

Data Path : Z:\HPCHEM1\BNA F\DATA\BF120517\  
 Data File : BF101157.D  
 Acq On : 6 Dec 2017 9:23  
 Operator : SJ/JU  
 Sample : I6696-04DL 20X  
 Misc :  
 ALS Vial : 44 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :

Quant Time: Dec 06 11:10:20 2017  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF113017.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Mon Dec 04 13:07:49 2017  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 6.85  | 152  | 52419    | 20.00 | ng    | 0.00     |
| 21) Naphthalene-d8        | 8.13  | 136  | 202440   | 20.00 | ng    | 0.00     |
| 38) Acenaphthene-d10      | 9.88  | 164  | 91733    | 20.00 | ng    | 0.00     |
| 63) Phenanthrene-d10      | 11.37 | 188  | 166084   | 20.00 | ng    | 0.00     |
| 75) Chrysene-d12          | 14.02 | 240  | 106103   | 20.00 | ng    | 0.00     |
| 86) Perylene-d12          | 15.49 | 264  | 113748   | 20.00 | ng    | 0.00     |

|                             |       |     |       |      |    |       |
|-----------------------------|-------|-----|-------|------|----|-------|
| System Monitoring Compounds |       |     |       |      |    |       |
| 5) 2-Fluorophenol           | 5.46  | 112 | 14398 | 4.54 | ng | 0.00  |
| 7) Phenol-d6                | 6.47  | 99  | 16451 | 4.27 | ng | 0.00  |
| 23) Nitrobenzene-d5         | 7.41  | 82  | 9863  | 2.91 | ng | 0.00  |
| 41) 2,4,6-Tribromophenol    | 10.67 | 330 | 3068  | 2.78 | ng | 0.00  |
| 44) 2-Fluorobiphenyl        | 9.20  | 172 | 21736 | 3.24 | ng | -0.01 |
| 78) Terphenyl-d14           | 12.95 | 244 | 18483 | 3.81 | ng | -0.01 |

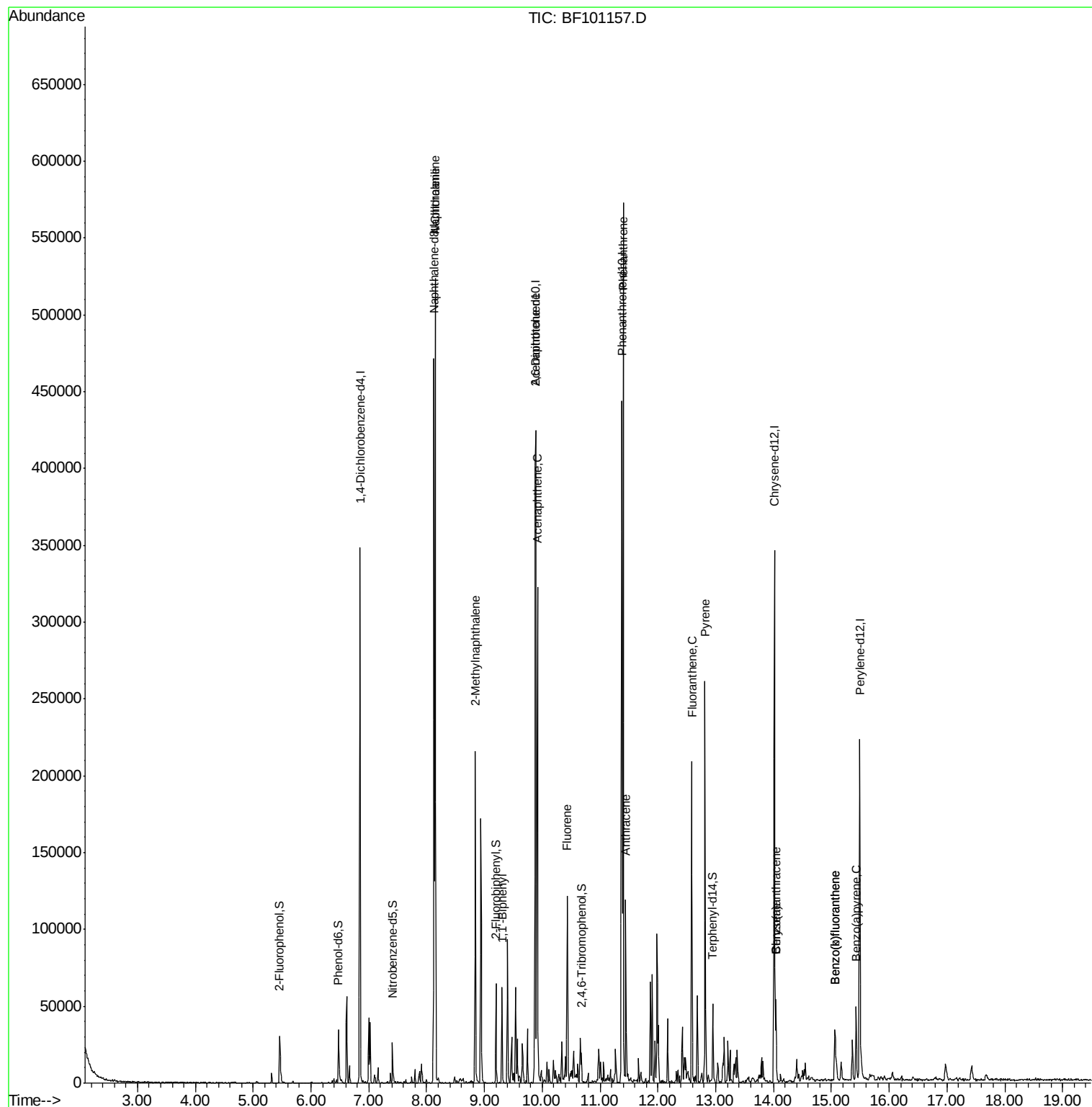
|                          |       |     |        |        |    |      |
|--------------------------|-------|-----|--------|--------|----|------|
| Target Compounds         |       |     |        | Qvalue |    |      |
| 31) Naphthalene          | 8.15  | 128 | 219131 | 21.963 | ng | 98   |
| 33) 4-Chloroaniline      | 8.15  | 127 | 28153  | 7.023  | ng | # 34 |
| 37) 2-Methylnaphthalene  | 8.84  | 142 | 58564  | 8.639  | ng | 99   |
| 45) 1,1'-Biphenyl        | 9.30  | 154 | 20985  | 2.497  | ng | 98   |
| 50) 2,6-Dinitrotoluene   | 9.88  | 165 | 13232  | 8.492  | ng | # 24 |
| 51) Acenaphthene         | 9.92  | 154 | 65984  | 11.234 | ng | 98   |
| 57) Fluorene             | 10.43 | 166 | 36295  | 5.275  | ng | 94   |
| 70) Phenanthrene         | 11.40 | 178 | 208339 | 22.779 | ng | 98   |
| 71) Anthracene           | 11.45 | 178 | 54022  | 5.836  | ng | 97   |
| 74) Fluoranthene         | 12.59 | 202 | 79218  | 7.814  | ng | 95   |
| 77) Pyrene               | 12.82 | 202 | 110448 | 15.086 | ng | 98   |
| 80) Benzo(a)anthracene   | 14.04 | 228 | 25802  | 3.852  | ng | 98   |
| 82) Chrysene             | 14.04 | 228 | 25802  | 4.147  | ng | 98   |
| 87) Benzo(b)fluoranthene | 15.06 | 252 | 29152  | 4.279  | ng | 96   |
| 88) Benzo(k)fluoranthene | 15.06 | 252 | 29152  | 4.343  | ng | 98   |
| 89) Benzo(a)pyrene       | 15.43 | 252 | 26280  | 4.243  | ng | 96   |

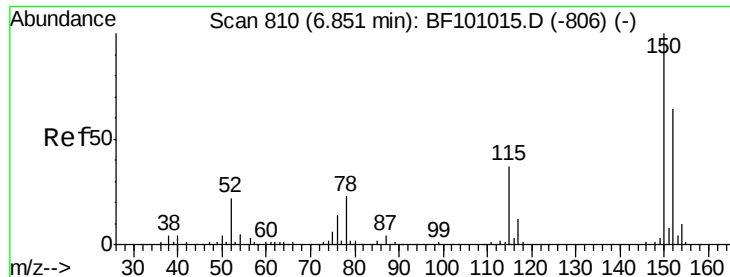
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Misc :  
ALS Vial : 44 Sample Multiplier: 1

Instrument :  
BNA\_F  
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Quant Time: Dec 06 11:10:20 2017  
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF113017.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Mon Dec 04 13:07:49 2017  
Response via : Initial Calibration



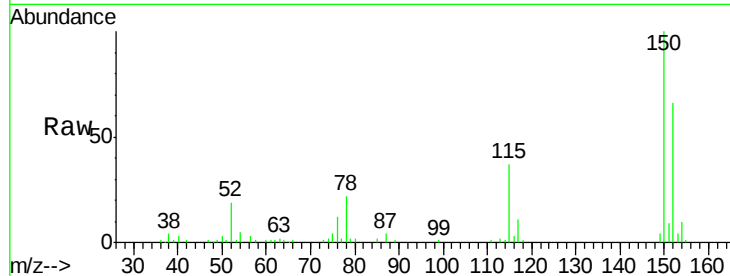


#1

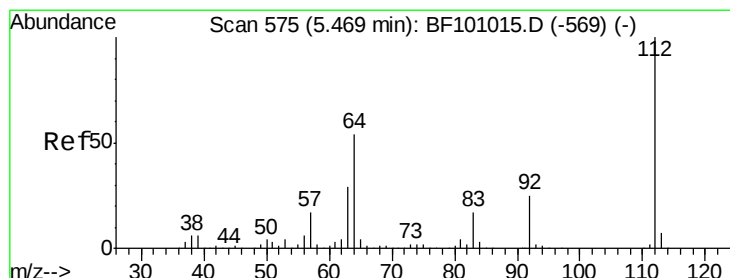
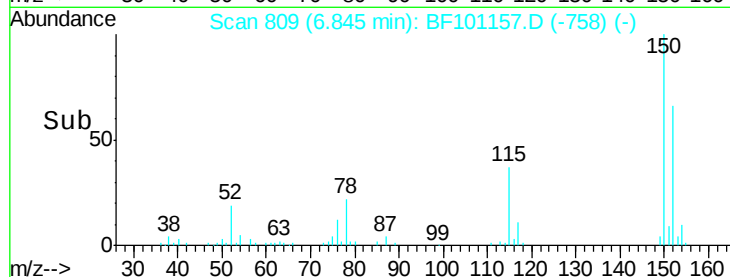
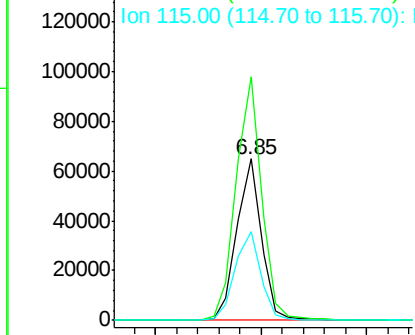
1,4-Dichlorobenzene-d4  
Concen: 20.000 ng  
RT: 6.85 min Scan# 809  
Delta R.T. 0.00 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Instrument :  
BNA\_F  
ClientSampleId :

Tot Ion:152 Resp: 52419  
Ion Ratio Lower Upper  
152 100  
150 150.8 124.6 186.8  
115 55.3 50.1 75.1



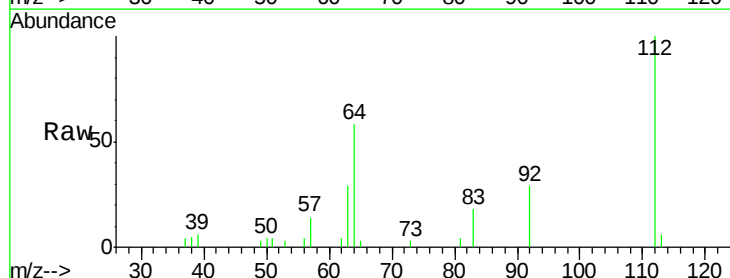
Abundance Ion 152.00 (151.70 to 152.70): E  
Ion 150.00 (149.70 to 150.70): E  
Ion 115.00 (114.70 to 115.70): E



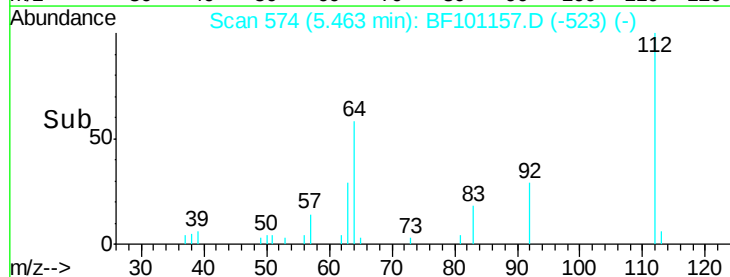
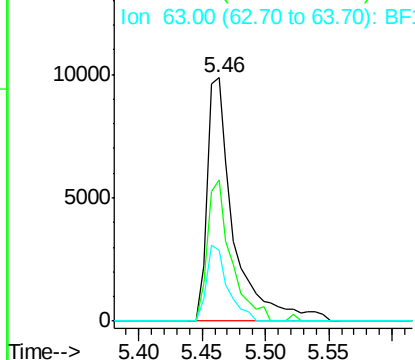
#5

2-Fluorophenol  
Concen: 4.539 ng  
RT: 5.46 min Scan# 574  
Delta R.T. 0.00 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Tgt Ion:112 Resp: 14398  
Ion Ratio Lower Upper  
112 100  
64 57.8 47.9 71.9  
63 29.0 23.7 35.5



Abundance Ion 112.00 (111.70 to 112.70): E  
Ion 64.00 (63.70 to 64.70): BF1  
Ion 63.00 (62.70 to 63.70): BF1





#7

Phenol-d6

Concen: 4.271 ng

RT: 6.47 min Scan# 746

Delta R.T. -0.01 min

Lab File: BF101157.D

Acq: 6 Dec 2017 9:23

Instrument :

BNA\_F

ClientSampleId :

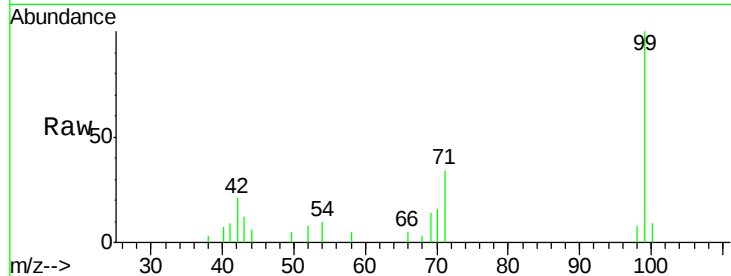
Tot Ion: 99 Resp: 16451

Ion Ratio Lower Upper

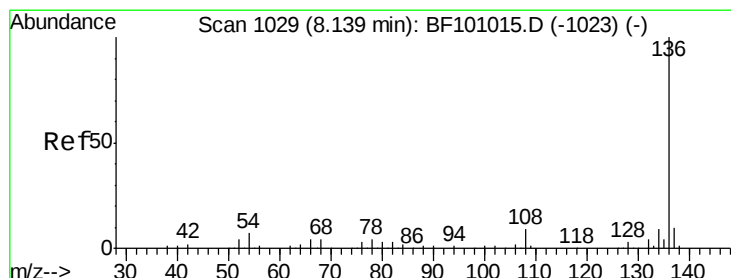
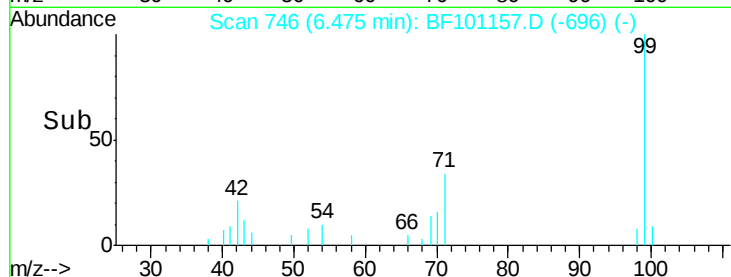
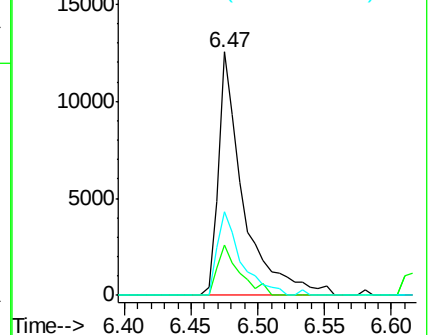
99 100

42 20.8 14.5 21.7

71 34.4 25.4 38.0



Abundance Ion 99.00 (98.70 to 99.70): BF1  
Ion 42.00 (41.70 to 42.70): BF1  
Ion 71.00 (70.70 to 71.70): BF1



#21

Naphthalene-d8

Concen: 20.000 ng

RT: 8.13 min Scan# 1027

Delta R.T. -0.01 min

Lab File: BF101157.D

Acq: 6 Dec 2017 9:23

Tgt Ion: 136 Resp: 202440

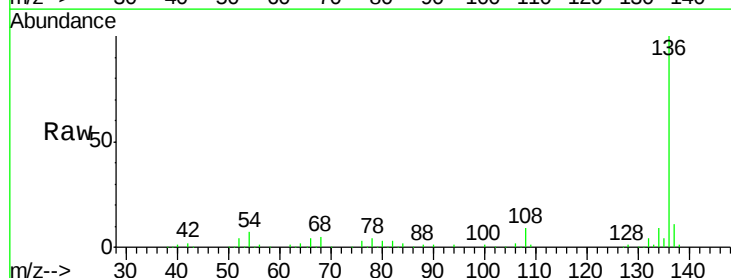
Ion Ratio Lower Upper

136 100

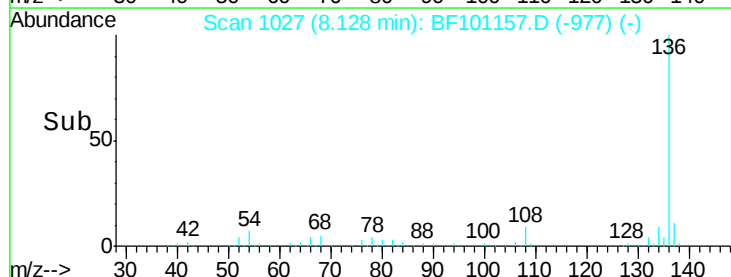
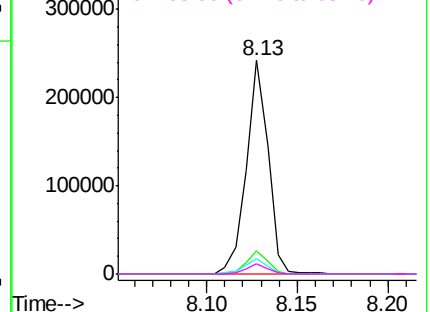
137 10.8 8.9 13.3

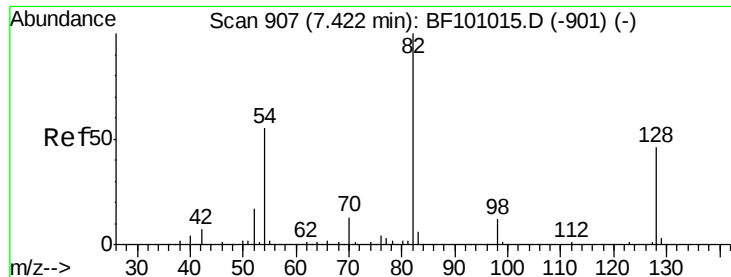
54 7.3 6.6 9.8

68 5.0 5.0 7.4



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): BF1  
Ion 68.00 (67.70 to 68.70): BF1

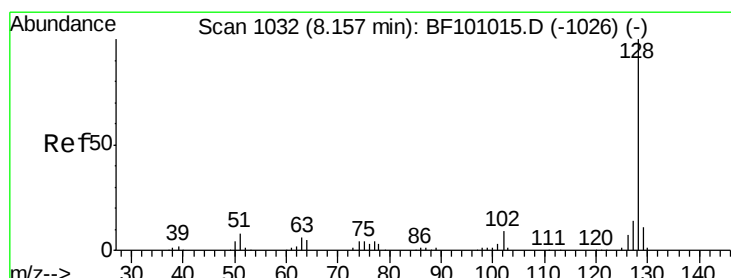
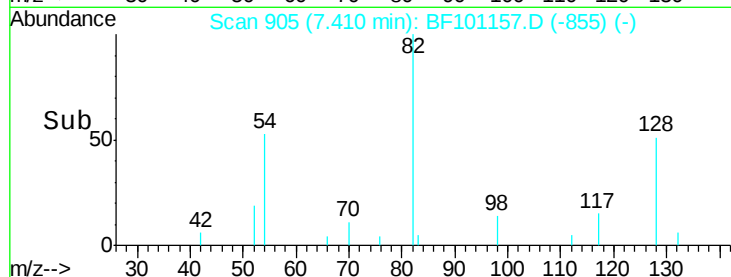
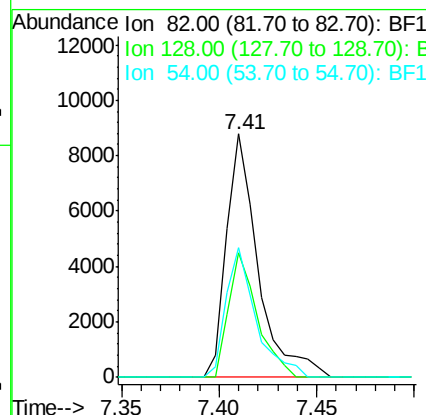
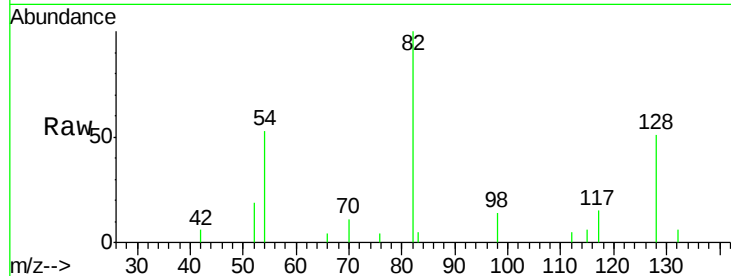




#23  
 Nitrobenzene-d5  
 Concen: 2.906 ng  
 RT: 7.41 min Scan# 905  
 Delta R.T. -0.01 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

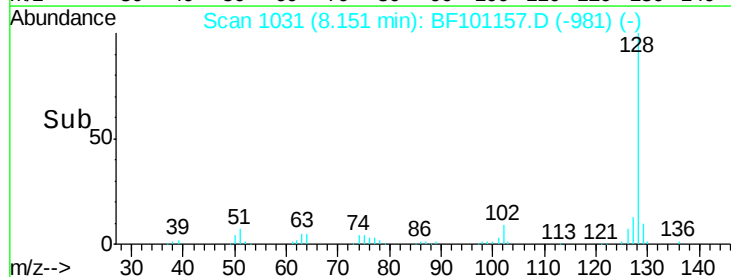
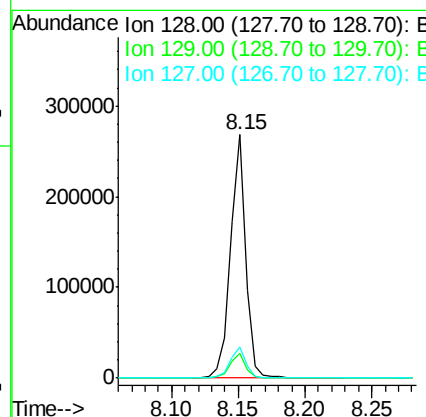
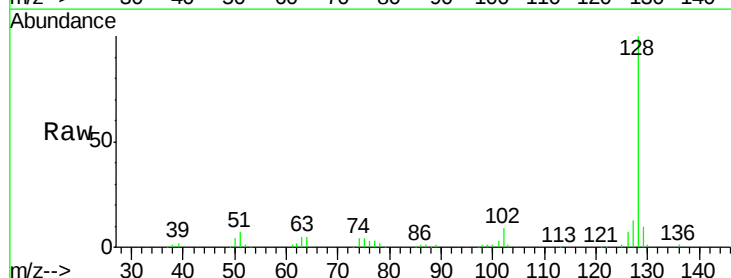
Instrument :  
 BNA\_F  
 ClientSampled :

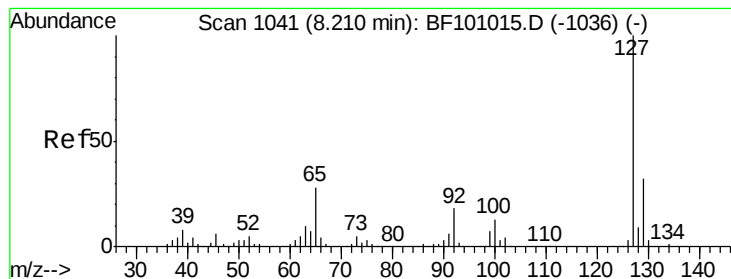
Tot Ion: 82 Resp: 9863  
 Ion Ratio Lower Upper  
 82 100  
 128 51.0 36.1 54.1  
 54 53.2 41.4 62.2



#31  
 Naphthalene  
 Concen: 21.963 ng  
 RT: 8.15 min Scan# 1031  
 Delta R.T. -0.01 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

Tgt Ion: 128 Resp: 219131  
 Ion Ratio Lower Upper  
 128 100  
 129 10.4 8.8 13.2  
 127 12.6 10.9 16.3

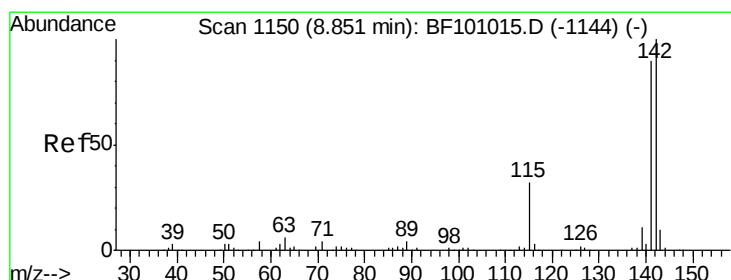
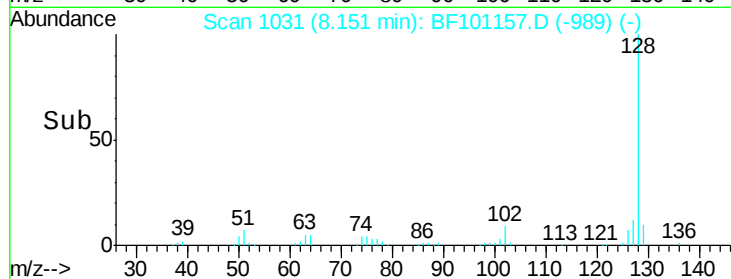
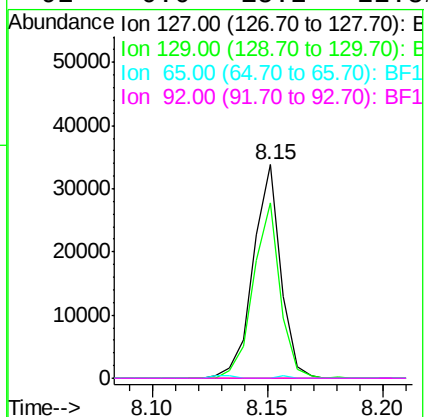
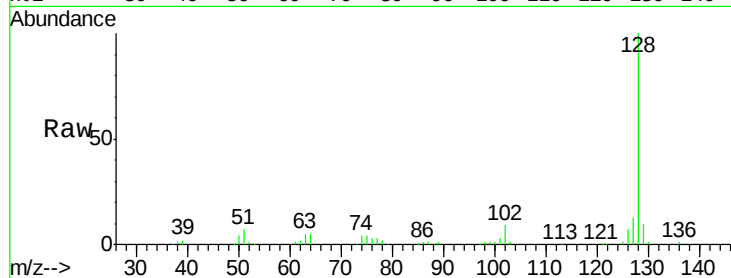




#33  
 4-Chloroaniline  
 Concen: 7.023 ng  
 RT: 8.15 min Scan# 1031  
 Delta R.T. -0.05 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

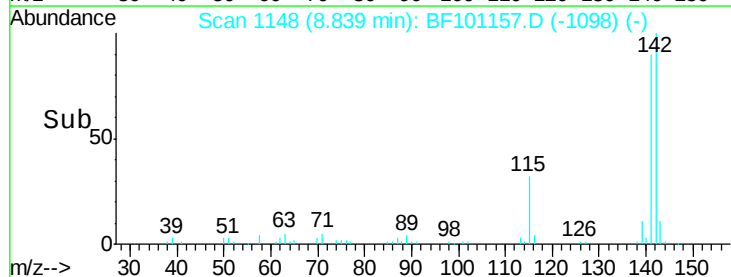
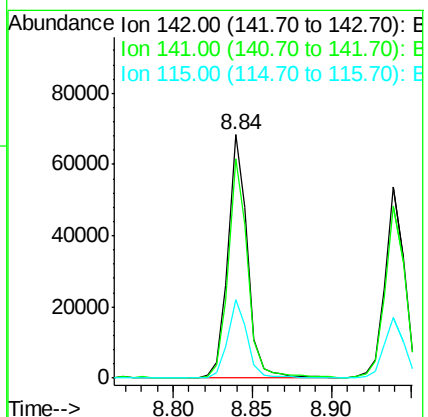
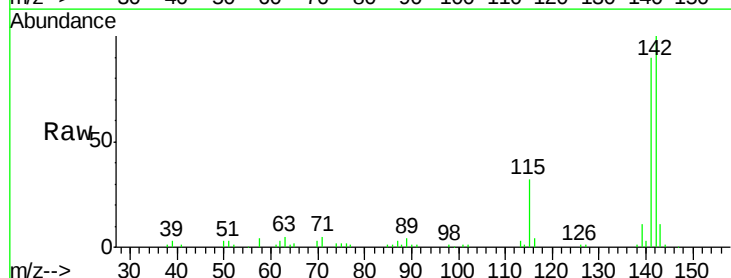
Instrument :  
 BNA\_F  
 ClientSampleId :

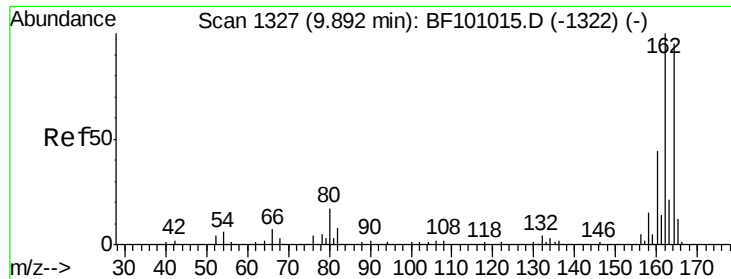
|             |       |            |
|-------------|-------|------------|
| Tot Ion:127 | Resp: | 28153      |
| Ion Ratio   | Lower | Upper      |
| 127         | 100   |            |
| 129         | 82.4  | 25.9 38.9# |
| 65          | 0.0   | 25.0 37.4# |
| 92          | 0.0   | 15.2 22.8# |



#37  
 2-Methylnaphthalene  
 Concen: 8.639 ng  
 RT: 8.84 min Scan# 1148  
 Delta R.T. -0.01 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

|             |       |            |
|-------------|-------|------------|
| Tgt Ion:142 | Resp: | 58564      |
| Ion Ratio   | Lower | Upper      |
| 142         | 100   |            |
| 141         | 89.9  | 70.8 106.2 |
| 115         | 32.2  | 26.1 39.1  |

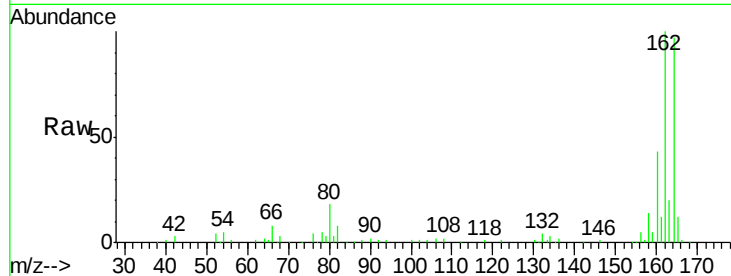




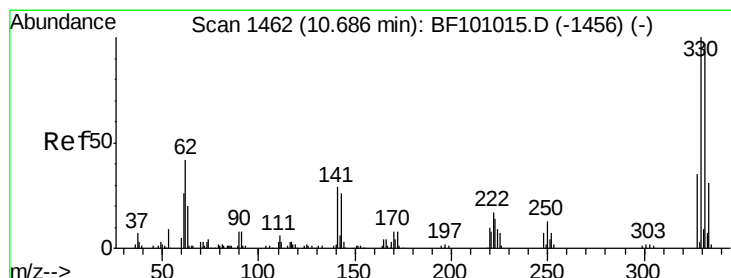
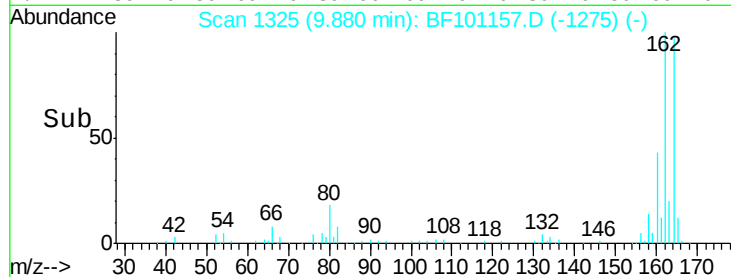
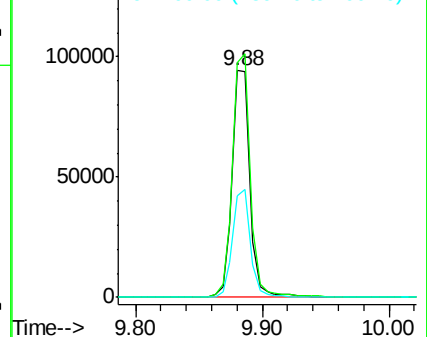
#38  
Acenaphthene-d10  
Concen: 20.000 ng  
RT: 9.88 min Scan# 1325  
Delta R.T. -0.01 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Instrument :  
BNA\_F  
ClientSampleId :

Tot Ion:164 Resp: 91733  
Ion Ratio Lower Upper  
164 100  
162 103.5 86.1 129.1  
160 44.9 38.3 57.5

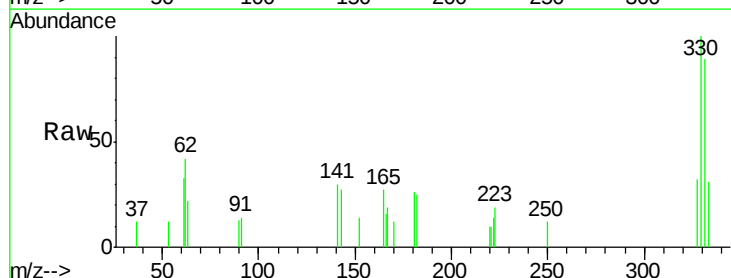


Abundance Ion 164.00 (163.70 to 164.70): E  
Ion 162.00 (161.70 to 162.70): E  
Ion 160.00 (159.70 to 160.70): E

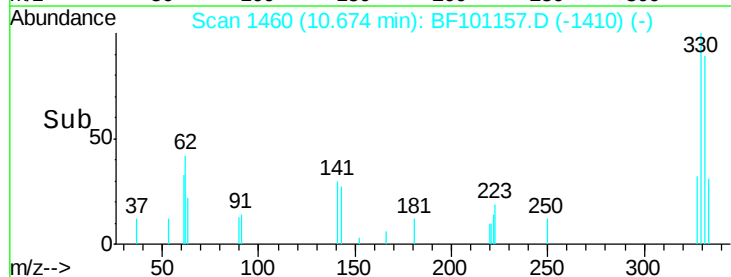
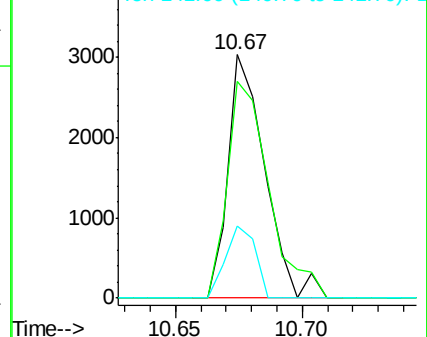


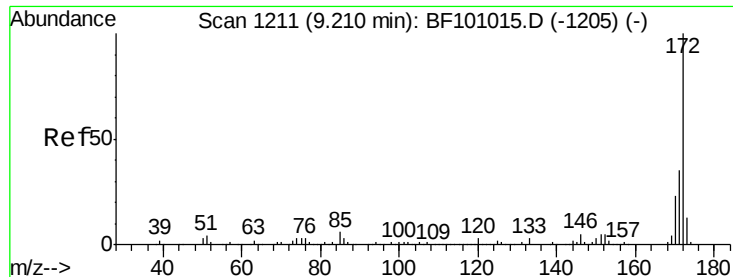
#41  
2,4,6-Tribromophenol  
Concen: 2.784 ng  
RT: 10.67 min Scan# 1460  
Delta R.T. -0.01 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Tgt Ion:330 Resp: 3068  
Ion Ratio Lower Upper  
330 100  
332 100.7 77.0 115.6  
141 23.6 29.9 44.9#



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

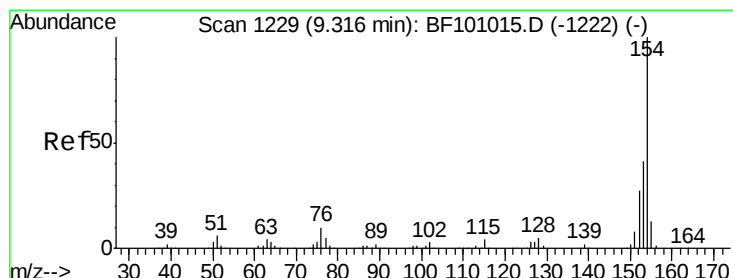
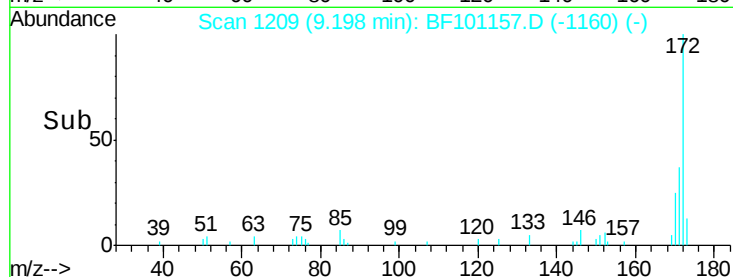
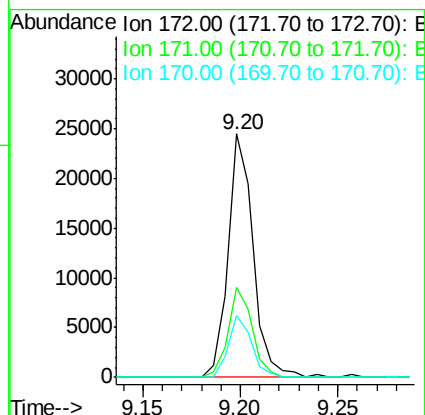
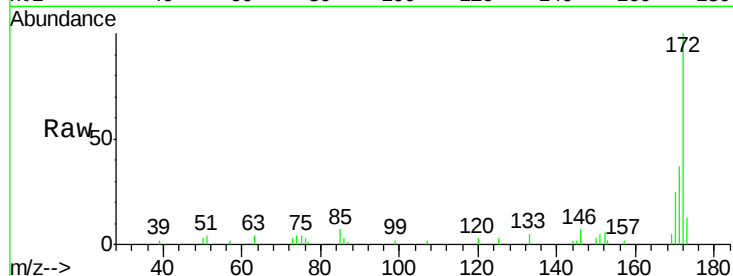




#44  
 2-Fluorobiphenyl  
 Concen: 3.242 ng  
 RT: 9.20 min Scan# 1209  
 Delta R.T. -0.01 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

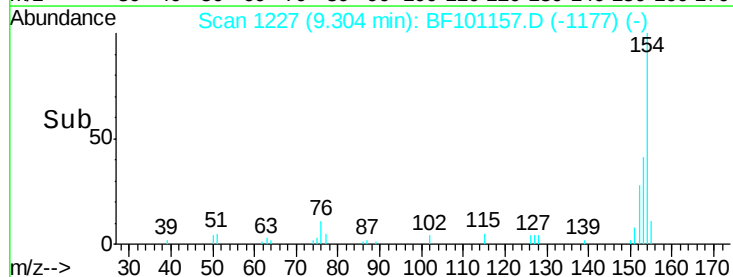
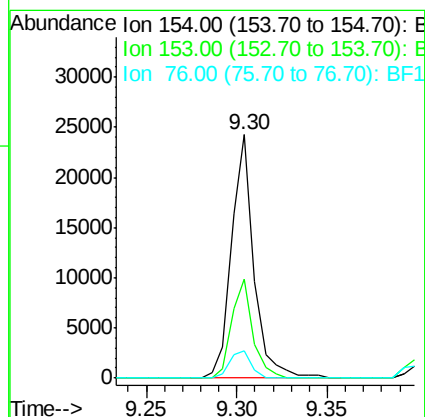
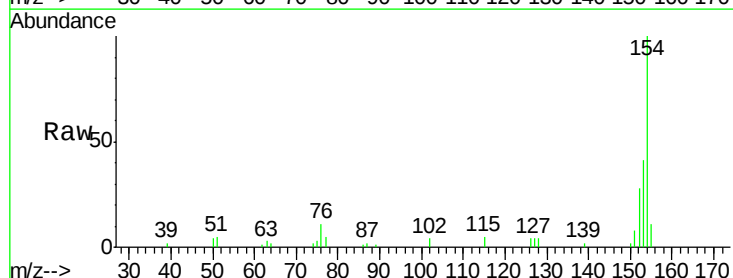
Instrument :  
 BNA\_F  
 ClientSampleId :

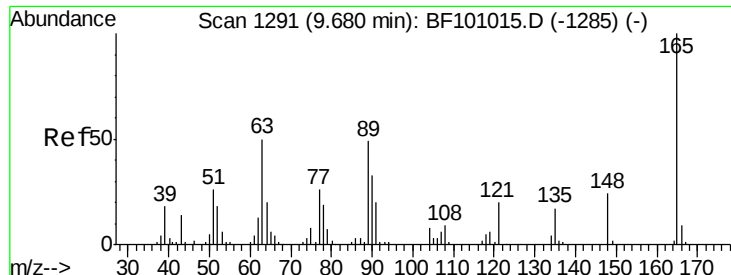
Tot Ion:172 Resp: 21736  
 Ion Ratio Lower Upper  
 172 100  
 171 37.1 29.7 44.5  
 170 25.5 19.6 29.4



#45  
 1,1'-Biphenyl  
 Concen: 2.497 ng  
 RT: 9.30 min Scan# 1227  
 Delta R.T. -0.01 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

Tgt Ion:154 Resp: 20985  
 Ion Ratio Lower Upper  
 154 100  
 153 40.7 21.3 61.3  
 76 11.2 0.0 34.0

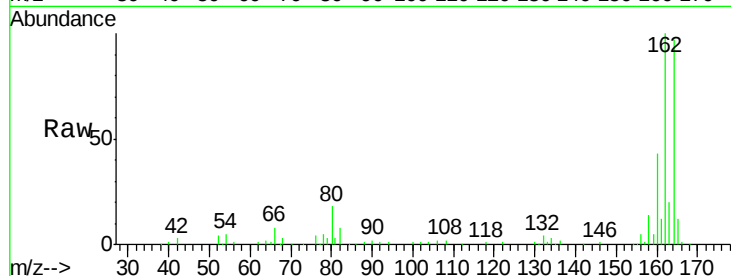




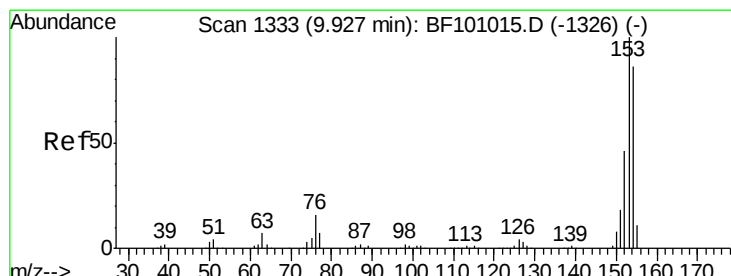
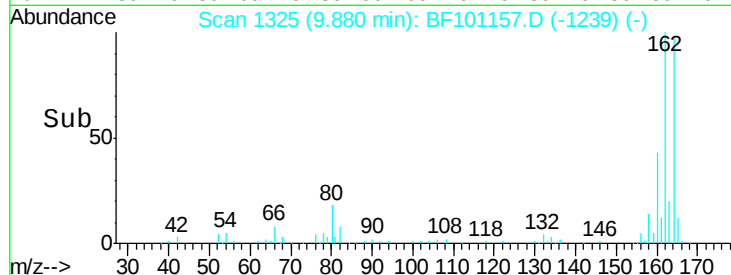
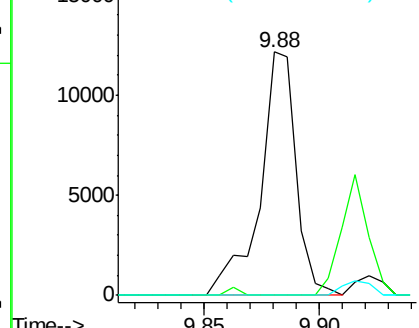
#50  
2,6-Dinitrotoluene  
Concen: 8.492 ng  
RT: 9.88 min Scan# 1325  
Delta R.T. 0.21 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Instrument :  
BNA\_F  
ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 165     | 100   |       |       |
| 63      | 0.0   | 44.7  | 67.1# |
| 89      | 0.0   | 44.0  | 66.0# |

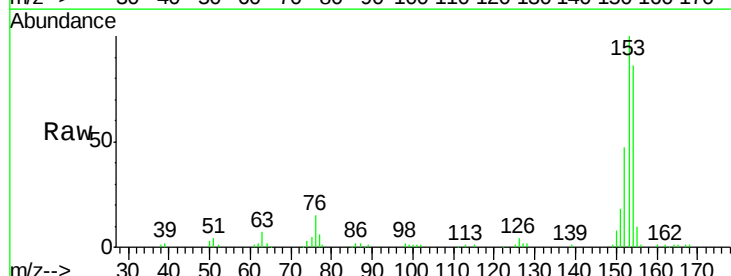


Abundance Ion 165.00 (164.70 to 165.70): E  
Ion 63.00 (62.70 to 63.70): BF1  
Ion 89.00 (88.70 to 89.70): BF1

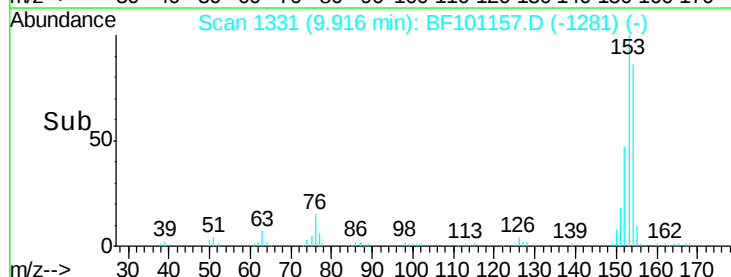
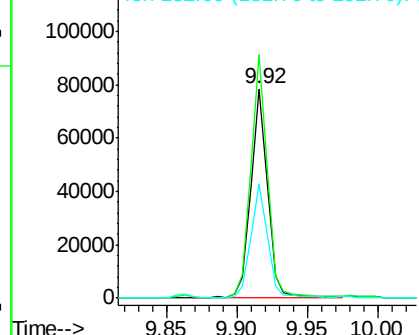


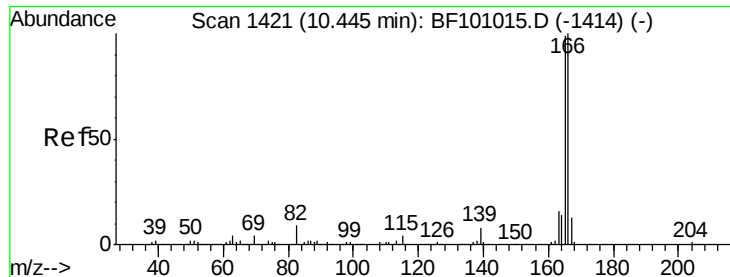
#51  
Acenaphthene  
Concen: 11.234 ng  
RT: 9.92 min Scan# 1331  
Delta R.T. -0.01 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 154     | 100   |       |       |
| 153     | 116.3 | 91.2  | 136.8 |
| 152     | 54.4  | 43.8  | 65.8  |



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





#57

Fluorene

Concen: 5.275 ng

RT: 10.43 min Scan# 1419

Delta R.T. -0.01 min

Lab File: BF101157.D

Acq: 6 Dec 2017 9:23

Instrument :

BNA\_F

ClientSampleId :

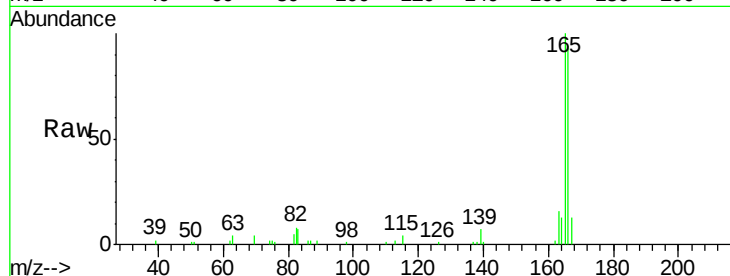
Tot Ion:166 Resp: 36295

Ion Ratio Lower Upper

166 100

165 106.5 79.8 119.8

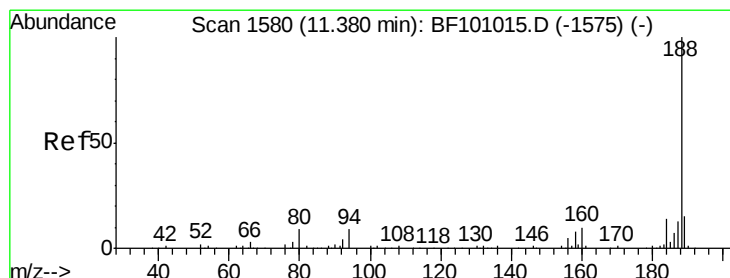
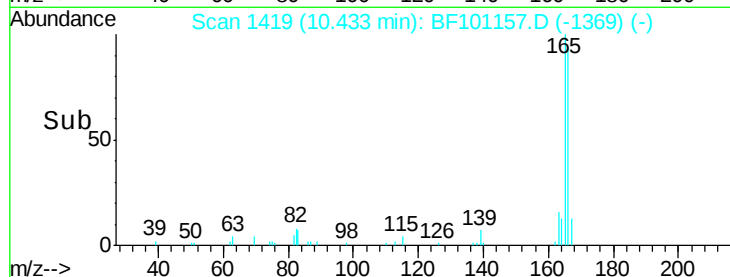
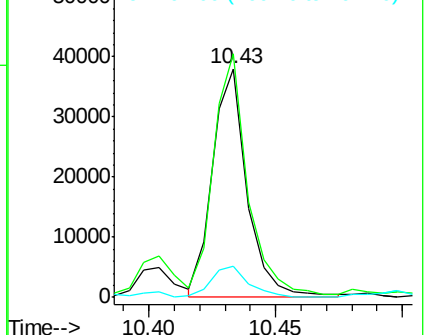
167 13.4 10.6 16.0



Abundance Ion 166.00 (165.70 to 166.70): E

Ion 165.00 (164.70 to 165.70): E

Ion 167.00 (166.70 to 167.70): E



#63

Phenanthrene-d10

Concen: 20.000 ng

RT: 11.37 min Scan# 1579

Delta R.T. 0.00 min

Lab File: BF101157.D

Acq: 6 Dec 2017 9:23

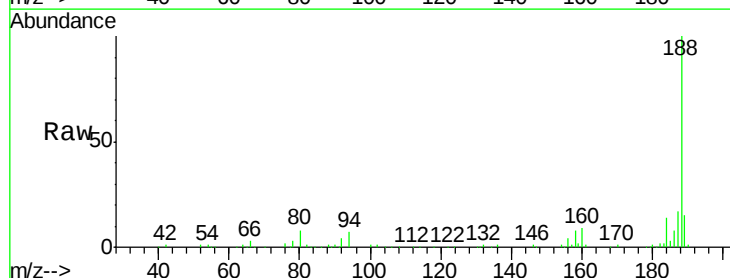
Tgt Ion:188 Resp: 166084

Ion Ratio Lower Upper

188 100

94 7.3 8.5 12.7#

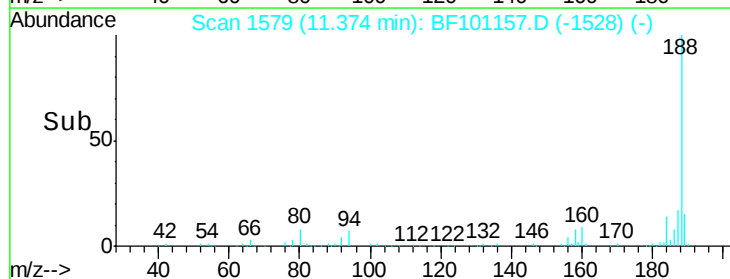
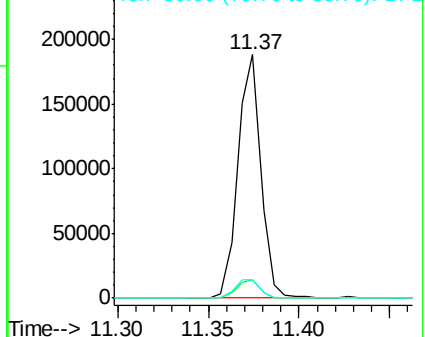
80 7.6 9.2 13.8#

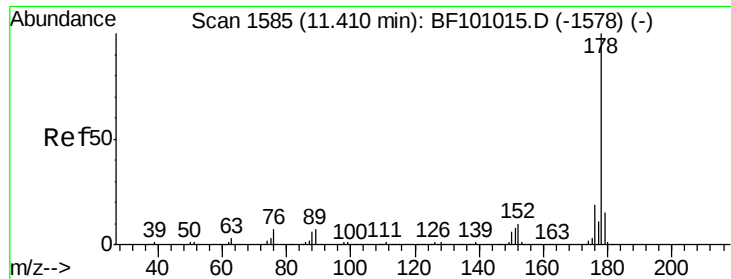


Abundance Ion 188.00 (187.70 to 188.70): E

Ion 94.00 (93.70 to 94.70): BF1

Ion 80.00 (79.70 to 80.70): BF1

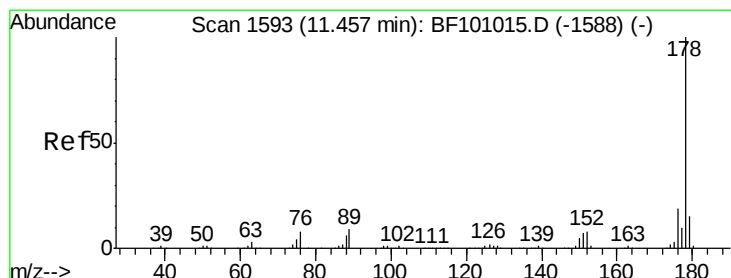
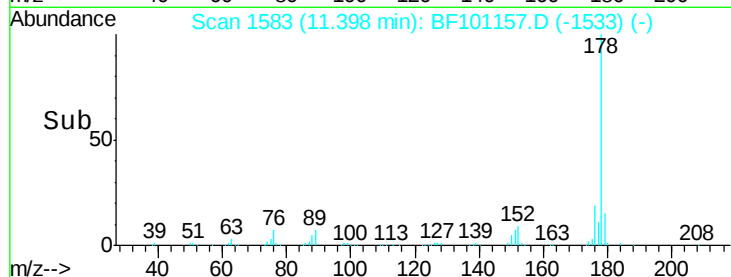
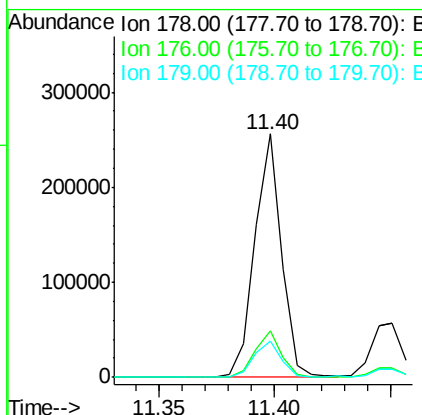
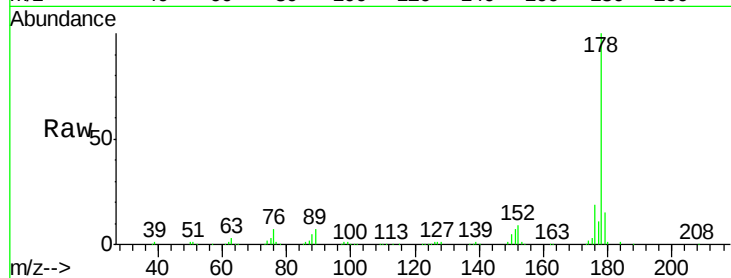




#70  
 Phenanthrene  
 Concen: 22.779 ng  
 RT: 11.40 min Scan# 1583  
 Delta R.T. -0.01 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

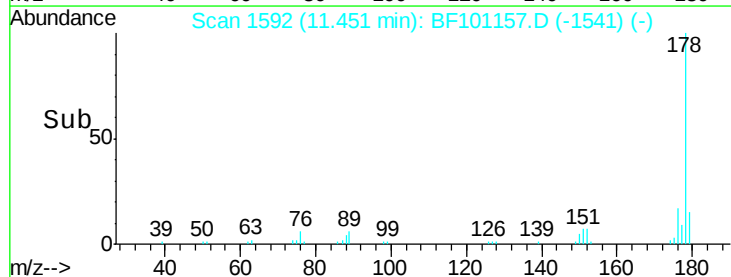
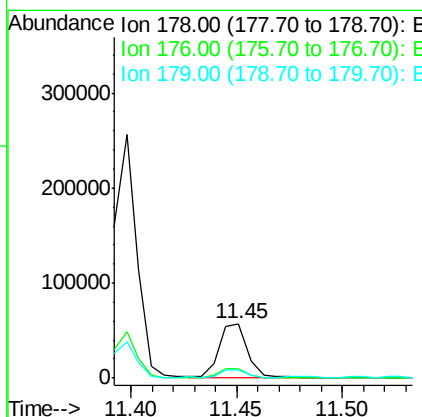
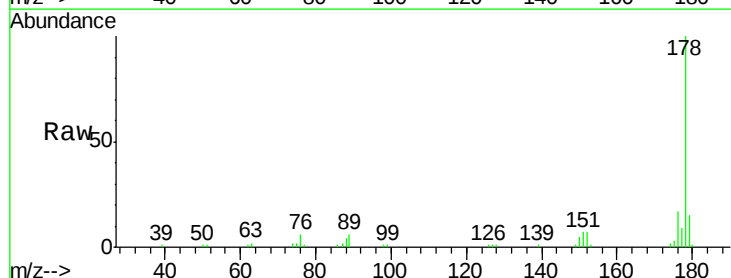
Instrument :  
 BNA\_F  
 ClientSampleId :

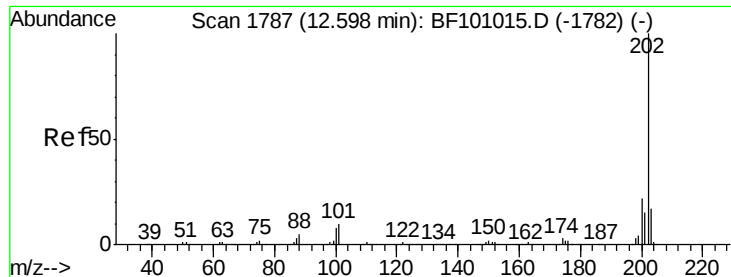
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 19.0  | 15.8  | 23.8  |
| 179     | 14.9  | 13.0  | 19.6  |



#71  
 Anthracene  
 Concen: 5.836 ng  
 RT: 11.45 min Scan# 1592  
 Delta R.T. 0.00 min  
 Lab File: BF101157.D  
 Acq: 6 Dec 2017 9:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 17.5  | 15.4  | 23.2  |
| 179     | 14.7  | 12.6  | 19.0  |





#74

Fluoranthene

Concen: 7.814 ng

RT: 12.59 min Scan# 1785

Delta R.T. -0.01 min

Lab File: BF101157.D

Acq: 6 Dec 2017 9:23

Instrument :

BNA\_F

ClientSampleId :

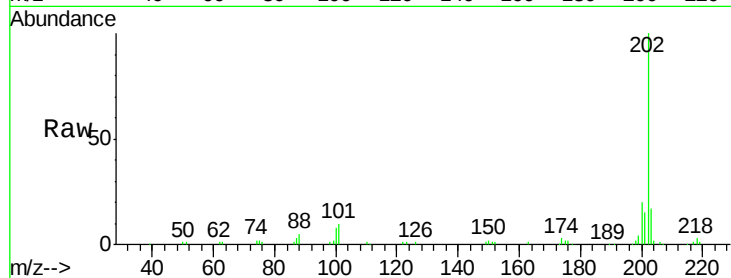
Tot Ion:202 Resp: 79218

Ion Ratio Lower Upper

202 100

101 10.0 0.0 34.1

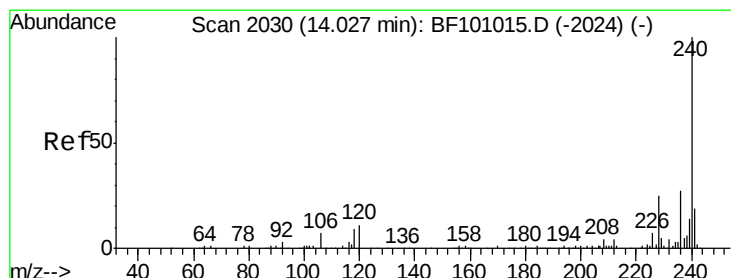
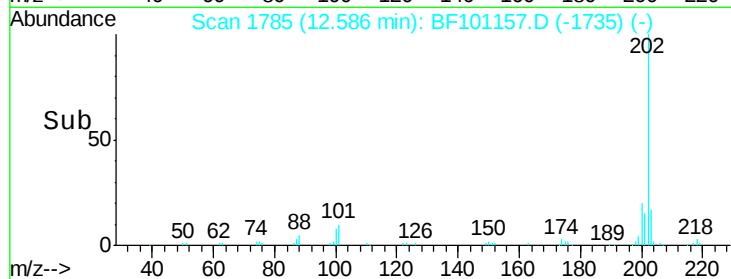
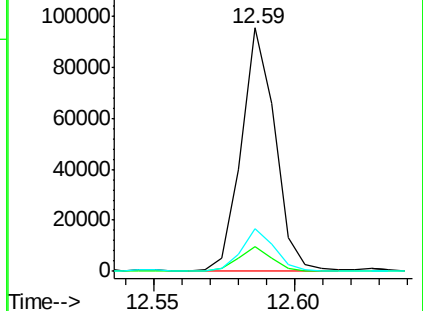
203 17.4 0.0 38.1



Abundance Ion 202.00 (201.70 to 202.70): E

Ion 101.00 (100.70 to 101.70): E

Ion 203.00 (202.70 to 203.70): E



#75

Chrysene-d12

Concen: 20.000 ng

RT: 14.02 min Scan# 2028

Delta R.T. -0.01 min

Lab File: BF101157.D

Acq: 6 Dec 2017 9:23

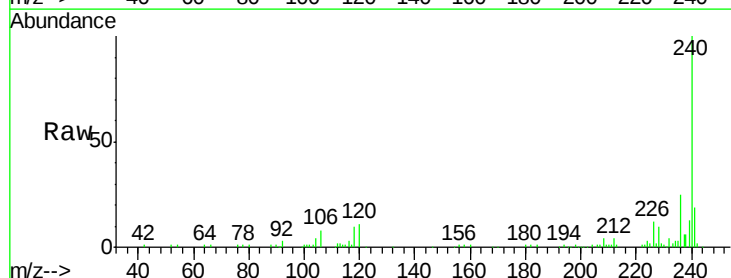
Tgt Ion:240 Resp: 106103

Ion Ratio Lower Upper

240 100

120 11.2 9.5 14.3

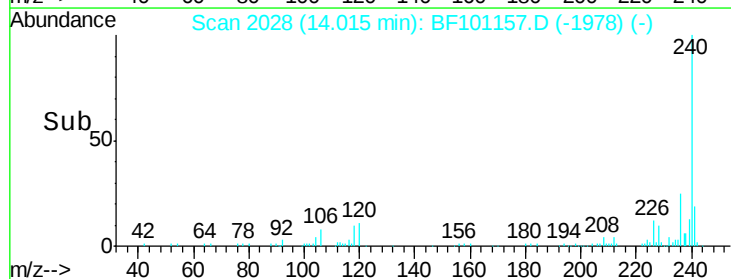
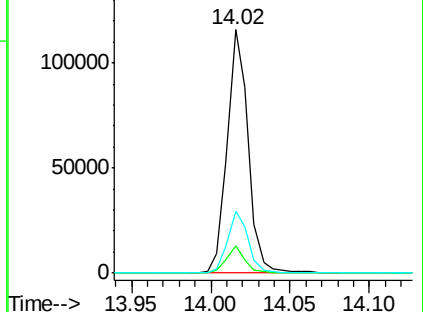
236 25.2 20.7 31.1

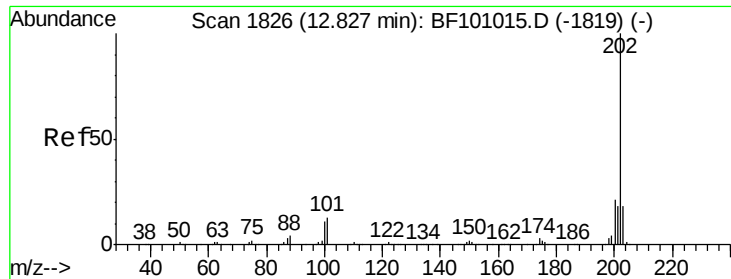


Abundance Ion 240.00 (239.70 to 240.70): E

Ion 120.00 (119.70 to 120.70): E

Ion 236.00 (235.70 to 236.70): E

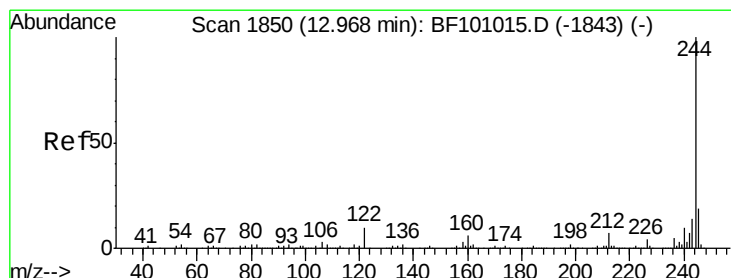
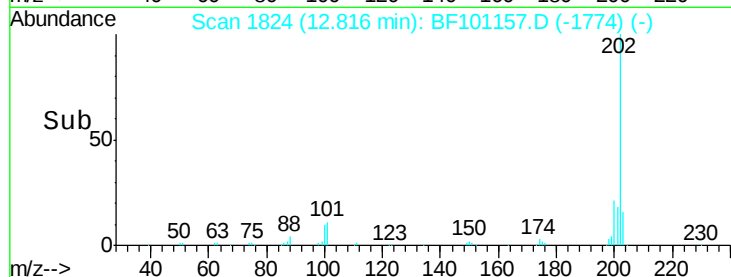
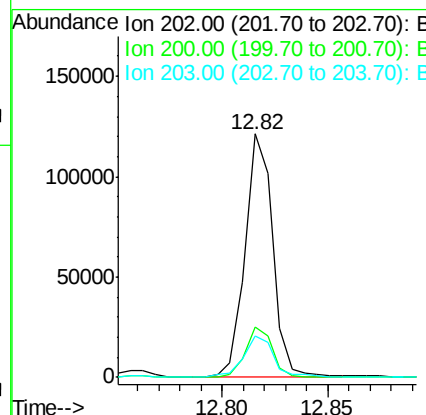
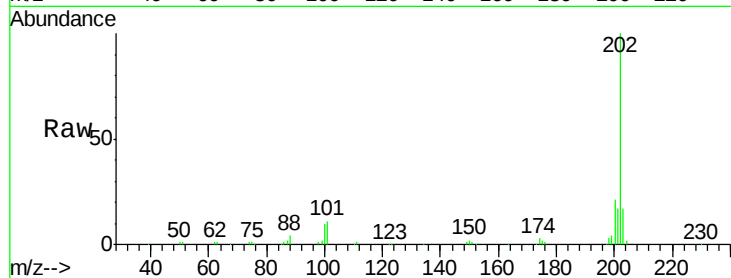




#77  
Pvrene  
Concen: 15.086 ng  
RT: 12.82 min Scan# 1824  
Delta R.T. -0.01 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

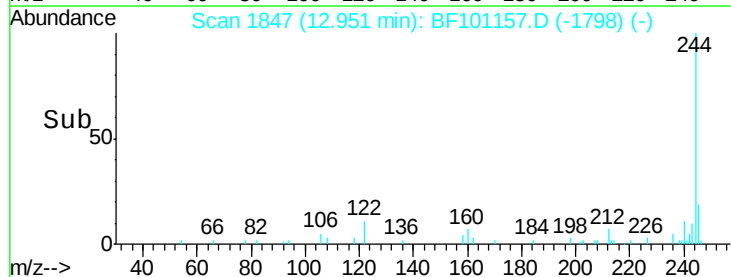
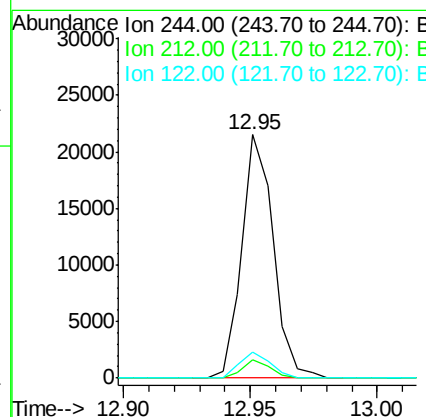
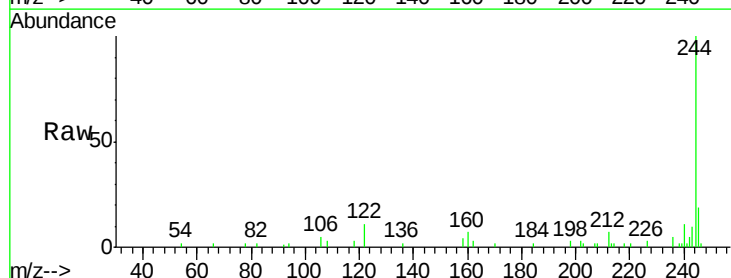
Instrument :  
BNA\_F  
ClientSampleId :

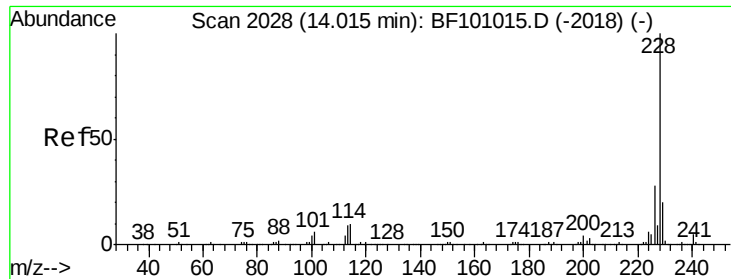
Tot Ion:202 Resp: 110448  
Ion Ratio Lower Upper  
202 100  
200 20.8 17.4 26.2  
203 17.2 14.3 21.5



#78  
Terphenyl-d14  
Concen: 3.810 ng  
RT: 12.95 min Scan# 1847  
Delta R.T. -0.01 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Tgt Ion:244 Resp: 18483  
Ion Ratio Lower Upper  
244 100  
212 7.4 5.4 8.0  
122 10.6 11.0 16.4#

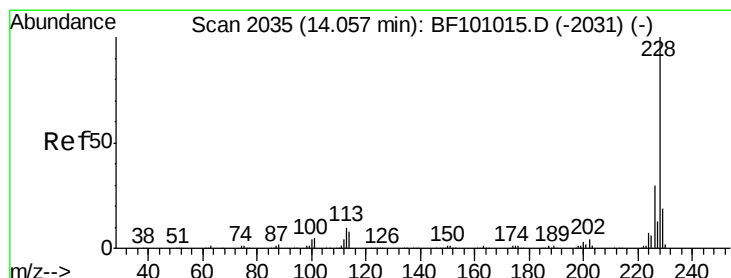
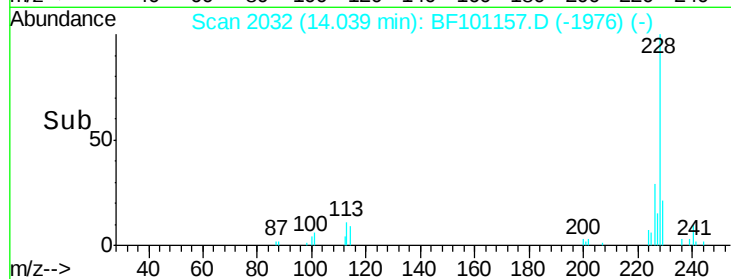
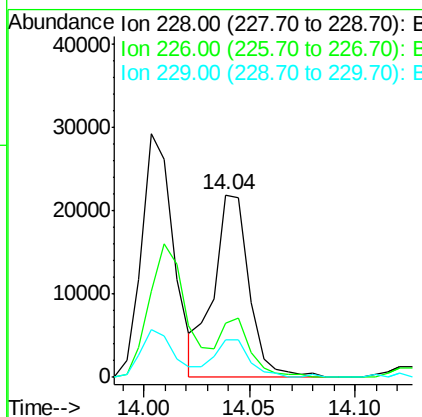
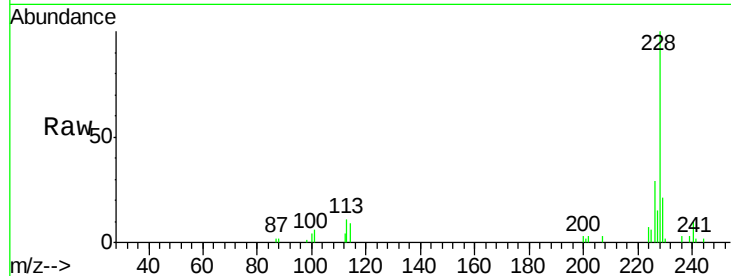




#80  
Benzo(a)anthracene  
Concen: 3.852 ng  
RT: 14.04 min Scan# 2032  
Delta R.T. 0.03 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

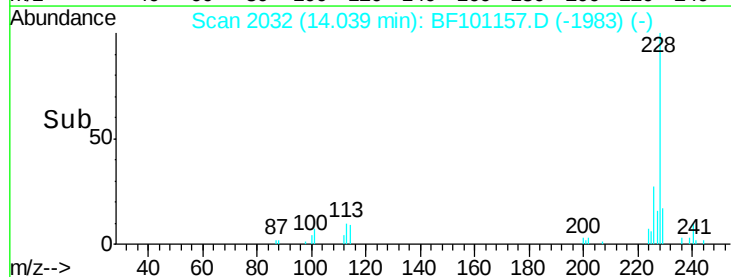
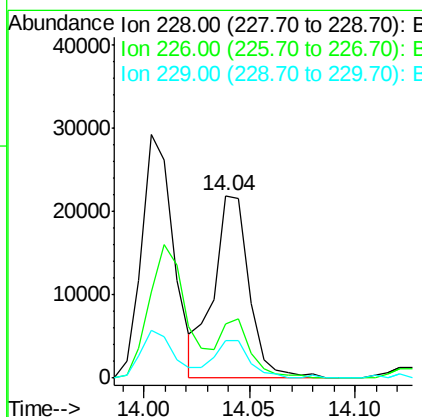
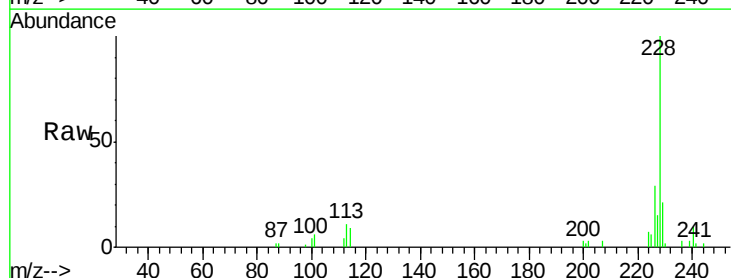
Instrument :  
BNA\_F  
ClientSampleId :

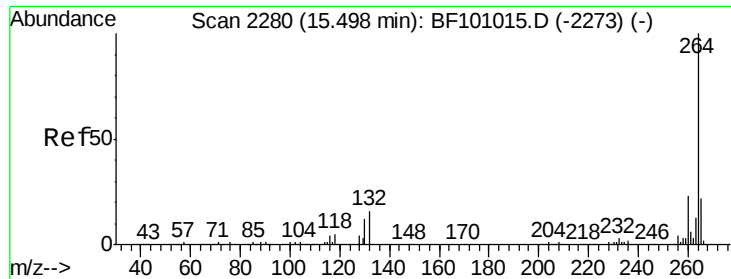
Tot Ion:228 Resp: 25802  
Ion Ratio Lower Upper  
228 100  
226 29.3 22.6 33.8  
229 20.6 15.8 23.6



#82  
Chrysene  
Concen: 4.147 ng  
RT: 14.04 min Scan# 2032  
Delta R.T. -0.01 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Tgt Ion:228 Resp: 25802  
Ion Ratio Lower Upper  
228 100  
226 29.3 25.0 37.6  
229 20.6 16.2 24.4

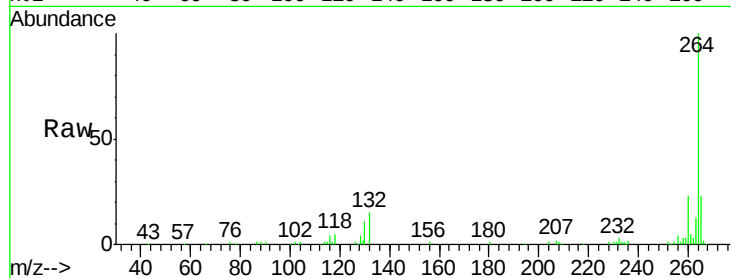




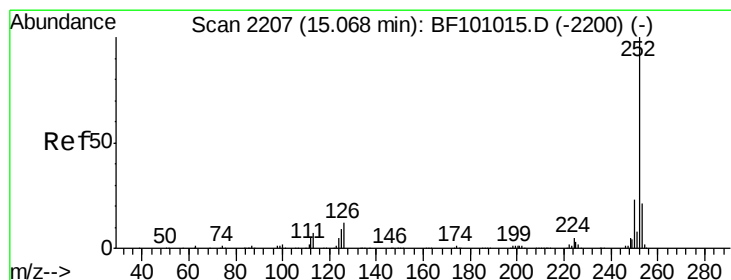
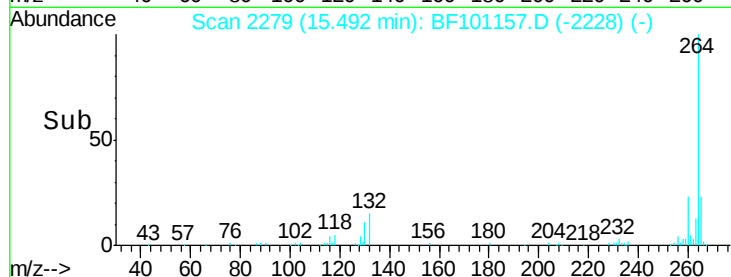
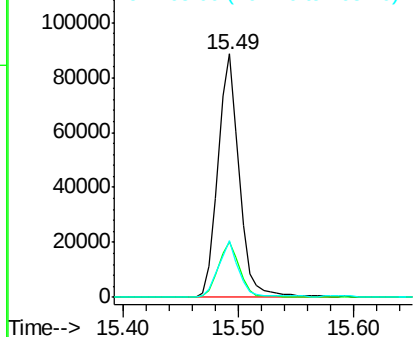
#86  
Pervlene-d12  
Concen: 20.000 ng  
RT: 15.49 min Scan# 2279  
Delta R.T. 0.00 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Instrument :  
BNA\_F  
ClientSampleId :

Tot Ion:264 Resp: 113748  
Ion Ratio Lower Upper  
264 100  
260 22.6 19.2 28.8  
265 23.1 17.5 26.3

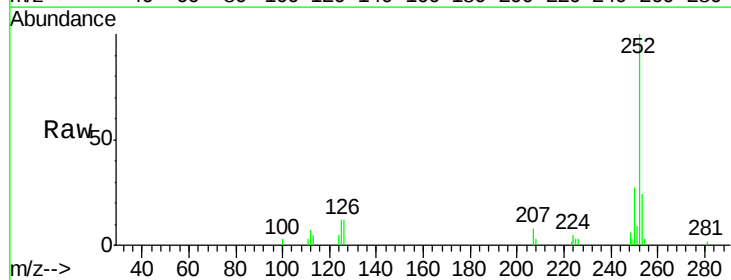


Abundance Ion 264.00 (263.70 to 264.70): E  
Ion 260.00 (259.70 to 260.70): E  
Ion 265.00 (264.70 to 265.70): E

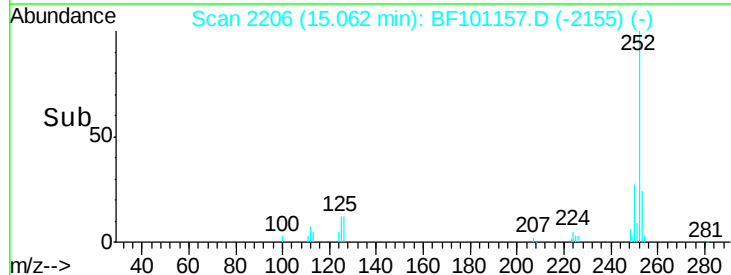
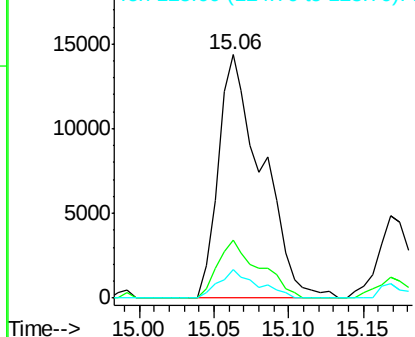


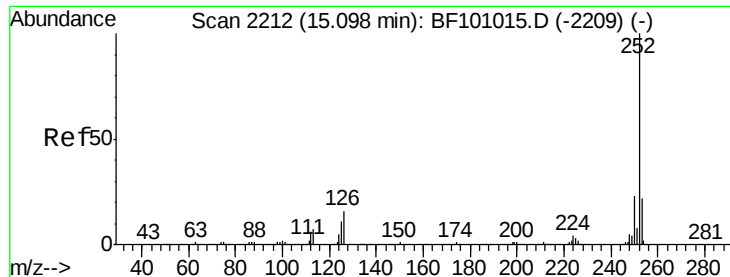
#87  
Benzo(b)fluoranthene  
Concen: 4.279 ng  
RT: 15.06 min Scan# 2206  
Delta R.T. 0.00 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Tgt Ion:252 Resp: 29152  
Ion Ratio Lower Upper  
252 100  
253 23.6 17.0 25.6  
125 11.9 9.0 13.6



Abundance Ion 252.00 (251.70 to 252.70): E  
Ion 253.00 (252.70 to 253.70): E  
Ion 125.00 (124.70 to 125.70): E

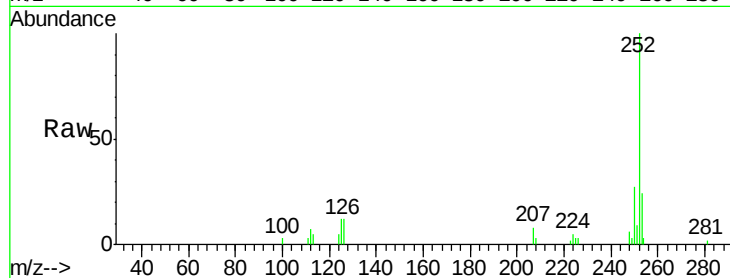




#88  
Benzo(k)fluoranthene  
Concen: 4.343 ng  
RT: 15.06 min Scan# 2206  
Delta R.T. -0.03 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

Instrument :  
BNA\_F  
ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 23.6  | 17.9  | 26.9  |
| 125     | 11.9  | 10.2  | 15.2  |

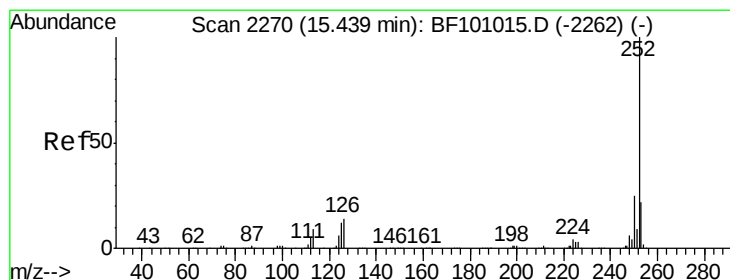
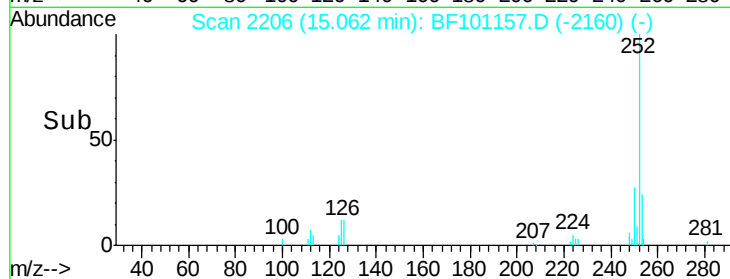
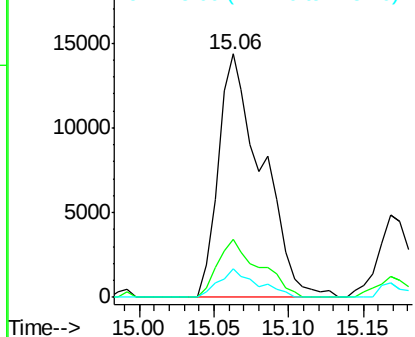


Abundance

Ion 252.00 (251.70 to 252.70): E

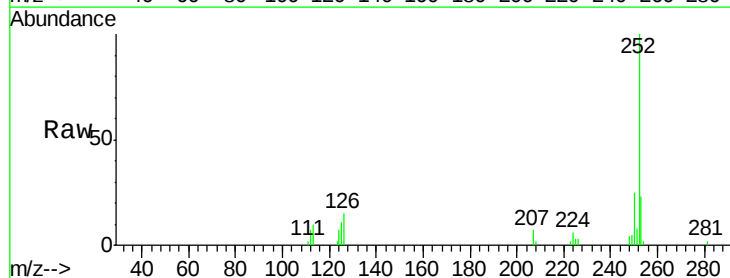
Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E



#89  
Benzo(a)pyrene  
Concen: 4.243 ng  
RT: 15.43 min Scan# 2268  
Delta R.T. -0.01 min  
Lab File: BF101157.D  
Acq: 6 Dec 2017 9:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 23.0  | 17.1  | 25.7  |
| 125     | 10.5  | 9.8   | 14.6  |



Abundance

Ion 252.00 (251.70 to 252.70): E

Ion 253.00 (252.70 to 253.70): E

Ion 125.00 (124.70 to 125.70): E

