

Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG082217\  
 Data File : BG028431.D  
 Acq On : 22 Aug 2017 23:57  
 Operator : SJ/JU  
 Sample : I4827-06 5X  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 B0AB5

Manual Integrations  
 APPROVED

Sohil  
 8/23/2017 3:02:30 PM

Quant Time: Aug 23 08:00:17 2017  
 Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM-EPA-BG080217.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Wed Aug 23 07:06:03 2017  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 8.34  | 152  | 41173    | 20.00 | ng/ul | 0.00     |
| 18) Naphthalene-d8        | 11.16 | 136  | 198162   | 20.00 | ng/ul | 0.00     |
| 35) Acenaphthene-d10      | 14.95 | 164  | 143652   | 20.00 | ng/ul | 0.00     |
| 61) Phenanthrene-d10      | 17.70 | 188  | 317386m  | 20.00 | ng/ul | 0.00     |
| 75) Chrysene-d12          | 22.04 | 240  | 356419   | 20.00 | ng/ul | 0.00     |
| 83) Perylene-d12          | 25.55 | 264  | 350759   | 20.00 | ng/ul | 0.00     |

## System Monitoring Compounds

|                                |       |     |       |      |       |      |
|--------------------------------|-------|-----|-------|------|-------|------|
| 3) 1,4-Dioxane-d8              | 3.82  | 96  | 636   | 0.72 | ng/uL | 0.00 |
| 5) Phenol-d5                   | 7.50  | 99  | 17955 | 3.97 | ng/ul | 0.00 |
| 7) Bis-(2-Chloroethyl)ether-d  | 7.66  | 67  | 10661 | 3.72 | ng/ul | 0.00 |
| 9) 2-Chlorophenol-d4           | 7.88  | 132 | 12884 | 4.52 | ng/ul | 0.00 |
| 13) 4-Methylphenol-d8          | 9.04  | 113 | 16368 | 4.33 | ng/ul | 0.00 |
| 19) Nitrobenzene-d5            | 9.51  | 128 | 7270  | 4.69 | ng/ul | 0.00 |
| 22) 2-Nitrophenol-d4           | 10.24 | 143 | 9502  | 5.59 | ng/ul | 0.00 |
| 26) 2,4-Dichlorophenol-d3      | 10.78 | 165 | 17156 | 4.88 | ng/ul | 0.00 |
| 29) 4-Chloroaniline-d4         | 11.29 | 131 | 16248 | 4.15 | ng/ul | 0.00 |
| 43) Dimethylphthalate-d6       | 14.34 | 166 | 57614 | 4.51 | ng/ul | 0.00 |
| 46) Acenaphthylene-d8          | 14.65 | 160 | 65024 | 4.51 | ng/ul | 0.00 |
| 51) 4-Nitrophenol-d4           | 15.16 | 143 | 4424  | 2.18 | ng/ul | 0.01 |
| 57) Fluorene-d10               | 15.94 | 176 | 50962 | 4.45 | ng/ul | 0.00 |
| 62) 4,6-Dinitro-2-methylphenol | 16.06 | 200 | 4797m | 2.33 | ng/ul | 0.00 |
| 70) Anthracene-d10             | 17.80 | 188 | 77857 | 5.12 | ng/ul | 0.00 |
| 76) Pyrene-d10                 | 20.08 | 212 | 90845 | 4.97 | ng/ul | 0.00 |
| 87) Benzo(a)pyrene-d12         | 25.31 | 264 | 81234 | 4.95 | ng/ul | 0.00 |

## Target Compounds

|                            |       |     |          |               | Qvalue |
|----------------------------|-------|-----|----------|---------------|--------|
| 28) Naphthalene            | 11.22 | 128 | 116847   | 11.906 ng/ul  | 99     |
| 34) 2-Methylnaphthalene    | 12.80 | 142 | 53054    | 6.730 ng/ul   | 85     |
| 40) 1,1'-Biphenyl          | 13.78 | 154 | 19515    | 1.860 ng/ul#  | 86     |
| 44) Dimethylphthalate      | 14.38 | 163 | 16601    | 1.411 ng/ul   | 99     |
| 47) Acenaphthylene         | 14.68 | 152 | 29433    | 2.138 ng/ul   | 95     |
| 49) Acenaphthene           | 15.01 | 153 | 109443   | 11.782 ng/ul  | 93     |
| 53) Dibenzofuran           | 15.35 | 168 | 161096   | 11.895 ng/ul  | 99     |
| 58) Fluorene               | 15.99 | 166 | 195561   | 16.310 ng/ul  | 98     |
| 69) Phenanthrene           | 17.75 | 178 | 2032821m | 127.269 ng/ul |        |
| 71) Anthracene             | 17.84 | 178 | 392831   | 24.064 ng/ul  | 99     |
| 72) Carbazole              | 18.10 | 167 | 177981   | 12.536 ng/ul  | 98     |
| 74) Fluoranthene           | 19.75 | 202 | 2218000  | 114.262 ng/ul | 98     |
| 77) Pyrene                 | 20.11 | 202 | 1940325  | 91.248 ng/ul  | 99     |
| 80) Benzo(a)anthracene     | 22.02 | 228 | 983098   | 47.738 ng/ul  | 97     |
| 82) Chrysene               | 22.09 | 228 | 941425   | 50.759 ng/ul  | 96     |
| 85) Benzo(b)fluoranthene   | 24.43 | 252 | 1142730m | 54.442 ng/ul  |        |
| 86) Benzo(k)fluoranthene   | 24.49 | 252 | 353152   | 17.225 ng/ul  | 97     |
| 88) Benzo(a)pyrene         | 25.38 | 252 | 868297m  | 42.725 ng/ul  |        |
| 89) Indeno(1,2,3-cd)pyrene | 29.57 | 276 | 530844   | 22.305 ng/ul  | 99     |
| 90) Dibenzo(a,h)anthracene | 29.61 | 278 | 134352   | 6.735 ng/ul   | 97     |
| 91) Benzo(g,h,i)perylene   | 30.84 | 276 | 442255   | 22.588 ng/ul  | 94     |

Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG082217\  
Data File : BG028431.D  
Acq On : 22 Aug 2017 23:57  
Operator : SJ/JU  
Sample : I4827-06 5X  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Instrument :  
BNA\_G  
ClientSampleId :  
B0AB5

Manual Integrations  
APPROVED

Sohil  
8/23/2017 3:02:30 PM

Quant Time: Aug 23 08:00:17 2017  
Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM-EPA-BG080217.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Wed Aug 23 07:06:03 2017  
Response via : Initial Calibration

| Internal Standards                                                         | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------------------------------------------------------|------|------|----------|------|-------|----------|
| -----                                                                      |      |      |          |      |       |          |
| (#) = qualifier out of range (m) = manual integration (+) = signals summed |      |      |          |      |       |          |

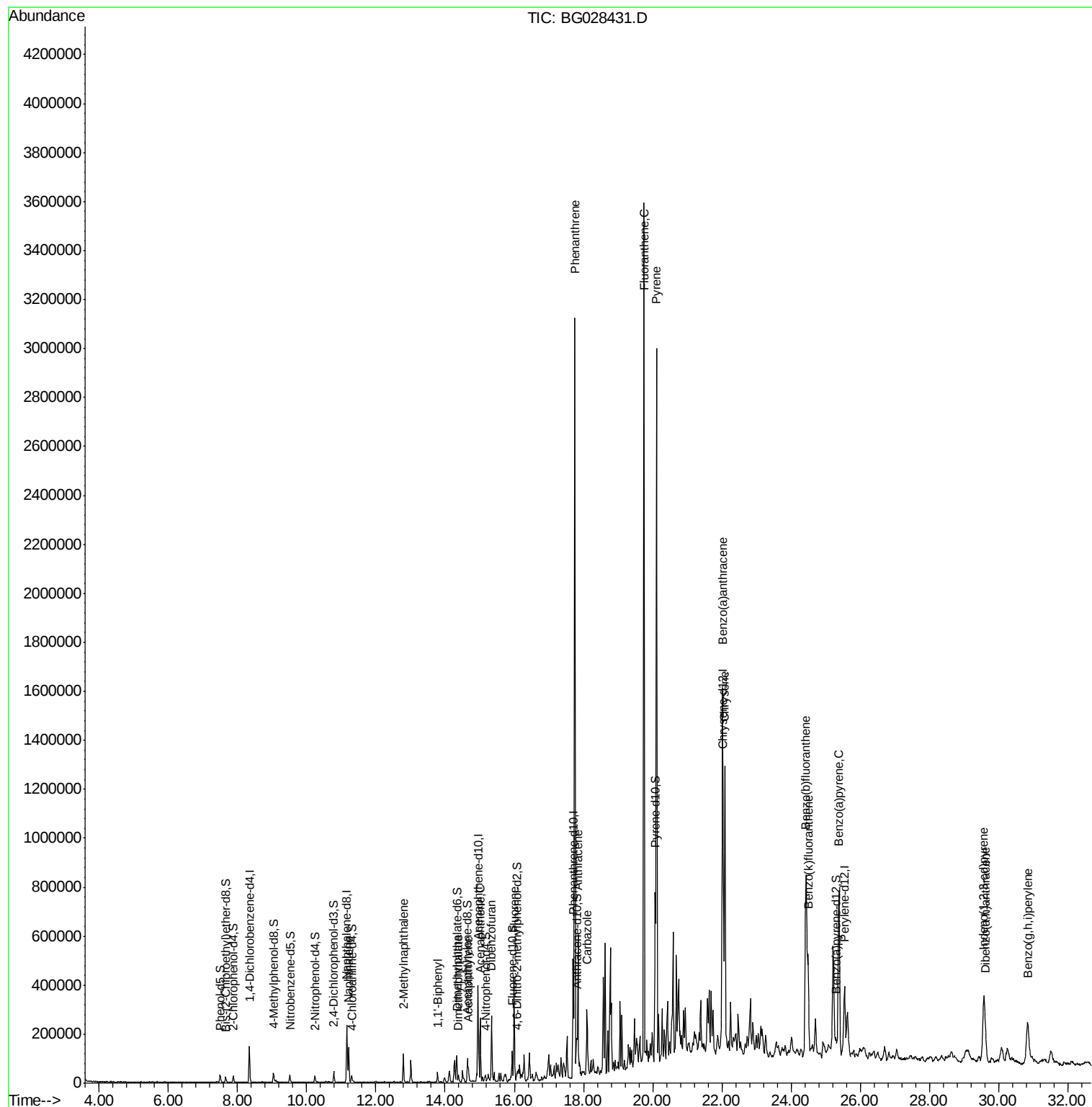
Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG082217\  
Data File : BG028431.D  
Acq On : 22 Aug 2017 23:57  
Operator : SJ/JU  
Sample : I4827-06 5X  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

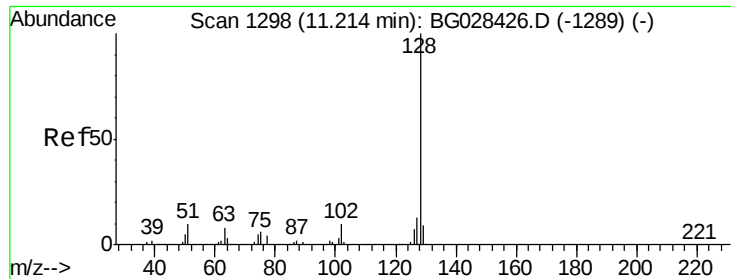
Instrument :  
BNA\_G  
ClientSampleId :  
B0AB5

Manual Integrations  
APPROVED

Sohil  
8/23/2017 3:02:30 PM

Quant Time: Aug 23 08:00:17 2017  
Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\SOM-EPA-BG080217.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Wed Aug 23 07:06:03 2017  
Response via : Initial Calibration





#28

Naphthalene

Concen: 11.906 ng/ul

RT: 11.22 min Scan# 1298

Delta R.T. 0.00 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

Instrument :

BNA\_G

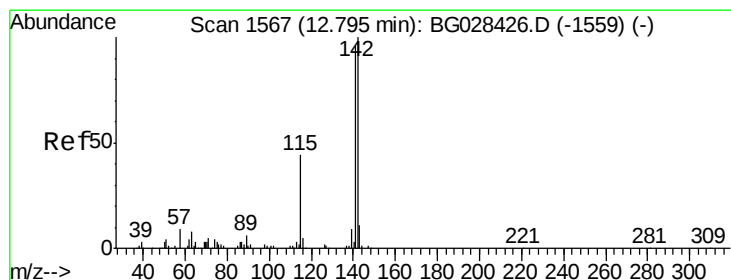
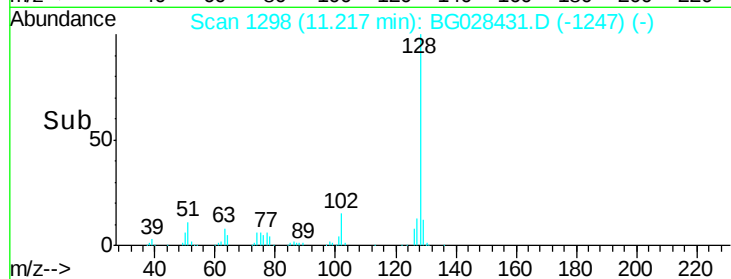
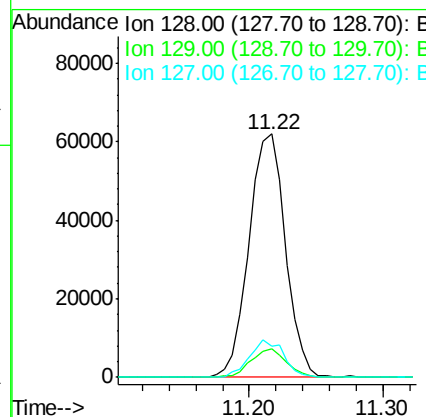
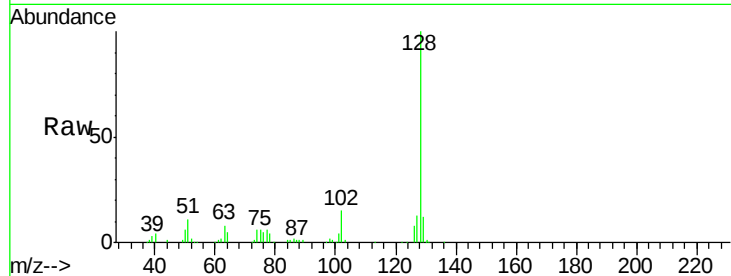
ClientSampleId :

B0AB5

|           |      |       |        |
|-----------|------|-------|--------|
| Tgt Ion:  | 128  | Resp: | 116847 |
| Ion Ratio |      | Lower | Upper  |
| 128       | 100  |       |        |
| 129       | 11.6 | 9.4   | 14.2   |
| 127       | 12.6 | 10.3  | 15.5   |

Manual Integrations  
APPROVED

Sohil  
8/23/2017 3:02:30 PM



#34

2-Methylnaphthalene

Concen: 6.730 ng/ul

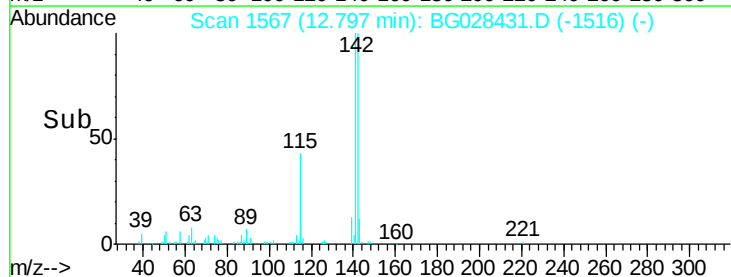
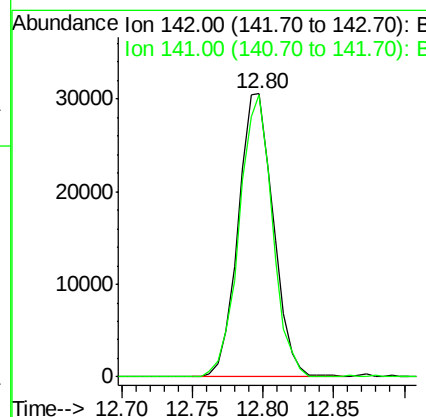
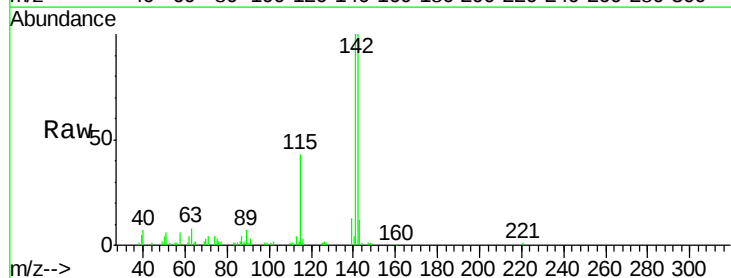
RT: 12.80 min Scan# 1567

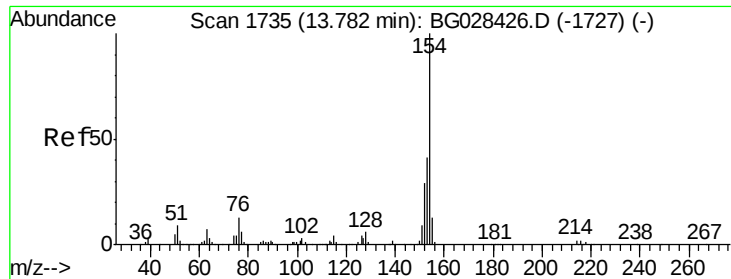
Delta R.T. 0.00 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

|           |      |       |       |
|-----------|------|-------|-------|
| Tgt Ion:  | 142  | Resp: | 53054 |
| Ion Ratio |      | Lower | Upper |
| 142       | 100  |       |       |
| 141       | 99.8 | 68.6  | 102.8 |





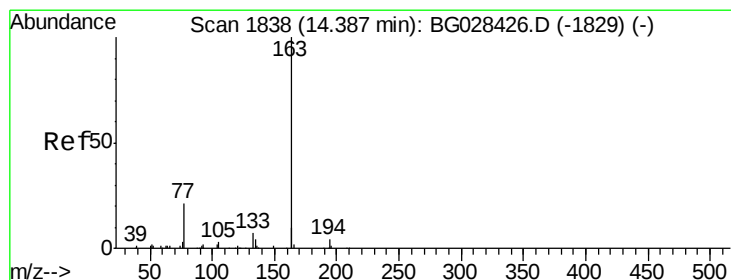
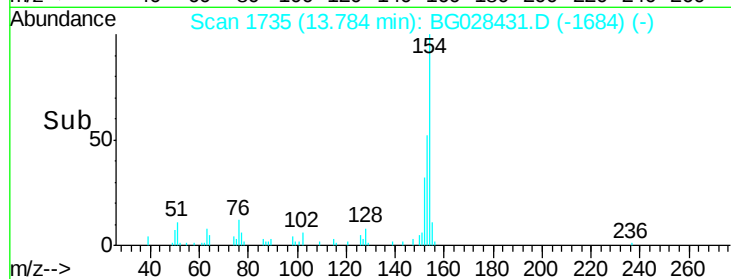
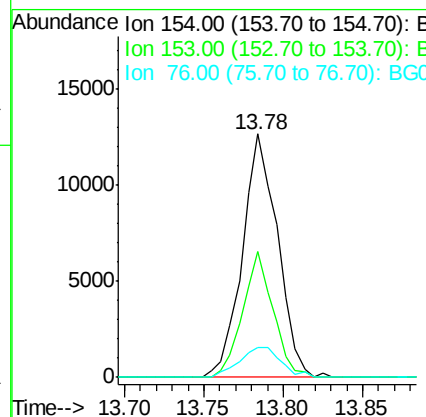
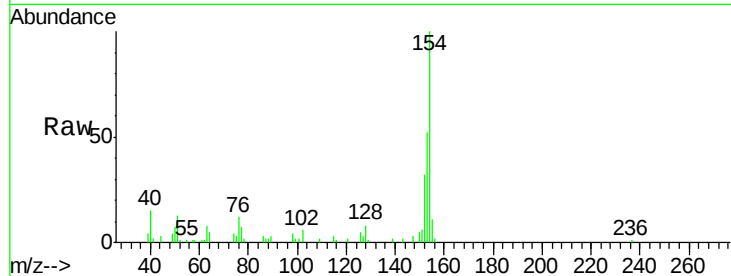
#40  
 1,1'-Biphenyl  
 Concen: 1.860 ng/ul  
 RT: 13.78 min Scan# 1735  
 Delta R.T. 0.00 min  
 Lab File: BG028431.D  
 Acq: 22 Aug 2017 23:57

Instrument :  
 BNA\_G  
 ClientSampleId :  
 B0AB5

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 154     | 100   | 19515 |       |       |
| 153     | 51.7  | 32.2  | 48.2# |       |
| 76      | 12.0  | 9.6   | 14.4  |       |

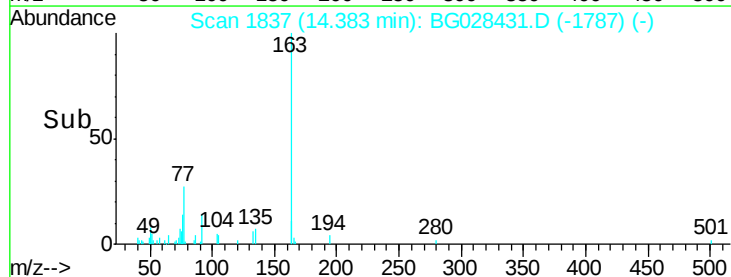
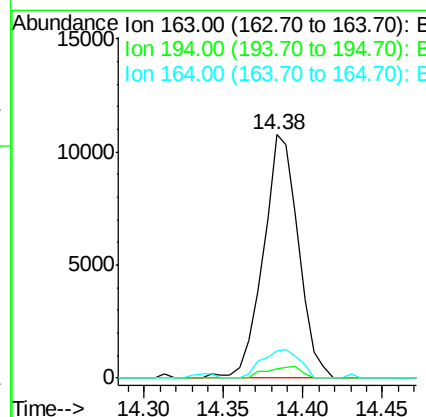
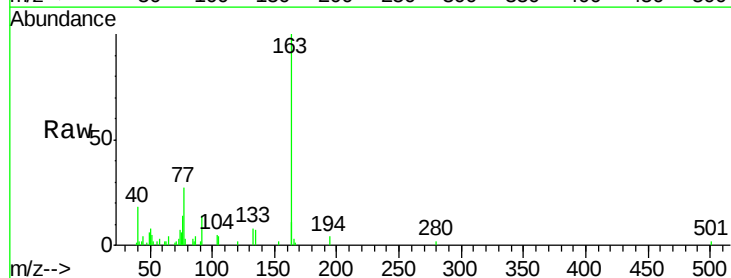
Manual Integrations  
 APPROVED

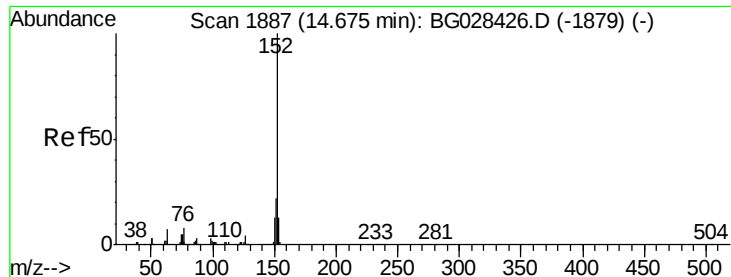
Sohil  
 8/23/2017 3:02:30 PM



#44  
 Dimethylphthalate  
 Concen: 1.411 ng/ul  
 RT: 14.38 min Scan# 1837  
 Delta R.T. -0.00 min  
 Lab File: BG028431.D  
 Acq: 22 Aug 2017 23:57

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 163     | 100   | 16601 |       |       |
| 194     | 3.8   | 3.4   | 5.0   |       |
| 164     | 11.5  | 9.0   | 13.4  |       |





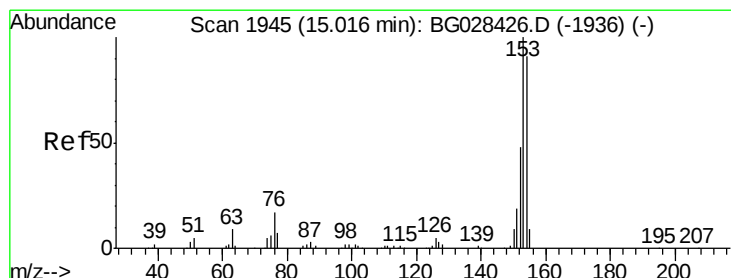
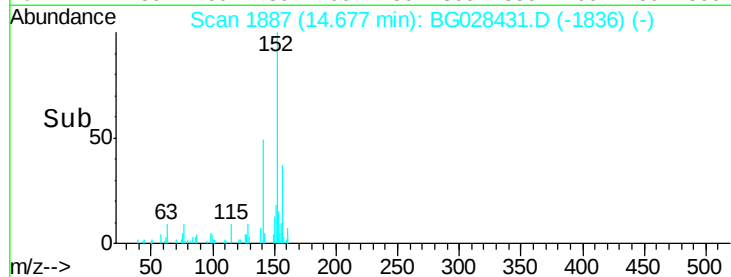
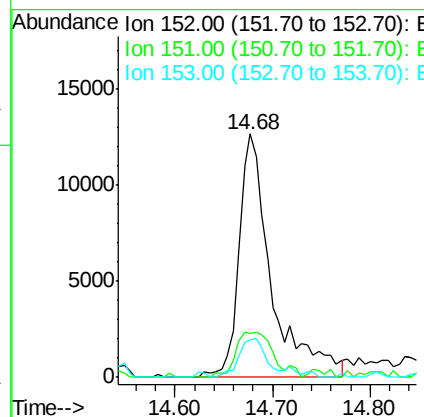
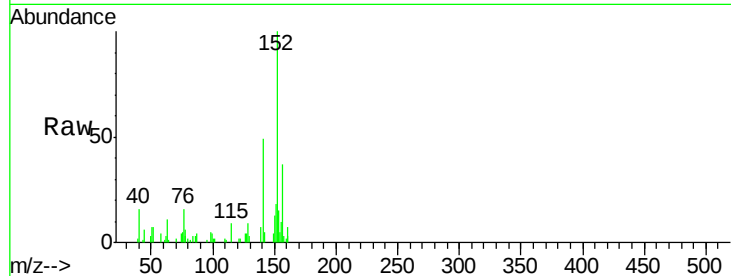
#47  
Acenaphthylene  
Concen: 2.138 ng/ul  
RT: 14.68 min Scan# 1887  
Delta R.T. 0.00 min  
Lab File: BG028431.D  
Acq: 22 Aug 2017 23:57

Instrument :  
BNA\_G  
ClientSampleId :  
B0AB5

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 152     | 100   | 29433 |       |       |
| 151     | 18.0  |       | 16.7  | 25.1  |
| 153     | 15.3  |       | 11.4  | 17.2  |

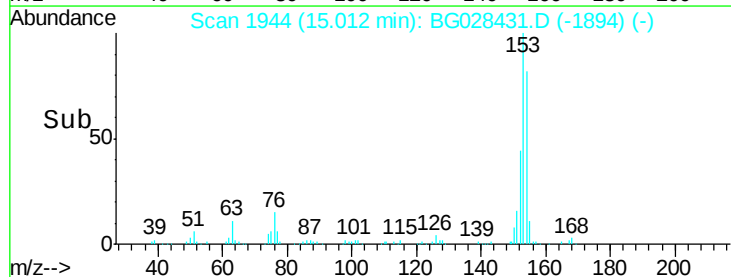
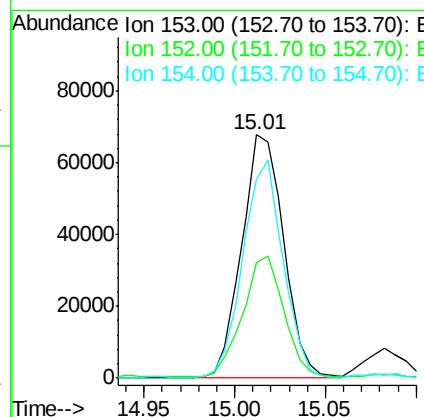
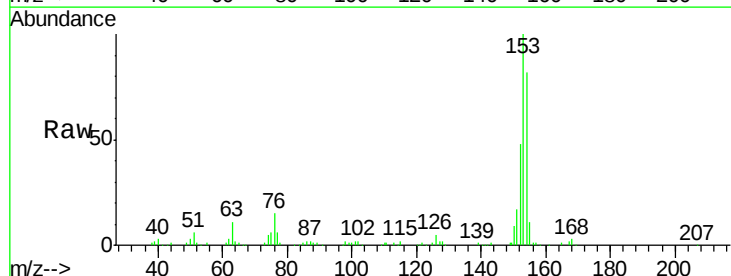
Manual Integrations  
APPROVED

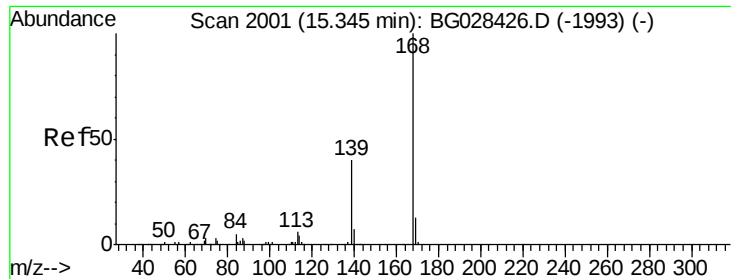
Sohil  
8/23/2017 3:02:30 PM



#49  
Acenaphthene  
Concen: 11.782 ng/ul  
RT: 15.01 min Scan# 1944  
Delta R.T. -0.00 min  
Lab File: BG028431.D  
Acq: 22 Aug 2017 23:57

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 153     | 100   | 109443 |       |       |
| 152     | 47.7  |        | 36.5  | 54.7  |
| 154     | 81.5  |        | 72.3  | 108.5 |





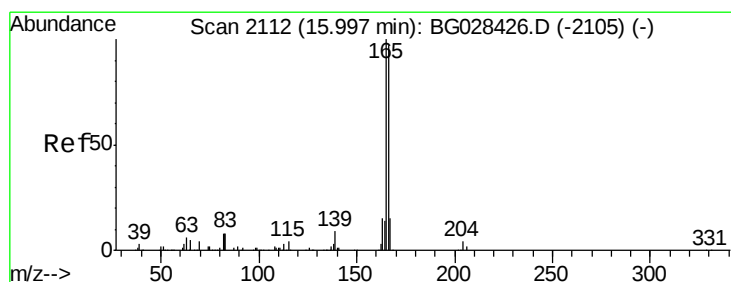
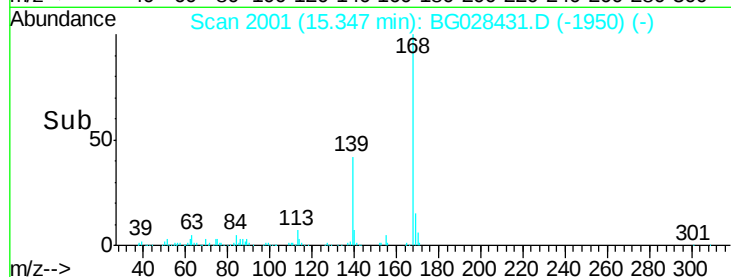
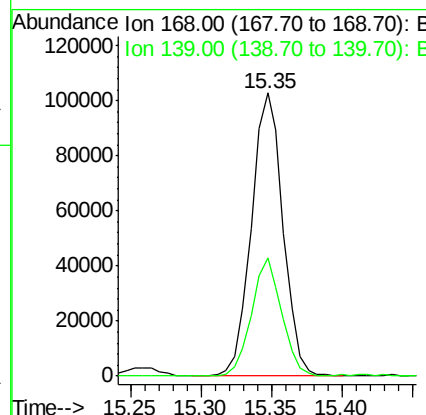
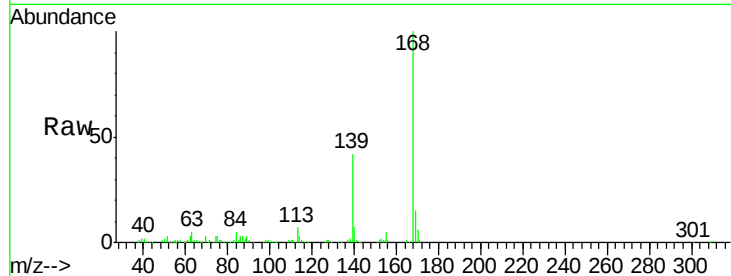
#53  
Dibenzenofuran  
Concen: 11.895 ng/ul  
RT: 15.35 min Scan# 2001  
Delta R.T. 0.00 min  
Lab File: BG028431.D  
Acq: 22 Aug 2017 23:57

Instrument :  
BNA\_G  
ClientSampled :  
B0AB5

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 168     | 100   |       |       |
| 139     | 41.6  | 33.8  | 50.8  |

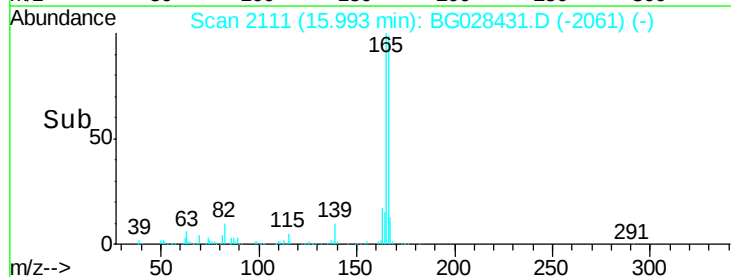
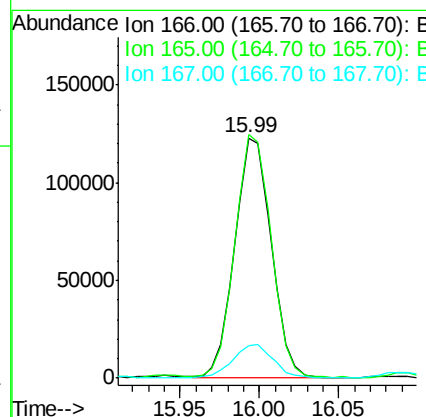
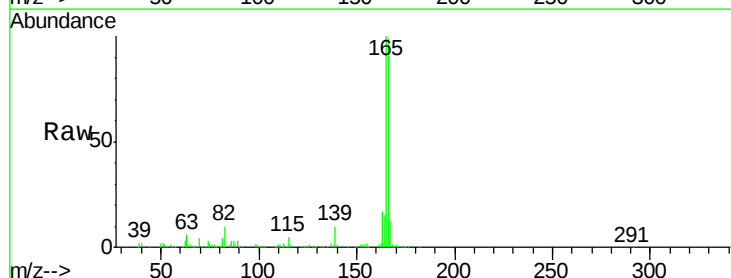
Manual Integrations  
APPROVED

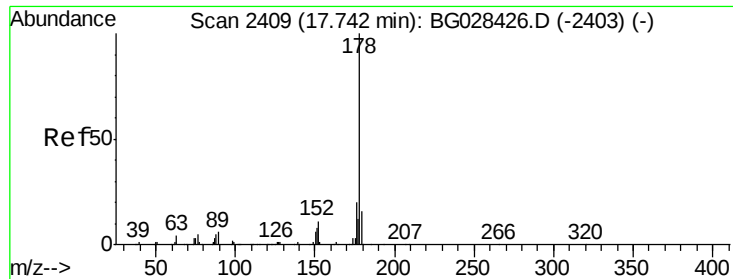
Sohil  
8/23/2017 3:02:30 PM



#58  
Fluorene  
Concen: 16.310 ng/ul  
RT: 15.99 min Scan# 2111  
Delta R.T. -0.00 min  
Lab File: BG028431.D  
Acq: 22 Aug 2017 23:57

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 166     | 100   |       |       |
| 165     | 101.3 | 79.7  | 119.5 |
| 167     | 13.6  | 11.4  | 17.2  |





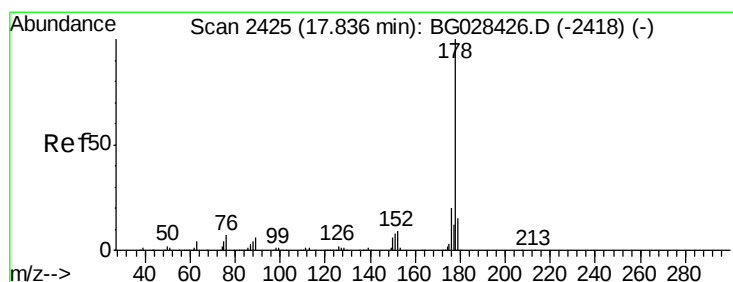
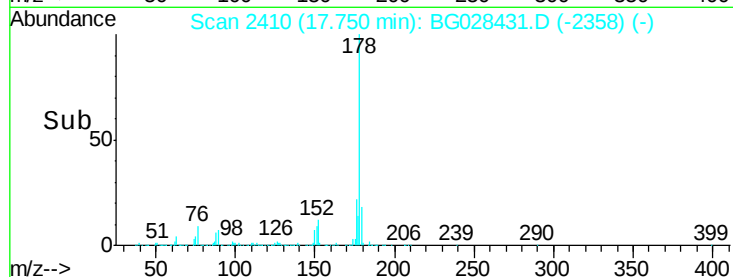
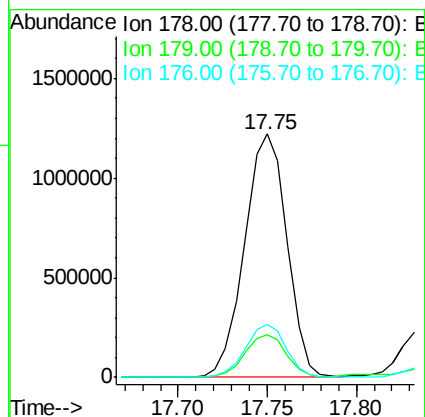
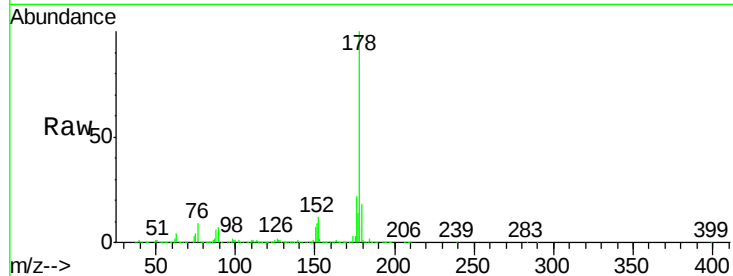
#69  
Phenanthrene  
Concen: 127.269 ng/ul m  
RT: 17.75 min Scan# 2410  
Delta R.T. 0.01 min  
Lab File: BG028431.D  
Acq: 22 Aug 2017 23:57

Instrument :  
BNA\_G  
ClientSampleId :  
B0AB5

Tgt Ion:178 Resp: 2032821  
Ion Ratio Lower Upper  
178 100  
179 17.7 12.4 18.6  
176 21.6 16.5 24.7

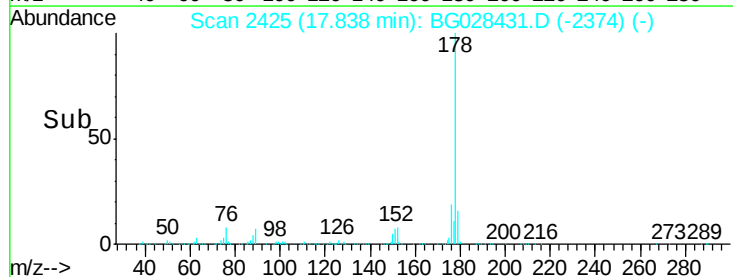
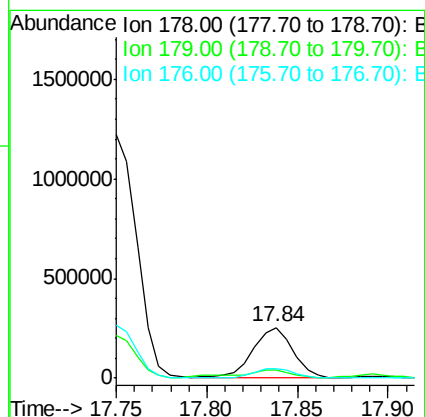
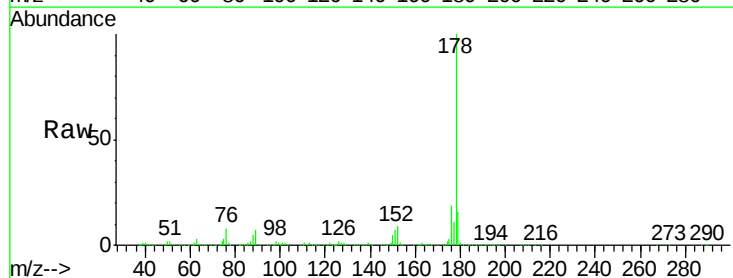
Manual Integrations  
APPROVED

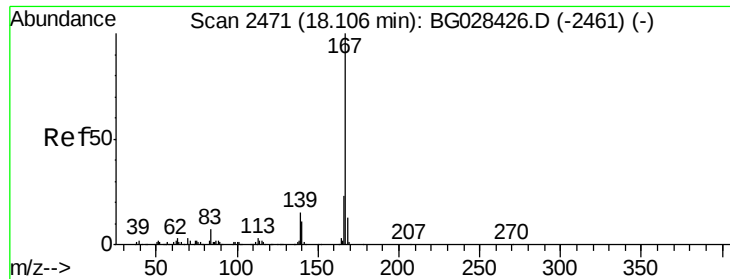
Sohil  
8/23/2017 3:02:30 PM



#71  
Anthracene  
Concen: 24.064 ng/ul  
RT: 17.84 min Scan# 2425  
Delta R.T. 0.00 min  
Lab File: BG028431.D  
Acq: 22 Aug 2017 23:57

Tgt Ion:178 Resp: 392831  
Ion Ratio Lower Upper  
178 100  
179 16.0 12.6 19.0  
176 19.1 15.9 23.9





#72

Carbazole

Concen: 12.536 ng/ul

RT: 18.10 min Scan# 2470

Delta R.T. -0.00 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

Instrument :

BNA\_G

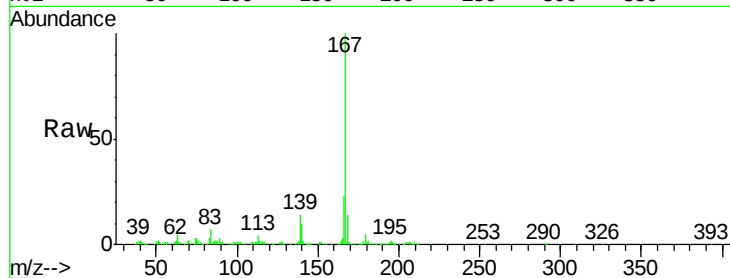
ClientSampled :

B0AB5

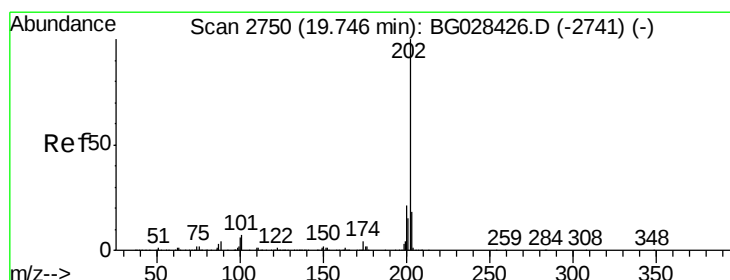
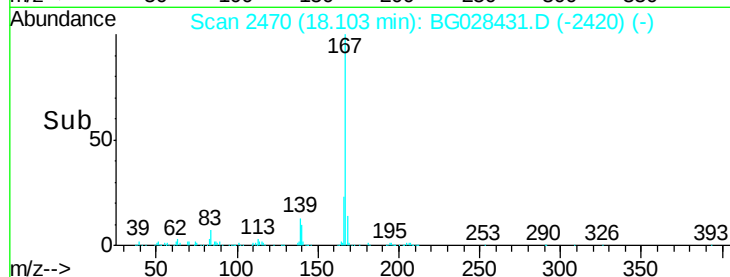
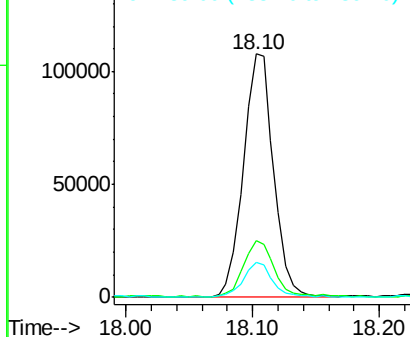
|           |      |       |        |
|-----------|------|-------|--------|
| Tgt Ion:  | 167  | Resp: | 177981 |
| Ion Ratio |      | Lower | Upper  |
| 167       | 100  |       |        |
| 166       | 23.1 | 17.9  | 26.9   |
| 139       | 14.1 | 10.5  | 15.7   |

Manual Integrations  
APPROVED

Sohil  
8/23/2017 3:02:30 PM



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



#74

Fluoranthene

Concen: 114.262 ng/ul

RT: 19.75 min Scan# 2750

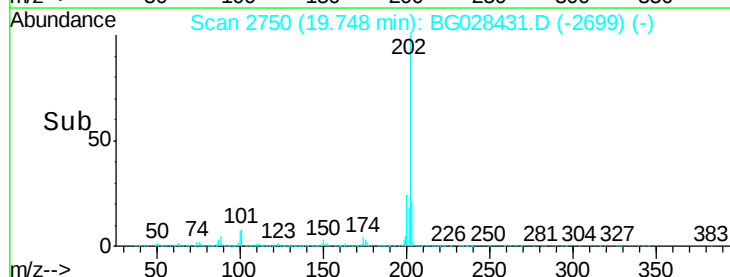
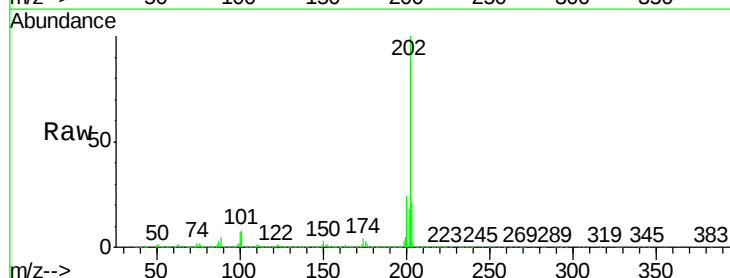
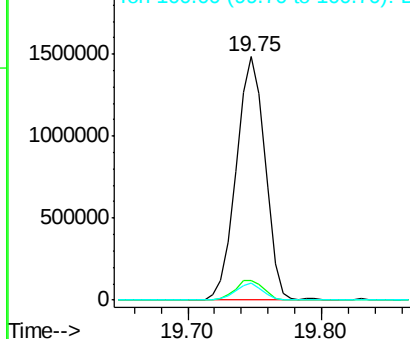
Delta R.T. 0.00 min

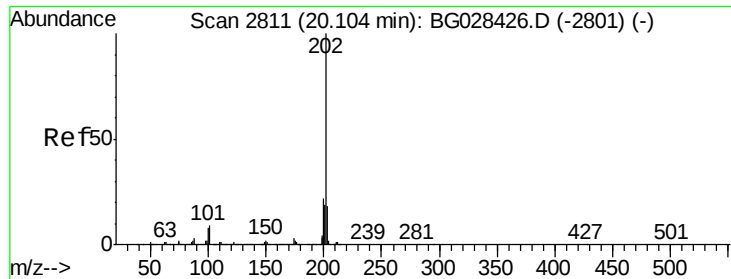
Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

|           |     |       |         |
|-----------|-----|-------|---------|
| Tgt Ion:  | 202 | Resp: | 2218000 |
| Ion Ratio |     | Lower | Upper   |
| 202       | 100 |       |         |
| 101       | 8.3 | 6.2   | 9.2     |
| 100       | 7.1 | 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





#77

Pyrene

Concen: 91.248 ng/ul

RT: 20.11 min Scan# 2812

Delta R.T. 0.01 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

Instrument :

BNA\_G

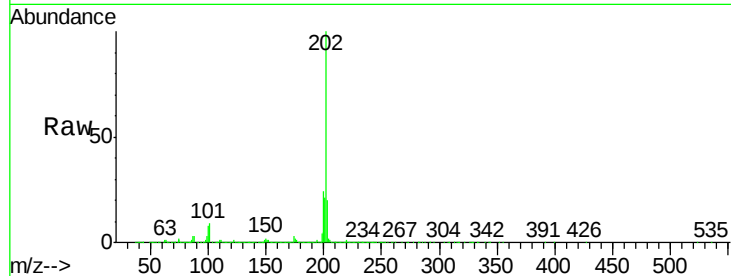
ClientSampleId :

B0AB5

|           |     |       |         |
|-----------|-----|-------|---------|
| Tgt Ion:  | 202 | Resp: | 1940325 |
| Ion Ratio |     | Lower | Upper   |
| 202       | 100 |       |         |
| 101       | 9.2 | 6.9   | 10.3    |
| 100       | 8.2 | 6.6   | 10.0    |

Manual Integrations  
APPROVED

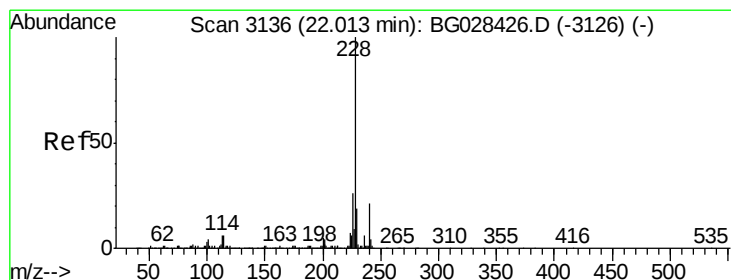
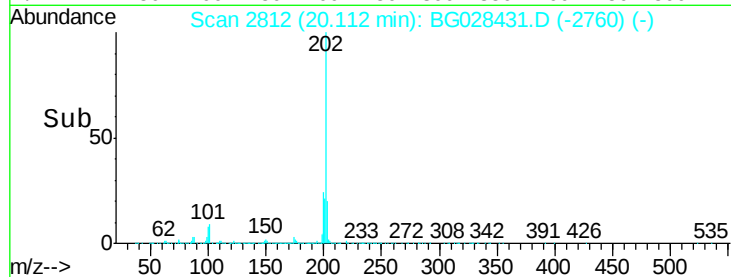
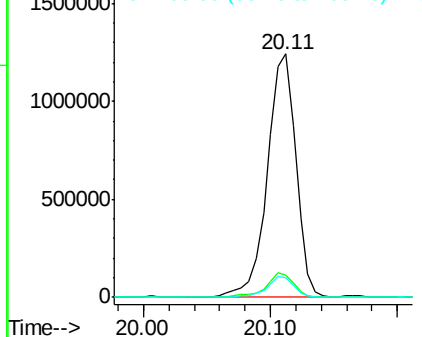
Sohil  
8/23/2017 3:02:30 PM



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

Benzo(a)anthracene

Concen: 47.738 ng/ul

RT: 22.02 min Scan# 3136

Delta R.T. 0.00 min

Lab File: BG028431.D

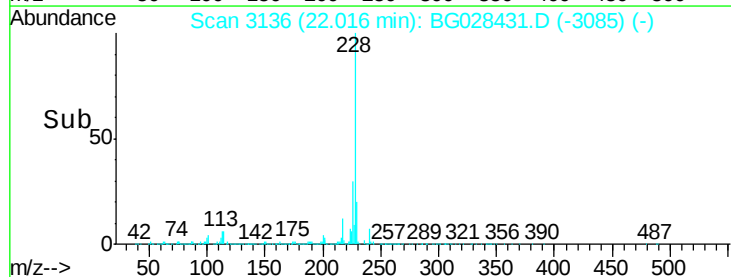
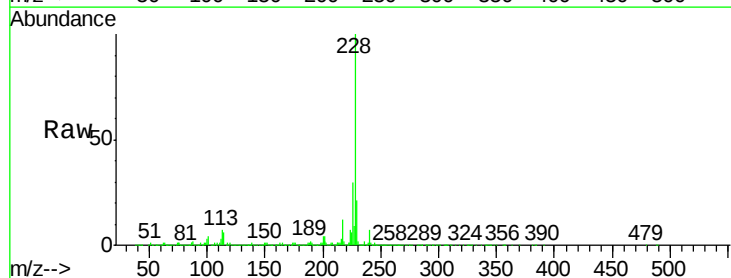
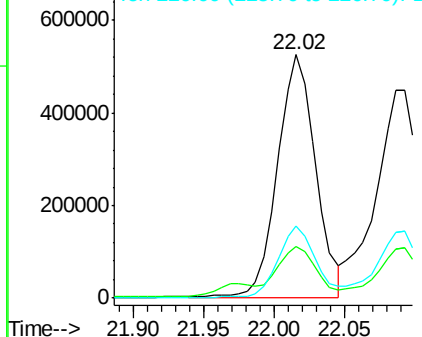
Acq: 22 Aug 2017 23:57

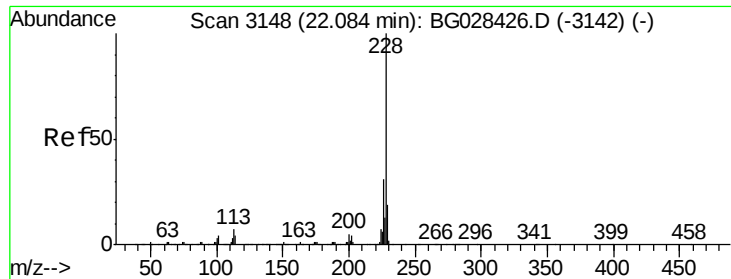
|           |      |       |        |
|-----------|------|-------|--------|
| Tgt Ion:  | 228  | Resp: | 983098 |
| Ion Ratio |      | Lower | Upper  |
| 228       | 100  |       |        |
| 229       | 21.2 | 16.3  | 24.5   |
| 226       | 29.7 | 21.9  | 32.9   |

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





#82

Chrysene

Concen: 50.759 ng/ul

RT: 22.09 min Scan# 3148

Delta R.T. 0.00 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

Instrument :

BNA\_G

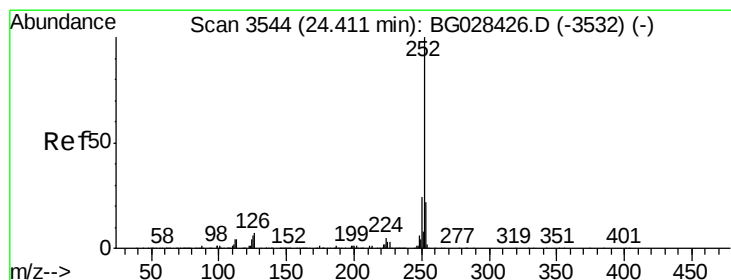
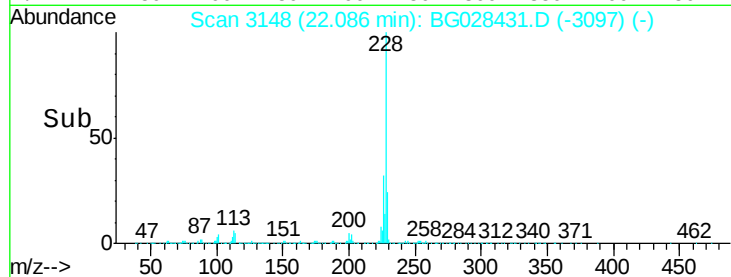
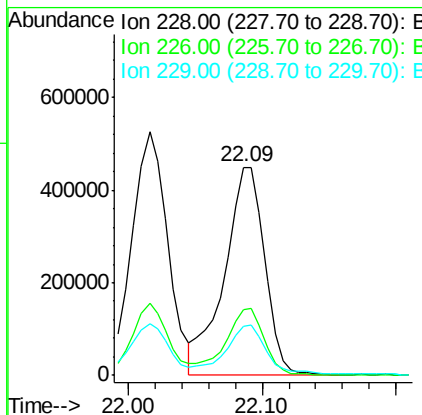
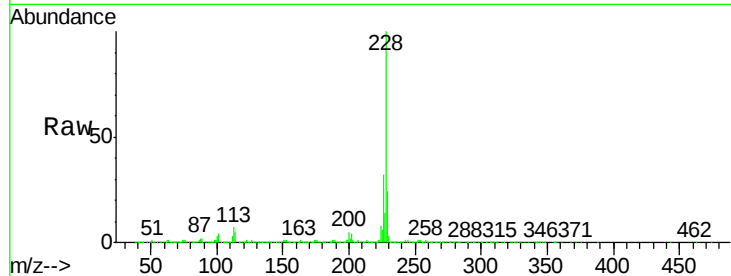
ClientSampleId :

B0AB5

|           |      |       |        |
|-----------|------|-------|--------|
| Tgt Ion:  | 228  | Resp: | 941425 |
| Ion Ratio |      | Lower | Upper  |
| 228       | 100  |       |        |
| 226       | 31.8 | 24.0  | 36.0   |
| 229       | 23.9 | 16.9  | 25.3   |

Manual Integrations  
APPROVED

Sohil  
8/23/2017 3:02:30 PM



#85

Benzo(b)fluoranthene

Concen: 54.442 ng/ul m

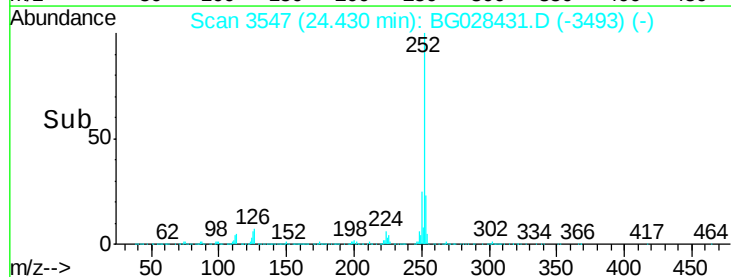
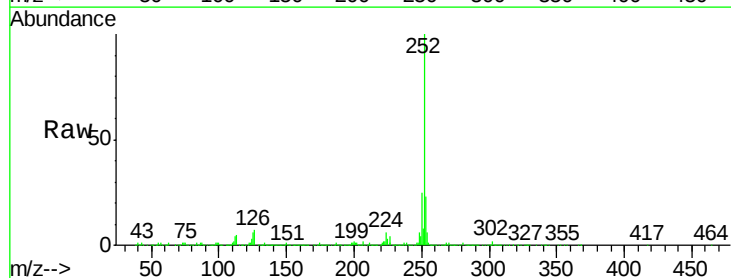
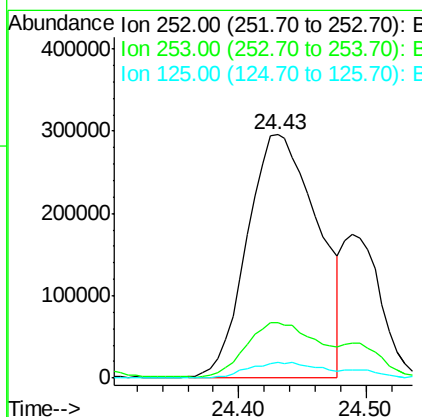
RT: 24.43 min Scan# 3547

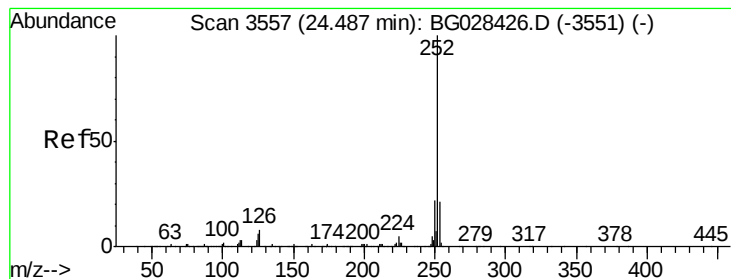
Delta R.T. 0.02 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

|           |      |       |         |
|-----------|------|-------|---------|
| Tgt Ion:  | 252  | Resp: | 1142730 |
| Ion Ratio |      | Lower | Upper   |
| 252       | 100  |       |         |
| 253       | 23.0 | 17.7  | 26.5    |
| 125       | 6.3  | 4.0   | 6.0#    |





#86

Benzo(k)fluoranthene

Concen: 17.225 ng/ul

RT: 24.49 min Scan# 3557

Delta R.T. 0.00 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

Instrument :

BNA\_G

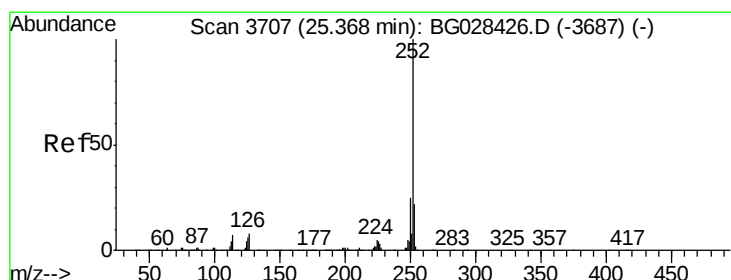
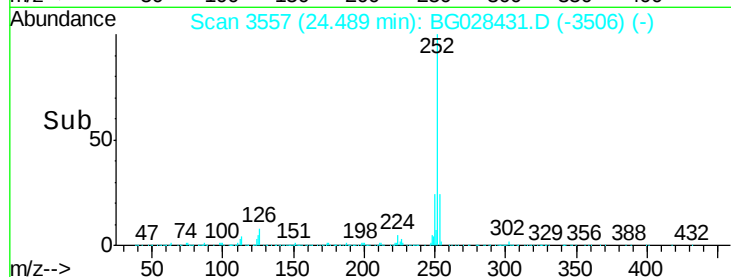
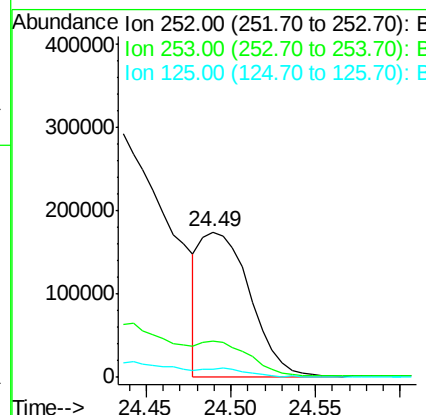
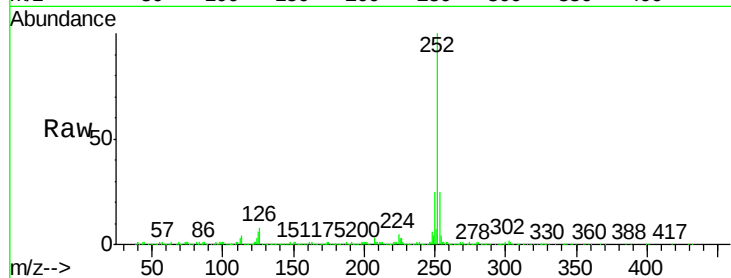
ClientSampled :

B0AB5

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 252   | Resp: | 353152 |
| Ion Ratio | Lower | Upper |        |
| 252       | 100   |       |        |
| 253       | 24.8  | 18.5  | 27.7   |
| 125       | 5.5   | 4.1   | 6.1    |

Manual Integrations  
APPROVED

Sohil  
8/23/2017 3:02:30 PM



#88

Benzo(a)pyrene

Concen: 42.725 ng/ul m

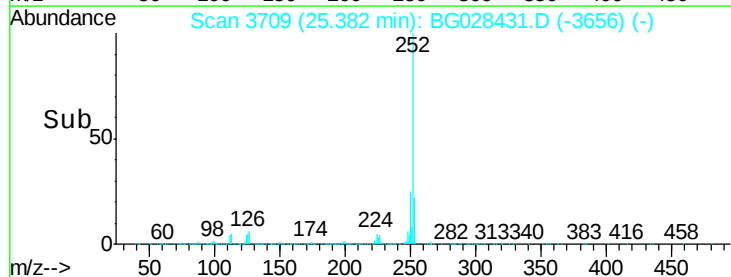
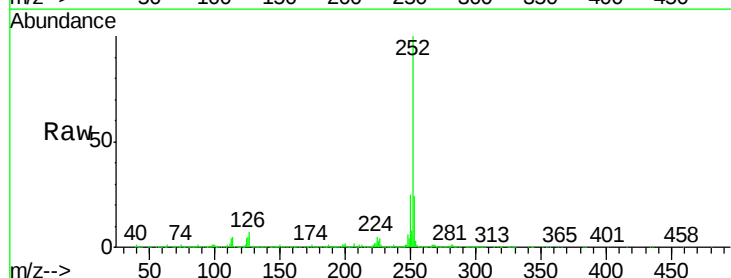
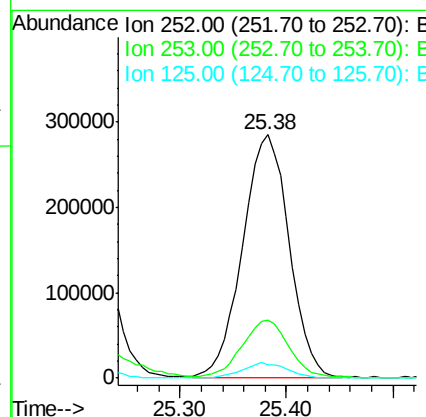
RT: 25.38 min Scan# 3709

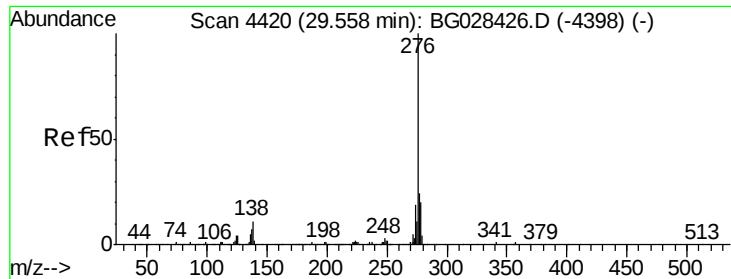
Delta R.T. 0.01 min

Lab File: BG028431.D

Acq: 22 Aug 2017 23:57

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 252   | Resp: | 868297 |
| Ion Ratio | Lower | Upper |        |
| 252       | 100   |       |        |
| 253       | 24.0  | 17.8  | 26.6   |
| 125       | 5.2   | 5.4   | 8.0#   |





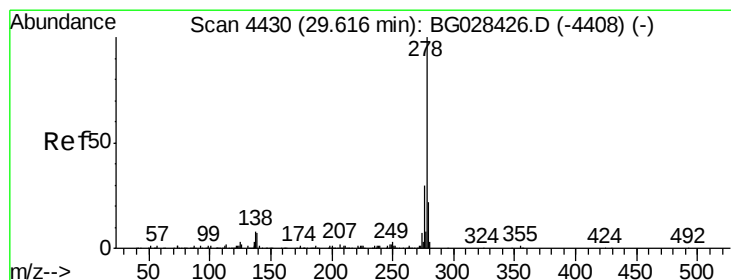
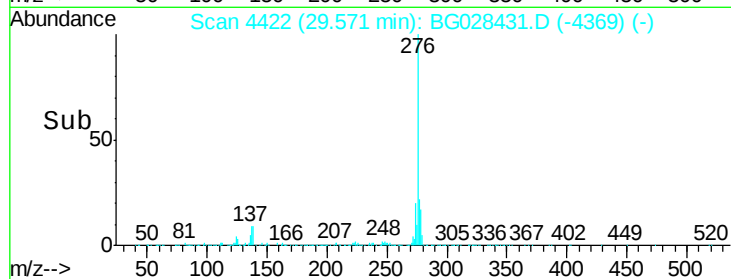
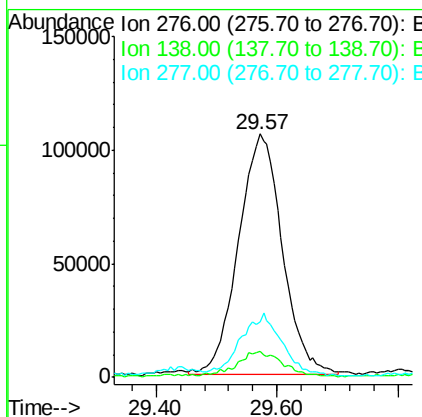
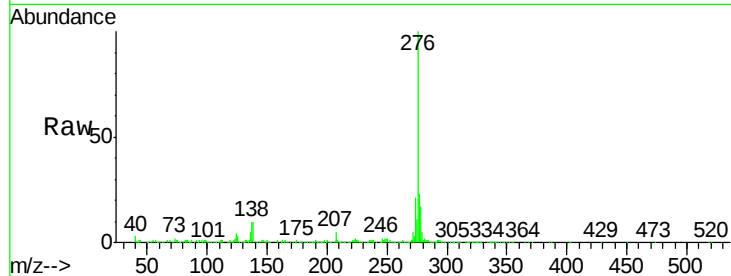
#89  
 Indeno(1,2,3-cd)pyrene  
 Concen: 22.305 ng/ul  
 RT: 29.57 min Scan# 4422  
 Delta R.T. 0.01 min  
 Lab File: BG028431.D  
 Acq: 22 Aug 2017 23:57

Instrument :  
 BNA\_G  
 ClientSampled :  
 B0AB5

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 276     | 100   | 530844 |       |       |
| 138     | 10.4  |        | 8.2   | 12.4  |
| 277     | 22.8  |        | 18.6  | 28.0  |

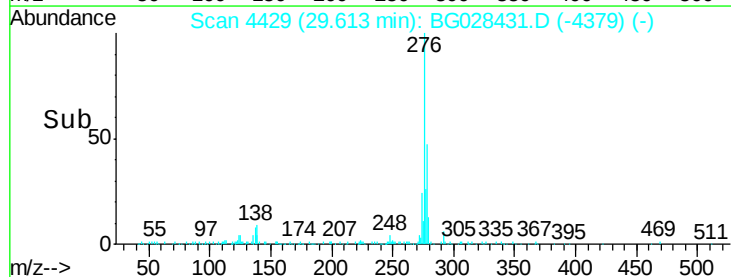
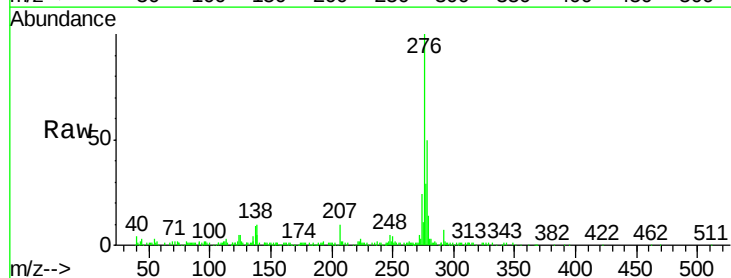
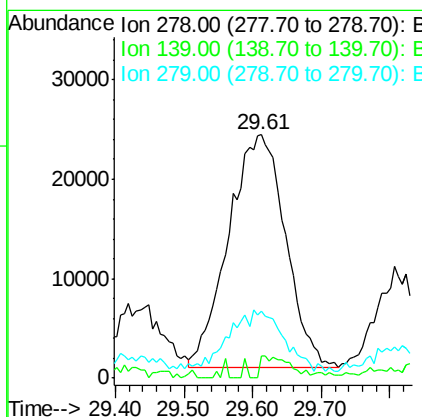
Manual Integrations  
 APPROVED

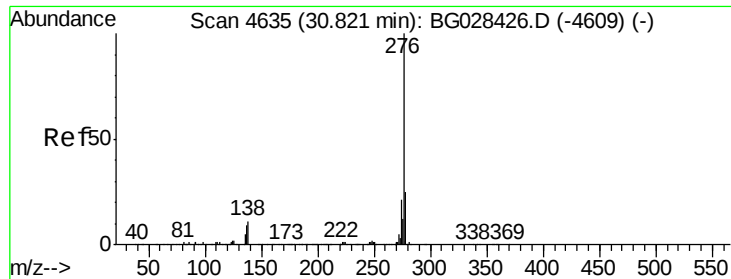
Sohil  
 8/23/2017 3:02:30 PM



#90  
 Dibenzo(a,h)anthracene  
 Concen: 6.735 ng/ul  
 RT: 29.61 min Scan# 4429  
 Delta R.T. -0.00 min  
 Lab File: BG028431.D  
 Acq: 22 Aug 2017 23:57

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 278     | 100   | 134352 |       |       |
| 139     | 9.2   |        | 6.7   | 10.1  |
| 279     | 27.5  |        | 20.9  | 31.3  |





#91  
 Benzo(g,h,i)perylene  
 Concen: 22.588 ng/u1  
 RT: 30.84 min Scan# 4638  
 Delta R.T. 0.02 min  
 Lab File: BG028431.D  
 Acq: 22 Aug 2017 23:57

Instrument :  
 BNA\_G  
 ClientSampleId :  
 B0AB5

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 276   | Resp: | 442255 |
| Ion Ratio | Lower | Upper |        |
| 276       | 100   |       |        |
| 138       | 9.2   | 8.6   | 12.8   |
| 277       | 25.6  | 17.6  | 26.4   |

Manual Integrations  
 APPROVED

Sohil  
 8/23/2017 3:02:30 PM

