINERS	DESCRIPTION OF SAMPLE
			Black silty soil Soil #3

LAB CONTROL NO. _____

Date Sampling Completed & Field Seal Affixed to Sample Shuttle 5/1/85 | Military Time 1300 | Field Affixed Sample Shuttle Seal No. 0034534

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample
Name: Shyama Khanna Title: _____

Field Sample Seal No. 0034534 | Date Broken 5/2/85 | Military Time Seal Broken _____

SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
Neil Jiorle	Neil Jiorle	5/1/85		— Del to Lab

COPIES: *Gold - Container/Shuttle Preparation Receipt* *Yellow - Analyst Chain of Custody* *Pink - Field Sampler Receipt* *White - Sample Custodians Chain of Custody*

Form DWM-025
6/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SAMPLE ANALYSIS REQUEST FORM

NJDEP File # _____

SAMPLE LOCATION

NJDEP / HSMA / SEM

NAME OF FACILITY/ COMPANY/PERSON	Diamond Head	CODE	MAILING ADDRESS 65 Prospect ST
SAMPLE LOCATION	Kearny - Soil #3		Trenton NJ

SAMPLE COLLECTOR

SAMPLER(S) Name	Deborah Mazur	Agency	NJDEP / HSMA	Sampler ID #	
Name	Neil Jiorle	Agency	NJDEP / HSMA	Sampler ID #	HS91

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	Soil #3	SAMPLING DATE	5-1-85	ABSCISSA (Longitude)	
SAMPLE POINT ID	H5673	TIME (MIL) SAMPLING BEGAN	1025	ORDINATE (Latitude)	
SAMPLE SOURCE CODE		TIME (MIL) SAMPLING FINISHED	1030	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code Soil	Other
TYPE OF SAMPLER	Code Trowel	Other	SAMPLE MATRIX	Code	Other
DESCRIPTION	black silty soil				

FIELD MEASUREMENTS

SAMPLE TEMP. °C	PARAMETER	PARAMETER	PARAMETER
AIR TEMP. 75 °C	VALUE	VALUE	VALUE
WEATHER Sunny			

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

PARAMETERS (by Compound or Group of Compounds)	CONTAINER NUMBER	DETECTION LIMIT (digits/units)	PRECISION & ACCURACY LIMITS	REQUESTED TURNOVER (days)
PP + 40 PCB's				
GC/ECD				

ANALYSIS(ES) AUTHORIZED BY	AL Plevia	TITLE	Supr. tech.

ANALYZING LABORATORY

CONTRACT LAB NAME	ETC	PERSON ACCEPTING SAMPLE	Khanna	TITLE	
LAB ID #	LAB CONTROL #	DATE	5/2/85	TIME (MIL)	1100

EXTRACTION LOG

QC Batch # 2995

Analysis: PP/PST (GC)

Matrix: SOIL

Turnaround: NORM

Date: 5/4/85

Extraction Method:

- sep funnel
- continuous
- soxhlet ✓
- other

Sample Number	Log Entry	Sample weight (g.)	Extract Vol. (ml)		Comments
H5671	9303	2.14	5.0ml		
H5672		2.09	5.0ml		
* H5673		2.23	10.0ml		
* H5674		2.11	10.0ml		
* H5675		2.00	10.0ml		
H5676	✓	2.04	1.0ml		
QC 2995		—	1.0ml		
H5676 S1		2.17	1.0ml		
* H5674 R		-2.05-	10.0ml		
H5676 S2		2.00	1.0ml		

COMMENTS FOR EXTRACT.:

N.J. DEP

SAMPLES ON @ 1:00 pm 5/4/85

concentrate to 1.0 ml FINAL VOL IN HEXANE & package

* Final vols are high because, at lower vol, precipitation was occuring.
There might be little more precipitation while sitting in the Freez-
1.0 ml aliq taken

COMMENTS FOR GC/MS:

FRACTION	SPIKE Amt. (ml)	Conc.	Lot #
PP PEST (GC)	1.0	1.0 w/ml	10,404
METHOXYCHLOR	1.0	25.0 w/ml	10,406
TOXAPHENE	1.0	10.0 w/ml	10,414
CHLORDANE	1.0	10.0 w/ml	10,410

SURROGATE	Amt. (ml)	Conc.	Lot #

Set-up: [illegible] 5/4/85

Conc.: [illegible] 5/10/85

UPD/Supervisor: [illegible] 5/10/85

Spike/surr. verified: [illegible] 5/4/85

EXTRACTION LOG

QC Batch # 2997

Analysis: PP/ORG
PP/ACID ONLY:
Note: H4071, H4653, H4656, H4657

Matrix: SOIL
Turnaround:
Date: 5/4/85

Extraction Method:
sep funnel
continuous
soxhlet ✓
other sonicator

Repeats in green

Sample Number	Log Line	Sample weight (g.)	Extract Vol. (ml) BNA		Comments pH
H5671	9303	30.25	*		5.2
H5672	↓	30.29	*		6.8
H5673		30.66	*		6.6
H5674		30.16	*		6.8
H5675		30.12	*		8.8
H5676	↓	30.36	10.0ml		6.2
H4071	8986	30.23	4.0ml		5.4
H4512	9114	30.93	*		5.0
H4683	9127	30.12	1.0ml		4.6
H4686	↓	30.27	*		2.8
H4687	↓	30.60	*		3.0
H4513	9114	30.12	4.0ml		5.8
H4514	↓	30.47	*		6.0
H4515	↓	30.53	*		4.4
H4516	↓	30.26	1.0ml		4.6
H4071-R	—	30.06	4.0		
QC 2997		30.02	1.0ml		
H5676 S		30.16	10.0ml		
* H4683 R		30.14	—		
* Concentrating tube broken on water bath					

COMMENTS FOR EXTRACT.:
NJDep: Holding Times critical

check pH: a few grams in H_2O 1:1. take pH w/ electrode. Advise if not neutral

These are to be run neutral pH only. Samples should be dried before weighing. Only 1 fraction. Final volume = 1ml

COMMENTS FOR GC/MS:
Samples with pH outside the range of 5-9 were adjusted to a neutral pH.

* these sample to be reextracted at medium level

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
B/N	1.0	100 ug/ml	10,499
ACID	1.0	100 ug/ml	10,523
SEMI-VOA			

SURROGATE Amt. (ml)	Conc.	Lot #
1.0	B/N @ 50 ug/ml	10,551
	ACID @ 100 ug/ml	

Set-up: [signature] 5/4/85 Supervisor: S McArthur 5/12/85
Conc.: [signature] Spike/surr. verified: [signature] 5/4/85

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GC-MS ANALYSIS CUSTODY LOG

DATE 5/8/85 SHIFT ___
FRACTION VOA
INSTRUMENT D
TUNE FILE APEI02
SEQUENCE FILE
METHOD FILE VOAD
IDFILE DVOA
ANALYST(S) S. Johnston

SUPERVISOR [signature]
BATCH #'s QV3241

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ		DATE	5/9
WIP		BY	SJ

STANDARD	CONC PPM	LOT NO.	LOT VOL
P-BFB	50	10275	1
Istd	40	10332	5
Surr	25	8793	10
ABC	18	10530	5

IFB Prep Soil 110+15

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
P-BFB	708206	1			E0198	Arcu 0120	
QC3241v	708207	5ml		NG	700 NG	meth. Cl (mistyped as 708241)	
QC3241v	708208			NG		570 methyl	
QC3241vS	708209					5uL ABC	
QC3241vS	708210					10uL ABC	
QC3241vS	708211					30uL	
P-BFB	708212	1		OK		0731	
QC3241v	708213	5ml					
H5672VS ✓	708214	5g/5ml				spl ABC	
H5672V ✓	708215	5g/5ml					
H5674V ✓	708216	5g/5ml					
H5674VR ✓	708217	5g/5ml					
H5676V	708218	5g/5ml					
H5673V ✓	708219	0.1g/5ml				4000 Nb 7.1 Wpm	
H5671V ✓	708220	0.1g/5ml					
H5675V ✓	708221	0.1g/5ml					
H5671V ✓	708222	1.0g/5ml					
H5671V ✓	708223	5g/5ml				Low TSTD	
H5671V ✓	708224	5g/5ml					

TSR 8-84

EXTRACTION LOG

QC Batch # 2994

Analysis: PP/PCB (GC)

Matrix: SOIL

Turnaround: NORM

Date: 5/4/85

Extraction Method:

- sep funnel
- continuous
- soxhlet ✓
- other

Sample Number	Log Line	Sample weight (g)	Extract Vol. (ml) PCB		Comments
H5671	9303	2.12	=10.0		
H5672	↓	2.01	=10.0		
H5673		2.35	=10.0		
H5674		2.01	=10.0		
H5675		2.20	=10.0		
H5676	↓	2.19	=10.0		
QC 2994		—	10.0		
H5676 S		2.21	=10.0		
H5674 R		2.18	10.0		

COMMENTS FOR EXTRACT.:
N.J. DEP: HOLDING TIME CRITICAL
SAMPLES ON @ 1:00 pm 5/4/85
QC2994 and H5674 1.0ml whole volume cleaned & brought up to 10.0ml, final volume 1 aliquot packaged
All others after clean up brought up to 10.0 & 1 ml of this total volume
H5674 sample strattle

COMMENTS FOR GC/MS:
was cleaned & brought down to 1.0ml final volume which is equivalent to 10.0ml.

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
AROCHLOR 1260	2.0	10 µg/ml	10,529

SURROGATE Amt. (ml)	Conc.	Lot #

Set-up: [signature] 5/4/85 UPD/Supervisor: [signature] 5/4/85

Conc.: LOUIS ANNUNZIATO 5/6/85 Spike/surr. verified: [signature] 5/6/85

EXTRACTION LOG

Sample Number	Log Line	Sample weight (g)	Extract Vol. (ml) BNA		Comments pH
H5671	9303	3.00	5.0		7.6
H5672	↓	3.05	10.0		6.8
H5673	↓	3.15	10.0		7.0
H5674	↓	3.02	1.0		7.1
H5675	↓	3.06	10.0		8.7
H5676	↓	3.04	1.0		7.6
H4512	9114	3.04	10.0		6.5
H4686	9127	3.02	10.0		2.6
H4687	↓	3.01	10.0		2.2
H4514	9114	3.05	10.0		5.1
H4515	↓	3.03	1.0		4.5
QC 3025		3.04	1.0		
H4515 S		3.02	1.0		
H5674 R		3.01	~~10.0~~	1.0 (2nd)	

QC Batch # 3025

Analysis: PP/ORG

PP/ACID (REPEATS)

Matrix: SOIL

Turnaround: NORM

Date: 5/12/85

Extraction Method:

sep funnel

continuous

soxhlet

other sonicator

COMMENTS FOR EXTRACT.:
NJ DEP: Holding Times Critical

Samples were too concentrated at low level, all sample to be reextracted at medium level.
Dry sample
Use 3 g sample weight
Adjust to neutral pH (5–9) if necessary
Extract x3 w/ DCM/ACETONE
F.V. = 1.0 ml.

COMMENTS FOR GC/MS:
Samples with a pH outside of the range 5.0 & 9.0 were adjusted to a neutral pH

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
BN	1.0	100 ug/ml	10,499
ACID	1.0	100 ug/ml	10,523
Semi-Voa			

SURROGATE Amt. (ml)	Conc.	Lot #
1.0	BN @ 50 ug/ml	10,531
	ACID @ 100 ug/ml	

Set-up: [signature] 5/12/85 [signature] 5/13/85 UPD/Supervisor: Karen Allerton 5/13/85
Spike/Surr. verified: [signature] 5/13/85

EXTRACTION LOG

QC Batch # 2997

REVISED 5/13/85

Analysis: PP/ORG

PP/ACID ONLY:

Note: H4071, H4683, H4656, H4687

Matrix: SOIL

Turnaround:

Date: 5/4/85

Extraction Method:

sep funnel

continuous

soxhlet ✓

other sonicator

Repeats in green

Sample No.	Log Line	Sample weight (g.)	Extract Vol. (ml) BNA		Comments pH
H5671	9303	30.25	*		5.2
H5672	↓	30.29	*		6.8
H5673	↓	30.66	*		6.6
H5674	↓	30.16	*		6.8
H5675	↓	30.12	*		8.8
H5676	↓	30.36	10.0ml		6.2
H4071	8986	30.23	4.0ml		5.4
H4512	9114	30.93	*		5.0
H4683	9127	30.12	1.0ml		4.6
H4686	↓	30.27	*		2.8
H4687	↓	30.60	*		3.0
H4513	9114	30.12	4.0ml		5.8
H4514	↓	30.47	*		6.0
4515	↓	30.53	*		4.4
H4516	↓	30.26	1.0ml		4.6
H4071-R	—	30.06	4.0		
QC 2997		30.02	1.0ml		
H5676 S		30.16	10.0ml		
* H4683 R		30.14	—		
* Concentrating tube broken on water bath					

COMMENTS FOR EXTRACT.:

NJDep: Holding Times critical

check pH: a few grams in H_2O 1:1. take pH w/ electrode. Advise if not neutral

These are to be run neutral pH only. Samples should be dried before weighing. Only 1 fraction. Final volume ≡ 1ml

COMMENTS FOR GC/MS:

Samples with pH out side the range of 5-9 were adjusted to a neutral pH. Final extracts ranged from 10-20ml and were heavily blackened and would need to be diluted at least x10 by GC/MS.

* These sample to be reextracted at medium level

FRACTION	SPIKE Amt. (ml)	Conc.	Lot #
B/N	1.0	100 ug/ml	10,499
ACID	1.0	100 ug/ml	10,523
SEMI-VOA			

SURROGATE	Amt. (ml)	Conc.	Lot #
	1.0	B/N @ 50 ug/ml	10,551
		ACID @ 100 ug/ml	

Set-up: [signature] 5/4/85 Frank Wolff

Conc.: [signature]

Supervisor: S McArthur 5/12/85

Spike/surr. verified: [signature] 5/4/85

MAY 10, 1985 13:26
SEQUENCE: SCON2 ON CAN 15
CHANNEL 2

SUBSEQUENCE 1

METHOD
PCBB2

DIALG-PRG PARAM-FILE
/N

#WSHG AMPS STOP
5, 5. 1

ISO POST-STL# PRGI-#WSHS
NO , 0, 1

John Strain 5/10/85
John Strain 5/15/85

SAMPLES

	SAMPLE-NAME	BTL#	PROC-FILE	RAW-FILE	%DIL-F	STD-AMT	SMP-AMT
1	AR1260-5.0 ,	1,	RJ0522:YI,	RJ0522:YI,	100.00,	1.0000,	1.0000
2	AR1240-1.0 ,	2,	RJ0523:YI,	RJ0523:YI,	100.00,	1.0000,	1.0000
3	AR1221-5.0 ,	3,	RJ0524:YI,	RJ0524:YI,	100.00,	1.0000,	1.0000
4	H5674 ,	4,	H5674K:YI,	H5674L:YI,	100.00,	1.0000,	1.0000
5	H5674R ,	5,	RJ0525:YI,	RJ0525:YI,	100.00,	1.0000,	1.0000
6	AR1221-1.0 ,	6,	RJ0526:YI,	RJ0526:YI,	100.00,	1.0000,	1.0000
7	AR1232-1.0 ,	7,	RJ0527:YI,	RJ0527:YI,	100.00,	1.0000,	1.0000
8	H5671 ,	8,	H5671K:YI,	H5671L:YI,	100.00,	1.0000,	1.0000
9	AR1232-5.0 ,	9,	RJ0528:YI,	RJ0528:YI,	100.00,	1.0000,	1.0000
10	H5672 1:25 ,	10,	H5672K:YI,	H5672L:YI,	100.00,	1.0000,	1.0000
11	AR1254-1.0 ,	11,	RJ0529:YI,	RJ0529:YI,	100.00,	1.0000,	1.0000
12	H5673 1:10 ,	12,	H5673K:YI,	H5673L:YI,	100.00,	1.0000,	1.0000
13	H5675 1:10 ,	13,	H5675K:YI,	H5675L:YI,	100.00,	1.0000,	1.0000
14	AR1248-1.0 ,	14,	RJ0530:YI,	RJ0530:YI,	100.00,	1.0000,	1.0000
15	AR1242-1.0 ,	15,	RJ0531:YI,	RJ0531:YI,	100.00,	1.0000,	1.0000
16	AR1016-1.0 ,	16,	RJ0532:YI,	RJ0532:YI,	100.00,	1.0000,	1.0000
17	AR1240-10.0 ,	17,	RJ0533:YI,	RJ0533:YI,	100.00,	1.0000,	1.0000
18	/E						

KB

[illegible] 5/14/05

John Strain 5/16/05

QC 3003

QC 2995

1:10
1:10
1:50
1:10
1:10
1:100
1:100
1:100
1:100

ETC ENVIRONMENTAL TESTING and CERTIFICATION

Request for Analysis

Name of Subcontractor: Chyun

ETC Sample Number(s) H5671 to H5676

Send bill to: John Hamilton
Send report to: John Hamilton

ETC Corporation
284 Raritan Center Pkw.
Edison, NJ 08837
(201) 225-5600

Date Data Required: 5/16/85
If deadline cannot be met, contact John Hamilton immediately.

Please perform the analyses requested below:

____ Color
____ Conductance, Specific
____ Odor
____ pH
____ Turbidity
____ Total Solids
____ Total Suspended Solids
____ Total Dissolved Solids
____ Total Volatile Solids
____ Gross Alpha and Gross Beta*
____ Radium 226 if Gross Alpha exceeds 5 pCi/l
____ Radium 228 if Radium 226 exceeds 3 pCi/l

____ Coliform, Total
____ Coliform, Fecal
____ Biological Oxygen Demand (5 day, 20 degree C)
____ Chemical Oxygen Demand (COD)
____ Oil & Grease (Gravimetric)
____ Petroleum Hydrocarbons (Infrared)
____ Organic Carbon, Total (TOC)
X Phenols, Total (as Phenolics)
____ Methylene Blue Active Substances (MBAS) (Foaming Agents, Surfactants)

* If Gross Alpha exceeds 5 pCi/l, John Hamilton must be notified immediately.

____ Acidity
____ Alkalinity
____ Bromide
____ Chloride
____ Chlorine, Total Residual
X Cyanide, Total
____ Ammonia (as N)
____ Total Kjeldahl Nitrogen (TKN)
____ Nitrate

____ Nitrate-Nitrite
____ Nitrite
____ Oxygen, Dissolved
____ Phosphorous, Ortho Phosphate
____ Silica, Dissolved
____ Sulfate (as SO_4)
____ Sulfide (as S)
____ Sulfite (as SO_3)
____ Fluoride

OTHERS

Soil Contract X-029

Sample(s) Relinquished by: Tracy Durel

Date 5/6/85 Time 3:45

Sample(s) Received by: Gregory J. Lobb

Date 5/6/85 Time 3:45

284 RARITAN CENTER PARKWAY • EDISON, NJ 08837 (201) 225-5600

GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT Day V2
FRACTION Acid
INSTRUMENT F
TUNE FILE HTF00
SEQUENCE FILE WUCF
METHOD FILE AcidF
IDFILE FACID
ANALYST(S) Wen-Wen Chi

SUPERVISOR [illegible]
BATCH #'s 6A3017

STANDARD	CONC PPM	LOT NO.	LOT VOL
Calib II (Acid)	300	10528	
II	100	10527	
I	60	[illegible]	
HSLPP/Acid	300	9603	
"	100	9604	
"	60	9605	
Calib II (BN)	200		
II	100		
I	50		

(PLEASE INITIAL)

CURRENT CSWS STATUS		STANDARDS UPDATED	
ACQ		DATE	5/21/85
WIP		BY	W.W. Acid

NAME	DATA FILE	UL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
50NG DFTPP ✓	>F9520 X		21			5:00.	
Calib II	>F9521 X		22				
II	>F9522 X		23				
I	>F9523 X		24				
HSLPP / Acid 300	>F9524		25				
HSLPP / Acid 100	>F9525		26				
" 60	>F9526		27				
50NG DFTPP ✓	>F9527 X		28			8:41	
H2986AS	>F9528		29				
GC3017AS	>F9529		30				
GC3017A	>F9530		31				
~~H6552A~~	~~>F9531~~		Cancel				Y
~~H6354A~~	~~>F9532~~						
H3877A	>F9533		34				
H2980A	>F9534		35				
H2982A	>F9535		4				
H2984A	>F9536		5				
H2985A	>F9537		6				
H2986A	>F9538		7				
H2987A	>F9539		8				
H1642A	>F9540		9				
H2236A	>F9541		10				
H5474A	>F9542		11				
H1647A	>F9543		12				
H1648A	>F9544		13		131		

TSR 8-84

GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT 1/2
FRACTION Acid/BN
INSTRUMENT
TUNE FILE
SEQUENCE FILE
METHOD FILE
IDFILE
ANALYST(S)
SUPERVISOR
BATCH #'s

(PLEASE INITIAL)

CURRENT CSWS STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL

NAME	DATA FILE	UL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
H1649A	7F9545		04				
H2983A	7F9546		05				
H2983AR	7F9547		06				
Calib III (B/N)	7F9548		7				
Calib II (B/N)	7F9549		8				
Calib I (B/N)	7F9550		9				
Calib II (Acid)	7F9551		10	X			
50NG DFTPP	7F9552	A	11				
GC3025 BNA	7F9553	A	12	X		✓	✓
H6515 BNAS	7F9554	A	13			–	
H5671 BNA	7F9555	A	14			✓	✓
H5675BNA	7F9556	A	15			✓	✓
H5676BNA	7F9557	A	16			✓	✓
H6514BNA	7F9558	A	17			✓	✓
H6512BNA	7F9559	A	18			✓	✓
H6686BNA	7F9560	A	19			✓	✓
H6687BNA	7F9561	A	20			✓	✓
~~H6514BNA~~ H6671BNA	7F9562	A	21	1:2		✓	✓
H5674 BNAR	7F9563	A	22	1:2			
~~Calib~~ 50NG DFTPP	7F9564		23				
Calib II (BN)	7F9565		24				
~~Calib~~	~~7F9566~~		~~25~~				
50NG DFTPP	7F9567		26				
GC2997 BNA	7F9568		27				X
H5676 BNAS	7F9569		28		132		

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GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT ___
FRACTION BNA
INSTRUMENT ~~[illegible]~~ F~~[illegible]~~
TUNE FILE MTE001
SEQUENCE FILE ___
METHOD FILE ___
IDFILE ___
ANALYST(S) ___
SUPERVISOR [illegible]
BATCH #'s ___

(PLEASE INITIAL)

CURRENT CS&S STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL

NAME	DATA FILE	UL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
H U683 BNA ✓	7F9570 ✓		29				Y
H 5U516 BNA	7F9571 ✓		30				
H U513 BNA ✓	7F9572 ✓		31				
~~H 5676 BNA~~ ✓	7F9573 ✓		32			✓	✓
~~H U071 BNA~~	~~[illegible]~~		~~[illegible]~~				
~~H U071 BNA B~~			~~[illegible]~~				
H 5672 BNA ✓	7F9574 ✓		33	1:2		✓	✓
H 5673 BNA ✓	7F9575 ✓		34	1:2			
H U515 BNA ✓	7F9576		35	1:2			✓
H U071 BNA	7F9577		36				✓
H U071 BNA 2	7F9578		37				

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GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT 1/2

FRACTION Acid BN

INSTRUMENT

TUNE FILE

SEQUENCE FILE

METHOD FILE

IDFILE

ANALYST(S)

SUPERVISOR

BATCH #'s

(PLEASE INITIAL)

CURRENT CS#S STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL

NAME	DATA FILE	UL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
H1649A	7F9554		04				
H2983A	7F9556		05				
H2983AR	7F9567		06				
Calib III (B/N)	7F9548		7				
Calib II (B/N)	7F9549		8				
Calib I (B/N)	7F9550		9				
Calib II (Acid)	7F9551	A	10	X			
50NG DFTPP	7F9552	A	11				
QC3825 BNA	7F9553	A	12	X		✓	✓
H6515 BNAS	7F9554	A	130			–	
H5671 BNA	7F9555	A	14			✓	✓
H5675BNA	7F9556	A	15			✓	✓
H5676BNA	7F9557	A	16			✓	✓
H5514BNA	7F9558	A	17			✓	✓
H6512BNA	7F9559	A	18			✓	✓
H6686BNA	7F9560	A	19			✓	✓
H6687BNA	7F9561	A	20			✓	✓
~~H6686BNA~~ H5674 BNA	7F9562	A	21	1:2		✓	✓
H5674 BNAR	7F9563	A	22	1:2			
~~Calib~~ 50NG DFTPP	7F9564		23				
Calib II (BN)	7F9565		24				
~~Calib I (BN)~~	~~7F9566~~		~~25~~				
50NG DFTPP	7F9567		26				
QC2997 BNA	7F9568		27				✓
H5676 BNAS	7F9569		28				

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GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT ___
FRACTION BNA
INSTRUMENT ~~[illegible]~~ F~~[illegible]~~
TUNE FILE HTF001
SEQUENCE FILE ___
METHOD FILE ___
IDFILE ___
ANALYST(S) ___
SUPERVISOR [illegible]
BATCH #'s ___

(PLEASE INITIAL)

CURRENT CSWS STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL

NAME	DATA FILE	UL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
H U683 BNA ✓	7F9570 ✓		29				Y
H U516 BNA	7F9571 ✓		30				
H U513 BNA ✓	7F9572 ✓		31				
~~H 5676 BNA~~ ✓	7F9573 ✓		32			✓	✓
~~H U071 BNA~~	~~[illegible]~~		~~[illegible]~~				
~~H U071 BNA B~~			~~[illegible]~~				
H 5672 BNA ✓	7F9574 ✓		33	1:2		✓	✓
H 5673 BNA ✓	7F9575 ✓		34	1:2			
H U515 BNA ✓	7F9576		35	1:2			✓
H U071 BNA	7F9577		36				✓
H U071 BNA 2	7F9578		37				

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

LOG LINK 9303

Metals Analysis Custody Log

Samples H5671-H5676

	Chemist	Date
Hg Prep	R Walla	6/3/85
AA/ICAP Prep	Matt Cordova	5/23/85

Lab Supervisor Lidya Wikanov date 6/5/85