

Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM061217\  
 Data File : BM010552.D  
 Acq On : 13 Jun 2017 01:21  
 Operator : SJ/MA  
 Sample : I3521-10DL 30X  
 Misc :  
 ALS Vial : 26 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 F5C58DL

Manual Integrations  
 APPROVED

mohammad  
 6/13/2017 3:54:51 PM

Quant Time: Jun 13 04:52:00 2017  
 Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM-EPA-BM052717.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Tue Jun 13 03:33:28 2017  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.89  | 152  | 102777   | 20.00 | ng/ul | 0.00     |
| 18) Naphthalene-d8        | 10.69 | 136  | 372428   | 20.00 | ng/ul | 0.00     |
| 35) Acenaphthene-d10      | 14.52 | 164  | 255290   | 20.00 | ng/ul | 0.00     |
| 61) Phenanthrene-d10      | 17.27 | 188  | 694204   | 20.00 | ng/ul | 0.00     |
| 75) Chrysene-d12          | 21.44 | 240  | 1030648  | 20.00 | ng/ul | 0.00     |
| 83) Perylene-d12          | 23.77 | 264  | 1044544  | 20.00 | ng/ul | 0.00     |

## System Monitoring Compounds

|                                |       |     |       |      |       |       |
|--------------------------------|-------|-----|-------|------|-------|-------|
| 3) 1,4-Dioxane-d8              | 0.00  | 96  | 0d    | 0.00 | ng/uL |       |
| 5) Phenol-d5                   | 7.08  | 99  | 2709  | 0.35 | ng/ul | 0.01  |
| 7) Bis-(2-Chloroethyl)ether-d  | 7.23  | 67  | 1980m | 0.45 | ng/ul | 0.00  |
| 9) 2-Chlorophenol-d4           | 7.43  | 132 | 3251m | 0.52 | ng/ul | 0.00  |
| 13) 4-Methylphenol-d8          | 0.00  | 113 | 0d    | 0.00 | ng/ul |       |
| 19) Nitrobenzene-d5            | 9.08  | 128 | 725   | 0.27 | ng/ul | 0.00  |
| 22) 2-Nitrophenol-d4           | 9.79  | 143 | 2353  | 0.74 | ng/ul | 0.00  |
| 26) 2,4-Dichlorophenol-d3      | 10.33 | 165 | 3327  | 0.51 | ng/ul | 0.02  |
| 29) 4-Chloroaniline-d4         | 10.87 | 131 | 6469m | 1.03 | ng/ul | 0.01  |
| 43) Dimethylphthalate-d6       | 13.94 | 166 | 17177 | 0.81 | ng/ul | 0.00  |
| 46) Acenaphthylene-d8          | 14.23 | 160 | 16127 | 0.65 | ng/ul | 0.00  |
| 51) 4-Nitrophenol-d4           | 0.00  | 143 | 0d    | 0.00 | ng/ul |       |
| 57) Fluorene-d10               | 15.52 | 176 | 15551 | 0.83 | ng/ul | 0.00  |
| 62) 4,6-Dinitro-2-methylphenol | 15.66 | 200 | 2012  | 0.41 | ng/ul | 0.01  |
| 70) Anthracene-d10             | 17.37 | 188 | 21533 | 0.64 | ng/ul | 0.00  |
| 76) Pyrene-d10                 | 19.66 | 212 | 27478 | 0.64 | ng/ul | 0.00  |
| 87) Benzo(a)pyrene-d12         | 23.61 | 264 | 32739 | 0.67 | ng/ul | -0.02 |

## Target Compounds

|                          |       |     |         |        | Qvalue |     |
|--------------------------|-------|-----|---------|--------|--------|-----|
| 28) Naphthalene          | 10.74 | 128 | 1618748 | 86.657 | ng/ul  | 99  |
| 34) 2-Methylnaphthalene  | 12.34 | 142 | 558598  | 39.441 | ng/ul  | 98  |
| 40) 1,1'-Biphenyl        | 13.36 | 154 | 161292  | 7.788  | ng/ul  | 94  |
| 49) Acenaphthene         | 14.59 | 153 | 475080  | 28.014 | ng/ul  | 97  |
| 53) Dibenzofuran         | 14.92 | 168 | 641223  | 25.571 | ng/ul  | 99  |
| 58) Fluorene             | 15.57 | 166 | 630348  | 30.645 | ng/ul  | 99  |
| 69) Phenanthrene         | 17.32 | 178 | 3117038 | 84.107 | ng/ul  | 99  |
| 71) Anthracene           | 17.40 | 178 | 307083  | 7.937  | ng/ul  | 96  |
| 72) Carbazole            | 17.69 | 167 | 139123  | 4.248  | ng/ul  | 97  |
| 74) Fluoranthene         | 19.32 | 202 | 1837249 | 40.314 | ng/ul# | 96  |
| 77) Pyrene               | 19.69 | 202 | 1185534 | 22.322 | ng/ul# | 93  |
| 80) Benzo(a)anthracene   | 21.42 | 228 | 383801  | 6.604  | ng/ul  | 99  |
| 82) Chrysene             | 21.47 | 228 | 302891  | 5.765  | ng/ul  | 96  |
| 85) Benzo(b)fluoranthene | 23.06 | 252 | 220515  | 3.628  | ng/ul  | 100 |
| 86) Benzo(k)fluoranthene | 23.10 | 252 | 67415m  | 1.161  | ng/ul  |     |
| 88) Benzo(a)pyrene       | 23.67 | 252 | 121219  | 2.012  | ng/ul  | 96  |

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

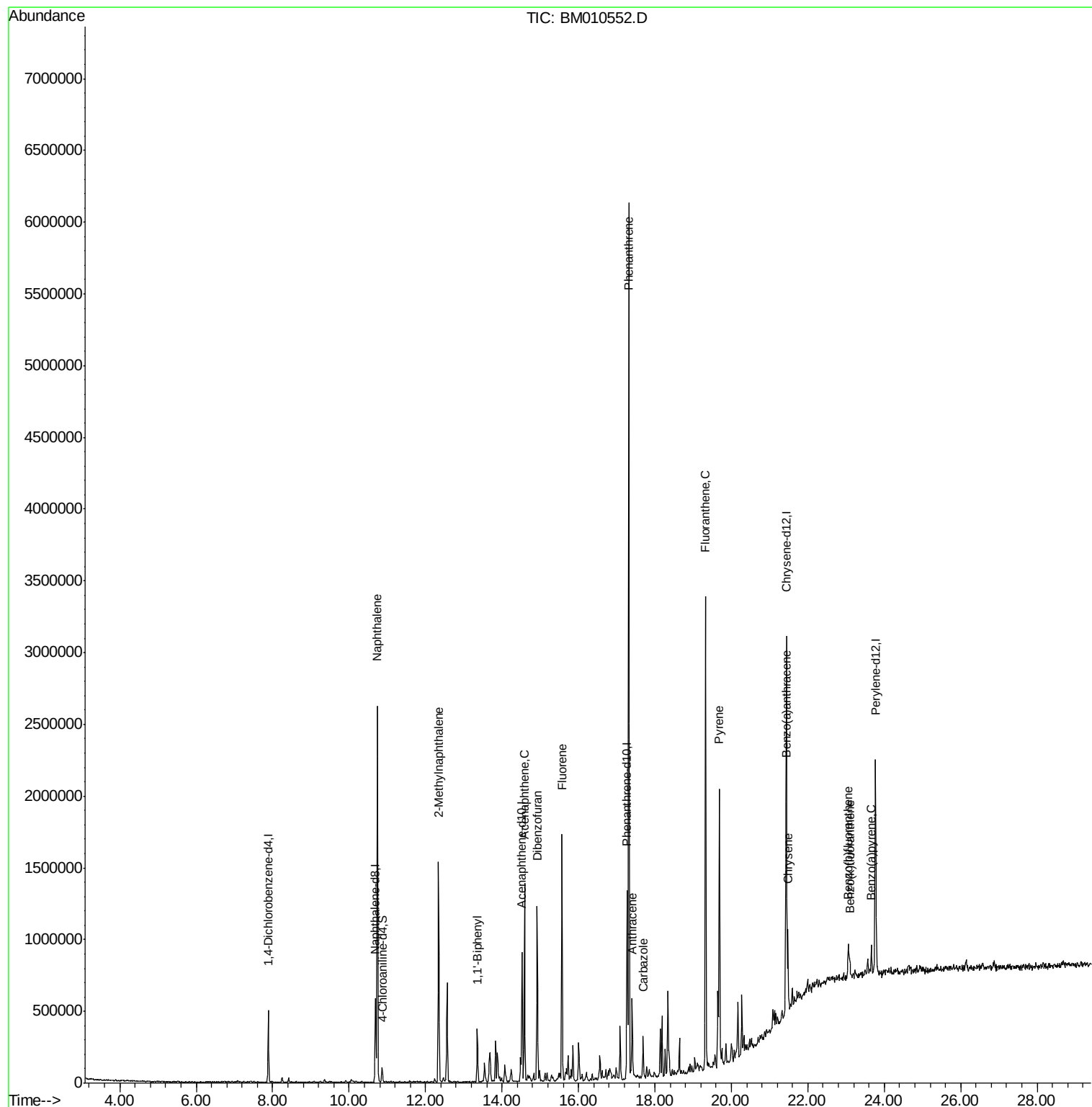
Data Path : Z:\HPCHEM1\BNA\_M\DATA\BM061217\  
Data File : BM010552.D  
Acq On : 13 Jun 2017 01:21  
Operator : SJ/MA  
Sample : I3521-10DL 30X  
Misc :  
ALS Vial : 26 Sample Multiplier: 1

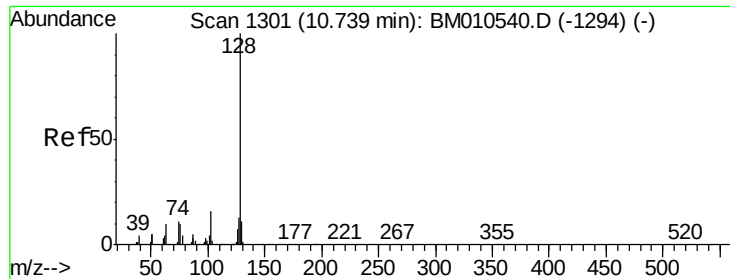
Instrument :  
BNA\_M  
ClientSampleId :  
F5C58DL

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Quant Time: Jun 13 04:52:00 2017  
Quant Method : Z:\HPCHEM1\BNA\_M\METHODS\SOM-EPA-BM052717.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Tue Jun 13 03:33:28 2017  
Response via : Initial Calibration





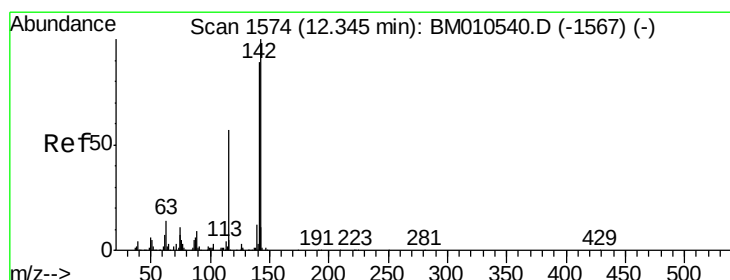
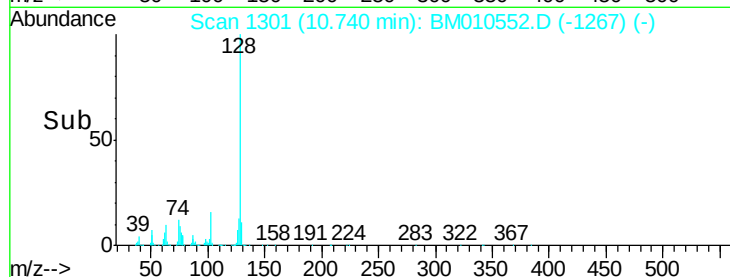
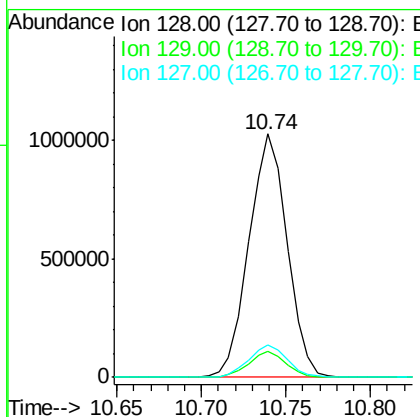
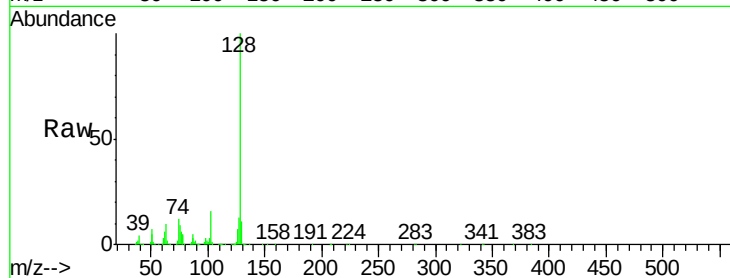
#28  
Naphthalene  
Concen: 86.657 ng/ul  
RT: 10.74 min Scan# 1301  
Delta R.T. 0.00 min  
Lab File: BM010552.D  
Acq: 13 Jun 2017 01:21

Instrument :  
BNA\_M  
ClientSampleId :  
F5C58DL

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 129     | 10.6  | 8.8   | 13.2  |
| 127     | 13.1  | 10.6  | 16.0  |

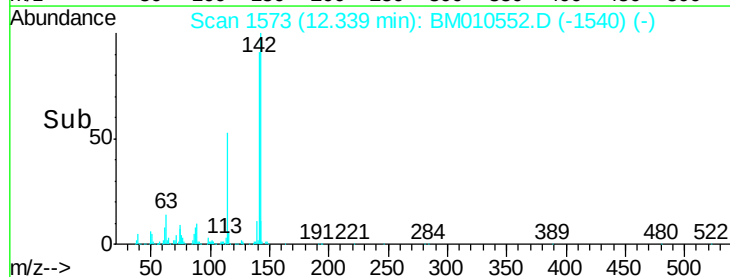
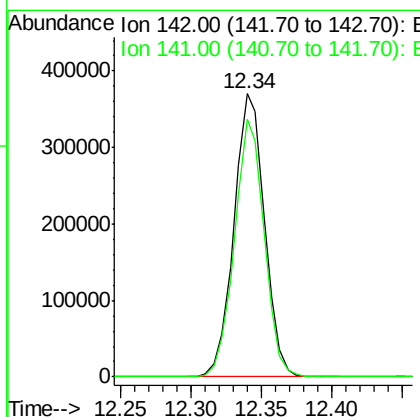
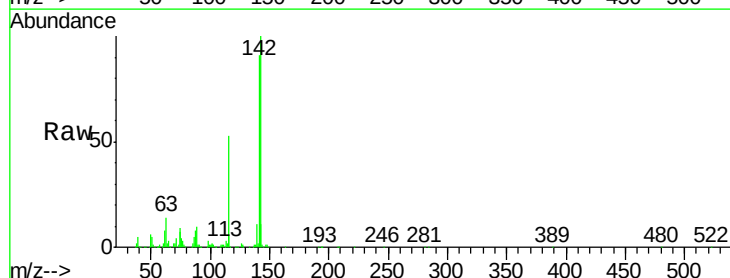
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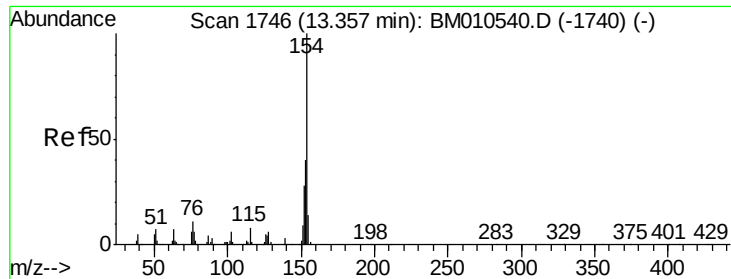
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#34  
2-Methylnaphthalene  
Concen: 39.441 ng/ul  
RT: 12.34 min Scan# 1573  
Delta R.T. -0.01 min  
Lab File: BM010552.D  
Acq: 13 Jun 2017 01:21

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 90.9  | 74.1  | 111.1 |





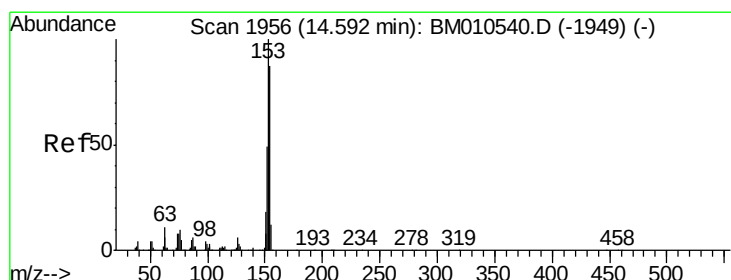
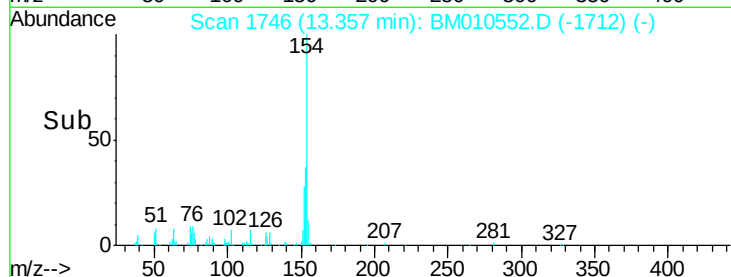
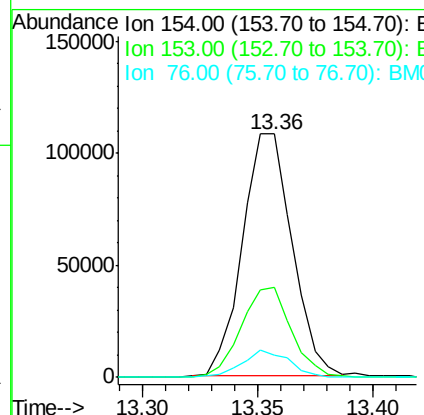
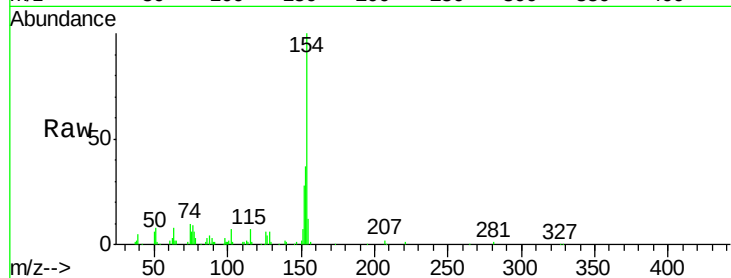
#40  
 1,1'-Biphenyl  
 Concen: 7.788 ng/ul  
 RT: 13.36 min Scan# 1746  
 Delta R.T. 0.00 min  
 Lab File: BM010552.D  
 Acq: 13 Jun 2017 01:21

Instrument :  
 BNA\_M  
 ClientSampleId :  
 F5C58DL

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 154     | 100   | 161292 |       |       |
| 153     | 36.9  | 32.6   | 48.8  |       |
| 76      | 9.3   | 8.5    | 12.7  |       |

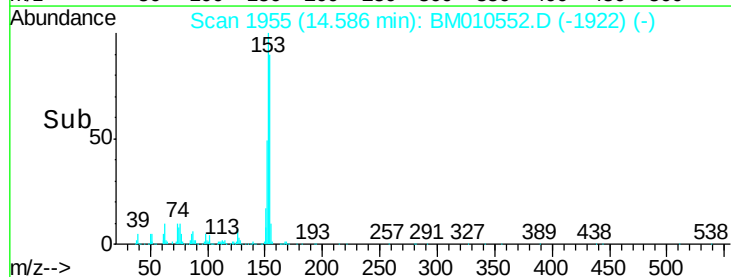
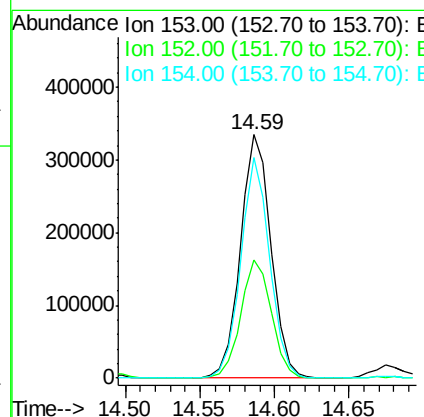
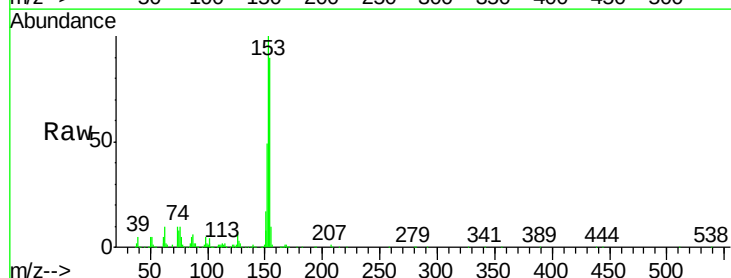
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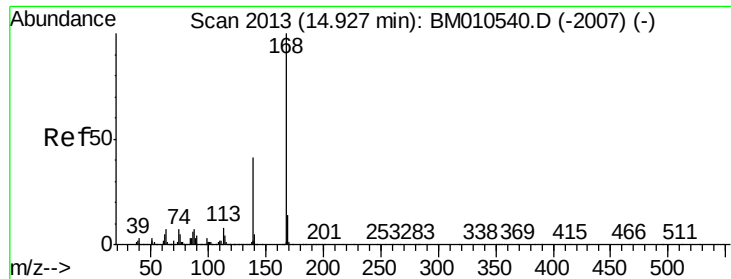
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#49  
 Acenaphthene  
 Concen: 28.014 ng/ul  
 RT: 14.59 min Scan# 1955  
 Delta R.T. -0.01 min  
 Lab File: BM010552.D  
 Acq: 13 Jun 2017 01:21

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 153     | 100   | 475080 |       |       |
| 152     | 48.7  | 37.6   | 56.4  |       |
| 154     | 90.4  | 70.4   | 105.6 |       |





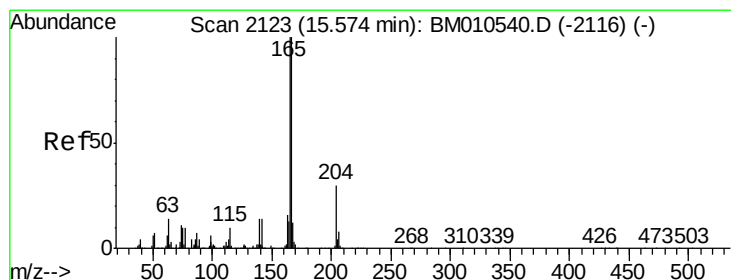
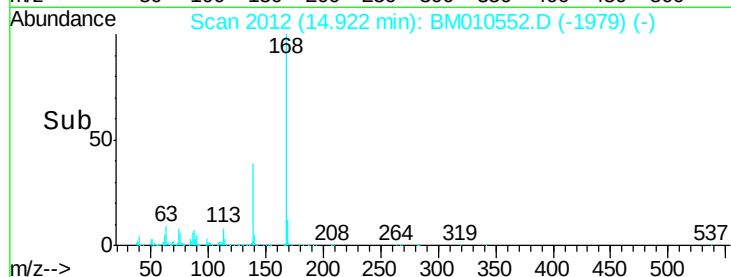
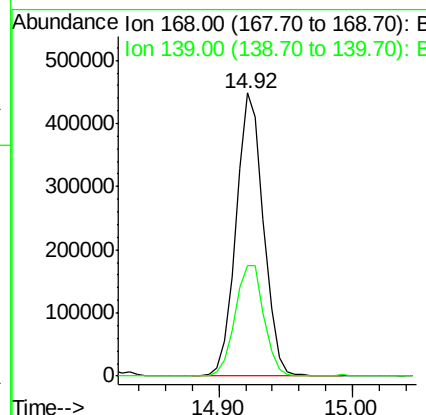
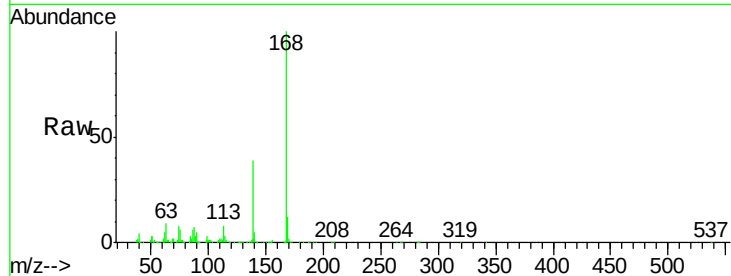
#53  
Dibenzenofuran  
Concen: 25.571 ng/ul  
RT: 14.92 min Scan# 2012  
Delta R.T. -0.01 min  
Lab File: BM010552.D  
Acq: 13 Jun 2017 01:21

Instrument :  
BNA\_M  
ClientSampleId :  
F5C58DL

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 168     | 100   |       |       |
| 139     | 39.0  | 30.8  | 46.2  |

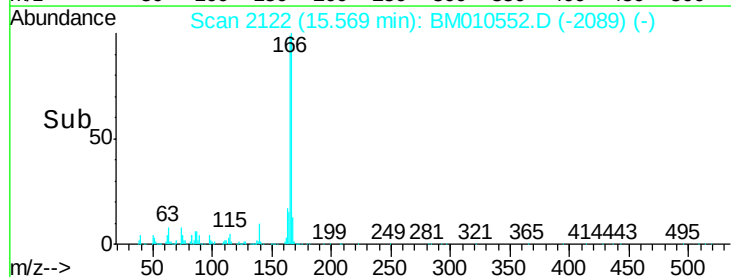
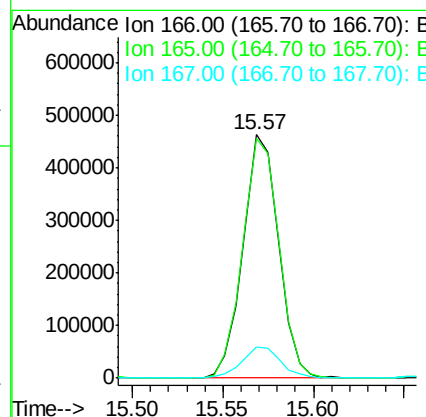
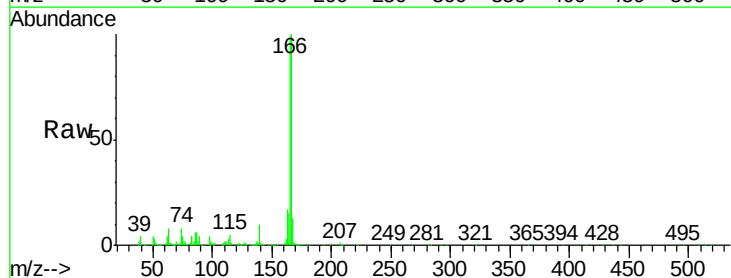
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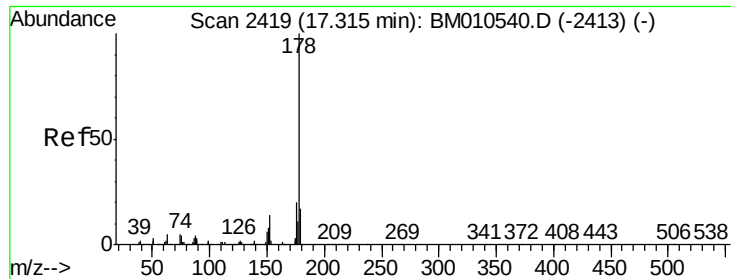
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#58  
Fluorene  
Concen: 30.645 ng/ul  
RT: 15.57 min Scan# 2122  
Delta R.T. -0.01 min  
Lab File: BM010552.D  
Acq: 13 Jun 2017 01:21

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 166     | 100   |       |       |
| 165     | 98.7  | 77.9  | 116.9 |
| 167     | 13.0  | 10.6  | 16.0  |





#69

Phenanthrene

Concen: 84.107 ng/ul

RT: 17.32 min Scan# 2419

Delta R.T. 0.00 min

Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

Instrument :

BNA\_M

ClientSampleId :

F5C58DL

Tgt Ion:178 Resp: 3117038

Ion Ratio Lower Upper

178 100

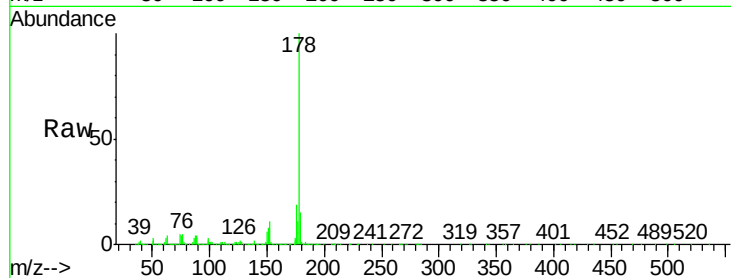
179 15.0 12.6 19.0

176 19.0 14.9 22.3

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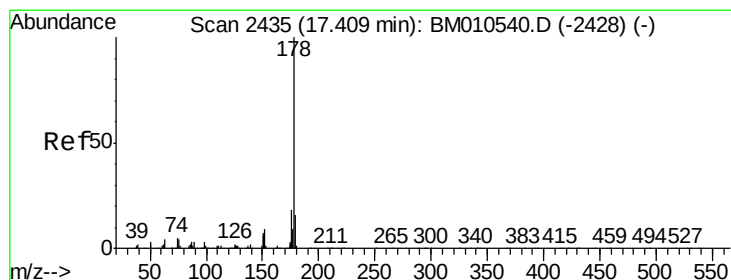
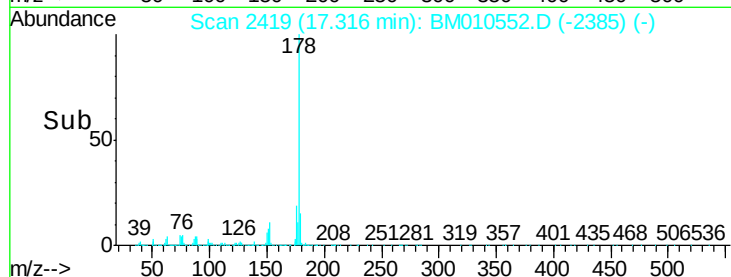
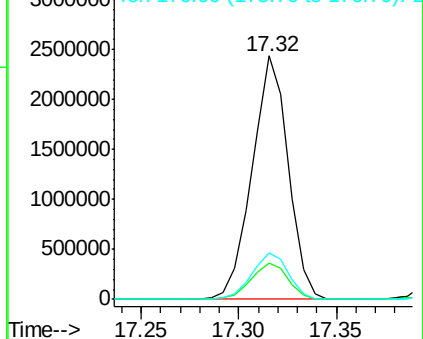
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Abundance Ion 178.00 (177.70 to 178.70): E

Ion 179.00 (178.70 to 179.70): E

Ion 176.00 (175.70 to 176.70): E



#71

Anthracene

Concen: 7.937 ng/ul

RT: 17.40 min Scan# 2434

Delta R.T. -0.01 min

Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

Tgt Ion:178 Resp: 307083

Ion Ratio Lower Upper

178 100

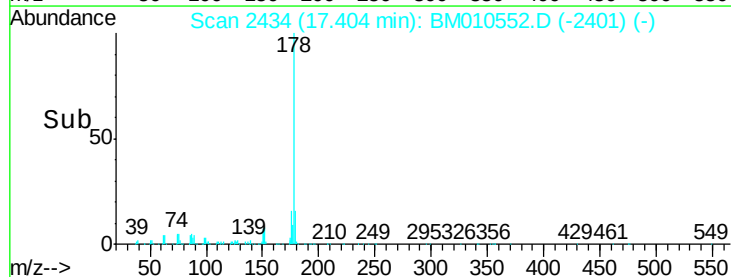
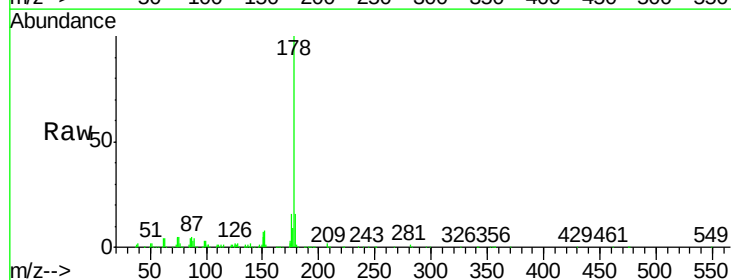
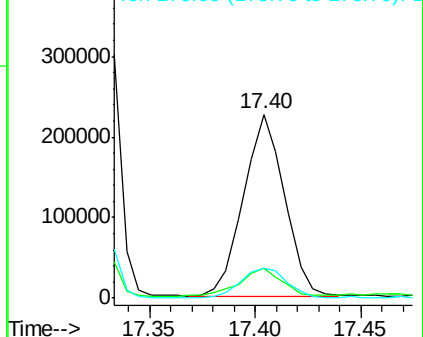
179 16.4 11.7 17.5

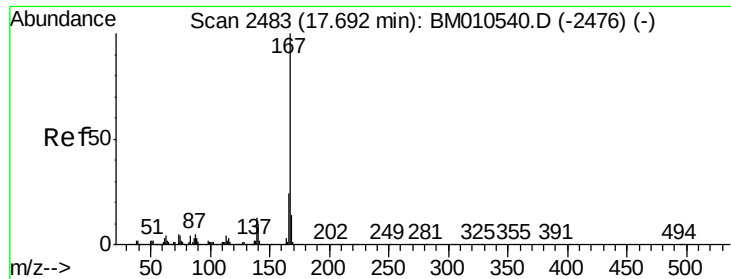
176 16.3 14.6 21.8

Abundance Ion 178.00 (177.70 to 178.70): E

Ion 179.00 (178.70 to 179.70): E

Ion 176.00 (175.70 to 176.70): E





#72

Carbazole

Concen: 4.248 ng/ul

RT: 17.69 min Scan# 2483

Delta R.T. 0.00 min

Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

Instrument :

BNA\_M

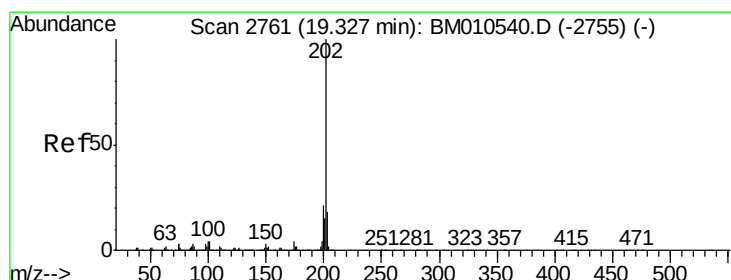
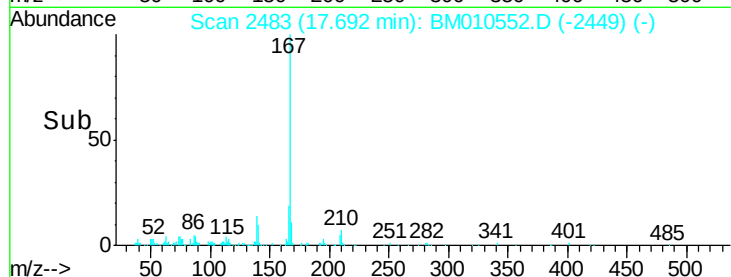
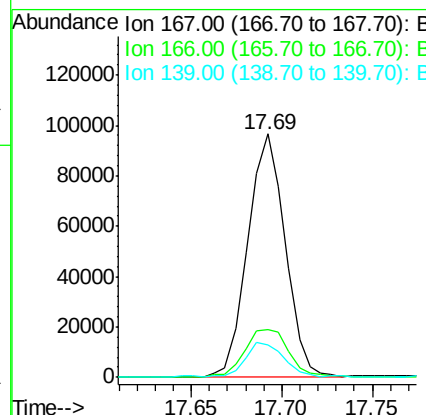
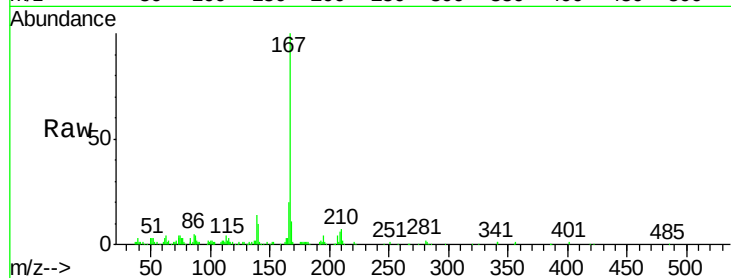
ClientSampleId :

F5C58DL

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 167   | Resp: | 139123 |
| Ion Ratio | Lower | Upper |        |
| 167       | 100   |       |        |
| 166       | 19.9  | 17.1  | 25.7   |
| 139       | 13.6  | 10.0  | 15.0   |

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#74

Fluoranthene

Concen: 40.314 ng/ul

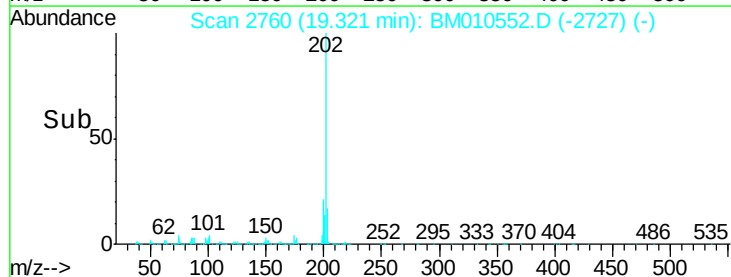
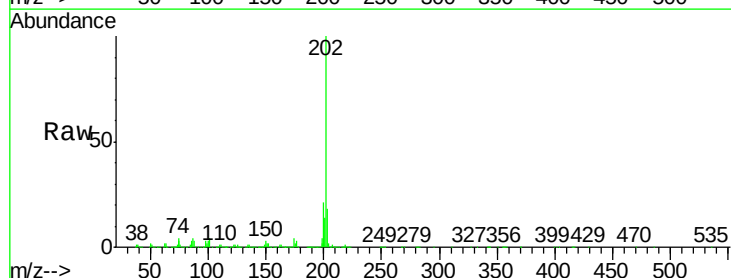
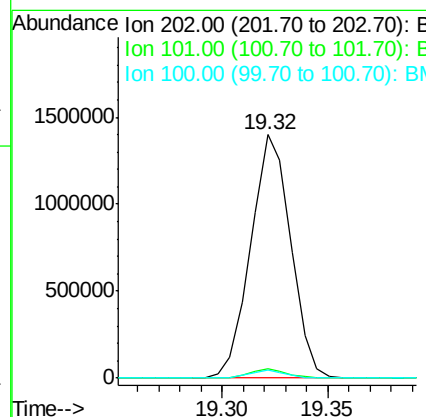
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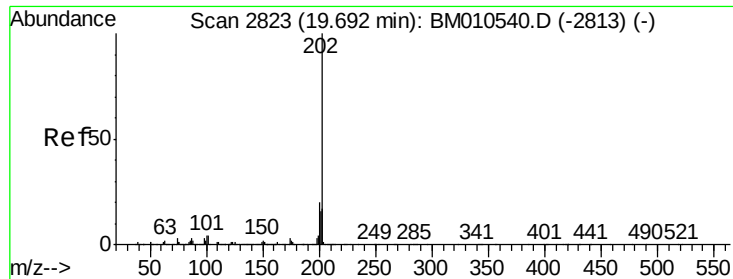
Delta R.T. -0.01 min

Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

|           |       |       |         |
|-----------|-------|-------|---------|
| Tgt Ion:  | 202   | Resp: | 1837249 |
| Ion Ratio | Lower | Upper |         |
| 202       | 100   |       |         |
| 101       | 3.9   | 4.6   | 7.0#    |
| 100       | 3.4   | 3.4   | 5.2#    |





#77

Pyrene

Concen: 22.322 ng/ul

RT: 19.69 min Scan# 2822

Delta R.T. -0.01 min

Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

Instrument :

BNA\_M

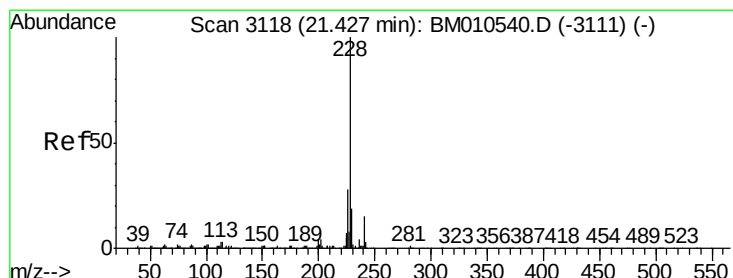
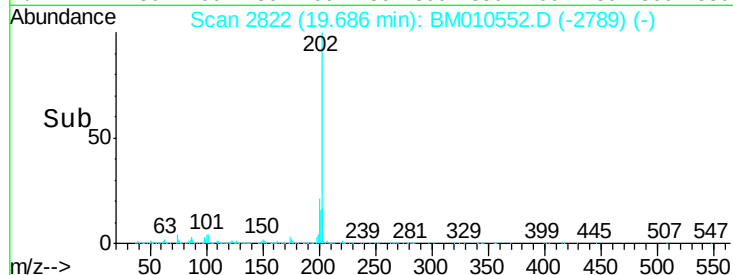
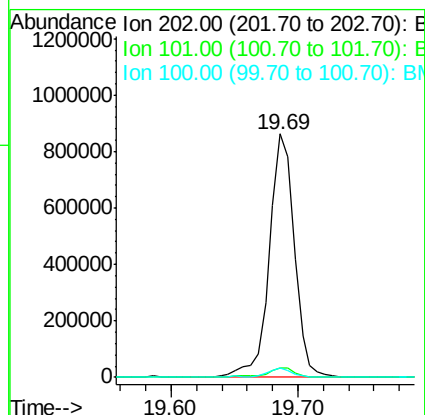
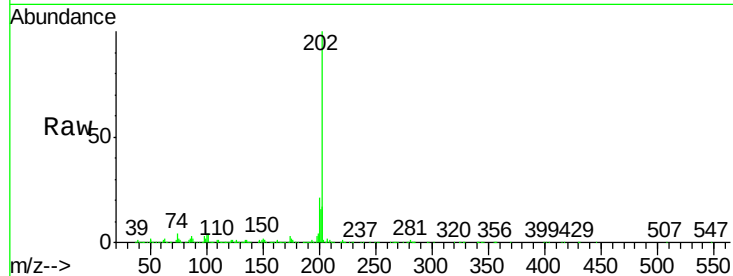
ClientSampleId :

F5C58DL

|           |       |       |         |
|-----------|-------|-------|---------|
| Tgt Ion:  | 202   | Resp: | 1185534 |
| Ion Ratio | Lower | Upper |         |
| 202       | 100   |       |         |
| 101       | 4.0   | 5.1   | 7.7#    |
| 100       | 3.6   | 4.9   | 7.3#    |

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#80

Benzo(a)anthracene

Concen: 6.604 ng/ul

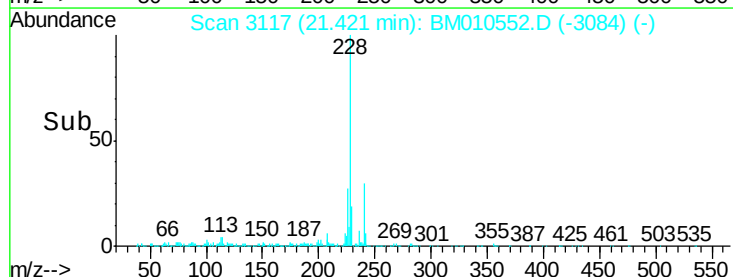
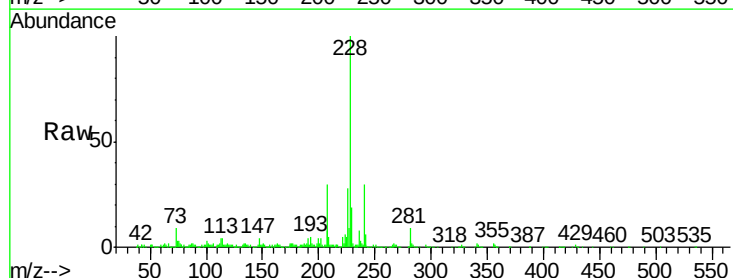
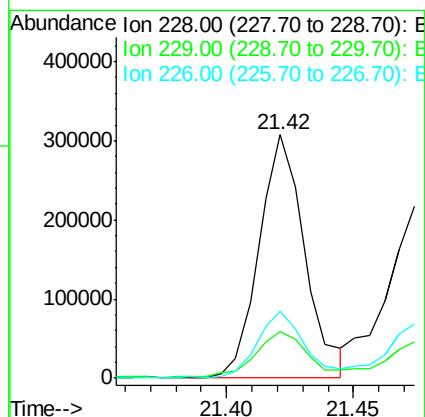
RT: 21.42 min Scan# 3117

Delta R.T. -0.01 min

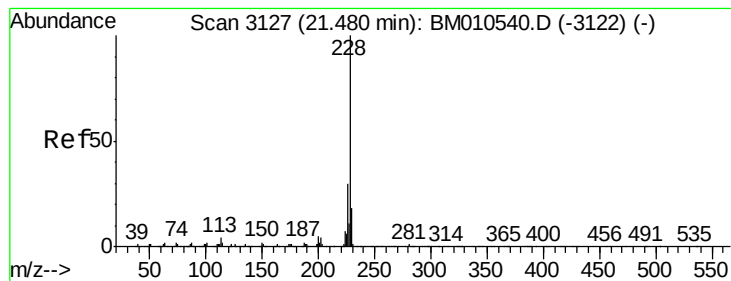
Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 228   | Resp: | 383801 |
| Ion Ratio | Lower | Upper |        |
| 228       | 100   |       |        |
| 229       | 19.1  | 15.4  | 23.0   |
| 226       | 27.6  | 21.4  | 32.0   |







#82

Chrysene

Concen: 5.765 ng/ul

RT: 21.47 min Scan# 3126

Delta R.T. -0.01 min

Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

Instrument :

BNA\_M

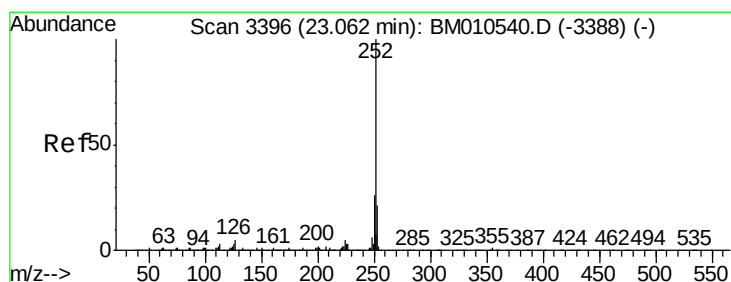
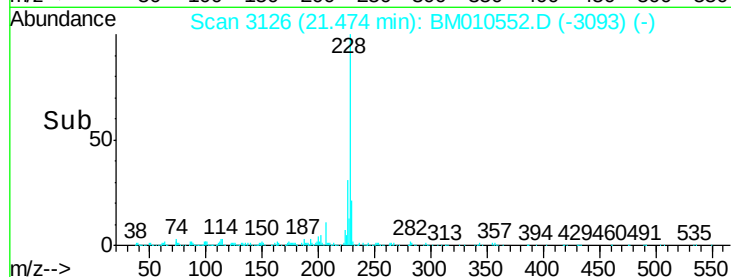
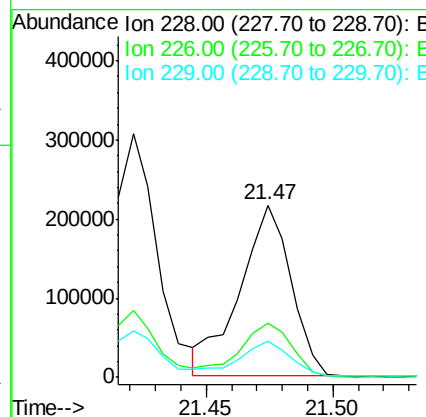
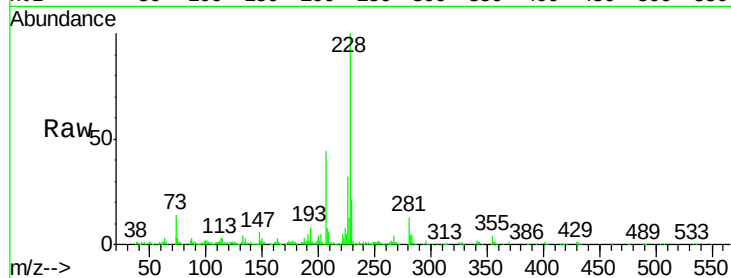
ClientSampleId :

F5C58DL

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 228   | Resp: | 302891 |
| Ion Ratio | Lower | Upper |        |
| 228       | 100   |       |        |
| 226       | 31.6  | 23.4  | 35.2   |
| 229       | 21.0  | 15.5  | 23.3   |

Manual Integrations  
APPROVED

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6/13/2017 3:54:51 PM



#85

Benzo(b)fluoranthene

Concen: 3.628 ng/ul

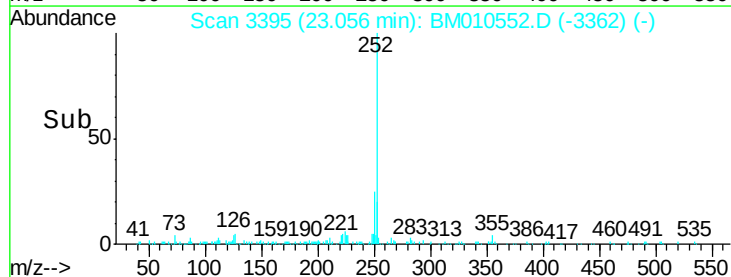
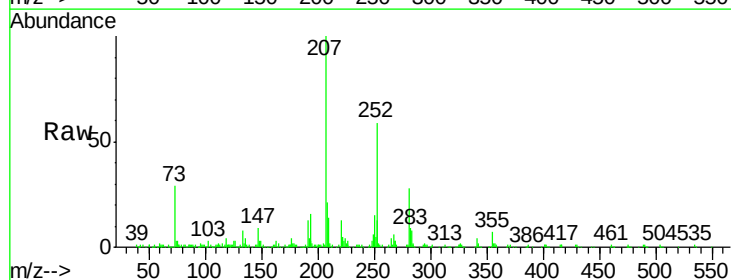
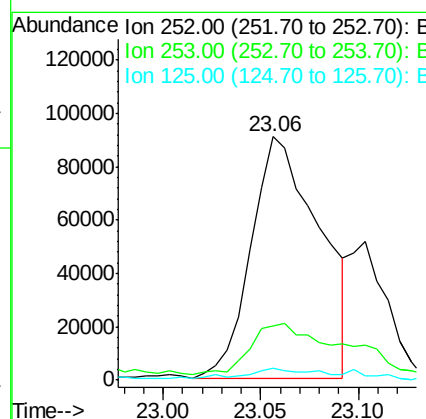
RT: 23.06 min Scan# 3395

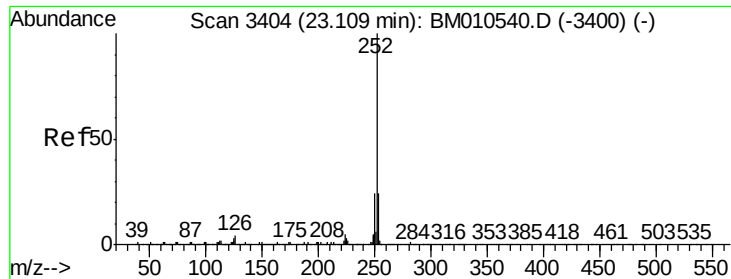
Delta R.T. -0.01 min

Lab File: BM010552.D

Acq: 13 Jun 2017 01:21

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 252   | Resp: | 220515 |
| Ion Ratio | Lower | Upper |        |
| 252       | 100   |       |        |
| 253       | 22.5  | 17.9  | 26.9   |
| 125       | 5.0   | 3.6   | 5.4    |





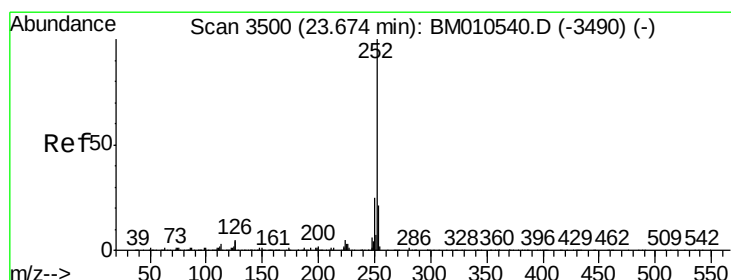
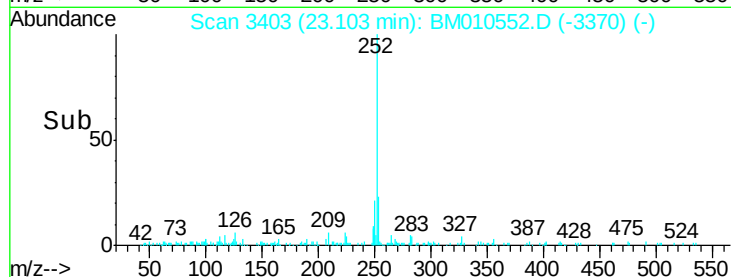
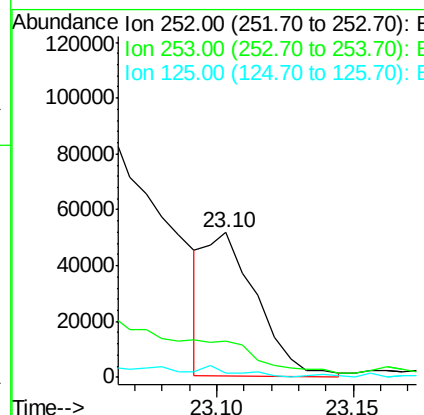
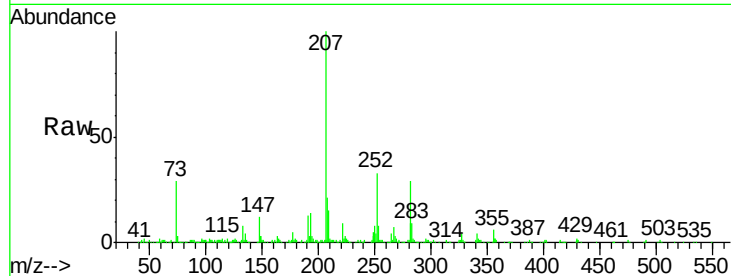
#86  
Benzo(k)fluoranthene  
Concen: 1.161 ng/ul m  
RT: 23.10 min Scan# 3403  
Delta R.T. -0.01 min  
Lab File: BM010552.D  
Acq: 13 Jun 2017 01:21

Instrument :  
BNA\_M  
ClientSampleId :  
F5C58DL

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 25.0  | 17.1  | 25.7  |
| 125     | 2.9   | 3.4   | 5.2#  |

Manual Integrations  
APPROVED

mohammad  
6/13/2017 3:54:51 PM



#88  
Benzo(a)pyrene  
Concen: 2.012 ng/ul  
RT: 23.67 min Scan# 3499  
Delta R.T. -0.01 min  
Lab File: BM010552.D  
Acq: 13 Jun 2017 01:21

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 24.8  | 18.2  | 27.2  |
| 125     | 5.6   | 4.0   | 6.0   |

