

Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM061816\  
 Data File : BM005866.D  
 Acq On : 17 Jun 2016 18:03  
 Operator : UM/SJ  
 Sample : H3535-02  
 Misc :  
 ALS Vial : 19 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 D9XW2

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 6/19/2016 12:14:44 AM

Quant Time: Jun 17 19:00:41 2016  
 Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM061716.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Fri Jun 17 10:48:37 2016  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.73  | 152  | 25857    | 20.00 | ng/ul | 0.00     |
| 7) Naphthalene-d8         | 10.52 | 136  | 112493   | 20.00 | ng/ul | 0.00     |
| 15) Acenaphthene-d10      | 14.38 | 164  | 67104    | 20.00 | ng/ul | 0.00     |
| 23) Phenanthrene-d10      | 17.13 | 188  | 151738   | 20.00 | ng/ul | 0.00     |
| 29) Chrysene-d12          | 21.31 | 240  | 142110   | 20.00 | ng/ul | 0.00     |
| 34) Perylene-d12          | 23.57 | 264  | 133084   | 20.00 | ng/ul | 0.01     |

## System Monitoring Compounds

|                                |       |     |        |       |       |      |
|--------------------------------|-------|-----|--------|-------|-------|------|
| 2) 1,4-Dioxane-d8              | 3.18  | 96  | 474    | 2.37  | ng/uL | 0.00 |
| 3) Phenol-d5                   | 6.92  | 99  | 33535  | 15.49 | ng/ul | 0.01 |
| 4) Bis-(2-Chloroethyl)ether-d  | 7.06  | 67  | 17439  | 15.54 | ng/ul | 0.00 |
| 5) 2-Chlorophenol-d4           | 7.27  | 132 | 31578  | 17.49 | ng/ul | 0.00 |
| 6) 4-Methylphenol-d8           | 8.46  | 113 | 27872  | 14.40 | ng/ul | 0.00 |
| 8) Nitrobenzene-d5             | 8.89  | 128 | 14898  | 18.76 | ng/ul | 0.00 |
| 9) 2-Nitrophenol-d4            | 9.62  | 143 | 17843  | 18.39 | ng/ul | 0.00 |
| 10) 2,4-Dichlorophenol-d3      | 10.16 | 165 | 34344  | 17.92 | ng/ul | 0.00 |
| 12) 4-Chloroaniline-d4         | 10.67 | 131 | 20351  | 15.69 | ng/ul | 0.00 |
| 16) Dimethylphthalate-d6       | 13.79 | 166 | 111473 | 17.56 | ng/ul | 0.00 |
| 17) Acenaphthylene-d8          | 14.07 | 160 | 133559 | 18.26 | ng/ul | 0.00 |
| 20) 4-Nitrophenol-d4           | 14.64 | 143 | 8402   | 10.98 | ng/ul | 0.02 |
| 21) Fluorene-d10               | 15.37 | 176 | 96704  | 17.88 | ng/ul | 0.00 |
| 24) 4,6-Dinitro-2-methylphenol | 15.53 | 200 | 7137   | 6.97  | ng/ul | 0.01 |
| 26) Anthracene-d10             | 17.22 | 188 | 150089 | 18.94 | ng/ul | 0.00 |
| 30) Pyrene-d10                 | 19.52 | 212 | 159933 | 23.74 | ng/ul | 0.00 |
| 37) Benzo(a)pyrene-d12         | 23.43 | 264 | 124505 | 18.71 | ng/ul | 0.01 |

## Target Compounds

|                            |       |     |         |       |        | Qvalue |
|----------------------------|-------|-----|---------|-------|--------|--------|
| 11) Naphthalene            | 10.57 | 128 | 6321    | 1.05  | ng/ul  | 96     |
| 13) 2-Methylnaphthalene    | 12.19 | 142 | 5551    | 1.21  | ng/ul  | 94     |
| 18) Acenaphthylene         | 14.10 | 152 | 16580   | 2.24  | ng/ul# | 97     |
| 25) Phenanthrene           | 17.17 | 178 | 22177   | 2.45  | ng/ul  | 98     |
| 27) Anthracene             | 17.26 | 178 | 29368   | 3.18  | ng/ul  | 98     |
| 28) Fluoranthene           | 19.19 | 202 | 96155   | 8.47  | ng/ul  | 97     |
| 31) Pyrene                 | 19.55 | 202 | 117513  | 13.99 | ng/ul  | 98     |
| 32) Benzo(a)anthracene     | 21.29 | 228 | 85821   | 9.67  | ng/ul  | 94     |
| 33) Chrysene               | 21.34 | 228 | 88795m  | 10.39 | ng/ul  |        |
| 35) Benzo(b)fluoranthene   | 22.89 | 252 | 172739m | 20.85 | ng/ul  |        |
| 36) Benzo(k)fluoranthene   | 22.93 | 252 | 49687m  | 6.21  | ng/ul  |        |
| 38) Benzo(a)pyrene         | 23.47 | 252 | 82157   | 10.10 | ng/ul  | 96     |
| 39) Indeno(1,2,3-cd)pyrene | 25.86 | 276 | 60269   | 6.06  | ng/ul  | 97     |
| 40) Dibenzo(a,h)anthracene | 25.86 | 278 | 20571   | 2.52  | ng/ul# | 68     |
| 41) Benzo(g,h,i)perylene   | 26.57 | 276 | 48980   | 5.79  | ng/ul# | 93     |

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

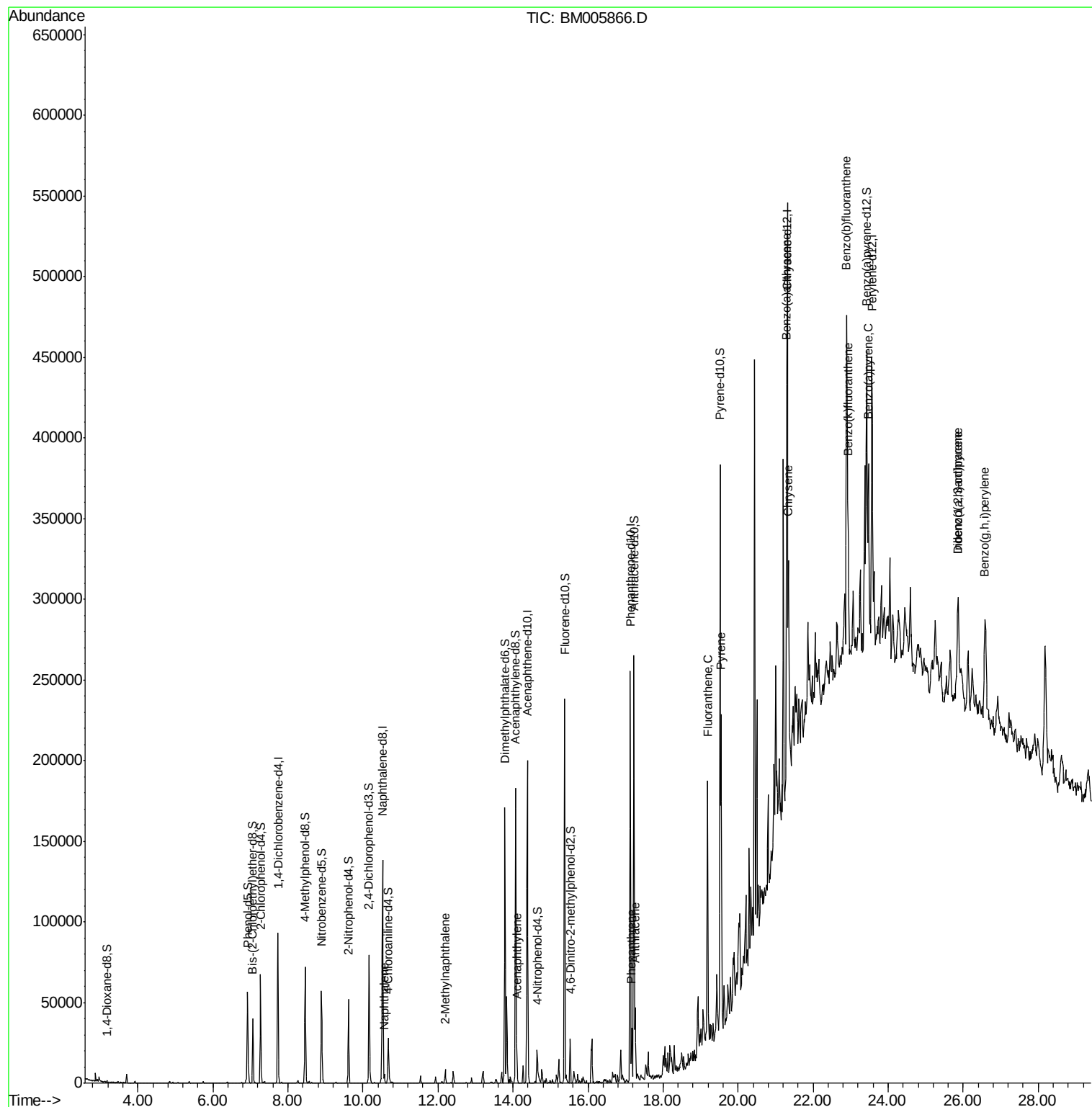
Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM061816\  
Data File : BM005866.D  
Acq On : 17 Jun 2016 18:03  
Operator : UM/SJ  
Sample : H3535-02  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

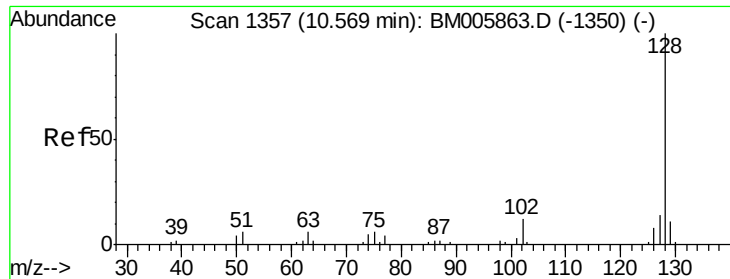
Instrument :  
BNA\_M  
ClientSampleId :  
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Quant Time: Jun 17 19:00:41 2016  
Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM02.2-EPA-BM061716.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Fri Jun 17 10:48:37 2016  
Response via : Initial Calibration

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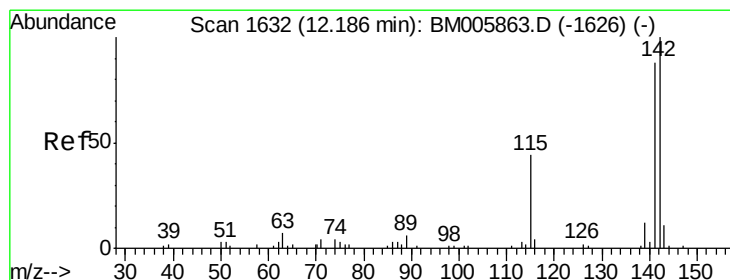
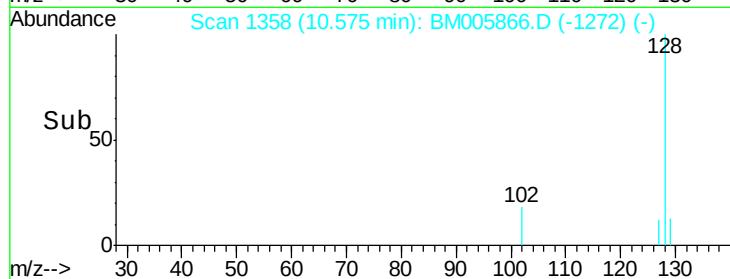
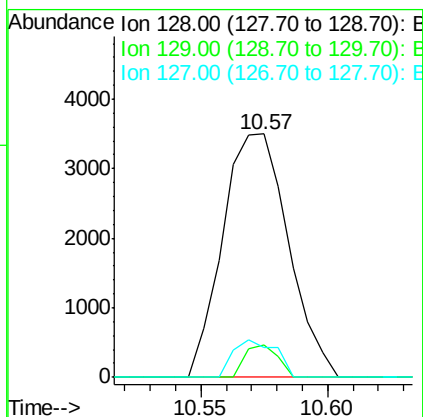
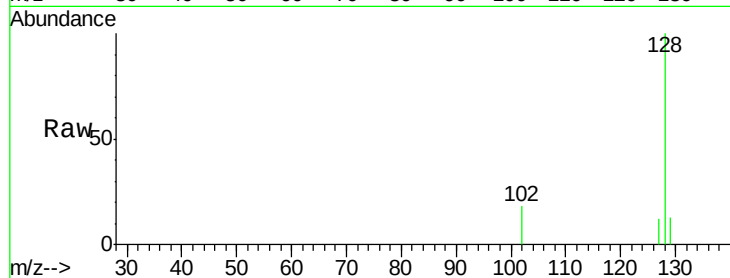
#11  
Naphthalene  
Concen: 1.05 ng/ul  
RT: 10.57 min Scan# 1358  
Delta R.T. 0.01 min  
Lab File: BM005866.D  
Acq: 17 Jun 2016 18:03

Instrument :  
BNA\_M  
ClientSampleId :  
D9XW2

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 129     | 13.4  | 9.0   | 13.4  |
| 127     | 12.5  | 10.9  | 16.3  |

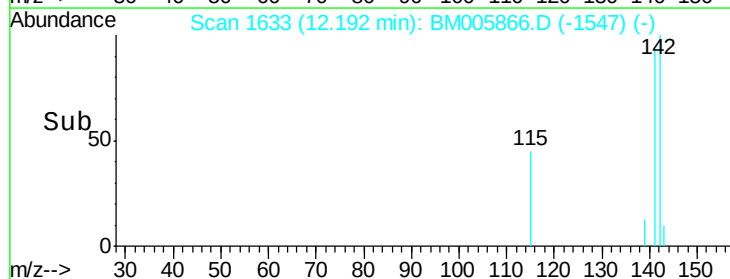
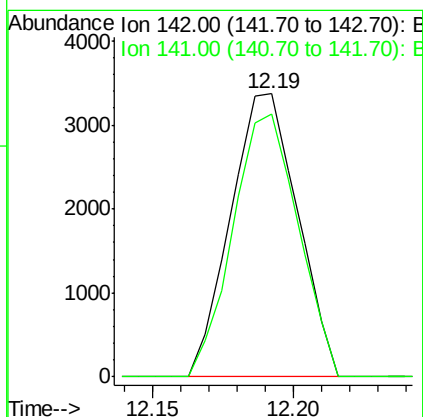
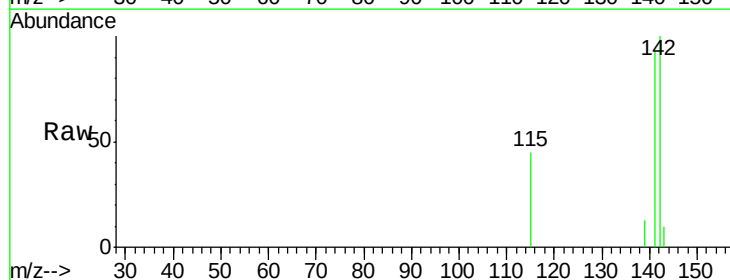
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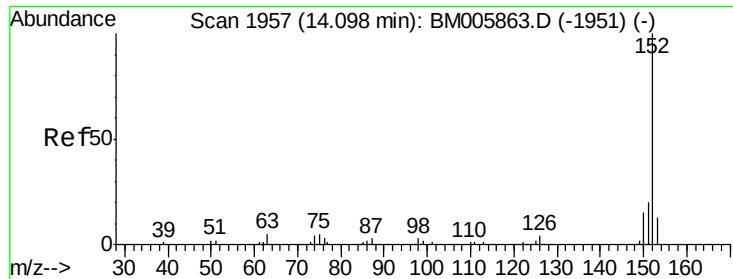
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#13  
2-Methylnaphthalene  
Concen: 1.21 ng/ul  
RT: 12.19 min Scan# 1633  
Delta R.T. 0.01 min  
Lab File: BM005866.D  
Acq: 17 Jun 2016 18:03

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 93.0  | 70.2  | 105.2 |





#18

Acenaphthylene

Concen: 2.24 ng/ul

RT: 14.10 min Scan# 1958

Delta R.T. 0.01 min

Lab File: BM005866.D

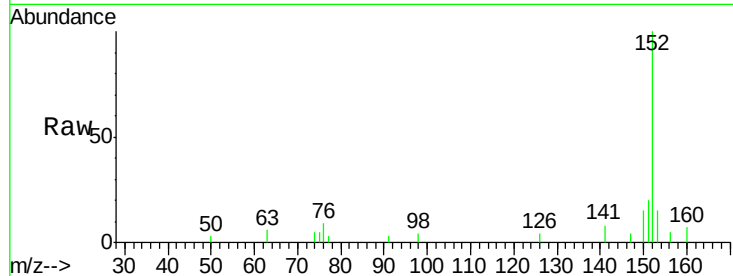
Acq: 17 Jun 2016 18:03

Instrument :

BNA\_M

ClientSampleId :

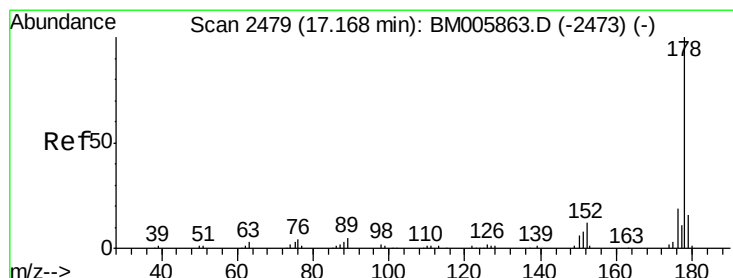
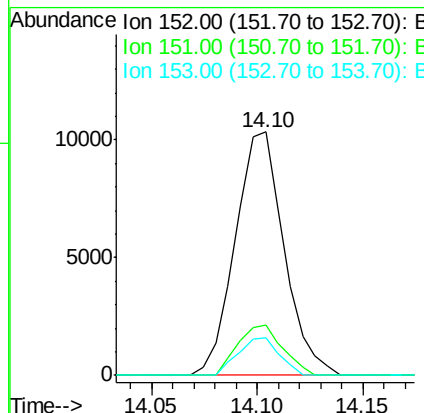
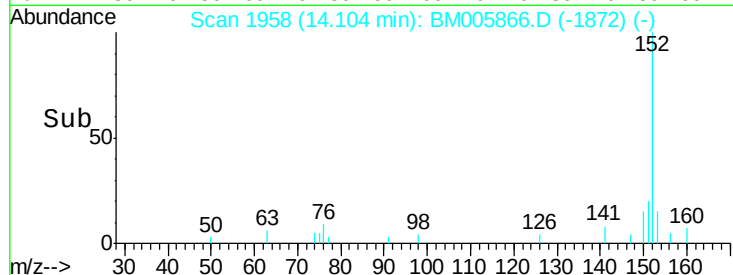
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| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 151     | 20.5  | 16.3  | 24.5  |
| 153     | 15.5  | 10.2  | 15.2# |

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#25

Phenanthrene

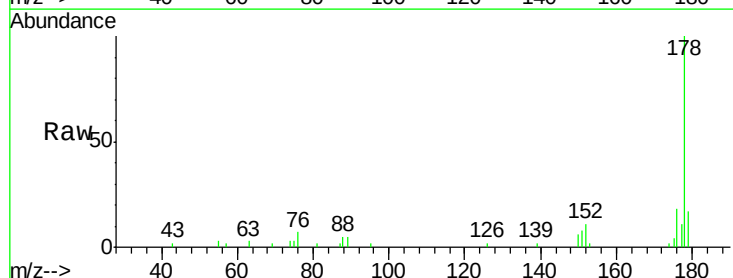
Concen: 2.45 ng/ul

RT: 17.17 min Scan# 2479

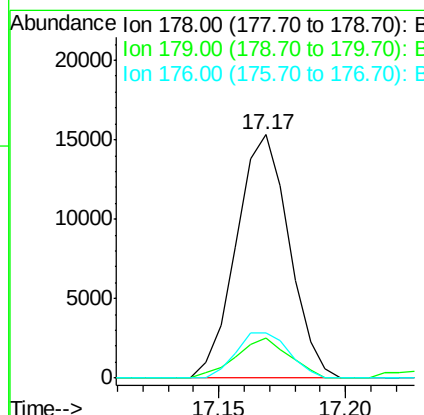
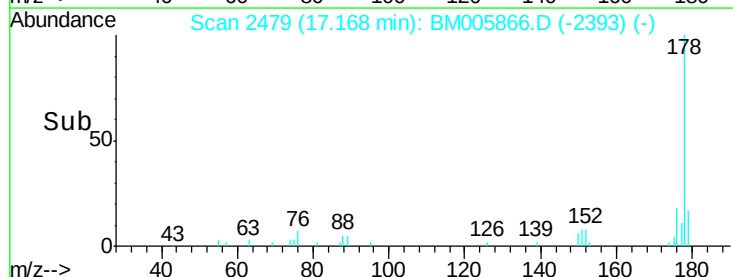
Delta R.T. 0.01 min

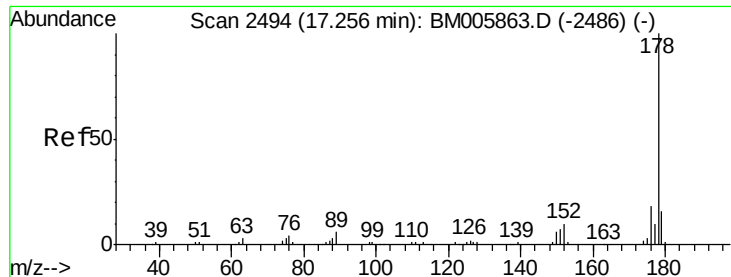
Lab File: BM005866.D

Acq: 17 Jun 2016 18:03



| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 179     | 16.6  | 12.0  | 18.0  |
| 176     | 18.3  | 14.9  | 22.3  |





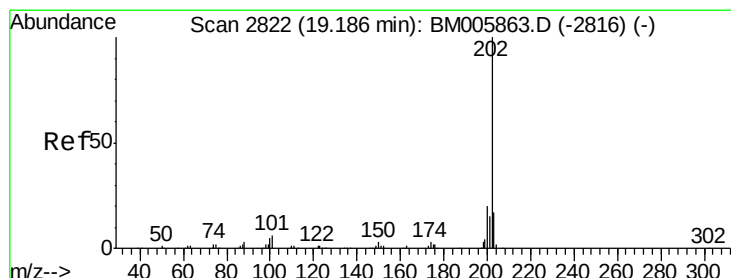
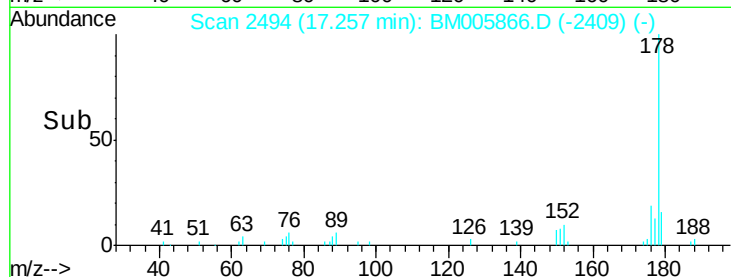
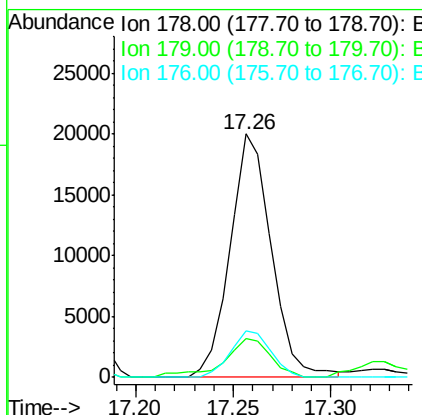
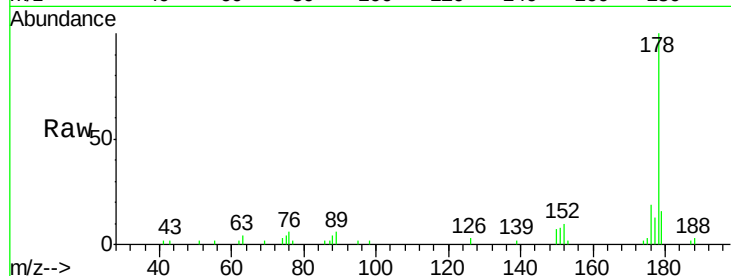
#27  
 Anthracene  
 Concen: 3.18 ng/ul  
 RT: 17.26 min Scan# 2494  
 Delta R.T. -0.00 min  
 Lab File: BM005866.D  
 Acq: 17 Jun 2016 18:03

Instrument :  
 BNA\_M  
 ClientSampleId :  
 D9XW2

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 179     | 15.7  | 11.9  | 17.9  |
| 176     | 19.0  | 14.8  | 22.2  |

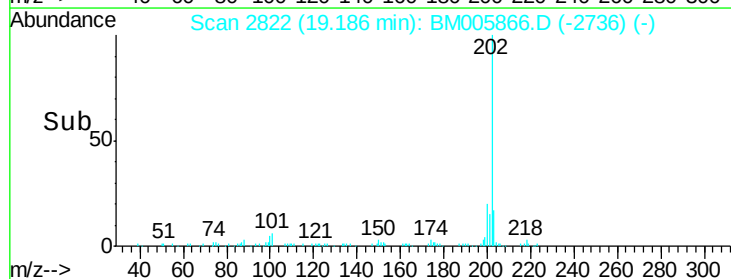
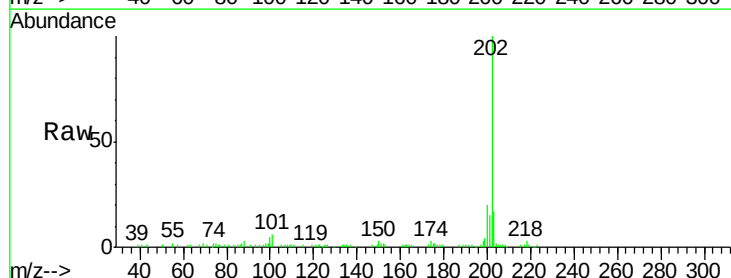
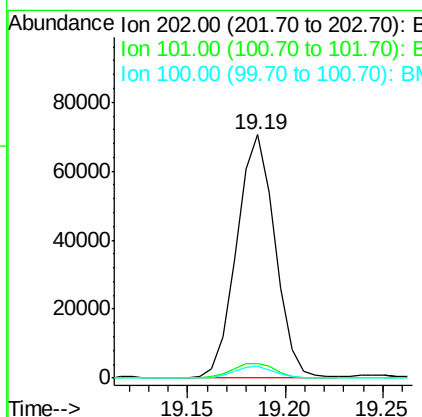
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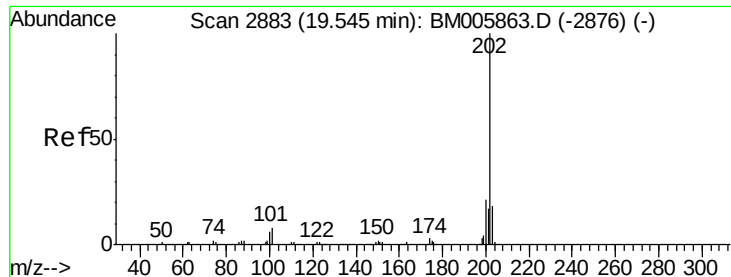
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#28  
 Fluoranthene  
 Concen: 8.47 ng/ul  
 RT: 19.19 min Scan# 2822  
 Delta R.T. 0.01 min  
 Lab File: BM005866.D  
 Acq: 17 Jun 2016 18:03

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 6.2   | 6.1   | 9.1   |
| 100     | 4.9   | 4.2   | 6.2   |





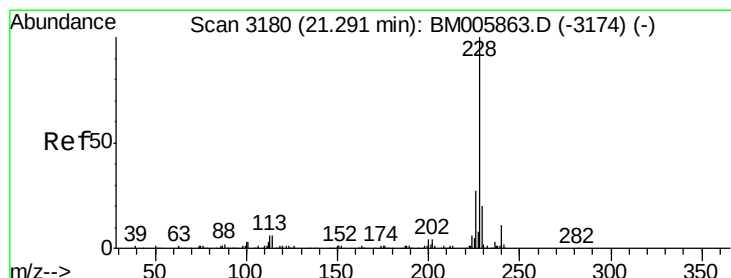
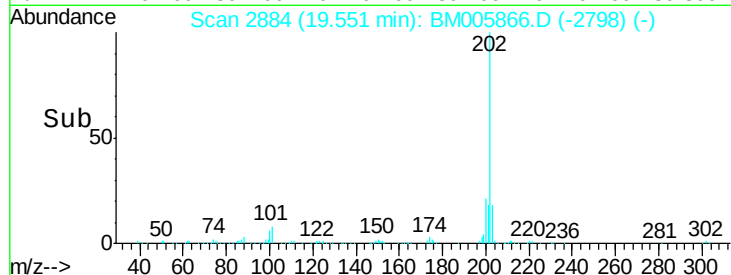
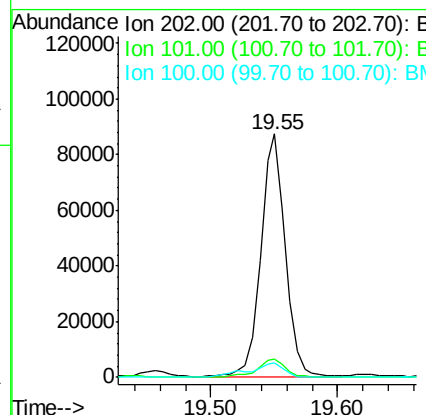
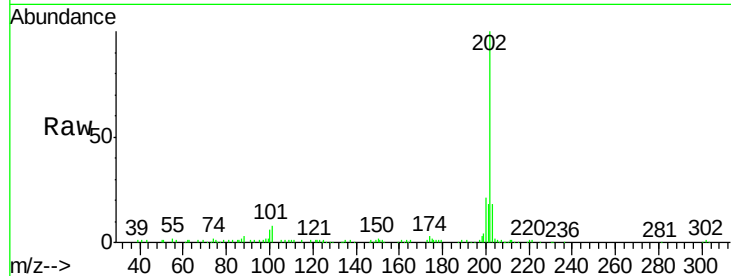
#31  
 Pyrene  
 Concen: 13.99 ng/ul  
 RT: 19.55 min Scan# 2884  
 Delta R.T. 0.01 min  
 Lab File: BM005866.D  
 Acq: 17 Jun 2016 18:03

Instrument :  
 BNA\_M  
 ClientSampleId :  
 D9XW2

| Tgt Ion | Ratio | Resp Lower | Resp Upper |
|---------|-------|------------|------------|
| 202     | 100   |            |            |
| 101     | 7.7   | 6.5        | 9.7        |
| 100     | 5.9   | 5.4        | 8.2        |

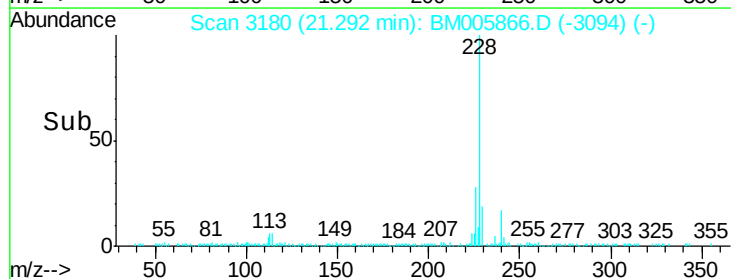
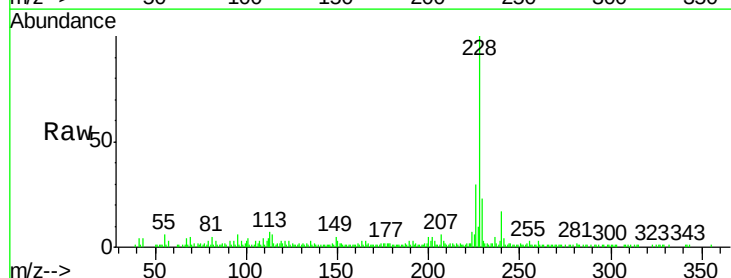
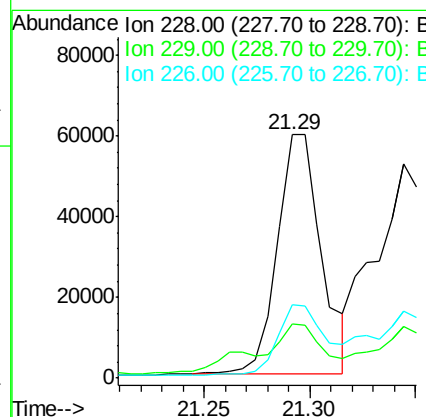
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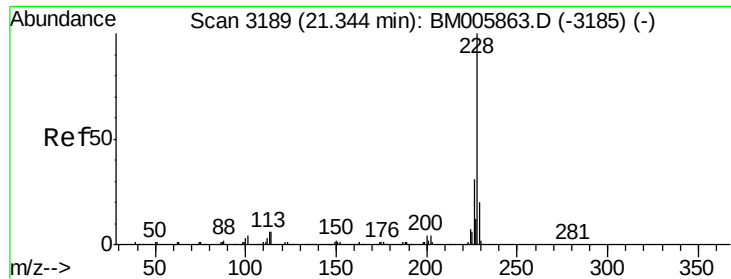
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#32  
 Benzo(a)anthracene  
 Concen: 9.67 ng/ul  
 RT: 21.29 min Scan# 3180  
 Delta R.T. 0.01 min  
 Lab File: BM005866.D  
 Acq: 17 Jun 2016 18:03

| Tgt Ion | Ratio | Resp Lower | Resp Upper |
|---------|-------|------------|------------|
| 228     | 100   |            |            |
| 229     | 22.5  | 15.8       | 23.6       |
| 226     | 29.9  | 21.8       | 32.6       |





#33

Chrysene

Concen: 10.39 ng/ul m

RT: 21.34 min Scan# 3189

Delta R.T. 0.01 min

Lab File: BM005866.D

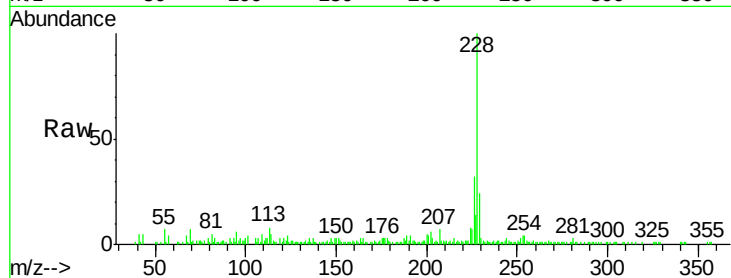
Acq: 17 Jun 2016 18:03

Instrument :

BNA\_M

ClientSampleId :

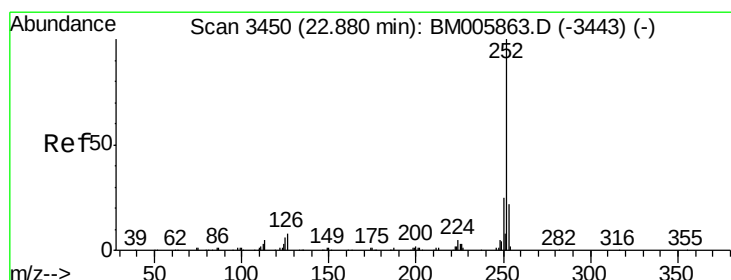
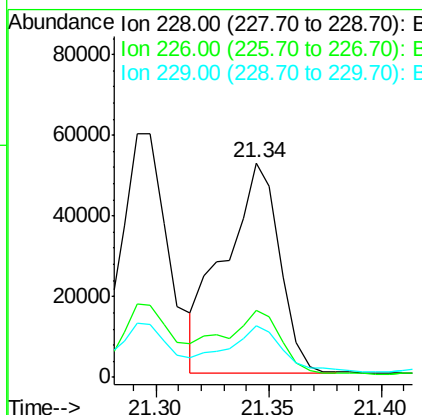
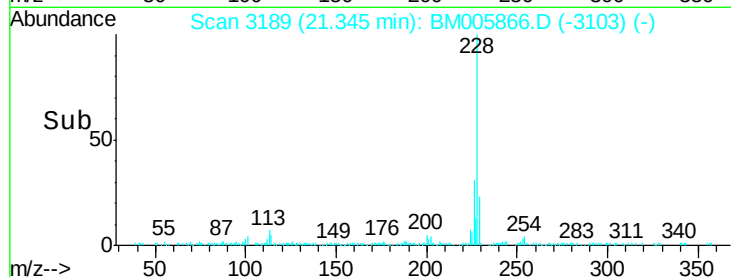
D9XW2



|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 228   | Resp: | 88795 |
| Ion Ratio | Lower | Upper |       |
| 228       | 100   |       |       |
| 226       | 31.5  | 23.5  | 35.3  |
| 229       | 24.0  | 15.4  | 23.0# |

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#35

Benzo(b)fluoranthene

Concen: 20.85 ng/ul m

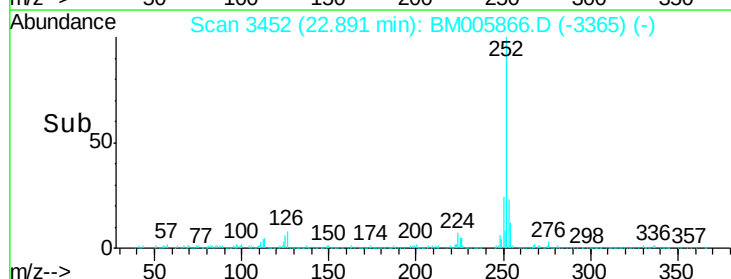
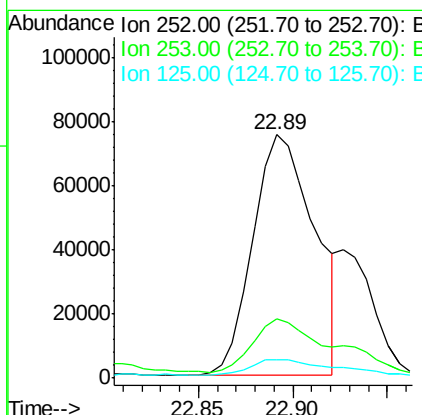
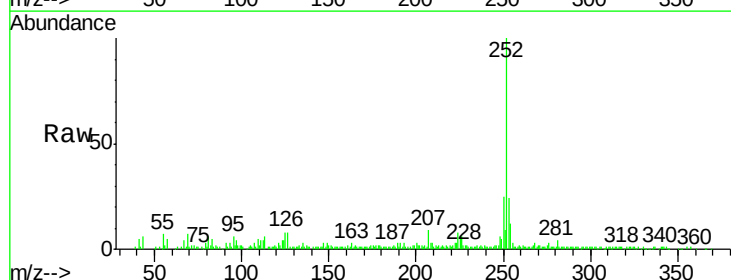
RT: 22.89 min Scan# 3452

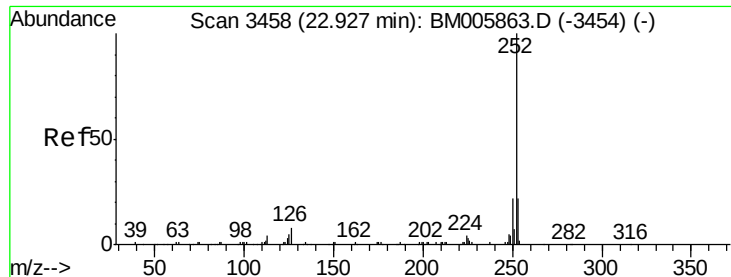
Delta R.T. 0.01 min

Lab File: BM005866.D

Acq: 17 Jun 2016 18:03

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 252   | Resp: | 172739 |
| Ion Ratio | Lower | Upper |        |
| 252       | 100   |       |        |
| 253       | 24.5  | 17.1  | 25.7   |
| 125       | 7.6   | 4.9   | 7.3#   |





#36

Benzo(k)fluoranthene

Concen: 6.21 ng/ul m

RT: 22.93 min Scan# 3458

Delta R.T. 0.01 min

Lab File: BM005866.D

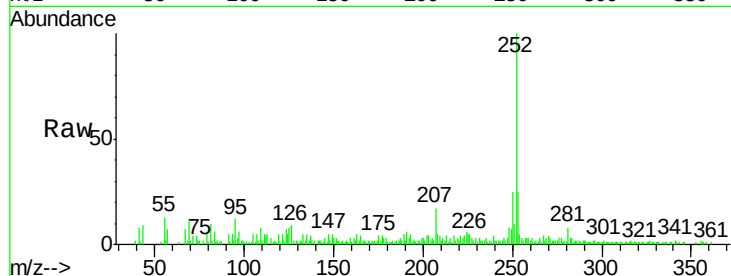
Acq: 17 Jun 2016 18:03

Instrument :

BNA\_M

ClientSampleId :

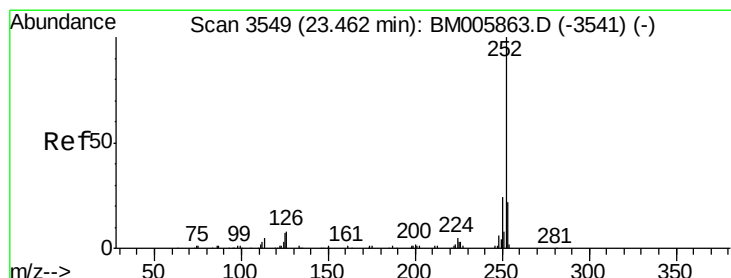
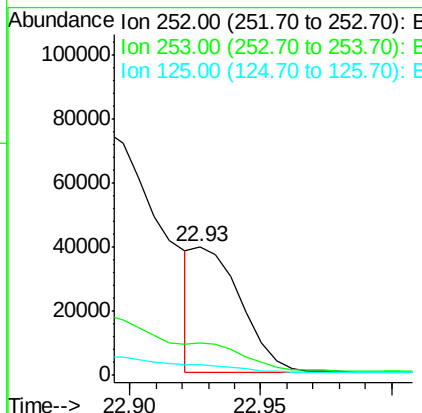
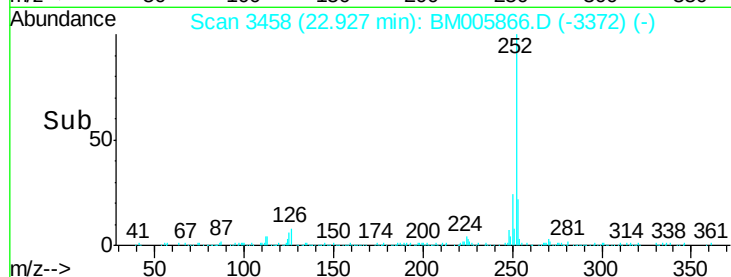
D9XW2



|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 252   | Resp: | 49687 |
| Ion Ratio | Lower | Upper |       |
| 252       | 100   |       |       |
| 253       | 25.0  | 17.5  | 26.3  |
| 125       | 8.1   | 4.8   | 7.2#  |

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#38

Benzo(a)pyrene

Concen: 10.10 ng/ul

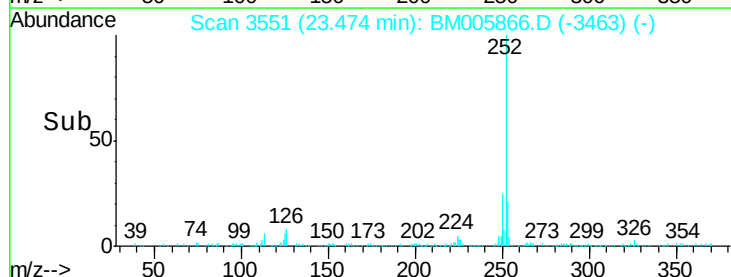
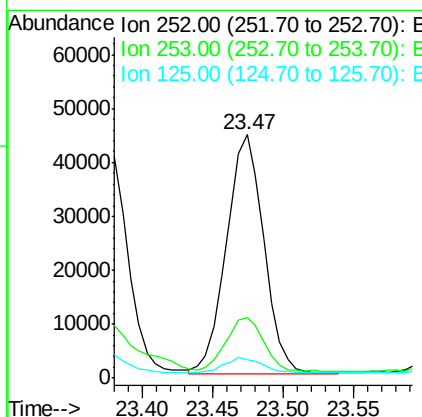
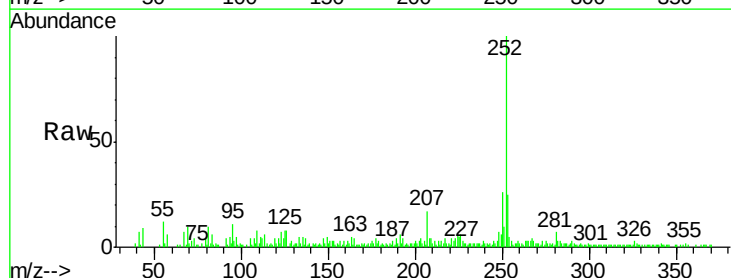
RT: 23.47 min Scan# 3551

Delta R.T. 0.02 min

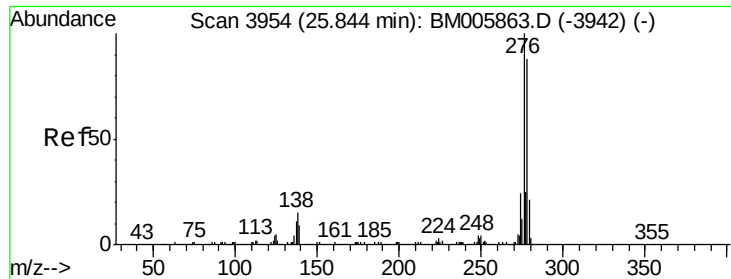
Lab File: BM005866.D

Acq: 17 Jun 2016 18:03

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 252   | Resp: | 82157 |
| Ion Ratio | Lower | Upper |       |
| 252       | 100   |       |       |
| 253       | 24.7  | 18.0  | 27.0  |
| 125       | 7.6   | 5.1   | 7.7   |







#39

Indeno(1,2,3-cd)pyrene

Concen: 6.06 ng/ul

RT: 25.86 min Scan# 3957

Delta R.T. 0.02 min

Lab File: BM005866.D

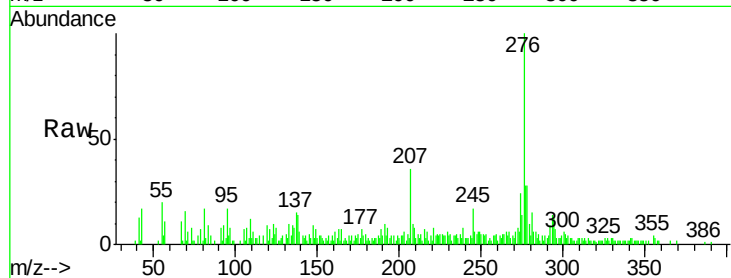
Acq: 17 Jun 2016 18:03

Instrument :

BNA\_M

ClientSampled :

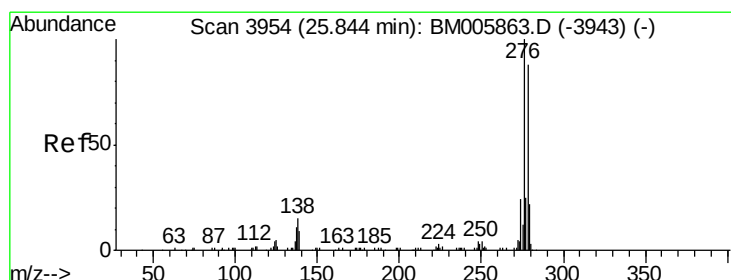
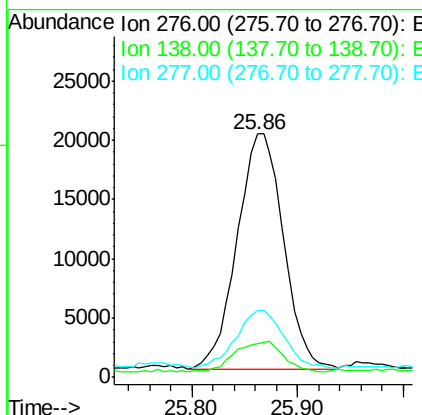
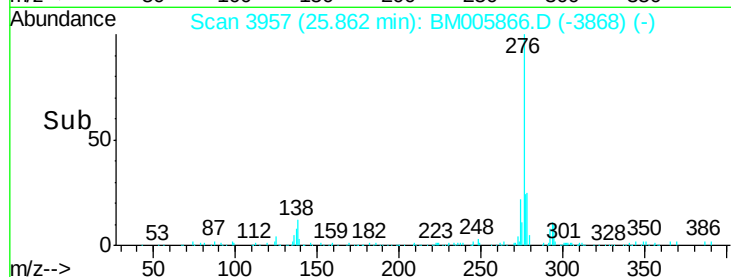
D9XW2



|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 276   | Resp: | 60269 |
| Ion Ratio | Lower | Upper |       |
| 276       | 100   |       |       |
| 138       | 13.9  | 11.9  | 17.9  |
| 277       | 27.7  | 21.0  | 31.6  |

Manual Integrations  
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6/19/2016 12:14:44 AM



#40

Dibenzo(a,h)anthracene

Concen: 2.52 ng/ul

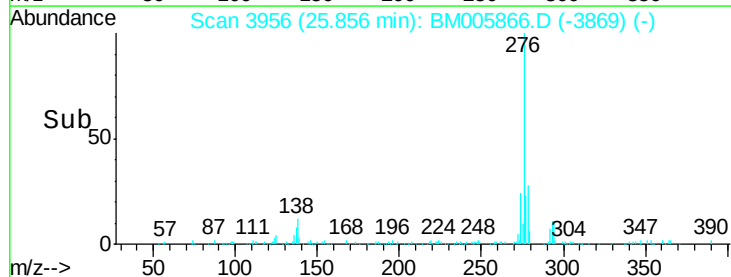
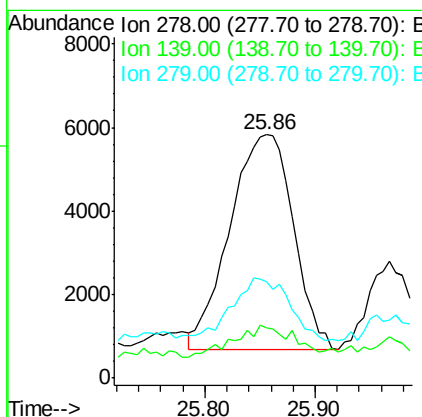
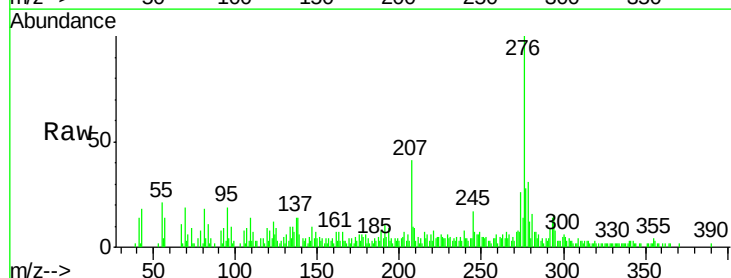
RT: 25.86 min Scan# 3956

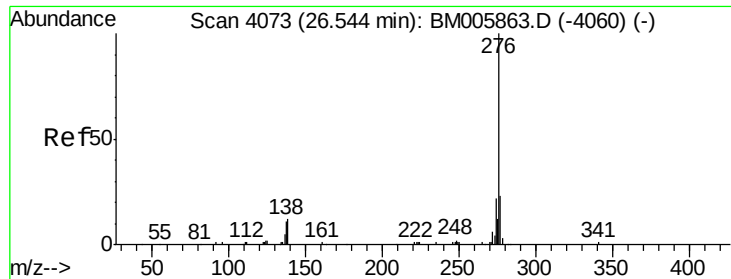
Delta R.T. 0.01 min

Lab File: BM005866.D

Acq: 17 Jun 2016 18:03

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 278   | Resp: | 20571 |
| Ion Ratio | Lower | Upper |       |
| 278       | 100   |       |       |
| 139       | 20.6  | 8.2   | 12.4# |
| 279       | 39.4  | 18.6  | 27.8# |





#41  
 Benzo(g,h,i)perylene  
 Concen: 5.79 ng/ul  
 RT: 26.57 min Scan# 4078  
 Delta R.T. 0.04 min  
 Lab File: BM005866.D  
 Acq: 17 Jun 2016 18:03

Instrument :  
 BNA\_M  
 ClientSampleId :  
 D9XW2

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 16.8  | 10.6  | 15.8# |
| 277     | 27.6  | 19.6  | 29.4  |

Manual Integrations  
 APPROVED

umangi  
 6/19/2016 12:14:44 AM

