Rec'd. 11/8/93

COAST-TO-COAST ANALYTICAL SERVICES, INC.
MIDWEST REGION: Indianapolis & Valparaiso, Indiana; Livonia, Michigan
EXCELLENCE IN ANALYSIS

October 29, 1993

Monroe Twp Contaminated Soil Site

Mr. Adly Michael
Roy F. Weston, Inc.
Region II EPA
1090 King Georges Post Road
Suite 201
Edison, NJ 08837

Dear Mr. Michael,

Enclosed are analytical results for the analysis of two soil samples for PCDD/PCDF. These samples were analyzed according to Method 8280 by Low Resolution GC/Low Resolution MS as described in the following narrative.

These samples were received for analysis on October 11, 1993 at 09:45. The analytical results for case IJ0873 were faxed on October 25, 1993 at 15:06. This level 1 hardcopy report, including calibration data, was sent via Federal Express Overnight on October 29, 1993.

If you should have any questions regarding this data or this report, please contact Jody Walker, Client Services at (317) 875-5894. Certification requirements may vary from state to state. To resolve any questions associated with this concern, please contact Ms. Janet Sachs, CCAS-Indy Certifications Officer.

Sincerely,

Rae Cogswell

Rae Ann Cogswell
Document Control Officer

Enclosure

385217

7726 Moller Road • Indianapolis, IN 46268 • 317-875-5894 • 800-875-8674 • 317-872-6189 FAX

EXCELLENCE
IN ANALYSIS

IJ0873

Two soil samples for case IJ0873 were received on October 11, 1993. These samples were checked for integrity, logged and assigned laboratory identification numbers per the current Standard Operating Procedures (SOP). Any discrepancies noted during this process have been documented on the chain of custody.

The samples were extracted, prepared and analyzed according to the current Statement of Work for Analysis of PCDD/PCDF (Document Number DFLM01.1). The samples were found to contain all analytes. The ion abundance ratios for the TCDD internal standard (samples MB-SC1 and MB-SC2) and the TCDF internal standard (sample MB-SC2) were outside control limits. Their recoveries were also outside CRQ limits. An "E" flag was used on the 1DFA and 2DF forms to show that the calculations were done using these internal standard values, and therefore the calculations are all estimated. In the analyst's opinion, this is due to matrix interference. No other particular problems were encountered during the analytical process.

All QA/QC samples (method blank, laboratory control spike and laboratory control spike duplicate) were within established control limits.

If any questions arise concerning this analysis, please contact Ms. Jody Walker, Client Services Division, at 317-875-5894.

ZFA
10-25-93

CHAIN OF CUSTODY RECORD

REGION II EPA ROY F. WESTON, INC.
TECHINICAL ASSISTANCE TEAM
1090 KING GEORGES POST RD.
SUITE 201 - EDISON, NJ 08837 PHONE NO.: (908) 225-6116

TAT PM: Eric Wilson

PCS # C694
P.O. # 16-3245

Sample Number	Number of Containers	Description of Samples
MB-SL1	1	1 x 16 oz solid / PC-DD/PCDF — 873 RC 10-11-93 — IJ0~~87~~ 2-1
MB-SL2	1	~~same as above~~ — IJC~~87~~-2-2 — 873 RC 10-11-93

can temp. 15.2°C RC 10-11-93

Person Assuming Responsibility for Sample: Eric Wilson — Time: 1730 — Date: 10/7/93

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
All	Eric Wilson				for analysis
		Zae Cogswell	10/11/93	0945	

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.

MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 0401005.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.58				U	0.0085
2378-TCDF	304/306	19.02				U	0.0084
12378-PeCDF	340/342	23.04				U	0.0078
12378-PeCDD	356/358	24.18				U	0.0099
23478-PeCDF	340/342	23.63				U	0.0072
123478-HxCDF	374/376	27.74				U	0.0056
123678-HxCDF	374/376	28.07				U	0.0057
123478-HxCDD	390/392	29.01				U	0.0101
123678-HxCDD	390/392	29.13				U	0.0099
123789-HxCDD	390/392	29.68				U	0.0095
234678-HxCDF	374/376	29.31				U	0.0059
123789-HxCDF	374/376	30.19				U	0.0066
1234678-HpCDF	408/410	33.32				U	0.0064
1234678-HpCDD	424/426	35.04				U	0.0070
1234789-HpCDF	408/410	35.87				U	0.0073
OCDD	458/460	41.33	0.62	*			0.0087
OCDF	442/444	41.62				U	0.0100

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	18.98	0.81		0.65-0.89	95.2		25-150
13C-2378-TCDD	332/334	19.58	0.80		0.65-0.89	97.3		25-150
13C-123678-HxCDD	402/404	29.09	1.26		1.05-1.43	94.8		25-150
13C-1234678-HpCDF	420/422	33.32	1.08		0.88-1.20	95.0		25-150
13C-OCDD	470/472	41.33	0.93		0.76-1.01	91.8		25-150
37Cl-2378-TCDD	328/NA	19.60	NA		NA	85.1		25-150

Column to be used to flag values outside QC limits.

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.
MB-SC2

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: IJ0873 SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.01 (g/mL) g Lab Sample ID: IJ0873-2

Water Sample Prep: (Sepf/Cont) Lab File ID: 0701008.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.73	0.91	*		E	0.0036
2378-TCDF	304/306	19.13	0.74		14.7060	E	
12378-PeCDF	340/342	23.24	1.50		2.1221	E	
12378-PeCDD	356/358	24.40	1.56		0.0081	E	
23478-PeCDF	340/342	24.02	1.50		5.7794	E	
123478-HxCDF	374/376	27.80	1.24		36.8705		
123678-HxCDF	374/376	28.00	1.23		11.2862		
123478-HxCDD	390/392	29.01	1.11		0.9496	J	
123678-HxCDD	390/392	29.17	1.29		1.7543	J	
123789-HxCDD	390/392	29.68	1.23		2.7916		
234678-HxCDF	374/376	28.82	1.23		13.1874		
123789-HxCDF	374/376	30.35	1.24		3.0544		
1234678-HpCDF	408/410	33.35	1.05		37.3800		
1234678-HpCDD	424/426	35.08	1.04		7.1480		
1234789-HpCDF	408/410	35.89	1.05		3.2368		
OCDD	458/460	41.35	0.84		18.5949		
OCDF	442/444	41.65	0.83		14.6299		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	19.10	1.00	*	0.65-0.89	124.4		25-150
13C-2378-TCDD	332/334	19.75	0.52	*	0.65-0.89	4462	*	25-150
13C-123678-HxCDD	402/404	29.15	1.25		1.05-1.43	79.4		25-150
13C-1234678-HpCDF	420/422	33.35	1.08		0.88-1.20	58.2		25-150
13C-OCDD	470/472	41.35	0.88		0.76-1.01	29.1		25-150
37Cl-2378-TCDD	328/NA	19.75	NA		NA	77.2		25-150

Column to be used to flag values outside QC limits.

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.
LCS_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.03 (g/mL) g Lab Sample ID: LCS_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1001011.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.60	0.77		2.5547		
2378-TCDF	304/306	19.00	0.73		2.5124		
12378-PeCDF	340/342	23.00	1.50		4.3599		
12378-PeCDD	356/358	24.20	1.56		5.1374		
23478-PeCDF	340/342	23.81				U	0.0141
123478-HxCDF	374/376	27.76				U	0.0262
123678-HxCDF	374/376	27.93	1.24		9.0062		
123478-HxCDD	390/392	28.99				U	0.0300
123678-HxCDD	390/392	29.13	1.24		6.0183		
123789-HxCDD	390/392	29.70				U	0.0284
234678-HxCDF	374/376	28.82				U	0.0272
123789-HxCDF	374/376	30.41				U	0.0307
1234678-HpCDF	408/410	33.32	1.04		6.1766		
1234678-HpCDD	424/426	35.06	1.04		4.0557		
1234789-HpCDF	408/410	35.85				U	0.0316
OCDD	458/460	41.33	0.84		10.9263		
OCDF	442/444	41.64	0.86		10.5557		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	18.98	0.81		0.65-0.89	80.8		25-150
13C-2378-TCDD	332/334	19.58	0.79		0.65-0.89	72.1		25-150
13C-123678-HxCDD	402/404	29.11	1.28		1.05-1.43	65.2		25-150
13C-1234678-HpCDF	420/422	33.30	1.08		0.88-1.20	46.8		25-150
13C-OCDD	470/472	41.33	0.93		0.76-1.01	26.8		25-150
37Cl-2378-TCDD	328/NA	19.60	NA		NA	66.3		25-150

Column to be used to flag values outside QC limits.

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.
LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.06 . (g/mL) g Lab Sample ID: LCSD_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1101012.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.60	0.79		2.4876		
2378-TCDF	304/306	19.00	0.74		2.4870		
12378-PeCDF	340/342	23.00	1.50		5.2511		
12378-PeCDD	356/358	24.20	1.57		5.4713		
23478-PeCDF	340/342	23.79				U	0.0131
123478-HxCDF	374/376	27.76				U	0.0211
123678-HxCDF	374/376	27.93	1.24		8.3359		
123478-HxCDD	390/392	28.98				U	0.0230
123678-HxCDD	390/392	29.12	1.24		5.8655		
123789-HxCDD	390/392	29.71	1.26		0.0275	J	
234678-HxCDF	374/376	28.93				U	0.0219
123789-HxCDF	374/376	30.67				U	0.0247
1234678-HpCDF	408/410	33.33	1.04		6.0211		
1234678-HpCDD	424/426	35.05	1.06		4.0747		
1234789-HpCDF	408/410	36.27				U	0.0264
OCDD	458/460	41.33	0.84		10.7720		
OCDF	442/444	41.63	0.85		10.4111		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	18.98	0.79		0.65-0.89	91.8		25-150
13C-2378-TCDD	332/334	19.58	0.79		0.65-0.89	91.6		25-150
13C-123678-HxCDD	402/404	29.10	1.29		1.05-1.43	94.3		25-150
13C-1234678-HpCDF	420/422	33.31	1.07		0.88-1.20	72.1		25-150
13C-OCDD	470/472	41.31	0.94		0.76-1.01	38.8		25-150
37Cl-2378-TCDD	328/NA	19.60	NA		NA	86.0		25-150

Column to be used to flag values outside QC limits.

1DFB
PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.
MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 0401005.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION		TEF		TEF-ADJUSTED CONCENTRATION
2378-TCDD	00.0000	x	1.0	=	0.000
2378-TCDF	00.0000	x	0.1	=	0.000
12378-PeCDF	00.0000	x	0.05	=	0.000
12378-PeCDD	00.0000	x	0.5	=	0.000
23478-PeCDF	00.0000	x	0.5	=	0.000
123478-HxCDF	00.0000	x	0.1	=	0.000
123678-HxCDF	00.0000	x	0.1	=	0.000
123478-HxCDD	00.0000	x	0.1	=	0.000
123678-HxCDD	00.0000	x	0.1	=	0.000
123789-HxCDD	00.0000	x	0.1	=	0.000
234678-HxCDF	00.0000	x	0.1	=	0.000
123789-HxCDF	00.0000	x	0.1	=	0.000
1234678-HpCDF	00.0000	x	0.01	=	0.000
1234678-HpCDD	00.0000	x	0.01	=	0.000
1234789-HpCDF	00.0000	x	0.01	=	0.000
OCDD	00.0000	x	0.001	=	0.000
OCDF	00.0000	x	0.001	=	0.000
		TOTAL =			0.00

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

1DFB
PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.
MB-SC1

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: IJ0873 SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.05 (g/mL) g Lab Sample ID: IJ0873-1

Water Sample Prep: (Sepf/Cont) Lab File ID: 0601007.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	00.0398	x 1.0 =	0.040
2378-TCDF	12.8282	x 0.1 =	1.283
12378-PeCDF	02.9265	x 0.05 =	0.146
12378-PeCDD	00.1504	x 0.5 =	0.075
23478-PeCDF	05.1079	x 0.5 =	2.554
123478-HxCDF	28.3231	x 0.1 =	2.832
123678-HxCDF	09.2221	x 0.1 =	0.922
123478-HxCDD	01.2708	x 0.1 =	0.127
123678-HxCDD	02.0134	x 0.1 =	0.201
123789-HxCDD	03.4870	x 0.1 =	0.349
234678-HxCDF	12.3657	x 0.1 =	1.237
123789-HxCDF	01.7978	x 0.1 =	0.180
1234678-HpCDF	39.3186	x 0.01 =	0.393
1234678-HpCDD	09.2798	x 0.01 =	0.093
1234789-HpCDF	02.6288	x 0.01 =	0.026
OCDD	23.4562	x 0.001=	0.023
OCDF	14.8411	x 0.001=	0.015
		TOTAL =	10.50

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

1DFB

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.

MB-SC2

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: IJ0873 SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.01 (g/mL) g Lab Sample ID: IJ0873-2

Water Sample Prep: (Sepf/Cont) Lab File ID: 0701008.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	00.0000	x 1.0 =	0.000
2378-TCDF	14.7060	x 0.1 =	1.471
12378-PeCDF	02.1221	x 0.05 =	0.106
12378-PeCDD	00.0081	x 0.5 =	0.004
23478-PeCDF	05.7794	x 0.5 =	2.890
123478-HxCDF	36.8705	x 0.1 =	3.687
123678-HxCDF	11.2862	x 0.1 =	1.129
123478-HxCDD	00.9496	x 0.1 =	0.095
123678-HxCDD	01.7543	x 0.1 =	0.175
123789-HxCDD	02.7916	x 0.1 =	0.279
234678-HxCDF	13.1874	x 0.1 =	1.319
123789-HxCDF	03.0544	x 0.1 =	0.305
1234678-HpCDF	37.3800	x 0.01 =	0.374
1234678-HpCDD	07.1480	x 0.01 =	0.071
1234789-HpCDF	03.2368	x 0.01 =	0.032
OCDD	18.5949	x 0.001=	0.019
OCDF	14.6299	x 0.001=	0.015
		TOTAL =	11.97

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

1DFB

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.

LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.06 (g/mL) g Lab Sample ID: LCSD_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1101012.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	02.4876	x 1.0 =	2.488
2378-TCDF	02.4870	x 0.1 =	0.249
12378-PeCDF	05.2511	x 0.05 =	0.263
12378-PeCDD	05.4713	x 0.5 =	2.736
23478-PeCDF	00.0000	x 0.5 =	0.000
123478-HxCDF	00.0000	x 0.1 =	0.000
123678-HxCDF	08.3359	x 0.1 =	0.834
123478-HxCDD	00.0000	x 0.1 =	0.000
123678-HxCDD	05.8655	x 0.1 =	0.587
123789-HxCDD	00.0275	x 0.1 =	0.003
234678-HxCDF	00.0000	x 0.1 =	0.000
123789-HxCDF	00.0000	x 0.1 =	0.000
1234678-HpCDF	06.0211	x 0.01 =	0.060
1234678-HpCDD	04.0747	x 0.01 =	0.041
1234789-HpCDF	00.0000	x 0.01 =	0.000
OCDD	10.7720	x 0.001=	0.011
OCDF	10.4111	x 0.001=	0.010
		TOTAL =	7.28

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 0401005.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD			U	0.0085
Total PeCDD			U	0.0099
Total HxCDD			U	0.0095
Total HpCDD			U	0.007
FURANS				
Total TCDF			U	0.0084
Total PeCDF			U	0.0072
Total HxCDF			U	0.0056
Total HpCDF			U	0.0064

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

MB-SC1

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.05 (g/mL) g Lab Sample ID: IJ0873-1

Water Sample Prep: (Sepf/Cont) Lab File ID: 0601007.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	9	1.56	E	
Total PeCDD	9	2.39	E	
Total HxCDD	7	29.08		
Total HpCDD	2	19.61		
FURANS				
Total TCDF	8	54.36		
Total PeCDF	13	69.34		
Total HxCDF	10	92.47		
Total HpCDF	4	53.12		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

MB-SC2

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.01 (g/mL) g Lab Sample ID: IJ0873-2

Water Sample Prep: (Sepf/Cont) Lab File ID: 0701008.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	8	0.12	E	0.0036
Total PeCDD	10	0.14	E	
Total HxCDD	7	24.77		
Total HpCDD	2	15.31		
FURANS				
Total TCDF	5	34.01	E	
Total PeCDF	13	53.00	E	
Total HxCDF	9	108.72		
Total HpCDF	4	51.64		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

LCS_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.03 (g/mL) g Lab Sample ID: LCS_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1001011.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	1	2.55		
Total PeCDD	1	5.14		
Total HxCDD	1	6.02		
Total HpCDD	1	4.06		
FURANS				
Total TCDF	2	2.55		
Total PeCDF	2	4.41		
Total HxCDF	1	9.01		
Total HpCDF	1	6.18		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.06 (g/mL) g Lab Sample ID: LCSD_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1101012.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	1	2.49		
Total PeCDD	1	5.47		
Total HxCDD	2	5.89		
Total HpCDD	1	4.07		
FURANS				
Total TCDF	2	2.53		
Total PeCDF	1	5.25		
Total HxCDF	1	8.34		
Total HpCDF	1	6.02		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

3DFA
PCDD/PCDF SPIKED SAMPLE SUMMARY

EPA SAMPLE NO.

LCS_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No.:

CONCENTRATION UNITS: (ng/L or ug/Kg) ug/Kg

ANALYTE	SPIKE ADDED (PG)	SPIKED SAMPLE CONCENTRATION	SAMPLE CONCENTRATION	% REC	#	QC LIMITS
2378-TCDD	25000	2.55	0.00	102.5		50-150
2378-TCDF	25000	2.51	0.00	100.8		50-150
12378-PeCDF	62500	4.36	0.00	70.0		50-150
12378-PeCDD	62500	5.14	0.00	82.4		50-150
123678-HxCDF	62500	9.01	0.00	144.5		50-150
123678-HxCDD	62500	6.02	0.00	96.6		50 150
1234678-HpCDF	62500	6.18	0.00	99.1		50-150
1234678-HpCDD	62500	4.06	0.00	65.1		50-150
OCDD	125000	10.93	0.00	87.7		50-150
OCDF	125000	10.56	0.00	84.7		50-150

If an analyte is not detected in the unspiked sample, enter 0 (zero) as the "SAMPLE CONCENTRATION".

Column to be used to flag values outside QC limits.

QC limits are advisory.

3DFC
PCDD/PCDF SPIKED DUPLICATE SUMMARY

EPA SAMPLE NO.

LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

CONCENTRATION UNITS: (ng/L or ug/Kg) ug/Kg

ANALYTE	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD	#	QC LIMITS
2378-TCDD	2.55	2.49	2.4		50
2378-TCDF	2.51	2.49	0.8		50
12378-PeCDF	4.36	5.25	18.5		50
12378-PeCDD	5.14	5.47	6.2		50
123678-HxCDF	9.01	8.34	7.7		50
123678-HxCDD	6.02	5.87	2.5		50
1234678-HpCDF	6.18	6.02	2.6		50
1234678-HpCDD	4.06	4.07	0.2		50
OCDD	10.93	10.77	1.5		50
OCDF	10.56	10.41	1.4		50

If an analyte is not detected in either analysis, enter 0 (zero) as the concentration.

Column to be used to flag values outside QC limits.

QC limits are advisory.

4DF
PCDD/PCDF METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case no.: IJ0873 SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep.: (Sepf/Cont) Lab File ID: 0401005.D

Date Extracted: 10/14/93

Date Analyzed: 10/25/93

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, SPIKES, AND DUPLICATES

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
MB-SC1	IJ0873-1	0601007.D	10/25/93
MB-SC2	IJ0873-2	0701008.D	10/25/93
LCS_SOIL	LCS_SOIL	1001011.D	10/25/93
LCSD_SOIL	LCSD_SOIL	1101012.D	10/25/93

6DFB

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.: SDG No.:

GC Column: DB-5 ID: 0.25 (mm) Instrument ID: 5971

Init. Calib. Date(s): 10/14/93

Init. Calib. Times: 11:17:00-14:27:00

NATIVE ANALYTES	SELECT IONS	ION ABUNDANCE RATIO					FLAG	QC LIMITS
		CC1	CC2	CC3	CC4	CC5		
2378-TCDD	320/322	0.81	0.78	0.79	0.79	0.79		0.65-0.89
2378-TCDF	304/306	0.72	0.73	0.74	0.75	0.74		0.65-0.89
12378-PeCDF	340/342	1.52	1.49	1.50	1.48	1.49		1.24-1.86
12378-PeCDD	356/358	1.58	1.52	1.52	1.51	1.49		1.24-1.86
23478-PeCDF	340/342			1.48				1.24-1.86
123478-HxCDF	374/376			1.24				1.05-1.43
123678-HxCDF	374/376	1.25	1.24	1.26	1.24	1.25		1.05-1.43
123478-HxCDD	390/392			1.25				1.05-1.43
123678-HxCDD	390/392	1.26	1.26	1.25	1.25	1.25		1.05-1.43
123789-HxCDD	390/392			1.23				1.05-1.43
234678-HxCDF	374/376			1.24				1.05-1.43
123789-HxCDF	374/376			1.25				1.05-1.43
1234678-HpCDF	408/410	1.00	0.98	0.99	0.97	0.99		0.88-1.20
1234678-HpCDD	424/426	1.05	1.06	1.07	1.04	1.05		0.88-1.20
1234789-HpCDF	408/410			0.99				0.88-1.20
OCDD	458/460	0.89	0.91	0.92	0.92	0.91		0.76-1.02
OCDF	442/444	0.92	0.93	0.92	0.93	0.93		0.76-1.02
INTERNAL STANDARDS								
13C-2378-TCDD	332/334	0.82	0.88	0.79	0.77	0.77		0.65-0.89
13C-2378-TCDF	316/318	0.81	0.81	0.81	0.82	0.82		0.65-0.89
13C-123678-HxCDD	402/404	1.20	1.21	1.20	1.24	1.24		1.05-1.43
13C-1234678-HpCDF	420/422	1.08	1.08	1.08	1.07	1.08		0.88-1.20
13C-OCDD	470/472	0.86	0.85	0.90	0.88	0.87		0.76-1.02
RECOVERY STANDARDS								
13C-1234-TCDD	332/334	0.80	0.72	0.82	0.80	0.81		0.65-0.89
13C-123789-HxCDD	402/404	1.22	1.21	1.21	1.22	1.23		1.05-1.43

QC limits represent +/- 15% window around the theoretical ion abundance ratio.

A single point calibration is performed for seven of the native analytes and the cleanup standard.

The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA
PCDD/PCDF CONTINUING CALIBRATION SUMMARY

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.: SDG No.:

GC Column: DB-5 ID: 0.25 (mm) Instrument ID: 5971

Date Analyzed: 10/24/93 Time Analyzed: 23:43:00

Lab File ID: 0301003.D Init. Calib. Date(s): 10/14/93

NATIVE ANALYTES	SELECT IONS	RRF	MEAN RRF	%D	RRF FLAG	ION RATIO	ION FLAG	QC LIMITS
2378-TCDD	320/322	1.0032	1.0615	5.5		0.78		0.65-0.89
2378-TCDF	304/306	0.8756	0.8953	2.2		0.73		0.65-0.89
12378-PeCDF	340/342	0.8121	0.8210	1.1		1.49		1.24-1.86
12378-PeCDD	356/358	0.9775	0.9537	2.5		1.54		1.24-1.86
23478-PeCDF	340/342	0.8776	0.8555	2.6		1.48		1.24-1.86
123478-HxCDF	374/376	0.9803	0.9969	1.7		1.24		1.05-1.43
123678-HxCDF	374/376	0.9752	1.0212	4.5		1.23		1.05-1.43
123478-HxCDD	390/392	0.9138	0.9777	6.5		1.25		1.05-1.43
123678-HxCDD	390/392	0.9298	0.9560	2.7		1.24		1.05-1.43
123789-HxCDD	390/392	0.9637	0.9749	1.1		1.24		1.05-1.43
234678-HxCDF	374/376	0.9451	0.9626	1.8		1.24		1.05-1.43
123789-HxCDF	374/376	0.8367	0.7881	6.2		1.24		1.05-1.43
1234678-HpCDF	408/410	0.9658	0.9459	2.1		1.05		0.88-1.20
1234678-HpCDD	424/426	1.0036	0.9744	3.0		1.05		0.88-1.20
1234789-HpCDF	408/410	0.8388	0.7429	12.9		1.05		0.88-1.20
OCDD	458/460	1.2793	1.2932	1.1		0.85		0.76-1.02
OCDF	442/444	1.5553	1.5231	2.1		0.86		0.76-1.02
INTERNAL STANDARDS								
VS. RECOVERY STDS.								
13C-2378-TCDD	332/334	1.0531	0.9853	6.9		0.81		0.65-0.89
13C-2378-TCDF	316/318	1.4817	1.4241	4.0		0.81		0.65-0.89
13C-123678-HxCDD	402/404	0.9630	0.9995	3.7		1.27		1.05-1.43
13C-1234678-HpCDF	420/422	1.3683	1.4631	6.5		1.08		0.88-1.20
13C-OCDD	470/472	0.6880	0.6537	5.2		0.94		0.76-1.02
37-Cl-2378-TCDD	328/NA	1.2087	1.1451	5.6		NA	NA	NA
RECOVERY STANDARDS								
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.81		0.65-0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.27		1.05-1.43

QC limits are shown are for ion abundance ratios. Maximum %D for RRF is +/- 30.0%.

The laboratory must flag any analyte which does not meet criteria for %D or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB

PCDD/PCDF CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.: SDG No.:

GC Column: DB-5 ID: 0.25 (mm) Instrument ID: 5971

Date Analyzed: 10/24/93 Time Analyzed: 23:43:00

Lab File ID: 0301003.D Init. Calib. Date(s): 10/14/93

NATIVE ANALYTES	RRT	RT
2378-TCDD	1.00	19.58
2378-TCDF	1.00	18.98
12378-PeCDF	1.21	22.98
12378-PeCDD	1.24	24.18
23478-PeCDF	1.25	23.79
123478-HxCDF	0.83	27.76
123678-HxCDF	0.84	27.93
123478-HxCDD	1.00	28.97
123678-HxCDD	1.00	29.11
123789-HxCDD	1.02	29.70
234678-HxCDF	0.86	28.78
123789-HxCDF	0.91	30.19
1234678-HpCDF	1.00	33.32
1234678-HpCDD	1.20	35.04
1234789-HpCDF	1.08	35.85
OCDD	1.00	41.37
OCDF	1.01	41.64
INTERNAL STANDARDS		
VS. RECOVERY STDS.		
13C-2378-TCDD	N/A	19.56
13C-2378-TCDF	N/A	18.96
13C-123678-HxCDD	N/A	29.11
13C-1234678-HpCDF	N/A	33.30
13C-OCDD	N/A	41.35
37Cl-2378-TCDD	1.01	19.58
RECOVERY STANDARDS		
13C-1234-TCDD	N/A	19.42
13C-123789-HxCDD	N/A	29.68

RRT = (RT of analyte) / (RT of appropriate internal standard)

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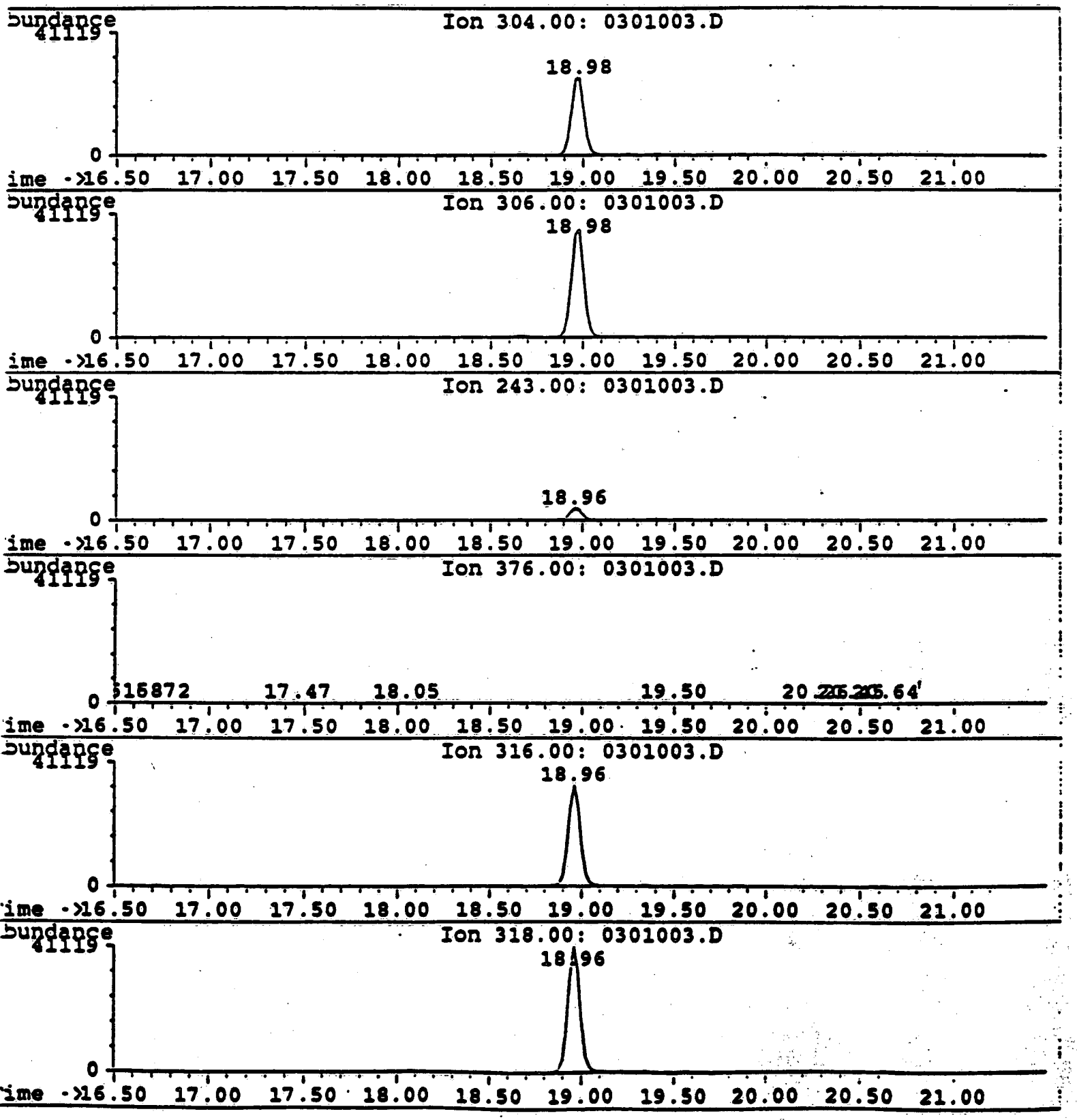

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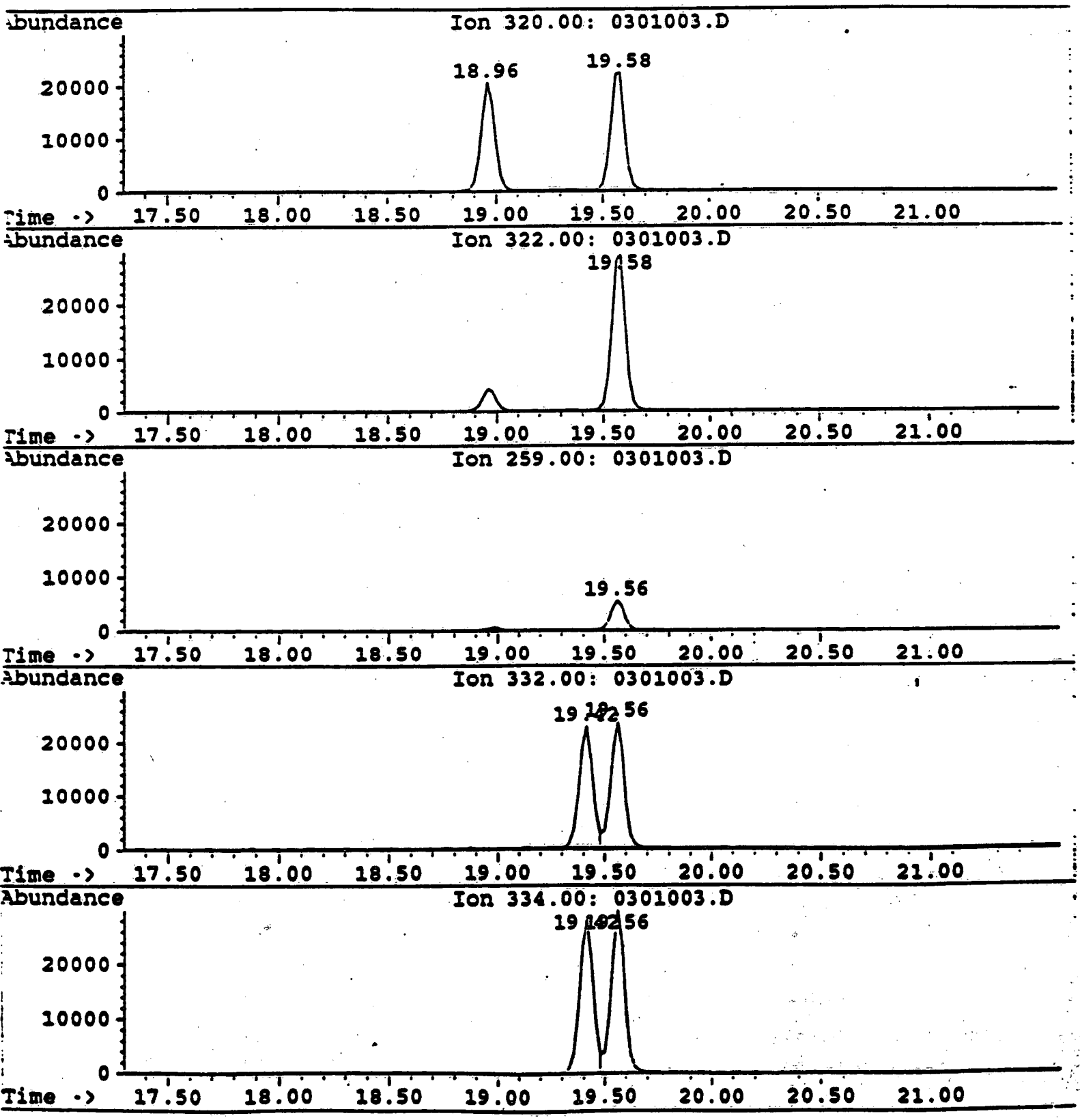

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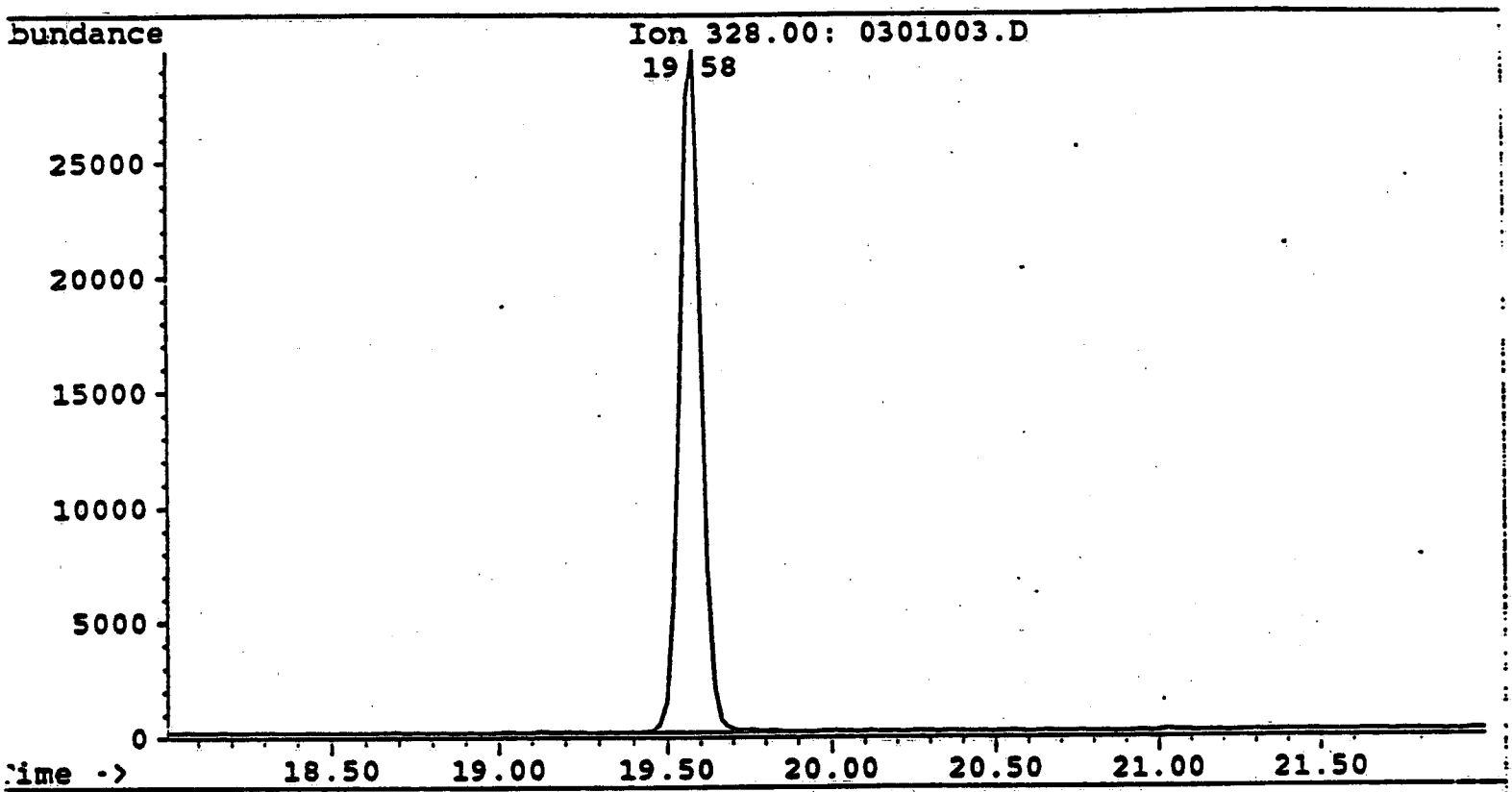

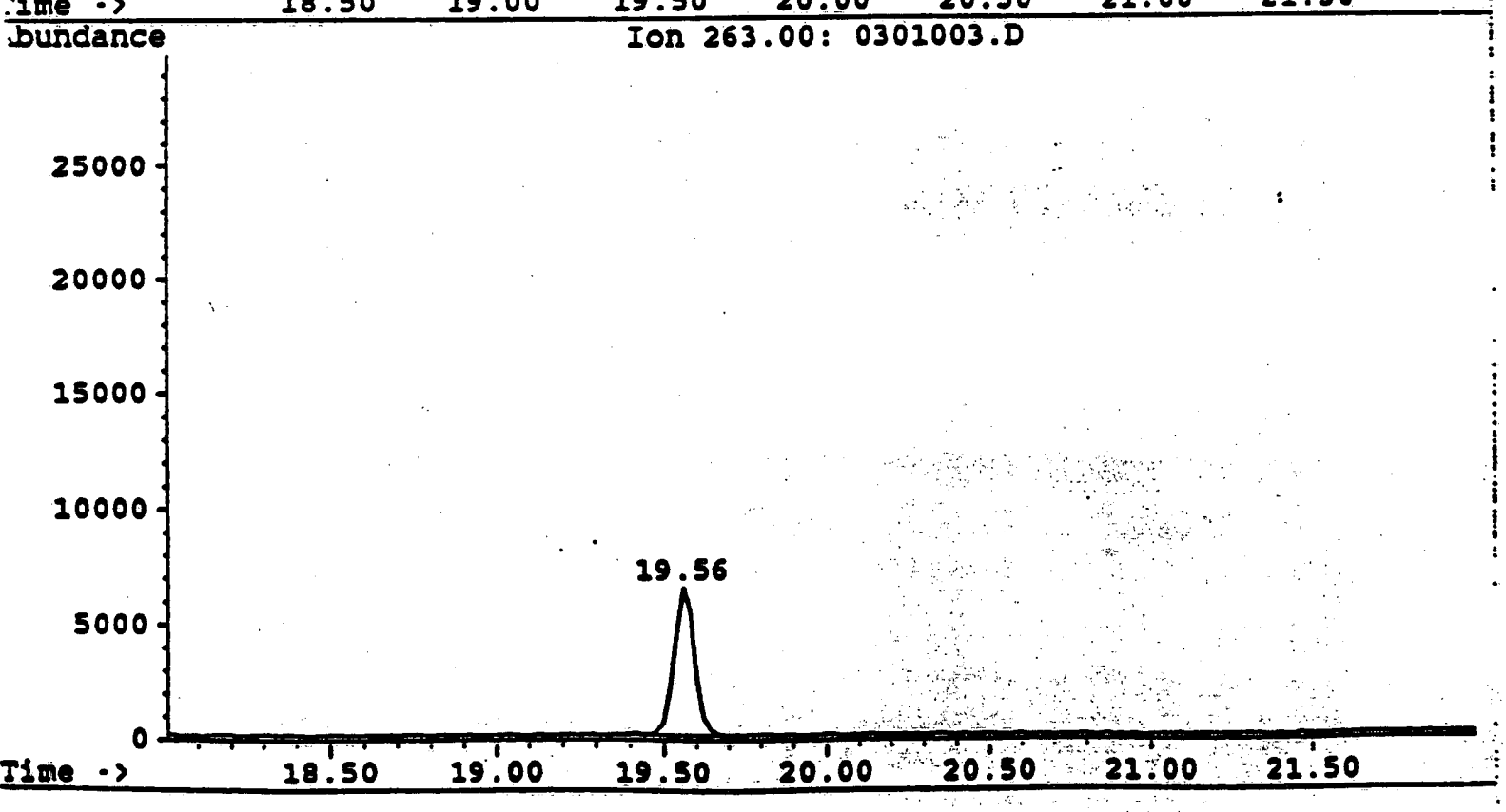

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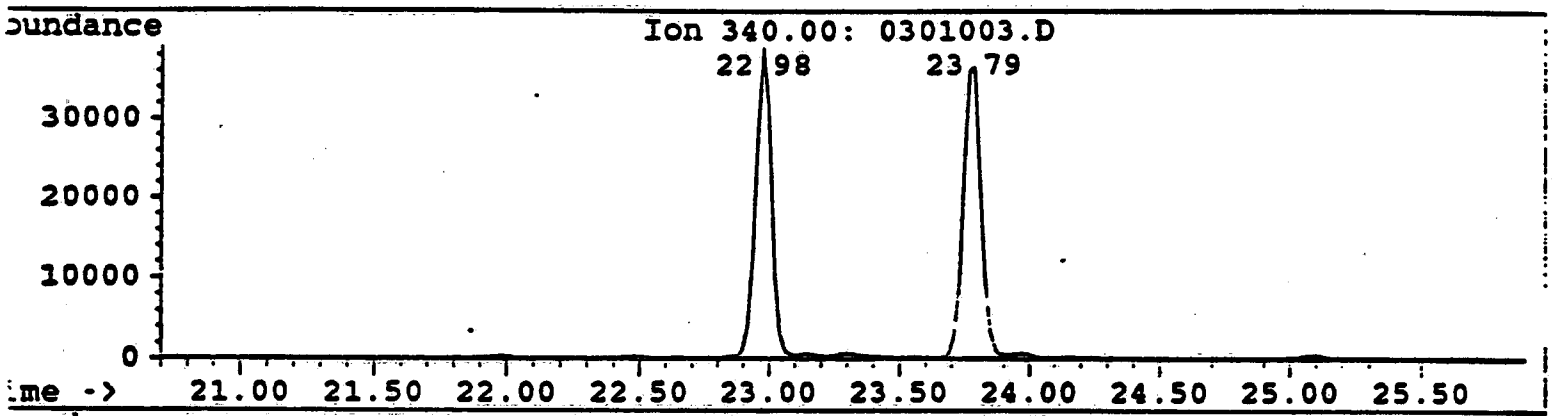

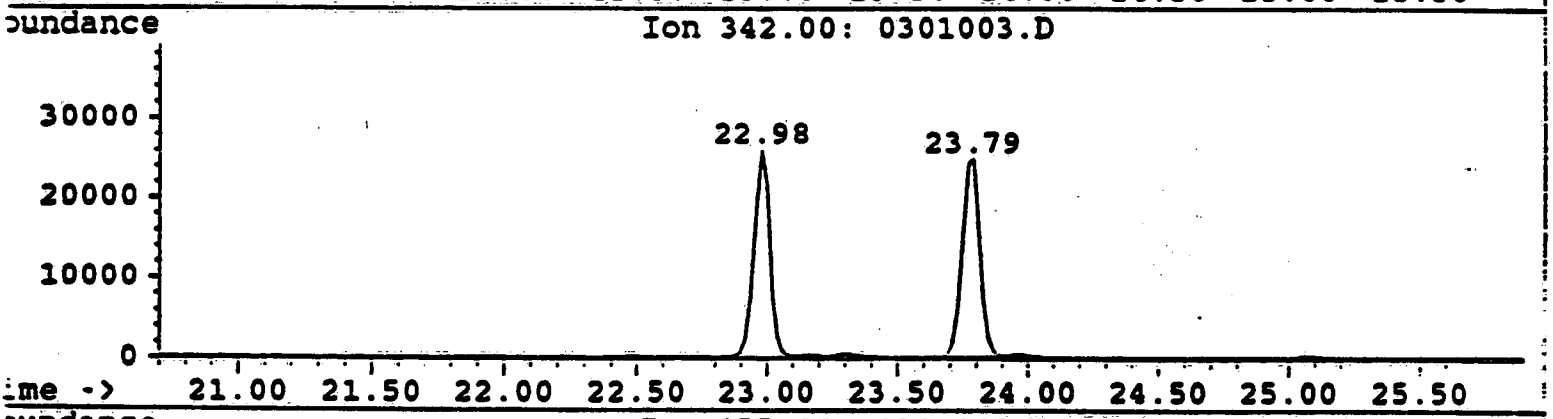

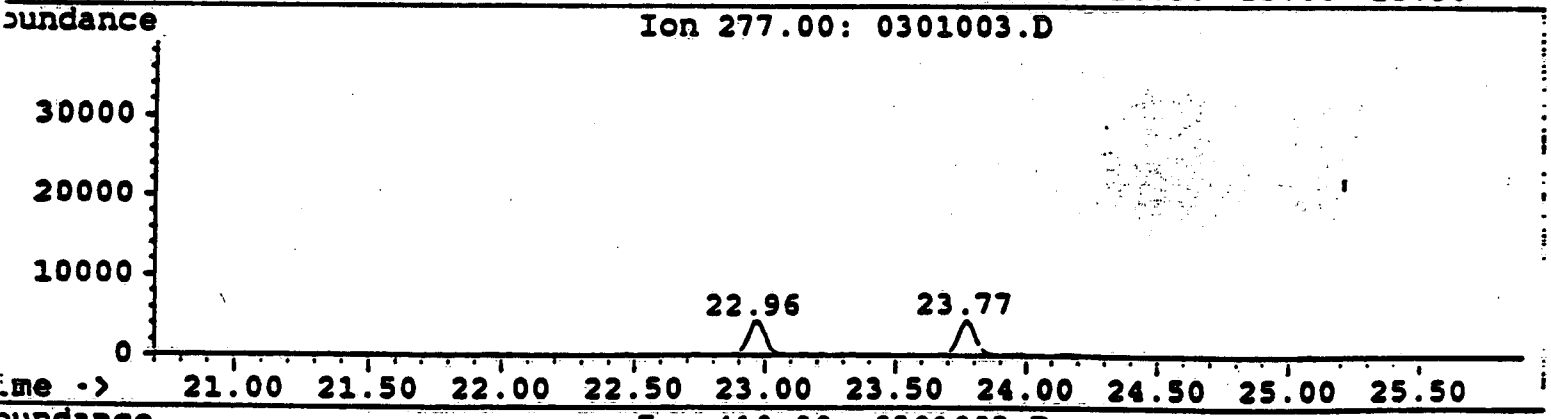

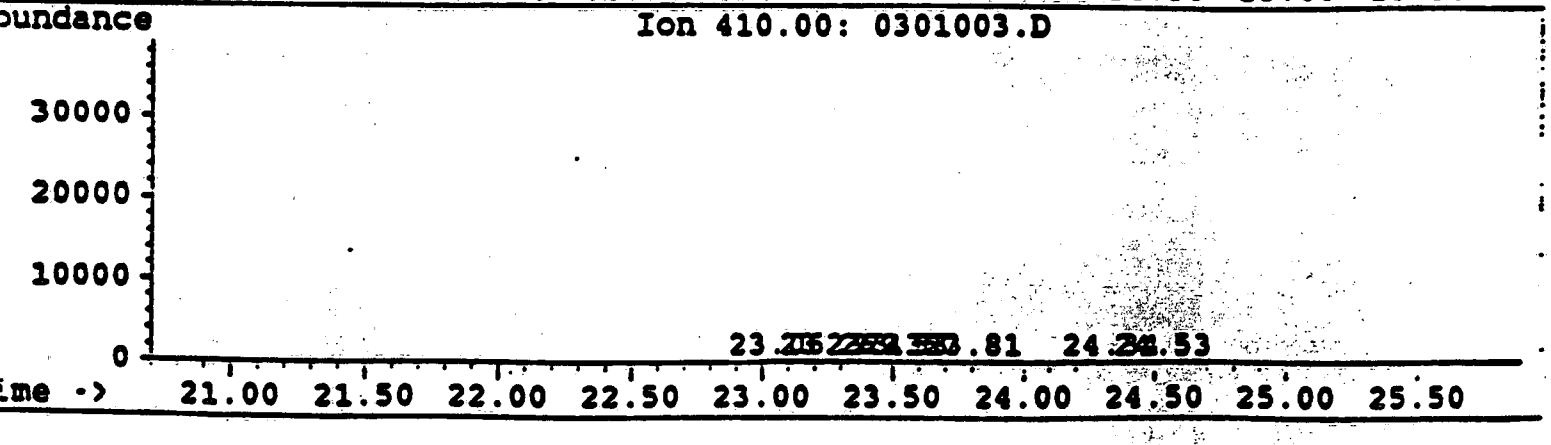

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Date Acquired: 24 Oct 93 11:43 pm
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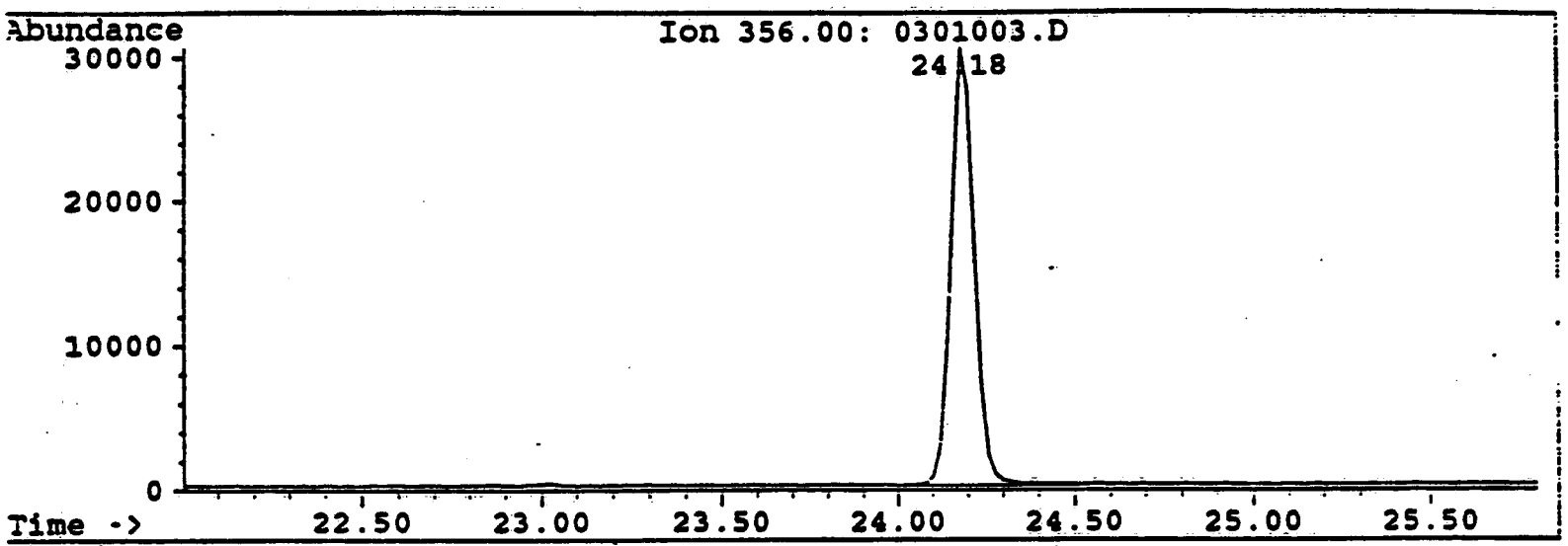
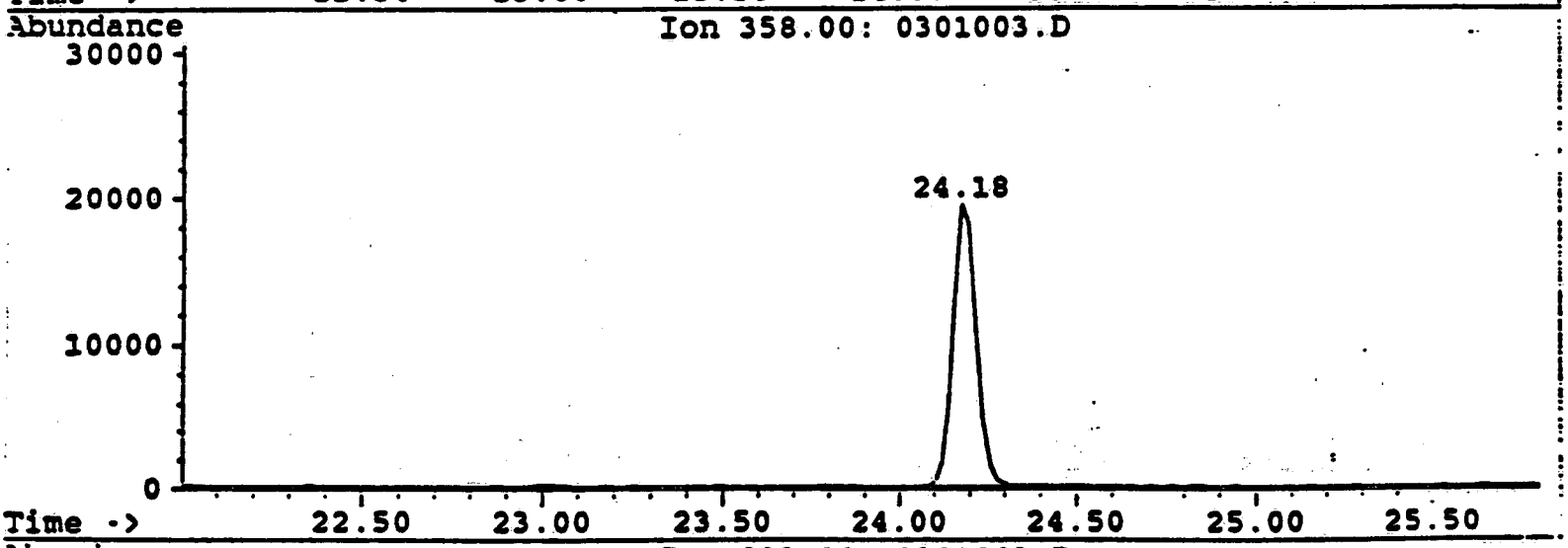
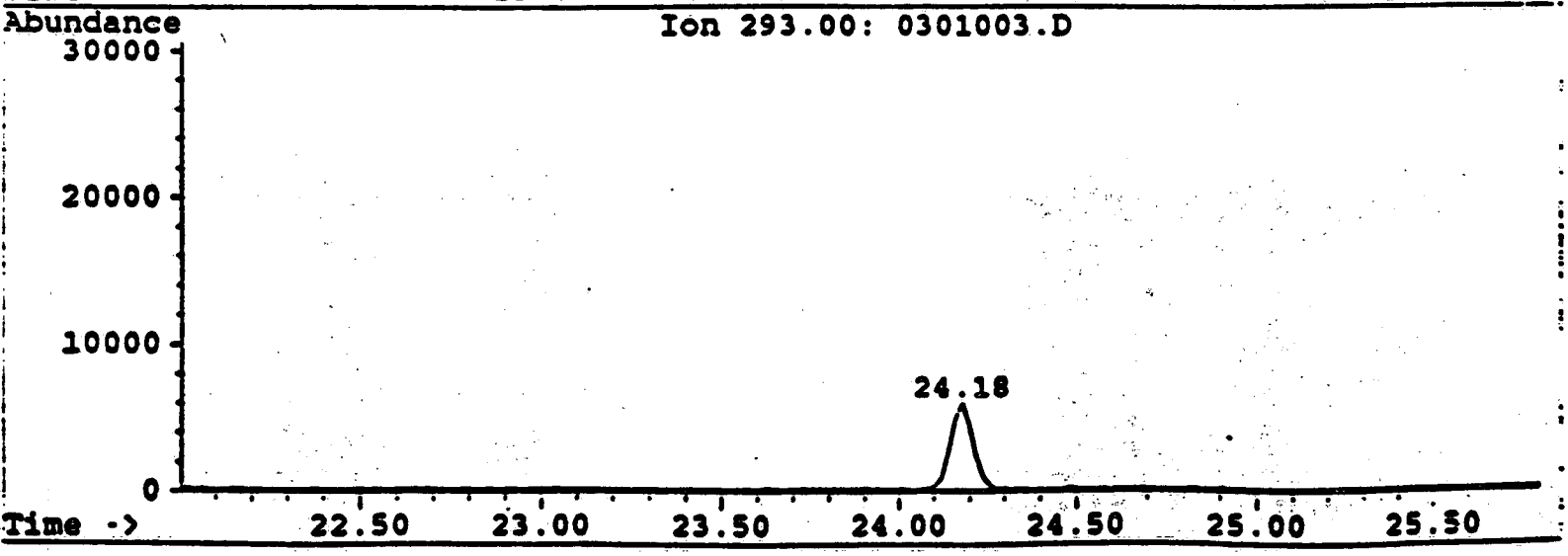
Sample Name: CC3
Misc Info:
Vial Number : 3







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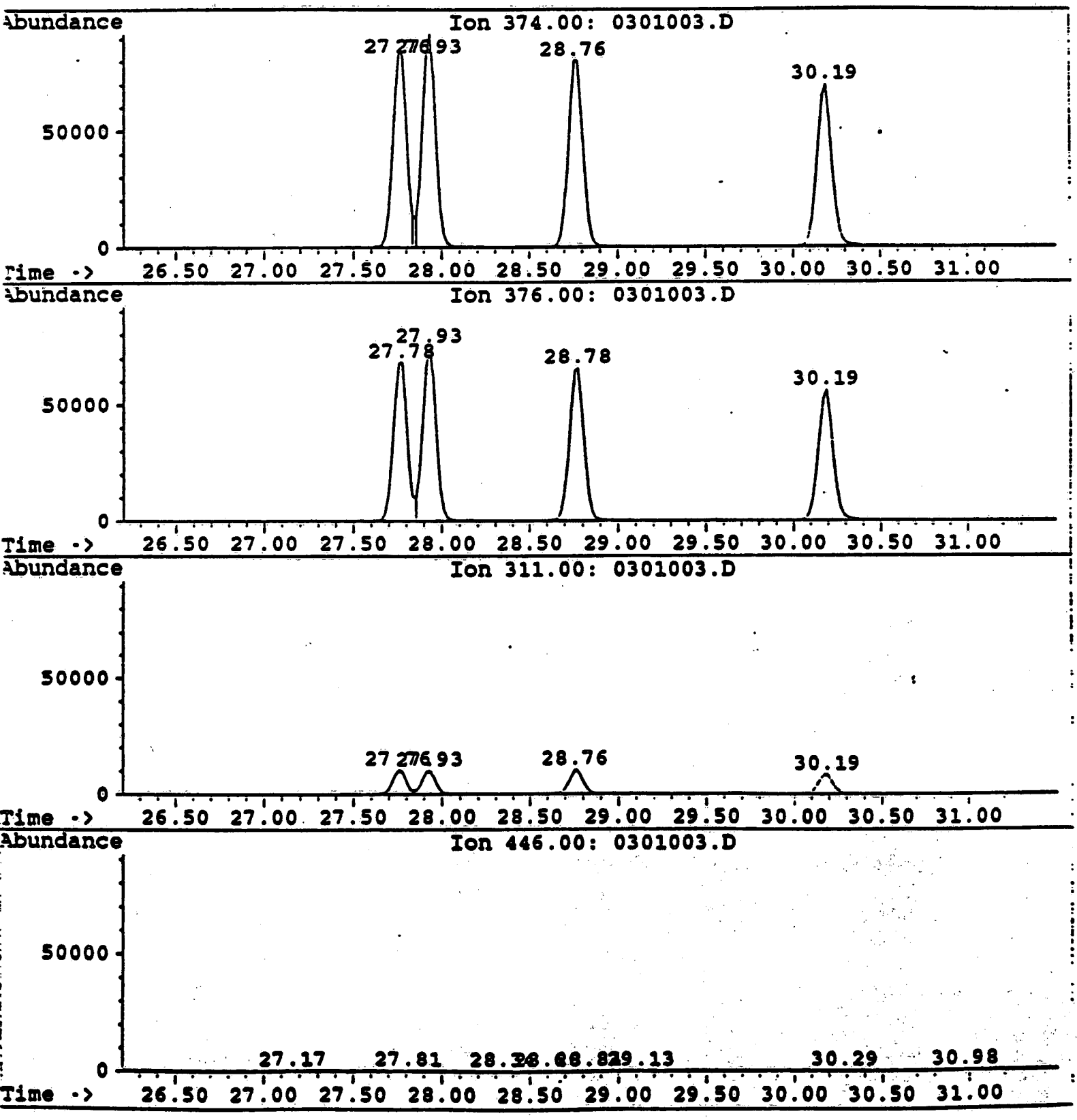

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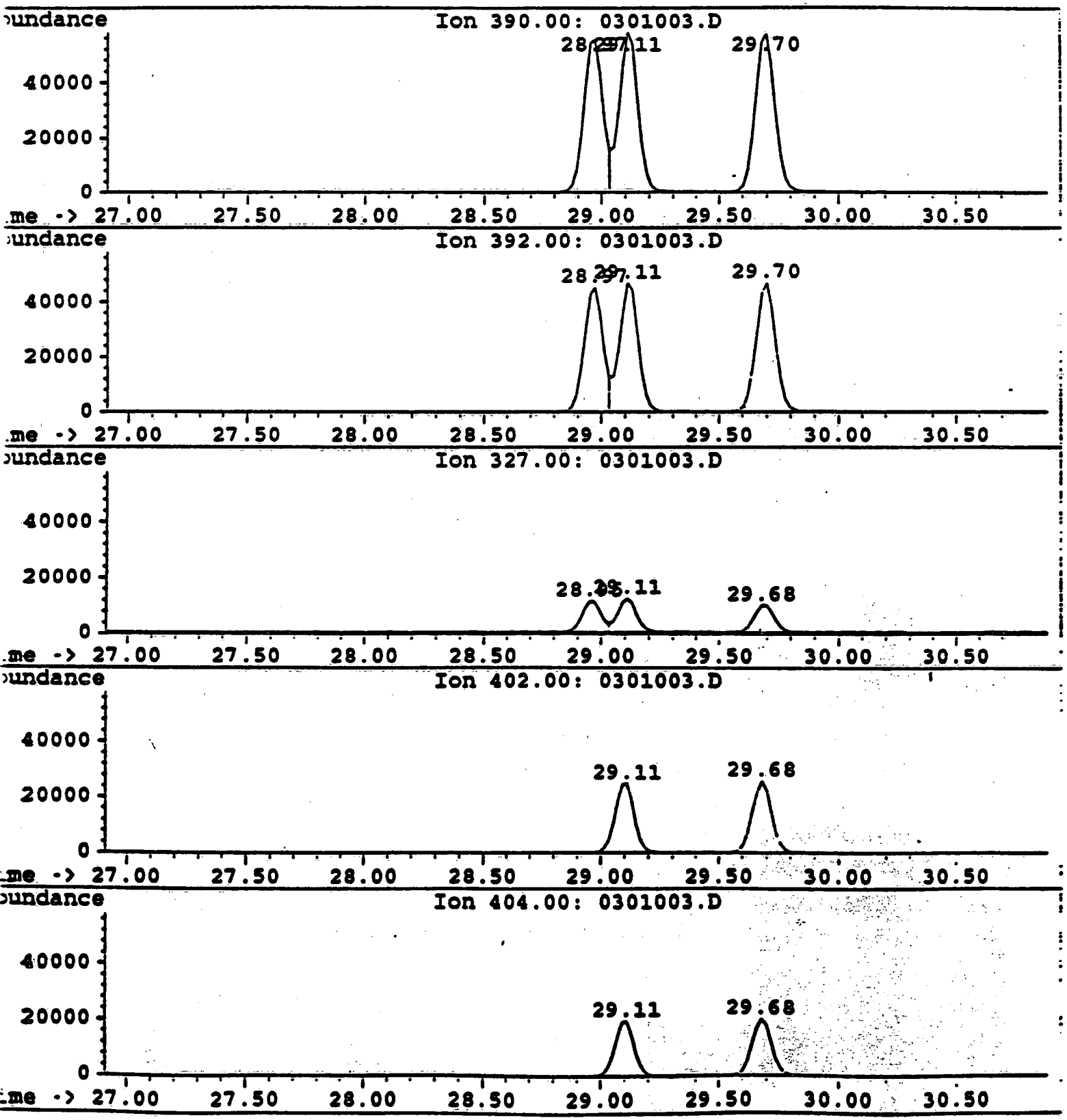

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ample Name: CC3
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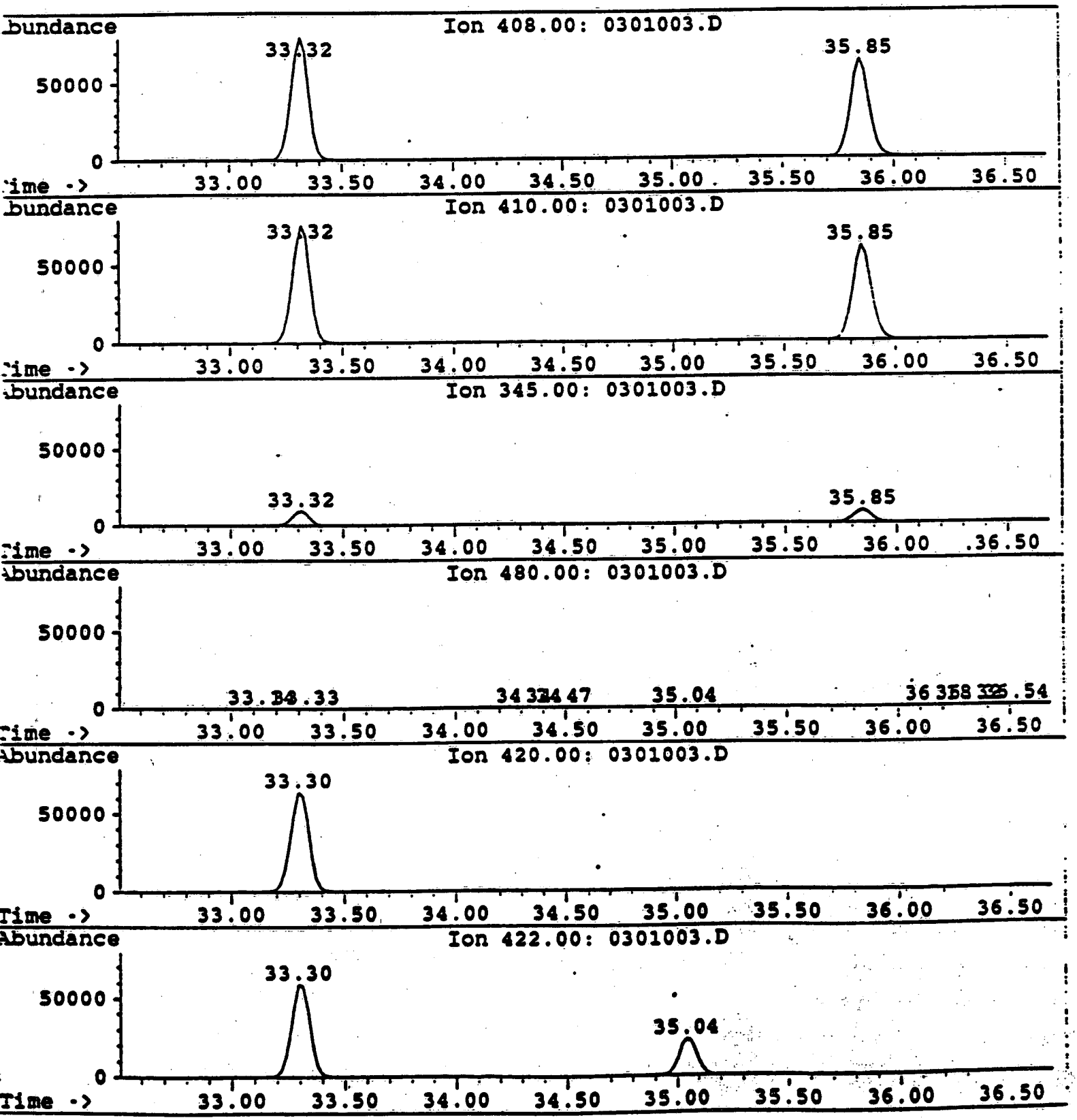
ial Number : 3



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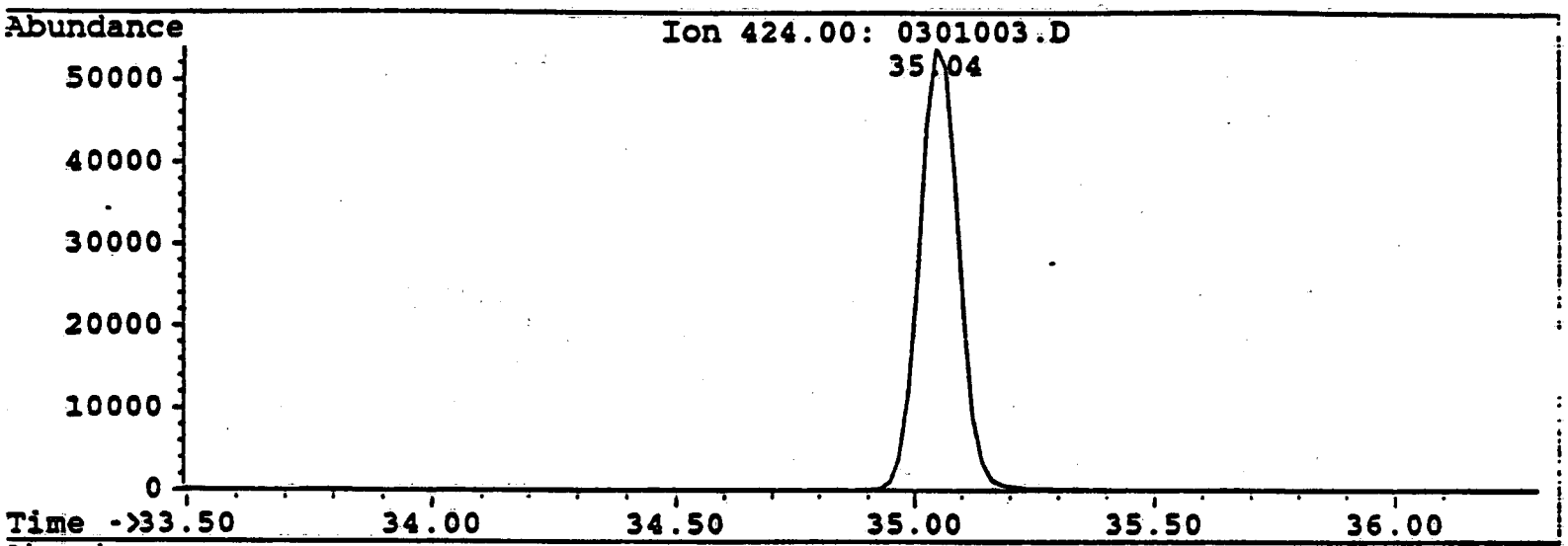
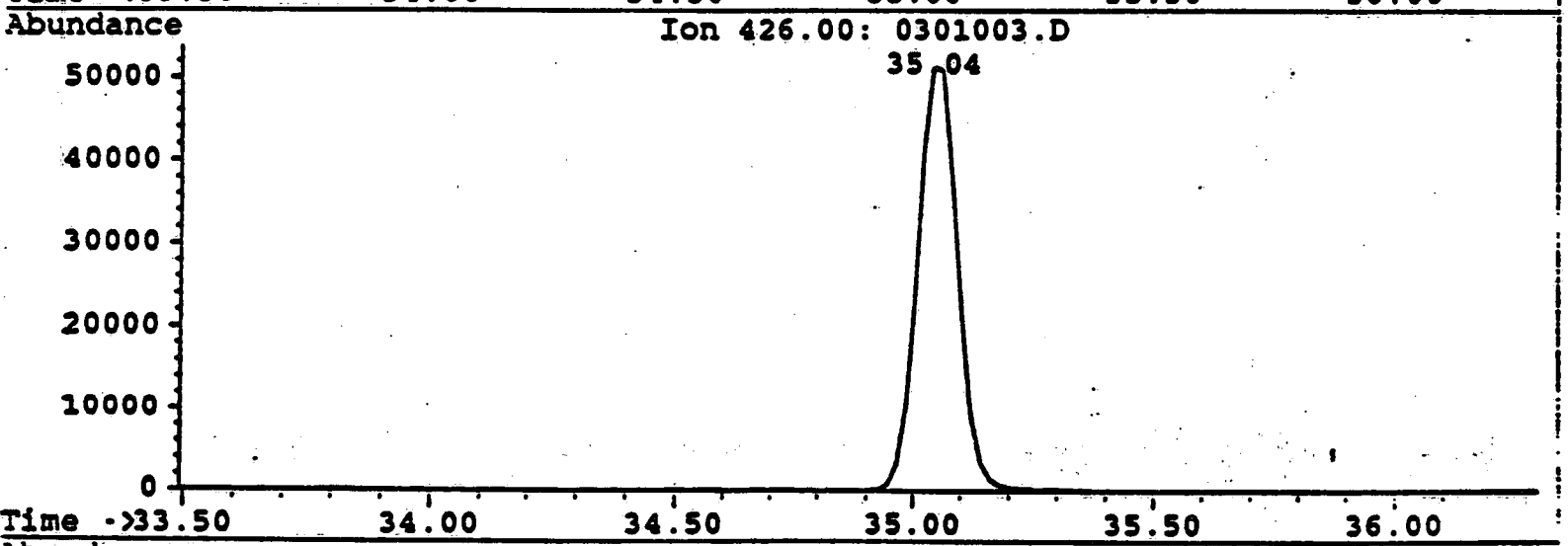
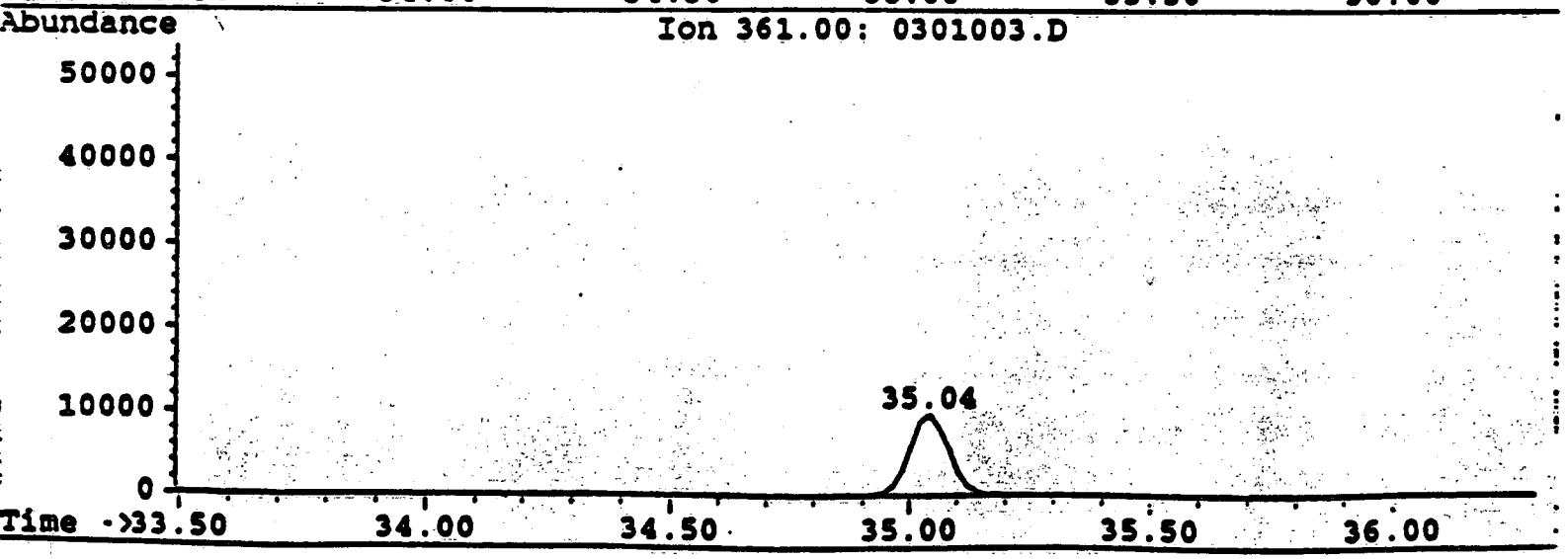
Date Acquired: 24 Oct 93 11:43 pm
Method File: ROSE.M
Sample Name: CC3
Misc Info:
Vial Number : 3







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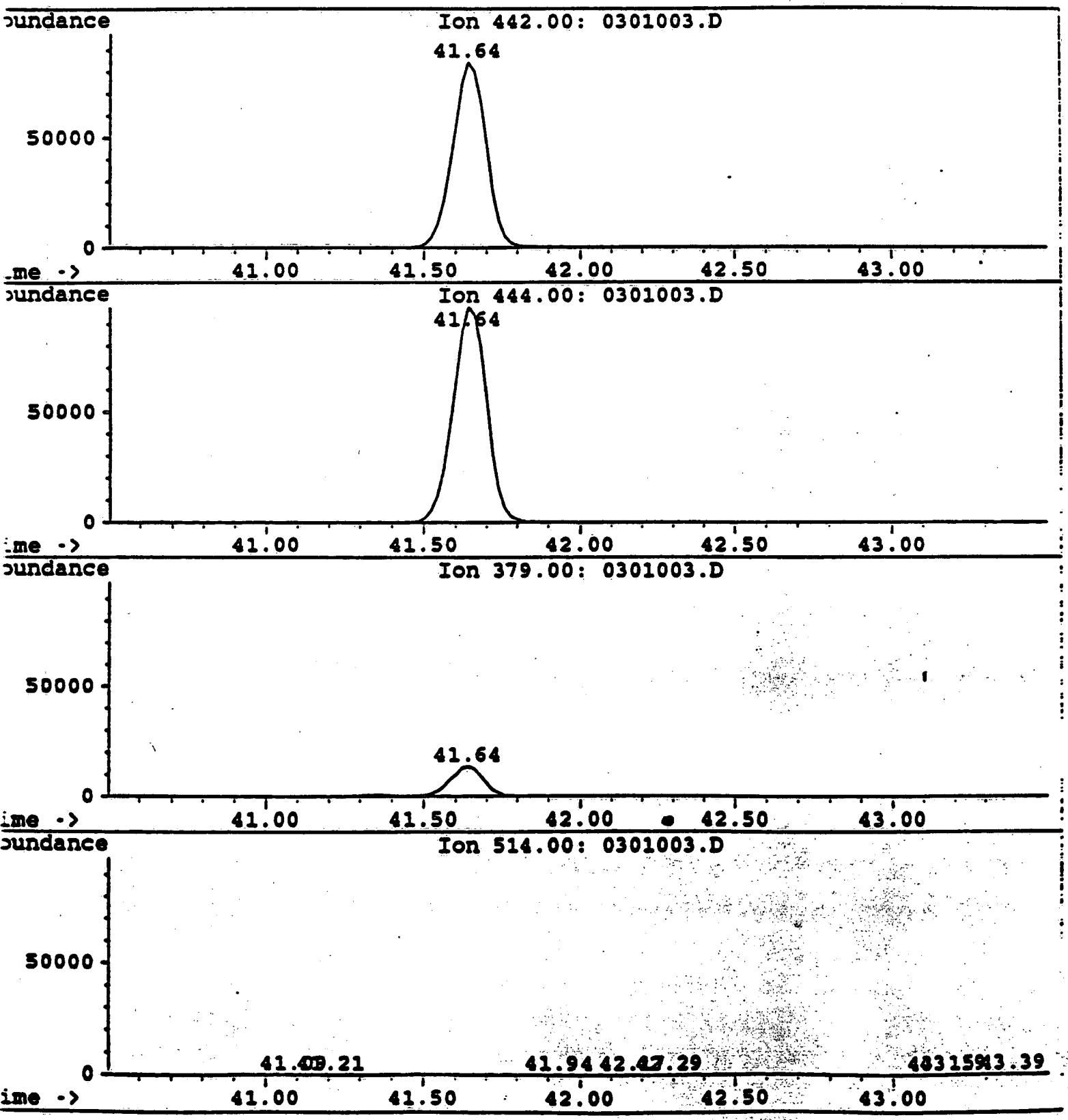

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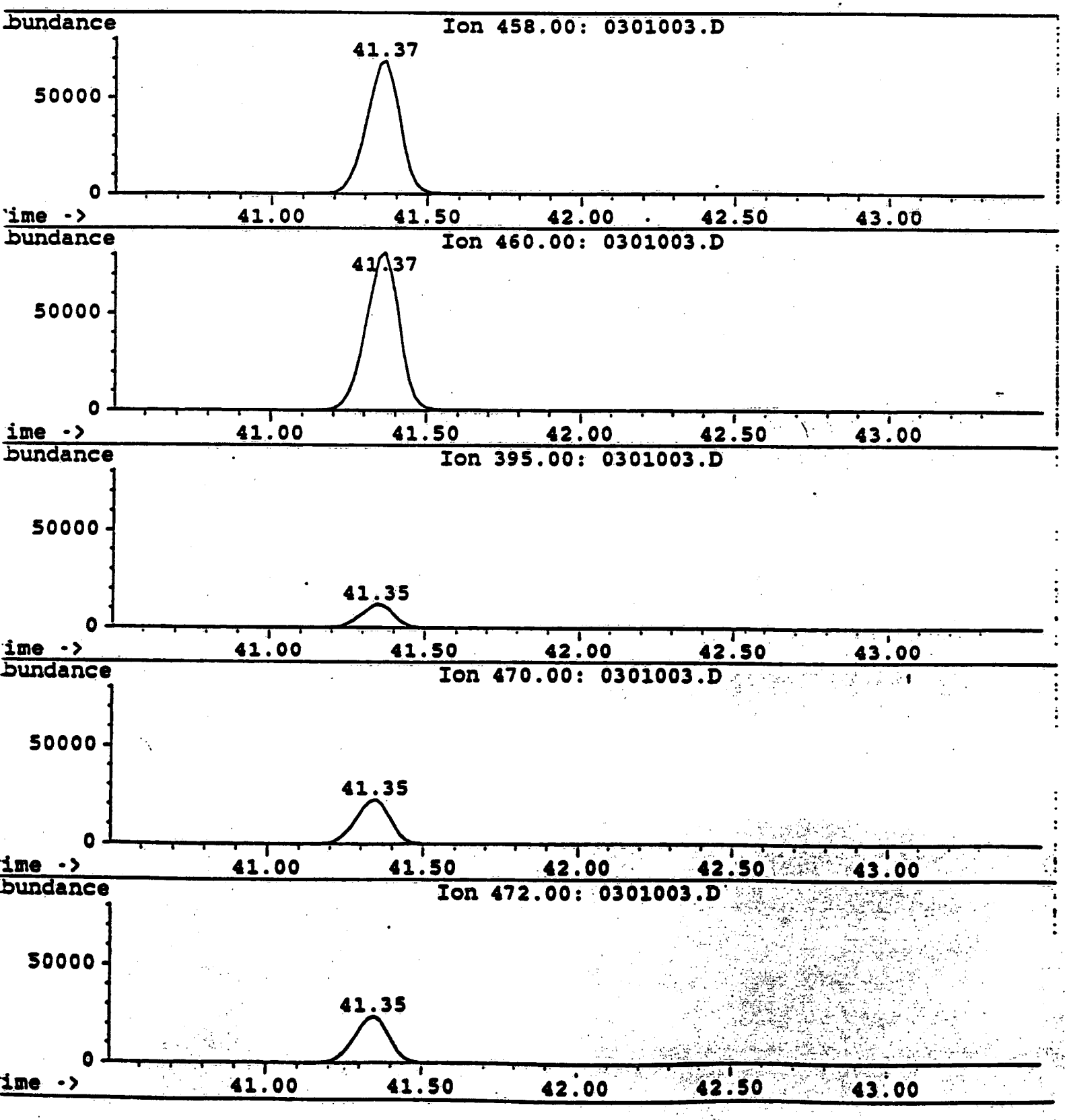
isc Info:
ial Number : 3



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10/24/93 23:43 ROSE.M 3
CC3
Sat Oct 23 13:20:35 1993
CLP Dioxins and Dibenzofurans for Methos 8280

COMPOUND	R.T.	m/z #1	Area #1	m/z #2	Area #2
2378-TCDD	19.58	320	103127	322	132883
2378-TCDF	18.98	304	122152	306	167679
12378-PeCDF	22.98	340	160728	342	108101
12378-PeCDD	24.18	356	139443	358	90534
23478-PeCDF	23.79	340	173574	342	116907
123478-HxCDF	27.76	374	472161	376	381388
123678-HxCDF	27.93	374	469073	376	380093
123478-HxCDD	28.97	390	310908	392	249065
123678-HxCDD	29.11	390	315231	392	254549
123789-HxCDD	29.7	390	326722	392	263802
234678-HxCDF	28.78	374	455829	376	367100
123789-HxCDF	30.19	374	403724	376	324849
1234678-HpCDF	33.32	408	430535	410	410456
1234678-HpCDD	35.04	424	314495	426	300503
1234789-HpCDF	35.85	408	373731	410	356612
OCDD	41.37	458	514395	460	605845
OCDF	41.64	442	628412	444	733548
C37-2378-TCDD (CS)	19.58	328	135021	NA	0
13C-1234-TCDD (RS)	19.42	332	99997	334	123410
13C-123789-HxCDD (RS)	29.68	402	142351	404	112190
13C-2378-TCDD	19.56	332	105507	334	129757
13C-2378-TCDF	18.96	316	147639	318	183373
13C-123678-HxCDD	29.11	402	137298	404	107820
13C-1234678-HpCDF	33.3	420	362103	422	334490
13C-OCDD	41.35	470	169444	472	180827

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

7726 Moller Road • Indianapolis, IN 46268 • 317-875-5894 • 800-875-8674 • 317-872-6189 FAX

Sample Tracking Record

Low Resolution Dioxin/Furan

Page 1 of 1

Case No. 1J673 Weston | Method No. 8280 | Balance ID LC220 S | Exter. Start Time/Date 17:30 10-14-93

Con. I.S. R530 | Con. R.S. R531 | Con. Native R533 | Exter. End Time/Date 10:30 10-15-93

Dioxin WDM R516 | Furan WDM R515 | ICAL 10/14/93 | Surr. Std R534 9/28/93

	CCAS/LDMS Client Sample #	Sample Weight	Sample Spiked	Sample Exter'ed	Cl 37 TCDD Spkd	Acid Base Wash	Column #1 & #2 Cleanup	Carbon Column Cleanup	Exter's Iss to GC/MS	Exter's Rec'd GC/MS	GC/MS Analy Comp	Exter's Rec'd to Storage	Comments
1	MB	10.07g	Conc 15	250 ml Toluene	✓	✓	✓	✓	✓	✓	✓	✓	Na_2SO_4
2	1J673 -1	10.05	↓	↓	✓	✓	✓	✓	✓	✓	✓	✓	Soil
3	1J6873 -2	10.0 ~~10.0~~	↓	↓	✓	✓	✓	✓	✓	✓	✓	✓	↓
4	LCS	10.03g	Conc 15 + NATIVE	↓	✓	✓	✓	✓	✓	✓	✓	✓	Sand
5	LCSD	10.06g	↓	↓	✓	✓	✓	✓	✓	✓	✓	✓	↓
6													
7													
8													
9													
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18													
19													
20													
Completed By:		KD	KD	KD	KD	KD	KD	KD	[illegible]	BTH	ZAA	ZAA	KD
Date:		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Chemical Waste Management, Inc. BO 8086

Profile #

WASTE PROFILE

☐ Check here if this is a Recertification LOCATION OF ORIGINAL _____

GENERAL INFORMATION

1. GENERATOR NAME: USEPA Region II / Monroe Twp. Contaminated Soil Site Generator USEPA ID: NJD 000 066 027
2. Generator Address: Bishop Rd. Block 4001 Lot 1 Billing Address: ☐ Same DPW Corp.
   Williamstown, NJ 08094 PO Box 4647
3. Technical Contact/Phone: Tom Joyce / 609-588-6255 Trenton, NJ 08540
4. Alternate Contact/Phone: _____ Billing Contact/Phone: Tom Joyce / 609-588-6255

PROPERTIES AND COMPOSITION

5. Process Generating Waste: EPA cleanup of abandoned burn site
6. Waste Name: Lead Contaminated Debris

7A. Is this a USEPA hazardous waste (40 CFR Part 261)? Yes ☑ No ☐

B. Identify ALL USEPA listed and characteristic waste code numbers (D,F,K,P,U): D008

State Waste Codes: _____

8. Physical State @ 70°F: A. Solid ☑ Liquid ☐ Both ☐ B. Single Layer ☑ Multilayer ☐ C. Free liquid range _____ to Ø %

9A. pH: Range 5 to 9 or Not applicable ☐ B. Strong Odor ☐; describe _____

10. Liquid Flash Point: < 73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☐ N.A. ☑ Closed Cup ☐ Open Cup ☐

11. CHEMICAL COMPOSITION: List ALL constituents (including halogenated organics) present in any concentration and forward available analysis.

Constituents	Range	Units	Constituents	Range	Units
Debris (wood, plastic, metal, PPE, glass, etc)	90-100	%			
Lead	0-100	ppm			
Dioxins	<1	ppm			
Soil/dirt	0-10	%			

TOTAL COMPOSITION MUST EQUAL OR EXCEED 100%

12. OTHER: PCBs if yes, concentration ____ ppm, PCBs regulated by 40 CFR 761 ☐. Pyrophoric ☐ Explosive ☐ Radioactive ☐
    Benzene if yes, concentration ____ ppm. Shock Sensitive ☐ Oxidizer ☐ Carcinogen ☐ Infectious ☐ Other _____

13. If the waste is subject to the land ban and meets the treatment standards, check here: ____, and supply analytical results where applicable.

SHIPPING INFORMATION

14. PACKAGING: Bulk Solid ☑ Bulk Liquid ☐ Drum ☐ Type/Size: _____ Other _____
15. ANTICIPATED ANNUAL VOLUME: 42 Units: yds Shipping Frequency: OT

SAMPLING INFORMATION

16a. Sample source (drum, lagoon, pond, tank, vat, etc.) N/A

Date Sampled: _____ Sampler's Name/Company: _____

16b. Generator's Agent Supervising Sampling: _____ 17. ☐ No sample required (See Instructions.)

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize CWM to obtain a sample from any waste shipment for purposes of recertification.

Dan Harkins DAN HARKINS - USEPA Site Manager 5/13/94

Signature Printed (or typed) name and title Date

CWM Form 6000-C replaces and is equivalent to the following forms: CWM-51, CWM-6000, CWM 50-A-2 and CWM 50-B

Monroe Twp
Contaminated
Soil Site

CHAIN OF CUSTODY RECORD

REGION II EPA ROY F. WESTON, INC.
TECHINICAL ASSISTANCE TEAM
1090 KING GEORGES POST RD.
SUITE 201 - EDISON, NJ 08837 PHONE NO.: (908) 225-6116

TAT PM: Eric Wilson

PCS # 0694
P.O. # 16-3244

Sample Number	Number of Containers	Description of Samples
MB-SC1	~~6~~ 3	2 x 40mL solid / VOA
9310863		1 x 16 oz. solid / BNA, PCB & Pesticides
		1 x 16 oz. solid / Metals & CN
		1 x 16 oz. solid / RCRA parameters (Ignitability, Corrosivity & reactivity)
		1 x 32 oz. solid / TCLP
MB-SC2	~~6~~ 3	Same as above
9310864		

Person Assuming Responsibility for Sample: Eric Wilson

Time/Date: 10/7/93 1730

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
All	Eric Wilson	[signature]	4:55pm	10/8/93	For analysis

C-4760

EDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS

CASE NUMBER	[illegible]	MATRIX	[illegible]
SAMPLE NUMBER	[illegible]	DILUTION FACTOR	[illegible]
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	[illegible]	DATE ANALYZED	[illegible]
FIELD ID	[illegible]	ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
74873	Chloromethane	U	24
74839	Bromomethane	U	24
75014	Vinyl Chloride	U	24
75003	Chloroethane	U	24
75092	Methylene Chloride	15	12
67641	Acetone	U	24
75150	Carbon Disulfide	U	12
75354	1,1-Dichloroethene	U	12
75343	1,1-Dichloroethane	U	12
156605	trans-1,2-Dichloroethene	U	12
67663	Chloroform	3 J)	12
107062	1,2-Dichloroethane	[illegible]	12
78933	2-Butanone	[illegible]	24
71556	1,1,1-Trichloroethane	U	12
56235	Carbon Tetrachloride	[illegible]	12
108054	Vinyl Acetate	[illegible]	24
75274	Bromodichloromethane	[illegible]	12
78875	1,2-Dichloropropane	U	12

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	12
79016	Trichloroethene	U	12
124481	Dibromochloromethane	U	12
79016	1,1,2-Trichloroethane	U	12
71432	Benzene	U	12
10061026	trans-1,3-Dichloropropene	U	12
75252	Bromoform	U	12
108101	4-Methyl-2-pentanone	U	24
591786	2-Hexanone	U	24
127184	Tetrachloroethene	U	12
79345	1,1,2,2-Tetrachloroethane	U	12
108883	Toluene	U	12
108907	Chlorobenzene	U	12
100414	Ethylbenzene	U	12
100425	Styrene	U	12
1330207	m,p-Xylene	U	12
95476	o-Xylene	U	12
156593	cis-1,2-Dichloroethene	U	12

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	[illegible] %	[illegible]	[illegible]
Toluene-d8	[illegible] %	[illegible]	[illegible]
Bromofluorobenzene	[illegible] %	[illegible]	[illegible]

Surrogate spike of [illegible] is used for all target compounds

U: Indicates compound was analyzed for but not detected

J: Indicates compound concentration found below MDL

ACCREDITED LABORATORIES, INC.
TCLP VOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310863	DILUTION FACTOR	10
DATA FILE	>D2164	DATE EXTRACTED	
CLIENT NAME	WRFI	DATE ANALYZED	10/19/93
FIELD ID	MB-SC1	ANALYZED BY	LARRY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
71432	Benzene	U	.050	0.5
78933	2-Butanone	U	.100	200.0
56235	Carbon Tetrachloride	U	.050	0.5
108907	Chlorobenzene	U	.050	100.0
67663	Chloroform	U	.050	6.0
75354	1,1-Dichloroethene	U	.050	0.7
107062	1,2-Dichloroethane	U	.050	0.5
127184	Tetrachloroethene	U	.050	0.7
79016	Trichloroethene	U	.050	0.5
75014	Vinyl Chloride	U	.100	0.2

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	94 %	76 - 114	OK
Toluene-d8	90 %	88 - 110	OK
Bromofluorobenzene	95 %	86 - 115	OK

(U) Indicates compound was analyzed for but not detected

* 2-Butanone = Methyl ethyl ketone

EDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	931084[illegible]	DILUTION FACTOR	2/100
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	[illegible]	DATE ANALYZED	12/18/93
FIELD ID	MB-502	ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
74873	Chloromethane	U	23
74839	Bromomethane	U	23
75014	Vinyl Chloride	U	23
75003	Chloroethane	U	23
75092	Methylene Chloride	23	12
67641	Acetone	37	23
75150	Carbon Disulfide	U	12
75354	1,1-Dichloroethene	U	12
75343	1,1-Dichloroethane	U	12
156605	trans-1,2-Dichloroethene	U	12
67663	Chloroform	U	12
107062	1,2-Dichloroethane	U	12
78933	2-Butanone	U	23
71556	1,1,1-Trichloroethane	U	12
56235	Carbon Tetrachloride	U	12
108054	Vinyl Acetate	U	23
75274	Bromodichloromethane	U	12
78875	1,2-Dichloropropane	U	12

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	12
79016	Trichloroethene	U	12
124481	Dibromochloromethane	U	12
79016	1,1,2-Trichloroethane	U	12
71432	Benzene	U	12
10061026	trans-1,3-Dichloropropene	U	12
75252	Bromoform	U	12
108101	4-Methyl-2-pentanone	U	23
591786	2-Hexanone	U	23
127184	Tetrachloroethene	U	12
79345	1,1,2,2-Tetrachloroethane	U	12
108883	Toluene	11131	12
108907	Chlorobenzene	17	12
100414	Ethylbenzene	U	12
100425	Styrene	U	12
1330207	m,p-xylene	U	12
95476	o-Xylene	U	12
156592	cis-1,2-Dichloroethene	U	12

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	91 %	76-121	OK
Toluene-d8	95 %	81-117	OK
Bromofluorobenzene	99 %	74-121	OK

Percent solids of 8.1 is used for all target compounds.

(B) Indicates compound found in associated blank
U Indicates compound analyzed for but not detected
(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP VOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310864	DILUTION FACTOR	10
DATA FILE	>D2165	DATE EXTRACTED	
CLIENT NAME	WRFI	DATE ANALYZED	10/19/93
FIELD ID	MB-SC2	ANALYZED BY	LARRY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
71432	Benzene	U	.050	0.5
78933	2-Butanone	U	.100	200.0
56235	Carbon Tetrachloride	U	.050	0.5
108907	Chlorobenzene	U	.050	100.0
67663	Chloroform	U	.050	6.0
75354	1,1-Dichloroethene	U	.050	0.7
107062	1,2-Dichloroethane	U	.050	0.5
127184	Tetrachloroethene	U	.050	0.7
79016	Trichloroethene	U	.050	0.5
75014	Vinyl Chloride	U	.100	0.2

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	94 %	76 - 114	OK
Toluene-d8	90 %	88 - 110	OK
Bromofluorobenzene	96 %	86 - 115	OK

(U) Indicates compound was analyzed for but not detected

* 2-Butanone = Methyl ethyl ketone

ACCREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSYS

CASE NUMBER		MATRIX	Solid
SAMPLE NUMBER	FAILS BLANK	DILUTION FACTOR	1.0
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	[illegible]
FIELD ID		ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
74873	Chloromethane	U	10
7-839	Bromomethane	U	10
75014	Vinyl Chloride	U	10
75003	Chloroethane	U	10
75092	Methylene Chloride	U	5
67641	Acetone	U	10
75156	Carbon Disulfide	U	5
75354	1,1-Dichloroethene	U	5
75343	1,1-Dichloroethane	U	5
156605	trans-1,2-Dichloroethene	U	5
67663	Chloroform	U	5
107062	1,2-Dichloroethane	U	5
78933	2-Butanone	U	10
71556	1,1,1-Trichloroethane	U	5
56235	Carbon Tetrachloride	U	5
108054	Vinyl Acetate	U	10
75274	Bromodichloromethane	U	5
78875	1,2-Dichloropropane	U	5

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	5
79016	Trichloroethene	U	5
124481	Dibromochloromethane	U	5
79016	1,1,2-Trichloroethene	U	5
71432	Benzene	U	5
10061026	trans-1,3-Dichloropropene	U	5
75252	Bromoform	U	5
108101	4-Methyl-2-pentanone	U	10
591786	2-Hexanone	U	10
127184	Tetrachloroethene	U	5
79345	1,1,2,2-Tetrachloroethane	U	5
108883	Toluene	U	5
108907	Chlorobenzene	U	5
100414	Ethylbenzene	U	5
100425	Styrene	U	5
1330207	m,p-Xylene	U	5
95476	o-Xylene	U	5
156592	cis-1,2-Dichloroethene	U	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-D4	99 %	71-121	OK
Toluene-D8	92 %	81-117	OK
Bromofluorobenzene	88 %	74-121	OK

Percent solids of 100 was used for all target compounds.

B: Indicates analyte found in associated blank.
E: Indicates compound analyzed for but not detected
U: Indicates compound concentration found below MDL.

[illegible]EDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSYS

CASE NUMBER		MATRIX	Solid
SAMPLE NUMBER	DAILY BLANK	DILUTION FACTOR	1.0
DATA FILE	[illegible]2746	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
74873	Chloromethane	U	10
74839	Bromomethane	U	10
75014	Vinyl Chloride	U	10
75003	Chloroethane	U	10
75092	Methylene Chloride	4(J)	5
67641	Acetone	U	10
75150	Carbon Disulfide	U	5
75354	1,1-Dichloroethene	U	5
75343	1,1-Dichloroethane	U	5
156605	trans-1,2-Dichloroethene	U	5
67663	Chloroform	U	5
107062	1,2-Dichloroethane	U	5
78933	2-Butanone	U	10
71556	1,1,1-Trichloroethane	U	5
56235	Carbon Tetrachloride	U	5
108054	Vinyl Acetate	U	10
75274	Bromodichloromethane	U	5
78875	1,2-Dichloropropane	U	5

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	5
79016	Trichloroethene	U	5
124481	Dibromochloromethane	U	5
79016	1,1,2-Trichloroethane	U	5
71432	Benzene	U	5
10061026	trans-1,3-Dichloropropene	U	5
75252	Bromoform	U	5
108101	4-Methyl-2-pentanone	U	10
591786	2-Hexanone	U	10
127184	Tetrachloroethene	U	5
79345	1,1,2,2-Tetrachloroethane	U	5
108883	Toluene	U	5
108907	Chlorobenzene	U	5
100414	Ethylbenzene	U	5
100425	Styrene	U	5
1330207	m,p-Xylene	U	5
95476	o-Xylene	U	5
156592	cis-1,2-Dichloroethene	U	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	1[illegible] %	70-121	[illegible]
Toluene-d8	[illegible] %	81-117	[illegible]
Bromofluorobenzene	[illegible] %	[illegible]-[illegible]	[illegible]

Percent solid of 100 is used for all target compounds

(B) Indicates compound found in associated blank.
U Indicates compound analyzed for but not detected

(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP VOLATILES ANALYSIS DATA

CASE NUMBER		MATRIX	Leachate
SAMPLE NUMBER	DAILY B	DILUTION FACTOR	1
DATA FILE	>D2161	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	LARRY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
71432	Benzene	U	.005	0.5
78933	2-Butanone	U	.010	200.0
56235	Carbon Tetrachloride	U	.005	0.5
108907	Chlorobenzene	U	.005	100.0
67663	Chloroform	U	.005	6.0
75354	1,1-Dichloroethene	U	.005	0.7
107062	1,2-Dichloroethane	U	.005	0.5
127184	Tetrachloroethene	U	.005	0.7
79016	Trichloroethene	U	.005	0.5
75014	Vinyl Chloride	U	.010	0.2

SUROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	92 %	76 - 114	OK
Toluene-d8	92 %	88 - 110	OK
Bromofluorobenzene	95 %	86 - 115	OK

(U) Indicates compound was analyzed for but not detected

* 2-Butanone = Methyl ethyl ketone

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSYS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310863 (K)	DILUTION FACTOR	1
DATA FILE	[illegible]381	DATE EXTRACTED	10/15/93
CLIENT NAME	[illegible]	DATE ANALYZED	10/18/93
FIELD ID	MB-SC1	ANALYZED BY	PAUL

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
108952	Phenol	U	390	59507	4-Chloro-3-methylphenol	U	390
95578	2-Chlorophenol	U	390	88062	2,4,6-Trichlorophenol	U	390
95487	2-Methylphenol	U	390	95954	2,4,5-Trichlorophenol	U	2000
108394	3&4-Methylphenol	U	390	51285	2,4-Dinitrophenol	U	2000
88755	2-Nitrophenol	U	390	100027	4-Nitrophenol	U	2000
105679	2,4-Dimethylphenol	U	390	534521	4,6-Dinitro-2-methylphenol	U	2000
120832	2,4-Dichlorophenol	U	390	87865	Pentachlorophenol	U	2000
111444	Bis(2-Chloroethyl)Ether	U	390	121142	2,4-Dinitrotoluene	U	390
541731	1,3-Dichlorobenzene	U	390	84662	Diethylphthalate	U	390
106467	1,4-Dichlorobenzene	U	390	7005723	4-Chlorophenyl-phenylether	U	390
100516	Benzyl Alcohol	U	390	86737	Fluorene	U	390
95501	1,2-Dichlorobenzene	U	390	100016	4-Nitroaniline	U	2000
108601	Bis(2-Chloroisopropyl)ether	U	390	86306	N-Nitrosodiphenylamine	U	390
621647	N-Nitroso-Di-n-propylamine	U	390	101553	4-Bromophenyl-phenylether	U	390
67721	Hexachloroethane	U	390	118741	Hexachlorobenzene	140(J)	390
98953	Nitrobenzene	U	390	85018	Phenanthrene	240(J)	390
78591	Isophorone	U	390	120127	Anthracene	U	390
65850	Benzoic Acid	U	2000	84742	Di-n-Butylphthalate	84(J)	390
111911	Bis(2-Chloroethoxy)Methane	U	390	206440	Fluoranthene	U	390
120821	1,2,4-Trichlorobenzene	U	390	129000	Pyrene	140(J)	390
91203	Naphthalene	460	390	85687	Butylbenzylphthalate	U	390
106478	4-Chloroaniline	U	390	91941	3,3'-Dichlorobenzidine	U	780
87683	Hexachlorobutadiene	U	390	56553	Benzo(a)Anthracene	U	390
91576	2-Methylnaphthalene	330(J)	390	117817	Bis(2-Ethylhexyl)Phthalate	13000	390
77474	Hexachlorocyclopentadiene	U	390	218019	Chrysene	U	390
91587	2-Chloronaphthalene	U	390	117840	Di-n-octyl phthalate	1300	390
88744	2-Nitroaniline	U	2000	205992	Benzo(b)fluoranthene	U	390
131113	Dimethyl Phthalate	U	390	207089	Benzo(k)Fluoranthene	U	390
208968	Acenaphthylene	U	390	50328	Benzo(a)Pyrene	U	390
99092	3-Nitroaniline	U	2000	193395	Indeno(1,2,3-cd)Pyrene	U	390
83329	Acenaphthene	U	390	53703	Dibenzo(a,h)Anthracene	U	390
132649	Dibenzofuran	U	390	191242	Benzo(g,h,i)Perylene	U	390
606202	2,6-Dinitrotoluene	U	390	62759	N-Nitrosodimethylamine	U	390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	54 %	23-120	OK
2-Fluorobiphenyl	59 %	30-115	OK
Terphenyl-d14	128 %	18-137	OK
Phenol-d5	71 %	24-113	OK
2-Fluorophenol	71 %	25-121	OK
2,4,6-Tribromophenol	81 %	19-122	OK

Percent solid of 85.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
- Indicates compound analyzed for but not detected.

(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP SEMIVOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310863	DILUTION FACTOR	10
DATA FILE	[illegible]B3414	DATE EXTRACTED	10/18/93
CLIENT NAME	[illegible]WRF1	DATE ANALYZED	10/20/93
FIELD ID	ME-SC1	ANALYZED BY	PAUL

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
110861	Pyridine	U	.10	5.0
106467	1,4-Dichlorobenzene	U	.10	7.5
95487	2-Methylphenol	U	.10	200.0
108394	3&4-Methylphenol	U	.10	200.0
67721	Hexachloroethane	U	.10	3.0
[illegible]	Nitrobenzene	U	.10	2.0
[illegible]	Hexachlorobutadiene	U	.10	0.5
[illegible]	2,4,6-Trichlorophenol	U	.10	2.0
[illegible]	2,4,5-Trichlorophenol	U	.50	400.0
[illegible]	2,4-Dinitrotoluene	U	.10	0.13
118741	Hexachlorobenzene	U	.10	0.13
87865	Pentachlorophenol	U	.10	100.0

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
2-Fluorophenol	56 %	21 - 100	OK
Phenol-d5	62 %	10 - 94	OK
Nitrobenzene-d5	55 %	35 - 114	OK
2-Fluorobiphenyl	72 %	43 - 116	OK
2,4,6-Tribromophenol	66 %	10 - 123	OK
Terphenyl-d14	47 %	33 - 141	OK

U - Indicates compound was analyzed for but not detected

- 2-Methylphenol = o-cresol
- 3-Methylphenol = m-cresol
- 4-Methylphenol = p-cresol

** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied.

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

LAB NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	[illegible] (K)	DILUTION FACTOR	1
DATA FILE	[illegible]	DATE EXTRACTED	10/15/93
CLIENT NAME	[illegible]	DATE ANALYZED	10/18/93
FIELD ID	[illegible]	ANALYZED BY	PAUL

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
[illegible]	Phenol	U	390	59507	4-Chloro-3-methylphenol	U	390
[illegible]	2-Chlorophenol	U	390	88062	2,4,6-Trichlorophenol	U	390
[illegible]	2-Methylphenol	U	390	95954	2,4,5-Trichlorophenol	U	1900
[illegible]	3&4-Methylphenol	U	390	51285	2,4-Dinitrophenol	U	1900
[illegible]	2-Nitrophenol	U	390	100027	4-Nitrophenol	U	1900
[illegible]	2,4-Dimethylphenol	U	390	534521	4,6-Dinitro-2-methylphenol	U	1900
[illegible]	2,4-Dichlorophenol	U	390	87865	Pentachlorophenol	U	1900
[illegible]	bis(2-Chloroethyl)Ether	U	390	121142	2,4-Dinitrotoluene	U	390
[illegible]	1,3-Dichlorobenzene	U	390	84662	Diethylphthalate	U	390
[illegible]	1,4-Dichlorobenzene	U	390	7005723	4-Chlorophenyl-phenylether	U	390
[illegible]	Benzyl Alcohol	U	390	86737	Fluorene	U	390
[illegible]	1,2-Dichlorobenzene	U	390	100016	4-Nitroaniline	U	1900
[illegible]	bis(2-Chloroisopropyl)Ether	U	390	86306	N-Nitrosodiphenylamine	U	390
[illegible]	N-Nitroso-Di-n-propylamine	U	390	101553	4-Bromophenyl-phenylether	U	390
[illegible]	Hexachloroethane	U	390	118741	Hexachlorobenzene	U	390
[illegible]	Nitrobenzene	U	390	85018	Phenanthrene	360(J)	390
[illegible]	Isophorone	U	390	120127	Anthracene	U	390
[illegible]	Benzoic Acid	U	1900	84742	Di-n-Butylphthalate	83(J)	390
[illegible]	bis(2-Chloroethoxy)Methane	U	390	206440	Fluoranthene	U	390
[illegible]	1,2,4-Trichlorobenzene	U	390	129000	Pyrene	170(J)	390
[illegible]	Naphthalene	1100	390	85687	Butylbenzylphthalate	U	390
[illegible]	4-Chloroaniline	U	390	91941	3,3'-Dichlorobenzidine	U	770
[illegible]	Hexachlorobutadiene	U	390	56553	Benzo(a)Anthracene	U	390
[illegible]	2-Methylnaphthalene	780	390	117817	Bis(2-Ethylhexyl)Phthalate	24000	390
[illegible]	Hexachlorocyclopentadiene	U	390	218019	Chrysene	U	390
[illegible]	2-Chloronaphthalene	U	390	117840	Di-n-octyl phthalate	2000	390
[illegible]	2-Nitroaniline	U	1900	205992	Benzo(b)Fluoranthene	U	390
[illegible]	Dimethyl Phthalate	U	390	207089	Benzo(k)Fluoranthene	U	390
[illegible]	Acenaphthylene	U	390	50328	Benzo(a)Pyrene	U	390
[illegible]	3-Nitroaniline	U	1900	193395	Indeno(1,2,3-cd)Pyrene	U	390
[illegible]	Acenaphthene	U	390	53703	Dibenzo(a,h)Anthracene	U	390
[illegible]	Dibenzofuran	U	390	191242	Benzo(g,h,i)Perylene	U	390
[illegible]	2,6-Dinitrotoluene	U	390	62759	N-Nitrosodimethylamine	U	390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	64 %	23-120	OK
2-Fluorobiphenyl	68 %	30-115	OK
Terphenyl-d14	169 %	18-137	OUT
Phenol-d5	73 %	24-113	OK
2-Fluorophenol	78 %	25-121	OK
2,4,6-Tribromophenol	82 %	19-122	OK

Percent solid of 86.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
- Indicates compound analyzed for but not detected.

(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP SEMIVOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310864	DILUTION FACTOR	10
DATA FILE	>E3415	DATE EXTRACTED	10/18/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	M=-SC2	ANALYZED BY	PAUL

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
110861	Pyridine	U	.10	5.0
106467	1,4-Dichlorobenzene	U	.10	7.5
95478	2-Methylphenol	U	.10	200.0
108394	3&4-Methylphenol	U	.10	200.0
67721	Hexachloroethane	U	.10	3.0
98953	Nitrobenzene	U	.10	2.0
87683	Hexachlorobutadiene	U	.10	0.5
88062	2,4,6-Trichlorophenol	U	.10	2.0
95954	2,4,5-Trichlorophenol	U	.50	400.0
121142	2,4-Dinitrotoluene	U	.10	0.13
118741	Hexachlorobenzene	U	.10	0.13
87865	Pentachlorophenol	U	.10	100.0

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
2-Fluorophenol	22 %	21 - 100	OK
Phenol-d5	58 %	10 - 94	OK
Nitrobenzene-d5	55 %	35 - 114	OK
2-Fluorobiphenyl	78 %	43 - 116	OK
2,4,6-Tribromophenol	80 %	10 - 123	OK
Terphenyl-d14	49 %	33 - 141	OK

U - Indicates compound was analyzed for but not detected

* 2-Methylphenol = o-cresol
* 3-Methylphenol = m-cresol
* 4-Methylphenol = p-cresol

** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied.

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSYS DATA

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	SELVEY	DILUTION FACTOR	1
DATA FILE	[illegible]	DATE EXTRACTED	10/15/93
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	PAUL

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
108952	Phenol	U	330	59507	4-Chloro-3-methylphenol	U	330
[illegible]	2-Chlorophenol	U	330	88062	2,4,6-Trichlorophenol	U	330
95487	2-Methylphenol	U	330	95954	2,4,5-Trichlorophenol	U	1700
108394	3&4-Methylphenol	U	330	51285	2,4-Dinitrophenol	U	1700
88755	2-Nitrophenol	U	330	100027	4-Nitrophenol	U	1700
105679	2,4-Dimethylphenol	U	330	534521	4,6-Dinitro-2-methylphenol	U	1700
120832	2,4-Dichlorophenol	U	330	87865	Pentachlorophenol	U	1700
111444	Bis(-2-Chloroethyl)Ether	U	330	121142	2,4-Dinitrotoluene	U	330
541731	1,3-Dichlorobenzene	U	330	84662	Diethylphthalate	U	330
[illegible]	1,4-Dichlorobenzene	U	330	7005723	4-Chlorophenyl-phenylether	U	330
100516	Benzyl Alcohol	U	330	86737	Fluorene	U	330
[illegible]	1,2-Dichlorobenzene	U	330	100016	4-Nitroaniline	U	1700
108601	Bis(2-Chloroisopropyl)Ether	U	330	86306	N-Nitrosodiphenylamine	U	330
621647	N-Nitroso-Di-n-propylamine	U	330	101553	4-Bromophenyl-phenylether	U	330
67721	Hexachloroethane	U	330	118741	Hexachlorobenzene	U	330
[illegible]	Nitrobenzene	U	330	85018	Phenanthrene	U	330
78591	Isophorone	U	330	120127	Anthracene	U	330
[illegible]	Benzoic Acid	U	1700	84742	Di-n-Butylphthalate	U	330
111911	Bis(-2-Chloroethoxy)Methane	U	330	206440	Fluoranthene	U	330
120821	1,2,4-Trichlorobenzene	U	330	129000	Pyrene	U	330
91203	Naphthalene	U	330	85687	Butylbenzylphthalate	U	330
[illegible]	4-Chloroaniline	U	330	91941	3,3'-Dichlorobenzidine	U	670
87683	Hexachlorobutadiene	U	330	56553	Benzo(a)Anthracene	U	330
[illegible]	2-Methylnaphthalene	U	330	117817	Bis(2-Ethylhexyl)Phthalate	U	330
77474	Hexachlorocyclopentadiene	U	330	218019	Chrysene	U	330
[illegible]	2-Chloronaphthalene	U	330	117840	Di-n-octyl phthalate	U	330
88744	2-Nitroaniline	U	1700	205992	Benzo(b)Fluoranthene	U	330
131113	Dimethyl Phthalate	U	330	207089	Benzo(k)Fluoranthene	U	330
208968	Acenaphthylene	U	330	50328	Benzo(a)Pyrene	U	330
[illegible]	3-Nitroaniline	U	1700	193395	Indeno(1,2,3-cd)Pyrene	U	330
83329	Acenaphthene	U	330	53703	Dibenzo(a,h)Anthracene	U	330
132649	Dibenzofuran	U	330	191242	Benzo(g,h,i)Perylene	U	330
606202	2,6-Dinitrotoluene	U	330	62759	N-Nitrosodimethylamine	U	330

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	49 %	23-120	OK
2-Fluorobiphenyl	75 %	30-115	OK
Terphenyl-d14	43 %	18-137	OK
Phenol-d5	48 %	24-113	OK
2-Fluorophenol	27 %	25-121	OK
2,4,6-Tribromophenol	22 %	19-122	OK

Percent solid of 100 is used for all target compounds.

(B) Indicates compound found in associated blank.
U Indicates compound analyzed for but not detected.
(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP SEMIVOLATILES ANALYSIS DATA

CASE NUMBER		MATRIX	Leachate
SAMPLE NUMBER	SBLK90	DILUTION FACTOR	10
DATA FILE	[illegible]2409	DATE EXTRACTED	10/18/93
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	PAUL

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
[illegible]	Pyridine	U	.10	5.0
[illegible]	1,4-Dichlorobenzene	U	.10	7.5
[illegible]	2-Methylphenol	U	.10	200.0
[illegible]	3&4-Methylphenol	U	.10	200.0
[illegible]	Hexachloroethane	U	.10	3.0
[illegible]	Nitrobenzene	U	.10	2.0
[illegible]	Hexachlorobutadiene	U	.10	0.5
[illegible]	2,4,6-Trichlorophenol	U	.10	2.0
[illegible]	2,4,5-Trichlorophenol	U	.50	400.0
[illegible]	2,4-Dinitrotoluene	U	.10	0.13
[illegible]	Hexachlorobenzene	U	.10	0.13
[illegible]	Pentachlorophenol	U	.10	100.0

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
2-Fluorophenol	23 %	21 - 100	OK
Phenol-d5	50 %	10 - 94	OK
Nitrobenzene-d5	56 %	35 - 114	OK
2-Fluorobiphenyl	76 %	43 - 116	OK
2,4,6-Tribromophenol	81 %	10 - 123	OK
Terphenyl-d14	42 %	33 - 141	OK

U - Indicates compound was analyzed for but not detected

* 2-Methylphenol = o-cresol
* 3-Methylphenol = m-cresol
* 4-Methylphenol = p-cresol

** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied.

ACCREDITED LABORATORIES, INC
PESTICIDE ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310863	DILUTION FACTOR	10
DATA FILE	>G4680	DATE EXTRACTED	10/14/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	MB-SC1	ANALYZED BY	CLIFF

COMPOUND	UG/KG	MDL
A-BHC	U	19.6
B-BHC	U	19.6
Lindane	U	19.6
D-BHC	U	19.6
Heptachlor	U	19.6
Aldrin	U	19.6
Heptachlor Epoxide	U	19.6
Endosulfan I	U	19.6
A-Chlordane	U	19.6
G-Chlordane	U	19.6
Dieldrin	U	39.2
4,4'-DDE	U	39.2
Endrin	U	39.2
Endosulfan II	U	39.2
4,4'-DDD	U	39.2
Endosulfan Sulfate	U	39.2
4,4'-DDT	U	39.2
Endrin Ketone	U	39.2
Methoxychlor	U	196
Toxaphene	U	392

Percent Solid of 85.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES, INC.
TCLP PESTICIDES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310863	DILUTION FACTOR	50
DATA FILE	>G4686	DATE EXTRACTED	10/19/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	MB-SC1	ANALYZED BY	CLIFF

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
58899	Lindane	U	.003	0.400
76448	Heptachlor	U	.003	0.008
1024573	Heptachlor Epoxide	U	.003	0.008
72208	Endrin	U	.005	0.02
72435	Methoxychlor	U	.050	10.0
5103719	A-Chlordane	U	.025	0.03
5103742	G-Chlordane	U	.025	0.03
8001352	Toxaphene	U	.050	0.5

SURROGATE COMPOUNDS	RECOVERY	ADVISORY LIMITS	STATUS
Dibutyl Chlorendate	113%	24 - 154	OK
Tetrachloro-m-xylene	81%	60 - 150	OK

U - Indicates compound was analyzed for but not detected

ACCREDITED LABORATORIES, INC
TCLP HERBICIDE ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310863	DILUTION FACTOR	1
DATA FILE	>E2456	DATE EXTRACTED	10/15/93
CLIENT NAME	WRFI	DATE ANALYZED	10/18/93
FIELD ID	MB-SC1	ANALYZED BY	DANNY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
94757	2,4'-D	U	.100	10.0
93721	SILVEX	U	.010	1.0

U - Indicates compound was analyzed for but not detected

ACCREDITED LABORATORIES, INC
PCB ORGANIC ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310863	DILUTION FACTOR	10
DATA FILE	>A7244	DATE EXTRACTED	10/14/93
CLIENT NAME	WRFI	DATE ANALYZED	10/19/93
FIELD ID	MB-SC1	ANALYZED BY	CLIFF

CAS#	COMPOUND	UG/KG	MDL
12674112	Aroclor-1016	U	392
11104282	Aroclor-1221	U	783
11141165	Aroclor-1232	U	392
53469219	Aroclor-1242	U	392
12672296	Aroclor-1248	U	392
11097691	Aroclor-1254	U	392
11096825	Aroclor-1260	U	392

Percent Solid of 85.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES, INC
PESTICIDE ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310864	DILUTION FACTOR	10
DATA FILE	>G4681	DATE EXTRACTED	10/14/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	MB-SC2	ANALYZED BY	CLIFF

COMPOUND	UG/KG	MDL
A-BHC	U	19.4
B-BHC	U	19.4
Lindane	U	19.4
D-BHC	U	19.4
Heptachlor	U	19.4
Aldrin	U	19.4
Heptachlor Epoxide	U	19.4
Endosulfan I	U	19.4
A-Chlordane	U	19.4
G-Chlordane	U	19.4
Dieldrin	U	38.7
4,4'-DDE	U	38.7
Endrin	U	38.7
Endosulfan II	U	38.7
4,4'-DDD	U	38.7
Endosulfan Sulfate	U	38.7
4,4'-DDT	U	38.7
Endrin Ketone	U	38.7
Methoxychlor	U	194
Toxaphene	U	387

Percent Solid of 86.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES, INC.
TCLP PESTICIDES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310864	DILUTION FACTOR	50
DATA FILE	>G4687	DATE EXTRACTED	10/19/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	MB-SC2	ANALYZED BY	CLIFF

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
58899	Lindane	U	.003	0.400
76448	Heptachlor	U	.003	0.008
1024573	Heptachlor Epoxide	U	.003	0.008
72208	Endrin	U	.005	0.02
72435	Methoxychlor	U	.050	10.0
5103719	A-Chlordane	U	.025	0.03
5103742	G-Chlordane	U	.025	0.03
8001352	Toxaphene	U	.050	0.5

SURROGATE COMPOUNDS	RECOVERY	ADVISORY LIMITS	STATUS
Dibutyl Chlorendate	112%	24 - 154	OK
Tetrachloro-m-xylene	83%	60 - 150	OK

U - Indicates compound was analyzed for but not detected

ACCREDITED LABORATORIES, INC
TCLP HERBICIDE ANALYSIS DATA

CASE NUMBER		MATRIX	Leachate
SAMPLE NUMBER	HBLK87	DILUTION FACTOR	1
DATA FILE	>E2452	DATE EXTRACTED	10/15/93
CLIENT NAME		DATE ANALYZED	10/18/93
FIELD ID		ANALYZED BY	DANNY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
94757	2,4'-D	U	.100	10.0
93721	SILVEX	U	.010	1.0

U - Indicates compound was analyzed for but not detected

ACCREDITED LABORATORIES, INC
PCB ORGANIC ANALYSIS DATA

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	PBLK76	DILUTION FACTOR	1
DATA FILE	>A7230	DATE EXTRACTED	10/14/93
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	CLIFF

CAS#	COMPOUND	UG/KG	MDL
12674112	Aroclor-1016	U	33.3
11104282	Aroclor-1221	U	66.7
11141165	Aroclor-1232	U	33.3
53469219	Aroclor-1242	U	33.3
12672296	Aroclor-1248	U	33.3
11097691	Aroclor-1254	U	33.3
11096825	Aroclor-1260	U	33.3

Percent Solid of 100. is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES INC.

REGULATED TCLP METALS

FIELD ID.

MB-SC1

Client : WRFI

Case No.: 4760

Matrix: EXTRACT

Lab Sample ID: 9310863

Date Received: 10/08/93

Concentration Units (mg/L): MG/L

CAS No.	Analyte	Concentration	C	M	MDL	Regulatory Level
7440-38-2	Arsenic	0.059	U	P	1.00	5.00
7440-39-3	Barium	0.88		P	0.50	100.00
7440-43-9	Cadmium	0.41		P	0.03	1.00
7440-47-3	Chromium	0.026	B	P	0.03	5.00
7439-92-1	Lead	89.7		P	0.30	5.00
7439-97-6	Mercury	0.00040	U	CV	0.05	0.20
7782-49-2	Selenium	0.099	U	P	0.50	1.00
7440-22-4	Silver	0.0026	U	P	0.03	5.00

Comments:

DATE_ANALYZED: (P) 10/24-25/93 (CV) 10/21/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES INC.

INORGANIC ANALYSIS DATA SHEET

FIELD ID.

MB-SC1

Client : WRFI
Case No.: 4760
Matrix: SOLID

Lab Sample ID: 9310863
Date Received: 10/08/93

% Solids: 85.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M	MDL
7429-90-5	Aluminum	24600		P	20.0
7440-36-0	Antimony	215		P	10.0
7440-38-2	Arsenic	8.7		F	1.0
7440-39-3	Barium	1540		P	3.0
7440-41-7	Beryllium	0.47	B	P	0.5
7440-43-9	Cadmium	52.9		P	1.0
7440-70-2	Calcium	24100		P	30.0
7440-47-3	Chromium	37.5		P	3.0
7440-48-4	Cobalt	4.9		P	3.0
7440-50-8	Copper	68700		P	3.0
7439-89-6	Iron	6060		P	10.0
7439-92-1	Lead	9170		P	30.0
7439-95-4	Magnesium	3910		P	30.0
7439-96-5	Manganese	61.0		P	1.5
7439-97-6	Mercury	0.21		CV	0.1
7440-02-0	Nickel	48.8		P	4.0
7440-09-7	Potassium	230	B	P	200.0
7782-49-2	Selenium	21.1	B	F	~~0.5~~ 25 wc
7440-22-4	Silver	1.2	B	P	1.0
7440-23-5	Sodium	192		P	100.0
7440-28-0	Thallium	27.3	U	P	30.0
7440-62-2	Vanadium	29.7		P	5.0
7440-66-6	Zinc	16600		P	10.0

Comments:
DATE_ANALYZED: (P) 10/27/93, (F,CV) 10/20,21/93

Qualifiers:
B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

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ACCREDITED LABORATORIES INC.

INORGANIC ANALYSIS DATA SHEET

FIELD ID.

MB-SC2

lient : WRFI
ase No.: 4760
atrix: SOLID

Lab Sample ID: 9310864
Date Received: 10/08/93

Solids: 86.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M	MDL
7429-90-5	Aluminum	19100		P	20.0
7440-36-0	Antimony	190		P	10.0
7440-38-2	Arsenic	6.2		F	1.0
7440-39-3	Barium	1600		P	3.0
7440-41-7	Beryllium	0.16	U	P	0.5
7440-43-9	Cadmium	24.0		P	1.0
7440-70-2	Calcium	18400		P	30.0
7440-47-3	Chromium	36.4		P	3.0
7440-48-4	Cobalt	3.5		P	3.0
7440-50-8	Copper	55200		P	3.0
7439-89-6	Iron	4440		P	10.0
7439-92-1	Lead	7910		P	30.0
7439-95-4	Magnesium	2620		P	30.0
7439-96-5	Manganese	41.6		P	1.5
7439-97-6	Mercury	0.34		CV	0.1
7440-02-0	Nickel	41.0		P	4.0
7440-09-7	Potassium	171	B	P	200.0
7782-49-2	Selenium	19.0	B	F	~~0.5~~ 25
7440-22-4	Silver	5.7		P	1.0
7440-23-5	Sodium	152		P	100.0
7440-28-0	Thallium	26.9	U	P	30.0
7440-62-2	Vanadium	26.9		P	5.0
7440-66-6	Zinc	13500		P	10.0

Comments:
DATE_ANALYZED:_(P)_10/27/93,_(F,CV)_10/20,21/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

AC[illegible]EDITED LABORATORIES INC.

REGULATED TCLP METALS

FIELD ID.

MB-SC2

Client : WRFI

Case No.: 4760

Matrix: EXTRACT

Lab Sample ID: 9310864

Date Received: 10/08/93

Concentration Units (mg/L): MG/L

CAS No.	Analyte	Concentration	C	M	MDL	Regulatory Level
7440-38-2	Arsenic	0.059	U	P	1.00	5.00
7440-39-3	Barium	1.0		P	0.50	100.00
7440-43-9	Cadmium	0.59		P	0.03	1.00
7440-47-3	Chromium	0.014	B	P	0.03	5.00
7439-92-1	Lead	80.5		P	0.30	5.00
7439-97-6	Mercury	0.00040	U	CV	0.05	0.20
7782-49-2	Selenium	0.099	U	P	0.50	1.00
7440-22-4	Silver	0.0026	U	P	0.03	5.00

Comments:

DATE_ANALYZED:_(P)_10/24-25/93_(CV)_10/21/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES INC.

INORGANIC ANALYSIS DATA SHEET

FIELD ID.

PREP BLANK__

Matrix: SOLID_

Lab Sample ID: PBS
Date Prepared: 10/15/93

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M	MDL
7429-90-5	Aluminum	1.9	U	P	20.0
7440-36-0	Antimony	2.8	U	P	10.0
7440-38-2	Arsenic	0.29	U	F	1.0
7440-39-3	Barium	0.34	U	P	3.0
7440-41-7	Beryllium	0.14	U	P	0.5
7440-43-9	Cadmium	0.41	U	P	1.0
7440-70-2	Calcium	4.3	B	P	30.0
7440-47-3	Chromium	0.78	U	P	3.0
7440-48-4	Cobalt	1.6	U	P	3.0
7440-50-8	Copper	0.40	U	P	3.0
7439-89-6	Iron	0.58	U	P	10.0
7439-92-1	Lead	8.7	U	P	30.0
7439-95-4	Magnesium	4.3	U	P	30.0
7439-96-5	Manganese	0.18	U	P	1.5
7439-97-6	Mercury	0.05	B	CV	0.1
7440-02-0	Nickel	1.8	U	P	4.0
7440-09-7	Potassium	53.2	U	P	200.0
7782-49-2	Selenium	0.29	U	F	0.5
7440-22-4	Silver	0.26	U	P	1.0
7440-23-5	Sodium	84.6	B	P	100.0
7440-28-0	Thallium	0.30	U	F	30.0
7440-62-2	Vanadium	0.39	U	P	5.0
7440-66-6	Zinc	1.4	B	P	10.0

Comments:
DATE ANALYZED: (P)10/22-25,27/93 (F)10/20,21/93 (CV)10/21/93
MERCURY PREPARED: 10/20/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES INC.

REGULATED TCLP METALS

FIELD ID.

TCLP-BLK

Matrix: EXTRACT

Lab Sample ID: TCLPBLK

Date Prepared: 10/19/93

Concentration Units (mg/L): MG/L

CAS No.	Analyte	Concentration	C	M	MDL	Regulatory Level
7440-38-2	Arsenic	0.059	U	P	1.00	5.00
7440-39-3	Barium	0.0034	U	P	0.50	100.00
7440-43-9	Cadmium	0.0041	U	P	0.03	1.00
7440-47-3	Chromium	0.0078	U	P	0.03	5.00
7439-92-1	Lead	0.087	U	P	0.30	5.00
7439-97-6	Mercury	0.0021	B	CV	0.001	0.20
7782-49-2	Selenium	0.099	U	P	0.50	1.00
7440-22-4	Silver	0.0026	U	P	0.03	5.00

Comments:

DATE_ANALYZED: (P) 10/23-24/93 (CV) 10/21/93

MERCURY_PREPARED: 10/20/93

Qualifiers:

B -- greater than the IDL but less than the MDL

U -- less than the IDL

P -- analyzed by ICP

CV -- analyzed by cold vapor

F -- analyzed by GFA

A -- analyzed by flame AA

NR -- analysis not requested

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #:	4760	Matrix:	Solid
Sample #:	9310863	Date Received:	10/08/93
Client Name:	WRFI	% Moisture:	14.9
Field Number:	MB-SC1		

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	85.1	0.1	%	1.0			10/13/93
Cyanide, Total	ND	0.24	mg/Kg	1.0	ND	0.20	10/19/93
Flash Point	>200	80.	°F	1.0			10/19/93
PH	7.77	0.05	S.U.	1.0			10/13/93
Cyanide, Reactive	ND	0.24	mg/Kg	1.0	ND	0.20	10/15/93
Sulfide, Reactive	ND	47.0	mg/Kg	1.0	ND	40.0	10/15/93

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #:	4760	Matrix:	Solid
Sample #:	9310864	Date Received:	10/08/93
Client Name:	WRFI	% Moisture:	13.9
Field Number:	MB-SC2		

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	86.1	0.1	%	1.0			10/13/93
Cyanide, Total	ND	0.23	mg/Kg	1.0	ND	0.20	10/19/93
Flash Point	>200	80.	°F	1.0			10/19/93
PH	7.94	0.05	S.U.	1.0			10/13/93
Cyanide, Reactive	ND	0.23	mg/Kg	1.0	ND	0.20	10/15/93
Sulfide, Reactive	ND	46.5	mg/Kg	1.0	ND	40.0	10/15/93

Rec'd 11/01/93

COAST-TO-COAST ANALYTICAL SERVICES, INC.
MIDWEST REGION: Indianapolis & Valparaiso, Indiana; Livonia, Michigan
EXCELLENCE IN ANALYSIS

October 29, 1993

Monroe Twp Contaminated Soil Site

Mr. Adly Michael
Roy F. Weston, Inc.
Region II EPA
1090 King Georges Post Road
Suite 201
Edison, NJ 08837

Dear Mr. Michael,

Enclosed are analytical results for the analysis of two soil samples for PCDD/PCDF. These samples were analyzed according to Method 8280 by Low Resolution GC/Low Resolution MS as described in the following narrative.

These samples were received for analysis on October 11, 1993 at 09:45. The analytical results for case IJ0873 were faxed on October 25, 1993 at 15:06. This level 1 hardcopy report, including calibration data, was sent via Federal Express Overnight on October 29, 1993.

If you should have any questions regarding this data or this report, please contact Jody Walker, Client Services at (317) 875-5894. Certification requirements may vary from state to state. To resolve any questions associated with this concern, please contact Ms. Janet Sachs, CCAS-Indy Certifications Officer.

Sincerely,

Rae Cogswell

Rae Ann Cogswell
Document Control Officer

Enclosure

7726 Moller Road • Indianapolis, IN 46268 • 317-875-5894 • 800-875-8674 • 317-872-6189 FAX

CCAS

EXCELLENCE
IN ANALYSIS

IJ0873

Two soil samples for case IJ0873 were received on October 11, 1993. These samples were checked for integrity, logged and assigned laboratory identification numbers per the current Standard Operating Procedures (SOP). Any discrepancies noted during this process have been documented on the chain of custody.

The samples were extracted, prepared and analyzed according to the current Statement of Work for Analysis of PCDD/PCDF (Document Number DFLM01.1). The samples were found to contain all analytes. The ion abundance ratios for the TCDD internal standard (samples MB-SC1 and MB-SC2) and the TCDF internal standard (sample MB-SC2) were outside control limits. Their recoveries were also outside CRQ limits. An "E" flag was used on the 1DFA and 2DF forms to show that the calculations were done using these internal standard values, and therefore the calculations are all estimated. In the analyst's opinion, this is due to matrix interference. No other particular problems were encountered during the analytical process.

All QA/QC samples (method blank, laboratory control spike and laboratory control spike duplicate) were within established control limits.

If any questions arise concerning this analysis, please contact Ms. Jody Walker, Client Services Division, at 317-875-5894.

CEA
10-25-93

CHAIN OF CUSTODY RECORD

REGION II EPA ROY F. WESTON, INC.
TECHINICAL ASSISTANCE TEAM
1090 KING GEORGES POST RD.
SUITE 201 - EDISON, NJ 08837 PHONE NO.: (908) 225-6116

TAT PM: Eric Wilson

PCS # C694
P.O. # 16-3245

Sample Number	Number of Containers	Description of Samples
MB-SL1	1	1 x 16 oz solid / PCDD/PCDF — 873 RC 10-1-93 — IS0~~872~~ 2-1
MB-SL2	1	Same as above — IS0~~872~~-~~3~~-2 — 873 RC 10-1-93

can temp. 15.2°C RC 10-1-93

Person Assuming Responsibility for Sample: Eric Wilson — Time: 1730 — Date: 10/7/93

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
All	Eric Wilson				for analysis
		Zae Cogswell	10/1/93	0945	

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.

MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 0401005.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.58				U	0.0085
2378-TCDF	304/306	19.02				U	0.0084
12378-PeCDF	340/342	23.04				U	0.0078
12378-PeCDD	356/358	24.18				U	0.0099
23478-PeCDF	340/342	23.63				U	0.0072
123478-HxCDF	374/376	27.74				U	0.0056
123678-HxCDF	374/376	28.07				U	0.0057
123478-HxCDD	390/392	29.01				U	0.0101
123678-HxCDD	390/392	29.13				U	0.0099
123789-HxCDD	390/392	29.68				U	0.0095
234678-HxCDF	374/376	29.31				U	0.0059
123789-HxCDF	374/376	30.19				U	0.0066
1234678-HpCDF	408/410	33.32				U	0.0064
1234678-HpCDD	424/426	35.04				U	0.0070
1234789-HpCDF	408/410	35.87				U	0.0073
OCDD	458/460	41.33	0.62	*			0.0087
OCDF	442/444	41.62				U	0.0100

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	18.98	0.81		0.65-0.89	95.2		25-150
13C-2378-TCDD	332/334	19.58	0.80		0.65-0.89	97.3		25-150
13C-123678-HxCDD	402/404	29.09	1.26		1.05-1.43	94.8		25-150
13C-1234678-HpCDF	420/422	33.32	1.08		0.88-1.20	95.0		25-150
13C-OCDD	470/472	41.33	0.93		0.76-1.01	91.8		25-150
37Cl-2378-TCDD	328/NA	19.60	NA		NA	85.1		25-150

Column to be used to flag values outside QC limits.

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.

MB-SC2

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: IJ0873 SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.01 (g/mL) g Lab Sample ID: IJ0873-2

Water Sample Prep: (Sepf/Cont) Lab File ID: 0701008.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.73	0.91	*		E	0.0036
2378-TCDF	304/306	19.13	0.74		14.7060	E	
12378-PeCDF	340/342	23.24	1.50		2.1221	E	
12378-PeCDD	356/358	24.40	1.56		0.0081	E	
23478-PeCDF	340/342	24.02	1.50		5.7794	E	
123478-HxCDF	374/376	27.80	1.24		36.8705		
123678-HxCDF	374/376	28.00	1.23		11.2862		
123478-HxCDD	390/392	29.01	1.11		0.9496	J	
123678-HxCDD	390/392	29.17	1.29		1.7543	J	
123789-HxCDD	390/392	29.68	1.23		2.7916		
234678-HxCDF	374/376	28.82	1.23		13.1874		
123789-HxCDF	374/376	30.35	1.24		3.0544		
1234678-HpCDF	408/410	33.35	1.05		37.3800		
1234678-HpCDD	424/426	35.08	1.04		7.1480		
1234789-HpCDF	408/410	35.89	1.05		3.2368		
OCDD	458/460	41.35	0.84		18.5949		
OCDF	442/444	41.65	0.83		14.6299		

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NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	19.10	1.00	*	0.65-0.89	124.4		25-150
13C-2378-TCDD	332/334	19.75	0.52	*	0.65-0.89	4462	*	25-150
13C-123678-HxCDD	402/404	29.15	1.25		1.05-1.43	79.4		25-150
13C-1234678-HpCDF	420/422	33.35	1.08		0.88-1.20	58.2		25-150
13C-OCDD	470/472	41.35	0.88		0.76-1.01	29.1		25-150
37Cl-2378-TCDD	328/NA	19.75	NA		NA	77.2		25-150

Column to be used to flag values outside QC limits.

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.
LCS_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.03 (g/mL) g Lab Sample ID: LCS_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1001011.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.60	0.77		2.5547		
2378-TCDF	304/306	19.00	0.73		2.5124		
12378-PeCDF	340/342	23.00	1.50		4.3599		
12378-PeCDD	356/358	24.20	1.56		5.1374		
23478-PeCDF	340/342	23.81				U	0.0141
123478-HxCDF	374/376	27.76				U	0.0262
123678-HxCDF	374/376	27.93	1.24		9.0062		
123478-HxCDD	390/392	28.99				U	0.0300
123678-HxCDD	390/392	29.13	1.24		6.0183		
123789-HxCDD	390/392	29.70				U	0.0284
234678-HxCDF	374/376	28.82				U	0.0272
123789-HxCDF	374/376	30.41				U	0.0307
1234678-HpCDF	408/410	33.32	1.04		6.1766		
1234678-HpCDD	424/426	35.06	1.04		4.0557		
1234789-HpCDF	408/410	35.85				U	0.0316
OCDD	458/460	41.33	0.84		10.9263		
OCDF	442/444	41.64	0.86		10.5557		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	18.98	0.81		0.65-0.89	80.8		25-150
13C-2378-TCDD	332/334	19.58	0.79		0.65-0.89	72.1		25-150
13C-123678-HxCDD	402/404	29.11	1.28		1.05-1.43	65.2		25-150
13C-1234678-HpCDF	420/422	33.30	1.08		0.88-1.20	46.8		25-150
13C-OCDD	470/472	41.33	0.93		0.76-1.01	26.8		25-150
37Cl-2378-TCDD	328/NA	19.60	NA		NA	66.3		25-150

Column to be used to flag values outside QC limits.

1DFA
PCDD/PCDF SAMPLE DATA SUMMARY

EPA SAMPLE NO.
LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.06 (g/mL) g Lab Sample ID: LCSD_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1101012.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

ANALYTE	SELECTED IONS	PEAK RT	ION RATIO	#	CONCENTRATION	Q	EMPC/EDL
2378-TCDD	320/322	19.60	0.79		2.4876		
2378-TCDF	304/306	19.00	0.74		2.4870		
12378-PeCDF	340/342	23.00	1.50		5.2511		
12378-PeCDD	356/358	24.20	1.57		5.4713		
23478-PeCDF	340/342	23.79				U	0.0131
123478-HxCDF	374/376	27.76				U	0.0211
123678-HxCDF	374/376	27.93	1.24		8.3359		
123478-HxCDD	390/392	28.98				U	0.0230
123678-HxCDD	390/392	29.12	1.24		5.8655		
123789-HxCDD	390/392	29.71	1.26		0.0275	J	
234678-HxCDF	374/376	28.93				U	0.0219
123789-HxCDF	374/376	30.67				U	0.0247
1234678-HpCDF	408/410	33.33	1.04		6.0211		
1234678-HpCDD	424/426	35.05	1.06		4.0747		
1234789-HpCDF	408/410	36.27				U	0.0264
OCDD	458/460	41.33	0.84		10.7720		
OCDF	442/444	41.63	0.85		10.4111		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.

INTERNAL STANDARDS	SELECTED IONS	PEAK RT	ION RATIO	#	ION RATIO LIMITS	% REC	#	RECOVERY LIMITS
13C-2378-TCDF	316/318	18.98	0.79		0.65-0.89	91.8		25-150
13C-2378-TCDD	332/334	19.58	0.79		0.65-0.89	91.6		25-150
13C-123678-HxCDD	402/404	29.10	1.29		1.05-1.43	94.3		25-150
13C-1234678-HpCDF	420/422	33.31	1.07		0.88-1.20	72.1		25-150
13C-OCDD	470/472	41.31	0.94		0.76-1.01	38.8		25-150
37Cl-2378-TCDD	328/NA	19.60	NA		NA	86.0		25-150

Column to be used to flag values outside QC limits.

1DFB

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.

MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 0401005.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION		TEF		TEF-ADJUSTED CONCENTRATION
2378-TCDD	00.0000	x	1.0	=	0.000
2378-TCDF	00.0000	x	0.1	=	0.000
12378-PeCDF	00.0000	x	0.05	=	0.000
12378-PeCDD	00.0000	x	0.5	=	0.000
23478-PeCDF	00.0000	x	0.5	=	0.000
123478-HxCDF	00.0000	x	0.1	=	0.000
123678-HxCDF	00.0000	x	0.1	=	0.000
123478-HxCDD	00.0000	x	0.1	=	0.000
123678-HxCDD	00.0000	x	0.1	=	0.000
123789-HxCDD	00.0000	x	0.1	=	0.000
234678-HxCDF	00.0000	x	0.1	=	0.000
123789-HxCDF	00.0000	x	0.1	=	0.000
1234678-HpCDF	00.0000	x	0.01	=	0.000
1234678-HpCDD	00.0000	x	0.01	=	0.000
1234789-HpCDF	00.0000	x	0.01	=	0.000
OCDD	00.0000	x	0.001	=	0.000
OCDF	00.0000	x	0.001	=	0.000
		TOTAL =			0.00

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

1DFB

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.

MB-SC1

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: IJ0873 SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.05 (g/mL) g Lab Sample ID: IJ0873-1

Water Sample Prep: (Sepf/Cont) Lab File ID: 0601007.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION		TEF		TEF-ADJUSTED CONCENTRATION
2378-TCDD	00.0398	x	1.0	=	0.040
2378-TCDF	12.8282	x	0.1	=	1.283
12378-PeCDF	02.9265	x	0.05	=	0.146
12378-PeCDD	00.1504	x	0.5	=	0.075
23478-PeCDF	05.1079	x	0.5	=	2.554
123478-HxCDF	28.3231	x	0.1	=	2.832
123678-HxCDF	09.2221	x	0.1	=	0.922
123478-HxCDD	01.2708	x	0.1	=	0.127
123678-HxCDD	02.0134	x	0.1	=	0.201
123789-HxCDD	03.4870	x	0.1	=	0.349
234678-HxCDF	12.3657	x	0.1	=	1.237
123789-HxCDF	01.7978	x	0.1	=	0.180
1234678-HpCDF	39.3186	x	0.01	=	0.393
1234678-HpCDD	09.2798	x	0.01	=	0.093
1234789-HpCDF	02.6288	x	0.01	=	0.026
OCDD	23.4562	x	0.001	=	0.023
OCDF	14.8411	x	0.001	=	0.015
		TOTAL =			10.50

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

1DFB

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.

MB-SC2

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: IJ0873 SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.01 (g/mL) g Lab Sample ID: IJ0873-2

Water Sample Prep: (Sepf/Cont) Lab File ID: 0701008.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	00.0000	x 1.0 =	0.000
2378-TCDF	14.7060	x 0.1 =	1.471
12378-PeCDF	02.1221	x 0.05 =	0.106
12378-PeCDD	00.0081	x 0.5 =	0.004
23478-PeCDF	05.7794	x 0.5 =	2.890
123478-HxCDF	36.8705	x 0.1 =	3.687
123678-HxCDF	11.2862	x 0.1 =	1.129
123478-HxCDD	00.9496	x 0.1 =	0.095
123678-HxCDD	01.7543	x 0.1 =	0.175
123789-HxCDD	02.7916	x 0.1 =	0.279
234678-HxCDF	13.1874	x 0.1 =	1.319
123789-HxCDF	03.0544	x 0.1 =	0.305
1234678-HpCDF	37.3800	x 0.01 =	0.374
1234678-HpCDD	07.1480	x 0.01 =	0.071
1234789-HpCDF	03.2368	x 0.01 =	0.032
OCDD	18.5949	x 0.001=	0.019
OCDF	14.6299	x 0.001=	0.015
		TOTAL =	11.97

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

1DFB
PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.
LCS_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.03 (g/mL) g Lab Sample ID: LCS_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1001011.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	02.5547	x 1.0 =	2.555
2378-TCDF	02.5124	x 0.1 =	0.251
12378-PeCDF	04.3599	x 0.05 =	0.218
12378-PeCDD	05.1374	x 0.5 =	2.569
23478-PeCDF	00.0000	x 0.5 =	0.000
123478-HxCDF	00.0000	x 0.1 =	0.000
123678-HxCDF	09.0062	x 0.1 =	0.901
123478-HxCDD	00.0000	x 0.1 =	0.000
123678-HxCDD	06.0183	x 0.1 =	0.602
123789-HxCDD	00.0000	x 0.1 =	0.000
234678-HxCDF	00.0000	x 0.1 =	0.000
123789-HxCDF	00.0000	x 0.1 =	0.000
1234678-HpCDF	06.1766	x 0.01 =	0.062
1234678-HpCDD	04.0557	x 0.01 =	0.041
1234789-HpCDF	00.0000	x 0.01 =	0.000
OCDD	10.9263	x 0.001=	0.011
OCDF	10.5557	x 0.001=	0.011
		TOTAL =	7.22

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

1DFB
PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

EPA SAMPLE NO.
LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.06 (g/mL) g Lab Sample ID: LCSD_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1101012.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 (uL) % Solids: 0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: ug/Kg (ng/L or ug/Kg)

ANALYTE	CONCENTRATION	TEF	TEF-ADJUSTED CONCENTRATION
2378-TCDD	02.4876	x 1.0 =	2.488
2378-TCDF	02.4870	x 0.1 =	0.249
12378-PeCDF	05.2511	x 0.05 =	0.263
12378-PeCDD	05.4713	x 0.5 =	2.736
23478-PeCDF	00.0000	x 0.5 =	0.000
123478-HxCDF	00.0000	x 0.1 =	0.000
123678-HxCDF	08.3359	x 0.1 =	0.834
123478-HxCDD	00.0000	x 0.1 =	0.000
123678-HxCDD	05.8655	x 0.1 =	0.587
123789-HxCDD	00.0275	x 0.1 =	0.003
234678-HxCDF	00.0000	x 0.1 =	0.000
123789-HxCDF	00.0000	x 0.1 =	0.000
1234678-HpCDF	06.0211	x 0.01 =	0.060
1234678-HpCDD	04.0747	x 0.01 =	0.041
1234789-HpCDF	00.0000	x 0.01 =	0.000
OCDD	10.7720	x 0.001=	0.011
OCDF	10.4111	x 0.001=	0.010
		TOTAL =	7.28

NOTE: Do NOT include EMPC or EDL values in the TEF-adjusted Concentration.

If the Total Toxic Equivalent Concentration of the sample is greater than 7 ng/L for an aqueous sample, greater than 0.7 ug/Kg for any solid matrix, or greater than 7 ug/Kg for a chemical waste sample, then second column confirmation of the results may be required.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 0401005.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD			U	0.0085
Total PeCDD			U	0.0099
Total HxCDD			U	0.0095
Total HpCDD			U	0.007
FURANS				
Total TCDF			U	0.0084
Total PeCDF			U	0.0072
Total HxCDF			U	0.0056
Total HpCDF			U	0.0064

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

MB-SC1

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.05 (g/mL) g Lab Sample ID: IJ0873-1

Water Sample Prep: (Sepf/Cont) Lab File ID: 0601007.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	9	1.56	E	
Total PeCDD	9	2.39	E	
Total HxCDD	7	29.08		
Total HpCDD	2	19.61		
FURANS				
Total TCDF	8	54.36		
Total PeCDF	13	69.34		
Total HxCDF	10	92.47		
Total HpCDF	4	53.12		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

MB-SC2

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.01 (g/mL) g Lab Sample ID: IJ0873-2

Water Sample Prep: (Sepf/Cont) Lab File ID: 0701008.D

Concentrated Extract Volume: 50 (uL) Date Received: 10/11/93

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	8	0.12	E	0.0036
Total PeCDD	10	0.14	E	
Total HxCDD	7	24.77		
Total HpCDD	2	15.31		
FURANS				
Total TCDF	5	34.01	E	
Total PeCDF	13	53.00	E	
Total HxCDF	9	108.72		
Total HpCDF	4	51.64		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

LCS_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.03 (g/mL) g Lab Sample ID: LCS_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1001011.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	1	2.55		
Total PeCDD	1	5.14		
Total HxCDD	1	6.02		
Total HpCDD	1	4.06		
FURANS				
Total TCDF	2	2.55		
Total PeCDF	2	4.41		
Total HxCDF	1	9.01		
Total HpCDF	1	6.18		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

2DF

PCDD/PCDF TOTAL HOMOLOGUE CONCENTRATION SUMMARY

EPA SAMPLE NO.

LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No:

Sample wt/vol: 10.06 (g/mL) g Lab Sample ID: LCSD_SOIL

Water Sample Prep: (Sepf/Cont) Lab File ID: 1101012.D

Concentrated Extract Volume: 50 (uL) Date Received:

Injection Volume: 2 uL % Solids: 0.0 Date Extracted: 10/14/93

GC Column: DB-5 ID: 0.25 (mm) Date Analyzed: 10/25/93

Dilution Factor: 1

Concentration Units: (ng/L or ug/Kg) ug/Kg

HOMOLOGUE	PEAKS	CONCENTRATION	Q	EMPC/EDL
DIOXINS				
Total TCDD	1	2.49		
Total PeCDD	1	5.47		
Total HxCDD	2	5.89		
Total HpCDD	1	4.07		
FURANS				
Total TCDF	2	2.53		
Total PeCDF	1	5.25		
Total HxCDF	1	8.34		
Total HpCDF	1	6.02		

NOTE: Concentrations, EMPC's, and EDL's are calculated on a wet weight basis.
The total congener concentrations do not affect the TEF calculations.

3DFA
PCDD/PCDF SPIKED SAMPLE SUMMARY

EPA SAMPLE NO.

LCS_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SDG No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SAS No.:

CONCENTRATION UNITS: (ng/L or ug/Kg) ug/Kg

ANALYTE	SPIKE ADDED (PG)	SPIKED SAMPLE CONCENTRATION	SAMPLE CONCENTRATION	% REC	#	QC LIMITS
2378-TCDD	25000	2.55	0.00	102.5		50-150
2378-TCDF	25000	2.51	0.00	100.8		50-150
12378-PeCDF	62500	4.36	0.00	70.0		50-150
12378-PeCDD	62500	5.14	0.00	82.4		50-150
123678-HxCDF	62500	9.01	0.00	144.5		50-150
123678-HxCDD	62500	6.02	0.00	96.6		50 150
1234678-HpCDF	62500	6.18	0.00	99.1		50-150
1234678-HpCDD	62500	4.06	0.00	65.1		50-150
OCDD	125000	10.93	0.00	87.7		50-150
OCDF	125000	10.56	0.00	84.7		50-150

If an analyte is not detected in the unspiked sample, enter 0 (zero) as the "SAMPLE CONCENTRATION".

Column to be used to flag values outside QC limits.

QC limits are advisory.

3DFC
PCDD/PCDF SPIKED DUPLICATE SUMMARY

EPA SAMPLE NO.

LCSD_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

CONCENTRATION UNITS: (ng/L or ug/Kg) ug/Kg

ANALYTE	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD	#	QC LIMITS
2378-TCDD	2.55	2.49	2.4		50
2378-TCDF	2.51	2.49	0.8		50
12378-PeCDF	4.36	5.25	18.5		50
12378-PeCDD	5.14	5.47	6.2		50
123678-HxCDF	9.01	8.34	7.7		50
123678-HxCDD	6.02	5.87	2.5		50
1234678-HpCDF	6.18	6.02	2.6		50
1234678-HpCDD	4.06	4.07	0.2		50
OCDD	10.93	10.77	1.5		50
OCDF	10.56	10.41	1.4		50

If an analyte is not detected in either analysis, enter 0 (zero) as the concentration.

Column to be used to flag values outside QC limits.

QC limits are advisory.

4DF
PCDD/PCDF METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB_SOIL

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case no.: IJ0873 SAS No.:

Matrix: SOIL (Soil/Water/Waste/Ash) SDG No.:

Sample wt/vol: 10.07 (g/mL) g Lab Sample ID: MB_SOIL

Water Sample Prep.: (Sepf/Cont) Lab File ID: 0401005.D

Date Extracted: 10/14/93

Date Analyzed: 10/25/93

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, SPIKES, AND DUPLICATES

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
MB-SC1	IJ0873-1	0601007.D	10/25/93
MB-SC2	IJ0873-2	0701008.D	10/25/93
LCS_SOIL	LCS_SOIL	1001011.D	10/25/93
LCSD_SOIL	LCSD_SOIL	1101012.D	10/25/93

6DFB

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.: SDG No.:

GC Column: DB-5 ID: 0.25 (mm) Instrument ID: 5971

Init. Calib. Date(s): 10/14/93

Init. Calib. Times: 11:17:00-14:27:00

NATIVE ANALYTES	SELECT IONS	ION ABUNDANCE RATIO					FLAG	QC LIMITS
		CC1	CC2	CC3	CC4	CC5		
2378-TCDD	320/322	0.81	0.78	0.79	0.79	0.79		0.65-0.89
2378-TCDF	304/306	0.72	0.73	0.74	0.75	0.74		0.65-0.89
12378-PeCDF	340/342	1.52	1.49	1.50	1.48	1.49		1.24-1.86
12378-PeCDD	356/358	1.58	1.52	1.52	1.51	1.49		1.24-1.86
23478-PeCDF	340/342			1.48				1.24-1.86
123478-HxCDF	374/376			1.24				1.05-1.43
123678-HxCDF	374/376	1.25	1.24	1.26	1.24	1.25		1.05-1.43
123478-HxCDD	390/392			1.25				1.05-1.43
123678-HxCDD	390/392	1.26	1.26	1.25	1.25	1.25		1.05-1.43
123789-HxCDD	390/392			1.23				1.05-1.43
234678-HxCDF	374/376			1.24				1.05-1.43
123789-HxCDF	374/376			1.25				1.05-1.43
1234678-HpCDF	408/410	1.00	0.98	0.99	0.97	0.99		0.88-1.20
1234678-HpCDD	424/426	1.05	1.06	1.07	1.04	1.05		0.88-1.20
1234789-HpCDF	408/410			0.99				0.88-1.20
OCDD	458/460	0.89	0.91	0.92	0.92	0.91		0.76-1.02
OCDF	442/444	0.92	0.93	0.92	0.93	0.93		0.76-1.02
INTERNAL STANDARDS								
13C-2378-TCDD	332/334	0.82	0.88	0.79	0.77	0.77		0.65-0.89
13C-2378-TCDF	316/318	0.81	0.81	0.81	0.82	0.82		0.65-0.89
13C-123678-HxCDD	402/404	1.20	1.21	1.20	1.24	1.24		1.05-1.43
13C-1234678-HpCDF	420/422	1.08	1.08	1.08	1.07	1.08		0.88-1.20
13C-OCDD	470/472	0.86	0.85	0.90	0.88	0.87		0.76-1.02
RECOVERY STANDARDS								
13C-1234-TCDD	332/334	0.80	0.72	0.82	0.80	0.81		0.65-0.89
13C-123789-HxCDD	402/404	1.22	1.21	1.21	1.22	1.23		1.05-1.43

QC limits represent +/- 15% window around the theoretical ion abundance ratio.

A single point calibration is performed for seven of the native analytes and the cleanup standard.

The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA
PCDD/PCDF CONTINUING CALIBRATION SUMMARY

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.: SDG No.:

GC Column: DB-5 ID: 0.25 (mm) Instrument ID: 5971

Date Analyzed: 10/24/93 Time Analyzed: 23:43:00

Lab File ID: 0301003.D Init. Calib. Date(s): 10/14/93

NATIVE ANALYTES	SELECT IONS	RRF	MEAN RRF	%D	RRF FLAG	ION RATIO	ION FLAG	QC LIMITS
2378-TCDD	320/322	1.0032	1.0615	5.5		0.78		0.65-0.89
2378-TCDF	304/306	0.8756	0.8953	2.2		0.73		0.65-0.89
12378-PeCDF	340/342	0.8121	0.8210	1.1		1.49		1.24-1.86
12378-PeCDD	356/358	0.9775	0.9537	2.5		1.54		1.24-1.86
23478-PeCDF	340/342	0.8776	0.8555	2.6		1.48		1.24-1.86
123478-HxCDF	374/376	0.9803	0.9969	1.7		1.24		1.05-1.43
123678-HxCDF	374/376	0.9752	1.0212	4.5		1.23		1.05-1.43
123478-HxCDD	390/392	0.9138	0.9777	6.5		1.25		1.05-1.43
123678-HxCDD	390/392	0.9298	0.9560	2.7		1.24		1.05-1.43
123789-HxCDD	390/392	0.9637	0.9749	1.1		1.24		1.05-1.43
234678-HxCDF	374/376	0.9451	0.9626	1.8		1.24		1.05-1.43
123789-HxCDF	374/376	0.8367	0.7881	6.2		1.24		1.05-1.43
1234678-HpCDF	408/410	0.9658	0.9459	2.1		1.05		0.88-1.20
1234678-HpCDD	424/426	1.0036	0.9744	3.0		1.05		0.88-1.20
1234789-HpCDF	408/410	0.8388	0.7429	12.9		1.05		0.88-1.20
OCDD	458/460	1.2793	1.2932	1.1		0.85		0.76-1.02
OCDF	442/444	1.5553	1.5231	2.1		0.86		0.76-1.02
INTERNAL STANDARDS								
VS. RECOVERY STDS.								
13C-2378-TCDD	332/334	1.0531	0.9853	6.9		0.81		0.65-0.89
13C-2378-TCDF	316/318	1.4817	1.4241	4.0		0.81		0.65-0.89
13C-123678-HxCDD	402/404	0.9630	0.9995	3.7		1.27		1.05-1.43
13C-1234678-HpCDF	420/422	1.3683	1.4631	6.5		1.08		0.88-1.20
13C-OCDD	470/472	0.6880	0.6537	5.2		0.94		0.76-1.02
37-Cl-2378-TCDD	328/NA	1.2087	1.1451	5.6		NA	NA	NA
RECOVERY STANDARDS								
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.81		0.65-0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.27		1.05-1.43

QC limits are shown are for ion abundance ratios. Maximum %D for RRF is +/- 30.0%.

The laboratory must flag any analyte which does not meet criteria for %D or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB

PCDD/PCDF CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: CCAS-INDIANAPOLIS Contract:

Lab Code: IN 049 Case No.: SAS No.: SDG No.:

GC Column: DB-5 ID: 0.25 (mm) Instrument ID: 5971

Date Analyzed: 10/24/93 Time Analyzed: 23:43:00

Lab File ID: 0301003.D Init. Calib. Date(s): 10/14/93

NATIVE ANALYTES	RRT	RT
2378-TCDD	1.00	19.58
2378-TCDF	1.00	18.98
12378-PeCDF	1.21	22.98
12378-PeCDD	1.24	24.18
23478-PeCDF	1.25	23.79
123478-HxCDF	0.83	27.76
123678-HxCDF	0.84	27.93
123478-HxCDD	1.00	28.97
123678-HxCDD	1.00	29.11
123789-HxCDD	1.02	29.70
234678-HxCDF	0.86	28.78
123789-HxCDF	0.91	30.19
1234678-HpCDF	1.00	33.32
1234678-HpCDD	1.20	35.04
1234789-HpCDF	1.08	35.85
OCDD	1.00	41.37
OCDF	1.01	41.64
INTERNAL STANDARDS		
VS. RECOVERY STDS.		
13C-2378-TCDD	N/A	19.56
13C-2378-TCDF	N/A	18.96
13C-123678-HxCDD	N/A	29.11
13C-1234678-HpCDF	N/A	33.30
13C-OCDD	N/A	41.35
37Cl-2378-TCDD	1.01	19.58
RECOVERY STANDARDS		
13C-1234-TCDD	N/A	19.42
13C-123789-HxCDD	N/A	29.68

RRT = (RT of analyte) / (RT of appropriate internal standard)

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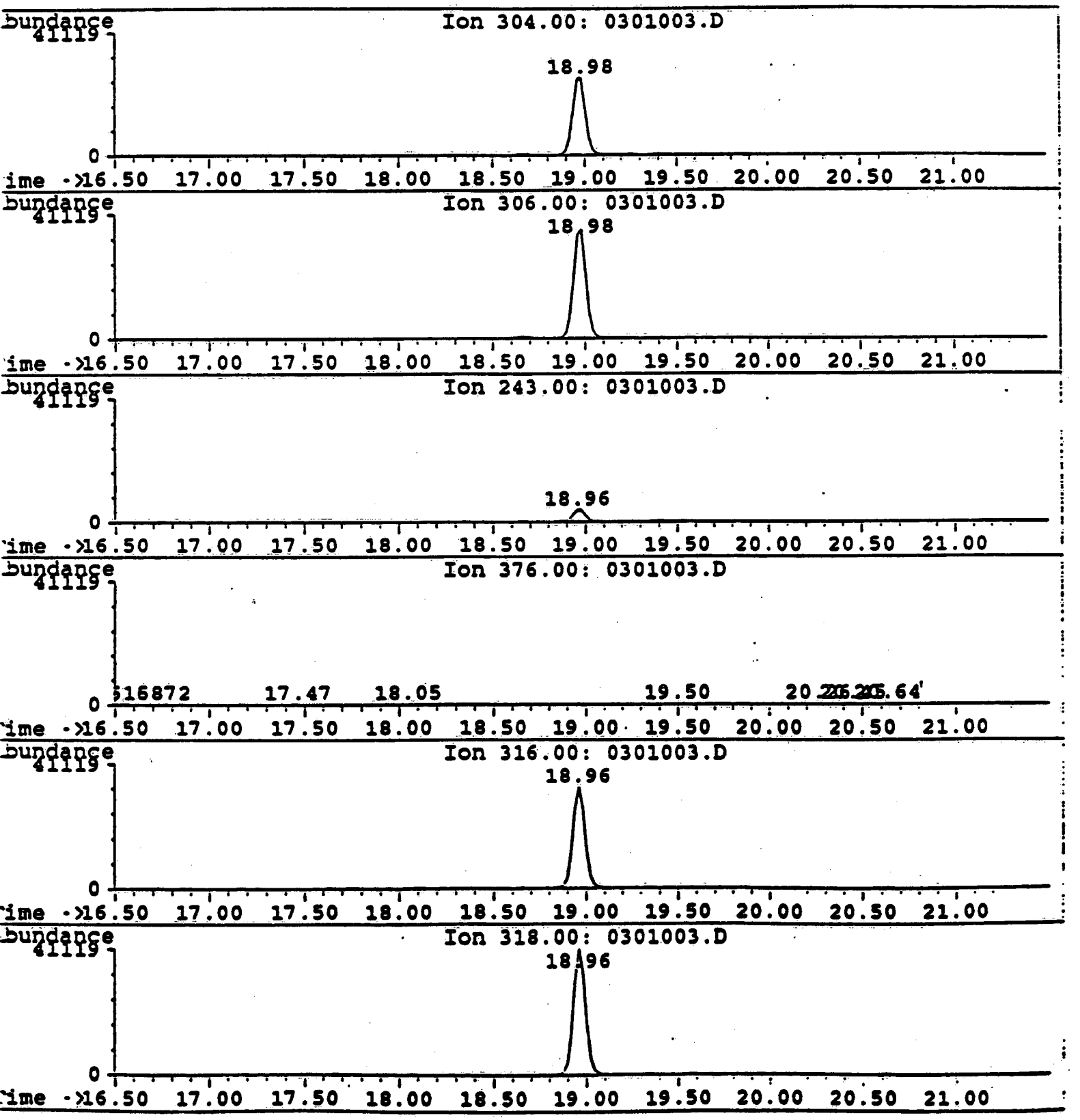

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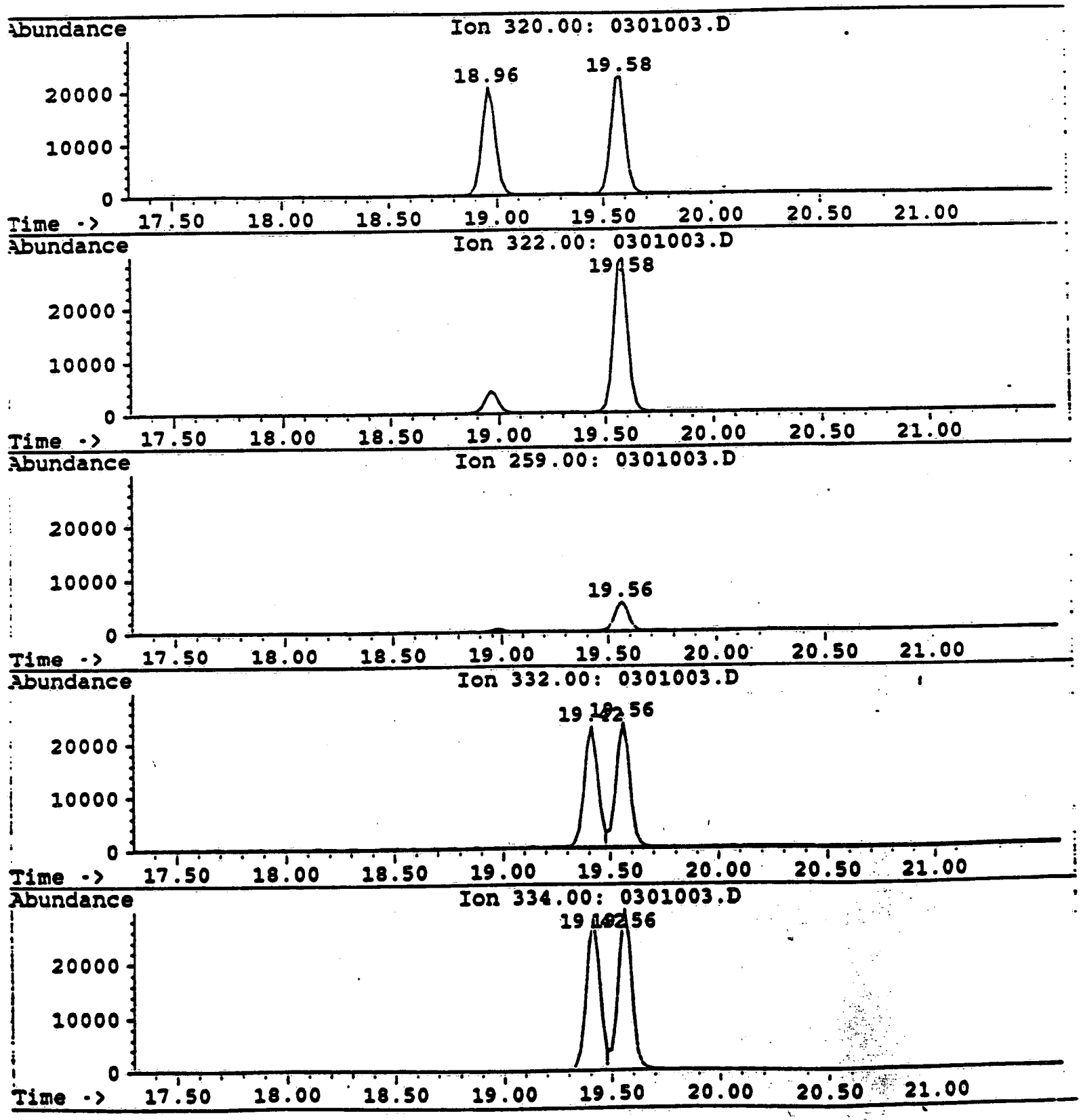

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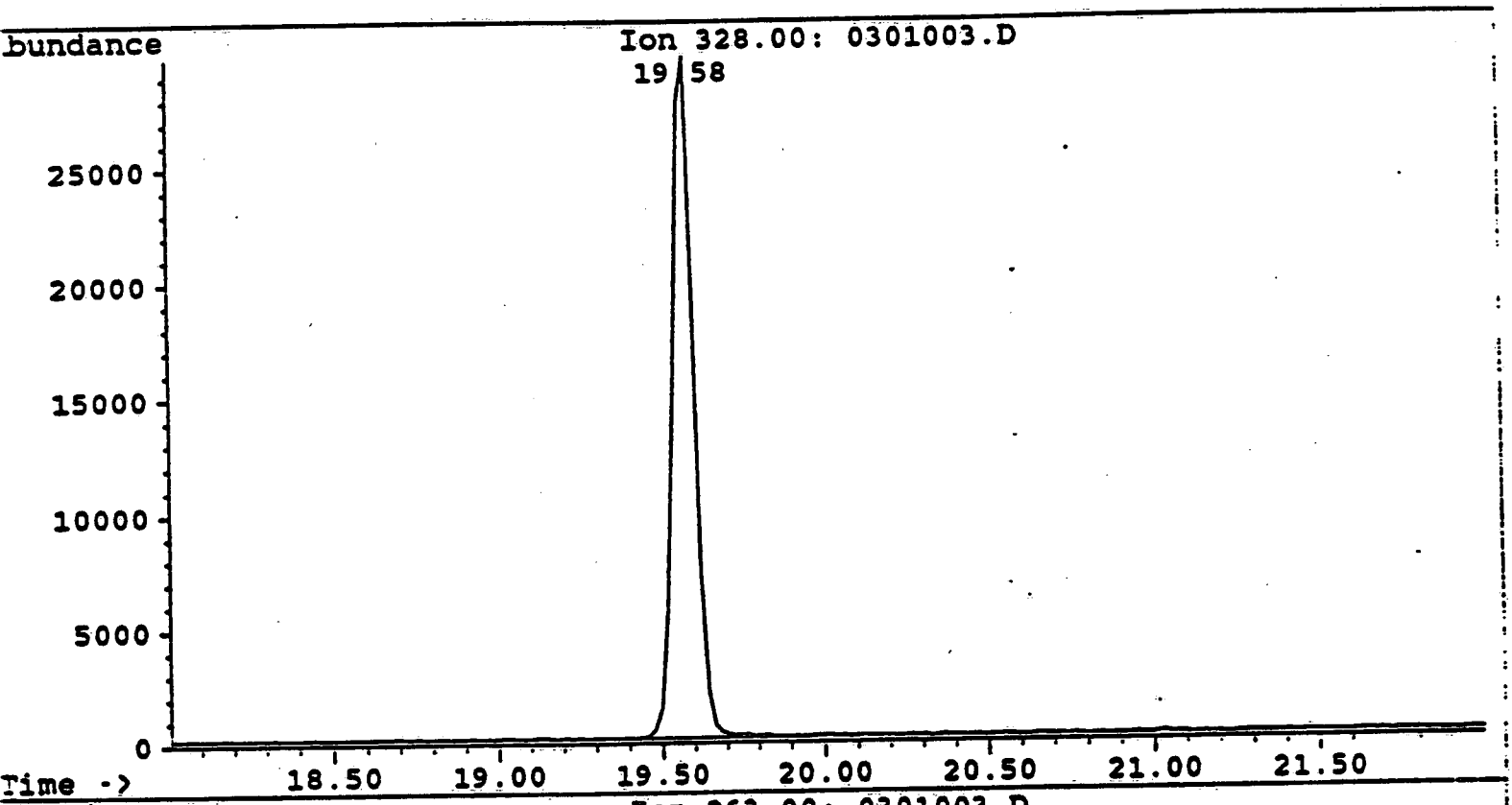

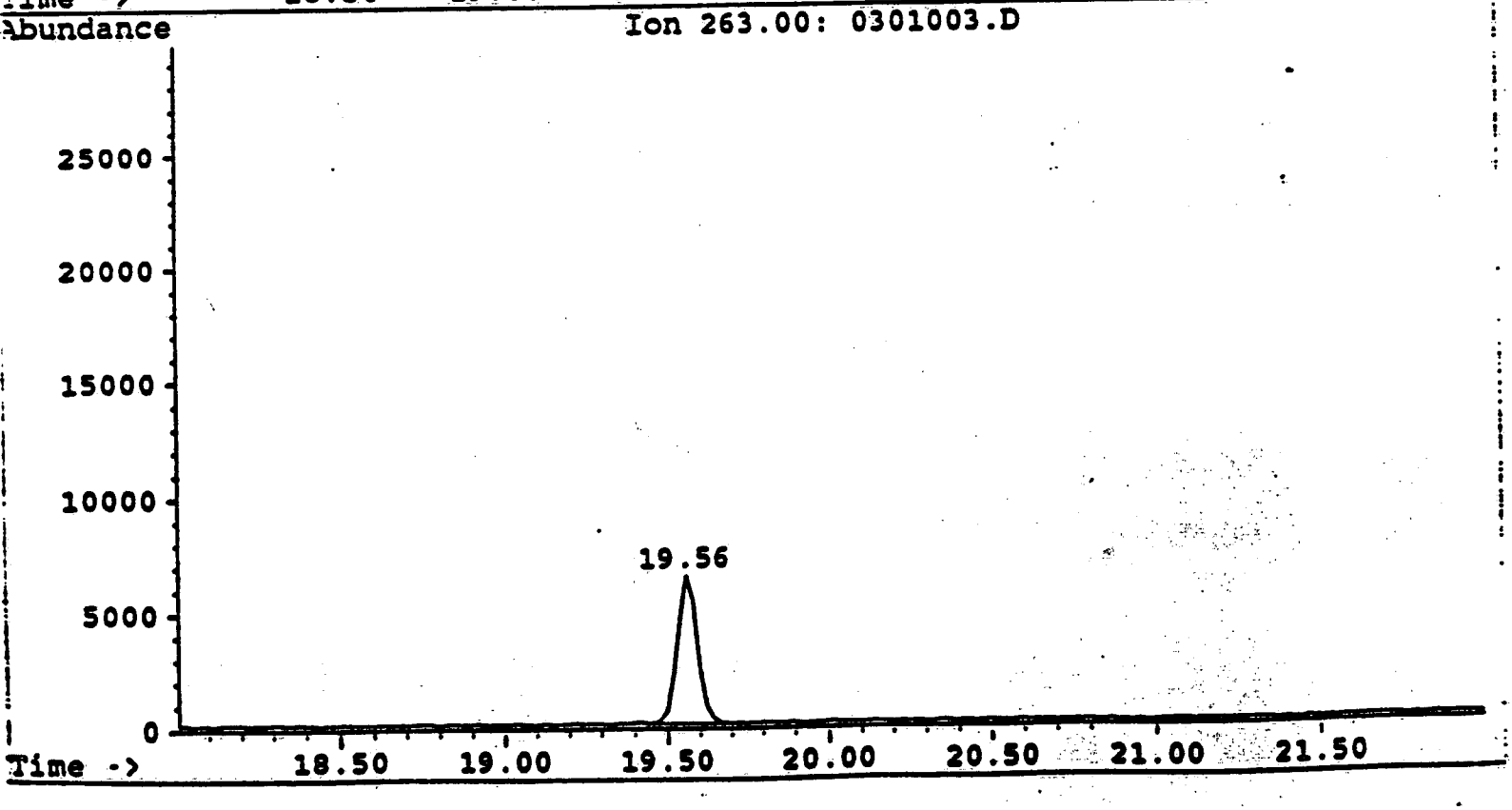

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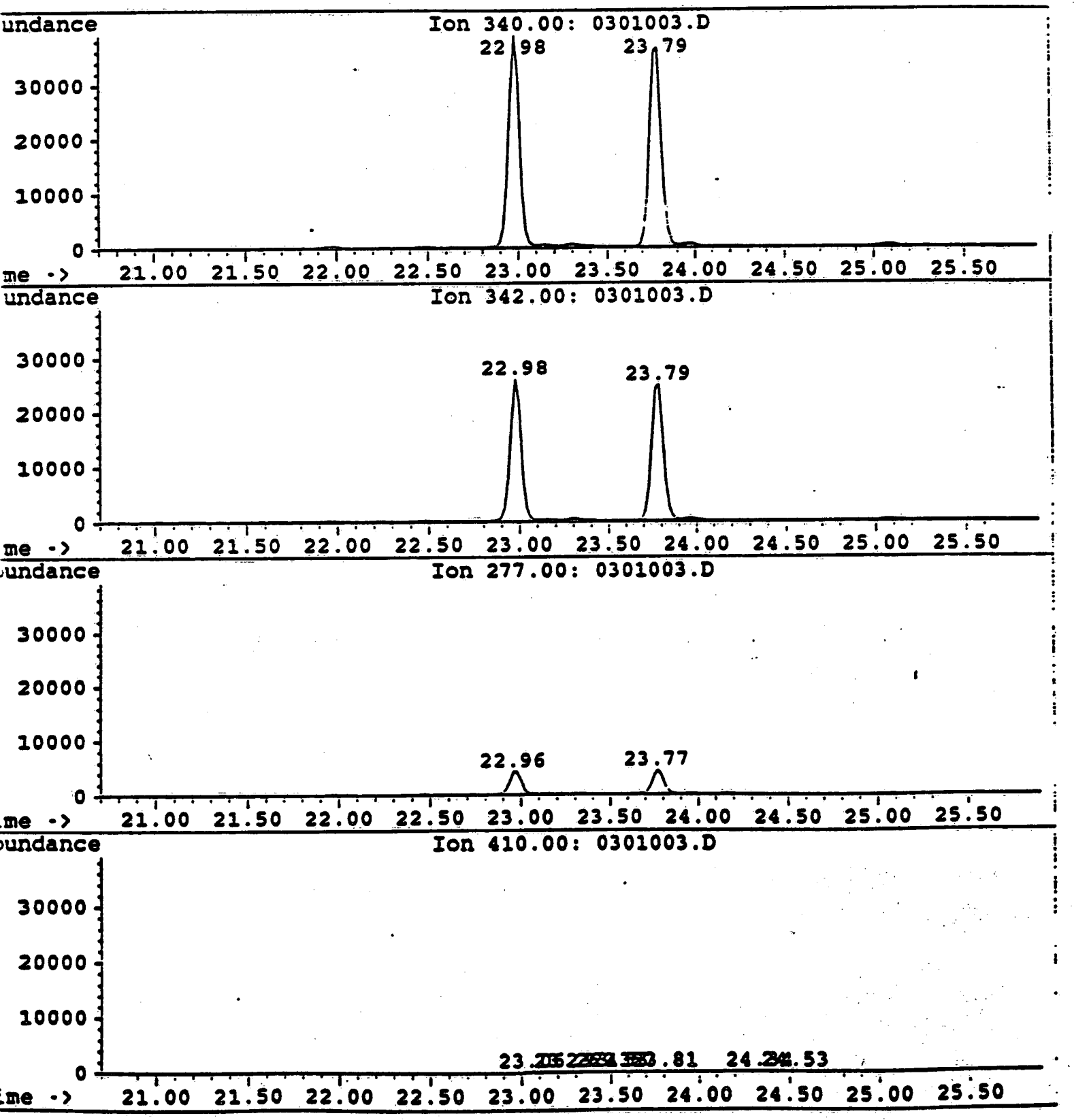

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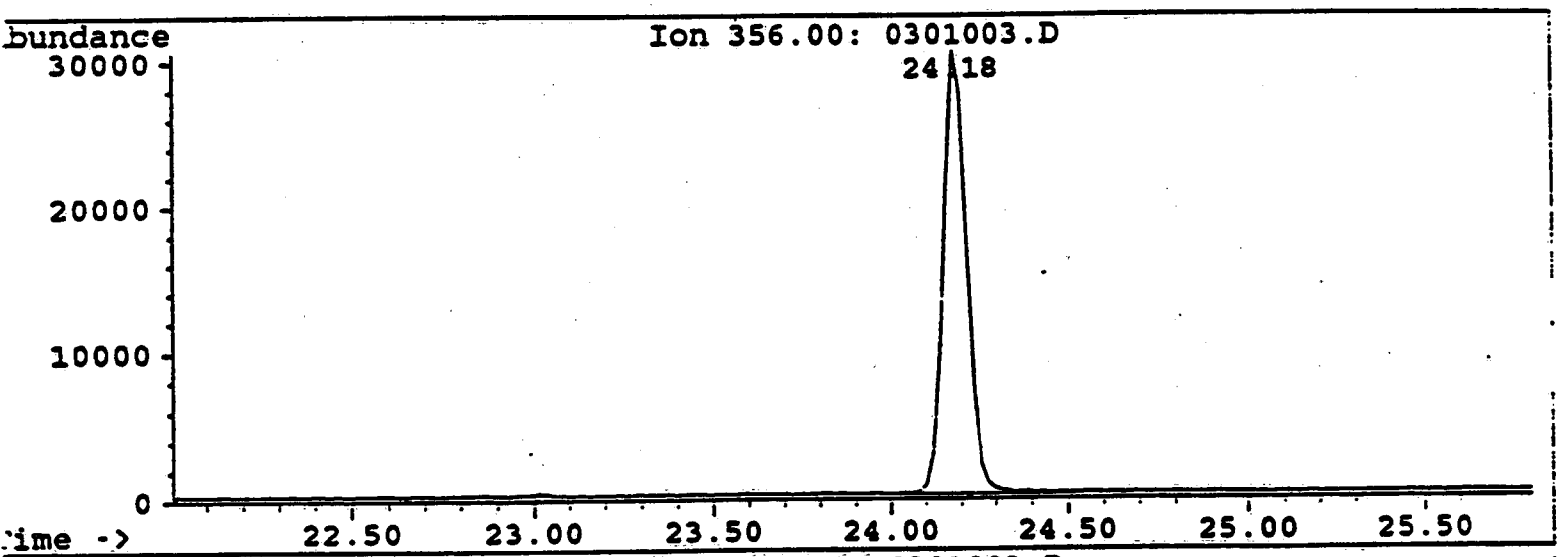

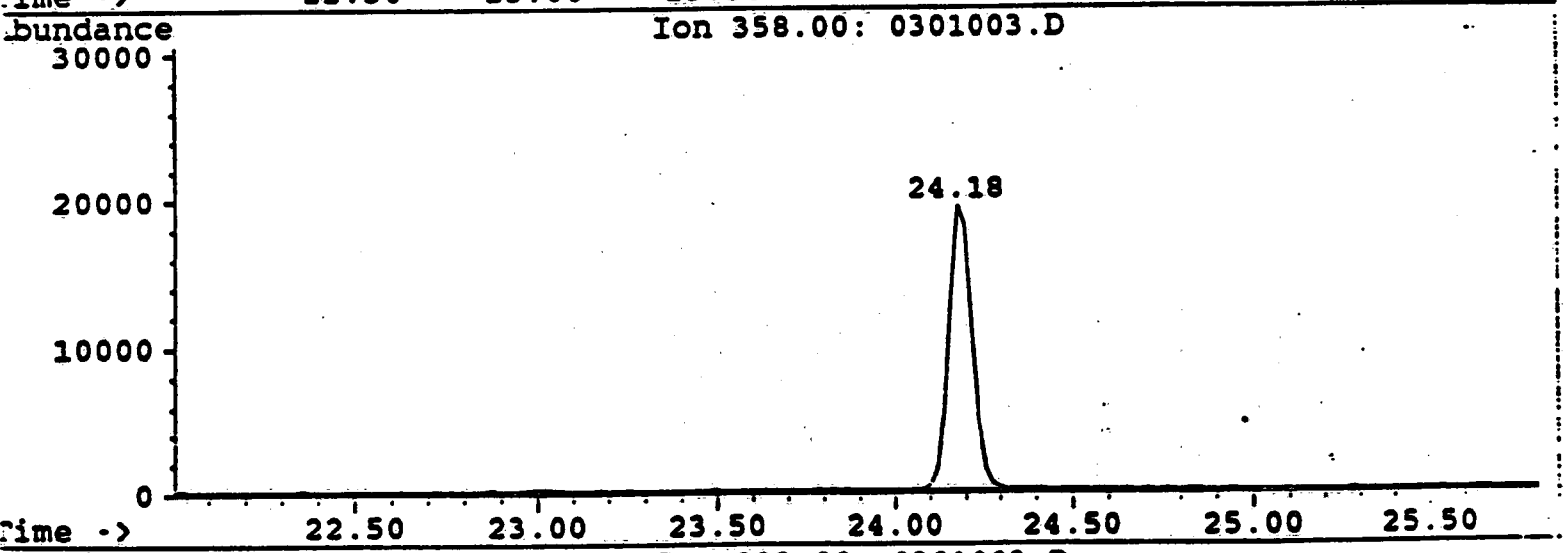

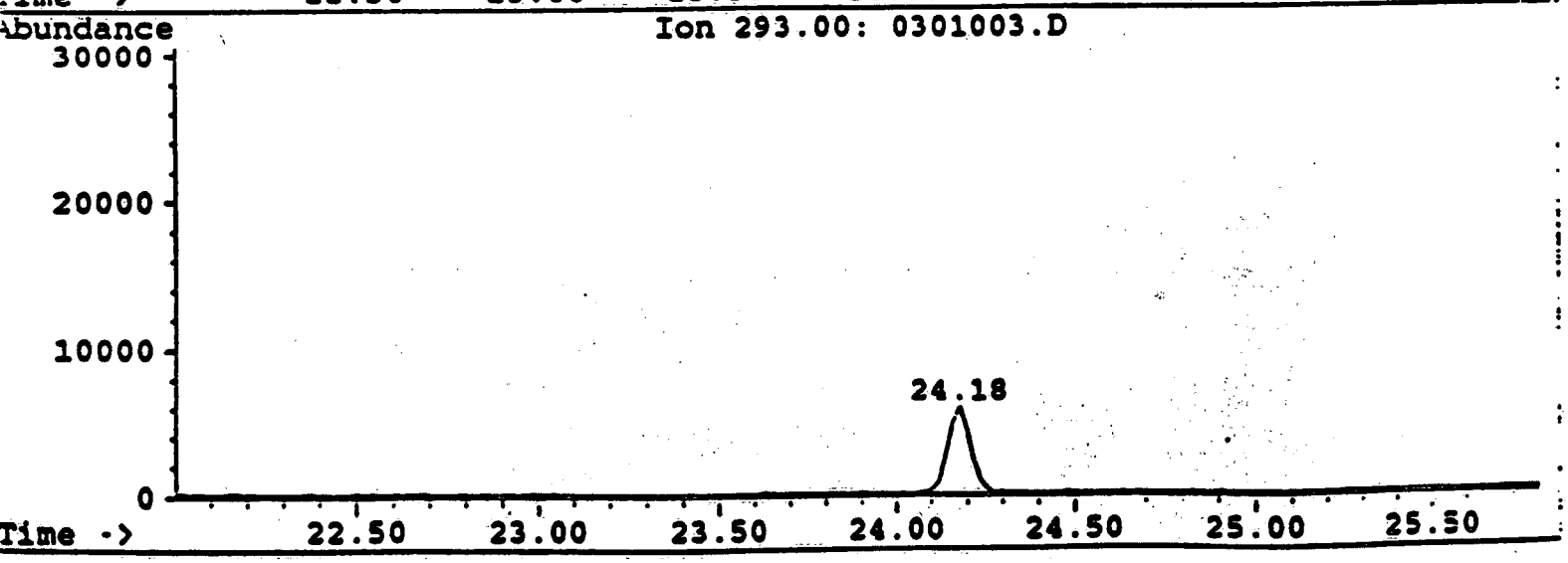

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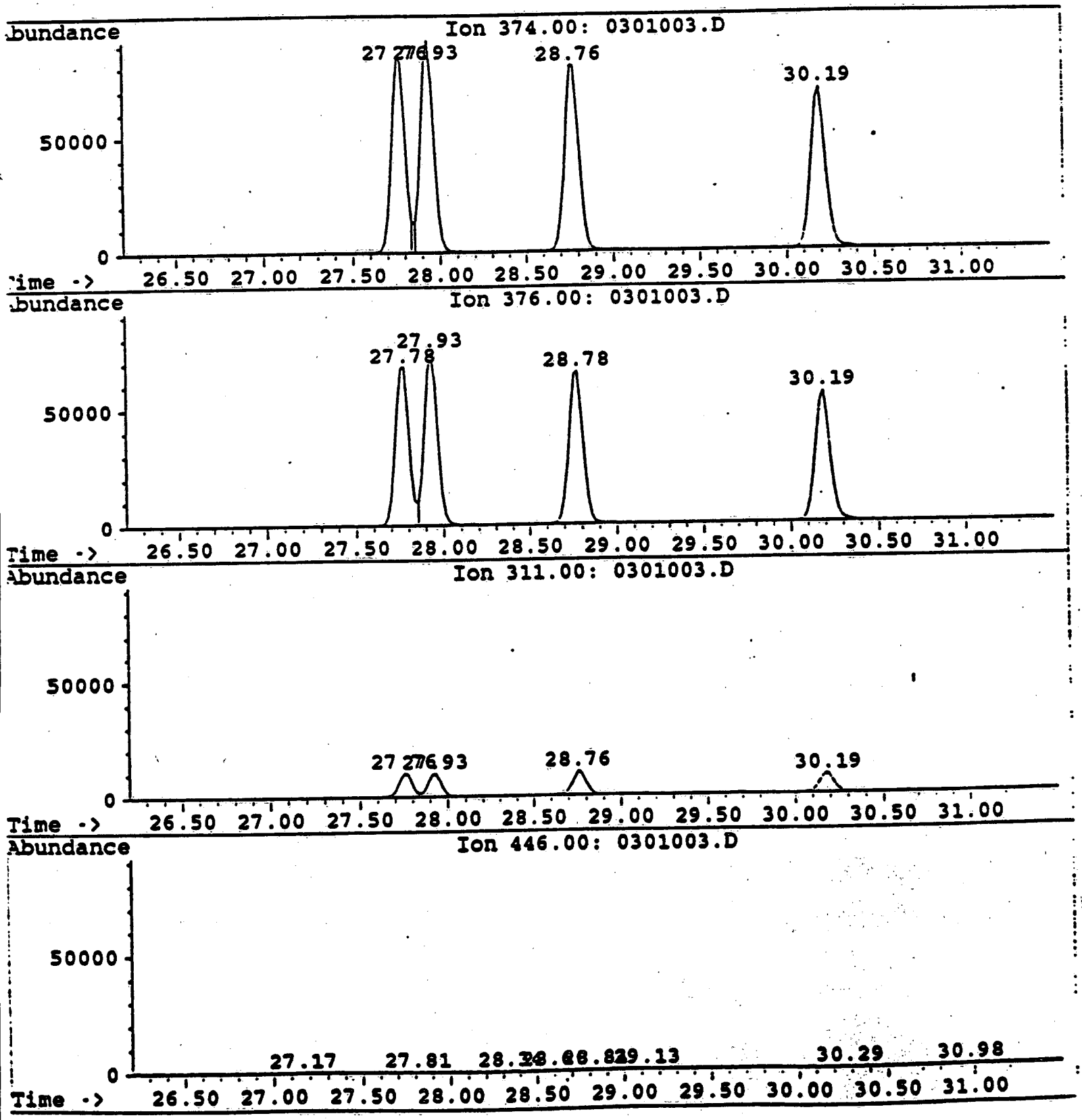

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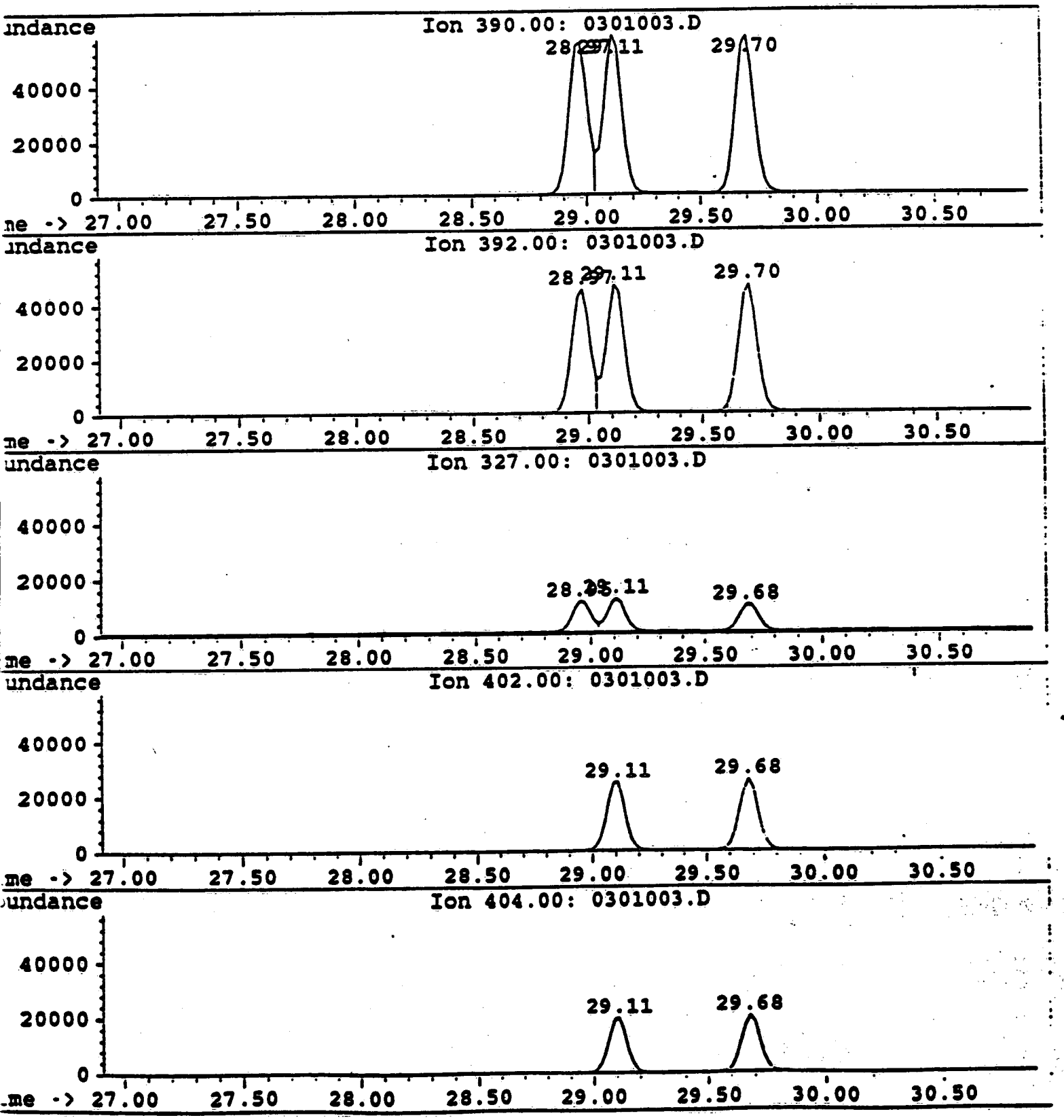

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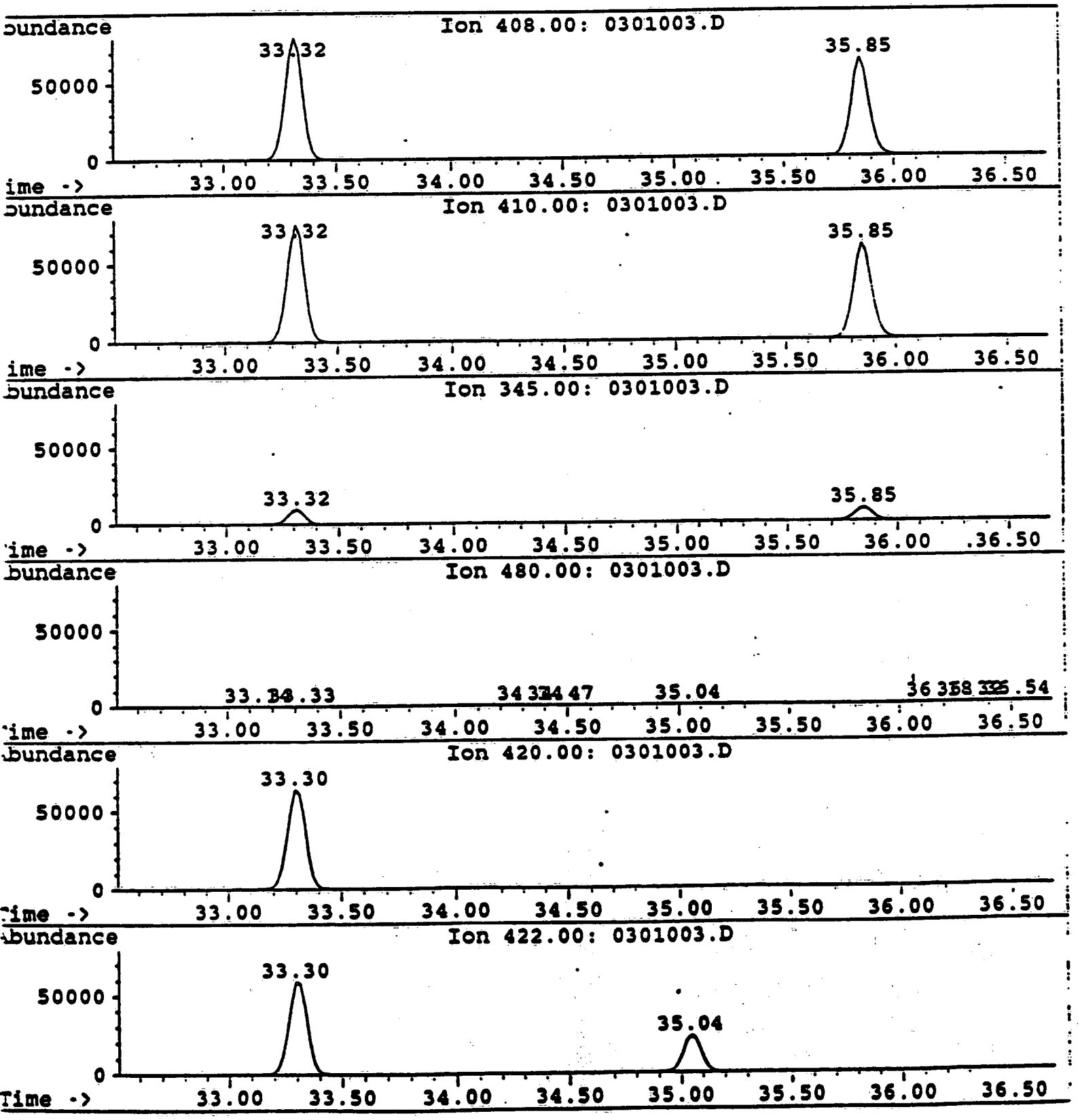

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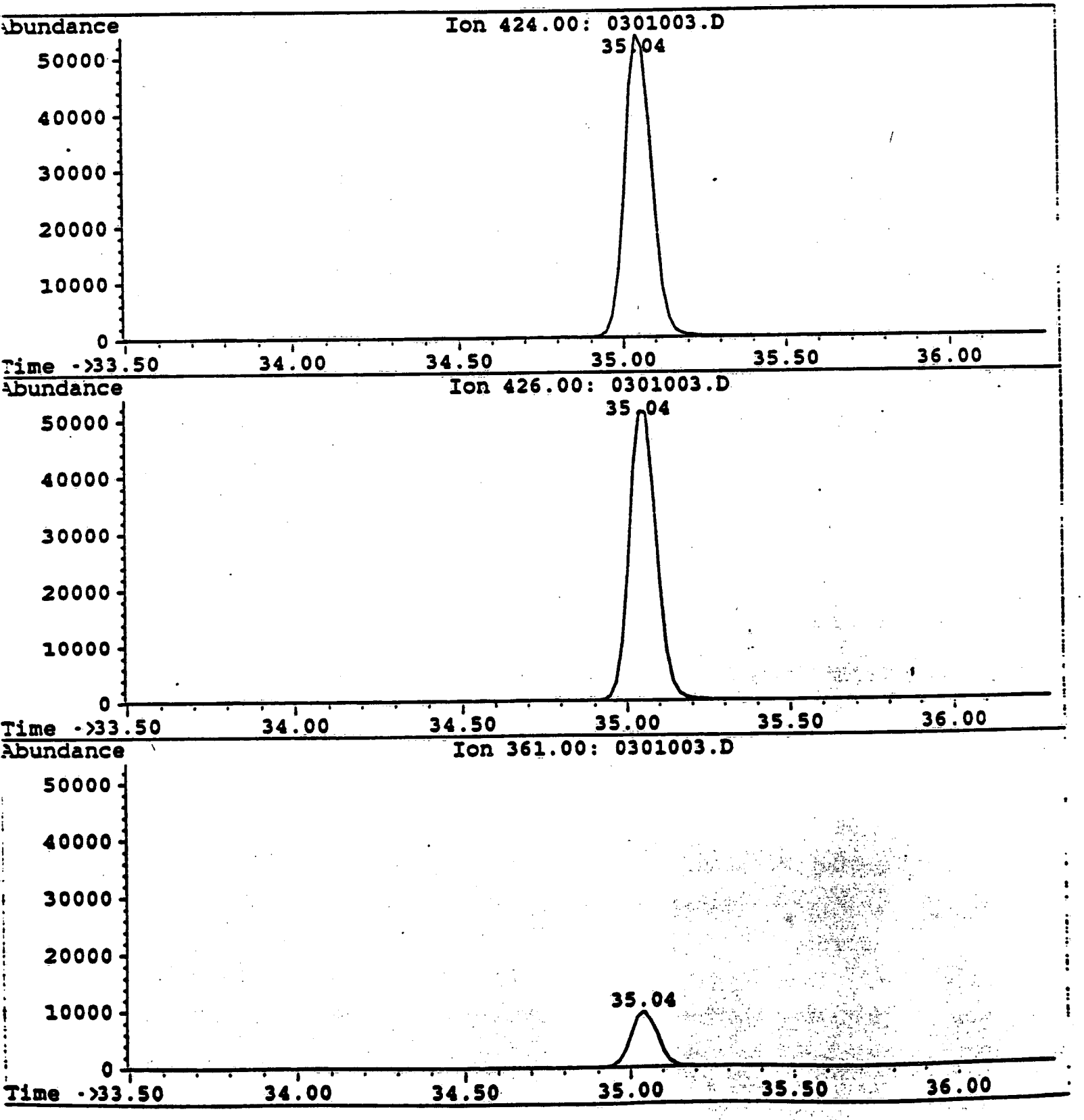

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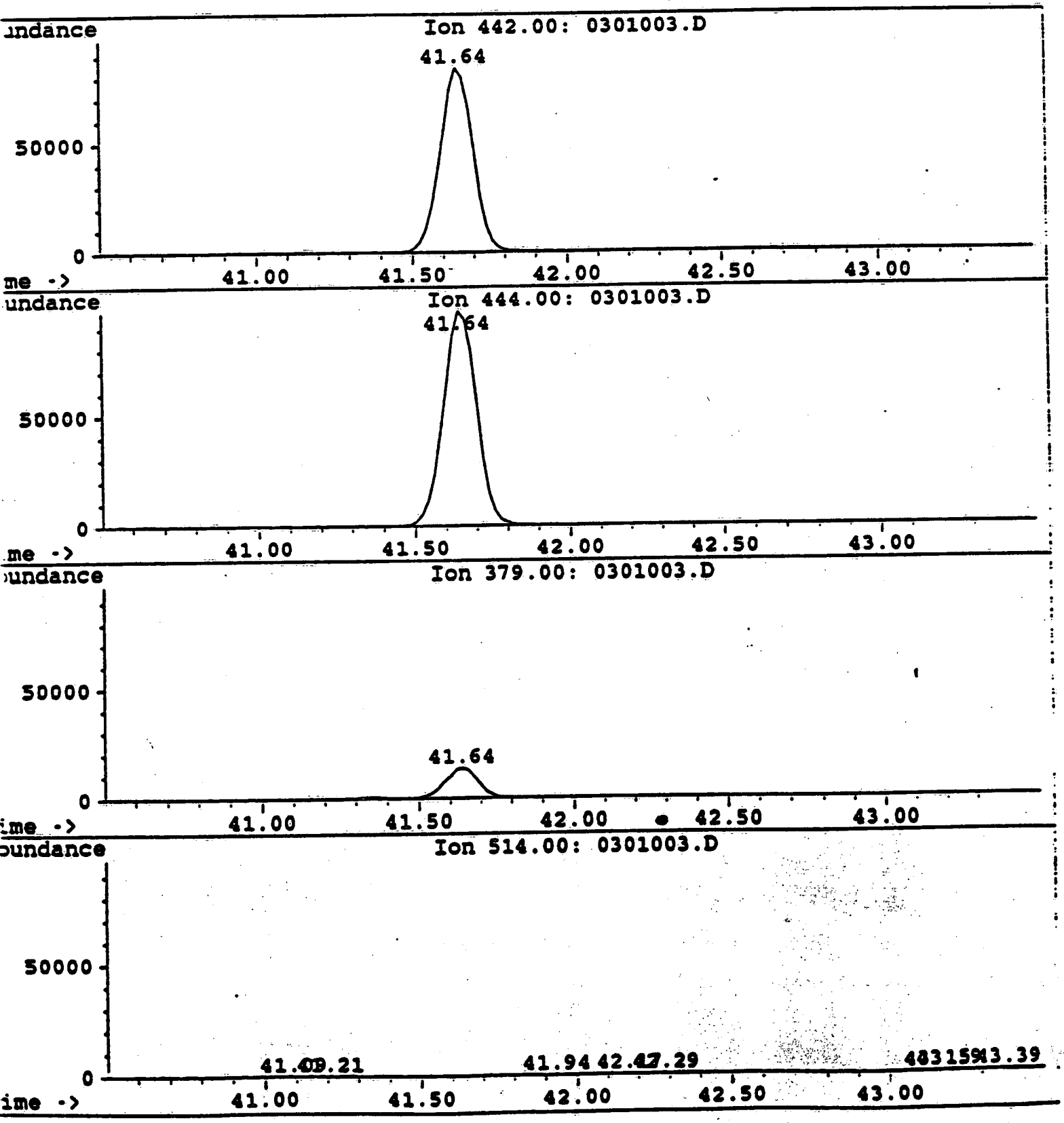

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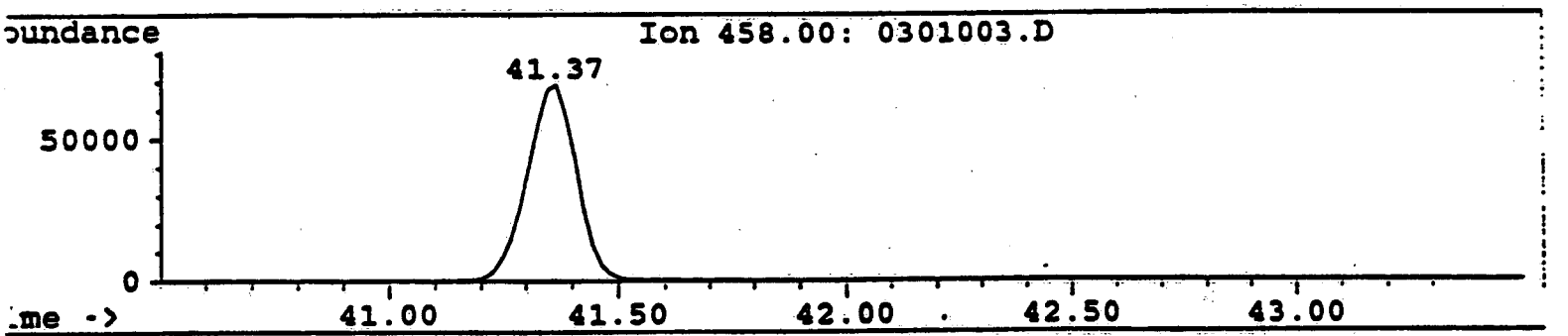

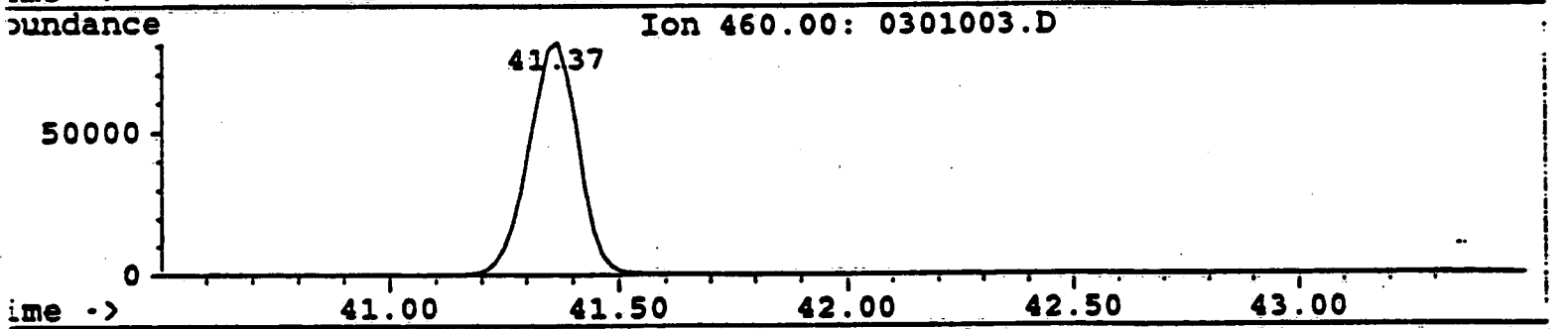

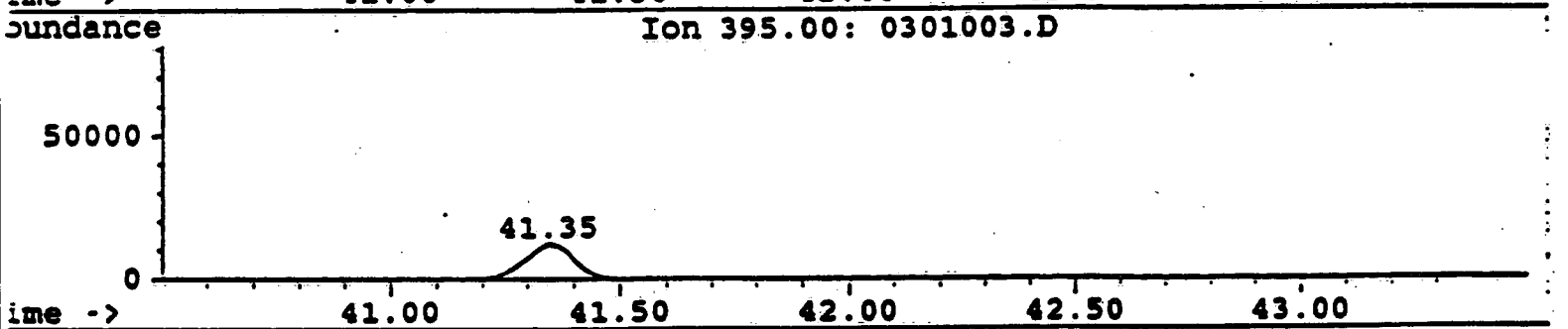

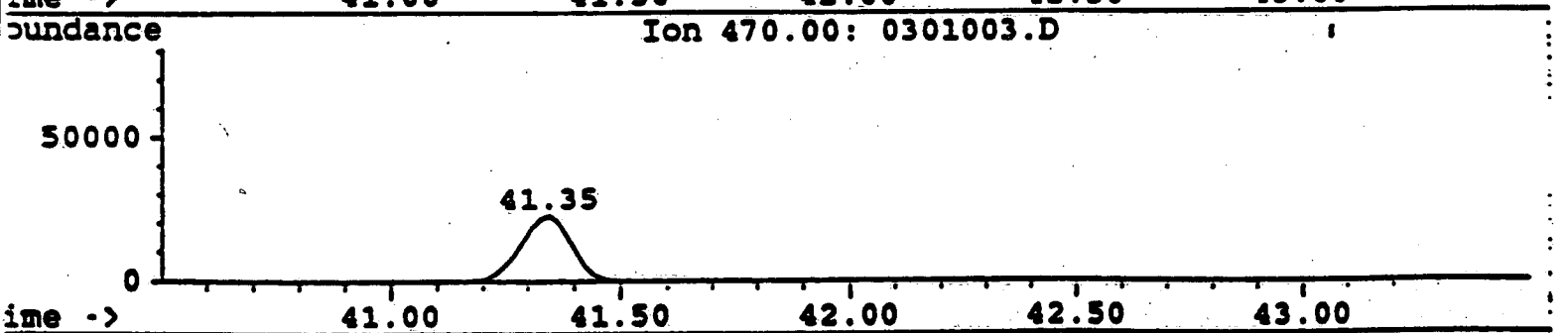

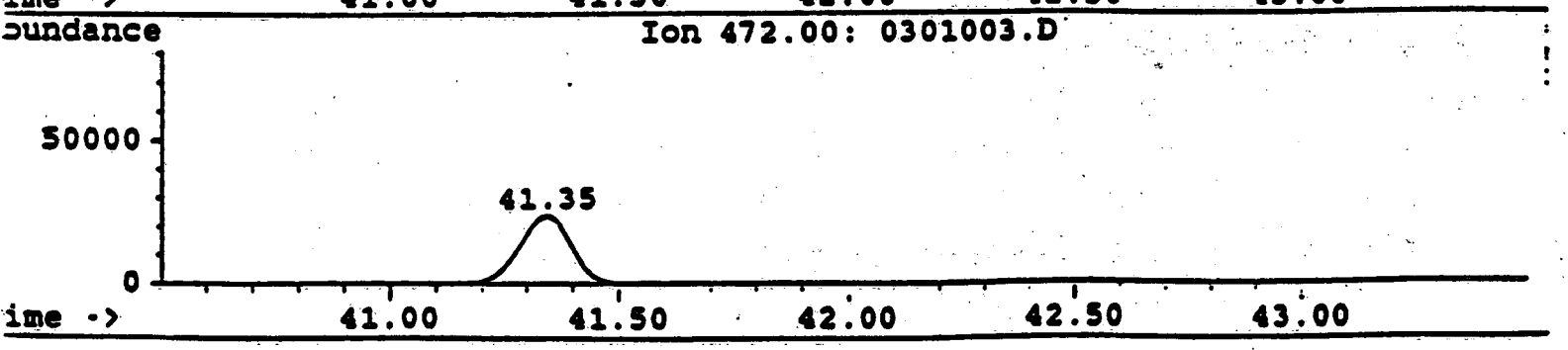

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10/24/93 23:43 ROSE.M 3
CC3
Sat Oct 23 13:20:35 1993
CLP Dioxins and Dibenzofurans for Methos 8280

COMPOUND	R.T.	m/z #1	Area #1	m/z #2	Area #2
2378-TCDD	19.58	320	103127	322	132883
2378-TCDF	18.98	304	122152	306	167679
12378-PeCDF	22.98	340	160728	342	108101
12378-PeCDD	24.18	356	139443	358	90534
23478-PeCDF	23.79	340	173574	342	116907
123478-HxCDF	27.76	374	472161	376	381388
123678-HxCDF	27.93	374	469073	376	380093
123478-HxCDD	28.97	390	310908	392	249065
123678-HxCDD	29.11	390	315231	392	254549
123789-HxCDD	29.7	390	326722	392	263802
234678-HxCDF	28.78	374	455829	376	367100
123789-HxCDF	30.19	374	403724	376	324849
1234678-HpCDF	33.32	408	430535	410	410456
1234678-HpCDD	35.04	424	314495	426	300503
1234789-HpCDF	35.85	408	373731	410	356612
OCDD	41.37	458	514395	460	605845
OCDF	41.64	442	628412	444	733548
Cl37-2378-TCDD (CS)	19.58	328	135021	NA	0
13C-1234-TCDD (RS)	19.42	332	99997	334	123410
13C-123789-HxCDD (RS)	29.68	402	142351	404	112190
13C-2378-TCDD	19.56	332	105507	334	129757
13C-2378-TCDF	18.96	316	147639	318	183373
13C-123678-HxCDD	29.11	402	137298	404	107820
13C-1234678-HpCDF	33.3	420	362103	422	334490
13C-OCDD	41.35	470	169444	472	180827

Monroe Twp
Contaminated
Soil Site

CHAIN OF CUSTODY RECORD

REGION II EPA ROY F. WESTON, INC.
TECHINICAL ASSISTANCE TEAM
1090 KING GEORGES POST RD.
SUITE 201 - EDISON, NJ 08837 PHONE NO.: (908) 225-6116

TAT PM: Eric Wilson

PCS # 0694
P.O. # 16-3244

Sample Number	Number of Containers	Description of Samples
MB-SC1	~~4~~ 3	2 x 40mL solid / VOA
9310863		1 x 16 oz. solid / BNA, PCB & Pesticides
		1 x 16 oz. solid / Metals & CN
		1 x 16 oz. solid / RCRA parameters (Ignitability, Corrosivity & reactivity)
		1 x 32 oz. solid / TCLP
MB-SC2	~~4~~ 3	same as above
9310864		

Person Assuming Responsibility for Sample: Eric Wilson

Date: 10/7/93 Time: 1730

Sample Number	Relinquished By:	Received By:	Time	Date	Reason for Change of Custody
All	Eric Wilson	[signature]	4:55pm	10/8/93	For analysis

C-4-7660

[illegible]REDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS

CASE NUMBER	[illegible]	MATRIX	[illegible]
SAMPLE NUMBER	[illegible]	DILUTION FACTOR	[illegible]
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	[illegible]	DATE ANALYZED	[illegible]
FIELD ID	[illegible]	ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
[illegible]	Chloromethane	U	24
[illegible]	Bromomethane	U	24
[illegible]	Vinyl Chloride	U	24
[illegible]	Chloroethane	U	24
[illegible]	Methylene Chloride	[illegible]	12
[illegible]	Acetone	U	24
[illegible]	Carbon Disulfide	U	12
[illegible]	1,1-Dichloroethene	U	12
[illegible]	1,1-Dichloroethane	U	12
[illegible]	trans-1,2-Dichloroethene	U	12
[illegible]	Chloroform	[illegible]	12
[illegible]	1,2-Dichloroethane	[illegible]	12
[illegible]	2-Butanone	[illegible]	12
[illegible]	1,1,1-Trichloroethane	[illegible]	12
[illegible]	Carbon Tetrachloride	[illegible]	12
[illegible]	Vinyl Acetate	[illegible]	12
[illegible]	Bromodichloromethane	[illegible]	12
[illegible]	1,2-Dichloropropane	U	12

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	12
79016	Trichloroethene	U	12
124481	Dibromochloromethane	U	12
79016	1,1,2-Trichloroethane	U	12
71432	Benzene	U	12
10061026	trans-1,3-Dichloropropene	U	12
75252	Bromoform	U	12
108101	4-Methyl-2-pentanone	U	24
591786	2-Hexanone	U	24
127184	Tetrachloroethene	U	12
79345	1,1,2,2-Tetrachloroethane	[illegible]	12
108883	Toluene	[illegible]	12
[illegible]	Chlorobenzene	[illegible]	12
[illegible]	Ethylbenzene	[illegible]	12
[illegible]	Styrene	[illegible]	12
[illegible]	Xylene	[illegible]	12
[illegible]	Xylene	[illegible]	12
[illegible]	trans-1,2-Dichloroethene	[illegible]	12

INTERNAL STANDARDS	AREA(%)	RT	STATUS
1,4-Dichlorobenzene-d4	[illegible]	[illegible]	[illegible]
Toluene-d8	[illegible]	[illegible]	[illegible]
Bromofluorobenzene	[illegible]	[illegible]	[illegible]

Target area of 87.1 is used for all target compounds.

U: Indicates compound found in associated blank
B: Indicates analyte analyzed for but not detected

U: Indicates compound concentration found below MDL

ACCREDITED LABORATORIES, INC.
TCLP VOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310863	DILUTION FACTOR	10
DATA FILE	>D2164	DATE EXTRACTED	
CLIENT NAME	WRFI	DATE ANALYZED	10/19/93
FIELD ID	MB-SC1	ANALYZED BY	LARRY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
71432	Benzene	U	.050	0.5
78933	2-Butanone	U	.100	200.0
56235	Carbon Tetrachloride	U	.050	0.5
108907	Chlorobenzene	U	.050	100.0
67663	Chloroform	U	.050	6.0
75354	1,1-Dichloroethene	U	.050	0.7
107062	1,2-Dichloroethane	U	.050	0.5
127184	Tetrachloroethene	U	.050	0.7
79016	Trichloroethene	U	.050	0.5
75014	Vinyl Chloride	U	.100	0.2

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	94 %	76 - 114	OK
Toluene-d8	90 %	88 - 110	OK
Bromofluorobenzene	95 %	86 - 115	OK

(U) Indicates compound was analyzed for but not detected

* 2-Butanone = Methyl ethyl ketone

CREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSIS

CASE NUMBER	8760	MATRIX	Solid
SAMPLE NUMBER	9510842	DILUTION FACTOR	2/100
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME	KPFI	DATE ANALYZED	10/18/93
FIELD ID	MS-502	ANALYZED BY	LARRY

CAS #	COMPOUND	UG/KG	MDL
74873	Chloromethane	U	23
74839	Bromomethane	U	23
75014	Vinyl Chloride	U	23
75003	Chloroethane	U	23
75092	Methylene Chloride	23	12
67641	Acetone	37	23
75150	Carbon Disulfide	U	12
75354	1,1-Dichloroethene	U	12
75343	1,1-Dichloroethane	U	12
156605	trans-1,2-Dichloroethene	U	12
67663	Chloroform	U	12
107062	1,2-Dichloroethane	U	12
78933	2-Butanone	U	23
71556	1,1,1-Trichloroethane	U	12
56235	Carbon Tetrachloride	U	12
108054	Vinyl Acetate	U	23
75274	Bromodichloromethane	U	12
78875	1,2-Dichloropropane	U	12

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	12
79016	Trichloroethene	U	12
124481	Dibromochloromethane	U	12
79016	1,1,2-Trichloroethane	U	12
71432	Benzene	U	12
10061026	trans-1,3-Dichloropropene	U	12
75252	Bromoform	U	12
108101	4-Methyl-2-pentanone	U	23
591786	2-Hexanone	U	23
127184	Tetrachloroethene	U	12
79345	1,1,2,2-Tetrachloroethane	U	12
108883	Toluene	11(J)	12
108907	Chlorobenzene	17	12
100414	Ethylbenzene	U	12
100425	Styrene	U	12
1330207	m,p-Xylene	U	12
95476	o-Xylene	U	12
156592	cis-1,2-Dichloroethene	U	12

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	91 %	76-121	OK
Toluene-d8	99 %	81-117	OK
Bromofluorobenzene	99 %	74-121	OK

Percent solids of 2.1 is used for all target compounds.

(B) Indicates compound found in associated blank
U Indicates compound analyzed for but not detected

(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP VOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310864	DILUTION FACTOR	10
DATA FILE	>D2165	DATE EXTRACTED	
CLIENT NAME	WRFI	DATE ANALYZED	10/19/93
FIELD ID	MB-SC2	ANALYZED BY	LARRY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
71432	Benzene	U	.050	0.5
78933	2-Butanone	U	.100	200.0
56235	Carbon Tetrachloride	U	.050	0.5
108907	Chlorobenzene	U	.050	100.0
67663	Chloroform	U	.050	6.0
75354	1,1-Dichloroethene	U	.050	0.7
107062	1,2-Dichloroethane	U	.050	0.5
127184	Tetrachloroethene	U	.050	0.7
79016	Trichloroethene	U	.050	0.5
75014	Vinyl Chloride	U	.100	0.2

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	94 %	76 - 114	OK
Toluene-d8	90 %	88 - 110	OK
Bromofluorobenzene	96 %	86 - 115	OK

(U) Indicates compound was analyzed for but not detected

* 2-Butanone = Methyl ethyl ketone

CREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSYS

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	DAILY BLANK	DILUTION FACTOR	1.0
DATA FILE	[illegible]	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	10/18/95
FIELD ID		ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
74873	Chloromethane	U	10
7-839	Bromomethane	U	10
75014	Vinyl Chloride	U	10
75003	Chloroethane	U	10
75092	Methylene Chloride	U	5
67641	Acetone	U	10
75150	Carbon Disulfide	U	5
75354	1,1-Dichloroethene	U	5
75343	1,1-Dichloroethane	U	5
156605	trans-1,2-Dichloroethene	U	5
67663	Chloroform	U	5
107062	1,2-Dichloroethane	U	5
78933	2-Butanone	U	10
71556	1,1,1-Trichloroethane	U	5
56235	Carbon Tetrachloride	U	5
108054	Vinyl Acetate	U	10
75274	Bromodichloromethane	U	5
78875	1,2-Dichloropropane	U	5

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	5
79016	Trichloroethene	U	5
124481	Dibromochloromethane	U	5
79016	1,1,2-Trichloroethane	U	5
71432	Benzene	U	5
10061026	trans-1,3-Dichloropropene	U	5
75252	Bromoform	U	5
108101	4-Methyl-2-pentanone	U	10
591786	2-Hexanone	U	10
127184	Tetrachloroethene	U	5
79345	1,1,2,2-Tetrachloroethane	U	5
108883	Toluene	U	5
108907	Chlorobenzene	U	5
100414	Ethylbenzene	U	5
100425	Styrene	U	5
1330207	Xylene	U	5
95476	o-Xylene	U	5
156592	cis-1,2-Dichloroethene	U	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99 %	71-121	OK
Toluene-d8	92 %	81-117	OK
Bromofluorobenzene	88 %	74-121	OK

Percent recovery of 100 % was used for all target compounds.

B: Indicates compound found in associated blank.
E: Indicates compound analyzed for but not detected.

U: Indicates compound concentration found below MDL.

CREDITED LABORATORIES, INC.
VOLATILE ORGANIC ANALYSYS

CASE NUMBER		MATRIX	Solid
SAMPLE NUMBER	DAILY BLANK	DILUTION FACTOR	1.0
DATA FILE	[illegible]746	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	[illegible]

CAS #	COMPOUND	UG/KG	MDL
74873	Chloromethane	U	10
74839	Bromomethane	U	10
75014	Vinyl Chloride	U	10
75003	Chloroethane	U	10
75092	Methylene Chloride	4(J)	5
67641	Acetone	U	10
75150	Carbon Disulfide	U	5
75354	1,1-Dichloroethene	U	5
75343	1,1-Dichloroethane	U	5
156605	trans-1,2-Dichloroethene	U	5
67663	Chloroform	U	5
107062	1,2-Dichloroethane	U	5
78933	2-Butanone	U	10
71556	1,1,1-Trichloroethane	U	5
56235	Carbon Tetrachloride	U	5
108054	Vinyl Acetate	U	10
75274	Bromodichloromethane	U	5
78875	1,2-Dichloropropane	U	5

CAS #	COMPOUND	UG/KG	MDL
10061015	cis-1,3-Dichloropropene	U	5
79016	Trichloroethene	U	5
124481	Dibromochloromethane	U	5
79016	1,1,2-Trichloroethane	U	5
71432	Benzene	U	5
10061026	trans-1,3-Dichloropropene	U	5
75252	Bromoform	U	5
108101	4-Methyl-2-pentanone	U	10
591786	2-Hexanone	U	10
127184	Tetrachloroethene	U	5
79345	1,1,2,2-Tetrachloroethane	U	5
108883	Toluene	U	5
108907	Chlorobenzene	U	5
100414	Ethylbenzene	U	5
100425	Styrene	U	5
1330207	m,p-Xylene	U	5
95476	o-Xylene	U	5
156592	cis-1,2-Dichloroethene	U	5

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	101 %	70-121	OK
Toluene-d8	99 %	81-117	OK
Bromofluorobenzene	94 %	74-121	OK

Percent solid of 100 is used for all target compounds

(B) Indicates compound found in associated blank.
U Indicates compound analyzed for but not detected

(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP VOLATILES ANALYSIS DATA

CASE NUMBER		MATRIX	Leachate
SAMPLE NUMBER	DAILY B	DILUTION FACTOR	1
DATA FILE	>D2161	DATE EXTRACTED	
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	LARRY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
71432	Benzene	U	.005	0.5
78933	2-Butanone	U	.010	200.0
56235	Carbon Tetrachloride	U	.005	0.5
108907	Chlorobenzene	U	.005	100.0
67663	Chloroform	U	.005	6.0
75354	1,1-Dichloroethene	U	.005	0.7
107062	1,2-Dichloroethane	U	.005	0.5
127184	Tetrachloroethene	U	.005	0.7
79016	Trichloroethene	U	.005	0.5
75014	Vinyl Chloride	U	.010	0.2

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	92 %	76 - 114	OK
Toluene-d8	92 %	88 - 110	OK
Bromofluorobenzene	95 %	86 - 115	OK

(U) Indicates compound was analyzed for but not detected

* 2-Butanone = Methyl ethyl ketone

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSYS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310863 (K)	DILUTION FACTOR	1
DATA FILE	284381	DATE EXTRACTED	10/15/93
CLIENT NAME	WRP	DATE ANALYZED	10/18/93
FIELD ID	MB-SC1	ANALYZED BY	PAUL

CAS #	COMPOUND	UG/KG	MDL
108952	Phenol	U	390
95578	2-Chlorophenol	U	390
95487	2-Methylphenol	U	390
108394	3&4-Methylphenol	U	390
88755	2-Nitrophenol	U	390
105679	2,4-Dimethylphenol	U	390
120832	2,4-Dichlorophenol	U	390
111444	Bis(2-Chloroethyl)Ether	U	390
541731	1,3-Dichlorobenzene	U	390
106467	1,4-Dichlorobenzene	U	390
100516	Benzyl Alcohol	U	390
95501	1,2-Dichlorobenzene	U	390
108601	Bis(2-Chloroisopropyl)Ether	U	390
621647	N-Nitroso-Di-n-propylamine	U	390
67721	Hexachloroethane	U	390
98953	Nitrobenzene	U	390
78591	Isophorone	U	390
65850	Benzoic Acid	U	2000
111911	Bis(2-Chloroethoxy)Methane	U	390
120821	1,2,4-Trichlorobenzene	U	390
91203	Naphthalene	460	390
106478	4-Chloroaniline	U	390
87683	Hexachlorobutadiene	U	390
91576	2-Methylnaphthalene	330(J)	390
77474	Hexachlorocyclopentadiene	U	390
91587	2-Chloronaphthalene	U	390
88744	2-Nitroaniline	U	2000
131113	Dimethyl Phthalate	U	390
208968	Acenaphthylene	U	390
99092	3-Nitroaniline	U	2000
83329	Acenaphthene	U	390
132649	Dibenzofuran	U	390
606202	2,6-Dinitrotoluene	U	390

CAS #	COMPOUND	UG/KG	MDL
59507	4-Chloro-3-methylphenol	U	390
88062	2,4,6-Trichlorophenol	U	390
95954	2,4,5-Trichlorophenol	U	2000
51285	2,4-Dinitrophenol	U	2000
100027	4-Nitrophenol	U	2000
534521	4,6-Dinitro-2-methylphenol	U	2000
87865	Pentachlorophenol	U	2000
121142	2,4-Dinitrotoluene	U	390
84662	Diethylphthalate	U	390
7005723	4-Chlorophenyl-phenylether	U	390
86737	Fluorene	U	390
100016	4-Nitroaniline	U	2000
86306	N-Nitrosodiphenylamine	U	390
101553	4-Bromophenyl-phenylether	U	390
118741	Hexachlorobenzene	140(J)	390
85018	Phenanthrene	240(J)	390
120127	Anthracene	U	390
84742	Di-n-Butylphthalate	84(J)	390
206440	Fluoranthene	U	390
129000	Pyrene	140(J)	390
85687	Butylbenzylphthalate	U	390
91941	3,3'-Dichlorobenzidine	U	780
56553	Benzo(a)Anthracene	U	390
117817	Bis(2-Ethylhexyl)Phthalate	13000	390
218019	Chrysene	U	390
117840	Di-n-octyl phthalate	1300	390
205992	Benzo(b)fluoranthene	U	390
207089	Benzo(k)Fluoranthene	U	390
50328	Benzo(a)Pyrene	U	390
193395	Indeno(1,2,3-cd)Pyrene	U	390
53703	Dibenzo(a,h)Anthracene	U	390
191242	Benzo(g,h,i)Perylene	U	390
62759	N-Nitrosodimethylamine	U	390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	54 %	23-120	OK
2-Fluorobiphenyl	59 %	30-115	OK
Terphenyl-d14	108 %	18-137	OK
Phenol-d5	71 %	24-113	OK
2-Fluorophenol	71 %	25-121	OK
2,4,6-Tribromophenol	81 %	19-122	OK

Percent solid of 85.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
- Indicates compound analyzed for but not detected.

(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP SEMIVOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310863	DILUTION FACTOR	10
DATA FILE	[illegible]B7414	DATE EXTRACTED	10/18/93
CLIENT NAME	WRPI	DATE ANALYZED	10/20/93
FIELD ID	ME-SC1	ANALYZED BY	PAUL

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
110861	Pyridine	U	.10	5.0
106467	1,4-Dichlorobenzene	U	.10	7.5
95487	2-Methylphenol	U	.10	200.0
108394	3&4-Methylphenol	U	.10	200.0
67721	Hexach.orcethane	U	.10	3.0
[illegible]	Nitrobenzene	U	.10	2.0
[illegible]	Hexach.orcbutadiene	U	.10	0.5
[illegible]	2,4,6-Trichlorophenol	U	.10	2.0
88062	2,4,5-Trichlorophenol	U	.50	400.0
121142	2,4-Dinitrotoluene	U	.10	0.13
118741	Hexachlorobenzene	U	.10	0.13
87865	Pentachlorophenol	U	.10	100.0

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
2-Fluorophenol	36 %	21 - 100	OK
Phenol-d5	62 %	10 - 94	OK
Nitrobenzene-d5	55 %	35 - 114	OK
2-Fluorobiphenyl	72 %	43 - 116	OK
2,4,6-Tribromophenol	66 %	10 - 123	OK
Terphenyl-d14	47 %	33 - 141	OK

U - Indicates compound was analyzed for but not detected

- 2-Methylphenol = o-cresol
- 3-Methylphenol = m-cresol
- 4-Methylphenol = p-cresol

** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied.

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSIS DATA

LAB NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	[illegible] (K)	DILUTION FACTOR	1
DATA FILE	[illegible]	DATE EXTRACTED	10/15/93
CLIENT NOTE	[illegible]	DATE ANALYZED	10/18/93
FIELD ID	[illegible]	ANALYZED BY	PAUL

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
[illegible]	Phenol	U	390	59507	4-Chloro-3-methylphenol	U	390
[illegible]	2-Chlorophenol	U	390	88062	2,4,6-Trichlorophenol	U	390
[illegible]	2-Methylphenol	U	390	95954	2,4,5-Trichlorophenol	U	1900
[illegible]	3&4-Methylphenol	U	390	51285	2,4-Dinitrophenol	U	1900
[illegible]	2-Nitrophenol	U	390	100027	4-Nitrophenol	U	1900
[illegible]	2,4-Dimethylphenol	U	390	534521	4,6-Dinitro-2-methylphenol	U	1900
[illegible]	2,4-Dichlorophenol	U	390	87865	Pentachlorophenol	U	1900
[illegible]	Bis(2-Chloroethyl)Ether	U	390	121142	2,4-Dinitrotoluene	U	390
[illegible]	1,3-Dichlorobenzene	U	390	84662	Diethylphthalate	U	390
[illegible]	1,4-Dichlorobenzene	U	390	7005723	4-Chlorophenyl-phenylether	U	390
[illegible]	Benzyl Alcohol	U	390	86737	Fluorene	U	390
[illegible]	1,2-Dichlorobenzene	U	390	100016	4-Nitroaniline	U	1900
[illegible]	Bis(2-Chloroisopropyl)Ether	U	390	86306	N-Nitrosodiphenylamine	U	390
[illegible]	N-Nitroso-Di-n-propylamine	U	390	101555	4-Bromophenyl-phenylether	U	390
[illegible]	Hexachloroethane	U	390	118741	Hexachlorobenzene	U	390
[illegible]	Nitrobenzene	U	390	85018	Phenanthrene	360(J)	390
[illegible]	Isophorone	U	390	120127	Anthracene	U	390
[illegible]	Benzoic Acid	U	1900	84742	Di-n-Butylphthalate	83(J)	390
[illegible]	Bis(2-Chloroethoxy)Methane	U	390	206440	Fluoranthene	U	390
[illegible]	1,2,4-Trichlorobenzene	U	390	129000	Pyrene	170(J)	390
[illegible]	Naphthalene	1100	390	85687	Butylbenzylphthalate	U	390
[illegible]	4-Chloroaniline	U	390	91941	3,3'-Dichlorobenzidine	U	770
[illegible]	Hexachlorobutadiene	U	390	56553	Benzo(a)Anthracene	U	390
[illegible]	2-Methylnaphthalene	780	390	117817	Bis(2-Ethylhexyl)Phthalate	24000	390
[illegible]	Hexachlorocyclopentadiene	U	390	218019	Chrysene	U	390
[illegible]	2-Chloronaphthalene	U	390	117840	Di-n-octyl phthalate	2000	390
[illegible]	2-Nitroaniline	U	1900	205992	Benzo(b)fluoranthene	U	390
[illegible]	Dimethyl Phthalate	U	390	207089	Benzo(k)fluoranthene	U	390
[illegible]	Acenaphthylene	U	390	50328	Benzo(a)Pyrene	U	390
[illegible]	3-Nitroaniline	U	1900	193395	Indeno(1,2,3-cd)Pyrene	U	390
[illegible]	Acenaphthene	U	390	53703	Dibenzo(a,h)Anthracene	U	390
[illegible]	Dibenzofuran	U	390	191242	Benzo(g,h,i)Perylene	U	390
[illegible]	2,6-Dinitrotoluene	U	390	62759	N-Nitrosodimethylamine	U	390

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	64 %	23-120	OK
2-Fluorobiphenyl	68 %	30-115	OK
Terphenyl-d14	169 %	18-137	OUT
Phenol-d5	23 %	24-113	OK
2-Fluorophenol	28 %	25-121	OK
2,4,6-Tribromophenol	82 %	19-122	OK

Percent solid of 86.2 is used for all target compounds.

(B) Indicates compound found in associated blank.
(U) Indicates compound analyzed for but not detected.
(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP SEMIVOLATILES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310864	DILUTION FACTOR	10
DATA FILE	>E3415	DATE EXTRACTED	10/16/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	M=-SC2	ANALYZED BY	PAUL

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
110861	Pyridine	U	.10	5.0
106467	1,4-Dichlorobenzene	U	.10	7.5
95478	2-Methylphenol	U	.10	200.0
108394	3&4-Methylphenol	U	.10	200.0
67721	Hexachloroethane	U	.10	3.0
98953	Nitrobenzene	U	.10	2.0
87683	Hexachlorobutadiene	U	.10	0.5
88062	2,4,6-Trichlorophenol	U	.10	2.0
95954	2,4,5-Trichlorophenol	U	.50	400.0
121142	2,4-Dinitrotoluene	U	.10	0.13
118741	Hexachlorobenzene	U	.10	0.13
87865	Pentachlorophenol	U	.10	100.0

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
2-Fluorophenol	22 %	21 - 100	OK
Phenol-d5	58 %	10 - 94	OK
Nitrobenzene-d5	55 %	35 - 114	OK
2-Fluorobiphenyl	78 %	43 - 116	OK
2,4,6-Tribromophenol	60 %	10 - 123	OK
Terphenyl-d14	45 %	33 - 141	OK

U - Indicates compound was analyzed for but not detected

- 2-Methylphenol = o-cresol
- 3-Methylphenol = m-cresol
- 4-Methylphenol = p-cresol

** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied.

ACCREDITED LABORATORIES, INC.
BNA ORGANIC ANALYSYS DATA

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	[illegible]	DILUTION FACTOR	1
DATA FILE	[illegible]	DATE EXTRACTED	10/15/93
CLIENT NAME	"	DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	PAUL

CAS #	COMPOUND	UG/KG	MDL	CAS #	COMPOUND	UG/KG	MDL
108952	Phenol	U	330	59507	4-Chloro-3-methylphenol	U	330
[illegible]	2-Chlorophenol	U	330	88062	2,4,6-Trichlorophenol	U	330
[illegible]	2-Methylphenol	U	330	95954	2,4,5-Trichlorophenol	U	1700
[illegible]	3&4-Methylphenol	U	330	51285	2,4-Dinitrophenol	U	1700
[illegible]	2-Nitrophenol	U	330	100027	4-Nitrophenol	U	1700
[illegible]	2,4-Dimethylphenol	U	330	534521	4,6-Dinitro-2-methylphenol	U	1700
[illegible]	2,4-Dichlorophenol	U	330	87865	Pentachlorophenol	U	1700
[illegible]	bis(-2-Chloroethyl)Ether	U	330	121142	2,4-Dinitrotoluene	U	330
[illegible]	1,3-Dichlorobenzene	U	330	84662	Diethylphthalate	U	330
[illegible]	1,4-Dichlorobenzene	U	330	7005723	4-Chlorophenyl-phenylether	U	330
[illegible]	Benzyl Alcohol	U	330	86737	Fluorene	U	330
[illegible]	1,2-Dichlorobenzene	U	330	100016	4-Nitroaniline	U	1700
[illegible]	bis(2-Chloroisopropyl)ether	U	330	86306	N-Nitrosodiphenylamine	U	330
[illegible]	N-Nitroso-Di-n-propylamine	U	330	101553	4-Bromophenyl-phenylether	U	330
[illegible]	Hexachloroethane	U	330	118741	Hexachlorobenzene	U	330
[illegible]	Nitrobenzene	U	330	85018	Phenanthrene	U	330
[illegible]	Isophorone	U	330	120127	Anthracene	U	330
[illegible]	Benzoic Acid	U	1700	84742	Di-n-Butylphthalate	U	330
[illegible]	bis(-2-Chloroethoxy)Methane	U	330	206440	Fluoranthene	U	330
[illegible]	1,2,4-Trichlorobenzene	U	330	129000	Pyrene	U	330
[illegible]	Naphthalene	U	330	85687	Butylbenzylphthalate	U	330
[illegible]	4-Chloroaniline	U	330	91941	3,3'-Dichlorobenzidine	U	670
[illegible]	Hexachlorobutadiene	U	330	56553	Benzo(a)Anthracene	U	330
[illegible]	2-Methylnaphthalene	U	330	117817	Bis(2-Ethylhexyl)Phthalate	U	330
[illegible]	Hexachlorocyclopentadiene	U	330	218019	Chrysene	U	330
[illegible]	2-Chloronaphthalene	U	330	117840	Di-n-octyl phthalate	U	330
88744	2-Nitroaniline	U	1700	205992	Benzo(b)fluoranthene	U	330
131113	Dimethyl Phthalate	U	330	207089	Benzo(k)Fluoranthene	U	330
[illegible]	Acenaphthylene	U	330	50328	Benzo(a)Pyrene	U	330
[illegible]	3-Nitroaniline	U	1700	193395	Indeno(1,2,3-cd)Pyrene	U	330
83329	Acenaphthene	U	330	53703	Dibenzo(a,h)Anthracene	U	330
[illegible]	Dibenzofuran	U	330	191242	Benzo(g,h,i)Perylene	U	330
[illegible]	2,6-Dinitrotoluene	U	330	62759	N-Nitrosodimethylamine	U	330

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
Nitrobenzene-d5	49 %	23-120	OK
2-Fluorobiphenyl	75 %	30-115	OK
Terphenyl-d14	43 %	18-137	OK
Phenol-d5	48 %	24-113	OK
2-Fluorophenol	27 %	25-121	OK
2,4,6-Tribromophenol	72 %	19-122	OK

Percent solid of 100 is used for all target compounds.

(B) Indicates compound found in associated blank.
U Indicates compound analyzed for but not detected.

(J) Indicates compound concentration found below MDL.

ACCREDITED LABORATORIES, INC.
TCLP SEMIVOLATILES ANALYSIS DATA

CASE NUMBER		MATRIX	Leachate
SAMPLE NUMBER	SBLK90	DILUTION FACTOR	1U
DATA FILE	2E3409	DATE EXTRACTED	10/18/93
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	PAUL

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
110861	Pyridine	U	.10	5.0
106467	1,4-Dichlorobenzene	U	.10	7.5
95487	2-Methylphenol	U	.10	200.0
108394	3&4-Methylphenol	U	.10	200.0
67721	Hexachloroethane	U	.10	3.0
98953	Nitrobenzene	U	.10	2.0
87683	Hexachlorobutadiene	U	.10	0.5
95954	2,4,6-Trichlorophenol	U	.10	2.0
95954	2,4,5-Trichlorophenol	U	.50	400.0
121142	2,4-Dinitrotoluene	U	.10	0.13
118741	Hexachlorobenzene	U	.10	0.13
87865	Pentachlorophenol	U	.10	100.0

SURROGATE COMPOUNDS	RECOVERY	LIMITS	STATUS
2-Fluorophenol	23 %	21 - 100	OK
Phenol-d5	50 %	10 - 94	OK
Nitrobenzene-d5	56 %	35 - 114	OK
2-Fluorobiphenyl	76 %	43 - 116	OK
2,4,6-Tribromophenol	81 %	10 - 123	OK
Terphenyl-d14	42 %	33 - 141	OK

U - Indicates compound was analyzed for but not detected

- 2-Methylphenol = o-cresol
- 3-Methylphenol = m-cresol
- 4-Methylphenol = p-cresol

** 3-Methylphenol and 4-Methylphenol can not be separated by the method applied.

ACCREDITED LABORATORIES, INC
PESTICIDE ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310863	DILUTION FACTOR	10
DATA FILE	>G4680	DATE EXTRACTED	10/14/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	MB-SC1	ANALYZED BY	CLIFF

COMPOUND	UG/KG	MDL
A-BHC	U	19.6
B-BHC	U	19.6
Lindane	U	19.6
D-BHC	U	19.6
Heptachlor	U	19.6
Aldrin	U	19.6
Heptachlor Epoxide	U	19.6
Endosulfan I	U	19.6
A-Chlordane	U	19.6
G-Chlordane	U	19.6
Dieldrin	U	39.2
4,4'-DDE	U	39.2
Endrin	U	39.2
Endosulfan II	U	39.2
4,4'-DDD	U	39.2
Endosulfan Sulfate	U	39.2
4,4'-DDT	U	39.2
Endrin Ketone	U	39.2
Methoxychlor	U	196
Toxaphene	U	392

Percent Solid of 85.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES, INC
PESTICIDE ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310864	DILUTION FACTOR	10
DATA FILE	>G4681	DATE EXTRACTED	10/14/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	MB-SC2	ANALYZED BY	CLIFF

COMPOUND	UG/KG	MDL
A-BHC	U	19.4
B-BHC	U	19.4
Lindane	U	19.4
D-BHC	U	19.4
Heptachlor	U	19.4
Aldrin	U	19.4
Heptachlor Epoxide	U	19.4
Endosulfan I	U	19.4
A-Chlordane	U	19.4
G-Chlordane	U	19.4
Dieldrin	U	38.7
4,4'-DDE	U	38.7
Endrin	U	38.7
Endosulfan II	U	38.7
4,4'-DDD	U	38.7
Endosulfan Sulfate	U	38.7
4,4'-DDT	U	38.7
Endrin Ketone	U	38.7
Methoxychlor	U	194
Toxaphene	U	387

Percent Solid of 86.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES, INC.
TCLP PESTICIDES ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310864	DILUTION FACTOR	50
DATA FILE	>G4687	DATE EXTRACTED	10/19/93
CLIENT NAME	WRFI	DATE ANALYZED	10/20/93
FIELD ID	MB-SC2	ANALYZED BY	CLIFF

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
58899	Lindane	U	.003	0.400
76448	Heptachlor	U	.003	0.008
1024573	Heptachlor Epoxide	U	.003	0.008
72208	Endrin	U	.005	0.02
72435	Methoxychlor	U	.050	10.0
5103719	A-Chlordane	U	.025	0.03
5103742	G-Chlordane	U	.025	0.03
8001352	Toxaphene	U	.050	0.5

SURROGATE COMPOUNDS	RECOVERY	ADVISORY LIMITS	STATUS
Dibutyl Chlorendate	112%	24 - 154	OK
Tetrachloro-m-xylene	83%	60 - 150	OK

U - Indicates compound was analyzed for but not detected

ACCREDITED LABORATORIES, INC
TCLP HERBICIDE ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Leachate
SAMPLE NUMBER	9310864	DILUTION FACTOR	1
DATA FILE	>E2459	DATE EXTRACTED	10/15/93
CLIENT NAME	WRFI	DATE ANALYZED	10/18/93
FIELD ID	MB-SC2	ANALYZED BY	DANNY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
94757	2,4'-D	U	.100	10.0
93721	SILVEX	U	.010	1.0

U - Indicates compound was analyzed for but not detected

ACCREDITED LABORATORIES, INC
PCB ORGANIC ANALYSIS DATA

CASE NUMBER	4760	MATRIX	Solid
SAMPLE NUMBER	9310864	DILUTION FACTOR	10
DATA FILE	>A7245	DATE EXTRACTED	10/14/93
CLIENT NAME	WRFI	DATE ANALYZED	10/19/93
FIELD ID	MB-SC2	ANALYZED BY	CLIFF

CAS#	COMPOUND	UG/KG	MDL
12674112	Aroclor-1016	U	387
11104282	Aroclor-1221	U	774
11141165	Aroclor-1232	U	387
53469219	Aroclor-1242	U	387
12672296	Aroclor-1248	U	387
11097691	Aroclor-1254	U	387
11096825	Aroclor-1260	U	387

Percent Solid of 86.1 is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES, INC
PESTICIDE ANALYSIS DATA

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	PBLK76	DILUTION FACTOR	1
DATA FILE	>G4676	DATE EXTRACTED	10/14/93
CLIENT NAME		DATE ANALYZED	10/20/93
FIELD ID		ANALYZED BY	CLIFF

COMPOUND	UG/KG	MDL
A-BHC	U	1.67
B-BHC	U	1.67
Lindane	U	1.67
D-BHC	U	1.67
Heptachlor	U	1.67
Aldrin	U	1.67
Heptachlor Epoxide	U	1.67
Endosulfan I	U	1.67
A-Chlordane	U	1.67
G-Chlordane	U	1.67
Dieldrin	U	3.33
4,4'-DDE	U	3.33
Endrin	U	3.33
Endosulfan II	U	3.33
4,4'-DDD	U	3.33
Endosulfan Sulfate	U	3.33
4,4'-DDT	U	3.33
Endrin Ketone	U	3.33
Methoxychlor	U	16.7
Toxaphene	U	33.3

Percent Solid of 100. is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES, INC
TCLP HERBICIDE ANALYSIS DATA

CASE NUMBER		MATRIX	Leachate
SAMPLE NUMBER	HBLK87	DILUTION FACTOR	1
DATA FILE	>E2452	DATE EXTRACTED	10/15/93
CLIENT NAME		DATE ANALYZED	10/18/93
FIELD ID		ANALYZED BY	DANNY

CAS No.	Compound	Result (mg/l)	MDL (mg/l)	Regulatory Level (mg/l)
94757	2,4'-D	U	.100	10.0
93721	SILVEX	U	.010	1.0

U - Indicates compound was analyzed for but not detected

ACCREDITED LABORATORIES, INC
PCB ORGANIC ANALYSIS DATA

CASE NUMBER		MATRIX	Soil
SAMPLE NUMBER	PBLK76	DILUTION FACTOR	1
DATA FILE	>A7230	DATE EXTRACTED	10/14/93
CLIENT NAME		DATE ANALYZED	10/19/93
FIELD ID		ANALYZED BY	CLIFF

CAS#	COMPOUND	UG/KG	MDL
12674112	Aroclor-1016	U	33.3
11104282	Aroclor-1221	U	66.7
11141165	Aroclor-1232	U	33.3
53469219	Aroclor-1242	U	33.3
12672296	Aroclor-1248	U	33.3
11097691	Aroclor-1254	U	33.3
11096825	Aroclor-1260	U	33.3

Percent Solid of 100. is used for all target compounds.

(B) Indicates compound found in associated blank.
(J) Indicates compound concentration found below MDL.
U Indicates compound analyzed for but not detected.

ACCREDITED LABORATORIES INC.

REGULATED TCLP METALS

FIELD ID.

MB-SC1

Client : WRFI

Case No.: 4760

Matrix: EXTRACT

Lab Sample ID: 9310863

Date Received: 10/08/93

Concentration Units (mg/L): MG/L

CAS No.	Analyte	Concentration	C	M	MDL	Regulatory Level
7440-38-2	Arsenic	0.059	U	P	1.00	5.00
7440-39-3	Barium	0.88		P	0.50	100.00
7440-43-9	Cadmium	0.41		P	0.03	1.00
7440-47-3	Chromium	0.026	B	P	0.03	5.00
7439-92-1	Lead	89.7		P	0.30	5.00
7439-97-6	Mercury	0.00040	U	CV	0.05	0.20
7782-49-2	Selenium	0.099	U	P	0.50	1.00
7440-22-4	Silver	0.0026	U	P	0.03	5.00

Comments:

DATE_ANALYZED:_(P)_10/24-25/93_(CV)_10/21/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES INC

INORGANIC ANALYSIS DATA SHEET

FIELD ID.

MB-SC1

Client : WRFI
Case No.: 4760
Matrix: SOLID

Lab Sample ID: 9310863
Date Received: 10/08/93

% Solids: 85.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M	MDL
7429-90-5	Aluminum	24600		P	20.0
7440-36-0	Antimony	215		P	10.0
7440-38-2	Arsenic	8.7		F	1.0
7440-39-3	Barium	1540		P	3.0
7440-41-7	Beryllium	0.47	B	P	0.5
7440-43-9	Cadmium	52.9		P	1.0
7440-70-2	Calcium	24100		P	30.0
7440-47-3	Chromium	37.5		P	3.0
7440-48-4	Cobalt	4.9		P	3.0
7440-50-8	Copper	68700		P	3.0
7439-89-6	Iron	6060		P	10.0
7439-92-1	Lead	9170		P	30.0
7439-95-4	Magnesium	3910		P	30.0
7439-96-5	Manganese	61.0		P	1.5
7439-97-6	Mercury	0.21		CV	0.1
7440-02-0	Nickel	48.8		P	4.0
7440-09-7	Potassium	230	B	P	200.0
7782-49-2	Selenium	21.1	B	F	~~0.5~~ 25 NC
7440-22-4	Silver	1.2	B	P	1.0
7440-23-5	Sodium	192		P	100.0
7440-28-0	Thallium	27.3	U	P	30.0
7440-62-2	Vanadium	29.7		P	5.0
7440-66-6	Zinc	16600		P	10.0

Comments:
DATE_ANALYZED:_(P)_10/27/93,_(F,CV)_10/20,21/93

Qualifiers:
B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

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ACCREDITED LABORATORIES INC.

INORGANIC ANALYSIS DATA SHEET

FIELD ID.

MB-SC2

Client : WRFI
Case No.: 4760
Matrix: SOLID

Lab Sample ID: 9310864
Date Received: 10/08/93

% Solids: 86.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M	MDL
7429-90-5	Aluminum	19100		P	20.0
7440-36-0	Antimony	190		P	10.0
7440-38-2	Arsenic	6.2		F	1.0
7440-39-3	Barium	1600		P	3.0
7440-41-7	Beryllium	0.16	U	P	0.5
7440-43-9	Cadmium	24.0		P	1.0
7440-70-2	Calcium	18400		P	30.0
7440-47-3	Chromium	36.4		P	3.0
7440-48-4	Cobalt	3.5		P	3.0
7440-50-8	Copper	55200		P	3.0
7439-89-6	Iron	4440		P	10.0
7439-92-1	Lead	7910		P	30.0
7439-95-4	Magnesium	2620		P	30.0
7439-96-5	Manganese	41.6		P	1.5
7439-97-6	Mercury	0.34		CV	0.1
7440-02-0	Nickel	41.0		P	4.0
7440-09-7	Potassium	171	B	P	200.0
7782-49-2	Selenium	19.0	B	F	~~0.5~~ 25 HC
7440-22-4	Silver	5.7		P	1.0
7440-23-5	Sodium	152		P	100.0
7440-28-0	Thallium	26.9	U	P	30.0
7440-62-2	Vanadium	26.9		P	5.0
7440-66-6	Zinc	13500		P	10.0

Comments:
DATE_ANALYZED:_(P)_10/27/93,_(F,CV)_10/20,21/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES INC.

REGULATED TCLP METALS

FIELD ID.

MB-SC2

Client : WRFI

Case No.: 4760

Matrix: EXTRACT

Lab Sample ID: 9310864

Date Received: 10/08/93

Concentration Units (mg/L): MG/L

CAS No.	Analyte	Concentration	C	M	MDL	Regulatory Level
7440-38-2	Arsenic	0.059	U	P	1.00	5.00
7440-39-3	Barium	1.0		P	0.50	100.00
7440-43-9	Cadmium	0.59		P	0.03	1.00
7440-47-3	Chromium	0.014	B	P	0.03	5.00
7439-92-1	Lead	80.5		P	0.30	5.00
7439-97-6	Mercury	0.00040	U	CV	0.05	0.20
7782-49-2	Selenium	0.099	U	P	0.50	1.00
7440-22-4	Silver	0.0026	U	P	0.03	5.00

Comments:

DATE_ANALYZED:_(P)_10/24-25/93_(CV)_10/21/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES INC.

INORGANIC ANALYSIS DATA SHEET

FIELD ID.

PREP BLANK__

Matrix: SOLID_

Lab Sample ID: PBS
Date Prepared: 10/15/93

% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	M	MDL
7429-90-5	Aluminum	1.9	U	P	20.0
7440-36-0	Antimony	2.8	U	P	10.0
7440-38-2	Arsenic	0.29	U	F	1.0
7440-39-3	Barium	0.34	U	P	3.0
7440-41-7	Beryllium	0.14	U	P	0.5
7440-43-9	Cadmium	0.41	U	P	1.0
7440-70-2	Calcium	4.3	B	P	30.0
7440-47-3	Chromium	0.78	U	P	3.0
7440-48-4	Cobalt	1.6	U	P	3.0
7440-50-8	Copper	0.40	U	P	3.0
7439-89-6	Iron	0.58	U	P	10.0
7439-92-1	Lead	8.7	U	P	30.0
7439-95-4	Magnesium	4.3	U	P	30.0
7439-96-5	Manganese	0.18	U	P	1.5
7439-97-6	Mercury	0.05	B	CV	0.1
7440-02-0	Nickel	1.8	U	P	4.0
7440-09-7	Potassium	53.2	U	P	200.0
7782-49-2	Selenium	0.29	U	F	0.5
7440-22-4	Silver	0.26	U	P	1.0
7440-23-5	Sodium	84.6	B	P	100.0
7440-28-0	Thallium	0.30	U	F	30.0
7440-62-2	Vanadium	0.39	U	P	5.0
7440-66-6	Zinc	1.4	B	P	10.0

Comments:
DATE_ANALYZED: (P)10/22-25,27/93 (F)10/20,21/93 (CV)10/21/93
MERCURY_PREPARED: 10/20/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES INC.

REGULATED TCLP METALS

FIELD ID.

TCLP-BLK

Matrix: EXTRACT

Lab Sample ID: TCLPBLK

Date Prepared: 10/19/93

Concentration Units (mg/L): MG/L

CAS No.	Analyte	Concentration	C	M	MDL	Regulatory Level
7440-38-2	Arsenic	0.059	U	P	1.00	5.00
7440-39-3	Barium	0.0034	U	P	0.50	100.00
7440-43-9	Cadmium	0.0041	U	P	0.03	1.00
7440-47-3	Chromium	0.0078	U	P	0.03	5.00
7439-92-1	Lead	0.087	U	P	0.30	5.00
7439-97-6	Mercury	0.0021	B	CV	0.001	0.20
7782-49-2	Selenium	0.099	U	P	0.50	1.00
7440-22-4	Silver	0.0026	U	P	0.03	5.00

Comments:

DATE_ANALYZED: (P) 10/23-24/93 (CV) 10/21/93

MERCURY_PREPARED: 10/20/93

Qualifiers:

B -- greater than the IDL but less than the MDL
U -- less than the IDL
P -- analyzed by ICP
CV -- analyzed by cold vapor
F -- analyzed by GFA
A -- analyzed by flame AA
NR -- analysis not requested

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #:	4760	Matrix:	Solid
Sample #:	9310863	Date Received:	10/08/93
Client Name:	WRFI	% Moisture:	14.9
Field Number:	MB-SC1		

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	85.1	0.1	%	1.0			10/13/93
Cyanide, Total	ND	0.24	mg/Kg	1.0	ND	0.20	10/19/93
Flash Point	>200	80.	°F	1.0			10/19/93
PH	7.77	0.05	S.U.	1.0			10/13/93
Cyanide, Reactive	ND	0.24	mg/Kg	1.0	ND	0.20	10/15/93
Sulfide, Reactive	ND	47.0	mg/Kg	1.0	ND	40.0	10/15/93

ACCREDITED LABORATORIES, INC.
GENERAL CHEMISTRY ANALYSIS DATA

Case #:	4760	Matrix:	Solid
Sample #:	9310864	Date Received:	10/08/93
Client Name:	WRFI	% Moisture:	13.9
Field Number:	MB-SC2		

ANALYTES	RESULTS	MDL	UNITS	DILUTION FACTOR	METHOD BLANK RESULTS	METHOD BLANK MDL	ANALYSIS DATE
Solids, Percent	86.1	0.1	%	1.0			10/13/93
Cyanide, Total	ND	0.23	mg/Kg	1.0	ND	0.20	10/19/93
Flash Point	>200	80.	°F	1.0			10/19/93
PH	7.94	0.05	S.U.	1.0			10/13/93
Cyanide, Reactive	ND	0.23	mg/Kg	1.0	ND	0.20	10/15/93
Sulfide, Reactive	ND	46.5	mg/Kg	1.0	ND	40.0	10/15/93