

Data Path : Z:\HPCHEM1\BNA\_E\DATA\BE103114\  
 Data File : BE088462.D  
 Acq On : 1 Nov 2014 21:30  
 Operator : TP/JJ  
 Sample : F4312-13RE  
 Misc :  
 ALS Vial : 37 Sample Multiplier: 1

Instrument :  
 BNA\_E  
 ClientSampleId :  
 YS19-SB28-1014RE

Quant Time: Nov 02 04:20:51 2014  
 Quant Method : Z:\HPCHEM1\BNA\_E\METHODS\SIM-PAH-BE103114.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Sat Nov 01 00:42:07 2014  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|---------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.09  | 152  | 62777    | 5.00 | ng    | 0.00     |
| 3) Naphthalene-d8         | 8.65  | 136  | 232481   | 5.00 | ng    | 0.00     |
| 7) Acenaphthene-d10       | 10.79 | 164  | 109767   | 5.00 | ng    | 0.00     |
| 12) Phenanthrene-d10      | 12.91 | 188  | 225380   | 5.00 | ng    | 0.00     |
| 16) Chrysene-d12          | 18.33 | 240  | 136496   | 5.00 | ng    | 0.02     |
| 22) Perylene-d12          | 21.40 | 264  | 133318   | 5.00 | ng    | 0.03     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-----------------------------|-------|------|----------|-------|-------|----------|
| 4) Nitrobenzene-d5          | 7.79  | 82   | 790268   | 46.35 | ng    | 0.02     |
| 8) 2-Fluorobiphenyl         | 10.00 | 172  | 857433   | 27.71 | ng    | 0.01     |
| 18) Terphenyl-d14           | 16.12 | 244  | 703078   | 28.04 | ng    | 0.04     |

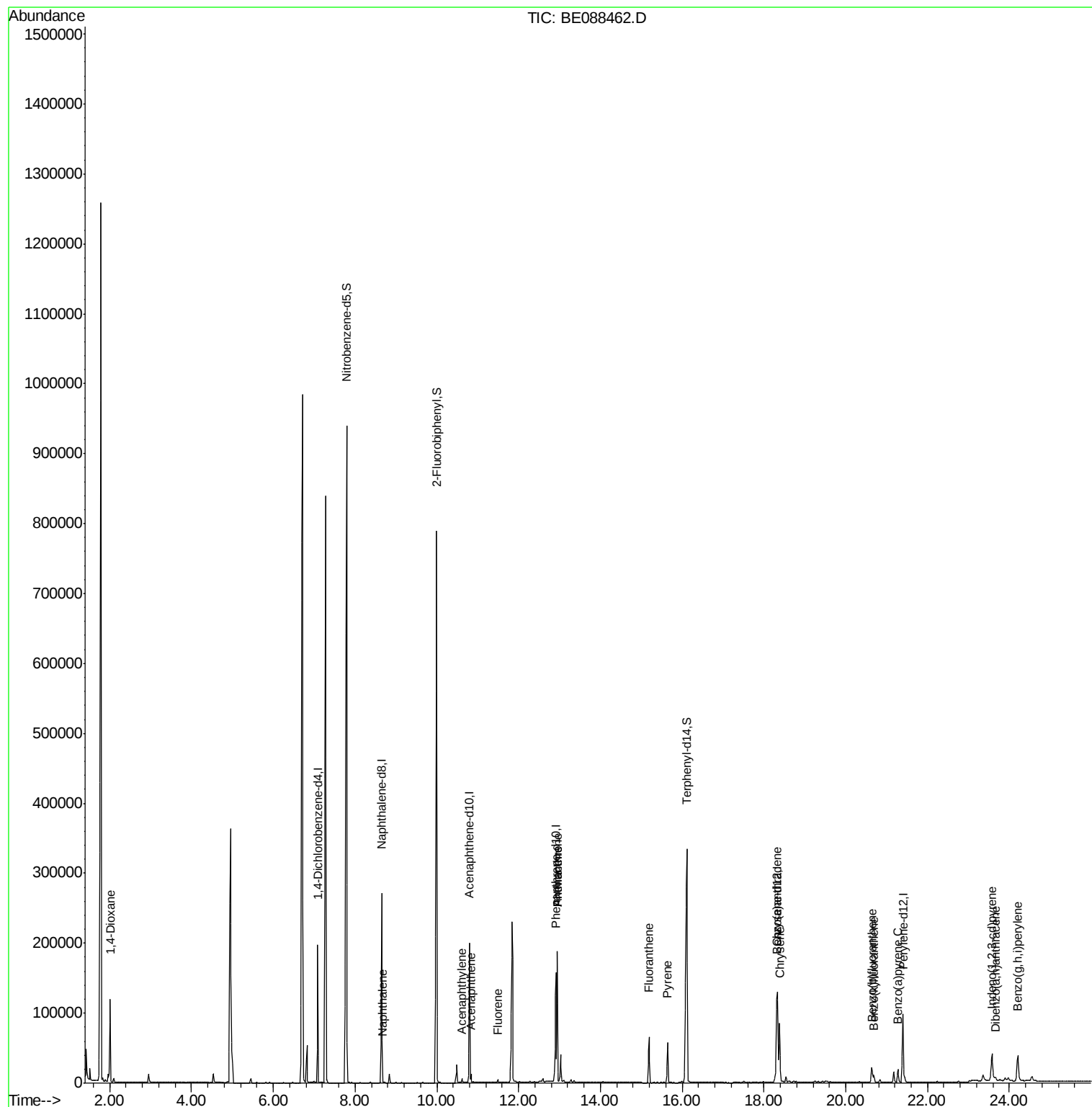
| Target Compounds           | R.T.  | QIon | Response | Conc | Units | Qvalue |
|----------------------------|-------|------|----------|------|-------|--------|
| 2) 1,4-Dioxane             | 2.01  | 88   | 4313     | 0.53 | ng    | # 1    |
| 5) Naphthalene             | 8.68  | 128  | 1356     | 0.03 | ng    | # 87   |
| 9) Acenaphthylene          | 10.62 | 152  | 7851     | 0.04 | ng    | # 98   |
| 10) Acenaphthene           | 10.84 | 154  | 2467     | 0.09 | ng    | # 81   |
| 11) Fluorene               | 11.49 | 166  | 1935     | 0.07 | ng    | # 95   |
| 13) Phenanthrene           | 12.95 | 178  | 226868   | 1.11 | ng    | 99     |
| 14) Anthracene             | 12.95 | 178  | 226868   | 1.37 | ng    | 98     |
| 15) Fluoranthene           | 15.19 | 202  | 65997    | 1.99 | ng    | 100    |
| 17) Pyrene                 | 15.64 | 202  | 55952    | 1.26 | ng    | 97     |
| 19) Benzo(a)anthracene     | 18.31 | 228  | 111196   | 0.87 | ng    | 98     |
| 20) Chrysene               | 18.38 | 228  | 113608   | 0.90 | ng    | 96     |
| 21) Indeno(1,2,3-cd)pyrene | 23.58 | 276  | 69032    | 0.59 | ng    | # 88   |
| 23) Benzo(b)fluoranthene   | 20.64 | 252  | 37551    | 1.28 | ng    | # 95   |
| 24) Benzo(k)fluoranthene   | 20.69 | 252  | 14281    | 0.44 | ng    | # 93   |
| 25) Benzo(a)pyrene         | 21.27 | 252  | 24739    | 0.88 | ng    | 97     |
| 26) Dibenzo(a,h)anthracene | 23.66 | 278  | 3792     | 0.15 | ng    | # 66   |
| 27) Benzo(g,h,i)perylene   | 24.20 | 276  | 70181    | 0.59 | ng    | 98     |

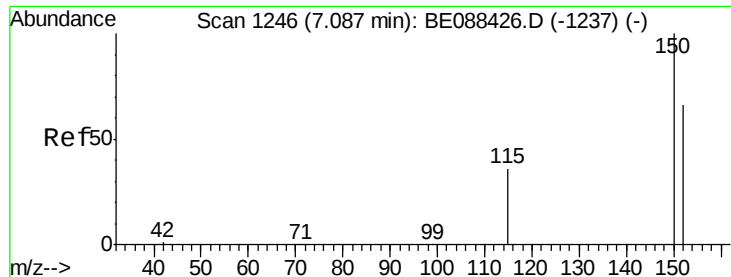
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Sat Nov 01 00:42:07 2014  
Response via : Initial Calibration





#1

1,4-Dichlorobenzene-d4

Concen: 5.00 ng

RT: 7.09 min Scan# 1247

Delta R.T. 0.00 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

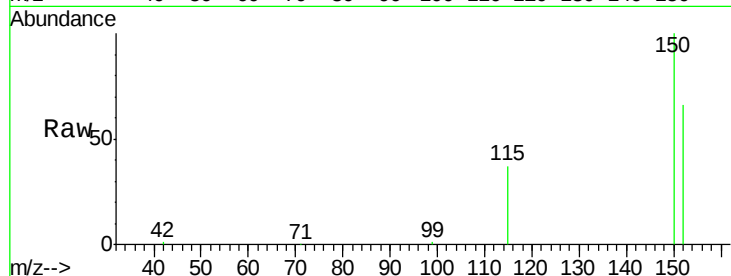
Tgt Ion:152 Resp: 62777

Ion Ratio Lower Upper

152 100

150 151.5 121.8 182.8

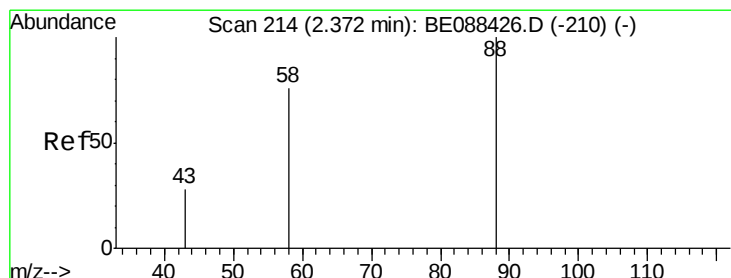
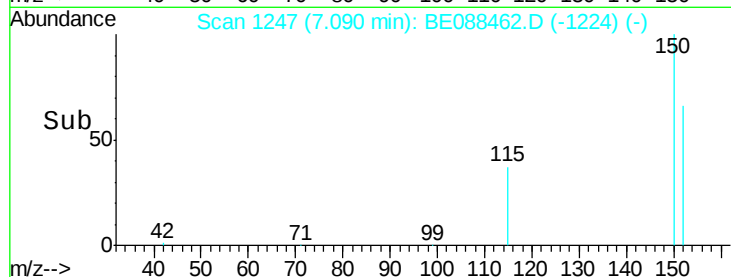
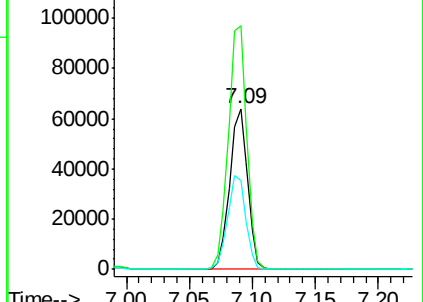
115 55.4 43.9 65.9



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

1,4-Dioxane

Concen: 0.53 ng

RT: 2.01 min Scan# 136

Delta R.T. -0.36 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

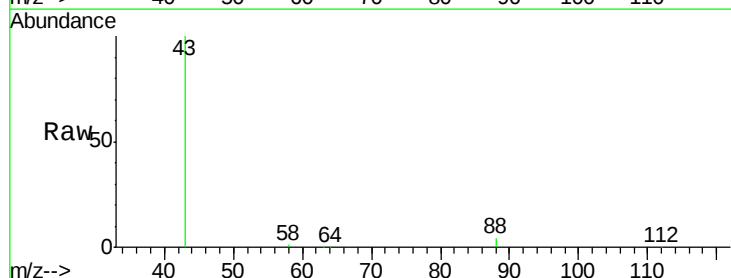
Tgt Ion: 88 Resp: 4313

Ion Ratio Lower Upper

88 100

58 24.4 59.1 88.7#

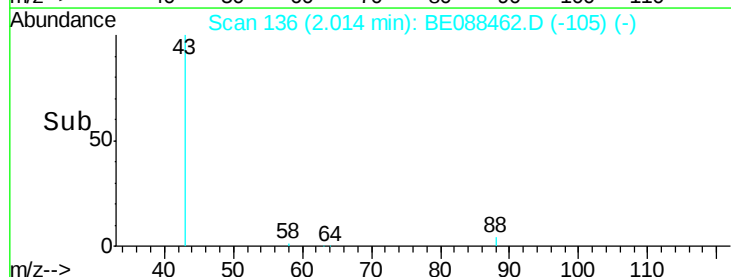
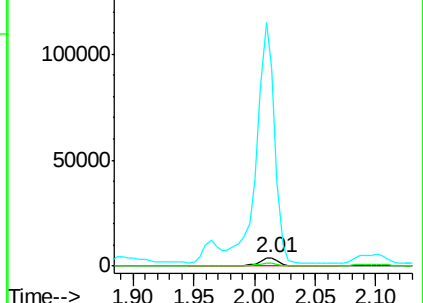
43 2698.4 21.9 32.9#

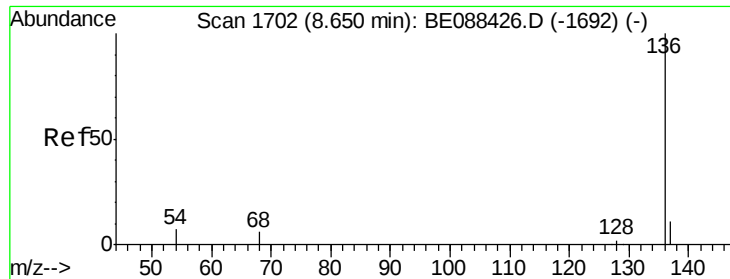


Abundance Ion 88.00 (87.70 to 88.70): BE0

Ion 58.00 (57.70 to 58.70): BE0

Ion 43.00 (42.70 to 43.70): BE0

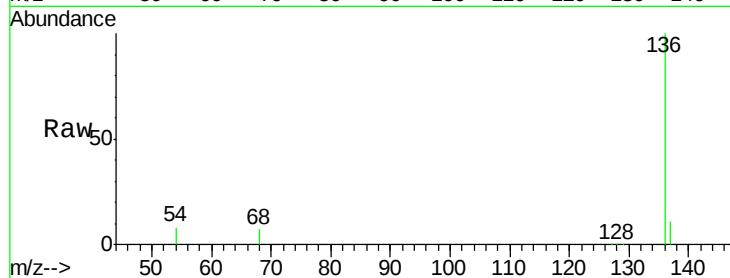




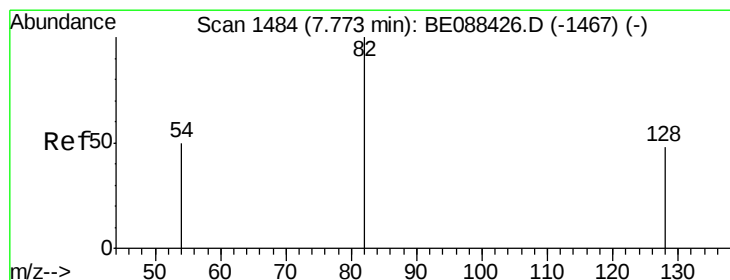
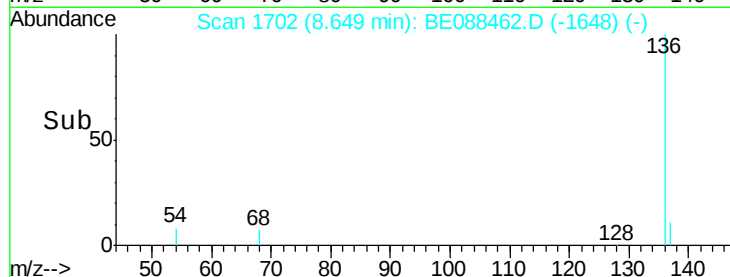
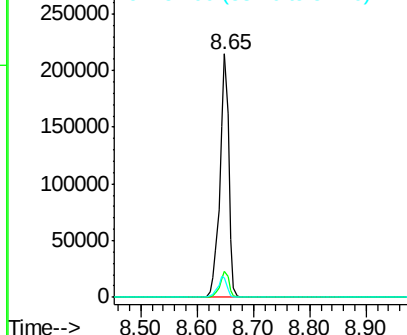
#3  
Naphthalene-d8  
Concen: 5.00 ng  
RT: 8.65 min Scan# 1702  
Delta R.T. -0.00 min  
Lab File: BE088462.D  
Acq: 1 Nov 2014 21:30

Instrument :  
BNA\_E  
ClientSampleId :  
YS19-SB28-1014RE

Tgt Ion: 136 Resp: 232481  
Ion Ratio Lower Upper  
136 100  
137 10.9 8.8 13.2  
54 8.1 5.3 7.9#

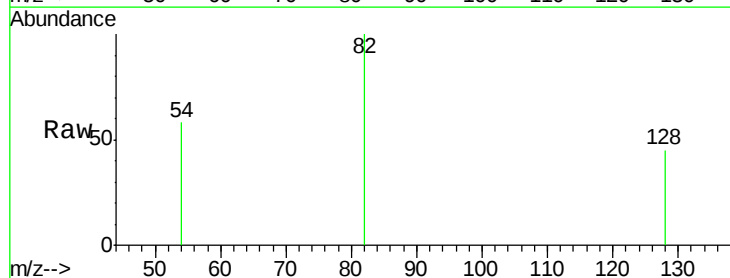


Abundance Ion 136.00 (135.70 to 136.70): E  
Ion 137.00 (136.70 to 137.70): E  
Ion 54.00 (53.70 to 54.70): E

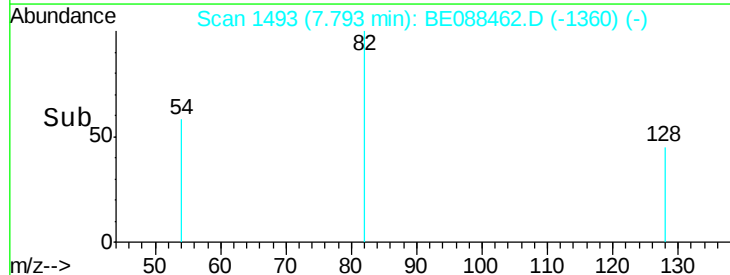
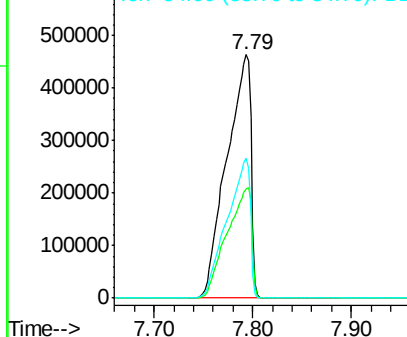


#4  
Nitrobenzene-d5  
Concen: 46.35 ng  
RT: 7.79 min Scan# 1493  
Delta R.T. 0.02 min  
Lab File: BE088462.D  
Acq: 1 Nov 2014 21:30

Tgt Ion: 82 Resp: 790268  
Ion Ratio Lower Upper  
82 100  
128 44.9 38.4 57.6  
54 57.7 40.2 60.2



Abundance Ion 82.00 (81.70 to 82.70): E  
Ion 128.00 (127.70 to 128.70): E  
Ion 54.00 (53.70 to 54.70): E





#5

Naphthalene

Concen: 0.03 ng

RT: 8.68 min Scan# 1707

Delta R.T. 0.00 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

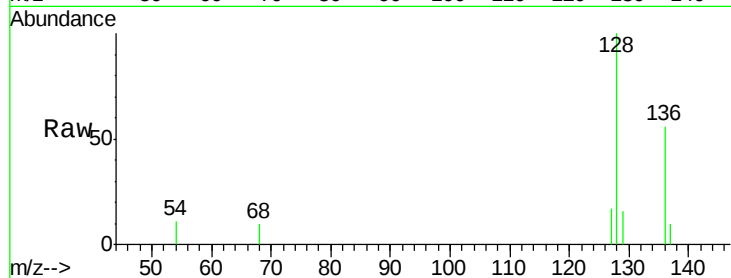
Tgt Ion:128 Resp: 1356

Ion Ratio Lower Upper

128 100

129 16.0 8.6 12.8#

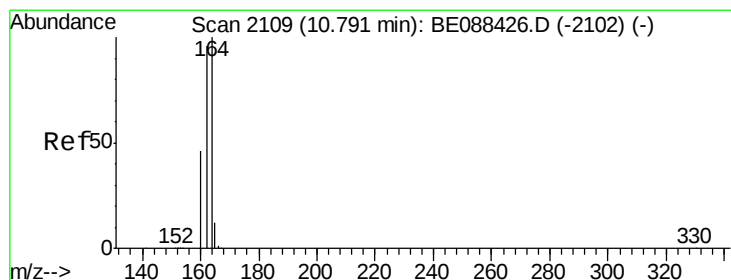
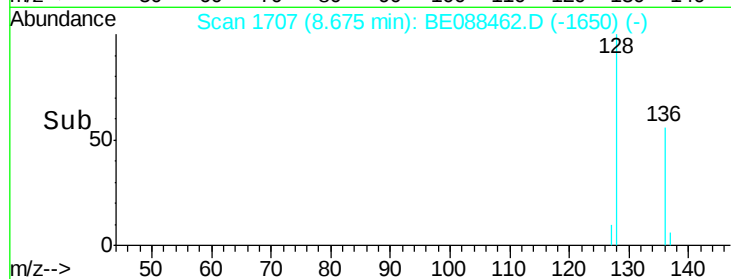
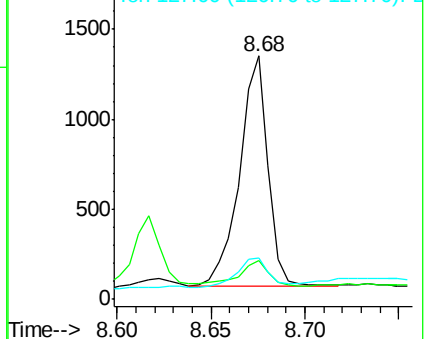
127 17.2 10.1 15.1#



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

Acenaphthene-d10

Concen: 5.00 ng

RT: 10.79 min Scan# 2109

Delta R.T. 0.00 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

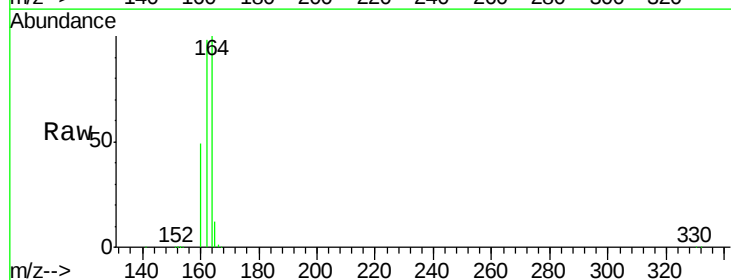
Tgt Ion:164 Resp: 109767

Ion Ratio Lower Upper

164 100

162 98.0 77.0 115.4

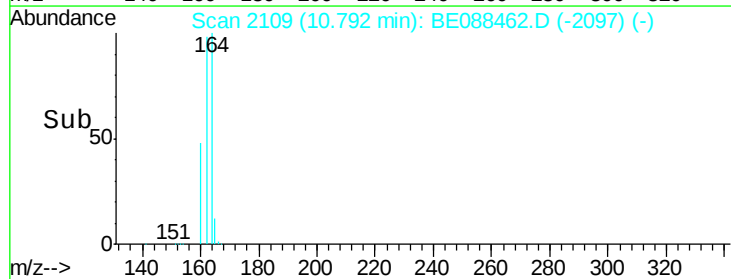
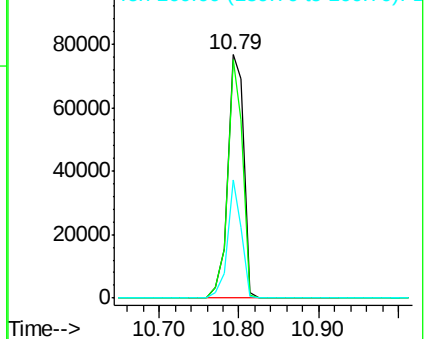
160 48.5 36.8 55.2

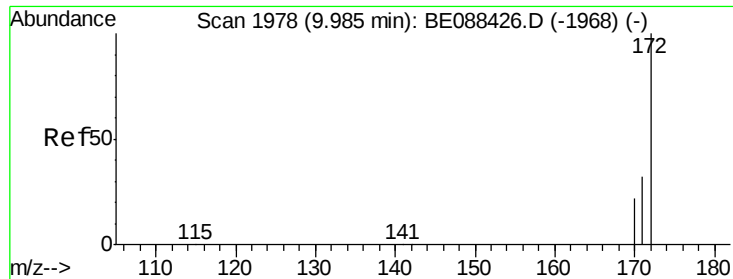


Abundance Ion 164.00 (163.70 to 164.70): E

Ion 162.00 (161.70 to 162.70): E

Ion 160.00 (159.70 to 160.70): E





#8

2-Fluorobiphenyl

Concen: 27.71 ng

RT: 10.00 min Scan# 1981

Delta R.T. 0.01 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

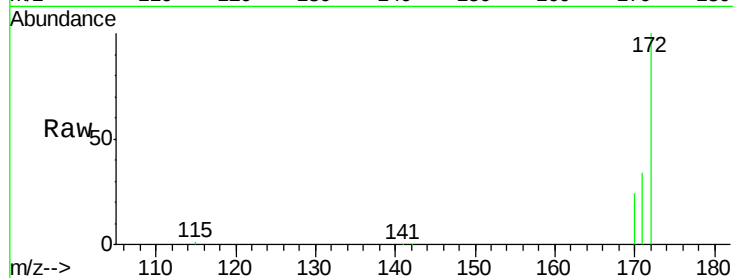
Tgt Ion:172 Resp: 857433

Ion Ratio Lower Upper

172 100

171 34.1 26.0 39.0

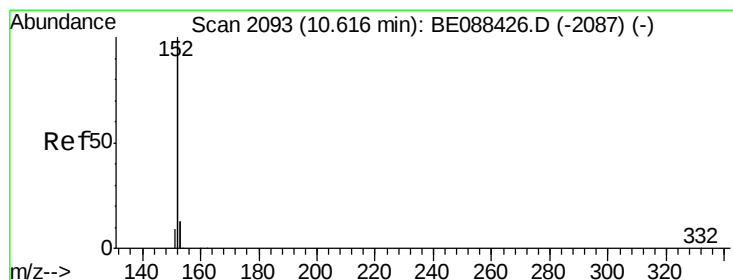
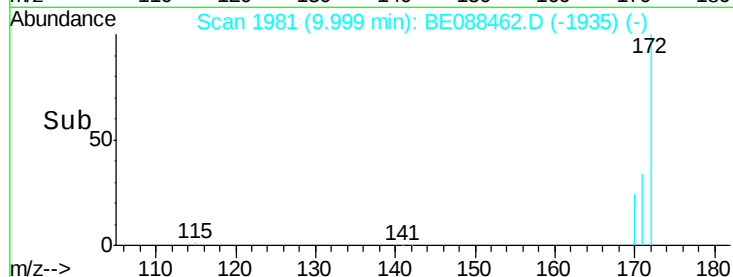
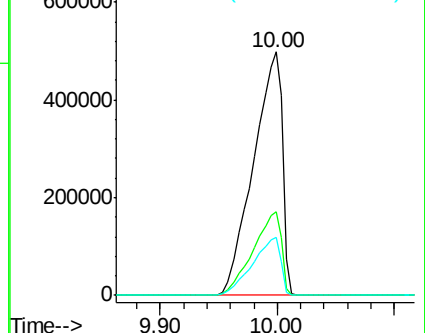
170 23.7 17.6 26.4



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



#9

Acenaphthylene

Concen: 0.04 ng

RT: 10.62 min Scan# 2093

Delta R.T. 0.00 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

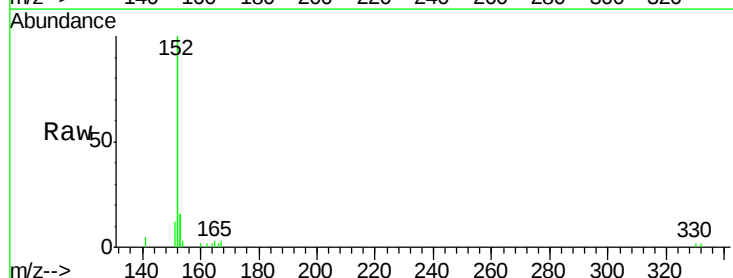
Tgt Ion:152 Resp: 7851

Ion Ratio Lower Upper

152 100

151 3.5 4.4 6.6#

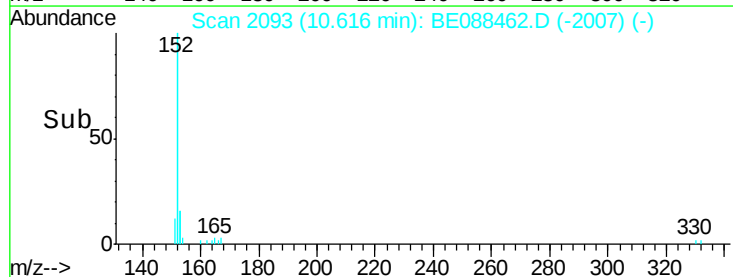
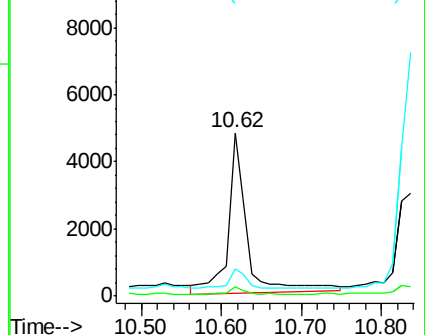
153 13.3 10.5 15.7

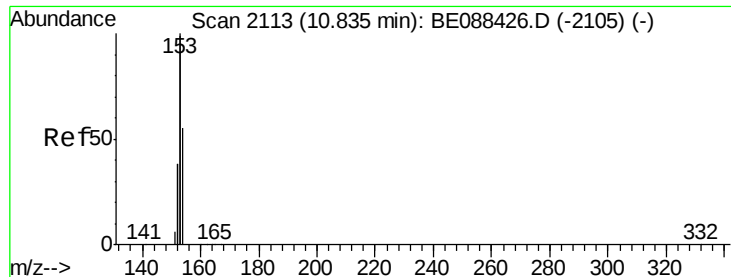


Abundance Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E





#10

Acenaphthene

Concen: 0.09 ng

RT: 10.84 min Scan# 2113

Delta R.T. 0.00 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

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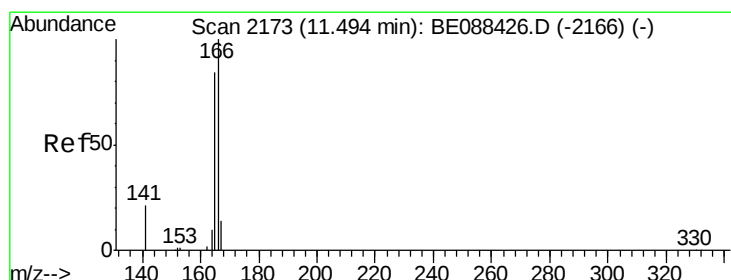
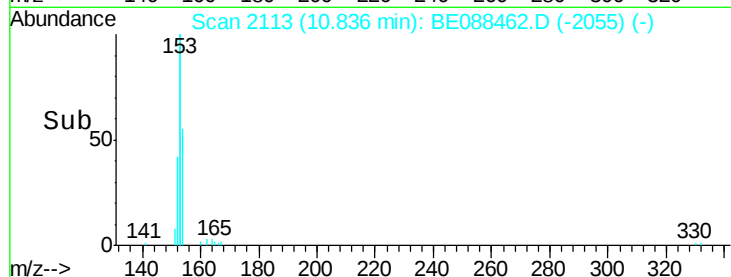
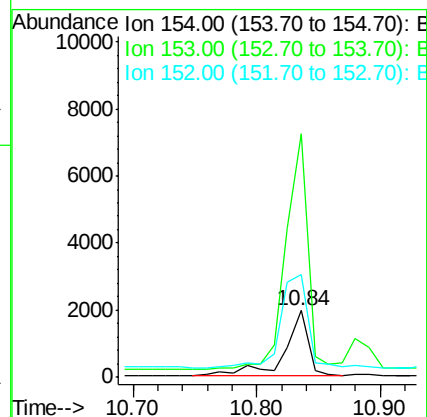
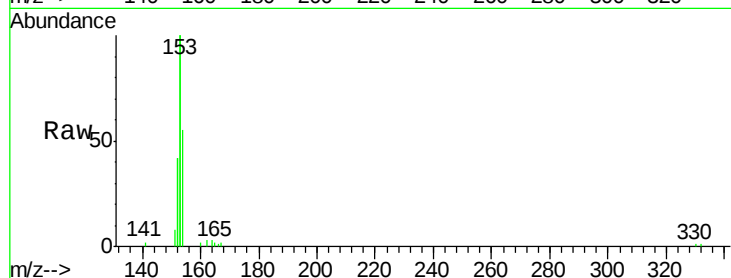
Tgt Ion:154 Resp: 2467

Ion Ratio Lower Upper

154 100

153 341.3 324.3 486.5

152 191.2 154.9 232.3



#11

Fluorene

Concen: 0.07 ng

RT: 11.49 min Scan# 2173

Delta R.T. 0.00 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

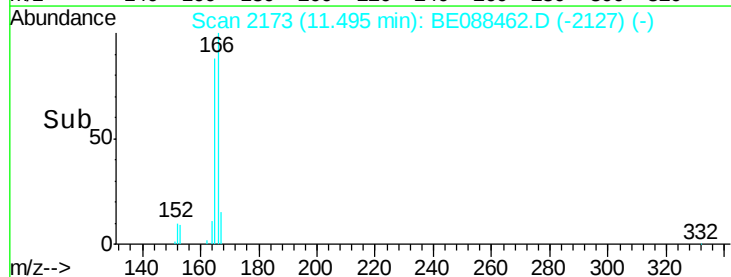
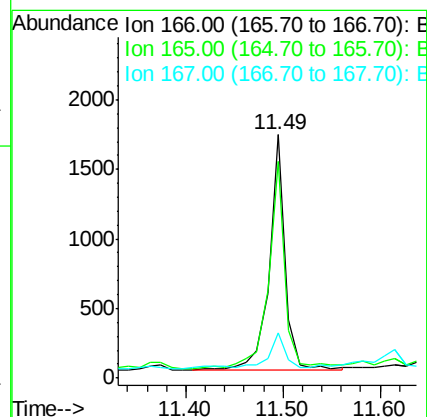
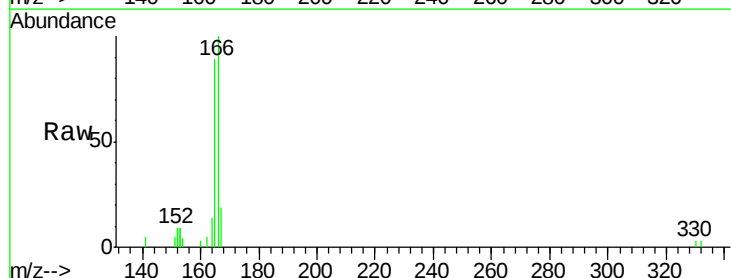
Tgt Ion:166 Resp: 1935

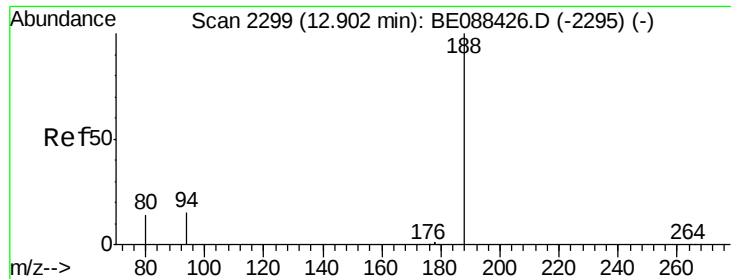
Ion Ratio Lower Upper

166 100

165 92.6 71.3 106.9

167 17.9 10.7 16.1#

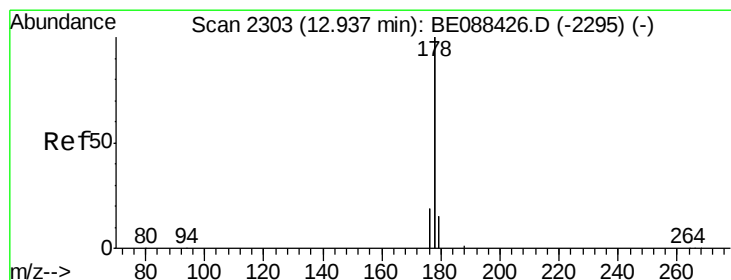
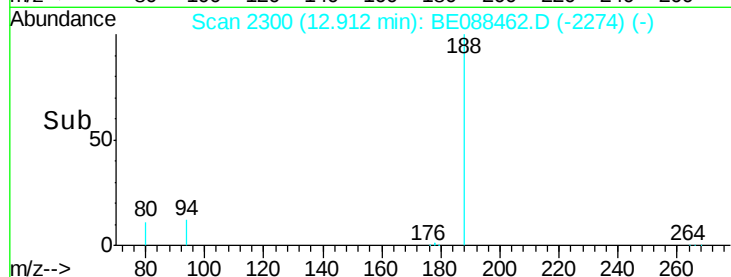
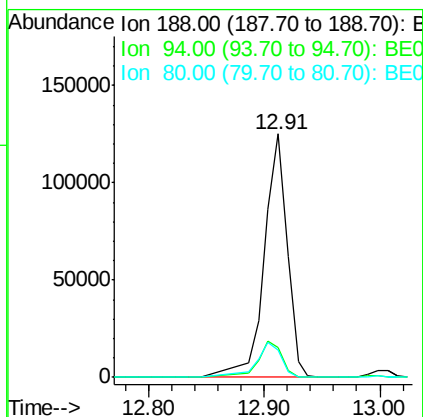
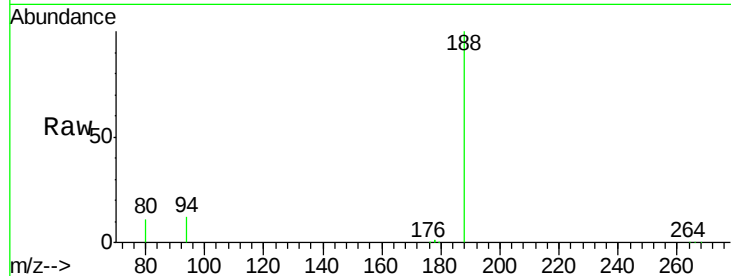




#12  
 Phenanthrene-d10  
 Concen: 5.00 ng  
 RT: 12.91 min Scan# 2300  
 Delta R.T. 0.01 min  
 Lab File: BE088462.D  
 Acq: 1 Nov 2014 21:30

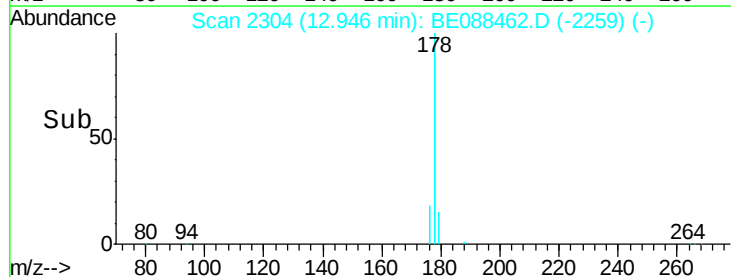
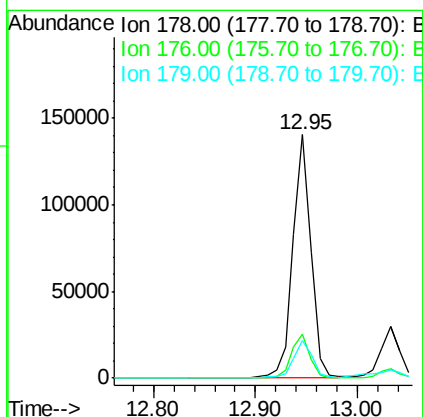
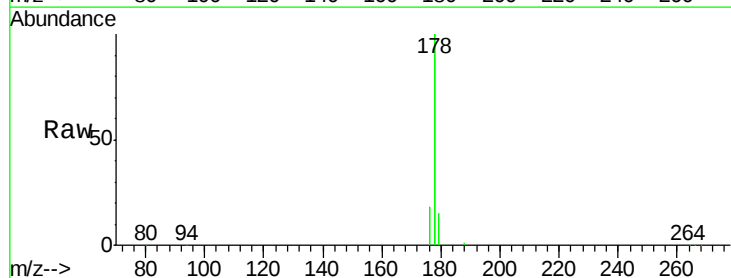
Instrument :  
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 YS19-SB28-1014RE

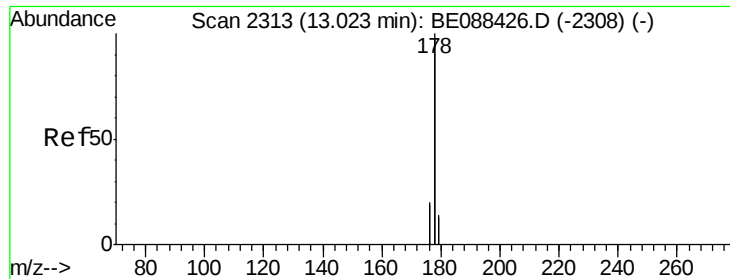
Tgt Ion:188 Resp: 225380  
 Ion Ratio Lower Upper  
 188 100  
 94 12.4 11.8 17.8  
 80 11.2 10.9 16.3



#13  
 Phenanthrene  
 Concen: 1.11 ng  
 RT: 12.95 min Scan# 2304  
 Delta R.T. 0.01 min  
 Lab File: BE088462.D  
 Acq: 1 Nov 2014 21:30

Tgt Ion:178 Resp: 226868  
 Ion Ratio Lower Upper  
 178 100  
 176 19.1 15.4 23.2  
 179 16.7 12.8 19.2





#14

Anthracene

Concen: 1.37 ng

RT: 12.95 min Scan# 2304

Delta R.T. -0.08 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

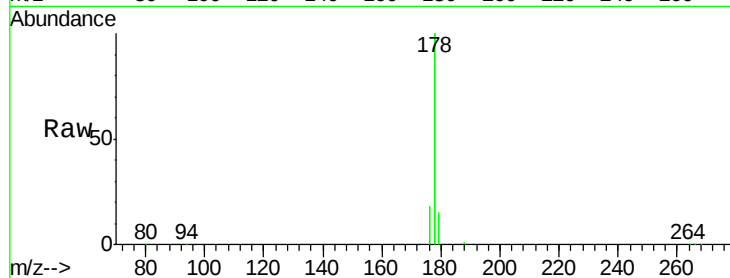
Tgt Ion:178 Resp: 226868

Ion Ratio Lower Upper

178 100

176 19.1 15.0 22.4

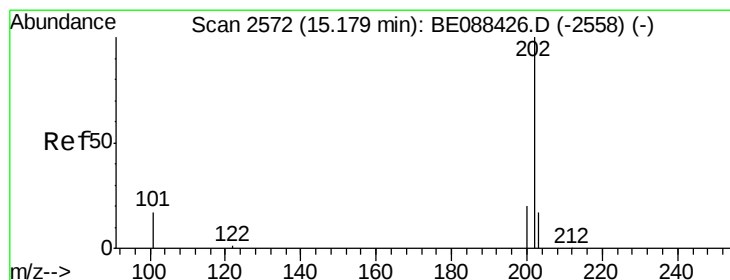
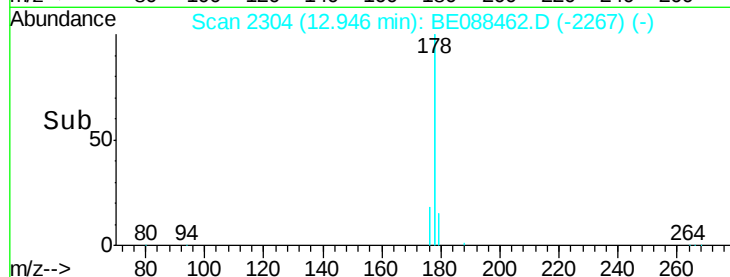
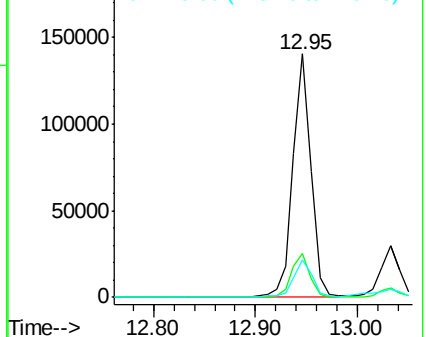
179 16.7 12.5 18.7



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: 1.99 ng

RT: 15.19 min Scan# 2574

Delta R.T. 0.01 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

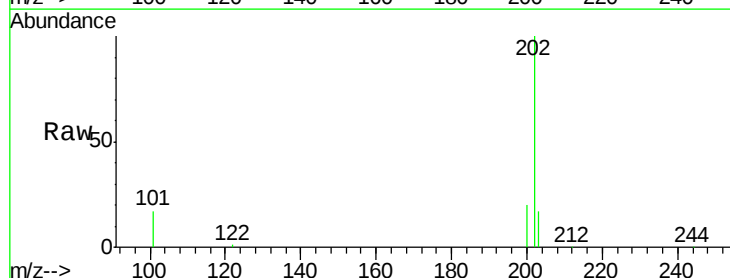
Tgt Ion:202 Resp: 65997

Ion Ratio Lower Upper

202 100

101 17.7 14.3 21.5

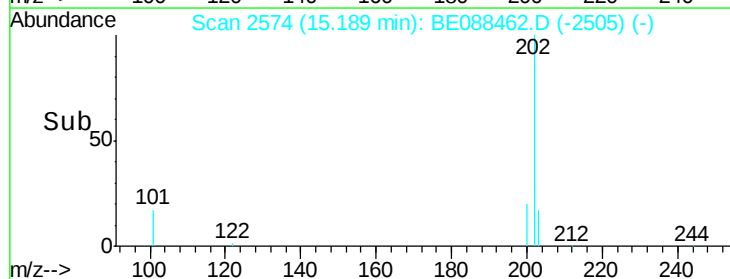
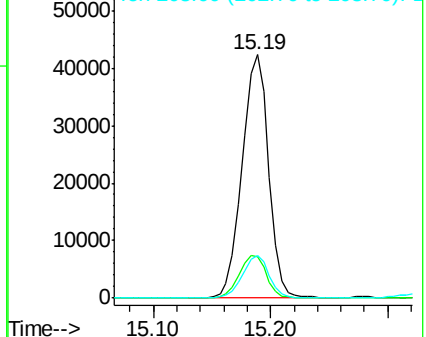
203 17.3 13.6 20.4

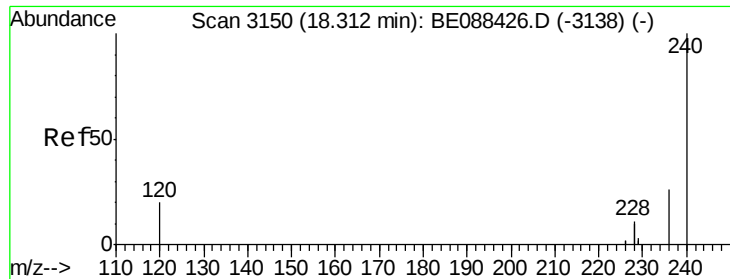


Abundance Ion 202.00 (201.70 to 202.70): E

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: 18.33 min Scan# 3153

Delta R.T. 0.02 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

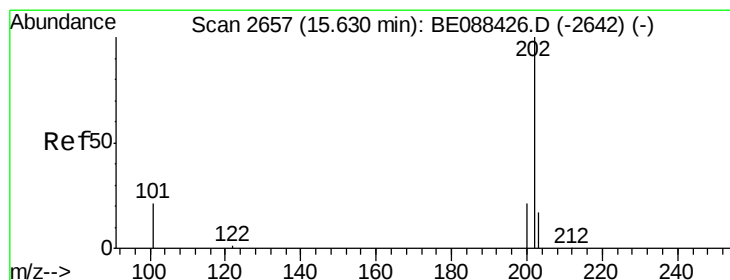
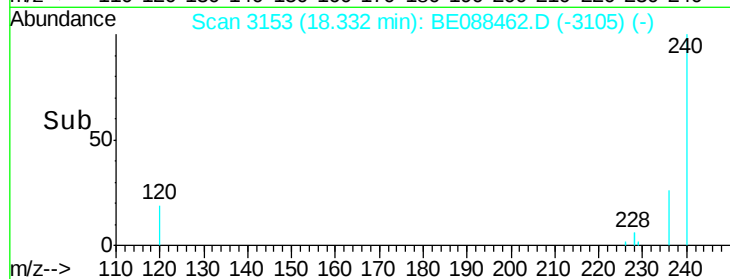
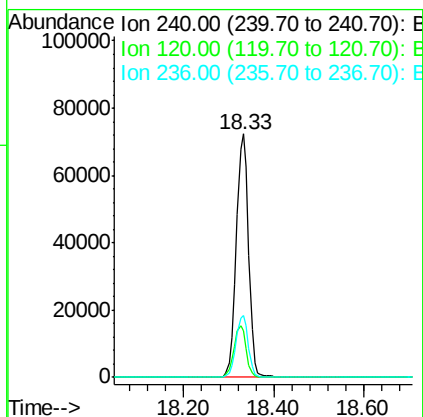
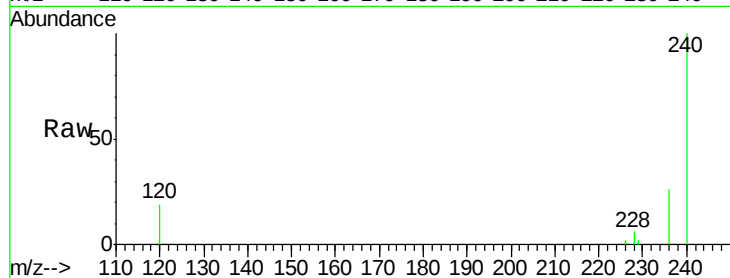
Tgt Ion:240 Resp: 136496

Ion Ratio Lower Upper

240 100

120 19.0 16.4 24.6

236 25.7 20.5 30.7



#17

Pyrene

Concen: 1.26 ng

RT: 15.64 min Scan# 2660

Delta R.T. 0.01 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

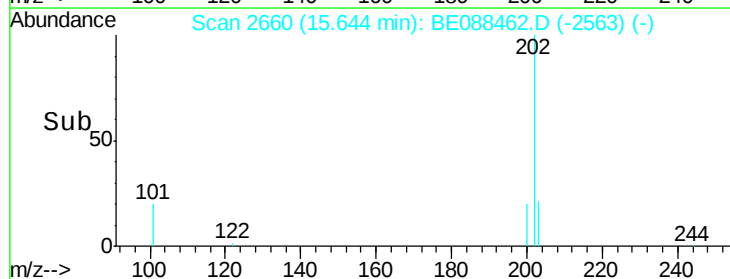
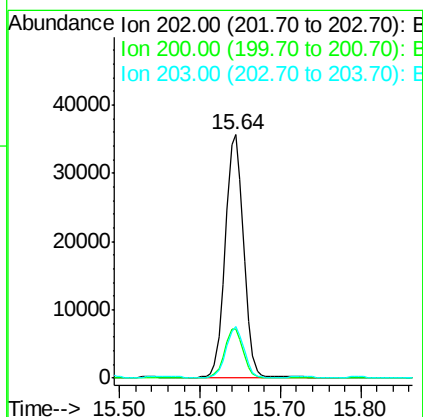
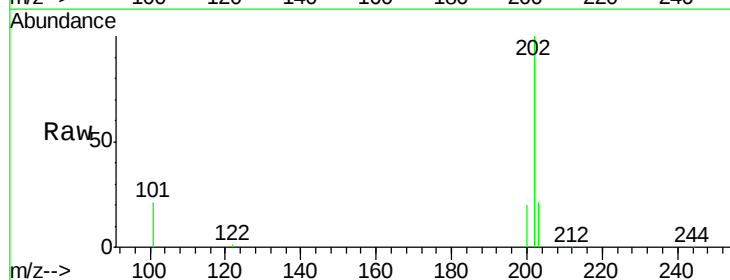
Tgt Ion:202 Resp: 55952

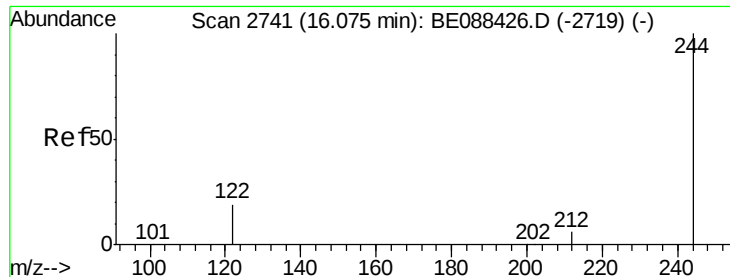
Ion Ratio Lower Upper

202 100

200 20.2 16.1 24.1

203 20.4 13.8 20.8





#18

Terphenyl-d14

Concen: 28.04 ng

RT: 16.12 min Scan# 2749

Delta R.T. 0.04 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

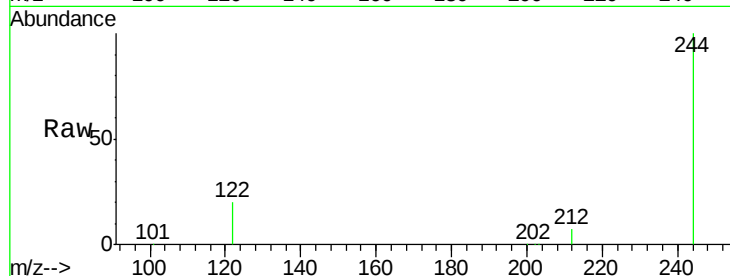
Tgt Ion:244 Resp: 703078

Ion Ratio Lower Upper

244 100

212 7.1 5.5 8.3

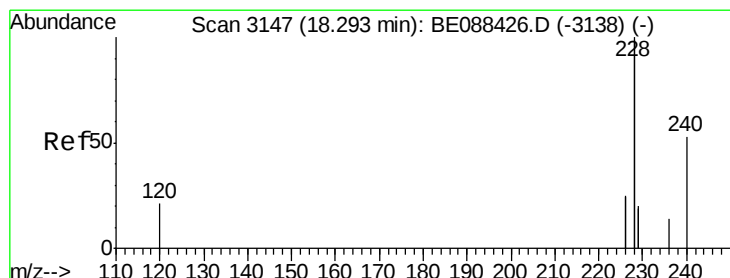
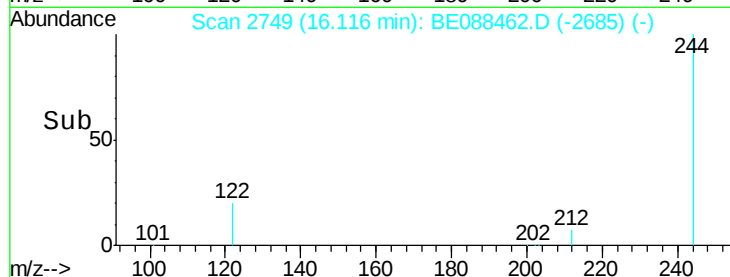
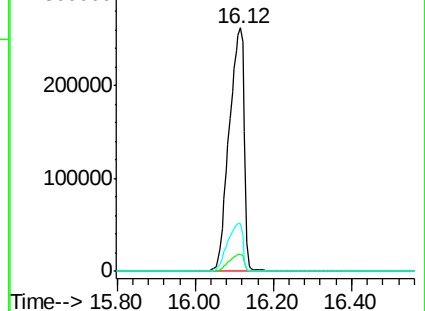
122 19.8 15.6 23.4



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: 0.87 ng

RT: 18.31 min Scan# 3149

Delta R.T. 0.01 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

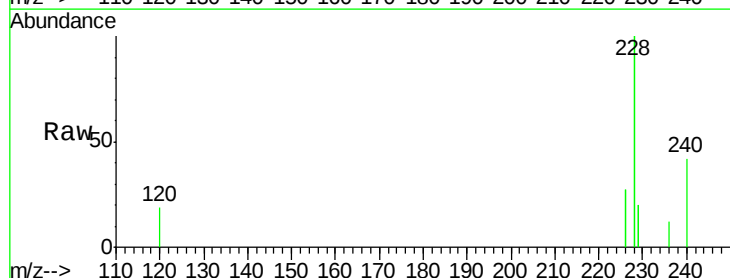
Tgt Ion:228 Resp: 111196

Ion Ratio Lower Upper

228 100

226 26.5 19.8 29.6

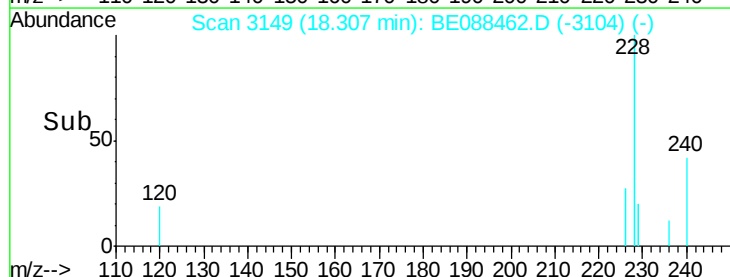
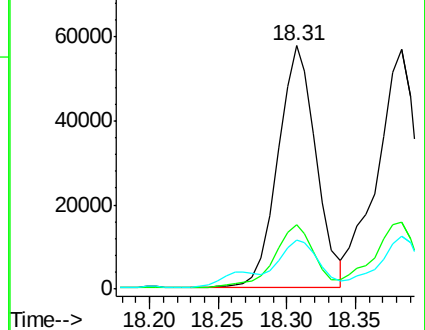
229 20.2 16.0 24.0

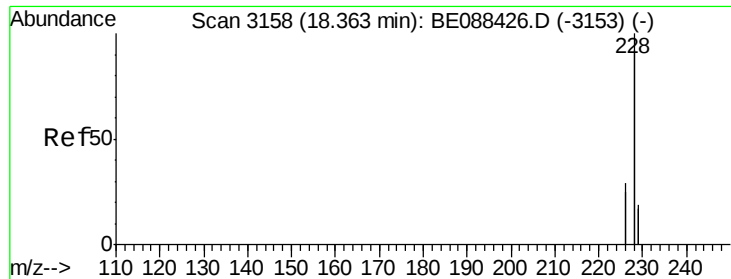


Abundance Ion 228.00 (227.70 to 228.70): E

Ion 226.00 (225.70 to 226.70): E

Ion 229.00 (228.70 to 229.70): E





#20

Chrysene

Concen: 0.90 ng

RT: 18.38 min Scan# 3161

Delta R.T. 0.02 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

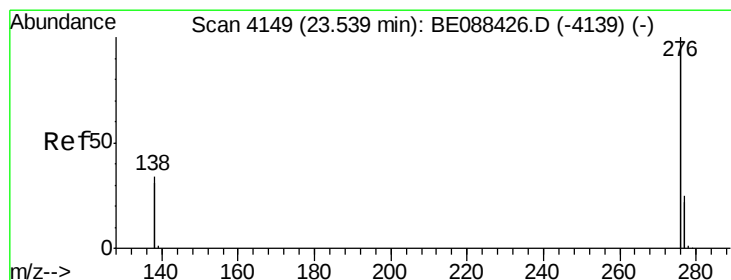
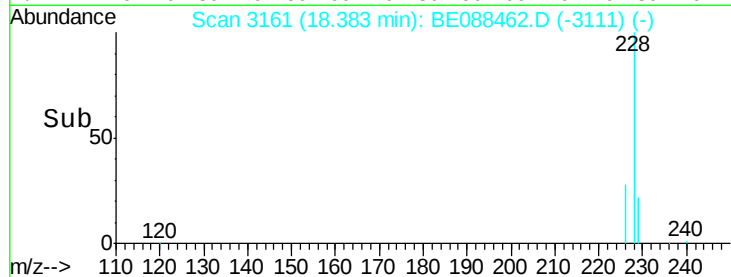
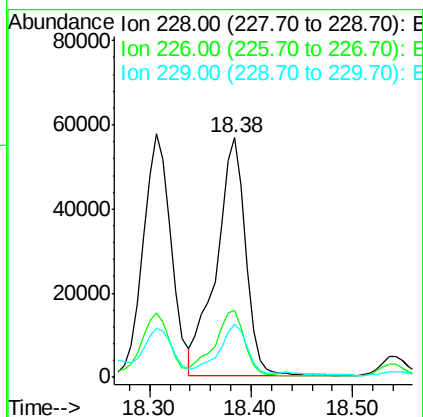
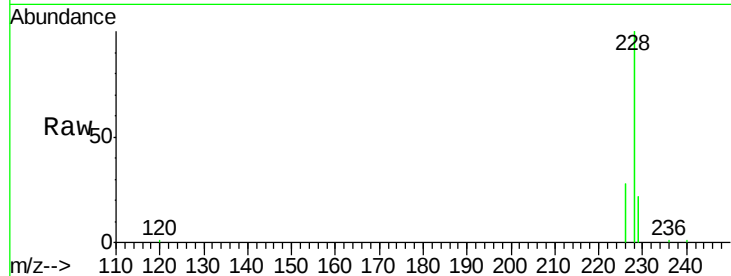
Tgt Ion:228 Resp: 113608

Ion Ratio Lower Upper

228 100

226 28.3 23.6 35.4

229 22.2 15.4 23.2



#21

Indeno(1,2,3-cd)pyrene

Concen: 0.59 ng

RT: 23.58 min Scan# 4155

Delta R.T. 0.04 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

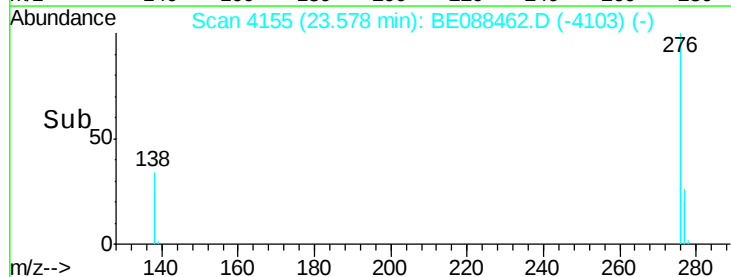
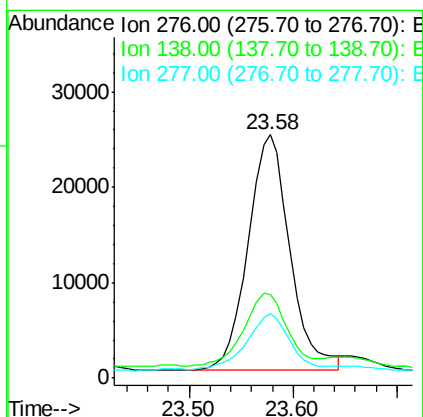
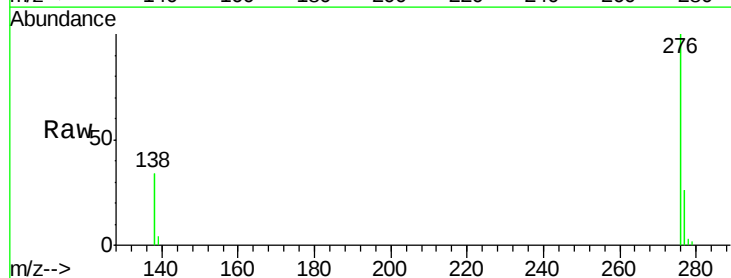
Tgt Ion:276 Resp: 69032

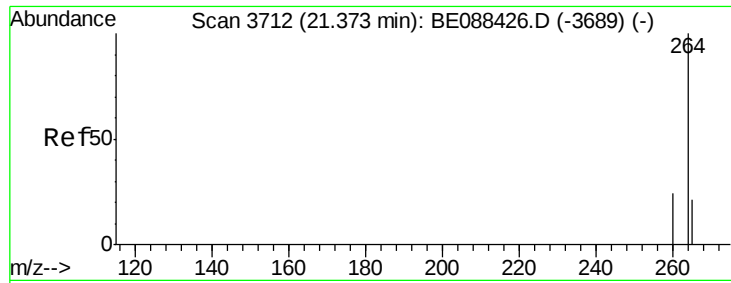
Ion Ratio Lower Upper

276 100

138 31.2 20.2 30.2#

277 24.4 14.8 22.2#

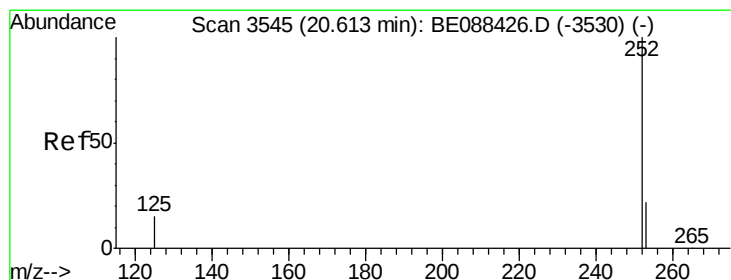
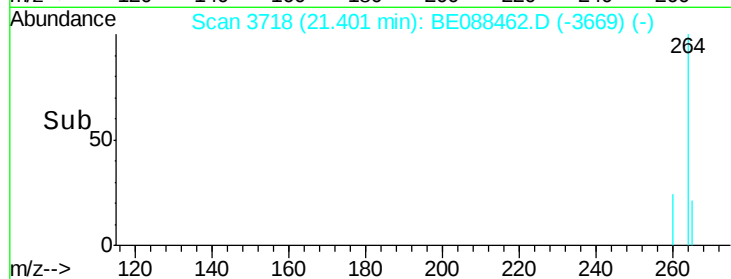
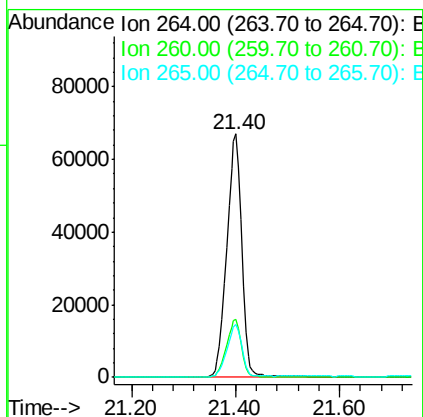
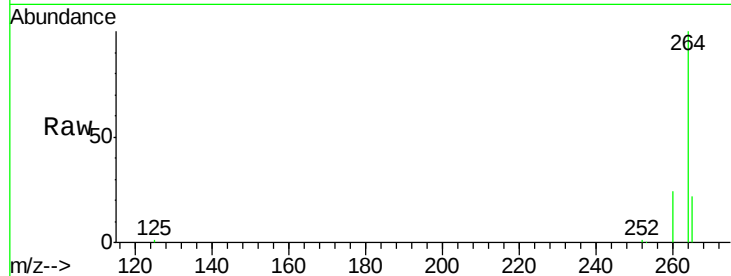




#22  
Perylene-d12  
Concen: 5.00 ng  
RT: 21.40 min Scan# 3718  
Delta R.T. 0.03 min  
Lab File: BE088462.D  
Acq: 1 Nov 2014 21:30

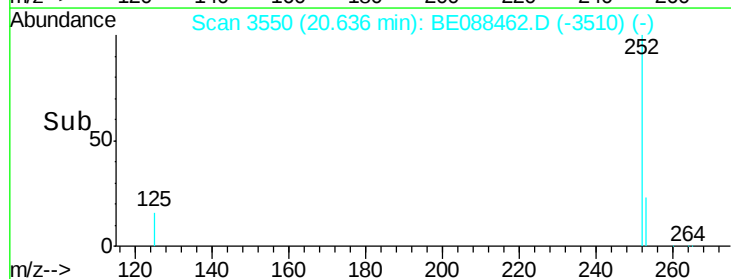
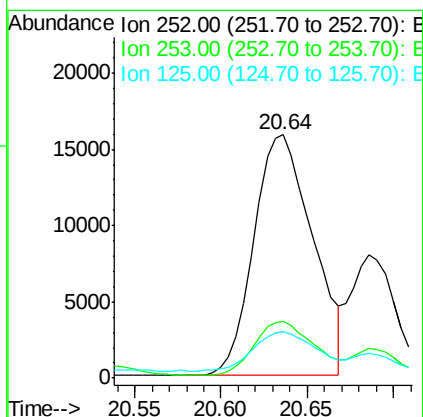
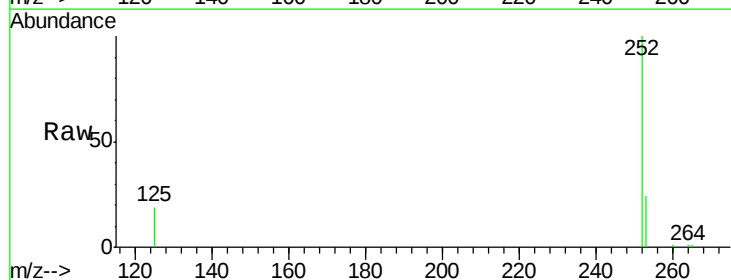
Instrument :  
BNA\_E  
ClientSampleId :  
YS19-SB28-1014RE

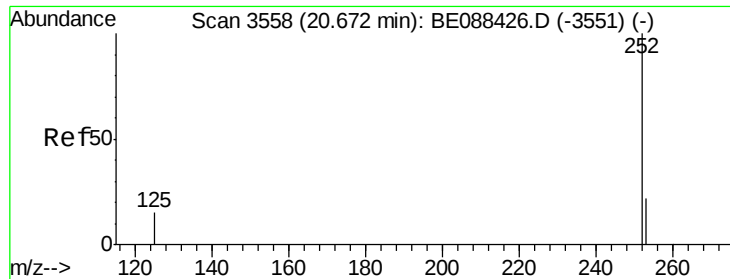
Tgt Ion:264 Resp: 133318  
Ion Ratio Lower Upper  
264 100  
260 23.7 18.9 28.3  
265 21.6 17.2 25.8



#23  
Benzo(b)fluoranthene  
Concen: 1.28 ng  
RT: 20.64 min Scan# 3550  
Delta R.T. 0.02 min  
Lab File: BE088462.D  
Acq: 1 Nov 2014 21:30

Tgt Ion:252 Resp: 37551  
Ion Ratio Lower Upper  
252 100  
253 23.5 17.8 26.8  
125 19.2 12.3 18.5#





#24

Benzo(k)fluoranthene

Concen: 0.44 ng

RT: 20.69 min Scan# 3561

Delta R.T. 0.01 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

Instrument :

BNA\_E

ClientSampleId :

YS19-SB28-1014RE

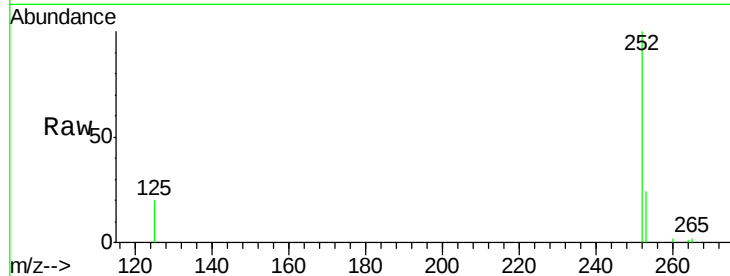
Tgt Ion:252 Resp: 14281

Ion Ratio Lower Upper

252 100

253 24.0 17.8 26.8

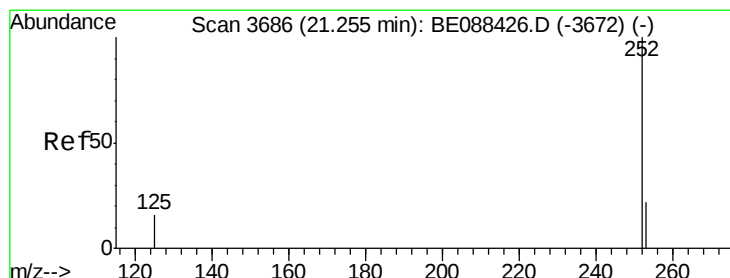
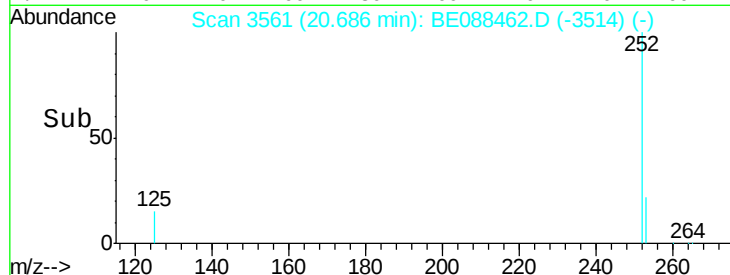
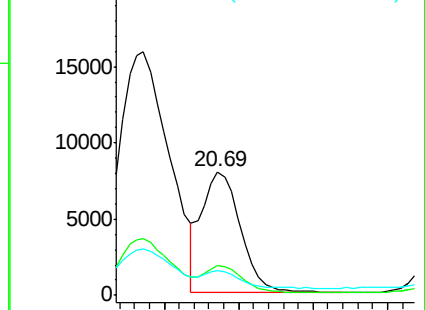
125 20.5 12.2 18.4#



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



#25

Benzo(a)pyrene

Concen: 0.88 ng

RT: 21.27 min Scan# 3690

Delta R.T. 0.02 min

Lab File: BE088462.D

Acq: 1 Nov 2014 21:30

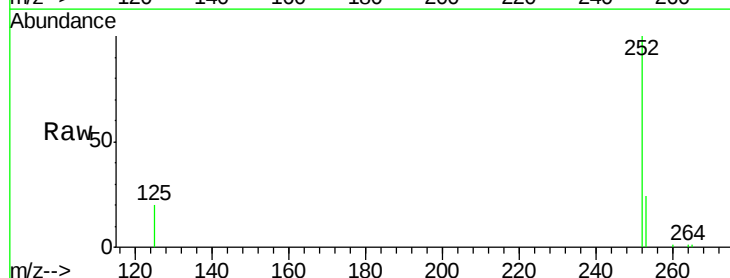
Tgt Ion:252 Resp: 24739

Ion Ratio Lower Upper

252 100

253 23.5 18.2 27.4

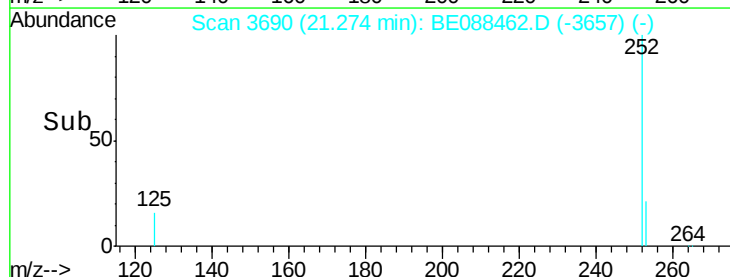
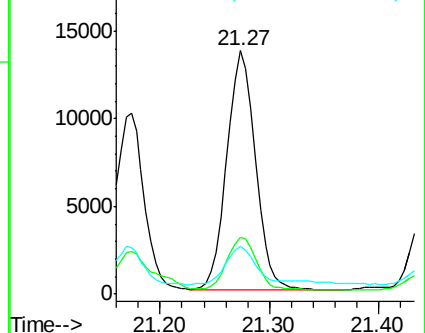
125 19.5 13.7 20.5

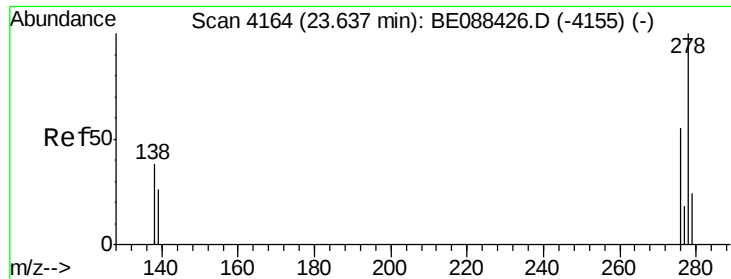


Abundance Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E



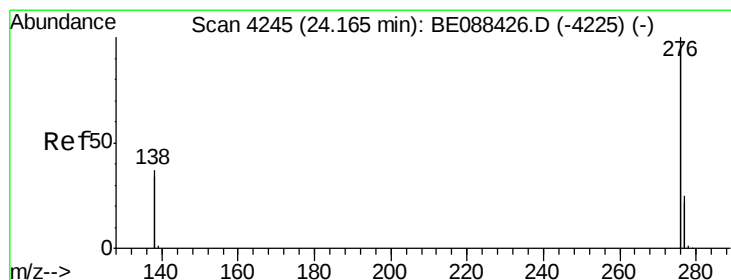
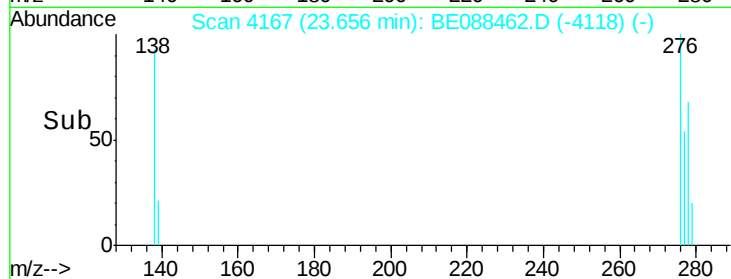
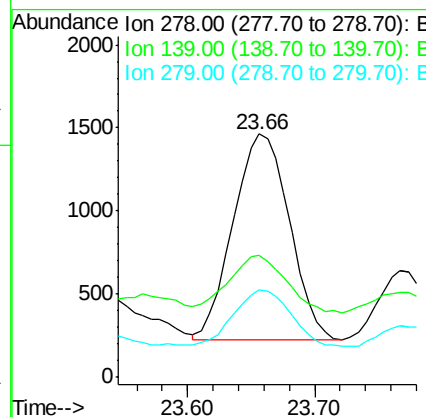
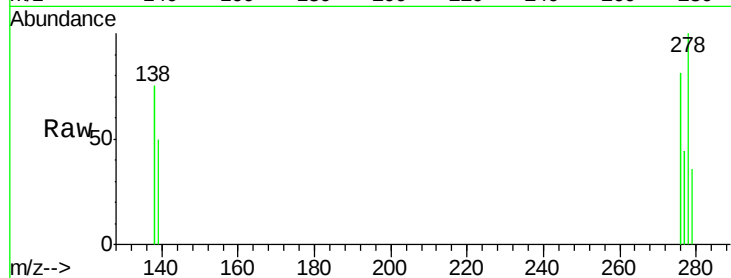


#26  
Dibenzo(a,h)anthracene  
Concen: 0.15 ng  
RT: 23.66 min Scan# 4167  
Delta R.T. 0.02 min  
Lab File: BE088462.D  
Acq: 1 Nov 2014 21:30

Instrument :  
BNA\_E  
ClientSampleId :  
YS19-SB28-1014RE

Tgt Ion: 278 Resp: 3792  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 278 | 100   |       |       |
| 139 | 50.1  | 22.1  | 33.1# |
| 279 | 36.1  | 19.7  | 29.5# |



#27  
Benzo(g,h,i)perylene  
Concen: 0.59 ng  
RT: 24.20 min Scan# 4251  
Delta R.T. 0.04 min  
Lab File: BE088462.D  
Acq: 1 Nov 2014 21:30

Tgt Ion: 276 Resp: 70181  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 276 | 100   |       |       |
| 277 | 26.0  | 19.8  | 29.6  |
| 138 | 37.3  | 29.3  | 43.9  |

