

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE020615\  
 Data File : BE089584.D  
 Acq On : 8 Feb 2015 10:08  
 Operator : TP/IZ  
 Sample : MDL-05-S  
 Misc : MDL-SOIL-0.2/0.4  
 ALS Vial : 56 Sample Multiplier: 1

Instrument :  
 BNA\_E  
 ClientSampleId :

Quant Time: Feb 09 00:31:05 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  | 38807    | 5.00 | ng    | 0.00     |
| 2) Naphthalene-d8         | 12.33 | 136  | 166077   | 5.00 | ng    | 0.00     |
| 6) Acenaphthene-d10       | 16.51 | 164  | 91544    | 5.00 | ng    | 0.00     |
| 11) Phenanthrene-d10      | 19.84 | 188  | 153577   | 5.00 | ng    | 0.00     |
| 16) Chrysene-d12          | 23.72 | 240  | 139788   | 5.00 | ng    | 0.00     |
| 22) Perylene-d12          | 25.41 | 264  | 128804   | 5.00 | ng    | -0.01    |

|                             |       |     |        |       |    |      |
|-----------------------------|-------|-----|--------|-------|----|------|
| System Monitoring Compounds |       |     |        |       |    |      |
| 3) Nitrobenzene-d5          | 10.69 | 82  | 107718 | 9.77  | ng | 0.00 |
| 7) 2-Fluorobiphenyl         | 14.96 | 172 | 196604 | 8.05  | ng | 0.00 |
| 18) Terphenyl-d14           | 22.36 | 244 | 207206 | 11.24 | ng | 0.00 |

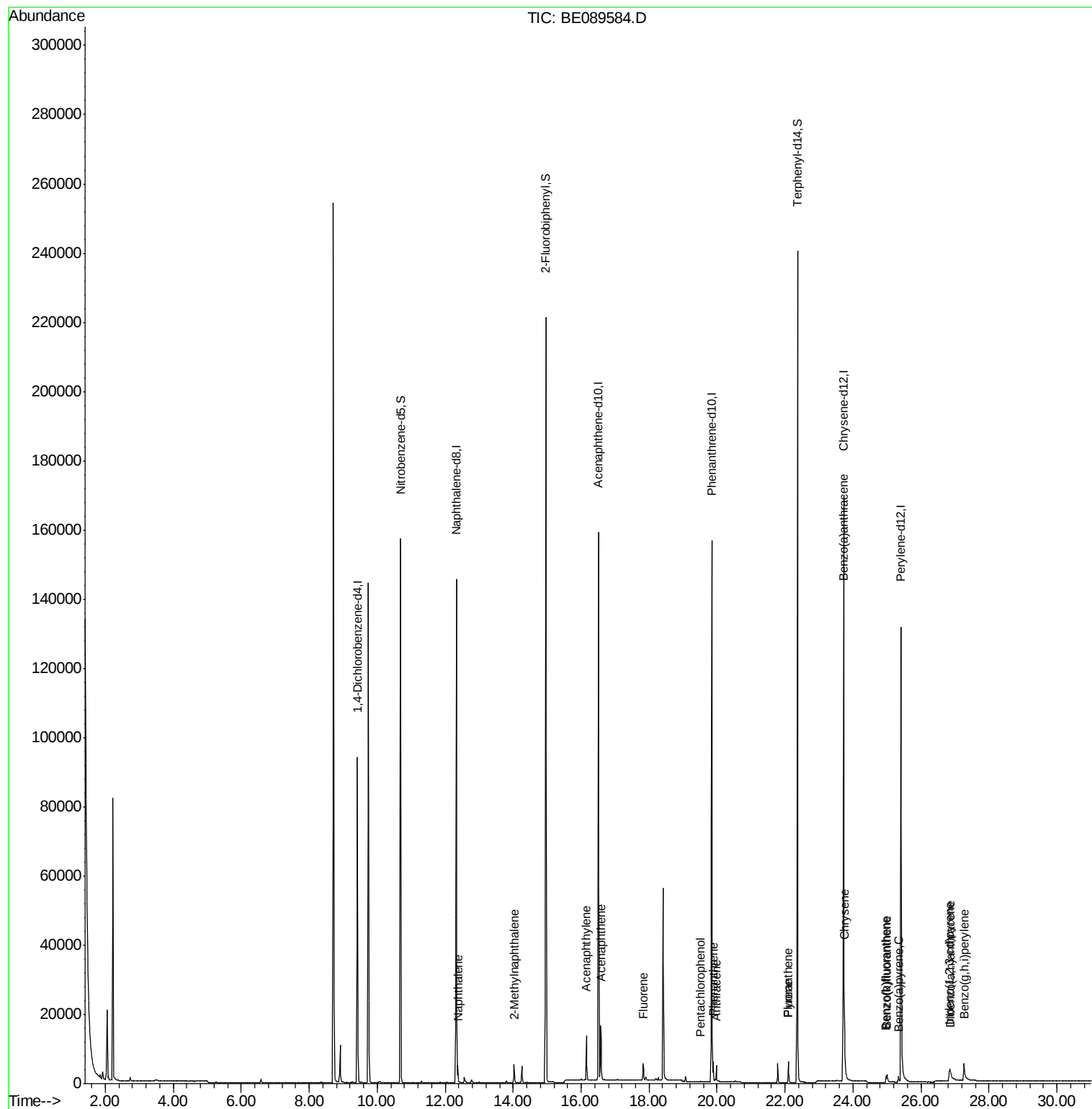
|                            |       |     |       |      |    |        |
|----------------------------|-------|-----|-------|------|----|--------|
| Target Compounds           |       |     |       |      |    | Qvalue |
| 4) Naphthalene             | 12.37 | 128 | 5497  | 0.15 | ng | 98     |
| 5) 2-Methylnaphthalene     | 14.03 | 142 | 3157  | 0.15 | ng | # 92   |
| 8) Acenaphthylene          | 16.16 | 152 | 17324 | 0.11 | ng | 100    |
| 9) Acenaphthene            | 16.58 | 154 | 3060  | 0.13 | ng | 97     |
| 10) Fluorene               | 17.83 | 166 | 3244  | 0.13 | ng | 99     |
| 12) Pentachlorophenol      | 19.52 | 266 | 138   | 0.65 | ng | 86     |
| 13) Phenanthrene           | 19.89 | 178 | 5480  | 0.14 | ng | 100    |
| 14) Anthracene             | 19.98 | 178 | 4214  | 0.13 | ng | 99     |
| 15) Fluoranthene           | 22.10 | 202 | 4459  | 0.13 | ng | 99     |
| 17) Pyrene                 | 22.10 | 202 | 4459  | 0.15 | ng | 99     |
| 19) Benzo(a)anthracene     | 23.70 | 228 | 14705 | 0.12 | ng | 96     |
| 20) Chrysene               | 23.74 | 228 | 19903 | 0.16 | ng | 94     |
| 21) Indeno(1,2,3-cd)pyrene | 26.83 | 276 | 10159 | 0.06 | ng | 91     |
| 23) Benzo(b)fluoranthene   | 24.97 | 252 | 1899  | 0.08 | ng | 95     |
| 24) Benzo(k)fluoranthene   | 25.00 | 252 | 3753  | 0.12 | ng | 97     |
| 25) Benzo(a)pyrene         | 25.34 | 252 | 2015  | 0.08 | ng | # 91   |
| 26) Dibenzo(a,h)anthracene | 26.87 | 278 | 1880  | 0.06 | ng | # 85   |
| 27) Benzo(g,h,i)perylene   | 27.26 | 276 | 11362 | 0.09 | ng | # 91   |

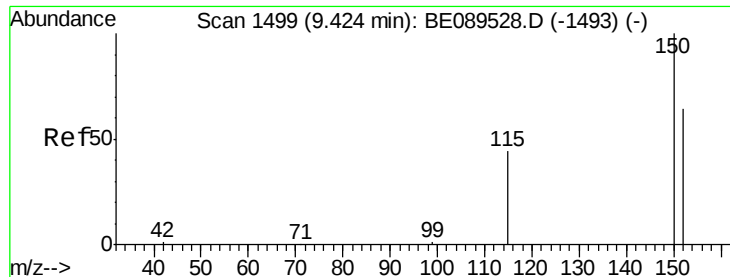
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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BNA\_E  
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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. -0.00 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

Instrument :

BNA\_E

ClientSampled :

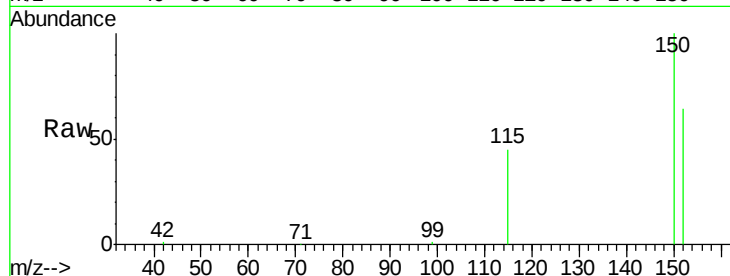
Tgt Ion:152 Resp: 38807

Ion Ratio Lower Upper

152 100

150 156.1 125.7 188.5

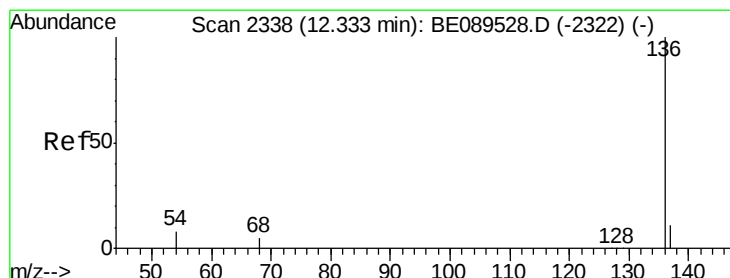
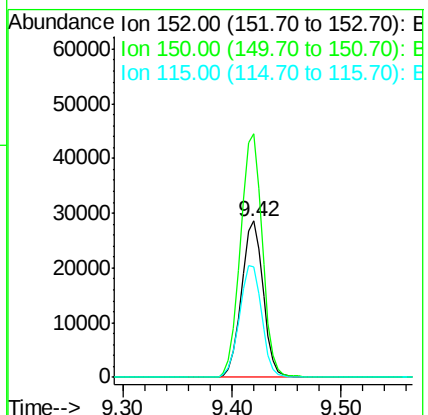
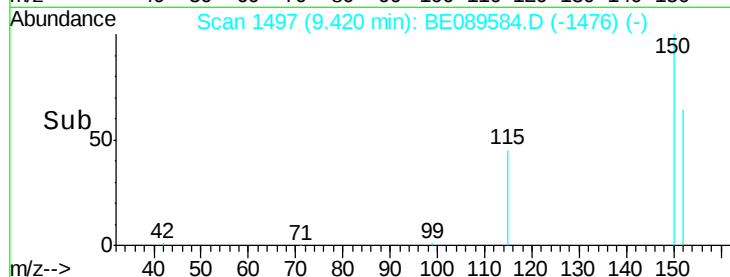
115 70.9 55.6 83.4



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: BE089584.D

Acq: 8 Feb 2015 10:08

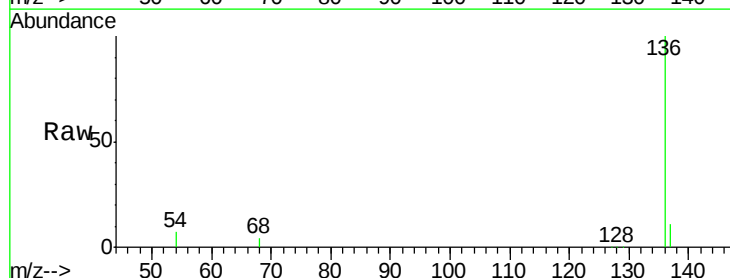
Tgt Ion:136 Resp: 166077

Ion Ratio Lower Upper

136 100

137 10.9 8.7 13.1

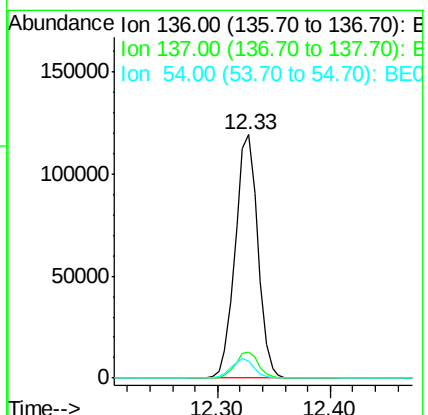
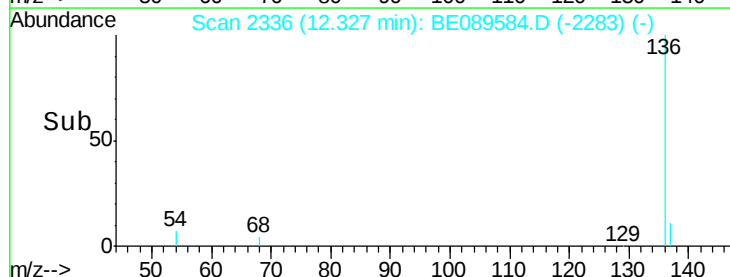
54 6.9 6.1 9.1

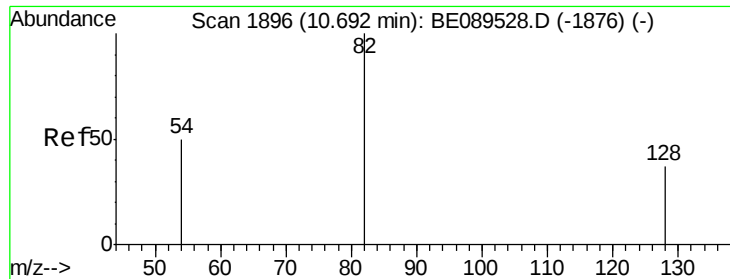


Abundance Ion 136.00 (135.70 to 136.70): E

Ion 137.00 (136.70 to 137.70): E

Ion 54.00 (53.70 to 54.70): BE0





#3

Nitrobenzene-d5

Concen: 9.77 ng

RT: 10.69 min Scan# 1893

Delta R.T. -0.00 min

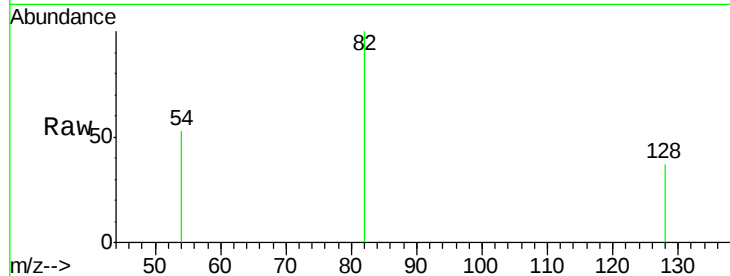
Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

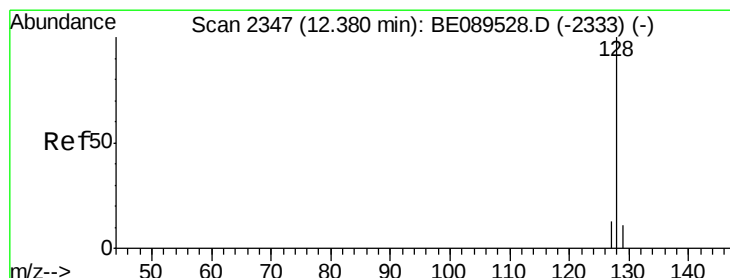
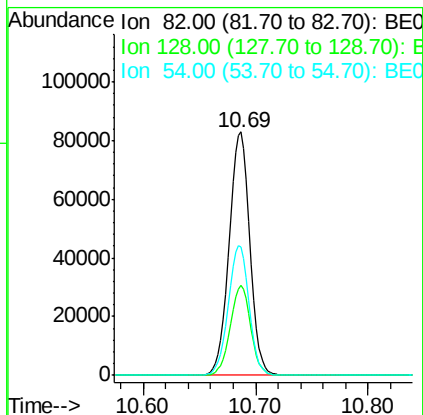
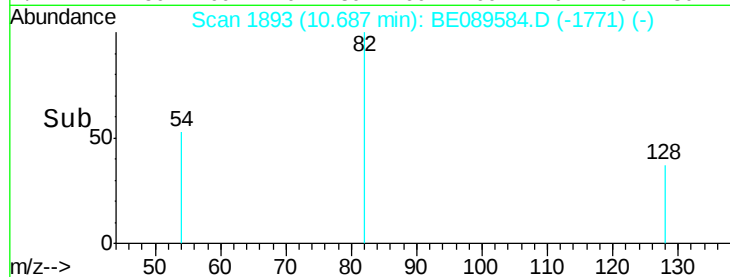
Instrument :

BNA\_E

ClientSampled :



|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 82    | Resp: | 107718 |
| Ion      | Ratio | Lower | Upper  |
| 82       | 100   |       |        |
| 128      | 37.0  | 30.2  | 45.4   |
| 54       | 52.7  | 40.6  | 60.8   |



#4

Naphthalene

Concen: 0.15 ng

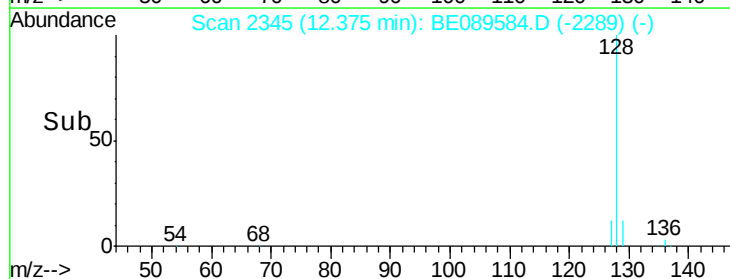
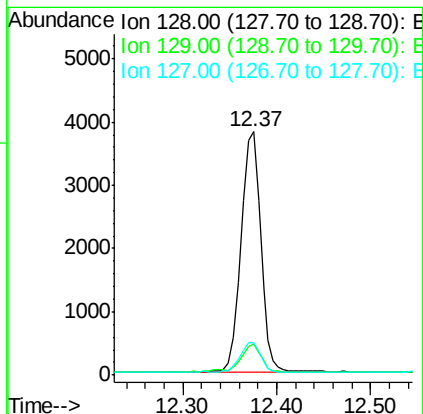
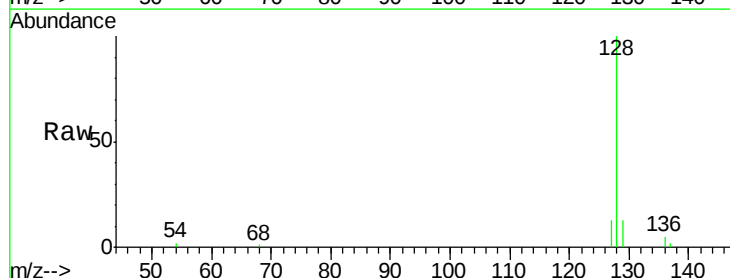
RT: 12.37 min Scan# 2345

Delta R.T. -0.01 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 128   | Resp: | 5497  |
| Ion      | Ratio | Lower | Upper |
| 128      | 100   |       |       |
| 129      | 12.8  | 9.1   | 13.7  |
| 127      | 13.4  | 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: BE089584.D

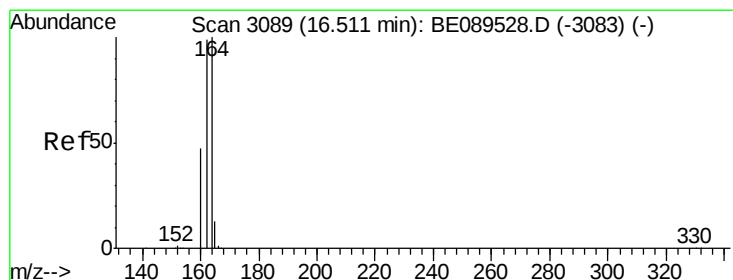
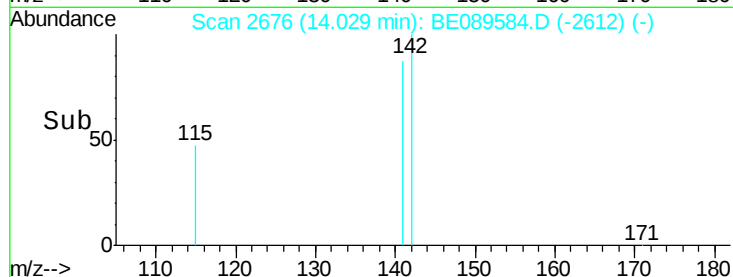
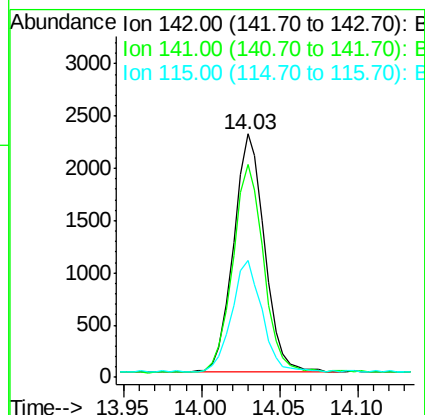
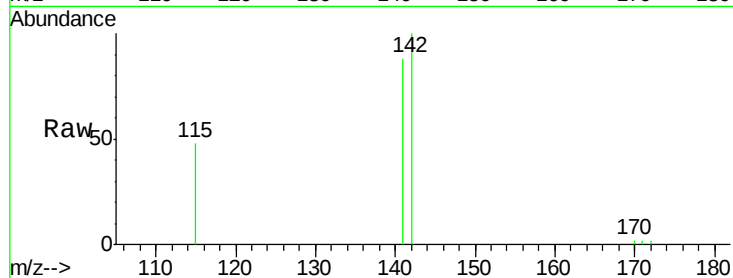
Acq: 8 Feb 2015 10:08

Instrument :

BNA\_E

ClientSampleId :

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 142   | Resp: | 3157  |
| Ion Ratio | Lower | Upper |       |
| 142       | 100   |       |       |
| 141       | 87.6  | 67.0  | 100.6 |
| 115       | 47.9  | 30.6  | 45.8# |



#6

Acenaphthene-d10

Concen: 5.00 ng

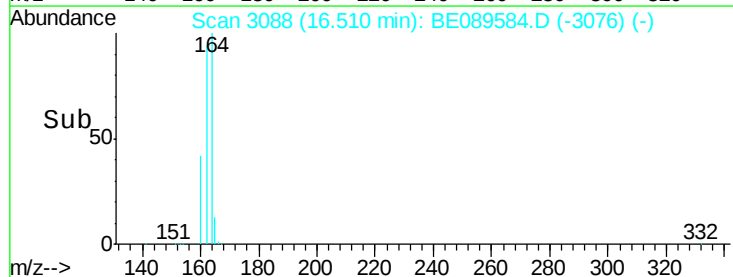
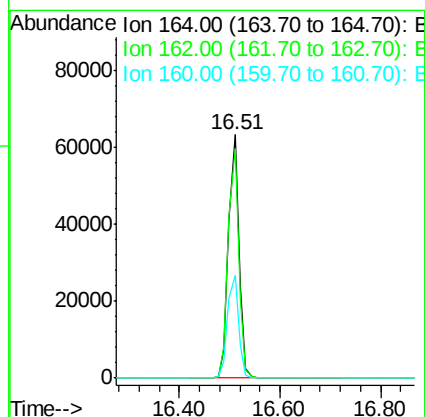
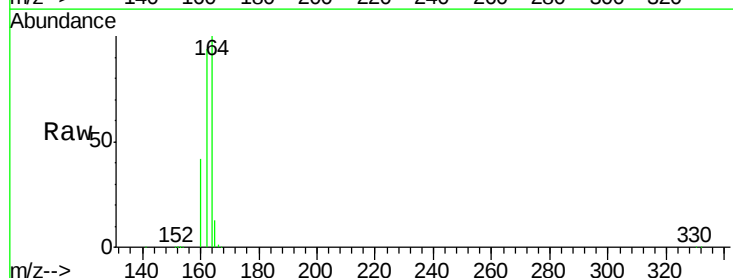
RT: 16.51 min Scan# 3088

Delta R.T. -0.00 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 164   | Resp: | 91544 |
| Ion Ratio | Lower | Upper |       |
| 164       | 100   |       |       |
| 162       | 94.1  | 79.5  | 119.3 |
| 160       | 42.4  | 37.6  | 56.4  |





#7

2-Fluorobiphenyl

Concen: 8.05 ng

RT: 14.96 min Scan# 2881

Delta R.T. -0.00 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

Instrument :

BNA\_E

ClientSampleId :

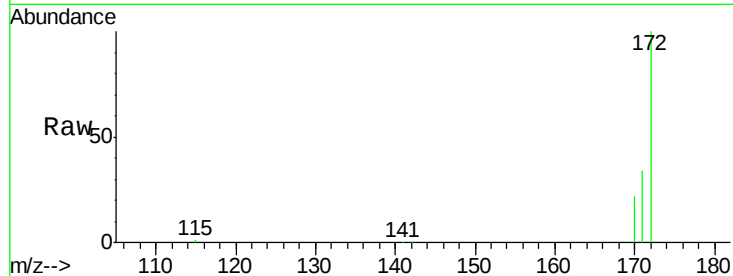
Tgt Ion:172 Resp: 196604

Ion Ratio Lower Upper

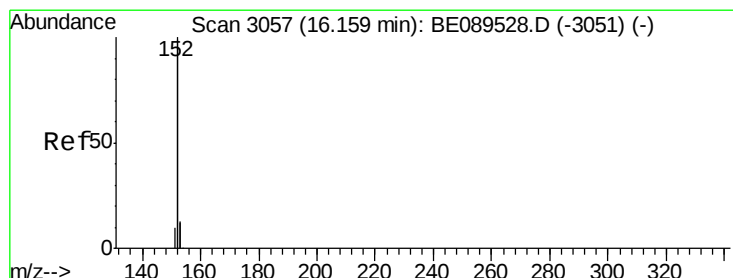
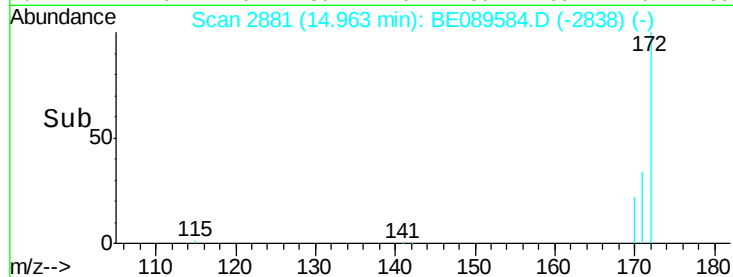
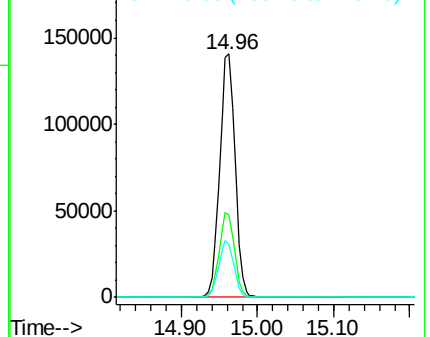
172 100

171 33.8 27.7 41.5

170 21.7 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: BE089584.D

Acq: 8 Feb 2015 10:08

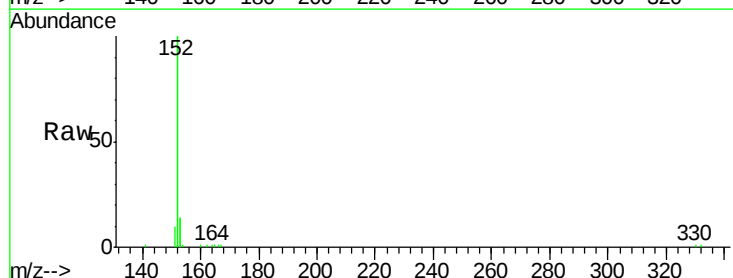
Tgt Ion:152 Resp: 17324

Ion Ratio Lower Upper

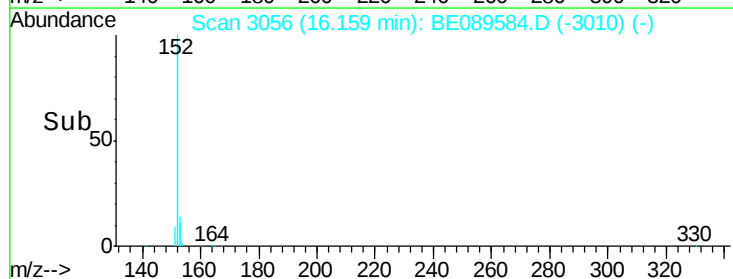
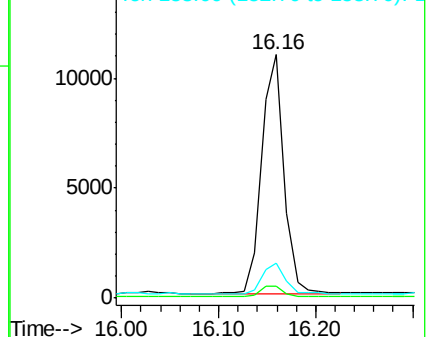
152 100

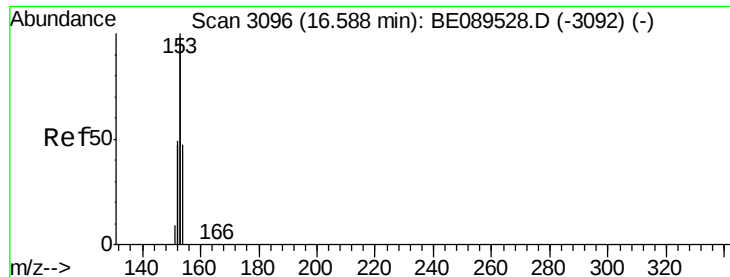
151 5.0 4.0 6.0

153 13.1 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: 0.13 ng

RT: 16.58 min Scan# 3094

Delta R.T. -0.01 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

Instrument :

BNA\_E

ClientSampleId :

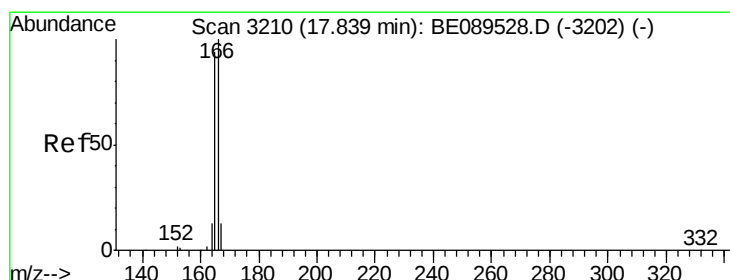
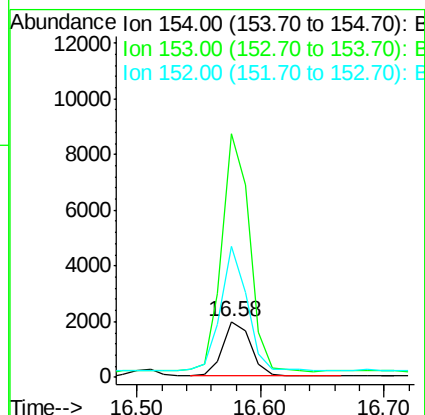
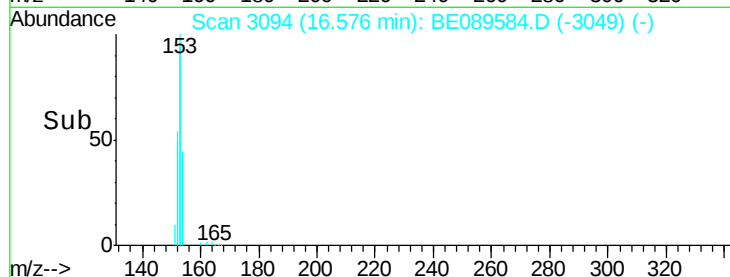
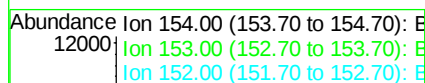
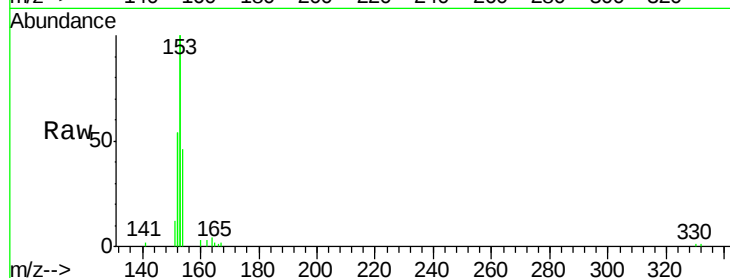
Tgt Ion:154 Resp: 3060

Ion Ratio Lower Upper

154 100

153 429.0 340.8 511.2

152 215.4 165.5 248.3



#10

Fluorene

Concen: 0.13 ng

RT: 17.83 min Scan# 3208

Delta R.T. -0.01 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

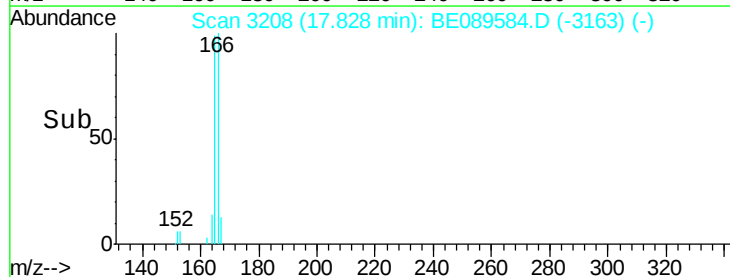
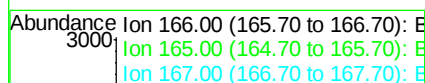
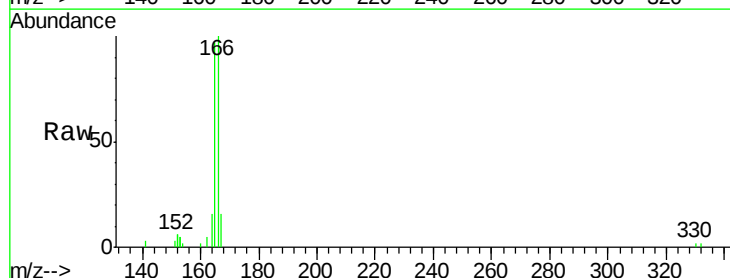
Tgt Ion:166 Resp: 3244

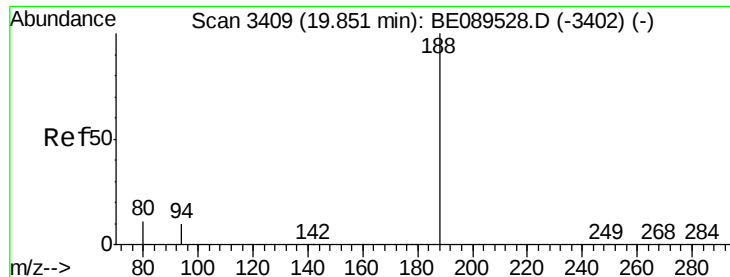
Ion Ratio Lower Upper

166 100

165 94.8 75.5 113.3

167 14.7 10.9 16.3

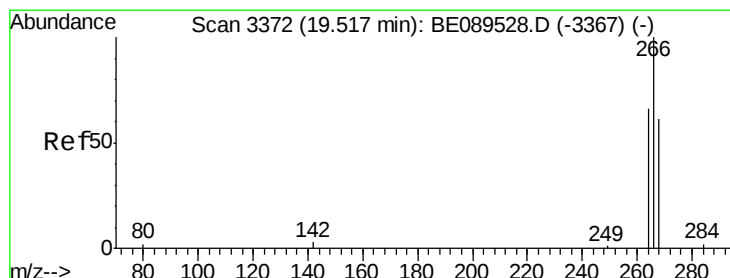
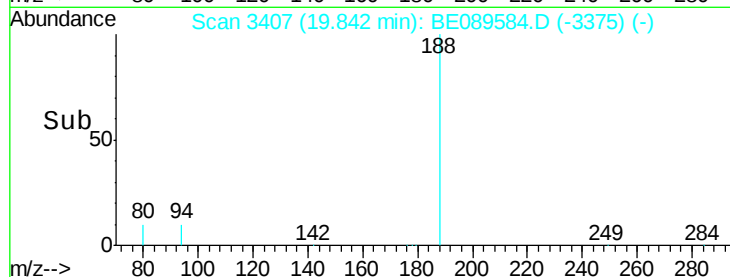
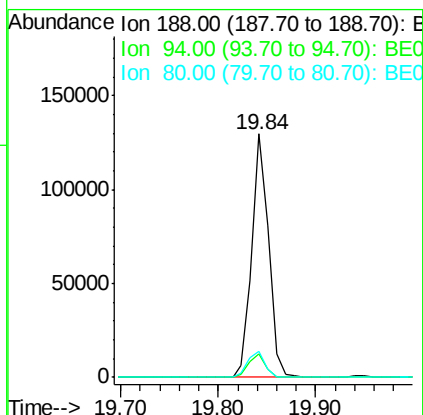
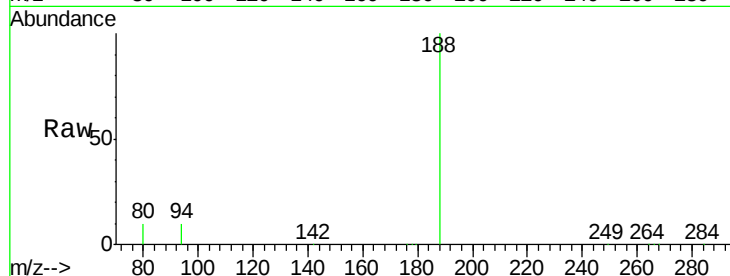




#11  
Phenanthrene-d10  
Concen: 5.00 ng  
RT: 19.84 min Scan# 3407  
Delta R.T. -0.01 min  
Lab File: BE089584.D  
Acq: 8 Feb 2015 10:08

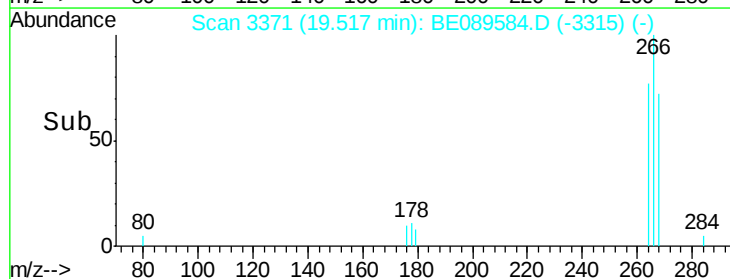
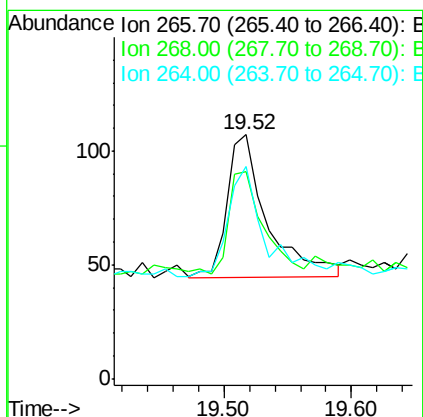
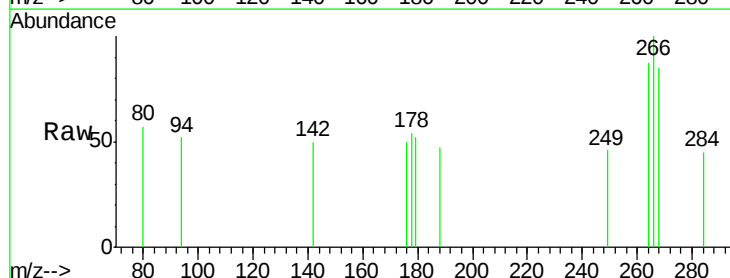
Instrument :  
BNA\_E  
ClientSampleId :

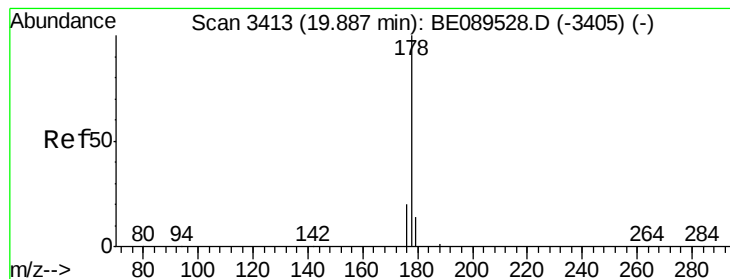
Tgt Ion:188 Resp: 153577  
Ion Ratio Lower Upper  
188 100  
94 9.8 8.4 12.6  
80 10.5 8.6 12.8



#12  
Pentachlorophenol  
Concen: 0.65 ng  
RT: 19.52 min Scan# 3371  
Delta R.T. 0.00 min  
Lab File: BE089584.D  
Acq: 8 Feb 2015 10:08

Tgt Ion:266 Resp: 138  
Ion Ratio Lower Upper  
266 100  
268 85.0 57.9 86.9  
264 86.9 60.2 90.4





#13

Phenanthrene

Concen: 0.14 ng

RT: 19.89 min Scan# 3412

Delta R.T. 0.00 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

Instrument :

BNA\_E

ClientSampled :

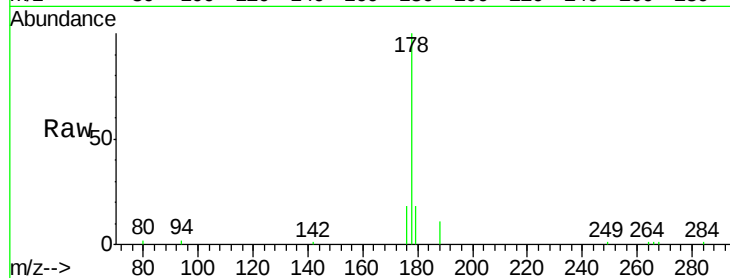
Tgt Ion:178 Resp: 5480

Ion Ratio Lower Upper

178 100

176 19.3 15.4 23.0

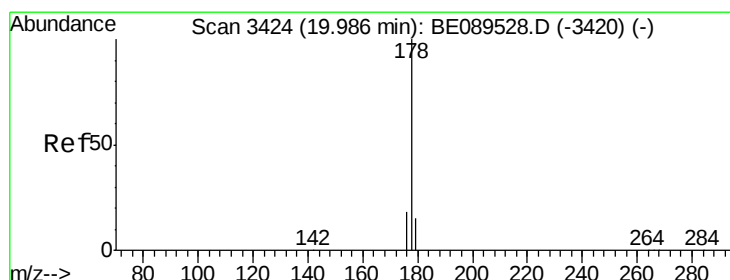
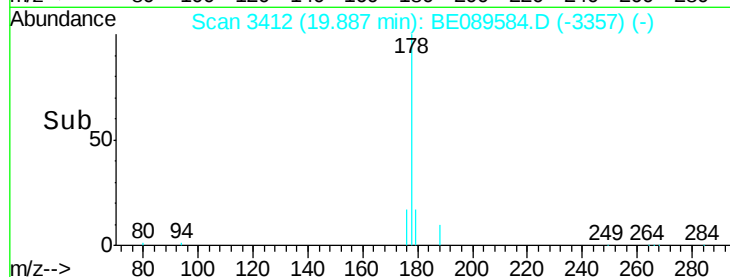
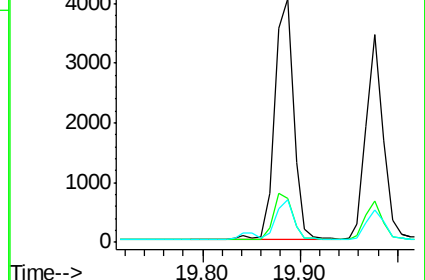
179 15.4 12.2 18.2



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E



#14

Anthracene

Concen: 0.13 ng

RT: 19.98 min Scan# 3422

Delta R.T. -0.01 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

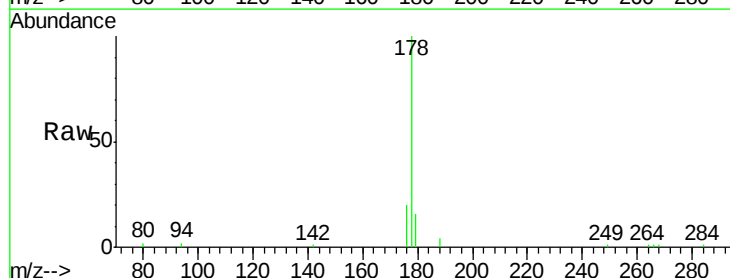
Tgt Ion:178 Resp: 4214

Ion Ratio Lower Upper

178 100

176 18.5 14.5 21.7

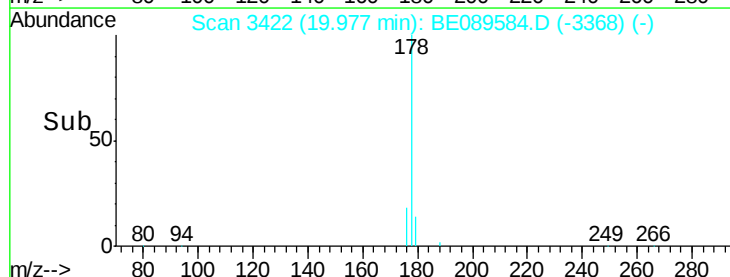
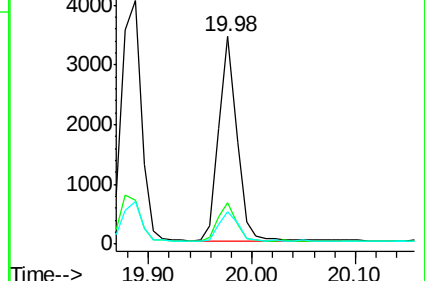
179 15.0 12.2 18.2



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E

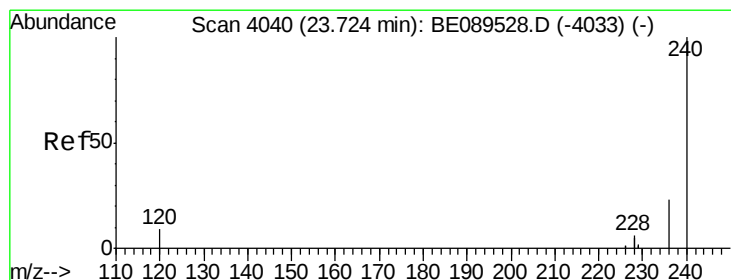
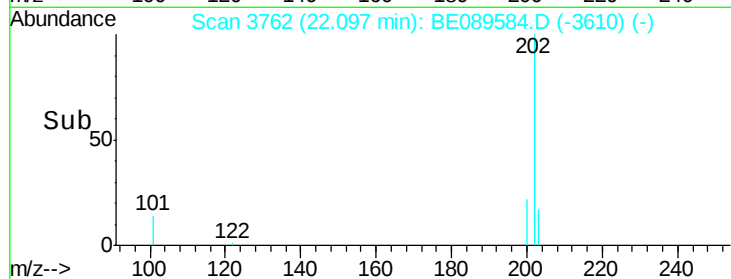
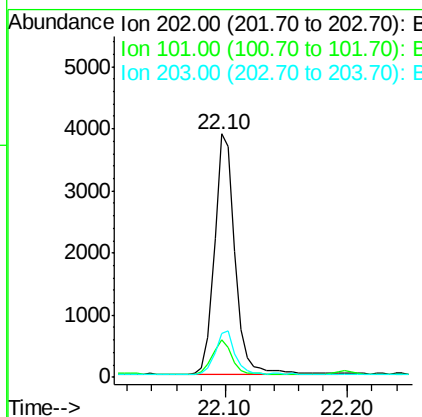
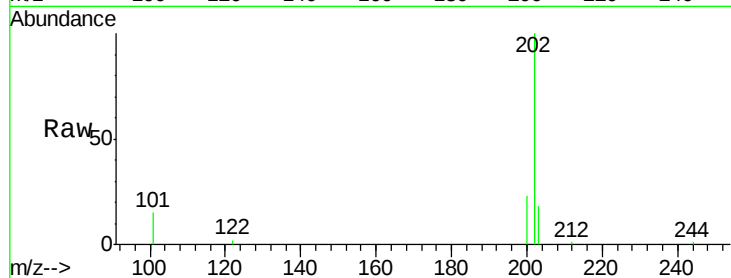




#15  
 Fluoranthene  
 Concen: 0.13 ng  
 RT: 22.10 min Scan# 3762  
 Delta R.T. 0.31 min  
 Lab File: BE089584.D  
 Acq: 8 Feb 2015 10:08

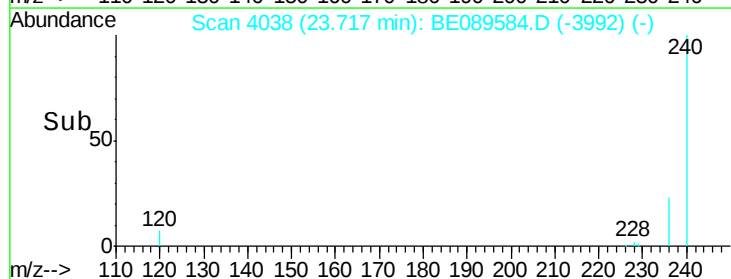
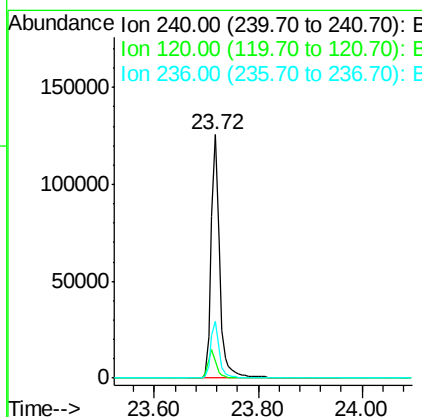
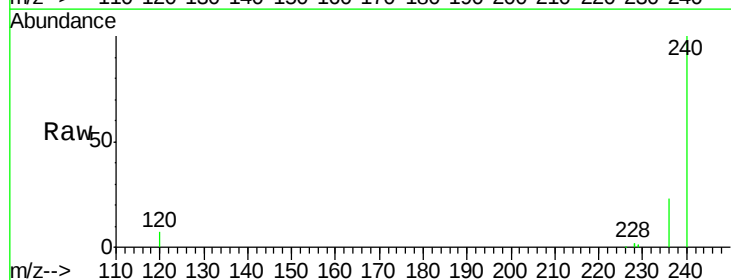
Instrument :  
 BNA\_E  
 ClientSampleId :

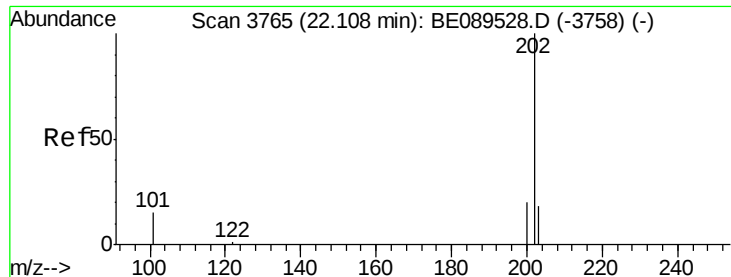
Tgt Ion:202 Resp: 4459  
 Ion Ratio Lower Upper  
 202 100  
 101 14.0 11.6 17.4  
 203 17.7 13.6 20.4



#16  
 Chrysene-d12  
 Concen: 5.00 ng  
 RT: 23.72 min Scan# 4038  
 Delta R.T. -0.01 min  
 Lab File: BE089584.D  
 Acq: 8 Feb 2015 10:08

Tgt Ion:240 Resp: 139788  
 Ion Ratio Lower Upper  
 240 100  
 120 7.0 7.2 10.8#  
 236 23.2 18.5 27.7

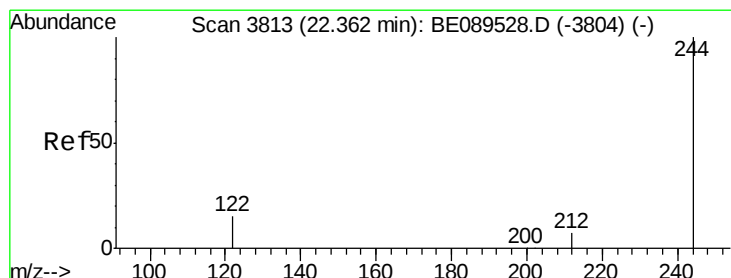
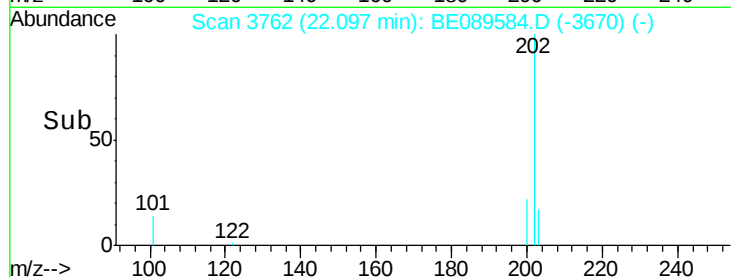
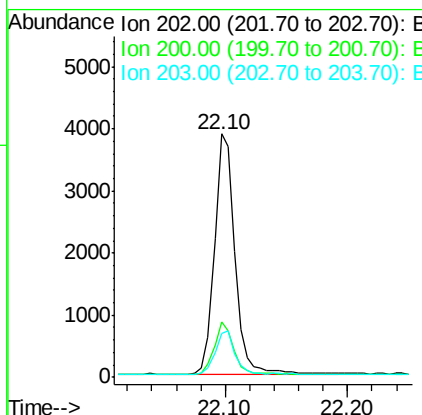
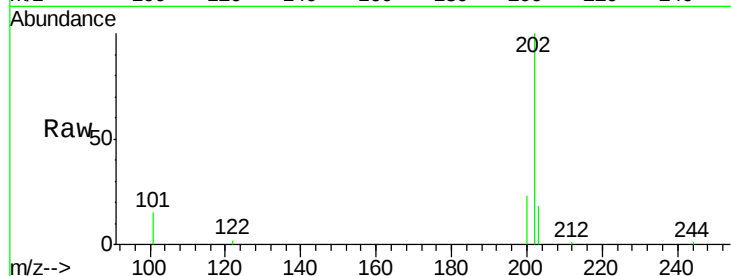




#17  
 Pyrene  
 Concen: 0.15 ng  
 RT: 22.10 min Scan# 3762  
 Delta R.T. -0.01 min  
 Lab File: BE089584.D  
 Acq: 8 Feb 2015 10:08

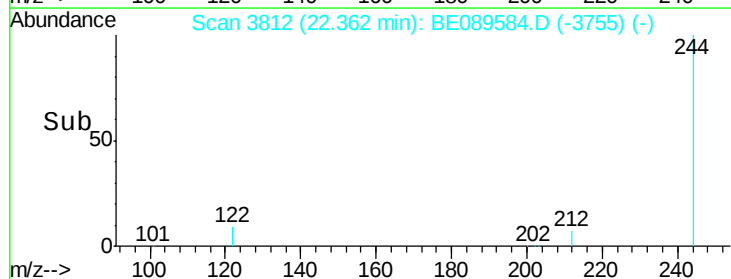
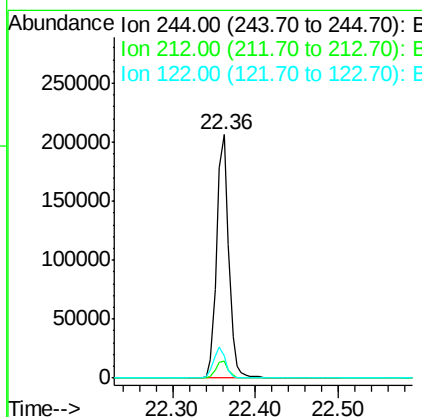
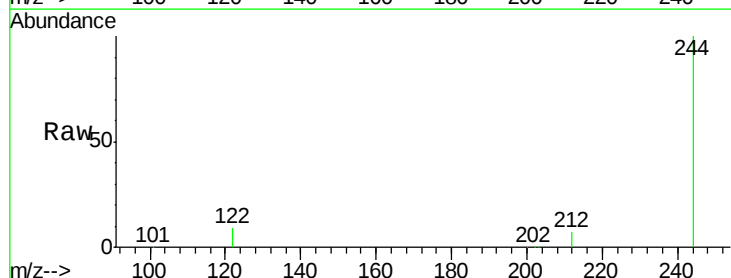
Instrument :  
 BNA\_E  
 ClientSampleId :

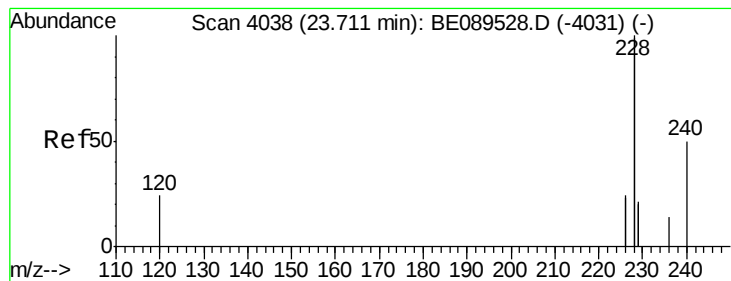
Tgt Ion:202 Resp: 4459  
 Ion Ratio Lower Upper  
 202 100  
 200 20.6 16.3 24.5  
 203 17.7 13.5 20.3



#18  
 Terphenyl-d14  
 Concen: 11.24 ng  
 RT: 22.36 min Scan# 3812  
 Delta R.T. -0.00 min  
 Lab File: BE089584.D  
 Acq: 8 Feb 2015 10:08

Tgt Ion:244 Resp: 207206  
 Ion Ratio Lower Upper  
 244 100  
 212 7.0 5.8 8.8  
 122 8.9 12.6 19.0#





#19

Benzo(a)anthracene

Concen: 0.12 ng

RT: 23.70 min Scan# 4036

Delta R.T. -0.01 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

Instrument :

BNA\_E

ClientSampleId :

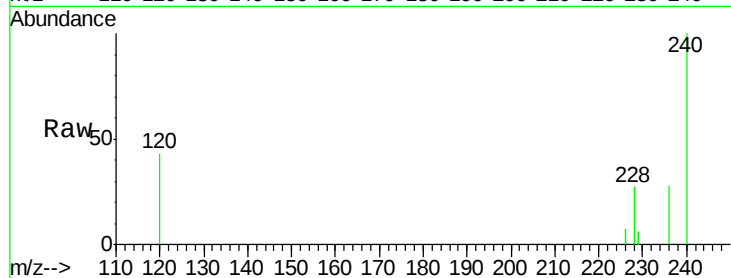
Tgt Ion:228 Resp: 14705

Ion Ratio Lower Upper

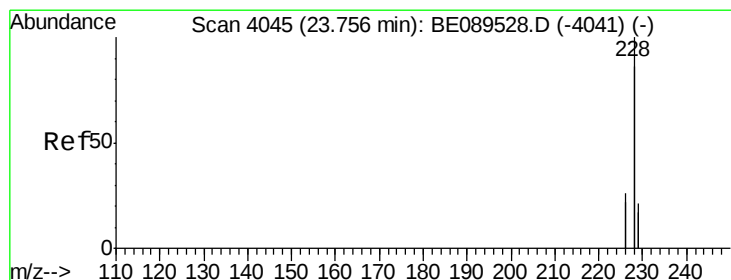
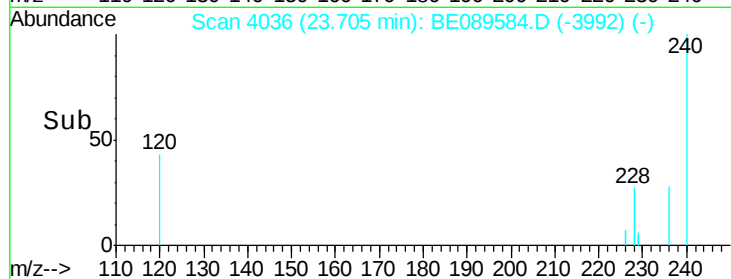
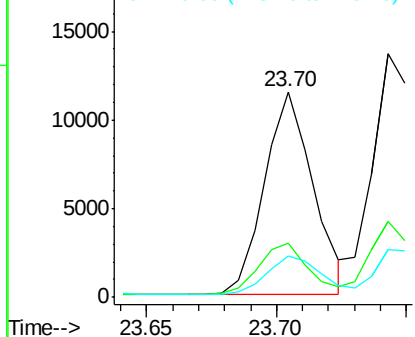
228 100

226 26.7 19.0 28.4

229 20.4 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: BE089584.D

Acq: 8 Feb 2015 10:08

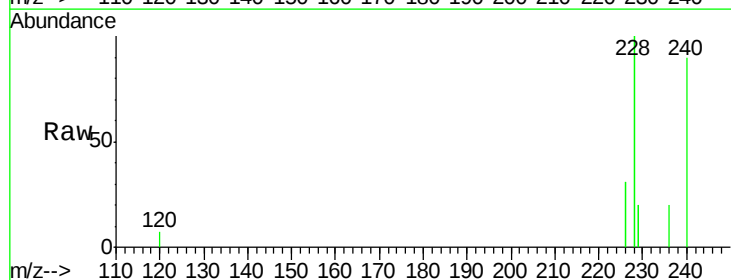
Tgt Ion:228 Resp: 19903

Ion Ratio Lower Upper

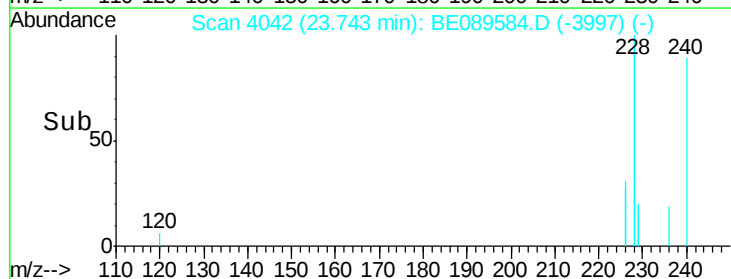
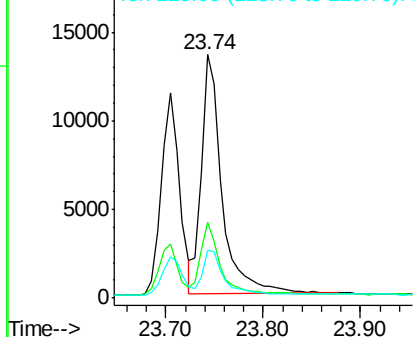
228 100

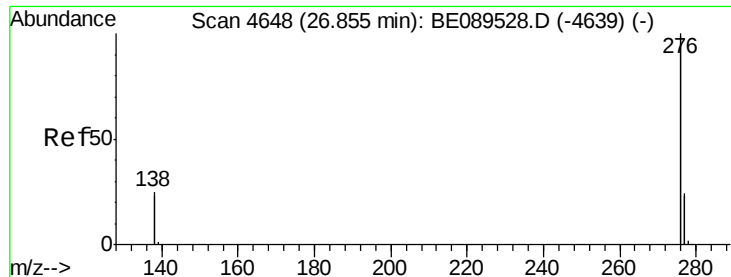
226 30.9 21.0 31.4

229 19.9 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

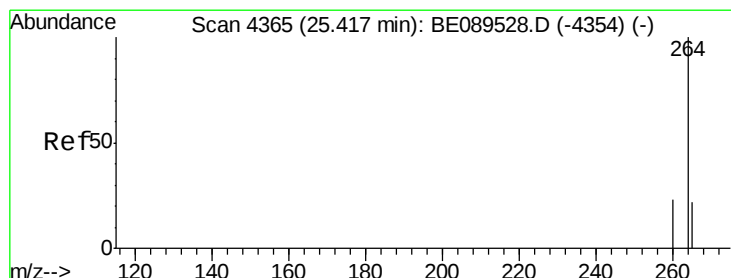
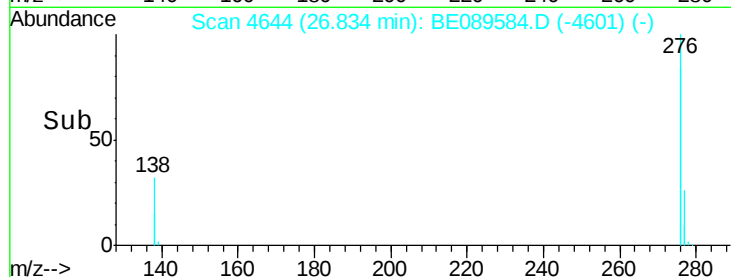
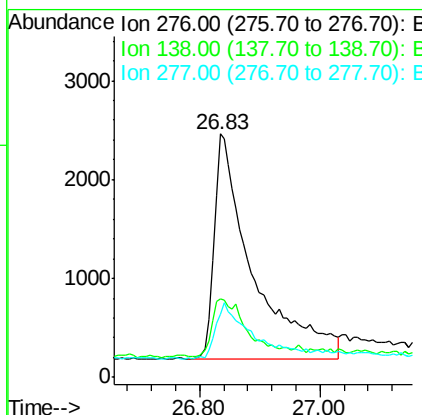
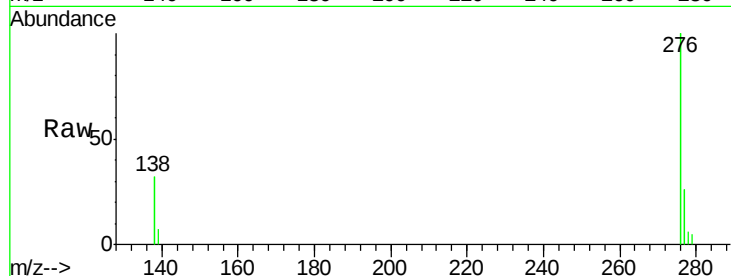




#21  
 Indeno(1,2,3-cd)pyrene  
 Concen: 0.06 ng  
 RT: 26.83 min Scan# 4644  
 Delta R.T. -0.02 min  
 Lab File: BE089584.D  
 Acq: 8 Feb 2015 10:08

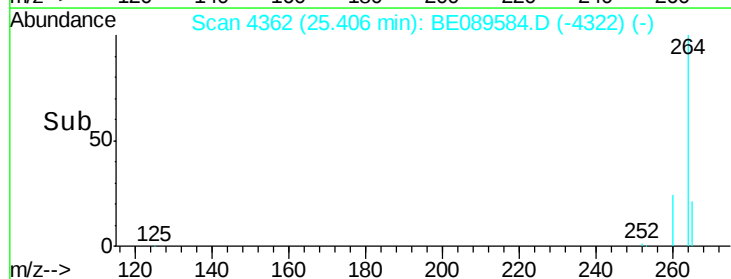
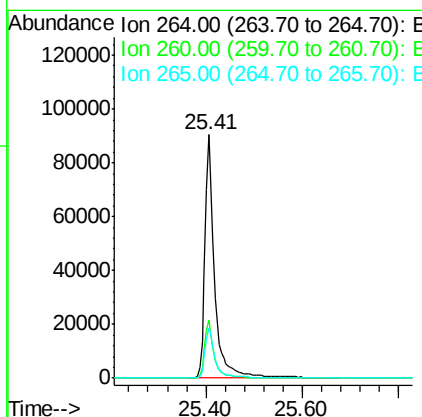
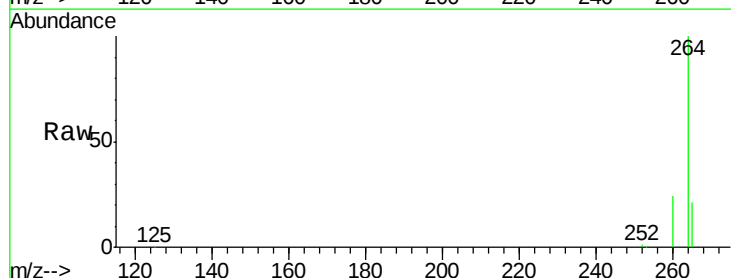
Instrument :  
 BNA\_E  
 ClientSampleId :

Tgt Ion:276 Resp: 10159  
 Ion Ratio Lower Upper  
 276 100  
 138 23.9 23.0 34.4  
 277 20.4 19.9 29.9



#22  
 Perylene-d12  
 Concen: 5.00 ng  
 RT: 25.41 min Scan# 4362  
 Delta R.T. -0.01 min  
 Lab File: BE089584.D  
 Acq: 8 Feb 2015 10:08

Tgt Ion:264 Resp: 128804  
 Ion Ratio Lower Upper  
 264 100  
 260 23.8 18.7 28.1  
 265 20.9 17.5 26.3

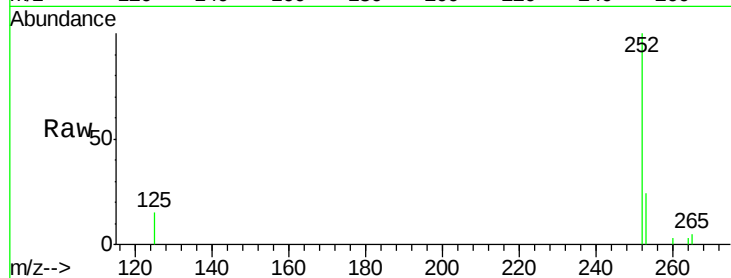




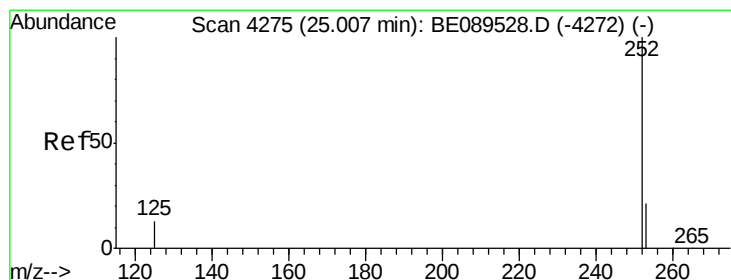
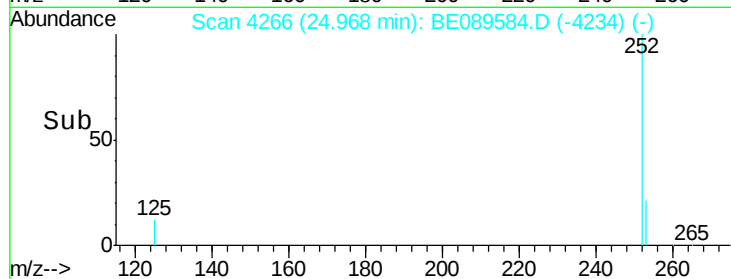
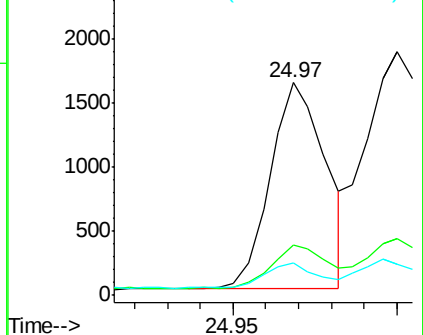
#23  
Benzo(b)fluoranthene  
Concen: 0.08 ng  
RT: 24.97 min Scan# 4266  
Delta R.T. -0.01 min  
Lab File: BE089584.D  
Acq: 8 Feb 2015 10:08

Instrument :  
BNA\_E  
ClientSampleId :

Tgt Ion:252 Resp: 1899  
Ion Ratio Lower Upper  
252 100  
253 23.6 17.4 26.0  
125 15.4 10.4 15.6

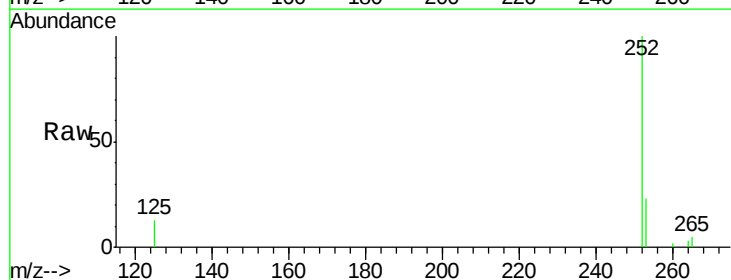


Abundance Ion 252.00 (251.70 to 252.70): E  
Ion 253.00 (252.70 to 253.70): E  
Ion 125.00 (124.70 to 125.70): E

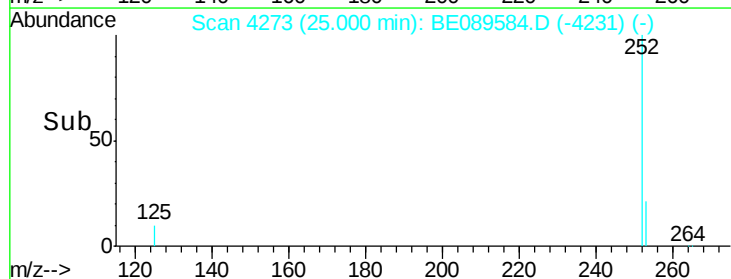
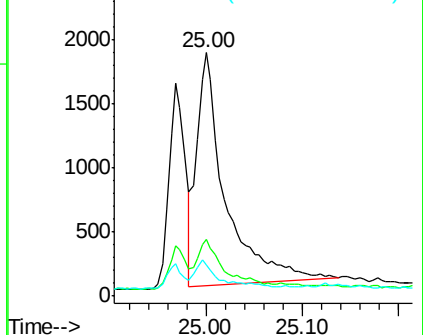


#24  
Benzo(k)fluoranthene  
Concen: 0.12 ng  
RT: 25.00 min Scan# 4273  
Delta R.T. -0.01 min  
Lab File: BE089584.D  
Acq: 8 Feb 2015 10:08

Tgt Ion:252 Resp: 3753  
Ion Ratio Lower Upper  
252 100  
253 23.3 17.2 25.8  
125 12.8 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: 0.08 ng

RT: 25.34 min Scan# 4347

Delta R.T. -0.01 min

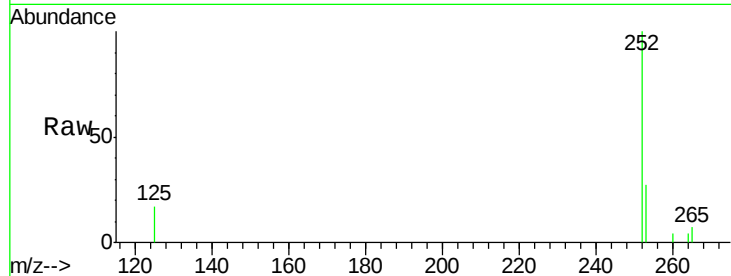
Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

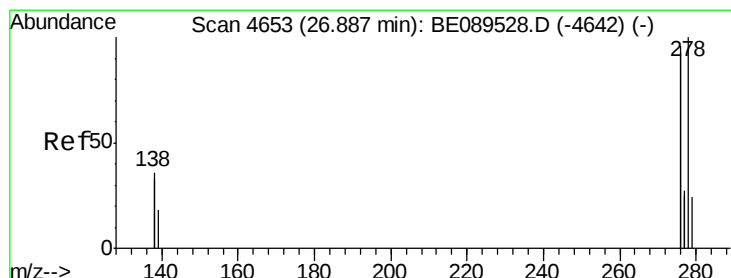
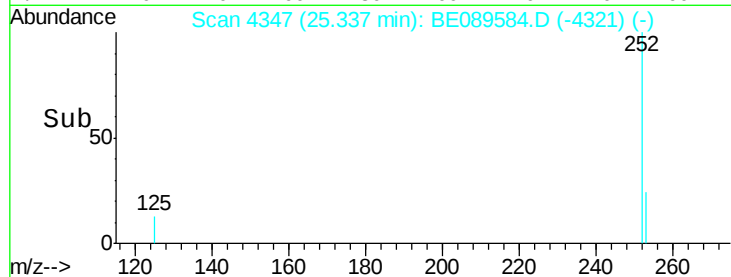
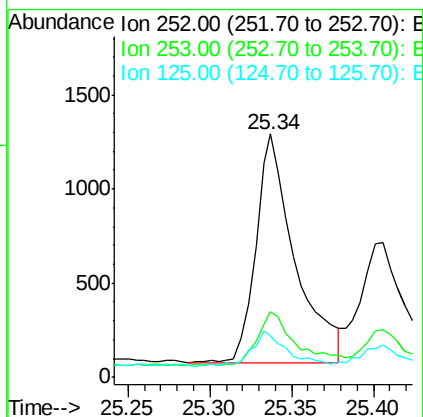
Instrument :

BNA\_E

ClientSampleId :



|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 252   | Resp: | 2015  |
| Ion      | Ratio | Lower | Upper |
| 252      | 100   |       |       |
| 253      | 27.1  | 17.8  | 26.6# |
| 125      | 16.8  | 11.4  | 17.2  |



#26

Dibenzo(a,h)anthracene

Concen: 0.06 ng

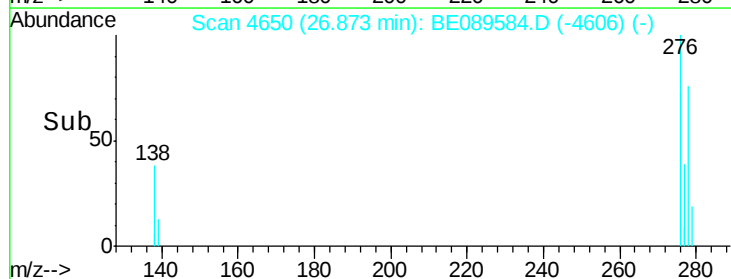
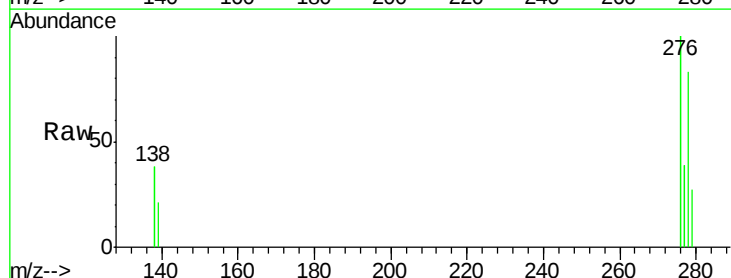
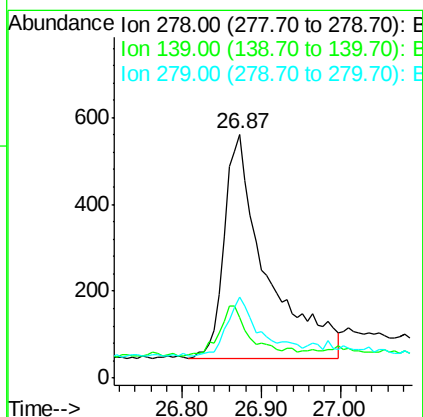
RT: 26.87 min Scan# 4650

Delta R.T. -0.01 min

Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 278   | Resp: | 1880  |
| Ion      | Ratio | Lower | Upper |
| 278      | 100   |       |       |
| 139      | 25.0  | 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# 4710

Delta R.T. -0.02 min

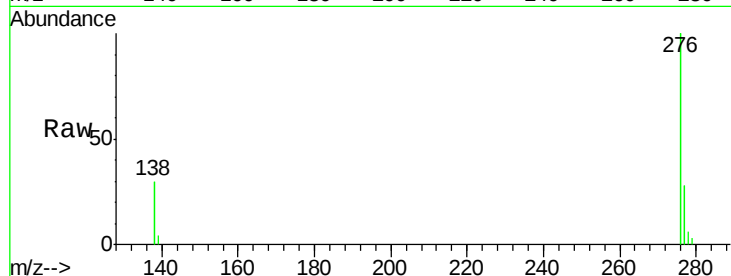
Lab File: BE089584.D

Acq: 8 Feb 2015 10:08

Instrument :

BNA\_E

ClientSampleId :



Tgt Ion: 276 Resp: 11362

Ion Ratio Lower Upper

276 100

277 28.3 18.6 27.8#

138 29.9 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

