34421

Technical Report

for

CBS RECORDS

5152 COLUMBIA DRIVE

CARROLLTON, GA 30117

Chain of Custody Data Required for ETC Data Management Summary Reports						
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*	*Time*	*Elapsed Hours*

Denis C. K. Lin, Ph.D.

Vice President
Research and Operations

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Introduction

This report contains the analytical results on your water sample, WB9 85/07/23 10:30. Per your request, we analyzed for as many Appendix VIII parameters as presently available methodology permits. USEPA instructs that SW846, July, 1982 "Test Methods for Evaluating Solid Waste" is to be followed in the analysis. However, SW846 does not provide sufficient information to analyze for all the parameters in Appendix VIII. We have performed the analysis based on the methodology described in SW846 and divided the parameters into the following categories:

1. Direct Aqueous Injection for water soluble compounds by GC/MS.
2. Purge and Trap GC/MS method for volatile compounds.
3. Extractable Acid/Base/Neutral/Pesticides compounds by GC/MS.
4. Pesticides by GC/EC.
5. Pesticides by GC/FPD.
6. Herbicides by GC/EC.
7. Polar and thermally unstable compounds by HPLC/UV.
8. Metallic and Organometallic compounds by ICAP, AA, and Cold Vapor AA. (Table 4)
9. Conventionals.

Furthermore, there are three categories of compounds that cannot be analyzed directly:

1. Compounds which are unstable in water. (Table A)
2. Not Otherwise Specified (N.O.S.) classes of compounds. (Tables B and D)
3. "Exotic" compounds that require special methods. (Table C)

We analyzed for selected representatives from the N.O.S. classes of compounds.

The Appendix VIII Parameters

As proposed on October 1, 1984, (Federal Register, Vol. 49, Page 38786) there are 13 parameters that are unstable in water; and 10 parameters that are exotic in nature and no satisfactory analytical methods are available. Furthermore, for those parameters that have metals in their compositions it is sufficient to analyze for the metal components only. There are 51 parameters that belong to this category. Using the same rationale 14 parameters can be tested as cyanides. Since one exotic, two unstable, and seven cyanide compounds are also classified as metals, the remaining Appendix VIII parameters that need to be addressed in an analytical scheme total 297.

The analytical scheme designed at ETC for the Appendix VIII parameters follows the rationale suggested by SW-846. Various parameters are categorized according to their chemical and physical characteristics and they are grouped together under analytical methods by which they can be quantified at optional method detection limits. We agree with EPA's approach to the unstable, exotic and metallic compounds. We focus our attention on the remaining 297 parameters.

There are 11 parameters among the 297 that ETC believes should also be classified as "unstable in water" (Table 1). EPA, while acknowledging that there are other unstable compounds, suggests that there is some likelihood they can be found in water. Since EPA insists these compounds should be analyzed, we have decided to incorporate them into our analytical scheme but not setting data acceptance critiera for them.

There are another 33 parameters (Table 2) that ETC believes should be classified as exotic compounds and require special or unusual methods for their analysis. Ten of these compounds are antineoplastic agents or other drugs. Five are uncommon compounds where pertinent information is unavailable. Three are alkaloid poisons or mycotoxins. Two are water soluble dyes. One is a very volatile compounds that can explode easily. The remaining 12 compounds, along with the rest of the compounds in this exotic group, possess unusual chemical and physical characteristics which in turn dictate that their analysis at a meaningful detection limit will require individual tailor-made analytical methodology. In most of these cases, EPA recommends to include them in a generalized analytical method without any data to support such recommendations. ETC is obliged to include these parameters into its most

recent Appendix VIII analytical scheme, but strongly urges US EPA to reexamine its position. Perhaps only under unusual circumstances analysis is required for the selected exotic parameters in Table 2.

Among the 297 parameters there are 28 that are listed "N.O.S." (not otherwise specified). These 28 parameters, along with aflatoxins, coal tars, cresote, cresols, phthalic acid esters, tetrachloroethane, and toluenediamine, constitute 35 complex mixtures or classes of compounds (Table B). Since some of these parameters represent thousands of individual compounds it is necessary to select representatives for the analysis of these parameters. In as much as possible, we have chosen "priority pollutants" and commonly available reference standard compounds to represent the 35 parameters (see Table B).

Throughout the development of the analytical scheme one of the major obstacles was the availability of reference standard compounds for the 375 parameters.

Results

There are 375 listings in Appendix VIII. To assist you in reviewing the results we have assigned a number to each parameter in the "Grand" Table. Also in the Grand Table we classified the parameters according to their analytical categories and indicated which result table the data and QA data are tabulated on. Depending on the analyses ordered, the quality assurance data may include results from the blank, spiked blank, spiked sample (i.e matrix spike) and replicate sample as well as results from surrogate compound analyses.

In the results table, when a compound or element is present below published MDL it is reported as BMDL (Below Method Detection Limit). When a compound is not present at any detectable concentrations it is reported as ND (Not Detected). Matrix spike and replicate analyses, where included, were performed on samples randomly chosen within each quality assurance batch and are therefore not necessarily spikes and replicates of this report's sample. Surrogate compound recovery data and instrument calibration data are included in the Method Performance Data Tables.

The procedures used in the analysis of the sample are described in this report's methodology section. All analytical procedures within our laboratory are performed within a strictly enforced Quality Assurance Protocol. A description of this Protocol is included in the report. The report appendices include the chain of custody record for your sample and, where appropriate, the gas chromatograms and mass spectra.

TABLE 1

PARAMETERS WHICH SHOULD BE UNSTABLE IN WATER

40 Benzotrichloride
53 2-Butanone peroxide
75 1-Chloro-2,3-epoxypropane
79 Chloromethyl methyl ether
138 1,2,3,4-Diepoxybutane
148 Diisopropylfluorophosphate
161 Dimethyl sulfate
220 Maleic anhydride
295 Phorate
298 Phthalic Anhydride
331 Tetraethyldithiopyrophosphate

TABLE 2

"EXOTIC" COMPOUNDS THAT REQUIRE SPECIAL METHODS

10 Aflatoxins
15 Mitomycin C
25 Auramine
26 Azaserine
52 Brucine
62 Chlorambucil
86 Citrus red No. 2
98 Cyclophosphamide
99 Daunomycin
103 Diallate
147 3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol
173 2,4-Dithiobiuret
188 Formaldehyde
189 Formic acid
202 Hexaethyl tetraphosphate
241 N-Methyl-N'-nitrosoguanidine
262 4-Nitroquinoline-1-oxide
277 N-Nitrososarcosine
279 Diphosphoramide, octamethyl
281 Endothal
282 Paraldehyde
304 1,3-Propane sultone
306 Propylthiouracil
311 Saccharin and salts
320 Streptozotocin
322 Strychnine and salts
324 2,3,7,8-TCDD
334 Tetranitromethane
343 Thioacetamide
344 Thiosemicarbazide
367 Tri(1-azoidinyl)phosphine sulfide
369 Trypan blue
370 Uracil mustard

GRAND TABLE

	COMPOUND NAME	FRACTION	TABLE
1	Acetonitrile	P&T	QR27
2	Acetophenone	A/B/N	QR28
3	Warfarin	HPLC	QR31
4	2-Acetylaminofluorene	A/B/N	QR28
5	Acetyl chloride	UNSTABLE	TBL A
6	1-Acetyl-2-thiourea	HPLC	QR25
7	Acrolein	P&T	QR27
8	Acrylamide	HPLC	QR25
9	Acrylonitrile	P&T	QR27
10	Aflatoxins	CLASS	TBL B
10A	Aflatoxins, Total	A/B/N	QR28
11	Aldrin	PEST/HERB	QR24
12	Allyl alcohol	DIR/INJ	QR26
13	Aluminum phosphide	INORG,UNSTABLE	TBL D,A
13A	Aluminum	METALS	QR29
14	4-Aminobiphenyl	A/B/N	QR28
15	Mitomycin C	HPLC	QR31
16	5-(Aminomethyl)-3-isoxazolol	A/B/N	QR28
17	Amitrole	HPLC	QR25
18	Aniline	A/B/N	QR28
19	Antimony and Compounds, N.O.S.	CLASS, INORG	TBL B,D
19A	Antimony	METALS	QR29
20	Aramite	A/B/N	QR28
21	Arsenic and Compounds, N.O.S.	CLASS, INORG	TBL B,D
21A	Arsenic	METALS	QR29
22	Arsenic acid (Orthoarsenic acid)	INORG	TBL D
23	Arsenic pentoxide (Arsenic (V) oxide)	INORG	TBL D
24	Arsenic trioxide (Arsenic (III) oxide)	INORG	TBL D
25	Auramine	A/B/N	QR28
26	Azaserine	HPLC	QR31
27	Barium and Compounds, N.O.S.	CLASS, INORG	TBL B,D
27A	Barium	METALS	QR29
28	Barium cyanide	INORG	TBL D
29	Benz[c]acridine	A/B/N	QR28
30	Benz[a]anthracene	A/B/N	QR28
31	Benzene	P&T	QR27
32	Benzenearsonic acid	INORG	TBL D
33	Dichloromethylbenzene	A/B/N	QR28
34	Benzenethiol	A/B/N	QR28
35	Benzidine	HPLC	QR31
36	Benzo[b]fluoranthene	A/B/N	QR28
37	Benzo[j]fluoranthene	A/B/N	QR28
38	Benzo[a]pyrene	A/B/N	QR28
39	p-Benzoquinone	A/B/N	QR28
40	Benzotrichloride	A/B/N	QR28
41	Benzyl chloride	A/B/N	QR28
42	Beryllium and Compounds, N.O.S.	CLASS, INORG	TBL B,D
42A	Beryllium	METALS	QR29
43	bis(2-Chloroethoxy)methane	A/B/N	QR28
44	bis(2-Chloroethyl) ether	A/B/N	QR28
45	Chlornaphazine	A/B/N	QR28
46	bis(2-Chloroisopropyl)ether	A/B/N	QR28
47	bis(Chloromethyl)ether	UNSTABLE	TBL A
48	bis(2-ethylhexyl)phthalate	A/B/N	QR28
49	Bromoacetone	P&T	QR27
50	Methyl bromide	P&T	QR27
51	4-Bromophenyl phenyl ether	A/B/N	QR28
52	Brucine	A/B/N	QR28
53	2-Butanone peroxide	A/B/N	QR28

	COMPOUND NAME	FRACTION	TABLE
54	Butyl benzyl phthalate	A/B/N	QR28
55	2-sec-Butyl-4,6-dinitrophenol	A/B/N	QR28
56	Cadmium and Compounds, N.O.S.	CLASS, INORG	TBL B,D
56A	Cadmium	METALS	QR29
57	Calcium chromate(Chromic acid,calcium salt)	INORG	TBL D
57A	Calcium	METALS	QR29
58	Calcium cyanide	INORG	TBL D
59	Carbon disulfide	P&T	QR27
60	Carbon oxyfluoride	UNSTABLE	TBL A
61	Chloral	DIR/INJ	QR26
62	Chlorambucil	HPLC	QR31
63	Chlordane	PEST/HERB	QR24
64	Chlorinated Benzenes, N.O.S.	CLASS	TBL B
64A	1,2,3-trichlorobenzene	A/B/N	QR28
64B	2,4,6-trichlorobenzene	A/B/N	QR28
64C	1,2,3,4-tetrachlorobenzene	A/B/N	QR28
64D	1,2,3,5-tetrachlorobenzene	A/B/N	QR28
65	Chlorinated Ethane, N.O.S.	CLASS	TBL B
65A	Chloroethane	P&T	QR27
66	Chlorinated Fluorocarbons, N.O.S.	CLASS	TBL B
66A	Freon TF	P&T	QR27
67	Chlorinated Naphthalene, N.O.S.	CLASS	TBL B
67A	1-chloronaphthalene	A/B/N	QR28
68	Chlorinated Phenol, N.O.S.	CLASS	TBL B
68A	2,3,5,6-tetrachlorophenol	A/B/N	QR28
68B	2,3,4,5-tetrachlorophenol	A/B/N	QR28
69	Chloroacetaldehyde	DIR/INJ	QR26
70	Chloroalkyl Ethers, N.O.S.	CLASS	TBL B
71	p-Chloroaniline	A/B/N	QR28
72	Chlorobenzene	P&T	QR27
73	Chlorobenzilate	PEST/HERB	QR24
74	p-Chloro-m-cresol	A/B/N	QR28
75	1-Chloro-2,3-epoxypropane	P&T	QR27
76	2-Chloroethyl vinyl ether	P&T	QR27
77	Chloroform	P&T	QR27
78	Methyl chloride	P&T	QR27
79	Chloromethyl methyl ether	P&T	QR27
80	2-Chloronaphthalene	A/B/N	QR28
81	2-Chlorophenol	A/B/N	QR28
82	1-(o-Chlorophenyl)thiourea	HPLC	QR25
83	3-Chloropropionitrile	DIR/INJ	QR26
84	Chromium and Compounds, N.O.S.	CLASS, INORG	TBL B,D
84A	Chromium	METALS	QR29
85	Chrysene	A/B/N	QR28
86	Citrus red No. 2	HPLC	QR31
87	Coal Tars	CLASS	TBL B
87A	Acenapthene	A/B/N	QR28
87B	Acenaphthalene	A/B/N	QR28
87C	Anthracene	A/B/N	QR28
87D	Benzo(ghi)perylene	A/B/N	QR28
87E	Benzo(k)fluoranthene	A/B/N	QR28
87F	Fluorene	A/B/N	QR28
87G	Phenathrene	A/B/N	QR28
87H	Pyrene	A/B/N	QR28
88	Copper cyanide	INORG	TBL D
88A	Copper	METALS	QR29
89	Creosote	CLASS	TBL B
89A	2,Nitrophenol	A/B/N	QR28
90	Cresols	CLASS	TBL B
90A	o-Cresol	A/B/N	QR28
90B	m+p-Cresol	A/B/N	QR28

	COMPOUND NAME	FRACTION	TABLE
91	Crotonaldehyde	P&T	QR27
92	Cyanides (soluble salts and complexes)N.O.S	CLASS,INORG	TBL B,D
92A	Cyanide, Total	METALS	QR29
93	Cyanogen	DIR/INJ	QR26
94	Cyanogen bromide	INORG	TBL D
95	Cyanogen chloride	INORG	TBL D
96	Cycasin	EXOTIC, UNSTABLE	TBL C, A
97	2-Cyclohexyl-4,6-dinitrophenol	A/B/N	QR28
98	Cyclophosphamide	EXOTIC	TBL C
99	Daunomycin	HPLC	QR31
100	4,4'-DDD	PEST/HERB	QR24
101	4,4'-DDE	PEST/HERB	QR24
102	4,4'-DDT	PEST/HERB	QR24
103	Diallate	A/B/N	QR28
104	Dibenz[a,h]acridine	A/B/N	QR28
105	Dibenz[a,j]acridine	A/B/N	QR28
106	Dibenz[a,h]anthracene	A/B/N	QR28
107	7H-Dibenzo[c,g]carbazole	A/B/N	QR28
108	Dibenzo[a,e]pyrene	A/B/N	QR28
109	Dibenzo[a,h]pyrene	A/B/N	QR28
110	Dibenzo[a,i]pyrene	A/B/N	QR28
111	1,2-dibromo-3-chloropropane	P&T	QR27
112	1,2-Dibromoethane	P&T	QR27
113	Dibromomethane	P&T	QR27
114	Di-n-butyl phthalate	A/B/N	QR28
115	1,2-Dichlorobenzene	A/B/N	QR28
116	1,3-Dichlorobenzene	A/B/N	QR28
117	1,4-Dichlorobenzene	A/B/N	QR28
118	Dichlorobenzene, N.O.S.	CLASS	TBL B
119	3,3'-Dichlorobenzidine	HPLC	QR31
120	1,4-Dichloro-2-butene	P&T	QR27
121	Dichlorodifluoromethane	P&T	QR27
122	1,1-Dichloroethane	P&T	QR27
123	1,2-Dichloroethane	P&T	QR27
124	1,2-Trans-dichloroethylene	P&T	QR27
125	Dichloroethylene, N.O.S.	CLASS	TBL B
126	1,1-Dichloroethylene	P&T	QR27
127	Methylene chloride	P&T	QR27
128	2,4-Dichlorophenol	A/B/N	QR28
129	2,6-Dichlorophenol	A/B/N	QR28
130	2,4-D	PEST/HERB	QR24
131	Dichlorophenylarsine	A/B/N	QR28
132	Dichloropropane, N.O.S.	CLASS	TBL B
132A	1,3-Dichloropropane	P&T	QR27
133	1,2-Dichloropropane	P&T	QR27
134	Dichloropropanol, N.O.S.	CLASS	TBL B
134A	Dichloropropanol	DIR/INJ	QR26
135	2,3-Dichloropropene	P&T	QR27
136A	cis-1,3-Dichloropropene	P&T	QR27
136B	trans-1,3-Dichloropropene	P&T	QR27
137	Dieldrin	PEST/HERB	QR24
138	1,2,3,4-Diepoxybutane	P&T	QR27
139	Diethylarsine	P&T	QR27
140	N,N,-Diethylhydrazine	P&T	QR27
141	Carbophenothion	PEST/HERB	QR24
142	0,0-Diethylphosphoric acid, 0-p-nitrophenyl ester	A/B/N	QR28
143	Diethyl phthalate	A/B/N	QR28
144	Thionazin	PEST/HERB	QR24
145	Diethylstilbesterol	HPLC	QR25
146	Dihydrosafrole	A/B/N	QR28
147	3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol	HPLC	QR31

	COMPOUND NAME	FRACTION	TABLE
148	Diisopropylfluorophosphate	A/B/N	QR28
149	Dimethoate	PEST/HERB	QR24
150	3,3'-Dimethoxybenzidine	HPLC	QR31
151	p-Dimethylaminoazobenzene	A/B/N	QR28
152	7,12-Dimethylbenz[a]anthracene	A/B/N	QR28
153	3,3'-Dimethylbenzidine	HPLC	QR31
154	Dimethyl carbamoylchloride	UNSTABLE	TBL A
155	1,1-Dimethylhydrazine	DIR/INJ	QR26
156	1,2-Dimethylhydrazine	DIR/INJ	QR26
157	Thiofanox	A/B/N	QR28
158	alpha-alpha-Dimethylphenethylamine	A/B/N	QR28
159	2,4-Dimethylphenol	A/B/N	QR28
160	Dimethyl phthalate	A/B/N	QR28
161	Dimethyl sulfate	A/B/N	QR28
162	Dinitrobenzene, N.O.S.	CLASS	TBL B
162A	m-Dinitrobenzene	A/B/N	QR28
163	4,6-Dinitro-o-cresol	A/B/N	QR28
164	2,4-Dinitrophenol	A/B/N	QR28
165	2,4-Dinitrotoluene	A/B/N	QR28
166	2,6-Dinitrotoluene	A/B/N	QR28
167	Di-n-octyl phthalate	A/B/N	QR28
168	1,4-Dioxane	DIR/INJ	QR26
169	Diphenylamine	A/B/N	QR28
170	1,2-Diphenylhydrazine	A/B/N	QR28
171	N-Nitrosodi-n-propylamine	A/B/N	QR28
172	Disulfoton	PEST/HERB	QR24
173	2,4-Dithiobiuret	A/B/N	QR28
174A	Endosulfan I	PEST/HERB	QR24
174B	Endosulfan II	PEST/HERB	QR24
175	Endrin	PEST/HERB	QR24
176	Ethyl carbamate	HPLC	QR25
177	Ethyl cyanide	DIR/INJ	QR26
178	Ethylenebisdithiocarbamic acid	EXOTIC	TBL C
179	Ethyleneimine	HPLC	QR25
180	Ethylene oxide	DIR/INJ	QR26
181	Ethylenethiourea	HPLC	QR25
182	Ethyl methacrylate	P&T	QR27
183	Ethyl methanesulfonate	A/B/N	QR28
184	Fluoranthene	A/B/N	QR28
185	Fluorine	UNSTABLE	TBL A
186	2-Fluoroacetamide	UNSTABLE, EXOTIC	TBL A, C
187	Fluoroacetic acid	DIR/INJ	QR26
188	Formaldehyde	P&T	QR27
189	Formic acid	A/B/N	QR28
190	Glycidylaldehyde	DIR/INJ	QR26
191	Halomethane, N.O.S.	CLASS	TBL B
191A	Chlorodibromomethane	P&T	QR27
191B	Dichlorobromomethane	P&T	QR27
192	Heptachlor	PEST/HERB	QR24
193	Heptachlor epoxide	PEST/HERB	QR24
194	Hexachlorobenzene	A/B/N	QR28
195	Hexachlorobutadiene	A/B/N	QR28
196A	Alpha-BHC	PEST/HERB	QR24
196B	Beta-BHC	PEST/HERB	QR24
196C	Gamma-BHC	PEST/HERB	QR24
196D	Delta-BHC	PEST/HERB	QR24
197	Hexachlorocyclopentadiene	A/B/N	QR28
198	Hexachloroethane	A/B/N	QR28
199	Hexachlorohexahydro-endo, endo-dimethanonaphthalene	A/B/N	QR28
200	Hexachlorophene	A/B/N	QR28

	COMPOUND NAME	FRACTION	TABLE
201	Hexachloropropene	A/B/N	QR28
202	Hexaethyltetraphosphate	A/B/N	QR28
203	Hydrazine	DIR/INJ	QR26
204	Hydrogen cyanide	SEE 92	TBL B
205	Hydrofluoric acid	UNSTABLE	TBL A
206	Hydrogen sulfide	P&T	QR27
207	Hydroxydimethylarsine oxide	INORG	TBL D
208	Indeno(1,2,3-cd)pyrene	A/B/N	QR28
209	Iodomethane	P&T	QR27
210	Iron dextran	UNSTABLE, EXOTIC	TBL A,C
210A	Iron	METAL	QR29
211	Methyl isocyanate	UNSTABLE	TBL A
212	Isobutyl alcohol	DIR/INJ	QR26
213	Isosafrole	A/B/N	QR28
214	Kepone	PEST/HERB	QR24
215	Lasiocarpine	UNSTABLE, EXOTIC	TBL A,C
216	Lead and Compounds, N.O.S.	CLASS, INORG	TBL B,D
216A	Lead	METALS	QR29
217	Lead acetate (Acetic acid, lead salt)	INORG	TBL D
218	Lead phosphate (Phosphoric acid, lead salt)	INORG	TBL D
219	Lead subacetate	INORG	TBL D
220	Maleic anhydride	A/B/N	QR28
221	Maleic hydrazide	HPLC	QR25
222	Malononitrile	HPLC	QR25
223	Melphalan	A/B/N	QR28
224	Mercury fulminate	INORG	TBL D
225	Mercury and Compounds, N.O.S.	CLASS, INORG	TBL B,D
225A	Mercury	METALS	QR29
226	Methacrylonitrile	DIR/INJ	QR26
227	Methanethiol	DIR/INJ	QR26
228	Methapyrilene	A/B/N	QR28
229	Methomyl	HPLC	QR25
230	Methoxychlor	PEST/HERB	QR24
231	2-Methylaziridine	HPLC	QR25
232	3-Methylcholanthrene	A/B/N	QR28
233	Methyl Chlorocarbonate	UNSTABLE	TBL A
234	4,4'-Methylenebis(2-chloroaniline)	A/B/N	QR28
235	Methyl ethyl ketone	P&T	QR27
236	Methyl hydrazine	DIR/INJ	QR26
237	2-Methyllactonitrile	DIR/INJ	QR26
238	Methyl methacrylate	P&T	QR27
239	Methyl methanesulfonate	A/B/N	QR28
240	Aldicarb	A/B/N	QR28
241	N-Methyl-N'-nitrosoguanidine	A/B/N	QR28
242	Methyl parathion	PEST/HERB	QR24
243	Methylthiouracil	A/B/N	QR28
244	Mustard gas	UNSTABLE, EXOTIC	TBL A,C
245	Naphthalene	A/B/N	QR28
246	1,4-Naphthoquinone	A/B/N	QR28
247	1-Naphthylamine	A/B/N	QR28
248	2-Naphthylamine	A/B/N	QR28
249	1-Naphthyl-2-thiourea	HPLC	QR31
250	Nickel and Compounds, N.O.S.	CLASS, INORG	TBL B,D
250A	Nickel	METALS	QR29
251	Nickel carbonyl (Nickel tetracarbonyl)	INORG	TBL D

	COMPOUND NAME	FRACTION	TABLE
252	Nickel cyanide (Nickel (II)cyanide)	INORG	TBL D
253	Nicotinic acid	HPLC	QR25
254	Nitric oxide	UNSTABLE, EXOTIC	TBL A,C
255	p-Nitroaniline	A/B/N	QR28
256	Nitrobenzene	A/B/N	QR28
257	Nitrogen dioxide	UNSTABLE	TBL A
258	Nitrogen mustard and hydrochloride salt	EXOTIC, UNSTABLE	TBL C,A
259	Nitrogen mustard N-Oxide and hydrochloride salt	EXOTIC, UNSTABLE	TBL C,A
260	Nitroglycerin	HPLC	QR25
261	4-Nitrophenol	A/B/N	QR28
262	4-Nitroquinoline-1-oxide	A/B/N	QR28
263	Nitrosamines, N.O.S.	CLASS	TBL B
263A	N-Nitrosodiphenylamine	A/B/N	QR28
264	N-Nitrosodi-n-butylamine	A/B/N	QR28
265	N-Nitrosodiethanolamine	A/B/N	QR28
266	N-Nitrosodiethylamine	A/B/N	QR28
267	N-Nitrosodimethylamine	A/B/N	QR28
268	N-Nitroso-N-ethylurea	HPLC	QR25
269	N-Nitrosomethylethylamine	A/B/N	QR28
270	N-Nitroso-N-methylurea	HPLC	QR25
271	N-Nitroso-N-methylurethane	A/B/N	QR28
272	N-Nitrosomethylvinylamine	A/B/N	QR28
273	N-Nitrosomorpholine	A/B/N	QR28
274	N-Nitrosonornicotine	A/B/N	QR28
275	N-Nitrosopiperidine	A/B/N	QR28
276	N-Nitrosopyrrolidine	DIR/INJ	QR26
277	N-Nitrososarcosine	A/B/N	QR28
278	5-Nitro-o-toluidine	A/B/N	QR28
279	Octamethylpyrophosphoramide	A/B/N	QR28
280	Osmium tetroxide (Osmium (VIII) oxide)	INORG	TBL D
280A	Osmium	METALS	QR29
281	Endothal	A/B/N	QR28
282	Paraldehyde	P&T	QR27
283	Parathion	PEST/HERB	QR24
284	Pentachlorobenzene	A/B/N	QR28
285	Pentachloroethane	P&T	QR27
286	Pentachloronitrobenzene	A/B/N	QR28
287	Pentachlorophenol	A/B/N	QR28
288	Phenacetin	A/B/N	QR28
289	Phenol	A/B/N	QR28
290A	m-phenylenediamine	HPLC	QR31
290B	o-phenylenediamine	HPLC	QR31
290C	p-phenylenediamine	HPLC	QR31
291	Phenylmercury acetate	INORG	TBL D
292	N-Phenylthiourea	HPLC	QR25
293	Phosgene	UNSTABLE	TBL A
294	Phosphine	EXOTIC, UNSTABLE	TBL C, A
295	Phorate	PEST/HERB	QR24
296	Famphur	PEST/HERB	QR24
297	Phthalic acid esters	CLASS	TBL B
298	Phthalic anhydride	A/B/N	QR28
299	2-Picoline	A/B/N	QR28
300	Polychlorinated Biphenyl, N.O.S.	CLASS	TBL B
300A	Aroclor 1242	PCB/GC/EC	QR30
300B	Aroclor 1254	PCB/GC/EC	QR30
300C	Aroclor 1260	PCB/GC/EC	QR30
300D	Aroclor 1248	PCB/GC/EC	QR30
300E	Aroclor 1232	PCB/GC/EC	QR30
300F	Aroclor 1221	PCB/GC/EC	QR30
300G	Aroclor 1016	PCB/GC/EC	QR30
301	Potassium cyanide	INORG	TBL D
301A	Potassium	METAL	QR29

	COMPOUND NAME	FRACTION	TABLE
302	Potassium silver cyanide	INORG	TBL D
303	Pronamide	A/B/N	QR28
304	1,3-Propane sultone	A/B/N	QR28
305	n-Propylamine	DIR/INJ	QR26
306	Propylthiouracil	A/B/N	QR28
307	2-Propyn-1-ol	DIR/INJ	QR26
308	Pyridine	DIR/INJ	QR26
309	Reserpine	HPLC	QR25
310	Resorcinol	A/B/N	QR28
311	Saccharin and salts	A/B/N	QR28
312	Safrole	A/B/N	QR28
313	Selenious acid (Selenium dioxide)	INORG	TBL D
314	Selenium and Compounds, N.O.S.	CLASS, INORG	TBL B,D
314A	Selenium	METALS	QR29
315	Selenium sulfide (Sulfur selenide)	INORG	TBL D
316	Selenourea	INORG	TBL D
317	Silver and Compounds, N.O.S.	CLASS, INORG	TBL B,D
317A	Silver	METALS	QR29
318	Silver cyanide	INORG	TBL D
319	Sodium cyanide	INORG	TBL D
319A	Sodium	METALS	QR29
320	Streptozotocin	HPLC	QR31
321	Strontium sulfide	INORG	TBL D
321A	Strontium	METALS	QR29
322	Strychnine and salts	EXOTIC	TBL C
323	1,2,4,5-Tetrachlorobenzene	A/B/N	QR28
324	2,3,7,8-TCDD	EXOTIC	TBL C
325	Tetrachloroethane	CLASS	TBL B
326	1,1,1,2-Tetrachloroethane	P&T	QR27
327	1,1,2,2-Tetrachloroethane	P&T	QR27
328	Tetrachloroethylene	P&T	QR27
329	Carbon tetrachloride	P&T	QR27
330	2,3,4,6-Tetrachlorophenol	A/B/N	QR28
331	Tetraethyldithiopyrophosphate	A/B/N	QR28
332	Tetraethyl lead	INORG	TBL D
333	Tetraethylpyrophosphate	PEST/HERB	QR24
334	Tetranitromethane	P&T	QR27
335	Thallium and Compounds, N.O.S.	CLASS, INORG	TBL B,D
335A	Thallium	METALS	QR29
336	Thallic oxide (Thallium (III) oxide)	INORG	TBL D
337	Thallium (I) acetate (Acetic acid, thallium (I) salt)	INORG	TBL D
338	Thallium (I) carbonate	INORG	TBL D
339	Thallium (I) chloride	INORG	TBL D
340	Thallium (I) nitrate	INORG	TBL D
341	Thallium selenite	INORG	TBL D
342	Thallium (I) sulfate	INORG	TBL D
343	Thioacetamide	HPLC	QR31
344	Thiosemicarbazide	HPLC	QR31
345	Thiourea	HPLC	QR25
346	Thiuram	A/B/N	QR28
347	Toluene	P&T	QR27
348	Toluenediamine	CLASS	TBL B
348A	Toluene-2,4-Diamine	HPLC	QR31
349	O-Toluidine hydrochloride	A/B/N	QR28
350	Toluene diisocyanate	UNSTABLE	TBL A
351	Toxaphene	PEST/HERB	QR24

	COMPOUND NAME	FRACTION	TABLE
352	Bromoform	P&T	QR27
353	1,2,4-Trichlorobenzene	A/B/N	QR28
354	1,1,1-Trichloroethane	P&T	QR27
355	1,1,2-Trichloroethane	P&T	QR27
356	Trichloroethylene	P&T	QR27
357	Trichloromethanethiol	P&T	QR27
358	Trichlorofluoromethane	P&T	QR27
359	2,4,5-Trichlorophenol	A/B/N	QR28
360	2,4,6-Trichlorophenol	A/B/N	QR28
361	2,4,5-T	PEST/HERB	QR24
362	2,4,5-TP (Silvex)	PEST/HERB	QR24
363	Trichloropropane, N.O.S.	CLASS	TBL B
363A	1,1,2-trichloropropane	P&T	QR27
363B	1,2,2-trichloropropane	P&T	QR27
364	1,2,3-Trichloropropane	P&T	QR27
365	0,0,0-Triethyl phosphorothioate	A/B/N	QR28
366	sym-Trinitrobenzene	A/B/N	QR28
367	Tris (1-Azridinyl) phosphine sulfide	A/B/N	QR28
368	Tris(2,3-dibromopropyl) phosphate	A/B/N	QR28
369	Trypan blue	HPLC	QR31
370	Uracil mustard	A/B/N	QR28
371	Vanadic acid, ammonium salt	INORG	TBL D
372	Vanadium pentoxide (Vandium (V) oxide)	INORG	TBL D
372A	Vanadium	METALS	QR29
373	Vinyl chloride	P&T	QR27
374	Zinc cyanide	INORG	TBL D
374A	Zinc	METALS	QR29
375	Zinc phosphide	UNSTABLE	TBL A

TABLE A
PARAMETERS WHICH ARE UNSTABLE IN WATER

5 Acetyl chloride
13 Aluminum phosphide
47 bis (Chloromethyl) ether
60 Carbon oxyfluoride
96 Cycasin
154 Dimethyl carbamoylchloride
185 Fluorine
186 2-Fluoroacetamide
205 Hydrofluoric acid
210 Iron dextran
211 Methyl isocyanate
215 Lasiocarpine
233 Methyl chlorocarbonate
244 Mustard gas
254 Nitric oxide
257 Nitrogen dioxide
258 Nitrogen mustard and hydrochloride salt
259 Nitrogen mustard N-Oxide and hydrochloride salt
293 Phosgene
294 Phosphine
350 Toluene diisocyanate
375 Zinc phosphide

TABLE B
COMPOUND CLASSES

CLASS	REPRESENTATIVE		TABLE
19 Antimony and Compounds, N.O.S.	19A	Antimony	QR29
21 Arsenic and Compounds, N.O.S.	21A	Arsenic	QR29
27 Barium and Compounds, N.O.S.	27A	Barium	QR29
42 Beryllium and Compounds, N.O.S.	42A	Beryllium	QR29
56 Cadmium and Compounds, N.O.S.	56A	Cadmium	QR29
84 Chromium and Compounds, N.O.S.	84A	Chromium	QR29
216 Lead and Compounds, N.O.S.	216A	Lead	QR29
225 Mercury and Compounds, N.O.S.	225A	Mercury	QR29
250 Nickel and Compounds, N.O.S.	250A	Nickel	QR29
314 Selenium and Compounds, N.O.S.	314A	Selenium	QR29
317 Silver and Compounds, N.O.S.	317A	Silver	QR29
335 Thallium and Compounds, N.O.S.	335A	Thallium	QR29
10 Aflatoxins	10A	Aflatoxins, Total	QR28
64 Chlorinated Benzenes, N.O.S.	64A	1,2,3-trichlorobenzene	QR28
	64B	2,4,6-trichlorobenzene	QR28
	64C	1,2,3,4-tetrachlorobenzene	QR28
	64D	1,2,3,5-tetrachlorobenzene	QR28
	115	1,2-Dichlorobenzene	QR28
	116	1,3-Dichlorobenzene	QR28
	117	1,4-Dichlorobenzene	QR28
	353	1,2,4-Trichlorobenzene	QR28
65 Chlorinated Ethane, N.O.S.	65A	Chloroethane	QR27
	354	1,1,1-Trichloroethane	QR27
	355	1,1,2-Trichloroethane	QR27
66 Chlorinated Fluorocarbons, N.O.S.	66A	Freon TF	QR27
67 Chlorinated Naphthalene, N.O.S.	67A	1-chloronaphthalene	QR28
68 Chlorinated Phenol, N.O.S.	68A	2,3,5,6-tetrachlorophenol	QR28
	68B	2,3,4,5-tetrachlorophenol	QR28
	128	2,4-Dichlorophenol	QR28
	129	2,6-Dichlorophenol	QR28
	359	2,4,5-Trichlorophenol	QR28
	360	2,4,6-Trichlorophenol	QR28
70 Chloroalkyl Ethers, N.O.S.	44	bis(2-chloroethyl) ether	QR28
	46	bis(2-chloroisopropyl)ether	QR28
	76	2-Chloroethyl vinyl ether	QR27
87 Coal Tars	31	Benzene	QR27
	87A	Acenapthene	QR28
	87B	Acenaphthalene	QR28
	87C	Anthracene	QR28
	87D	3,4-Benzofluoranthene	QR28
	87E	Benzo(ghi)perylene	QR28
	87F	Benzo(k)fluoranthene	QR28
	87G	Fluorene	QR28
	87H	Phenathrene	QR28
	87I	Pyrene	QR28
	90	Cresols	SEE BELOW
	245	Napthalene	QR28
	289	Phenol	QR28
	347	Toluene	QR27

TABLE B (cont'd)
COMPOUND CLASSES

CLASS	REPRESENTATIVE		TABLE
89 Creosote	74	p-Chloro-m-cresol	QR28
	89A	2,Nitrophenol	QR28
	90A	o-Cresol	QR28
	90B	m+p Cresol	QR28
	163	4,6-Dinitro-o-cresol	QR28
	261	4-Nitrophenol	QR28
90 Cresols	90A	o-Cresol	QR28
	90B	m+p Cresol	QR28
92 Cyanides, N.O.S.	92A	Cyanide, Total	QR29
118 Dichlorobenzene, N.O.S.	115	1,2-Dichlorobenzene	QR28
	116	1,3-Dichlorobenzene	QR28
	117	1,4-Dichlorobenzene	QR28
125 Dichloroethylene, N.O.S.	126	1,1-Dichloroethylene	QR27
132 Dichloropropane, N.O.S.	132A	1,3-Dichloropropane	QR27
	133	1,2-Dichloropropane	QR27
134 Dichloropropanol, N.O.S.	134A	Dichloropropanol	QR26
162 Dinitrobenzene, N.O.S.	162A	m-Dinitrobenzene	QR28
191 Halomethane, N.O.S.	191A	Chlorodibromomethane	QR27
	191B	Dichlorobromoethane	QR27
263 Nitrosamines, N.O.S.	263A	N-Nitrosodiphenylamine	QR28
	264	N-Nitrosodi-n-butylamine	QR28
	265	N-Nitrosodiethanolamine	QR28
	266	N-Nitrosodiethylamine	QR28
	267	N-Nitrosodimethylamine	QR28
	268	N-Nitroso-N-ethylurea	QR25
	269	N-Nitrosomethylethylamine	QR28
	270	N-Nitroso-N-methylurea	QR25
	271	N-Nitroso-N-methylurethane	QR28
	272	N-Nitrosomethylvinylamine	QR28
	273	N-Nitrosomorpholine	QR28
	274	N-Nitrosonornicotine	QR28
	275	N-Nitrosopiperidine	QR28
	276	N-Nitrosopyrrolidine	QR28
	277	N-Nitrososarcosine	QR28
297 Phthalic acid esters	48	bis(2-ethylhexyl)phthalate	QR28
	54	Butyl benzyl phthalate	QR28
	114	Di-N-Butyl phthalate	QR28
	143	Diethyl phthalate	QR28
	160	Dimethyl phthalate	QR28
	167	Di-n-octyl phthalate	QR28
300 Polychlorinated Biphenyl, N.O.S.	300A	Aroclor 1242	QR30
	300B	Aroclor 1254	QR30
	300C	Aroclor 1260	QR30
	300D	Aroclor 1248	QR30
	300E	Aroclor 1232	QR30
	300F	Aroclor 1221	QR30
	300G	Aroclor 1016	QR30
325 Tetrachloroethane	326	1,1,1,2-Tetrachloroethane	QR27
	327	1,1,2,2-Tetrachloroethane	QR27
348 Toluenediamine	348A	Toluene-2,4-Diamine	QR25
363 Trichloropropane, N.O.S.	363A	1,1,2-trichloropropane	QR27
	363B	1,2,2-Trichloropropane	QR27
	364	1,2,3-Trichloropropane	QR27

TABLE C
"EXOTIC" COMPOUNDS THAT REQUIRE SPECIAL METHODS

96 Cycasin
98 Cyclophosphamide *
178 Ethylenebisdithiocarbamic acid
186 2-Fluoroacetamide
210 Iron dextran
215 Lasiocarpine
244 Mustard gas
254 Nitric oxide
258 Nitrogen mustard and hydrochloride salt
259 Nitrogen mustard N-Oxide and hydrochloride salt
294 Phosphine
322 Strychnine and salts *
324 2,3,7,8-TCDD **

* No method specified by EPA.
** Method 8280, extra charge required.

TABLE D
INORGANICS

		REPRESENTATIVE	TABLE
13	Aluminum phosphide	13A Aluminum	QR29
19	Antimony and Compounds, N.O.S.	19A Antimony	QR29
21	Arsenic and compounds, N.O.S.	21A Arsenic	QR29
22	Arsenic acid (Orthoarsenic acid)	21A Arsenic	QR29
23	Arsenic pentoxide (Arsenci (V) oxide)	21A Arsenic	QR29
24	Arsenic trioxide (Arsenic (III) oxide)	21A Arsenic	QR29
27	Barium and compounds, N.O.S	27A Barium	QR29
28	Barium cyanide	27A Barium,	QR29
		92A Cyanide, Total	
32	Benzenearsonic acid	21A Arsenic	QR29
42	Beryllium and compounds, N.O.S.	42A Beryllium	QR29
56	Cadmium and compounds, N.O.S.	56A Cadmium	QR29
57	Calcium chromate (Chromic acid, calcium salt)	57A Calcium	QR29
		84A Chromium	QR29
58	Calcium cyanide	57A Calcium,	QR29
		92A Cyanide, Total	
84	Chromium and compounds, N.O.S	84A Chromium	QR29
88	Copper cyanide	88A Copper,	QR29
		92A Cyanide, Total	
92	Cyanides (soluble salts and complexes)	92A Cyanide, Total	QR29
94	Cyanogen bromide	92A Cyanide, Total	QR29
95	Cyanogen chloride	92A Cyanide, Total	QR29
207	Hyroxydimethylarsine oxide	21A Arsenic	QR29
216	Lead and compounds, N.O.S.	216A Lead	QR29
217	Lead acetate (Acetic acid, lead salt)	216A Lead	QR29
218	Lead phosphate (Phosphoric acid, lead salt)	216A Lead	QR29
219	Lead subacetate	216A Lead	QR29
224	Mercury fulminate (Fulminic acid, mercury salt)	225A Mercury	QR29
225	Mercury and compounds, N.O.S.	225A Mercury	QR29
250	Nickel and compounds, N.O.S.	250A Nickel	QR29
251	Nickel carbonyl (Nickel tetracarbonyl)	250A Nickel	QR29
252	Nickel cyanide (Nickel (II)cyanide)	250A Nickel	QR29
280	Osmium tetroxide (Osmium (VIII) oxide)	280A Osmium	QR29
291	Phenylmercury acetate	225A Mercury	QR29
301	Potassium cyanide	301A Potassium	QR29
		92A Cyanide, Total	QR29
302	Potassium silver cyanide	301A Potassium	QR29
		317A Silver	QR29
		92A Cyanide, Total	QR29
313	Selenious acid (Selenium dioxide)	314A Selenium	QR29
314	Selenium and compounds, N.O.S.	314A Selenium	QR29
315	Selenium sulfide (Sulfur selenide)	314A Selenium	QR29
316	Selenourea	314A Selenium	QR29
317	Silver and compounds, N.O.S.	317A Silver	QR29
318	Silver cyanide	317A Silver,	QR29
		92A Cyanide, Total	
319	Sodium cyanide	319A Sodium,	QR29
		92A Cyanide, Toatl	
321	Strontium sulfide	321A Strontium	QR29
332	Tetraethyl lead	216A Lead	QR29
335	Thallium and compounds, N.O.S.	335A Thallium	QR29
336	Thallic oxide (Thallium (III) oxide)	335A Thallium	QR29
337	Thallium (I) acetate (Acetic acid, thallium (I) salt)	335A Thallium	QR29
338	Thallium (I) carbonate	335A Thallium	QR29
339	Thallium (I) chloride	335A Thallium	QR29
340	Thallium (I) nitrate	335A Thallium	QR29
341	Thallium selenite	335A Thallium	QR29
342	Thallium (I) sulfate	335A Thallium	QR29
371	Vanadic acid, ammonium salt	371A Vanadium	QR29
372	Vanadium pentoxide (Vandium (V) oxide)	371A Vanadium	QR29
374	Zinc cyanide	374A Zinc	QR29

J3284

COMMENTS

Pesticides: Alpha and Gamma BHC results in the QC blank were confirmed on a second column. 4,4-DDD and Endosulfan II are co-eluting compounds.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

AUG 18, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Purge & Trap Compounds - GC/MS Analysis Data (QR27)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

	Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1	Acetonitrile	IND		IND	IND	IND	50	0	IND	50	0
7	Acrolein	ND	100	ND	ND	ND	800	89	ND	800	84
9	Acrylonitrile	ND	100	ND	ND	ND	80	79	ND	80	76
31	Benzene	ND	4.4	ND	ND	ND	18	92	ND	18	104
49	Bromoacetone	-	-	-	-	-	-	-	-	-	-
50	Methyl bromide	ND	10.0	ND	ND	ND	18	97	ND	18	123
59	Carbon disulfide	ND	10	ND	ND	ND	68	22	ND	68	24
65A	Chloroethane	ND	10.0	ND	ND	ND	18	80	ND	18	86
66A	Freon TF	ND	10.0	ND	ND	ND	68	43	ND	68	51
72	Chlorobenzene	ND	6.0	ND	ND	ND	18	83	ND	18	139
75	1-Chloro-2,3-epoxypropane	-	-	-	-	-	-	-	-	-	-
76	2-Chloroethylvinyl ether	ND	10.0	ND	ND	ND	18	91	ND	18	79
77	Chloroform	ND	1.6	ND	ND	ND	18	85	ND	18	96
78	Methyl chloride	ND	10.0	ND	ND	ND	18	83	ND	18	114
79	Chloromethyl methyl ether	-	-	-	-	-	-	-	-	-	-
91	Crotonaldehyde	ND	10	ND	ND	ND	50	86	ND	50	79
111	1,2-Dibromo-3-chloropropane	ND	10	ND	ND	ND	68	21	ND	68	21
112	1,2-Dibromoethane	ND	10	ND	ND	ND	50	93	ND	50	87
113	Dibromomethane	ND	10	ND	ND	ND	50	89	ND	50	88
120	1,4-Dichloro-2-butene	ND	10	ND	ND	ND	50	90	ND	50	80
121	Dichlorodifluoromethane	ND	10.0	ND	ND	ND	18	79	ND	18	103
122	1,1-Dichloroethane	ND	4.7	ND	ND	ND	18	71	ND	18	107
123	1,2-Dichloroethane	ND	2.8	ND	ND	ND	18	83	ND	18	101
124	1,2-Trans-dichloroethylene	ND	10.0	ND	ND	ND	18	85	ND	18	99
126	1,1-Dichloroethylene	ND	2.8	ND	ND	ND	18	78	ND	18	100
127	Methylene chloride	BMDL	2.8	ND	ND	4.30	18	68	4.20	18	95
132A	1,3-Dichloropropane	ND	10	ND	ND	ND	50	88	ND	50	87
133	1,2-Dichloropropane	ND	6.0	ND	ND	ND	18	83	ND	18	99
135	2,3-Dichloropropene	ND	10	ND	ND	ND	50	89	ND	50	89
136A	cis-1,3-Dichloropropylene	ND	10	-	-	-	-	-	-	-	-
136B	trans-1,3-Dichloropropylene	ND	10	-	-	-	-	-	-	-	-
138	1,2,3,4-Diepoxybutene	-	-	-	-	-	-	-	-	-	-

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-" specifies no standard or reference spectra available.
"IND" = indeterminate. Standard and/or spikes could not be detected at current method levels.
Result with neither "MDL" nor "Conc.added" specifies no standard available, compound was qualitatively searched for.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

AUG 18, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Purge & Trap Compounds - GC/MS Analysis Data (QR27)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
139 Diethylarsine	-	-	-	-	-	-	-	-	-	-
140 N,N-Diethylhydrazine	-	-	-	-	-	-	-	-	-	-
182 Ethyl methacrylate	ND	10	ND	ND	ND	50	89	ND	50	86
188 Formaldehyde	-	-	-	-	-	-	-	-	-	-
191A Chlorodibromomethane	ND	3.1	ND	ND	ND	18	79	ND	18	94
191B Dichlorobromomethane	ND	2.2	ND	ND	ND	18	79	ND	18	98
206 Hydrogen sulfide	-	-	-	-	-	-	-	-	-	-
209 Iodomethane	ND	10	ND	ND	ND	50	91	ND	50	94
235 Methyl ethyl ketone	BMDL	10	ND	ND	ND	140	59	8.85	140	39
238 Methyl methacrylate	ND	10	ND	ND	ND	50	92	ND	50	79
282 Paraldehyde	-	-	-	-	-	-	-	-	-	-
285 Pentachloroethane	ND	10	ND	ND	ND	50	137	ND	50	814
326 1,1,1,2-Tetrachloroethane	ND	10	ND	.494	ND	50	32	ND	50	33
327 1,1,2,2-Tetrachloroethane	ND	6.9	ND	ND	ND	18	103	ND	18	110
328 Tetrachloroethylene	ND	4.1	ND	.759	ND	18	86	ND	18	44
329 Carbon tetrachloride	ND	2.8	ND	ND	ND	18	89	ND	18	91
334 Tetranitromethane	-	-	-	-	-	-	-	-	-	-
347 Toluene	ND	6.0	ND	1.00	BMDL	18	80	ND	18	107
352 Bromoform	ND	4.7	ND	ND	ND	18	75	ND	18	82
354 1,1,1-Trichloroethane	ND	3.8	ND	ND	BMDL	18	76	ND	18	103
355 1,1,2-Trichloroethane	ND	5.0	ND	ND	ND	18	97	ND	18	111
356 Trichloroethylene	ND	1.9	ND	ND	ND	18	113	3.65	18	48
357 Trichloromethanethiol	-	-	-	-	-	-	-	-	-	-
358 Trichlorofluoromethane	ND	10.0	ND	ND	ND	18	75	ND	18	95
363A 1,1,2-Trichloropropane	ND	10	ND	ND	ND	50	32	ND	50	33
363B 1,2,2-Trichloropropane	ND		ND	ND	ND	0	-	ND	0	-
364 1,2,3-Trichloropropane	ND	10	ND	ND	ND	140	48	1.43	140	40
373 Vinyl chloride	ND	10.0	ND	ND	ND	18	83	ND	18	109

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-"specifies no standard or reference spectra available.
"IND" =indeterminate. Standard and/or spikes could not be detected at current method levels.
Result with neither "MDL" nor "Conc.added" specifies no standard available, compound was qualitatively searched for.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

SEP 5, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Acid/B/N/Pest Compounds - GC/MS Analysis Data (QR28)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
2 Acetophenone	ND	10	ND	ND	ND	100	95	ND	101	129
4 2-Acetylaminofluorene	ND	10	ND	ND	ND	300	141	ND	303	99
10A Aflatoxins, Total	-	-	-	-	-	-	-	-	-	-
14 4-Aminobiphenyl	ND	10	ND	ND	ND	100	91	ND	101	110
16 5-(Aminomethyl)-3-isoxazolo	IND		IND	IND	IND	300	0	ND	303	0
18 Aniline	ND	10	ND	ND	ND	100	92	ND	101	107
20 Aramite	-	-	-	-	-	-	-	-	-	-
25 Auramine	-	-	-	-	-	-	-	-	-	-
29 Benz[c]acridine	-	-	-	-	-	-	-	-	-	-
30 Benz[a]anthracene	ND	10	ND	ND	ND	100	91	ND	101	153
33 Dichloromethylbenzene	ND	10	ND	ND	ND	100	7	ND	101	42
34 Benzenethiol	ND	10	ND	ND	ND	300	25	ND	303	25
36 Benzo[b]fluoranthene	ND	10	ND	ND	ND	100	132	ND	101	95
37 Benzo[j]fluoranthene	-	-	-	-	-	-	-	-	-	-
38 Benzo(a)pyrene	ND	2.5	ND	ND	ND	100	126	ND	101	108
39 p-Benzoquinone	IND		IND	IND	IND	100	0	IND	101	24
40 Benzotrichloride	-	-	-	-	-	-	-	-	-	-
41 Benzyl chloride	ND	10	ND	ND	ND	100	77	ND	101	104
43 bis(2-Chloroethoxy)methane	ND	5.4	ND	ND	ND	100	82	ND	101	117
44 bis(2-Chloroethyl) ether	ND	5.8	ND	ND	ND	100	72	ND	101	143
45 Chlornaphazine	-	-	-	-	-	-	-	-	-	-
46 bis(2-Chloroisopropyl)ether	ND	5.8	ND	ND	ND	100	88	ND	101	118
48 bis(2-Ethylhexyl)phthalate	ND	10	1.18	.801	ND	100	98	3.68	101	159
51 4-Bromophenyl phenyl ether	ND	1.9	ND	ND	ND	100	115	ND	101	154
52 Brucine	-	-	-	-	-	-	-	-	-	-
53 2-Butanone peroxide	-	-	-	-	-	-	-	-	-	-
54 Butyl benzyl phthalate	ND	10	ND	ND	ND	100	91	ND	101	148
55 2-sec-Butyl-4,6-dinitrophen	ND	10	ND	ND	ND	300	96	ND	301	139
64A 1,2,3-Trichlorobenzene	ND	10	ND	ND	ND	100	88	ND	101	95
64B 1,3,5-Trichlorobenzene	ND	10	ND	ND	ND	100	92	ND	101	97
64C 1,2,3,4-Tetrachlorobenzene	ND	10	ND	ND	ND	100	111	ND	101	116
64D 1,2,3,5-Tetrachlorobenzene	ND	10	ND	ND	ND	100	98	ND	101	105

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-"specifies no standard or reference spectra available.
"IND" =Indeterminate. Standard and/or spikes could not be detected at current method levels.
Result with neither "MDL" nor "Conc.added" specifies no standard available, compound was qualitatively searched for.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

SEP 5, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Acid/B/N/Pest Compounds - GC/MS Analysis Data (QR28)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
67A 1-chloronaphthalene	ND	10	ND	ND	ND	100	317	ND	101	374
68A 2,3,5,6-Tetrachlorophenol	ND	10	ND	ND	ND	100	112	ND	101	56
68B 2,3,4,5-Tetrachlorophenol	ND	10	ND	ND	ND	100	122	ND	101	107
71 p-Chloroaniline	ND	10	ND	ND	ND	300	31	ND	301	44
74 p-Chloro-m-cresol	ND	3.0	ND	ND	ND	100	65	ND	101	85
80 2-Chloronaphthalene	ND	1.9	ND	ND	ND	100	54	ND	101	52
81 2-Chlorophenol	ND	3.3	ND	ND	ND	100	74	ND	101	106
85 Chrysene	ND	2.5	ND	ND	ND	100	90	ND	101	121
87A Acenaphthene	ND	1.9	ND	ND	ND	100	92	ND	101	118
87B Acenaphthylene	ND	3.5	ND	ND	ND	100	98	ND	101	123
87C Anthracene	ND	1.9	ND	ND	ND	100	109	ND	101	149
87D Benzo(ghi)perylene	ND	4.1	ND	ND	ND	0	-	ND	0	-
87E Benzo(k)fluoranthene	ND	3.5	ND	ND	ND	100	102	ND	101	116
87F Fluorene	ND	1.9	ND	ND	ND	100	88	ND	101	92
87G Phenanthrene	ND	5.5	ND	ND	ND	100	114	ND	101	158
87H Pyrene	ND	1.9	ND	ND	ND	100	87	ND	101	152
89A 2-Nitrophenol	ND	3.6	ND	ND	ND	100	86	ND	101	104
90A o-Cresol	ND	10	ND	ND	ND	100	101	ND	101	88
90B m+p-Cresol	ND	10	ND	ND	ND	200	61	ND	202	65
97 2-Cyclohexyl-4,6-dinitrophe	-	-	-	-	-	-	-	-	-	-
103 Diallate	-	-	-	-	-	-	-	-	-	-
104 Dibenz[a,h]acridine	-	-	-	-	-	-	-	-	-	-
105 Dibenz[a,j]acridine	ND	10	ND	ND	ND	100	113	ND	101	58
106 Dibenz[a,h]anthracene	ND	10	ND	ND	ND	0	-	ND	0	-
107 7H-Dibenzo[c,g]carbazole	-	-	-	-	-	-	-	-	-	-
108 Dibenzo[a,e]pyrene	-	-	-	-	-	-	-	-	-	-
109 Dibenzo[a,h]pyrene	-	-	-	-	-	-	-	-	-	-
110 Dibenzo[a,i]pyrene	-	-	-	-	-	-	-	-	-	-
114 Di-n-butyl phthalate	ND	10	2.30	1.46	BMDL	100	105	1	101	0
115 1,2-Dichlorobenzene	ND	1.9	ND	ND	ND	100	63	ND	101	83
116 1,3-Dichlorobenzene	ND	1.9	ND	ND	ND	100	50	ND	101	72
117 1,4-Dichlorobenzene	ND	4.4	ND	ND	ND	100	62	ND	101	75

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-" specifies no standard or reference spectra available.
"IND" = indeterminate. Standard and/or spikes could not be detected at current method levels.
Result with neither "MDL" nor "Conc.added" specifies no standard available, compound was qualitatively searched for.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

SEP 5, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Acid/B/N/Pest Compounds - GC/MS Analysis Data (QR28)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	W89	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
128 2,4-Dichlorophenol	ND	2.7	ND	ND	ND	100	81	ND	101	95
129 2,6-Dichlorophenol	ND	10	ND	ND	ND	100	89	ND	101	105
131 Dichlorophenylarsine	-	-	-	-	-	-	-	-	-	-
142 0,0-Diethylphosphoric acid	-	-	-	-	-	-	-	-	-	-
143 Diethyl phthalate	ND	10	ND	ND	ND	100	91	ND	101	99
146 Dihydrosafrole	-	-	-	-	-	-	-	-	-	-
148 Diisopropylfluorophosphate	-	-	-	-	-	-	-	-	-	-
151 p-Dimethylaminoazobenzene	ND	10	ND	ND	ND	100	114	ND	101	141
152 7,12-Dimethylbenz[a]anthrac	ND	10	ND	ND	ND	100	87	ND	101	68
157 Thiofanox	IND		IND	IND	IND	300	0	IND	303	0
158 a-a-Dimethylphenethylamine	IND		IND	IND	IND	100	0	IND	101	0
159 2,4-Dimethylphenol	ND	2.7	ND	ND	ND	100	90	ND	101	89
160 Dimethyl phthalate	ND	10	ND	ND	ND	100	92	ND	101	105
161 Dimethyl sulfate	-	-	-	-	-	-	-	-	-	-
162A m-Dinitrobenzene	ND	10	ND	ND	ND	100	93	ND	101	109
163 4,6-Dinitro-o-cresol	ND	24	ND	ND	ND	100	54	ND	101	81
164 2,4-Dinitrophenol	ND	42	ND	ND	ND	100	52	ND	101	89
165 2,4-Dinitrotoluene	ND	5.8	ND	ND	ND	100	75	ND	101	83
166 2,6-Dinitrotoluene	ND	1.9	ND	ND	ND	100	95	ND	101	113
167 Di-n-octyl phthalate	ND	10	ND	ND	ND	100	109	ND	101	146
169 Diphenylamine	ND	10	ND	ND	ND	100	0	ND	101	0
170 1,2-Diphenylhydrazine	ND	10	ND	ND	ND	100	82	ND	101	96
171 N-Nitrosodi-n-propylamine	ND	10	ND	ND	ND	100	29	ND	101	127
173 2,4-Dithiobiuret	-	-	-	-	-	-	-	-	-	-
183 Ethyl methanesulfonate	ND	10	ND	ND	ND	100	79	ND	101	73
184 Fluoranthene	ND	2.2	ND	ND	ND	100	90	ND	101	118
189 Formic acid	-	-	-	-	-	-	-	-	-	-
194 Hexachlorobenzene	ND	1.9	ND	ND	ND	100	97	ND	101	132
195 Hexachlorobutadiene	ND	.91	ND	ND	ND	100	55	ND	101	72
197 Hexachlorocyclopentadiene	ND	10	ND	ND	ND	0	-	ND	0	-
198 Hexachloroethane	ND	1.6	ND	ND	ND	100	56	ND	101	58
199 Hexachlorohexahydro-endo, e	-	-	-	-	-	-	-	-	-	-

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-" specifies no standard or reference spectra available.
"IND" =indeterminate. Standard and/or spikes could not be detected at current method levels.
Result with neither "MDL" nor "Conc.added" specifies no standard available, compound was qualitatively searched for.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

SEP 5, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Acid/B/N/Pest Compounds - GC/MS Analysis Data (QR28)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
200 Hexachlorophene	ND	10	ND	ND	ND	100	117	ND	101	145
201 Hexachloropropene	ND	10	ND	ND	ND	300	52	ND	303	73
202 Hexaethyltetraphosphate	-	-	-	-	-	-	-	-	-	-
208 Indeno(1,2,3-cd)pyrene	ND	10	ND	ND	ND	0	-	ND	0	-
213 Isosafrole	ND	10	ND	ND	ND	300	184	ND	303	217
220 Maleic anhydride	-	-	-	-	-	-	-	-	-	-
223 Melphalan	IND		IND	IND	IND	300	0	IND	303	0
228 Methapyrilene	-	-	-	-	-	-	-	-	-	-
232 3-Methylcholanthrene	ND	10	ND	ND	ND	100	103	ND	101	56
234 4,4'-Methylenebis(2-chloroa	ND	10	ND	ND	ND	300	127	ND	303	65
239 Methyl methanesulfonate	ND	10	ND	ND	ND	100	13	ND	101	97
240 Aldicarb	ND	10	ND	ND	ND	100	12	ND	101	162
241 N-Methyl-N'-nitrosoguanidin	-	-	-	-	-	-	-	-	-	-
243 Methylthiouracil	-	-	-	-	-	-	-	-	-	-
245 Naphthalene	ND	1.6	ND	ND	ND	100	76	ND	101	101
246 1,4-Naphthoquinone	ND	10	ND	ND	ND	100	37	ND	101	47
247 1-Naphthylamine	ND	10	ND	ND	ND	100	50	ND	101	34
248 2-Naphthylamine	ND	10	ND	ND	ND	100	36	ND	101	17
255 p-Nitroaniline	ND	10	ND	ND	ND	300	115	ND	303	178
256 Nitrobenzene	ND	1.9	ND	ND	ND	100	88	ND	101	113
261 4-Nitrophenol	ND	2.4	ND	ND	ND	100	54	ND	101	41
262 4-Nitroquinoline-1-oxide	-	-	-	-	-	-	-	-	-	-
263A N-Nitrosodiphenylamine	ND	1.9	ND	ND	ND	100	176	ND	101	155
264 N-Nitrosodi-n-butylamine	ND	10	ND	ND	ND	100	87	ND	101	103
265 N-Nitrosodiethanolamine	IND		IND	IND	IND	300	0	IND	303	0
266 N-Nitrosodiethylamine	ND	10	ND	ND	ND	300	76	ND	303	99
267 N-Nitrosodimethylamine	ND	10	ND	ND	ND	0	-	ND	0	-
269 N-Nitrosomethylethylamine	IND		IND	IND	IND	300	0	IND	303	0
271 N-Nitroso-N-methylurethane	ND	10	ND	ND	ND	300	43	ND	303	84
272 N-Nitrosomethylvinylamine	-	-	-	-	-	-	-	-	-	-
273 N-Nitrosomorpholine	ND	10	ND	ND	ND	300	55	ND	303	55
274 N-Nitrosonornicotine	-	-	-	-	-	-	-	-	-	-

*See Grand Table for complete compound name and specifications.
**EPA/ETC estublished method detection limit.
"-"specifies no standard or reference spectra available.
"IND" =indeterminate. Standard and/or spikes could not be detected at current method levels.
Result with neither "MDL" nor "Conc.added" specifies no standard available, compound was qualitatively searched for.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

SEP 5, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Acid/B/N/Pest Compounds - GC/MS Analysis Data (QR28)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

	Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
275	N-Nitrosopiperidine	ND	10	ND	ND	ND	100	93	ND	101	143
277	N-Nitrososarcosine	-	-	-	-	-	-	-	-	-	-
278	5-Nitro-o-toluidine	ND	10	ND	ND	ND	300	102	ND	303	163
279	Octamethylpyrophosphoramide	-	-	-	-	-	-	-	-	-	-
281	Endothal	-	-	-	-	-	-	-	-	-	-
284	Pentachlorobenzene	ND	10	ND	ND	ND	100	93	ND	101	116
286	Pentachloronitrobenzene	ND	10	ND	ND	ND	300	82	ND	303	110
287	Pentachlorophenol	ND	3.6	ND	ND	ND	100	149	ND	101	164
288	Phenacetin	ND	10	ND	ND	ND	100	113	ND	101	164
289	Phenol	ND	1.5	ND	ND	ND	100	84	ND	101	81
298	Phthalic anhydride	-	-	-	-	-	-	-	-	-	-
299	2-Picoline	ND	10	ND	ND	ND	100	64	ND	101	101
303	Pronamide	ND	10	ND	ND	ND	100	99	ND	101	130
304	1,3-Propane sultone	-	-	-	-	-	-	-	-	-	-
306	Propylthiouracil	-	-	-	-	-	-	-	-	-	-
310	Resorcinol	IND		IND	IND	IND	300	0	IND	303	0
311	Saccharin and salts	-	-	-	-	-	-	-	-	-	-
312	Safrole	ND	10	ND	ND	ND	300	144	ND	303	114
323	1,2,4,5-Tetrachlorobenzene	ND	10	ND	ND	ND	100	203	ND	101	92
330	2,3,4,6-Tetrachlorophenol	ND	10	ND	ND	ND	300	65	ND	303	138
331	Tetraethyldithiopyrophospha	-	-	-	-	-	-	-	-	-	-
346	Thiuram	-	-	-	-	-	-	-	-	-	-
349	O-Toluidine	IND		ND	ND	ND	300	64	ND	303	69
353	1,2,4-Trichlorobenzene	ND	1.9	ND	ND	ND	100	71	ND	101	90
359	2,4,5-Trichlorophenol	ND	10	ND	ND	ND	100	91	ND	101	120
360	2,4,6-Trichlorophenol	ND	2.7	ND	ND	ND	100	71	ND	101	96
365	0,0,0-Triethyl phosphorothi	-	-	-	-	-	-	-	-	-	-
366	sym-Trinitrobenzene	-	-	-	-	-	-	-	-	-	-
367	Tris(1-Azridinyl)phosphine	-	-	-	-	-	-	-	-	-	-
368	Tris(2,3-dibromopropyl)phos	IND		IND	IND	IND	300	0	IND	303	0
370	Uracil mustard	-	-	-	-	-	-	-	-	-	-

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-"specifies no standard or reference spectra available.
"IND" =indeterminate. Standard and/or spikes could not be detected at current method levels.
Result with neither "MDL" nor "Conc.added" specifies no standard available, compound was qualitatively searched for.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

AUG 27, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

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

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l	First ug/l A	Second ug/l A	Blank Data ug/l	Concen. Added ug/l	% Recov A	Unspiked Sample ug/l A	Concen. Added ug/l	% Recov A
	Formaldehyde	ND	1000	-	-	ND	-	-	-	-	-

A Standard QA procedures not applicable to these compounds.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

AUG 18, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Pest & Herb Compounds - GC Analysis Data (QR24)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
11 Aldrin	ND	.10	ND	ND	ND	0.50	70	ND	0.56	98
63 Chlordane	ND	1.0	ND	ND	ND	5.0	136	ND	5.6	130
73 Chlorobenzilate	-	-	-	-	-	-	-	-	-	-
100 4,4'-DDD	ND	.10	ND	ND	ND	0.50	0	ND	0.56	127
101 4,4'-DDE	ND	.10	ND	ND	ND	0.50	98	ND	0.56	100
102 4,4'-DDT	ND	.10	ND	ND	ND	0.50	0	ND	0.56	108
130 2,4-D	ND	50	ND	ND	ND	100	106	ND	100	103
137 Dieldrin	ND	.10	ND	ND	ND	0.50	118	ND	0.56	107
141 Carbophenothion	-	-	-	-	-	-	-	-	-	-
144 Thionazin	ND	1.0	ND	ND	ND	5.0	84	ND	5.6	93
149 Dimethoate	ND	5.2	ND	ND	ND	5.0	74	ND	5.6	70
172 Disulfoton	ND	5.2	ND	ND	ND	25	86	ND	28	90
174A Endosulfan I	ND	.10	ND	ND	ND	0.50	0	ND	0.56	98
174B Endosulfan II	ND	.10	ND	ND	ND	0.50	0	ND	0.56	127
175 Endrin	ND	.10	ND	ND	ND	0.50	0	ND	0.56	131
192 Heptachlor	ND	.10	ND	ND	ND	0.50	134	ND	0.56	101
193 Heptachlor epoxide	ND	.10	ND	ND	ND	0.50	116	ND	0.56	109
196A Alpha-BHC	ND	.10	ND	ND	0.080	0.50	86	ND	0.56	96
196B Beta-BHC	ND	.10	ND	ND	ND	0.50	0	ND	0.56	104
196C Gamma-BHC	ND	.10	ND	ND	0.18	0.50	88	ND	0.56	102
196D Delta-BHC	ND	.10	ND	ND	ND	0.50	164	ND	0.56	98
214 Kepone	ND	1.0	ND	ND	ND	5.0	70	ND	5.6	70
230 Methoxychlor	ND	10	ND	ND	ND	50	112	ND	56	106
242 Methyl parathion	ND	1.0	ND	ND	ND	5.0	84	ND	5.6	88
283 Parathion	ND	1.0	ND	ND	ND	5.0	96	ND	5.6	96
295 Phorate	-	-	-	-	-	-	-	-	-	-
296 Famphur	ND	10	ND	ND	ND	50	22	ND	56	27
333 Tetraethylpyrophosphate	ND	5.2	ND	ND	ND	25	48	ND	28	47
351 Toxaphene	ND	2.5	ND	ND	ND	20	115	ND	22	82
361 2,4,5-T	ND	5.0	ND	ND	ND	10	158	ND	10	104
362 2,4,5-TP (Silvex)	ND	5.0	ND	ND	ND	10	143	ND	10	103

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-" specifies no standard available.
"IND" = indeterminate. Standard and/or spikes could not be detected at current method levels.

ETC *ENVIRONMENTAL TESTING and CERTIFICATION*

SEP 30, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - DAI HPLC Compounds - Analysis Data (QR25)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

	Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. mg/l	MDL** mg/l	First mg/l	Second mg/l	Blank Data mg/l	Concen. Added mg/l	% Recov	Unspiked Sample mg/l	Concen. Added mg/l	% Recov
6	1-Acetyl-2-thiourea	ND	.5	ND	ND	ND	5.0	90	ND	5.0	0
8	Acrylamide	ND	.5	ND	ND	ND	5.0	96	ND	5.0	95
17	Amitrole	-	-	-	-	-	-	-	-	-	-
82	1-(o-Chlorophenyl)thiourea	ND	.5	ND	ND	ND	5.0	83	ND	5.0	87
145	Diethylstilbesterol	-	-	-	-	-	-	-	-	-	-
176	Ethyl carbamate	-	-	-	-	-	-	-	-	-	-
179	Ethyleneimine	-	-	-	-	-	-	-	-	-	-
181	Ethylenethiourea	ND	.5	ND	ND	ND	5.0	98	ND	5.0	96
221	Maleic hydrazide	ND	.5	ND	ND	ND	5.0	120	ND	5.0	130
222	Malononitrile	-	-	-	-	-	-	-	-	-	-
229	Methomyl	ND	.5	ND	ND	ND	5.0	39	ND	5.0	37
231	2-Methylaziridine	-	-	-	-	-	-	-	-	-	-
253	Nicotinic acid	ND	.5	ND	ND	ND	5.0	84	ND	5.0	130
260	Nitroglycerin	-	-	-	-	-	-	-	-	-	-
268	N-Nitroso-N-ethylurea	ND	.5	ND	ND	ND	5.0	-[a]	ND	5.0	-[a]
270	N-Nitroso-N-methylurea	ND	.5	ND	ND	ND	5.0	-[a]	ND	5.0	-[a]
292	N-Phenylthiourea	ND	.5	ND	ND	ND	5.0	70	ND	5.0	74
309	Reserpine	-	-	-	-	-	-	-	-	-	-
345	Thiourea	ND	.5	ND	ND	ND	5.0	84	ND	5.0	130

[a] Recovery Data not available due to compound degradation. Results are qualitative.

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-" specifies no standard available.
"IND" = indeterminate. Standard and/or spikes could not be detected at current method levels.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

SEP 30, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Extractable HPLC Compounds - Analysis Data (QR31)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
3 Warfarin	ND	25	ND	ND	ND	500	120	ND	500	64
15 Mitomycin C	-	-	-	-	-	-	-	-	-	-
26 Azaserine	-	-	-	-	-	-	-	-	-	-
35 Benzidine	ND	25	BMDL	ND	ND	500	140	ND	500	115
62 Chlorambucil	-	-	-	-	-	-	-	-	-	-
86 Citrus red No.2	-	-	-	-	-	-	-	-	-	-
99 Daunomycin	-	-	-	-	-	-	-	-	-	-
119 3,3'-Dichlorobenzidine	ND	25	BMDL	BMDL	BMDL	500	120	BMDL	500	94
147 3,4-Dihydroxy-alph-(methyla	-	-	-	-	-	-	-	-	-	-
150 3,3'-Dimethoxybenzidine	ND	25	BMDL	ND	ND	500	100	BMDL	500	104
153 3,3'-Dimethylbenzidine	ND	25	ND	ND	BMDL	500	83	ND	500	90
249 1-Naphthyl-2-thiourea	ND	25	ND	ND	ND	500	48	ND	500	44
290A m-phenylenediamine	ND	25	ND	ND	ND	500	65	ND	500	82
290B o-phenylenediamine	ND	25	ND	ND	ND	500	46	ND	500	64
290C p-phenylenediamine	BMDL	25	BMDL	ND	ND	500	49	ND	500	64
320 Streptozotocin	-	-	-	-	-	-	-	-	-	-
343 Thioacetamide	-	-	-	-	-	-	-	-	-	-
344 Thiosemicarbazide	-	-	-	-	-	-	-	-	-	-
348A Toluene-2,4-Diamine	ND	25	ND	ND	ND	500	110	ND	500	46
369 Trypan blue	-	-	-	-	-	-	-	-	-	-

*See Grand Table for complete compound name and specifications.
**EPA/ETC established method detection limit.
"-"specifies no standard available.
"IND" =indeterminate. Standard and/or spikes could not be detected at current method levels.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

AUG 17, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Aroclors -GC Analysis Data (QR30)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL** ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
300A Aroclor 1242	ND	1	ND	ND	ND	0	-	ND	0	-
300B Aroclor 1254	ND	1	ND	ND	ND	0	-	ND	0	-
300C Aroclor 1260	ND	1	ND	ND	ND	2	122	31	2	0[a]
300D Aroclor 1248	ND	1	ND	ND	ND	0	-	ND	0	-
300E Aroclor 1232	ND	1	ND	ND	ND	0	-	ND	0	-
300F Aroclor 1221	ND	1	ND	ND	ND	0	-	ND	0	-
300G Aroclor 1016	ND	1	ND	ND	ND	0	-	ND	0	-

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

*See Grund Table for complete compound name and specifications.
**MDL calculated for each sample matrix.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

SEP 1, 1985

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

RCRA Appendix 8 - Metals and Cyanides - Analysis Data (QR29)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
J3284	CBS RECORDS	CBSCARGWM	WB9	850723	1030	

Compound *	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/l	MDL ug/l	First	Second	Blank Data	Concen. Added	% Recov	Unspiked Sample	Concen. Added	% Recov
13A Aluminum	2400	100								
19A Antimony	ND	200								
21A Arsenic	ND	10								
27A Barium	49	3								
42A Beryllium	ND	3								
56A Cadmium	ND	10								
57A Calcium	19400	200								
84A Chromium	ND	30								
88A Copper	BMDL	10								
92A Cyanide, Total	<25	25								
210 Iron	2200	200								
216A Lead	ND	200								
225A Mercury	BMDL	1								
250A Nickel	BMDL	30								
280A Osmium	BMDL	600								
301A Potassium	1200	40								
314A Selenium	ND	5								
317A Silver	ND	10								
319A Sodium	2400	80								
321A Strontium	ND	100								
335A Thallium	ND	5								
372A Vanadium	20	20								
374A Zinc	50	10								

*See Grand Table for complete compound name and specifications.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

September 1, 1985

TABLE 2: METHOD PERFORMANCE DATA

Surrogate Recovery Water- GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

J3284

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	100	86	119
Bromofluorobenzene	.250	99	85	121
1,2-Dichloroethane-D4	.250	98	77	120
ACID FRACTION				
Phenol-D5	100	29	15	103
2-Fluorophenol	100	62	23	121
2,4,6-Tribromophenol	100	100	10	130
BASE/NEUTRAL FRACTION				
Nitrobenzene-D5	50	78	41	120
2-Fluorobiphenyl	50	112	44	119
Terphenyl-D14	50	100	33	128

* IFB EPA Control Limits.

ETC Sample #: J3284

METHOD 8610

The presence of total aromatics by ultraviolet absorp[illegible] is determined by Method 8610. The sample is prepared by Method 3560. Method 3560 may be summarized as follows: the sample is drawn into a 50 ml syringe and a precleaned reverse phase cartridge is fitted on the syringe. The sample is forced through the cartridge. This cartridge repeated with an additional 50 ml of sample. The cartridge is washed with distilled w[illegible] and then eluted first with hexane and then methanol. The sample extracts are screened from 220 nm to 310 nm using an ultraviolet/visible spectrophotometer. Samples that have an absorbance greater than 0.005 absorbance units (99% transmittance) in this region fail the screen

Extract	Pass	Fail
Hexane		X
Methanol		X

METHOD 8630

The presence of certain Appendix VIII compounds is determined by Method 8630. Aqueous samples are prepared using Method 3560 using diethyl ether as the eluting solvent. Method 3560 may be summarized as follows: The sample is drawn into a 50 ml syringe and a precleaned reverse phase cartridge is fitted on the syringe. The sample is forced through the cartridge. This cartridge is repeated with an additional 50 ml of sample. The cartridge is washed with distilled water and then eluted with diethyl ether. Ether extracts are dried over sodium sulfate and then reacted with lithium aluminum hydride. Compounds are then hydrolized to their parent alcohols or aminos by adding a small amount of water and then the dinitrophenyl esters are formed by adding dinitrobenzoyl chloride. Excess benzoyl chloride is removed by adding water and washing with base. The ether extract is removed and screened from 220 nm to 700 nm using an ultraviolet/visible spectrophotometer. Samples that have an absorbance greater than 0.005 absorbance units (99% transmittance) in this region fail the screen.

Extract	Pass	Fail
Diethyl Ether		X

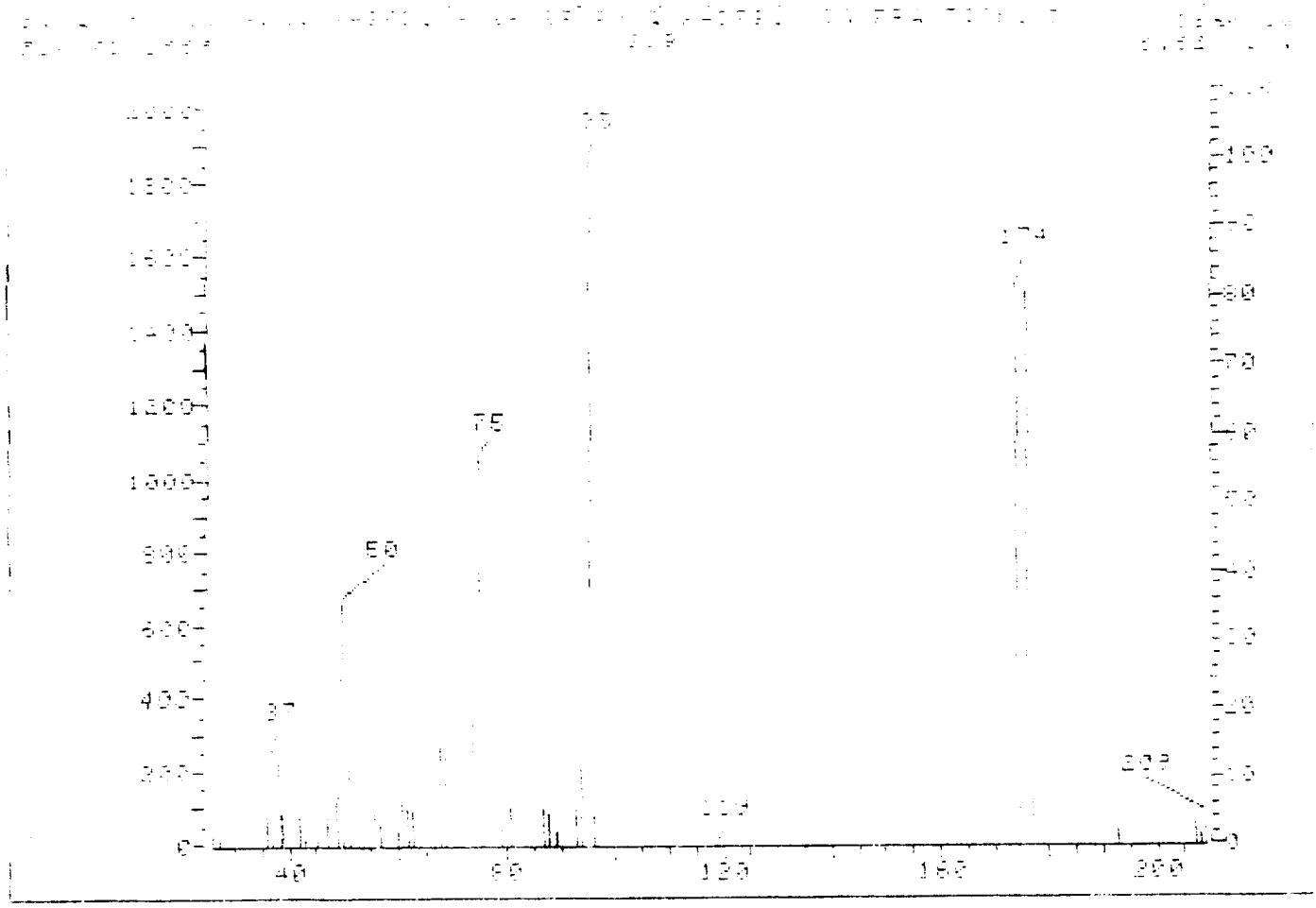


TABLE 2: METHOD PERFORMANCE DATA (Q/21)

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	35.53	35.53	OK
75	30-60% of mass 95	56.34	56.34	OK
95	Base peak, 100% relative abundance	100.00	100.00	OK
96	5-9% of mass 95	5.62	5.62	OK
173	Less then 1% of mass 95	0.00	0.00	OK
174	Greater then 50% of mass 95	82.77	82.77	OK
175	5-9% of mass 174	6.90	8.34	OK
176	95-101% of mass 174	80.25	96.96	OK
177	5-9% of mass 176	6.74	8.40	OK

Injection Date 09/26/85 Analyst Richard Losch

Injection Time 20:47 Processor: Jeff Handle (AF)

Run No 001399 QC Batch: QV3774

Spectrum No 86 Samples: J7173, J3284, J4933 ~~J7173~~ J4934

HAK 9/29/85 HAK 9/2/85

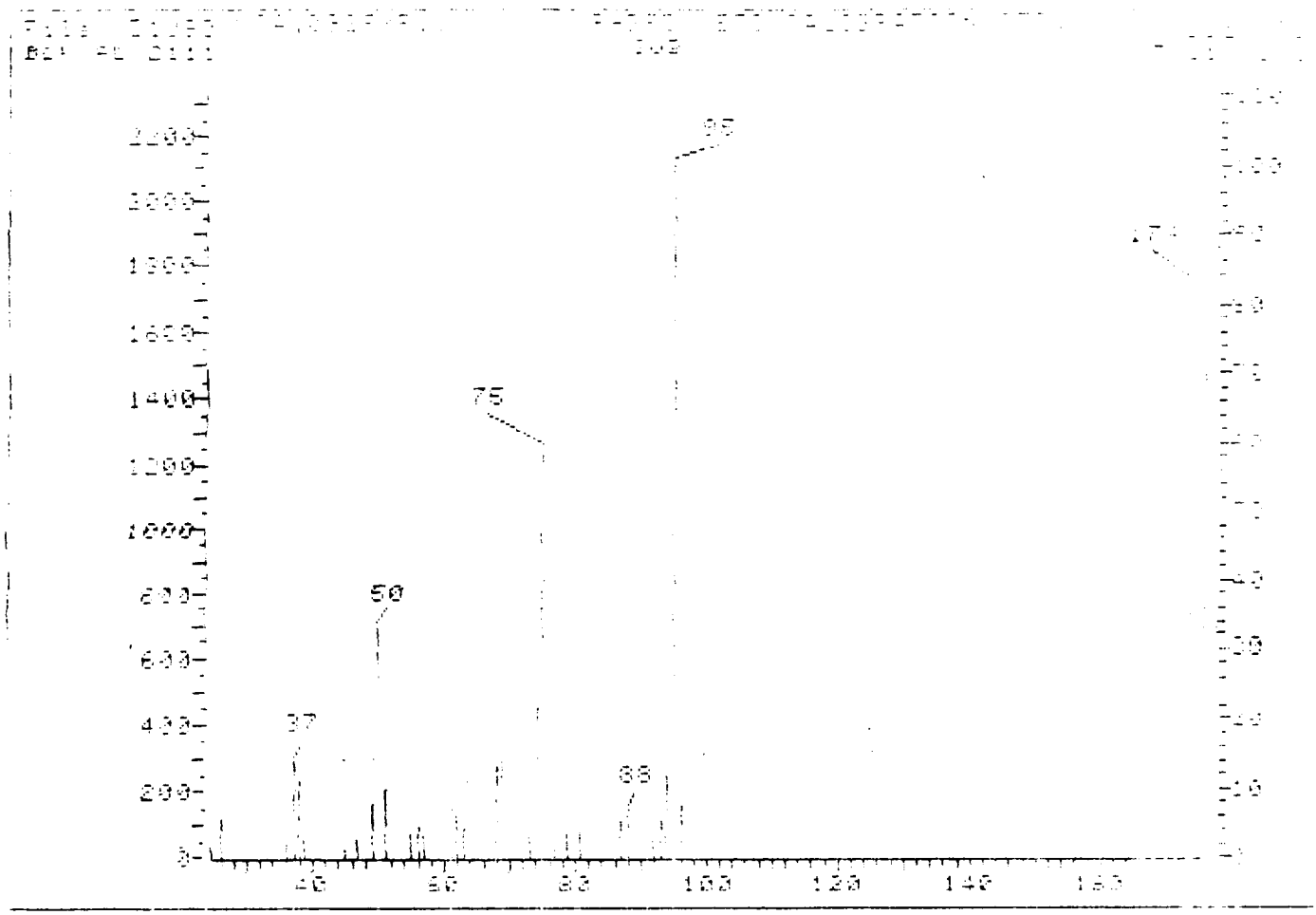


TABLE 2. METHOD PERFORMANCE DATA (QV21)

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

M/Z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	[illegible]
50	15-40% of mass 95	32.83	32.83	[illegible]
75	30-60% of mass 95	58.93	58.93	
95	Base peak, 100% relative abundance	100.00	100.00	[illegible]
96	5-9% of mass 95	7.25	7.25	[illegible]
173	Less then 1% of mass 95	0.00	0.00	[illegible]
174	Greater then 50% of mass 95	82.19	82.19	[illegible]
175	5-9% of mass 174	6.87	8.76	[illegible]
176	95-101% of mass 174	81.53	99.19	[illegible]
177	5-9% of mass 176	6.68	8.19	[illegible]

Injection Date: 09/25/85 Analyst: Rich Loschz
Injection Time: 21:03 Processor: Jeff Hawelz
Run No: [illegible] QC Batch: QV3744
Spectrum No: [illegible] Samples: J7173, J3284, J4933
~~J7175~~ J4934 HSK 9/30/85
HSK 9/29/85

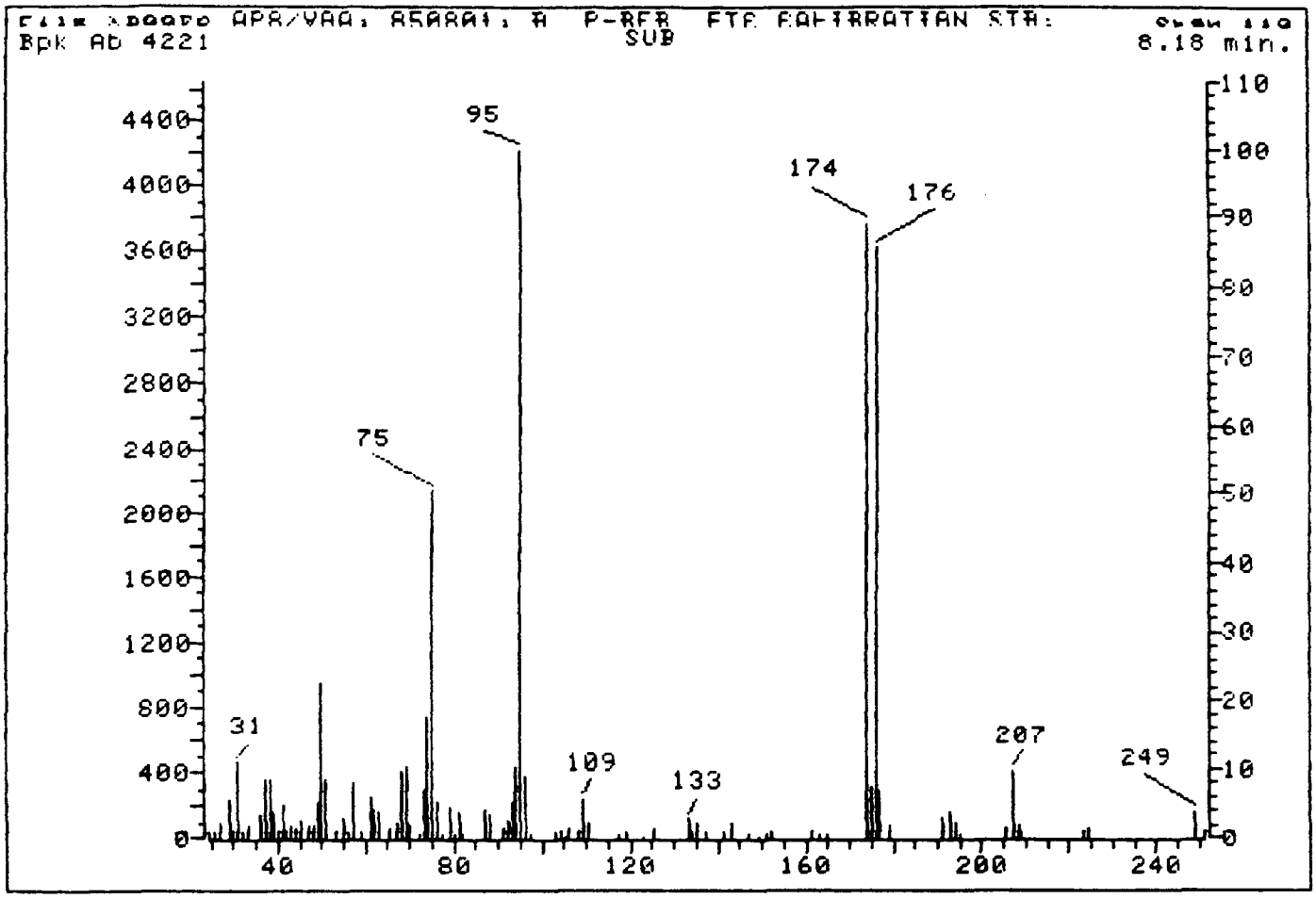


TABLE 2: METHOD PERFORMANCE DATA (QR21)

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	22.44	22.44	Ok
75	30-60% of mass 95	50.49	50.49	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.67	8.67	Ok
173	Less then 1% of mass 95	0.00	0.00	Ok
174	Greater then 50% of mass 95	89.17	89.17	Ok
175	5-9% of mass 174	7.20	8.08	Ok
176	95-101% of mass 174	85.69	96.09	Ok
177	5-9% of mass 176	6.68	7.80	Ok

Injection Date: 08/01/85 Analyst: D. Schaar
Injection Time: 23:55 Processor: B. [illegible]
Run No: >D0076 QC Batch: QN 3555
Spectrun No: 119 Samples: J3098, J3302, J3284, J2883, J2258, J2257, J3097, J3100, J4060

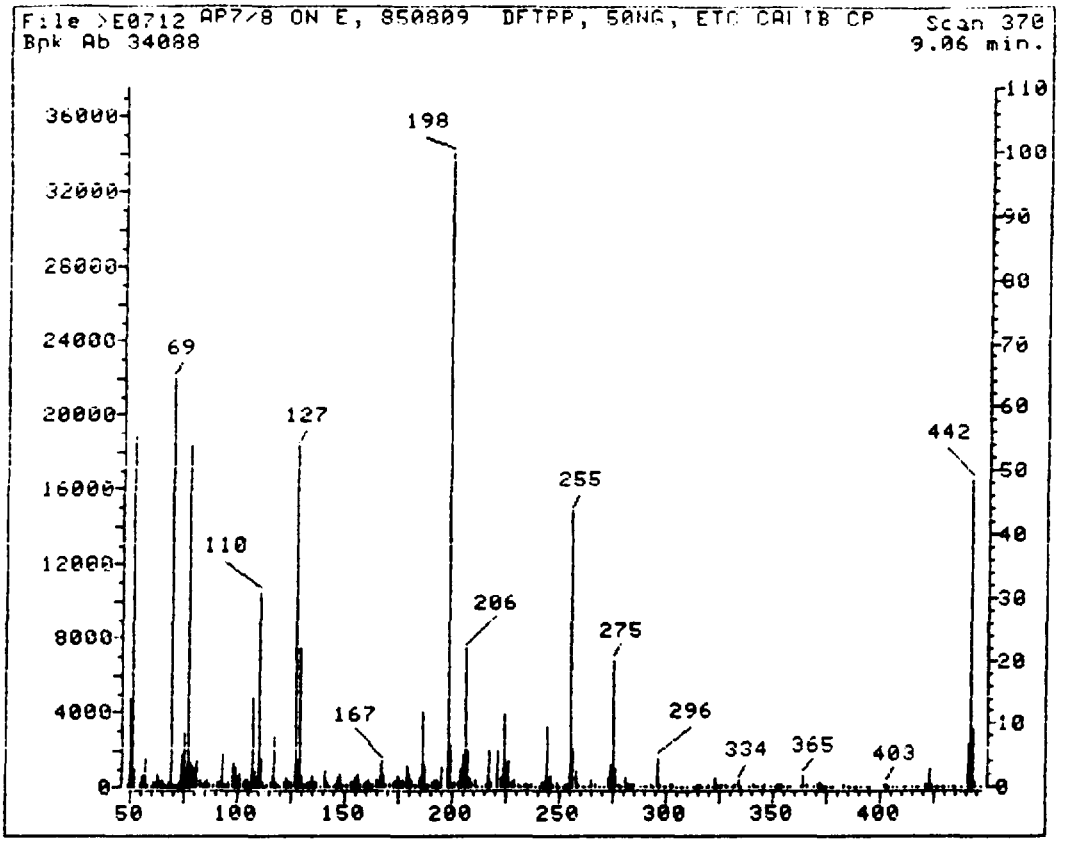


TABLE 2: METHOD PERFORMANCE DATA (QR23)

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

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	55.03	55.03	Ok
68	Less then 2% of mass 69	.92	1.42	Ok
69	(reference only)	64.49	64.49	Ok
70	Less then 2% of mass 69	.43	.66	Ok
127	40-60% of mass 198	53.63	53.63	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	6.41	6.41	Ok
275	10-30% of mass 198	20.02	20.02	Ok
365	Greater then 1% of mass 198	1.87	1.87	Ok
441	Less then mass 443	6.64	73.09	Ok
442	Greater then 40% of mass 198	48.44	48.44	Ok
443	17-23% of mass 442	9.09	18.77	Ok

Injection Date: 08/10/85 Analyst: [signature]
Injection Time: 13:24 Processor: [signature]
Run No: >E0712 QC Batch: QC3418
Spectrun No: 370 Samples: J2257, J2258, J3285 to J3290
J2956, J3702, J3284

[signature] 8/30/85

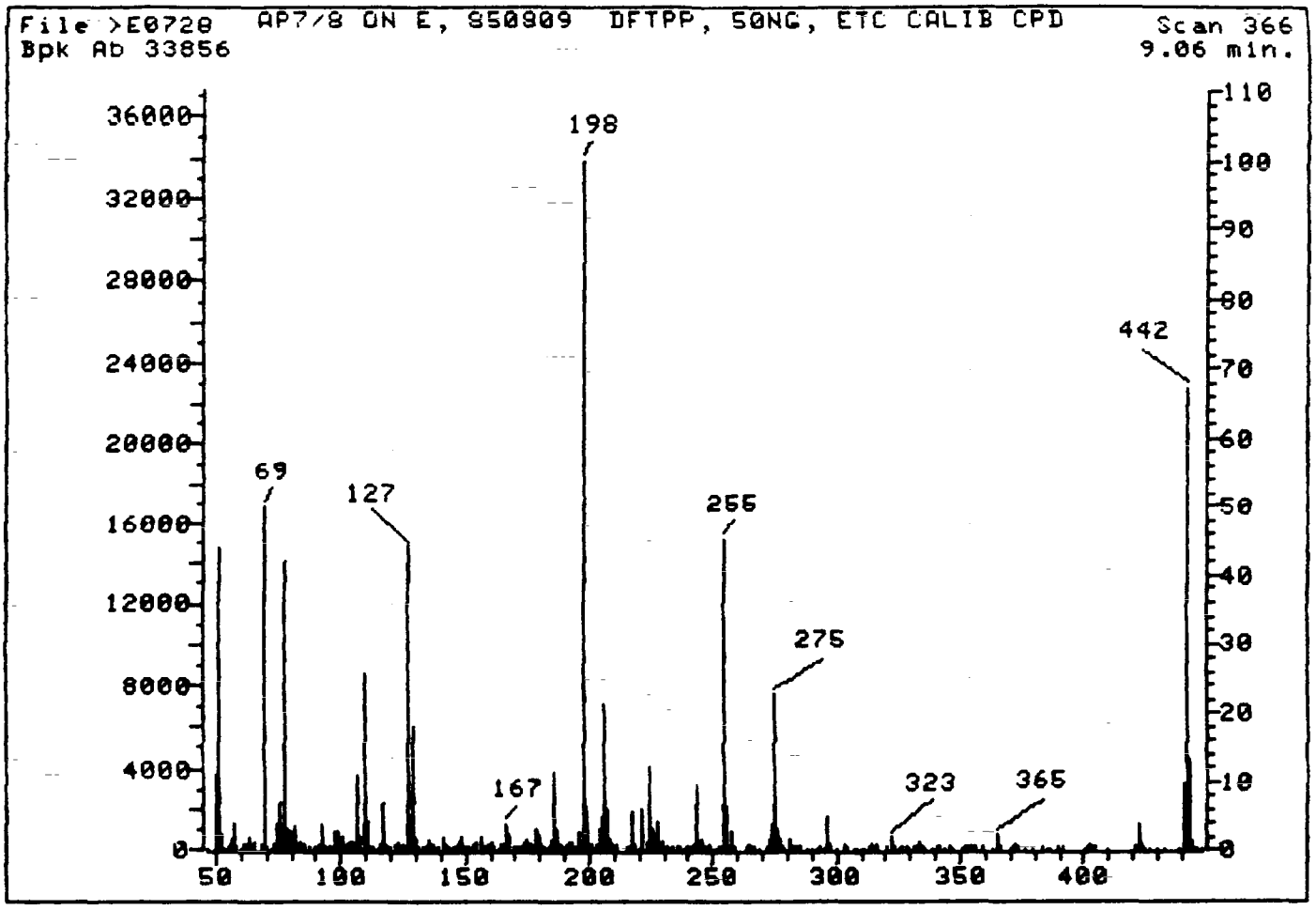


TABLE 2: METHOD PERFORMANCE DATA (QR23)

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	43.72	43.72	Ok
68	Less then 2% of mass 69	.83	1.67	Ok
69	(reference only)	49.83	49.83	Ok
70	Less then 2% of mass 69	.33	.66	Ok
127	40-60% of mass 198	43.93	43.93	Ok
197	Less then 1% of mass 198	.67	.67	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.33	6.33	Ok
275	10-30% of mass 198	22.41	22.41	Ok
365	Greater then 1% of mass 198	2.10	2.10	Ok
441	Less then mass 443	9.39	71.16	Ok
442	Greater then 40% of mass 198	67.39	67.39	Ok
443	17-23% of mass 442	13.19	19.57	Ok

Injection Date: 08/11/85 Analyst: Thomas Marsow
Injection Time: 05:10 Processor: Thomas Marsow
Run No: >E0728 QC Batch: GC3418
Spectrun No: 366 Samples: J2257, 58, J3285 to 90, J2956, J3702, J3284

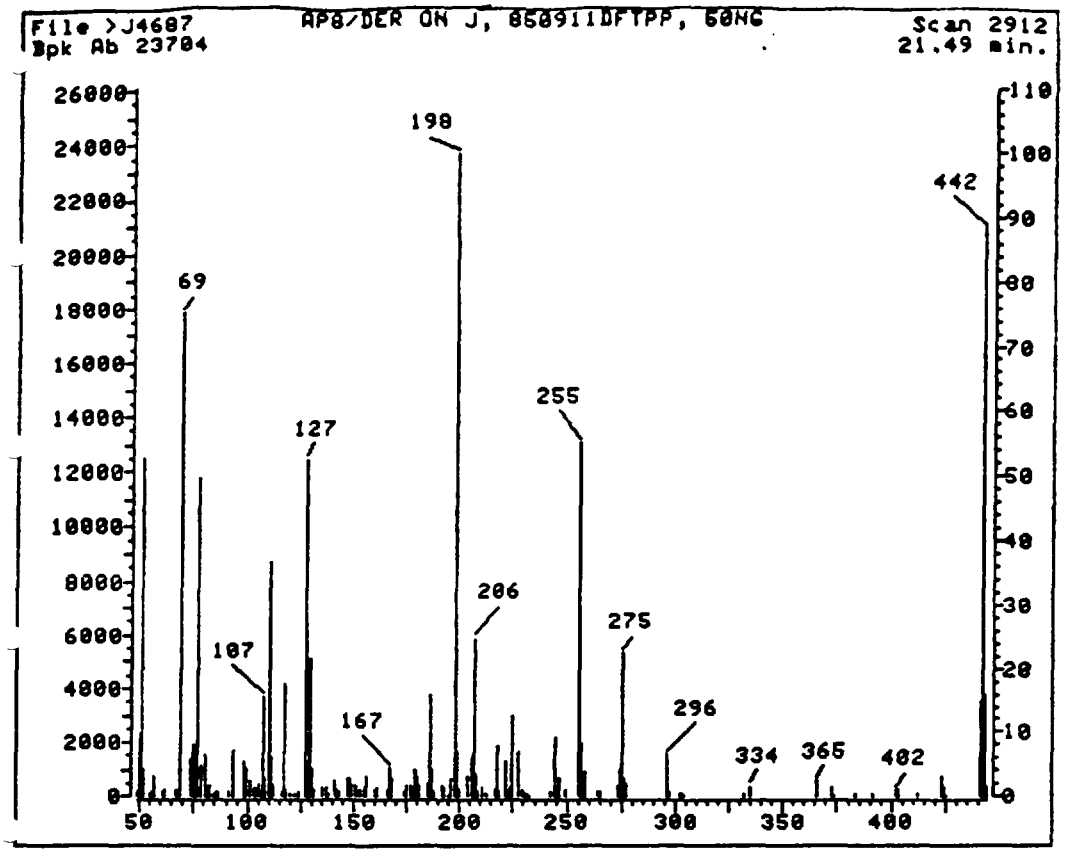


TABLE 2: METHOD PERFORMANCE DATA (QR23)

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	52.60	52.60	Ok
68	Less then 2% of mass 69	.81	1.08	Ok
69	(reference only)	75.19	75.19	Ok
70	Less then 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	52.48	52.48	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	6.79	6.79	Ok
275	10-30% of mass 198	22.46	22.46	Ok
365	Greater then 1% of mass 198	2.27	2.27	Ok
441	Less then mass 443	14.80	93.62	Ok
442	Greater then 40% of mass 198	88.19	88.19	Ok
443	17-23% of mass 442	15.81	17.93	Ok

Injection Date: 08/11/85 Analyst: [illegible]
Injection Time: 12:53 Processor: [illegible]
Run No: >J4687 QC Batch: RC3498 Dec.
Spectrun No: 2912 Samples: J2257, J2258, J3285-J3290
J3702, J3284, J2956

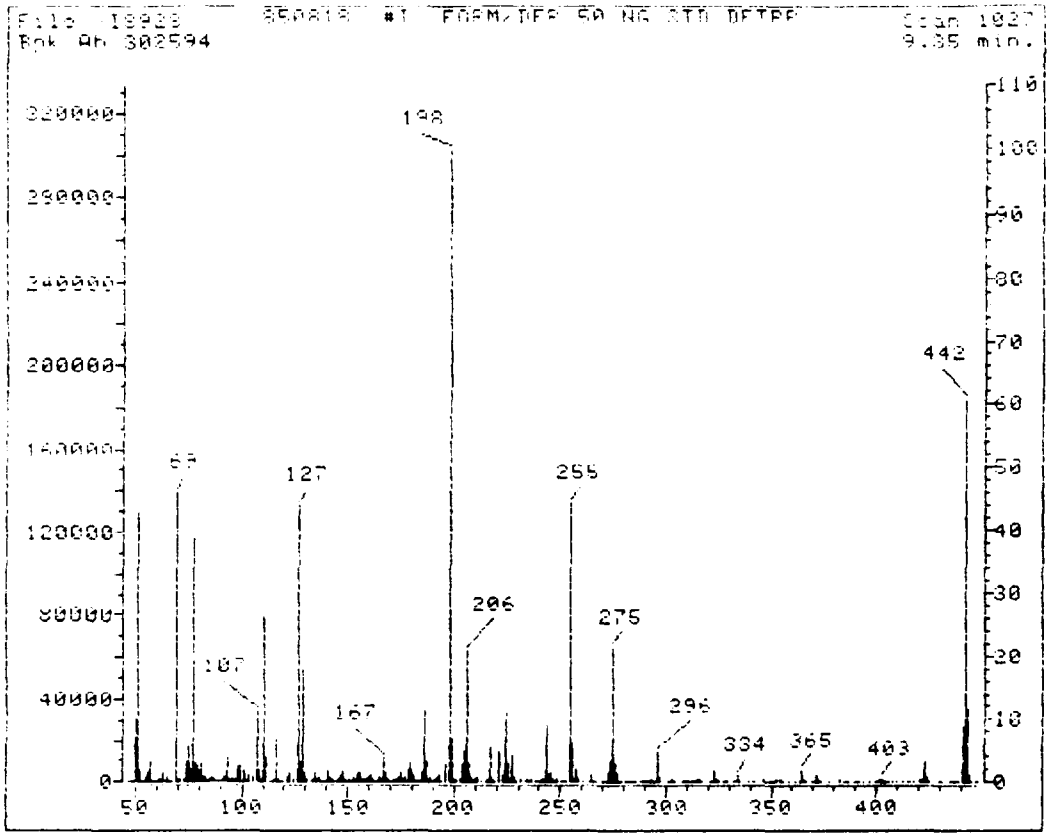


TABLE 2: METHOD PERFORMANCE DATA (QP23)

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

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
51	30-60% of mass 198	42.53	42.53	Ok
68	Less then 2% of mass 69	0.00	0.00	Ok
69	(reference only)	45.94	45.94	Ok
70	Less then 2% of mass 69	.31	.67	Ok
127	40-60% of mass 198	43.89	43.89	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	6.78	6.78	Ok
275	10-30% of mass 198	21.27	21.27	Ok
365	Greater then 1% of mass 198	1.92	1.92	Ok
441	Less then mass 443	8.65	75.35	Ok
442	Greater then 40% of mass 198	60.55	60.55	Ok
443	17-23% of mass 442	11.48	18.95	Ok

Injection Date: 08/18/85 Analyst: [illegible]
Injection Time: 14:20 Processor: [illegible]
Run No: >18928 QC Batch: QB3429
Spectrun No: 1027 Samples: J0545, J3284, J4933-J4935

Methodology For Analysis of Appendix VIII Parameters

The methods employed in the analysis of specific compounds in Appendix VIII are based on the second edition (July 1982) of EPA Manual SW-846 "Test Methods for Evaluating Solid Waste". Since the manual is deficient in details on how the complete analysis of Appendix VIII compounds can be performed, we devised an analytical scheme that divides the compounds into the twelve categories as stated in the introduction. Within the nine categories of compounds that can be specifically analysed, not all the reference standards are readily available. We footnoted those unavailable compounds in our result tables. In the GC/MS analyses we were able to search for the specific compounds that did not have corresponding reference standards by using standard spectra from the literature. In other cases, GC and HPLC, where retention time characteristics are the only means to identify the compounds, we were unable to draw any conclusions on those compounds that corresponding reference standards are not available at the time of analysis.

In each category rigid compliance with the instrument parameters and performance criteria of established EPA methods, such as those in methods 624 and 625, was achieved before any sample analysis was initiated. (Similar criteria do not exist in SW846.) For GC/MS analysis where standards were available, identification was performed using relative retention times, the relative abundance of three characteristic ions and the abundance ratios. The entire mass spectrum was reviewed to confirm each identification. Quantitative analysis was performed using an internal standard with a single characteristic ion. When compounds without corresponding reference standard were identified, they were quantified assuming the same response factor as the internal standard.

Volatile Compounds by Purge and Trap GC/MS

For the analysis of purge and trap Volatile compounds, Methods 8240 and 5030 were used. The analysis can be summarized as follows: Helium is bubbled through a 5 ml water sample contained in a specially designed purging chamber at ambient temperature. The purgeable volatile organic compounds are transferred from the aqueous phase to the vapor phase. The vapor is swept through a sorbent column where the organic components are trapped. After the purge cycle is complete, the sorbent column is heated and backflushed with helium to desorb the organic purgeables onto a gas chromatographic column. The gas chromatograph is temperature programmed to separate the purgeable mixture. The separated purgeable components are then identified and quantitated using a computerized mass spectrometer.

Water Soluble Compounds by Direct Aqueous Injection GC/MS

For the analysis of water soluble compounds, 5 ul of aqueous sample was injected directly into the GC/MS system. The chromatographic column employed in the procedure is the same column used for purge and trap analysis. MS scanning was begun prior to sample injection to capture mass intensity data for early eluting compounds. The GC oven temperature program used was that specified in procedure 8240.

Extractable Acid, Base/Neutral and Pesticide Compounds by GC/MS

For the analysis of the Acid, Base/Neutral and Pesticide compounds in water, Methods 3510 and 8270 were used. The analysis can be summarized as follows: a measured volume of sample, approximately 1 liter, is extracted with an aliquot of methylene chloride without pH adjustment and then the sample is adjusted to a pH greater than 11 and extracted with another aliquot of methylene chloride. These two aliquots were combined. The pH of the sample is then adjusted to a value less than 2 and extracted with another aliquot of methlyene chloride. A separatory funnel or continuous extractor is used to perform the extractions. The two extracts are dried and concentrated to a 1 ml final volume. The extracts are then combined just prior to injection into a GC/MS instrument.

GC Analysis of Herbicides and Pesticides

The methods employed in the analysis of your sample for herbicides and pesticides are established EPA methods taken from the "Manual of Analytical Methods for the Analysis of Pesticides in Humans and Environmental Samples," June, 1980 and methods 8080, 8140 and 8150.

The herbicide method can be summarized as follows: A measured volume of sample, approximately 500-1000 ml, to which sodium sulfate has been added, is acidified and extracted with methylene chloride. The methylene chloride extract is evaporated to dryness, and the residue is derivatized with diazomethane and injected into a gas chromatograph equipped with a ^{63}Ni electron capture detector.

The pesticide method can be summarized as follows: A measured volume of sample, approximately 500ml, is extracted with methylene chloride. The extract is dried and concentrated to a final volume of 1ml and injected into a gas chromatograph equipped with a ^{63}Ni electron capture detector and Flame Photometric detector in phosphorus mode.

Analysis of Metals

The determination of metals in aqueous samples is performed according to the methods published by EPA in "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020, March, 1979, and the inorganic methods in SW846. Arsenic, selenium and thallium are determined by furnace AA; silver, aluminum, barium, beryllium, boron, cadmium, calcium, chromium, copper, cobalt, iron, magnesium, manganese, molybdenum, nickel, lead, sodium, antimony, tin, titanium, vanadium, and zinc are determined by ICP emission. The determination of mercury is performed by cold vapor AA.

Analysis by HPLC

The analysis of thermally unstable and polar compounds are based on the HPLC methods 8320 and 8330. The compounds analyzed fall into two catagories: direct aqueous injection and Base/Neutral extractables. Twenty ul of the sample or extract is injected into an HPLC equipped with a reverse phase column. Gradient elution and UV detector at 210 and 250 nm are used.

Conventional

Total cyanide analysis is performed using Method 9010.

Summary of Quality Assurance/Quality Control Procedures (QA/QC)

ETC bases its quality assurance protocols on the following government guidelines:

. "Handbook for Analytical Quality Control in Water and Wastewater Laboratories", EPA-600/4-79-019, March 1979;

. National Enforcement Investigation Center Policies, and Procedures manual; EPA-330/9/79/001-R, October 1979;

. the recommended guidelines for EPA Methods 624 and 625. (Federal Register, December 3, 1979; updated on Otober 26,1984);

. "Manual of Analytical Methods for the Analysis of Pesticides in Humans and Environmental Samples," EPA 600/8-80-038, June 1980; and

. "Determination of 2,3,7,8-TCDD in Soil and Sediment" EPA, Region VII, Kansas City, September 1983.

. Organic Analysis: Multi-media, Multi Concentration-IFB WA84-A267

. Dioxin Analysis:Soil/Sediment Matrix; Multi-Concentration; Selected Ion Monitoring with Jar Extration Procedure-IFB WA84-A002

However, we have modified our protocols to provide a higher level of QA/QC than the guidelines require. For example, we analyze a higher than required number of quality control samples and we pay especially careful attention to the certification of the "reference standard" compounds we use in analysis. Below are listed the key QA/QC elements for the methods we used.

Analysis of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry

- Each batch of 13 samples consists of 9 customer samples (at a maximun). one blank sample, one spiked blank, one spiked sample and one replicate sample. This amounts to a 30% quality control factor.

- Three surrogate compounds are added to each sample in the batch of 13.

- A blind quality control sample is introduced to the laboratory for analysis on a weekly basis.

- Each GC/MS is checked and retuned, if necessary, at the beginning of each day to ensure that its performance on bromofluorobenzene (BFB) meets the EPA criteria.

- A calibration curve for quantitation is prepared using a mixture of Volatile Organic Priority Pollutant "standards" at a minimum of 3 different concentrations and using a mixture of 3 internal standards at a constant concentration.

- The calibration curve is verified with a mixture of priority pollutant standards every day. If the response factors factors vary greater than 25%, the instrument must be recalibrated.

Analysis of Organic Compounds Extracted in Acid or Base/Neutral Solutions by Gas Chromatography/Mass Spectrometry

- Each batch of 20 samples consists of 16 customer samples (at a maximum), one blank sample, one spiked blank (for water matrices), one sample spiked with the priority

pollutant standard mixture and a duplicate customer sample. This amounts to a 20% quality control factor.

- Three surrogate compounds are added to each sample in the batch for Base/Neutral analysis.
- Three surrogate compounds are added to each sample in the batch for Acid analysis.
- A blind quality control sample is introduced to the laboratory for analysis on a weekly basis.
- Each GC/MS is checked and retuned, if necessary, at the beginning of each day to ensure that its performance on decafluorotriphenylphosphine (DFTPP) meets the EPA criteria.
- A calibration curve for quantitation is prepared using a mixture of standards composed of either the Organic Acid or Base/Neutral Extractable Compounds at a minimum of 3 concentrations and using five internal standards for quantitation.

Analysis of Metals

All Samples

- New standards are prepared for each batch of samples.
- Normal calibration is performed using a blank sample and four standards that have been through the sample preparation procedure. A regression analysis is used to construct the calibration curve.
- All EP Toxicity samples and all samples determined by furnace atomic absorption are calculated by the "method of additions".
- For each sample analysis that requires the use of the "method of additions" technique, a three point calibration is performed using U.S. EPA "Methods for Chemical Analysis of Water and Wastes, 1979". Results are obtained using linear regression analysis. Any regression with a coefficient of correlation below 0.990 is considered suspect, necessitating review of calibration data or sample re-analysis.
- In constructing the normal calibration curves the lowest concentration levels we use are values greater than or equal to 5 times the Instrumental Detection Limit (IDL).
- All calibration standards are analyzed in duplicate, at a minimum.
- Independent reference standards are used to check the accuracy of calibration standards.
- A check standard is analyzed every ten samples to validate the normal calibration curve.
- One customer sample out of every ten is analyzed in triplicate.

Homogeneous Samples (except for Mercury analysis)

Samples are analyzed in batches of 30 or less. For batches in which the sample matrices are homogeneous, the QC program is a minimum of 25% and consists of analyzing:

- 3 sets of triplicate analyses;
- 2 Replicate spikes;
- 1 independent reference standard;
- 4 Calibration standards (processed using the sample preparation method);
- 4 Calibration standards (without sample preparation); and

- 1 Reagent Blank.

Heterogeneous Samples (except for Mercury analysis)

Samples are analyzed in batches of 30 or less. For batches in which the sample matrices are heterogeneous, the QC program is a minimum of 35% and consists of analyzing:

- 3 sets of triplicate analyses;
- 2 Replicate spikes;
- 1 Replicate independent reference standards;
- 4 Calibration standards (processed using the sample preparation method);
- 1 Procedural Blank;
- 4 Calibration standards (without sample preparation); and
- 1 Reagent Blank.

Analysis of Mercury

To analyze samples for mercury we group them by matrix in batches of 30 or less. Our QC program is a minimum of 30% and consists of analyzing:

- each of the 30 customer samples in duplicate;
- 3 sets of triplicate anaylses;
- 2 Replicate spikes;
- 2 Replicate independent reference standards;
- 10 Calibration standards (processed using the sample preparation method); and
- 2 Procedural Blanks.

Analysis of Pesticides, Herbicides and PCB's by Gas Chromatography

Pesticide, herbicide and PCB samples are grouped in batches of 16 customer samples or less according to the type of analysis to be performed. The QC program for each of these three types of analyses is a minimum of 20% and consists of analyzing:

- 1 procedural blank sample(a reagent blank is analyzed in the case of non-water matrices);
- 1 spiked blank sample (the spiked blank is eliminated in the case of non-water matrices);
- 1 replicate sample;
- 1 replicate spiked sample; and
- 1 known refernece QC sample for at least each 100 samples analyzed.

The instrument is calibrated each run with three standards, and checked every 10 samples.

Analysis of Cyanides, Phenols, Fluoride, Chloride, Nitrate and Nitrite

- All parameters are analyzed using a Technicon Autoanalyzer II GT.

- 3 calibration standards are analyzed at the beginning and end of each batch.
- Each batch (up to 80 samples) consists of analyzing one blank, one spiked blank, one duplicate and spiked sample every 20 samples, and an EPA known reference sample.

Analysis of Total Organic Carbon (TOC)

TOC samples are analyzed on a daily basis with the number of samples analyzed per day dependent on the request for duplicate or quadruplicate analyses. The quality control program is designed to maintain the appropriate amount of QC and consists of the following elements:

- Daily instrument calibration
- One blank
- Standard recalibration every 10 samples
- Spiked samples at a low and high level
- Every sample is run in duplicate at a minimum

Analysis of Total Organic Halide (TOX)

- Blank reagent water for absolute carbon backround must contain less than 5 ug/l of halide (as chloride).
- Using a trichlorophenol standard, the mean adsorption efficiency must be within +/- 15% of the standard value.
- Calibration standards are run every 10 samples.
- Every sample is run in duplicate at a minimum.

Analysis of 2,3,7,8-TCDD (Dioxin) by GC/MS (SIM)

- Each sample is dosed with a known quantity of $^{13}C_{12}$-2,3,7,8-TCDD as internal standard and $^{37}Cl_4$-TCDD as surogate standard. The action limits for surrogate standard results is +/- 40% of the true value. Samples showing surrogate standard results outside of these limits are reextracted and reanalyzed.
- Two laboratory "method blanks" are run along with each set of 24 or fewer samples. The method blank is also dosed with the internal standard and surrrogate standard.
- At least one per set of 24 samples is run in duplicate to determine intralaboratory precision.
- Qualitative Requirements. The following are met in order to confirm the presence of native 2,3,7,8-TCDD:

  a. Isomer specificity must be demonstrated initially and verified once per 8-hour work shift. The verification consists of injecting a mixture containing TCDD isomers which elute close to 2,3,7,8-TCDD. The 2,3,7,8-TCDD must be separated from interferring isomers, with no more than 25% valley relative to the 2,3,7,8-TCDD peak.

  b. The 320/322 ratio is within the range of 0.67 to 0.87.

  c. Ions 320, 322, and 257 are all present and maximize together the signal to mean noise ratio must be 2.5 to 1 or better for all 3 ions.

  d. The retention time is equal (within 3 seconds) the retention time for the isotopically labeled 2,3,7,8-TCDD.

e. At least one of the positives can be confirmed by obtaining partial scan spectra from mass 150 to mass 350. The partial scan guidelines are as follows:

. the 320/324 ratio should be 1.58 +/- 0.16

. the 257/259 ratio should be 1.03 +/- 0.10

. the 194/196 ratio should be 1.54 +/- 0.15

- One sample is spiked with native 2,3,7,8-TCDD at a level of 1.0 PPB (for soil) for each set of 24 or fewer samples.

- In cases where no native 2,3,7,8-TCDD is detected, the actual detection limit is estimated and reported based on a signal to noise ratio of 2.5 to 1 at ions 320 and 322.

- For each sample, the internal standard is present with at least a 10 to 1 signal to noise ratio for both mass 332 and mass 334. Also, the internal standard 332/334 ratio must be within the range of 0.67 to 0.87.

Subcontractor QA/QC

Each subcontractoer is required to maintain an appropriate level of quality control. To insure this, each subcontractor is required to submit to ETC the quality control data for all analyses it performs. This data is kept on file at ETC. In general, the amount of quality control required is one duplicate sample with one spiked sample for every ten analyses.

Chain-of-Custody

The chain-of-custody procedure is part of our quality assurance protocol. We believe our chain-of-custody record fully complies with the legal requirements of federal, state and local government agencies and of the courts of law. The record covers:

- labeling of sample bottles, packing the Sample Shuttle and transferring the Shuttle under seal to the custody of a shipper;

- outgoing shipping manifests;

- the chain-of-custody form completed by the person(s) breaking the Shuttle seal, taking the sample, resealing the Shuttle and transferring custody to a shipper;

- incoming shipping manifests;

- breaking the Shuttle's reseal;

- storing each labeled sample bottle in a secured area;

- disposition of each sample to an analyst or technician; and

- the use of the sample in each bottle in a testing procedure appropriate to the intended purpose of the sample.

The records show for each link in this process:

- the person with custody; and

- the time and date each person accepted or relinquished custody.

Appendix A

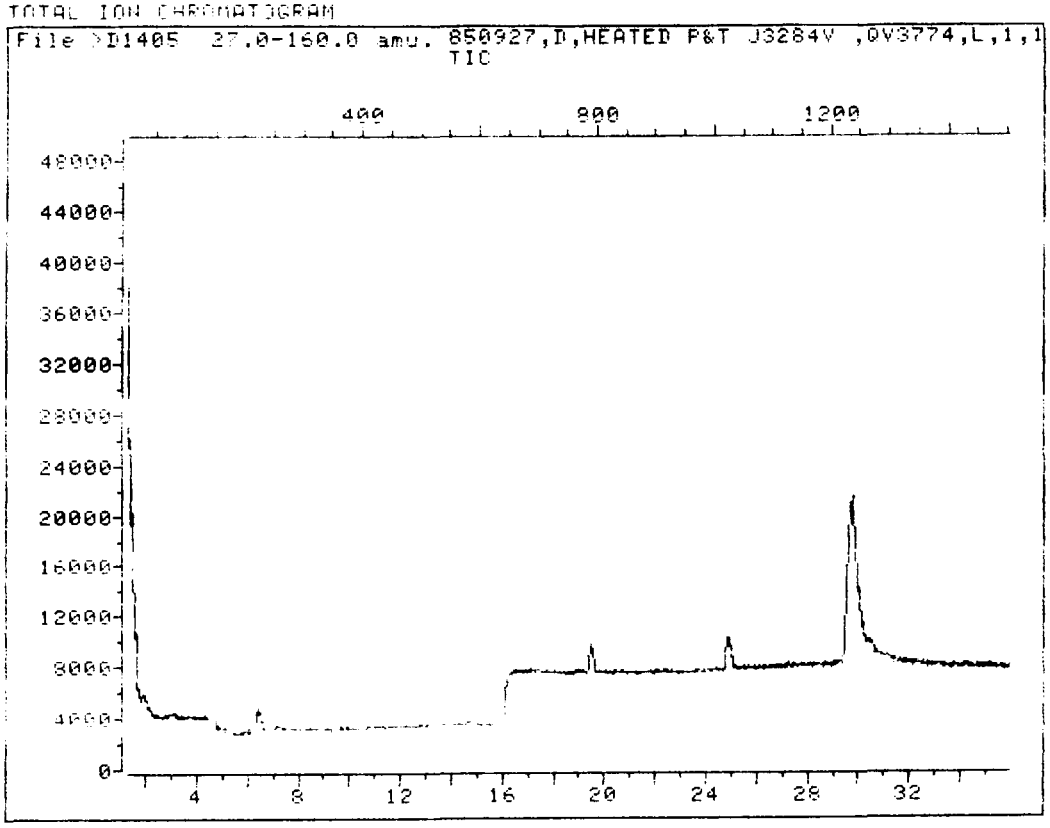
Mass Spectral Data for Quantitated Compounds

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

2) A Quant report used by the analyst to determine qualitative and quantitative results of the compounds present.

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

TOTAL ION CHROMATOGRAM



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Id File: DAP8DI::US
Title: DAI APENDIX 8 ID FILE
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Operator ID: JQ6275
Quant Time: 850928 21:31
Injected at: 850927 02:12

QUANT REPORT

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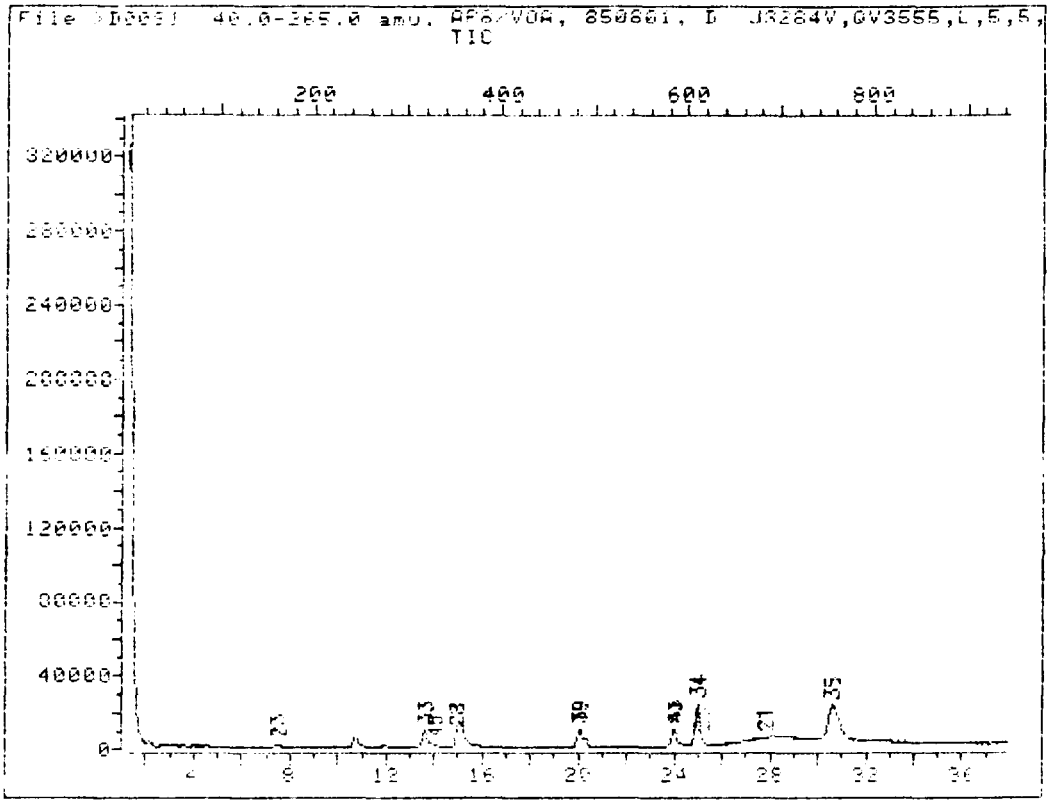
Quant Rev: 4
Quant Time: 850928 21:31
Injected at: 850927 02:12
Dilution Factor: 1.00

ID File: DAP8DI::US
Title: DAI APENDIX 8 ID FILE
Last Calibration: 850928 20:56

Compound	R.T.	Scan#	Area	Conc	Units	q

TOTAL ION CHROMATOGRAM



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Mass: JR284V,GV3555,L,5,5,

Id File: DAP8PT::US
Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, I
Last Calibration: 850801 23:52

Operator ID: DS3476
Quant Time: 850811 17:35
Injected at: 850802 03:17

QUANT REPORT

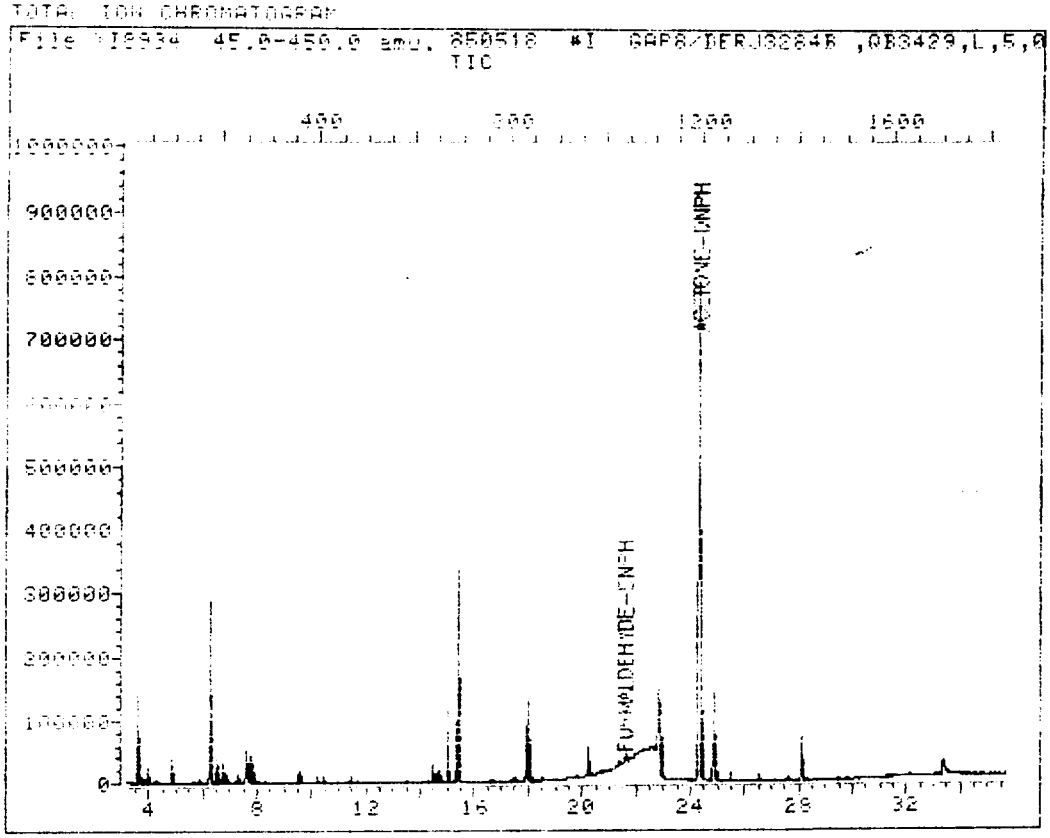
Operator ID: [illegible] Quant Rev: 4 Quant Time: 850811 12:35
Output File: ^D0081::AQ Injected at: 850802 03:17
Data File: >D0081::U3 Dilution Factor: 1.00
Name: AP8/VOA, 850801, D
Misc: J32840,QU3555,1,5,5,

ID File: DAP8PT::US
Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, I
Last Calibration: 850801 23:52

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane		20.04	485	50265	200.00	NG	96
21)	Ethylbenzene		22.78	684	5215	~~9.45~~	NG	85
23)	Methylene chloride		7.48	162	4406	34.1[illegible]	NG -21=13	95
26)	Toluene		25.17	617	1925	~~3.74~~	NG	90
28)	1,1,1-Trichloroethane		14.95	354	1495	~~6.87~~	NG	88
33)	1,2-Dichloroethane-D4	(SURR)	13.63	320	25859	245.61	NG	86
34)	Toluene-D8	(SURR)	24.98	612	113589	250.73	NG	93
35)	p-Bromofluorobenzene	(SURR)	30.58	756	53153	247.06	NG	99
39)	1,2-Dibromoethane		20.04	485	2203	~~16.42~~	NG	76
41)	1,4-Dichloro-2-butene		24.01	587	3115	~~13.98~~	NG	100
45)	Methyl ethyl ketone		14.05	331	569	18.55	NG	94
53)	*1,4-Dichlorobutane		24.01	587	62760	200.00	NG	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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Misc: J3284B ,0B3429,L,5,0.5

BTI # 6

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Last Calibration: 850410 18:39

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Quant Time: 850818 21:35
Injected at: 850818 20:57

QUANT REPORT

Operator ID: TR9113 Quant Rev: 4 Quant Time: 850818 21:35
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Mist: [illegible] BIL # 6

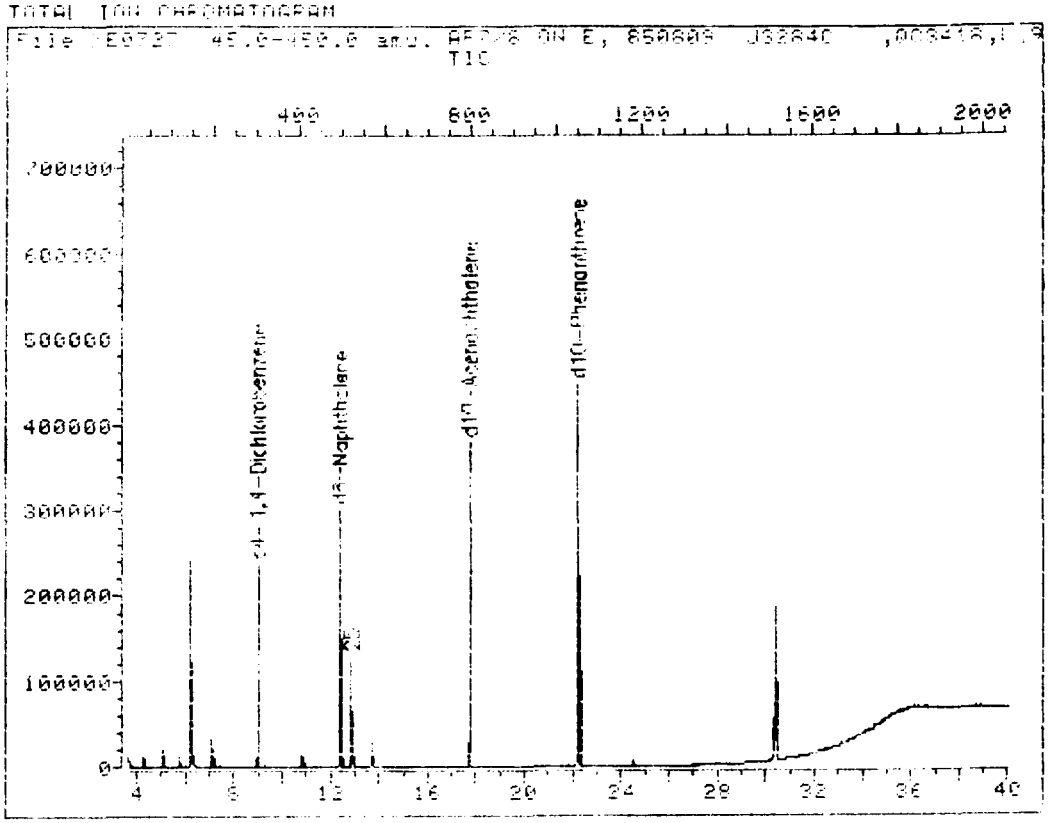
ID File: FORM::US
Title: IDFILE FOR DERIVITIZED COMPOUNDS
Last Calibration: 850610 18:39

	Compound	R.T.	Scan#	Area	Conc	Units	[illegible]
1)	*ACETONE-DNPH	24.32	1195	160170	2.50	UG/ML	[illegible]
2)	FORMALDEHYDE-DNPH	~~21.57~~	~~1040~~	~~810~~	~~.02~~	~~UG/ML~~	1[illegible]

x 8121

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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Title: APPENDIX 8 IDFILE
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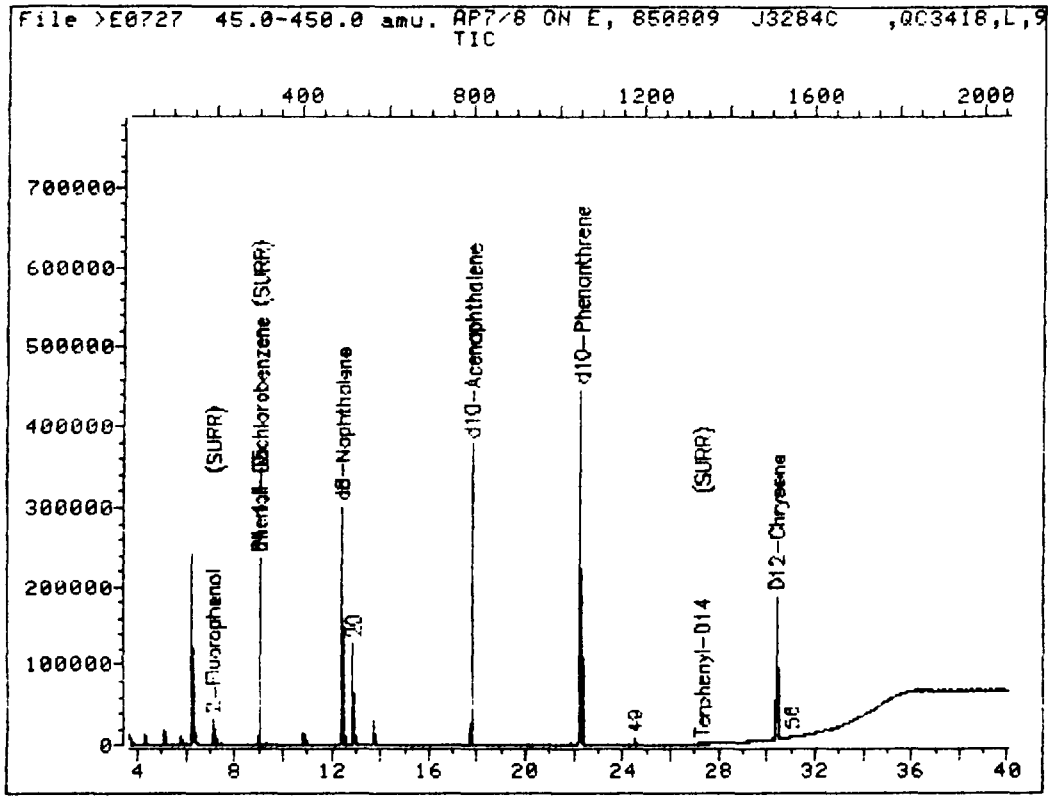
Operator ID: S13562
Quant Time: 850811 23:45
Injected at: 850811 04:22

FILE#02

TOTAL ION CHROMATOGRAM



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Misc: J3284C ,QC3418,L,990 ,1

BTL#32

Id File: EBNA8::US
Title: BN & ACID IDFILE FOR APPENDIX 8
Last Calibration: 850810 19:53

Operator ID: SJ3562
Quant Time: 850811 05:04
Injected at: 850811 04:22

QUANT REPORT

Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850811 23:45
Output File: EE0727::AQ Injected at: 850811 04:22
Data File: >E0727::U4 Dilution Factor: 1.00
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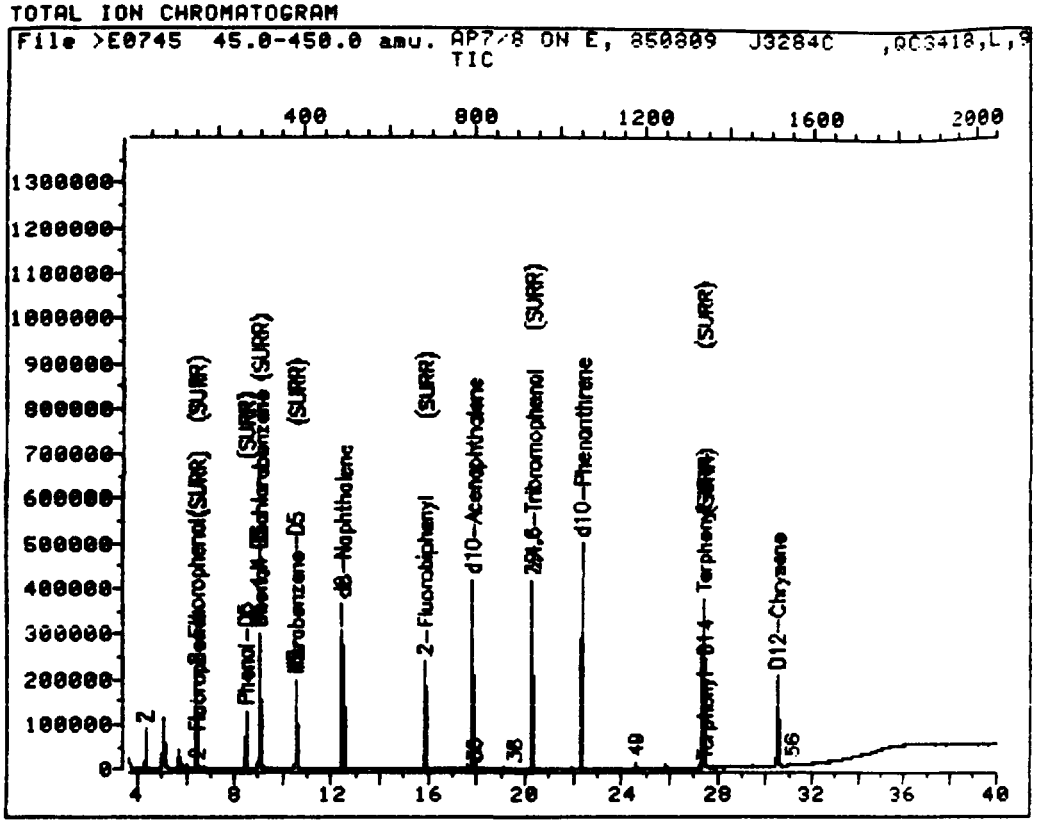
Misc: J3284C ,QC3418,L,990 ,1 BTL#32

ID File: EAP8E::US
Title: APPENDIX 8 IDFILE
Last Calibration: 850810 19:40

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	8.95	302	146857	40.00	UG/ML	87
16)	*d8-Naphthalene	12.36	495	349615	40.00	UG/ML	94
25)	p-Chloroaniline	12.86	523	9550	~~5.26~~	~~UG/ML~~ 850816	48
29)	*d10-Acenaphthalene	17.72	798	225194	40.00	UG/ML	97
46)	*d10-Phenanthrene	22.20	1052	511089	40.00	UG/ML	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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BTL#50

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Last Calibration: 850810 19:53

Operator ID: TM0576
Quant Time: 850812 01:21
Injected at: 850812 00:16

QUANT REPORT

Operator ID: TM0576 Quant Rev: 4 Quant Time: 850812 06:37
Output File: ^J4707::AQ Injected at: 850812 05:54
Data File: >J4707::U4 Dilution Factor: 1.00
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Misc: J3284C ,QC3418,L,990 ,1 BTL#21

ID File: AP8DER::US
Title: DER AP8 IDFILE
Last Calibration: 850811 16:37

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d12-Chrysene	28.13	278	83060	40.00	UG/ML	100

* Compound is ISTD

QUANT REPORT

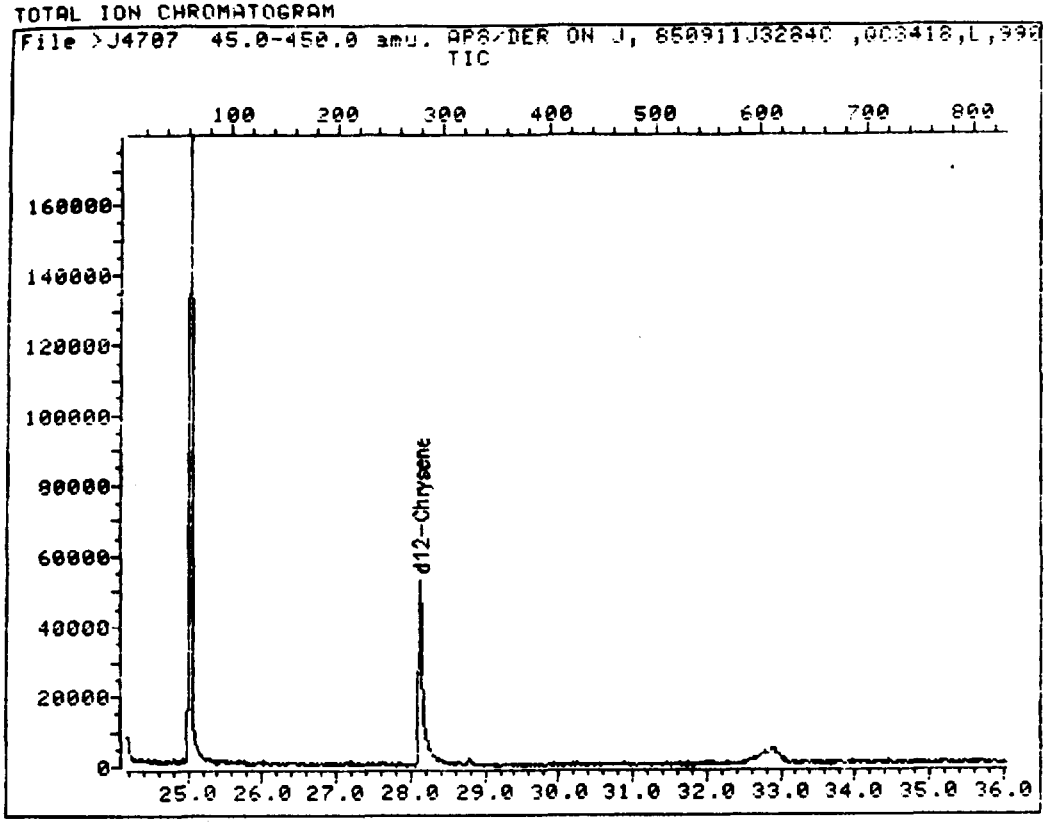
Operator ID: TM09/6 Quant Rev: 4 Quant Time: 850813 06:56
Output File: EE0745::AQ Injected at: 850812 00:16
Data File: EE0745::D4 Dilution Factor: 1.00
Name: AP7/8 UN E, 850809
Misc: J3284C ,QC3418,L,990 ,1 BTL#50

ID File: EAPRE::US
Title: APPENDIX B IDFILE
Last Calibration: 850810 19:40

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.03	298	189603	40.00	UG/ML	89
16)	*d8-Naphthalene	12.44	492	427939	40.00	UG/ML	94
29)	*d10-Acenaphthalene	17.29	795	268808	40.00	UG/ML	96
46)	*d10-Phenanthrene	22.28	1149	614350	40.00	UG/ML	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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Misc: J3284C ,QC3418,L,990 ,1

Id File: AP8DER::US
Title: DER AP8 IDFILE
Last Calibration: 850811 16:37

Operator ID: TMU576
Quant Time: 850812 06:37
Injected at: 850812 05:54

811 #21

QUANT REPORT

Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850811 05:04
Output File: ^E0727::AQ Injected at: 850811 04:22
Data File: >E0727::U4 Dilution Factor: 1.00
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Misc: J3284C ,QC3418,L,990 ,1 BTL#32

ID File: EBNA8::US
Title: BN & ACID IDFILE FOR APPENDIX 8
Last Calibration: 850810 19:53

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene		8.95	302	146857	40.00	UG/ML	87
10)	2-Fluorophenol	(SURR)	7.08	196	12084	6.06	UG/ML	100
12)	Phenol-D5	(SURR)	8.95	302	660	.22	UG/ML	76
13)	*d8-Naphthalene		12.36	495	349615	40.00	UG/ML	94
20)	Naphthalene		12.86	523	5157	~~.66 UG/ML~~	850823	91
27)	*d10-Acenaphthalene		17.72	798	225194	40.00	UG/ML	96
43)	*d10-Phenanthrene		22.20	1052	511089	40.00	UG/ML	98
49)	Di-n-butyl phthalate		24.48	1181	9436	~~.76 UG/ML~~	850823	98
51)	*D12-Chrysene		30.37	1514	202101	40.00	UG/ML	98
56)	bis(2-Ethylhexyl)phthalate		31.01	1550	1632	~~.34 UG/ML~~	850823	98
64)	Terphenyl-D14	(SURR)	27.27	1339	1287	.19	UG/ML	100

* Compound is ISTD

QUANT REPORT

Operator ID: TM0576 Quant Rev: 4 Quant Time: 850812 01:21
Output File: ^E0745::AQ Injected at: 850812 00:16
Data File: >E0745::U4 Dilution Factor: 1.00
Name: AP7/8 ON E, 850809
Misc: J3284C ,QC3418,L,990 ,1 BTL#50

ID File: EBNA8::US
Title: BN & ACID IDFILE FOR APPENDIX 8
Last Calibration: 850810 19:53

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene		9.01	298	189601	40.00	UG/ML	89
2)	N-Nitrosodimethylamine		4.28	37	823	~~.53~~	~~UG/ML~~	100
7)	Nitrobenzene-D5	(SURR)	10.51	383	137351	39.67	UG/ML	96
10)	2-Fluorophenol	(SURR)	6.39	150	144467	56.08	UG/ML	100
10)	2-Fluorophenol	(SURR)	6.45	153	5367	~~2.08~~	~~UG/ML~~	100
12)	Phenol-D5	(SURR)	8.43	265	108976	28.50	UG/ML	98
12)	Phenol-D5	(SURR)	9.01	298	936	~~.24~~	~~UG/ML~~	74
13)	*d8-Naphthalene		12.44	492	427939	40.00	UG/ML	94
14)	2-Fluorobiphenyl	(SURR)	15.83	684	199514	37.72	UG/ML	98
15)	N-Nitrosodi-n-propylamine		10.51	383	20045	~~8.67~~	~~UG/ML~~	61
27)	*d10-Acenaphthalene		17.79	795	268808	40.00	UG/ML	94
36)	Acenaphthene		17.88	800	781	~~.10~~	~~UG/ML~~	97
38)	Diethyl phthalate		19.53	893	2838	~~.38~~	~~UG/ML~~	95
39)	Fluorene		20.25	934	7932	~~.87~~	~~UG/ML~~	82
40)	2,4,6-Tribromophenol	(SURR)	20.25	934	149307	99.69	UG/ML	96
43)	*d10-Phenanthrene		22.28	1049	614350	40.00	UG/ML	96
49)	Di-n-butyl phthalate		24.56	1178	19632	~~1.32~~	~~UG/ML~~	97
51)	*D12-Chrysene		30.45	1511	218907	40.00	UG/ML	98
56)	bis(2-Ethylhexyl)phthalate		31.09	1547	2872	~~.55~~	~~UG/ML~~	99
64)	Terphenyl-D14	(SURR)	27.37	1337	362271	50.24	UG/ML	100
64)	Terphenyl-D14	(SURR)	27.43	1340	6246	~~.87~~	~~UG/ML~~	100

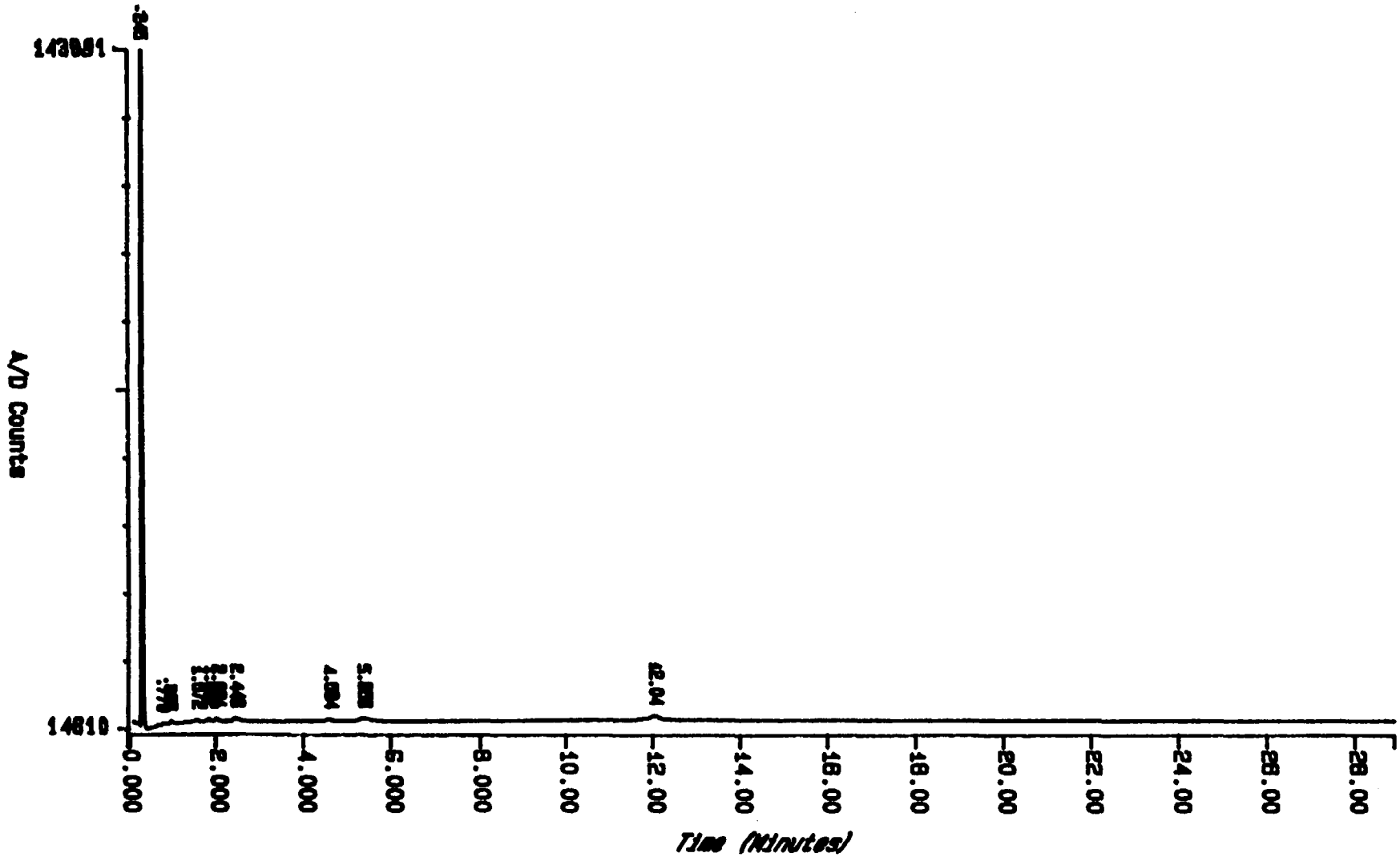
* Compound is ISTD

Appendix A1

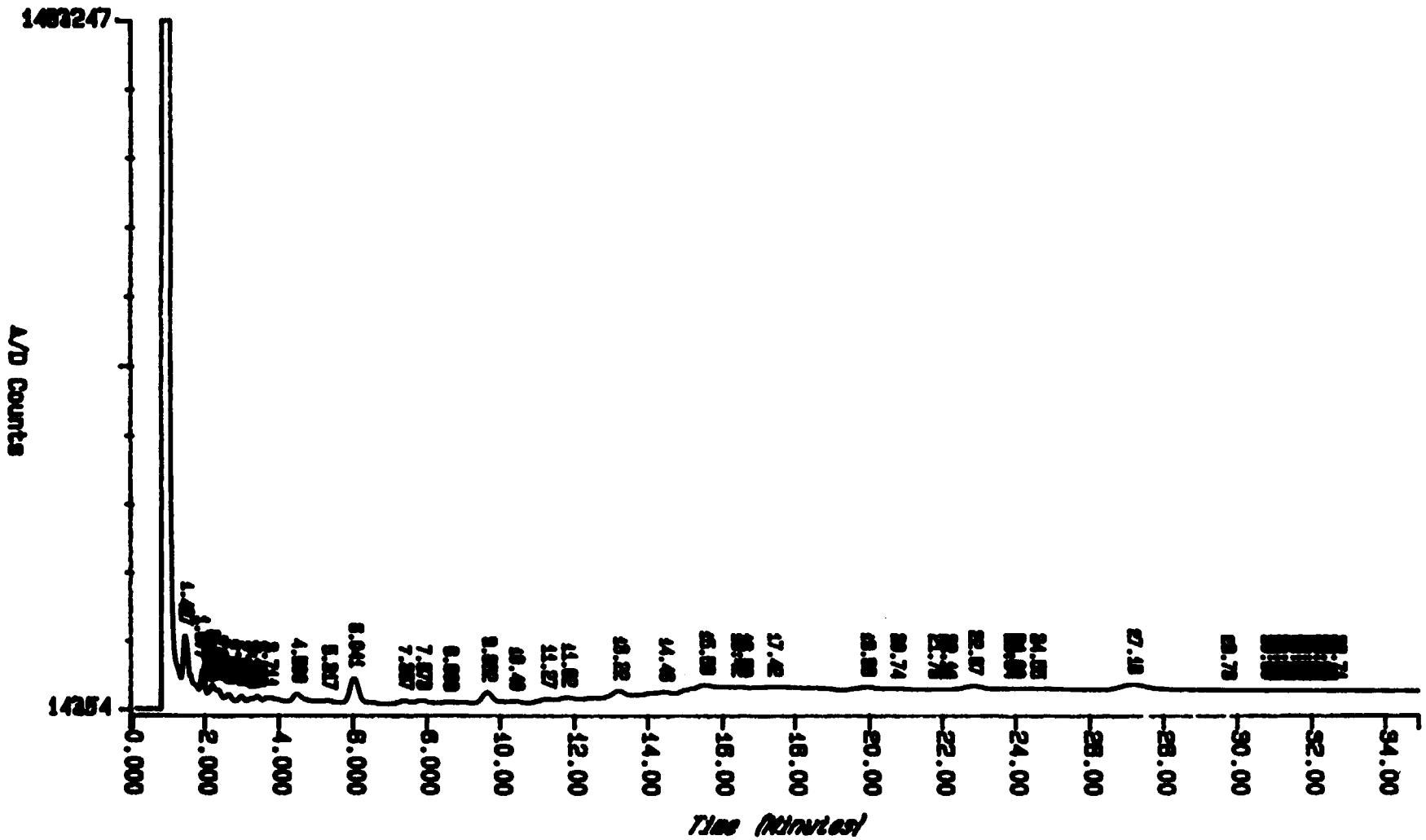
Gas Chromatographic Spectral Data for Quantitated Compounds

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

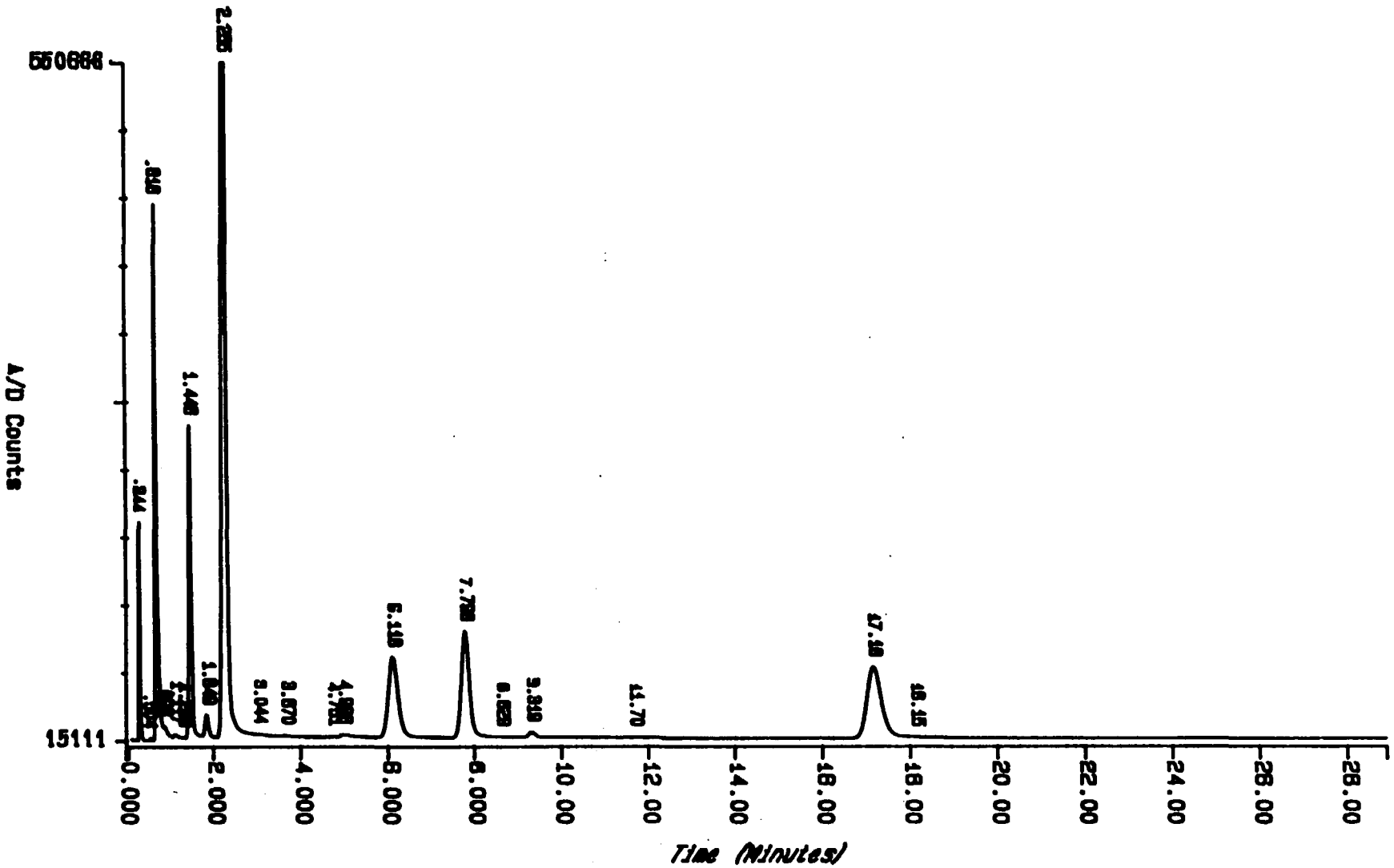
2) A reconstructed gas chromatogram for the appropriate standard compounds analyzed with the same GC under the same operating conditions.



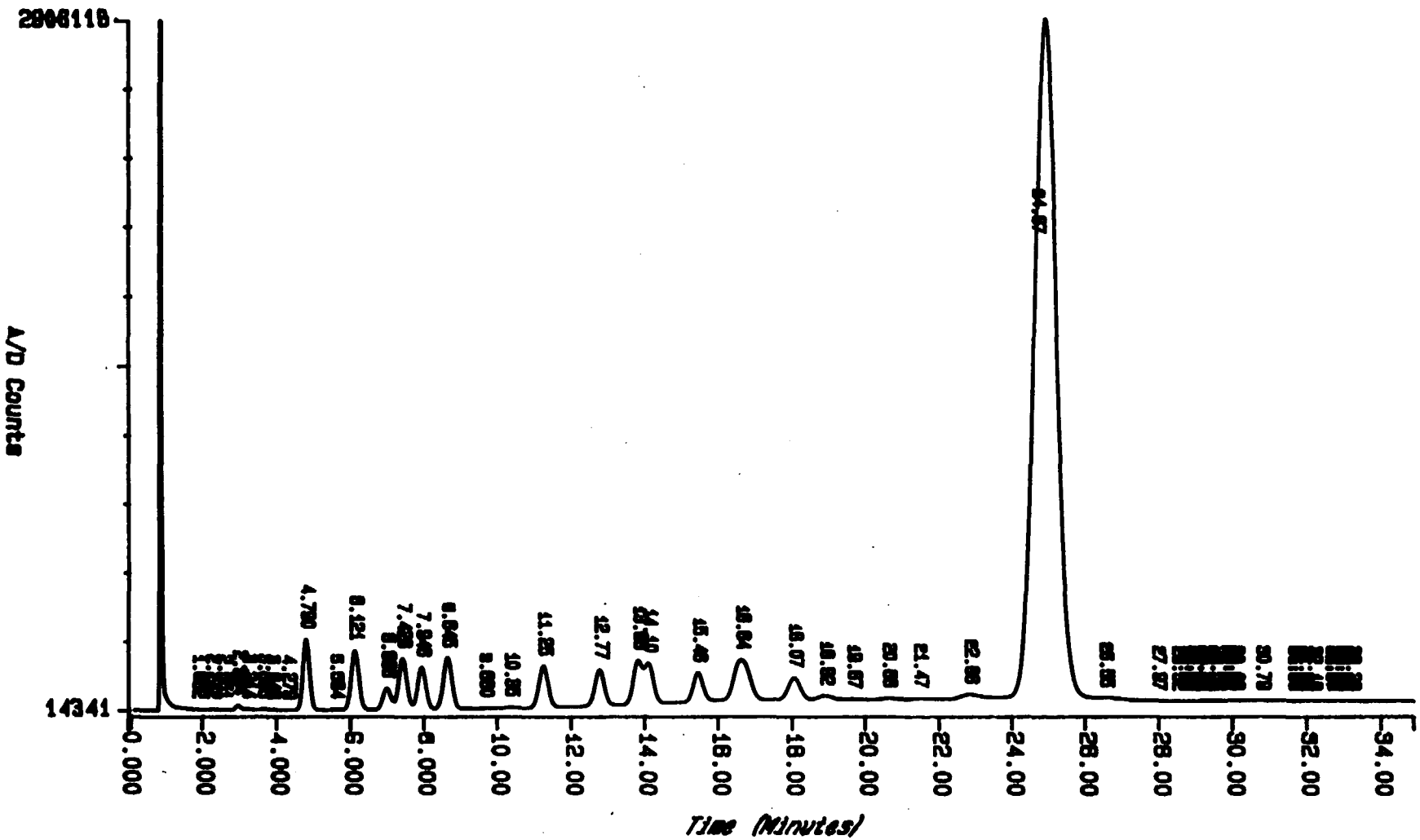
Sample: J3284 Injected at 23:40:08 ON AUG 5, 1985
Raw File: J3284T Proc File: J3284S Method: AP8FPD
Operator: AM Case No: QC3413FPD
Instrument ID: #5 ul Injected: 4.5
Column ID: FPD



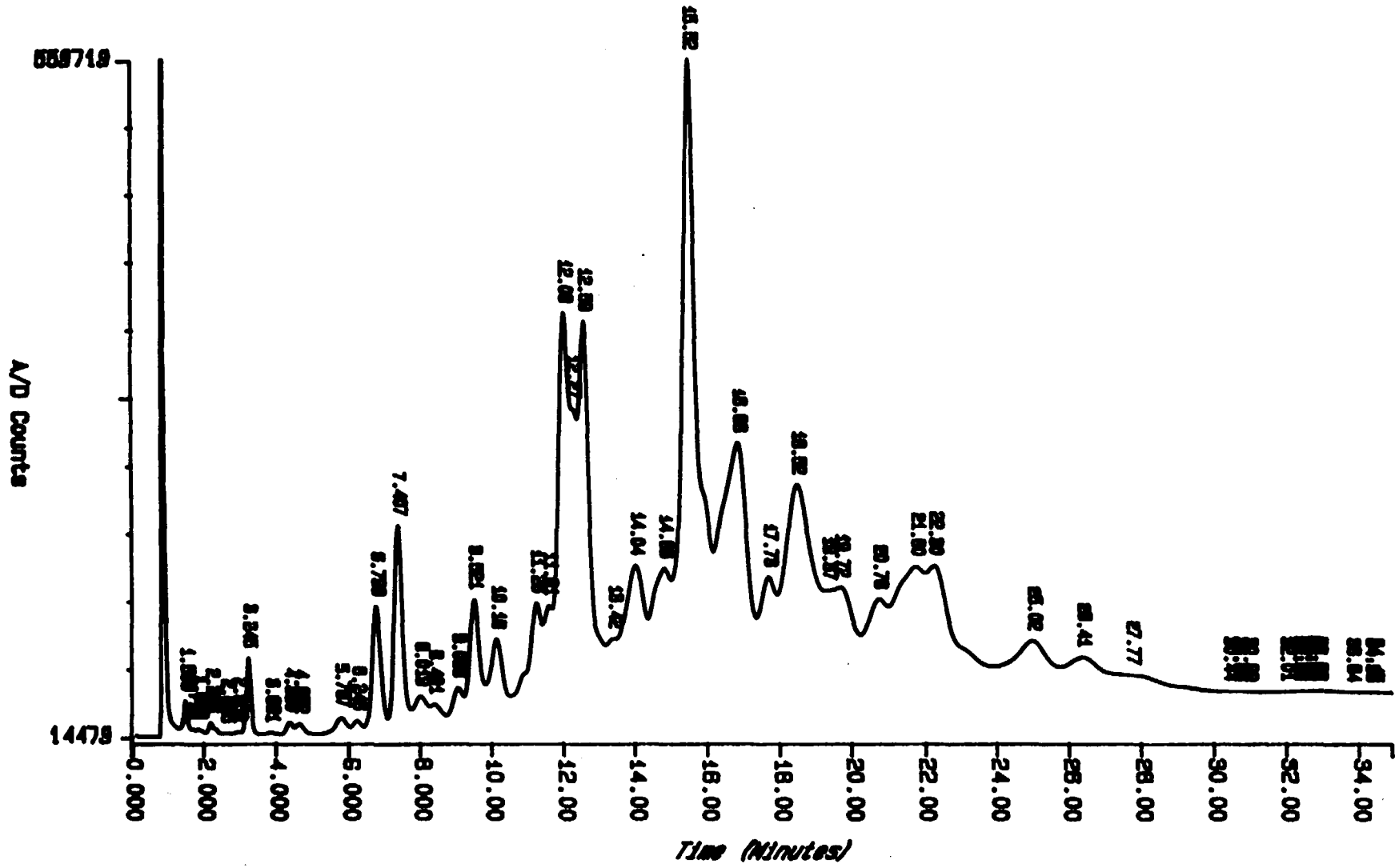
Sample: J3284 Injected at 22:08:53 ON AUG 6, 1985
Raw File: RA2880 Proc File: PA2880 Method: AP8PST
Operator: AM Case No: QC3413
Instrument ID: #5 ul Injected: 4.5
Column ID: 1.5%SP2250/1.95%SP2401



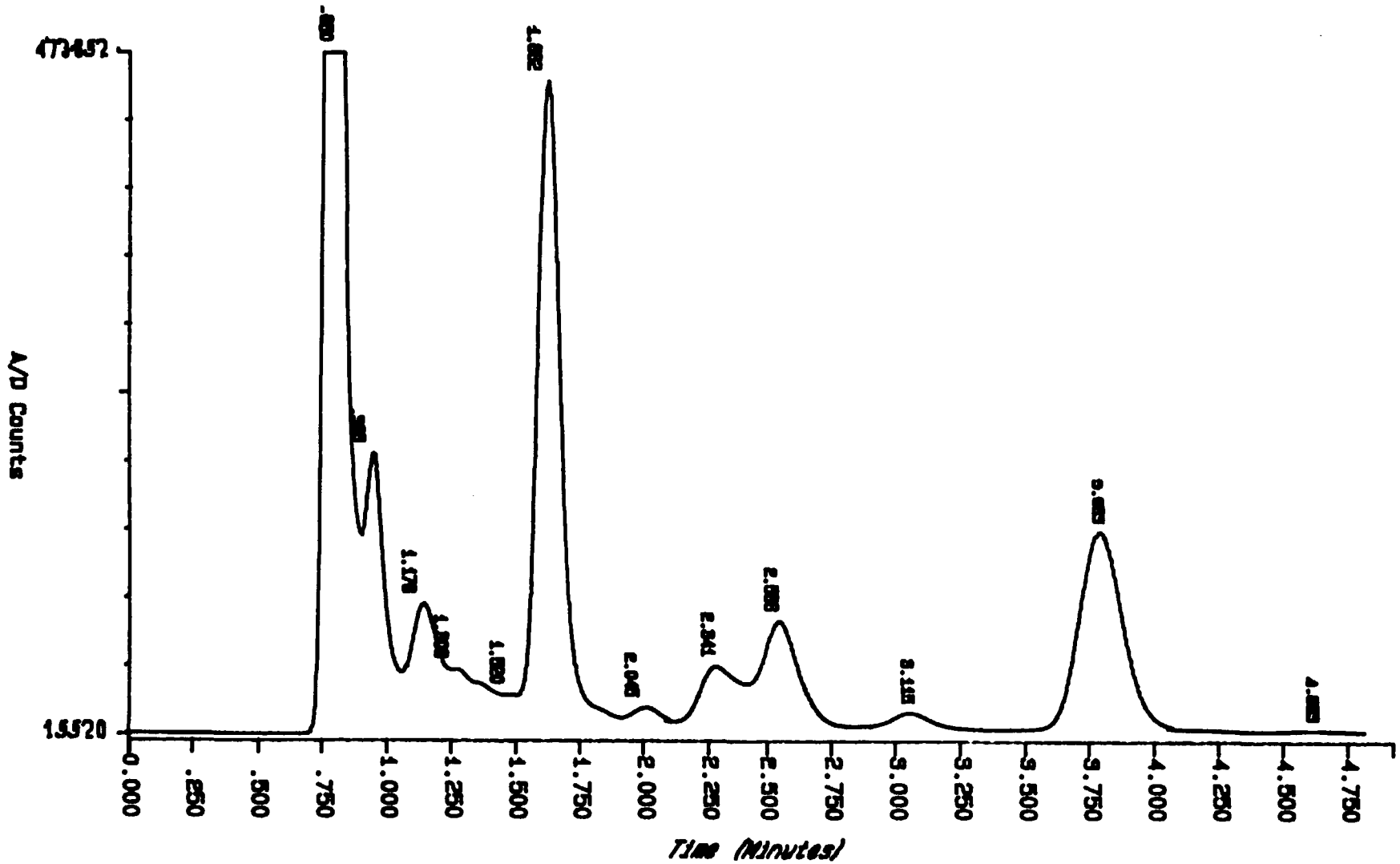
Sample: AP8FPD-C Injected at 5:39:10 ON AUG 6, 1985
Raw File: RA2862 Proc File: PA2862 Method: AP8FPD
Operator: AM Case No: QC3413FPD
Instrument ID: #5 ul Injected: 4.5
Column ID: FPD



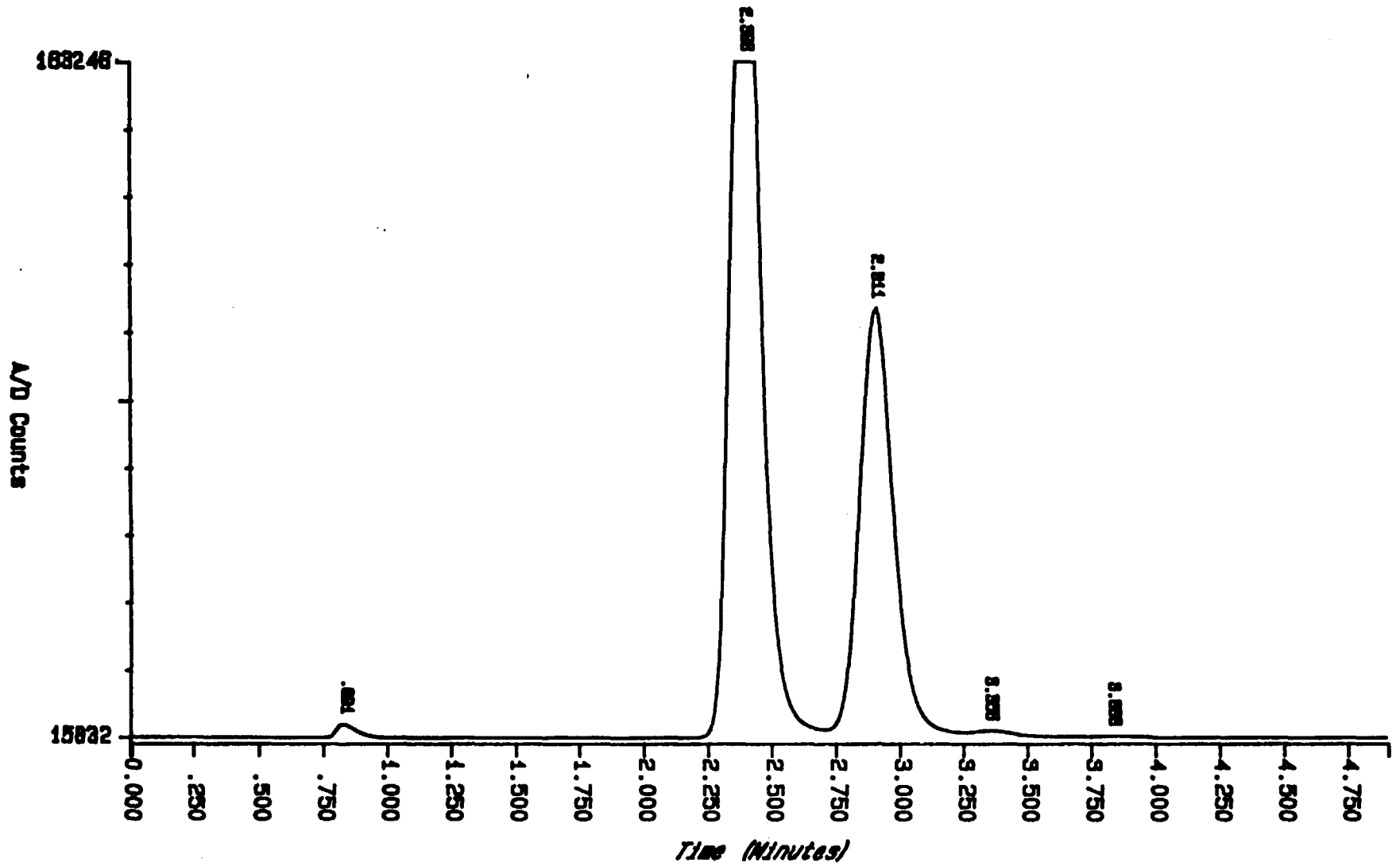
Sample: AP8PST-C Injected at 8:27:28 ON AUG 7, 1985
Raw File: RA2695 Proc File: PA2695 Method: AP8PST
Operator: AM Case No: QC3413
Instrument ID: #5 ul Injected: 4.5
Column ID: 1.5%SP2250/1.95%SP2401



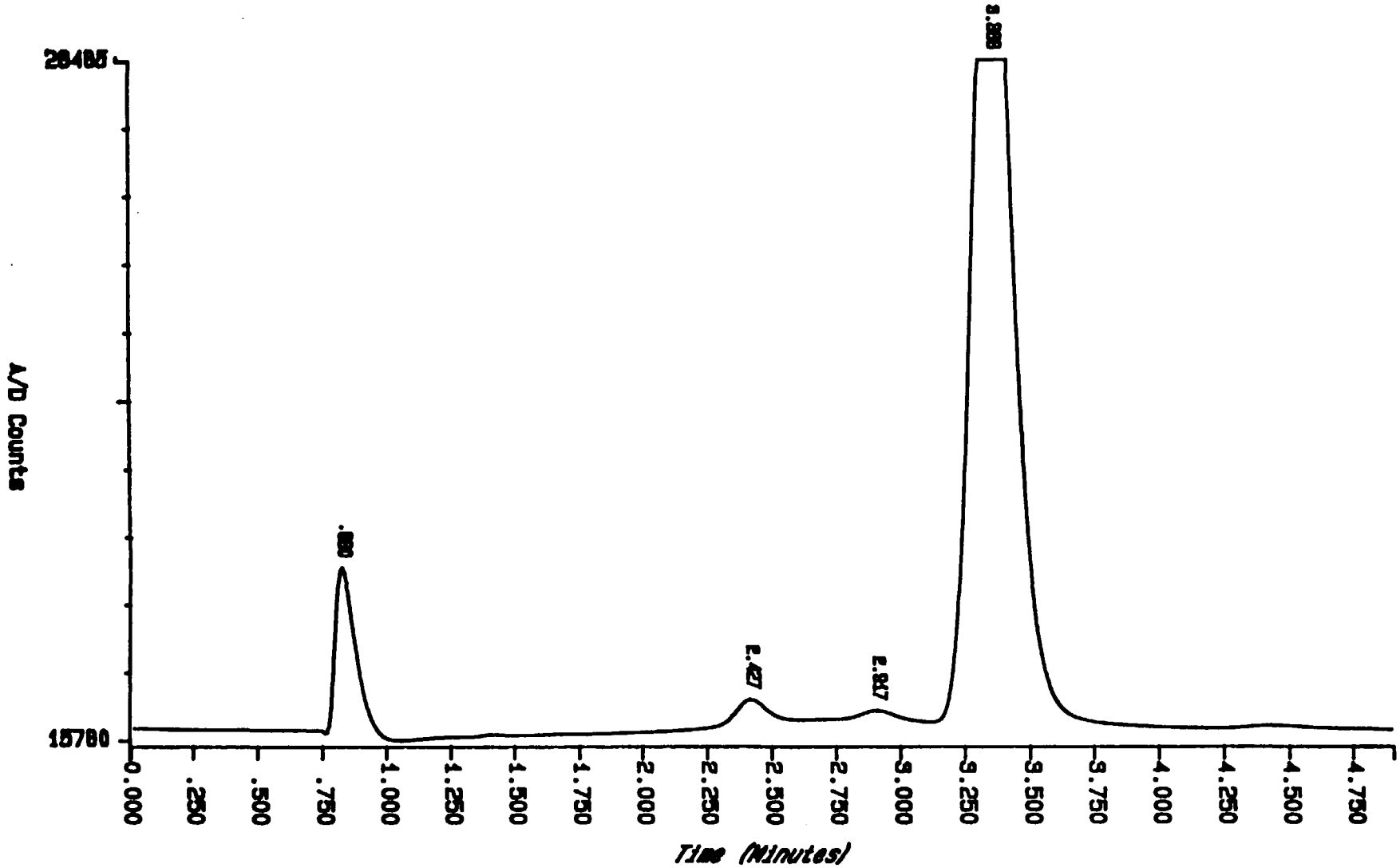
Sample: AP8ISO-C Injected at 14:00:49 ON AUG 7, 1985
Raw File: RA2703 Proc File: PA2703 Method: AP8PST
Operator: AM Case No: QC3413
Instrument ID: #5 ul Injected: 4.5
Column ID: 1.5%SP2250/1.95%SP2401



Sample: J3284 Injected at 19:49:17 ON AUG 14, 1985
Raw File: RA2838 Proc File: PA2838 Method: HERB1



Sample: HERB-B Injected at 18:18:35 ON AUG 14, 1985
Raw File: RA2827 Proc File: PA2827 Method: HERB1



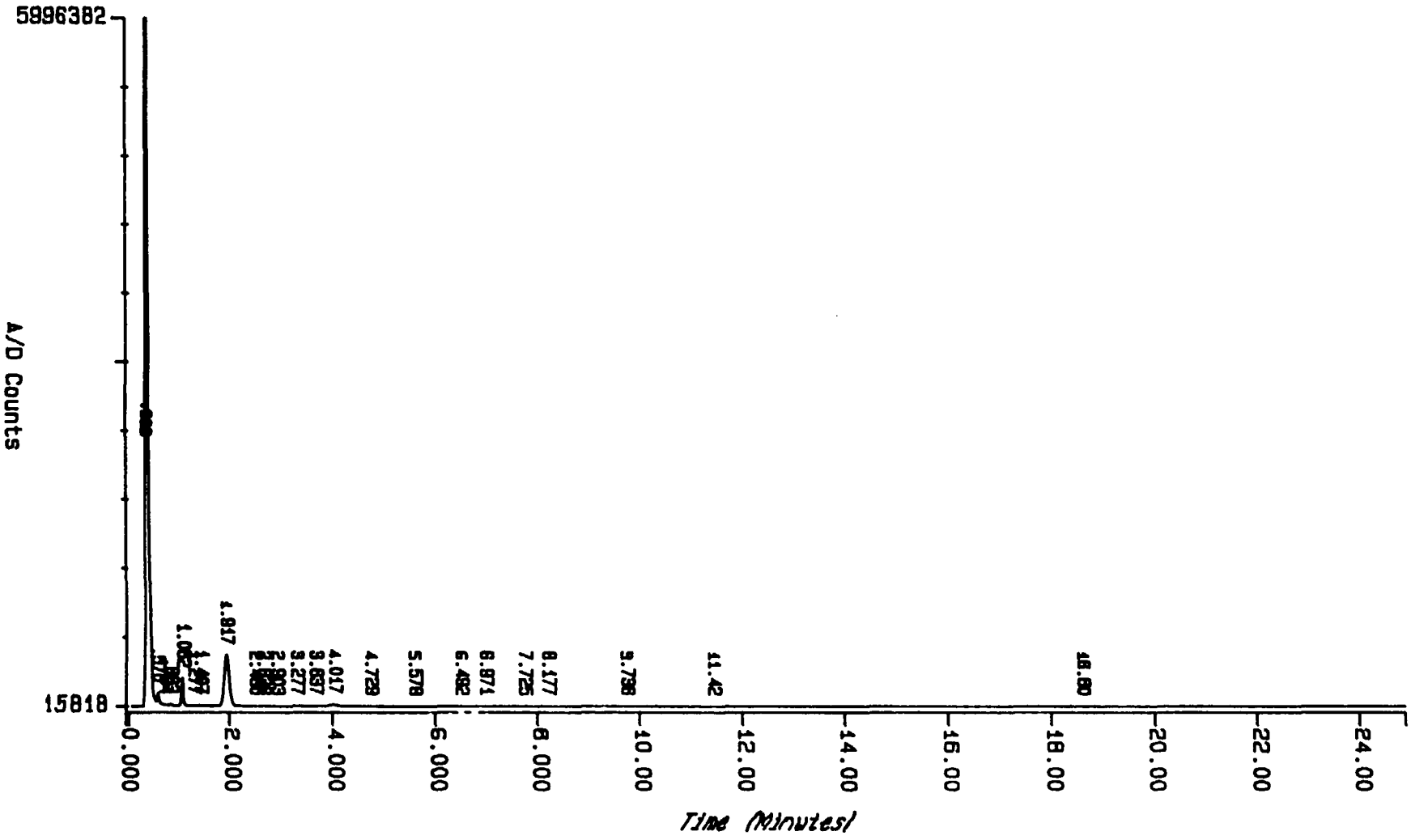
Sample: 245T-5.0 Injected at 18:26:37 ON AUG 14, 1985
Raw File: RA2828 Proc File: PA2828 Method: HERB1

Appendix A1

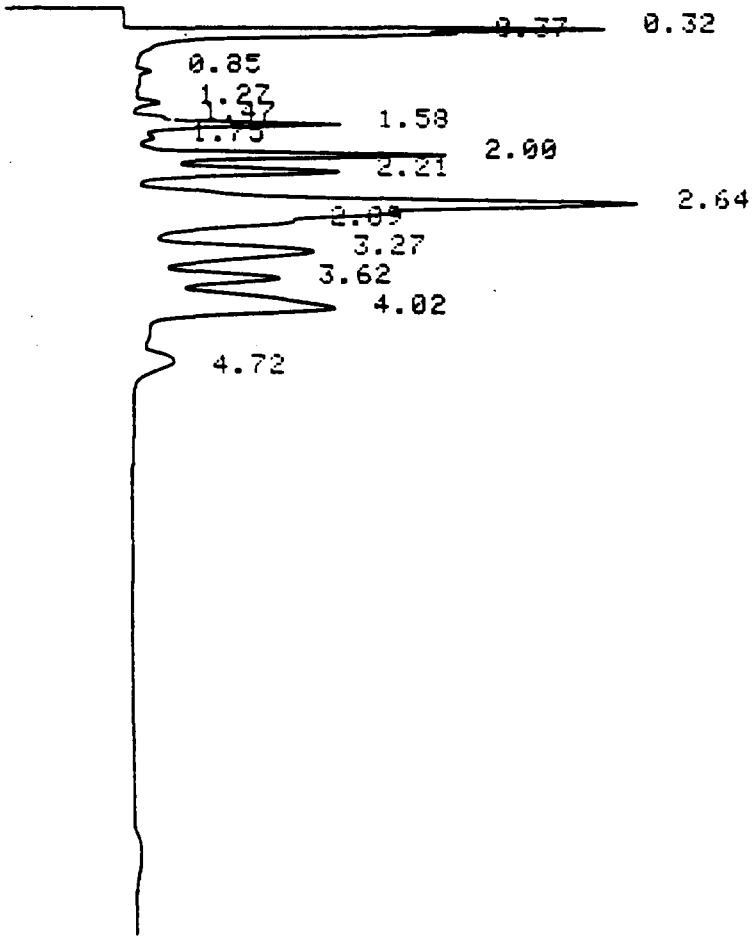
Gas Chromatographic Spectral Data for Quantitated Compounds

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

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

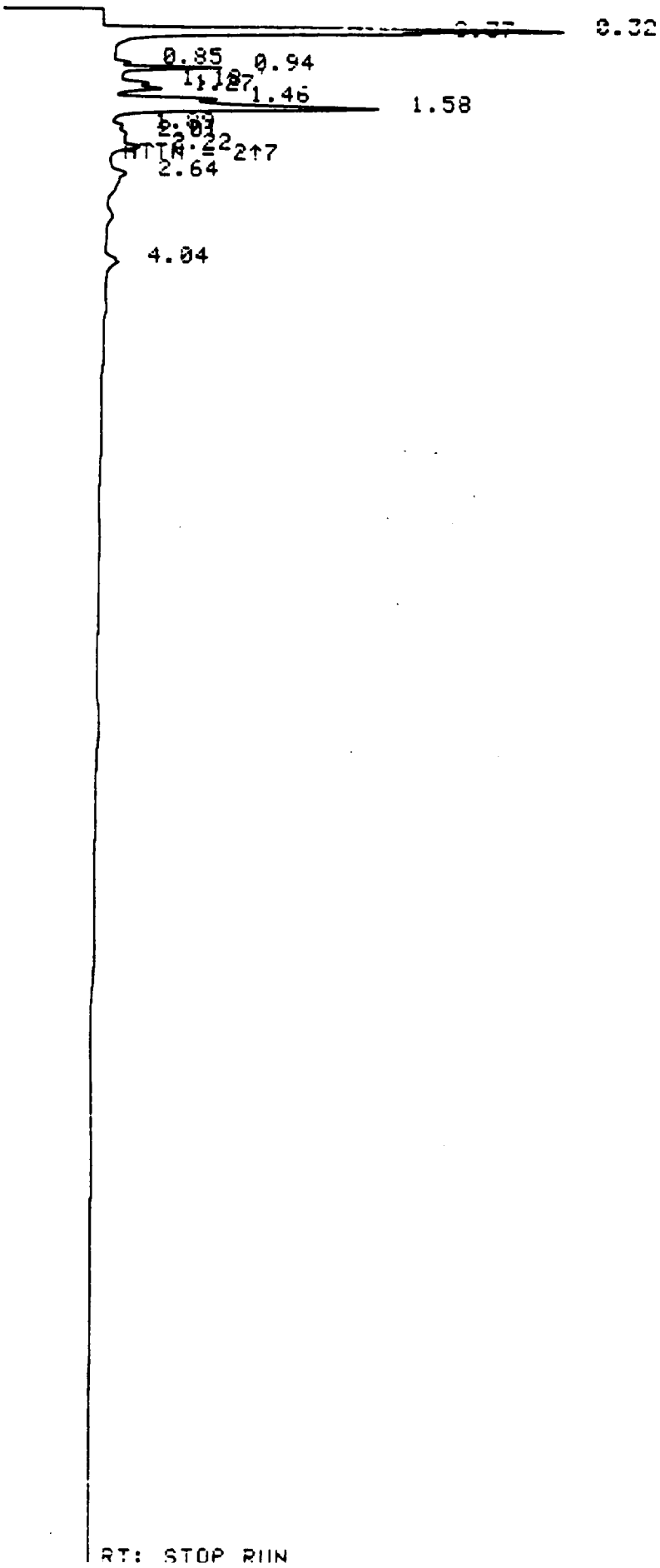


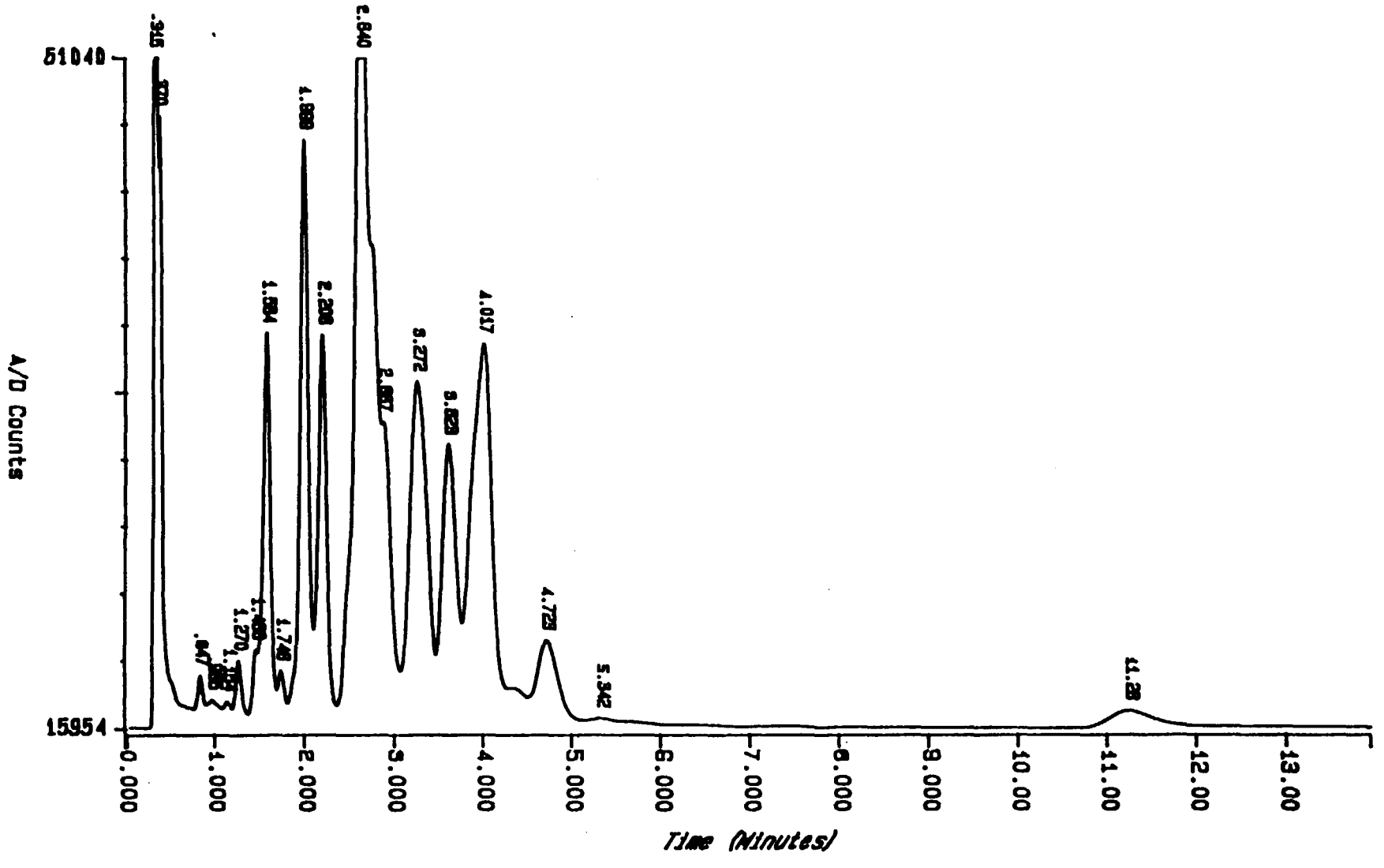
Sample: J3284 Injected at 2:42:03 ON AUG 2, 1985
Raw File: RJ1644 Proc File: PJ1644 Method: PCBBO



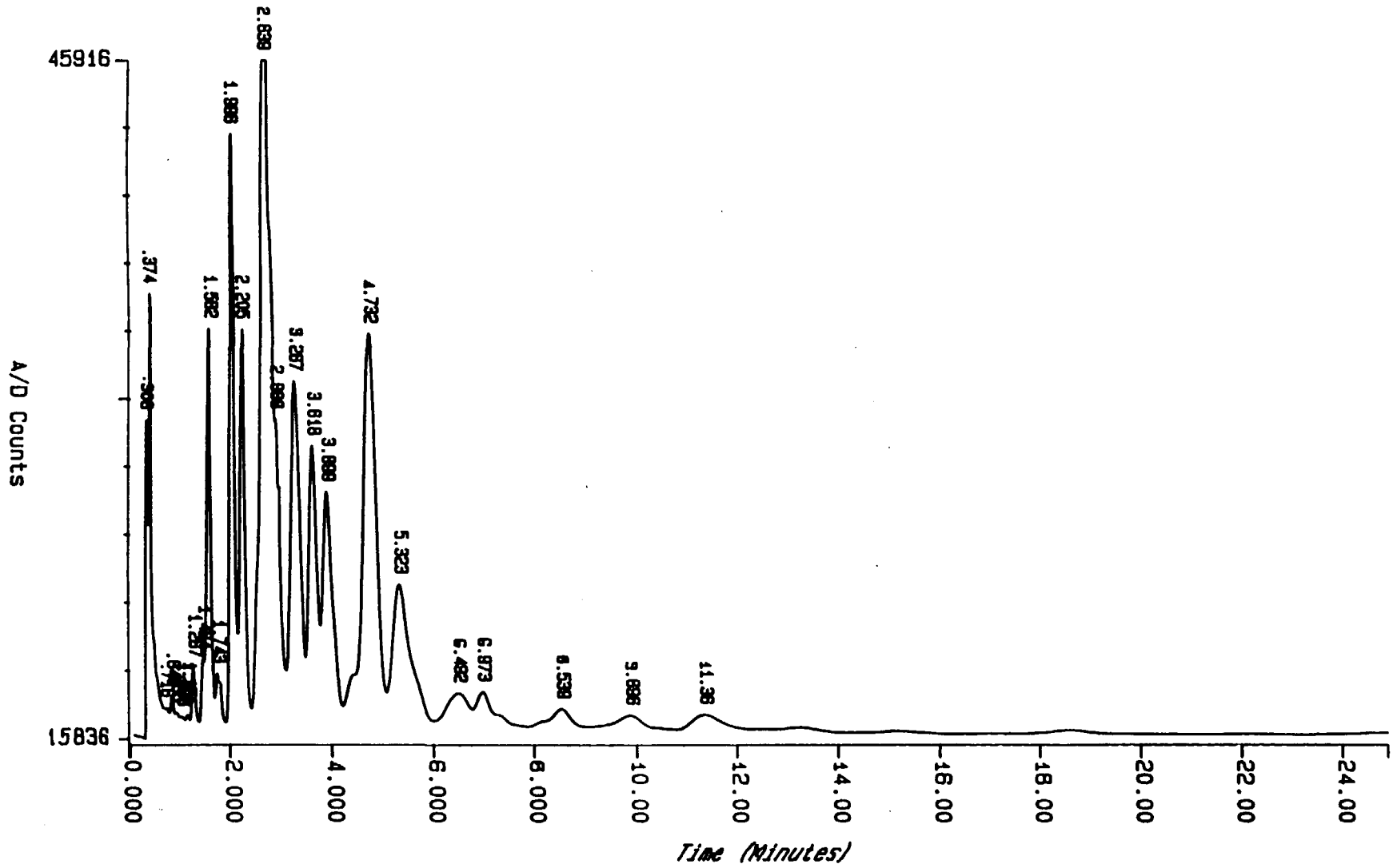
[hp] 5880A SAMPLER INJECTION @ 16:24 AUG 2, 1985
SAMPLE # : ID CODE :
15 1016-0.5

Ar 1221 -0.5ug/ml 15:58 8/2/85

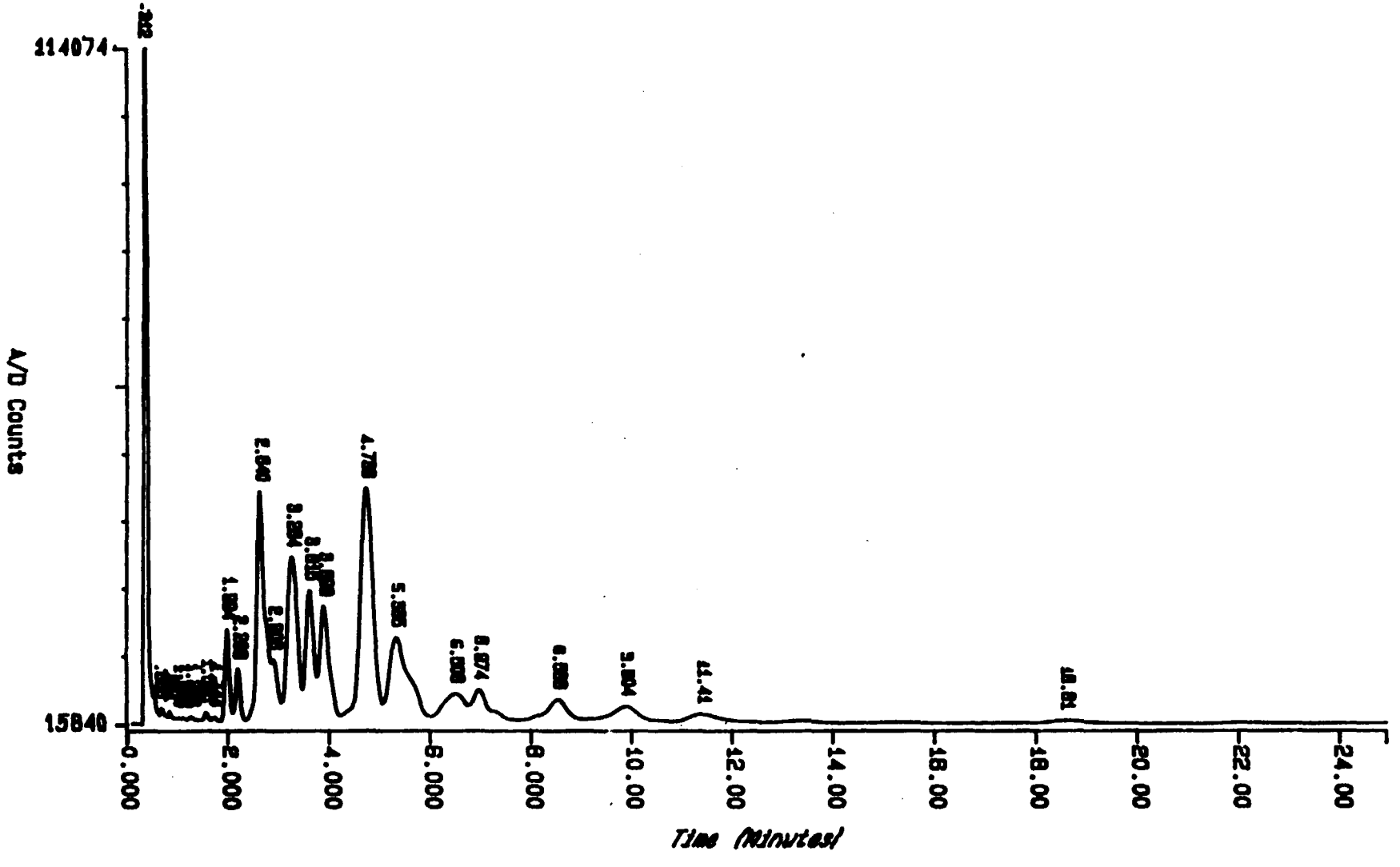




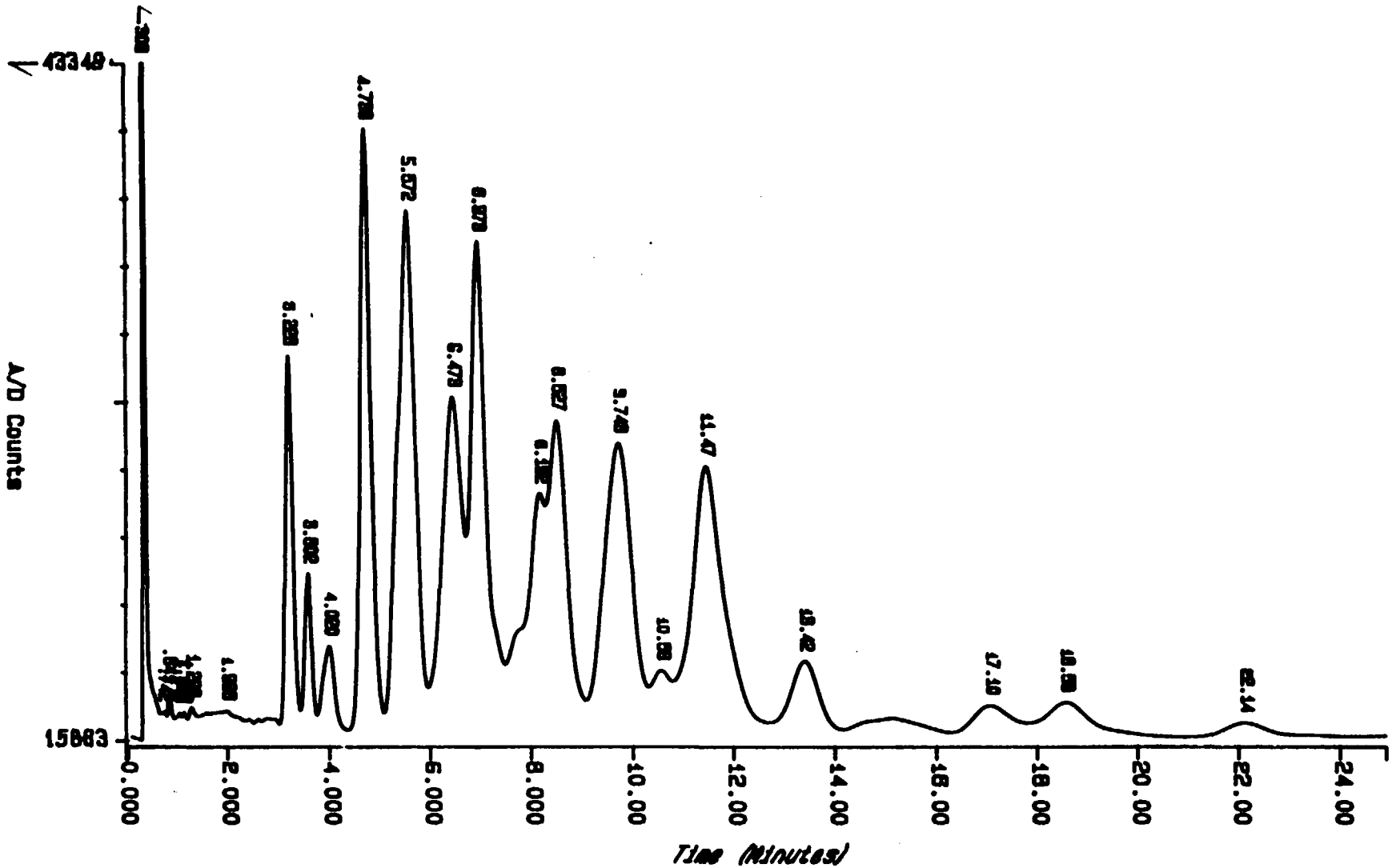
Sample: AR01232-0.5 Injected at 16:24:49 ON AUG 2, 1985
Raw File: RN0177 Proc File: PN0177 Method: PCB0



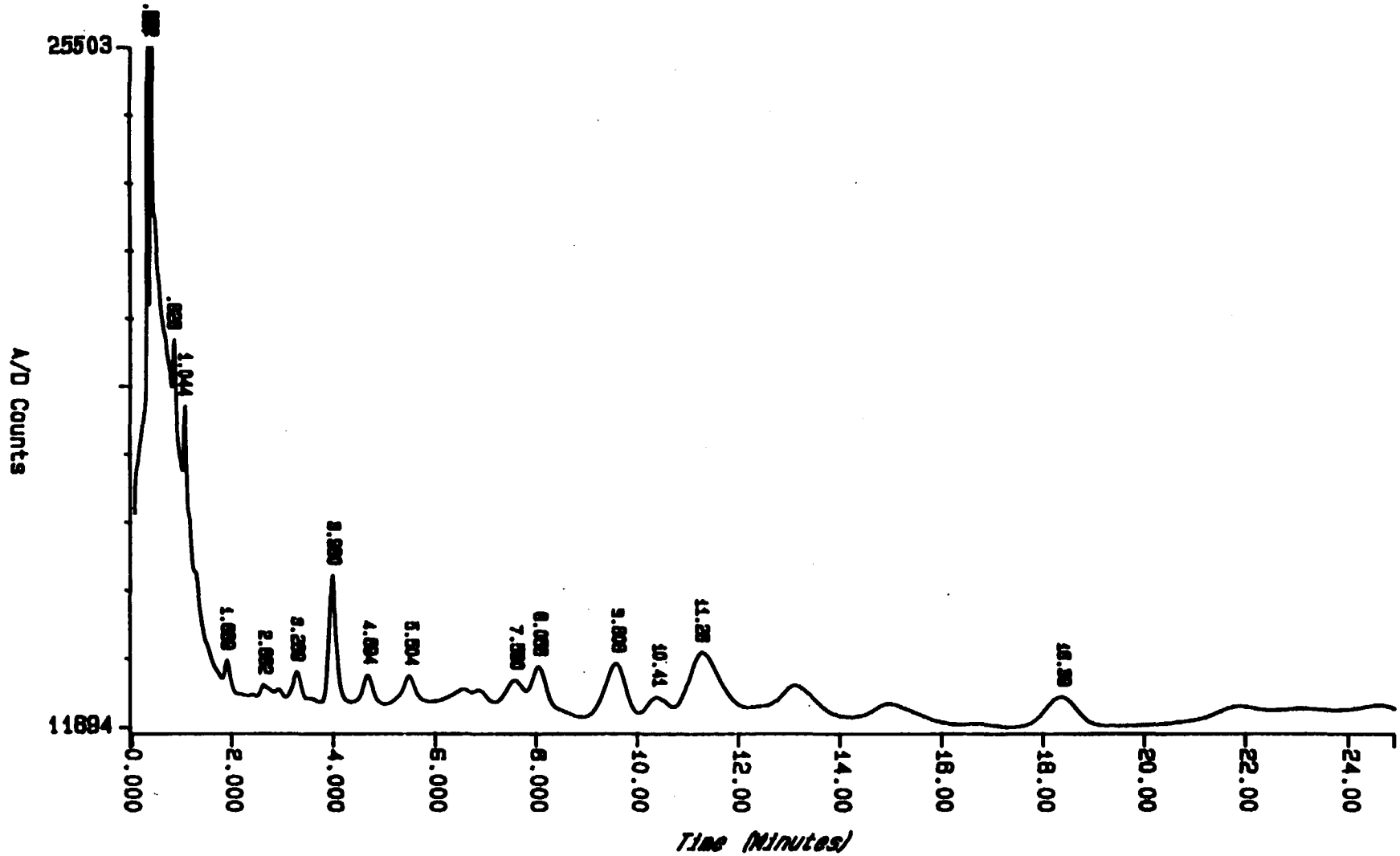
Sample: AR1242-0.5 Injected at 23:50:04 ON AUG 1, 1985
Raw File: RJ1638 Proc File: PJ1638 Method: PCBBO



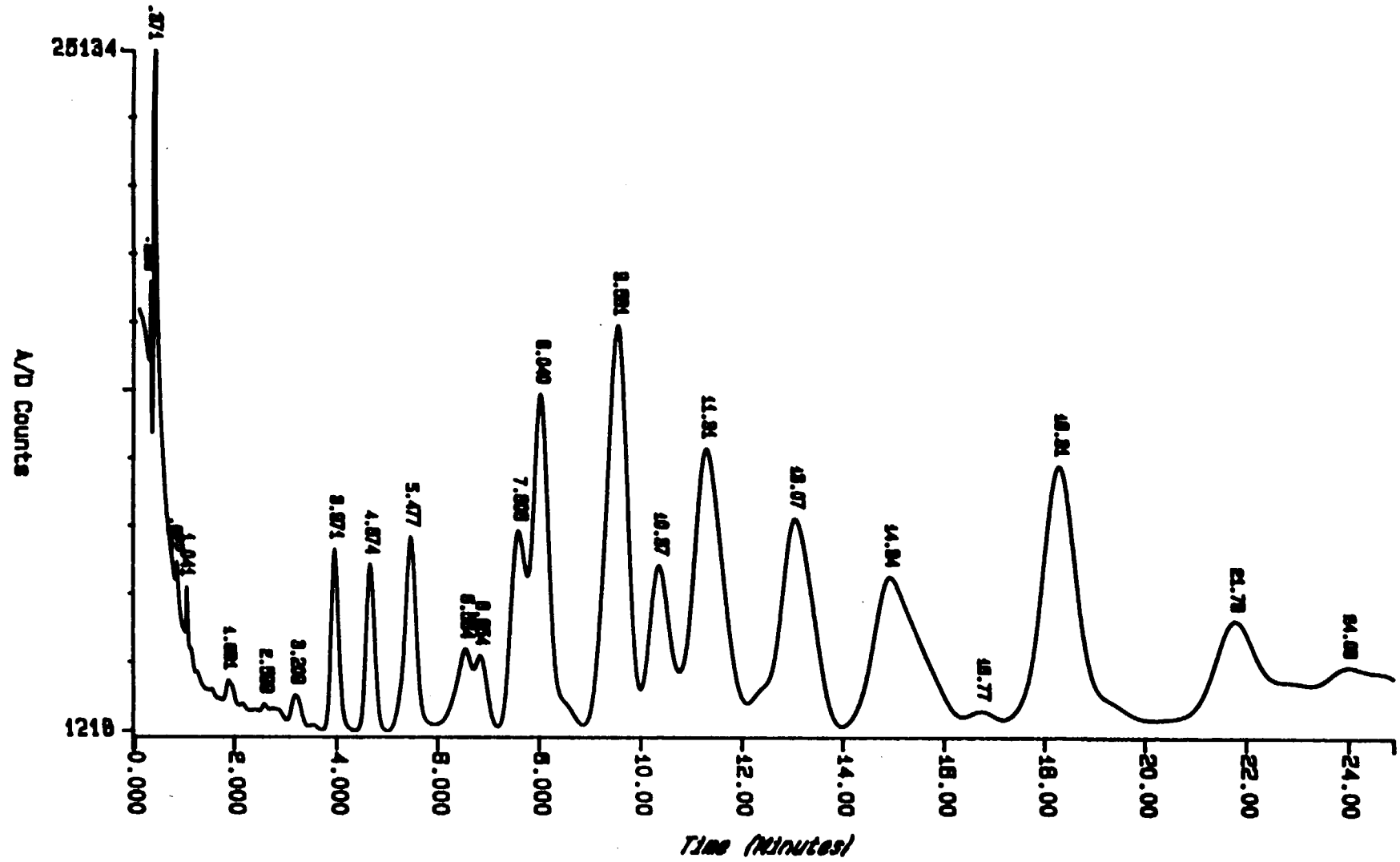
Sample: AR1248-0.5 Injected at 23:21:32 ON AUG 1, 1985
Raw File: RJ1637 Proc File: PJ1637 Method: PCBBO



Sample: AR1254-0.5 Injected at 22:53:03 ON AUG 1, 1985
Raw File: RJ1638 Proc File: PJ1638 Method: PCBBO



Sample: AR1280-0.03 Injected at 18:23:11 ON JUL 31, 1985
Raw File: RJ1596 Proc File: PJ1596 Method: PCBBO



Sample: AR1260-0.5 Injected at 23:50:32 ON JUL 31, 1985
Raw File: RJ1608 Proc File: PJ1608 Method: PCBBO

Appendix A2

Chromatographic Spectral Data for Quantitated Compounds

1) A reconstructed chromatogram for each sample analyzed by an HPLC instrument.

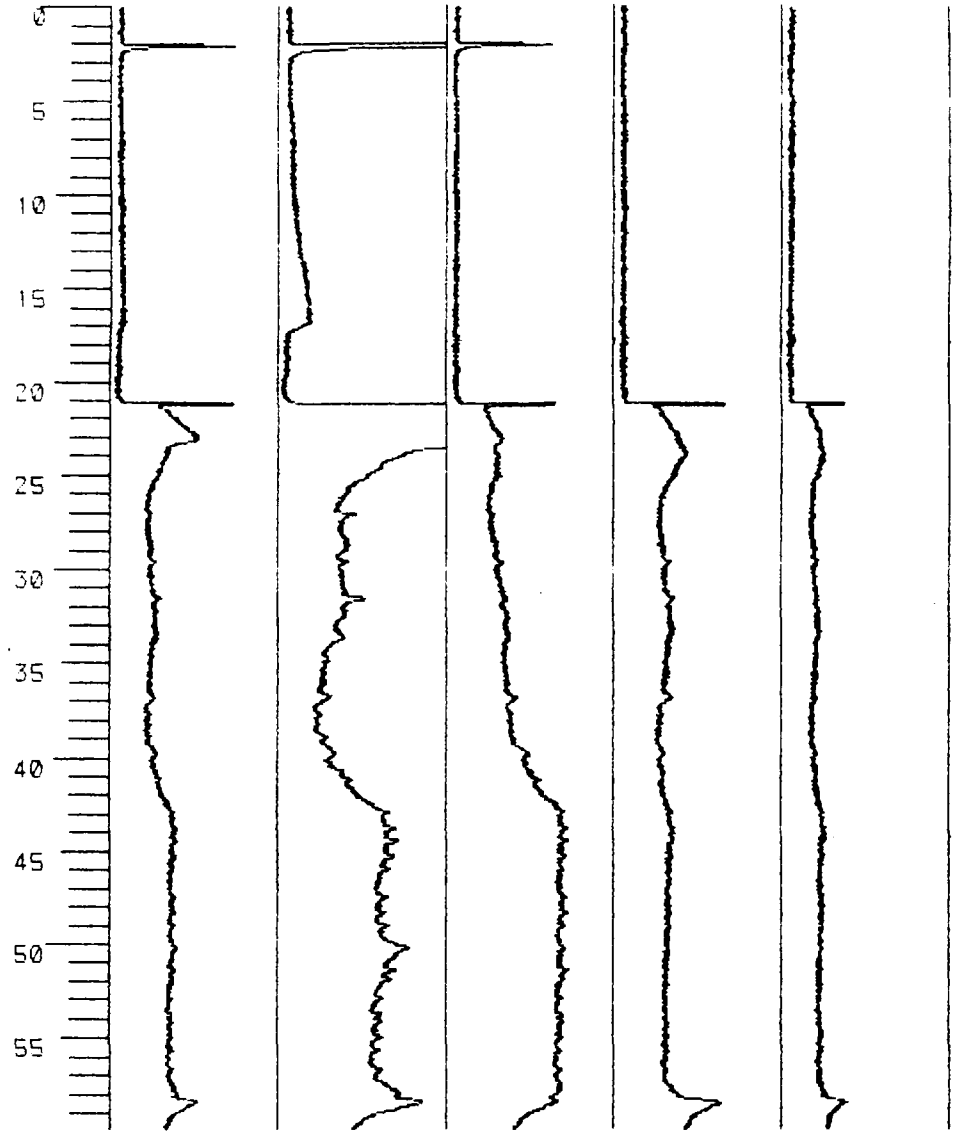
2) A reconstructed chromatogram for the appropriate standard compounds analyzed with the same HPLC under the same operating conditions.

Rawdata copied from DPU memory to
dal281:D702 01/01/1900 19:13

Integration & online plot of new analysis
VIAL 29 INJ 1 &APDAI 01/01/1900 20:24

J 3284

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	2.145	42.117	BB	8.421	7.219	0.085	0.000	A/B	0.140
2	C	21.206	36.084	BV	13.878	3.840	0.235	0.002	C/D	1.024
3	A	23.073	458.04	BP	91.579	3.361	1.688	0.003	A/B	0.161
4	D	23.912	377.10	VB	69.969	2.002	2.337			
5	B	27.099	17.243	PB	0.499	1.054	0.365			
6	B	42.955	66.529	PV	1.927	1.264	0.726			
7	B	43.798	19.142	VB	0.554	0.816	0.405	0.004	B/C	0.233
8	B	58.435	210.28	ABB	6.091	3.416	0.809			
9	D	58.485	126.60	ABB	23.490	2.688	0.687			

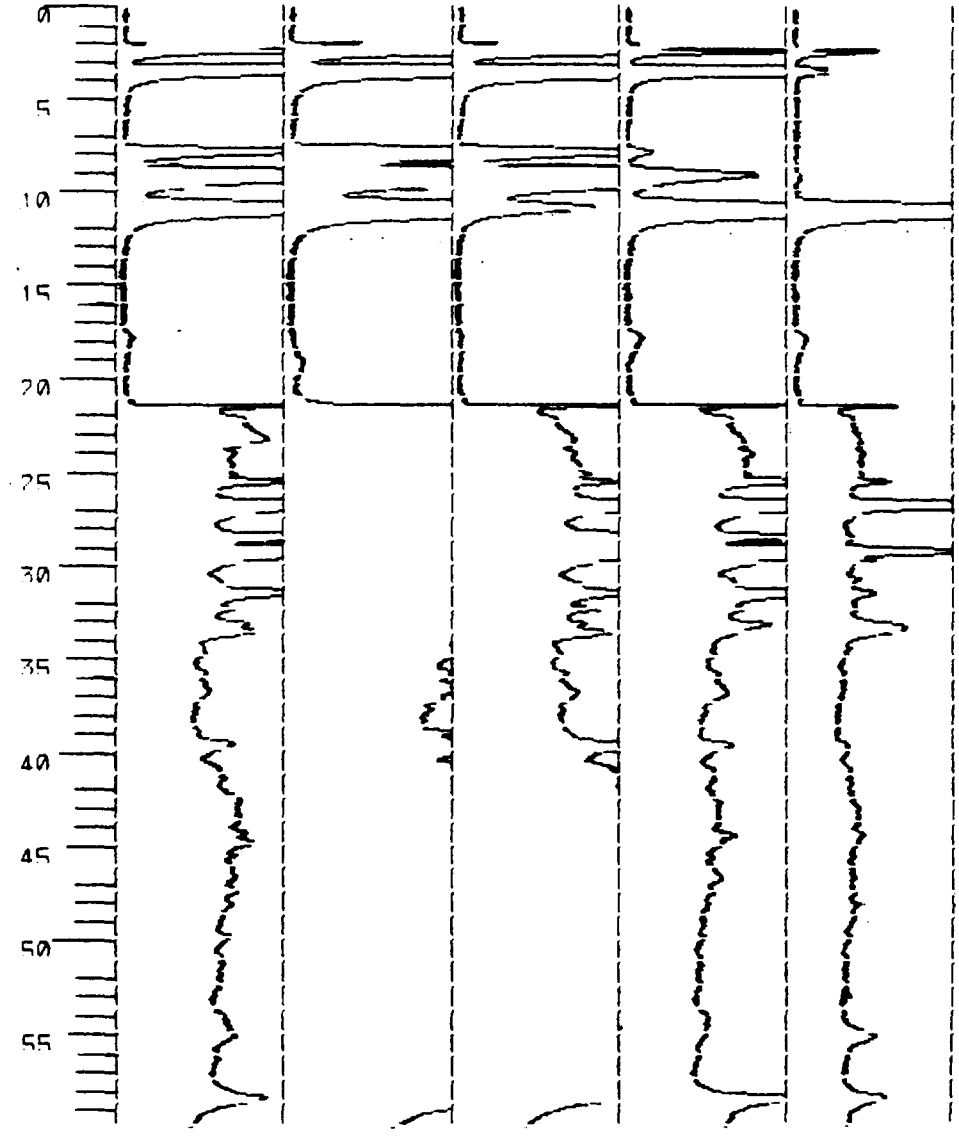
TOTAL AREA FOR SIGNAL A = 500
TOTAL AREA FOR SIGNAL B = 3452

Integration & online plot of new analysis

VTAI 10 INJ 1 &APDAT 12/31/1899 20:54

STD 11020-25

Signal	A	B	C	D	E	Annotation
S wl bw	254 100	210 4	230 4	254 4	280 4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

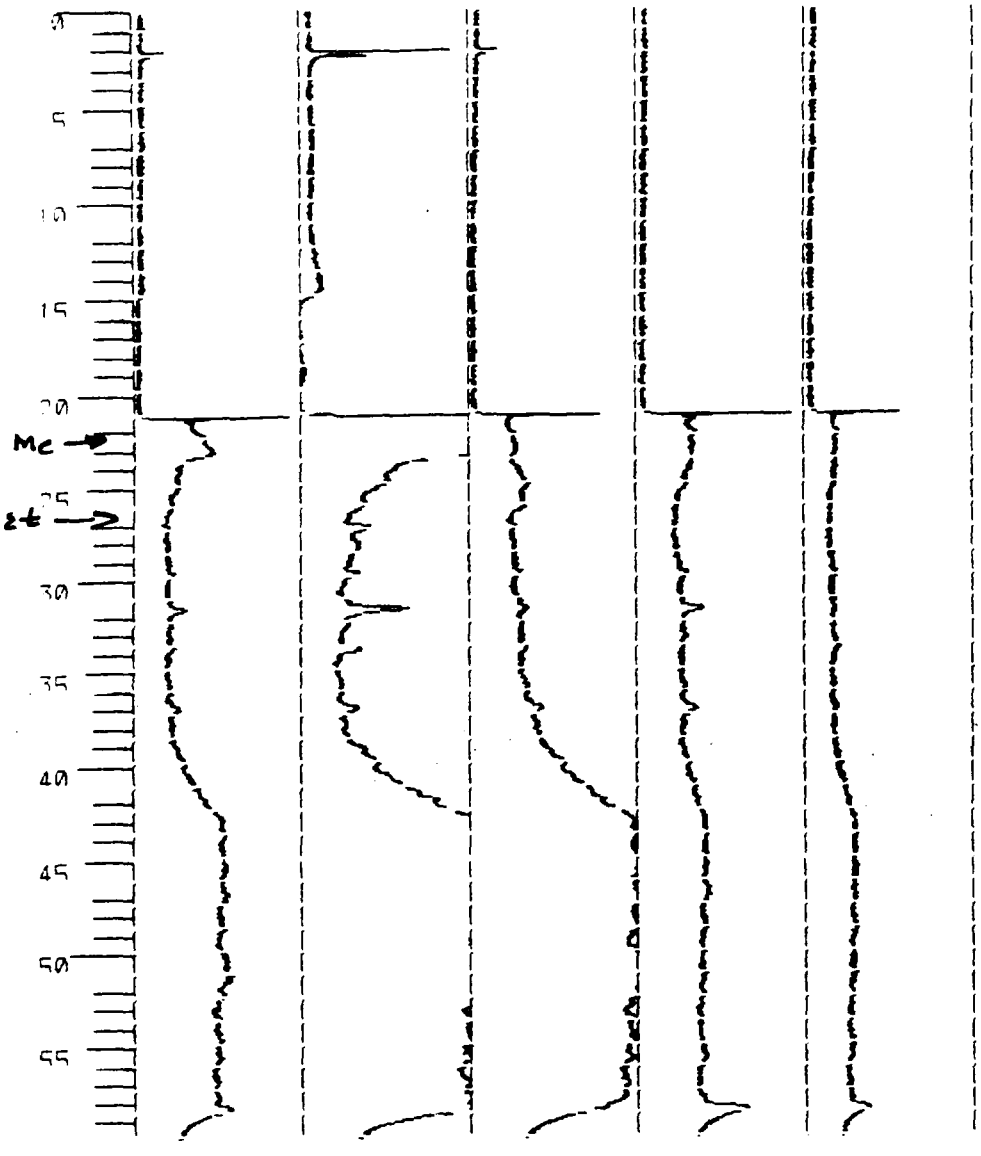
#	ST	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	HTIME [min]		QUOTIENT [area]
1	B	2.005	30.768	BV	0.107	4.260	0.109	0.002	B/C	1.682

Integration & online plot of new analysis

VIAL [illegible] INT [illegible] &AFDAT [illegible]

STD 11416-25

Signal	A	B	C	D	E	Acquisition
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	ST	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	2.153	15.439	BB	3.719	3.132	0.074	0.001	A/B	0.152
2	A	21.244	7.921	BB	1.908	2.538	0.123	0.003	A/C	0.242
3	D	22.234	63.773	VB	26.410	0.883	1.204			
4	B	23.091	2357.2	BV	59.190	20.094	1.492			
5	B	24.629	102.45	VB	2.573	2.410	0.709			
6	B	31.598	110.24	BB	2.768	4.072	0.391			
7	A	45.233	359.81	PV	86.680	1.148	3.895	0.010	A/B	0.369
8	A	46.288	31.931	VB	7.692	0.559	0.952	0.003	A/B	0.262
9		47.350	54.301	VB	6.420	0.822	0.929			
[illegible]	[illegible]	[illegible]	[illegible]	BP	5.359	2.897	0.965	0.002	B/C	1.848
		[illegible]	141.10	ABB	58.433	2.896	0.690			

[illegible] AREA [illegible] A = 415

[illegible] AREA [illegible] B = [illegible]

[illegible] AREA [illegible] C = 846

[illegible] AREA [illegible] D = [illegible]

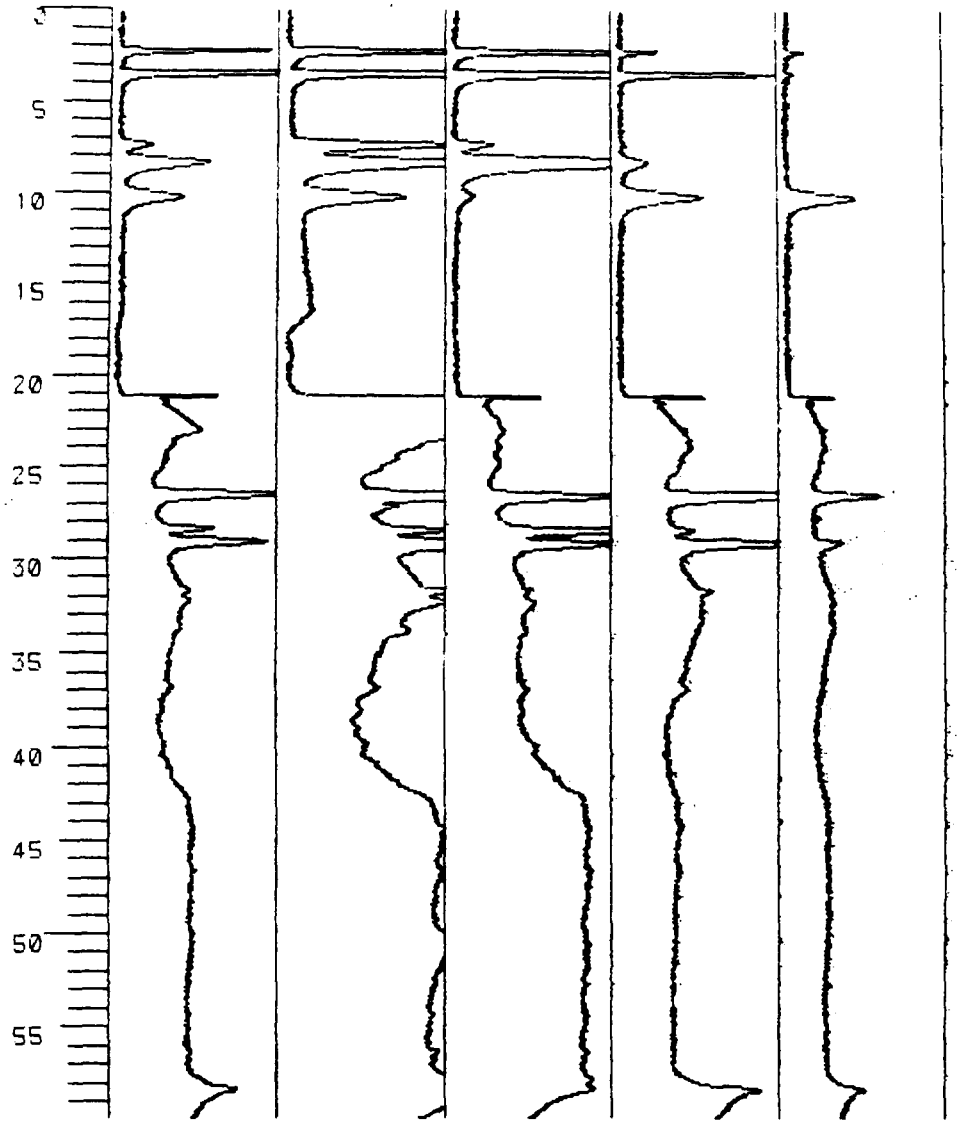
[illegible]

Rawdata copied from DPU memory to
da1191:2703 01/01/1900 08:41

Integration & online plot of new analysis
VIAL 20 INJ 1 &APDAI 01/01/1900 09:51

STD 11021-~~25~~ 5.0

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

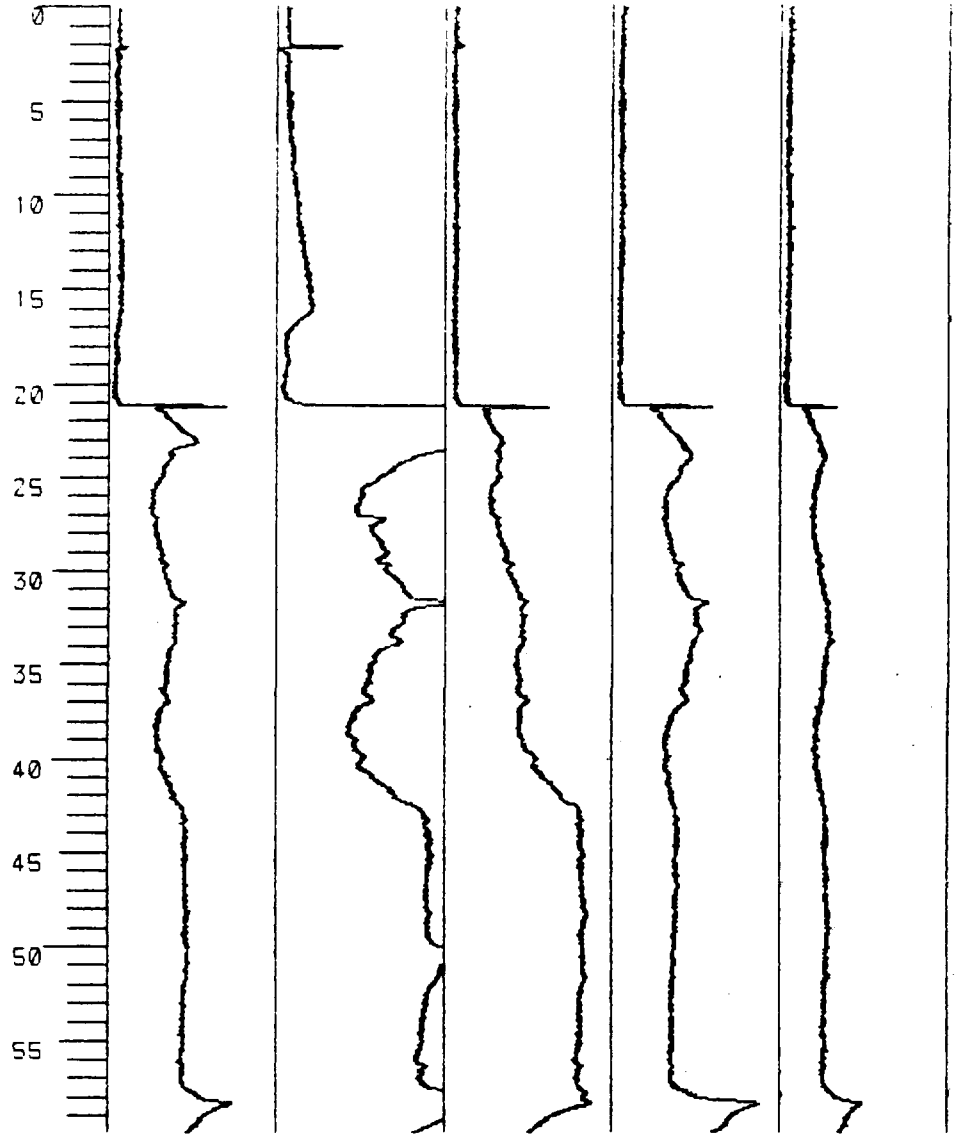
AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	2.213	115.79	BB	6.438	9.203	0.184	0.000	A/B	0.349
2	A	3.447	248.08	BB	13.794	17.790	0.213	0.000	A/B	0.561
3	B	7.421	286.54	BV	4.159	10.451	0.428	0.002	B/C	4.970
4	A	8.387	213.99	VV	11.899	5.318	0.612	0.001	A/B	0.451
5	A	10.239	145.21	VB	8.074	3.622	0.617	0.000	A/B	0.579
6	C	21.195	26.243	BB	1.157	2.267	0.233			
7	A	23.068	471.77	BV	26.233	3.473	1.720	0.011	A/B	0.159
8	D	23.931	351.08	BB	24.376	1.708	2.600			
9	A	26.521	214.13	VV	11.906	8.426	0.399	0.001	A/B	0.374
10	A	28.374	65.072	VV	3.618	3.176	0.327	0.005	A/B	[illegible]

Integration & online plot of new analysis

STD 11417-05.0

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	B	2.113	15.105	BP	0.320	3.525	0.069			
2	A	21.197	445.32	BV	73.752	5.111	1.671	0.002	A/B	2.425
3	B	23.061	2501.7	VP	52.995	20.770	1.586			
4	D	23.942	517.52	BB	69.401	2.539	2.508			
5	B	27.228	20.768	PB	0.440	1.189	0.289			
6	B	31.654	272.57	VP	5.774	4.133	0.855	0.024	B/C	1.367
7	B	50.455	1359.5	BB	28.799	2.046	7.803			
8	C	56.368	4.661	BB	2.163	0.310	0.302			
9	B	58.315	367.39	ABB	7.783	6.005	0.800			
10	A	58.335	158.49	ABB	26.248	2.780	0.834			
11	D	58.360	222.82	ABB	29.881	4.004	0.767	0.005	D/E	3.197

TOTAL AREA FOR SIGNAL A = 604
TOTAL AREA FOR SIGNAL B = 4721

Rawdata copied from DPU memory to
da:231:2702 01/01/1900 20:24

Integration & online plot of new analysis
VIAL 30 INJ 1 &APDAI 01/01/1900 21:35

STD 11022 - 1.0

Signal	A	B	C	D	E	Annotation
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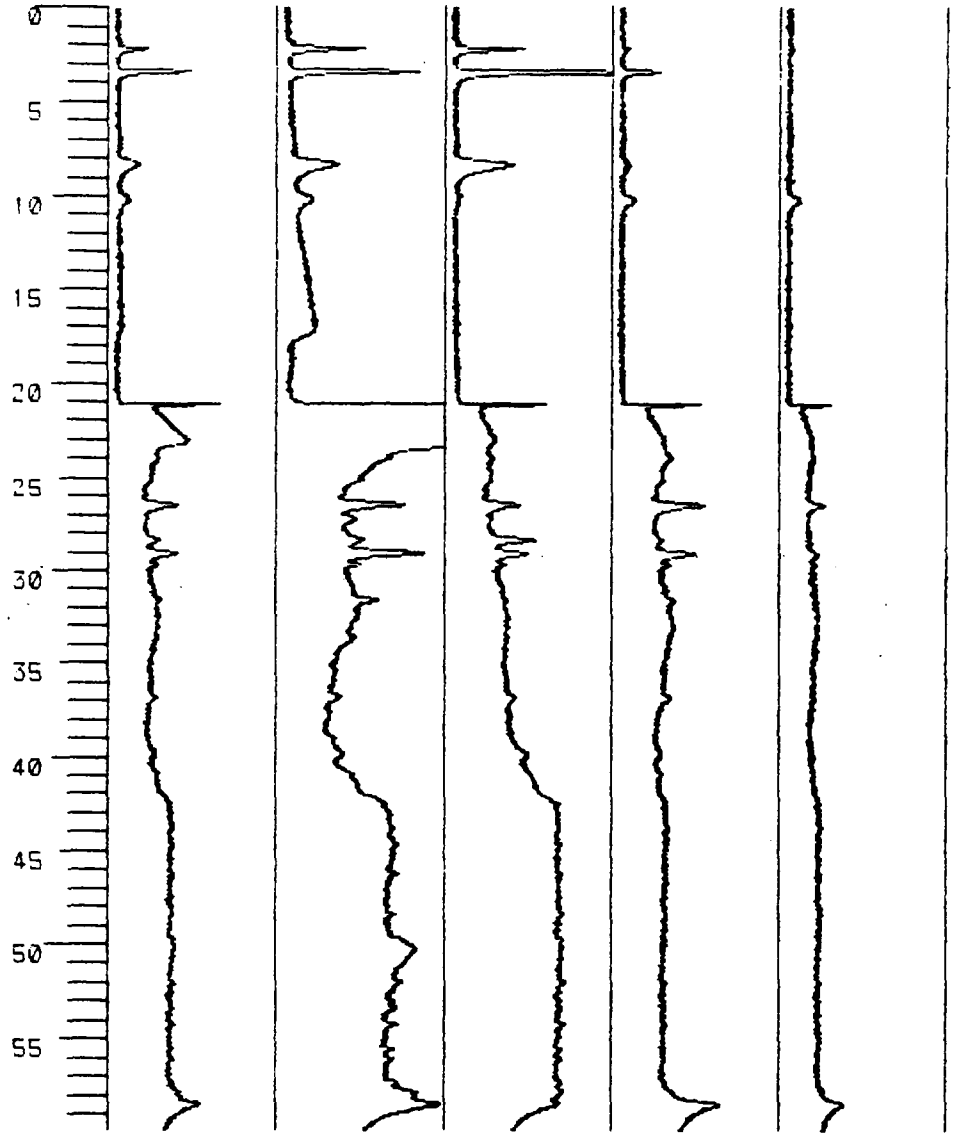
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

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1	B	2.195	59.321	VB	1.582	4.571	0.178	0.001	B/C	1.231
2	A	3.450	52.376	BB	11.170	4.367	0.182	0.000	A/B	0.557
3	B	8.343	92.138	BB	2.457	2.523	0.568	0.000	B/C	0.728
4	C	21.188	18.311	BB	2.125	1.703	0.233	0.006	C/D	2.202
5	A	23.044	374.50	BV	79.869	3.017	1.603	0.017	A/B	0.141
6	A	26.521	42.018	VV	8.961	2.045	0.459	0.001	A/B	0.338
7	B	27.298	51.649	VV	1.377	1.525	0.631			
8	B	28.379	64.146	VV	1.711	1.666	0.540	0.005	B/C	1.400
9	B	29.084	127.71	VP	3.406	5.069	0.378	0.005	B/C	3.396
10	B	44.676	242.87	BB	6.477	0.829	3.557			
11	C	48.400	394.95	BB	45.843	0.528	8.891			

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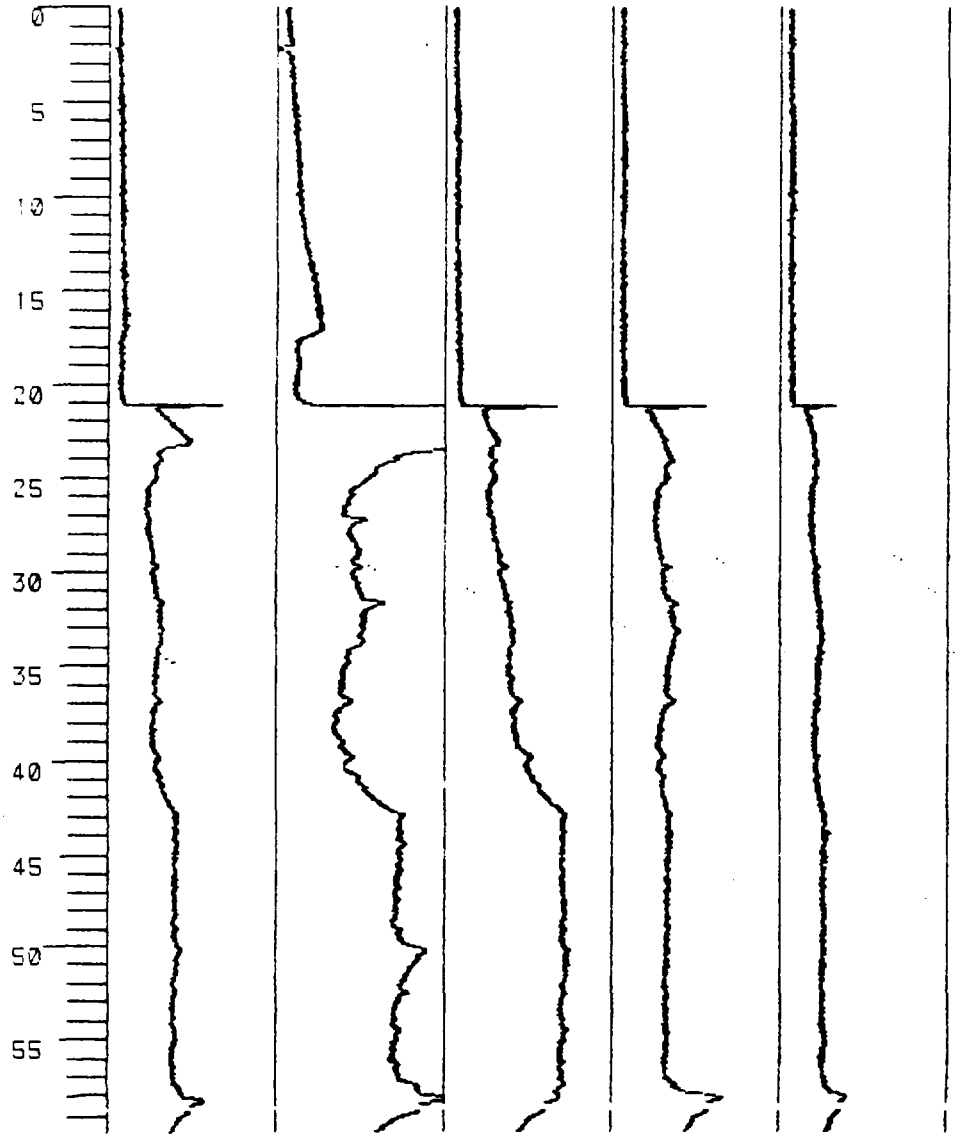
da'20'1D702 01/01/1900 21:35

Integration & online plot of new analysis
VIAL 31 INJ 1 &APDAI 01/01/1900 22:45

STD11418-1.0

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	21.188	30.647	BV	10.904	2.639	0.230	0.004	A/C	2.660
2	A	23.012	250.42	VP	89.096	2.452	1.315			
3	B	23.051	2571.7	BP	84.913	21.005	1.544			
4	B	27.233	21.790	PB	0.719	1.212	0.335			
5	B	42.886	15.310	PB	0.506	0.755	0.348			
6	B	50.196	144.51	BP	4.771	1.824	1.100			
7	C	57.745	8.381	BP	42.106	0.361	0.387			
8	B	58.452	275.32	ABB	9.091	3.910	0.917			
9	D	58.489	131.71	ABB	96.252	2.835	0.700			

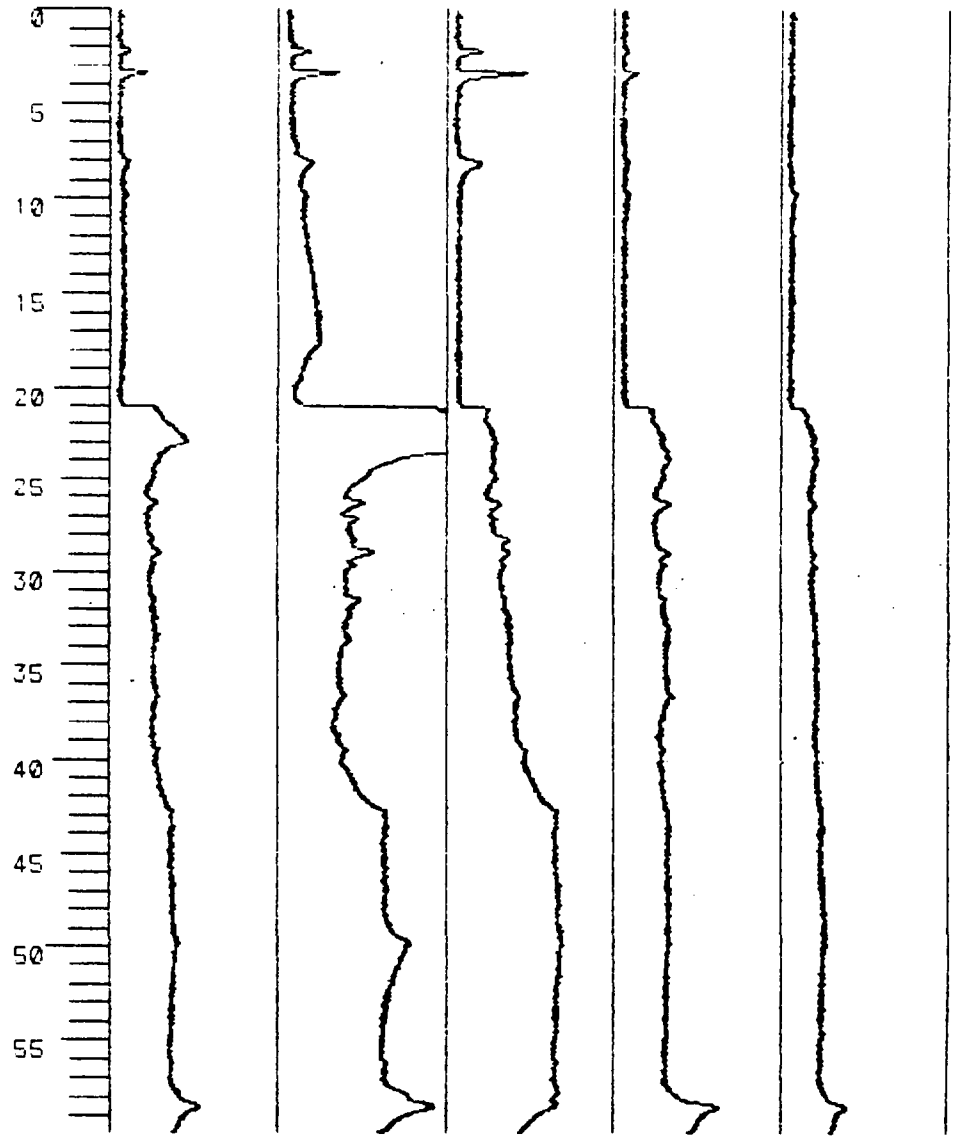
TOTAL AREA FOR SIGNAL A = 291

Rawdata copied from DPU memory to
da1331:0702 01/02/1900 07:00

Integration & online plot of new analysis
VIAL 39 INJ 1 &APDAI 01/02/1900 00:10

STD 11023-0.5

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

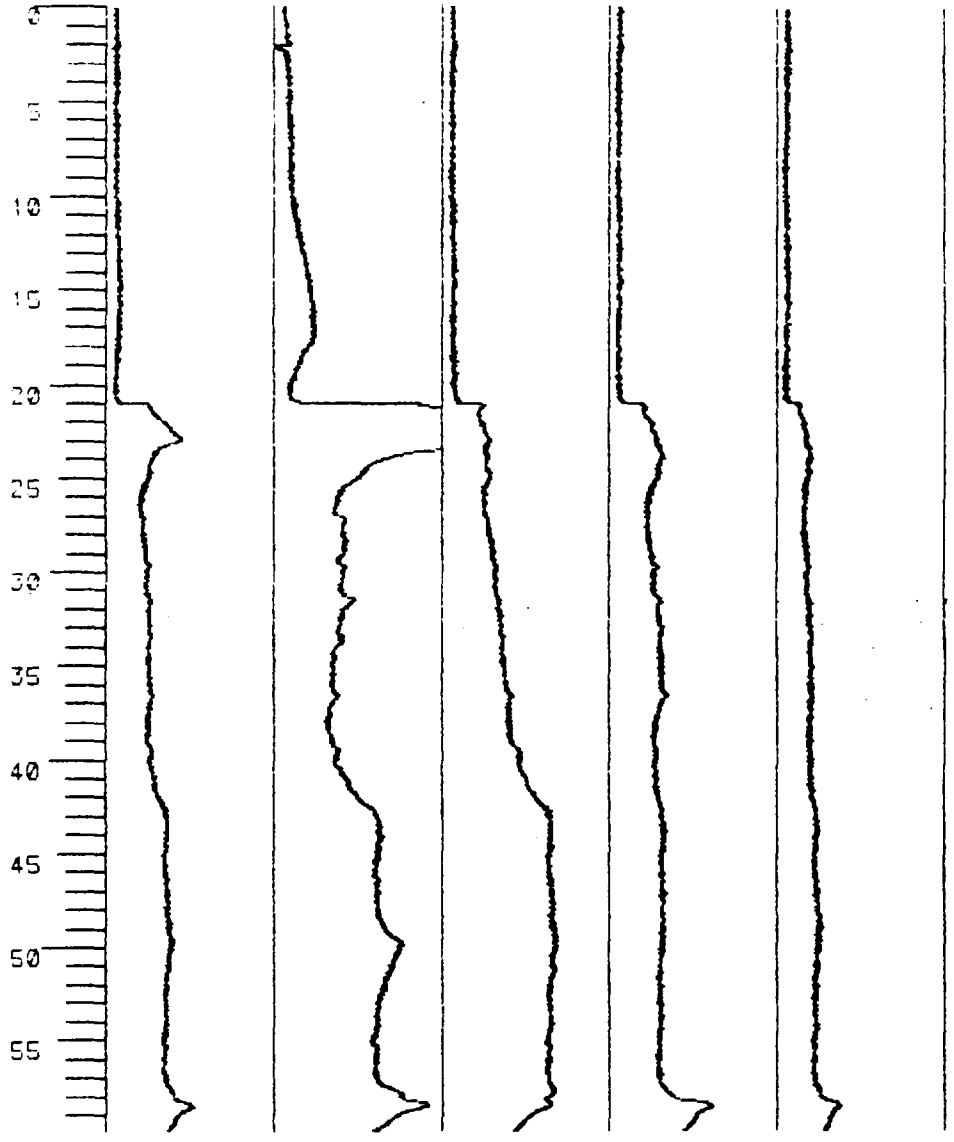
#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	B	3.367	46.216	BB	1.355	2.809	0.235	0.001	B/C	0.642
2	A	22.939	357.81	BV	100.00	2.810	1.586	0.003	A/B	0.146
3	D	23.951	184.93	BB	60.775	0.743	3.037			
4	B	26.333	44.397	VP	1.302	1.506	0.504			
5	C	26.353	19.132	BP	16.580	0.744	0.460			
6	B	27.161	13.372	PB	0.392	0.739	0.373			
7	B	49.844	618.16	BB	18.129	1.327	5.475			
8	C	57.781	24.264	BB	21.028	0.387	0.795			
9	B	58.478	229.64	ABB	6.735	3.156	0.971			
10	D	58.527	119.35	ABB	39.225	2.405	0.834			

Rawdata copied from DRS memory to
da1331:0702 01/02/1900 09:10

Integration & online plot of new analysis
VIAL 40 INJ 1 &APDAI 01/02/1900 09:20

STD 11419 -0.5

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	10	10	10	10	10	
Zero %	5	5	5	5	5	

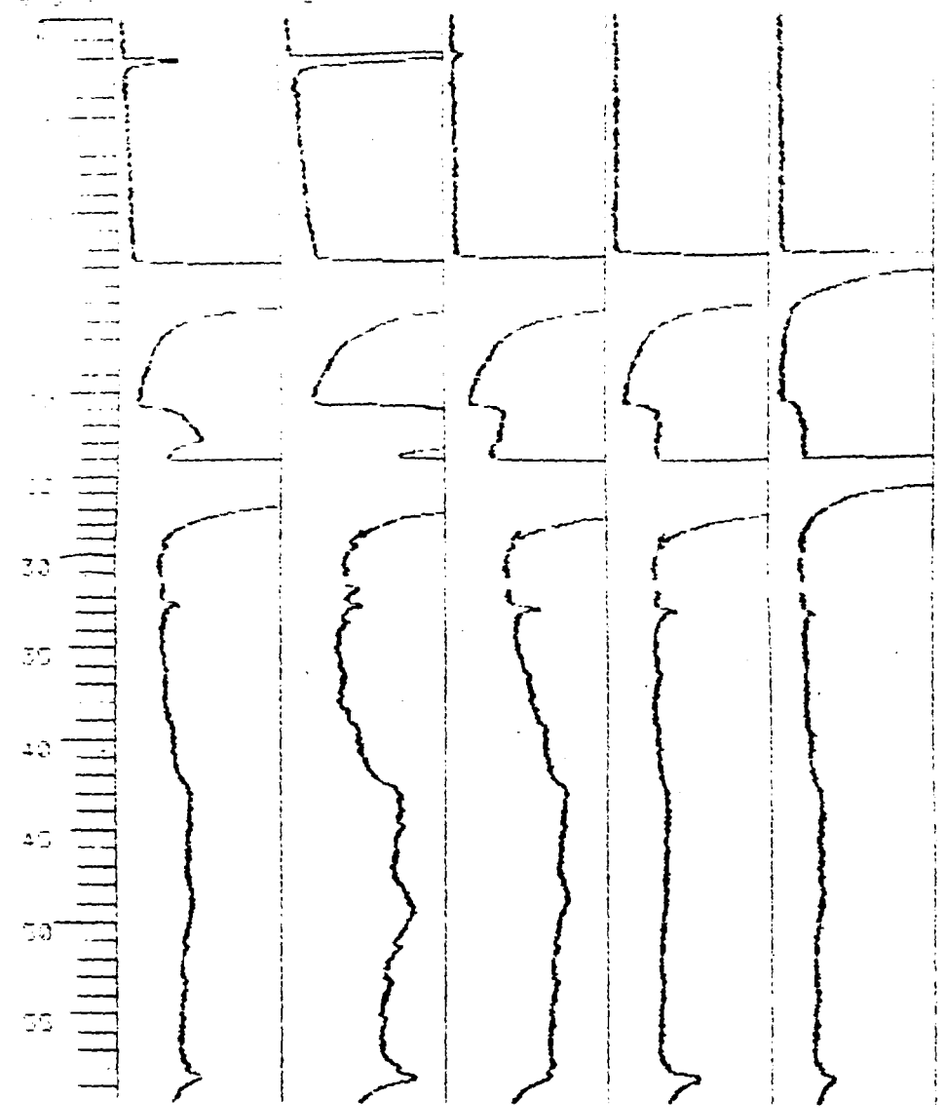


PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	22.933	344.91	BP	100.00	2.772	1.571	0.004	A/B	0.141
2	D	23.896	318.54	BB	72.052	1.459	2.985			
3	B	31.486	21.167	BB	0.774	0.793	0.477			
4	B	44.150	53.355	BB	1.951	0.524	1.373			
5	C	57.737	11.012	BP	100.00	0.380	0.483			
6	B	58.484	218.02	ABB	7.973	3.153	0.919			
7	D	58.536	123.56	ABB	27.948	2.340	0.732			

TOTAL AREA FOR SIGNAL A = 345
TOTAL AREA FOR SIGNAL B = 2734
TOTAL AREA FOR SIGNAL C = 11
TOTAL AREA FOR SIGNAL D = 442

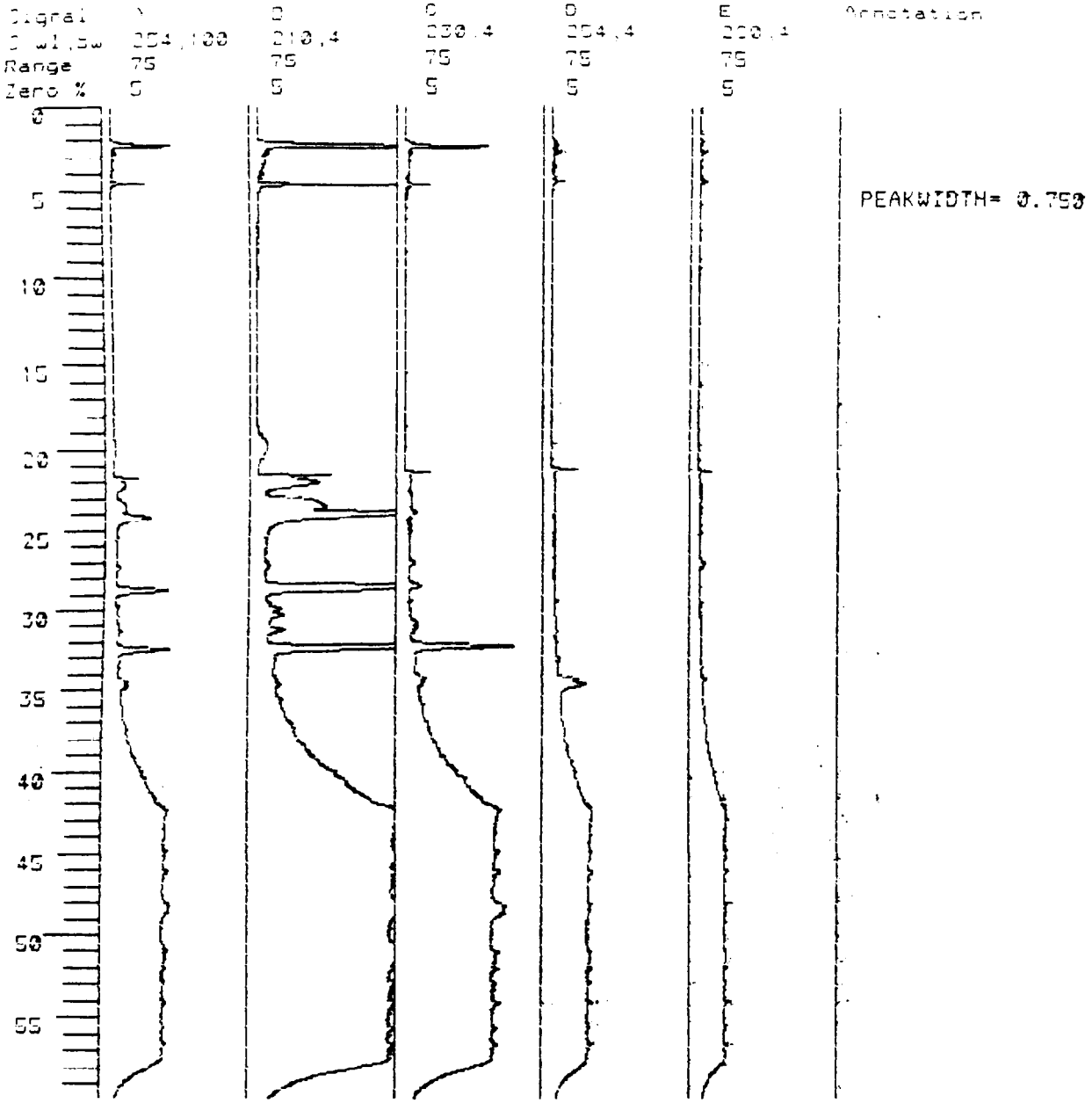


AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	STIME [min]	[illegible]
1	A	2.114	54.386	PB	0.157	3.339	0.232	0.000	[illegible]
2	A	13.427	8429.9	BP	24.343	136.68	0.693	0.000	[illegible]
3	B	21.408	170.38	BB	0.210	1.697	1.645		
4	B	22.710	121.17	BB	0.164	0.597	2.501		
5	A	22.820	475.87	BV	1.374	3.044	1.661		
6	B	22.852	2245.6	PV	3.048	18.974	1.432		
7	A	24.448	25670	VP	74.126	542.89	0.677	0.001	[illegible]
8	[illegible]	32.303	50.038	BB	0.083	1.730	0.518		
9	B	44.722	262.34	BB	0.450	0.992	3.304		
10	B	53.460	188.61	ABB	0.291	2.703	0.871		
11	B	60.526	100.20	ABB	0.173	2.120	3.743		

TOTAL AREA FOR SIGNAL A = 34630
TOTAL AREA FOR SIGNAL B = 51350

3284



AREA%

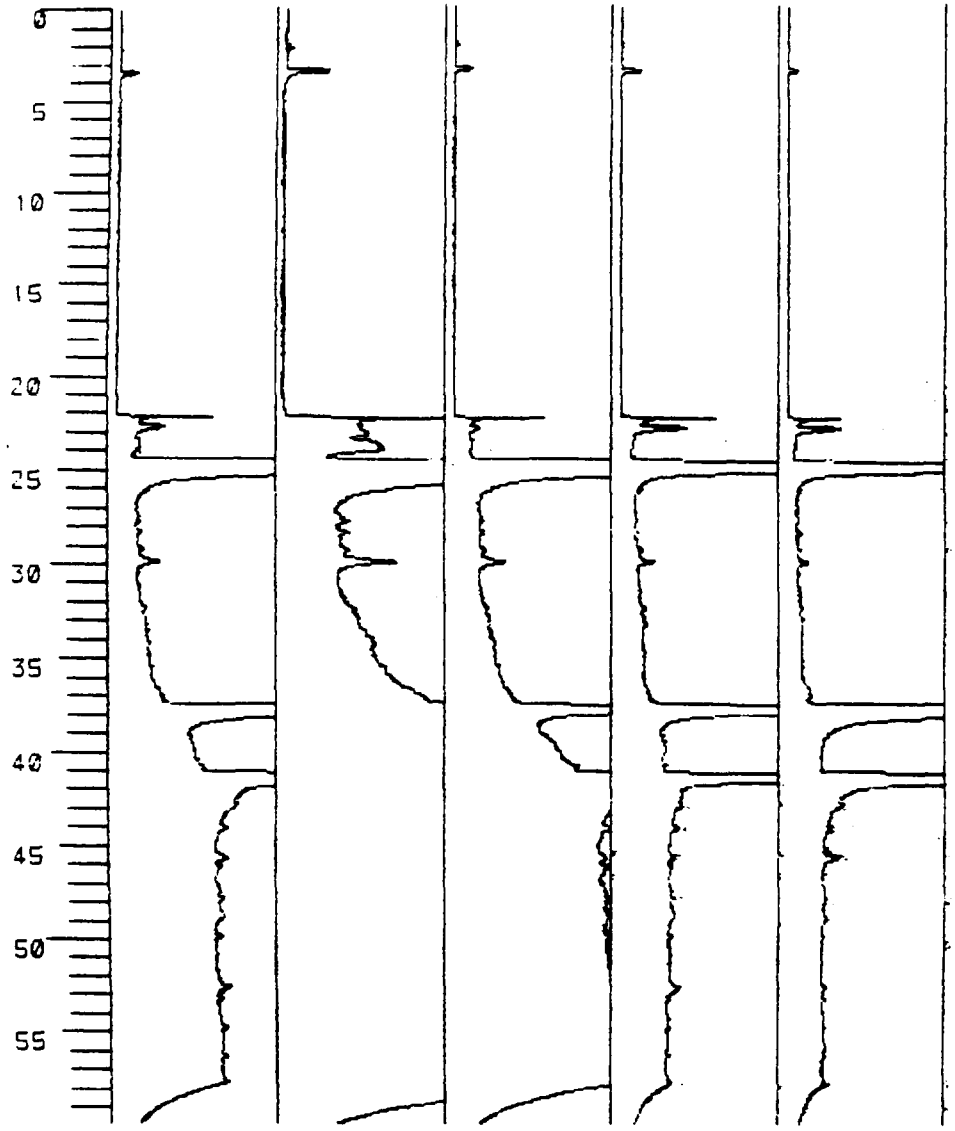
#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	C	2.092	25.853	BV	0.577	3.924	0.097			
2	A	2.316	248.06	BV	8.605	31.499	0.106	0.001	A/B	0.191
3	B	2.575	36.567	VV	0.093	5.065	0.102			
4	A	2.732	23.812	VV	0.826	2.407	0.148	0.008	A/B	0.311
5	A	4.498	76.981	VB	2.670	18.528	0.064	0.000	A/B	0.201
6	B	19.928	363.10	BP	0.924	4.952	1.137			
7	A	21.750	257.51	BV	8.933	10.551	0.500	0.005	A/C	7.112
8	B	22.176	1229.9	PV	3.129	30.569	0.600			
9	A	23.706	263.83	VV	9.152	5.335	0.824	0.007	A/B	0.177
10	A	24.219	467.40	VP	16.213	17.780	0.395	0.001	A/B	0.156
11	B	27.378	37.278	BP	0.095	2.048	0.279	0.004	B/C	0.834
12	A	28.779	542.11	PP	18.805	26.936	0.326	0.000	A/B	0.138
13	B	30.079	157.92	PV	0.402	7.221	0.386			
14	B	30.472	185.16	VV	0.471	8.910	0.346			
15	A	31.378	73.811	VP	2.560	2.196	0.490	0.004	A/B	0.431
16	A	32.503	487.97	PP	16.927	27.828	0.279	0.000	A/B	0.213
17	B	33.272	47.747	BP	4.524	2.011	0.416			

Integration & online plot of new analysis

VIAL 20 INJ 1 &APEXT 01/07/1900 23:31

STD 10897-1000

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	B	2.170	12.363	VP	0.003	3.329	0.062			
2	A	3.480	80.592	BB	0.079	7.582	0.144	0.000	A/B	0.327
3	A	22.170	340.44	BV	0.332	30.395	0.187	0.001	A/B	0.291
4	A	22.708	476.54	VV	0.465	19.642	0.404	0.000	A/C	1.555
5	B	22.977	1485.5	VV	0.325	37.173	0.550			
6	C	23.714	295.72	VV	0.178	5.884	0.757			
7	A	27.745	768.88	VV	0.760	5.356	0.726			

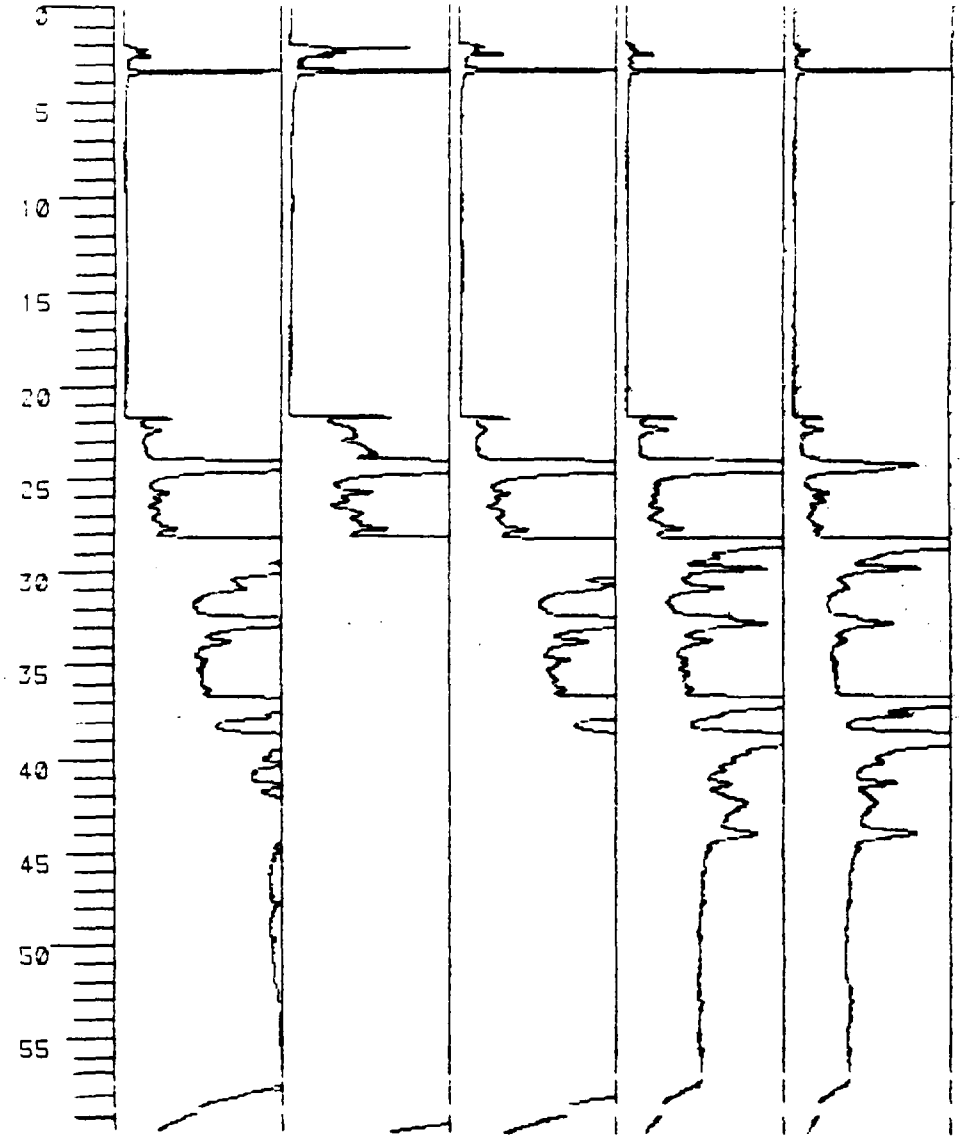
da1201:0703 [illegible]

Integration & online plot of new analysis

VIAL 21 INJ 1 &APEXT [illegible]

STD 10898-1000

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	200,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	2.152	80.786	BV	0.168	11.455	0.116	0.001	A/B	0.200
2	A	2.357	97.877	VV	0.204	9.157	0.152	0.011	A/B	0.459
3	A	2.550	114.33	VV	0.238	11.960	0.135	0.002	A/B	0.626
4	A	3.370	454.20	VB	0.947	85.550	0.080	0.000	A/B	0.510
5	D	21.844	161.24	BV	0.459	19.127	0.140	0.000	D/E	2.336
6	A	22.421	581.26	BV	1.212	13.091	0.655	0.008	A/C	0.827
7	B	22.756	1799.1	BV	0.409	28.462	0.807			
8	D	23.426	78.958	VV	0.225	3.591	0.366			
9	B	23.735	1725.8	VV	0.392	35.341	0.814			
10	A	24.271	6102.0	VV	12.724	212.62	0.426	0.001	A/B	[illegible]
11	D	25.769	301.61	VV	0.858	8.736	0.457			
12	A	25.792	213.90	VV	0.446	10.404	0.362	0.000	A/B	[illegible]
13	A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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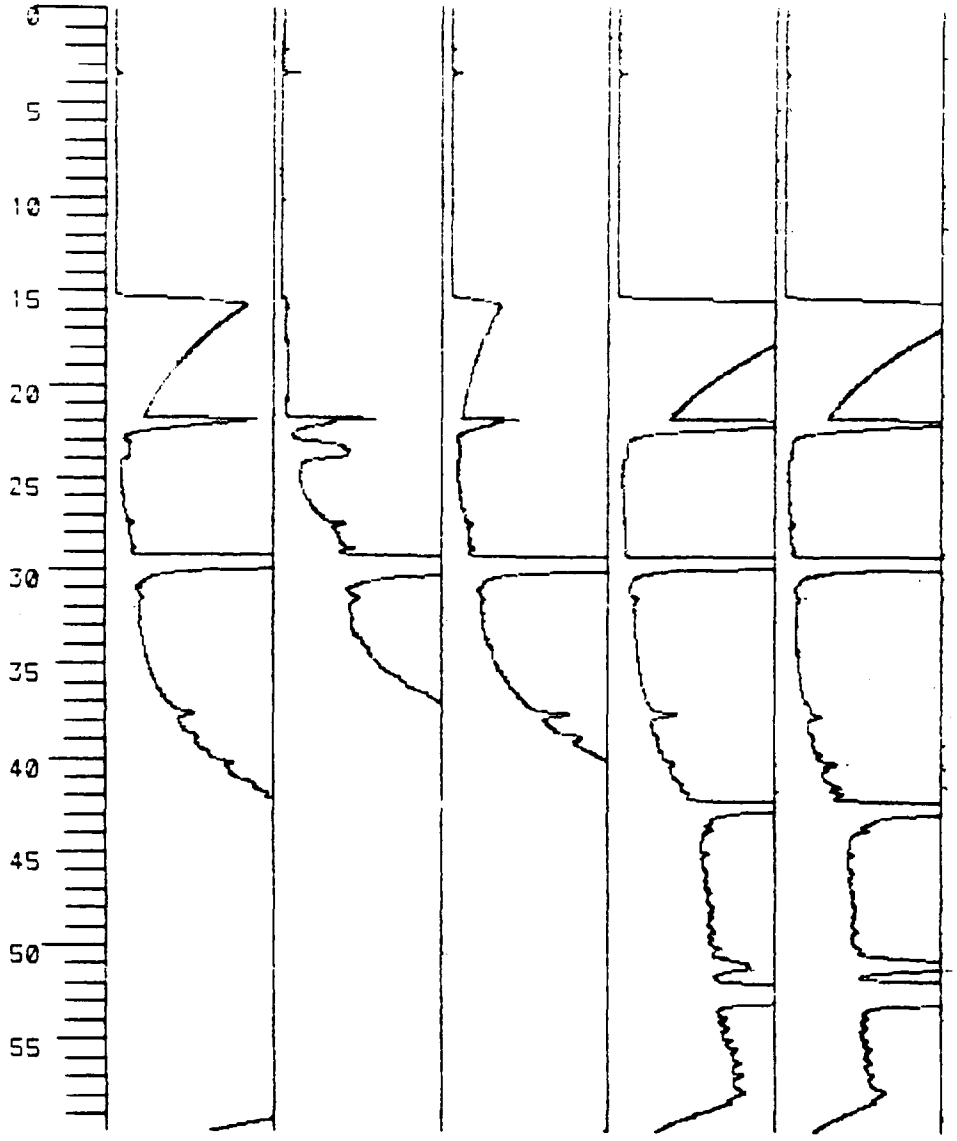
[illegible]

Integration & online plot of new analysis
VIAL 22 INJ 1 [illegible]

STD 10899-1000

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

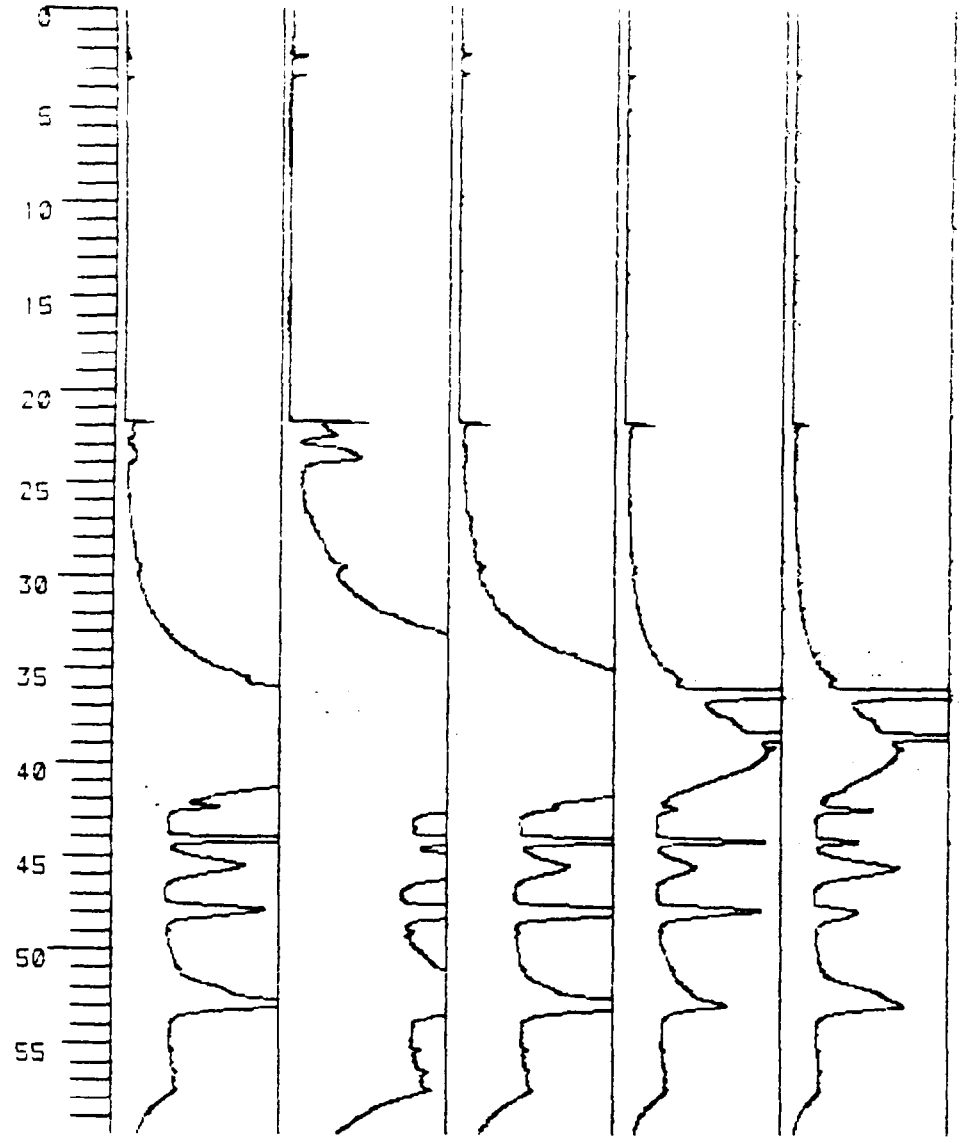
AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	B	2.163	9.432	BP	0.002	2.341	0.067			
2	A	3.433	15.113	BB	0.008	3.477	0.095	0.000	A/B	0.451
3	A	15.746	12243	BV	6.261	58.473	2.648	0.005	A/C	2.370
4	B	21.859	536.97	VV	0.088	20.685	0.435	0.019	B/C	0.812
5	A	21.900	1755.7	VV	0.898	57.132	0.491	0.004	A/D	0.521
6	C	23.375	63.666	VB	0.024	1.259	0.829			
7	A	23.553	252.79	VB	0.129	4.318	0.836			
8	B	23.591	1288.7	PP	0.212	23.702	0.891			
9	A	27.441	20.826	PV	0.011	2.744	0.215	0.004	A/B	0.070
10	A	28.757	57.372	OVV	0.029	2.230	0.429	0.001	A/B	0.085
11	A	29.410	23411	OVV	11.973	801.06	0.485	0.001	A/B	0.247
12	A	31.485	53.147	VV	0.027	1.893	0.418	0.007	A/B	0.225

Integration & online plot of new analysis

STD 10900-1000

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	200,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

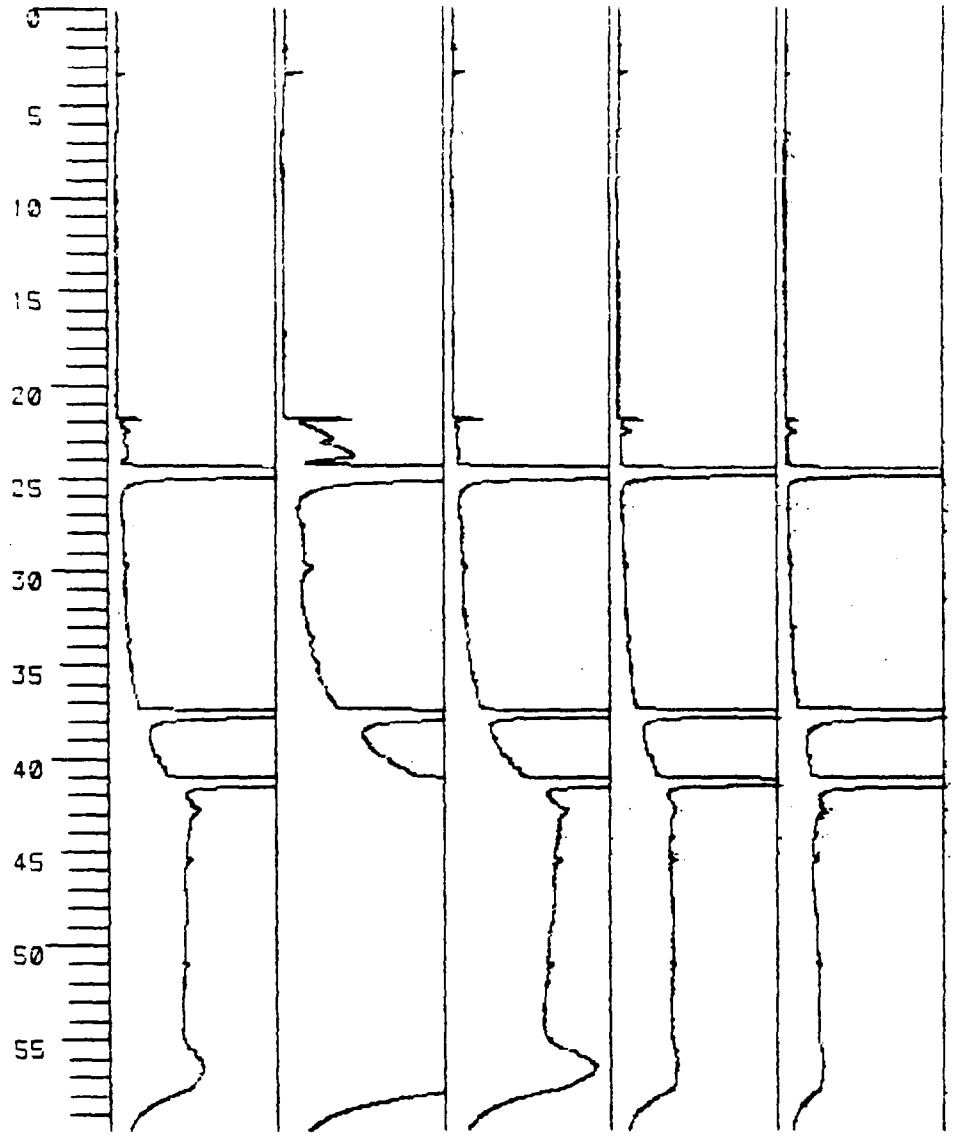
#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	2.425	15.957	BB	0.018	2.052	0.117	0.000	A/B	0.237
2	A	3.457	13.898	BB	0.016	3.159	0.115	0.001	A/B	0.493
3	A	21.841	219.15	BV	0.246	11.795	0.479	0.004	A/C	5.257
4	B	22.458	1026.4	BV	0.307	20.135	0.859			
5	A	23.724	225.94	VV	0.254	4.195	0.724	0.001	A/B	0.124
6	B	25.674	112.75	VV	0.034	3.895	0.447			
7	A	29.524	231.43	VV	0.260	3.438	0.892	0.004	A/B	0.095
8	D	29.790	1.937	BP	0.003	0.908	0.036			
9	D	35.468	1806.7	PV	2.923	19.286	1.561	0.001	D/E	[illegible]
10	A	36.174	41728	OVV	46.833	2263.6	0.281	0.001	A/B	[illegible]
11	C	36.243	72462	OVV	41.366	3599.3	0.336			
12	A	38.492	16595	VV	18.624	365.29	0.757	0.002	A/B	[illegible]
13	A	39.158	17744	VV	19.915	137.27	1.617	0.001	A/B	[illegible]
14	A	42.424	909.93	VV	1.021	30.865	0.412	0.007	A/B	[illegible]
15	A	44.131	2193.9	VV	2.462	104.90	0.318	0.001	A/B	[illegible]

Rawdata copied from DPU memory to
da1231:D702 [illegible]

Integration & online plot of new analysis
VIAL 30 INJ 1 &APEXT 01/08/1900 11:30

STD 10905-250

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



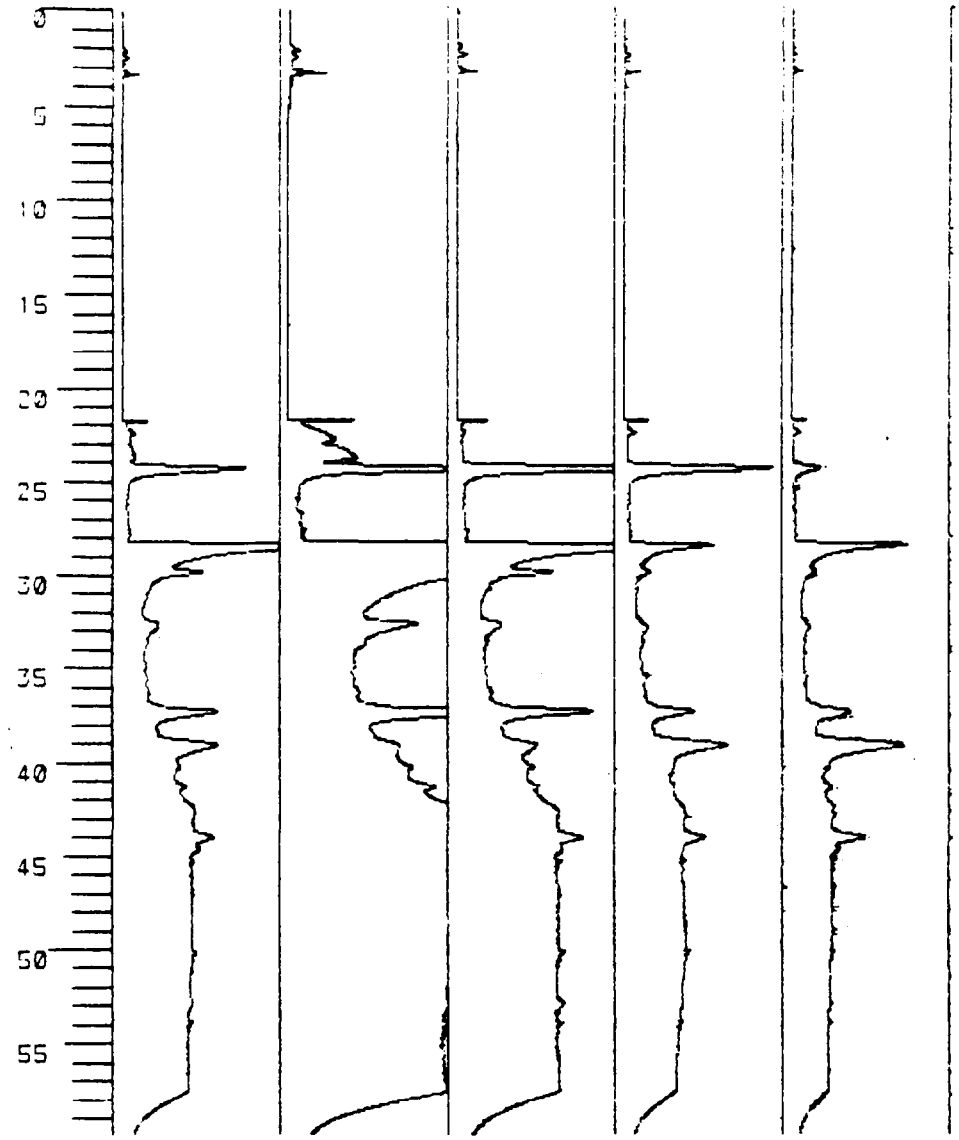
PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	3.367	16.044	BP	0.040	4.066	0.091	0.001	A/B	0.489
2	A	21.826	59.989	BV	0.151	7.618	0.131	0.002	A/C	0.904
3	A	22.428	189.83	VV	0.477	4.979	0.570	0.014	A/D	2.301
4	B	22.803	1089.4	BV	0.629	20.557	0.966			
5	A	23.736	218.79	VV	0.550	4.105	0.752	0.001	A/B	0.147
6	A	24.608	8533.2	OVV	21.446	331.46	0.411	0.000	A/B	0.136
7	B	28.171	271.70	VV	0.157	3.432	1.319			
8	B	29.098	105.00	VV	0.061	2.651	0.613			
9	D	29.734	31.469	BP	0.158	1.065	0.492			
10	A	29.762	109.23	VB	0.275	1.449	0.979	0.007	A/C	[illegible]
11	B	29.805	176.20	VB	0.102	5.124	0.502			
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.119			

STD 0906-250

Signal	A	B	C	D	E
S wl,bw	254,100	212,4	230,4	254,4	280,4
Range	75	75	75	75	75
Zero %	5	5	5	5	5



PEAKWIDTH= 0.750

AREA%

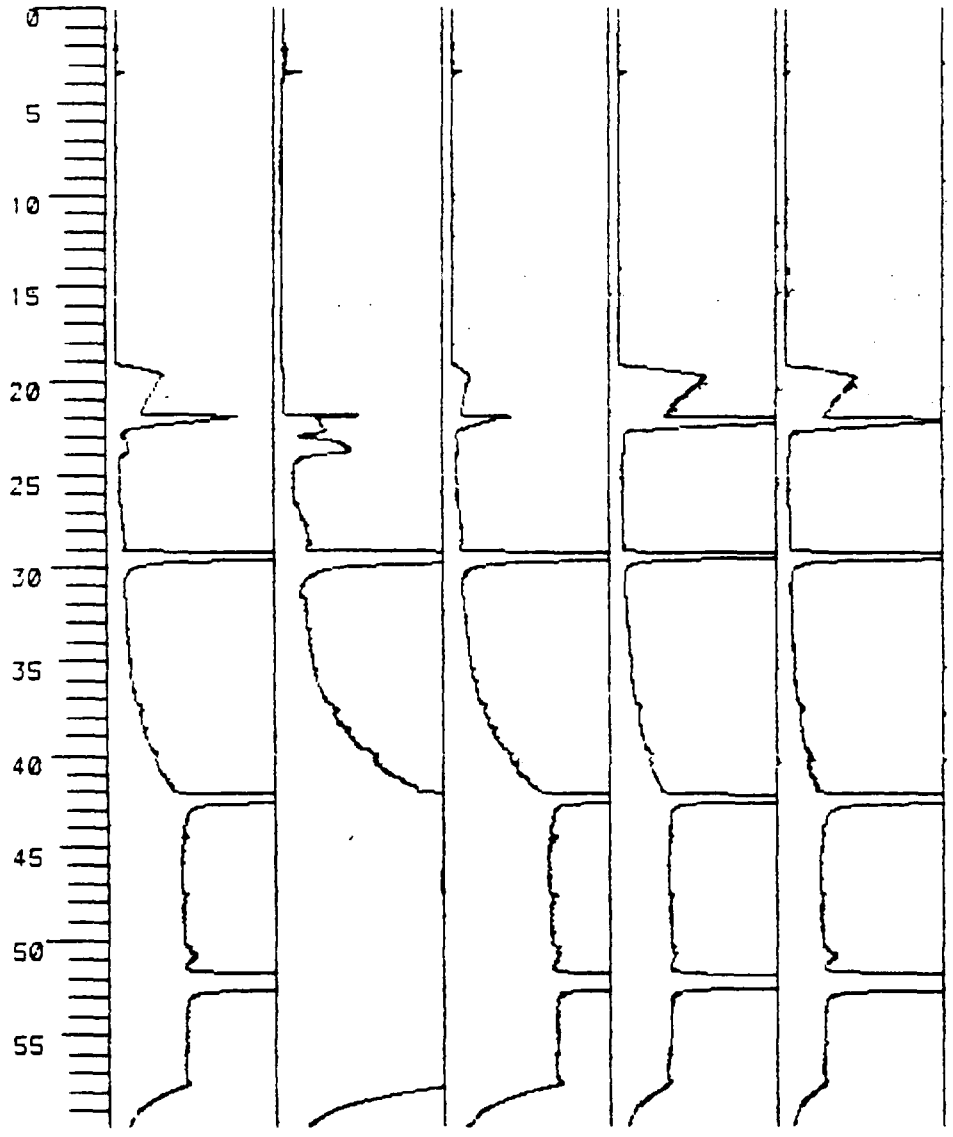
#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	B	2.137	13.618	VV	0.024	4.247	0.053			
2	A	2.490	21.148	VV	0.170	2.462	0.126	0.000	A/B	0.458
3	A	3.220	11.741	VV	0.094	2.156	0.085	0.001	A/B	0.231
4	A	3.347	29.426	VB	0.237	8.222	0.060	0.000	A/B	0.528
5	A	21.818	63.253	BV	0.509	10.792	0.098	0.001	A/B	0.411
6	A	22.420	195.06	VV	1.569	4.603	0.616	0.006	A/C	2.217
7	B	22.788	934.58	VV	1.663	20.405	0.606			
8	A	23.741	213.16	VV	1.714	4.330	0.654	0.005	A/B	0.150
9	A	24.335	1407.8	VP	11.321	54.447	0.391	0.001	A/B	2.333
10	B	26.902	41.821	PV	0.074	1.728	0.410	0.018	B/C	2.623
11	B	27.684	32.386	VP	0.058	1.434	0.367			
12	A	28.414	4244.9	PV	34.136	113.71	0.516	0.000	A/B	0.173
13	A	29.842	1409.4	VV	11.334	31.508	0.596	0.001	A/B	0.132
14	B	32.584	2412.1	VV	4.291	38.763	0.807			
15	A	32.658	577.65	VV	4.645	8.739	0.956			

***** END OF REPORT *****

Rawdata copied from DPU memory to
da1311:D702 01/08/1900 12:40

Integration & online plot of new analysis
VIAL 32 INJ 1 &APEXT 01/08/1900 13:52
STD 10907-250

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	3.370	14.356	BB	0.035	3.913	0.061	0.000	A/B	0.5[illegible]
2	A	19.744	2290.6	BV	5.611	20.613	1.524	0.000	A/C	3.04[illegible]
3	C	21.866	567.05	VP	1.823	19.546	0.420			

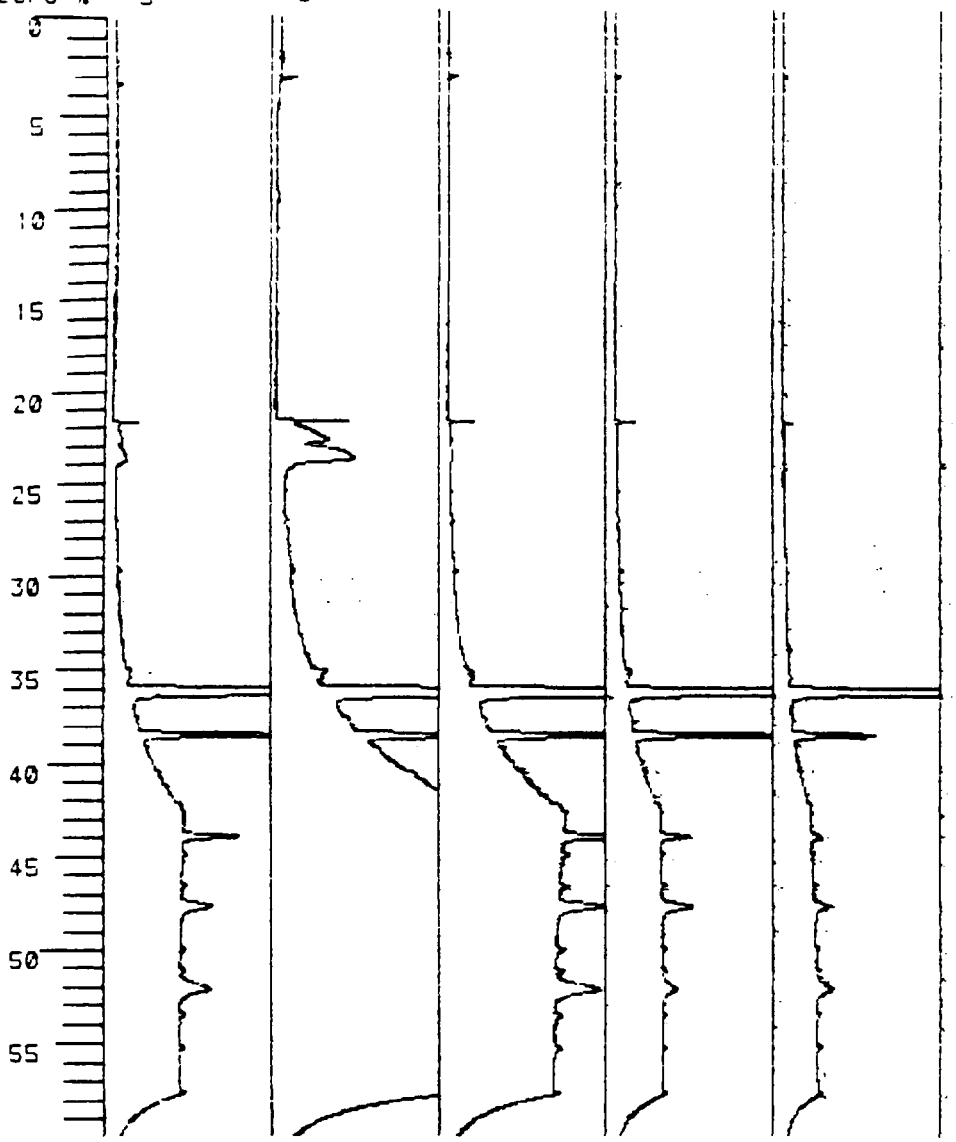
Rawdata copied from DPU memory to
da1010:0722

09/27/1995 [illegible]

Integration & online plot of new analysis
VIAL 33 INJ 1 &APEXT 09/27/1995 7:42

STD 10908-250

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	200,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

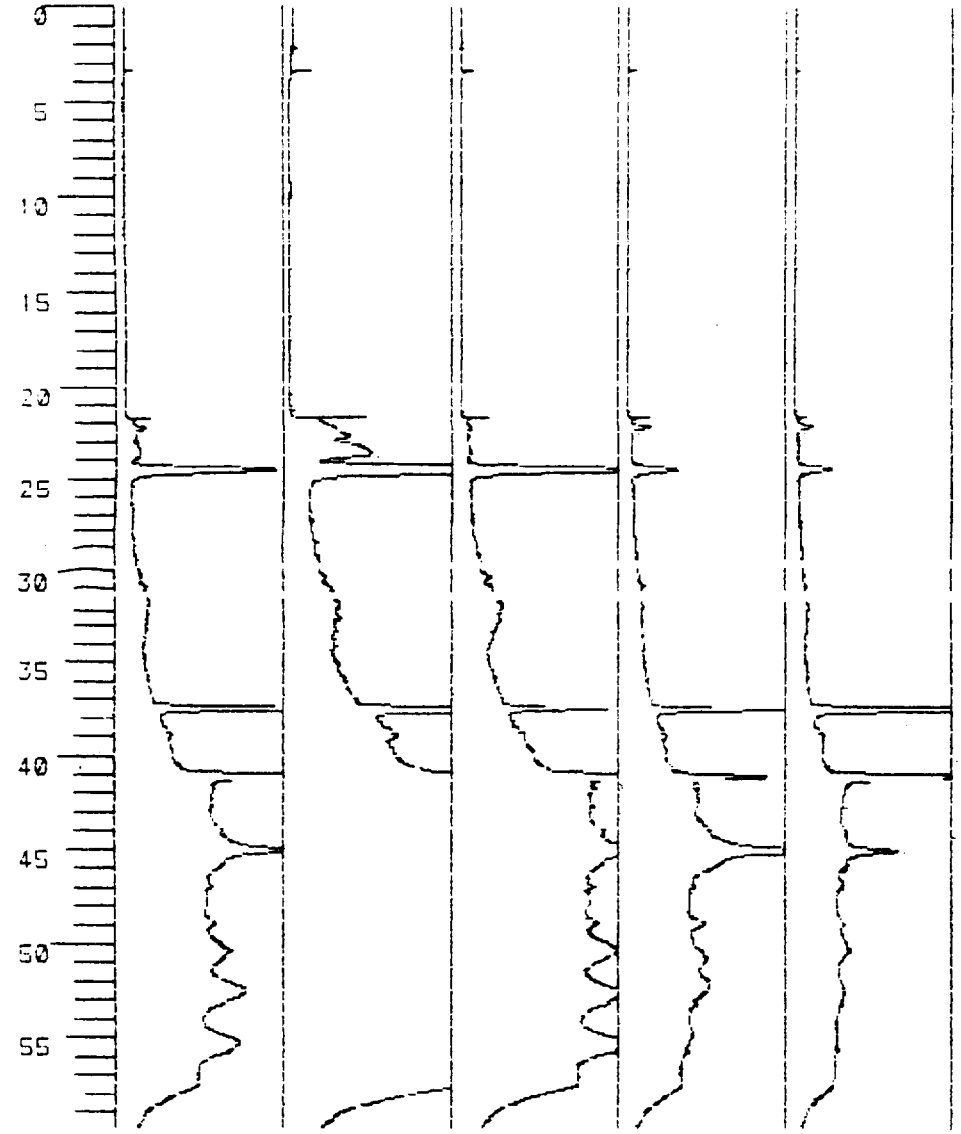
AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	3.374	14.587	BB	0.091	3.549	0.101	0.000	A/B	0.490
2	A	21.748	56.609	BV	0.354	9.863	0.096	0.003	A/B	0.046
3	A	22.749	187.24	VV	1.171	3.735	0.679			
4	A	23.723	275.14	VP	1.721	5.110	0.715	0.003	A/B	0.150
5	A	29.760	34.240	PP	0.214	1.009	0.521	0.000	A/B	0.377
6	D	35.074	2.856	BP	0.025	2.320	0.135			
7	A	36.128	11285	OPV	70.597	688.23	0.265	0.000	A/B	0.227
8	A	38.475	861.63	VV	5.390	65.490	0.217	0.000	A/B	0.355
9	A	42.636	1230.4	VV	7.698	9.207	1.698	0.005	A/B	0.155
10	B	43.307	2169.5	VV	3.077	53.665	0.674			
11	A	43.898	738.35	VV	4.619	30.362	0.354	0.001	A/B	0.134
12	A	44.855	164.15	VV	1.027	4.731	0.577	0.002	A/B	[illegible]

VIAL 47 INJ 1 &APEXT 09/20/1995 13:43

STD 10901-25

Signal	A	B	C	D	E	Annotation
Wl.bw	254.100	210.4	230.4	254.4	290.4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

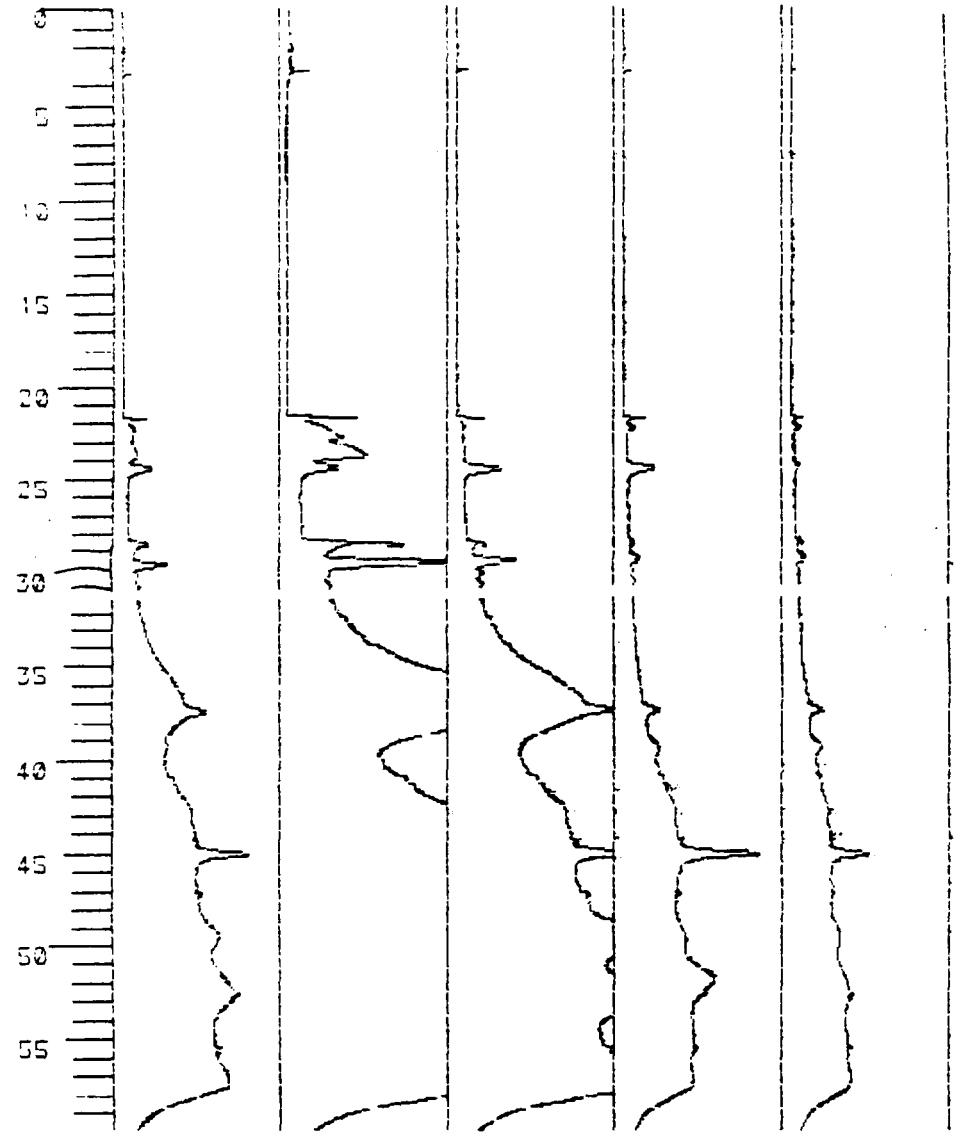
AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	3.342	14.609	BB	0.029	4.806	0.051	0.000	A/B	0.472
2	A	21.768	65.542	BV	0.132	10.263	0.106	0.002	A/C	0.729
3	A	22.251	188.31	VV	0.379	7.724	0.442	0.001	A/C	1.369
4	A	22.781	98.501	VV	0.198	3.967	0.414	0.005	A/B	0.065
5	C	23.552	260.88	VV	0.358	3.462	1.056			
6	A	23.704	265.66	VV	0.534	4.955	0.871	0.004	A/B	0.141
7	A	24.560	1474.5	VV	2.967	65.203	0.358	0.000	A/B	0.186
8	B	26.941	394.24	VV	0.298	7.167	0.725			
9	A	30.397	327.40	VV	0.659	4.079	1.015	0.003	A/B	0.191
10	D	30.918	48.764	VV	0.263	2.304	0.353			
11	A	31.535	477.22	VV	0.960	7.326	0.904	0.003	A/B	0.379
12	A	32.220	566.05	VV	1.139	6.752	1.103	0.000	A/B	0.631
13	C	32.518	1717.4	VV	2.354	14.730	1.467			
14	B	33.134	605.50	VV	0.457	15.980	0.519			
15	D	33.173	67.402	VV	0.363	1.127	0.997			
16	A	33.746	240.92	VV	0.485	5.368	0.748	0.019	A/B	0.333

Rawdata copied from CPU memory to
ga2471:0721 03/20/1995 13:43

Integration & online plot of new analysis
VIAL 46 INJ 1 &APEXT 03/20/1995 14:33
STD 10902-25

Signal	A	B	C	D	E	Annotation
Wavelength	254.100	210.4	230.4	254.4	280.4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



AREA%

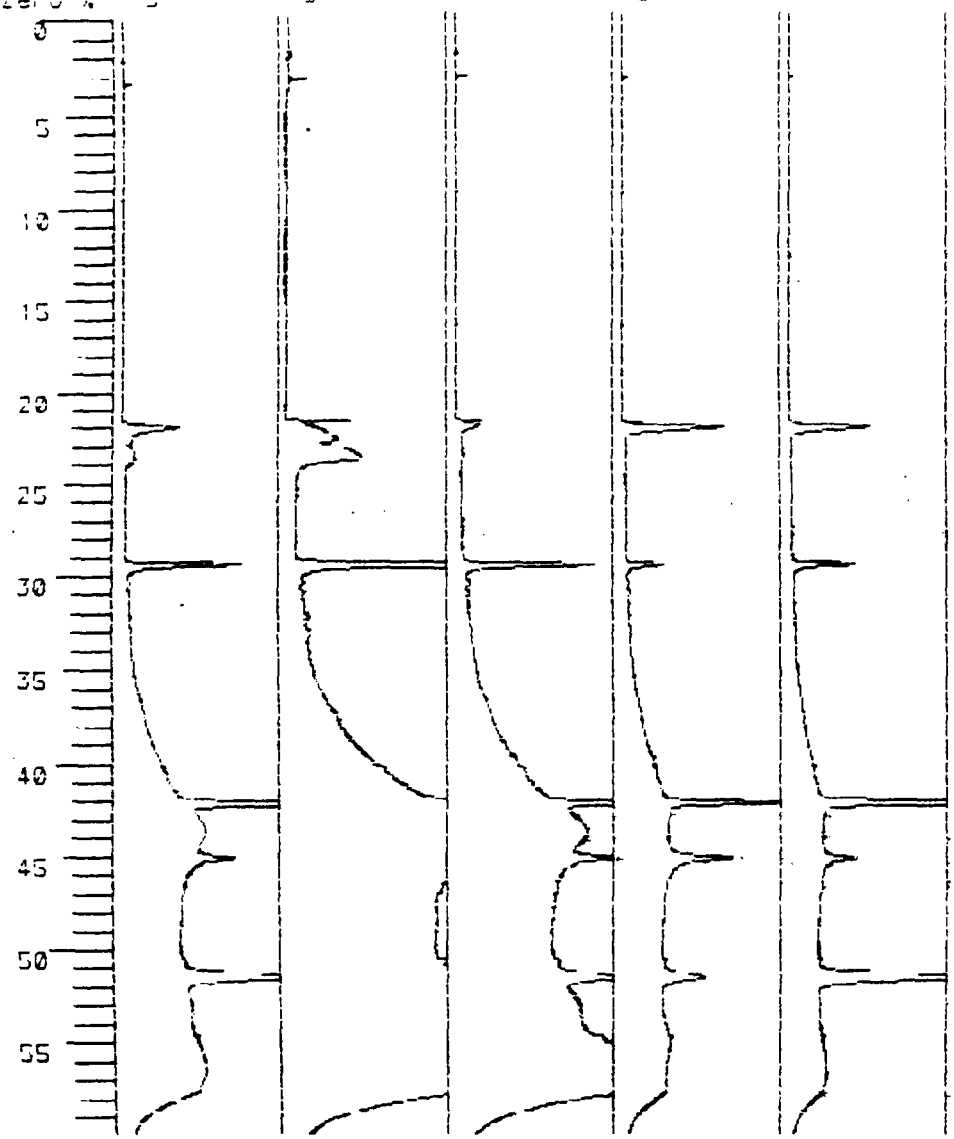
#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	3.340	14.293	VB	0.031	4.551	0.052	0.000	A/B	0.327
2	A	21.744	61.968	BV	0.134	10.124	0.102	0.000	A/B	0.382
3	A	22.266	124.00	VV	0.267	4.823	0.441	0.019	A/C	1.598
4	A	22.750	102.14	VV	0.220	3.825	0.445	0.015	A/B	0.092
5	A	23.707	254.60	VV	0.549	4.815	0.773	0.004	A/B	0.143
6	A	24.397	287.10	VB	0.619	11.567	0.381	0.007	A/B	0.447
7	A	28.551	359.24	BV	0.775	9.214	0.553	0.002	A/B	0.210
8	A	29.837	492.37	VV	1.062	17.471	0.412	0.000	A/B	0.240
9	C	30.399	172.40	VV	0.214	7.344	0.391			
10	A	30.944	128.19	VV	0.276	4.445	0.481	0.007	A/C	0.541

***** END OF REPORT *****

Rawdata copied from DPU memory to
da2481:0701 09/20/1985 14:[illegible]

Integration & online plot of new analysis
VIAL 49 INJ 1 &AFEXT 09/20/1985 [illegible]
STD 10903-25

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	280,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

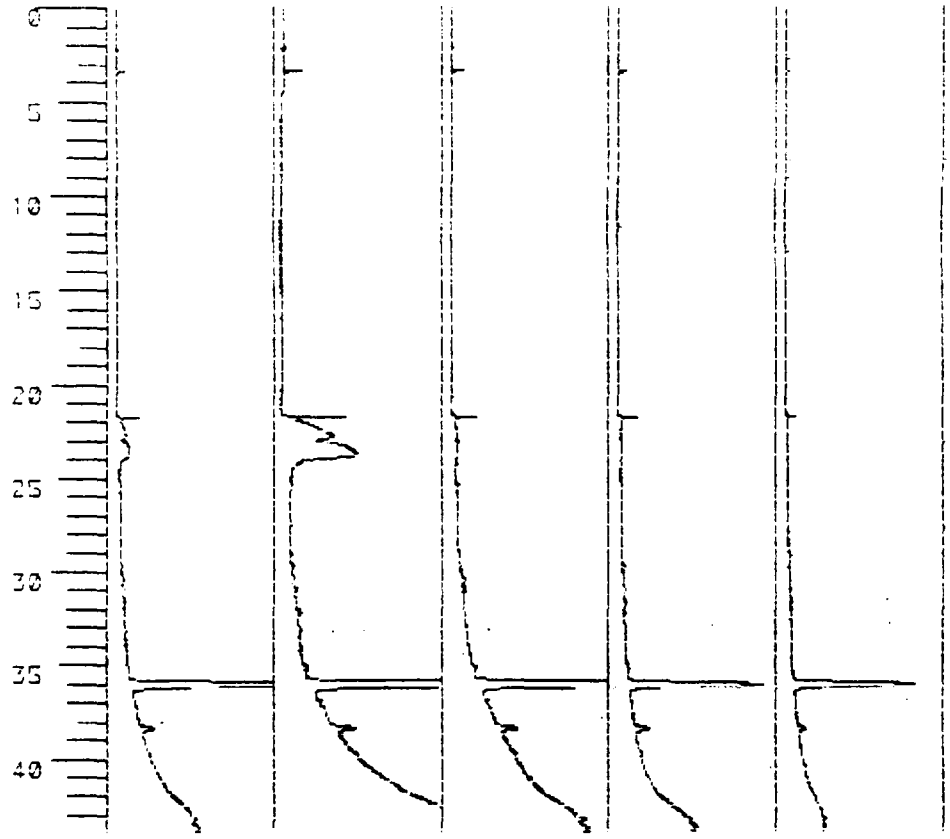
AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	3.333	11.614	BB	0.065	3.870	0.075	0.000	A/B	0.525
2	A	21.995	709.03	BV	3.953	25.029	0.405	0.005	A/C	3.12[illegible]
3	B	22.730	1224.0	BV	2.425	21.858	0.726			
4	A	23.701	276.94	VP	1.544	4.796	0.768	0.005	A/B	[illegible]
5	A	29.381	796.17	BV	4.439	52.972	0.238	0.000	A/B	0.301
6	B	30.379	31.122	VP	0.062	1.912	0.252	0.018	B/C	1.1[illegible]
7	B	30.929	27.168	PV	0.054	1.587	0.285	0.001	B/C	1.[illegible]
8	B	31.584	36.313	VV	0.072	1.160	0.522			
9	B	32.224	55.205	VV	0.109	2.405	0.345			

[redacted]
da2431:D701 03/28/1985 16:06

Integration & online plot of new analysis
VIAL 50 INJ 1 &APEXT 03/22/1985 17:17
STD 10904-25

Signal	A	B	C	D	E	Annotation
S wl,bw	254,100	210,4	230,4	254,4	220,4	
Range	75	75	75	75	75	
Zero %	5	5	5	5	5	



PEAKWIDTH= 0.750

AREA%

#	SI	TIME [min]	AREA [mAUs]	TYPE	AREA%	HEIGHT [mAU]	WIDTH [min]	dTIME [min]		QUOTIENT [area]
1	A	3.343	12.606	BB	0.609	4.139	0.093	0.000	A/B	0.498
2	A	21.745	51.469	BV	2.487	8.714	0.098	0.000	A/B	0.044
3	C	22.698	97.083	VV	3.536	1.987	0.695			
4	A	22.728	188.43	VV	9.104	3.743	0.698			
5	A	23.713	272.52	VP	13.167	4.845	0.801	0.002	A/B	0.154
6	B	30.430	36.861	PP	0.543	1.014	0.606			
7	B	30.918	14.070	PB	0.207	1.159	0.202	0.005	B/C	0.735
8	B	32.233	44.419	BB	0.655	1.689	0.477			
9	A	36.025	1480.5	PP	71.531	107.57	0.231	0.000	A/B	0.404
10	A	38.376	64.199	PP	3.102	5.989	0.179	0.002	A/B	0.353

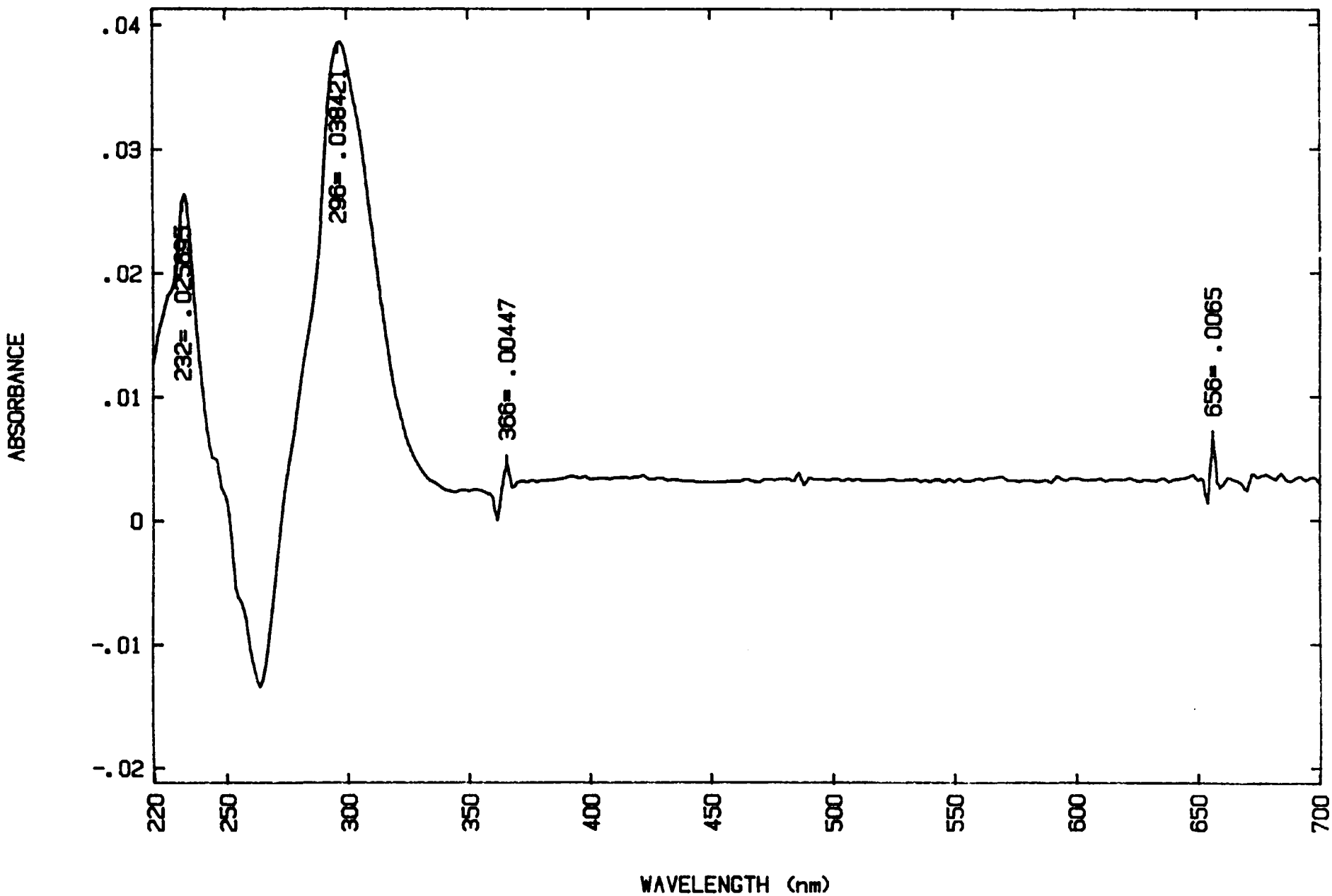
TOTAL AREA FOR SIGNAL A = 2070
TOTAL AREA FOR SIGNAL B = 6785
TOTAL AREA FOR SIGNAL C = 2746
TOTAL AREA FOR SIGNAL D = 1063
TOTAL AREA FOR SIGNAL E = 752

MUL FACTOR = 1

AREA% FOR SIGNAL A

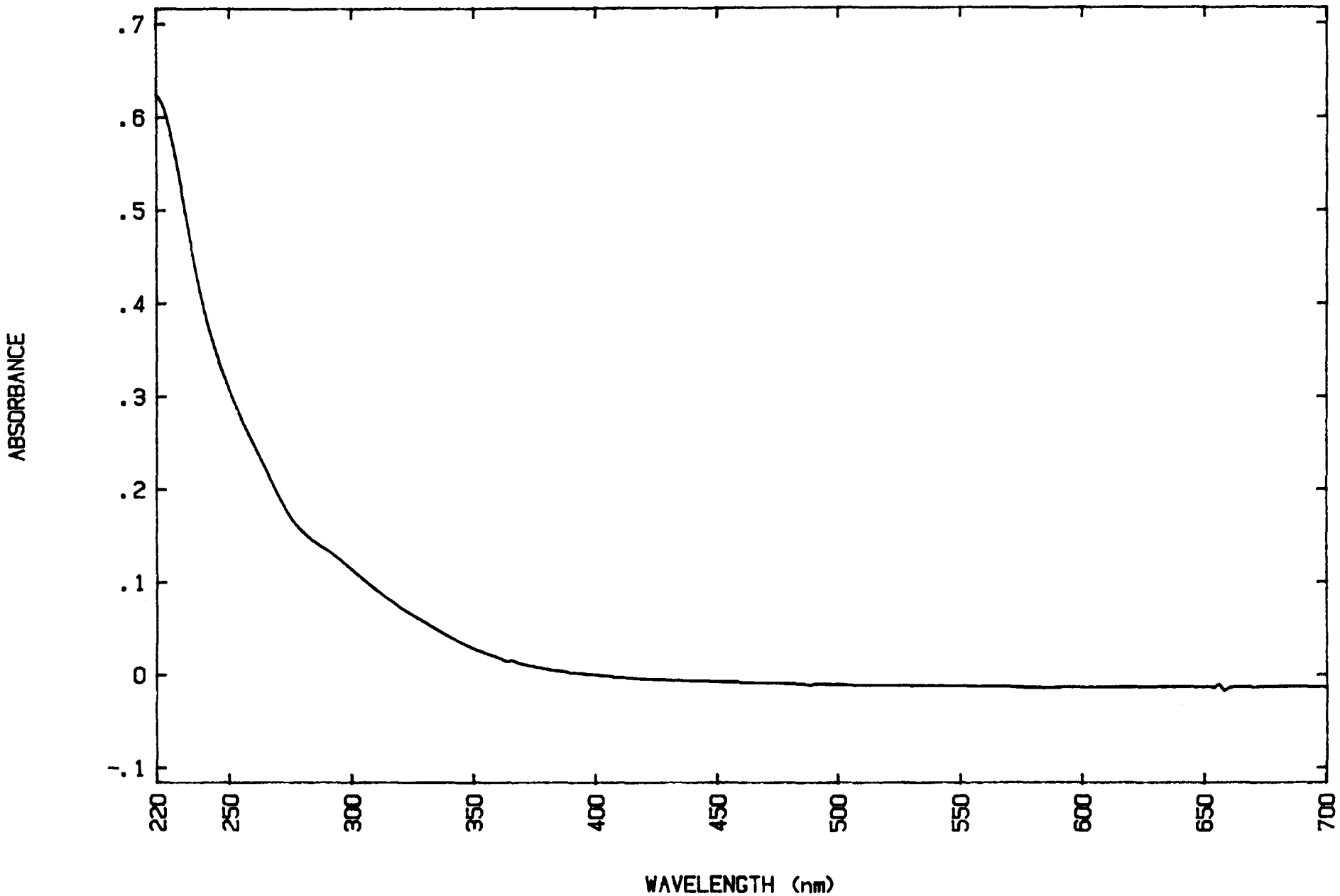
Appendix A3

Total Aromatics and Derivatized Appendix VIII Compounds by UV/VIS



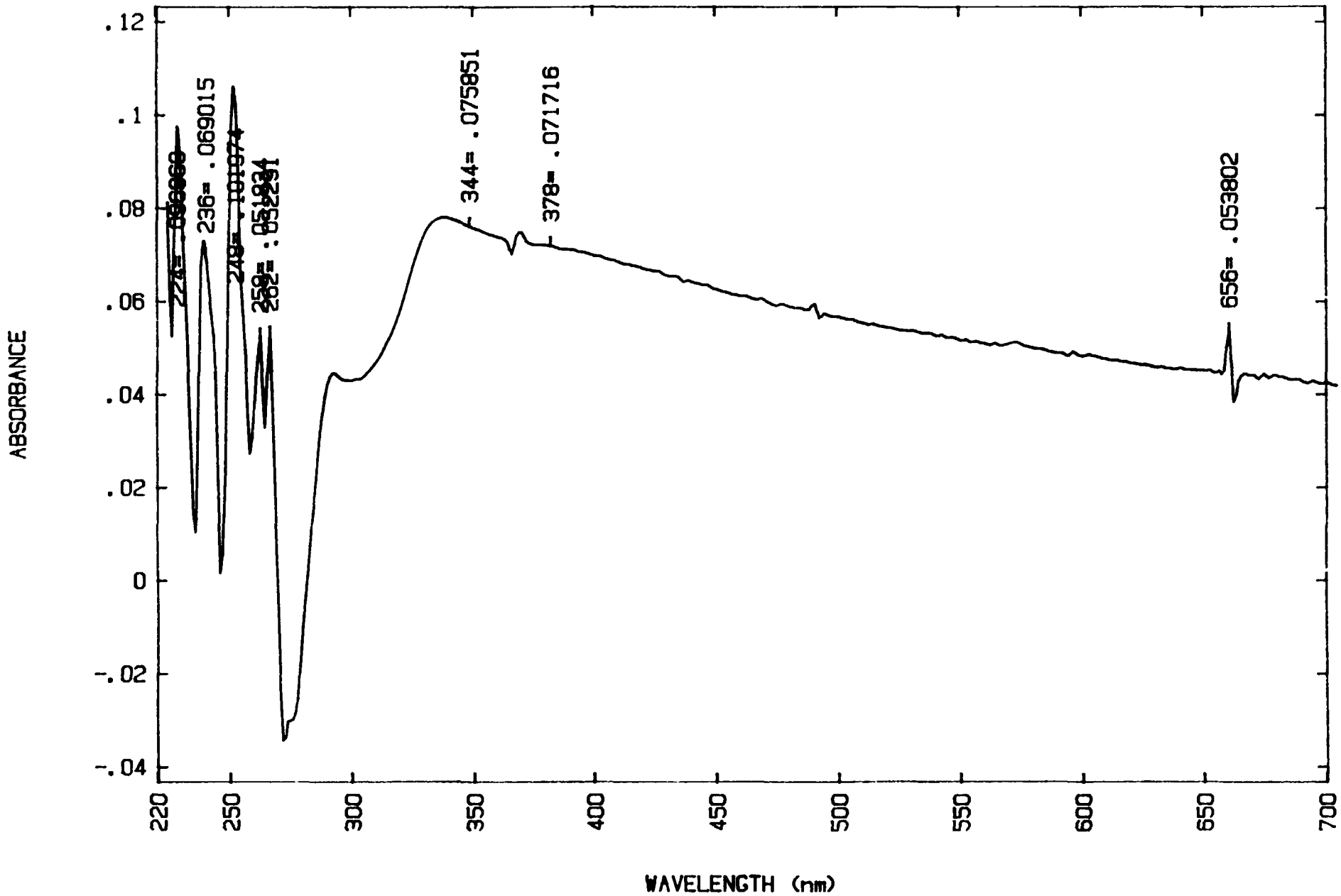
J3284/QC3426
(Hexane)

Method 8610- QC3426



J3284/QC3426

Method 8610 - QC 3427



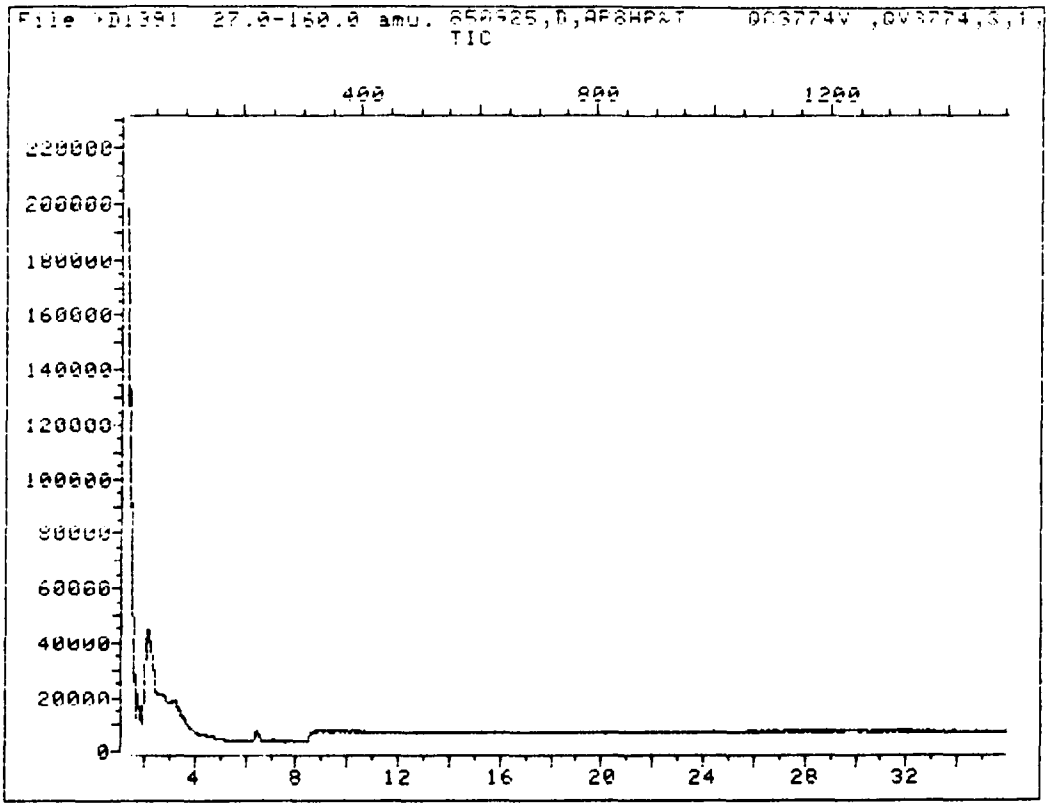
J3284/QC3511

Method 8630-QC3511

Appendix C1

GC/MS Subsidiary Data

TOTAL ION CHROMATOGRAM



Data File: >D1391
Name: 850925,D,AP8HP&T
Misc: QC3774V ,QV3774,S,1,1,

Id File: DAP8DI::US
Title: DAI APENDIX 8 ID FILE
Last Calibration: 850926 06:25

Operator ID: RR0835
Quant Time: 850926 06:26
Injected at: 850925 21:30

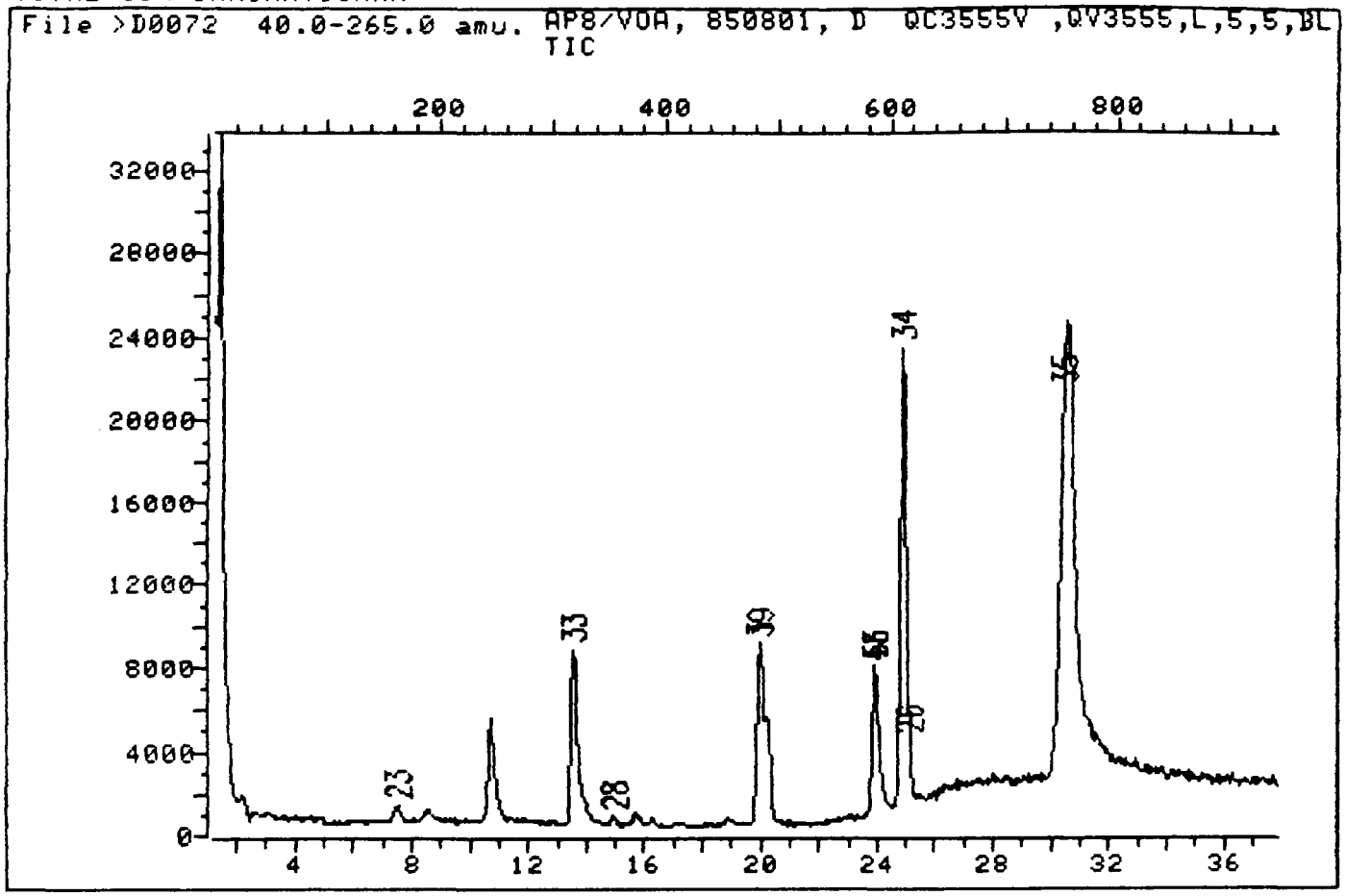
QUANT REPORT

Operator ID: RR0835 Quant Rev: 4 Quant Time: 850926 06:26
Output File: ^D1391::U6 Injected at: 850925 21:30
Data File: >D1391::U1 Dilution Factor: 1.00
Name: 850925,D,AP8HP&T
Misc: QC3774V ,QV3774,S,1,1,

ID File: DAP8DI::US
Title: DAI APENDIX 8 ID FILE
Last Calibration: 850926 06:25

Compound	R.T.	Scan#	Area	Conc	Units	q

TOTAL ION CHROMATOGRAM



Data File: >D0072::U1
Name: AP8/VOA, 850801, D
Misc: QC3555V ,QV3555,L,5,5,BLANK

Id File: DAP8PT::US
Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, I
Last Calibration: 850801 23:52

Operator ID: DS3476
Quant Time: 850802 00:55
Injected at: 850801 18:02

QUANT REPORT

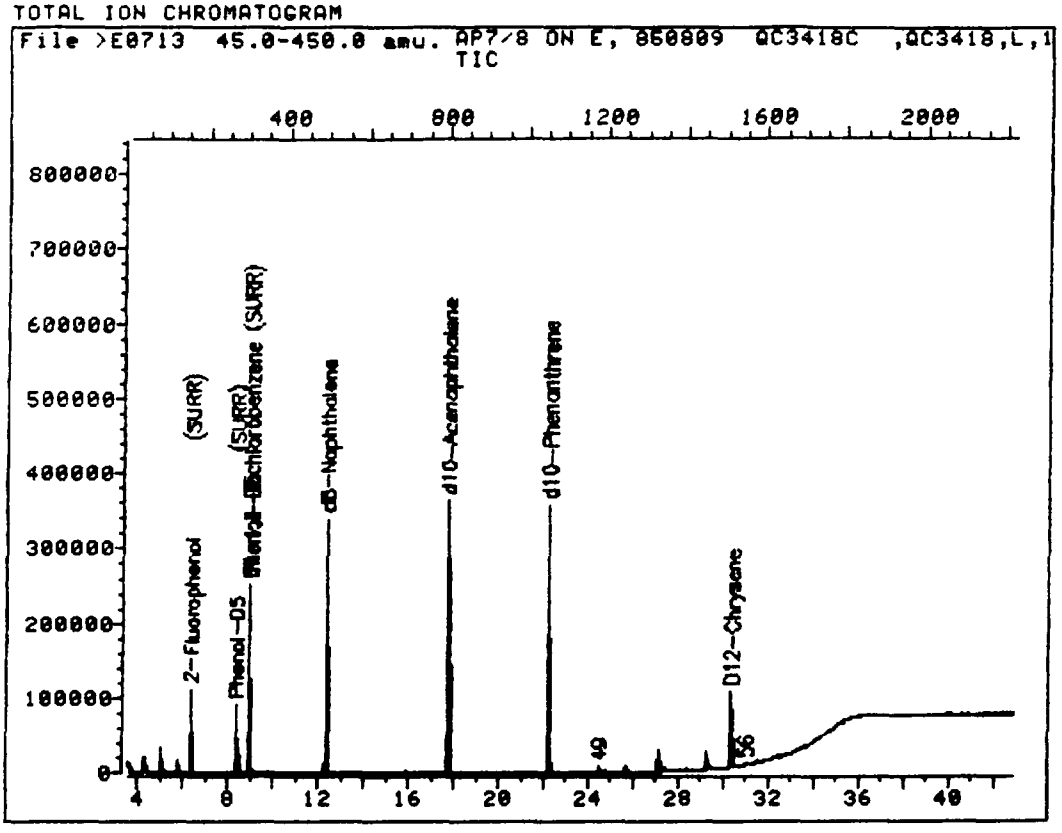
Operator ID: DS3476 Quant Rev: 4 Quant Time: 850802 00:55
Output File: ^D0072::AQ Injected at: 850801 18:02
Data File: >D0072::U1 Dilution Factor: 1.00
Name: AP8/VOA, 850801, D
Misc: QC3555V ,QV3555,L,5,5,BLANK

ID File: DAP8PT::US
Title: IDFILE, PURGEABLE PRIORITY POLLUTANTS, I
Last Calibration: 850801 23:52

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*2-Bromo-1-chloropropane		20.00	484	45093	200.00	NG	97
23)	Methylene chloride		7.52	163	2490	21.50	NG	84
26)	Toluene		25.13	616	2233	4.83	NG	96
28)	1,1,1-Trichloroethane		14.95	354	1970	10.09	NG	90
33)	1,2-Dichloroethane-D4	(SURR)	13.59	319	25067	265.40	NG	89
34)	Toluene-D8	(SURR)	24.94	611	111847	275.20	NG	93
35)	p-Bromofluorobenzene	(SURR)	30.46	753	53029	274.75	NG	97
39)	1,2-Dibromoethane		20.00	484	2025	~~16.82~~	NG	78
41)	1,4-Dichloro-2-butene		23.93	585	2426	~~12.14~~	NG	100
53)	*1,4-Dichlorobutane		23.96	586	51700	200.00	NG	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >E0713::U4
Name: AP7/8 ON E, 850809
Misc: QC3418C ,QC3418,L,1000,1 BTL#18

Id File: EBNA8::US
Title: BN & ACID IDFILE FOR APPENDIX 8
Last Calibration: 850810 19:53

Operator ID: TM0576
Quant Time: 850810 21:27
Injected at: 850810 13:44

QUANT REPORT

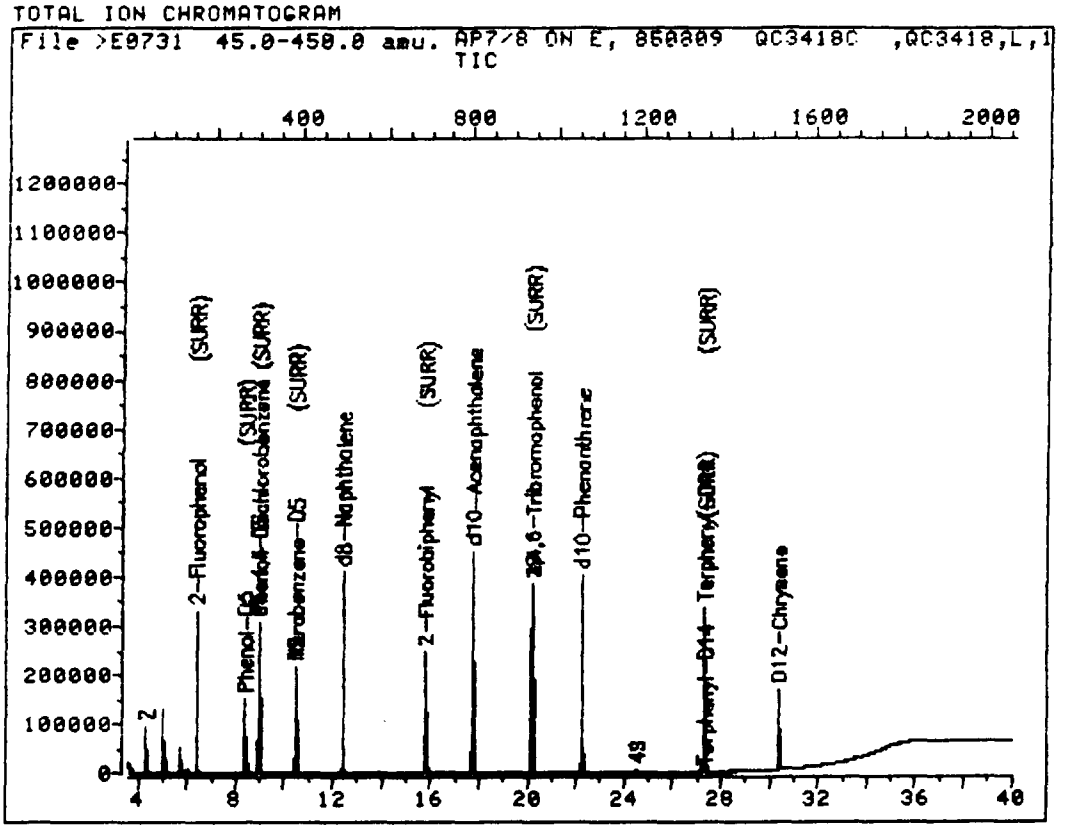
Operator ID: TM0576 Quant Rev: 4 Quant Time: 850810 21:27
Output File: ^E0713::AQ Injected at: 850810 13:44
Data File: >E0713::U4 Dilution Factor: 1.00
Name: AP7/8 ON E, 850809
Misc: QC3418C ,QC3418,L,1000,1 BTL#18

ID File: EBNA8::US
Title: BN & ACID IDFILE FOR APPENDIX 8
Last Calibration: 850810 19:53

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene		8.94	304	160660	40.00	UG/ML	91
10)	2-Fluorophenol	(SURR)	6.34	157	69531	31.85	UG/ML	100
12)	Phenol-D5	(SURR)	8.34	270	77512	23.93	UG/ML	90
12)	Phenol-D5	(SURR)	8.94	304	677	~~.21~~	~~UG/ML~~ 850823	72
13)	*d8-Naphthalene		12.35	497	361522	40.00	UG/ML	94
27)	*d10-Acenaphthalene		17.70	800	218733	40.00	UG/ML	94
43)	*d10-Phenanthrene		22.19	1054	387224	40.00	UG/ML	97
49)	Di-n-butyl phthalate		24.47	1183	11015	1.17	UG/ML	96
51)	*D12-Chrysene		30.34	1515	103348	40.00	UG/ML	97
56)	bis(2-Ethylhexyl)phthalate		30.99	1552	945	~~.38~~	~~UG/ML~~ 850823	93

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >E0731::U4
Name: AP7/8 ON E, 850809
Misc: QC3418C ,QC3418,L,1000,1 BTL#36

Id File: EBNA8::US
Title: BN & ACID IDFILE FOR APPENDIX 8
Last Calibration: 850810 19:53

Operator ID: SJ3562
Quant Time: 850811 07:44
Injected at: 850811 07:01

QUANT REPORT

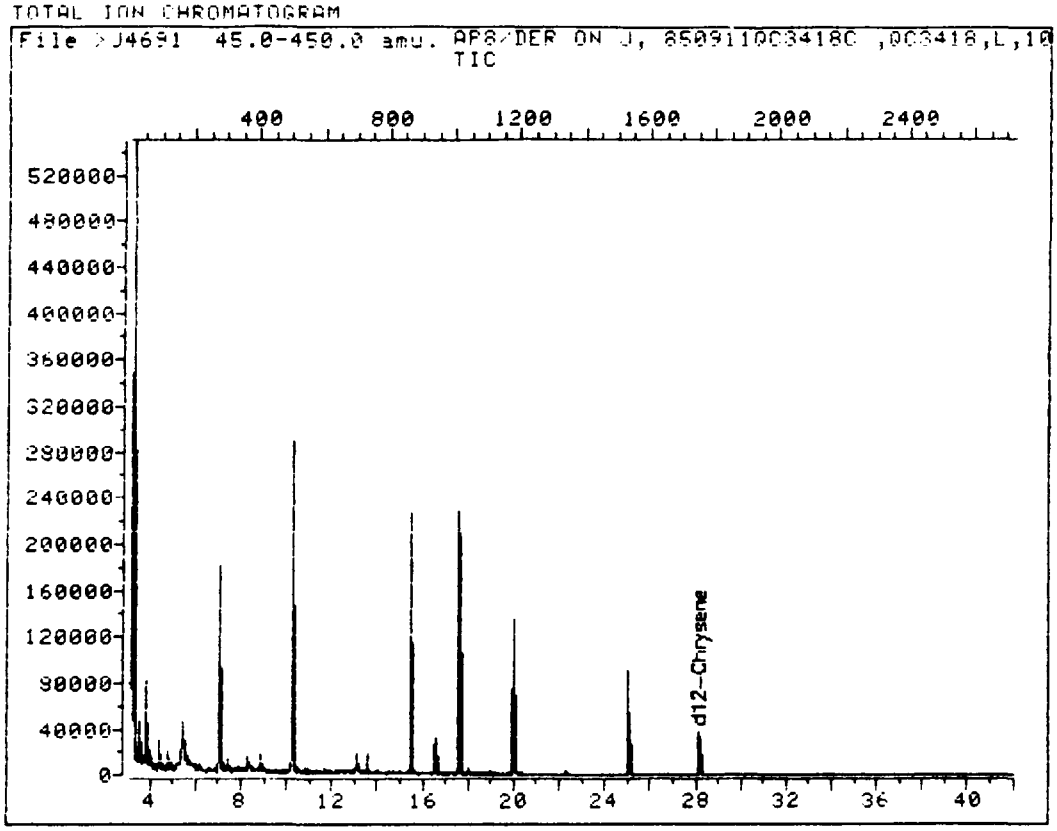
Operator ID: SJ3562 Quant Rev: 4 Quant Time: 850811 07:44
Output File: ^E0731::AQ Injected at: 850811 07:01
Data File: >E0731::U4 Dilution Factor: 1.00
Name: AP7/8 ON E, 850809
Misc: QC3418C ,QC3418,L,1000,1 BTL#36

ID File: EBNA8::US
Title: BN & ACID IDFILE FOR APPENDIX 8
Last Calibration: 850810 19:53

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene		8.95	305	192120	40.00	UG/ML	88
2)	N-Nitrosodimethylamine		4.29	42	848	~~.54~~	~~UG/ML~~	100
7)	Nitrobenzene-D5	(SURR)	10.45	390	149358	42.58	UG/ML	97
10)	2-Fluorophenol	(SURR)	6.37	159	171218	65.60	UG/ML	100
12)	Phenol-D5	(SURR)	8.37	272	116749	30.14	UG/ML	92
12)	Phenol-D5	(SURR)	8.95	305	884	~~.23~~	~~UG/ML~~	1
13)	*d8-Naphthalene		12.38	499	434221	40.00	UG/ML	95
14)	2-Fluorobiphenyl	(SURR)	15.77	691	209838	39.10	UG/ML	99
15)	N-Nitrosodi-n-propylamine		10.45	390	21999	~~9.38~~	~~UG/ML~~	61
27)	*d10-Acenaphthalene		17.73	802	270380	40.00	UG/ML	94
39)	Fluorene		20.19	941	6927	~~.76~~	~~UG/ML~~	87
40)	2,4,6-Tribromophenol	(SURR)	20.19	941	125334	83.20	UG/ML	95
43)	*d10-Phenanthrene		22.20	1055	505143	40.00	UG/ML	97
49)	Di-n-butyl phthalate		24.50	1185	10114	~~.83~~	~~UG/ML~~	97
51)	*D12-Chrysene		30.37	1517	171335	40.00	UG/ML	97
64)	Terphenyl-D14	(SURR)	27.29	1343	305086	54.06	UG/ML	100
64)	Terphenyl-D14	(SURR)	27.34	1346	4829	~~.86~~	~~UG/ML~~	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >J4691::U6
Name: AP8/DER ON J, 850911
Misc: QC3418C ,QC3418,L,1000,1

BTL# 5

Id File: AP8DER::US
Title: DER AP8 IDFILE
Last Calibration: 850811 16:37

Operator ID: TM0576
Quant Time: 850811 17:16
Injected at: 850811 16:27

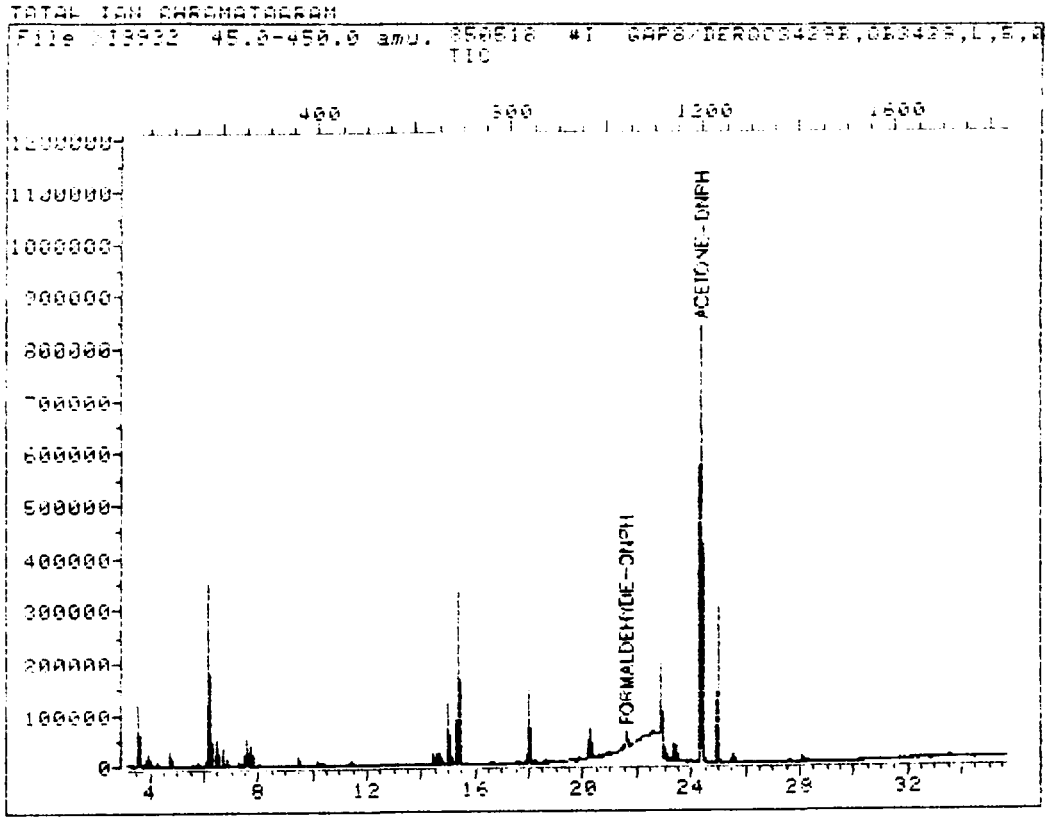
QUANT REPORT

Operator ID: TM0576 Quant Rev: 4 Quant Time: 850811 17:16
Output File: ^J4691::AQ Injected at: 850811 16:27
Data File: >J4691::U6 Dilution Factor: 1.00
Name: AP8/DER ON J, 850911
Misc: QC3418C ,QC3418,L,1000,1 BTL# 5

ID File: AP8DER::US
Title: DER AP8 IDFILE
Last Calibration: 850811 16:37

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d12-Chrysene	28.13	1752	47734	40.00	UG/ML	100

* Compound is ISTD



Data File: :13932::U6
Name: 850518 #1 GAP8/DER
Misc: QC3429B,QB3429,L,5,0.5

RT: # 4

Id File: FORM::US
Title: IDFILE FOR DERIVITIZED COMPOUNDS
Last Calibration: 850610 18:39

Operator ID: TR9113
Quant Time: 850818 20:07
Injected at: 850818 19:29

QUANT REPORT

Operator ID: IR9113 Quant Rev: 4 Quant Time: 850818 20:02
Output File: ^I8932::AQ Injected at: 850818 19:29
Data File: >I8932::U6 Dilution Factor: 1.00
Name: 850518 #1 GAP8/DFR
Misc: QC3429B,QB3429,1,5,0.5 BIL # 4

ID File: FORM::US
Title: IDFILE FOR DERIVITIZED COMPOUNDS
Last Calibration: 850610 18:39

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*ACETONE-DNPH	24.37	1198	192373	2.50	UG/ML	7
2)	FORMALDEHYDE-DNPH	~~21.60~~	~~1042~~	~~4320~~	~~.08~~	~~UG/ML~~	OK 8/24

* Compound is ISTD

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 all samples not shipped by ETC shuttle.

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

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

5) Analysis and Extraction Custody forms are included for the period the sample was in ETC's possession.

Shuttle A

ETC ENVIRONMENTAL TESTING and CERTIFICATION

CHAIN OF CUSTODY FORM (CC1)

Seal No. 37077 ETC Job # J3284

Date Sealed 7/12/85 By: Khanna

Company: CBS Records

Facility/Site:

Address: 5152 Columbia Drive
Carrollton, GA 30117

Attn.: Mark Donas

Phone: (404) 836-2343

SAMPLE IDENTIFICATION

Facility: Facility/Site Code (Optional Sample Point Descriptions)

Sample Point: W-B-9 (Source Code (from below) / Your Sample Point ID (left justify)) 072385 (Start Date (YY/MM/DD)) 1030 (Start Time (2400 hr. clock)) (Elapsed Hours (composite))

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

684
5

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Fill (Y/N)	SAMPLER Observations	LAB Observations
3	E	1L	Baked	Ext Dl			/
1	E	1L	Baked	Pest/Herb			/
1	CN	125ml	NaOH	Cyanide			/
4	V	40ml	sod. thio	VOA			/ ALL VOAS: Head Spa
4	F	40ml	Baked	DAI			/ DAI 3 Heads
1	TB	40ml	GC/MS H2O	Trip Blank			/ TB Bubble
							DAI 2+4 Bub

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) Mark Danas Date: 7/22/85 Time: 1100HR
Signature: Mark Danas Seal #: 37077 Intact:

2. I have received these materials in good condition from the above person.
Name: Mark Danas Signature: Mark Danas
Date: 7/22/85 Time: 1100HR Remarks:

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

4. Shuttle Sealed By: (print) Mark Danas Date: 7/23/85 Time: 10:30HR
Signature: Mark Danas Seal #: 0037078 Intact:

ETC USE ONLY Opened By: Khanna Date: 7/24/85 Time: 4:00pm
Seal #: 37078 Condition: ok

ETC ENVIRONMENTAL TESTING and CERTIFICATION

FIELD PARAMETER FORM (CC2)

ETC JOB # J3284

Sample Point W (Source Code) B-9 (Sample Point ID)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL IN CASING (Gallons)	VOLUME PURGED (Gallons)
072285	0930	24		10

SAMPLING METHOD: Bailer

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

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

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

Sample Composited [Y/N] _____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl) 1035.01

Well Depth (ft) 30.

Depth to Ground water (ft) 20.17

Sample Depth (non-well) (ft) ____.

Groundwater Elevation (ft msl) 1014.84

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

Sample Temp (°C) _____ Turbidity (NTU) _____

FIELD COMMENTS

Sample Appearance: ~~[illegible]~~ silty, brown color due to silt

Weather Conditions: Partly cloudy, 79°F

Other:

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

Sampler: (Print) Mark Dunas Employer: CBS Records

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

(Date) (Signature) Mark Dunas 23 July 1985

Shuttle B

ETC ENVIRONMENTAL TESTING and CERTIFICATION

CHAIN OF CUSTODY FORM (CC1)

Seal No. 37075 ETC Job # J3284

Date Sealed 7/12/85 By: Khanna

Company: CBS Records

Facility/Site:

Address: 5152 Columbia Drive
Carrollton, GA 30117

Attn.: Mark Donas

Phone: (404) 836-2343

SAMPLE IDENTIFICATION

Facility: Facility/Site Code (Optional Sample Point Descriptions)

Sample Point: W-B-9 (Source Code (from below) / Your Sample Point ID (left justify)) 072385 (Start Date (YY/MM/DD)) 1030 (Start Time (2400 hr. clock)) (Elapsed Hours (composite))

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

+46
5

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Fill (Y/N)	SAMPLER Observations	LAB Observations
1	E	1L	Baked	Pest/Herb			✓
2	E	1L	Baked	HPLC			✓
1	M	1L	HNO3	Metals			✓
2	E	1L	Baked	Extbls			✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) Mark Danas Date: 7/22/85 Time: 1100HR
Signature: Mark Danas Seal #: 37075 Intact:

2. I have received these materials in good condition from the above person.
Name: Mark Danas Signature: Mark Danas
Date: 7/22/85 Time: 1100HR Remarks:

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

4. Shuttle Sealed By: (print) Mark Danas Date: 7/23/85 Time: 10:30HR
Signature: Mark Danas Seal #: 0037076 Intact:

ETC USE ONLY Opened By: Khanna Date: 7/24/85 Time: ~~11:00am~~ 4:00pm
Seal #: 37076 Condition: Ok

ETC ENVIRONMENTAL TESTING and CERTIFICATION

FIELD PARAMETER FORM (CC2)

ETC JOB # J3284

Sample Point W B-9 (Source Code / Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL IN CASING (Gallons)	VOLUME PURGED (Gallons)
072285	0930	24		10

SAMPLING METHOD: Bailer

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

Sampler Material: C — A-Teflon, B-Metal, C-PVC, D-Plastic — X-Other _____ (SPECIFY OTHER)

Tubing Material: — A-Teflon, B-Tygon, C-Polyethylene, D-Silicon — X-Other _____ (SPECIFY OTHER)

Sample Composited: Y/N _____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl): 1035.01

Well Depth (ft): 30.

Depth to Ground water (ft): 20.17

Sample Depth (non-well) (ft):

Groundwater Elevation (ft msl): 1014.84

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

Sample Temp: (°C) Turbidity: NTU

FIELD COMMENTS

Sample Appearance: silty, brown color due to silt

Weather Conditions: Partly cloudy, 79°F

Other:

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

Sampler: Mark Danas (Print) Employer: CBS Records

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

Mark Danas 23 July 1985 (Date) (Signature)

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LOG LINK 10496

LABORATORY CHRONICLE: Metals Department

Samples J 3284

	Chemist	Date
Hg Prep	R Walle	8/6/85
AA/ICAP Prep	Joan Komarek	8/3/85

Lab Supervisor Anthony W Macaw Date 8-9-85

ETC FORM #101

JUL 31, 1985 11:54
SEQUENCE: S8195 ON CRN 15
CHANNEL 0

J Stan 7/31/85
[illegible] 8/6/85
June G. Schaper 8/15/85

SUBSEQUENCE 1

METHOD
PCBB0

DIALG-PRG PARAM-FILE
/N

#WSHS #PMPS STOP
5, 5, 1

ISO POST-BTL# POST-#WSHS
NO , 0, 1

SAMPLES

	SAMPLE-NAME	BTL#	PROC-FILE	RAW-FILE	%DIL-F	STD-AMT	SMP-AMT
1	QC3361 ,	1,	PJ1595:FL,	RJ1595:FL,	100.00,	1.0000,	1.0000
2	AR1260-0.03 ,	2,	PJ1596:FL,	RJ1596:FL,	100000,	1.0000,	1.0000
3	AR1260-0.1 ,	3,	PJ1597:FL,	RJ1597:FL,	100000,	1.0000,	1.0000
4	QC33615 ,	4,	PJ1598:FL,	RJ1598:FL,	100.00,	1.0000,	1.0000
5	J0255 ,	5,	PJ1599:FL,	RJ1599:FL,	100.00,	1.0000,	1.0000
6	J0255S ,	6,	PJ1600:FL,	RJ1600:FL,	100.00,	1.0000,	1.0000
7	J0214 ,	7,	PJ1601:FL,	RJ1601:FL,	100.00,	1.0000,	1.0000
8	J0214R ,	8,	PJ1602:FL,	RJ1602:FL,	100.00,	1.0000,	1.0000
9	J0304 ,	9,	PJ1603:FL,	RJ1603:FL,	200.00,	1.0000,	1.0000
10	J0305 ,	10,	PJ1604:FL,	RJ1604:FL,	200.00,	1.0000,	1.0000
11	J0306 ,	11,	PJ1605:FL,	RJ1605:FL,	200.00,	1.0000,	1.0000
12	J0307 ,	12,	PJ1606:FL,	RJ1606:FL,	200.00,	1.0000,	1.0000
13	J0312 ,	13,	PJ1607:FL,	RJ1607:FL,	200.00,	1.0000,	1.0000
14	AR1260-0.5 ,	14,	PJ1608:FL,	RJ1608:FL,	100000,	1.0000,	1.0000
15	AR1254-0.5 ,	15,	PJ1609:FL,	RJ1609:FL,	100000,	1.0000,	1.0000
16	AR1248-0.5 ,	16,	PJ1610:FL,	RJ1610:FL,	100000,	1.0000,	1.0000
17	AR1242-0.5 ,	17,	PJ1611:FL,	RJ1611:FL,	100000,	1.0000,	1.0000
18	J0191 ,	18,	PJ1612:FL,	RJ1612:FL,	100.00,	1.0000,	1.0000
19	J0197 ,	19,	PJ1613:FL,	RJ1613:FL,	100.00,	1.0000,	1.0000
20	J0193 ,	20,	PJ1614:FL,	RJ1614:FL,	189.00,	1.0000,	1.0000
21	J0310 ,	21,	PJ1615:FL,	RJ1615:FL,	200.00,	1.0000,	1.0000
22	J0258 ,	22,	PJ1616:FL,	RJ1616:FL,	100.00,	1.0000,	1.0000
23	J0274 ,	23,	PJ1617:FL,	RJ1617:FL,	100.00,	1.0000,	1.0000
24	AR1232-0.5 ,	24,	PJ1618:FL,	RJ1618:FL,	100000,	1.0000,	1.0000
25	AR1221-0.5 ,	25,	PJ1619:FL,	RJ1619:FL,	100000,	1.0000,	1.0000
26	AR1016-0.5 ,	26,	PJ1620:FL,	RJ1620:FL,	100000,	1.0000,	1.0000
27	AR1260-1.0 ,	27,	PJ1621:FL,	RJ1621:FL,	100000,	1.0000,	1.0000
28	QC3395 ,	28,	PJ1622:FL,	RJ1622:FL,	200.00,	1.0000,	1.0000
29	DWPST C ,	29,	PJ1623:FL,	RJ1623:FL,	100000,	1.0000,	1.0000
30	AR1260-1.0 ,	30,	PJ1624:FL,	RJ1624:FL,	100000,	1.0000,	1.0000
31	QC3395S ,	31,	PJ1625:FL,	RJ1625:FL,	200.00,	1.0000,	1.0000
32	J1609 ,	32,	PJ1626:FL,	RJ1626:FL,	204.00,	1.0000,	1.0000
33	J1609S ,	33,	PJ1627:FL,	RJ1627:FL,	200.00,	1.0000,	1.0000
34	J1366 ,	34,	PJ1628:FL,	RJ1628:FL,	213.00,	1.0000,	1.0000
35	J1366R ,	35,	PJ1629:FL,	RJ1629:FL,	200.00,	1.0000,	1.0000
36	J1615 ,	36,	PJ1630:FL,	RJ1630:FL,	200.00,	1.0000,	1.0000
37	J4012 ,	37,	PJ1631:FL,	RJ1631:FL,	200.00,	1.0000,	1.0000
38	J4017 ,	38,	PJ1632:FL,	RJ1632:FL,	200.00,	1.0000,	1.0000

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39  J1368        ,  39, PJ1633:FL, RJ1633:FL, 200.00,  1.0000,  1.0000
40  J1369        ,  40, PJ1634:FL, RJ1634:FL, 200.00,  1.0000,  1.0000
41  AR1260-0.5   ,  41, PJ1635:FL, RJ1635:FL, 100000,  1.0000,  1.0000
42  AR1254-0.5   ,  42, PJ1636:FL, RJ1636:FL, 100000,  1.0000,  1.0000
43  AR1248-0.5   ,  43, PJ1637:FL, RJ1637:FL, 100000,  1.0000,  1.0000
44  AR1242-0.5   ,  44, PJ1638:FL, RJ1638:FL, 100000,  1.0000,  1.0000
45  J1370        ,  45, PJ1639:FL, RJ1639:FL, 200.00,  1.0000,  1.0000
46  J1371        ,  46, PJ1640:FL, RJ1640:FL, 200.00,  1.0000,  1.0000
47  J1372        ,  47, PJ1641:FL, RJ1641:FL, 200.00,  1.0000,  1.0000
48  J2956        ,  48, PJ1642:FL, RJ1642:FL, 200.00,  1.0000,  1.0000
49  J3702        ,  49, PJ1643:FL, RJ1643:FL, 200.00,  1.0000,  1.0000
50  J3284        ,  50, PJ1644:FL, RJ1644:FL, 200.00,  1.0000,  1.0000
51  J2883        ,  51, PJ1645:FL, RJ1645:FL, 200.00,  1.0000,  1.0000
52  J4165        ,  52, PJ1646:FL, RJ1646:FL, 200.00,  1.0000,  1.0000
53  AR1232-0.5   ,  53, PJ1647:FL, RJ1647:FL, 100000,  1.0000,  1.0000
54  AR1221-0.5   ,  54, PJ1648:FL, RJ1648:FL, 100000,  1.0000,  1.0000
55  AR1016-0.5   ,  55, PJ1649:FL, RJ1649:FL, 100000,  1.0000,  1.0000
56  AR1260-5.0   ,  56, PJ1650:FL, RJ1650:FL, 100000,  1.0000,  1.0000
57  /E
```

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: Sample Preparation Departmen

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml) PEST	Extract Vol. (ml) —	Comments
J3285	10,409	500	5.0		AP 7
J3286		500	5.0		
J3287		500	5.0		
J3288		500	5.0		
J3289		500	5.0		
J3290		500	5.0		
J2956	10,441	500	5.0		AP8
J3702	10,470	460	5.0		
J3284	10,496	480	5.0		
J2883	10,484	500	5.0		
J3096	10,524	500	5.0		
J3097		500	5.0		
J3098		500	5.0		
J3099		500	5.0		
J3102		500	5.0		
J3101		500	5.0		
J3103		500	5.0		
J3104		460	5.0		
QC 3413	(S3)	500	5.0		
QC 3413	(S3)	500	5.0		
J3101	(S3)	450	5.0		
QC 3413		500	5.0		
QC 3413	(S1)	500	5.0		
J3102	(S2)	450	5.0		
J3103	(S2)	450	5.0		
J3288	R	500	5.0		

QC Batch # 3413

Analysis AP7/PEST(EC)
AP8/PEST(EC)
AP8/PEST(FPD)

Matrix H2O

Turnaround Normal

Date 7/30/85

Extraction Method:

Sep. Funnel ✓

Continuous

Soxhlet

Other

COMMENTS

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
(S1) AP8-Pest (EC) SPIKE	0.1	14 @ 25 ng/ml 1 @ 250 ng/ml	11,044
(S2) AP8-Pest (EC) Isothermal	0.1	2 @ 25 ng/ml 1 @ 100 ng/ml	10,636
(S3) AP8-Pest (FPD) SPIKE	0.2	4 @ 12.5 ng/ml 2 @ 62.5 ng/ml 1 @ 125 ng/ml	10,640

SURROGATE Amt. (ml)	Conc.	Lot #

Set-up: J Angelone 7-30-85 / JB 7-30-85

UPD/Supervisor: [illegible] 7/31/85

Conc: [illegible] 7/31/85

Spike/Surr. Verified: [illegible] 7/31/85

A. Migliaccio 8/5/85

FPD: A. Migliaccio 8/6/85

AUG 5, 1985 14:28
SEQUENCE: FP3413 ON CRN 15
CHANNEL 8

QC 3413
Psts: FPD

SUBSEQUENCE 1

Primary

METHOD
AP8FPD

DIALG-PRG PARAM-FILE
/N

#WSHS	#PMPS	STOP
5,	5,	1

ISO	POST-BTL#	POST-#WSHS
NO ,	0,	1

SAMPLES

	SAMPLE-NAME	BTL#	PROC-FILE	RAW-FILE	%DIL-F	STD-AMT	SMP-AMT
1	HEXANE ,	1,	PA2655:FW,	RA2655:FW,	100.00,	1.0000,	1.0000
2	QC3413 ,	2,	PA2656:FW,	RA2656:FW,	1000.0,	1.0000,	1.0000
3	AP8FPD-B ,	3,	PA2657:FW,	RA2657:FW,	100000,	1.0000,	1.0000
4	QC3413S3 ,	4,	PA2658:FW,	RA2658:FW,	1000.0,	1.0000,	1.0000
5	J3101 ,	5,	J3101S:FW,	J3101T:FW,	1000.0,	1.0000,	1.0000
6	J3101S3 ,	6,	PA2659:FW,	RA2659:FW,	1111.0,	1.0000,	1.0000
7	J3288 ,	7,	J3288S:FW,	J3288T:FW,	1000.0,	1.0000,	1.0000
8	J3288R ,	8,	PA2660:FW,	RA2660:FW,	1000.0,	1.0000,	1.0000
9	J2956 ,	9,	J2956S:FW,	J2956T:FW,	1000.0,	1.0000,	1.0000
10	J3702 ,	10,	J3702S:FW,	J3702T:FW,	1087.0,	1.0000,	1.0000
11	J3284 ,	11,	J3284S:FW,	J3284T:FW,	1042.0,	1.0000,	1.0000
12	J2883 ,	12,	J2883S:FW,	J2883T:FW,	1000.0,	1.0000,	1.0000
13	J3096 ,	13,	J3096S:FW,	J3096T:FW,	1000.0,	1.0000,	1.0000
14	AP8FPD-A ,	14,	PA2661:FW,	RA2661:FW,	100000,	1.0000,	1.0000
15	J3097 ,	15,	J3097S:FW,	J3097T:FW,	1000.0,	1.0000,	1.0000
16	J3098 ,	16,	J3098S:FW,	J3098T:FW,	1000.0,	1.0000,	1.0000
17	J3099 ,	17,	J3099S:FW,	J3099T:FW,	1000.0,	1.0000,	1.0000
18	J3102 ,	18,	J3102S:FW,	J3102T:FW,	1000.0,	1.0000,	1.0000
19	J3103 ,	19,	J3103S:FW,	J3103T:FW,	1000.0,	1.0000,	1.0000
20	J3104 ,	20,	J3104S:FW,	J3104T:FW,	1087.0,	1.0000,	1.0000
21	AP8FPD-C ,	21,	PA2662:FW,	RA2662:FW,	100000,	1.0000,	1.0000
22	/E						

R. Baker
8-14-85

A.M. 8/6/85

Pest(EC) A. Mizliacsin 8/8/85

AUG 6, 1985 13:58
SEQUENCE: S3413P ON CRN 15
CHANNEL 8

SUBSEQUENCE 1

METHOD
AP8PST

DIALG-PRG PARAM-FILE
/N

#WSHS #PMPS STOP
5, 5, 1

K. Bah 8-14-85

ISO POST-BTL# POST-#WSHS
NO , 0, 1

SAMPLES

	SAMPLE-NAME		BTL#	PROC-FILE	RAW-FILE	%DIL-F	STD-AMT	SMP-AMT
1	HEXANE	,	1,	PA2670:GB,	RA2670:GB,	100.00,	1.0000,	1.0000
2	QC3413	,	2,	PA2671:GB,	RA2671:GB,	1000.0,	1.0000,	1.0000
3	AP8PST-B	,	3,	PA2672:GB,	RA2672:GB,	100000,	1.0000,	1.0000
4	QC3413S1	,	4,	PA2673:GB,	RA2673:GB,	1000.0,	1.0000,	1.0000
5	J3103	,	5,	PA2674:GB,	RA2674:GB,	1000.0,	1.0000,	1.0000
6	J3103S1	,	6,	PA2675:GB,	RA2675:GB,	1111.0,	1.0000,	1.0000
7	J3288	,	7,	PA2676:GB,	RA2676:GB,	1000.0,	1.0000,	1.0000
8	J3288R	,	8,	PA2677:GB,	RA2677:GB,	1000.0,	1.0000,	1.0000
9	J2956	,	9,	PA2678:GB,	RA2678:GB,	1000.0,	1.0000,	1.0000
10	J3702	,	10,	PA2679:GB,	RA2679:GB,	1087.0,	1.0000,	1.0000
11	J3284	,	11,	PA2680:GB,	RA2680:GB,	1042.0,	1.0000,	1.0000
12	J2883	,	12,	PA2681:GB,	RA2681:GB,	1000.0,	1.0000,	1.0000
13	J3096	,	13,	PA2682:GB,	RA2682:GB,	1000.0,	1.0000,	1.0000
14	AP8PST-A	,	14,	PA2683:GB,	RA2683:GB,	100000,	1.0000,	1.0000
15	J3097	,	15,	PA2684:GB,	RA2684:GB,	1000.0,	1.0000,	1.0000
16	J3098	,	16,	PA2685:GB,	RA2685:GB,	1000.0,	1.0000,	1.0000
17	J3099	,	17,	PA2686:GB,	RA2686:GB,	1000.0,	1.0000,	1.0000
18	J3102	,	18,	PA2687:GB,	RA2687:GB,	1000.0,	1.0000,	1.0000
19	J3101	,	19,	PA2688:GB,	RA2688:GB,	1000.0,	1.0000,	1.0000
20	J3104	,	20,	PA2689:GB,	RA2689:GB,	1087.0,	1.0000,	1.0000
21	J3285	,	21,	PA2690:GB,	RA2690:GB,	1000.0,	1.0000,	1.0000
22	J3286	,	22,	PA2691:GB,	RA2691:GB,	1000.0,	1.0000,	1.0000
23	J3287	,	23,	PA2692:GB,	RA2692:GB,	1000.0,	1.0000,	1.0000
24	J3289	,	24,	PA2693:GB,	RA2693:GB,	1000.0,	1.0000,	1.0000
25	J3290	,	25,	PA2694:GB,	RA2694:GB,	1000.0,	1.0000,	1.0000
26	AP8PST-C	,	26,	PA2695:GB,	RA2695:GB,	100000,	1.0000,	1.0000
27	HEXANE	,	27,	PA2696:GB,	RA2696:GB,	100.00,	1.0000,	1.0000
28	AP8ISO-B	,	28,	PA2697:GB,	RA2697:GB,	100000,	1.0000,	1.0000
29	QC3413S2	,	29,	PA2698:GB,	RA2698:GB,	1000.0,	1.0000,	1.0000
30	HEXANE	,	30,	PA2699:GB,	RA2699:GB,	100.00,	1.0000,	1.0000
31	J3102S2	,	31,	PA2700:GB,	RA2700:GB,	1111.0,	1.0000,	1.0000
32	HEXANE	,	32,	PA2701:GB,	RA2701:GB,	100.00,	1.0000,	1.0000
33	AP8ISO-A	,	33,	PA2702:GB,	RA2702:GB,	100000,	1.0000,	1.0000
34	AP8ISO-C	,	34,	PA2703:GB,	RA2703:GB,	100000,	1.0000,	1.0000
35	/E							

AUG 7, 1985 14:58
SEQUENCE: D3413P ON CRN 16
CHANNEL 8

Pest (EC) Dilutions A. Mufaccio 8/7/85+ 8/8/85

SUBSEQUENCE 1

METHOD
AP8PST

DIALG-PRG PARAM-FILE
/N

#WSHS #PMPS STOP
5, 5, 1

K. Baker 8-14-85

ISO POST-BTL# POST-#WSHS
NO , 0, 1

SAMPLES

	SAMPLE-NAME	BTL#	PROC-FILE	RAW-FILE	%DIL-F	STD-AMT	SMP-AMT
1	AP8PST-B ,	1,	PA2730:GJ,	RA2730:GJ,	100000,	1.0000,	1.0000
2	J2883 1:100 ,	2,	PA2731:GJ,	RA2731:GJ,	100000,	1.0000,	1.0000
3	J3096 1:25 ,	3,	PA2732:GJ,	RA2732:GJ,	25000.,	1.0000,	1.0000
4	J3097 1:100 ,	4,	PA2733:GJ,	RA2733:GJ,	100000,	1.0000,	1.0000
5	J3098 1:100 ,	5,	PA2734:GJ,	RA2734:GJ,	100000,	1.0000,	1.0000
6	J3099 1:50 ,	6,	PA2735:GJ,	RA2735:GJ,	50000.,	1.0000,	1.0000
7	AP8PST-A ,	7,	PA2736:GJ,	RA2736:GJ,	100000,	1.0000,	1.0000
8	/E						

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: GC-MS Department

DATE 850801 SHIFT
FRACTION VOA
INSTRUMENT D
TUNE FILE ~~VOAD~~ DS APE102
SEQUENCE FILE
METHOD FILE VOAD
ID FILE DAP8PT
ANALYST(S) W. Schaar
SUPERVISOR
BATCH #'s QV3555

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ		DATE	850802
WIP	DS	BY	VG

STANDARD	CONC PPM	LOT NO.	LOT VOL.
p-BFB	50	10,078	1
Istd	40	10,332	5
SURR	25	11,197	10
ABC/SCVOA	15, 18, 90	11,161	5, 10, 30
AP8 Blend	50	10,218	5, 10, 30

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
p-BFB	>D0071	1ul				OK	
QC3555V	>D0072	5ul	1				
QC3555VS	>D0073		2			5ul ABC/SCVOA + AP8	
QC3555VS	>D0074		3			10ul ABC/SCVOA + AP8	
QC3555VS	>D0075		4			30ul AB/SCVOA + AP8	
p-BFB	>D0076					119 - 140	
J3098VS	>D0077		1				
J3098V	>D0078		2				
J3702V	>D0079		3				
J3702VR	>D0080		4				
J3284V	>D0081		5				
J2883V	>D0082		6	1:10		Rerun 1:100	
J3100V	>D0083		7	1:10		Rerun for carryover	
J4060V	>D0084		8	1:1000		Rerun 1:50	
(R) J3800V	>D0085			1:5		Rerun straight	
(R) J2883V	>D0086			1:100	OK		
p-BFB	>D0087				OK	(122-112) (0853HRS)	
QC3555VS	>D0088	5ul	1		OK	5ul ABC/SCVOA + AP8.	
(R) J4060V	>D0089	100ul	1:~~50~~ DS	1:50	OK		
(R) J3100V	>D0090	5ul	2		OK		
J2258V	>D0091		3		OK		
J2257V	>D0092		4		OK		
J3097V	>D0093		5		Rerun	1:10 for tolerance.	
(R) J3097V	>D0094	.5ul	1	1:10	OK		

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: Sample Preparation Department

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml)		Comments
J2257	10,316	500	2.5		
J2258	↓		2.5		
J2956	10,441		2.5		
J3702	10,470		2.5		
J3284	10,496		2.5		
J2883	10,484		2.5		
J3096	10,524		2.5		
J3097			5.0		SAMPLE VISCOUS @ 2.5 ml F.V.
J3098			2.5		
J3099			2.5		
J3101			2.5		
J3102			2.5		
J3103			2.5		
J3104			2.5		
QC 3401		500	2.5		
QC 3401 S			2.5		
J3104 S			2.5		
J3102 R			2.5		

QC Batch # 3401

Analysis APB/HERB (EC)

Matrix H_2O

Turnaround Normal

Date 7/29/85

8/26 Extraction Method:

Sep. Funnel

Continuous

Soxhlet

Other

COMMENTS

FRACTION	SPIKE		
	Amt (ml)	Conc.	Lot #
Blend 2,4-D	0.5	100µg/ml	11,114
2,4,5-TP		10µg/ml	
2,4,5-T	0.5	10µg/ml	11,115

SURROGATE		
Amt. (ml)	Conc.	Lot #

Set-up: [illegible] 7/29/85

Conc.: [illegible] 7-29-85

UPD/Supervisor: [illegible] 7/30/85

Spike/Surr. Verified: [illegible] 7/29/85

ETC FORM #105

A. Mufaccio 8/13/85

AUG 13, 1985 14:22
SEQUENCE: AP8HER ON CRN 16
CHANNEL 1

QC 3401, 3458, 3423 } AP8Hers primary

SUBSEQUENCE 1

METHOD
HERB1

DIALG-PRG PARAM-FILE
/N

K. Baker 8-17-85

#WSHS #PMPS STOP
5, 5, 1

ISO POST-BTL# POST-#WSHS
NO , 0, 1

SAMPLES

	SAMPLE-NAME	BTL#	PROC-FILE	RAW-FILE	%DIL-F	STD-AMT	SMP-AMT
1	HEXANE ,	1,	PA2825:HA,	RA2825:HA,	100.00,	1.0000,	1.0000
2	QC3401 ,	2,	PA2826:HA,	RA2826:HA,	500.00,	1.0000,	1.0000
3	HERB-~~EAB~~ ,	3,	PA2827:HA,	RA2827:HA,	100000,	1.0000,	1.0000
4	245T-~~5.0~~1.0 ,	4,	PA2828:HA,	RA2828:HA,	100000,	1.0000,	1.0000
5	QC3401S ,	5,	PA2829:HA,	RA2829:HA,	500.00,	1.0000,	1.0000
6	J3104 ,	6,	PA2830:HA,	RA2830:HA,	500.00,	1.0000,	1.0000
7	J3104S ,	7,	PA2831:HA,	RA2831:HA,	500.00,	1.0000,	1.0000
8	J3102 ,	8,	PA2832:HA,	RA2832:HA,	500.00,	1.0000,	1.0000
9	J3102R ,	9,	PA2833:HA,	RA2833:HA,	500.00,	1.0000,	1.0000
10	J2257 ,	10,	PA2834:HA,	RA2834:HA,	500.00,	1.0000,	1.0000
11	J2258 ,	11,	PA2835:HA,	RA2835:HA,	500.00,	1.0000,	1.0000
12	J2956 ,	12,	PA2836:HA,	RA2836:HA,	500.00,	1.0000,	1.0000
13	J3702 ,	13,	PA2837:HA,	RA2837:HA,	500.00,	1.0000,	1.0000
14	J3284 ,	14,	PA2838:HA,	RA2838:HA,	500.00,	1.0000,	1.0000
15	HERB-~~AB~~A ,	15,	PA2839:HA,	RA2839:HA,	100000,	1.0000,	1.0000
16	245T-~~1.0~~5.0 ,	16,	PA2840:HA,	RA2840:HA,	100000,	1.0000,	1.0000
17	J2883 ,	17,	PA2841:HA,	RA2841:HA,	500.00,	1.0000,	1.0000
18	J3096 ,	18,	PA2842:HA,	RA2842:HA,	500.00,	1.0000,	1.0000
19	J3097 ,	19,	PA2843:HA,	RA2843:HA,	500.00,	1.0000,	1.0000
20	J3098 ,	20,	PA2844:HA,	RA2844:HA,	500.00,	1.0000,	1.0000
21	J3099 ,	21,	PA2845:HA,	RA2845:HA,	500.00,	1.0000,	1.0000
22	J3101 ,	22,	PA2846:HA,	RA2846:HA,	500.00,	1.0000,	1.0000
23	J3103 ,	23,	PA2847:HA,	RA2847:HA,	500.00,	1.0000,	1.0000
24	HERB-C ,	24,	PA2848:HA,	RA2848:HA,	100000,	1.0000,	1.0000
25	245T-10.0 ,	25,	PA2849:HA,	RA2849:HA,	100000,	1.0000,	1.0000

ETC ENVIRONMENTAL TESTING and CERTIFICATION

L .BORATORY CHRONICLE: S mple Preparation Department

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml)		Comments
J0545	10,096	5.0 ml	0.5 ml		
J3284	10,496	5.0 ml	0.5 ml		
J4933	10,625	5.0 ml	0.5 ml		
J4934	↓	5.0 ml	0.5 ml		
J4935	↓	5.0 ml	0.5 ml		
STND 1		5.0 ml	0.5 ml		
STND 2		5.0 ml	0.5 ml		
STND 3		5.0 ml	0.5 ml		
QC 3429		5.0 ml	0.5 ml		
~~QC~~ S					
S					
R					

QC Batch # 3429

Analysis GAP8/FORM

Matrix H_2O

Turnaround Normal

Date

8/10 **Extraction Method:**

Sep. Funnel

Continuous

Soxhlet

Other ✓

COMMENTS

FRACTION	SPIKE		
	Amt (ml)	Conc.	Lot #

SURROGATE		
Amt. (ml)	Conc.	Lot #

Set-up: Wanda Edmundson 8/11/85 UPD/Supervisor: [illegible] 8/12/85

Conc.: Wanda Edmundson 8/11/85 Spike/Surr. Verified:

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: GC-MS Department

DATE August 18th 85 SHIFT
FRACTION Deriv. / Form.
INSTRUMENT "I"
TUNE FILE MTI 001
SEQUENCE FILE KV18B
METHOD FILE BNPI
ID FILE FORM
ANALYST(S) [illegible]

SUPERVISOR P. Tr[illegible]
BATCH #'s QB 3429 - Deriv

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL.
GAP8/FORM	20		
↓	10		
	2		
DFTPP	25	10941	

CBFORM is CB-file

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
DFTPP - SONG std	>I8928						
GAP8/FORM, 20ppm	>I8929		1				
GAP8/FORM 10ppm	>I8930		2				
GAP8/FORM 2ppm	>I8931		3				
QC3429D	>I8932		4				
J0545D	>I8933		5				
J3284D	>I8934		6				
J4933D	>I8935		7				
J4934D	>I8936		8				
J4935D	>I8937		9				

ETC FORM #102

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: Sample Preparation Department

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml) HEX	Extract Vol. (ml) MeOH	Comments
J0545	10,096	100	1.0	1.0	
J3284	10,496	100	1.0	1.0	
J4933	10,625	100	1.0	1.0	
J4934	↓	100	1.0	1.0	
~~J4935~~					SOIL K.B.
QC 3426		100	1.0	1.0	
QC 3426 S		100	1.0	1.0	
J3284 S		100	1.0	1.0	
J4934 R		100	1.0	1.0	

QC Batch # 3426

Analysis GAP8 / 8610

Matrix H_2O

Turnaround NORMAL

Date 8/8/85

Extraction Method:

Sep. Funnel

Continuous

Soxhlet

Other Sep-pak

COMMENTS

Ken did not designate on labels which J3284 was the SPIKE. (MA) 8/8/85 Also, he did not differentiate between the QC + QCS. Was reported 8/10/85.

Analyst: Paula E. Koleno 8/23/85.

FRACTION	SPIKE Amt (ml)	SPIKE Conc.	SPIKE Lot #
FLUORANTHANE	1.0	0.025 ug/ml	10,857
PARATHION	1.0	0.4 ug/ml	10,858
2,4,5 Trichlorophenol	1.0	0.4 ug/ml	10,859

SURROGATE Amt. (ml)	Conc.	Lot #

Set-up: Ken Boykin 8/9/85

Conc.: Ken Boykin 8/10/85

UPD/Supervisor: Karen Albertson 8/10/85

Spike/Surr. Verified: Paula Y. Williams 8/9/85

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: Sample Preparation Department

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml)		Comments
J0545	10,096	100	1.0		
J3284	10,496	100	1.0		
J4933	10,625	100	1.0		
J4934	↓	100	1.0		
QC 3427		100	1.0		
QC 3427	S	100	1.0		
J3284	S	100	1.0		
J4934	R	100	1.0		

QC Batch # 3427

Analysis GAPS 1863 0

Matrix H_2O

Turnaround NORMAL

Date 8/13/85

Extraction Method:

Sep. Funnel

Continuous

Soxhlet

Other ✓

COMMENTS

FRACTION	SPIKE		
	Amt ~~(ml)~~	Conc.	Lot #
PHENOL	100 ul	40 ug/ml	10,594

SURROGATE		
Amt. (ml)	Conc.	Lot #

Set-up: K. Boffin 8/13/85

Conc.: K. Boffin 8/13/85

UPD/Supervisor: Dan Wa[illegible] 8/16/85

Spike/Surr. Verified: Dan Wa[illegible] 8/18/85

ETC FORM #105

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: Sample Preparation Department

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml)		Comments
J0545	10,096	100	1.0		
J3284	10,496	100	1.0		
J4933	10,625	100	1.0		
J4934	↓	100	1.0		
QC 3511		100	1.0		
QC 3511	S	100	1.0		
J4934	S	100	1.0		
J3284	R	100	1.0		

QC Batch # 3511

Analysis GAPS/8630

Matrix H_2O

Turnaround NORMAL

Date 8/20/85

Extraction Method:

Sep. Funnel

Continuous

Soxhlet

Other ✓

REPEAT OF QC 3427

COMMENTS

REPEATED DUE TO CHANGE IN PROCEDURE.

Analyst: Paula E. Kolena 8/23/85.

FRACTION	SPIKE		
	Amt (ml)	Conc.	Lot #
PHENOL	100 ul	40 ug/ml	10,594

SURROGATE		
Amt. (ml)	Conc.	Lot #

Set-up: K. Boykin 8/20/85

K. Boykin 8/21/85

UPD/Supervisor: Paul R. Lamer 8/21/85

Spike/Surr. Verified: [illegible] 8/22/85

SAMPLE NUMBER	Log Link	DATE PRES.	SAMPLE VOLUME (ml)	Extract Vol (ml) BN	ACID	DER BN	
J2257	10,316		965	1.0	1.0	1.0	AP8
J2258	↓		900	1.0	1.0	1.0	
J3285	10,409		960	1.0	1.0	1.0	AP7
J3286			960	1.0	1.0	1.0	AP7
J3287			990	1.0	1.0	1.0	
J3288			990	1.0	1.0	1.0	
J3289			990	1.0	1.0	1.0	
J3290	↓		970	1.0	1.0	1.0	
J2956	10,441		990	1.0	1.0	1.0	AP8
J3702	10,470		1000	1.0	1.0	1.0	↓
J3284	10,496		990	1.0	1.0	1.0	AP8
~~J2883~~	~~10,484~~		~~970~~				INSUFFICIENT GLASSWARE [illegible]
~~096~~	~~10,524~~	will be	another	batch	7/30/85	[illegible]	
	J3288 R		980	1.0	1.0	1.0	
	J3289 S		990	1.0	1.0	1.0	
	QC 3418		1000	1.0	1.0	1.0	
	QC 3418 S		1000	1.0	1.0	1.0	

EXTRACTION LOG
QC BATCH 3418

ANALYSIS A-TYPES AP8/BN, AP8/ACID, AP7/BN, AP7/ACID

SEP. FUNNEL ✓ CONTINUOUS

SET UP [illegible] 7-30-85

DATE START 7-30-85

8/26 NEUTRAL
BASE
ACID
DERIVATIZED BN

MATRIX H_2O

COMMENTS:

EXTRACTION: Ken Boyle 7-3[illegible] Pam Y. [illegible]
BN DER.: [illegible] 7-3[illegible] Pam Y. [illegible]
BN CONC.:
ACID CONC.: [illegible] 7-3[illegible]
SUPERVISOR: [illegible] 7/31/[illegible]
UPD

Spike/Surr Verify Luann P. Zoke 7-30-85

FRACTIONS	SPIKES Lot No.	SPIKES Conc.	SPIKES Amount (ml)	SURROGATES Lot No.	SURROGATES Conc.	SURROGATES Amount (ml)
AP8/BN I	98[illegible]	31 @ 100 ug/ml	1.0			
AP8/BN II	9890	25 @ 300 ug/ml	1.0			
AP8/ACID	9892	5 @ 100 ug/ml, 4 @ 300 ug/ml	1.0			
BN	11,146	41 @ 100 ug/ml	1.0			
ACID	11,145	11 @ 100 ug/ml	1.0			
Semi-Voa Surrogate				11,144	ACIDS @ 100 ug/ml	1.0

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: GC-MS Department

DATE 850808/9 SHIFT
FRACTION AP7+8 BNA
INSTRUMENT E
TUNE FILE ~~TME~~ MT EOD1
SEQUENCE FILE TME
METHOD FILE BNDE
ID FILE EAP8E, EBNA8
ANALYST(S) [illegible]

SUPERVISOR [illegible]
BATCH #'s QC3418, QC3430

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ	[illegible]	DATE	850810
WIP		BY	[illegible]

STANDARD	CONC PPM	LOT NO.	LOT VOL.
ISTD	400	11131	100/50ul
DFTPP	25	10941	2ul
BN Calib III	200	11026	1ml
II	100	11151	
I	60	11239	
AP8 BN I High	300	9889	
Med	100	9894	
Low	30	9895	
AP8 BN II High	500	9891	
Med	300	9896	
Low	100	9897	
Calib AP8 Acid High III	300	10856	
Med II	~~150~~ 100	10855	
Low I	60	10854	
AP8 Acid Calib III	300	9893	
II	100	9899	
I	30	9894	

CBAP8B, CBAP8A, CBBNA8

NAME	DATA FILE 7E	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
DFTPP	7E0696		1				
BN Calib III	0697		2				
" " II	0698		3				
" " I	0699		4				
AP8 BN I High	0700		5				
" Med	0701		6				
" Low	0702		7				
AP8 BN II High	0703		8				
" Med	0704		9				
" Low	0705		10				
Acid Calib III	0706		11				
" " II	0707		12				
" " I	0708		13				
AP8 Acid III	0709		14				
" II	0710		15				
" I	0711		16				
DFTPP	0712		17				
QB3418C	0713		18	—		Acid	
QB3418CS	0714		19	—			
J3289CS	0715		20	—			
J2257C	0716		21	—			
J2258C	0717		22	—			
J3285C	0718		23	—			
J3286C	0719		24	—			
[illegible]	0720		25	—			

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: GC-MS Department

DATE 950809 SHIFT
FRACTION
INSTRUMENT
TUNE FILE
SEQUENCE FILE
METHOD FILE
ID FILE
ANALYST(S) [illegible]
SUPERVISOR [illegible]
BATCH #'s

(PLEASE INITIAL)

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

STANDARD	CONC PPM	LOT NO.	LOT VOL.

NAME	DATA FILE >E	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
J3288C	>E0721		26			Acid	
J3288CR	0722		27				
J3289C	0723		28				
J3290C	0724		29				
J2956C	0725		30				
J3702C	0726		31				
J3284C	0727		32				
DFTPP	0728		33				
Acid Calib II	0729		34				
BN Calib II	0730		35				
QB3418C	0731		36			BN	
QB3418CS	0732		37				
J3289CS	0733		38				
J2257C	0734		39				
J2258C	0735		40				
J3285C	0736		41				
J3286C	0737		42				
J3287C	0738		43				
J3288C	0739		44				
J3289C	0740		45				
J3290C	0741		46				
J3288CR	0742		47				
J3702C	0743		48				
J2956C	0744		49				
J3284C	0745		50				

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: GC-MS Department

DATE 850811/12 SHIFT
FRACTION AP8DER
INSTRUMENT J
TUNE FILE MTJ001
SEQUENCE FILE TMJ
METHOD FILE BNPJ1
ID FILE ~~TA~~ AP8DER
ANALYST(S) [signature]

SUPERVISOR
BATCH #'s QD3418, QD3430, QD3353

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ	NA	DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL.
ISTD	400	11131	50ul
DFTPP	25	10941	2ul

3/3

NAME	DATA FILE >J	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
DFTPP	>J4687		1				
Hexachlorophene 300 ppm deriv	>J4688		2				
" 150ppm "	4689		3				
" 50ppm "	4690		4				
QC3418C	4691		5				
QC3418CS	4692		6				
J3289CS	4693		7				
J2257C 850811	4694		8				
J2258C 850811	4695		9				
J3285C 850811	4696		10				
J3286C	4697		11				
J3287C	4698		12				
J3288C	4699		13				
J3288CR	4700		14				
J3289C	4701		15				
J3290C	4702		16				
J2956C	4703		17				
DFTPP	4704		18				
Hexachlorophene Der 150 ppm STD	4705		19				
J3702C	4706		20				
J3284C	4707		21				
QC3353C	4708		22				
J4315CS	4709		23				
J4315C	4710		24				
J3281C	4711		25				

ANALYSIS/CUSTODY

TITLE: Cyanides BOOK NO. CV 7 PAGE NO. 29

	SAMPLE #	CONC.
1	J2956	ND
2	J3702	ND
3	J3284	ND
4	J2883	BMDL
5	J3096	BMDL
6	J3097	.29 1:2
7	J3098	BMDL
8	J3099	BMDL
9	J3100	Spike 1:200 .0491
10	J4060	1:100 7.13
11	J3640	1:10 2.96
12	J3647	1:500 81.0
13	J3653	1:1000 97.9
14	J3655	1:50 5.45
15	J3656	.287
16	J3658	1:100 9.47
17	J4759	1:100 46.3
18	J3644	1:100 35.8
19	J3646	1:10 1.84
20	J3659	1:10 1.73
21	J4059	1:50 9.15
22		
23		
24		
25		
26		
27		
28		
29		

	SAMPLE #	CONC
30		
31		
32		
33		
34		
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57		
58		

UNITS: MG/L Detection limit = 0.025 mg/l

COMMENTS:

< = less than 0.025 mg/l

Blank Recovery = .195/.200 = 98%

EPA Std. Rec. = .197/.224 = 88%

SPIKE RECOVERY

SAMPLE #:	J3100 1:200		
REPLICATE 1:	.0473		
REPLICATE 2:	.0510		
MEAN :	.0491		
STD. DEV. :			
SPIKE VALUE:	0.200		
REPLICATE 1:	0.199		
REPLICATE 2:			
MEAN :			
STD. DEV. :			
% RECOVERY :	99%		

REPLICATE DATA:

SAMPLE # :			
REPLICATE 1:			
REPLICATE 2:			
MEAN :			
STD DEV. :			

ANALYST: Deborah Kay

DATE : 8/29/83

VERIFIED BY:

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: Sample Preparation Departmer

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml)		Comments
~~J2257~~	~~10,316~~		ALIQUOTED		
~~J2258~~					
J3285	10,409	✓			
J3286		✓			
J3287		✓			
J3288		✓			
J3289		✓			
J3290		✓			
J2956	10,441	✓			
J3702	10,470	✓			
J2883	10,484	✓			
J3284	10,496	✓			
J3096	10,524	✓			
J3097		✓			
J3098		✓			
J3099					
J3101					
J3102					
J3103					
J3104					
J3097	RL	✓			
QC 3382	✓		ALIQUOTED		
QC 3382	✓ S				
J3098	✓ S				
J3096	✓ R				

AP7

QC Batch # 3382

Analysis AP8/DAILC210
AP8/DAILC254
AP7/DAILC

Matrix H_2O

Turnaround Normal

Date 7/29/85

Extraction Method:

Sep. Funnel

Continuous

Soxhlet

Other Aliquot

COMMENTS

★ Use BRAND NEW SPIKES ONLY.

- Aliquot ≈ 2ml into vial — label vial with "Sharpie" - not with tape labels.
- QC is hydropure H_2O only.
- MS & QCS: Add 1.0 ml of both AP8/DAILC stds to 5.0 ml volumetric. Bring to 5.0 ml with sample & hydropure H_2O respectively.
- Mix; aliquot into vial.

Analyzed [signature] 9/20-22/85
MJP 9/12

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
AP8-HPLC DAI Spike I	1.0 ml	8@25ug/ml	11,020
AP8-HPLC DAI Spike II	1.0 ml	2@25ug/ml	11,015

SURROGATE Amt. (ml)	Conc.	Lot #

Set-up: S McArthur 7/29/85

UPD/Supervisor: S McArthur 7/29/85

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: Sample Preparation Department

Sample Number	Log Link	Sample Vol. (ml)	Extract Vol. (ml)		Comments
J3702	10,470	1000	1.0		
J3284	10,496	1000	1.0		
J2883	10,484	1000	1.0		
J3096	10,524	940	1.0		
J3097		930	1.0		
J3098		940	1.0		
J3099		820	1.0		
J3101		900	1.0		
J3102		940	1.0		
J3103		950	1.0		
J3104		870	1.0		
J3100	10,557	440	1.0		
* ~~J4935~~	~~10,625~~	run as soil MB 8/7/85			
J3649	10,668	890	10ml		
J3651		970	10ml		
J3657		800	1.0		
QC 3457		1000	1.0		
QC 3457	S	1000	1.0		
J3104	S	950	1.0		
J3103	R	980	1.0		

QC Batch # 3457

Analysis AP8/EXT LC

Matrix H_2O

Turnaround Normal

Date ~~3/8/85~~ 8/7/85 MB

Extraction Method:

Sep. Funnel ✓

Continuous ✓

Soxhlet

Other

COMMENTS

~~* Use the sample designated for continuos. There is 100ml of sample w/ 900 ml H_2O~~

run as soil MB 8/7/85

analyzed 9/26-27/85 [signature]

FRACTION	SPIKE Amt (ml)	Conc.	Lot #
AP8 EXT LC I	0.5	1000 ug/ml	10,897
AP8 EXT LC II	0.5	1000 ug/ml	10,898
AP8 EXT LC III	0.5	1000 ug/ml	10,899
AP8 EXT LC IV	0.5	1000 ug/ml	10,900

SURROGATE Amt. (ml)	Conc.	Lot #

8/7/85 MB

Set-up: John Fabate ~~8/8/85~~ Judie C. 8/8/85 UPD/Supervisor: Dina Gandhi 8/3/85

Conc.: Judie C. 8/8/85 Spike/Surr. Verified: [signature] 8/8/85

ETC FORM #105

ETC ENVIRONMENTAL TESTING and CERTIFICATION

LABORATORY CHRONICLE: GC-MS Department

DATE 850926 SHIFT
FRACTION VOA
INSTRUMENT D
TUNE FILE APBIO2
SEQUENCE FILE
METHOD FILE APBHPT
ID FILE DAPBDI
ANALYST(S) Joseph Quinn
SUPERVISOR
BATCH #'s QV3774

(PLEASE INITIAL)

CURRENT CS05 STATUS		STANDARDS UPDATED	
ACQ		DATE	
WIP		BY	

STANDARD	CONC PPM	LOT NO.	LOT VOL.
p-BFB	50		1
APBDAI STD	500	11155	5
		~~11155~~	

NAME	DATA FILE	uL INJ	ALS #	DIL	TAPE #	SPECIALS (WRITE A-TYPE)	PLUS Y/N
p-BFB	>D1390						
QC3774V	>D1391					567	
QC3774VS	>D1392					131415	
QC3774VS	>D1393					181920	
J4933V	>D1394	1ml				51,52,53	
J4934V	>D1395					54-56	
J3284V	>D1396					57-59	
J7173V	>D1397					60-62	
J4934VR	>D1398					63-65	
50ng p-BFB	>D1399				OK	+86-66 76-81 117118	
QC3774VS	>D1400					140-144 158 160	
QC3774VS	>D1401					161-163	
J7173V	>D1402					NG	
J7173V	>D1403					OK	
J7173VR	>D1404						
J3284V	>D1405						
J4933V	>D1406						
J4934V	>D1407						
J7173V	>D1408						