

Data Path : U:\HPCHEM1\BNA F\DATA\BF011018\  
 Data File : BF102002.D  
 Acq On : 11 Jan 2018 1:43  
 Operator : SJ/JU  
 Sample : J1076-17 50X  
 Misc :  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 WC-52-01

Manual Integrations  
 APPROVED

Sohil  
 1/11/2018 10:53:33 AM

Quant Time: Jan 11 05:12:08 2018  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF010918.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Tue Jan 09 15:20:36 2018  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 6.73  | 152  | 207175   | 20.00 | ng    | 0.00     |
| 21) Naphthalene-d8          | 8.01  | 136  | 819472   | 20.00 | ng    | 0.00     |
| 38) Acenaphthene-d10        | 9.76  | 164  | 340248   | 20.00 | ng    | 0.00     |
| 63) Phenanthrene-d10        | 11.24 | 188  | 511404   | 20.00 | ng    | 0.00     |
| 75) Chrysene-d12            | 13.87 | 240  | 327120   | 20.00 | ng    | 0.00     |
| 86) Perylene-d12            | 15.29 | 264  | 378162   | 20.00 | ng    | 0.00     |
| System Monitoring Compounds |       |      |          |       |       |          |
| 5) 2-Fluorophenol           | 5.32  | 112  | 4748     | 0.32  | ng    | 0.00     |
| 7) Phenol-d6                | 6.35  | 99   | 5705     | 0.33  | ng    | 0.00     |
| 23) Nitrobenzene-d5         | 7.28  | 82   | 2920     | 0.21  | ng    | -0.01    |
| 41) 2,4,6-Tribromophenol    | 10.54 | 330  | 538      | 0.18  | ng    | -0.01    |
| 44) 2-Fluorobiphenyl        | 9.08  | 172  | 6671     | 0.31  | ng    | -0.01    |
| 78) Terphenyl-d14           | 12.82 | 244  | 4575     | 0.29  | ng    | -0.01    |
| Target Compounds            |       |      |          |       |       |          |
| 31) Naphthalene             | 8.03  | 128  | 374506   | 9.146 | ng    | 99       |
| 57) Fluorene                | 10.30 | 166  | 48855    | 2.292 | ng    | 99       |
| 70) Phenanthrene            | 11.26 | 178  | 207323   | 6.940 | ng    | 99       |
| 74) Fluoranthene            | 12.45 | 202  | 152483   | 5.188 | ng    | 96       |
| 77) Pyrene                  | 12.67 | 202  | 140110   | 4.846 | ng    | 98       |
| 80) Benzo(a)anthracene      | 13.86 | 228  | 60724m   | 2.909 | ng    |          |
| 82) Chrysene                | 13.90 | 228  | 46178    | 2.122 | ng    | 96       |
| 85) Indeno(1,2,3-cd)pyrene  | 16.66 | 276  | 33386    | 2.108 | ng    | 92       |
| 87) Benzo(b)fluoranthene    | 14.89 | 252  | 68132m   | 2.763 | ng    |          |
| 89) Benzo(a)pyrene          | 15.23 | 252  | 57736    | 2.602 | ng    | # 92     |

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

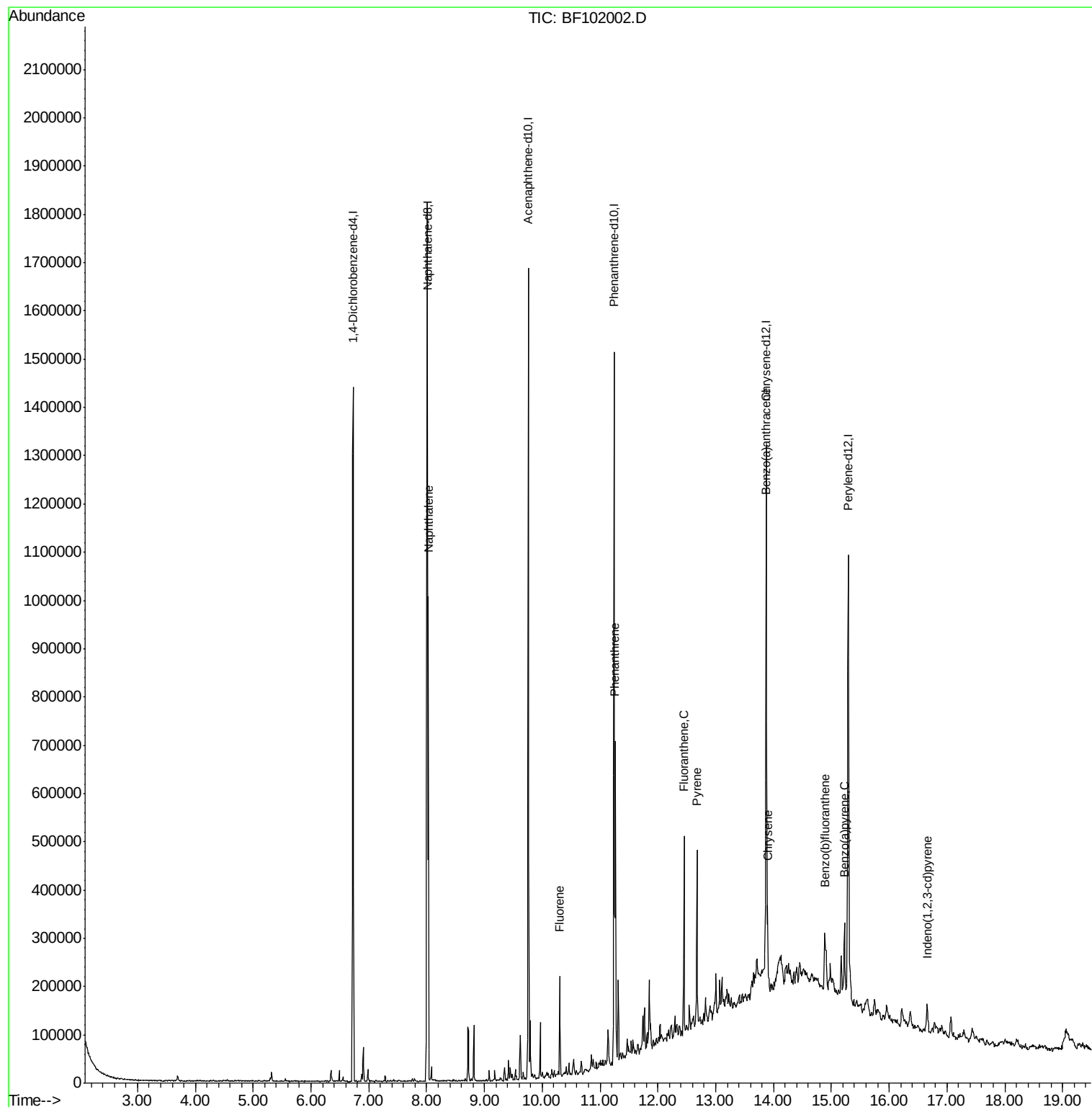
Data Path : U:\HPCHEM1\BNA F\DATA\BF011018\  
Data File : BF102002.D  
Acq On : 11 Jan 2018 1:43  
Operator : SJ/JU  
Sample : J1076-17 50X  
Misc :  
ALS Vial : 23 Sample Multiplier: 1

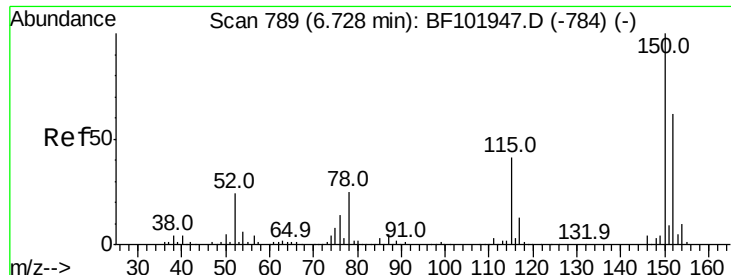
Instrument :  
BNA\_F  
ClientSampleId :  
WC-52-01

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM

Quant Time: Jan 11 05:12:08 2018  
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF010918.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Tue Jan 09 15:20:36 2018  
Response via : Initial Calibration





#1

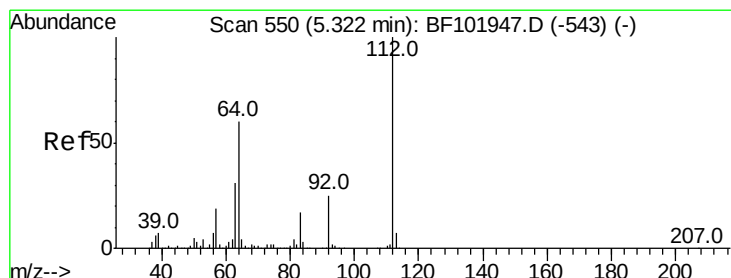
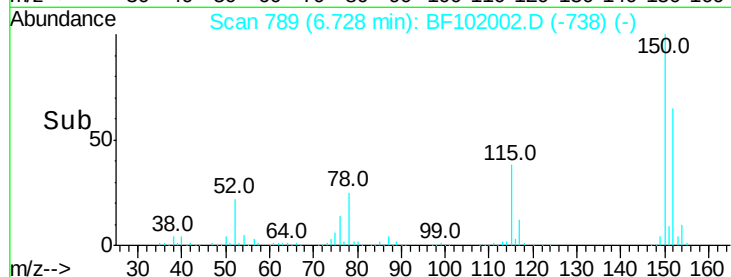
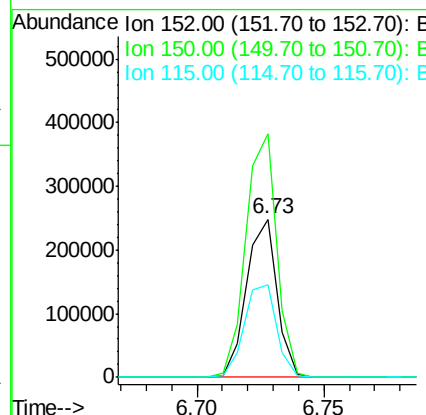
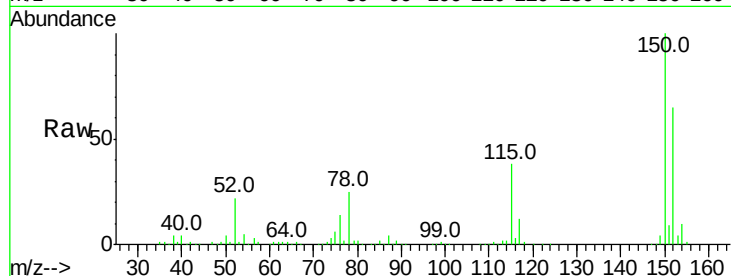
1,4-Dichlorobenzene-d4  
Concen: 20.000 ng  
RT: 6.73 min Scan# 789  
Delta R.T. -0.00 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

Instrument :  
BNA\_F  
ClientSampleId :  
WC-52-01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 150     | 154.0 | 124.6 | 186.8 |
| 115     | 58.6  | 50.1  | 75.1  |

Manual Integrations  
APPROVED

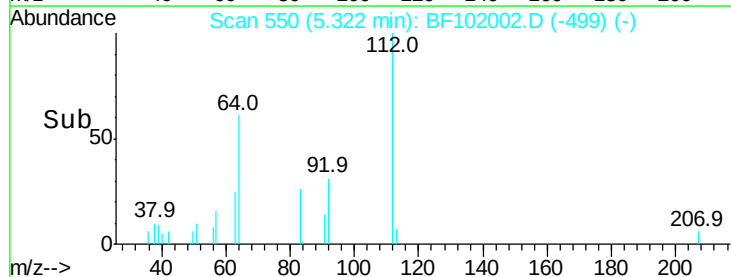
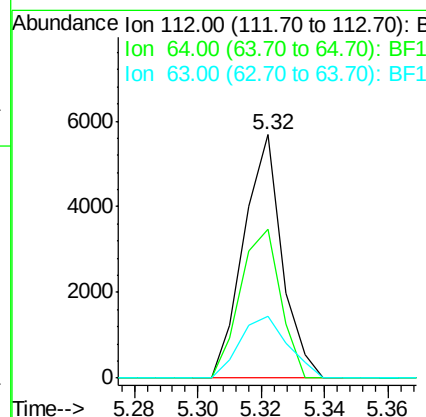
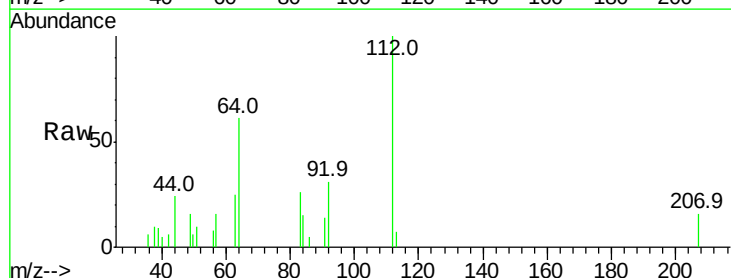
Sohil  
1/11/2018 10:53:33 AM

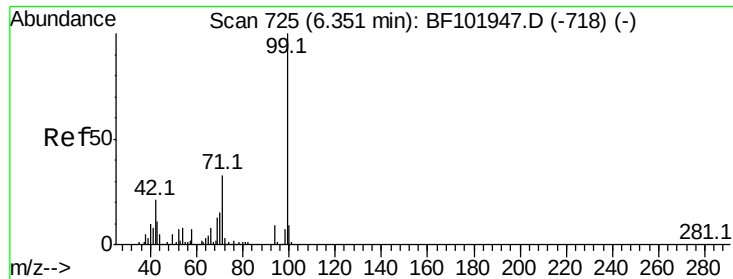


#5

2-Fluorophenol  
Concen: 0.324 ng  
RT: 5.32 min Scan# 550  
Delta R.T. 0.00 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 64      | 61.1  | 47.9  | 71.9  |
| 63      | 25.3  | 23.7  | 35.5  |





#7

Phenol-d6

Concen: 0.326 ng

RT: 6.35 min Scan# 724

Delta R.T. -0.01 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

Instrument :

BNA\_F

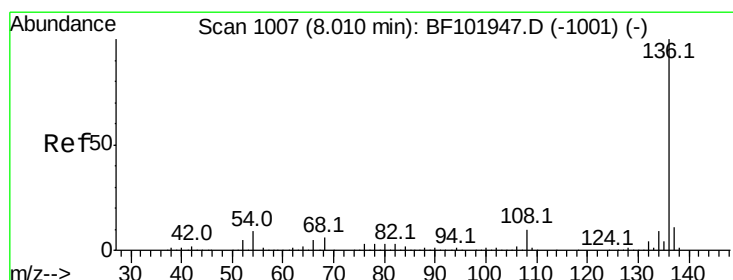
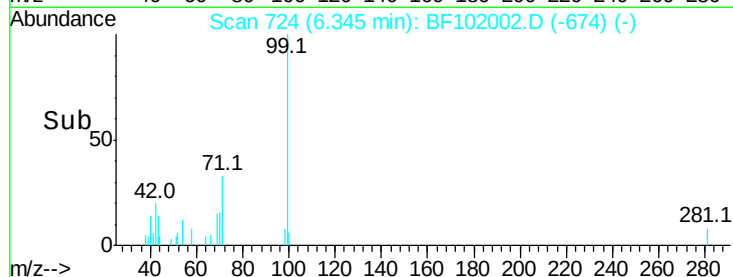
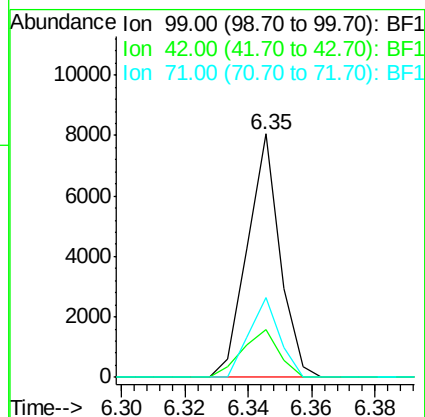
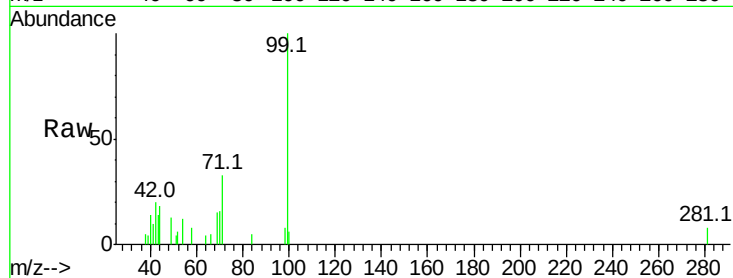
ClientSampled :

WC-52-01

| Tot Ion   | 99    | Resp: | 5705 |
|-----------|-------|-------|------|
| Ion Ratio | Lower | Upper |      |
| 99        | 100   |       |      |
| 42        | 19.9  | 14.5  | 21.7 |
| 71        | 32.6  | 25.4  | 38.0 |

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM



#21

Naphthalene-d8

Concen: 20.000 ng

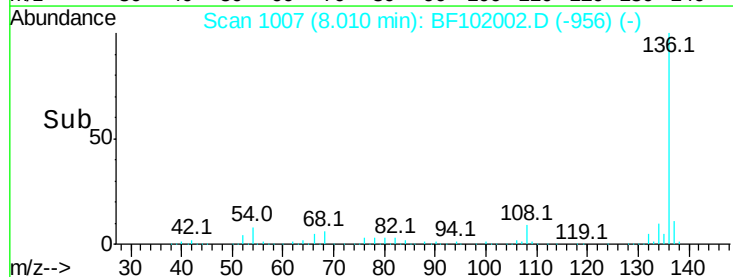
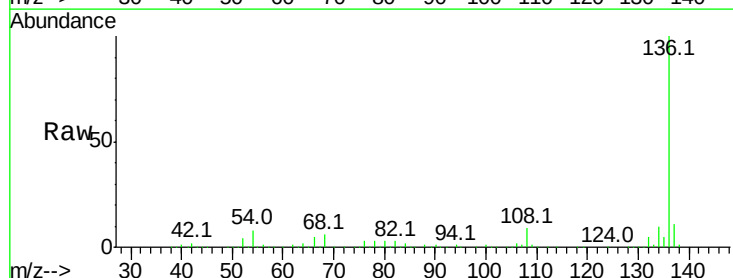
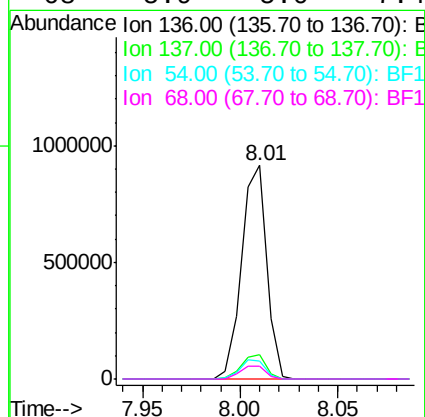
RT: 8.01 min Scan# 1007

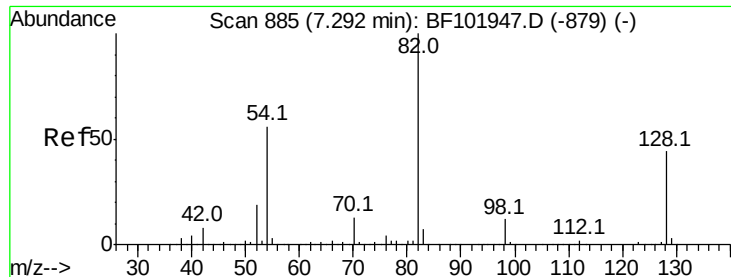
Delta R.T. -0.00 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

| Tgt Ion   | 136   | Resp: | 819472 |
|-----------|-------|-------|--------|
| Ion Ratio | Lower | Upper |        |
| 136       | 100   |       |        |
| 137       | 11.1  | 8.9   | 13.3   |
| 54        | 8.2   | 6.6   | 9.8    |
| 68        | 5.9   | 5.0   | 7.4    |





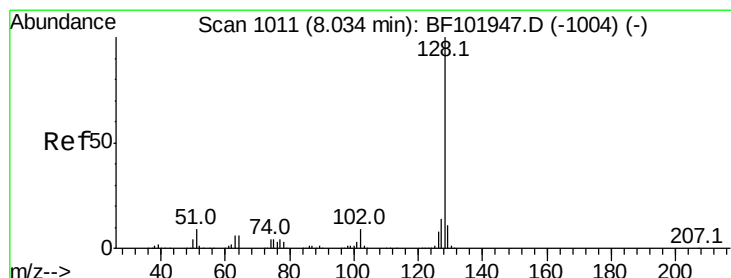
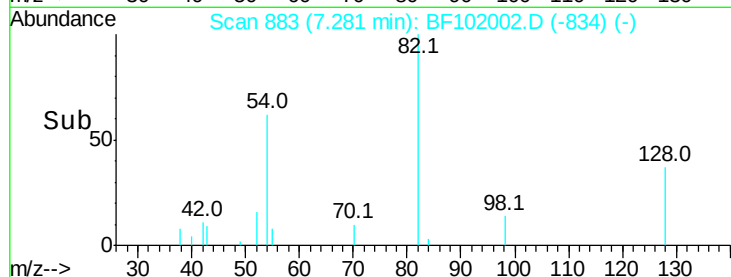
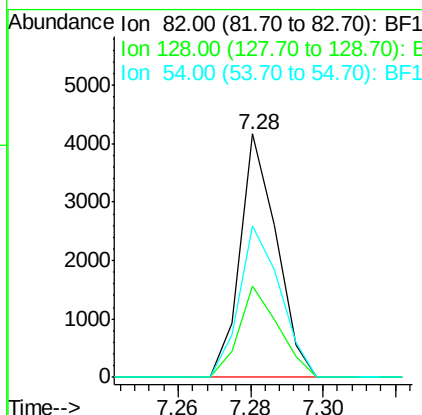
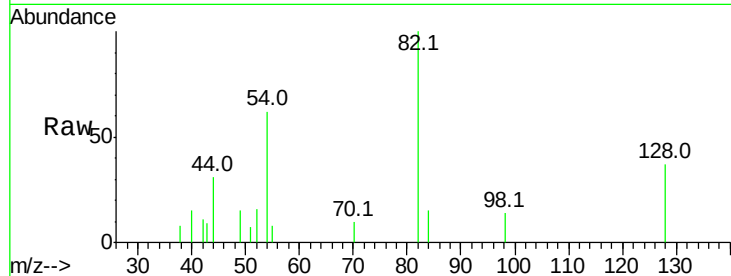
#23  
Nitrobenzene-d5  
Concen: 0.209 ng  
RT: 7.28 min Scan# 883  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

Instrument :  
BNA\_F  
ClientSampled :  
WC-52-01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 82      | 100   |       |       |
| 128     | 37.3  | 36.1  | 54.1  |
| 54      | 62.3  | 41.4  | 62.2# |

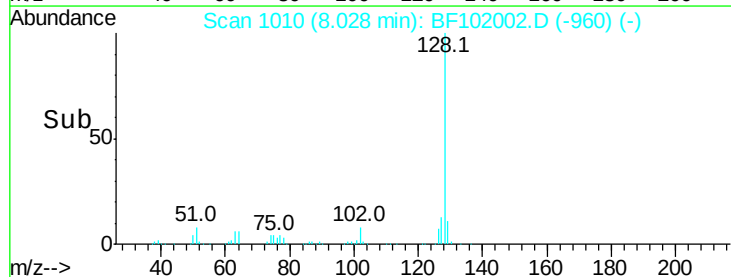
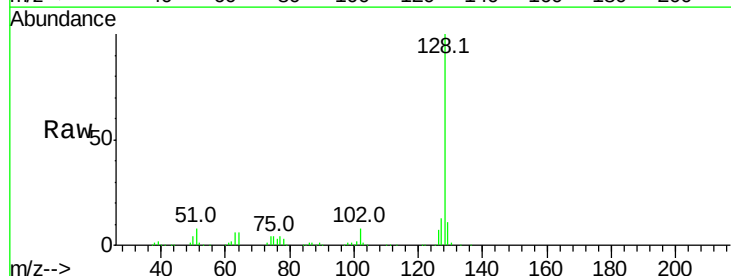
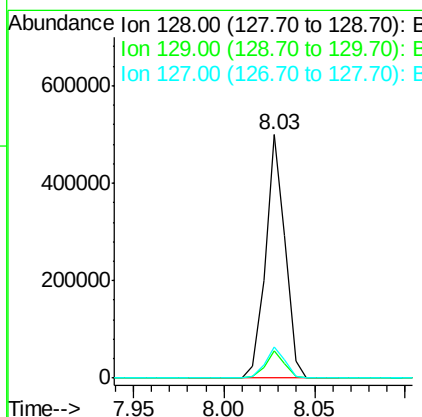
Manual Integrations  
APPROVED

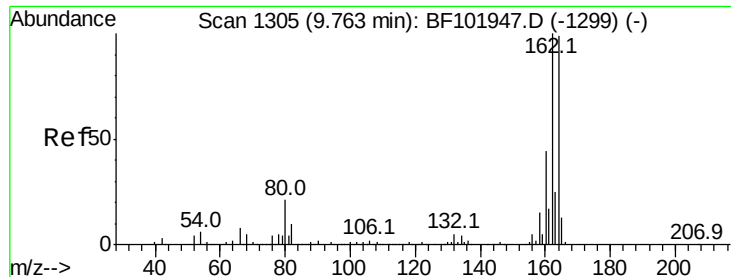
Sohil  
1/11/2018 10:53:33 AM



#31  
Naphthalene  
Concen: 9.146 ng  
RT: 8.03 min Scan# 1010  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 129     | 11.0  | 8.8   | 13.2  |
| 127     | 12.7  | 10.9  | 16.3  |





#38

Acenaphthene-d10

Concen: 20.000 ng

RT: 9.76 min Scan# 1304

Delta R.T. -0.01 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

Instrument :

BNA\_F

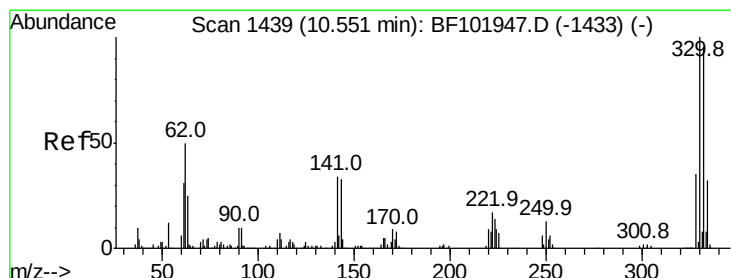
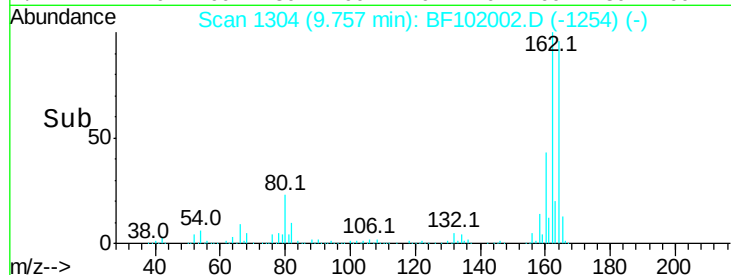
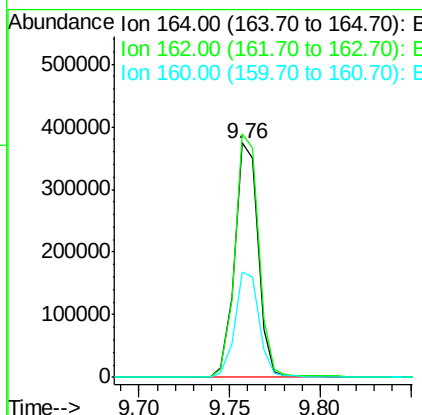
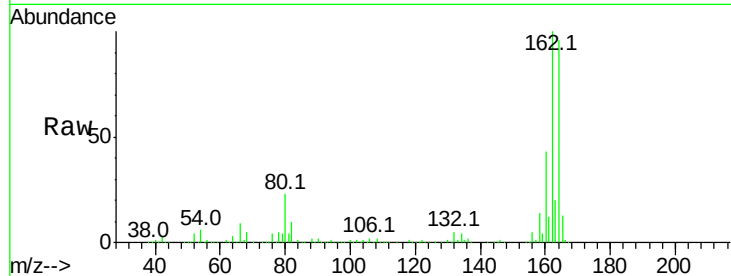
ClientSampled :

WC-52-01

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 164   | Resp: | 340248 |
| Ion Ratio | Lower | Upper |        |
| 164       | 100   |       |        |
| 162       | 103.9 | 86.1  | 129.1  |
| 160       | 44.9  | 38.3  | 57.5   |

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM



#41

2,4,6-Tribromophenol

Concen: 0.181 ng

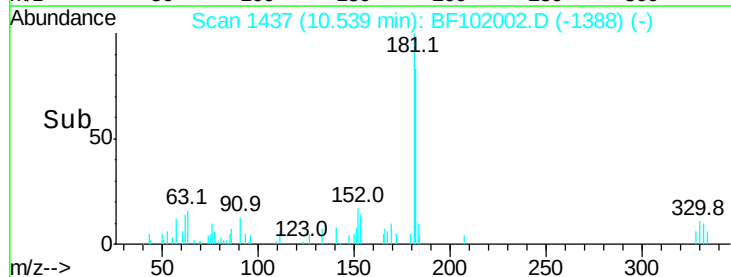
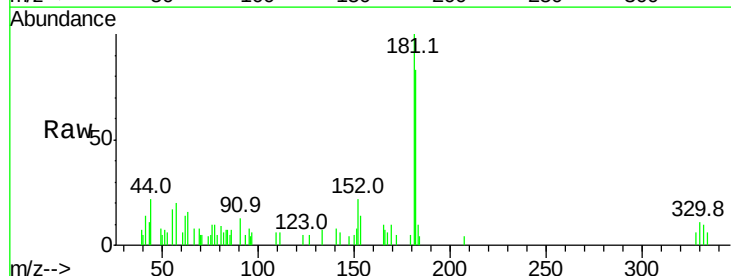
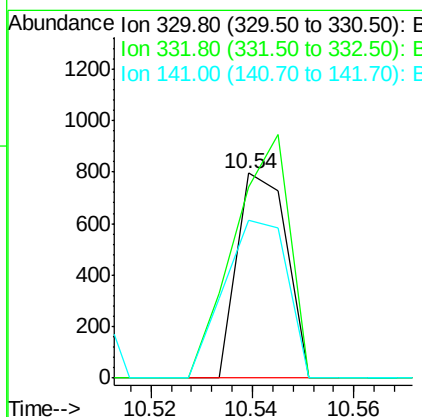
RT: 10.54 min Scan# 1437

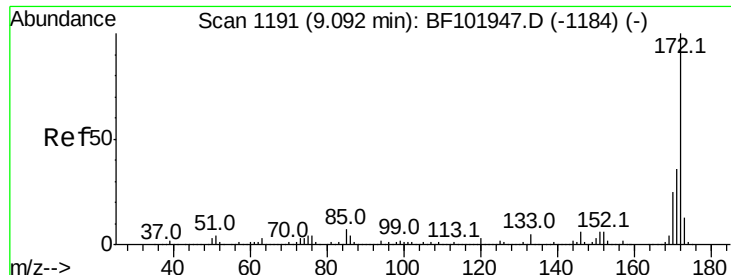
Delta R.T. -0.01 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 330   | Resp: | 538    |
| Ion Ratio | Lower | Upper |        |
| 330       | 100   |       |        |
| 332       | 132.3 | 77.0  | 115.6# |
| 141       | 98.5  | 29.9  | 44.9#  |





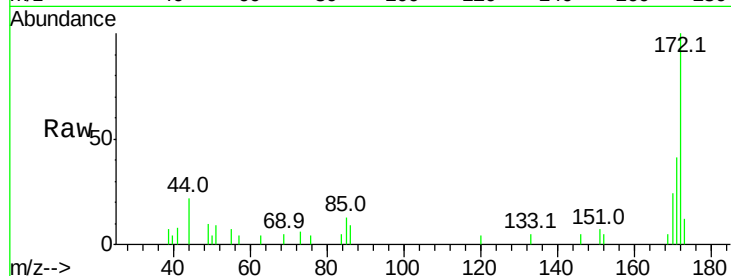
#44  
2-Fluorobiphenyl  
Concen: 0.306 ng  
RT: 9.08 min Scan# 1189  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

Instrument :  
BNA\_F  
ClientSampled :  
WC-52-01

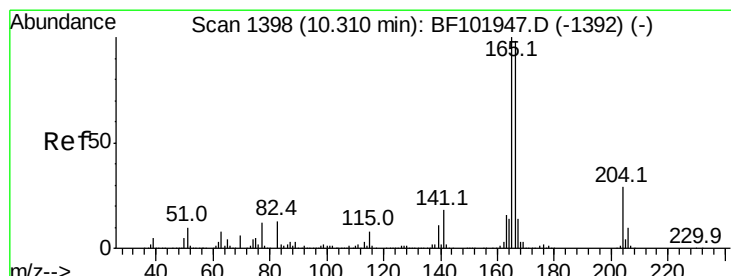
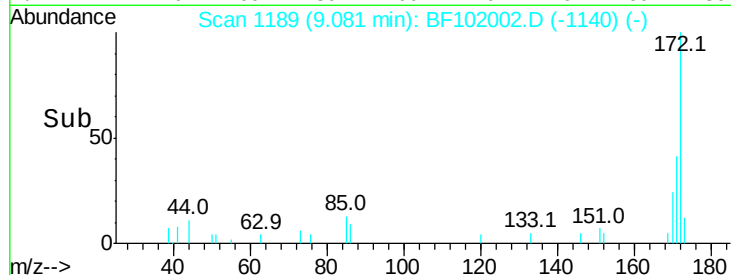
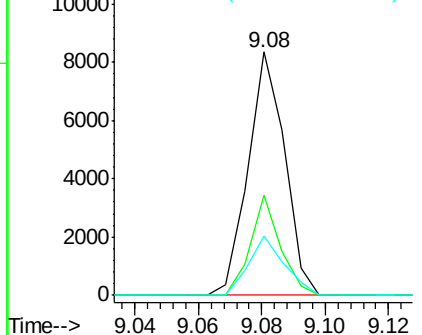
|           |       |       |      |
|-----------|-------|-------|------|
| Tot Ion:  | 172   | Resp: | 6671 |
| Ion Ratio | Lower | Upper |      |
| 172       | 100   |       |      |
| 171       | 41.0  | 29.7  | 44.5 |
| 170       | 24.1  | 19.6  | 29.4 |

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM



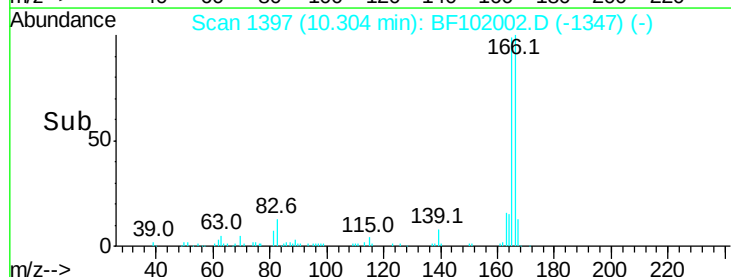
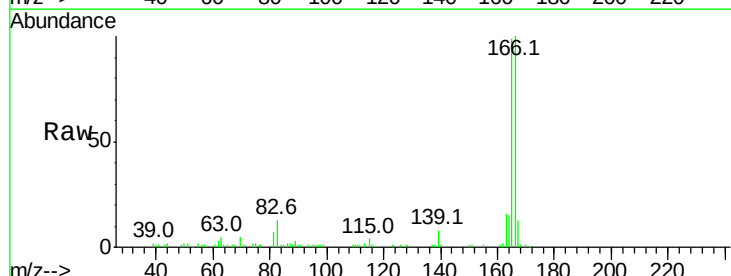
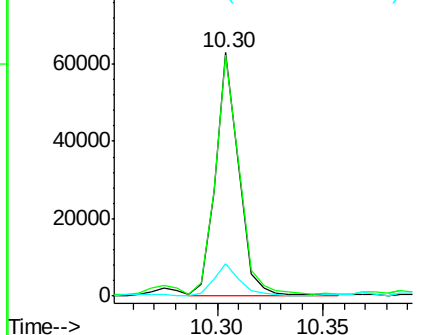
Abundance Ion 172.00 (171.70 to 172.70): E  
Ion 171.00 (170.70 to 171.70): E  
Ion 170.00 (169.70 to 170.70): E

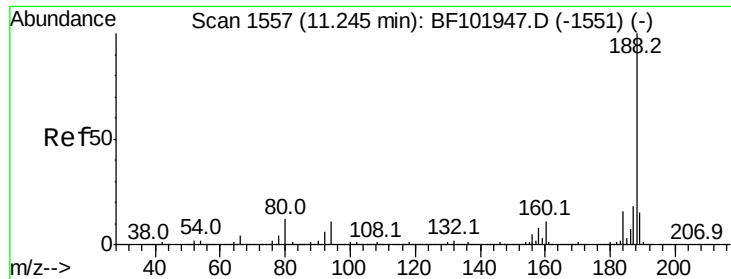


#57  
Fluorene  
Concen: 2.292 ng  
RT: 10.30 min Scan# 1397  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 166   | Resp: | 48855 |
| Ion Ratio | Lower | Upper |       |
| 166       | 100   |       |       |
| 165       | 98.8  | 79.8  | 119.8 |
| 167       | 13.5  | 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





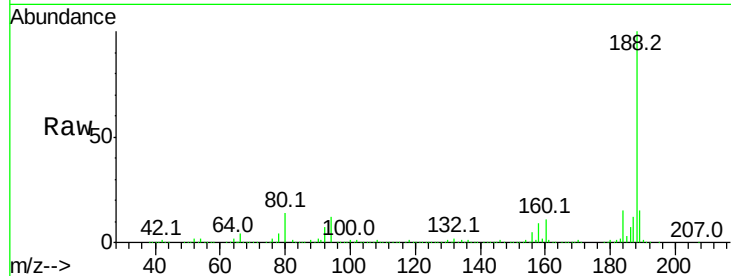
#63  
Phenanthrene-d10  
Concen: 20.000 ng  
RT: 11.24 min Scan# 1556  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

Instrument :  
BNA\_F  
ClientSampleId :  
WC-52-01

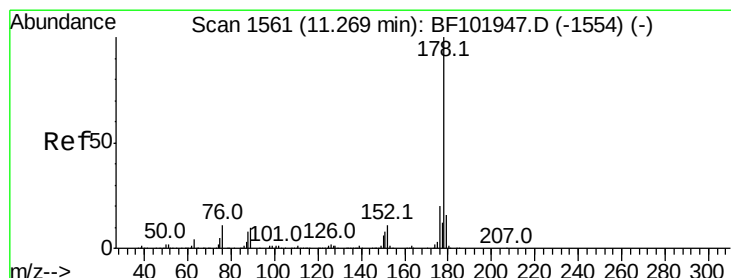
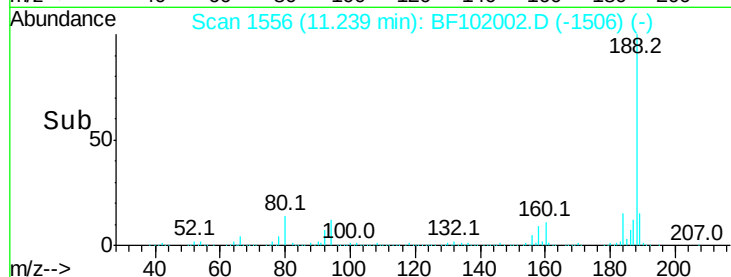
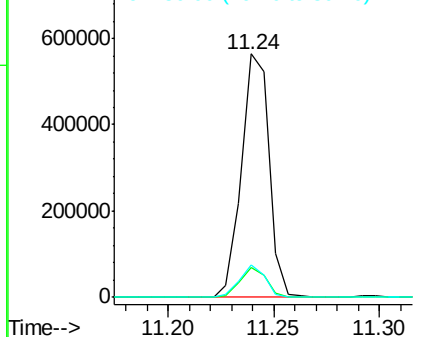
| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 188     | 100   | 511404 |       |       |
| 94      | 12.3  |        | 8.5   | 12.7  |
| 80      | 13.5  |        | 9.2   | 13.8  |

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM

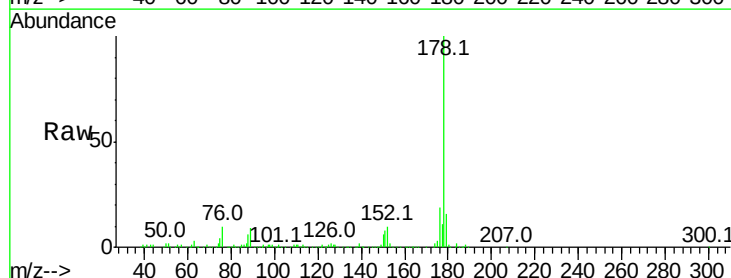


Abundance Ion 188.00 (187.70 to 188.70): E  
Ion 94.00 (93.70 to 94.70): BF1  
Ion 80.00 (79.70 to 80.70): BF1

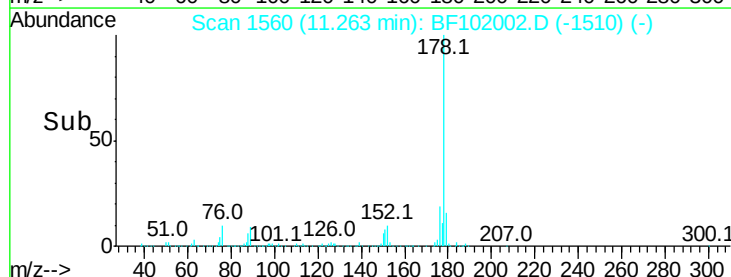
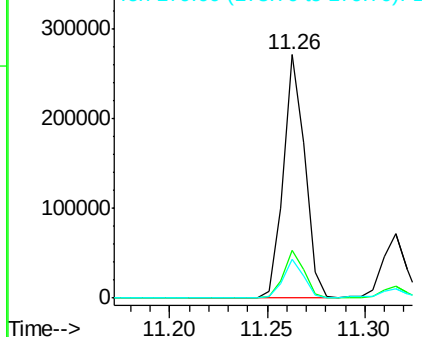


#70  
Phenanthrene  
Concen: 6.940 ng  
RT: 11.26 min Scan# 1560  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

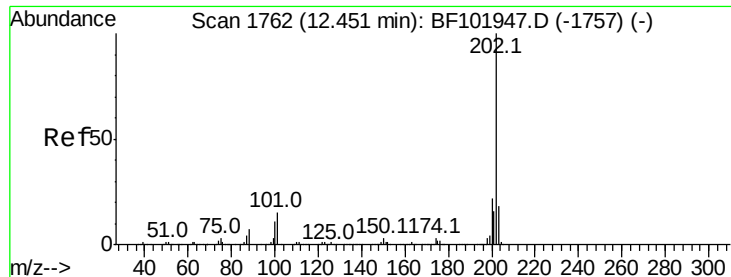
| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 178     | 100   | 207323 |       |       |
| 176     | 19.4  |        | 15.8  | 23.8  |
| 179     | 16.0  |        | 13.0  | 19.6  |



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







#74

Fluoranthene

Concen: 5.188 ng

RT: 12.45 min Scan# 1762

Delta R.T. 0.00 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

Instrument :

BNA\_F

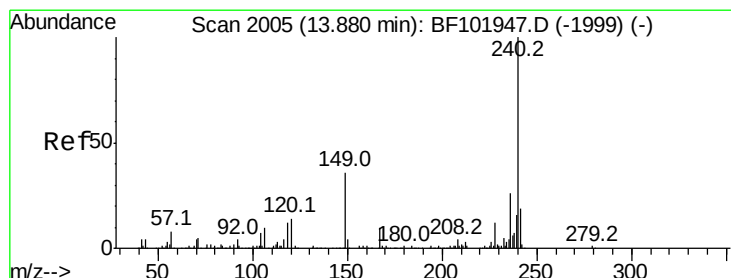
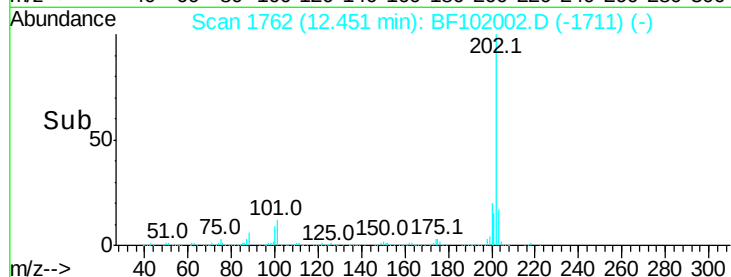
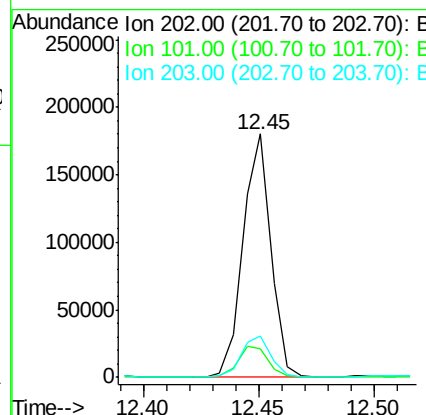
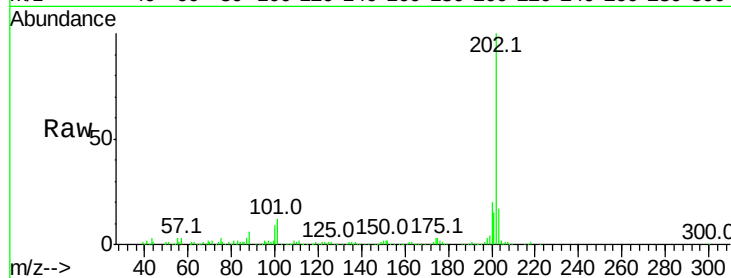
ClientSampled :

WC-52-01

|           |      |       |        |
|-----------|------|-------|--------|
| Tot Ion:  | 202  | Resp: | 152483 |
| Ion Ratio |      | Lower | Upper  |
| 202       | 100  |       |        |
| 101       | 11.7 | 0.0   | 34.1   |
| 203       | 17.1 | 0.0   | 38.1   |

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM



#75

Chrysene-d12

Concen: 20.000 ng

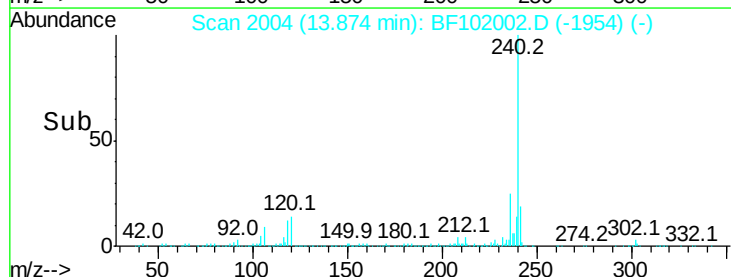
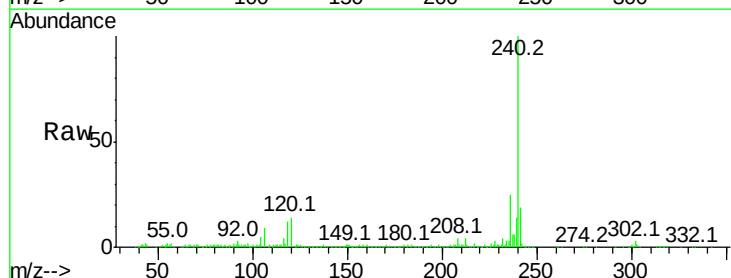
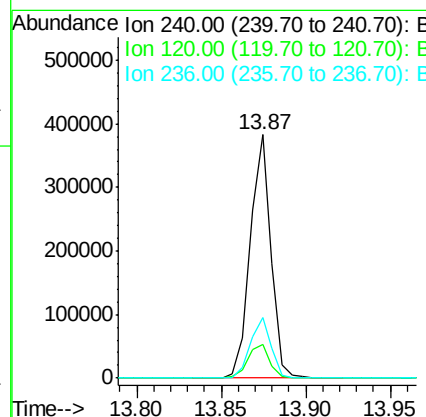
RT: 13.87 min Scan# 2004

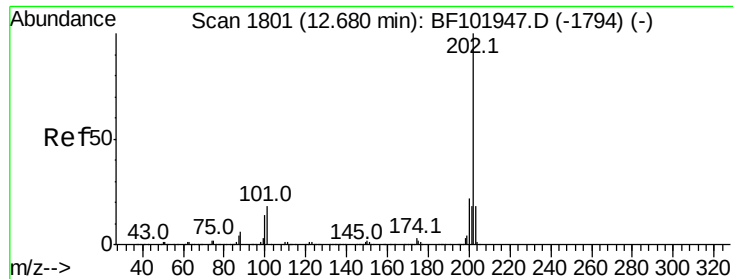
Delta R.T. -0.01 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

|           |      |       |        |
|-----------|------|-------|--------|
| Tgt Ion:  | 240  | Resp: | 327120 |
| Ion Ratio |      | Lower | Upper  |
| 240       | 100  |       |        |
| 120       | 13.9 | 9.5   | 14.3   |
| 236       | 25.1 | 20.7  | 31.1   |





#77

Pvrene

Concen: 4.846 ng

RT: 12.67 min Scan# 1800

Delta R.T. -0.01 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

Instrument :

BNA\_F

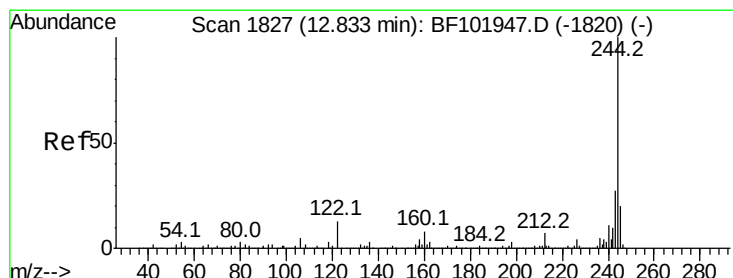
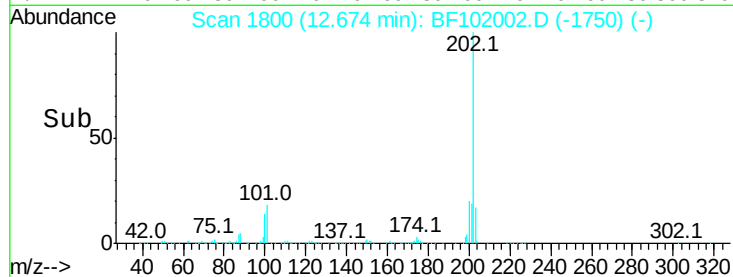
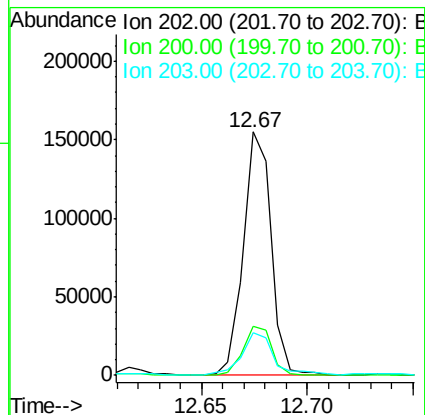
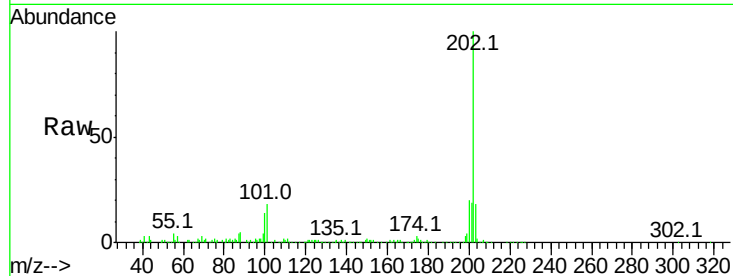
ClientSampleId :

WC-52-01

|           |      |       |        |
|-----------|------|-------|--------|
| Tot Ion:  | 202  | Resp: | 140110 |
| Ion Ratio |      | Lower | Upper  |
| 202       | 100  |       |        |
| 200       | 20.3 | 17.4  | 26.2   |
| 203       | 17.6 | 14.3  | 21.5   |

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM



#78

Terphenyl-d14

Concen: 0.290 ng

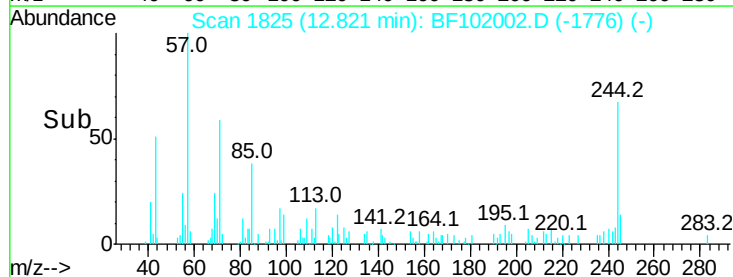
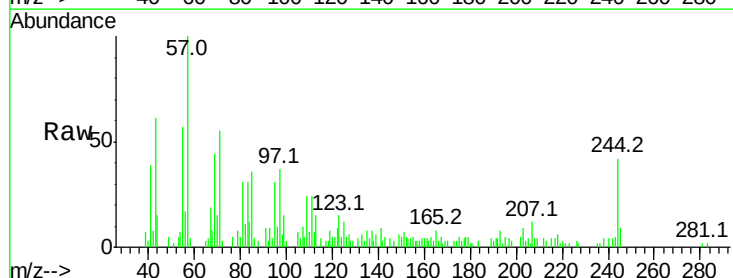
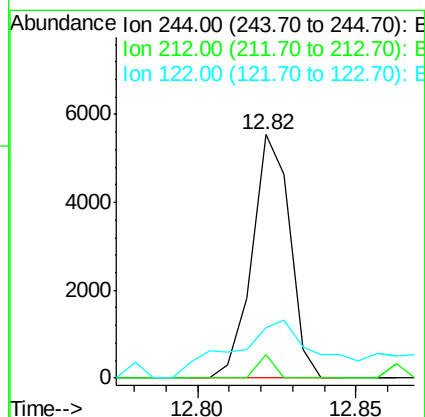
RT: 12.82 min Scan# 1825

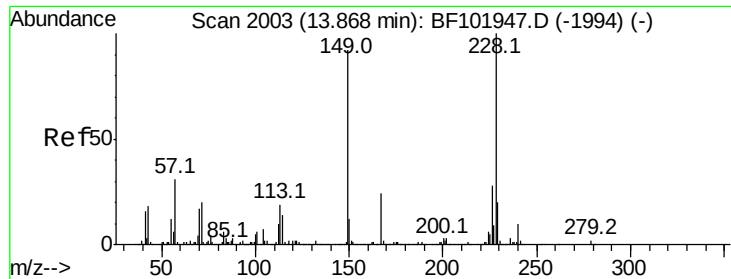
Delta R.T. -0.01 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

|           |      |       |       |
|-----------|------|-------|-------|
| Tgt Ion:  | 244  | Resp: | 4575  |
| Ion Ratio |      | Lower | Upper |
| 244       | 100  |       |       |
| 212       | 9.5  | 5.4   | 8.0#  |
| 122       | 20.5 | 11.0  | 16.4# |





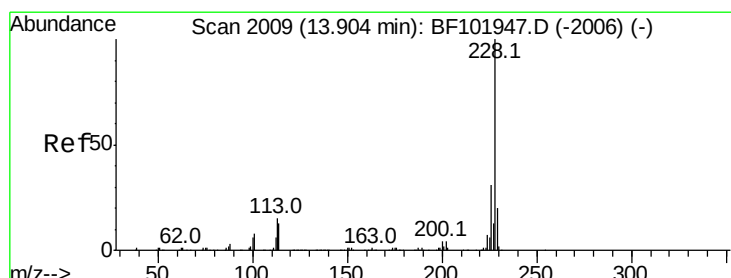
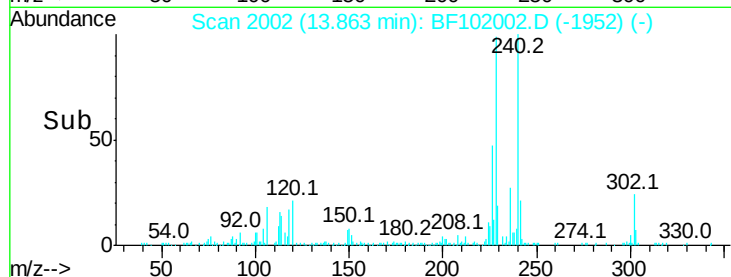
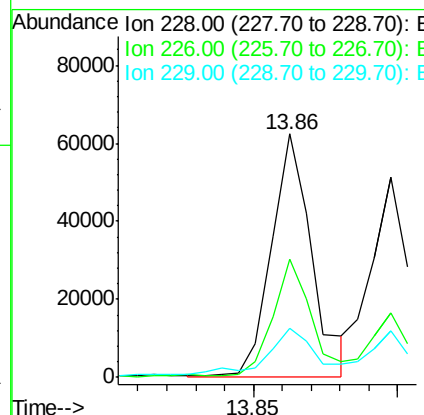
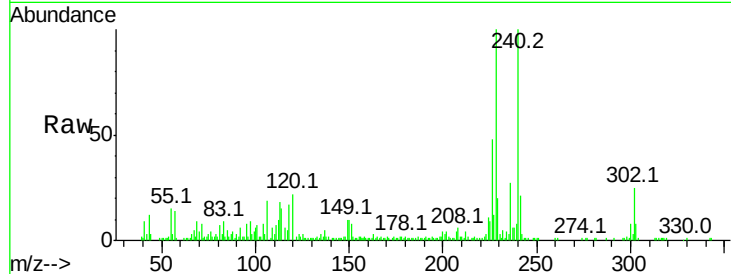
#80  
Benzo(a)anthracene  
Concen: 2.909 ng m  
RT: 13.86 min Scan# 2002  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

Instrument :  
BNA\_F  
ClientSampleId :  
WC-52-01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 48.4  | 22.6  | 33.8# |
| 229     | 19.9  | 15.8  | 23.6  |

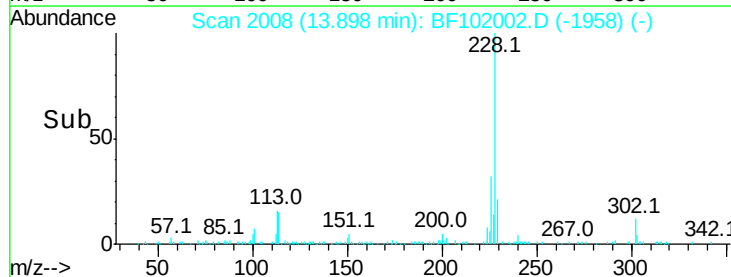
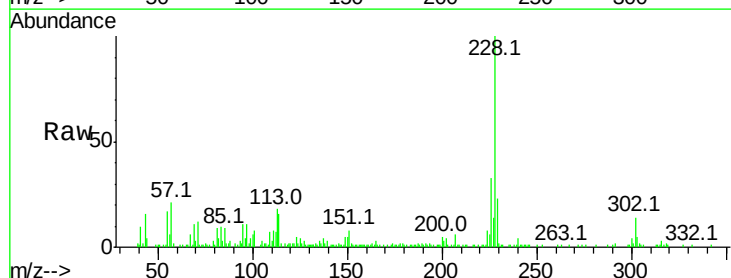
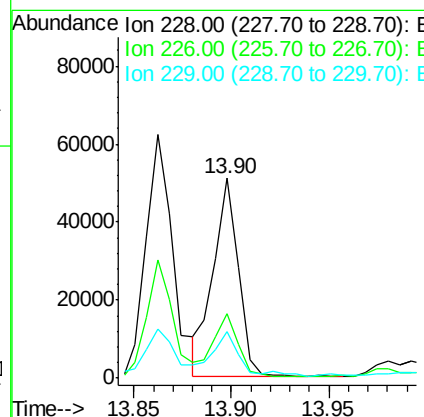
Manual Integrations  
APPROVED

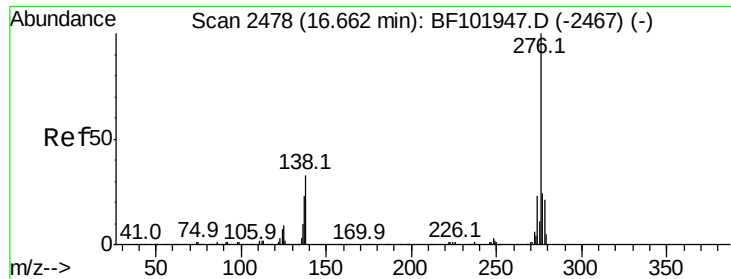
Sohil  
1/11/2018 10:53:33 AM



#82  
Chrysene  
Concen: 2.122 ng  
RT: 13.90 min Scan# 2008  
Delta R.T. -0.01 min  
Lab File: BF102002.D  
Acq: 11 Jan 2018 1:43

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 32.5  | 25.0  | 37.6  |
| 229     | 23.0  | 16.2  | 24.4  |





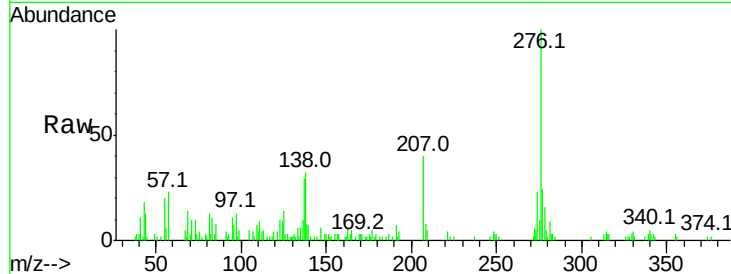
#85  
 Indeno(1,2,3-cd)pyrene  
 Concen: 2.108 ng  
 RT: 16.66 min Scan# 2477  
 Delta R.T. -0.01 min  
 Lab File: BF102002.D  
 Acq: 11 Jan 2018 1:43

Instrument :  
 BNA\_F  
 ClientSampled :  
 WC-52-01

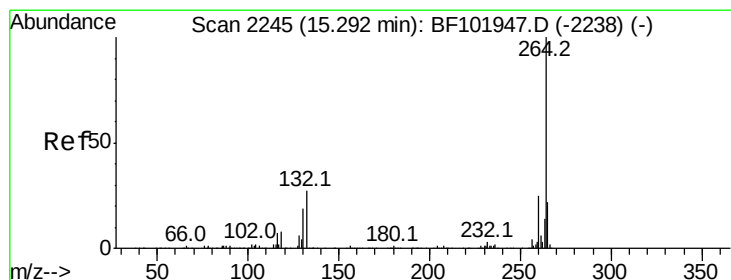
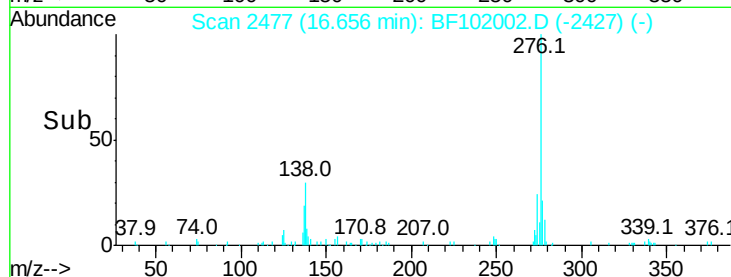
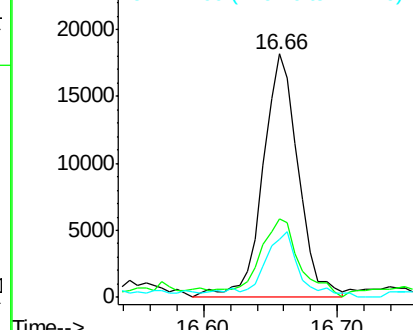
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 36.2  | 25.0  | 37.6  |
| 277     | 28.1  | 20.1  | 30.1  |

Manual Integrations  
 APPROVED

Sohil  
 1/11/2018 10:53:33 AM

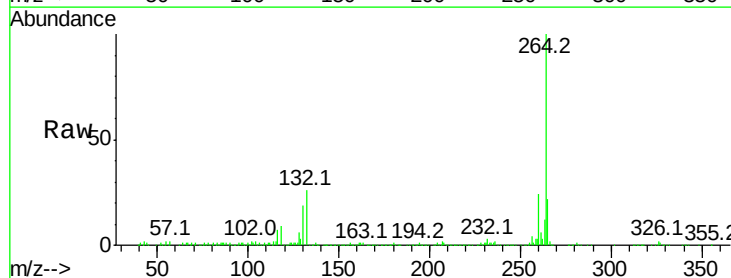


Abundance Ion 276.00 (275.70 to 276.70): E  
 Ion 138.00 (137.70 to 138.70): E  
 Ion 277.00 (276.70 to 277.70): E

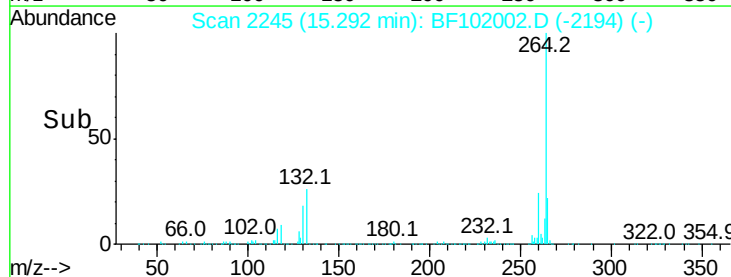
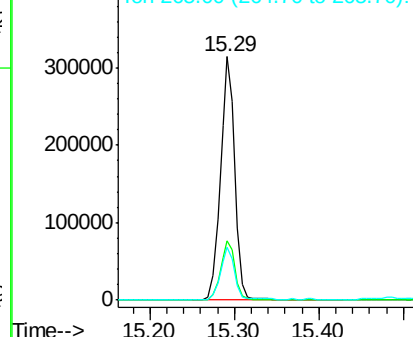


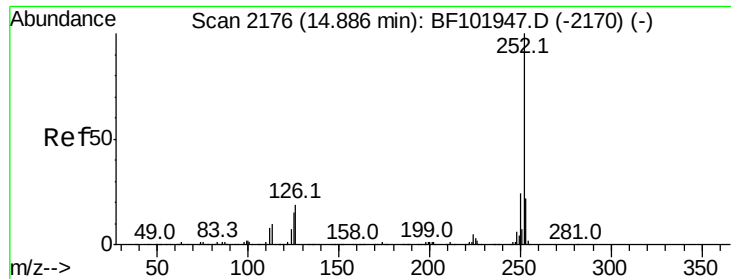
#86  
 Perylene-d12  
 Concen: 20.000 ng  
 RT: 15.29 min Scan# 2245  
 Delta R.T. -0.00 min  
 Lab File: BF102002.D  
 Acq: 11 Jan 2018 1:43

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 264     | 100   |       |       |
| 260     | 24.5  | 19.2  | 28.8  |
| 265     | 21.9  | 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: 2.763 ng/mL

RT: 14.89 min Scan# 2176

Delta R.T. 0.00 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

Instrument :

BNA\_F

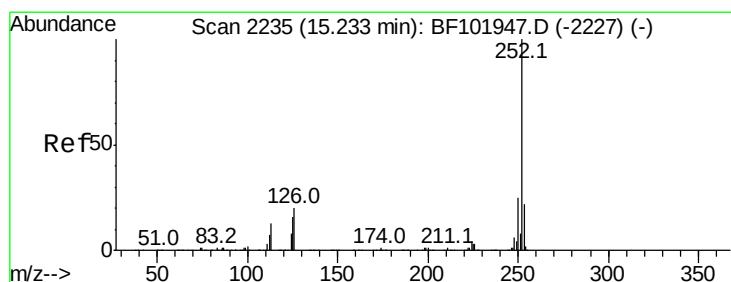
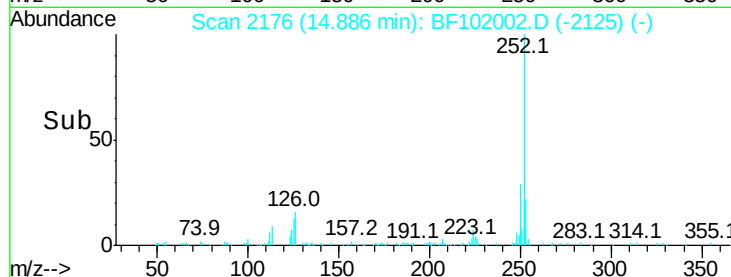
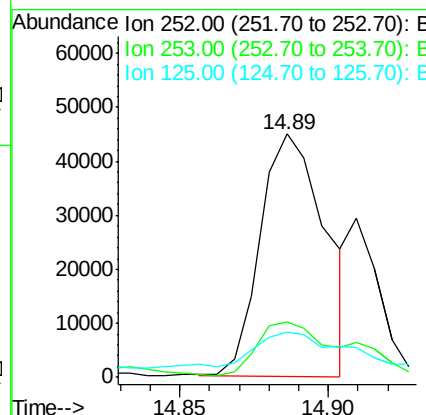
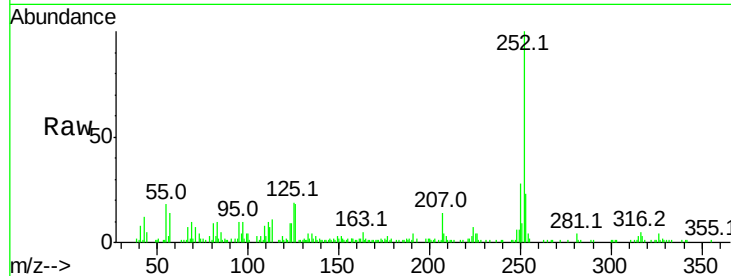
ClientSampled :

WC-52-01

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.8  | 17.0  | 25.6  |
| 125     | 18.7  | 9.0   | 13.6  |

Manual Integrations  
APPROVED

Sohil  
1/11/2018 10:53:33 AM



#89

Benzo(a)pyrene

Concen: 2.602 ng/mL

RT: 15.23 min Scan# 2234

Delta R.T. -0.01 min

Lab File: BF102002.D

Acq: 11 Jan 2018 1:43

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 23.2  | 17.1  | 25.7  |
| 125     | 17.9  | 9.8   | 14.6  |

