

Data Path : Z:\HPCHEM1\BNA M\DATA\BM120915\  
 Data File : BM003455.D  
 Acq On : 10 Dec 2015 16:45  
 Operator : UM/IZ  
 Sample : G4681-03DL 5X  
 Misc :  
 ALS Vial : 58 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :

Quant Time: Dec 10 17:32:31 2015  
 Quant Method : Z:\HPCHEM1\BNA M\METHODS\8270-BM120915.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Wed Dec 09 18:52:47 2015  
 Response via : Initial Calibration

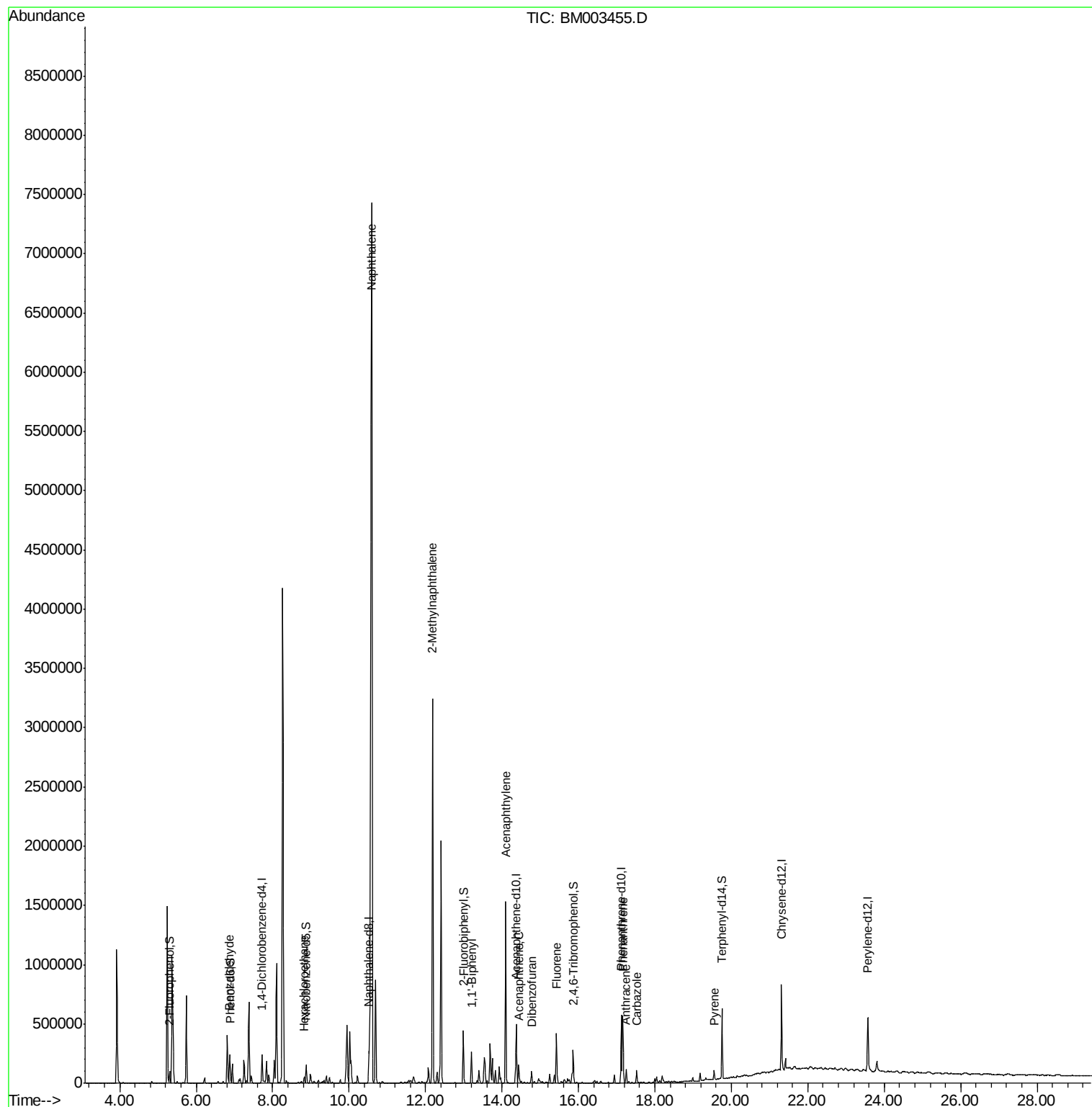
| Internal Standards          | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|-------|------|----------|--------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 7.72  | 152  | 68209    | 20.00  | ng    | 0.00     |
| 21) Naphthalene-d8          | 10.52 | 136  | 298609   | 20.00  | ng    | 0.00     |
| 38) Acenaphthene-d10        | 14.37 | 164  | 165216   | 20.00  | ng    | 0.00     |
| 63) Phenanthrene-d10        | 17.12 | 188  | 331526   | 20.00  | ng    | 0.00     |
| 75) Chrysene-d12            | 21.32 | 240  | 321336   | 20.00  | ng    | 0.00     |
| 86) Perylene-d12            | 23.57 | 264  | 316180   | 20.00  | ng    | 0.00     |
| System Monitoring Compounds |       |      |          |        |       |          |
| 5) 2-Fluorophenol           | 5.30  | 112  | 46843    | 12.21  | ng    | 0.00     |
| 7) Phenol-d6                | 6.89  | 99   | 41171    | 7.73   | ng    | 0.00     |
| 23) Nitrobenzene-d5         | 8.88  | 82   | 88579    | 18.39  | ng    | 0.00     |
| 41) 2,4,6-Tribromophenol    | 15.86 | 330  | 44005    | 26.67  | ng    | 0.00     |
| 44) 2-Fluorobiphenyl        | 12.99 | 172  | 237676   | 19.60  | ng    | 0.00     |
| 78) Terphenyl-d14           | 19.76 | 244  | 250750   | 18.40  | ng    | 0.00     |
| Target Compounds            |       |      |          |        |       | Qvalue   |
| 9) Benzaldehyde             | 6.87  | 77   | 16620    | 6.36   | ng    | # 1      |
| 18) Hexachloroethane        | 8.82  | 117  | 12009    | 6.35   | ng    | # 37     |
| 31) Naphthalene             | 10.59 | 128  | 9153933  | 585.83 | ng    | 97       |
| 37) 2-Methylnaphthalene     | 12.19 | 142  | 1651671  | 154.10 | ng    | # 97     |
| 45) 1,1'-Biphenyl           | 13.20 | 154  | 139861   | 9.55   | ng    | 99       |
| 48) Acenaphthylene          | 14.10 | 152  | 1059171  | 59.03  | ng    | 100      |
| 51) Acenaphthene            | 14.44 | 154  | 55575    | 5.35   | ng    | 99       |
| 54) Dibenzofuran            | 14.77 | 168  | 54108    | 3.60   | ng    | # 94     |
| 57) Fluorene                | 15.42 | 166  | 200772   | 16.13  | ng    | 99       |
| 70) Phenanthrene            | 17.16 | 178  | 330159   | 17.75  | ng    | 100      |
| 71) Anthracene              | 17.25 | 178  | 71731    | 3.88   | ng    | 100      |
| 72) Carbazole               | 17.52 | 167  | 72100    | 4.48   | ng    | 99       |
| 77) Pvrene                  | 19.55 | 202  | 46287    | 2.05   | ng    | 99       |

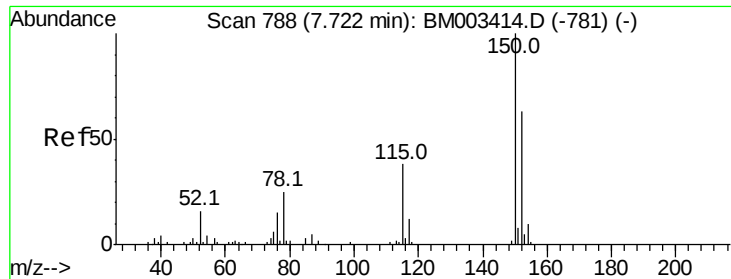
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\HPCHEM1\BNA M\DATA\BM120915\  
Data File : BM003455.D  
Acq On : 10 Dec 2015 16:45  
Operator : UM/IZ  
Sample : G4681-03DL 5X  
Misc :  
ALS Vial : 58 Sample Multiplier: 1

Instrument :  
BNA\_M  
ClientSampleId :

Quant Time: Dec 10 17:32:31 2015  
Quant Method : Z:\HPCHEM1\BNA M\METHODS\8270-BM120915.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Wed Dec 09 18:52:47 2015  
Response via : Initial Calibration



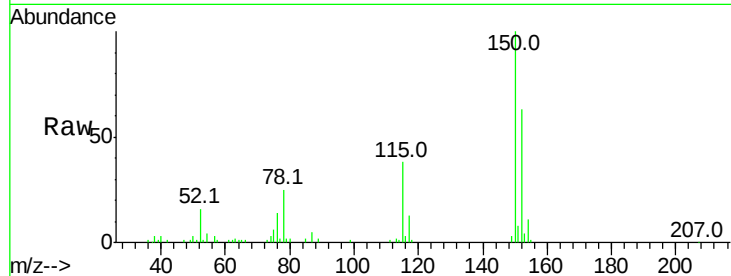


#1

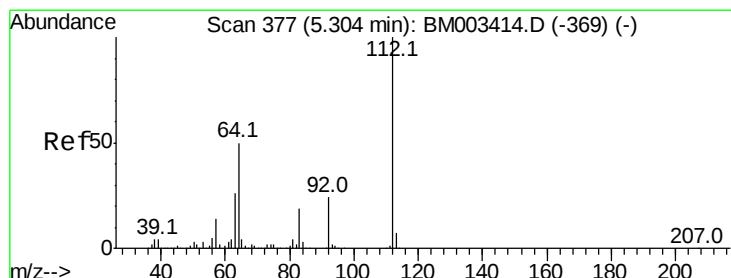
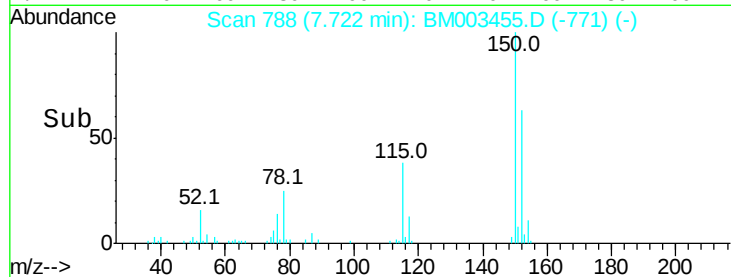
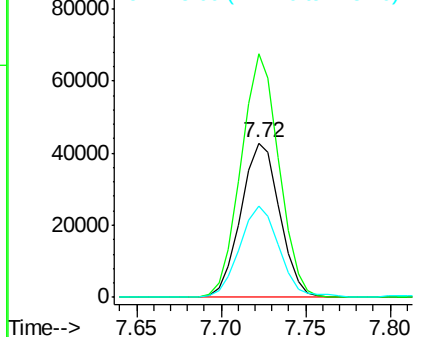
1,4-Dichlorobenzene-d4  
Concen: 20.00 ng  
RT: 7.72 min Scan# 788  
Delta R.T. 0.00 min  
Lab File: BM003455.D  
Acq: 10 Dec 2015 16:45

Instrument :  
BNA\_M  
ClientSampleId :

Tot Ion:152 Resp: 68209  
Ion Ratio Lower Upper  
152 100  
150 157.6 119.5 179.3  
115 59.5 43.0 64.4



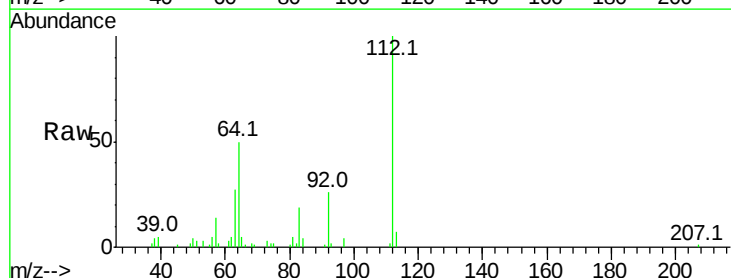
Abundance Ion 152.00 (151.70 to 152.70): E  
Ion 150.00 (149.70 to 150.70): E  
Ion 115.00 (114.70 to 115.70): E



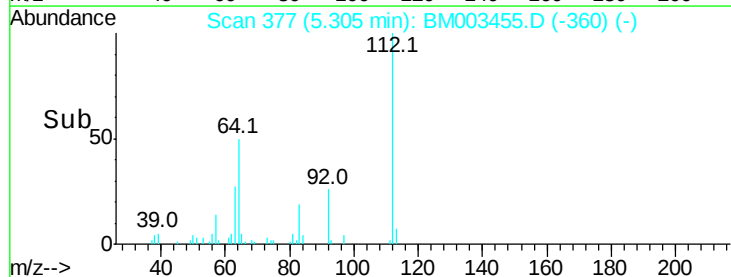
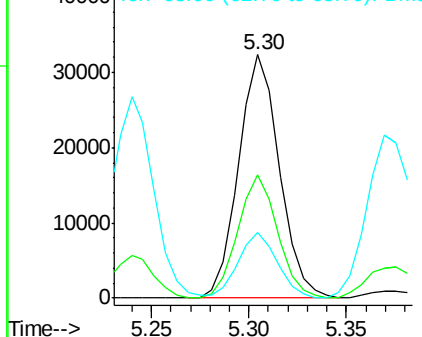
#5

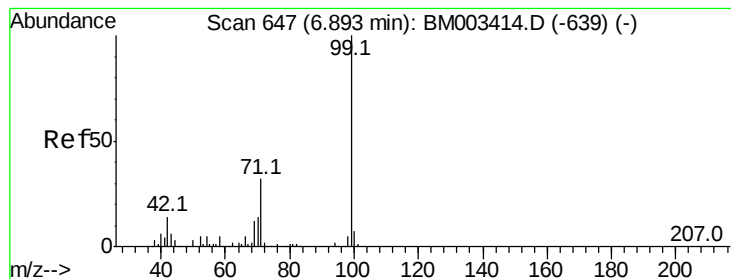
2-Fluorophenol  
Concen: 12.21 ng  
RT: 5.30 min Scan# 377  
Delta R.T. 0.00 min  
Lab File: BM003455.D  
Acq: 10 Dec 2015 16:45

Tgt Ion:112 Resp: 46843  
Ion Ratio Lower Upper  
112 100  
64 50.4 38.6 57.8  
63 26.9 19.3 28.9



Abundance Ion 112.00 (111.70 to 112.70): E  
Ion 64.00 (63.70 to 64.70): BM0  
Ion 63.00 (62.70 to 63.70): BM0





#7

Phenol-d6

Concen: 7.73 ng

RT: 6.89 min Scan# 647

Delta R.T. 0.00 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

Instrument :

BNA\_M

ClientSampleId :

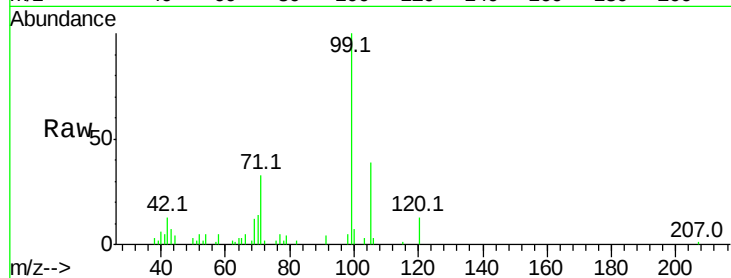
Tot Ion: 99 Resp: 41171

Ion Ratio Lower Upper

99 100

42 13.2 11.0 16.4

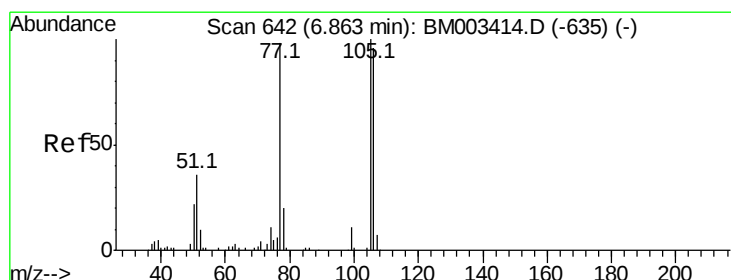
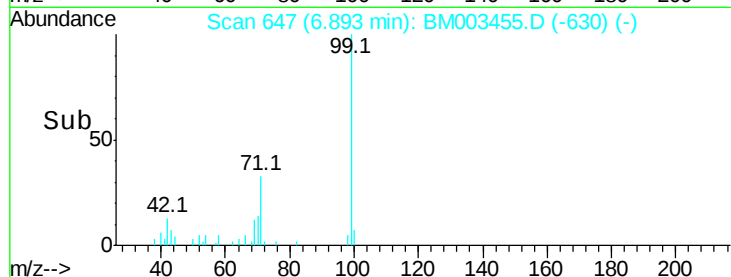
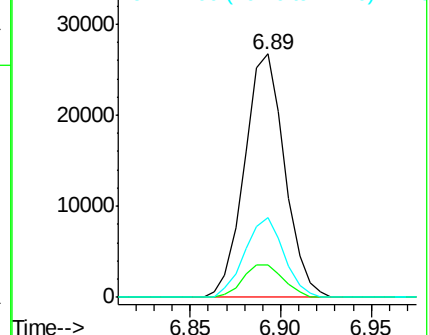
71 32.8 23.4 35.2



Abundance Ion 99.00 (98.70 to 99.70): BM003414.D (-639) (-)

Ion 42.00 (41.70 to 42.70): BM003414.D (-639) (-)

Ion 71.00 (70.70 to 71.70): BM003414.D (-639) (-)



#9

Benzaldehyde

Concen: 6.36 ng

RT: 6.87 min Scan# 643

Delta R.T. 0.01 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

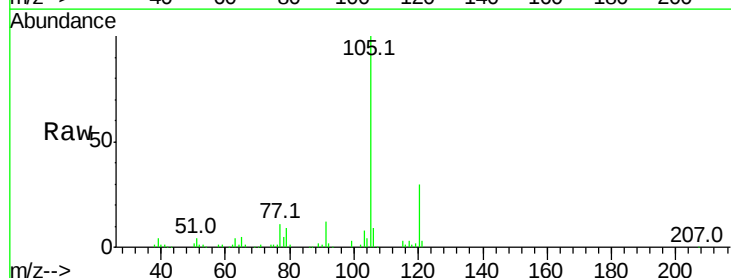
Tgt Ion: 77 Resp: 16620

Ion Ratio Lower Upper

77 100

105 877.6 78.8 118.8#

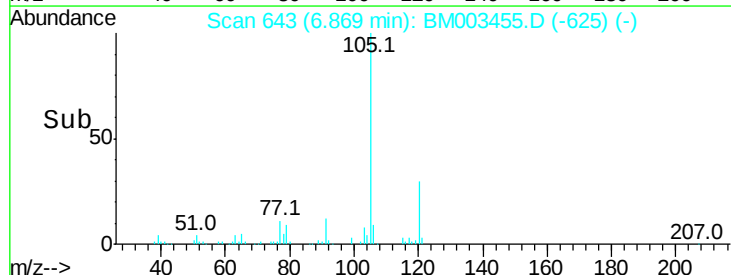
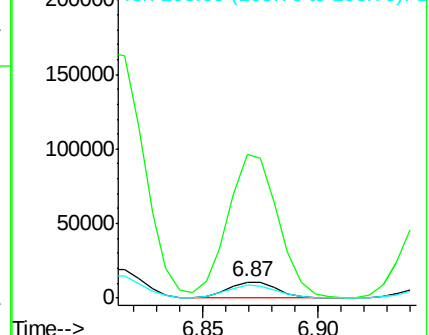
106 78.9 73.7 113.7

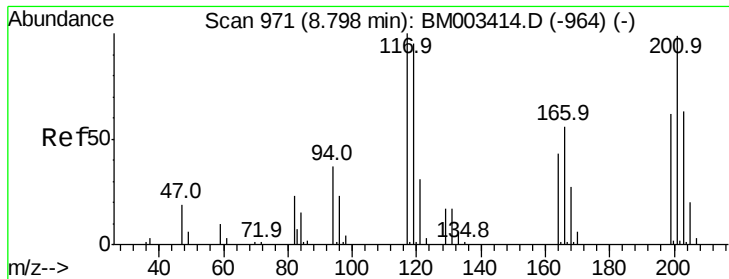


Abundance Ion 77.00 (76.70 to 77.70): BM003414.D (-635) (-)

Ion 105.00 (104.70 to 105.70): BM003414.D (-635) (-)

Ion 106.00 (105.70 to 106.70): BM003414.D (-635) (-)

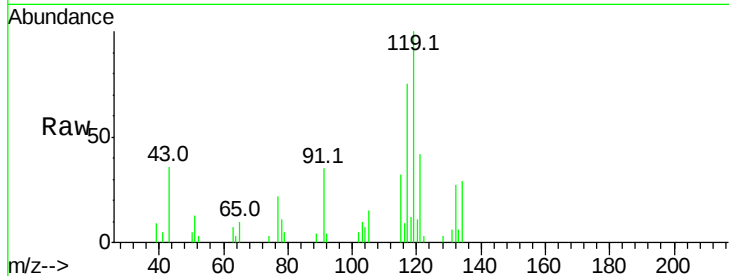




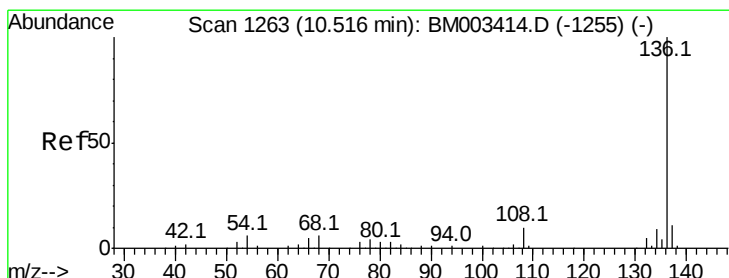
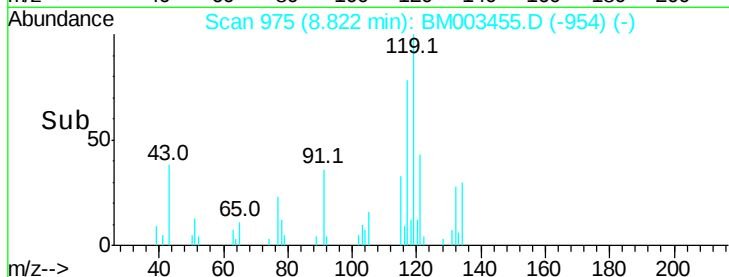
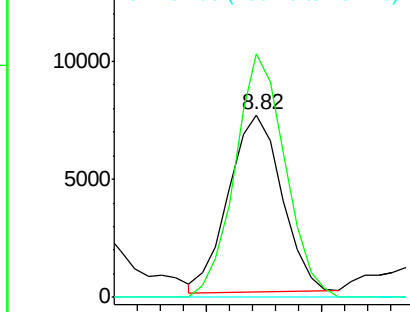
#18  
Hexachloroethane  
Concen: 6.35 ng  
RT: 8.82 min Scan# 975  
Delta R.T. 0.02 min  
Lab File: BM003455.D  
Acq: 10 Dec 2015 16:45

Instrument :  
BNA\_M  
ClientSampled :

Tot Ion:117 Resp: 12009  
Ion Ratio Lower Upper  
117 100  
119 133.5 79.2 118.8#  
201 0.0 69.8 104.6#

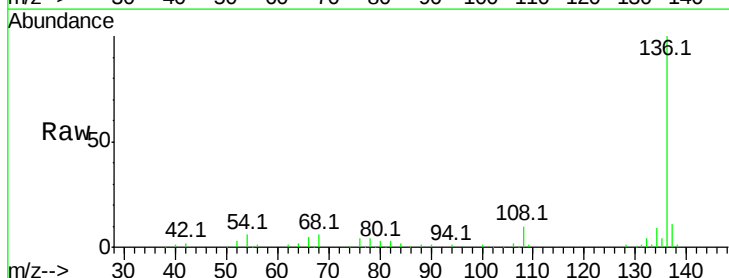


Abundance Ion 117.00 (116.70 to 117.70): E  
Ion 119.00 (118.70 to 119.70): E  
Ion 201.00 (200.70 to 201.70): E

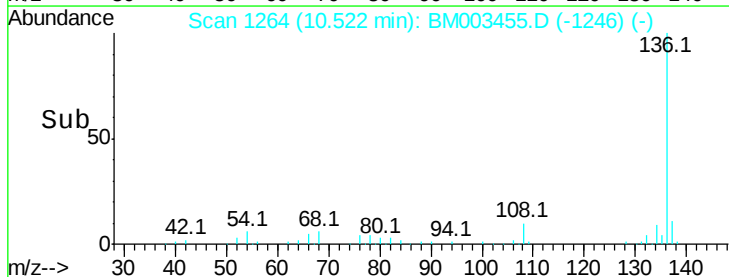
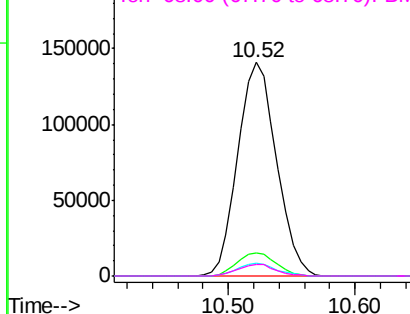


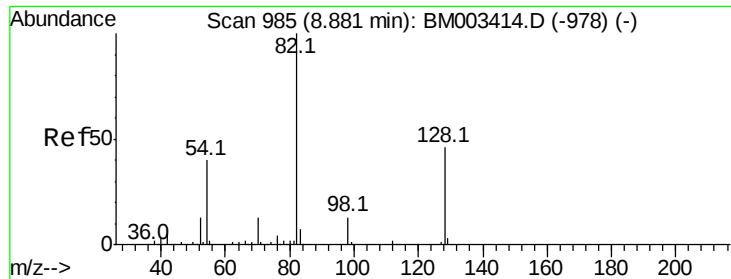
#21  
Naphthalene-d8  
Concen: 20.00 ng  
RT: 10.52 min Scan# 1264  
Delta R.T. 0.01 min  
Lab File: BM003455.D  
Acq: 10 Dec 2015 16:45

Tgt Ion:136 Resp: 298609  
Ion Ratio Lower Upper  
136 100  
137 10.6 8.7 13.1  
54 5.8 4.6 6.8  
68 5.5 3.7 5.5#



Abundance Ion 136.00 (135.70 to 136.70): E  
Ion 137.00 (136.70 to 137.70): E  
Ion 54.00 (53.70 to 54.70): BM0  
Ion 68.00 (67.70 to 68.70): BM0

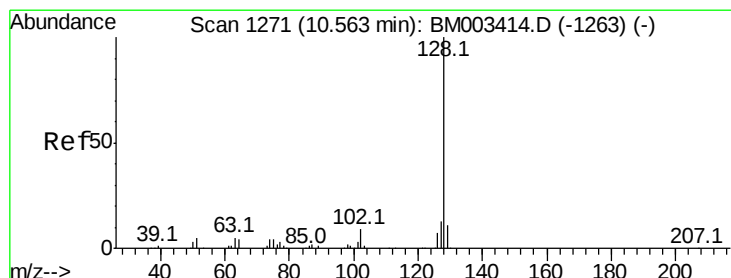
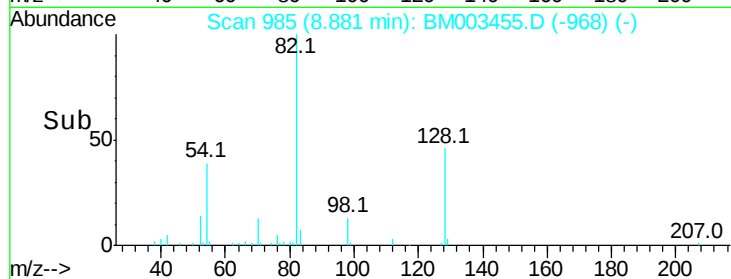
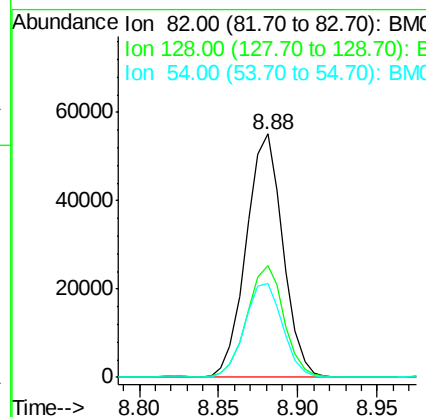
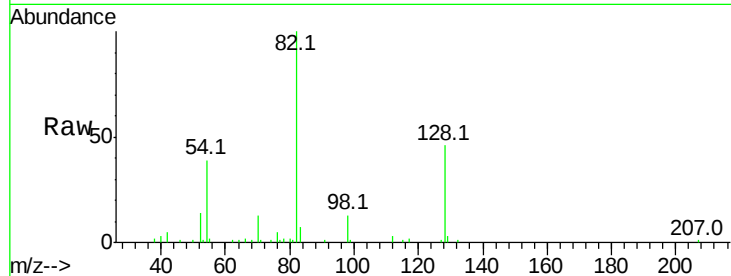




#23  
 Nitrobenzene-d5  
 Concen: 18.39 ng  
 RT: 8.88 min Scan# 985  
 Delta R.T. 0.00 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

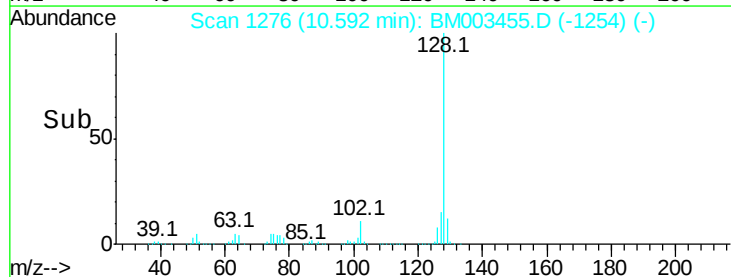
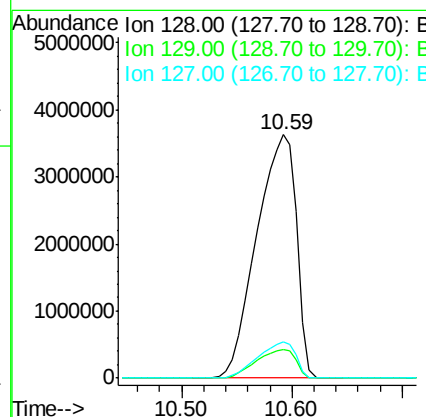
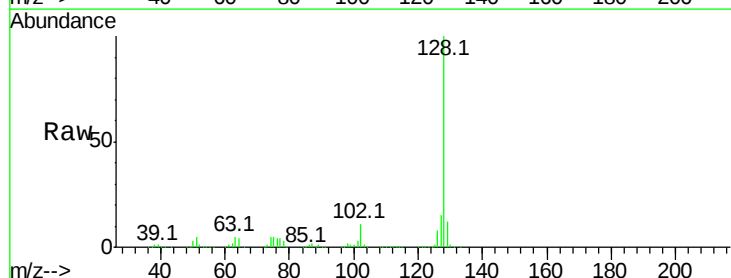
Instrument :  
 BNA\_M  
 ClientSampleId :

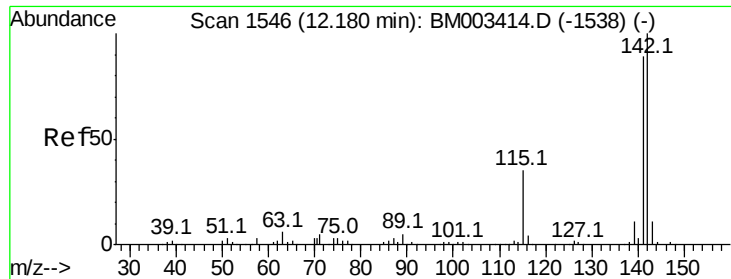
Tot Ion: 82 Resp: 88579  
 Ion Ratio Lower Upper  
 82 100  
 128 46.0 32.8 49.2  
 54 38.8 40.6 60.8#



#31  
 Naphthalene  
 Concen: 585.83 ng  
 RT: 10.59 min Scan# 1276  
 Delta R.T. 0.03 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

Tgt Ion:128 Resp: 9153933  
 Ion Ratio Lower Upper  
 128 100  
 129 11.8 8.9 13.3  
 127 14.7 10.4 15.6

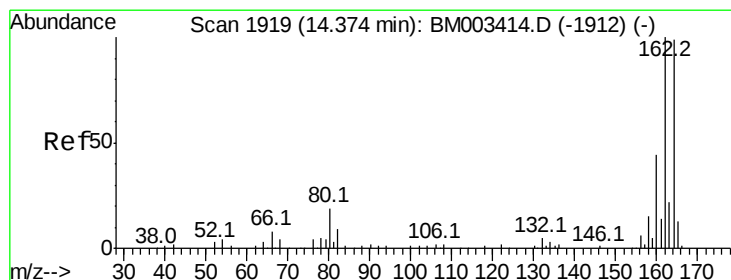
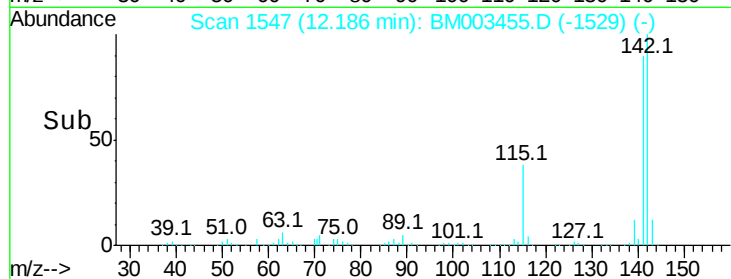
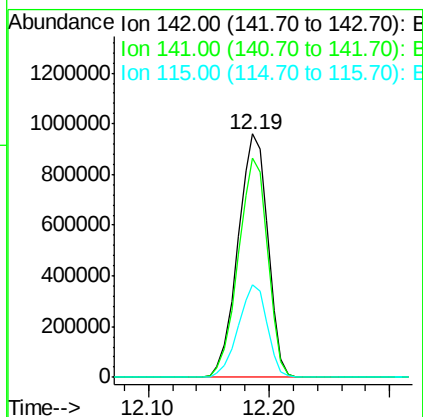
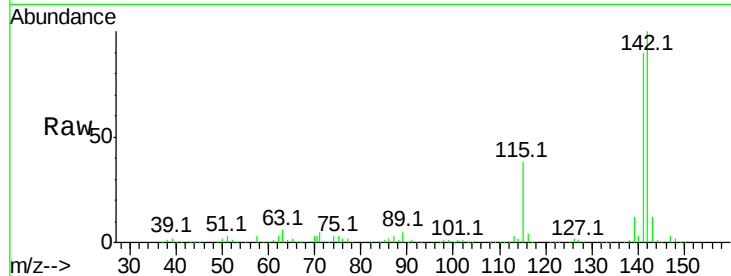




#37  
2-Methylnaphthalene  
Concen: 154.10 ng  
RT: 12.19 min Scan# 1547  
Delta R.T. 0.01 min  
Lab File: BM003455.D  
Acq: 10 Dec 2015 16:45

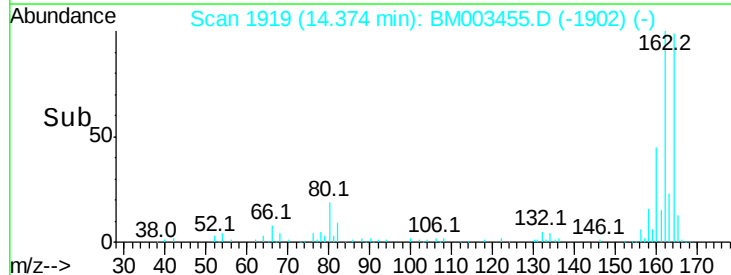
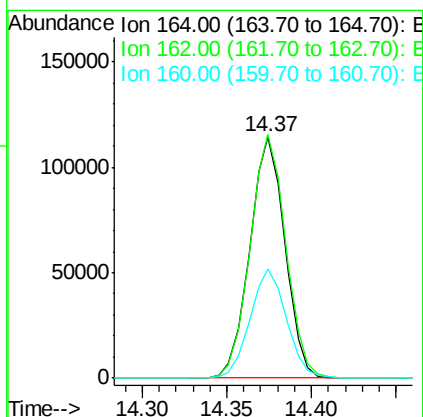
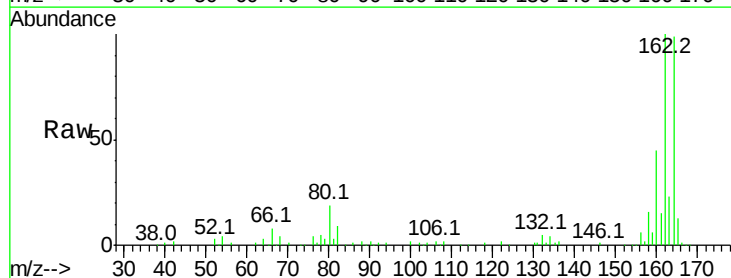
Instrument :  
BNA\_M  
ClientSampleId :

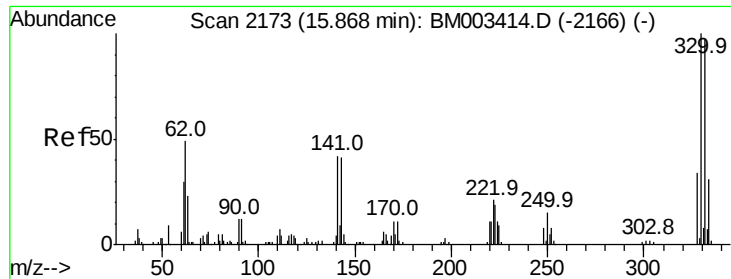
Tot Ion:142 Resp: 1651671  
Ion Ratio Lower Upper  
142 100  
141 90.0 71.9 107.9  
115 38.3 25.4 38.0#



#38  
Acenaphthene-d10  
Concen: 20.00 ng  
RT: 14.37 min Scan# 1919  
Delta R.T. 0.00 min  
Lab File: BM003455.D  
Acq: 10 Dec 2015 16:45

Tgt Ion:164 Resp: 165216  
Ion Ratio Lower Upper  
164 100  
162 101.0 82.4 123.6  
160 45.3 35.8 53.6

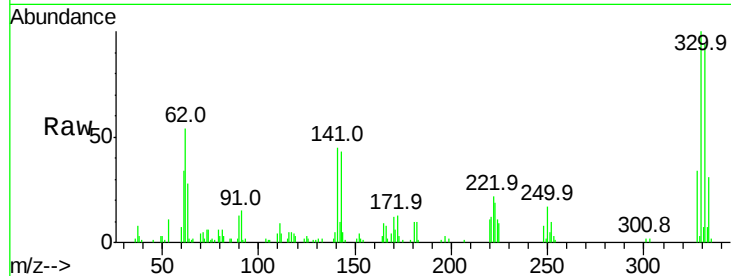




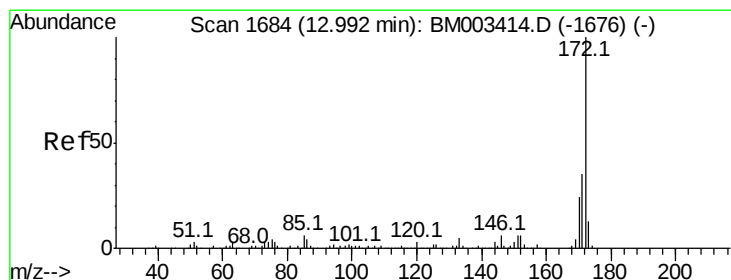
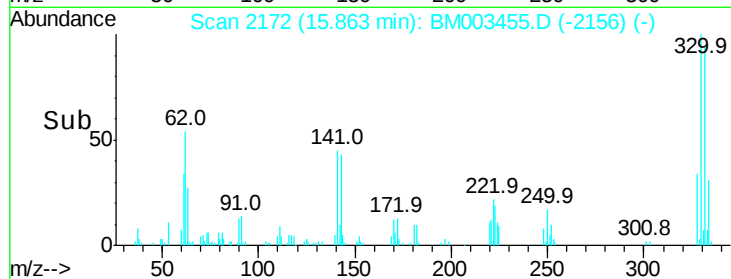
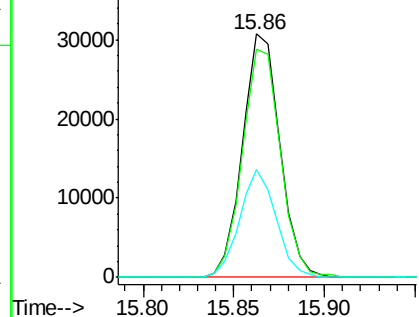
#41  
 2,4,6-Tribromophenol  
 Concen: 26.67 ng  
 RT: 15.86 min Scan# 2172  
 Delta R.T. -0.01 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

Instrument :  
 BNA\_M  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 330     | 100   |       |       |
| 332     | 95.7  | 0.0   | 0.0#  |
| 141     | 43.3  | 0.0   | 0.0#  |

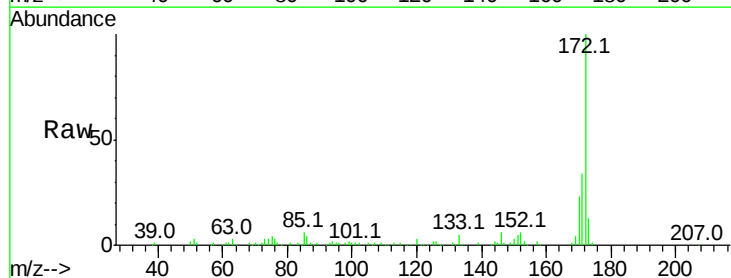


Abundance Ion 329.80 (329.50 to 330.50): E  
 Ion 331.80 (331.50 to 332.50): E  
 Ion 141.00 (140.70 to 141.70): E

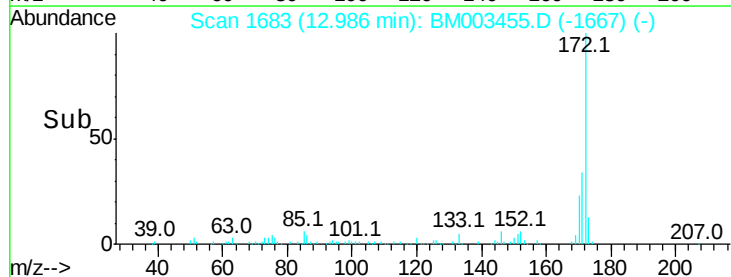
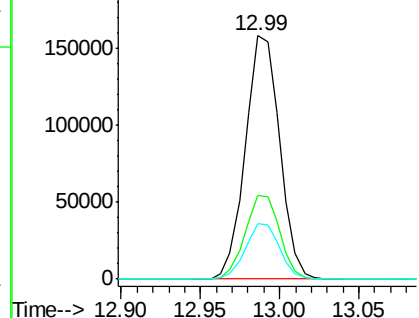


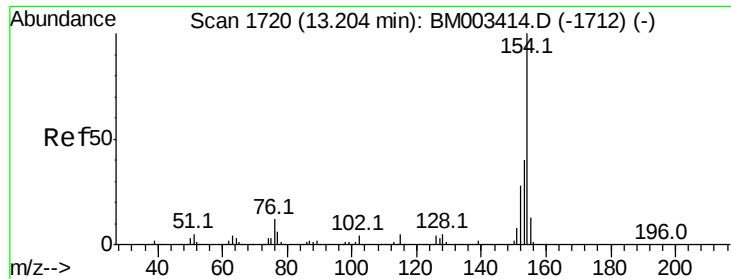
#44  
 2-Fluorobiphenyl  
 Concen: 19.60 ng  
 RT: 12.99 min Scan# 1683  
 Delta R.T. -0.01 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 172     | 100   |       |       |
| 171     | 34.2  | 28.5  | 42.7  |
| 170     | 22.6  | 18.8  | 28.2  |



Abundance Ion 172.00 (171.70 to 172.70): E  
 Ion 171.00 (170.70 to 171.70): E  
 Ion 170.00 (169.70 to 170.70): E

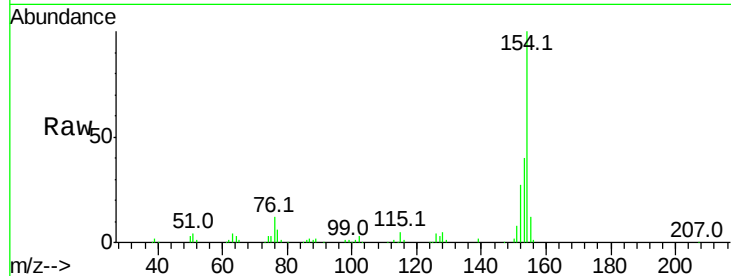




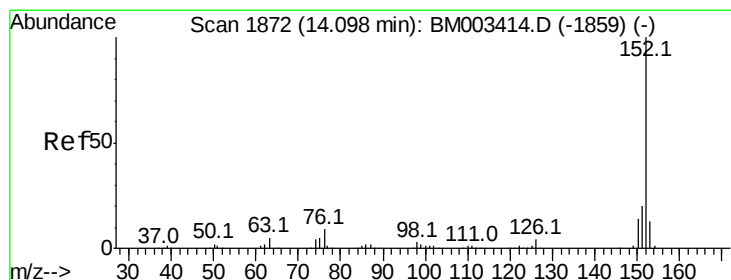
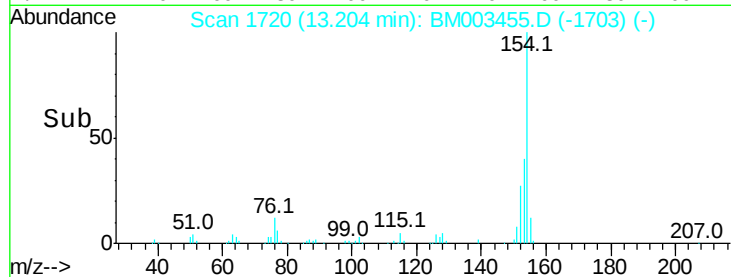
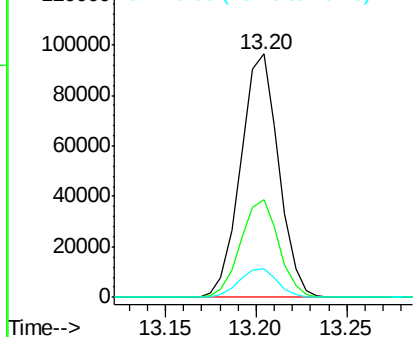
#45  
 1,1'-Biphenyl  
 Concen: 9.55 ng  
 RT: 13.20 min Scan# 1720  
 Delta R.T. 0.00 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

Instrument :  
 BNA\_M  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 154     | 100   |       |       |
| 153     | 39.9  | 20.7  | 60.7  |
| 76      | 11.8  | 0.0   | 30.9  |

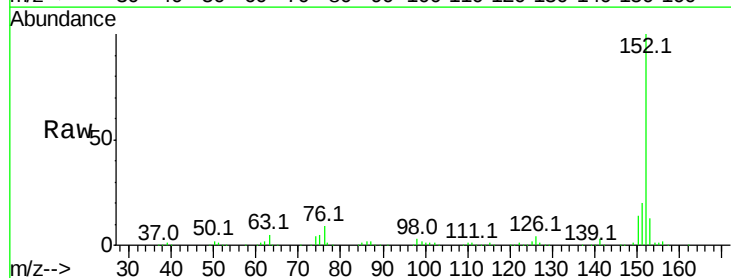


Abundance Ion 154.00 (153.70 to 154.70): E  
 Ion 153.00 (152.70 to 153.70): E  
 Ion 76.00 (75.70 to 76.70): BM

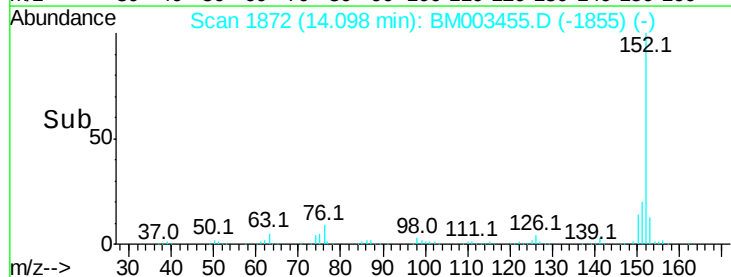
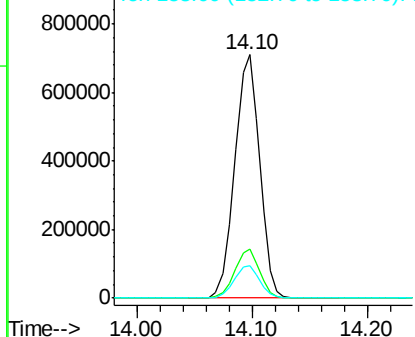


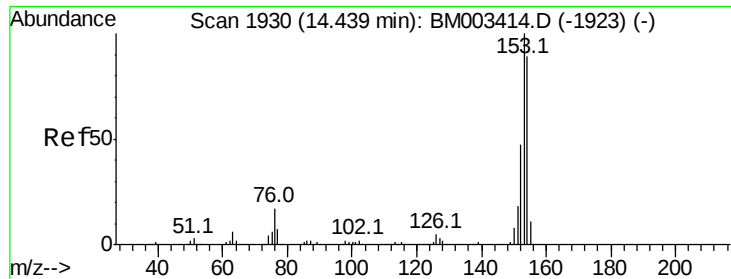
#48  
 Acenaphthylene  
 Concen: 59.03 ng  
 RT: 14.10 min Scan# 1872  
 Delta R.T. 0.00 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 151     | 20.0  | 15.9  | 23.9  |
| 153     | 13.5  | 10.6  | 16.0  |



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





#51

Acenaphthene

Concen: 5.35 ng

RT: 14.44 min Scan# 1930

Delta R.T. 0.00 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

Instrument :

BNA\_M

ClientSampleId :

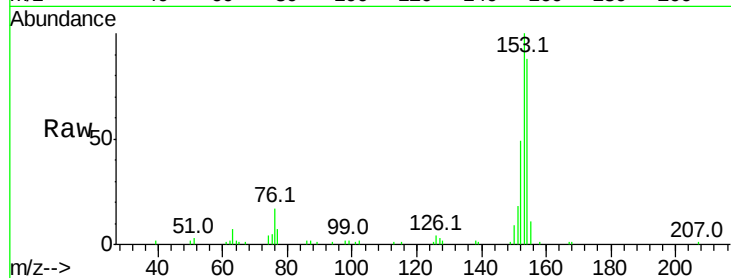
Tot Ion:154 Resp: 55575

Ion Ratio Lower Upper

154 100

153 113.3 90.0 135.0

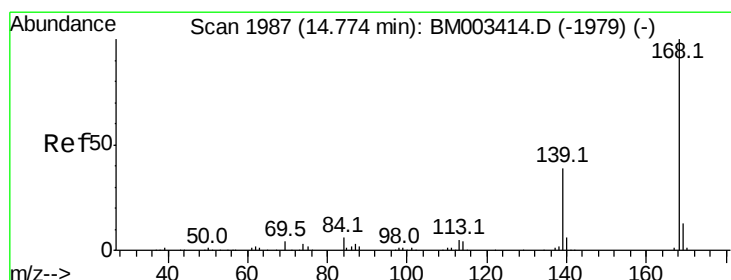
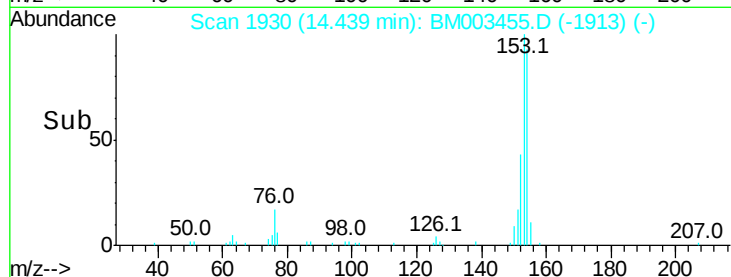
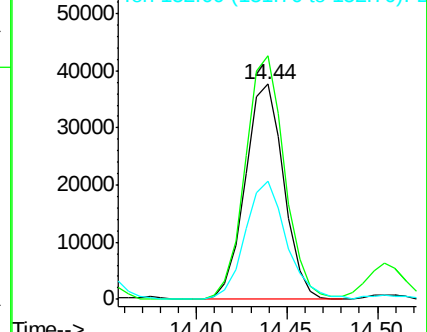
152 55.0 42.6 63.8



Abundance Ion 154.00 (153.70 to 154.70): E

Ion 153.00 (152.70 to 153.70): E

Ion 152.00 (151.70 to 152.70): E



#54

Dibenzofuran

Concen: 3.60 ng

RT: 14.77 min Scan# 1987

Delta R.T. 0.00 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

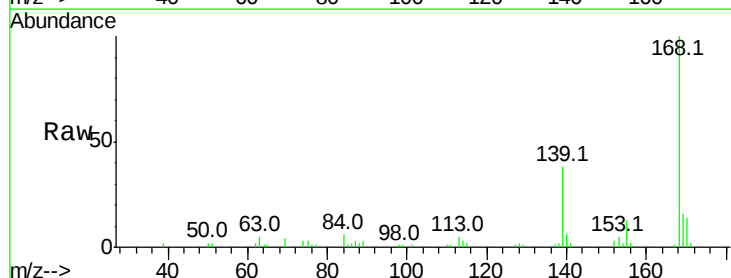
Tgt Ion:168 Resp: 54108

Ion Ratio Lower Upper

168 100

139 37.6 27.3 40.9

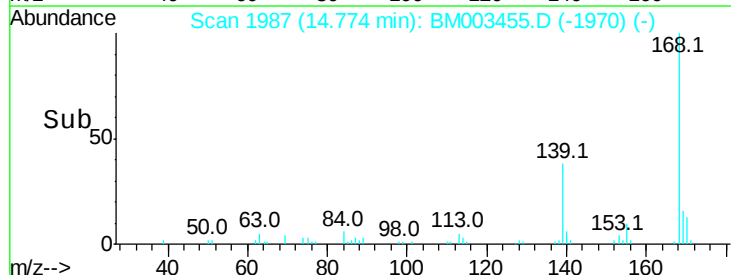
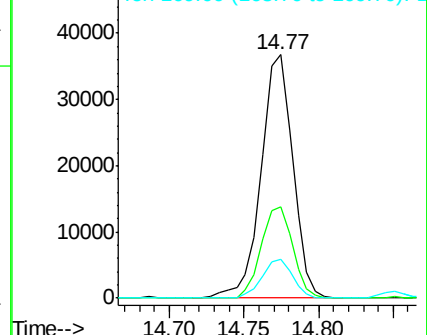
169 16.2 10.6 16.0#

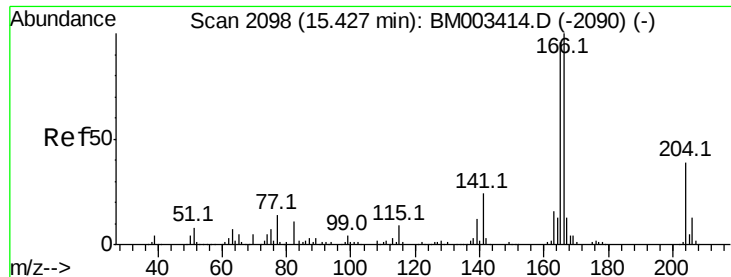


Abundance Ion 168.00 (167.70 to 168.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 169.00 (168.70 to 169.70): E

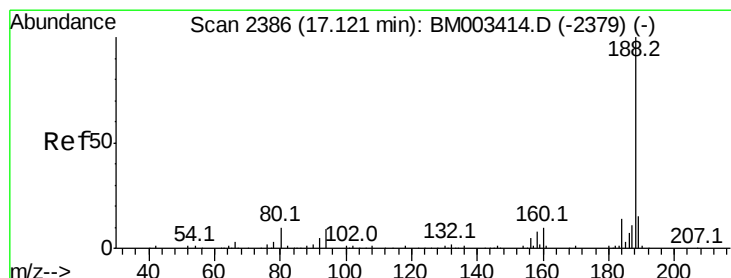
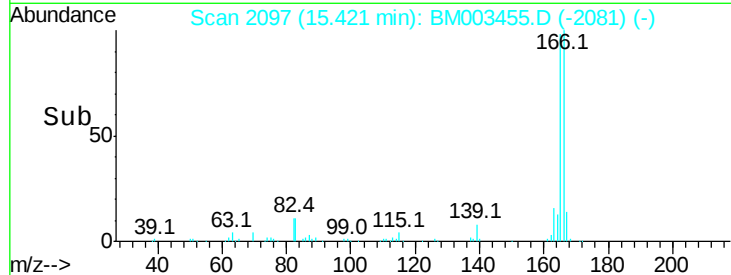
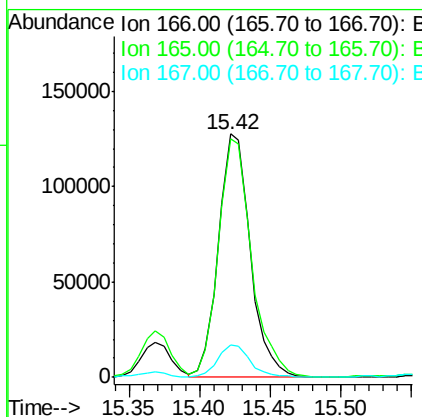
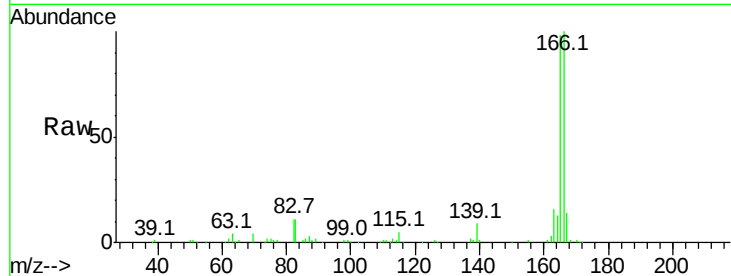




#57  
**Fluorene**  
 Concen: 16.13 ng  
 RT: 15.42 min Scan# 2097  
 Delta R.T. -0.01 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

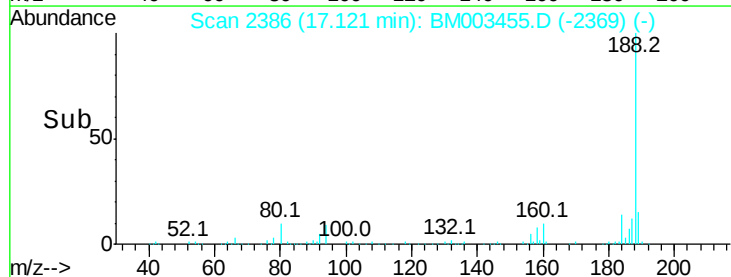
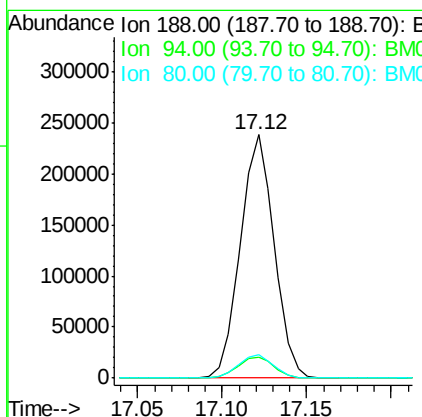
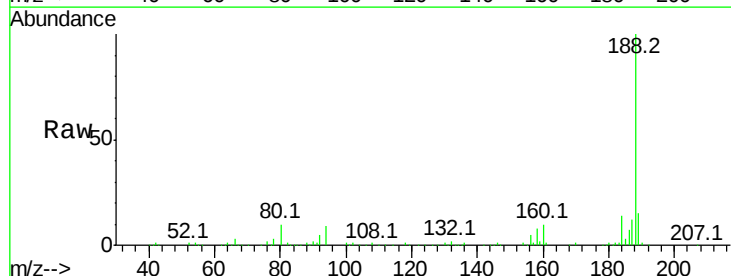
Instrument :  
 BNA\_M  
 ClientSampleId :

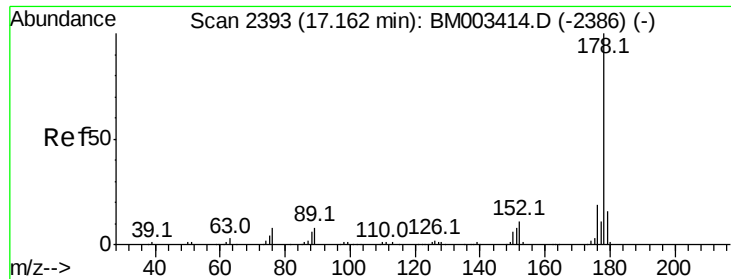
Tot Ion:166 Resp: 200772  
 Ion Ratio Lower Upper  
 166 100  
 165 97.8 79.0 118.4  
 167 13.5 10.3 15.5



#63  
**Phenanthrene-d10**  
 Concen: 20.00 ng  
 RT: 17.12 min Scan# 2386  
 Delta R.T. 0.00 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

Tgt Ion:188 Resp: 331526  
 Ion Ratio Lower Upper  
 188 100  
 94 8.8 8.7 13.1  
 80 9.6 9.3 13.9





#70

Phenanthrene

Concen: 17.75 ng

RT: 17.16 min Scan# 2393

Delta R.T. 0.00 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

Instrument :

BNA\_M

ClientSampleId :

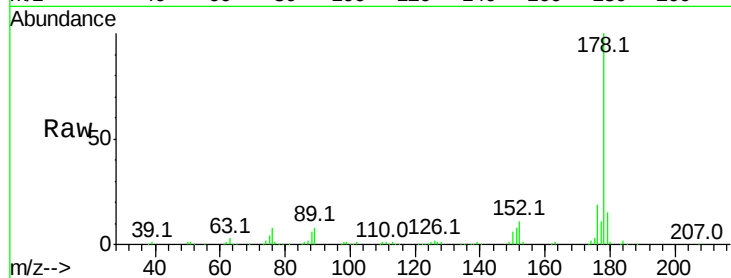
Tot Ion:178 Resp: 330159

Ion Ratio Lower Upper

178 100

176 18.9 15.2 22.8

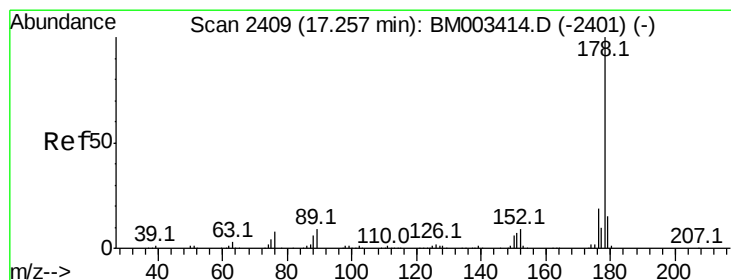
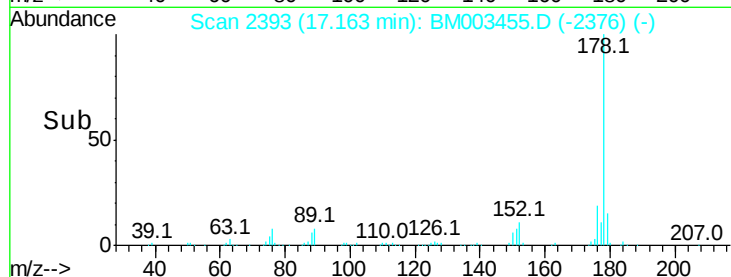
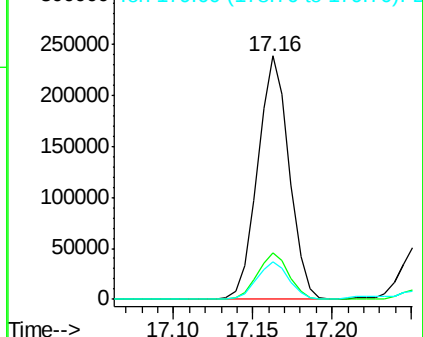
179 15.5 12.1 18.1



Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E



#71

Anthracene

Concen: 3.88 ng

RT: 17.25 min Scan# 2408

Delta R.T. -0.01 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

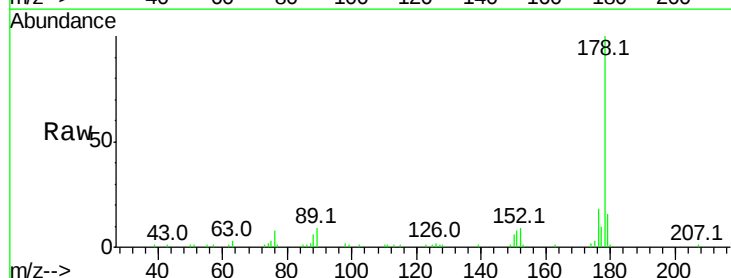
Tgt Ion:178 Resp: 71731

Ion Ratio Lower Upper

178 100

176 18.3 14.6 22.0

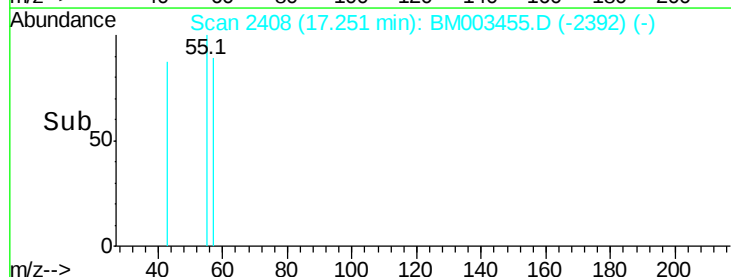
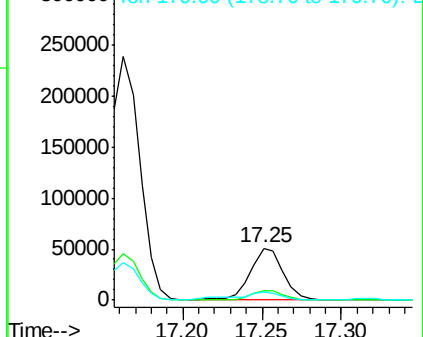
179 15.7 12.6 19.0

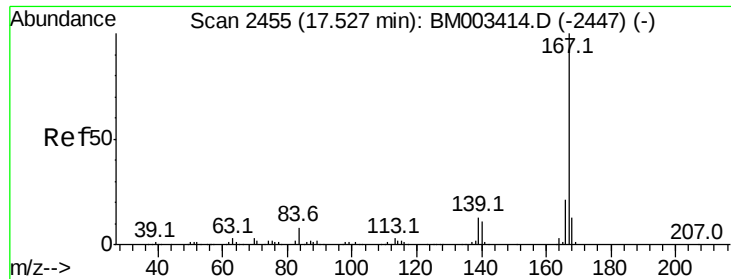


Abundance Ion 178.00 (177.70 to 178.70): E

Ion 176.00 (175.70 to 176.70): E

Ion 179.00 (178.70 to 179.70): E

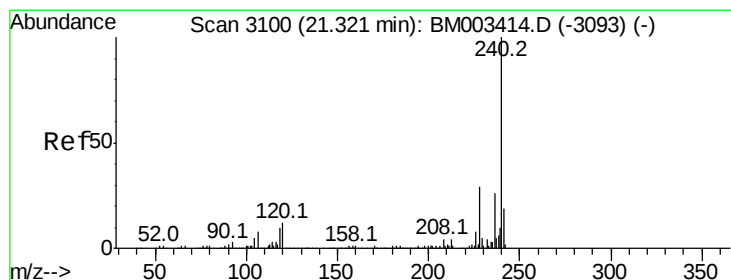
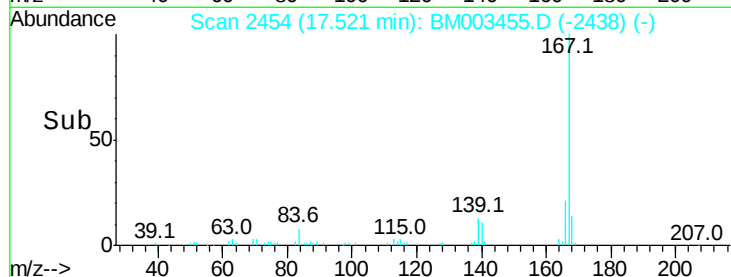
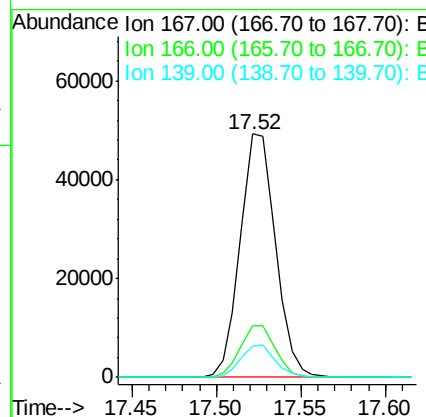
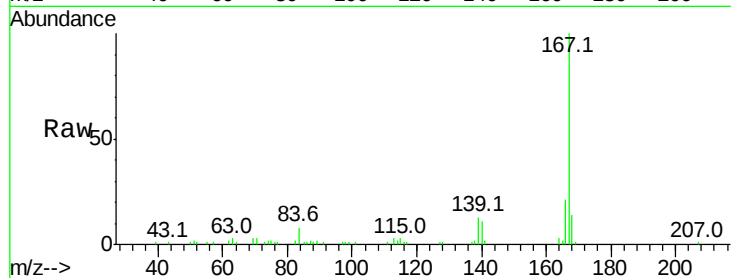




#72  
 Carbazole  
 Concen: 4.48 ng  
 RT: 17.52 min Scan# 2454  
 Delta R.T. -0.01 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

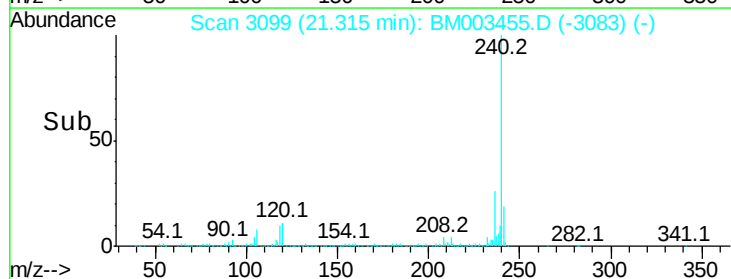
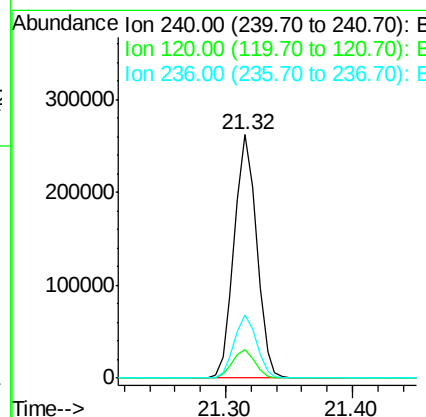
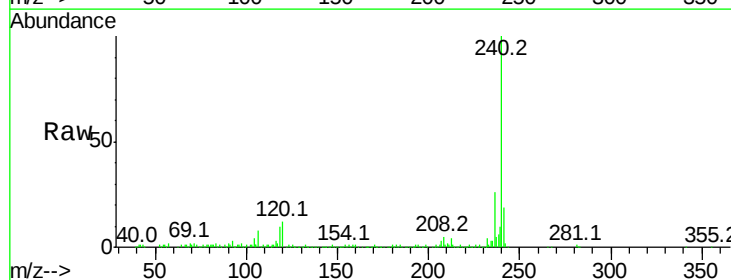
Instrument :  
 BNA\_M  
 ClientSampleId :

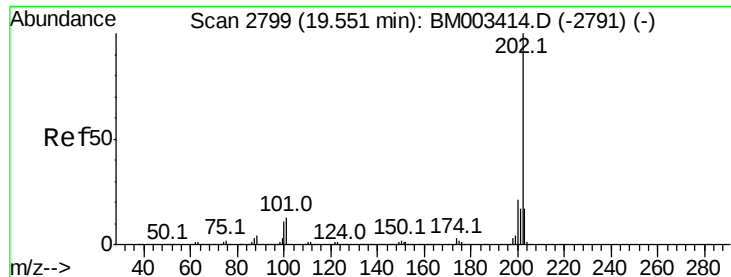
Tot Ion:167 Resp: 72100  
 Ion Ratio Lower Upper  
 167 100  
 166 21.1 17.2 25.8  
 139 12.9 10.8 16.2



#75  
 Chrysene-d12  
 Concen: 20.00 ng  
 RT: 21.32 min Scan# 3099  
 Delta R.T. -0.01 min  
 Lab File: BM003455.D  
 Acq: 10 Dec 2015 16:45

Tgt Ion:240 Resp: 321336  
 Ion Ratio Lower Upper  
 240 100  
 120 11.6 8.2 12.2  
 236 25.7 20.0 30.0





#77

Pvrene

Concen: 2.05 ng

RT: 19.55 min Scan# 2799

Delta R.T. 0.00 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

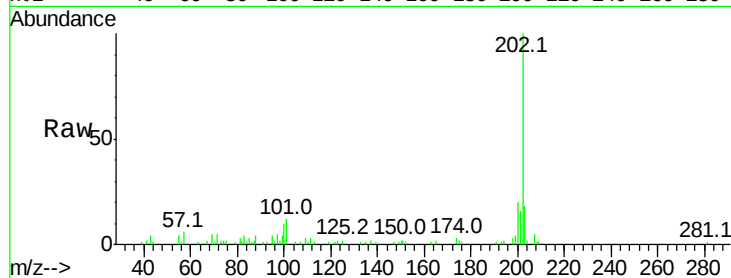
Instrument :

BNA\_M

ClientSampleId :

Tot Ion:202 Resp: 46287

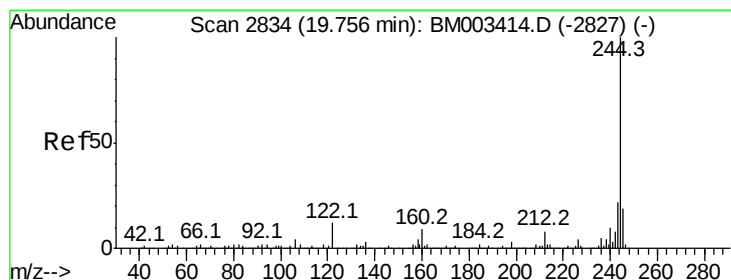
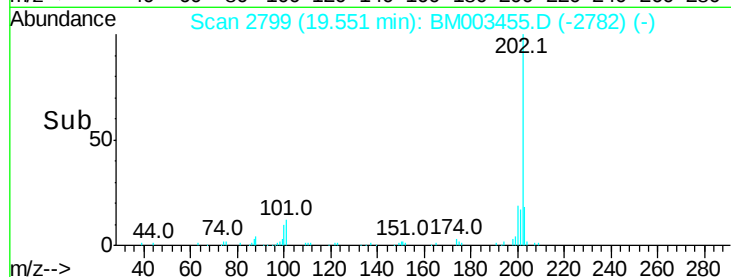
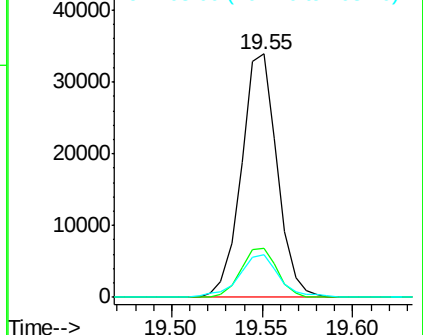
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 202 | 100   |       |       |
| 200 | 20.1  | 16.9  | 25.3  |
| 203 | 17.7  | 14.1  | 21.1  |



Abundance Ion 202.00 (201.70 to 202.70): E

Ion 200.00 (199.70 to 200.70): E

Ion 203.00 (202.70 to 203.70): E



#78

Terphenyl-d14

Concen: 18.40 ng

RT: 19.76 min Scan# 2834

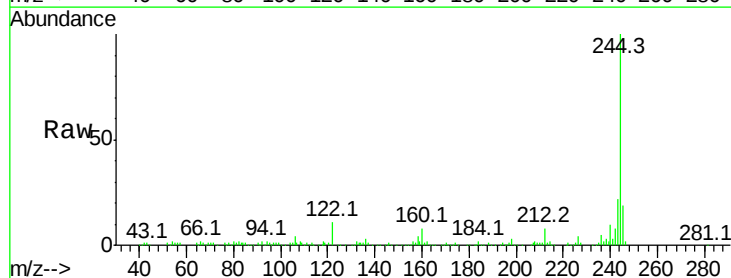
Delta R.T. 0.00 min

Lab File: BM003455.D

Acq: 10 Dec 2015 16:45

Tgt Ion:244 Resp: 250750

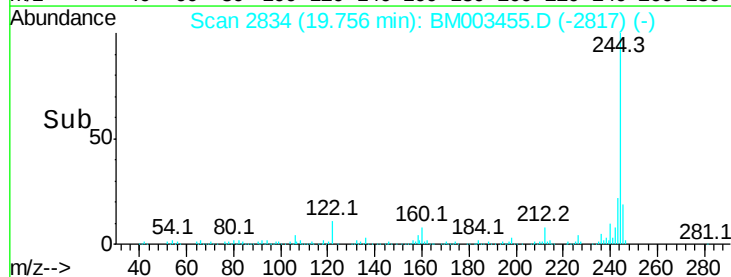
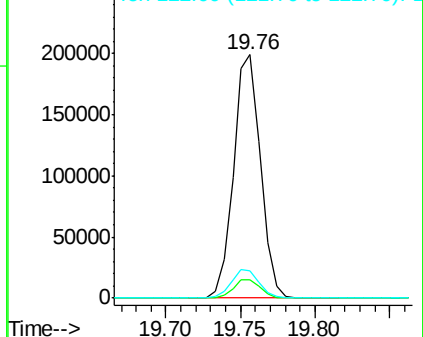
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 244 | 100   |       |       |
| 212 | 7.6   | 4.9   | 7.3#  |
| 122 | 11.3  | 6.2   | 9.4#  |

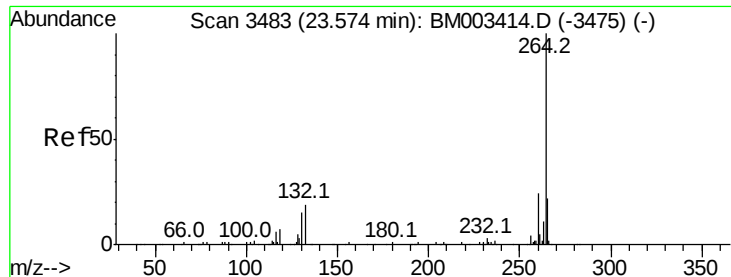


Abundance Ion 244.00 (243.70 to 244.70): E

Ion 212.00 (211.70 to 212.70): E

Ion 122.00 (121.70 to 122.70): E



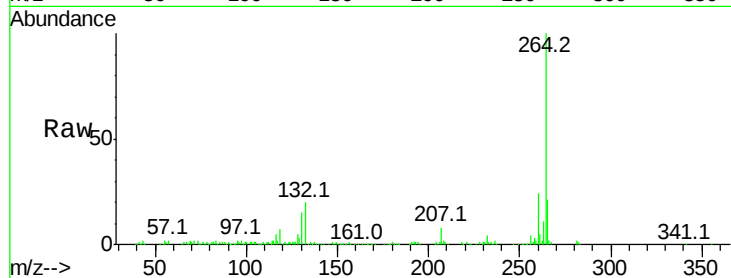


#86  
Pervlene-d12  
Concen: 20.00 ng  
RT: 23.57 min Scan# 3482  
Delta R.T. -0.01 min  
Lab File: BM003455.D  
Acq: 10 Dec 2015 16:45

Instrument :  
BNA\_M  
ClientSampleId :

Tot Ion: 264 Resp: 316180  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 264 | 100   |       |       |
| 260 | 23.9  | 18.6  | 27.8  |
| 265 | 21.5  | 17.3  | 25.9  |



Abundance Ion 264.00 (263.70 to 264.70): E  
Ion 260.00 (259.70 to 260.70): E  
Ion 265.00 (264.70 to 265.70): E

