

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF030315\  
 Data File : BF077571.D  
 Acq On : 4 Mar 2015 4:19  
 Operator : TP/IZ  
 Sample : G1402-05DL2 200X  
 Misc :  
 ALS Vial : 28 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 MW44DL2

Quant Time: Mar 04 06:53:32 2015  
 Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF021915.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Wed Mar 04 04:46:40 2015  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.24  | 152  | 85976    | 20.00 | ng    | 0.00     |
| 21) Naphthalene-d8        | 8.81  | 136  | 351974   | 20.00 | ng    | 0.00     |
| 38) Acenaphthene-d10      | 10.99 | 164  | 180945   | 20.00 | ng    | 0.00     |
| 63) Phenanthrene-d10      | 12.83 | 188  | 352142   | 20.00 | ng    | 0.00     |
| 75) Chrysene-d12          | 16.12 | 240  | 380620   | 20.00 | ng    | 0.00     |
| 86) Perylene-d12          | 17.82 | 264  | 375567   | 20.00 | ng    | 0.00     |

## System Monitoring Compounds

|                          |       |     |      |      |    |      |
|--------------------------|-------|-----|------|------|----|------|
| 5) 2-Fluorophenol        | 0.00  | 112 | 0    | 0.00 | ng |      |
| 7) Phenol-d6             | 0.00  | 99  | 0    | 0.00 | ng |      |
| 23) Nitrobenzene-d5      | 7.93  | 82  | 532  | 0.09 | ng | 0.00 |
| 41) 2,4,6-Tribromophenol | 0.00  | 330 | 0    | 0.00 | ng |      |
| 44) 2-Fluorobiphenyl     | 10.16 | 172 | 933  | 0.08 | ng | 0.00 |
| 78) Terphenyl-d14        | 14.83 | 244 | 1115 | 0.07 | ng | 0.00 |

## Target Compounds

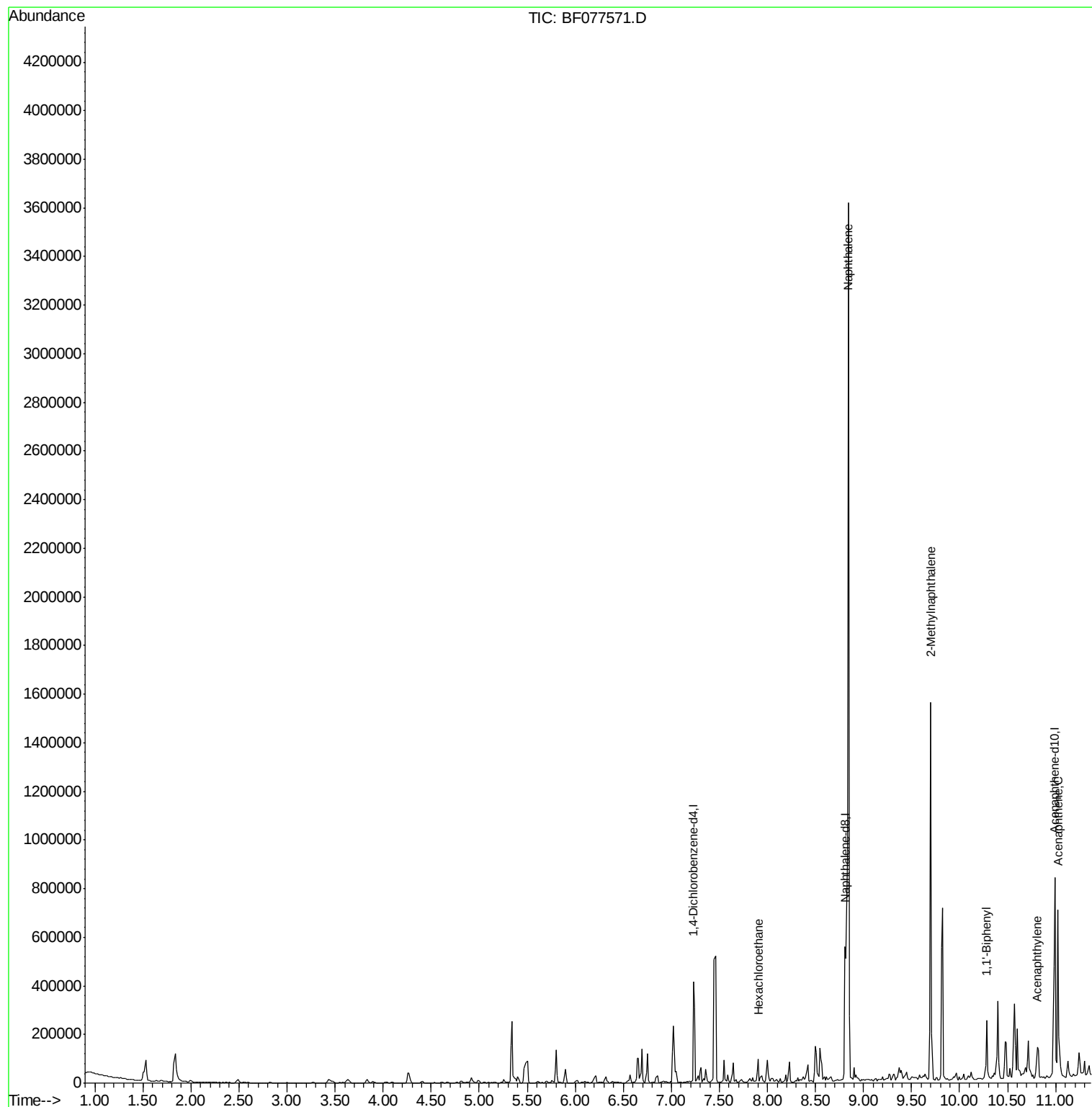
|                          |       |     |         |       |    | Qvalue |
|--------------------------|-------|-----|---------|-------|----|--------|
| 18) Hexachloroethane     | 7.90  | 117 | 7315    | 3.25  | ng | # 1    |
| 31) Naphthalene          | 8.84  | 128 | 1584591 | 90.03 | ng | 98     |
| 37) 2-Methylnaphthalene  | 9.70  | 142 | 405828  | 32.47 | ng | 98     |
| 45) 1,1'-Biphenyl        | 10.28 | 154 | 76048   | 5.55  | ng | 98     |
| 48) Acenaphthylene       | 10.81 | 152 | 40632   | 2.39  | ng | # 91   |
| 51) Acenaphthene         | 11.03 | 154 | 151051  | 14.87 | ng | 99     |
| 57) Fluorene             | 11.66 | 166 | 132252  | 10.55 | ng | 97     |
| 70) Phenanthrene         | 12.86 | 178 | 574583  | 28.15 | ng | 99     |
| 71) Anthracene           | 12.92 | 178 | 175949  | 8.69  | ng | 99     |
| 74) Fluoranthene         | 14.34 | 202 | 235201  | 10.55 | ng | 98     |
| 77) Pyrene               | 14.62 | 202 | 369547  | 15.87 | ng | 99     |
| 80) Benzo(a)anthracene   | 16.15 | 228 | 80822   | 3.62  | ng | 95     |
| 82) Chrysene             | 16.14 | 228 | 113183  | 5.40  | ng | 98     |
| 87) Benzo(b)fluoranthene | 17.39 | 252 | 108558  | 4.97  | ng | # 92   |
| 88) Benzo(k)fluoranthene | 17.39 | 252 | 109439  | 5.11  | ng | 97     |
| 89) Benzo(a)pyrene       | 17.75 | 252 | 104315  | 5.02  | ng | 98     |
| 91) Benzo(g,h,i)perylene | 19.67 | 276 | 43453   | 2.17  | ng | 94     |

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

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Instrument :  
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ClientSampleId :  
MW44DL2

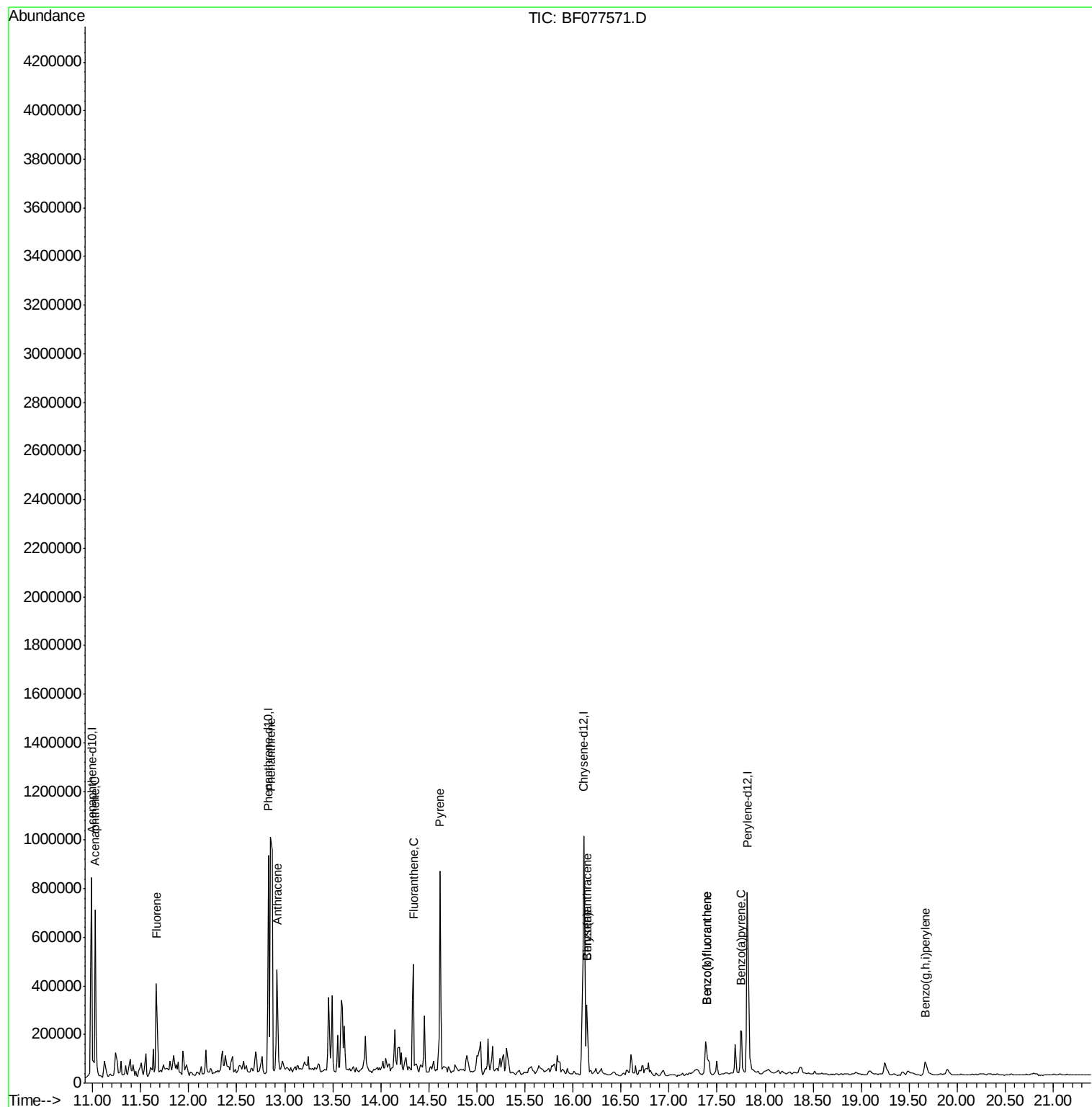
Quant Time: Mar 04 06:53:32 2015  
Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF021915.M  
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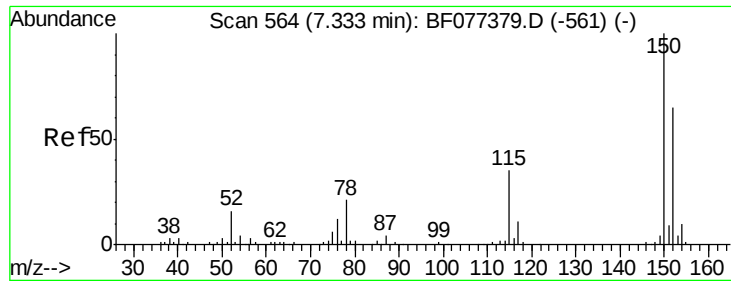


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QLast Update : Wed Mar 04 04:46:40 2015  
Response via : Initial Calibration





#1

1,4-Dichlorobenzene-d4

Concen: 20.00 ng

RT: 7.24 min Scan# 555

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

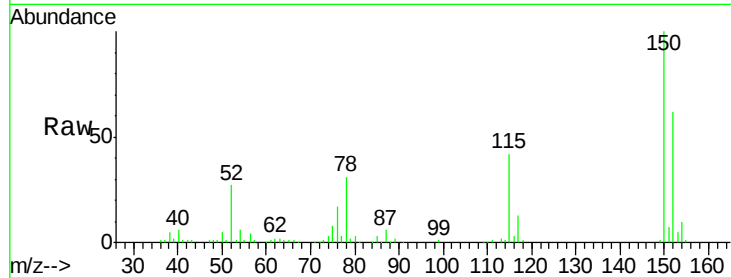
Tgt Ion:152 Resp: 85976

Ion Ratio Lower Upper

152 100

150 161.0 124.0 186.0

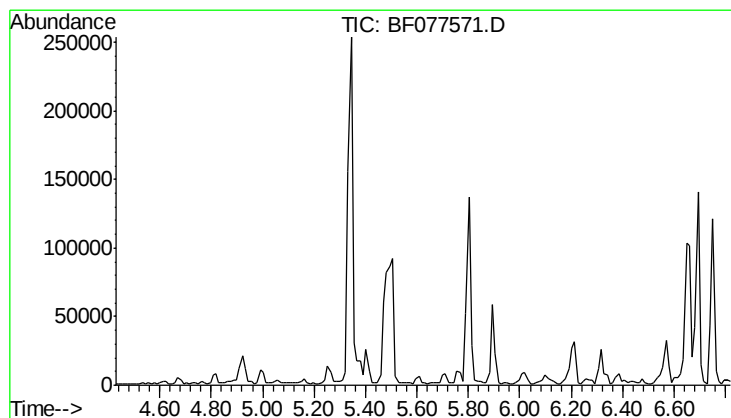
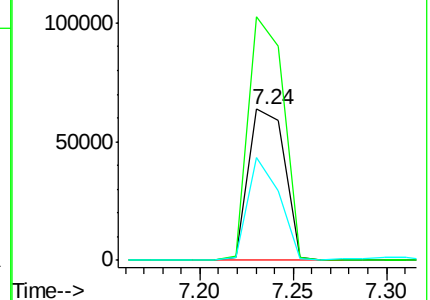
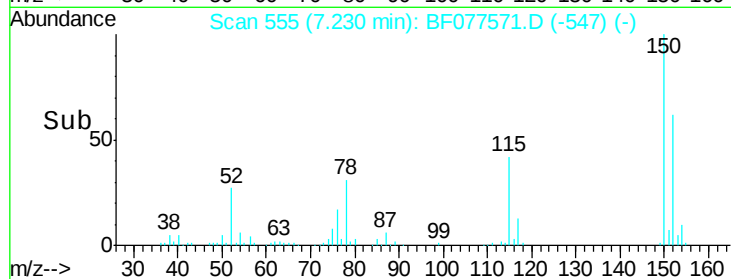
115 68.2 49.4 74.2



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: 0.00 ng

Expected RT: 5.53 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

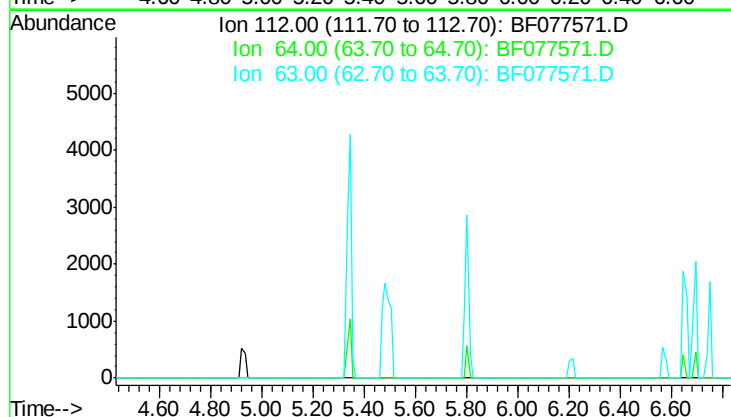
Tgt Ion: 112

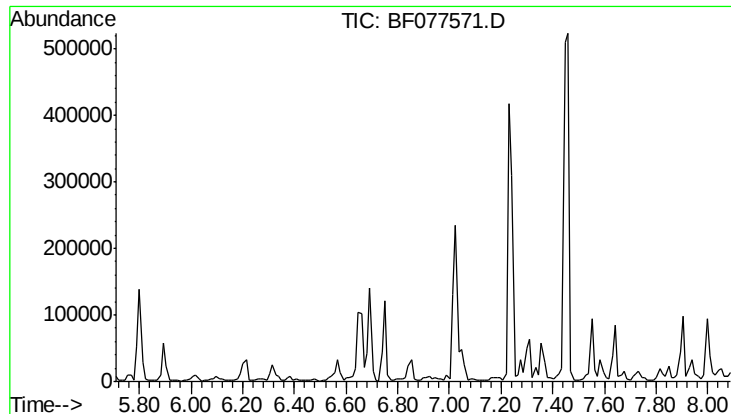
Sig Exp Ratio

112 100

64 60.6

63 31.2





#7

Phenol-d6

Concen: 0.00 ng

Expected RT: 6.80 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

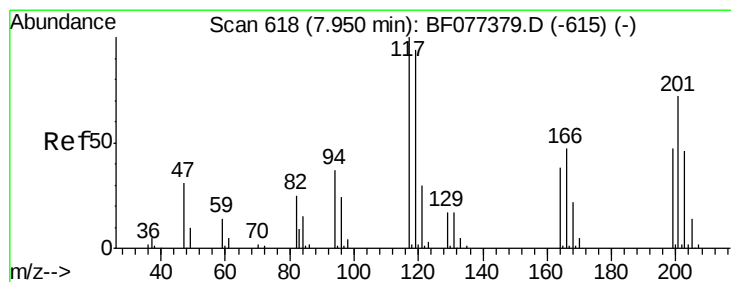
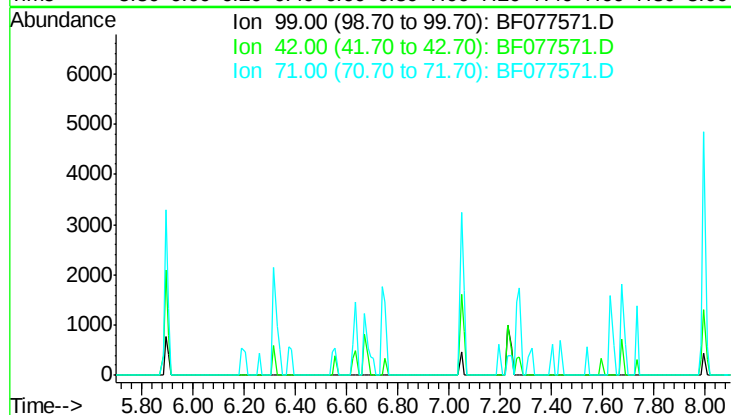
Tgt Ion: 99

Sig Exp Ratio

99 100

42 20.3

71 33.4



#18

Hexachloroethane

Concen: 3.25 ng

RT: 7.90 min Scan# 613

Delta R.T. 0.04 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

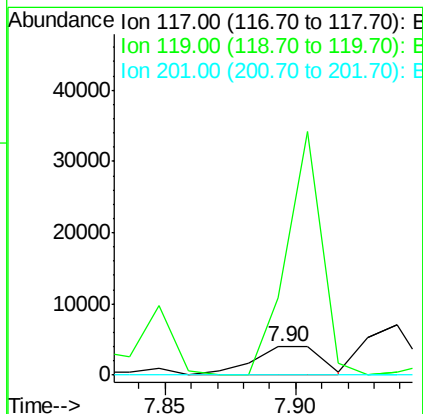
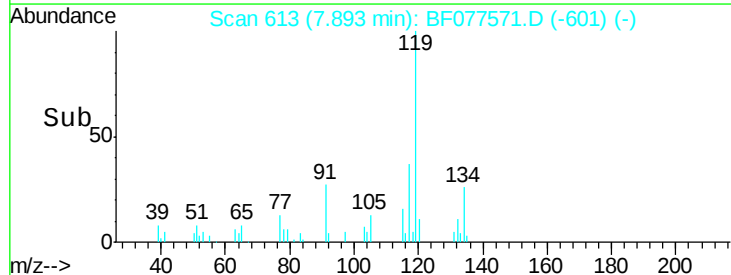
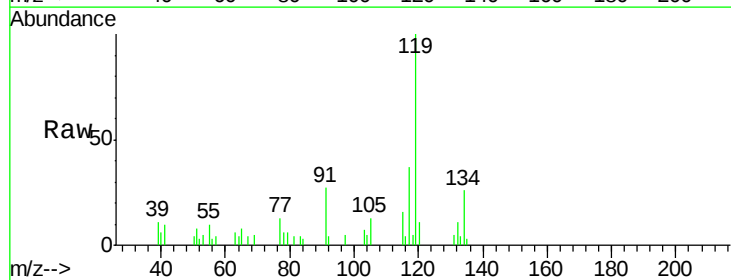
Tgt Ion:117 Resp: 7315

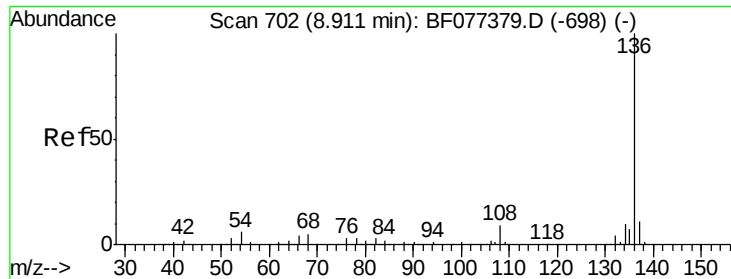
Ion Ratio Lower Upper

117 100

119 271.9 77.8 116.8#

201 0.0 90.6 136.0#

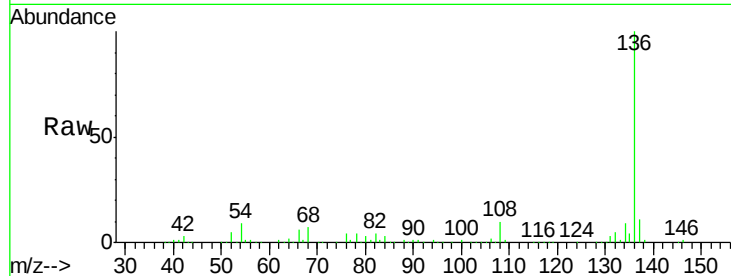




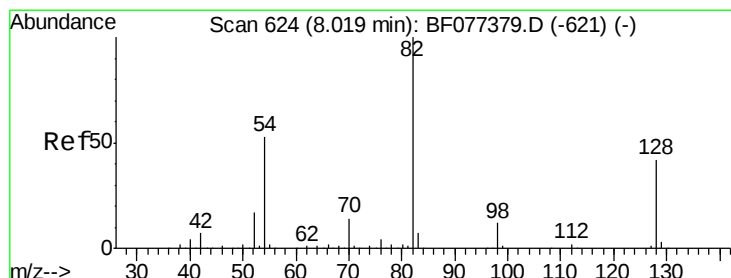
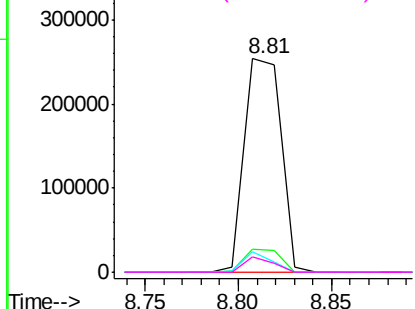
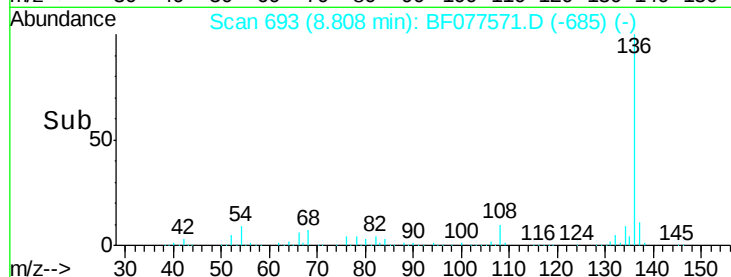
#21  
Naphthalene-d8  
Concen: 20.00 ng  
RT: 8.81 min Scan# 693  
Delta R.T. -0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

Instrument :  
BNA\_F  
ClientSampleId :  
MW44DL2

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 136   | Resp: | 351974 |
| Ion      | Ratio | Lower | Upper  |
| 136      | 100   |       |        |
| 137      | 10.8  | 8.6   | 13.0   |
| 54       | 9.5   | 6.2   | 9.4#   |
| 68       | 7.4   | 5.0   | 7.6    |

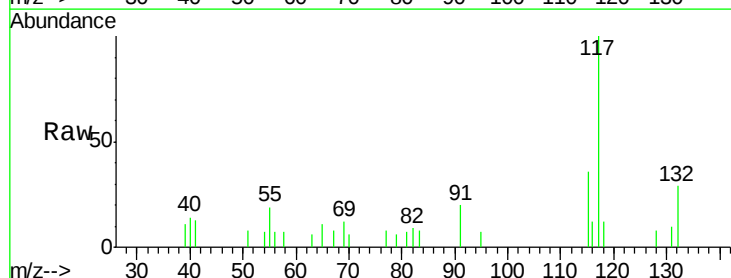


Abundance Ion 136.00 (135.70 to 136.70): E  
Ion 137.00 (136.70 to 137.70): E  
Ion 54.00 (53.70 to 54.70): BF0  
Ion 68.00 (67.70 to 68.70): BF0

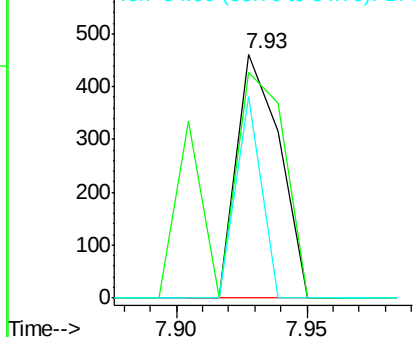
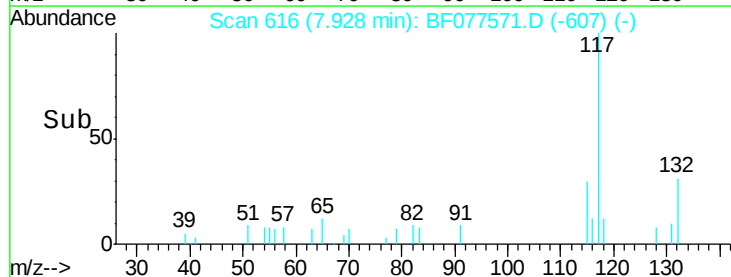


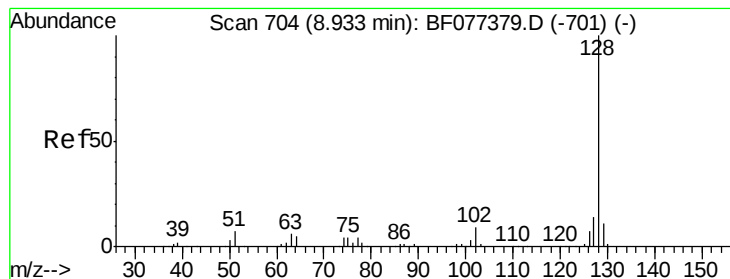
#23  
Nitrobenzene-d5  
Concen: 0.09 ng  
RT: 7.93 min Scan# 616  
Delta R.T. 0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 82    | Resp: | 532   |
| Ion      | Ratio | Lower | Upper |
| 82       | 100   |       |       |
| 128      | 92.8  | 43.8  | 65.8# |
| 54       | 82.9  | 36.7  | 55.1# |



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: 90.03 ng

RT: 8.84 min Scan# 696

Delta R.T. 0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

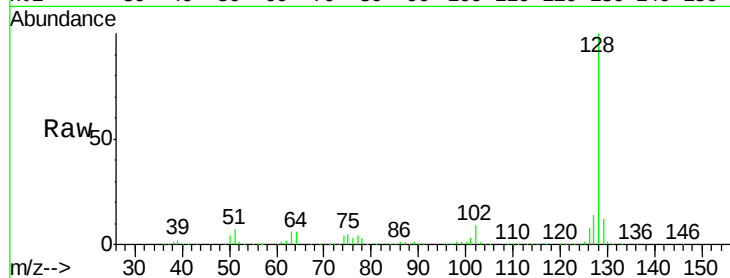
Tgt Ion:128 Resp: 1584591

Ion Ratio Lower Upper

128 100

129 12.1 9.4 14.0

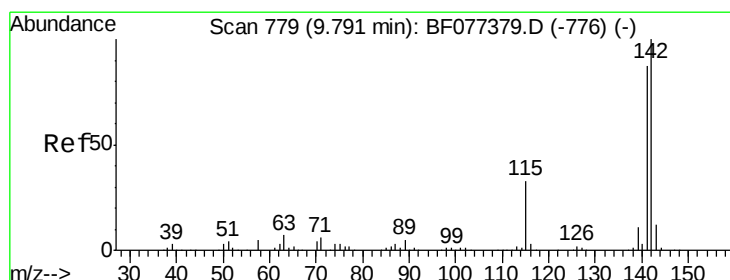
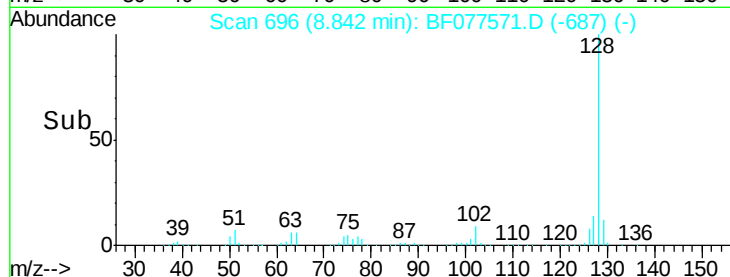
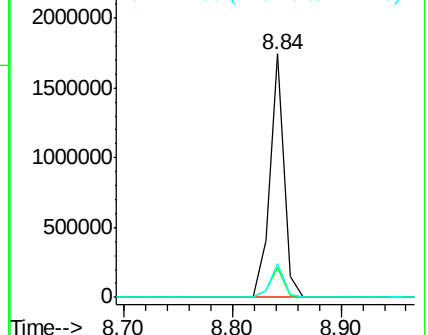
127 14.0 10.6 15.8



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



#37

2-Methylnaphthalene

Concen: 32.47 ng

RT: 9.70 min Scan# 771

Delta R.T. 0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

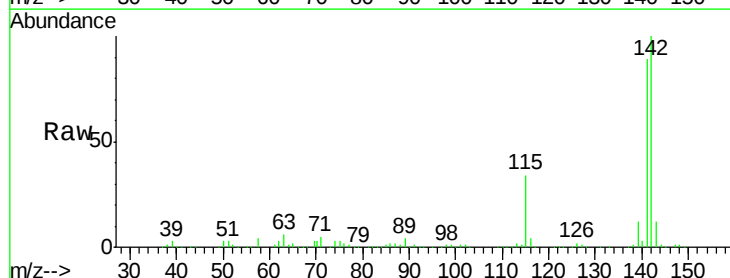
Tgt Ion:142 Resp: 405828

Ion Ratio Lower Upper

142 100

141 88.9 70.7 106.1

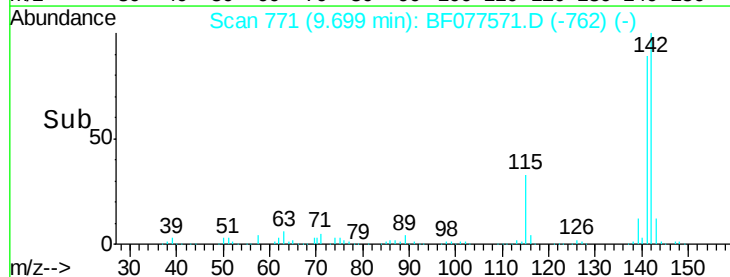
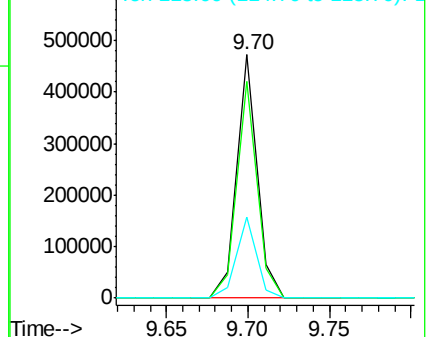
115 33.5 24.2 36.4

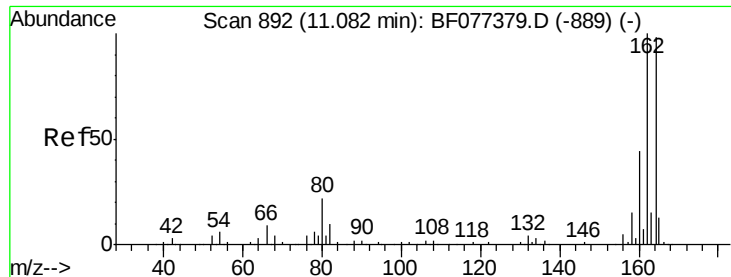


Abundance Ion 142.00 (141.70 to 142.70): E

Ion 141.00 (140.70 to 141.70): E

Ion 115.00 (114.70 to 115.70): E





#38

Acenaphthene-d10

Concen: 20.00 ng

RT: 10.99 min Scan# 884

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

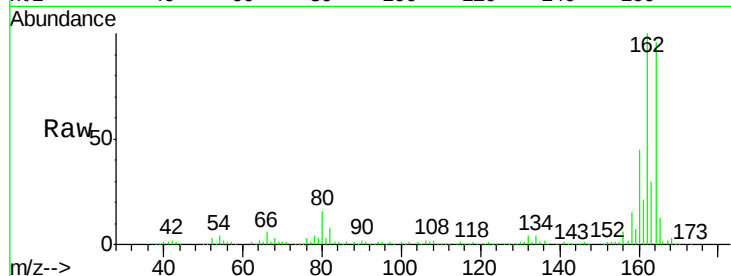
Tgt Ion: 164 Resp: 180945

Ion Ratio Lower Upper

164 100

162 104.1 83.2 124.8

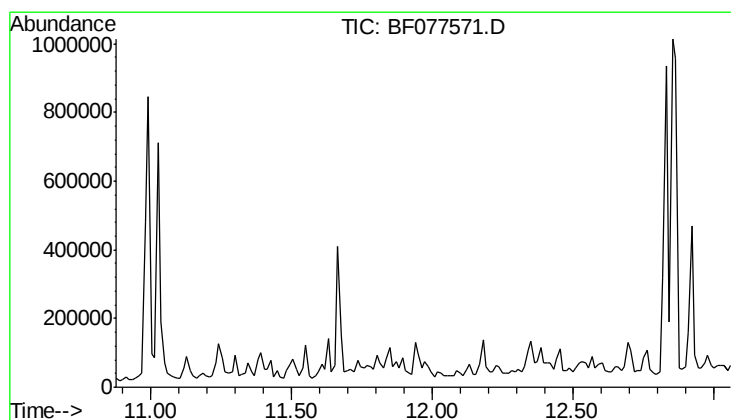
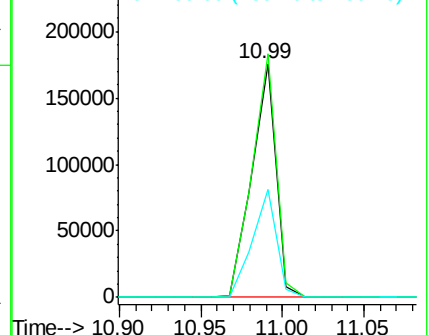
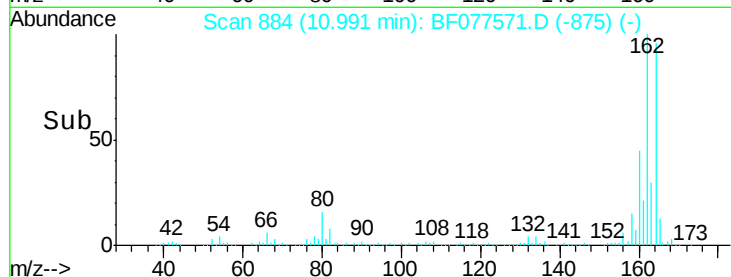
160 46.3 34.6 52.0



Abundance Ion 164.00 (163.70 to 164.70): E

Ion 162.00 (161.70 to 162.70): E

Ion 160.00 (159.70 to 160.70): E



#41

2,4,6-Tribromophenol

Concen: 0.00 ng

Expected RT: 11.97 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

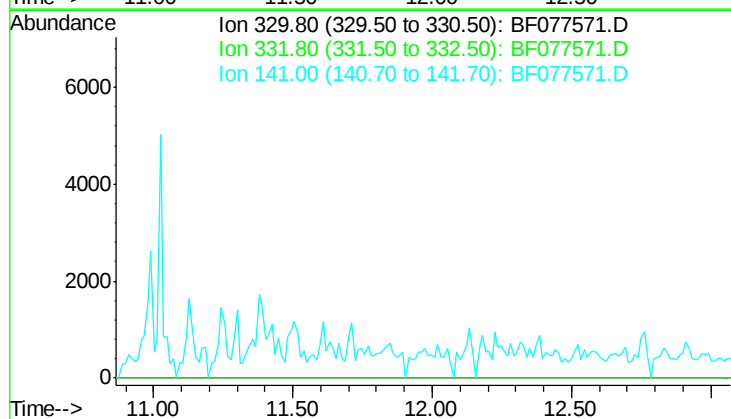
Tgt Ion: 330

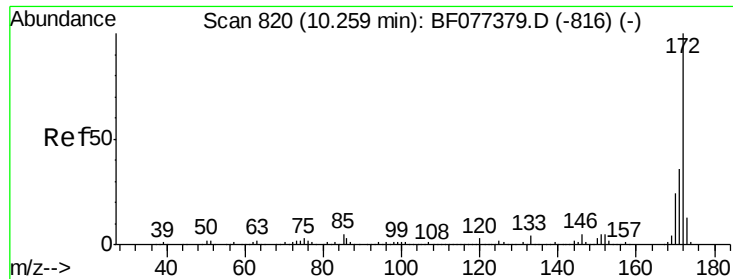
Sig Exp Ratio

330 100

332 96.8

141 36.0

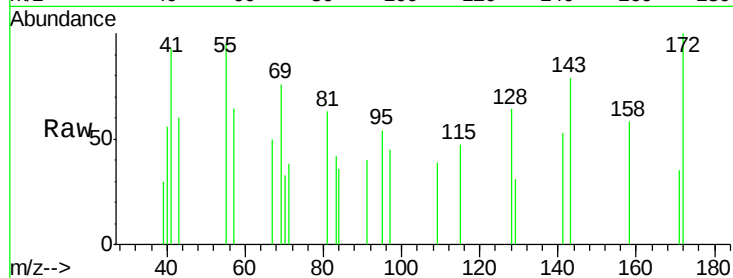




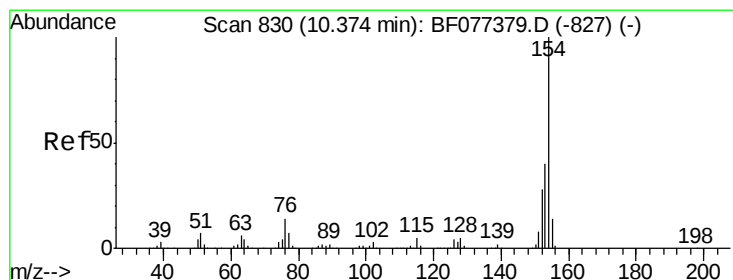
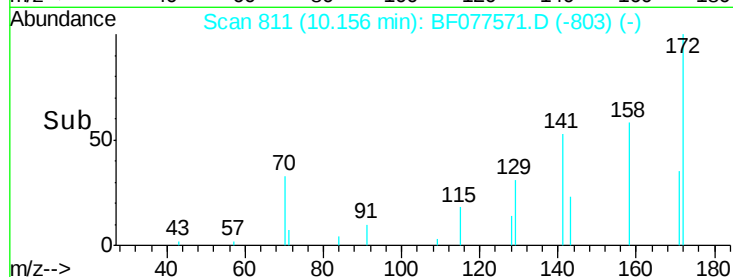
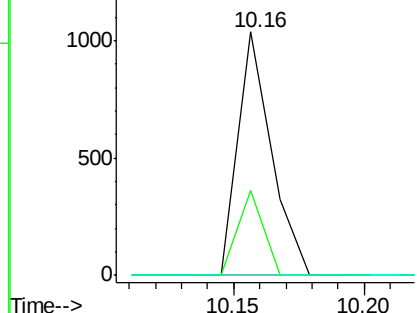
#44  
2-Fluorobiphenyl  
Concen: 0.08 ng  
RT: 10.16 min Scan# 811  
Delta R.T. -0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

Instrument :  
BNA\_F  
ClientSampleId :  
MW44DL2

Tgt Ion:172 Resp: 933  
Ion Ratio Lower Upper  
172 100  
171 35.1 28.9 43.3  
170 0.0 19.4 29.2#

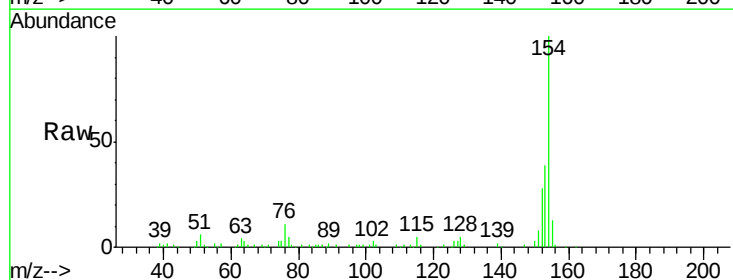


Abundance Ion 172.00 (171.70 to 172.70): E  
Ion 171.00 (170.70 to 171.70): E  
Ion 170.00 (169.70 to 170.70): E

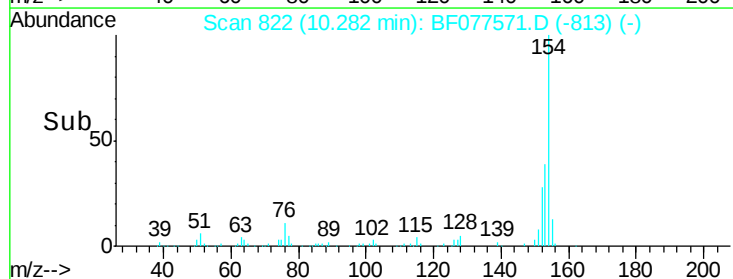
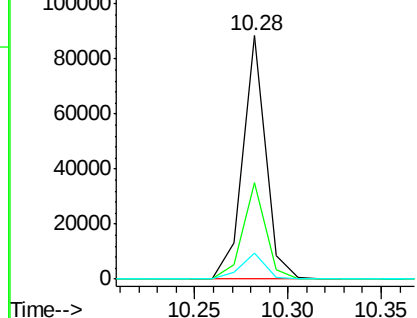


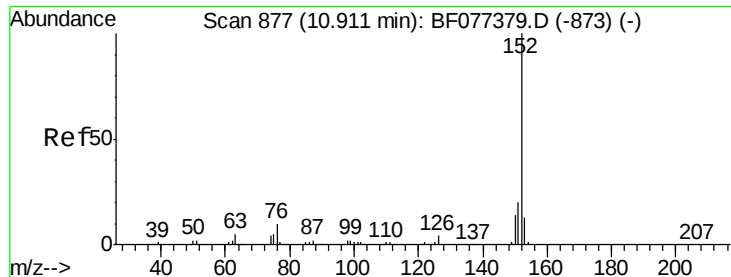
#45  
1,1'-Biphenyl  
Concen: 5.55 ng  
RT: 10.28 min Scan# 822  
Delta R.T. -0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

Tgt Ion:154 Resp: 76048  
Ion Ratio Lower Upper  
154 100  
153 39.4 20.2 60.2  
76 10.8 0.0 29.4



Abundance Ion 154.00 (153.70 to 154.70): E  
Ion 153.00 (152.70 to 153.70): E  
Ion 76.00 (75.70 to 76.70): BF0





#48

Acenaphthylene

Concen: 2.39 ng

RT: 10.81 min Scan# 868

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

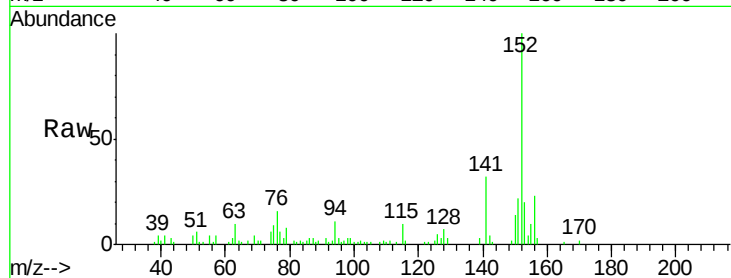
Tgt Ion:152 Resp: 40632

Ion Ratio Lower Upper

152 100

151 21.9 16.1 24.1

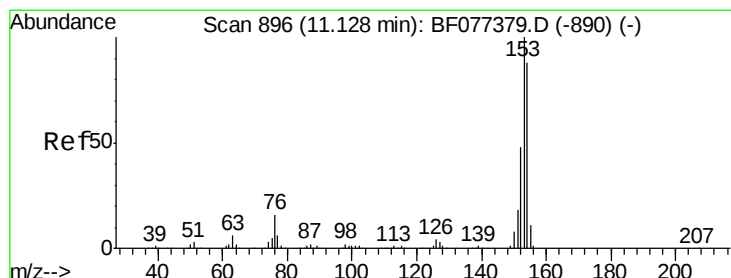
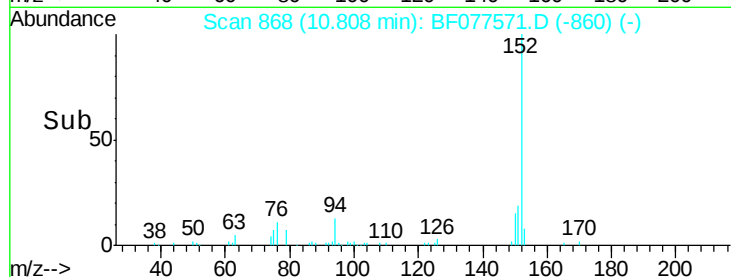
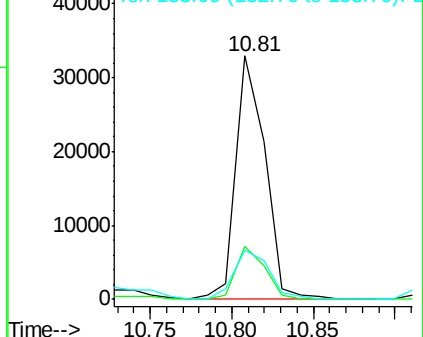
153 20.1 10.9 16.3#



Abundance Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E



#51

Acenaphthene

Concen: 14.87 ng

RT: 11.03 min Scan# 887

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

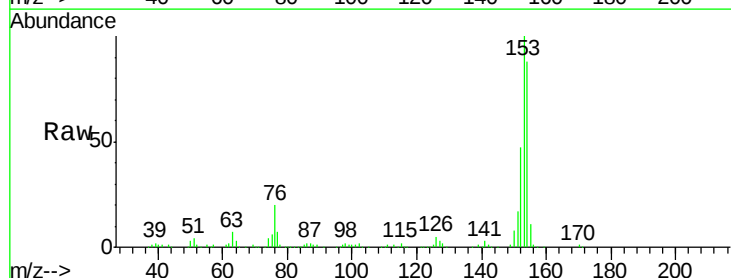
Tgt Ion:154 Resp: 151051

Ion Ratio Lower Upper

154 100

153 113.9 90.5 135.7

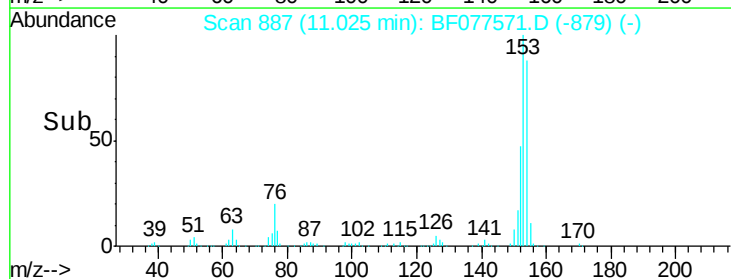
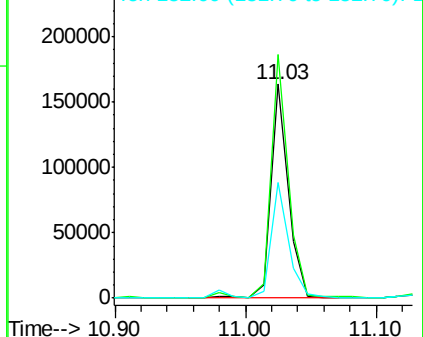
152 53.9 43.5 65.3

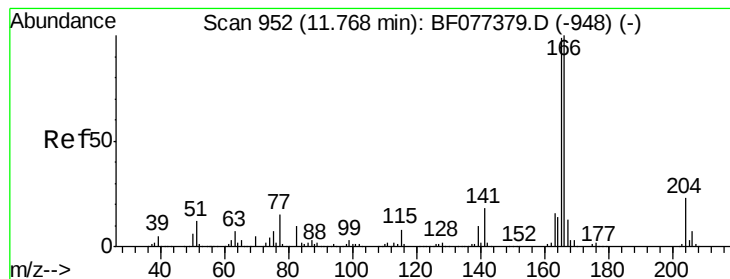


Abundance Ion 154.00 (153.70 to 154.70): E

Ion 153.00 (152.70 to 153.70): E

Ion 152.00 (151.70 to 152.70): E





#57

Fluorene

Concen: 10.55 ng

RT: 11.66 min Scan# 943

Delta R.T. -0.01 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

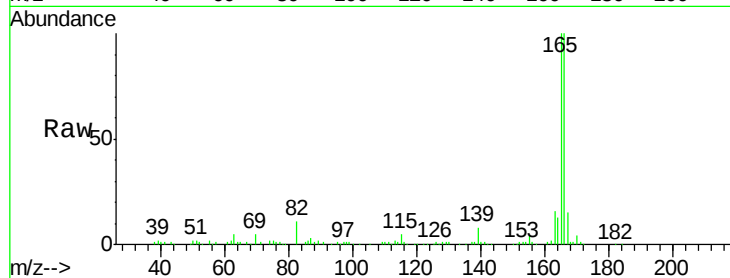
Tgt Ion:166 Resp: 132252

Ion Ratio Lower Upper

166 100

165 99.8 77.6 116.4

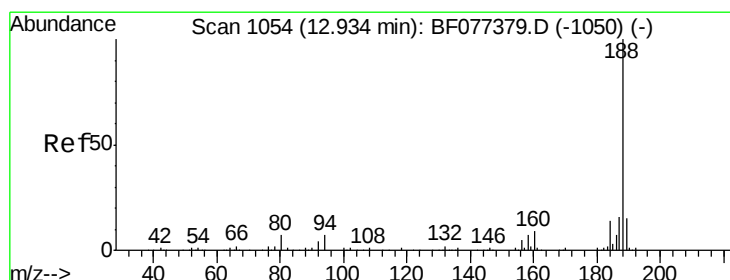
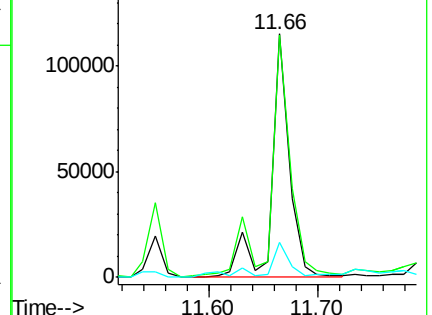
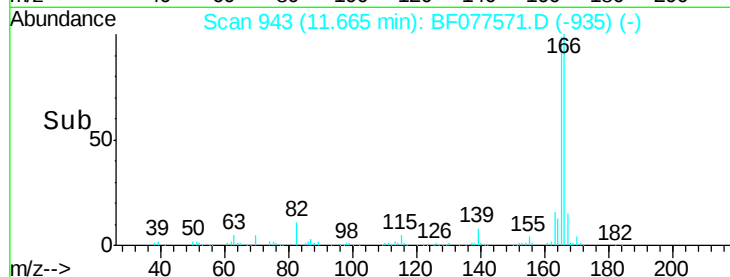
167 14.5 10.6 16.0



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: 12.83 min Scan# 1045

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

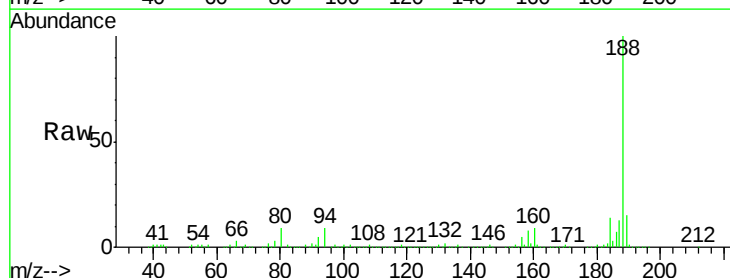
Tgt Ion:188 Resp: 352142

Ion Ratio Lower Upper

188 100

94 9.1 7.4 11.2

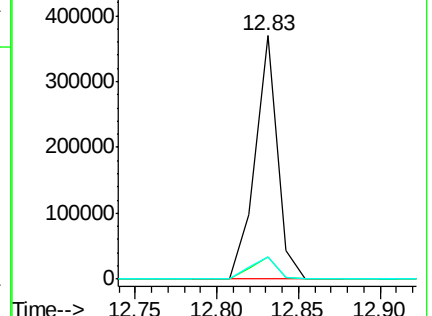
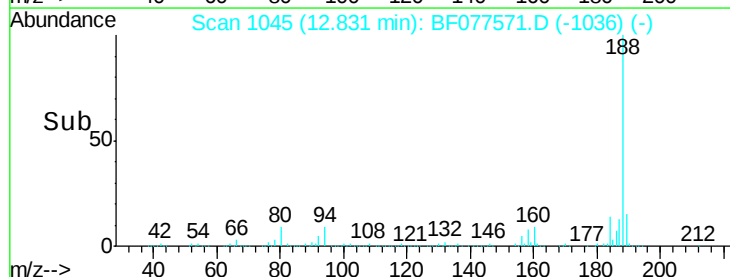
80 9.2 8.0 12.0

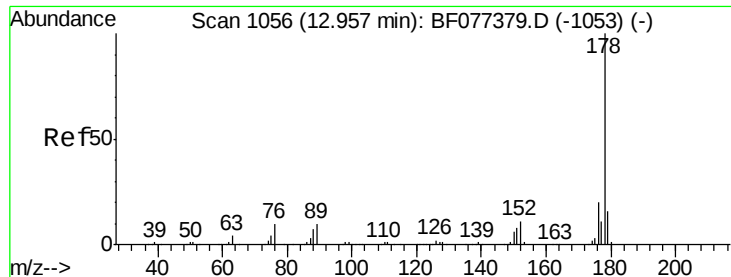


Abundance Ion 188.00 (187.70 to 188.70): E

Ion 94.00 (93.70 to 94.70): BF0

Ion 80.00 (79.70 to 80.70): BF0

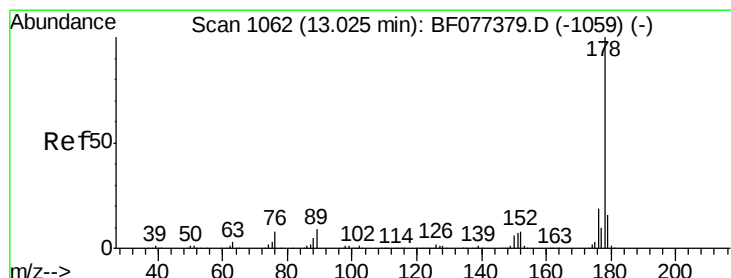
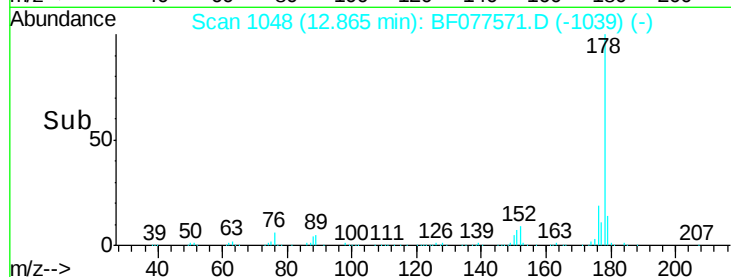
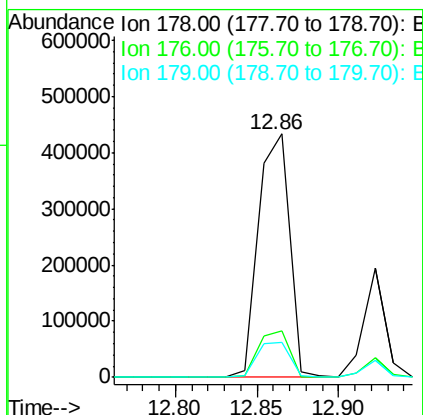
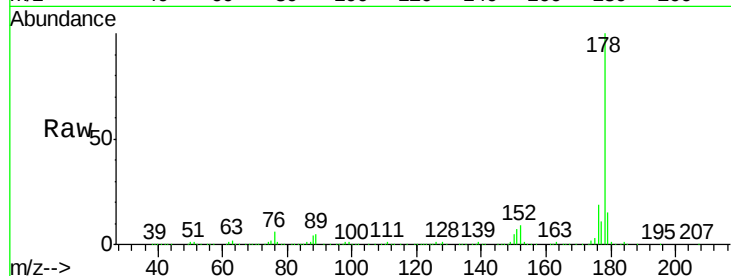




#70  
Phenanthrene  
Concen: 28.15 ng  
RT: 12.86 min Scan# 1048  
Delta R.T. 0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

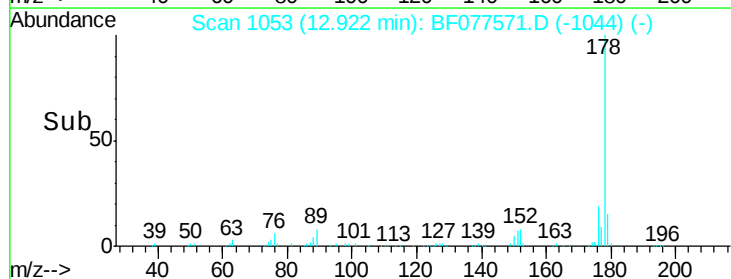
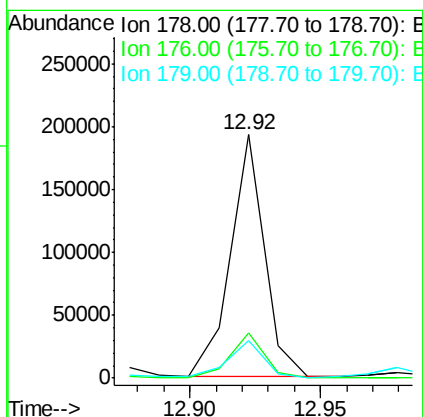
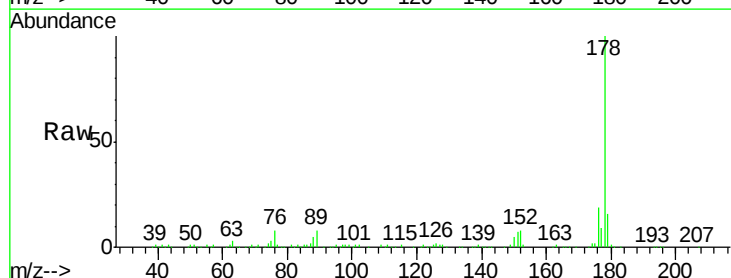
Instrument :  
BNA\_F  
ClientSampleId :  
MW44DL2

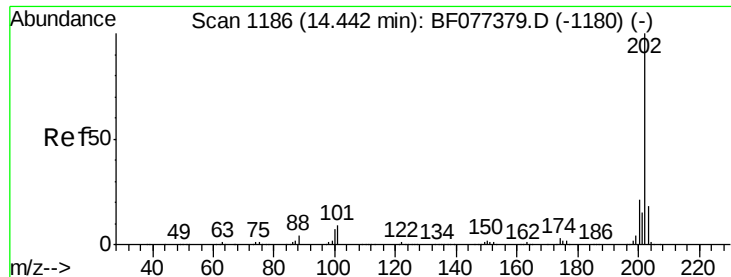
Tgt Ion:178 Resp: 574583  
Ion Ratio Lower Upper  
178 100  
176 18.9 15.5 23.3  
179 14.5 12.2 18.2



#71  
Anthracene  
Concen: 8.69 ng  
RT: 12.92 min Scan# 1053  
Delta R.T. -0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

Tgt Ion:178 Resp: 175949  
Ion Ratio Lower Upper  
178 100  
176 18.6 15.4 23.0  
179 15.5 12.9 19.3





#74

Fluoranthene

Concen: 10.55 ng

RT: 14.34 min Scan# 1177

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

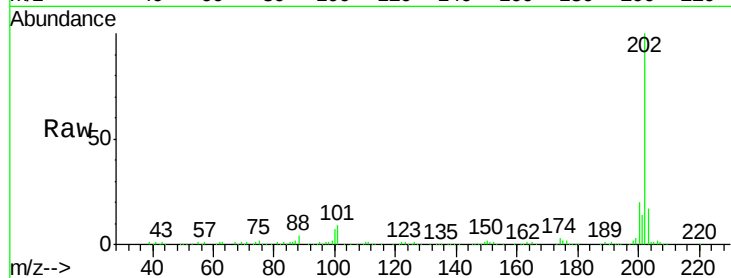
Tgt Ion: 202 Resp: 235201

Ion Ratio Lower Upper

202 100

101 9.0 0.0 30.8

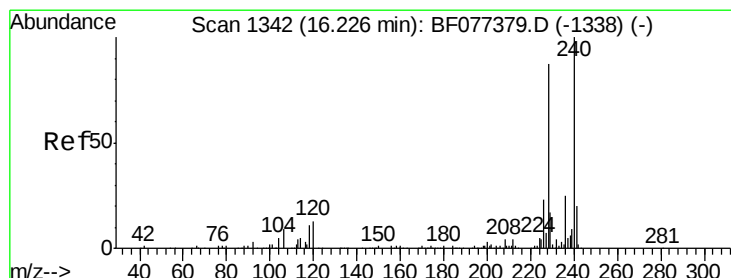
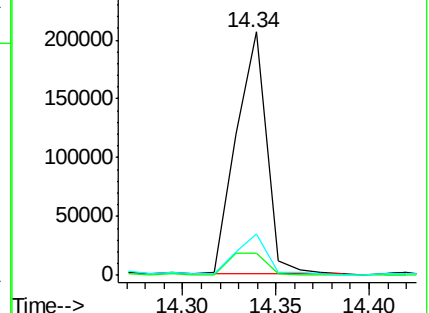
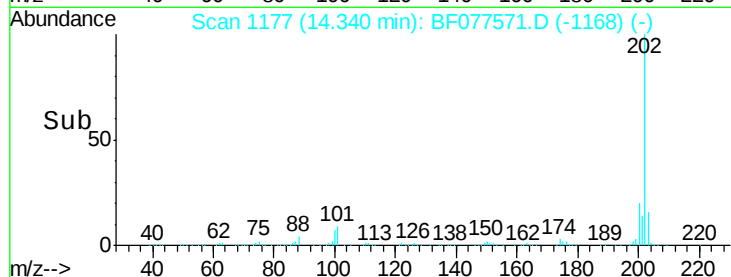
203 17.3 0.0 37.7



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: 16.12 min Scan# 1332

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

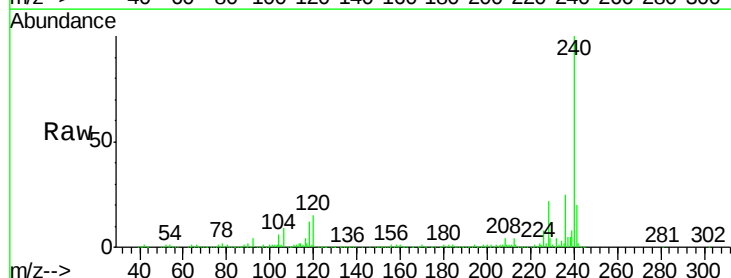
Tgt Ion: 240 Resp: 380620

Ion Ratio Lower Upper

240 100

120 14.6 8.8 13.2#

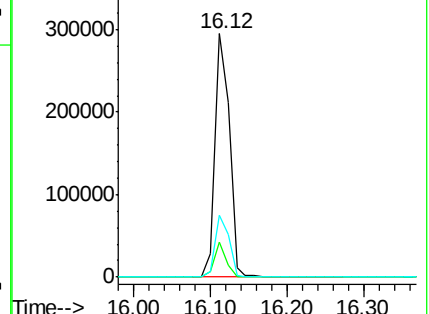
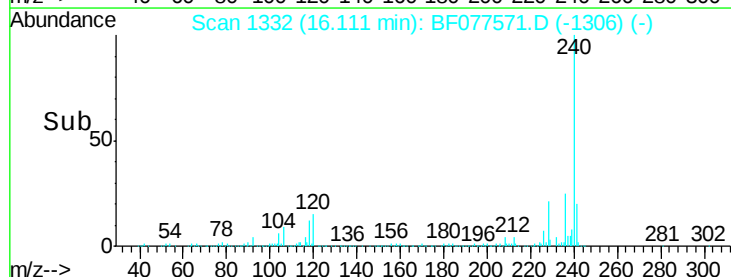
236 25.4 20.7 31.1

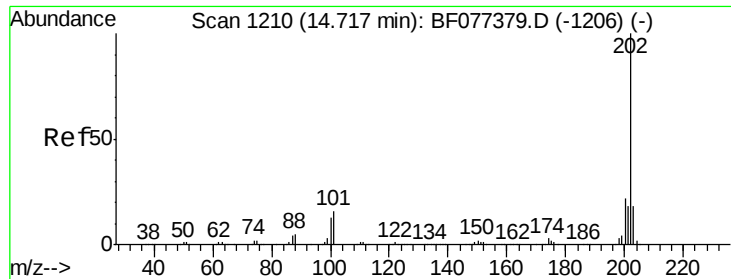


Abundance Ion 240.00 (239.70 to 240.70): E

Ion 120.00 (119.70 to 120.70): E

Ion 236.00 (235.70 to 236.70): E

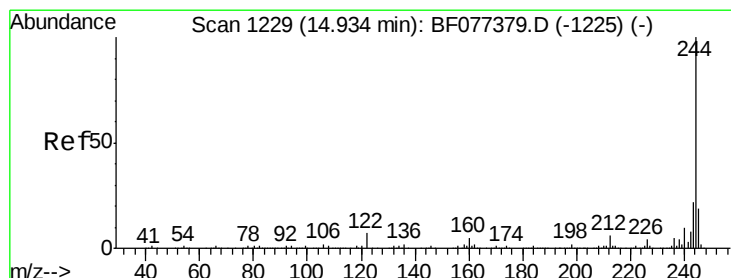
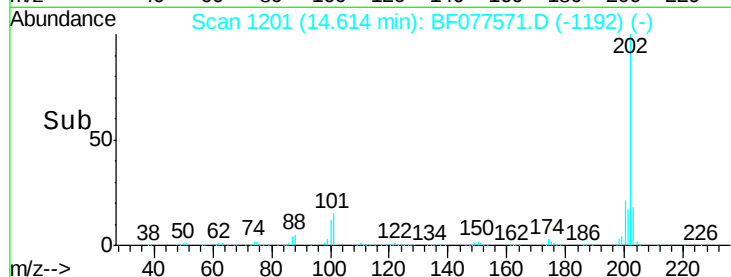
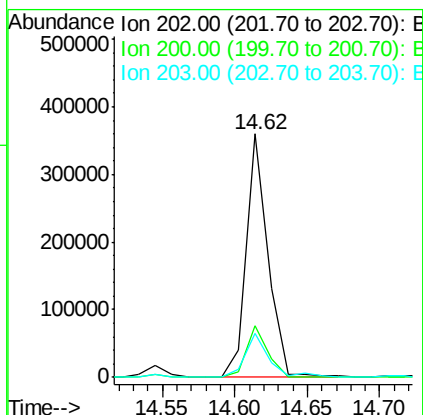
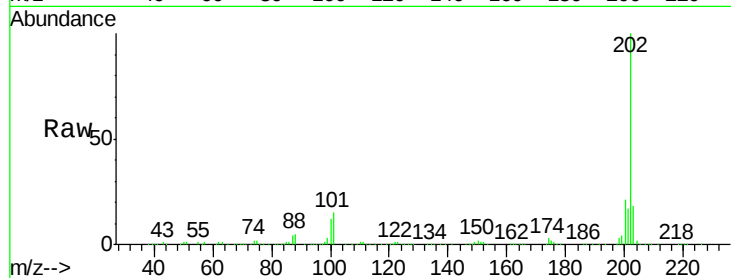




#77  
 Pyrene  
 Concen: 15.87 ng  
 RT: 14.62 min Scan# 1201  
 Delta R.T. 0.00 min  
 Lab File: BF077571.D  
 Acq: 4 Mar 2015 4:19

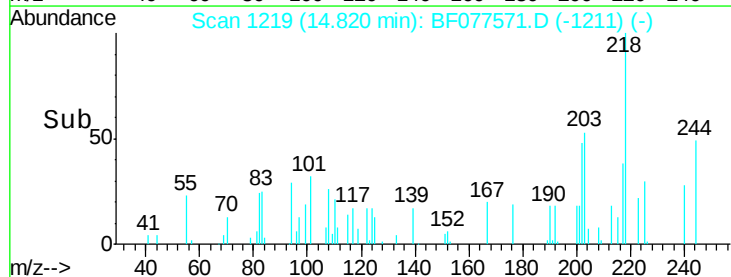
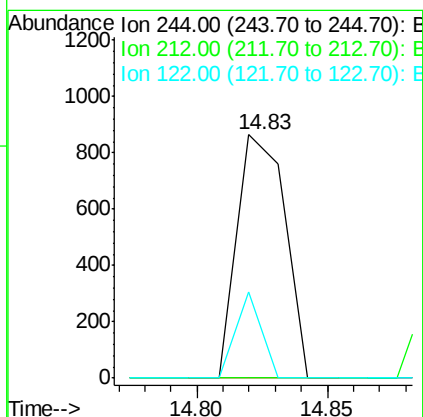
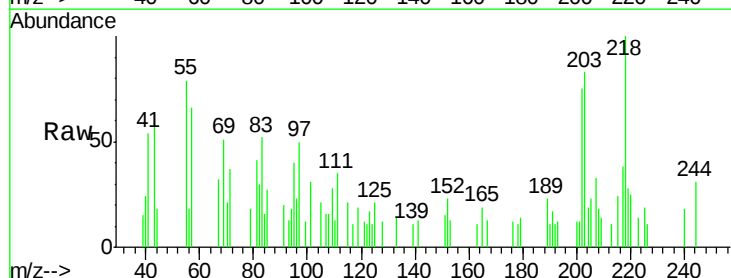
Instrument :  
 BNA\_F  
 ClientSampleId :  
 MW44DL2

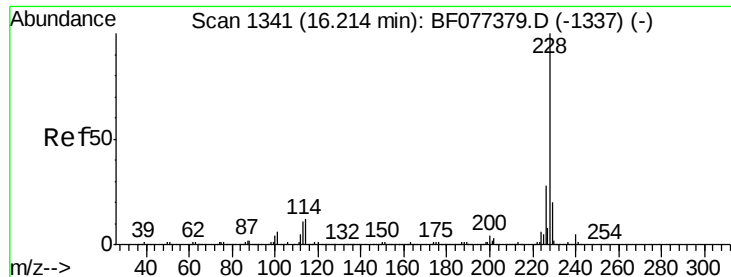
Tgt Ion: 202 Resp: 369547  
 Ion Ratio Lower Upper  
 202 100  
 200 21.1 17.1 25.7  
 203 18.1 14.2 21.2



#78  
 Terphenyl-d14  
 Concen: 0.07 ng  
 RT: 14.83 min Scan# 1219  
 Delta R.T. -0.00 min  
 Lab File: BF077571.D  
 Acq: 4 Mar 2015 4:19

Tgt Ion: 244 Resp: 1115  
 Ion Ratio Lower Upper  
 244 100  
 212 0.0 5.2 7.8#  
 122 35.4 7.8 11.8#





#80

Benzo(a)anthracene

Concen: 3.62 ng

RT: 16.15 min Scan# 1335

Delta R.T. 0.04 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

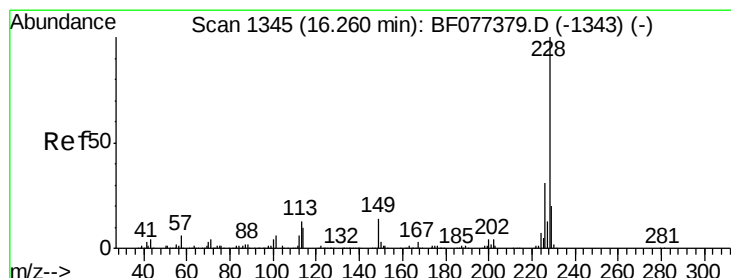
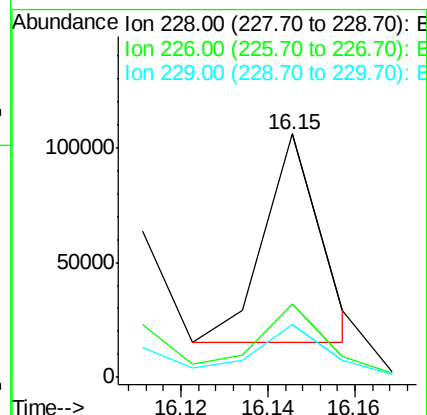
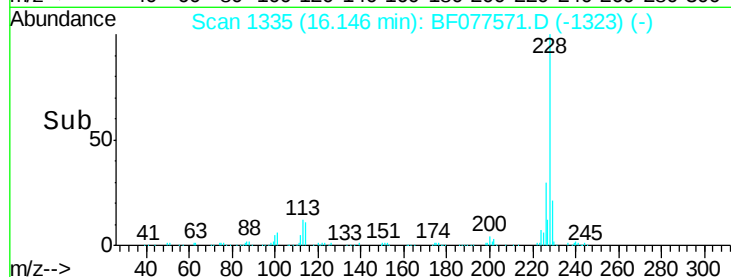
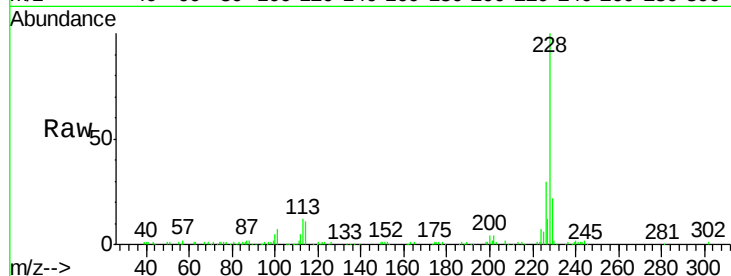
Tgt Ion:228 Resp: 80822

Ion Ratio Lower Upper

228 100

226 30.0 22.0 33.0

229 21.7 15.8 23.8



#82

Chrysene

Concen: 5.40 ng

RT: 16.14 min Scan# 1335

Delta R.T. -0.00 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

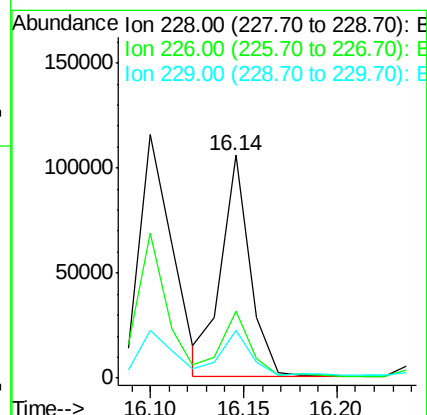
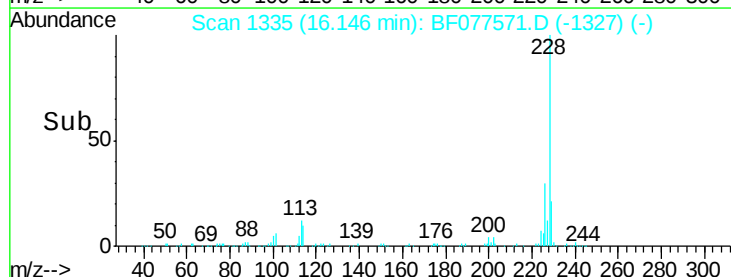
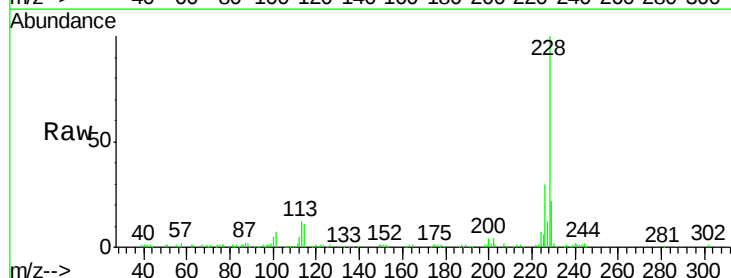
Tgt Ion:228 Resp: 113183

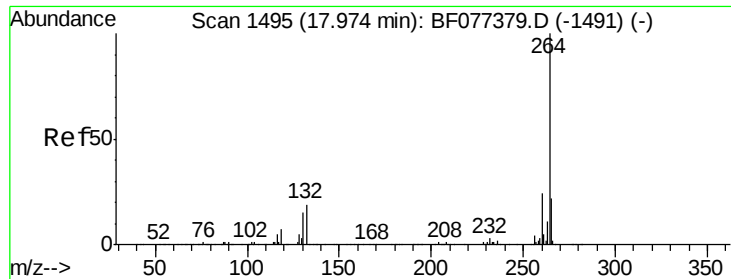
Ion Ratio Lower Upper

228 100

226 30.0 24.9 37.3

229 21.7 16.4 24.6



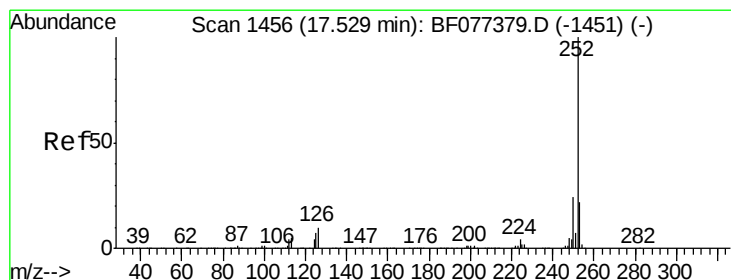
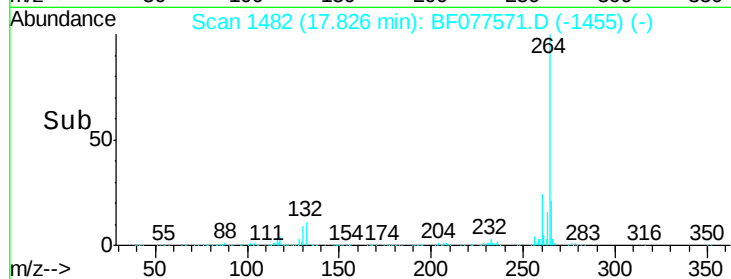
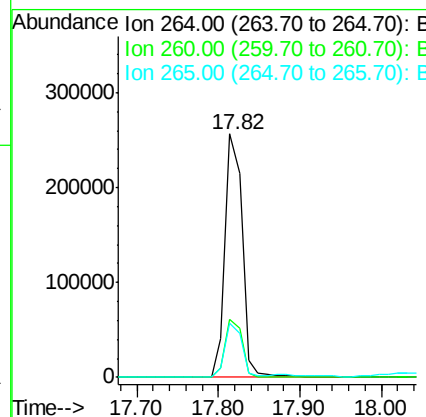
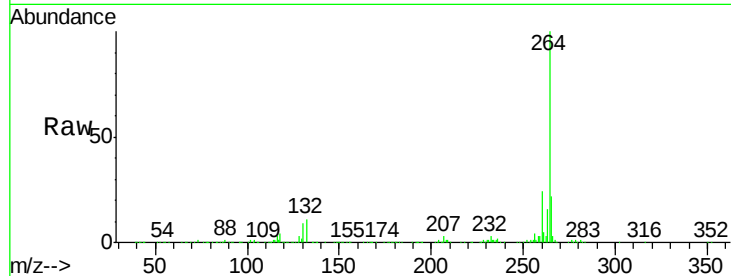


#86  
Perylene-d12  
Concen: 20.00 ng  
RT: 17.82 min Scan# 1482  
Delta R.T. 0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

Instrument :  
BNA\_F  
ClientSampleId :  
MW44DL2

Tgt Ion:264 Resp: 375567  

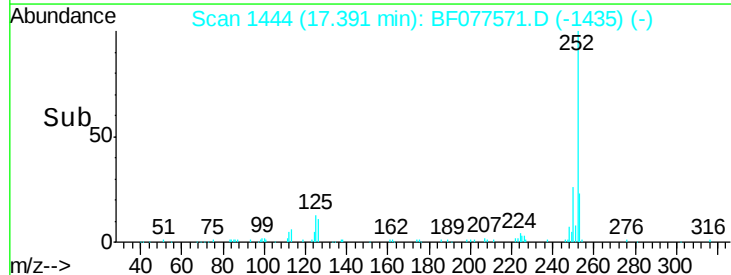
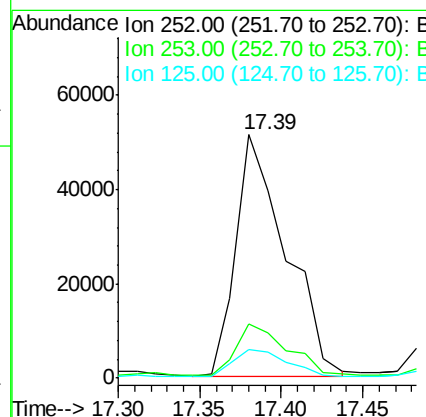
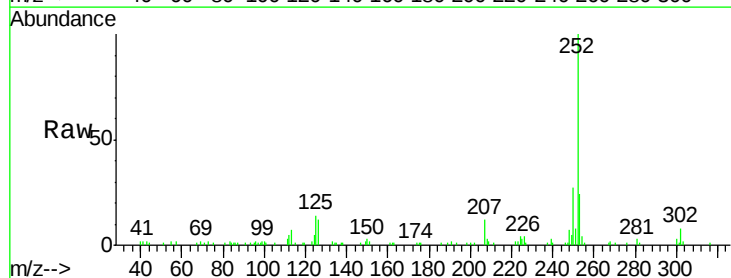
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 264 | 100   |       |       |
| 260 | 24.0  | 19.3  | 28.9  |
| 265 | 21.5  | 16.8  | 25.2  |

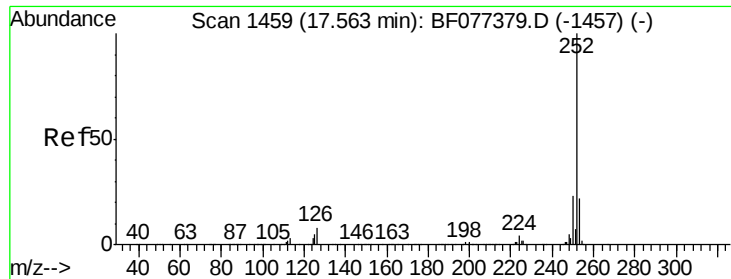


#87  
Benzo(b)fluoranthene  
Concen: 4.97 ng  
RT: 17.39 min Scan# 1444  
Delta R.T. 0.01 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

Tgt Ion:252 Resp: 108558  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 252 | 100   |       |       |
| 253 | 24.2  | 17.6  | 26.4  |
| 125 | 13.5  | 5.4   | 8.2   |

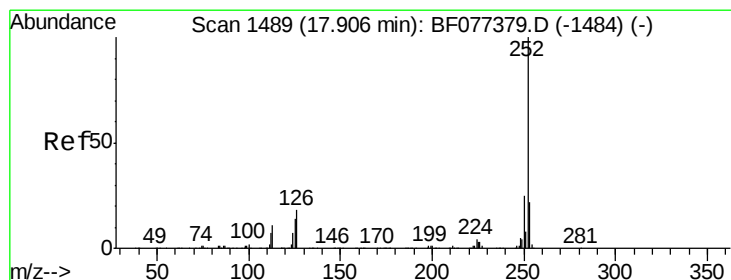
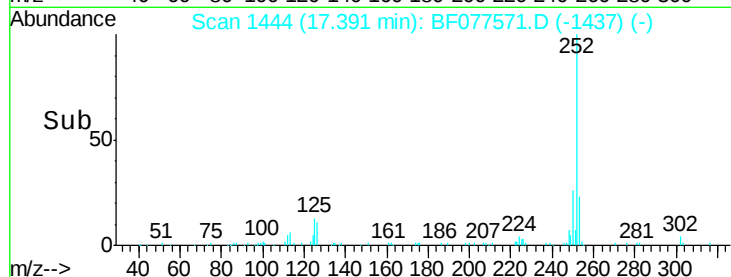
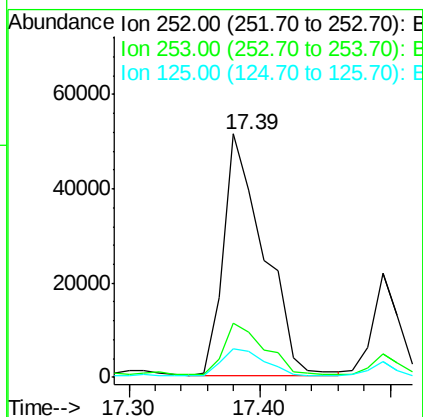
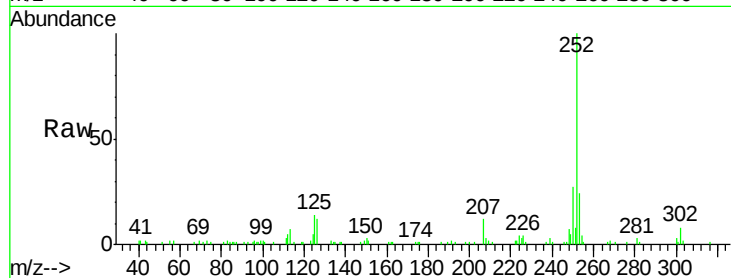




#88  
Benzo(k)fluoranthene  
Concen: 5.11 ng  
RT: 17.39 min Scan# 1444  
Delta R.T. -0.02 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

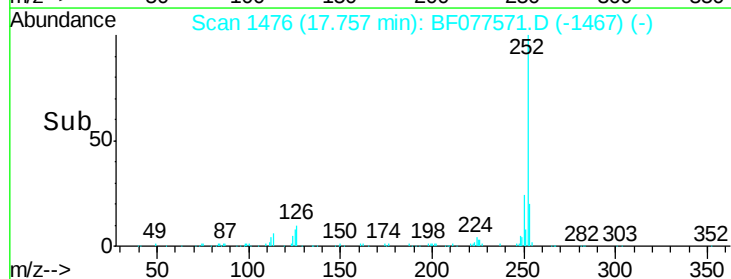
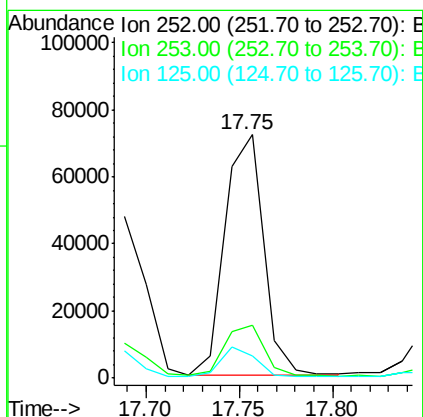
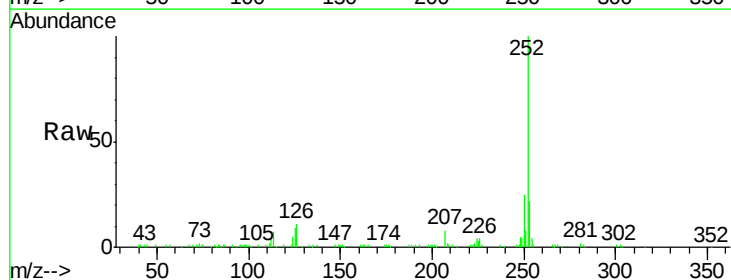
Instrument :  
BNA\_F  
ClientSampleId :  
MW44DL2

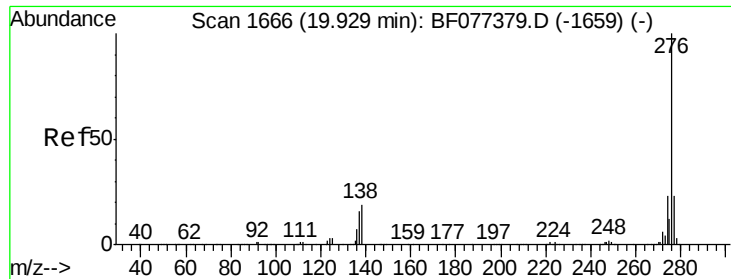
Tgt Ion:252 Resp: 109439  
Ion Ratio Lower Upper  
252 100  
253 24.2 18.1 27.1  
125 13.5 10.1 15.1



#89  
Benzo(a)pyrene  
Concen: 5.02 ng  
RT: 17.75 min Scan# 1476  
Delta R.T. -0.00 min  
Lab File: BF077571.D  
Acq: 4 Mar 2015 4:19

Tgt Ion:252 Resp: 104315  
Ion Ratio Lower Upper  
252 100  
253 21.9 18.2 27.2  
125 9.0 8.3 12.5





#91

Benzo(g,h,i)perylene

Concen: 2.17 ng

RT: 19.67 min Scan# 1644

Delta R.T. -0.01 min

Lab File: BF077571.D

Acq: 4 Mar 2015 4:19

Instrument :

BNA\_F

ClientSampleId :

MW44DL2

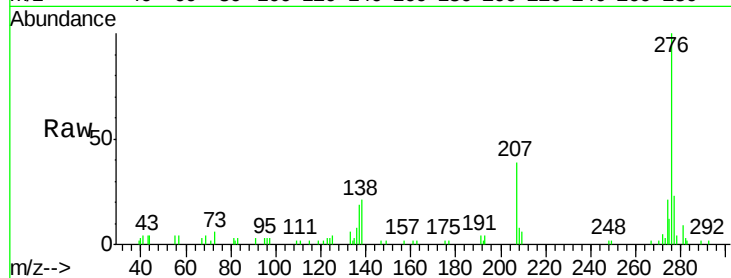
Tgt Ion: 276 Resp: 43453

Ion Ratio Lower Upper

276 100

277 22.8 18.9 28.3

138 21.0 20.5 30.7



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

