

Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM080315\  
 Data File : BM002194.D  
 Acq On : 03 Aug 2015 13:03  
 Operator : TP/UM  
 Sample : G3073-18  
 Misc :  
 ALS Vial : 13 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 C02G3

Quant Time: Aug 04 02:34:01 2015  
 Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM072715.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Tue Aug 04 02:31:26 2015  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.53  | 152  | 66615    | 20.00 | ng/ul | 0.00     |
| 18) Naphthalene-d8        | 10.32 | 136  | 286291   | 20.00 | ng/ul | 0.00     |
| 36) Acenaphthene-d10      | 14.20 | 164  | 186107   | 20.00 | ng/ul | 0.00     |
| 62) Phenanthrene-d10      | 16.96 | 188  | 450983   | 20.00 | ng/ul | 0.00     |
| 78) Chrysene-d12          | 21.17 | 240  | 563114   | 20.00 | ng/ul | 0.00     |
| 86) Perylene-d12          | 23.35 | 264  | 468787   | 20.00 | ng/ul | 0.00     |

## System Monitoring Compounds

|                                |       |     |        |       |       |      |
|--------------------------------|-------|-----|--------|-------|-------|------|
| 3) 1,4-Dioxane-d8              | 2.98  | 96  | 3862   | 3.00  | ng/uL | 0.00 |
| 5) Phenol-d5                   | 6.72  | 99  | 107409 | 22.56 | ng/ul | 0.00 |
| 7) Bis-(2-Chloroethyl)ether-d  | 6.87  | 67  | 52527  | 19.95 | ng/ul | 0.00 |
| 9) 2-Chlorophenol-d4           | 7.06  | 132 | 87974  | 21.79 | ng/ul | 0.00 |
| 13) 4-Methylphenol-d8          | 8.25  | 113 | 87004  | 22.98 | ng/ul | 0.00 |
| 19) Nitrobenzene-d5            | 8.69  | 128 | 42329  | 20.80 | ng/ul | 0.00 |
| 22) 2-Nitrophenol-d4           | 9.41  | 143 | 49025  | 21.68 | ng/ul | 0.00 |
| 26) 2,4-Dichlorophenol-d3      | 9.95  | 165 | 95953  | 22.03 | ng/ul | 0.00 |
| 29) 4-Chloroaniline-d4         | 10.46 | 131 | 44902  | 9.38  | ng/ul | 0.00 |
| 44) Dimethylphthalate-d6       | 13.62 | 166 | 290384 | 21.30 | ng/ul | 0.00 |
| 47) Acenaphthylene-d8          | 13.89 | 160 | 304946 | 17.89 | ng/ul | 0.00 |
| 52) 4-Nitrophenol-d4           | 14.45 | 143 | 36899  | 16.22 | ng/ul | 0.00 |
| 58) Fluorene-d10               | 15.20 | 176 | 211948 | 17.67 | ng/ul | 0.00 |
| 63) 4,6-Dinitro-2-methylphenol | 15.35 | 200 | 39875  | 14.46 | ng/ul | 0.00 |
| 71) Anthracene-d10             | 17.06 | 188 | 326933 | 16.24 | ng/ul | 0.00 |
| 79) Pyrene-d10                 | 19.36 | 212 | 358187 | 15.11 | ng/ul | 0.00 |
| 90) Benzo(a)pyrene-d12         | 23.21 | 264 | 273846 | 12.05 | ng/ul | 0.00 |

## Target Compounds

|                                |       |     |        |       |        | Qvalue |
|--------------------------------|-------|-----|--------|-------|--------|--------|
| 28) Naphthalene                | 10.36 | 128 | 19237  | 1.41  | ng/ul# | 96     |
| 34) 2-Methylnaphthalene        | 11.99 | 142 | 10961  | 1.11  | ng/ul  | 94     |
| 35) 1-Methylnaphthalene        | 12.22 | 142 | 9539   | 1.00  | ng/ul# | 89     |
| 45) Dimethylphthalate          | 13.66 | 163 | 101597 | 7.46  | ng/ul  | 99     |
| 48) Acenaphthylene             | 13.92 | 152 | 17677  | 1.01  | ng/ul  | 97     |
| 50) Acenaphthene               | 14.26 | 153 | 16040  | 1.39  | ng/ul  | 96     |
| 54) Dibenzofuran               | 14.60 | 168 | 19297  | 1.17  | ng/ul  | 99     |
| 59) Fluorene                   | 15.26 | 166 | 23579  | 1.73  | ng/ul  | 94     |
| 70) Phenanthrene               | 17.00 | 178 | 466648 | 19.98 | ng/ul  | 100    |
| 72) Anthracene                 | 17.09 | 178 | 74072  | 3.10  | ng/ul  | 98     |
| 75) Carbazole                  | 17.37 | 167 | 40158  | 1.97  | ng/ul  | 96     |
| 76) Di-n-butylphthalate        | 17.92 | 149 | 25848  | 1.06  | ng/ul  | 97     |
| 77) Fluoranthene               | 19.03 | 202 | 762712 | 28.28 | ng/ul  | 99     |
| 80) Pyrene                     | 19.39 | 202 | 722290 | 23.57 | ng/ul  | 99     |
| 83) Benzo(a)anthracene         | 21.15 | 228 | 325817 | 10.44 | ng/ul  | 97     |
| 84) Bis(2-ethylhexyl)phthalate | 21.07 | 149 | 92189  | 5.15  | ng/ul  | 99     |
| 85) Chrysene                   | 21.20 | 228 | 356873 | 12.22 | ng/ul  | 97     |
| 88) Benzo(b)fluoranthene       | 22.70 | 252 | 397729 | 15.10 | ng/ul# | 94     |
| 89) Benzo(k)fluoranthene       | 22.70 | 252 | 242925 | 9.56  | ng/ul# | 95     |
| 91) Benzo(a)pyrene             | 23.26 | 252 | 254585 | 10.01 | ng/ul  | 97     |
| 92) Indeno(1,2,3-cd)pyrene     | 25.54 | 276 | 164787 | 5.62  | ng/ul# | 94     |
| 93) Dibenzo(a,h)anthracene     | 25.54 | 278 | 43928  | 1.75  | ng/ul# | 87     |
| 94) Benzo(g,h,i)perylene       | 26.21 | 276 | 153606 | 6.25  | ng/ul  | 96     |

Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM080315\  
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Operator : TP/UM  
Sample : G3073-18  
Misc :  
ALS Vial : 13 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

Quant Time: Aug 04 02:34:01 2015  
Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM072715.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Tue Aug 04 02:31:26 2015  
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|--------------------|------|------|----------|------|-------|----------|
|--------------------|------|------|----------|------|-------|----------|

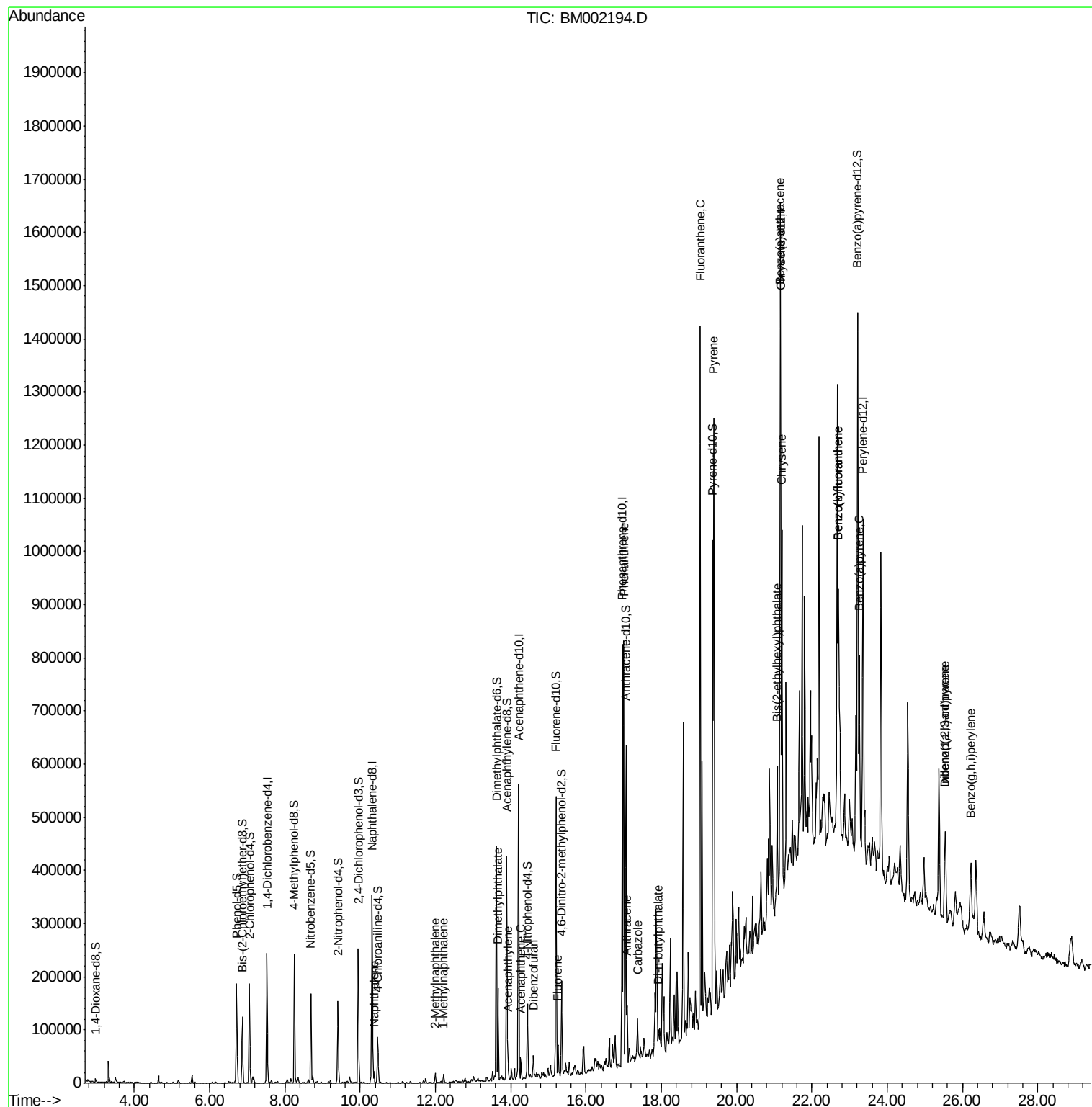
|       |  |  |  |  |  |  |
|-------|--|--|--|--|--|--|
| ----- |  |  |  |  |  |  |
| ----- |  |  |  |  |  |  |

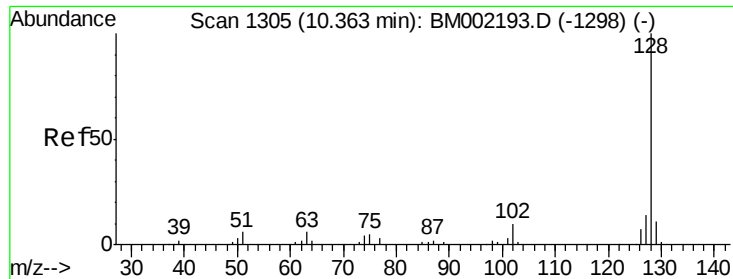
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM080315\  
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Acq On : 03 Aug 2015 13:03  
Operator : TP/UM  
Sample : G3073-18  
Misc :  
ALS Vial : 13 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

Quant Time: Aug 04 02:34:01 2015  
Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM072715.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Tue Aug 04 02:31:26 2015  
Response via : Initial Calibration





#28

Naphthalene

Concen: 1.41 ng/ul

RT: 10.36 min Scan# 1305

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

C02G3

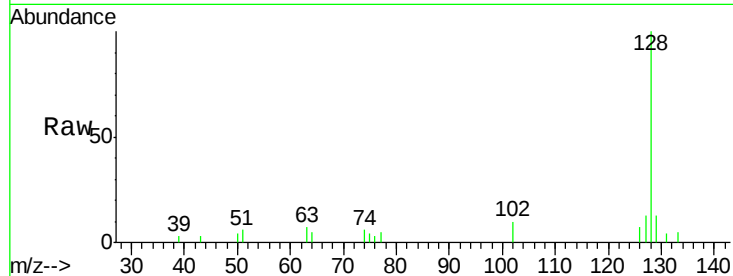
Tgt Ion:128 Resp: 19237

Ion Ratio Lower Upper

128 100

129 13.5 9.0 13.4#

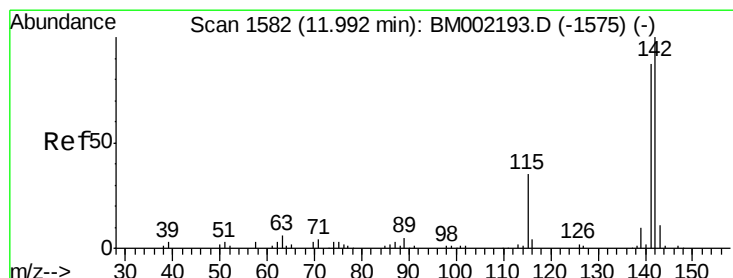
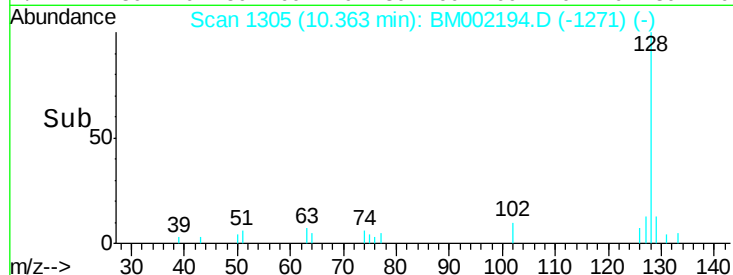
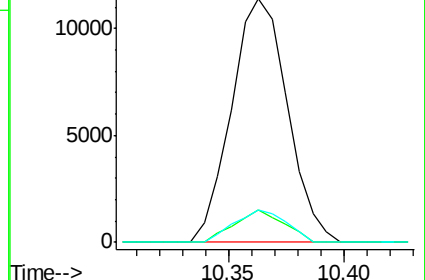
127 13.5 10.2 15.4



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



#34

2-Methylnaphthalene

Concen: 1.11 ng/ul

RT: 11.99 min Scan# 1581

Delta R.T. -0.01 min

Lab File: BM002194.D

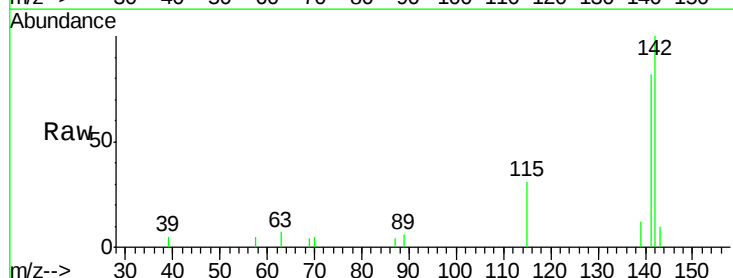
Acq: 03 Aug 2015 13:03

Tgt Ion:142 Resp: 10961

Ion Ratio Lower Upper

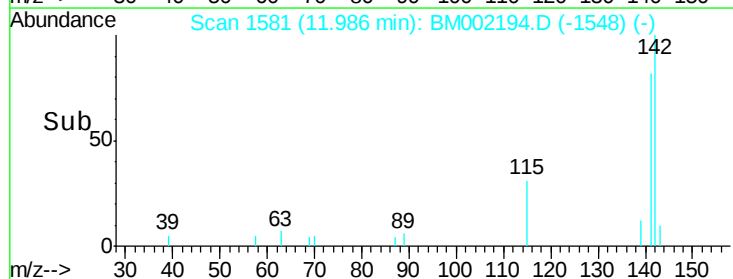
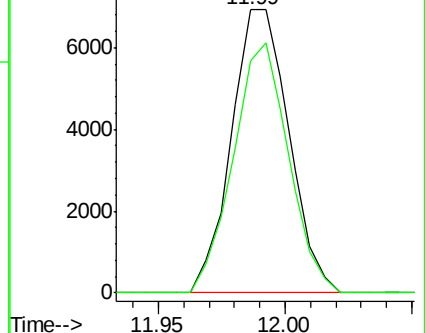
142 100

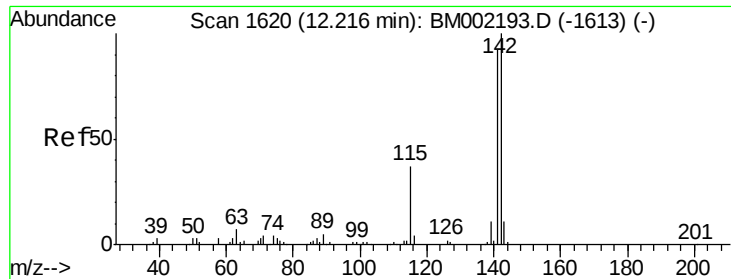
141 82.0 69.8 104.6



Abundance Ion 142.00 (141.70 to 142.70): E

Ion 141.00 (140.70 to 141.70): E

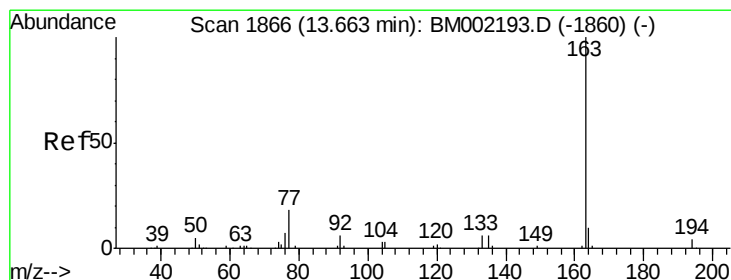
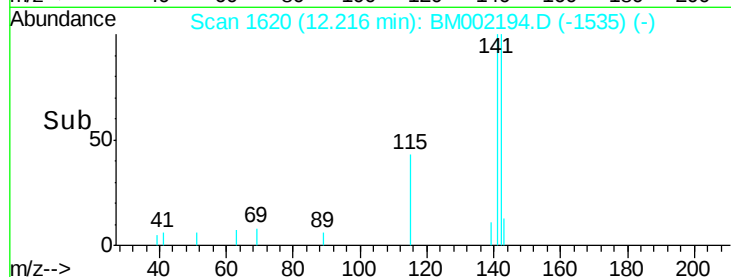
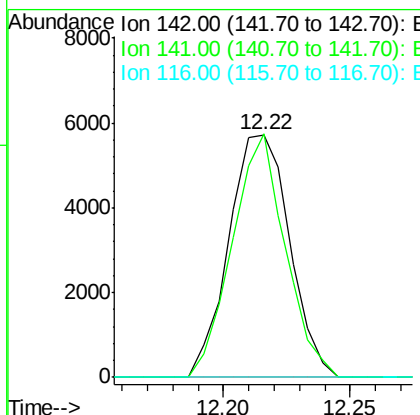
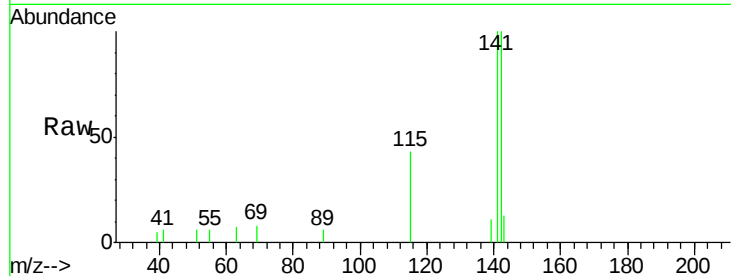




#35  
 1-Methylnaphthalene  
 Concen: 1.00 ng/ul  
 RT: 12.22 min Scan# 1620  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

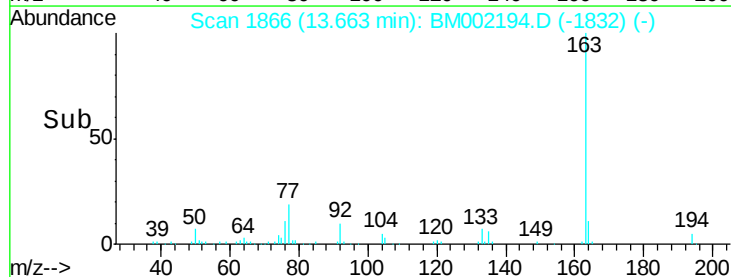
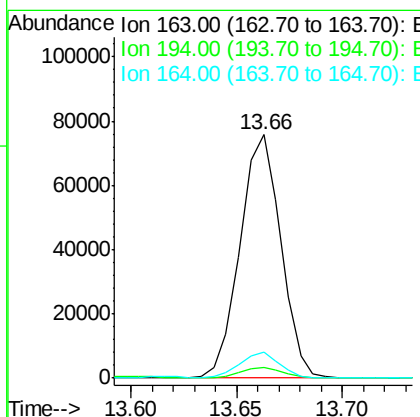
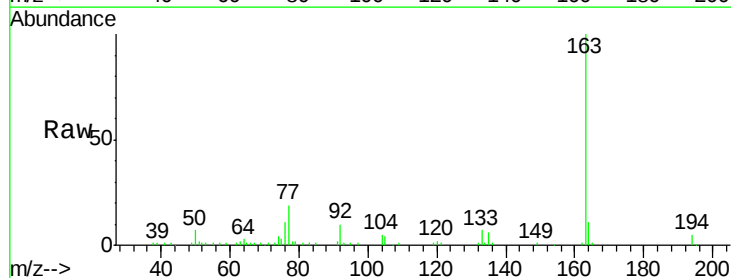
Instrument :  
 BNA\_M  
 ClientSampleId :  
 C02G3

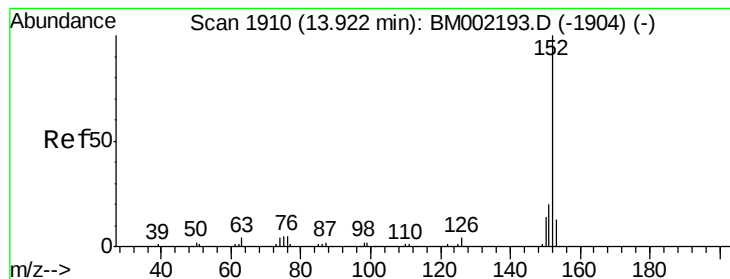
Tgt Ion:142 Resp: 9539  
 Ion Ratio Lower Upper  
 142 100  
 141 100.4 72.4 108.6  
 116 0.0 3.2 4.8#



#45  
 Dimethylphthalate  
 Concen: 7.46 ng/ul  
 RT: 13.66 min Scan# 1866  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

Tgt Ion:163 Resp: 101597  
 Ion Ratio Lower Upper  
 163 100  
 194 4.5 3.5 5.3  
 164 10.7 8.0 12.0





#48

Acenaphthylene

Concen: 1.01 ng/ul

RT: 13.92 min Scan# 1910

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

C02G3

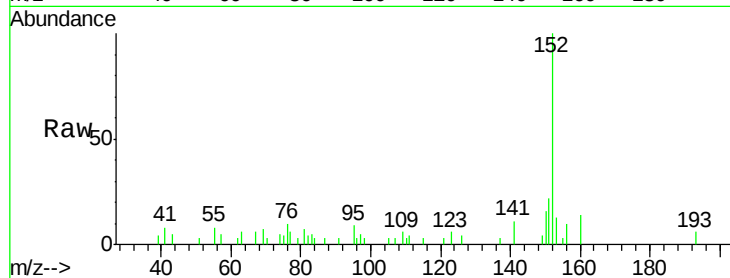
Tgt Ion:152 Resp: 17677

Ion Ratio Lower Upper

152 100

151 21.6 15.6 23.4

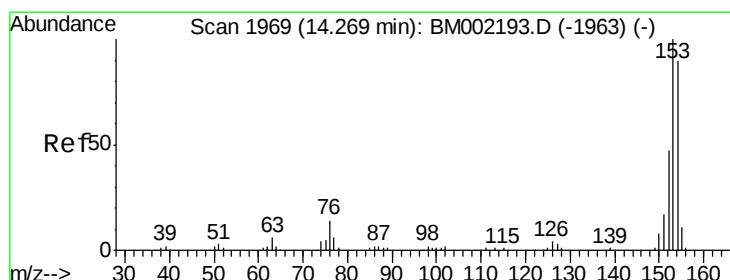
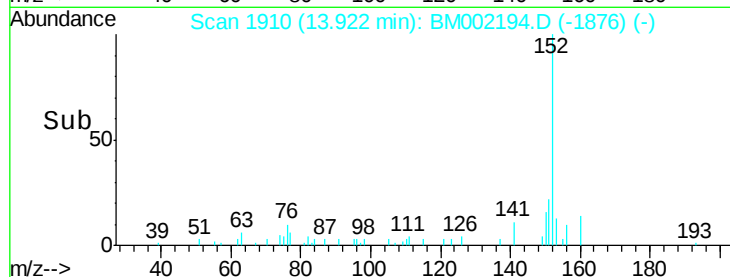
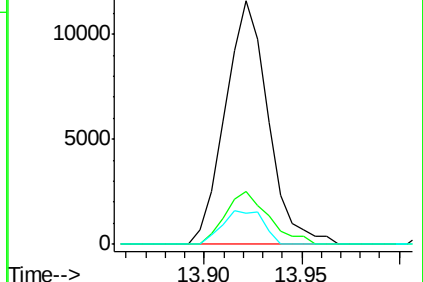
153 13.0 10.3 15.5



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



#50

Acenaphthene

Concen: 1.39 ng/ul

RT: 14.26 min Scan# 1968

Delta R.T. -0.01 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

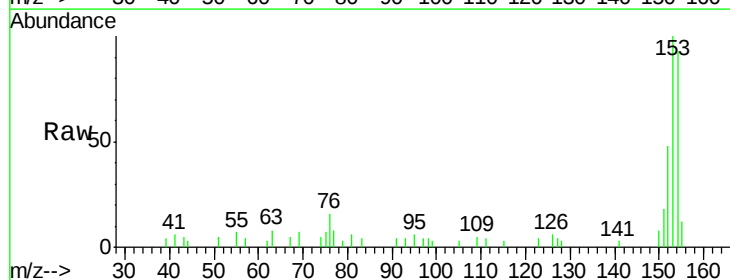
Tgt Ion:153 Resp: 16040

Ion Ratio Lower Upper

153 100

152 48.4 37.3 55.9

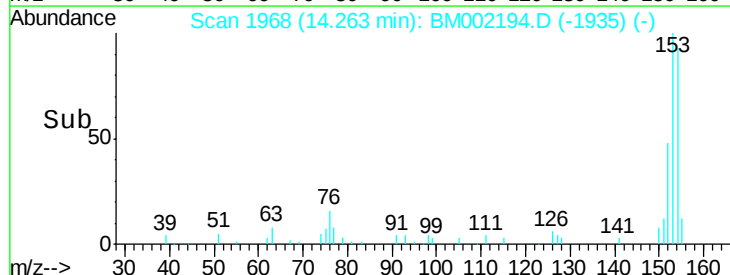
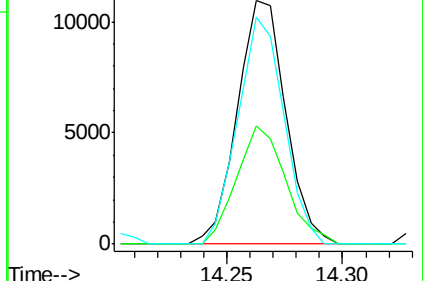
154 93.0 71.4 107.2

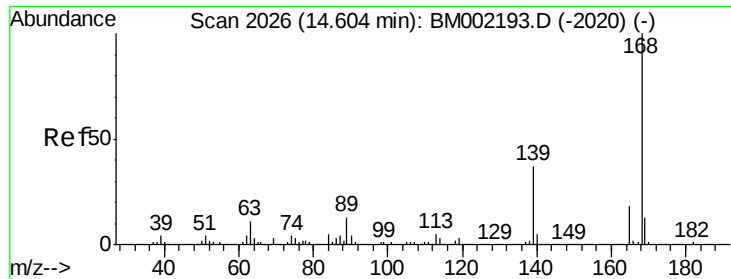


Abundance Ion 153.00 (152.70 to 153.70): E

Ion 152.00 (151.70 to 152.70): E

Ion 154.00 (153.70 to 154.70): E





#54

Dibenzenofuran

Concen: 1.17 ng/ul

RT: 14.60 min Scan# 2026

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

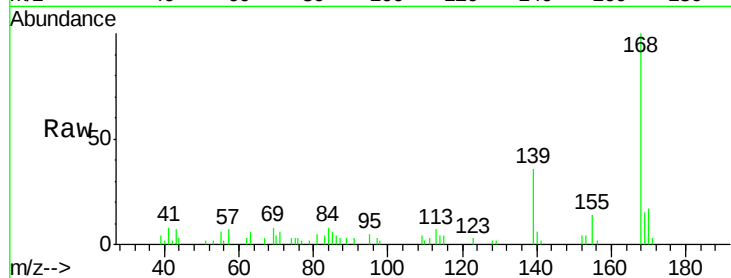
C02G3

Tgt Ion:168 Resp: 19297

Ion Ratio Lower Upper

168 100

139 35.7 28.2 42.2



Abundance Ion 168.00 (167.70 to 168.70): E

Ion 139.00 (138.70 to 139.70): E

14.60

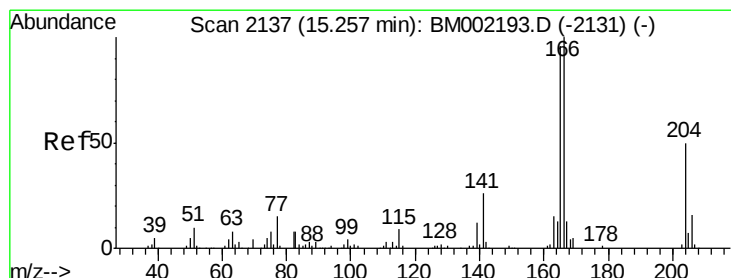
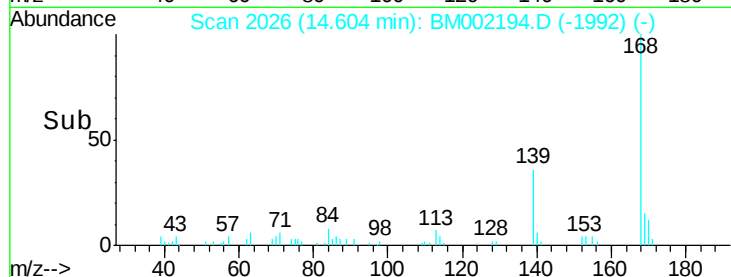
15000

10000

5000

0

Time--> 14.55 14.60 14.65



#59

Fluorene

Concen: 1.73 ng/ul

RT: 15.26 min Scan# 2137

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

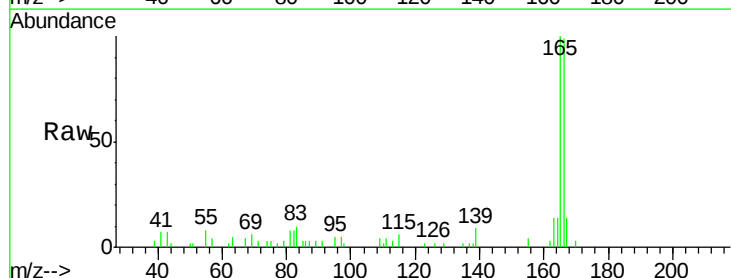
Tgt Ion:166 Resp: 23579

Ion Ratio Lower Upper

166 100

165 101.0 75.6 113.4

167 14.0 10.5 15.7



Abundance Ion 166.00 (165.70 to 166.70): E

Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E

15.26

20000

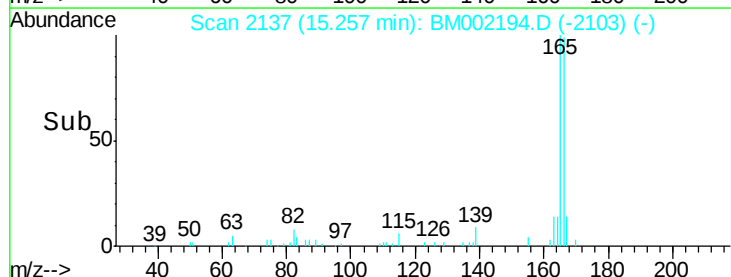
15000

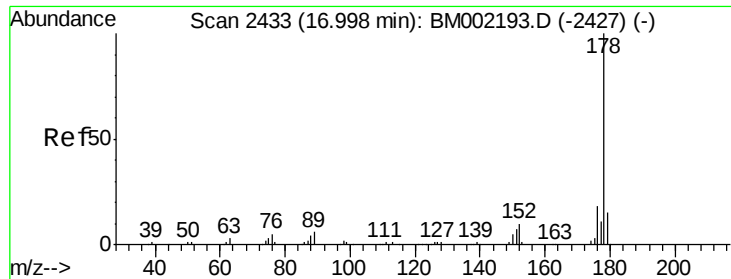
10000

5000

0

Time--> 15.20 15.25 15.30

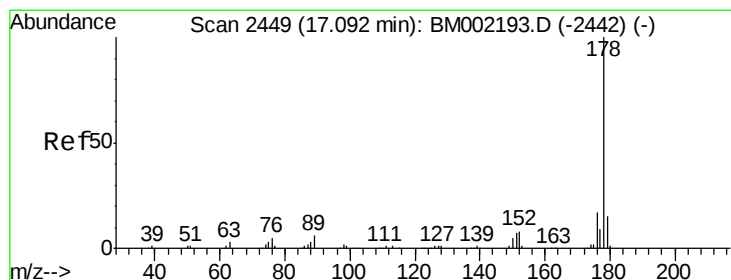
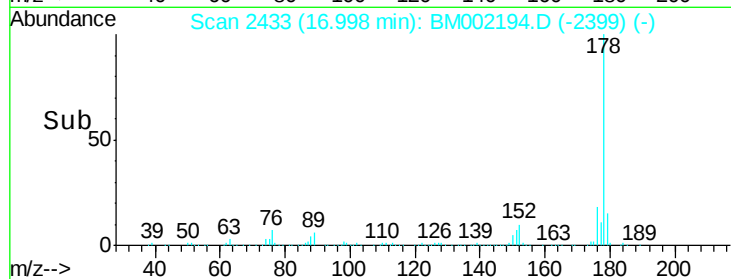
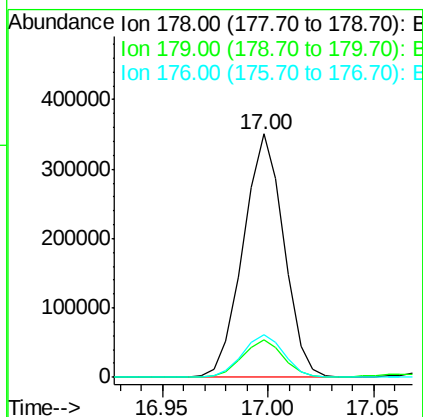
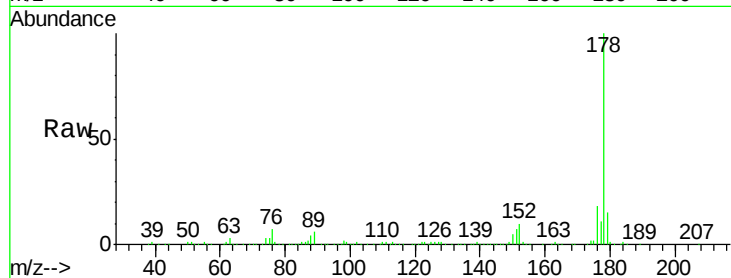




#70  
Phenanthrene  
Concen: 19.98 ng/ul  
RT: 17.00 min Scan# 2433  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

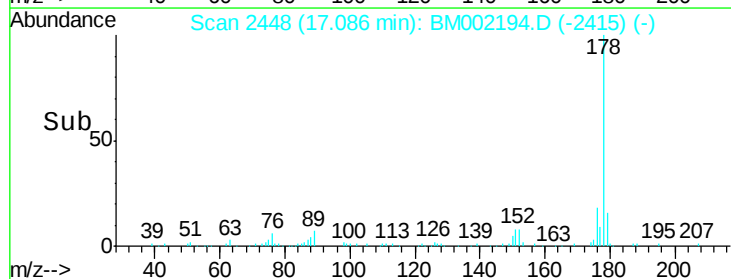
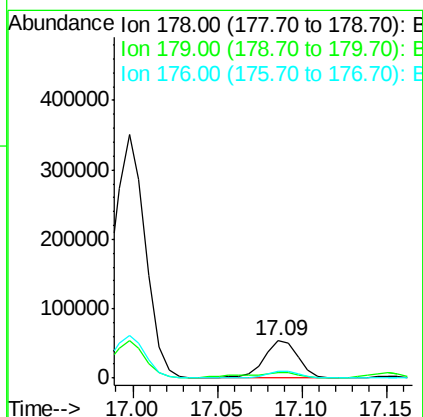
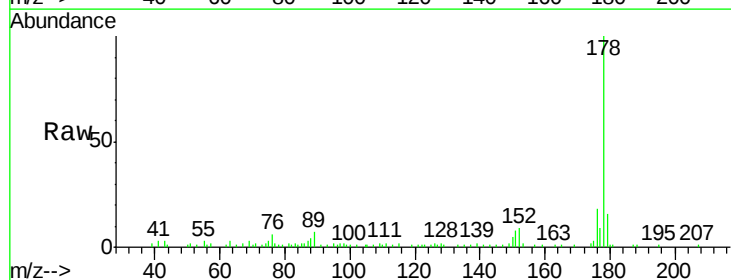
Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

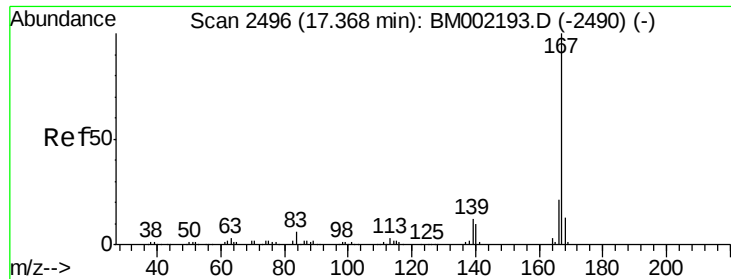
Tgt Ion:178 Resp: 466648  
Ion Ratio Lower Upper  
178 100  
179 15.4 12.5 18.7  
176 17.7 14.2 21.4



#72  
Anthracene  
Concen: 3.10 ng/ul  
RT: 17.09 min Scan# 2448  
Delta R.T. -0.01 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

Tgt Ion:178 Resp: 74072  
Ion Ratio Lower Upper  
178 100  
179 16.1 12.1 18.1  
176 18.0 14.1 21.1





#75

Carbazole

Concen: 1.97 ng/ul

RT: 17.37 min Scan# 2496

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

C02G3

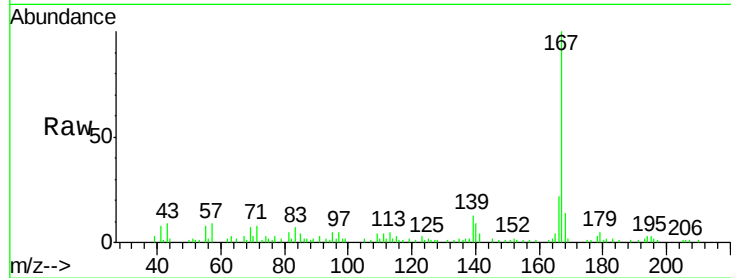
Tgt Ion:167 Resp: 40158

Ion Ratio Lower Upper

167 100

166 22.5 16.2 24.4

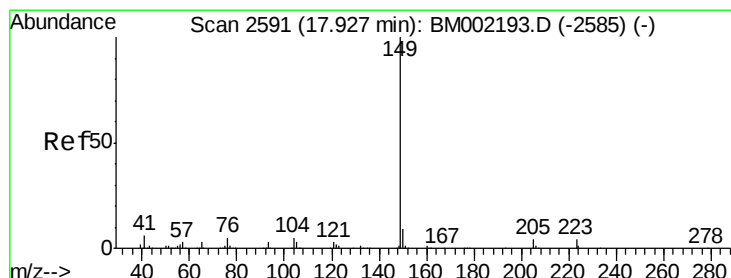
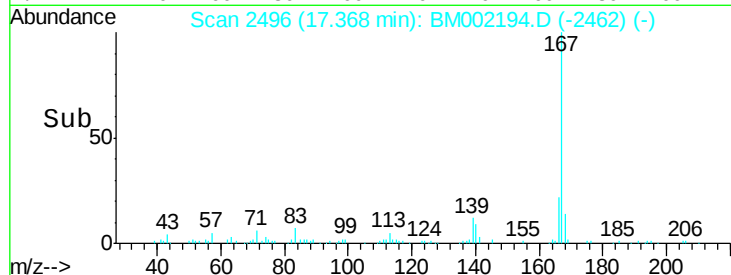
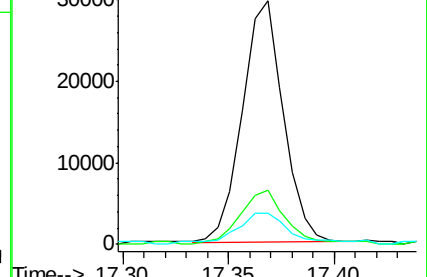
139 12.7 9.6 14.4



Abundance Ion 167.00 (166.70 to 167.70): E

Ion 166.00 (165.70 to 166.70): E

Ion 139.00 (138.70 to 139.70): E



#76

Di-n-butylphthalate

Concen: 1.06 ng/ul

RT: 17.92 min Scan# 2590

Delta R.T. -0.01 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

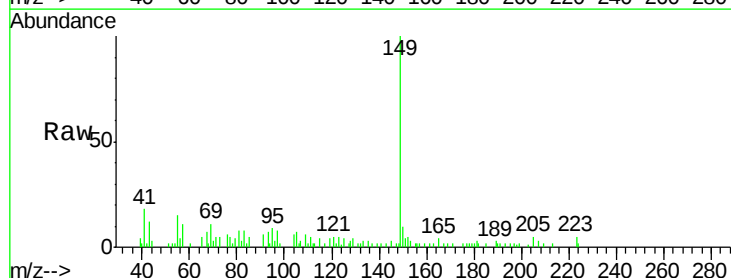
Tgt Ion:149 Resp: 25848

Ion Ratio Lower Upper

149 100

150 10.0 7.0 10.4

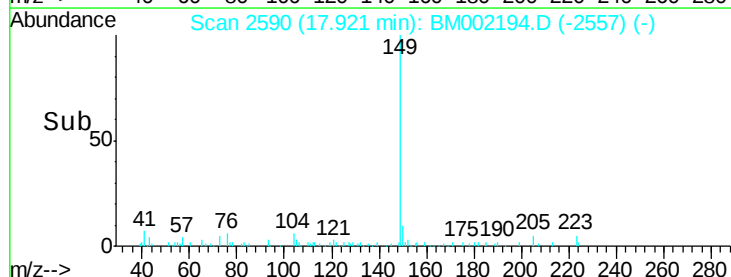
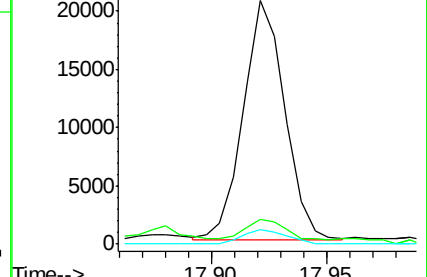
104 5.8 4.2 6.2

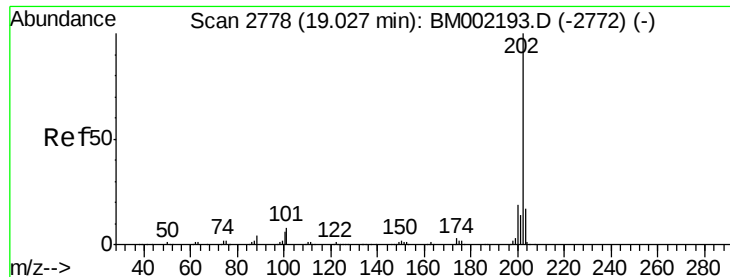


Abundance Ion 149.00 (148.70 to 149.70): E

Ion 150.00 (149.70 to 150.70): E

Ion 104.00 (103.70 to 104.70): E

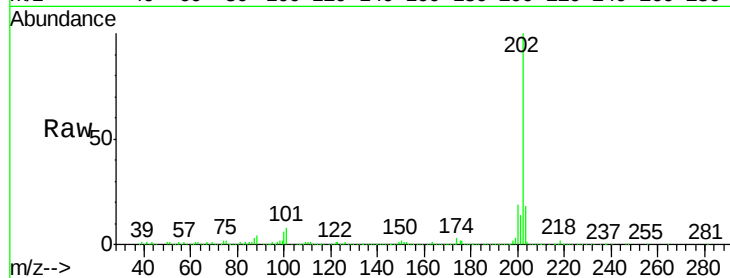




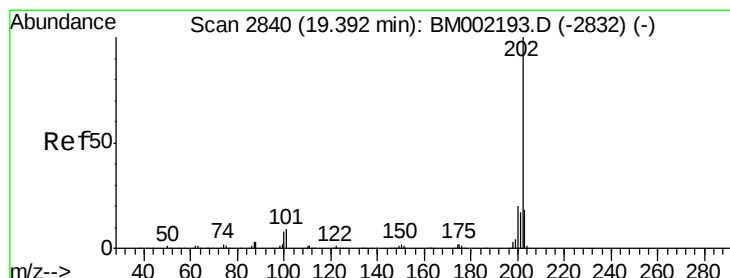
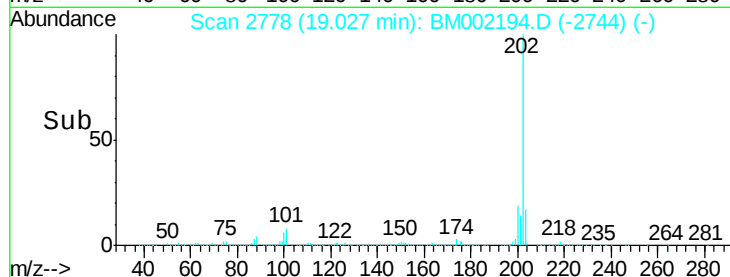
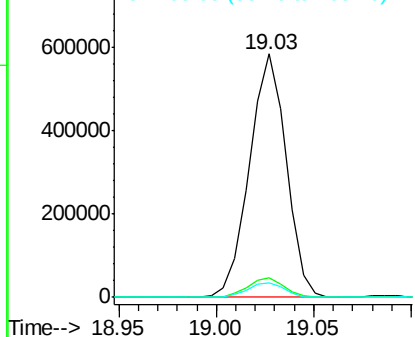
#77  
 Fluoranthene  
 Concen: 28.28 ng/ul  
 RT: 19.03 min Scan# 2778  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

Instrument :  
 BNA\_M  
 ClientSampleId :  
 C02G3

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 7.9   | 6.2   | 9.4   |
| 100     | 5.9   | 5.2   | 7.8   |

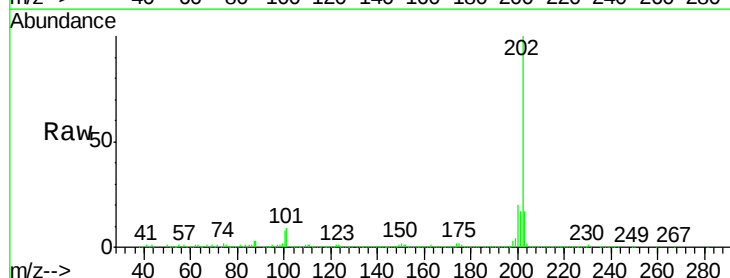


Abundance Ion 202.00 (201.70 to 202.70): E  
 Ion 101.00 (100.70 to 101.70): E  
 Ion 100.00 (99.70 to 100.70): B

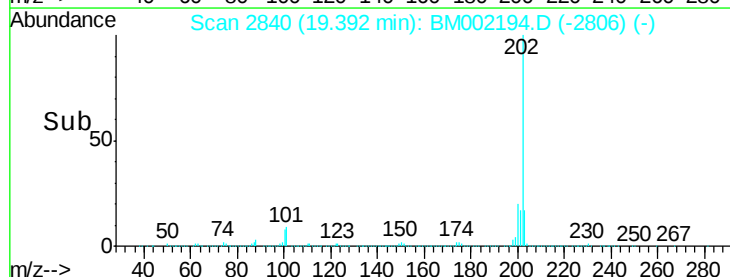
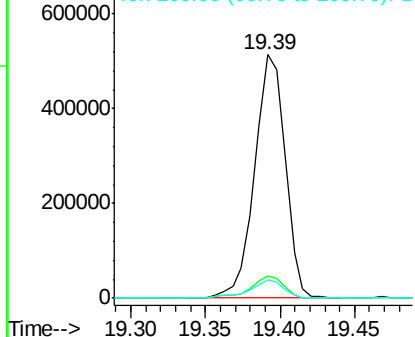


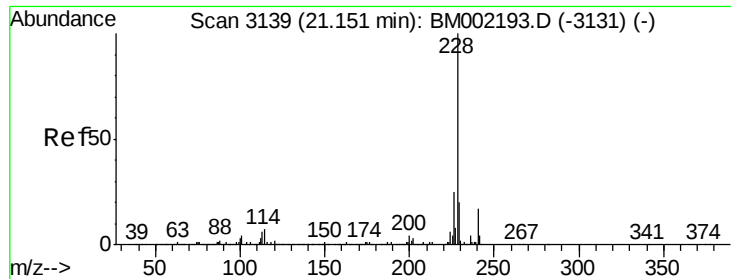
#80  
 Pyrene  
 Concen: 23.57 ng/ul  
 RT: 19.39 min Scan# 2840  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 8.9   | 7.4   | 11.2  |
| 100     | 7.6   | 6.3   | 9.5   |



Abundance Ion 202.00 (201.70 to 202.70): E  
 Ion 101.00 (100.70 to 101.70): E  
 Ion 100.00 (99.70 to 100.70): B





#83

Benzo(a)anthracene

Concen: 10.44 ng/ul

RT: 21.15 min Scan# 3139

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

C02G3

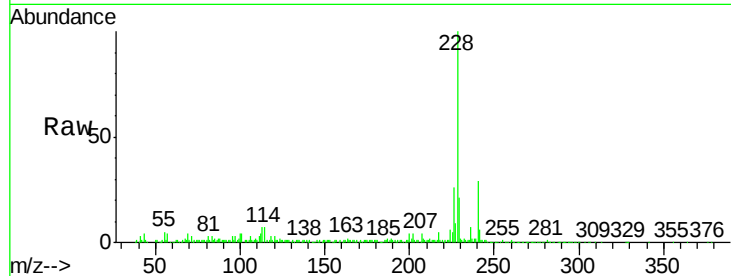
Tgt Ion:228 Resp: 325817

Ion Ratio Lower Upper

228 100

229 21.5 15.4 23.2

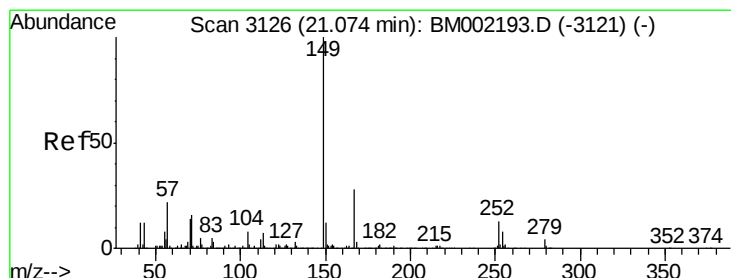
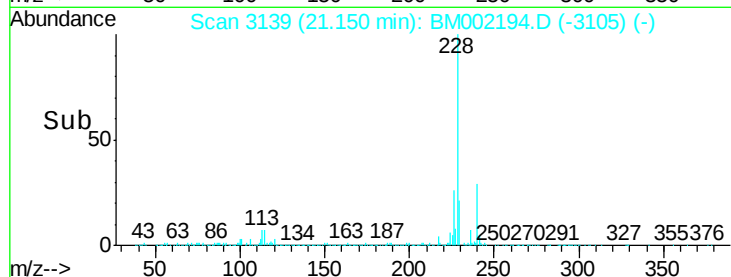
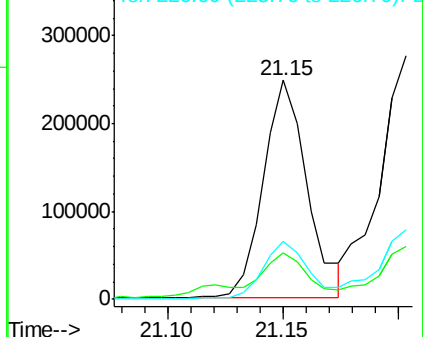
226 26.4 20.5 30.7



Abundance Ion 228.00 (227.70 to 228.70): E

Ion 229.00 (228.70 to 229.70): E

Ion 226.00 (225.70 to 226.70): E



#84

Bis(2-ethylhexyl)phthalate

Concen: 5.15 ng/ul

RT: 21.07 min Scan# 3126

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

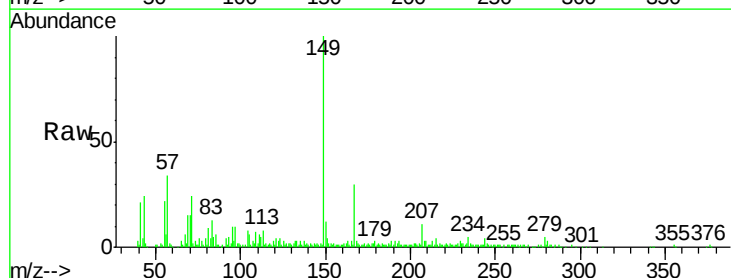
Tgt Ion:149 Resp: 92189

Ion Ratio Lower Upper

149 100

167 30.3 23.6 35.4

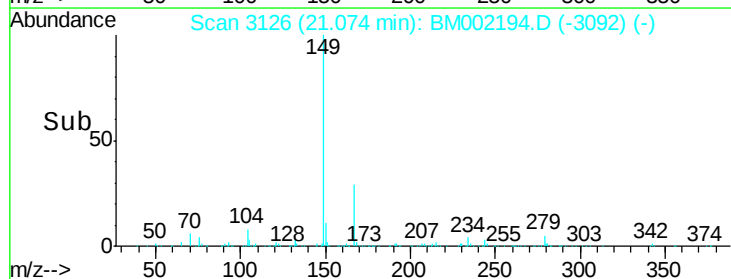
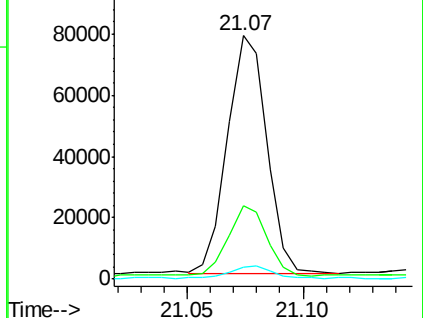
279 4.8 4.2 6.4

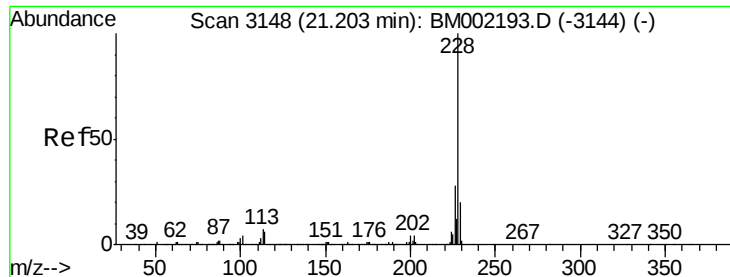


Abundance Ion 149.00 (148.70 to 149.70): E

Ion 167.00 (166.70 to 167.70): E

Ion 279.00 (278.70 to 279.70): E





#85

Chrysene

Concen: 12.22 ng/ul

RT: 21.20 min Scan# 3148

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

C02G3

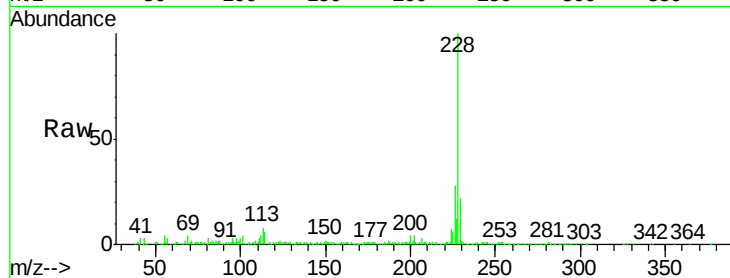
Tgt Ion: 228 Resp: 356873

Ion Ratio Lower Upper

228 100

226 28.4 22.3 33.5

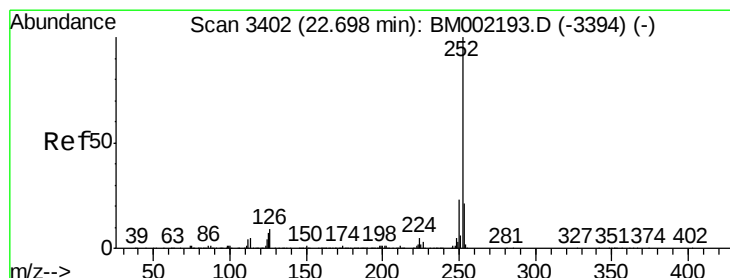
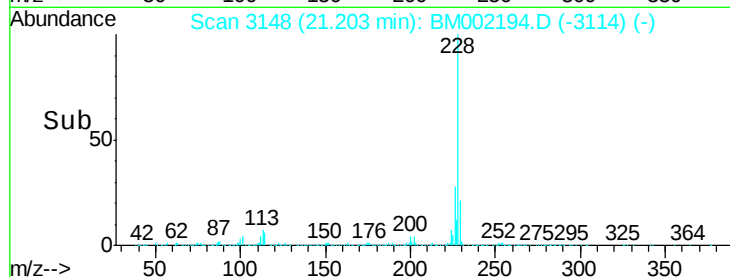
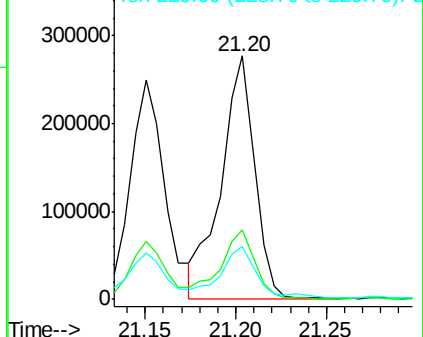
229 21.8 15.5 23.3



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



#88

Benzo(b)fluoranthene

Concen: 15.10 ng/ul

RT: 22.70 min Scan# 3402

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

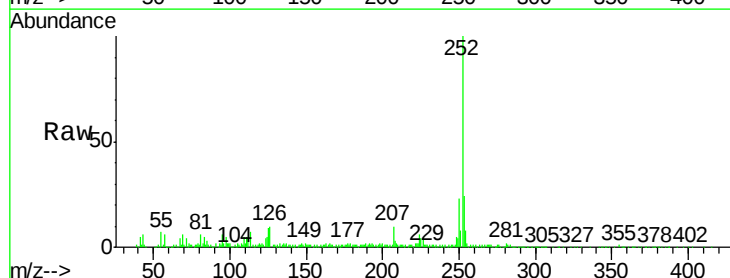
Tgt Ion: 252 Resp: 397729

Ion Ratio Lower Upper

252 100

253 24.0 16.9 25.3

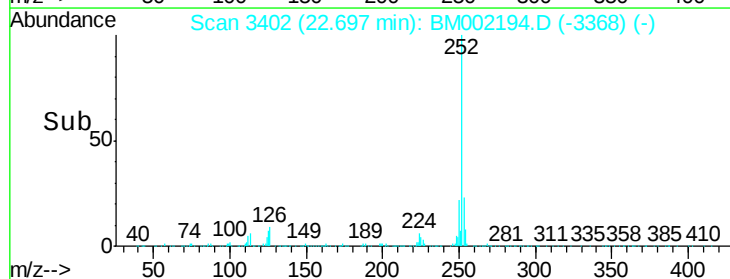
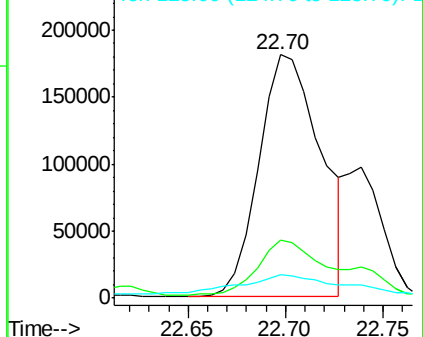
125 9.5 6.2 9.2#

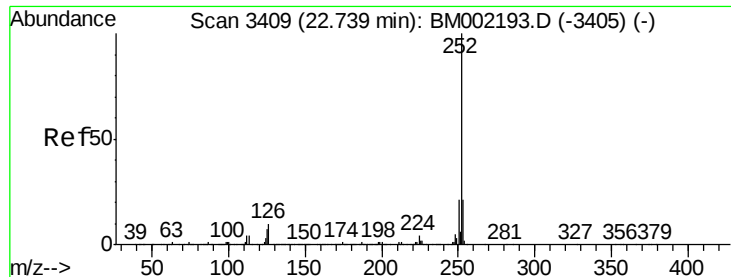


Abundance Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E

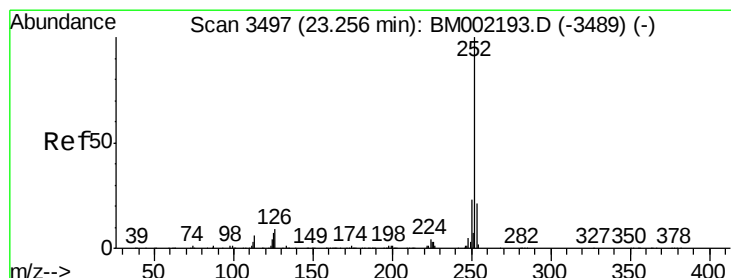
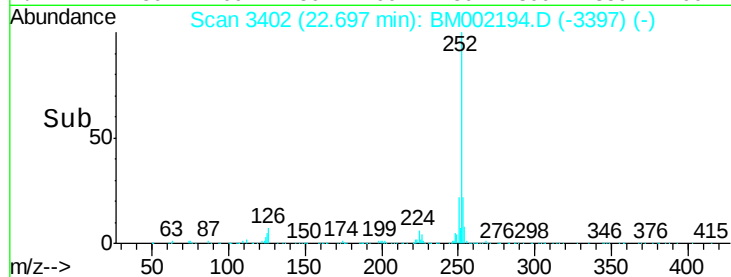
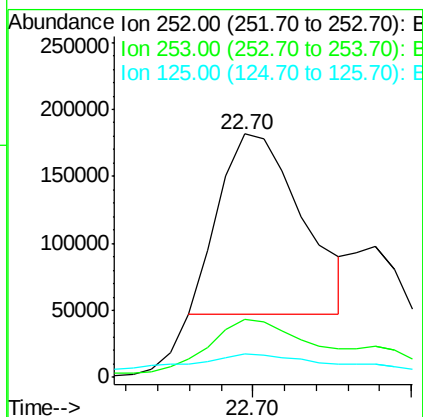
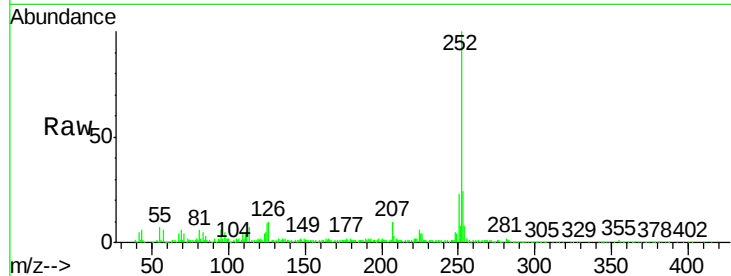




#89  
Benzo(k)fluoranthene  
Concen: 9.56 ng/ul  
RT: 22.70 min Scan# 3402  
Delta R.T. -0.04 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

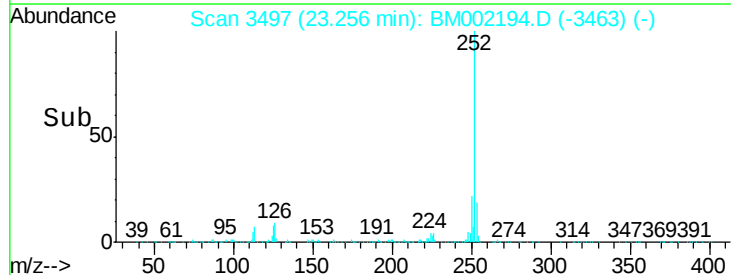
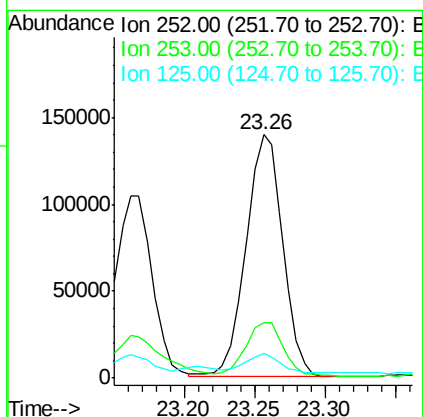
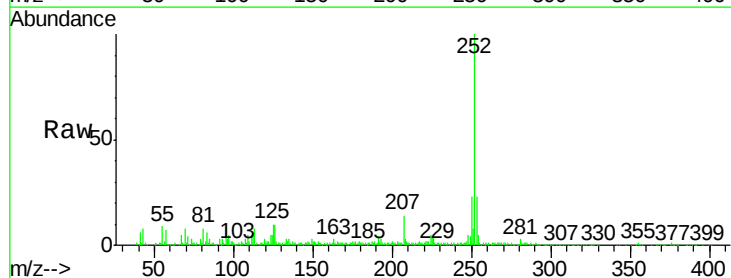
Instrument :  
BNA\_M  
ClientSampled :  
C02G3

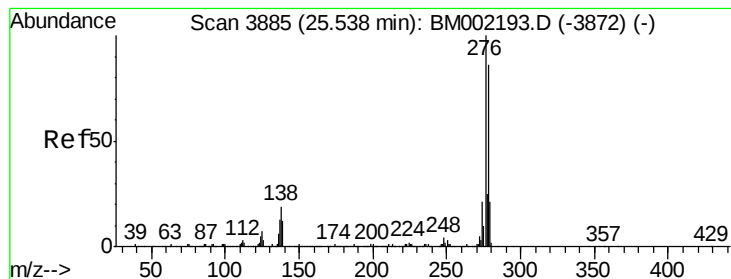
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 24.0  | 17.4  | 26.0  |
| 125     | 9.5   | 6.2   | 9.4#  |



#91  
Benzo(a)pyrene  
Concen: 10.01 ng/ul  
RT: 23.26 min Scan# 3497  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.6  | 17.2  | 25.8  |
| 125     | 9.9   | 6.6   | 10.0  |





#92

Indeno(1,2,3-cd)pyrene

Concen: 5.62 ng/ul

RT: 25.54 min Scan# 3886

Delta R.T. 0.01 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

C02G3

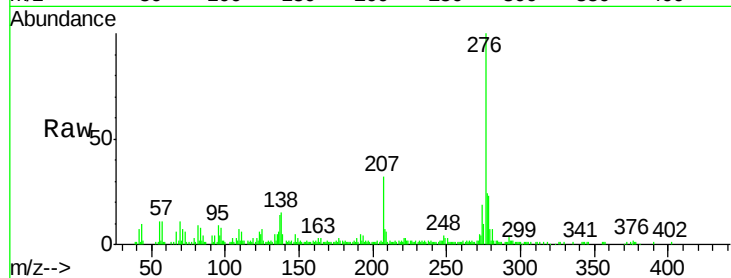
Tgt Ion:276 Resp: 164787

Ion Ratio Lower Upper

276 100

138 14.6 16.2 24.2#

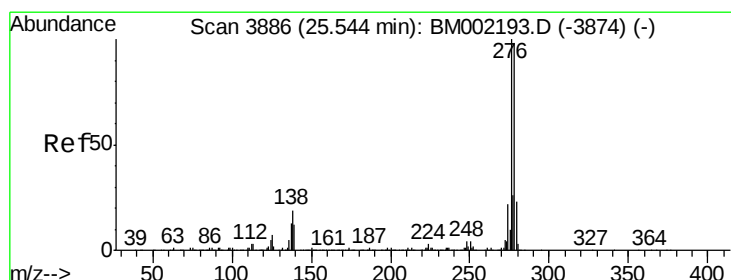
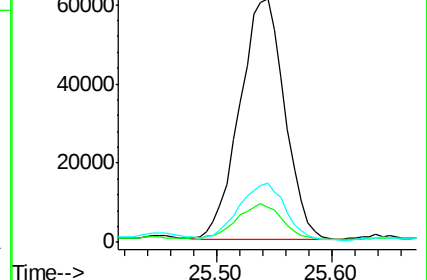
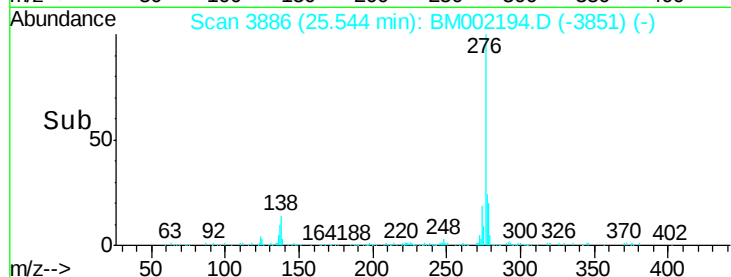
277 24.3 19.8 29.8



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



#93

Dibenzo(a,h)anthracene

Concen: 1.75 ng/ul

RT: 25.54 min Scan# 3886

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

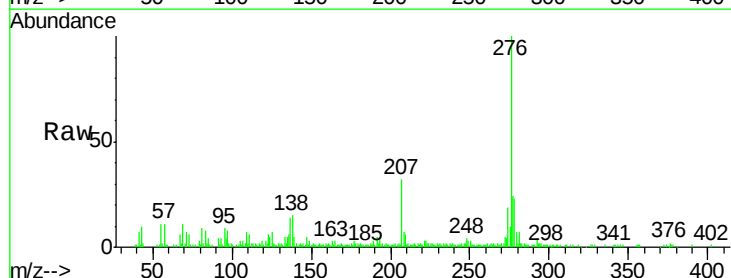
Tgt Ion:278 Resp: 43928

Ion Ratio Lower Upper

278 100

139 20.1 10.6 16.0#

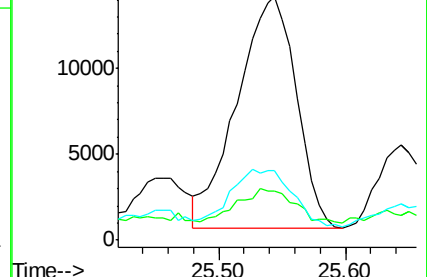
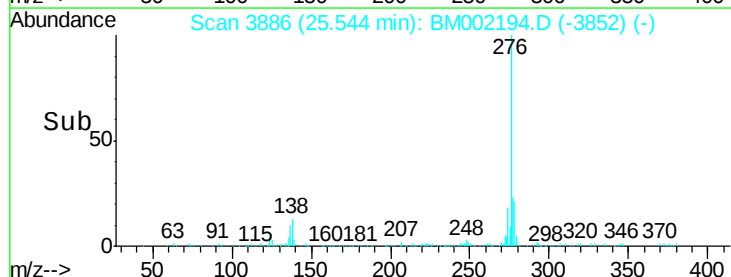
279 28.6 18.5 27.7#

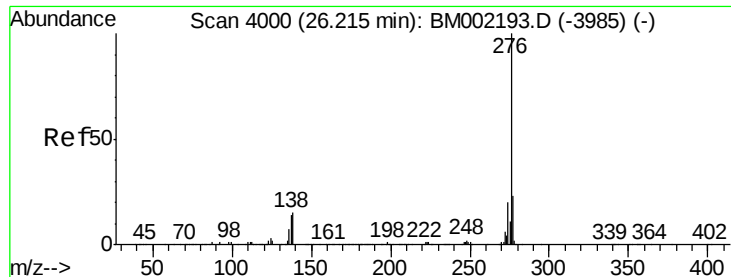


Abundance Ion 278.00 (277.70 to 278.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 279.00 (278.70 to 279.70): E

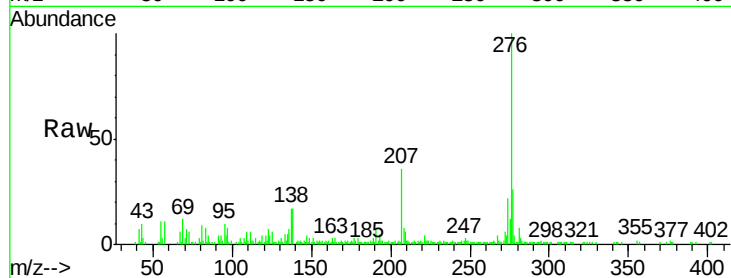




#94  
 Benzo(g,h,i)perylene  
 Concen: 6.25 ng/ul  
 RT: 26.21 min Scan# 4000  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

Instrument :  
 BNA\_M  
 ClientSampleId :  
 C02G3

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 17.0  | 13.8  | 20.6  |
| 277     | 26.0  | 18.2  | 27.2  |



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

