

Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM052216\  
 Data File : BM005607.D  
 Acq On : 23 May 2016 03:31  
 Operator : UM/SJ  
 Sample : H3086-02  
 Misc :  
 ALS Vial : 25 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 JHGF3

Manual Integrations  
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 5/23/2016 8:36:14 PM

Quant Time: May 23 08:17:15 2016  
 Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM052016.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Mon May 23 05:32:02 2016  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.82  | 152  | 116160   | 20.00 | ng/ul | 0.01     |
| 18) Naphthalene-d8        | 10.62 | 136  | 509623   | 20.00 | ng/ul | 0.01     |
| 35) Acenaphthene-d10      | 14.46 | 164  | 279027   | 20.00 | ng/ul | 0.02     |
| 61) Phenanthrene-d10      | 17.21 | 188  | 556709   | 20.00 | ng/ul | 0.02     |
| 75) Chrysene-d12          | 21.39 | 240  | 516137   | 20.00 | ng/ul | 0.02     |
| 83) Perylene-d12          | 23.69 | 264  | 482777   | 20.00 | ng/ul | 0.05     |

## System Monitoring Compounds

|                                |       |     |        |       |       |      |
|--------------------------------|-------|-----|--------|-------|-------|------|
| 3) 1,4-Dioxane-d8              | 3.29  | 96  | 8361   | 3.15  | ng/uL | 0.00 |
| 5) Phenol-d5                   | 7.00  | 99  | 234088 | 24.59 | ng/ul | 0.02 |
| 7) Bis-(2-Chloroethyl)ether-d  | 7.15  | 67  | 135296 | 24.52 | ng/ul | 0.00 |
| 9) 2-Chlorophenol-d4           | 7.36  | 132 | 193256 | 24.33 | ng/ul | 0.02 |
| 13) 4-Methylphenol-d8          | 8.54  | 113 | 187873 | 24.08 | ng/ul | 0.02 |
| 19) Nitrobenzene-d5            | 8.98  | 128 | 98658  | 25.32 | ng/ul | 0.01 |
| 22) 2-Nitrophenol-d4           | 9.70  | 143 | 105143 | 24.51 | ng/ul | 0.01 |
| 26) 2,4-Dichlorophenol-d3      | 10.25 | 165 | 201326 | 24.92 | ng/ul | 0.02 |
| 29) 4-Chloroaniline-d4         | 10.75 | 131 | 81318  | 10.05 | ng/ul | 0.01 |
| 43) Dimethylphthalate-d6       | 13.87 | 166 | 587911 | 25.81 | ng/ul | 0.01 |
| 46) Acenaphthylene-d8          | 14.16 | 160 | 757208 | 26.59 | ng/ul | 0.02 |
| 51) 4-Nitrophenol-d4           | 14.68 | 143 | 90114  | 20.92 | ng/ul | 0.03 |
| 57) Fluorene-d10               | 15.46 | 176 | 497673 | 25.11 | ng/ul | 0.02 |
| 62) 4,6-Dinitro-2-methylphenol | 15.59 | 200 | 10599  | 3.31  | ng/ul | 0.03 |
| 70) Anthracene-d10             | 17.31 | 188 | 726628 | 27.40 | ng/ul | 0.02 |
| 76) Pyrene-d10                 | 19.60 | 212 | 758414 | 32.45 | ng/ul | 0.03 |
| 87) Benzo(a)pyrene-d12         | 23.54 | 264 | 593032 | 26.31 | ng/ul | 0.05 |

## Target Compounds

|                                |       |     |         |       |        | Qvalue |
|--------------------------------|-------|-----|---------|-------|--------|--------|
| 28) Naphthalene                | 10.66 | 128 | 77413   | 3.02  | ng/ul  | 98     |
| 34) 2-Methylnaphthalene        | 12.28 | 142 | 68255   | 3.64  | ng/ul  | 97     |
| 44) Dimethylphthalate          | 13.92 | 163 | 97232   | 4.32  | ng/ul# | 96     |
| 47) Acenaphthylene             | 14.19 | 152 | 230824  | 7.98  | ng/ul  | 96     |
| 49) Acenaphthene               | 14.52 | 153 | 23900   | 1.25  | ng/ul  | 92     |
| 53) Dibenzofuran               | 14.86 | 168 | 39602   | 1.45  | ng/ul# | 81     |
| 58) Fluorene                   | 15.51 | 166 | 69062   | 3.17  | ng/ul# | 86     |
| 69) Phenanthrene               | 17.26 | 178 | 1020823 | 32.81 | ng/ul  | 98     |
| 71) Anthracene                 | 17.34 | 178 | 298624m | 9.42  | ng/ul  |        |
| 72) Carbazole                  | 17.62 | 167 | 55707   | 2.02  | ng/ul# | 58     |
| 74) Fluoranthene               | 19.27 | 202 | 1167857 | 33.35 | ng/ul  | 97     |
| 77) Pyrene                     | 19.63 | 202 | 1360879 | 45.87 | ng/ul  | 95     |
| 80) Benzo(a)anthracene         | 21.37 | 228 | 410121  | 13.52 | ng/ul# | 86     |
| 81) Bis(2-ethylhexyl)phthalate | 21.29 | 149 | 27590   | 1.56  | ng/ul# | 85     |
| 82) Chrysene                   | 21.42 | 228 | 517024  | 17.91 | ng/ul# | 93     |
| 85) Benzo(b)fluoranthene       | 23.00 | 252 | 571749  | 20.08 | ng/ul# | 85     |
| 86) Benzo(k)fluoranthene       | 23.03 | 252 | 163659m | 6.07  | ng/ul  |        |
| 88) Benzo(a)pyrene             | 23.59 | 252 | 474683  | 17.19 | ng/ul# | 91     |
| 89) Indeno(1,2,3-cd)pyrene     | 26.04 | 276 | 410272  | 12.50 | ng/ul  | 96     |
| 90) Dibenzo(a,h)anthracene     | 26.04 | 278 | 80279   | 2.94  | ng/ul# | 61     |
| 91) Benzo(g,h,i)perylene       | 26.76 | 276 | 446277  | 16.18 | ng/ul  | 97     |

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Data File : BM005607.D  
Acq On : 23 May 2016 03:31  
Operator : UM/SJ  
Sample : H3086-02  
Misc :  
ALS Vial : 25 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :  
JHGF3

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Quant Time: May 23 08:17:15 2016  
Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM052016.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Mon May 23 05:32:02 2016  
Response via : Initial Calibration

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

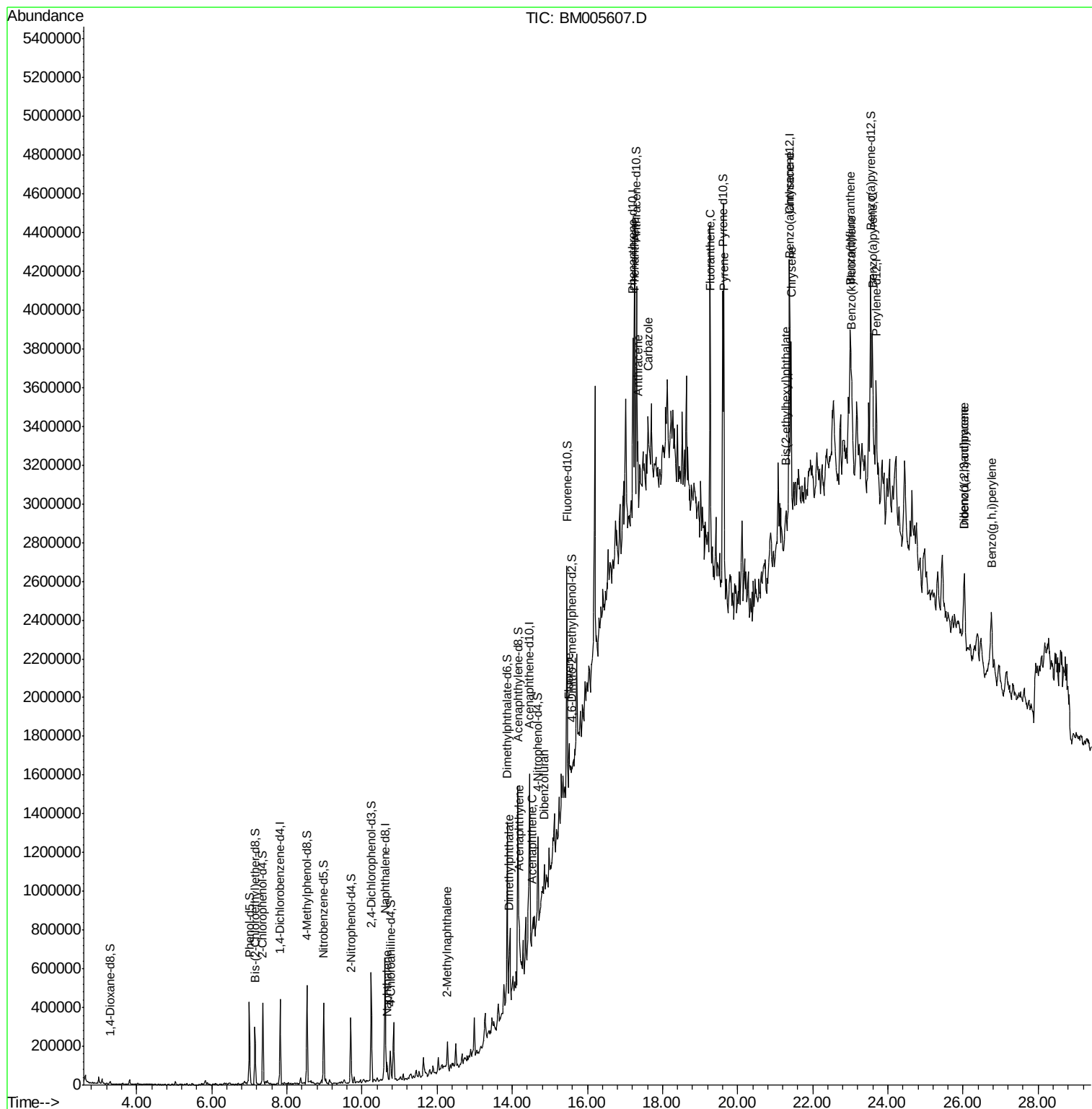
Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM052216\  
Data File : BM005607.D  
Acq On : 23 May 2016 03:31  
Operator : UM/SJ  
Sample : H3086-02  
Misc :  
ALS Vial : 25 Sample Multiplier: 1

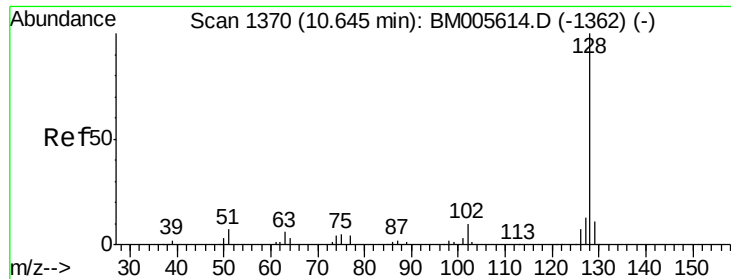
Instrument :  
BNA\_M  
ClientSampled :  
JHGF3

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Quant Time: May 23 08:17:15 2016  
Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM052016.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Mon May 23 05:32:02 2016  
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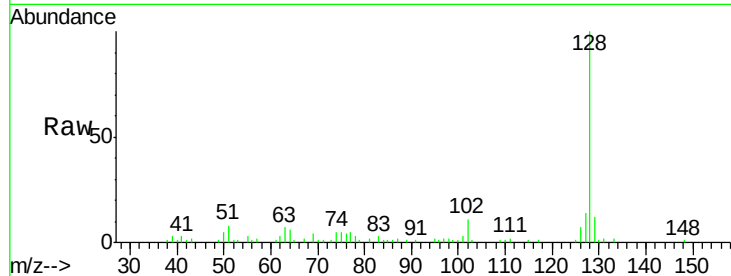
#28  
Naphthalene  
Concen: 3.02 ng/ul  
RT: 10.66 min Scan# 1373  
Delta R.T. 0.01 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

Instrument :  
BNA\_M  
ClientSampleId :  
JHGF3

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 129     | 11.7  | 8.6   | 13.0  |
| 127     | 13.7  | 10.6  | 15.8  |

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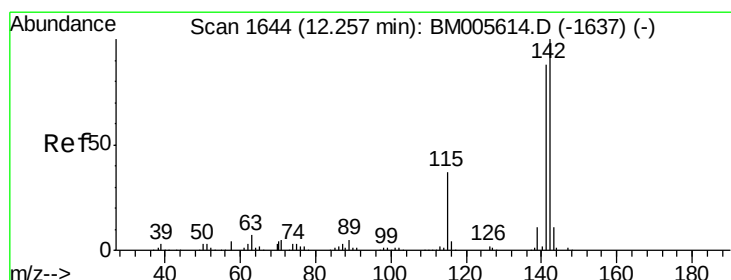
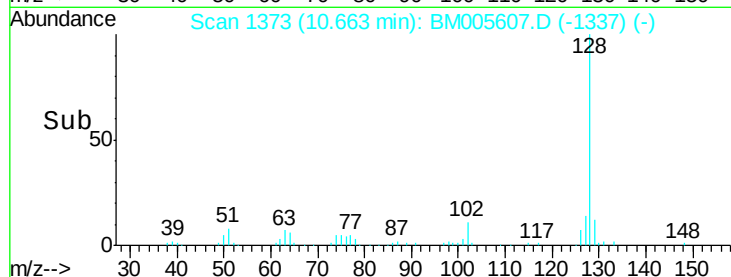
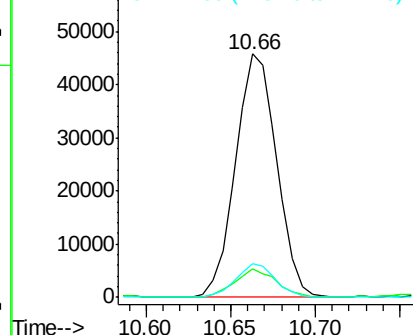


Abundance

Ion 128.00 (127.70 to 128.70): E

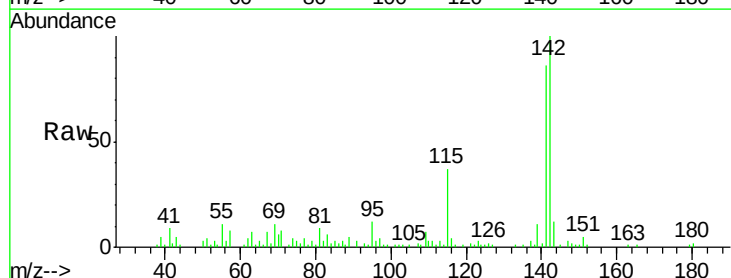
Ion 129.00 (128.70 to 129.70): E

Ion 127.00 (126.70 to 127.70): E



#34  
2-Methylnaphthalene  
Concen: 3.64 ng/ul  
RT: 12.28 min Scan# 1648  
Delta R.T. 0.02 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

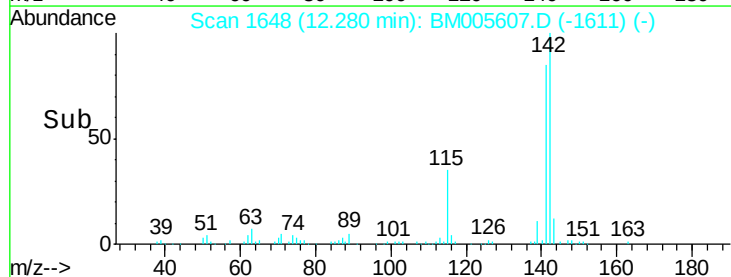
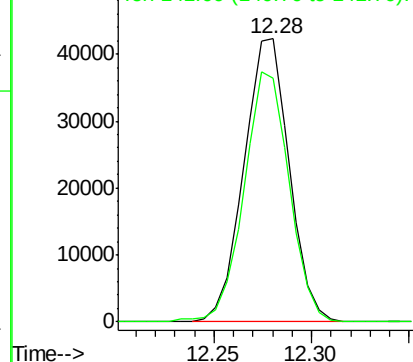
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 86.0  | 70.6  | 106.0 |

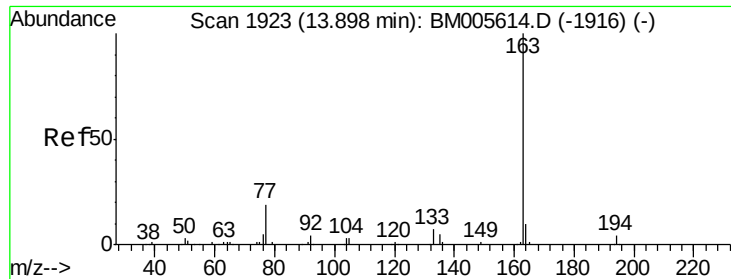


Abundance

Ion 142.00 (141.70 to 142.70): E

Ion 141.00 (140.70 to 141.70): E





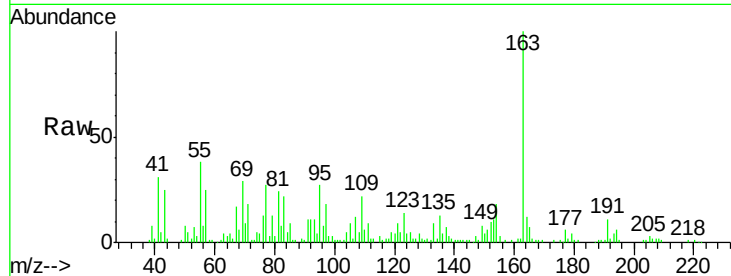
#44  
Dimethylphthalate  
Concen: 4.32 ng/ul  
RT: 13.92 min Scan# 1926  
Delta R.T. 0.01 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

Instrument :  
BNA\_M  
ClientSampleId :  
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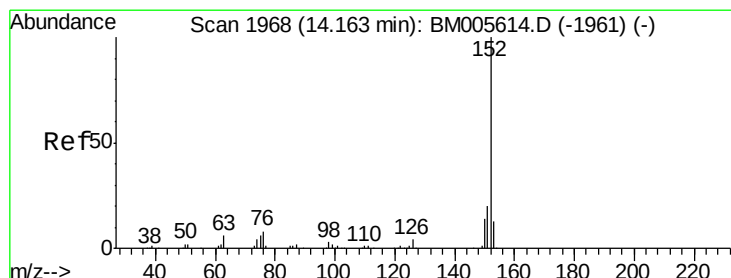
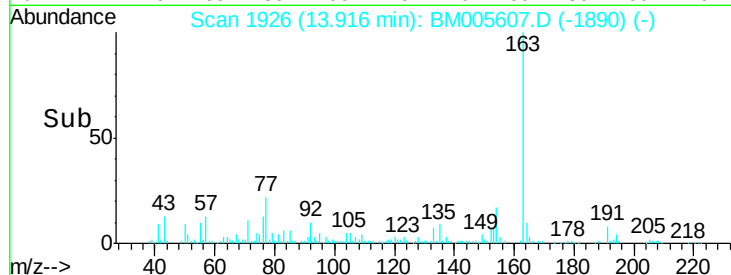
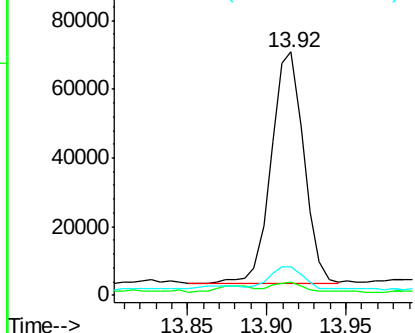
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 163     | 100   |       |       |
| 194     | 5.5   | 3.4   | 5.0#  |
| 164     | 11.5  | 8.0   | 12.0  |

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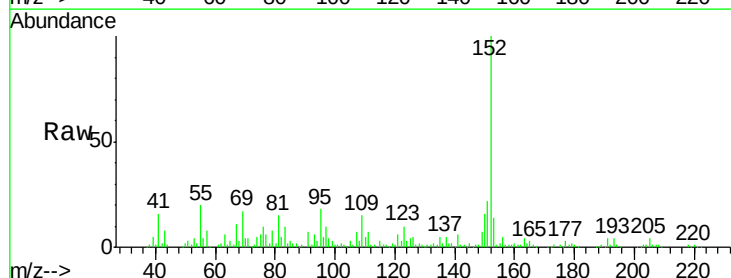


Abundance Ion 163.00 (162.70 to 163.70): E  
Ion 194.00 (193.70 to 194.70): E  
Ion 164.00 (163.70 to 164.70): E

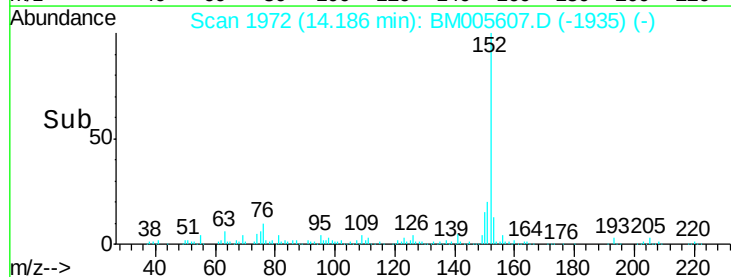
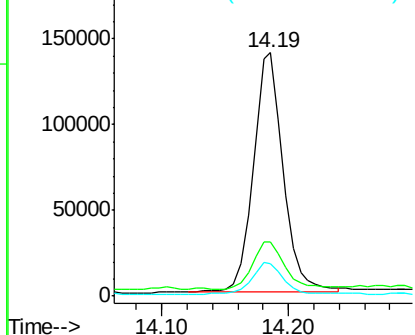


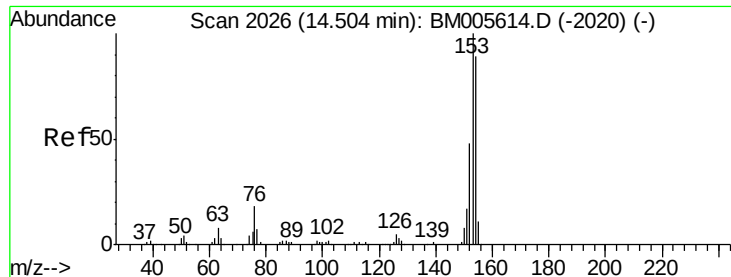
#47  
Acenaphthylene  
Concen: 7.98 ng/ul  
RT: 14.19 min Scan# 1972  
Delta R.T. 0.02 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 151     | 22.2  | 15.7  | 23.5  |
| 153     | 13.6  | 10.5  | 15.7  |



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





#49

Acenaphthene

Concen: 1.25 ng/ul

RT: 14.52 min Scan# 2029

Delta R.T. 0.01 min

Lab File: BM005607.D

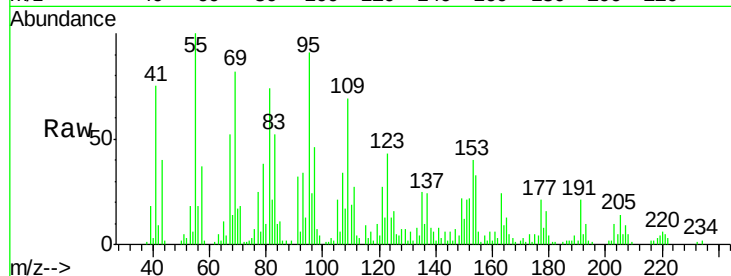
Acq: 23 May 2016 03:31

Instrument :

BNA\_M

ClientSampleId :

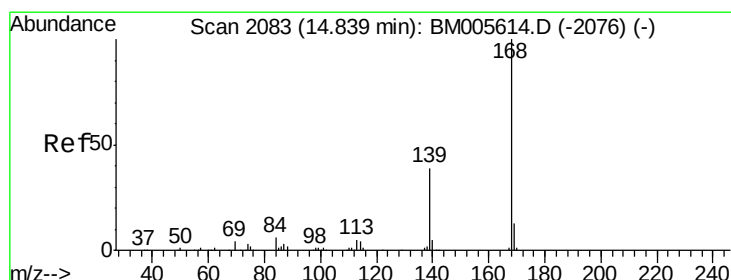
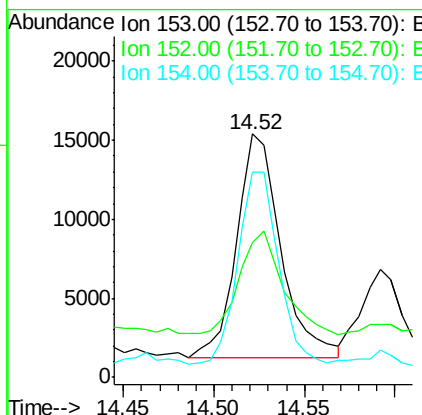
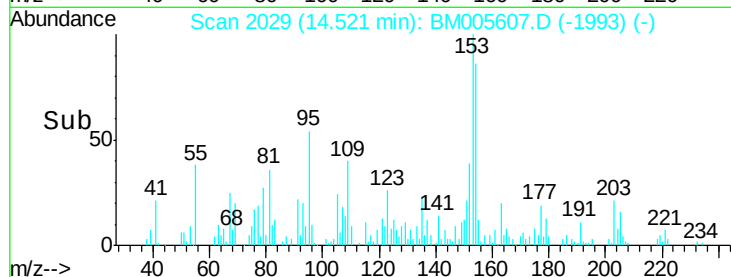
JHGF3



|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 153   | Resp: | 23900 |
| Ion Ratio | Lower | Upper |       |
| 153       | 100   |       |       |
| 152       | 55.5  | 37.8  | 56.6  |
| 154       | 84.1  | 71.1  | 106.7 |

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#53

Dibenzofuran

Concen: 1.45 ng/ul

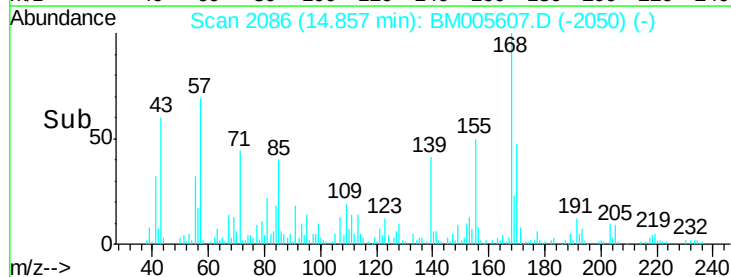
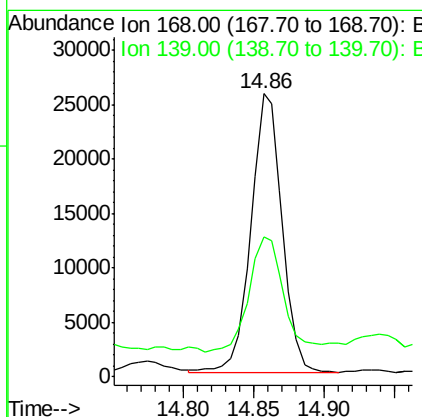
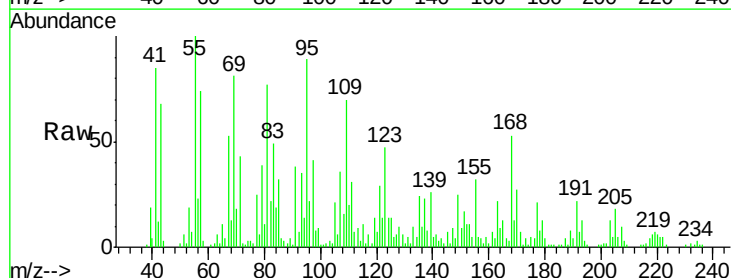
RT: 14.86 min Scan# 2086

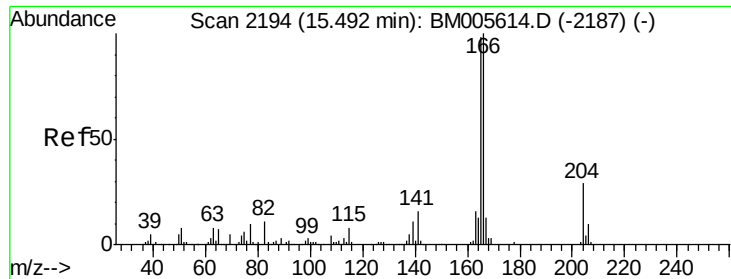
Delta R.T. 0.01 min

Lab File: BM005607.D

Acq: 23 May 2016 03:31

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 168   | Resp: | 39602 |
| Ion Ratio | Lower | Upper |       |
| 168       | 100   |       |       |
| 139       | 49.6  | 30.6  | 46.0# |





#58

Fluorene

Concen: 3.17 ng/ul

RT: 15.51 min Scan# 2197

Delta R.T. 0.02 min

Lab File: BM005607.D

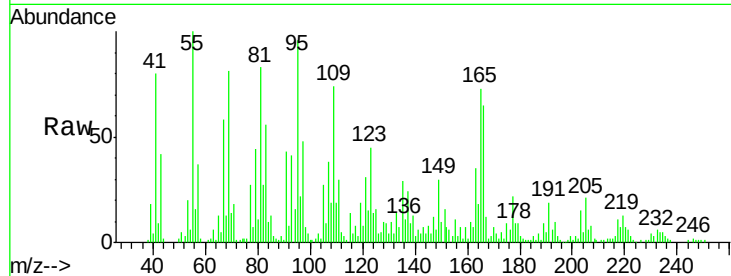
Acq: 23 May 2016 03:31

Instrument :

BNA\_M

ClientSampleId :

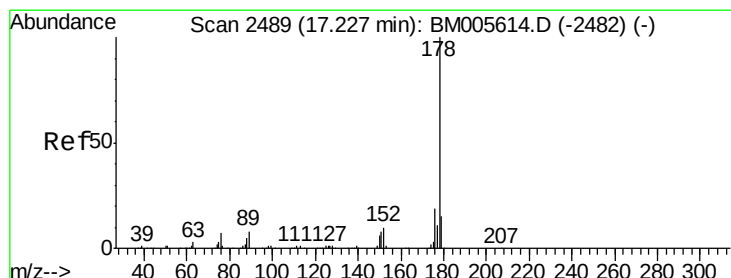
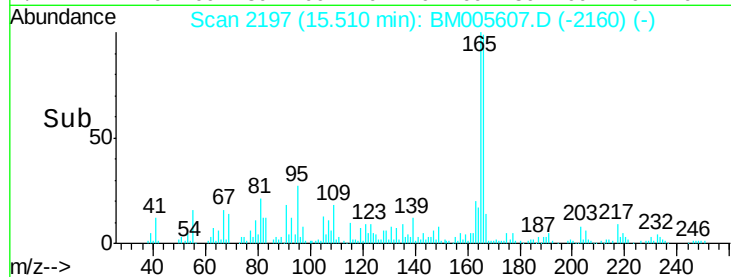
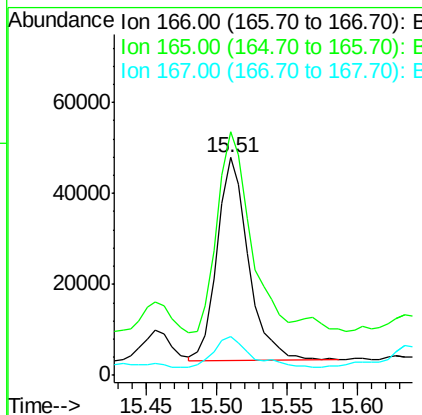
JHGF3



|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 166   | Resp: | 69062 |
| Ion Ratio | Lower | Upper |       |
| 166       | 100   |       |       |
| 165       | 111.9 | 78.0  | 117.0 |
| 167       | 17.9  | 10.5  | 15.7# |

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#69

Phenanthrene

Concen: 32.81 ng/ul

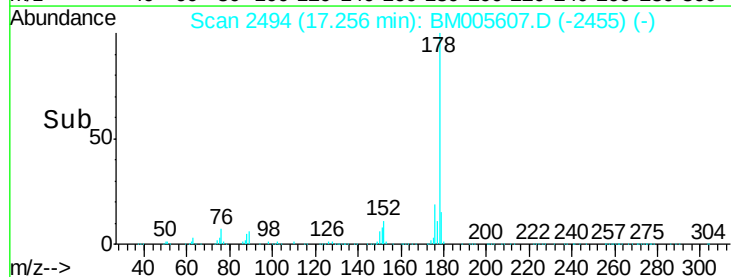
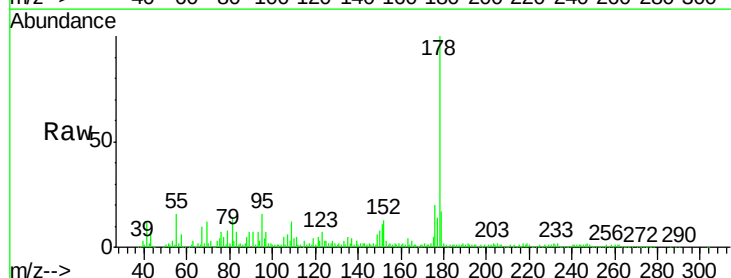
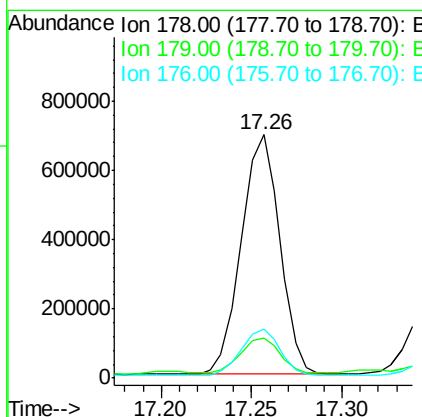
RT: 17.26 min Scan# 2494

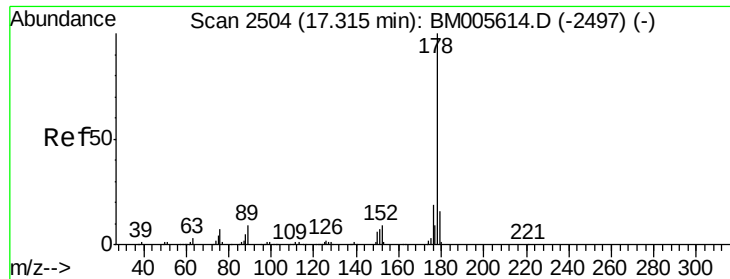
Delta R.T. 0.03 min

Lab File: BM005607.D

Acq: 23 May 2016 03:31

|           |       |       |         |
|-----------|-------|-------|---------|
| Tgt Ion:  | 178   | Resp: | 1020823 |
| Ion Ratio | Lower | Upper |         |
| 178       | 100   |       |         |
| 179       | 16.7  | 12.2  | 18.2    |
| 176       | 19.9  | 15.8  | 23.6    |





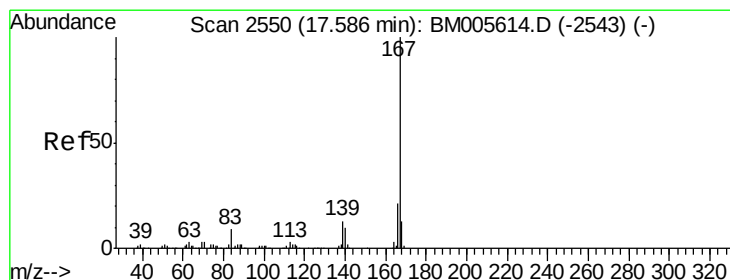
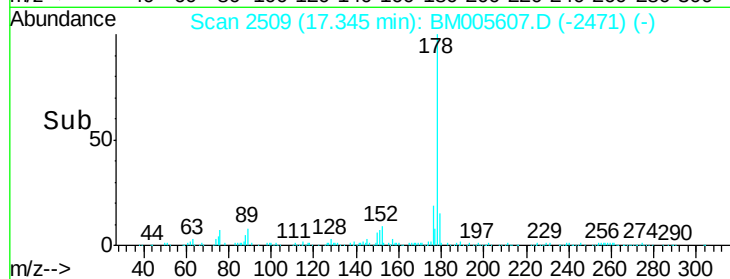
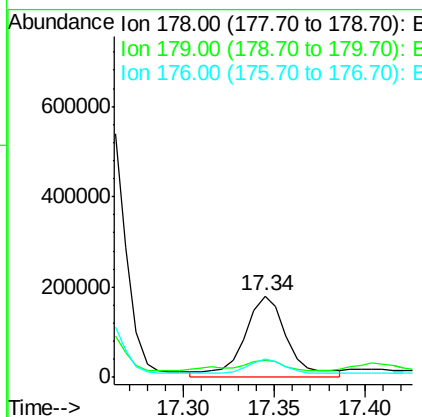
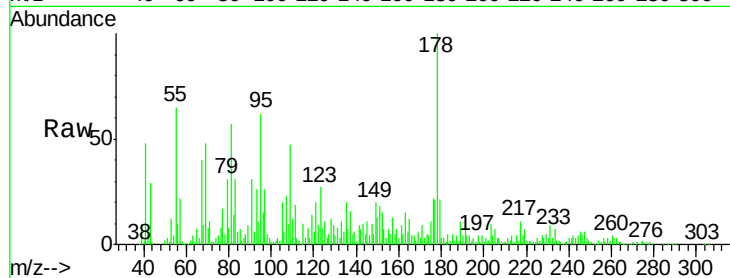
#71  
 Anthracene  
 Concen: 9.42 ng/ul m  
 RT: 17.34 min Scan# 2509  
 Delta R.T. 0.02 min  
 Lab File: BM005607.D  
 Acq: 23 May 2016 03:31

Instrument :  
 BNA\_M  
 ClientSampleId :  
 JHGF3

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 179     | 21.0  | 12.6  | 18.8# |
| 176     | 22.0  | 15.0  | 22.4  |

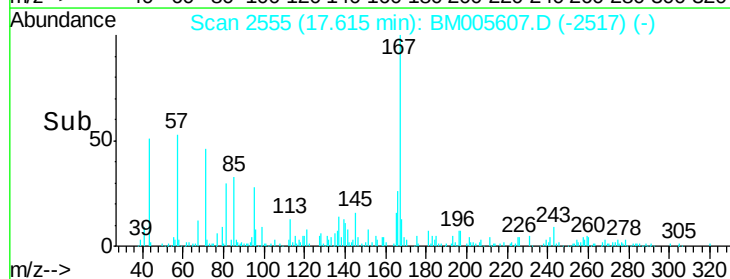
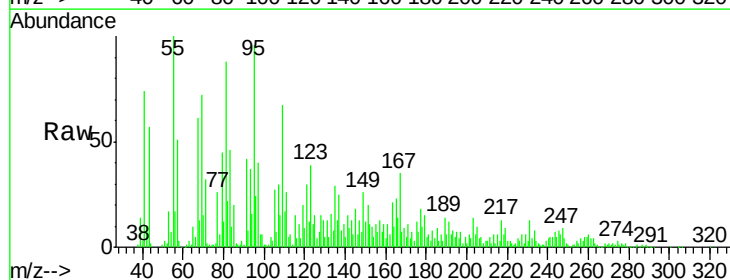
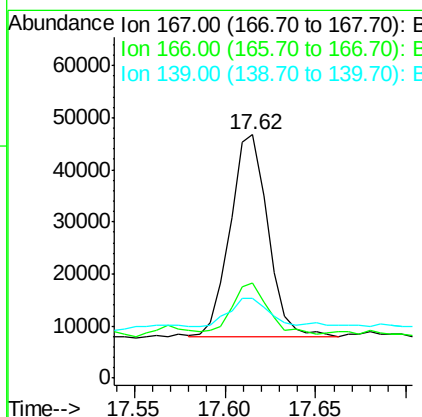
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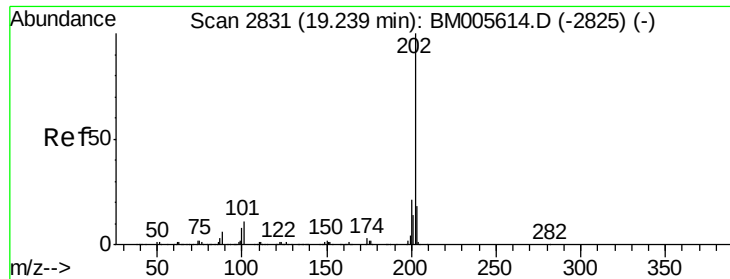


#72  
 Carbazole  
 Concen: 2.02 ng/ul  
 RT: 17.62 min Scan# 2555  
 Delta R.T. 0.02 min  
 Lab File: BM005607.D  
 Acq: 23 May 2016 03:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 167     | 100   |       |       |
| 166     | 38.8  | 16.9  | 25.3# |
| 139     | 32.9  | 10.6  | 16.0# |







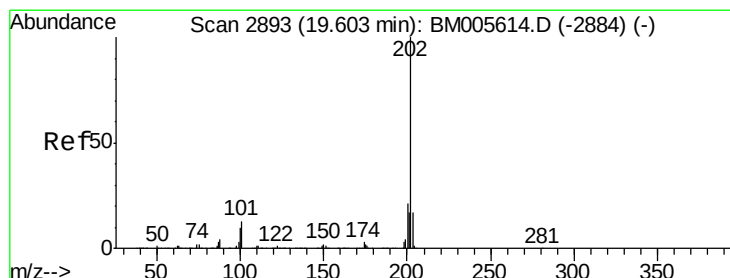
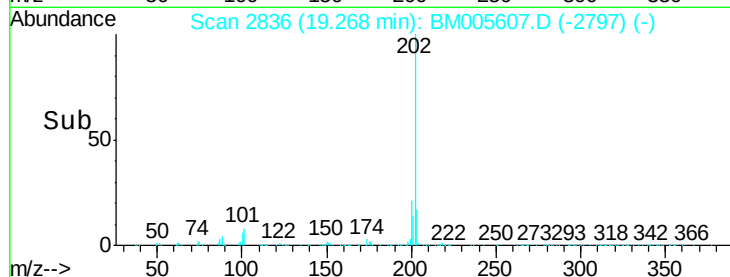
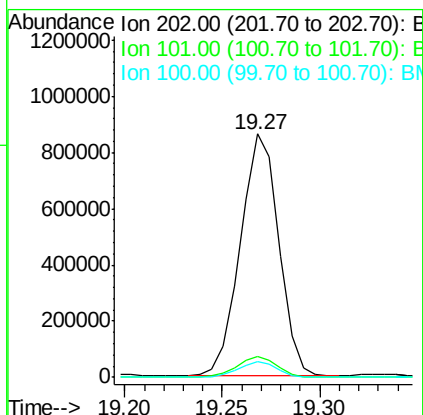
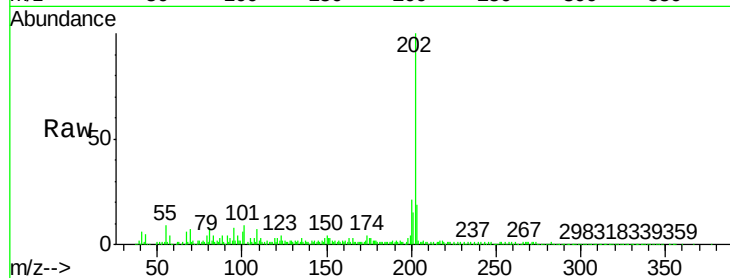
#74  
 Fluoranthene  
 Concen: 33.35 ng/ul  
 RT: 19.27 min Scan# 2836  
 Delta R.T. 0.03 min  
 Lab File: BM005607.D  
 Acq: 23 May 2016 03:31

Instrument :  
 BNA\_M  
 ClientSampleId :  
 JHGF3

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 8.6   | 7.9   | 11.9  |
| 100     | 6.3   | 5.6   | 8.4   |

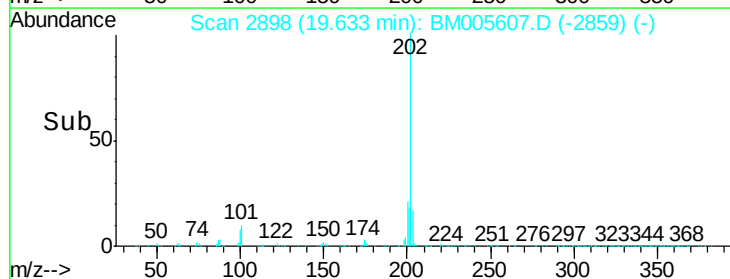
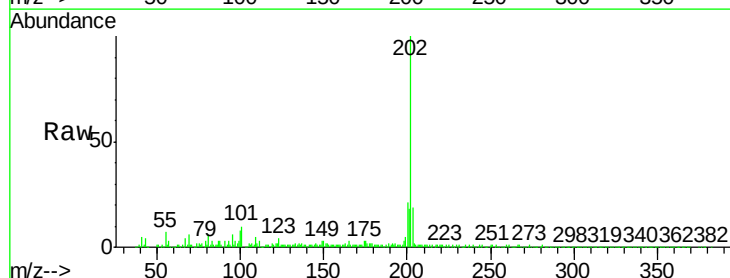
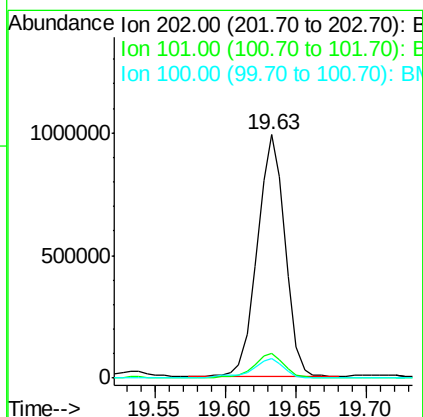
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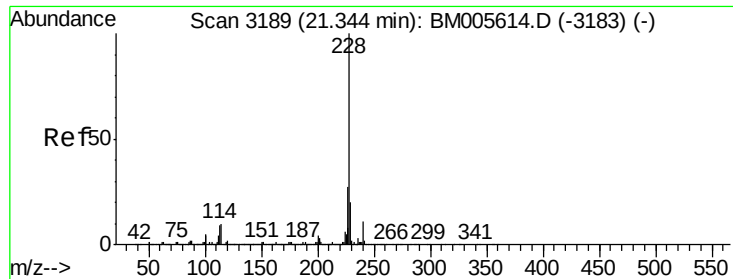
umangi  
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#77  
 Pyrene  
 Concen: 45.87 ng/ul  
 RT: 19.63 min Scan# 2898  
 Delta R.T. 0.03 min  
 Lab File: BM005607.D  
 Acq: 23 May 2016 03:31

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 10.1  | 9.6   | 14.4  |
| 100     | 7.9   | 7.8   | 11.6  |





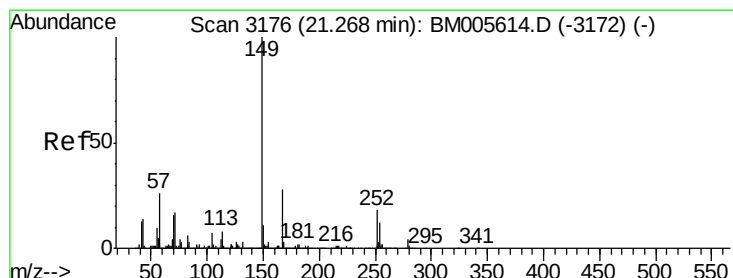
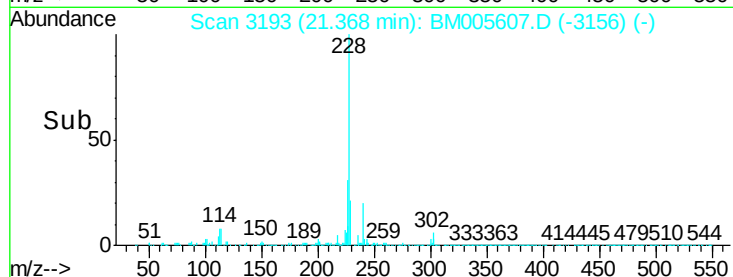
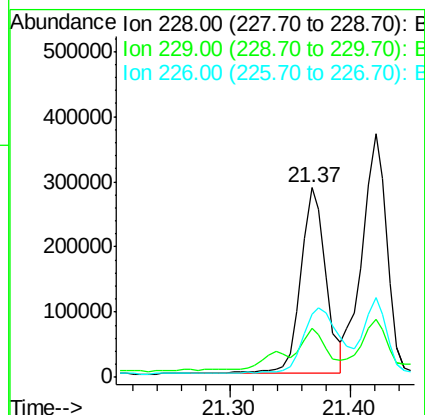
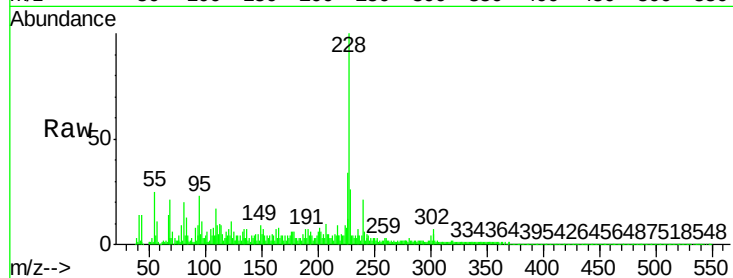
#80  
Benzo(a)anthracene  
Concen: 13.52 ng/ul  
RT: 21.37 min Scan# 3193  
Delta R.T. 0.02 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

Instrument :  
BNA\_M  
ClientSampled :  
JHGF3

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 228     | 100   | 410121 |       |       |
| 229     | 25.9  | 15.4   | 23.2# |       |
| 226     | 33.5  | 21.0   | 31.4# |       |

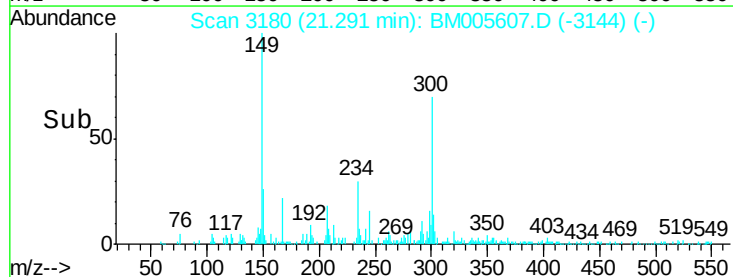
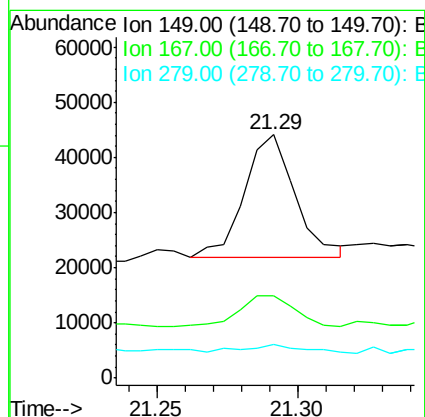
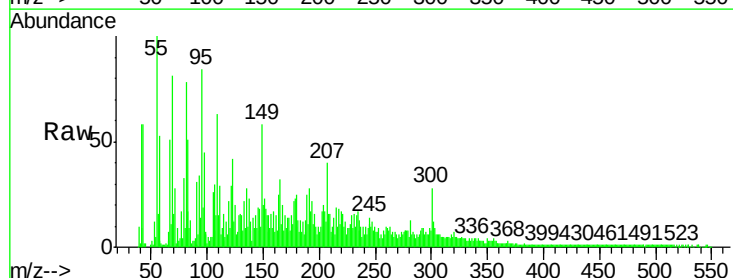
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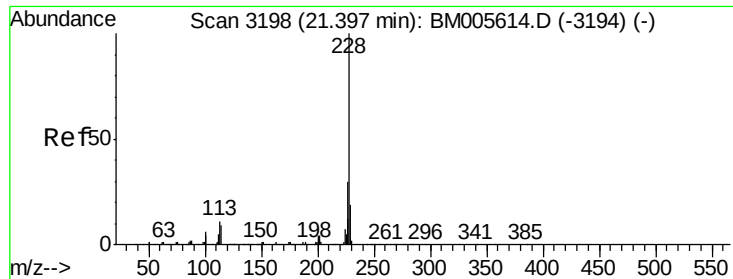
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#81  
Bis(2-ethylhexyl)phthalate  
Concen: 1.56 ng/ul  
RT: 21.29 min Scan# 3180  
Delta R.T. 0.01 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

| Tgt Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 149     | 100   | 27590 |       |       |
| 167     | 34.1  | 22.0  | 33.0# |       |
| 279     | 13.8  | 3.8   | 5.8#  |       |





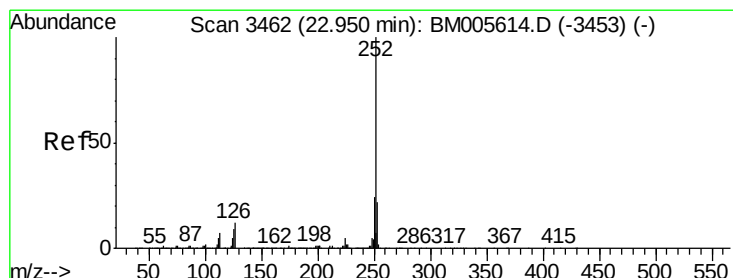
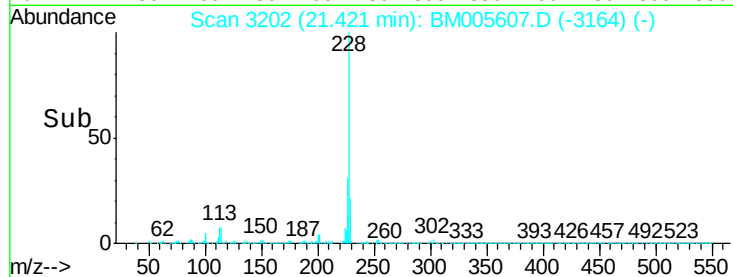
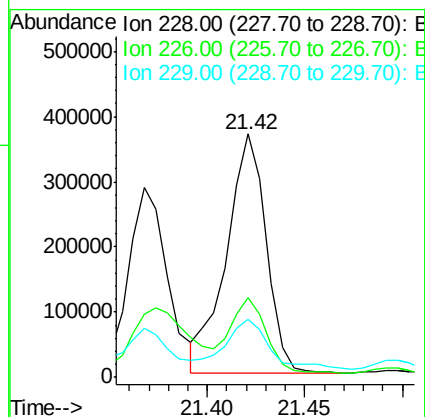
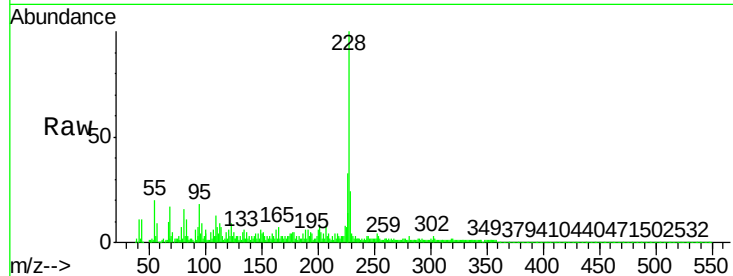
#82  
Chrysene  
Concen: 17.91 ng/ul  
RT: 21.42 min Scan# 3202  
Delta R.T. 0.02 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

Instrument :  
BNA\_M  
ClientSampleId :  
JHGF3

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 228     | 100   | 517024 |       |       |
| 226     | 32.6  | 23.7   | 35.5  |       |
| 229     | 24.0  | 15.5   | 23.3# |       |

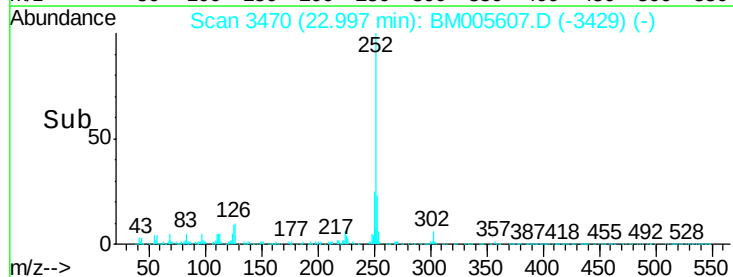
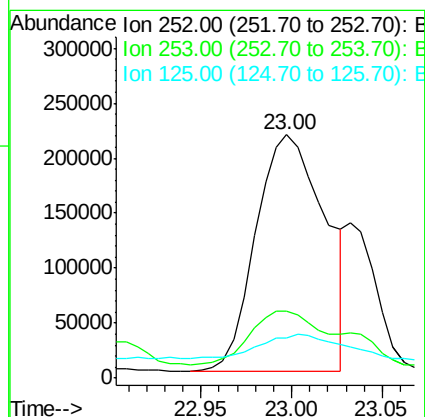
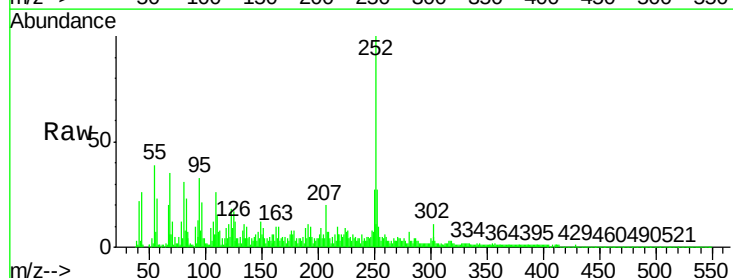
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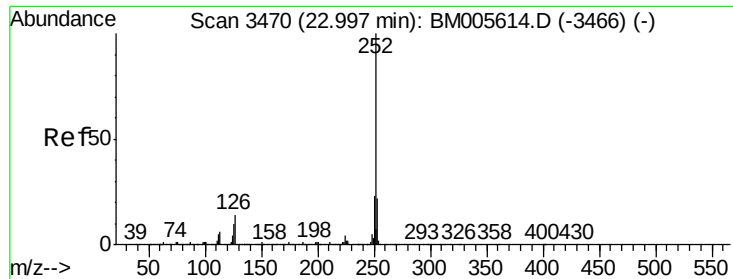
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#85  
Benzo(b)fluoranthene  
Concen: 20.08 ng/ul  
RT: 23.00 min Scan# 3470  
Delta R.T. 0.04 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 252     | 100   | 571749 |       |       |
| 253     | 27.4  | 17.3   | 25.9# |       |
| 125     | 16.7  | 7.0    | 10.4# |       |





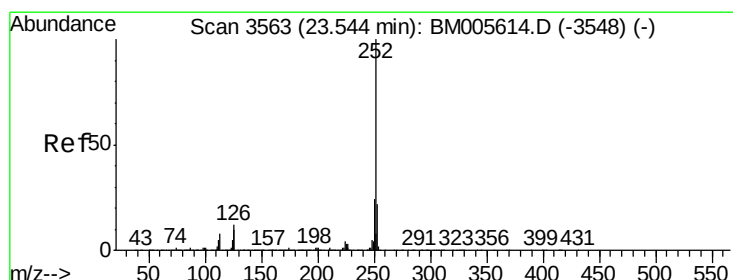
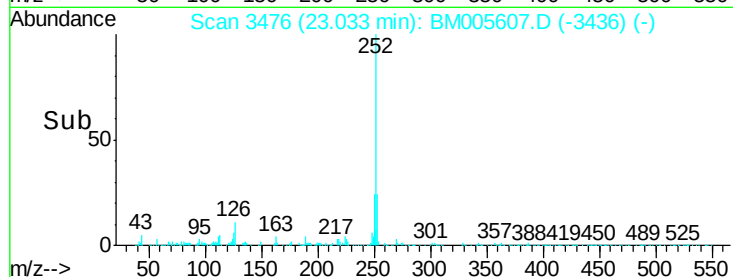
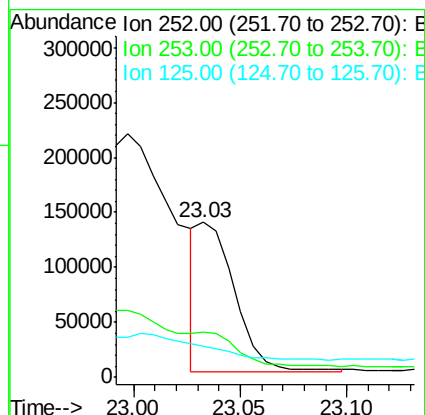
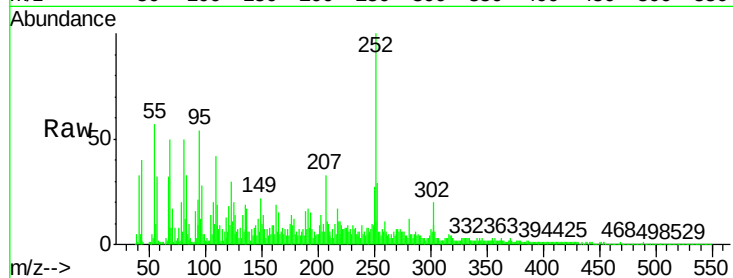
#86  
Benzo(k)fluoranthene  
Concen: 6.07 ng/ul m  
RT: 23.03 min Scan# 3476  
Delta R.T. 0.03 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

Instrument :  
BNA\_M  
ClientSampled :  
JHGF3

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 252     | 100   | 163659 |       |       |
| 253     | 29.3  | 17.5   | 26.3# |       |
| 125     | 20.1  | 7.0    | 10.6# |       |

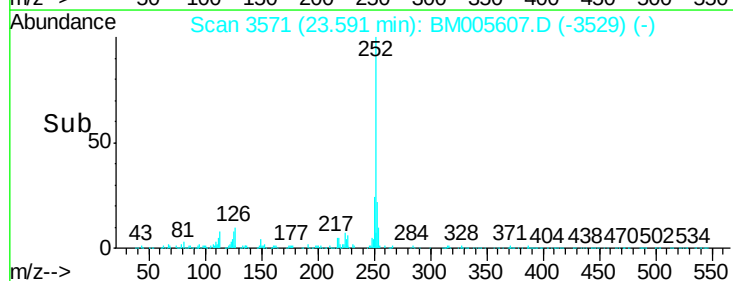
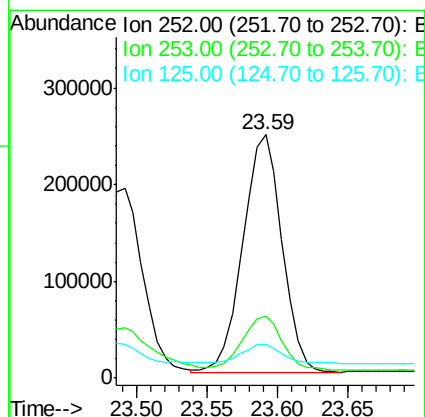
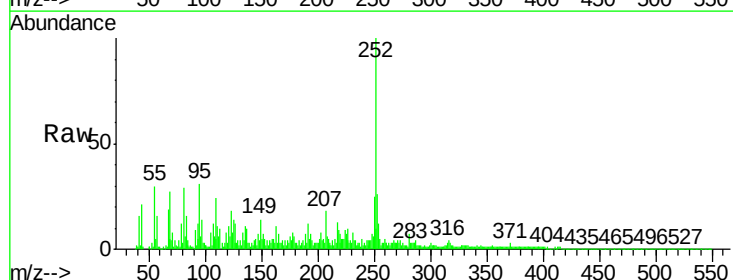
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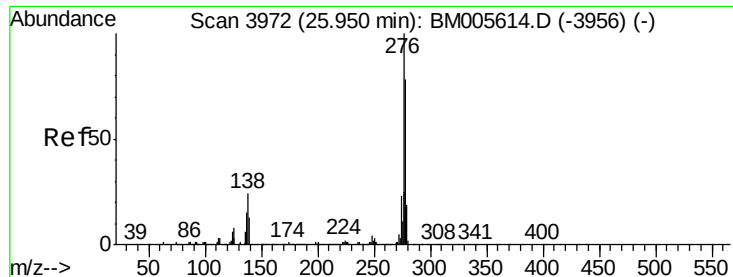
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#88  
Benzo(a)pyrene  
Concen: 17.19 ng/ul  
RT: 23.59 min Scan# 3571  
Delta R.T. 0.05 min  
Lab File: BM005607.D  
Acq: 23 May 2016 03:31

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 252     | 100   | 474683 |       |       |
| 253     | 25.7  | 17.6   | 26.4  |       |
| 125     | 13.8  | 7.6    | 11.4# |       |





#89

Indeno(1,2,3-cd)pyrene

Concen: 12.50 ng/ul

RT: 26.04 min Scan# 3987

Delta R.T. 0.09 min

Lab File: BM005607.D

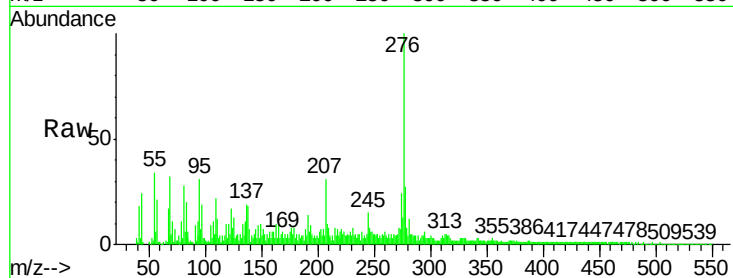
Acq: 23 May 2016 03:31

Instrument :

BNA\_M

ClientSampleId :

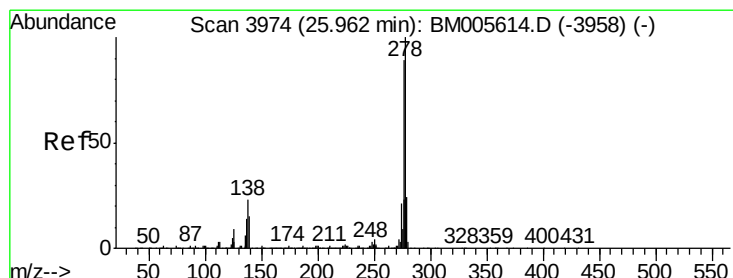
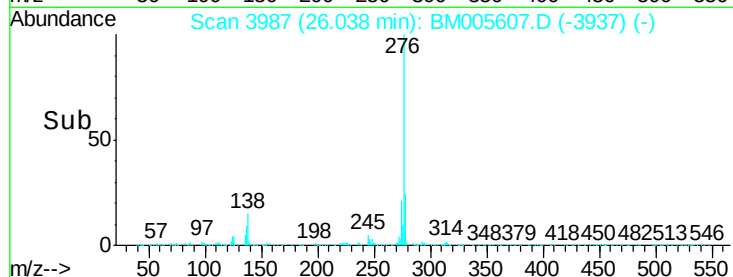
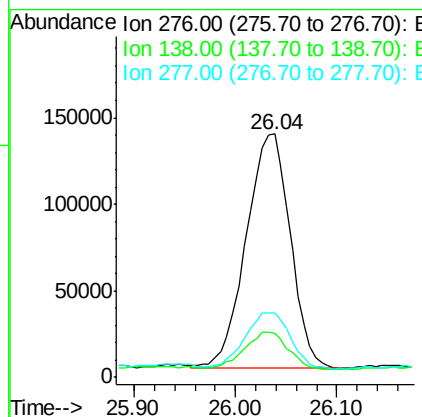
JHGF3



|           |      |       |        |
|-----------|------|-------|--------|
| Tgt Ion:  | 276  | Resp: | 410272 |
| Ion Ratio |      | Lower | Upper  |
| 276       | 100  |       |        |
| 138       | 18.3 | 16.9  | 25.3   |
| 277       | 26.6 | 20.2  | 30.4   |

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#90

Dibenzo(a,h)anthracene

Concen: 2.94 ng/ul

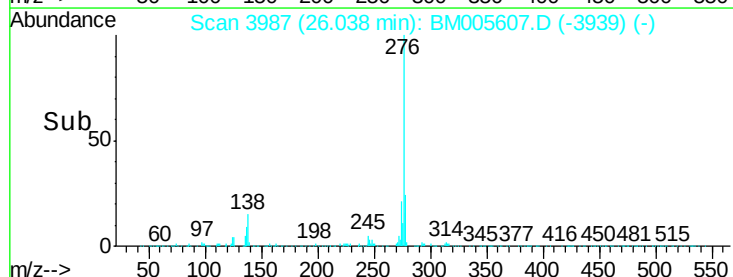
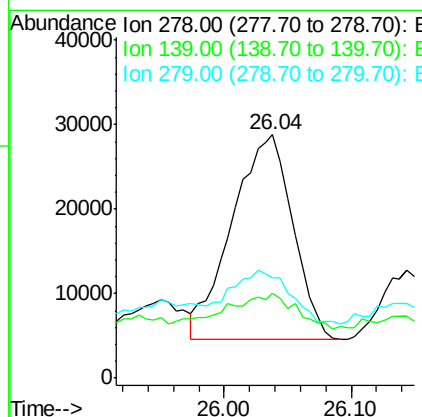
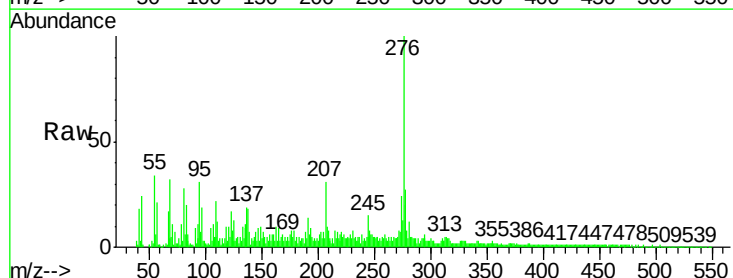
RT: 26.04 min Scan# 3987

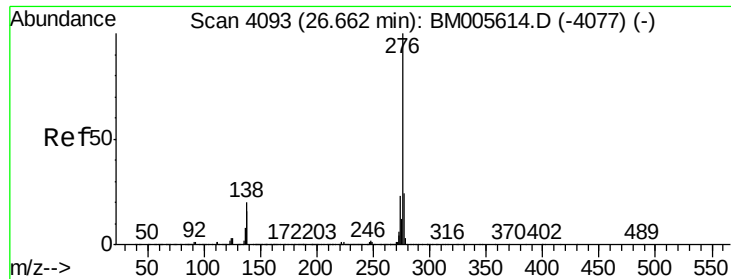
Delta R.T. 0.08 min

Lab File: BM005607.D

Acq: 23 May 2016 03:31

|           |      |       |       |
|-----------|------|-------|-------|
| Tgt Ion:  | 278  | Resp: | 80279 |
| Ion Ratio |      | Lower | Upper |
| 278       | 100  |       |       |
| 139       | 34.7 | 11.8  | 17.6# |
| 279       | 41.1 | 19.4  | 29.2# |





#91  
 Benzo(g,h,i)perylene  
 Concen: 16.18 ng/ul  
 RT: 26.76 min Scan# 4109  
 Delta R.T. 0.10 min  
 Lab File: BM005607.D  
 Acq: 23 May 2016 03:31

Instrument :  
 BNA\_M  
 ClientSampleId :  
 JHGF3

|           |      |       |        |
|-----------|------|-------|--------|
| Tgt Ion:  | 276  | Resp: | 446277 |
| Ion Ratio |      | Lower | Upper  |
| 276       | 100  |       |        |
| 138       | 18.5 | 15.0  | 22.6   |
| 277       | 25.8 | 18.6  | 28.0   |

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