

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE020615\  
 Data File : BE089585.D  
 Acq On : 8 Feb 2015 10:47  
 Operator : TP/IZ  
 Sample : MDL-06-S  
 Misc : MDL-SOIL-0.2/0.4  
 ALS Vial : 57 Sample Multiplier: 1

Instrument :  
 BNA\_E  
 ClientSampleId :

Quant Time: Feb 09 00:31:32 2015  
 Quant Method : Z:\HPCHEM1\BNA\_E\methods\SIMPAH-BE020615.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Sat Feb 07 04:07:57 2015  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|---------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 9.42  | 152  | 40753    | 5.00 | ng    | 0.00     |
| 2) Naphthalene-d8         | 12.33 | 136  | 178152   | 5.00 | ng    | 0.00     |
| 6) Acenaphthene-d10       | 16.51 | 164  | 101224   | 5.00 | ng    | 0.00     |
| 11) Phenanthrene-d10      | 19.84 | 188  | 171164   | 5.00 | ng    | 0.00     |
| 16) Chrysene-d12          | 23.72 | 240  | 143531   | 5.00 | ng    | 0.00     |
| 22) Perylene-d12          | 25.41 | 264  | 126617   | 5.00 | ng    | 0.00     |

|                             |       |     |        |       |    |      |
|-----------------------------|-------|-----|--------|-------|----|------|
| System Monitoring Compounds |       |     |        |       |    |      |
| 3) Nitrobenzene-d5          | 10.69 | 82  | 115240 | 9.74  | ng | 0.00 |
| 7) 2-Fluorobiphenyl         | 14.96 | 172 | 217001 | 8.04  | ng | 0.00 |
| 18) Terphenyl-d14           | 22.36 | 244 | 230169 | 12.16 | ng | 0.00 |

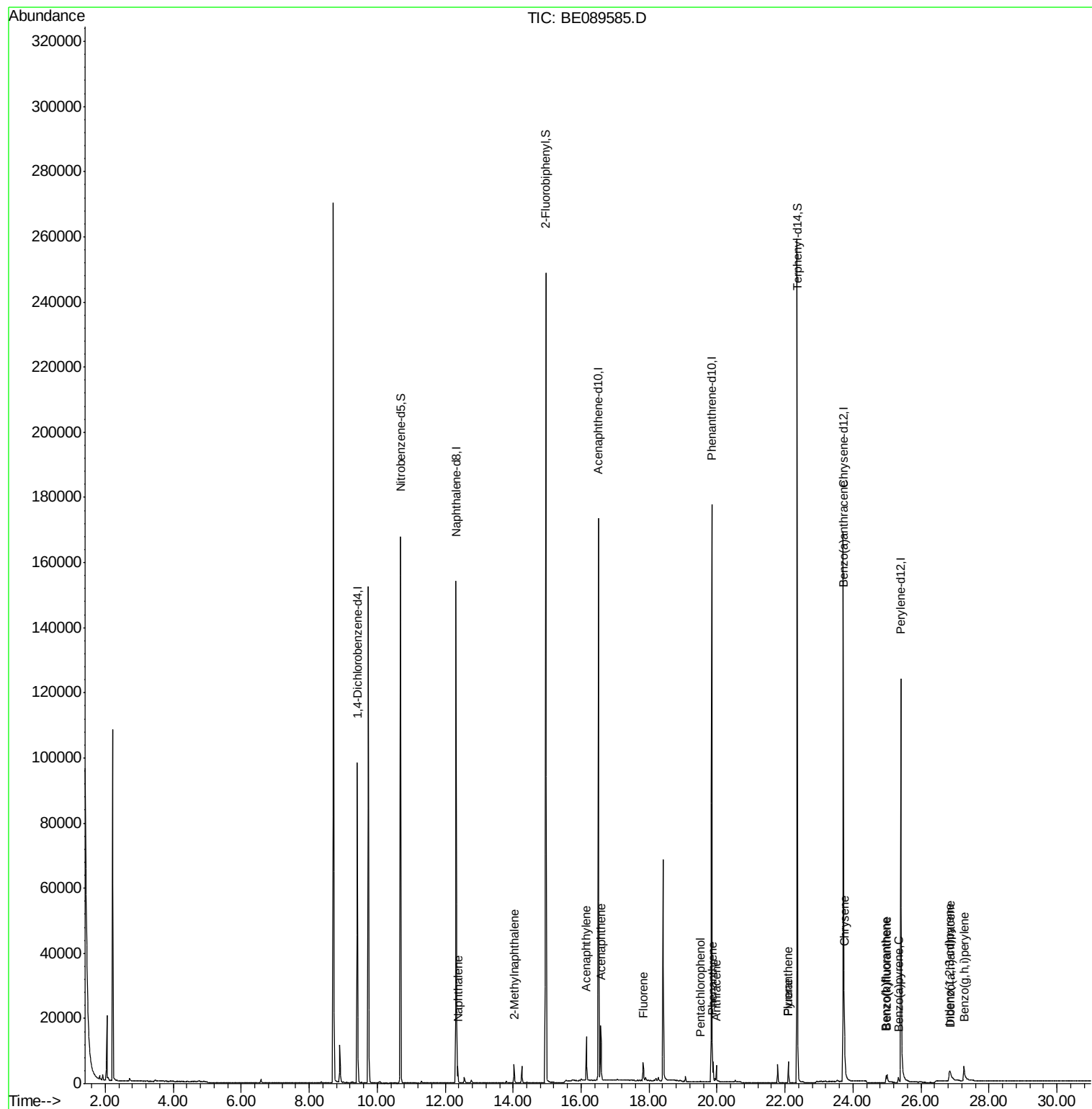
|                            |       |     |       |      |    |        |
|----------------------------|-------|-----|-------|------|----|--------|
| Target Compounds           |       |     |       |      |    | Qvalue |
| 4) Naphthalene             | 12.37 | 128 | 5544  | 0.14 | ng | 97     |
| 5) 2-Methylnaphthalene     | 14.03 | 142 | 3354  | 0.15 | ng | 96     |
| 8) Acenaphthylene          | 16.16 | 152 | 18890 | 0.11 | ng | 100    |
| 9) Acenaphthene            | 16.58 | 154 | 3251  | 0.12 | ng | 95     |
| 10) Fluorene               | 17.83 | 166 | 3577  | 0.12 | ng | 99     |
| 12) Pentachlorophenol      | 19.52 | 266 | 126   | 0.63 | ng | 95     |
| 13) Phenanthrene           | 19.88 | 178 | 6057  | 0.14 | ng | 99     |
| 14) Anthracene             | 19.98 | 178 | 4781  | 0.13 | ng | 99     |
| 15) Fluoranthene           | 22.10 | 202 | 4782  | 0.12 | ng | 98     |
| 17) Pyrene                 | 22.10 | 202 | 4782  | 0.16 | ng | 99     |
| 19) Benzo(a)anthracene     | 23.70 | 228 | 15243 | 0.12 | ng | 97     |
| 20) Chrysene               | 23.74 | 228 | 20315 | 0.16 | ng | 93     |
| 21) Indeno(1,2,3-cd)pyrene | 26.84 | 276 | 8059  | 0.04 | ng | 98     |
| 23) Benzo(b)fluoranthene   | 24.97 | 252 | 2045  | 0.08 | ng | 96     |
| 24) Benzo(k)fluoranthene   | 25.00 | 252 | 3528  | 0.12 | ng | 93     |
| 25) Benzo(a)pyrene         | 25.34 | 252 | 2121  | 0.09 | ng | # 95   |
| 26) Dibenzo(a,h)anthracene | 26.87 | 278 | 1866  | 0.06 | ng | # 81   |
| 27) Benzo(g,h,i)perylene   | 27.26 | 276 | 11179 | 0.09 | ng | # 93   |

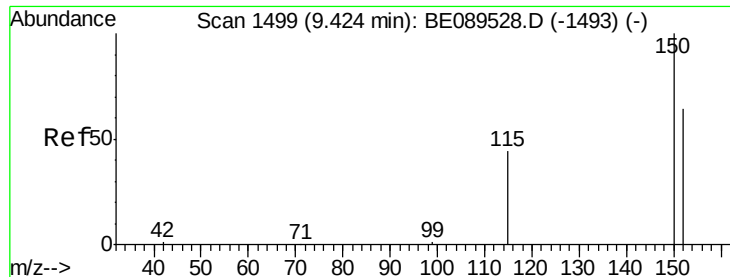
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

1,4-Dichlorobenzene-d4

Concen: 5.00 ng

RT: 9.42 min Scan# 1497

Delta R.T. -0.00 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :

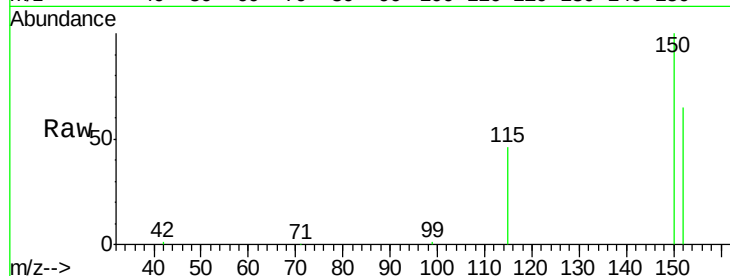
Tgt Ion:152 Resp: 40753

Ion Ratio Lower Upper

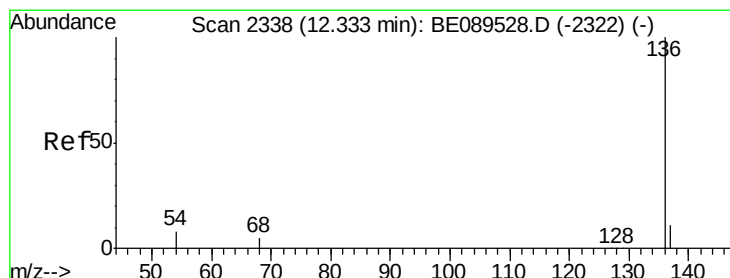
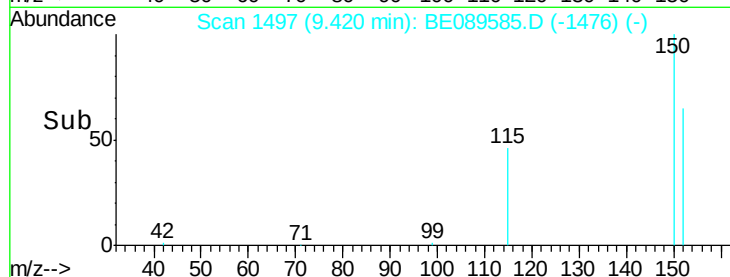
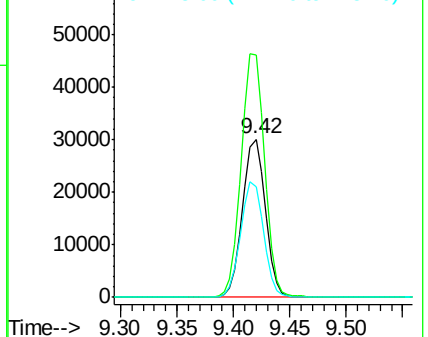
152 100

150 153.4 125.7 188.5

115 70.2 55.6 83.4



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



#2

Naphthalene-d8

Concen: 5.00 ng

RT: 12.33 min Scan# 2336

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

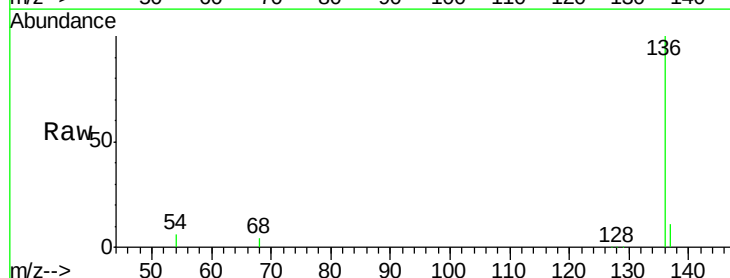
Tgt Ion:136 Resp: 178152

Ion Ratio Lower Upper

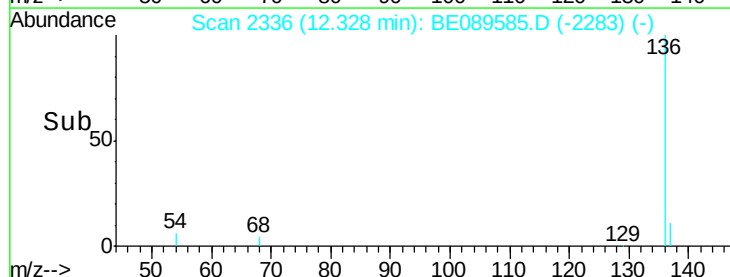
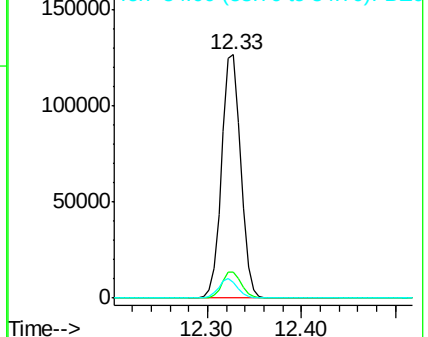
136 100

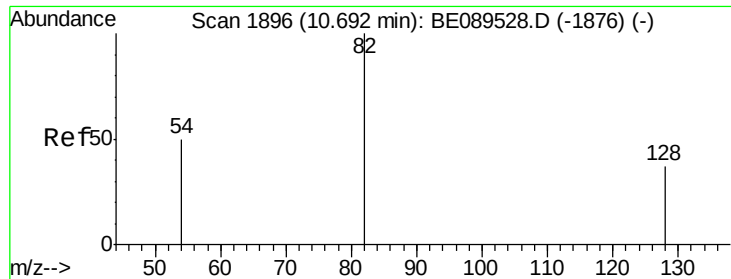
137 10.9 8.7 13.1

54 6.5 6.1 9.1



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): BE0





#3

Nitrobenzene-d5

Concen: 9.74 ng

RT: 10.69 min Scan# 1893

Delta R.T. -0.00 min

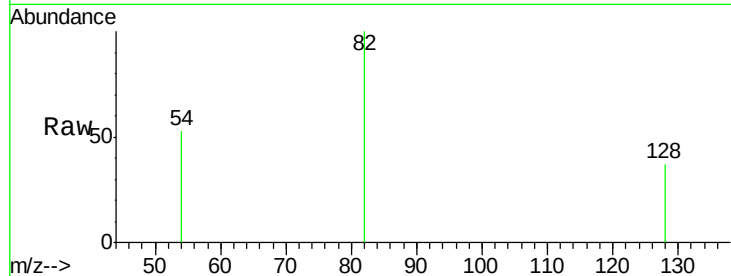
Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :



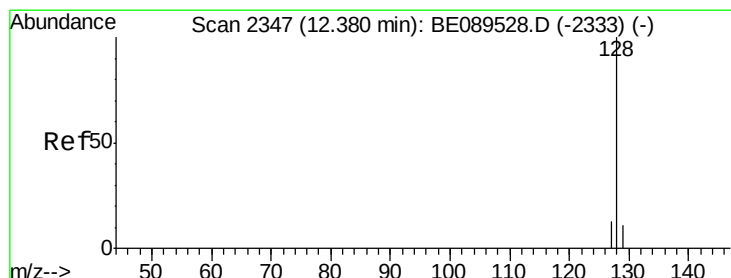
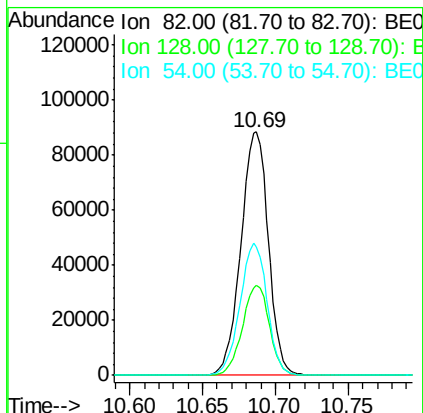
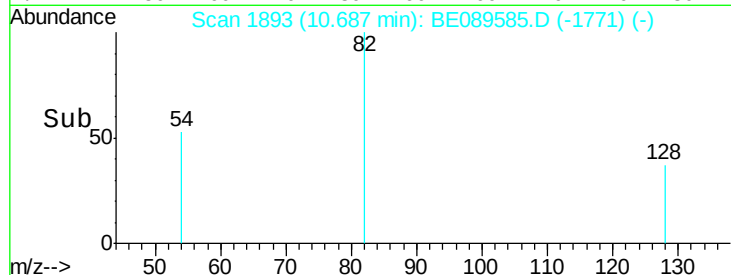
Tgt Ion: 82 Resp: 115240

Ion Ratio Lower Upper

82 100

128 37.0 30.2 45.4

54 52.9 40.6 60.8



#4

Naphthalene

Concen: 0.14 ng

RT: 12.37 min Scan# 2344

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

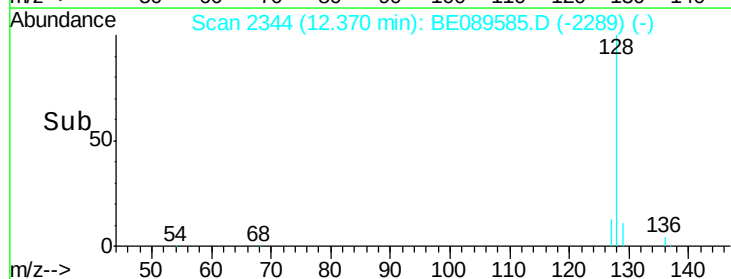
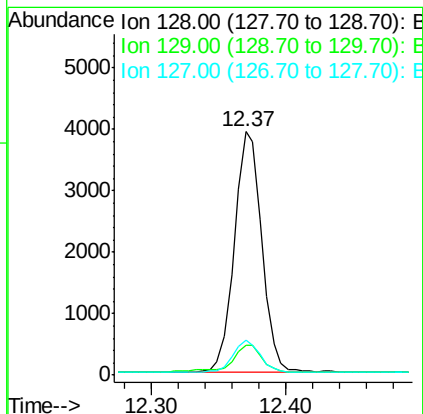
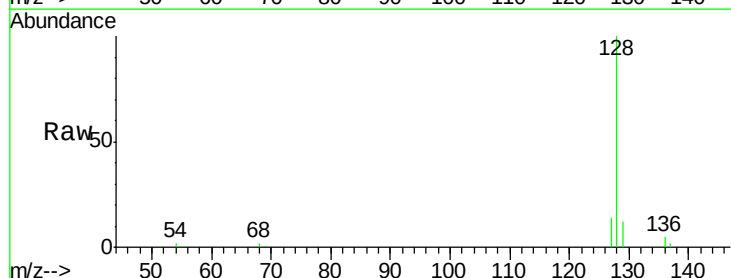
Tgt Ion: 128 Resp: 5544

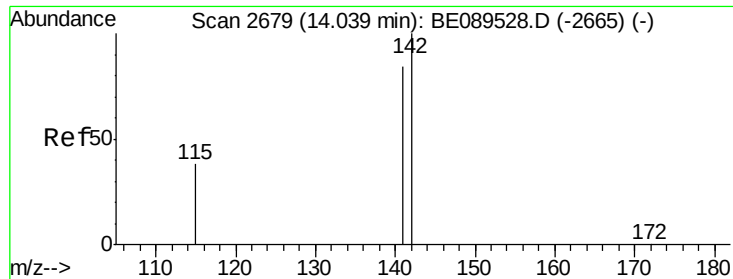
Ion Ratio Lower Upper

128 100

129 12.2 9.1 13.7

127 14.3 10.5 15.7





#5

2-Methylnaphthalene

Concen: 0.15 ng

RT: 14.03 min Scan# 2676

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :

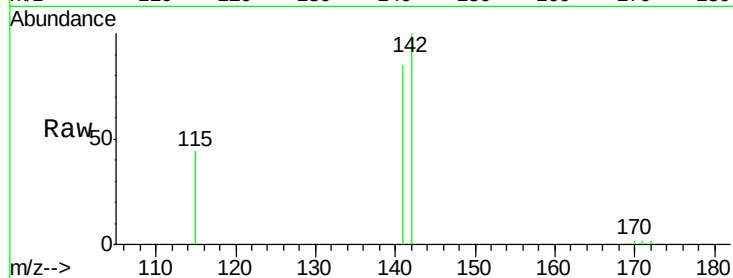
Tgt Ion:142 Resp: 3354

Ion Ratio Lower Upper

142 100

141 84.8 67.0 100.6

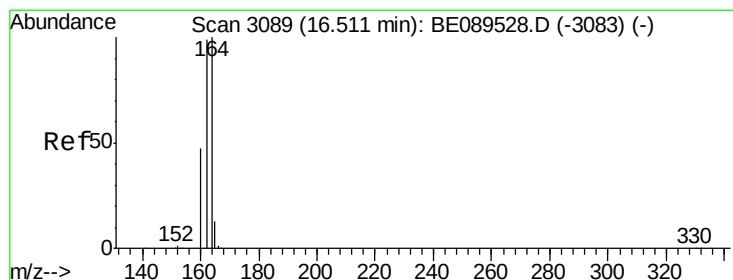
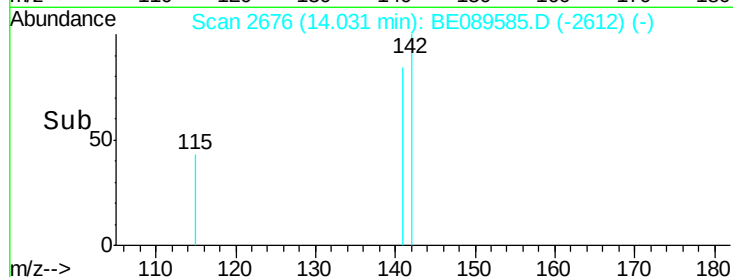
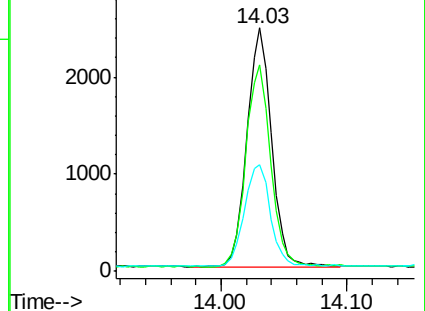
115 44.1 30.6 45.8



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



#6

Acenaphthene-d10

Concen: 5.00 ng

RT: 16.51 min Scan# 3088

Delta R.T. 0.00 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

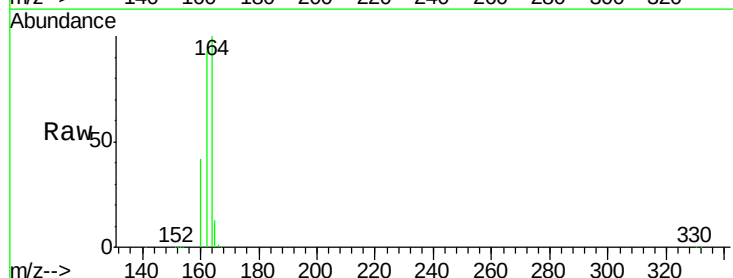
Tgt Ion:164 Resp: 101224

Ion Ratio Lower Upper

164 100

162 93.4 79.5 119.3

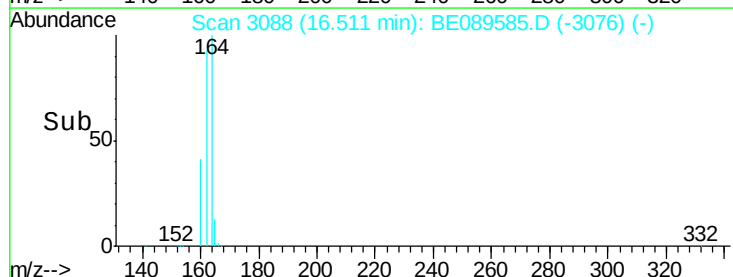
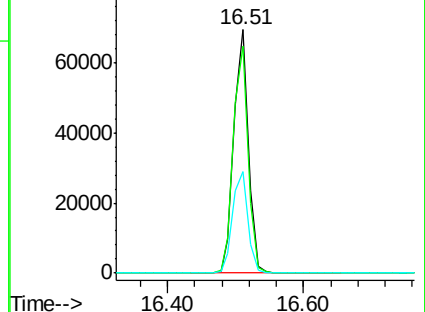
160 41.5 37.6 56.4

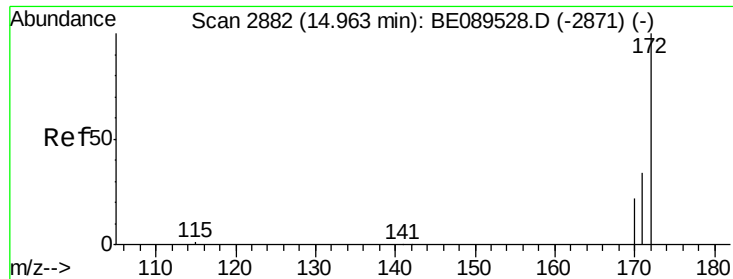


Abundance Ion 164.00 (163.70 to 164.70): E

Ion 162.00 (161.70 to 162.70): E

Ion 160.00 (159.70 to 160.70): E





#7

2-Fluorobiphenyl

Concen: 8.04 ng

RT: 14.96 min Scan# 2880

Delta R.T. -0.00 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :

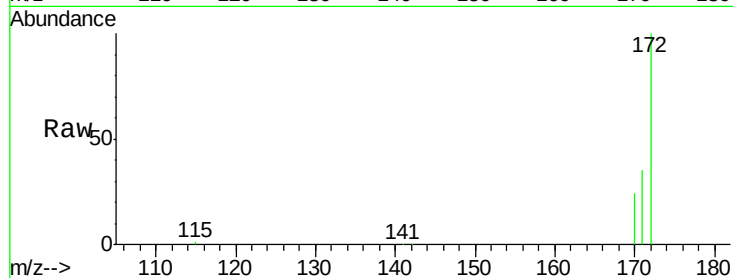
Tgt Ion:172 Resp: 217001

Ion Ratio Lower Upper

172 100

171 34.8 27.7 41.5

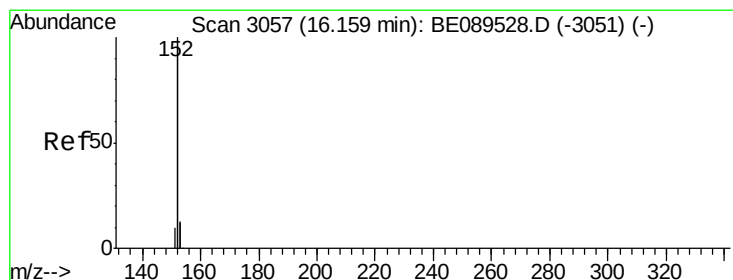
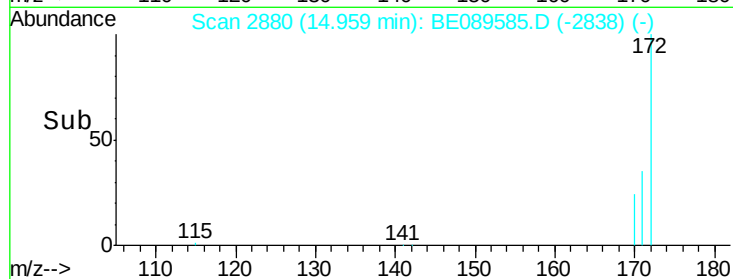
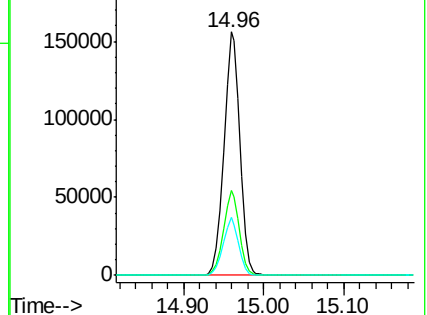
170 23.6 18.3 27.5



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



#8

Acenaphthylene

Concen: 0.11 ng

RT: 16.16 min Scan# 3056

Delta R.T. 0.00 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

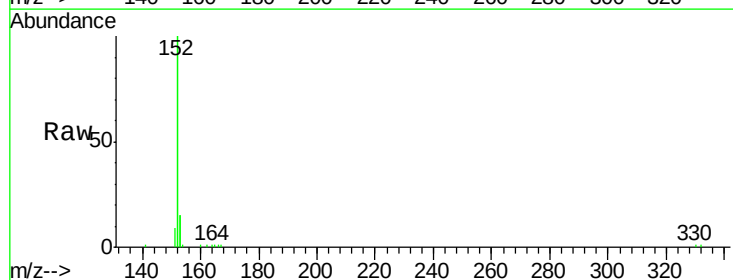
Tgt Ion:152 Resp: 18890

Ion Ratio Lower Upper

152 100

151 4.9 4.0 6.0

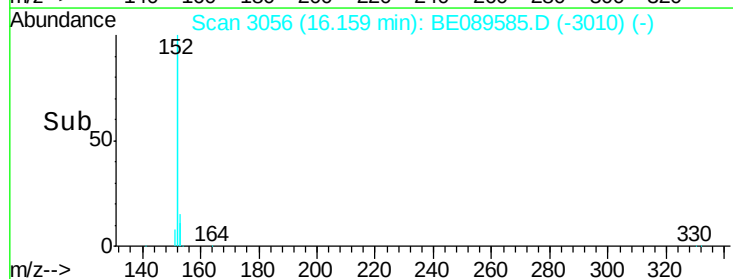
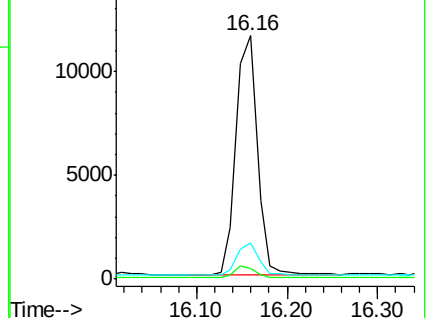
153 13.4 10.6 15.8

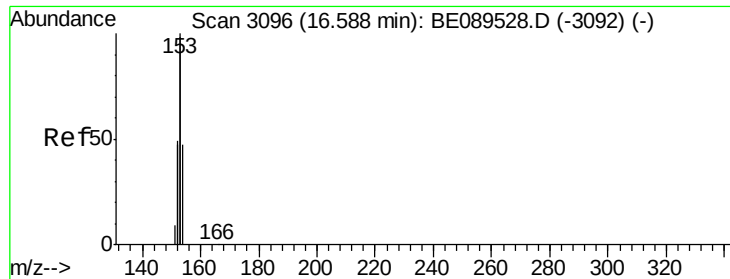


Abundance Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E





#9

Acenaphthene

Concen: 0.12 ng

RT: 16.58 min Scan# 3094

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :

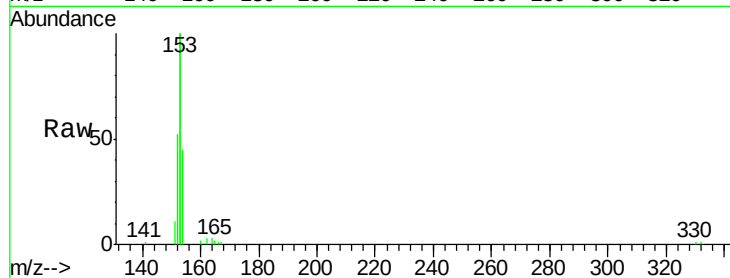
Tgt Ion:154 Resp: 3251

Ion Ratio Lower Upper

154 100

153 434.7 340.8 511.2

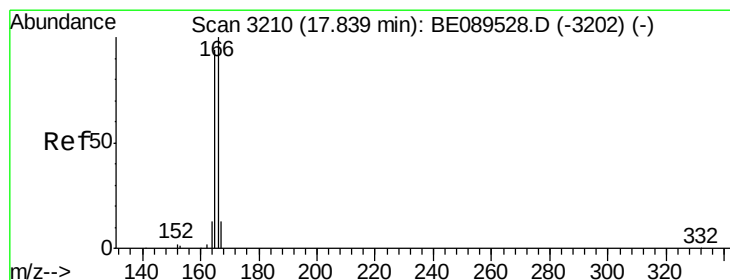
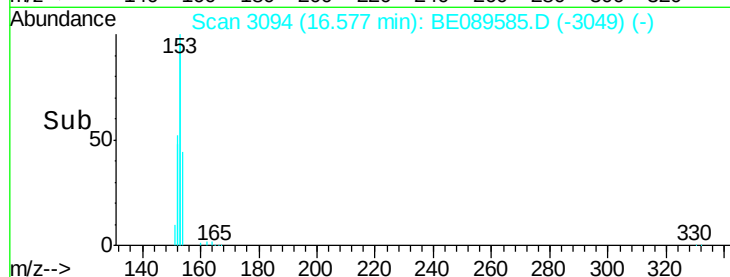
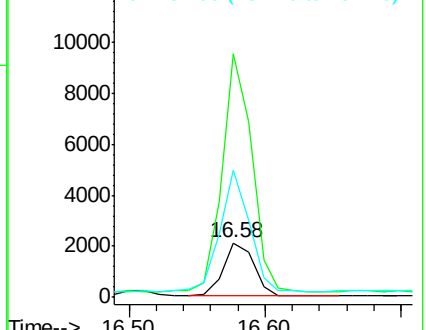
152 221.3 165.5 248.3



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



#10

Fluorene

Concen: 0.12 ng

RT: 17.83 min Scan# 3208

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

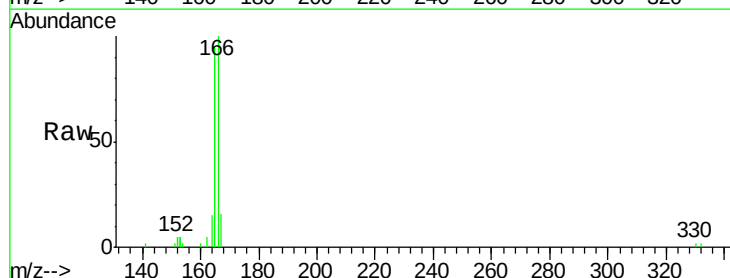
Tgt Ion:166 Resp: 3577

Ion Ratio Lower Upper

166 100

165 95.2 75.5 113.3

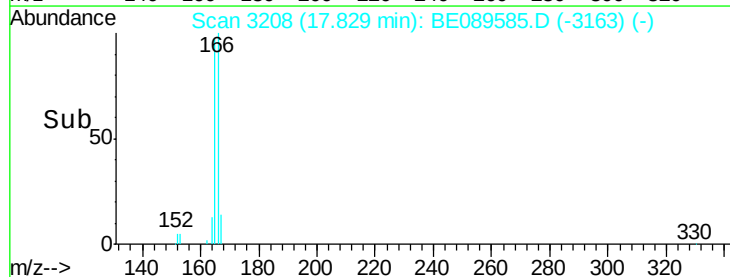
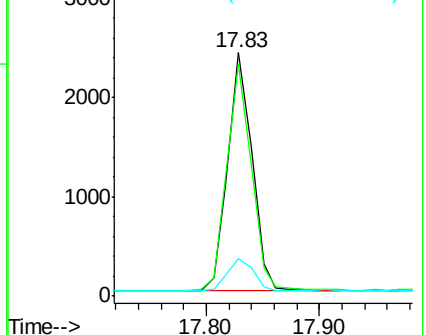
167 15.5 10.9 16.3

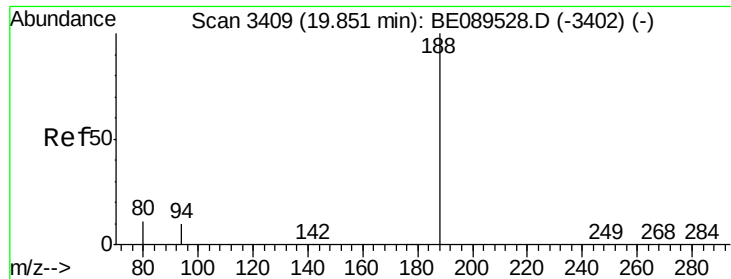


Abundance Ion 166.00 (165.70 to 166.70): E

Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E

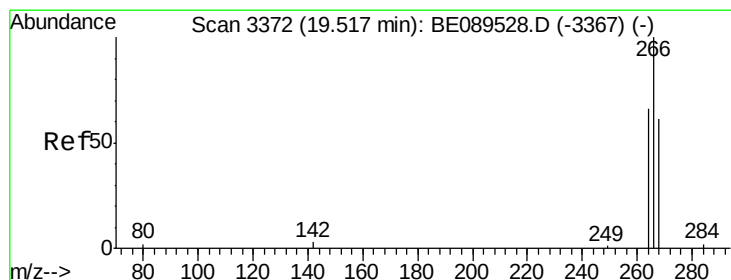
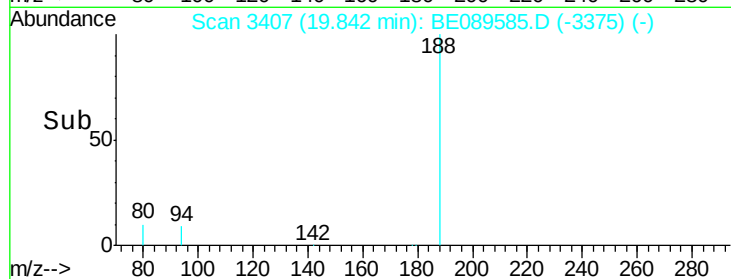
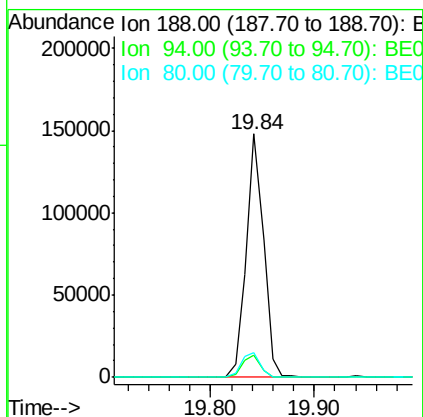
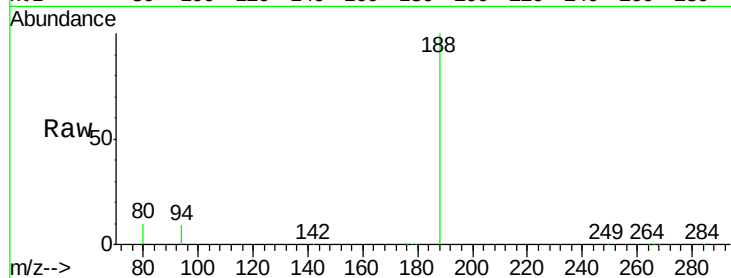




#11  
Phenanthrene-d10  
Concen: 5.00 ng  
RT: 19.84 min Scan# 3407  
Delta R.T. -0.01 min  
Lab File: BE089585.D  
Acq: 8 Feb 2015 10:47

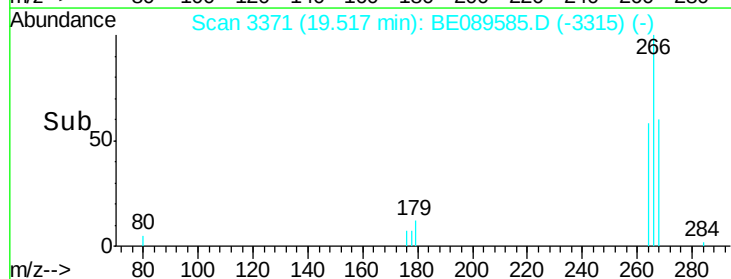
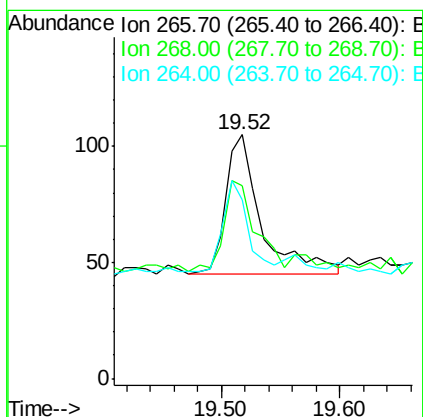
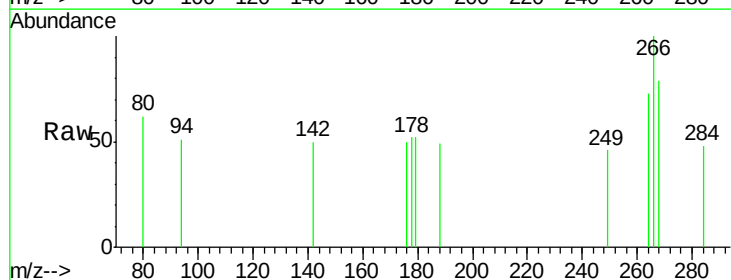
Instrument :  
BNA\_E  
ClientSampleId :

Tgt Ion:188 Resp: 171164  
Ion Ratio Lower Upper  
188 100  
94 9.3 8.4 12.6  
80 10.1 8.6 12.8

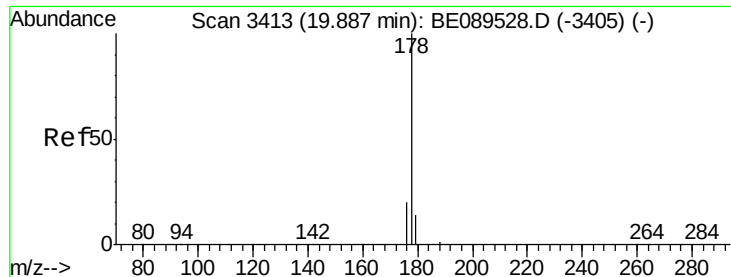


#12  
Pentachlorophenol  
Concen: 0.63 ng  
RT: 19.52 min Scan# 3371  
Delta R.T. 0.00 min  
Lab File: BE089585.D  
Acq: 8 Feb 2015 10:47

Tgt Ion:266 Resp: 126  
Ion Ratio Lower Upper  
266 100  
268 79.0 57.9 86.9  
264 73.3 60.2 90.4



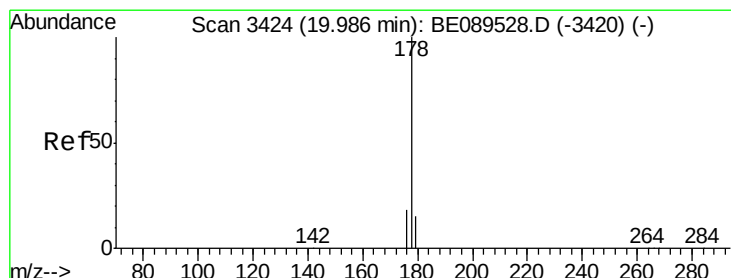
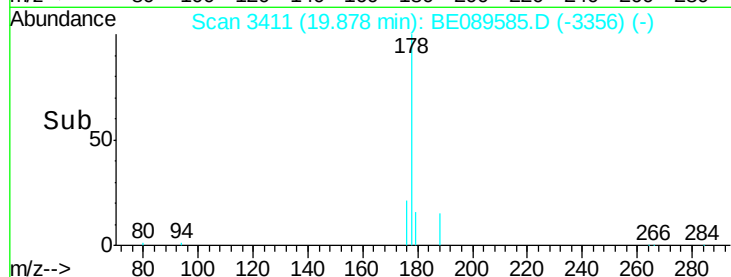
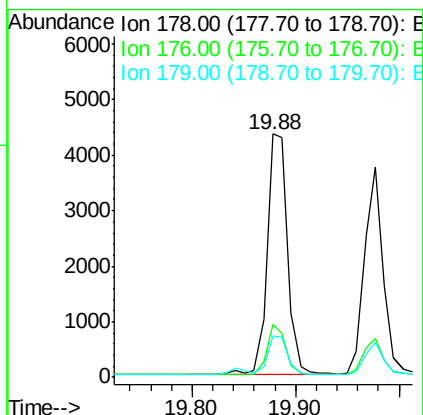
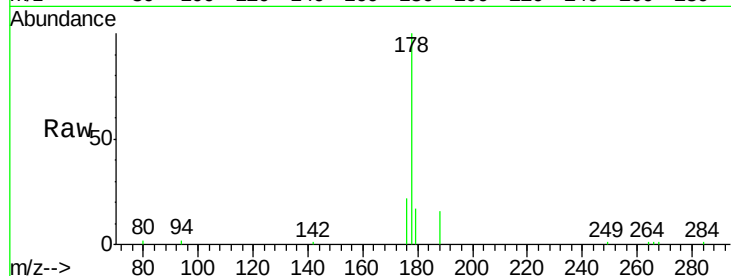




#13  
 Phenanthrene  
 Concen: 0.14 ng  
 RT: 19.88 min Scan# 3411  
 Delta R.T. -0.01 min  
 Lab File: BE089585.D  
 Acq: 8 Feb 2015 10:47

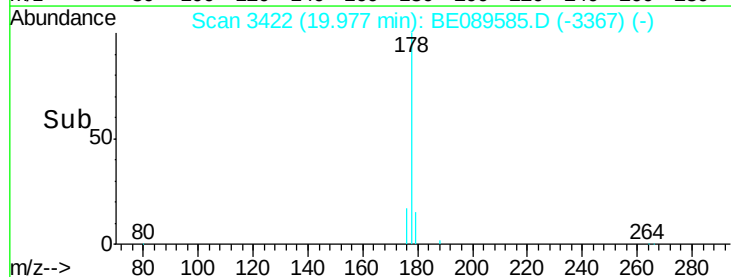
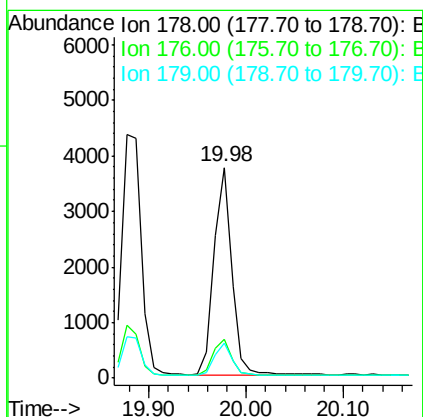
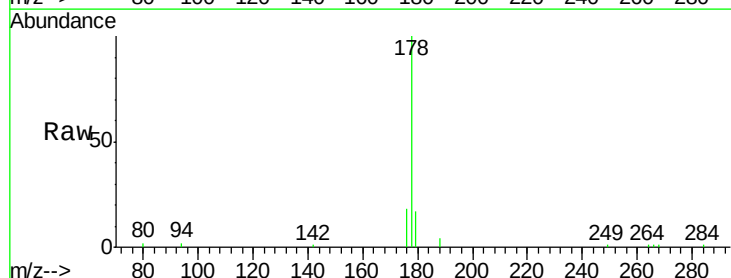
Instrument :  
 BNA\_E  
 ClientSampleId :

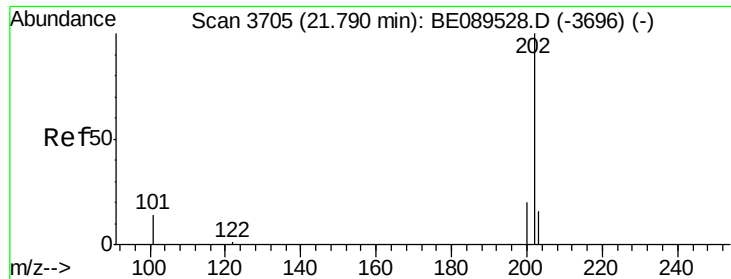
Tgt Ion:178 Resp: 6057  
 Ion Ratio Lower Upper  
 178 100  
 176 19.3 15.4 23.0  
 179 15.8 12.2 18.2



#14  
 Anthracene  
 Concen: 0.13 ng  
 RT: 19.98 min Scan# 3422  
 Delta R.T. -0.01 min  
 Lab File: BE089585.D  
 Acq: 8 Feb 2015 10:47

Tgt Ion:178 Resp: 4781  
 Ion Ratio Lower Upper  
 178 100  
 176 17.6 14.5 21.7  
 179 15.5 12.2 18.2

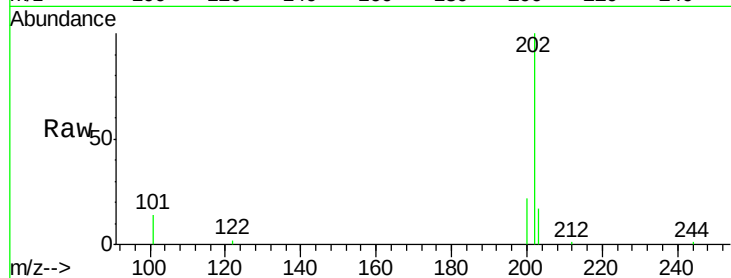




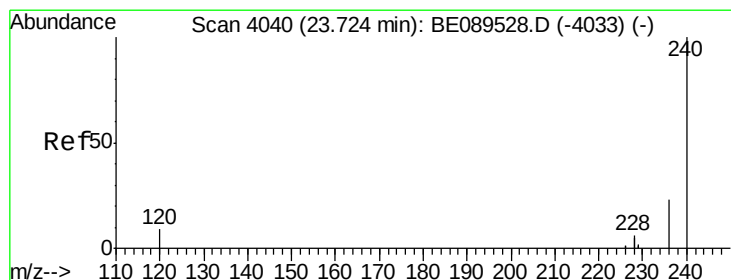
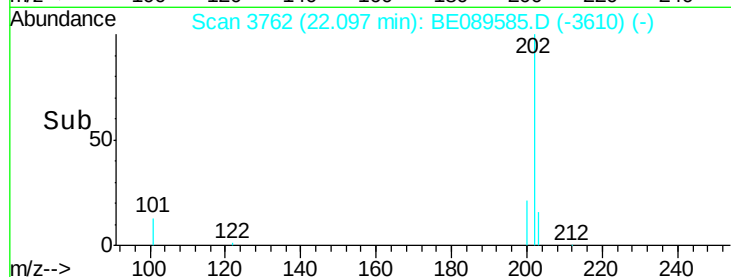
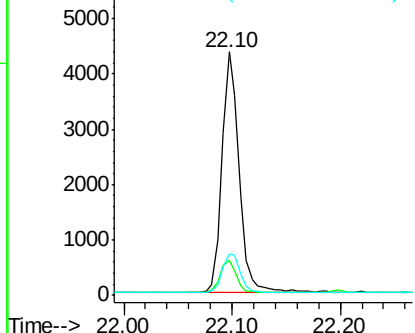
#15  
 Fluoranthene  
 Concen: 0.12 ng  
 RT: 22.10 min Scan# 3762  
 Delta R.T. 0.31 min  
 Lab File: BE089585.D  
 Acq: 8 Feb 2015 10:47

Instrument :  
 BNA\_E  
 ClientSampleId :

Tgt Ion:202 Resp: 4782  
 Ion Ratio Lower Upper  
 202 100  
 101 12.9 11.6 17.4  
 203 17.3 13.6 20.4

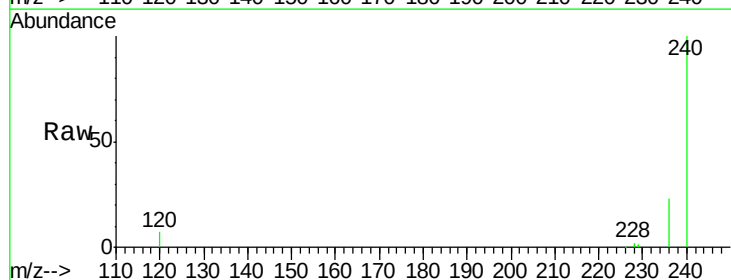


Abundance Ion 202.00 (201.70 to 202.70): E  
 Ion 101.00 (100.70 to 101.70): E  
 Ion 203.00 (202.70 to 203.70): E

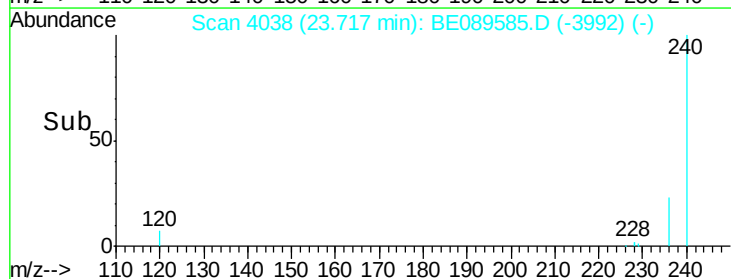
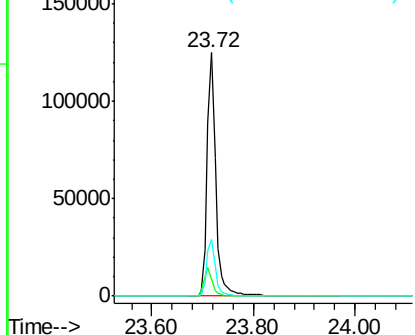


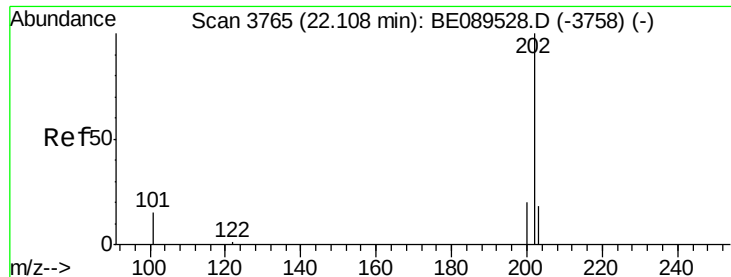
#16  
 Chrysene-d12  
 Concen: 5.00 ng  
 RT: 23.72 min Scan# 4038  
 Delta R.T. -0.01 min  
 Lab File: BE089585.D  
 Acq: 8 Feb 2015 10:47

Tgt Ion:240 Resp: 143531  
 Ion Ratio Lower Upper  
 240 100  
 120 7.1 7.2 10.8#  
 236 23.2 18.5 27.7



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





#17

Pyrene

Concen: 0.16 ng

RT: 22.10 min Scan# 3762

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :

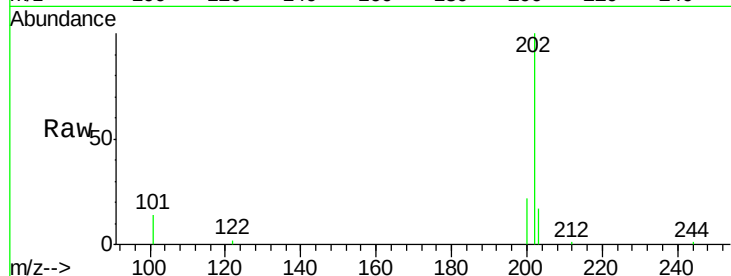
Tgt Ion:202 Resp: 4782

Ion Ratio Lower Upper

202 100

200 20.6 16.3 24.5

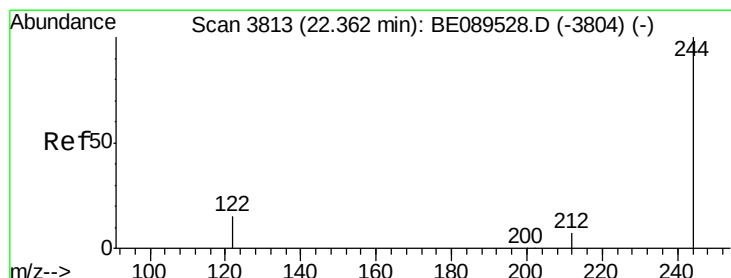
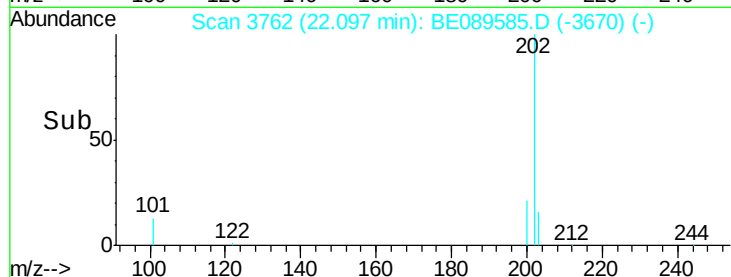
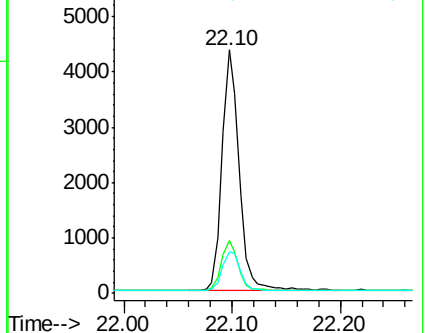
203 17.3 13.5 20.3



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



#18

Terphenyl-d14

Concen: 12.16 ng

RT: 22.36 min Scan# 3812

Delta R.T. -0.00 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

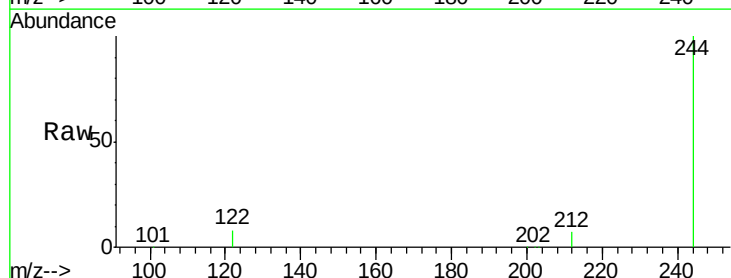
Tgt Ion:244 Resp: 230169

Ion Ratio Lower Upper

244 100

212 6.8 5.8 8.8

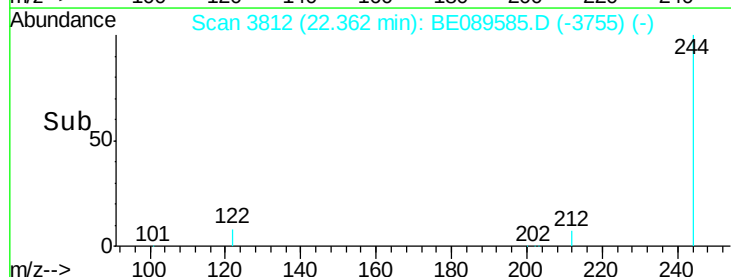
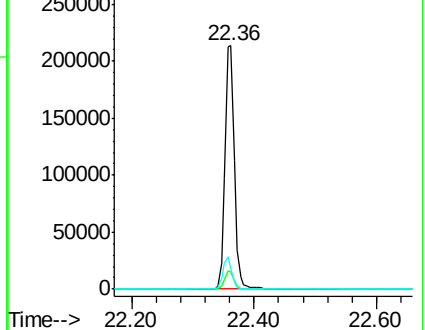
122 8.5 12.6 19.0#

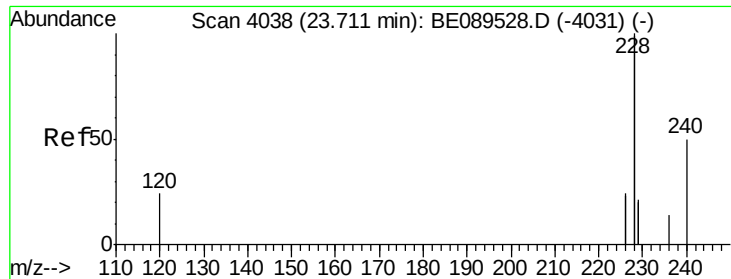


Abundance Ion 244.00 (243.70 to 244.70): E

Ion 212.00 (211.70 to 212.70): E

Ion 122.00 (121.70 to 122.70): E





#19

Benzo(a)anthracene

Concen: 0.12 ng

RT: 23.70 min Scan# 4036

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampled :

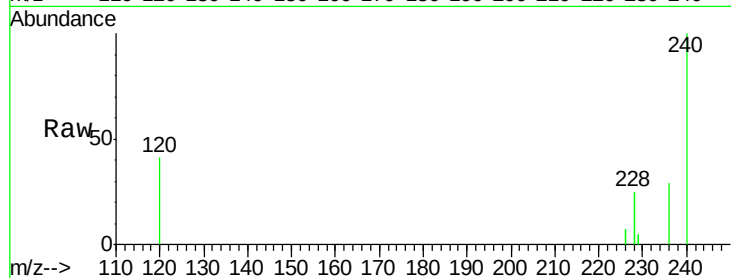
Tgt Ion:228 Resp: 15243

Ion Ratio Lower Upper

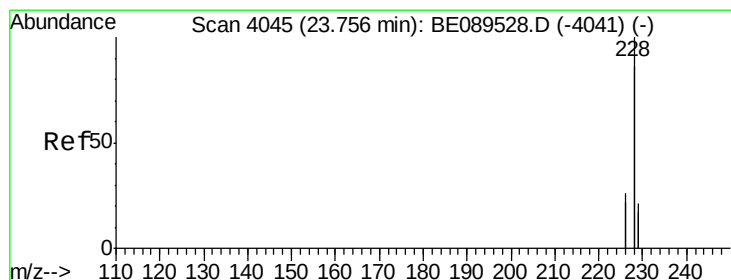
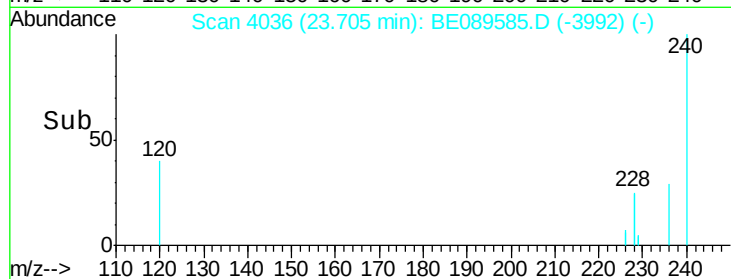
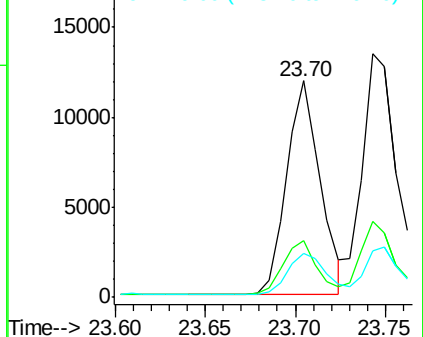
228 100

226 26.1 19.0 28.4

229 20.2 16.8 25.2



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



#20

Chrysene

Concen: 0.16 ng

RT: 23.74 min Scan# 4042

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

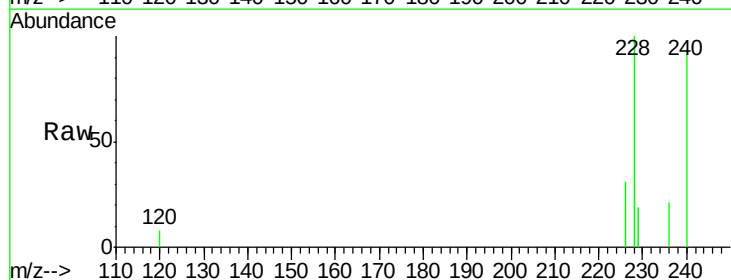
Tgt Ion:228 Resp: 20315

Ion Ratio Lower Upper

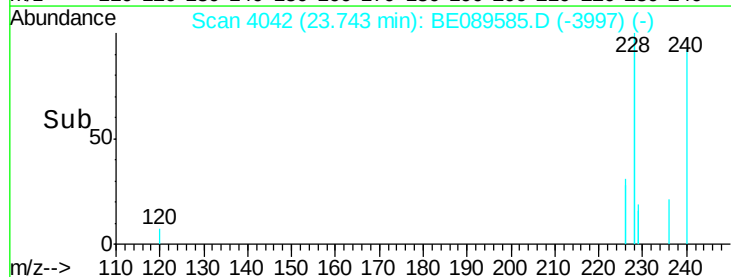
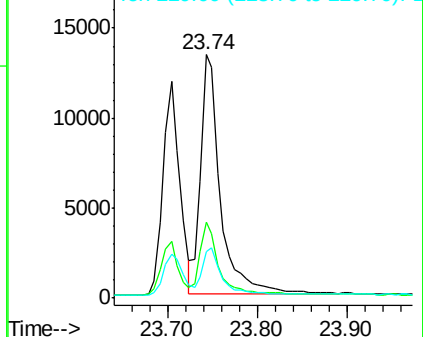
228 100

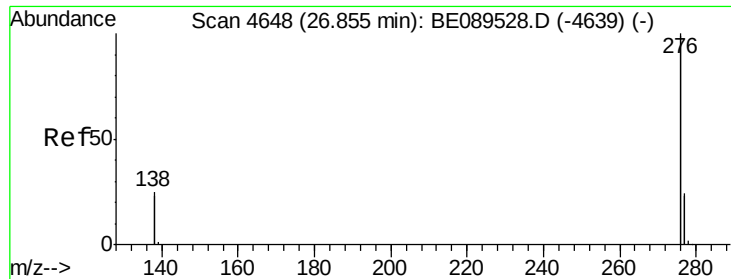
226 31.3 21.0 31.4

229 19.1 16.7 25.1



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

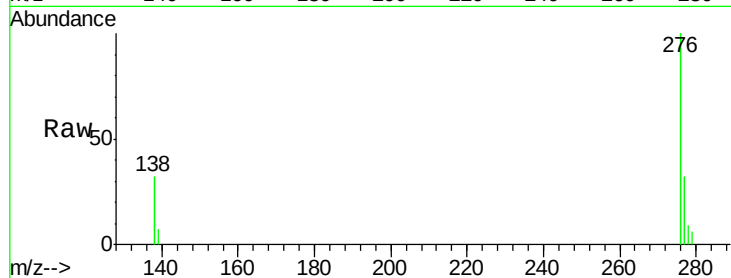




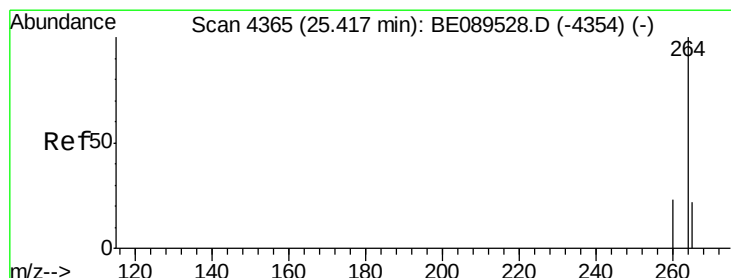
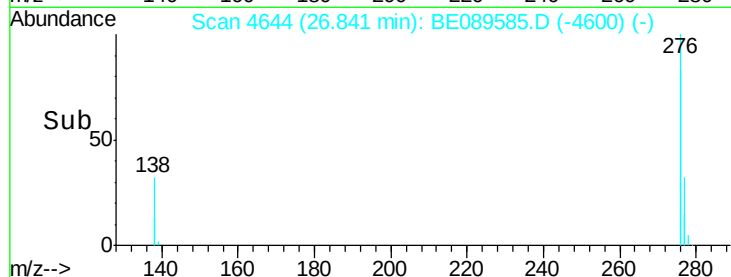
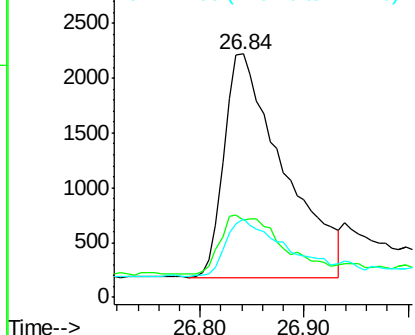
#21  
 Indeno(1,2,3-cd)pyrene  
 Concen: 0.04 ng  
 RT: 26.84 min Scan# 4644  
 Delta R.T. -0.01 min  
 Lab File: BE089585.D  
 Acq: 8 Feb 2015 10:47

Instrument :  
 BNA\_E  
 ClientSampleId :

Tgt Ion: 276 Resp: 8059  
 Ion Ratio Lower Upper  
 276 100  
 138 27.4 23.0 34.4  
 277 25.9 19.9 29.9

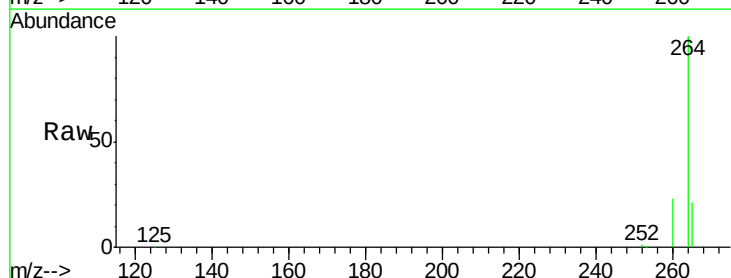


Abundance Ion 276.00 (275.70 to 276.70): E  
 Ion 138.00 (137.70 to 138.70): E  
 Ion 277.00 (276.70 to 277.70): E

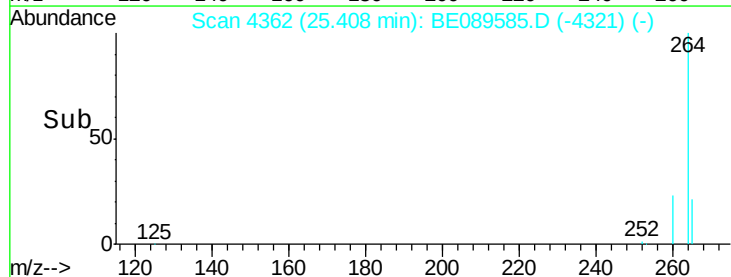
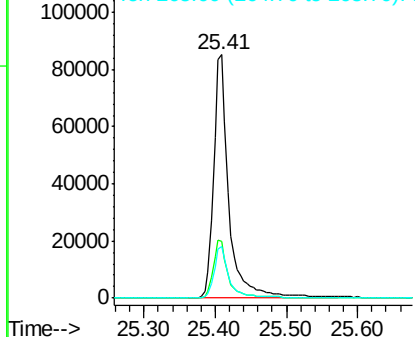


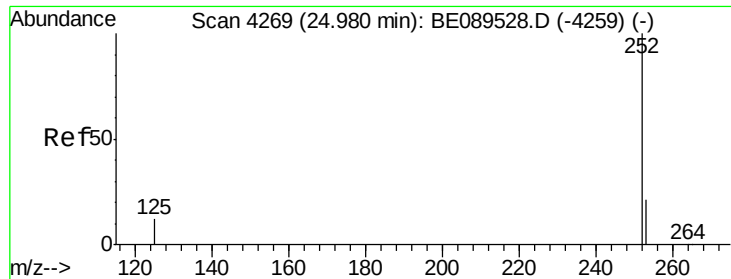
#22  
 Perylene-d12  
 Concen: 5.00 ng  
 RT: 25.41 min Scan# 4362  
 Delta R.T. -0.01 min  
 Lab File: BE089585.D  
 Acq: 8 Feb 2015 10:47

Tgt Ion: 264 Resp: 126617  
 Ion Ratio Lower Upper  
 264 100  
 260 23.1 18.7 28.1  
 265 21.4 17.5 26.3



Abundance Ion 264.00 (263.70 to 264.70): E  
 Ion 260.00 (259.70 to 260.70): E  
 Ion 265.00 (264.70 to 265.70): E





#23

Benzo(b)fluoranthene

Concen: 0.08 ng

RT: 24.97 min Scan# 4266

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :

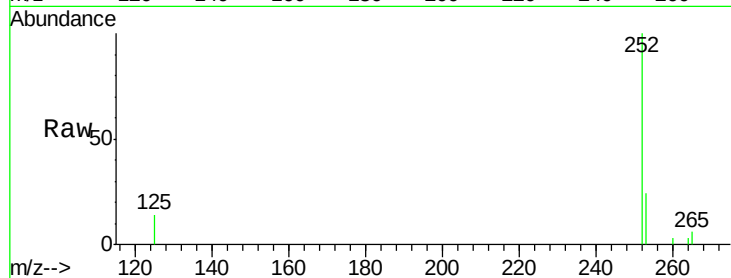
Tgt Ion:252 Resp: 2045

Ion Ratio Lower Upper

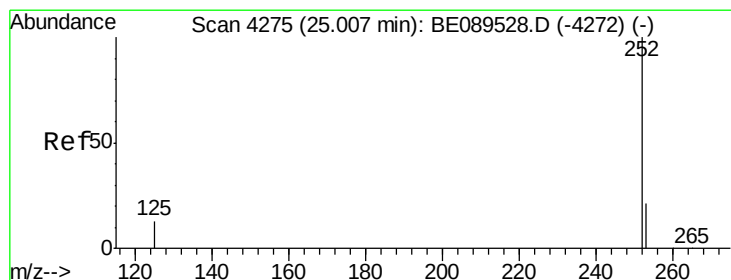
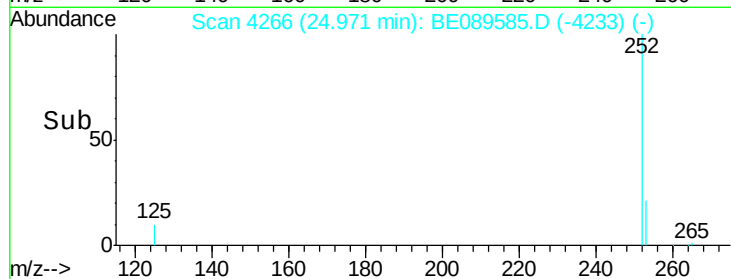
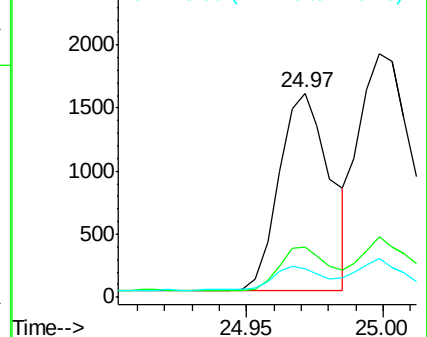
252 100

253 24.4 17.4 26.0

125 13.7 10.4 15.6



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



#24

Benzo(k)fluoranthene

Concen: 0.12 ng

RT: 25.00 min Scan# 4272

Delta R.T. -0.01 min

Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

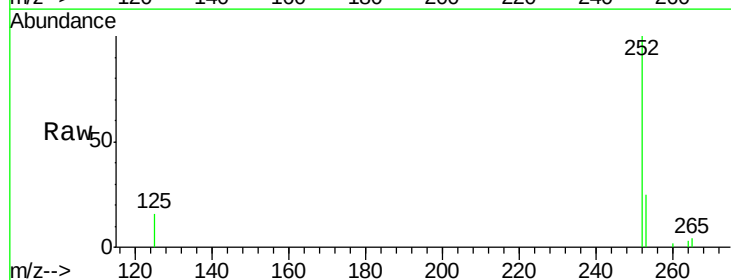
Tgt Ion:252 Resp: 3528

Ion Ratio Lower Upper

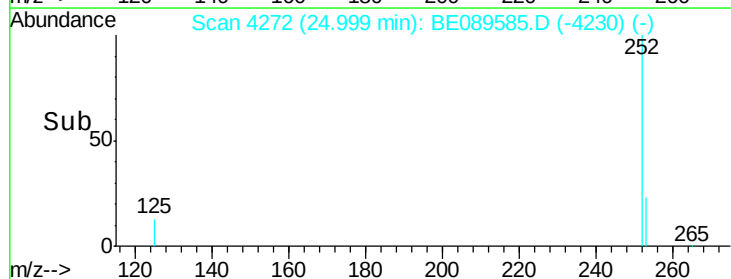
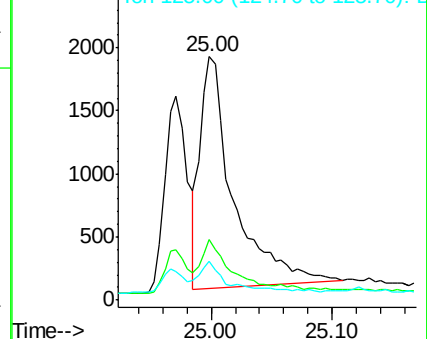
252 100

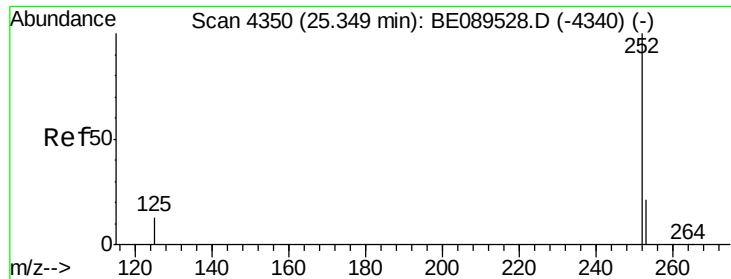
253 25.1 17.2 25.8

125 15.8 10.6 15.8



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

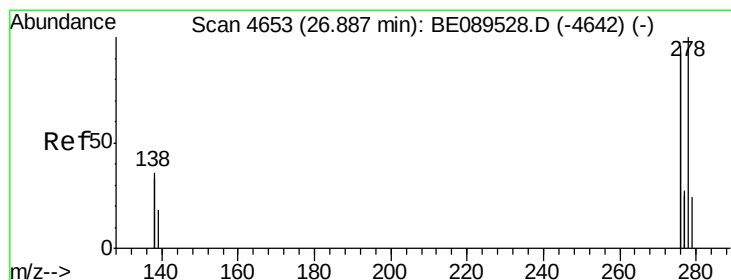
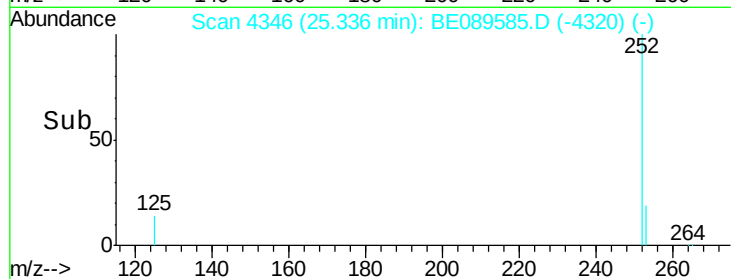
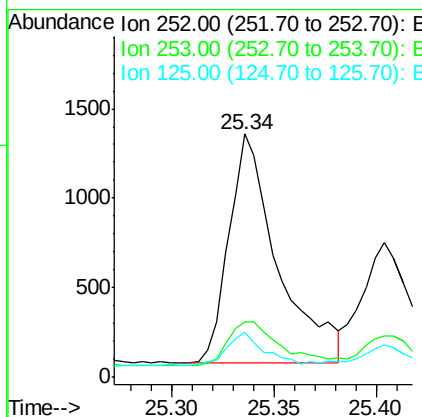
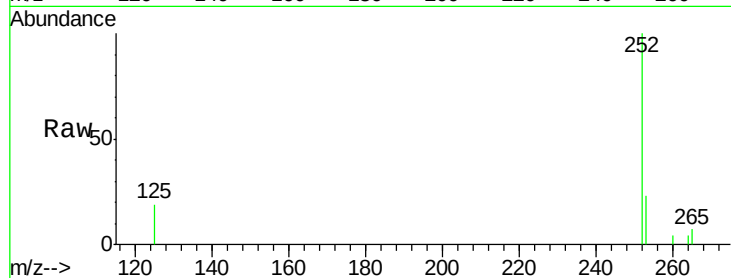




#25  
Benzo(a)pyrene  
Concen: 0.09 ng  
RT: 25.34 min Scan# 4346  
Delta R.T. -0.01 min  
Lab File: BE089585.D  
Acq: 8 Feb 2015 10:47

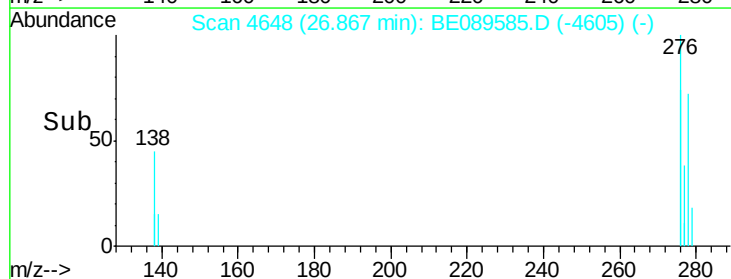
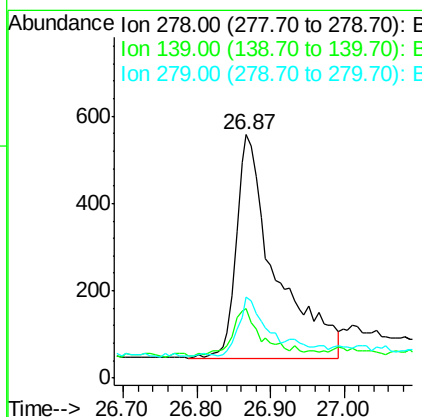
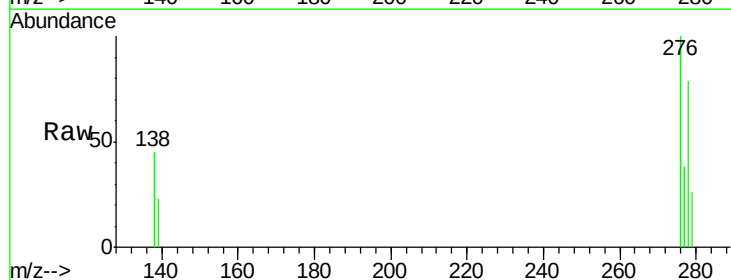
Instrument :  
BNA\_E  
ClientSampleId :

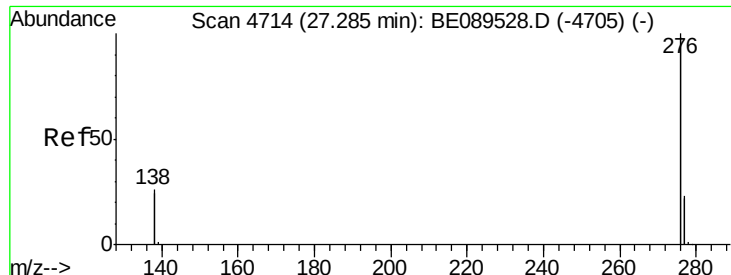
Tgt Ion: 252 Resp: 2121  
Ion Ratio Lower Upper  
252 100  
253 22.8 17.8 26.6  
125 18.6 11.4 17.2#



#26  
Dibenzo(a,h)anthracene  
Concen: 0.06 ng  
RT: 26.87 min Scan# 4648  
Delta R.T. -0.02 min  
Lab File: BE089585.D  
Acq: 8 Feb 2015 10:47

Tgt Ion: 278 Resp: 1866  
Ion Ratio Lower Upper  
278 100  
139 28.7 15.7 23.5#  
279 33.2 19.5 29.3#





#27

Benzo(g,h,i)perylene

Concen: 0.09 ng

RT: 27.26 min Scan# 4709

Delta R.T. -0.02 min

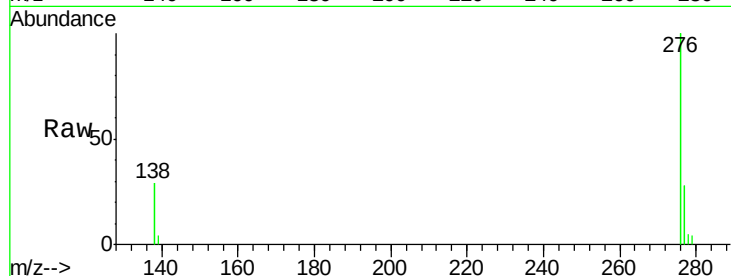
Lab File: BE089585.D

Acq: 8 Feb 2015 10:47

Instrument :

BNA\_E

ClientSampleId :



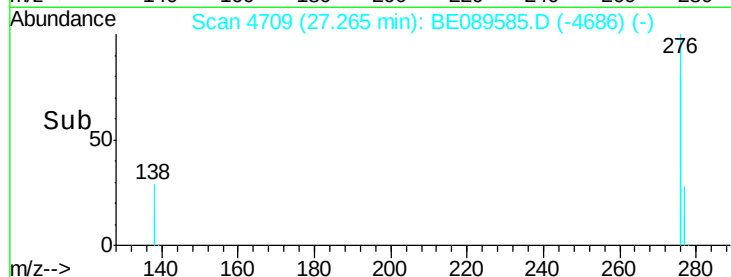
Tgt Ion: 276 Resp: 11179

Ion Ratio Lower Upper

276 100

277 28.0 18.6 27.8#

138 28.7 20.9 31.3



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

