Technical Report

for

NJDEP-DIVISION OF WASTE MGMT.

CONTRACT X-029

Chain of Custody Data Required for ETC Data Management Summary Reports						
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SS0IL1	850501	1015	0001
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*	*Time*	*Elapsed Hours*

Denis C. K. Lin, Ph.D.

Vice President
Research and Operations

510345

TABLE OF CONTENTS

Methodology Summary

Table 1: Results and Quality Assurance Data

Table 2: Method Performance Data

Report Appendices

Appendix A1 - Gas Chromatographic Spectral Data for Quantitated Compounds

Appendix A - Mass Spectral Data for Quantitated Compounds

Appendix B - GC/MS Calibration Data - Forms IX and X

Appendix C1 - GC/MS Subsidiary Data - Blank Chromatograms

Appendix C - Mass Spectral Data for Tentatively Identified Compounds

Appendix D - Subcontractor's Data

Appendix E - Chain of Custody Forms

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

ETC ENVIRONMENTAL TESTING and CERTIFICATION

JUN 29, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

004

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	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	100.0	ND	ND	ND	800	82	ND	800	163[B]
2V	Acrylonitrile	ND	100.0	ND	ND	ND	80	98	ND	80	184[B]
3V	Benzene	BMDL	4.4	ND	ND	ND	18	99	46	18	21[C]
4V	bis(Chloromethyl)ether	ND	10.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	4.7	ND	ND	ND	18	94	ND	18	69
6V	Carbon tetrachloride	ND	2.8	ND	ND	ND	18	100	ND	18	94
7V	Chlorobenzene	ND	6.0	ND	ND	ND	18	101	ND	18	109
8V	Chlorodibromomethane	ND	3.1	ND	ND	ND	18	95	ND	18	87
9V	Chloroethane	ND	10.0	ND	ND	ND	18	100	ND	18	154[B]
10V	2-Chloroethylvinyl ether	ND	10.0	ND	ND	ND	18	119	ND	18	102
11V	Chloroform	ND	1.6	ND	ND	ND	18	104	ND	18	132
12V	Dichlorobromomethane	ND	2.2	ND	ND	ND	18	101	ND	18	101
13V	Dichlorodifluoromethane	ND	10.0	ND	ND	ND	18	106	ND	18	145
14V	1,1-Dichloroethane	10.1	4.7	ND	ND	ND	18	101	21	18	92
15V	1,2-Dichloroethane	ND	2.8	ND	ND	ND	18	103	ND	18	137
16V	1,1-Dichloroethylene	ND	2.8	ND	ND	ND	18	100	ND	18	129
17V	1,2-Dichloropropane	ND	6.0	ND	ND	ND	18	95	ND	18	125
18V	cis-1,3-Dichloropropylene	ND	5.0	ND	ND	ND	18	94	ND	18	95
19V	Ethylbenzene	18.5	7.2	ND	ND	BMDL	18	99	14	18	37[B]
20V	Methyl bromide	ND	10.0	ND	ND	ND	18	101	ND	18	118
21V	Methyl chloride	ND	10.0	ND	ND	ND	18	102	ND	18	156[B]
22V	Methylene chloride	10.8	2.8	24	1	9	18	76	18	18	98
23V	1,1,2,2-Tetrachloroethane	ND	6.9	ND	ND	ND	18	99	ND	18	125
24V	Tetrachloroethylene	BMDL	4.1	ND	ND	ND	18	100	19	18	43
25V	Toluene	36.3	6.0	ND	ND	ND	18	102	95	18	0[C]
26V	1,2-Trans-dichloroethylene	5.2	1.6	ND	ND	ND	18	100	87	18	0[C]
27V	1,1,1-Trichloroethane	ND	3.8	ND	ND	ND	18	111	13	18	83
28V	1,1,2-Trichloroethane	ND	5.0	ND	ND	ND	18	98	ND	18	109
29V	Trichloroethylene	3.2	1.9	ND	ND	3	18	85	13	18	51
30V	Trichlorofluoromethane	ND	10.0	5	3	ND	18	102	ND	18	124
31V	Vinyl chloride	BMDL	10.0	ND	ND	ND	18	103	3	18	149[B]
18V	trans-1,3-Dichloropropylene	ND	10.0	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.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

JUN 27, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

005

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED SSOIL1		850501	1015	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 [c]	Unspiked Sample ug/kg	Concen Added ug/kg	% Recov [c]
1A	2-Chlorophenol	ND	109	ND	ND	ND	0	-	ND	333	36
2A	2,4-Dichlorophenol	ND	89	ND	ND	ND	0	-	ND	333	28
3A	2,4-Dimethylphenol	ND	89	ND	ND	ND	0	-	ND	333	24
4A	4,6-Dinitro-o-cresol	ND	792	ND	ND	ND	0	-	ND	333	26
5A	2,4-Dinitrophenol	ND	1386	ND	ND	ND	0	-	ND	333	10
6A	2-Nitrophenol	ND	119	ND	ND	ND	0	-	ND	333	27
7A	4-Nitrophenol	ND	79	ND	ND	ND	0	-	ND	333	22
8A	p-Chloro-m-cresol	ND	99	ND	ND	ND	0	-	ND	333	34
9A	Pentachlorophenol	ND	119	ND	ND	ND	0	-	ND	333	33
10A	Phenol	ND	50	ND	ND	ND	0	-	ND	333	45
11A	2,4,6-Trichlorophenol	ND	89	ND	ND	ND	0	-	ND	333	29

A ETC established Method Detection Limit for this particular sample.

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

C Recovery low due to sample matrix interference.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

JUN 27, 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
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED SSOIL1		850501	1015	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 [c]
1B	Acenaphthene	192	66	ND	ND	ND	0	-	ND	333	31
2B	Acenaphthylene	ND	116	ND	ND	ND	0	-	ND	333	29
3B	Anthracene	BMDL	63	ND	ND	ND	0	-	ND	333	31
4B	Benzidine	ND	1450	ND	ND	ND	0	-	ND	333	0
5B	Benzo(a)anthracene	ND	257	ND	ND	ND	0	-	ND	333	33
6B	Benzo(a)pyrene	738	83	ND	ND	ND	0	-	40	333	37
7B	Benzo(b)fluoroanthene	ND	158	ND	ND	ND	0	-	ND	333	38
8B	Benzo(ghi)perylene	ND	135	ND	ND	ND	0	-	ND	0	-
9B	Benzo(k)fluoranthene	1270	83	ND	ND	ND	0	-	119	333	36
10B	bis(2-Chloroethoxy)methane	ND	175	ND	ND	ND	0	-	ND	333	29
11B	bis(2-Chloroethyl) ether	ND	189	ND	ND	ND	0	-	ND	333	27
12B	bis(2-Chloroisopropyl)ether	ND	198	ND	ND	ND	0	-	ND	333	24
13B	bis(2-Ethylhexyl)phthalate	2117	330	ND	ND	ND	0	-	136	333	35
14B	4-Bromophenyl phenyl ether	ND	63	ND	ND	ND	0	-	ND	333	32
15B	Butyl benzyl phthalate	ND	330	ND	ND	ND	0	-	ND	333	30
16B	2-Chloronaphthalene	ND	63	ND	ND	ND	0	-	ND	333	33
17B	4-Chlorophenyl phenyl ether	ND	139	ND	ND	ND	0	-	ND	333	25
18B	Chrysene	ND	83	ND	ND	ND	0	-	ND	333	32
19B	Dibenzo(a,h)anthracene	ND	83	ND	ND	ND	0	-	ND	0	-
20B	1,2-Dichlorobenzene	ND	63	ND	ND	ND	0	-	ND	333	23
21B	1,3-Dichlorobenzene	ND	66	ND	ND	ND	0	-	ND	333	23
22B	1,4-Dichlorobenzene	ND	145	ND	ND	ND	0	-	ND	333	22
23B	3,3'-Dichlorobenzidine	ND	545	ND	ND	ND	0	-	ND	333	14
24B	Diethyl phthalate	ND	330	ND	ND	ND	0	-	ND	333	27
25B	Dimethyl phthalate	ND	330	ND	ND	ND	0	-	ND	333	29
26B	Di-n-butyl phthalate	ND	330	ND	ND	172	0	-	ND	333	38
27B	2,4-Dinitrotoluene	BMDL	189	ND	ND	ND	0	-	ND	333	28
28B	2,6-Dinitrotoluene	ND	63	ND	ND	ND	0	-	ND	333	29
29B	Di-n-octyl phthalate	ND	330	ND	ND	ND	0	-	ND	333	33
30B	1,2-Diphenylhydrazine	ND	330	ND	ND	ND	0	-	ND	333	26
31B	Fluoranthene	236	73	ND	ND	ND	0	-	ND	333	32
32B	Fluorene	ND	63	ND	ND	ND	0	-	ND	333	28

ETC ENVIRONMENTAL TESTING and CERTIFICATION

JUN 27, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

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

007

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	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 [c]
33B	Hexachlorobenzene	ND	63	ND	ND	ND	0	-	ND	333	23
34B	Hexachlorobutadiene	ND	30	ND	ND	ND	0	-	ND	333	30
35B	Hexachlorocyclopentadiene	ND	330	ND	ND	ND	0	-	ND	0	-
36B	Hexachloroethane	ND	53	ND	ND	ND	0	-	ND	333	22
37B	Indeno(1,2,3-c,d)pyrene	ND	122	ND	ND	ND	0	-	ND	0	-
38B	Isophorone	ND	73	ND	ND	ND	0	-	ND	333	29
39B	Naphthalene	ND	53	ND	ND	ND	0	-	ND	333	28
40B	Nitrobenzene	ND	63	ND	ND	ND	0	-	ND	333	25
41B	N-Nitrosodimethylamine	ND	330	ND	ND	ND	0	-	ND	0	-
42B	N-Nitrosodi-n-propylamine	ND	330	ND	ND	ND	0	-	ND	333	27
43B	N-Nitrosodiphenylamine	ND	66	ND	ND	ND	0	-	ND	333	26
44B	Phenanthrene	410	178	ND	ND	ND	0	-	ND	333	32
45B	Pyrene	349	63	ND	ND	ND	0	-	ND	333	31
46B	1,2,4-Trichlorobenzene	ND	63	ND	ND	ND	0	-	ND	333	27

A ETC established Method Detection Limit for this particular sample.

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

C Recovery low due to sample matrix interference.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 21, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide Compounds - GC Analysis Data (QR32)

008

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	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	23000	ND	ND	ND	0	-	ND	460	93
2P	Alpha-BHC	ND	23000	150	ND	ND	0	-	ND	460	84
3P	Beta-BHC	ND	23000	ND	ND	ND	0	-	ND	460	84
4P	Gamma-BHC	ND	23000	ND	ND	ND	0	-	ND	460	84
5P	Delta-BHC	ND	23000	ND	ND	ND	0	-	ND	460	100
6P	Chlordane	ND	230000	ND	ND	ND	0	-	ND	5000	81
7P	4,4'-DDT	ND	23000	ND	ND	ND	0	-	ND	460	190[C]
8P	4,4'-DDE	ND	23000	ND	ND	ND	0	-	ND	460	110
9P	4,4'-DDD	ND	23000	2400	ND	ND	0	-	ND	460	130
10P	Dieldrin	ND	23000	ND	ND	ND	0	-	ND	460	110
11P	Endosulfan I	ND	23000	ND	ND	ND	0	-	ND	460	100
12P	Endosulfan II	BMDL	23000	ND	ND	ND	0	-	ND	460	110
13P	Endosulfan sulfate	ND	23000	ND	180	ND	0	-	ND	460	110
14P	Endrin	ND	23000	ND	ND	ND	0	-	ND	460	140
15P	Endrin aldehyde	ND	23000	600	ND	ND	0	-	ND	460	73
16P	Heptachlor	ND	23000	ND	ND	ND	0	-	ND	460	83
17P	Heptachlor epoxide	ND	23000	ND	ND	ND	0	-	ND	460	100
25P	Toxaphene	ND	230000	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.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

JUN 6, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Metals, Cyanide and Phenols - Analysis Data (QR05)

600

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	1

NPDES Number	Compound		Results Sample Concen.	Results MDL
1M	Antimony	ug/kg	BMDL	9000
2M	Arsenic	mg/kg	4.2	1
3M	Beryllium	ug/kg	200	50
4M	Cadmium	ug/kg	BMDL	300
5M	Chromium	ug/kg	31000	2000
6M	Copper	ug/kg	47000	900
7M	Lead	mg/kg	620	5
8M	Mercury	mg/kg	.2	.1
9M	Nickel	ug/kg	9000	1000
10M	Selenium	mg/kg	ND	.5
11M	Silver	ug/kg	ND	500
12M	Thallium	mg/kg	ND	.5
13M	Zinc	ug/kg	123000	600
14M	Cyanide, Total	ug/kg	<500	500
15M	Phenolics, Total	ug/kg	1400	100

ETC ENVIRONMENTAL TESTING and CERTIFICATION

June 29, 1985

TABLE 1: QUALITATIVE RESULTS

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

010

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	1

	Compound Name	Data: Scan Number	Data: Retention Time (Min)	Data: M.W.	Identifiers: CAS Number	Identifiers: Empirical Formula	Estim Concen ug/kg		
1	unknown	139	6.2	-	-	-	9		
2	unknown	330	13.6	-	-	-	7		
3	Cyclohexane, methyl	478	19.4	98	108872	C_7H_{14}	12		
4	unknown	501	20.2	-	-	-	7		
5	unknown	532	21.5	-	-	-	16		
6	unknown	555	22.3	-	-	-	36		
7	unknown	562	22.6	-	-	-	42		
8	Benzene, dimethyl	732	29.2	106	-	-	112		
9	Benzene, dimethyl	749	29.9	106	-	C_8H_{10}	145		
10	unknown	600	24	-	-	C_8H_{10}	19		
11	unknown	628	25.2	-	-	-	9		

ETC ENVIRONMENTAL TESTING and CERTIFICATION

June 27, 1985

TABLE 1: QUALITATIVE RESULTS

'Tentatively Identified Organic Compounds – GC/MS Analysis Data – Base/Neutral/Acid Fraction

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED S SOIL1		850501	1015	1

0111

	Compound Name	Data: Scan Number	Data: Retention Time (Min)	Data: M.W.	Identifiers: CAS Number	Identifiers: Empirical Formula	Estim. Concen. ug/kg		
1	2-methyl 3-heptene	73	2.95	112	692966	C_8H_{16}	1210		
2	unknown	99	3.40	-	-	-	2020		
3	unknown	194	5.10	-	-	-	485		
4	unknown	250	6.10	-	-	-	1550		
5	unknown	258	6.30	-	-	-	528		
6	alkane	266	6.40	-	-	-	449		
7	unknown	280	6.70	-	-	-	2030		
8	unknown	284	6.70	-	-	-	669		
9	1-methyl-4-propyl benzene	291	6.90	134	1074551	$C_{10}H_{14}$	569		
10	2-ethyl-1,4-dimethyl benzene	310	7.20	134	1758889	$C_{10}H_{14}$	1120		
11	1-ethyl 2-propyl cyclohexane	315	7.30	154	62238339	$C_{11}H_{22}$	532		
12	alkane	327	7.50	-	-	-	4420		
13	decahydro-2-methyl naphthalene	335	7.60	152	2958761	$C_{11}H_{20}$	443		
14	unknown	340	7.70	-	-	-	1350		
15	unknown	351	7.90	-	-	-	2350		

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 19, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Aroclors - GC Analysis Data (QR14)

012

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	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	BMDL	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.

June 27, 1985

TABLE 2: METHOD PERFORMANCE DATA

Surrogate Recovery Soil- GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

H5671

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	85	50	160
Bromofluorobenzene	.250	74	50	160
1,2-Dichloroethane-D4	.250	112	50	160
ACID FRACTION				
Phenol-D5	100	30	20	140
2-Fluorophenol	100	21	20	140
2,4,6-Tribromophenol	100	46	10	140
BASE/NEUTRAL FRACTION				
Nitrobenzene-D5	50	29	20	140
2-Fluorobiphenyl	50	30	20	140
Terphenyl-D14	50	32	20	150

* IFB EPA Control Limits.

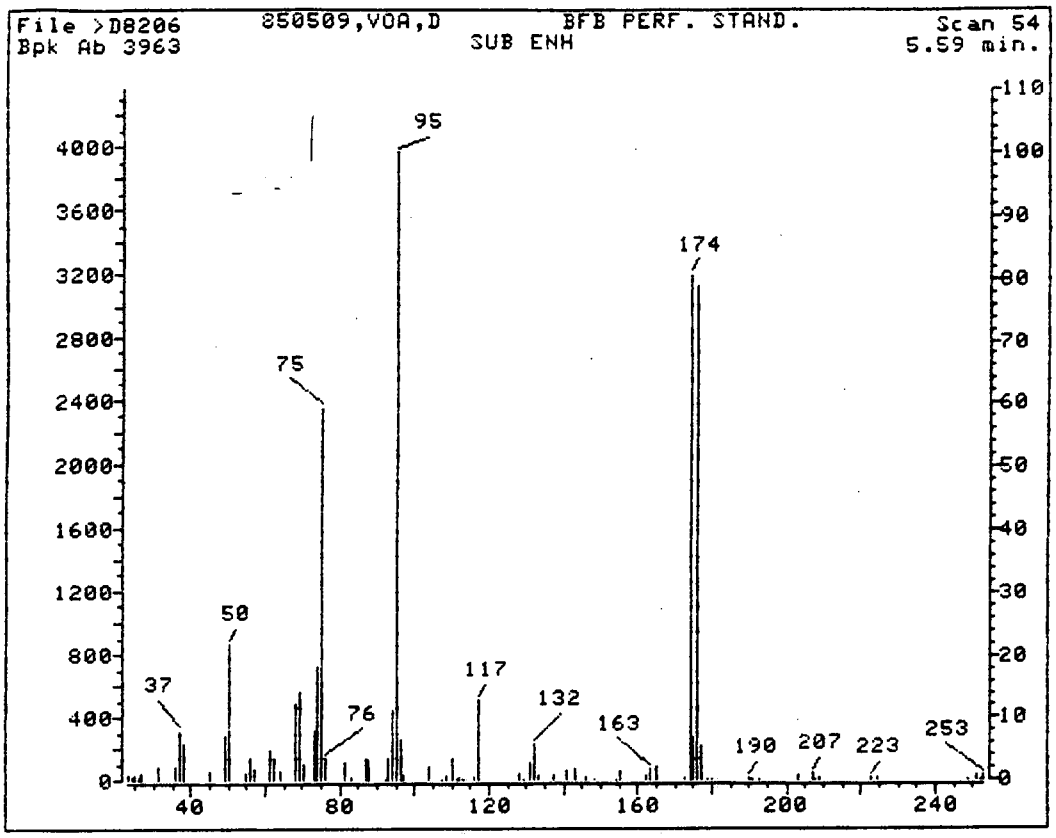


TABLE 2: METHOD PERFORMANCE DATA (QR21)

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

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance 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

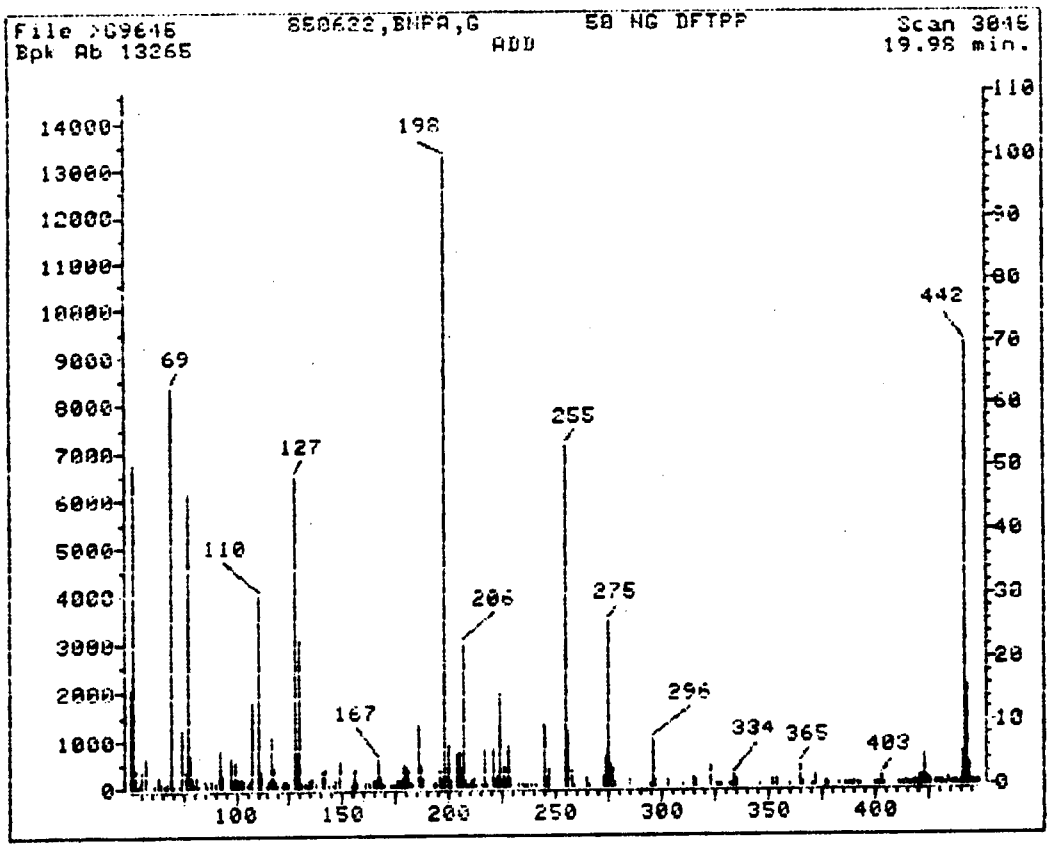


TABLE 2: METHOD PERFORMANCE DATA (QR23)

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

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	50.70	50.70	Ok
68	Less then 2% of mass 69	0.00	0.00	Ok
69	(reference only)	62.89	62.89	Ok
70	Less then 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	48.84	48.84	Ok
197	Less then 1% of mass 198	.66	.66	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.46	6.46	Ok
275	10-30% of mass 198	25.76	25.76	Ok
365	Greater then 1% of mass 198	3.20	3.20	Ok
441	Less then mass 443	5.00	32.31	Ok
442	Greater then 40% of mass 198	69.46	69.46	Ok
443	17-23% of mass 442	15.47	22.27	Ok

Injection Date: 06/23/85 Analyst: Tom Rusowicz
Injection Time: 06:53 Processor: Wan Wan Ch
Run No: >G9645 QC Batch: QC3149
Spectrum No: 3045 Samples: M7395, M7396, M7398, M7553
M7554, M5671, M4071

Relative Percent Difference (RPD) for VOA

Job Number	Account Name	Facility	Source	Date	Time	
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	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	
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	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

017

Relative Percent Difference (RPD) for B/N

Job Number	Account Name	Facility	Source	Date	Time	
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	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	
H5671	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL1	850501	1015	1

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

Parameter	REP 1 ug/kg	REP 2 ug/kg	RPD
Aldrin	ND	ND	0
Alpha-BHC	150	ND	200
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	2400	ND	200
Dieldrin	ND	ND	0
Endosulfan I	ND	ND	0
Endosulfan II	ND	ND	0
Endosulfan sulfate	ND	180	200
Endrin	ND	ND	0
Endrin aldehyde	600	ND	200
Heptachlor	ND	ND	0
Heptachlor epoxide	ND	ND	0
Toxaphene	ND	ND	0

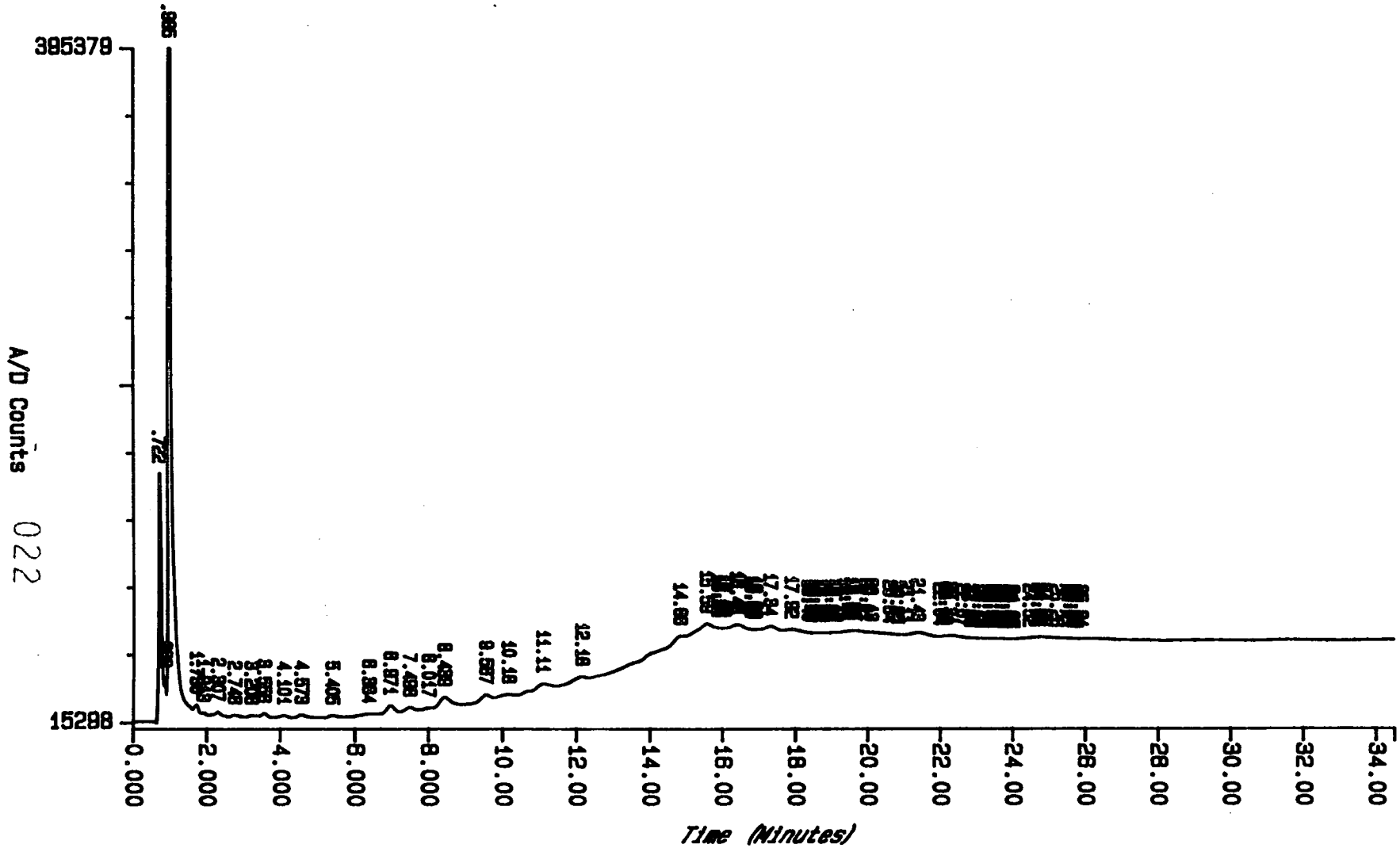
020

Appendix A1

Gas Chromatographic Spectral Data for Quantitated Compounds

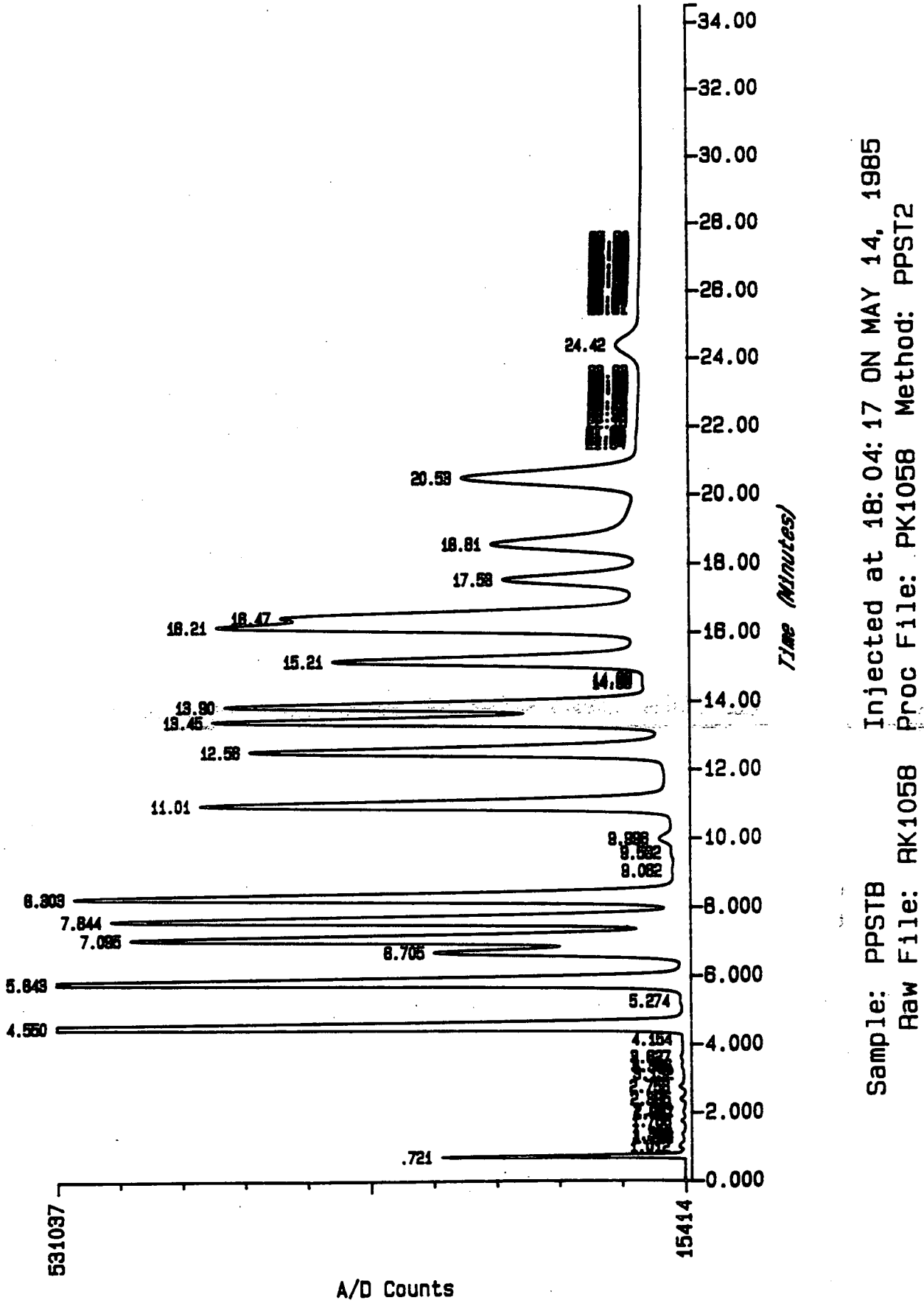
1) A reconstructed gas chromatogram for each sample analyzed by a GC instrument.

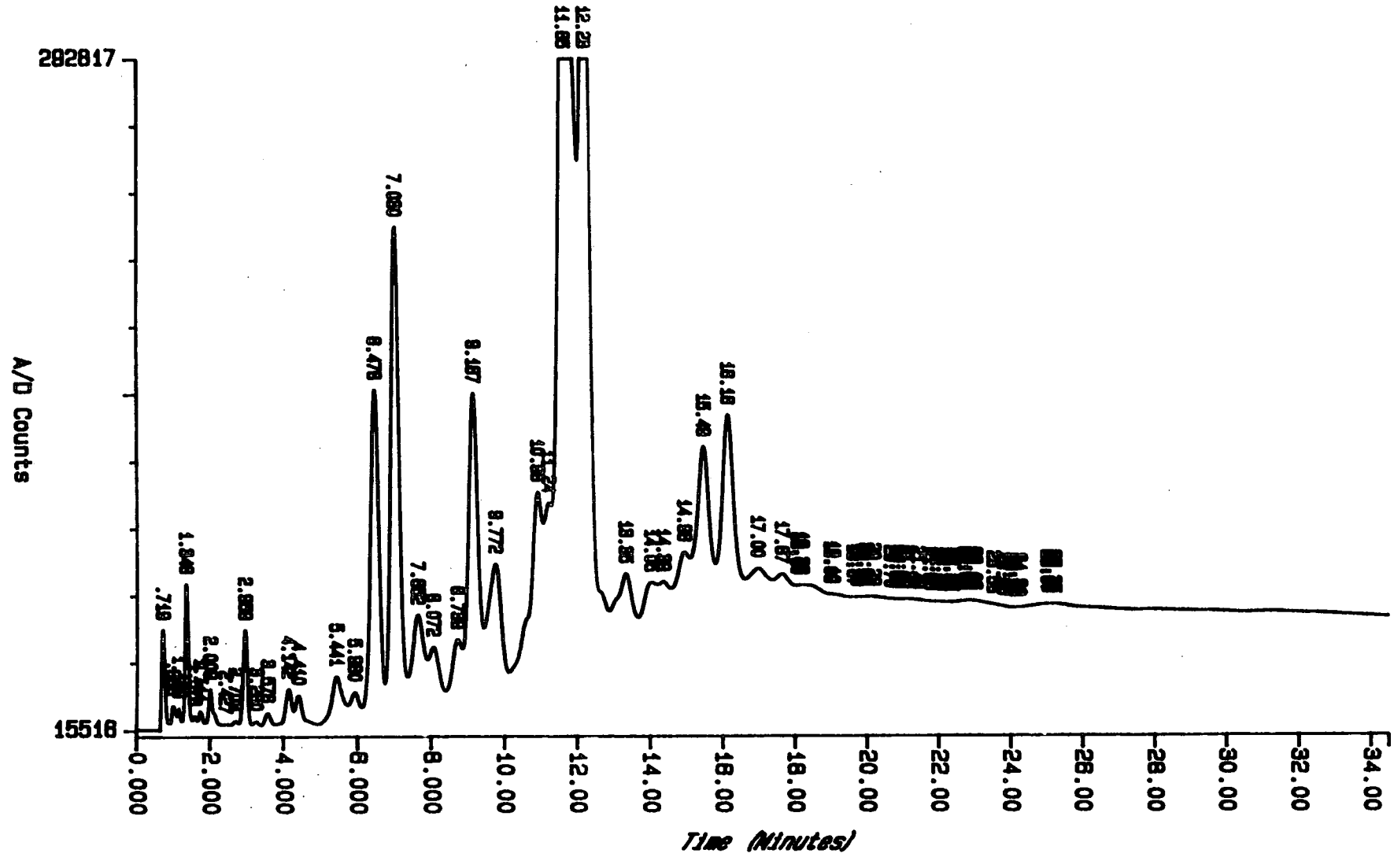
2) A reconstructed gas chromatogram for the appropriate standard compounds analyzed with the same GC under the same operating conditions.



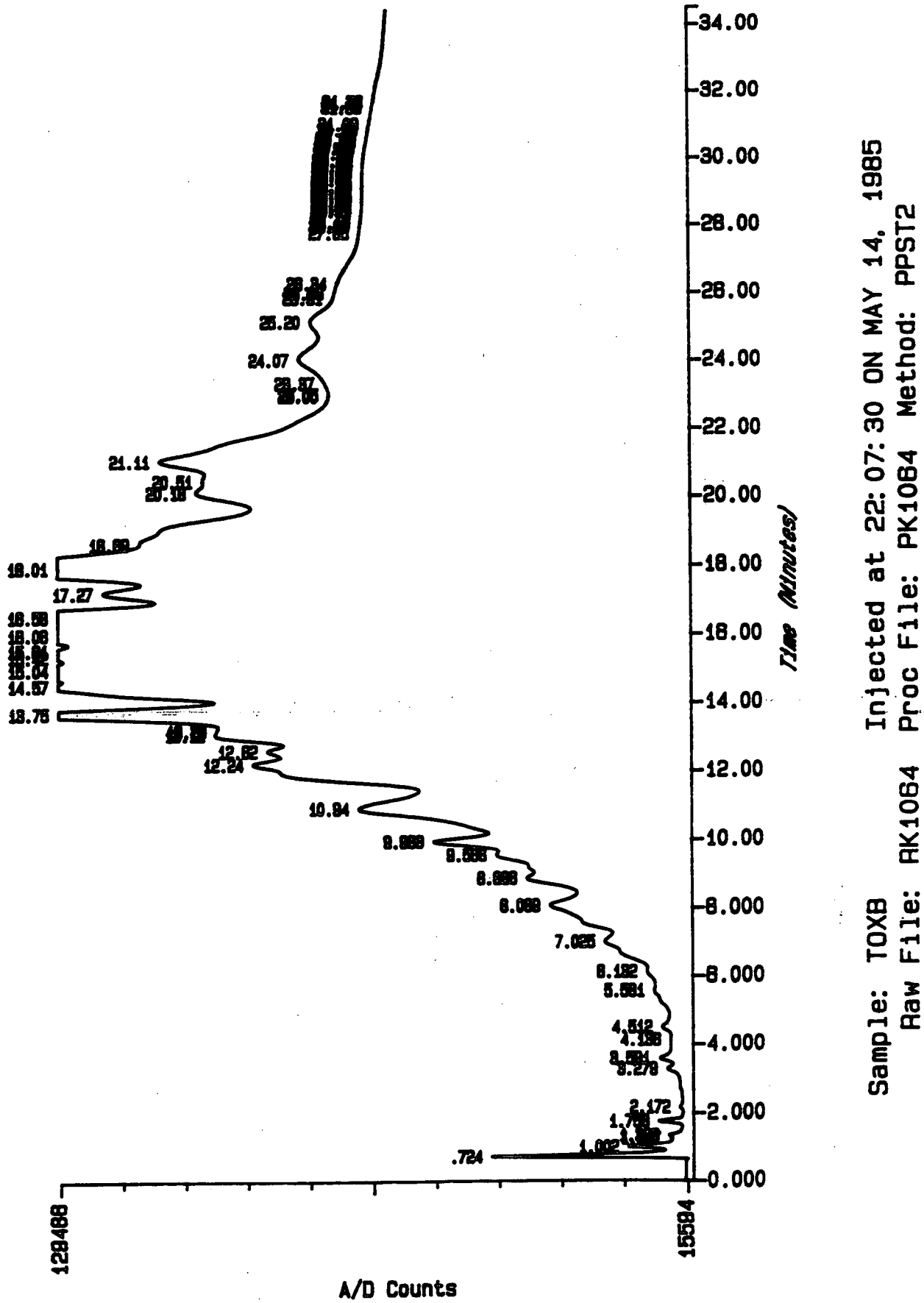
022

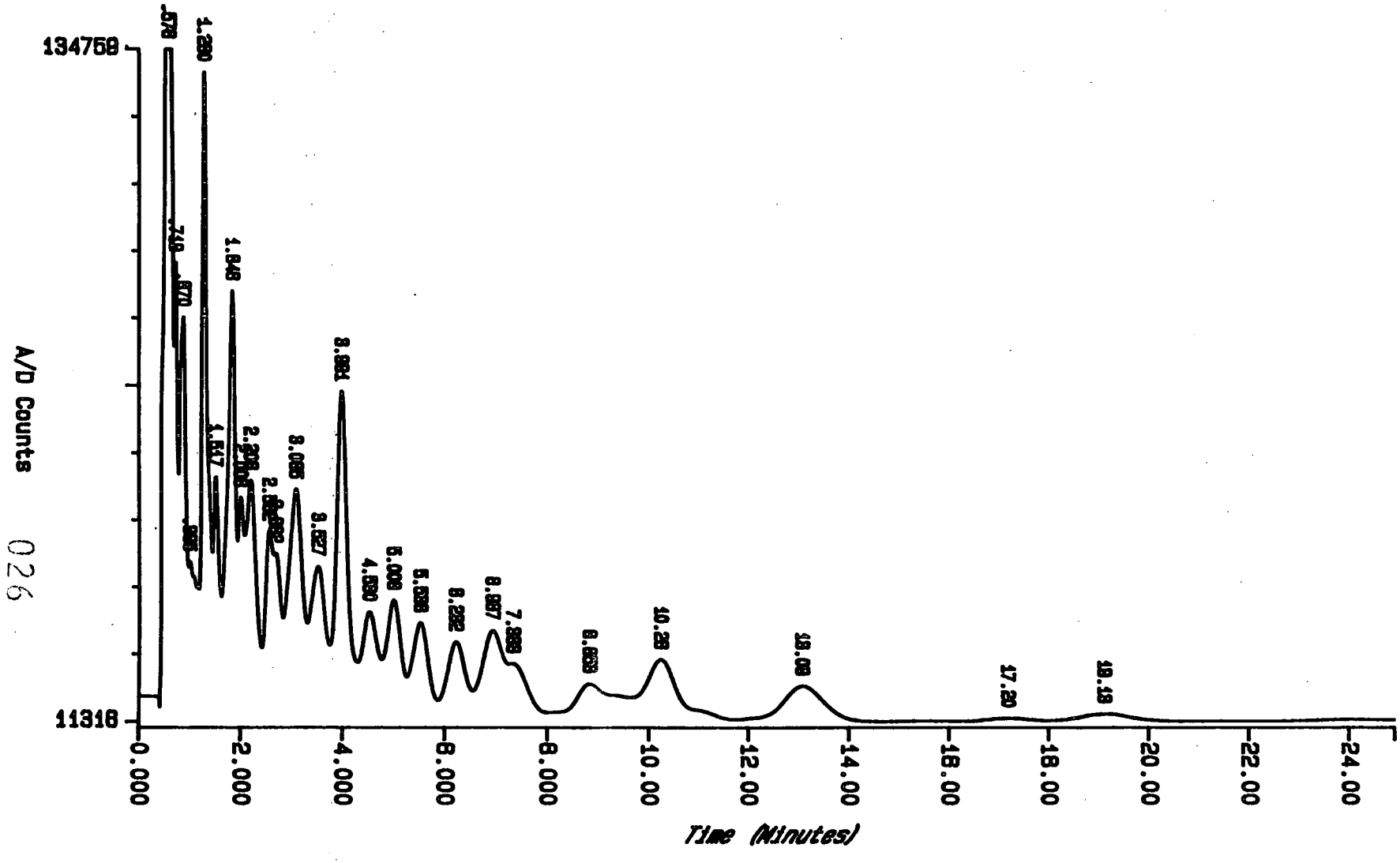
Sample: H5671 Injected at 11:05:33 ON MAY 15, 1985
Raw File: RK1083 Proc File: PK1083 Method: PPST2


Sample: PPSTB
Raw File: RK1058
Injected at 18:04:17 ON MAY 14, 1985
Proc File: PK1058 Method: PPST2
Time (Minutes)
A/D Counts
531037
15414
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
24.42
20.58
18.81
17.58
16.47
16.21
15.21
13.90
13.45
12.58
11.01
9.082
8.303
7.844
7.095
6.705
5.843
5.274
4.550
4.154
.721



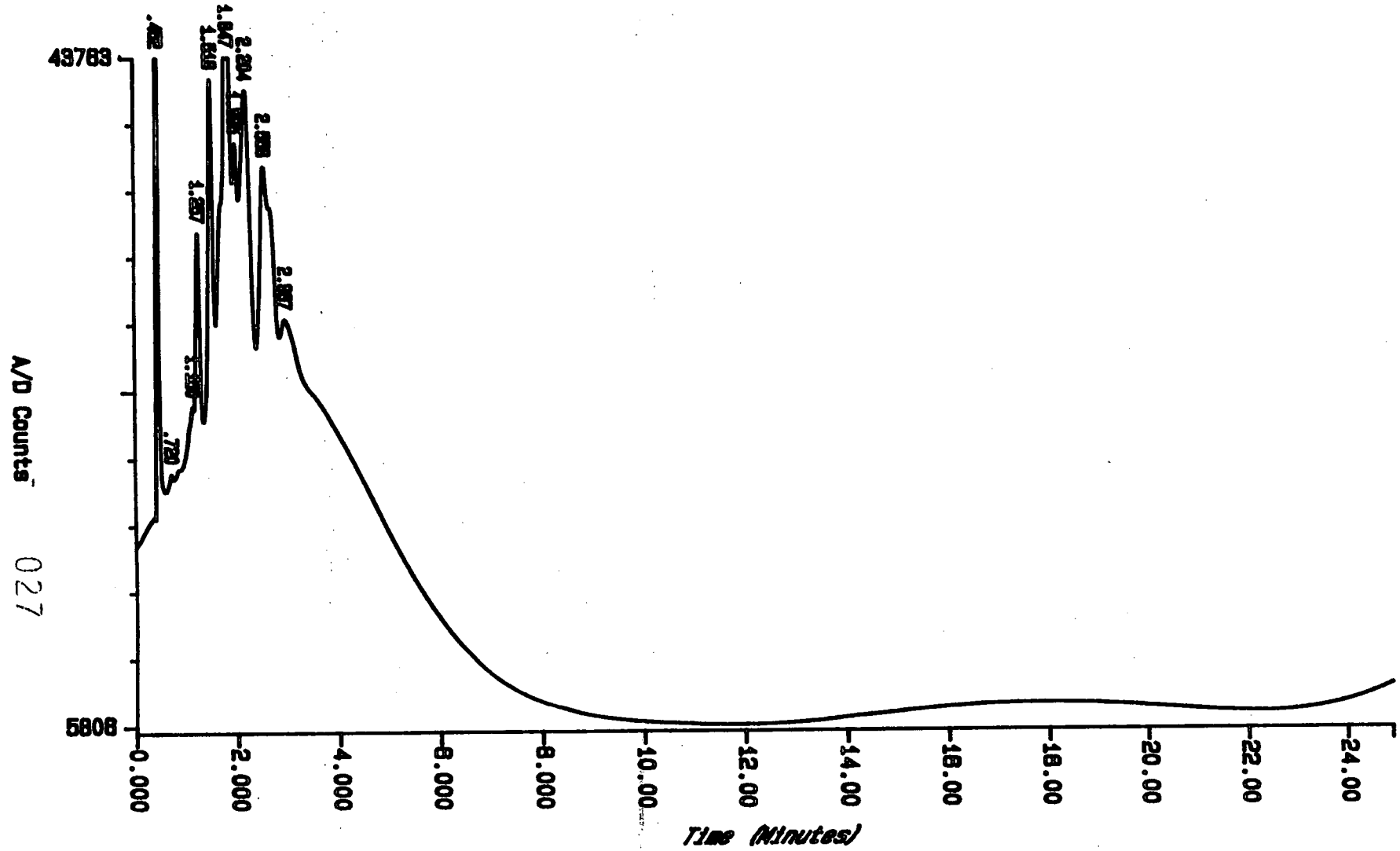
Sample: CHLORB Injected at 22:48:09 ON MAY 14, 1985
Raw File: RK1065 Proc File: PK1065 Method: PPST2


Sample: TOXB
Raw File: RK1064
Injected at 22:07:30 ON MAY 14, 1985
Proc File: PK1064
Method: PPST2
Time (Minutes)
A/D Counts
128488
15584
.724
2.172
4.542
5.181
7.025
10.94
12.24
12.82
13.76
14.57
17.27
18.01
21.11
24.07
25.20
0.000
2.000
4.000
6.000
8.000
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
26.00
28.00
30.00
32.00
34.00



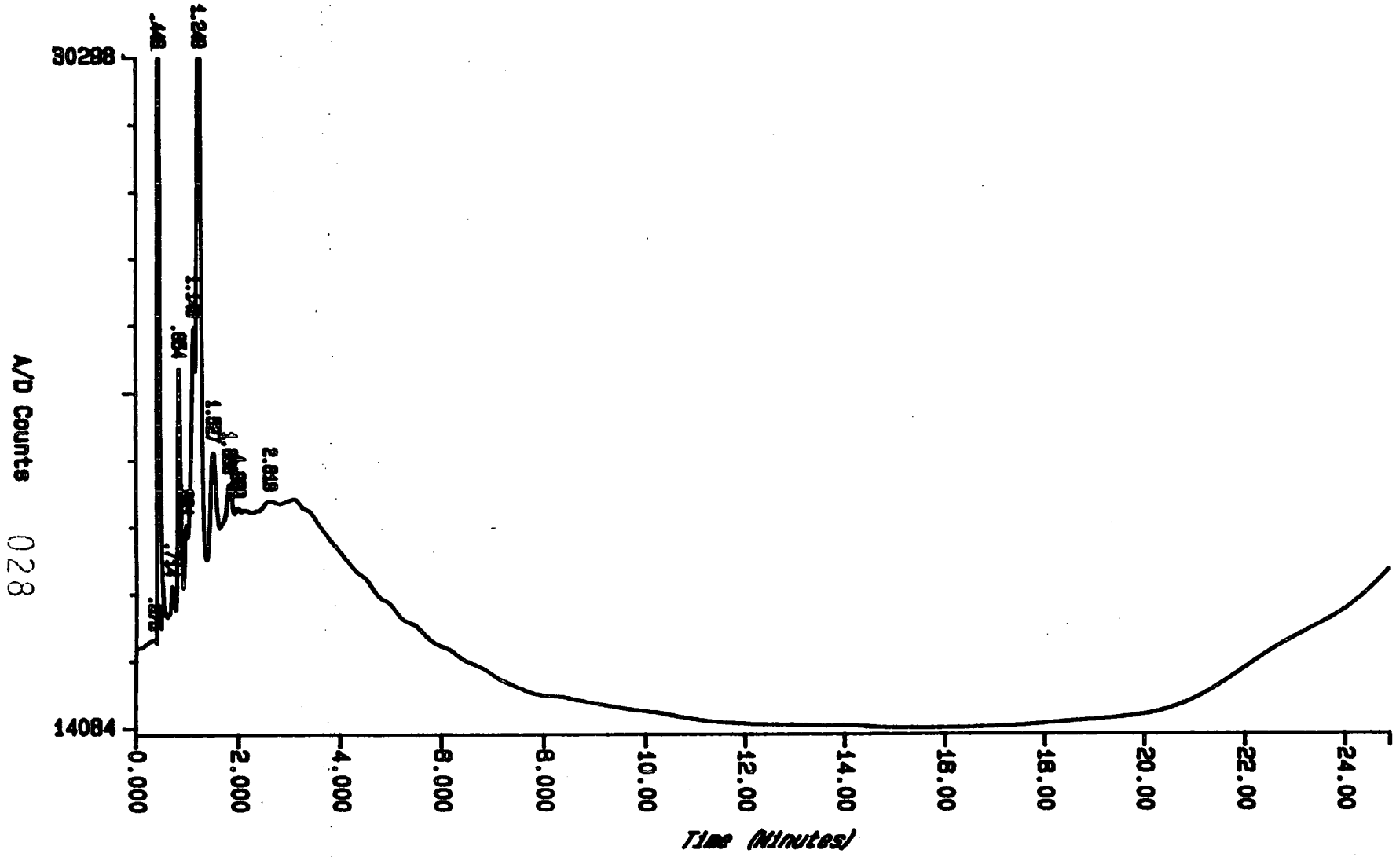
026

Sample: H5671 Injected at 21:28:46 ON MAY 7, 1985
Raw File: H5671H Proc File: H5671G Method: PCBB8

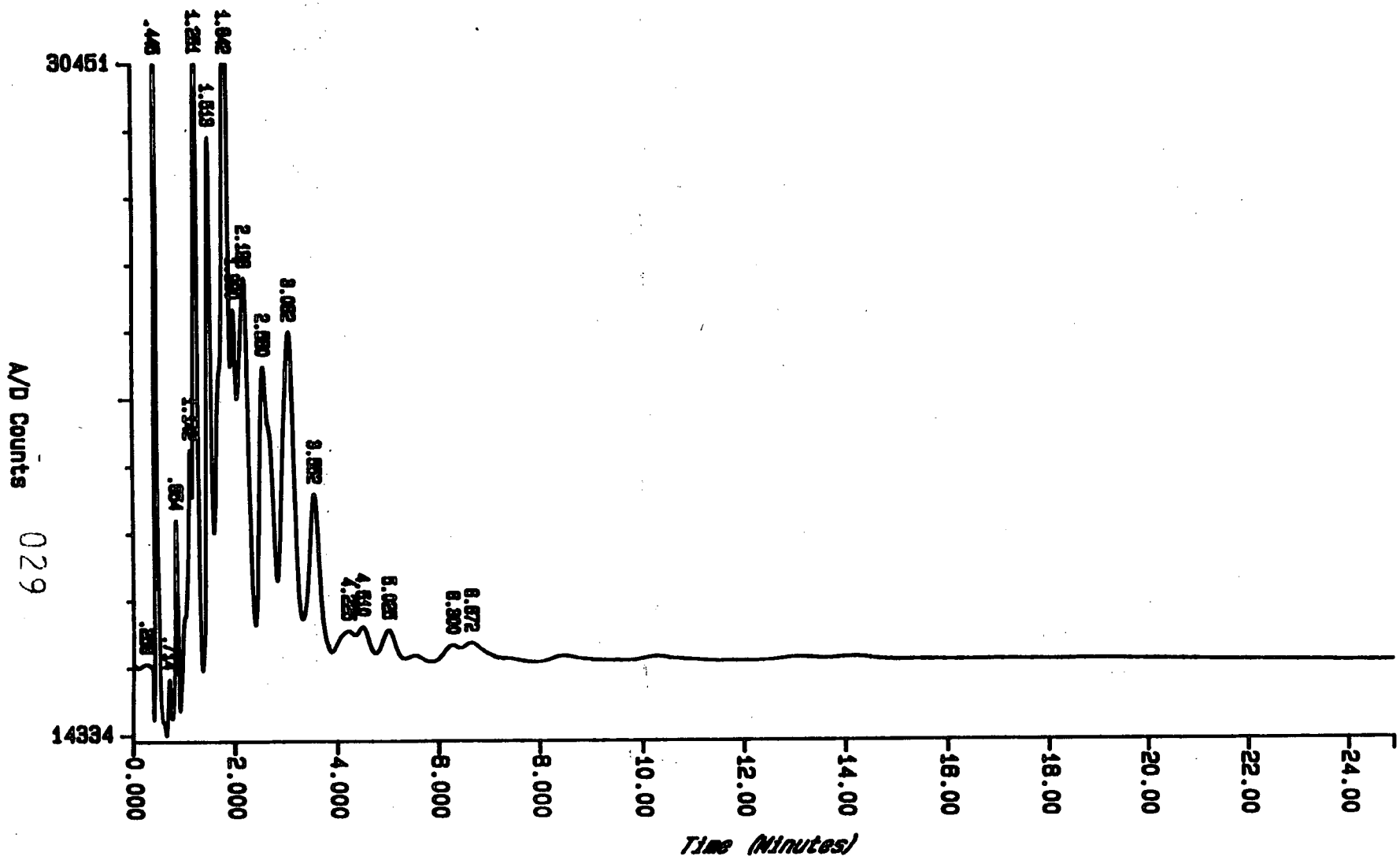


Sample: AR1016-1.0 Injected at 23:46:30 ON MAY 7, 1985
Raw File: RJ0484 Proc File: PJ0484 Method: PCBB8

027

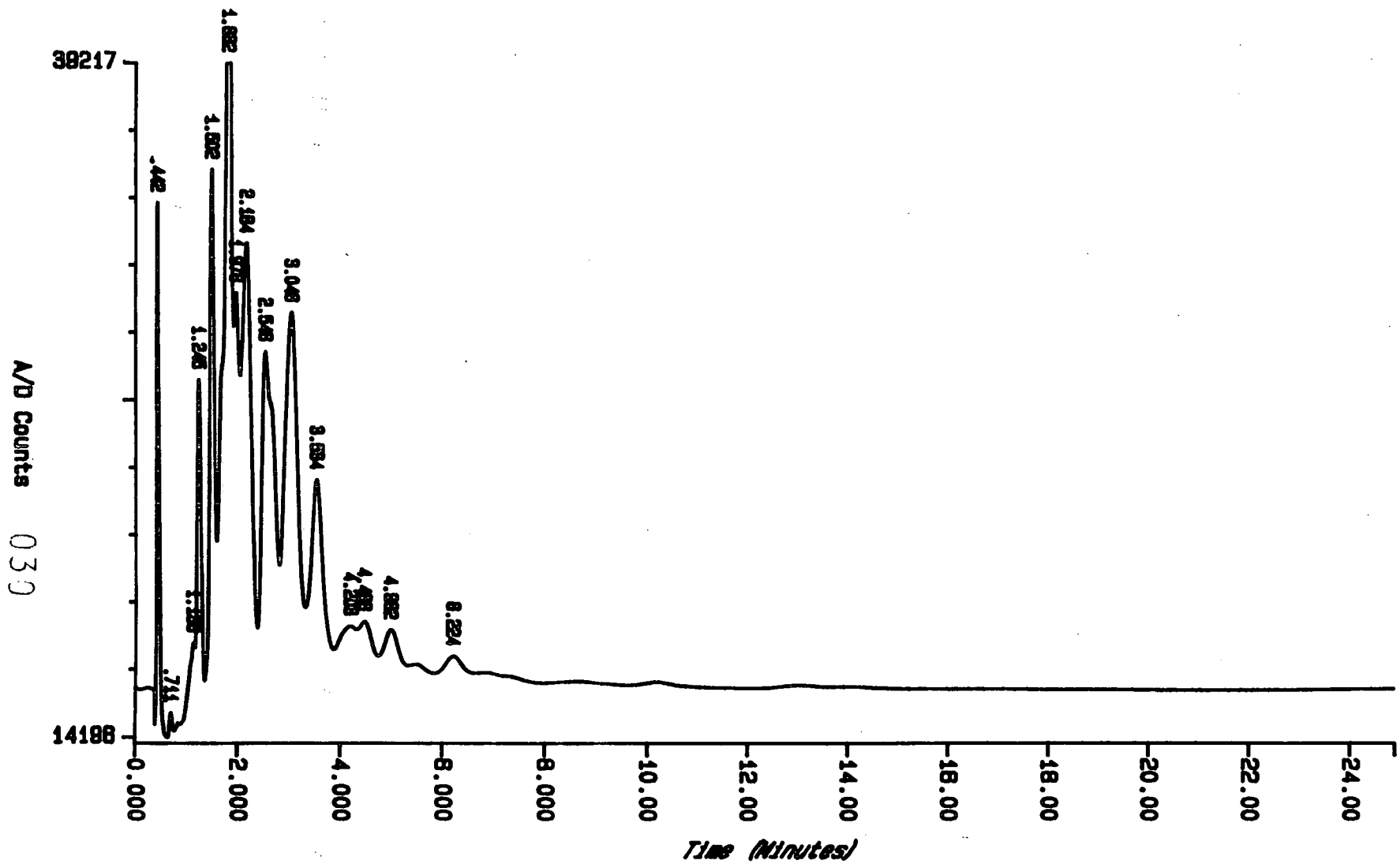


Sample: AR1221-1.0 Injected at 23:18:53 ON MAY 7, 1985
Raw File: RJ0483 Proc File: PJ0483 Method: PCBB8



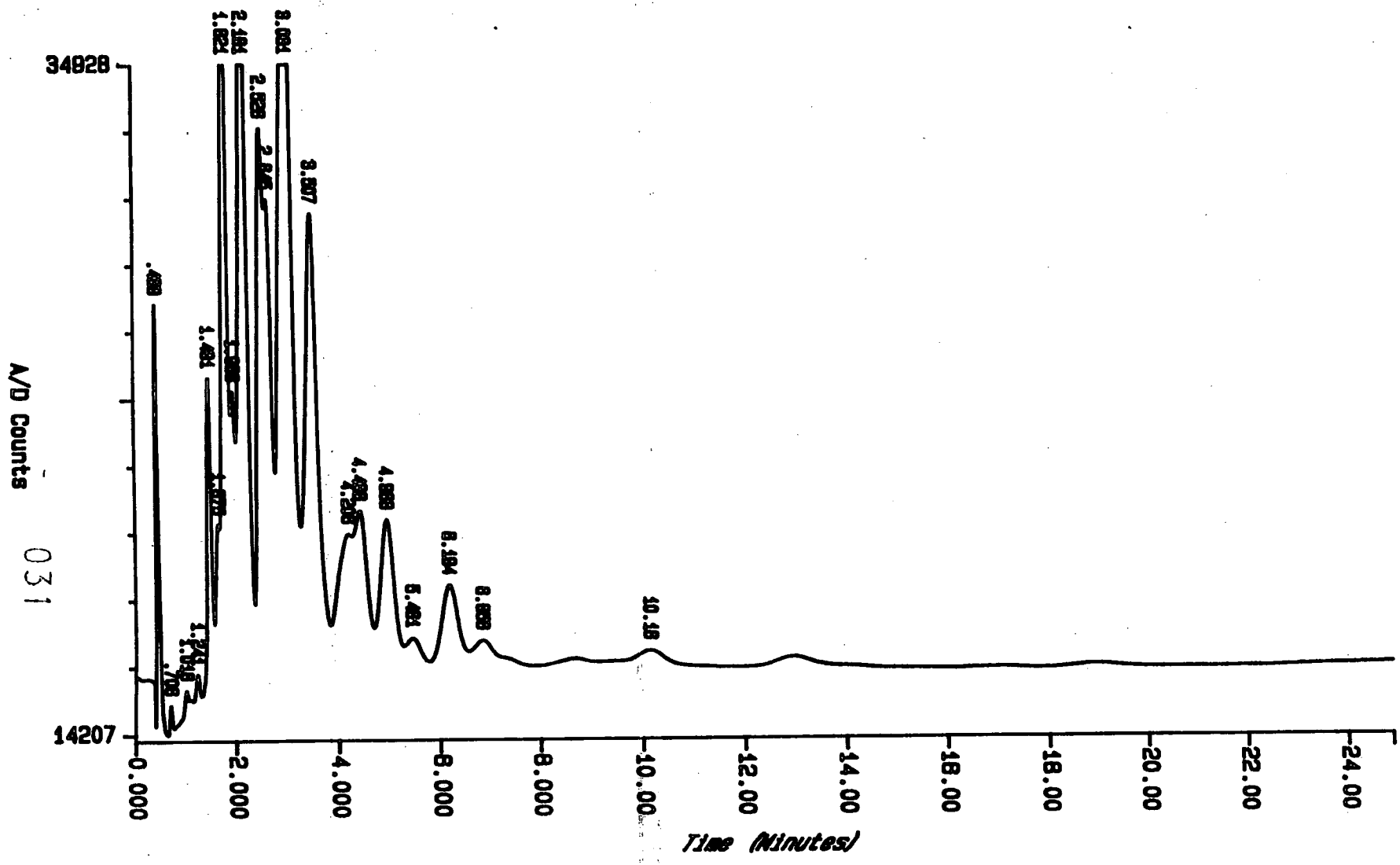
029

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



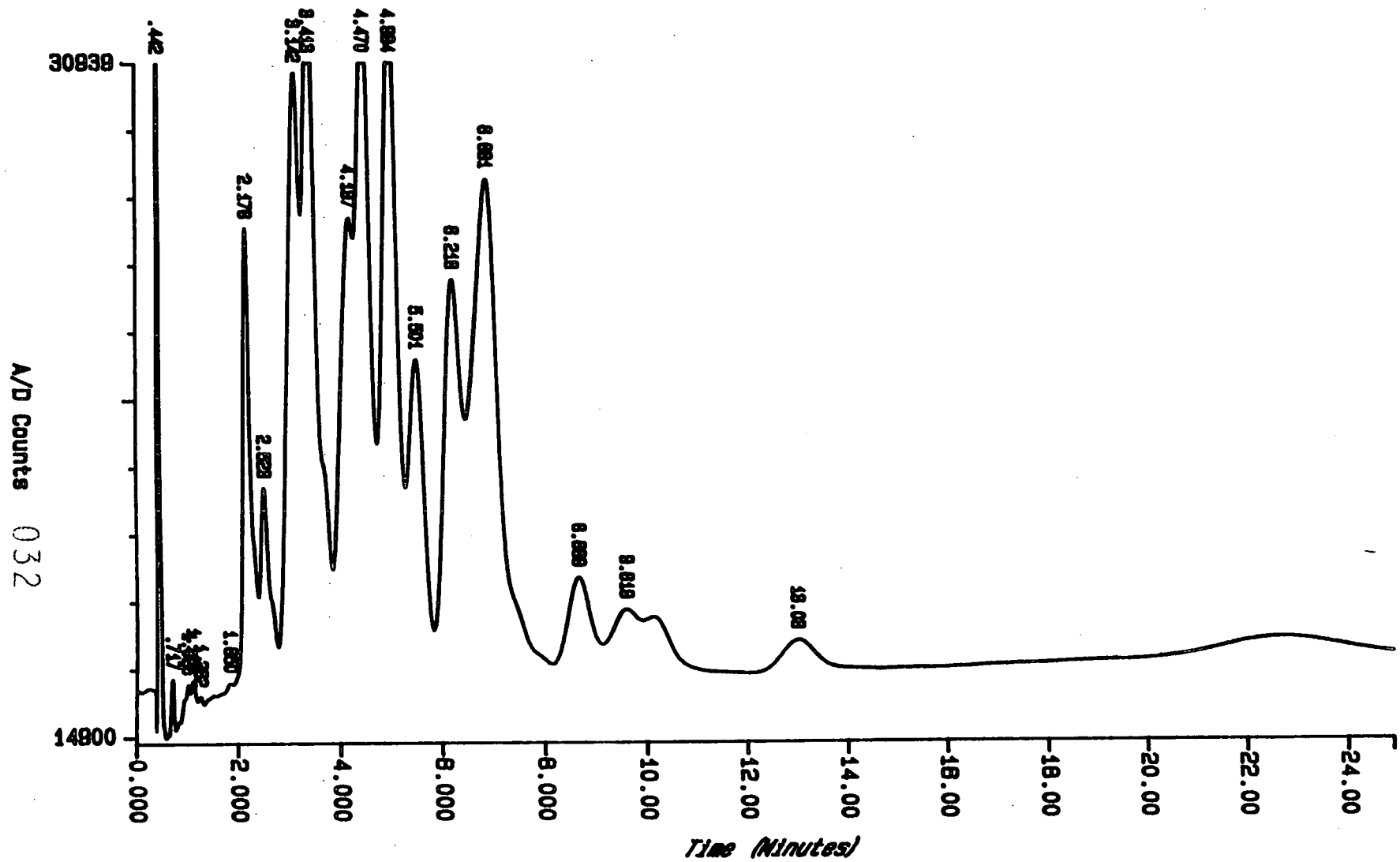
Sample: AR1242-1.0 Injected at 20:33:54 ON MAY 7, 1985
Raw File: RJ0481 Proc File: PJ0481 Method: PCBB8

030



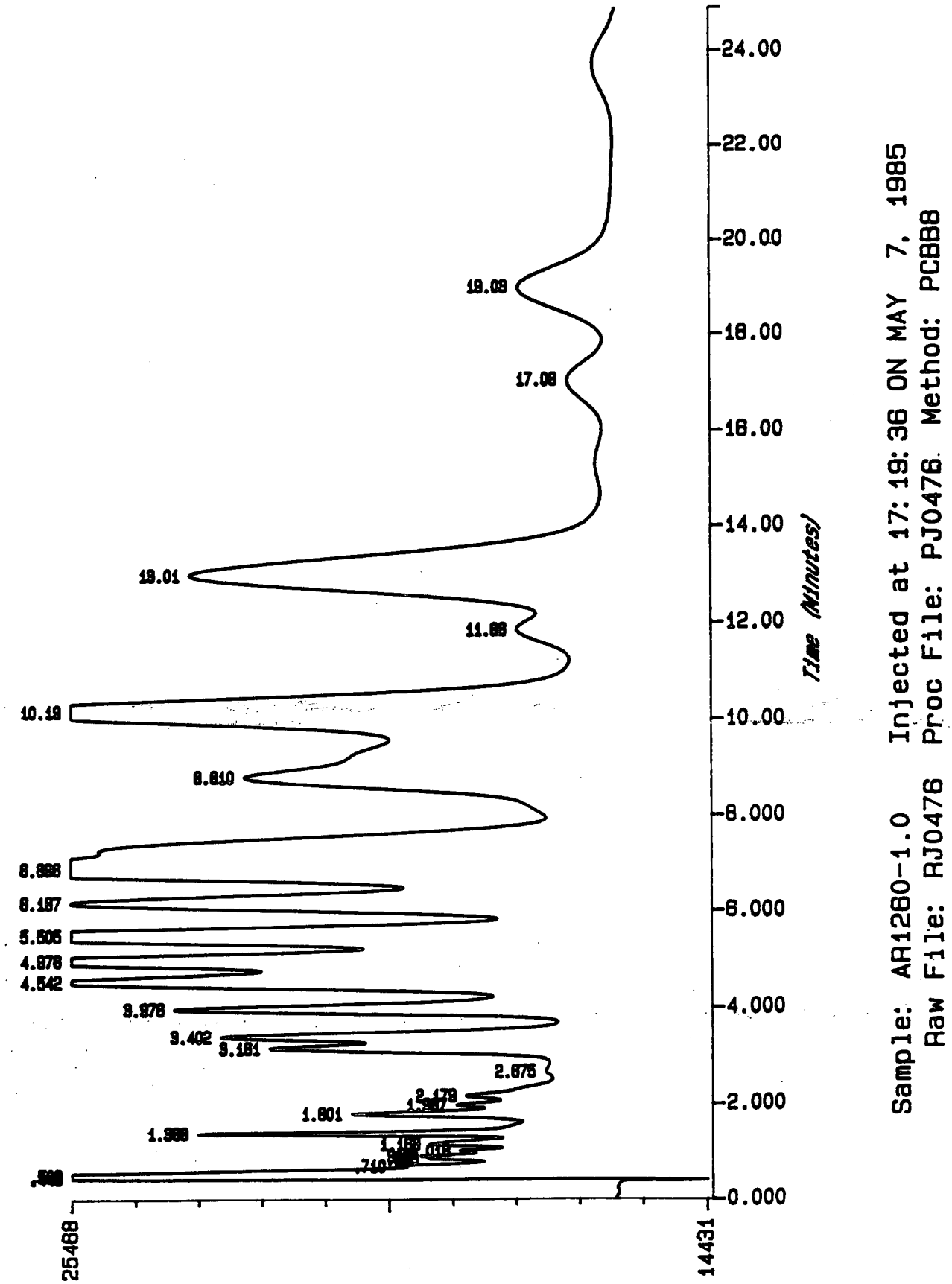
Sample: AR1248-1.0 Injected at 20:06:32 ON MAY 7, 1985
Raw File: RJ0480 Proc File: PJ0480 Method: PCBB8

031



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

032


Sample: AR1260-1.0
Raw File: RJ0476
Injected at 17:19:36 ON MAY 7, 1985
Proc File: PJ0476 Method: PCBBB
Time (Minutes)
A/D Counts
25488
14431
0.000
2.000
4.000
6.000
8.000
10.00
12.00
14.00
16.00
18.00
20.00
22.00
24.00
19.09
17.08
13.01
11.88
10.19
8.810
6.187
5.505
4.976
4.542
3.976
3.402
3.181
2.675
2.479
1.801
1.388
.740

033

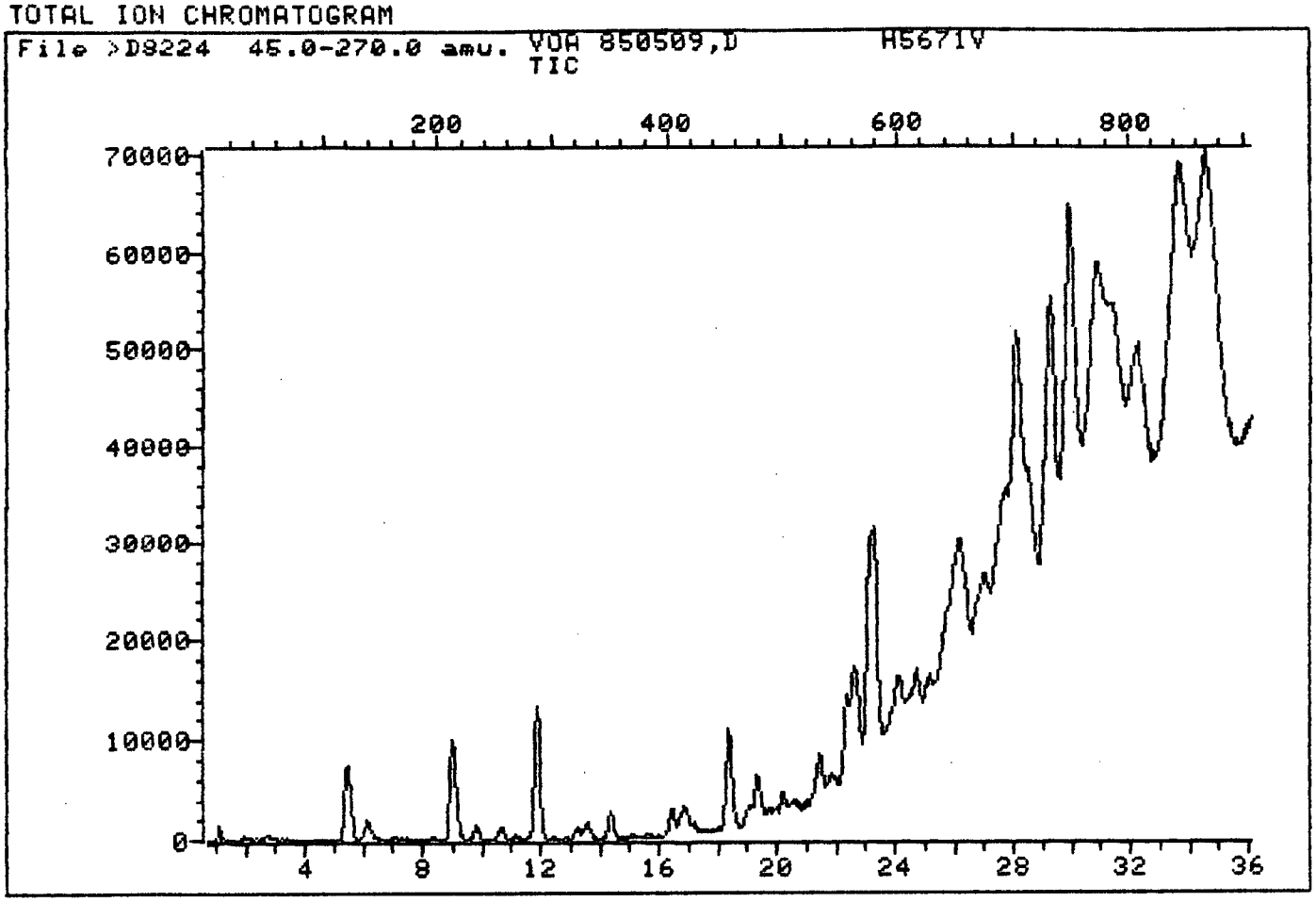
Appendix A

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: >D8224::U4
Name: VOA 850509,D
Misc: H5671V

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

Operator ID: SJ3562
Quant Time: 850509 20:06
Injected at: 850509 19:29

QUANT REPORT

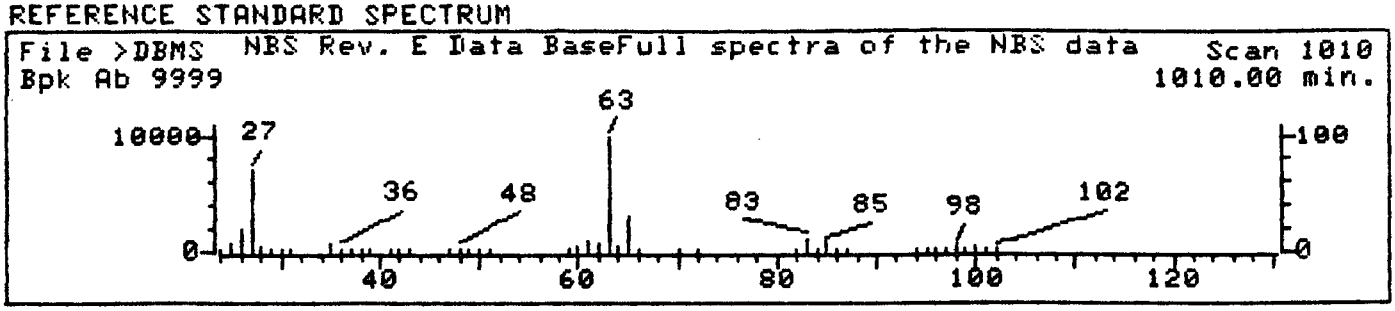
Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850509 20:06
Injected at: 850509 19:29
Data File: >D8224::U4 Dilution Factor: 1.00
Name: VOA 850509,D
Misc: H5671V

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

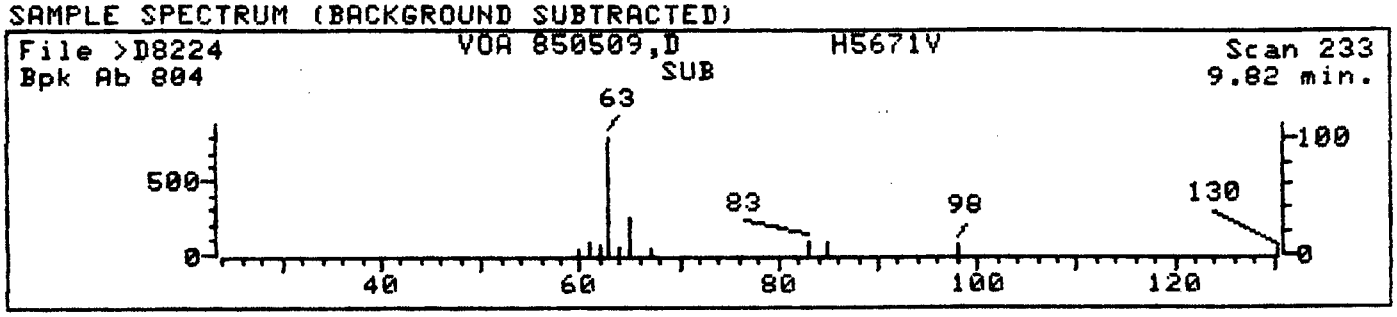
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane	18.37	453	35369	200.00	NG	98
2)	Acrolein	6.28	142	2448	~~146.78~~	~~NG~~	100
4)	Benzene	16.90	415	7205	21.97	NG	93
5)	bis(Chloromethyl)ether	18.37	~~453~~	~~13451~~	~~165.81~~	~~NG~~	67
7)	Carbon tetrachloride	13.24	~~321~~	~~629~~	~~2.43~~	~~NG~~	89
10)	Chloroethane	2.75	~~51~~	~~1051~~	~~7.33~~	NG	100
11)	2-Chloroethylvinyl ether	17.17	~~422~~	~~1404~~	~~37.77~~	NG	100
12)	Chloroform	11.30	~~271~~	~~1263~~	~~3.69~~	~~NG~~	99
15)	1,1-Dichloroethane	9.82	233	11283	50.47	NG	98
20)	cis-1,3-Dichloropropylene	17.36	~~427~~	~~879~~	~~5.22~~	~~NG~~	100
21)	Ethylbenzene	26.16	653	59465	92.72	NG	98
24)	Methylene chloride	5.47	121	23550	100.59	NG ~~47~~ = 54	80
26)	Tetrachloroethylene	22.15	550	2127	12.51	NG	96
27)	Toluene	23.31	580	78166	181.42	NG	97
28)	1,2-Trans-dichloroethylene	10.64	254	6117	26.00	NG	95
29)	1,1,1-Trichloroethane	13.24	321	5588	~~17.26~~	NG	92
31)	Trichloroethylene	16.51	405	3227	31.93	NG ~~16~~ = 16	83
33)	Vinyl chloride	2.75	51	3243	14.94	NG	100
35)	1,2-Dichloroethane-D4	11.88	286	66495	280.65	NG	92
36)	Toluene-D8	23.12	575	89549	211.71	NG	99
37)	p-Bromofluorobenzene	28.07	702	48415	185.40	NG	88
38)	*1,4-Dichlorobutane	22.38	556	52996	200.00	NG	99

* Compound is ISTD

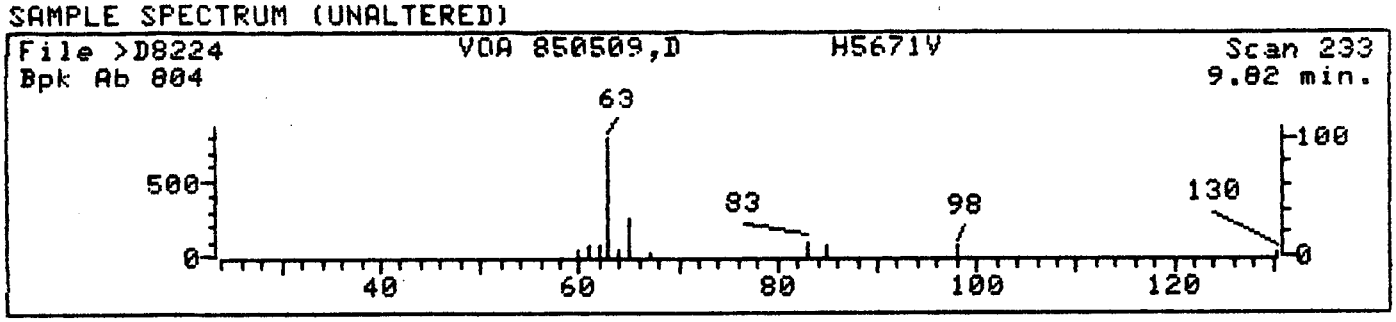
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



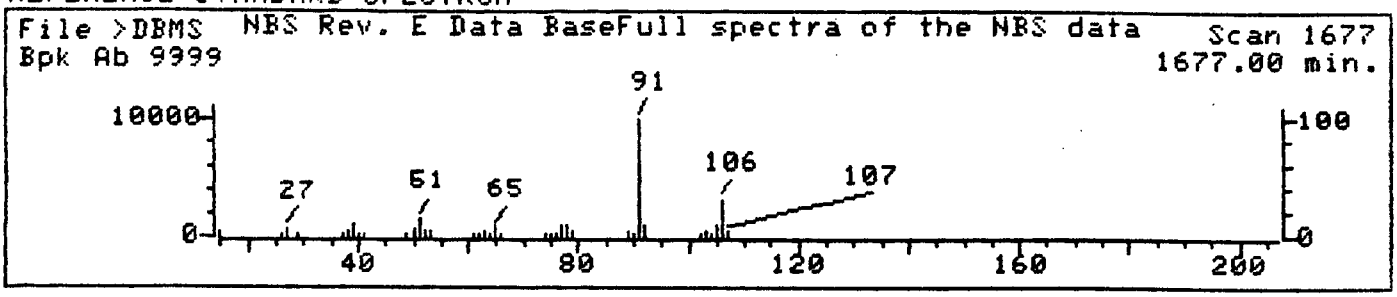
SAMPLE SPECTRUM (UNALTERED)



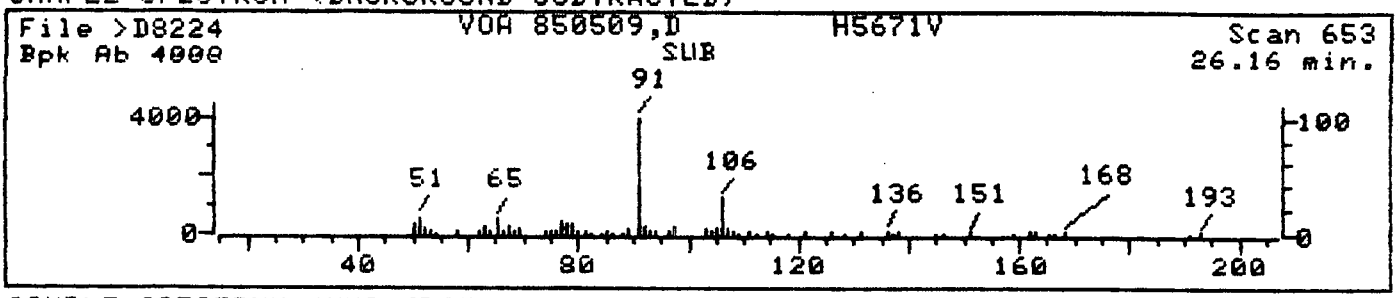
Data File: >D8224::U4
Name: VOA 850509,D
Misc: H5671V
Quant Time: 850509 20:06
Injected at: 850509 19:29

Compound No: 15
Compound Name: 1,1-Dichloroethane
Scan Number: 233
Retention Time: 9.82 min.
Area: 11283
Concentration: 50.47 NG
q-value: 98

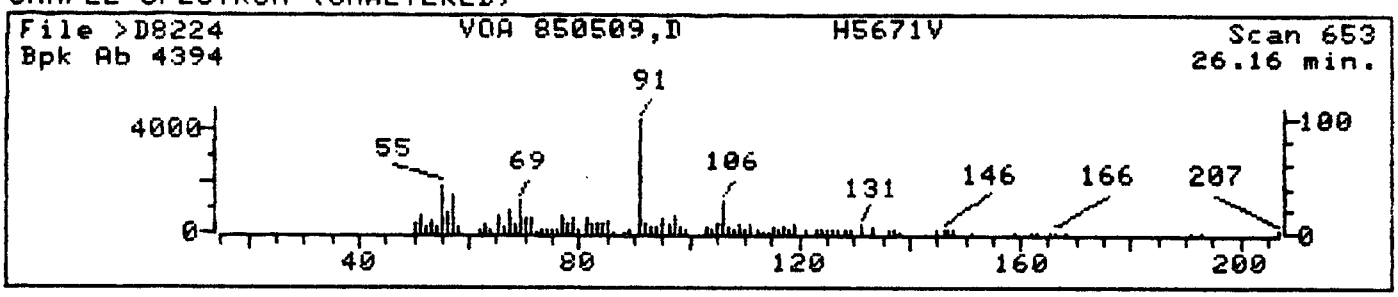
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



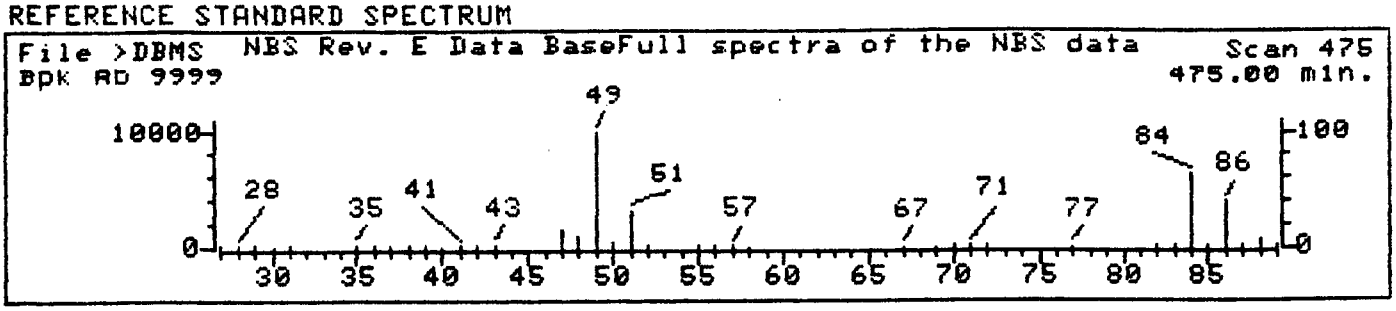
SAMPLE SPECTRUM (UNALTERED)



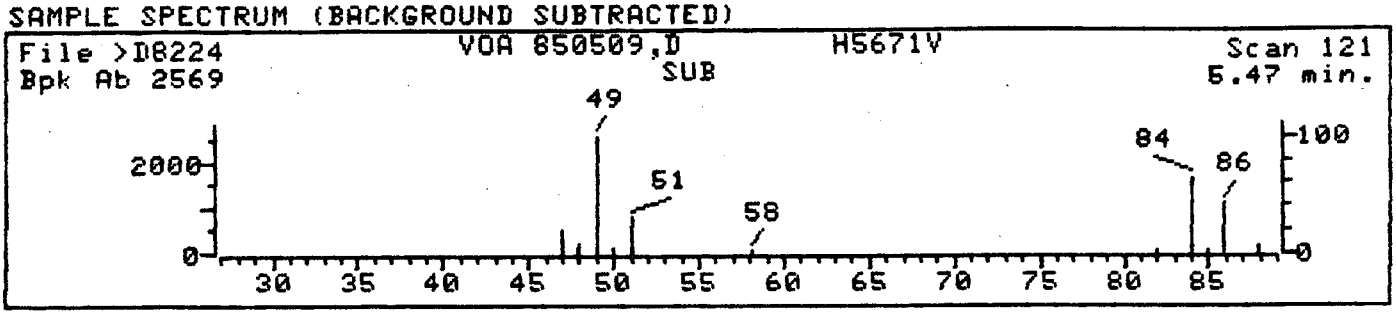
Data File: >D8224::U4
Name: VOA 850509,D
Misc: H5671V
Quant Time: 850509 20:06
Injected at: 850509 19:29

Compound No: 21
Compound Name: Ethylbenzene
Scan Number: 653
Retention Time: 26.16 min.
Area: 59465
Concentration: 92.72 NG
q-value: 98

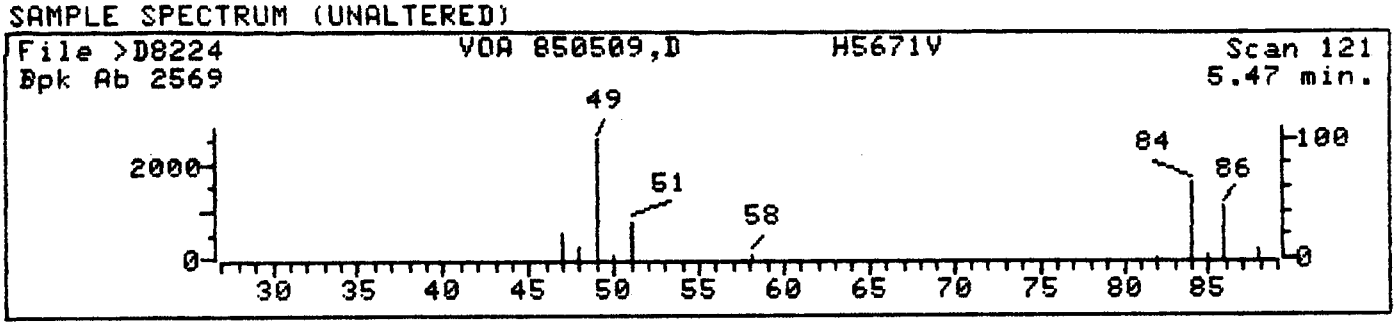
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



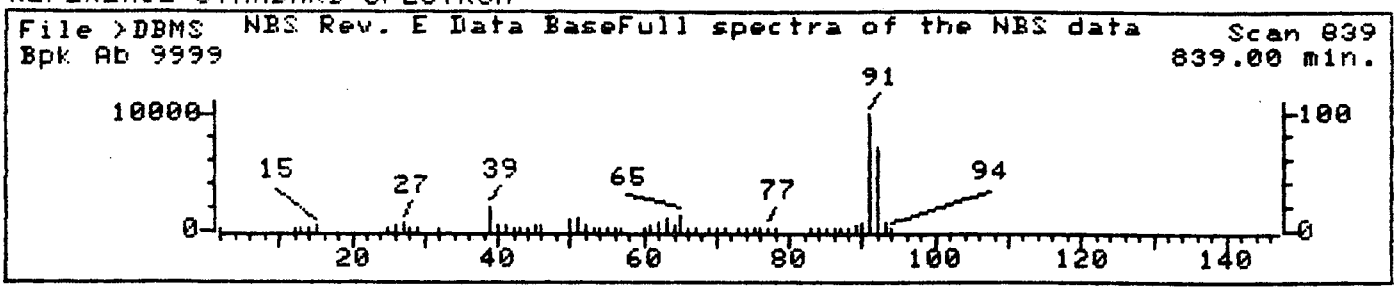
SAMPLE SPECTRUM (UNALTERED)



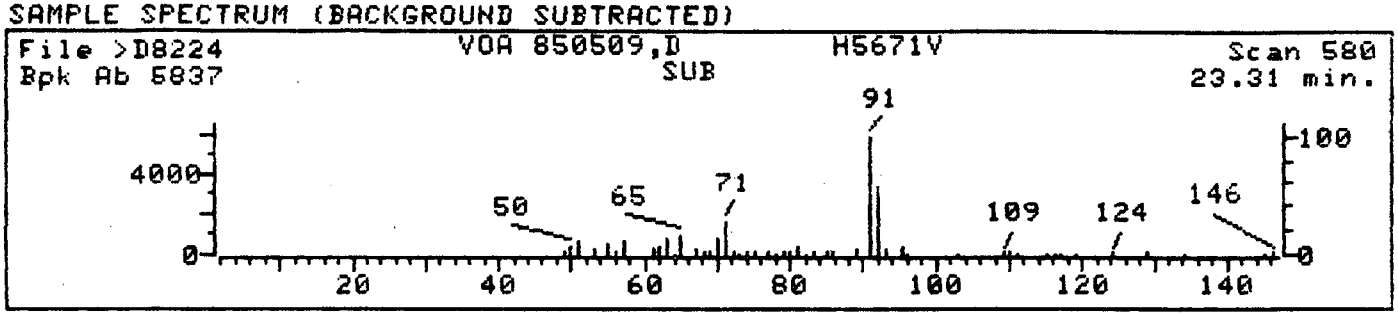
Data File: >D8224::U4
Name: VOA 850509,D
Misc: H5671V
Quant Time: 850509 20:06
Injected at: 850509 19:29

Compound No: 24
Compound Name: Methylene chloride
Scan Number: 121
Retention Time: 5.47 min.
Area: 23550
Concentration: 100.59 NG
q-value: 80

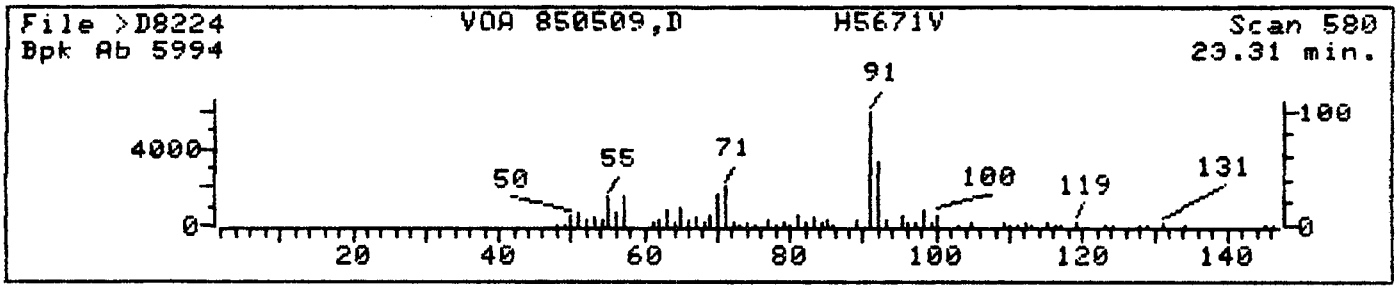
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



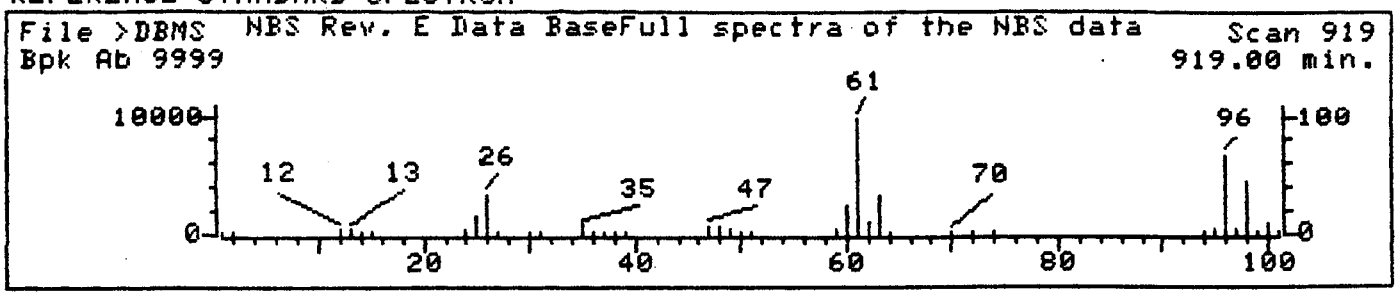
SAMPLE SPECTRUM (UNALTERED)



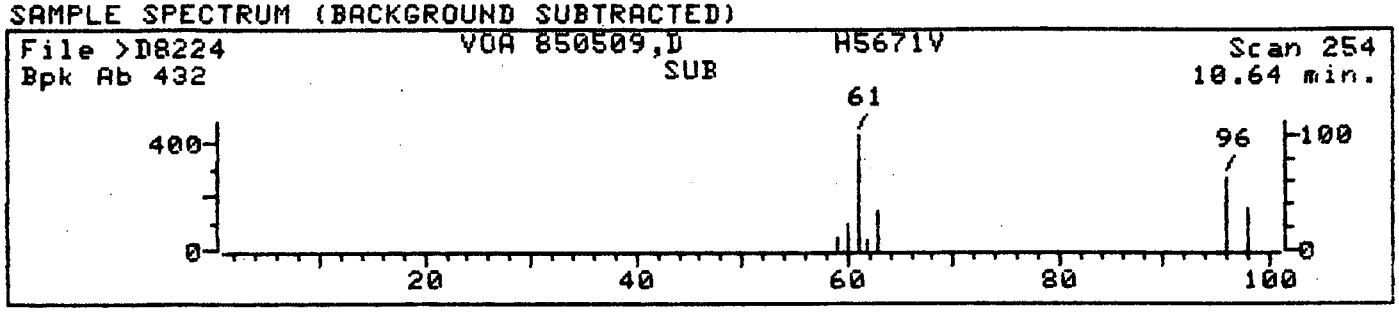
Data File: >D8224::U4
Name: VOA 850509,D
Misc: H5671V
Quant Time: 850509 20:06
Injected at: 850509 19:29

Compound No: 27
Compound Name: Toluene
Scan Number: 580
Retention Time: 23.31 min.
Area: 78166
Concentration: 181.42 NG
q-value: 97

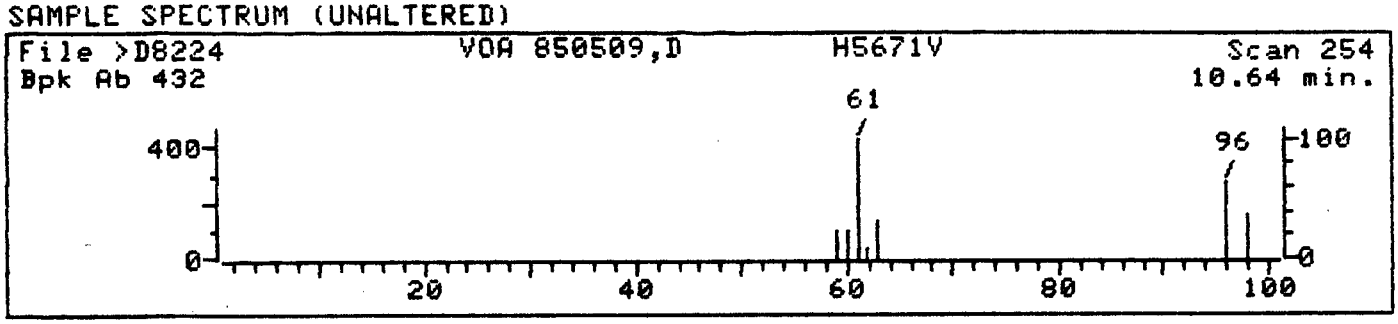
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



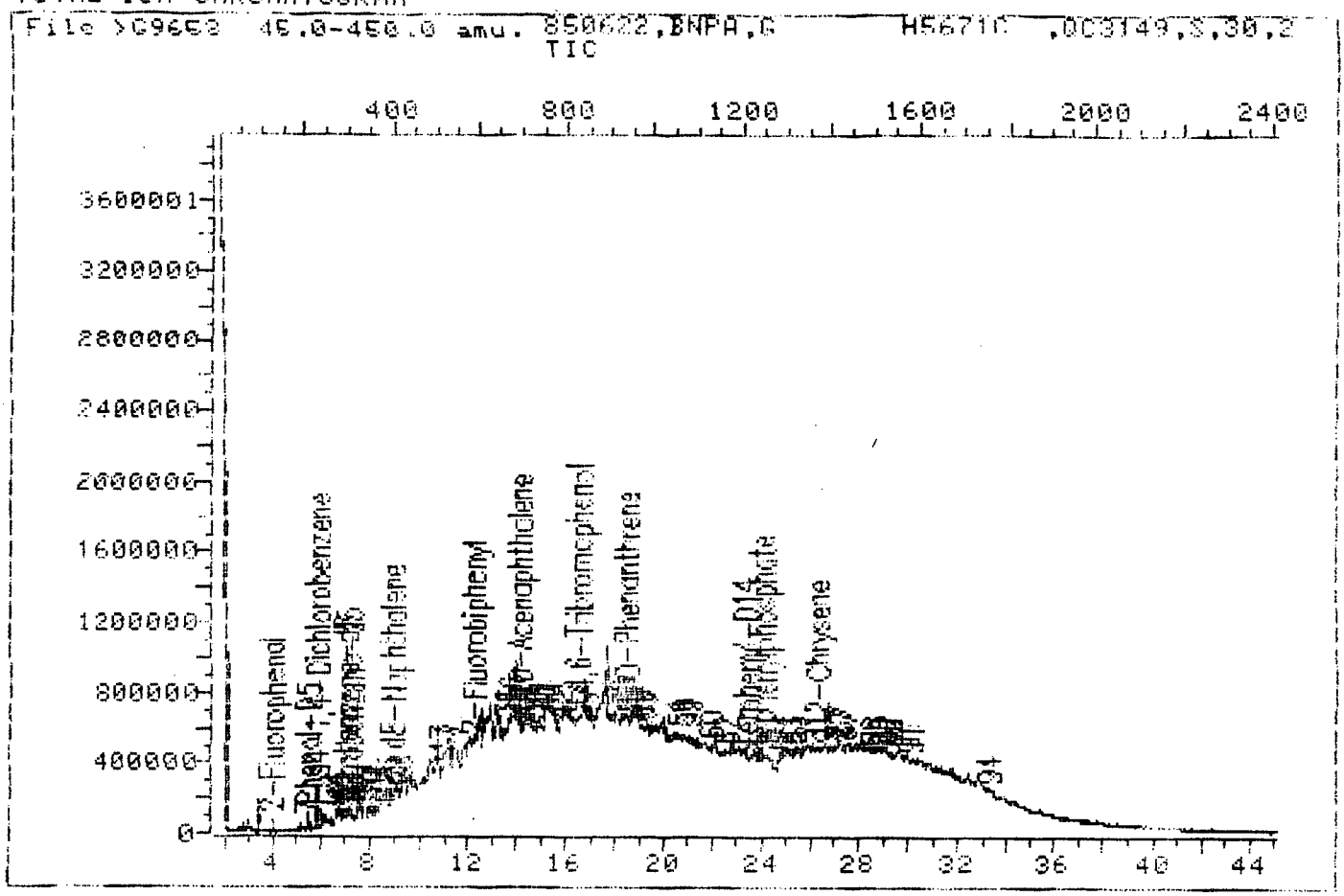
SAMPLE SPECTRUM (UNALTERED)



Data File: >D8224::U4
Name: VOA 850509,D
Misc: H5671V
Quant Time: 850509 20:06
Injected at: 850509 19:29

Compound No: 28
Compound Name: 1,2-Trans-dichloroethylene
Scan Number: 254
Retention Time: 10.64 min.
Area: 6117
Concentration: 26.00 NG
q-value: 95

TOTAL ION CHROMATOGRAM



Data File: >G9653::U4
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24

Id File: GBNPA::US
Title: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,1SP,G
Last Calibration: 850623 12:38

Operator ID: RA0157
Quant Time: 850623 15:52
Injected at: 850623 13:31

QUANT REPORT

Operator ID: RA0157 Quant Rev: 4 Quant Time: 850623 15:52
Output File: ^G9653::AW Injected at: 850623 13:31
Data File: >G9653::U4 Dilution Factor: 1.00
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24

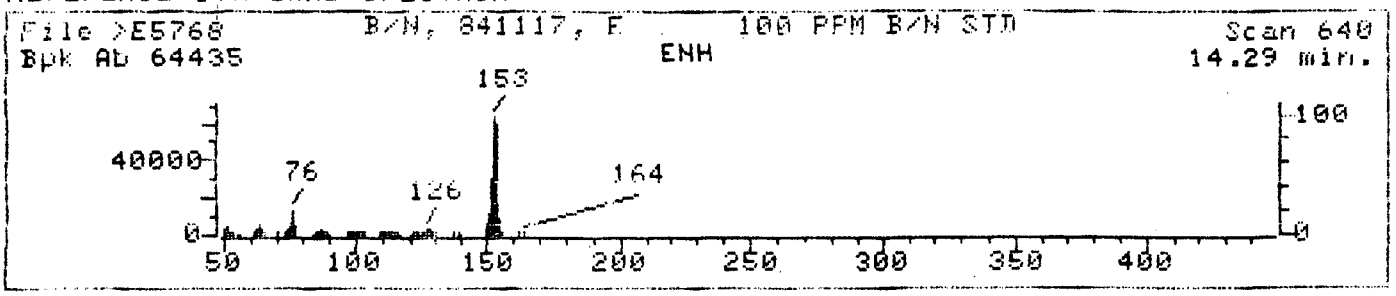
ID File: GBNPA::US
Title: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Last Calibration: 850623 12:38

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.86	235	119531	40.00	UG/ML	99
3)	2-Fluorophenol	3.91	126	50198	~~17.67~~	UG/ML	100
6)	Phenol-D5	5.45	212	84562	30.27	UG/ML	97
7)	Phenol	5.48	214	7094	~~2.59~~	UG/ML	67
13)	Nitrobenzene-d5	6.98	298	791	~~.26~~	UG/ML	92
13)	Nitrobenzene-d5	7.13	306	44490	14.48	UG/ML	86
14)	bis(2-Chloroisopropyl)ether	6.59	276	7616	~~10.66~~	UG/ML	95
14)	bis(2-Chloroisopropyl)ether	6.66	280	4804	~~6.73~~	UG/ML	89
14)	bis(2-Chloroisopropyl)ether	6.95	296	2077	~~2.93~~	UG/ML	74
15)	*d8-Naphthalene	8.88	404	412673	40.00	UG/ML	92
17)	2-Methylnaphthalene	10.92	518	24166	~~5.34~~	UG/ML	83
17)	2-Methylnaphthalene	11.20	534	41534	~~9.18~~	UG/ML	83
18)	2-Fluorobiphenyl	12.19	589	43561	14.87	UG/ML	97
19)	N-Nitrosodi-n-propylamine	7.13	306	7989	~~2.56~~	UG/ML	65
21)	Nitrobenzene	7.06	302	9651	~~1.55~~	UG/ML	57
22)	Isophorone	7.64	335	8434	~~1.42~~	UG/ML	70
22)	Isophorone	7.93	351	19897	3.34	UG/ML	72
23)	2-Nitrophenol	7.77	342	1672	~~.80~~	UG/ML	100
23)	2-Nitrophenol	8.13	362	752	~~.36~~	UG/ML	100
23)	2-Nitrophenol	8.25	369	2512	~~1.21~~	UG/ML	100
24)	2,4-Dimethylphenol	8.32	373	13447	~~3.72~~	UG/ML	94
25)	bis(2-Chloroethoxy)methane	8.81	400	5668	~~1.28~~	UG/ML	83
28)	Naphthalene	9.93	407	13786	~~1.26~~	UG/ML	71
28)	Naphthalene	9.13	418	1838	~~.12~~	UG/ML	50
31)	*d10-Acenaphthalene	14.09	695	131262	40.00	UG/ML	100
36)	Acenaphthylene	13.60	668	2758	~~.41~~	UG/ML	48
36)	Acenaphthylene	13.75	676	8164	~~1.23~~	UG/ML	39
37)	2,6-Dinitrotoluene	14.09	695	9869	~~9.43~~	UG/ML	59
38)	Acenaphthene	14.18	700	26357	5.84	UG/ML	88
40)	4-Nitrophenol	14.88	739	3951	~~6.03~~	UG/ML	64
41)	2,4-Dinitrotoluene	14.88	739	3138	~~2.30~~	UG/ML	74
41)	2,4-Dinitrotoluene	15.13	753	2123	~~1.56~~	UG/ML	49
42)	Diethyl phthalate	15.69	784	1177	~~.22~~	UG/ML	72
42)	Diethyl phthalate	16.13	809	827	~~.16~~	UG/ML	84
49)	3-Nitroaniline	14.20	701	919	~~1.06~~	UG/ML	64
50)	Dibenzofuran	14.63	725	3644	~~.86~~	UG/ML	59
52)	*d10-Phenanthrene	18.42	936	80442	40.00	UG/ML	100
53)	2,4,6-Tribromophenol	16.48	828	13506	45.05	UG/ML	92
57)	Phenanthrene	18.49	940	23973	12.44	UG/ML	87
57)	Phenanthrene	18.61	947	3966	~~2.08~~	UG/ML	87
58)	Anthracene	18.49	940	23973	~~10.39~~	UG/ML	85
58)	Anthracene	18.61	947	3966	1.72	UG/ML	84
59)	Di-n-butyl phthalate	20.74	1065	18407	7.19	UG/ML	91
59)	Di-n-butyl phthalate	21.04	1082	1884	~~.74~~	UG/ML	69
60)	Fluoranthene	21.98	1134	14966	7.14	UG/ML	95
62)	Pyrene	22.59	1168	22465	10.57	UG/ML	99

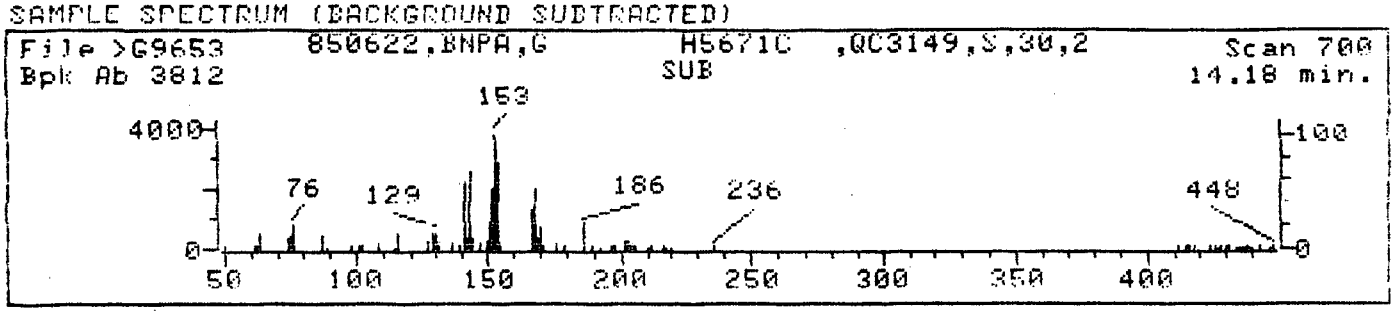
	Compound	R.T.	Scan#	Area	Conc	Units	q
64)	Beta-BHC	17.89	907	7184	34.66	UG/ML	38
64)	Beta-BHC	18.29	929	3620	17.46	UG/ML	79
65)	Gamma-BHC	18.29	929	3643	12.17	UG/ML	85
66)	Delta-BHC	19.08	973	1516	6.53	UG/ML	42
66)	Delta-BHC	19.15	977	1860	8.01	UG/ML	58
69)	*d12-Chrysene	26.26	1371	6194	40.00	UG/ML	100
70)	Triphenylphosphate	24.00	1246	1912	260.84	UG/ML	75
79)	Endrin aldehyde	24.31	1263	2231	76.97	UG/ML	58
79)	Endrin aldehyde	24.40	1268	4023	174.85	UG/ML	51
79)	Endrin aldehyde	24.50	1274	3146	136.73	UG/ML	55
82)	Terphenyl-D14	23.35	1210	2841	15.90	UG/ML	100
83)	Butyl benzyl phthalate	25.08	1306	1121	7.70	UG/ML	59
83)	Butyl benzyl phthalate	25.30	1318	720	6.36	UG/ML	63
87)	bis(2-Ethylhexyl)phthalate	27.05	1415	9656	64.15	UG/ML	86
87)	bis(2-Ethylhexyl)phthalate	27.18	1422	1129	7.50	UG/ML	73
87)	bis(2-Ethylhexyl)phthalate	27.36	1432	1992	13.23	UG/ML	87
88)	Di-n-octyl phthalate	28.61	1501	1045	5.34	UG/ML	43
88)	Di-n-octyl phthalate	28.92	1518	2106	10.77	UG/ML	41
89)	Benzo(b)fluoroanthene	29.28	1538	3810	34.95	UG/ML	83
90)	Benzo(k)fluoranthene	29.28	1538	3810	38.37	UG/ML	82
91)	Benzo(a)pyrene	29.94	1574	1884	23.45	UG/ML	88
91)	Benzo(a)pyrene	30.10	1583	1796	22.36	UG/ML	84
94)	Benzo(ghi)perylene	33.27	1758	934	17.98	UG/ML	62

* Compound is ISTD

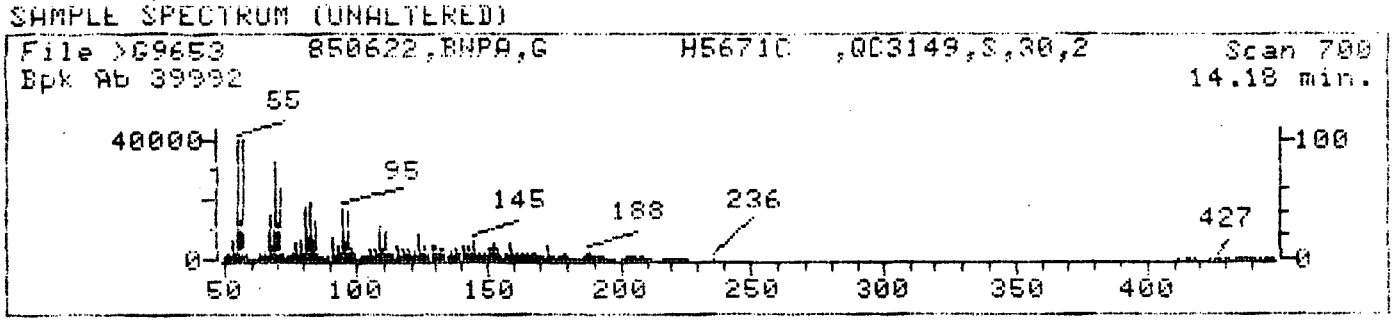
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



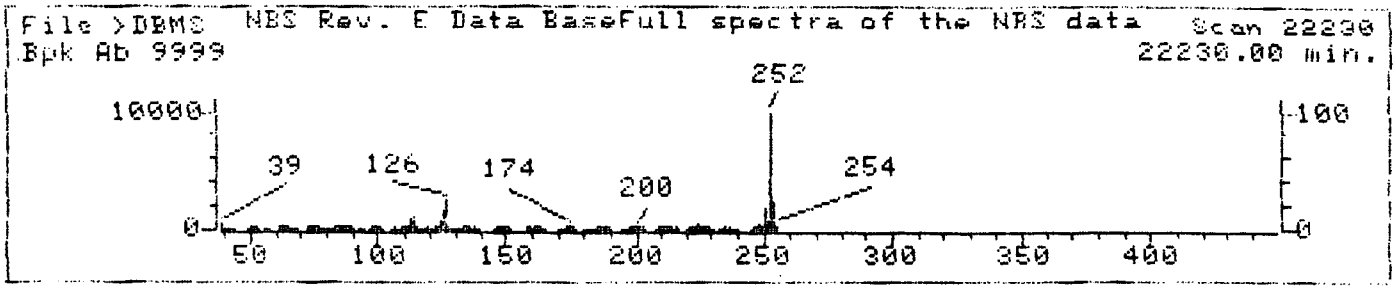
SAMPLE SPECTRUM (UNALTERED)



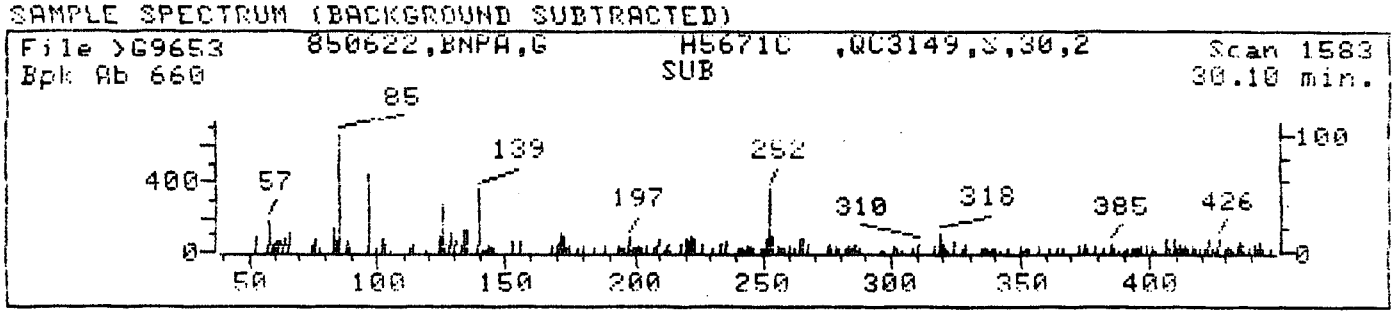
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24
Quant Time: 850623 15:52
Injected at: 850623 13:31

Compound No: 38
Compound Name: Acenaphthene
Scan Number: 700
Retention Time: 14.18 min.
Area: 26357
Concentration: 5.84 UG/ML
q-value: 88

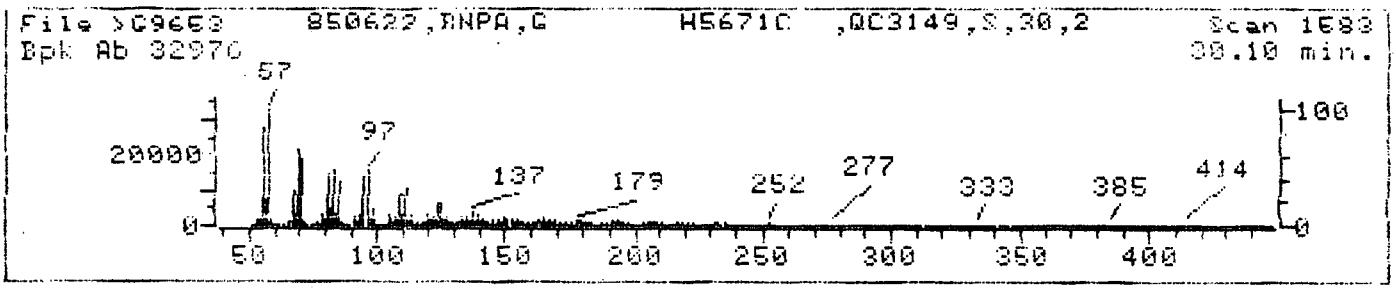
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



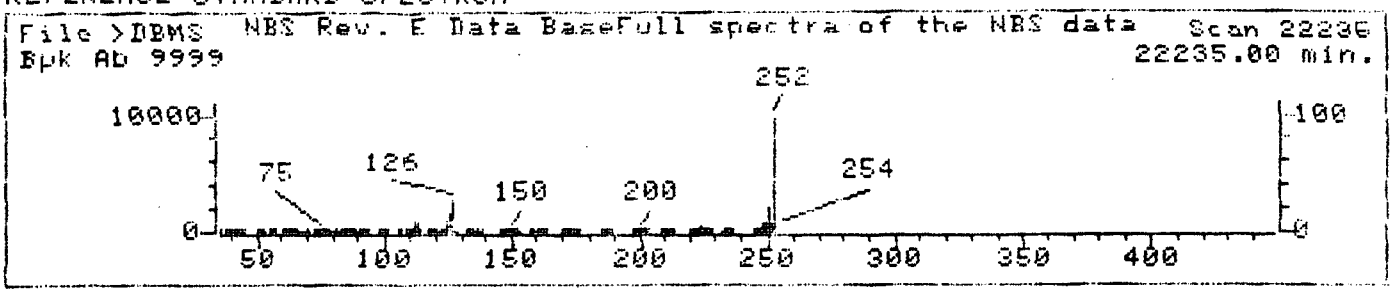
SAMPLE SPECTRUM (UNALTERED)



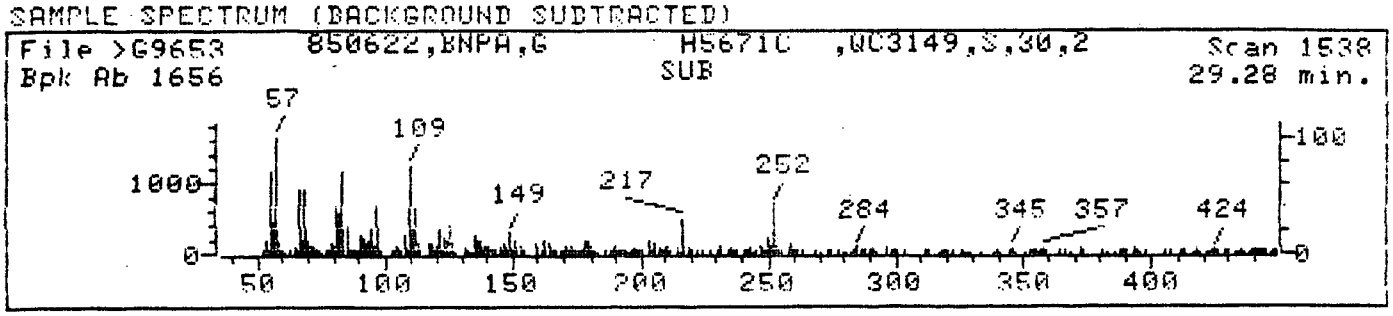
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24
Quant Time: 850623 15:52
Injected at: 850623 13:31

Compound No: 91
Compound Name: Benzo(a)pyrene
Scan Number: 1583
Retention Time: 30.10 min.
Area: 1776
Concentration: 22.36 UG/ML
q-value: 84

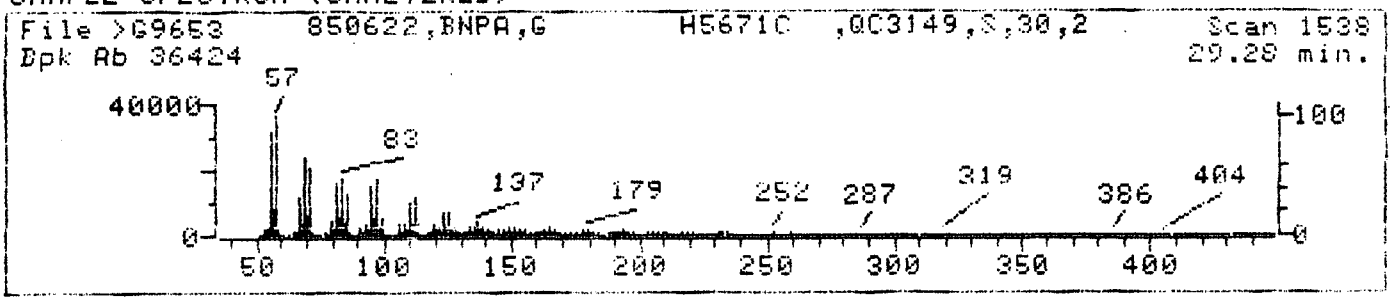
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



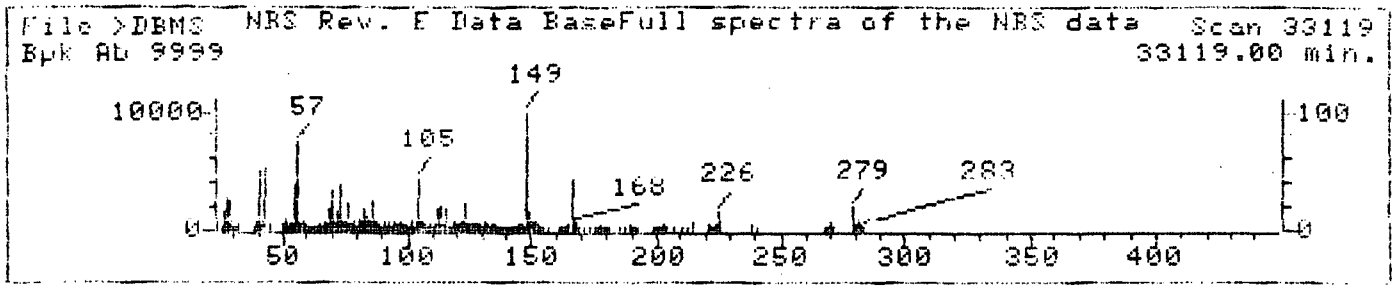
SAMPLE SPECTRUM (UNALTERED)



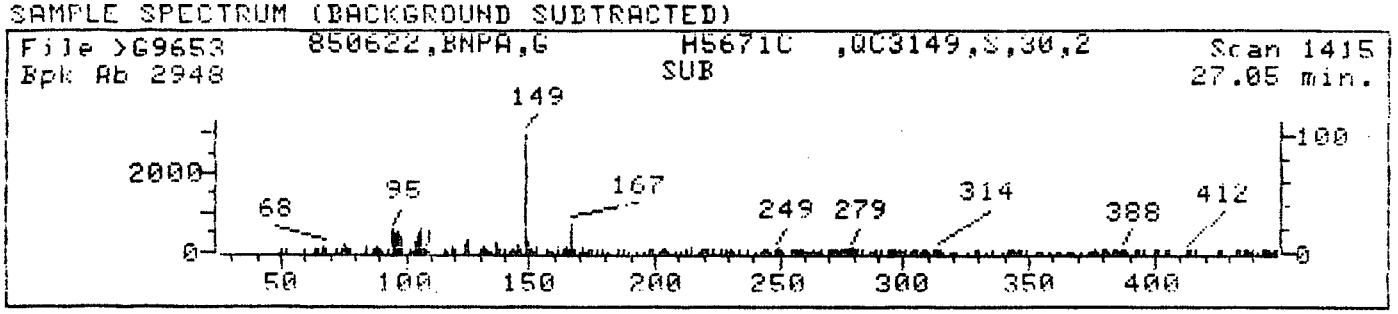
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24
Quant Time: 850623 15:52
Injected at: 850623 13:31

Compound No: 90
Compound Name: Benzo(k)fluoranthene
Scan Number: 1538
Retention Time: 29.28 min.
Area: 3810
Concentration: 38.37 UG/ML
q-value: 82

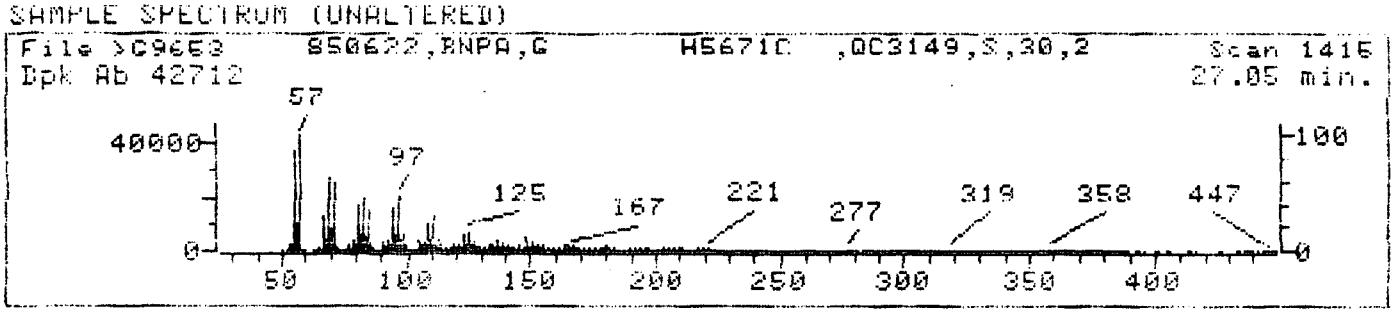
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



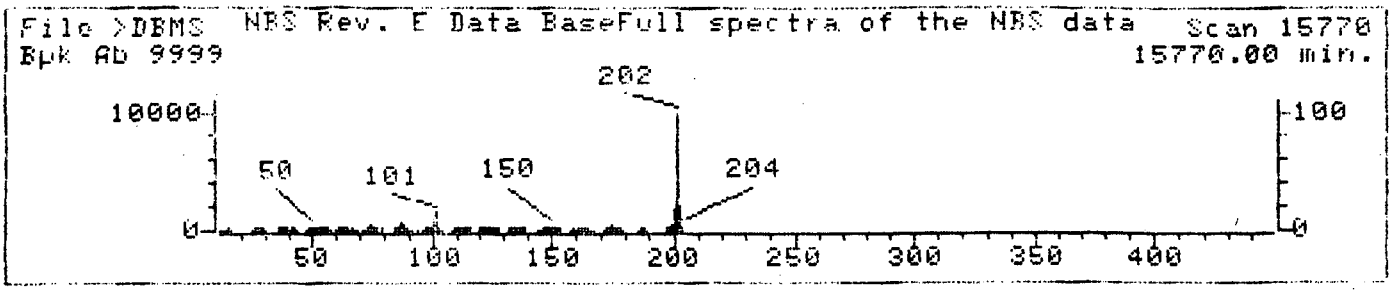
SAMPLE SPECTRUM (UNALTERED)



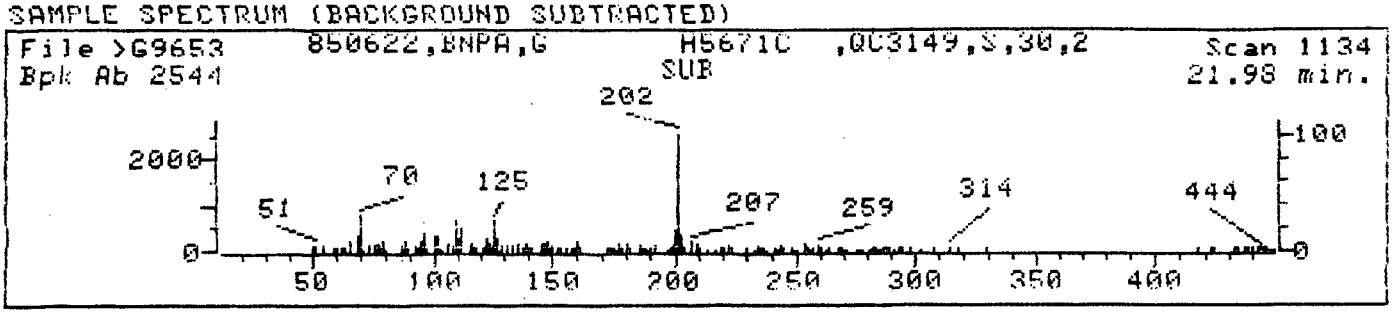
Data File: >G9653::04
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24
Quant Time: 850623 15:52
Injected at: 850623 13:31

Compound No: 87
Compound Name: bis(2-Ethylhexyl)phthalate
Scan Number: 1415
Retention Time: 27.05 min.
Area: 9656
Concentration: 64.15 UG/ML
q-value: 86

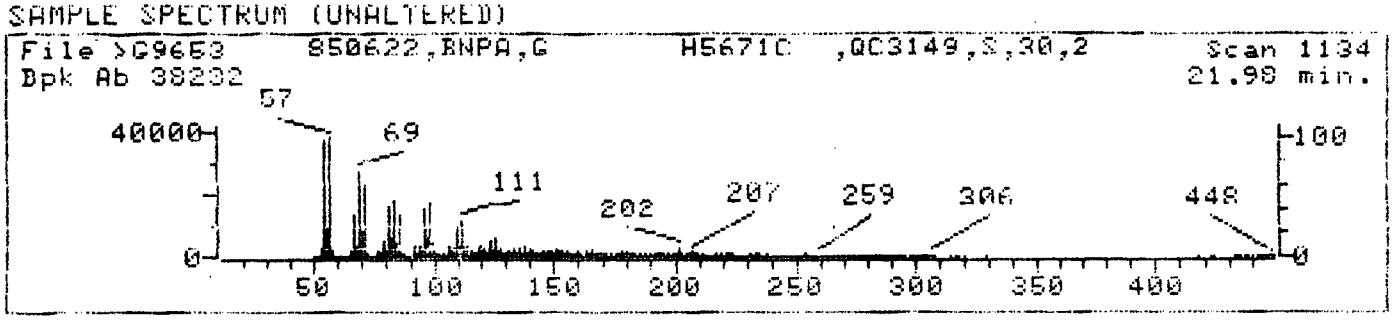
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



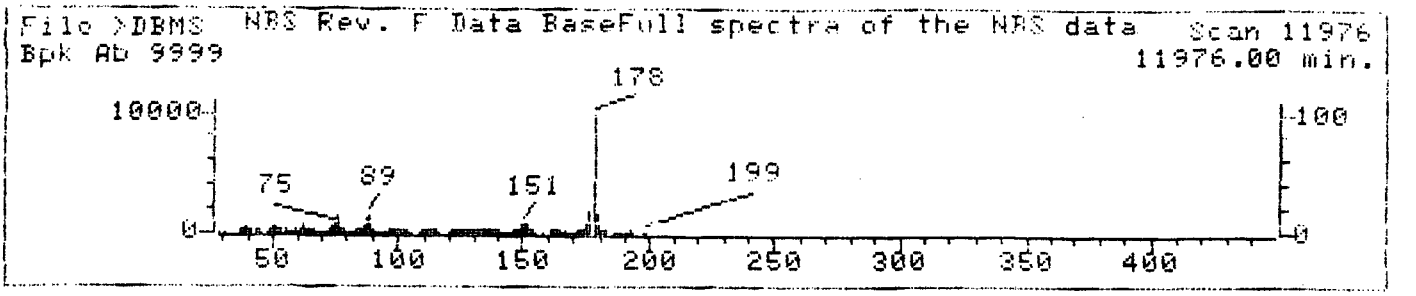
SAMPLE SPECTRUM (UNALTERED)



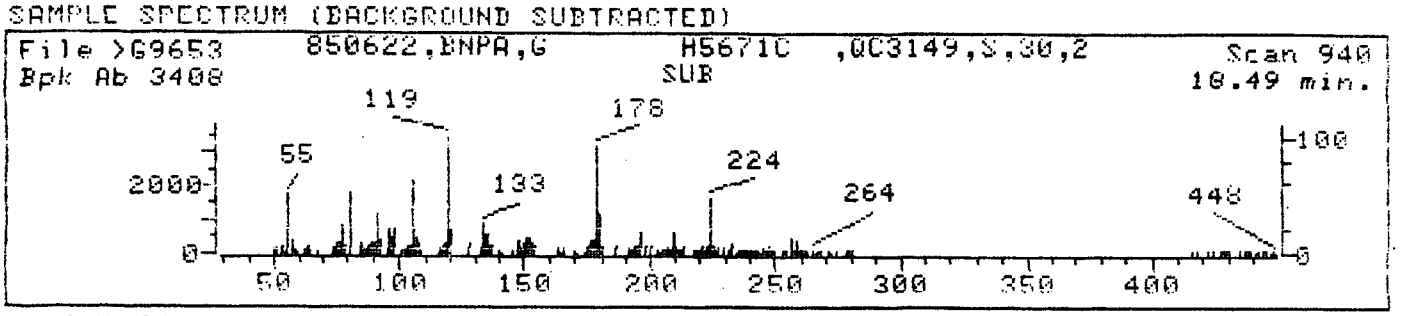
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24
Quant Time: 850623 15:52
Injected at: 850623 13:31

Compound No: 60
Compound Name: Fluoranthene
Scan Number: 1134
Retention Time: 21.98 min.
Area: 14966
Concentration: 7.14 UG/ML
q-value: 95

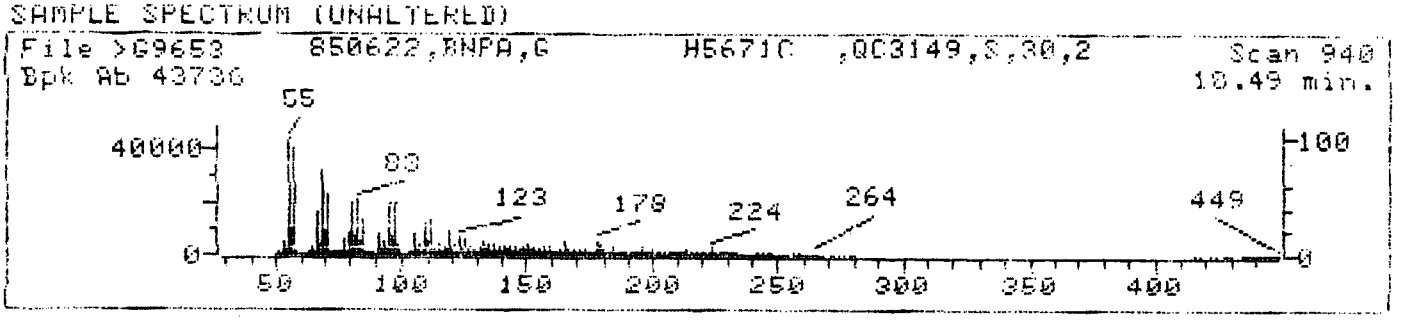
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



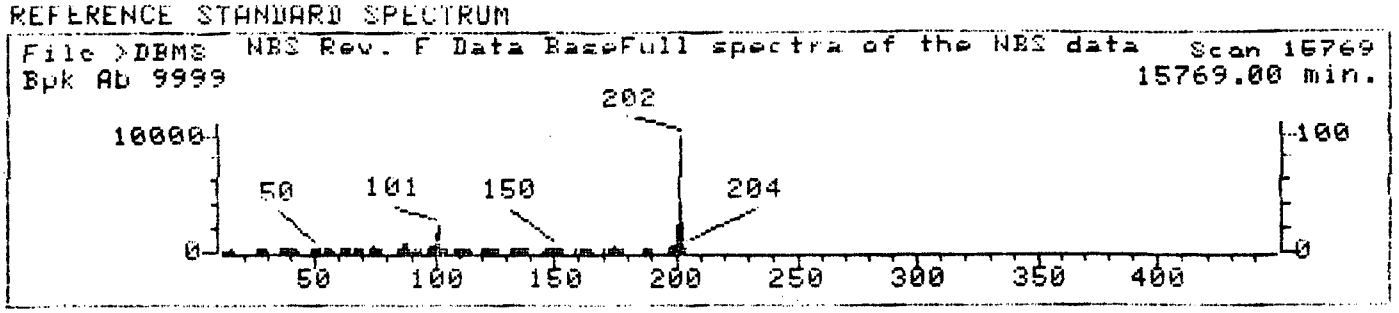
SAMPLE SPECTRUM (UNALTERED)



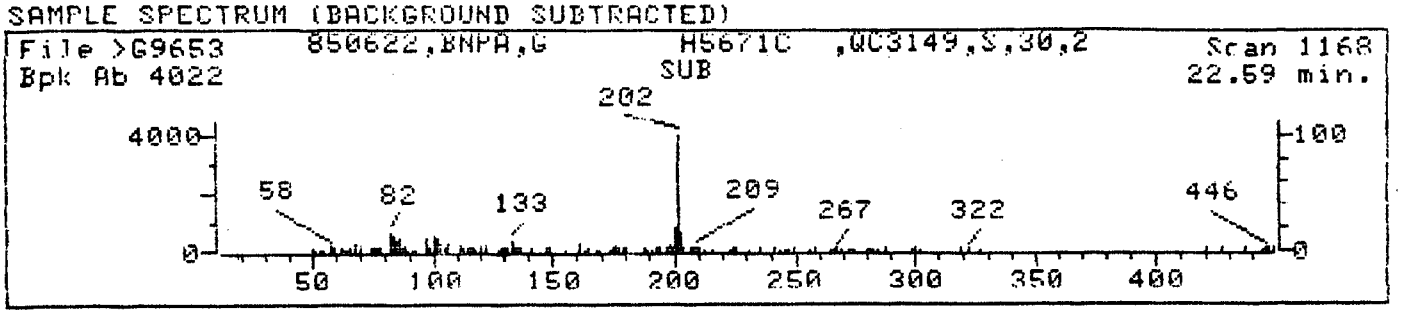
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24
Quant Time: 850623 15:52
Injected at: 850623 13:31

Compound No: 57
Compound Name: Phenanthrene
Scan Number: 940
Retention Time: 18.49 min.
Area: 23973
Concentration: 12.44 UG/ML
q-value: 87

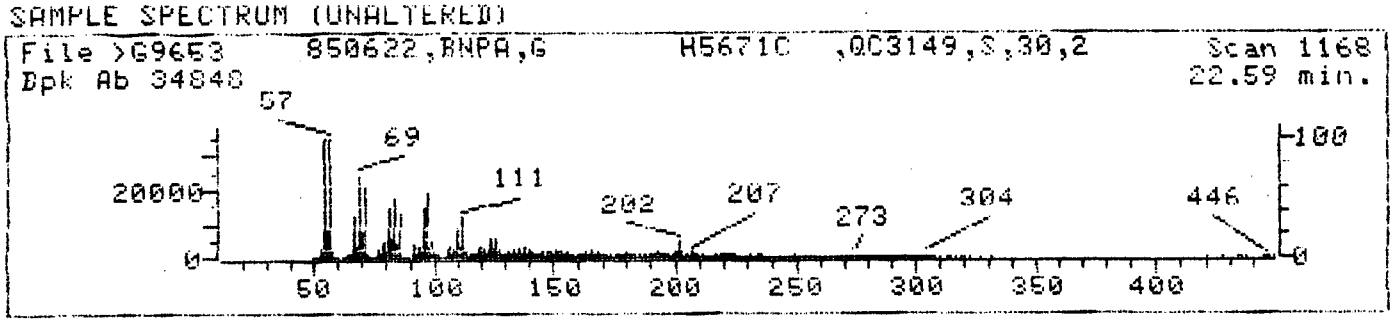
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >G9653::U4
Name: 850622,BNPA,G
Misc: H5671C ,QC3149,S,30,2 BTL#24
Quant Time: 850623 15:52
Injected at: 850623 13:31

Compound No: 62
Compound Name: Pyrene
Scan Number: 1168
Retention Time: 22.59 min.
Area: 22465
Concentration: 10.57 UG/ML
q-value: 99

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

CB BNPA

Calibration Report

Title: BASE/NEUTRAL,PESTICIDE,ACID 10FILE , 850622,TSR,6
Calibrated: 850623 11:50

Compound	Files: >G9634 RF 60.00	>G9635 RF 100.00	>G9636 RF 200.00	>G9637 RF 150.00	>G9631 RF 300.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
N-Nitrosodimethylamine	1.33583	1.14286	.91709	-	-	.416	1.13193	18.515	
2-Fluorophenol	1.03627	.95111	-	-	.86530	.668	.95089	8.990	(Conc=100.0,100.0,,,100.0)
Aniline	-	-	-	-	-	-	-	-	
Benzyl alcohol	-	-	-	-	-	-	-	-	
Phenol-D5	.97032	.94665	-	-	.88753	.933	.93483	4.561	(Conc=100.0,100.0,,,100.0)
Phenol	.90647	.91681	-	-	.92694	.937	.91674	1.117	
bis(2-Chloroethyl) ether	1.38302	1.31253	1.26638	-	-	.941	1.32064	4.448	
2-Chlorophenol	.91919	.89758	-	-	.85132	.948	.88934	3.898	
1,3-Dichlorobenzene	1.42253	1.43886	1.56015	-	-	.987	1.42385	4.051	
1,4-Dichlorobenzene	1.56720	1.65367	1.56390	-	-	1.007	1.59492	3.192	
1,2-Dichlorobenzene	1.48719	1.42656	1.48746	-	-	1.070	1.46707	2.391	
Nitrobenzene-d5	1.04138	1.00678	1.03706	-	-	1.217	1.02841	1.833	(Conc=50.0,50.0,50.0,,)
bis(2-Chloroisopropyl)ether	.19608	.19741	.32343	-	-	1.134	.23897	30.608	
4-Chloroaniline	-	-	-	-	-	-	-	-	
2-Methylnaphthalene	-	-	-	-	-	-	-	-	
2-Fluorobiphenyl	.27888	.29782	.27508	-	-	1.369	.28393	4.290	(Conc=50.0,50.0,50.0,,)
N-Nitrosodi-n-propylamine	.32552	.34086	.31724	-	-	.789	.32789	3.653	
Hexachloroethane	.24877	.26503	.23951	-	-	.783	.25110	5.144	
Nitrobenzene	.58660	.58234	.64577	-	-	.812	.60490	5.862	
Isophorone	.54021	.59434	.59720	-	-	.880	.57725	5.562	
2-Nitrophenol	.19171	.19540	-	-	.21790	.901	.20167	7.029	
2,4-Dimethylphenol	.35296	.35450	-	-	.34490	.939	.35079	1.470	
bis(2-Chloroethoxy)methane	.43265	.43948	.41457	-	-	.962	.42890	3.001	
2,4-Dichlorophenol	.25891	.26784	-	-	.24783	.975	.25819	3.882	
1,2,4-Trichlorobenzene	.34541	.35521	.34203	-	-	.993	.34755	1.978	
Naphthalene	1.05527	1.08695	1.02851	-	-	1.006	1.05691	2.768	
Hexachlorobutadiene	.26756	.27614	.23935	-	-	1.076	.26102	7.323	
p-Chloro-m-cresol	.22867	.20971	-	-	.23221	1.225	.22353	5.414	
Hexachlorocyclopentadiene	.40880	.46766	.42979	-	-	.831	.43541	6.851	
2,4,6-Trichlorophenol	.41236	.41052	-	-	.43457	.852	.41915	3.193	
2-Chloronaphthalene	1.13682	1.22300	1.08598	-	-	.878	1.14860	6.031	
Dimethyl phthalate	1.56521	1.53744	1.48388	-	-	.975	1.52884	2.704	
Acenaphthylene	1.97163	2.10214	2.01026	-	-	.965	2.02801	3.306	
2,6-Dinitrotoluene	.34781	.33571	.30463	-	-	.984	.32938	6.762	
Acenaphthene	1.33168	1.39514	1.39730	-	-	1.007	1.37471	2.712	
2,4-Dinitrophenol	.02876	.09355	-	-	.18653	1.032	.10295	77.033	
4-Nitrophenol	.14948	.19044	-	-	.25887	1.068	.19960	27.690	
2,4-Dinitrotoluene	.47210	.39311	.38190	-	-	1.065	.41571	11.826	
Diethyl phthalate	1.80860	1.56885	1.42693	-	-	1.132	1.60146	12.046	
Fluorene	1.47414	1.34852	1.25562	-	-	1.117	1.35943	8.067	
4-Chlorophenyl phenyl ether	.72217	.68745	.64710	-	-	1.128	.68557	5.480	
N-Nitrosodiphenylamine	1.08675	.95558	.81981	-	-	1.159	.95405	13.991	
4,6-Dinitro-o-cresol	.15966	.21219	-	-	.32147	1.151	.22977	36.684	

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: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Calibrated: 850623 11:50

Compound	>G9634 RF 60.00	>G9635 RF 100.00	>G9636 RF 200.00	>G9637 RF 150.00	>G9631 RF 300.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
1,2-Diphenylhydrazine	2.04720	1.79761	1.75988	-	-	1.162	1.86823	8.358	
2-Nitroaniline	-	-	-	-	-	-	-	-	
3-Nitroaniline	-	-	-	-	-	-	-	-	
Dibenzofuran	-	-	-	-	-	-	-	-	
4-Nitroaniline	-	-	-	-	-	-	-	-	
2,4,6-Tribromophenol	.13662	.13948	-	-	.16329	.893	.14647	9.998	(Conc=100.0,100.0,,,100.0)
4-Bromophenyl phenyl ether	.21084	.22363	.22616	-	-	.938	.22021	3.731	
Hexachlorobenzene	.24012	.26730	.25568	-	-	.954	.25436	5.361	
Pentachlorophenol	.10026	.13087	-	-	.15638	.987	.12917	21.755	
Phenanthrene	.92810	.94032	1.00698	-	-	1.004	.95847	4.430	
Anthracene	1.14651	1.14619	1.15068	-	-	1.012	1.14779	.218	
Di-n-butyl phthalate	1.27345	1.20029	1.34400	-	-	1.132	1.27258	5.647	
Fluoranthene	.97514	.96065	1.19072	-	-	1.198	1.04217	12.364	
Benzidine	-	.23268	.22040	-	-	1.230	.22654	3.832	
Pyrene	.96049	.99928	1.20934	-	-	1.231	1.05637	12.674	
Alpha-BHC	.15158	.16029	-	.16949	-	.942	.16045	5.581	
Beta-BHC	.09939	.09838	-	.11146	-	.985	.10308	7.058	
Gamma-BHC	.14097	.14917	-	.15643	-	.991	.14886	5.195	
Delta-BHC	.11213	.11090	-	.12329	-	1.026	.11544	5.911	
Heptachlor	.17686	.19105	-	.22300	-	1.092	.19697	11.997	
Aldrin	.17701	.17663	-	.18568	-	1.138	.17977	2.848	
Triphenylphosphate	-	-	-	-	-	-	-	-	
Heptachlor epoxide	.11404	.13409	-	.14124	-	.832	.12979	10.864	
Chlordane	.02462	.03535	-	.06533	-	.854	.04177	50.517	
Endosulfan I	.04836	.05585	-	.06003	-	.865	.05475	10.802	
4,4'-DDE	.35708	.41550	-	.46634	-	.889	.41297	13.238	
Dieldrin	.29681	.34562	-	.36978	-	.888	.33740	11.018	
Endrin	.04456	.04364	-	.05221	-	.907	.04680	10.053	
Endosulfan II	.02664	.03837	-	.03680	-	.916	.03394	18.765	
4,4'-DDD	.44196	.55787	-	.61954	-	.926	.53979	16.703	
Endrin aldehyde	-	-	-	.14858	-	.933	.14858	-	
4,4'-DDT	.38556	.47297	-	.50870	-	.959	.45574	13.901	
Endosulfan sulfate	.08666	.10365	-	.11590	-	.954	.10207	14.388	
Terphenyl-D14	1.00941	1.18616	1.26621	-	-	.889	1.15393	11.387	(Conc=50.0,50.0,50.0,,)
Butyl benzyl phthalate	.65657	.74571	.79043	-	-	.957	.73090	9.324	
Benzo(a)anthracene	.86579	.89183	.93499	-	-	.999	.89754	3.894	
Chrysene	1.15428	1.19596	1.17906	-	-	1.003	1.17643	1.782	
3,3'-Dichlorobenzidine	.22870	.22527	.25734	-	-	1.004	.23710	7.426	
bis(2-Ethylhexyl)phthalate	.90886	.96358	1.04352	-	-	1.033	.97199	6.968	
Di-n-octyl phthalate	1.37565	1.31181	1.10226	-	-	1.099	1.26324	11.322	
Benzo(b)fluoroanthene	.75254	.77460	.59677	-	-	1.114	.70797	13.692	
Benzo(k)fluoranthene	.80584	.62637	.49163	-	-	1.117	.64128	24.582	
Benzo(a)pyrene	.59629	.53495	.42522	-	-	1.145	.51882	16.705	

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

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

055

$\overline{RF}$ - Average Response Factor

Calibration Report

Title: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Calibrated: 850623 11:50

Compound	Files: >G9634 RF 60.00	>G9635 RF 100.00	>G9636 RF 200.00	>G9637 RF 150.00	>G9631 RF 300.00	$\overline{RRT}$	$\overline{RF}$	% RSD
Indeno(1,2,3-c,d)pyrene	.33668	.47098	.44869	-	-	1.247	.41878	17.186
Dibenzo(a,h)anthracene	.26953	.38374	.36225	-	-	1.250	.33851	17.930
Benzo(ghi)perylene	.23989	.38650	.37992	-	-	1.267	.33544	24.687

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

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

$\overline{RF}$ - Average Response Factor

Calibration Check Report

Title: BASE/NEUTRAL,PESTICIDE,ACID 1DFILE , 850622,1SR,5
Calibrated: 850623 11:50

Check Standard Data File: >G9646
Injection Time: 850623 07:31

Compound	$\overline{RF}$	RF	%Diff	Calib Meth
N-Nitrosodimethylamine	1.13193	-	-	Average
2-Fluorophenol	.95089	1.28164	34.78	Average
Aniline	-	-	-	Average
Benzyl alcohol	-	-	-	Average
Phenol-D5	.93483	1.46922	57.16	Average
Phenol	.91674	1.54892	68.96	Average
bis(2-Chloroethyl) ether	1.32064	-	-	Average
2-Chlorophenol	.88934	1.41592	59.21	Average
1,3-Dichlorobenzene	1.42385	-	-	Average
1,4-Dichlorobenzene	1.59492	-	-	Average
1,2-Dichlorobenzene	1.46707	-	-	Average
Nitrobenzene-d5	1.02841	-	-	Average
bis(2-Chloroisopropyl)ether	.23897	-	-	Average
4-Chlnroaniline	-	-	-	Average
2-Methylnaphthalene	-	-	-	Average
2-Fluorobiphenyl	.28595	-	-	Average
N-Nitrosodi-n-propylamine	.32789	-	-	Average
Hexachloroethane	.26110	-	-	Average
Nitrobenzene	.60490	-	-	Average
Isophorone	.57725	-	-	Average
2-Nitrophenol	.20167	.19715	2.24	Average
2,4-Dimethylphenol	.35079	.34175	2.58	Average
bis(2-Chloroethoxy)methane	.42890	-	-	Average
2,4-Dichlorophenol	.25819	.25372	1.73	Average
1,2,4-Trichlorobenzene	.34755	-	-	Average
Naphthalene	1.05691	.01306	98.76	Average
Hexachlorobutadiene	.26102	-	-	Average
p-Chloro-m-cresol	.22353	.21108	5.57	Average
Hexachlorocyclopentadiene	.43541	-	-	Average
2,4,6-Trichlorophenol	.41915	.43433	3.62	Average
2-Chloronaphthalene	1.14860	-	-	Average
Dimethyl phthalate	1.52884	-	-	Average
Acenaphthylene	2.02801	-	-	Average
2,6-Dinitrotoluene	.32938	-	-	Average
Acenaphthene	1.37471	-	-	Average
2,4-Dinitrophenol	.10295	.07805	24.19	Average
4-Nitrophenol	.19960	.14345	28.13	Average
2,4-Dinitrotoluene	.41571	-	-	Average
Diethyl phthalate	1.60146	-	-	Average
Fluorene	1.35943	-	-	Average
4-Chlorophenyl phenyl ether	.68557	-	-	Average
N-Nitrosodiphenylamine	.95405	-	-	Average
4,6-Dinitro-o-cresol	.22977	.18564	19.21	Average
1,2-Diphenylhydrazine	1.86823	-	-	Average

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: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Calibrated: 850623 11:50

Check Standard Data File: >G9646
Injection Time: 850623 07:31

Compound	$\overline{RF}$	RF	%Diff	Calib Meth
2-Nitroaniline	-	-	-	Average
3-Nitroaniline	-	-	-	Average
Dibenzofuran	-	-	-	Average
4-Nitroaniline	-	-	-	Average
2,4,6-Tribromophenol	.14647	.14897	1.71	Average
4-Bromophenyl phenyl ether	.22021	-	-	Average
Hexachlorobenzene	.25436	-	-	Average
Pentachlorophenol	.12917	.12677	1.86	Average
Phenanthrene	.95847	-	-	Average
Anthracene	1.14779	-	-	Average
Di-n-butyl phthalate	1.27258	-	-	Average
Fluoranthene	1.04217	-	-	Average
Benzidine	.22654	-	-	Average
Pyrene	1.05637	-	-	Average
Alpha-BHC	.16045	-	-	Average
Beta-BHC	.10308	-	-	Average
Gamma-BHC	.14886	-	-	Average
Delta-BHC	.11544	-	-	Average
Heptachlor	.19697	-	-	Average
Aldrin	.17977	-	-	Average
Triphenylphosphate	-	-	-	Average
Heptachlor epoxide	.12979	-	-	Average
Chlordane	.04177	-	-	Average
Endosulfan I	.05475	-	-	Average
4,4'-DDE	.41297	-	-	Average
Dieldrin	.33740	-	-	Average
Endrin	.04680	-	-	Average
Endosulfan II	.03394	-	-	Average
4,4'-DDD	.53979	-	-	Average
Endrin aldehyde	.14858	-	-	Average
4,4'-DDT	.45574	-	-	Average
Endosulfan sulfate	.10207	-	-	Average
Terphenyl-D14	1.15395	-	-	Average
Butyl benzyl phthalate	.73090	-	-	Average
Benzo(a)anthracene	.89754	-	-	Average
Chrysene	1.17643	-	-	Average
3,3'-Dichlorobenzidine	.23710	-	-	Average
bis(2-Ethylhexyl)phthalate	.97199	-	-	Average
Di-n-octyl phthalate	1.26324	-	-	Average
Benzo(b)fluoroanthene	.70797	-	-	Average
Benzo(k)fluoranthene	.64128	-	-	Average
Benzo(a)pyrene	.51882	-	-	Average
Indeno(1,2,3-c,d)pyrene	.41878	-	-	Average
Dibenzo(a,h)anthracene	.33851	-	-	Average

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: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Calibrated: 850623 11:50

Check Standard Data File: >G9646
Injection Time: 850623 07:31

Compound	$\overline{RF}$	RF	%Diff	Calib Meth
Benzo(ghi)perylene	.33544	-	-	Average

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: BASE/NEUTRAL,PESTICIDE,ACID 1DFILE , 850622,1SR,5
Calibrated: 850623 11:50

Check Standard Data File: >G9647
Injection Time: 850623 08:09

Compound	$\overline{RF}$	RF	%Diff	Calib Meth
N-Nitrosodimethylamine	1.13193	1.14522	1.17	Average
2-Fluorophenol	.95089	-	-	Average
Aniline	-	-	-	Average
Benzyl alcohol	-	-	-	Average
Phenol-D5	.93483	-	-	Average
Phenol	.91674	-	-	Average
bis(2-Chloroethyl) ether	1.32064	1.29587	1.88	Average
2-Chlorophenol	.88934	-	-	Average
1,3-Dichlorobenzene	1.42385	1.34327	5.66	Average
1,4-Dichlorobenzene	1.59492	1.66305	4.27	Average
1,2-Dichlorobenzene	1.46707	1.37416	6.33	Average
Nitrobenzene-d5	1.02841	.55514	46.02	Average
bis(2-Chloroisopropyl)ether	.23897	.25958	8.62	Average
4-Chloroaniline	-	-	-	Average
2-Methylnaphthalene	-	.00197	-	Average
2-Fluorobiphenyl	.28393	.14888	47.56	Average
N-Nitrosodi-n-propylamine	.32789	.31596	3.64	Average
Hexachloroethane	.25110	.21427	14.67	Average
Nitrobenzene	.60499	.57510	4.93	Average
Isophorone	.57725	.59465	3.01	Average
2-Nitrophenol	.20167	.00833	95.87	Average
2,4-Dimethylphenol	.55079	-	-	Average
bis(2-Chloroethoxy)methane	.42890	.43955	2.48	Average
2,4-Dichlorophenol	.25819	-	-	Average
1,2,4-Trichlorobenzene	.34755	.34734	.06	Average
Naphthalene	1.05691	1.11274	5.28	Average
Hexachlorobutadiene	.26102	.25654	1.72	Average
p-Chloro-m-cresol	.22353	-	-	Average
Hexachlorocyclopentadiene	.43541	.50574	16.15	Average
2,4,6-Trichlorophenol	.41915	-	-	Average
2-Chloronaphthalene	1.14860	1.27993	11.43	Average
Dimethyl phthalate	1.52884	1.44415	5.54	Average
Acenaphthylene	2.02801	2.01293	.74	Average
2,6-Dinitrotoluene	.32938	.32411	1.60	Average
Acenaphthene	1.37471	1.37869	.29	Average
2,4-Dinitrophenol	.10295	-	-	Average
4-Nitrophenol	.19960	-	-	Average
2,4-Dinitrotoluene	.41571	.34991	15.83	Average
Diethyl phthalate	1.60146	1.40738	12.12	Average
Fluorene	1.35943	1.26270	7.12	Average
4-Chlorophenyl phenyl ether	.68557	.62132	9.37	Average
N-Nitrosodiphenylamine	.95405	.79119	17.07	Average
4,6-Dinitro-o-cresol	.22977	-	-	Average
1,2-Diphenylhydrazine	1.86823	1.63115	12.69	Average

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

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

060

%Diff - % Difference from original average or curve

Calibration Check Report

Title: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Calibrated: 850623 11:50

Check Standard Data File: >G9647
Injection Time: 850623 08:09

Compound	$\overline{RF}$	RF	%Diff	Calib Meth
2-Nitroaniline	-	-	-	Average
3-Nitroaniline	-	-	-	Average
Dibenzofuran	-	.01110	-	Average
4-Nitroaniline	-	-	-	Average
2,4,6-Tribromophenol	.14647	-	-	Average
4-Bromophenyl phenyl ether	.22021	.23990	8.94	Average
Hexachlorobenzene	.25436	.27811	9.34	Average
Pentachlorophenol	.12917	-	-	Average
Phenanthrene	.95847	.96132	.30	Average
Anthracene	1.14779	1.14773	.01	Average
Di-n-butyl phthalate	1.27258	1.13288	11.04	Average
Fluoranthene	1.04217	.81206	22.08	Average
Benzidine	.22654	.00694	96.94	Average
Pyrene	1.05637	.78210	25.96	Average
Alpha-BHC	.16045	.16937	5.56	Average
Beta-BHC	.10308	.09155	11.18	Average
Gamma-BHC	.14886	.14904	.13	Average
Delta-BHC	.11544	.10331	10.50	Average
Heptachlor	.19697	.19790	.47	Average
Aldrin	.17977	.18141	.91	Average
Triphenylphosphate	-	.04665	-	Average
Heptachlor epoxide	.12979	.15814	21.84	Average
Chlordane	.04177	.03835	8.19	Average
Endosulfan I	.05475	.06349	15.97	Average
4,4'-DDE	.41297	.44339	7.37	Average
Dieldrin	.33740	.38536	14.21	Average
Endrin	.04680	.04719	.83	Average
Endosulfan II	.03394	.04176	23.05	Average
4,4'-DDD	.53979	.59250	9.76	Average
Endrin aldehyde	.14858	-	-	Average
4,4'-DDT	.45574	.50387	10.56	Average
Endosulfan sulfate	.10207	.10168	.38	Average
Terphenyl-D14	1.15395	.63015	45.39	Average
Butyl benzyl phthalate	.73090	.78825	7.85	Average
Benzo(a)anthracene	.89754	.91323	1.75	Average
Chrysene	1.17643	1.21456	3.24	Average
3,3'-Dichlorobenzidine	.23710	.20749	12.49	Average
bis(2-Ethylhexyl)phthalate	.97199	1.03991	6.99	Average
Di-n-octyl phthalate	1.26324	1.30667	3.44	Average
Benzo(b)fluoroanthene	.70797	.69740	1.49	Average
Benzo(k)fluoranthene	.64128	.67078	4.60	Average
Benzo(a)pyrene	.51882	.50872	1.95	Average
Indeno(1,2,3-c,d)pyrene	.41878	.49301	17.72	Average
Dibenzo(a,h)anthracene	.33851	.39144	15.64	Average

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: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Calibrated: 850623 11:50

Check Standard Data File: >G9647
Injection Time: 850623 08:09

Compound	$\overline{RF}$	RF	%Diff	Calib Meth
Benzo(ghi)perylene	.33544	.39751	18.51	Average

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

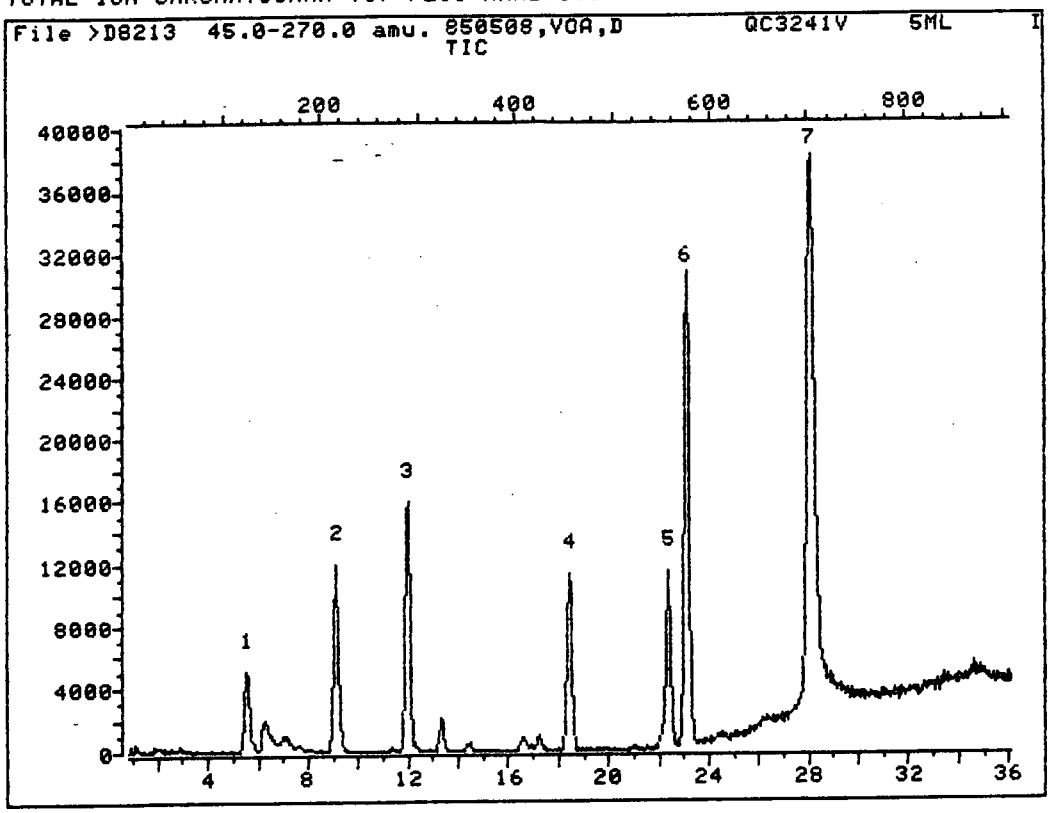
$\overline{RF}$ - Average Response Factor from Initial Calibration

%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

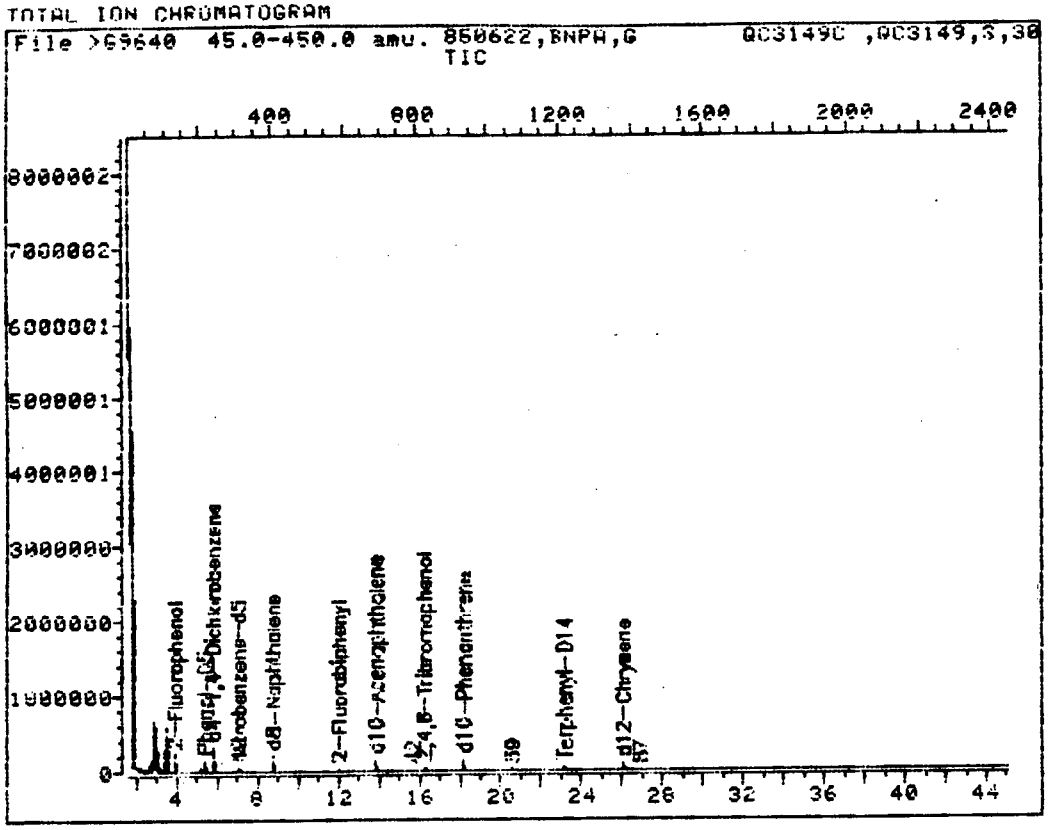
Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850509 09:03
Injected at: 850509 07:57
Data File: >D8213::U4 Dilution Factor: 1.00
Name: 850508,VOA,D
Misc: QC3241V 5ML IFBPREP SOIL

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



Data File: >G9640::U3
Name: 850622,BNPA,G
Misc: QC3149C ,QC3149,S,30,2 BTL#11

Id File: GBNPA::US
Title: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Last Calibration: 850623 12:38

Operator ID: RA0157
Quant Time: 850623 13:10
Injected at: 850623 01:34

QUANT REPORT

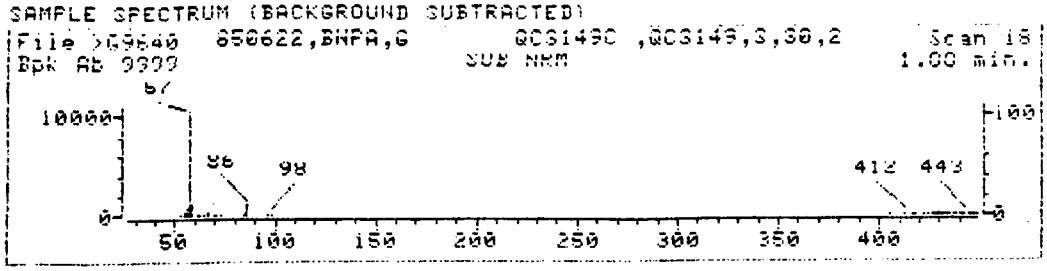
Operator ID: RA0157 Quant Rev: 4 Quant Time: 850623 13:10
Output File: ^G9640::AQ Injected at: 850623 01:34
Data File: >G9640::U3 Dilution Factor: 1.00
Name: 850622,BNPA,G
Misc: QC3149C ,QC3149,S,30,2 BTL#11

ID File: GBNPA::US
Title: BASE/NEUTRAL,PESTICIDE,ACID IDFILE , 850622,TSR,G
Last Calibration: 850623 12:38

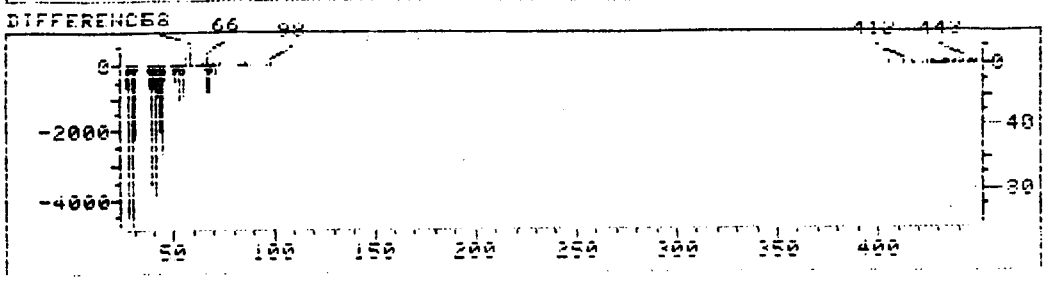
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.79	237	82551	40.00	UG/ML	99
3)	2-Fluorophenol	3.88	130	111454	56.79	UG/ML	100
6)	Phenol-D5	5.38	214	99700	51.68	UG/ML	98
13)	Nitrobenzene-d5	7.05	308	42809	20.17	UG/ML	82
15)	*d8-Naphthalene	8.75	404	194712	40.00	UG/ML	94
18)	2-Fluorobiphenyl	12.00	587	27426	19.84	UG/ML	94
19)	N-Nitrosodi-n-propylamine	7.05	308	6499	4.07	UG/ML	66
31)	*d10-Acenaphthalene	13.83	690	70525	40.00	UG/ML	100
42)	Diethyl phthalate	15.66	793	874	.31	UG/ML	96
52)	*d10-Phenanthrene	18.17	934	139527	40.00	UG/ML	100
53)	2,4,6-Tribromophenol	16.23	825	17199	33.66	UG/ML	94
59)	Di-n-butyl phthalate	20.57	1069	25304	5.70	UG/ML ✓	98
69)	*d12-Chrysene	26.04	1377	86788	40.00	UG/ML	100
82)	Terphenyl-D14	23.14	1214	55444	22.15	UG/ML	100
87)	bis(2-Ethylhexyl)phthalate	26.89	1425	884	.42	UG/ML	84

* Compound is ISTD

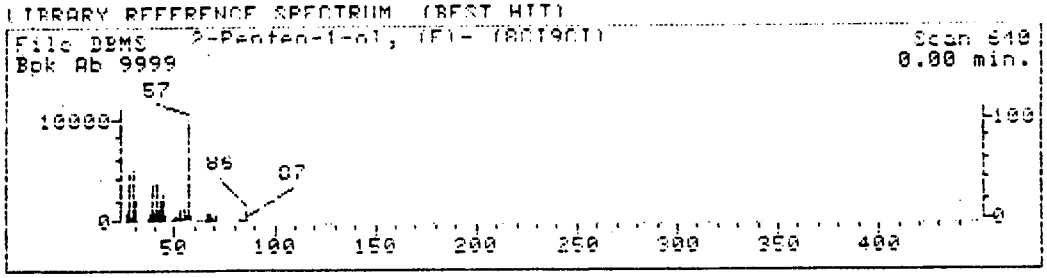
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCES



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >69640::115
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,S,30,2 Hit #11
RT (min): 1.88
Scan: 18
Area: 244828
Semi-quantitative Conc: 32.115 UG/ML

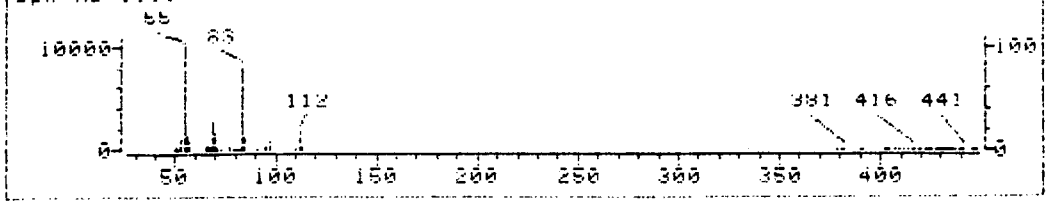
Data File: >69640 Scan Number: 18
Search Speed: 2 Titling option: S Number of ion ranges searched: 84

1. 2-Penten-1-ol, (E)- (8C19C1) 86 C5H10O

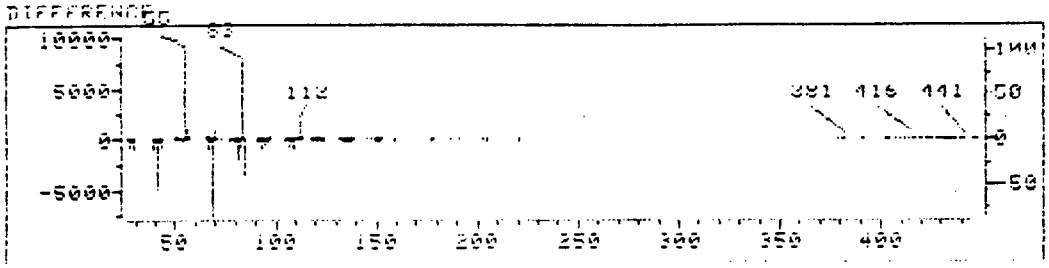
	Prob.	Cas#	K	dK	#Hlg	Tilt
1.	52	1576961	.23	88	3	11

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

File >69640 850622,BNPA,G QC3149C ,QC3149,3,30.2 Scan 46
Bpk Ab 9999 SUB NRM 2.30 min.

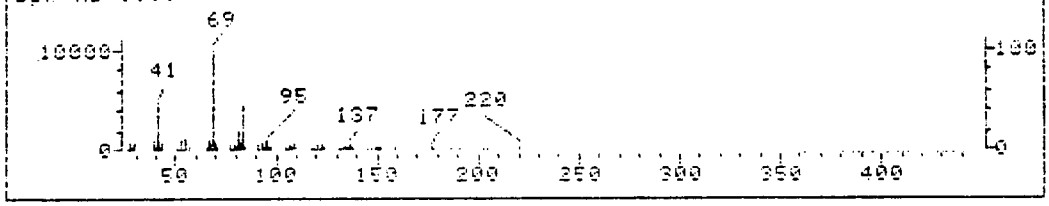


DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

File DBMS 2,6,10-Dodecatrienal, 3,7,11-trimethyl-, (7,E Scan 18240
Bpk Ab 9999 0.00 min.



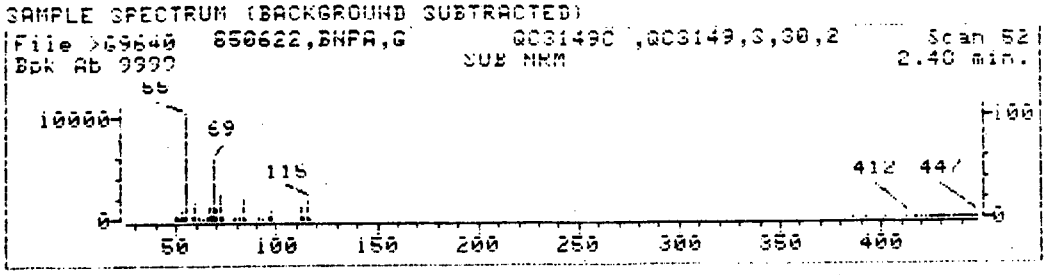
Data File: >69640::113
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,3,30,2 HIT #1
RT (min): 2.28
Scan: 46
Area: 6104112
Semi-quantitative Conc: 2.90 UG/ML

Data File: >69640 Scan Number: 46
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

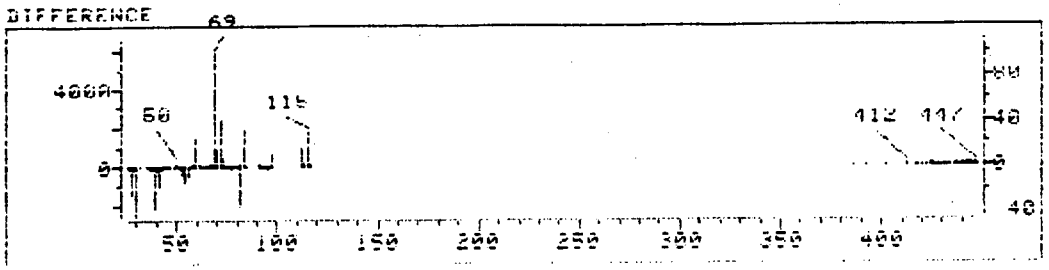
1. 2,6,10-Dodecatrienal, 3,7,11-trimethyl-, (7,E)- (RCI 9001) 220 C15H24O
2. 2,6,10-Dodecatrienal, 3,7,11-trimethyl-, (E,E)- (RCI 9001) 220 C15H24O
3. Cyclopentane, 1-ethyl-2-methyl-, cis- (RCI9001) 112 C8H16

	Prob.%	Cas#	K	RK	#Fig	Tilt
1.	28	4300329	33	26	0	-2
2.	28	5092621	33	28	0	-2
3.	20	930892	28	82	3	0

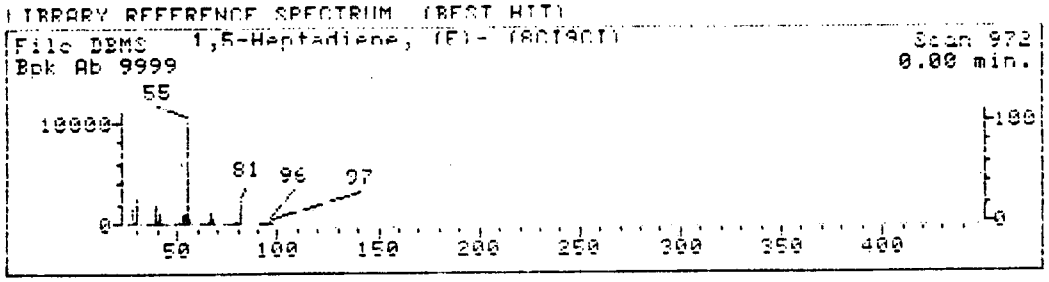
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



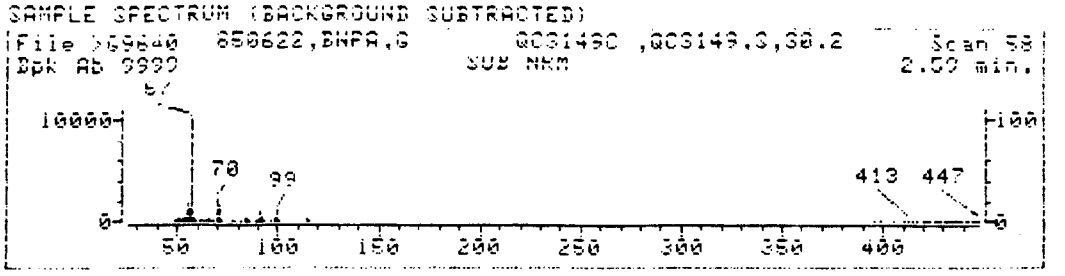
Data File: >G9640::115
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,S,30,2 RII #11
RT (min): 2.48
Scan: 52
Area: 58606
Semi-quantitative Conc: 2.66 UG/ML

Data File: >G9640 Scan Number: 52
Search Speed: 2 Titling option: S Number of ion ranges searched: 80

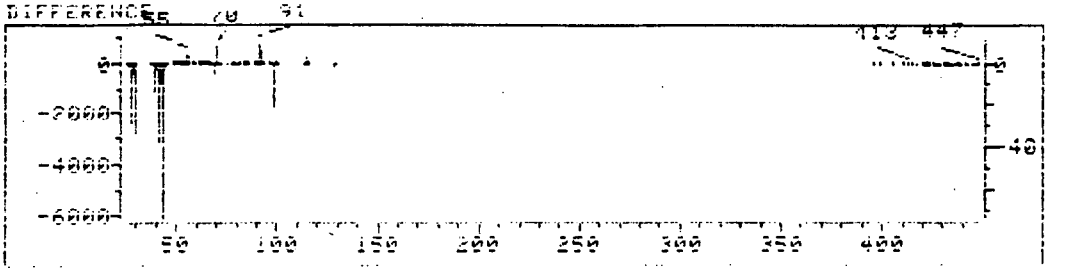
1. 1,5-Heptadiene, (E)- (8C19C1) 96 C7H12
2. 3-Hepten-2-one (8C19C1) 112 C7H12O
3. Cyclohexanecarboxaldehyde (8C19C1) 112 C7H12O

	Prob.	Cas#	K	dK	#Hig	Tilt
1.	31	2736223	34	43	2	0
2.	31	1119444	28	52	2	0
3.	30	2043610	25	80	3	0

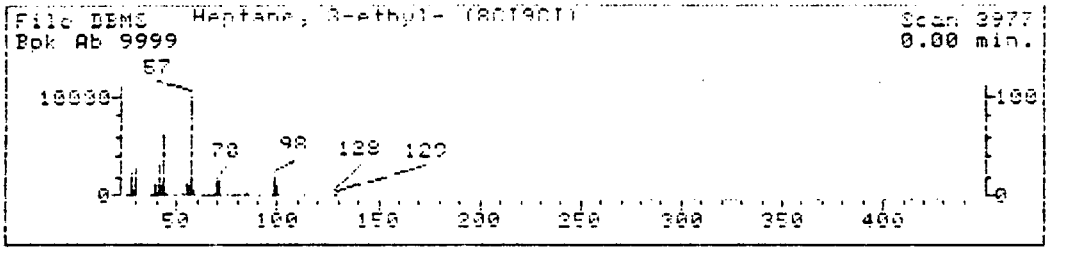
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



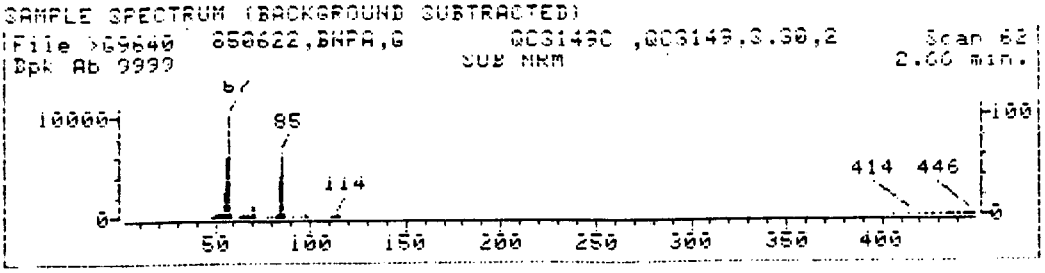
Data File: >69640::113
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,5,50,2 RU #11
RT (min): 2.59
Scan: 58
Area: 198896
Semi-quantitative Conc: 26.01 UG/ML

Data File: >69640 Scan Number: 58
Search Speed: 2 Titling option: S Number of ion ranges searched: 62

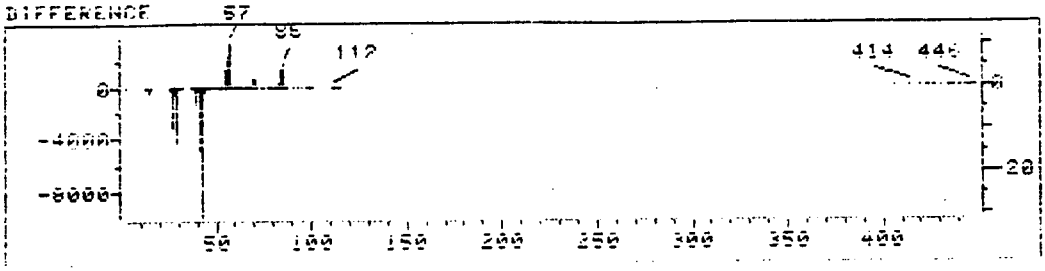
1. Heptane, 3-ethyl- (8C19C1) 128 C9H20
2. Pentane, 2,2,4,3-tetramethyl- (8C19C1) 128 C9H20
3. Heptane, 3,5-dimethyl- (8C19C1) 128 C9H20

	Prob.	Cas#	K	dK	#Hig	Tilt
1.	70	15869804	45	43	2	0
2.	52	2154792	45	44	2	0
3.	52	926829	41	41	2	0

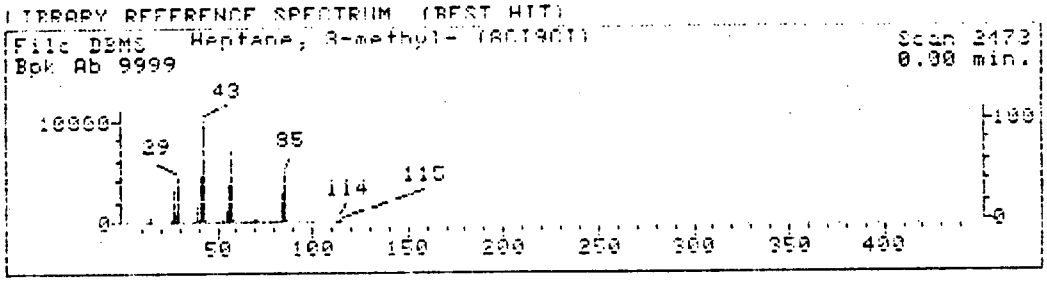
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



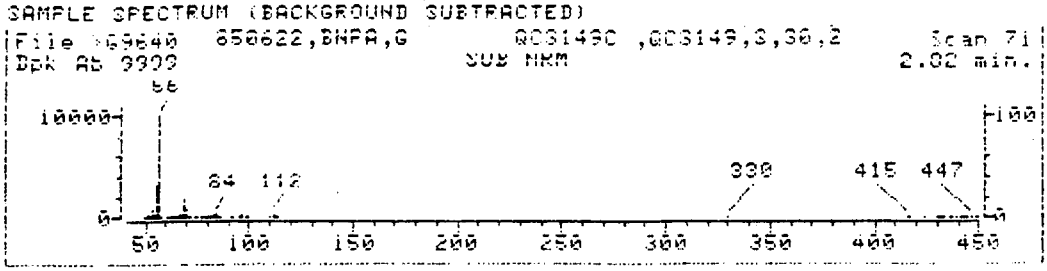
Data File: >G9640::115
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,S,50,2 BII #11
RT (min): 2.66
Scan: 62
Area: 122563
Semi-quantitative Conc: 16.03 UG/ML

Data File: >G9640 Scan Number: 62
Search Speed: 2 Titling option: S Number of ion ranges searched: 58

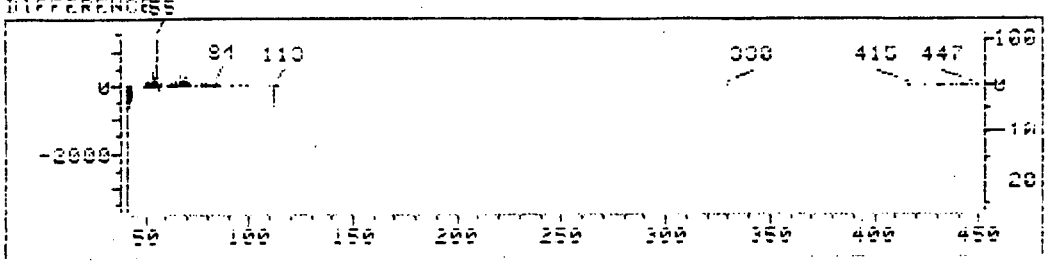
1. Heptane, 3-methyl- (8C19C1) 114 C8H18
2. 4-Pentenal, 2-ethyl- (8C19C1) 112 C7H12O
3. Pentane, 2,2-dimethyl- (8C19C1) 100 C7H16

	Prob.	Cas#	K	AK	#Flg	Tilt
1.	28	589811	40	51	1	0
2.	43	5204808	25	81	2	0
3.	31	590352	28	56	0	0

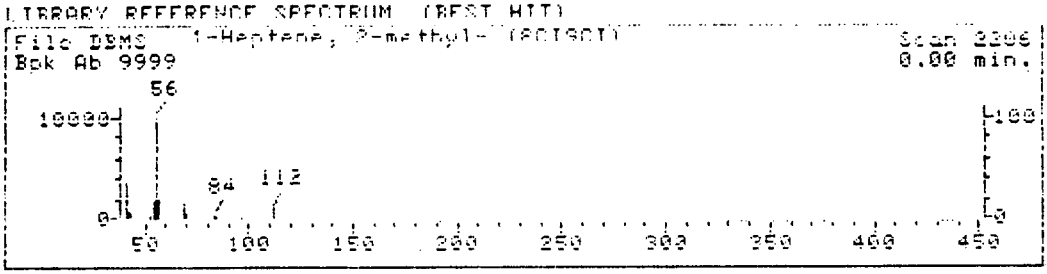
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >69640::115
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,S,30,2 HIT #1
RT (min): 2.82
Scan: 71
Area: 1134152
Semi-quantitative Conc: 148.56 UG/ML

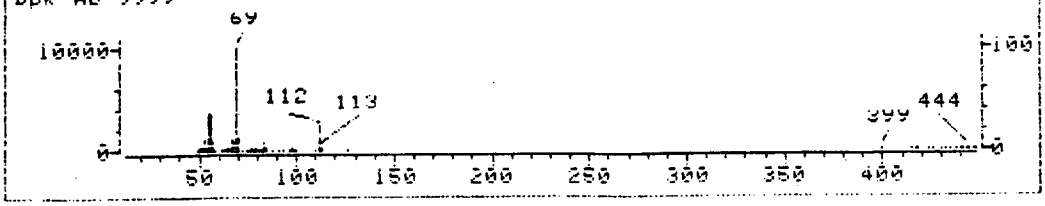
Data File: >69640 Scan Number: 71
Search Speed: 2 Fitting option: S Number of ion ranges searched: 59

1. 1-Heptene, 2-methyl- (8C19C1) 112 C8H16
2. Cyclobutane, ethyl- (8C19C1) 84 C6H12
3. Cyclopropane, (1-methylethyl)- (9C1) 84 C6H12

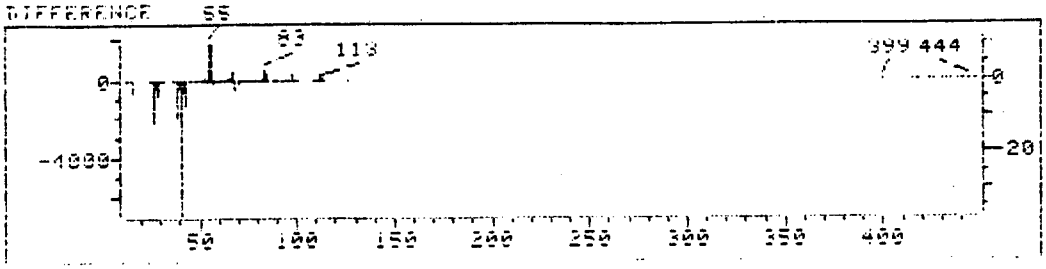
	Prob.	Cas#	K	dK	#Mlg	Tilt
1.	68	15820112	39	31	1	0
2.	52	4806615	22	56	2	0
3.	46	3638355	31	52	0	0

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

File >G9640 850622,BNPA,G QC3149C ,QC3149,S,30.2 Scan 79
Bpk Ab 9999 SUB NKM 2.00 min.

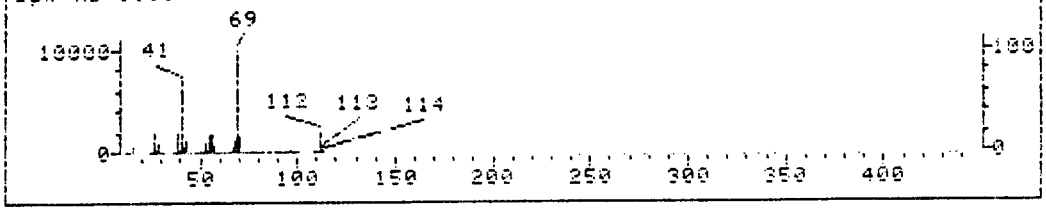


DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

File DBMS 2-Hexene, 2,5-dimethyl- (RC19C1) Scan 2195
Bpk Ab 9999 0.00 min.



Data File: >G9640::115
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,S,30,2 HIT #11
RT (min): 2.98
Scan: 79
Area: 1248921
Semi-quantitative Conc: 163.35 UG/ML

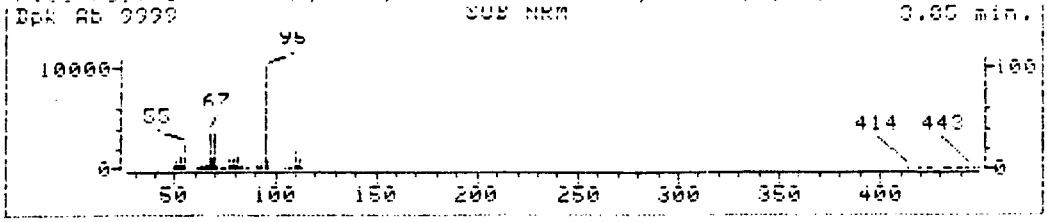
Data File: >G9640 Scan Number: 79
Search Speed: 2 Titling option: S Number of ion ranges searched: 99

1. 2-Hexene, 2,5-dimethyl- (RC19C1) 112 C8H16
2. Cyclohexanone, 3-methyl-, (R)- (RC19C1) 112 C7H12O
3. 3-Hexene, 2,5-dimethyl-, (E)- (RC19C1) 112 C8H16

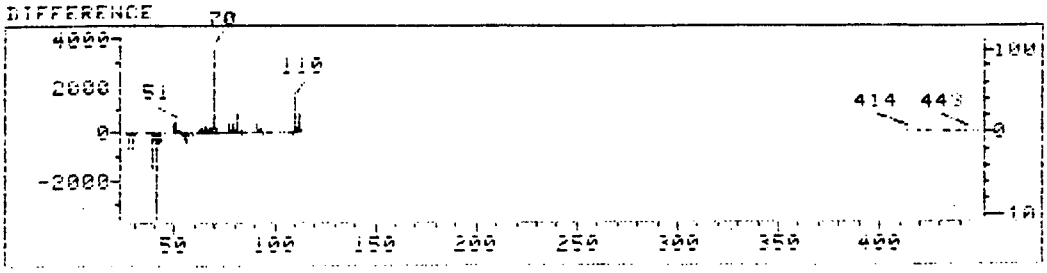
	Prob.	Cas#	K	dK	#Flg	Tilt
1.	62	3404782	49	48	1	0
2.	62	13368655	49	52	2	0
3.	62	692216	51	46	2	0

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

File >69640 650622,BNPA,G QC3149C ,QC3149,3,30,2 Scan 87
Bpk Ab 9999 SUB NRM 3.05 min.

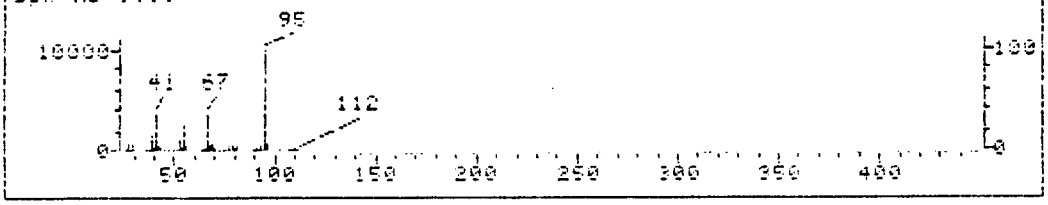


DIFFERENCE



LIBRARY REFERENCE SPECTRUM (HIT # 2)

File DBMS 1,4-Pentadiene, 2,3,4-trimethyl- (9CI) Scan 1965
Bpk Ab 9999 0.00 min.



Data File: >69640::113
Name: 850622,BNPA,G
Misc Data: QC3149C ,QC3149,9,30,2 RU #11
RT (min): 3.05
Scan: 83
Area: 183824
Semi-quantitative Conc: 24.04 UG/ML

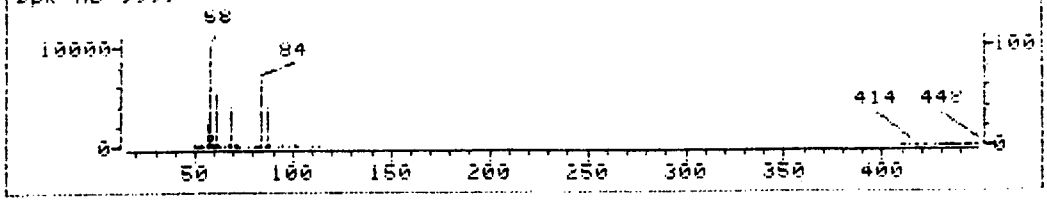
Data File: >69640 Scan Number: 83
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

1. 2-Cyclopentene-1-undecanoic acid, methyl ester (RCI9 266 C12H20O2 (C1)
2. 1,4-Pentadiene, 2,3,4-trimethyl- (9CI) 110 C8H14
3. 1,4-Hexadiene, 2,3-dimethyl- (RCI9CI) 110 C8H14

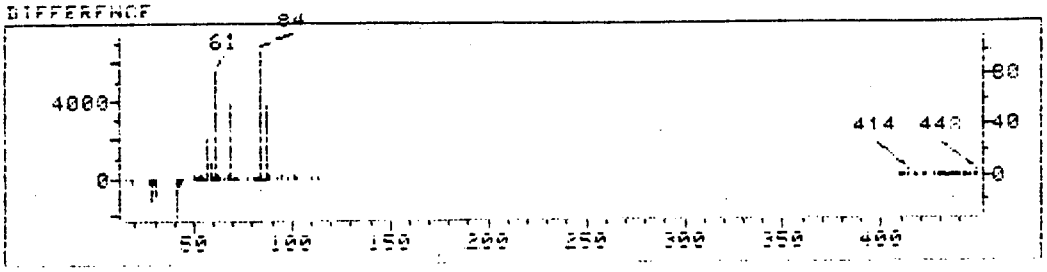
	Prob.	Cas#	K	dK	#Hig	Tilt
1.	83	24828566	36	100	0	-2
2.	59	72011490	59	25	2	1
3.	58	18669528	64	42	1	0

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

File >G9640 850622,BNPA,G QCS149C ,QCS149,S,30,2 Scan 89
Bpk Ab 9999 SUB NRM 3.15 min.

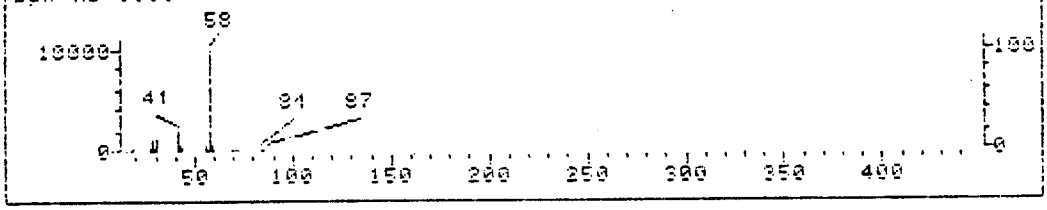


DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

File DBMS 3-Pentanamine (9CI) Scan 691
Bpk Ab 9999 0.00 min.

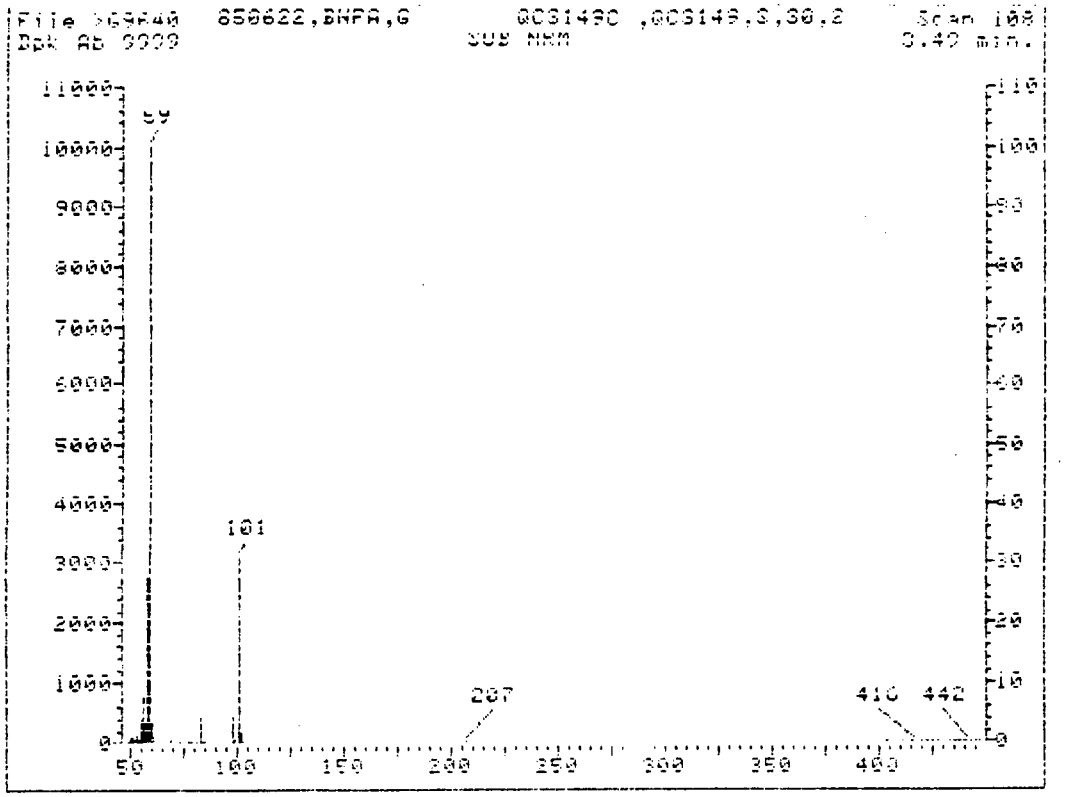


Data File: >G9640::113
Name: 850622,BNPA,G
Misc Data: QCS149C ,QCS149,S,30,2 HIT #11
RT (min): 3.15
Scan: 89
Area: 96117
Semi-quantitative Conc: 12.52 UG/ML

Data File: >G9640 Scan Number: 89
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

1. 3-Pentanamine (9CI) 82 C5H13N
2. Propanal (9CI) 58 C3H6O

	Prob.	Cas#	K	dK	#Fig	Tilt
1.	15	616240	26	52	1	0
2.	15	123386	21	63	2	0

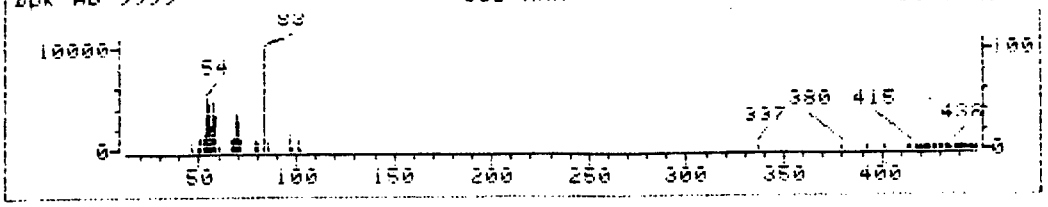


Data File: 369640::115
Name: R5118422,BNPA,G
Misc Data: QC31490 ,QC3149,5,10,2 RI #11
RT (min): 3.49
Scan: 108
Area: 2108905
Semi-quantitative Conc: 225.83 UG/ML

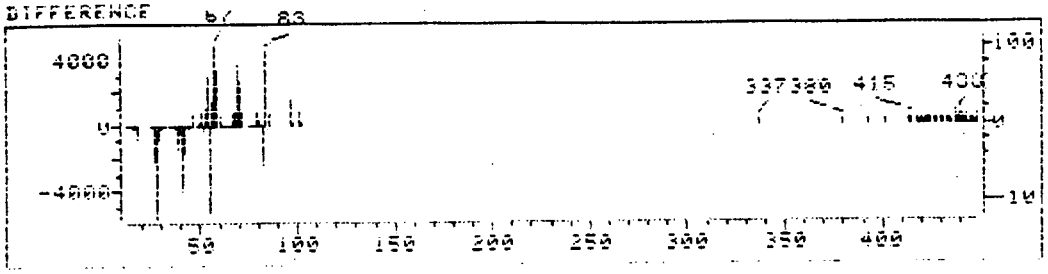
No PBM hits for this scan.

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

File >G9640 850622,BNPA,G 0C31490 ,0C3149,S,30,2 Scan 114
Bpk Ab 9999 SUB NKM 0.00 min.

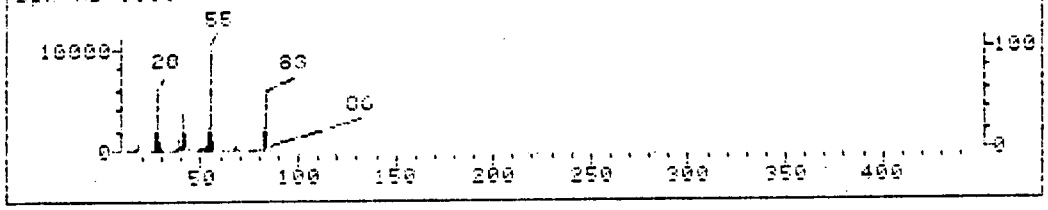


DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

File DBMS Pyridine, 2,3,4,5-tetrahydro- (80C19C1) Scan 459
Bpk Ab 9999 0.00 min.



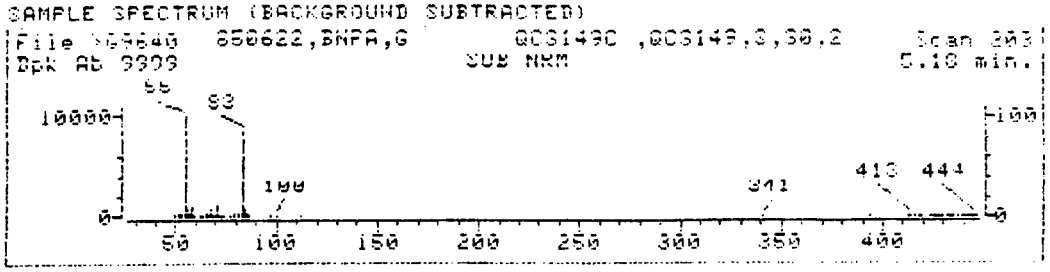
Data File: >G9640 :: 114
Name: 850622,BNPA,G
Misc Data: 0C31490 ,0C3149,S,30,2 RI #11
RI (min): 5.80
Scan: 114
Area: 67600
Semi-quantitative Conc: 8.84 UG/ML

Data File: >G9640 Scan Number: 114
Search Speed: 2 Titling option: S Number of ion ranges searched: 8

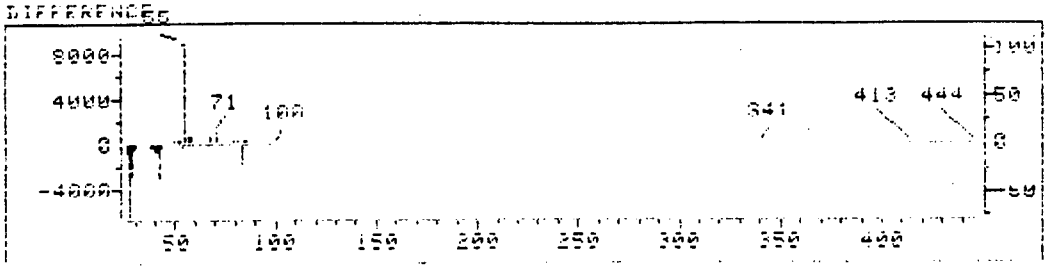
1. Pyridine, 2,3,4,5-tetrahydro- (80C19C1) 83 C5H9N
2. 1H-1,2,4-Triazole, 3-methyl- (9C1) 83 C3H5N3
3. 2-Oxabicyclo[4.1.0]heptane (80C19C1) 98 C6H10O

	Prob.	Cas#	K	dK	#Hig	Tilt
1.	31	5057800	37	56	2	0
2.	28	2120016	21	34	1	0
3.	28	2862004	64	51	2	0

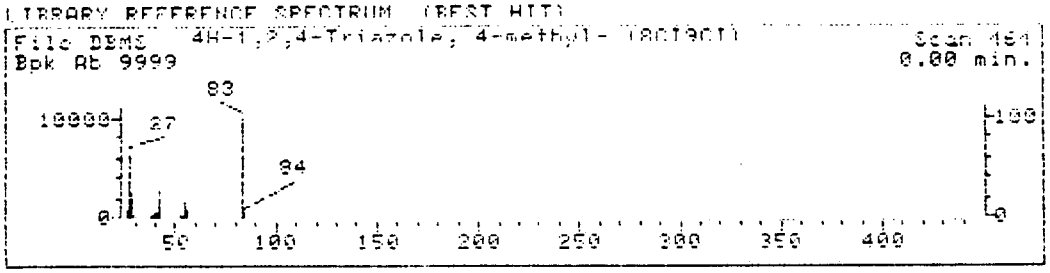
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >69640::113
Name: 850622,BNPA,G
Misc Data: QCS149C ,QCS149,3,30,2 Hit #1
RT (min): 5.18
Scan: 203
Area: 103269
Semi-quantitative Conc: 13.51 UG/ML

Data File: >69640 Scan Number: 203
Search Speed: 2 Libling option: S Number of ion ranges searched: 59

1. 4H-1,2,4-Triazole, 4-methyl- (RC19C1) R3 C3H5N3

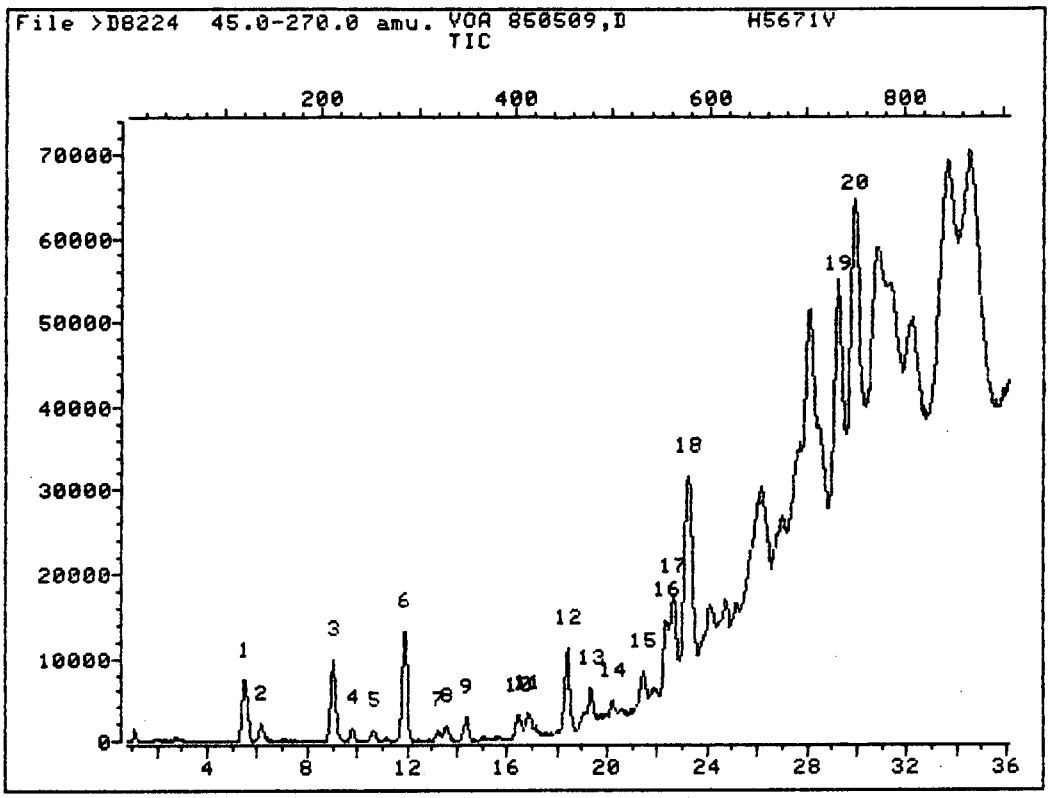
	Prob.	Cas#	K	dK	#Hlg	Tlit
1.	95	105270-08	92	53	1	[illegible]

Appendix C

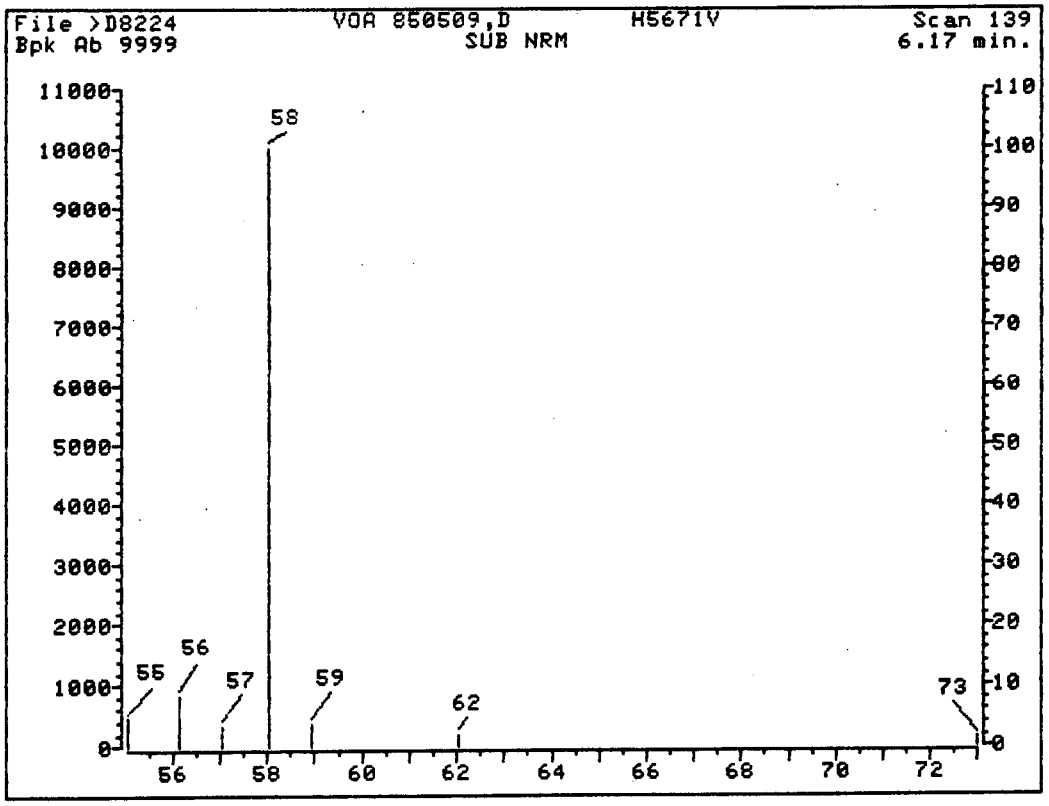
Mass Spectral Data for Tentatively Identified Compounds

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



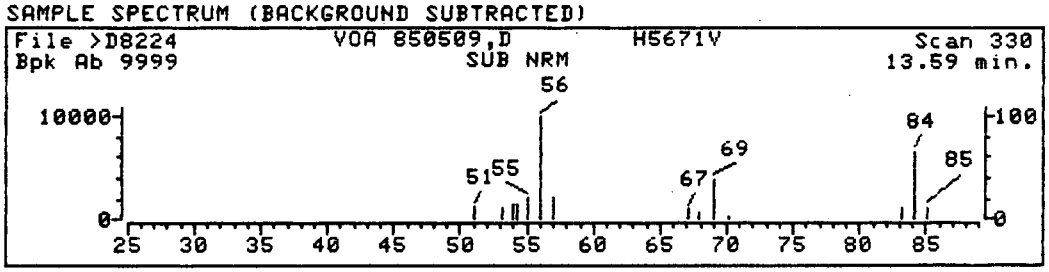
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V



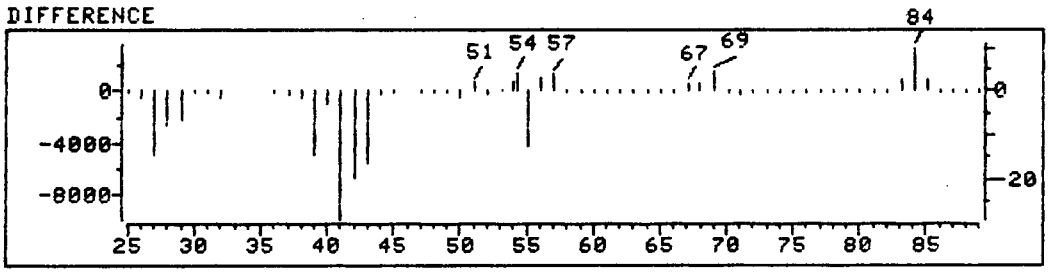
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 6.17
Scan: 139
Area: 32599
Semi-quantitative Conc: 43.80 NG

No PBM hits for this scan.

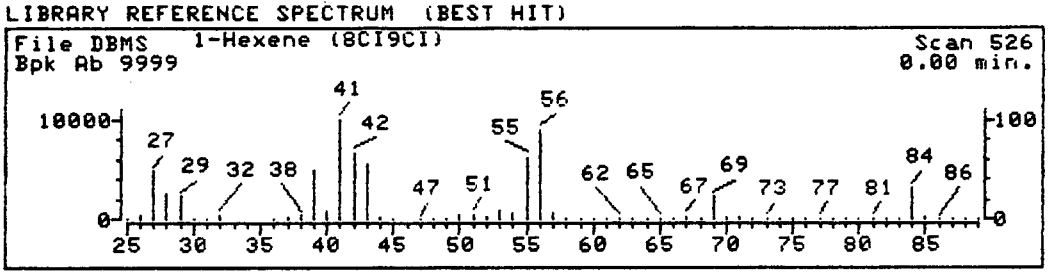
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



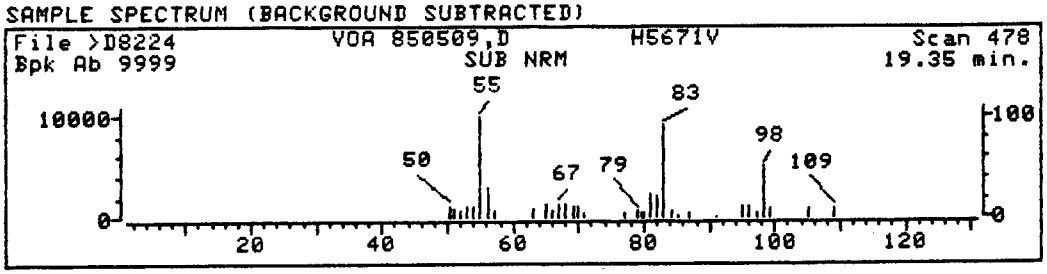
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 13.59
Scan: 330
Area: 25536
Semi-quantitative Conc: 34.31 NG

Data File: >D8224 Scan Number: 330
Search Speed: 2 Titling option: S Number of ion ranges searched: 61

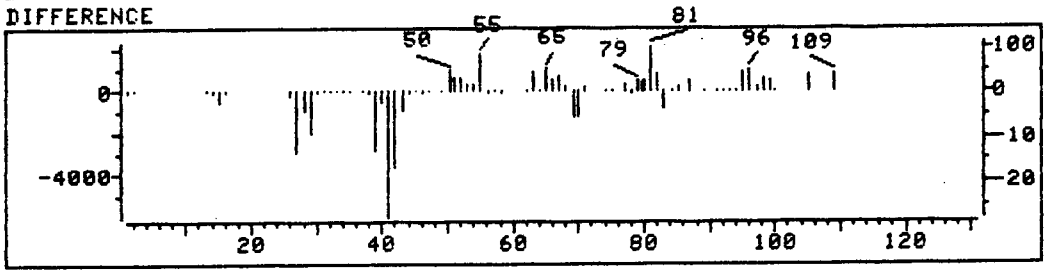
1. 1-Hexene (8CI9CI) 84 C6H12
2. 1-Pentene, 4-methyl- (8CI9CI) 84 C6H12
3. Cyclopropane, 1-ethyl-1-methyl- (9CI) 84 C6H12

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	52	592416	30	70	1	0
2.	42	691372	28	57	0	0
3.	42	53778431	32	64	3	0

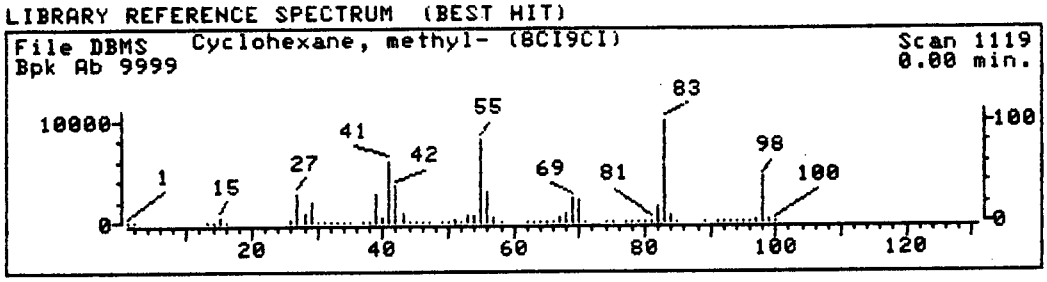
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



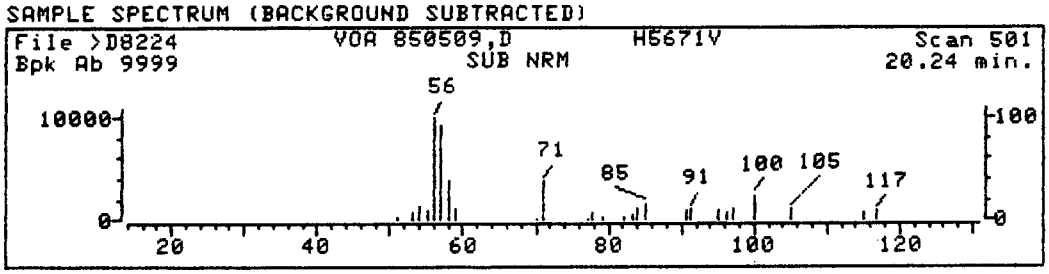
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 19.35
Scan: 478
Area: 44280
Semi-quantitative Conc: 59.49 NG

Data File: >D8224 Scan Number: 478
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

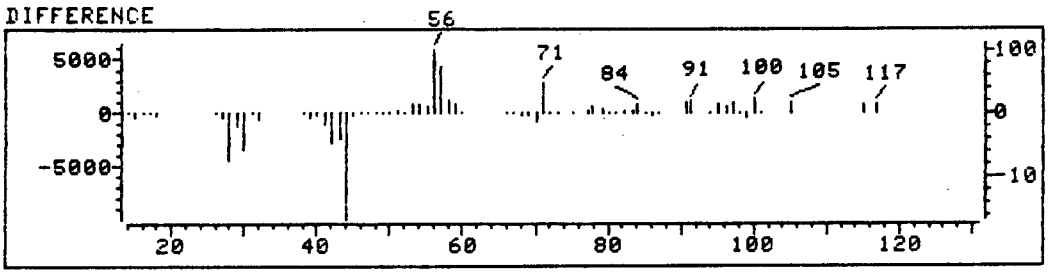
1. Cyclohexane, methyl- (8CI9CI) 98 C7H14
2. 2-Pentene, 3,4-dimethyl-, (E)- (8CI9CI) 98 C7H14
3. 2-Pentene, 3,4-dimethyl-, (Z)- (8CI9CI) 98 C7H14

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	71	108872	56	47	2	0
2.	65	4914925	45	51	0	0
3.	65	4914914	45	53	0	0

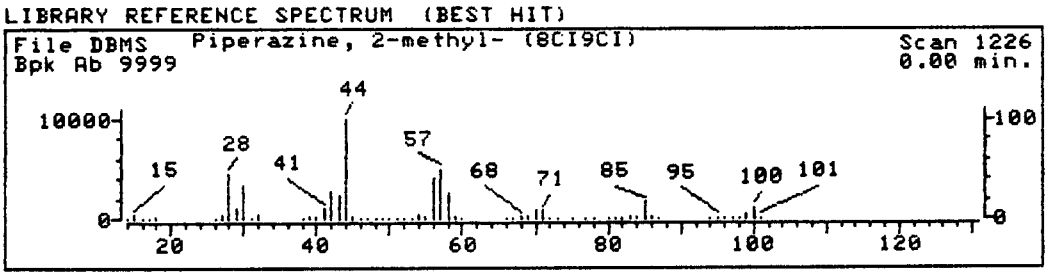
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



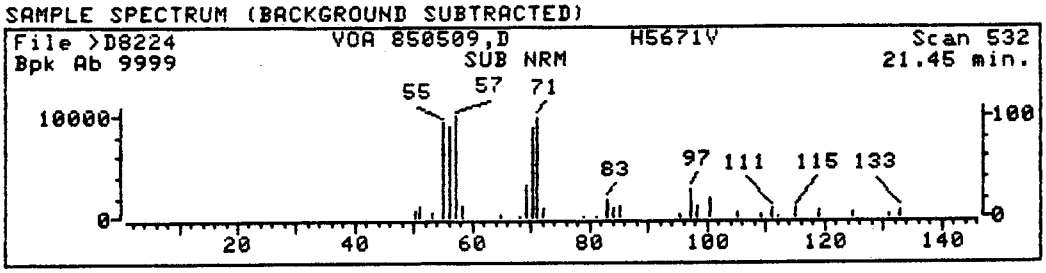
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 20.24
Scan: 501
Area: 24698
Semi-quantitative Conc: 33.18 NG

Data File: >D8224 Scan Number: 501
Search Speed: 2 Titling option: S Number of ion ranges searched: 62

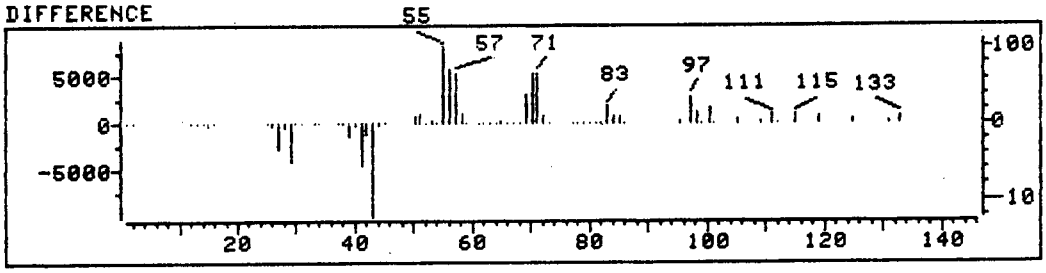
1.	Piperazine, 2-methyl- (8CI9CI)	100	C5H12N2
2.	Pentane, 2,3-dimethyl- (8CI9CI)	100	C7H16
3.	Ethanamine, N-methylene- (9CI)	57	C3H7N

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	42	109079	26	75	3	0
2.	37	565593	27	68	2	0
3.	28	43729971	21	54	1	0

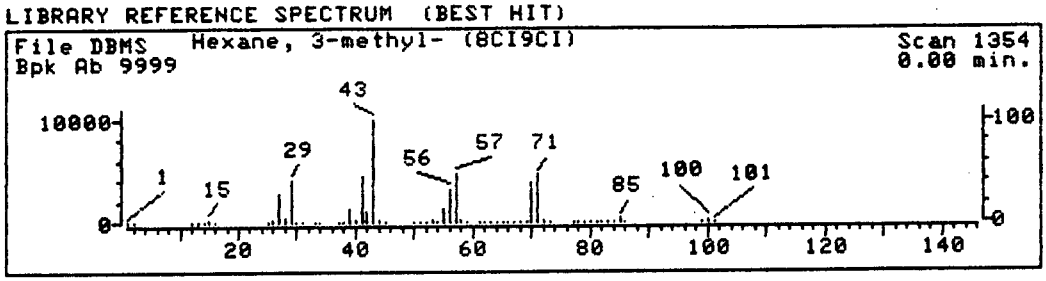
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



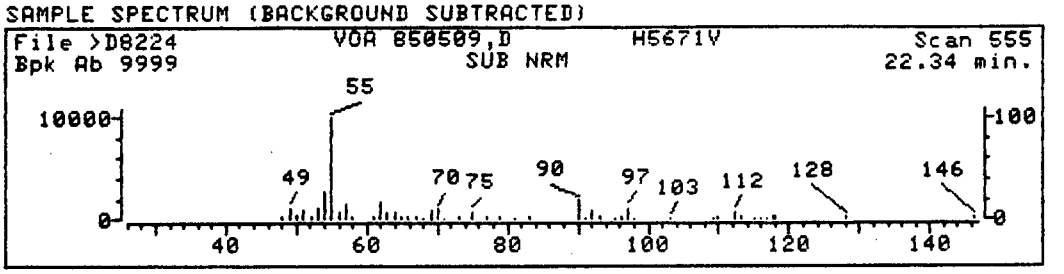
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 21.45
Scan: 532
Area: 58141
Semi-quantitative Conc: 78.11 NG

Data File: >D8224 Scan Number: 532
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

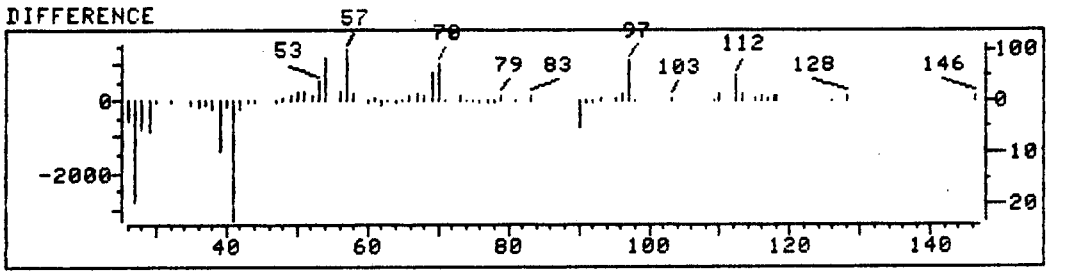
1.	Hexane, 3-methyl- (8CI9CI)	100 C7H16
2.	Heptane (8CI9CI)	100 C7H16
3.	Heptane, 4-methyl- (8CI9CI)	114 C8H18

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	64	589344	40	53	0	0
2.	25	142825	21	76	0	0
3.	20	589537	35	52	1	0

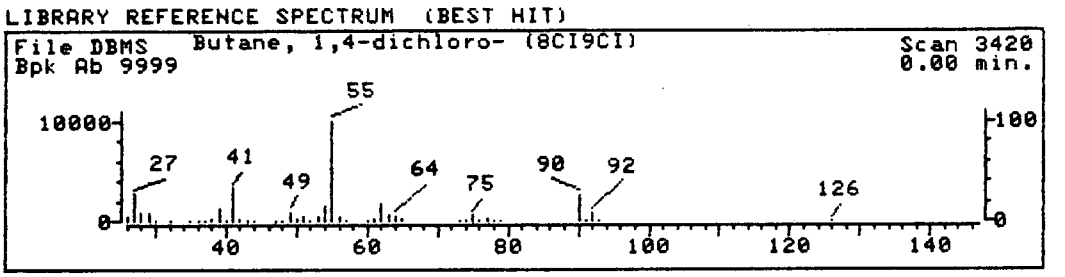
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



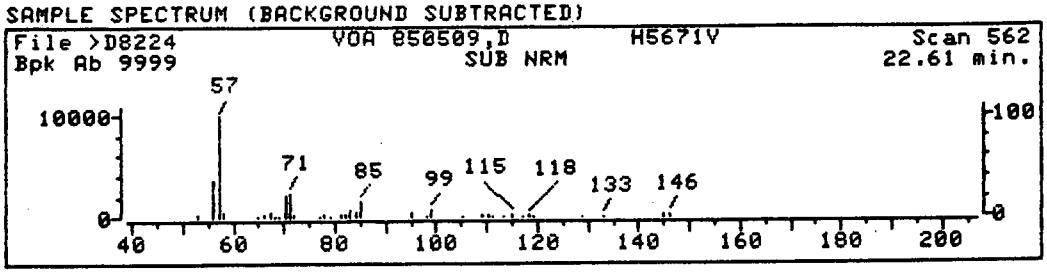
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 22.34
Scan: 555
Area: 135179
Semi-quantitative Conc: 181.62 NG

Data File: >D8224 Scan Number: 555
Search Speed: 2 Titling option: S Number of ion ranges searched: 58

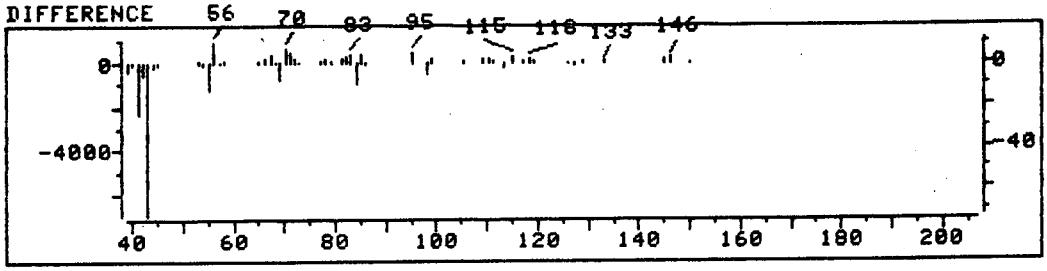
1.	Butane, 1,4-dichloro- (8CI9CI)	126	C4H8Cl2
2.	1,5-Heptadiene, (Z)- (8CI9CI)	96	C7H12
3.	1-Butene, 3-chloro- (8CI9CI)	90	C4H7Cl

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	59	110565	59	38	0	0
2.	29	7736347	34	45	2	0
3.	28	563520	29	62	2	0

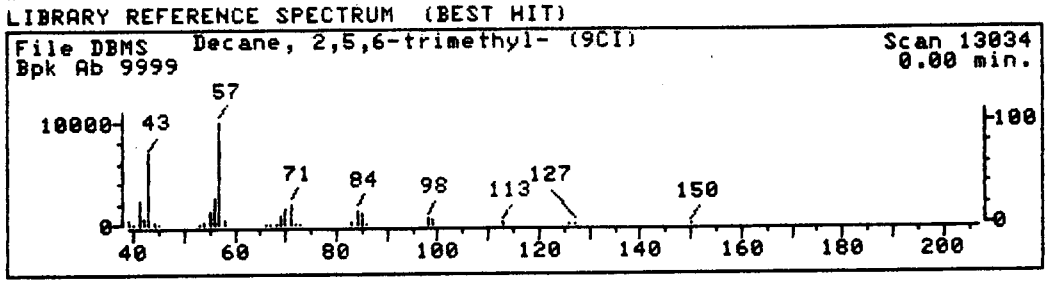
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



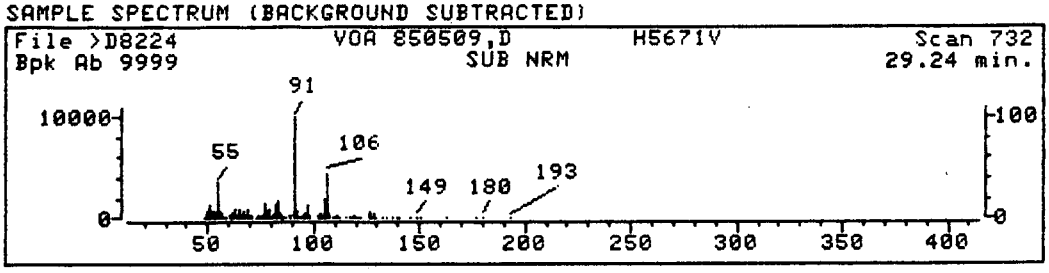
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 22.61
Scan: 562
Area: 156656
Semi-quantitative Conc: 210.47 NG

Data File: >D8224 Scan Number: 562
Search Speed: 2 Titling option: S Number of ion ranges searched: 73

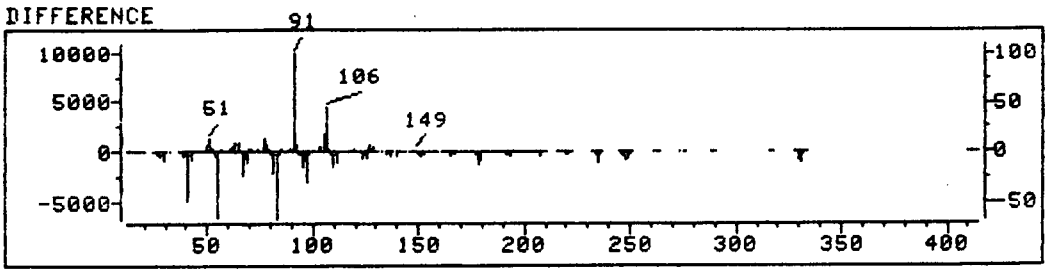
1. Decane, 2,5,6-trimethyl- (9CI) 184 C13H28
2. Methanamine, N-pentylidene- (9CI) 99 C6H13N
3. Pentane, 2,3,3-trimethyl- (8CI9CI) 114 C8H18

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	78	62108230	52	49	2	0
2.	37	10599754	26	49	2	0
3.	20	560214	34	54	1	0

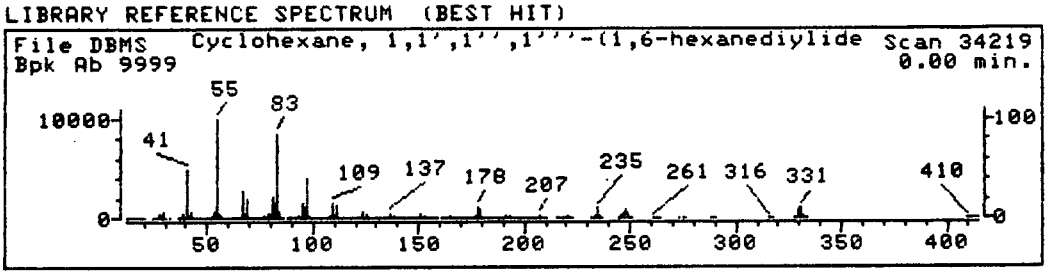
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



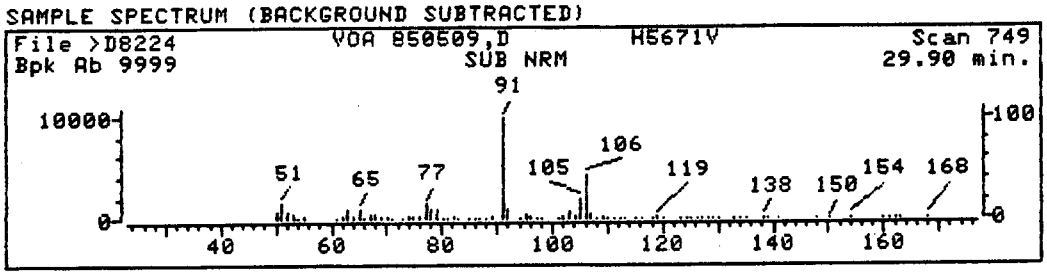
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 29.24
Scan: 732
Area: 415368
Semi-quantitative Conc: 558.05 NG

Data File: >D8224 Scan Number: 732
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

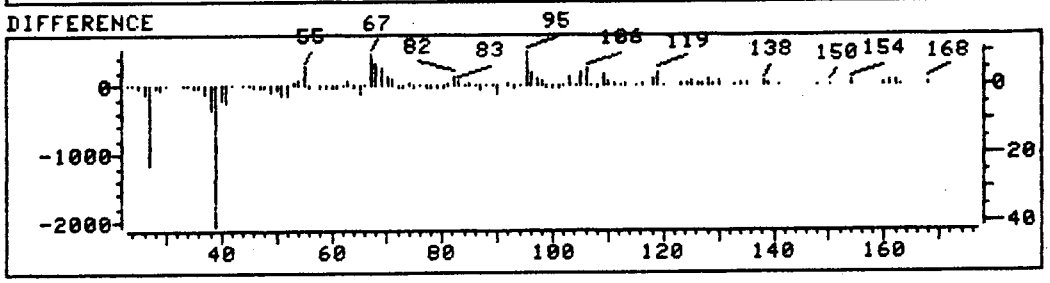
1. Cyclohexane, 1,1',1'',1'''-(1,6-hexanediylidene)tetr 414 C30H54
   akis- (9CI)
2. Cyclohexane, [6-cyclopentyl-3-(3-cyclopentylpropyl)h 346 C25H46
   exyl]- (9CI)
3. 14-Pentadecenoic acid (8CI9CI) 240 C15H28O2

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	55281919	41	102	0	-2
2.	83	55401724	38	99	0	-2
3.	78	17351347	35	104	0	-2

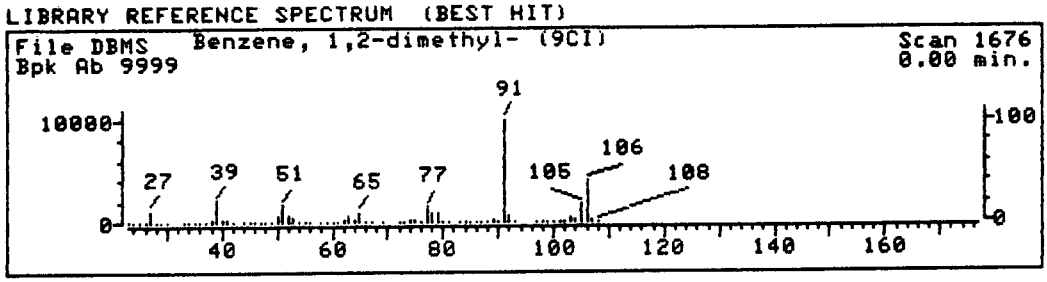
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



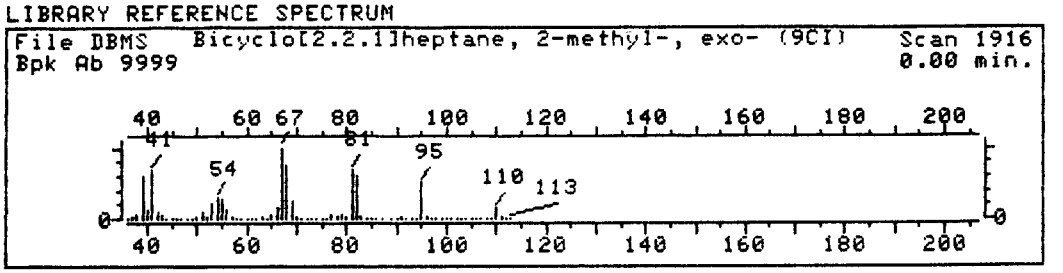
Data File: >D8224::U4
Name: VOA 850509,D
Misc Data: H5671V
RT (min): 29.90
Scan: 749
Area: 538656
Semi-quantitative Conc: 723.69 NG

Data File: >D8224 Scan Number: 749
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

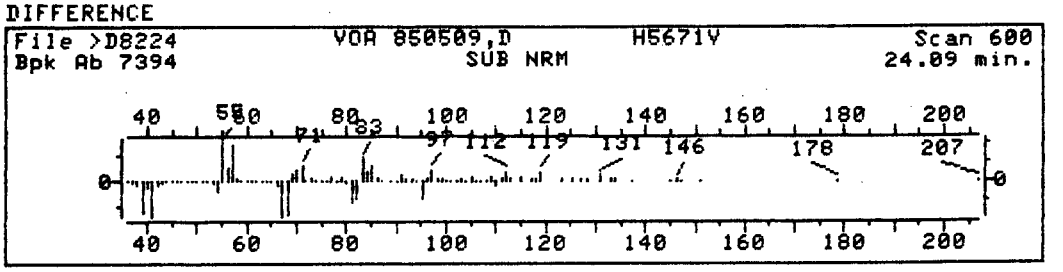
1. Benzene, 1,2-dimethyl- (9CI) 106 C8H10
2. Benzene, 1,3-dimethyl- (9CI) 106 C8H10
3. Benzene, 1,4-dimethyl- (9CI) 106 C8H10

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	95	95476	79	13	1	0
2.	88	108383	70	22	0	0
3.	87	106423	65	28	2	2

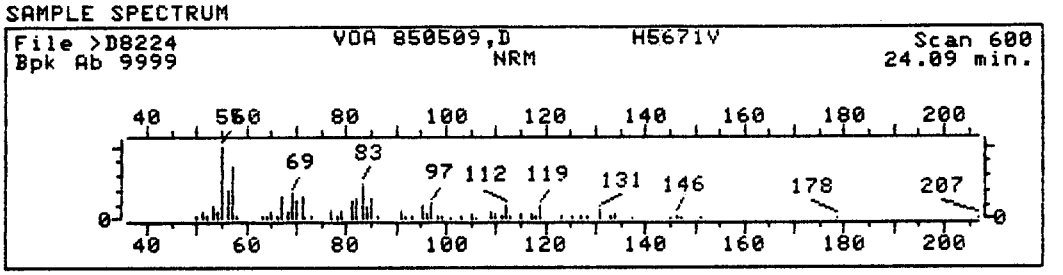
LIBRARY REFERENCE SPECTRUM



DIFFERENCE



SAMPLE SPECTRUM



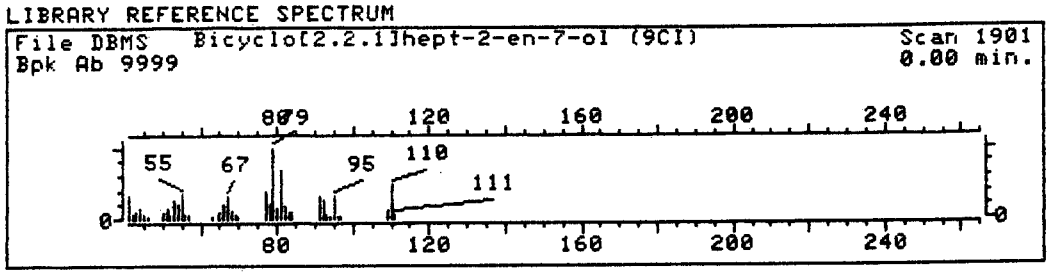
Data File: >D8224
Scan Number: 600
Hit number : 1 of 1

Rec.#: 1916 Reg.#: 872786 Xref.#: 20120 Base : DBMS:D
Name: Bicyclo[2.2.1]heptane, 2-methyl-, exo- (9CI)
MW : 110.109 QI: 656 MF: C8H14

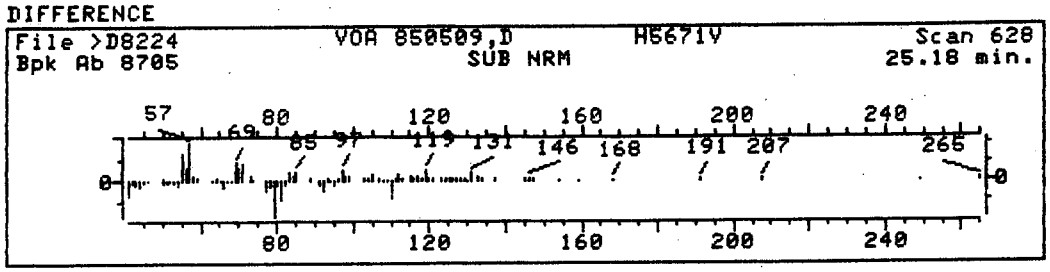
PBM Values:

Class IV Reliability value: 78
K-value: 57
dK-value: 56
Flagged Ions: 2
Tilt factor: *

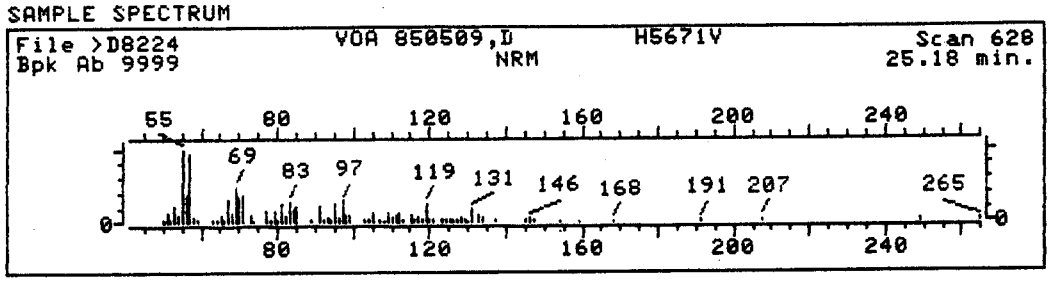
LIBRARY REFERENCE SPECTRUM



DIFFERENCE



SAMPLE SPECTRUM



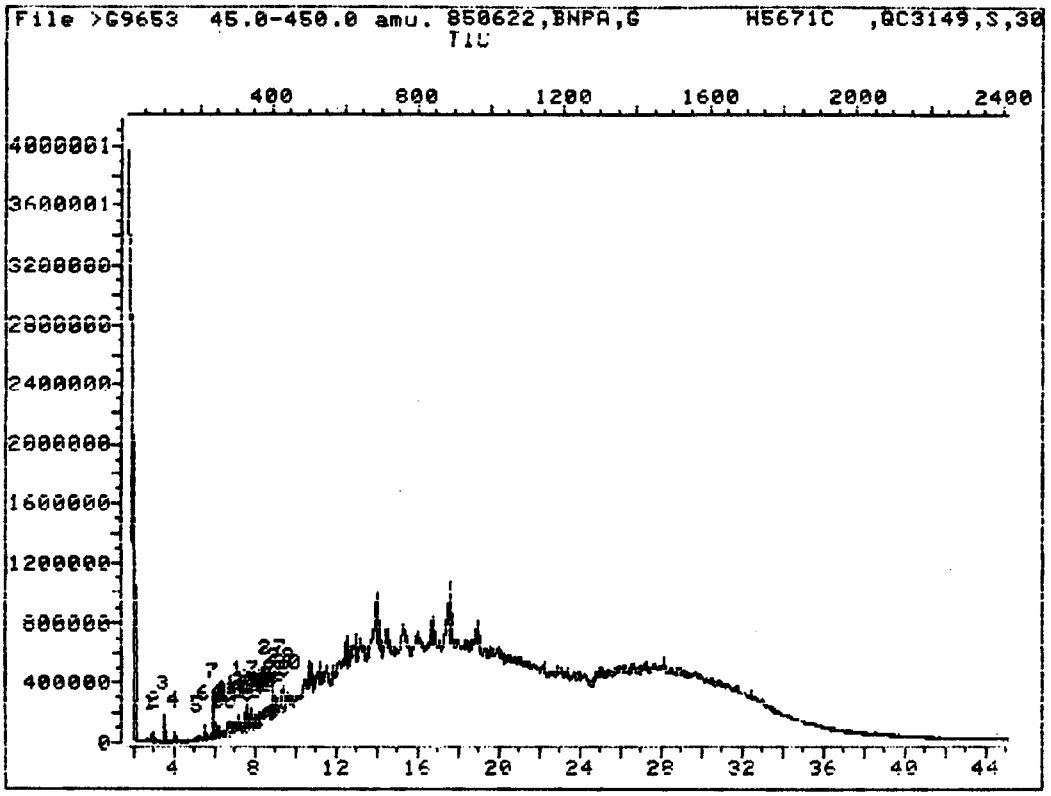
Data File: >D8224
Scan Number: 628
Hit number : 1 of 1

Rec.#: 1901 Reg.#: 53783872 Xref.#: 20149 Base : DBMS:D
Name: Bicyclo[2.2.1]hept-2-en-7-ol (9CI)
MW : 110.073 QI: 598 MF: C7H10O

PBM Values:

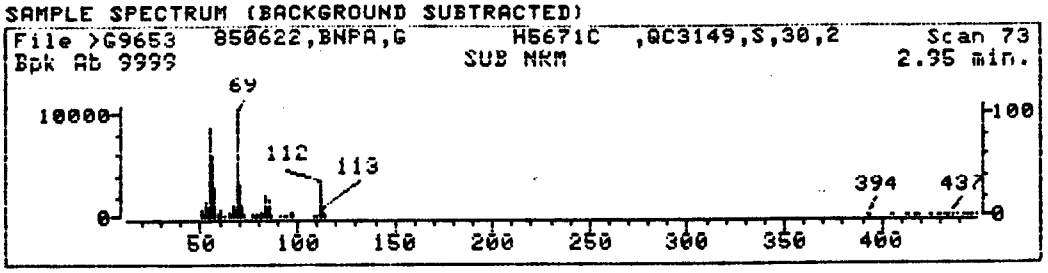
Class IV Reliability value: 83
K-value: 37
dK-value: 86
Flagged Ions: 0
Tilt factor: *

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS

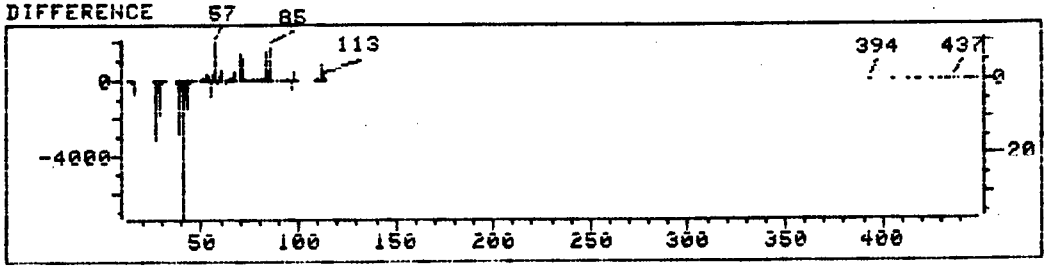


Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24

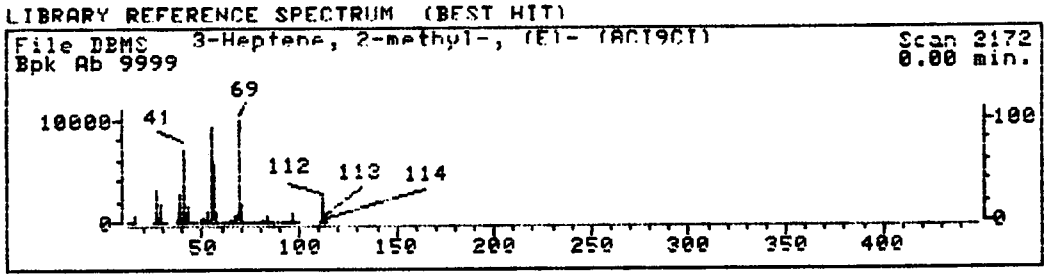
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

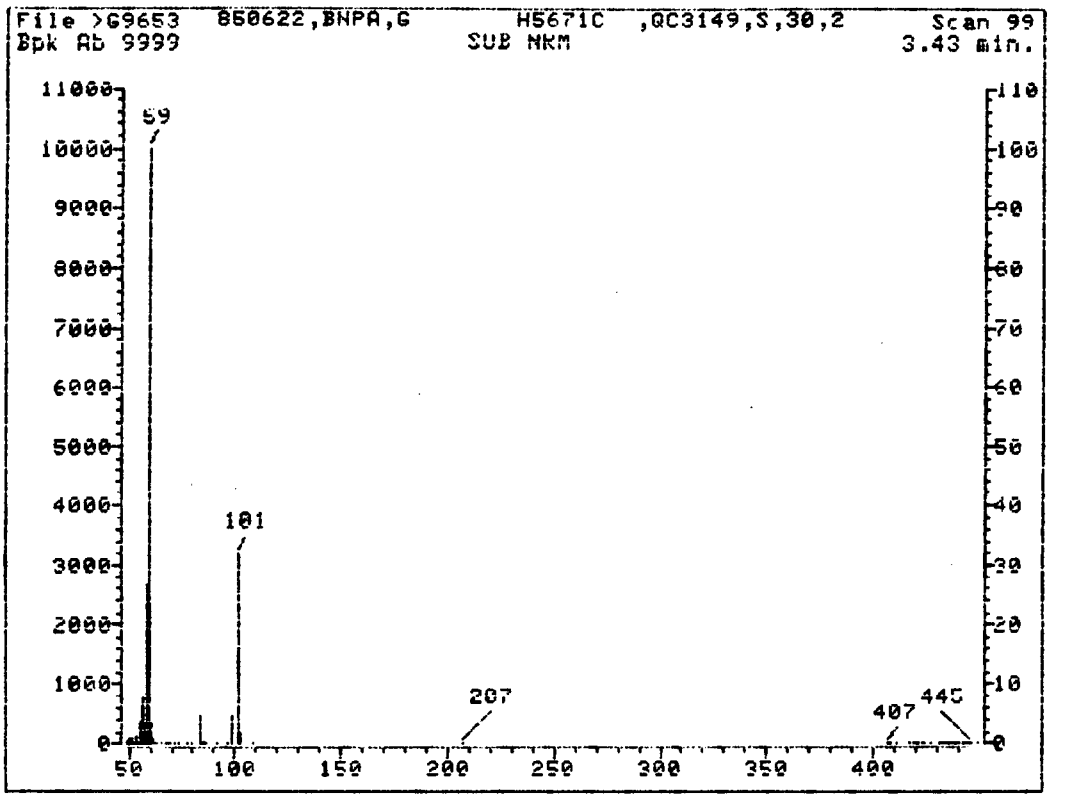


Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL.#24
RT (min): 2.95
Scan: 73
Area: 282077
Semi-quantitative Conc: 36.63 UG/ML

Data File: >G9653 Scan Number: 73
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

1. 3-Heptene, 2-methyl-, (E)- (8CI9CI) 112 C8H16
2. Cyclopentanone, 2,5-dimethyl- (8CI9CI) 112 C7H12O
3. 4-Nonene, 5-methyl- (8CI) 140 C10H20

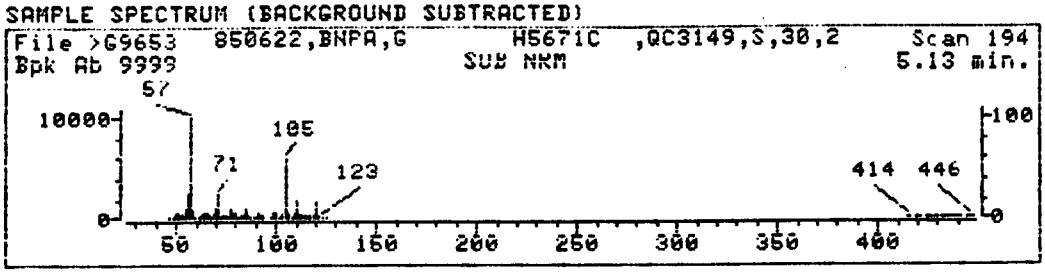
	Prob.	Cas#	K	dK	#Flg	Tilt
1.	74	692966	55	43	1	0
2.	60	4041092	31	65	2	0
3.	60	15918077	46	37	2	0



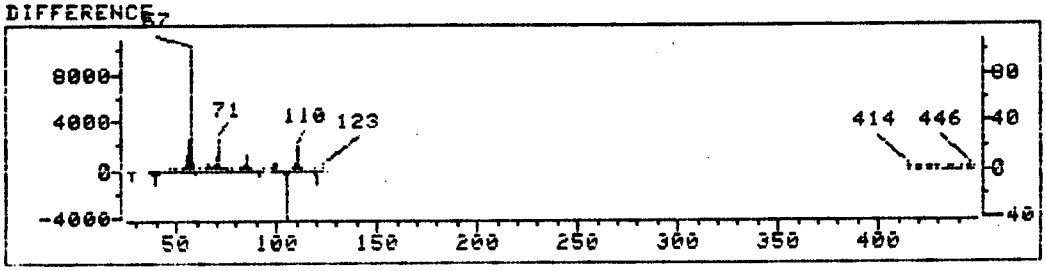
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 3.43
Scan: 99
Area: 486176
Semi-quantitative Conc: 63.14 UG/ML

No PBM hits for this scan.

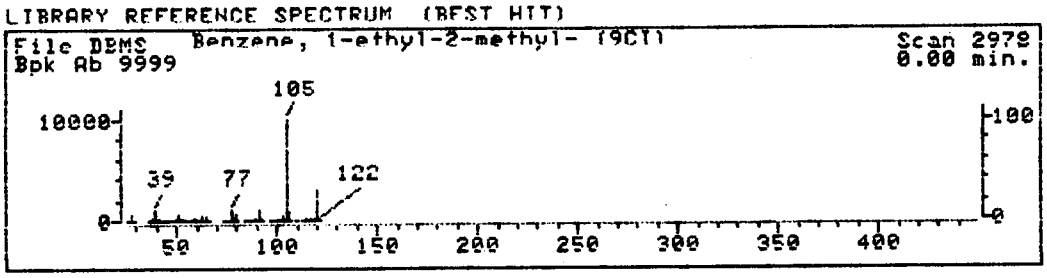
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



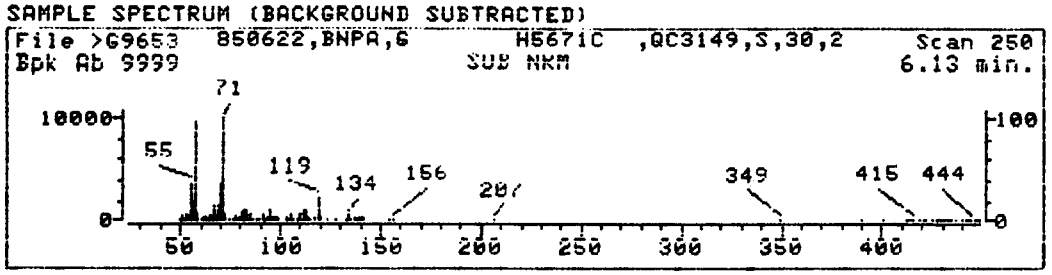
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 5.13
Scan: 194
Area: 113169
Semi-quantitative Conc: 14.70 UG/ML

Data File: >G9653 Scan Number: 194
Search Speed: 2 Titling option: S Number of ion ranges searched: 106

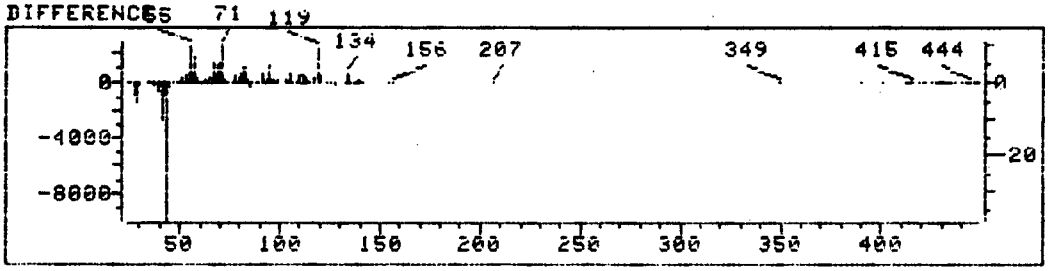
1. Benzene, 1-ethyl-2-methyl- (9CI) 120 C9H12
2. Decane, 2,6,6-trimethyl- (9CI) 184 C13H28
3. Benzene, 1-ethyl-4-methyl- (9CI) 120 C9H12

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	53	611143	78	7	1	2
2.	52	62108241	50	49	2	0
3.	48	622968	72	13	1	3

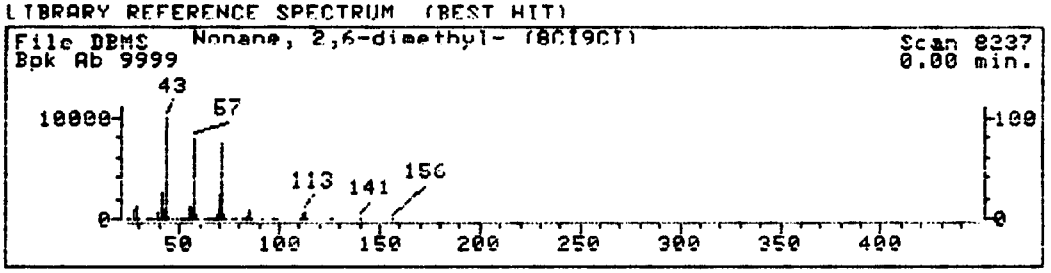
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



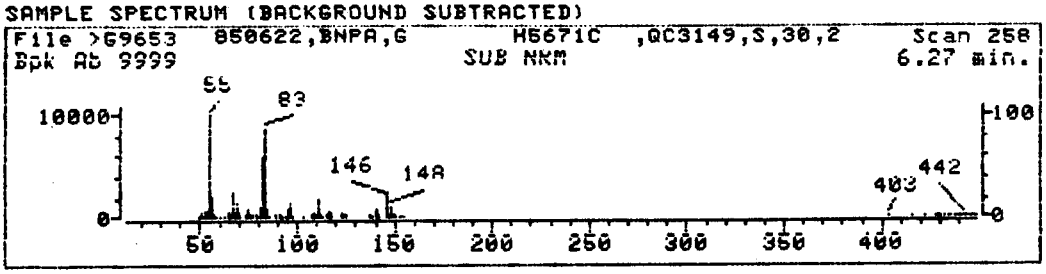
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 6.13
Scan: 250
Area: 361177
Semi-quantitative Conc: 46.91 UG/ML

Data File: >G9653 Scan Number: 250
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

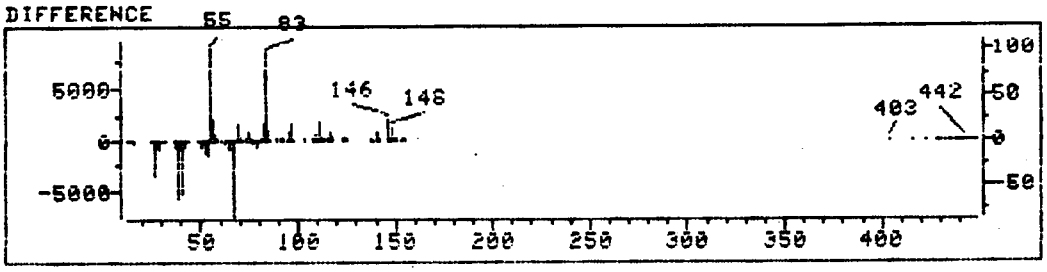
1. Nonane, 2,6-dimethyl- (8CI9CI) 156 C11H24
2. Octane, 2,3,6-trimethyl- (9CI) 156 C11H24
3. Octane, 2,3,7-trimethyl- (9CI) 156 C11H24

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	74	17302282	58	33	1	0
2.	71	62016335	55	37	0	0
3.	66	62016346	67	26	0	0

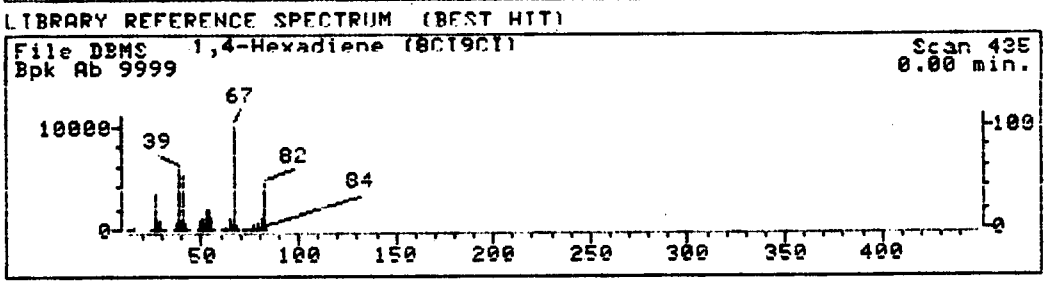
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



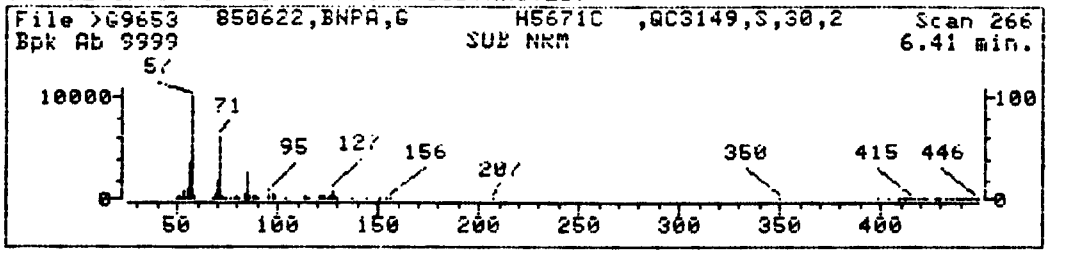
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL #24
RT (min): 6.27
Scan: 258
Area: 124139
Semi-quantitative Conc: 16.12 UG/ML

Data File: >G9653 Scan Number: 258
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

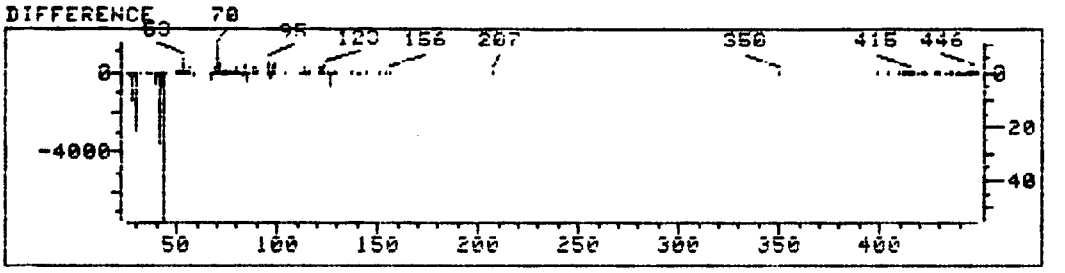
1. 1,4-Hexadiene (8CI9CI) 82 C6H10
2. Cyclohexane, (1-methylpropyl)- (9CI) 140 C10H20
3. Cyclohexane, (4-methylpentyl)- (9CI) 168 C12H24

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	70	592450	50	52	2	-2
2.	59	7058017	56	45	2	0
3.	52	61142209	62	35	2	1

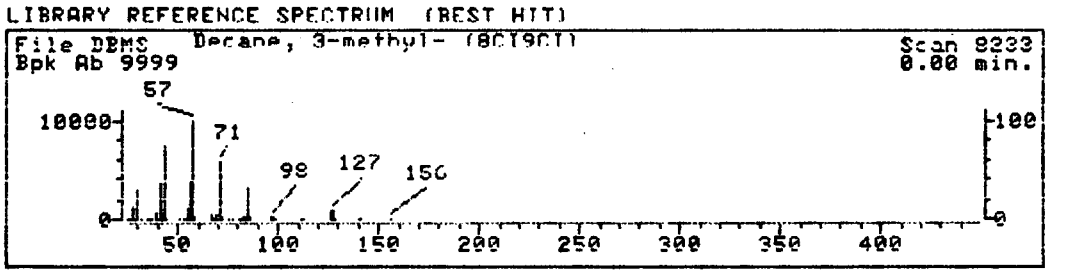
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



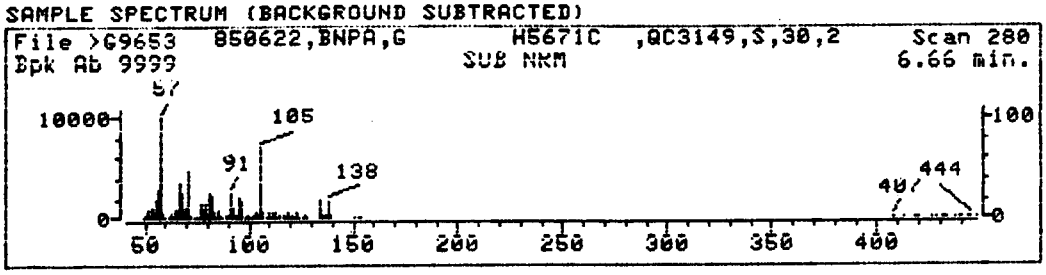
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 6.41
Scan: 266
Area: 104907
Semi-quantitative Conc: 13.62 UG/ML

Data File: >G9653 Scan Number: 266
Search Speed: 2 Titling option: S Number of ion ranges searched: 88

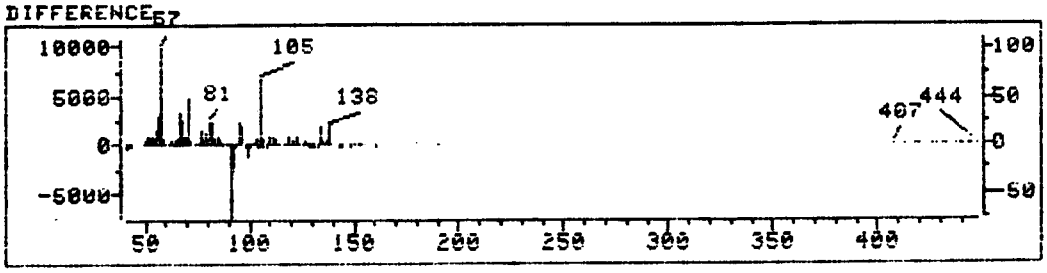
1. Decane, 3-methyl- (8CI9CI) 156 C11H24
2. Nonane, 3,7-dimethyl- (8CI9CI) 156 C11H24
3. Hydroxylamine, O-(2-methylpropyl)- (9CI) 89 C4H11NO

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	71	13151343	53	41	2	0
2.	67	17302328	47	39	2	2
3.	52	5618622	30	61	2	0

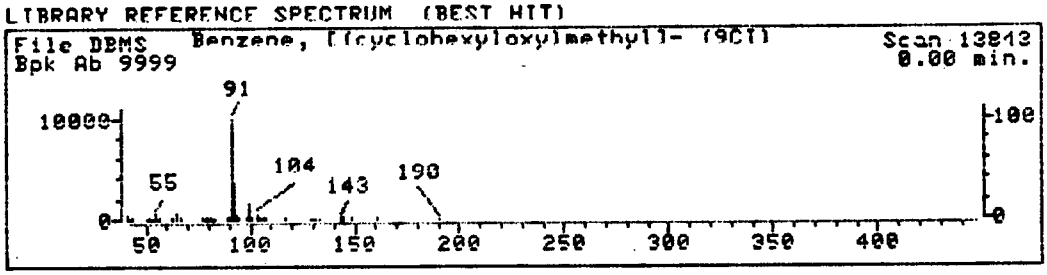
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



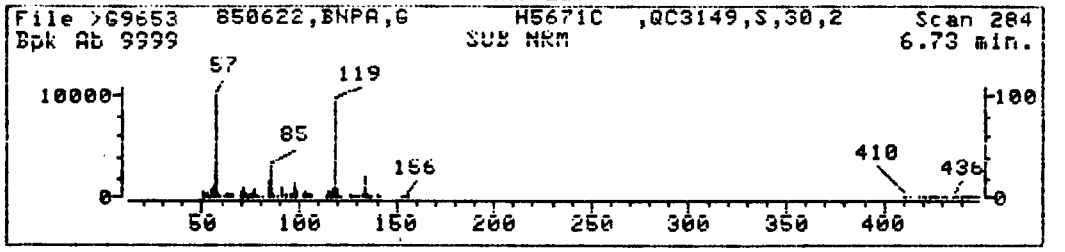
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 6.66
Scan: 280
Area: 474309
Semi-quantitative Conc: 61.60 UG/ML

Data File: >G9653 Scan Number: 280
Search Speed: 2 Titling option: S Number of ion ranges searched: 88

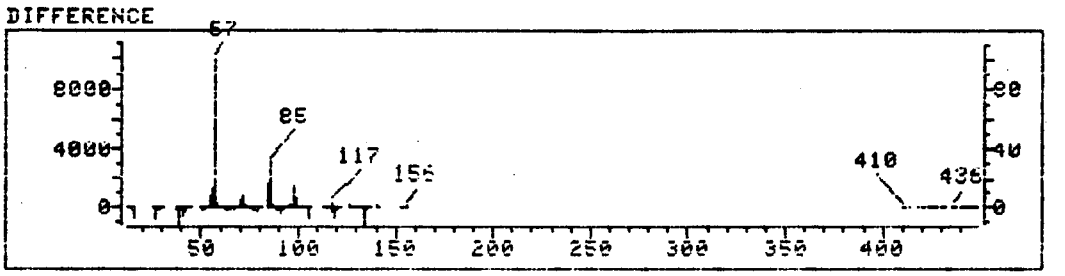
1. Benzene, [(cyclohexyloxy)methyl]- (9CI) 190 C13H18O
2. Benzo[b]cyclobuta[d]thiophene-1,2-dicarboxylic acid, 1,2,2a,7b-tetrahydro-1-methyl- (8CI) 264 C13H12O4S
3. Bicyclo[4.1.0]heptane, 3,7,7-trimethyl-, [1S-(1.alpha.,3.beta.,6.alpha.)]- (9CI) 138 C10H18

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	16224092	37	55	0	-2
2.	83	34244752	41	76	0	-2
3.	81	2778689	53	57	0	-2

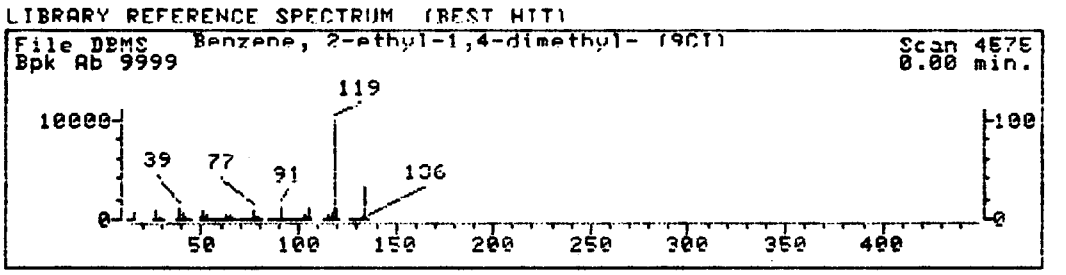
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



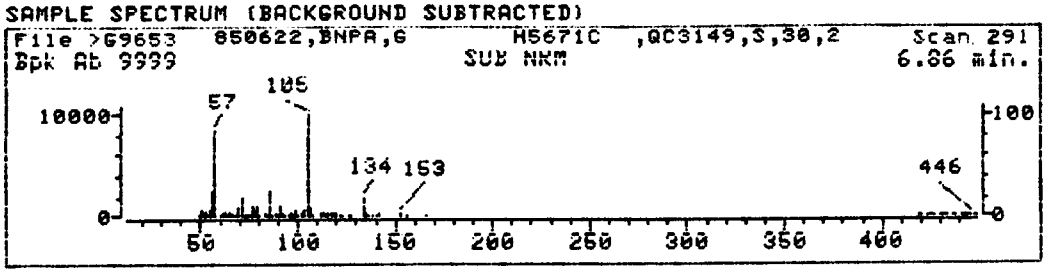
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 RTL#24
RT (min): 6.73
Scan: 284
Area: 156276
Semi-quantitative Conc: 20.30 UG/ML

Data File: >G9653 Scan Number: 284
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

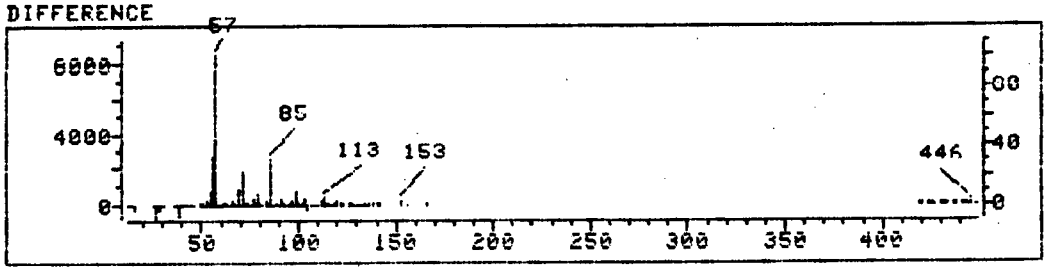
1. Benzene, 2-ethyl-1,4-dimethyl- (9CI) 134 C10H14
2. Benzene, 1-ethyl-2,3-dimethyl- (9CI) 134 C10H14
3. Benzene, 4-ethyl-1,2-dimethyl- (9CI) 134 C10H14

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	40	1758889	74	20	2	1
2.	32	933982	67	24	2	1
3.	32	934805	67	26	2	1

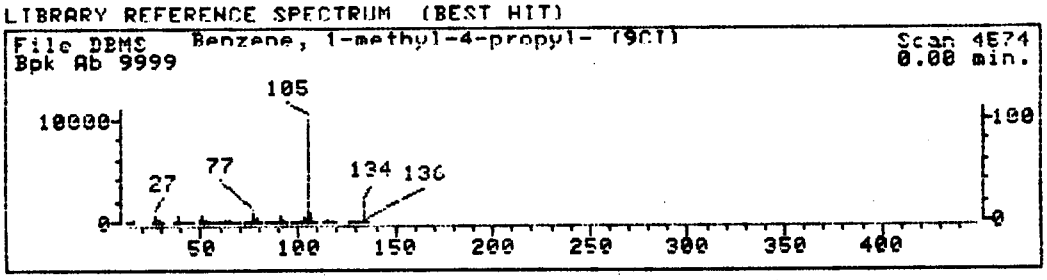
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



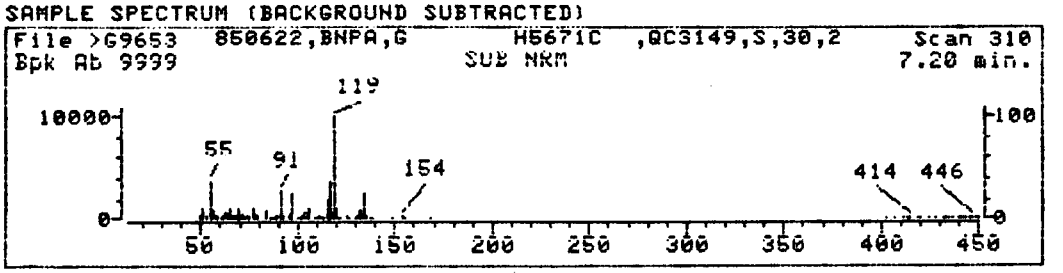
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 6.86
Scan: 291
Area: 132885
Semi-quantitative Conc: 17.26 UG/ML

Data File: >G9653 Scan Number: 291
Search Speed: 2 Titling option: S Number of ion ranges searched: 83

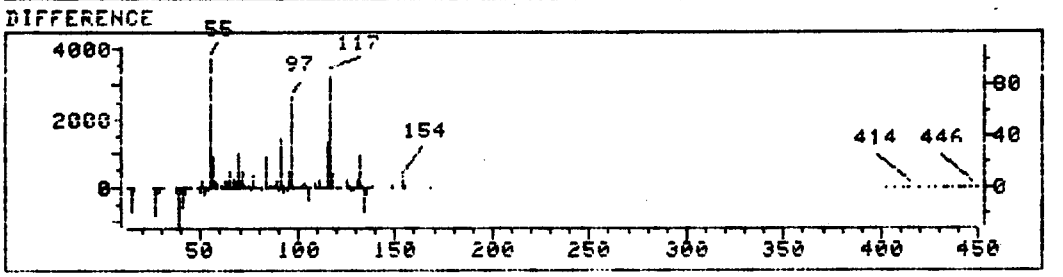
1. Benzene, 1-methyl-4-propyl- (9CI) 134 C10H14
2. Benzene, (1-methylpropyl)- (9CI) 134 C10H14
3. Benzene, 1-methyl-2-propyl- (9CI) 134 C10H14

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	64	1074551	72	11	1	0
2.	45	135988	63	23	1	0
3.	45	1074175	62	23	1	0

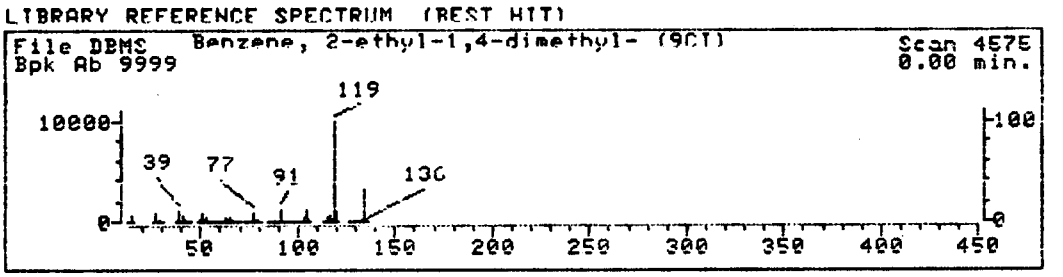
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



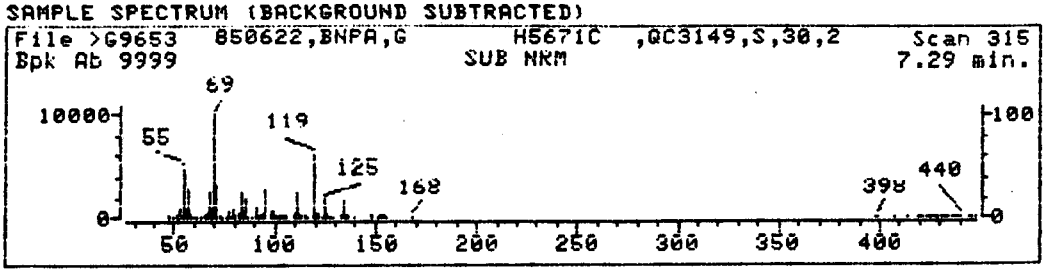
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 7.20
Scan: 310
Area: 261080
Semi-quantitative Conc: 33.91 UG/ML

Data File: >G9653 Scan Number: 310
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

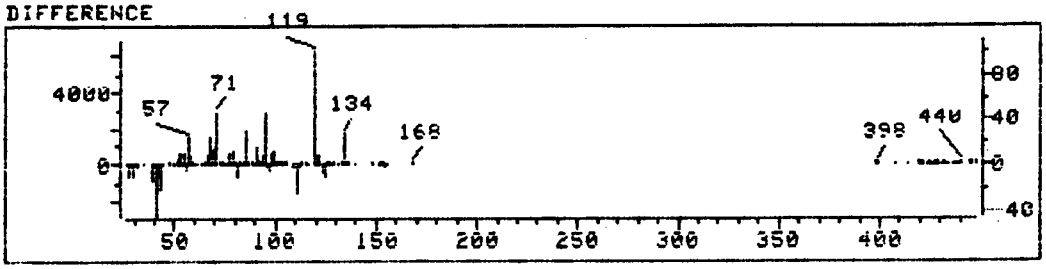
1. Benzene, 2-ethyl-1,4-dimethyl- (9CI) 134 C10H14
2. Benzene, methyl(1-methylethyl)- (9CI) 134 C10H14
3. Benzene, 4-ethyl-1,2-dimethyl- (9CI) 134 C10H14

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	58	1758889	58	36	1	0
2.	56	25155151	52	38	1	0
3.	47	934805	51	42	1	0

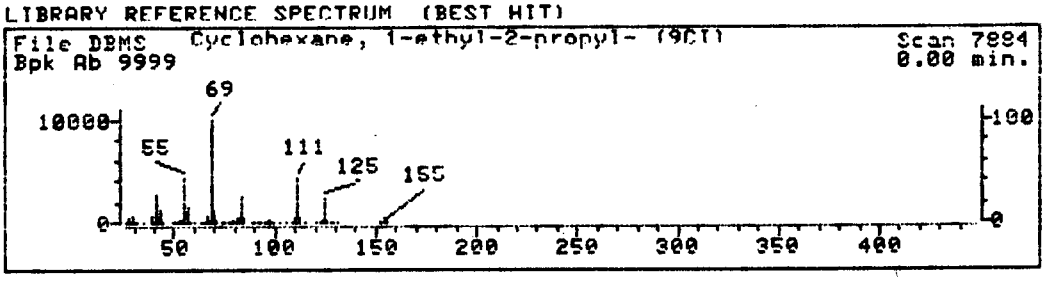
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



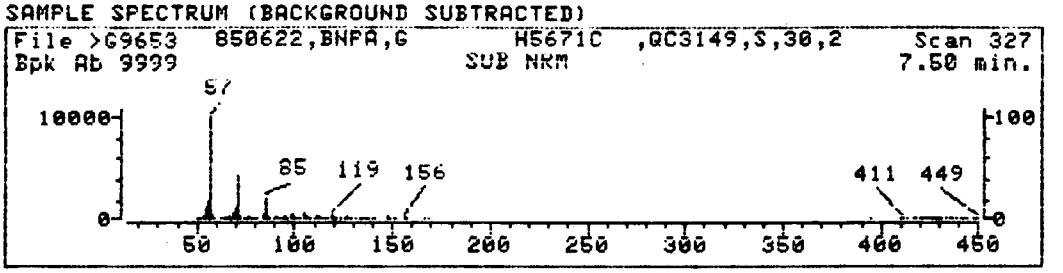
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 7.29
Scan: 315
Area: 125255
Semi-quantitative Conc: 16.27 UG/ML

Data File: >G9653 Scan Number: 315
Search Speed: 2 Titling option: S Number of ion ranges searched: 58

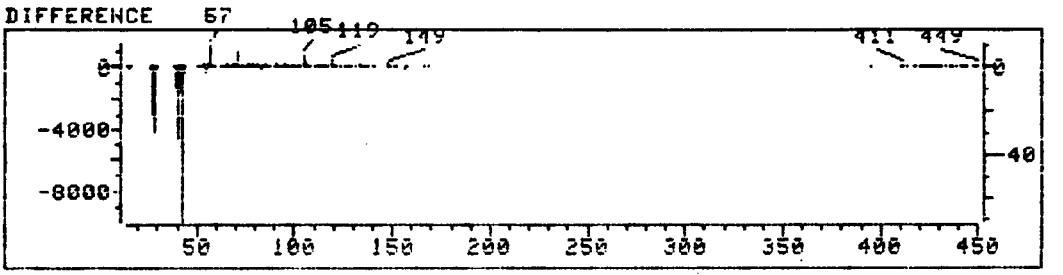
1. Cyclohexane, 1-ethyl-2-propyl- (9CI) 154 C11H22
2. Cyclohexane, (1,2-dimethylpropyl)- (9CI) 154 C11H22
3. Cyclohexane, (1,2-dimethylbutyl)- (9CI) 168 C12H24

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	50	62238339	70	32	1	1
2.	25	51284298	27	78	3	0
3.	25	61142378	26	84	3	0

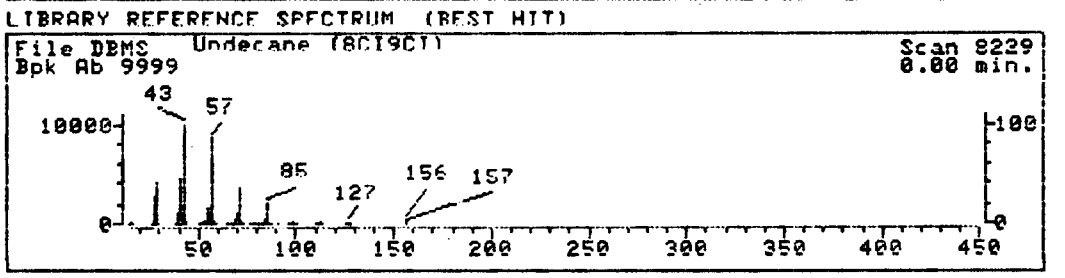
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



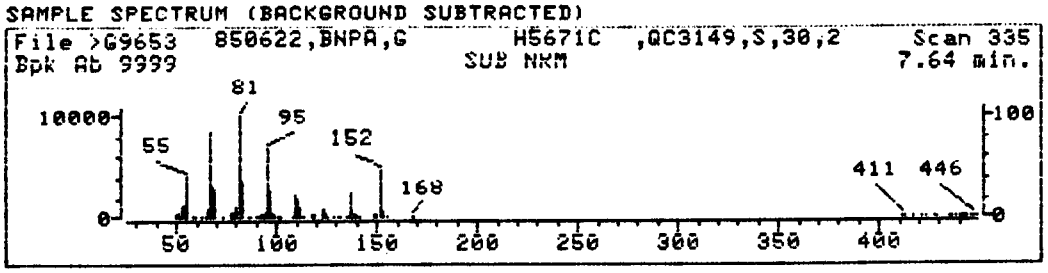
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 7.50
Scan: 327
Area: 1031806
Semi-quantitative Conc: 134.00 UG/ML

Data File: >G9653 Scan Number: 327
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

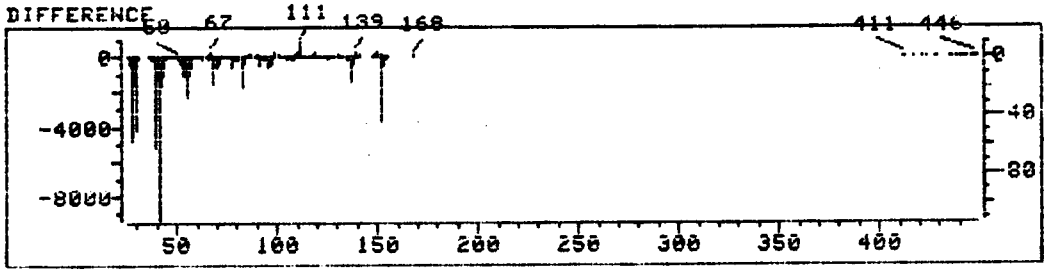
1.	Undecane (8CI9CI)	156 C11H24
2.	Nonane, 4,5-dimethyl- (8CI9CI)	156 C11H24
3.	Heptane, 2,6-dimethyl- (8CI9CI)	128 C9H20

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	86	1120214	68	29	1	0
2.	70	17302237	40	65	3	0
3.	60	1072055	43	49	2	0

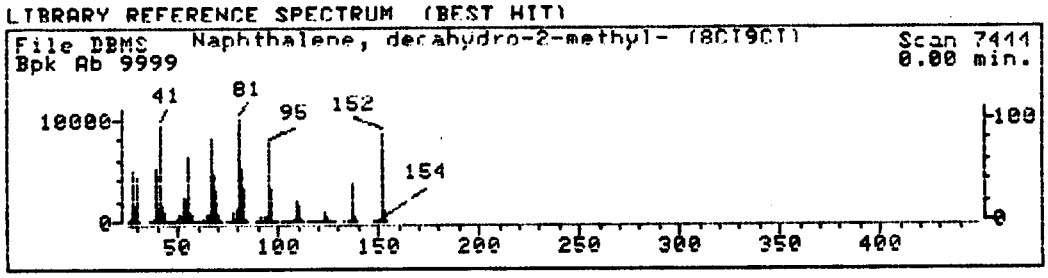
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



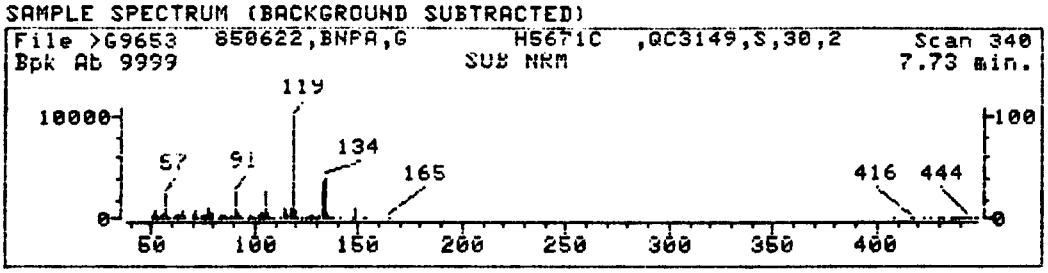
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 7.64
Scan: 335
Area: 103448
Semi-quantitative Conc: 13.43 UG/ML

Data File: >G9653 Scan Number: 335
Search Speed: 2 Titling option: S Number of ion ranges searched: 61

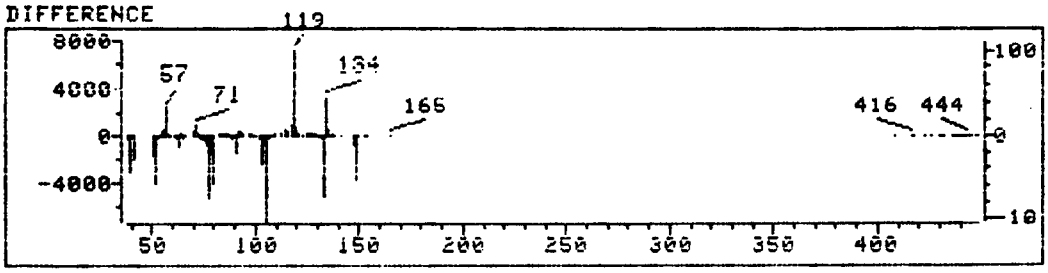
1. Naphthalene, decahydro-2-methyl- (8CI9CI) 152 C11H20
2. Cyclohexanol, 1-ethynyl- (8CI9CI) 124 C8H12O
3. Bicyclo[4.1.0]heptane, 3-methyl- (9CI) 110 C8H14

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	71	2958761	65	68	1	0
2.	53	78273	64	50	1	0
3.	53	41977473	65	55	3	0

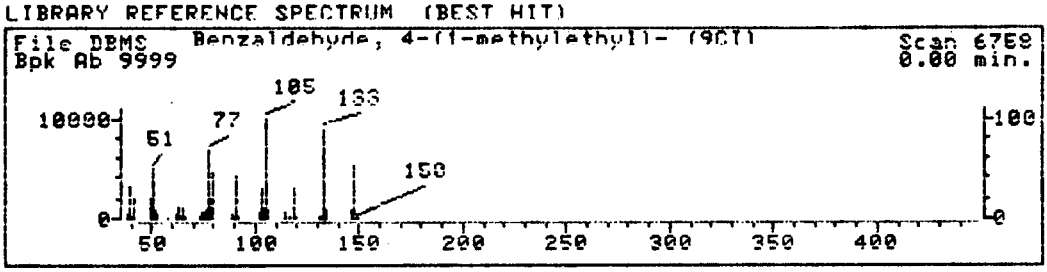
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



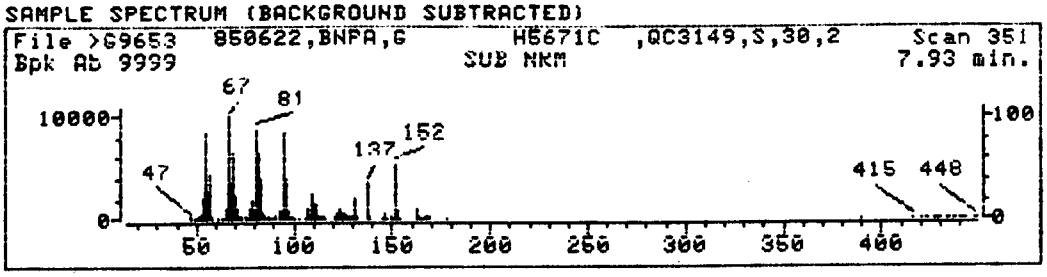
Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTI #24
RT (min): 7.73
Scan: 340
Area: 316370
Semi-quantitative Conc: 41.09 UG/ML

Data File: >G9653 Scan Number: 340
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

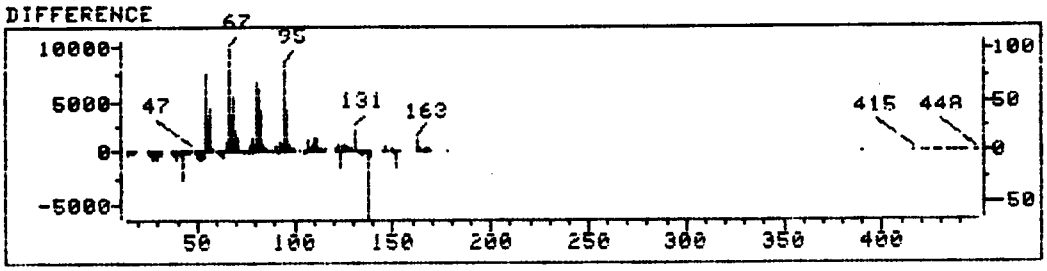
1. Benzaldehyde, 4-(1-methylethyl)- (9CI) 148 C10H12O
2. Benzene, 1,4-diethyl- (9CI) 134 C10H14
3. Benzene, 2-ethyl-1,4-dimethyl- (9CI) 134 C10H14

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	87	122032	67	52	1	-2
2.	83	105055	54	46	2	-2
3.	71	1758889	64	30	1	0

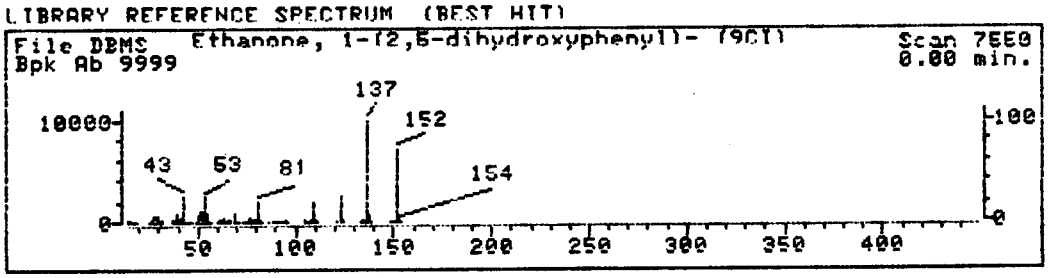
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >G9653::U4
Name: 850622,BNPA,G
Misc Data: H5671C ,QC3149,S,30,2 BTL#24
RT (min): 7.93
Scan: 351
Area: 544844
Semi-quantitative Conc: 70.76 UG/ML

Data File: >G9653 Scan Number: 351
Search Speed: 2 Titling option: S Number of ion ranges searched: 58

1. Ethanone, 1-(2,5-dihydroxyphenyl)- (9CI) 152 C8H8O3
2. Cyclohexanone, 5-methyl-2-(1-methylethenyl)-, trans- (9CI) 152 C10H16O
3. 12,15-Octadecadienoic acid, methyl ester (9CI) 294 C19H34O2

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	490788	51	52	1	-1
2.	83	29606799	36	98	0	-1
3.	78	57156975	84	81	2	-2

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

ETC Job # H15612/1

Lab ID: L85392-A1

Submitted by: HW CHYUN

Date: 5/28/85

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 MAY 30 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	1.4	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	<0.5	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 # H5671

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 #1 (Source Code (from below); Your Sample Point ID (left justify))

(Optional Sample Point Descriptions): Start Date (YY/MM/DD) 850501; Start Time (2400 hr. clock) 1015; Elapsed Hours (composite) 0000

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 Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	E	1L	Baked	Extb			/
2	V	40ml	Baked	VOA			/
1	TB	40ml	GC/MS H2O	TB			TB Bubble

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) D. Mazur Date: 5-1-85 Time: 1012
Signature: [signature] 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) Neil Tiarks Date: 5-1-85 Time: 1300
Signature: [signature] Seal #: 0034534 Intact: yes

ETC USE ONLY Opened By: [signature] Date: 5/2/85 Time: 11:00
Seal #: 34534 Condition: ok

ETC ENVIRONMENTAL TESTING and CERTIFICATION

FIELD PARAMETER FORM (CC2)

ETC JOB # H5671

Sample Point [S] [Soil 4] (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) [0.5]

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

Sample Temp [ ] (°C)

Turbidity [ ] NTU

FIELD COMMENTS

Sample Appearance: Black oily soil

Weather Conditions: 75 °F sunny

Other: _____

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

Sampler: Neil Trank (Print) Employer: NJDEP

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

5/1/85 (Date) [signature] (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 NJDEP / DWM / HSMA / SEU 65 Prospect St Trenton

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 Deb Mazur Title Envirn Spec

Name Neil Tiark Title Envirn Spec

Name _____ Title _____

Date Laboratory Sample Shuttle Seal No. 34533 **Broken** 5/1/85 | **Time (Mil) Seal Broken and Sampling Begun** 1012

FIELD SAMPLE NUMBER	CONTAINER NUMBER(S)	VOLUME OF CONTAINERS	DESCRIPTION OF SAMPLE
			Soil # 1 5671
			Blk only soil

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
~~[illegible]~~		5-1-85		Del to Lab
~~[illegible]~~				
Neil Tiark				

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

NAME OF FACILITY/ COMPANY/PERSON: Diamond Head	CODE	MAILING ADDRESS
SAMPLE LOCATION: Soil #1		

SAMPLE COLLECTOR

SAMPLER(S) Name: Neil Jlork	Agency: NJDEP	Sampler ID #: HS 51
Name	Agency	Sampler ID #

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.: Soil #1	SAMPLING DATE: 5-1-85	ABSCISSA (Longitude)
SAMPLE POINT ID	TIME (MIL) SAMPLING BEGAN: 1015	ORDINATE (Latitude)
SAMPLE SOURCE CODE	TIME (MIL) SAMPLING FINISHED: 1030	ELEVATION
REFERENCE POINT		

SAMPLING PROCESS

COLLECTION METHOD	Code: Grab	Other	SAMPLE TYPE	Code	Other
TYPE OF SAMPLER	Code: Trowel	Other	SAMPLE MATRIX	Code	Other
DESCRIPTION: BLK oily sed					

FIELD MEASUREMENTS

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

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#46 PCB's by GC/ECD	5671			

ANALYSIS(ES) AUTHORIZED BY: A Pleva

TITLE: HSMS II

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 Line	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 ug/ml	10,404
METHOXYCHLOR	1.0	25.0 ug/ml	10,406
TOXAPHENE	1.0	10.0 ug/ml	10,414
CHLORDANE	1.0	10.0 ug/ml	10,410

SURROGATE Amt. (ml)	Conc.	Lot #

116

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

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					

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

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			117

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

Set-up: [signature] 5/4/85 Reviewed/Supervisor: S McArthur 5/12/85

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

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 CSØS 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 19.30

IFB Prep 50:1 110+15

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
P-BFB	708206	1			E0198	Arcw 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				5pl ABC	
H5672V ✓	708215	5g/5ml					
H5674V ✓	708216	5g/5ml					
H5674VR ✓	708217	5g/5ml					
H5676V	708218	5g/5ml					
H5673V ✓	708219	0.1g/5ml				4000 Nb Tolwne	
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

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. D.E.P.: HOLDING TIME CRITICAL
SAMPLES ON @ 1:00 pm 5/4/85
QC2994 and H5674 1.0ml whole volume cleaned & brought up to 10.ml, final volume 1 aliquot packaged
All others after 1 cleanup brought up to 10.0 & 1 ml of this total volume
H5674 Sample strategic

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 ug/ml	10,529

SURROGATE	Amt. (ml)	Conc.	Lot #

119

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

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

EXTRACTION LOG

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

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 (7m)	

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 to 9.0 were adjusted to a neutral pH

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
	1.0	100 ug/ml	10,499
BN	1.0	100 ug/ml	10,523
ACID			
			120
Semi-Voa			

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

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

EXTRACTION LOG

QC Batch # 2997

REVISED 5/13/85

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	8956	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					

Analysis: PP/ORG

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

Matrix: SOIL

Turnaround:

Date: 5/4/85

Extraction Method:

sep funnel

continuous

soxhlet ✓

other sonicator

Repeats in green

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. 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 Wu

Conc.: [signature]

Supervisor: S McArthur 5/12/85

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

MAY 10, 1985 13:26
SEQUENCE: SCDN2 ON DPM 5
CHANNEL 2

SUBSEQUENCE 1

METHOD
PCBB2

DIALO-PRO PARAM-FILE
/N

#WSHS PPMPS STOP
5, 5. 1

ISO POST-BTL# PRO1-#WHS
NO , 3, 1

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

SAMPLES

	SAMPLE-NAME	B/L#	PROG-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 1:11 ,	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	AR1260-10.0 ,	17,	RJ0533:YI,	RJ0533:YI,	100.00,	1.0000,	1.0000
18	/E						

KB

[illegible] 5/14/85

John Strain 5/16/85

QC 3003

QC 2995

1:10

1:10

1:50

1:10

1:10

1:100

1:100

1:100

1:100

KB

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 Hamitlon 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 Durant

Date 5/6/85 Time 3:45

Sample(s) Received by: Gregory J. Lobb

Date 5/6/85 Time 3:45

124

GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT Day 1/2
FRACTION Acid
INSTRUMENT F
TUNE FILE HTF001
SEQUENCE FILE WWCH
METHOD FILE Acid F
IDFILE FACID
ANALYST(S) Wen-Wen Chi
SUPERVISOR [illegible]
BATCH #'s GA3017

STANDARD	CONC PPM	LOT NO.	LOT VOL
Calib III (Acid)	300	10528	
II	100	10527	
I	60	10526	
HSLPP/Acid	300	9603	
"	100	9604	
"	60	9605	
Calib III (BN)	200		
II "	100		
I "	60		

(PLEASE INITIAL)

CURRENT CSWS STATUS		STANDARDS UPDATED	
ACQ		DATE	5/9/85
WIP		BY	W.W. Acid

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
STNG DFTPP ✓	>F9520 X		21			5:00.	
Calib III	>F9521 X		22				
II	>F9522 X		23				
I	>F9523 X		24				
HSLPP / Acid 300	>F9524		25				
HSLPP / Acid 100	>F9525		26				
" 60	>F9526		27				
STNG DFTPP ✓	>F9527 X		28			8:41	
H2986AS	>F9528		29				
GC3017AS	>F9529		30				
GC3017A	>F9530		31				
~~H8352A~~	~~>F9531~~		Cancel				Y
~~H4354A~~	~~>F9532~~						
H3877A	>F9533		34				
H2981A	>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		125		
H1648A	>F9544		13				

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	
ACD		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	7F9557		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			
SONG DFTPP	7F9552	A	11				
GC3825 BNA	7F9553	A	12	X		✓	✓
H6515 BNAS	7F9554	A	13			–	
H5671 BNA	7F9555	A	14			✓	✓
H5675BNA	7F9556	A	15			✓	✓
H5676BNA	7F9557	A	16			✓	✓
H5514BNA	7F9558	A	17			✓	✓
H5512BNA	7F9559	A	18			✓	✓
H4686BNA	7F9560	A	19			✓	✓
H4687BNA	7F9561	A	20			✓	✓
H ~~[illegible]~~ BNA H5673	7F9562	A	21	1:2		✓	✓
H5674 BNAR	7F9563	A	22	1:2			
~~[illegible]~~ Calib SONG DFTPP	7F9564		23				
Calib II (BN)	7F9565		24				
~~Calib [illegible]~~	~~7F9566~~		~~25~~				
SONG DFTPP	7F9567		26				
GC2997 BNA	7F9568		27		126		✓
H5676 BNAS	7F9569		28				

TSR 8-84

GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT ___
FRACTION BNA
INSTRUMENT ~~[illegible]~~ F004
TUNE FILE MTE001
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 X		33	1:2		✓	✓
H 5673 BNA ✓	7F9575 X ✓		34	1:2			
H U515 BNA ✓	7F9576 X		35	1:2			✓
H U071 BNA	7F9577		36				✓
H U071 BNA X	7F9578		37				

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 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		10	X			
50NG DFTPP	7F9552		11				
GC3025 BNA	7F9553 X		12	X		✓	✓
H6515 BNAS	7F9554 X		130			–	
H5671 BNA	7F9555 X		14			✓	✓
H5675BNA	7F9556 X		15			✓	✓
H5676BNA	7F9557 X		16			✓	✓
H6514BNA	7F9558 X		17			✓	✓
H6512BNA	7F9559 X		18			✓	✓
H6686BNA	7F9560		19			✓	✓
H6687BNA	7F9561		20			✓	✓
~~H BNA~~ H5673 BNA	7F9562		21	1:2		✓	✓
H5674 BNAR	7F9563		22	1:2			
~~Calib~~ 50NG DFTPP	7F9564		23				
Calib II (BN)	7F9565		24				
~~Calib I (BN)~~	~~7F9566~~		~~25~~				
50NG DFTPP	7F9567		26				
GC2997 BNA	7F9568		27		128		✓
H5676 BNAS	7F9569		28				

TSR 8-84

GC-MS ANALYSIS CUSTODY LOG

DATE 5/21/85 SHIFT ___
FRACTION BNA
INSTRUMENT ~~F001~~ F001
TUNE FILE MTF001
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 U516 BNA	7F9571 ✓		30				
H U513 BNA ✓	7F9572 ✓		31				
~~H 5676 BNA ✓~~	7F9573 ✓		32			✓	✓
~~H U071 BNA~~							
~~H U071 BNA B~~							
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	7F9578		37				

TSR 8-84

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 Wkiewor date 6/5/85

	Number	Link	Wt. (g)	PEST	BNA	GCMS	pH
11 *	H4071	8986	30.69	10.0		PP/ACID	
12 *	H5671	9303	30.18	10.0		PP/BN	
13 *	7395	9516	30.30	10.0		PP/T ✓	
14 *	H7398	↓	30.43	10.0		PP/BN	
15 *	H7553	9566	30.36	10.0		PP/ACID	
16 *	H7554	↓	30.98	10.0		PP/ACID	
17 *	H5325	9196	30.31	10.0		PP/ORG ✓	
18 *	H5327	↓	30.16	10.0		PP/ACID	
19 *	H7396	9516	~~30.98~~ 30.40	10.0		PP/T ✓	
6	GPC Blank		—	10.0			
10	H5327R		30.36	10.0			
8	QCS 3149		—	10.0			
7	QC 3149		—	10.0			
	~~H5329 R~~						
	~~H7554 MS~~						
9	H7553 S		31.66	10.0			

QC Batch # 3149 Page 1

Analysis NJ DEP/BNA
NJ DEP/DET/PST

Matrix SEDIMENT

Date Start 6/16/85

* REPEATS
pH was already done with original EXTRACTION

Extraction Method:

Sonifier ✓

Other GPC clean-up
IFB BNA
DET/PST PREP.

SPIKES/SURROGATES

5ml of 10ml used in GPC clean-up

UPD: M Bailey

COMMENTS: Method- EMSLV-CI; Level-LOW
See page 2 for Pesticide continuation.
See page 3 for BNA continuation.

ACID Added(ml) 1.0
Conc. 100µg/ml
Lot # 10,523

SET UP: Dan de Rivera 6/16/85
EXTRACTION: Rachel Lewis
CONC.:
GPC:
VMINA CLEANUP: Vmina Gandhi 6/21
UPD/SUPERVISOR:

SPIKES: PESTICIDE: Added (ml) 1.0, Conc. —, Lot # 10,731
BNA: Added (ml) 1.0, Conc. 100µg/ml, Lot # 10,499

SURR.: DIBUTYLCHLORENDATE: Added (ml) none, Conc. 2 ng/ml, Lot # 0739
SEMIVOA: Added (ml) 1.0, Conc. 50/100, Lot # 10,686

Sample Number	Log Link	Sample Wgt. (g)	Extract Vol. (ml) PEST A	PEST B	Comments	Analyst
H7395	9576	-	0.5 ml	1.0 ml		
H7396	9516		0.5 ml	1.0 ml		
			~~0.~~			
H5327	—		0.5 ml	1.0 ml	FOR SPIKE/REP	
H7553	—		0.5 ml	1.0 ml	COMPARISON ONLY	
QCS 3149			0.5 ml	1.0 ml		
QC 3149			0.5 ml	1.0 ml		
H5327 R			0.5 ml	1.0 ml		
H7553 S			0.5 ml	1.0 ml		

IPB EXTRACTION LOG

QC Batch # 3149 Page

Analysis NJ DEP/DET/PST (CONTINUED)

Matrix SEDIMENT

Date Start 6/16/85

Extraction Method:

Sonifier

Other

SPIKES/SURROGATES

UPD:

COMMENTS:

PESTICIDE A : .5 ml aliquot out of 10 ml intermediate volume taken for pesticide fraction.

PESTICIDE B : 1 Final volume pesticide fraction after clean-up.

QC Batch # 3149 Page 5

Analysis NJDEP/BNA (Continued)

Matrix SEDIMENT

Date Start 6/16/85

Extraction Method:

Sonifier

Other

Sample Number	Log Link	Sample Wgt. (g)	Extract BNA A	Extract BNA B		
H4071	8986		9.5ml	.95ml		
H5671	9303		9.5ml	.95ml		
H7395	9576		9.5ml	.95ml		
H7398	↓		9.5ml	.95ml		
H7553	9566		9.5ml	.95ml		
H7554	↓		9.5ml	.95ml		
H5325	9196		9.5ml	.95ml		
H5327	↓		9.5ml	.95ml		
H7396	9516		9.5ml	.95ml		
QCS 3149		mk ~~9.5ml~~	9.5ml	9.5ml		
QC 3149		mk ~~9.5ml~~	9.5ml	.95ml		
H5327 R		mk ~~9.5ml~~	9.5ml	.95ml		
H7553 MS		mk ~~9.5ml~~	9.5ml	.95ml		

SPIKES/SURROGATES

UPD:

COMMENTS: Method- EMSLV-CI; Level- LOW

BNA A : 9.5 ml aliquot out of 10 ml intermediate volume taken for BNA fraction.

BNA B : Final volume of BNA fraction.

GC-MS ANALYSIS CUSTODY LOG

DATE 850622 SHIFT ___
FRACTION BNPA
INSTRUMENT 6
TUNE FILE MT6001
SEQUENCE FILE TSR46
METHOD FILE BNP6
IDFILE 6BNPA
ANALYST(S) Tom Rusowicz
SUPERVISOR [signature]
BATCH #'s QC3149BA

(PLEASE INITIAL)

CURRENT CSWS STATUS		STANDARDS UPDATED	
ACQ	TR	DATE	850623
WIP		BY	TR

STANDARD		CONC PPM	LOT NO.	LOT VOL
ACID	1	60	10526	
	2	100	10527	
	3	300	10528	
BNP	1	60	10802	
	2	100	10803	
	3	200	10804	
	4	150	10805	
DFTPP		25	10610	
ISTD		400	10701	

NAME	DATA FILE >6	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
50 NG DFTPP	9630		1			1630 OK +3056, +3052	
ACID STD 3	9631		2			NJDEP	
ACID STD 2	9632		3			REPEATS	
ACID STD 1	9633		4				
BNP STD 1	9634		5				
BNP STD 2	9635		6				
BN STD 3	9636		7				
PEST STD 4	9637		8				
QC3149BAS	9638		9				
H7553BAS	9639		10				
QC3149BA	9640		11			•	PB
6PC BLANK	9641		12			•	PB
H5325BA	9642		13			•	PB
H5327BA	9643		14			•	PB
H5327BAR	9644		15				
50 NG DFTPP	9645		16			OK +3043, +3045	
ACID STD 2	9646		17				
BNP STD 2	9647		18				
H7395BA	9648		19			•	PB
H7396BA	9649		20				PB
H7398BA	9650		21				PB
H7553BA	9651		22			•	PB
H7554BA	9652		23			•	PB
H5671BA	9653		24				PB
H4071BA	9654		25				PB

TSR 8-84