

Data Path : Z:\HPCHEM1\BNA F\DATA\BF122217\  
 Data File : BF101669.D  
 Acq On : 22 Dec 2017 22:23  
 Operator : SJ/JU  
 Sample : I6966-01 10X  
 Misc :  
 ALS Vial : 21 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 DB-WW-3-0-4DL

Quant Time: Dec 23 00:17:52 2017  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF121417.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Fri Dec 22 16:07:58 2017  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 6.79  | 152  | 145547   | 20.00 | ng    | 0.00     |
| 21) Naphthalene-d8        | 8.07  | 136  | 547874   | 20.00 | ng    | 0.00     |
| 38) Acenaphthene-d10      | 9.82  | 164  | 217503   | 20.00 | ng    | 0.00     |
| 63) Phenanthrene-d10      | 11.32 | 188  | 351045   | 20.00 | ng    | 0.00     |
| 75) Chrysene-d12          | 13.97 | 240  | 273618   | 20.00 | ng    | 0.00     |
| 86) Perylene-d12          | 15.44 | 264  | 283341   | 20.00 | ng    | 0.02     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-----------------------------|-------|------|----------|-------|-------|----------|
| 5) 2-Fluorophenol           | 5.42  | 112  | 102869   | 10.53 | ng    | 0.01     |
| 7) Phenol-d6                | 6.44  | 99   | 136817   | 11.25 | ng    | 0.00     |
| 23) Nitrobenzene-d5         | 7.36  | 82   | 71392    | 7.25  | ng    | 0.00     |
| 41) 2,4,6-Tribromophenol    | 10.62 | 330  | 20613    | 9.84  | ng    | 0.00     |
| 44) 2-Fluorobiphenyl        | 9.14  | 172  | 140263   | 10.00 | ng    | 0.00     |
| 78) Terphenyl-d14           | 12.90 | 244  | 102281   | 9.01  | ng    | 0.00     |

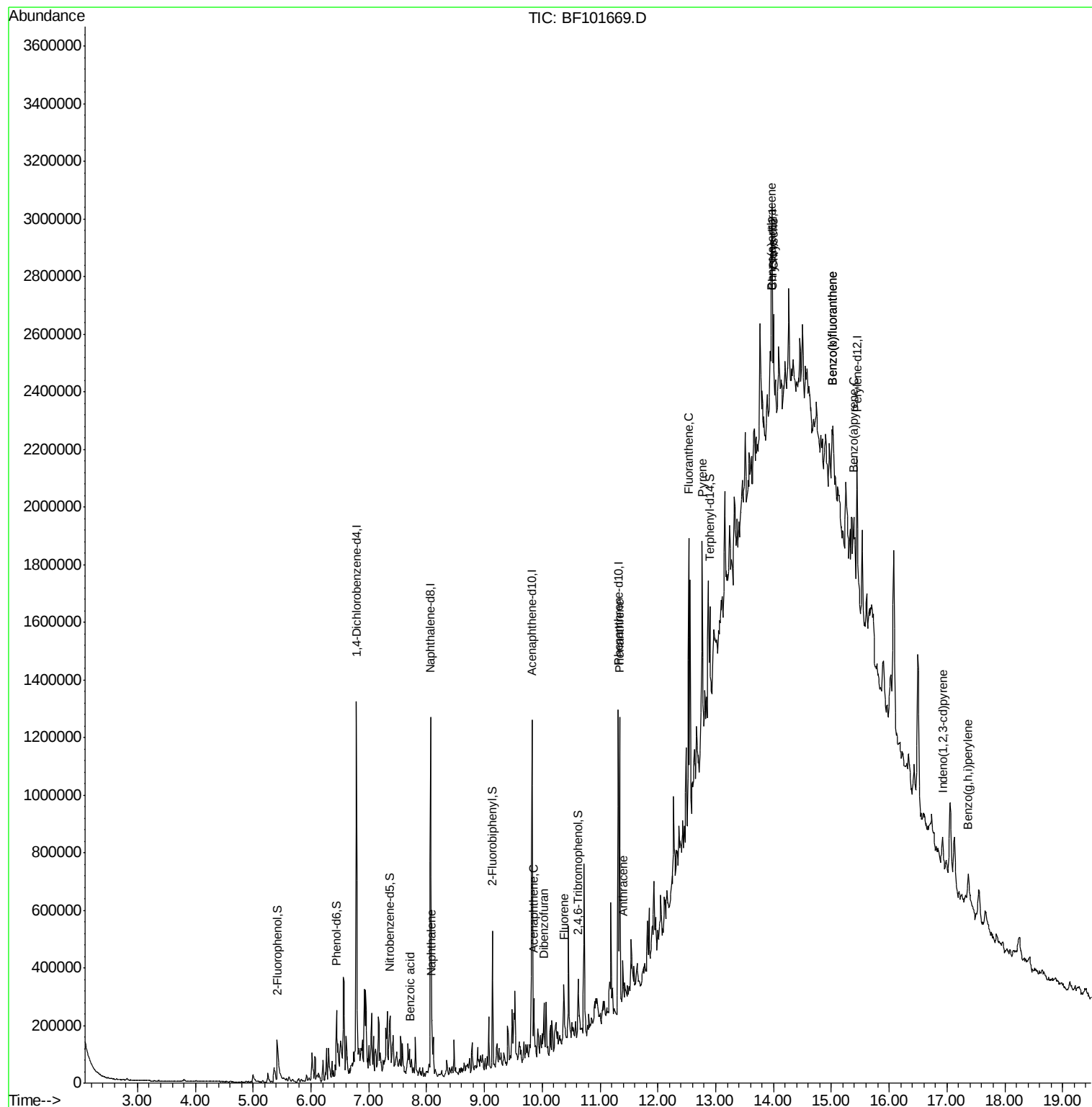
| Target Compounds           | R.T.  | QIon | Response | Conc   | Units | Qvalue |
|----------------------------|-------|------|----------|--------|-------|--------|
| 31) Naphthalene            | 8.09  | 128  | 72420    | 2.626  | ng    | 99     |
| 32) Benzoic acid           | 7.72  | 122  | 123      | 7.980  | ng    | # 1    |
| 51) Acenaphthene           | 9.86  | 154  | 37744    | 2.695  | ng    | 96     |
| 54) Dibenzofuran           | 10.03 | 168  | 36591    | 2.056  | ng    | # 95   |
| 57) Fluorene               | 10.37 | 166  | 51334    | 3.409  | ng    | 98     |
| 70) Phenanthrene           | 11.34 | 178  | 357819   | 18.329 | ng    | 99     |
| 71) Anthracene             | 11.39 | 178  | 70992    | 3.560  | ng    | 97     |
| 74) Fluoranthene           | 12.53 | 202  | 412860   | 20.148 | ng    | 99     |
| 77) Pyrene                 | 12.77 | 202  | 348423   | 16.967 | ng    | 99     |
| 80) Benzo(a)anthracene     | 13.96 | 228  | 135625   | 7.507  | ng    | 98     |
| 82) Chrysene               | 14.00 | 228  | 146150   | 8.567  | ng    | 97     |
| 85) Indeno(1,2,3-cd)pyrene | 16.93 | 276  | 60560    | 3.987  | ng    | # 91   |
| 87) Benzo(b)fluoranthene   | 15.02 | 252  | 210847   | 12.209 | ng    | # 79   |
| 88) Benzo(k)fluoranthene   | 15.02 | 252  | 210847   | 12.557 | ng    | # 82   |
| 89) Benzo(a)pyrene         | 15.39 | 252  | 101944   | 6.403  | ng    | # 79   |
| 91) Benzo(g,h,i)perylene   | 17.37 | 276  | 58412    | 4.315  | ng    | # 94   |

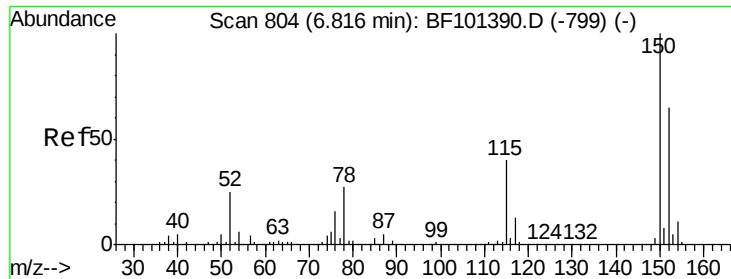
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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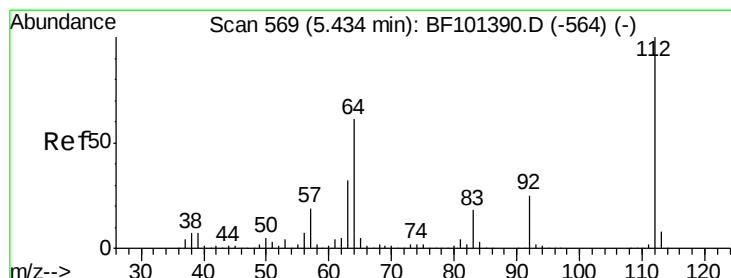
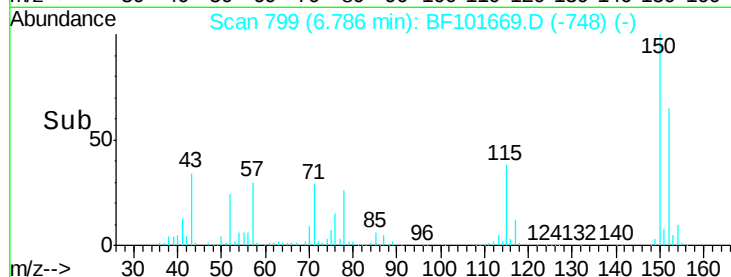
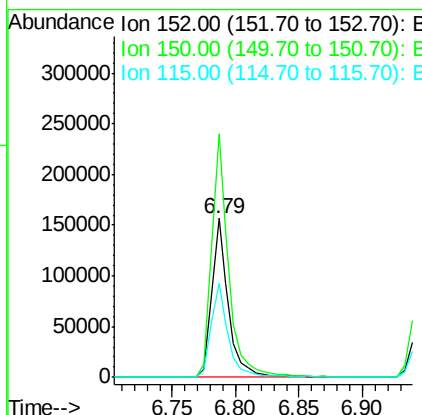
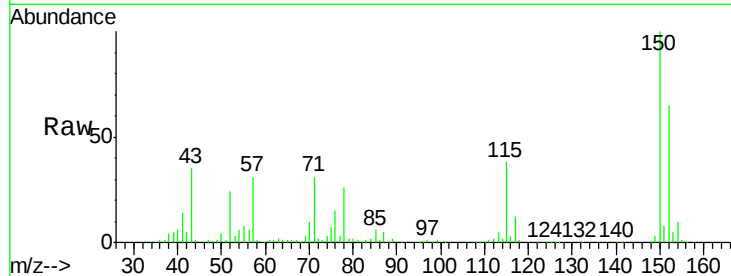


#1

1,4-Dichlorobenzene-d4  
 Concen: 20.000 ng  
 RT: 6.79 min Scan# 799  
 Delta R.T. 0.00 min  
 Lab File: BF101669.D  
 Acq: 22 Dec 2017 22:23

Instrument :  
 BNA\_F  
 ClientSampleId :  
 DB-WW-3-0-4DL

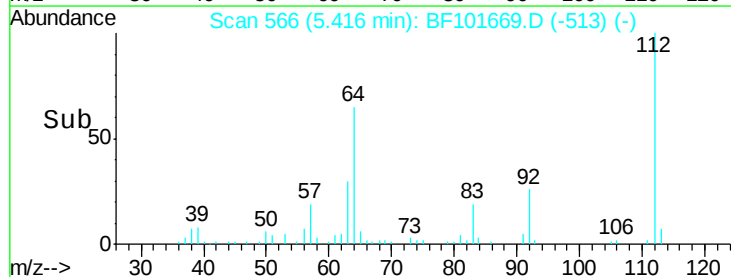
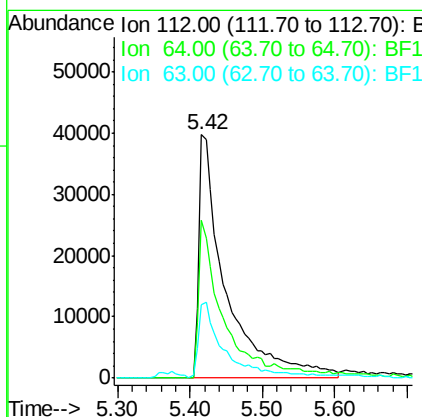
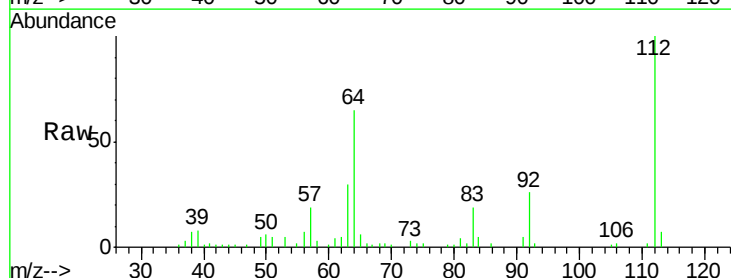
Tot Ion:152 Resp: 145547  
 Ion Ratio Lower Upper  
 152 100  
 150 153.5 124.6 186.8  
 115 58.8 50.1 75.1

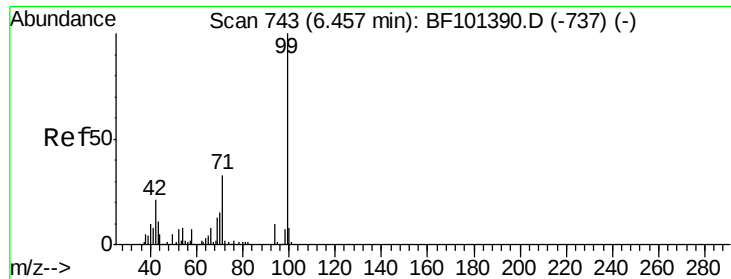


#5

2-Fluorophenol  
 Concen: 10.528 ng  
 RT: 5.42 min Scan# 566  
 Delta R.T. 0.01 min  
 Lab File: BF101669.D  
 Acq: 22 Dec 2017 22:23

Tgt Ion:112 Resp: 102869  
 Ion Ratio Lower Upper  
 112 100  
 64 64.8 47.9 71.9  
 63 30.1 23.7 35.5





#7

Phenol-d6

Concen: 11.251 ng

RT: 6.44 min Scan# 740

Delta R.T. 0.01 min

Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

Instrument :

BNA\_F

ClientSampleId :

DB-WW-3-0-4DL

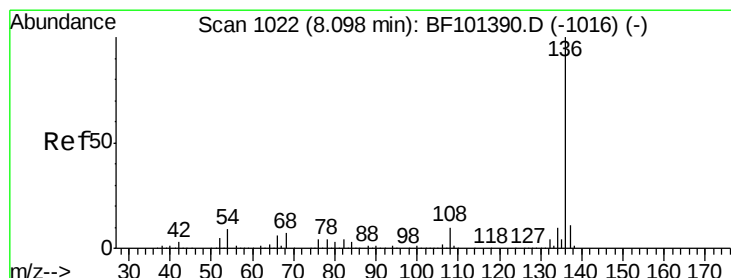
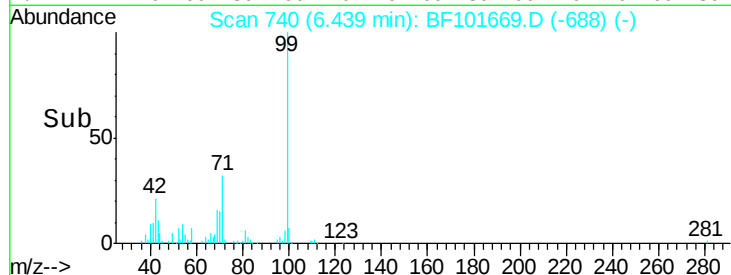
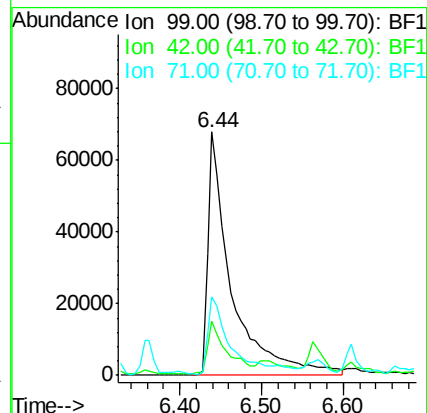
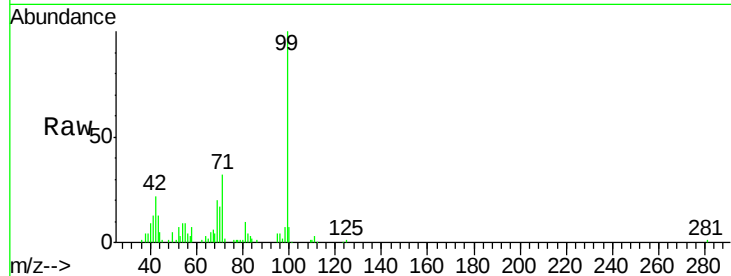
Tot Ion: 99 Resp: 136817

Ion Ratio Lower Upper

99 100

42 22.3 14.5 21.7#

71 32.3 25.4 38.0



#21

Naphthalene-d8

Concen: 20.000 ng

RT: 8.07 min Scan# 1017

Delta R.T. 0.00 min

Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

Tgt Ion: 136 Resp: 547874

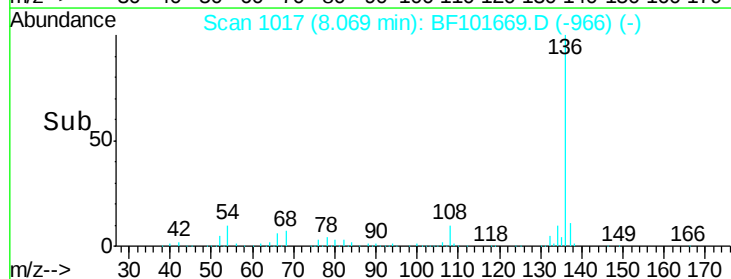
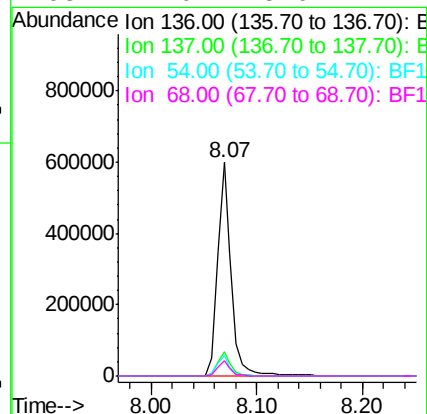
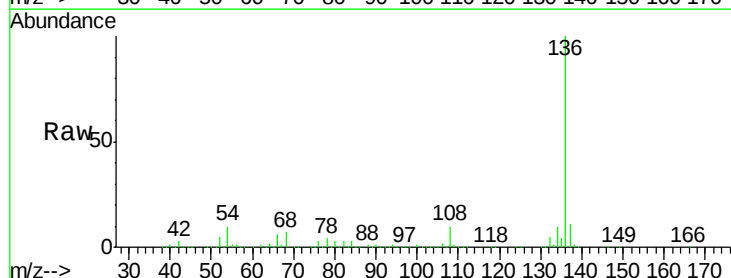
Ion Ratio Lower Upper

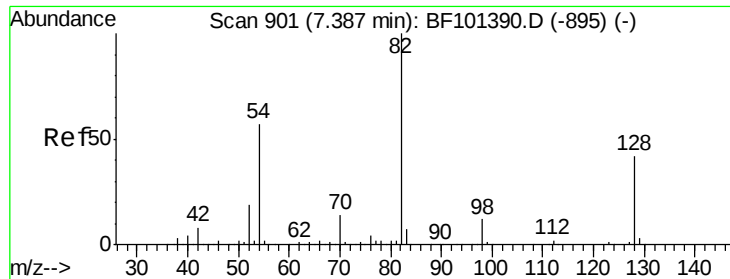
136 100

137 11.5 8.9 13.3

54 9.6 6.6 9.8

68 7.0 5.0 7.4

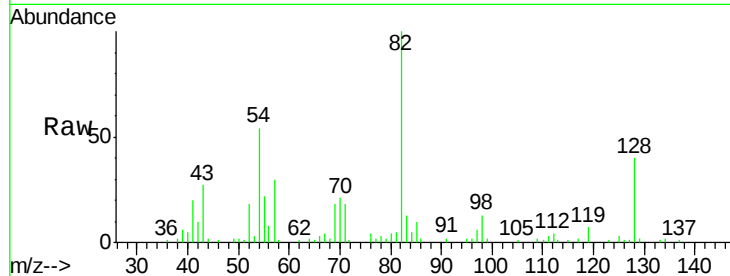




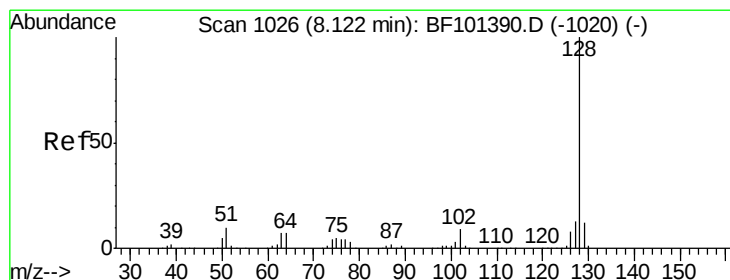
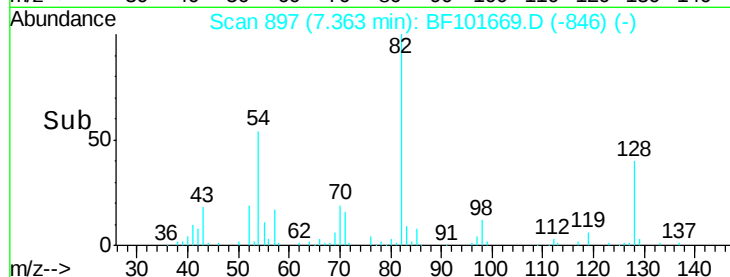
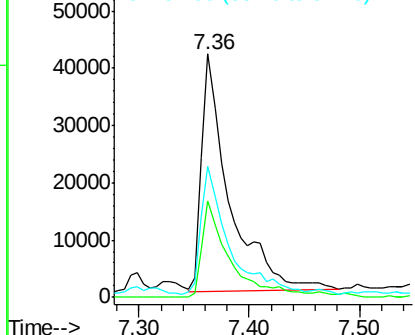
#23  
Nitrobenzene-d5  
Concen: 7.254 ng  
RT: 7.36 min Scan# 897  
Delta R.T. 0.00 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

Tot Ion: 82 Resp: 71392  
Ion Ratio Lower Upper  
82 100  
128 39.5 36.1 54.1  
54 54.0 41.4 62.2

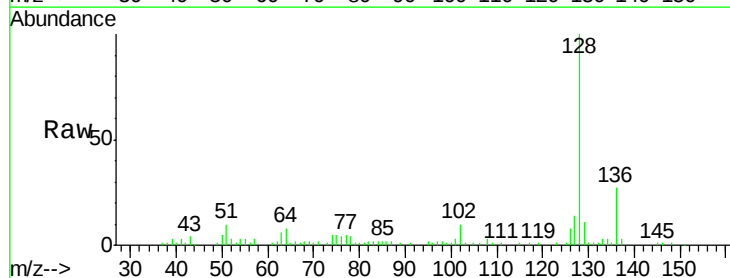


Abundance Ion 82.00 (81.70 to 82.70): BF1  
Ion 128.00 (127.70 to 128.70): BF1  
Ion 54.00 (53.70 to 54.70): BF1

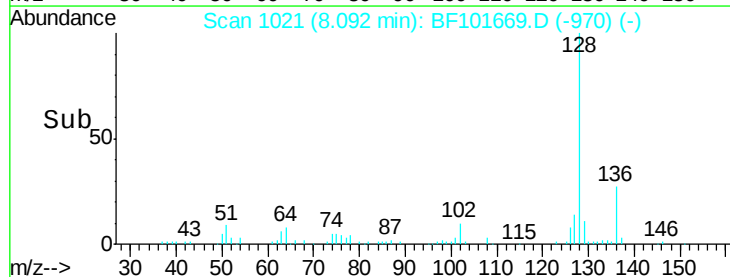
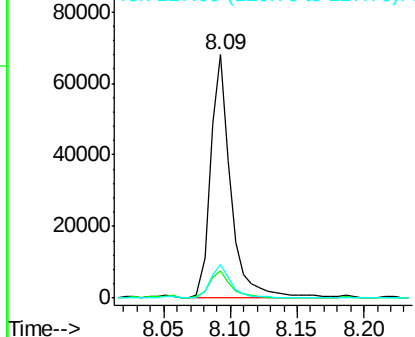


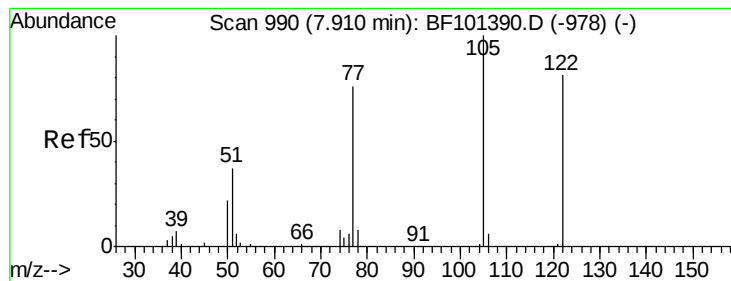
#31  
Naphthalene  
Concen: 2.626 ng  
RT: 8.09 min Scan# 1021  
Delta R.T. 0.00 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

Tgt Ion: 128 Resp: 72420  
Ion Ratio Lower Upper  
128 100  
129 11.4 8.8 13.2  
127 14.0 10.9 16.3



Abundance Ion 128.00 (127.70 to 128.70): BF1  
Ion 129.00 (128.70 to 129.70): BF1  
Ion 127.00 (126.70 to 127.70): BF1





#32

Benzoic acid

Concen: 7.980 ng

RT: 7.72 min Scan# 957

Delta R.T. -0.18 min

Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

Instrument :

BNA\_F

ClientSampleId :

DB-WW-3-0-4DL

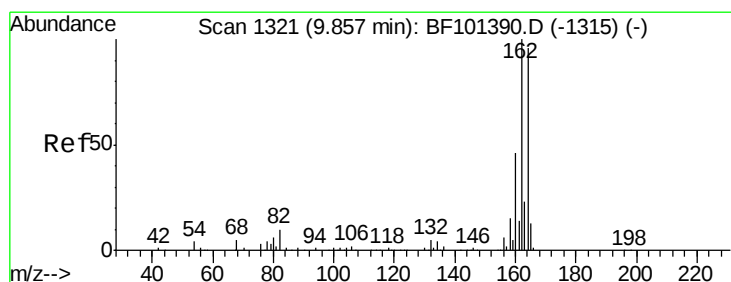
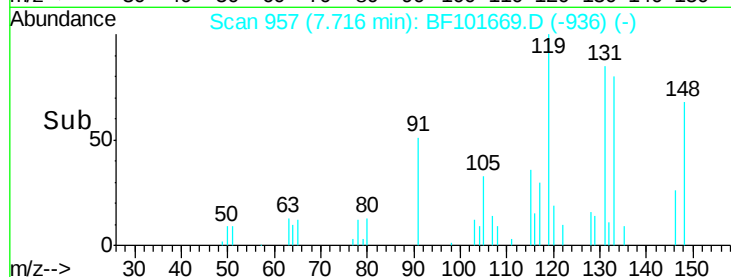
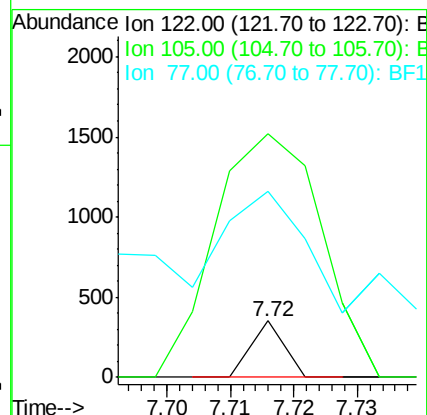
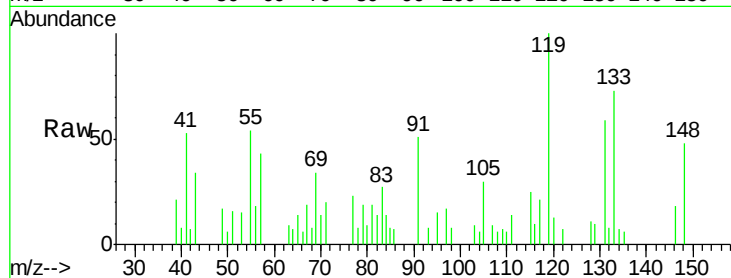
Tot Ion:122 Resp: 123

Ion Ratio Lower Upper

122 100

105 434.0 101.1 141.1#

77 331.4 70.7 110.7#



#38

Acenaphthene-d10

Concen: 20.000 ng

RT: 9.82 min Scan# 1315

Delta R.T. -0.01 min

Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

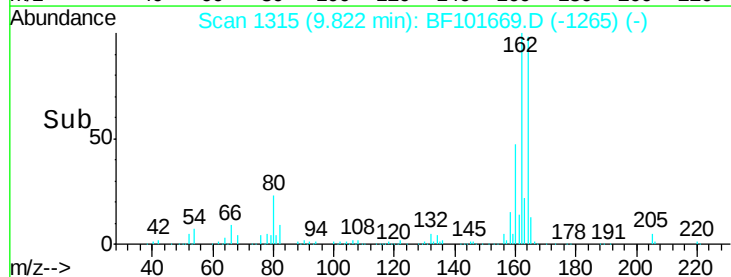
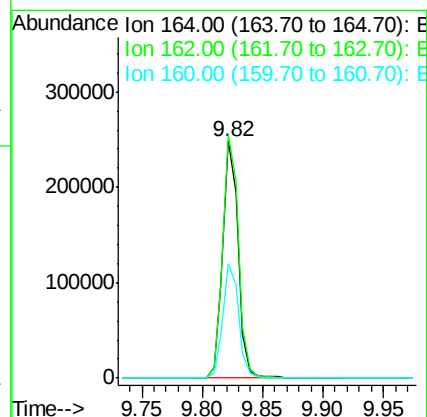
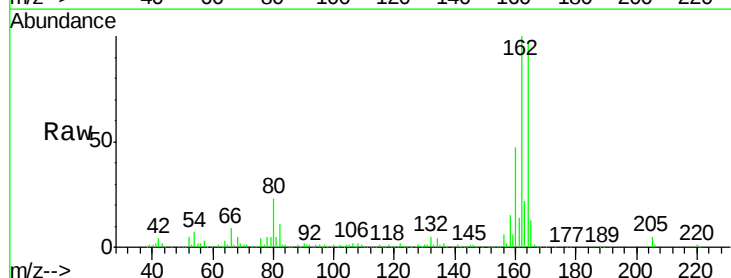
Tgt Ion:164 Resp: 217503

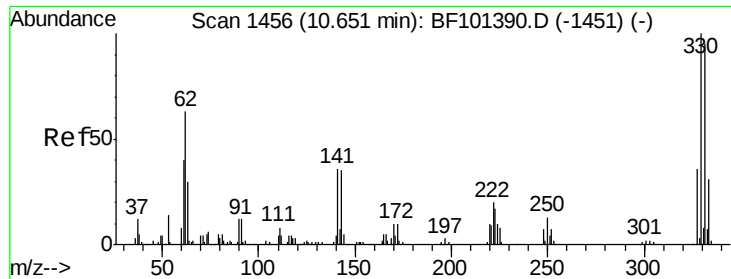
Ion Ratio Lower Upper

164 100

162 102.8 86.1 129.1

160 48.1 38.3 57.5

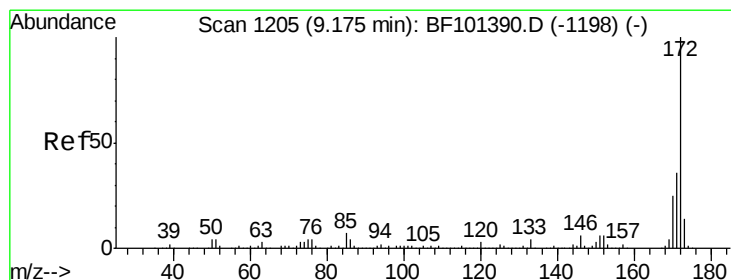
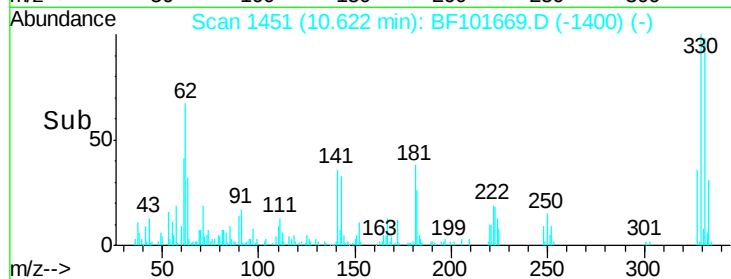
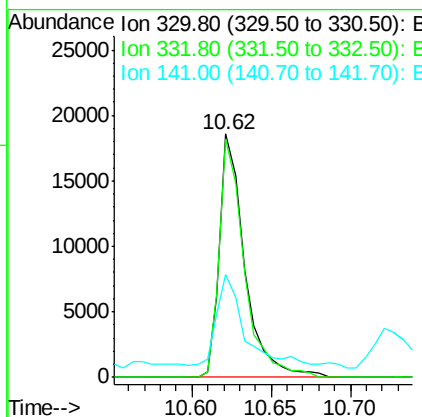
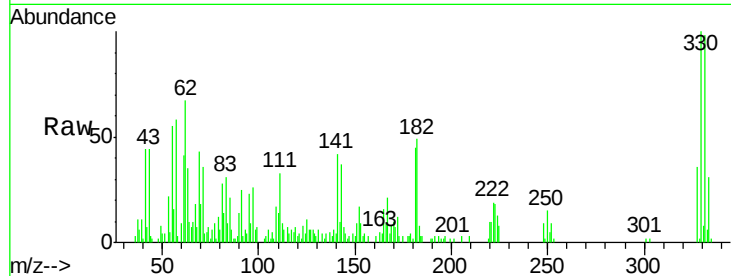




#41  
 2,4,6-Tribromophenol  
 Concen: 9.835 ng  
 RT: 10.62 min Scan# 1451  
 Delta R.T. 0.00 min  
 Lab File: BF101669.D  
 Acq: 22 Dec 2017 22:23

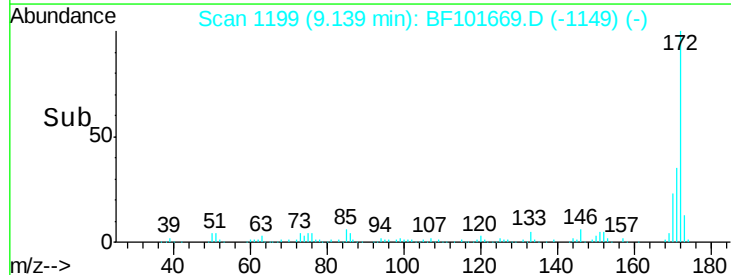
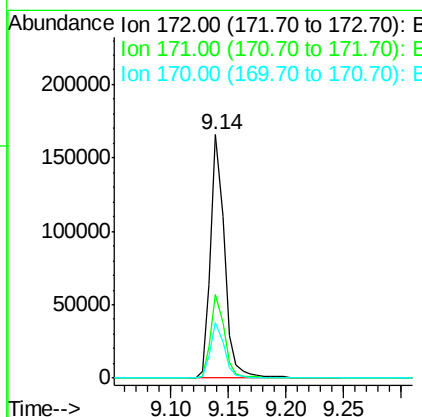
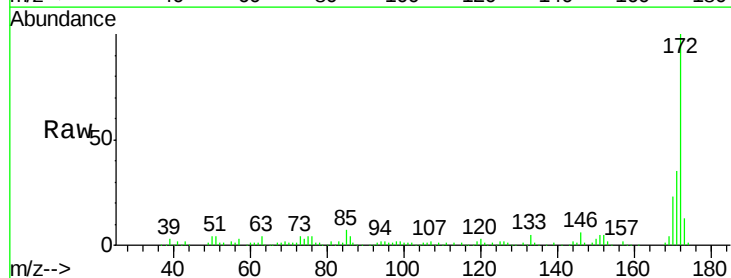
Instrument :  
 BNA\_F  
 ClientSampleId :  
 DB-WW-3-0-4DL

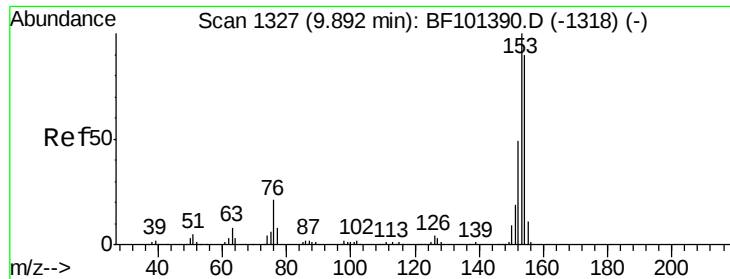
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 330     | 100   |       |       |
| 332     | 96.8  | 77.0  | 115.6 |
| 141     | 44.8  | 29.9  | 44.9  |



#44  
 2-Fluorobiphenyl  
 Concen: 10.004 ng  
 RT: 9.14 min Scan# 1199  
 Delta R.T. -0.01 min  
 Lab File: BF101669.D  
 Acq: 22 Dec 2017 22:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 172     | 100   |       |       |
| 171     | 34.6  | 29.7  | 44.5  |
| 170     | 22.5  | 19.6  | 29.4  |





#51

Acenaphthene

Concen: 2.695 ng

RT: 9.86 min Scan# 1321

Delta R.T. -0.01 min

Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

Instrument :

BNA\_F

ClientSampleId :

DB-WW-3-0-4DL

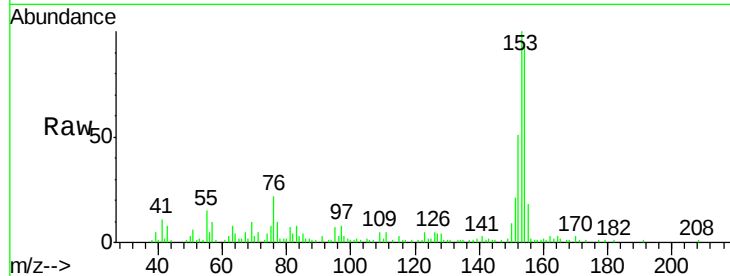
Tot Ion:154 Resp: 37744

Ion Ratio Lower Upper

154 100

153 107.7 91.2 136.8

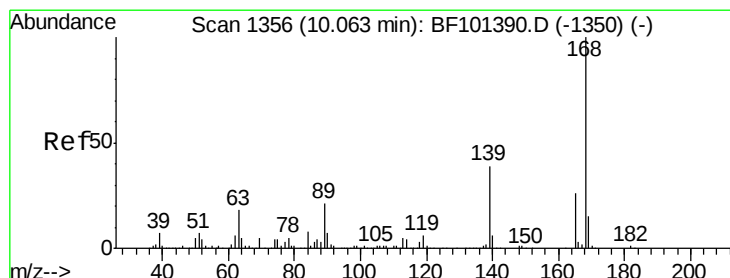
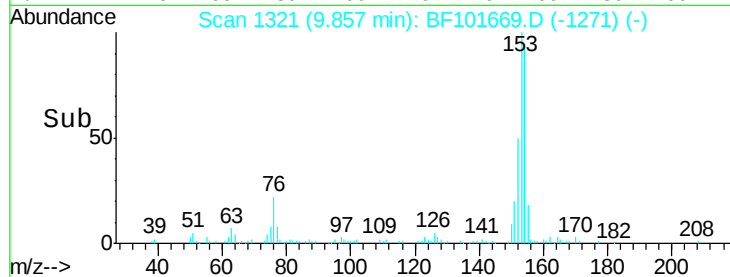
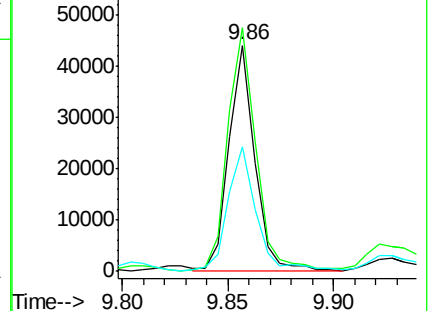
152 54.8 43.8 65.8



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



#54

Dibenzofuran

Concen: 2.056 ng

RT: 10.03 min Scan# 1351

Delta R.T. 0.00 min

Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

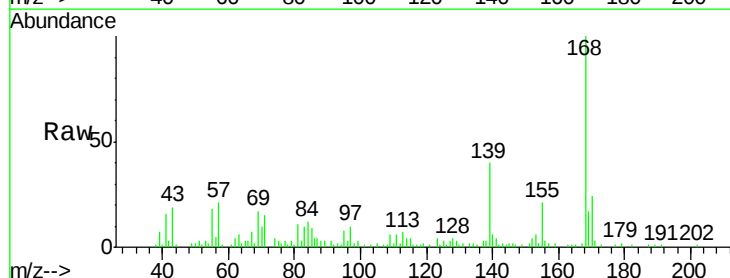
Tgt Ion:168 Resp: 36591

Ion Ratio Lower Upper

168 100

139 39.6 30.1 45.1

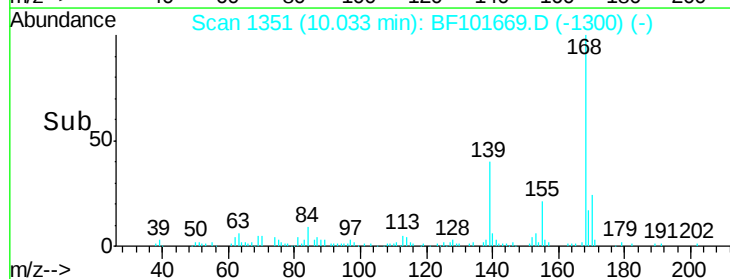
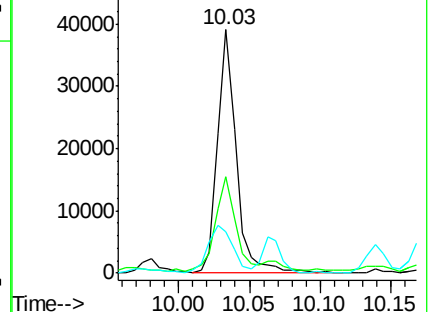
169 17.2 10.9 16.3#

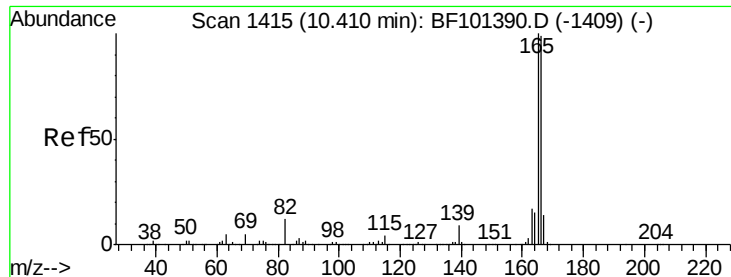


Abundance Ion 168.00 (167.70 to 168.70): E

Ion 139.00 (138.70 to 139.70): E

Ion 169.00 (168.70 to 169.70): E

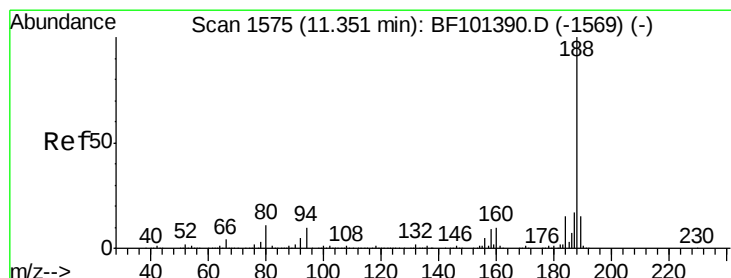
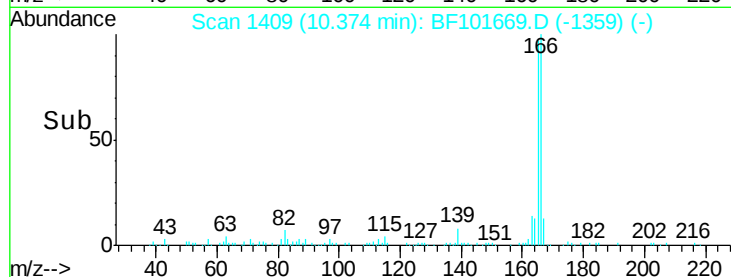
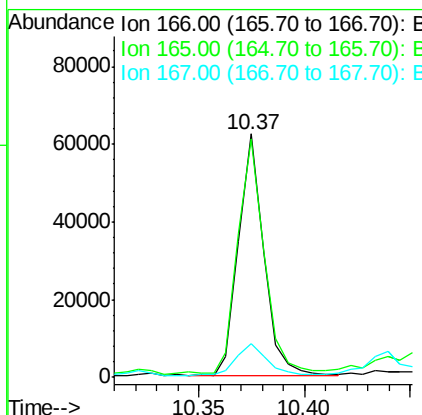
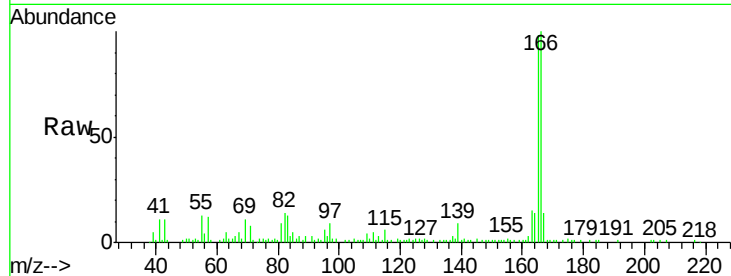




#57  
**Fluorene**  
 Concen: 3.409 ng  
 RT: 10.37 min Scan# 1409  
 Delta R.T. -0.01 min  
 Lab File: BF101669.D  
 Acq: 22 Dec 2017 22:23

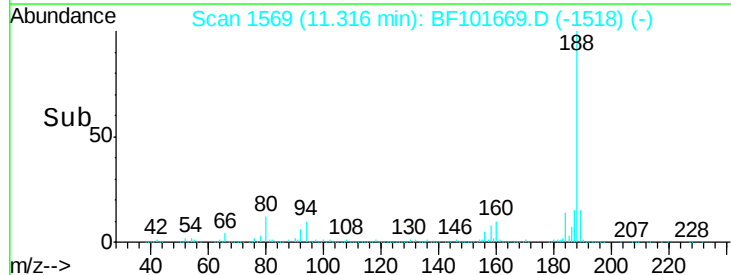
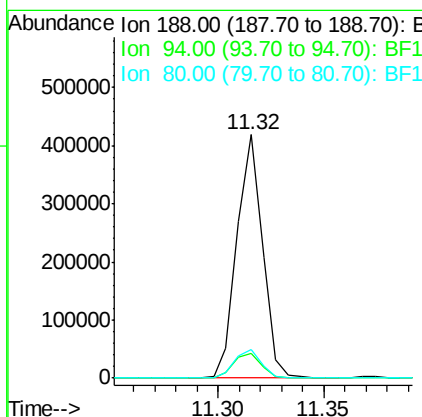
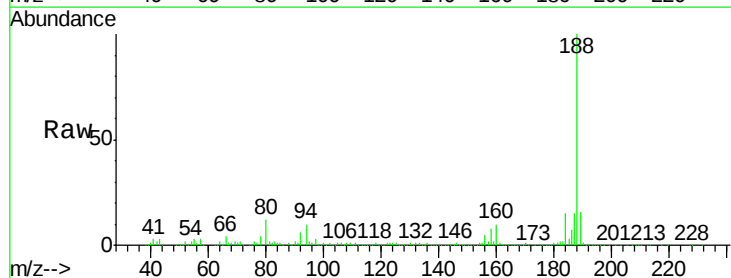
Instrument :  
 BNA\_F  
 ClientSampleId :  
 DB-WW-3-0-4DL

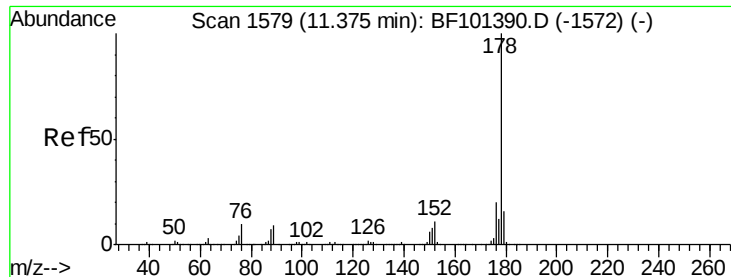
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 166     | 100   |       |       |
| 165     | 98.1  | 79.8  | 119.8 |
| 167     | 13.9  | 10.6  | 16.0  |



#63  
**Phenanthrene-d10**  
 Concen: 20.000 ng  
 RT: 11.32 min Scan# 1569  
 Delta R.T. 0.00 min  
 Lab File: BF101669.D  
 Acq: 22 Dec 2017 22:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 188     | 100   |       |       |
| 94      | 10.4  | 8.5   | 12.7  |
| 80      | 11.9  | 9.2   | 13.8  |

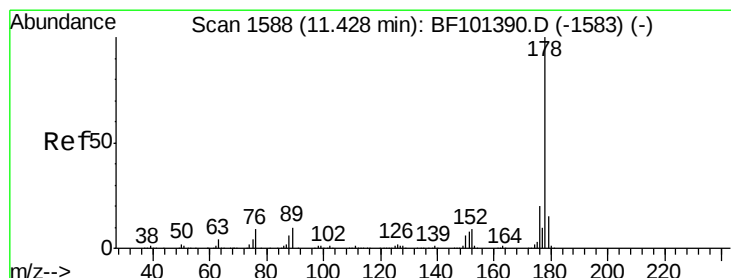
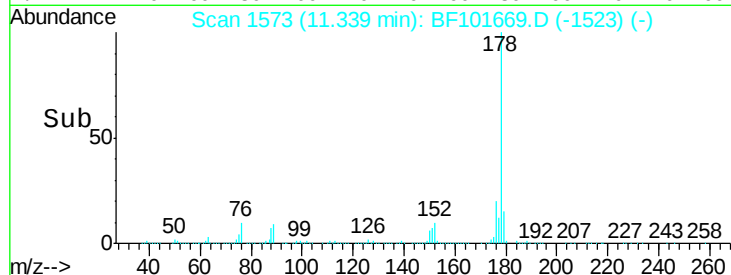
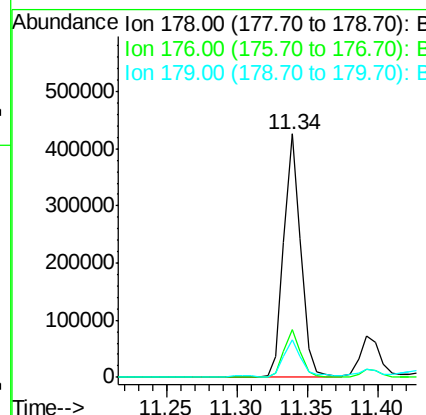
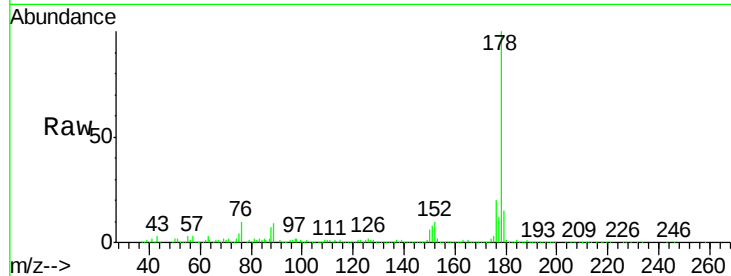




#70  
Phenanthrene  
Concen: 18.329 ng  
RT: 11.34 min Scan# 1573  
Delta R.T. -0.01 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

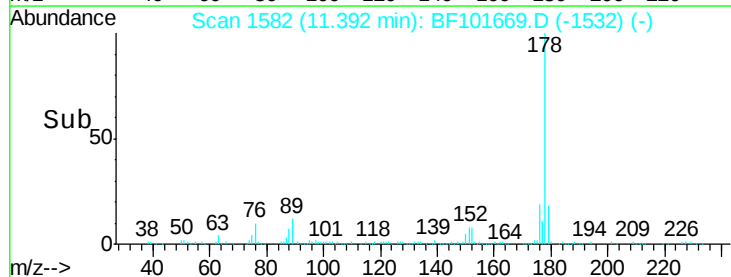
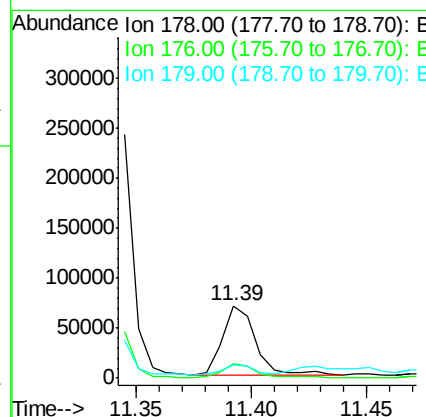
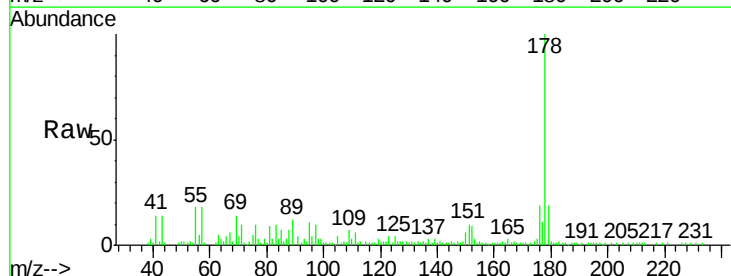
Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

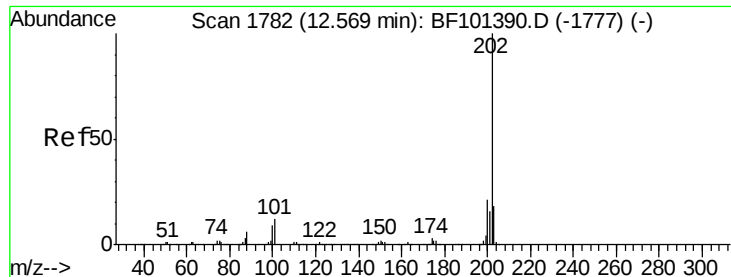
Tot Ion:178 Resp: 357819  
Ion Ratio Lower Upper  
178 100  
176 19.8 15.8 23.8  
179 15.5 13.0 19.6



#71  
Anthracene  
Concen: 3.560 ng  
RT: 11.39 min Scan# 1582  
Delta R.T. -0.01 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

Tgt Ion:178 Resp: 70992  
Ion Ratio Lower Upper  
178 100  
176 19.2 15.4 23.2  
179 18.9 12.6 19.0

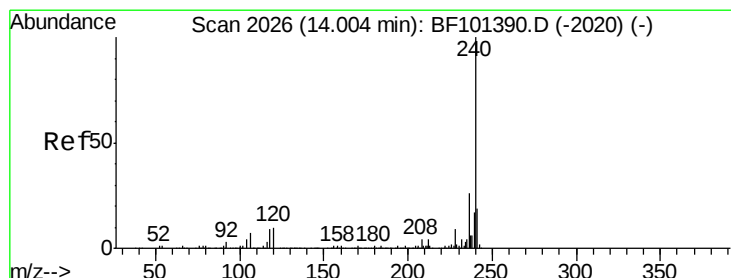
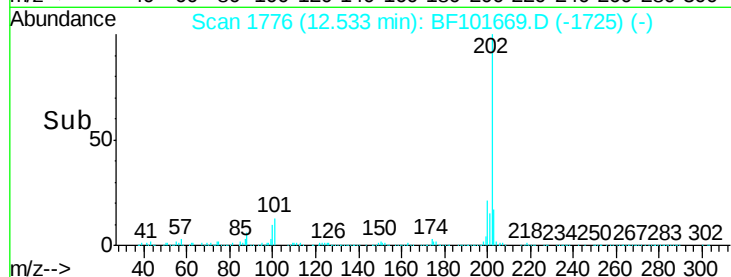
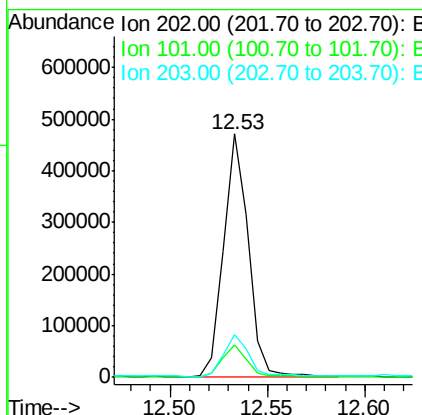
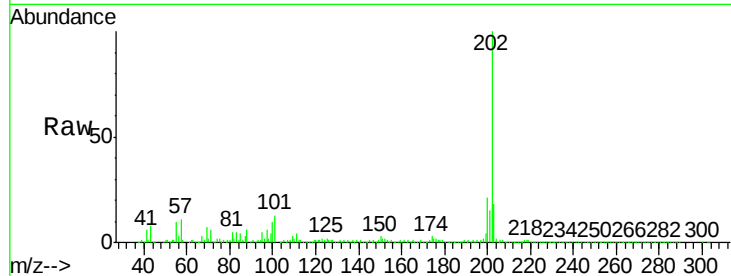




#74  
Fluoranthene  
Concen: 20.148 ng  
RT: 12.53 min Scan# 1776  
Delta R.T. 0.00 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

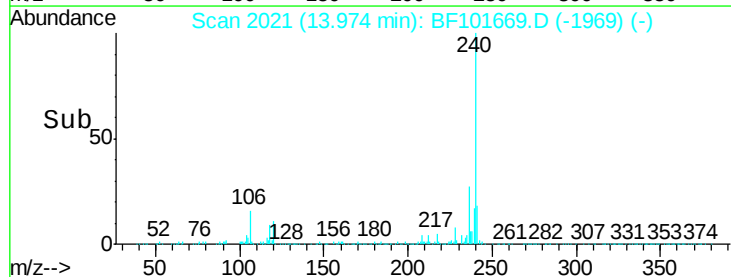
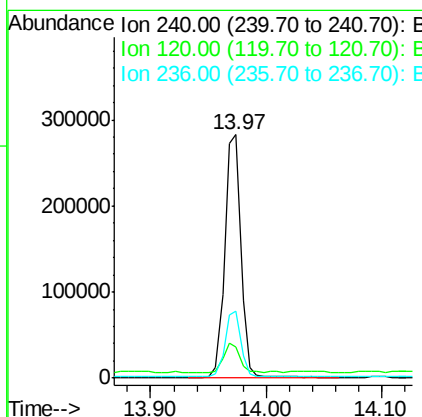
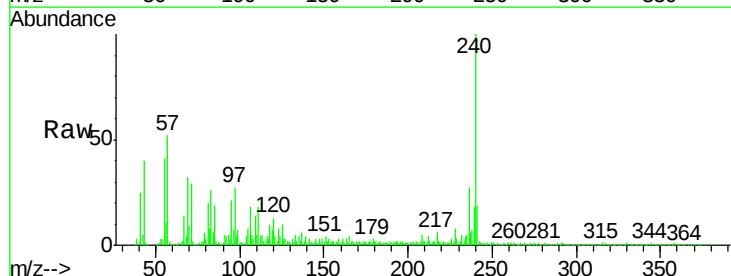
Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

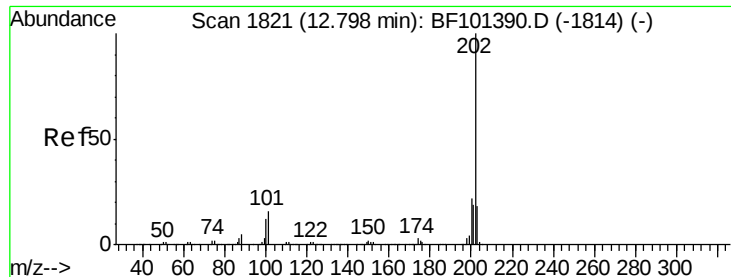
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 13.1  | 0.0   | 34.1  |
| 203     | 17.8  | 0.0   | 38.1  |



#75  
Chrysene-d12  
Concen: 20.000 ng  
RT: 13.97 min Scan# 2021  
Delta R.T. 0.01 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 240     | 100   |       |       |
| 120     | 12.9  | 9.5   | 14.3  |
| 236     | 27.4  | 20.7  | 31.1  |

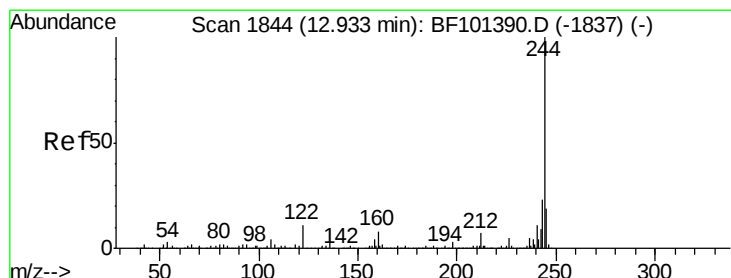
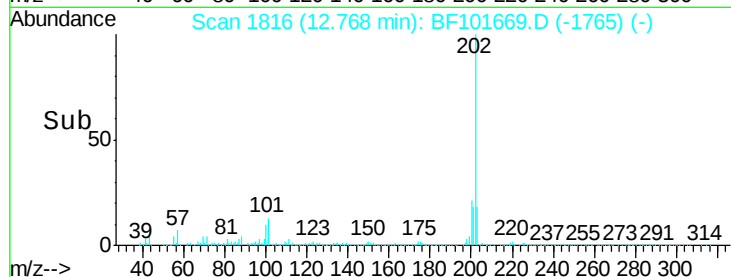
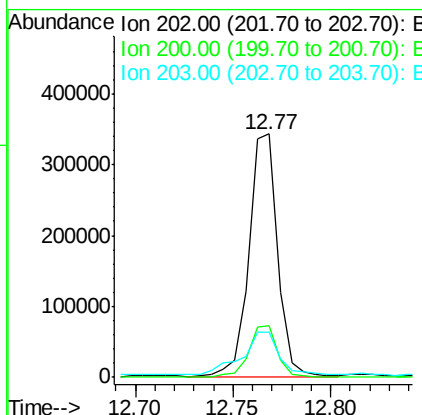
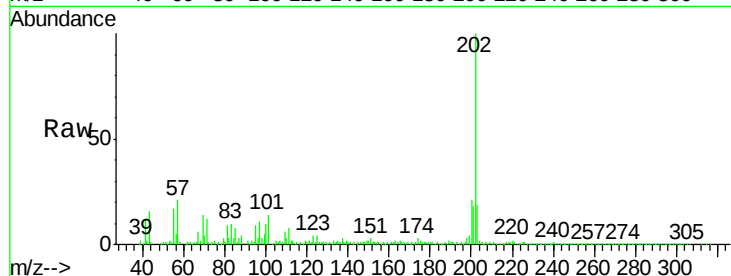




#77  
Pvrene  
Concen: 16.967 ng  
RT: 12.77 min Scan# 1816  
Delta R.T. 0.00 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

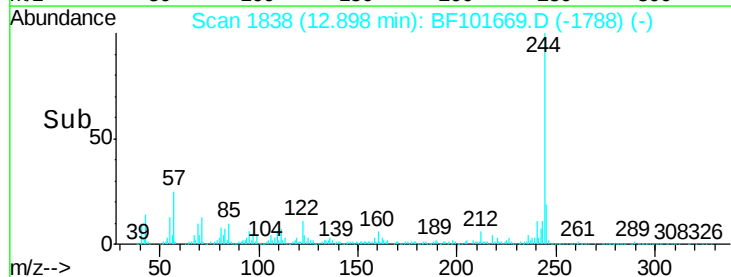
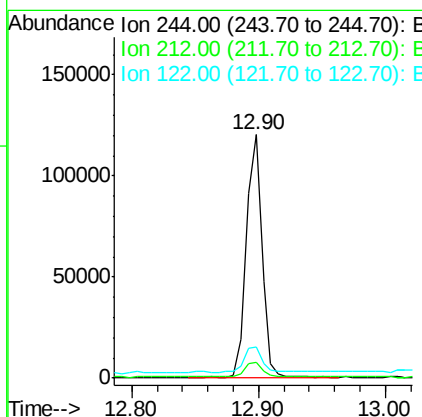
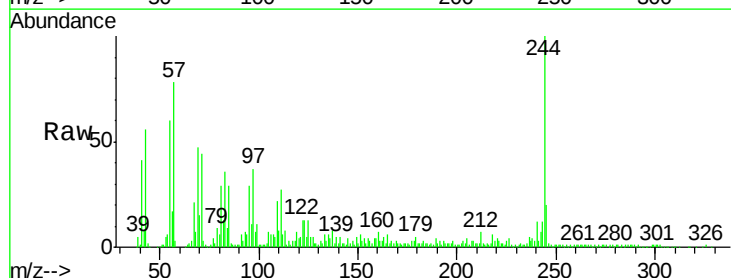
Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

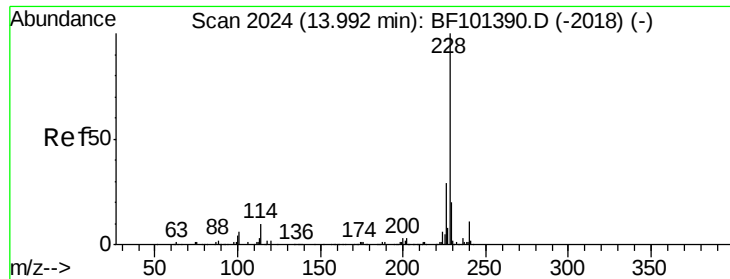
Tot Ion:202 Resp: 348423  
Ion Ratio Lower Upper  
202 100  
200 21.4 17.4 26.2  
203 18.6 14.3 21.5



#78  
Terphenyl-d14  
Concen: 9.012 ng  
RT: 12.90 min Scan# 1838  
Delta R.T. -0.01 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

Tgt Ion:244 Resp: 102281  
Ion Ratio Lower Upper  
244 100  
212 6.6 5.4 8.0  
122 13.0 11.0 16.4

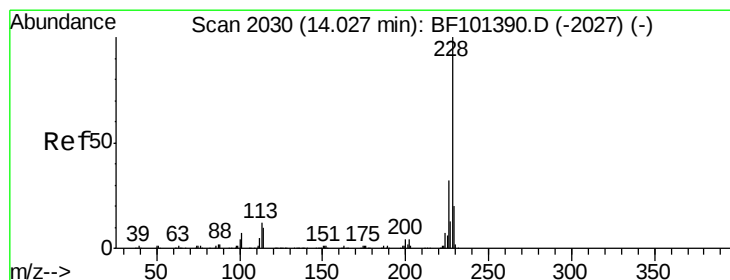
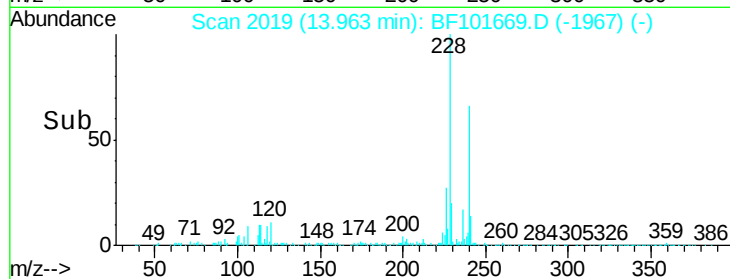
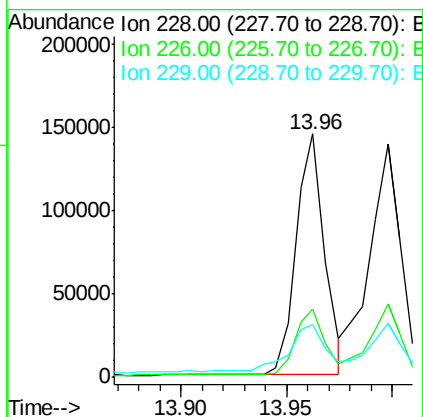
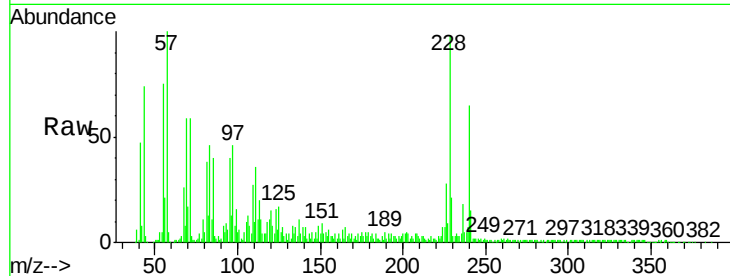




#80  
Benzo(a)anthracene  
Concen: 7.507 ng  
RT: 13.96 min Scan# 2019  
Delta R.T. 0.01 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

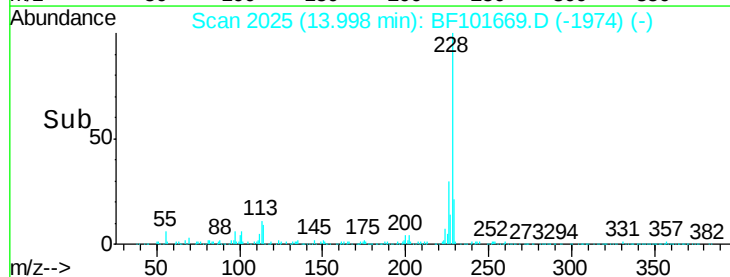
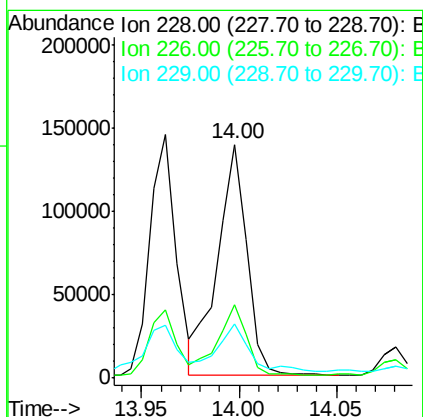
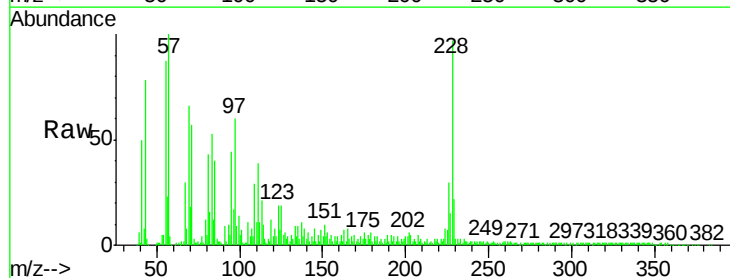
Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

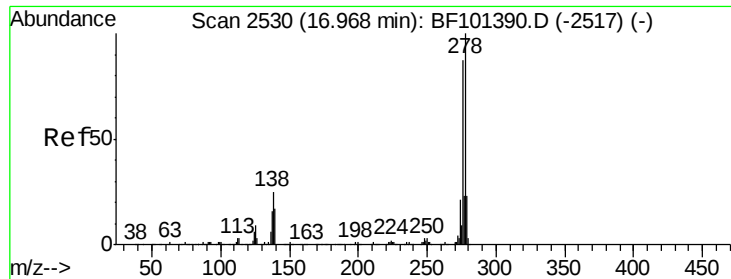
Tot Ion:228 Resp: 135625  
Ion Ratio Lower Upper  
228 100  
226 28.2 22.6 33.8  
229 21.7 15.8 23.6



#82  
Chrysene  
Concen: 8.567 ng  
RT: 14.00 min Scan# 2025  
Delta R.T. 0.00 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

Tgt Ion:228 Resp: 146150  
Ion Ratio Lower Upper  
228 100  
226 31.1 25.0 37.6  
229 23.0 16.2 24.4

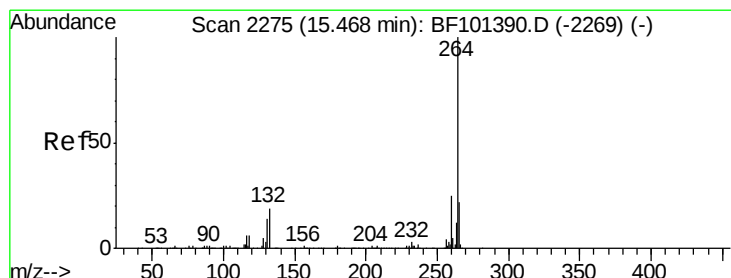
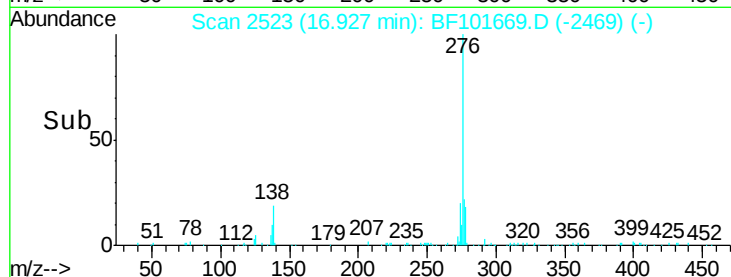
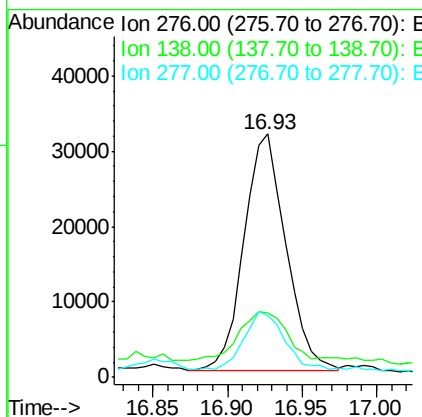
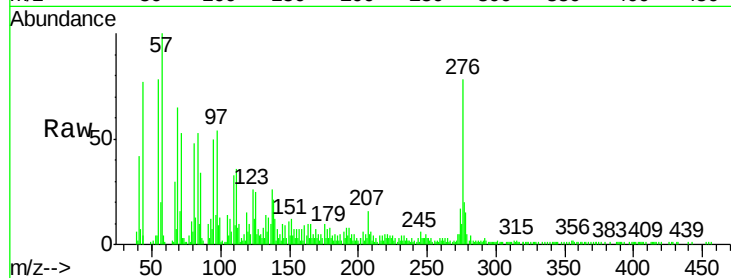




#85  
Indeno(1,2,3-cd)pyrene  
Concen: 3.987 ng  
RT: 16.93 min Scan# 2523  
Delta R.T. 0.02 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

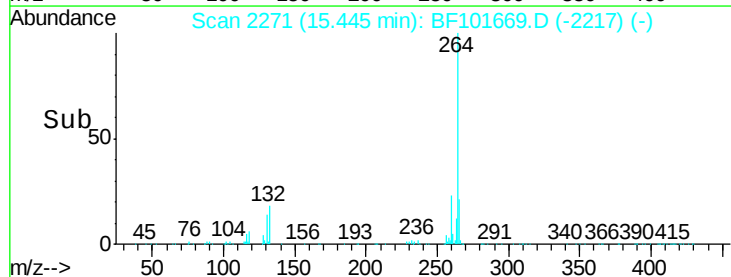
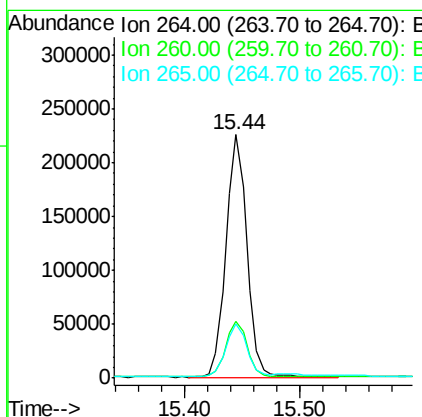
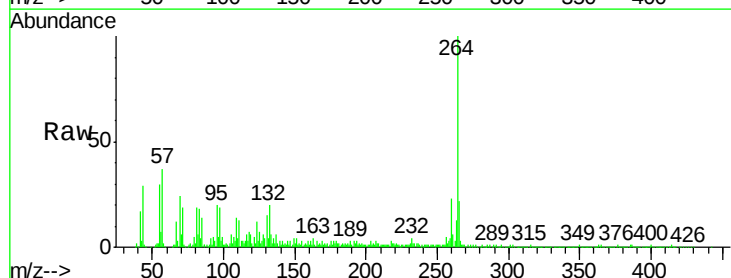
Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

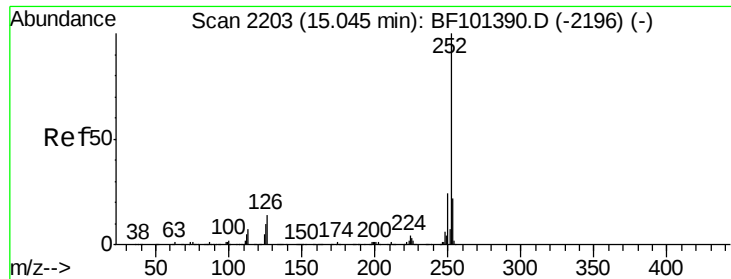
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 22.8  | 25.0  | 37.6# |
| 277     | 24.9  | 20.1  | 30.1  |



#86  
Perylene-d12  
Concen: 20.000 ng  
RT: 15.44 min Scan# 2271  
Delta R.T. 0.02 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 264     | 100   |       |       |
| 260     | 23.3  | 19.2  | 28.8  |
| 265     | 22.0  | 17.5  | 26.3  |





#87

Benzo(b)fluoranthene

Concen: 12.209 ng

RT: 15.02 min Scan# 2198

Delta R.T. 0.01 min

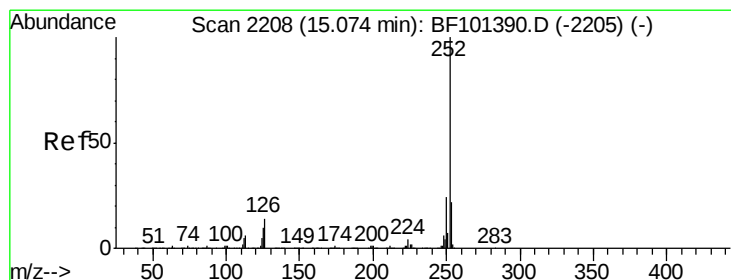
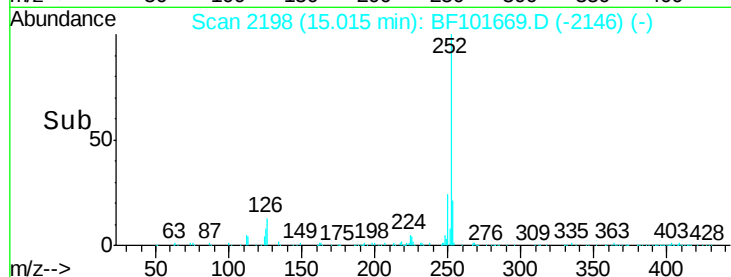
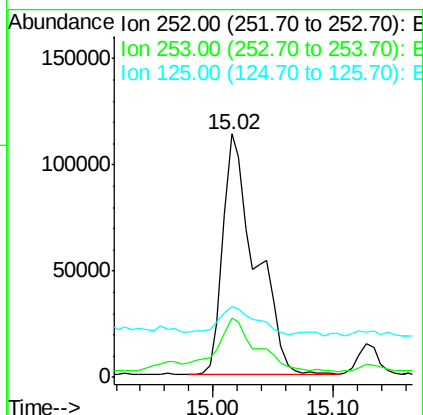
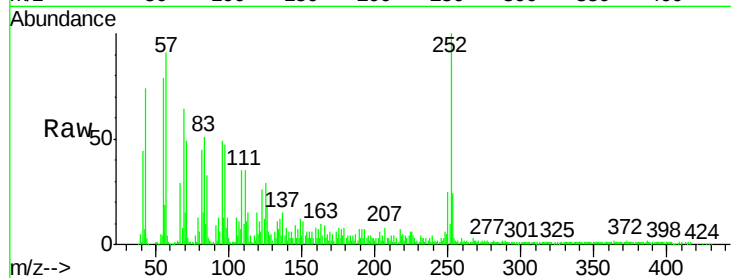
Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

Tot Ion:252 Resp: 210847

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 252 | 100   |       |       |
| 253 | 24.3  | 17.0  | 25.6  |
| 125 | 29.3  | 9.0   | 13.6# |



#88

Benzo(k)fluoranthene

Concen: 12.557 ng

RT: 15.02 min Scan# 2198

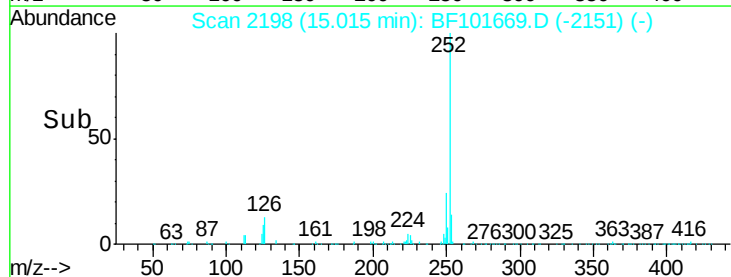
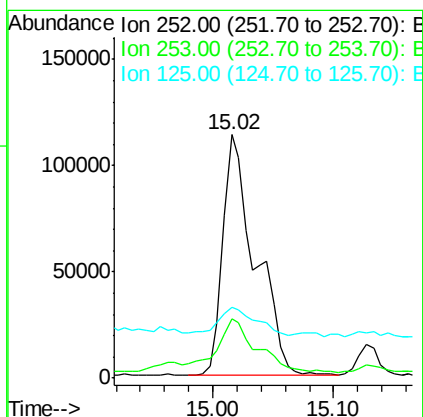
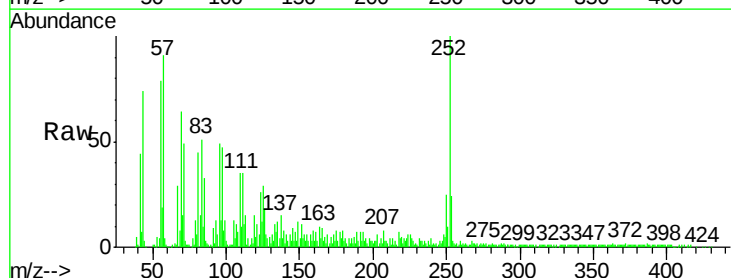
Delta R.T. -0.02 min

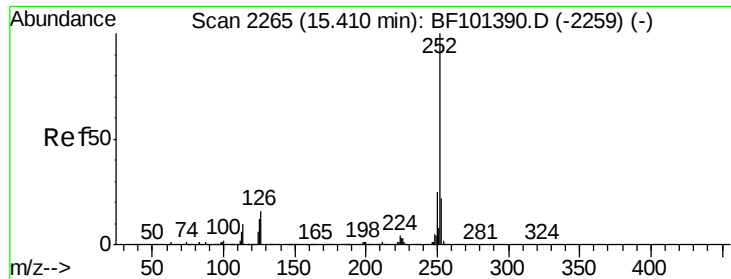
Lab File: BF101669.D

Acq: 22 Dec 2017 22:23

Tgt Ion:252 Resp: 210847

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 252 | 100   |       |       |
| 253 | 24.3  | 17.9  | 26.9  |
| 125 | 29.3  | 10.2  | 15.2# |

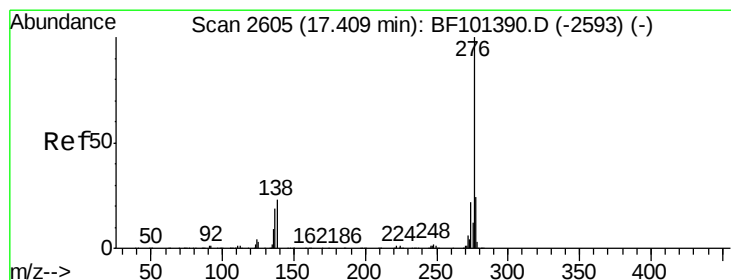
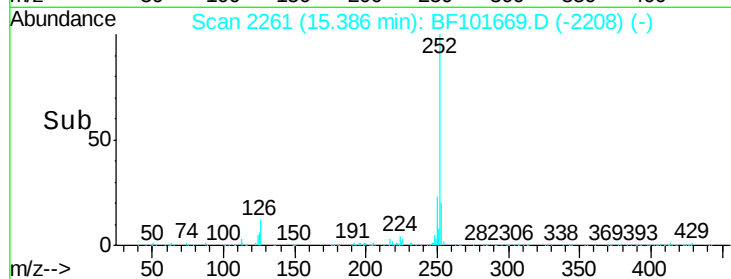
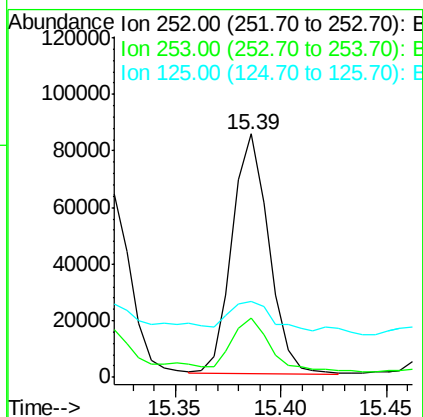
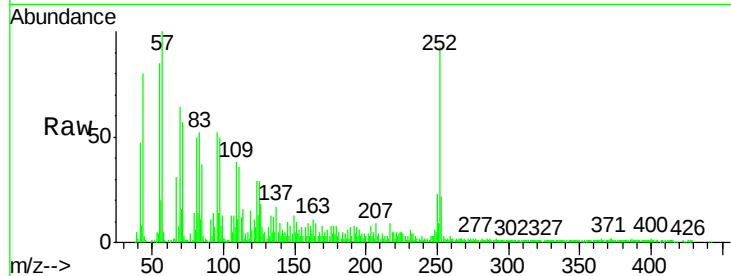




#89  
Benzo(a)pyrene  
Concen: 6.403 ng  
RT: 15.39 min Scan# 2261  
Delta R.T. 0.01 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

Instrument :  
BNA\_F  
ClientSampleId :  
DB-WW-3-0-4DL

Tot Ion:252 Resp: 101944  
Ion Ratio Lower Upper  
252 100  
253 24.2 17.1 25.7  
125 31.0 9.8 14.6#



#91  
Benzo(g,h,i)perylene  
Concen: 4.315 ng  
RT: 17.37 min Scan# 2599  
Delta R.T. 0.03 min  
Lab File: BF101669.D  
Acq: 22 Dec 2017 22:23

Tgt Ion:276 Resp: 58412  
Ion Ratio Lower Upper  
276 100  
277 28.5 17.9 26.9#  
138 28.0 21.8 32.8

