

Data Path : Z:\HPCHEM1\BNA G\DATA\BG051816\  
 Data File : BG021953.D  
 Acq On : 19 May 2016 4:38  
 Operator : UM/SJ  
 Sample : H3096-06DL 5X  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 D9XG1DL

Quant Time: May 19 05:15:58 2016  
 Quant Method : Z:\HPCHEM1\BNA G\METHODS\SOM02.2-EPA-BG051816.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Thu May 19 03:59:04 2016  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 8.16  | 152  | 32331    | 20.00 | ng/ul | 0.00     |
| 7) Naphthalene-d8         | 10.98 | 136  | 183245   | 20.00 | ng/ul | 0.00     |
| 15) Acenaphthene-d10      | 14.78 | 164  | 111401   | 20.00 | ng/ul | 0.00     |
| 23) Phenanthrene-d10      | 17.53 | 188  | 236388   | 20.00 | ng/ul | 0.00     |
| 29) Chrysene-d12          | 21.81 | 240  | 209614   | 20.00 | ng/ul | 0.00     |
| 34) Perylene-d12          | 25.14 | 264  | 199952   | 20.00 | ng/ul | 0.00     |

## System Monitoring Compounds

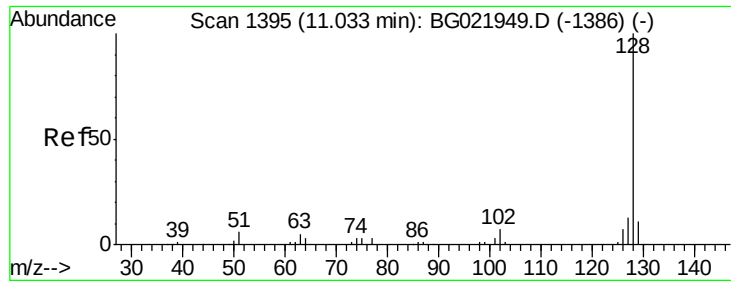
|                                |       |     |        |       |       |       |
|--------------------------------|-------|-----|--------|-------|-------|-------|
| 2) 1,4-Dioxane-d8              | 3.54  | 96  | 436    | 0.62  | ng/uL | 0.00  |
| 3) Phenol-d5                   | 7.31  | 99  | 9006   | 3.15  | ng/ul | 0.00  |
| 4) Bis-(2-Chloroethyl)ether-d  | 7.48  | 67  | 2635   | 1.73  | ng/ul | 0.00  |
| 5) 2-Chlorophenol-d4           | 7.69  | 132 | 9028   | 3.85  | ng/ul | 0.00  |
| 6) 4-Methylphenol-d8           | 8.87  | 113 | 4677   | 1.84  | ng/ul | 0.00  |
| 8) Nitrobenzene-d5             | 9.34  | 128 | 3298   | 2.57  | ng/ul | 0.00  |
| 9) 2-Nitrophenol-d4            | 10.06 | 143 | 4998   | 3.64  | ng/ul | 0.00  |
| 10) 2,4-Dichlorophenol-d3      | 10.60 | 165 | 8795   | 3.63  | ng/ul | 0.00  |
| 12) 4-Chloroaniline-d4         | 11.12 | 131 | 5363   | 2.81  | ng/ul | 0.00  |
| 16) Dimethylphthalate-d6       | 14.18 | 166 | 38238  | 4.45  | ng/ul | 0.00  |
| 17) Acenaphthylene-d8          | 14.48 | 160 | 51552  | 4.66  | ng/ul | 0.00  |
| 20) 4-Nitrophenol-d4           | 15.00 | 143 | 292    | 0.19  | ng/ul | 0.02  |
| 21) Fluorene-d10               | 15.77 | 176 | 35049  | 4.53  | ng/ul | 0.00  |
| 24) 4,6-Dinitro-2-methylphenol | 15.89 | 200 | 2094   | 1.78  | ng/ul | 0.00  |
| 26) Anthracene-d10             | 17.53 | 188 | 236388 | 21.70 | ng/ul | -0.10 |
| 30) Pyrene-d10                 | 19.90 | 212 | 54828  | 4.96  | ng/ul | 0.00  |
| 37) Benzo(a)pyrene-d12         | 24.91 | 264 | 45492  | 5.12  | ng/ul | 0.01  |

## Target Compounds

|                            |       |     |         |       |        | Ovalue |
|----------------------------|-------|-----|---------|-------|--------|--------|
| 11) Naphthalene            | 11.03 | 128 | 121219  | 13.60 | ng/ul  | 99     |
| 13) 2-Methylnaphthalene    | 12.63 | 142 | 32977   | 5.10  | ng/ul  | 93     |
| 14) 1-Methylnaphthalene    | 12.84 | 142 | 22164   | 3.35  | ng/ul  | 92     |
| 19) Acenaphthene           | 14.85 | 153 | 89970   | 11.37 | ng/ul  | 99     |
| 22) Fluorene               | 15.83 | 166 | 139267  | 15.90 | ng/ul  | 98     |
| 25) Phenanthrene           | 17.66 | 178 | 302063  | 23.91 | ng/ul  | 98     |
| 27) Anthracene             | 17.66 | 178 | 302063  | 23.79 | ng/ul  | 100    |
| 28) Fluoranthene           | 19.57 | 202 | 1186768 | 90.38 | ng/ul# | 90     |
| 31) Pyrene                 | 19.94 | 202 | 876080  | 60.69 | ng/ul# | 90     |
| 32) Benzo(a)anthracene     | 21.79 | 228 | 435142  | 37.42 | ng/ul  | 95     |
| 33) Chrysene               | 21.86 | 228 | 356285  | 31.50 | ng/ul  | 95     |
| 35) Benzo(b)fluoranthene   | 24.08 | 252 | 433757  | 37.74 | ng/ul# | 94     |
| 36) Benzo(k)fluoranthene   | 24.08 | 252 | 433757  | 38.36 | ng/ul# | 93     |
| 38) Benzo(a)pyrene         | 24.98 | 252 | 287162  | 26.12 | ng/ul# | 93     |
| 39) Indeno(1,2,3-cd)pyrene | 28.94 | 276 | 194246  | 15.55 | ng/ul# | 89     |
| 40) Dibenzo(a,h)anthracene | 28.98 | 278 | 24159   | 2.33  | ng/ul# | 82     |
| 41) Benzo(g,h,i)perylene   | 30.14 | 276 | 166550  | 15.76 | ng/ul# | 92     |

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

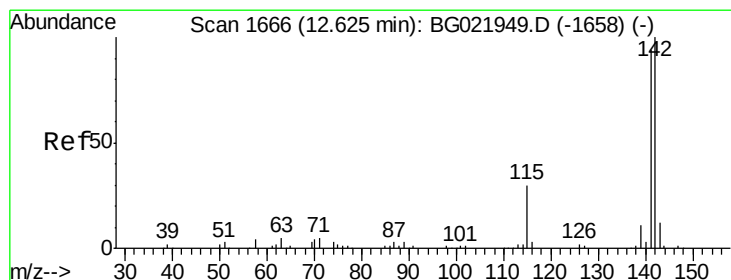
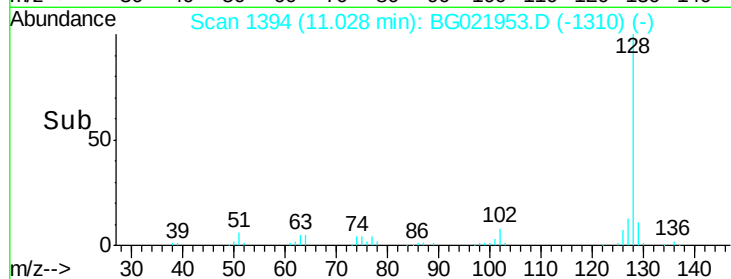
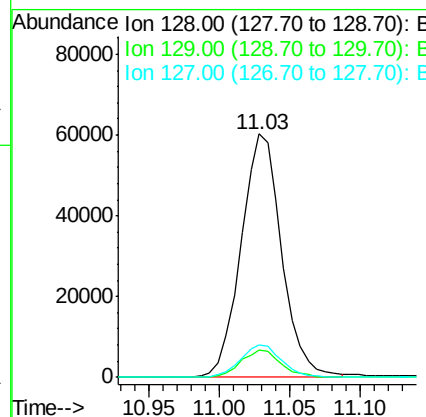
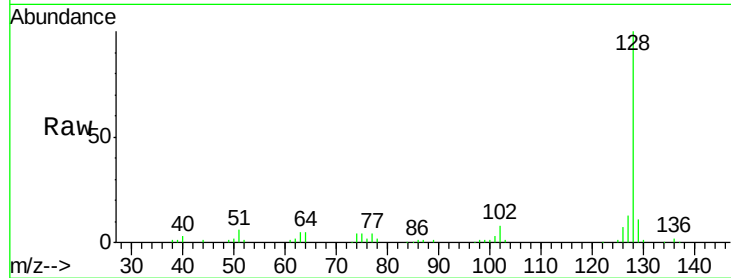
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Data Path : Z:\HPCHEM1\BNA G\DATA\BG051816\  
Data File : BG021953.D  
Acq On    : 19 May 2016    4:38  
Operator  : UM/SJ  
Sample    : H3096-06DL 5X  
Misc      :  
ALS Vial  : 19    Sample Multiplier: 1
```



#11  
Naphthalene  
Concen: 13.60 ng/ul  
RT: 11.03 min Scan# 1394  
Delta R.T. -0.01 min  
Lab File: BG021953.D  
Acq: 19 May 2016 4:38

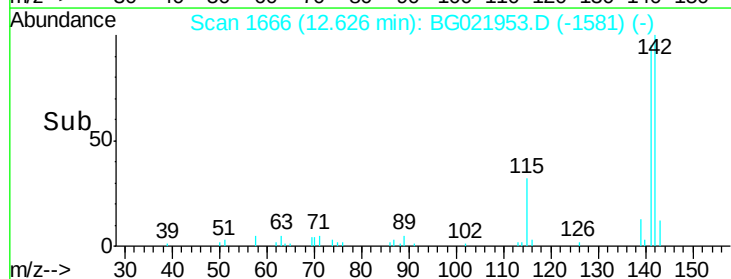
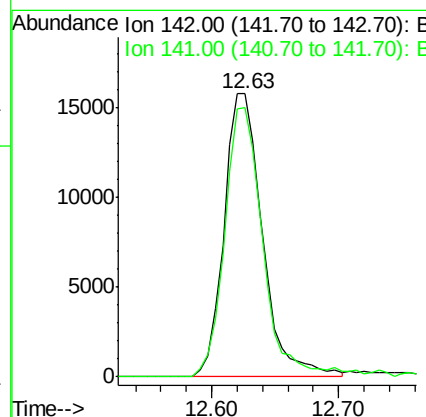
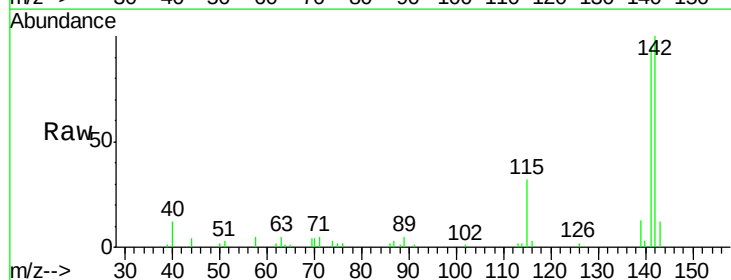
Instrument :  
BNA\_G  
ClientSampleId :  
D9XG1DL

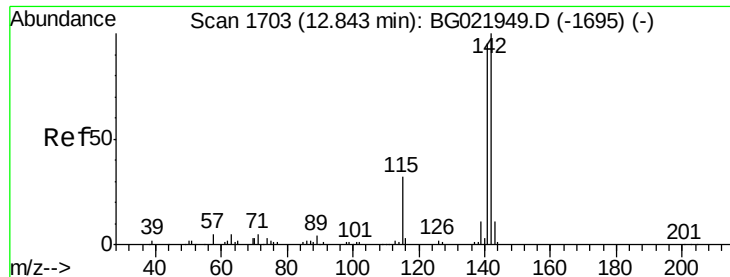
Tot Ion:128 Resp: 121219  
Ion Ratio Lower Upper  
128 100  
129 11.1 8.3 12.5  
127 13.4 10.8 16.2



#13  
2-Methylnaphthalene  
Concen: 5.10 ng/ul  
RT: 12.63 min Scan# 1666  
Delta R.T. 0.00 min  
Lab File: BG021953.D  
Acq: 19 May 2016 4:38

Tgt Ion:142 Resp: 32977  
Ion Ratio Lower Upper  
142 100  
141 95.3 71.3 106.9

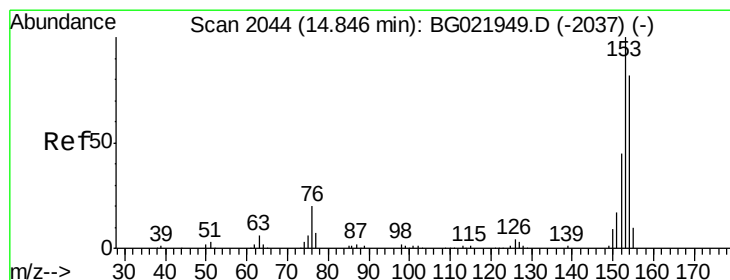
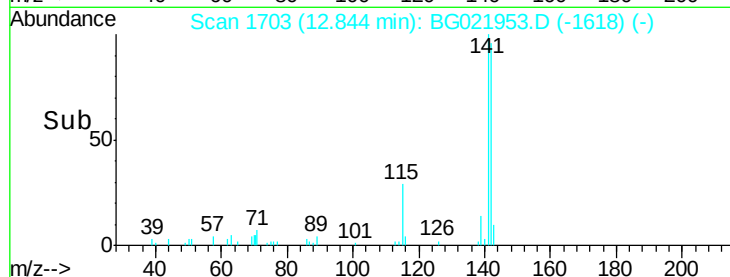
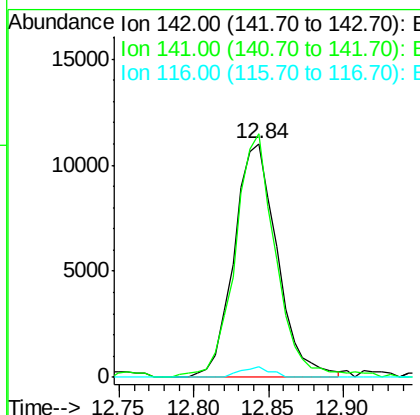
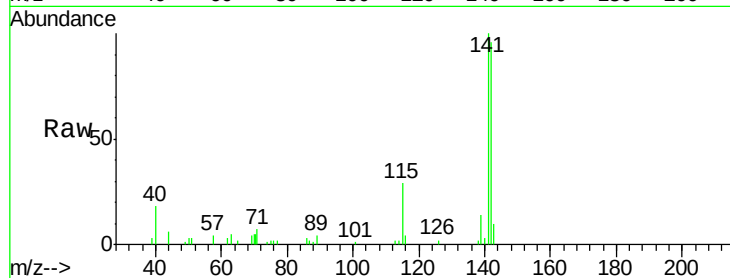




#14  
 1-Methylnaphthalene  
 Concen: 3.35 ng/ul  
 RT: 12.84 min Scan# 1703  
 Delta R.T. 0.00 min  
 Lab File: BG021953.D  
 Acq: 19 May 2016 4:38

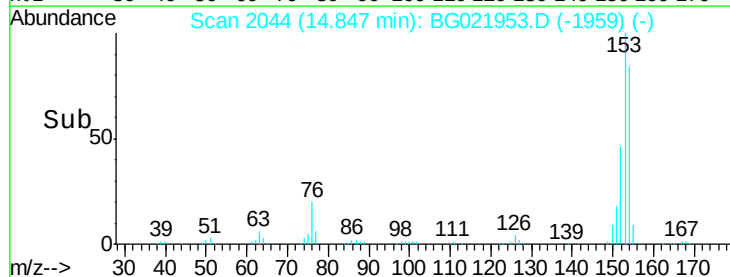
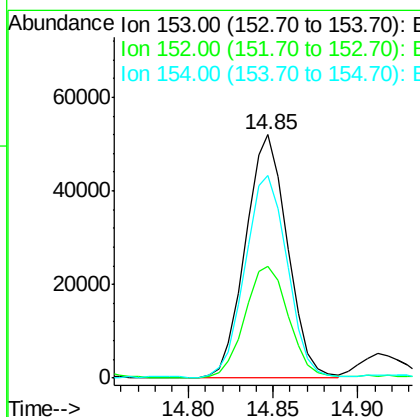
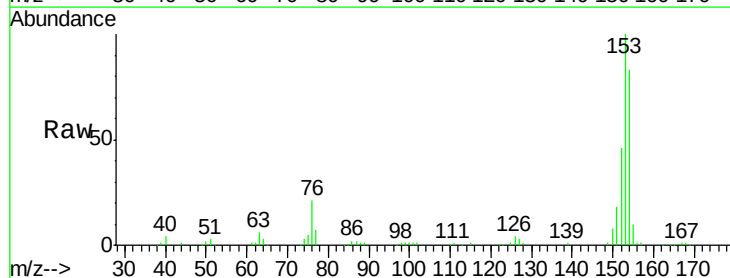
Instrument :  
 BNA\_G  
 ClientSampleId :  
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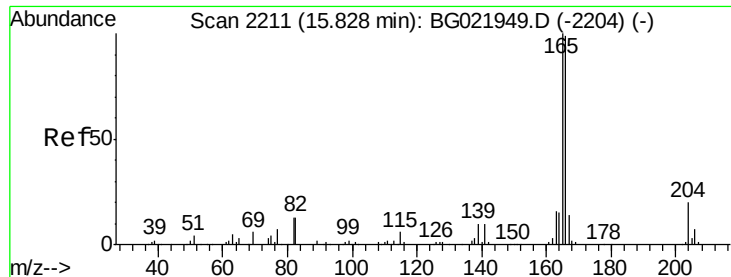
Tot Ion:142 Resp: 22164  
 Ion Ratio Lower Upper  
 142 100  
 141 104.2 77.0 115.4  
 116 4.5 4.2 6.4



#19  
 Acenaphthene  
 Concen: 11.37 ng/ul  
 RT: 14.85 min Scan# 2044  
 Delta R.T. 0.00 min  
 Lab File: BG021953.D  
 Acq: 19 May 2016 4:38

Tgt Ion:153 Resp: 89970  
 Ion Ratio Lower Upper  
 153 100  
 152 46.1 36.5 54.7  
 154 83.4 67.3 100.9





#22

Fluorene

Concen: 15.90 ng/ul

RT: 15.83 min Scan# 2211

Delta R.T. 0.00 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

Instrument :

BNA\_G

ClientSampled :

D9XG1DL

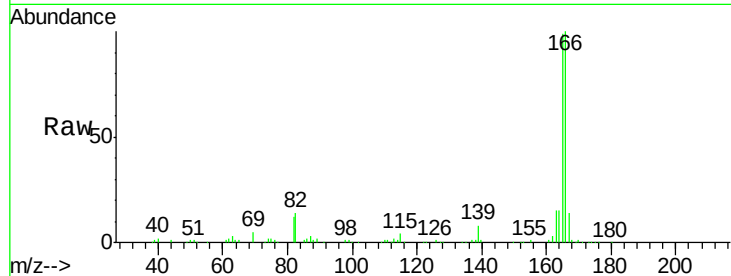
Tot Ion:166 Resp: 139267

Ion Ratio Lower Upper

166 100

165 99.4 81.1 121.7

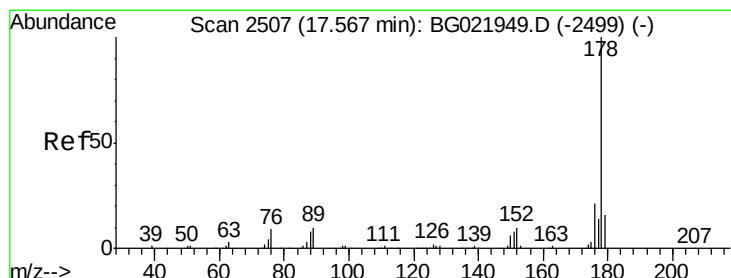
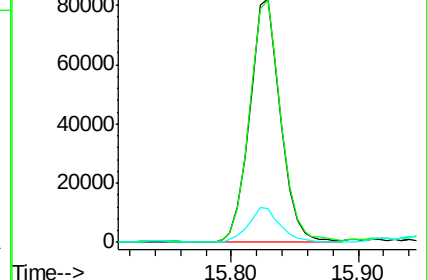
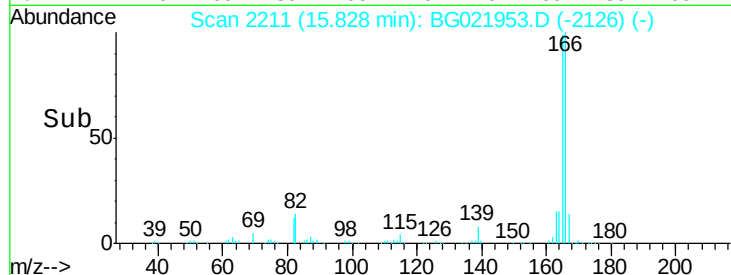
167 14.0 10.6 16.0



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



#25

Phenanthrene

Concen: 23.91 ng/ul

RT: 17.66 min Scan# 2523

Delta R.T. 0.09 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

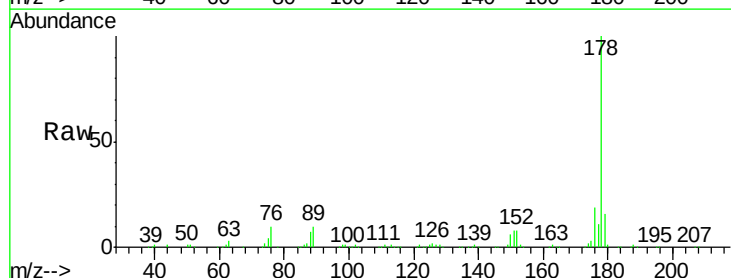
Tgt Ion:178 Resp: 302063

Ion Ratio Lower Upper

178 100

179 15.8 11.8 17.8

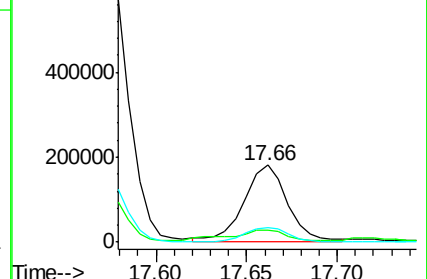
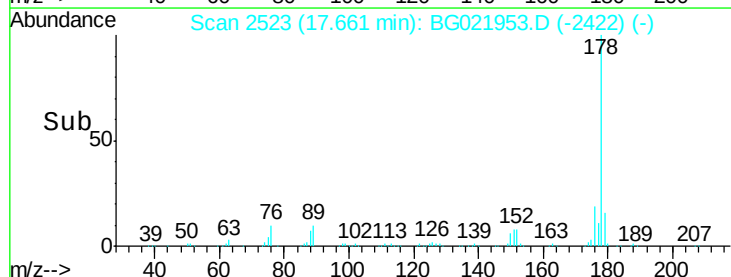
176 19.4 14.8 22.2

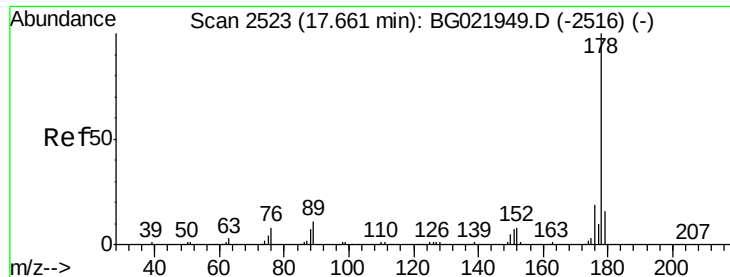


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 179.00 (178.70 to 179.70): E

Ion 176.00 (175.70 to 176.70): E





#27

Anthracene

Concen: 23.79 ng/ul

RT: 17.66 min Scan# 2523

Delta R.T. 0.00 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

Instrument :

BNA\_G

ClientSampleId :

D9XG1DL

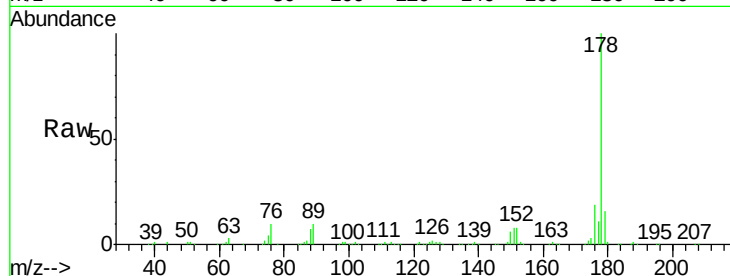
Tot Ion:178 Resp: 302063

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 178 | 100   |       |       |
| 179 | 15.8  | 12.9  | 19.3  |
| 176 | 19.4  | 15.6  | 23.4  |

178 100

179 15.8 12.9 19.3

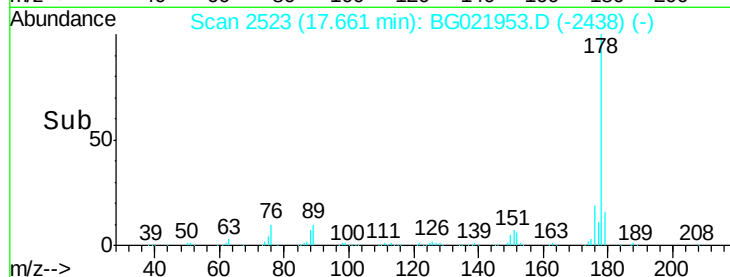
176 19.4 15.6 23.4



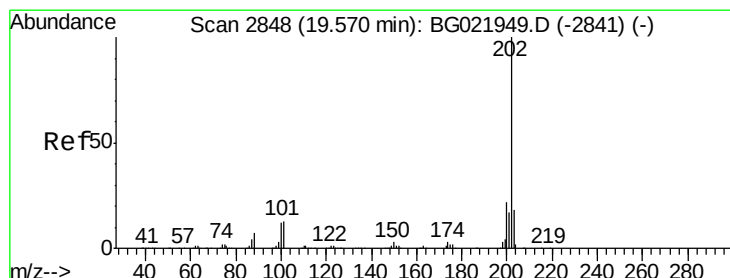
Abundance Ion 178.00 (177.70 to 178.70): E

Ion 179.00 (178.70 to 179.70): E

Ion 176.00 (175.70 to 176.70): E



Time-->



#28

Fluoranthene

Concen: 90.38 ng/ul

RT: 19.57 min Scan# 2848

Delta R.T. 0.00 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

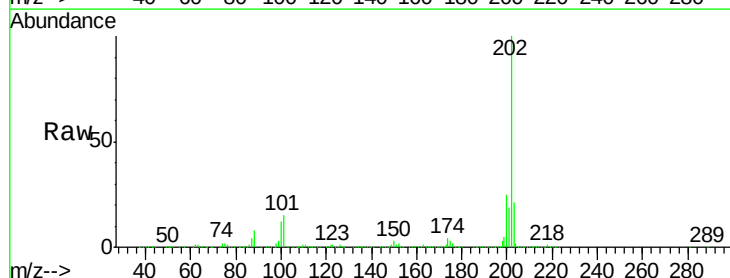
Tgt Ion:202 Resp: 1186768

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 202 | 100   |       |       |
| 101 | 15.1  | 8.9   | 13.3# |
| 100 | 12.4  | 7.0   | 10.4# |

202 100

101 15.1 8.9 13.3#

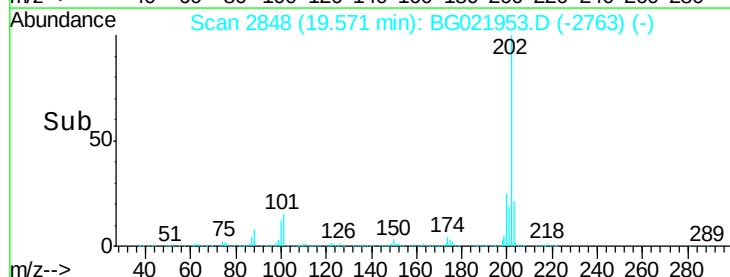
100 12.4 7.0 10.4#



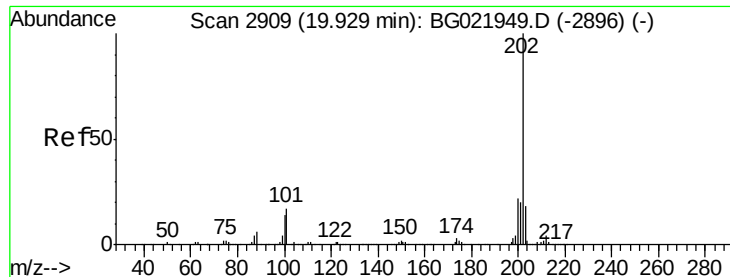
Abundance Ion 202.00 (201.70 to 202.70): E

Ion 101.00 (100.70 to 101.70): E

Ion 100.00 (99.70 to 100.70): B



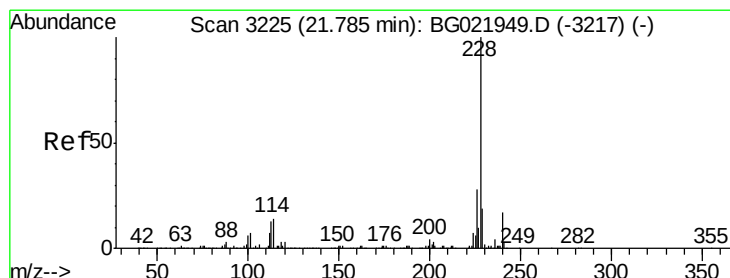
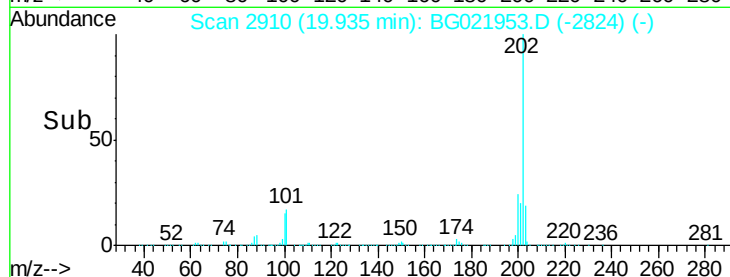
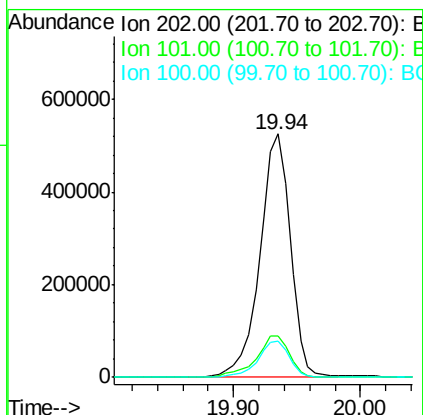
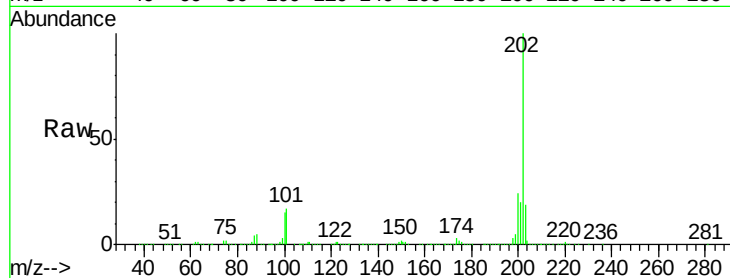
Time-->



#31  
 Pvrene  
 Concen: 60.69 ng/ul  
 RT: 19.94 min Scan# 2910  
 Delta R.T. 0.01 min  
 Lab File: BG021953.D  
 Acq: 19 May 2016 4:38

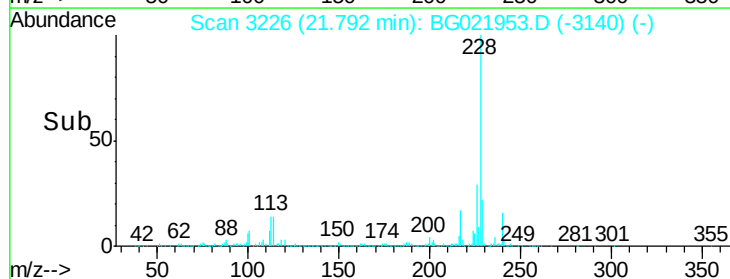
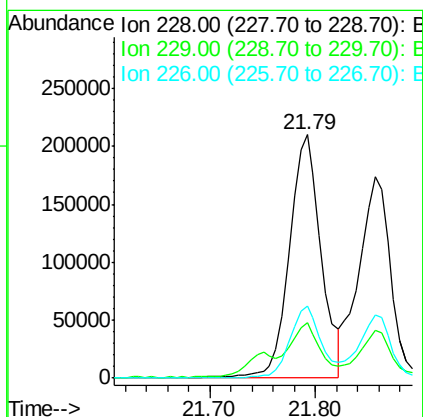
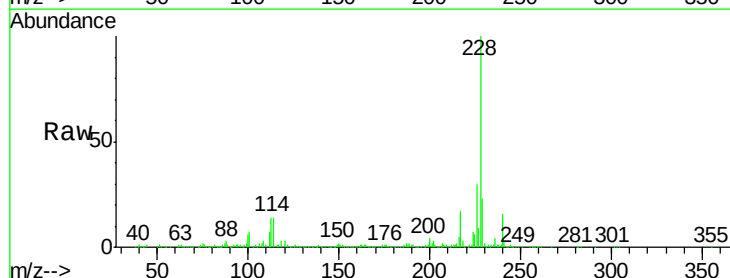
Instrument :  
 BNA\_G  
 ClientSampleId :  
 D9XG1DL

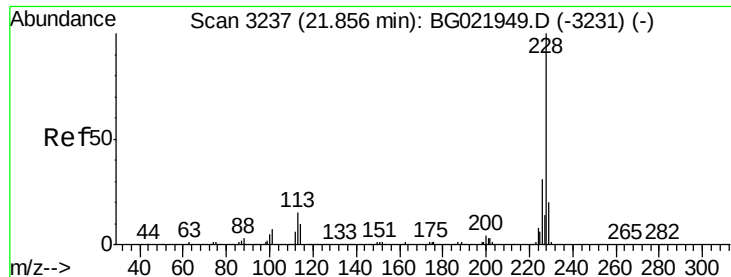
Tot Ion:202 Resp: 876080  
 Ion Ratio Lower Upper  
 202 100  
 101 17.0 9.8 14.8#  
 100 14.9 9.3 13.9#



#32  
 Benzo(a)anthracene  
 Concen: 37.42 ng/ul  
 RT: 21.79 min Scan# 3226  
 Delta R.T. 0.01 min  
 Lab File: BG021953.D  
 Acq: 19 May 2016 4:38

Tgt Ion:228 Resp: 435142  
 Ion Ratio Lower Upper  
 228 100  
 229 22.5 16.6 25.0  
 226 29.5 21.0 31.4





#33

Chrysene

Concen: 31.50 ng/ul

RT: 21.86 min Scan# 3237

Delta R.T. 0.00 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

Instrument :

BNA\_G

ClientSampleId :

D9XG1DL

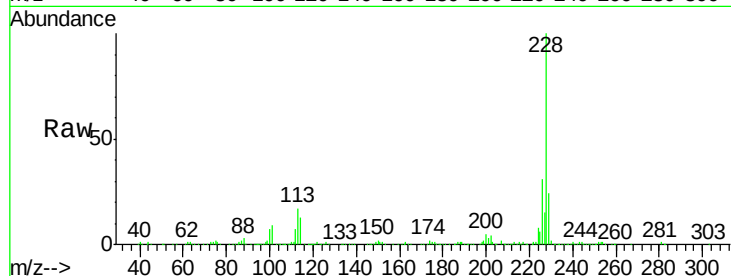
Tot Ion:228 Resp: 356285

Ion Ratio Lower Upper

228 100

226 31.2 23.4 35.2

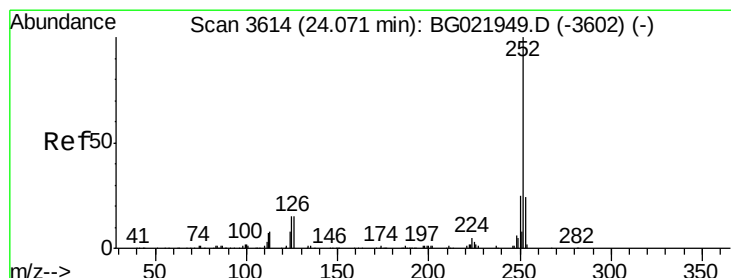
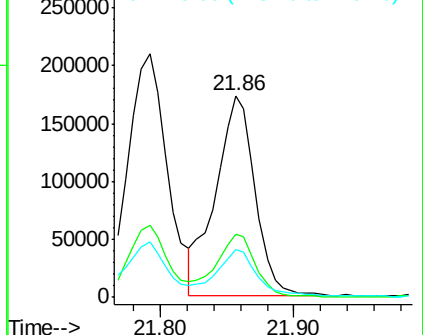
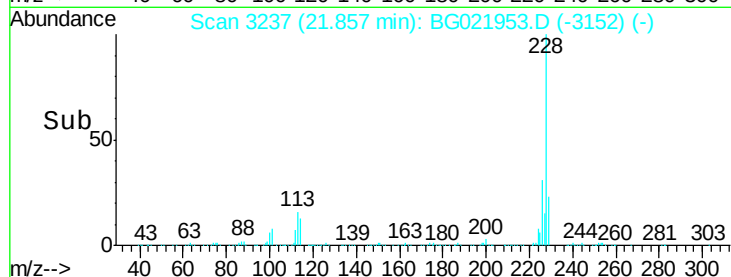
229 23.8 16.2 24.2



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



#35

Benzo(b)fluoranthene

Concen: 37.74 ng/ul

RT: 24.08 min Scan# 3616

Delta R.T. 0.01 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

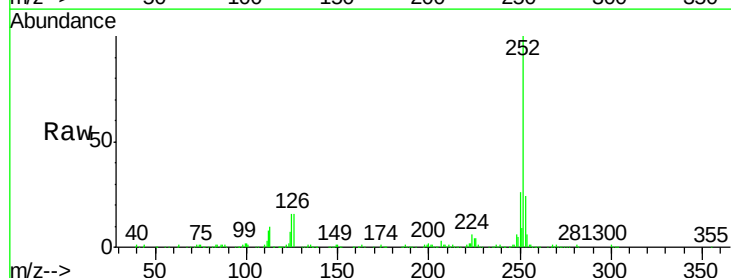
Tgt Ion:252 Resp: 433757

Ion Ratio Lower Upper

252 100

253 23.6 18.1 27.1

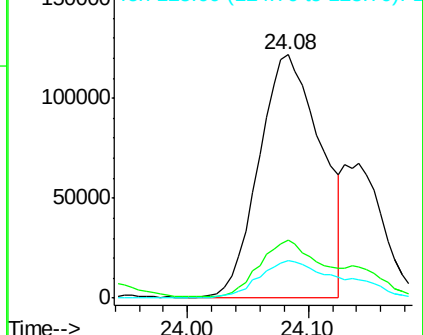
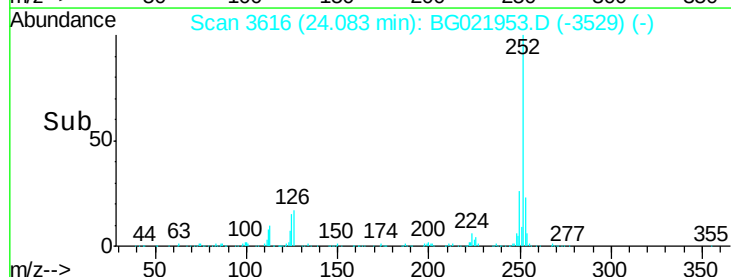
125 15.7 7.6 11.4#



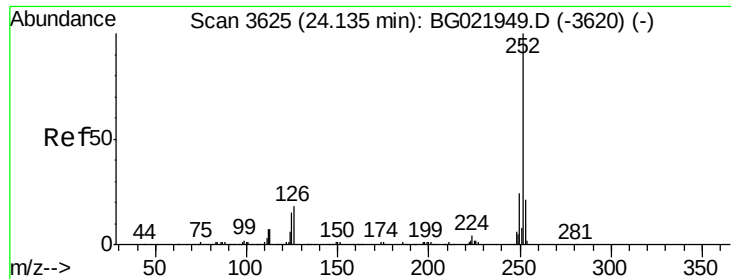
Abundance Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E



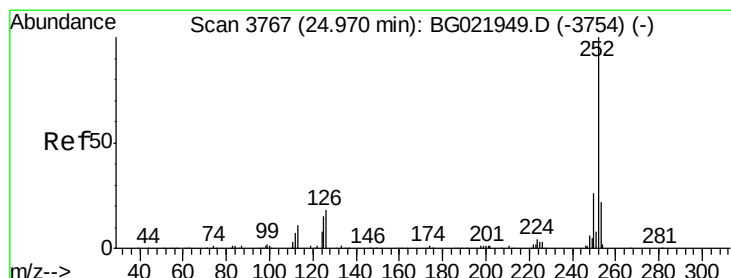
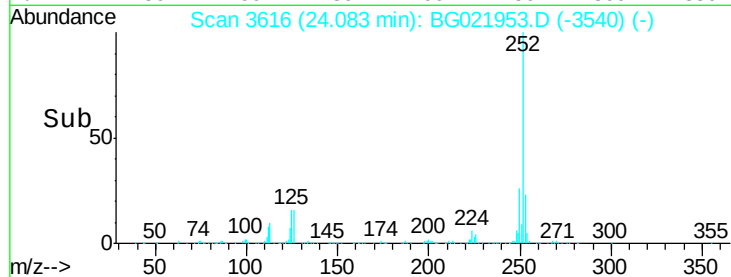
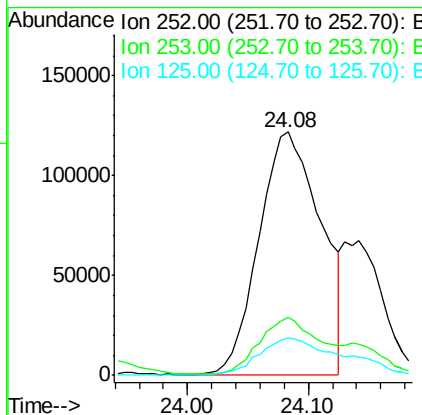
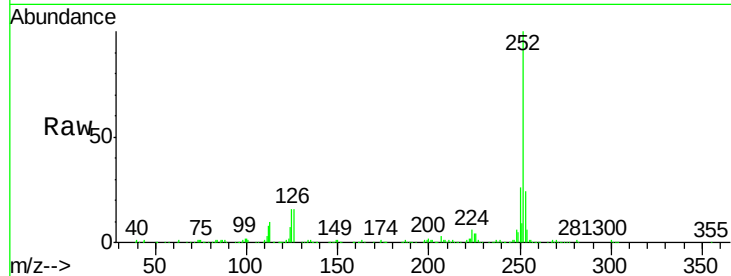




#36  
Benzo(k)fluoranthene  
Concen: 38.36 ng/ul  
RT: 24.08 min Scan# 3616  
Delta R.T. -0.05 min  
Lab File: BG021953.D  
Acq: 19 May 2016 4:38

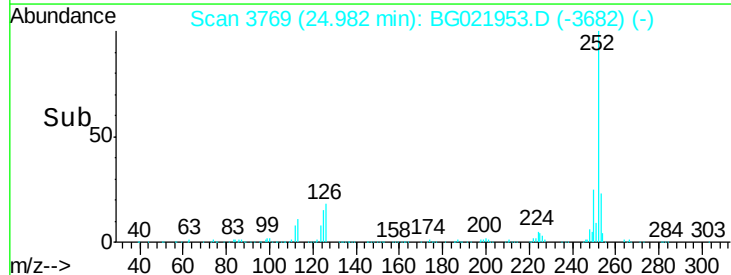
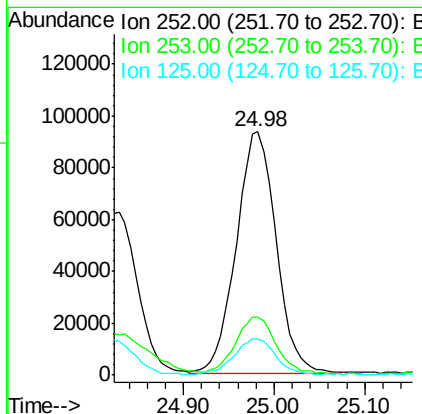
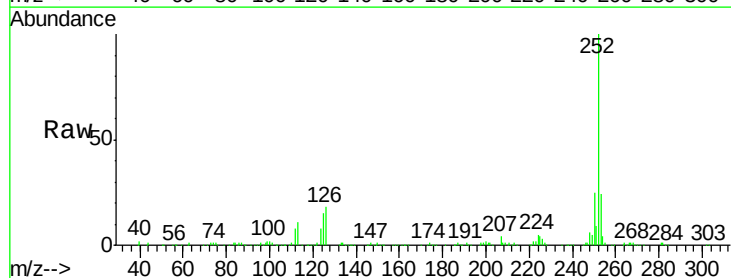
Instrument :  
BNA\_G  
ClientSampleId :  
D9XG1DL

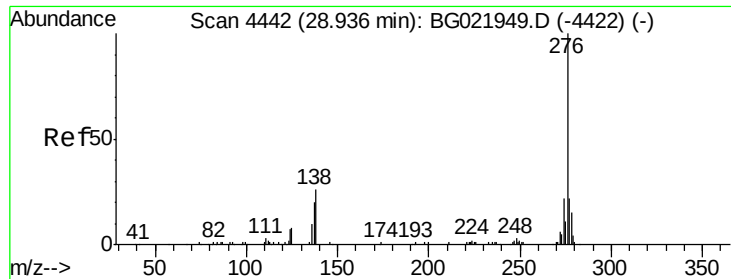
Tot Ion:252 Resp: 433757  
Ion Ratio Lower Upper  
252 100  
253 23.6 17.8 26.8  
125 15.7 7.7 11.5#



#38  
Benzo(a)pyrene  
Concen: 26.12 ng/ul  
RT: 24.98 min Scan# 3769  
Delta R.T. 0.01 min  
Lab File: BG021953.D  
Acq: 19 May 2016 4:38

Tgt Ion:252 Resp: 287162  
Ion Ratio Lower Upper  
252 100  
253 23.8 17.4 26.0  
125 15.0 8.2 12.2#





#39

Indeno(1,2,3-cd)pyrene

Concen: 15.55 ng/ul

RT: 28.94 min Scan# 4443

Delta R.T. 0.01 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

Instrument :

BNA\_G

ClientSampleId :

D9XG1DL

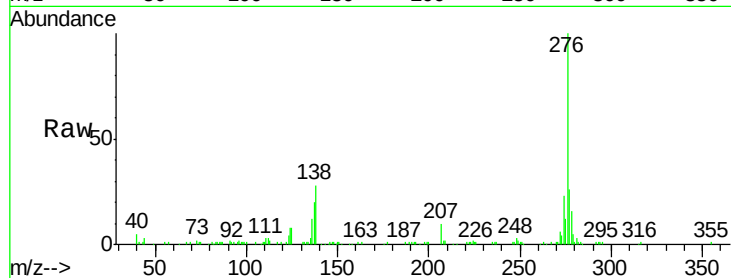
Tot Ion:276 Resp: 194246

Ion Ratio Lower Upper

276 100

138 27.9 15.8 23.6#

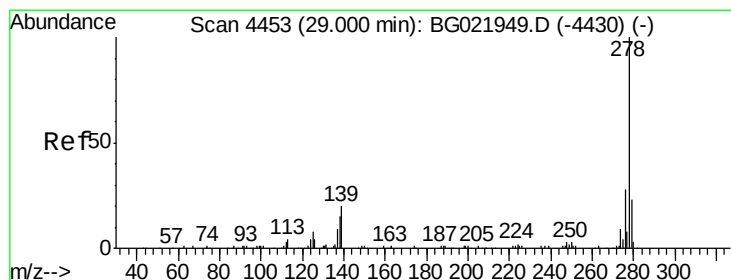
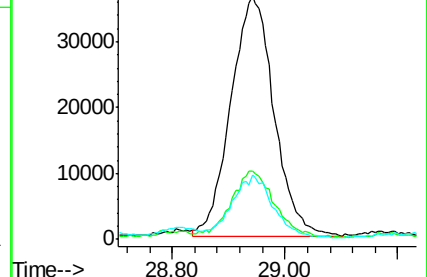
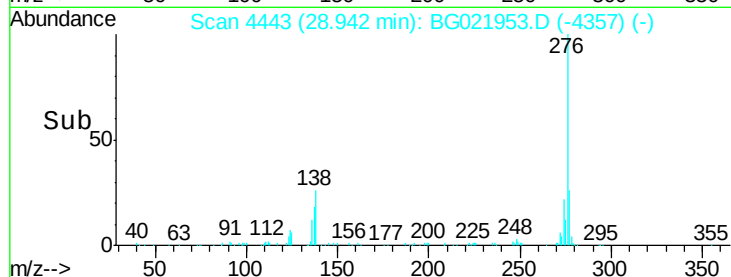
277 26.3 19.0 28.6



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



#40

Dibenzo(a,h)anthracene

Concen: 2.33 ng/ul

RT: 28.98 min Scan# 4449

Delta R.T. -0.02 min

Lab File: BG021953.D

Acq: 19 May 2016 4:38

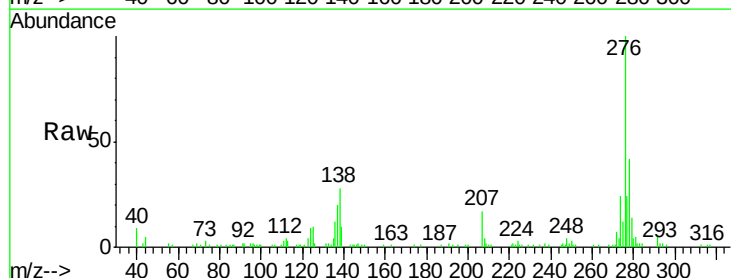
Tgt Ion:278 Resp: 24159

Ion Ratio Lower Upper

278 100

139 22.5 12.1 18.1#

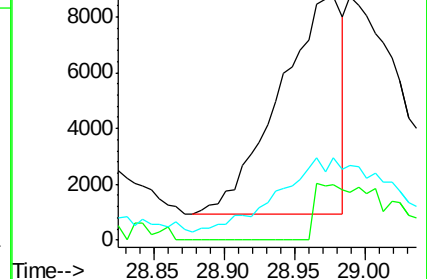
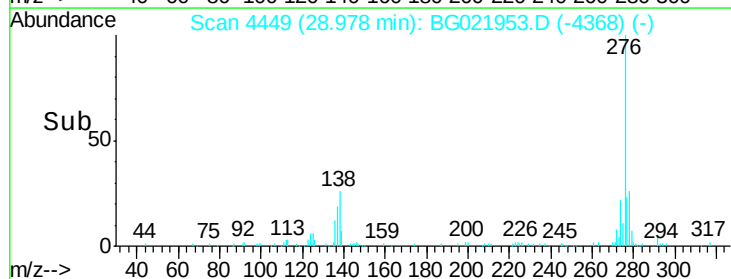
279 34.0 19.8 29.8#

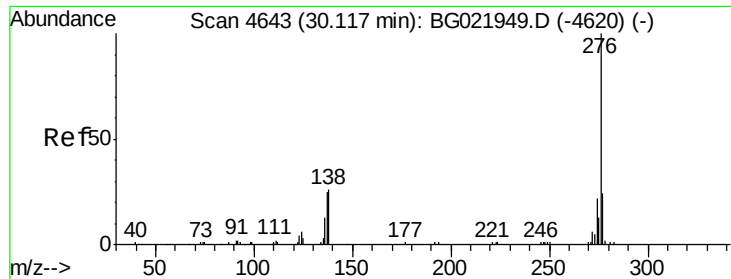


Abundance Ion 278.00 (277.70 to 278.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 279.00 (278.70 to 279.70): E

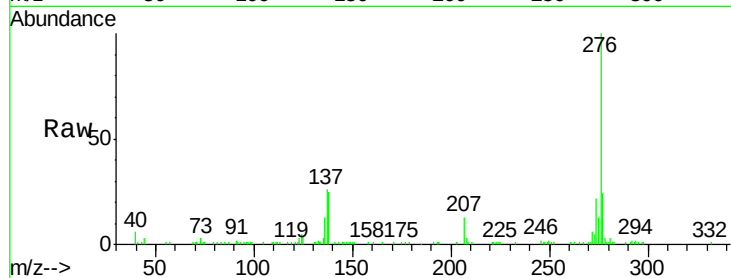




#41  
 Benzo(a,h,i)perylene  
 Concen: 15.76 ng/ul  
 RT: 30.14 min Scan# 4646  
 Delta R.T. 0.02 min  
 Lab File: BG021953.D  
 Acq: 19 May 2016 4:38

Instrument :  
 BNA\_G  
 ClientSampleId :  
 D9XG1DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 24.9  | 13.9  | 20.9  |
| 277     | 24.0  | 19.8  | 29.6  |



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

