ETC ENVIRONMENTAL TESTING and CERTIFICATION

Technical Report

for

NJDEP-DIVISION OF WASTE MGMT.

CONTRACT X-029

Chain of Custody Data Required for ETC Data Management Summary Reports						
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	0001
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Denis C. K. Lin, Ph.D.
Vice President
Research and Operations

510348

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

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 16, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	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	ND	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	ND	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	ND	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	BMDL	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	ND	4.1	ND	ND	ND	18	100	19	18	43
25V	Toluene	ND	6.0	ND	ND	ND	18	102	95	18	0[C]
26V	1,2-Trans-dichloroethylene	ND	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	ND	1.9	ND	ND	3	18	85	13	18	51
30V	Trichlorofluoromethane	BMDL	10.0	5	3	ND	18	102	ND	18	124
31V	Vinyl chloride	ND	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

MAY 30, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg A	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov B	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	2178.0	ND	ND	ND	0	-	ND	33333	74
2A	2,4-Dichlorophenol	ND	1782.0	ND	ND	ND	0	-	ND	33333	96
3A	2,4-Dimethylphenol	ND	1782.0	ND	ND	ND	0	-	ND	33333	82
4A	4,6-Dinitro-o-cresol	ND	15840.0	ND	ND	ND	0	-	ND	33333	34
5A	2,4-Dinitrophenol	ND	27720.0	ND	ND	ND	0	-	ND	33333	21
6A	2-Nitrophenol	ND	2376.0	ND	ND	ND	0	-	ND	33333	99
7A	4-Nitrophenol	ND	1584.0	ND	ND	ND	0	-	ND	33333	99
8A	p-Chloro-m-cresol	ND	1980.0	ND	ND	ND	0	-	ND	33333	90
9A	Pentachlorophenol	ND	2376.0	ND	ND	ND	0	-	ND	33333	91
10A	Phenol	ND	990.0	ND	ND	ND	0	-	ND	33333	83
11A	2,4,6-Trichlorophenol	ND	1782.0	ND	ND	ND	0	-	ND	33333	108

A ETC established Method Detection Limit for this particular sample.

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

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 26, 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
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	1254	ND	ND	ND	0	-	ND	33333	110
2B	Acenaphthylene	6138	2310	ND	ND	ND	0	-	ND	33333	114
3B	Anthracene	4983	1254	ND	ND	ND	0	-	ND	33333	112
4B	Benzidine	ND	29040	ND	ND	ND	0	-	ND	33333	0
5B	Benzo(a)anthracene	6712	5148	ND	ND	ND	0	-	ND	33333	118
6B	Benzo(a)pyrene	3967	1650	ND	ND	ND	0	-	ND	33333	99
7B	Benzo(b)fluoroanthene	9913	3168	ND	ND	ND	0	-	ND	33333	107
8B	Benzo(ghi)perylene	ND	2706	ND	ND	ND	0	-	ND	0	-
9B	Benzo(k)fluoranthene	ND	1650	ND	ND	ND	0	-	ND	33333	77
10B	bis(2-Chloroethoxy)methane	ND	3498	ND	ND	ND	0	-	ND	33333	101
11B	bis(2-Chloroethyl) ether	ND	3762	ND	ND	ND	0	-	ND	33333	97
12B	bis(2-Chloroisopropyl)ether	ND	3762	ND	ND	ND	0	-	ND	33333	96
13B	bis(2-Ethylhexyl)phthalate	ND	6600	ND	ND	ND	0	-	ND	33333	98
14B	4-Bromophenyl phenyl ether	ND	1254	ND	ND	ND	0	-	ND	33333	108
15B	Butyl benzyl phthalate	ND	6600	ND	ND	ND	0	-	ND	33333	107
16B	2-Chloronaphthalene	ND	1254	ND	ND	ND	0	-	ND	33333	114
17B	4-Chlorophenyl phenyl ether	ND	2772	ND	ND	ND	0	-	ND	33333	109
18B	Chrysene	5894	1650	ND	ND	ND	0	-	ND	33333	92
19B	Dibenzo(a,h)anthracene	ND	1650	ND	ND	ND	0	-	ND	0	-
20B	1,2-Dichlorobenzene	ND	1254	ND	ND	ND	0	-	ND	33333	91
21B	1,3-Dichlorobenzene	ND	1254	ND	ND	ND	0	-	ND	33333	89
22B	1,4-Dichlorobenzene	ND	2904	ND	ND	ND	0	-	ND	33333	87
23B	3,3'-Dichlorobenzidine	ND	10890	ND	ND	ND	0	-	ND	33333	0
24B	Diethyl phthalate	ND	6600	ND	ND	ND	0	-	ND	33333	113
25B	Dimethyl phthalate	ND	6600	ND	ND	ND	0	-	ND	33333	110
26B	Di-n-butyl phthalate	BMDL	6600	ND	ND	ND	0	-	ND	33333	114
27B	2,4-Dinitrotoluene	ND	3762	ND	ND	ND	0	-	ND	33333	111
28B	2,6-Dinitrotoluene	ND	1254	ND	ND	ND	0	-	ND	33333	109
29B	Di-n-octyl phthalate	ND	6600	ND	ND	ND	0	-	ND	33333	105
30B	1,2-Diphenylhydrazine	ND	6600	ND	ND	ND	0	-	ND	33333	114
31B	Fluoranthene	16645	1452	ND	ND	ND	0	-	ND	33333	128
32B	Fluorene	ND	1254	ND	ND	ND	0	-	ND	33333	113

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 26, 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
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg[A]	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov [B]	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	ND	1254	ND	ND	ND	0	-	ND	33333	80
34B	Hexachlorobutadiene	ND	594	ND	ND	ND	0	-	ND	33333	96
35B	Hexachlorocyclopentadiene	ND	10	ND	ND	ND	0	-	ND	0	-
36B	Hexachloroethane	ND	1056	ND	ND	ND	0	-	ND	33333	93
37B	Indeno(1,2,3-c,d)pyrene	ND	2442	ND	ND	ND	0	-	ND	0	-
38B	Isophorone	ND	1452	ND	ND	ND	0	-	ND	33333	102
39B	Naphthalene	2072	1056	ND	ND	ND	0	-	ND	33333	105
40B	Nitrobenzene	ND	1254	ND	ND	ND	0	-	ND	33333	92
41B	N-Nitrosodimethylamine	ND	6600	ND	ND	ND	0	-	ND	0	-
42B	N-Nitrosodi-n-propylamine	ND	6600	ND	ND	ND	0	-	ND	33333	100
43B	N-Nitrosodiphenylamine	ND	1254	ND	ND	ND	0	-	ND	33333	116
44B	Phenanthrene	13114	3564	ND	ND	ND	0	-	ND	33333	115
45B	Pyrene	13200	1254	ND	ND	ND	0	-	ND	33333	131
46B	1,2,4-Trichlorobenzene	ND	1254	ND	ND	ND	0	-	ND	33333	99

A ETC established Method Detection Limit for this particular sample.

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

C Recovery normally variable using EPA Protocol Method 625.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 21, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide Compounds - GC Analysis Data (QR32)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	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	25000	ND	ND	ND	0	-	ND	460	93
2P	Alpha-BHC	BMDL	25000	150	ND	ND	0	-	ND	460	84
3P	Beta-BHC	ND	25000	ND	ND	ND	0	-	ND	460	84
4P	Gamma-BHC	ND	25000	ND	ND	ND	0	-	ND	460	84
5P	Delta-BHC	ND	25000	ND	ND	ND	0	-	ND	460	100
6P	Chlordane	ND	240000	ND	ND	ND	0	-	ND	5000	81
7P	4,4'-DDT	ND	25000	ND	ND	ND	0	-	ND	460	190[C]
8P	4,4'-DDE	ND	25000	ND	ND	ND	0	-	ND	460	110
9P	4,4'-DDD	BMDL	25000	2400	ND	ND	0	-	ND	460	130
10P	Dieldrin	ND	25000	ND	ND	ND	0	-	ND	460	110
11P	Endosulfan I	ND	25000	ND	ND	ND	0	-	ND	460	100
12P	Endosulfan II	ND	25000	ND	ND	ND	0	-	ND	460	110
13P	Endosulfan sulfate	ND	25000	ND	180	ND	0	-	ND	460	110
14P	Endrin	ND	25000	ND	ND	ND	0	-	ND	460	140
15P	Endrin aldehyde	BMDL	25000	600	ND	ND	0	-	ND	460	73
16P	Heptachlor	ND	25000	ND	ND	ND	0	-	ND	460	83
17P	Heptachlor epoxide	ND	25000	ND	ND	ND	0	-	ND	460	100
25P	Toxaphene	ND	240000	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)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

NPDES Number	Compound		Results: Sample Concen.	Results: MDL
1M	Antimony	ug/kg	20000	9000
2M	Arsenic	mg/kg	18	1
3M	Beryllium	ug/kg	1200	50
4M	Cadmium	ug/kg	9400	300
5M	Chromium	mg/kg	340	2
6M	Copper	mg/kg	490	.8
7M	Lead	mg/kg	4400	5
8M	Mercury	mg/kg	7	1.4
9M	Nickel	ug/kg	110000	1000
10M	Selenium	mg/kg	ND	1
11M	Silver	ug/kg	4000	500
12M	Thallium	mg/kg	BMDL	1
13M	Zinc	mg/kg	1600	.6
14M	Cyanide, Total	mg/kg	<.5	.5
15M	Phenolics, Total	mg/kg	.6	.1

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

May 14, 1985

TABLE 1: QUALITATIVE RESULTS

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

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
None Found								

ETC ENVIRONMENTAL TESTING and CERTIFICATION

June 6, 1985

TABLE 1: QUALITATIVE RESULTS

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

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula	Estimated Concen. ug/kg		
1 Unknown	22	3.09	-	-	-	165000		
2 Unknown	900	18.69	-	-	-	8580		

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 19, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Aroclors - GC Analysis Data (QR14)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	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.

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

May 29, 1985

TABLE 2: METHOD PERFORMANCE DATA

Surrogate Recovery Soil- GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

H5674

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	87	50	160
Bromofluorobenzene	.250	57	50	160
1,2-Dichloroethane-D4	.250	98	50	160
ACID FRACTION				
Phenol-D5	100	78	20	140
2-Fluorophenol	100	80	20	140
2,4,6-Tribromophenol	100	74	10	140
*BASE/NEUTRAL FRACTION***				
Nitrobenzene-D5	50	92	20	140
2-Fluorobiphenyl	50	92	20	140
Terphenyl-D14	50	88	20	150

* IFB EPA Control Limits.

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

NJDEP Contract 029

Aqueous Sample Preparation

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

Non-Aqueous Extractions

Soil and Sediment Samples

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

Sludge/Petroleum Based Samples

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

Flame AA or ICP

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

Furnace AA

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

Aqueous Methodologies

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

Non-Aqueous Methodologies

Gas Chromatography/Mass Spectrometry for:

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

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

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

Non-Aqueous

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

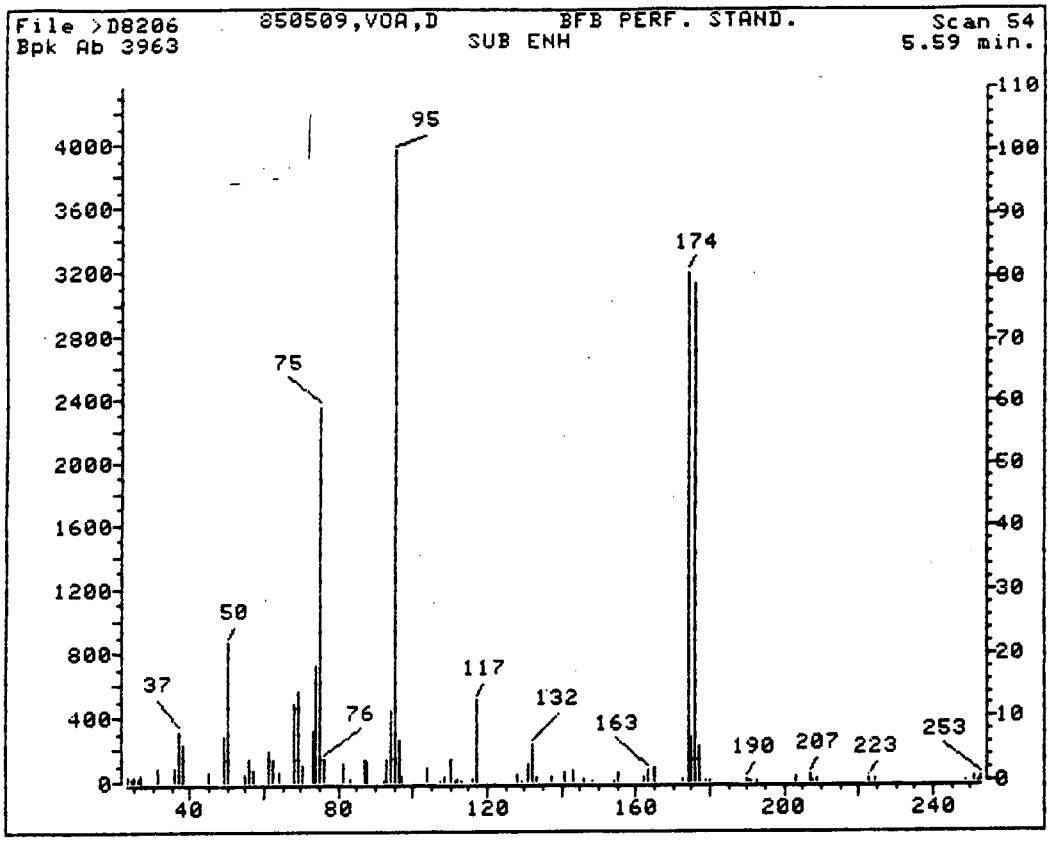


TABLE 2: METHOD PERFORMANCE DATA (QR21)

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

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% 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: Carol Trask
Run No: >D8206 QC Batch: QV 3241
Spectrun No: 54 Samples: H5671 - H5678 6

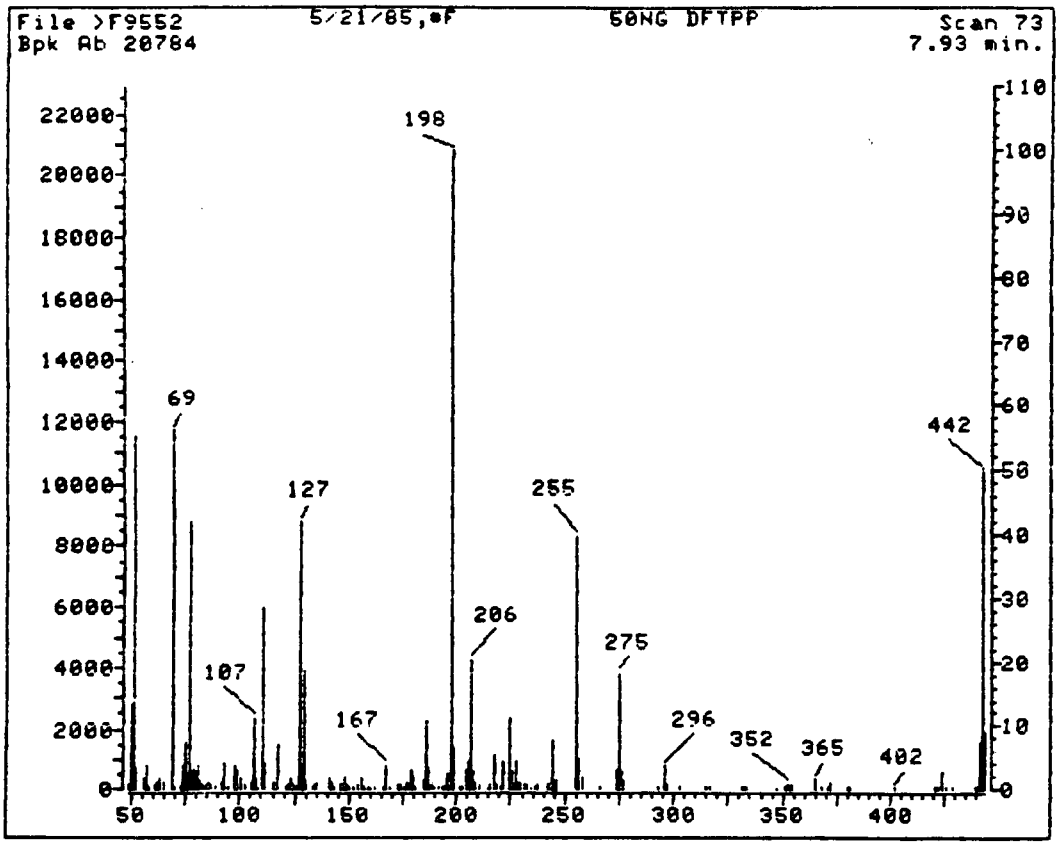


TABLE 2: METHOD PERFORMANCE DATA (QR23)

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

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
51	30-60% of mass 198	55.31	55.31	Ok
68	Less then 2% of mass 69	0.00	0.00	Ok
69	(reference only)	56.39	56.39	Ok
70	Less then 2% of mass 69	.35	.62	Ok
127	40-60% of mass 198	42.26	42.26	Ok
197	Less then 1% of mass 198	.44	.44	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	18.22	18.22	Ok
365	Greater then 1% of mass 198	1.67	1.67	Ok
441	Less then mass 443	7.40	81.81	Ok
442	Greater then 40% of mass 198	49.65	49.65	Ok
443	17-23% of mass 442	9.05	18.22	Ok

Injection Date: 05/21/85 Analyst: [signature]
Injection Time: 22:21 Processor: [signature]
Run No: >F9552 QC Batch: QA 3025
Spectrun No: 73 Samples: H5671, H5675, H5676, H4572, H4574, H4686, H4687, H5674

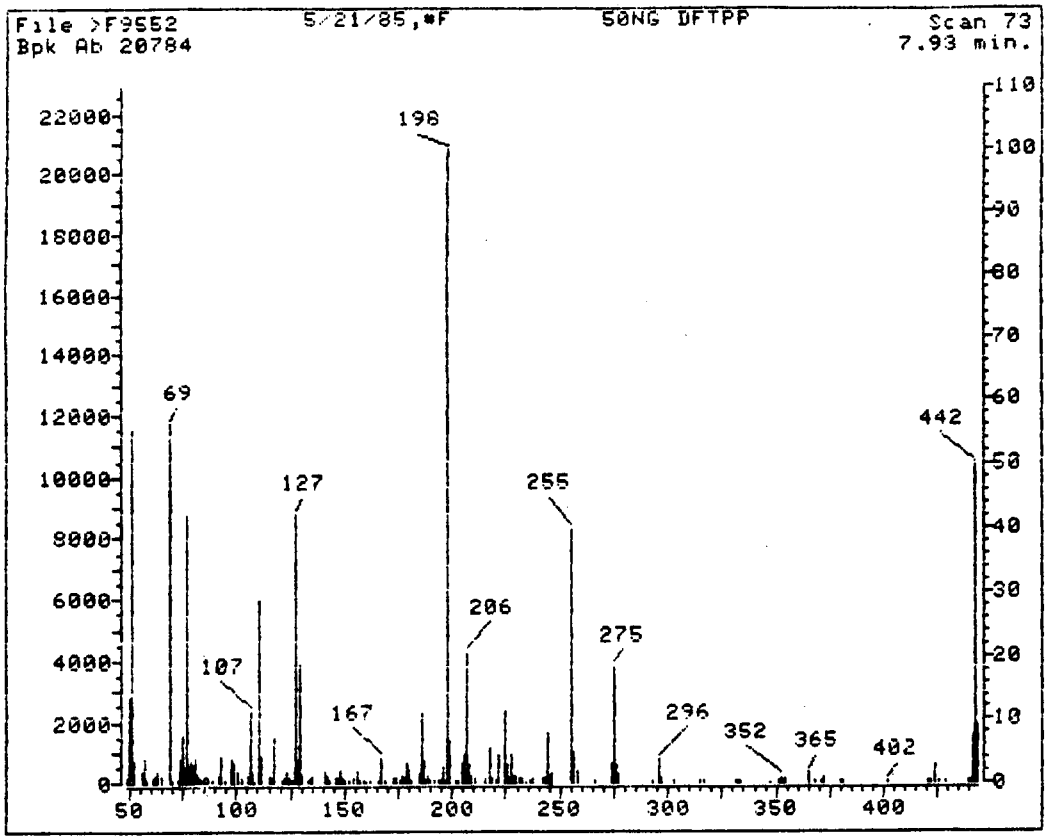


TABLE 2: METHOD PERFORMANCE DATA (QR23)

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	55.31	55.31	Ok
68	Less then 2% of mass 69	0.00	0.00	Ok
69	(reference only)	56.39	56.39	Ok
70	Less then 2% of mass 69	.35	.62	Ok
127	40-60% of mass 198	42.26	42.26	Ok
197	Less then 1% of mass 198	.44	.44	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	18.22	18.22	Ok
365	Greater then 1% of mass 198	1.67	1.67	Ok
441	Less then mass 443	7.40	81.81	Ok
442	Greater then 40% of mass 198	49.65	49.65	Ok
443	17-23% of mass 442	9.05	18.22	Ok

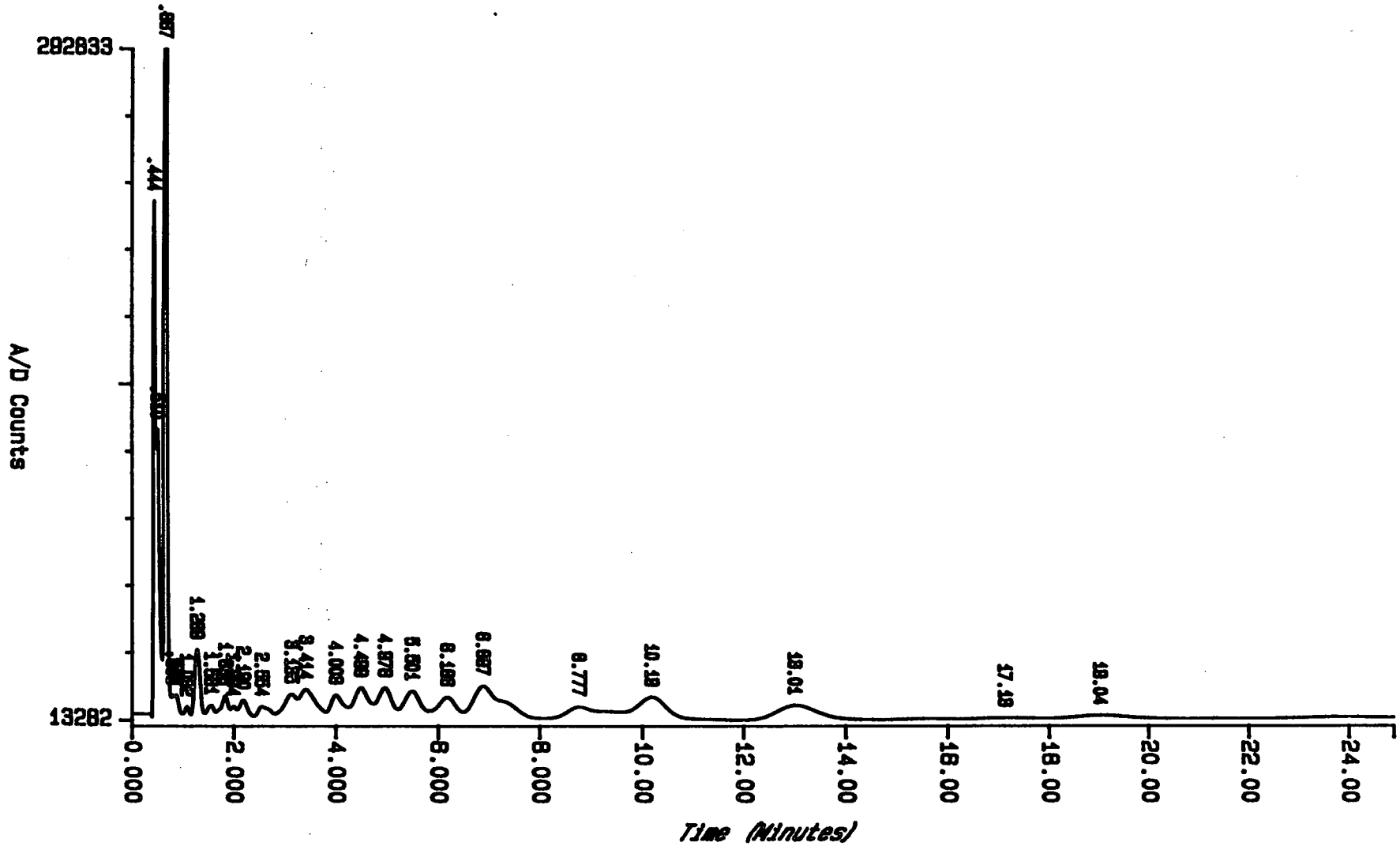
Injection Date: 05/21/85 Analyst: [illegible]
Injection Time: 22:21 Processor: [illegible]
Run No: >F9552 QC Batch: QB 3025
Spectrun No: 73 Samples: H5671, H5675, H5676, H4572, H4686, H4687, H5674

Appendix A1

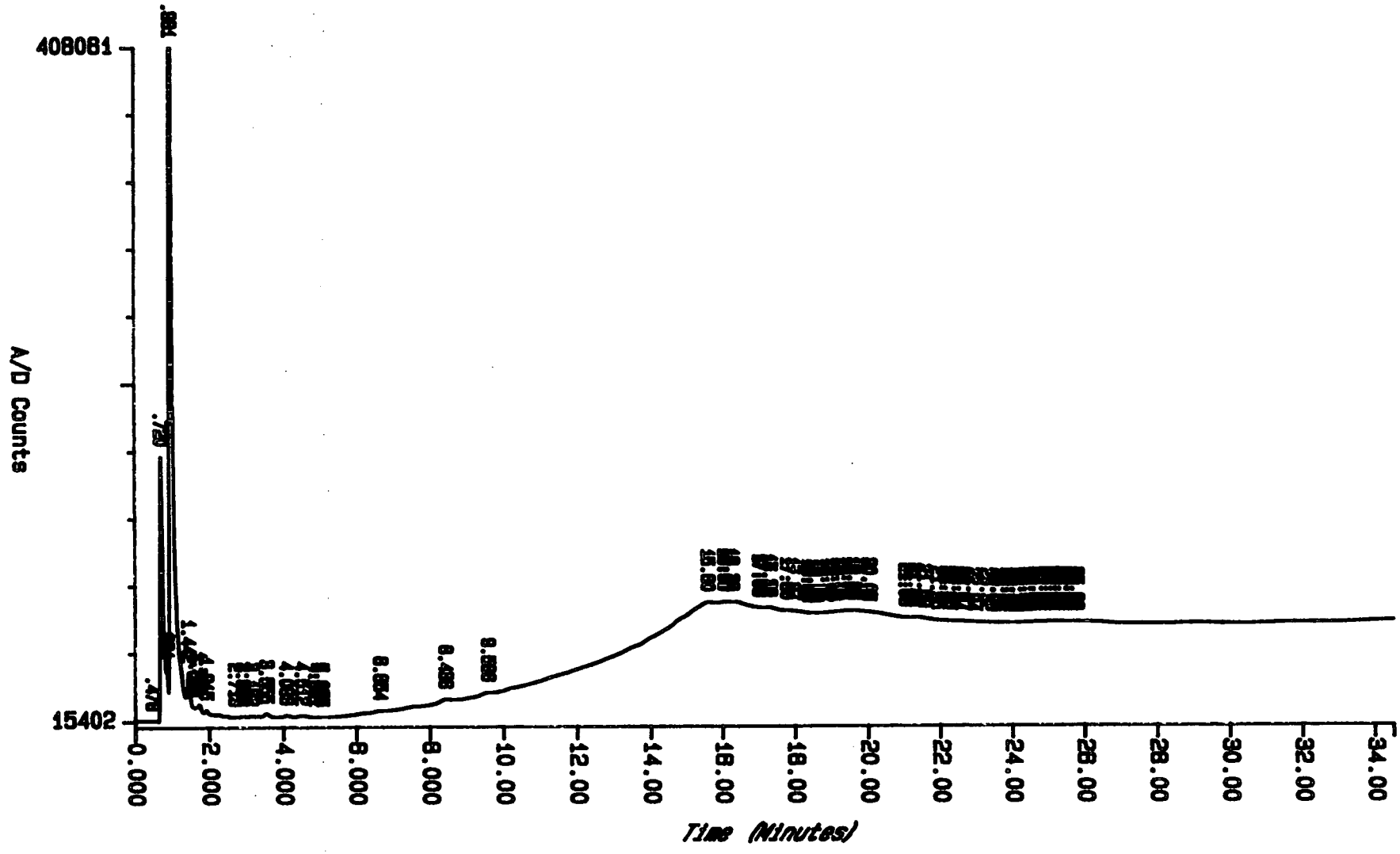
Gas Chromatographic Spectral Data for Quantitated Compounds

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

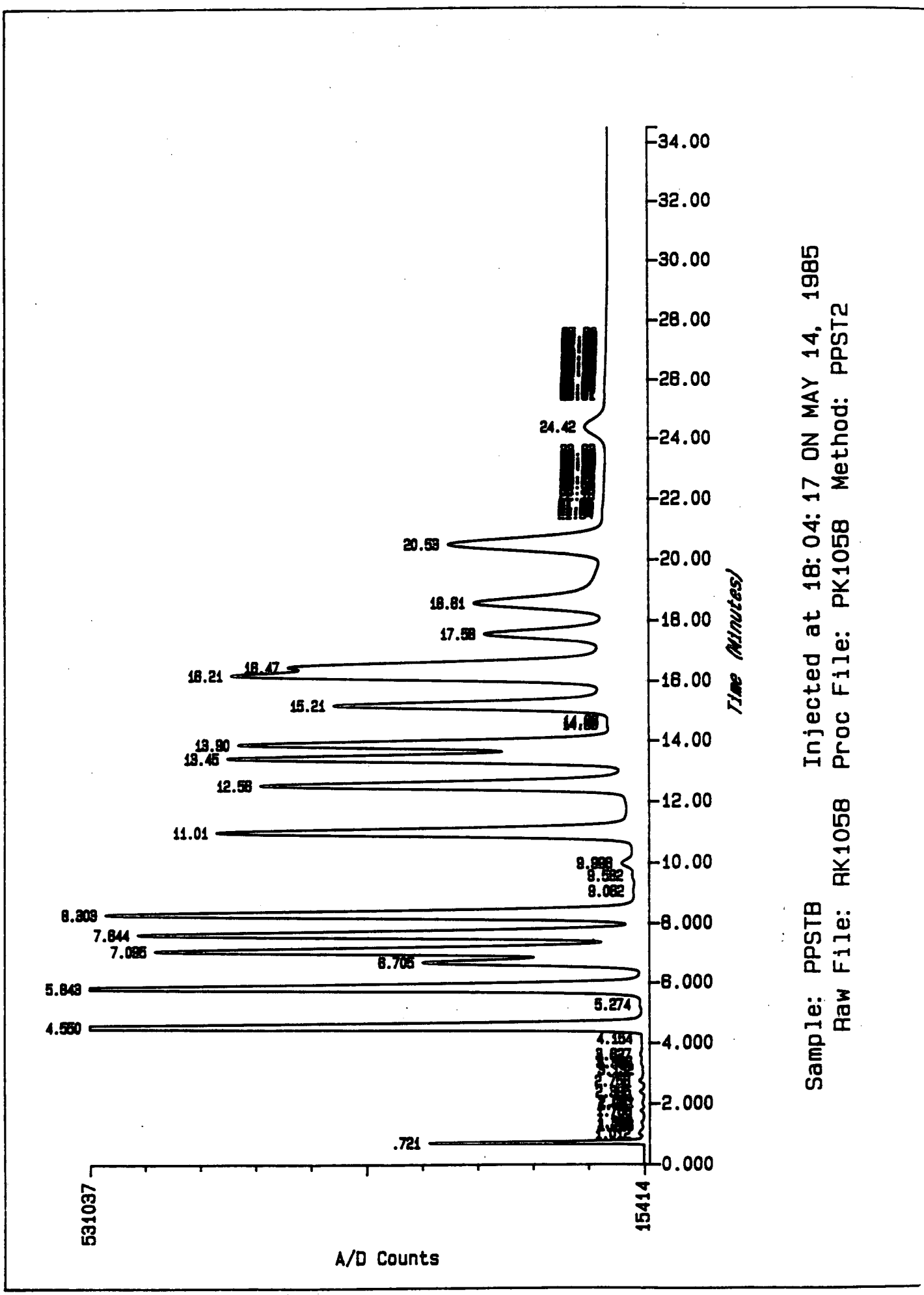
2) A reconstructed gas chromatogram for the appropriate standard compounds analyzed with the same GC under the same operating conditions.

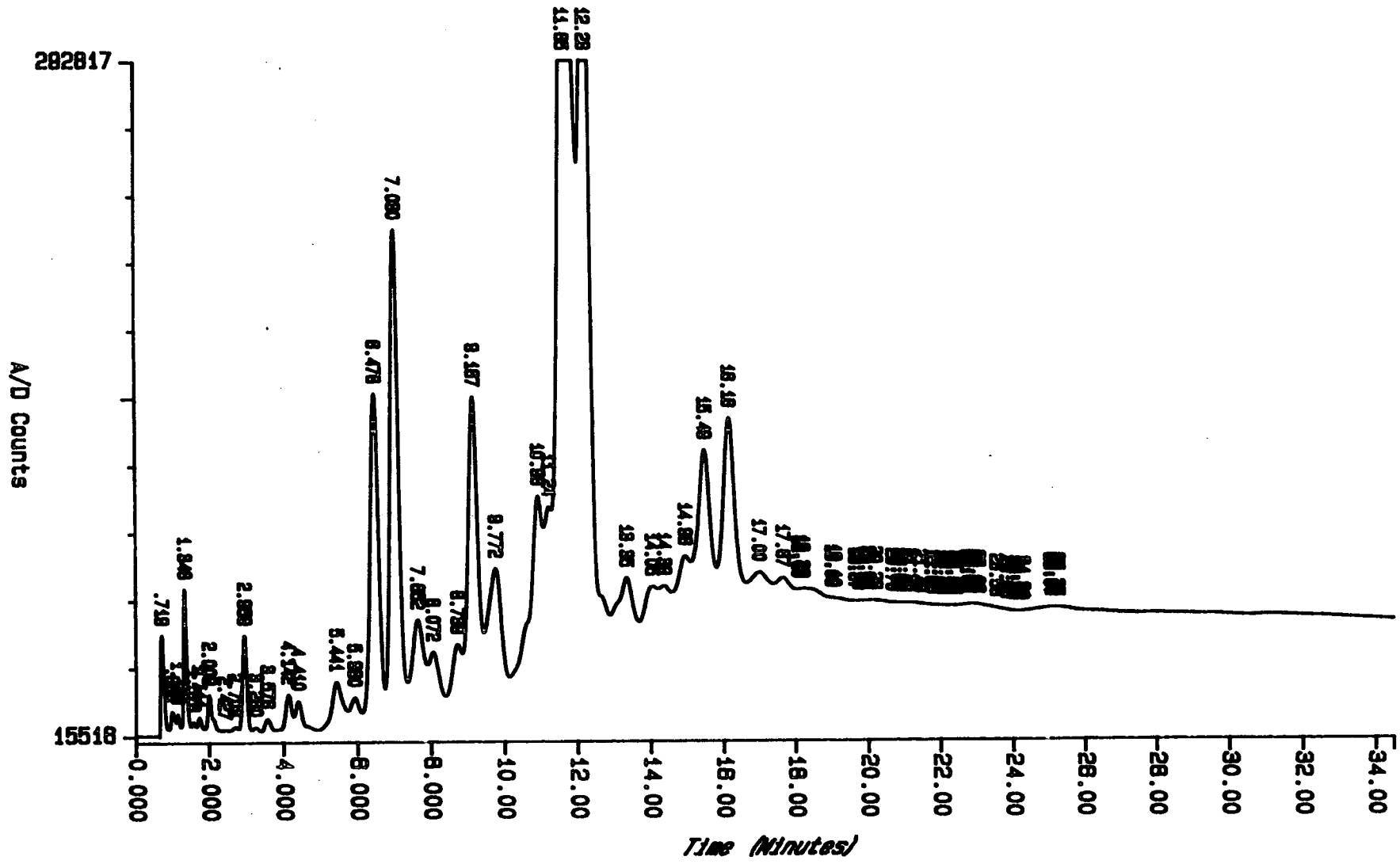


Sample: H5674 Injected at 18:44:39 ON MAY 7, 1985
Raw File: H5674H Proc File: H5674G Method: PCB88

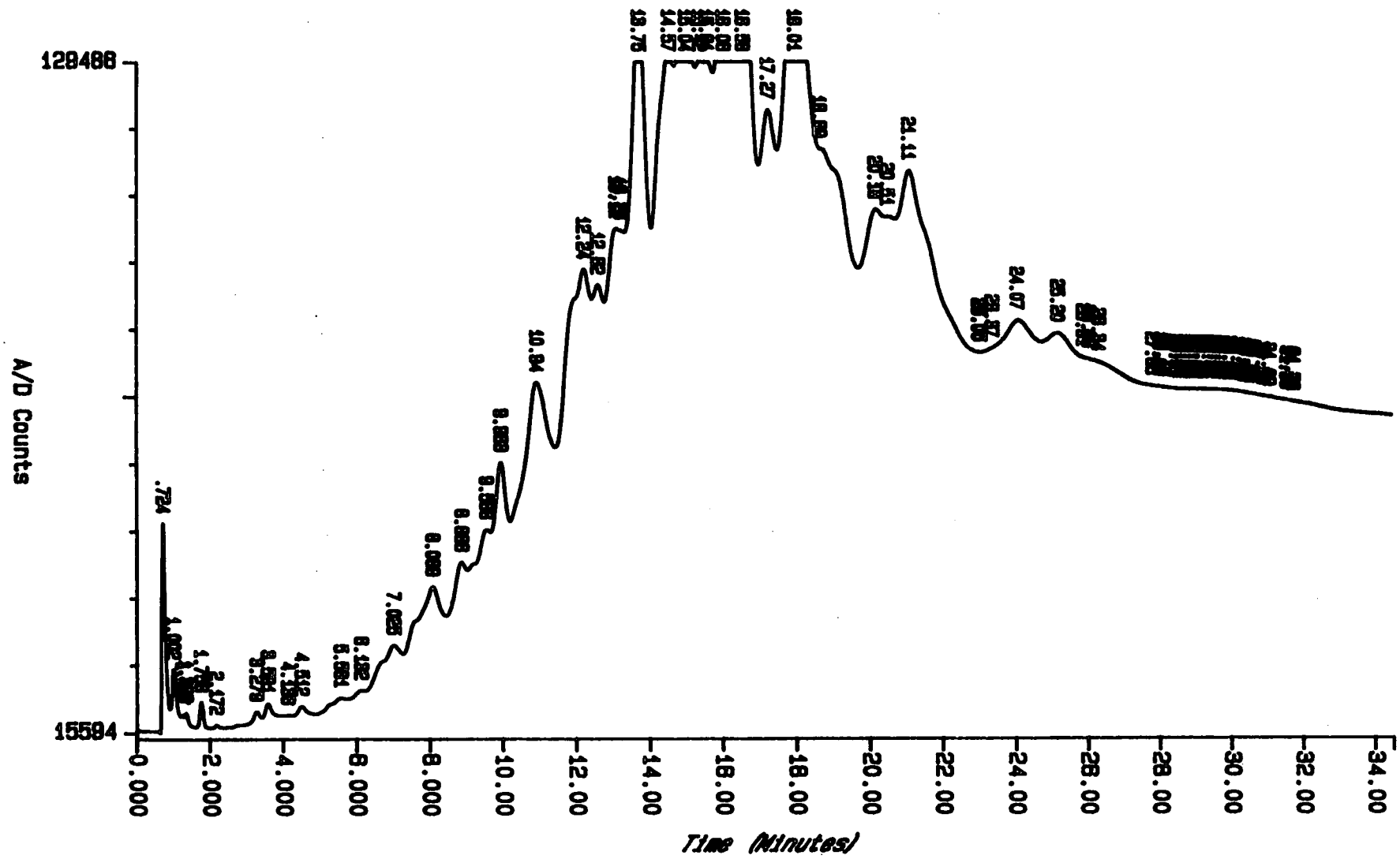


Sample: H5674 Injected at 7:39:39 ON MAY 15, 1985
Raw File: RK1078 Proc File: PK1078 Method: PPST2

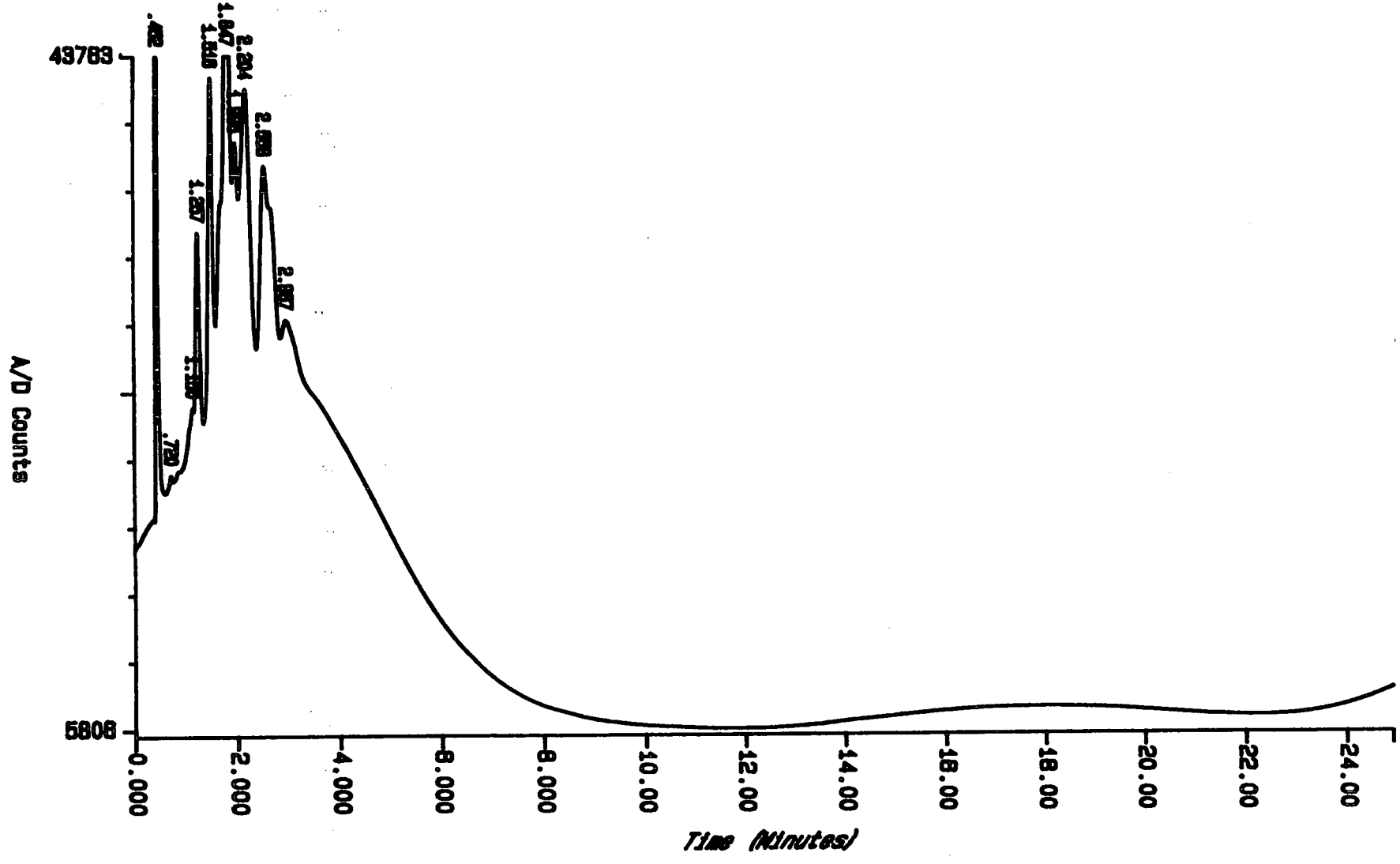

Sample: PPSTB
Raw File: RK1058
Injected at 18:04:17 ON MAY 14, 1985
Proc File: PK1058
Method: PPST2
Time (Minutes)
A/D Counts
531037
15414
34.00
32.00
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.000
6.000
4.000
2.000
0.000
24.42
20.53
18.81
17.58
16.47
16.21
15.21
13.90
13.45
12.58
11.01
8.309
7.844
7.095
6.705
5.843
5.274
4.550
4.154
.721



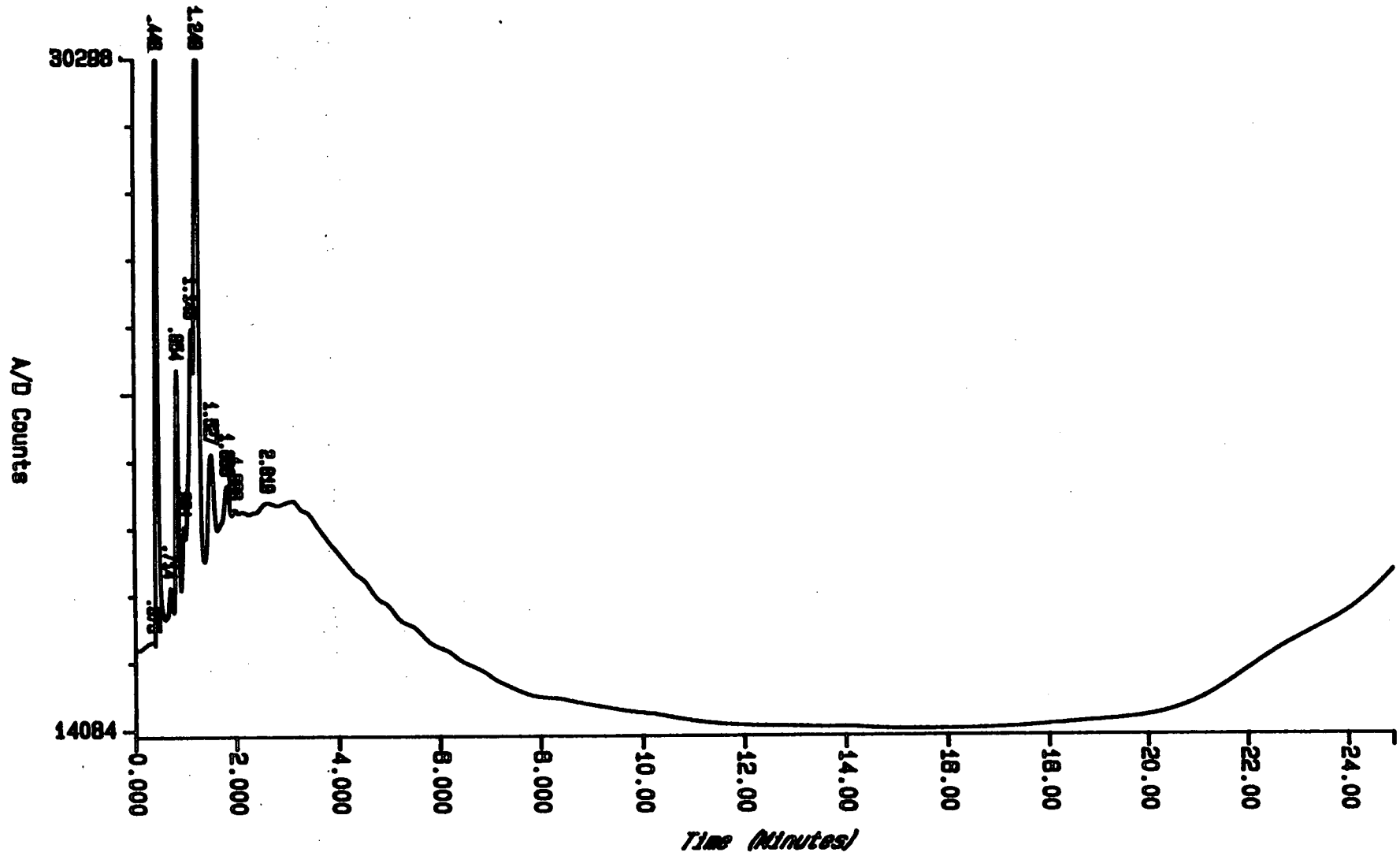
Sample: CHLORB Injected at 22:48:09 ON MAY 14, 1985
Raw File: RK1065 Proc File: PK1065 Method: PPST2



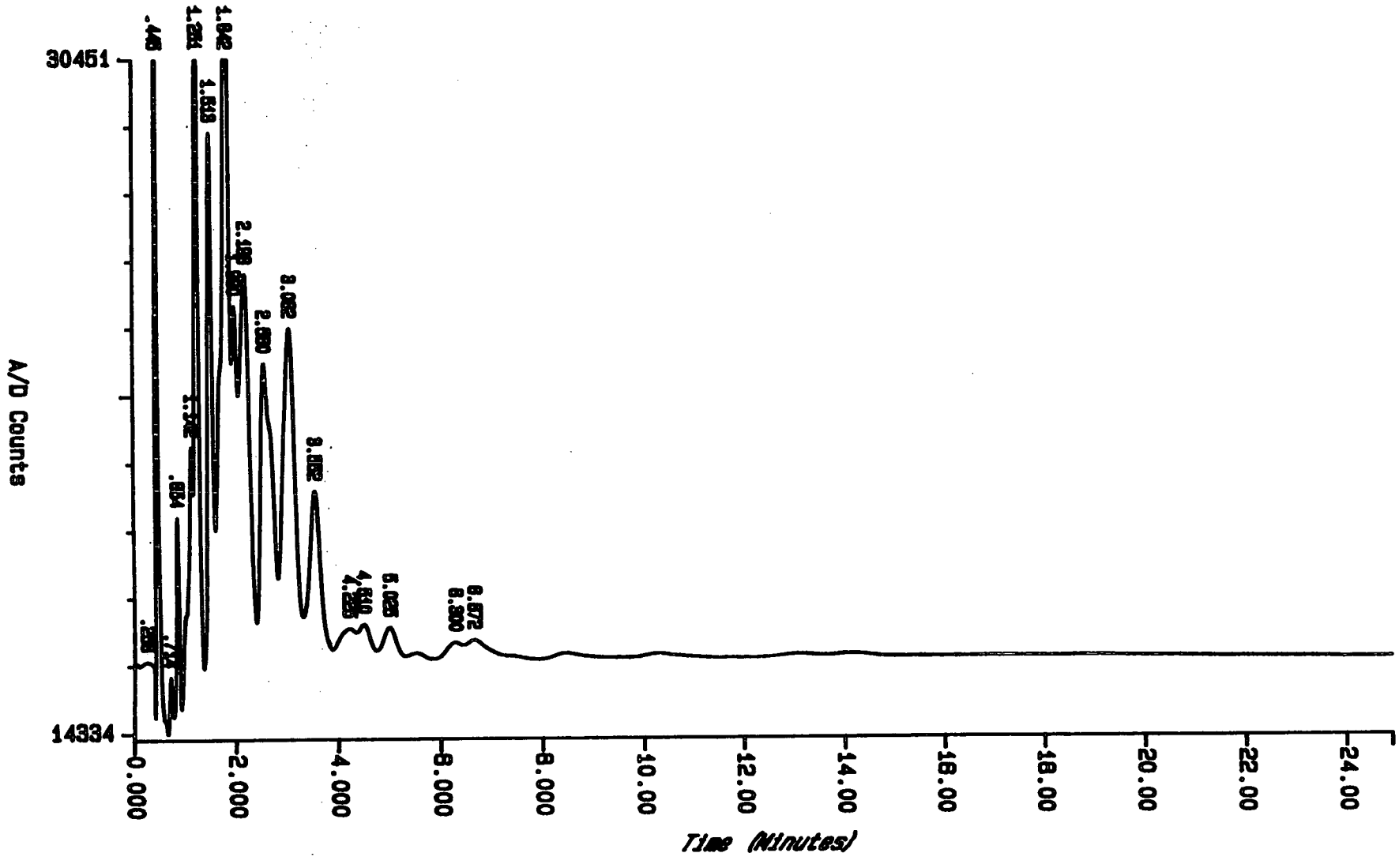
Sample: TOXB Injected at 22:07:30 ON MAY 14, 1985
Raw File: RK1064 Proc File: PK1064 Method: PPST2



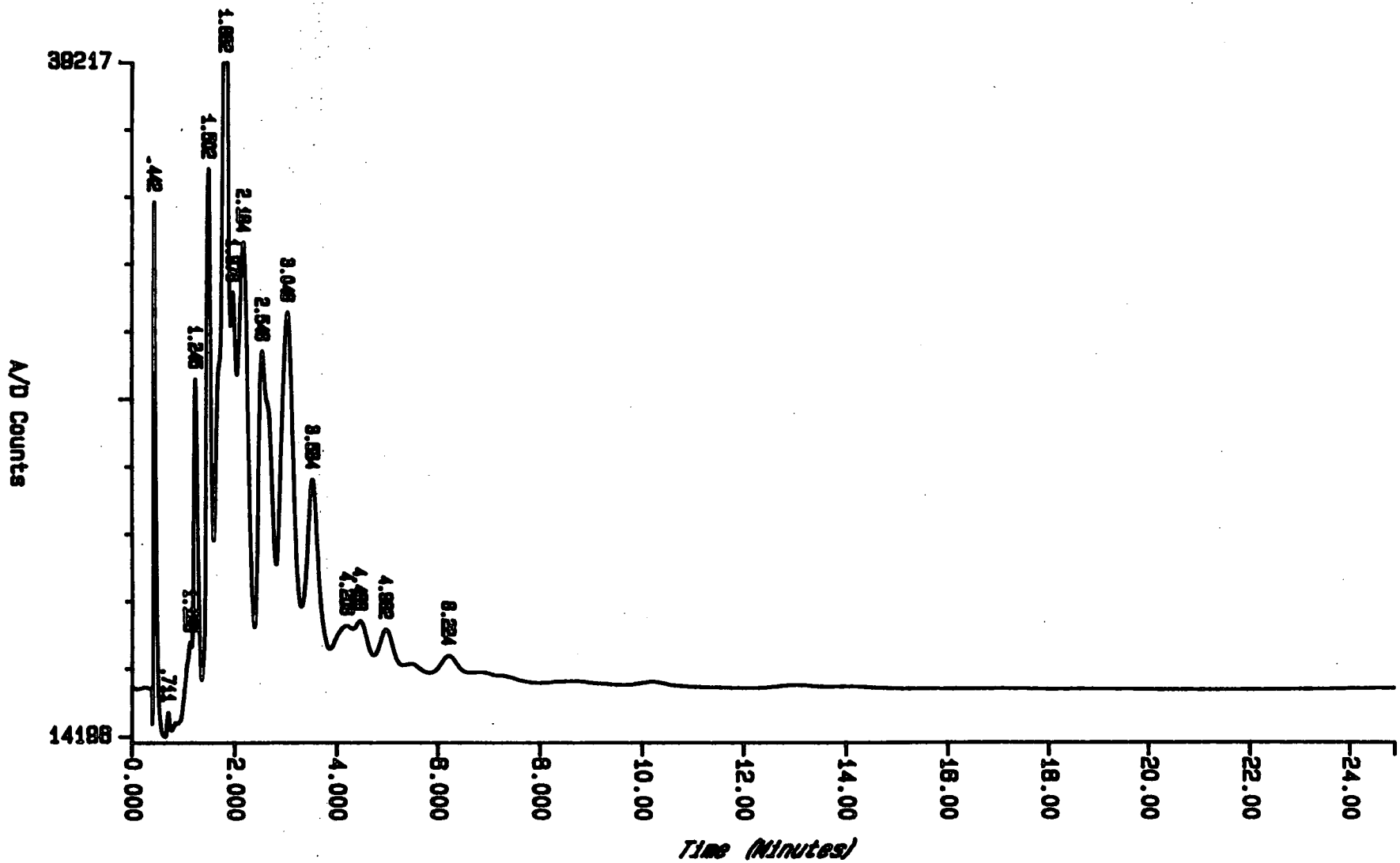
Sample: AR1016-1.0 Injected at 23:46:30 ON MAY 7, 1985
Raw File: RJ0484 Proc File: PJ0484 Method: PCBB8



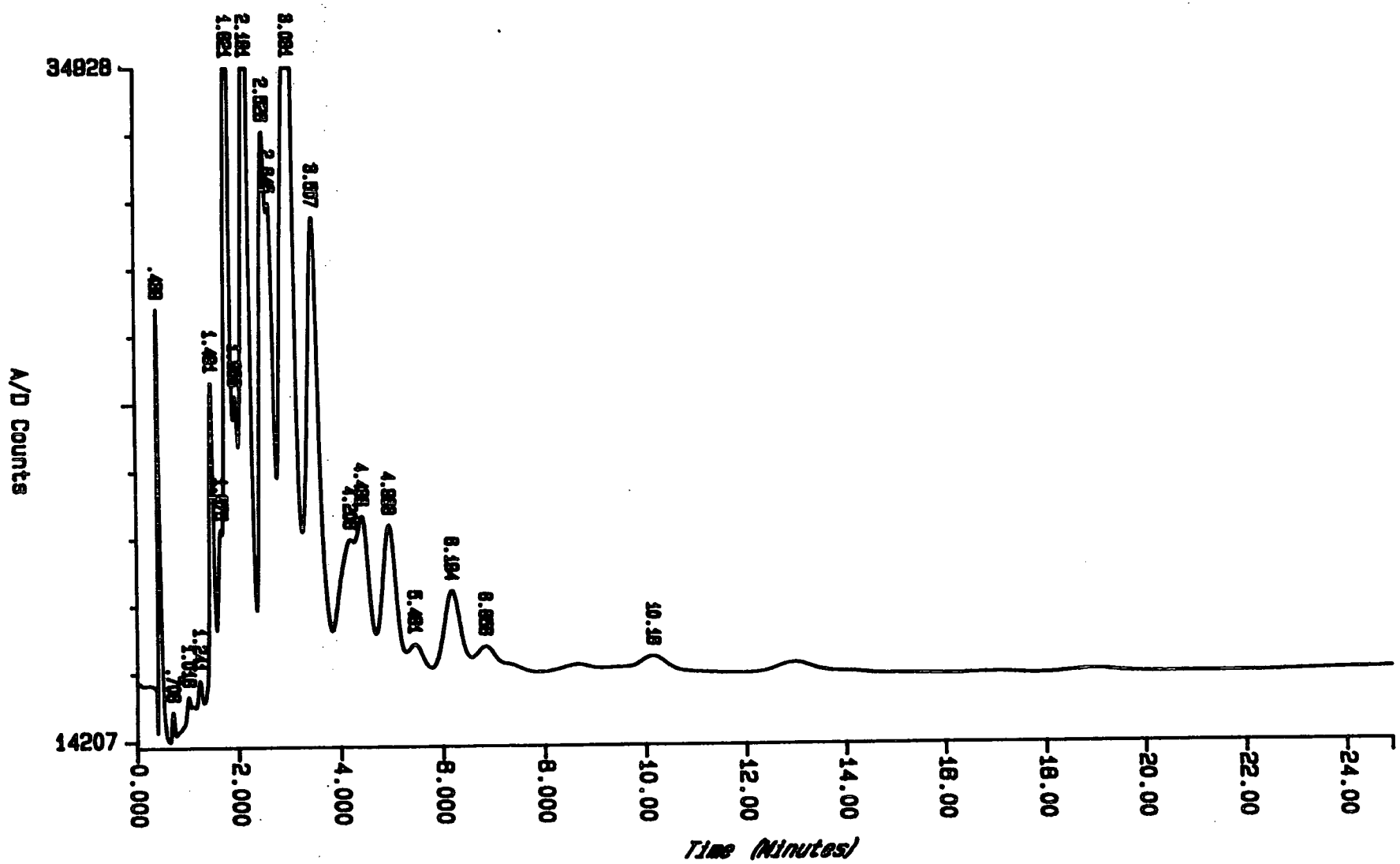
Sample: AR1221-1.0 Injected at 23:18:53 ON MAY 7, 1985
Raw File: RJ0483 Proc File: PJ0483 Method: PCBB8



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

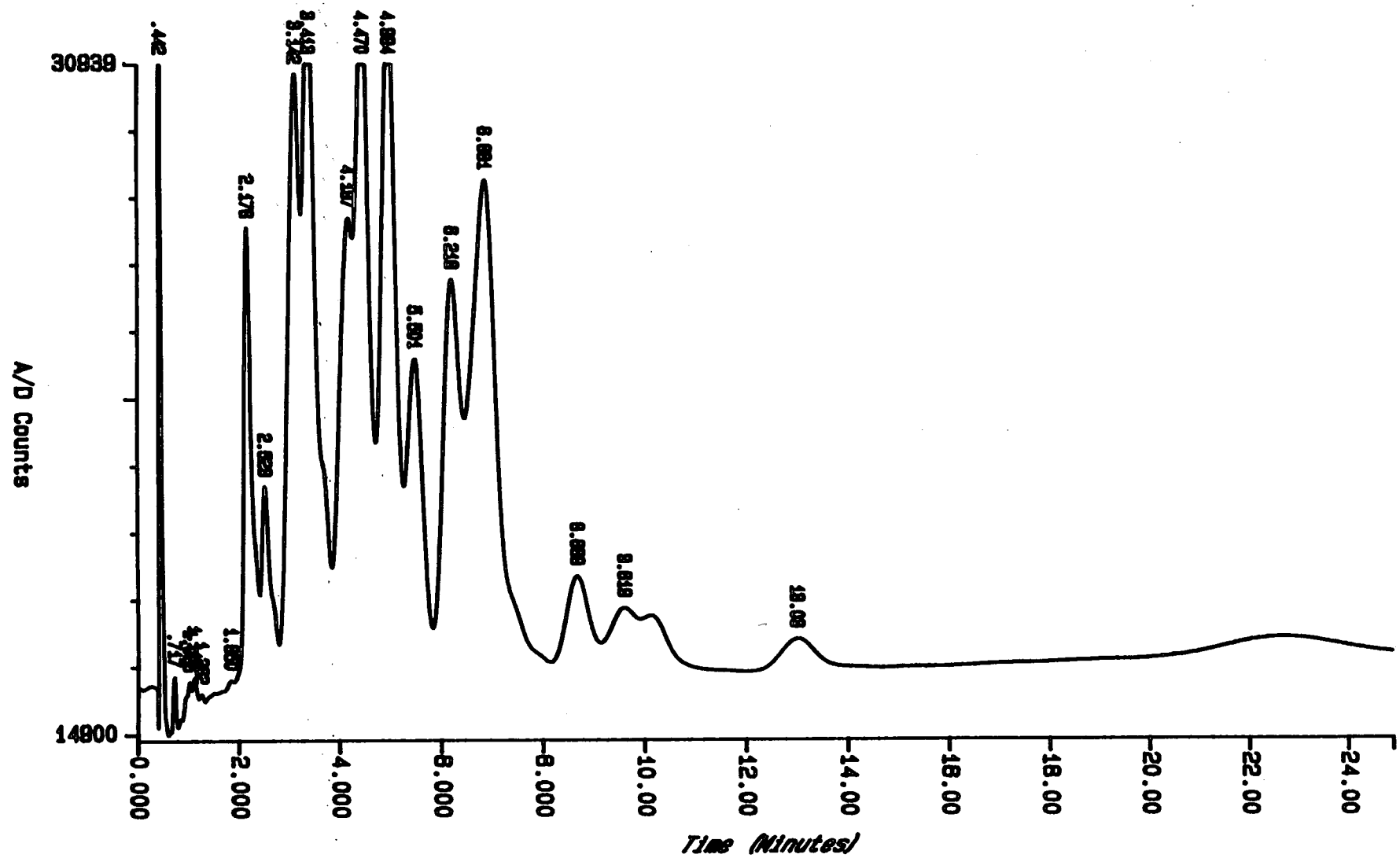


Sample: AR1242-1.0 Injected at 20:33:54 ON MAY 7, 1985
Raw File: RJ0481 Proc File: PJ0481 Method: PCBB8

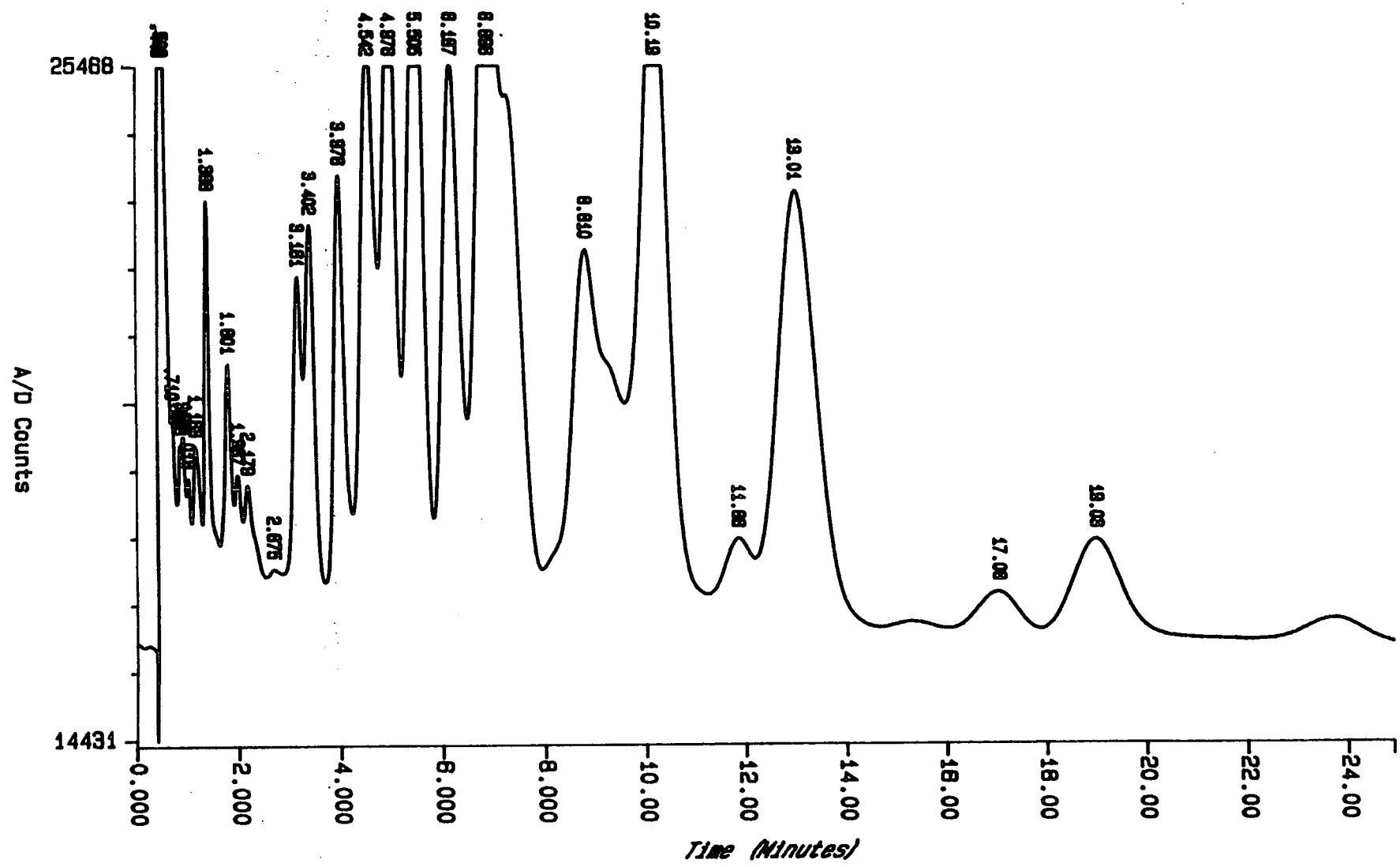


Sample: AR1248-1.0 Injected at 20:06:32 ON MAY 7, 1985
Raw File: RJ0480 Proc File: PJ0480 Method: PCBB8

027



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



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

029

Relative Percent Difference (RPD) for VOA

Job Number	Account Name	Facility	Source	Date	Time	
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	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	
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

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

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

Relative Percent Difference (RPD) for B/N

Job Number	Account Name	Facility	Source	Date	Time	
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	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	
H5674	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	SSOIL4	850501	1037	1

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

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

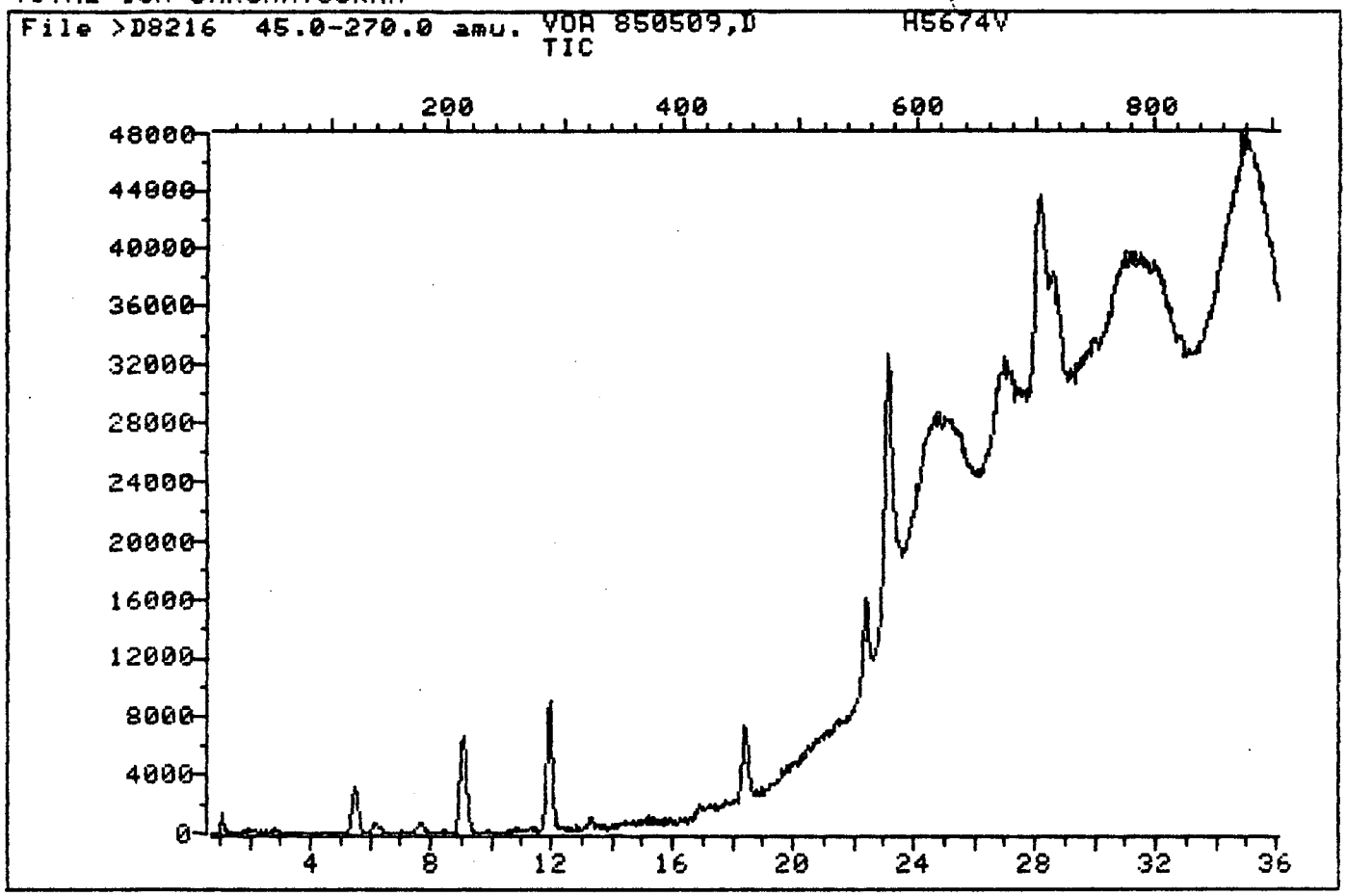
Appendix A

Mass Spectral Data for Quantitated Compounds

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

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

TOTAL ION CHROMATOGRAM



Data File: >D8216::U4
Name: VOA 850509,D
Misc: H5674V

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

Operator ID: SJ3562
Quant Time: 850509 11:42
Injected at: 850509 11:05

QUANT REPORT

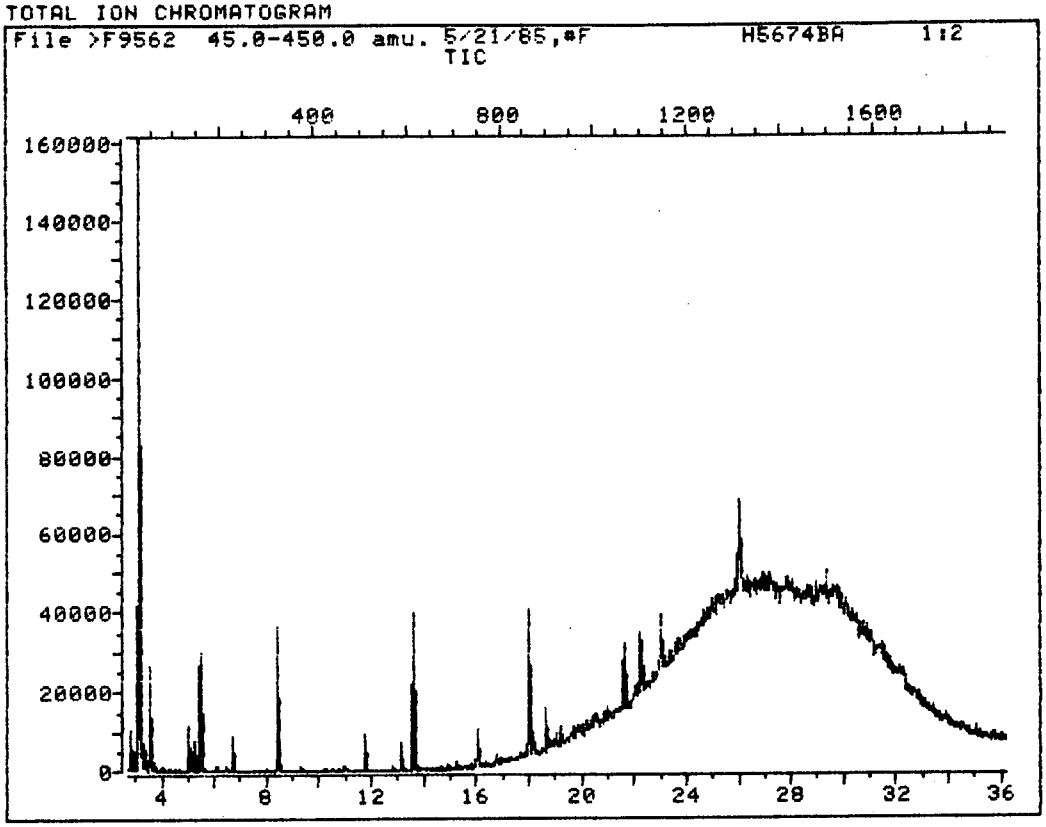
Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850509 11:42
Injected at: 850509 11:05
Data File: >D8216::U4 Dilution Factor: 1.00
Name: VOA 850509,D
Misc: H5674V

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

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane	18.41	454	28583	200.00	NG	96
4)	Benzene	17.01	418	2699	~~10.19~~	NG	86
5)	bis(Chloromethyl)ether	~~18.41~~	~~454~~	~~8737~~	133.27	NG	65
11)	2-Chloroethylvinyl ether	~~17.17~~	~~422~~	~~1491~~	~~49.64~~	~~NG~~	100
21)	Ethylbenzene	~~26.24~~	~~655~~	~~2017~~	~~3.89~~	~~NG~~	91
24)	Methylene chloride	5.55	123	10301	54.44	NG 17 = 7	84
27)	Toluene	23.32	580	6728	~~19.32~~	~~NG~~	92
29)	1,1,1-Trichloroethane	13.32	323	4814	~~18.39~~	~~NG~~	97
30)	1,1,2-Trichloroethane	16.39	402	550	~~8.18~~	~~NG~~	70
32)	Trichlorofluoromethane	7.68	178	4951	14.34	NG	96
35)	1,2-Dichloroethane-D4	11.96	288	47166	246.33	NG	91
36)	Toluene-D8	23.16	576	74406	217.68	NG	96
37)	p-Bromofluorobenzene	28.11	703	30186	143.04	NG	82
38)	*1,4-Dichlorobutane	22.38	556	43720	200.00	NG	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >F9562::U2
Name: 5/21/85,#F
Misc: H5674BA 1:2

BTL#21

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

Operator ID: WW9928
Quant Time: 850522 05:52
Injected at: 850522 05:13

QUANT REPORT

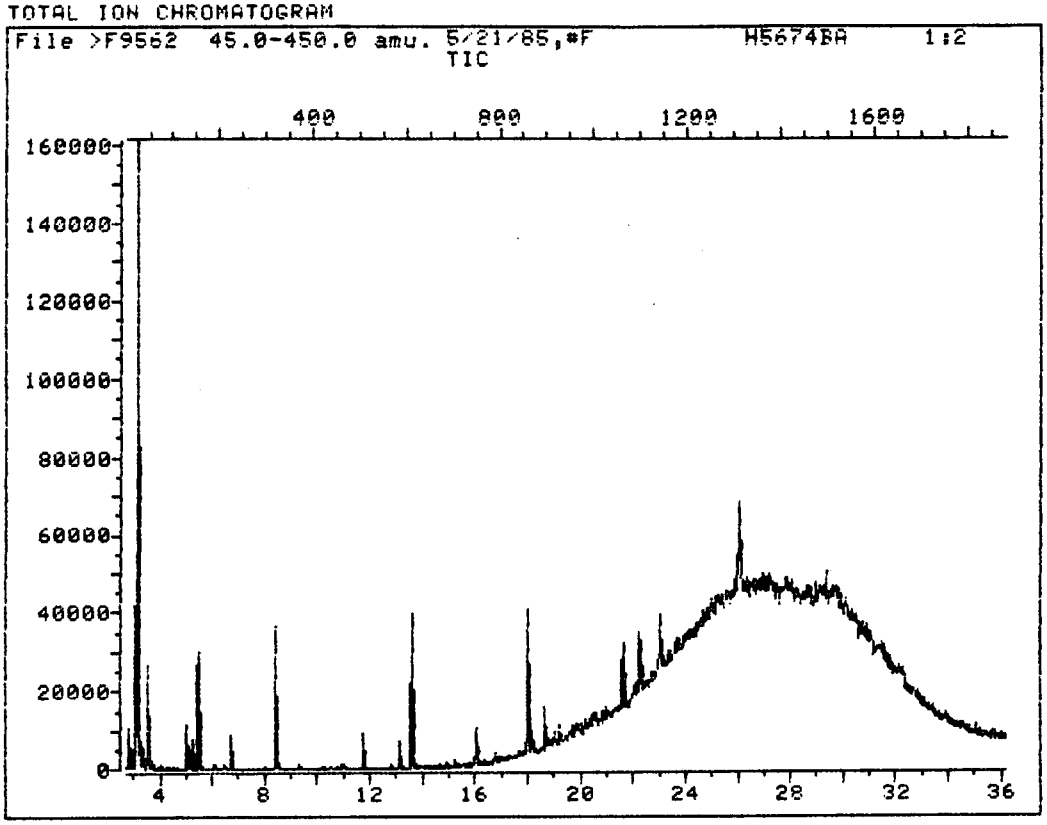
Operator ID: WW9928 Quant Rev: 4 Quant Time: 850522 05:52
Output File: ^F9562::AQ Injected at: 850522 05:13
Data File: >F9562::U2 Dilution Factor: 1.00
Name: 5/21/85,#F
Disc: H5674BA 1:2 BTL#21

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

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.40	152	18472	40.00	UG/ML	87
3)	2-Fluorophenol	3.50	45	12336	40.10	UG/ML	86
5)	Phenol-D5	3.09	22	1052	~~3.00~~	~~UG/ML~~	91
5)	Phenol-D5	3.22	29	286	~~.81~~	~~UG/ML~~	93
5)	Phenol-D5	4.99	129	13662	38.93	UG/ML	99
9)	*d8-Naphthalene	8.44	323	45040	40.00	UG/ML	98
14)	*d10-Acenaphthalene	13.59	613	25654	40.00	UG/ML	93
20)	*d10-Phenanthrene	17.96	859	46846	40.00	UG/ML	96
21)	2,4,6-Tribromophenol	16.00	749	3142	36.65	UG/ML	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >F9562::U2
Name: 5/21/85,#F
Misc: H5674BA 1:2

BTL#21

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

Operator ID: WW9928
Quant Time: 850522 09:48
Injected at: 850522 05:13

QUANT REPORT

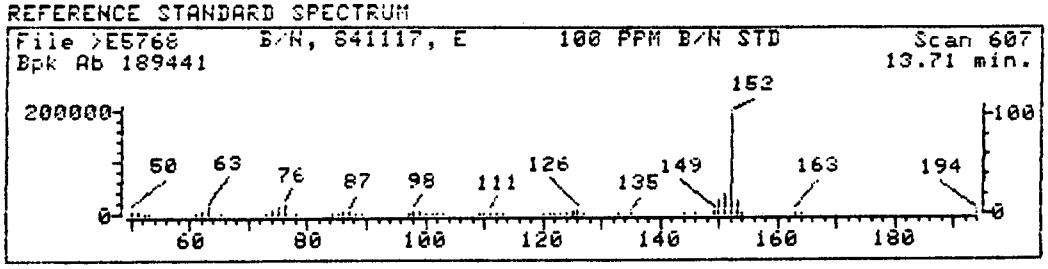
Operator ID: WW9928 Quant Rev: 4 Quant Time: 850522 09:48
Output File: BF9562::AQ Injected at: 850522 05:13
Data File: >F9562::U2 Dilution Factor: 1.00
Name: 5/21/85,#F
Misc: H5674BA 1:2 BTL#21

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

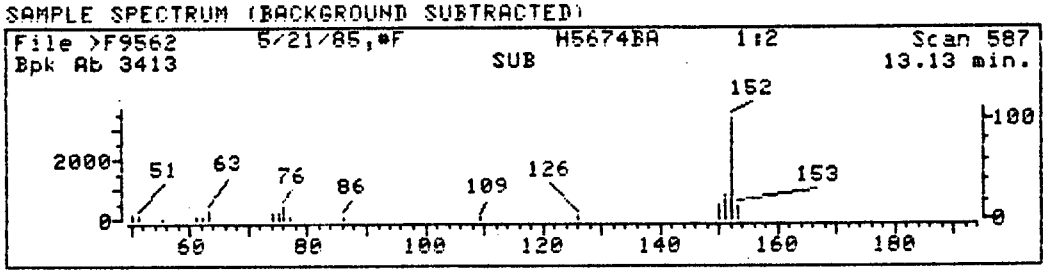
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.40	152	11560	40.00	UG/ML	96
2)	N-Nitrosodimethylamine	3.11	23	1469	~~25.27~~	~~UG/ML~~	100
7)	Nitrobenzene-d5	6.72	226	7360	23.16	UG/ML	90
8)	bis(2-Chloroisopropyl)ether	5.42	153	592	~~11.35~~	~~UG/ML~~	83
9)	*d8-Naphthalene	8.44	323	45040	40.00	UG/ML	93
10)	2-Fluorobiphenyl	11.72	508	8731	23.41	UG/ML	99
17)	Naphthalene	8.49	326	2941	3.14	UG/ML	93
19)	*d10-Acenaphthalene	13.59	613	25654	40.00	UG/ML	93
22)	Dimethyl phthalate	13.59	613	4520	~~5.83~~	~~UG/ML~~	74
23)	Acenaphthylene	13.13	587	9383	9.30	UG/ML	91
32)	*d10-Phenanthrene	17.96	859	46846	40.00	UG/ML	95
35)	Phenanthrene	18.03	863	18621	19.87	UG/ML	94
35)	Phenanthrene	18.17	871	8095	~~8.64~~	~~UG/ML~~	94
36)	Anthracene	18.03	863	18621	~~17.36~~	~~UG/ML~~	93
36)	Anthracene	18.17	871	8095	7.55	UG/ML	92
37)	Di-n-butyl phthalate	20.13	981	1464	~~1.25~~	~~UG/ML~~	26
37)	Di-n-butyl phthalate	20.34	993	1956	1.67	UG/ML	74
38)	Fluoranthene	21.63	1065	25643	25.22	UG/ML	96
38)	Fluoranthene	21.93	1082	3424	~~3.37~~	~~UG~~/ML	94
38)	Fluoranthene	22.16	1095	1670	~~1.64~~	~~UG/ML~~	66
38)	Fluoranthene	22.25	1100	20806	~~20.46~~	~~UG/ML~~	96
40)	Pyrene	21.63	1065	25643	~~24.65~~	~~UG/ML~~	96
40)	Pyrene	21.93	1082	3424	~~3.29~~	~~UG~~/ML	94
40)	Pyrene	22.16	1095	1670	~~1.61~~	~~UG~~/ML	66
40)	Pyrene	22.25	1100	20806	20.00	UG/ML	96
47)	*d12-Chrysene	26.01	1310	28175	40.00	UG/ML	100
56)	Endrin aldehyde	24.47	1224	1064	~~5.10~~	~~UG/ML~~	77
59)	Terphenyl-D14	23.00	1142	15558	21.88	UG/ML	94
61)	Benzo(a)anthracene	25.97	1308	5691	10.17	UG/ML	78
61)	Benzo(a)anthracene	26.10	~~1315~~	~~6486~~	~~11.59~~	~~UG/ML~~	99
62)	Chrysene	25.97	1308	5691	~~7.84~~	~~UG/ML~~	78
62)	Chrysene	26.10	1315	6486	8.93	UG/ML	99
64)	bis(2-Ethylhexyl)phthalate	26.76	1352	1837	2.44	UG/ML	83
66)	Benzo(b)fluoroanthene	29.10	1483	4843	15.02	UG/ML	93
66)	Benzo(b)fluoroanthene	29.94	1530	1397	~~4.33~~	~~UG/ML~~	83
67)	Benzo(k)fluoranthene	29.10	~~1483~~	~~4843~~	~~17.88~~	~~UG/ML~~	92
67)	~~Benzo(k)~~fluoranthene	29.94	~~1530~~	~~1397~~	~~5.16~~	~~UG/ML~~	84
68)	Benzo(a)pyrene	29.10	1483	4843	~~20.82~~	~~UG/ML~~	94
68)	Benzo(a)pyrene	29.94	1530	1397	6.01	UG/ML	82

* Compound is ISTD

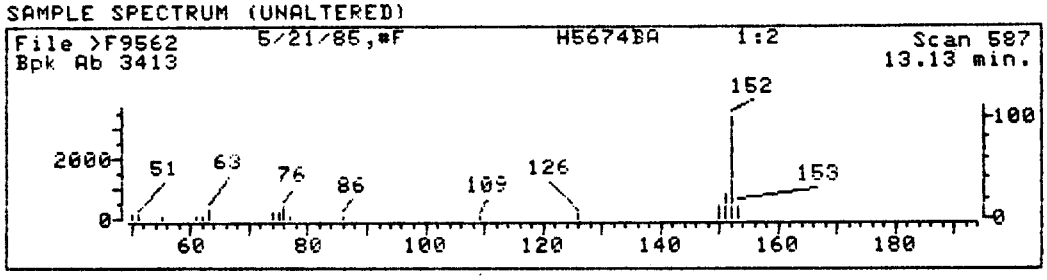
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

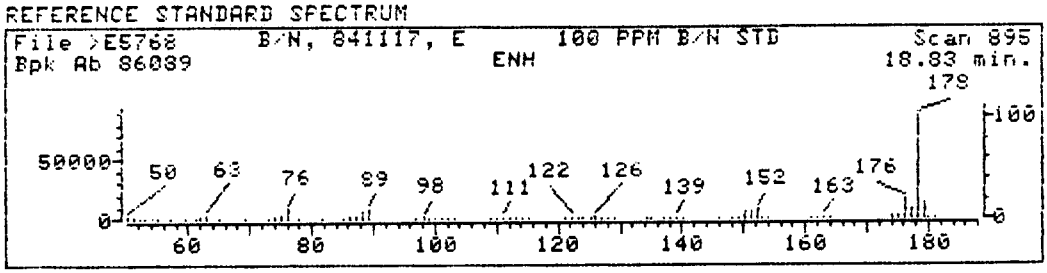


Data File: >F9562::U2
Name: 5/21/85,#F
Misc: H5674BA 1:2
Quant Time: 850522 09:48
Injected at: 850522 05:13

BTL#21

Compound No: 23
Compound Name: Acenaphthylene
Scan Number: 587
Retention Time: 13.13 min.
Area: 9383
Concentration: 9.30 UG/ML
q-value: 91

REFERENCE STANDARD SPECTRUM



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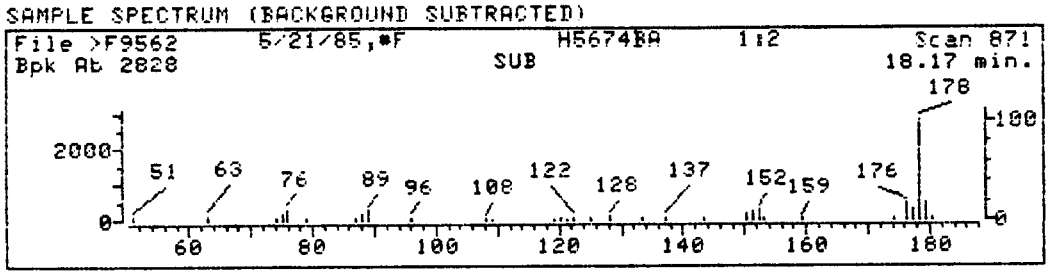

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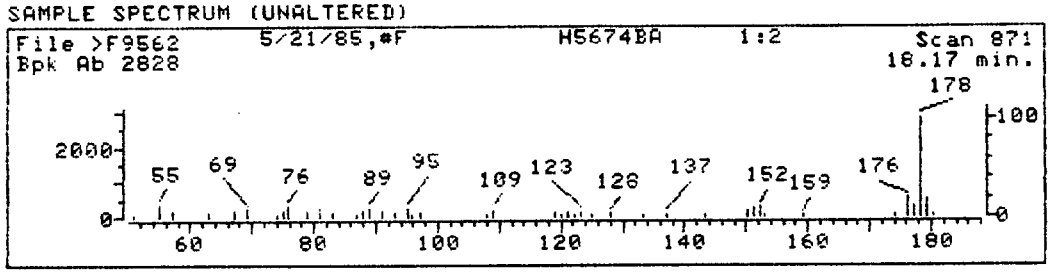
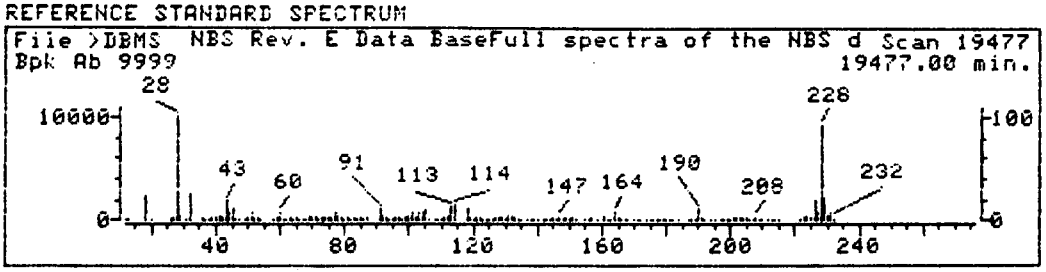


Data File: >F9562::U2
Name: 5/21/85,#F
Misc: H5674BA 1:2 BTL#21
Quant Time: 850522 09:48
Injected at: 850522 05:13

Compound No: 36
Compound Name: Anthracene
Scan Number: 871
Retention Time: 18.17 min.
Area: 8095
Concentration: 7.55 UG/ML
q-value: 92

REFERENCE STANDARD SPECTRUM



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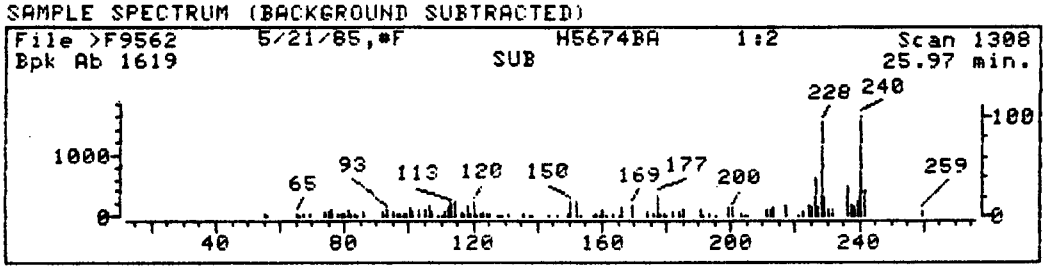

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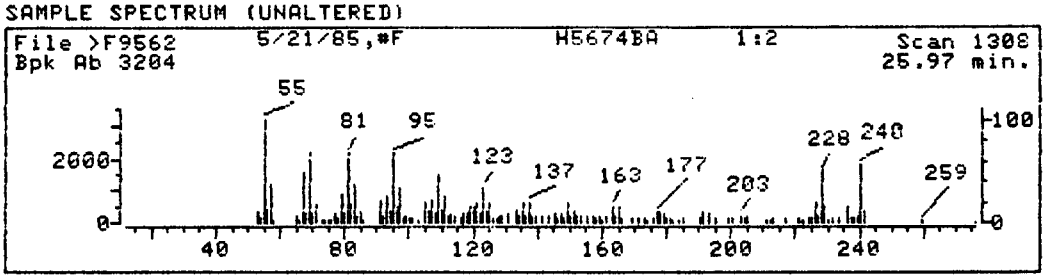
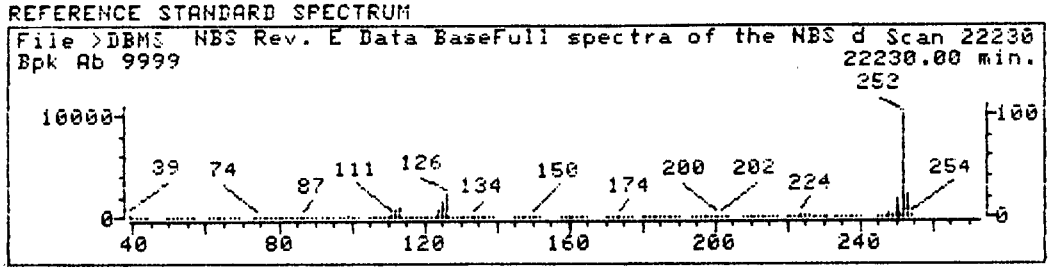


Data File: >F9562::U2
Name: 5/21/85,#F
Misc: H5674BA 1:2 BTL#21
Quant Time: 850522 09:48
Injected at: 850522 05:13

Compound No: 61
Compound Name: Benzo(a)anthracene
Scan Number: 1308
Retention Time: 25.97 min.
Area: 5691
Concentration: 10.17 UG/ML
q-value: 78

REFERENCE STANDARD SPECTRUM



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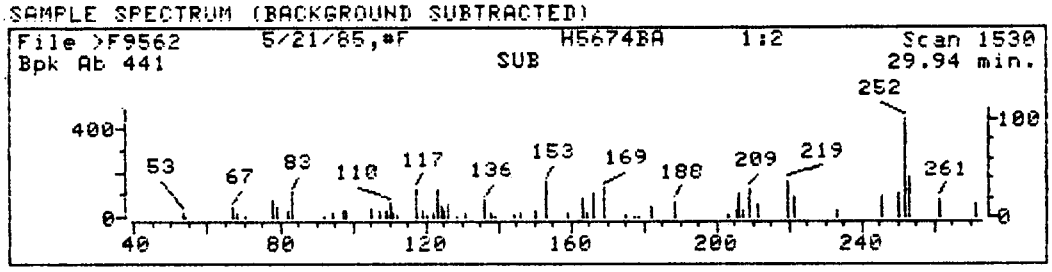

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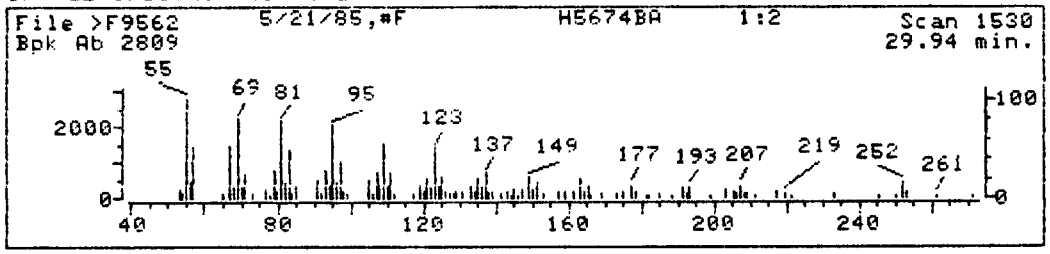
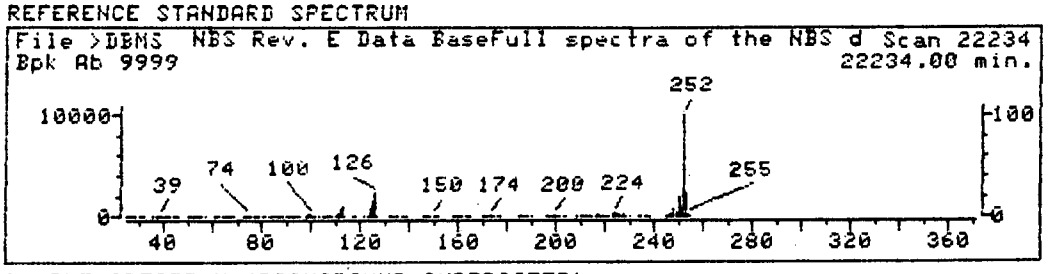


Data File: >F9562::U2
Name: 5/21/85,#F
Misc: H5674BA 1:2
Quant Time: 850522 09:48
Injected at: 850522 05:13

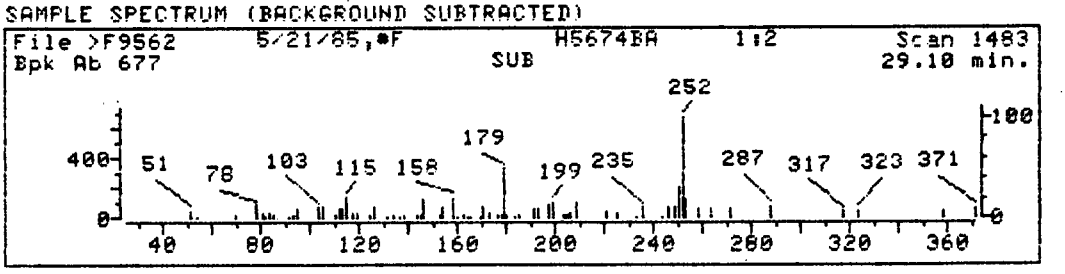
BTL#21

Compound No: 68
Compound Name: Benzo(a)pyrene
Scan Number: 1530
Retention Time: 29.94 min.
Area: 1397
Concentration: 6.01 UG/ML
q-value: 82

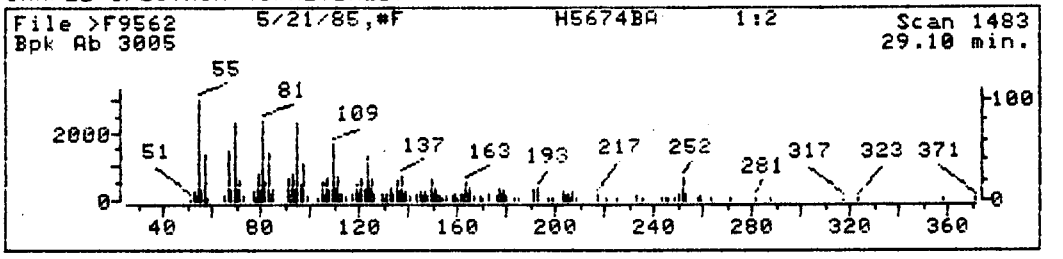
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >F9562::U2
Name: 5/21/85,#F
Misc: H5674BA 1:2 BTL#21
Quant Time: 850522 09:48
Injected at: 850522 05:13

Compound No: 66
Compound Name: Benzo(b)fluoroanthene
Scan Number: 1483
Retention Time: 29.10 min.
Area: 4843
Concentration: 15.02 UG/ML
q-value: 93