

Arthur D. Little
 Environmental Monitoring and Analysis Unit

Project Title : Tesoro - Feathers
 Data Package: 1512
 Data Table: PAH - IRM - Surrogate Corrected

Field ID	SRM 1491			
Lab ID	BO19			
Lab Batch	B0247			
File	DZ5836.D			
Sample Type	QC			
Weight Basis	VOLUME			
Matrix	SRM			
Sample Size	0.1 mL			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	01/05/99			
Min Reporting Limit	250			
Units	ug/L	T	%D	Q
Naphthalene	6600	6890	-4.2	
C1-Naphthalenes	ND			
C2-Naphthalenes	ND			
C3-Naphthalenes	ND			
C4-Naphthalenes	ND			
Acenaphthylene	6900	6960	-0.9	
Acenaphthene	6900	7280	-5.2	
Biphenyl	7200	7000	2.8	
Fluorene	6700	7270	-7.8	
C1-Fluorenes	ND			
C2-Fluorenes	ND			
C3-Fluorenes	ND			
Anthracene	8300	7820	6.1	
Phenanthrene	7000	7010	-0.1	
C1-Phenanthrenes/anthracenes	ND			
C2-Phenanthrenes/anthracenes	ND			
C3-Phenanthrenes/anthracenes	ND			
C4-Phenanthrenes/anthracenes	ND			
Dibenzothiophene	ND			
C1-Dibenzothiophenes	ND			
C2-Dibenzothiophenes	ND			
C3-Dibenzothiophenes	ND			
Fluoranthene	6000	5910	1.5	
Pyrene	6100	5890	3.6	
C1-Fluoranthenes/pyrenes	ND			
C2-Fluoranthenes/pyrenes	ND			
C3-Fluoranthenes/pyrenes	ND			
Benzo[a]anthracene	4000	3590	11	
Chrysene	6700	7030	-4.7	
C1-Chrysenes	ND			
C2-Chrysenes	ND			
C3-Chrysenes	ND			
C4-Chrysenes	ND			
Benzo[b]fluoranthene	5200	5250	-1	
Benzo[k]fluoranthene	5600	5570	0.54	
Benzo[e]pyrene	5700	5620	1.4	
Benzo[a]pyrene	7400	6790	9	
Perylene	7300	7120	2.5	
Indeno[1,2,3,-c,d]pyrene	6100	6290	-3	
Dibenzo[a,h]anthracene	5100	5180	-1.5	
Benzo[g,h,i]perylene	5200	5290	-1.7	
%d8-Naphthalene	93			
%d10-Acenaphthene	88			
%d10-Phenanthrene	90			
%d12-Benzo[a]pyrene	98			

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 Data Table: PAH - NSC - Surrogate Corrected

Field ID	North Slope Crude			
Lab ID	BN14			
Lab Batch	B0247			
File	DZ5837.D			
Sample Type	QC			
Weight Basis	OIL			
Matrix	OIL			
Sample Size	5 mg			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	01/05/99			
Min Reporting Limit	5			
Units	mg/Kg	T	%D	Q
Naphthalene	770 E	750	2.7	
C1-Naphthalenes	1800	1700	5.9	
C2-Naphthalenes	2400	2400	0	
C3-Naphthalenes	2000	2000	0	
C4-Naphthalenes	1200	1200	0	
Acenaphthylene	ND			
Acenaphthene	ND			
Biphenyl	220	220	0	
Fluorene	95	94	1.1	
C1-Fluorenes	250	240	4.2	
C2-Fluorenes	380	350	8.6	
C3-Fluorenes	380	400	-5	
Anthracene	ND			
Phenanthrene	290	260	12	
C1-Phenanthrenes/anthracenes	660	600	10	
C2-Phenanthrenes/anthracenes	760	740	2.7	
C3-Phenanthrenes/anthracenes	580	540	7.4	
C4-Phenanthrenes/anthracenes	420	330	27	
Dibenzothiophene	240	240	0	
C1-Dibenzothiophenes	510	500	2	
C2-Dibenzothiophenes	690	740	-6.8	
C3-Dibenzothiophenes	650	660	-1.5	
Fluoranthene	ND			
Pyrene	11	14	-21	
C1-Fluoranthenes/pyrenes	89	83	7.2	
C2-Fluoranthenes/pyrenes	160	150	6.7	
C3-Fluoranthenes/pyrenes	180	170	5.9	
Benzo[a]anthracene	ND			
Chrysene	44	49	-10	
C1-Chrysenes	81	84	-3.6	
C2-Chrysenes	99	110	-10	
C3-Chrysenes	93	92	1.1	
C4-Chrysenes	88	75	17	
Benzo[b]fluoranthene	7.1	6.6	7.6	
Benzo[k]fluoranthene	ND			
Benzo[e]pyrene	14	12	17	
Benzo[a]pyrene	ND			
Perylene	ND			
Indeno[1,2,3-c,d]pyrene	ND			
Dibenzo[a,h]anthracene	1.5 J			
Benzo[g,h,i]perylene	3.5 J			
%d8-Naphthalene	101			
%d10-Acenaphthene	100			
%d10-Phenanthrene	97			
%d12-Benzo[a]pyrene	113			

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Project Title : Tesoro - Feathers
 Data Package: 1512
 Data Table: S/T - Main - Surrogate Corrected

Field ID	NSC	OA 1010-1	OA 1010-2	Item 4
Lab ID	BK81	98D3503	98D3504	98D4903
Lab Batch	B0247	B0247	B0247	B0247
File	DZ5813.D	DZ5827.D	DZ5828.D	DZ5826.D
Sample Type	QC	SAMP	SAMP	SAMP
Weight Basis	OIL	OIL	OIL	OIL
Matrix	OIL	FEATHER	FEATHER	FEATHER
Sample Size	5.04 mg	3.8 mg	2.96 mg	0.16 mg
Associated Blank	NA	BY-S-57PB	BY-S-57PB	BY-S-57PB
Field Date	NA	10/10/98	10/10/98	09/27/98
Extract Date	NA	11/16/98	11/16/98	12/02/98
Analysis Date	01/03/99	01/04/99	01/04/99	01/04/99
Min Reporting Limit	5	6.6	8.4	160
Unite	mg/Kg	mg/Kg	mg/Kg	mg/Kg
T4-C23Diterpane	33	ND	ND	440
S4-Diacholestane	39	ND	ND	ND
S5-Diacholestane	26	ND	ND	ND
T9-C29Tricyclitriterpane	16	ND	ND	ND
T10-C29Tricyclitriterpane	14	ND	ND	ND
T11-Trisnorhopane(TS)	19	2.5 J	4.2 J	ND
T12-Trisnorhopane(TM)	24	ND	ND	ND
S24-Methylcholestane	38	ND	ND	ND
S25-Ethylcholestane	59	ND	ND	ND
S28-Ethylcholestane	40	ND	ND	ND
T15-Norhopane	74	ND	ND	ND
T18-Oleanane	ND	ND	ND	ND
T19-Hopane	104	ND	ND	ND
T21-Homohopane	47	ND	ND	ND
T22-Homohopane	32	ND	ND	ND
%5B(H)-Cholane	111	115	118	72

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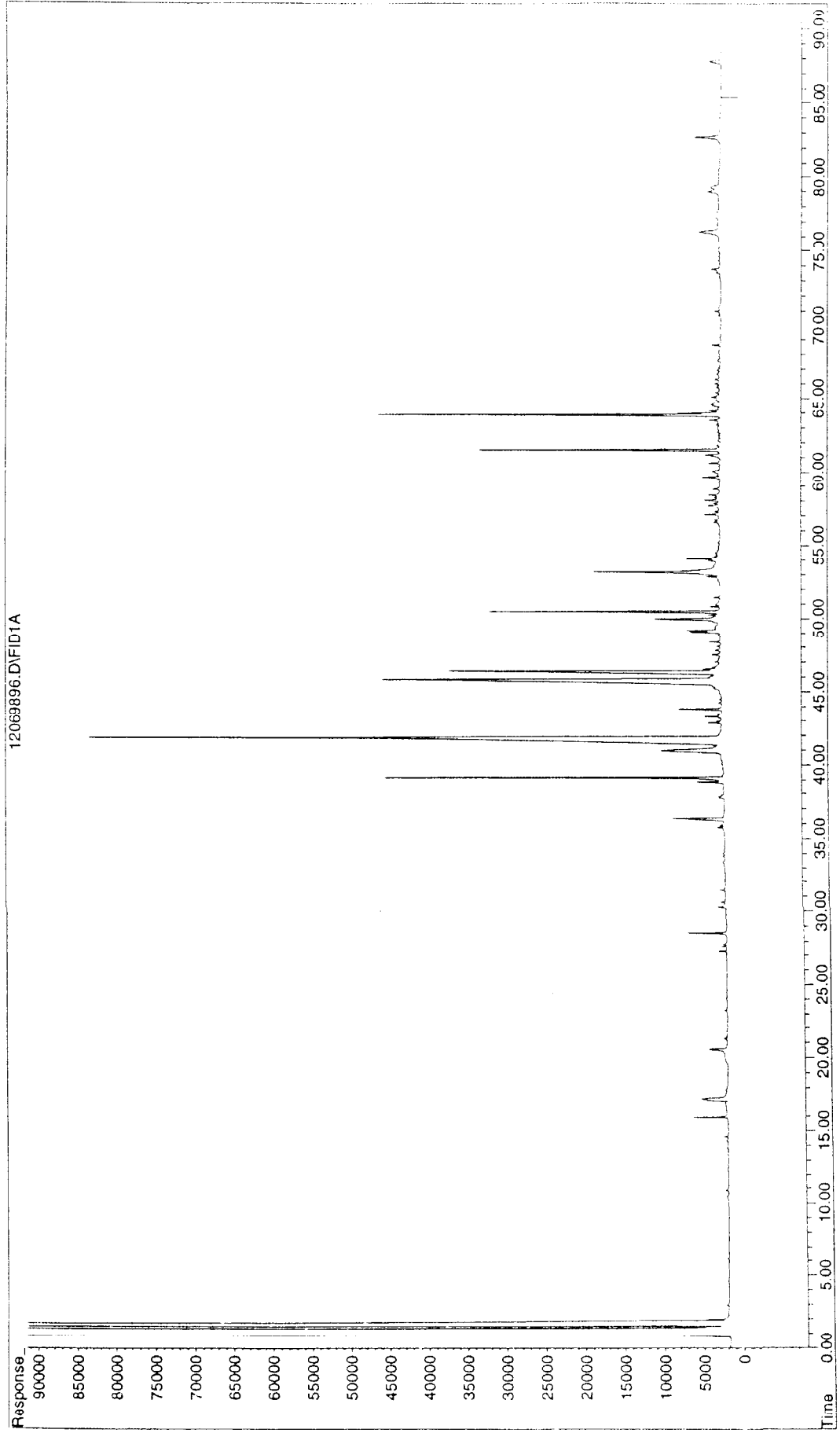
Field ID	Item 5
Lab ID	98D4904
Lab Batch	B0247
File	DZ5824.D
Sample Type	SAMP
Weight Basis	OIL
Matrix	FEATHER
Sample Size	4.05 mg
Associated Blank	BY-S-57PB
Field Date	10/04/98
Extract Date	12/02/98
Analysis Date	01/04/99
Min Reporting Limit	6.2
Units	mg/Kg
T4-C23Diterpane	12
S4-Diacholestane	18
S5-Diacholestane	4.2 J
T9-C29Tricyclitriterpane	4.6 J
T10-C29Tricyclitriterpane	6.6
T11-Trisnorhopane(TS)	36
T12-Trisnorhopane(TM)	22
S24-Methylcholestane	ND
S25-Ethylcholestane	11 J
S28-Ethylcholestane	16
T15-Norhopane	110
T18-Oleanane	52
T19-Hopane	220
T21-Homohopane	50
T22-Homohopane	40
%5B(H)-Cholane	72

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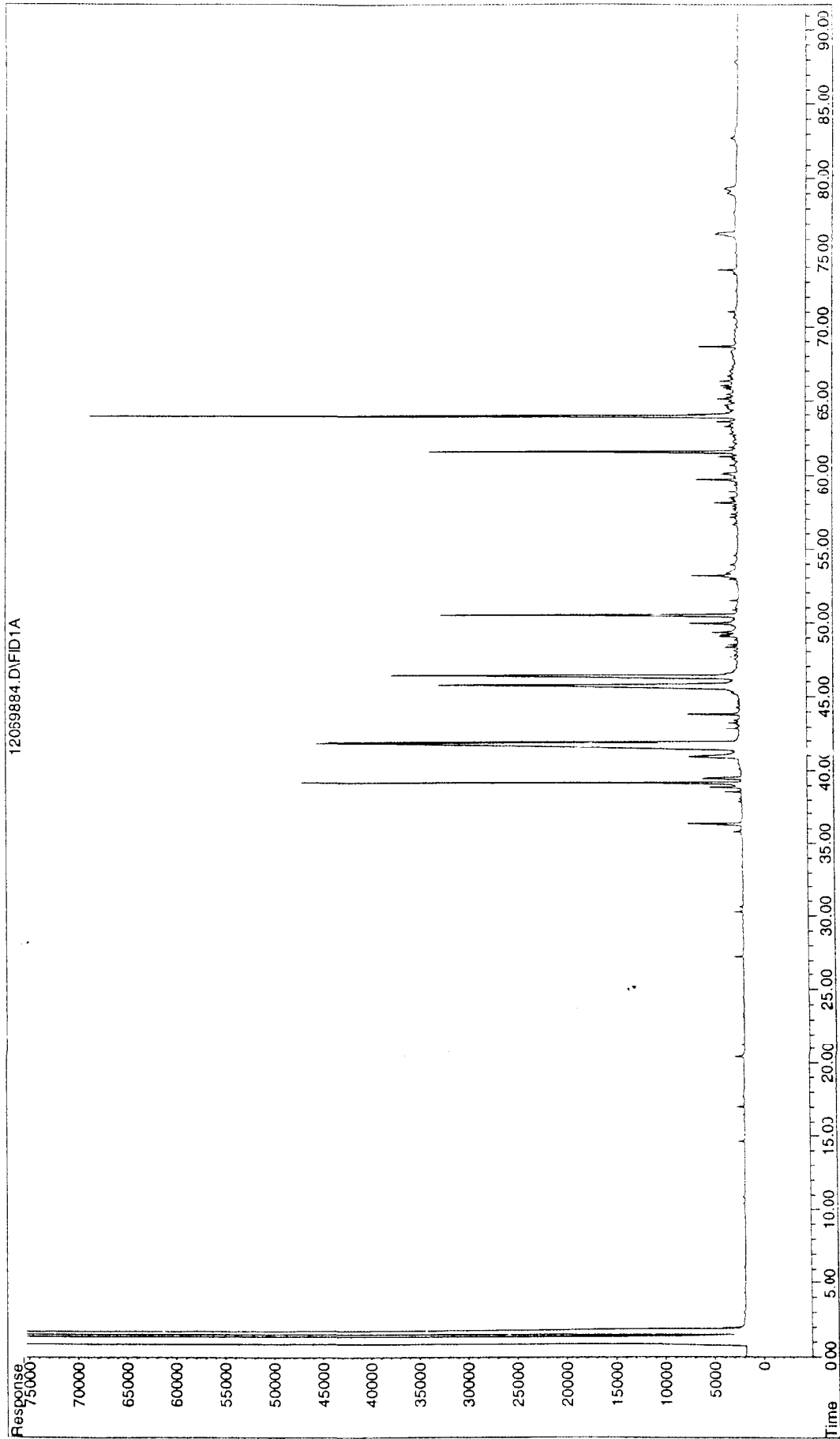
Project Title : Tesoro - Feathers
 Data Package: 1512
 Data Table: S/T - NSC - Surrogate Corrected

Field ID	NSC			
Lab ID	BK81			
Lab Batch	NA			
File	DZ5813.D			
Sample Type	QC			
Weight Basis	DRY			
Matrix	NA			
Sample Size	5.04 mg			
Associated Blank	NA			
Field Date	NA			
Extract Date	NA			
Analysis Date	01/03/99			
Min Reporting Limit	5			
Units	mg/Kg	T	%D	Q
T4-C23Diterpane	33	46	-28	
S4-Diacholestane	39	50	-22	
S5-Diacholestane	26	29	-10	
T9-C29Tricyclitriterpane	16	16	0	
T10-C29Tricyclitriterpane	14	18	-22	
T11-Trisnorhopane(TS)	19	26	-27	
T12-Trisnorhopane(TM)	24	32	-25	
S24-Methylcholestane	38			
S25-Ethylcholestane	59	53	11	
S28-Ethylcholestane	40	40	0	
T15-Norhopane	74	96	-23	
T18-Oleanane	ND			
T19-Hopane	104	128	-19	
T21-Homohopane	47	53	-11	
T22-Homohopane	32	38	-16	
%5B(H)-Cholane	111			

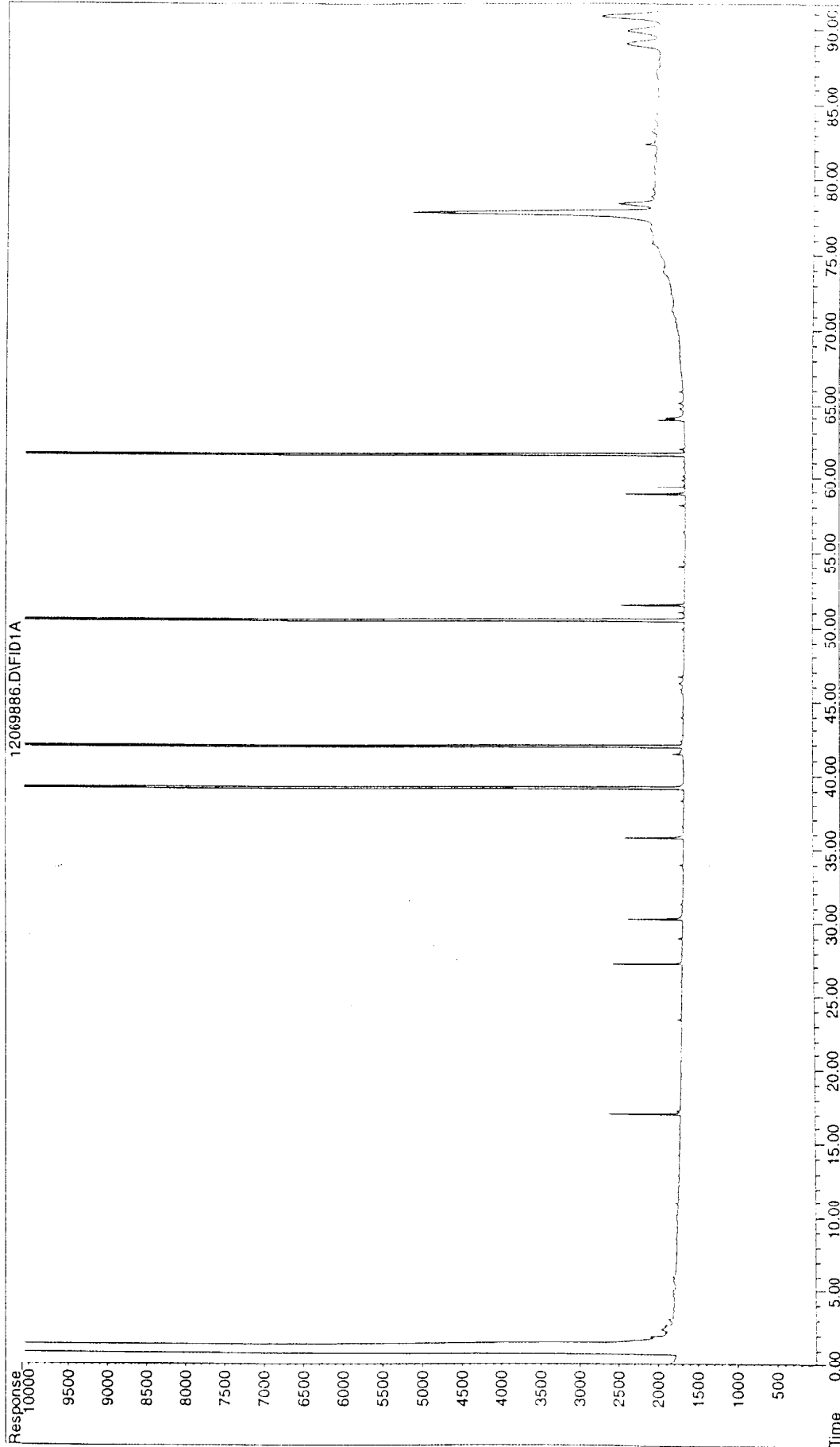
Arthur D. Little - Environmental Monitoring and Analysis
File : C:\HPCHEM\1\DATA\1206981A\12069896.D
Operator : FQ
Acquired : 9 Dec 98 6:07 pm using AcqMethod SHCDUAL.M
Instrument : GC FID #1
Sample Name : 98D3503
Misc Info : OA 1010-1 TESORO B0247
Vial Number: 43



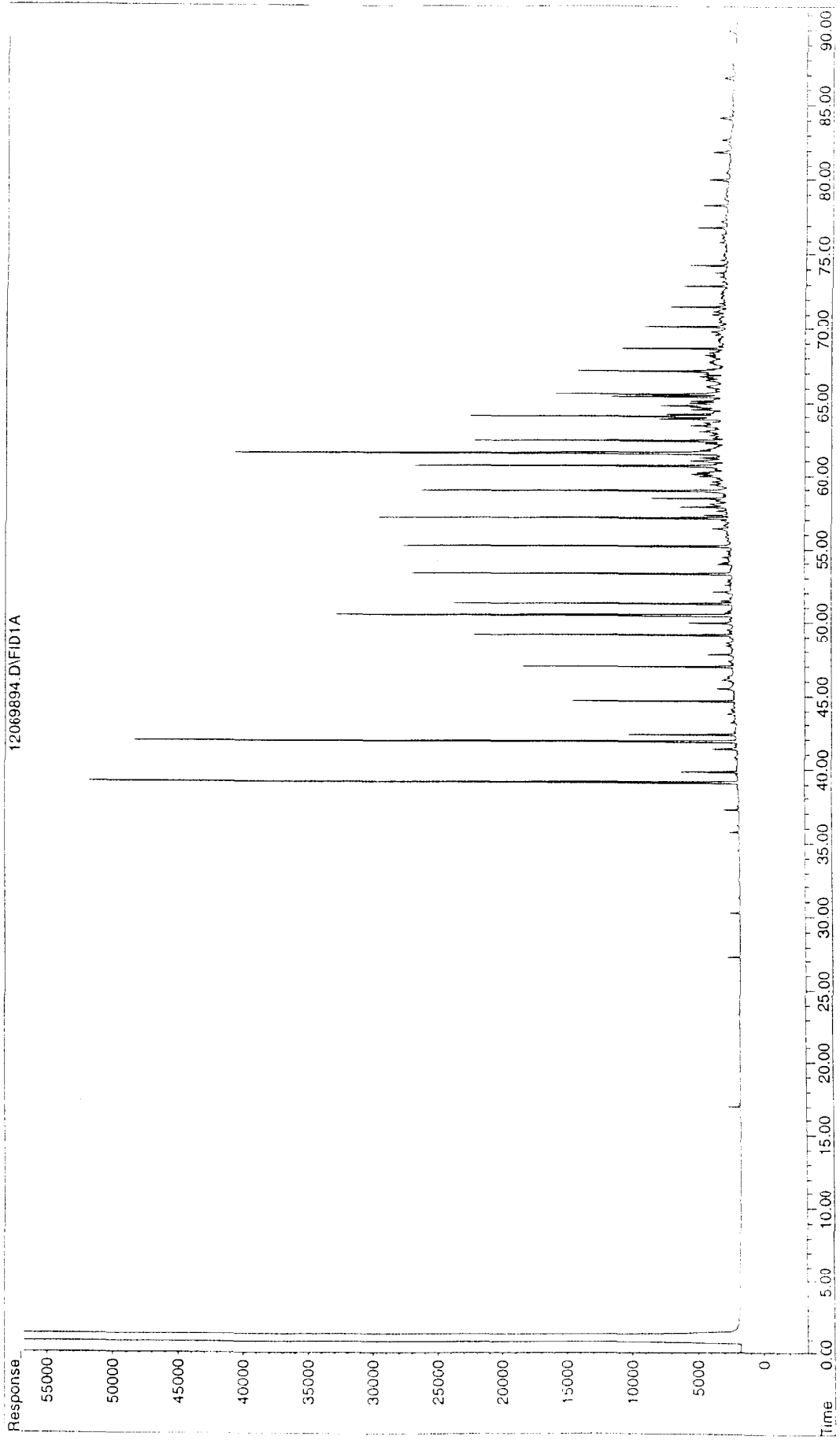
Arthur D. Little - Environmental Monitoring and Analysis
File : C:\HPCHEM\1\DATA\1206981A\12069884.D
Operator : FQ
Acquired : 9 Dec 98 7:54 am using AcqMethod SHCDUAL.M
Instrument : GC FID #1
Sample Name: 98D3504
Misc Info : OA 1010-2 TESORO B0247
Vial Number: 37



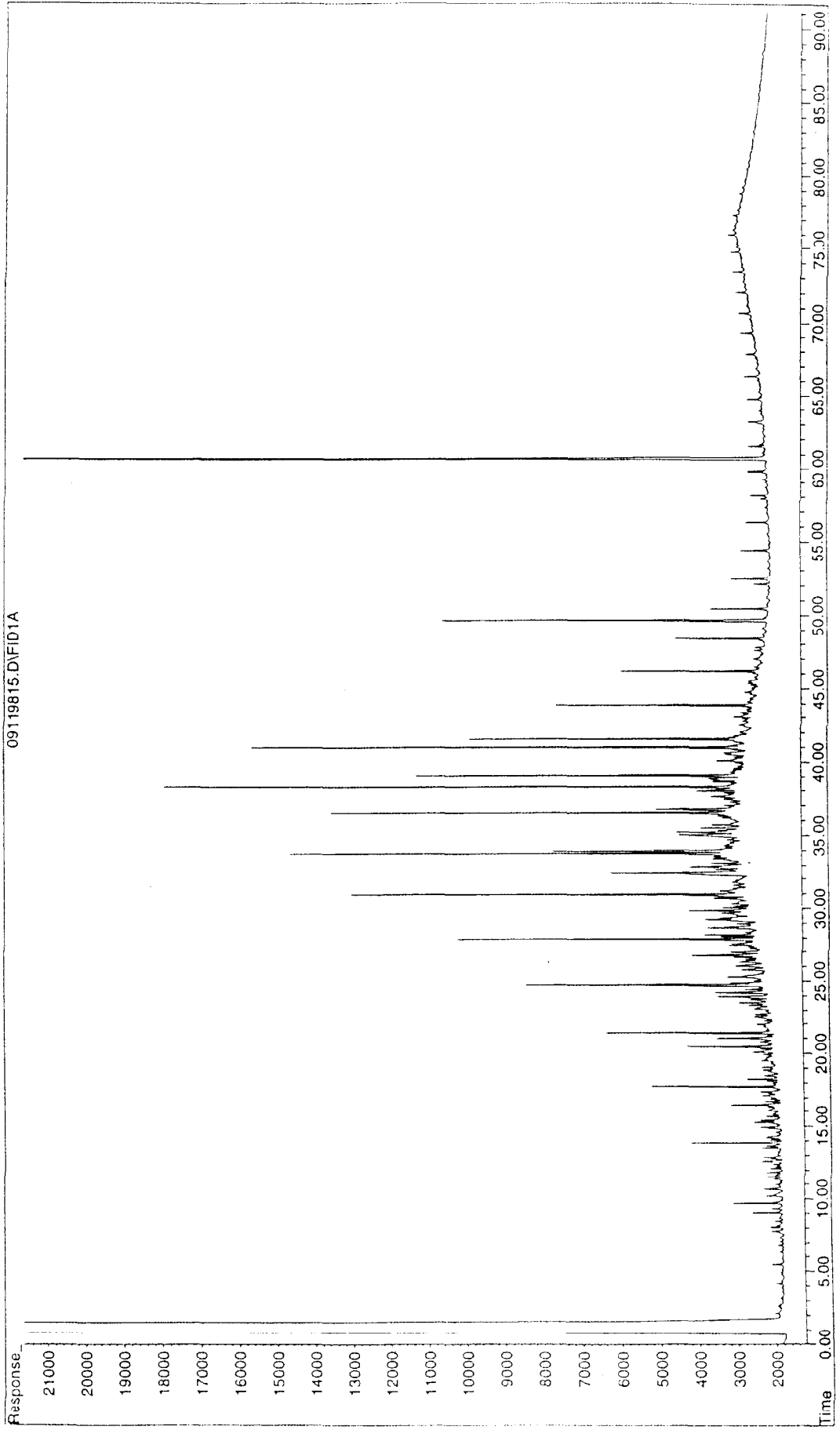
Arthur D. Little - Environmental Monitoring and Analysis
File : C:\HPCEM\1\DATA\1206981A\12069885.D
Operator : FQ
Acquired : 9 Dec 98 9:35 am using AcqMethod SHCDUAL.M
Instrument : GC FID #1
Sample Name : 98D4903
Misc Info : ITEM 4 TESORO B0247
Vial Number: 38



Arthur D. Little - Environmental Monitoring and Analysis
File : C:\HPCHEM\1\DATA\12069891A\12069894.D
Operator : FQ
Acquired : 9 Dec 98 4:25 pm using AcqMethod SHCDUAL.M
Instrument : GC FID #1
Sample Name: 98D4904
Misc Info : ITEM 5 TESORO B0247
Vial Number: 42



Arthur Little - Environmental Monitoring and Analysis
File : C:\HPCHEM\1\DATA\0911981\09119815.D
Operator : FQ
Acquired : 12 Sep 98 7:54 am using AcqMethod SHCTPHC.M
Instrument : GC FID #1
Sample Name: 98D2804
Misc Info : SPM HOSE001
Vial Number: 12



File : C:\HPCHEM\1\SQZ531\DZ5827.D

Operator : slr

Acquired : 4 Jan 1999 3:34 pm using AcqMethod RTE method: STER3

Instrument : MS #3

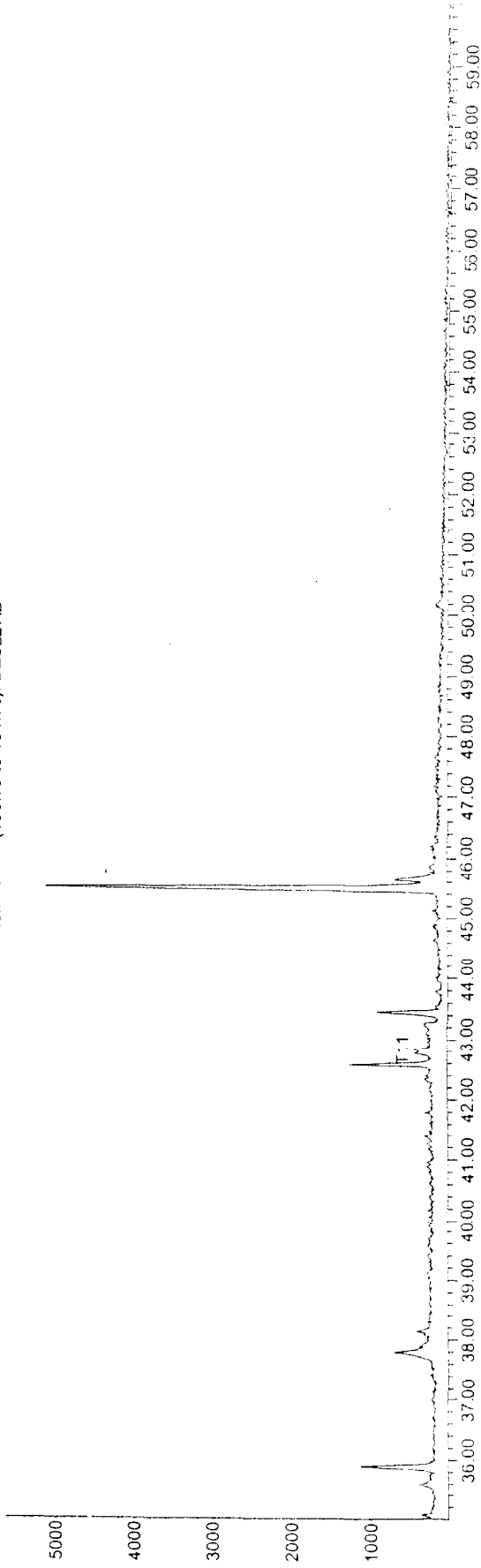
Sample Name : 98D3503

Misc Info :

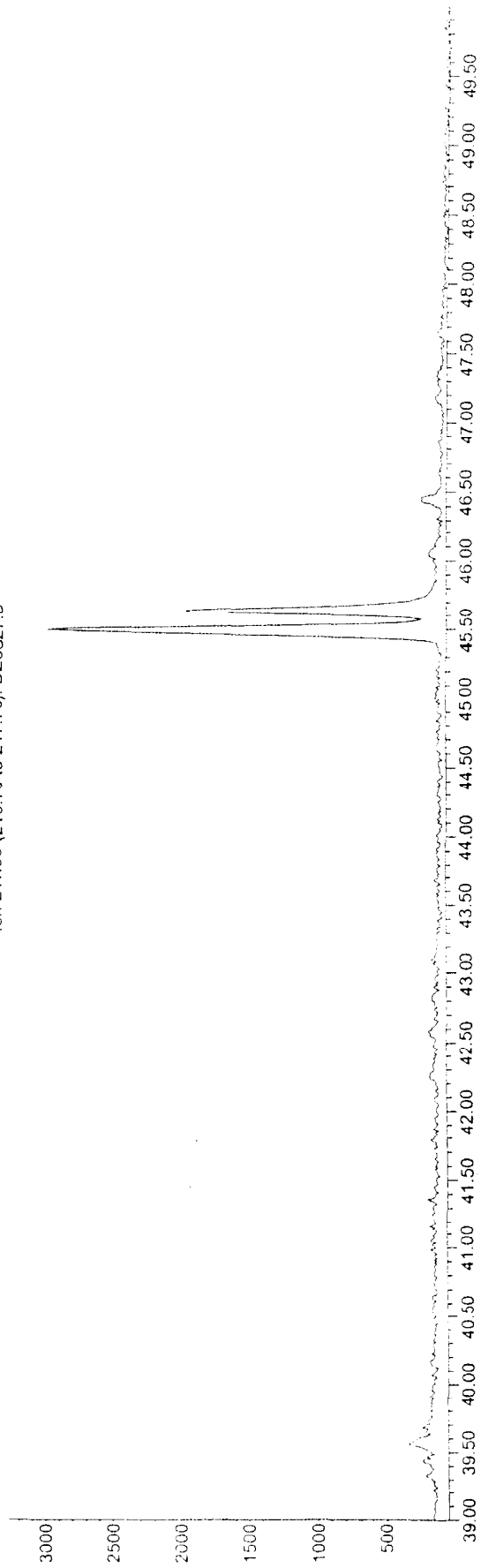
Vial Number : 4294934579

OA 1010-1

Ion 191.00 (190.70 to 191.70): DZ5827.D



Ion 217.00 (216.70 to 217.70): DZ5827.D



File C:\HPCHEM\1\SQZ531\DZ5828.D

Operator slr

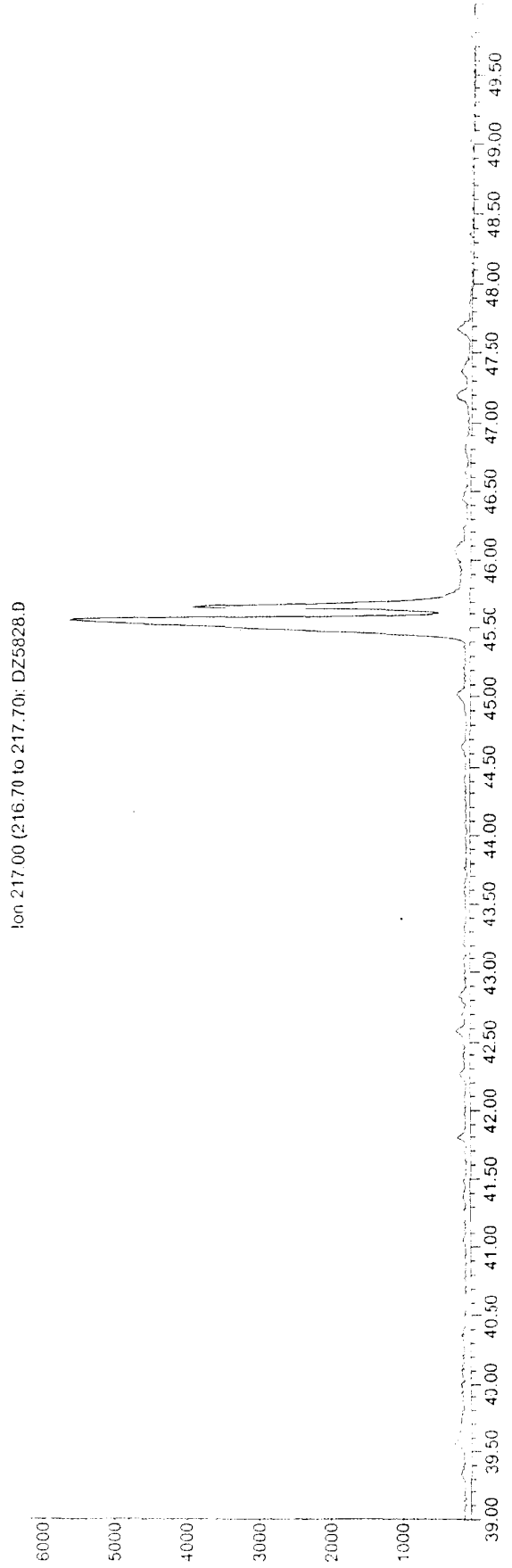
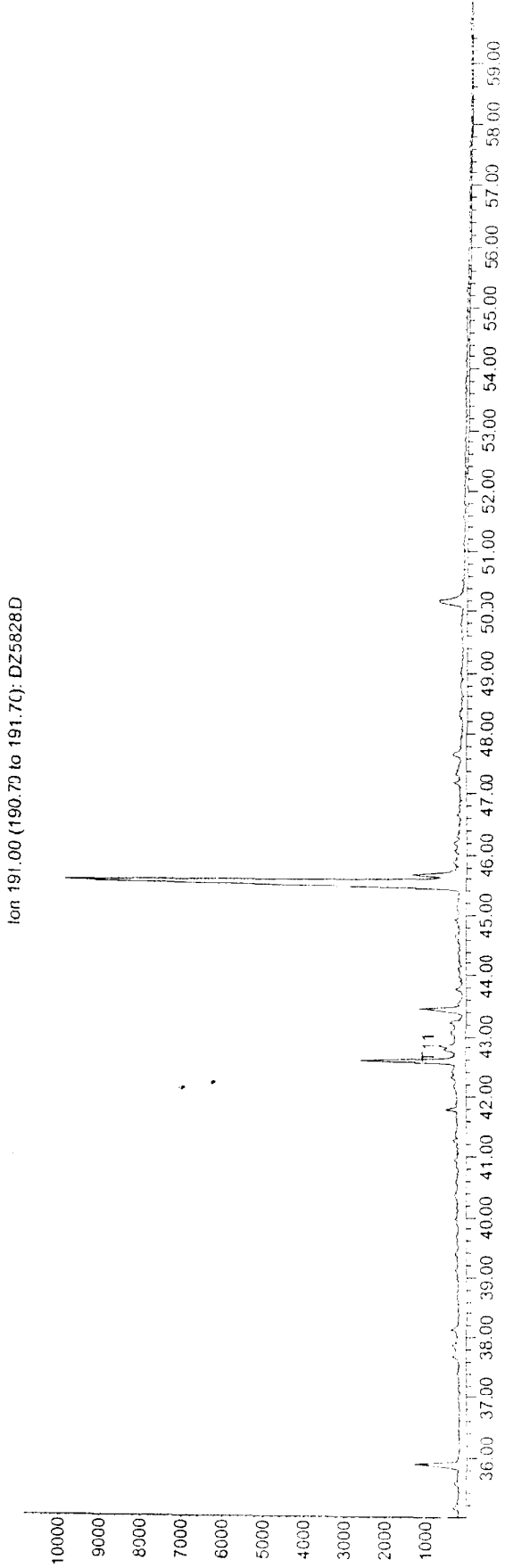
Acquired : 4 Jan 1999 4:49 pm using AcqMethod RTE method: STER3

Instrument : MS #3

Sample Name : 98D3504

Misc Info : OA 1010-2

Vial Number : 4294934580



File : C:\HPCHEM\1\SQ2531\DZ5826.D

Operator : SLR

Acquired : 4 Jan 1999 2:18 pm using AcqMethod RTE meth : STER3

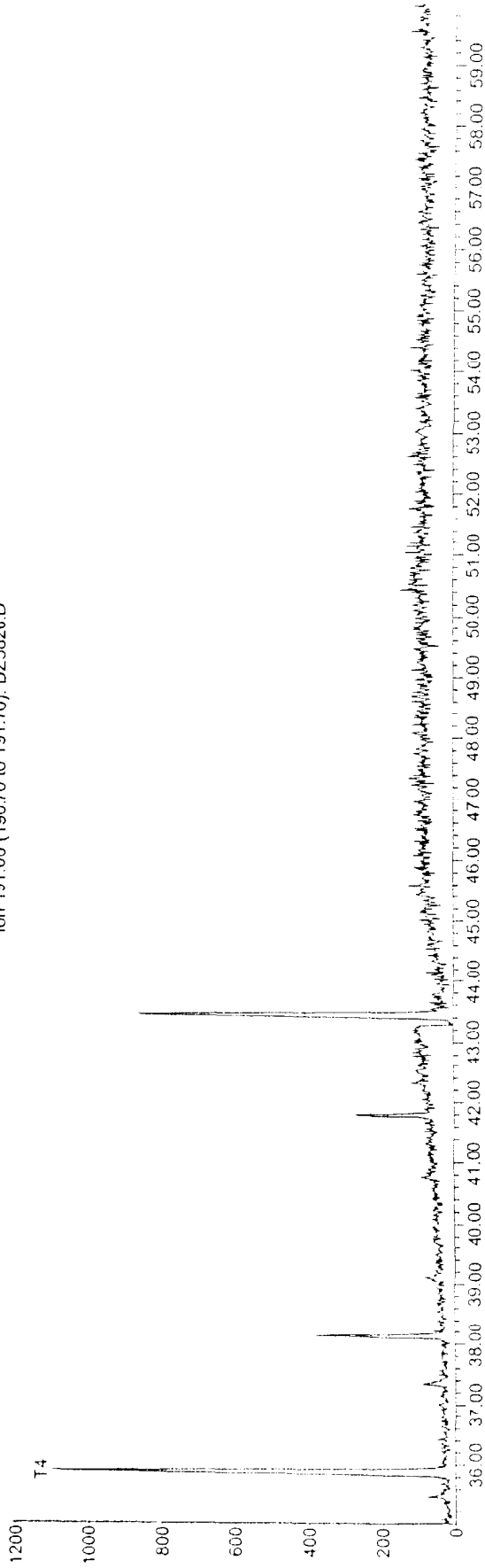
Instrument : MS #3

Sample Name : 96D4903

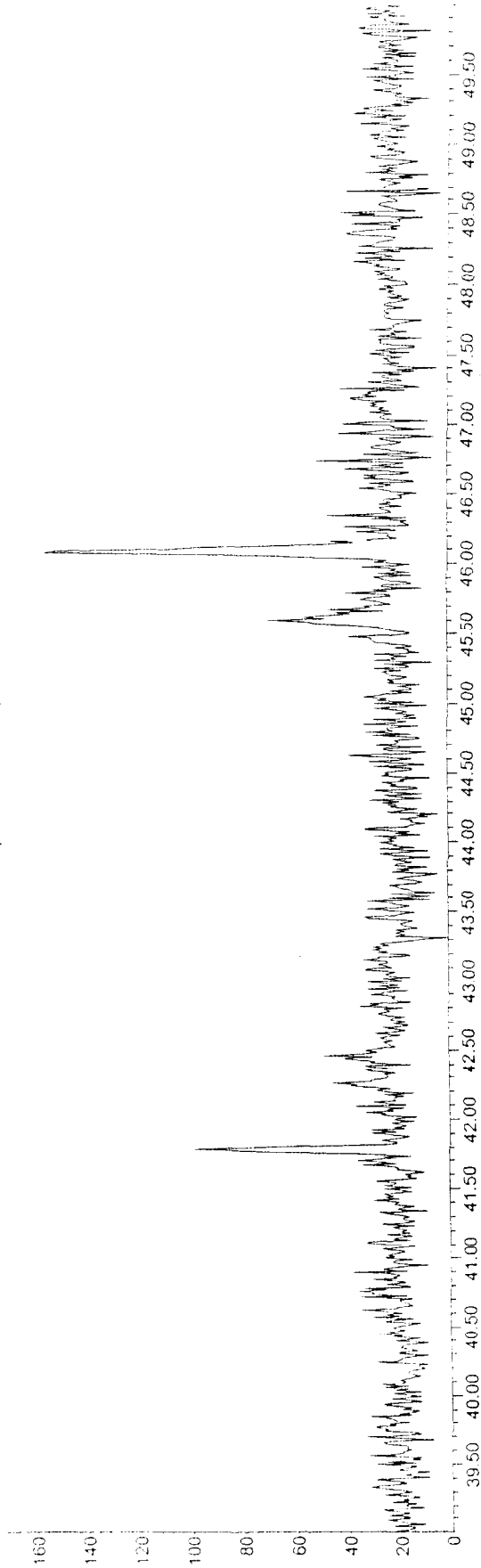
Misc Info : Item 4

Vial Number: 4294934548

Ion 191.00 (190.70 to 191.70): DZ5826.D



Ion 217.00 (216.70 to 217.70): DZ5826.D



File C:\HPCHEM\1\SQ2531\DZ5824.D

Operator slr

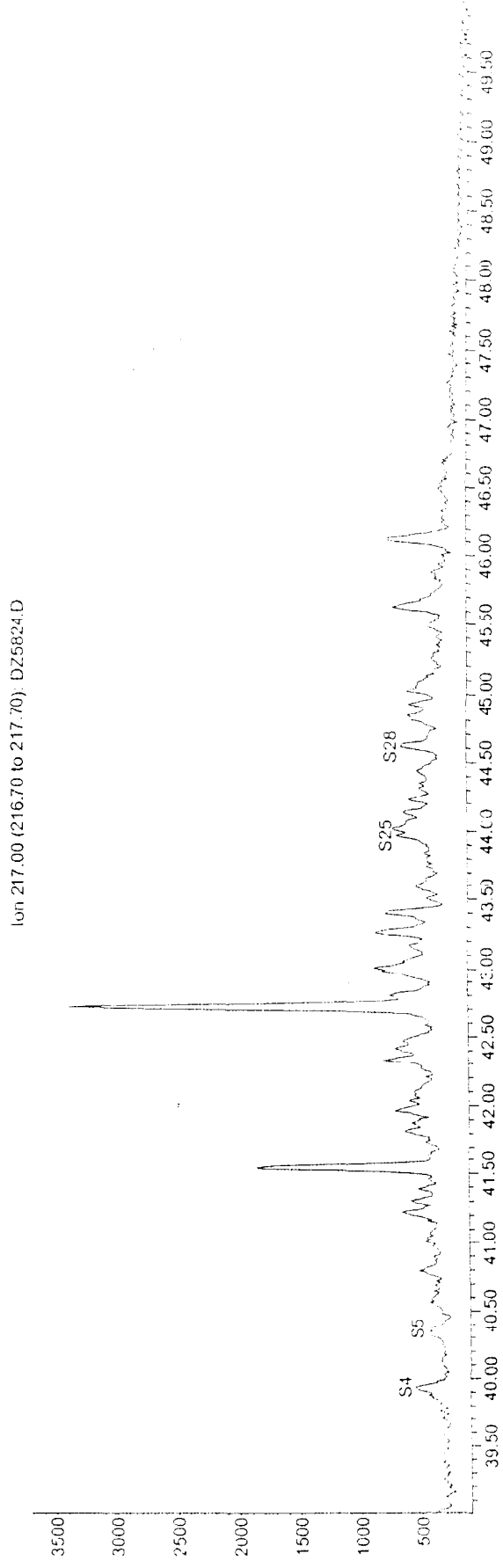
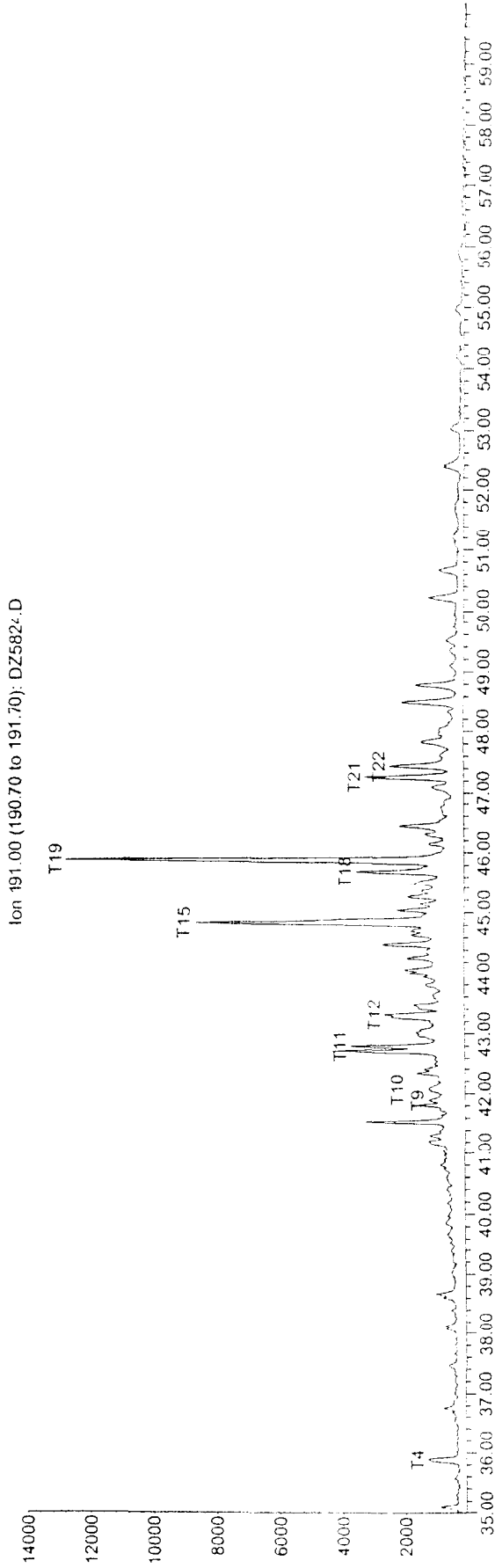
Acquired : 4 Jan 1999 11:46 am using AcqMethod RTE method: STER3

Instrument : MS #3

Sample Name: 58D4904

Misc Info : Item 5

Vial Number: 4294934546



File : C:\FPCHEM\1\SQX658\DX8261.D
Operator :
Acquired : 12 Sep 98 4:55 pm using AcqMethod PA4SIM
Instrument : GC/MS#4
Sample Name : 98D2804
Misc Info : SPM HOSE001
Vial Number : 1

