

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE020615\  
 Data File : BE089581.D  
 Acq On : 8 Feb 2015 8:08  
 Operator : TP/IZ  
 Sample : MDL-02-S  
 Misc : MDL-SOIL-0.2/0.4  
 ALS Vial : 53 Sample Multiplier: 1

Instrument :  
 BNA\_E  
 ClientSampleId :

Quant Time: Feb 09 00:28:25 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  | 40982    | 5.00 | ng    | 0.00     |
| 2) Naphthalene-d8         | 12.33 | 136  | 181145   | 5.00 | ng    | 0.00     |
| 6) Acenaphthene-d10       | 16.51 | 164  | 105578   | 5.00 | ng    | 0.00     |
| 11) Phenanthrene-d10      | 19.84 | 188  | 168218   | 5.00 | ng    | 0.00     |
| 16) Chrysene-d12          | 23.72 | 240  | 139804   | 5.00 | ng    | 0.00     |
| 22) Perylene-d12          | 25.41 | 264  | 125482   | 5.00 | ng    | -0.01    |

|                             |       |     |        |       |    |      |
|-----------------------------|-------|-----|--------|-------|----|------|
| System Monitoring Compounds |       |     |        |       |    |      |
| 3) Nitrobenzene-d5          | 10.69 | 82  | 122444 | 10.18 | ng | 0.00 |
| 7) 2-Fluorobiphenyl         | 14.96 | 172 | 233925 | 8.31  | ng | 0.00 |
| 18) Terphenyl-d14           | 22.36 | 244 | 224020 | 12.15 | ng | 0.00 |

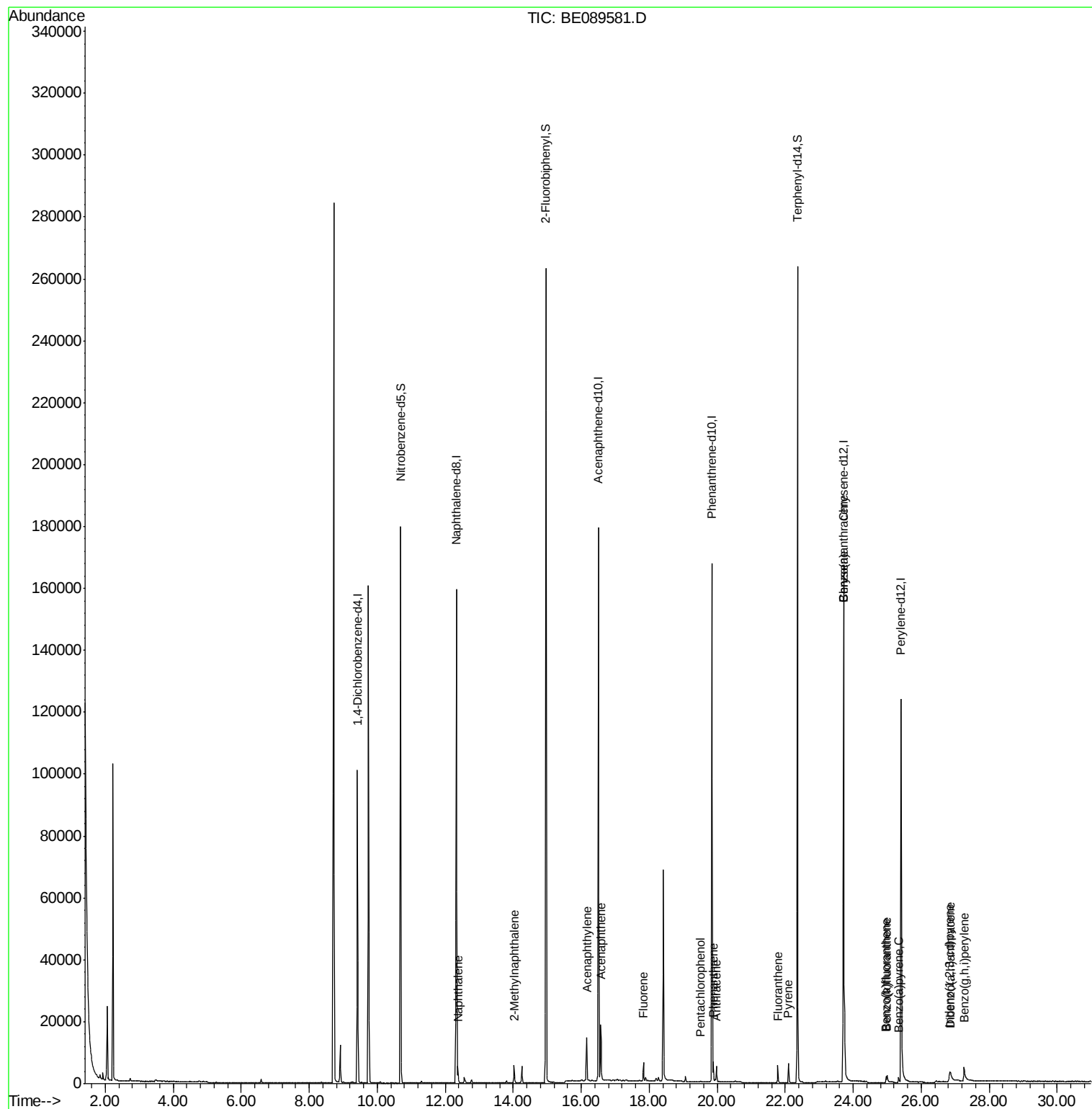
|                            |       |     |       |      |    |        |
|----------------------------|-------|-----|-------|------|----|--------|
| Target Compounds           |       |     |       |      |    | Qvalue |
| 4) Naphthalene             | 12.37 | 128 | 5875  | 0.14 | ng | 98     |
| 5) 2-Methylnaphthalene     | 14.03 | 142 | 3518  | 0.15 | ng | 94     |
| 8) Acenaphthylene          | 16.16 | 152 | 20375 | 0.11 | ng | 99     |
| 9) Acenaphthene            | 16.58 | 154 | 3522  | 0.12 | ng | 95     |
| 10) Fluorene               | 17.83 | 166 | 3799  | 0.13 | ng | 98     |
| 12) Pentachlorophenol      | 19.51 | 266 | 139   | 0.64 | ng | 95     |
| 13) Phenanthrene           | 19.89 | 178 | 6027  | 0.14 | ng | 100    |
| 14) Anthracene             | 19.98 | 178 | 4911  | 0.14 | ng | 99     |
| 15) Fluoranthene           | 21.79 | 202 | 4303  | 0.11 | ng | 96     |
| 17) Pyrene                 | 22.10 | 202 | 4720  | 0.16 | ng | 99     |
| 19) Benzo(a)anthracene     | 23.70 | 228 | 14612 | 0.12 | ng | 97     |
| 20) Chrysene               | 23.70 | 228 | 14612 | 0.12 | ng | 99     |
| 21) Indeno(1,2,3-cd)pyrene | 26.84 | 276 | 8671  | 0.05 | ng | 98     |
| 23) Benzo(b)fluoranthene   | 24.97 | 252 | 1980  | 0.08 | ng | 94     |
| 24) Benzo(k)fluoranthene   | 25.00 | 252 | 3229  | 0.11 | ng | 98     |
| 25) Benzo(a)pyrene         | 25.34 | 252 | 2050  | 0.08 | ng | 93     |
| 26) Dibenzo(a,h)anthracene | 26.87 | 278 | 1651  | 0.06 | ng | # 88   |
| 27) Benzo(g,h,i)perylene   | 27.27 | 276 | 10320 | 0.08 | ng | # 87   |

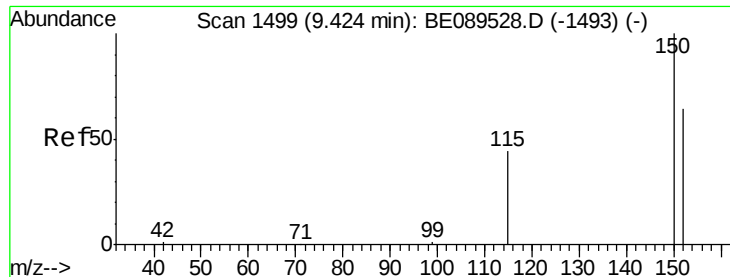
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE020615\  
Data File : BE089581.D  
Acq On : 8 Feb 2015 8:08  
Operator : TP/IZ  
Sample : MDL-02-S  
Misc : MDL-SOIL-0.2/0.4  
ALS Vial : 53 Sample Multiplier: 1

Instrument :  
BNA\_E  
ClientSampleId :

Quant Time: Feb 09 00:28:25 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





#1

1,4-Dichlorobenzene-d4

Concen: 5.00 ng

RT: 9.42 min Scan# 1497

Delta R.T. -0.01 min

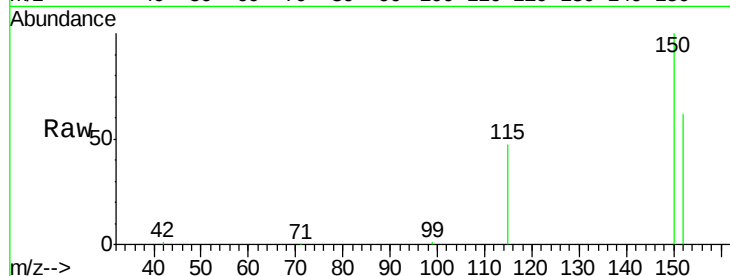
Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :



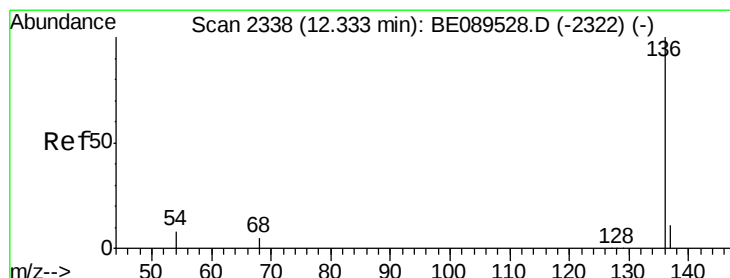
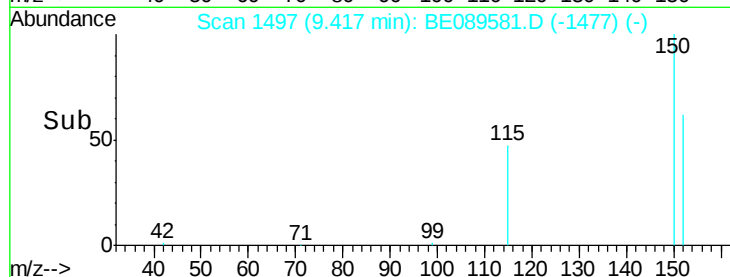
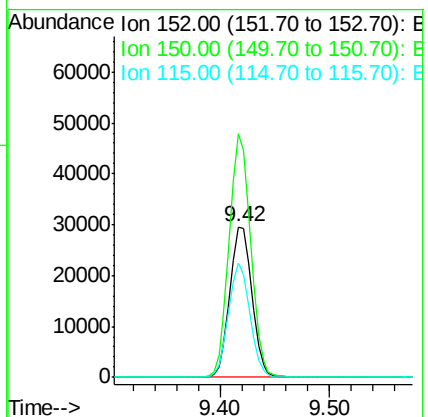
Tgt Ion:152 Resp: 40982

Ion Ratio Lower Upper

152 100

150 162.0 125.7 188.5

115 76.4 55.6 83.4



#2

Naphthalene-d8

Concen: 5.00 ng

RT: 12.33 min Scan# 2337

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

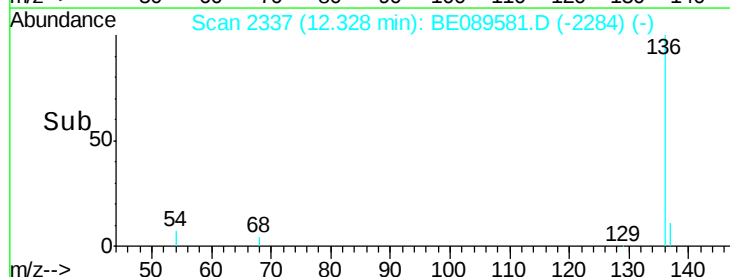
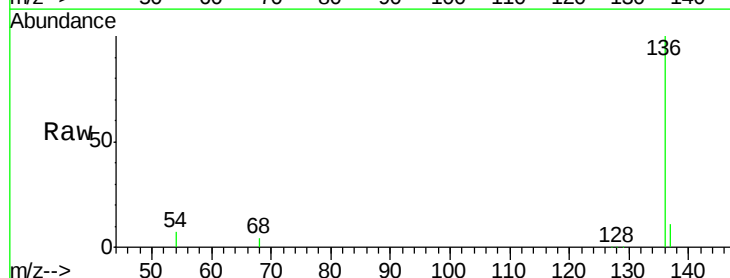
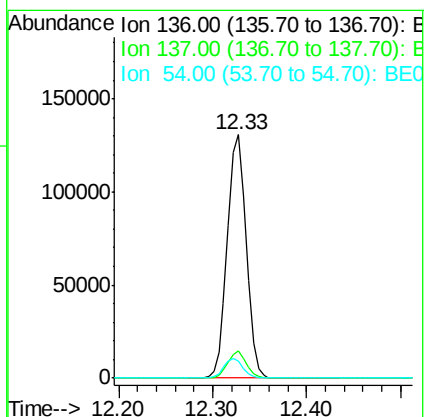
Tgt Ion:136 Resp: 181145

Ion Ratio Lower Upper

136 100

137 11.0 8.7 13.1

54 6.8 6.1 9.1





#3

Nitrobenzene-d5

Concen: 10.18 ng

RT: 10.69 min Scan# 1894

Delta R.T. -0.00 min

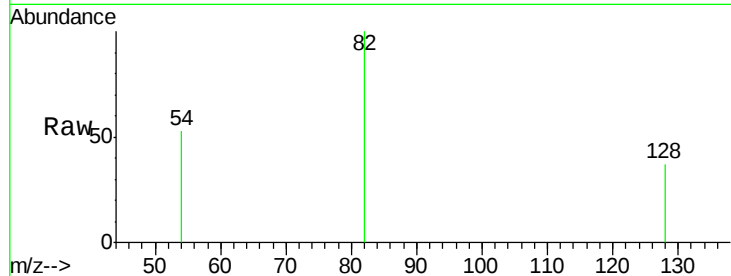
Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :



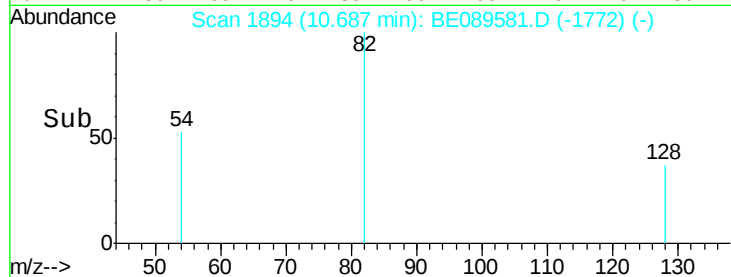
Tgt Ion: 82 Resp: 122444

Ion Ratio Lower Upper

82 100

128 37.5 30.2 45.4

54 53.3 40.6 60.8

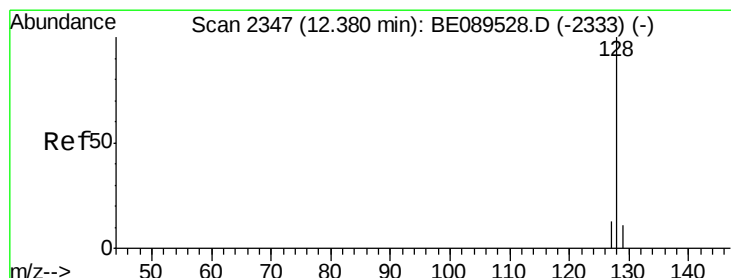
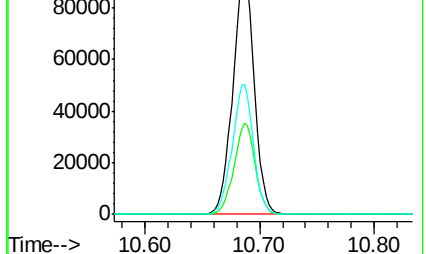


Abundance Ion 82.00 (81.70 to 82.70): BE089528.D (-1876) (-)

Ion 128.00 (127.70 to 128.70): BE089528.D (-1876) (-)

Ion 54.00 (53.70 to 54.70): BE089528.D (-1876) (-)

Time-->



#4

Naphthalene

Concen: 0.14 ng

RT: 12.37 min Scan# 2345

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

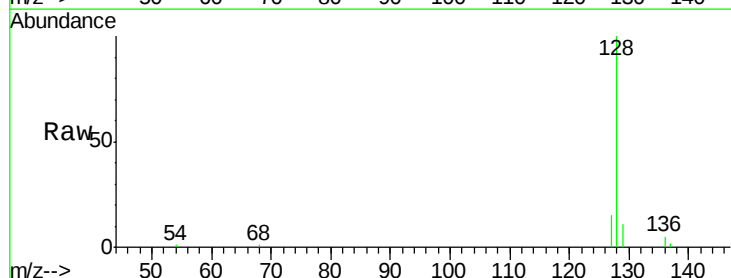
Tgt Ion: 128 Resp: 5875

Ion Ratio Lower Upper

128 100

129 11.4 9.1 13.7

127 14.9 10.5 15.7

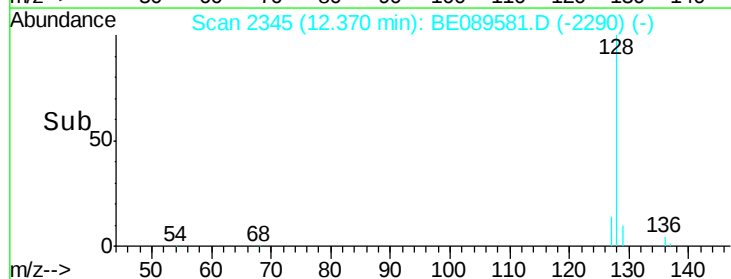
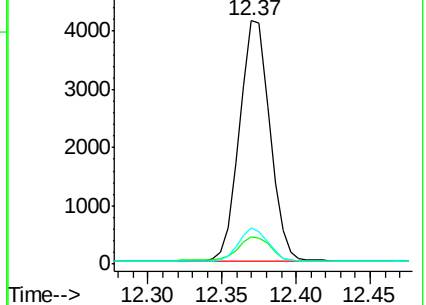


Abundance Ion 128.00 (127.70 to 128.70): BE089528.D (-2333) (-)

Ion 129.00 (128.70 to 129.70): BE089528.D (-2333) (-)

Ion 127.00 (126.70 to 127.70): BE089528.D (-2333) (-)

Time-->





#5

2-Methylnaphthalene

Concen: 0.15 ng

RT: 14.03 min Scan# 2677

Delta R.T. -0.01 min

Lab File: BE089581.D

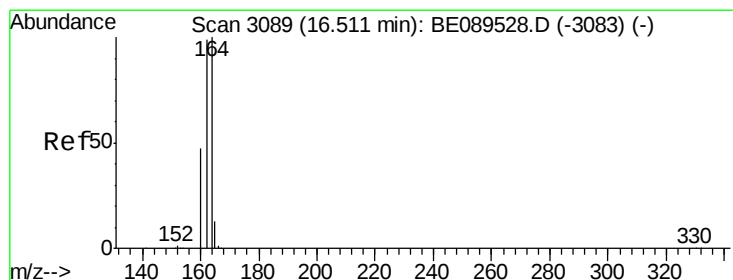
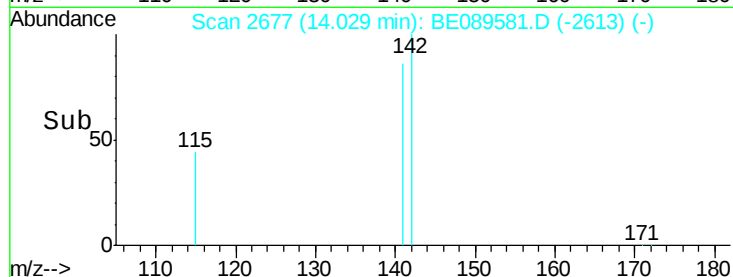
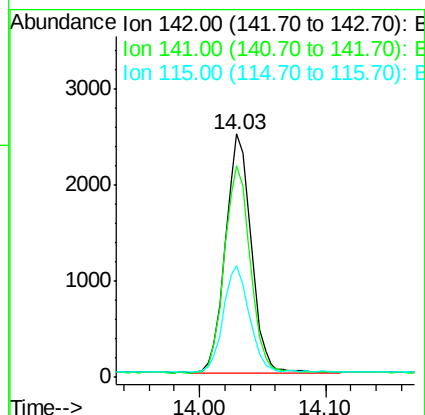
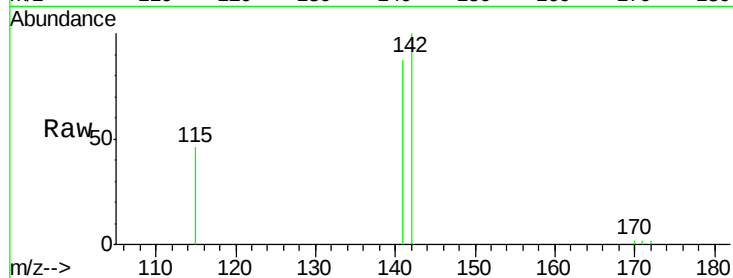
Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 142   | Resp: | 3518  |
| Ion      | Ratio | Lower | Upper |
| 142      | 100   |       |       |
| 141      | 87.0  | 67.0  | 100.6 |
| 115      | 45.8  | 30.6  | 45.8  |



#6

Acenaphthene-d10

Concen: 5.00 ng

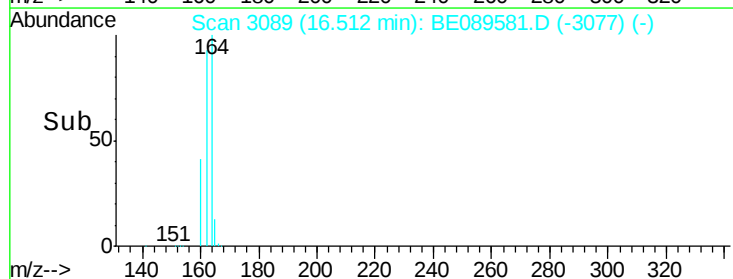
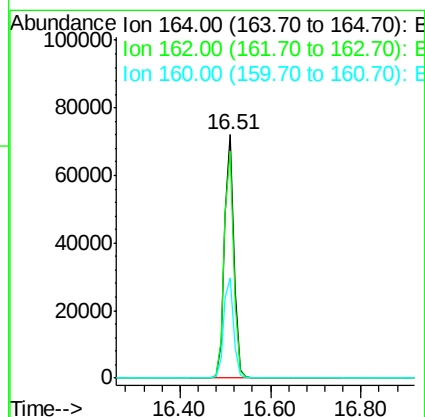
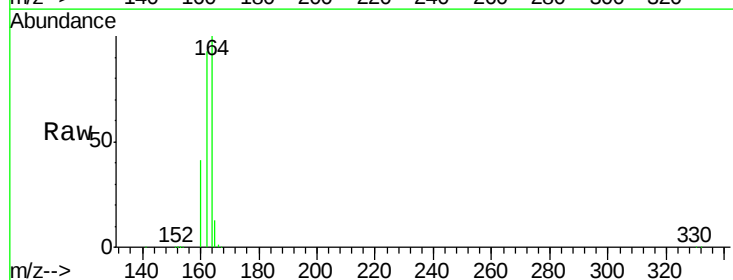
RT: 16.51 min Scan# 3089

Delta R.T. 0.00 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 164   | Resp: | 105578 |
| Ion      | Ratio | Lower | Upper  |
| 164      | 100   |       |        |
| 162      | 93.2  | 79.5  | 119.3  |
| 160      | 41.1  | 37.6  | 56.4   |





#7

2-Fluorobiphenyl

Concen: 8.31 ng

RT: 14.96 min Scan# 2882

Delta R.T. -0.00 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :

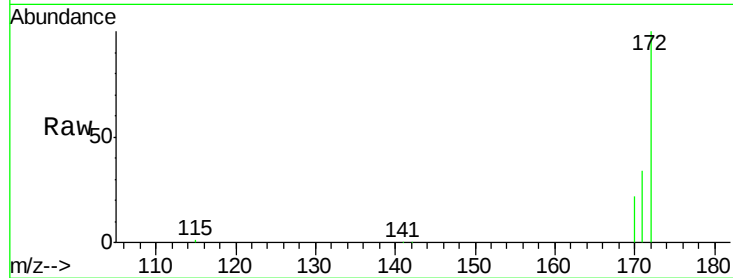
Tgt Ion:172 Resp: 233925

Ion Ratio Lower Upper

172 100

171 34.2 27.7 41.5

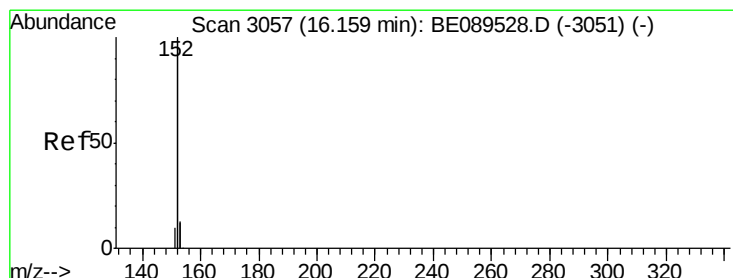
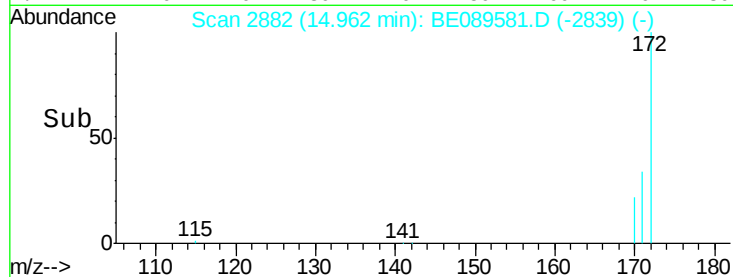
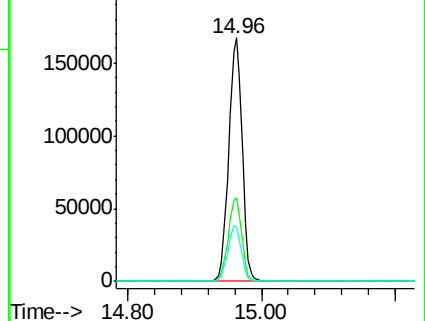
170 22.5 18.3 27.5



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# 3057

Delta R.T. 0.00 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

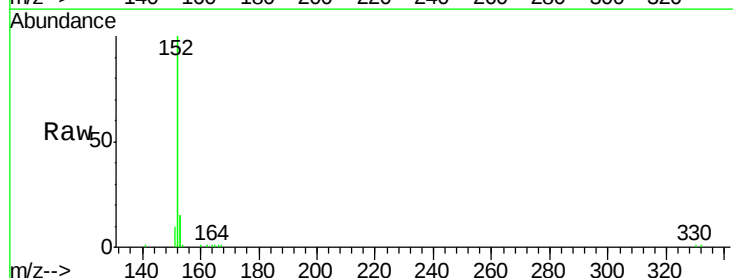
Tgt Ion:152 Resp: 20375

Ion Ratio Lower Upper

152 100

151 5.2 4.0 6.0

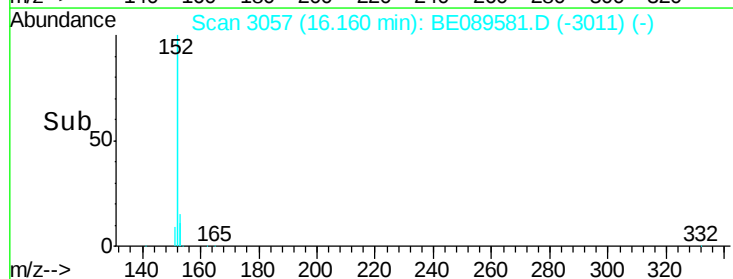
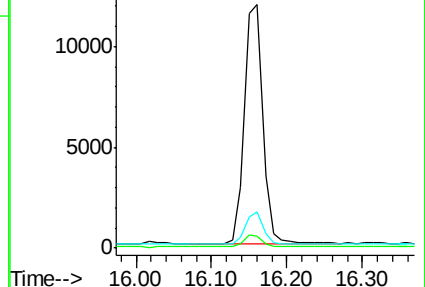
153 12.6 10.6 15.8

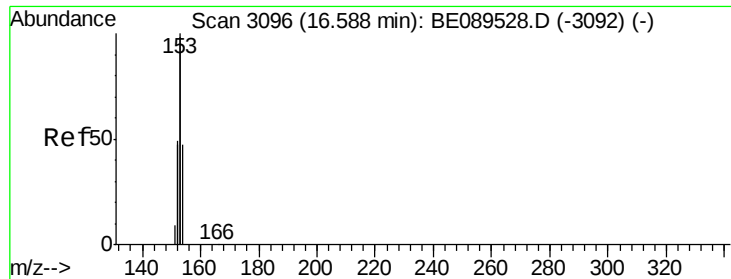


Abundance Ion 152.00 (151.70 to 152.70): E

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# 3095

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :

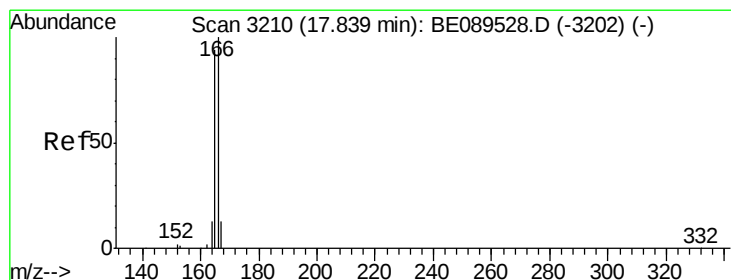
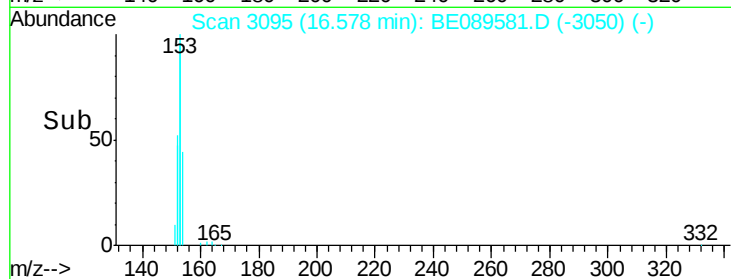
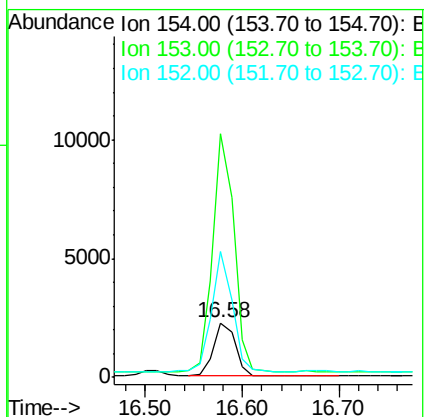
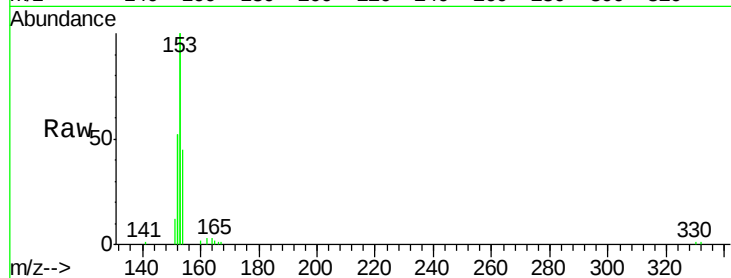
Tgt Ion:154 Resp: 3522

Ion Ratio Lower Upper

154 100

153 432.8 340.8 511.2

152 223.2 165.5 248.3



#10

Fluorene

Concen: 0.13 ng

RT: 17.83 min Scan# 3209

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

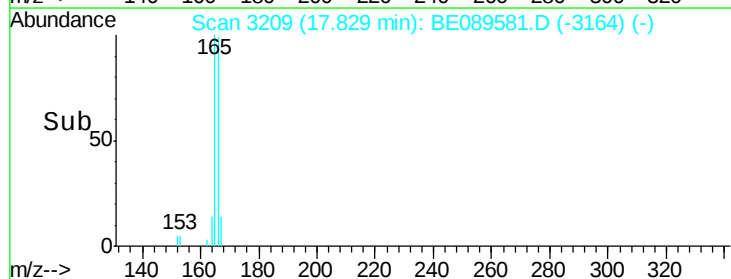
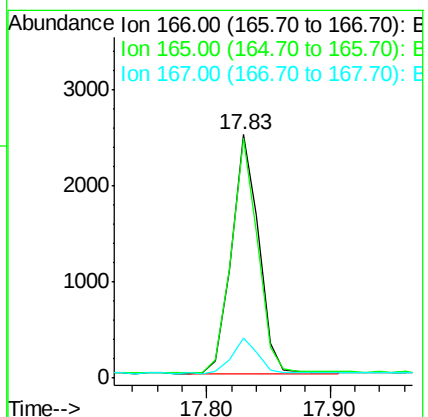
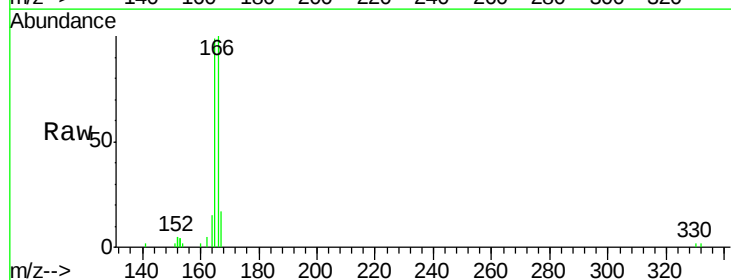
Tgt Ion:166 Resp: 3799

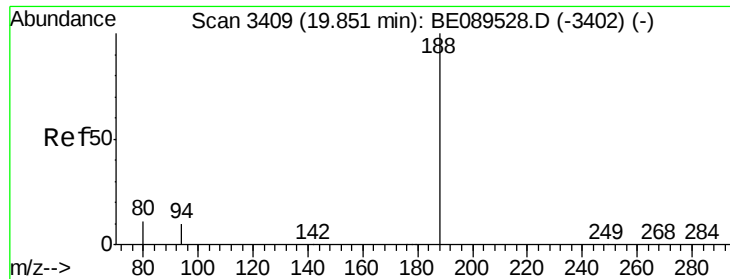
Ion Ratio Lower Upper

166 100

165 96.2 75.5 113.3

167 13.9 10.9 16.3

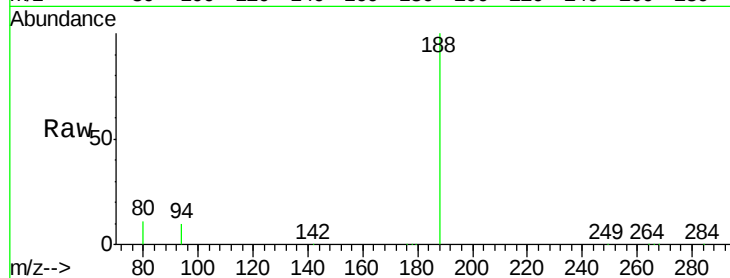




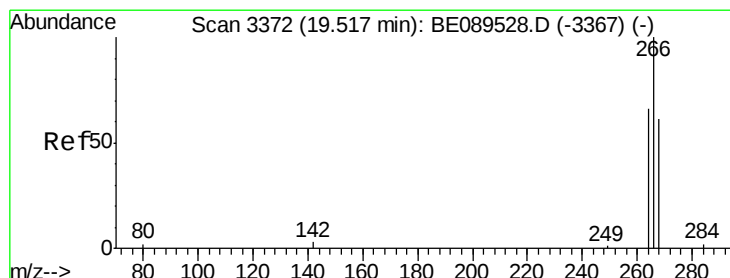
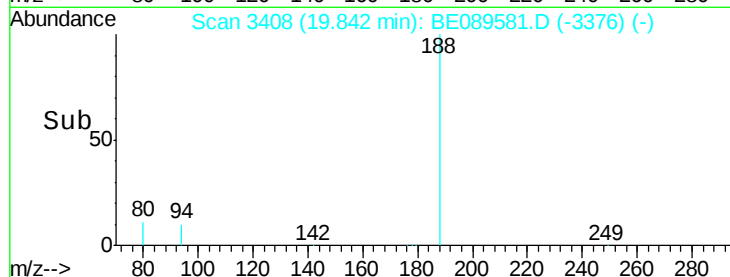
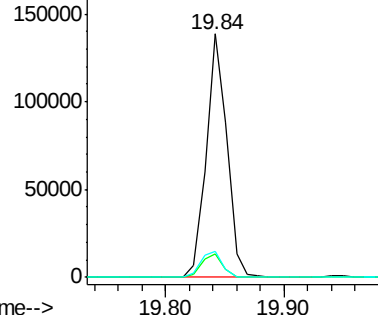
#11  
Phenanthrene-d10  
Concen: 5.00 ng  
RT: 19.84 min Scan# 3408  
Delta R.T. -0.01 min  
Lab File: BE089581.D  
Acq: 8 Feb 2015 8:08

Instrument :  
BNA\_E  
ClientSampleId :

Tgt Ion:188 Resp: 168218  
Ion Ratio Lower Upper  
188 100  
94 9.8 8.4 12.6  
80 10.6 8.6 12.8

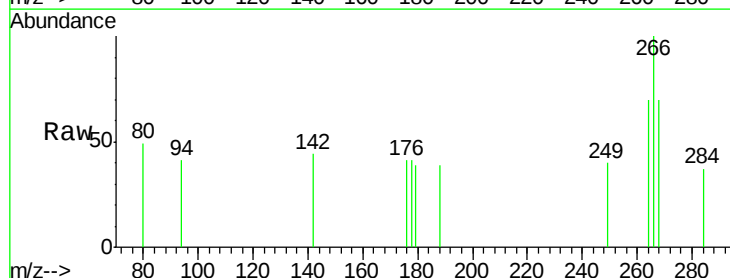


Abundance Ion 188.00 (187.70 to 188.70): E  
Ion 94.00 (93.70 to 94.70): BE0  
Ion 80.00 (79.70 to 80.70): BE0

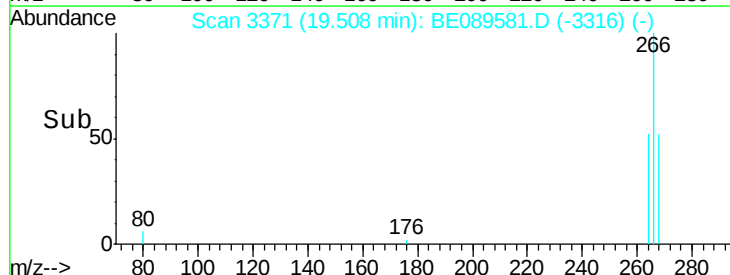
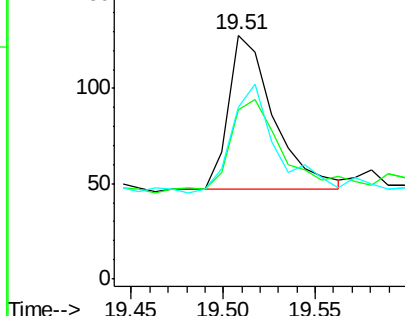


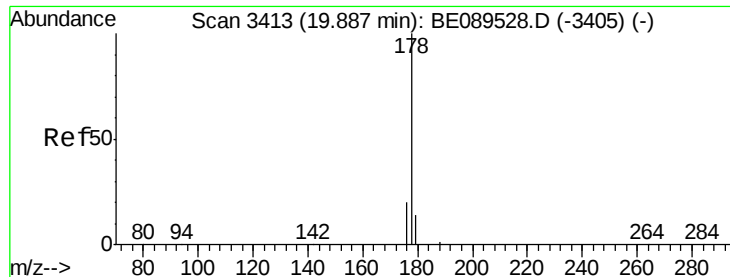
#12  
Pentachlorophenol  
Concen: 0.64 ng  
RT: 19.51 min Scan# 3371  
Delta R.T. -0.01 min  
Lab File: BE089581.D  
Acq: 8 Feb 2015 8:08

Tgt Ion:266 Resp: 139  
Ion Ratio Lower Upper  
266 100  
268 69.5 57.9 86.9  
264 70.3 60.2 90.4



Abundance Ion 265.70 (265.40 to 266.40): E  
Ion 268.00 (267.70 to 268.70): E  
Ion 264.00 (263.70 to 264.70): E

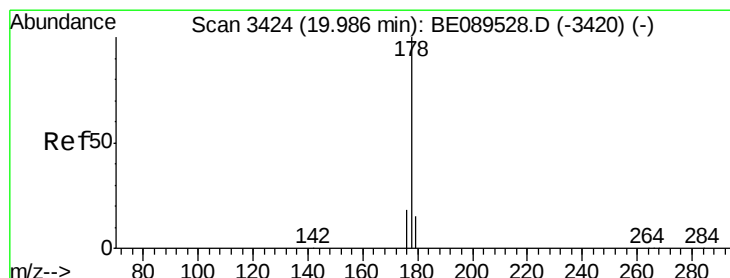
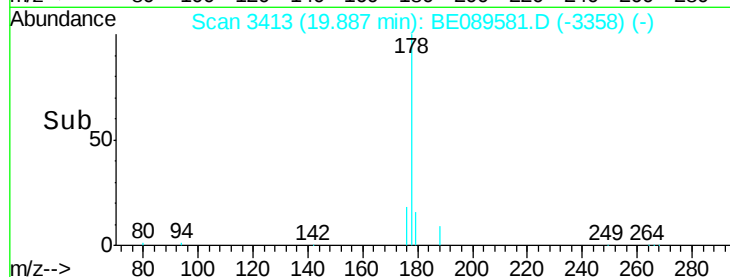
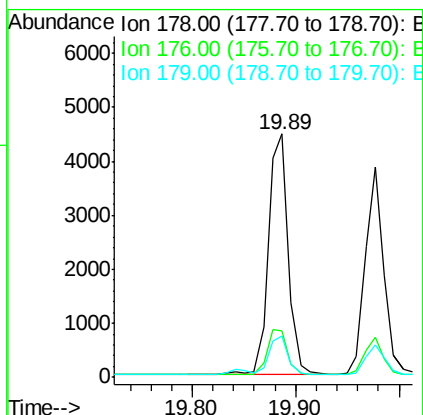
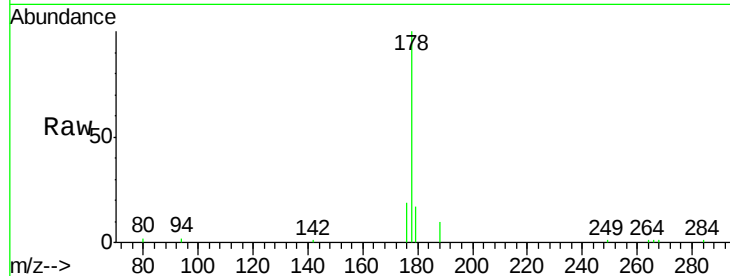




#13  
Phenanthrene  
Concen: 0.14 ng  
RT: 19.89 min Scan# 3413  
Delta R.T. 0.00 min  
Lab File: BE089581.D  
Acq: 8 Feb 2015 8:08

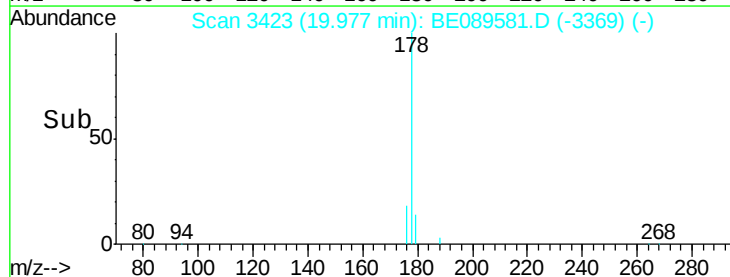
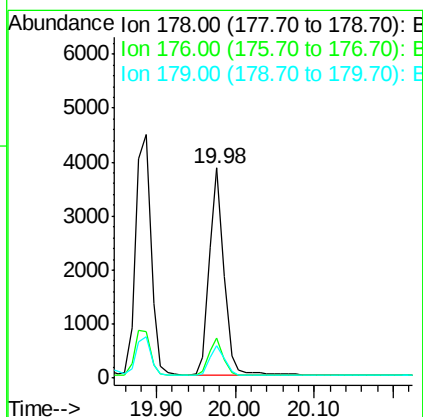
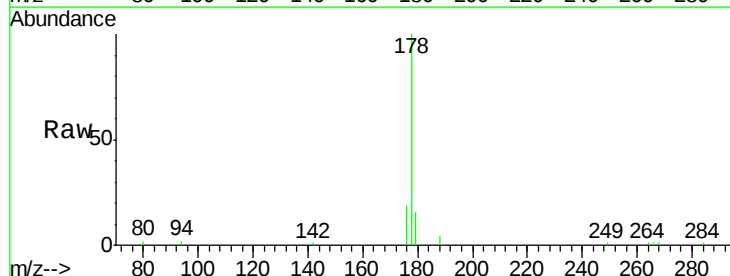
Instrument :  
BNA\_E  
ClientSampleId :

Tgt Ion:178 Resp: 6027  
Ion Ratio Lower Upper  
178 100  
176 19.1 15.4 23.0  
179 15.2 12.2 18.2



#14  
Anthracene  
Concen: 0.14 ng  
RT: 19.98 min Scan# 3423  
Delta R.T. -0.01 min  
Lab File: BE089581.D  
Acq: 8 Feb 2015 8:08

Tgt Ion:178 Resp: 4911  
Ion Ratio Lower Upper  
178 100  
176 18.2 14.5 21.7  
179 14.4 12.2 18.2

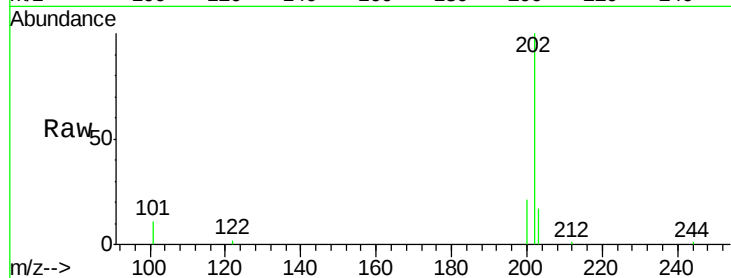




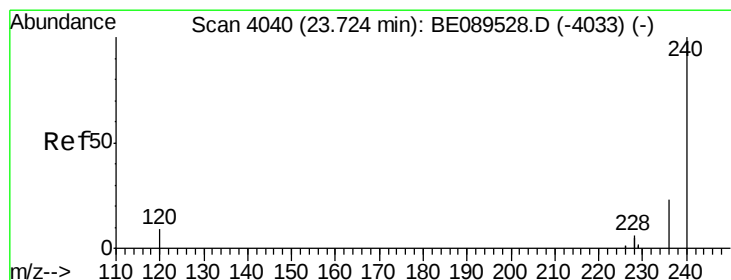
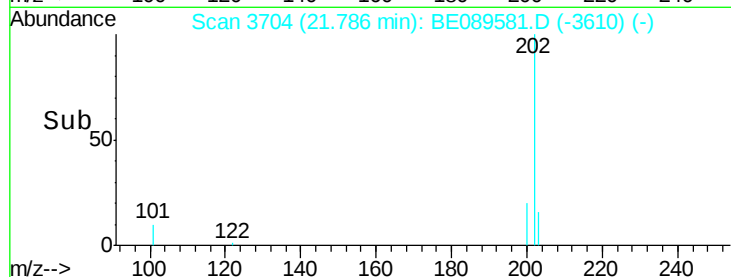
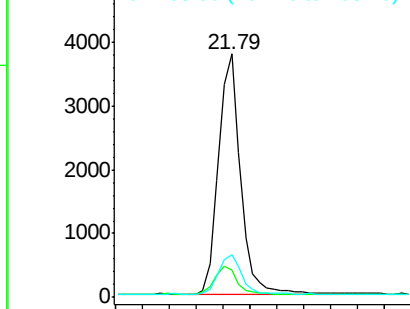
#15  
 Fluoranthene  
 Concen: 0.11 ng  
 RT: 21.79 min Scan# 3704  
 Delta R.T. -0.00 min  
 Lab File: BE089581.D  
 Acq: 8 Feb 2015 8:08

Instrument :  
 BNA\_E  
 ClientSampleId :

Tgt Ion: 202 Resp: 4303  
 Ion Ratio Lower Upper  
 202 100  
 101 11.6 11.6 17.4  
 203 17.3 13.6 20.4

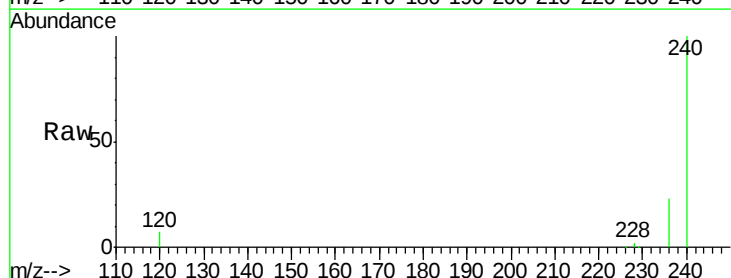


Abundance Ion 202.00 (201.70 to 202.70): E  
 Ion 101.00 (100.70 to 101.70): E  
 Ion 203.00 (202.70 to 203.70): E

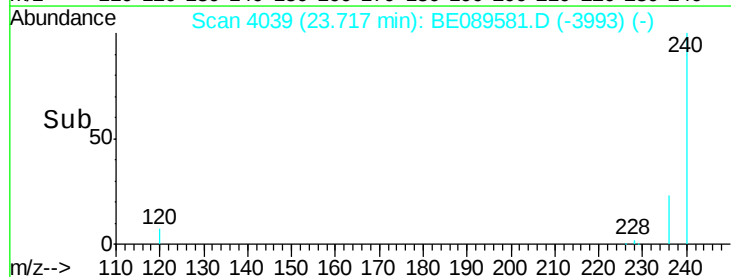
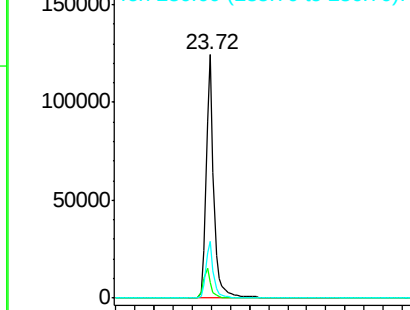


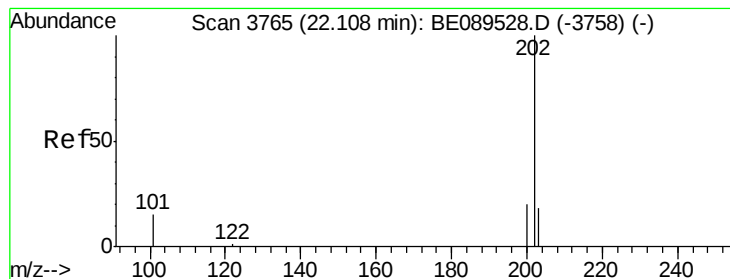
#16  
 Chrysene-d12  
 Concen: 5.00 ng  
 RT: 23.72 min Scan# 4039  
 Delta R.T. -0.01 min  
 Lab File: BE089581.D  
 Acq: 8 Feb 2015 8:08

Tgt Ion: 240 Resp: 139804  
 Ion Ratio Lower Upper  
 240 100  
 120 6.6 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# 3763

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampled :

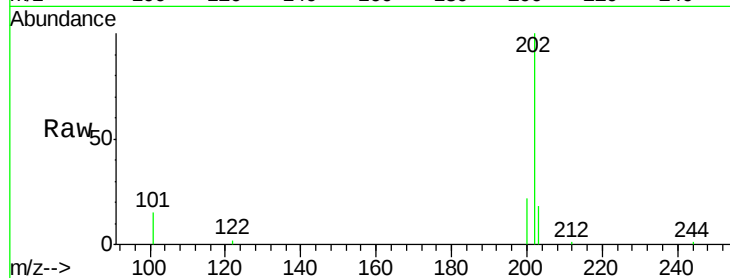
Tgt Ion:202 Resp: 4720

Ion Ratio Lower Upper

202 100

200 20.5 16.3 24.5

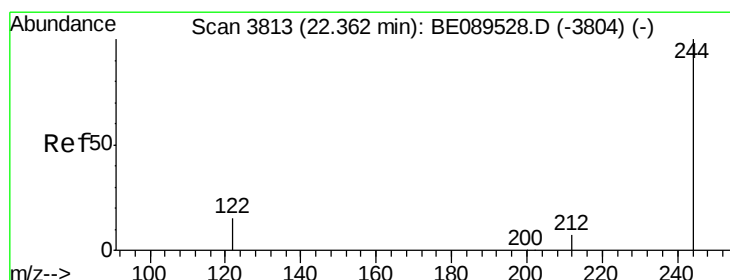
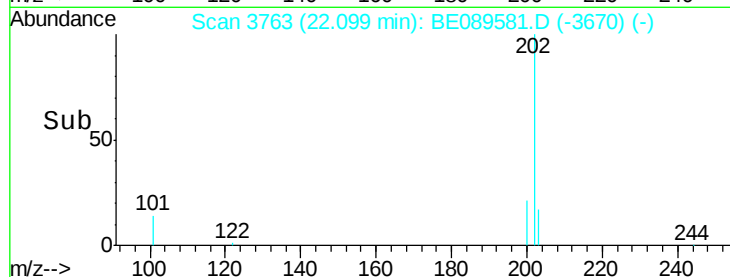
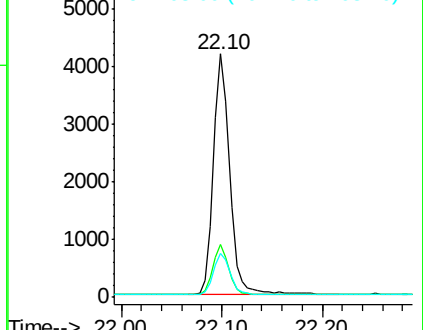
203 17.7 13.5 20.3



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: 12.15 ng

RT: 22.36 min Scan# 3812

Delta R.T. -0.00 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

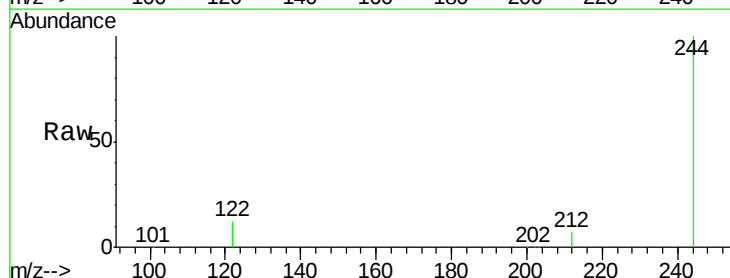
Tgt Ion:244 Resp: 224020

Ion Ratio Lower Upper

244 100

212 7.3 5.8 8.8

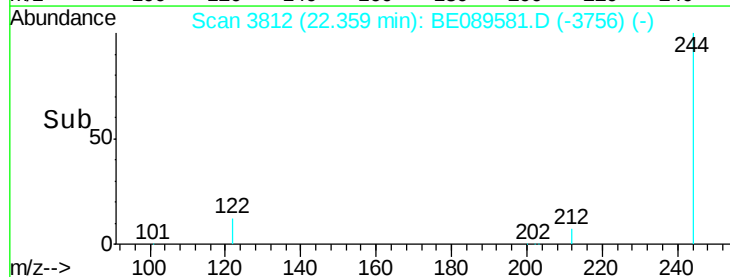
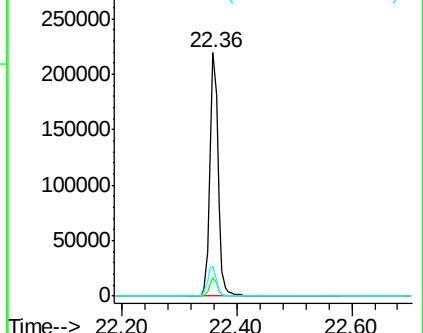
122 12.2 12.6 19.0#



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# 4037

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :

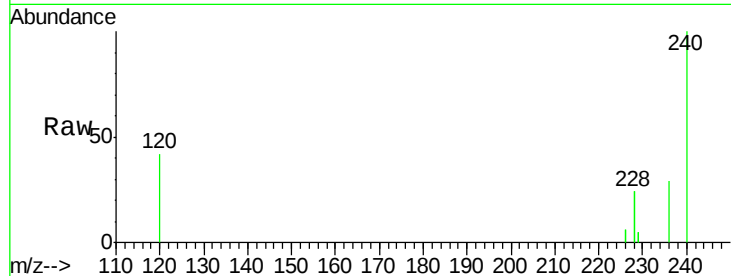
Tgt Ion:228 Resp: 14612

Ion Ratio Lower Upper

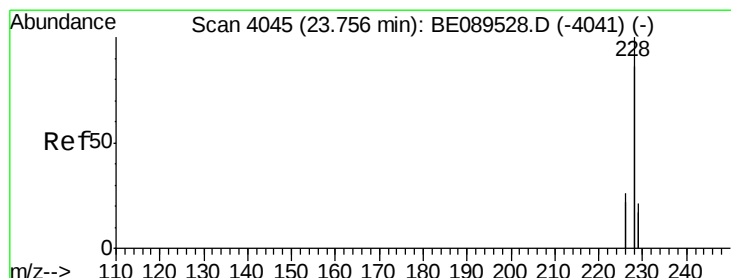
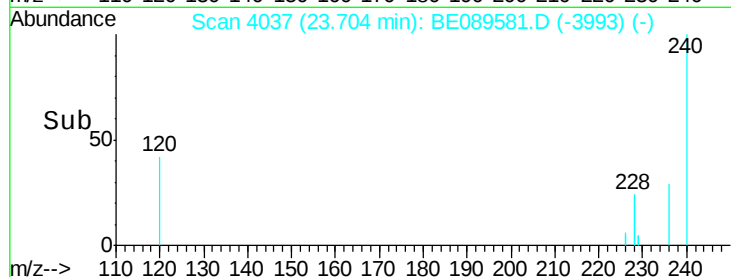
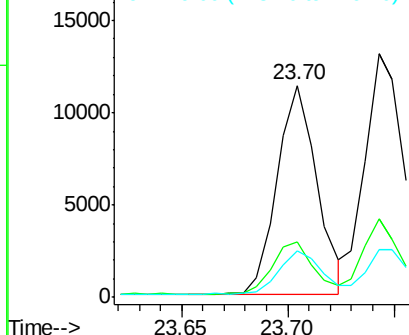
228 100

226 26.1 19.0 28.4

229 21.8 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: 0.12 ng

RT: 23.70 min Scan# 4037

Delta R.T. -0.05 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

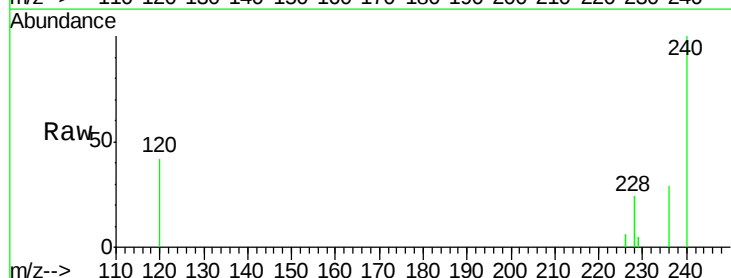
Tgt Ion:228 Resp: 14612

Ion Ratio Lower Upper

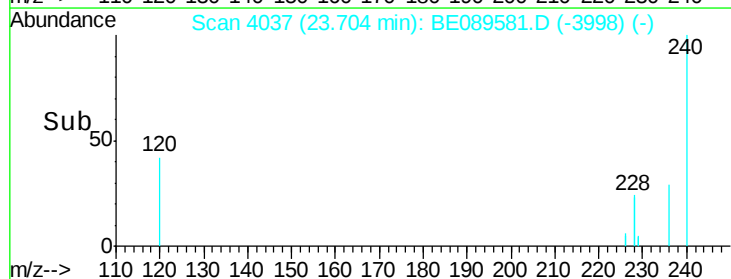
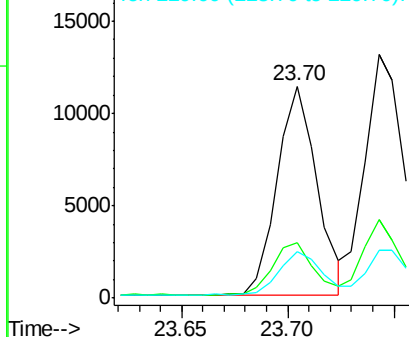
228 100

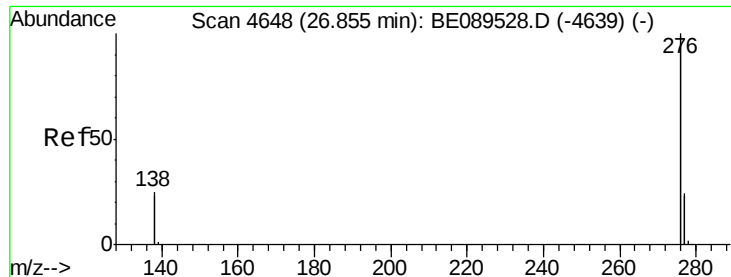
226 26.1 21.0 31.4

229 21.8 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: 0.05 ng

RT: 26.84 min Scan# 4646

Delta R.T. -0.01 min

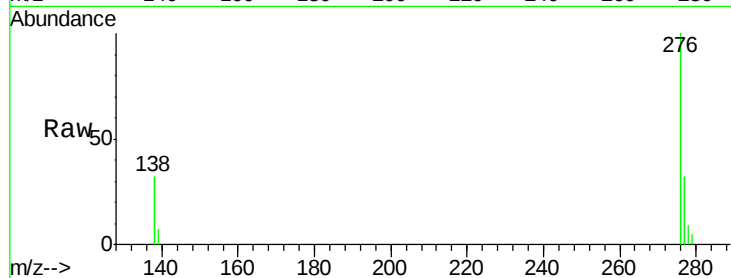
Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :



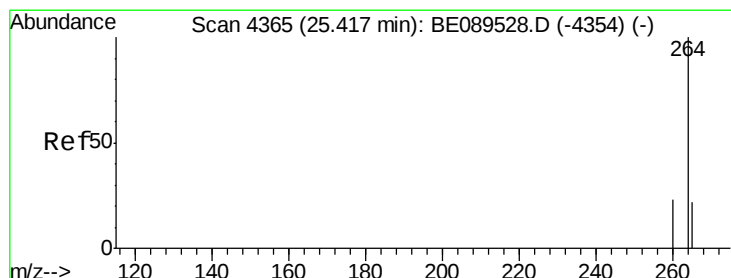
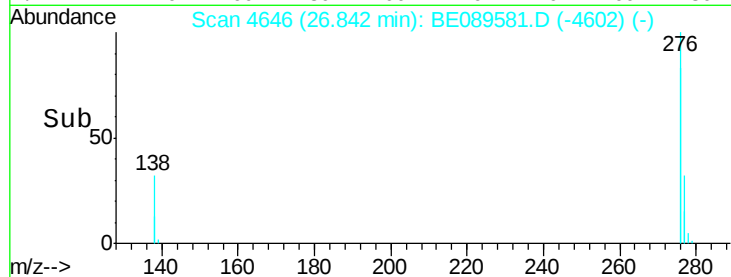
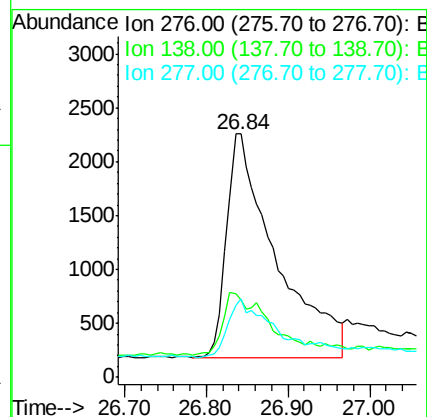
Tgt Ion: 276 Resp: 8671

Ion Ratio Lower Upper

276 100

138 27.0 23.0 34.4

277 24.1 19.9 29.9



#22

Perylene-d12

Concen: 5.00 ng

RT: 25.41 min Scan# 4363

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

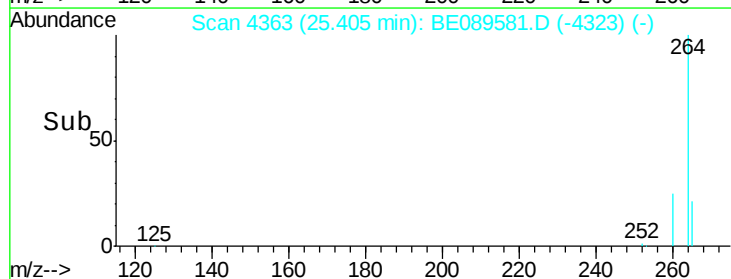
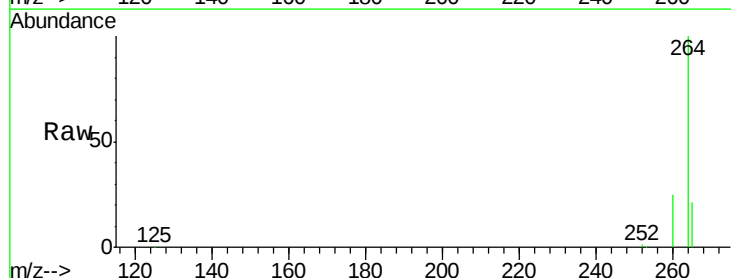
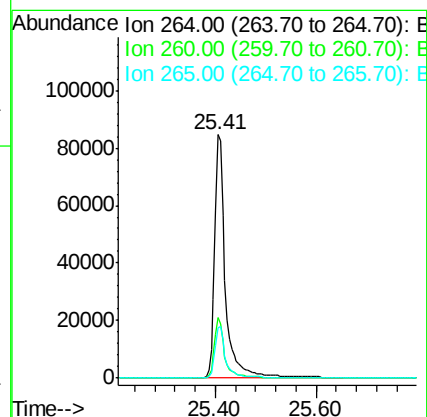
Tgt Ion: 264 Resp: 125482

Ion Ratio Lower Upper

264 100

260 24.7 18.7 28.1

265 20.6 17.5 26.3





#23

Benzo(b)fluoranthene

Concen: 0.08 ng

RT: 24.97 min Scan# 4267

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :

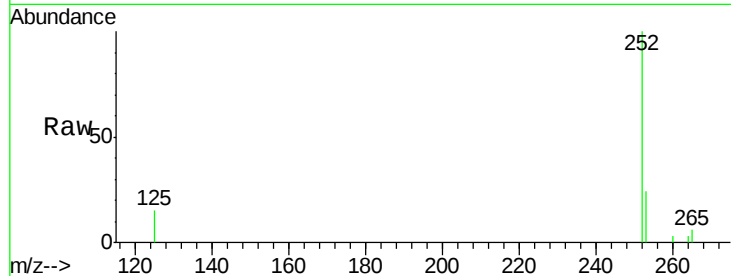
Tgt Ion:252 Resp: 1980

Ion Ratio Lower Upper

252 100

253 24.5 17.4 26.0

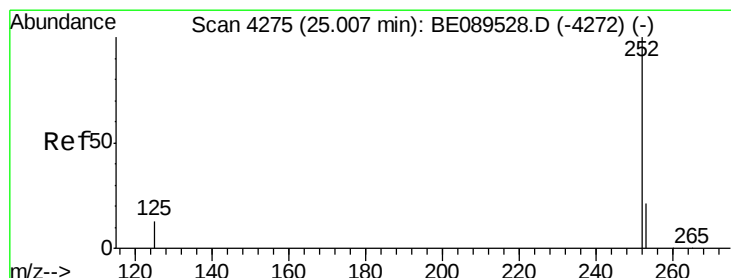
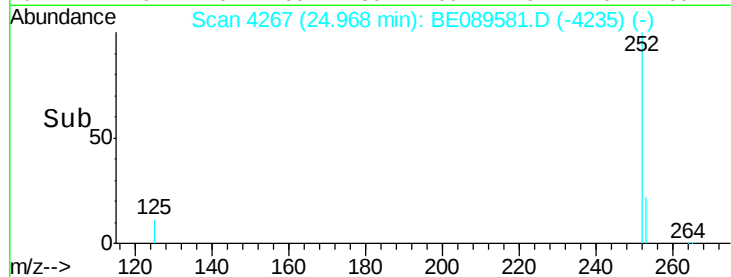
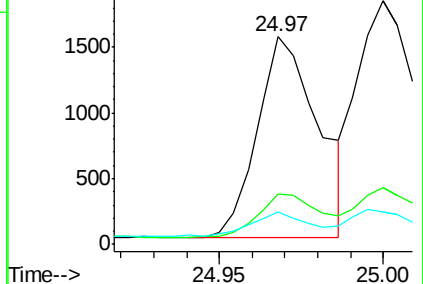
125 15.5 10.4 15.6



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: 0.11 ng

RT: 25.00 min Scan# 4274

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

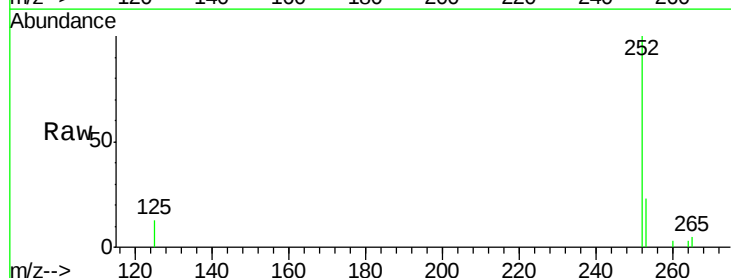
Tgt Ion:252 Resp: 3229

Ion Ratio Lower Upper

252 100

253 23.3 17.2 25.8

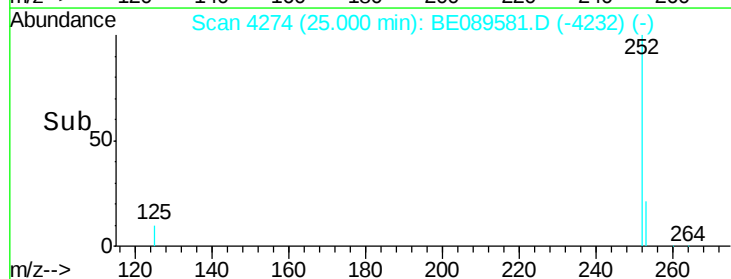
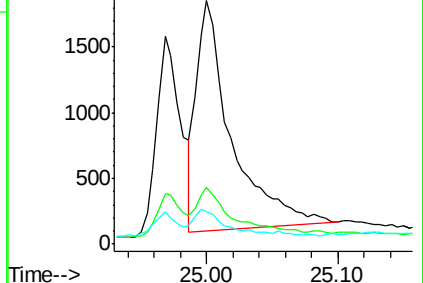
125 13.3 10.6 15.8



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: 0.08 ng

RT: 25.34 min Scan# 4348

Delta R.T. -0.01 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :

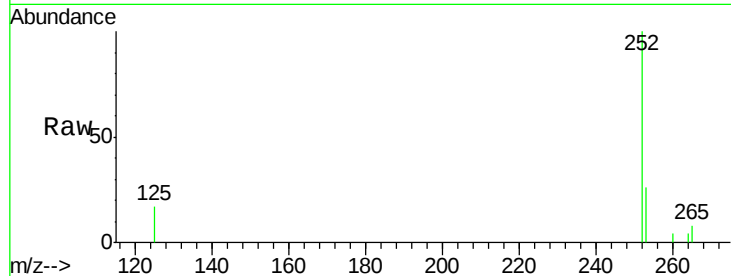
Tgt Ion: 252 Resp: 2050

Ion Ratio Lower Upper

252 100

253 25.6 17.8 26.6

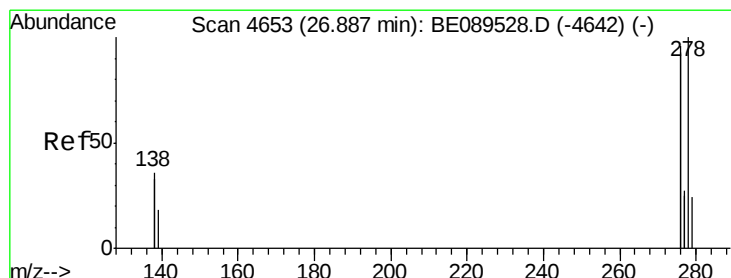
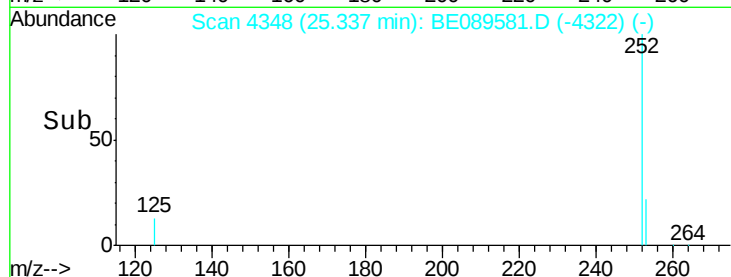
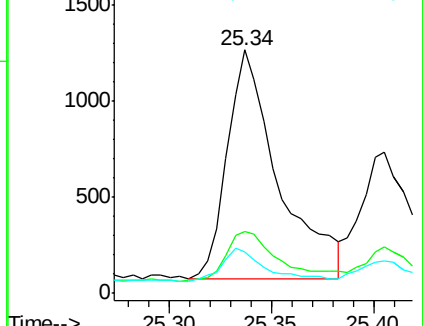
125 17.1 11.4 17.2



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



#26

Dibenzo(a,h)anthracene

Concen: 0.06 ng

RT: 26.87 min Scan# 4650

Delta R.T. -0.02 min

Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

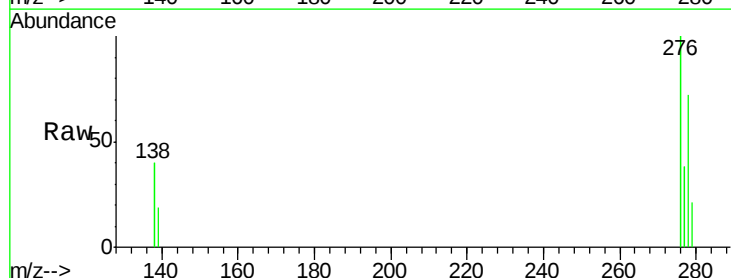
Tgt Ion: 278 Resp: 1651

Ion Ratio Lower Upper

278 100

139 26.5 15.7 23.5#

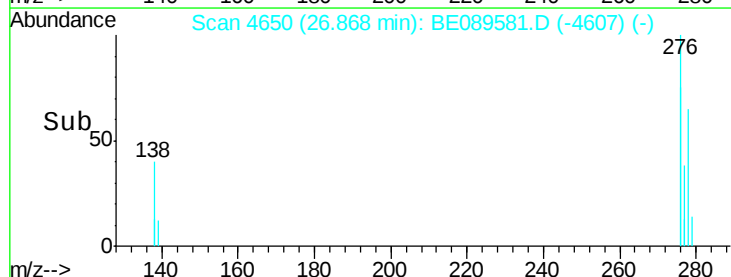
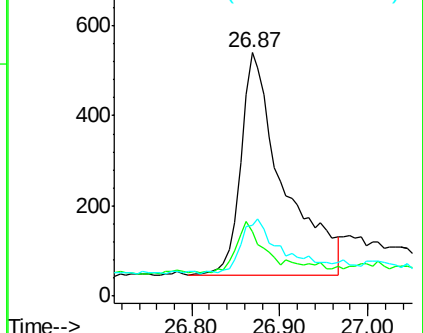
279 28.9 19.5 29.3



Abundance Ion 278.00 (277.70 to 278.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 279.00 (278.70 to 279.70): E





#27

Benzo(g,h,i)perylene

Concen: 0.08 ng

RT: 27.27 min Scan# 4711

Delta R.T. -0.02 min

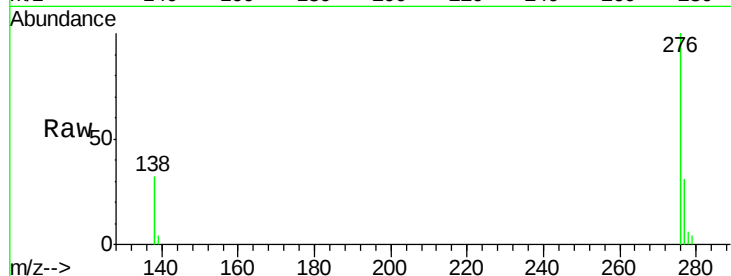
Lab File: BE089581.D

Acq: 8 Feb 2015 8:08

Instrument :

BNA\_E

ClientSampleId :



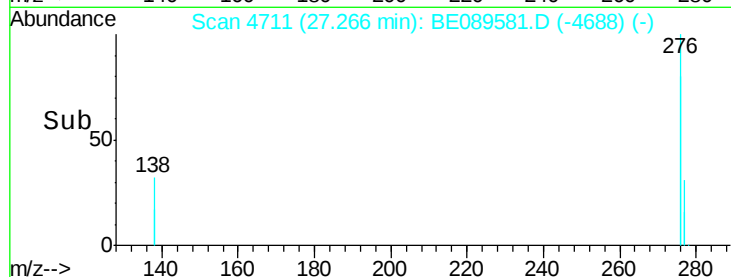
Tgt Ion: 276 Resp: 10320

Ion Ratio Lower Upper

276 100

277 30.7 18.6 27.8#

138 31.7 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

