

Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG121815\  
 Data File : BG020261.D  
 Acq On : 18 Dec 2015 1:24  
 Operator : UM/SJ  
 Sample : G4767-19DL 5X  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 D9N41DL

Quant Time: Dec 18 07:47:28 2015  
 Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG121415.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Fri Dec 18 02:40:02 2015  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 8.10  | 152  | 18004    | 20.00 | ng/ul | 0.00     |
| 18) Naphthalene-d8        | 10.92 | 136  | 74889    | 20.00 | ng/ul | 0.00     |
| 36) Acenaphthene-d10      | 14.73 | 164  | 54556    | 20.00 | ng/ul | 0.00     |
| 62) Phenanthrene-d10      | 17.47 | 188  | 139266   | 20.00 | ng/ul | 0.00     |
| 78) Chrysene-d12          | 21.74 | 240  | 179466   | 20.00 | ng/ul | 0.00     |
| 86) Perylene-d12          | 25.02 | 264  | 173009   | 20.00 | ng/ul | 0.00     |

## System Monitoring Compounds

|                                |       |     |       |      |       |      |
|--------------------------------|-------|-----|-------|------|-------|------|
| 3) 1,4-Dioxane-d8              | 3.47  | 96  | 270   | 0.83 | ng/uL | 0.00 |
| 5) Phenol-d5                   | 7.24  | 99  | 9263  | 5.83 | ng/ul | 0.00 |
| 7) Bis-(2-Chloroethyl)ether-d  | 7.41  | 67  | 6110  | 6.45 | ng/ul | 0.00 |
| 9) 2-Chlorophenol-d4           | 7.62  | 132 | 7323  | 6.34 | ng/ul | 0.00 |
| 13) 4-Methylphenol-d8          | 8.80  | 113 | 8420  | 6.20 | ng/ul | 0.00 |
| 19) Nitrobenzene-d5            | 9.27  | 128 | 3910  | 6.70 | ng/ul | 0.00 |
| 22) 2-Nitrophenol-d4           | 9.99  | 143 | 4559  | 7.02 | ng/ul | 0.00 |
| 26) 2,4-Dichlorophenol-d3      | 10.53 | 165 | 8738  | 6.64 | ng/ul | 0.00 |
| 29) 4-Chloroaniline-d4         | 11.05 | 131 | 11081 | 7.50 | ng/ul | 0.00 |
| 44) Dimethylphthalate-d6       | 14.12 | 166 | 32769 | 7.43 | ng/ul | 0.00 |
| 47) Acenaphthylene-d8          | 14.42 | 160 | 34987 | 6.81 | ng/ul | 0.00 |
| 52) 4-Nitrophenol-d4           | 14.92 | 143 | 4195  | 5.30 | ng/ul | 0.00 |
| 58) Fluorene-d10               | 15.72 | 176 | 26964 | 6.74 | ng/ul | 0.00 |
| 63) 4,6-Dinitro-2-methylphenol | 15.83 | 200 | 3857  | 4.67 | ng/ul | 0.00 |
| 71) Anthracene-d10             | 17.57 | 188 | 44380 | 6.92 | ng/ul | 0.00 |
| 79) Pyrene-d10                 | 19.85 | 212 | 53120 | 6.35 | ng/ul | 0.00 |
| 90) Benzo(a)pyrene-d12         | 24.79 | 264 | 58521 | 6.78 | ng/ul | 0.00 |

## Target Compounds

|                          |       |     |         |        |        | Qvalue |
|--------------------------|-------|-----|---------|--------|--------|--------|
| 17) Hexachloroethane     | 9.28  | 117 | 803     | 1.58   | ng/ul# | 1      |
| 28) Naphthalene          | 10.97 | 128 | 814605  | 208.29 | ng/ul  | 96     |
| 30) 4-Chloroaniline      | 10.97 | 127 | 113374  | 75.14  | ng/ul# | 8      |
| 34) 2-Methylnaphthalene  | 12.56 | 142 | 266232  | 89.12  | ng/ul  | 96     |
| 35) 1-Methylnaphthalene  | 12.78 | 142 | 134085  | 46.69  | ng/ul# | 100    |
| 41) 1,1'-Biphenyl        | 13.56 | 154 | 117143  | 28.46  | ng/ul  | 94     |
| 45) Dimethylphthalate    | 14.17 | 163 | 14587   | 3.24   | ng/ul  | 99     |
| 48) Acenaphthylene       | 14.45 | 152 | 39009   | 7.15   | ng/ul  | 98     |
| 50) Acenaphthene         | 14.79 | 153 | 508074  | 138.44 | ng/ul  | 98     |
| 53) 4-Nitrophenol        | 14.80 | 109 | 991     | 1.30   | ng/ul# | 1      |
| 54) Dibenzofuran         | 15.12 | 168 | 541857  | 99.25  | ng/ul  | 100    |
| 59) Fluorene             | 15.78 | 166 | 508063  | 115.89 | ng/ul  | 98     |
| 61) 4-Nitroaniline       | 15.78 | 138 | 6425    | 6.57   | ng/ul# | 13     |
| 70) Phenanthrene         | 17.61 | 178 | 258933  | 33.99  | ng/ul  | 99     |
| 72) Anthracene           | 17.61 | 178 | 259126  | 33.54  | ng/ul  | 99     |
| 75) Carbazole            | 17.87 | 167 | 190200  | 29.30  | ng/ul  | 99     |
| 77) Fluoranthene         | 19.52 | 202 | 1311973 | 147.37 | ng/ul  | 97     |
| 80) Pyrene               | 19.88 | 202 | 930447  | 85.66  | ng/ul  | 99     |
| 83) Benzo(a)anthracene   | 21.73 | 228 | 226340  | 21.61  | ng/ul  | 99     |
| 85) Chrysene             | 21.79 | 228 | 183522  | 18.61  | ng/ul  | 97     |
| 88) Benzo(b)fluoranthene | 23.98 | 252 | 106532  | 10.23  | ng/ul  | 96     |
| 89) Benzo(k)fluoranthene | 23.98 | 252 | 106532  | 10.66  | ng/ul  | 99     |
| 91) Benzo(a)pyrene       | 24.86 | 252 | 60180   | 6.10   | ng/ul  | 100    |

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Data File : BG020261.D  
Acq On : 18 Dec 2015 1:24  
Operator : UM/SJ  
Sample : G4767-19DL 5X  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

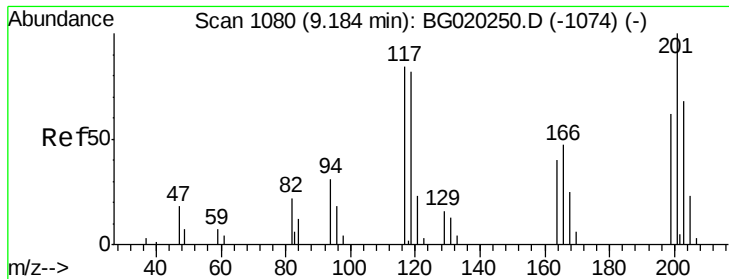
Instrument :  
BNA\_G  
ClientSampleId :  
D9N41DL

Quant Time: Dec 18 07:47:28 2015  
Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG121415.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Fri Dec 18 02:40:02 2015  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 92) Indeno(1,2,3-cd)pyrene | 28.73 | 276  | 16917    | 1.44 | ng/ul | 95       |

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

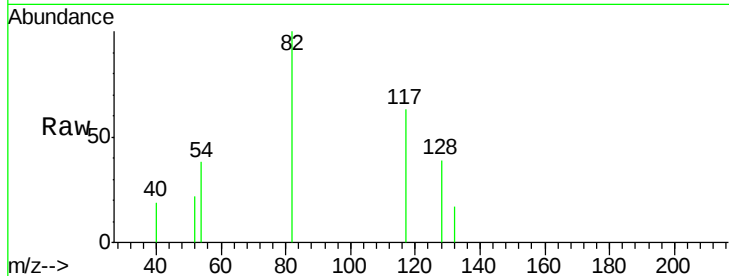
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Data Path : Z:\HPCHEM1\BNA_G\DATA\BG121815\  
Data File : BG020261.D  
Acq On    : 18 Dec 2015    1:24  
Operator  : UM/SJ  
Sample    : G4767-19DL 5X  
Misc      :  
ALS Vial  : 14    Sample Multiplier: 1
```



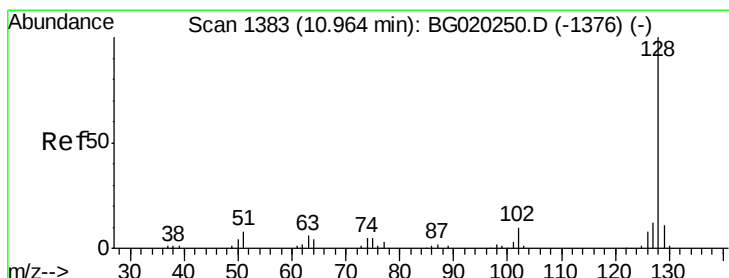
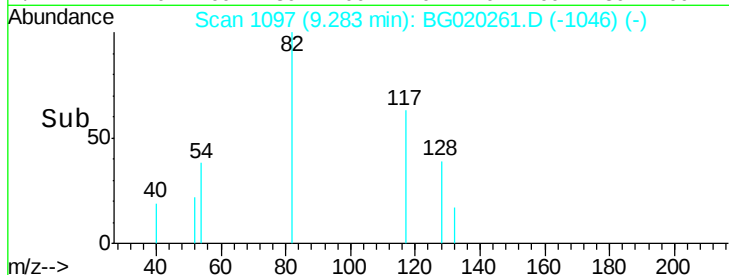
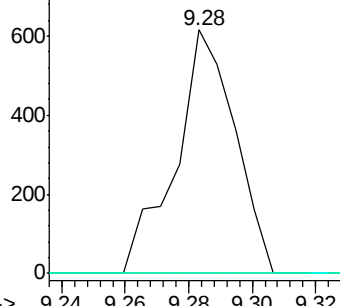
#17  
Hexachloroethane  
Concen: 1.58 ng/ul  
RT: 9.28 min Scan# 1097  
Delta R.T. 0.10 min  
Lab File: BG020261.D  
Acq: 18 Dec 2015 1:24

Instrument :  
BNA\_G  
ClientSampled :  
D9N41DL

Tgt Ion:117 Resp: 803  
Ion Ratio Lower Upper  
117 100  
201 0.0 102.7 154.1#  
199 0.0 65.8 98.8#

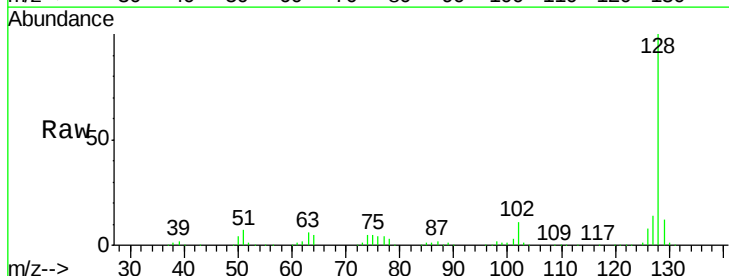


Abundance Ion 117.00 (116.70 to 117.70): E  
Ion 201.00 (200.70 to 201.70): E  
Ion 199.00 (198.70 to 199.70): E

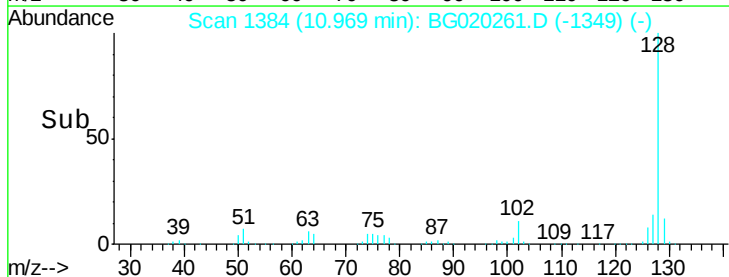
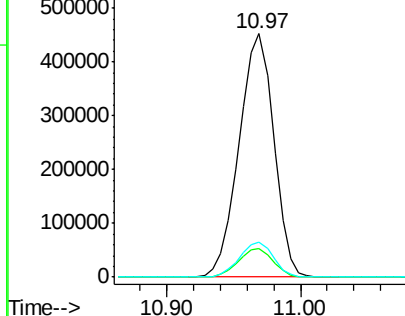


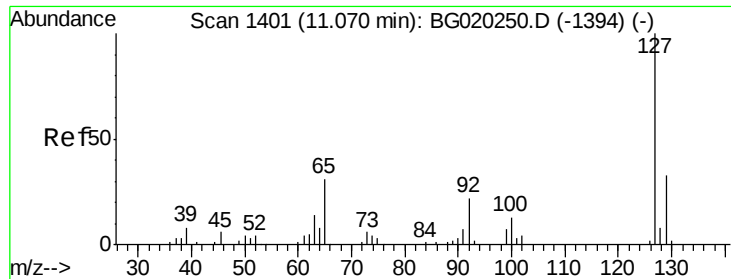
#28  
Naphthalene  
Concen: 208.29 ng/ul  
RT: 10.97 min Scan# 1384  
Delta R.T. 0.01 min  
Lab File: BG020261.D  
Acq: 18 Dec 2015 1:24

Tgt Ion:128 Resp: 814605  
Ion Ratio Lower Upper  
128 100  
129 11.8 8.6 12.8  
127 14.2 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

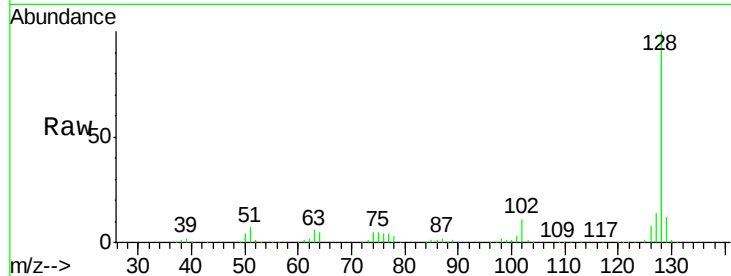




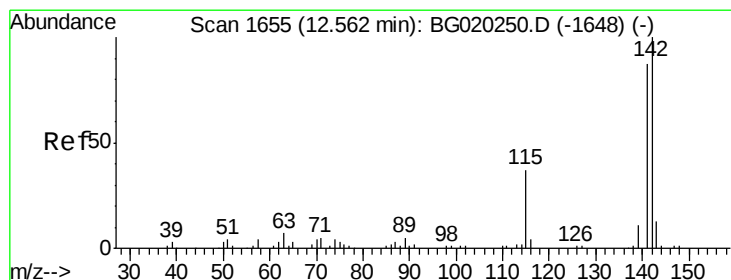
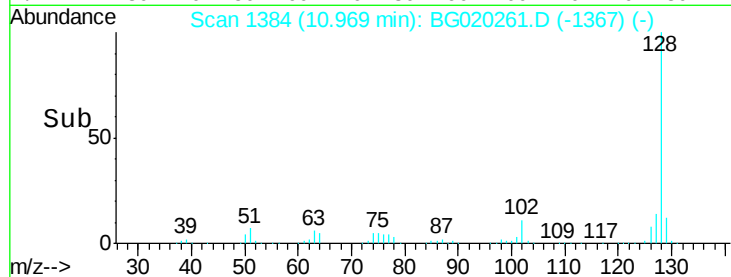
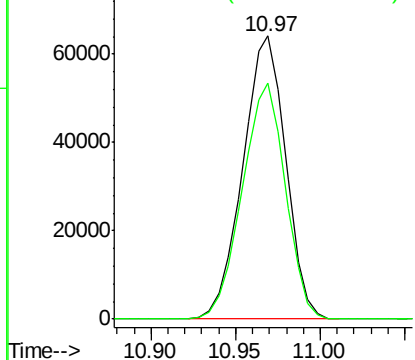
#30  
4-Chloroaniline  
Concen: 75.14 ng/ul  
RT: 10.97 min Scan# 1384  
Delta R.T. -0.10 min  
Lab File: BG020261.D  
Acq: 18 Dec 2015 1:24

Instrument :  
BNA\_G  
ClientSampleId :  
D9N41DL

Tgt Ion:127 Resp: 113374  
Ion Ratio Lower Upper  
127 100  
129 83.4 25.7 38.5#

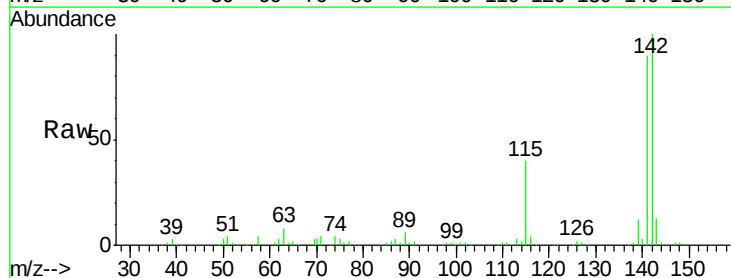


Abundance Ion 127.00 (126.70 to 127.70): E  
Ion 129.00 (128.70 to 129.70): E

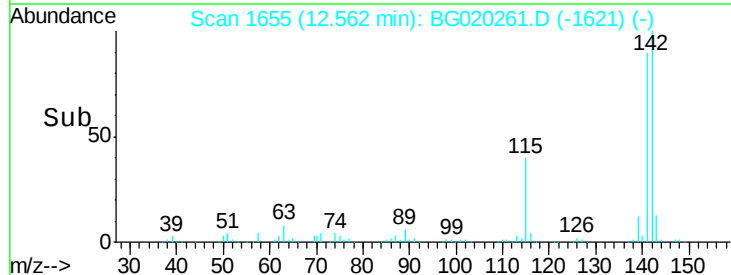
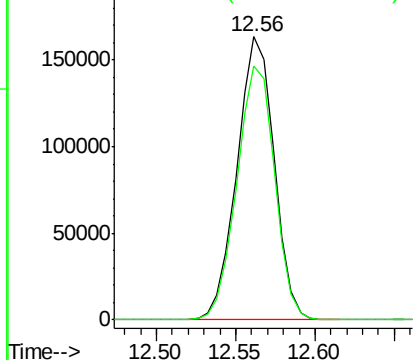


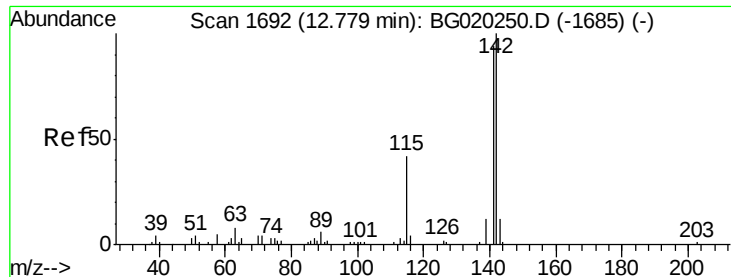
#34  
2-Methylnaphthalene  
Concen: 89.12 ng/ul  
RT: 12.56 min Scan# 1655  
Delta R.T. -0.00 min  
Lab File: BG020261.D  
Acq: 18 Dec 2015 1:24

Tgt Ion:142 Resp: 266232  
Ion Ratio Lower Upper  
142 100  
141 89.7 74.9 112.3



Abundance Ion 142.00 (141.70 to 142.70): E  
Ion 141.00 (140.70 to 141.70): E

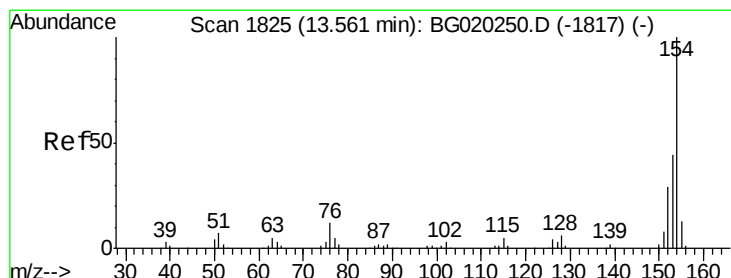
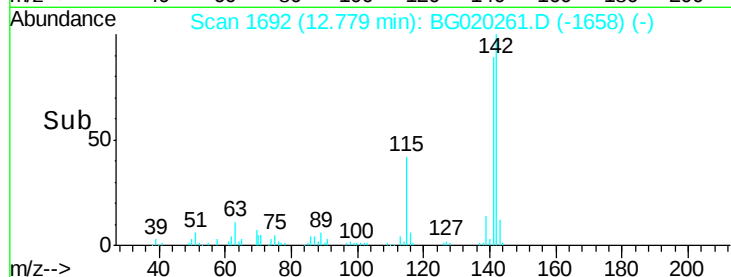
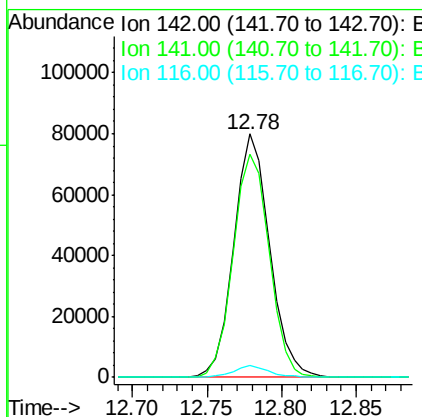
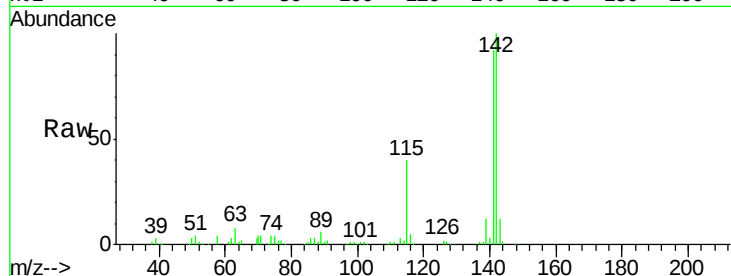




#35  
 1-Methylnaphthalene  
 Concen: 46.69 ng/ul  
 RT: 12.78 min Scan# 1692  
 Delta R.T. -0.00 min  
 Lab File: BG020261.D  
 Acq: 18 Dec 2015 1:24

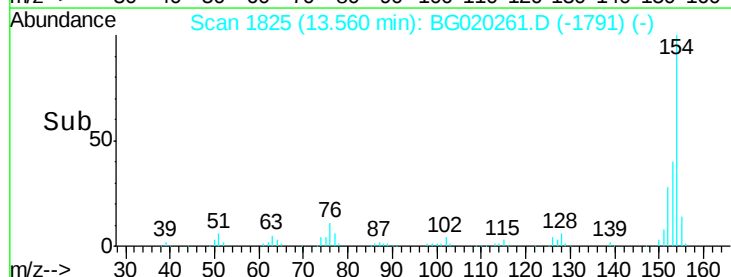
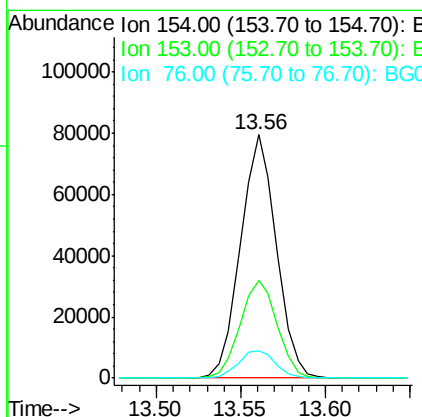
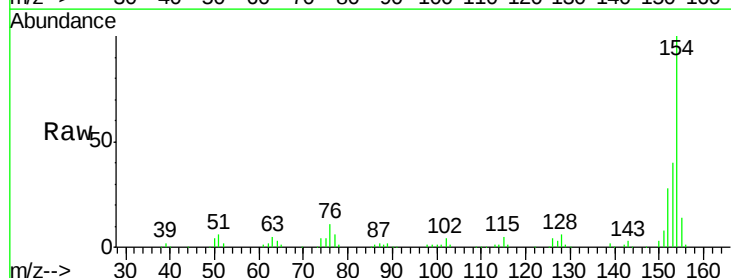
Instrument :  
 BNA\_G  
 ClientSampleId :  
 D9N41DL

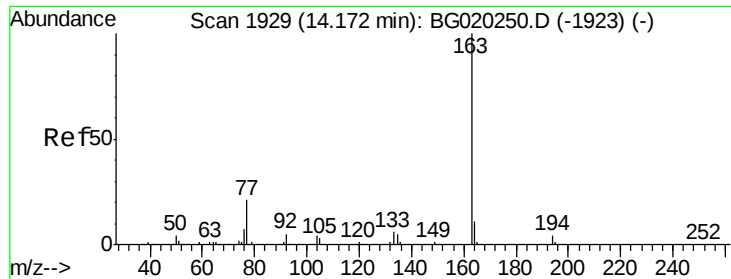
Tgt Ion:142 Resp: 134085  
 Ion Ratio Lower Upper  
 142 100  
 141 91.7 73.0 109.6  
 116 4.8 3.0 4.6#



#41  
 1,1'-Biphenyl  
 Concen: 28.46 ng/ul  
 RT: 13.56 min Scan# 1825  
 Delta R.T. -0.00 min  
 Lab File: BG020261.D  
 Acq: 18 Dec 2015 1:24

Tgt Ion:154 Resp: 117143  
 Ion Ratio Lower Upper  
 154 100  
 153 40.1 35.5 53.3  
 76 11.4 10.4 15.6





#45

Dimethylphthalate

Concen: 3.24 ng/ul

RT: 14.17 min Scan# 1929

Delta R.T. -0.00 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

Instrument :

BNA\_G

ClientSampleId :

D9N41DL

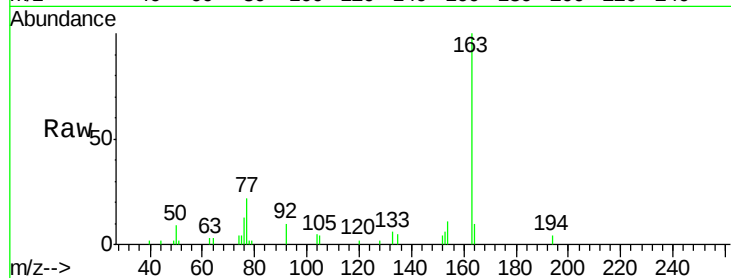
Tgt Ion:163 Resp: 14587

Ion Ratio Lower Upper

163 100

194 3.8 3.5 5.3

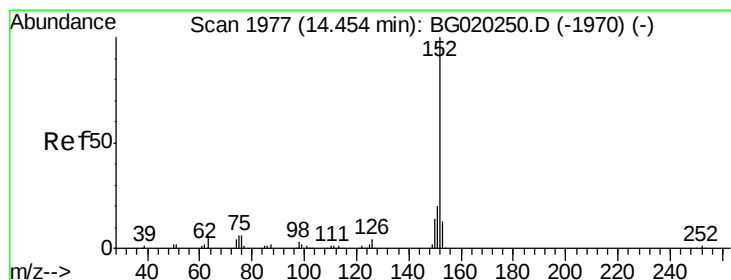
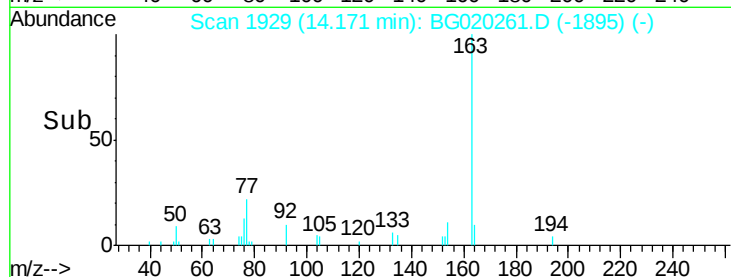
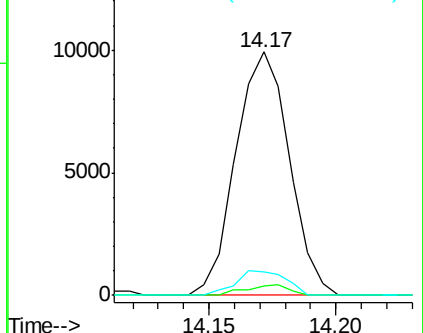
164 9.6 7.7 11.5



Abundance Ion 163.00 (162.70 to 163.70): E

Ion 194.00 (193.70 to 194.70): E

Ion 164.00 (163.70 to 164.70): E



#48

Acenaphthylene

Concen: 7.15 ng/ul

RT: 14.45 min Scan# 1976

Delta R.T. -0.01 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

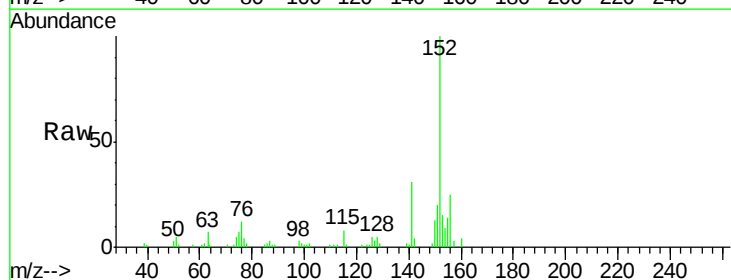
Tgt Ion:152 Resp: 39009

Ion Ratio Lower Upper

152 100

151 20.3 16.4 24.6

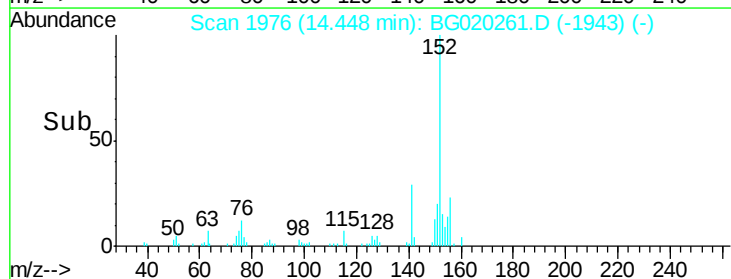
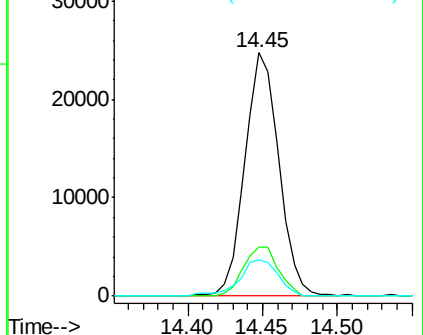
153 15.1 10.4 15.6

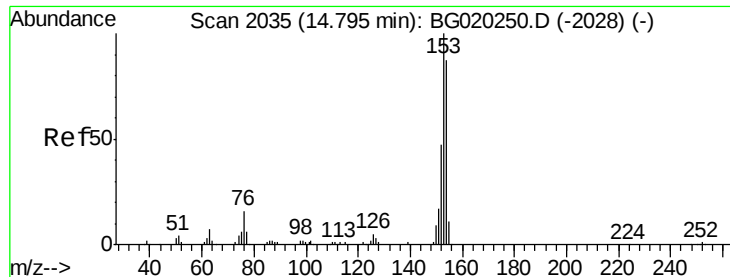


Abundance Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E





#50

Acenaphthene

Concen: 138.44 ng/ul

RT: 14.79 min Scan# 2035

Delta R.T. -0.00 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

Instrument :

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ClientSampleId :

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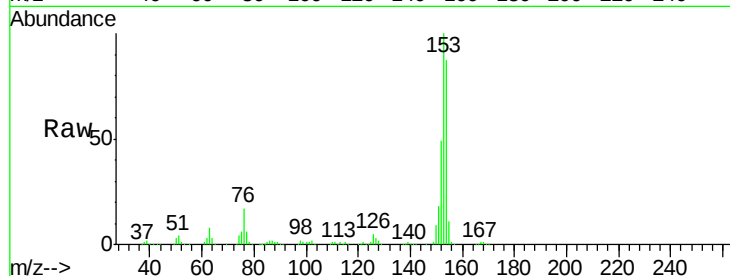
Tgt Ion:153 Resp: 508074

Ion Ratio Lower Upper

153 100

152 48.7 37.6 56.4

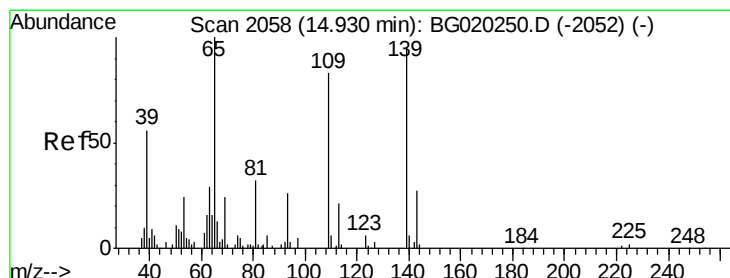
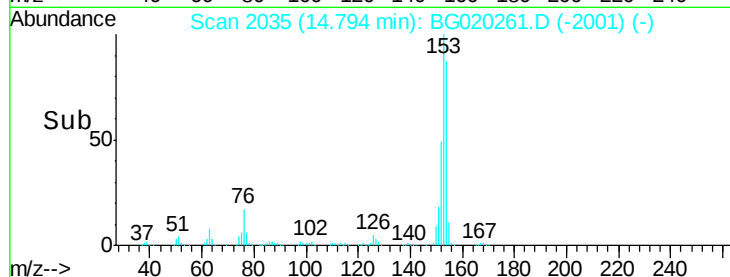
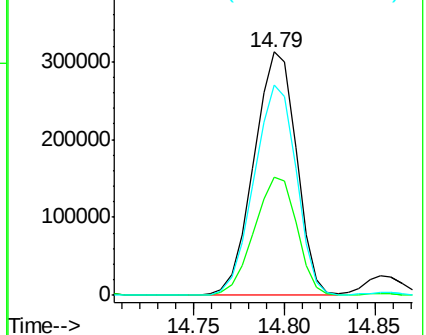
154 86.7 67.9 101.9



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



#53

4-Nitrophenol

Concen: 1.30 ng/ul

RT: 14.80 min Scan# 2036

Delta R.T. -0.13 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

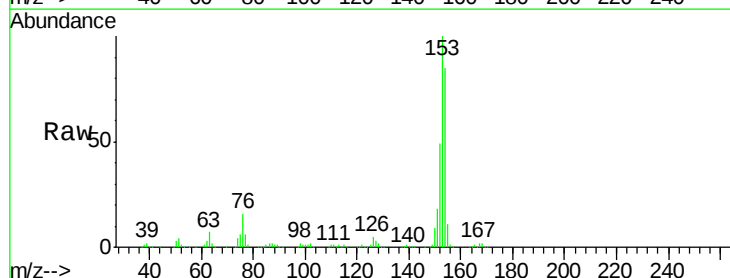
Tgt Ion:109 Resp: 991

Ion Ratio Lower Upper

109 100

139 406.6 80.5 120.7#

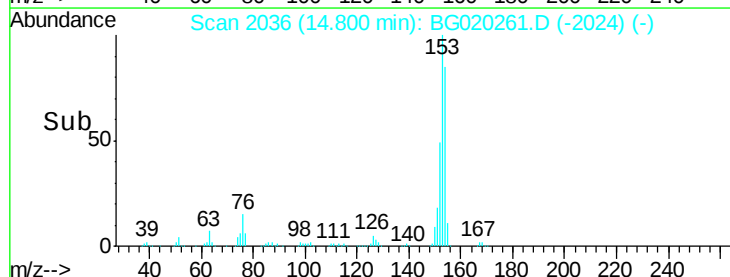
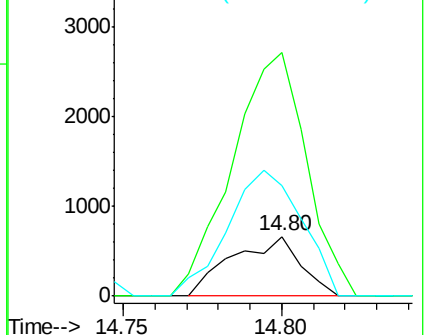
65 184.7 93.4 140.2#

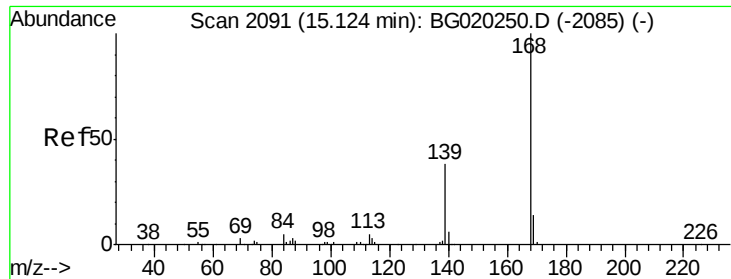


Abundance Ion 109.00 (108.70 to 109.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 65.00 (64.70 to 65.70): BGC





#54

Dibenzenofuran

Concen: 99.25 ng/ul

RT: 15.12 min Scan# 2091

Delta R.T. -0.00 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

Instrument :

BNA\_G

ClientSampleId :

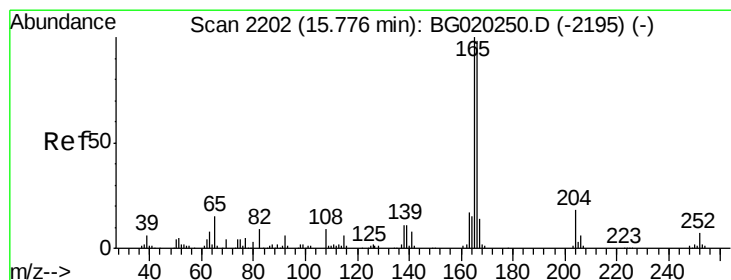
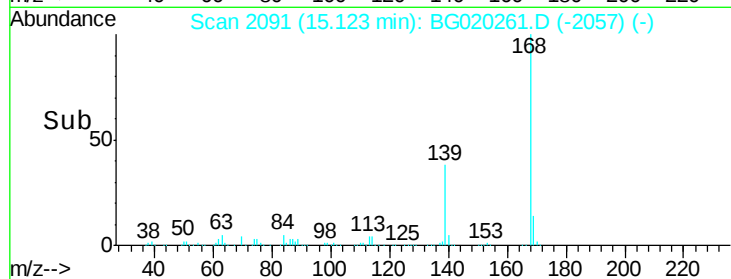
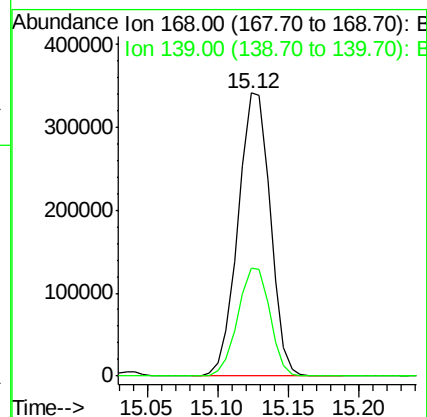
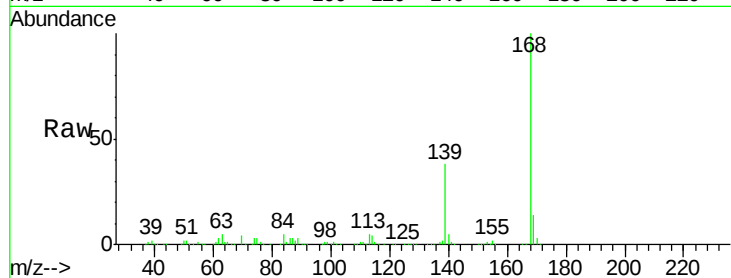
D9N41DL

Tgt Ion:168 Resp: 541857

Ion Ratio Lower Upper

168 100

139 38.4 30.5 45.7



#59

Fluorene

Concen: 115.89 ng/ul

RT: 15.78 min Scan# 2202

Delta R.T. -0.00 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

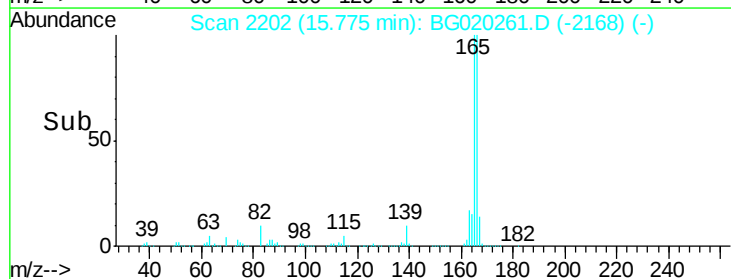
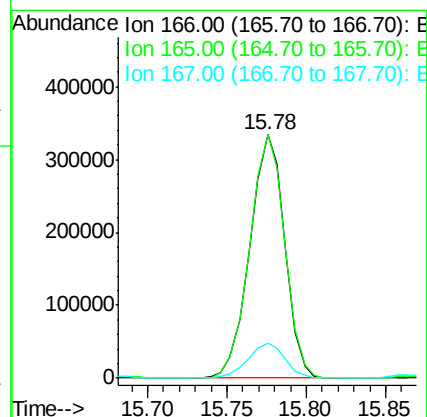
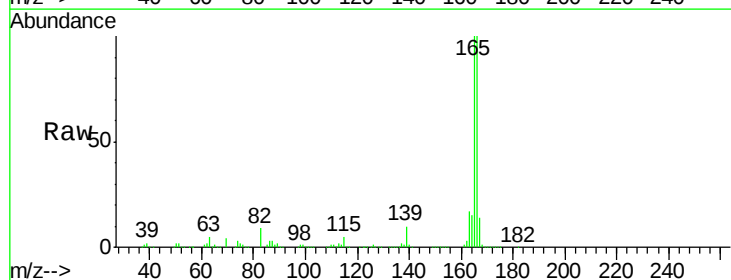
Tgt Ion:166 Resp: 508063

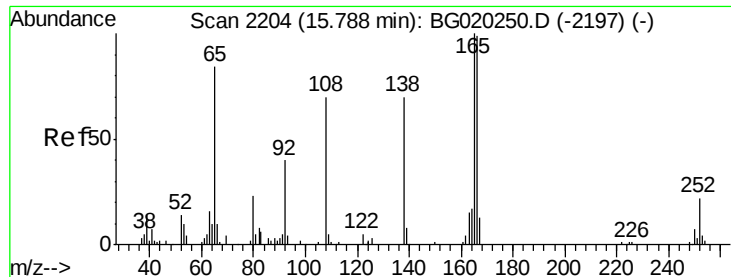
Ion Ratio Lower Upper

166 100

165 100.0 81.4 122.0

167 14.3 11.2 16.8





#61

4-Nitroaniline

Concen: 6.57 ng/ul

RT: 15.78 min Scan# 2202

Delta R.T. -0.01 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

Instrument :

BNA\_G

ClientSampleId :

D9N41DL

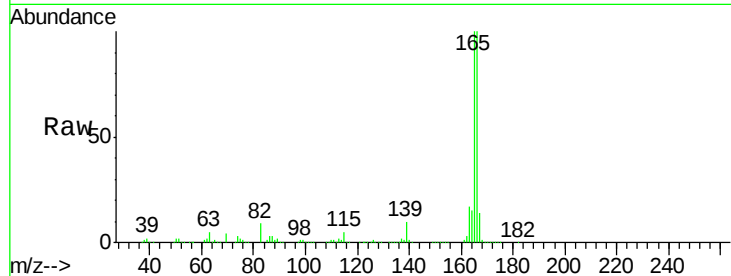
Tgt Ion:138 Resp: 6425

Ion Ratio Lower Upper

138 100

92 0.0 45.2 67.8#

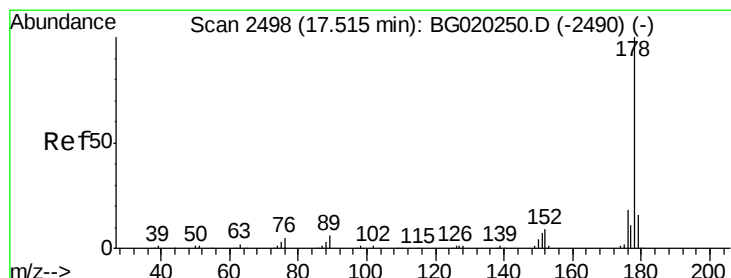
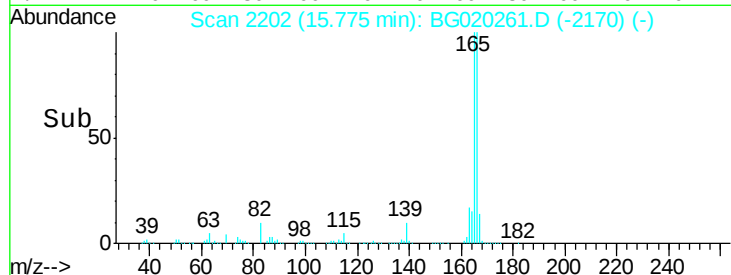
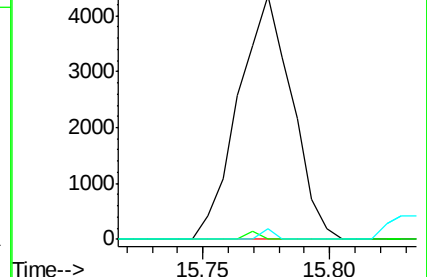
108 4.5 75.4 113.0#



Abundance Ion 138.00 (137.70 to 138.70): E

Ion 92.00 (91.70 to 92.70): BGC

Ion 108.00 (107.70 to 108.70): E



#70

Phenanthrene

Concen: 33.99 ng/ul

RT: 17.61 min Scan# 2514

Delta R.T. 0.09 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

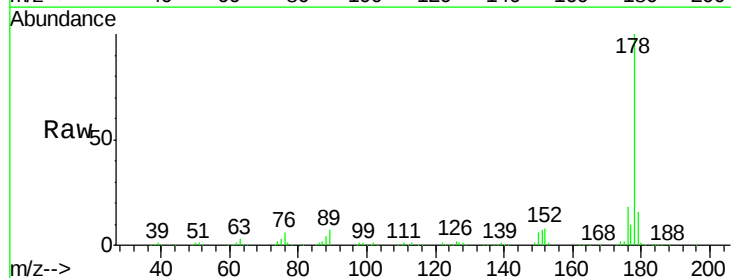
Tgt Ion:178 Resp: 258933

Ion Ratio Lower Upper

178 100

179 16.3 12.9 19.3

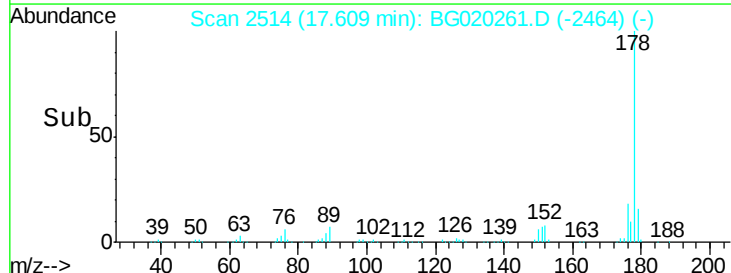
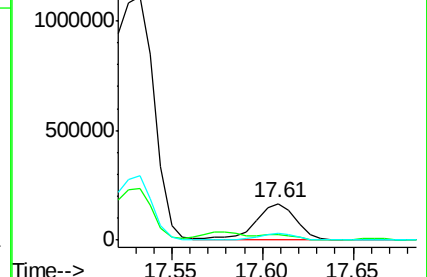
176 18.1 15.3 22.9

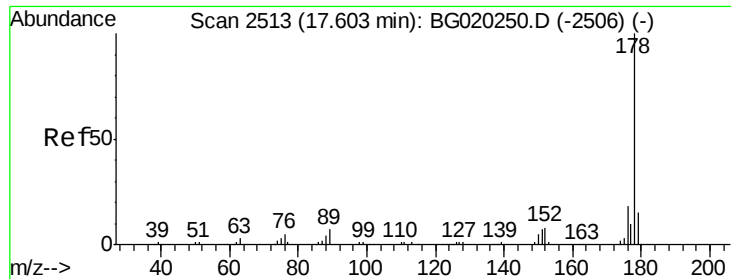


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 179.00 (178.70 to 179.70): E

Ion 176.00 (175.70 to 176.70): E





#72

Anthracene

Concen: 33.54 ng/ul

RT: 17.61 min Scan# 2514

Delta R.T. 0.01 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

Instrument :

BNA\_G

ClientSampled :

D9N41DL

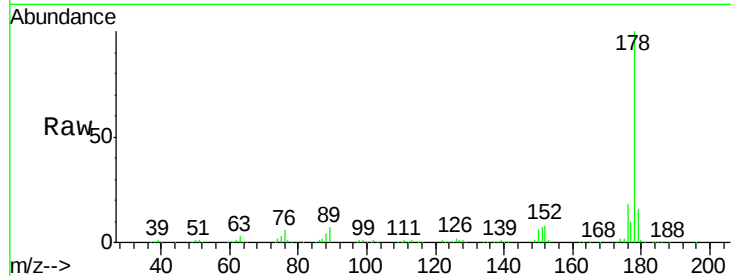
Tgt Ion:178 Resp: 259126

Ion Ratio Lower Upper

178 100

179 16.3 12.3 18.5

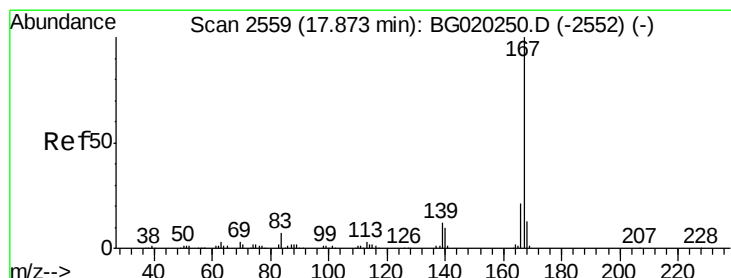
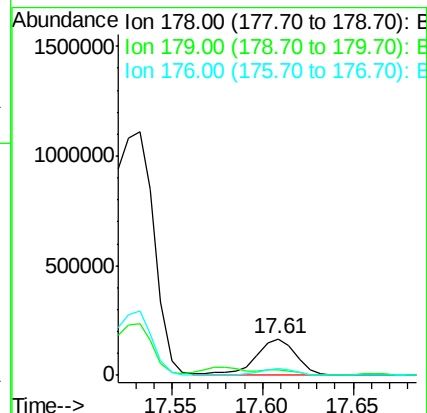
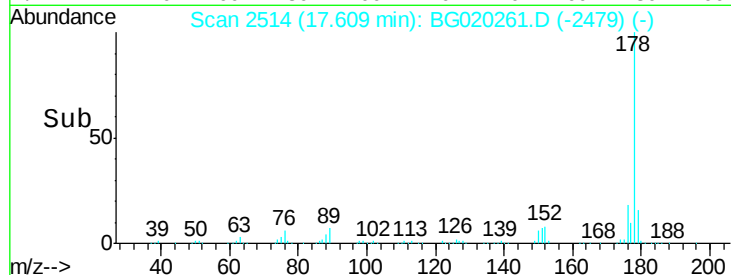
176 18.1 14.3 21.5



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 179.00 (178.70 to 179.70): E

Ion 176.00 (175.70 to 176.70): E



#75

Carbazole

Concen: 29.30 ng/ul

RT: 17.87 min Scan# 2559

Delta R.T. -0.00 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

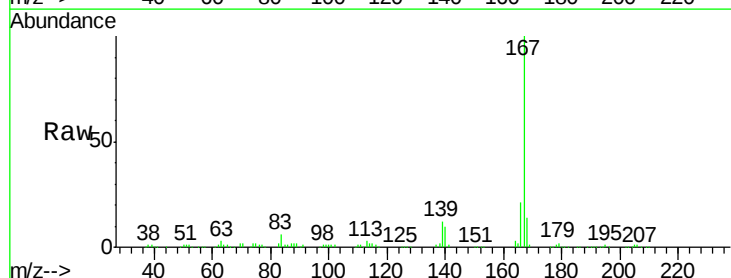
Tgt Ion:167 Resp: 190200

Ion Ratio Lower Upper

167 100

166 21.2 17.0 25.6

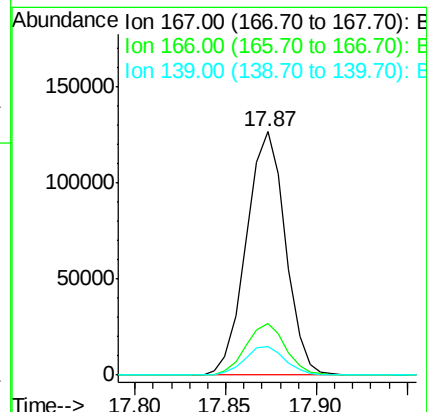
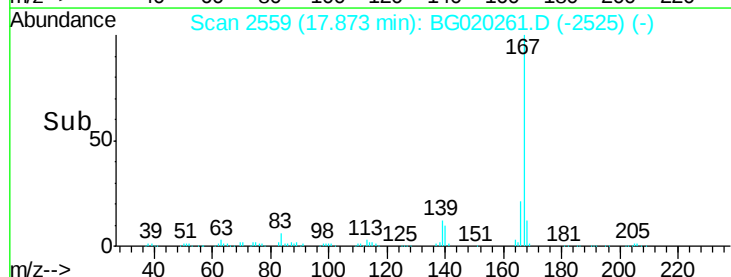
139 11.8 10.1 15.1

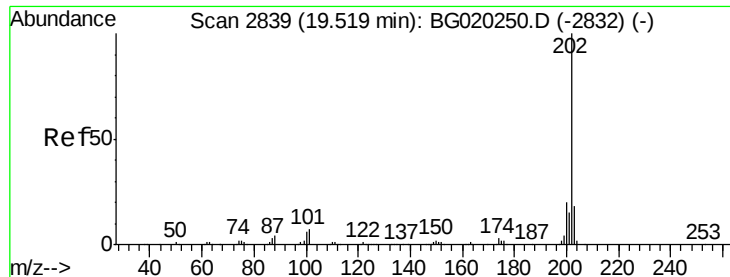


Abundance Ion 167.00 (166.70 to 167.70): E

Ion 166.00 (165.70 to 166.70): E

Ion 139.00 (138.70 to 139.70): E

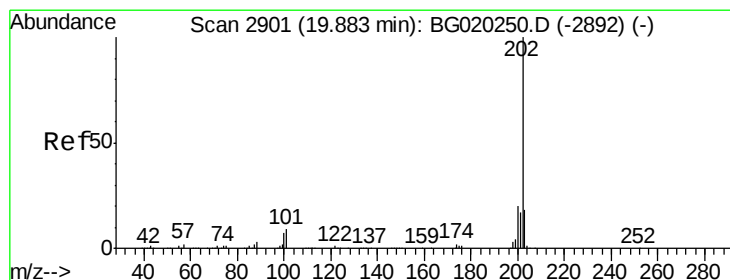
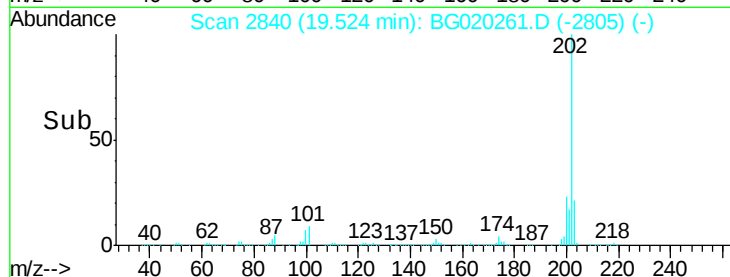
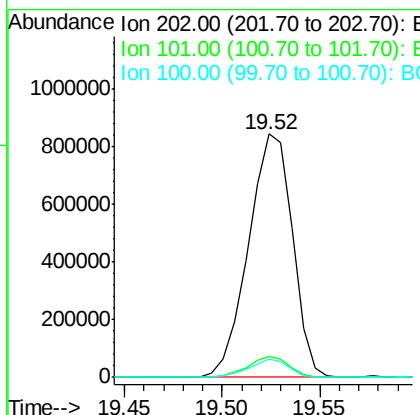
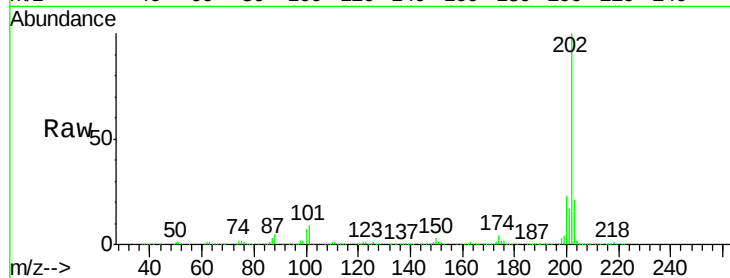




#77  
 Fluoranthene  
 Concen: 147.37 ng/ul  
 RT: 19.52 min Scan# 2840  
 Delta R.T. 0.01 min  
 Lab File: BG020261.D  
 Acq: 18 Dec 2015 1:24

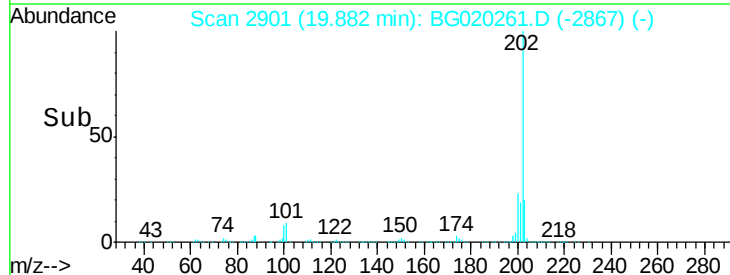
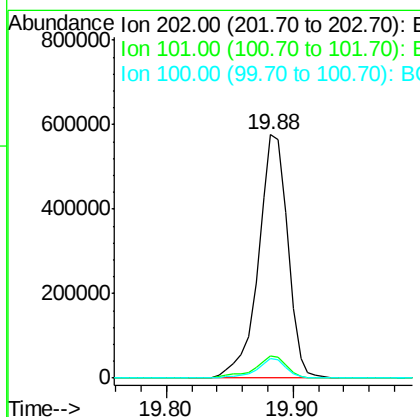
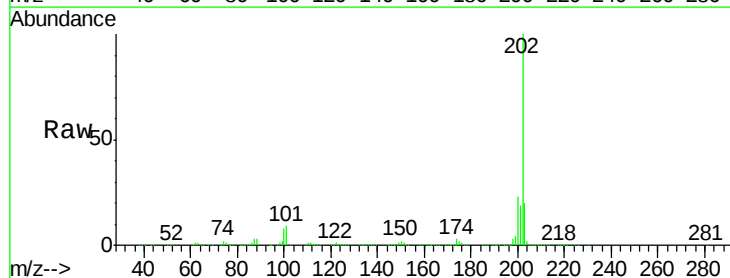
Instrument :  
 BNA\_G  
 ClientSampled :  
 D9N41DL

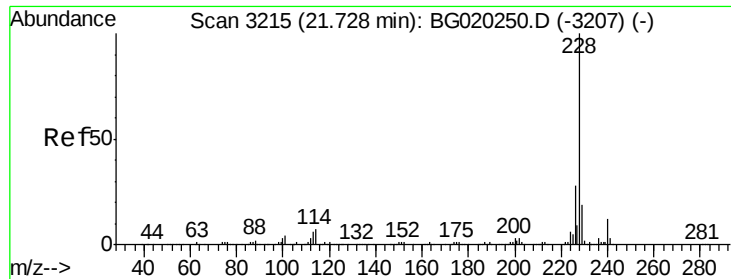
Tgt Ion:202 Resp: 1311973  
 Ion Ratio Lower Upper  
 202 100  
 101 8.8 6.2 9.4  
 100 7.4 5.1 7.7



#80  
 Pyrene  
 Concen: 85.66 ng/ul  
 RT: 19.88 min Scan# 2901  
 Delta R.T. -0.00 min  
 Lab File: BG020261.D  
 Acq: 18 Dec 2015 1:24

Tgt Ion:202 Resp: 930447  
 Ion Ratio Lower Upper  
 202 100  
 101 9.3 7.0 10.4  
 100 8.2 6.4 9.6

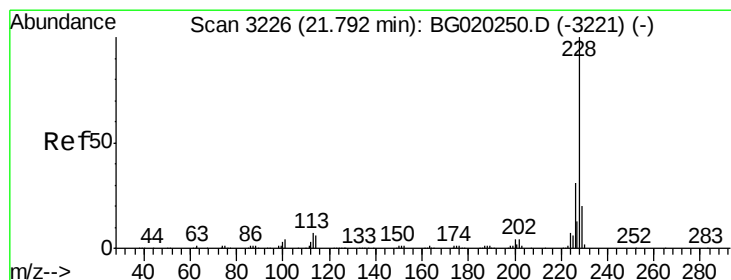
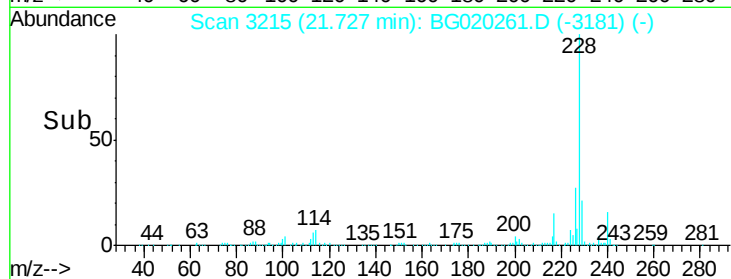
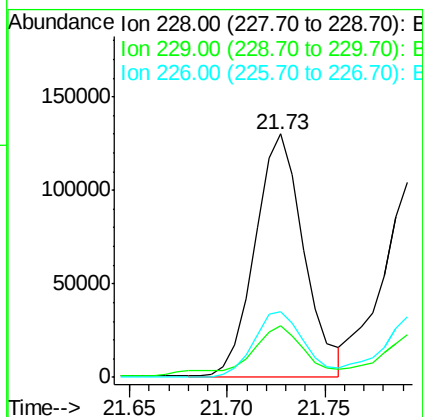
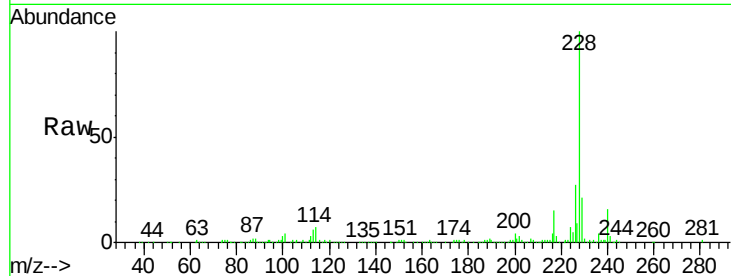




#83  
Benzo(a)anthracene  
Concen: 21.61 ng/u1  
RT: 21.73 min Scan# 3215  
Delta R.T. -0.00 min  
Lab File: BG020261.D  
Acq: 18 Dec 2015 1:24

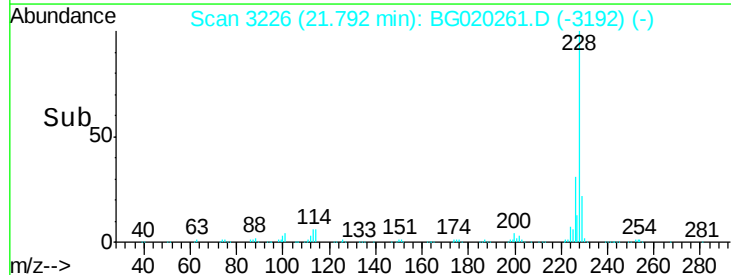
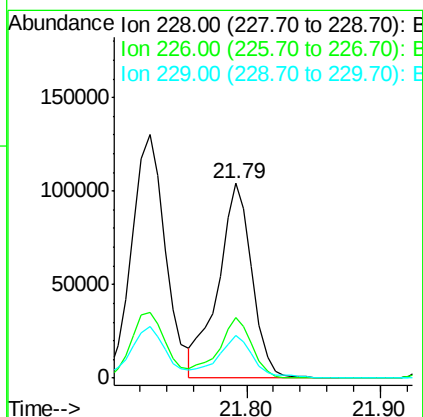
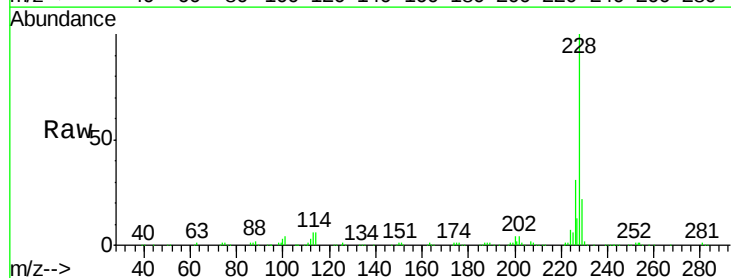
Instrument :  
BNA\_G  
ClientSampleId :  
D9N41DL

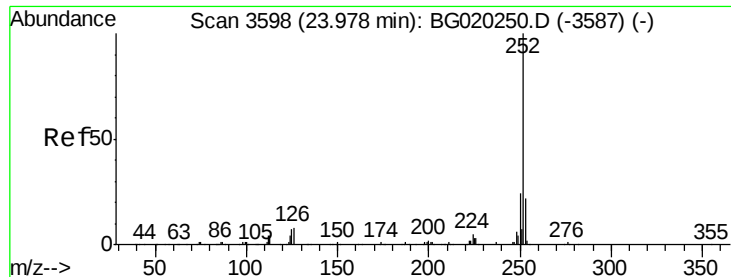
Tgt Ion:228 Resp: 226340  
Ion Ratio Lower Upper  
228 100  
229 21.0 15.8 23.8  
226 27.0 21.8 32.6



#85  
Chrysene  
Concen: 18.61 ng/u1  
RT: 21.79 min Scan# 3226  
Delta R.T. -0.00 min  
Lab File: BG020261.D  
Acq: 18 Dec 2015 1:24

Tgt Ion:228 Resp: 183522  
Ion Ratio Lower Upper  
228 100  
226 30.9 23.9 35.9  
229 22.0 15.6 23.4





#88

Benzo(b)fluoranthene

Concen: 10.23 ng/u1

RT: 23.98 min Scan# 3598

Delta R.T. -0.00 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

Instrument :

BNA\_G

ClientSampleId :

D9N41DL

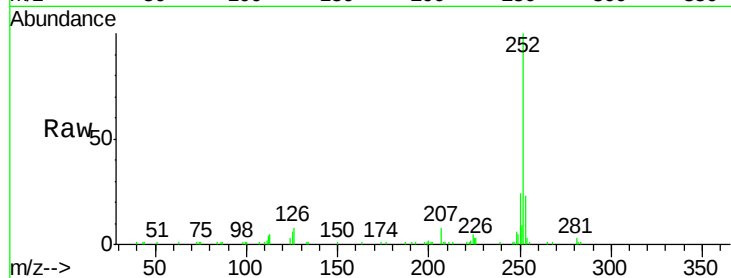
Tgt Ion:252 Resp: 106532

Ion Ratio Lower Upper

252 100

253 22.7 16.7 25.1

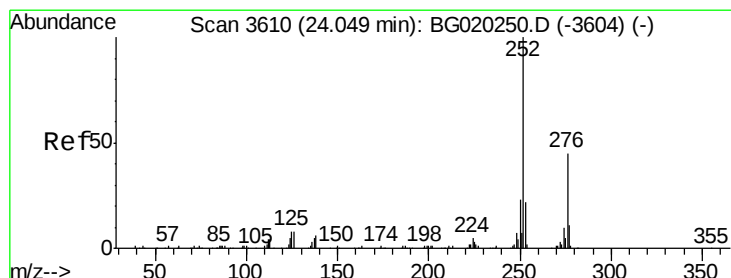
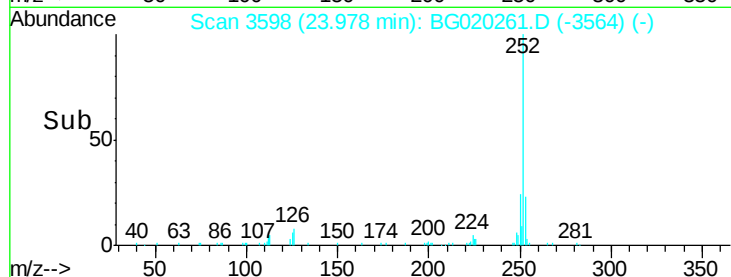
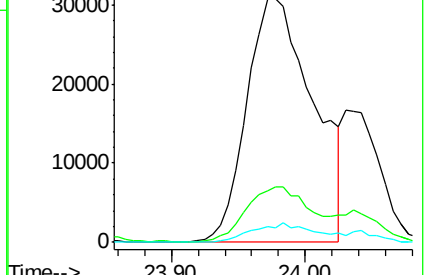
125 6.2 6.2 9.2



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: 10.66 ng/u1

RT: 23.98 min Scan# 3598

Delta R.T. -0.07 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

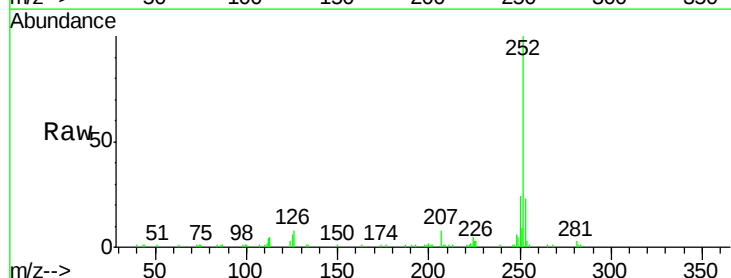
Tgt Ion:252 Resp: 106532

Ion Ratio Lower Upper

252 100

253 22.7 17.9 26.9

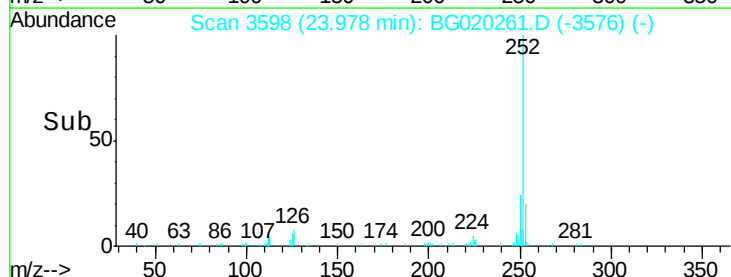
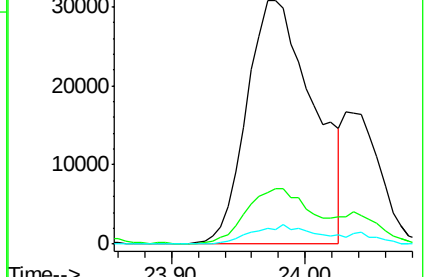
125 6.2 5.8 8.6

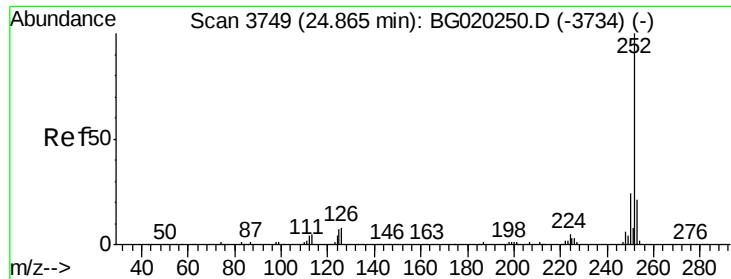


Abundance Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E





#91

Benzo(a)pyrene

Concen: 6.10 ng/ul

RT: 24.86 min Scan# 3748

Delta R.T. -0.01 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

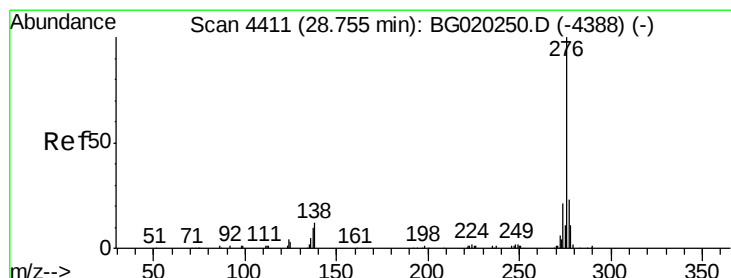
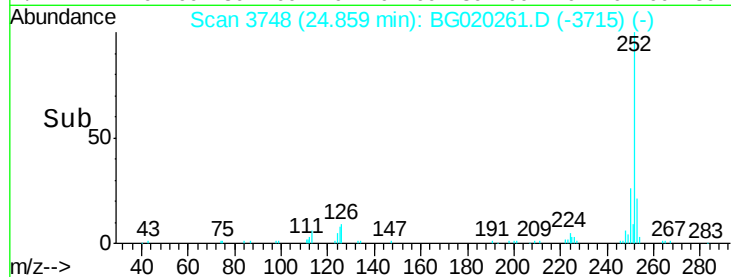
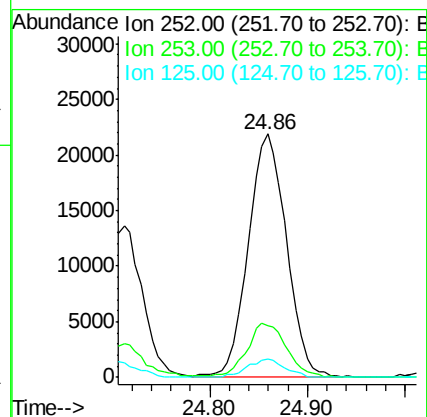
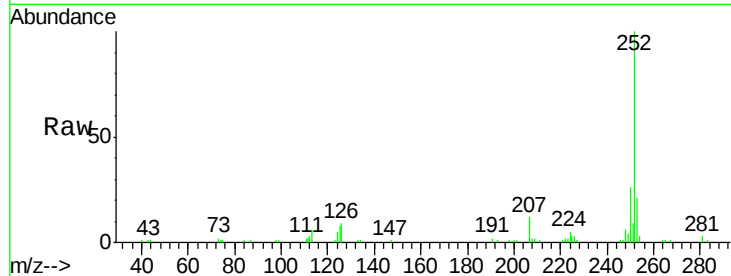
Instrument :

BNA\_G

ClientSampleId :

D9N41DL

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 252   | Resp: | 60180 |
| Ion      | Ratio | Lower | Upper |
| 252      | 100   |       |       |
| 253      | 21.4  | 17.0  | 25.4  |
| 125      | 7.7   | 6.2   | 9.4   |



#92

Indeno(1,2,3-cd)pyrene

Concen: 1.44 ng/ul

RT: 28.73 min Scan# 4407

Delta R.T. -0.02 min

Lab File: BG020261.D

Acq: 18 Dec 2015 1:24

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 276   | Resp: | 16917 |
| Ion      | Ratio | Lower | Upper |
| 276      | 100   |       |       |
| 138      | 12.3  | 11.4  | 17.0  |
| 277      | 23.9  | 17.4  | 26.0  |

