

Data Path : Z:\HPCHEM1\BNA F\DATA\BF050817\  
 Data File : BF095000.D  
 Acq On : 9 May 2017 1:58  
 Operator : SJ/MA  
 Sample : I2996-01 20X  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :

Quant Time: May 09 07:04:27 2017  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF050217.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Wed May 03 17:24:51 2017  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.71  | 152  | 91552    | 20.00 | ng    | -0.02    |
| 21) Naphthalene-d8        | 9.73  | 136  | 377631   | 20.00 | ng    | -0.02    |
| 38) Acenaphthene-d10      | 12.56 | 164  | 167715   | 20.00 | ng    | -0.02    |
| 63) Phenanthrene-d10      | 14.96 | 188  | 267592   | 20.00 | ng    | -0.02    |
| 75) Chrysene-d12          | 18.63 | 240  | 206821   | 20.00 | ng    | -0.02    |
| 86) Perylene-d12          | 20.29 | 264  | 179220   | 20.00 | ng    | -0.02    |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|-----------------------------|-------|------|----------|------|-------|----------|
| 5) 2-Fluorophenol           | 5.69  | 112  | 34284    | 6.24 | ng    | 0.01     |
| 7) Phenol-d6                | 7.29  | 99   | 51595    | 7.83 | ng    | 0.01     |
| 23) Nitrobenzene-d5         | 8.63  | 82   | 30213    | 5.05 | ng    | 0.00     |
| 41) 2,4,6-Tribromophenol    | 13.87 | 330  | 9538     | 6.94 | ng    | -0.01    |
| 44) 2-Fluorobiphenyl        | 11.51 | 172  | 68014    | 5.84 | ng    | -0.02    |
| 78) Terphenyl-d14           | 17.28 | 244  | 43165    | 4.60 | ng    | -0.03    |

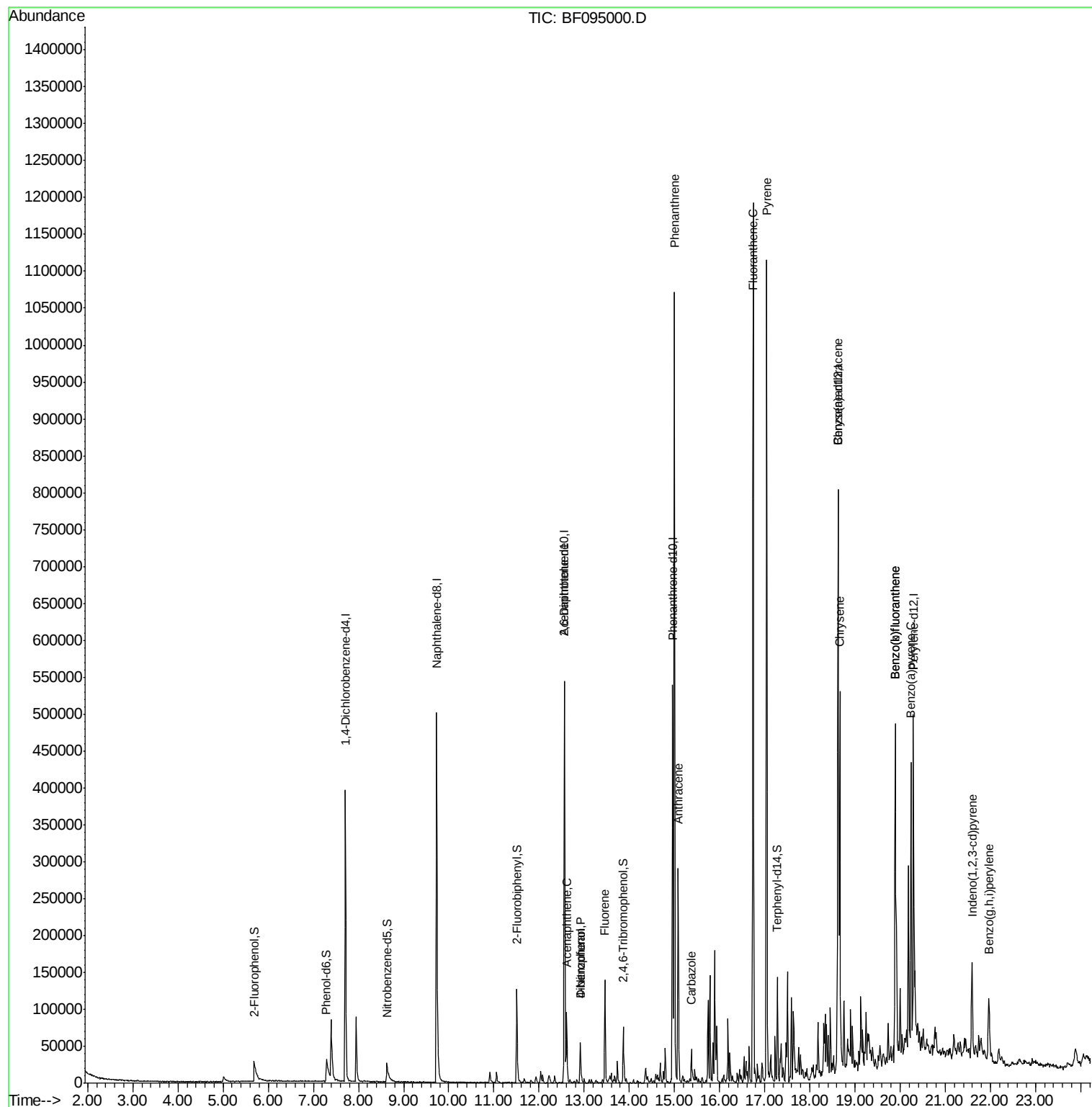
| Target Compounds           | R.T.  | QIon | Response | Conc  | Units | Qvalue |
|----------------------------|-------|------|----------|-------|-------|--------|
| 50) 2,6-Dinitrotoluene     | 12.56 | 165  | 16395    | 5.84  | ng    | # 31   |
| 51) Acenaphthene           | 12.61 | 154  | 31653    | 2.97  | ng    | 97     |
| 54) Dibenzofuran           | 12.91 | 168  | 39380    | 2.67  | ng    | 96     |
| 55) 4-Nitrophenol          | 12.91 | 139  | 13897    | 7.67  | ng    | # 25   |
| 57) Fluorene               | 13.46 | 166  | 58025    | 4.52  | ng    | 98     |
| 70) Phenanthrene           | 15.00 | 178  | 558010   | 36.29 | ng    | 98     |
| 71) Anthracene             | 15.08 | 178  | 158995   | 10.12 | ng    | 96     |
| 72) Carbazole              | 15.37 | 167  | 29853    | 2.09  | ng    | 95     |
| 74) Fluoranthene           | 16.74 | 202  | 609436   | 38.64 | ng    | 99     |
| 77) Pyrene                 | 17.04 | 202  | 478167   | 30.91 | ng    | # 96   |
| 80) Benzo(a)anthracene     | 18.62 | 228  | 253586   | 21.07 | ng    | 99     |
| 82) Chrysene               | 18.67 | 228  | 225908   | 19.41 | ng    | 98     |
| 85) Indeno(1,2,3-cd)pyrene | 21.59 | 276  | 72709    | 7.69  | ng    | 97     |
| 87) Benzo(b)fluoranthene   | 19.89 | 252  | 326765   | 29.51 | ng    | 97     |
| 88) Benzo(k)fluoranthene   | 19.89 | 252  | 326765   | 30.59 | ng    | 97     |
| 89) Benzo(a)pyrene         | 20.24 | 252  | 166132   | 16.26 | ng    | 98     |
| 91) Benzo(a,h,i)perylene   | 21.97 | 276  | 64038    | 7.73  | ng    | 97     |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Misc :  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :

Quant Time: May 09 07:04:27 2017  
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF050217.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Wed May 03 17:24:51 2017  
Response via : Initial Calibration



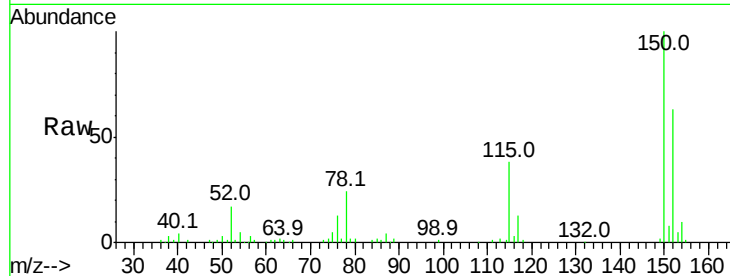


#1

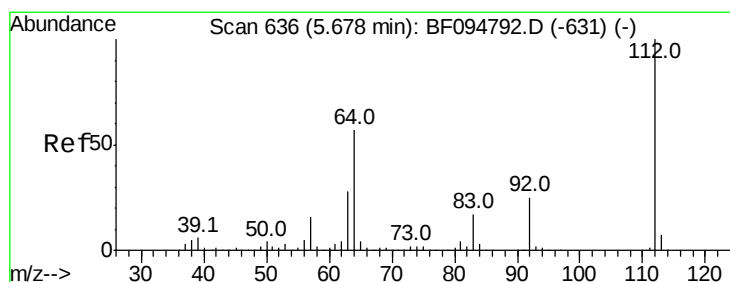
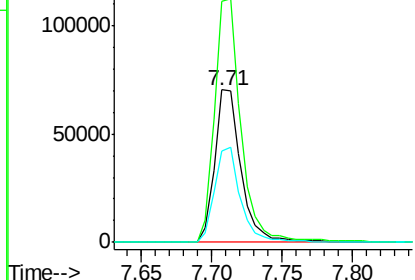
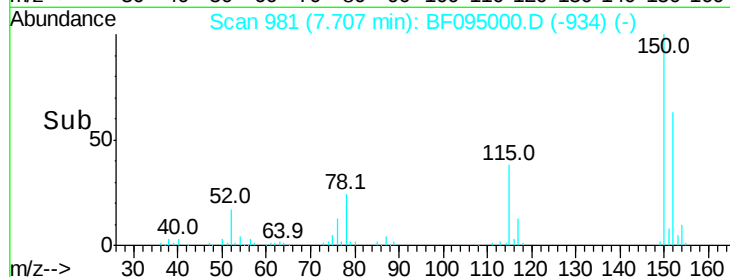
1,4-Dichlorobenzene-d4  
Concen: 20.00 ng  
RT: 7.71 min Scan# 981  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

Instrument :  
BNA\_F  
ClientSampled :

Tot Ion:152 Resp: 91552  
Ion Ratio Lower Upper  
152 100  
150 158.5 126.2 189.2  
115 60.0 52.2 78.2



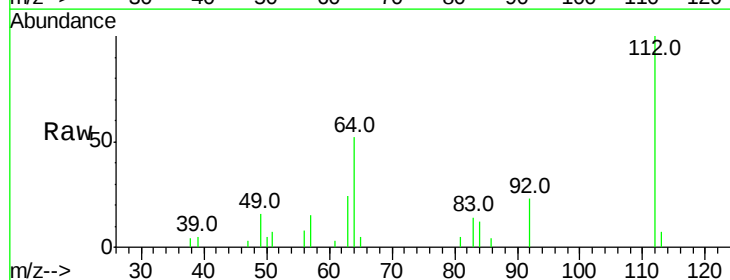
Abundance Ion 152.00 (151.70 to 152.70): E  
Ion 150.00 (149.70 to 150.70): E  
Ion 115.00 (114.70 to 115.70): E



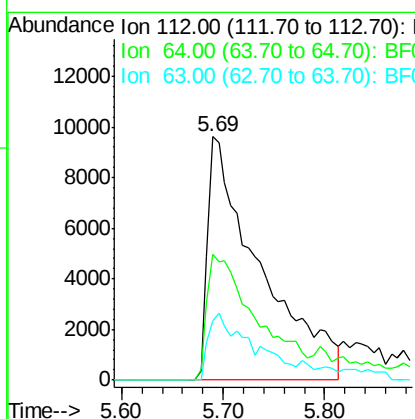
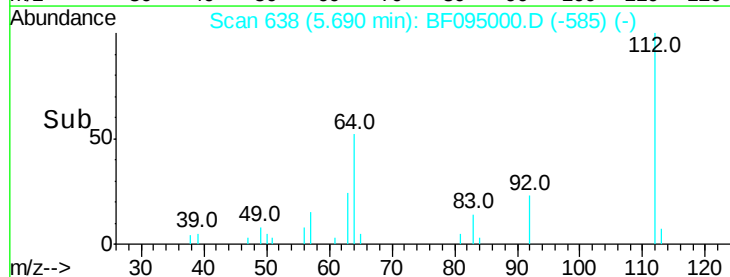
#5

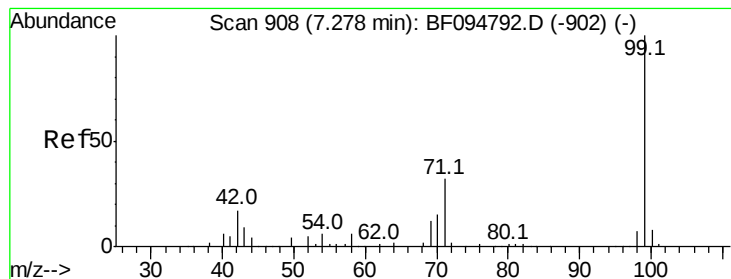
2-Fluorophenol  
Concen: 6.24 ng  
RT: 5.69 min Scan# 638  
Delta R.T. 0.01 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

Tgt Ion:112 Resp: 34284  
Ion Ratio Lower Upper  
112 100  
64 51.7 46.0 69.0  
63 24.4 23.4 35.0



Abundance Ion 112.00 (111.70 to 112.70): E  
Ion 64.00 (63.70 to 64.70): BF0  
Ion 63.00 (62.70 to 63.70): BF0





#7

Phenol-d6

Concen: 7.83 ng

RT: 7.29 min Scan# 910

Delta R.T. 0.01 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

Instrument :

BNA\_F

ClientSampleId :

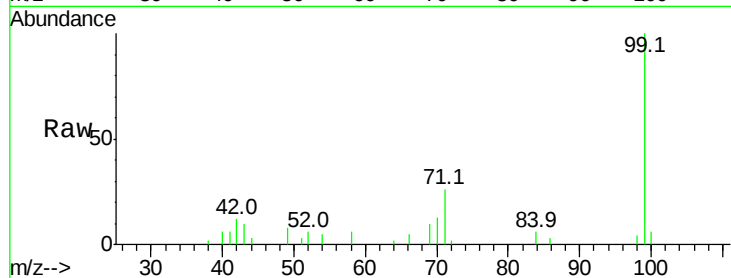
Tot Ion: 99 Resp: 51595

Ion Ratio Lower Upper

99 100

42 11.9 13.5 20.3#

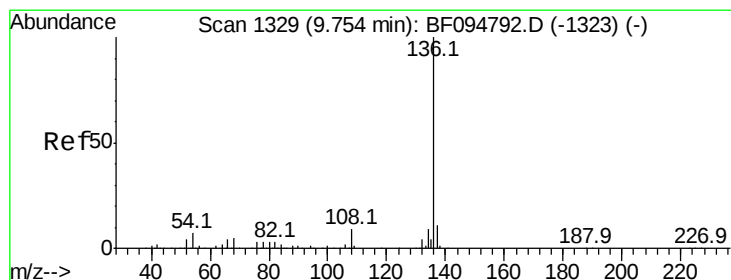
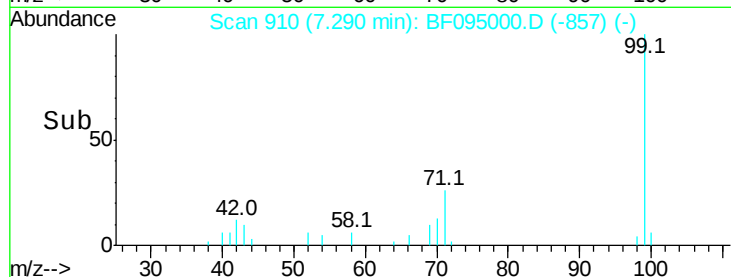
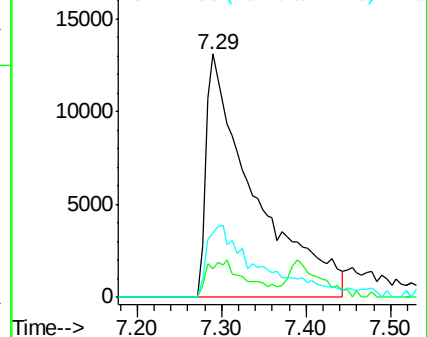
71 26.3 24.5 36.7



Abundance Ion 99.00 (98.70 to 99.70): BF0

Ion 42.00 (41.70 to 42.70): BF0

Ion 71.00 (70.70 to 71.70): BF0



#21

Naphthalene-d8

Concen: 20.00 ng

RT: 9.73 min Scan# 1325

Delta R.T. -0.02 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

Tgt Ion: 136 Resp: 377631

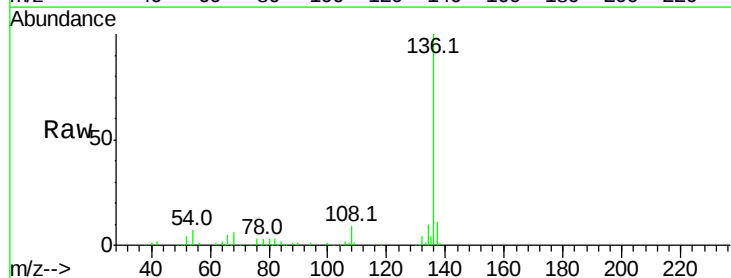
Ion Ratio Lower Upper

136 100

137 10.5 8.5 12.7

54 6.9 4.9 7.3

68 5.7 4.1 6.1

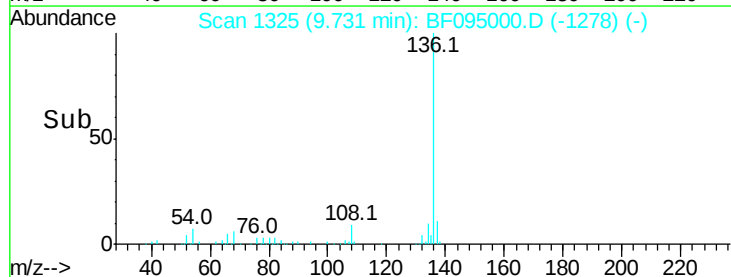
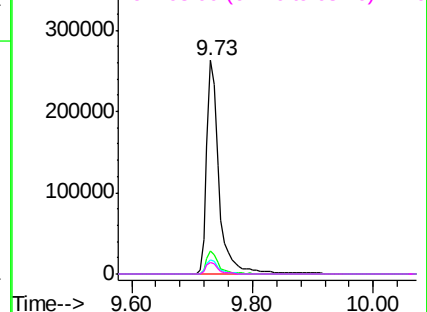


Abundance Ion 136.00 (135.70 to 136.70): E

Ion 137.00 (136.70 to 137.70): E

Ion 54.00 (53.70 to 54.70): BF0

Ion 68.00 (67.70 to 68.70): BF0

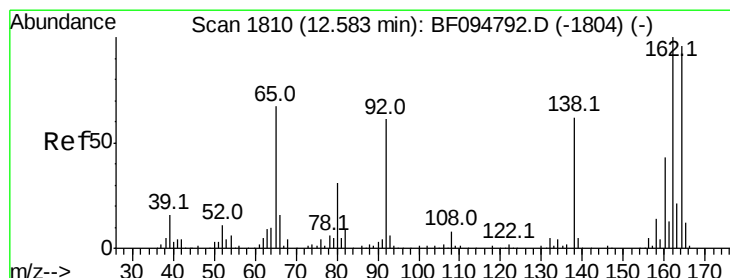
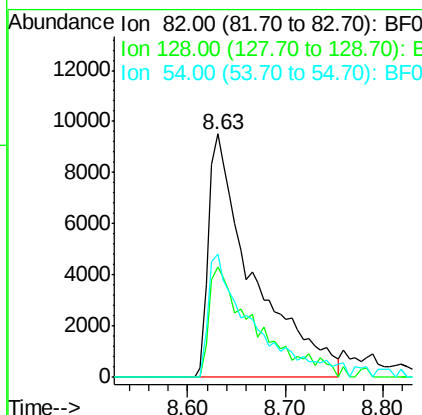
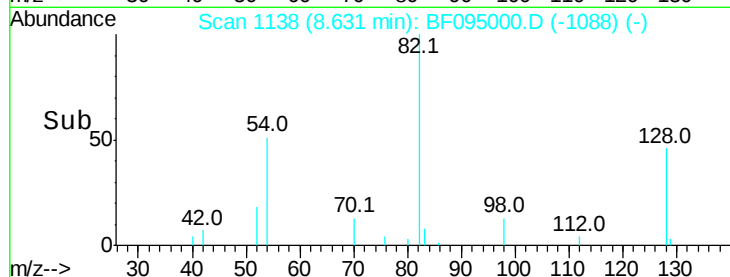
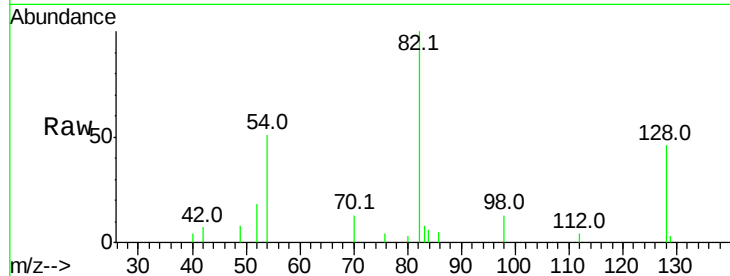




#23  
 Nitrobenzene-d5  
 Concen: 5.05 ng  
 RT: 8.63 min Scan# 1138  
 Delta R.T. -0.01 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

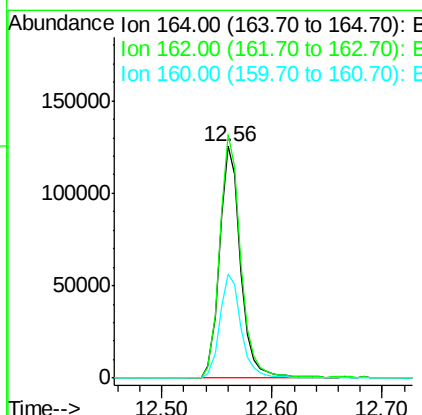
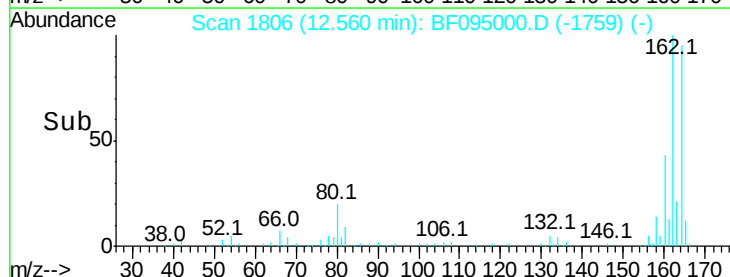
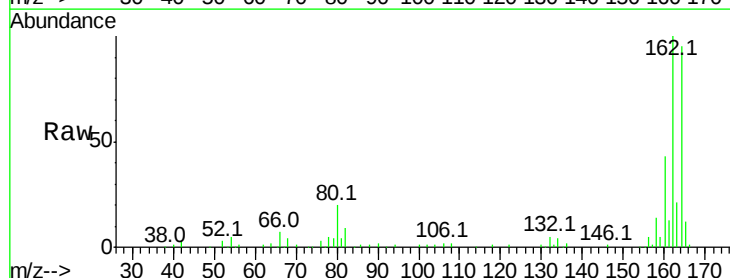
Instrument :  
 BNA\_F  
 ClientSampled :

Tot Ion: 82 Resp: 30213  
 Ion Ratio Lower Upper  
 82 100  
 128 45.5 34.0 51.0  
 54 50.5 42.2 63.2



#38  
 Acenaphthene-d10  
 Concen: 20.00 ng  
 RT: 12.56 min Scan# 1806  
 Delta R.T. -0.02 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Tgt Ion:164 Resp: 167715  
 Ion Ratio Lower Upper  
 164 100  
 162 105.0 82.6 123.8  
 160 45.0 36.2 54.2

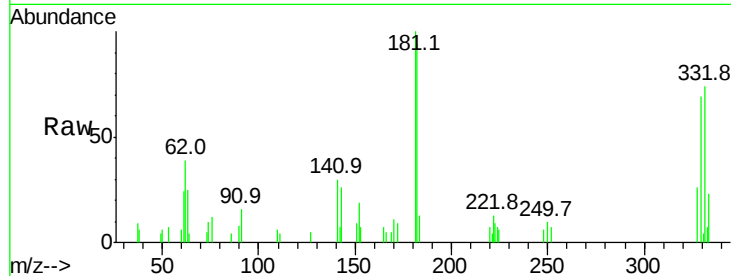




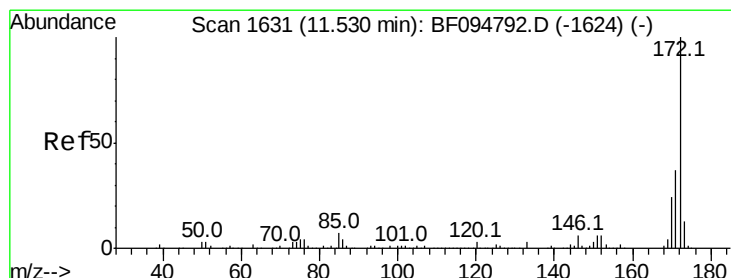
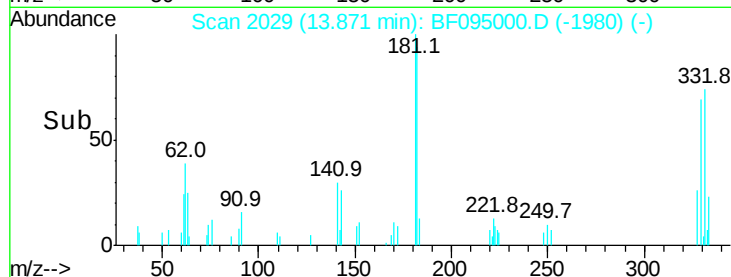
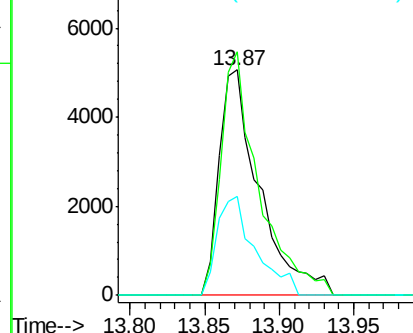
#41  
 2,4,6-Tribromophenol  
 Concen: 6.94 ng  
 RT: 13.87 min Scan# 2029  
 Delta R.T. -0.01 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Instrument :  
 BNA\_F  
 ClientSampleId :

Tot Ion:330 Resp: 9538  
 Ion Ratio Lower Upper  
 330 100  
 332 101.5 76.6 115.0  
 141 41.3 31.4 47.2

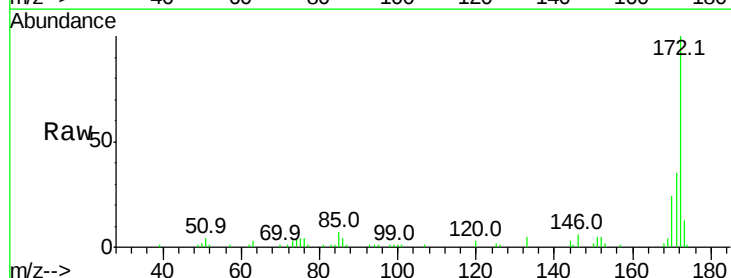


Abundance Ion 329.80 (329.50 to 330.50): E  
 Ion 331.80 (331.50 to 332.50): E  
 Ion 141.00 (140.70 to 141.70): E

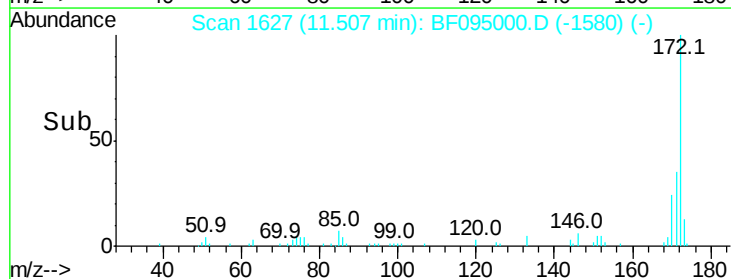
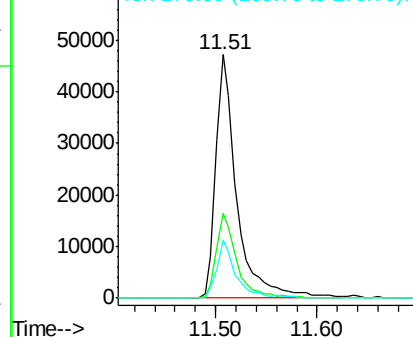


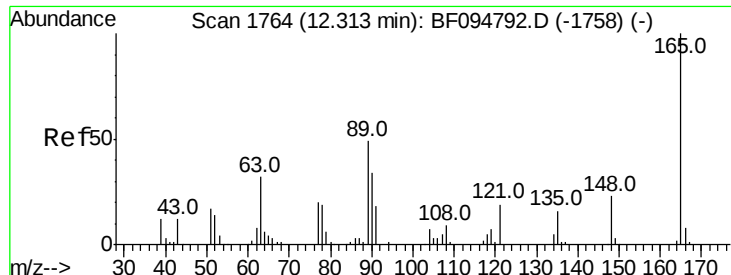
#44  
 2-Fluorobiphenyl  
 Concen: 5.84 ng  
 RT: 11.51 min Scan# 1627  
 Delta R.T. -0.02 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Tgt Ion:172 Resp: 68014  
 Ion Ratio Lower Upper  
 172 100  
 171 35.0 29.6 44.4  
 170 23.6 19.8 29.8



Abundance Ion 172.00 (171.70 to 172.70): E  
 Ion 171.00 (170.70 to 171.70): E  
 Ion 170.00 (169.70 to 170.70): E

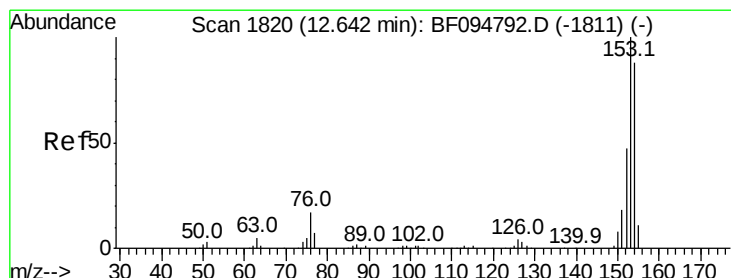
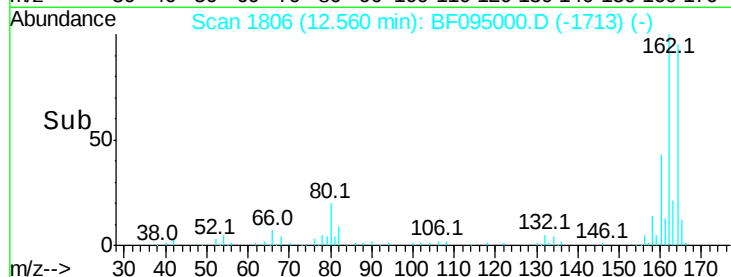
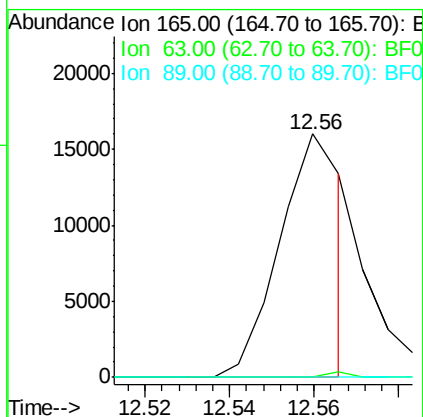
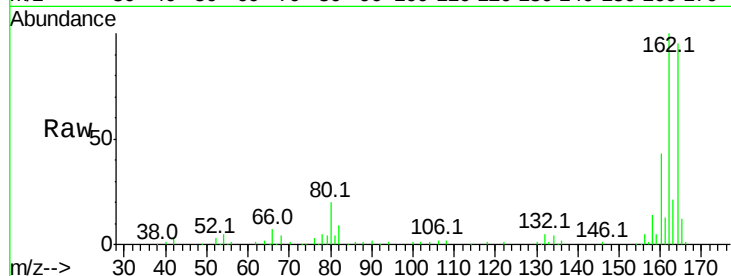




#50  
 2,6-Dinitrotoluene  
 Concen: 5.84 ng  
 RT: 12.56 min Scan# 1806  
 Delta R.T. 0.25 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

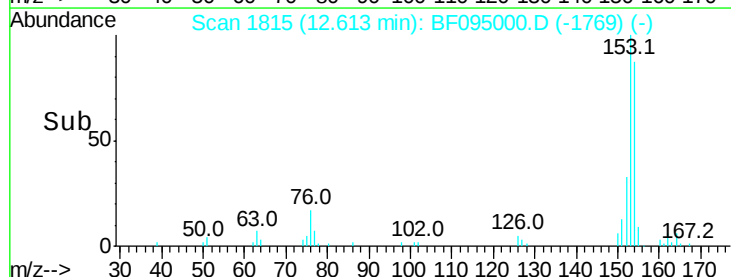
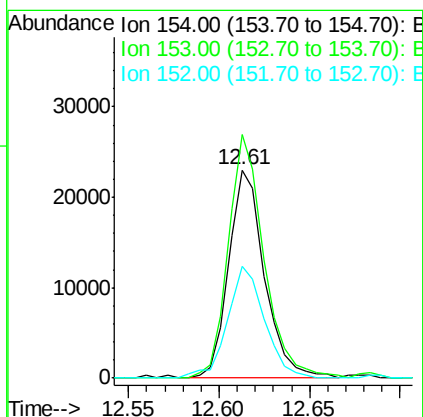
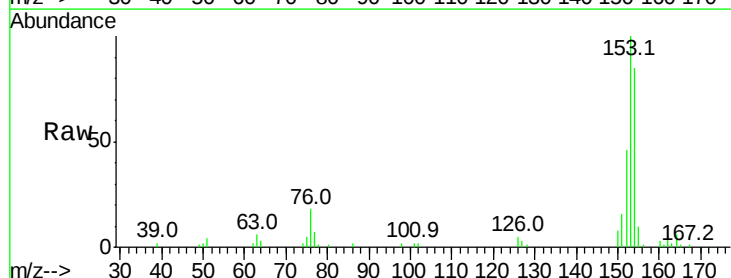
Instrument :  
 BNA\_F  
 ClientSampleId :

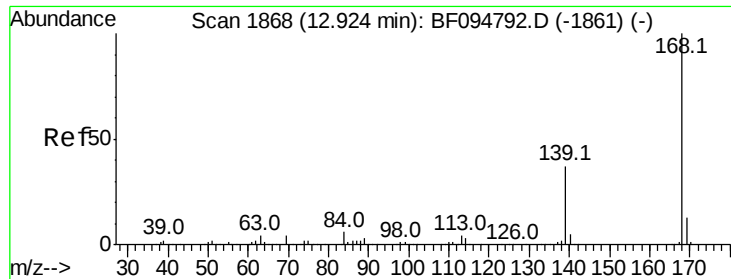
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 165     | 100   |       |       |
| 63      | 0.0   | 34.3  | 51.5# |
| 89      | 0.0   | 37.1  | 55.7# |



#51  
 Acenaphthene  
 Concen: 2.97 ng  
 RT: 12.61 min Scan# 1815  
 Delta R.T. -0.03 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 154     | 100   |       |       |
| 153     | 117.2 | 90.5  | 135.7 |
| 152     | 54.0  | 43.6  | 65.4  |





#54

Dibenzenofuran

Concen: 2.67 ng

RT: 12.91 min Scan# 1866

Delta R.T. -0.01 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

Instrument :

BNA\_F

ClientSampleId :

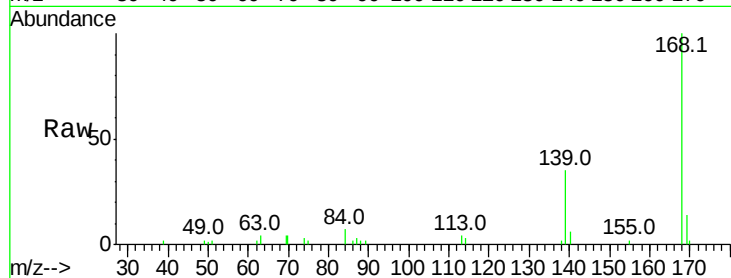
Tot Ion:168 Resp: 39380

Ion Ratio Lower Upper

168 100

139 35.1 30.6 45.8

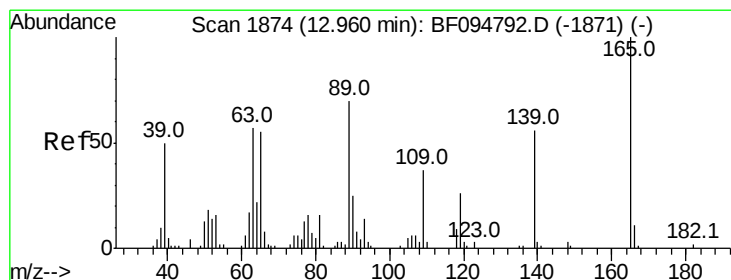
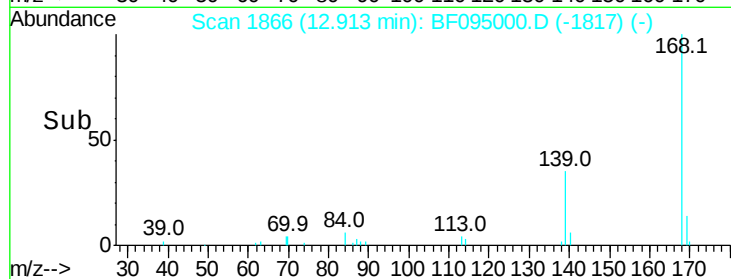
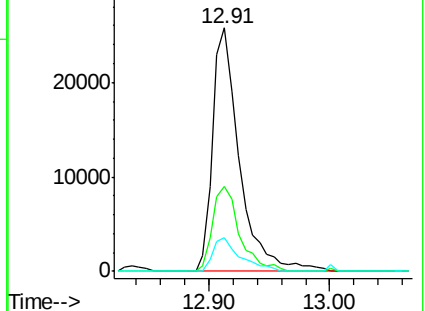
169 13.6 10.8 16.2



Abundance Ion 168.00 (167.70 to 168.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 169.00 (168.70 to 169.70): E



#55

4-Nitrophenol

Concen: 7.67 ng

RT: 12.91 min Scan# 1866

Delta R.T. -0.05 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

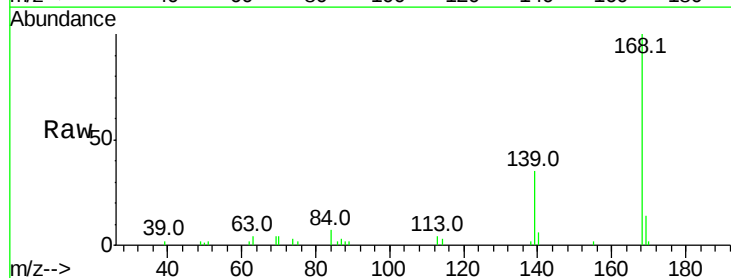
Tgt Ion:139 Resp: 13897

Ion Ratio Lower Upper

139 100

109 0.0 34.1 74.1#

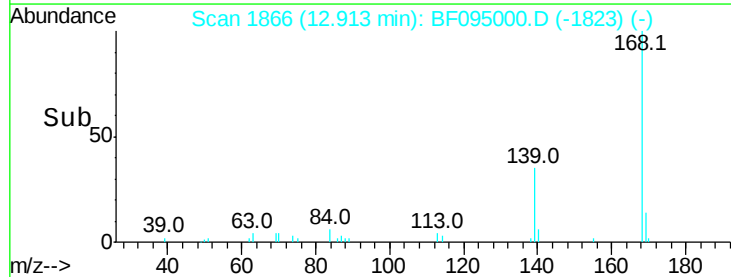
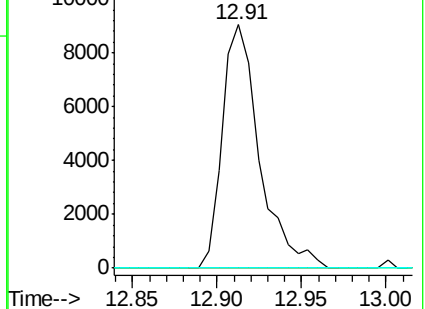
65 0.0 31.4 71.4#

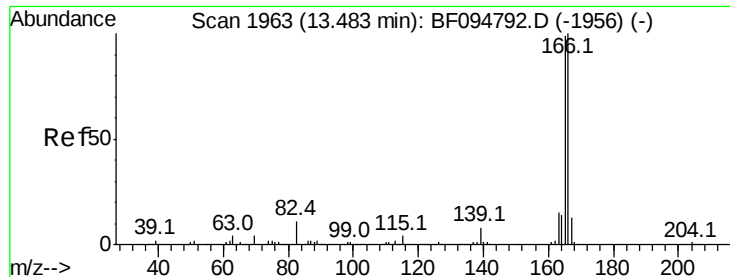


Abundance Ion 139.00 (138.70 to 139.70): E

Ion 109.00 (108.70 to 109.70): E

Ion 65.00 (64.70 to 65.70): BF0





#57

Fluorene

Concen: 4.52 ng

RT: 13.46 min Scan# 1959

Delta R.T. -0.02 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

Instrument :

BNA\_F

ClientSampleId :

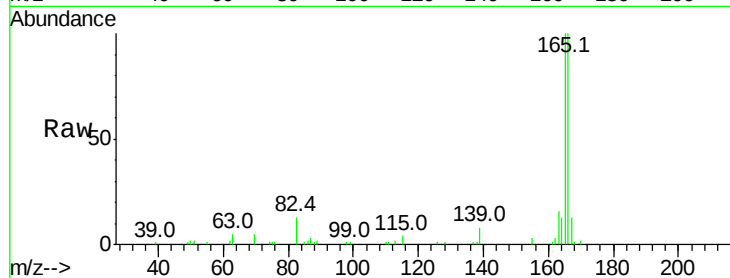
Tot Ion:166 Resp: 58025

Ion Ratio Lower Upper

166 100

165 100.1 78.8 118.2

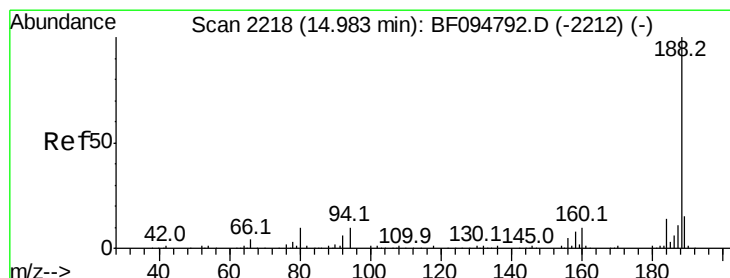
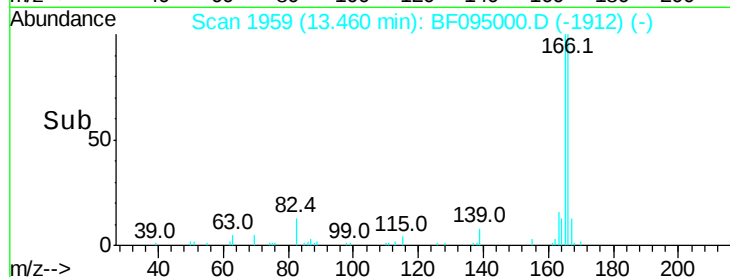
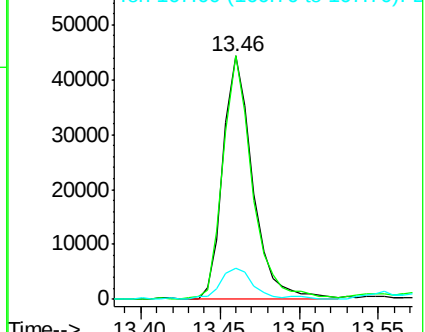
167 12.9 10.6 16.0



Abundance Ion 166.00 (165.70 to 166.70): E

Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E



#63

Phenanthrene-d10

Concen: 20.00 ng

RT: 14.96 min Scan# 2214

Delta R.T. -0.02 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

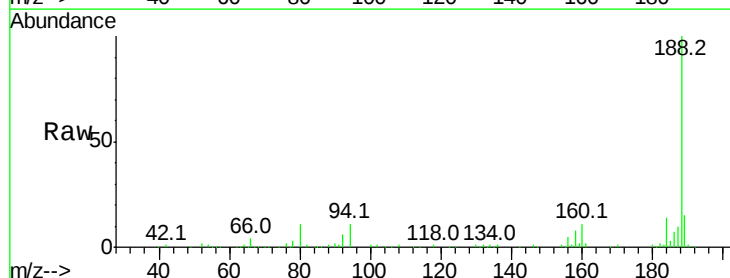
Tgt Ion:188 Resp: 267592

Ion Ratio Lower Upper

188 100

94 10.9 9.4 14.2

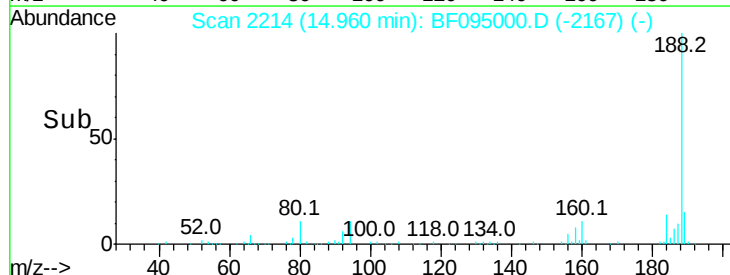
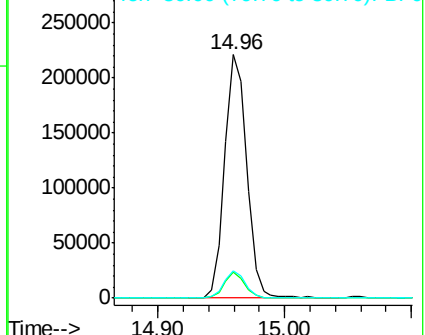
80 11.2 10.2 15.2

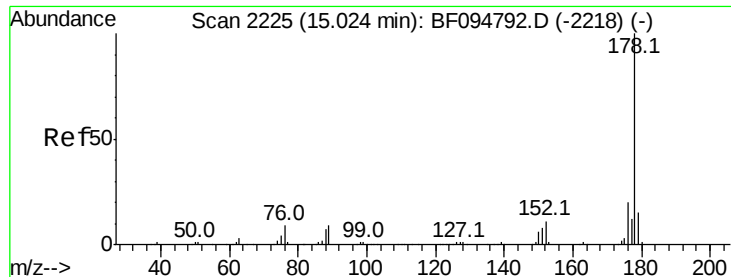


Abundance Ion 188.00 (187.70 to 188.70): E

Ion 94.00 (93.70 to 94.70): BF0

Ion 80.00 (79.70 to 80.70): BF0

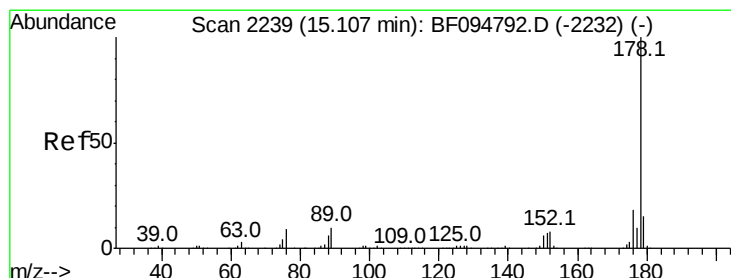
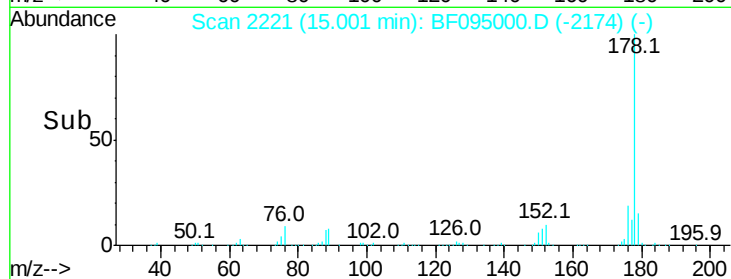
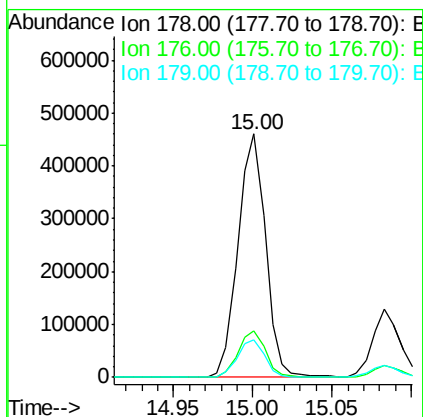
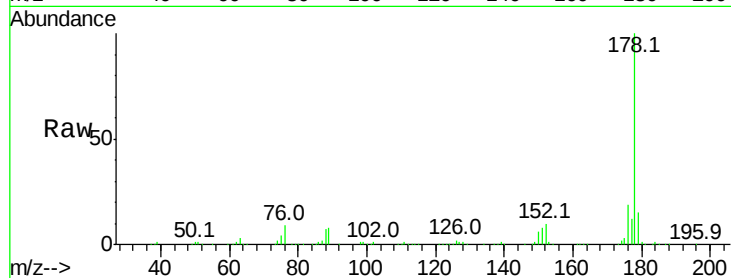




#70  
Phenanthrene  
Concen: 36.29 ng  
RT: 15.00 min Scan# 2221  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

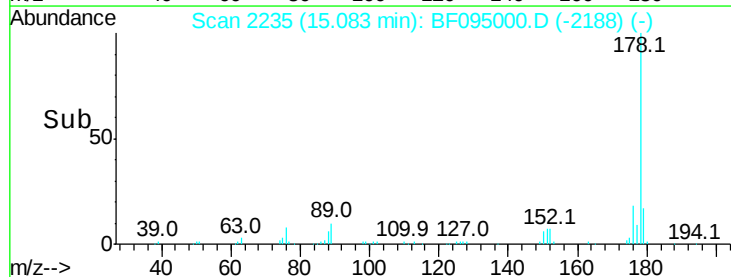
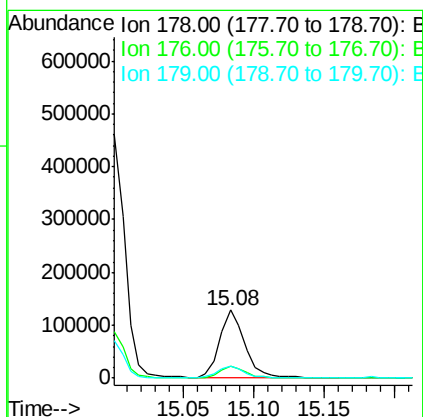
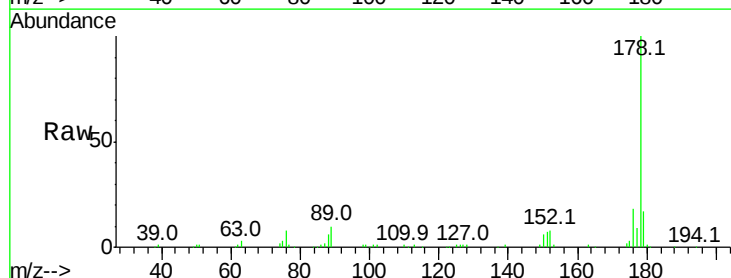
Instrument :  
BNA\_F  
ClientSampleId :

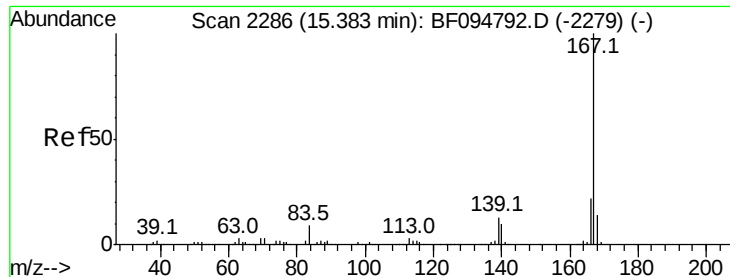
Tot Ion:178 Resp: 558010  
Ion Ratio Lower Upper  
178 100  
176 19.2 16.2 24.4  
179 15.2 12.6 19.0



#71  
Anthracene  
Concen: 10.12 ng  
RT: 15.08 min Scan# 2235  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

Tgt Ion:178 Resp: 158995  
Ion Ratio Lower Upper  
178 100  
176 18.0 15.8 23.8  
179 17.4 12.7 19.1

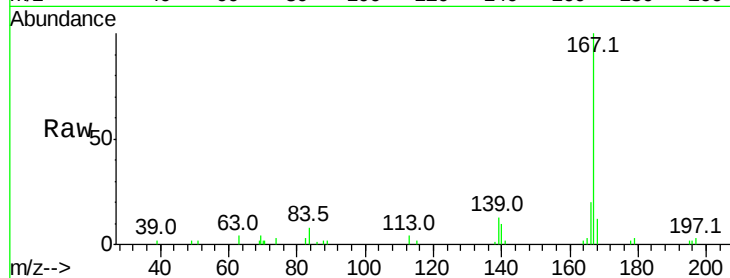




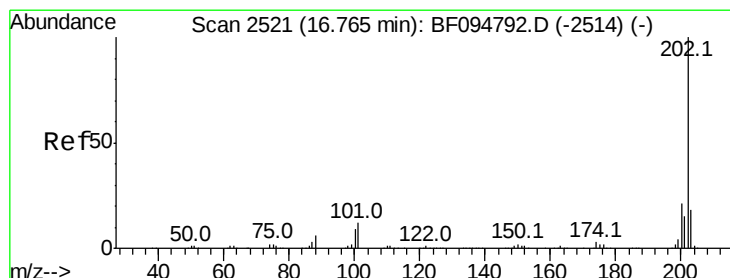
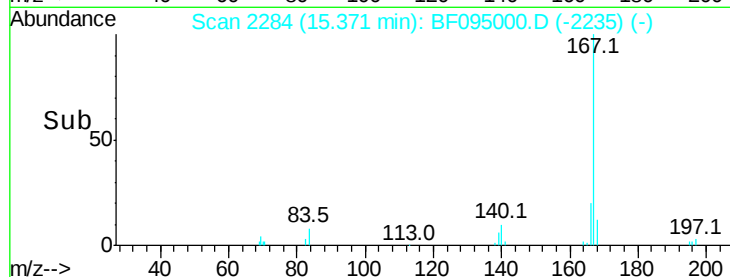
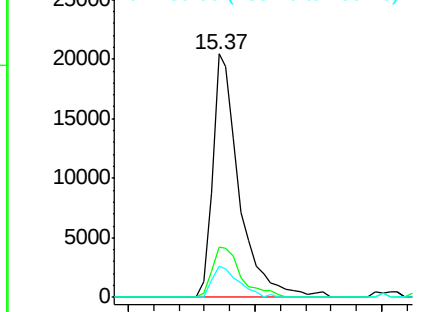
#72  
 Carbazole  
 Concen: 2.09 ng  
 RT: 15.37 min Scan# 2284  
 Delta R.T. -0.01 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Instrument :  
 BNA\_F  
 ClientSampled :

Tot Ion:167 Resp: 29853  
 Ion Ratio Lower Upper  
 167 100  
 166 20.5 18.1 27.1  
 139 12.6 11.7 17.5

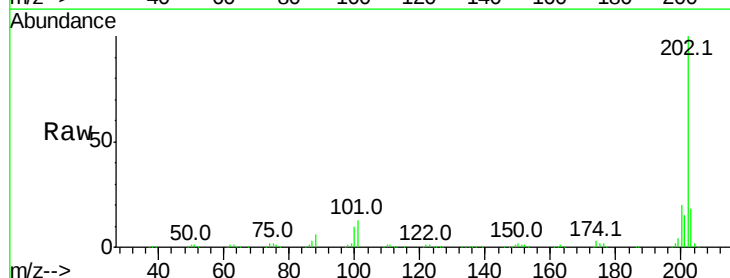


Abundance Ion 167.00 (166.70 to 167.70): E  
 Ion 166.00 (165.70 to 166.70): E  
 Ion 139.00 (138.70 to 139.70): E

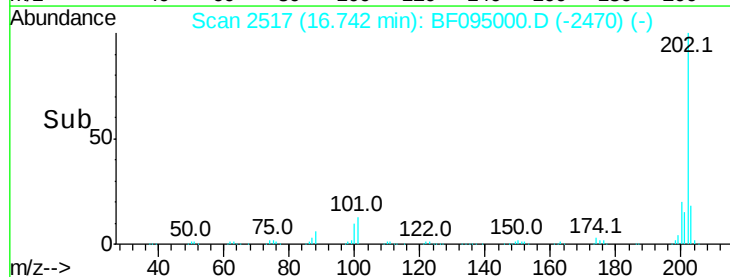
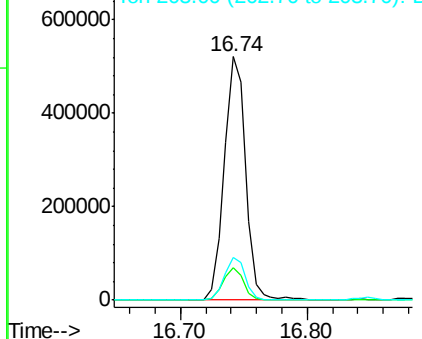


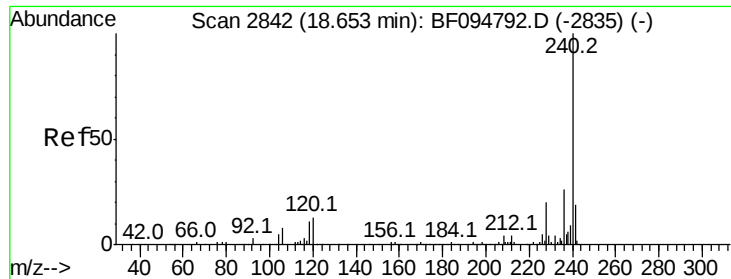
#74  
 Fluoranthene  
 Concen: 38.64 ng  
 RT: 16.74 min Scan# 2517  
 Delta R.T. -0.02 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Tgt Ion:202 Resp: 609436  
 Ion Ratio Lower Upper  
 202 100  
 101 13.1 0.0 33.2  
 203 17.7 0.0 38.1



Abundance Ion 202.00 (201.70 to 202.70): E  
 Ion 101.00 (100.70 to 101.70): E  
 Ion 203.00 (202.70 to 203.70): E





#75

Chrysene-d12

Concen: 20.00 ng

RT: 18.63 min Scan# 2838

Delta R.T. -0.02 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

Instrument :

BNA\_F

ClientSampled :

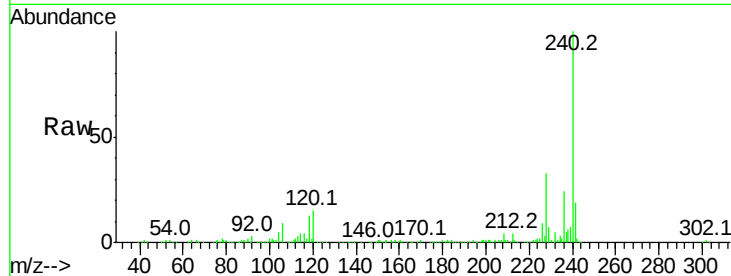
Tot Ion:240 Resp: 206821

Ion Ratio Lower Upper

240 100

120 14.9 5.8 8.8#

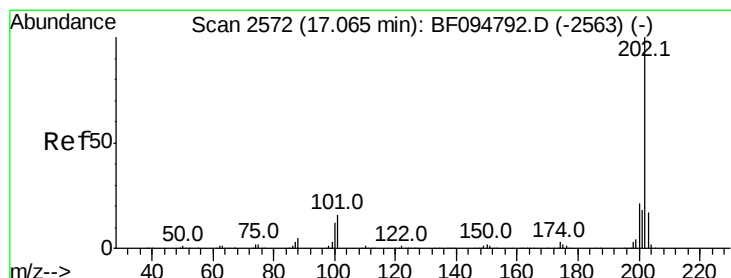
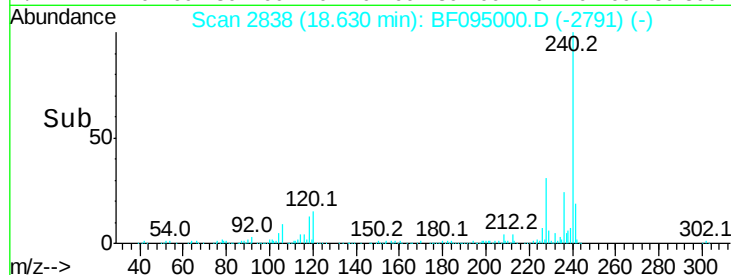
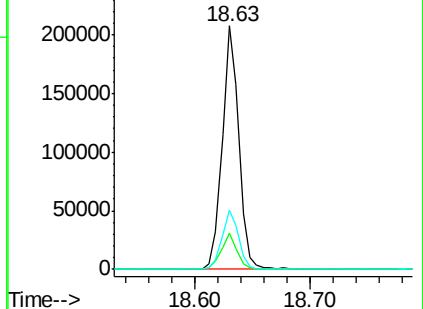
236 24.2 20.5 30.7



Abundance Ion 240.00 (239.70 to 240.70): E

Ion 120.00 (119.70 to 120.70): E

Ion 236.00 (235.70 to 236.70): E



#77

Pyrene

Concen: 30.91 ng

RT: 17.04 min Scan# 2568

Delta R.T. -0.02 min

Lab File: BF095000.D

Acq: 9 May 2017 1:58

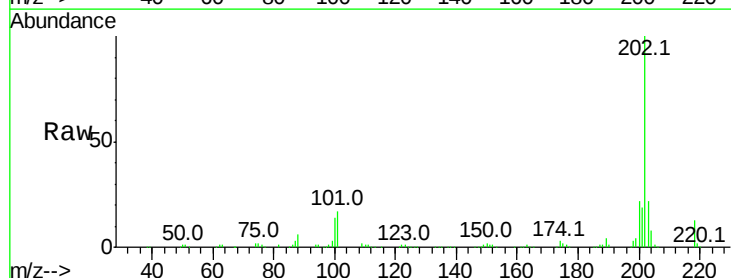
Tgt Ion:202 Resp: 478167

Ion Ratio Lower Upper

202 100

200 21.8 17.6 26.4

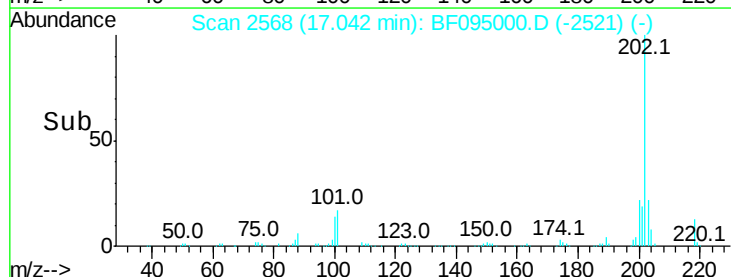
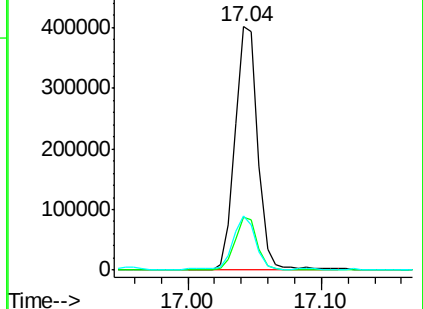
203 22.1 14.4 21.6#

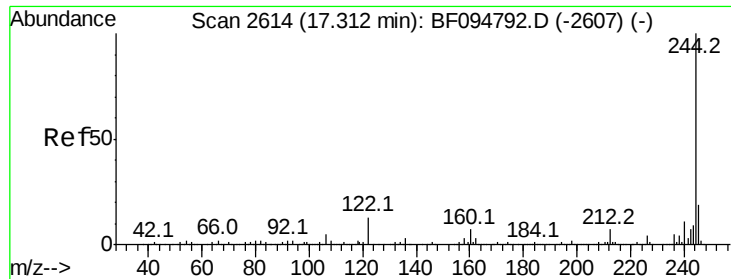


Abundance Ion 202.00 (201.70 to 202.70): E

Ion 200.00 (199.70 to 200.70): E

Ion 203.00 (202.70 to 203.70): E

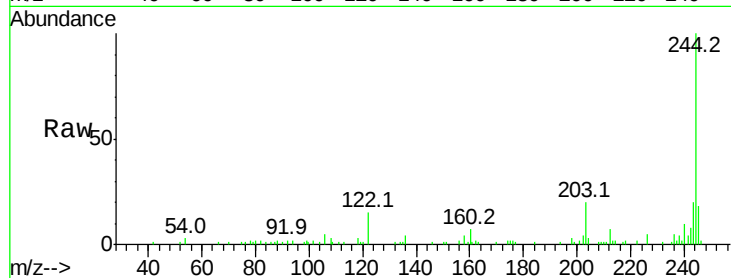




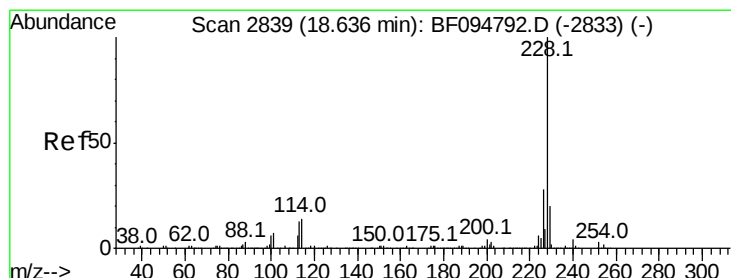
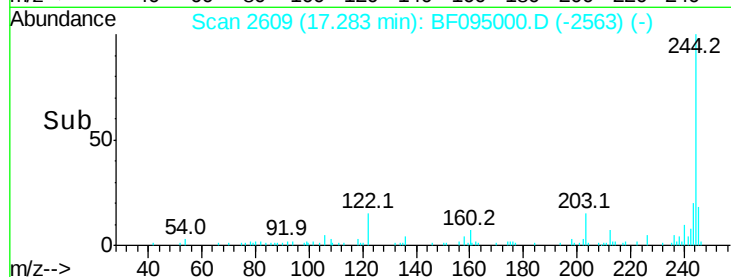
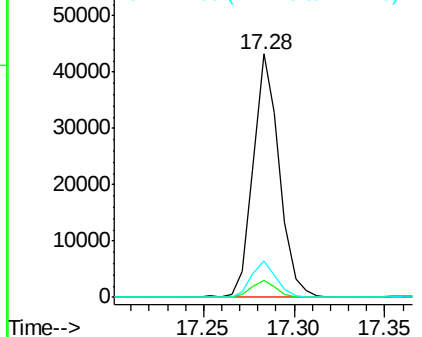
#78  
 Terphenyl-d14  
 Concen: 4.60 ng  
 RT: 17.28 min Scan# 2609  
 Delta R.T. -0.03 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Instrument :  
 BNA\_F  
 ClientSampleId :

Tot Ion:244 Resp: 43165  
 Ion Ratio Lower Upper  
 244 100  
 212 7.3 6.0 9.0  
 122 15.1 10.3 15.5

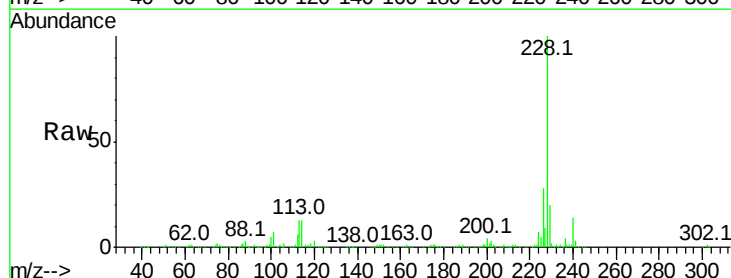


Abundance Ion 244.00 (243.70 to 244.70): E  
 Ion 212.00 (211.70 to 212.70): E  
 Ion 122.00 (121.70 to 122.70): E

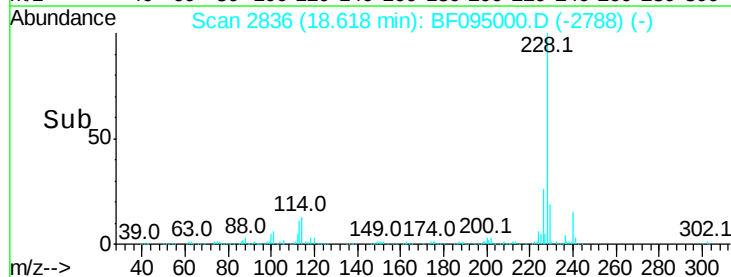
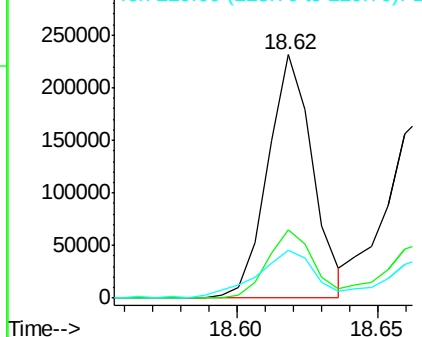


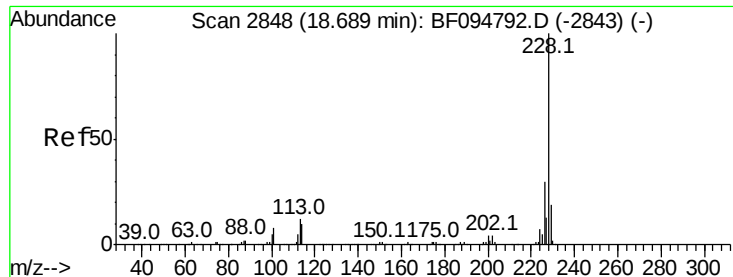
#80  
 Benzo(a)anthracene  
 Concen: 21.07 ng  
 RT: 18.62 min Scan# 2836  
 Delta R.T. -0.02 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Tgt Ion:228 Resp: 253586  
 Ion Ratio Lower Upper  
 228 100  
 226 28.1 22.6 33.8  
 229 19.7 16.3 24.5



Abundance Ion 228.00 (227.70 to 228.70): E  
 Ion 226.00 (225.70 to 226.70): E  
 Ion 229.00 (228.70 to 229.70): E

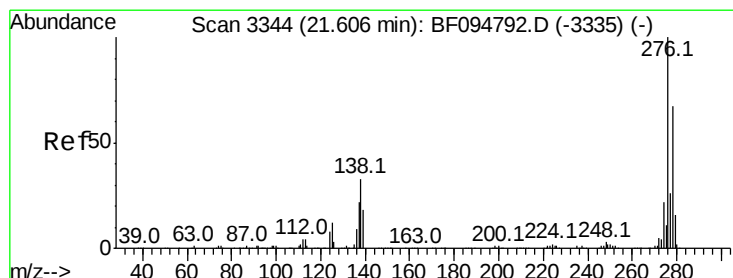
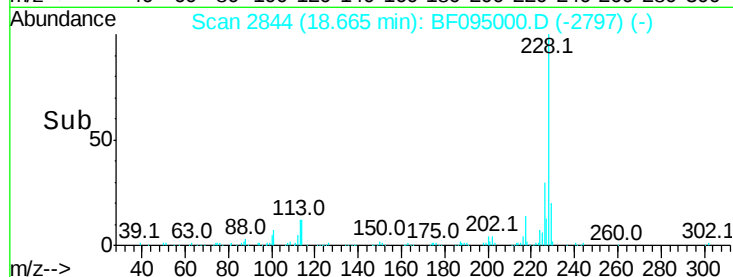
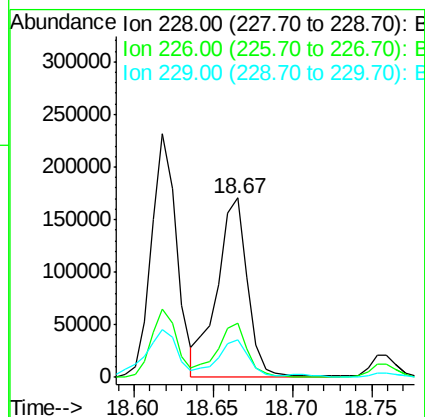
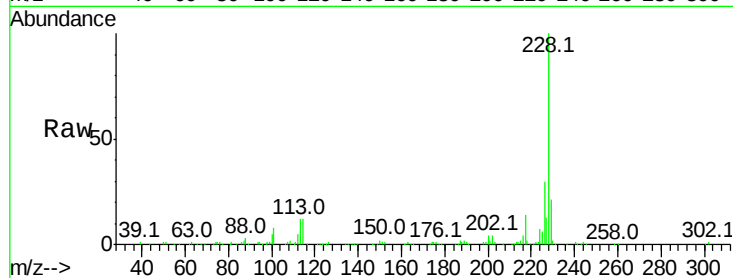




#82  
Chrysene  
Concen: 19.41 ng  
RT: 18.67 min Scan# 2844  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

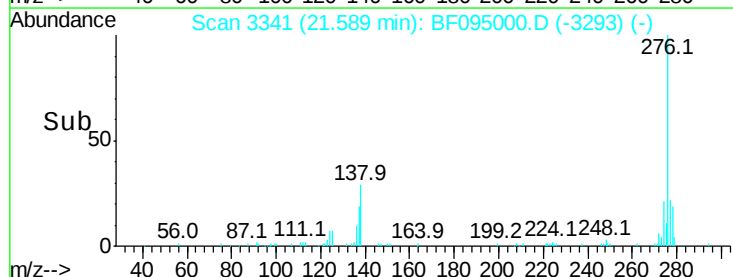
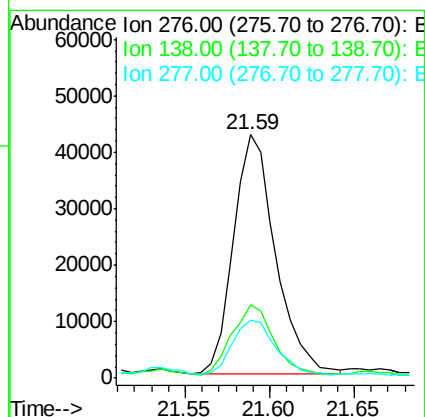
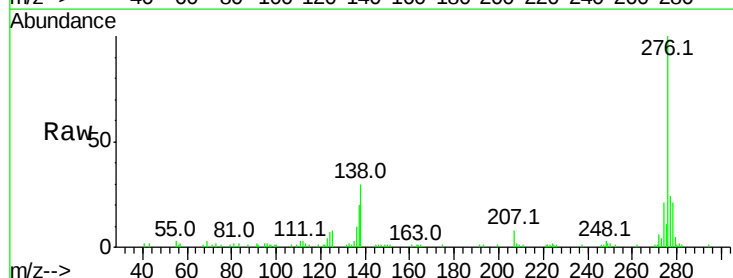
Instrument :  
BNA\_F  
ClientSampleId :

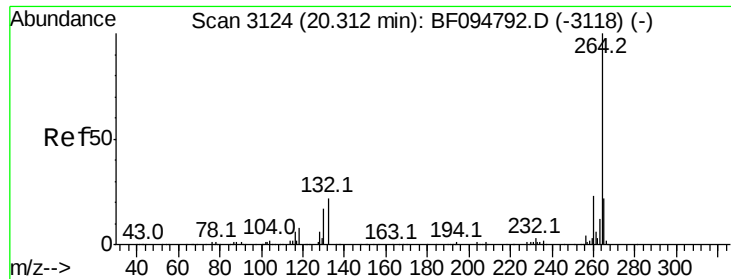
Tot Ion:228 Resp: 225908  
Ion Ratio Lower Upper  
228 100  
226 30.5 24.9 37.3  
229 21.0 15.8 23.6



#85  
Indeno(1,2,3-cd)pyrene  
Concen: 7.69 ng  
RT: 21.59 min Scan# 3341  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

Tgt Ion:276 Resp: 72709  
Ion Ratio Lower Upper  
276 100  
138 32.6 27.8 41.6  
277 24.1 20.2 30.4

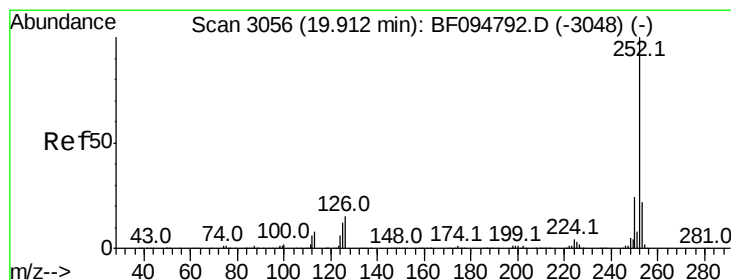
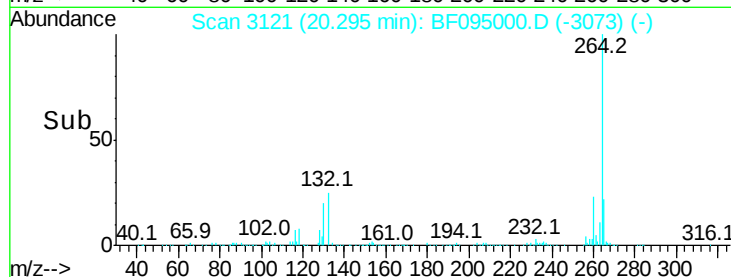
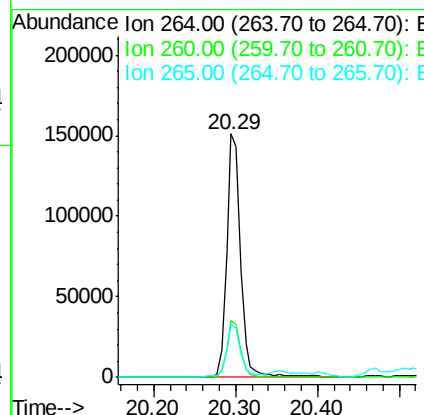
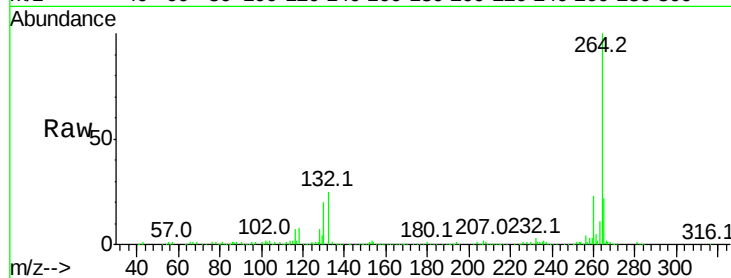




#86  
Pervlene-d12  
Concen: 20.00 ng  
RT: 20.29 min Scan# 3121  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

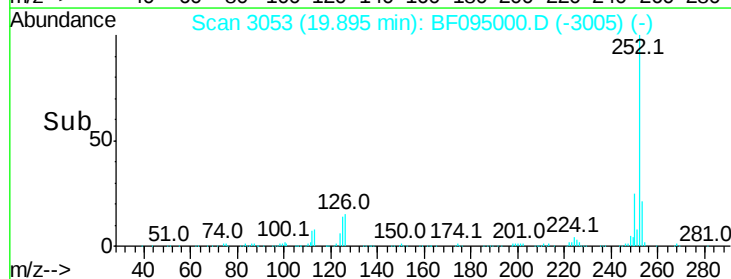
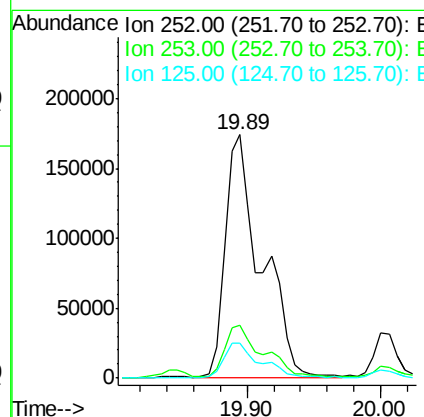
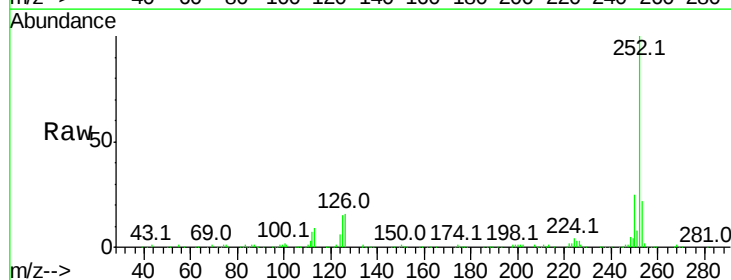
Instrument :  
BNA\_F  
ClientSampleId :

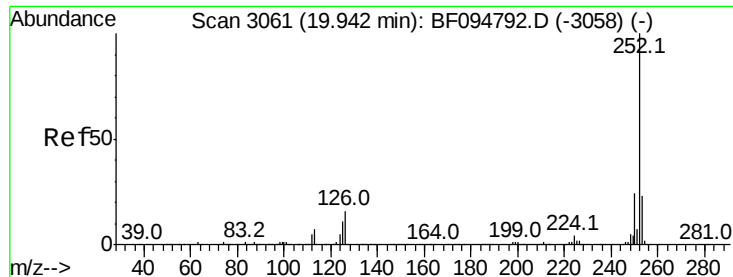
Tot Ion:264 Resp: 179220  
Ion Ratio Lower Upper  
264 100  
260 23.4 19.5 29.3  
265 21.8 17.2 25.8



#87  
Benzo(b)fluoranthene  
Concen: 29.51 ng  
RT: 19.89 min Scan# 3053  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

Tgt Ion:252 Resp: 326765  
Ion Ratio Lower Upper  
252 100  
253 21.6 18.1 27.1  
125 14.5 9.8 14.8

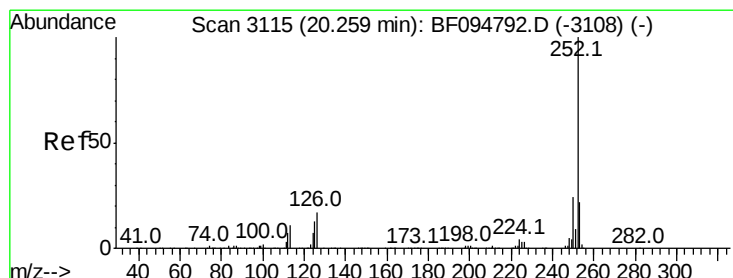
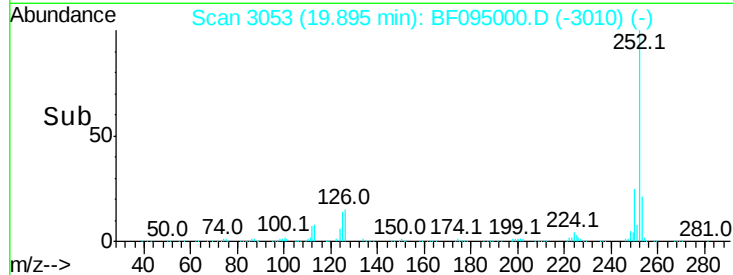
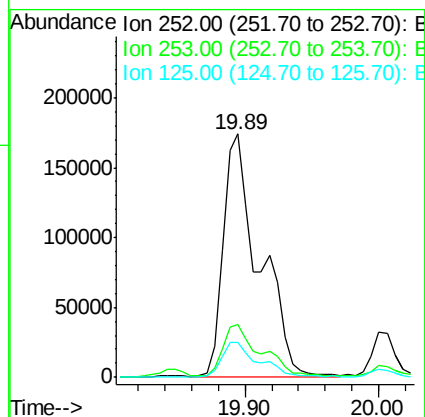
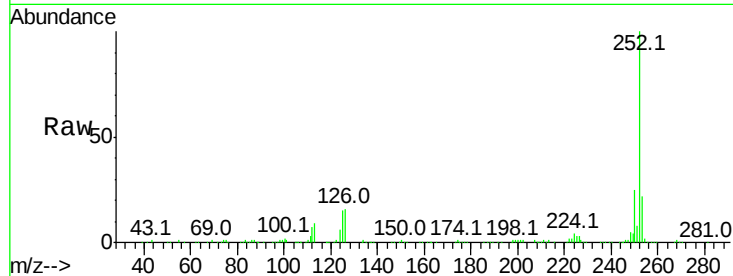




#88  
Benzo(k)fluoranthene  
Concen: 30.59 ng  
RT: 19.89 min Scan# 3053  
Delta R.T. -0.05 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

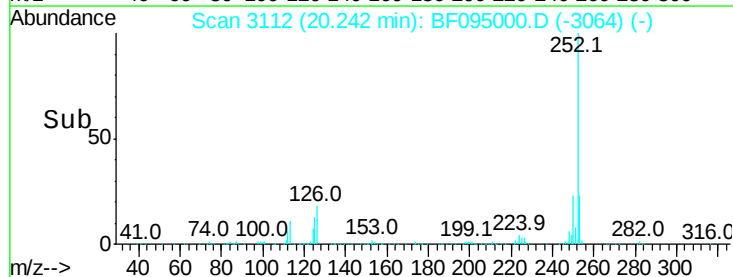
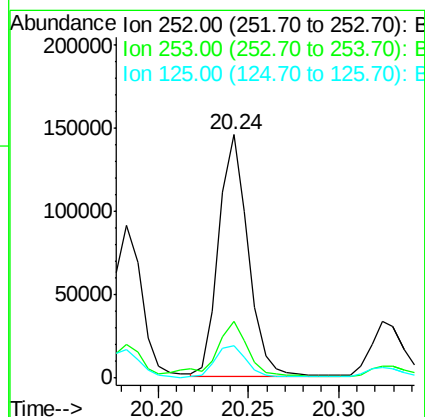
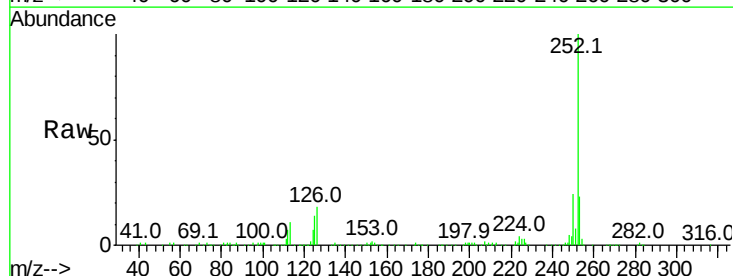
Instrument :  
BNA\_F  
ClientSampleId :

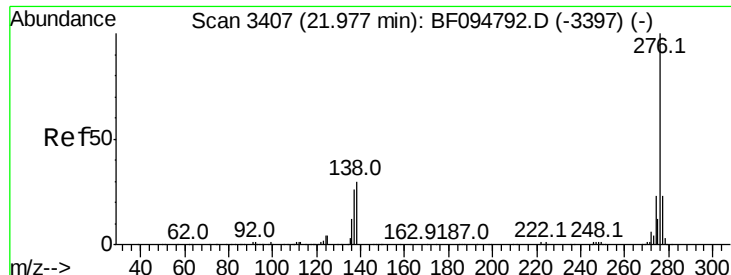
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 21.6  | 18.4  | 27.6  |
| 125     | 14.5  | 13.1  | 19.7  |



#89  
Benzo(a)pyrene  
Concen: 16.26 ng  
RT: 20.24 min Scan# 3112  
Delta R.T. -0.02 min  
Lab File: BF095000.D  
Acq: 9 May 2017 1:58

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 23.2  | 17.5  | 26.3  |
| 125     | 13.5  | 11.0  | 16.4  |

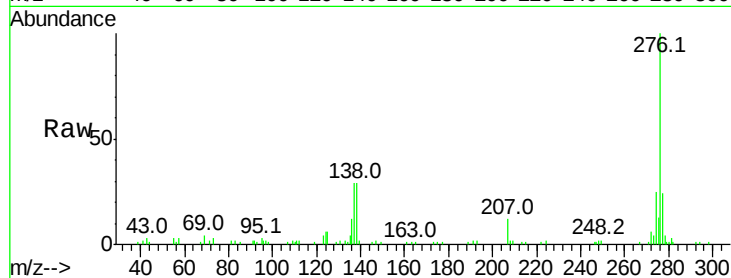




#91  
 Benzo(a,h,i)perylene  
 Concen: 7.73 ng  
 RT: 21.97 min Scan# 3405  
 Delta R.T. -0.01 min  
 Lab File: BF095000.D  
 Acq: 9 May 2017 1:58

Instrument :  
 BNA\_F  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 277     | 24.4  | 18.6  | 28.0  |
| 138     | 29.4  | 25.4  | 38.0  |



Abundance

Ion 276.00 (275.70 to 276.70): E

Ion 277.00 (276.70 to 277.70): E

Ion 138.00 (137.70 to 138.70): E

