

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE011516\  
 Data File : BE091374.D  
 Acq On : 15 Jan 2016 11:11  
 Operator : UM/IZ  
 Sample : SSTDCCC001  
 Misc :  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 BNA\_E  
 ClientSampleId :  
 SSTDCCC001EC

Quant Time: Jan 16 05:04:15 2016  
 Quant Method : Z:\HPCHEM1\BNA\_E\METHODS\8270-SIM-BE011416.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Fri Jan 15 15:14:26 2016  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|---------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 6.87  | 152  | 22830    | 5.00 | ng    | 0.00     |
| 4) Naphthalene-d8         | 9.55  | 136  | 105342   | 5.00 | ng    | 0.00     |
| 8) Acenaphthene-d10       | 13.35 | 164  | 52324    | 5.00 | ng    | 0.00     |
| 14) Phenanthrene-d10      | 16.08 | 188  | 145691   | 5.00 | ng    | 0.00     |
| 18) Chrysene-d12          | 20.21 | 240  | 154552   | 5.00 | ng    | 0.00     |
| 24) Perylene-d12          | 22.10 | 264  | 126254   | 5.00 | ng    | 0.00     |

|                             |       |     |       |      |    |       |
|-----------------------------|-------|-----|-------|------|----|-------|
| System Monitoring Compounds |       |     |       |      |    |       |
| 2) 2-Fluorophenol           | 4.93  | 112 | 3279  | 1.30 | ng | 0.00  |
| 3) Phenol-d6                | 6.56  | 99  | 5454  | 1.30 | ng | -0.01 |
| 5) Nitrobenzene-d5          | 8.16  | 82  | 5849  | 0.95 | ng | 0.00  |
| 9) 2,4,6-Tribromophenol     | 14.89 | 330 | 938   | 0.98 | ng | 0.00  |
| 10) 2-Fluorobiphenyl        | 12.01 | 172 | 11926 | 1.01 | ng | 0.00  |
| 20) Terphenyl-d14           | 18.62 | 244 | 15582 | 0.98 | ng | 0.00  |

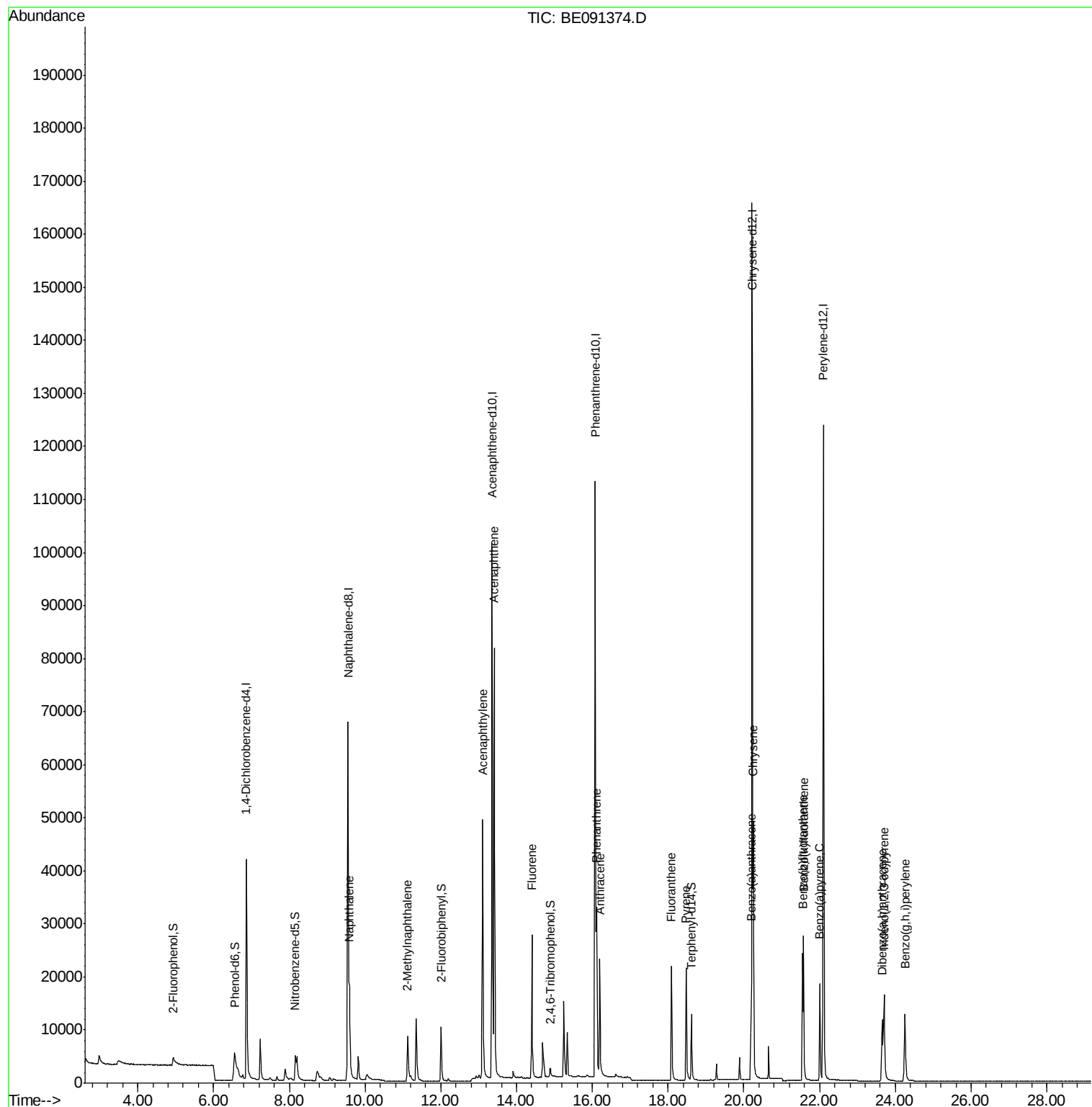
|                            |       |     |       |      |    |        |
|----------------------------|-------|-----|-------|------|----|--------|
| Target Compounds           |       |     |       |      |    | Qvalue |
| 6) Naphthalene             | 9.58  | 128 | 22605 | 1.01 | ng | 99     |
| 7) 2-Methylnaphthalene     | 11.12 | 142 | 8907  | 0.97 | ng | 94     |
| 11) Acenaphthylene         | 13.10 | 152 | 71978 | 0.97 | ng | 99     |
| 12) Acenaphthene           | 13.42 | 154 | 14862 | 1.00 | ng | 84     |
| 13) Fluorene               | 14.40 | 166 | 17998 | 0.98 | ng | 97     |
| 15) Phenanthrene           | 16.11 | 178 | 36127 | 1.00 | ng | 100    |
| 16) Anthracene             | 16.20 | 178 | 27482 | 0.99 | ng | 100    |
| 17) Fluoranthene           | 18.09 | 202 | 23846 | 0.87 | ng | 100    |
| 19) Pyrene                 | 18.48 | 202 | 22489 | 0.94 | ng | 99     |
| 21) Benzo(a)anthracene     | 20.19 | 228 | 19961 | 0.94 | ng | 99     |
| 22) Chrysene               | 20.25 | 228 | 37812 | 1.01 | ng | 98     |
| 23) Indeno(1,2,3-cd)pyrene | 23.70 | 276 | 22591 | 0.91 | ng | 95     |
| 25) Benzo(b)fluoranthene   | 21.55 | 252 | 23106 | 0.97 | ng | 100    |
| 26) Benzo(k)fluoranthene   | 21.58 | 252 | 28068 | 1.00 | ng | 99     |
| 27) Benzo(a)pyrene         | 22.01 | 252 | 20478 | 0.89 | ng | 99     |
| 28) Dibenzo(a,h)anthracene | 23.65 | 278 | 17190 | 0.99 | ng | 99     |
| 29) Benzo(g,h,i)perylene   | 24.25 | 276 | 20884 | 0.97 | ng | 99     |

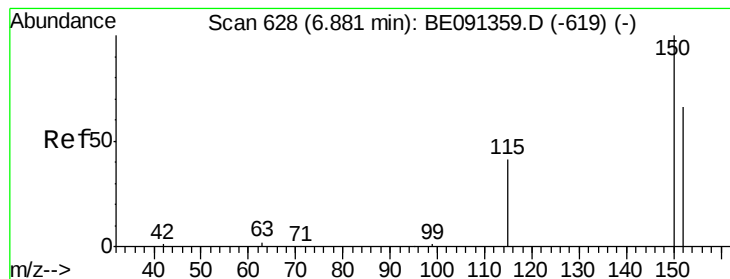
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE011516\  
Data File : BE091374.D  
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Misc :  
ALS Vial : 2 Sample Multiplier: 1

Instrument :  
BNA\_E  
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SSTDCCC001EC

Quant Time: Jan 16 05:04:15 2016  
Quant Method : Z:\HPCHEM1\BNA\_E\METHODS\8270-SIM-BE011416.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Fri Jan 15 15:14:26 2016  
Response via : Initial Calibration





#1

1,4-Dichlorobenzene-d4

Concen: 5.00 ng

RT: 6.87 min Scan# 627

Delta R.T. -0.01 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

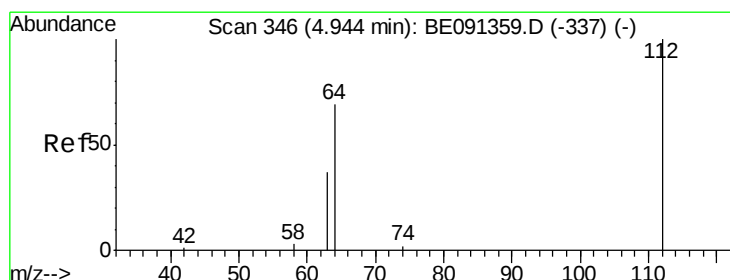
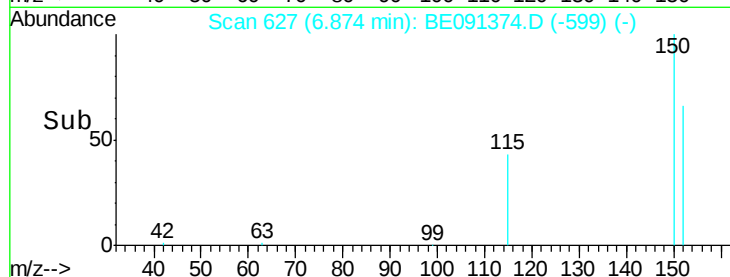
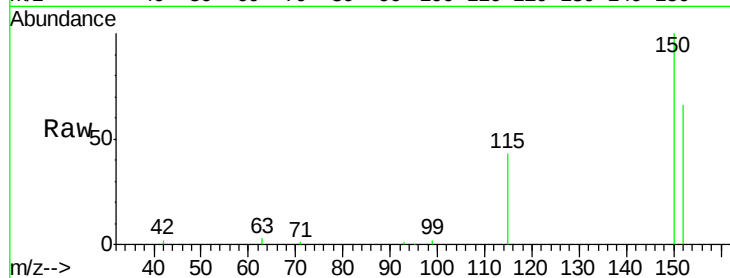
Tgt Ion:152 Resp: 22830

Ion Ratio Lower Upper

152 100

150 152.1 121.6 182.4

115 65.3 50.6 75.8



#2

2-Fluorophenol

Concen: 1.30 ng

RT: 4.93 min Scan# 344

Delta R.T. -0.01 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

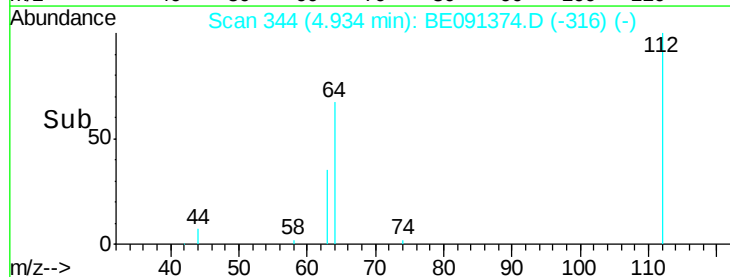
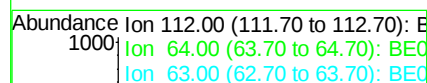
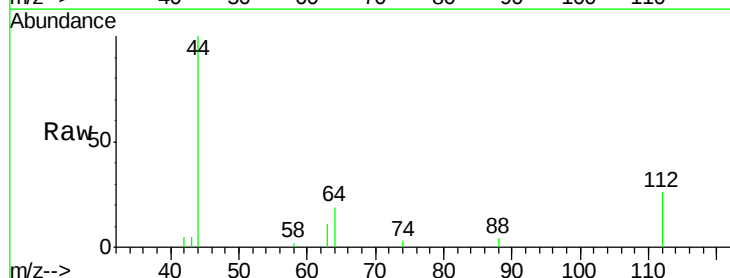
Tgt Ion:112 Resp: 3279

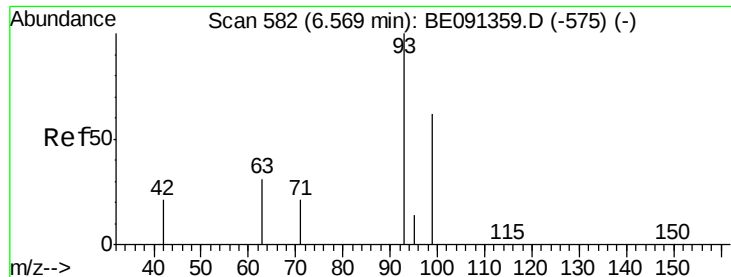
Ion Ratio Lower Upper

112 100

64 74.0 57.4 86.0

63 34.3 32.2 48.2





#3

Phenol-d6

Concen: 1.30 ng

RT: 6.56 min Scan# 580

Delta R.T. -0.01 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

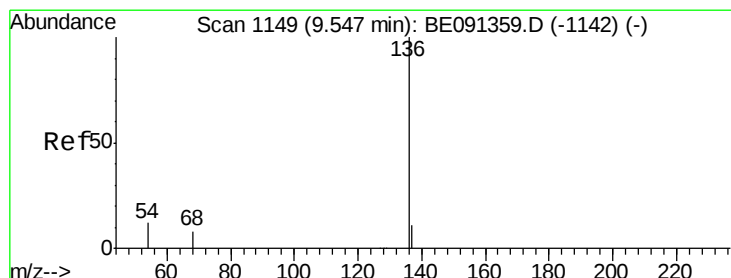
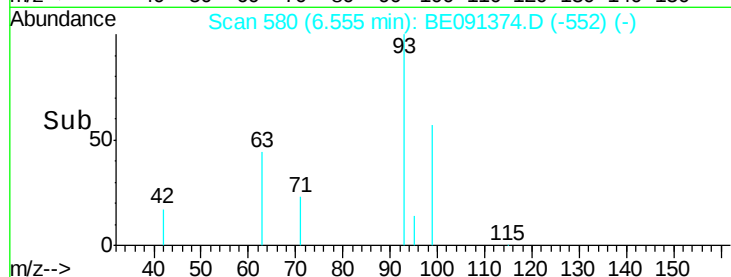
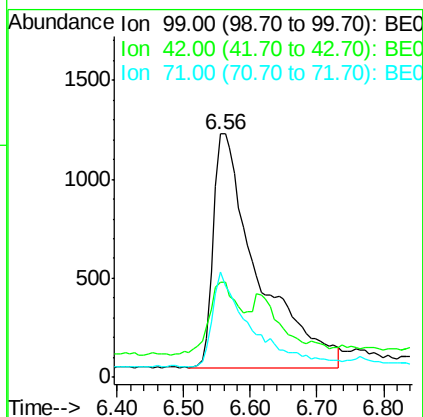
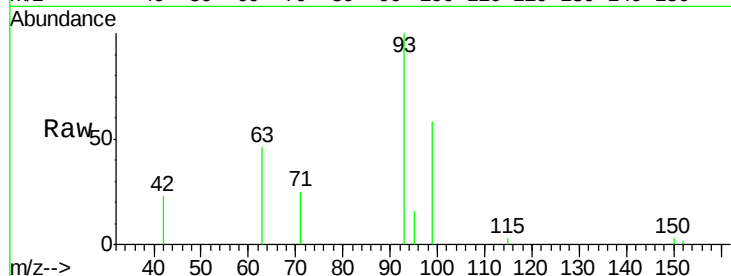
Tgt Ion: 99 Resp: 5454

Ion Ratio Lower Upper

99 100

42 19.7 22.9 34.3#

71 34.8 35.4 53.2#



#4

Naphthalene-d8

Concen: 5.00 ng

RT: 9.55 min Scan# 1149

Delta R.T. -0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Tgt Ion: 136 Resp: 105342

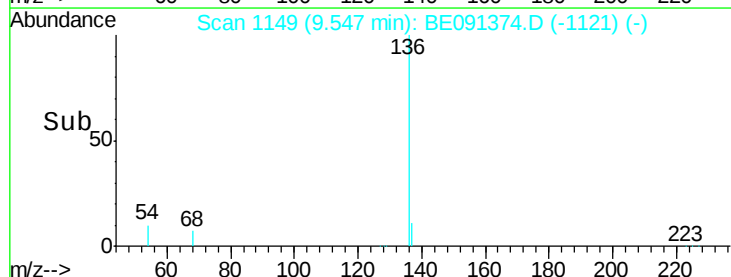
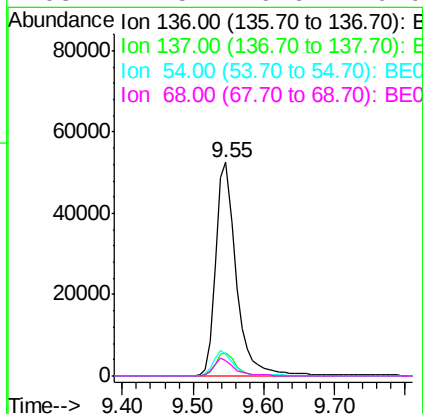
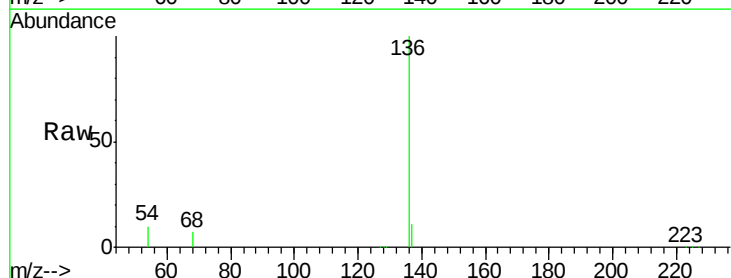
Ion Ratio Lower Upper

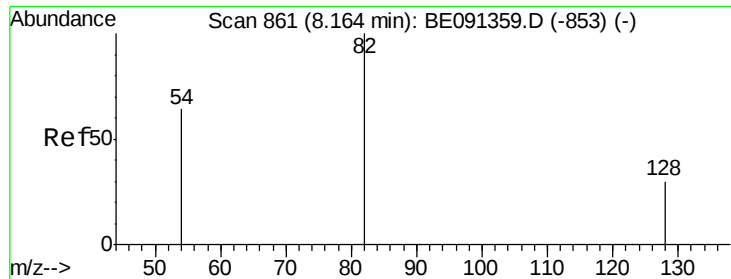
136 100

137 11.1 8.7 13.1

54 10.4 9.8 14.6

68 7.5 6.6 10.0





#5

Nitrobenzene-d5

Concen: 0.95 ng

RT: 8.16 min Scan# 860

Delta R.T. -0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

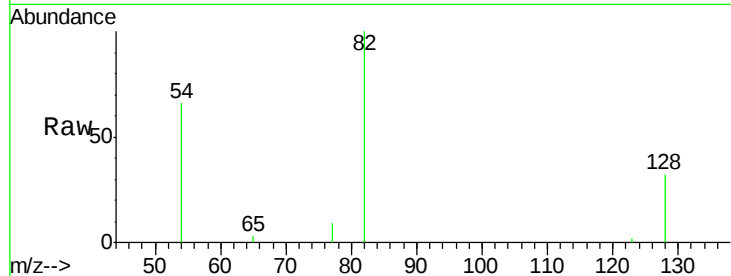
Tgt Ion: 82 Resp: 5849

Ion Ratio Lower Upper

82 100

128 32.0 24.6 36.8

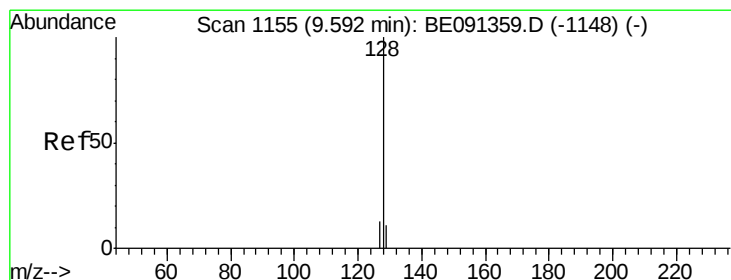
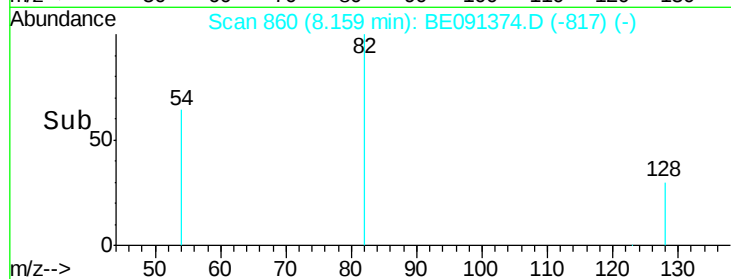
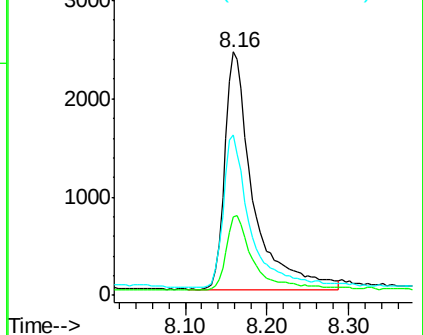
54 65.7 52.7 79.1



Abundance Ion 82.00 (81.70 to 82.70): BE0

Ion 128.00 (127.70 to 128.70): BE0

Ion 54.00 (53.70 to 54.70): BE0



#6

Naphthalene

Concen: 1.01 ng

RT: 9.58 min Scan# 1154

Delta R.T. -0.01 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

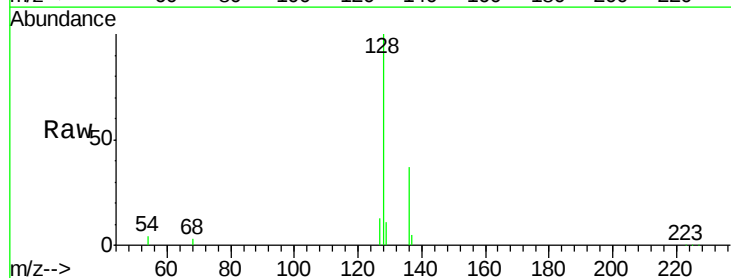
Tgt Ion: 128 Resp: 22605

Ion Ratio Lower Upper

128 100

129 11.4 9.3 13.9

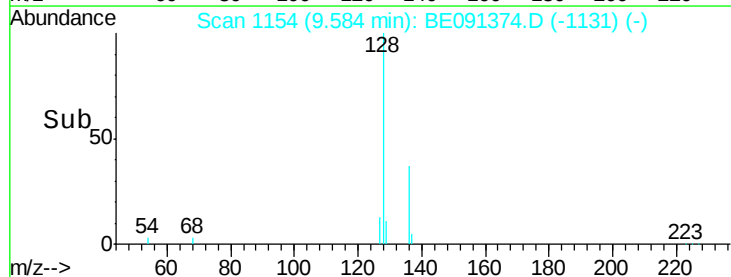
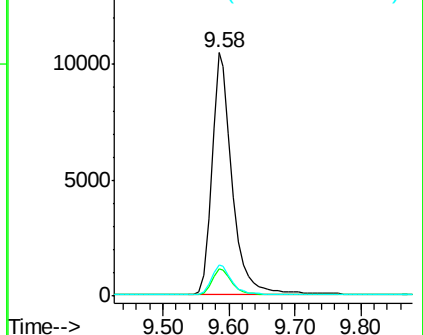
127 12.8 10.6 15.8

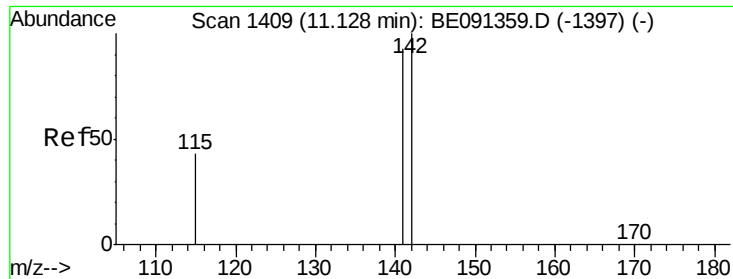


Abundance Ion 128.00 (127.70 to 128.70): E

Ion 129.00 (128.70 to 129.70): E

Ion 127.00 (126.70 to 127.70): E





#7

2-Methylnaphthalene

Concen: 0.97 ng

RT: 11.12 min Scan# 1408

Delta R.T. -0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

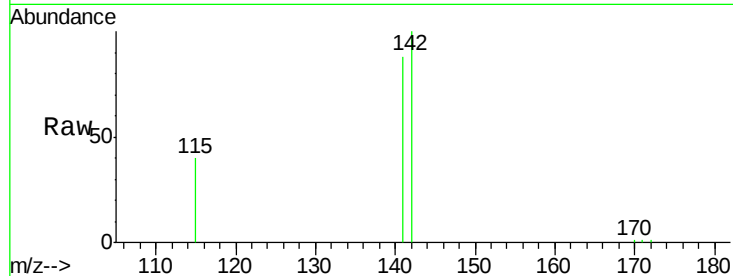
Tgt Ion:142 Resp: 8907

Ion Ratio Lower Upper

142 100

141 87.8 74.5 111.7

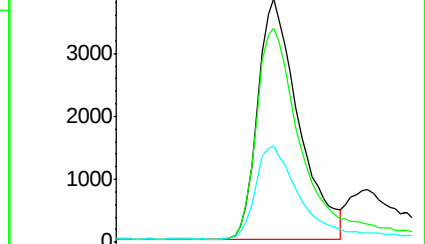
115 39.6 35.2 52.8



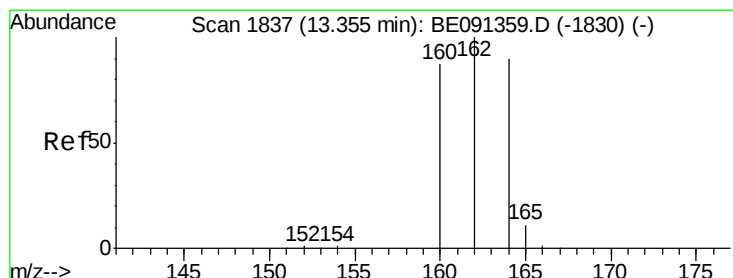
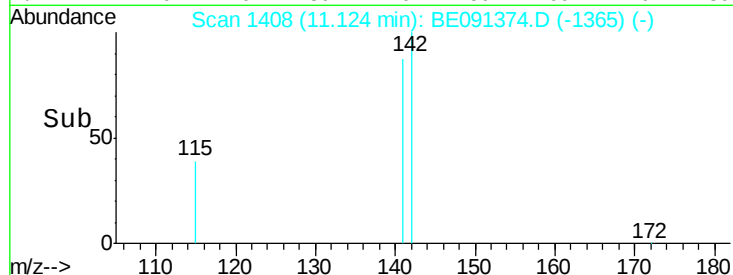
Abundance Ion 142.00 (141.70 to 142.70): E

Ion 141.00 (140.70 to 141.70): E

Ion 115.00 (114.70 to 115.70): E



Time--> 11.00 11.10 11.20



#8

Acenaphthene-d10

Concen: 5.00 ng

RT: 13.35 min Scan# 1837

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

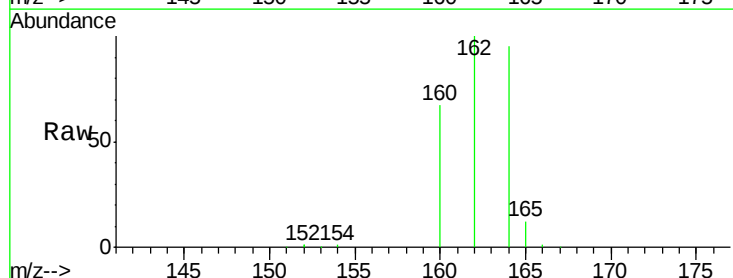
Tgt Ion:164 Resp: 52324

Ion Ratio Lower Upper

164 100

162 105.6 88.5 132.7

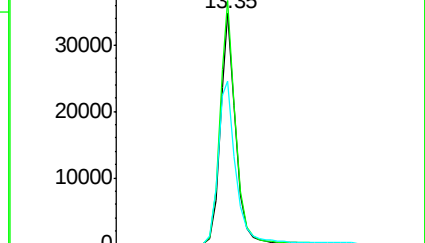
160 70.6 76.7 115.1#



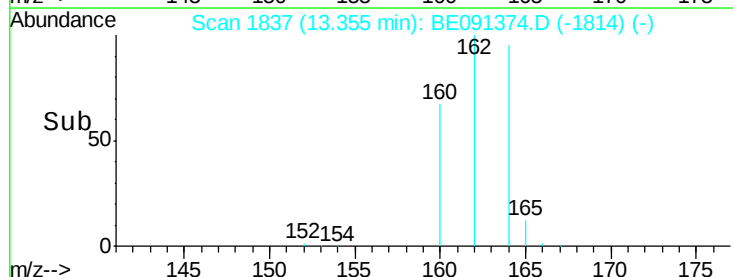
Abundance Ion 164.00 (163.70 to 164.70): E

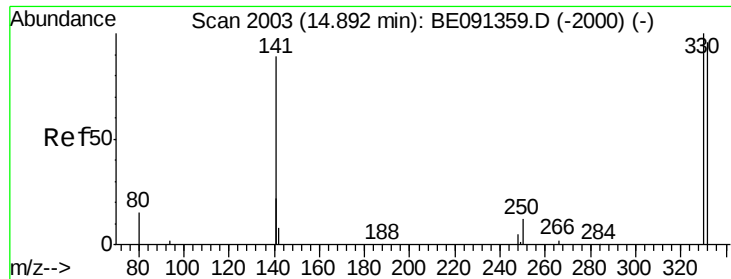
Ion 162.00 (161.70 to 162.70): E

Ion 160.00 (159.70 to 160.70): E



Time--> 13.20 13.30 13.40 13.50





#9

2,4,6-Tribromophenol

Concen: 0.98 ng

RT: 14.89 min Scan# 2003

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

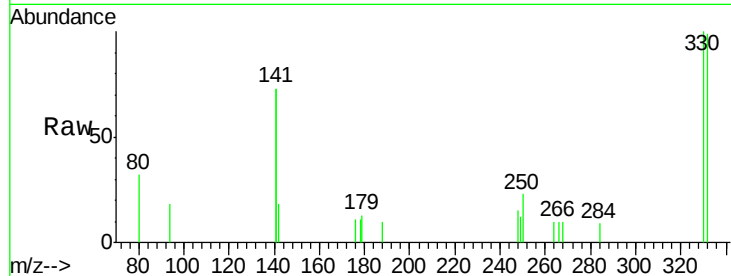
Tgt Ion:330 Resp: 938

Ion Ratio Lower Upper

330 100

332 96.4 78.6 118.0

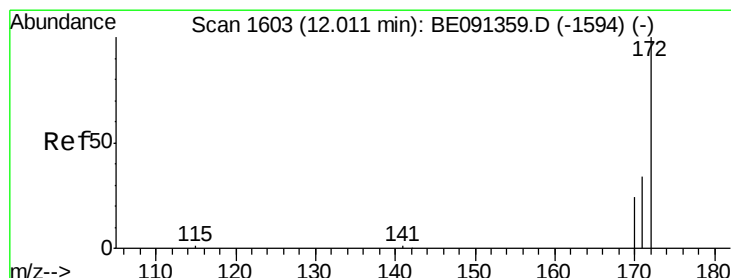
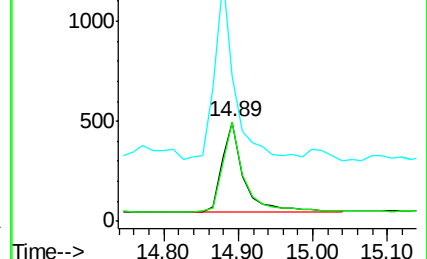
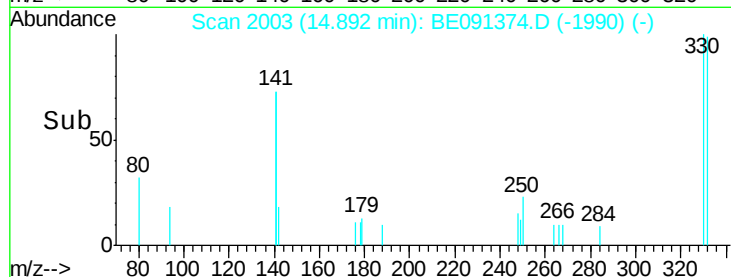
141 173.9 147.8 221.8



Abundance Ion 329.80 (329.50 to 330.50): E

Ion 331.80 (331.50 to 332.50): E

Ion 141.00 (140.70 to 141.70): E



#10

2-Fluorobiphenyl

Concen: 1.01 ng

RT: 12.01 min Scan# 1602

Delta R.T. -0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

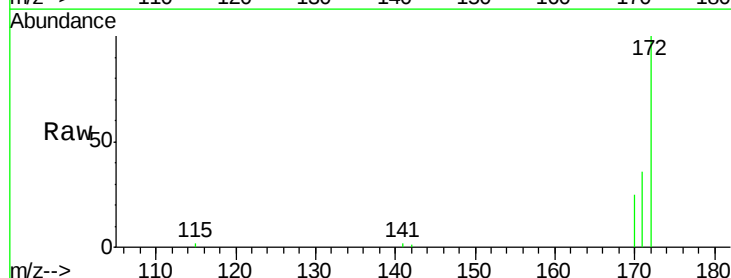
Tgt Ion:172 Resp: 11926

Ion Ratio Lower Upper

172 100

171 35.7 27.3 40.9

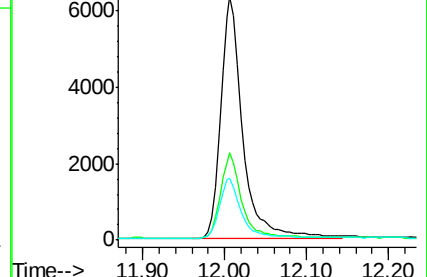
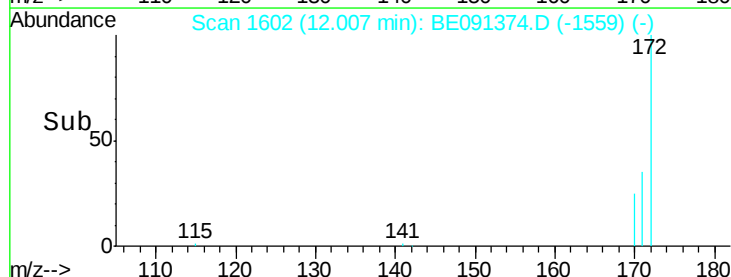
170 25.4 19.8 29.6

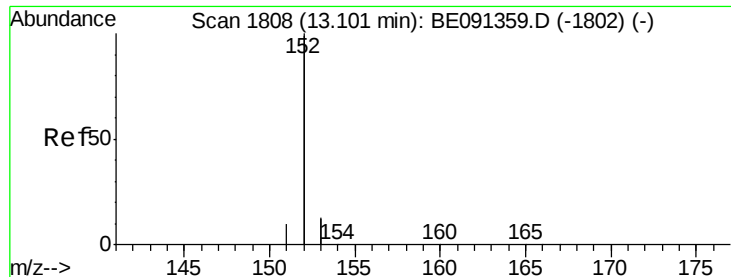


Abundance Ion 172.00 (171.70 to 172.70): E

Ion 171.00 (170.70 to 171.70): E

Ion 170.00 (169.70 to 170.70): E





#11

Acenaphthylene

Concen: 0.97 ng

RT: 13.10 min Scan# 1808

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

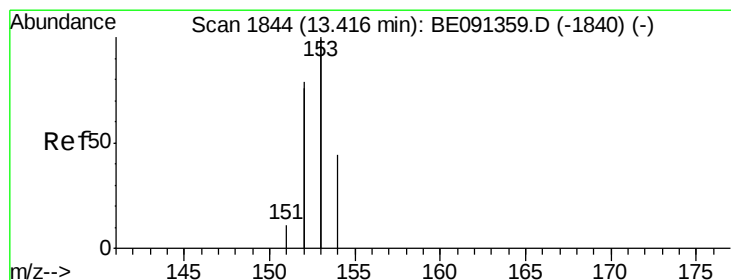
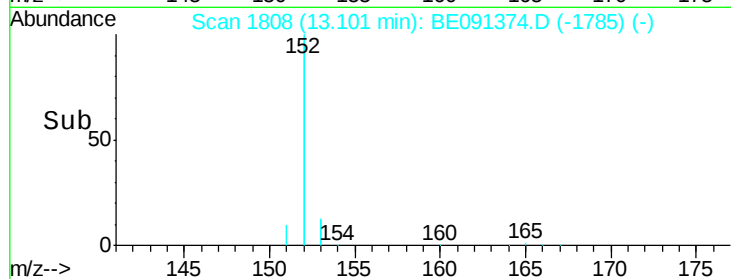
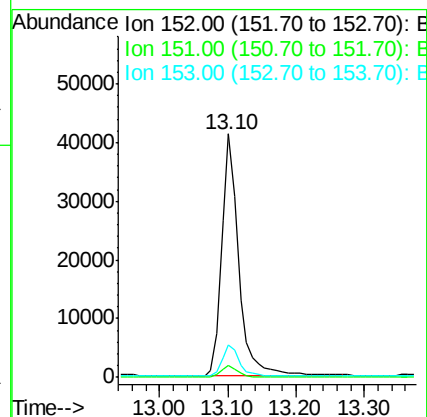
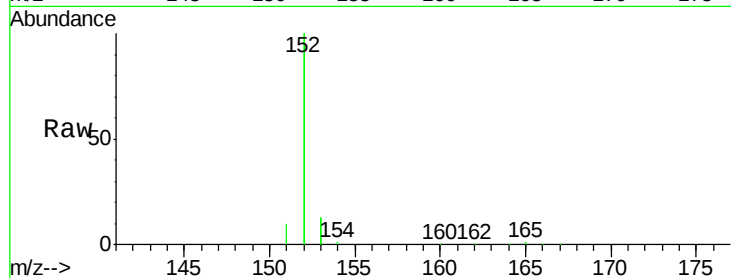
Tgt Ion:152 Resp: 71978

Ion Ratio Lower Upper

152 100

151 4.8 3.8 5.8

153 12.9 10.1 15.1



#12

Acenaphthene

Concen: 1.00 ng

RT: 13.42 min Scan# 1844

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

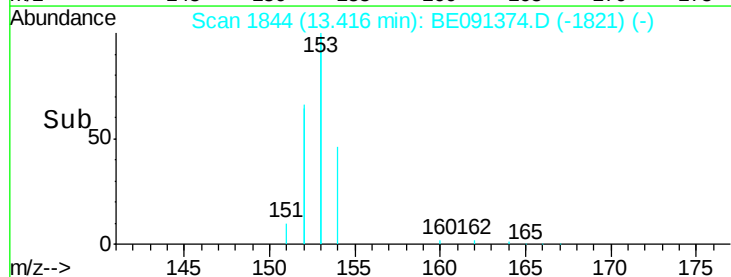
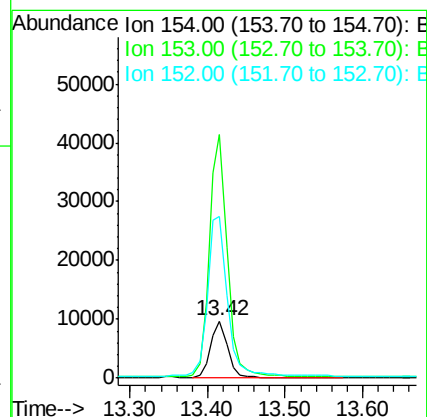
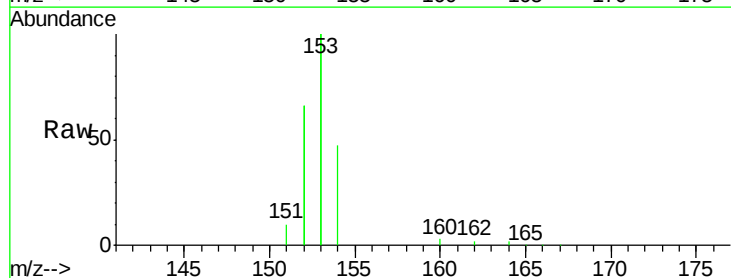
Tgt Ion:154 Resp: 14862

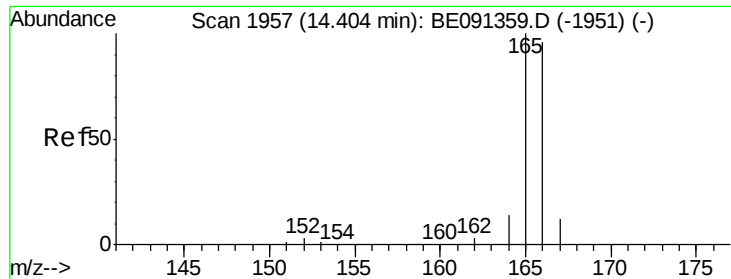
Ion Ratio Lower Upper

154 100

153 445.8 370.2 555.4

152 325.7 310.5 465.7





#13

Fluorene

Concen: 0.98 ng

RT: 14.40 min Scan# 1957

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

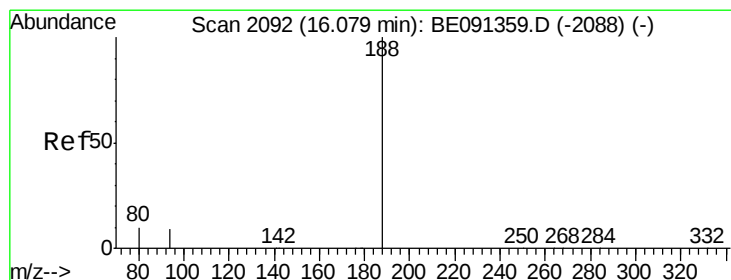
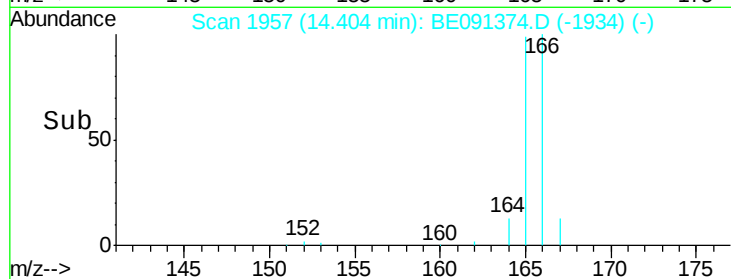
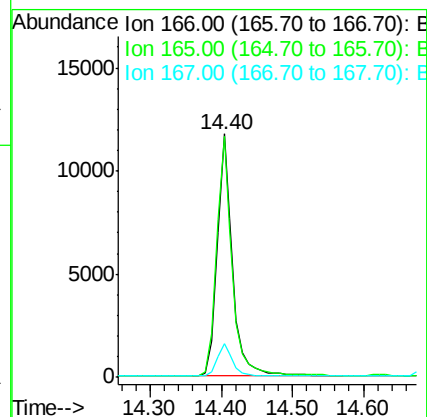
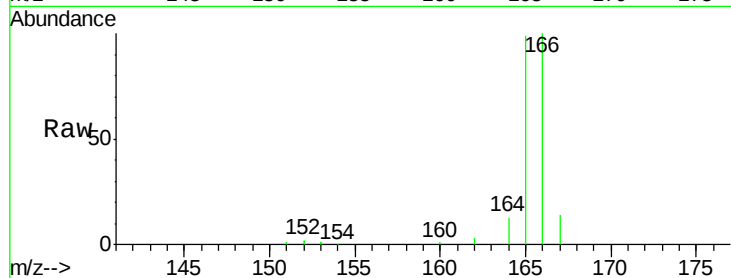
Tgt Ion:166 Resp: 17998

Ion Ratio Lower Upper

166 100

165 100.9 83.0 124.6

167 13.5 11.1 16.7



#14

Phenanthrene-d10

Concen: 5.00 ng

RT: 16.08 min Scan# 2092

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

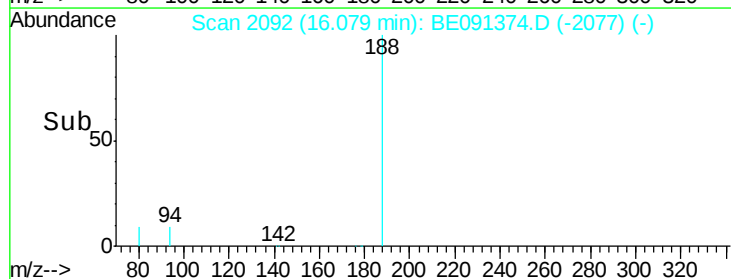
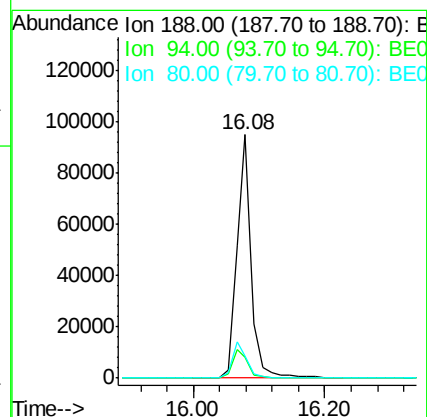
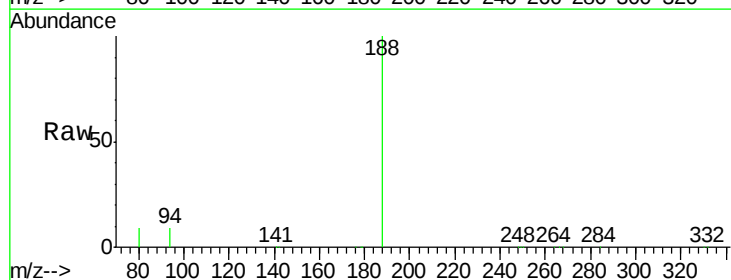
Tgt Ion:188 Resp: 145691

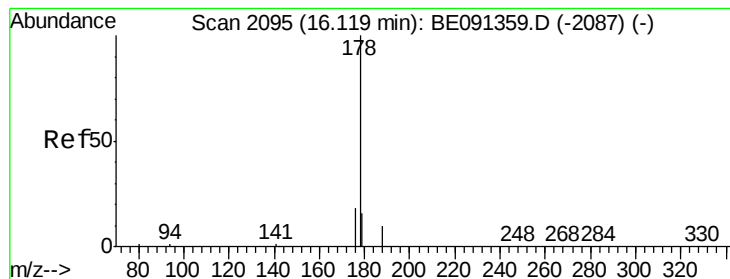
Ion Ratio Lower Upper

188 100

94 8.7 7.5 11.3

80 9.1 8.2 12.2





#15

Phenanthrene

Concen: 1.00 ng

RT: 16.11 min Scan# 2094

Delta R.T. -0.01 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

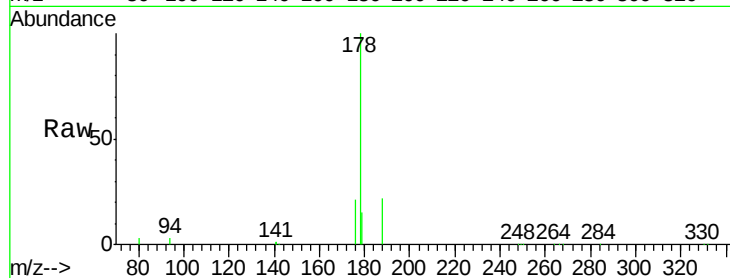
BNA\_E

ClientSampleId :

SSTDCCC001EC

Tgt Ion:178 Resp: 36127

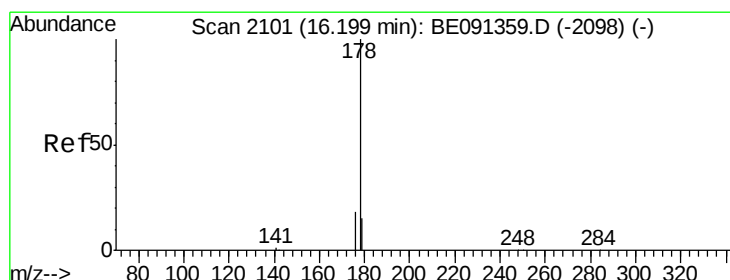
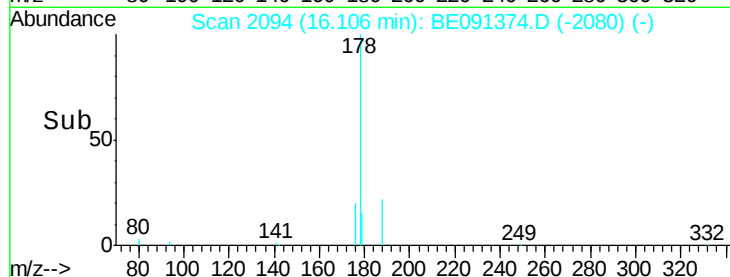
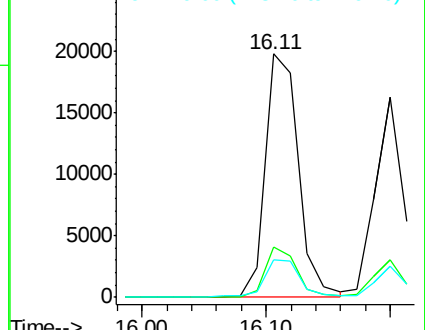
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 178 | 100   |       |       |
| 176 | 19.5  | 15.4  | 23.2  |
| 179 | 15.8  | 12.8  | 19.2  |



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E



#16

Anthracene

Concen: 0.99 ng

RT: 16.20 min Scan# 2101

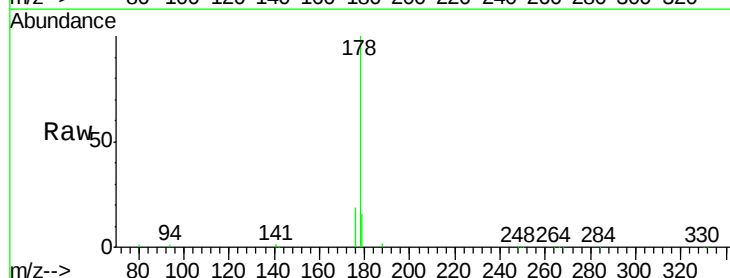
Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Tgt Ion:178 Resp: 27482

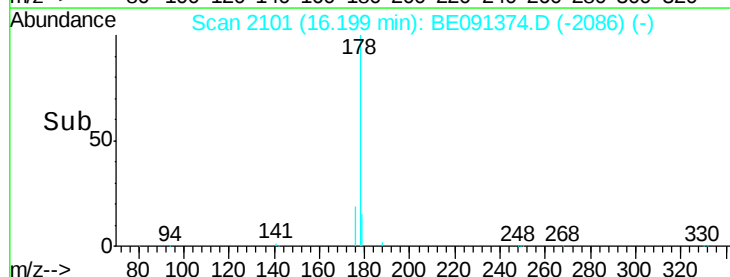
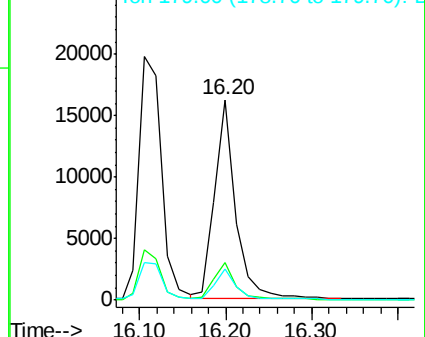
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 178 | 100   |       |       |
| 176 | 19.0  | 15.0  | 22.6  |
| 179 | 15.6  | 12.4  | 18.6  |

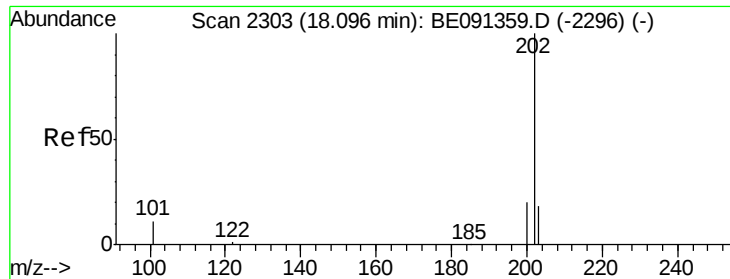


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E

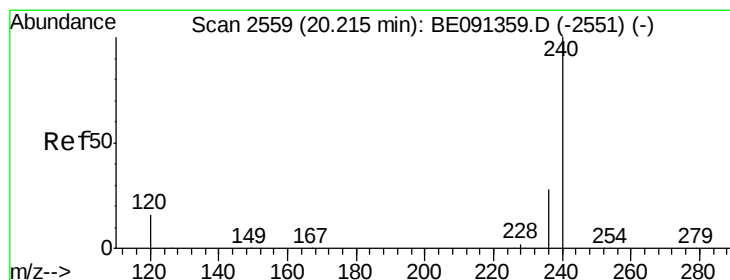
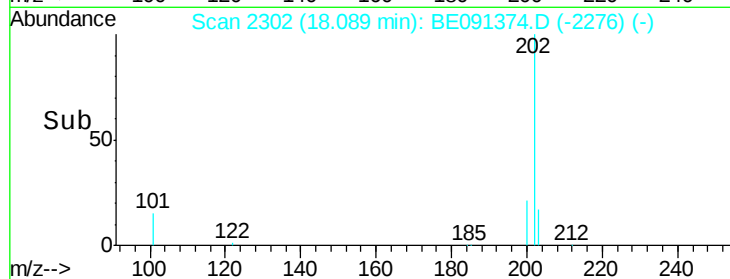
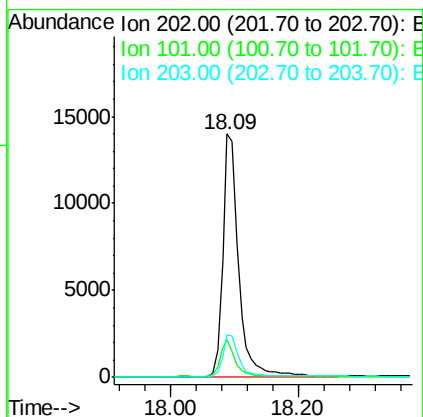
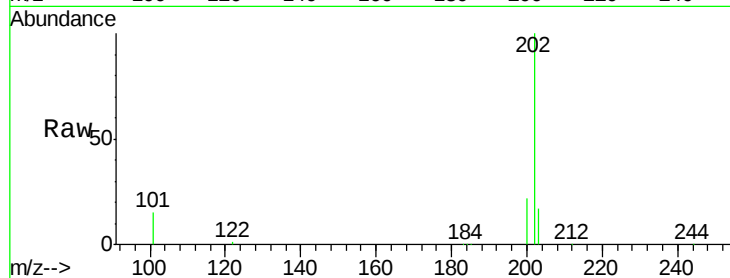




#17  
**Fluoranthene**  
 Concen: 0.87 ng  
 RT: 18.09 min Scan# 2302  
 Delta R.T. -0.01 min  
 Lab File: BE091374.D  
 Acq: 15 Jan 2016 11:11

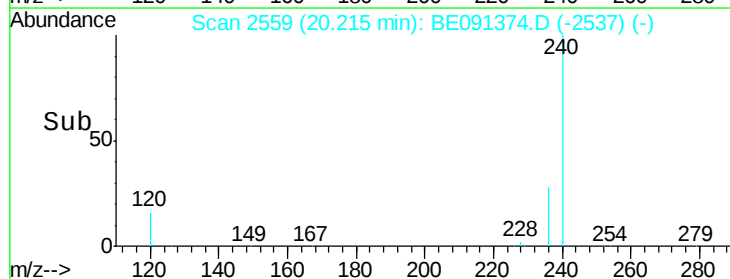
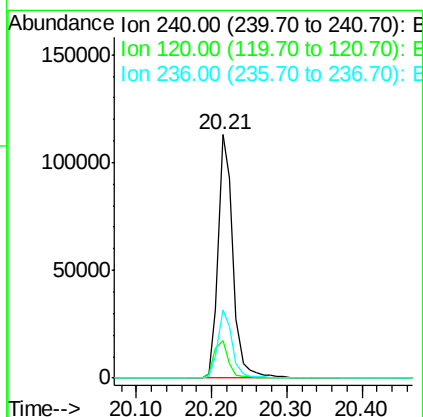
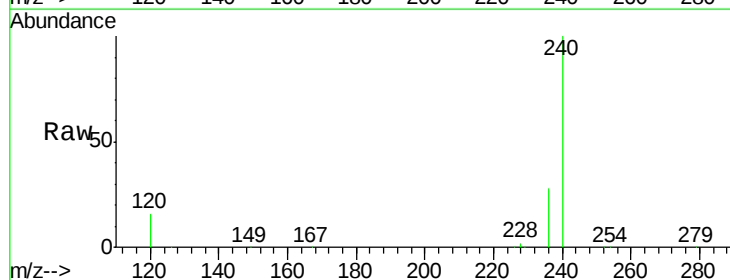
Instrument :  
 BNA\_E  
 ClientSampleId :  
 SSTDCCC001EC

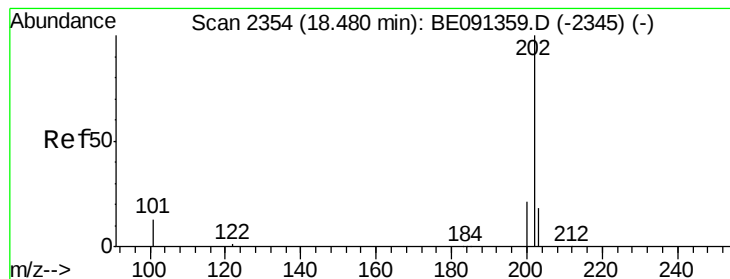
Tgt Ion:202 Resp: 23846  
 Ion Ratio Lower Upper  
 202 100  
 101 14.0 11.0 16.4  
 203 17.3 13.9 20.9



#18  
**Chrysene-d12**  
 Concen: 5.00 ng  
 RT: 20.21 min Scan# 2559  
 Delta R.T. -0.00 min  
 Lab File: BE091374.D  
 Acq: 15 Jan 2016 11:11

Tgt Ion:240 Resp: 154552  
 Ion Ratio Lower Upper  
 240 100  
 120 15.7 12.6 19.0  
 236 27.8 22.7 34.1





#19

Pyrene

Concen: 0.94 ng

RT: 18.48 min Scan# 2354

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

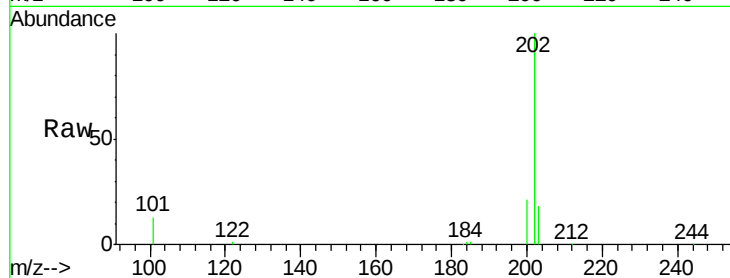
Tgt Ion:202 Resp: 22489

Ion Ratio Lower Upper

202 100

200 20.9 17.2 25.8

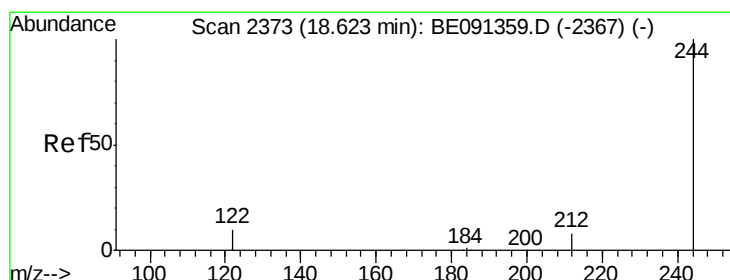
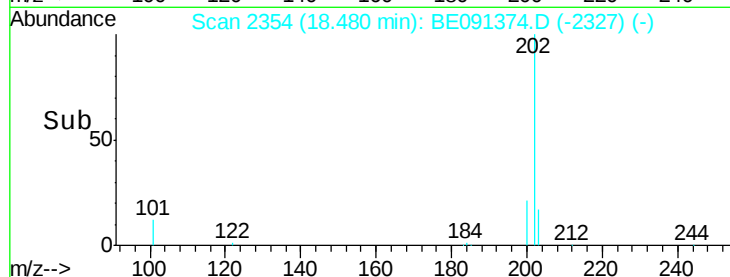
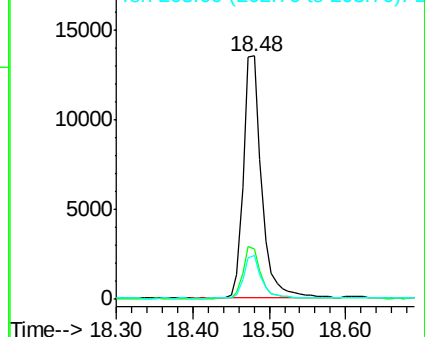
203 17.4 14.2 21.4



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



#20

Terphenyl-d14

Concen: 0.98 ng

RT: 18.62 min Scan# 2373

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

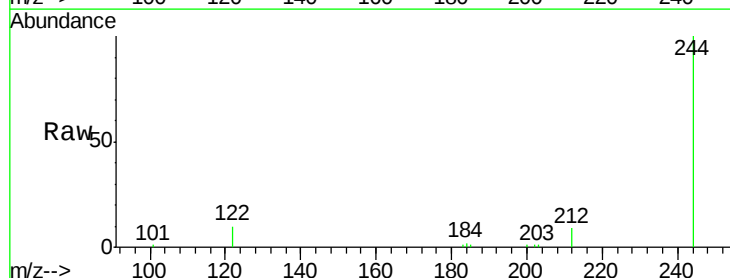
Tgt Ion:244 Resp: 15582

Ion Ratio Lower Upper

244 100

212 8.6 7.0 10.4

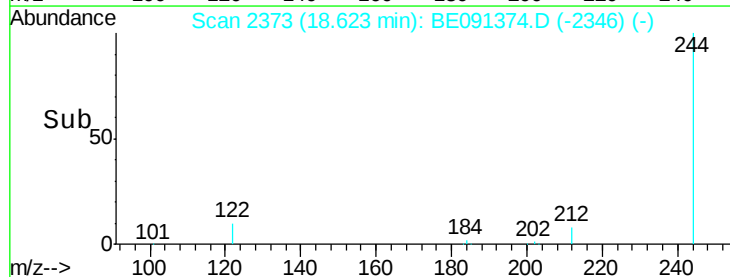
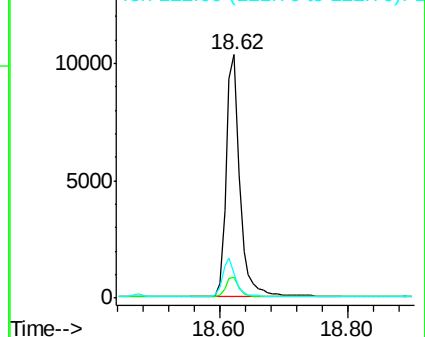
122 10.1 8.5 12.7

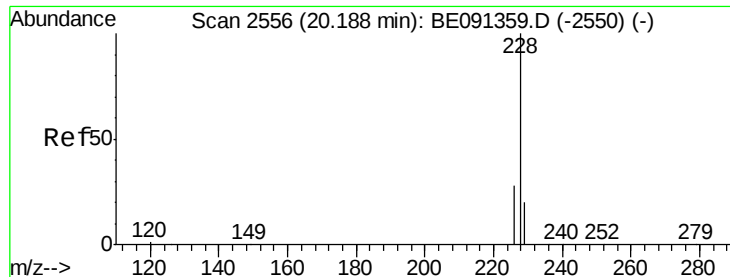


Abundance Ion 244.00 (243.70 to 244.70): E

Ion 212.00 (211.70 to 212.70): E

Ion 122.00 (121.70 to 122.70): E





#21

Benzo(a)anthracene

Concen: 0.94 ng

RT: 20.19 min Scan# 2556

Delta R.T. 0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

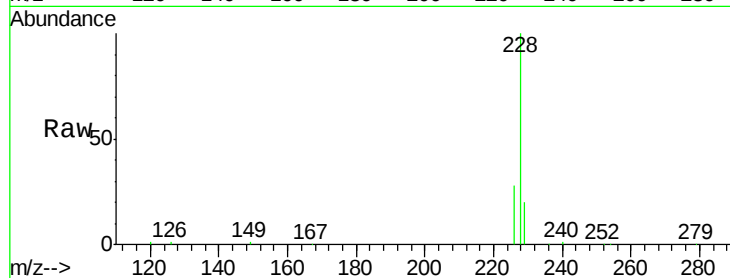
Tgt Ion:228 Resp: 19961

Ion Ratio Lower Upper

228 100

226 28.0 22.5 33.7

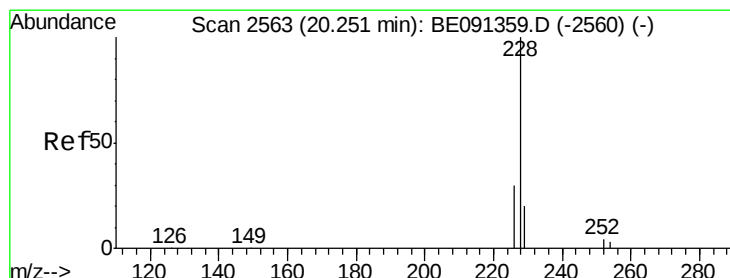
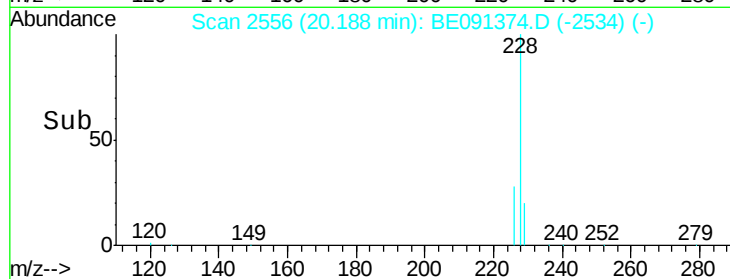
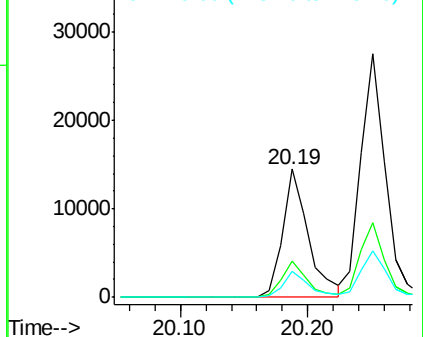
229 19.8 16.2 24.4



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



#22

Chrysene

Concen: 1.01 ng

RT: 20.25 min Scan# 2563

Delta R.T. -0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

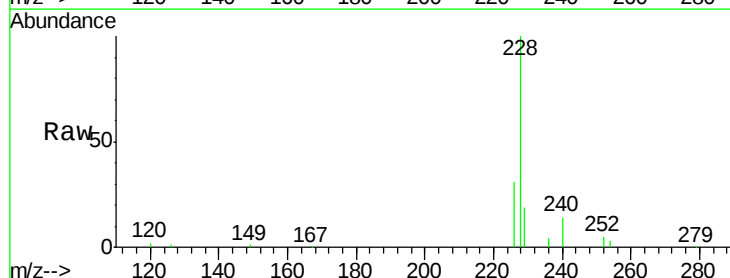
Tgt Ion:228 Resp: 37812

Ion Ratio Lower Upper

228 100

226 30.5 23.7 35.5

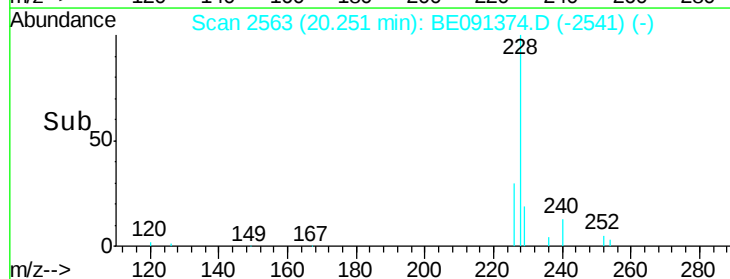
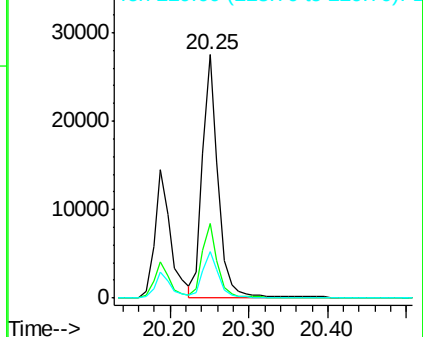
229 19.2 16.0 24.0

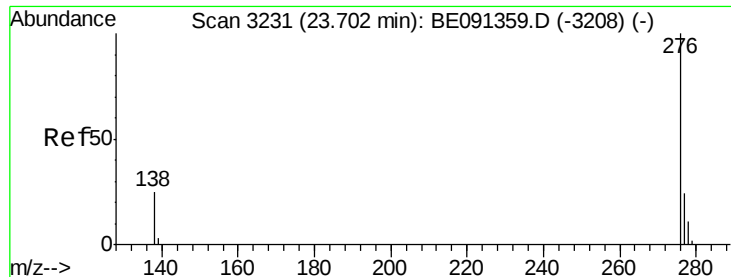


Abundance Ion 228.00 (227.70 to 228.70): E

Ion 226.00 (225.70 to 226.70): E

Ion 229.00 (228.70 to 229.70): E

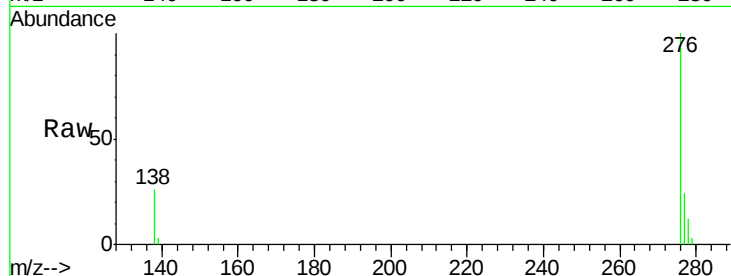




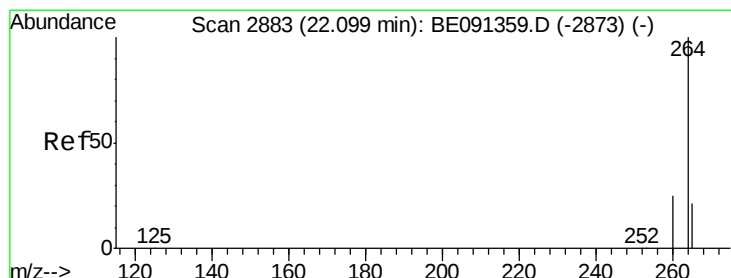
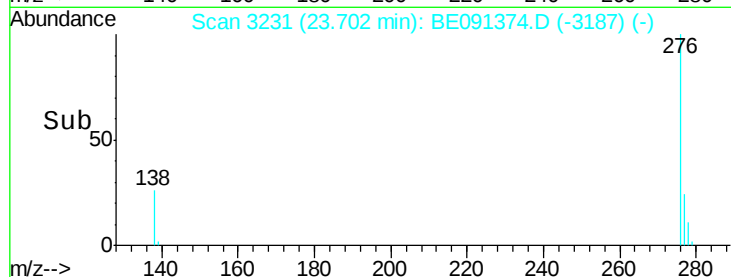
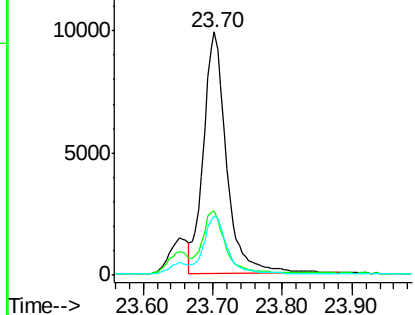
#23  
Indeno(1,2,3-cd)pyrene  
Concen: 0.91 ng  
RT: 23.70 min Scan# 3231  
Delta R.T. -0.00 min  
Lab File: BE091374.D  
Acq: 15 Jan 2016 11:11

Instrument :  
BNA\_E  
ClientSampleId :  
SSTDCCC001EC

Tgt Ion:276 Resp: 22591  
Ion Ratio Lower Upper  
276 100  
138 25.0 18.6 27.8  
277 23.1 16.5 24.7

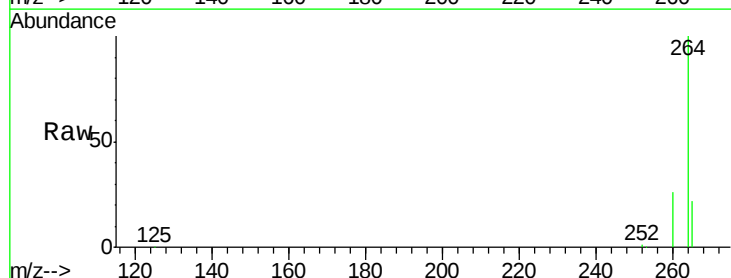


Abundance Ion 276.00 (275.70 to 276.70): E  
Ion 138.00 (137.70 to 138.70): E  
Ion 277.00 (276.70 to 277.70): E

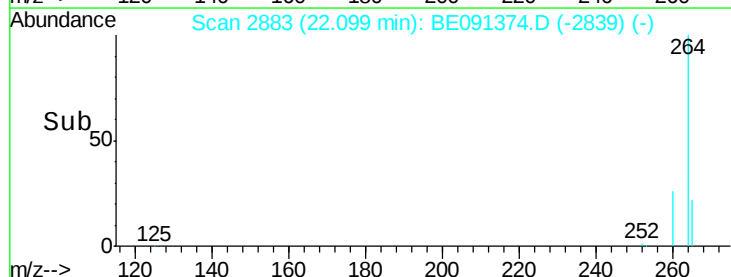
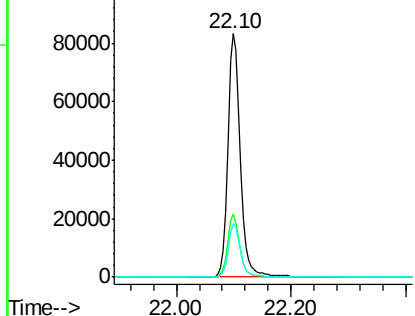


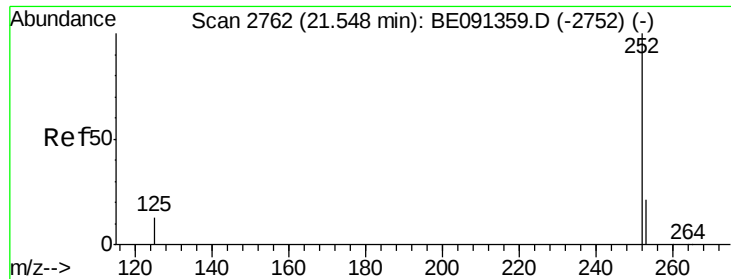
#24  
Perylene-d12  
Concen: 5.00 ng  
RT: 22.10 min Scan# 2883  
Delta R.T. 0.00 min  
Lab File: BE091374.D  
Acq: 15 Jan 2016 11:11

Tgt Ion:264 Resp: 126254  
Ion Ratio Lower Upper  
264 100  
260 25.7 20.4 30.6  
265 21.8 17.2 25.8



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

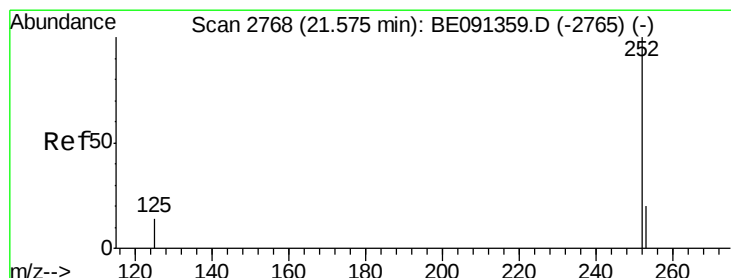
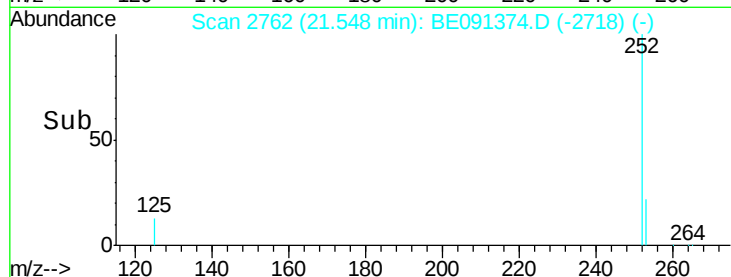
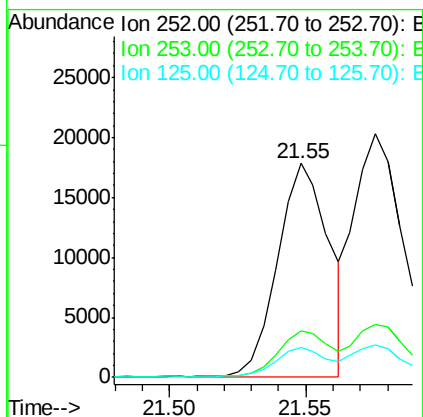
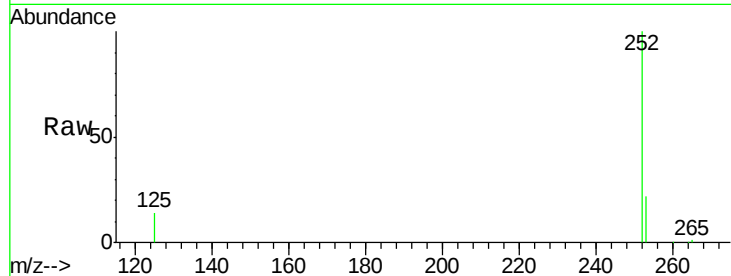




#25  
Benzo(b)fluoranthene  
Concen: 0.97 ng  
RT: 21.55 min Scan# 2762  
Delta R.T. 0.00 min  
Lab File: BE091374.D  
Acq: 15 Jan 2016 11:11

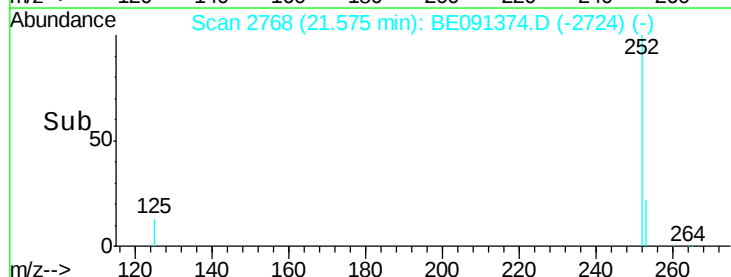
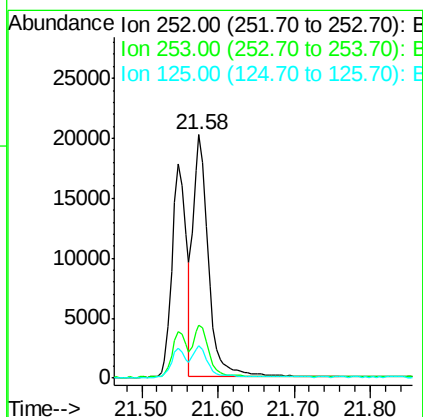
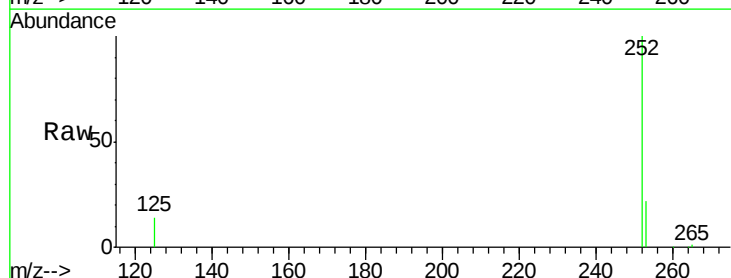
Instrument :  
BNA\_E  
ClientSampleId :  
SSTDCCC001EC

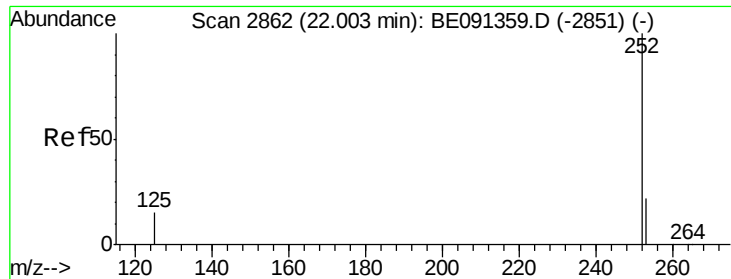
Tgt Ion:252 Resp: 23106  
Ion Ratio Lower Upper  
252 100  
253 21.9 17.4 26.2  
125 13.7 11.0 16.6



#26  
Benzo(k)fluoranthene  
Concen: 1.00 ng  
RT: 21.58 min Scan# 2768  
Delta R.T. 0.00 min  
Lab File: BE091374.D  
Acq: 15 Jan 2016 11:11

Tgt Ion:252 Resp: 28068  
Ion Ratio Lower Upper  
252 100  
253 21.9 17.5 26.3  
125 13.5 11.3 16.9





#27

Benzo(a)pyrene

Concen: 0.89 ng

RT: 22.01 min Scan# 2863

Delta R.T. 0.01 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC

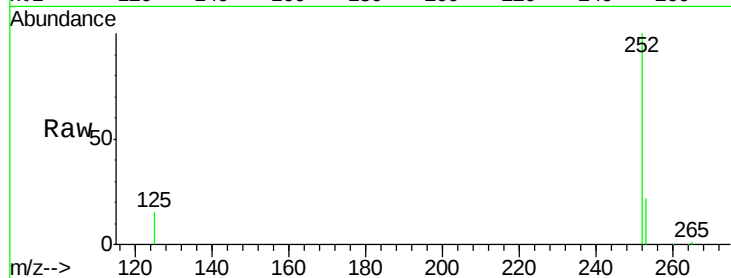
Tgt Ion:252 Resp: 20478

Ion Ratio Lower Upper

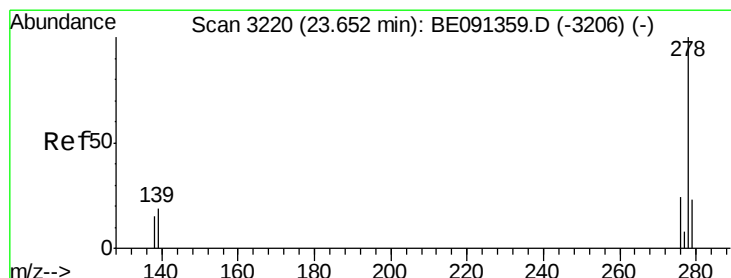
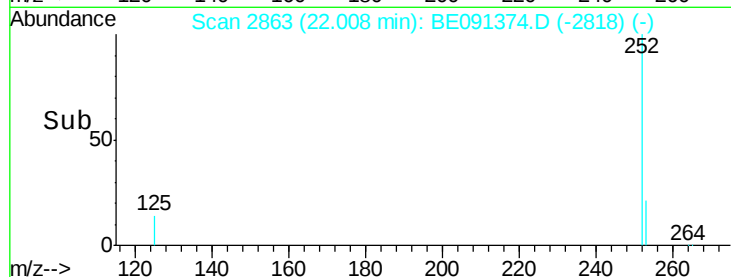
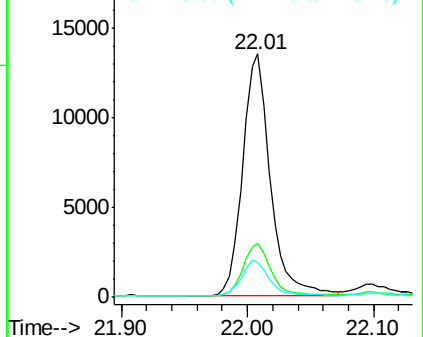
252 100

253 22.1 18.1 27.1

125 14.5 12.2 18.4



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



#28

Dibenzo(a,h)anthracene

Concen: 0.99 ng

RT: 23.65 min Scan# 3220

Delta R.T. -0.00 min

Lab File: BE091374.D

Acq: 15 Jan 2016 11:11

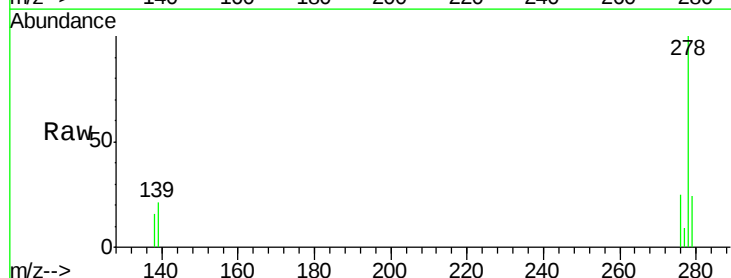
Tgt Ion:278 Resp: 17190

Ion Ratio Lower Upper

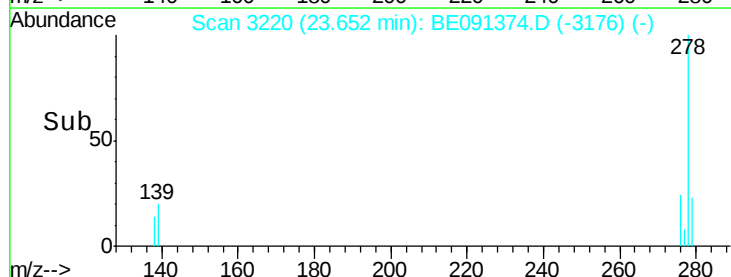
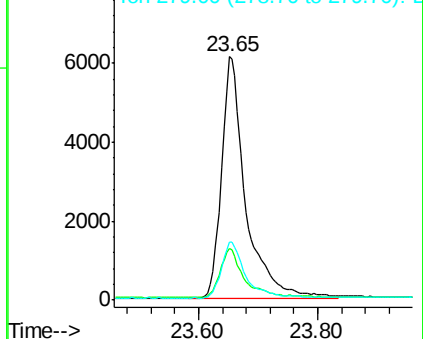
278 100

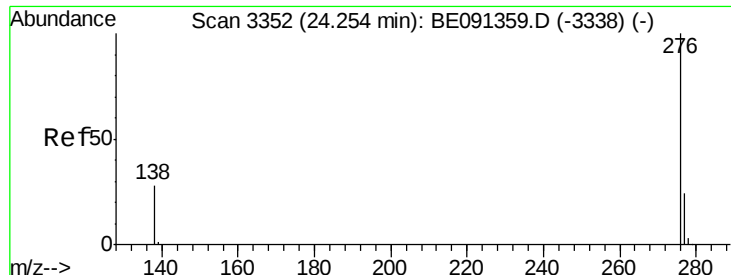
139 21.1 16.3 24.5

279 23.6 19.4 29.2



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





#29

Benzo(g,h,i)perylene

Concen: 0.97 ng

RT: 24.25 min Scan# 3352

Delta R.T. 0.00 min

Lab File: BE091374.D

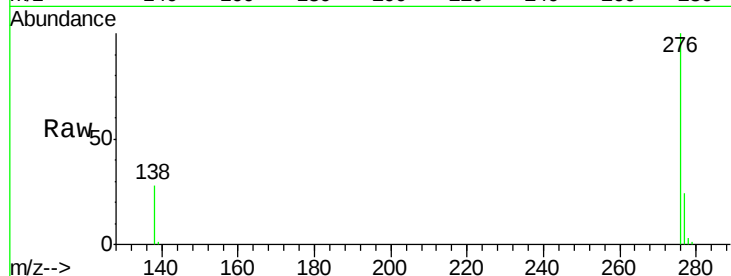
Acq: 15 Jan 2016 11:11

Instrument :

BNA\_E

ClientSampleId :

SSTDCCC001EC



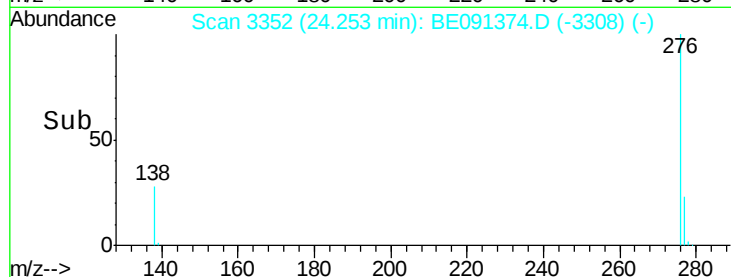
Tgt Ion: 276 Resp: 20884

Ion Ratio Lower Upper

276 100

277 23.9 19.8 29.6

138 28.4 23.3 34.9



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

