

Data Path : Z:\HPCHEM1\BNA F\Data\BF031117\  
 Data File : BF093598.D  
 Acq On : 12 Mar 2017 8:33  
 Operator : SJ/MA  
 Sample : I2106-04DL 20X  
 Misc :  
 ALS Vial : 33 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 HY-SB413ADL

Quant Time: Mar 13 18:41:24 2017  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF030717.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Mon Mar 13 15:05:08 2017  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 6.72  | 152  | 150266   | 20.00 | ng    | 0.00     |
| 21) Naphthalene-d8        | 8.00  | 136  | 585439   | 20.00 | ng    | -0.01    |
| 38) Acenaphthene-d10      | 9.76  | 164  | 247050   | 20.00 | ng    | 0.00     |
| 63) Phenanthrene-d10      | 11.24 | 188  | 370116   | 20.00 | ng    | -0.01    |
| 75) Chrysene-d12          | 13.89 | 240  | 286528   | 20.00 | ng    | 0.00     |
| 86) Perylene-d12          | 15.29 | 264  | 214169   | 20.00 | ng    | 0.01     |

|                             |       |     |       |      |    |      |
|-----------------------------|-------|-----|-------|------|----|------|
| System Monitoring Compounds |       |     |       |      |    |      |
| 5) 2-Fluorophenol           | 5.36  | 112 | 39322 | 4.36 | ng | 0.05 |
| 7) Phenol-d6                | 6.41  | 99  | 49762 | 4.37 | ng | 0.03 |
| 23) Nitrobenzene-d5         | 7.32  | 82  | 30523 | 2.89 | ng | 0.01 |
| 41) 2,4,6-Tribromophenol    | 10.56 | 330 | 5366  | 3.33 | ng | 0.01 |
| 44) 2-Fluorobiphenyl        | 9.09  | 172 | 56655 | 4.27 | ng | 0.00 |
| 78) Terphenyl-d14           | 12.83 | 244 | 36956 | 3.35 | ng | 0.00 |

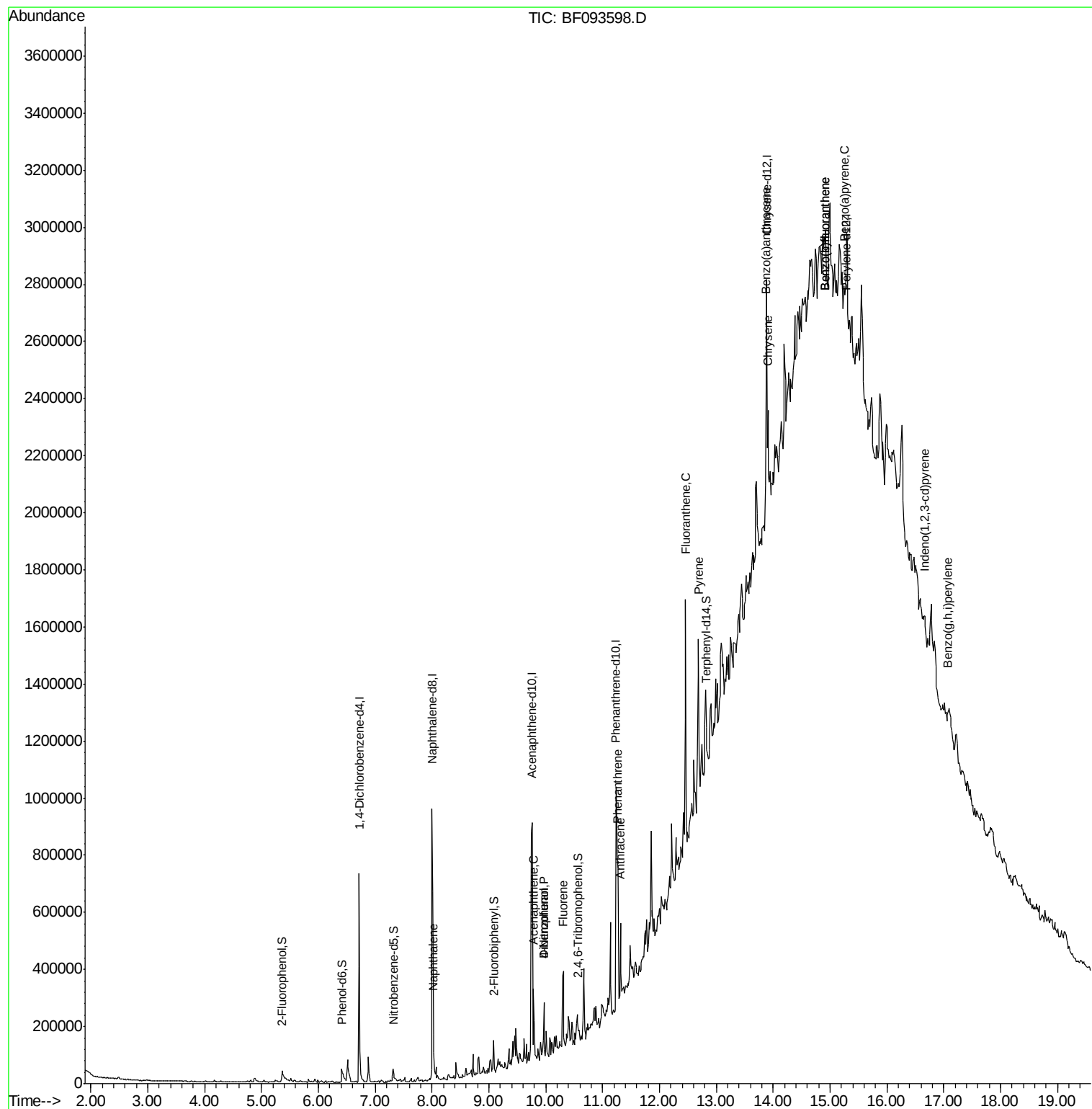
|                            |       |     |        |           |    |      |
|----------------------------|-------|-----|--------|-----------|----|------|
| Target Compounds           |       |     |        | Qvalue    |    |      |
| 9) Benzaldehyde            | 6.31  | 77  | 228    | Below Cal | #  | 1    |
| 31) Naphthalene            | 8.02  | 128 | 66451  | 2.27      | ng | 97   |
| 51) Acenaphthene           | 9.78  | 154 | 58755  | 4.37      | ng | 91   |
| 54) Dibenzofuran           | 9.97  | 168 | 70297  | 4.18      | ng | 91   |
| 55) 4-Nitrophenol          | 9.97  | 139 | 25153  | 11.99     | ng | # 10 |
| 57) Fluorene               | 10.31 | 166 | 104849 | 7.36      | ng | 99   |
| 70) Phenanthrene           | 11.27 | 178 | 300208 | 14.21     | ng | 97   |
| 71) Anthracene             | 11.32 | 178 | 139930 | 6.55      | ng | 100  |
| 74) Fluoranthene           | 12.46 | 202 | 433501 | 21.24     | ng | 93   |
| 77) Pyrene                 | 12.69 | 202 | 346256 | 16.62     | ng | 99   |
| 80) Benzo(a)anthracene     | 13.88 | 228 | 156104 | 9.23      | ng | # 95 |
| 82) Chrysene               | 13.91 | 228 | 100962 | 6.45      | ng | # 93 |
| 85) Indeno(1,2,3-cd)pyrene | 16.67 | 276 | 28770  | 2.20      | ng | # 84 |
| 87) Benzo(b)fluoranthene   | 14.91 | 252 | 134921 | 10.34     | ng | # 59 |
| 88) Benzo(k)fluoranthene   | 14.91 | 252 | 134921 | 10.73     | ng | # 59 |
| 89) Benzo(a)pyrene         | 15.25 | 252 | 52432  | 4.40      | ng | # 34 |
| 91) Benzo(a,h,i)perylene   | 17.08 | 276 | 23162  | 2.29      | ng | # 49 |

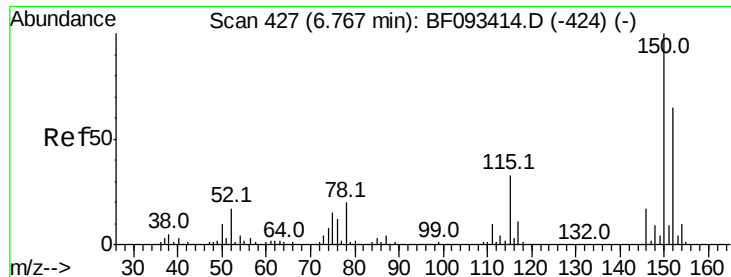
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\HPCHEM1\BNA F\Data\BF031117\  
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ALS Vial : 33 Sample Multiplier: 1

Instrument :  
BNA\_F  
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HY-SB413ADL

Quant Time: Mar 13 18:41:24 2017  
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF030717.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Mon Mar 13 15:05:08 2017  
Response via : Initial Calibration





#1

1,4-Dichlorobenzene-d4

Concen: 20.00 ng

RT: 6.72 min Scan# 423

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

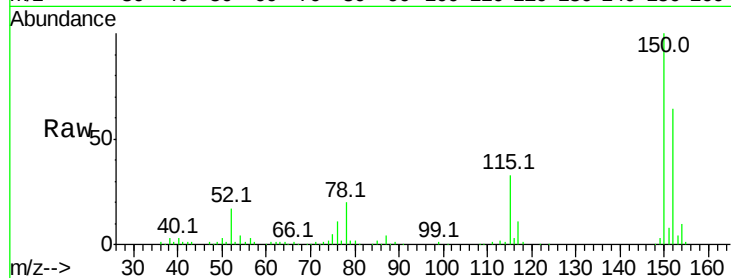
Tot Ion:152 Resp: 150266

Ion Ratio Lower Upper

152 100

150 157.4 124.9 187.3

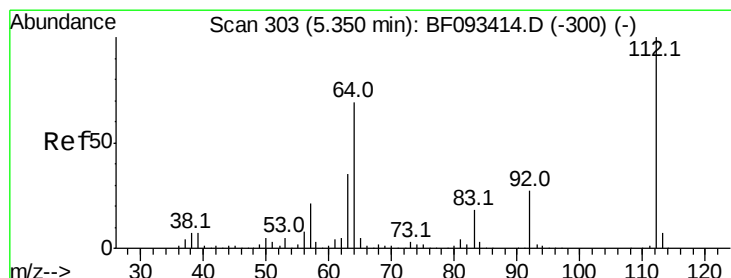
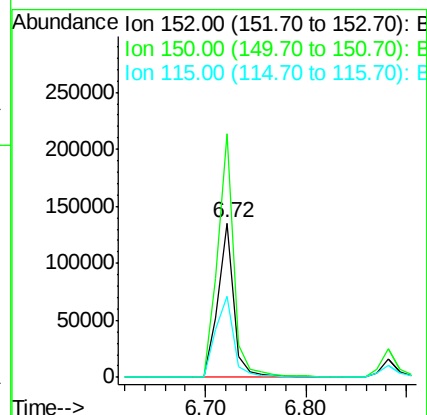
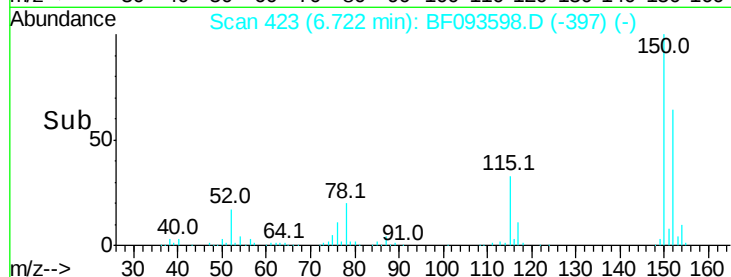
115 52.7 46.0 69.0



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: 4.36 ng

RT: 5.36 min Scan# 304

Delta R.T. 0.05 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

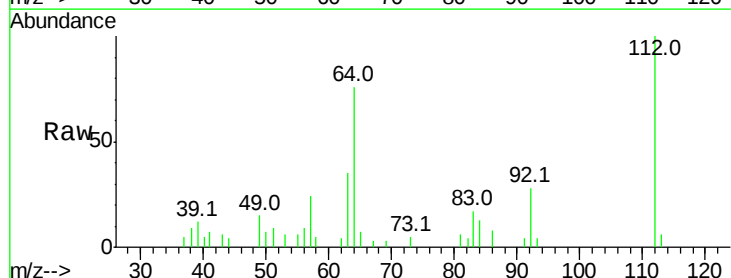
Tgt Ion:112 Resp: 39322

Ion Ratio Lower Upper

112 100

64 76.3 46.1 69.1#

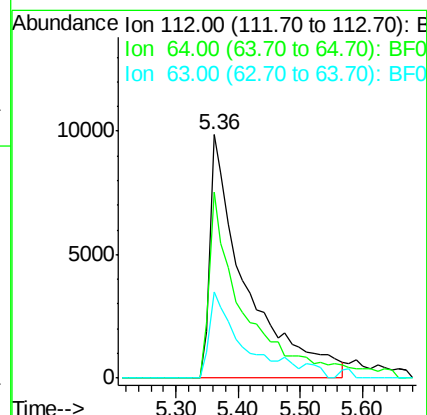
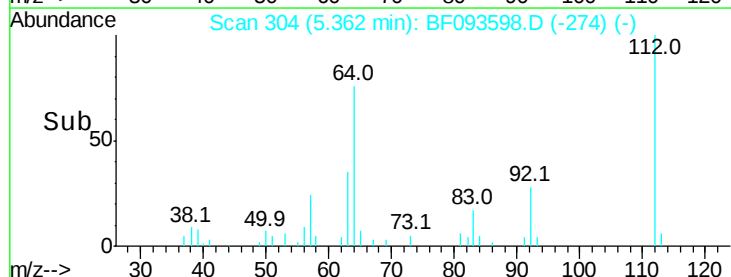
63 35.2 23.8 35.6

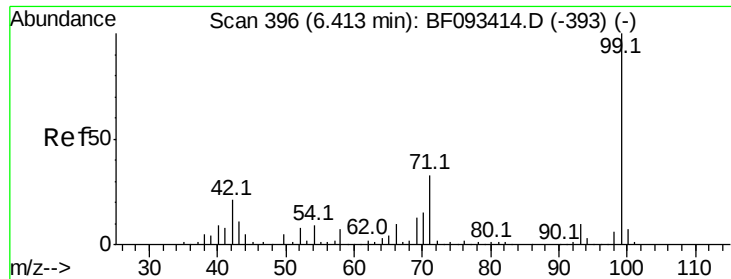


Abundance Ion 112.00 (111.70 to 112.70): E

Ion 64.00 (63.70 to 64.70): BF0

Ion 63.00 (62.70 to 63.70): BF0





#7

Phenol-d6

Concen: 4.37 ng

RT: 6.41 min Scan# 396

Delta R.T. 0.03 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

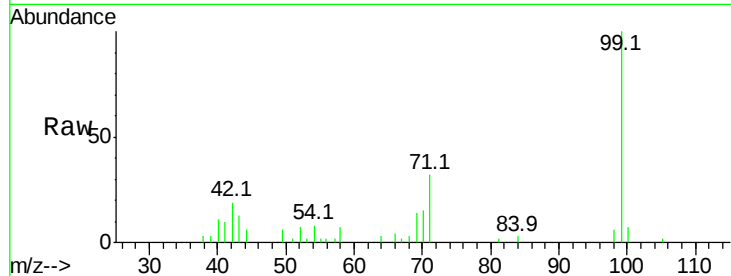
Tot Ion: 99 Resp: 49762

Ion Ratio Lower Upper

99 100

42 19.4 15.6 23.4

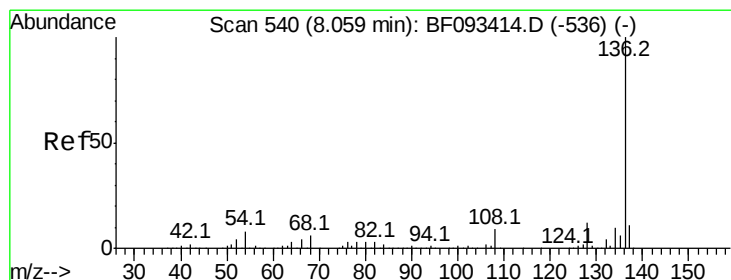
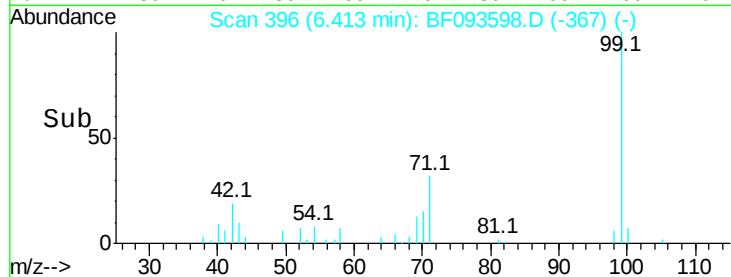
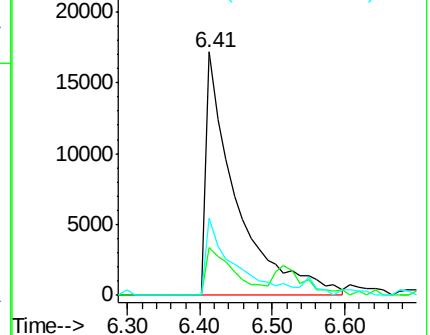
71 31.6 27.5 41.3



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: 8.00 min Scan# 535

Delta R.T. -0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Tgt Ion: 136 Resp: 585439

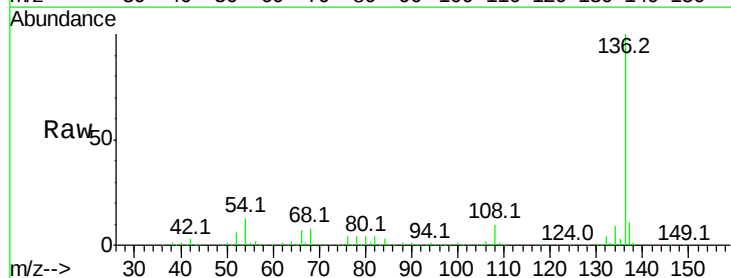
Ion Ratio Lower Upper

136 100

137 11.0 8.4 12.6

54 12.6 4.5 6.7#

68 8.3 3.6 5.4#

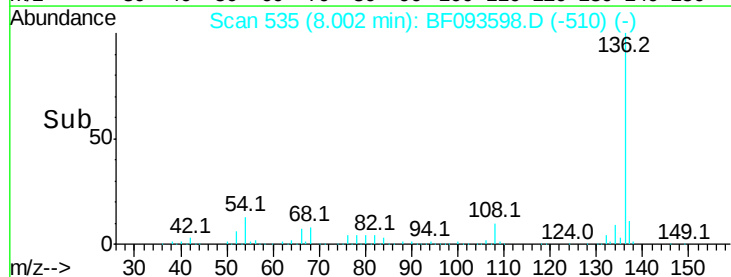
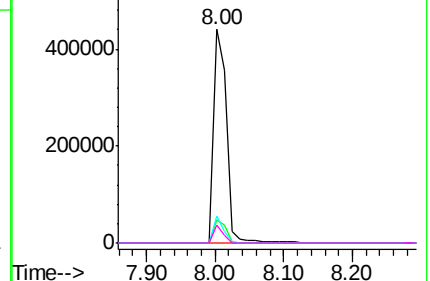


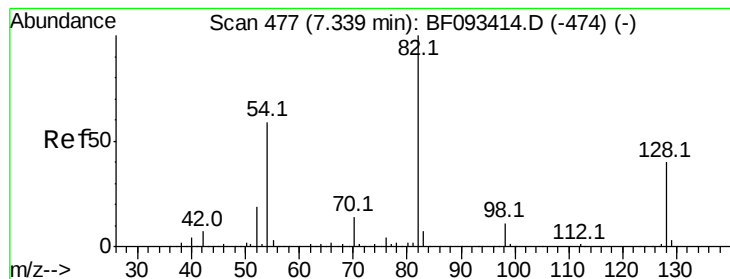
Abundance Ion 136.00 (135.70 to 136.70): E

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: 2.89 ng

RT: 7.32 min Scan# 475

Delta R.T. 0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

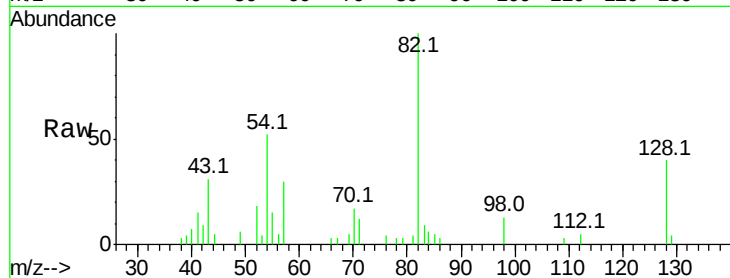
Tot Ion: 82 Resp: 30523

Ion Ratio Lower Upper

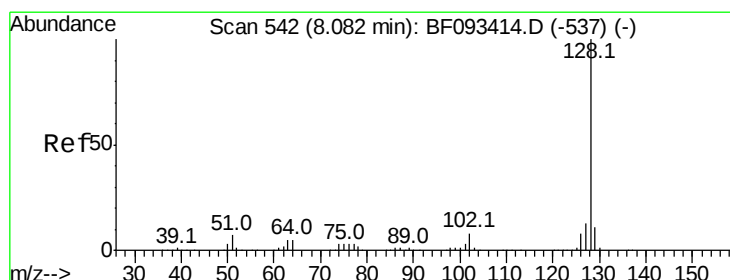
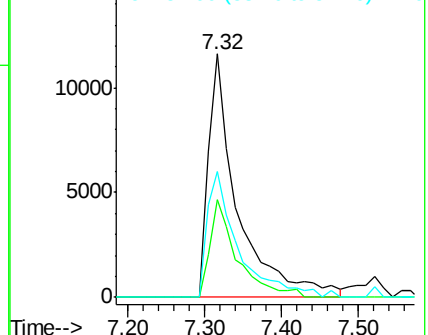
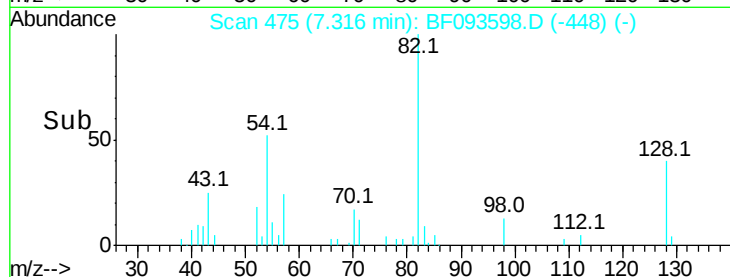
82 100

128 40.4 34.6 52.0

54 51.5 39.5 59.3



Abundance Ion 82.00 (81.70 to 82.70): BF0  
Ion 128.00 (127.70 to 128.70): E  
Ion 54.00 (53.70 to 54.70): BF0



#31

Naphthalene

Concen: 2.27 ng

RT: 8.02 min Scan# 537

Delta R.T. -0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

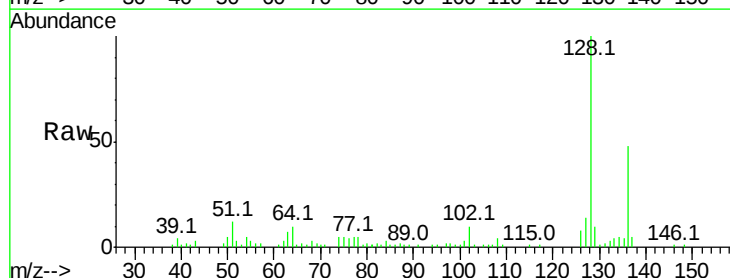
Tgt Ion: 128 Resp: 66451

Ion Ratio Lower Upper

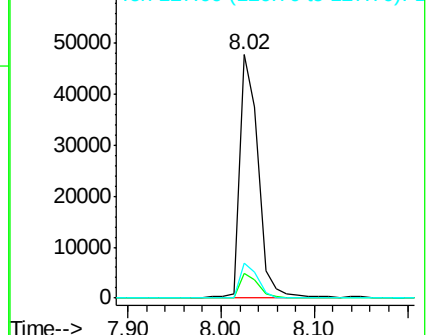
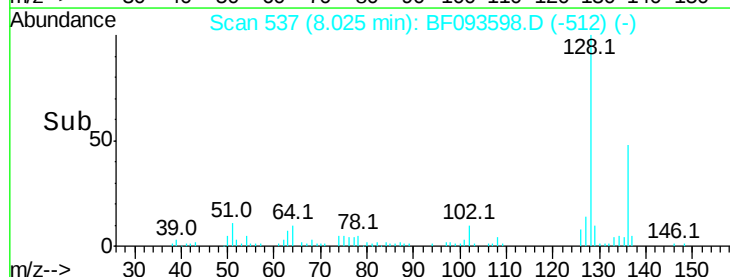
128 100

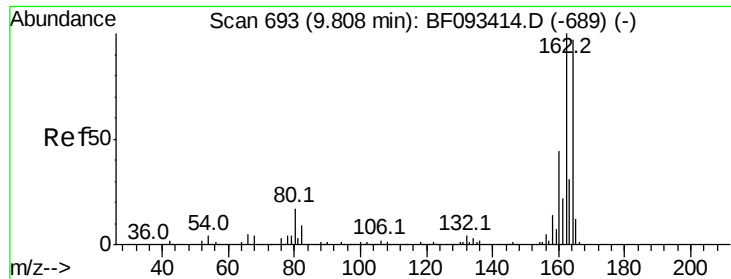
129 10.3 9.5 14.3

127 14.3 10.8 16.2



Abundance Ion 128.00 (127.70 to 128.70): E  
Ion 129.00 (128.70 to 129.70): E  
Ion 127.00 (126.70 to 127.70): E

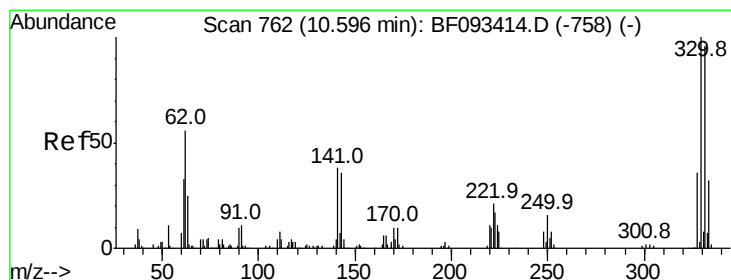
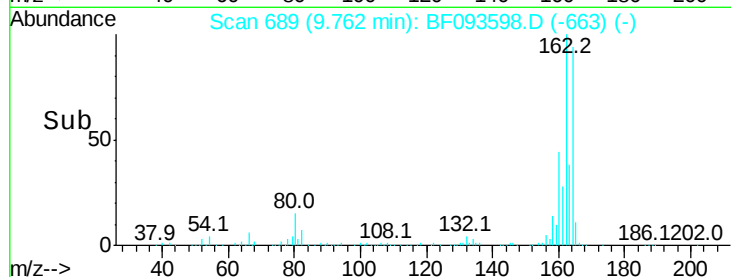
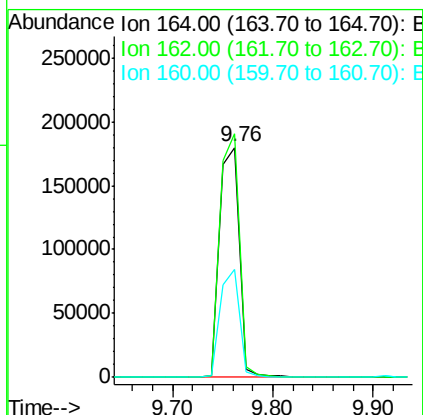
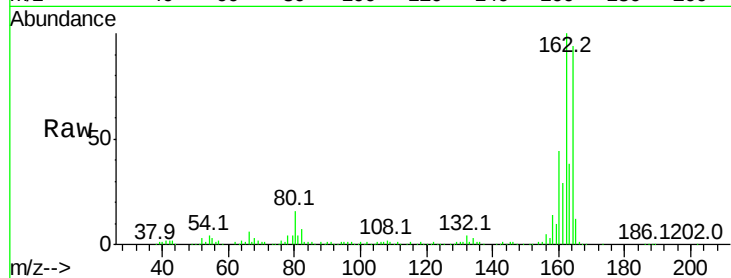




#38  
 Acenaphthene-d10  
 Concen: 20.00 ng  
 RT: 9.76 min Scan# 689  
 Delta R.T. 0.00 min  
 Lab File: BF093598.D  
 Acq: 12 Mar 2017 8:33

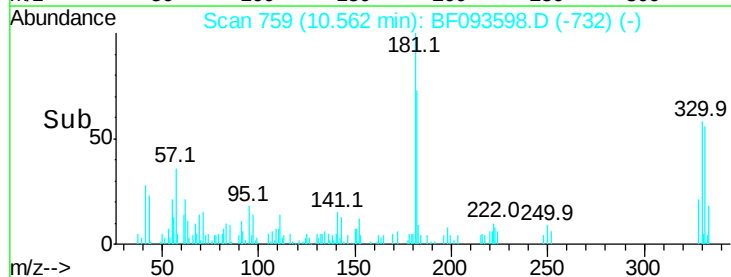
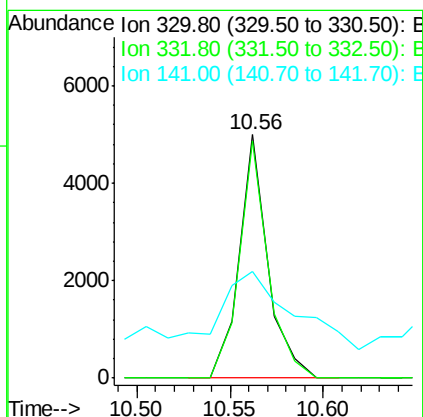
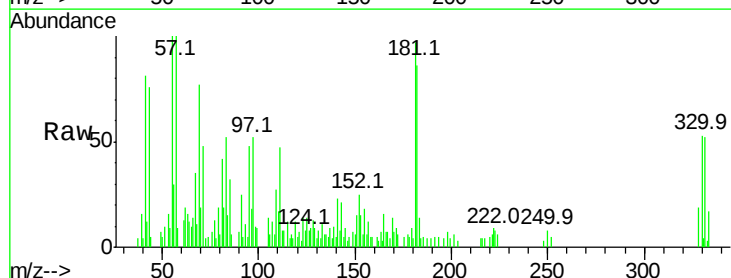
Instrument :  
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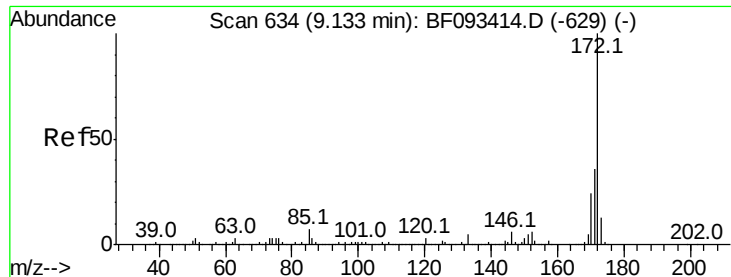
Tot Ion:164 Resp: 247050  
 Ion Ratio Lower Upper  
 164 100  
 162 106.0 80.2 120.2  
 160 47.0 36.9 55.3



#41  
 2,4,6-Tribromophenol  
 Concen: 3.33 ng  
 RT: 10.56 min Scan# 759  
 Delta R.T. 0.01 min  
 Lab File: BF093598.D  
 Acq: 12 Mar 2017 8:33

Tgt Ion:330 Resp: 5366  
 Ion Ratio Lower Upper  
 330 100  
 332 98.1 77.4 116.2  
 141 80.1 34.1 51.1#





#44

2-Fluorobiphenyl

Concen: 4.27 ng

RT: 9.09 min Scan# 630

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

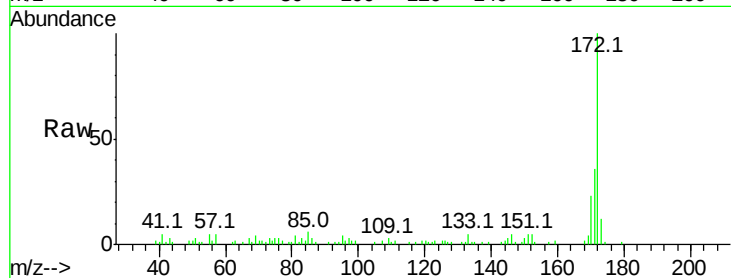
Tot Ion:172 Resp: 56655

Ion Ratio Lower Upper

172 100

171 35.6 29.4 44.0

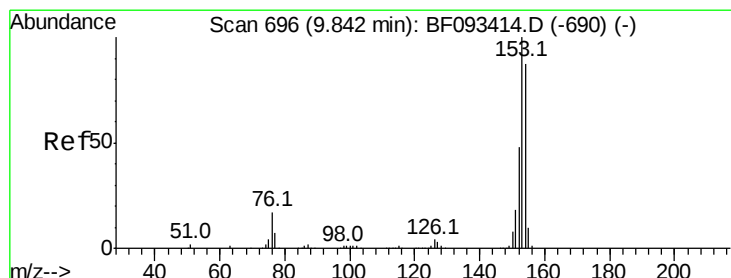
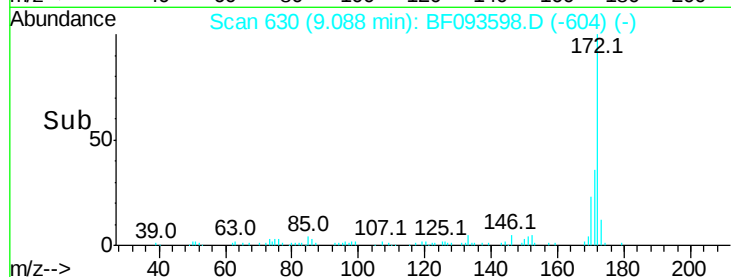
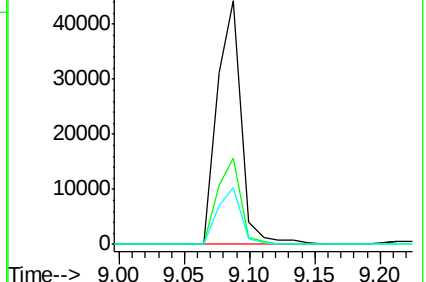
170 23.4 20.2 30.4



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



#51

Acenaphthene

Concen: 4.37 ng

RT: 9.78 min Scan# 691

Delta R.T. -0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

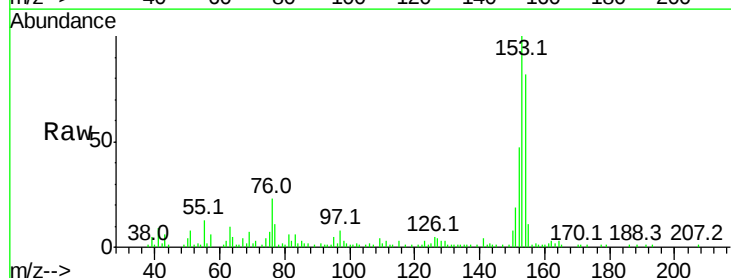
Tgt Ion:154 Resp: 58755

Ion Ratio Lower Upper

154 100

153 121.4 88.6 133.0

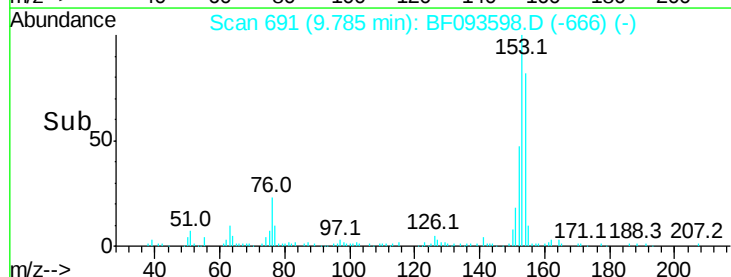
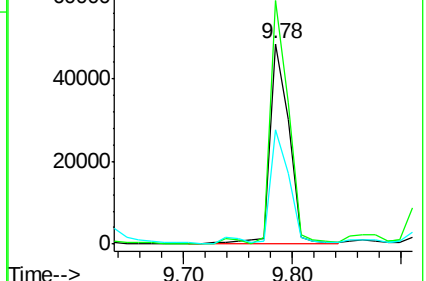
152 57.1 41.6 62.4

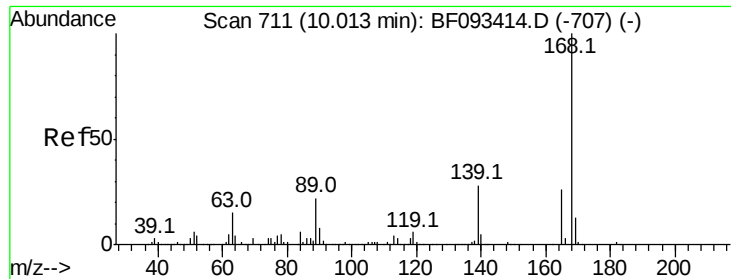


Abundance Ion 154.00 (153.70 to 154.70): E

Ion 153.00 (152.70 to 153.70): E

Ion 152.00 (151.70 to 152.70): E

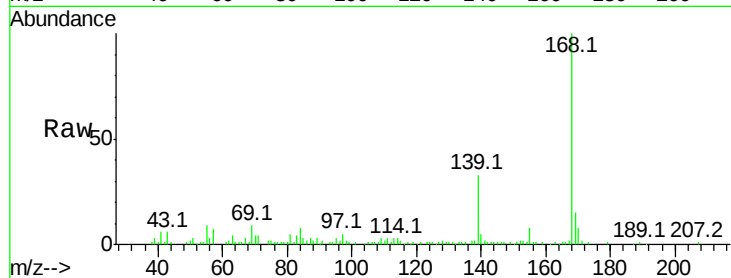




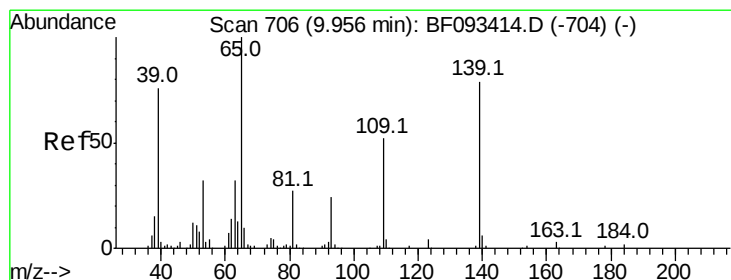
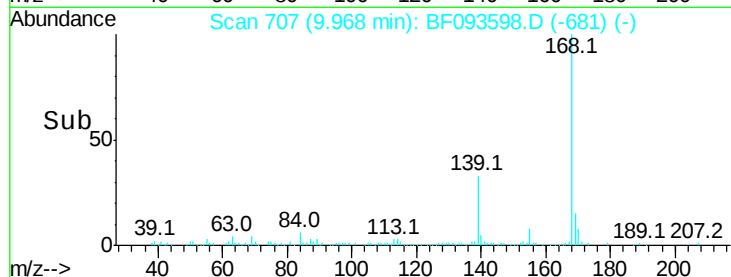
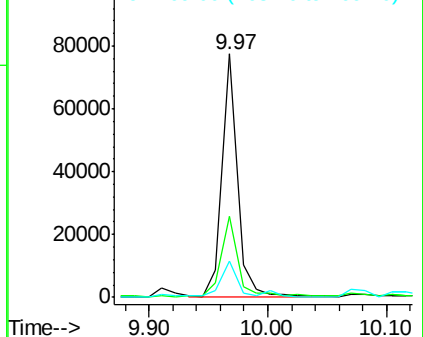
#54  
Dibenzofuran  
Concen: 4.18 ng  
RT: 9.97 min Scan# 707  
Delta R.T. 0.00 min  
Lab File: BF093598.D  
Acq: 12 Mar 2017 8:33

Instrument :  
BNA\_F  
ClientSampleId :  
HY-SB413ADL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 168     | 100   |       |       |
| 139     | 33.3  | 32.6  | 49.0  |
| 169     | 14.7  | 11.3  | 16.9  |

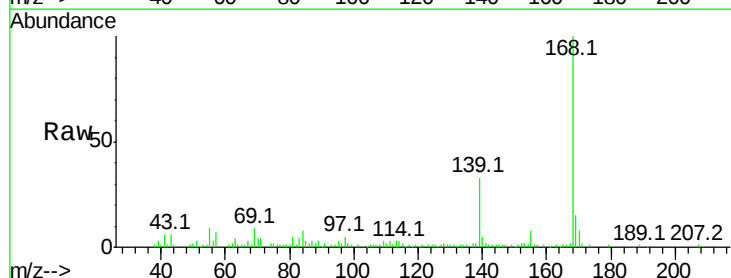


Abundance Ion 168.00 (167.70 to 168.70): E  
Ion 139.00 (138.70 to 139.70): E  
Ion 169.00 (168.70 to 169.70): E

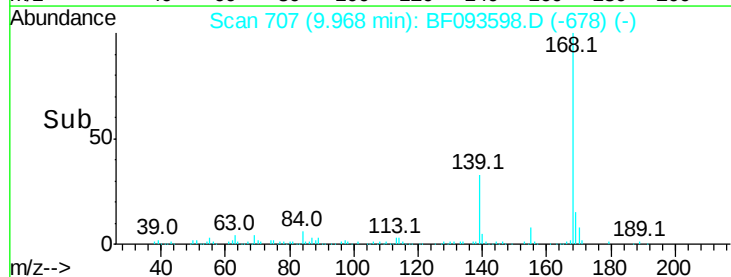
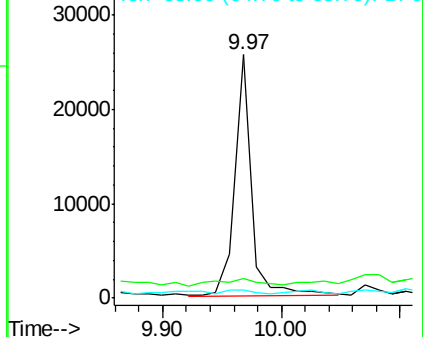


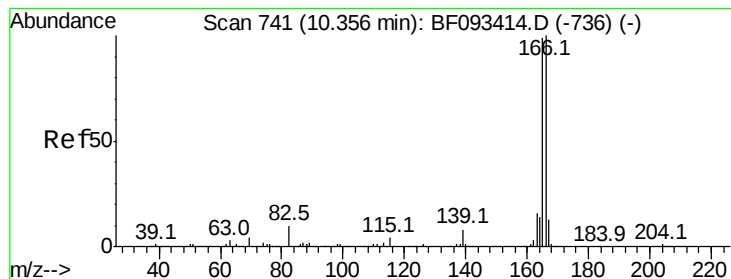
#55  
4-Nitrophenol  
Concen: 11.99 ng  
RT: 9.97 min Scan# 707  
Delta R.T. 0.03 min  
Lab File: BF093598.D  
Acq: 12 Mar 2017 8:33

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 139     | 100   |       |        |
| 109     | 8.1   | 52.2  | 92.2#  |
| 65      | 3.2   | 85.8  | 125.8# |



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: 7.36 ng

RT: 10.31 min Scan# 737

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

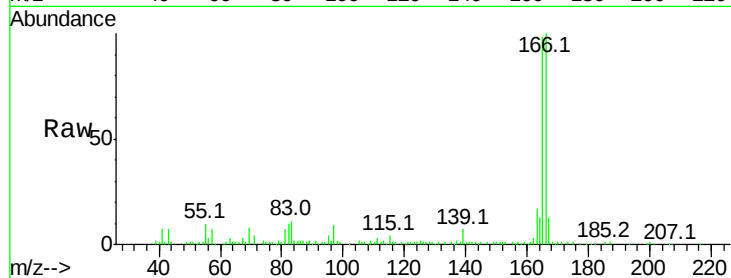
Tot Ion:166 Resp: 104849

Ion Ratio Lower Upper

166 100

165 97.6 77.8 116.8

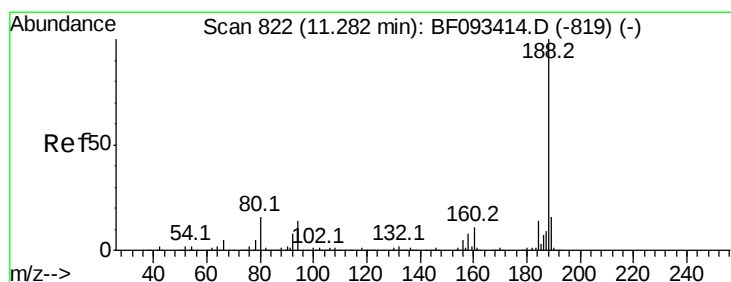
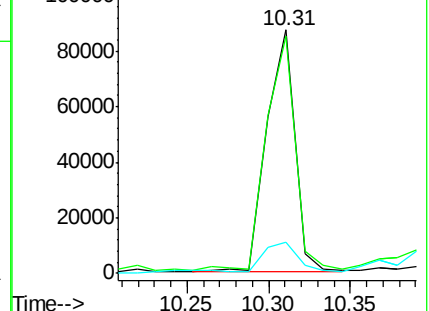
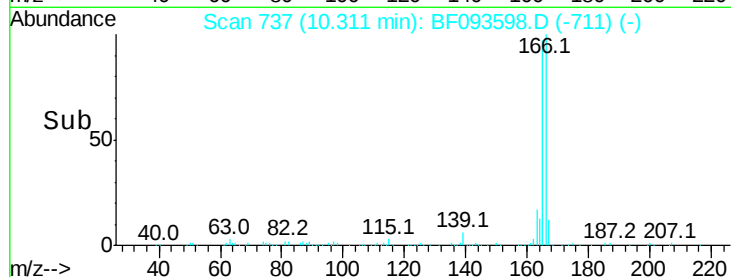
167 12.7 10.8 16.2



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: 11.24 min Scan# 818

Delta R.T. -0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

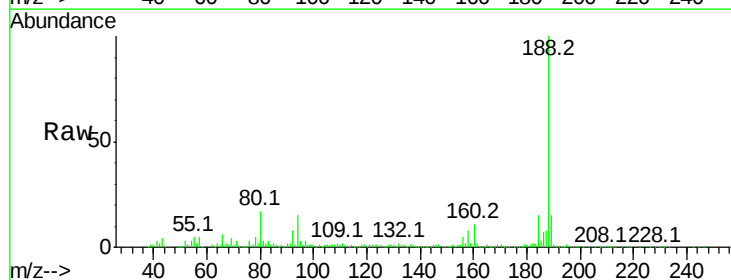
Tgt Ion:188 Resp: 370116

Ion Ratio Lower Upper

188 100

94 15.3 10.0 15.0#

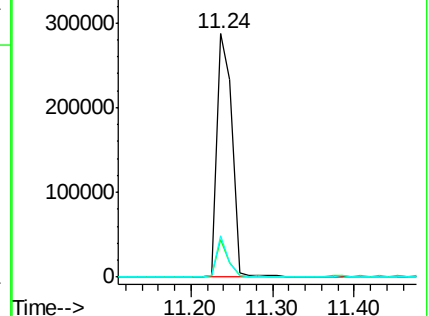
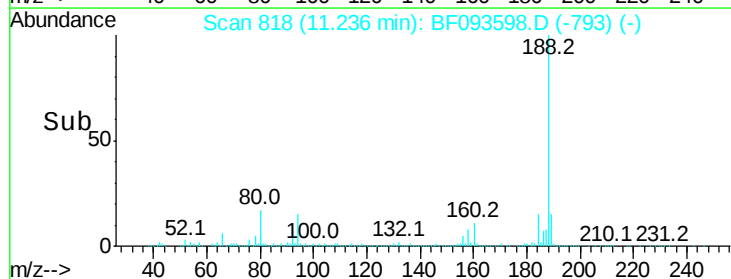
80 17.2 11.2 16.8#

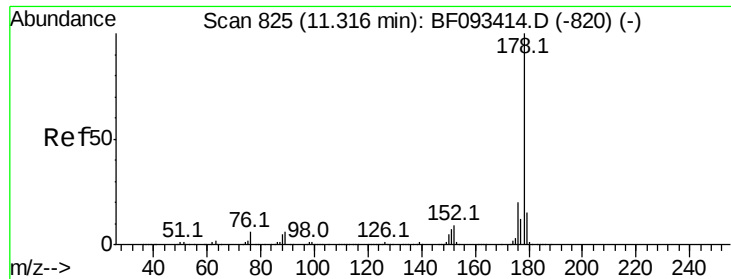


Abundance Ion 188.00 (187.70 to 188.70): E

Ion 94.00 (93.70 to 94.70): BF0

Ion 80.00 (79.70 to 80.70): BF0





#70

Phenanthrene

Concen: 14.21 ng

RT: 11.27 min Scan# 821

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

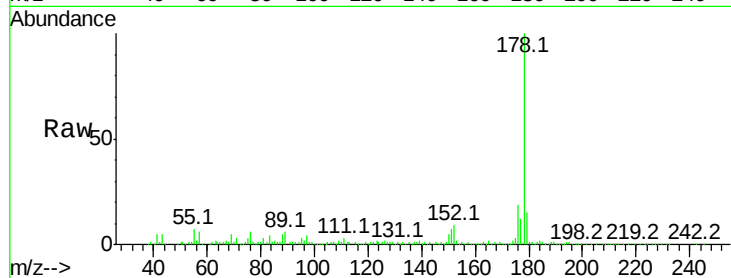
Tot Ion:178 Resp: 300208

Ion Ratio Lower Upper

178 100

176 19.4 16.6 25.0

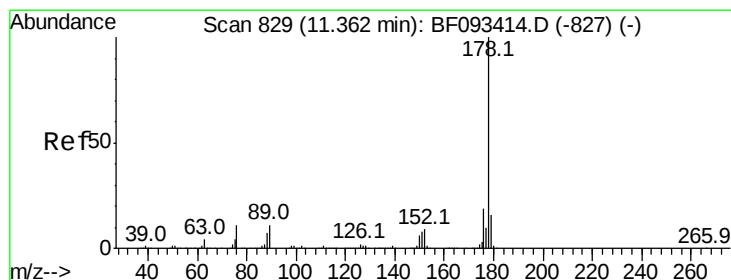
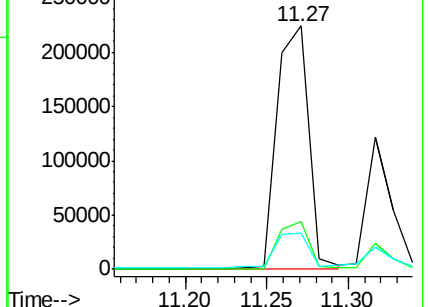
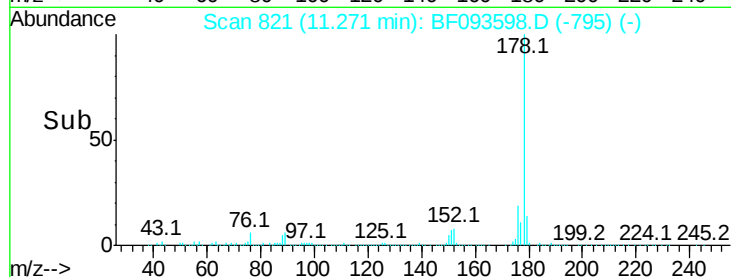
179 14.8 12.8 19.2



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E



#71

Anthracene

Concen: 6.55 ng

RT: 11.32 min Scan# 825

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

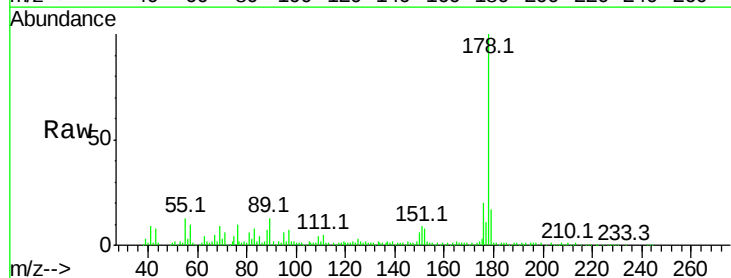
Tgt Ion:178 Resp: 139930

Ion Ratio Lower Upper

178 100

176 20.0 15.9 23.9

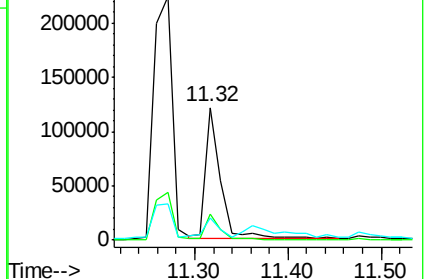
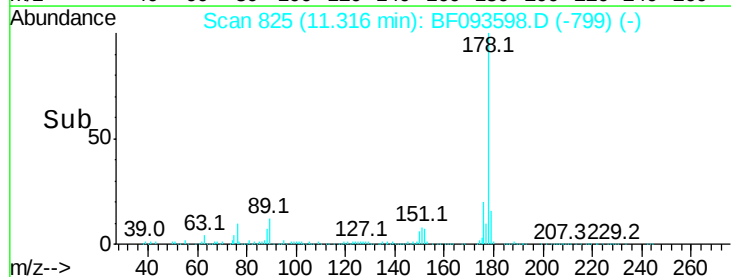
179 16.8 13.2 19.8

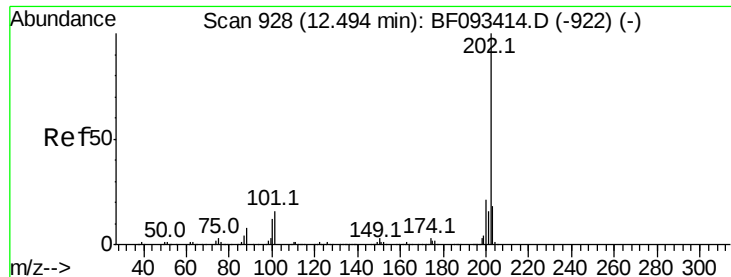


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E





#74

Fluoranthene

Concen: 21.24 ng

RT: 12.46 min Scan# 925

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

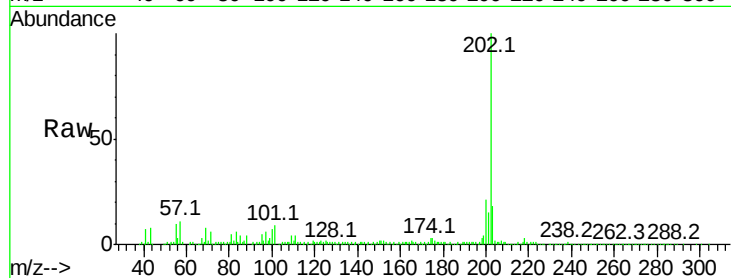
Tot Ion:202 Resp: 433501

Ion Ratio Lower Upper

202 100

101 9.3 0.0 34.6

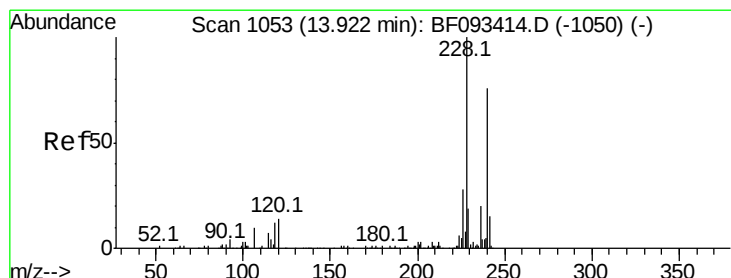
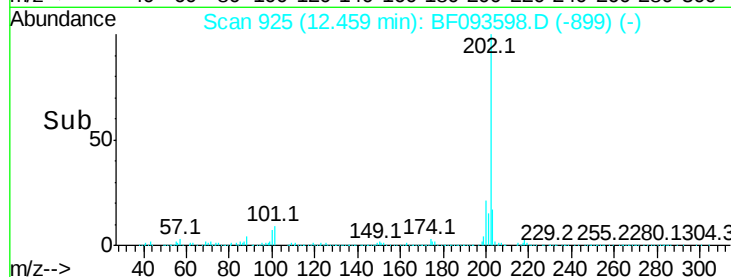
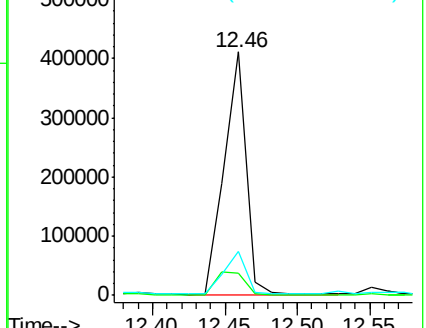
203 17.8 0.0 38.7



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: 13.89 min Scan# 1050

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

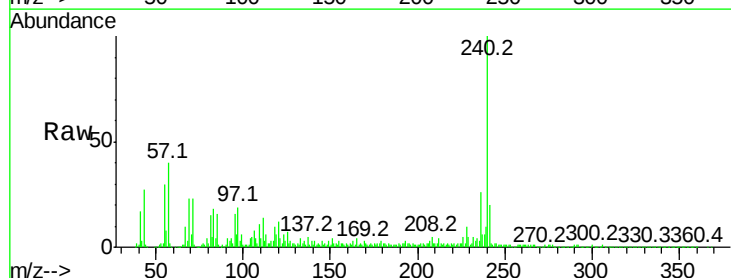
Tgt Ion:240 Resp: 286528

Ion Ratio Lower Upper

240 100

120 12.1 12.9 19.3#

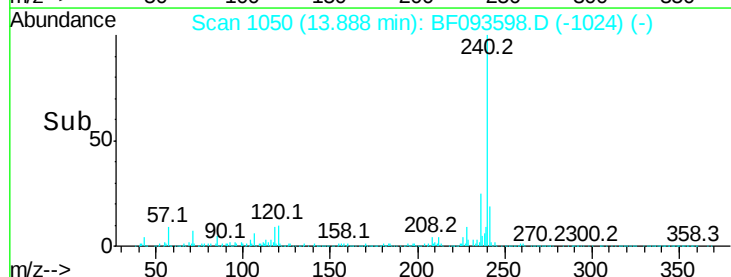
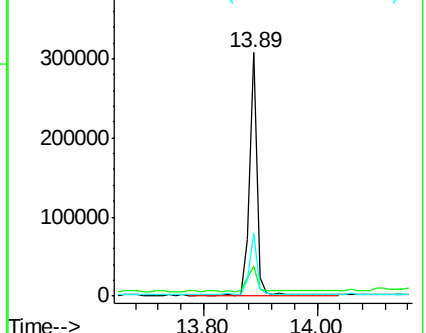
236 26.1 20.9 31.3

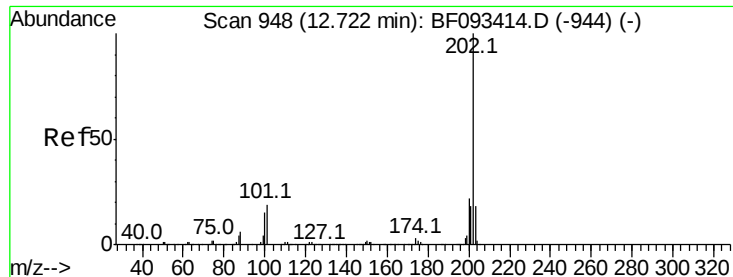


Abundance Ion 240.00 (239.70 to 240.70): E

Ion 120.00 (119.70 to 120.70): E

Ion 236.00 (235.70 to 236.70): E





#77

Pvrene

Concen: 16.62 ng

RT: 12.69 min Scan# 945

Delta R.T. 0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

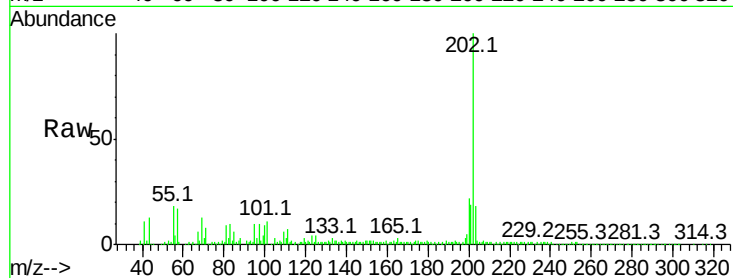
Tot Ion:202 Resp: 346256

Ion Ratio Lower Upper

202 100

200 21.7 17.7 26.5

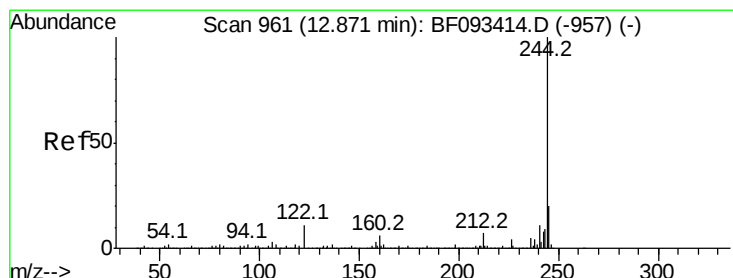
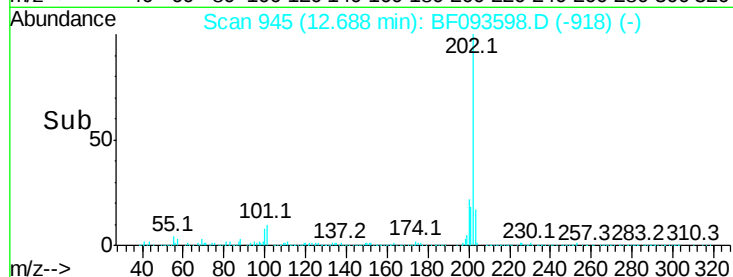
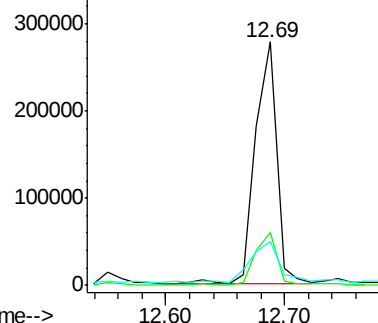
203 18.2 14.7 22.1



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: 3.35 ng

RT: 12.83 min Scan# 957

Delta R.T. 0.00 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

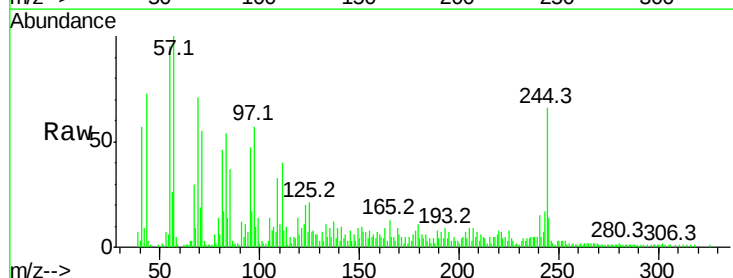
Tgt Ion:244 Resp: 36956

Ion Ratio Lower Upper

244 100

212 7.4 6.2 9.2

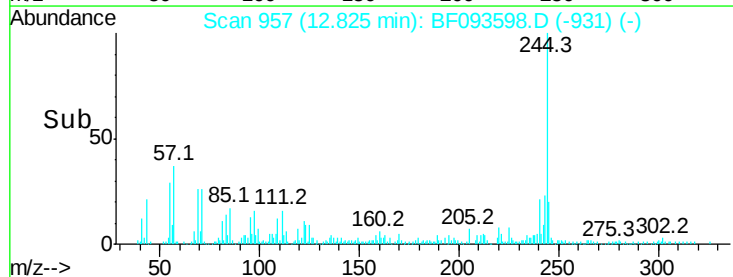
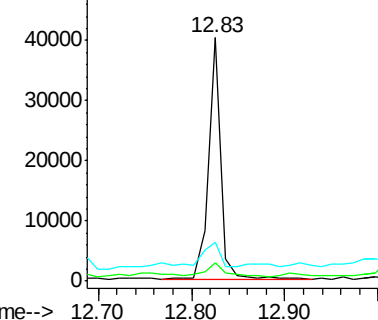
122 16.2 11.4 17.2

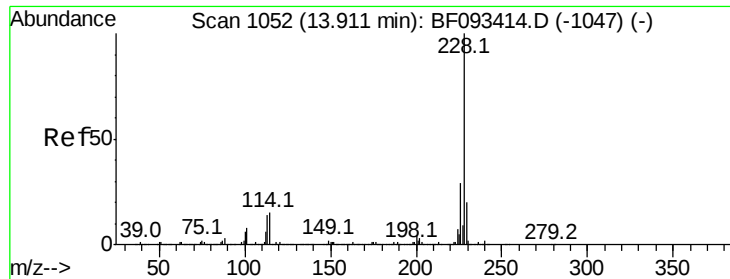


Abundance Ion 244.00 (243.70 to 244.70): E

Ion 212.00 (211.70 to 212.70): E

Ion 122.00 (121.70 to 122.70): E

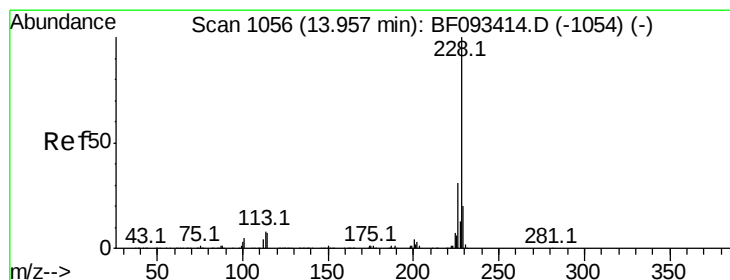
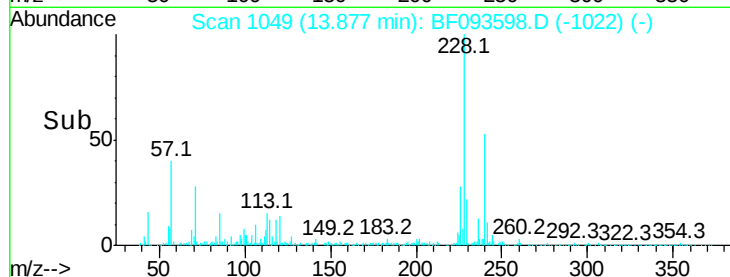
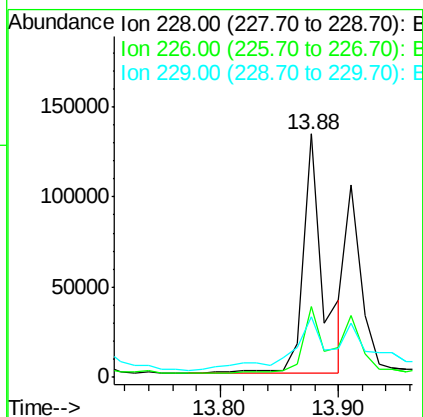
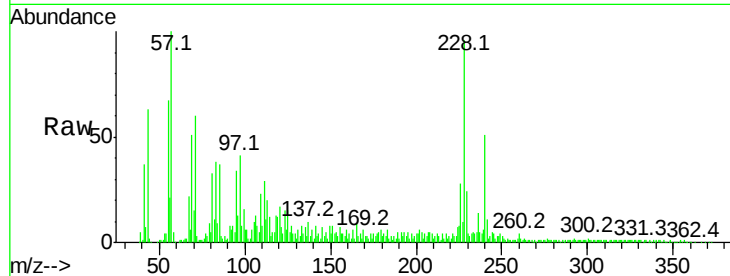




#80  
Benzo(a)anthracene  
Concen: 9.23 ng  
RT: 13.88 min Scan# 1049  
Delta R.T. 0.01 min  
Lab File: BF093598.D  
Acq: 12 Mar 2017 8:33

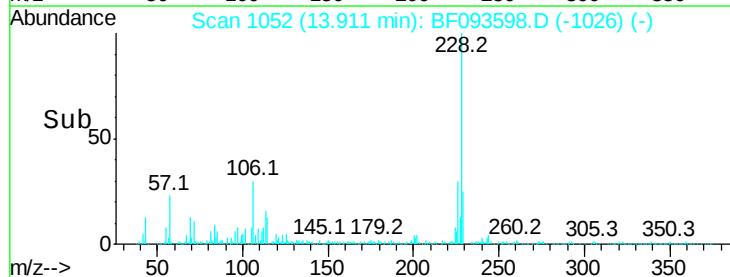
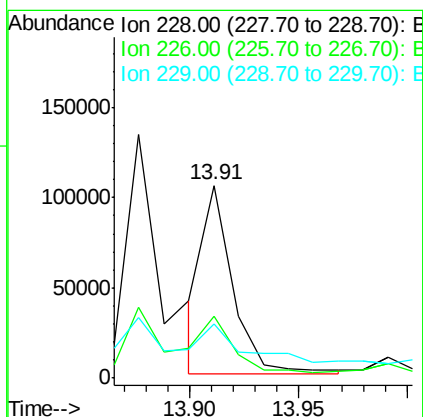
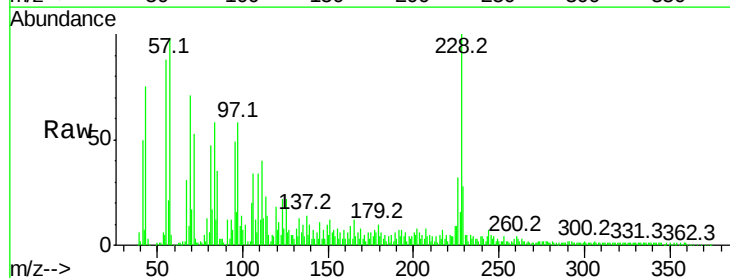
Instrument :  
BNA\_F  
ClientSampleId :  
HY-SB413ADL

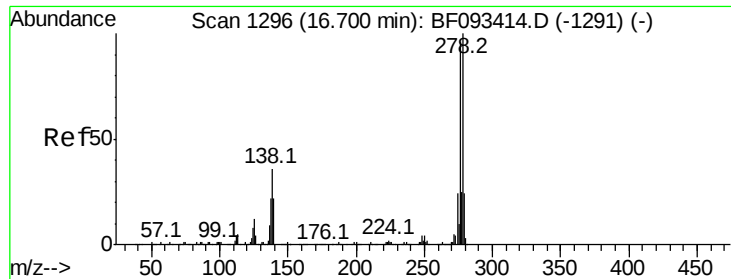
Tot Ion:228 Resp: 156104  
Ion Ratio Lower Upper  
228 100  
226 29.0 22.4 33.6  
229 24.6 16.2 24.4#



#82  
Chrysene  
Concen: 6.45 ng  
RT: 13.91 min Scan# 1052  
Delta R.T. 0.00 min  
Lab File: BF093598.D  
Acq: 12 Mar 2017 8:33

Tgt Ion:228 Resp: 100962  
Ion Ratio Lower Upper  
228 100  
226 32.1 25.4 38.0  
229 28.1 16.2 24.2#

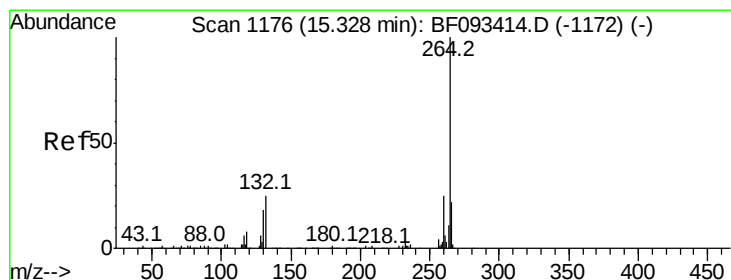
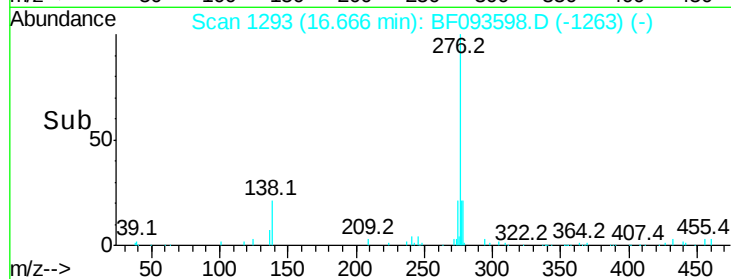
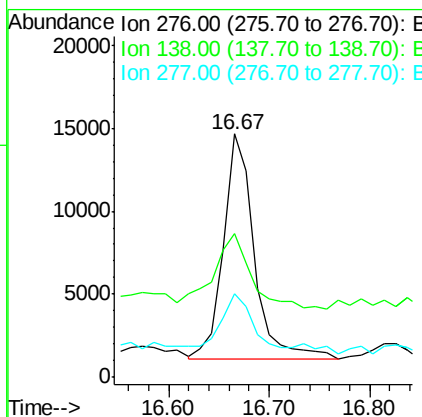
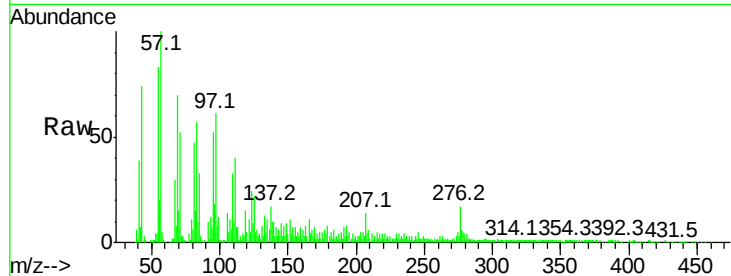




#85  
 Indeno(1,2,3-cd)pyrene  
 Concen: 2.20 ng  
 RT: 16.67 min Scan# 1293  
 Delta R.T. 0.05 min  
 Lab File: BF093598.D  
 Acq: 12 Mar 2017 8:33

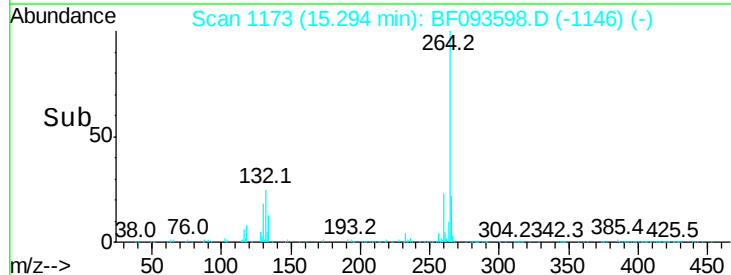
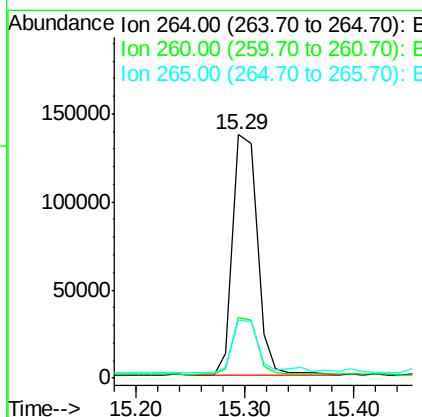
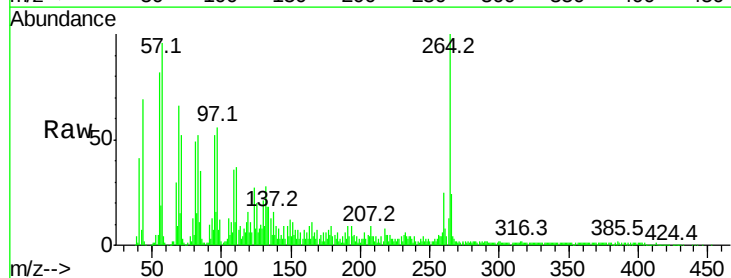
Instrument :  
 BNA\_F  
 ClientSampleId :  
 HY-SB413ADL

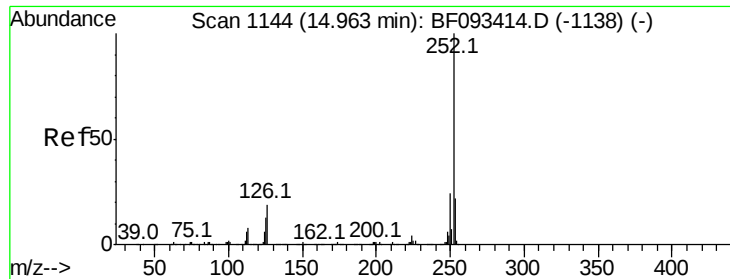
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 41.0  | 21.8  | 32.6# |
| 277     | 22.7  | 20.2  | 30.4  |



#86  
 Perylene-d12  
 Concen: 20.00 ng  
 RT: 15.29 min Scan# 1173  
 Delta R.T. 0.01 min  
 Lab File: BF093598.D  
 Acq: 12 Mar 2017 8:33

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 264     | 100   |       |       |
| 260     | 24.7  | 19.2  | 28.8  |
| 265     | 23.7  | 17.4  | 26.0  |





#87

Benzo(b)fluoranthene

Concen: 10.34 ng

RT: 14.91 min Scan# 1139

Delta R.T. 0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

Instrument :

BNA\_F

ClientSampleId :

HY-SB413ADL

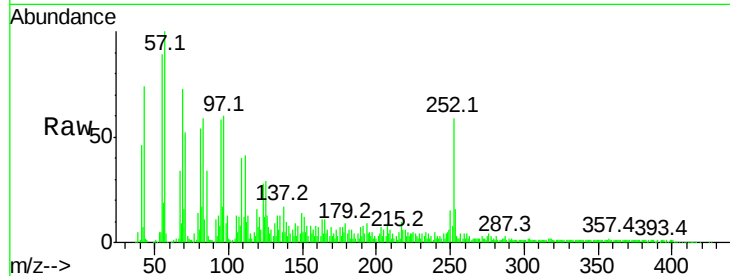
Tot Ion:252 Resp: 134921

Ion Ratio Lower Upper

252 100

253 28.2 18.2 27.4#

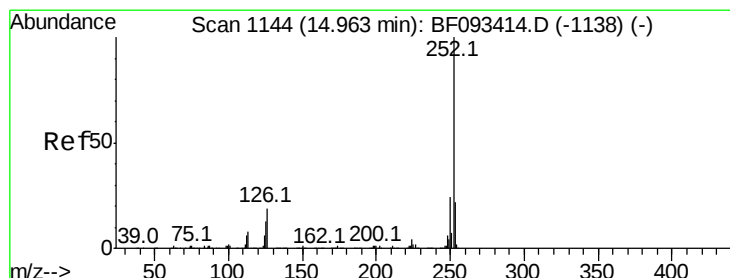
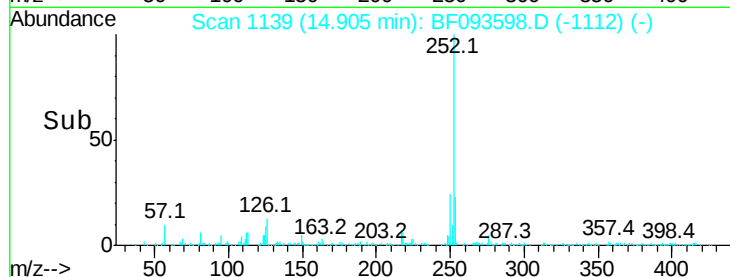
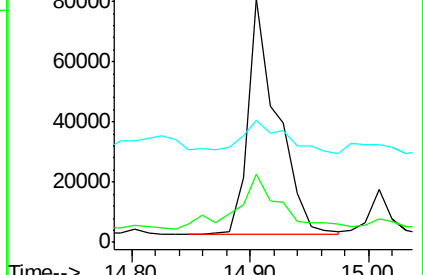
125 50.3 9.8 14.6#



Abundance Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E



#88

Benzo(k)fluoranthene

Concen: 10.73 ng

RT: 14.91 min Scan# 1139

Delta R.T. -0.01 min

Lab File: BF093598.D

Acq: 12 Mar 2017 8:33

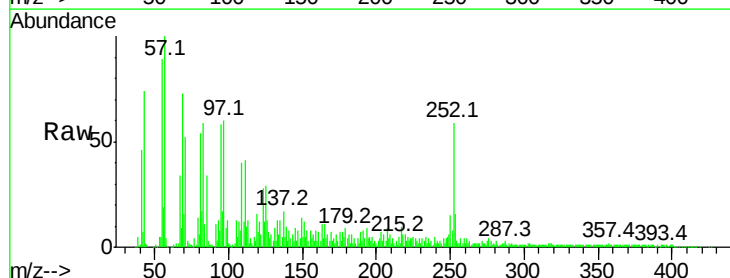
Tgt Ion:252 Resp: 134921

Ion Ratio Lower Upper

252 100

253 28.2 18.5 27.7#

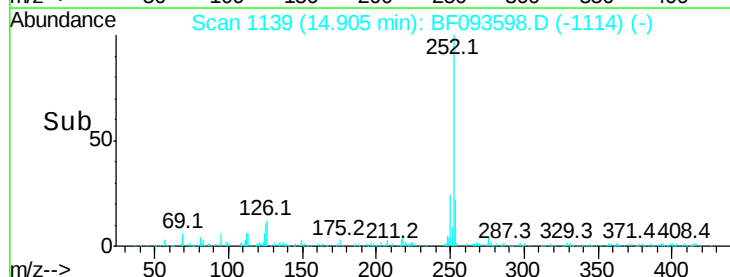
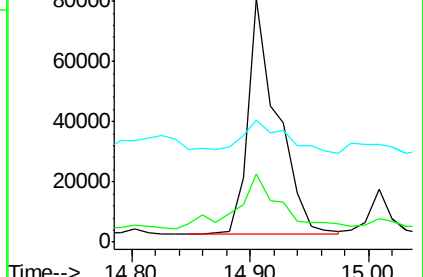
125 50.3 8.9 13.3#

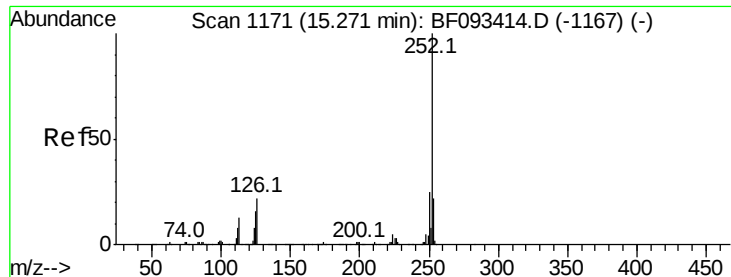


Abundance Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E

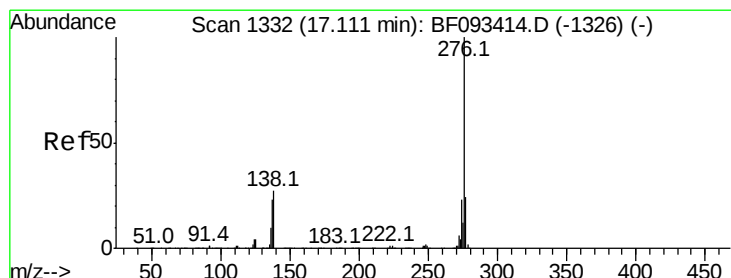
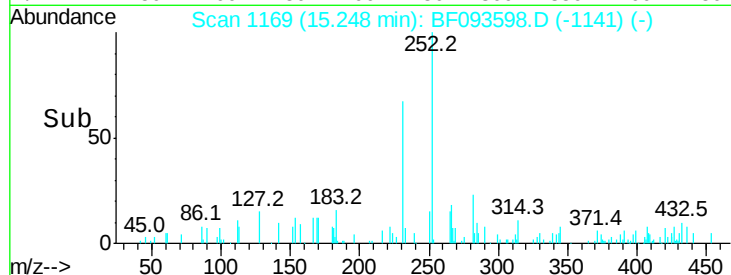
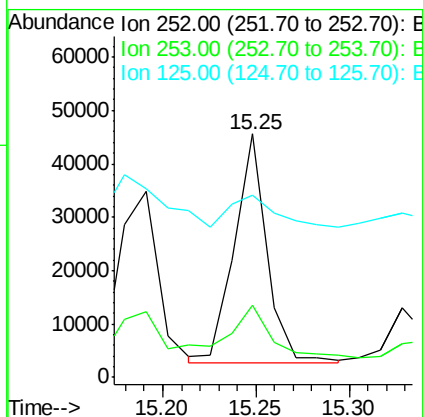
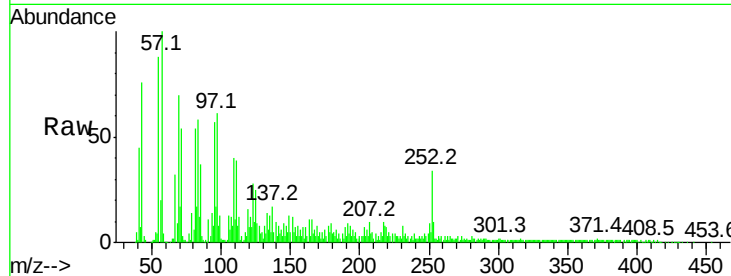




#89  
Benzo(a)pyrene  
Concen: 4.40 ng  
RT: 15.25 min Scan# 1169  
Delta R.T. 0.02 min  
Lab File: BF093598.D  
Acq: 12 Mar 2017 8:33

Instrument :  
BNA\_F  
ClientSampleId :  
HY-SB413ADL

Tot Ion:252 Resp: 52432  
Ion Ratio Lower Upper  
252 100  
253 29.6 18.2 27.2#  
125 75.0 10.0 15.0#



#91  
Benzo(g,h,i)perylene  
Concen: 2.29 ng  
RT: 17.08 min Scan# 1329  
Delta R.T. 0.06 min  
Lab File: BF093598.D  
Acq: 12 Mar 2017 8:33

Tgt Ion:276 Resp: 23162  
Ion Ratio Lower Upper  
276 100  
277 35.1 19.2 28.8#  
138 59.2 16.0 24.0#

