

Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG122515\  
 Data File : BG020535.D  
 Acq On : 26 Dec 2015 11:34  
 Operator : UM/SJ  
 Sample : G4802-14  
 Misc :  
 ALS Vial : 72 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 G9D89

Quant Time: Dec 28 01:21:09 2015  
 Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG122415.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Mon Dec 28 01:15:44 2015  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 8.08  | 152  | 20436    | 20.00 | ng/ul | 0.00     |
| 18) Naphthalene-d8        | 10.89 | 136  | 89595    | 20.00 | ng/ul | 0.00     |
| 36) Acenaphthene-d10      | 14.71 | 164  | 64197    | 20.00 | ng/ul | 0.00     |
| 62) Phenanthrene-d10      | 17.46 | 188  | 146282   | 20.00 | ng/ul | 0.00     |
| 78) Chrysene-d12          | 21.74 | 240  | 179827   | 20.00 | ng/ul | 0.01     |
| 86) Perylene-d12          | 25.03 | 264  | 180439   | 20.00 | ng/ul | 0.04     |

## System Monitoring Compounds

|                                |       |     |        |       |       |      |
|--------------------------------|-------|-----|--------|-------|-------|------|
| 3) 1,4-Dioxane-d8              | 3.44  | 96  | 1297   | 3.50  | ng/uL | 0.00 |
| 5) Phenol-d5                   | 7.24  | 99  | 37793  | 23.05 | ng/ul | 0.00 |
| 7) Bis-(2-Chloroethyl)ether-d  | 7.39  | 67  | 22040  | 22.68 | ng/ul | 0.00 |
| 9) 2-Chlorophenol-d4           | 7.61  | 132 | 30459  | 24.21 | ng/ul | 0.00 |
| 13) 4-Methylphenol-d8          | 8.79  | 113 | 33294  | 24.13 | ng/ul | 0.00 |
| 19) Nitrobenzene-d5            | 9.25  | 128 | 16290  | 23.19 | ng/ul | 0.00 |
| 22) 2-Nitrophenol-d4           | 9.97  | 143 | 19587  | 24.53 | ng/ul | 0.00 |
| 26) 2,4-Dichlorophenol-d3      | 10.51 | 165 | 38043  | 24.62 | ng/ul | 0.00 |
| 29) 4-Chloroaniline-d4         | 11.03 | 131 | 20447  | 11.58 | ng/ul | 0.00 |
| 44) Dimethylphthalate-d6       | 14.11 | 166 | 119871 | 22.65 | ng/ul | 0.00 |
| 47) Acenaphthylene-d8          | 14.41 | 160 | 153445 | 25.03 | ng/ul | 0.00 |
| 52) 4-Nitrophenol-d4           | 14.91 | 143 | 14053  | 15.93 | ng/ul | 0.00 |
| 58) Fluorene-d10               | 15.70 | 176 | 117952 | 24.65 | ng/ul | 0.00 |
| 63) 4,6-Dinitro-2-methylphenol | 15.83 | 200 | 11131  | 11.48 | ng/ul | 0.00 |
| 71) Anthracene-d10             | 17.56 | 188 | 176758 | 25.80 | ng/ul | 0.00 |
| 79) Pyrene-d10                 | 19.84 | 212 | 206398 | 26.51 | ng/ul | 0.00 |
| 90) Benzo(a)pyrene-d12         | 24.80 | 264 | 238402 | 26.13 | ng/ul | 0.04 |

## Target Compounds

|                            |       |     |        |       |        | Qvalue |
|----------------------------|-------|-----|--------|-------|--------|--------|
| 28) Naphthalene            | 10.94 | 128 | 66186  | 13.90 | ng/ul  | 99     |
| 30) 4-Chloroaniline        | 10.94 | 127 | 8882   | 4.99  | ng/ul# | 8      |
| 34) 2-Methylnaphthalene    | 12.54 | 142 | 24755  | 7.02  | ng/ul  | 97     |
| 35) 1-Methylnaphthalene    | 12.76 | 142 | 17202  | 5.14  | ng/ul# | 94     |
| 41) 1,1'-Biphenyl          | 13.55 | 154 | 5242   | 1.06  | ng/ul  | 99     |
| 45) Dimethylphthalate      | 14.16 | 163 | 40178  | 7.47  | ng/ul  | 97     |
| 48) Acenaphthylene         | 14.44 | 152 | 110965 | 17.22 | ng/ul  | 98     |
| 50) Acenaphthene           | 14.77 | 153 | 10453  | 2.40  | ng/ul# | 94     |
| 54) Dibenzofuran           | 15.11 | 168 | 6960   | 1.07  | ng/ul  | 98     |
| 59) Fluorene               | 15.76 | 166 | 22387  | 4.26  | ng/ul  | 97     |
| 61) 4-Nitroaniline         | 15.79 | 138 | 2351   | 2.07  | ng/ul# | 79     |
| 70) Phenanthrene           | 17.50 | 178 | 283729 | 34.86 | ng/ul  | 99     |
| 72) Anthracene             | 17.59 | 178 | 74790  | 8.99  | ng/ul  | 98     |
| 75) Carbazole              | 17.86 | 167 | 9690   | 1.38  | ng/ul# | 81     |
| 77) Fluoranthene           | 19.51 | 202 | 543249 | 53.07 | ng/ul  | 99     |
| 80) Pyrene                 | 19.88 | 202 | 855292 | 84.11 | ng/ul  | 99     |
| 83) Benzo(a)anthracene     | 21.72 | 228 | 517951 | 49.04 | ng/ul# | 92     |
| 85) Chrysene               | 21.79 | 228 | 626804 | 62.31 | ng/ul# | 93     |
| 88) Benzo(b)fluoranthene   | 23.99 | 252 | 829637 | 76.60 | ng/ul  | 94     |
| 89) Benzo(k)fluoranthene   | 23.99 | 252 | 829637 | 79.24 | ng/ul  | 97     |
| 91) Benzo(a)pyrene         | 24.89 | 252 | 682123 | 65.53 | ng/ul  | 97     |
| 92) Indeno(1,2,3-cd)pyrene | 28.80 | 276 | 524271 | 42.05 | ng/ul  | 94     |
| 93) Dibenzo(a,h)anthracene | 28.82 | 278 | 159862 | 15.45 | ng/ul  | 95     |

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Sample : G4802-14  
Misc :  
ALS Vial : 72 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
G9D89

Quant Time: Dec 28 01:21:09 2015  
Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG122415.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Mon Dec 28 01:15:44 2015  
Response via : Initial Calibration

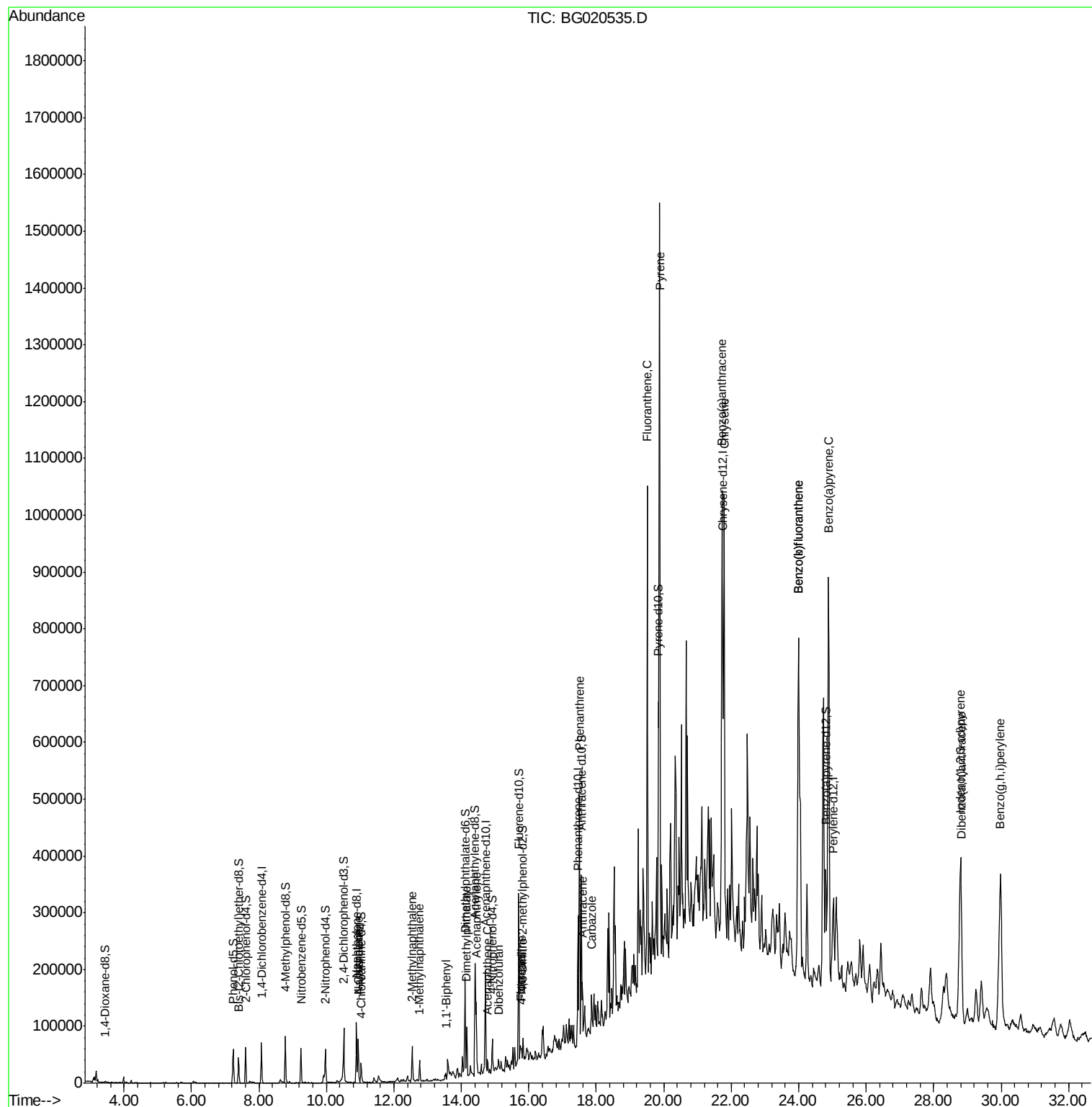
| Internal Standards       | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|--------------------------|-------|------|----------|-------|-------|----------|
| 94) Benzo(g,h,i)perylene | 29.98 | 276  | 635041   | 62.01 | ng/ul | 99       |

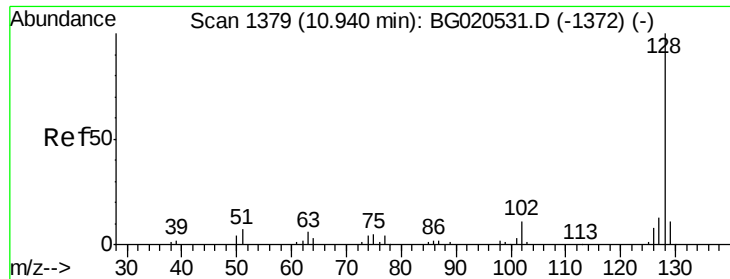
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :  
BNA\_G  
ClientSampled :  
G9D89

Quant Time: Dec 28 01:21:09 2015  
Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM02.2-EPA-BG122415.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Mon Dec 28 01:15:44 2015  
Response via : Initial Calibration

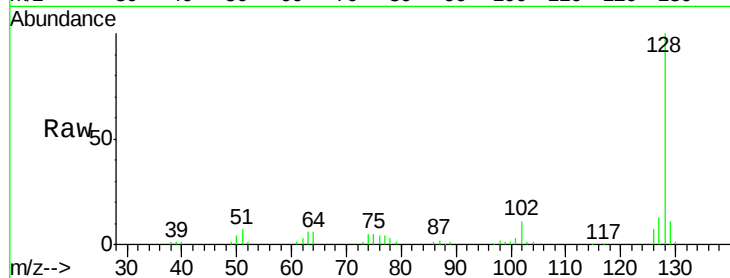




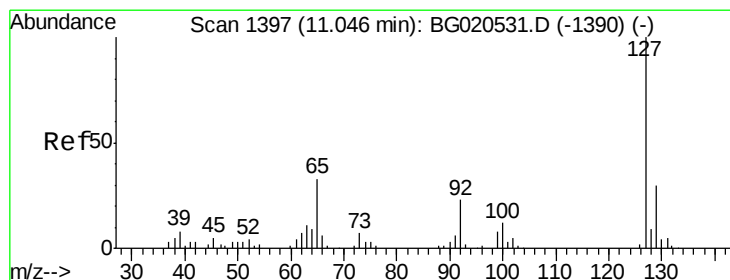
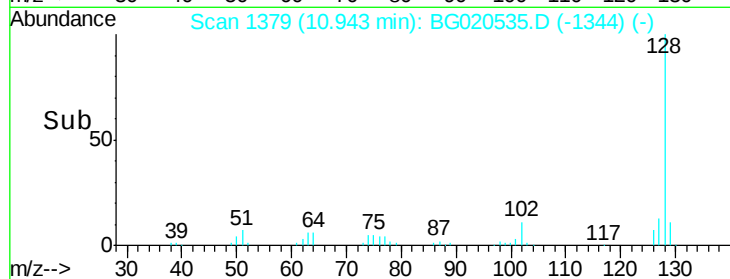
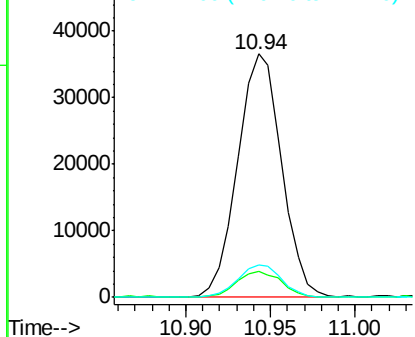
#28  
Naphthalene  
Concen: 13.90 ng/ul  
RT: 10.94 min Scan# 1379  
Delta R.T. 0.00 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

Instrument :  
BNA\_G  
ClientSampleId :  
G9D89

Tgt Ion:128 Resp: 66186  
Ion Ratio Lower Upper  
128 100  
129 10.9 8.6 12.8  
127 13.1 10.1 15.1

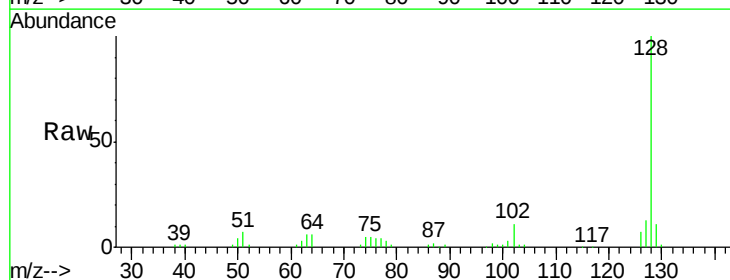


Abundance Ion 128.00 (127.70 to 128.70): E  
Ion 129.00 (128.70 to 129.70): E  
Ion 127.00 (126.70 to 127.70): E

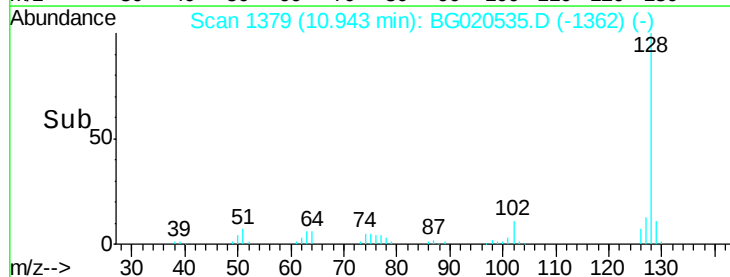
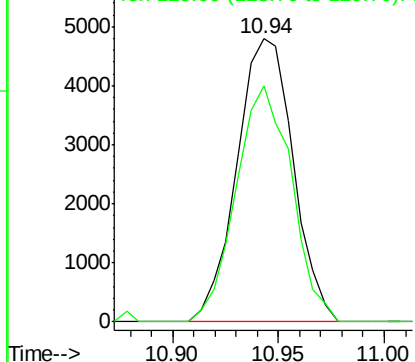


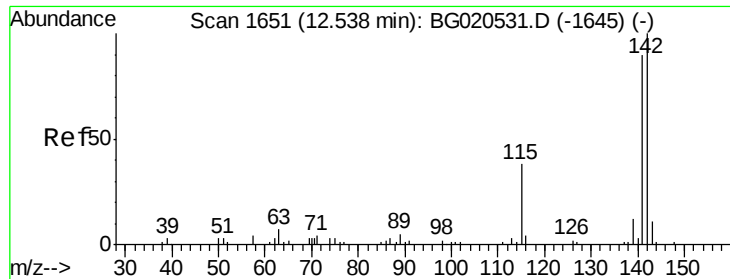
#30  
4-Chloroaniline  
Concen: 4.99 ng/ul  
RT: 10.94 min Scan# 1379  
Delta R.T. -0.10 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

Tgt Ion:127 Resp: 8882  
Ion Ratio Lower Upper  
127 100  
129 83.3 25.7 38.5#



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

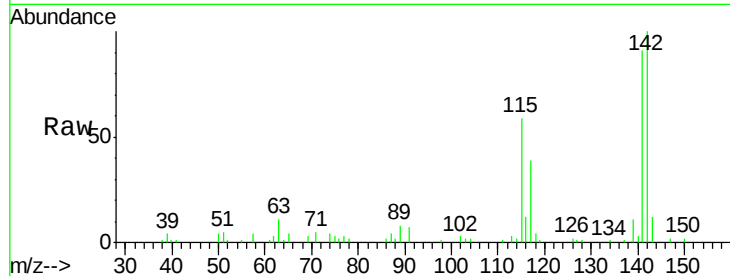




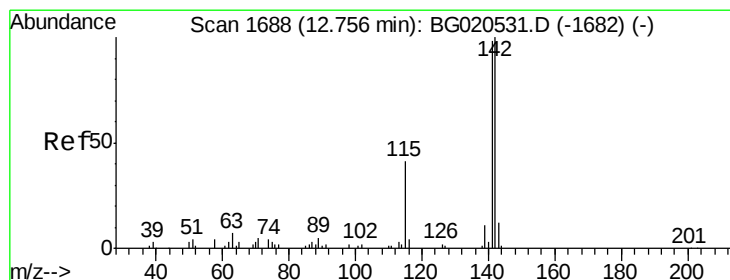
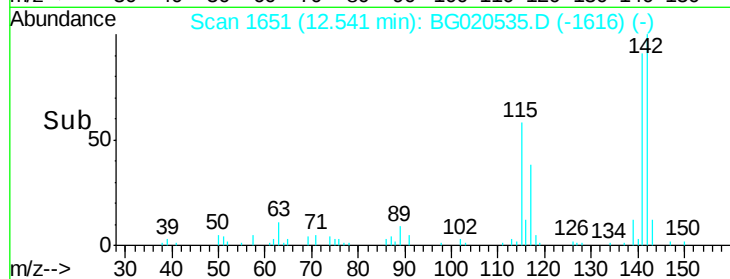
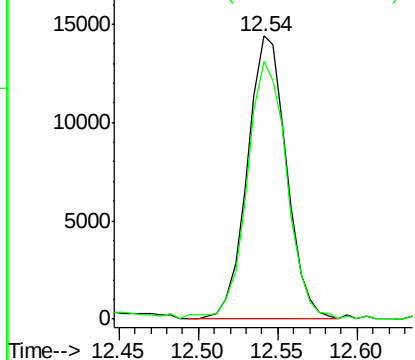
#34  
2-Methylnaphthalene  
Concen: 7.02 ng/ul  
RT: 12.54 min Scan# 1651  
Delta R.T. 0.00 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

Instrument :  
BNA\_G  
ClientSampleId :  
G9D89

Tgt Ion:142 Resp: 24755  
Ion Ratio Lower Upper  
142 100  
141 91.0 74.9 112.3

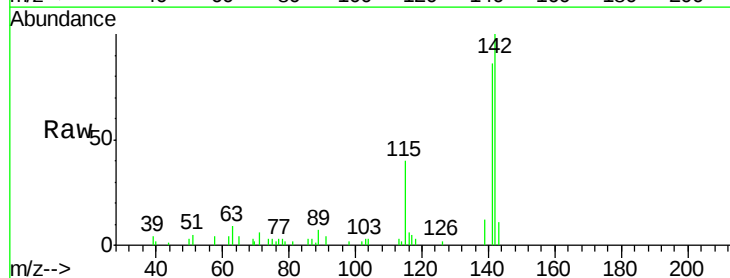


Abundance Ion 142.00 (141.70 to 142.70): E  
Ion 141.00 (140.70 to 141.70): E

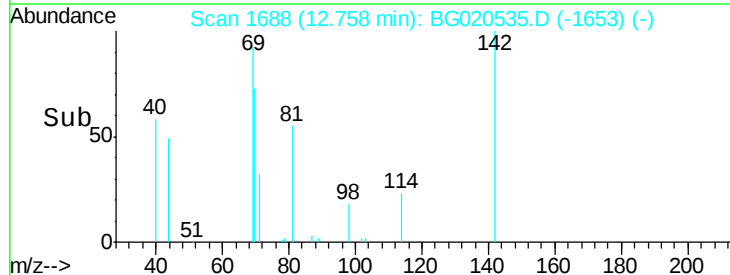
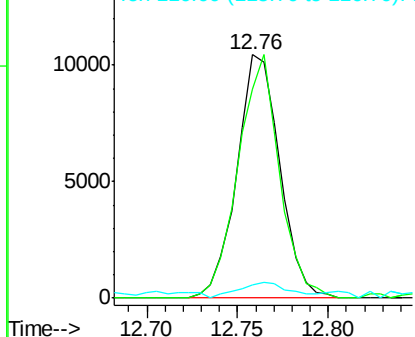


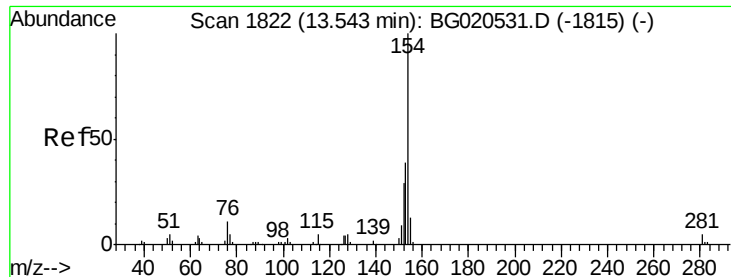
#35  
1-Methylnaphthalene  
Concen: 5.14 ng/ul  
RT: 12.76 min Scan# 1688  
Delta R.T. 0.00 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

Tgt Ion:142 Resp: 17202  
Ion Ratio Lower Upper  
142 100  
141 86.0 73.0 109.6  
116 5.6 3.0 4.6#



Abundance Ion 142.00 (141.70 to 142.70): E  
Ion 141.00 (140.70 to 141.70): E  
Ion 116.00 (115.70 to 116.70): E

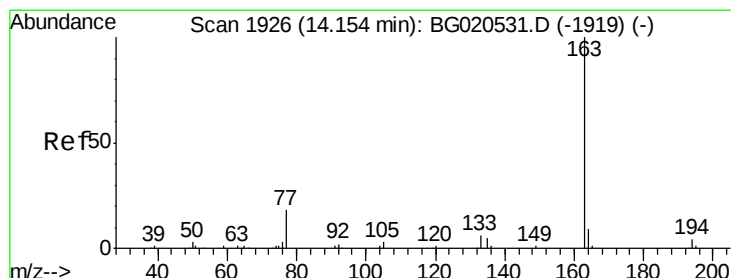
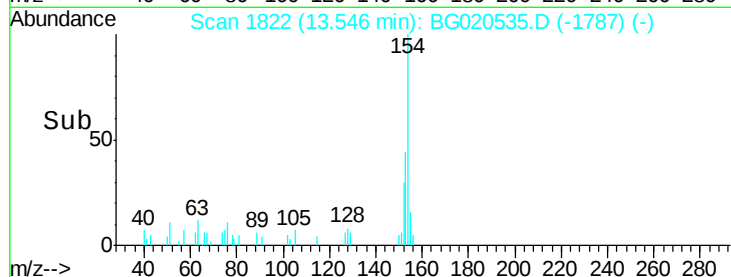
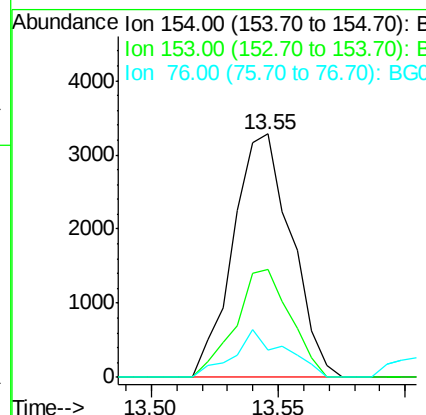
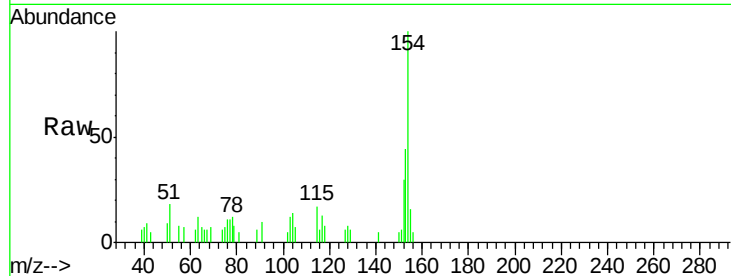




#41  
 1,1'-Biphenyl  
 Concen: 1.06 ng/ul  
 RT: 13.55 min Scan# 1822  
 Delta R.T. 0.00 min  
 Lab File: BG020535.D  
 Acq: 26 Dec 2015 11:34

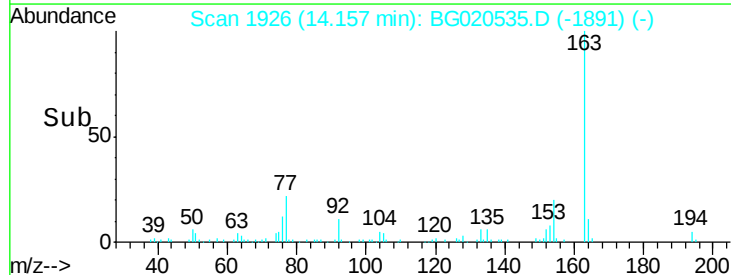
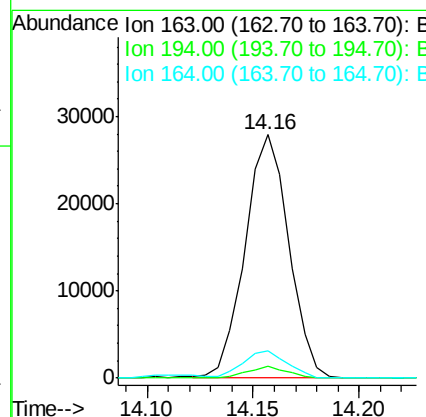
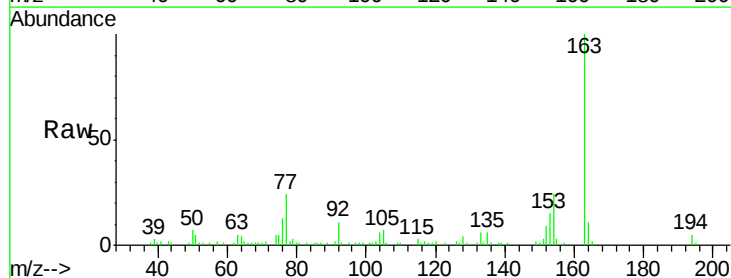
Instrument :  
 BNA\_G  
 ClientSampleId :  
 G9D89

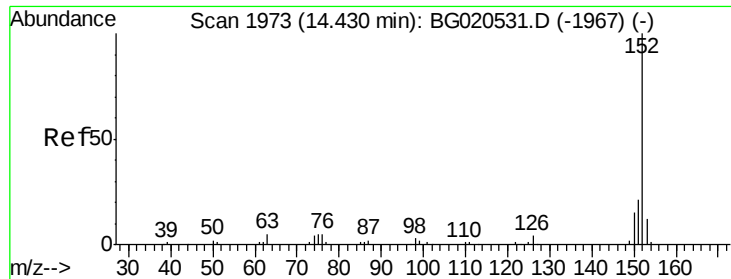
Tgt Ion:154 Resp: 5242  
 Ion Ratio Lower Upper  
 154 100  
 153 44.1 35.5 53.3  
 76 11.1 10.4 15.6



#45  
 Dimethylphthalate  
 Concen: 7.47 ng/ul  
 RT: 14.16 min Scan# 1926  
 Delta R.T. 0.00 min  
 Lab File: BG020535.D  
 Acq: 26 Dec 2015 11:34

Tgt Ion:163 Resp: 40178  
 Ion Ratio Lower Upper  
 163 100  
 194 5.1 3.5 5.3  
 164 11.1 7.7 11.5





#48

Acenaphthylene

Concen: 17.22 ng/ul

RT: 14.44 min Scan# 1974

Delta R.T. 0.01 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

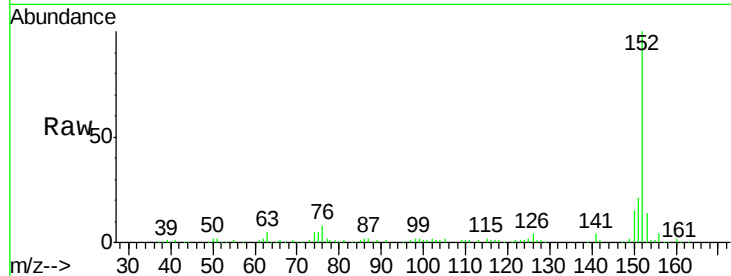
Instrument :

BNA\_G

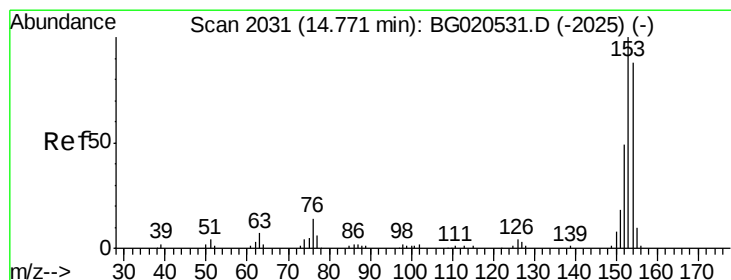
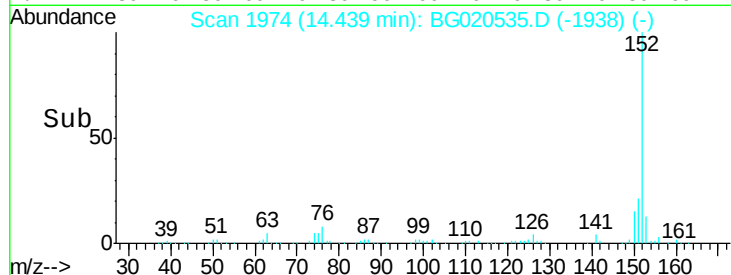
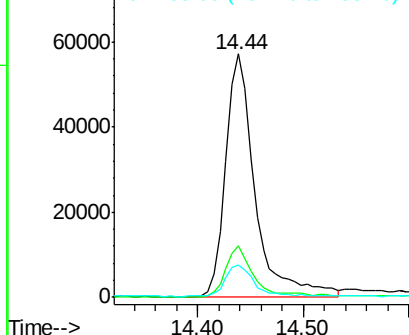
ClientSampleId :

G9D89

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 152   | Resp: | 110965 |
| Ion      | Ratio | Lower | Upper  |
| 152      | 100   |       |        |
| 151      | 21.3  | 16.4  | 24.6   |
| 153      | 13.5  | 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: 2.40 ng/ul

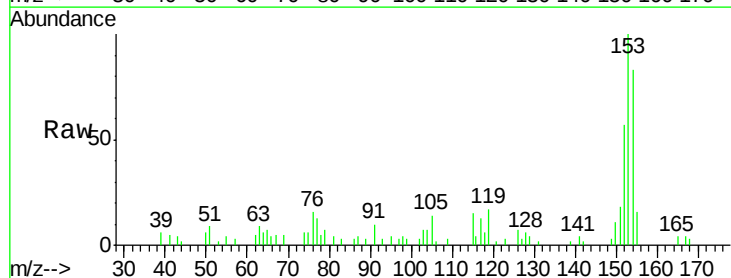
RT: 14.77 min Scan# 2031

Delta R.T. 0.00 min

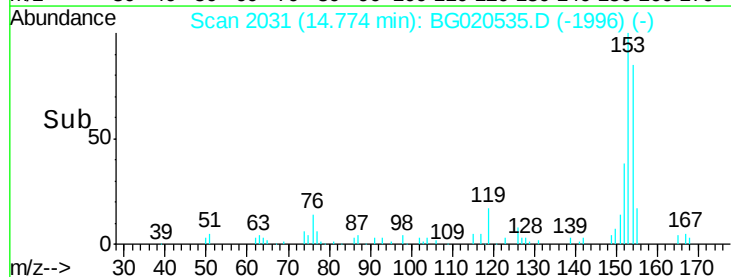
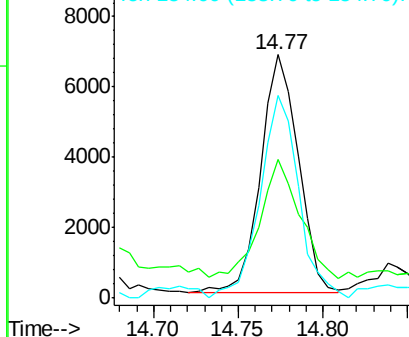
Lab File: BG020535.D

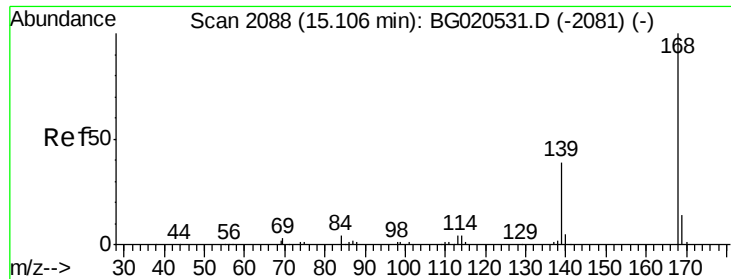
Acq: 26 Dec 2015 11:34

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 153   | Resp: | 10453 |
| Ion      | Ratio | Lower | Upper |
| 153      | 100   |       |       |
| 152      | 56.9  | 37.6  | 56.4# |
| 154      | 83.4  | 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





#54

Dibenzenofuran

Concen: 1.07 ng/ul

RT: 15.11 min Scan# 2088

Delta R.T. 0.00 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

Instrument :

BNA\_G

ClientSampleId :

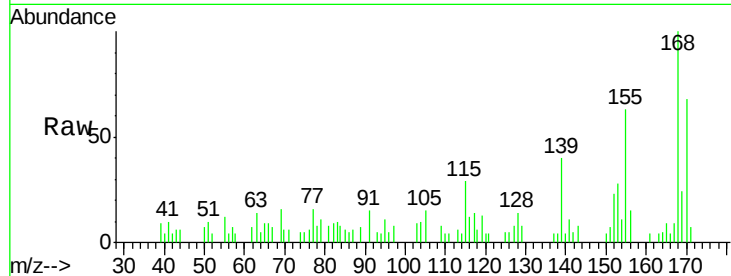
G9D89

Tgt Ion:168 Resp: 6960

Ion Ratio Lower Upper

168 100

139 39.6 30.5 45.7

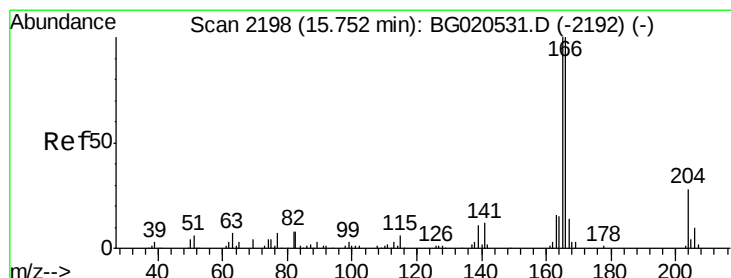
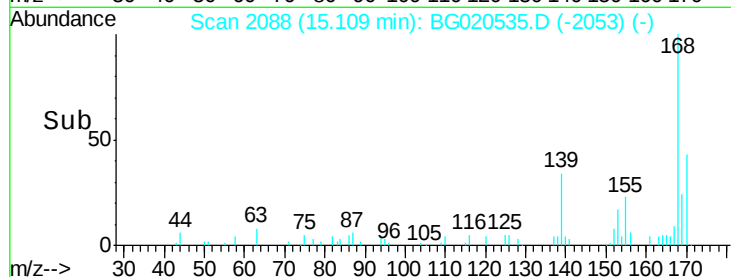


Abundance Ion 168.00 (167.70 to 168.70): E

Ion 139.00 (138.70 to 139.70): E

15.11

Time-->



#59

Fluorene

Concen: 4.26 ng/ul

RT: 15.76 min Scan# 2199

Delta R.T. 0.01 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

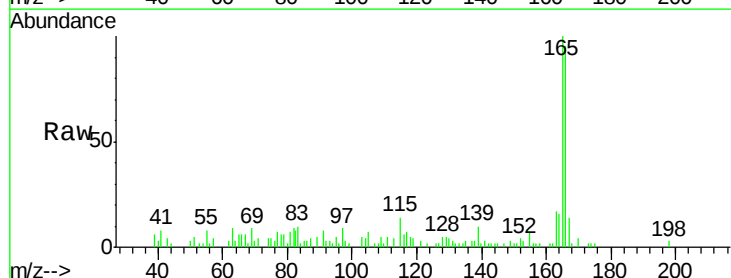
Tgt Ion:166 Resp: 22387

Ion Ratio Lower Upper

166 100

165 105.2 81.4 122.0

167 14.6 11.2 16.8



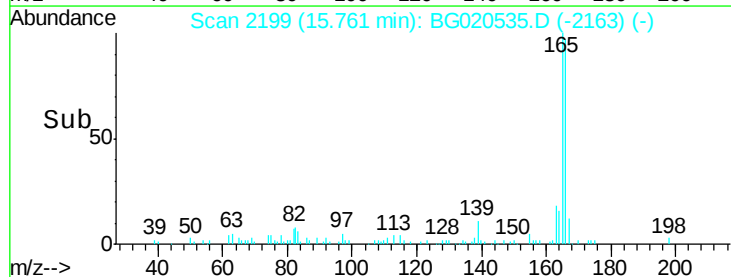
Abundance Ion 166.00 (165.70 to 166.70): E

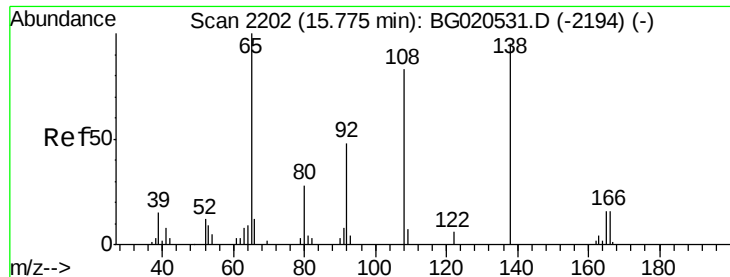
Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E

15.76

Time-->

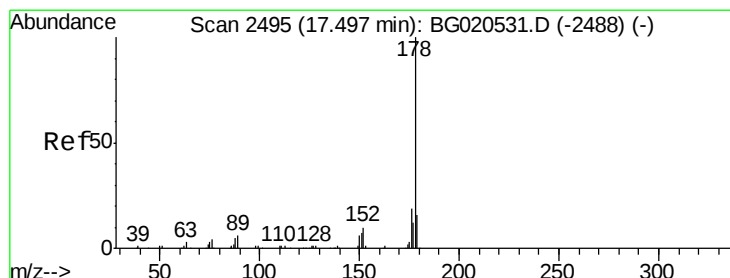
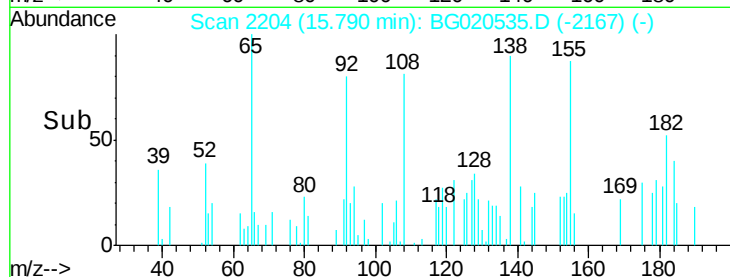
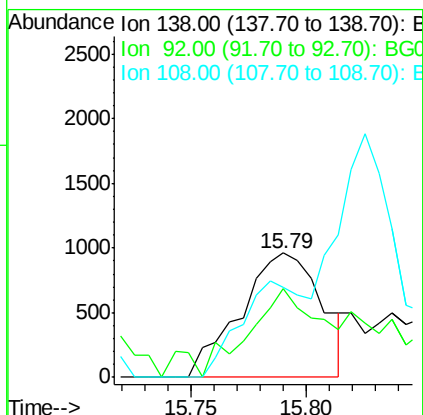
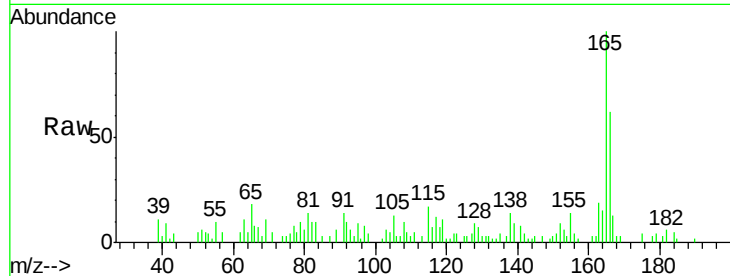




#61  
 4-Nitroaniline  
 Concen: 2.07 ng/ul  
 RT: 15.79 min Scan# 2204  
 Delta R.T. 0.01 min  
 Lab File: BG020535.D  
 Acq: 26 Dec 2015 11:34

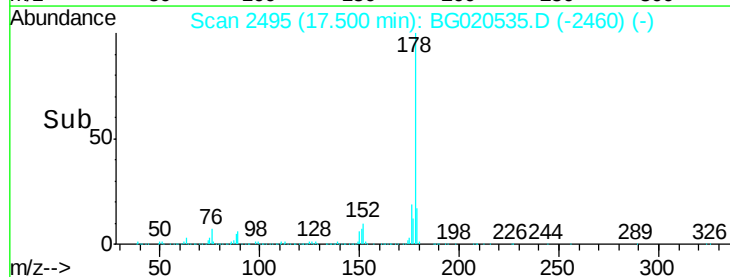
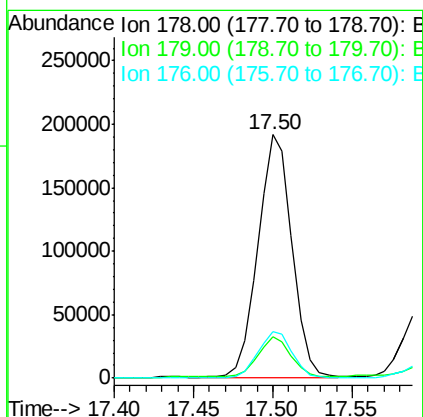
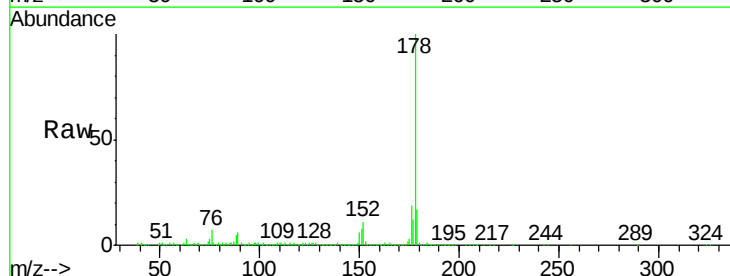
Instrument :  
 BNA\_G  
 ClientSampleId :  
 G9D89

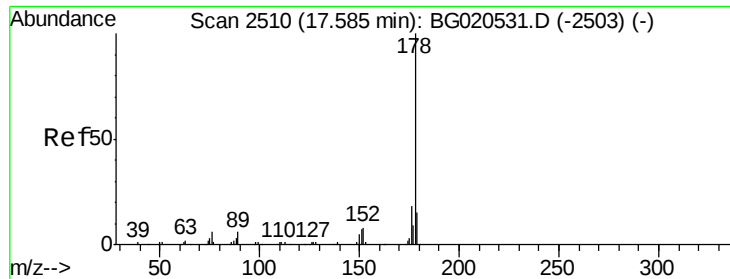
Tgt Ion:138 Resp: 2351  
 Ion Ratio Lower Upper  
 138 100  
 92 71.3 45.2 67.8#  
 108 72.7 75.4 113.0#



#70  
 Phenanthrene  
 Concen: 34.86 ng/ul  
 RT: 17.50 min Scan# 2495  
 Delta R.T. 0.00 min  
 Lab File: BG020535.D  
 Acq: 26 Dec 2015 11:34

Tgt Ion:178 Resp: 283729  
 Ion Ratio Lower Upper  
 178 100  
 179 17.1 12.9 19.3  
 176 19.2 15.3 22.9





#72

Anthracene

Concen: 8.99 ng/ul

RT: 17.59 min Scan# 2511

Delta R.T. 0.01 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

Instrument :

BNA\_G

ClientSampleId :

G9D89

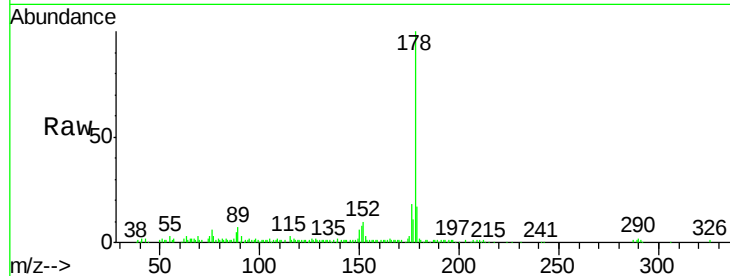
Tgt Ion:178 Resp: 74790

Ion Ratio Lower Upper

178 100

179 16.8 12.3 18.5

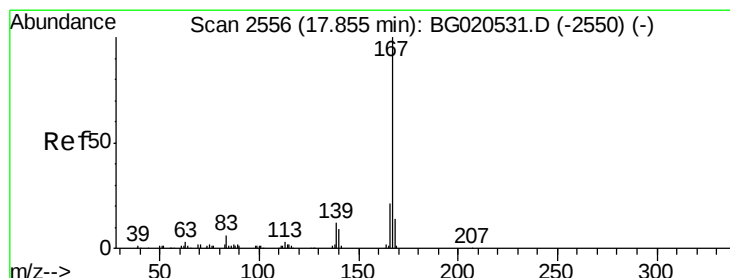
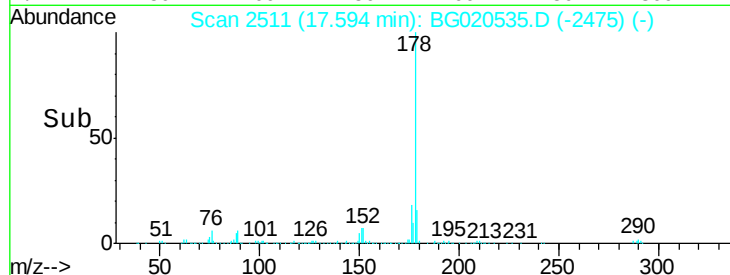
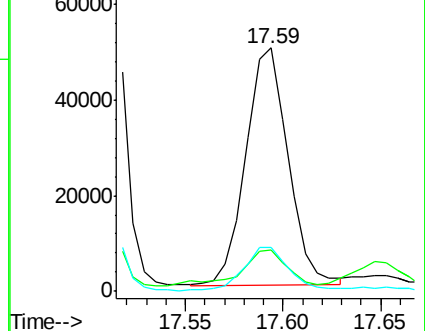
176 18.2 14.3 21.5



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: 1.38 ng/ul

RT: 17.86 min Scan# 2557

Delta R.T. 0.01 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

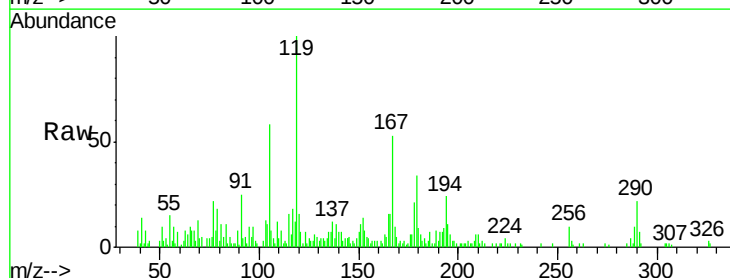
Tgt Ion:167 Resp: 9690

Ion Ratio Lower Upper

167 100

166 29.9 17.0 25.6#

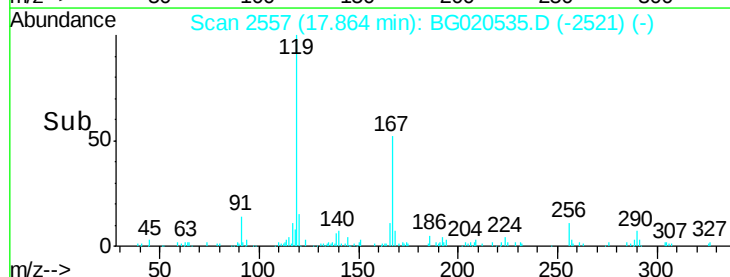
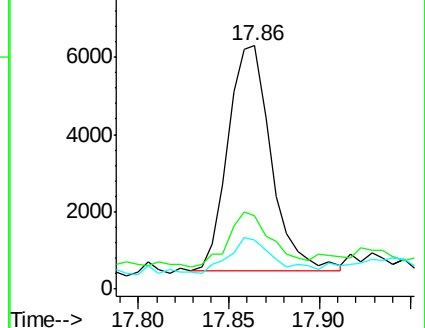
139 20.0 10.1 15.1#

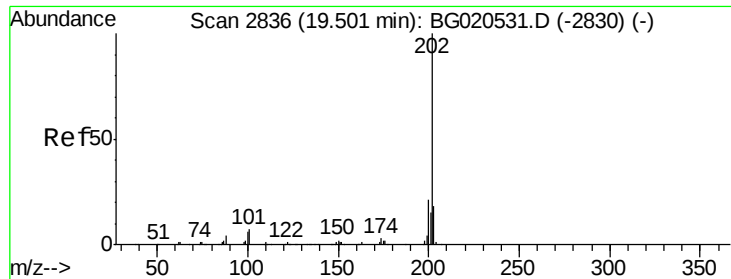


Abundance Ion 167.00 (166.70 to 167.70): E

Ion 166.00 (165.70 to 166.70): E

Ion 139.00 (138.70 to 139.70): E

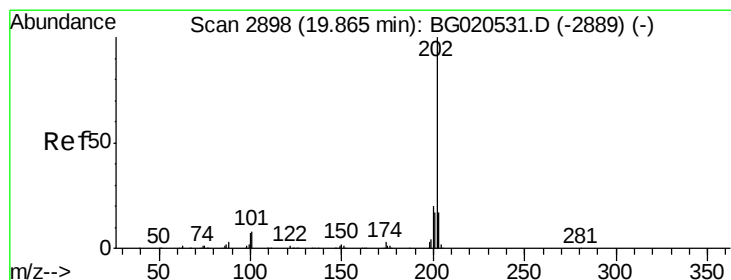
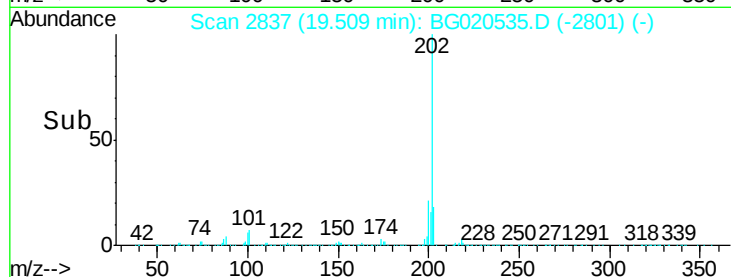
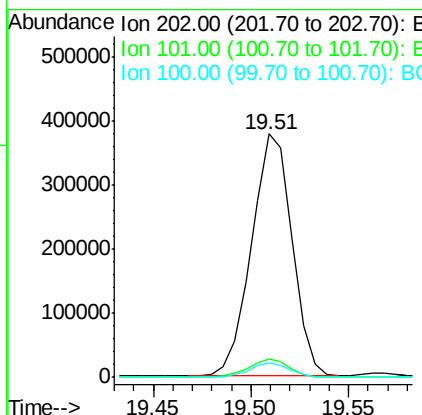
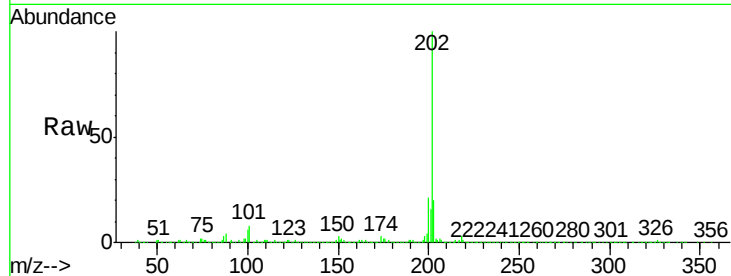




#77  
**Fluoranthene**  
 Concen: 53.07 ng/ul  
 RT: 19.51 min Scan# 2837  
 Delta R.T. 0.01 min  
 Lab File: BG020535.D  
 Acq: 26 Dec 2015 11:34

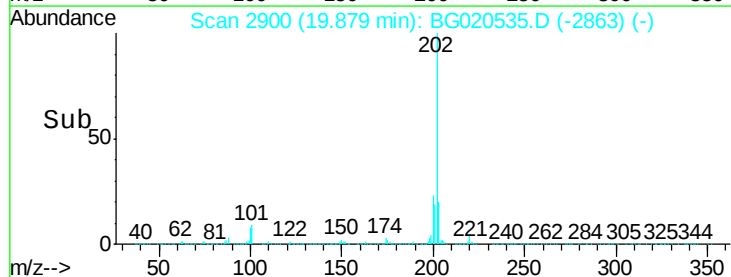
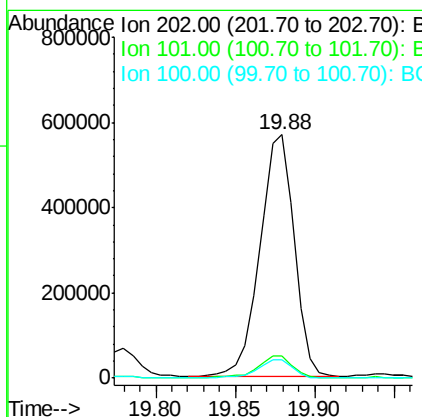
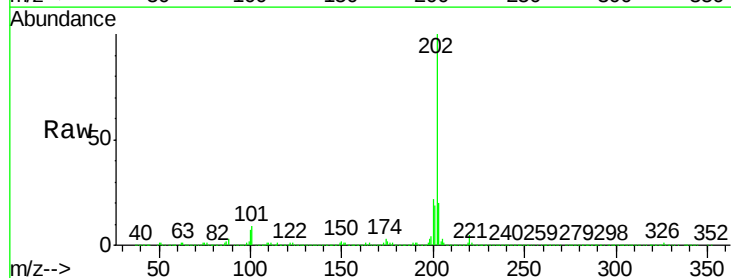
Instrument :  
 BNA\_G  
 ClientSampleId :  
 G9D89

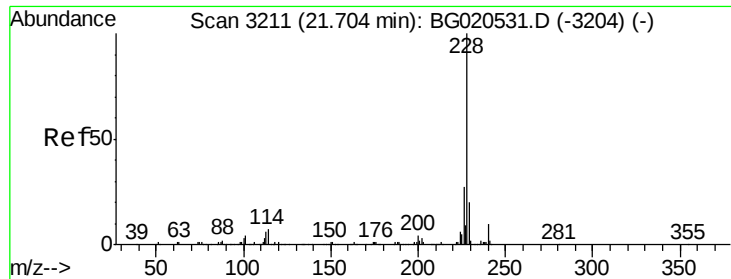
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 7.7   | 6.2   | 9.4   |
| 100     | 5.8   | 5.1   | 7.7   |



#80  
**Pyrene**  
 Concen: 84.11 ng/ul  
 RT: 19.88 min Scan# 2900  
 Delta R.T. 0.01 min  
 Lab File: BG020535.D  
 Acq: 26 Dec 2015 11:34

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 9.2   | 7.0   | 10.4  |
| 100     | 7.4   | 6.4   | 9.6   |

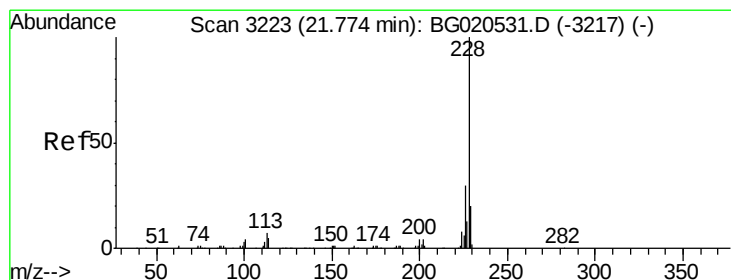
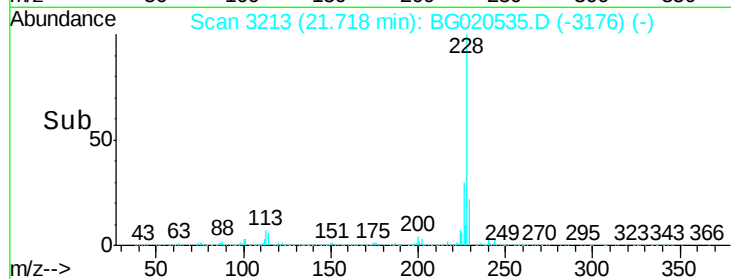
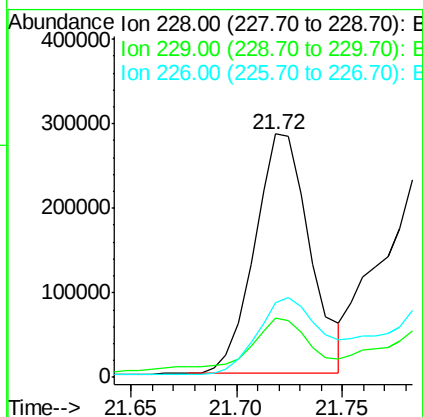
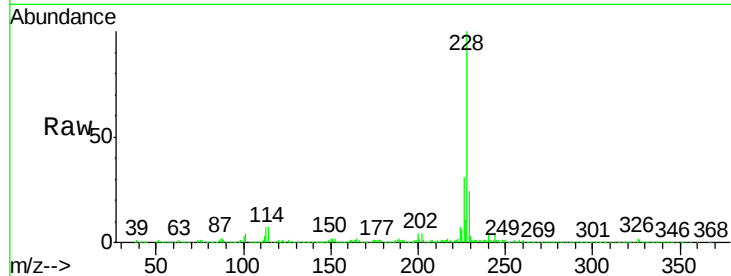




#83  
Benzo(a)anthracene  
Concen: 49.04 ng/ul  
RT: 21.72 min Scan# 3213  
Delta R.T. 0.01 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

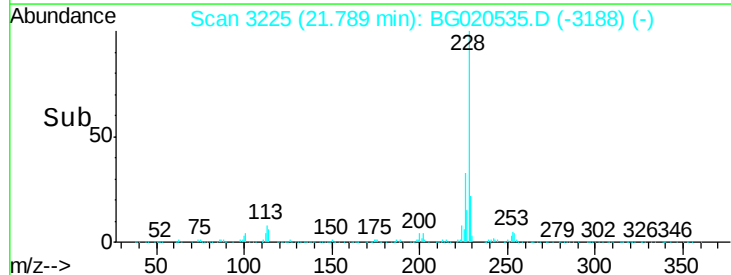
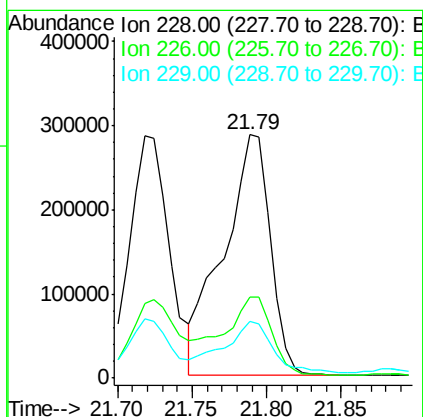
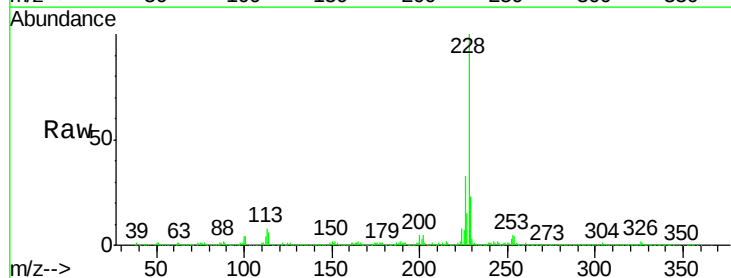
Instrument :  
BNA\_G  
ClientSampleId :  
G9D89

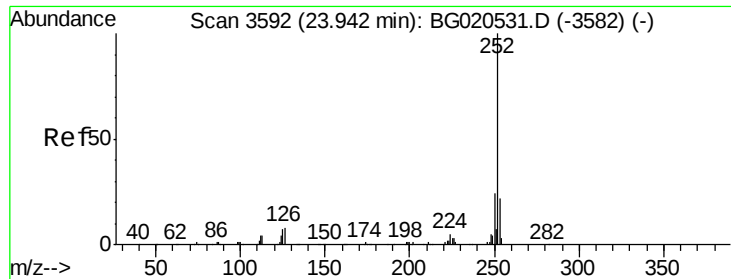
Tgt Ion:228 Resp: 517951  
Ion Ratio Lower Upper  
228 100  
229 24.4 15.8 23.8#  
226 30.9 21.8 32.6



#85  
Chrysene  
Concen: 62.31 ng/ul  
RT: 21.79 min Scan# 3225  
Delta R.T. 0.01 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

Tgt Ion:228 Resp: 626804  
Ion Ratio Lower Upper  
228 100  
226 33.4 23.9 35.9  
229 23.4 15.6 23.4#

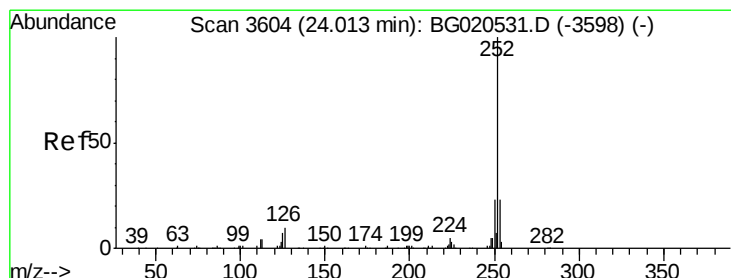
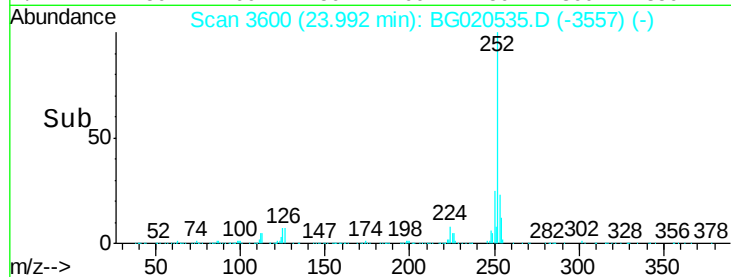
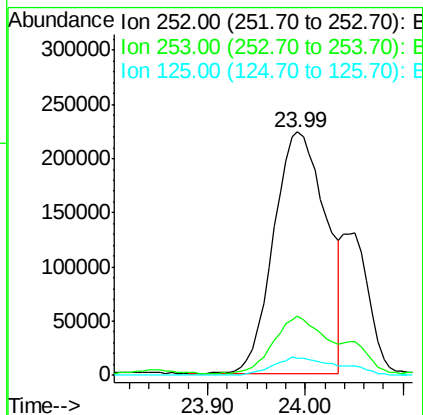
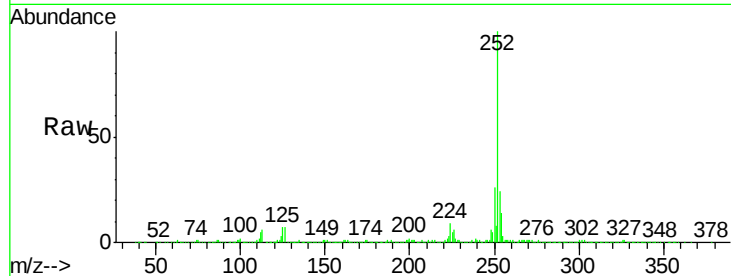




#88  
Benzo(b)fluoranthene  
Concen: 76.60 ng/u1  
RT: 23.99 min Scan# 3600  
Delta R.T. 0.05 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

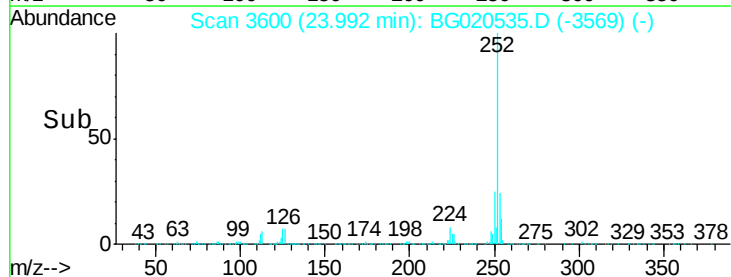
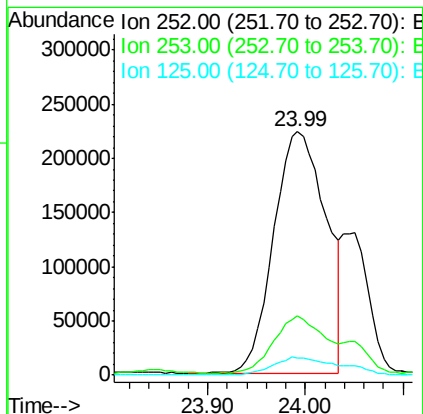
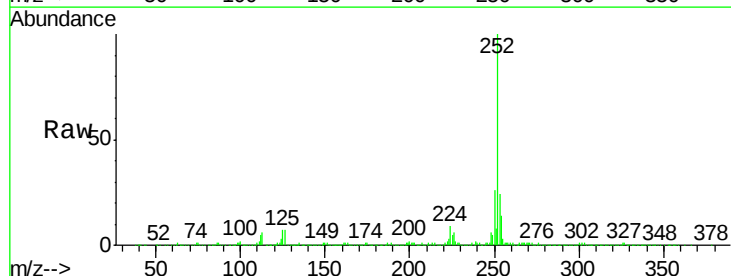
Instrument :  
BNA\_G  
ClientSampleId :  
G9D89

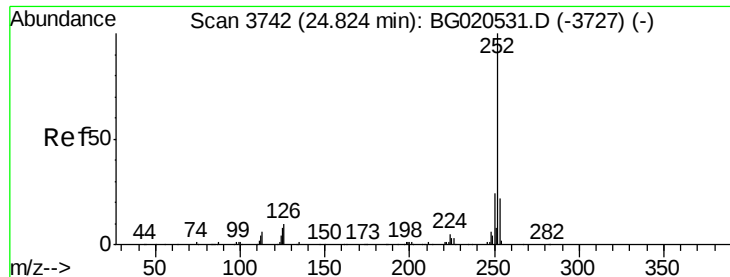
Tgt Ion:252 Resp: 829637  
Ion Ratio Lower Upper  
252 100  
253 24.4 16.7 25.1  
125 7.0 6.2 9.2



#89  
Benzo(k)fluoranthene  
Concen: 79.24 ng/u1  
RT: 23.99 min Scan# 3600  
Delta R.T. -0.02 min  
Lab File: BG020535.D  
Acq: 26 Dec 2015 11:34

Tgt Ion:252 Resp: 829637  
Ion Ratio Lower Upper  
252 100  
253 24.4 17.9 26.9  
125 7.0 5.8 8.6





#91

Benzo(a)pyrene

Concen: 65.53 ng/ul

RT: 24.89 min Scan# 3752

Delta R.T. 0.06 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

Instrument :

BNA\_G

ClientSampleId :

G9D89

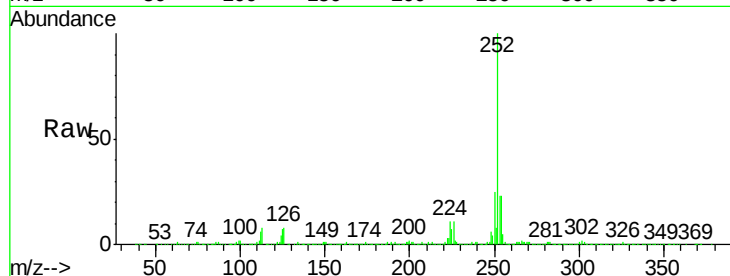
Tgt Ion:252 Resp: 682123

Ion Ratio Lower Upper

252 100

253 22.8 17.0 25.4

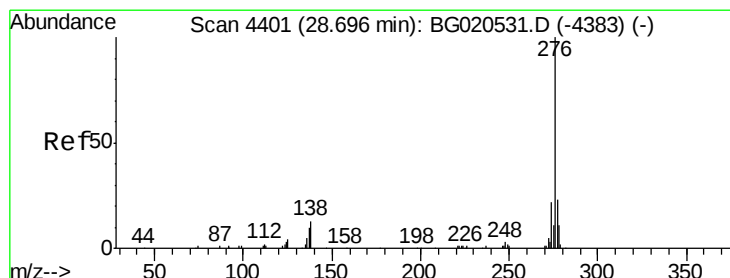
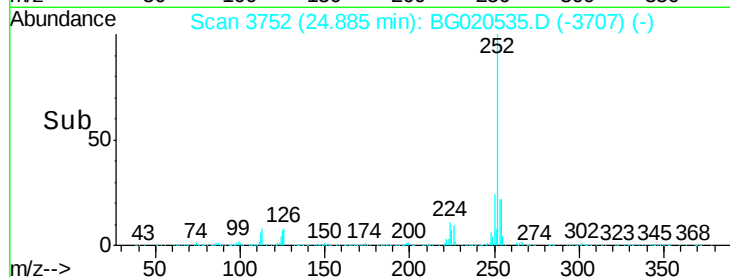
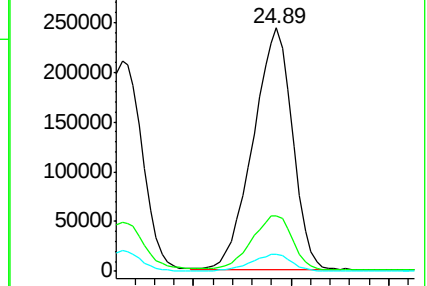
125 7.0 6.2 9.4



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



#92

Indeno(1,2,3-cd)pyrene

Concen: 42.05 ng/ul

RT: 28.80 min Scan# 4418

Delta R.T. 0.10 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

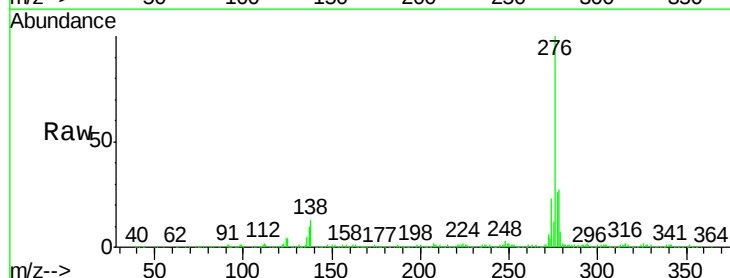
Tgt Ion:276 Resp: 524271

Ion Ratio Lower Upper

276 100

138 13.3 11.4 17.0

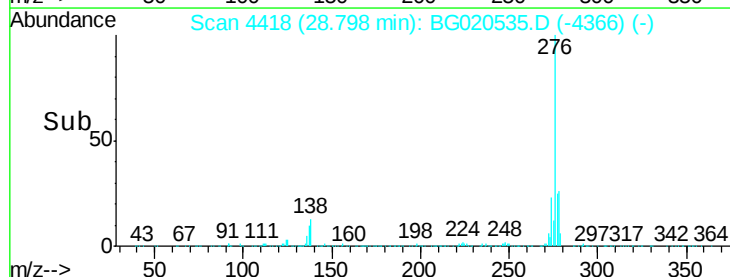
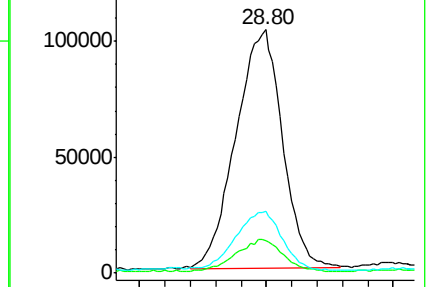
277 25.7 17.4 26.0

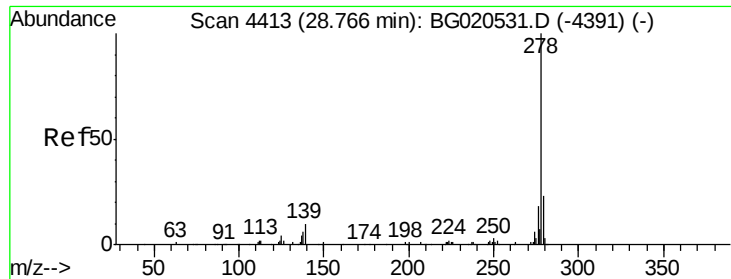


Abundance Ion 276.00 (275.70 to 276.70): E

Ion 138.00 (137.70 to 138.70): E

Ion 277.00 (276.70 to 277.70): E





#93

Dibenzo(a,h)anthracene

Concen: 15.45 ng/ul

RT: 28.82 min Scan# 4422

Delta R.T. 0.06 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

Instrument :

BNA\_G

ClientSampleId :

G9D89

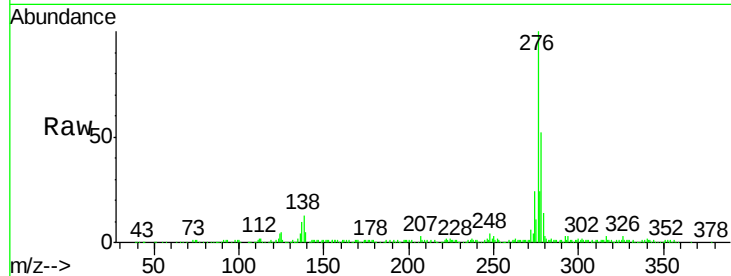
Tgt Ion:278 Resp: 159862

Ion Ratio Lower Upper

278 100

139 10.3 9.4 14.2

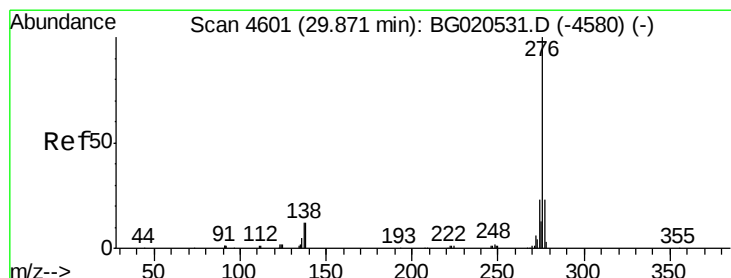
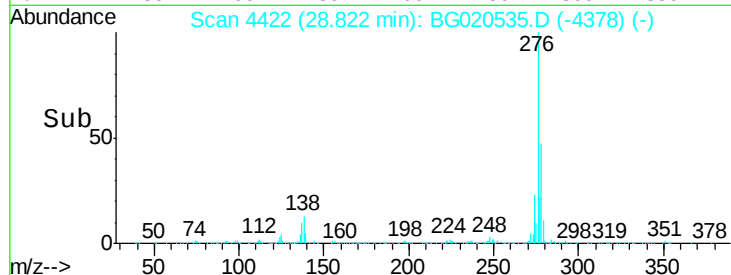
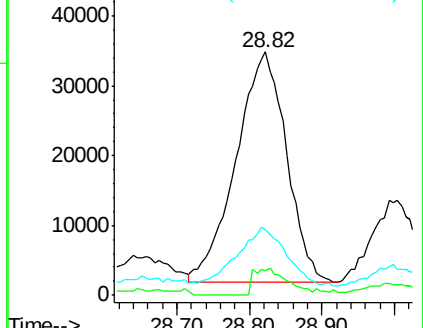
279 27.1 19.4 29.0



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: 62.01 ng/ul

RT: 29.98 min Scan# 4619

Delta R.T. 0.11 min

Lab File: BG020535.D

Acq: 26 Dec 2015 11:34

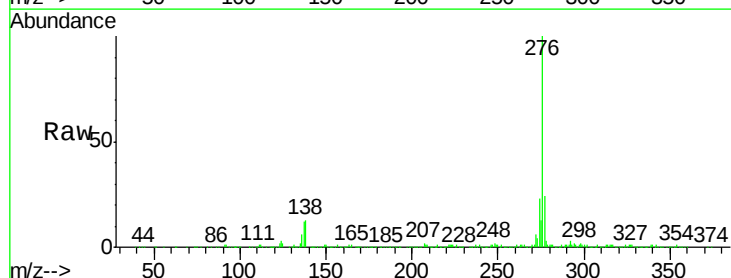
Tgt Ion:276 Resp: 635041

Ion Ratio Lower Upper

276 100

138 13.1 10.8 16.2

277 24.2 19.9 29.9



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

