

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

Instrument :  
 BNA\_M  
 ClientSampleId :  
 C02G3

Manual Integrations  
 APPROVED

MMDadoda  
 8/6/2015 4:14:10 PM

Quant Time: Aug 12 11:10:00 2015  
 Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM072715.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Tue Aug 04 02:31:26 2015  
 Response via : Initial Calibration

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

## System Monitoring Compounds

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

## Target Compounds

|                                |       |     |         |              | Ovalue |
|--------------------------------|-------|-----|---------|--------------|--------|
| 28) Naphthalene                | 10.36 | 128 | 19237   | 1.41 ng/ul#  | 96     |
| 34) 2-Methylnaphthalene        | 11.99 | 142 | 10961   | 1.11 ng/ul   | 94     |
| 45) Dimethylphthalate          | 13.66 | 163 | 101597  | 7.46 ng/ul   | 99     |
| 48) Acenaphthylene             | 13.92 | 152 | 17677   | 1.01 ng/ul   | 97     |
| 50) Acenaphthene               | 14.26 | 153 | 16040   | 1.39 ng/ul   | 96     |
| 54) Dibenzofuran               | 14.60 | 168 | 19297   | 1.17 ng/ul   | 99     |
| 59) Fluorene                   | 15.26 | 166 | 23579   | 1.73 ng/ul   | 94     |
| 70) Phenanthrene               | 17.00 | 178 | 466648  | 19.98 ng/ul  | 100    |
| 72) Anthracene                 | 17.09 | 178 | 74072   | 3.10 ng/ul   | 98     |
| 75) Carbazole                  | 17.37 | 167 | 40158   | 1.97 ng/ul   | 96     |
| 76) Di-n-butylphthalate        | 17.92 | 149 | 25848   | 1.06 ng/ul   | 97     |
| 77) Fluoranthene               | 19.03 | 202 | 762712  | 28.28 ng/ul  | 99     |
| 80) Pyrene                     | 19.39 | 202 | 722290  | 23.57 ng/ul  | 99     |
| 83) Benzo(a)anthracene         | 21.15 | 228 | 325817  | 10.44 ng/ul  | 97     |
| 84) Bis(2-ethylhexyl)phthalate | 21.07 | 149 | 92189   | 5.15 ng/ul   | 99     |
| 85) Chrysene                   | 21.20 | 228 | 356873  | 12.22 ng/ul  | 97     |
| 88) Benzo(b)fluoranthene       | 22.70 | 252 | 397729  | 15.10 ng/ul# | 94     |
| 89) Benzo(k)fluoranthene       | 22.74 | 252 | 126962m | 5.00 ng/ul   |        |
| 91) Benzo(a)pyrene             | 23.26 | 252 | 254585  | 10.01 ng/ul  | 97     |
| 92) Indeno(1,2,3-cd)pyrene     | 25.54 | 276 | 164787  | 5.62 ng/ul#  | 94     |
| 93) Dibenzo(a,h)anthracene     | 25.54 | 278 | 43928   | 1.75 ng/ul#  | 87     |
| 94) Benzo(a,h,i)perylene       | 26.21 | 276 | 153606  | 6.25 ng/ul   | 96     |

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

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

Manual Integrations  
APPROVED

MMDadoda  
8/6/2015 4:14:10 PM

Quant Time: Aug 12 11:10:00 2015  
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM072715.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Tue Aug 04 02:31:26 2015  
Response via : Initial Calibration

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

-----

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

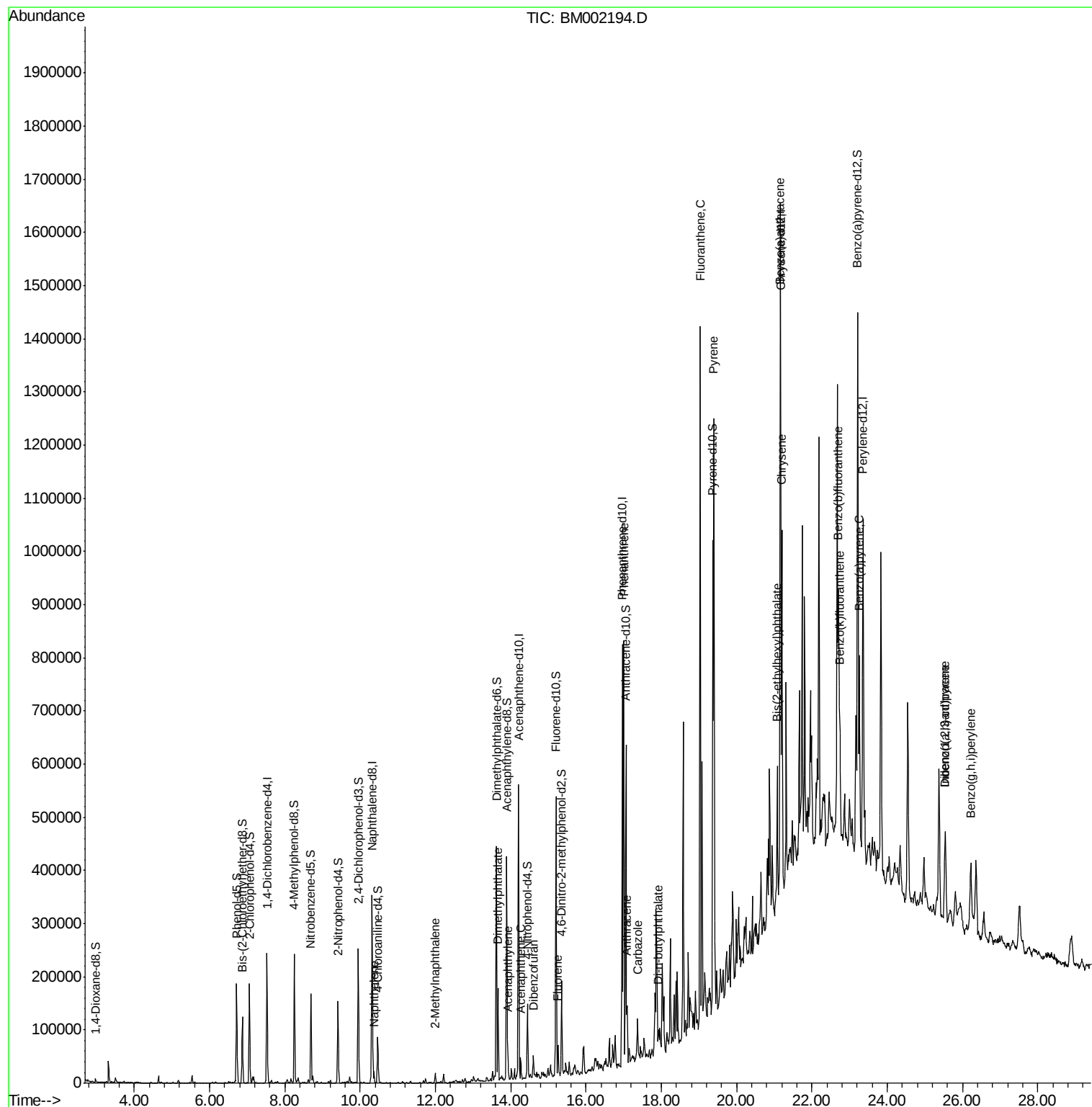
Data Path : Z:\HPCHEM1\BNA M\DATA\BM080315\  
Data File : BM002194.D  
Acq On : 03 Aug 2015 13:03  
Operator : TP/UM  
Sample : G3073-18  
Misc :  
ALS Vial : 13 Sample Multiplier: 1

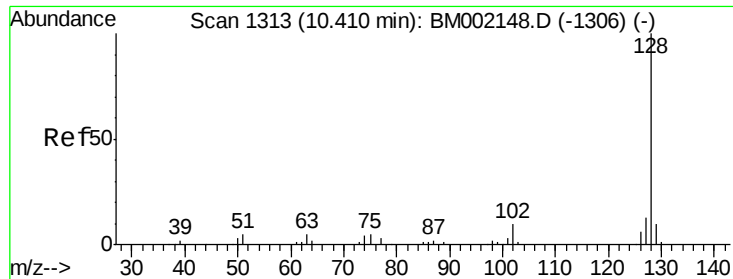
Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

Quant Time: Aug 12 11:10:00 2015  
Quant Method : Z:\HPCHEM1\BNA M\METHODS\SOM02.2-EPA-BM072715.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Tue Aug 04 02:31:26 2015  
Response via : Initial Calibration

Manual Integrations  
APPROVED

MMDadoda  
8/6/2015 4:14:10 PM





#28

Naphthalene

Concen: 1.41 ng/ul

RT: 10.36 min Scan# 1305

Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

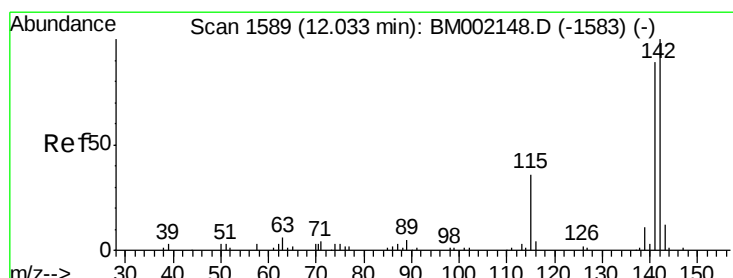
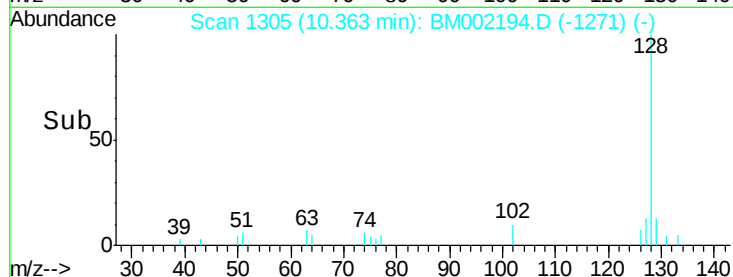
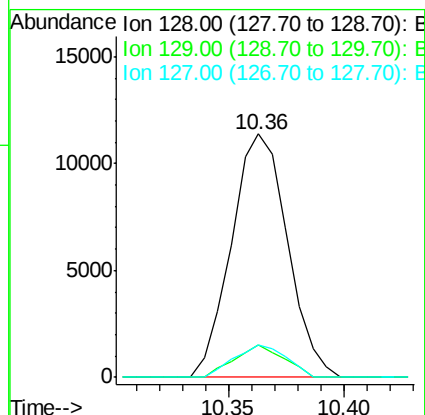
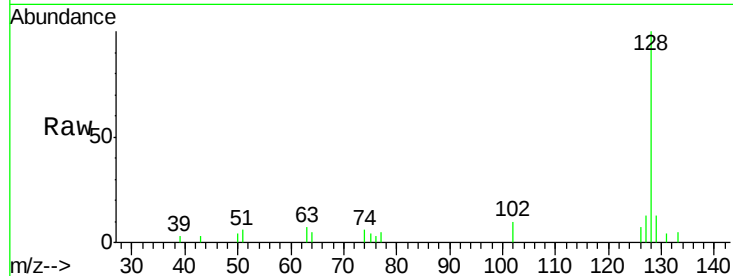
ClientSampleId :

C02G3

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 129     | 13.5  | 9.0   | 13.4# |
| 127     | 13.5  | 10.2  | 15.4  |

Manual Integrations  
APPROVED

MMDadoda  
8/6/2015 4:14:10 PM



#34

2-Methylnaphthalene

Concen: 1.11 ng/ul

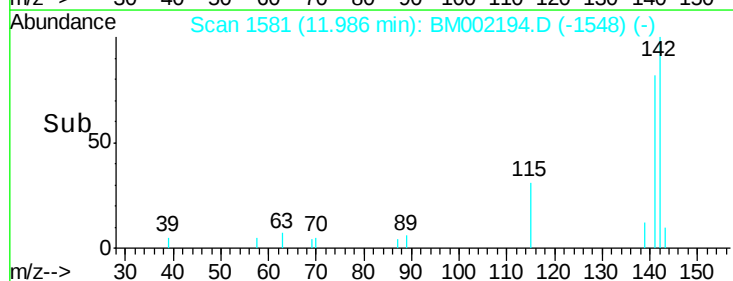
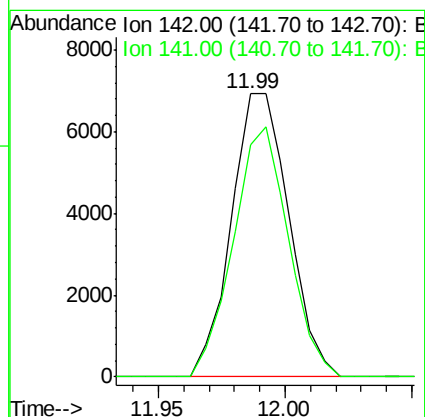
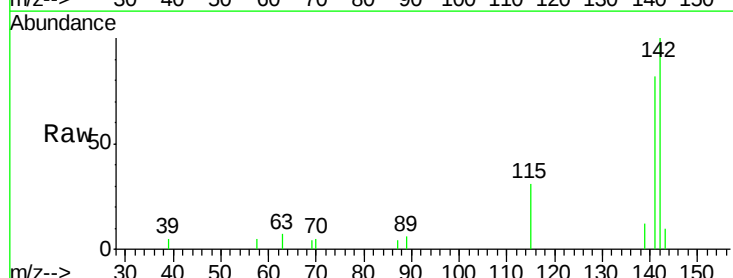
RT: 11.99 min Scan# 1581

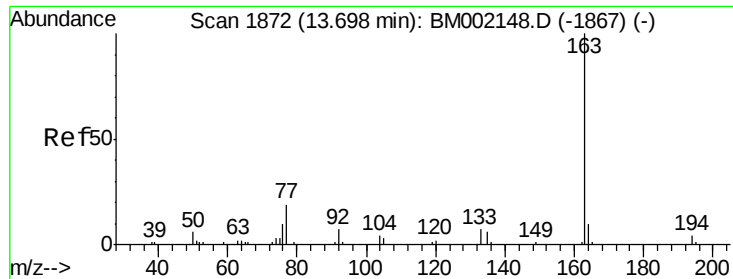
Delta R.T. -0.01 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 82.0  | 69.8  | 104.6 |





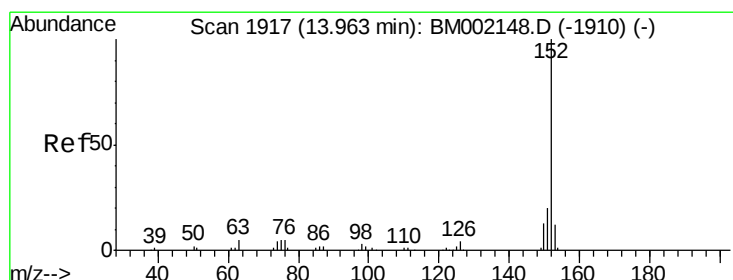
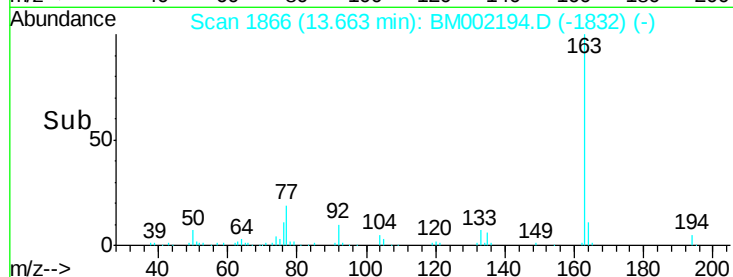
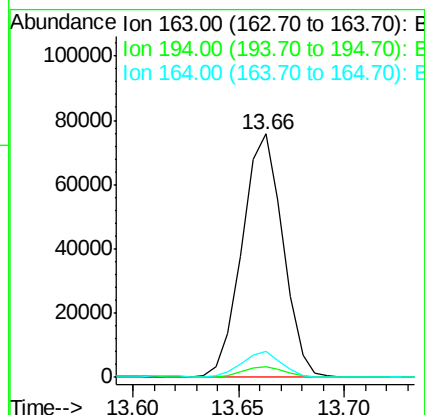
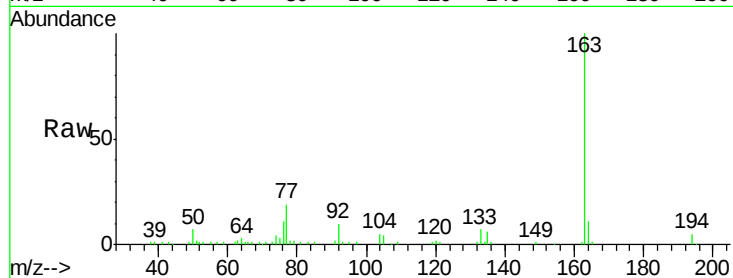
#45  
Dimethylphthalate  
Concen: 7.46 ng/ul  
RT: 13.66 min Scan# 1866  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 163     | 100   | 101597 |       |       |
| 194     | 4.5   | 3.5    | 5.3   |       |
| 164     | 10.7  | 8.0    | 12.0  |       |

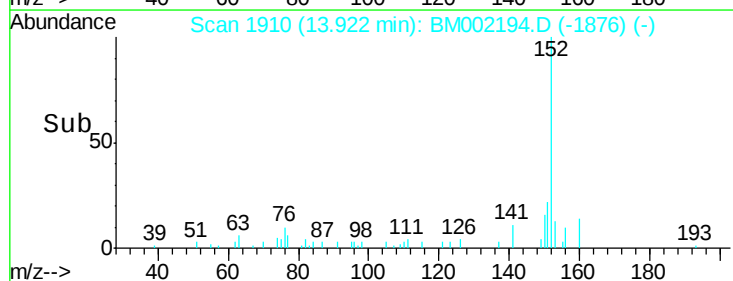
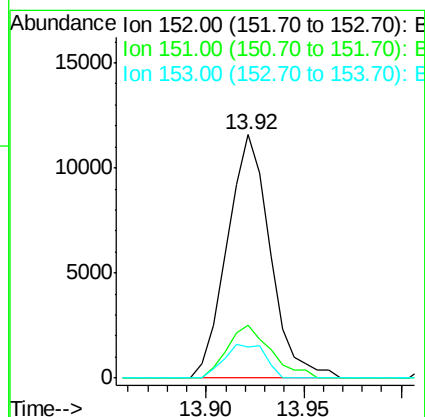
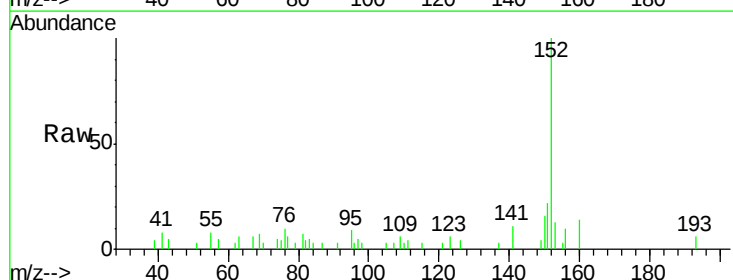
Manual Integrations  
APPROVED

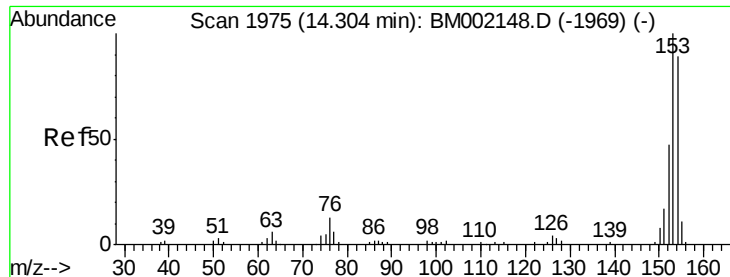
MMDadoda  
8/6/2015 4:14:10 PM



#48  
Acenaphthylene  
Concen: 1.01 ng/ul  
RT: 13.92 min Scan# 1910  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 152     | 100   | 17677 |       |       |
| 151     | 21.6  | 15.6  | 23.4  |       |
| 153     | 13.0  | 10.3  | 15.5  |       |





#50

Acenaphthene

Concen: 1.39 ng/ul

RT: 14.26 min Scan# 1968

Delta R.T. -0.01 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

ClientSampleId :

C02G3

Tot Ion:153 Resp: 16040

Ion Ratio Lower Upper

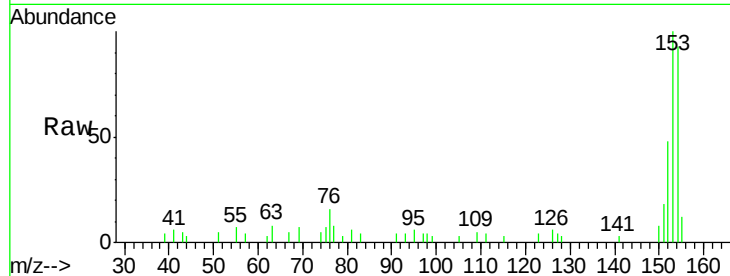
153 100

152 48.4 37.3 55.9

154 93.0 71.4 107.2

Manual Integrations  
APPROVED

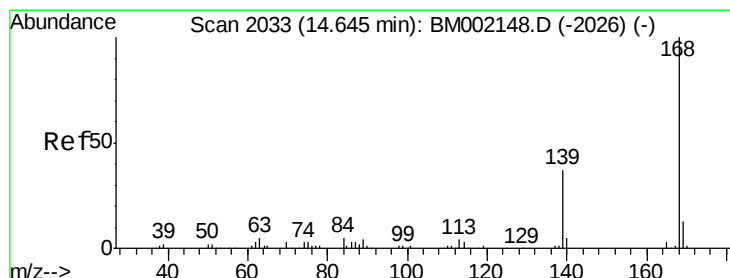
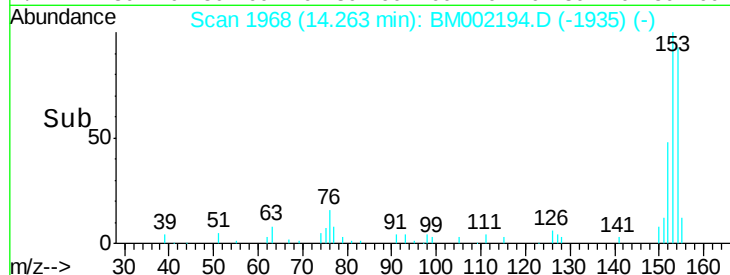
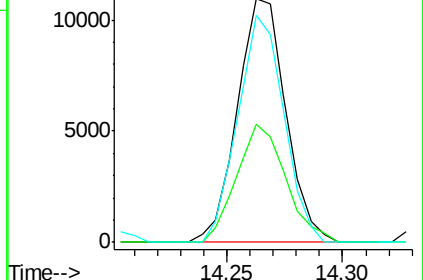
MMDadoda  
8/6/2015 4:14:10 PM



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

Dibenzofuran

Concen: 1.17 ng/ul

RT: 14.60 min Scan# 2026

Delta R.T. -0.00 min

Lab File: BM002194.D

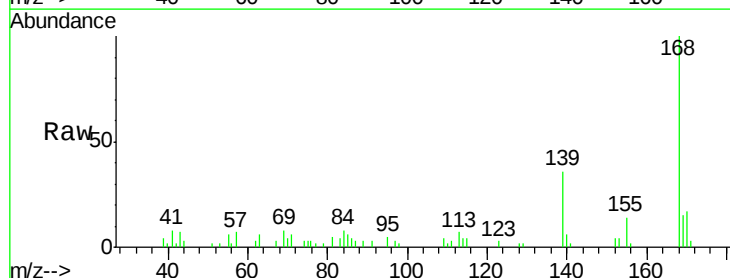
Acq: 03 Aug 2015 13:03

Tgt Ion:168 Resp: 19297

Ion Ratio Lower Upper

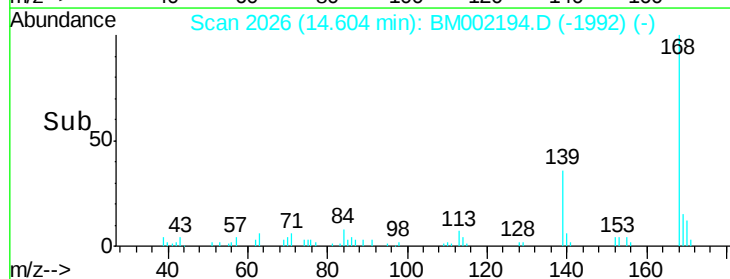
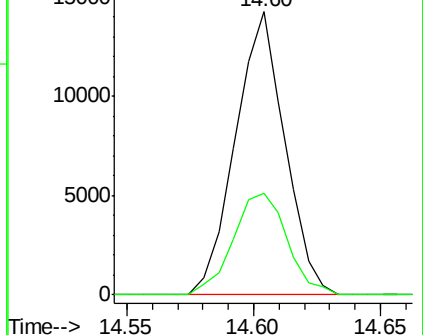
168 100

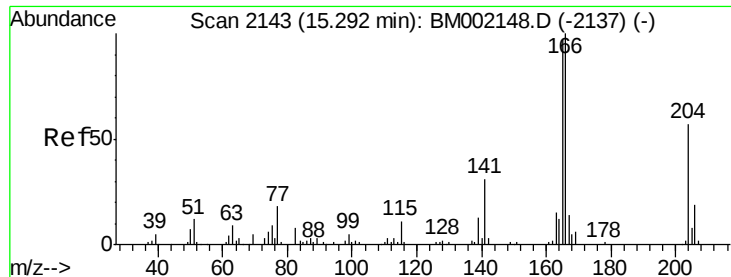
139 35.7 28.2 42.2



Abundance Ion 168.00 (167.70 to 168.70): E

Ion 139.00 (138.70 to 139.70): E





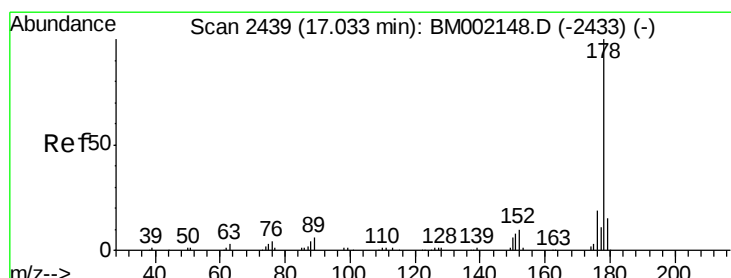
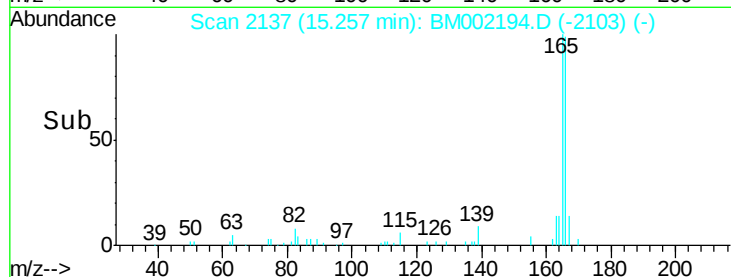
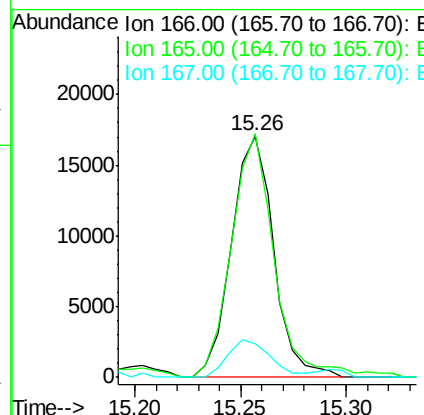
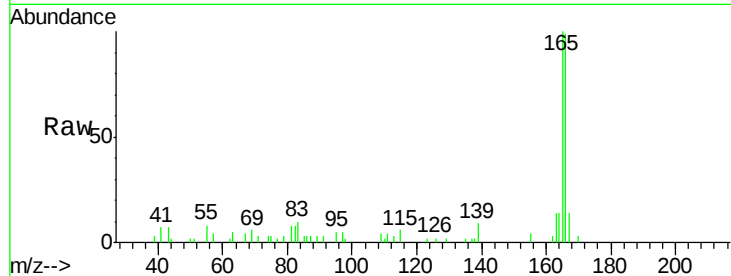
#59  
**Fluorene**  
 Concen: 1.73 ng/ul  
 RT: 15.26 min Scan# 2137  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

Instrument :  
 BNA\_M  
 ClientSampleId :  
 C02G3

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 166     | 100   |       |       |
| 165     | 101.0 | 75.6  | 113.4 |
| 167     | 14.0  | 10.5  | 15.7  |

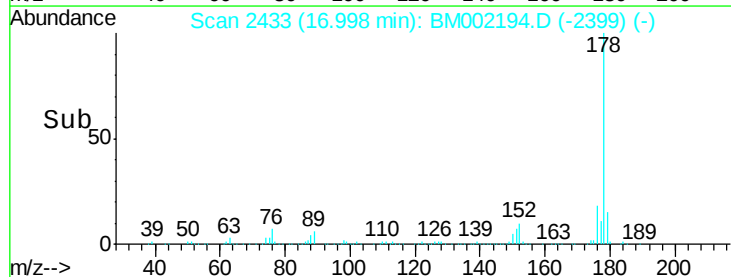
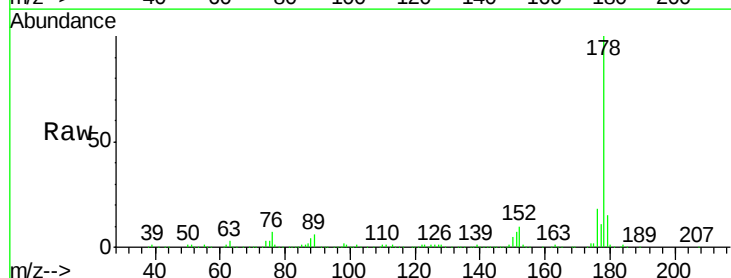
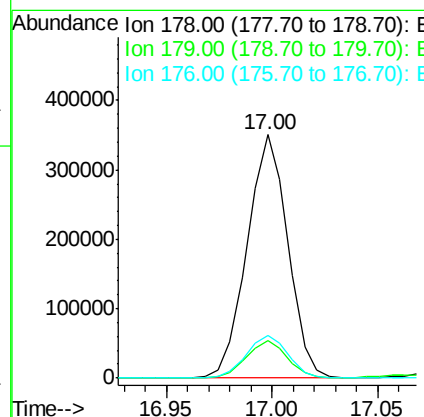
Manual Integrations  
 APPROVED

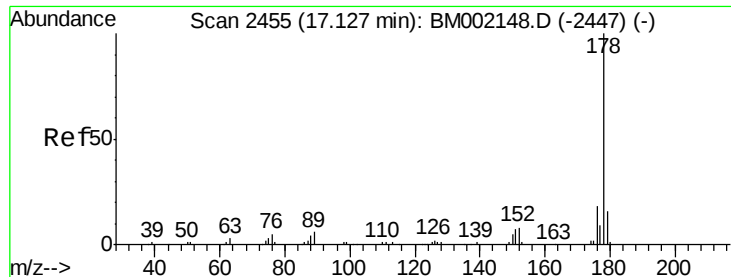
MMDadoda  
 8/6/2015 4:14:10 PM



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

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 179     | 15.4  | 12.5  | 18.7  |
| 176     | 17.7  | 14.2  | 21.4  |





#72

Anthracene

Concen: 3.10 ng/ul

RT: 17.09 min Scan# 2448

Delta R.T. -0.01 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

Instrument :

BNA\_M

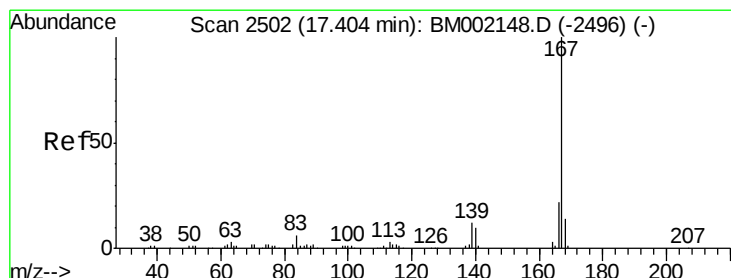
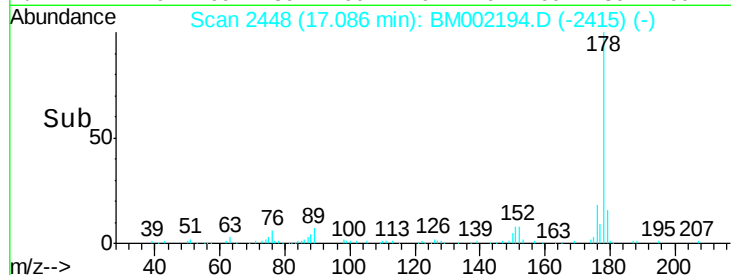
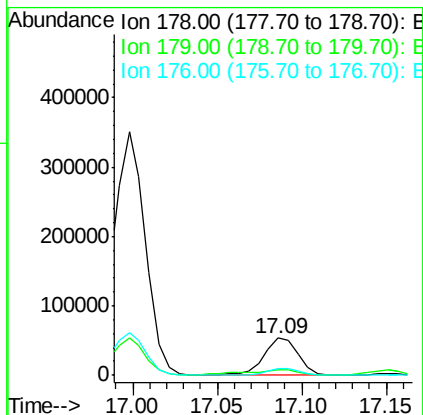
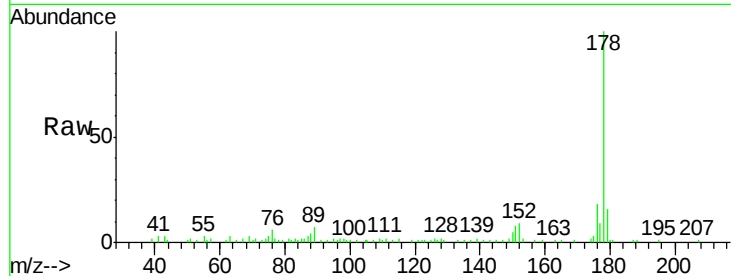
ClientSampleId :

C02G3

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

Manual Integrations  
APPROVED

MMDadoda  
8/6/2015 4:14:10 PM



#75

Carbazole

Concen: 1.97 ng/ul

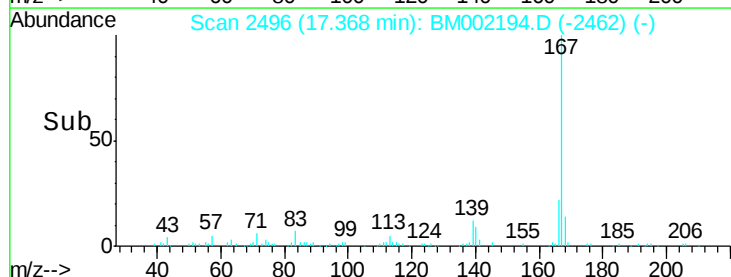
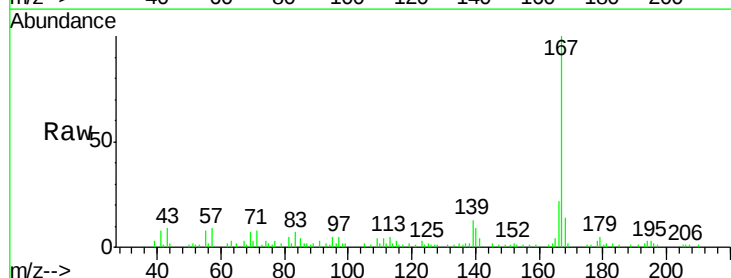
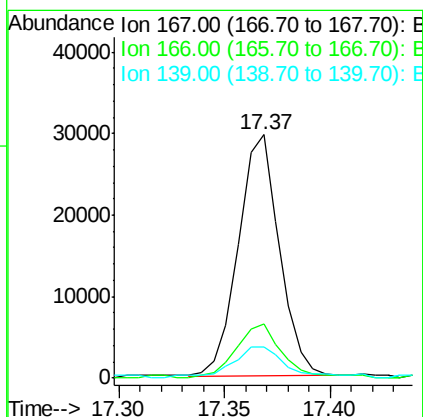
RT: 17.37 min Scan# 2496

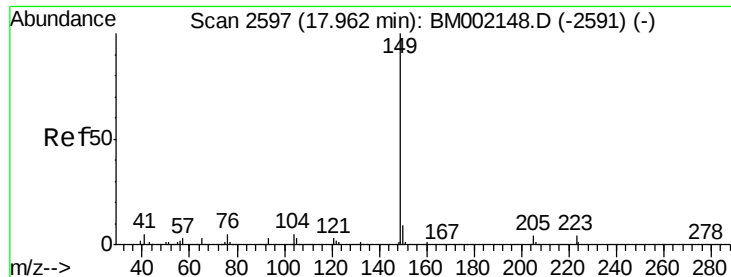
Delta R.T. -0.00 min

Lab File: BM002194.D

Acq: 03 Aug 2015 13:03

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 167   | Resp: | 40158 |
| Ion Ratio | Lower | Upper |       |
| 167       | 100   |       |       |
| 166       | 22.5  | 16.2  | 24.4  |
| 139       | 12.7  | 9.6   | 14.4  |





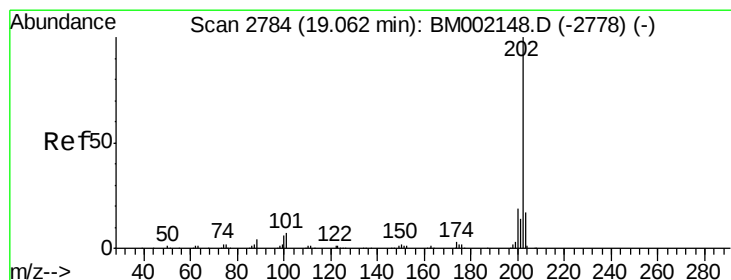
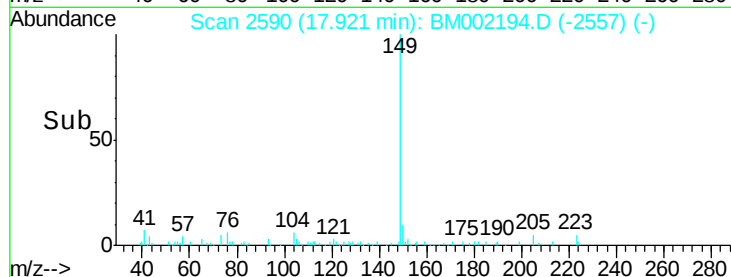
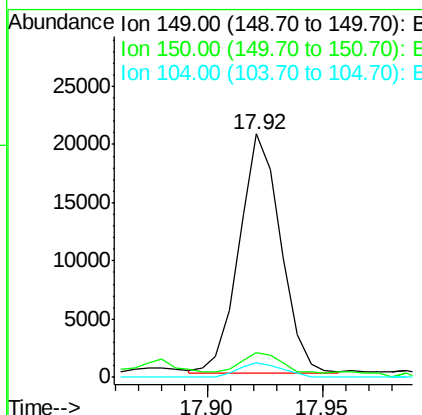
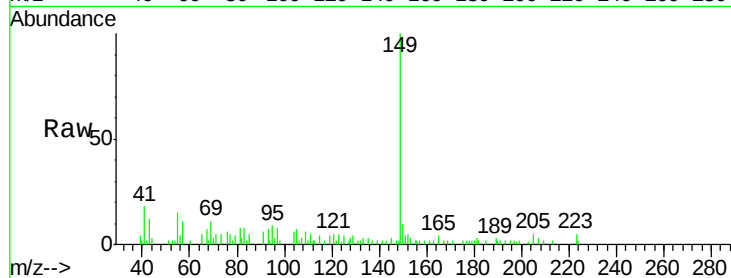
#76  
Di-n-butylphthalate  
Concen: 1.06 ng/ul  
RT: 17.92 min Scan# 2590  
Delta R.T. -0.01 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 149     | 100   |       |       |
| 150     | 10.0  | 7.0   | 10.4  |
| 104     | 5.8   | 4.2   | 6.2   |

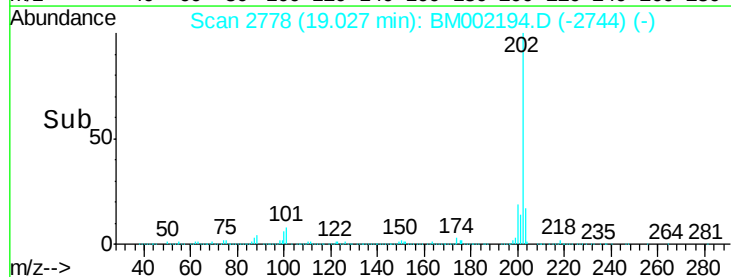
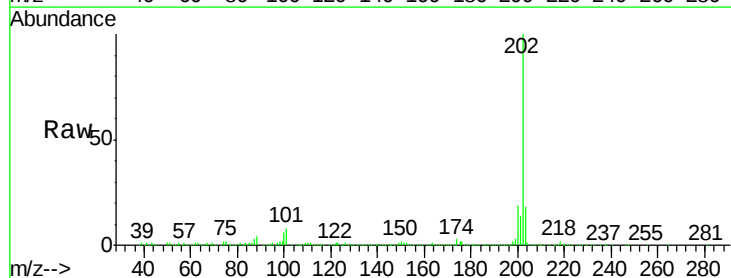
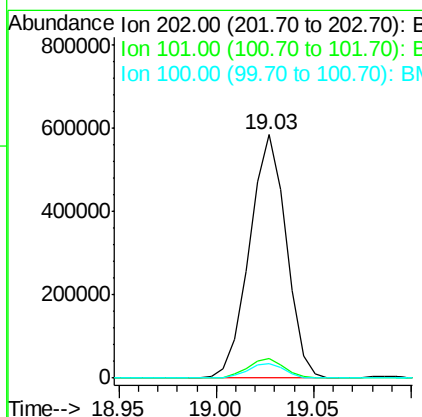
Manual Integrations  
APPROVED

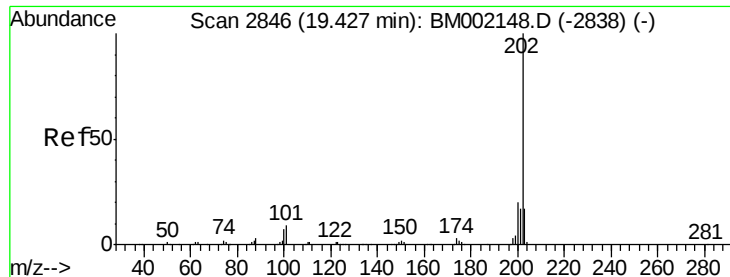
MMDadoda  
8/6/2015 4:14:10 PM



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

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





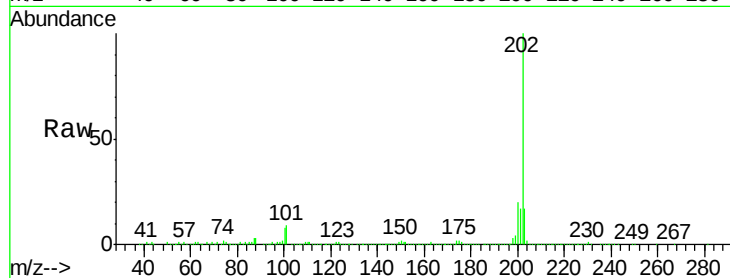
#80  
Pvrene  
Concen: 23.57 ng/ul  
RT: 19.39 min Scan# 2840  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

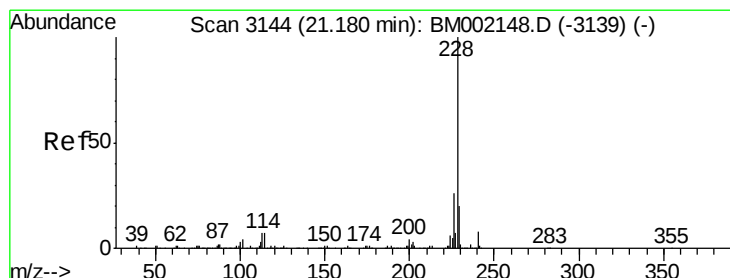
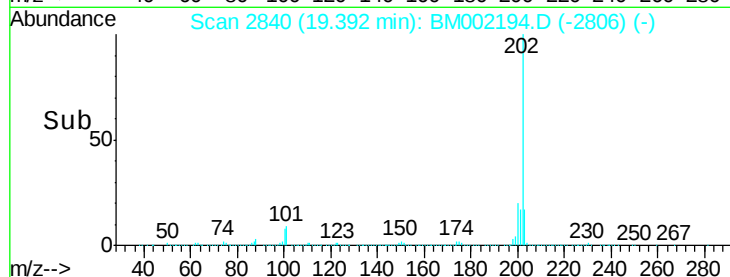
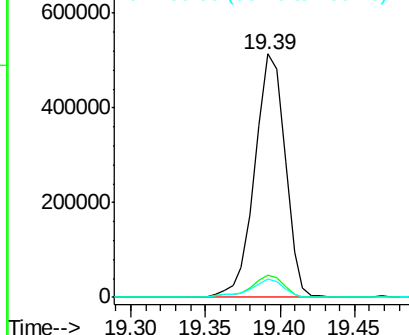
| Tot Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 202     | 100   |            |       |
| 101     | 8.9   | 7.4        | 11.2  |
| 100     | 7.6   | 6.3        | 9.5   |

Manual Integrations  
APPROVED

MMDadoda  
8/6/2015 4:14:10 PM



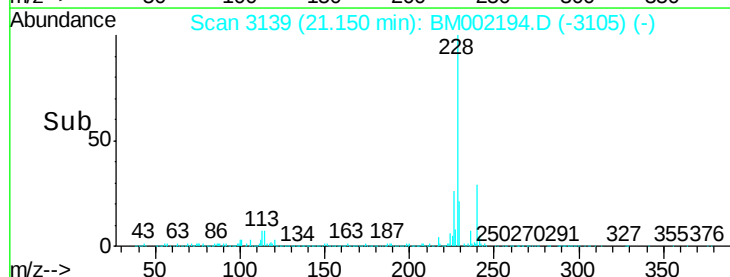
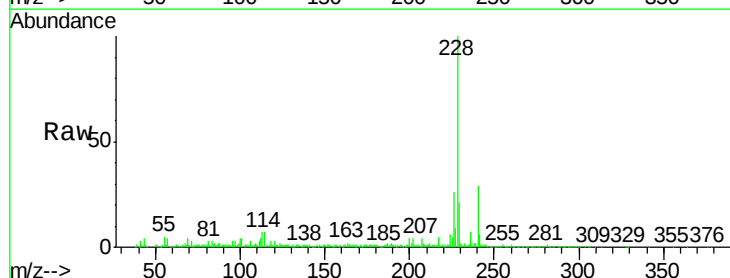
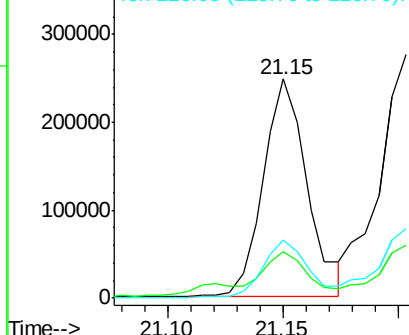
Abundance Ion 202.00 (201.70 to 202.70): E  
Ion 101.00 (100.70 to 101.70): E  
Ion 100.00 (99.70 to 100.70): B

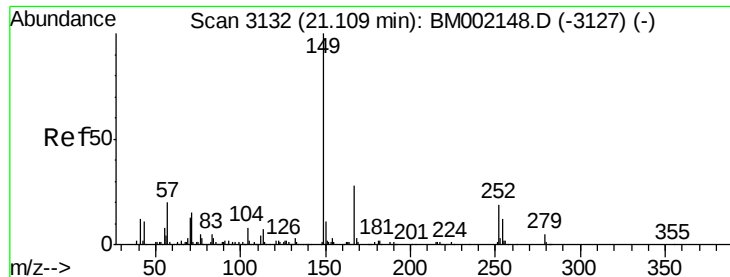


#83  
Benzo(a)anthracene  
Concen: 10.44 ng/ul  
RT: 21.15 min Scan# 3139  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

| Tgt Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 228     | 100   |            |       |
| 229     | 21.5  | 15.4       | 23.2  |
| 226     | 26.4  | 20.5       | 30.7  |

Abundance Ion 228.00 (227.70 to 228.70): E  
Ion 229.00 (228.70 to 229.70): E  
Ion 226.00 (225.70 to 226.70): E





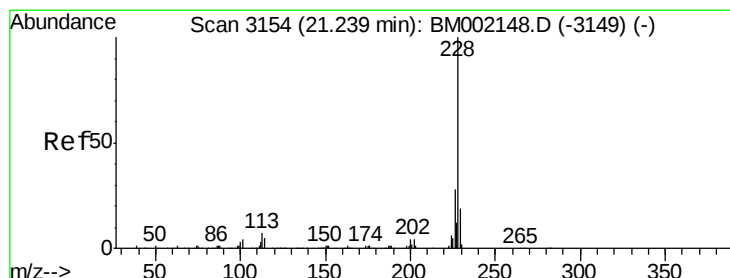
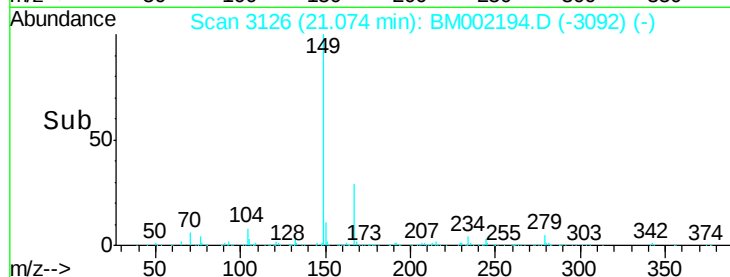
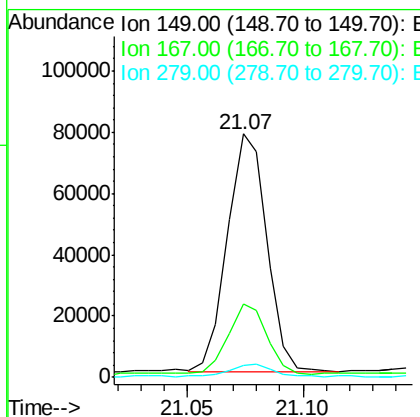
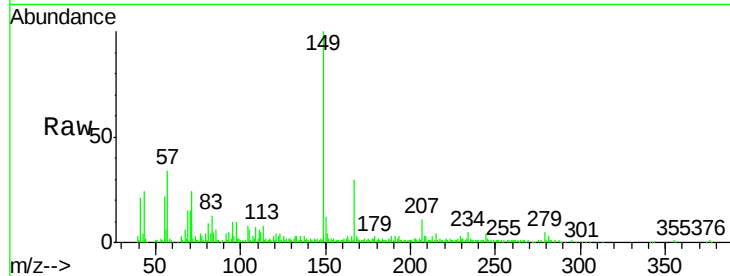
#84  
 Bis(2-ethylhexyl)phthalate  
 Concen: 5.15 ng/ul  
 RT: 21.07 min Scan# 3126  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

Instrument :  
 BNA\_M  
 ClientSampled :  
 C02G3

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 149   | Resp: | 92189 |
| Ion Ratio | Lower | Upper |       |
| 149       | 100   |       |       |
| 167       | 30.3  | 23.6  | 35.4  |
| 279       | 4.8   | 4.2   | 6.4   |

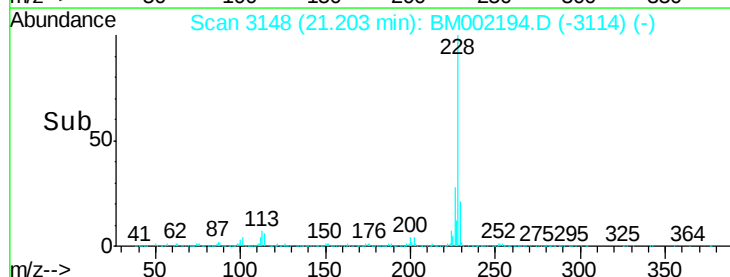
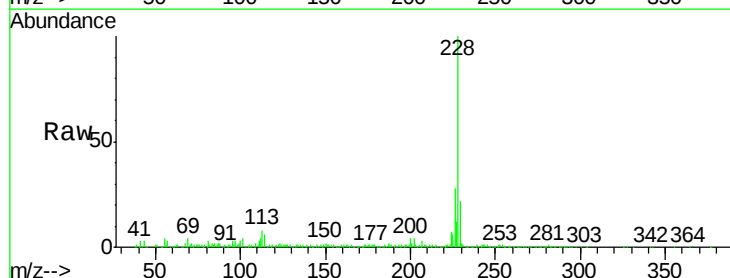
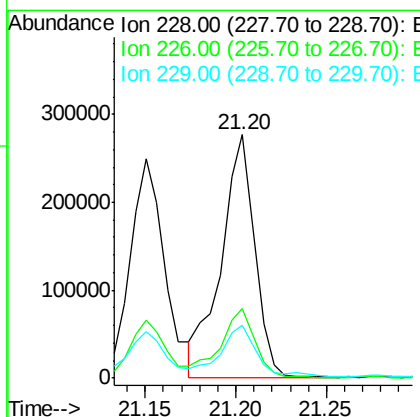
Manual Integrations  
 APPROVED

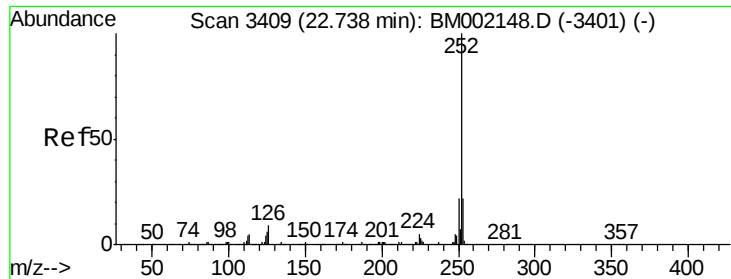
MMDadoda  
 8/6/2015 4:14:10 PM



#85  
 Chrysene  
 Concen: 12.22 ng/ul  
 RT: 21.20 min Scan# 3148  
 Delta R.T. -0.00 min  
 Lab File: BM002194.D  
 Acq: 03 Aug 2015 13:03

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 228   | Resp: | 356873 |
| Ion Ratio | Lower | Upper |        |
| 228       | 100   |       |        |
| 226       | 28.4  | 22.3  | 33.5   |
| 229       | 21.8  | 15.5  | 23.3   |





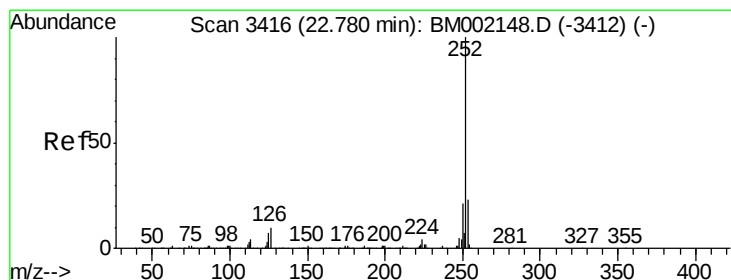
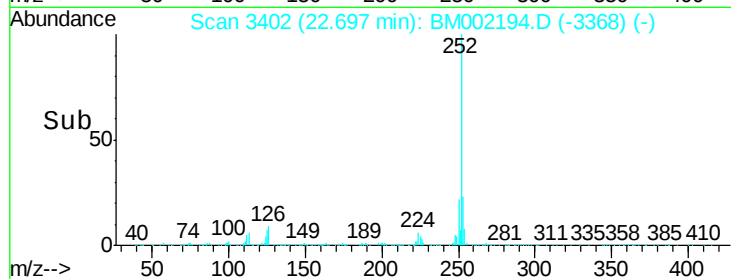
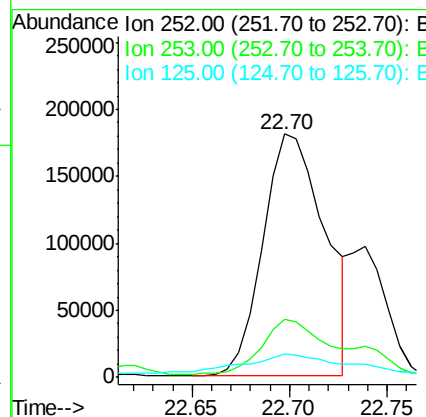
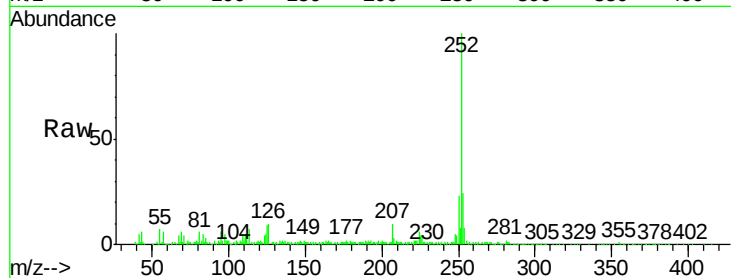
#88  
Benzo(b)fluoranthene  
Concen: 15.10 ng/ul  
RT: 22.70 min Scan# 3402  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

Instrument :  
BNA\_M  
ClientSampled :  
C02G3

| Tot Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 252     | 100   |            |       |
| 253     | 24.0  | 16.9       | 25.3  |
| 125     | 9.5   | 6.2        | 9.2#  |

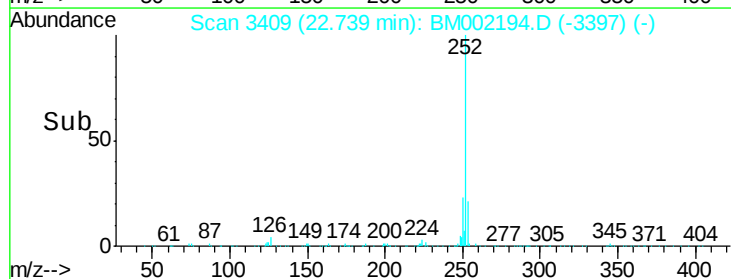
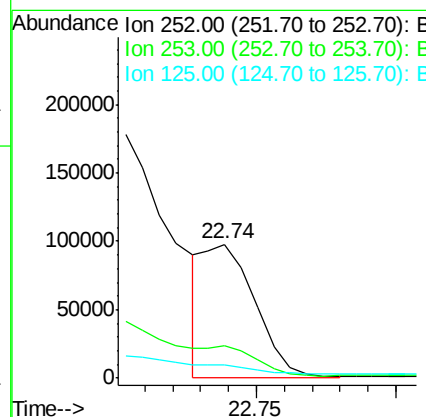
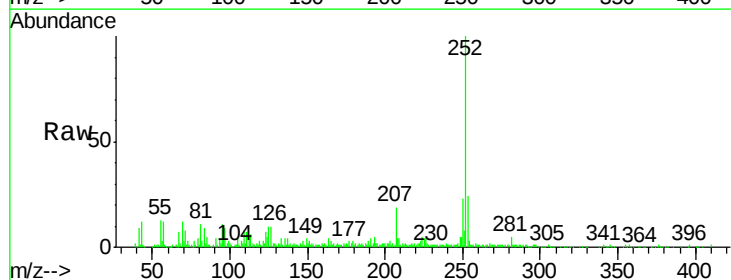
Manual Integrations  
APPROVED

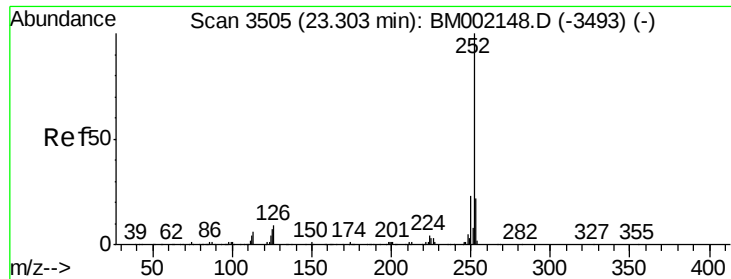
MMDadoda  
8/6/2015 4:14:10 PM



#89  
Benzo(k)fluoranthene  
Concen: 5.00 ng/ul m  
RT: 22.74 min Scan# 3409  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

| Tgt Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 252     | 100   |            |       |
| 253     | 23.8  | 17.4       | 26.0  |
| 125     | 10.3  | 6.2        | 9.4#  |





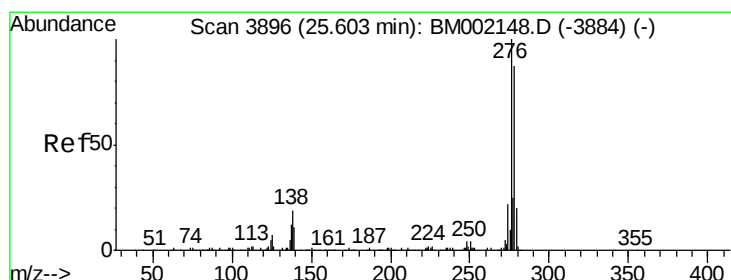
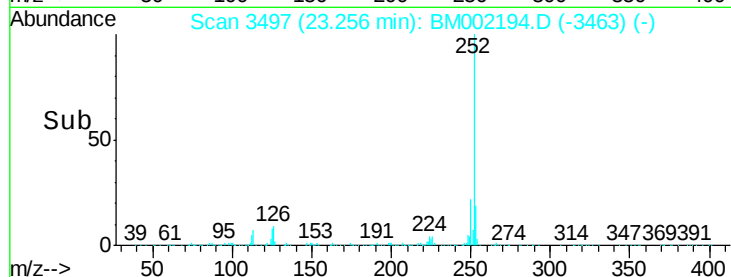
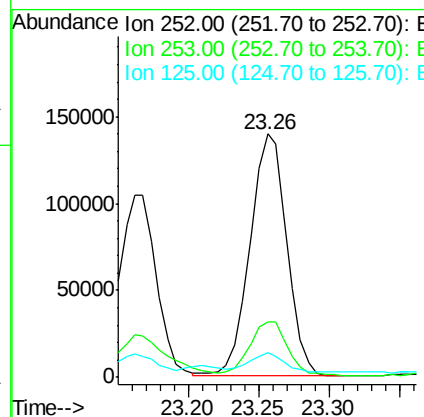
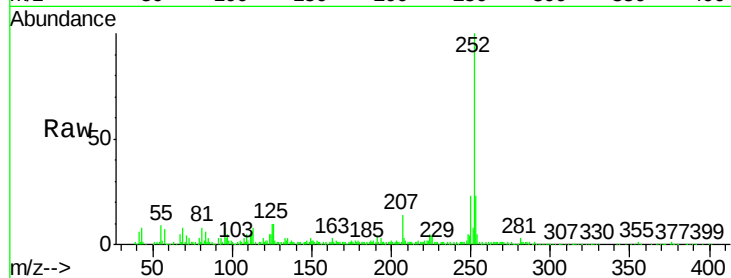
#91  
Benzo(a)pyrene  
Concen: 10.01 ng/ul  
RT: 23.26 min Scan# 3497  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

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

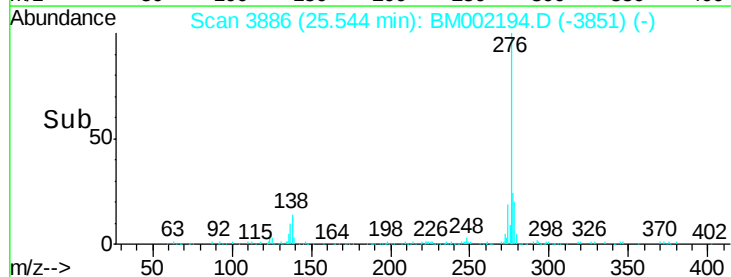
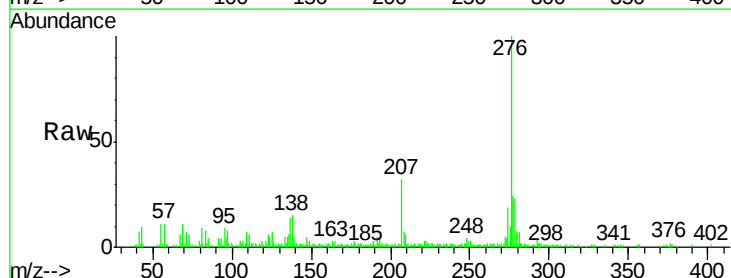
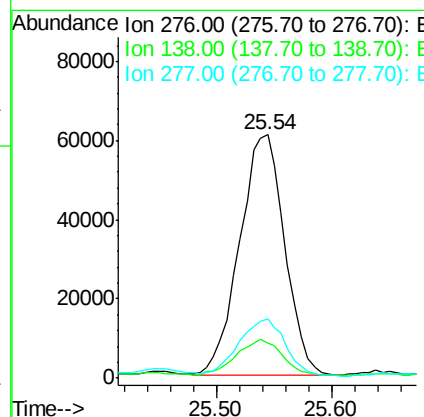
Manual Integrations  
APPROVED

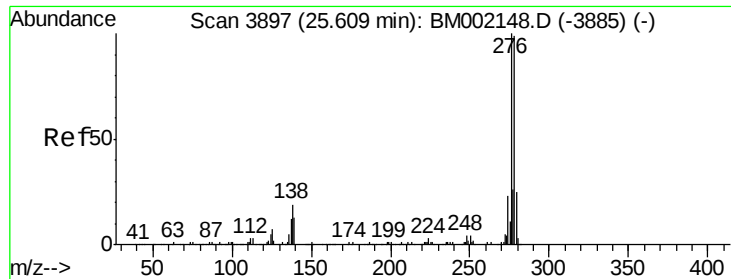
MMDadoda  
8/6/2015 4:14:10 PM



#92  
Indeno(1,2,3-cd)pyrene  
Concen: 5.62 ng/ul  
RT: 25.54 min Scan# 3886  
Delta R.T. 0.01 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

| Tgt Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 276     | 100   |            |       |
| 138     | 14.6  | 16.2       | 24.2# |
| 277     | 24.3  | 19.8       | 29.8  |





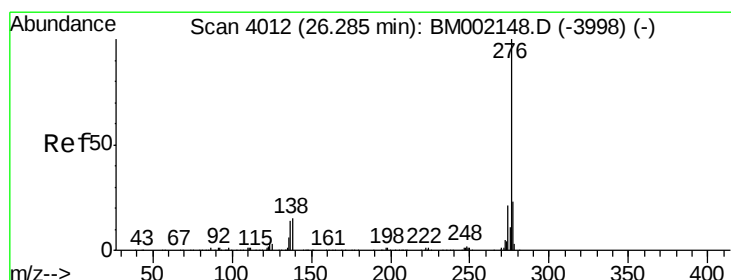
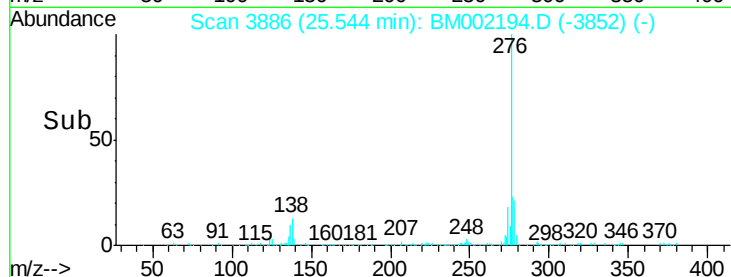
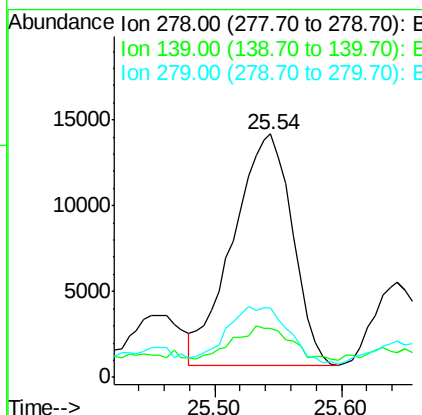
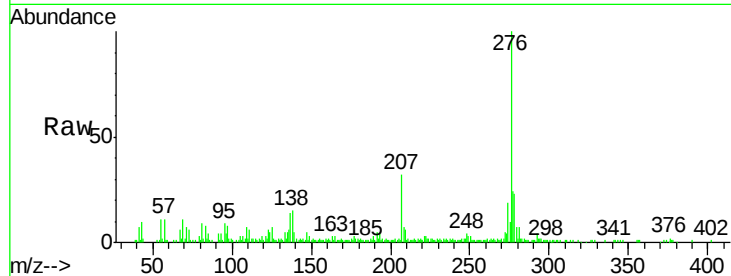
#93  
Dibenzo(a,h)anthracene  
Concen: 1.75 ng/ul  
RT: 25.54 min Scan# 3886  
Delta R.T. -0.00 min  
Lab File: BM002194.D  
Acq: 03 Aug 2015 13:03

Instrument :  
BNA\_M  
ClientSampleId :  
C02G3

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 278     | 100   |       |       |
| 139     | 20.1  | 10.6  | 16.0# |
| 279     | 28.6  | 18.5  | 27.7# |

Manual Integrations  
APPROVED

MMDadoda  
8/6/2015 4:14:10 PM



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

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

