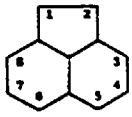
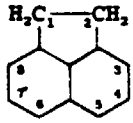
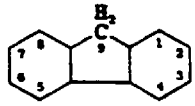
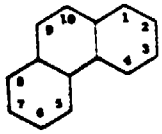
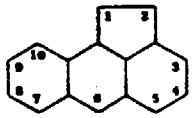
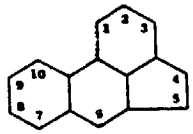
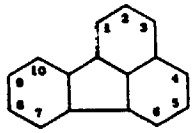
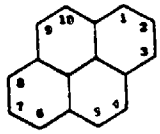
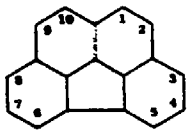
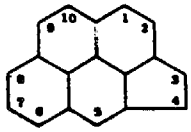
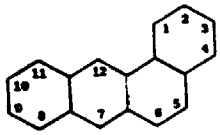
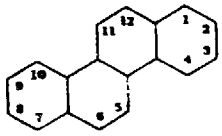
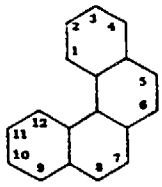
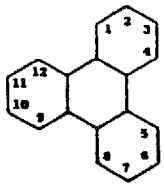
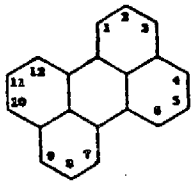
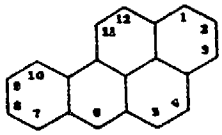
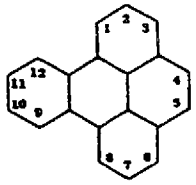
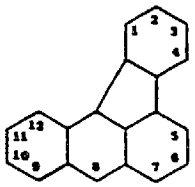
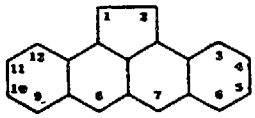
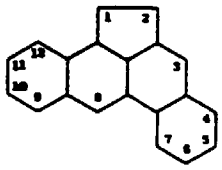
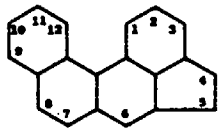
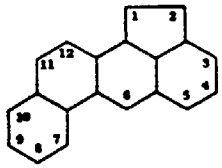
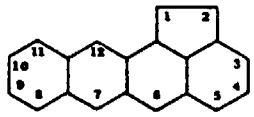
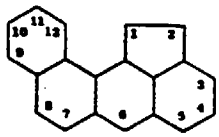
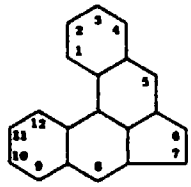
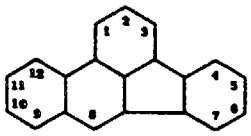
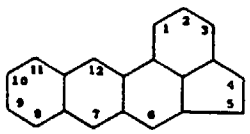
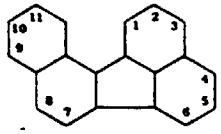
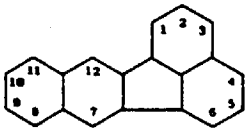
APPENDIX A

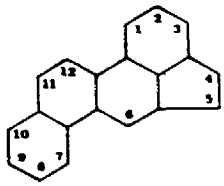
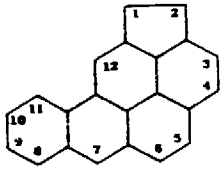
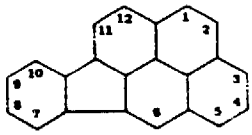
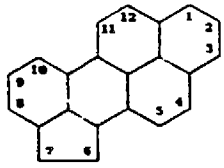
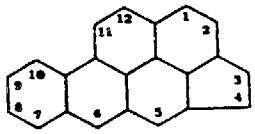
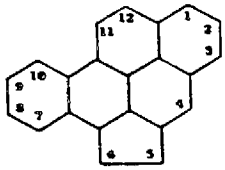
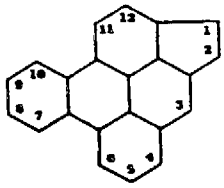
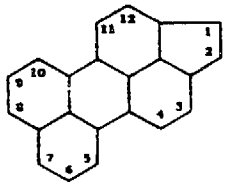
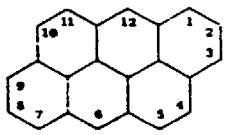
Structures of Polycyclic Aromatic Hydrocarbons

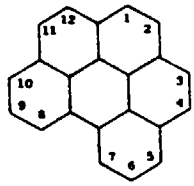
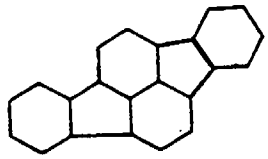
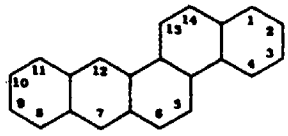
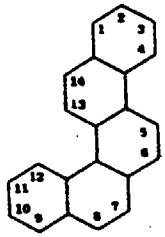
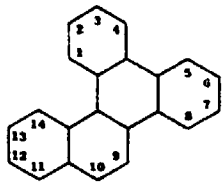
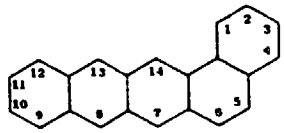
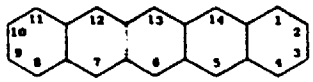
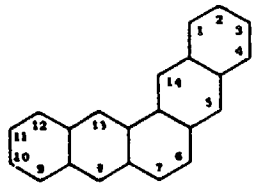
The names, formulas, structures and numbering of all isomers of targeted polycyclic aromatic hydrocarbons (PAH) are given (adapted from Lee et al. 1981). Except for those structures where hydrogens are shown, all PAH are completely saturated. PAH that were quantified and/or are on the targeted list are starred.

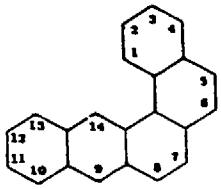
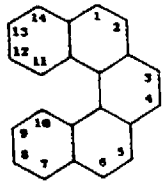
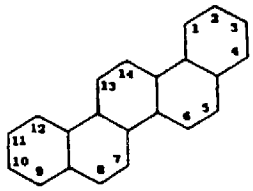
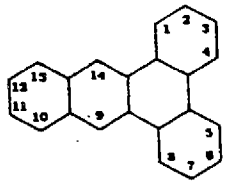
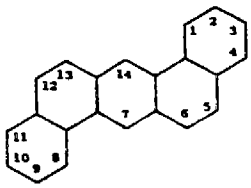
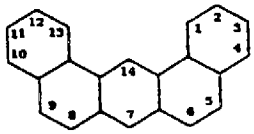
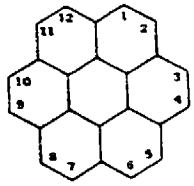
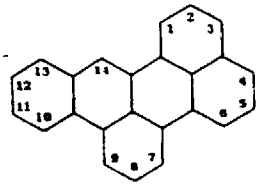
Name	Molecular formula (weight)	Structure
Naphthalene (abbreviated prefix naphtho)*	$C_{10}H_8$ (128)	
Acenaphthylene (abbreviated prefix acenaphtho)*	$C_{12}H_8$ (152)	
Acenaphthene*	$C_{12}H_{10}$ (154)	
Fluorene*	$C_{13}H_{10}$ (166)	
Anthracene (abbreviated prefix anthra)*	$C_{14}H_{10}$ (178)	
Phenanthrene (abbreviated prefix phenanthro)*	$C_{14}H_{10}$ (178)	
Aceanthrylene	$C_{16}H_{10}$ (202)	
Acephenanthrylene*	$C_{16}H_{10}$ (202)	
Fluoranthene*	$C_{16}H_{10}$ (202)	
Pyrene (abbreviated prefix pyrano)*	$C_{16}H_{10}$ (202)	
Benzo[*ghi*]fluoranthene*	$C_{18}H_{10}$ (226)	
Cyclopenta[*cd*]pyrene*	$C_{18}H_{10}$ (226)	
Benz[*a*]anthracene*	$C_{18}H_{12}$ (228)	

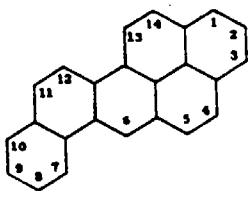
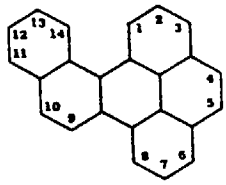
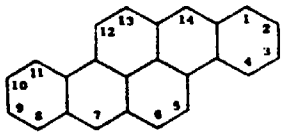
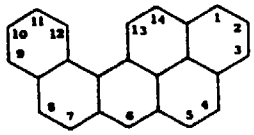
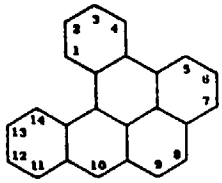
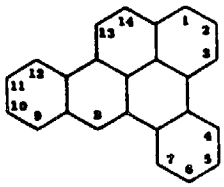
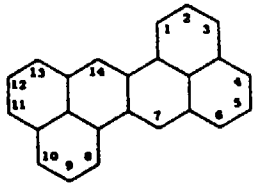
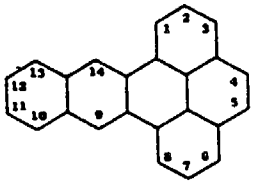
Name	Molecular formula (weight)	Structure
Chrysene (abbreviated prefix chryseno)*	$C_{18}H_{12}$ (228)	
Naphthacene (abbreviated prefix naphthaceno)	$C_{18}H_{12}$ (228)	
Benzo[*c*]phenanthrene*	$C_{18}H_{12}$ (228)	
Triphenylene (abbreviated prefix triphenyleno)*	$C_{18}H_{12}$ (228)	
Perylene (abbreviated prefix perylo)*	$C_{20}H_{12}$ (252)	
Benzo[*a*]pyrene*	$C_{20}H_{12}$ (252)	
Benzo[*e*]pyrene*	$C_{20}H_{12}$ (252)	
Benzo [a] fluoranthene	$C_{20}H_{12}$ (252)	
Benz[*d*]aceanthrylene	$C_{20}H_{12}$ (252)	

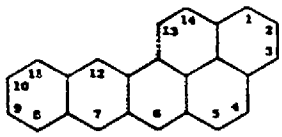
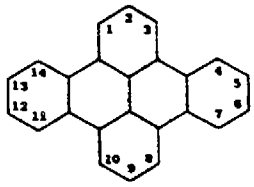
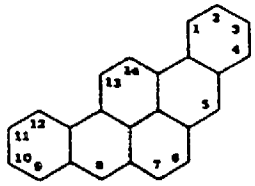
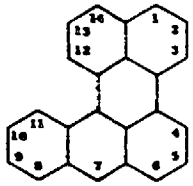
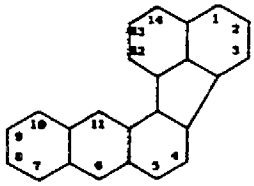
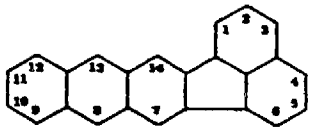
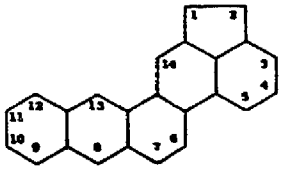
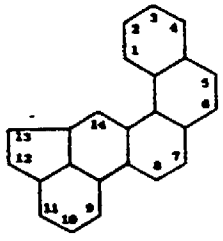
Name	Molecular formula (weight)	Structure
Benz[*e*]aceanthrylene	$C_{20}H_{12}$ (252)	
Benz[*l*]acephenanthrylene	$C_{20}H_{12}$ (252)	
Benz[*j*]aceanthrylene	$C_{20}H_{12}$ (252)	
Cyclopenta[*de*]naphthacene	$C_{20}H_{12}$ (252)	
Benz[*l*]aceanthrylene	$C_{20}H_{12}$ (252)	
Benz[*a*]acephenanthrylene	$C_{20}H_{12}$ (252)	
Benz[*e*]acephenanthrylene* (Benzo[b] fluoranthene)	$C_{20}H_{12}$ (252)	
Benz[*k*]acephenanthrylene	$C_{20}H_{12}$ (252)	
Benzo[*j*]fluoranthene*	$C_{20}H_{12}$ (252)	
Benzo[*k*]fluoranthene*	$C_{20}H_{12}$ (252)	

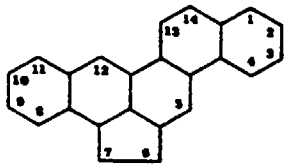
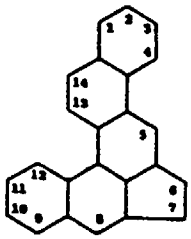
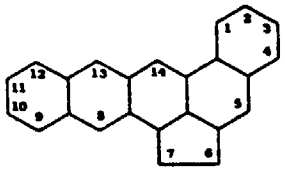
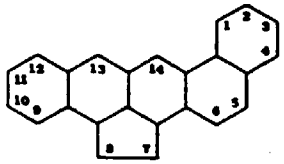
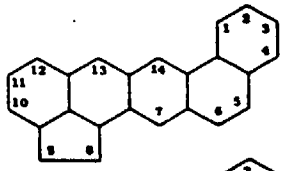
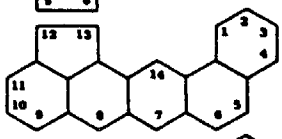
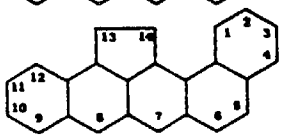
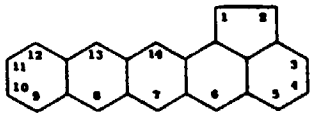
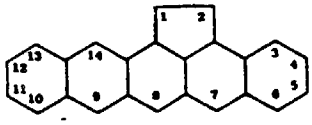
Name	Molecular formula (weight)	Structure
Cyclopenta[*hi*]chrysene	$C_{20}H_{12}$ (252)	
Benzo[*def*]cyclopenta[*qr*]chrysene	$C_{22}H_{12}$ (276)	
Indeno[1,2,3-*cd*]pyrene*	$C_{22}H_{12}$ (276)	
Indeno[1,7-*ab*]pyrene	$C_{22}H_{12}$ (276)	
Indeno[1,7,6,5-*cdef*]chrysene	$C_{22}H_{12}$ (276)	
Indeno[5,6,7,1-*defg*]chrysene	$C_{22}H_{12}$ (276)	
Benzo[*e*]cyclopenta[*jk*]pyrene	$C_{22}H_{12}$ (276)	
Cyclopenta[*cd*]perylene	$C_{22}H_{12}$ (276)	
Dibenzo[*def,mno*]chrysene* (Anthanthrene)	$C_{22}H_{12}$ (276)	

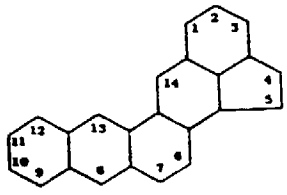
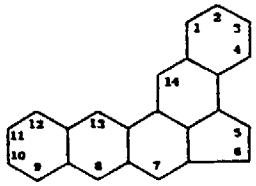
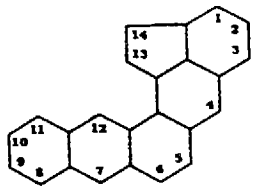
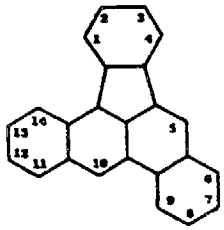
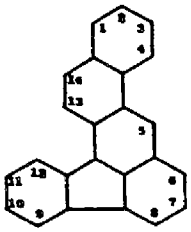
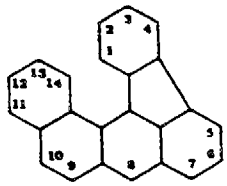
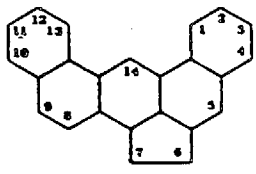
Name	Molecular formula (weight)	Structure
Benzo[*ghi*]perylene*	$C_{22}H_{12}$ (276)	
Indeno[1,2,3-*cd*]fluoranthene*	$C_{22}H_{12}$ (276)	
Benzo[*b*]chrysene*	$C_{22}H_{14}$ (278)	
Benzo[*c*]chrysene*	$C_{22}H_{14}$ (278)	
Benzo[*g*]chrysene*	$C_{22}H_{14}$ (278)	
Benzo[*a*]naphthacene	$C_{22}H_{14}$ (278)	
Pentacene	$C_{22}H_{14}$ (278)	
Pentaphene	$C_{22}H_{14}$ (278)	

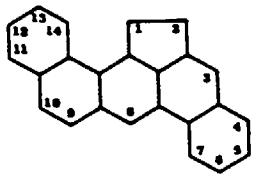
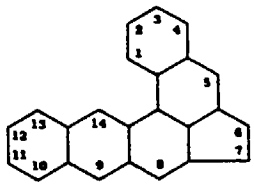
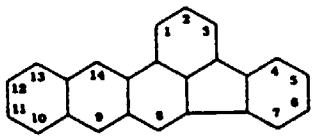
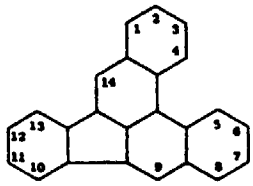
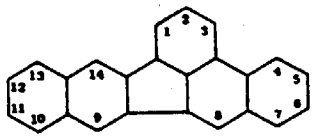
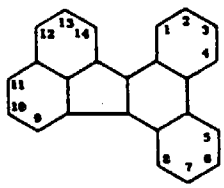
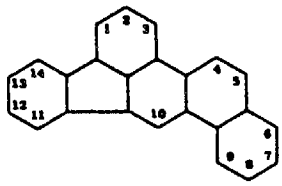
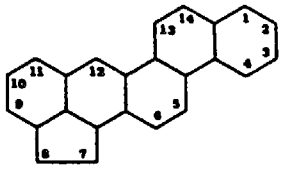
Name	Molecular formula (weight)	Structure
Dibenzo[*b*,*g*]phenanthrene	$C_{22}H_{14}$ (278)	
Dibenzo[*c*,*g*]phenanthrene	$C_{22}H_{14}$ (278)	
Picene*	$C_{22}H_{14}$ (278)	
Dibenz[*a*,*c*]anthracene*	$C_{22}H_{14}$ (278)	
Dibenz[*a*,*h*]anthracene*	$C_{22}H_{14}$ (278)	
Dibenz[*a*,*j*]anthracene*	$C_{22}H_{14}$ (278)	
Coronene*	$C_{24}H_{12}$ (300)	
Benzo[*b*]perylene	$C_{24}H_{14}$ (302)	

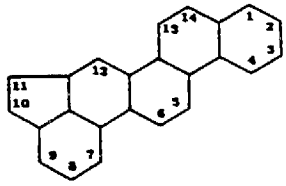
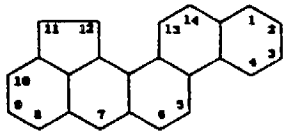
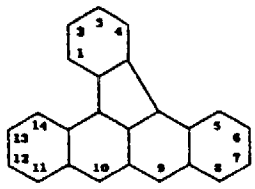
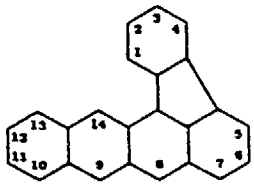
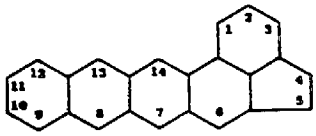
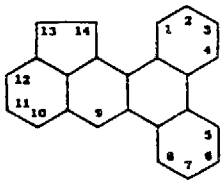
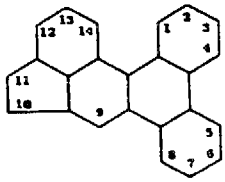
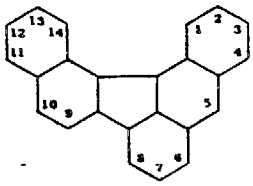
Name	Molecular formula (weight)	Structure
Benzo[*pqr*]picene	$C_{24}H_{14}$ (302)	
Naphtho[1,2-*e*]pyrene	$C_{24}H_{14}$ (302)	
Dibenzo[*b,def*]chrysene* (Dibenzo [a,h] pyrene)	$C_{24}H_{14}$ (302)	
Dibenzo[*c,mno*]chrysene	$C_{24}H_{14}$ (302)	
Dibenzo[*def,p*]chrysene* (Dibenzo [a,l] pyrene)	$C_{24}H_{14}$ (302)	
Naphtho[1,2,3,4-*def*]chrysene* (Dibenzo [a,e] pyrene)	$C_{24}H_{14}$ (302)	
Dibenzo[*de,mn*]naphthacene	$C_{24}H_{14}$ (302)	
Dibenzo[*de,qr*]naphthacene	$C_{24}H_{14}$ (302)	

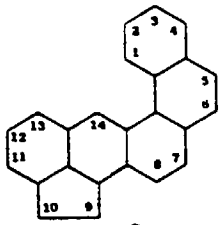
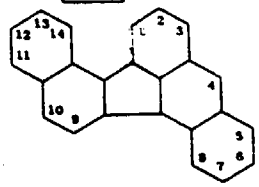
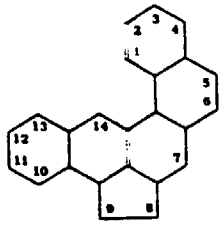
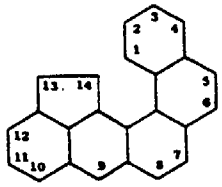
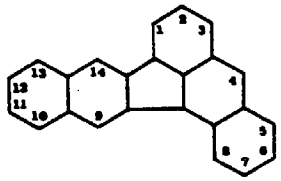
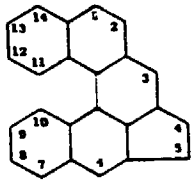
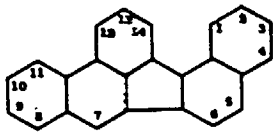
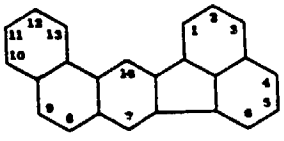
Name	Molecular formula (weight)	Structure
Naphtho[2,1,8-*qra*]naphthacene	$C_{24}H_{14}$ (302)	
Dibenzo[*fg*,*op*]naphthacene	$C_{24}H_{14}$ (302)	
Benzo[*rst*]pentaphene* (Dibenzo[a,i] pyrene)	$C_{24}H_{14}$ (302)	
Benzo[*a*]perylene	$C_{24}H_{14}$ (302)	
Naphtho[2,3-*j*]fluoranthene	$C_{24}H_{14}$ (302)	
Naphtho[2,3-*k*]fluoranthene	$C_{24}H_{14}$ (302)	
Benzo[*b*]cyclopenta[*hi*]chrysene	$C_{24}H_{14}$ (302)	
Benzo[*c*]cyclopenta[*hi*]chrysene	$C_{24}H_{14}$ (302)	

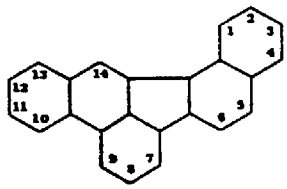
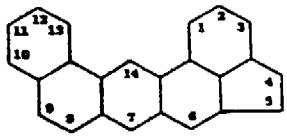
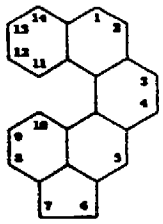
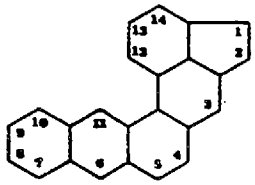
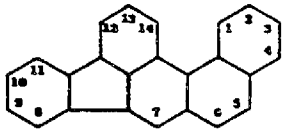
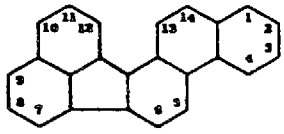
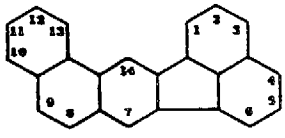
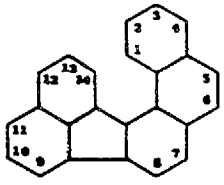
Name	Molecular formula (weight)	Structure
Benzo[*b*]cyclopenta[*qr*]chrysene	$C_{24}H_{14}$ (302)	
Benzo[*c*]cyclopenta[*qr*]chrysene	$C_{24}H_{14}$ (302)	
Benzo[*a*]cyclopenta[*de*]-naphthacene	$C_{24}H_{14}$ (302)	
Benzo[*a*]cyclopenta[*fg*]-naphthacene	$C_{24}H_{14}$ (302)	
Benzo[*a*]cyclopenta[*hi*]-naphthacene	$C_{24}H_{14}$ (302)	
Benzo[*a*]cyclopenta[*mn*]-naphthacene	$C_{24}H_{14}$ (302)	
Benzo[*a*]cyclopenta[*op*]-naphthacene	$C_{24}H_{14}$ (302)	
Cyclopenta[*de*]pentacene	$C_{24}H_{14}$ (302)	
Cyclopenta[*fg*]pentacene	$C_{24}H_{14}$ (302)	

Name	Molecular formula (weight)	Structure
Cyclopenta[*de*]pentaphene	$C_{24}H_{14}$ (302)	
Cyclopenta[*fg*]pentaphene	$C_{24}H_{14}$ (302)	
Cyclopenta[*pq*]pentaphene	$C_{24}H_{14}$ (302)	
Dibenz[*a,e*]aceanthrylene*	$C_{24}H_{14}$ (302)	
Dibenz[*a,j*]aceanthrylene	$C_{24}H_{14}$ (302)	
Dibenz[*a,l*]aceanthrylene	$C_{24}H_{14}$ (302)	
Dibenz[*e,j*]aceanthrylene	$C_{24}H_{14}$ (302)	

Name	Molecular formula (weight)	Structure
Dibenz[*e*,*l*]aceanthrylene	$C_{24}H_{14}$ (302)	
Dibenz[*a*,*k*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Dibenz[*e*,*k*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Dibenzo[*b*,*e*]fluoranthene	$C_{24}H_{14}$ (302)	
Dibenzo[*b*,*k*]fluoranthene	$C_{24}H_{14}$ (302)	
Dibenzo[*j*,*l*]fluoranthene	$C_{24}H_{14}$ (302)	
Indeno[1,2,3-*hi*]chrysene	$C_{24}H_{14}$ (302)	
Indeno[1,7-*ab*]chrysene	$C_{24}H_{14}$ (302)	

Name	Molecular formula (weight)	Structure
Cyclopenta[*de*]picene	$C_{24}H_{14}$ (302)	
Indeno[7,1-*bc*]chrysene	$C_{24}H_{14}$ (302)	
Indeno[1,2,3-*fg*]naphthacene	$C_{24}H_{14}$ (302)	
Indeno[1,2,3-*de*]naphthacene	$C_{24}H_{14}$ (302)	
Indeno[7,1-*ab*]naphthacene	$C_{24}H_{14}$ (302)	
Indeno[1,7-*ab*]triphenylene	$C_{24}H_{14}$ (302)	
Indeno[7,1-*ab*]triphenylene	$C_{24}H_{14}$ (302)	
Naphth[1,2-*a*]aceanthrylene	$C_{24}H_{14}$ (302)	

Name	Molecular formula (weight)	Structure
Naphth[1,2-*j*]aceanthrylene	$C_{24}H_{14}$ (302)	
Naphth[2,1-*a*]aceanthrylene	$C_{24}H_{14}$ (302)	
Naphth[2,1-*e*]aceanthrylene	$C_{24}H_{14}$ (302)	
Naphth[2,1-*l*]aceanthrylene	$C_{24}H_{14}$ (302)	
Naphth[2,3-*a*]aceanthrylene	$C_{24}H_{14}$ (302)	
Naphth[1,2-*a*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Naphth[1,2-*e*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Naphth[1,2-*k*]fluoranthene	$C_{24}H_{14}$ (302)	

Name	Molecular formula (weight)	Structure
Naphth[2,1-*e*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Naphth[2,1-*k*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Naphth[2,1-*l*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Naphth[2,3-*l*]acephenanthrylene	$C_{24}H_{14}$ (302)	
Naphtho[2,1-*b*]fluoranthene	$C_{24}H_{14}$ (302)	
Naphtho[2,1-*j*]fluoranthene	$C_{24}H_{14}$ (302)	
Naphtho[1,2-*k*]fluoranthene	$C_{24}H_{14}$ (302)	
Naphtho[1,2-*j*]fluoranthene	$C_{24}H_{14}$ (302)	

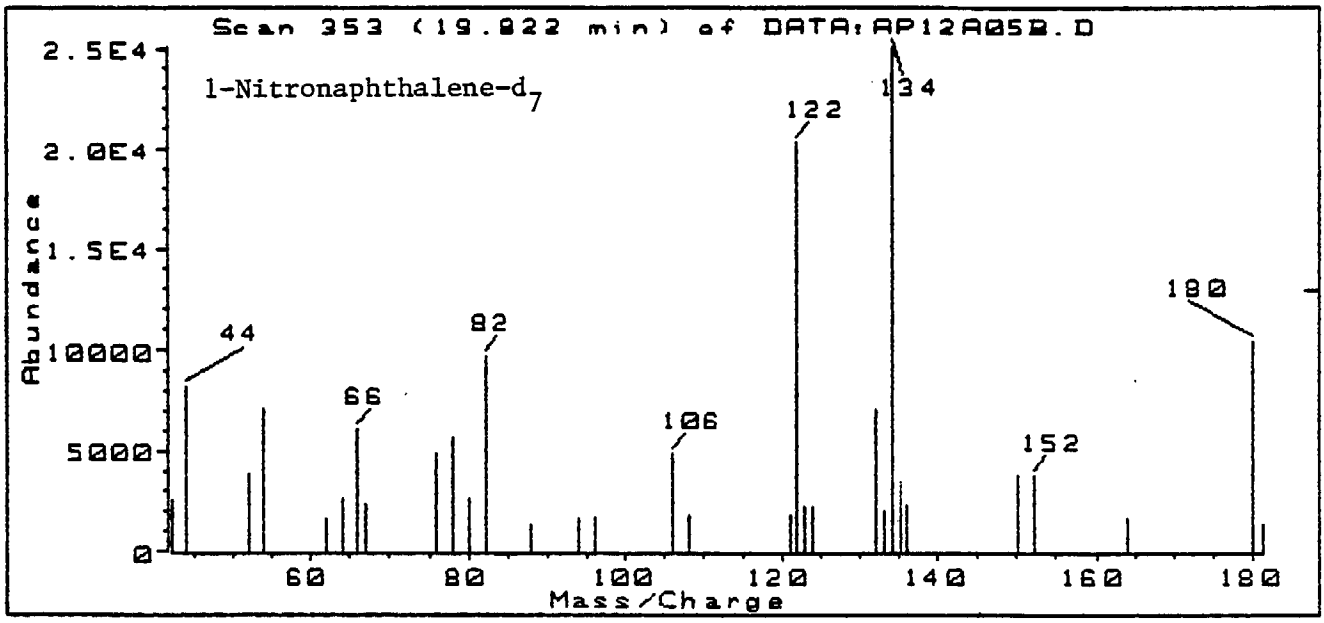
APPENDIX B

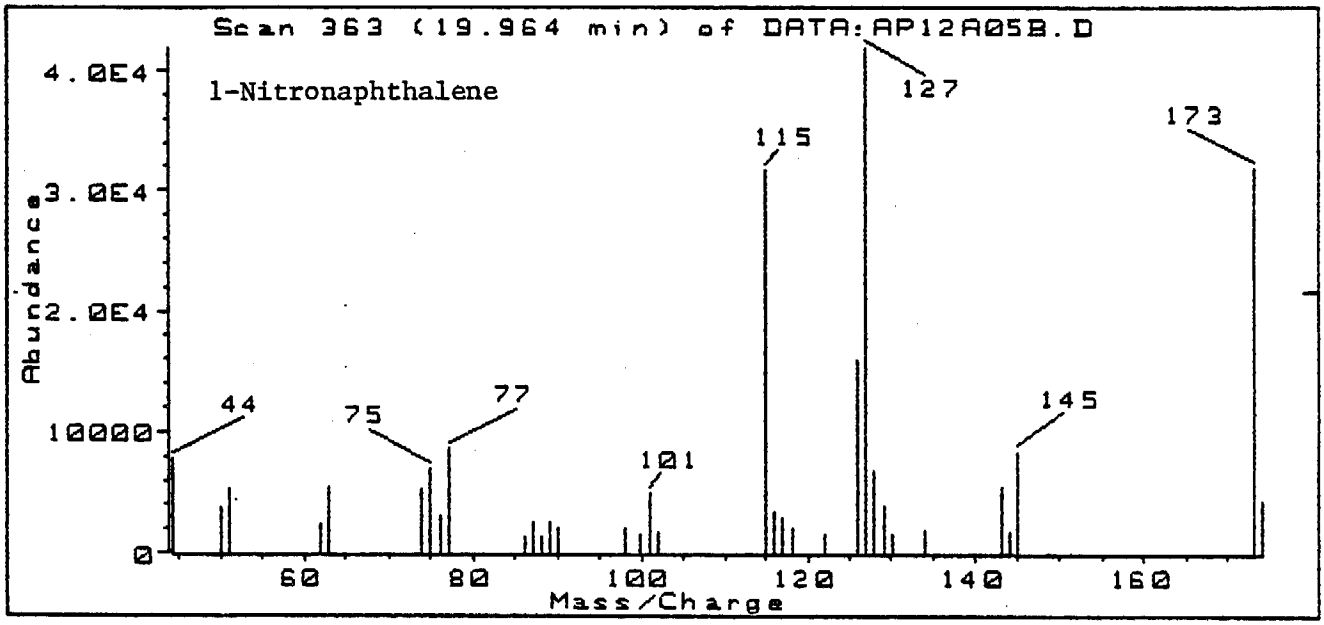
Electron Impact Mass Spectra of Nitroarenes

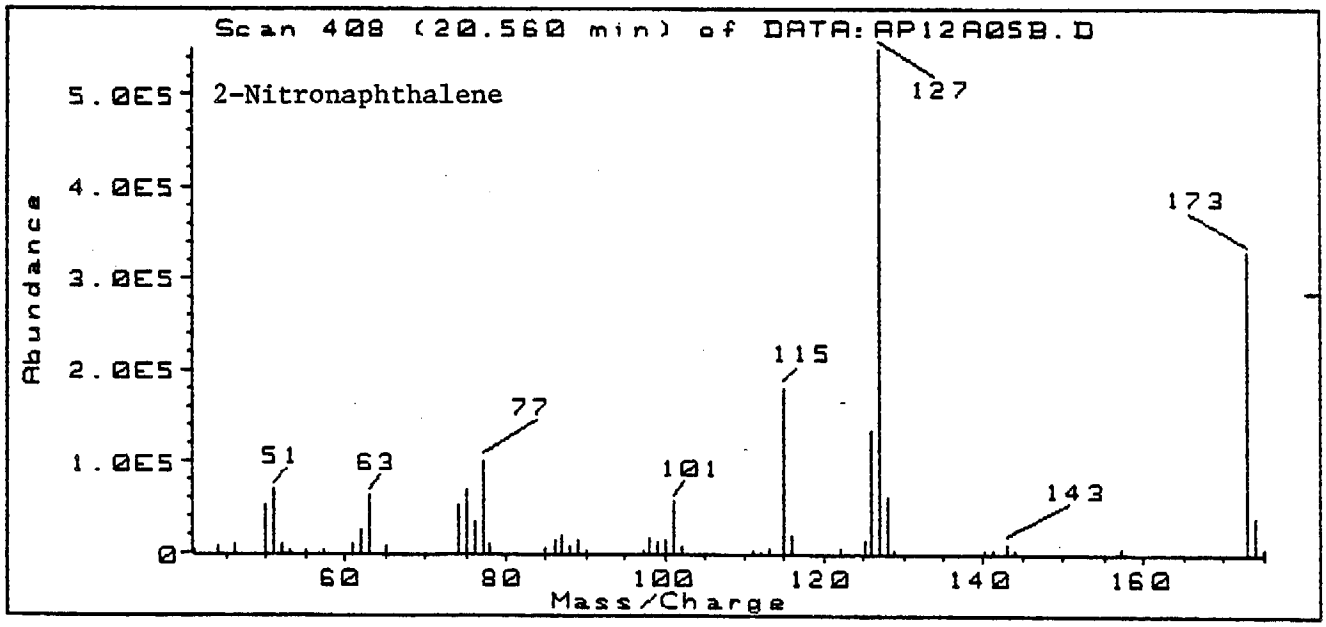
The mass spectra shown were recorded utilizing a Hewlett-Packard 5890 GC interfaced to a 5970 MSD. GC conditions were: ~50 m 5% PhMe Silicone fused-silica column (0.2 mm i.d., 0.33 μm film thickness), splitless injection with injection port at 300°C, initial column temperature 50°C followed by programming at 8°C min^{-1} to 340°C. The spectra shown are:

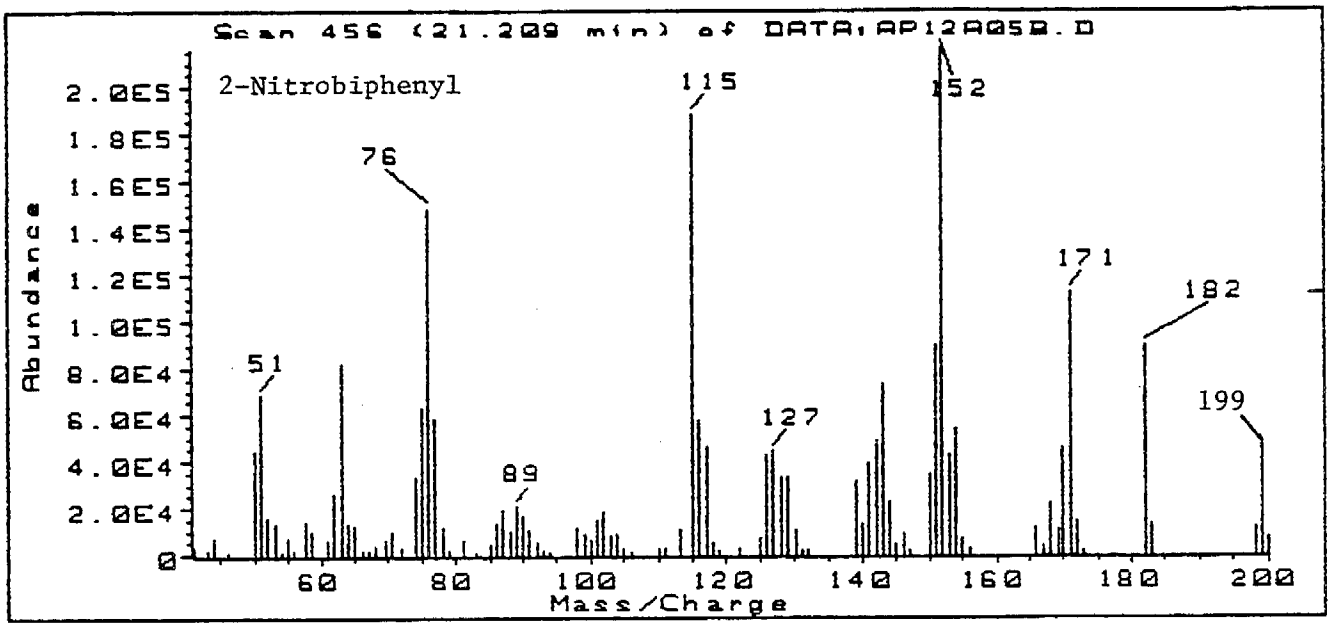
Compound	Retention time (min)
1-Nitronaphthalene-d_7	19.8
1-Nitronaphthalene	20.0
2-Nitronaphthalene	20.6
2-Nitrobiphenyl	21.2
3-Nitrobiphenyl	23.1
4-Nitrobiphenyl	23.6
3-Nitroacenaphthene	25.3
5-Nitroacenaphthene	25.8
2-Nitrofluorene	27.1
9-Nitroanthracene-d_9	27.4
9-Nitroanthracene	27.5
2-Nitrofluoranthene-d_9	32.1
2-Nitrofluoranthene	32.2
1-Nitropyrene-d_9	32.8
9-Nitrobenz[a]anthracene-d_{11} (tentative identification)	34.1
7-Nitrobenz[a]anthracene-d_{11}	34.7
7-Nitrobenz[a]anthracene	34.8
6-Nitrochrysene-d_{11}	35.5
6-Nitrochrysene	35.6
6-Nitrobenzo[a]pyrene-d_{11}	38.9
6-Nitrobenzo[a]pyrene	39.0

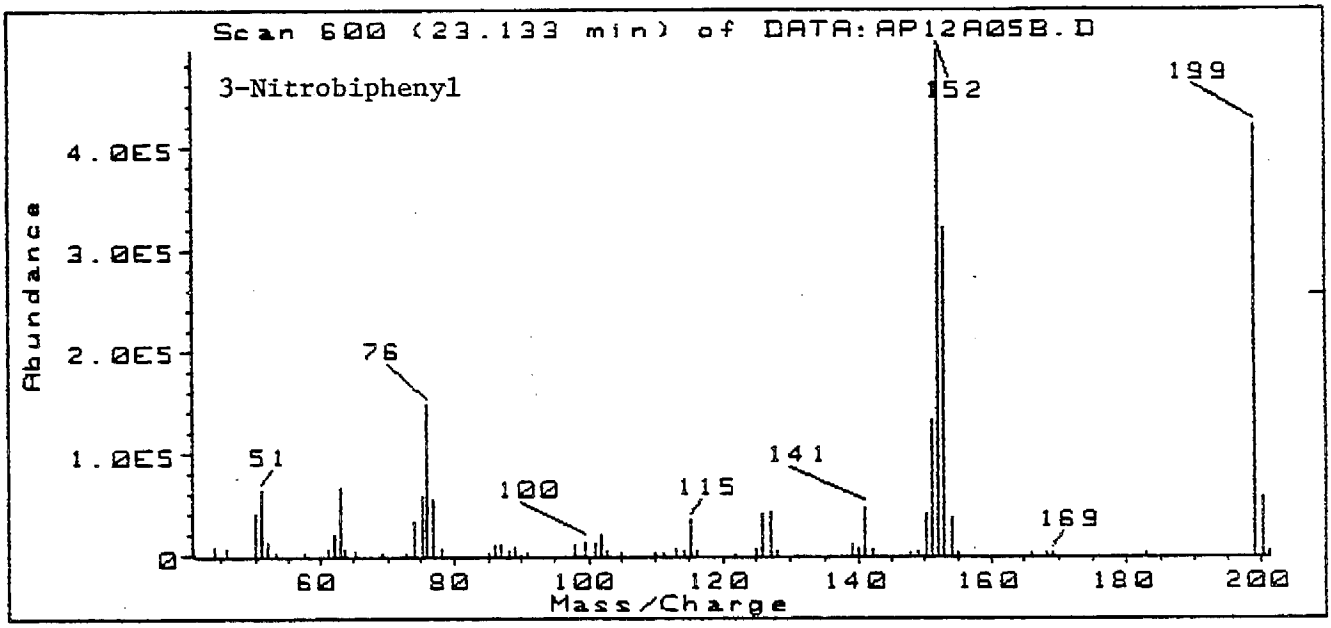
Compound	Retention time (min)
Methylnitronaphthalenes	
1-Methyl-2-nitronaphthalene	21.7
1-Methyl-3-nitronaphthalene	22.7
1-Methyl-4-nitronaphthalene	22.3
1-Methyl-5-nitronaphthalene	22.0
1-Methyl-6-nitronaphthalene	22.4
1-Methyl-8-nitronaphthalene	20.9
2-Methyl-1-nitronaphthalene	20.3
2-Methyl-3-nitronaphthalene	21.6
2-Methyl-4-nitronaphthalene	21.7
2-Methyl-5-nitronaphthalene	21.8
2-Methyl-6-nitronaphthalene	22.5
2-Methyl-8-nitronaphthalene	21.5

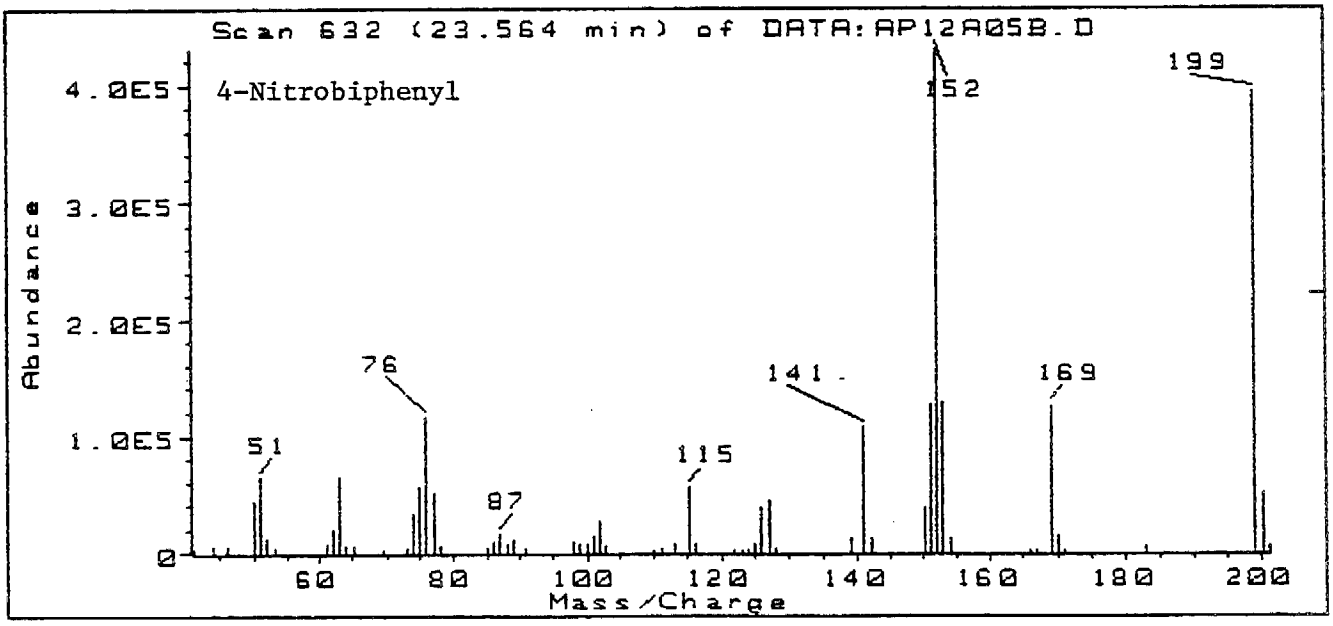

Scan 353 (19.822 min) of DATA:AP12A05B.D
1-Nitronaphthalene-d7
Abundance
Mass/Charge
2.5E4
2.0E4
1.5E4
10000
5000
0
44
66
82
106
122
134
152
180
60
80
100
120
140
160
180

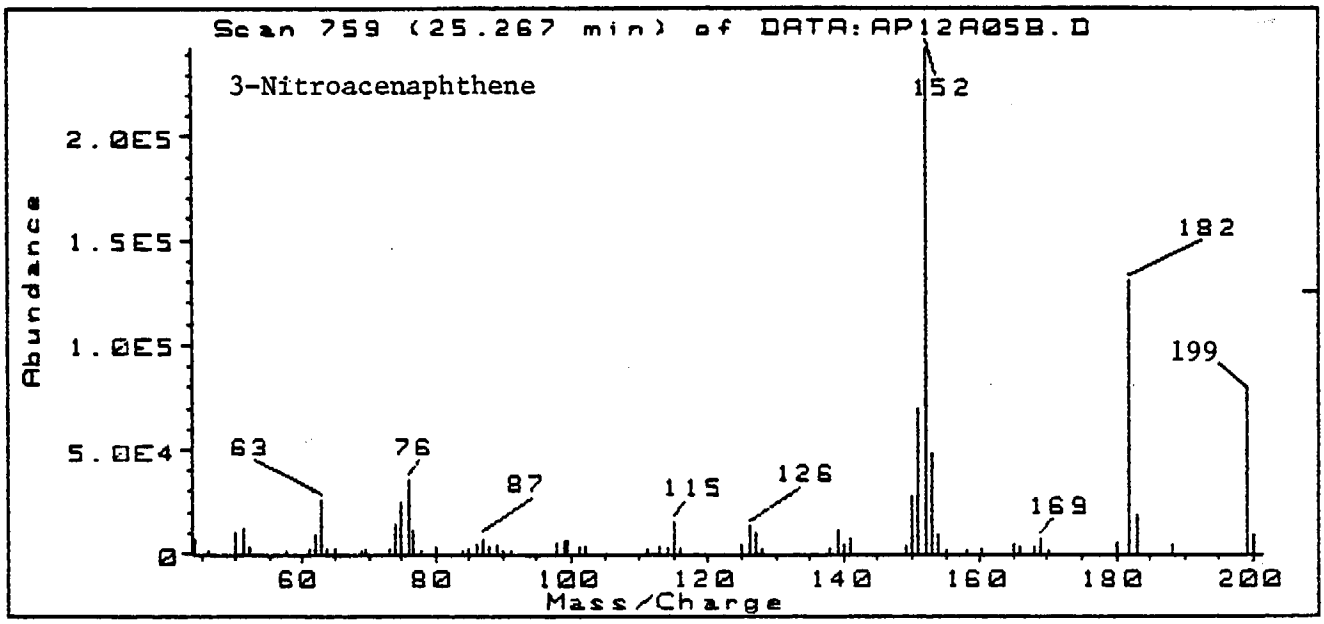

Scan 363 (19.964 min) of DATA:AP12A05B.D
1-Nitronaphthalene
Abundance
Mass/Charge
4.0E4
3.0E4
2.0E4
10000
0
44
75
77
101
115
127
145
173
60
80
100
120
140
160

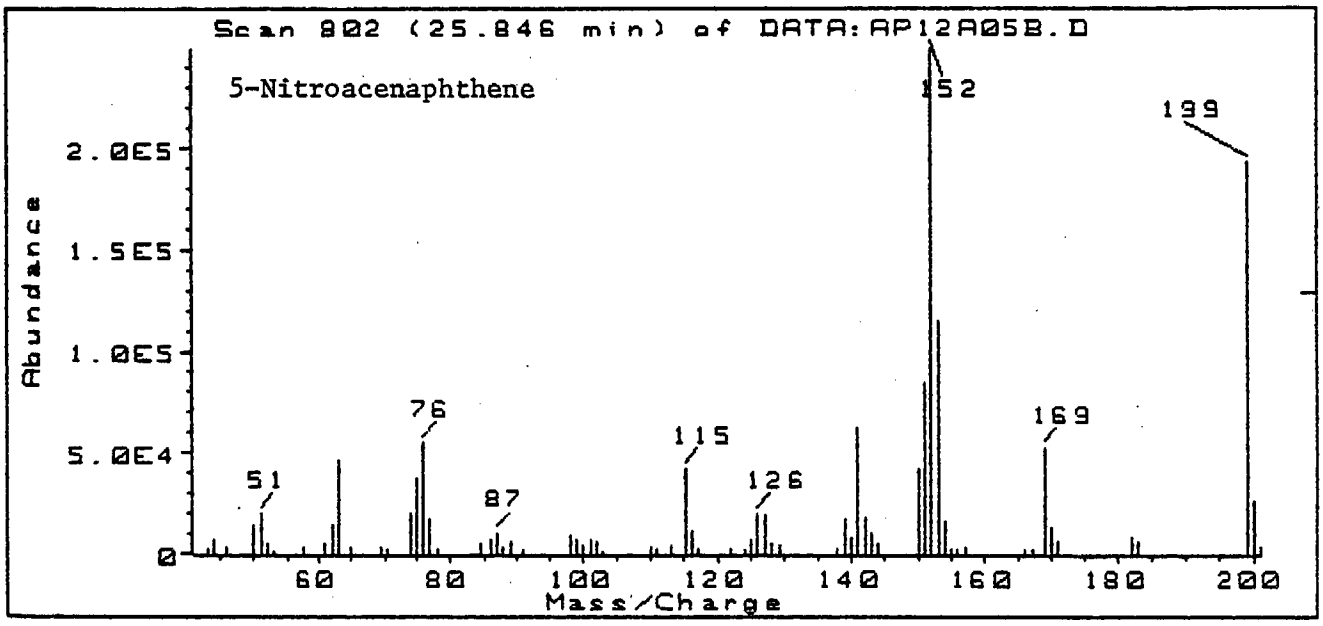

Scan 408 (20.560 min) of DATA:AP12A05B.D
2-Nitronaphthalene
Abundance
Mass/Charge
5.0E5
4.0E5
3.0E5
2.0E5
1.0E5
0
51
63
77
101
115
127
143
173
60
80
100
120
140
160

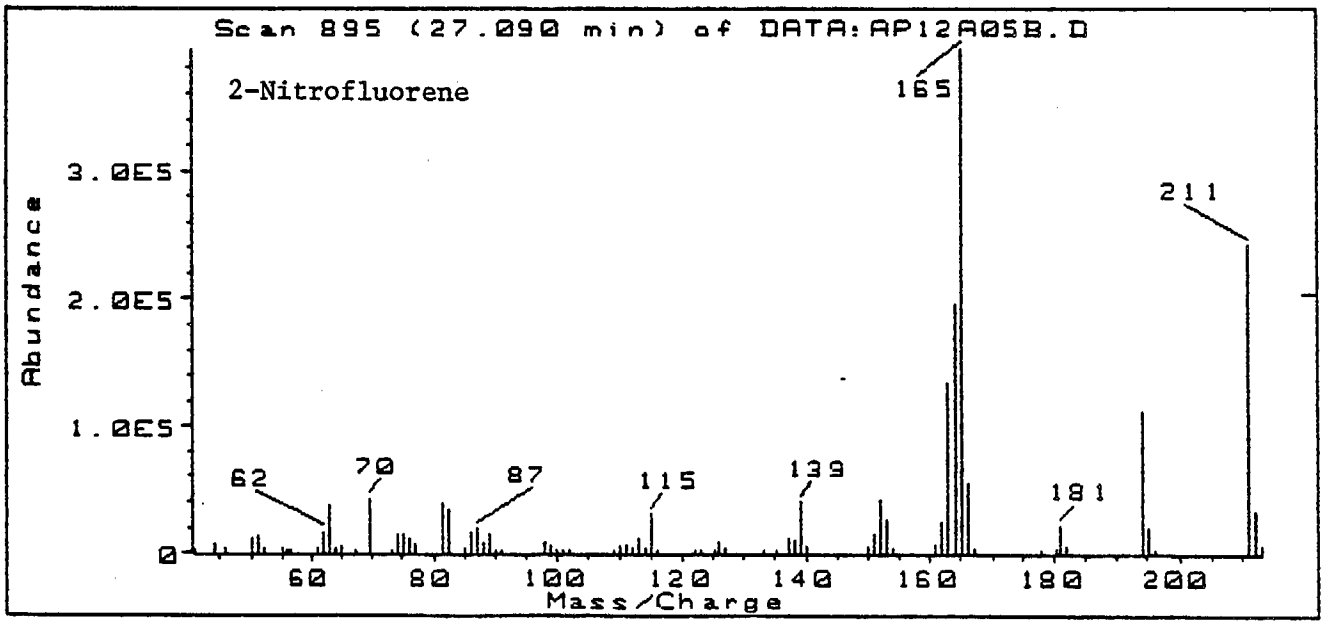

Scan 456 (21.209 min) of DATA:AP12A05B.D
2-Nitrobiphenyl
Abundance
Mass/Charge
115
152
76
171
182
51
127
199
89

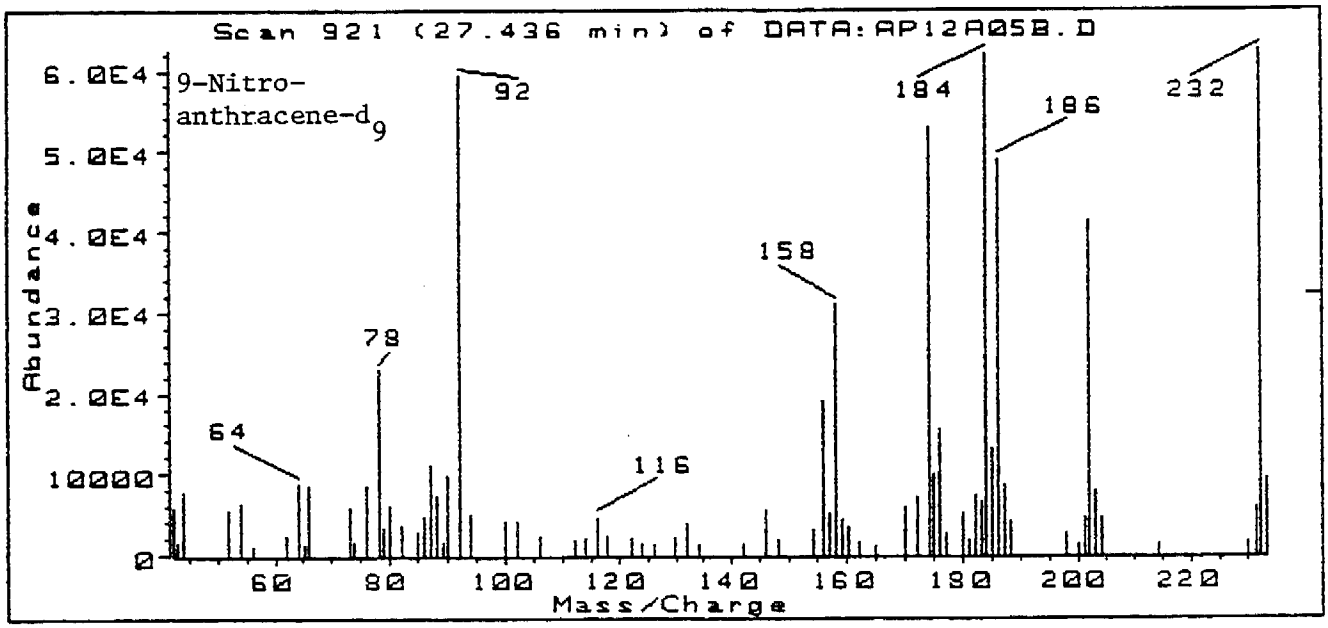

Scan 600 (23.133 min) of DATA:AP12A05B.D
3-Nitrobiphenyl
Abundance
Mass/Charge
152
199
76
51
141
100
115
169

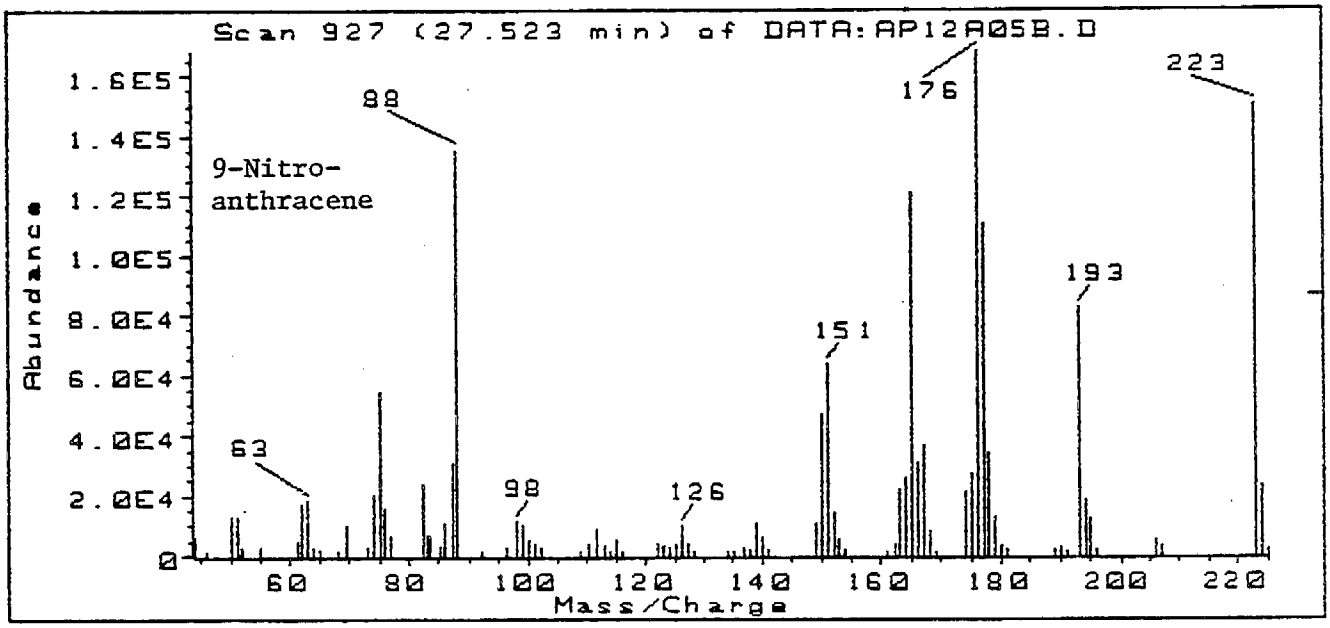

Scan 632 (23.564 min) of DATA:AP12A05B.D
4-Nitrobiphenyl
Abundance
Mass/Charge
152
199
76
141
169
51
115
87

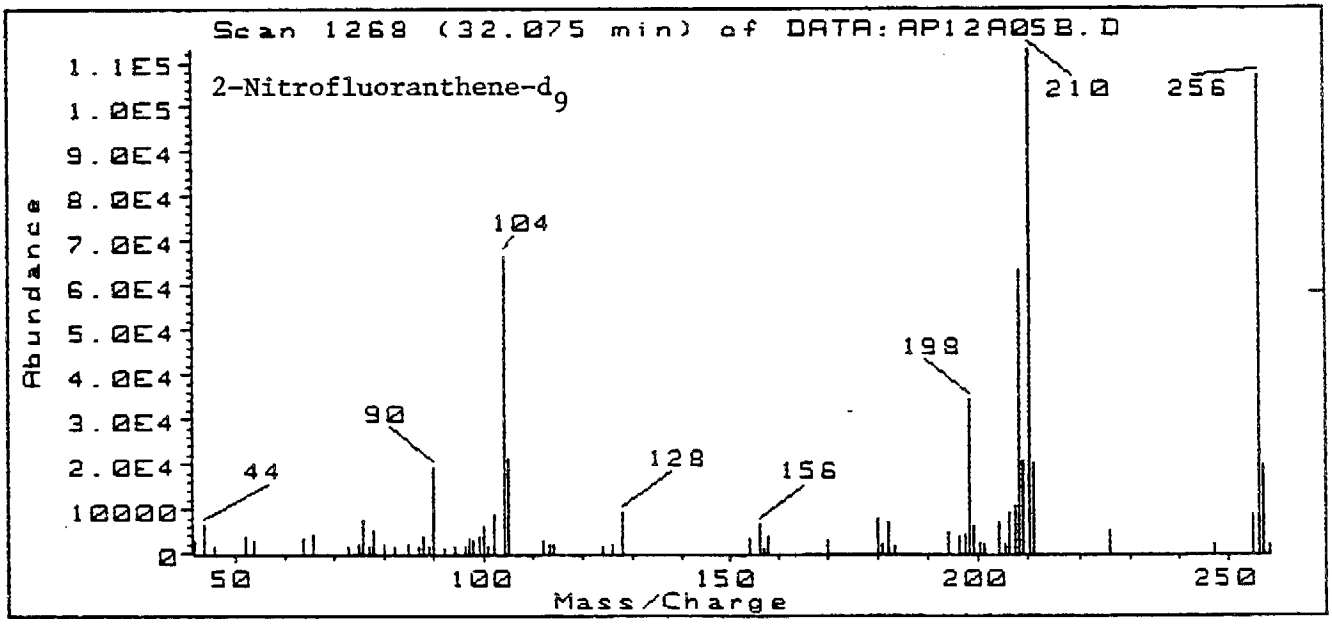

Scan 759 (25.267 min) of DATA:AP12A05B.D
3-Nitroacenaphthene
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
63
76
87
115
126
152
169
182
199
60
80
100
120
140
160
180
200
Mass/Charge

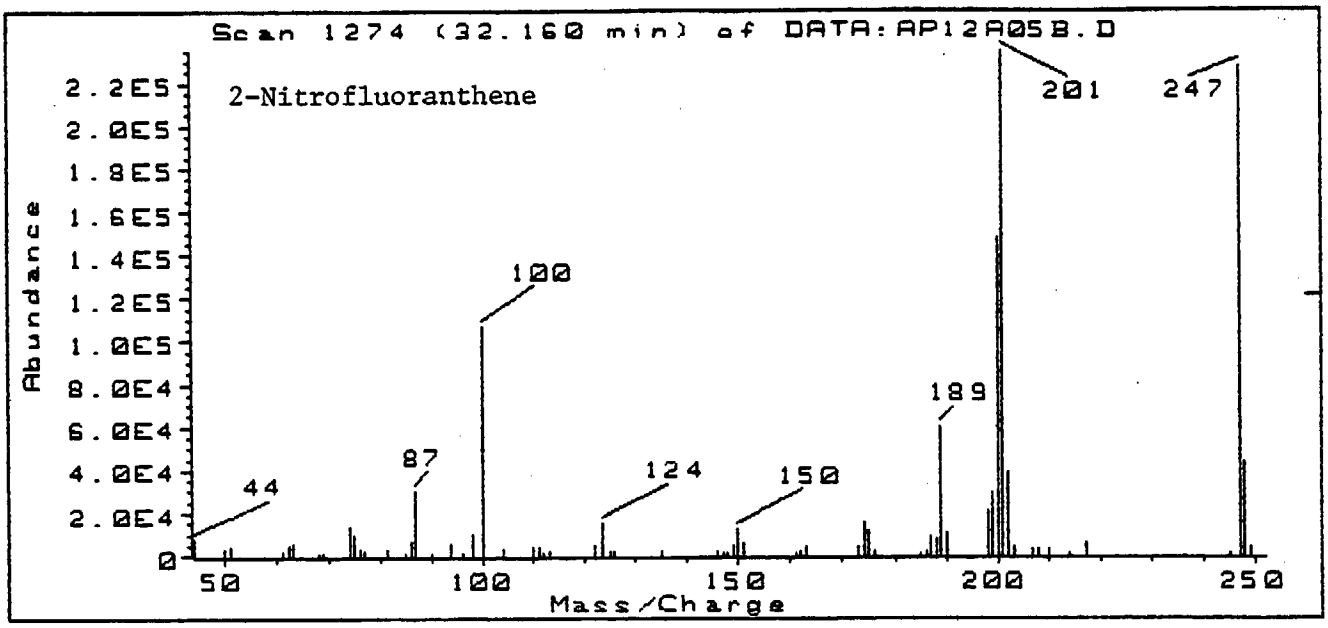

Scan 802 (25.846 min) of DATA:AP12A05B.D
5-Nitroacenaphthene
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
51
76
87
115
126
152
169
199
60
80
100
120
140
160
180
200
Mass/Charge

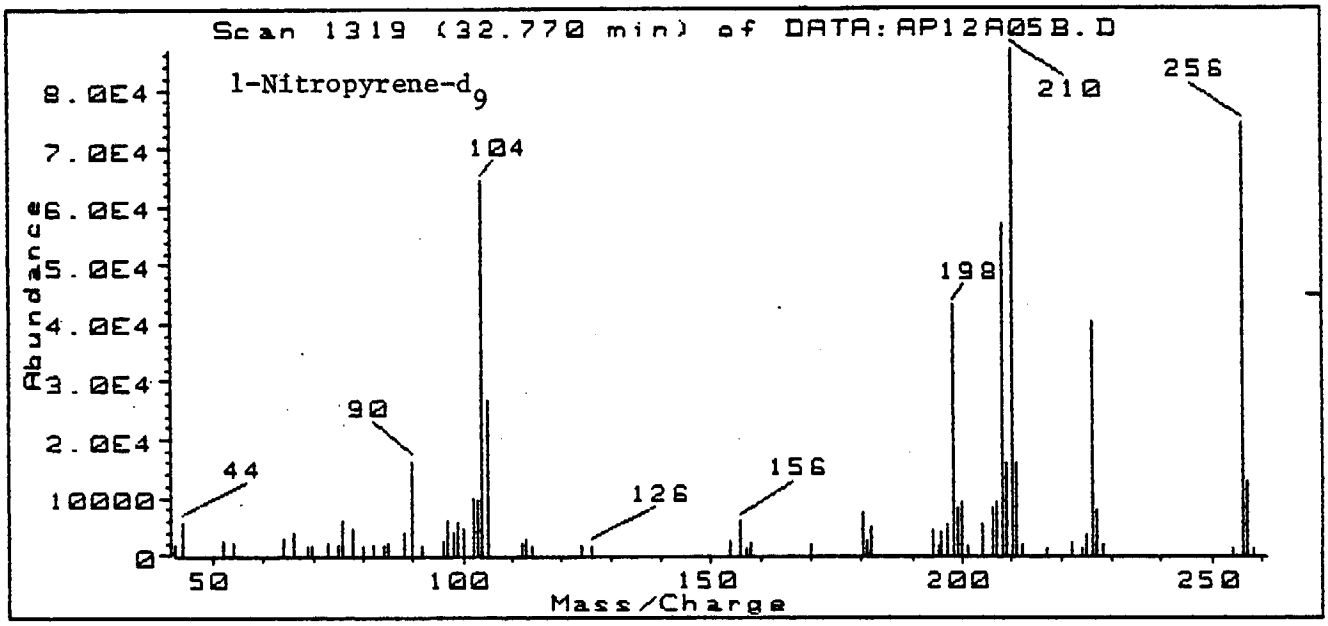

Scan 895 (27.090 min) of DATA:AP12A05B.D
2-Nitrofluorene
Abundance
3.0E5
2.0E5
1.0E5
0
62
70
87
115
139
165
181
211
60
80
100
120
140
160
180
200
Mass/Charge

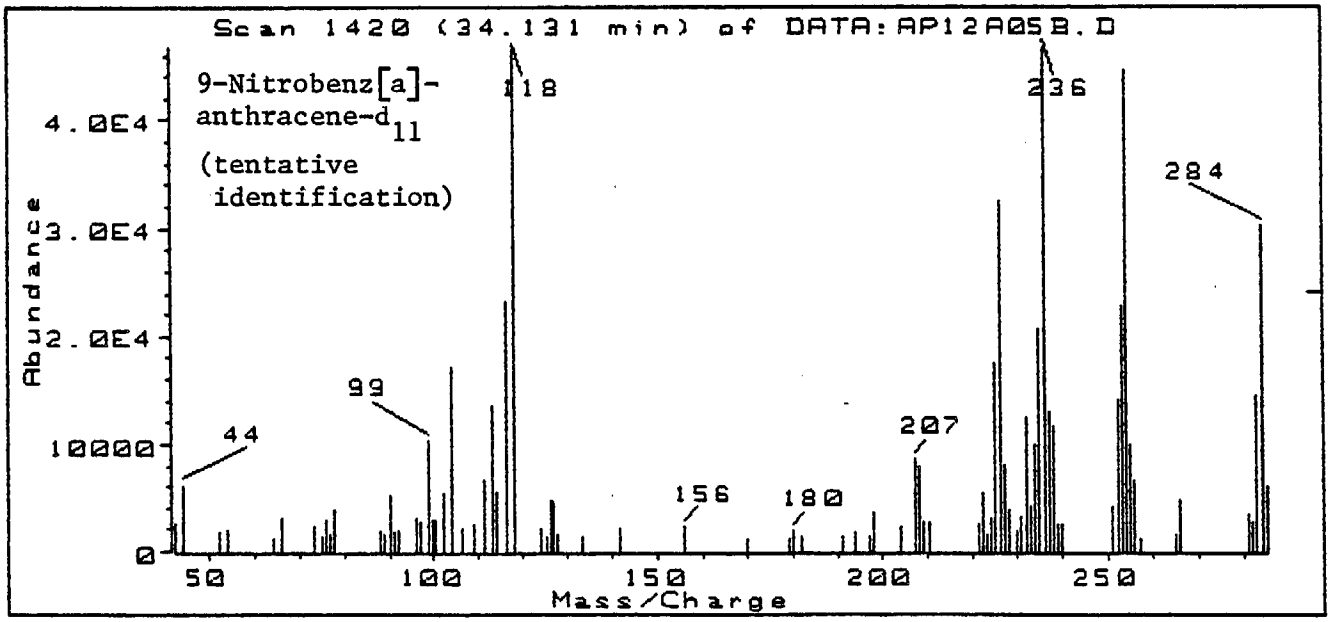

Scan 921 (27.436 min) of DATA:AP12A05B.D
9-Nitro-
anthracene-d9
Abundance
Mass/Charge
92
184
186
232
158
78
64
116

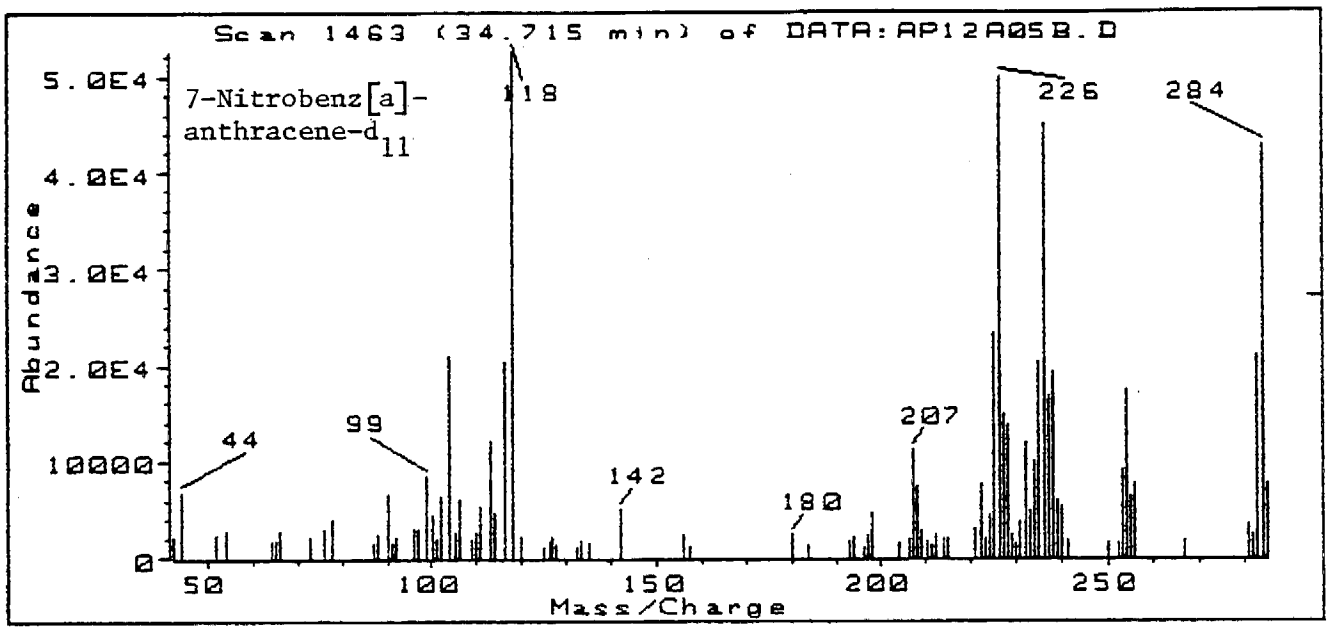

Scan 927 (27.523 min) of DATA:AP12A05B.D
9-Nitro-
anthracene
Abundance
Mass/Charge
88
176
223
193
151
63
98
126

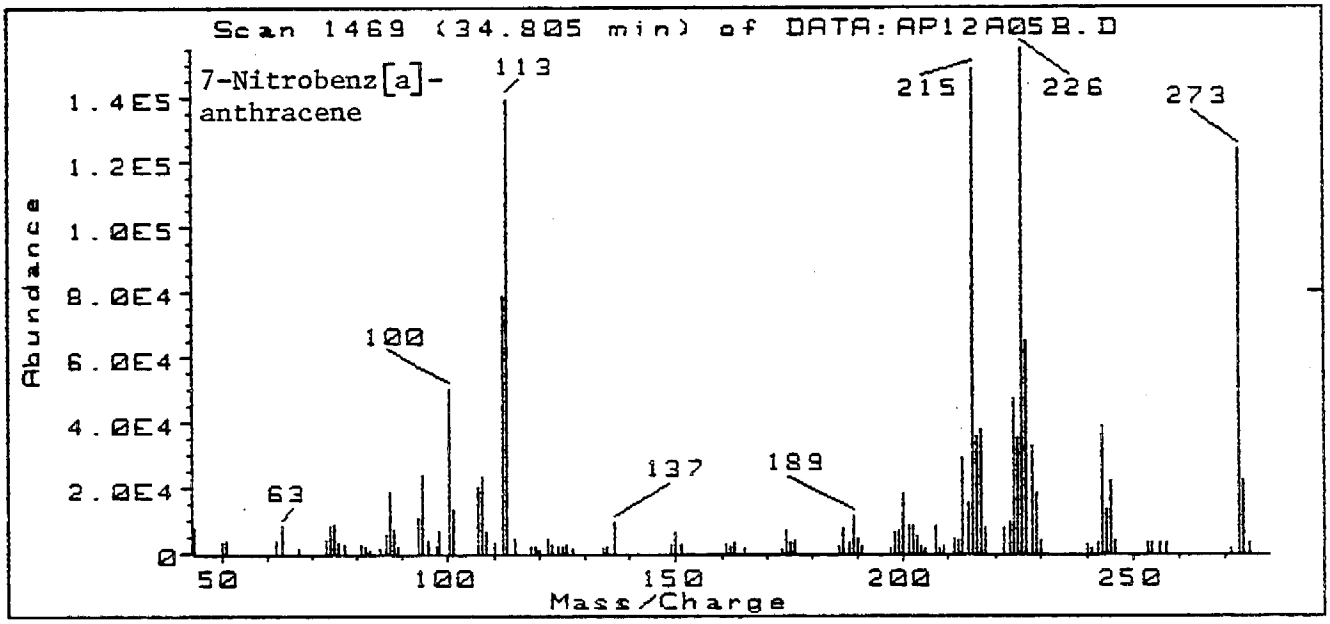

Scan 1268 (32.075 min) of DATA:AP12A05B.D
2-Nitrofluoranthene-d9
Abundance
Mass/Charge
210
256
104
198
90
128
156
44

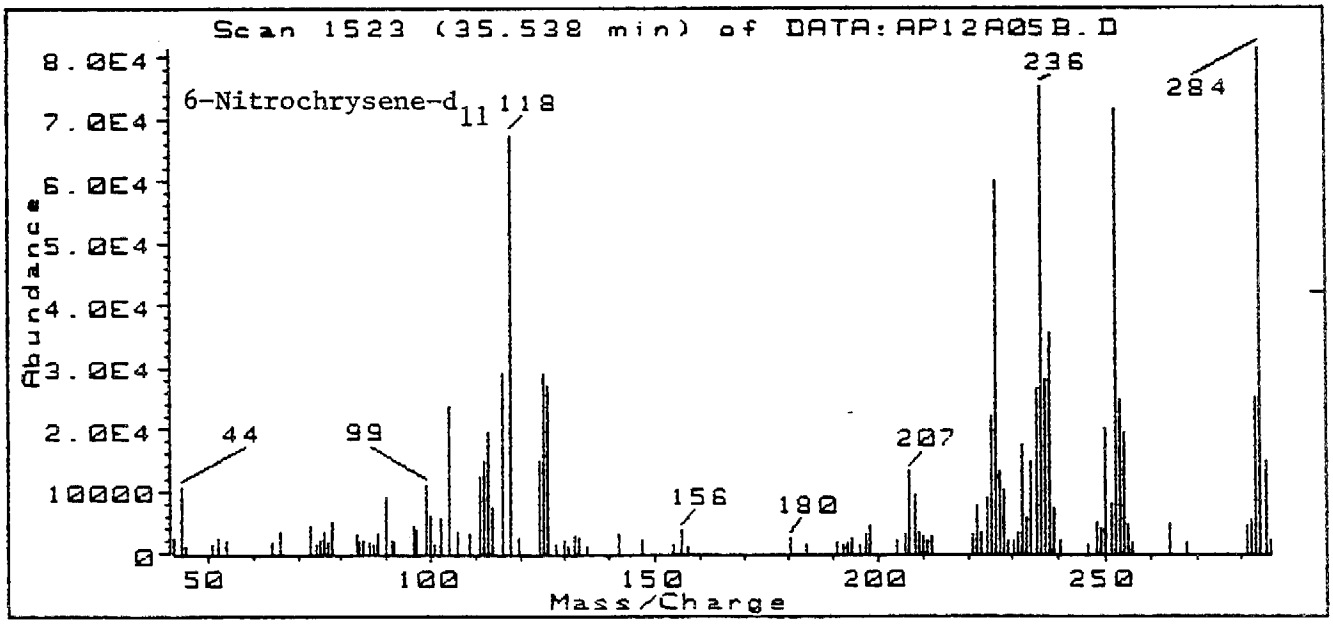

Scan 1274 (32.160 min) of DATA:AP12A05B.D
2-Nitrofluoranthene
Abundance
Mass/Charge
201
247
100
189
87
124
150
44

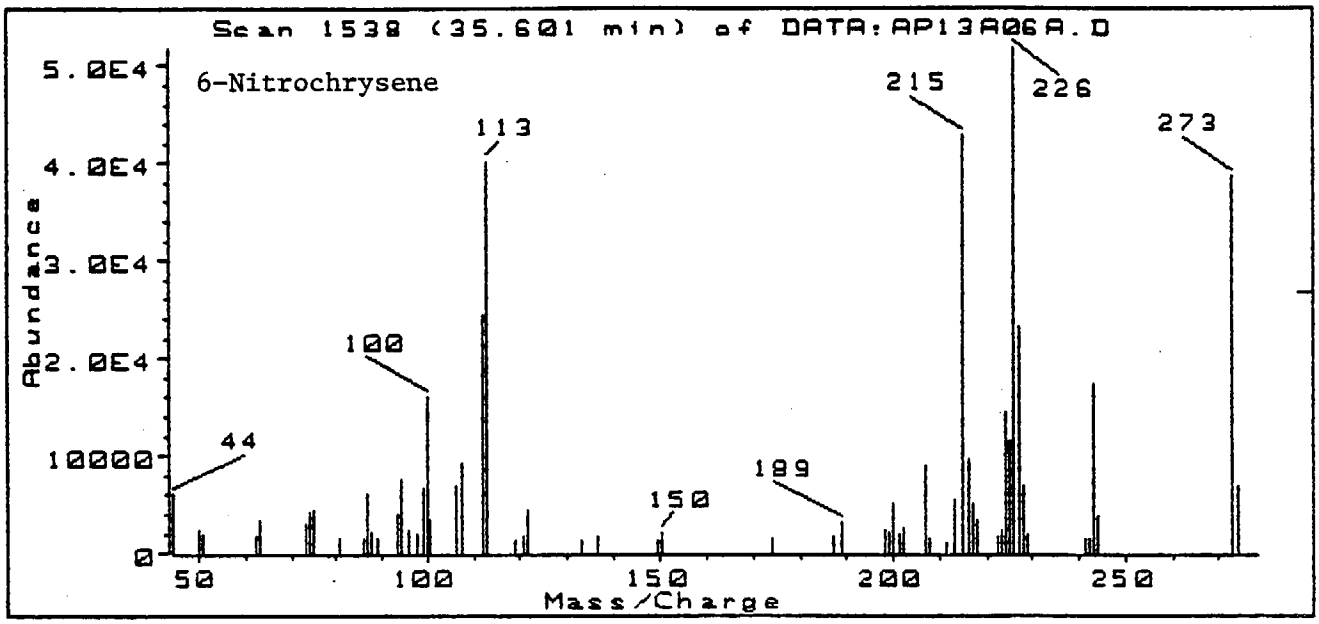

Scan 1319 (32.770 min) of DATA:AP12A05B.D
1-Nitropyrene-d9
Abundance
Mass/Charge
210
256
104
198
90
156
126
44

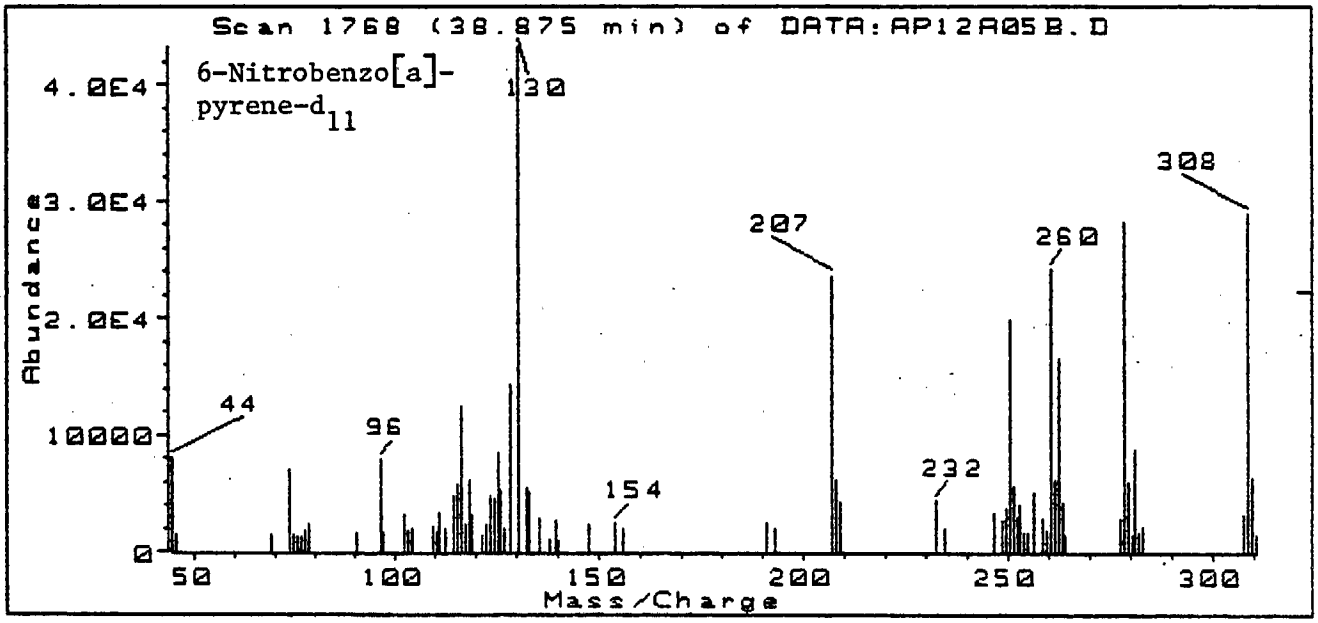

Scan 1420 (34.131 min) of DATA:AP12A05B.D
9-Nitrobenz[a]-
anthracene-d11
(tentative
identification)
Abundance
Mass/Charge
118
236
284
99
207
156
180
44

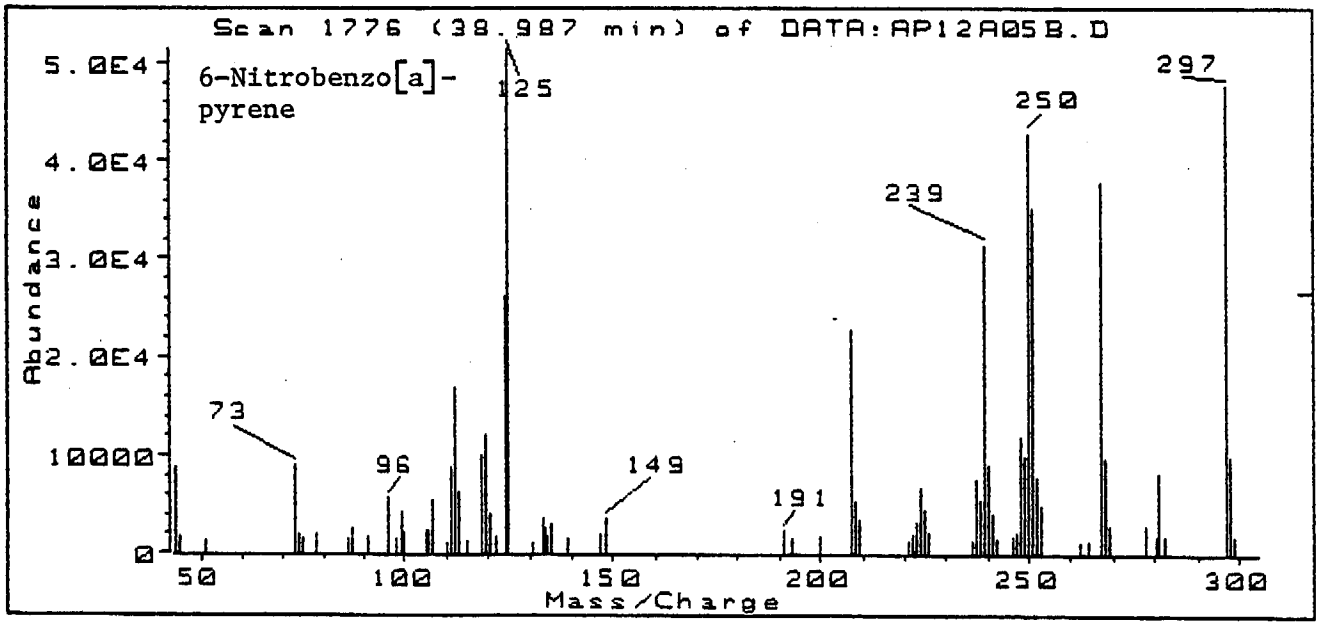

Scan 1463 (34.715 min) of DATA:AP12A05B.D
7-Nitrobenz[a]-anthracene-d11
Abundance
Mass/Charge
118
226
284
44
99
142
180
207


Scan 1469 (34.805 min) of DATA:AP12A05B.D
7-Nitrobenz[a]-anthracene
Abundance
Mass/Charge
113
215
226
273
100
137
189
63


Scan 1523 (35.538 min) of DATA:AP12A05B.D
6-Nitrochrysene-d11
Abundance
Mass/Charge
118
236
284
44
99
156
180
207


Scan 1538 (35.601 min) of DATA:AP13A06A.D
6-Nitrochrysene
Abundance
Mass/Charge
5.0E4
4.0E4
3.0E4
2.0E4
10000
0
50
100
150
200
250
44
100
113
150
189
215
226
273


Scan 1768 (38.875 min) of DATA:AP12A05B.D
6-Nitrobenzo[a]-
pyrene-d11
Abundance
Mass/Charge
4.0E4
3.0E4
2.0E4
10000
0
50
100
150
200
250
300
44
96
130
154
207
232
260
308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6-Nitrobenzo[a]-
pyrene
Abundance
Mass/Charge
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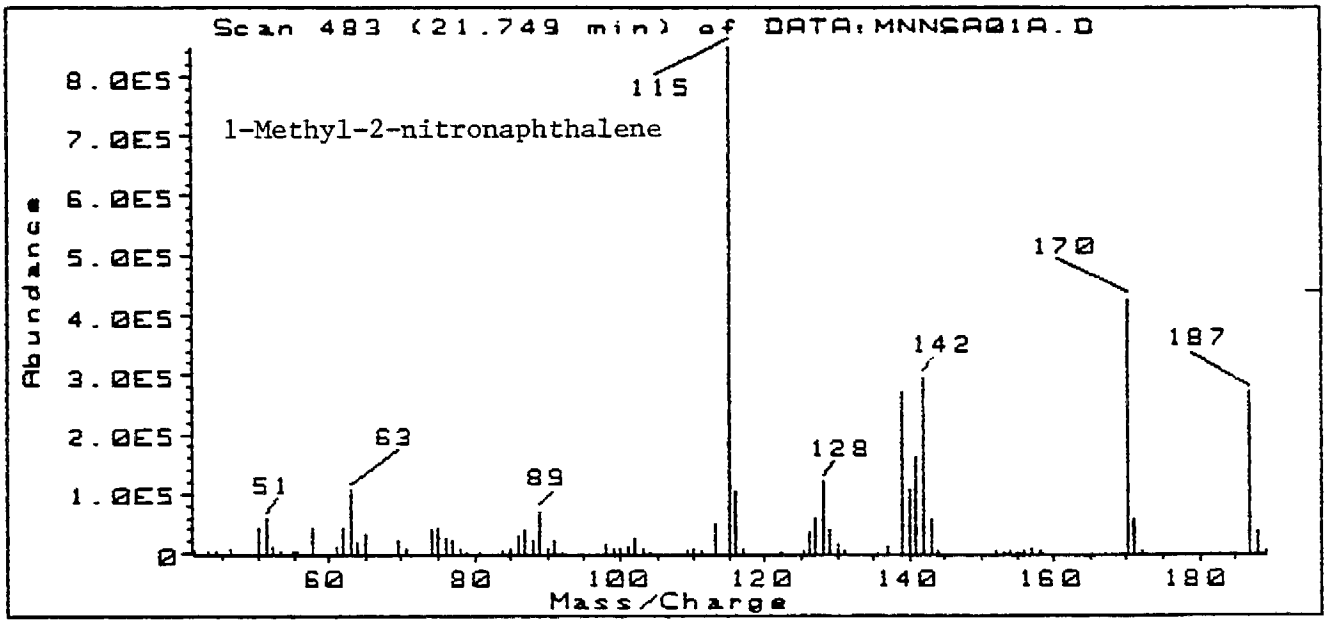
4.0E4
3.0E4
2.0E4
10000
0
50
100
150
200
250
300
73
96
125
149
191
239
250
297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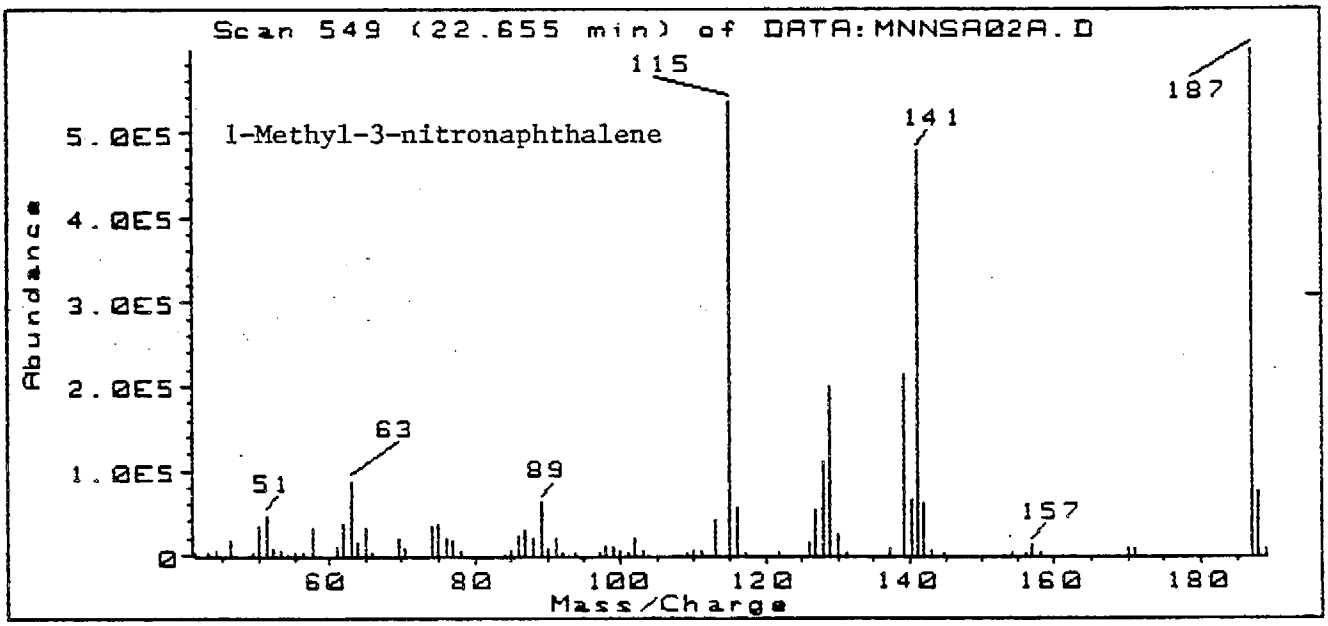
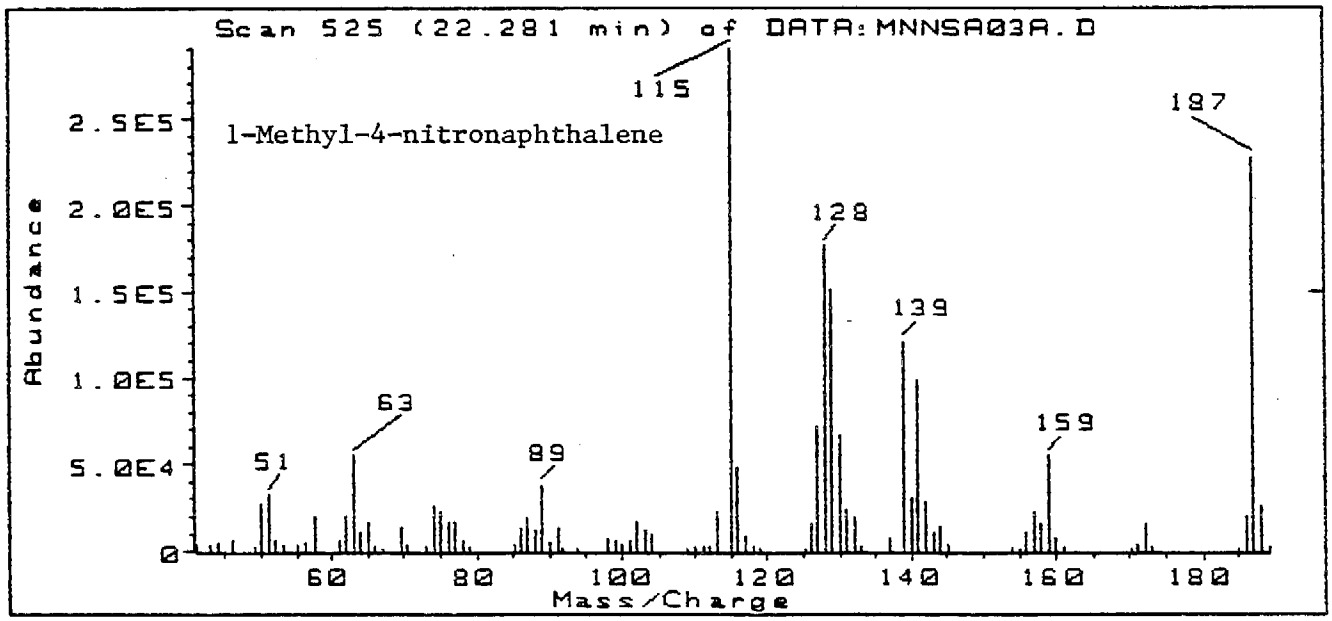
1-Methyl-2-nitronaphthalene
Abundance
Mass/Charge
115
170
142
187
128
63
89
51


Scan 549 (22.655 min) of DATA:MNNSA02A.D
1-Methyl-3-nitronaphthalene
Abundance
Mass/Charge
115
187
141
63
89
51
157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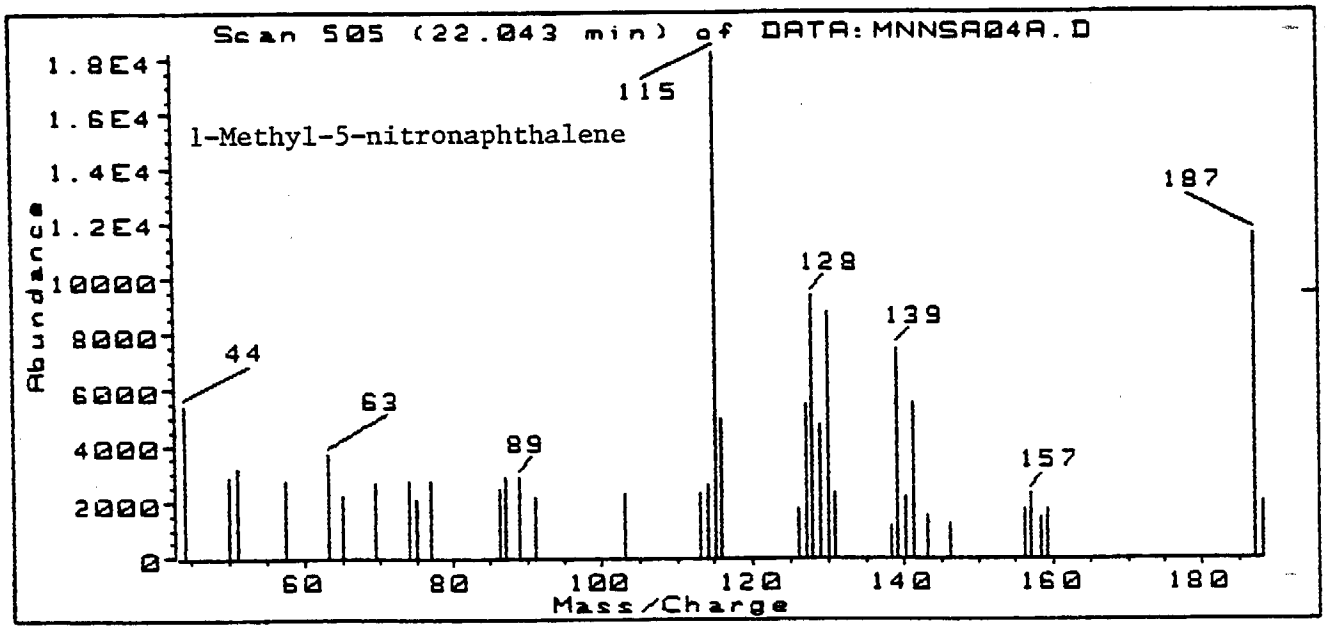
1-Methyl-4-nitronaphthalene
Abundance
Mass/Charge
115
187
128
139
63
89
51
159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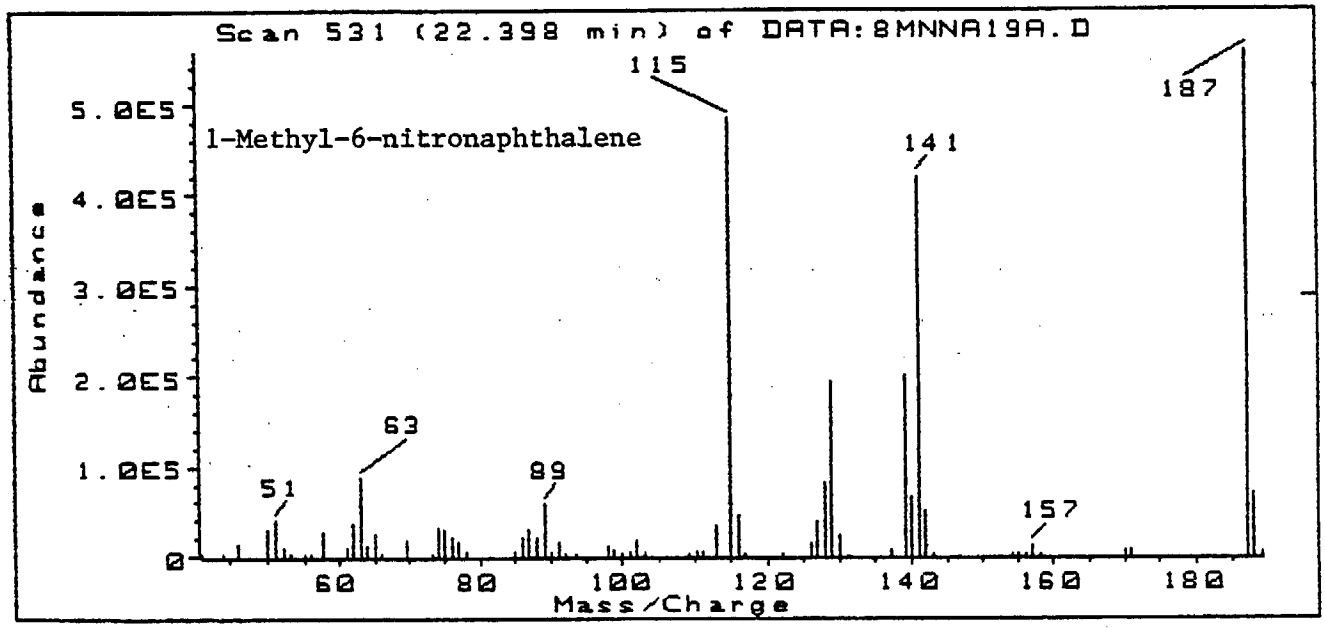
1-Methyl-5-nitronaphthalene
Abundance
Mass/Charge
115
187
128
139
44
63
89
157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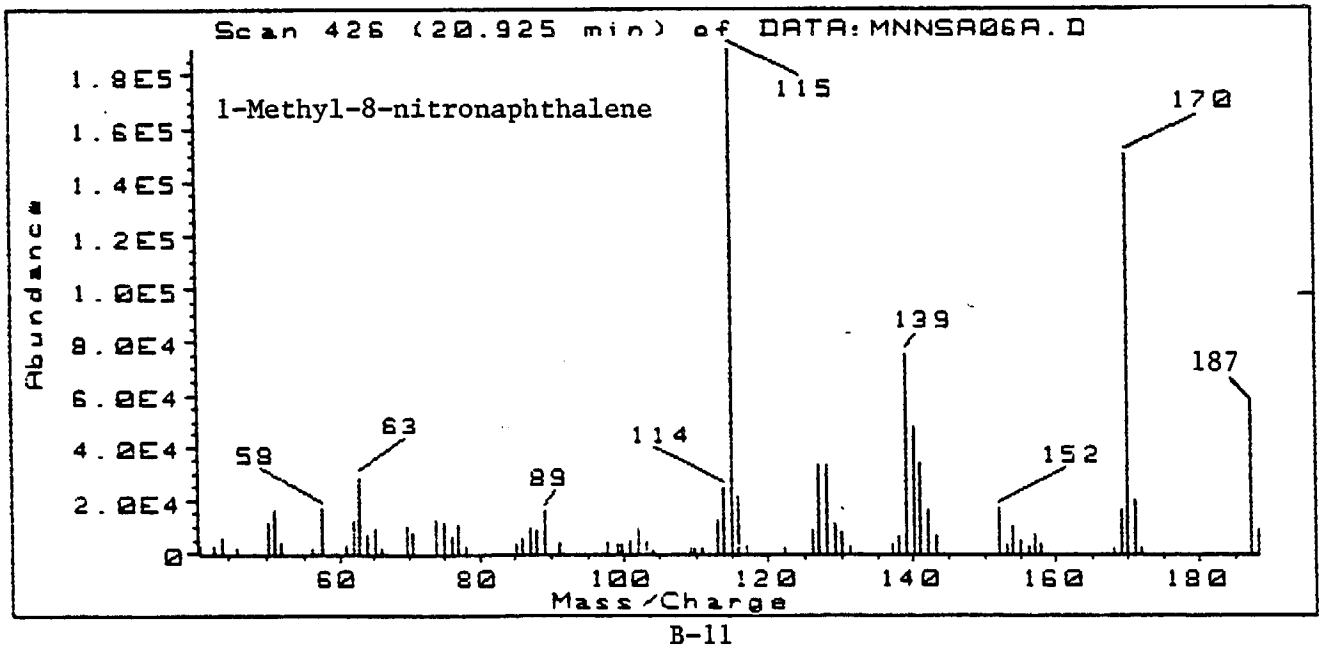
Abundance
Mass/Charge
115
187
141
63
89
51
157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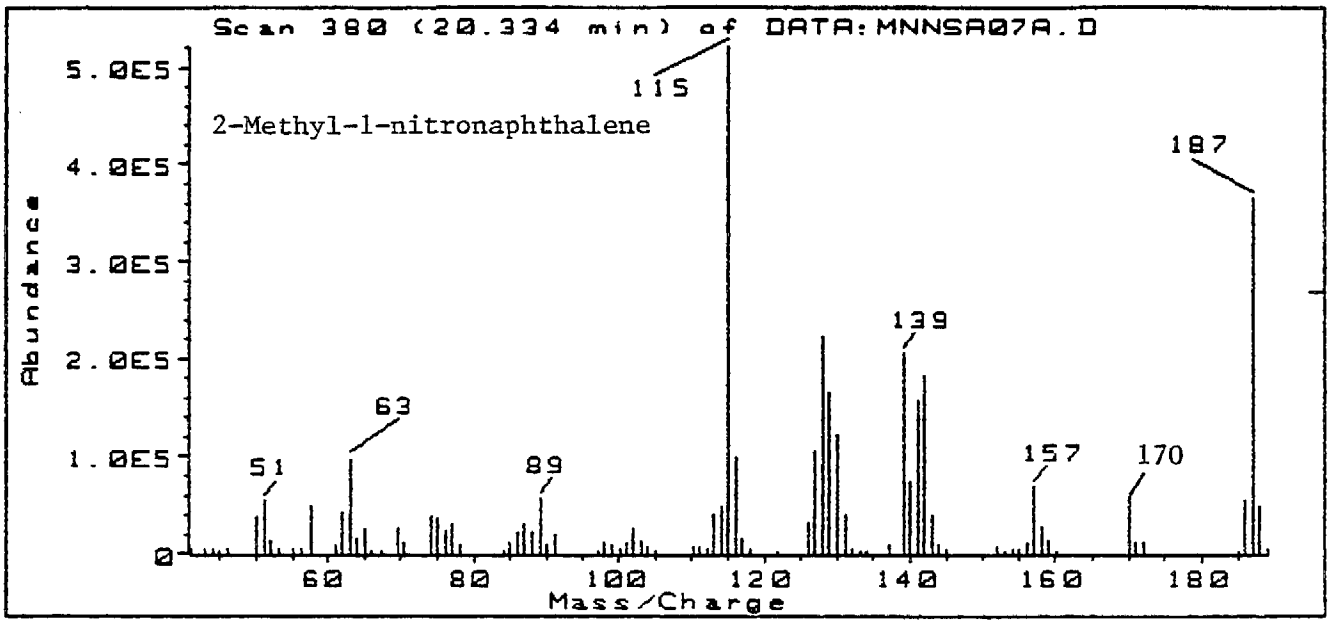
Abundance
Mass/Charge
115
170
139
187
63
114
58
89
152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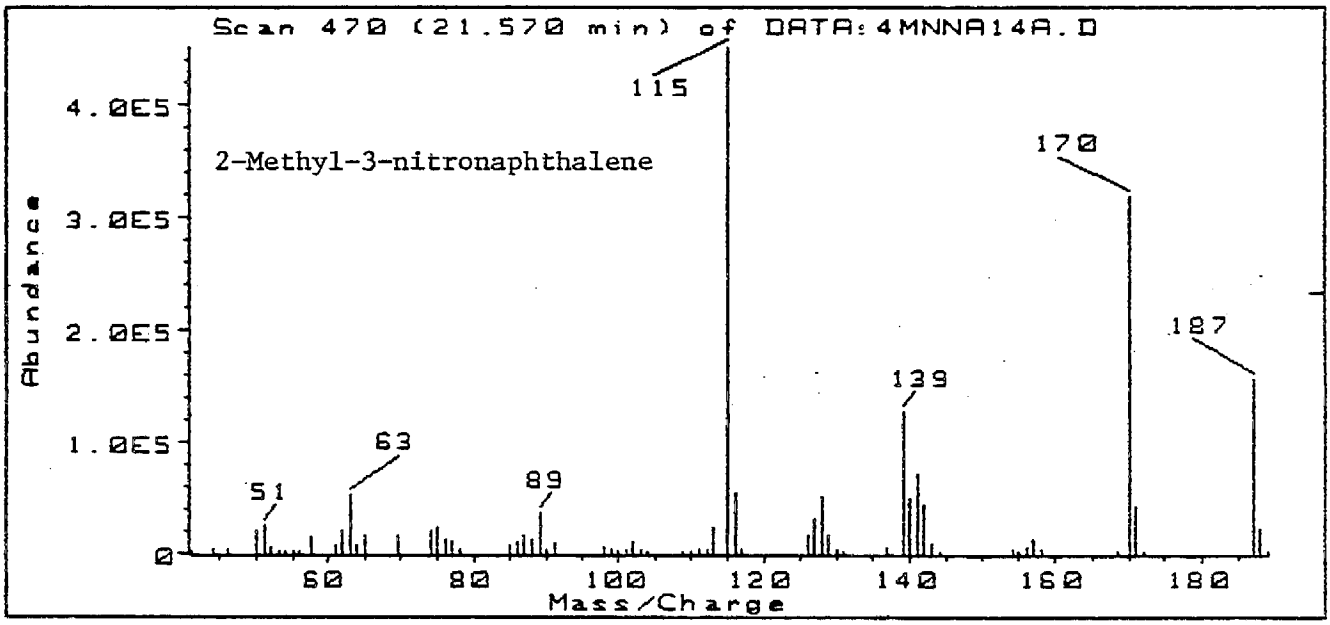
2-Methyl-1-nitronaphthalene
Abundance
Mass/Charge
115
187
139
63
51
89
157
170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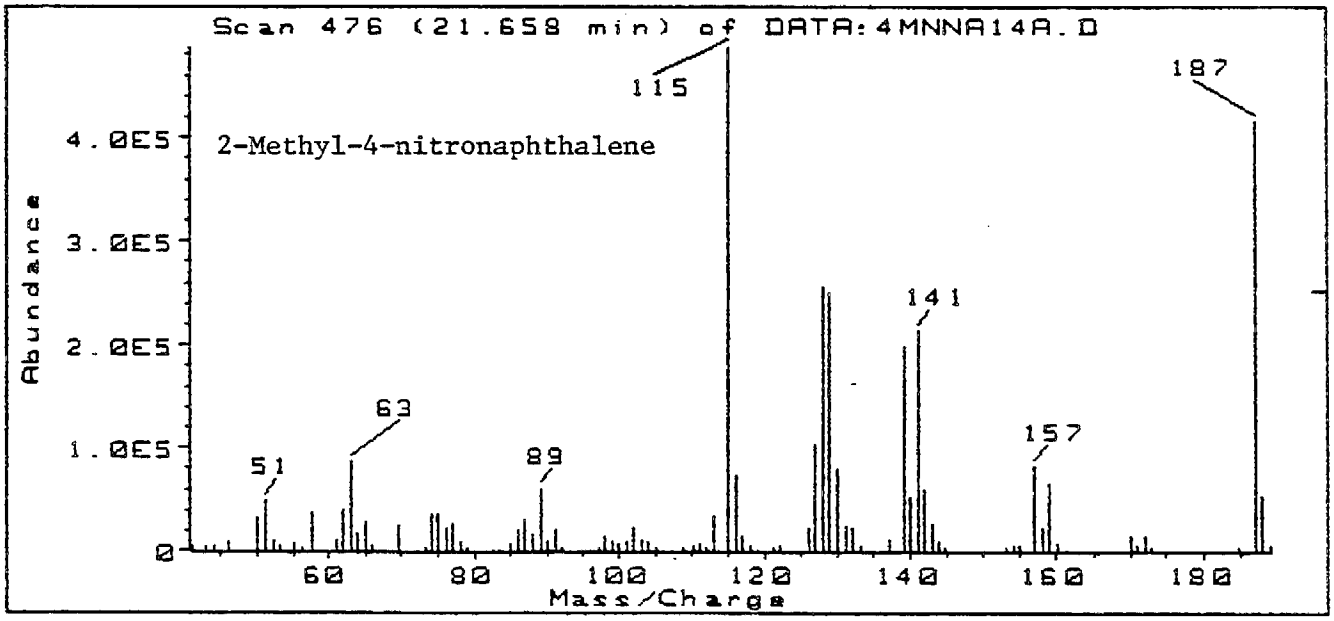
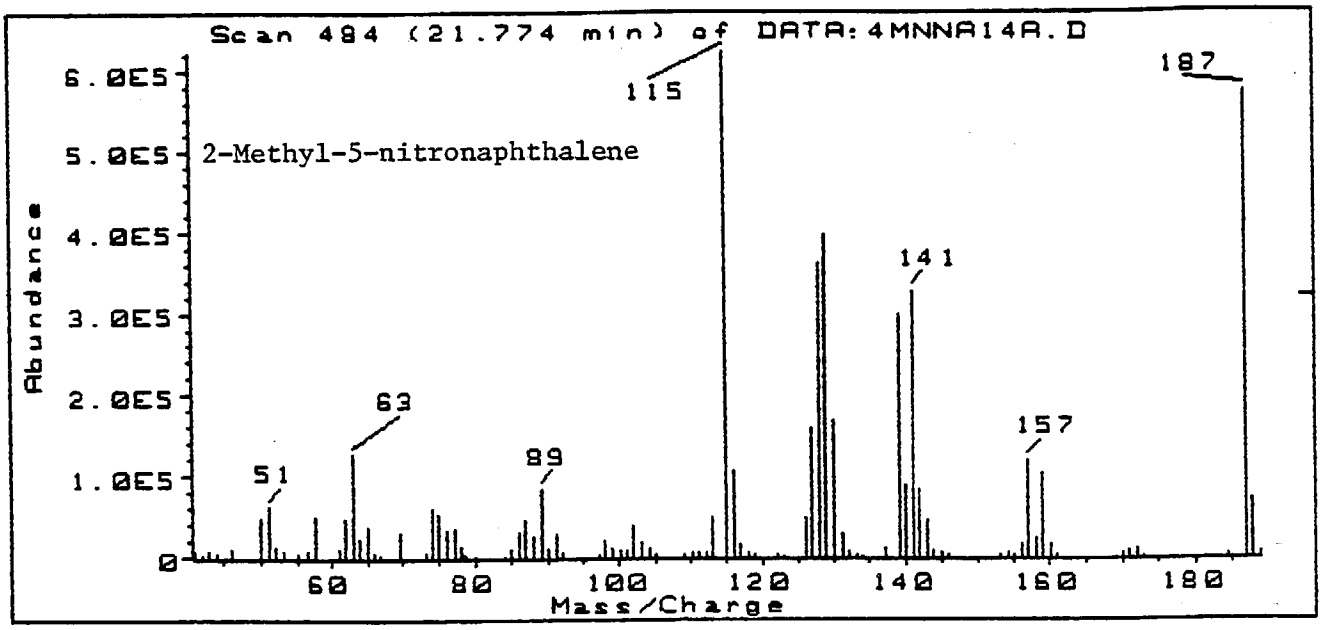
2-Methyl-3-nitronaphthalene
Abundance
Mass/Charge
115
170
187
139
63
51
89


Scan 476 (21.658 min) of DATA:4MNNA14A.D
2-Methyl-4-nitronaphthalene
Abundance
Mass/Charge
115
187
141
63
157
51
89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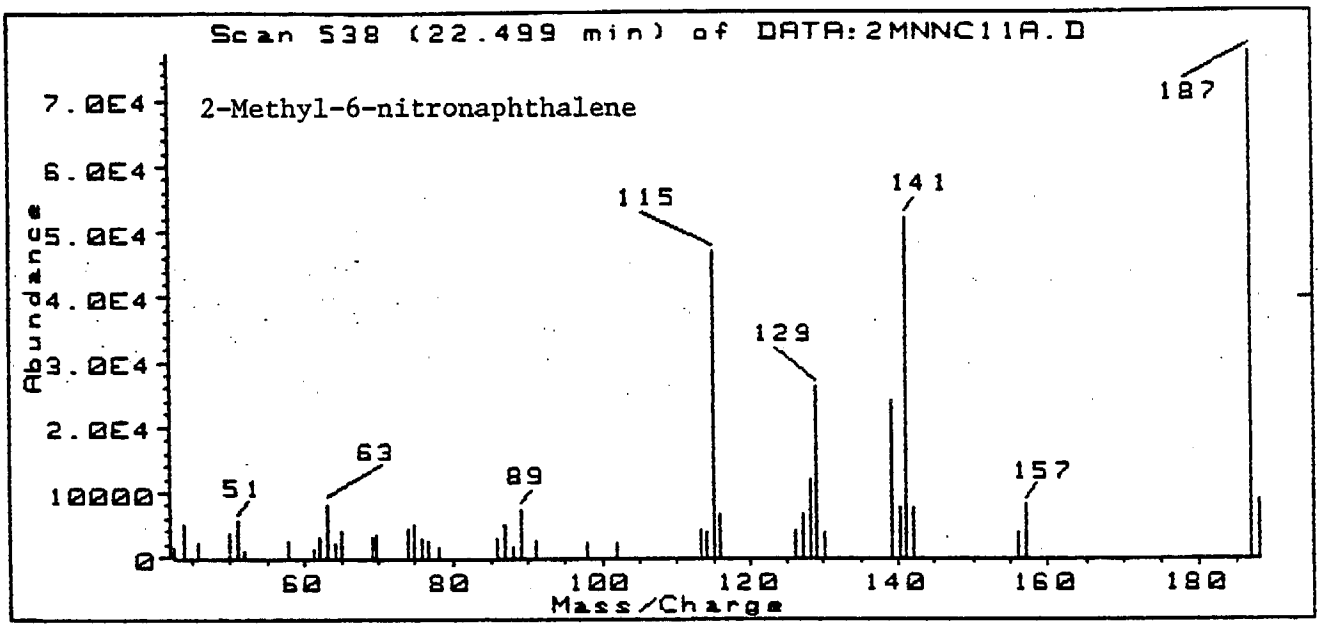
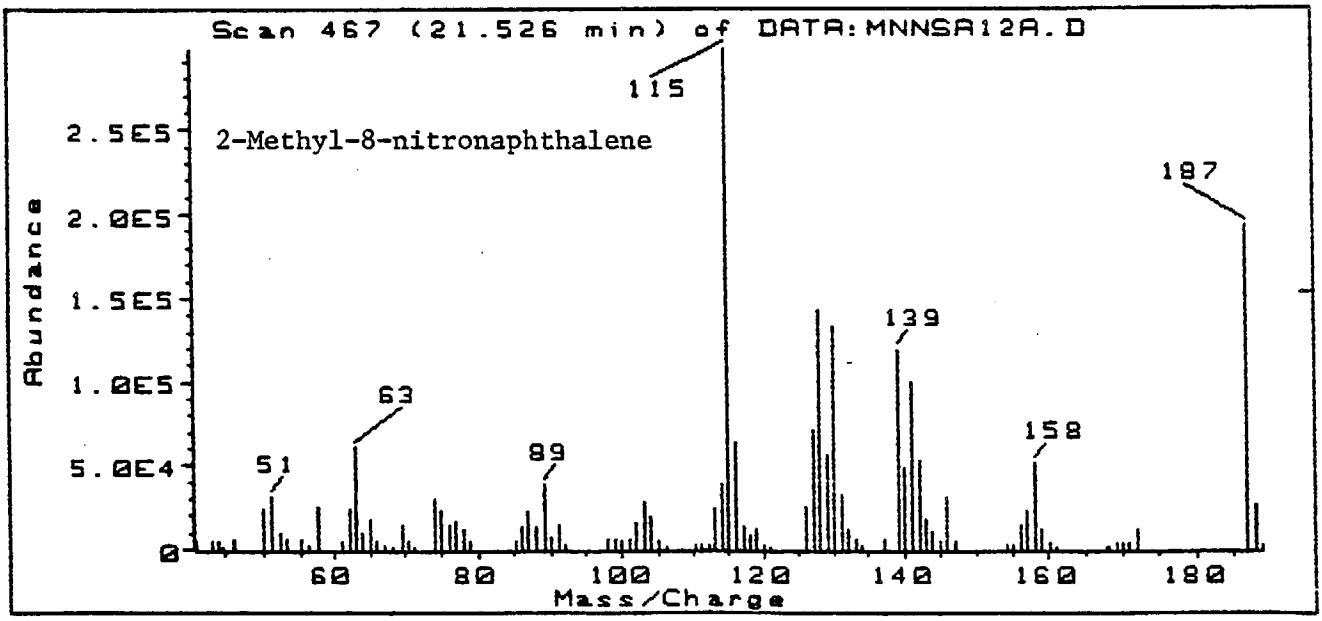
2-Methyl-5-nitronaphthalene
Abundance
Mass/Charge
115
187
141
63
157
89
51


Scan 538 (22.499 min) of DATA:2MNNC11A.D
2-Methyl-6-nitronaphthalene
Abundance
Mass/Charge
187
115
141
129
63
89
51
157


Scan 467 (21.526 min) of DATA:MNNSA12A.D
2-Methyl-8-nitronaphthalene
Abundance
Mass/Charge
115
187
139
63
158
89
51

APPENDIX C

Data Tables for GC/MS/MID Quantifications

Table C-1 to C-7	Naphthalene (μg) Measured and Total Volume Sampled on Low-Flow Tenax at the Seven Sites.
Table C-8	PAH (ng m^{-3}) Measured on Low-Flow and High-Flow Tenax at Glendora.
Table C-9	PAH (μg) Measured and Total Volume Sampled on High-Flow Tenax at the Seven Sites.
Table C-10	PAH (ng m^{-3}) Measured and Total Volume Sampled on PUFs at Glendora (including Data on PUF #4).
Table C-11	PAH (μg) Measured and Total Volume Sampled on PUFs at the Seven Sampling Sites.
Table C-12	Nitroarenes (μg) Measured and Total Volume Sampled on PUFs at the Seven Sampling Sites.
Table C-13	Nitroarenes (μg) Measured and Total Volume Sampled on PUFs at Glendora (including Data on PUF #4).
Table C-14	PAH (μg) of M.W. 202-234 Measured on TIGF Filters at the Seven Sampling Sites and San Nicolas Island.
Table C-15	PAH (μg) of M.W. 252 Measured on TIGF Filters at the Seven Sampling Sites and San Nicolas Island.
Table C-16	PAH (μg) of M.W. 276-300 Measured on TIGF Filters at the Seven Sampling Sites.
Table C-17	Nitrofluoranthenes and Nitropyrenes (μg) Measured on TIGF Filters at the Seven Sampling Sites and San Nicolas Island.
Table C-18	Nitronaphthalenes, 9-Nitroanthracene and 7-Nitrobenz-[a]anthracene (μg) Measured on TIGF Filters at the Seven Sampling Sites.

Table C-1. Naphthalene (μg) Measured and Total Volumes Sampled on Low-Flow Tenax at Glendora, CA, August 1986 (Day, 0800-2000 PDT; Night, 2000-0800 PDT)

Date		Total Volume m^3	μg[a]
8/12/86	Day	0.66	1.51 1.41
8/12-13/86	Night	0.56	2.86 2.70
8/13/86	Day	0.52	1.31 1.21
8/13-14/86	Night	0.54	2.65 2.53
8/14/86	Day	0.66	1.67 1.61
8/14-15/86	Night	0.66	2.00 1.95
8/15/86	Day	0.61	1.71 1.69
8/15-16/86	Night	0.52	2.16 2.06
8/16/86	Day	0.47	1.53 1.44
8/16-17/86	Night	0.57	2.01 1.90
8/17/86	Day	0.66	1.37 1.26
8/17-18/86	Night	0.63	2.76 2.60
8/18/86	Day	0.52	2.20 1.99
8/18-19/86	Night	0.59	2.49 2.38

(continued)

Table C-1 (continued) - 2

Date		Total Volume m^3	µg[a]
8/19/86	Day	0.59	2.55 2.58
8/19-20/86	Night	0.52	2.05 1.93
8/20/86	Day	0.49	2.04 1.95
8/20-21/86	Night	0.45	2.75 2.78

[a]Values given are for replicate injections on GC/MS.

Table C-2. Naphthalene (μg) Measured and Total Volumes Sampled on Low-Flow Tenax at Yuba City, CA, October 1986 (Day, 0700-1900 PDT; Night, 1900-0700 PDT)

Date		Total Volume m^3	μg[a]
10/16/86	Day	0.96	0.21 0.22
10/16-17/86	Night	0.99	0.07 0.06
10/17/86	Day (0700-1700)[b]	0.89	0.08 0.08
10/18/86	Day	0.63	0.11 0.10
10/18-19/86	Night	1.01	0.07 0.08
10/20/86	Day (0900-1900)[b]	0.56	0.03 0.03
10/20-21/86	Night	1.06	0.72 0.71
10/21/86	Day	0.97	1.08 1.09
10/21-22/86	Night	0.95	2.20 2.30
10/23/86	Day (0900-1620)[b]	0.50	0.14 0.15
10/23-24/86	Night (2345-0730)[b]	0.70	0.07 0.08
10/25/86	Day (1000-1700)[b]	0.35	0.06 0.08

[a]Values given are for replicate injections on GC/MS.
[b]Weather conditions necessitated shortened sampling interval as indicated.

Table C-3. Naphthalene (μg) Measured and Total Volumes Sampled on Low-Flow Tenax at Concord, CA, December 1986 and January 1987 (Day, 0500-1700 PST; Night, 1700-0500 PST)

Date		Total Volume m^3	μg[a]
12/6-7/86	Night (2045-0500)[b]	0.71	3.28 3.22
12/7/86	Day	0.65	0.57 0.55
12/7-8/86	Night	0.45	1.33 1.30
12/8/86	Day	0.65	0.85 0.84
12/8-9/86	Night	0.56	1.36 1.36
12/9/86	Day	0.38	0.38 0.38
12/10-11/86	Night	0.66	1.20 1.19
12/12/86	Day	1.22	0.74 0.74
1/13/87	Day (0930-1700)[b]	0.34	0.16 0.16
1/13-14/87	Night (1815-0500)[b]	0.51	0.69 0.68
1/14/87	Day	0.56	0.59 0.58
1/14-15/87	Night	0.58	0.26 0.25
1/17-18/87	Night	0.75	2.07 2.01
1/18/87	Day	0.40	0.41 0.39

(continued)

Table C-3 (continued) - 2

Date		Total Volume m^3	µg[a]
1/18-19/87	Night	0.67	1.04 1.01
1/19/87	Day	0.59	0.69 0.68
1/21/87	Day	0.54	0.32 0.32
1/21-22/87	Night	0.59	1.37 1.36
1/22/87	Day (0500-1600)[b]	0.74	0.67 0.67

[a]Values given are for replicate injections on GC/MS.
[b]Sampling interval less than 12-hr as indicated.

Table C-4. Naphthalene (μg) Measured and Total Volumes Sampled on Low-Flow Tenax at Mammoth Lakes, CA, February 1987 (Day, 0500-1700 PST; Night, 1700-0500 PST)

Date		Total Volume m^3	μg[a]
2/14/87	Day	0.41	0.57 0.59
2/14-15/87	Night (1700-2400)[b]	0.24	0.16 0.21
2/15-16/87	Night	0.93	0.78 0.80
2/16/87	Day	0.70	0.37 0.41
2/16-17/87	Night	0.48	0.64 0.65
2/17/87	Day	0.52	0.24 0.28
2/17-18/87	Night	0.69	0.60 0.61
2/18/87	Day (0500-1000)[b]	0.32	0.15 0.21
2/20-21/87	Night	0.87	1.21 1.16
2/21/87	Day	0.69	0.39 0.42
2/21-22/87	Night	0.45	0.16 0.21
2/22/87	Day	0.53	0.23 0.28
2/22-23/87	Night	0.87	0.08 0.14
2/25-26/87	Night (1800-0500)[c]	0.39	0.08 0.14

(continued)

Table C-4 (continued) - 2

Date		Total Volume m^3	µg[a]
2/26/87	Day	0.44	0.23 0.28
2/27-28/87	Night	0.68	0.67 0.68
2/28/87	Day	0.61	0.49 0.52
2/28-3/1/87	Night	0.44	0.64 0.64

[a]Values given are for replicate injections on GC/MS.
[b]Sampling interval shortened due to snow.
[c]Sampling interval less than 12-hr as indicated.

Table C-5. Naphthalene (μg) Measured and Total Volumes Sampled on Low-Flow Tenax at Oildale, CA, March and April 1987 (Day, 0600-1800 PST; Night, 1800-0600 PST)

Date		Total Volume m^3	μg[a]
3/29-30/87	Night	0.78	0.22 0.18
3/30/87	Day	0.96	0.13 0.10
3/31/87	Day (0800-1800)[b]	0.52	0.18 0.16
3/31-4/1/87	Night	0.48	0.19 0.16
4/1/87	Day	0.61	0.14 0.13
4/1-2/87	Night	0.59	0.20 0.19
4/2/87	Day	0.51	0.14 0.11
4/7/87	Day	0.78	0.18 0.15
4/7-8/87	Night	0.72	0.31 0.32
4/8/87	Day	0.52	0.15 0.12
4/8-9/87	Night	0.48	0.24 0.24
4/9/87	Day	0.60	0.17 0.14
4/9-10/87	Night	0.63	0.26 0.26
4/10/87	Day	0.45	0.13 0.10
4/10-11/87	Night	0.48	0.15 0.12

[a]Values given are for replicate injections on GC/MS.
[b]Sampling interval less than 12-hr as indicated.

Table C-6. Naphthalene (μg) Measured and Total Volumes Sampled on Low-flow Tenax at Reseda, CA, May and June 1987 (Day, 0700-1900 PDT; Night, 1900-0700 PDT)

Date		Total Volume m^3	μg[a]
5/27-28/87	Night (2000-0700)[b]	1.01	1.00 1.01
5/28/87	Day	0.64	0.33 0.33
5/28-29/87	Night	0.61	0.81 0.80
5/29/87	Day	0.58	0.44 0.43
5/29-30/87	Night	0.91	1.28 1.27
5/30/87[c]	Day	0.96	0.35 0.36
5/31/87	Day	0.55	0.23 0.22
5/31-6/1/87	Night	0.83	1.36 1.34
6/1/87	Day	0.87	0.30 0.30
6/1-2/87	Night	0.56	0.89 0.88
6/2/87	Day	0.51	0.33 0.33
6/2-3/87	Night	0.81	0.79 0.80
6/13-14/87	Night	0.58	0.41 0.41
6/14/87	Day	0.54	0.19 0.19

(continued)

Table C-6 (continued) - 2

Date		Total Volume m^3	µg[a]
6/14-15/87	Night	0.86	0.30 0.30
6/15/87	Day	0.81	0.37 0.36

[a]Values given are for replicate injections on GC/MS.
[b]Sampling interval less than 12-hr as indicated.
[c]Sample from 5/30-31/87 could not be quantified; no internal standard added prior to elution.

Table C-7. Naphthalene (μg) Measured and Total Volumes Sampled on Low-Flow Tenax at Pt. Arguello, CA, July 1987 (Day, 0700-1900 PDT; Night, 1900-0700 PDT)

Date		Total Volume m^3	μg
7/4/87	Day	0.58	0.03
7/4-5/87	Night	0.55	0.06
7/5/87	Day	0.81	0.04
7/5-6/87	Night	0.67	0.04
7/6/87	Day	0.53	0.03
7/6-7/87	Night	0.53	0.08
7/7/87	Day	0.53	0.04
7/7-8/87	Night	[a]	
7/8/87	Day	0.65	0.04
7/8-9/87	Night	0.62	0.06
7/9/87	Day	0.81	0.07
7/9-10/87	Night	0.72	0.06
7/10/87	Day	0.52	0.08
7/10-11/87	Night	0.46	0.09
7/11/87	Day	0.68	0.04
7/11-12/87	Night	[b]	
7/12/87	Day	0.56	0.05
7/12-13/87	Night	0.66	0.08
7/13/87	Day	0.81	0.07
7/13-14/87	Night	0.73	0.03

[a] Flow valve plugged.
[b] Condensation on flow valve.

Table C-8. A Comparison of PAH Concentrations (ng m^{-3}) Measured on Low Flow and High Flow Tenax-GC Solid Adsorbent at Citrus College, Glendora, CA (Day, 0800-2000 PDT; Night, 2000-0800 PDT)

Date		ng m^{-3} [a]					
		Naphthalene		1-Methyl-naphthalene		2-Methyl-naphthalene	
		Low Flow[b]	High Flow[c]	Low Flow[d]	High Flow	Low Flow	High Flow
8/12/86	Day	2,200	e	150	e	250	e
8/12-13/86	Night	5,000	2,200	460	500	860	900
8/13/86	Day	2,400	1,100	140	160	100	320
8/13-14/86	Night	4,800	1,900	430	390	720	730
8/14/86	Day	2,500	820	100	130	150	260
8/14-15/86	Night	3,000	1,600	340	330	680	640
8/15/86	Day	2,800	e	180	e	190	e
8/15-16/86	Night	4,100	2,000	380	380	720	730
8/16/86	Day	3,200	690	130	98	60	200
8/16-17/86	Night	3,400	1,800	350	350	660	700
8/17/86	Day	2,000	470	60	76	50	170
8/17-18/86	Night	4,300	1,800	310	330	650	680
8/18/86	Day	4,100	670	110	120	120	260
8/18-19/86	Night	4,200	1,600	270	280	540	570
8/19/86	Day	4,300	500	100	90	110	200
8/19-20/86	Night	3,800	1,600	350	290	620	600
8/20/86	Day	4,100	810	180	150	180	320
8/20-21/86	Night	6,100	e	490	e	860	e

[a] Average of replicate injections.
[b] Sampled at ~1 L min^{-1}.
[c] Sampled at ~10 L min^{-1}.
[d] Corrected by subtraction of average interference value as observed on back-up Tenax.
[e] High flow Tenax sample lost.

Table C-9. Volatile PAH (μg) Measured and Total Volumes Sampled for Selected Day/Night Intervals[a] at the Seven Sampling Sites in California. Samples were collected onto High-Flow Tenax-GC Solid Adsorbent Cartridges

Location and Date		Total Volume m^3	μg[b] Naphthalene	1-Methylnaphthalene	2-Methyl naphthalene	Biphenyl	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
Glendora[c]		0.66	1.51	0.11	0.18					
8/12/86	Day		1.41	0.11	0.15					
Glendora		6.76	14.99	3.24	5.83	1.51	0.26	0.22	0.33	0.43
8/12-13/86	Night		14.57	3.46	6.35	1.51	0.27	0.21	0.33	0.43
Glendora		6.76	7.97	1.07	2.09	0.64	d	0.02	0.20	0.17
8/13/86	Day		7.56	1.11	2.18	0.64	0.02	0.04	0.21	0.18
Glendora		6.83	12.83	2.53	4.75	1.16	0.08	0.15	0.25	0.34
8/13-14/86	Night		12.66	2.74	5.24	1.19	0.09	0.15	0.26	0.35
Glendora		6.83	5.70	0.90	1.73	0.48	d	0.02	0.20	0.14
8/14/86	Day		5.45	0.92	1.79	0.48	0.02	0.04	0.21	0.14
Glendora		6.83	11.22	2.19	4.23	0.71	0.15	0.11	0.23	0.27
8/14-15/86	Night		10.79	2.32	4.56	0.72	0.16	0.12	0.24	0.28
Glendora[c]		0.61	1.71	0.10	0.12					
8/15/86	Day		1.69	0.11	0.11					
Glendora		6.83	13.76	2.50	4.75	0.45	0.06	0.14	0.23	0.28
8/15-16/86	Night		13.40	2.66	5.20	0.45	0.07	0.15	0.25	0.30
Glendora		6.69	4.66	0.64	1.32	0.34	d	d	0.15	0.10
8/16/86	Day		4.63	0.67	1.40	0.35	0.02	0.03	0.16	0.11
Glendora		6.83	12.60	2.29	4.57	0.66	d	0.16	0.27	0.25
8/16-17/86	Night		12.39	2.51	5.01	0.68	0.02	0.17	0.28	0.26
Glendora		6.34	2.99	0.47	1.02	0.23	d	d	0.17	0.12
8/17/86	Day		2.96	0.49	1.08	0.23	0.02	0.03	0.17	0.13

(continued)

Table C-9 (continued) - 2

Location and Date		Total Volume m^3	Naphthalene (µg[b])	1-Methylnaphthalene (µg[b])	2-Methyl naphthalene (µg[b])	Biphenyl (µg[b])	Acenaphthylene (µg[b])	Acenaphthene (µg[b])	Fluorene (µg[b])	Phenanthrene (µg[b])
Glendora		6.76	12.16	2.17	4.40	0.36	0.02	0.20	0.30	0.34
8/17-18/86	Night		12.28	2.36	4.83	0.37	0.04	0.20	0.33	0.35
Glendora		6.42	4.30	0.78	1.61	0.27	d	0.02	0.19	0.16
8/18/86	Day		4.31	0.81	1.74	0.28	0.02	0.04	0.21	0.17
Glendora		6.76	10.71	1.83	3.67	0.44	d	0.18	0.28	0.30
8/18-19/86	Night		10.34	2.02	4.08	0.46	0.02	0.20	0.30	0.32
Glendora		6.76	3.43	0.60	1.27	0.24	d	0.02	0.15	0.14
8/19/86	Day		3.38	0.62	1.37	0.25	0.02	0.04	0.16	0.15
Glendora		6.76	10.84	1.89	3.89	0.40	d	0.18	0.28	0.33
8/19-20/86	Night		10.36	1.98	4.19	0.41	0.02	0.20	0.31	0.34
Glendora		6.76	5.52	1.00	2.11	0.36	d	0.03	0.22	0.19
8/20/86	Day		5.41	1.06	2.27	0.36	0.02	0.05	0.23	0.20
Glendora[c]		0.45	2.75	0.23	0.39					
8/20-21/86	Night		2.78	0.23	0.39					
Yuba City		7.31	10.5	2.19	4.89	0.20	0.04	0.03	0.13	0.15
10/21/86	Day		10.8	2.26	5.11	0.19	0.04	0.02	0.16	0.16
Yuba City		8.24	16.3	4.14	8.58	0.25	0.25	0.19	0.25	0.29
10/21-22/86	Night		16.6	4.27	8.96	0.22	0.24	0.17	0.26	0.29
Concord		5.41	11.0	2.02	4.24	0.47	0.64	0.16	0.27	0.42
12/6-7/86	Night		10.7	2.00	4.30	0.44	0.62	0.15	0.29	0.43
Concord		7.52	4.4	0.65	1.46	0.03	0.01	0.03	0.09	0.10
12/7/86	Day		4.2	0.62	1.41	0.01	d	0.01	0.11	0.10

(continued)

Table C-9 (continued) - 3

Location and Date		Total Volume m^3	μg[b] Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Biphenyl	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
Mammoth		6.05	11.1	1.31	2.13	0.59	0.04	0.12	0.46	1.47
2/20-21/87	Night		10.9	1.28	2.08	0.56	0.04	0.11	0.45	1.37
Mammoth		6.48	6.1	0.84	1.63	0.09	0.01	0.02	0.15	0.43
2/21/87	Day		6.1	0.80	1.56	0.07	0.01	d	0.17	0.42
Oildale		6.26	1.8	0.24	0.47	0.06	d	e	0.04	0.01
4/7/87	Day		1.8	0.22	0.44	0.06	d	e	0.06	0.02
Oildale		4.82	3.4	0.79	1.53	0.10	0.03	0.05	0.10	0.07
4/7-8/87	Night		3.3	0.78	1.51	0.10	0.02	0.04	0.12	0.07
Reseda		5.80	10.0	2.04	4.30	0.11	0.11	0.06	0.12	0.13
5/28-29/87	Night		9.9	2.09	4.40	0.09	0.10	0.04	0.13	0.13
Reseda		5.58	5.6	0.90	1.85	0.15	d	e	0.07	0.07
5/29/87	Day		5.4	0.87	1.83	0.13	d	e	0.09	0.07
Pt. Arguello		5.69	0.22	e	e	e	e	e	0.02	e
7/6-7/87	Night		0.22	e	e	e	e	e	0.04	e
Pt. Arguello		5.69	0.25	e	e	e	e	e	0.02	e
7/7/87	Day		0.24	e	e	e	e	e	0.04	e

[a]See Tables B-1 through B-7 for the 12-hr day and 12-hr night sampling intervals at each site.
[b]Values given are for replicate injections on GC/MS.
[c]No high-flow Tenax sample; values given are from low-flow Tenax sample. The 2-methylnaphthalene value has been corrected by subtraction of an interference as observed on the back-up Tenax.
[d]Peak area too small for quantification.
[e]None detected.

Table C-10. PAH Concentrations (ng m^{-3}) Measured on PUF Plugs at Citrus College, Glendora, CA

	Total Volume m^3	Fluorene[a]	Dibenzo-thiophene	Phen-anthrene	Anthra-cene	Fluor-anthene[b]	Pyrene[b]
Citrus College PUF Sample #1 8/13/86 0800-2000 PDT	469[c]	7.7	2.6	16.1	0.5	4.0	2.5
Citrus College PUF Sample #2 8/13-14/86 2000-0800 PDT	938	17.5	3.3	23.2	1.9	6.2	5.5
Citrus College PUF Sample #3 Day Composite 0800-2000 PDT 8/15,16,17,18/86	3,751	5.4	2.3	14.4	0.3	4.2	2.4
4th PUF Day Composite	3,751	4.4	0.3[d]	1.5	0.04	0.03	0.02
Citrus College PUF Sample #4 Night Composite 2000-0800 PDT 8/15-16,16-17,17-18,18-19/86	3,751	14.1	3.0	22.2	1.2	5.2	4.0
4th PUF Night Composite	3,751	11.6	0.05[d]	0.2	e	0.02	0.03
Citrus College PUF Sample #5 8/20/86 0800-2000 PDT	938	6.2	2.7	19.0	0.5	5.9	3.6
Citrus College PUF Sample #6 8/20-21/86 2000-0800 PDT	938	20.8	4.5	31.8	1.8	6.8	4.9

[a]Not quantitative, a lower limit due to breakthrough.
[b]Some present on the particles as well.
[c]Only a single Hi-vol sample utilized; second Hi-vol not operating correctly.
[d]Based on a single injection.
[e]None detected.

Table C-11. PAH (μg) Measured and the Total Volumes Sampled for Single or Composited Day/Night Sampling Intervals on PUF Plugs at the Seven Sampling Sites in California

Location and Dates[a]			Total Volume m^3	μg[b,c] Fluorene[d]	Dibenzo-thiophene	Phenan-threne	Anthra-cene	Fluor-anthene	Pyrene
Glendora	Sample #1	Day	469[e]	3.61	1.21	7.28	0.20	1.94	1.14
8/13/86				3.65	1.23	7.85	0.25	1.82	1.18
Glendora	Sample #2	Night	938	17.18	3.09	21.86	1.46	5.76	5.11
8/13-14/86				15.70	3.13	21.66	2.06	5.94	5.28
Glendora	Sample #3	Day	3,751	35.62	9.27	56.04	1.16	15.19	9.06
8/15,16,17,18/86				38.11	10.30	63.62	1.14	16.12	9.37
Glendora	Sample #4	Night	3,751	93.18	10.63	78.53	4.53	19.06	15.14
8/15-16,16-17,17-18,18-19/86				99.14	11.85	89.48	4.60	20.24	15.44
Glendora	Sample #5	Day	938	5.59	2.44	16.89	0.53	5.43	3.32
8/20/86				6.03	2.71	18.84	0.48	5.65	3.38
Glendora	Sample #6	Night	938	18.93	3.97	28.23	1.72	6.29	4.60
8/20-21/86				20.08	4.49	31.48	1.75	6.54	4.65
Yuba City	Sample #1	Day	3,415	18.31	8.32	35.60	2.14	11.20	7.15
10/16,18,20/86				19.06	8.19	36.79	2.76	10.71	6.84
Yuba City	Sample #2	Day	1,475	5.48	1.62	8.81	0.48	2.87	1.57
10/17,23/86				5.51	1.52	10.53	0.43	2.98	1.69
Yuba City	Sample #3	Night	3,700	15.51	4.05	18.85	1.52	6.26	4.71
10/16-17,18-19,20-21,23-24/86				15.29	4.00	20.18	2.43	6.52	5.04
Concord	Sample #1	Day	2,874	25.36	6.27	49.84	9.16	21.02	20.94
12/8,9/86; 1/19/87				27.42	6.22	53.73	9.84	22.75	22.65

(continued)

Table C-11 (continued) - 2

Location and Dates[a]			Total Volume m^3	µg[b,c] Fluorene[d]	Dibenzo-thiophene	Phenan-threne	Anthra-cene	Fluor-anthene	Pyrene
Concord	Sample #2	Day	2,956	30.43	4.81	50.06	5.20	18.06	14.72
1/18,21,22/87				32.73	4.60	52.55	5.31	18.91	15.65
Concord	Sample #3	Night	2,717	55.67	7.32	105.66	33.22	46.23	40.68
12/6-7,7-8,8-9/86				60.70	7.43	118.43	37.78	50.45	45.23
Concord	Sample #4	Night	3,040	99.45	12.11	193.84	49.54	74.03	59.61
1/17-18,18-19,21-22/87				108.92	12.60	209.82	54.00	78.92	63.93
Concord	Sample #5	Night	1,951	22.03	5.00	38.15	7.41	12.47	11.98
12/10-11/86; 1/14-15/87				22.64	5.20	41.92	8.03	13.60	13.12
Mammoth Lakes	Sample #1	Day	6,234	66.74	6.91	147.80	40.24	61.64	55.25
2/14,16,17,21,22,26,28/87				56.89	5.70	119.17	33.07	53.97	46.71
				60.47	6.67	138.95	38.12	58.36	52.72
Mammoth Lakes	Sample #2	Night	4,506	126.99	2.88	292.56	102.54	73.61	57.77
2/16-17,17-18,20-21,27-28;				114.61	3.03	252.49	87.20	68.03	51.77
2/28-3/1/87				116.24	2.92	272.11	96.55	72.24	55.59
Mammoth Lakes	Sample #3	Night	4,480	41.59	1.92	92.80	25.69	19.36	15.97
2/14-15,15-16,21-22,22-23,				36.19	1.80	82.55	22.78	17.51	14.60
25-26/87				36.06	1.73	87.38	23.33	18.47	15.62
Oildale	Sample #1	Day	8,070	10.27	6.53	49.11	4.34	10.76	11.11
3/30,31/87; 4/1,2,7,8,9,10/87				9.05	6.58	48.26	3.82	10.31	10.05
Oildale	Sample #2	Night	3,113	16.72	3.54	26.83	2.21	3.75	3.68
3/29-30/87; 4/9-10,10-11/87				15.81	3.39	25.90	1.93	3.60	3.53

(continued)

Table C-11 (continued) - 3

Location and Dates[a]	Total Volume m^3	µg [b,c] Fluorene[d]	Dibenzo-thiophene	Phenan-threne	Anthra-cene	Fluor-anthene	Pyrene
Oildale Sample #3 Night 3/31-4/1/87; 4/1-2,7-8,8-9/87	4,151	28.67 26.06	6.62 6.93	50.20 47.49	4.37 3.78	6.79 6.65	6.60 6.27
Reseda Sample #1 Day 5/28,29,30,31/87; 6/1,2,14,15/87	8,188	21.64 22.18	13.53 13.27	118.21 121.79	9.32 10.11	34.45 35.38	25.47 26.49
Reseda Sample #2 Night 5/27-28,28-29,29-30,30-31,5/31-6/1; 6/1-2,2-3,13-14,14-15/87	9,326	86.73 89.78	17.68 13.54	162.34 170.63	17.80 19.69	37.05 39.39	31.39 33.97
Pt. Arguello Sample #1 Day 7/4,5,6,7,8,9,10,11,12/87	9,138	5.15 5.17	1.85 1.88	16.45 16.49	1.13 1.18	0.99 0.99	0.82 0.83
Pt. Arguello Sample #2 Night 7/4-5,5-6,6-7,7-8,8-9,9-10, 10-11,11-12/87	8,150	13.62 13.65	3.47 3.56	33.49 33.49	1.87 1.87	1.64 1.62	1.10 1.11

[a]See Section V for full details of compositing.
[b]Values given are for replicate or triplicate injections on GC/MS.
[c]Four PUF plugs in series were used at Glendora, three PUF plugs were used at all other sites.
[d]Not quantitative, a lower limit due to breakthrough.
[e]Single Hi-vol with PUF plugs, second Hi-vol malfunctioned.

Table C-12. Nitroarenes (μg) Measured and Total Volumes Sampled for Single or Composited Day/Night Sampling Intervals on PUF Plugs at the Seven Sampling Sites in California

Location and Dates[a]			Total Volume m^3	μg[b,c] 1-Nitro-naphthalene	2-Nitro-naphthalene	3-Nitro-biphenyl
Glendora 8/13/86	Sample #1	Day	469[d]	1.06 1.12	0.85 0.83	0.56 0.60
Glendora 8/13-14/86	Sample #2	Night	938	2.30 2.59	1.49 1.57	0.39 0.45
Glendora 8/15,16,17,18/86	Sample #3	Day	3,751	8.95 9.31	8.82 9.47	3.00 3.35
Glendora 8/15-16,16-17,17-18,18-19/86	Sample #4	Night	3,751	12.17 12.43	7.60 7.53	1.20 1.28
Glendora 8/20/86	Sample #5	Day	938	2.44 2.59	2.41 2.45	0.79 0.87
Glendora 8/20-21/86	Sample #6	Night	938	5.16 5.56	2.64 3.26	0.41 0.45
Yuba City 10/16,18,20/86	Sample #1	Day	3,415	1.74 1.56	2.14 2.05	0.59 0.69
Yuba City 10/17,23/86	Sample #2	Day	1,475	0.68 0.70	0.85 0.92	0.16 0.21
Yuba City 10/16-17,18-19,20-21,23-24/86	Sample #3	Night	3,700	1.64 1.74	1.32 1.40	0.22 0.29
Concord 12/8,9/86; 1/19/87	Sample #1	Day	2,874	0.30 0.30	0.52 0.43	0.17 0.13

(continued)

Table C-12 (continued) - 2

Location and Dates[a]			Total Volume m^3	µg [b,c] 1-Nitro-naphthalene	2-Nitro-naphthalene	3-Nitro-biphenyl
Concord 1/18,21,22/87	Sample #2	Day	2,956	0.50 0.48	≤1.02[e] ≤1.05[e]	0.15 0.24
Concord 12/6-7,7-8,8-9/86	Sample #3	Night	2,717	1.50 1.41	0.77 0.67	0.23 0.18
Concord 1/17-18,18-19,21-22/87	Sample #4	Night	3,040	2.34 2.11	1.48 1.24	0.41 0.32
Concord 12/10-11/86; 1/14-15/87	Sample #5	Night	1,951	0.37 0.37	0.28 0.33	0.05 0.06
Mammoth Lakes 2/14,16,17,21,22,26,28/87	Sample #1	Day	6,234	≤0.28[e] ≤0.20[e]	<0.5[e] ≤0.2[e]	≤0.16 ≤0.11
Mammoth Lakes 2/16-17,17-18,20-21,27-28;2/28-3/1/87	Sample #2	Night	4,506	0.84 0.81	0.52 0.72	≤0.23 ≤0.30
Mammoth Lakes 2/14-15,15-16,21-22,22-23,25-26/87	Sample #3	Night	4,480	0.32 0.34	0.23 0.34	≤0.02 ≤0.08
Oildale 3/30,31/87; 4/1,2,7,8,9,10/87	Sample #1	Day	8,070	0.58 0.58	1.04 0.91	0.20 0.14
Oildale 3/29-30/87;4/9-10,10-11/87	Sample #2	Night	3,113	0.28 0.29	≤0.48[e] ≤0.38[e]	0.04 0.04
Oildale 3/31-4/1/87; 4/1-2,7-8,8-9/87	Sample #3	Night	4,151	0.47 0.49	<0.76[f] <0.71[f]	0.09 0.07

(continued)

Table C-12 (continued) - 3

Location and Dates[a]	Total Volume m^3	µg [b,c] 1-Nitro-naphthalene	2-Nitro-naphthalene	3-Nitro-biphenyl
Reseda Sample #1 Day 5/28,29,30,31/87; 6/1,2,14,15/87	8,188	2.67 2.89	3.13 3.58	1.04 1.63
Reseda Sample #2 Night 5/27-28,28-29,29-30,30-31,5/31-6/1; 6/1-2,2-3,13-14,14-15/87	9,326	7.42 7.68	4.94 5.26	0.37 0.55
Pt. Arguello Sample #1 Day 7/4,5,6,7,8,9,10,11,12/87	9,138	0.13 0.14	<0.2[f] <0.2[f]	0.02 g
Pt. Arguello Sample #2 Night 7/4-5,5-6,6-7,7-8,8-9,9-10,10-11,11-12/87	8,150	0.19 0.17	<0.5[f] <0.5[f]	g 0.014

[a]See Section V for full details of compositing.
[b]Values given are for replicate injections on GC/MS.
[c]Four PUF plugs in series were used at Glendora, three PUF plugs were used at all other sites.
[d]Single Hi-vol with PUF plugs, second Hi-vol malfunctioned.
[e]Possible interfering compounds.
[f]Upper limit given; interfering compound present.
[g]None detected.

Table C-13. Nitroarenes Measured on PUF Plugs at Citrus College, Glendora, CA

	Total Volume[a] m^3	Replicate GC/MS-MID Quantifications (µg) 1-Nitronaph-thalene	2-Nitronaph-thalene	3-Nitro-biphenyl
Citrus College PUF Sample #1	469[b]	1.06	0.85	0.56
8/13/86 0800-2000 PDT		1.12	0.83	0.60
Citrus College PUF Sample #2	938	2.30	1.49	0.39
8/13-14/86 2000-0800 PDT		2.59	1.57	0.45
Citrus College PUF Sample #3	3,751	7.48	8.09	2.92
Day Composite 0800-2000 PDT		8.04	8.43	3.35
8/15,16,17,18/86				
Sample #3		1.47	0.73	0.08
4th PUF Day Composite		1.27	1.04	c
Citrus College PUF Sample #4	3,751	11.65	7.51	1.19
Night Composite 2000-0800 PDT		11.86	7.31	1.28
8/15-16,16-17,17-18,18-19/86				
Sample # 4		0.52	0.09	0.01
4th. PUF Night Composite		0.57	0.22	c
Citrus College PUF Sample #5	938	2.44	2.41	0.79
8/20/86 0800-2000 PDT		2.59	2.45	0.87
Citrus College PUF Sample #6	938	5.16	2.64	0.41
8/20-21/86 2000-0800 PDT		5.56	3.26	0.45

[a]Run at 23 SCFM.
[b]Only a single Hi-vol sample utilized.
[c]None detected.

Table C-14. PAH (µg) Measured of Targeted Species M.W. 202-234 for Single or Composited Day/Night Sampling Intervals on TIGF Filters at the Seven Sampling Sites in California and San Nicolas Island

Location Site and Dates[a]			Total Volume m^3	µg[b] Fluor-anthene[c]	Pyrene[c]	Acephenan-thrylene[c]	Benzo[ghi]-fluoranthene	Cyclopenta-[cd]pyrene	Benzo[c]-phenanthrene	Benz[a]-anthracene	Chrysene/ triphenylene	Retene
Glendora 8/13/86	Sample #1	Day	4,078	1.532 0.897	2.466 1.965	1.247 0.489	0.986 1.003	0.286 0.286	0.167 0.177	1.029 0.834	2.616 3.691	1.474 0.745
Glendora 8/13-14/86	Sample #2	Night	4,078	1.170 1.125	1.445 1.243	0.141 d	1.441 1.699	0.692 0.738	0.138 0.110	1.174 1.133	5.405 6.617	0.588 d
Glendora 8/15,16,17,18/86	Sample #3	Day	13,048	3.096 3.037	3.098 2.920	0.768 0.807	0.837 0.727	0.324 0.352	0.228 0.220	1.954 1.890	7.024 6.900	1.612 1.589
Glendora 8/15,16,17,18/86	Sample #3A	Day	5,158	1.518 1.613	1.820 1.925	0.084 0.069	1.133 1.210	0.160 d	0.203 0.183	0.852 0.818	4.900 5.440	0.303 0.206
Glendora 8/15-16,16-17,17-18,18-19/86	Sample #4	Night	13,048	d d	d d	e e	0.155 0.217	0.208 0.269	d d	0.960 0.933	5.833 7.224	d d
Glendora 8/15-16,16-17,17-18,18-19/86	Sample #4A	Night	5,627	1.439 1.318	1.560 1.553	0.158 d	2.401 2.142	0.727 0.726	0.268 0.228	1.208 1.277	7.106 6.638	0.337 d
Glendora 8/20/86	Sample #5	Day	4,078	1.050 d	1.221 d	d e	0.603 0.727	0.309 d	0.106 d	0.594 d	3.306 3.491	0.086 d
Glendora 8/20-21/86	Sample #6	Night	4,078	0.745 0.866	0.996 1.103	0.135 0.101	0.663 0.825	0.305 0.278	0.099 0.124	0.697 0.849	3.250 3.963	0.790 d
Yuba City 10/16,18,20/86	Sample #1	Day	14,461	2.508 2.449	2.461 2.425	0.199 0.139	1.803 1.674	0.148 0.127	0.502 0.478	1.889 1.834	6.530 6.203	1.938 2.062
Yuba City 10/17,23/86	Sample #2	Day	6,290	1.777 1.748	1.805 1.751	0.136 0.150	1.809 1.624	0.294 0.280	0.615 0.590	1.773 1.691	7.321 6.940	0.476 0.526

(continued)

Table C-14 (continued) - 2

Location Site and Dates[a]	Total Volume m^3	µg[b] Fluoranthene[c]	Pyrene[c]	Acephenanthrylene[c]	Benzo[ghi]fluoranthene	Cyclopenta[cd]pyrene	Benzo[c]phenanthrene	Benz[a]anthracene	Chrysene/triphenylene	Retene
Yuba City Sample #3 Night 10/16-17,18-19,20-21,23-24/86	15,501	2.556 2.583	2.979 2.935	0.417 0.416	2.364 2.321	1.628 1.635	0.530 0.525	2.900 2.811	7.651 7.504	1.757 1.843
Concord Sample #1 Day 12/8,9/86; 1/19/87	12,143	2.290 2.286	2.827 2.845	0.402 0.407	9.227 8.510	10.08 10.315	2.303 2.352	19.343 19.259	29.990 30.372	1.724 1.842
Concord Sample #2 Day 1/18,21,22/87	12,737	2.689 2.581	2.932 2.929	0.427 0.390	11.037 10.690	5.860 6.100	4.288 4.196	31.502 31.825	58.172 58.855	2.920 3.026
Concord Sample #3 Night 12/6-7,7-8,8-9/86	11,827	6.254 6.264	7.477 7.554	2.390 2.331	26.518 25.951	70.528 71.372	15.099 14.853	74.133 76.011	103.492 107.708	16.100 17.047
Concord Sample #4 Night 1/17-18,18-19,21-22/87	13,101	15.911 16.134	18.303 18.636	5.768 5.745	47.483 46.686	120.700 122.160	27.248 24.931	127.422 127.789	177.550 175.706	27.267 29.124
Concord Sample #5 Night 12/10-11/86; 1/14-15/87	8,734	1.449 1.436	1.756 1.752	0.302 0.310	7.265 6.936	13.921 13.839	2.920 2.796	18.774 18.693	26.721 26.533	1.794 1.885
Mammoth Lakes Sample #1 Day 2/14,16,17,21,22,26,28/87	22,320	106.701 105.697	123.556 123.678	30.430 30.246	58.678 59.245	73.837 74.179	34.890 35.173	115.192 116.816	144.963 144.385	160.851 157.863
Mammoth Lakes Sample #2 Night 2/16-17,17-18,20-21,27-28; 2/28-3/1/87	15,943	467.358 475.817	474.804 476.389	141.371 140.979	410.587 140.137	184.738 190.956	112.794 111.842	290.789 291.511	376.016 375.764	1,356.883 1,374.774
Mammoth Lakes Sample #3 Night 2/14-15,15-16,21-22,22-23,25-26/87	13,475	98.699 99.091	100.532 101.652	31.976 32.314	28.913 28.916	44.278 44.383	21.953 21.826	66.691 67.706	83.197 83.293	382.118 388.981
Oildale Sample #1 Day 3/30,31/87; 4/1,2,7,8,9,10/87	31,641	8.645 8.663	9.532 9.512	0.618 0.628	3.192 3.211	1.726 1.748	1.792 1.795	10.154 10.148	16.993 17.082	1.059 0.995

(continued)

Table C-14 (continued) - 3

Location Site and Dates[a]	Total Volume m^3	µg[b] Fluoranthene[c]	Pyrene[c]	Acephenanthrylene[c]	Benzo[ghi]-fluoranthene	Cyclopenta-[cd]pyrene	Benzo[c]-phenanthrene	Benz[a]-anthracene	Chrysene/ triphenylene	Retene
Oildale Sample #2 Night 3/29-30/87; 4/9-10,10-11/87	12,086	2.102 2.108	2.197 2.214	0.209 0.216	1.048 1.054	0.366 0.374	0.376 0.373	1.576 1.564	3.595 3.639	1.722 1.692
Oildale Sample #3 Night 3/31-4/1/87; 4/1-2,7-8,8-9/87	16,114	8.309 8.320	9.972 9.911	0.485 0.489	3.016 3.087	1.301 1.241	1.562 1.547	10.948 10.992	16.704 17.004	1.514 1.698
Reseda Sample #1 Day 5/28,29,30,31/87; 6/1,2,14,15/87	30,728	8.621 8.422	10.284 9.935	2.396 2.378	9.855 9.463	9.241 8.701	2.061 2.057	9.993 9.366	21.162 19.905	1.293 1.613
Reseda Sample #2 Night 5/27-28,28-29,29-30,30-31,5/31-6/1; 6/1-2,2-3,13-14,14-15/87	34,436	5.450 5.180	5.523 5.283	0.653 0.694	4.072 3.847	1.640 1.578	0.802 0.835	4.582 4.282	11.499 10.594	0.883 1.290
Pt. Arguello Sample #1 Day 7/4,5,6,7,8,9,10,11,12/87	29,211	3.206 3.249	1.717 1.735	e e	0.252 0.261	e e	0.131 0.132	0.128 0.124	1.329 1.341	0.940 0.956
Pt. Arguello Sample #2 Night 7/4-5,5-6,6-7,7-8,8-9,9-10,10-11, 11-12/87	25,492	3.967 4.055	2.423 2.454	e e	0.225 0.229	e e	0.118 0.118	0.182 0.180	1.219 1.237	0.991 0.806
San Nicolas Island Composite 6/19-20,24-26; 7/13-16; 8/27-30; 9/2-4/87	17,641	0.659 0.706	1.266 1.352	e e	0.130 0.130	e e	0.080 0.070	0.095 0.085	0.969 0.969	1.169 1.090

[a]See Section V for full details of compositing.
[b]Replicate GC/MS injections.
[c]Mainly present on PUF plugs, see text for discussion.
[d]Amount present too low to quantify.
[e]None detected.

Table C-15. The M.W. 252 Species: Benzofluoranthenes, Benzo[e]pyrene, Benzo[a]pyrene and Perylene Measured for Single or Composited Day/Night Sampling Intervals on TIGF Filters at the Seven Sampling Sites in California and San Nicolas Island

Location Site and Dates[a]			Total Volume m^3	μg[b]			
				Benzo-fluoranthenes[c]	Benzo[e]-pyrene	Benzo[a]-pyrene	Perylene[d]
Glendora 8/13/86	Sample #1	Day	4,078	4.969 4.592	2.583 2.481	1.111 1.007	0.254 0.223
Glendora 8/13-14/86	Sample #2	Night	4,078	9.742 10.097	6.047 6.473	2.484 2.568	0.760 0.775
Glendora 8/15,16,17,18/86	Sample #3	Day	13,048	10.791 10.186	5.386 5.196	2.426 2.296	0.537 0.504
Glendora 8/15,16,17,18/86	Sample #3A	Day	5,158	5.197 4.843	2.867 2.878	1.105 1.060	e e
Glendora 8/15-16,16-17,17-18,18-19/86	Sample #4	Night	13,048	17.648 16.674	8.654 8.202	2.636 1.995	0.989 0.713
Glendora 8/15-16,16-17,17-18,18-19/86	Sample #4A	Night	5,627	8.777 8.557	6.364 6.299	2.22 1.873	0.505 0.315
Glendora 8/20/86	Sample #5	Day	4,078	7.325 7.069	3.374 3.365	1.030 0.854	0.320 0.222
Glendora 8/20-21/86	Sample #6	Night	4,078	8.033 7.304	4.031 3.739	1.361 1.225	0.450 0.389
Yuba City 10/16,18,20/86	Sample #1	Day	14,461	9.227 9.472	4.896 5.199	1.869 1.961	0.327 0.310
Yuba City 10/17,23/86	Sample #2	Day	6,290	9.103 9.692	4.003 4.241	1.988 2.077	0.307 0.318

(continued)

Table C-15 (continued) - 2

Location Site and Dates[a]	Total Volume m^3	µg[b] Benzo-fluoranthenes[c]	Benzo[e]-pyrene	Benzo[a]-pyrene	Perylene[d]
Yuba City Sample #3 Night 10/16-17,18-19,20-21,23-24/86	15,501	10.161 10.078	5.402 5.246	3.413 3.354	0.779 0.771
Concord Sample #1 Day 12/8,9/86; 1/19/87	12,143	53.797 53.610	23.324 23.048	21.532 21.434	4.615 4.612
Concord Sample #2 Day 1/18,21,22/87	12,737	73.274 72.593	35.517 35.067	41.315 40.984	4.580 4.538
Concord Sample #3 Night 12/6-7,7-8,8-9/86	11,827	132.612 128.968	50.314 49.390	73.839 71.559	16.454 16.362
Concord Sample #4 Night 1/17-18,18-19,21-22/87	13,101	200.641 206.215	73.990 76.911	104.895 108.608	21.305 22.440
Concord Sample #5 Night 12/10-11/86; 1/14-15/87	8,734	34.839 34.645	13.214 13.338	16.770 16.963	3.259 3.349
Mammoth Lakes Sample #1 Day 2/14,16,17,21,22,26,28/87	22,320	160.897 162.938	57.187 57.387	79.330 79.624	17.207 17.191
Mammoth Lakes Sample #2 Night 2/16-17,17-18,20-21,27-28;2/28-3/1/87	15,943	373.742 366.083	129.090 126.014	200.888 197.511	44.748 43.297
Mammoth Lakes Sample #3 Night 2/14-15,15-16,21-22,22-23,25-26/87	13,475	82.486 82.408	27.575 27.551	42.200 42.395	8.635 8.650
Oildale Sample #1 Day 3/30,31/87; 4/1,2,7,8,9,10/87	31,641	25.199 25.132	13.942 14.052	13.103 13.297	4.980 4.819
Oildale Sample #2 Night 3/29-30/87; 4/9-10,10-11/87	12,086	5.241 5.230	2.974 2.951	2.017 2.002	0.511 0.505

(continued)

Table C-15 (continued) - 3

Location Site and Dates[a]	Total Volume m^3	µg[b] Benzo-fluoranthenes[c]	Benzo[e]-pyrene	Benzo[a]-pyrene	Perylene[d]
Oildale Sample #3 Night 3/31-4/1/87; 4/1-2,7-8,8-9/87	16,114	35.227 35.272	15.716 15.712	14.237 14.278	5.475 5.626
Reseda Sample #1 Day 5/28,29,30,31/87; 6/1,2,14,15/87	30,728	29.672 28.019	22.102 21.424	14.630 14.205	3.551 3.277
Reseda Sample #2 Night 5/27-28,28-29,29-30,30-31,5/31-6/1; 6/1-2,2-3,13-14,14-15/87	34,436	15.349 15.050	9.886 9.678	4.454 4.750	0.307 0.784
Pt. Arguello Sample #1 Day 7/4,5,6,7,8,9,10,11,12/87	29,211	e e	0.153 0.148	e e	e e
Pt. Arguello Sample #2 Night 7/4-5,5-6,6-7,7-8,8-9,9-10,10-11,11-12/87	25,492	e e	0.197 0.197	e e	e e
San Nicolas Island Composite 6/19,24,25; 7/13,14,15; 8/27,28,29; 9/2,3/87; 6/19-20,24-25,25-26/87; 7/13-14,14-15,15-16/87; 8/27-28,28-29, 29-30/87; 9/3-4/87	17,641	0.186	0.084	e	e

[a]See Section V for full details of compositing.
[b]Replicate GC/MS injections.
[c]Σ Benzo[b]fluoranthene, benzo[j]fluoranthene and benzo[k]fluoranthene.
[d]Not on targeted list of PAH.
[e]Amount present too low to quantify.

Table C-16. PAH (μg) Measured of Targeted Species M.W. 276-300 for Single or Composited Day/Night Sampling Intervals on TIGF Filters at the Seven Sampling Sites in California

Location Site and Dates	Total Volume m^3	Indeno-[1,2,3-cd]-fluoranthene	Indeno-[1,2,3-cd]-pyrene	Benzo[ghi]-perylene	Anth-anthrene	Benzo[c]-chrysene	Dibenz[a,j]-anthracene	Dibenz[a,c]-anthracene/ Dibenz[a,h]-anthracene[c]	Benzo[b]-chrysene	Picene	Coronene
Glendora 8/13/86 Sample #1 Day	4,078	0.25; e 0.16; e	3.09; 0.02 2.55; 0.02	6.07; 0.04 5.90; 0.03	0.26; e e; e	0.06; e e e	0.18; e 0.08; e	0.39; 0.02 0.21; 0.02	0.12; e e; e	0.44; 0.04 0.18; e	2.69; 0.93 1.82; 0.20
Glendora 8/13-14/86 Sample #2 Night	4,078	0.61; e 0.67; e	11.57; 0.04 11.06; 0.03	25.71; 0.03 23.88; 0.03	1.10; e 1.13; e	e; e 0.13; e	0.25; 0.01 0.56; 0.01	0.62; 0.08 1.01; 0.06	e; 0.02 0.20; e	e; 0.07 0.41; 0.02	8.67; 1.35 8.96; 0.69
Glendora 8/15,16,17,18/86 Sample #3A Day	5,158	e; e 0.22; e	3.75; 0.01 4.01; e	9.00; 0.01 9.36; e	e; e e; e	e; e e; e	e; e 0.20; e	e; 0.02 0.42; 0.01	e; e e; e	e; 0.03 0.15; 0.01	9.71; 0.02 10.68; e
Glendora 8/15-16,16-17, 17-18,18-19/86 Sample #4A Night	5,627	e; e 0.36; e	7.29; 0.02 8.96; 0.03	30.59; 0.02 30.56; 0.02	e; e e; e	e; e e; e	e; e e; e	0.51; 0.02 0.68; 0.02	e; e e; e	e; e e; 0.02	30.94; e 33.14; 0.03
Glendora 8/20/86 Sample #5 Day	4,078	0.63; e 0.47; e	8.04; 0.01 7.24; e	13.64; 0.02 13.43; e	0.45; e e; e	0.08; e e; e	0.70; e 0.34; e	1.49; e 1.27; e	0.23; e e; e	1.38; e 1.14; e	7.83; 0.52 5.89; 0.27
Glendora 8/20-21/86 Sample #6 Night	4,078	0.59; e 0.74; e	8.95; e 10.37; e	19.54; 0.01 20.69; 0.01	0.42; e 0.64; e	e; e 0.12; e	0.40; e 0.67; e	1.48; e 1.70; e	0.19; e 0.30; e	0.85; e 1.25; e	17.41; 0.22 19.58; 0.15
Yuba City 10/16,18,20/86 Sample #1 Day	14,461	e; 0.48 e; 0.49	e; 3.68 e; 3.72	6.80; 1.61 6.68; 1.55	e; e e; e	e; e e; 0.11	e; 0.20 e; 0.21	e; 0.44 e; 0.42	e; e e; 0.14	e; 0.46 e; 0.55	e; 2.36 e; 3.27

(continued)

Table C-16 (continued) - 2

Location Site and Dates	Total Volume m^3	Indeno-[1,2,3-cd]-fluoranthene	Indeno-[1,2,3-cd]-pyrene	Benzo[ghi]-perylene	Anth-anthrene	Benzo[c]-chrysene	Dibenz[a,j]-anthracene	Dibenz[a,c]-anthracene/ Dibenz[a,h]-anthracene[c]	Benzo[b]-chrysene	Picene	Coronene
Yuba City 10/17,23/86 Sample #2 Day	6,290	0.26; 0.18 0.26; 0.16	2.42; 1.25 2.46; 1.04	3.71; 0.94 3.79; 0.77	e; e e; e	e; 0.04 e; 0.03	e; 0.12 e; 0.10	e; 0.29 e; 0.24	e; 0.11 e; 0.09	e; 0.28 e; 0.25	0.56; 1.02 0.55; 0.84
Yuba City 10/16-17,18-19, 20-21,23-24/86 Sample #3 Night	15,501	0.29; 0.17 0.29; 0.15	3.13; 1.31 3.13; 1.09	7.21; 1.37 7.22; 1.14	0.52; 0.06 0.52; 0.05	e; 0.03 e; 0.03	e; 0.15 e; 0.15	e; 0.32 e; 0.28	e; 0.15 e; 0.13	e; 0.32 e; 0.26	1.28; 1.59 1.22; 1.36
Concord 12/8,9/86; 1/19/87 Sample #1 Day	12,143	1.64; 0.95 1.71; 1.09	20.73; 6.50[d] 21.12; 7.58[d]	47.93; 2.64 47.10; 3.35	4.99; 0.21 5.39; 0.29	0.69; 0.15 0.71; 0.20	0.56; 1.23 0.61; 1.47	1.05; 2.57 1.07; 3.01	e; 1.39 e; 1.57	e; 2.30 e; 2.51	11.55; 11.50 14.70; 15.40
Concord 1/18,21,22/87 Sample #2 Day	12,737	1.83; 1.88 1.87; 2.14	18.61; 14.03[d] 18.87; 16.11[d]	28.92; 17.35 27.43; 21.11	3.86; 1.90 3.50; 2.38	1.04; 0.58 1.07; 0.69	0.74; 1.75 0.82; 2.17	1.20; 3.56 1.05; 4.10	e; 2.03 0.25; 2.00	0.54; 3.71 0.48; 3.67	3.92; 9.49 4.14; 12.32
Concord 12/6-7,7-8,8-9/86 Sample #3 Night	11,827	5.15; 2.79 5.05; 3.89	49.88; 9.18[d] 48.19; 11.42[d]	68.42; 1.66 68.66; 2.36	23.37; 0.67 24.21; 0.98	3.11; 0.33 3.14; 0.49	2.85; 3.70 2.87; 4.76	6.00; 6.81 6.05; 8.52	2.63; 4.74 2.67; 5.97	3.43; 7.51 3.43; 9.57	14.18; 12.44 15.59; 20.92
Concord 1/17-18,18-19, 21-22/87 Sample #4 Night	13,101	6.53; 2.77 6.44; 3.85	74.06; 7.31[d] 72.42; 9.66[d]	101.03; 1.21 96.93; 1.80	29.3; 0.47 27.54; 0.88	3.90; 0.11 3.75; 0.17	2.47; 4.03 2.43; 5.32	4.12; 6.99 3.89; 8.95	2.09; 4.99 2.10; 6.10	3.19; 7.66 3.10; 9.37	19.35; 11.08 15.92; 16.53
Concord 12/10-11/86; 1/14-15/87 Sample #5 Night	8,734	0.91; 0.35 0.91; 0.51	10.34; 2.02[d] 10.43; 2.89[d]	20.48; 0.21 20.86; 0.32	3.30; 0.06 3.41; 0.08	e; 0.04 e; 0.06	e; 0.42 e; 0.64	e; 0.79 0.70; 1.15	e; 0.52 e; 0.66	e; 0.77 e; 1.00	2.02; 2.47 2.83; 4.01

(continued)

Table C-16 (continued) - 3

Location Site and Dates	Total Volume m^3	Indeno-[1,2,3-cd]-fluoranthene	Indeno-[1,2,3-cd]-pyrene	Benzo[ghi]-perylene	Anth-anthrene	Benzo[c]-chrysene	Dibenz[a,j]-anthracene	Dibenz[a,c]-anthracene/ Dibenz[a,h]-anthracene[c]	Benzo[b]-chrysene	Picene	Coronene
Mammoth Lakes 2/14,16,17,21, 22,26,28/87 Sample #1 Day	22,320	5.86; 2.77 5.87; 3.67	56.02; 17.07[d] 55.98; 20.05[d]	82.92; 10.29 82.12; 13.19	19.57; 1.61 19.80; 2.43	2.82; 0.36 2.81; 0.50	3.50; 3.01 3.53; 4.14	6.10; 5.67 6.12; 7.21	3.27; 3.74 3.34; 4.85	3.53; 4.73 3.63; 6.05	12.96; 24.99 13.90; 37.40
Mammoth Lakes 2/16-17,17-18, 20-21,27-28; 2/28-3/1/87 Sample #2 Night	15,943	16.20; 15.49 15.85; 16.25	126.32; 69.73[d] 123.49; 72.9[d]	145.72; 36.51 141.00; 38.72	53.58; 5.20 51.74; 5.52	10.19; 1.62 9.98; 1.68	10.94; 21.10 10.75; 21.83	17.91; 37.97 18.04; 39.37	8.22; 25.71 8.07; 26.64	7.85; 32.05 7.75; 33.11	16.67; 86.66 16.27; 91.94
Mammoth Lakes 2/14-15,15-16, 21-22,22-23,25-26/87 Sample #3 Night	13,475	2.36; 3.54 2.33; 3.82	18.86; 19.24[d] 18.40; 20.21[d]	26.83; 12.69 26.53; 13.35	9.72; 1.37 9.63; 1.52	1.55; 0.47 1.56; 0.61	1.39; 4.18 1.38; 4.56	1.02; 9.16 1.06; 9.74	1.00; 5.16 1.00; 5.40	0.95; 6.64 0.95; 6.90	1.37; 20.11 1.34; 21.19
Oildale 3/30,31/87; 4/1,2,7,8,9,10/87 Sample #1 Day	31,641	0.65; 0.24 0.64; 0.26	10.51[d]; 4.92[d] 10.42[d]; 5.62[d]	14.54; 6.23 14.58; 7.11	1.13; 0.28 1.10; 0.28	0.37; 0.04 0.29; 0.04	1.46; 1.03 1.64; 1.12	2.61; 1.94 1.98; 2.10	1.17; 1.02 1.06; 1.12	4.59; 5.23 4.23; 5.80	0.71; 6.71 0.66; 7.64
Oildale 3/29-30/87; 4/9-10,10-11/87 Sample #2 Night	12,086	0.05; 0.07 0.05; 0.07	0.77; 1.20[d] 0.77; 1.39[d]	1.52; 2.16 1.51; 2.55	e; e e; e	e; e e; e	e; 0.14 e; 0.16	e; 0.27 e; 0.31	e; 0.13 e; 0.14	e; 0.59 e; 0.67	e; 1.51 e; 1.73
Oildale 3/31-4/1/87; 4/1-2,7-8,8-9/87 Sample #3 Night	16,114	0.44; 0.21 0.44; 0.21	8.85; 4.52[d] 8.80; 3.84[d]	13.98; 4.82 13.92; 4.17	0.40; 0.09 0.40; 0.09	0.28; 0.04 0.42; 0.06	0.50; 1.07 0.50; 1.01	0.37; 1.76 0.36; 1.69	0.21; 0.98 0.21; 0.95	0.61; 4.57 0.60; 4.15	e; 3.57 e; 3.28

(continued)

Table C-16 (continued) - 4

Location Site and Dates	Total Volume m^3	Indeno-[1,2,3-cd]-fluoranthene	Indeno-[1,2,3-cd]-pyrene	Benzo[ghi]-perylene	Anth-anthrene	Benzo[c]-chrysene	Dibenz[a,j]-anthracene	Dibenz[a,c]-anthracene/ Dibenz[a,h]-anthracene[c]	Benzo[b]-chrysene	Picene	Coronene
Reseda 5/28,29,30,31/87; 6/1,2,14,15/87 Sample #1 Day	30,728	0.87; 0.72 0.89; 0.71	9.65; 8.90 9.54; 9.59	23.74; 18.52 23.23; 20.52	1.60; 0.89 1.36; 0.85	0.38; 0.13 0.41; 0.10	0.49; 0.75 0.49; 0.76	0.86; 1.44 0.88; 1.47	0.22; 0.57 0.22; 0.54	0.33; 1.13 0.34; 1.08	1.01; 20.73 1.09; 21.74
Reseda 5/27-28,28-29, 29-30,30-31,5/31-6/1;6/1-2,2-3, 13-14,14-15/87 Sample #2 Night	34,436	0.38; 0.38 0.34; 0.39	3.73; 5.43 3.58; 3.54	8.16; 11.39 7.97; 3.15	0.18; 0.24 0.16; 0.26	0.18; e 0.14; 0.05	0.17; 0.30 0.13; 0.48	0.30; 0.69 0.25; 1.07	0.06; 0.19 e; 0.54	0.15; 0.67 0.13; 0.95	e; 7.89 e; 6.00
Pt. Arguello 7/4,5,6,7,8,9, 10,11,12/87 Sample #1 Day	29,211	e; e e; e	e; 0.01 e; 0.01	e; 0.02 e; 0.02	e; e e; e	e; e e; e	e; e e; e	e; e e; e	e; e e; e	e; e e; e	e; 0.01 e; 0.01
Pt. Arguello 7/4-5,5-6,6-7, 7-8,8-9,9-10, 11-12/87 Sample #2 Night	25,492	e; e e; e	e; 0.02 e; 0.02	e; 0.04 e; 0.04	e; e e; e	e; e e; e	e; e e; e	e; e e; e	e; e e; e	e; e e; e	e; e e; e

[a]See Section V for full details of compositing.
[b]µg values on the left are the amounts present in the 7-22 min HPLC fraction as determined by replicate GC/MS injections; values on the right are the amounts present in the 22-34 min HPLC.
[c]Compounds co-elute, therefore, amount given is their sum.
[d]Corrected for the contribution of the $[m-2]^+$ fragment ion of dibenz[a,c]anthracene/dibenz[a,h]anthracene.
[e]None detected or amount present too low to quantify.

Table C-17. Nitrofluoranthenes and Nitropyrenes (μg) Measured and the Total Volumes Sampled for Single or Composited Day/Night Sampling Intervals on TIGF Filters at the Seven Sites in California and at San Nicolas Island

Location Site and Dates[a]			Volume Sampled m^3	μg[b] 2-Nitro-fluor-anthene	3-Nitro-fluor-anthene	8-Nitro-fluor-anthene	1-Nitro-pyrene	2-Nitro-pyrene
Glendora 8/13/86	Sample #1	Day	4,078	0.897 0.792	c c	0.015 0.017	0.104 0.108	0.073 0.059
Glendora 8/13-14/86	Sample #2	Night	4,078	2.117 1.923	c c	0.040 0.030	0.156 0.143	0.243 0.186
Glendora 8/15,16,17,18/86	Sample #3A[d]	Day	5,158	1.328 1.146	e e	0.013 0.011	0.062 0.055	0.036 0.030
Glendora 8/15-16,16-17,17-18,18-19/86	Sample #4A[d]	Night	5,627	4.961 4.831	c c	0.021 0.017	0.081 0.078	0.120 0.111
Glendora 8/20/86	Sample #5	Day	4,078	1.376 1.509	c c	0.013 0.012	0.059 0.065	0.053 0.059
Glendora 8/20-21/86	Sample #6	Night	4,078	7.882 8.201	c c	0.015 0.015	0.061 0.059	0.135 0.125
Yuba City 10/16,18,20/86	Sample #1	Day	14,461	0.750 0.760	e e	0.012 c	0.090 0.108	0.046 0.048
Yuba City 10/17,23/86	Sample #2	Day	6,290	1.573 1.512	c c	0.017 0.017	0.091 0.082	0.107 0.108
Yuba City 10/16-17,18-19,20-21,23-24/86	Sample #3	Night	15,501	2.228 2.543	c c	0.017 0.024	0.084 0.102	0.140 0.144
Concord 12/8,9/86; 1/19/87	Sample #1[f]	Day	12,143	1.728 1.722	e e	0.038 0.040	0.313 0.321	0.364 0.363

(continued)

Table C-17 (continued) - 2

Location Site and Dates[a]			Volume Sampled m^3	2-Nitro-fluor-anthene (µg[b])	3-Nitro-fluor-anthene (µg[b])	8-Nitro-fluor-anthene (µg[b])	1-Nitro-pyrene (µg[b])	2-Nitro-pyrene (µg[b])
Concord	Sample #2[f]	Day	12,737	6.195	c	0.044	0.235	0.698
1/18,21,22/87				6.609	c	0.051	0.251	0.741
Concord	Sample #3[f]	Night	11,827	2.526	c	0.123[g]	0.502[g]	0.589[g]
12/6-7,7-8,8-9/86				2.632	c	0.123[g]	0.457[g]	0.589[g]
Concord	Sample #4[f]	Night	13,101	5.057	c	0.176[g]	0.593[g]	1.065[g]
1/17-18,18-19,21-22/87				4.777	c	0.180[g]	0.594[g]	1.067[g]
Concord	Sample #5[f]	Night	8,734	1.155	c	0.022	0.123	0.169
12/10-11/86; 1/14-15/87				1.087	c	0.017	0.117	0.166
Mammoth Lakes	Sample #1[f]	Day	22,320	0.384	c	h	0.180	0.063
2/14,16,17,21,22,26,28/87				0.389	c	h	0.190	0.071
Mammoth Lakes	Sample #2[f]	Night	15,943	0.869[g]	c	h	h	h
2/16-17,17-18,20-21,27-28;2/28-3/1/87				0.970[g]	c	h	h	h
Mammoth Lakes	Sample #3[f]	Night	13,475	0.191[g]	c	h	h	h
2/14-15,15-16,21-22,22-23,25-26/87				0.190[g]	c	h	h	h
Oildale	Sample #1	Day	31,641	0.641	c	0.004	0.164	0.032
3/30,31/87; 4/1,2,7,8,9,10/87				0.720	c	c	0.169	0.030
Oildale	Sample #2	Night	12,086	0.417	c	c	0.058	0.013
3/29-30/87; 4/9-10,10-11/87				0.432	c	c	0.061	0.011
Oildale	Sample #3	Night	16,114	0.633	c	c	0.173	0.021
3/31-4/1/87; 4/1-2,7-8,8-9/87				0.597	c	c	0.169	0.028
				0.560	c	c	0.170	0.024

(continued)

Table C-17 (continued) - 3

Location Site and Dates[a]			Volume Sampled m^3	μg[b] 2-Nitro-fluor-anthene	3-Nitro-fluor-anthene	8-Nitro-fluor-anthene	1-Nitro-pyrene	2-Nitro-pyrene
Reseda 5/28,29,30,31/87; 6/1,2,14,15/87	Sample #1	Day	30,728	7.468 7.239	c c	0.067 0.065	0.342 0.333	0.640 0.632
Reseda 5/27-28,28-29,29-30,30-31,5/31-6/1; 6/1-2,2-3,13-14,14-15/87	Sample #2	Night	34,436	2.565 2.803	c c	0.024 0.025	0.178 0.195	0.183 0.202
Pt. Arguello 7/4,5,6,7,8,9,10,11,12/87	Sample #1	Day	29,211	0.106 0.100	c c	c c	0.018 0.020	0.009 0.008
Pt. Arguello 7/4-5,5-6,6-7,7-8,8-9,9-10, 10-11,11-12/87	Sample #2	Night	25,492	0.146 0.138	c c	c c	0.008 0.009	c c
San Nicolas Island 6/19-20,24-26;7/13-16;8/27-30; 9/2-4/87		Composite	17,641	0.037 0.027	c c	c c	0.004 0.006	c c

[a]See Section V for full details of compositing.
[b]Replicate or triplicate GC/MS injections.
[c]None detected.
[d]Extracted with CH_2Cl_2, see Section VI for details.
[e]Present in an amount too small to quantify.
[f]Three HPLC fractionations performed to isolate the nitrofluoranthenes and nitropyrenes.
[g]Quantified on the response of the $[M-NO_2]^+$ fragment ion due to interference or high background in the $[M]^+$ ion trace.
[h]Background interferences too high to allow positive identification of nitroarene peaks.

Table C-18. Nitronaphthalenes, 9-Nitroanthracene and 7-Nitrobenz[a]anthracene (μg) Measured and the Total Volumes Sampled for Single or Composited Day/Night Sampling Intervals on TIGF Filters at the Seven Sites in California

Location Site and Dates[a]			Total Volume m^3	μg			
				1-Nitro-naphthalene	2-Nitro-naphthalene	9-Nitro-anthracene	7-Nitro-benz[a]-anthracene
Glendora 8/13/86	Sample #1	Day	4,078	0.261 0.255	b b	0.271[c] 0.274[c]	d
Glendora 8/13-14/86	Sample #2	Night	4,078	0.113 0.126	b b	0.392[c] 0.386[c]	d
Glendora 8/15,16,17,18/86	Sample #3A	Day	5,158	0.395 0.399	≤0.093[e] ≤0.093[e]	0.930[c] 0.964[c]	not analyzed
Glendora 8/15-16,16-17,17-18,18-19/86	Sample #4A	Night	5,627	0.182 0.175	≤0.050[e] ≤0.050[e]	1.423[c] 1.376[c]	not analyzed
Glendora 8/20/86	Sample #5	Day	4,078	0.051 0.057	b b	0.458[c] 0.447[c]	d
Glendora 8/20-21/86	Sample #6	Night	4,078	0.046 0.050	b b	1.073[c] 1.001[c]	d
Yuba City 10/16,18,20/86	Sample #1	Day	14,461	0.086 0.088	≤0.048[e] ≤0.036[e]	0.270[c] 0.269[c]	d
Yuba City 10/17,23/86	Sample #2	Day	6,290	0.079 0.091	≤0.063[e] ≤0.061[e]	f f	f
Yuba City 10/16-17,18-19,20-21,23-24/86	Sample #3	Night	15,501	0.113 0.097	≤0.049[e] ≤0.044[e]	f f	f

(continued)

Table C-18 (continued) - 2

Location Site and Dates[a]			Total Volume m^3	μg			
				1-Nitro-naphthalene	2-Nitro-naphthalene	9-Nitro-anthracene	7-Nitro-benz[a]-anthracene
Concord 12/8,9/86; 1/19/87	Sample #1	Day	12,143	0.067 0.064	≤0.052[e] ≤0.059[e]	1.337 1.298	0.17 0.17
Concord 1/18,21,22/87	Sample #2	Day	12,737	0.110 0.110	b b	3.409 3.351	0.31
Concord 12/6-7,7-8,8-9/86	Sample #3	Night	11,827	0.121 0.095	≤0.068[e] ≤0.076[e]	3.689 4.129	0.52 0.53
Concord 1/17-18,18-19,21-22/87	Sample #4	Night	13,101	0.182 0.218	b b	8.749 8.584	g
Concord 12/10-11/86; 1/14-15/87	Sample #5	Night	8,734	0.042 0.028	0.009 0.023	0.824 0.832	0.13
Mammoth Lakes 2/14,16,17,21,22,26,28/87	Sample #1	Day	22,320	0.109 0.168	g g	g g	not analyzed
Mammoth Lakes 2/16-17,17-18,20-21,27-28; 2/28-3/1/87	Sample #2	Night	15,943	g g	g g	g g	not analyzed
Mammoth Lakes 2/14-15,15-16,21-22,22-23,25-26/87	Sample #3	Night	13,475	g g	g g	g g	not analyzed
Oildale 3/30,31/87; 4/1,2,7,8,9,10/87	Sample #1	Day	31,641	0.071 0.062	b b	0.194 0.206	not analyzed
Oildale 3/29-30/87; 4/9-10,10-11/87	Sample #2	Night	12,086	0.066 0.060	b b	0.266 0.279	not analyzed

(continued)

Table C-18 (continued) - 3

Location Site and Dates[a]	Total Volume m^3	µg			
		1-Nitro-naphthalene	2-Nitro-naphthalene	9-Nitro-anthracene	7-Nitro-benz[a]-anthracene
Oildale Sample #3 Night 3/31-4/1/87; 4/1-2,7-8,8-9/87	16,114	0.053 0.066	b b	0.585 0.580	not analyzed
Reseda Sample #1 Day 5/28,29,30,31/87; 6/1,2,14,15/87	30,728	0.231 0.209	≤0.172[e] ≤0.162[e]	4.730 4.624	0.7[h]
Reseda Sample #2 Night 5/27-28,28-29,29-30,30-31,5/31-6/1; 6/1-2,2-3,13-14,14-15/87	34,436	0.142	≤0.109[e]	0.961	0.4[h]
Pt. Arguello Sample #1 Day 7/4,5,6,7,8,9,10,11,12/87	29,211	0.057 ≤0.024	b b	≤0.037 b	not analyzed
Pt. Arguello Sample #2 Night 7/4-5,5-6,6-7,7-8,8-9,9-10, 10-11,11-12/87	25,492	0.042 ≤0.082	b b	b ≤0.052	not analyzed

[a]See Section V for full details of compositing.
[b]None detected.
[c]Lower limit, internal standard added after HPLC fractionation.
[d]Present but not quantified, internal standard added after HPLC fractionation.
[e]Upper limit, possible interference.
[f]Present but not quantified, due to impurities in internal standard.
[g]High background, none detected above background.
[h]Approximate value, additional internal standard added after HPLC fractionation.

APPENDIX D

Co-Pollutant Data

Hourly average O_3 and NO_x data are given for the sampling sites in California. NO_x data are unavailable for Yuba City. Unless otherwise noted, measurements were conducted by SAPRC personnel using ultraviolet photometric analysis (O_3) and chemiluminescence (NO_x).

Table D-1. Hourly Average O_3 Concentrations (ppb) Measured at Glendora, CA, August 1986[a]

Time Period (PDT)	Date								
	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21
00-01	b	b	b	b	b	b	b	b	b
01-02	b	b	b	b	b	b	b	b	b
02-03	b	b	b	b	b	b	b	b	b
03-04	b	b	b	b	b	b	10	30	b
04-05	b	b	b	b	10	b	10	30	b
05-06	b	b	b	b	20	b	20	20	b
06-07	b	b	b	b	30	b	30	20	b
07-08	b	b	b	b	30	b	20	30	b
08-09	b	b	b	b	30	b	10	10	b
09-10	10	10	b	10	60	20	40	b	10
10-11	10	20	10	30	80	20	70	20	30
11-12	40	60	30	60	130	40	100	40	60
12-13	80	90	70	110	170	80	150	110	
13-14	110	130	120	140	210	80	170	180	
14-15	120	130	150	160	220	150	190	200	
15-16	140	140	210	180	220	150	230	220	
16-17	160	210	190	220	240	220	160	150	
17-18	150	180	120	200	200	180	90	100	
18-19	120	160	90	170	120	120	50	80	
19-20	70	120	60	120	70	70	30	60	
20-21	40	80	30	60	30	40	10	20	
21-22	10	30	b	20	b	10	b	20	
22-23	b	10	b	10	b	b	b	10	
23-24	b	b	b	b	b	b	b	b	

[a]Values as measured by Air Resources Board, Haagen-Smit Laboratory Division, using an ultraviolet photometric analyzer.
[b]Below detection limit.

Table D-2. Hourly Average O_3 Concentrations (ppb) Measured at Yuba City, CA, October 1986[a]

Time Period (PDT)	Date									
	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24	10/25
00-01	20	b	20	30	20	b	c	30	10	10
01-02	b	20	10	20	20	20	b	c	40	10
02-03	20	c	c	c	c	c	c	c	c	c
03-04	20	20	b	20	10	20	b	10	30	10
04-05	20	20	b	20	b	10	b	10	30	b
05-06	20	20	b	20	10	10	b	10	20	10
06-07	20	10	b	20	10	b	b	b	20	b
07-08	10	10	10	10	10	b	b	10	20	b
08-09	30	10	10	10	10	b	b	20	20	b
09-10	30	20	10	10	10	10	c	30	20	10
10-11	40	30	10	20	20	20	20	40	30	20
11-12	40	30	20	30	30	40	30	40	30	30
12-13	50	40	30	40	40	50	40	40	40	30
13-14	60	50	30	40	50	70	50	50	40	50
14-15	70	50	30	40	60	70	60	70	50	60
15-16	70	50	30	50	70	70	60	60	50	60
16-17	60	40	40	50	110	70	c	40	40	60
17-18	50	30	30	40	100	60	c	30	40	50
18-19	40	20	30	30	70	20	c	20	20	30
19-20	30	20	30	40	50	10	c	10	20	10
20-21	10	10	30	40	40	b	c	10	20	b
21-22	10	b	20	30	10	b	c	10	20	b
22-23	10	b	20	20	20	b	c	30	20	b
23-24	20	b	20	30	20	20	c	30	10	b

[a]Values as measured by Air Resources Board, Yuba City Station, using an ultraviolet photometric analyzer.
[b]Below detection limit.
[c]No data available.

Table D-3. Hourly Average O_3 Concentrations (ppb) Measured at Concord, CA, December 1986 and January 1987

Time Period (PST)	Date																	
	1986							1987										
	12/6	12/7	12/8	12/9	12/10	12/11	12/12	1/12	1/13	1/14	1/15	1/16	1/17	1/18	1/19	1/20	1/21	1/22
00-01		a	<10	10	<10	<10	<10		<10	<10	40		30	20	10	40	<10	10
01-02		a	<10	10	<10	<10	<10		<10	<10	40		40	<10	20	40	<10	10
02-03		a	<10	10	<10	<10	<10		<10	10	40		30	10	30	40	<10	10
03-04		a	<10	<10	<10	<10	<10		<10	10	40		30	10	30	40	10	<10
04-05		a	<10	<10	<10	<10	<10		<10	<10	40		30	10	20	30	<10	<10
05-06		a	<10	<10	<10	<10	<10		<10	10	40		30	10	<10	30	<10	<10
06-07		<10	<10	<10	<10	<10	<10		<10	<10	30		30	<10	<10	30	<10	<10
07-08		<10	<10	<10	<10	<10	<10		<10	<10	30		20	<10	<10	30	<10	<10
08-09		10	<10	<10	<10	<10	<10		<10	<10	30		20	<10	<10		20	<10
09-10		20	<10	<10	<10	<10	10		<10	<10			20	<10	10		20	20
10-11		40	10	30	<10	<10	10		20	20			30	10	20		30	20
11-12		40	20	30	10	<10	<10		20	20			30	20	40		40	30
12-13		40	20	30	10	<10	<10		30	40			30	30	40		50	30
13-14		40	30	40	10	<10	<10		40	30			30	30	40		50	30
14-15		40	30	40	10	<10	<10		40	30			30	40	40		60	30
15-16	30	40	30	40	10	<10	<10		40	30			30	40	40		50	20
16-17	20	40	20	20	<10	<10	<10		40	20			30	40	40		40	20
17-18	<10	10	10	10	<10	<10	<10		30	<10			20	30	30		20	20
18-19	<10	10	<10	10	<10	<10	<10		20	<10			10	20	30	10	10	
19-20	<10	10	<10	10	<10	<10	<10		20	10			10	20	30	10	a	
20-21	<10	10	a	10	<10	<10	<10	<10	10	20		20	20	20	30	10	10	
21-22	<10	10	10	15	<10	<10	<10	<10	10	10		10	20	20	40	10	<10	
22-23	<10	10	10	15	<10	<10	<10	<10	10	10		10	30	10	40	<10	<10	
23-24	a	10	10	10	<10	<10	<10	<10	<10	10		30	20	<10	40	10	<10	

[a]Below detection limit.

Table D-4. Hourly Average O_3 Concentrations (ppb) Measured at Mammoth Lakes, CA, February and March 1987

Time Period (PST)	Date													
	2/14	2/15	2/16	2/17	2/18	2/20	2/21	2/22	2/23	2/25	2/26	2/27	2/28	3/1
00-01	40	40	40	30	40		50	50	a		a	50	40	a
01-02	30	40	30	30	40		50	a	a		a	50	40	a
02-03	30	40	40	30	30		a	a	a		a	40	a	a
03-04	40	40	40	30	40		a	a	a		a	40	a	a
04-05	40	40	30	30	40		30	40	40		40	40	30	30
05-06	20	40	30	30	40		30	40	40		30	40	40	30
06-07	30	40	30	30	40		40	40	40		30	40	40	40
07-08	30	40	40	30	40		40	40	40		a	30	30	40
08-09	40	40	40	30	40		40	40	40		a	30	30	30
09-10	40	40	40	40	40		40	40			40	30	40	
10-11	40	40	40	40	40		50	50			50	40	40	
11-12	40	40	40	40			50	50			40	40	40	
12-13	50	40	40	40			50	50			40	40	a	
13-14	40	40	40	40		40	40	50			50	40	40	
14-15	40	40	40	40		50	50	50			50	40	40	
15-16	40	40	40	40		50	50	50			50	40	40	
16-17	40	40	40	40		50	50	50			50	40	40	
17-18	30	40	40	40		40	40	50			40	40	40	
18-19	30	40	30	30		40	50	40		40	40	40	30	
19-20	30	40	40	40		40	40	40		40	40	30	30	
20-21	30	40	40	40		40	40	50		40	40	30	30	
21-22	40	a	40	40		40	40	50		40	40	30	30	
22-23	40	a	40	40		40	40	a		40	40	40	40	
23-24	40	a	40	40		50	40	a		40	50	40	a	

[a]Below detection limit.

Table D-5. Hourly Average O_3 Concentrations (ppb) Measured at Oildale, CA, March and April 1987[a]

Time Period (PDT)	Date									
	3/29	3/30	3/31	4/1	4/2	4/7	4/8	4/9	4/10	4/11
00-01	20	20	20	20	30	20	30	20	20	30
01-02	20	20	20	30	30	c	20	20	30	20
02-03	20	30	20	60	30	c	10	20	30	10
03-04	10	10	10	60	40	c	c	c	c	c
04-05	20	10	10	60	30	c	c	c	c	c
05-06	20	20	20	50	30	c	10	20	10	10
06-07	20	20	20	20	20	c	10	10	10	10
07-08	20	30	20	20	30	c	10	10	10	10
08-09	30	40	10	30	40	c	20	20	20	10
09-10	40	50	20	30	40	c	20	30	40	10
10-11	c	c	c	c	c	c	30	40	50	20
11-12	50	50	40	60	70	c	50	50	60	20
12-13	50	50	40	70	c	50	60	60	70	20
13-14	50	50	50	70	110	60	60	60	80	30
14-15	50	50	60	70	100	60	60	60	80	30
15-16	50	60	50	70	c	60	60	c	60	30
16-17	50	60	50	70	90	c	60	70	60	40
17-18	40	70	50	60	90	c	70	60	70	40
18-19	40	60	50	50	70	c	60	60	70	40
19-20	40	50	50	40	50	c	50	40	70	40
20-21	20	40	40	40	40	50	50	50	70	40
21-22	30	30	20	30	30	40	30	40	60	40
22-23	40	30	10	30	30	20	30	40	50	40
23-24	20	30	10	30	30	20	30	30	40	30

[a]Values as measured by Air Resources Board, Oildale Station, using an ultraviolet photometric analyzer.
[b]Times are PST for 3/29/87 through 4/2/87; PDT for 4/7/87 through 4/11/87.
[c]No data available.

Table D-6. Hourly Average O_3 Concentration (ppb) Measured at Reseda, CA, May and June 1987[a]

Time Period (PDT)	Date										
	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/13	6/14	6/15
00-01	b	b	b	b	b	b	20	10	10	20	10
01-02	10	b	b	b	b	b	30	10	b	b	20
02-03	10	b	b	b	b	b	10	20	b	b	20
03-04	b	b	b	b	b	b	b	10	b	10	20
04-05	b	b	b	b	b	b	b	b	b	30	10
05-06	b	b	b	b	b	b	b	b	b	40	10
06-07	b	b	b	b	b	b	b	b	b	30	10
07-08	b	b	b	b	b	10	b	10	10	30	10
08-09	20	10	10	10	20	20	10	20	20	30	20
09-10	30	20	20	50	50	60	40	50	30	40	30
10-11	30	40	30	60	70	80	90	80	60	40	40
11-12	40	50	50	80	90	90	110	110	100	50	40
12-13	50	60	60	100	100	110	100	130	130	70	50
13-14	50	60	70	100	110	110	80	130	130	80	50
14-15	60	70	80	80	100	100	80	150	120	90	50
15-16	70	60	70	80	80	80	70	120	90	90	40
16-17	70	60	50	80	70	70	50	70	80	70	40
17-18	80	50	50	70	90	70	60	70	80	60	30
18-19	80	50	50	70	90	60	100	60	80	60	30
19-20	80	40	40	60	70	40	50	50	60	40	30
20-21	60	b	10	40	40	20	40	40	30	40	20
21-22	30	b	b	30	10	30	b	30	20	30	30
22-23	10	b	b	20	10	30	b	10	10	20	20
23-24	c	c	c	c	c	b	20	10	10	20	10

[a]Values as measured by Air Resources Board, Reseda Station, using an ultraviolet photometric analyzer.
[b]Below detection limit.
[c]No data available.

Table D-7. Hourly Average O_3 Concentrations (ppb) Measured at Pt. Arguello, CA, July 1987

Time Period (PDT)	Date										
	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14
00-01		20	30	30	20	30	40	40	40	30	30
01-02		20	30	30	20	30	40	40	30	30	30
02-03		20	30	30	20	30	30	40	30	30	30
03-04		20	30	30	20	30	30	30	30	30	30
04-05		20	30	30	20	30	30	30	30	30	30
05-06	30	20	30	30	20	30	30	30	30	30	30
06-07	30	30	30	30	20	30	30	30	30	30	
07-08	30	30	20	30	20	30	30	30	30	30	
08-09	30	30	20	30	a	30	30	a	30	30	
09-10	30	30	30	30	20	30	30	30	30	30	
10-11	30	30	30	40	20	30	40	30	30	30	
11-12	30	30	30	40	20	40	40	30	a	30	
12-13	30	30	30	40	20	40	40	40	40	40	
13-14	40	30	30	40	20	40	40	40	40	40	
14-15	30	30	40	40	30	40	40	40	30	40	
15-16	30	30	40	40	20	40	40	40	30	40	
16-17	30	30	40	40	30	40	40	40	30	30	
17-18	30	a	40	40	30	40	40	40	40	30	
18-19	30	30	30	30	30	30	40	40	40	30	
19-20	20	30	30	30	30	40	40	40	40	30	
20-21	20	30	30	30	30	30	30	40	40	30	
21-22	20	20	30	30	30	40	40	40	40	30	
22-23	20	20	30	20	20	40	30	40	30	30	
23-24	20	20	30	20	30	40	30	40	30	30	

[a]Below detection limit.

Table D-8. Hourly Average NO_x Concentrations (ppb) Measured at Glendora, CA, August 1986

Time Period (PDT)	Date								
	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21
00-01	110	70	90	100	a	60	50	70	30
01-02	100	100	90	90	a	70	60	60	50
02-03	110	90	80	90	a	70	40	40	50
03-04	100	80	80	70	a	60	20	40	100
04-05	100	90	80	80	a	80	10	40	110
05-06	100	90	100	80	a	60	30	40	100
06-07	110	90	120	70	a	60	50	60	120
07-08	150	100	100	90	a	70	70	90	110
08-09	140	120	100	110	a	70	40	200	
09-10	160	120	80	70	a	110	40	220	
10-11	120	100	80	70	a	120	20	180	
11-12	90	90	80	80	a	110	30	90	
12-13	80	70	70	50	a	70	30	70	
13-14	80	70	60	20	50	40	40	40	
14-15	70	70	80	20	60	30	50	30	
15-16	80	80	80	40	50	70	60	70	
16-17	60	80	80	50	70	80	60	70	
17-18	50	80	70	60	50	80	40	60	
18-19	70	70	70	60	50	80	70	80	
19-20	80	80	60	60	70	70	90	100	
20-21	70	90	80	70	90	70	80	90	
21-22	90	90	80	80	50	70	50	90	
22-23	100	80	80	70	60	80	20	90	
23-24	90	90	80	50	60	80	50	20	

[a]No data available.

Table D-9. Hourly Average NO_x Concentrations (ppb) Measured at Concord, CA, December 1986 and January 1987

Time Period (PST)	Date 1986 12/6	12/7	12/8	12/9	12/10	12/11	12/12	1987 1/12	1/13	1/14	1/15	1/16	1/17	1/18	1/19	1/20	1/21	1/22
00-01		120	100	30	160	130	40		80	60	<10		<10	140	70	<10	100	270
01-02		80	80	70	170	120	30		70	60	<10		<10	100	30	<10	90	280
02-03		70	60	150	160	90	20		30	40	<10		10	180	30	<10	130	280
03-04		70	70	130	140	50	30		20	40	<10		a	180	30	<10	160	200
04-05		70	90	120	150	50	40		20	40	<10		a	180	160	<10	160	140
05-06		50	120	120	130	60	30		50	60	<10		a	160	140	<10	150	180
06-07		40	160	130	100	70	40		60	80	<10		a	100	130	<10	100	270
07-08		70	150	220	180	60	30		90	300	<10		10	140	150	10	90	150
08-09		60	400	230	a	50	30		140	280	<10		10	140	290		40	70
09-10		60	200	180	100	40	30		160	160			20	150	190		40	60
10-11		<10	40	30	100	30	30		80	80			20	80	80		30	50
11-12		<10	20	20	90	50	50		50	70			10	80	20		30	60
12-13		<10	20	10	60	50	40		40	60			20	40	10		30	a
13-14		<10	20	10	50	60	40		10	50			20	40	<10		20	a
14-15		<10	30	10	40	60	50		10	40			30	30	10		20	40
15-16	20	<10	30	20	30	60	60		10	40			30	20	10		30	60
16-17	30	<10	30	50	40	60	50		10	50			30	20	<10		50	70
17-18	90	50	40	50	80	60	50		10	90			60	30	20		50	60
18-19	130	100	50	70	100	60	60		30	60			70	70	20	140	80	
19-20	120	200	60	180	90	60	60		90	40			180	160	10	160	a	
20-21	110	150	90	220	100	40	60		110	20		160	200	140	10	120	80	
21-22	100	120	270	290	120	30	30	40	120	40		210	220	140	<10	150	90	
22-23	110	100	240	300	140	30	30	120	90	60		60	210	140	<10	150	70	
23-24	110	120	140	220	140	40	20	160	80	70		110	180	110	<10	140	90	

[a]Below detection limit.

Table D-10. Hourly Average NO_x Concentrations (ppb) Measured at Mammoth Lakes, CA, February and March 1987

Time Period (PST)	Date													
	2/14	2/15	2/16	2/17	2/18	2/20	2/21	2/22	2/23	2/25	2/26	2/27	2/28	3/1
00-01	10	a	20	10	10		20	20	10		10	a	10	10
01-02	20	a	20	10	10		20	a	a		10	a	10	10
02-03	20	a	10	20	10		20	a	a		10	20	10	10
03-04	10	a	10	10	10		10	a	a		20	10	20	a
04-05	10	a	10	10	10		20	<10	<10		10	<10	<10	<10
05-06	50	a	10	10	<10		20	<10	<10		10	<10	<10	<10
06-07	20	a	10	10	<10		20	10	10		a	10	10	10
07-08	30	a	20	20	10		20	20	<10		20	20	20	10
08-09	30	10	20	20	10		20	20	10		20	30	20	20
09-10	20	10	30	10	10		20	10			<10	30	20	
10-11	30	a	20	<10	20		10	10			<10	10	10	
11-12	30	10	10	<10			10	10			<10	10	10	
12-13	30	10	<10	<10			20	10			<10	10	10	
13-14	20	20	<10	<10		<10	10	10			<10	<10	10	
14-15	20	10	10	10		<10	10	10			<10	<10	<10	
15-16	20	10	10	10		10	10	10			<10	<10	<10	
16-17	20	20	<10	<10		10	20	10			20	<10	20	
17-18	20	20	20	30		10	20	10			10	10	20	
18-19	20	30	30	30		20	20	10		<10	20	20	40	
19-20	20	20	30	10		20	30	10		<10	20	30	30	
20-21	20	20	20	10		20	10	20		<10	20	30	20	
21-22	20	20	20	10		20	20	10		<10	20	20	20	
22-23	a	20	20	10		20	20	20		<10	20	20	20	
23-24	a	a	10	10		10	20	10		<10	20	20	10	

[a]Below detection limit.

Table D-11. Hourly Average NO_x Concentrations (ppb) Measured at Oildale, CA, March and April 1987[a]

Time Period[b] (PDT)	Date									
	3/29	3/30	3/31	4/1	4/2	4/7	4/8	4/9	4/10	4/11
00-01	30	30	30	30	20	50	40	30	10	10
01-02	30	30	30	10	10	30	40	40	30	20
02-03	30	20	20	10	10	30	60	40	30	20
03-04	40	30	40	20	10	30	c	c	c	c
04-05	30	40	30	10	10	50	c	c	c	c
05-06	30	30	20	20	10	50	50	30	50	10
06-07	30	30	50	30	30	50	60	60	50	20
07-08	30	30	60	50	30	40	70	80	60	50
08-09	30	10	120	30	20	40	40	50	40	40
09-10	20	10	50	30	20	40	40	40	20	30
10-11	c	c	c	c	c	c	40	30	20	10
11-12	10	10	10	10	10	20	30	30	20	10
12-13	10	10	10	10	c	30	30	20	10	10
13-14	10	d	10	10	20	30	20	20	10	10
14-15	d	d	10	10	20	20	20	20	10	10
15-16	10	10	10	10	20	20	20	c	10	10
16-17	10	10	10	10	20	c	20	10	10	10
17-18	10	10	10	10	20	c	20	10	10	10
18-19	10	20	20	10	30	c	20	10	10	10
19-20	10	20	10	20	30	c	30	20	10	10
20-21	30	20	20	10	20	20	20	10	20	10
21-22	20	20	30	10	20	20	40	20	10	10
22-23	20	20	40	20	20	50	40	30	10	10
23-24	30	20	50	20	10	40	40	30	10	10

[a]Values as measured by Air Resources Board, Oildale Station, using a chemiluminescent detector.
[b]Times are PST for 3/29/87 through 4/2/87; PDT for 4/7/87 through 4/11/87.
[c]No data available.
[d]Below detection limit.

Table D-12. Hourly Average NO_x Concentrations (ppb) Measured at Reseda, CA, May and June 1987[a]

Time Period (PDT)	Date										
	5/27	5/28	5/29	5/30	5/31	6/1	6/2	6/3	6/13	6/14	6/15
00-01	70	100	80	130	100	110	40	120	50	30	30
01-02	20	80	70	100	110	120	70	40	70	60	20
02-03	20	80	60	90	110	130	80	40	70	60	20
03-04	20	70	80	90	140	120	90	60	70	40	20
04-05	40	70	60	140	160	120	100	80	80	20	20
05-06	50	80	80	110	140	120	110	80	90	20	40
06-07	70	110	110	140	130	150	130	100	110	20	60
07-08	70	110	130	110	110	180	160	90	50	30	50
08-09	40	110	100	90	80	140	160	100	50	30	30
09-10	30	60	90	30	50	60	130	90	60	20	30
10-11	30	50	90	40	50	40	80	70	60	20	20
11-12	20	40	60	40	30	60	70	60	50	30	20
12-13	10	30	60	30	30	40	60	60	50	30	20
13-14	10	20	50	20	20	30	30	50	40	30	20
14-15	10	10	30	10	10	30	20	40	30	30	20
15-16	20	10	30	10	10	20	20	40	30	30	20
16-17	20	10	30	10	b	20	30	30	30	30	20
17-18	20	10	30	10	10	30	40	30	30	30	20
18-19	20	20	20	10	10	40	30	30	40	30	20
19-20	10	20	30	20	20	50	60	30	40	30	20
20-21	20	50	60	30	50	60	70	30	60	20	20
21-22	30	60	60	40	70	60	90	30	60	20	20
22-23	40	50	60	40	90	70	90	100	50	20	20
23-24	c	c	c	c	c	c	c	c	c	c	c

[a]Values as measured by Air Resources Board, Reseda Station, using a chemiluminescent detector.
[b]Below detection limit.
[c]No data available.

Table D-13. Hourly Average NO_x Concentrations (ppb) Measured at Pt. Arguello, CA, July 1987

Time Period (PDT)	Date										
	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14
00-01	<10	<10	<10	<10	<10	<10	<10	a	<10	<10	<10
01-02	<10	<10	<10	<10	<10	<10	<10	a	<10	<10	<10
02-03	<10	<10	<10	<10	<10	<10	<10	a	<10	<10	<10
03-04	<10	<10	<10	<10	<10	<10	<10	a	<10	<10	<10
04-05	<10	<10	<10	<10	<10	<10	<10	a	<10	<10	<10
05-06	<10	<10	<10	<10	<10	<10	<10	a	<10	<10	<10
06-07	<10	<10	<10	<10	<10	<10	<10	a	<10	<10	<10
07-08	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
08-09	<10	<10	<10	<10	a	<10	<10	a	<10	<10	
09-10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
10-11	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
11-12	<10	<10	<10	<10	<10	<10	<10	<10	a	<10	
12-13	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
13-14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
14-15	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
15-16	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
16-17	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
17-18	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
18-19	<10	<10	<10	<10	<10	a	<10	<10	<10	<10	
19-20	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
20-21	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
21-22	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
22-23	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
23-24	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	

[a]Below detection limit.

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