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

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	0001

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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

MAY 10, 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
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

NPDES Number	Compound (Acrolein and Acrylonitrile values are screen only.)	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l A	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1V	Acrolein	ND	100.0	ND	ND	ND	800	98	ND	800	99
2V	Acrylonitrile	ND	100.0	ND	ND	ND	80	99	ND	80	109
3V	Benzene	BMDL	4.4	ND	ND	ND	18	104	ND	18	101
4V	bis(Chloromethyl)ether	ND	10.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	4.7	ND	ND	ND	18	85	ND	18	93
6V	Carbon tetrachloride	ND	2.8	ND	ND	ND	18	99	ND	18	107
7V	Chlorobenzene	ND	6.0	1	ND	ND	18	105	ND	18	104
8V	Chlorodibromomethane	ND	3.1	ND	ND	ND	18	99	ND	18	103
9V	Chloroethane	ND	10.0	ND	ND	ND	18	106	ND	18	83
10V	2-Chloroethylvinyl ether	ND	10.0	ND	ND	ND	18	70	ND	18	70
11V	Chloroform	ND	1.6	ND	ND	ND	18	103	ND	18	104
12V	Dichlorobromomethane	ND	2.2	ND	ND	ND	18	99	ND	18	100
13V	Dichlorodifluoromethane	ND	10.0	ND	ND	ND	0	-	ND	0	-
14V	1,1-Dichloroethane	5.5	4.7	ND	ND	ND	18	100	ND	18	101
15V	1,2-Dichloroethane	ND	2.8	ND	ND	ND	18	102	ND	18	102
16V	1,1-Dichloroethylene	ND	2.8	ND	ND	ND	18	100	ND	18	101
17V	1,2-Dichloropropane	ND	6.0	ND	ND	ND	18	100	ND	18	99
18V	cis-1,3-Dichloropropylene	ND	5.0	ND	ND	ND	18	101	ND	18	102
19V	Ethylbenzene	BMDL	7.2	1	2	ND	18	107	1	18	98
20V	Methyl bromide	ND	10.0	ND	ND	ND	18	138	ND	18	117
21V	Methyl chloride	ND	10.0	ND	ND	ND	18	98	ND	18	95
22V	Methylene chloride	ND	2.8	ND	ND	8	18	71	ND	18	61
23V	1,1,2,2-Tetrachloroethane	ND	6.9	ND	ND	ND	18	96	ND	18	108
24V	Tetrachloroethylene	9.3	4.1	ND	ND	ND	18	104	ND	18	107
25V	Toluene	16.4	6.0	ND	ND	BMDL	18	101	ND	18	100
26V	1,2-Trans-dichloroethylene	2.8	1.6	ND	ND	ND	18	100	ND	18	102
27V	1,1,1-Trichloroethane	BMDL	3.8	ND	ND	4	18	88	ND	18	90
28V	1,1,2-Trichloroethane	ND	5.0	ND	ND	ND	18	101	ND	18	84
29V	Trichloroethylene	ND	1.9	ND	ND	ND	18	103	ND	18	100
30V	Trichlorofluoromethane	ND	10.0	ND	3	ND	18	103	ND	18	103
31V	Vinyl chloride	ND	10.0	ND	ND	ND	18	109	ND	18	96
18V	trans-1,3-Dichloropropylene	ND	10.0	ND	ND	ND	18	101	ND	18	92

A EPA published Method Detection Limit.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

JUN 12, 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
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l A	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1A	2-Chlorophenol	ND	6.6	ND	ND	ND	100	85	ND	111	86
2A	2,4-Dichlorophenol	ND	5.4	ND	ND	ND	100	83	ND	111	91
3A	2,4-Dimethylphenol	22.4	5.4	ND	ND	ND	100	6B	ND	111	2B
4A	4,6-Dinitro-o-cresol	ND	48.0	ND	ND	ND	100	74	ND	111	73
5A	2,4-Dinitrophenol	ND	84.0	ND	ND	ND	100	68	ND	111	68
6A	2-Nitrophenol	ND	7.2	ND	ND	ND	100	85	ND	111	86
7A	4-Nitrophenol	ND	4.8	ND	ND	ND	100	70	ND	111	69
8A	p-Chloro-m-cresol	ND	6.0	ND	ND	ND	100	43	ND	111	41
9A	Pentachlorophenol	ND	7.2	ND	ND	ND	100	87	ND	111	80
10A	Phenol	20.3	3.0	ND	ND	ND	100	90	ND	111	87
11A	2,4,6-Trichlorophenol	ND	5.4	ND	ND	ND	100	90	ND	111	85

A ETC established Method Detection Limit for this particular sample.

B Recovery normally low using EPA Protocol Method 625.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 21, 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
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l [a]	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen Added ug/l	% Recov
1B	Acenaphthene	ND	1.9	ND	ND	ND	100	82	ND	100	82
2B	Acenaphthylene	ND	3.5	ND	ND	ND	100	89	ND	100	86
3B	Anthracene	ND	1.9	ND	ND	ND	100	82	ND	100	83
4B	Benzidine	ND	44.0	ND	ND	ND	100	37[c]	ND	100	38[c]
5B	Benzo(a)anthracene	ND	7.8	ND	ND	ND	100	85	ND	100	88
6B	Benzo(a)pyrene	ND	2.5	ND	ND	ND	100	79	ND	100	85
7B	Benzo(b)fluoroanthene	ND	4.8	ND	ND	ND	100	45	ND	100	59
8B	Benzo(ghi)perylene	ND	4.1	ND	ND	ND	0	-	ND	0	-
9B	Benzo(k)fluoranthene	ND	2.5	ND	ND	ND	100	87	ND	100	67
10B	bis(2-Chloroethoxy)methane	ND	5.3	ND	ND	ND	100	98	ND	100	93
11B	bis(2-Chloroethyl) ether	ND	5.7	ND	ND	ND	100	89	ND	100	86
12B	bis(2-Chloroisopropyl)ether	ND	5.7	ND	ND	ND	100	66	ND	100	71
13B	bis(2-Ethylhexyl)phthalate	ND	10.0 [b]	ND	ND	ND	100	81	ND	100	84
14B	4-Bromophenyl phenyl ether	ND	1.9	ND	ND	ND	100	82	ND	100	83
15B	Butyl benzyl phthalate	ND	10.0 [b]	ND	ND	ND	100	77	ND	100	81
16B	2-Chloronaphthalene	ND	1.9	ND	ND	ND	100	91	ND	100	91
17B	4-Chlorophenyl phenyl ether	ND	4.2	ND	ND	ND	100	87	ND	100	87
18B	Chrysene	ND	2.5	ND	ND	ND	100	85	ND	100	92
19B	Dibenzo(a,h)anthracene	ND	2.5	ND	ND	ND	0	-	ND	0	-
20B	1,2-Dichlorobenzene	ND	1.9	ND	ND	ND	100	50	ND	100	46
21B	1,3-Dichlorobenzene	ND	1.9	ND	ND	ND	100	42	ND	100	44
22B	1,4-Dichlorobenzene	ND	4.4	ND	ND	ND	100	45	ND	100	42
23B	3,3'-Dichlorobenzidine	ND	16.5	ND	ND	ND	100	80	ND	100	79
24B	Diethyl phthalate	ND	10.0 [b]	ND	ND	ND	100	31	ND	100	34
25B	Dimethyl phthalate	BMDL	10.0 [b]	ND	ND	ND	100	3[c]	ND	100	0[c]
26B	Di-n-butyl phthalate	ND	10.0 [b]	ND	ND	BMDL	100	79	2	100	87
27B	2,4-Dinitrotoluene	ND	5.7	ND	ND	ND	100	95	ND	100	94
28B	2,6-Dinitrotoluene	ND	1.9	ND	ND	ND	100	91	ND	100	88
29B	Di-n-octyl phthalate	ND	10.0 [b]	ND	ND	ND	100	82	ND	100	89
30B	1,2-Diphenylhydrazine	ND	10.0	ND	ND	ND	100	86	ND	100	85
31B	Fluoranthene	ND	2.2	ND	ND	ND	100	91	ND	100	94
32B	Fluorene	ND	1.9	ND	ND	ND	100	88	ND	100	87

ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 21, 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
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l A	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
33B	Hexachlorobenzene	ND	1.9	ND	ND	ND	100	63	ND	100	64
34B	Hexachlorobutadiene	ND	.90	ND	ND	ND	100	62	ND	100	62
35B	Hexachlorocyclopentadiene	ND	10.0	ND	ND	ND	0	-	ND	0	-
36B	Hexachloroethane	ND	1.6	ND	ND	ND	100	36	ND	100	38
37B	Indeno(1,2,3-c,d)pyrene	ND	3.7	ND	ND	ND	0	-	ND	0	-
38B	Isophorone	BMDL	2.2	ND	ND	ND	100	86	ND	100	84
39B	Naphthalene	ND	1.6	ND	ND	ND	100	71	ND	100	70
40B	Nitrobenzene	ND	1.9	ND	ND	ND	100	86	ND	100	87
41B	N-Nitrosodimethylamine	ND	10.0	ND	ND	ND	0	-	ND	0	-
42B	N-Nitrosodi-n-propylamine	ND	10.0	ND	ND	ND	100	73	ND	100	78
43B	N-Nitrosodiphenylamine	ND	1.9	ND	ND	ND	100	93	ND	100	95
44B	Phenanthrene	ND	5.4	ND	ND	ND	100	84	ND	100	86
45B	Pyrene	ND	1.9	ND	ND	ND	100	84	ND	100	92
46B	1,2,4-Trichlorobenzene	ND	1.9	ND	ND	ND	100	144	ND	100	134

A EPA published Method Detection Limit.

B ETC established Method Detection Limit for this particular sample.

C Recovery normally low using EPA Protocol Method 625.

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

MAY 21, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l A	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1P	Aldrin	ND	1.9	ND	ND	ND	100	79	ND	100	84
2P	Alpha-BHC	ND	10.0	ND	ND	ND	100	31	ND	100	37
3P	Beta-BHC	ND	4.2	ND	ND	ND	100	74	ND	100	79
4P	Gamma-BHC	ND	10.0	ND	ND	ND	100	32	ND	100	38
5P	Delta-BHC	ND	3.1	ND	ND	ND	100	29	ND	100	29
6P	Chlordane	ND	10.0	ND	ND	ND	200	21	ND	200	24
7P	4,4'-DDT	ND	4.7	ND	ND	ND	100	56B	ND	100	62B
8P	4,4'-DDE	ND	5.6	ND	ND	ND	100	63	ND	100	66
9P	4,4'-DDD	ND	2.8	ND	ND	ND	100	56	ND	100	62
10P	Dieldrin	ND	2.5	ND	ND	ND	100	52	ND	100	60
11P	Endosulfan I	ND	10.0	ND	ND	ND	100	24	ND	100	23
12P	Endosulfan II	ND	10.0	ND	ND	ND	100	21	ND	100	22
13P	Endosulfan sulfate	ND	5.6	ND	ND	ND	100	35B	ND	100	43B
14P	Endrin	ND	10.0	ND	ND	ND	100	52	ND	100	60
15P	Endrin aldehyde	ND	10.0	ND	ND	ND	100	25	ND	100	30
16P	Heptachlor	ND	1.9	ND	ND	ND	100	76	ND	100	80
17P	Heptachlor epoxide	ND	2.2	ND	ND	ND	100	58	ND	100	61
18P	PCB-1242	ND	36.0	ND	ND	ND	0	-	ND	0	-
19P	PCB-1254	ND	36.0	ND	ND	ND	0	-	ND	0	-
20P	PCB-1221	ND	30.0	ND	ND	ND	0	-	ND	0	-
21P	PCB-1232	ND	36.0	ND	ND	ND	0	-	ND	0	-
22P	PCB-1248	ND	36.0	ND	ND	ND	0	-	ND	0	-
23P	PCB-1260	ND	36.0	ND	ND	ND	100	21	ND	100	16
24P	PCB-1016	ND	36.0	ND	ND	ND	0	-	ND	0	-
25P	Toxaphene	ND	10.0	ND	ND	ND	0	-	ND	0	-

A EPA published Method Detection Limit.

B Recovery normally low using EPA Protocol Method 625.

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JUN 11, 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
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

NPDES Number	Compound		Results: Sample Concen.	Results: MDL
1M	Antimony	ug/l	ND	80
2M	Arsenic	ug/l	11	10
3M	Beryllium	ug/l	ND	1
4M	Cadmium	ug/l	ND	3
5M	Chromium	ug/l	ND	20
6M	Copper	ug/l	20	10
7M	Lead	ug/l	870	50
8M	Mercury	ug/l	ND	.6
9M	Nickel	ug/l	BMDL	20
10M	Selenium	ug/l	ND	5
11M	Silver	ug/l	ND	10
12M	Thallium	ug/l	ND	5
13M	Zinc	ug/l	150	4
14M	Cyanide, Total	mg/l	<.025	.025
15M	Phenolics, Total	mg/l	<.06	.01

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

May 12, 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
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula	Estimated Concen. ug/l		
1 Unknown	7	1.30	-	-	-	10		
2 Dimethyl sulfide	148	8.72	62	75183	C_2H_6S	16		
3 Alkane	614	24.88	-	-	C_nH_{2n+2}	25		
4 Xylene	832	33.36	106	-	C_8H_{10}	12		
5 Xylene	859	34.44	106	-	C_8H_{10}	16		

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ETC ENVIRONMENTAL TESTING and CERTIFICATION

June 11, 1985

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds – GC/MS Analysis Data – Acid Fraction (QR07)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula	Estim. Concen. ug/l		
1 1,3 Isobenzofurandione	436	10.71	148	85449	$C_8H_4O_3$	32		
2 Succinimide,N-methoxy-	521	12.23	129	5904507	$C_5H_7NO_3$	62		
3 unknown	617	13.95	-	-	-	248		
4 Alkane	769	16.67	-	-	C_nH_{2n+2}	24		

ETC ENVIRONMENTAL TESTING and CERTIFICATION

May 21, 1985

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds – GC/MS Analysis Data – Base Neutral (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula	Estimated Concen. ug/l		
1 Unknown	334	8.03	-	-	-	8.9		
2 Unknown	487	10.23	-	-	-	9.0		
3 Unknown	729	13.71	-	-	-	8.2		
4 5-propyl Tridecane	866	15.69	226	55045119	$C_{16}H_{34}$	8.7		
5 Unknown	946	16.84	-	-	-	8.3		
6 2,6,8-trimethyl Decane	1068	18.61	184	62108263	$C_{13}H_{28}$	8.4		
7 2,4-dimethyl undecane	1127	19.46	184	17312822	$C_{13}H_{28}$	22.2		
8 Unknown	1312	22.14	-	-	-	12.5		

May 21, 1985

TABLE 2: METHOD PERFORMANCE DATA

Surrogate Recovery Water- GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

H5677

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	92	86	119
Bromofluorobenzene	.250	97	85	121
1,2-Dichloroethane-D4	.250	99	77	120
ACID FRACTION				
Phenol-D5	100	46	15	103
2-Fluorophenol	100	41	23	121
2,4,6-Tribromophenol	100	70	10	130
BASE/NEUTRAL FRACTION				
Nitrobenzene-D5	50	64	41	120
2-Fluorobiphenyl	50	62	44	119
Terphenyl-D14	50	45	33	128

* IFB EPA Control Limits.

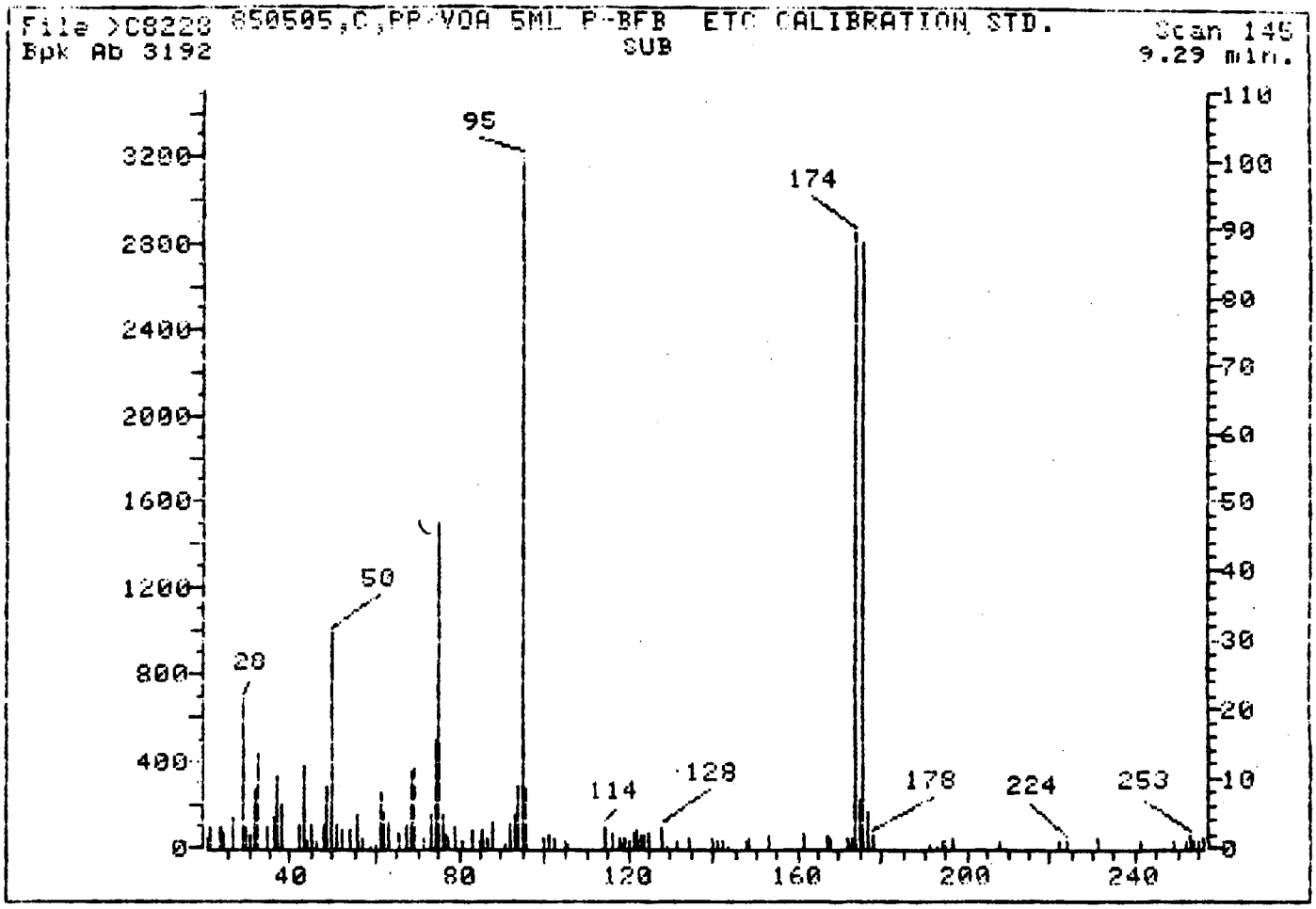


TABLE 2: METHOD PERFORMANCE DATA (QR21)

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	30.80	30.80	Ok
75	30-60% of mass 95	46.93	46.93	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.30	8.30	Ok
173	Less then 1% of mass 95	.50	.50	Ok
174	Greater then 50% of mass 95	89.35	89.35	Ok
175	5-9% of mass 174	7.11	7.96	Ok
176	95-101% of mass 174	88.06	98.56	Ok
177	5-9% of mass 176	5.01	5.69	Ok

Injection Date: 05/05/85 Analyst: [illegible]
Injection Time: 21:46 Processor: [illegible]
Run No: >C8228 QC Batch: [illegible]
Spectrun No: 145 Samples: H5679, H5680, H5677
H5678, H5567, H3269
H0261, H5657, H6217

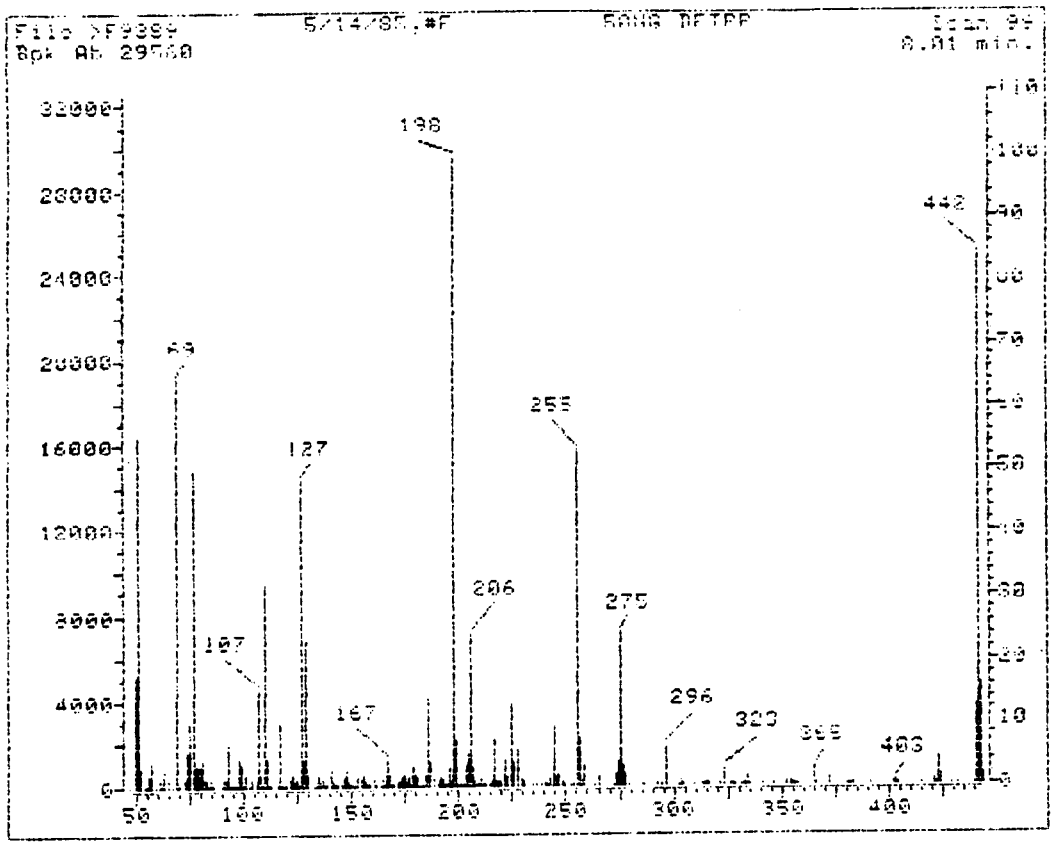


TABLE 2: METHOD PERFORMANCE DATA (QR22)

GC/MS Tuning Data - Decafluorotriphenylphosphine (DFTPP) For Acids Analysis

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	55.51	55.51	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	64.71	64.71	Ok
70	Less than 2% of mass 69	.17	.17	Ok
127	40-60% of mass 198	48.60	48.60	Ok
197	Less than 1% of mass 198	.61	.61	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	7.13	7.13	Ok
275	10-30% of mass 198	24.07	24.07	Ok
365	Greater than 1% of mass 198	2.66	2.66	Ok
441	Less then mass 443	12.65	79.31	Ok
442	Greater than 40% of mass 198	84.14	84.14	Ok
443	17-23% of mass 442	15.94	18.95	Ok

Injection Date: 05/14/85 Analyst: Wen Wen Chi
Injection Time: 09:56 Processor: Mita Mukh
Run No: XF9389 QC Batch: QA 2996
Spectrum No: 99 Samples: ~~HAS~~ QC 2996A, QC 2996 AS. ~~Q~~ H5680 AS, H4520, H5648-H564 H5653-H5656, H5658, H5677-H5680, H5650

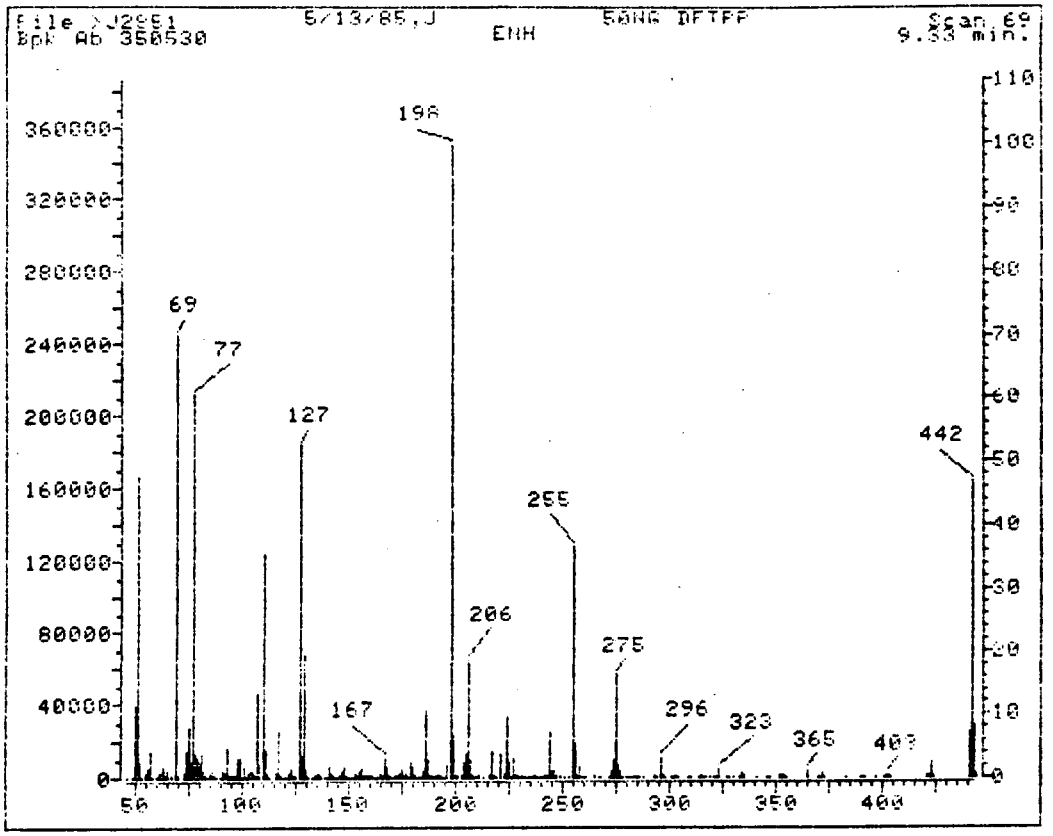


TABLE 2: METHOD PERFORMANCE DATA (QR23)

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	47.40	47.40	OK
68	Less then 2% of mass 69	0.00	0.00	OK
69	(reference only)	69.72	69.72	OK
70	Less then 2% of mass 69	.39	.56	OK
127	40-60% of mass 198	52.40	52.40	OK
197	Less then 1% of mass 198	0.00	0.00	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	16.02	16.02	OK
365	Greater then 1% of mass 198	1.13	1.13	OK
441	Less then mass 443	7.12	86.40	OK
442	Greater then 40% of mass 198	46.55	46.55	OK
443	17-23% of mass 442	8.24	17.70	OK

Injection Date: 05/13/85 Analyst: [illegible]
Injection Time: 11:43 Processor: [illegible]
Run No: >J2851 QC Batch: QC2996B
Spectrum No: 69 Samples: H5648-H5650, H5653-H5656
H5677-H5680, H5658

Relative Percent Difference (RPD) for VOA

Job Number	Account Name	Facility	Source	Date	Time	
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

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

Parameter	REP 1 ug/l	REP 2 ug/l	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	1	ND	200
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	1	2	67
Methyl bromide	ND	ND	0
Methyl chloride	ND	ND	0
Methylene chloride	ND	ND	0
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	ND	3	200
Vinyl chloride	ND	ND	0
trans-1,3-Dichloropropylene	ND	ND	0

Relative Percent Difference (RPD) for ACID

Job Number	Account Name	Facility	Source	Date	Time	
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

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

Parameter	REP 1 ug/l	REP 2 ug/l	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	
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

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

Parameter	REP 1 ug/l	REP 2 ug/l	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	
H5677	NJDEP-DIVISION OF WASTE MGMT.	NJDDAIMHED	RSURFWATER1	850501	0945	1

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

Parameter	REP 1 ug/l	REP 2 ug/l	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

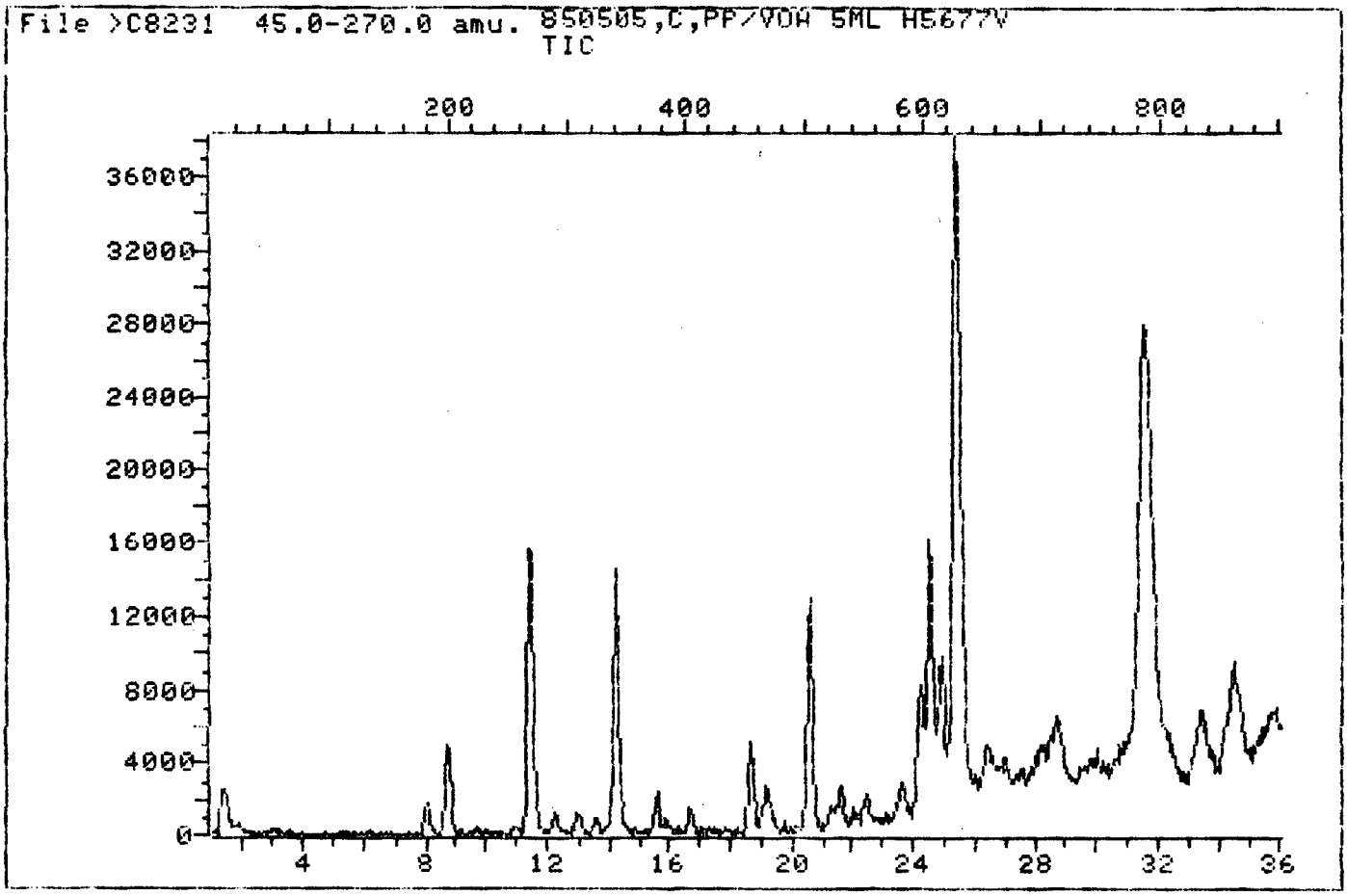
Appendix A

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: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc: H5677V

Id File: CVOA
Title: PURGEABLE PRIORITY POLLUTANTS,C
Last Calibration: 850505 13:03

Operator ID: JW6275
Quant Time: 850506 00:18
Injected at: 850505 23:42

QUANT REPORT

Operator ID: J06275 Quant Rev: 4 Quant Time: 850506 00:18
Injected at: 850505 23:42
Data File: >C8231::U1 Dilution Factor: 1.00
Name: 850505,C,PP/VOA 5ML
Misc: H5677V

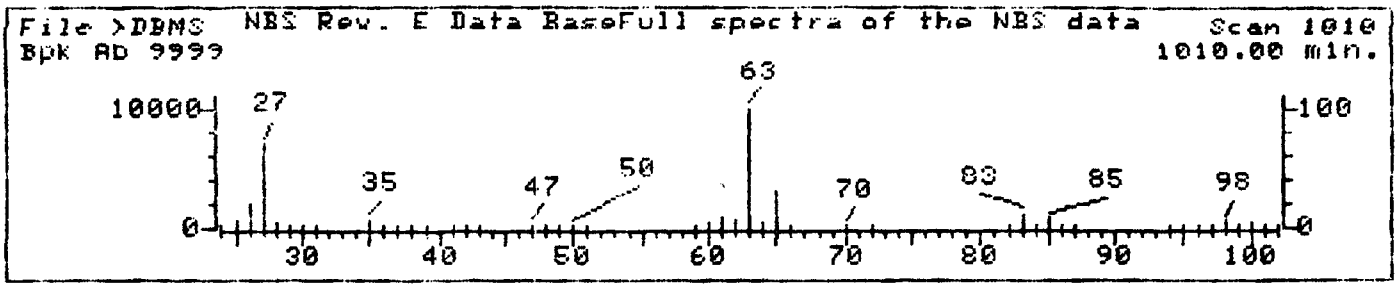
C1364A

ID File: CVOA
Title: PURGEABLE PRIORITY POLLUTANTS,C
Last Calibration: 850505 13:03

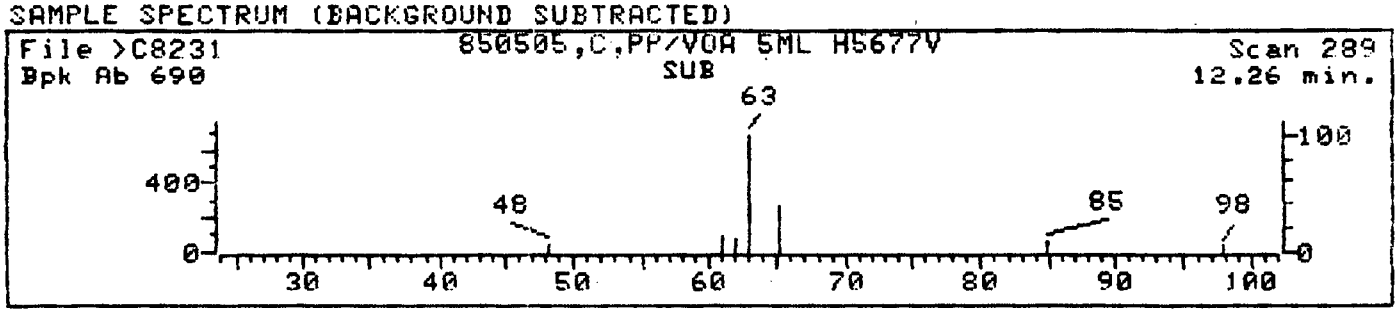
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane	20.57	503	73185	200.00	NG	93
~~2)~~	~~Acrolein~~	~~8.80~~	~~200~~	~~3516~~	~~157.50~~	~~NG~~	100
4)	Benzene	19.13	466	11114	14.95	NG	91
~~7)~~	~~Carbon tetrachloride~~	~~15.60~~	~~375~~	~~594~~	~~2.14~~	~~NG~~	93
15)	1,1-Dichloroethane	12.26	289	8517	27.62	NG	87
21)	Ethylbenzene	28.73	713	25922	25.18	NG	98
~~24)~~	~~Methylene chloride~~	~~8.02~~	~~180~~	~~5252~~	~~19.95~~	~~NG~~ -41	~~89~~
25)	1,1,2,2-Tetrachloroethane	23.64	582	729	3.03	NG	78
~~25)~~	~~1,1,2,2-Tetrachloroethane~~	~~24.26~~	~~598~~	~~326~~	~~1.35~~	~~NG~~	67
~~25)~~	~~1,1,2,2-Tetrachloroethane~~	~~24.69~~	~~609~~	~~494~~	~~2.05~~	~~NG~~	76
~~25)~~	~~1,1,2,2-Tetrachloroethane~~	~~24.88~~	~~614~~	~~256~~	~~1.06~~	~~NG~~	27
26)	Tetrachloroethylene	24.22	597	16684	46.73	NG	93
27)	Toluene	25.54	631	72745	84.94	NG -3=8L	95
28)	1,2-Trans-dichloroethylene	12.99	308	5212	14.14	NG	92
29)	1,1,1-Trichloroethane	15.60	375	7846	23.02	NG -19-4	87
~~30)~~	~~1,1,2-Trichloroethane~~	~~18.66~~	~~454~~	~~6121~~	~~40.79~~	~~NG~~	37
34)	1,2-Dichloroethane-D4	14.20	339	34146	273.34	NG	81
35)	Toluene-D8	25.35	626	175178	259.09	NG	99
36)	p-Bromofluorobenzene	31.53	785	93541	274.79	NG	88
~~37)~~	~~meta-Xylene~~	~~33.47~~	~~835~~	~~22376~~	~~25.91~~	~~NG~~	95
38)	~~ortho-and-para-Xylenes~~	~~33.47~~	~~835~~	~~22376~~	~~38.01~~	NG	95
38)	~~ortho-and-para-Xylenes~~	~~34.52~~	~~862~~	~~62713~~	~~106.52~~	~~NG~~	93
39)	*1,4-Dichlorobutane	24.53	605	88164	200.00	NG	94

* Compound is ISTD

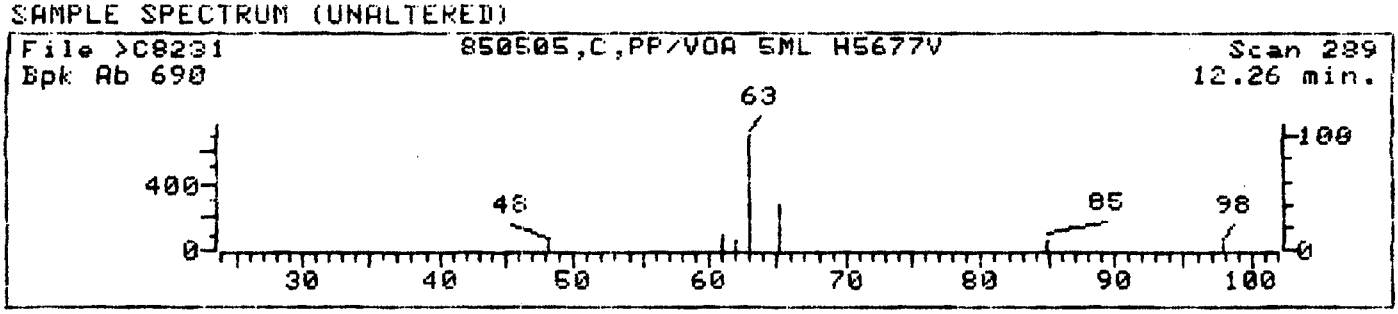
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



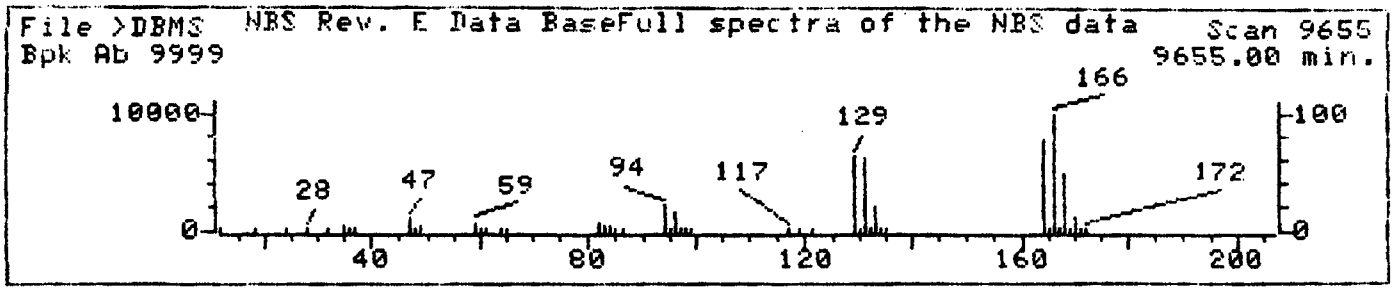
SAMPLE SPECTRUM (UNALTERED)



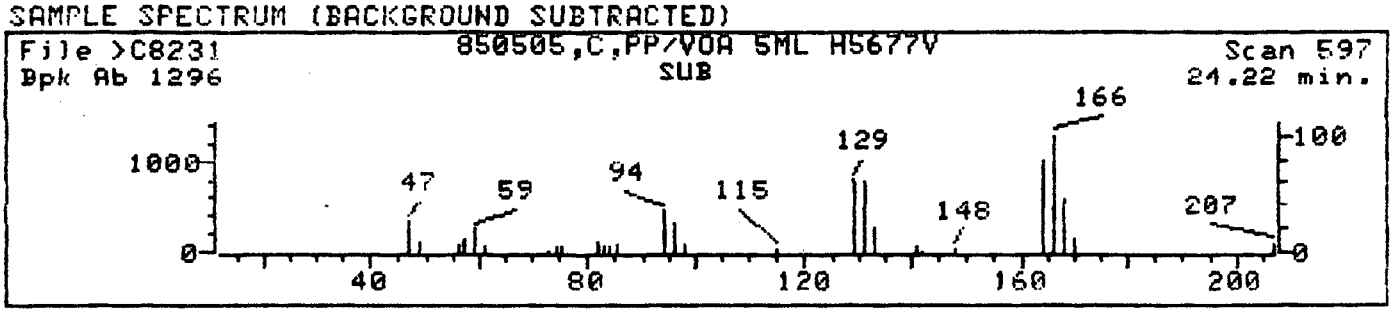
Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc: H5677V
Quant Time: 850506 00:18
Injected at: 850505 23:42

Compound No: 15
Compound Name: 1,1-Dichloroethane
Scan Number: 289
Retention Time: 12.26 min.
Area: 8517
Concentration: 27.62 NG
q-value: 87

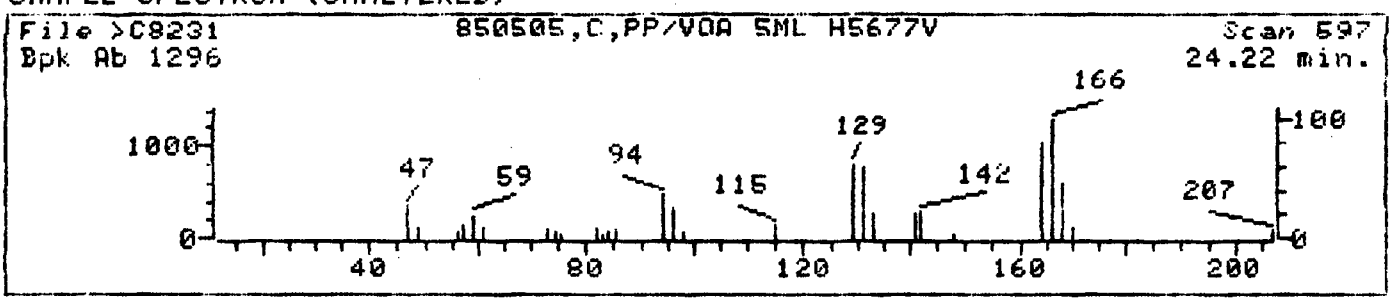
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



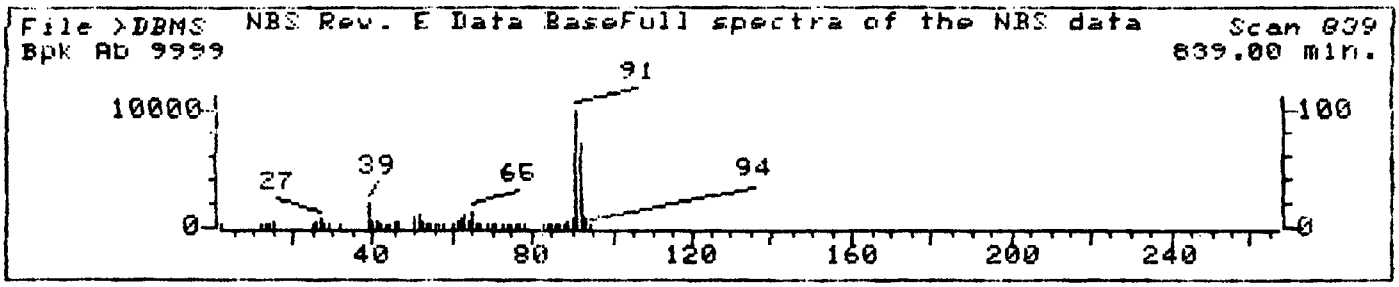
SAMPLE SPECTRUM (UNALTERED)



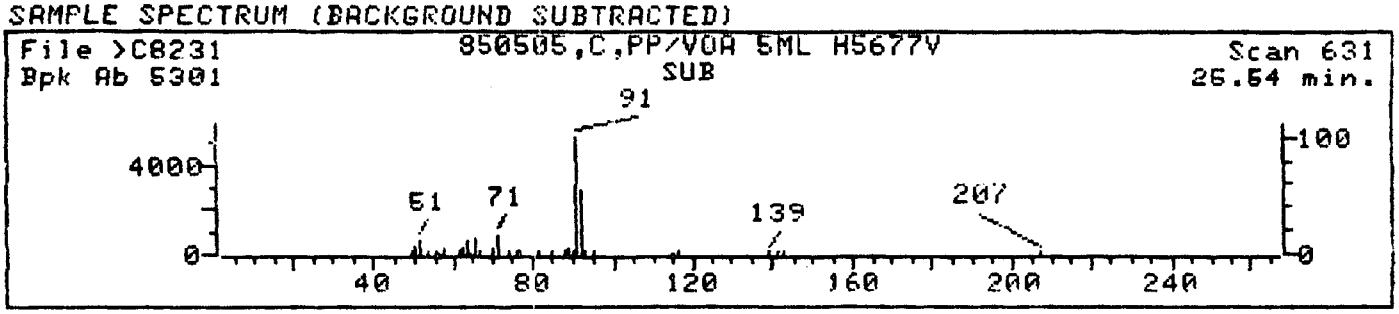
Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc: H5677V
Quant Time: 850506 00:18
Injected at: 850505 23:42

Compound No: 26
Compound Name: Tetrachloroethylene
Scan Number: 597
Retention Time: 24.22 min.
Area: 16684
Concentration: 46.73 NG
q-value: 93

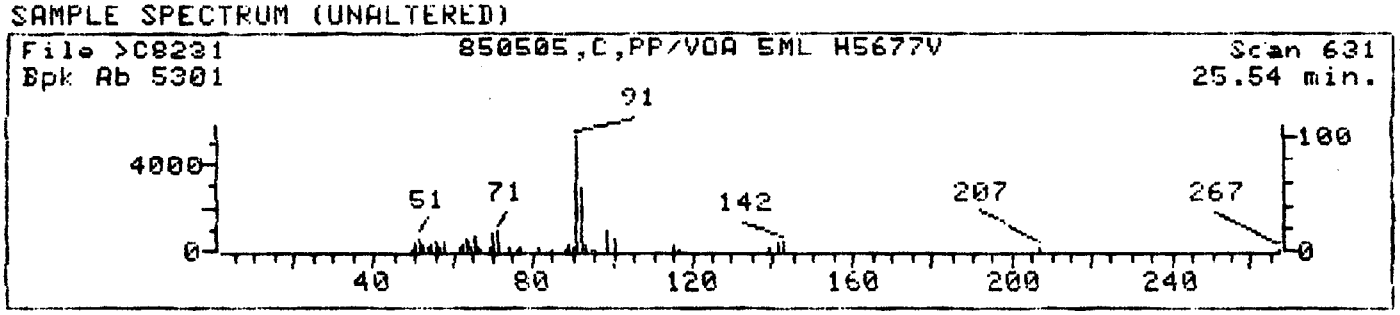
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



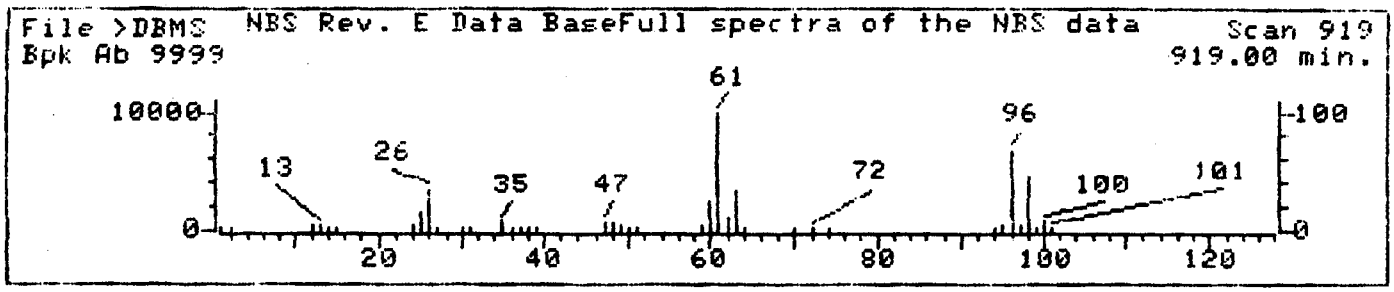
SAMPLE SPECTRUM (UNALTERED)



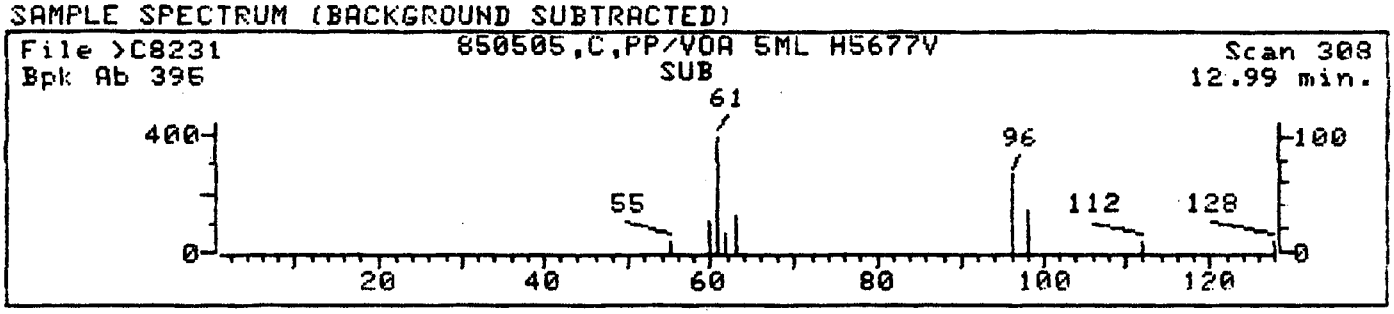
Data File: >C8231::U1
Name: 850505,C,PP/VOA SML
Misc: H5677V
Quant Time: 850506 00:18
Injected at: 850505 23:42

Compound No: 27
Compound Name: Toluene
Scan Number: 631
Retention Time: 25.54 min.
Area: 72745
Concentration: 84.94 NG
q-value: 95

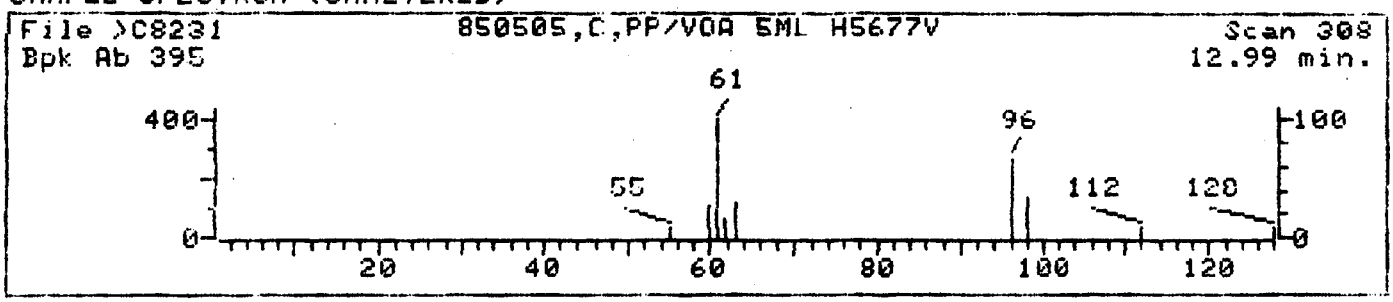
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



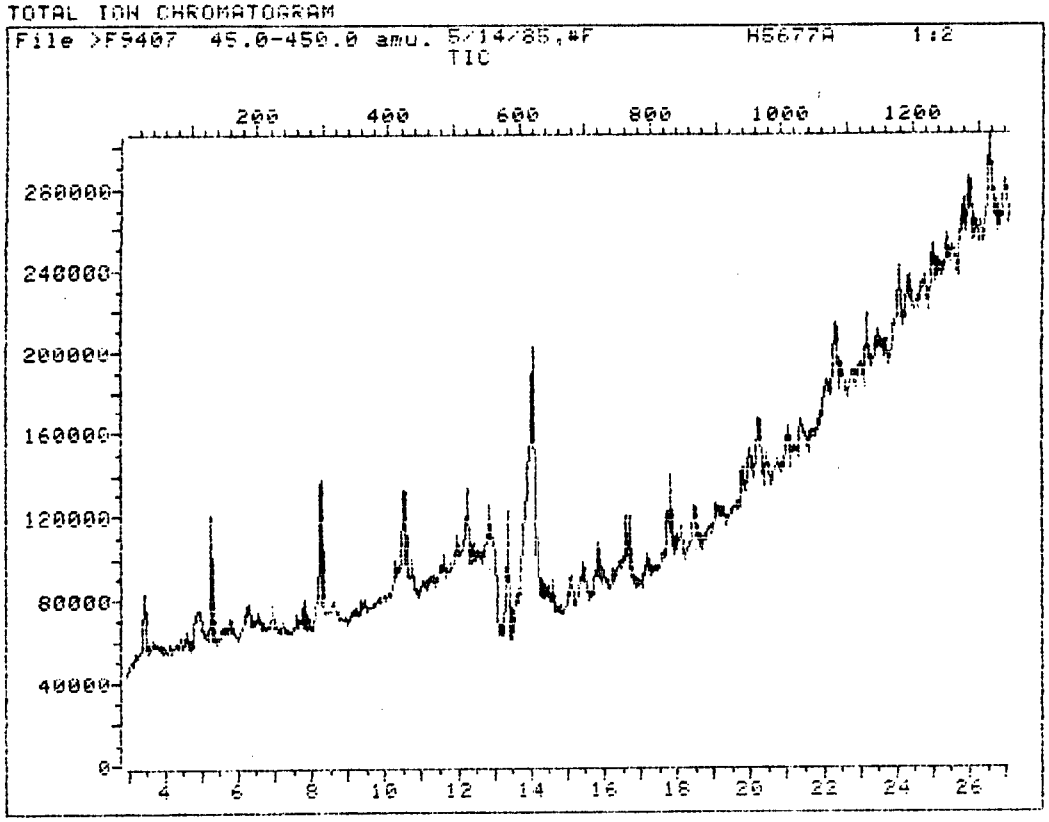
SAMPLE SPECTRUM (UNALTERED)



Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc: H5677V
Quant Time: 850506 00:18
Injected at: 850505 23:42

Compound No: 28
Compound Name: 1,2-Trans-dichloroethylene
Scan Number: 308
Retention Time: 12.99 min.
Area: 5212
Concentration: 14.14 NG
q-value: 92

TOTAL ION CHROMATOGRAM



Data File: >F9407::06
Name: 5/14/85,#F
Misc: H5677A 1:2

BTL#38

Id File: FACID
Title: ACID ID FILE.....3/15/85,#F,WWC
Last Calibration: 850514 11:47

Operator ID: WW9928
Quant Time: 850514 21:37
Injected at: 850514 21:08

QUANT REPORT

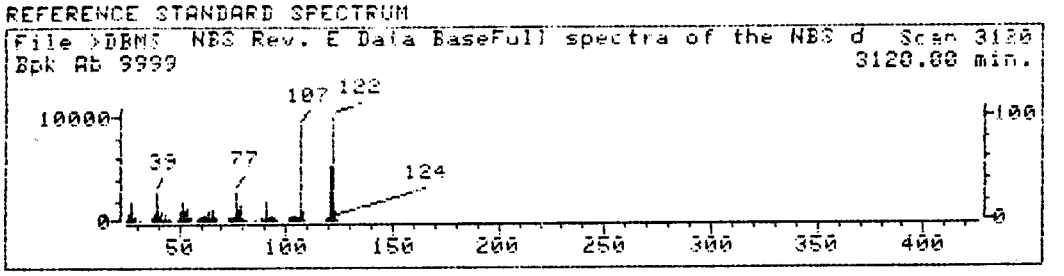
Operator ID: WW9928 Quant Rev: 4 Quant Time: 850514 21:32
Output File: ^F9407::AQ Injected at: 850514 21:08
Data File: >F9407::UA Dilution Factor: 1.00
Name: 5/14/85,#F
Misc: H5677A 1:2 BTL#38

ID File: FACID
Title: ACID ID FILE.....3/15/85,#F,WWC
Last Calibration: 850514 11:47

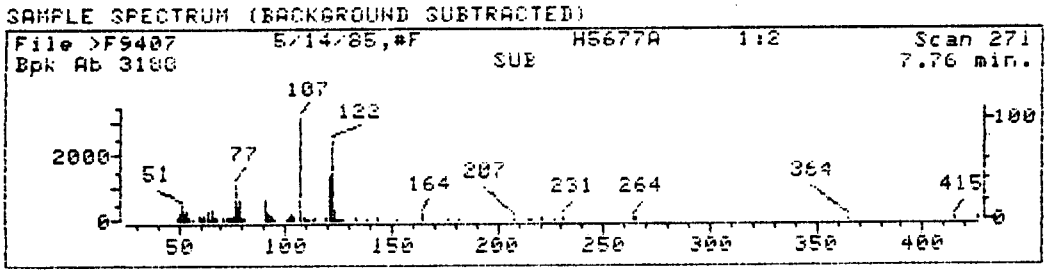
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	5.21	128	51834	40.00	UG/ML	89
3)	2-Fluorophenol	3.38	25	37688	41.29	UG/ML	92
4)	Phenol	4.98	115	11669	9.35	UG/ML	98
5)	Phenol-D5	4.84	107	51448	46.17	UG/ML	92
5)	Phenol-D5	5.21	128	793	.71	UG/ML	92
5)	Phenol-D5	5.57	148	2137	1.92	UG/ML	65
6)	2-Methylphenol	6.10	178	386	.37	UG/ML	52
6)	2-Methylphenol	6.50	200	4799	4.59	UG/ML	75
6)	2-Methylphenol	7.78	272	436	.42	UG/ML	59
7)	4-Methylphenol	6.50	200	4799	2.91	UG/ML	86
7)	4-Methylphenol	7.78	272	436	.36	UG/ML	79
9)	*d8-Naphthalene	8.23	297	121191	40.00	UG/ML	92
10)	2,4-Dichlorophenol	9.03	342	260	.33	UG/ML	52
10)	2,4-Dichlorophenol	9.33	359	618	.28	UG/ML	54
11)	2,4-Dimethylphenol	7.76	271	11448	10.31	UG/ML	96
11)	2,4-Dimethylphenol	8.14	292	18250	16.44	UG/ML	71
11)	2,4-Dimethylphenol	8.30	301	4296	3.87	UG/ML	76
12)	2-Nitrophenol	9.35	360	629	1.08	UG/ML	58
13)	p-Chloro-m-cresol	10.08	401	666	.67	UG/ML	64
13)	p-Chloro-m-cresol	11.17	462	608	.61	UG/ML	80
13)	p-Chloro-m-cresol	11.25	466	556	.56	UG/ML	76
14)	*d10-Acenaphthalene	13.32	585	33396	40.00	UG/ML	98
16)	2,4-Dinitrophenol	15.68	714	269	1.81	UG/ML	55
16)	2,4-Dinitrophenol	15.74	717	222	1.49	UG/ML	48
17)	4-Nitrophenol	15.02	677	247	1.25	UG/ML	65
20)	*d10-Phenanthrene	17.80	832	45161	40.00	UG/ML	99
21)	2,4,6-Tribromophenol	15.57	708	488	2.93	UG/ML	48
21)	2,4,6-Tribromophenol	15.77	719	4569	32.79	UG/ML	88
21)	2,4,6-Tribromophenol	15.84	723	5182	37.18	UG/ML	95

* Compound is ISTD

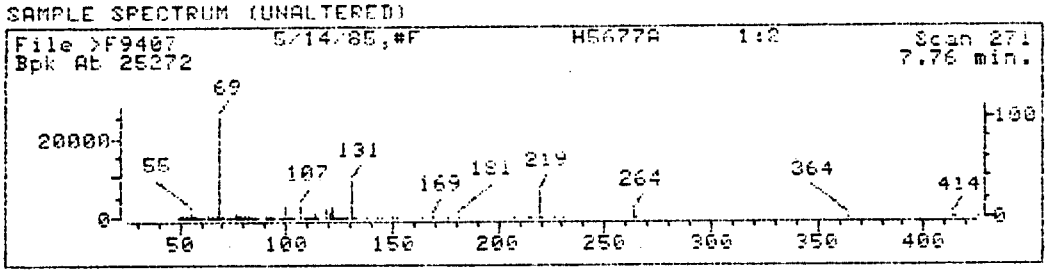
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



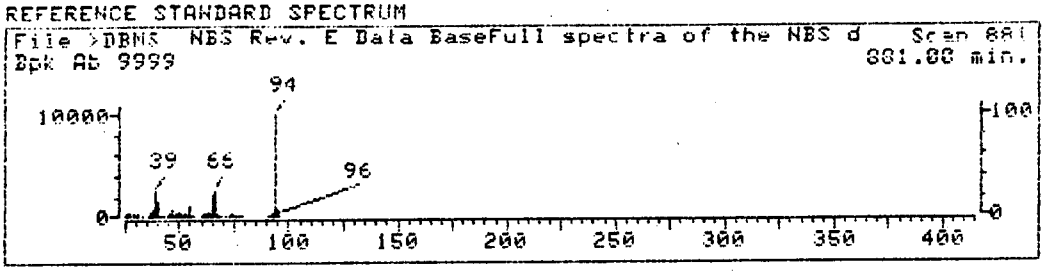
SAMPLE SPECTRUM (UNALTERED)



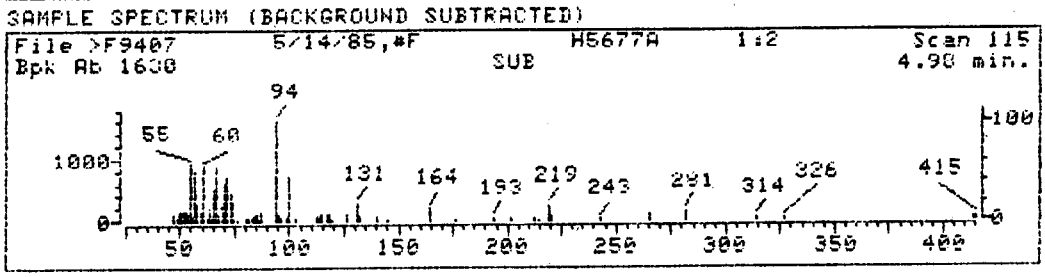
Data File: >F9407::U6
Name: 5/14/85,#F
Misc: H5677A 1:2 BTL#38
Quant Time: 850514 21:37
Injected at: 850514 21:08

Compound No: 11
Compound Name: 2,4-Dimethylphenol
Scan Number: 271
Retention Time: 7.76 min.
Area: 11448
Concentration: 10.31 UG/ML
q-value: 96

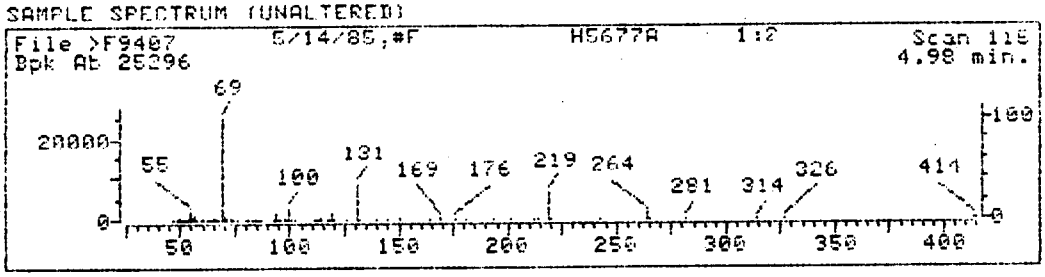
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

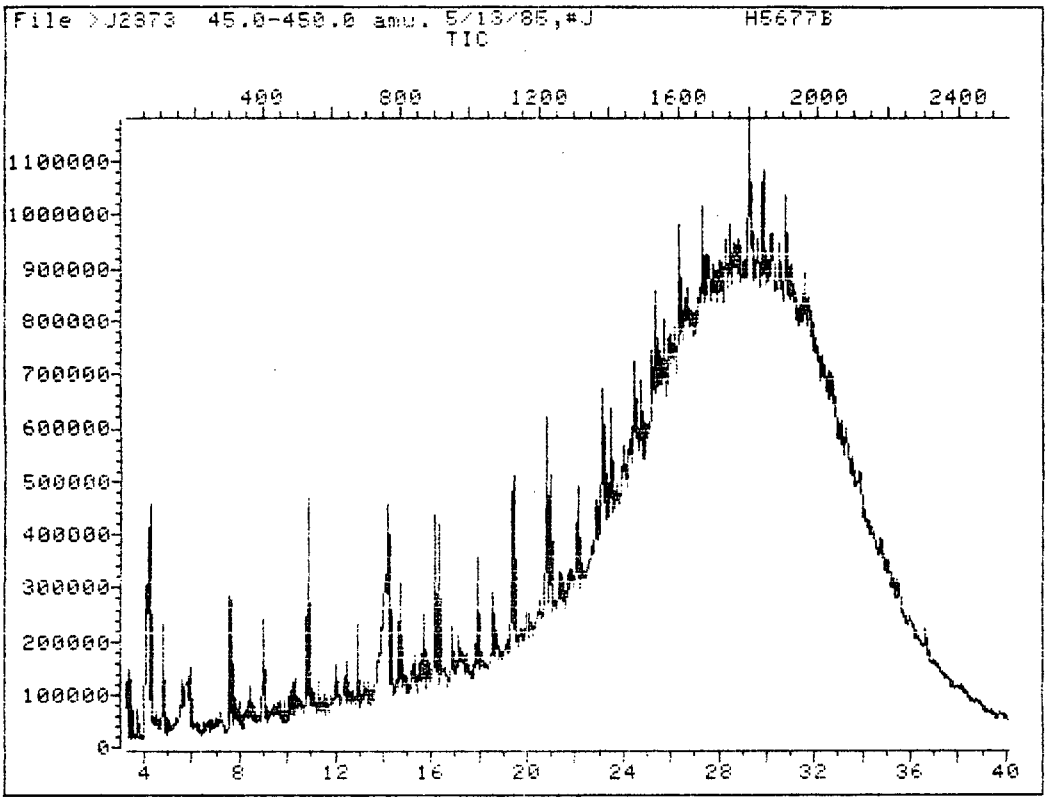


Data File: >F9407::U6
Name: 5/14/85,#F
Misc: H5677A 1:2
Quant Time: 850514 21:32
Injected at: 850514 21:08

BTL#38

Compound No: 4
Compound Name: Phenol
Scan Number: 115
Retention Time: 4.98 min.
Area: 11669
Concentration: 9.35 UG/ML
q-value: 98

TOTAL ION CHROMATOGRAM



Data File: >J2873::U5
Name: 5/13/85,#J
Misc: H5677B

BTL#16

Id File: JBNP
Title: B/N/P FRACTION ID FILE....3/16/85,#J,WWC
Last Calibration: 850513 21:05

Operator ID: WW9928
Quant Time: 850514 11:37
Injected at: 850514 10:48

QUANT REPORT

Operator ID: WW9928 Quant Rev: 4 Quant Time: 850514 11:37
Injected at: 850514 10:48
Data File: >J2873::U5 Dilution Factor: 1.00
Name: 5/13/85,#J
Misc: H5677B BTL#16

J137 AY

ID File: JBNP
Title: B/N/P FRACTION ID FILE....3/16/85,#J,WWC
Last Calibration: 850513 21:05

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	7.54	300	175249	40.00	UG/ML	97
2)	N-Nitrosodimethylamine	3.36	8	474	.08	UG/ML	100
2)	N-Nitrosodimethylamine	4.19	66	12290	1.96	UG/ML	100
2)	N-Nitrosodimethylamine	4.22	68	3176	.51	UG/ML	100
2)	N-Nitrosodimethylamine	4.30	74	510	.08	UG/ML	100
4)	bis(2-Chloroethyl) ether	7.33	289	642	.87	UG/ML	86
5)	1,3-Dichlorobenzene	7.58	303	1896	.31	UG/ML	64
5)	1,3-Dichlorobenzene	8.00	332	5356	.87	UG/ML	80
6)	1,4-Dichlorobenzene	7.58	303	1896	.23	UG/ML	64
6)	1,4-Dichlorobenzene	8.00	332	5356	.66	UG/ML	80
7)	1,2-Dichlorobenzene	7.58	303	1896	.26	UG/ML	66
7)	1,2-Dichlorobenzene	8.00	332	5356	.74	UG/ML	79
8)	Nitrobenzene-d5	8.98	400	219377	31.79	UG/ML	96
9)	bis(2-Chloroisopropyl)ether	7.56	301	10858	6.70	UG/ML	88
9)	bis(2-Chloroisopropyl)ether	7.79	317	8678	5.36	UG/ML	99
9)	bis(2-Chloroisopropyl)ether	8.30	353	5102	3.15	UG/ML	91
9)	bis(2-Chloroisopropyl)ether	8.43	362	7695	4.25	UG/ML	76
10)	*d8-Naphthalene	10.85	530	641098	40.00	UG/ML	98
11)	2-Fluorobiphenyl	14.17	761	110012	20.03	UG/ML	96
14)	Nitrobenzene	8.30	353	5102	.55	UG/ML	43
15)	Isophorone	9.18	414	7858	.57	UG/ML	75
15)	Isophorone	9.67	448	28993	2.09	UG/ML	93
15)	Isophorone	9.81	458	8149	.59	UG/ML	85
15)	Isophorone	10.57	511	7950	.57	UG/ML	77
16)	bis(2-Chloroethoxy)methane	10.07	476	4337	.52	UG/ML	66
16)	bis(2-Chloroethoxy)methane	10.44	502	5372	.65	UG/ML	73
18)	Naphthalene	10.46	503	1796	.10	UG/ML	29
18)	Naphthalene	10.89	533	13444	.72	UG/ML	98
18)	Naphthalene	11.05	544	1458	.08	UG/ML	58
18)	Naphthalene	11.67	587	2134	.11	UG/ML	74
20)	*d10-Acenaphthalene	16.16	899	249620	40.00	UG/ML	99
22)	2-Chloronaphthalene	13.71	729	959	.15	UG/ML	68
22)	2-Chloronaphthalene	13.90	742	588	.09	UG/ML	90
22)	2-Chloronaphthalene	14.42	778	695	.11	UG/ML	79
22)	2-Chloronaphthalene	15.27	837	937	.14	UG/ML	77
23)	Dimethyl phthalate	15.46	850	3647	.39	UG/ML	74
23)	Dimethyl phthalate	15.56	857	650	.07	UG/ML	91
23)	Dimethyl phthalate	15.87	879	647	.07	UG/ML	84
23)	Dimethyl phthalate	16.16	899	43721	4.71	UG/ML	65
24)	Acenaphthylene	15.86	878	5697	.47	UG/ML	45
25)	2,6-Dinitrotoluene	15.43	848	569	.31	UG/ML	25
27)	2,4-Dinitrotoluene	16.87	948	876	.55	UG/ML	95
27)	2,4-Dinitrotoluene	17.82	1014	5764	3.63	UG/ML	58
28)	Diethyl phthalate	17.85	1016	4066	.46	UG/ML	99
28)	Diethyl phthalate	18.78	1080	930	.10	UG/ML	79

Manual Area = 171196 (2W)

31.2

034

	Compound	R.T.	Scan#	Area	Conc	Units	q
29)	Fluorene	17.82	1014	4426	.63	UG/ML	90
30)	4-Chlorophenyl phenyl ether	17.42	986	546	.16	UG/ML	63
30)	4-Chlorophenyl phenyl ether	18.69	1074	547	.16	UG/ML	69
31)	Diphenylamine	17.87	1017	2201	.40	UG/ML	91
31)	Diphenylamine	18.45	1057	3643	.66	UG/ML	70
32)	N-Nitrosodiphenylamine	17.87	1017	2201	.56	UG/ML	84
32)	N-Nitrosodiphenylamine	18.45	1057	3643	.82	UG/ML	71
33)	1,2-Diphenylhydrazine	17.95	1023	470	.04	UG/ML	80
33)	1,2-Diphenylhydrazine	19.37	1121	1988	.17	UG/ML	50
36)	2-Nitroaniline	14.56	788	1015	.45	UG/ML	56
36)	2-Nitroaniline	15.25	836	883	.40	UG/ML	83
43)	*d10-Phenanthrene	20.75	1216	387702	40.00	UG/ML	96
46)	Phenanthrene	19.94	1160	568	.07	UG/ML	46
48)	Di-n-butyl phthalate	22.86	1361	6467	.52	UG/ML	89
48)	Di-n-butyl phthalate	23.03	1373	33819	2.72	UG/ML -1.5=1.2	99
48)	Di-n-butyl phthalate	23.16	1382	5346	.43	UG/ML	38
48)	Di-n-butyl phthalate	23.41	1399	4737	.38	UG/ML	61
49)	Fluoranthene	24.03	1442	1047	.15	UG/ML	62
49)	Fluoranthene	24.21	1454	2225	.33	UG/ML	43
49)	Fluoranthene	24.60	1481	6689	.98	UG/ML	96
49)	Fluoranthene	25.29	1528	13481	1.97	UG/ML	87
50)	Benzidine	24.40	1467	1029	11.20	UG/ML	100
50)	Benzidine	25.10	1515	995	10.83	UG/ML	100
50)	Benzidine	25.99	1576	881	9.59	UG/ML	100
50)	Benzidine	26.34	1600	858	9.34	UG/ML	100
51)	Pyrene	24.60	1481	6689	1.00	UG/ML	96
51)	Pyrene	25.29	1528	13481	2.02	UG/ML	87
55)	Delta-BHC	20.72	1214	12173	13.94	UG/ML	34
55)	Delta-BHC	22.06	1306	841	.96	UG/ML	69
58)	*d12-Chrysene	29.25	1799	181349	40.00	UG/ML	92
64)	Endrin	26.11	1584	2731	7.09	UG/ML	49
64)	Endrin	26.50	1611	3718	9.66	UG/ML	43
64)	Endrin	26.92	1640	5372	13.95	UG/ML	39
64)	Endrin	27.14	1655	4423	11.49	UG/ML	41
65)	Endosulfan II	27.77	1698	968	2.78	UG/ML	81
66)	4,4'-DDD	26.67	1623	584	.16	UG/ML	59
66)	4,4'-DDD	27.17	1657	680	.19	UG/ML	78
67)	Endrin aldehyde	25.92	1571	4858	6.18	UG/ML	45
67)	Endrin aldehyde	26.92	1640	5372	6.83	UG/ML	56
67)	Endrin aldehyde	27.14	1655	4423	5.63	UG/ML	63
67)	Endrin aldehyde	27.39	1672	3862	4.91	UG/ML	60
68)	4,4'-DDT	27.17	1657	680	.20	UG/ML	78
68)	4,4'-DDT	28.79	1768	456	.20	UG/ML	65
69)	Endosulfan sulfate	27.20	1659	811	1.21	UG/ML	49
70)	Terphenyl-D14	25.10	1515	503	.10	UG/ML	43
70)	Terphenyl-D14	25.97	1575	116153	22.74	UG/ML	96
71)	Butyl benzyl phthalate	26.94	1641	831	.23	UG/ML	49
71)	Butyl benzyl phthalate	27.20	1659	1469	.40	UG/ML	77
71)	Butyl benzyl phthalate	27.29	1665	2236	.61	UG/ML	74
71)	Butyl benzyl phthalate	28.34	1737	890	.24	UG/ML	91
72)	Benzo(a)anthracene	29.29	1802	3166	.92	UG/ML	82
73)	Chrysene	29.29	1802	3166	.53	UG/ML	90
74)	3,3'-Dichlorobenzidine	28.59	1754	1259	1.53	UG/ML	78
74)	3,3'-Dichlorobenzidine	29.80	1837	1648	2.00	UG/ML	51
74)	3,3'-Dichlorobenzidine	30.11	1858	466	.56	UG/ML	95
74)	3,3'-Dichlorobenzidine	30.20	1864	555	.67	UG/ML	76
75)	bis(2-Ethylhexyl)phthalate	29.25	1799	1686	.34	UG/ML	99

75)	bis(2-Ethylhexyl)phthalate	29.79	1859	59814	8.69	UG/ML	86

	Compound	R.T.	Scan#	Area	Conc	Units	q
75)	bis(2-Ethylhexyl)phthalate	30.16	1861	967	.19	UG/ML	98
75)	bis(2-Ethylhexyl)phthalate	30.18	1863	3640	.72	UG/ML	46
76)	Di-n-octyl phthalate	31.08	1924	7505	.97	UG/ML	88
76)	Di-n-octyl phthalate	31.42	1947	2964	.38	UG/ML	2
76)	Di-n-octyl phthalate	31.96	1984	4427	.57	UG/ML	85
76)	Di-n-octyl phthalate	32.28	2006	4652	.60	UG/ML	91
77)	Benzo(b)fluoroanthene	32.43	2016	3084	.59	UG/ML	70
78)	Benzo(k)fluoranthene	32.43	2016	3084	.72	UG/ML	69
79)	Benzo(a)pyrene	32.43	2016	3084	.91	UG/ML	70
80)	Indeno(1,2,3-c,d)pyrene	37.23	2344	493	.15	UG/ML	58
80)	Indeno(1,2,3-c,d)pyrene	37.29	2348	735	.22	UG/ML	94
83)	4-Nitrodiphenylamine	26.29	1597	817	.46	UG/ML	63

* Compound is ISTD

Appendix B

GC/MS Calibration Data

Calibration Report

Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, C
Calibrated: 850505 11:33

Compound	Files:)C8213 RF 90.00	)C8214 RF 180.00	)C8215 RF 540.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
Acrolein	.05970	.07154	.05178	.424	.06101	16.302	(Conc=4000.0,8000.0,32000.)
Acrylonitrile	.14274	.15670	.13188	.463	.14378	8.657	(Conc=400.0,800.0,3200.0)
Benzene	2.10816	2.05435	1.93188	.930	2.03146	4.447	
bis(Chloromethyl)ether	.08581	.10964	-	.803	.09773	17.247	
Bromoform	.34697	.40638	.47264	1.066	.40866	15.384	
Carbon tetrachloride	.75163	.75471	.76486	.778	.75706	.915	
Chlorobenzene	1.56588	1.51084	1.40788	1.294	1.49487	5.365	
Chlorodibromomethane	.66710	.69892	.65590	.937	.67398	3.311	
Chloroethane	.16185	.15000	.14579	.213	.15255	5.461	
2-Chloroethylvinyl ether	.14992	.12000	.11181	.940	.12725	15.764	
Chloroform	1.20815	1.16968	1.13374	.660	1.17052	3.179	
Dichlorobromomethane	.91045	.91854	.92521	.803	.91807	.805	
Dichlorodifluoromethane	.42113	.39939	.38992	.213	.40348	3.966	
1,1-Dichloroethane	.84317	.84802	.83669	.597	.84263	.674	
1,2-Dichloroethane	.83703	.81800	.81565	.697	.82356	1.424	
1,1-Dichloroethylene	.98787	.98633	.98021	.532	.98480	.411	
1,2-Dichloropropane	.75919	.76674	.74589	.868	.75727	1.394	
trans-1,3-Dichloropropylene	.92641	.91579	.91947	.881	.92056	.586	
cis-1,3-Dichloropropylene	.74620	.73917	.73831	.943	.74123	.584	
Ethylbenzene	2.99920	2.72547	2.71526	1.396	2.81331	5.725	
Methyl bromide	.30909	.24765	.11420	.170	.22365	44.552	
Methyl chloride	.72448	.73651	.75476	.112	.73858	2.064	
Methylene chloride	.84543	.70759	.60566	.391	.71956	16.723	
1,1,2,2-Tetrachloroethane	.63248	.69230	.65010	1.175	.65829	4.669	
Tetrachloroethylene	1.01150	.99390	.92137	1.176	.97559	4.897	
Toluene	2.45313	2.35598	2.21233	1.239	2.34048	5.176	
1,2-Trans-dichloroethylene	1.01008	.99845	1.01261	.632	1.00704	.750	
1,1,1-Trichloroethane	1.01892	.92290	.85204	.759	.93129	8.993	
1,1,2-Trichloroethane	.41294	.42223	.39510	.942	.41009	3.361	
Trichloroethylene	.53180	.51682	.49549	.906	.51470	3.545	
Trichlorofluoromethane	1.18249	1.15151	1.09921	.498	1.14440	3.678	
Vinyl chloride	.51647	.45777	.45078	.213	.47500	7.596	
meta-Xylene	2.86454	2.18708	2.02774	1.622	2.35979	18.829	(Conc=75.0,150.0,450.0)
ortho-and-para-Xylenes	1.43227	1.71333	1.68095	1.658	1.60885	9.558	(Conc=150.0,300.0,900.0)
Styrene	-	-	-	-	-	-	
Carbon disulfide	-	-	-	-	-	-	
Methyl ethyl ketone	-	-	-	-	-	-	(Conc=450.0,900.0,2700.0)
Acetone	-	-	-	-	-	-	
Vinyl acetate	-	-	-	-	-	-	
Methtyl butyl ketone	-	-	-	-	-	-	
Methyl-i-butyl ketone	-	-	-	-	-	-	
1,2-Dichloroethane-D4	.34968	.33905	.33542	.692	.34138	2.171	(Conc=250.0,250.0,250.0)
Toluene-D8	1.95089	1.81957	1.77279	1.230	1.84775	4.997	(Conc=250.0,250.0,250.0)

RF - Response Factor (Subscript is amount in NG)

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, C
Calibrated: 850505 11:33

Compound	Files:)C8213 RF 90.00	)C8214 RF 180.00	)C8215 RF 540.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
p-Bromofluorobenzene	.98204	.88531	.92344	1.527	.93027	5.238	(Conc=250.0,250.0,250.0)

RF - Response Factor (Subscript is amount in NG)

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Check Report

Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, C
Calibrated: 850505 11:33

Check Standard Data File:)C8227
Injection Time: 850505 20:51

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Acrolein	.06101	.06866	12.55	Average	(Conc=4000.00)
Acrylonitrile	.14378	.16632	15.68	Average	(Conc=400.00)
Benzene	2.03146	2.09208	2.98	Average	
bis(Chloromethyl)ether	.09773	.11861	21.37	Average	
Bromoform	.40866	.41062	.48	Average	
Carbon tetrachloride	.75706	.87508	15.59	Average	
Chlorobenzene	1.49487	1.63114	9.12	Average	
Chlorodibromomethane	.67398	.75508	12.03	Average	
Chloroethane	.15255	.15022	1.53	Average	
2-Chloroethylvinyl ether	.12725	.16228	27.54	Average	
Chloroform	1.17052	1.31195	12.08	Average	
Dichlorobromomethane	.91807	1.00729	9.72	Average	
Dichlorodifluoromethane	.40348	.44382	10.00	Average	
1,1-Dichloroethane	.84263	.88918	5.53	Average	
1,2-Dichloroethane	.82356	.95054	15.42	Average	
1,1-Dichloroethylene	.98480	1.04848	6.47	Average	
1,2-Dichloropropane	.75727	.74905	1.09	Average	
trans-1,3-Dichloropropylene	.92056	.91056	1.09	Average	
cis-1,3-Dichloropropylene	.74123	.78380	5.74	Average	
Ethylbenzene	2.81331	3.06817	9.06	Average	
Methyl bromide	.22365	.31398	40.39	Average	
Methyl chloride	.73858	.81047	9.74	Average	
Methylene chloride	.71956	.88513	23.01	Average	
1,1,2,2-Tetrachloroethane	.65829	.80991	23.03	Average	
Tetrachloroethylene	.97559	1.13140	15.97	Average	
Toluene	2.34048	2.49217	6.48	Average	
1,2-Trans-dichloroethylene	1.00704	1.05235	4.50	Average	
1,1,1-Trichloroethane	.93129	1.15490	24.01	Average	
1,1,2-Trichloroethane	.41009	.37637	8.22	Average	
Trichloroethylene	.51470	.57163	11.06	Average	
Trichlorofluoromethane	1.14440	1.33851	16.96	Average	
Vinyl chloride	.47500	.50669	6.67	Average	
meta-Xylene	2.35979	.32298	86.31	Average	(Conc=75.00)
ortho-and-para-Xylenes	1.60885	.16149	89.96	Average	(Conc=150.00)
Styrene	-	-	-	Average	
Carbon disulfide	-	-	-	Average	
Methyl ethyl ketone	-	-	-	Average	(Conc=450.00)
Acetone	-	-	-	Average	
Vinyl acetate	-	-	-	Average	
Methtyl butyl ketone	-	-	-	Average	
Methyl-i-butyl ketone	-	-	-	Average	
1,2-Dichloroethane-D4	.34138	.36723	7.57	Average	(Conc=250.00)
Toluene-D8	1.84775	1.86222	.78	Average	(Conc=250.00)
p-Bromofluorobenzene	.93027	.98271	5.64	Average	(Conc=250.00)

RF - Response Factor from daily standard file at 90.00 NG

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

%Diff - % Difference from original average or curve

Calibration Check Report

Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, C
Calibrated: 850505 11:33

Check Standard Data File: >C8213
Injection Time: 850505 09:14

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Acrolein	.06101	.05970	2.14	Average	(Conc=4000.00)
Acrylonitrile	.14378	.14274	.72	Average	(Conc=400.00)
Benzene	2.03146	2.10816	3.78	Average	
bis(Chloromethyl)ether	.09773	.08581	12.20	Average	
Bromoform	.40866	.34697	15.10	Average	
Carbon tetrachloride	.75706	.75163	.72	Average	
Chlorobenzene	1.49487	1.56588	4.75	Average	
Chlorodibromomethane	.67398	.66710	1.02	Average	
Chloroethane	.15255	.16185	6.10	Average	
2-Chloroethylvinyl ether	.12725	.14992	17.82	Average	
Chloroform	1.17052	1.20815	3.21	Average	
Dichlorobromomethane	.91807	.91045	.83	Average	
Dichlorodifluoromethane	.40348	.42113	4.37	Average	
1,1-Dichloroethane	.84263	.84317	.06	Average	
1,2-Dichloroethane	.82356	.83703	1.64	Average	
1,1-Dichloroethylene	.98480	.98787	.31	Average	
1,2-Dichloropropane	.75727	.75919	.25	Average	
trans-1,3-Dichloropropylene	.92056	.92641	.64	Average	
cis-1,3-Dichloropropylene	.74123	.74620	.67	Average	
Ethylbenzene	2.81331	2.99920	6.61	Average	
Methyl bromide	.22365	.30909	38.20	Average	
Methyl chloride	.73858	.72448	1.91	Average	
Methylene chloride	.71956	.84543	17.49	Average	
1,1,2,2-Tetrachloroethane	.65829	.63248	3.92	Average	
Tetrachloroethylene	.97559	1.01150	3.68	Average	
Toluene	2.34048	2.45313	4.81	Average	
1,2-Trans-dichloroethylene	1.00704	1.01008	.30	Average	
1,1,1-Trichloroethane	.93129	1.01892	9.41	Average	
1,1,2-Trichloroethane	.41009	.41294	.69	Average	
Trichloroethylene	.51470	.53180	3.32	Average	
Trichlorofluoromethane	1.14440	1.18249	3.33	Average	
Vinyl chloride	.47500	.51647	8.73	Average	
meta-Xylene	2.35979	.52580	77.72	Average	(Conc=75.00)
ortho-and-para-Xylenes	1.60885	-	-	Average	(Conc=150.00)
Styrene	-	-	-	Average	
Carbon disulfide	-	-	-	Average	
Methyl ethyl ketone	-	-	-	Average	(Conc=450.00)
Acetone	-	-	-	Average	
Vinyl acetate	-	-	-	Average	
Methtyl butyl ketone	-	-	-	Average	
Methyl-i-butyl ketone	-	-	-	Average	
1,2-Dichloroethane-D4	.34138	.34968	2.43	Average	(Conc=250.00)
Toluene-D8	1.84775	1.95089	5.58	Average	(Conc=250.00)
p-Bromofluorobenzene	.93027	.98204	5.57	Average	(Conc=250.00)

RF - Response Factor from daily standard file at 90.00 NG

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

%Diff - % Difference from original average or curve

Calibration Report

Title: ACID TO FILE.....3/15/85,$F,WWC
Calibrated: 850514 11:46

Compound	RF 60.00 (>F9392)	RF 100.00 (>F9391)	RF 300.00 (>F9390)	$\overline{RRT}$	$\overline{RF}$	% RSD	
2-Chlorophenol	.81091	.85161	.69129	.944	.78460	10.621	
2-Fluorophenol	.64677	.72167	.74492	.644	.70445	7.281	(Conc=100.0,100.0,100.0)
Phenol	1.01583	.96909	.90390	.925	.96294	5.838	
Phenol-D5	.80346	.90184	.87435	.918	.85989	5.903	(Conc=100.0,100.0,100.0)
2-Methylphenol	~~.90846~~	~~.83876~~	~~.67115~~	~~1.152~~	~~.80613~~	~~15.131~~	
4-Methylphenol	~~1.12496~~	~~.89120~~	~~.82201~~	~~1.224~~	~~.94609~~	~~16.780~~	
Benzoic acid	~~.91507~~	~~.07350~~	~~.27444~~	~~1.617~~	~~.42100~~	~~104.398~~	
2,4-Dichlorophenol	.27539	.26938	.23701	.973	.26059	7.922	
2,4-Dimethylphenol	.36473	.39160	.34293	.932	.36642	6.652	
2-Nitrophenol	.19268	.19498	.18642	.896	.19136	2.315	
p-Chloro-m-cresol	.33333	.34654	.30912	1.241	.32966	5.756	
4,6-Dinitro-o-cresol	.24392	.29675	.30324	1.159	.28131	11.566	
2,4-Dinitrophenol	.14805	.17983	.20770	1.035	.17853	16.718	
4-Nitrophenol	.17428	.24943	.28901	1.075	.23757	24.528	
2,4,5-Trichlorophenol	.40063	.37916	.32663	.844	.36880	10.324	
2,4,6-Trichlorophenol	.40063	.37916	.32663	.844	.36880	10.324	
2,4,6-Tribromophenol	.11816	.12152	.13062	.889	.12344	5.222	(Conc=100.0,100.0,100.0)
Pentachlorophenol	.11664	.12794	.14410	.986	.12956	10.654	

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

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850513 21:01

Compound	Files: >J2856 RF 60.00	>J2855 RF 100.00	>J2854 RF 200.00	>J2857 RF 150.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
N-Nitrosodimethylamine	1.52892	1.37311	1.38256	-	.456	1.42820	6.117	
bis(2-Chloroethyl) ether	1.86184	1.90394	2.13811	-	.937	1.96796	7.564	
1,3-Dichlorobenzene	1.35926	1.39315	1.43991	-	.990	1.39744	2.898	
1,4-Dichlorobenzene	1.98122	1.81445	1.76630	-	1.006	1.85399	6.083	
1,2-Dichlorobenzene	1.65238	1.62326	1.65385	-	1.063	1.64317	1.050	
Nitrobenzene-d5	1.47523	1.45753	1.79204	-	1.190	1.57494	11.952	(Conc=50.0,50.0,50.0,50.0)
bis(2-Chloroisopropyl)ether	.33387	.34511	.43044	-	1.108	.36981	14.281	
2-Fluorobiphenyl	.32927	.35428	.34441	-	1.307	.34265	3.676	(Conc=50.0,50.0,50.0,50.0)
N-Nitrosodi-n-propylamine	.35199	.34081	.34948	-	.801	.34743	1.688	
Hexachloroethane	.13989	.13947	.12358	-	.806	.13432	6.923	
Nitrobenzene	.51145	.54641	.54765	-	.831	.53517	3.841	
Isophorone	.86764	.85697	.87773	-	.889	.86744	1.197	
bis(2-Chloroethoxy)methane	.43872	.52411	.58996	-	.953	.51760	14.651	
1,2,4-Trichlorobenzene	.30655	.30338	.30563	-	.991	.30519	.535	
Naphthalene	1.15379	1.16906	1.17127	-	1.005	1.16471	.817	
Hexachlorobutadiene	.19227	.18541	.17295	-	1.059	.18354	5.336	
Hexachlorocyclopentadiene	.20636	.22818	.27340	-	.845	.23598	14.490	
2-Chloronaphthalene	.99777	1.06479	1.07792	-	.891	1.04682	4.107	
Dimethyl phthalate	1.52465	1.46763	1.46962	-	.969	1.48730	2.176	
Acenaphthylene	1.96401	1.88543	1.93165	-	.970	1.92703	2.050	
2,6-Dinitrotoluene	.27769	.30175	.31025	-	.979	.29656	5.696	
Acenaphthene	1.40596	1.35273	1.36747	-	1.007	1.37539	1.998	
2,4-Dinitrotoluene	.21189	.26340	.28758	-	1.052	.25429	15.203	
Diethyl phthalate	1.44293	1.37586	1.44353	-	1.107	1.42077	2.738	
Fluorene	1.10221	1.11901	1.13408	-	1.105	1.11843	1.426	
4-Chlorophenyl phenyl ether	.53321	.54466	.54909	-	1.110	.54232	1.510	
N-Nitrosodiphenylamine	.59677	.61330	.68568	-	1.136	.63192	7.483	
1,2-Diphenylhydrazine	1.80049	1.89582	2.05571	-	1.140	1.91734	6.726	
4-Bromophenyl phenyl ether	.25265	.25646	.26590	-	.938	.25834	2.641	
Hexachlorobenzene	.36314	.34500	.30594	-	.956	.33803	8.648	
Phenanthrene	.82198	.84701	.89820	-	1.004	.85573	4.540	
Anthracene	1.06938	1.08508	1.06460	-	1.011	1.07302	.998	
Di-n-butyl phthalate	1.25931	1.27143	1.32218	-	1.111	1.28431	2.597	
Fluoranthene	.65137	.69882	.76396	-	1.184	.70471	8.021	
Benzidine	-	-	.00948	-	1.222	.00948	-	
Pyrene	.64266	.68354	.74368	-	1.217	.68996	7.365	
Alpha-BHC	.19038	.18203	-	.19462	.944	.18901	3.389	
Beta-BHC	.08269	.08592	-	.10659	.982	.09173	14.136	
Gamma-BHC	.15853	.14887	-	.16736	.989	.15825	5.843	
Delta-BHC	.08389	.08258	-	.10375	1.021	.09008	13.170	
Heptachlor	.26329	.25382	-	.30685	1.084	.27465	10.297	
Aldrin	.24215	.22865	-	.25902	1.128	.24328	6.255	
Heptachlor epoxide	.25456	.18130	-	.39681	.838	.27756	39.481	

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

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850513 21:01

Compound	Files: >J2856 RF 60.00	>J2855 RF 100.00	>J2854 RF 200.00	>J2857 RF 150.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
Chlordane	.04763	.04666	-	.18971	.859	.09467	86.949	
Endosulfan I	.08455	.06190	-	.14020	.870	.09555	42.167	
4,4'-DDE	.53404	.40628	-	.91131	.889	.61721	42.544	
Dieldrin	.69251	.47743	-	1.15821	.893	.77605	44.841	
Endrin	.06324	.05464	-	.13690	.912	.08493	53.241	
Endosulfan II	.05785	.05904	-	.11380	.919	.07690	41.567	
4,4'-DDD	.64855	.58205	-	1.19789	.924	.80950	41.754	
Endrin aldehyde	.06324	.05464	-	.40242	.920	.17343	114.371	
4,4'-DDT	.34275	.36152	-	.81315	.956	.50581	52.654	
Endosulfan sulfate	.11615	.10361	-	.22466	.955	.14814	44.933	
Terphenyl-D14	.99584	1.13988	1.24470	-	.891	1.12681	11.088	(Conc=50.0,50.0,50.0,)
Butyl benzyl phthalate	.82497	.78490	.82928	-	.951	.81305	3.010	
Benzo(a)anthracene	.64333	.74559	.88917	-	.998	.75936	16.263	
Chrysene	1.43189	1.26222	1.27706	-	1.003	1.32372	7.099	
3,3'-Dichlorobenzidine	.16740	.09248	.28620	-	1.004	.18203	53.665	
bis(2-Ethylhexyl)phthalate	1.13330	1.05374	1.13979	-	1.019	1.10894	4.321	
Di-n-octyl phthalate	1.73847	1.65242	1.71498	-	1.082	1.70196	2.613	
Benzo(b)fluoroanthene	2.09630	.66157	.72219	-	1.109	1.16002	69.948	
Benzo(k)fluoranthene	.82695	1.08759	.93937	-	1.121	.95131	13.742	
Benzo(a)pyrene	.82695	.73546	.68635	-	1.141	.74959	9.519	
Indeno(1,2,3-c,d)pyrene	.82721	.64560	.73846	-	1.275	.73709	12.320	
Dibenzo(a,h)anthracene	-	.48227	.59719	-	1.279	.53973	15.056	
Benzo(ghi)perylene	.60865	.55143	.63287	-	1.311	.59765	6.997	

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

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

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850513 21:01

Compound	Files:)J2856 RF 60.00	)J2855 RF 100.00	)J2854 RF 200.00	)J2857 RF 150.00	
N-Nitrosodimethylamine	1.52892	1.37311	1.38256	-	
bis(2-Chloroethyl) ether	1.86184	1.90394	2.13811	-	
1,3-Dichlorobenzene	1.35926	1.39315	1.43991	-	
1,4-Dichlorobenzene	1.98122	1.81445	1.76630	-	
1,2-Dichlorobenzene	1.65238	1.62326	1.65385	-	
Nitrobenzene-d5	1.47523	1.45753	1.79204	-	(Conc=50.0,50.0,50.0,50.0)
bis(2-Chloroisopropyl)ether	.33387	.34511	.43044	-	
2-Fluorobiphenyl	.32927	.35428	.34441	-	(Conc=50.0,50.0,50.0,50.0)
N-Nitrosodi-n-propylamine	.35199	.34081	.34948	-	
Hexachloroethane	.13989	.13947	.12358	-	
Nitrobenzene	.51145	.54641	.54765	-	
Isophorone	.86764	.85697	.87773	-	
bis(2-Chloroethoxy)methane	.43872	.52411	.58996	-	
1,2,4-Trichlorobenzene	.30655	.30338	.30563	-	
Naphthalene	1.15379	1.16906	1.17127	-	
Hexachlorobutadiene	.19227	.18541	.17295	-	
Hexachlorocyclopentadiene	.20636	.22818	.27340	-	
2-Chloronaphthalene	.99777	1.06479	1.07792	-	
Dimethyl phthalate	1.52465	1.46763	1.46962	-	
Acenaphthylene	1.96401	1.88543	1.93165	-	
2,6-Dinitrotoluene	.27769	.30175	.31025	-	
Acenaphthene	1.40596	1.35273	1.36747	-	
2,4-Dinitrotoluene	.21189	.26340	.28758	-	
Diethyl phthalate	1.44293	1.37586	1.44353	-	
Fluorene	1.10221	1.11901	1.13408	-	
4-Chlorophenyl phenyl ether	.53321	.54466	.54909	-	
N-Nitrosodiphenylamine	.59677	.61330	.68568	-	
1,2-Diphenylhydrazine	1.80049	1.89582	2.05571	-	
4-Bromophenyl phenyl ether	.25265	.25646	.26590	-	
Hexachlorobenzene	.36314	.34500	.30594	-	
Phenanthrene	.82198	.84701	.89820	-	
Anthracene	1.06938	1.08508	1.06460	-	
Di-n-butyl phthalate	1.25931	1.27143	1.32218	-	
Fluoranthene	.65137	.69882	.76396	-	
Benzidine	-	-	.00948	-	
Pyrene	.64266	.68354	.74368	-	
Alpha-BHC	.19038	.18203	-	.19462	
Beta-BHC	.08269	.08592	-	.10659	
Gamma-BHC	.15853	.14887	-	.16736	
Delta-BHC	.08389	.08258	-	.10375	
Heptachlor	.26329	.25382	-	.30685	
Aldrin	.24215	.22865	-	.25902	
Heptachlor epoxide	.25456	.18130	-	.39681	
Chlordane	.04763	.04666	-	.18971	
Endosulfan I	.08455	.06190	-	.14020	
4,4'-DDE	.53404	.40628	-	.91131	
Dieldrin	.69251	.47743	-	1.15821	
Endrin	.06324	.05464	-	.13690	
Endosulfan II	.05785	.05904	-	.11380	

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

Calibration Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850513 21:01

Compound	Files:)J2856 RF 60.00	)J2855 RF 100.00	)J2854 RF 200.00	)J2857 RF 150.00	
4,4'-DDD	.64855	.58205	-	1.19789	
Endrin aldehyde	.06324	.05464	-	.40242	
4,4'-DDT	.34275	.36152	-	.81315	
Endosulfan sulfate	.11615	.10361	-	.22466	
Terphenyl-D14	.99584	1.13988	1.24470	-	(Conc=50.0,50.0,50.0,)
Butyl benzyl phthalate	.82497	.78490	.82928	-	
Benzo(a)anthracene	.64333	.74559	.88917	-	
Chrysene	1.43189	1.26222	1.27706	-	
3,3'-Dichlorobenzidine	.16740	.09248	.28620	-	
bis(2-Ethylhexyl)phthalate	1.13330	1.05374	1.13979	-	
Di-n-octyl phthalate	1.73847	1.65242	1.71498	-	
Benzo(b)fluoroanthene	2.09630	.66157	.72219	-	
Benzo(k)fluoranthene	.82695	1.08759	.93937	-	
Benzo(a)pyrene	.82695	.73546	.68635	-	
Indeno(1,2,3-c,d)pyrene	.82721	.64560	.73846	-	
Dibenzo(a,h)anthracene	-	.48227	.59719	-	
Benzo(ghi)perylene	.60865	.55143	.63287	-	

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

Calibration Check Report

Title: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850513 21:01

Check Standard Data File: >J2871
Injection Time: 850514 08:57

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
N-Nitrosodimethylamine	1.42820	1.01969	28.60	Average	
bis(2-Chloroethyl) ether	1.96796	2.28769	16.25	Average	
1,3-Dichlorobenzene	1.39744	1.44364	3.31	Average	
1,4-Dichlorobenzene	1.85399	1.74871	5.68	Average	
1,2-Dichlorobenzene	1.64317	1.74228	6.03	Average	
Nitrobenzene-d5	1.57494	2.09497	33.02	Average	(Conc=50.00)
bis(2-Chloroisopropyl)ether	.36981	.39215	6.04	Average	
2-Fluorobiphenyl	.34265	.37320	8.92	Average	(Conc=50.00)
N-Nitrosodi-n-propylamine	.34743	.33648	3.15	Average	
Hexachloroethane	.13432	.10299	23.32	Average	
Nitrobenzene	.53517	.56808	6.13	Average	
Isophorone	.86744	.88037	1.49	Average	
bis(2-Chloroethoxy)methane	.51760	.53365	3.10	Average	
1,2,4-Trichlorobenzene	.30519	.30197	1.05	Average	
Naphthalene	1.16471	1.16637	.14	Average	
Hexachlorobutadiene	.18354	.16376	10.78	Average	
Hexachlorocyclopentadiene	.23598	.26235	11.17	Average	
2-Chloronaphthalene	1.04682	1.16020	10.83	Average	
Dimethyl phthalate	1.48738	1.48993	.18	Average	
Acenaphthylene	1.92703	1.93503	.42	Average	
2,6-Dinitrotoluene	.29656	.30446	2.66	Average	
Acenaphthene	1.37539	1.38410	.63	Average	
2,4-Dinitrotoluene	.25429	.24827	2.37	Average	
Diethyl phthalate	1.42077	1.24571	12.32	Average	
Fluorene	1.11843	1.04413	6.64	Average	
4-Chlorophenyl phenyl ether	.54232	.51642	4.78	Average	
N-Nitrosodiphenylamine	.63192	.56526	10.55	Average	
1,2-Diphenylhydrazine	1.91734	1.66098	13.41	Average	
4-Bromophenyl phenyl ether	.25834	.28453	10.14	Average	
Hexachlorobenzene	.33803	.35306	4.45	Average	
Phenanthrene	.85573	.85185	.45	Average	
Anthracene	1.07302	1.05393	1.78	Average	
Di-n-butyl phthalate	1.28431	1.08954	15.17	Average	
Fluoranthene	.70471	.61442	12.81	Average	
Benzidine	.00948	.00420	55.67	Average	
Pyrene	.68996	.56463	18.16	Average	
Alpha-BHC	.18901	.19937	5.48	Average	
Beta-BHC	.09173	.08092	11.79	Average	
Gamma-BHC	.15825	.16006	1.14	Average	
Delta-BHC	.09008	.08108	9.99	Average	
Heptachlor	.27465	.23931	12.87	Average	
Aldrin	.24328	.19511	19.80	Average	
Heptachlor epoxide	.27756	.24712	10.96	Average	
Chlordane	.09467	.06601	30.28	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: B/N+PEST ID FILE .....MASTER, 850119
Calibrated: 850513 21:01

Check Standard Data File: >J2871
Injection Time: 850514 08:57

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Endosulfan I	.09555	.08329	12.84	Average	
4,4'-DDE	.61721	.54820	11.18	Average	
Dieldrin	.77605	.60571	22.01	Average	
Endrin	.08493	.05626	33.75	Average	
Endosulfan II	.07690	.06176	19.69	Average	
4,4'-DDD	.80950	.70386	13.05	Average	
Endrin aldehyde	.17343	.05626	67.56	Average	
4,4'-DDT	.50581	.47973	5.16	Average	
Endosulfan sulfate	.14814	.11417	22.93	Average	
Terphenyl-D14	1.12681	1.44747	28.46	Average	(Conc=50.00)
Butyl benzyl phthalate	.81305	.85153	4.73	Average	
Benzo(a)anthracene	.75936	.72391	4.67	Average	
Chrysene	1.32372	1.38374	4.53	Average	
3,3'-Dichlorobenzidine	.18203	.10151	44.24	Average	
bis(2-Ethylhexyl)phthalate	1.10894	1.05382	4.97	Average	
Di-n-octyl phthalate	1.70196	1.27929	24.83	Average	
Benzo(b)fluoroanthene	1.16002	.33512	71.11	Average	
Benzo(k)fluoranthene	.95131	.44576	53.14	Average	
Benzo(a)pyrene	.74959	.44576	40.53	Average	
Indeno(1,2,3-c,d)pyrene	.73709	.32893	55.37	Average	
Dibenzo(a,h)anthracene	.53973	.08053	85.08	Average	
Benzo(ghi)perylene	.59765	.28307	52.64	Average	

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

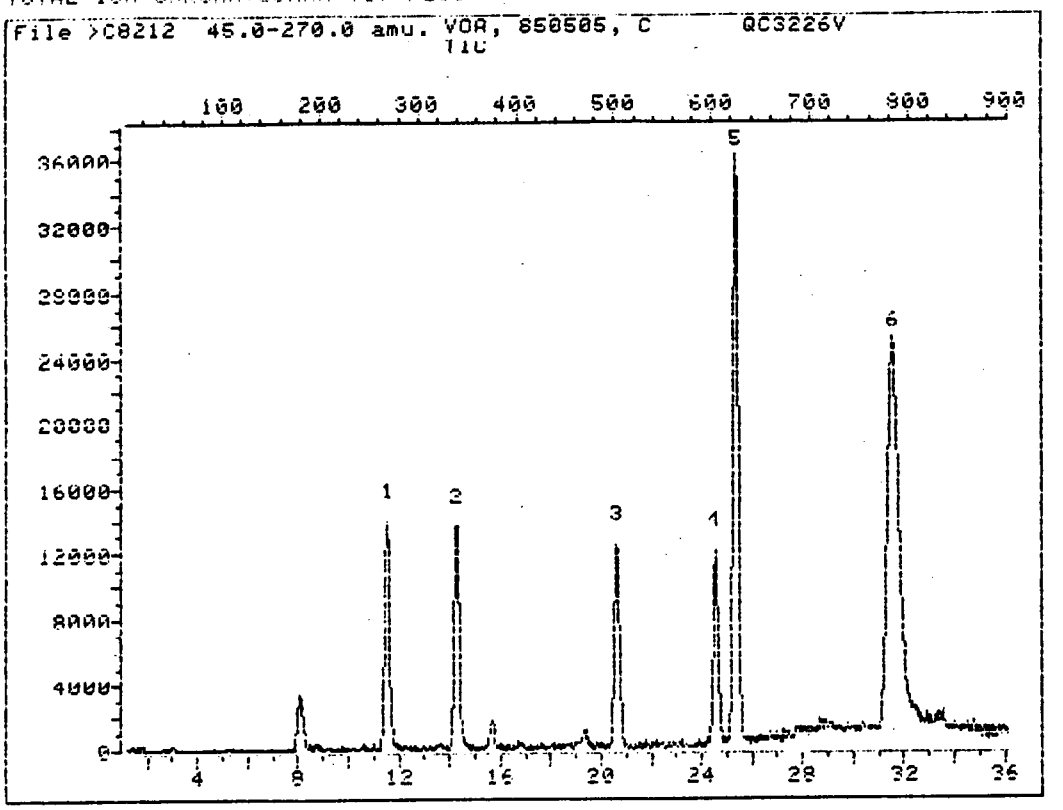
$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Appendix C1

GC/MS Subsidiary Data

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



Data File: >C8212::U2
Name: VOA, 850505, C
Misc Data: QC3226V

Operator ID: DS3476 Quant Rev: 4 Quant Time: 850505 13:04
Injected at: 850505 08:05
Data File: >C8212::U2 Dilution Factor: 1.00
Name: VOA, 850505, C
Misc: QC3226V

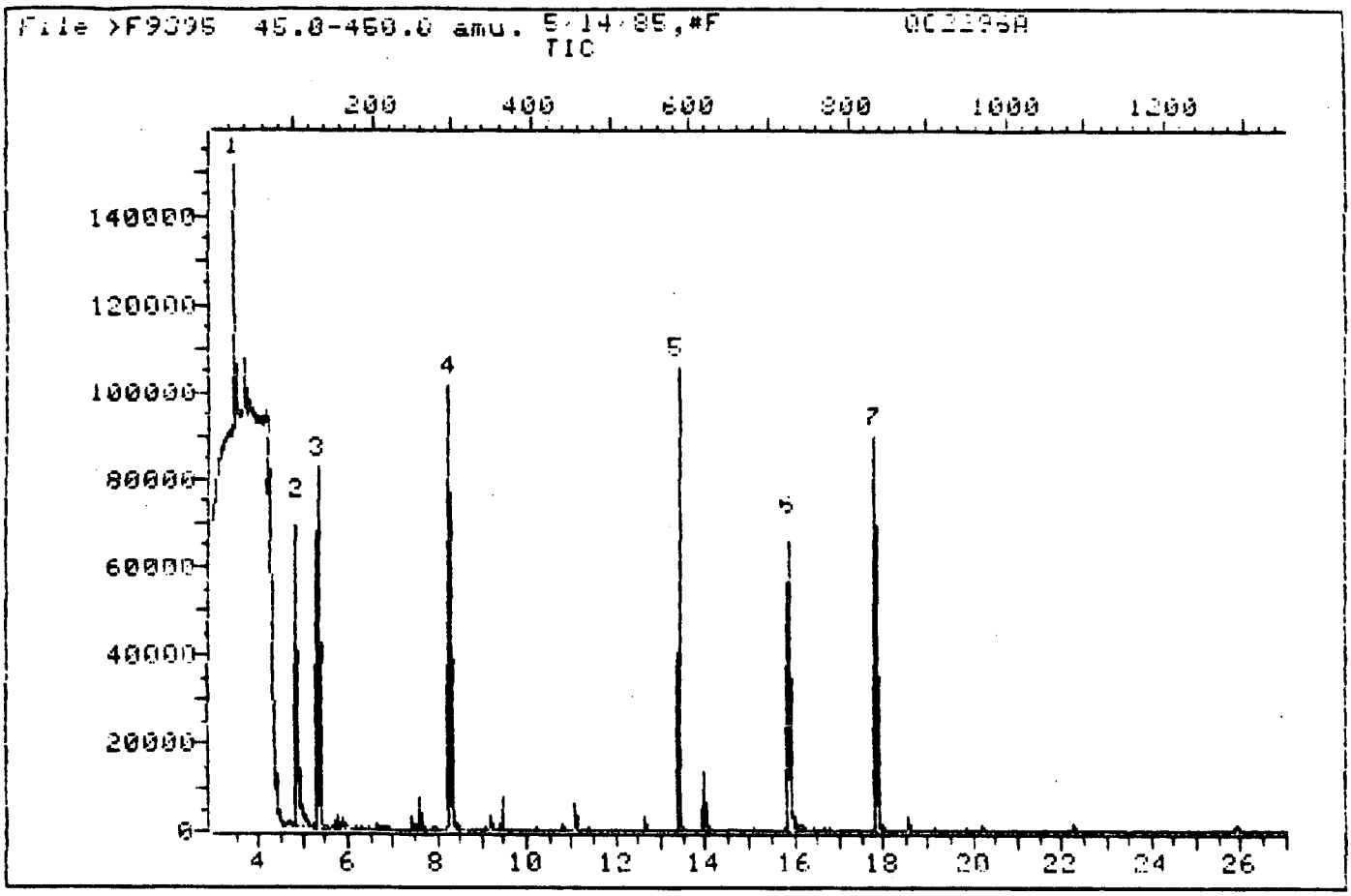
ID File: CVOA
Title: PURGEABLE PRIORITY POLLUTANTS,C
Last Calibration: 850505 13:03

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane	20.63	502	72057	200.00	NG	93
7)	~~Carbon tetrachloride~~	~~15.62~~	~~373~~	~~911~~	~~3.34~~	~~NG~~	52
24)	Methylene chloride	8.08	179	10747	41.45	NG	91
27)	Toluene	25.56	629	2900	3.44	NG	76
29)	1,1,1-Trichloroethane	15.65	374	6508	19.40	NG	91
34)	1,2-Dichloroethane-D4	14.29	339	34036	276.73	NG	80
35)	Toluene-D8	25.36	624	187748	282.02	NG	99
36)	p-Bromofluorobenzene	31.50	782	94856	283.02	NG	83
39)	*1,4-Dichlorobutane	24.55	603	78372	200.00	NG	94

* Compound is ISTD

CTS5AR

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



Data File: >F9395::U6
Name: 5/14/85,#F
Misc Data: QC2296A

BTL#26

QUANT REPORT

Operator ID: WWWWW
Output File: ^F9395::AQ
Data File: 3F9395::UA
Name: 5/14/85,#F
Misc: QC2296A

Quant Seq: 4
Quant Time: 850514 12:58
Injected at: 850514 12:23
Dilution Factor: 1.00

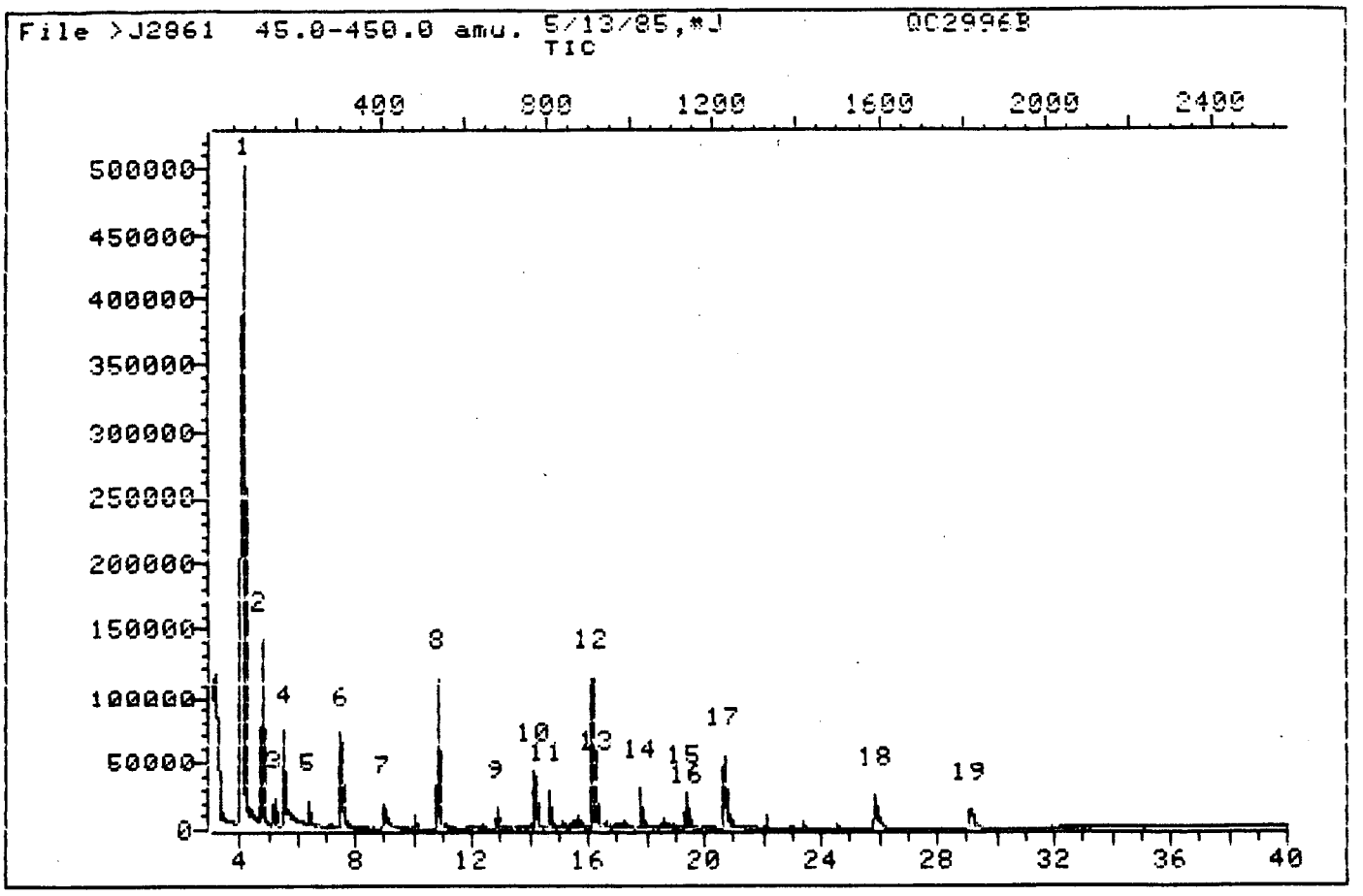
RU #26

ID File: F0010
Title: ACID ID FILE.....3/15/85,#F,WWW
Last Calibration: 850514 11:47

Compound	R.T.	Scan#	Area	Conc	Units	Q
1) *d4-1,4-Dichlorobenzene	5.29	129	43468	40.00	UG/ML	89
3) 2-Fluorophenol	3.49	94	27030	36.36	UG/ML	93
5) Phenol-D5	4.85	114	79412	84.90	UG/ML	95
9) *-8 Naphthalene	8.94	197	103107	40.00	UG/ML	99
14) *d10-Acenaphthalene	13.41	586	50299	40.00	UG/ML	99
20) *-10 Phenanthrene	12.93	554	90885	40.00	UG/ML	97
21) 2,4,6-Tribromophenol	15.84	723	21948	72.35	UG/ML	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B

BTL# 4

QUANT REPORT

Operator ID: WW9928 Quant Rev: 4 Quant Time: 850513 22:36
Injected at: 850513 21:47
Data File: >J2861::U5 Dilution Factor: 1.00
Name: 5/13/85,#J
Misc: QC2996B BTL# 4

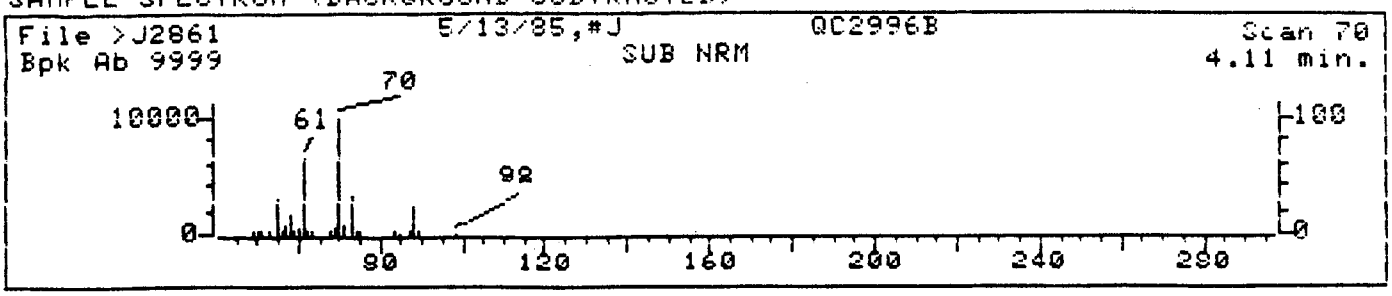
J137A0

ID File: JBNP
Title: B/N/P FRACTION ID FILE....3/16/85,#J,WWC
Last Calibration: 850513 21:05

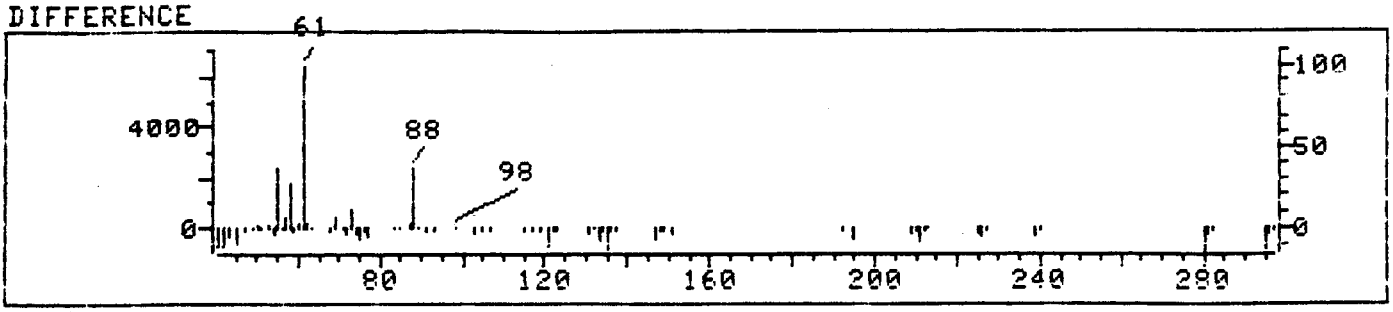
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	7.49	306	47700	40.00	UG/ML	94
2)	N-Nitrosodimethylamine	4.03	64	7238	~~4.25~~	UG/ML	100
2)	N-Nitrosodimethylamine	4.11	70	5620	~~3.30~~	UG/ML	100
8)	Nitrobenzene-d5	8.90	405	51252	~~27.29~~	~~UG/ML~~	96
8)	Nitrobenzene-d5	9.55	450	2377	~~1.27~~	UG/ML	54
8)	Nitrobenzene-d5	9.72	462	445	~~.24~~	~~UG~~/ML	64
9)	bis(2-Chloroisopropyl)ether	7.50	307	1499	~~3.40~~	UG/ML	72
10)	*d8-Naphthalene	10.77	536	170051	40.00	UG/ML	95
11)	2-Fluorobiphenyl	14.09	768	45111	~~30.97~~	~~UG/ML~~	94
20)	*d10-Acenaphthalene	16.06	906	79514	40.00	UG/ML	96
23)	Dimethyl phthalate	16.08	907	13582	~~4.59~~	~~UG/ML~~	73
28)	Diethyl phthalate	17.77	1025	1167	~~.41~~	~~UG/ML~~	99
43)	*d10-Phenanthrene	20.63	1225	104035	40.00	UG/ML	96
48)	Di-n-butyl phthalate	22.90	1384	5256	~~1.57~~	~~UG/ML~~	95
58)	*d12-Chrysene	29.03	1813	44337	40.00	UG/ML	91
70)	Terphenyl-D14	25.80	1587	79429	63.59	UG/ML	99

* Compound is ISTD

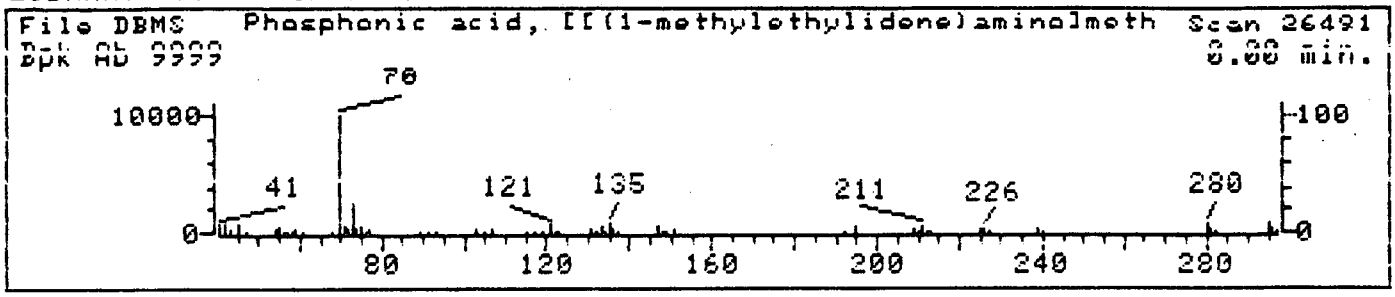
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

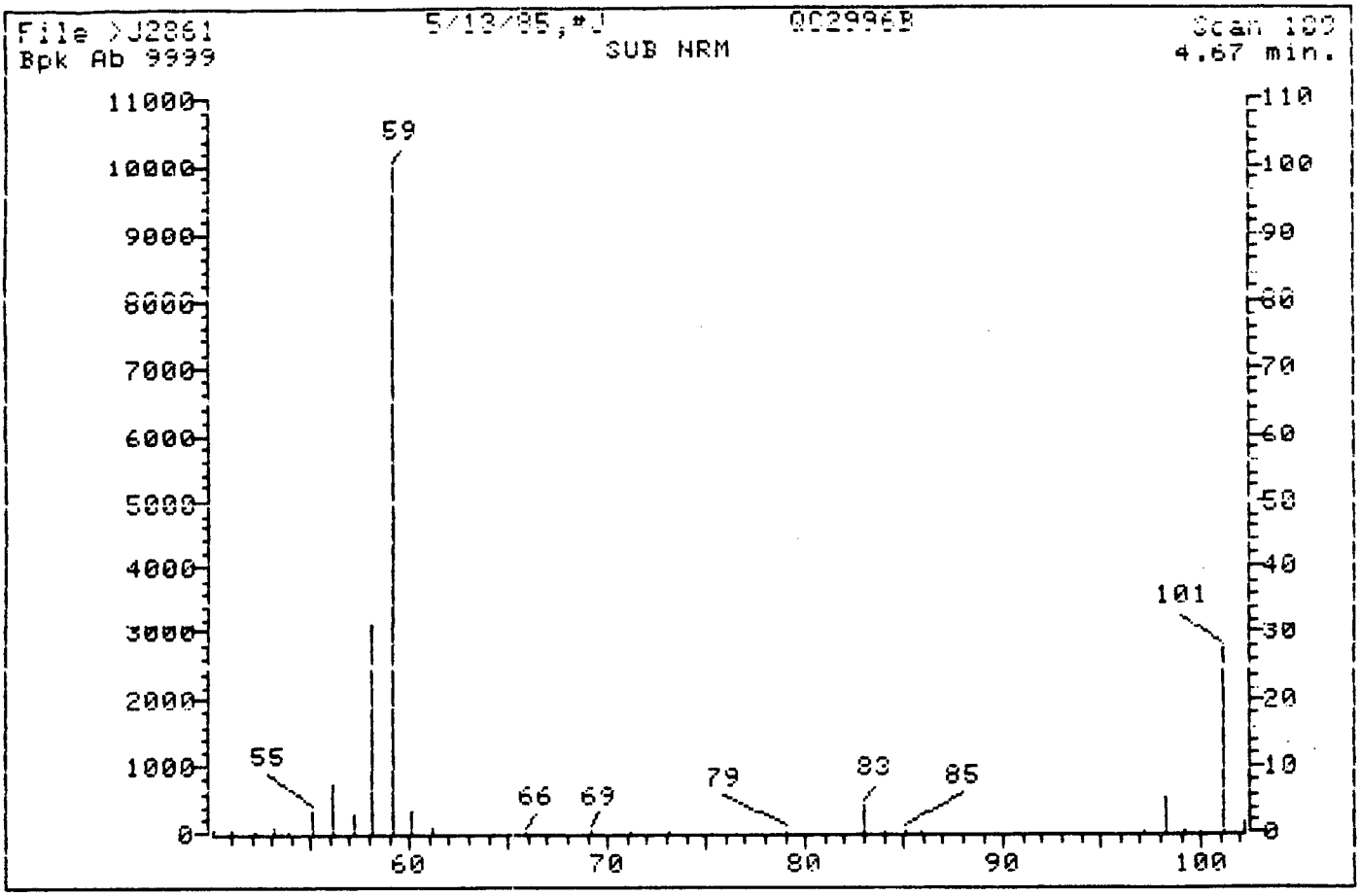


Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B BTL# 4
RT (min): 4.11
Scan: 70
Area: 3720082
Semi-quantitative Conc: 421.41 UG/ML

Data File: >J2861 Scan Number: 70
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

1. Phosphonic acid, [[(1-methylethylidene)aminolmethyl] 295 C10H26NO3PSi2
   -, bis(trimethylsilyl) ester (9CI)
2. Acetic acid, ethyl ester 88 C4H8O2

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	55108639	36	94	0	-2
2.	25	141786	22	70	1	0

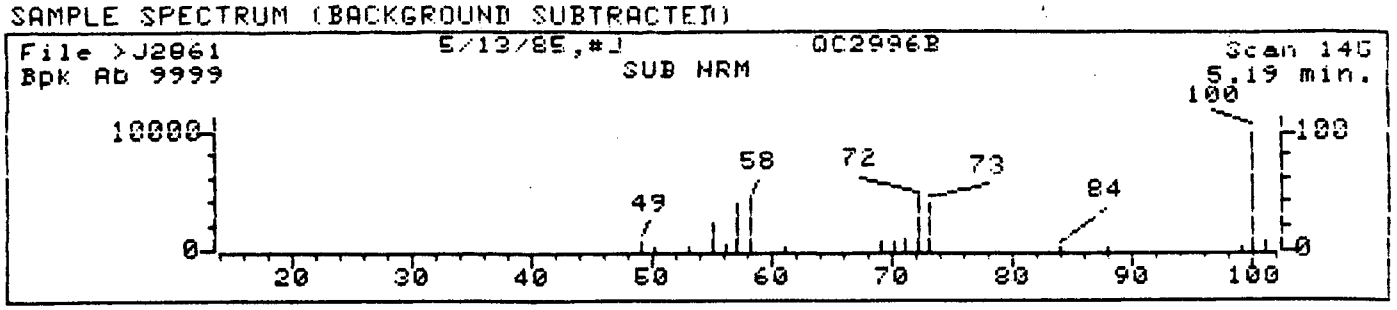


Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B
RT (min): 4.67
Scan: 109
Area: 273075
Semi-quantitative Conc: 30.93 UG/ML

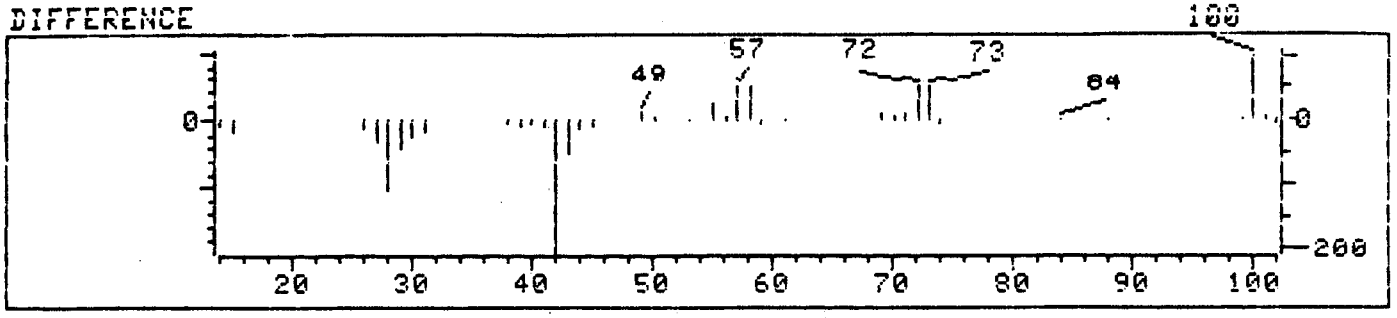
BTL# 4

No PBM hits for this scan.

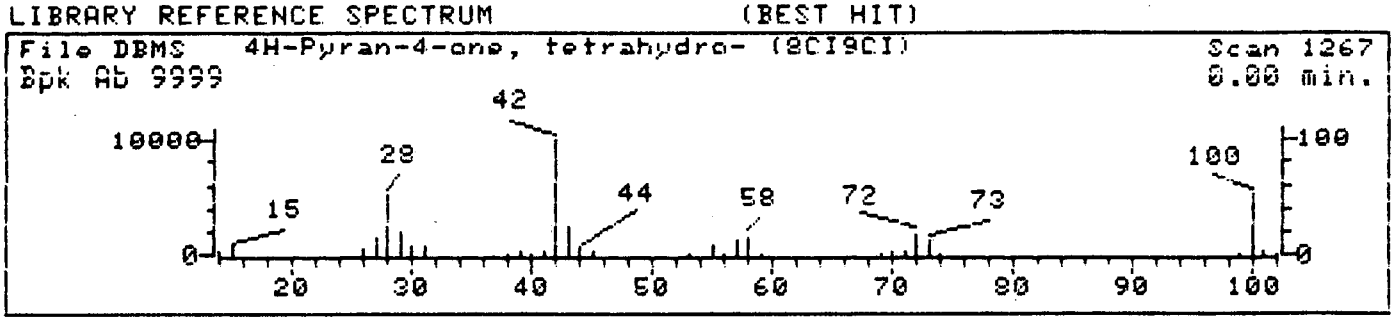
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

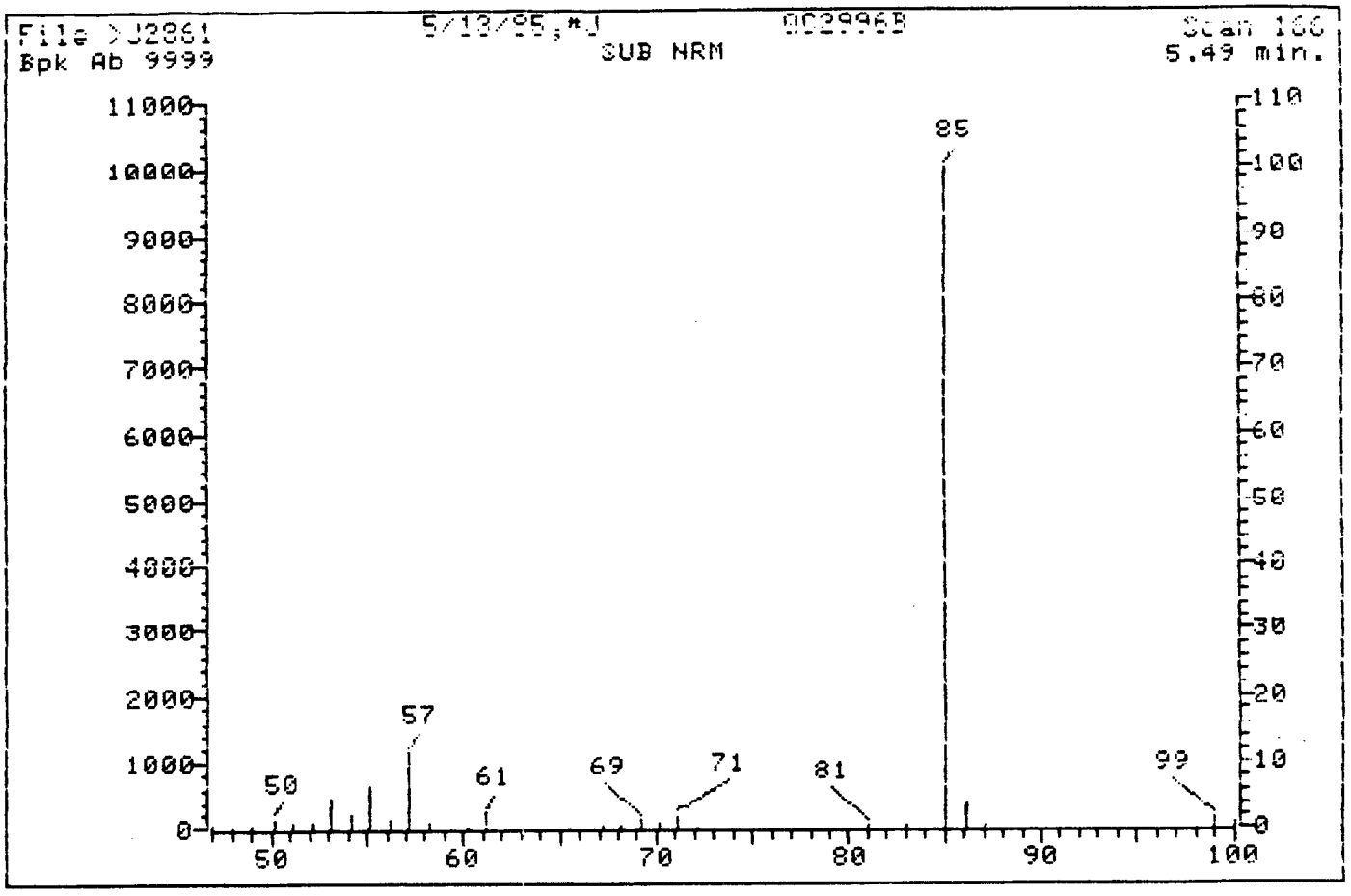


Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B BTL# 4
RT (min): 5.19
Scan: 145
Area: 70557
Semi-quantitative Conc: 7.99 UG/ML

Data File: >J2861 Scan Number: 145
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

1. 4H-Pyran-4-one, tetrahydro- (8CI9CI) 100 C5H8O2
2. 2,4-Imidazolidinedione (9CI) 100 C3H4N2O2
3. p-Dioxane, methylene- (8CI) 100 C5H8O2

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	74	29943428	44	52	0	0
2.	31	461723	31	86	1	0
3.	15	3984198	21	91	1	0

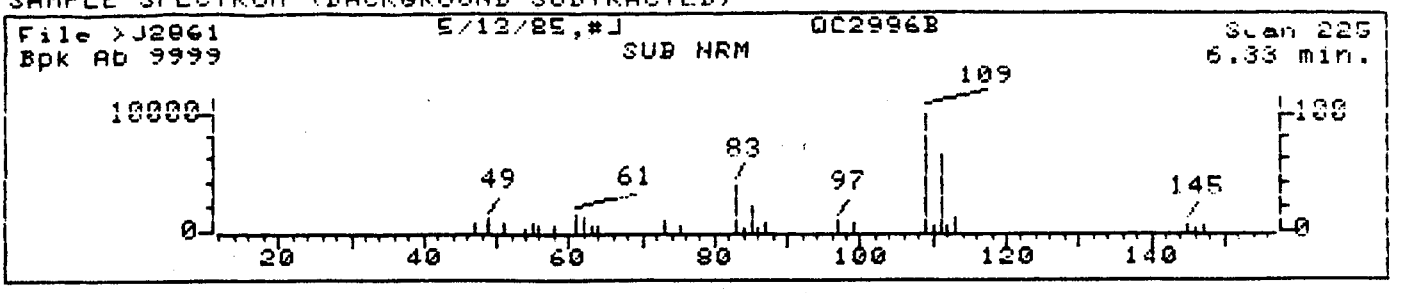


Data File: >J2861::US
Name: 5/13/85,#J
Misc Data: QC2996B
RT (min): 5.49
Scan: 166
Area: 222156
Semi-quantitative Conc: 25.17 UG/ML

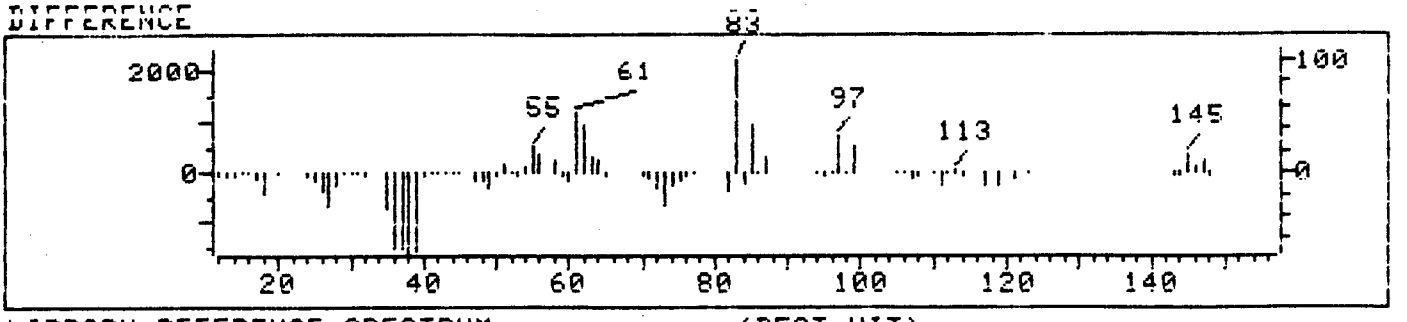
BTL# 4

No PBM hits for this scan.

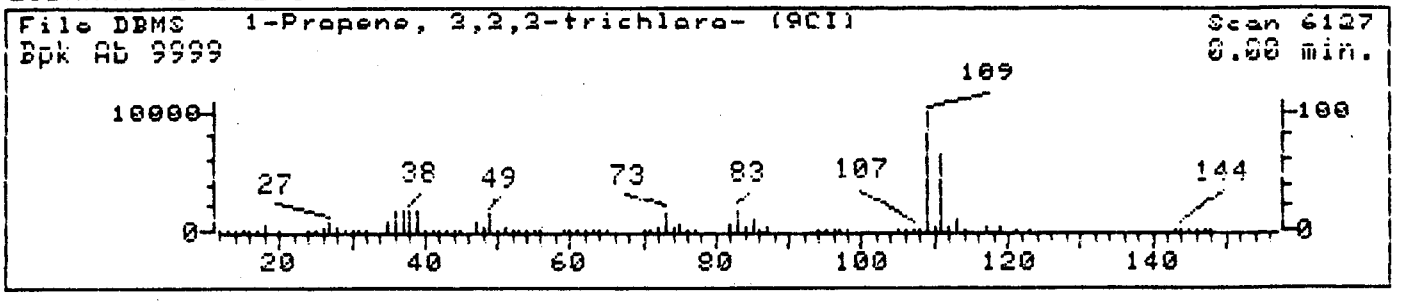
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



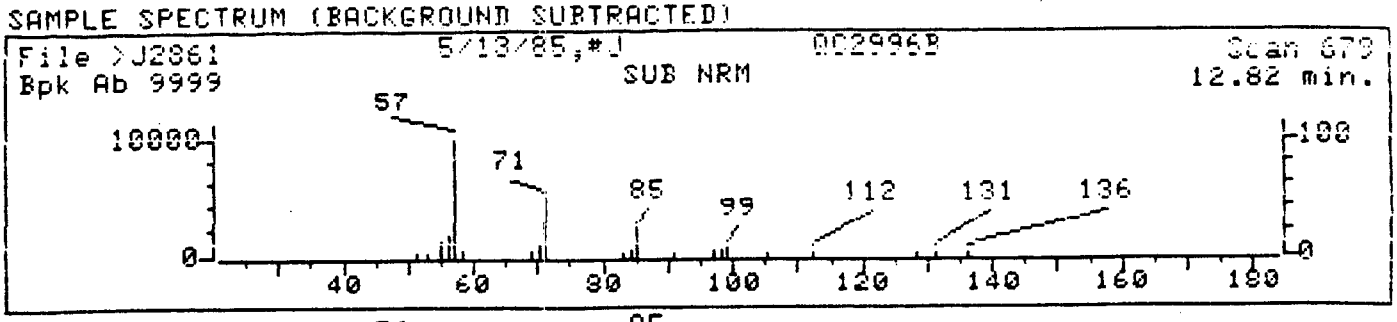
Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B BTL# 4
RT (min): 6.33
Scan: 225
Area: 53183
Semi-quantitative Conc: 6.02 UG/ML

Data File: >J2861 Scan Number: 225
Search Speed: 2 Titling option: S Number of ion ranges searched: 57

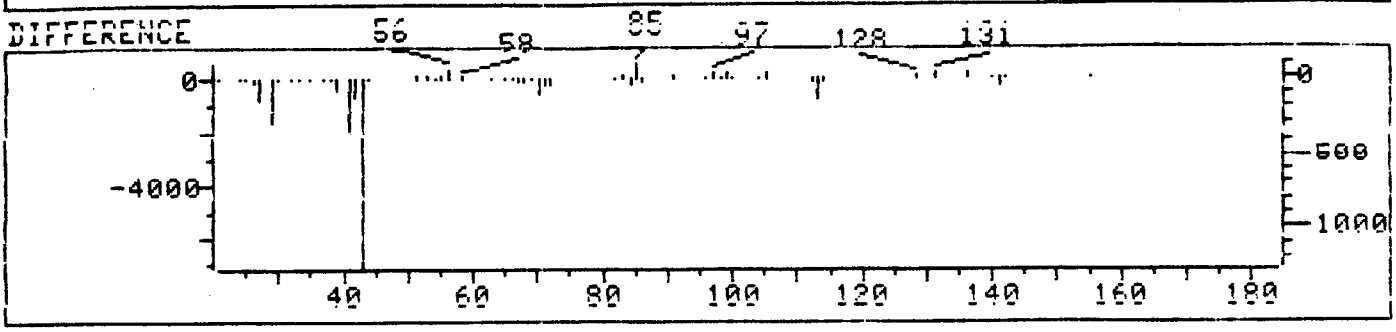
1. 1-Propene, 3,3,3-trichloro- (9CI) 144 C3H3Cl3

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	37	2233003	34	79	2	0

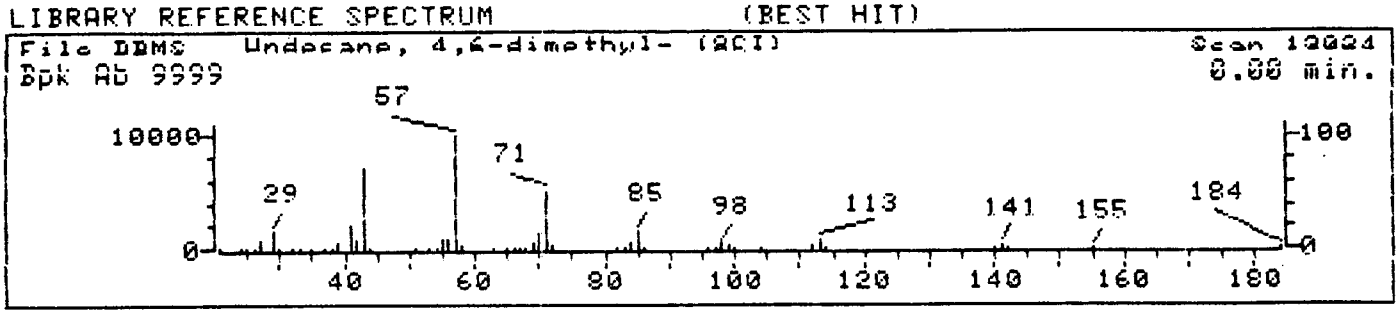
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



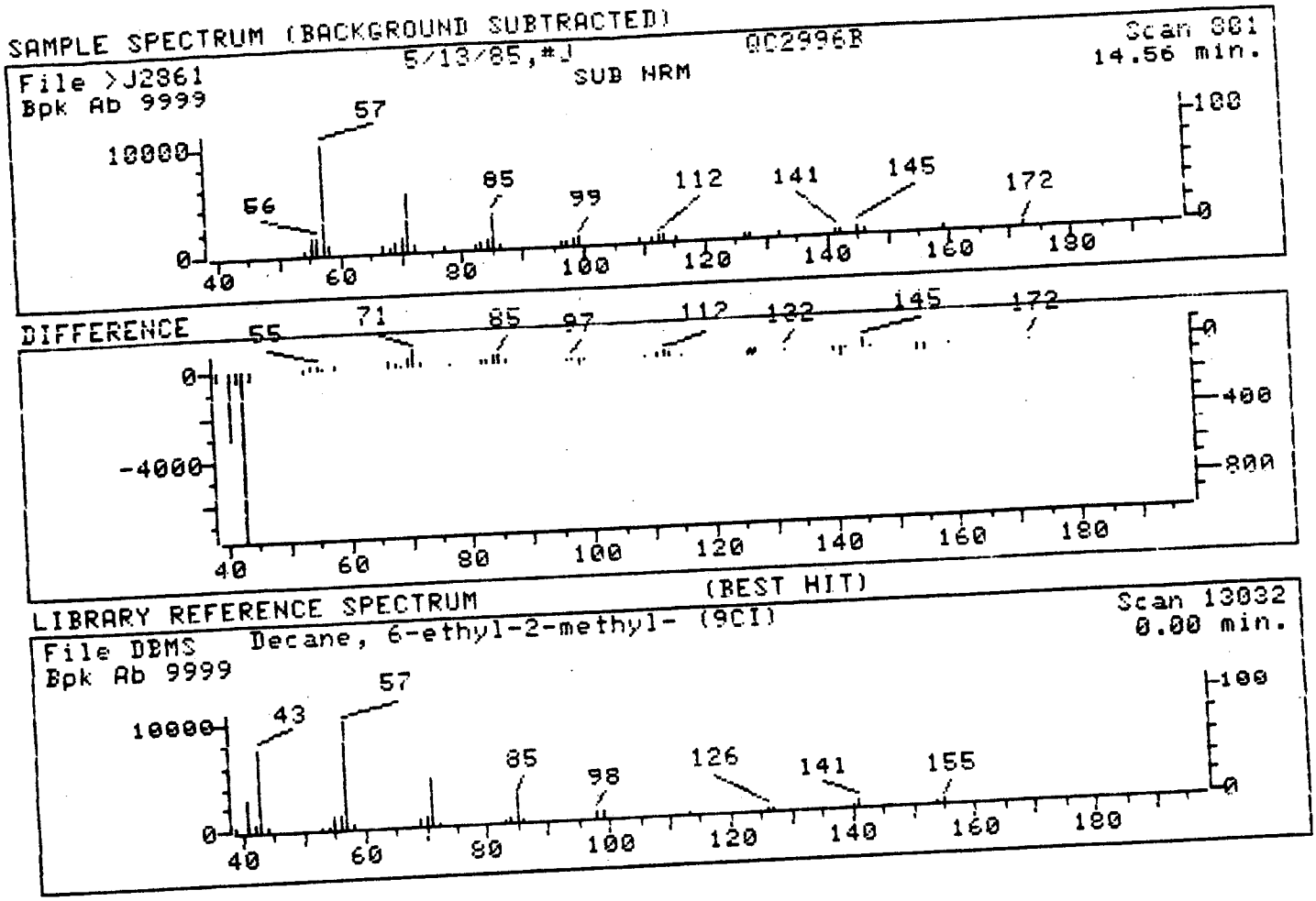
Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B
RT (min): 12.82
Scan: 679
Area: 30540
Semi-quantitative Conc: 3.46 UG/ML

BTL# 4

Data File: >J2861 Scan Number: 679
Search Speed: 2 Titling option: S Number of ion ranges searched: 61

1. Undecane, 4,6-dimethyl- (8CI) 184 C13H28
2. Decane, 6-ethyl-2-methyl- (9CI) 184 C13H28
3. Undecane, 3,6-dimethyl- (8CI) 184 C13H28

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	78	17312822	45	53	2	1
2.	78	62108218	51	48	2	0
3.	70	17301289	47	50	2	2



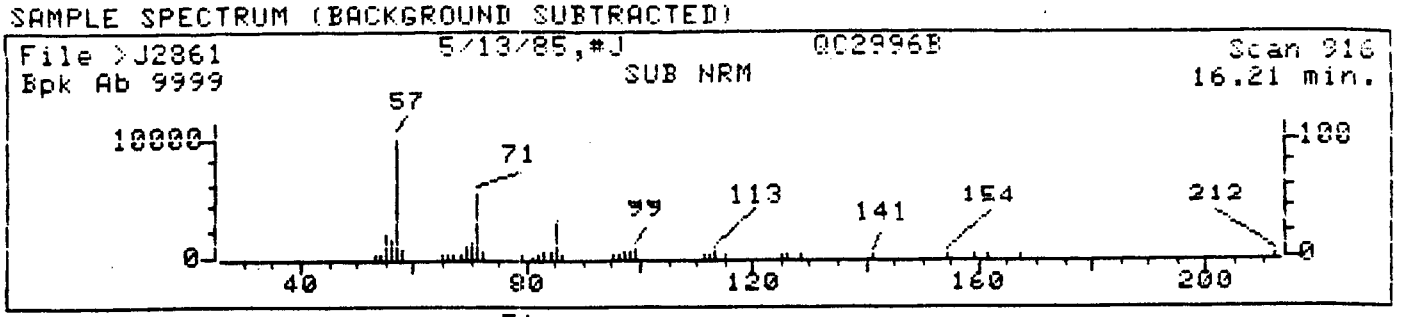
Data File: >J2861::U5 RTL# 4
Name: 5/13/85,#J
Misc Data: QC2996B
RT (min): 14.56
Scan: 801
Area: 69047
Semi-quantitative Conc: 7.82 UG/ML

Data File: >J2861 Scan Number: 801 Number of ion ranges searched: 64
Search Speed: 2 Titling option: S

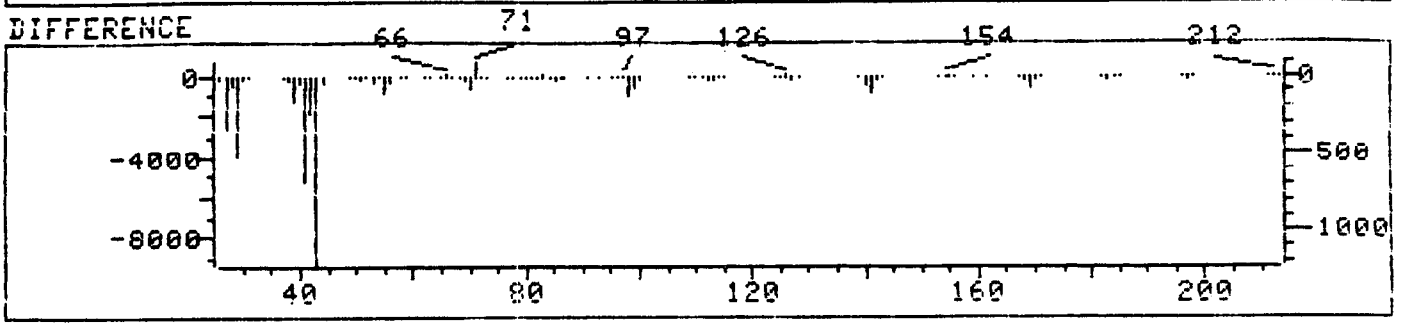
1. Decane, 6-ethyl-2-methyl- (9CI) 184 C13H28
2. Nonane, 2-methyl-5-propyl- (8CI) 184 C13H28
3. Tridecane, 7-methyl- (8CI9CI) 198 C14H30

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	70	62108218	56	43	2	0
2.	67	31081171	68	35	2	0
3.	60	26730143	50	61	3	0

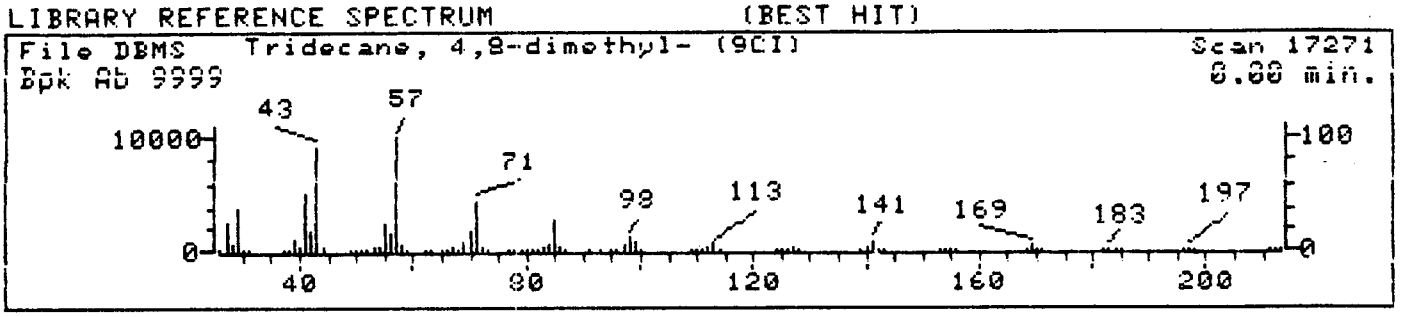
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



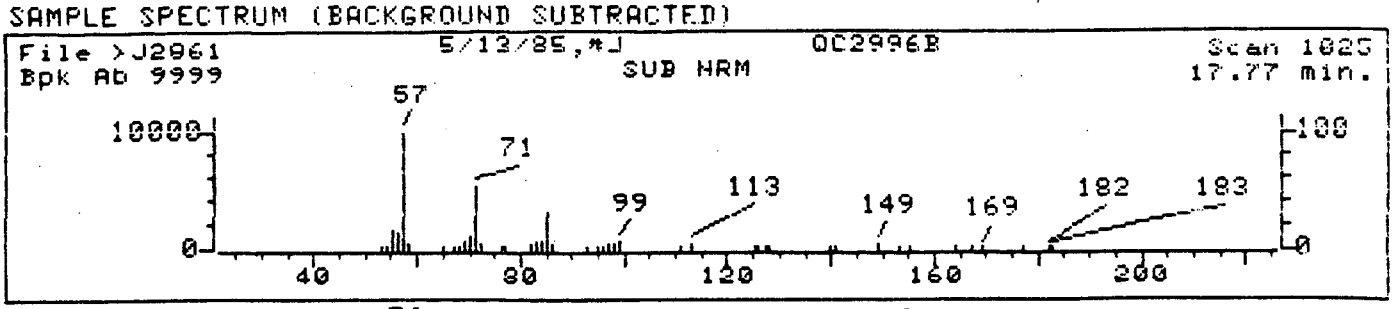
Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B BTL# 4
RT (min): 16.21
Scan: 916
Area: 83667
Semi-quantitative Conc: 9.48 UG/ML

Data File: >J2861 Scan Number: 916
Search Speed: 2 Titling option: S Number of ion ranges searched: 63

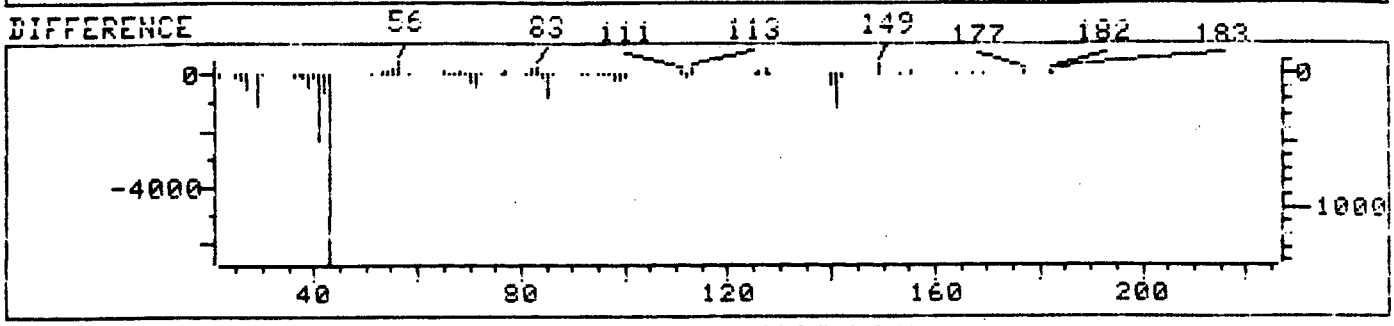
1. Tridecane, 4,8-dimethyl- (9CI) 212 C15H32
2. Decane, 5-propyl- (8CI) 184 C13H28
3. Nonane, 3-methyl-5-propyl- (8CI) 184 C13H28

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	78	55030621	25	98	3	0
2.	78	17312628	65	46	2	0
3.	78	31081182	60	45	2	0

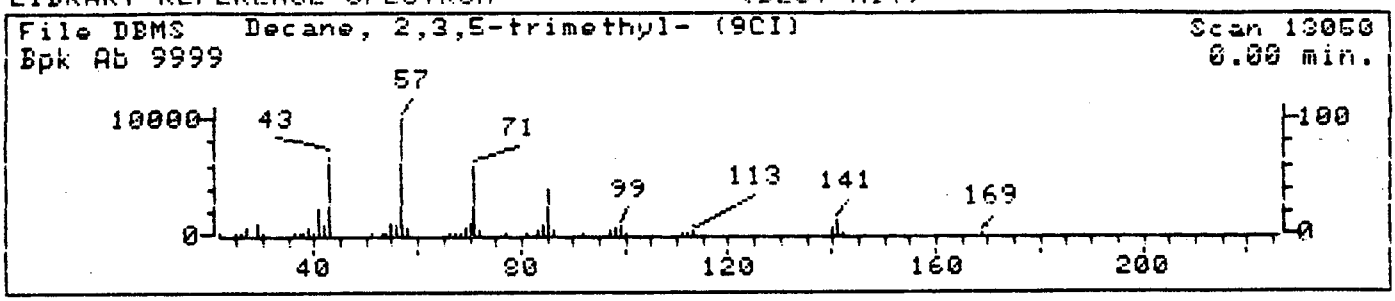
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



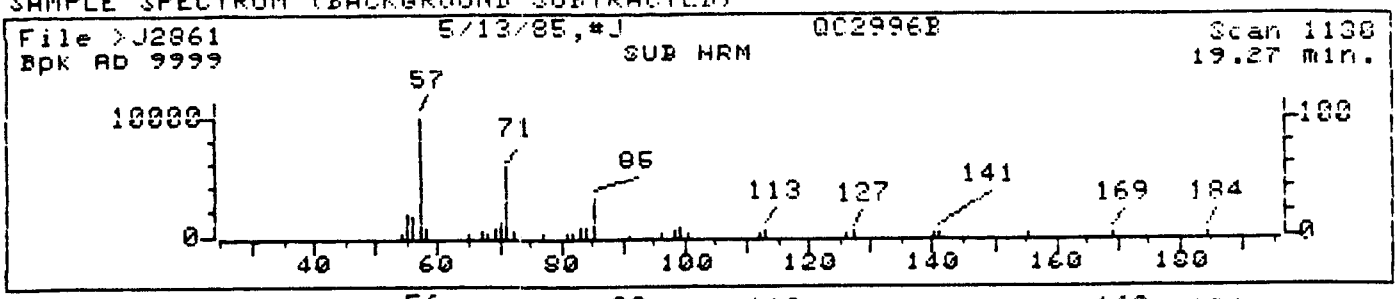
Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B BTL# 4
RT (min): 17.77
Scan: 1025
Area: 77849
Semi-quantitative Conc: 8.82 UG/ML

Data File: >J2861 Scan Number: 1025
Search Speed: 2 Titling option: S Number of ion ranges searched: 63

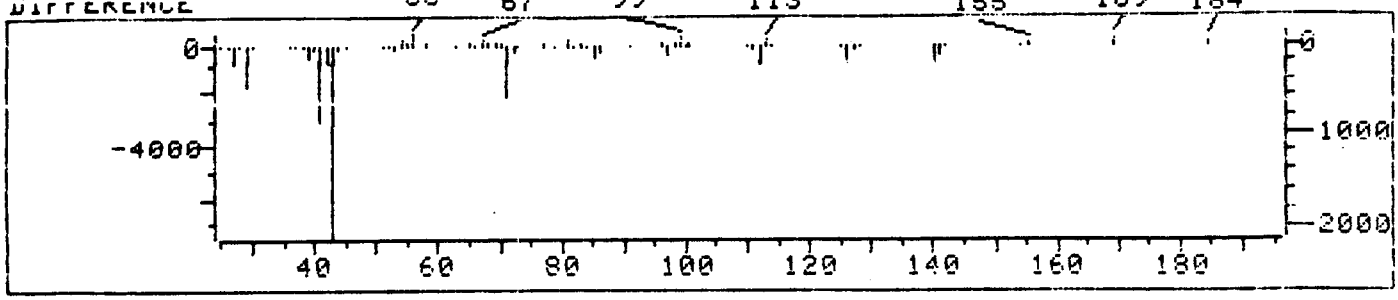
1. Decane, 2,3,5-trimethyl- (9CI) 184 C13H28
2. Dodecane, 5,8-diethyl- (8CI9CI) 226 C16H34
3. Dodecane, 2-methyl-8-propyl- (9CI) 226 C16H34

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	62238113	73	30	2	0
2.	78	24251863	36	83	3	0
3.	78	55045073	35	93	3	0

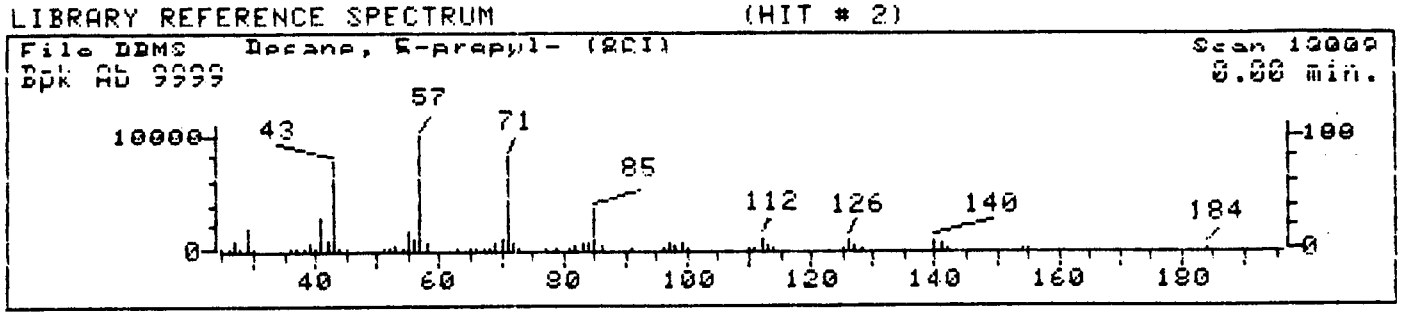
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (HIT # 2)



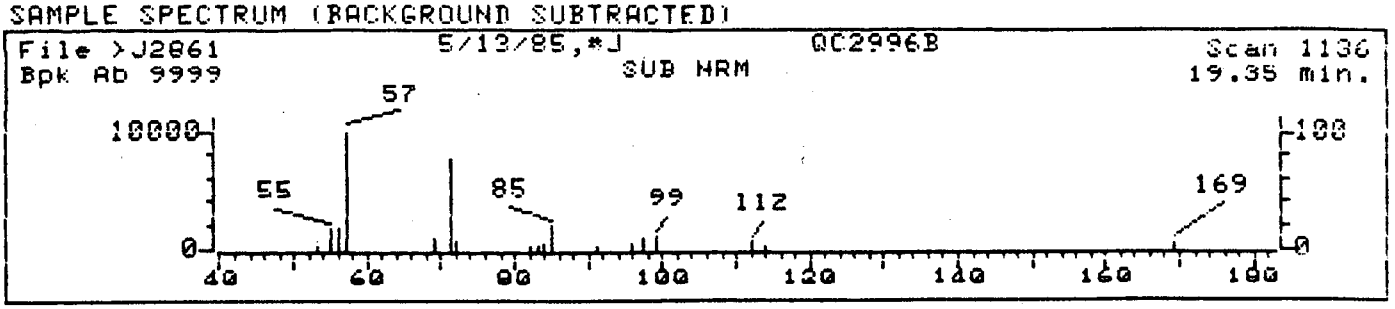
Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B BTL# 4
RT (min): 19.27
Scan: 1130
Area: 64359
Semi-quantitative Conc: 7.29 UG/ML

Data File: >J2861 Scan Number: 1130
Search Speed: 2 Titling option: S Number of ion ranges searched: 64

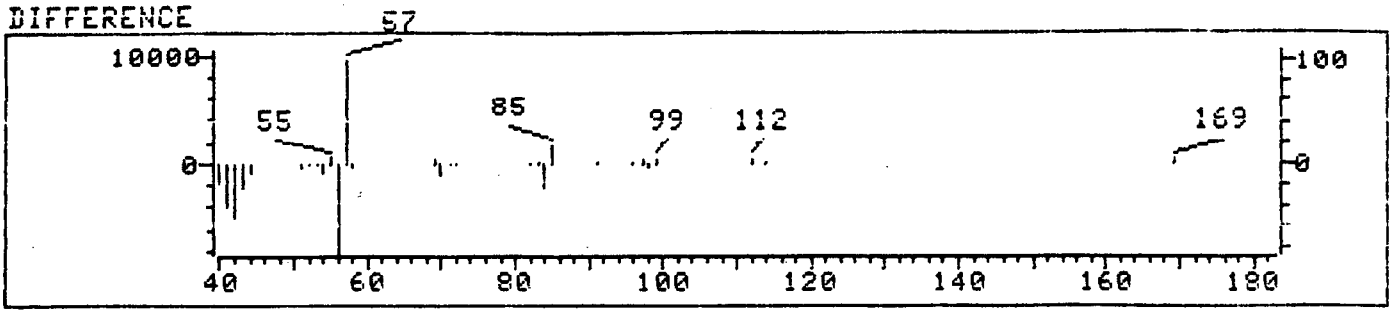
1. Cyclopropane, pentyl- (9CI) 112 C8H16
2. Decane, 5-propyl- (8CI) 184 C13H28
3. Decane, 6-ethyl-2-methyl- (9CI) 184 C13H28

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	2511913	53	49	1	-2
2.	78	17312628	42	69	2	0
3.	78	62108218	56	43	2	0

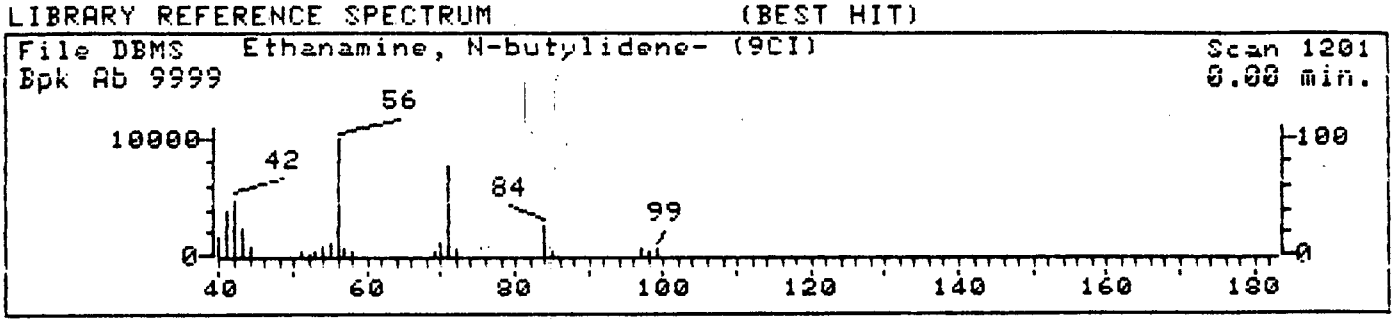
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >J2861::U5
Name: 5/13/85,#J
Misc Data: QC2996B RTL# 4
RT (min): 19.35
Scan: 1136
Area: 31543
Semi-quantitative Conc: 3.57 UG/ML

Data File: >J2861 Scan Number: 1136
Search Speed: 2 Titling option: S Number of ion ranges searched: 63

1. Ethanamine, N-butylidene- (9CI) 99 C6H13N
2. 2-Hexene, 1-methoxy-, (E)- (9CI) 114 C7H14O

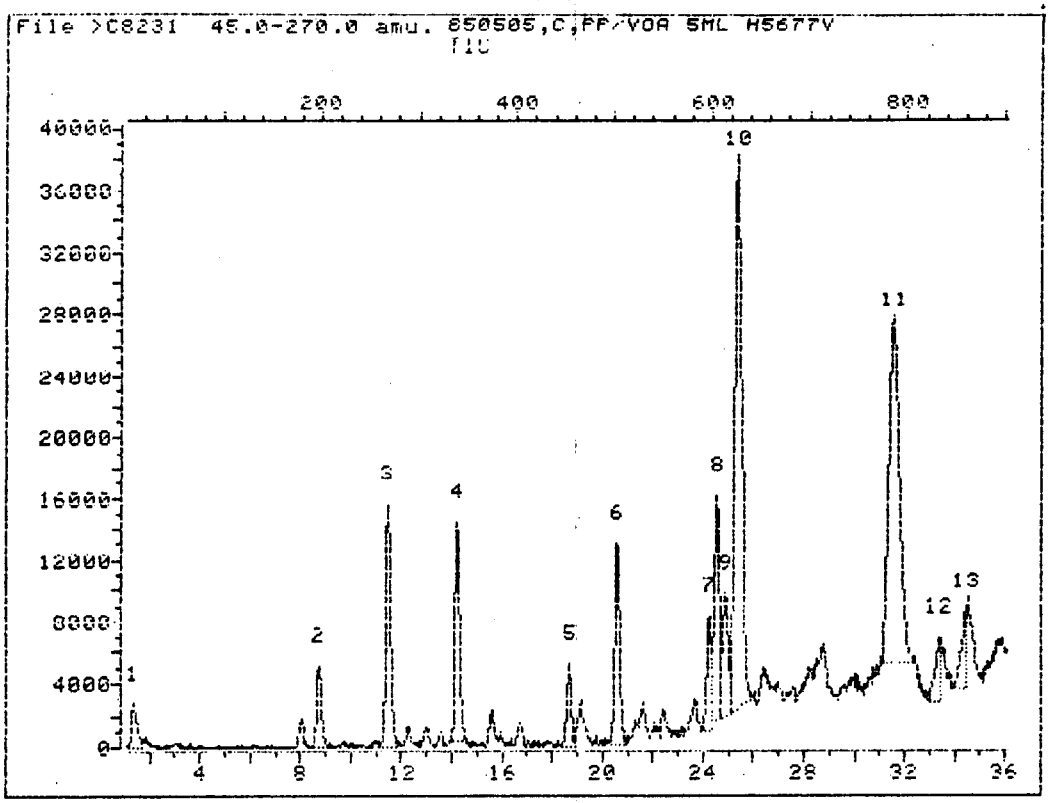
	Prob.	Cas#	K	dK	#Flg	Tilt
1.	25	1611127	25	70	3	0
2.	20	56052836	23	67	3	0

Appendix C

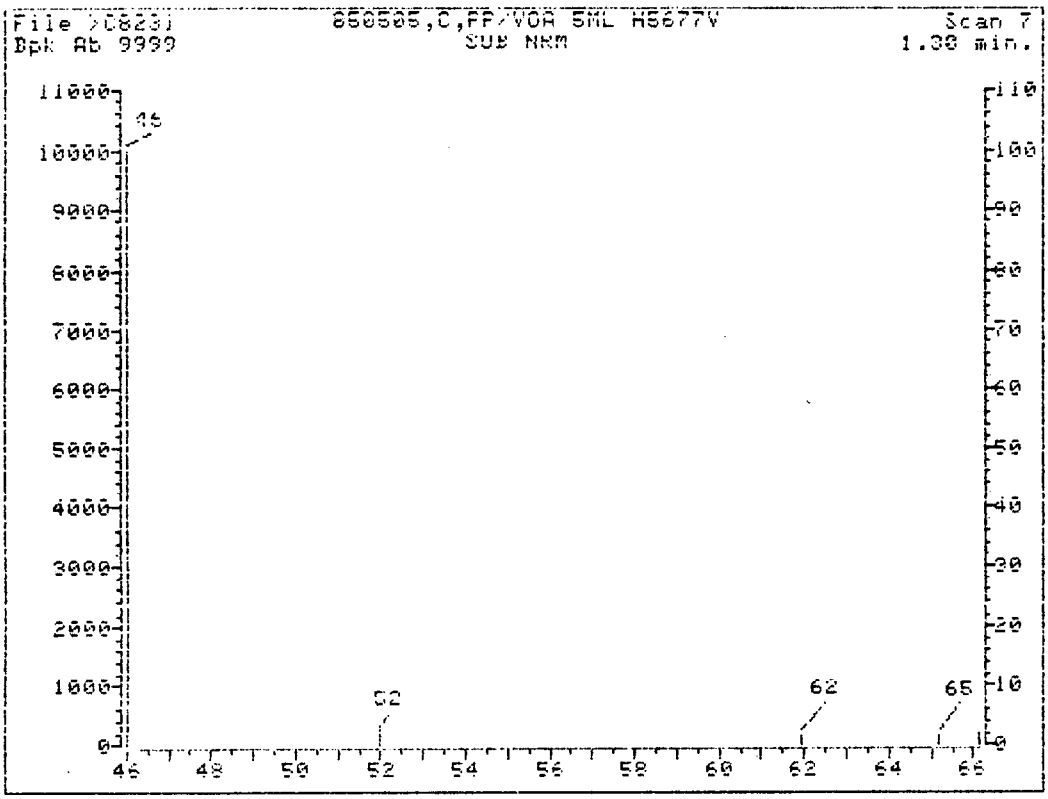
Mass Spectral Data for Tentatively Identified Compounds

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

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



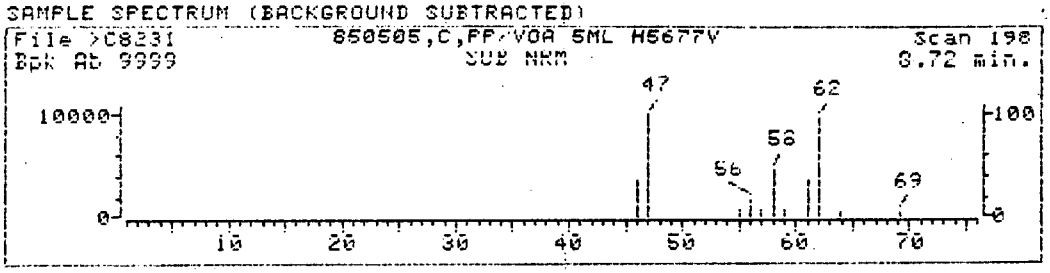
Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc Data: H5677V



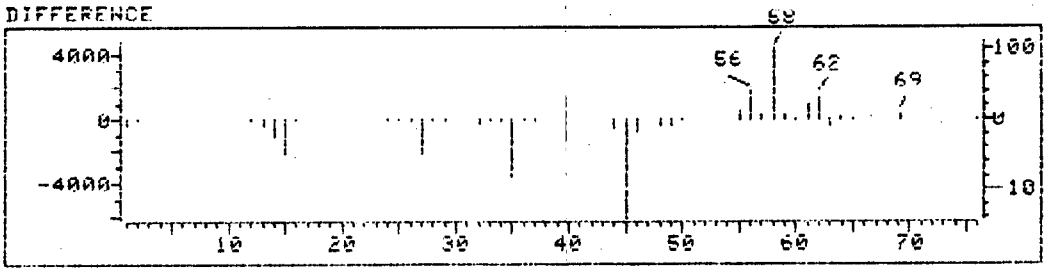
Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc Data: H5677V
RT (min): 1.30
Scan: 7
Area: 46138
Semi-quantitative Conc: 52.48 NG

No PRM hits for this scan.

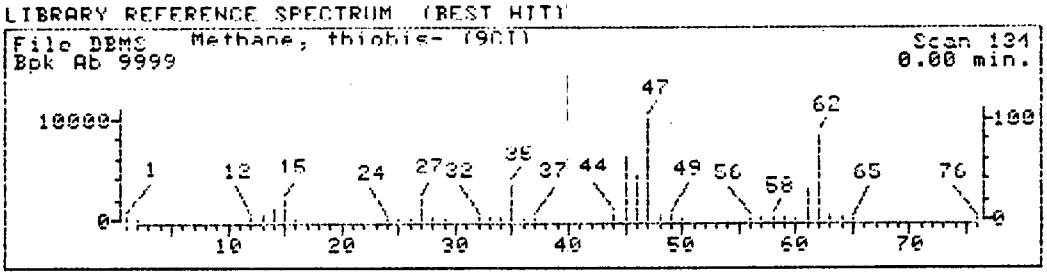
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



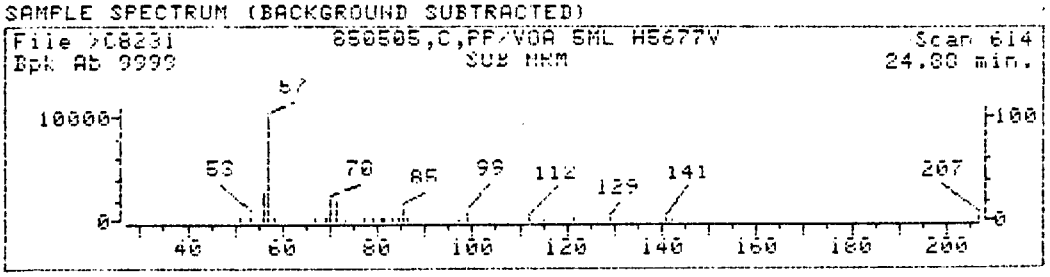
Data File: >C8231::10
Name: 850505,C,PP/VOA 5ML
Misc Data: H5677V
RT (min): 8.72
Scan: 198
Area: 69534
Semi-quantitative Conc: 79.09 NG

Data File: >C8231 Scan Number: 198
Search Speed: 2 Titling option: S Number of ion ranges searched: 56

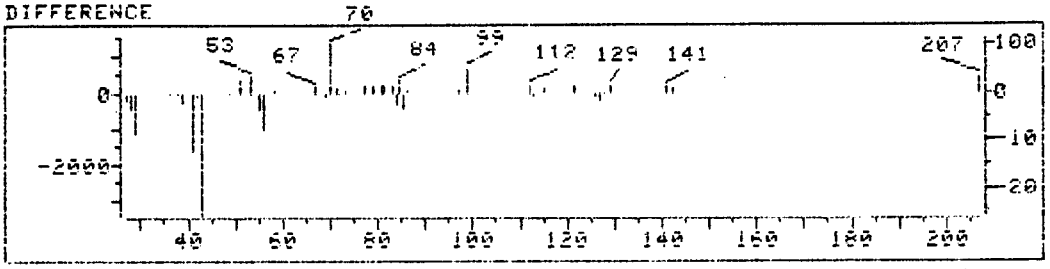
1. Methane, thiobis- (9CI) 62 C2H6S
2. Ethanethiol (8CI9CI) 62 C2H6S

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	37	75183	39	86	2	0
2.	31	75081	28	100	2	0

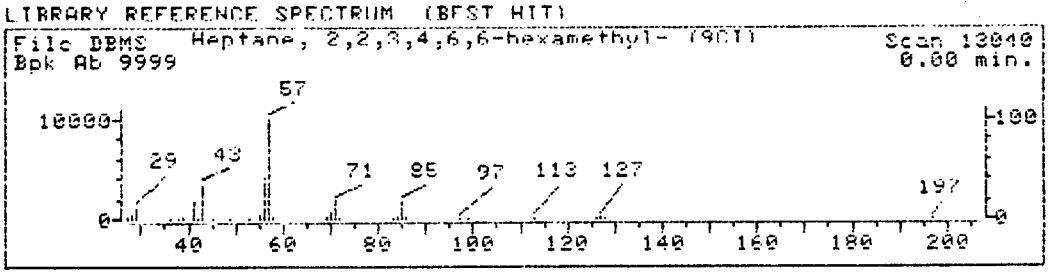
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



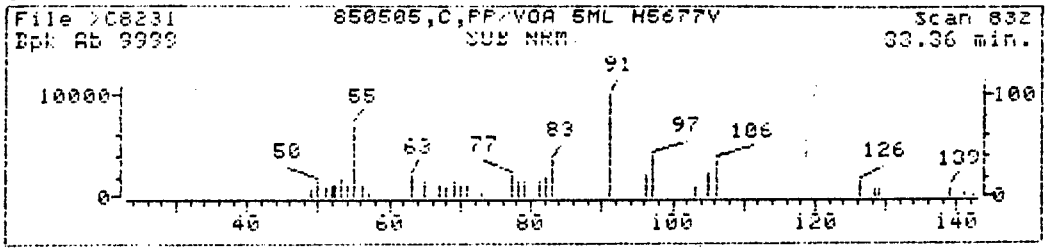
Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc Data: H5677V
RT (min): 24.88
Scan: 614
Area: 111301
Semi-quantitative Conc: 326.60 NG

Data File: >C8231 Scan Number: 614
Search Speed: 2 Titling option: S Number of ion ranges searched: 67

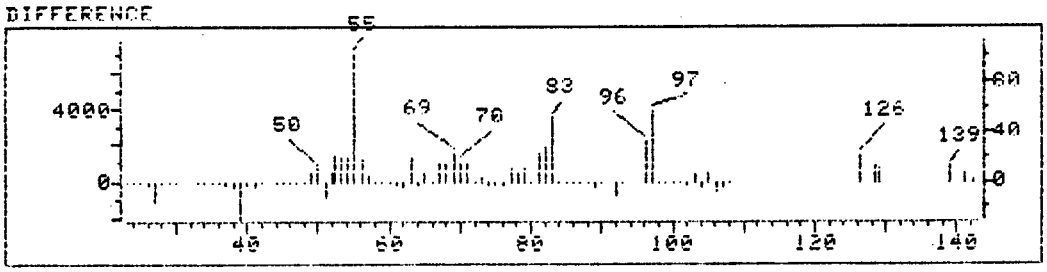
1. Heptane, 2,2,3,4,6,6-hexamethyl- (9CI) 184 C13H28
2. Methanamine, N-pentylidene- (9CI) 99 C6H13N
3. Heptane, 4-azido- (8CI9CI) 141 C7H15N3

	Prob.	Cas#	K	dK	#Fig	Tilt
1.	52	62108321	42	40	2	0
2.	31	10599754	26	49	2	0
3.	30	27126223	25	52	3	0

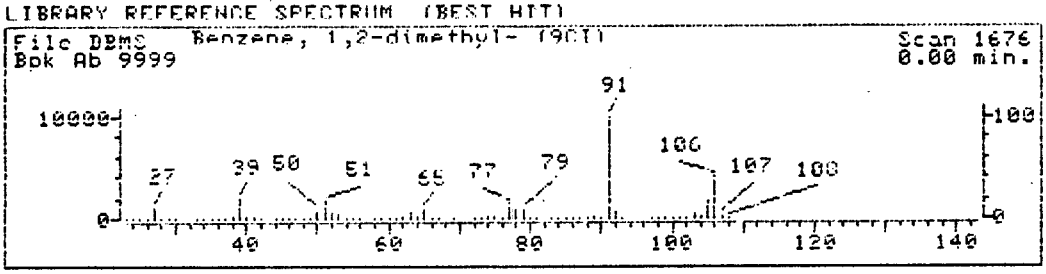
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



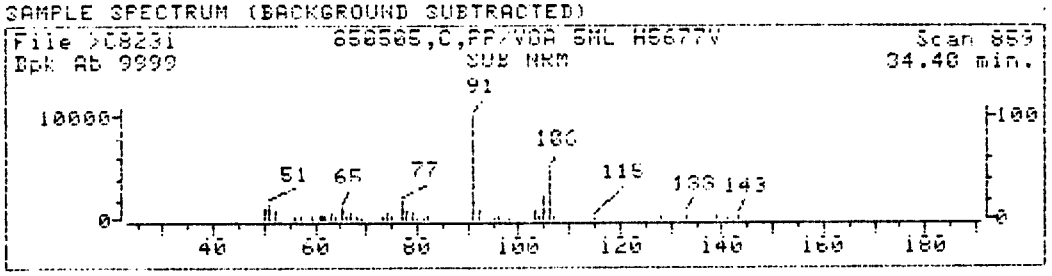
Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc Data: H5677V
RT (min): 33.36
Scan: 832
Area: 52923
Semi-quantitative Conc: 60.20 NG

Data File: >C8231 Scan Number: 832
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

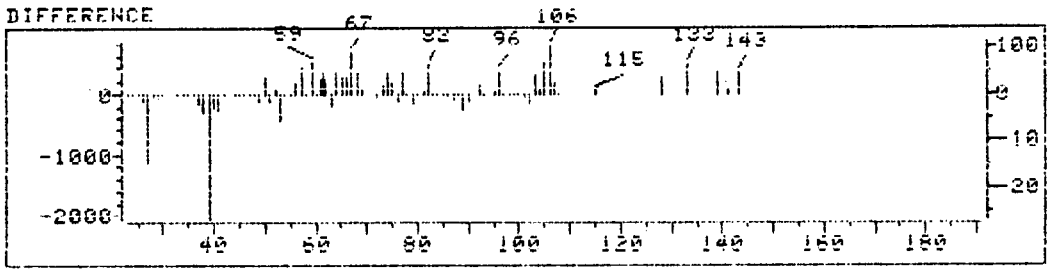
1. Benzene, 1,2-dimethyl- (9CI) 106 C8H10

	Prob.	Cas#	K	dK	#Hlg	Tilt
1.	25	95476	32	60	2	0

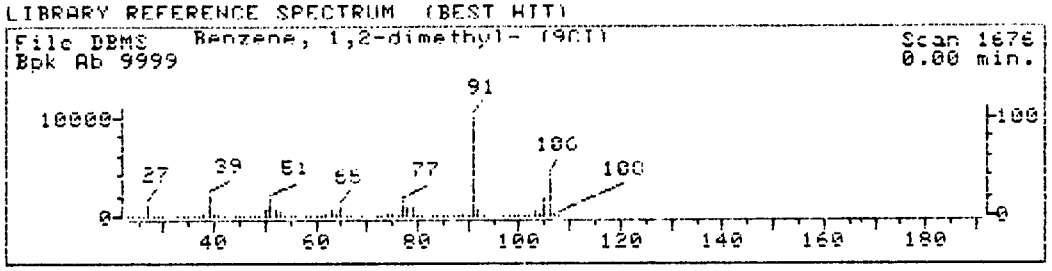
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



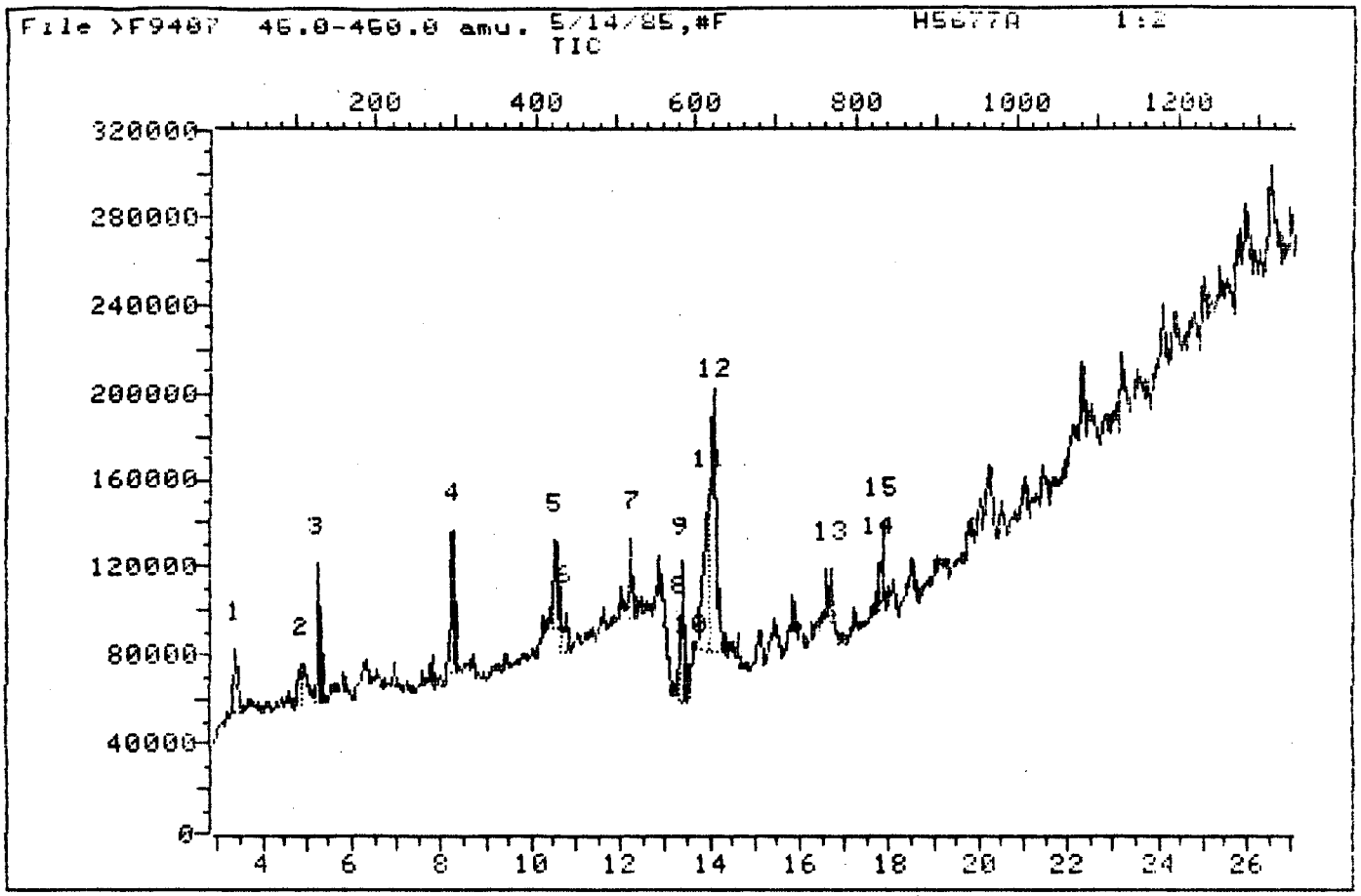
Data File: >C8231::U1
Name: 850505,C,PP/VOA 5ML
Misc Data: H5677V
RT (min): 34.40
Scan: 859
Area: 69893
Semi-quantitative Conc: 79.50 NG

Data File: >C8231 Scan Number: 859
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

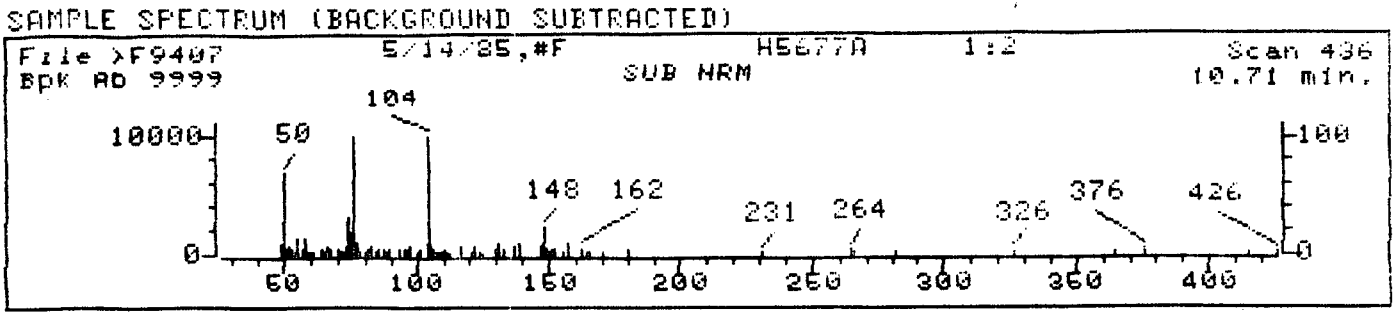
	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	95476	65	27	2	0
2.	81	108383	63	29	2	0
3.	79	106423	52	41	1	0

TOTAL ION CHROMATOGRAM for PLUS ANALYSIS

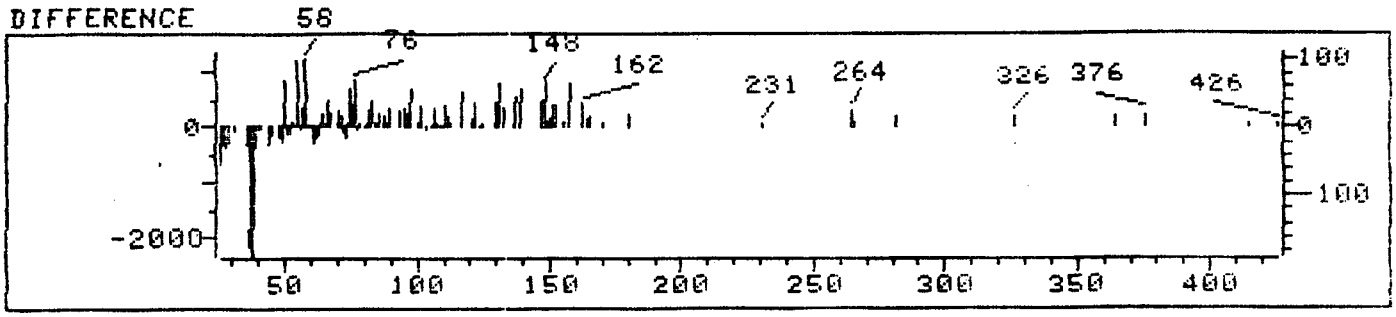


Data File: >F9407::U6
Name: 5/14/85,#F
Misc Data: H5677A 1:2 BTL#38

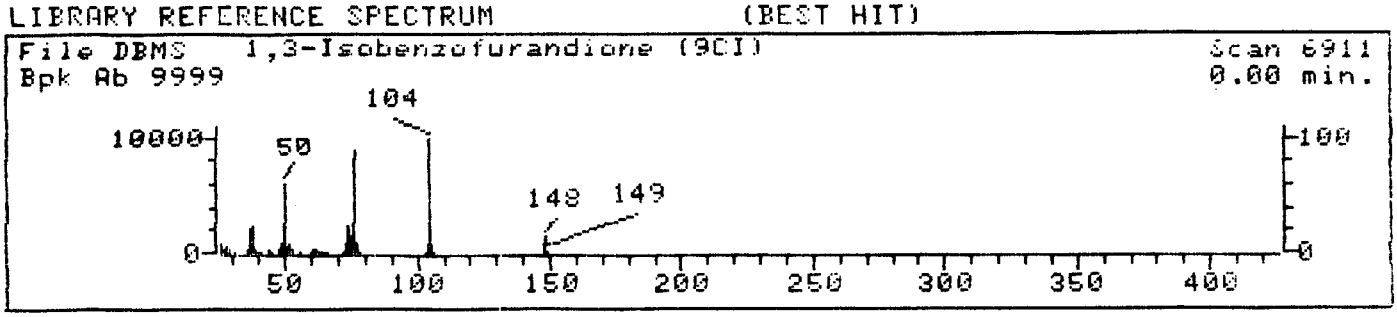
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



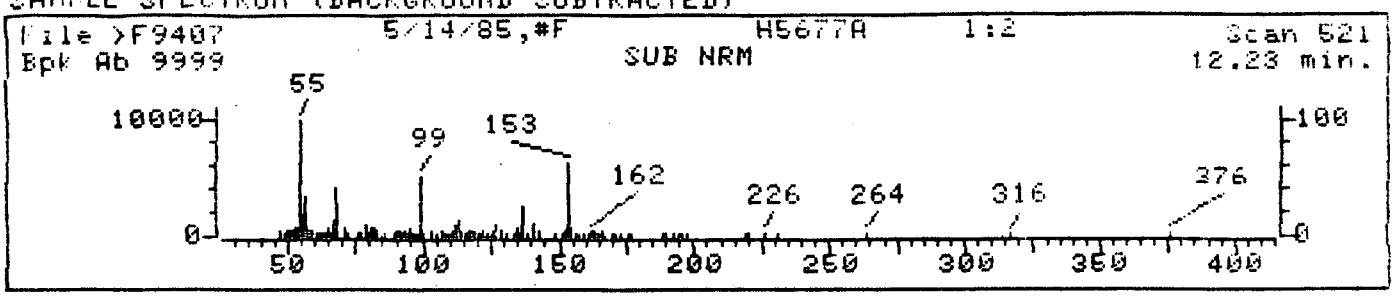
Data File: >F9407::U6
Name: 5/14/85,#F
Misc Data: H5677A 1:2 BTL#38
RT (min): 10.71
Scan: 436
Area: 83125
Semi-quantitative Conc: 16.24 UG/ML

Data File: >F9407 Scan Number: 436
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

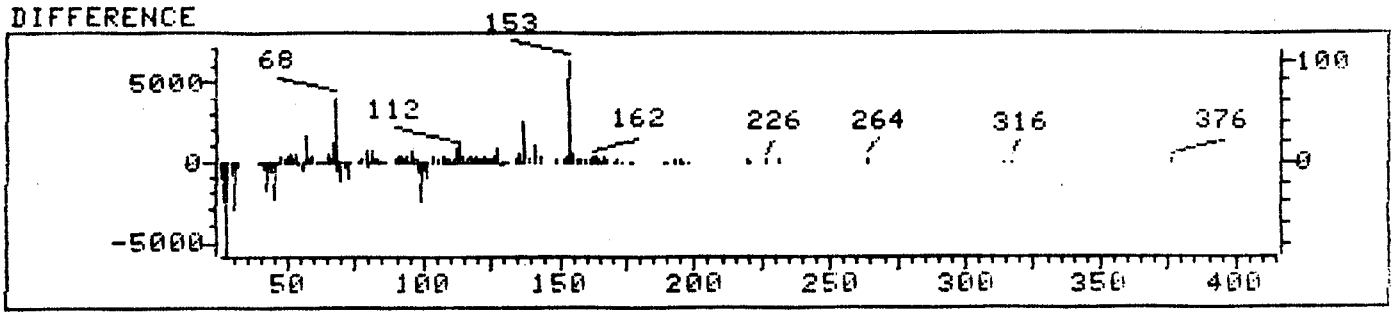
1. 1,3-Isobenzofurandione (9CI) 148 C8H4O3
2. Benzoic acid, 2-[[[4-[(acetylamino)sulfonyl]phenylla 362 C16H14N2O6S
   minolcarbonyl]- (9CI)
3. 1,2-Benzenedicarboxylic acid, monomethyl ester (9CI) 180 C9H8O4

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	79	85449	57	64	2	0
2.	78	131691	72	68	2	0
3.	43	4376185	40	82	2	0

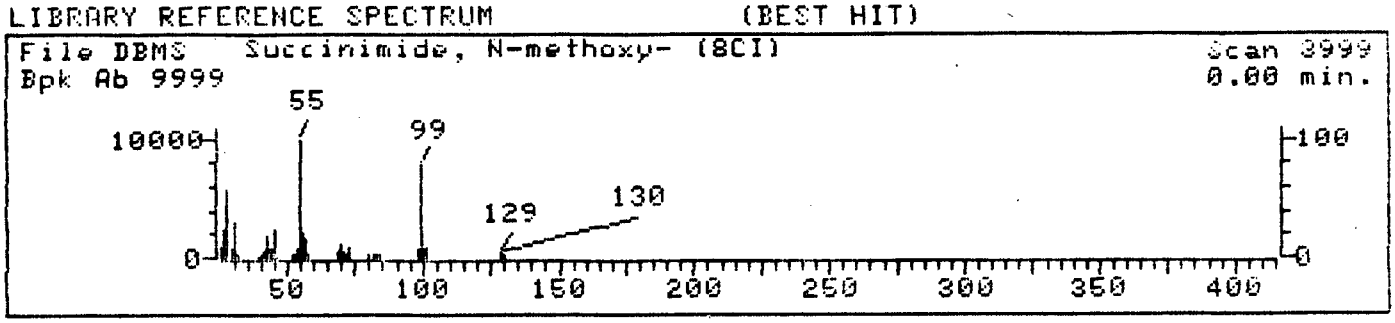
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)

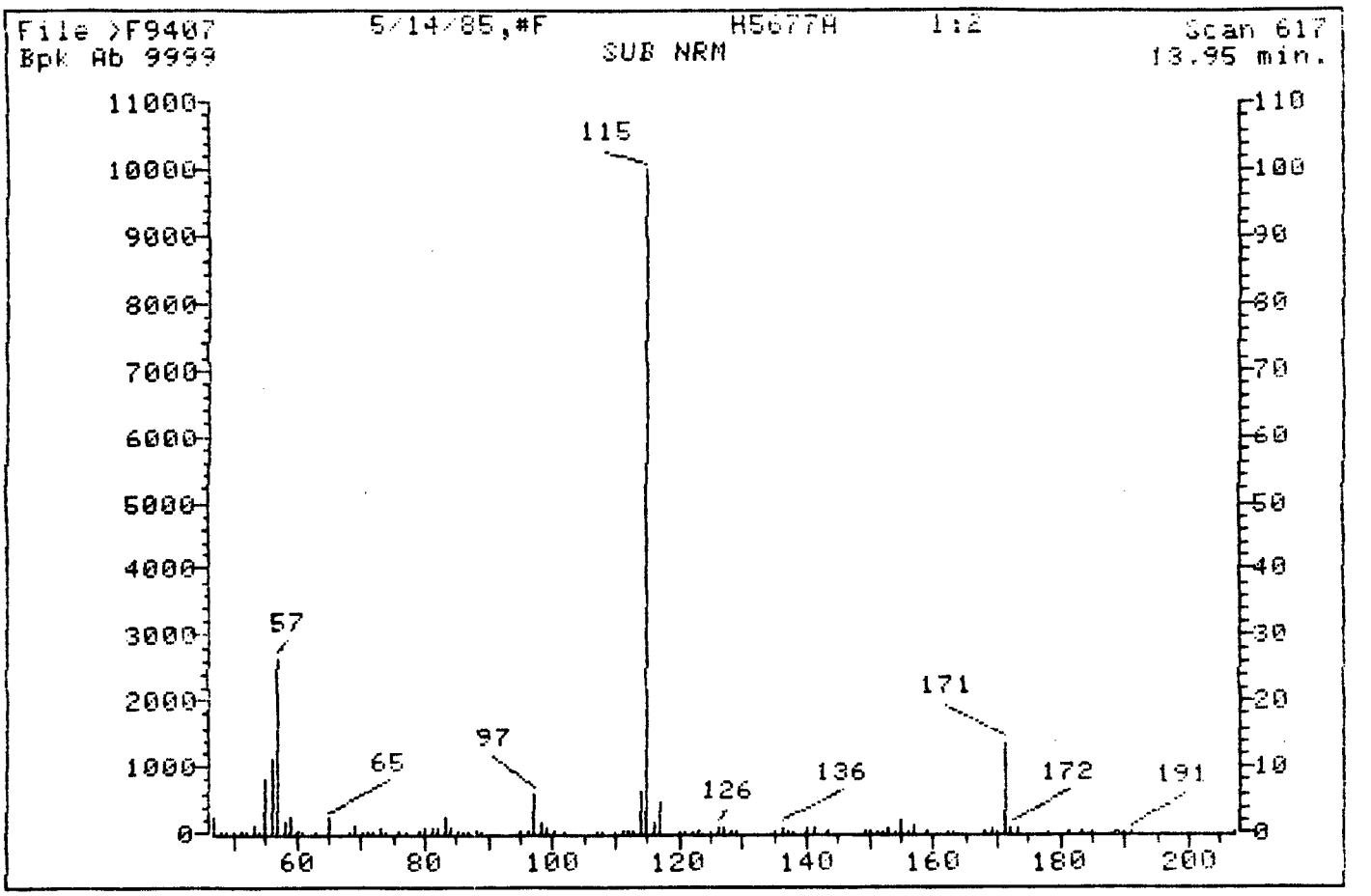


Data File: >F9407::U6
Name: 5/14/85,#F
Misc Data: H5677A 1:2 BTL#30
RT (min): 12.23
Scan: 521
Area: 156399
Semi-quantitative Conc: 30.56 UG/ML

Data File: >F9407 Scan Number: 521
Search Speed: 2 Titling option: S Number of ion ranges searched: 57

1. Succinimide, N-methoxy- (8CI) 129 C5H7NO3

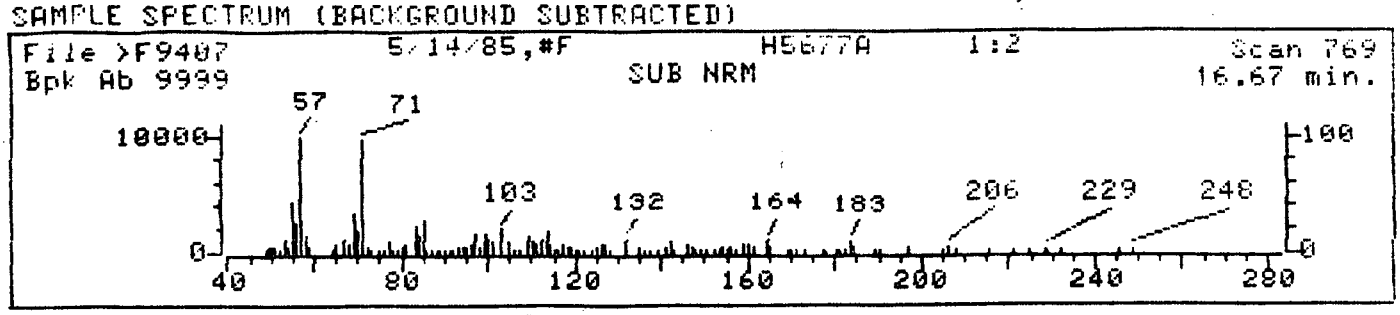
	Prob.	Cas#	K	dK	#Flg	Tilt
1.	20	5904507	30	79	3	0



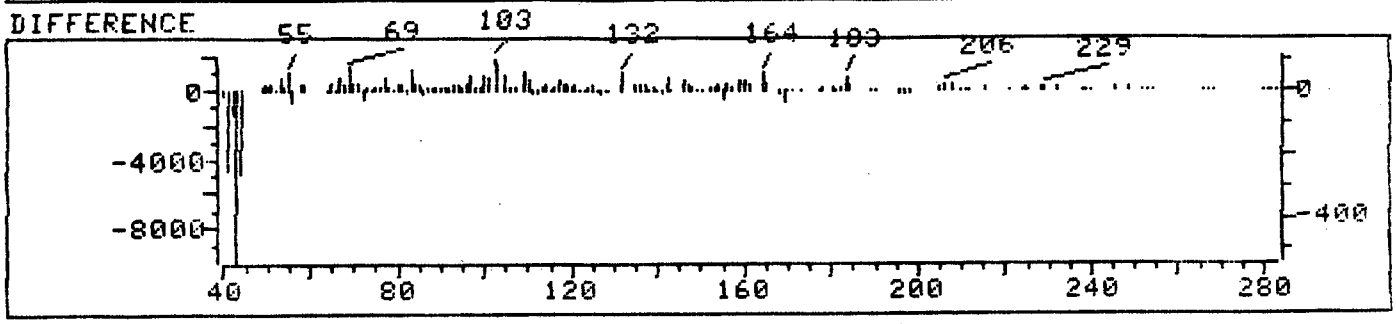
Data File: >F9407::U6
Name: 5/14/85,#F
Misc Data: H5677A 1:2 BTL#38
RT (min): 13.95
Scan: 617
Area: 636706
Semi-quantitative Conc: 124.42 UG/ML

No PBM hits for this scan.

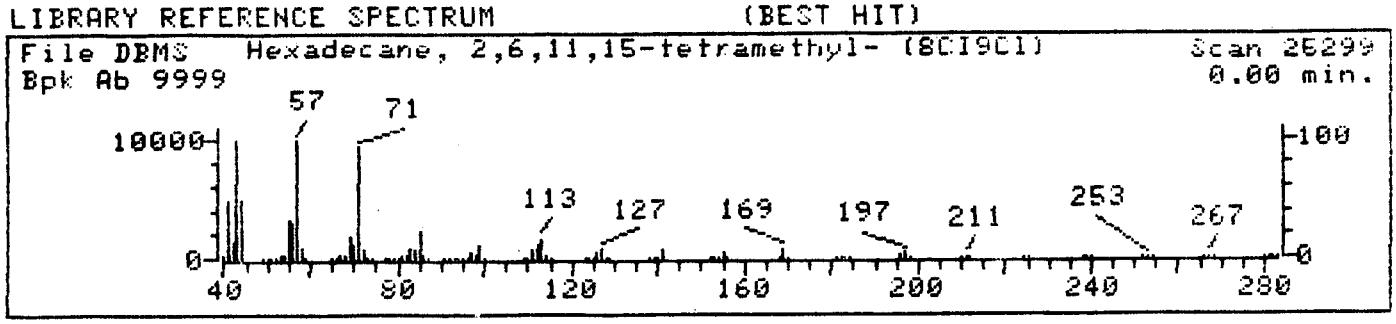
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



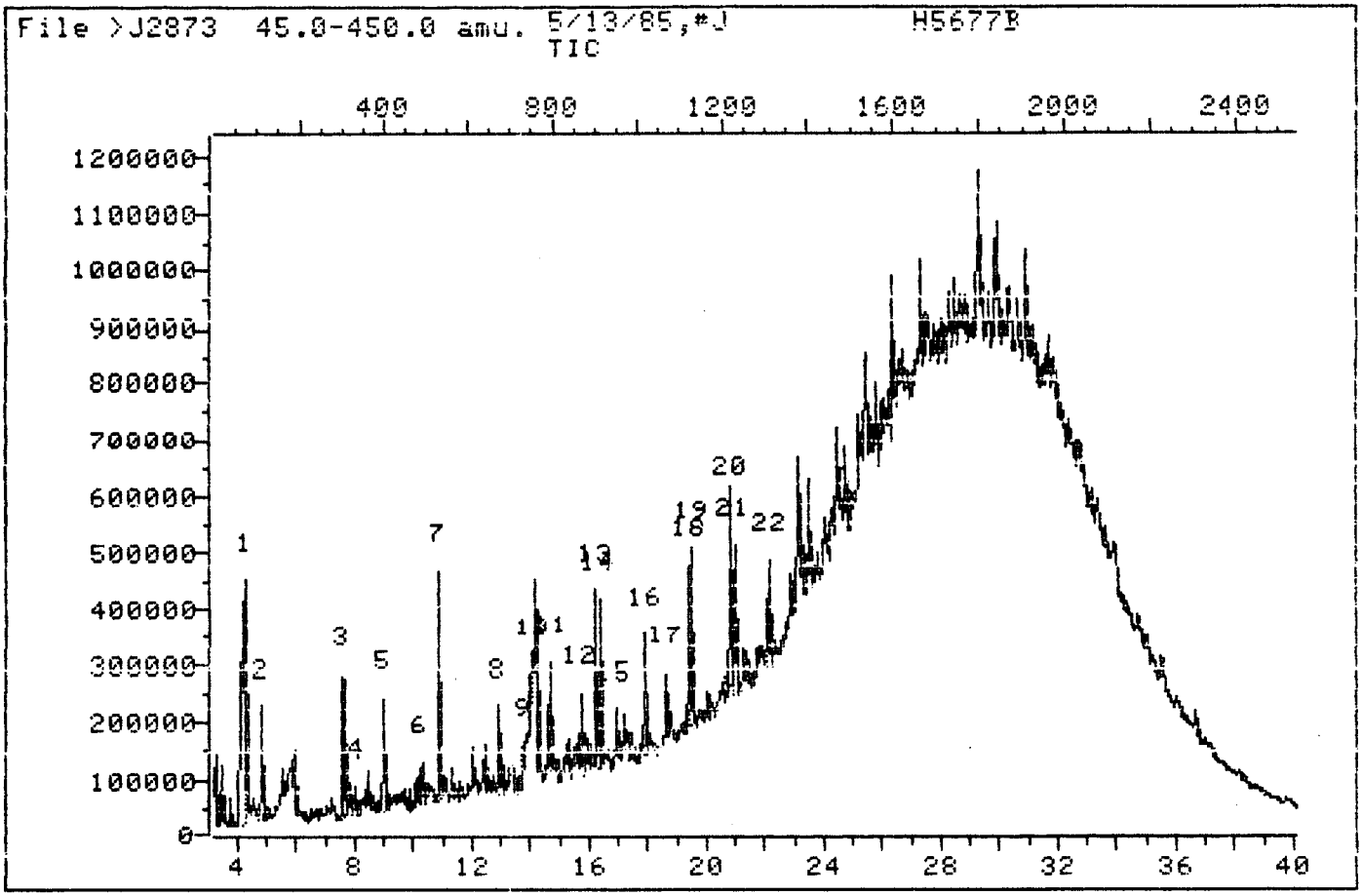
Data File: >F9407::U6
Name: 5/14/85,#F
Misc Data: H5677A 1:2 BTL#30
RT (min): 16.67
Scan: 769
Area: 62977
Semi-quantitative Conc: 12.31 UG/ML

Data File: >F9407 Scan Number: 769
Search Speed: 2 Titling option: S Number of ion ranges searched: 68

1. Hexadecane, 2,6,11,15-tetramethyl- (8CI9CI) 282 C20H42
2. Undecane, 3,6-dimethyl- (8CI) 184 C13H28
3. Heptane, 3-ethyl-5-methyl- (9CI) 142 C10H22

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	47	504449	74	63	2	0
2.	42	17301289	41	56	3	0
3.	36	52896909	36	58	1	0

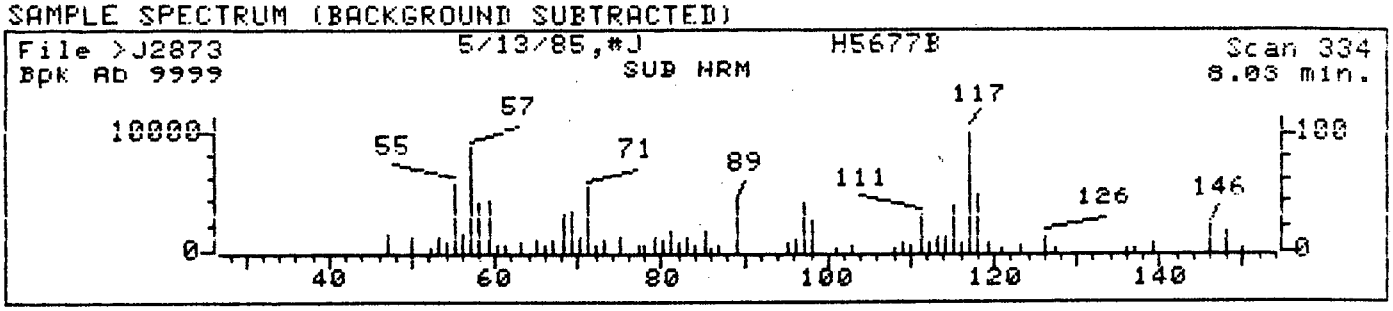
TOTAL ION CHROMATOGRAM for PLUS ANALYSIS



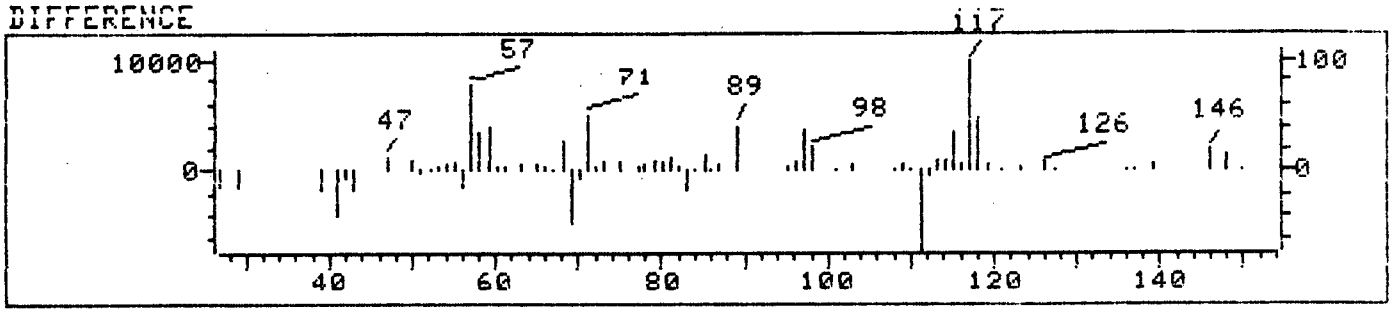
Data File: >J2873::U5
Name: 5/13/85,#J
Misc Data: H5677B

BTL.#16

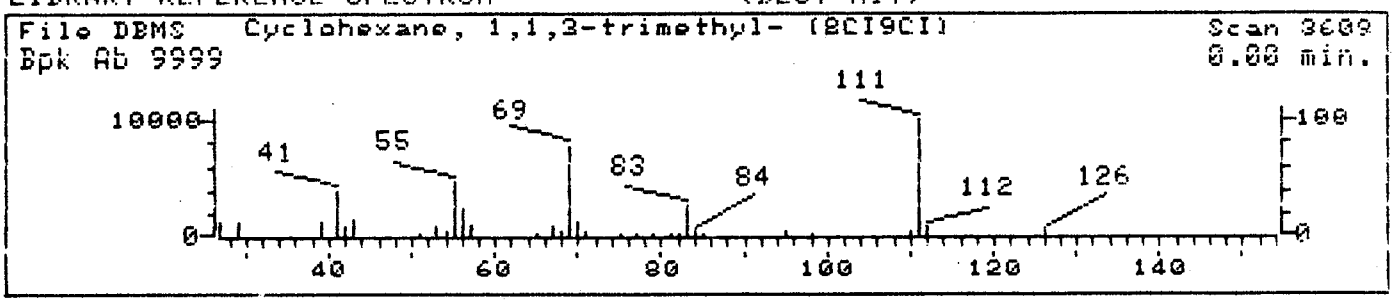
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



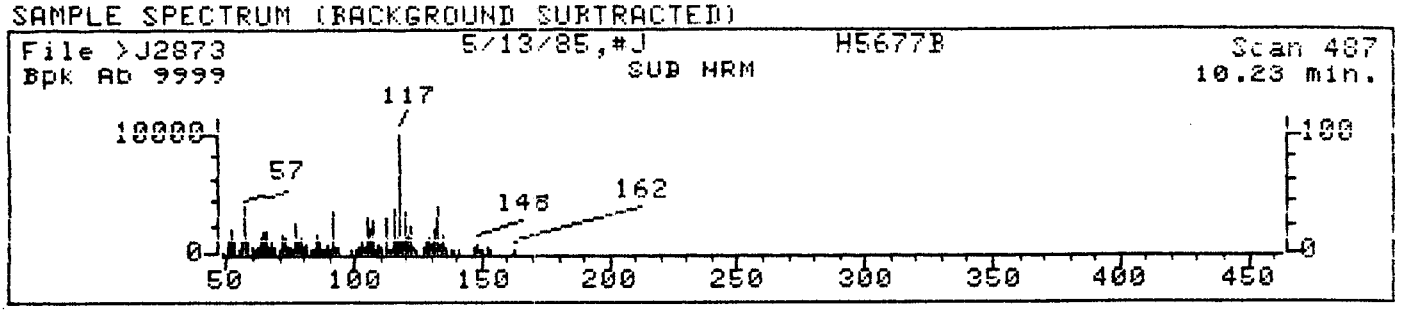
Data File: >J2873::US
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 8.03
Scan: 334
Area: 341131
Semi-quantitative Conc: 8.91 UG/ML

Data File: >J2873 Scan Number: 334
Search Speed: 2 Titling option: S Number of ion ranges searched: 58

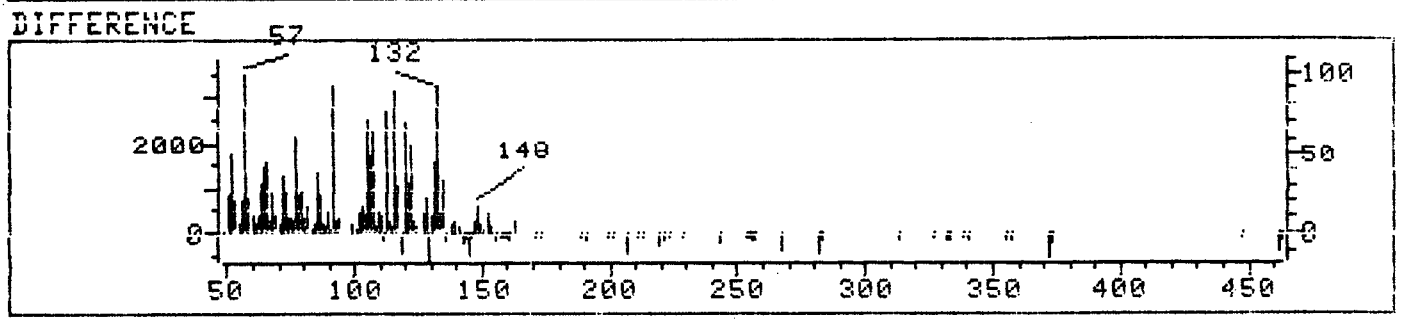
1. Cyclohexane, 1,1,3-trimethyl- (8CI9CI) 126 C9H18
2. Nonane, 5-propyl- (8CI) 170 C12H26
3. Cyclohexane, 1,2,4-trimethyl-, (1.alpha.,2.beta.,4.beta.)- (9CI) 126 C9H18

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	20	3073663	39	45	1	2
2.	20	998356	55	34	2	1
3.	15	7667609	46	50	2	1

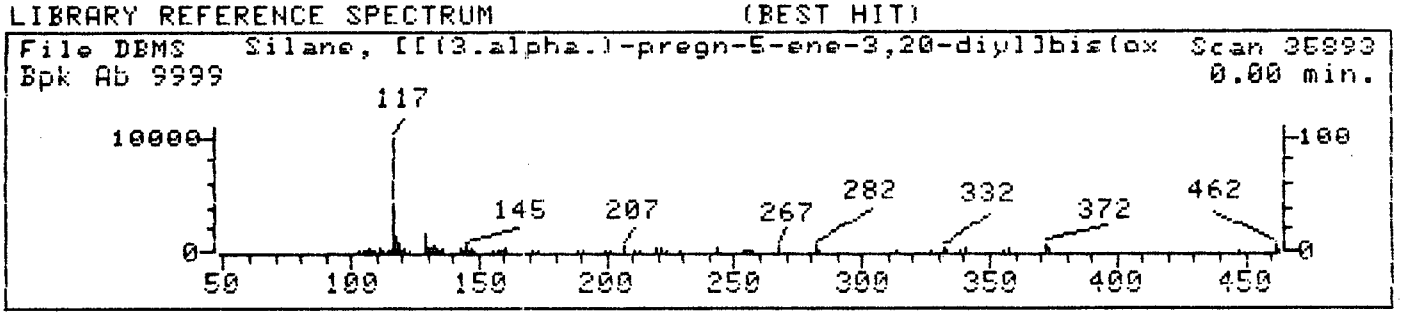
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



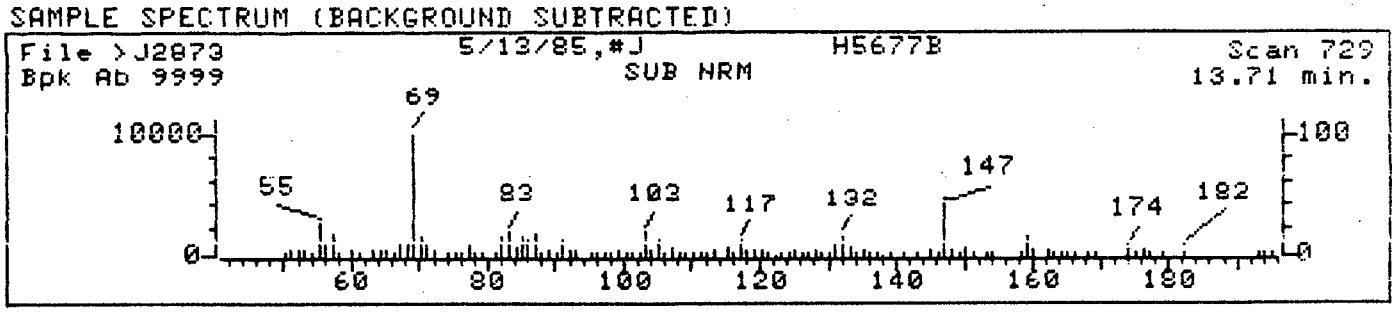
Data File: >J2873::U5
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 10.23
Scan: 487
Area: 345189
Semi-quantitative Conc: 9.01 UG/ML

Data File: >J2873 Scan Number: 487
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

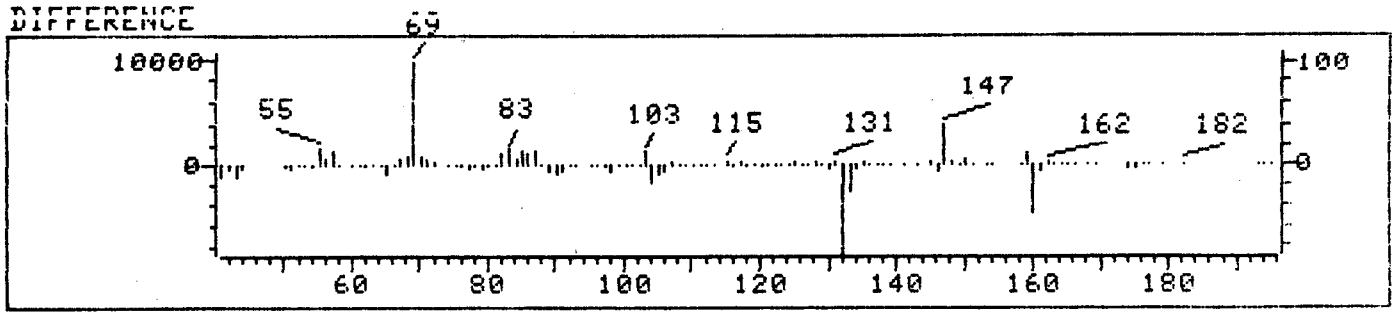
1. Silane, [[(3.alpha.)-pregn-5-ene-3,20-diyl]bis(oxy)] bis[trimethyl- (9CI) 462 C27H50O2Si2
2. Pyrazine, 2-ethyl-3-methyl- (8CI9CI) 122 C7H10N2
3. 1H-Cycloheptal[a]naphthalene-4-carboxylic acid, 2,3,4,4a,5,6,8,9,10,11,11a,11b-dodecahydro-4,8,9,11b-tetramethyl-, methyl ester (VAN9CI) 318 C21H34O2

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	86	55515258	43	108	0	-2
2.	83	15707230	38	88	0	-2
3.	78	55101923	33	147	0	-2

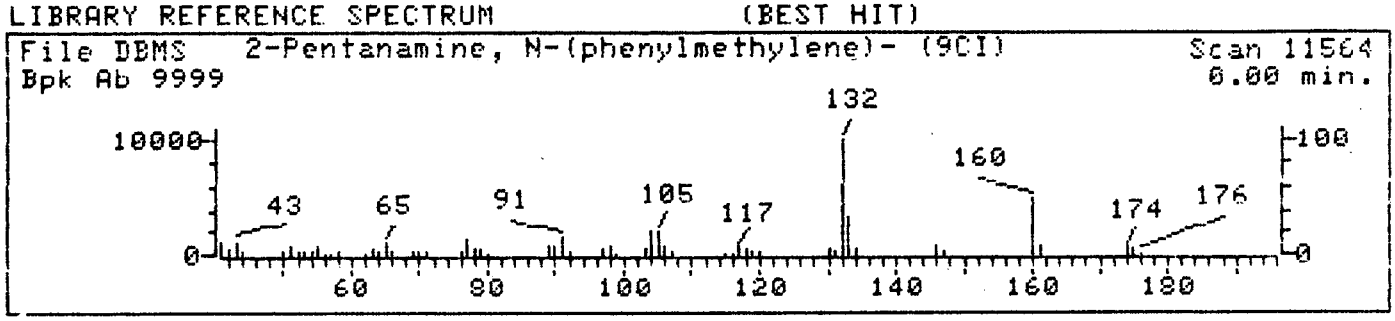
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



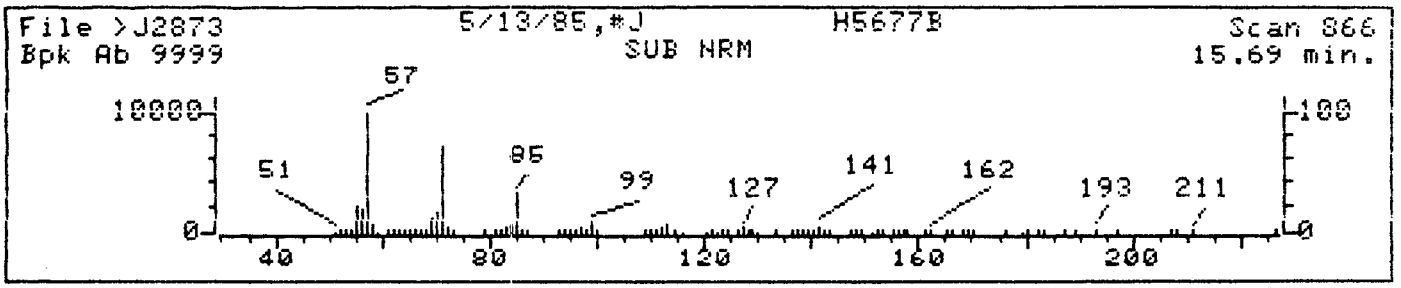
Data File: >J2873::US
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 13.71
Scan: 729
Area: 313578
Semi-quantitative Conc: 8.19 UG/ML

Data File: >J2873 Scan Number: 729
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

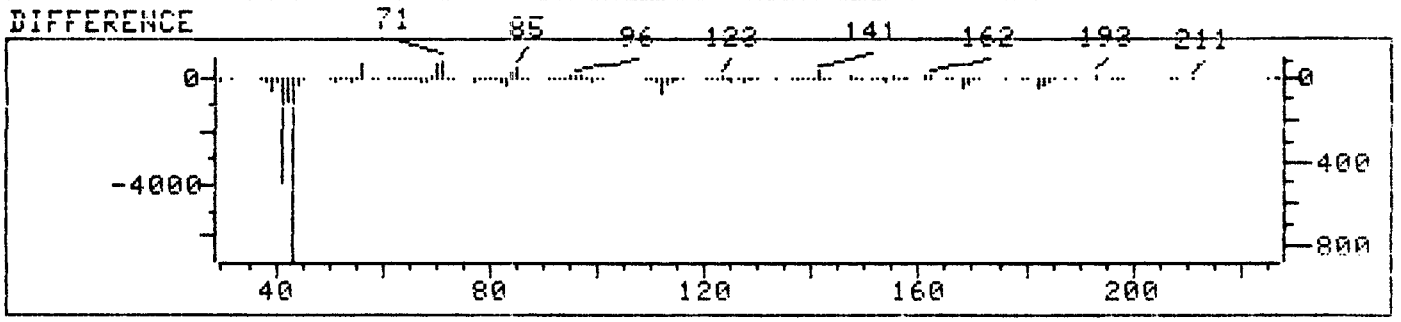
1. 2-Pentanamine, N-(phenylmethylene)- (9CI) 175 C12H17N
2. 2-Butenoic acid, 1-methylethyl ester (9CI) 128 C7H12O2
3. 2,6-Octadiene, 4-methyl- (9CI) 124 C9H16

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	25	41122650	36	26	1	1
2.	20	18060770	30	67	2	0
3.	15	74498945	36	42	1	0

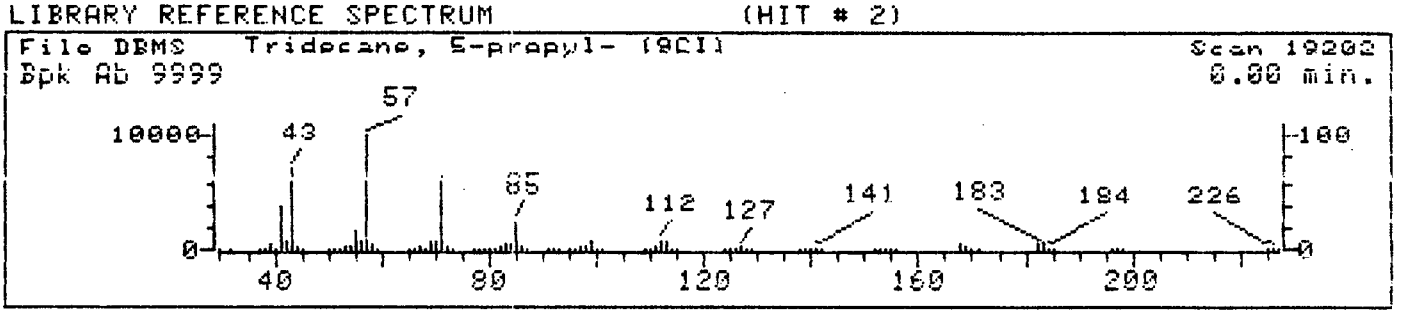
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (HIT # 2)



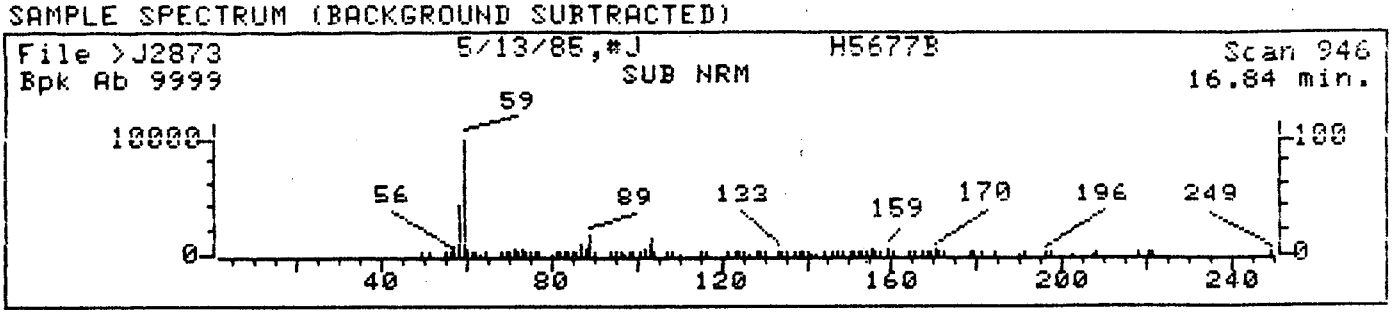
Data File: >J2873::U5
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 15.69
Scan: 866
Area: 334502
Semi-quantitative Conc: 8.74 UG/ML

Data File: >J2873 Scan Number: 866
Search Speed: 2 Titling option: S Number of ion ranges searched: 64

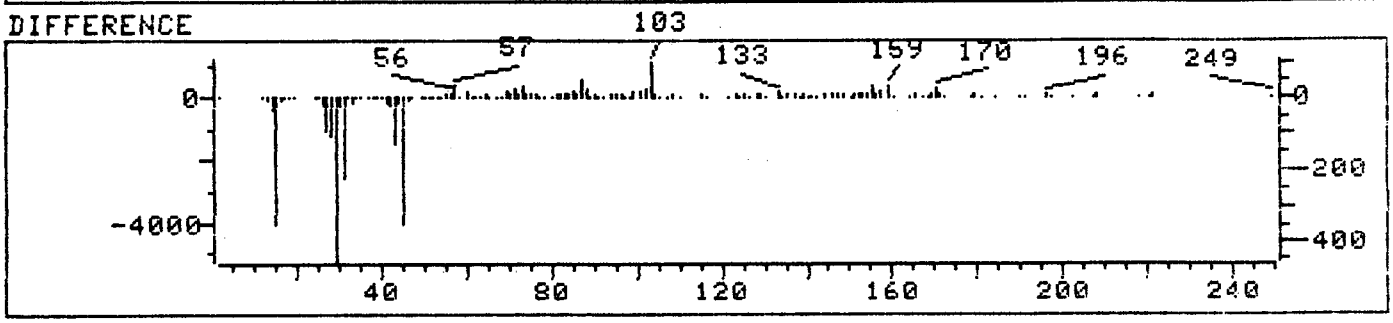
1. 1H-Tetrazol-5-amine (9CI) 85 CH3N5
2. Tridecane, 5-propyl- (9CI) 226 C16H34
3. Hexadecane (8CI9CI) 226 C16H34

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	87	4418615	51	74	0	-2
2.	86	55045119	67	46	2	2
3.	83	544763	90	30	2	2

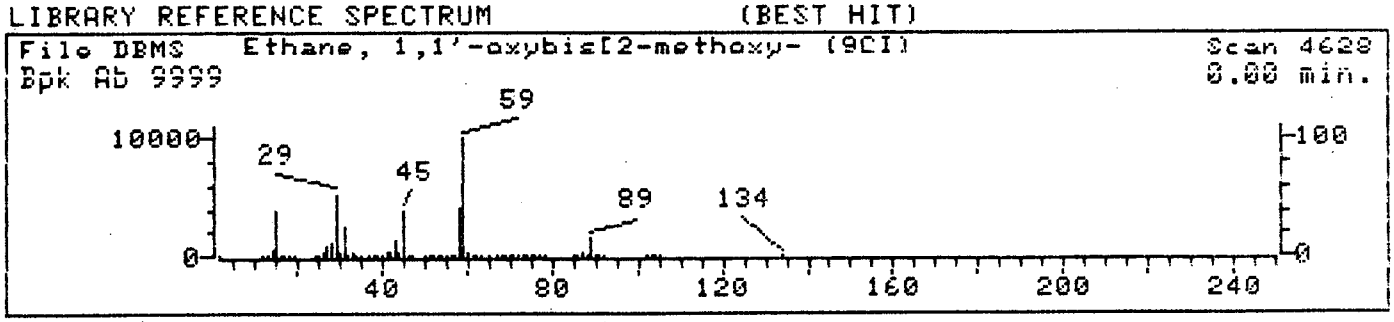
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



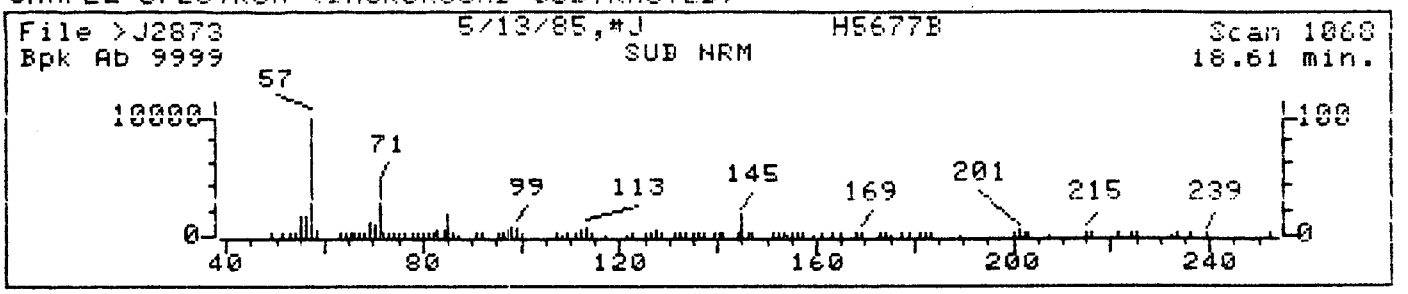
Data File: >J2873::U5
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 16.84
Scan: 946
Area: 317688
Semi-quantitative Conc: 8.30 UG/ML

Data File: >J2873 Scan Number: 946
Search Speed: 2 Titling option: S Number of ion ranges searched: 59

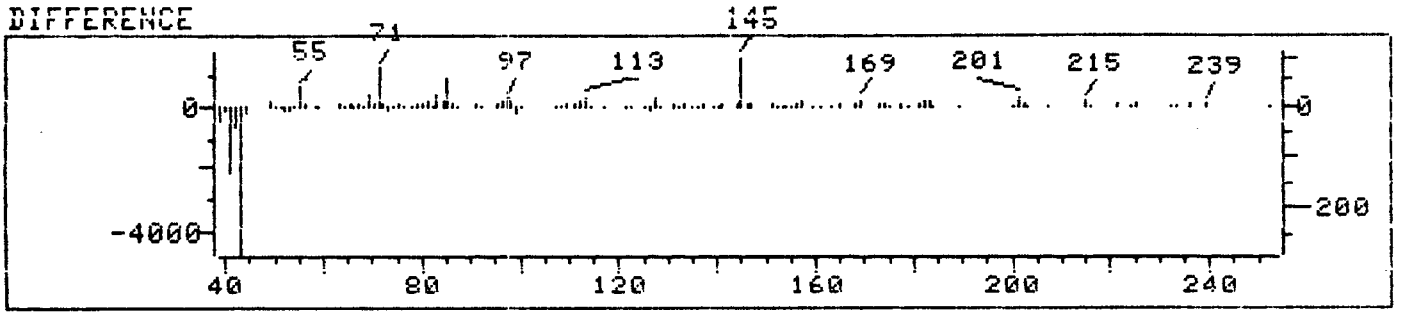
1. Ethane, 1,1'-oxybis[2-methoxy- (9CI) 134 C6H14O3
2. Pentane, 2-methoxy- (9CI) 102 C6H14O
3. Butane, 2-methoxy-3-methyl- (9CI) 102 C6H14O

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	52	111966	35	67	0	0
2.	28	6795886	33	48	2	0
3.	27	62016493	28	46	1	0

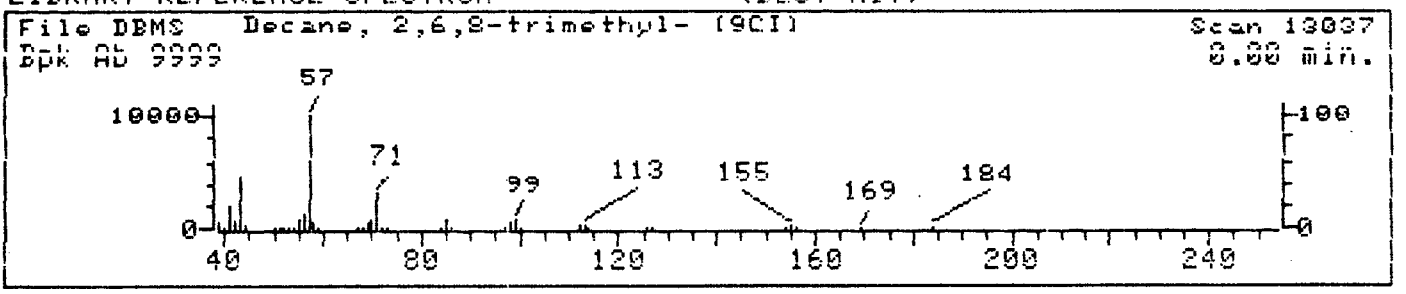
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



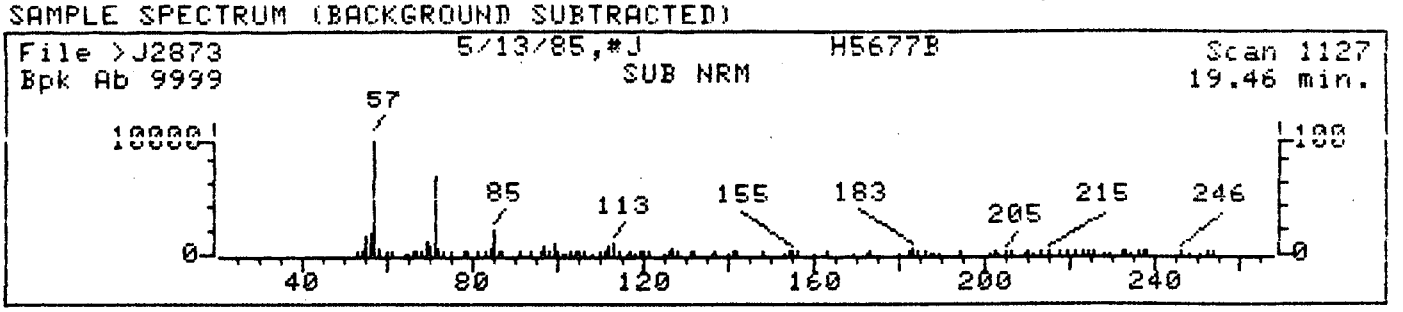
Data File: >J2873::U5
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 18.61
Scan: 1068
Area: 320513
Semi-quantitative Conc: 8.37 UG/ML

Data File: >J2873 Scan Number: 1068
Search Speed: 2 Titling option: S Number of ion ranges searched: 60

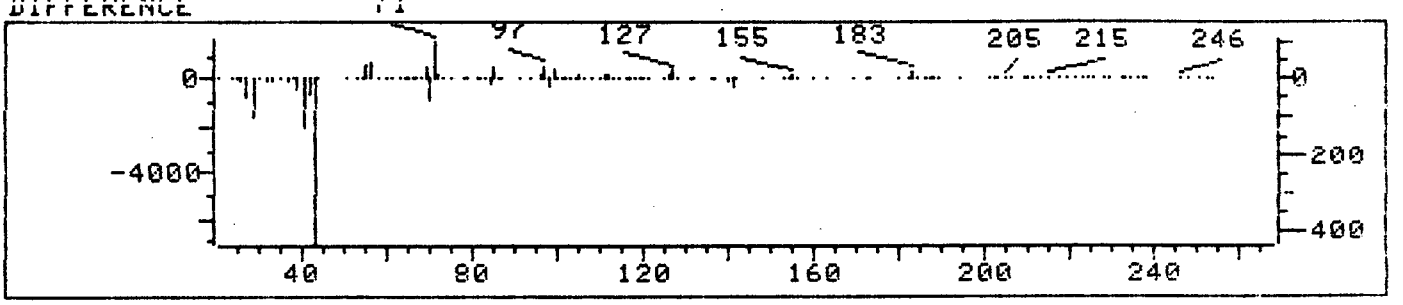
1. Decane, 2,6,8-trimethyl- (9CI) 184 C13H28
2. Undecane, 4,6-dimethyl- (8CI) 184 C13H28
3. Undecane, 3,5-dimethyl- (8CI) 184 C13H28

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	83	62108263	62	30	2	0
2.	70	17312822	55	43	2	0
3.	70	17312811	54	44	2	0

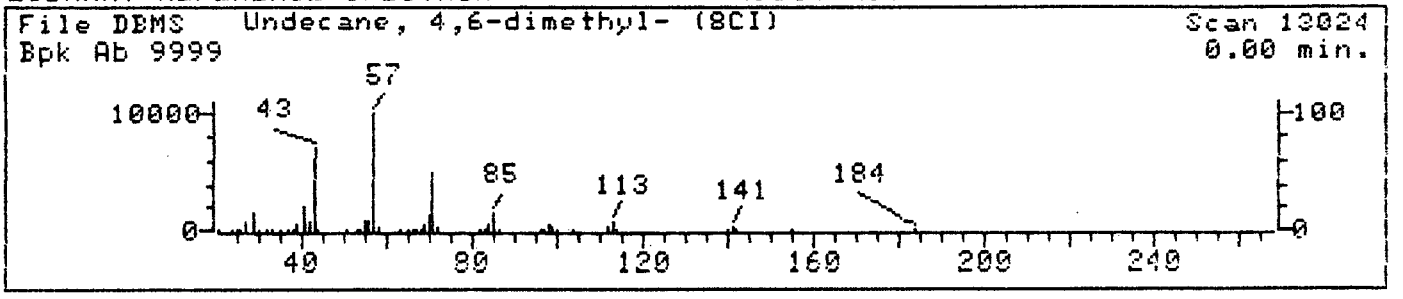
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



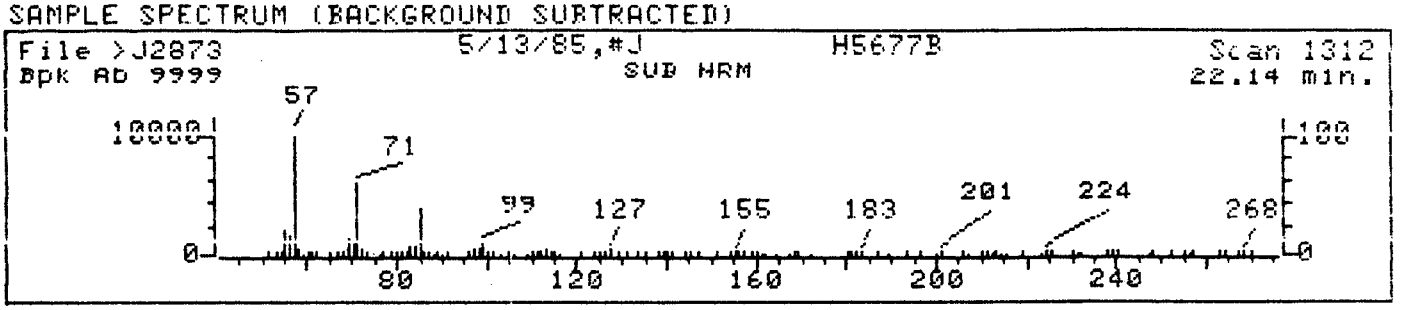
Data File: >J2873::U5
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 19.46
Scan: 1127
Area: 849554
Semi-quantitative Conc: 22.19 UG/ML

Data File: >J2873 Scan Number: 1127
Search Speed: 2 Titling option: S Number of ion ranges searched: 63

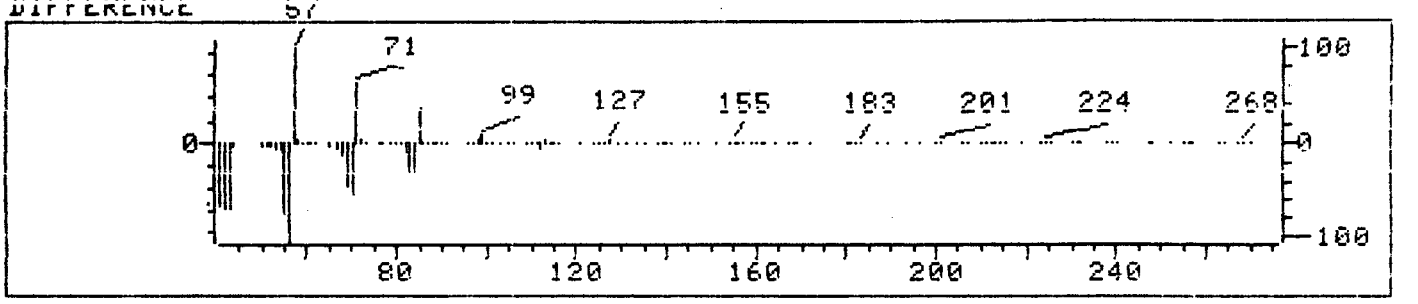
1. Undecane, 4,6-dimethyl- (8CI) 184 C13H28
2. Undecane, 6-ethyl- (8CI9CI) 184 C13H28
3. Dodecane, 2,6,11-trimethyl- (8CI9CI) 212 C15H32

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	86	17312822	57	41	2	0
2.	78	17312606	59	40	2	0
3.	76	31295564	72	34	2	0

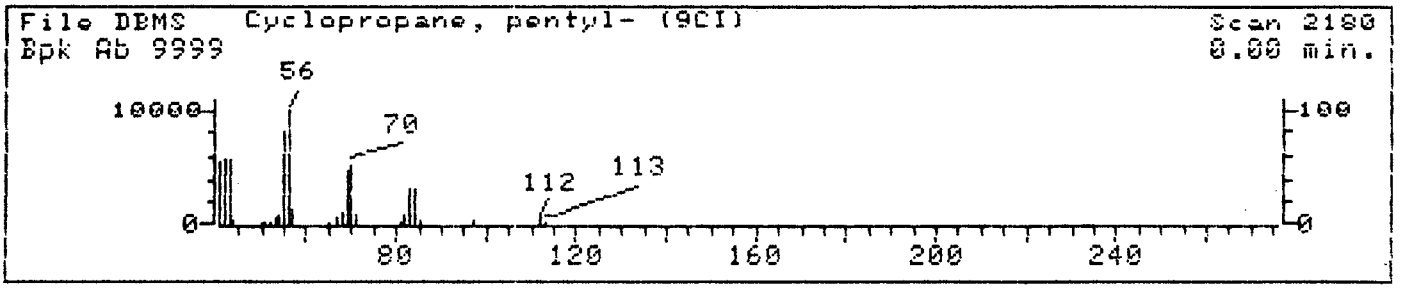
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



DIFFERENCE



LIBRARY REFERENCE SPECTRUM (BEST HIT)



Data File: >J2873::US
Name: 5/13/85,#J
Misc Data: H5677B BTL#16
RT (min): 22.14
Scan: 1312
Area: 478763
Semi-quantitative Conc: 12.50 UG/ML

Data File: >J2873 Scan Number: 1312
Search Speed: 2 Titling option: S Number of ion ranges searched: 61

1. Cyclopropane, pentyl- (9CI) 112 C8H16
2. Cyclopentane, 1,1,2-trimethyl- (8CI9CI) 112 C8H16
3. Cyclopropane, octyl- (9CI) 154 C11H22

	Prob.	Cas#	K	dK	#Flg	Tilt
1.	78	2511913	46	56	1	-2
2.	78	4259001	50	60	1	-2
3.	78	1472099	49	60	1	-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

REV. 1

ETC Job # 1415161717

Lab ID: L85387-B1

Submitted by: MW CHUN

Date: 5/31/85

Facility: (Facility Code)

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

Date Sampled: (Y Y M M D D)

Time Sampled: (H H : M M)

RECEIVED JUN 0 4 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/l	0.06	0.01	
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/l	<0.025	0.025	
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. 34527 ETC Job # H5677

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: R - SOIL STACK WATER +1 (Optional Sample Point Descriptions)

Source Code (from below) | Your Sample Point ID (left justify) | Start Date (YY/MM/DD) 850501 | Start Time (2400 hr. clock) 091415 | Elapsed Hours (composite) 0125

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

441
6

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
3	E	1L	Baked	Extb			/
1	M	1L	HNO_3	Metals			/
1	CN	500ml	NaOH	CY/T			/
1	PN	1L	H_2SO_4	Phenols			PN 3/4 Full
2	V	40ml	Sod.Thio	VOA			/
1	TB	40ml	Gl/msH_2O	TB			

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) Deb Mazur Date: 5-1-85 Time: 0945
   Signature: Deborah Mazur Seal #: 0034527 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 Jiorle Date: 5-1-85 Time: 1200
   Signature: [illegible] Seal #: 0034528 Intact: yes

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

Seal #: 34528 Condition: ok

ETC ENVIRONMENTAL TESTING and CERTIFICATION

FIELD PARAMETER FORM (CC2)

ETC JOB # H5677

Sample Point [ ] Source Code | Sign Black Water #1 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: Grab

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

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other Glass (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) 6.6

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

Sample Temp _____ (°C) Turbidity _____ NTU

FIELD COMMENTS

Sample Appearance: yellow green water

Weather Conditions: 75°F sunny

Other:

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

Sampler: Neil Tiemann (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: Diamond Head Site / NJDEP - HSMA / 65 Prospect St / Trenton, NJ

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

Name | Title | Agency

Name | Title | Agency

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

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

Date Laboratory Sample Shuttle Seal No. 0034527 Broken 5/1/85 | Time (Mil) Seal Broken and Sampling Begun 0945

FIELD SAMPLE NUMBER	CONTAINER NUMBER(S)	VOLUME OF CONTAINERS	DESCRIPTION OF SAMPLE
			Surface Water #1
			Yellow green water.

LAB CONTROL NO. ___

Date Sampling Completed & Field Seal Affixed to Sample Shuttle 5/1/85 | Military Time ~~0945~~ 1300 | Field Affixed Sample Shuttle Seal No. 0034528

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

Field Sample Seal No. 0034528 | Date Broken 5/2/85 | Military Time Seal Broken

SAMPLE RELINQUISHED BY	SAMPLE RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
Neil Jiorle	Neil Jiorle	5-1-85		Delivery to Lab

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

Form DWM-025
6/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SAMPLE ANALYSIS REQUEST FORM

NJDEP File # _____

SAMPLE LOCATION

NAME OF FACILITY/ COMPANY/PERSON	Diamond Head	CODE	MAILING ADDRESS 65 Prospect St
SAMPLE LOCATION	Kearny / Surface Water #1		Trenton NJ

SAMPLE COLLECTOR

SAMPLER(S) Name	Neil Jiorle	Agency	NJDEP / HSMA	Sampler ID #	H591
Name		Agency		Sampler ID #	

SAMPLE IDENTIFICATION

NJDEP SAMPLE NO.	Surface Water #1	SAMPLING DATE	5/1/85	ABSCISSA (Longitude)	
SAMPLE POINT ID	H5677	TIME (MIL) SAMPLING BEGAN	0945	ORDINATE (Latitude)	
SAMPLE SOURCE CODE		TIME (MIL) SAMPLING FINISHED	0950	ELEVATION	
REFERENCE POINT					

SAMPLING PROCESS

COLLECTION METHOD	Code Grab	Other	SAMPLE TYPE	Code Water	Other
TYPE OF SAMPLER	Code glass	Other	SAMPLE MATRIX	Code	Other
DESCRIPTION	yellow-green water				

FIELD MEASUREMENTS

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

CHAIN-OF-CUSTODY IMPLEMENTED ☒ YES ☐ NO

PRESERVATION CODE(S) ___ ___ ___ ___ ___

REQUESTED ANALYSIS(ES)

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

ANALYSIS(ES) AUTHORIZED BY Al Pleva TITLE Supr. tech.

ANALYZING LABORATORY

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

GC-MS ANALYSIS CUSTODY LOG

DATE 850505 SHIFT ___
FRACTION VOA
INSTRUMENT C
TUNE FILE APEI01
SEQUENCE FILE ___
METHOD FILE VOAC
IDFILE CVOA
ANALYST(S) B Pad
SUPERVISOR [illegible]
BATCH #'s QV3226

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL
BFB	50	10275	1
Istd.	40	10332	5
Surr.	25	9793	10
ABC	18	10530	5

V1,V2

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
p-BFB	>C8211				C00184	OK 0723 HRS	
QC3226 V	>C8212				08:06 OK	5/5/85 OK 08:05	Y
QC3226VS	>C8213	5uL	1			5uL ABC	
QC3226VS	>C8214		2			10uL ABC	
QC3226VS	>C8215		3		1043	30uL ABC	
pBFB	>C8216				ARCV 1159	5/6/85 1130	
H5962VS	>C8217		1			5uL ABC	
H5962V	>C8218		2			OK	
G H5043V	>C8219		3			OK	
G H5043VR	>C8220		4			OK	
H4220V	>C8221		5			OK	
H5695V	>C8222		6			OK	
H5390V	>C8223		7			OK	
H0261V	>C8224		8	1:10		slightly high surr -OK? Rerun	
H6217V	>C8225		9	1:10		OK Dwn from conc/much foam	Rerun
H5657V	>C8226		10	1:10		200 ppm 5%	Rerun "
QC3226VS	>C8227		1				
H5679 pBFB	>C8228 >C8229		1				
H5680	>C8230		2				
H5677	>C8231		3				
H6678	>C8232		4				
H5567	>C8233		5			10+15	Y
H3269	>C8234		6				
(8) H0264	>C8235		7				
(9) H6217	>C8236		8			1/6 Poor Recovery	Nc
(10) ~~H5657~~							

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GC-MS ANALYSIS CUSTODY LOG

DATE 850506 SHIFT ___
FRACTION VOA
INSTRUMENT C
TUNE FILE HPETO1
SEQUENCE FILE VOC
METHOD FILE VOAC
IDFILE CVOA
ANALYST(S) Janet Quinn
SUPERVISOR [illegible]
BATCH #'s QV3226

(PLEASE INITIAL)

CURRENT CS#5 STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL
p-BFB	50	KB 275	1
ISTD	40	KB 352	5
SUCR	25	9793	10

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
H5657V	>C8288		1	1	C-154	½ ml Antifoamer	
p-BFB	>C8278					2146	
H6217V	>C8288		2			½ ml Antifoamer	
QC3226V	>C8285						
QC3226V	>C8290					1½ ml antifoamer	

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EXTRACTION LOG

QC Batch # 2996

Analysis: PP/T

Matrix: H_2O

Turnaround: NORM

Date: 5/7/85

Extraction Method:

- sep funnel ~~WA~~
- continuous ✓
- soxhlet
- other

Sample Number	Log Book	Sample Vol. (ml)	Extract Vol. (ml) BN	Extract Vol. (ml) ACID	Comments
H5677	9303	920	1.0	1.0	
H5678	↓	800	1.0	1.0	
H5679	↓	1000	1.0	1.0	
H5680	↓	930	1.0	1.0	
H5648	9321	950	1.0	1.0	
H5649	↓	930	1.0	1.0	
H5650	↓	950	1.0	1.0	
~~H5651~~	↓	~~Sm~~			CANCELLED
~~H5652~~	↓	~~Sm~~			CANCELLED
H5653	↓	880	1.0	1.0	
H5654	↓	890	1.0	1.0	
H5655	↓	940	1.0	1.0	
H5656	↓	1000	1.0	1.0	
H5658	↓	930	1.0	1.0	
HY520	9114	1000		1.0	
QC 2996		1000	1.0	1.0	
QC 2996 S		1000	1.0	1.0	
H5680 S		900	1.0	1.0	
H5649 R		900	1.0	1.0	

COMMENTS FOR EXTRACT.:
N.J. DEP.

* Repeat. Don't use for QC PP/ACID

START 12:00 5/8/85

COMMENTS FOR GC/MS:
* 16 comp. @ 100 ug/ml
chlordane @ 200 ug/ml

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
BN	1.0	100 ug/ml	10,499
ACID	1.0	100 ug/ml	10,523
Pesticide	1.0	*	10,389
Aroclor 1260	1.0	100 ug/ml	9713

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

097

Set-up: [illegible] 5/7/85

UPD/Supervisor: [illegible] 5/13/85

BN Conc.: [illegible] 850513

spike/surr. verified: [illegible] 5/8/85

ACID Conc.: [illegible]

GC-MS ANALYSIS CUSTODY LOG

DATE 5/14/85 SHIFT ___
FRACTION ACID
INSTRUMENT #F
TUNE FILE UTF001
SEQUENCE FILE ___
METHOD FILE ACID F
IDFILE FACID
ANALYST(S) Wan-Wan-Chi
SUPERVISOR [illegible]
BATCH #'s ___

(PLEASE INITIAL)

CURRENT CS#5 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
LONG DFTPP	>F9389		20	20		10=20	
Calib III	>F9390		21				
II	>F9391		22				
I	>F9392		23				
H5680 AS	>F9393		24				
QC>996AS	>F9394		25			Bottle wrong.	
QC>996A	>F9395		26				Y
H4520A	>F9396		27	←			
H5648A	>F9397		28				
H5650A	>F9398		29				
H5653A	>F9399		30				
H5654A	>F9400		31				
H5655A	>F9401		32				
H5656A	>F9402		33				
H5658A	>F9403		34	←			
H5678A	>F9404		35				
H5679A	>F9405		36				
H5680A	>F9406		37				
H56[illegible]77A	>F9407		38	1=2			
H5649A	>F9408		39				
H5649AR	>F9409		40				
H4069A	>F9410		41	1=5		QC>987	
H5671	>F9411		42			HOT GC by SIM	
H5672	>F9412		43			SIMF	
			44		098		

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GC-MS ANALYSIS CUSTODY LOG

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DATE 5/13/85 SHIFT
FRACTION BN
INSTRUMENT J
TUNE FILE HTJ001
SEQUENCE FILE NWCJ
METHOD FILE BNPJ
IDFILE JBNP
ANALYST(S) [illegible]
SUPERVISOR [illegible]
BATCH #'s QB2996

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ		DATE	850515
WIP		BY	[illegible]

STANDARD	CONC PPM	LOT NO.	LOT VOL

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
50NG DFTPP	>J2851				H00069	11:43	
H5671	>J2852					for GC	
H5672	>J2853						
Calib III	>J2854						
II	>J2855						
I	>J2856						
IV	>J2857						
50NG DFTPP	>J2858		1			17:34	
H5680BS	>J2859		2				
QC2996BS	>J2860		3				
QC2996B	>J2861		4				Y
H5648B	>J2862		5				
H5650B	>J2863		6				
H5653B	>J2864		7				
H5654B	>J2865		8				
H5655B	>J2866		9				
H5656B	>J2867		10				
H5649B	>J2868		11				
H5649BR	>J2869		12				
50NG DFTPP	>J2870		13				
Calib II	>J2871		14				
H5658B	>J2872		15				Y
H5677B	>J2873		16				
H5678B	>J2874		17				
H5679B	>J2875		18		099		

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GC-MS ANALYSIS CUSTODY LOG

DATE 5/13/85 SHIFT Day

FRACTION

INSTRUMENT J

TUNE FILE

SEQUENCE FILE

METHOD FILE

IDFILE

ANALYST(S) Wen Wen Chi

SUPERVISOR Charles Clements

BATCH #'s

(PLEASE INITIAL)

CURRENT CS05 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
H5680B	>T>876		19				Y
H3462B	>J>877		>0	1:2		JQC>897	
H3466B	>T>878		>1	1:5			
			>2				

TSR A-A4

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LOG LINK 9303

Metals Analysis Custody Log

Samples H5677-H5680

	Chemist	Date
Hg Prep	R Walls	5/28/05
AA/ICAP Prep	Douglas G. Lehfeld	5/28/05

Lab Supervisor Lidya Lokicinski date 5/30/05

ETC TESTING and CERTIFICATION

Request for Analysis

Name of Subcontractor: CHYUN

ETC Sample Number(s) H5677 to H5680

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: 5-13
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

H20
X-029

Sample(s) Relinquished by: [signature]
Date 5-3-85 Time 4:30
Sample(s) Received by: Mark Kelly
Date 5/3/85 Time 4:30