

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082218\  
 Data File : BF108397.D  
 Acq On : 22 Aug 2018 21:39  
 Operator : JU/SJ  
 Sample : J4276-03 5X  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 OK-01-082118

Manual Integrations  
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 8/23/2018 3:43:23 PM

Quant Time: Aug 23 12:04:52 2018  
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF080818.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Wed Aug 22 11:01:45 2018  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc   | Units | Dev(Min)  |
|-----------------------------|-------|------|----------|--------|-------|-----------|
| 1) 1,4-Dichlorobenzene-d4   | 7.00  | 152  | 143141   | 20.00  | ng    | 0.00      |
| 21) Naphthalene-d8          | 8.28  | 136  | 553974   | 20.00  | ng    | 0.00      |
| 38) Acenaphthene-d10        | 10.05 | 164  | 259149   | 20.00  | ng    | 0.00      |
| 63) Phenanthrene-d10        | 11.54 | 188  | 423787   | 20.00  | ng    | 0.00      |
| 75) Chrysene-d12            | 14.19 | 240  | 298180   | 20.00  | ng    | 0.00      |
| 86) Perylene-d12            | 15.75 | 264  | 272151   | 20.00  | ng    | 0.00      |
| System Monitoring Compounds |       |      |          |        |       |           |
| 5) 2-Fluorophenol           | 5.62  | 112  | 153841   | 19.46  | ng    | -0.01     |
| 7) Phenol-d6                | 6.61  | 99   | 215257   | 20.49  | ng    | -0.02     |
| 23) Nitrobenzene-d5         | 7.56  | 82   | 131673   | 13.26  | ng    | -0.01     |
| 41) 2,4,6-Tribromophenol    | 10.84 | 330  | 39853    | 15.42  | ng    | -0.01     |
| 44) 2-Fluorobiphenyl        | 9.35  | 172  | 277080   | 17.17  | ng    | -0.01     |
| 78) Terphenyl-d14           | 13.12 | 244  | 195479   | 16.67  | ng    | 0.00      |
| Target Compounds            |       |      |          |        |       |           |
| 57) Fluorene                | 10.60 | 166  | 37166    | 2.216  | ng    | Qvalue 97 |
| 70) Phenanthrene            | 11.57 | 178  | 247345   | 12.374 | ng    | 99        |
| 71) Anthracene              | 11.62 | 178  | 63095    | 3.080  | ng    | 96        |
| 74) Fluoranthene            | 12.76 | 202  | 286148   | 13.117 | ng    | 95        |
| 77) Pyrene                  | 13.00 | 202  | 265247   | 14.051 | ng    | 98        |
| 80) Benzo(a)anthracene      | 14.18 | 228  | 117608   | 6.873  | ng    | 98        |
| 82) Chrysene                | 14.22 | 228  | 106242   | 6.772  | ng    | 97        |
| 85) Indeno(1,2,3-cd)pyrene  | 17.36 | 276  | 39010    | 2.870  | ng    | # 82      |
| 87) Benzo(b)fluoranthene    | 15.28 | 252  | 112496m  | 6.918  | ng    |           |
| 88) Benzo(k)fluoranthene    | 15.31 | 252  | 39113m   | 2.616  | ng    |           |
| 89) Benzo(a)pyrene          | 15.68 | 252  | 83229    | 5.715  | ng    | 96        |
| 91) Benzo(a,h,i)perylene    | 17.85 | 276  | 38784    | 3.269  | ng    | # 89      |

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

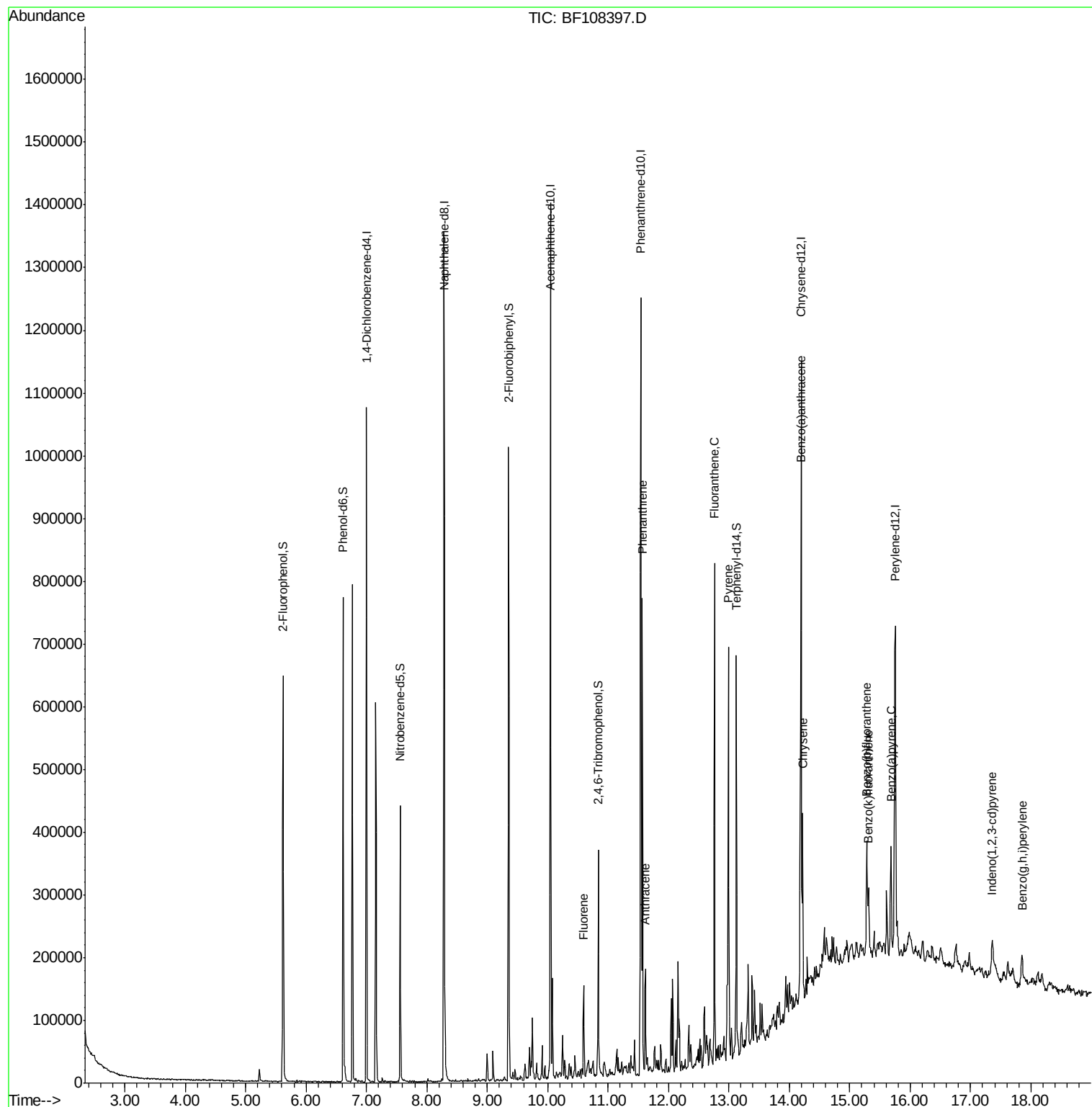
Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF082218\  
Data File : BF108397.D  
Acq On : 22 Aug 2018 21:39  
Operator : JU/SJ  
Sample : J4276-03 5X  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

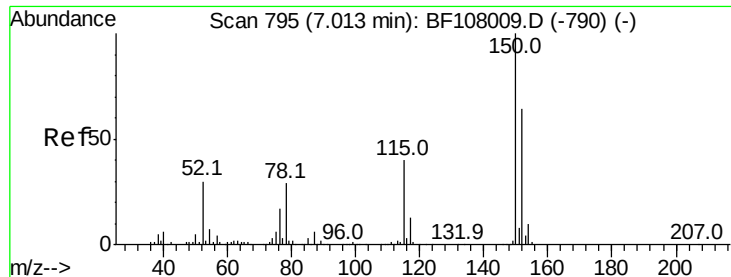
Instrument :  
BNA\_F  
ClientSampled :  
OK-01-082118

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Quant Time: Aug 23 12:04:52 2018  
Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF080818.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Wed Aug 22 11:01:45 2018  
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#1

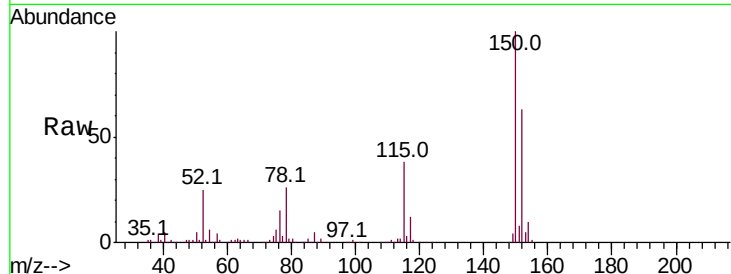
1,4-Dichlorobenzene-d4  
Concen: 20.000 ng  
RT: 7.00 min Scan# 793  
Delta R.T. -0.01 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

Instrument :  
BNA\_F  
ClientSampleId :  
OK-01-082118

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 150     | 157.6 | 124.6 | 186.8 |
| 115     | 60.2  | 50.1  | 75.1  |

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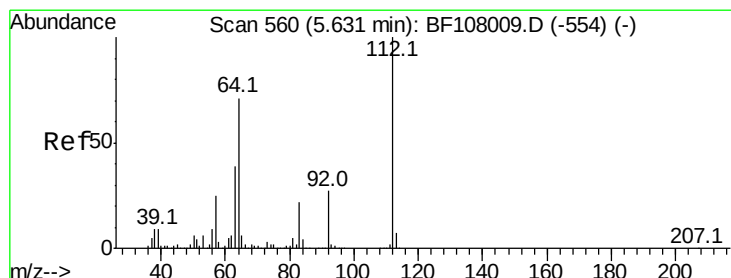
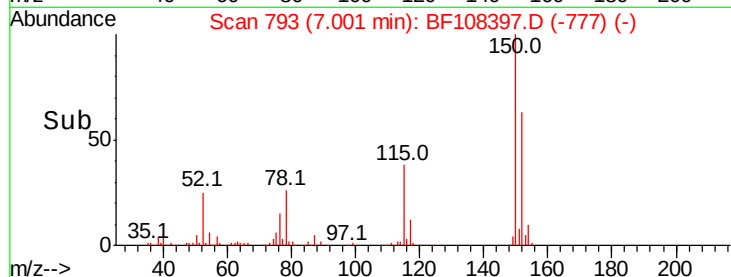
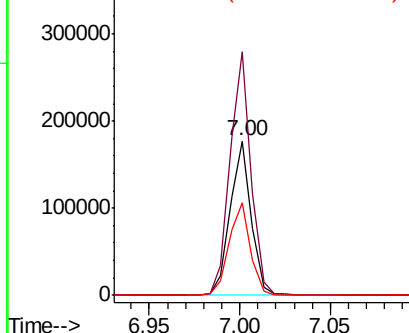


Abundance

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: 19.458 ng  
RT: 5.62 min Scan# 558  
Delta R.T. -0.01 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

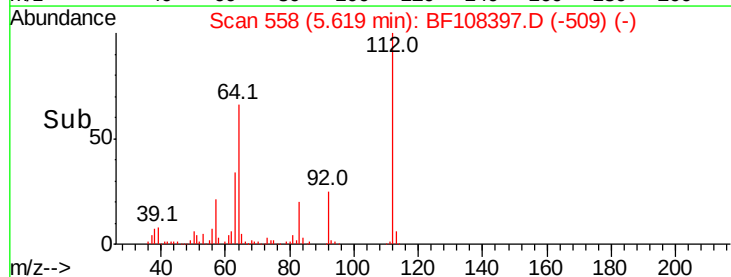
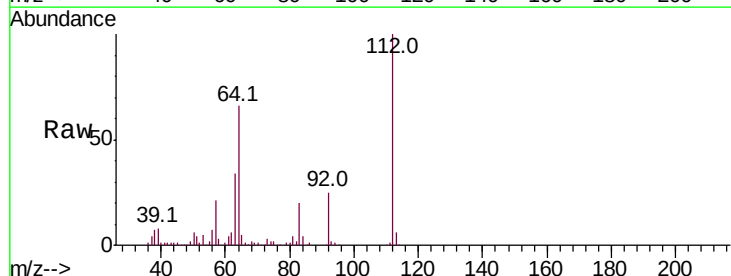
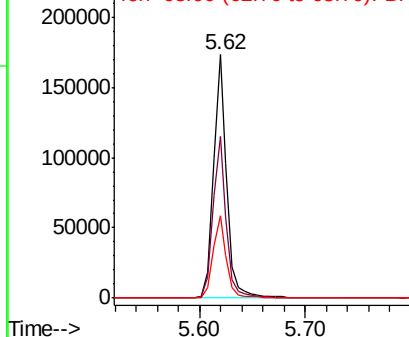
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 64      | 66.2  | 47.9  | 71.9  |
| 63      | 33.7  | 23.7  | 35.5  |

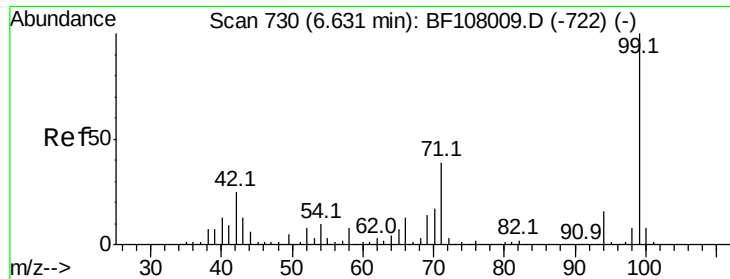
Abundance

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: 20.488 ng

RT: 6.61 min Scan# 727

Delta R.T. -0.02 min

Lab File: BF108397.D

Acq: 22 Aug 2018 21:39

Instrument :

BNA\_F

ClientSampleId :

OK-01-082118

Tot Ion: 99 Resp: 215257

Ion Ratio Lower Upper

99 100

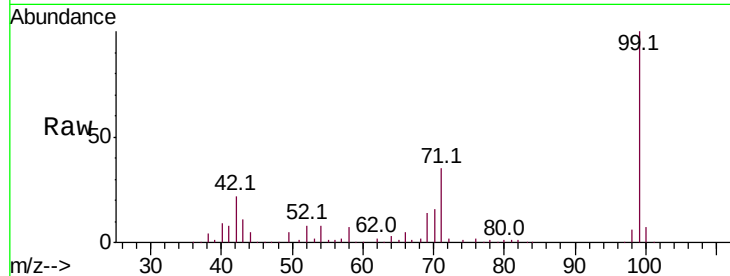
42 22.2 14.5 21.7#

71 35.3 25.4 38.0

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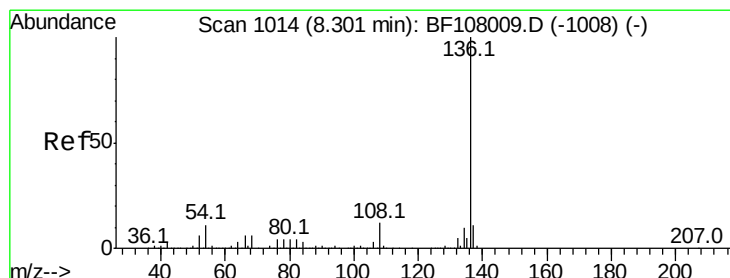
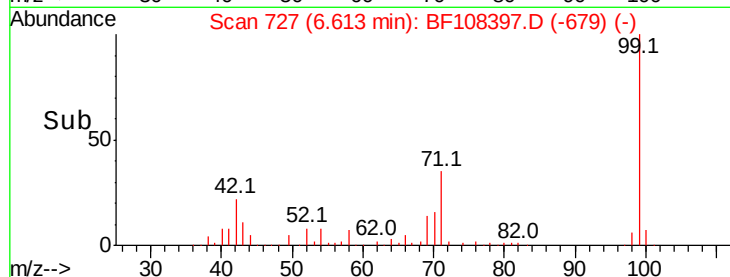
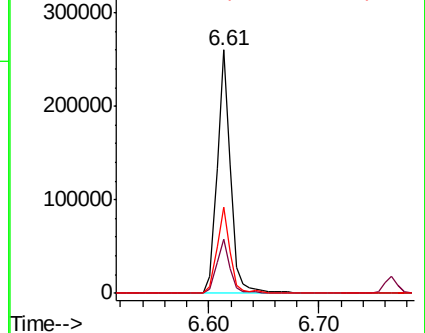
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Abundance Ion 99.00 (98.70 to 99.70): BF1

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: 8.28 min Scan# 1011

Delta R.T. -0.01 min

Lab File: BF108397.D

Acq: 22 Aug 2018 21:39

Tgt Ion: 136 Resp: 553974

Ion Ratio Lower Upper

136 100

137 11.2 8.9 13.3

54 10.1 6.6 9.8#

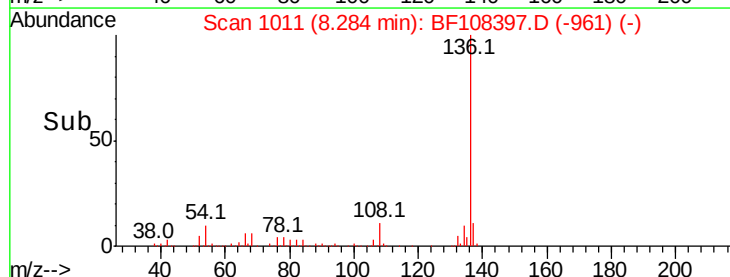
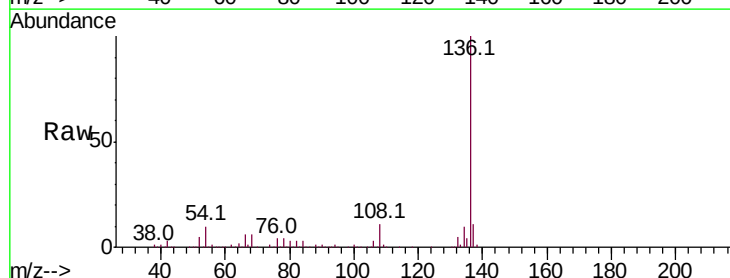
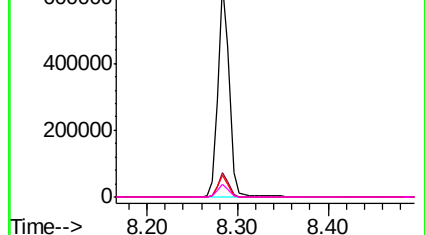
68 6.1 5.0 7.4

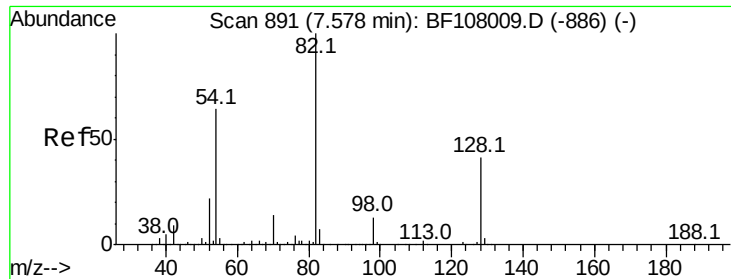
Abundance Ion 136.00 (135.70 to 136.70): E

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: 13.263 ng

RT: 7.56 min Scan# 888

Delta R.T. -0.01 min

Lab File: BF108397.D

Acq: 22 Aug 2018 21:39

Instrument :

BNA\_F

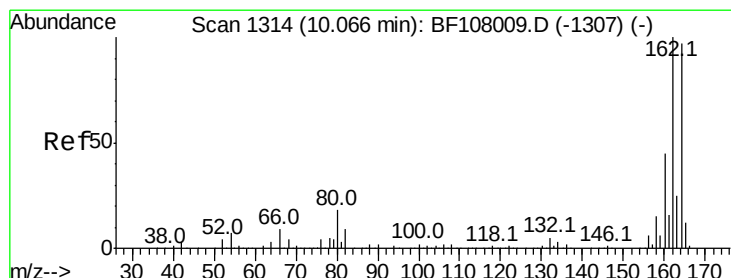
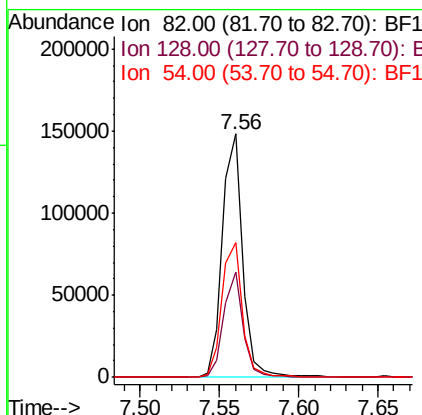
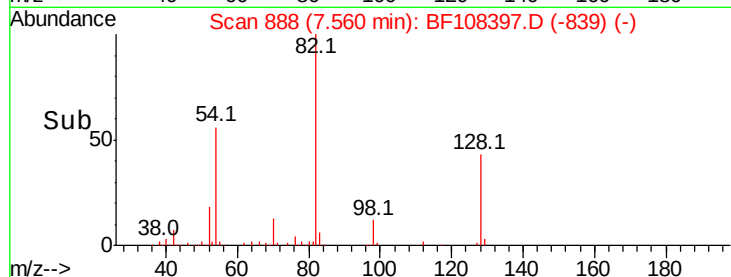
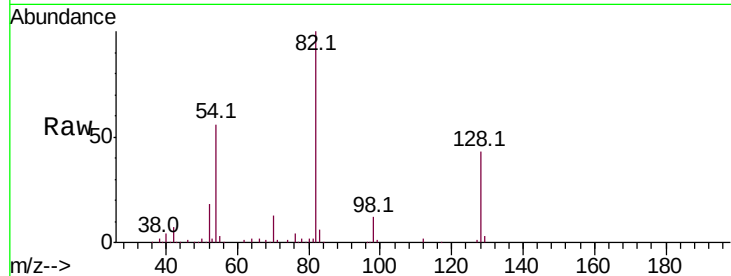
ClientSampleId :

OK-01-082118

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 82    | Resp: | 131673 |
| Ion Ratio | Lower | Upper |        |
| 82        | 100   |       |        |
| 128       | 43.5  | 36.1  | 54.1   |
| 54        | 55.6  | 41.4  | 62.2   |

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#38

Acenaphthene-d10

Concen: 20.000 ng

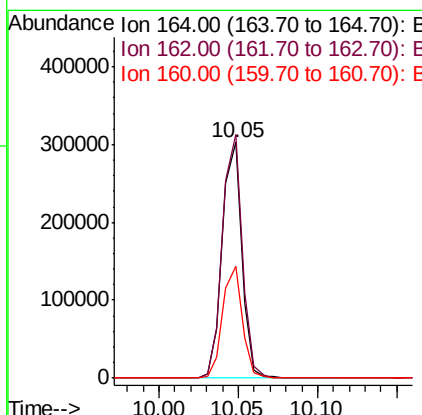
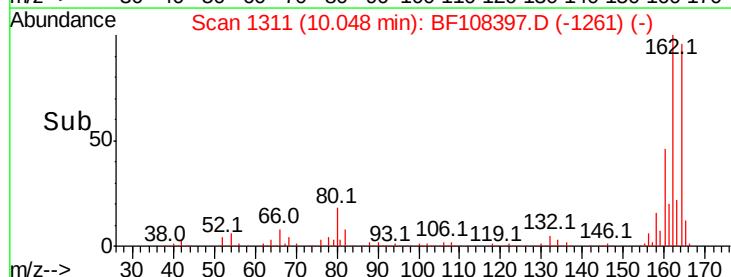
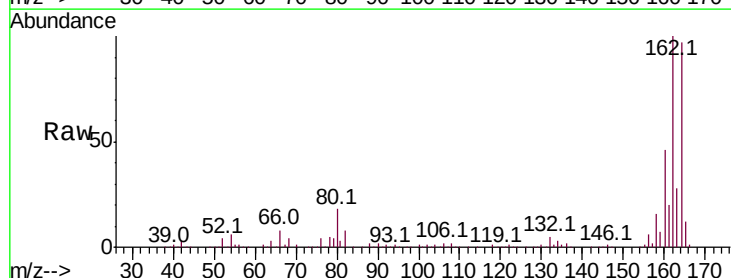
RT: 10.05 min Scan# 1311

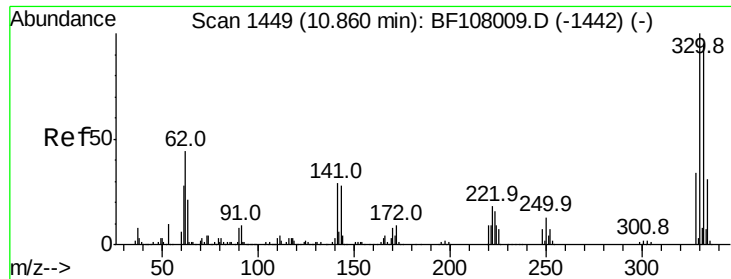
Delta R.T. -0.01 min

Lab File: BF108397.D

Acq: 22 Aug 2018 21:39

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 164   | Resp: | 259149 |
| Ion Ratio | Lower | Upper |        |
| 164       | 100   |       |        |
| 162       | 103.4 | 86.1  | 129.1  |
| 160       | 47.7  | 38.3  | 57.5   |





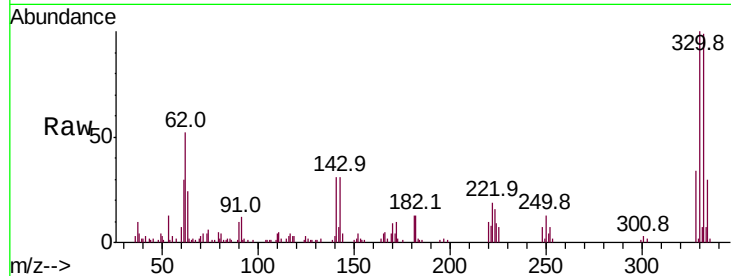
#41  
 2,4,6-Tribromophenol  
 Concen: 15.417 ng  
 RT: 10.84 min Scan# 1445  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

Instrument :  
 BNA\_F  
 ClientSampleId :  
 OK-01-082118

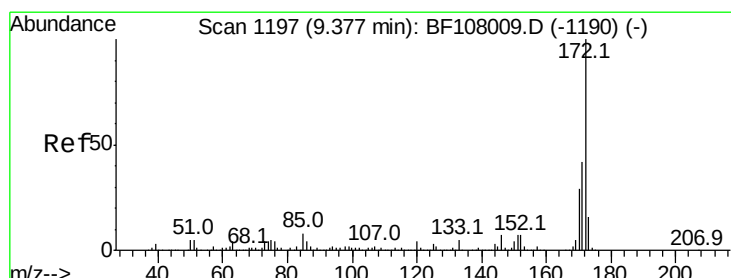
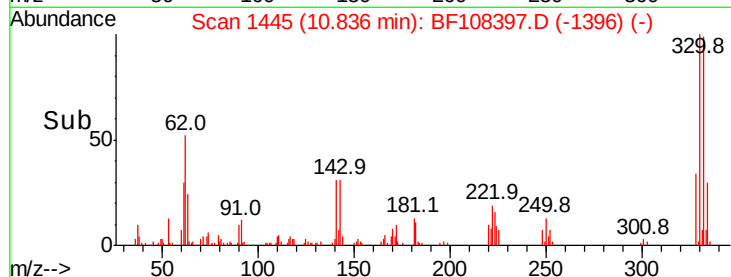
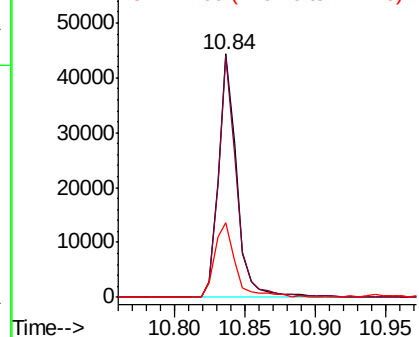
|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 330   | Resp: | 39853 |
| Ion Ratio | Lower | Upper |       |
| 330       | 100   |       |       |
| 332       | 98.1  | 77.0  | 115.6 |
| 141       | 35.2  | 29.9  | 44.9  |

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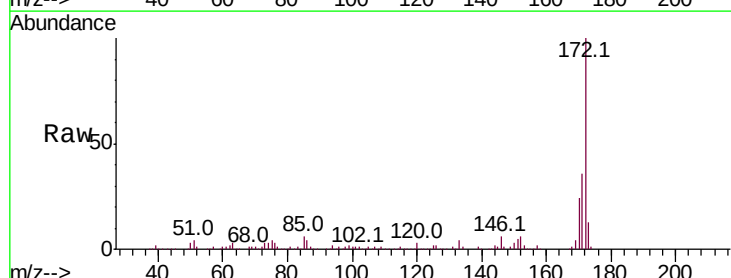


Abundance Ion 329.80 (329.50 to 330.50): E  
 Ion 331.80 (331.50 to 332.50): E  
 Ion 141.00 (140.70 to 141.70): E

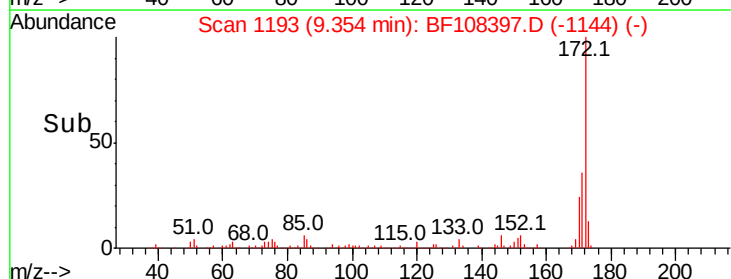
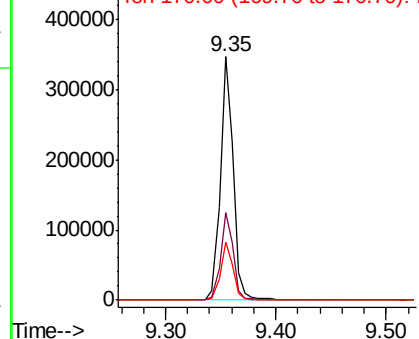


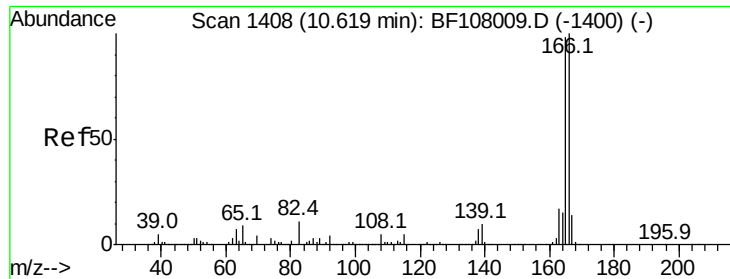
#44  
 2-Fluorobiphenyl  
 Concen: 17.166 ng  
 RT: 9.35 min Scan# 1193  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 172   | Resp: | 277080 |
| Ion Ratio | Lower | Upper |        |
| 172       | 100   |       |        |
| 171       | 36.1  | 29.7  | 44.5   |
| 170       | 23.9  | 19.6  | 29.4   |



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





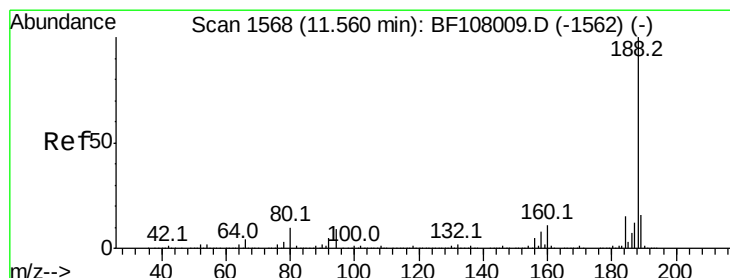
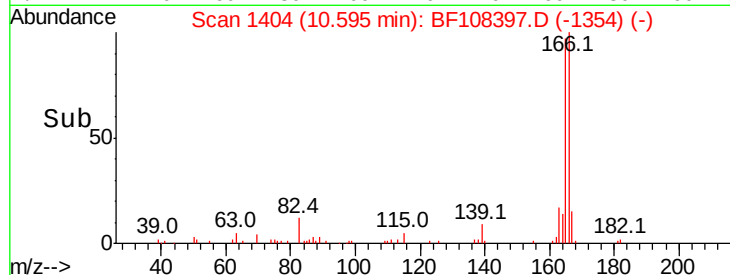
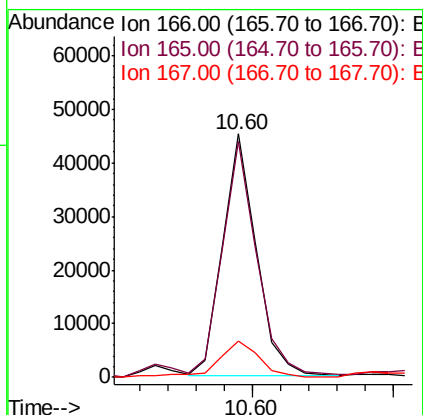
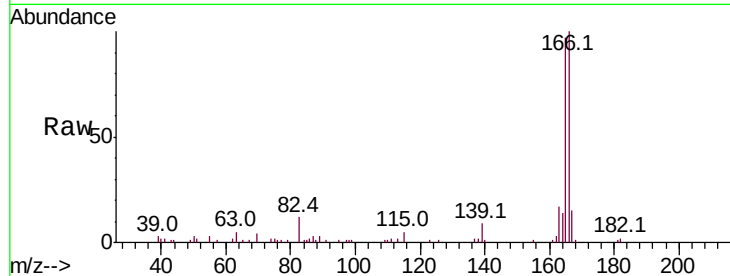
#57  
**Fluorene**  
 Concen: 2.216 ng  
 RT: 10.60 min Scan# 1404  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

Instrument :  
 BNA\_F  
 ClientSampleId :  
 OK-01-082118

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 166     | 100   |       |       |
| 165     | 97.0  | 79.8  | 119.8 |
| 167     | 14.9  | 10.6  | 16.0  |

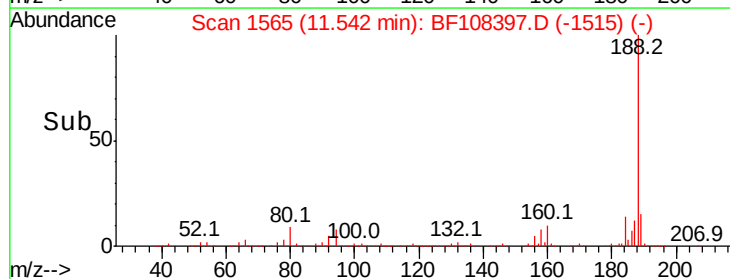
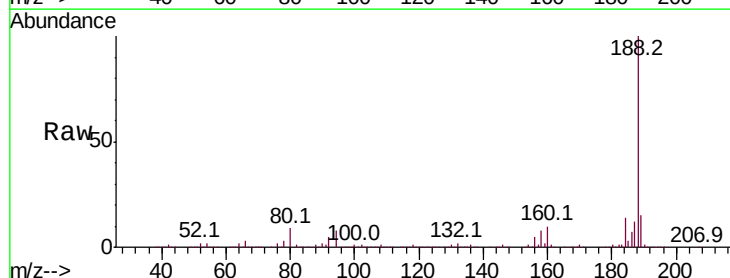
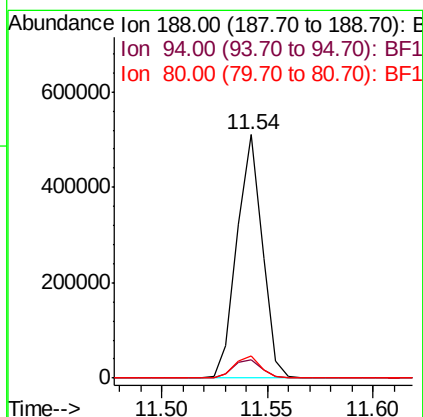
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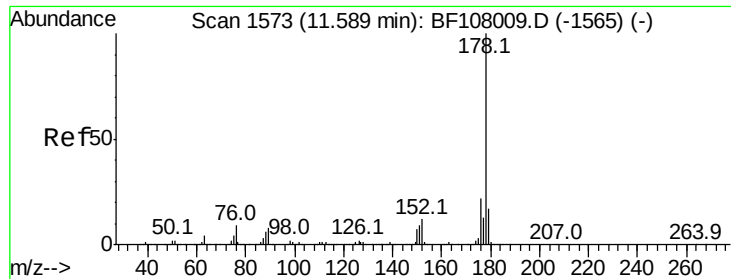
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#63  
**Phenanthrene-d10**  
 Concen: 20.000 ng  
 RT: 11.54 min Scan# 1565  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 188     | 100   |       |       |
| 94      | 7.8   | 8.5   | 12.7# |
| 80      | 8.9   | 9.2   | 13.8# |





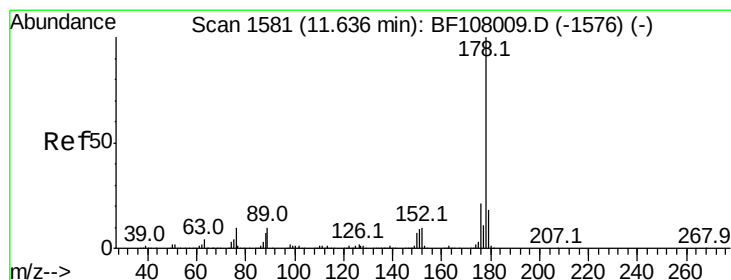
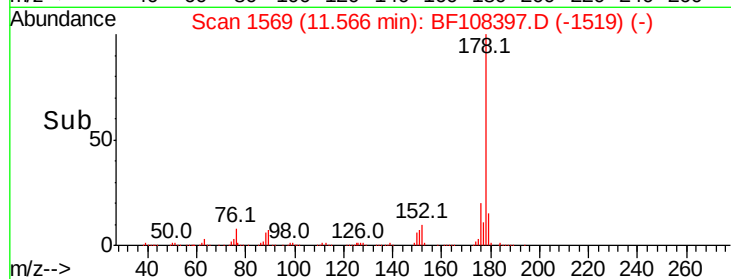
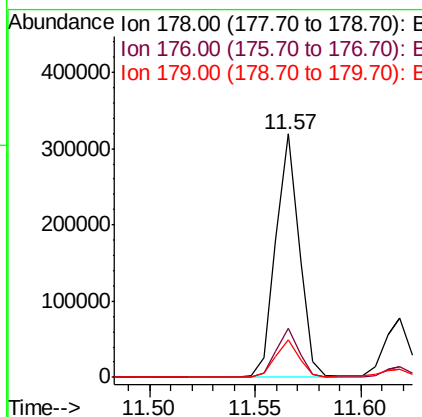
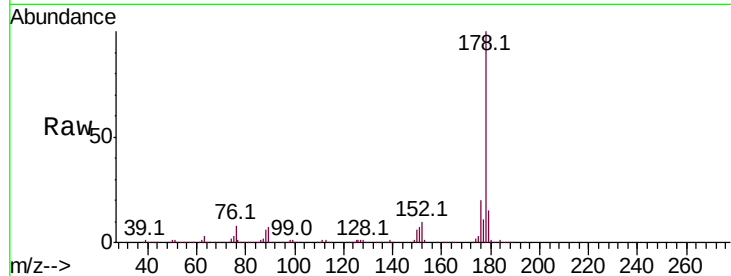
#70  
 Phenanthrene  
 Concen: 12.374 ng  
 RT: 11.57 min Scan# 1569  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

Instrument :  
 BNA\_F  
 ClientSampleId :  
 OK-01-082118

|             |       |        |
|-------------|-------|--------|
| Tot Ion:178 | Resp: | 247345 |
| Ion Ratio   | Lower | Upper  |
| 178 100     |       |        |
| 176 20.1    | 15.8  | 23.8   |
| 179 15.4    | 13.0  | 19.6   |

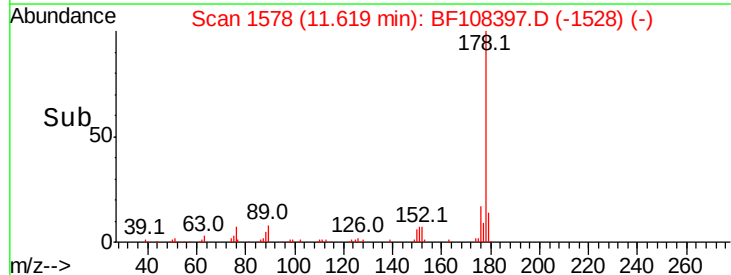
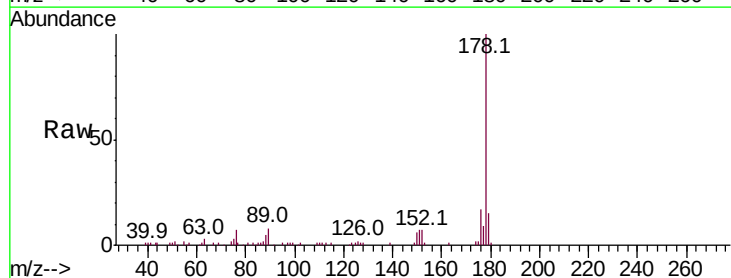
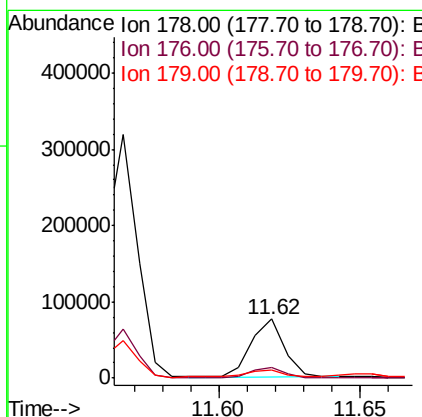
Manual Integrations  
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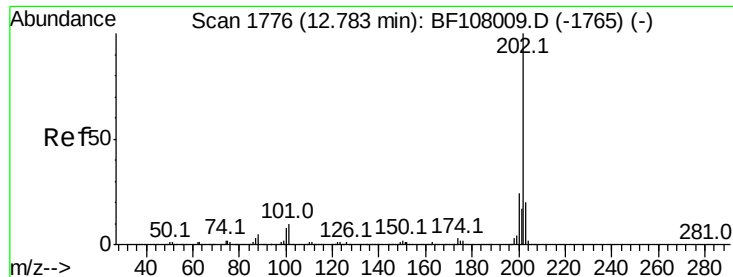


#71  
 Anthracene  
 Concen: 3.080 ng  
 RT: 11.62 min Scan# 1578  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

|             |       |       |
|-------------|-------|-------|
| Tgt Ion:178 | Resp: | 63095 |
| Ion Ratio   | Lower | Upper |
| 178 100     |       |       |
| 176 17.1    | 15.4  | 23.2  |
| 179 14.8    | 12.6  | 19.0  |







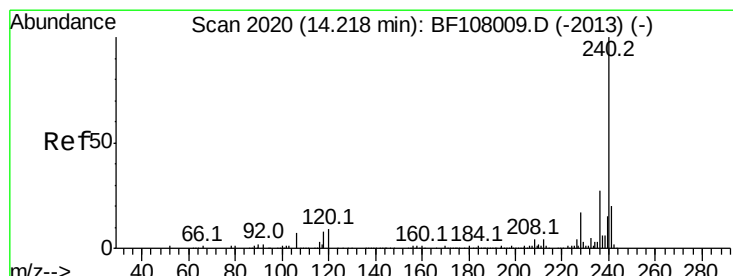
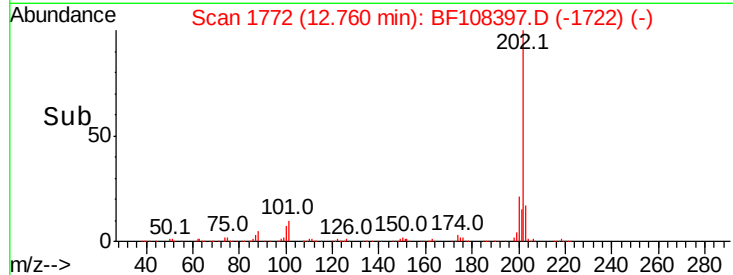
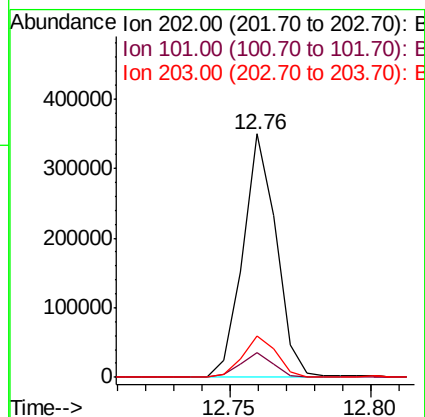
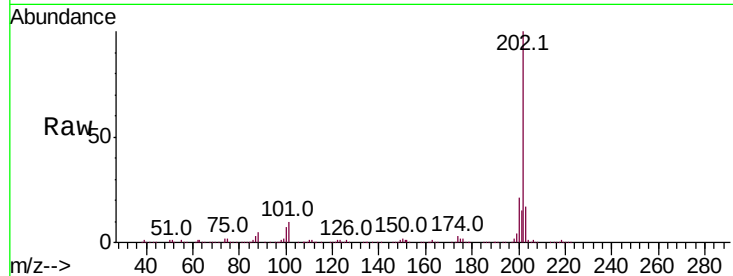
#74  
 Fluoranthene  
 Concen: 13.117 ng  
 RT: 12.76 min Scan# 1772  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

Instrument :  
 BNA\_F  
 ClientSampleId :  
 OK-01-082118

| Tot Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 202     | 100   |            |       |
| 101     | 10.3  | 0.0        | 34.1  |
| 203     | 17.2  | 0.0        | 38.1  |

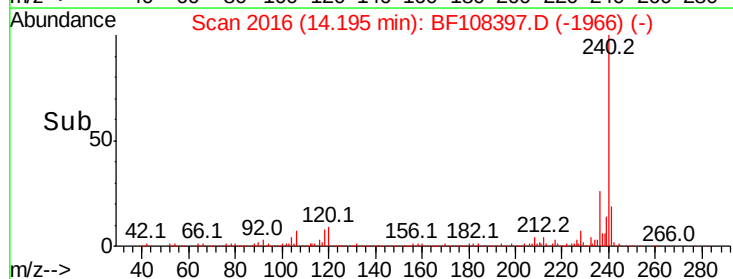
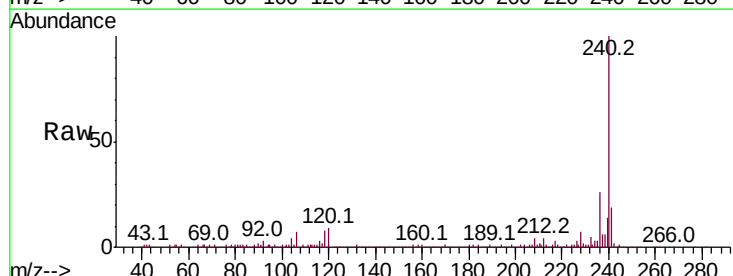
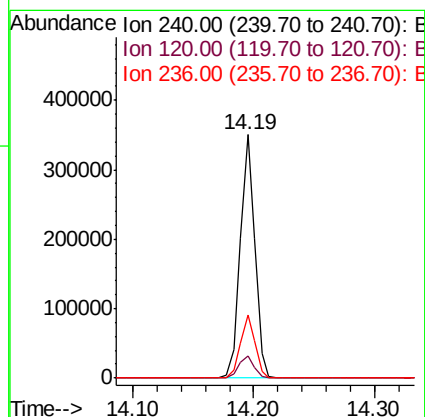
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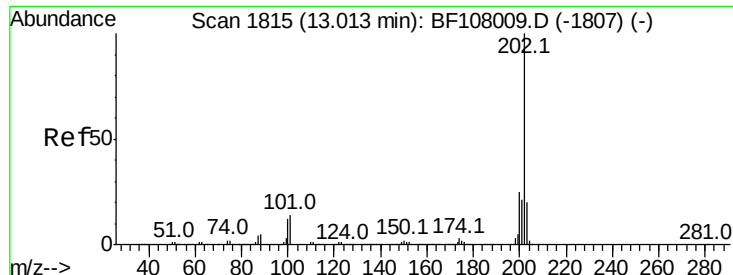
Sohil  
 8/23/2018 3:43:23 PM



#75  
 Chrysene-d12  
 Concen: 20.000 ng  
 RT: 14.19 min Scan# 2016  
 Delta R.T. -0.01 min  
 Lab File: BF108397.D  
 Acq: 22 Aug 2018 21:39

| Tgt Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 240     | 100   |            |       |
| 120     | 9.3   | 9.5        | 14.3# |
| 236     | 25.9  | 20.7       | 31.1  |





#77

Pvrene

Concen: 14.051 ng

RT: 13.00 min Scan# 1812

Delta R.T. -0.01 min

Lab File: BF108397.D

Acq: 22 Aug 2018 21:39

Instrument :

BNA\_F

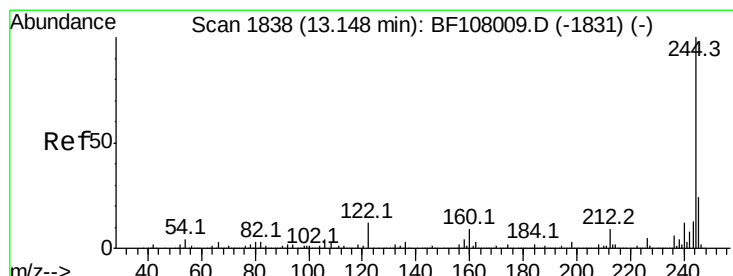
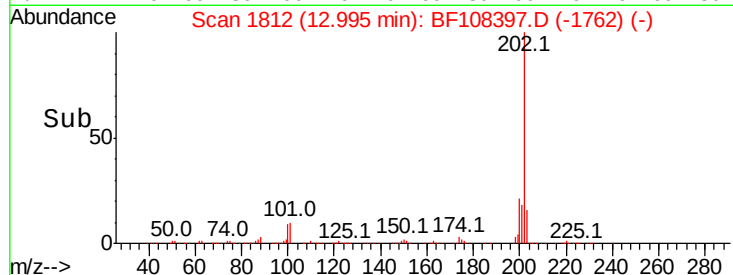
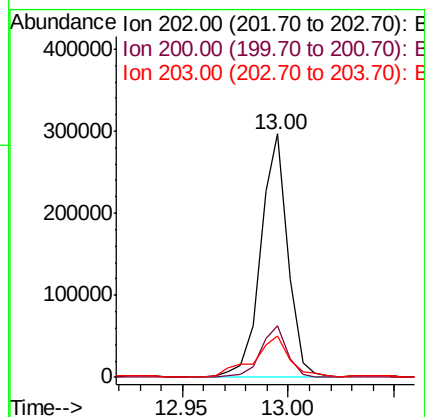
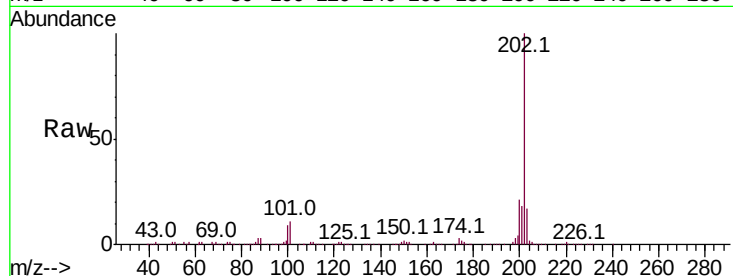
ClientSampleId :

OK-01-082118

|           |      |       |        |
|-----------|------|-------|--------|
| Tot Ion:  | 202  | Resp: | 265247 |
| Ion Ratio |      | Lower | Upper  |
| 202       | 100  |       |        |
| 200       | 21.0 | 17.4  | 26.2   |
| 203       | 17.3 | 14.3  | 21.5   |

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#78

Terphenyl-d14

Concen: 16.668 ng

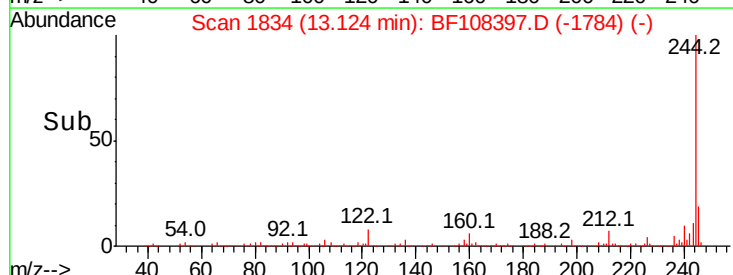
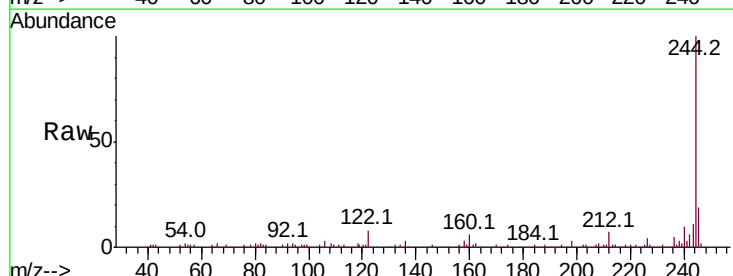
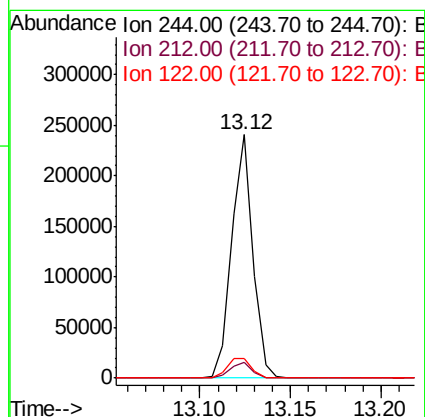
RT: 13.12 min Scan# 1834

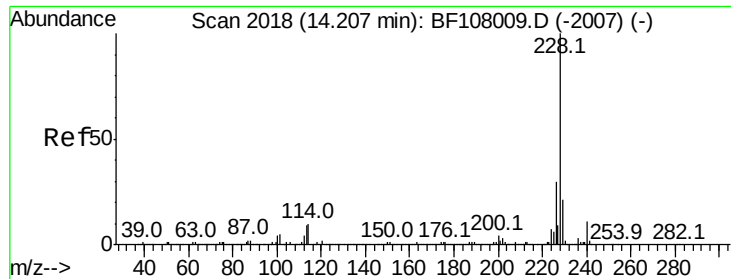
Delta R.T. -0.01 min

Lab File: BF108397.D

Acq: 22 Aug 2018 21:39

|           |     |       |        |
|-----------|-----|-------|--------|
| Tgt Ion:  | 244 | Resp: | 195479 |
| Ion Ratio |     | Lower | Upper  |
| 244       | 100 |       |        |
| 212       | 6.5 | 5.4   | 8.0    |
| 122       | 8.1 | 11.0  | 16.4#  |





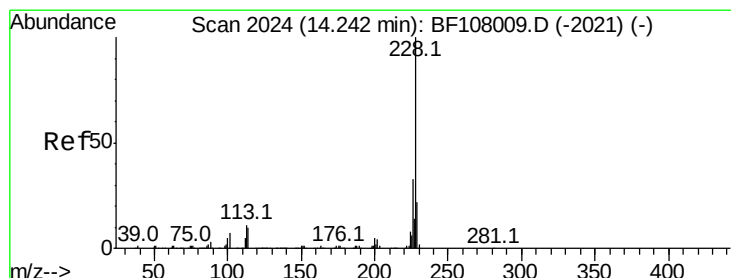
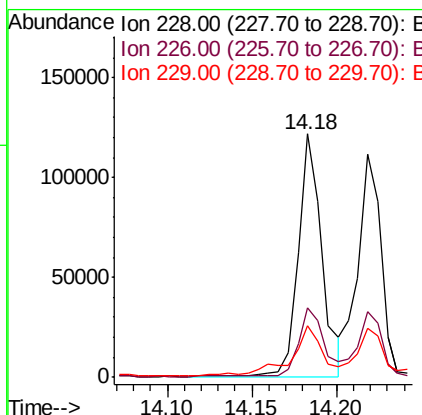
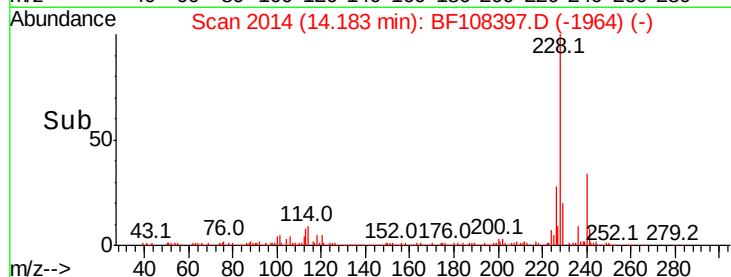
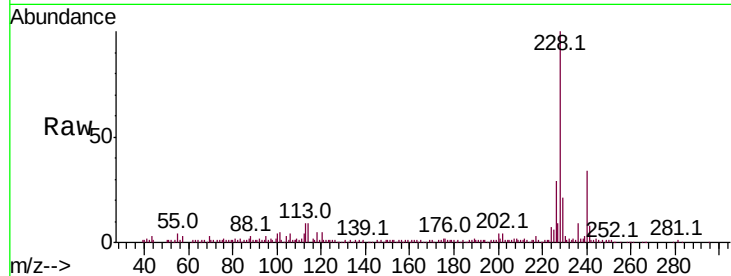
#80  
Benzo(a)anthracene  
Concen: 6.873 ng  
RT: 14.18 min Scan# 2014  
Delta R.T. -0.01 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

Instrument :  
BNA\_F  
ClientSampleId :  
OK-01-082118

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 28.6  | 22.6  | 33.8  |
| 229     | 21.4  | 15.8  | 23.6  |

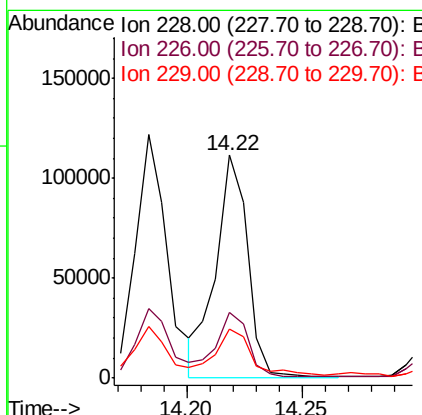
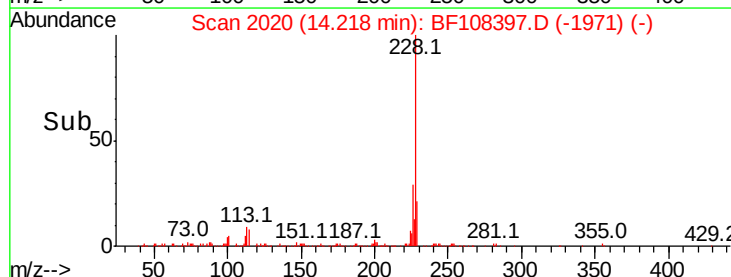
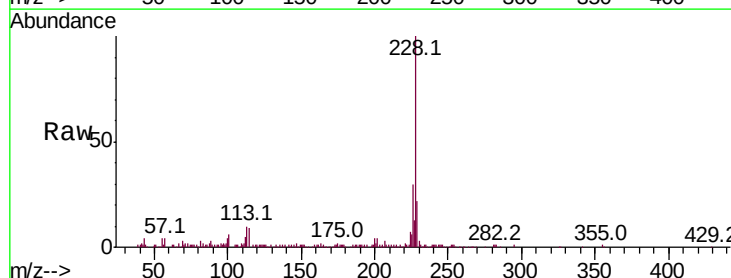
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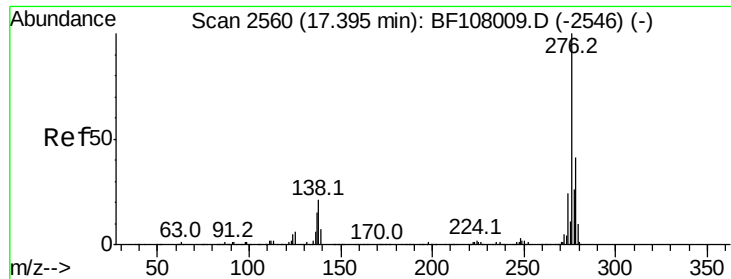
Sohil  
8/23/2018 3:43:23 PM



#82  
Chrysene  
Concen: 6.772 ng  
RT: 14.22 min Scan# 2020  
Delta R.T. -0.01 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 29.7  | 25.0  | 37.6  |
| 229     | 22.2  | 16.2  | 24.4  |





#85

Indeno(1,2,3-cd)pyrene

Concen: 2.870 ng

RT: 17.36 min Scan# 2554

Delta R.T. -0.01 min

Lab File: BF108397.D

Acq: 22 Aug 2018 21:39

Instrument :

BNA\_F

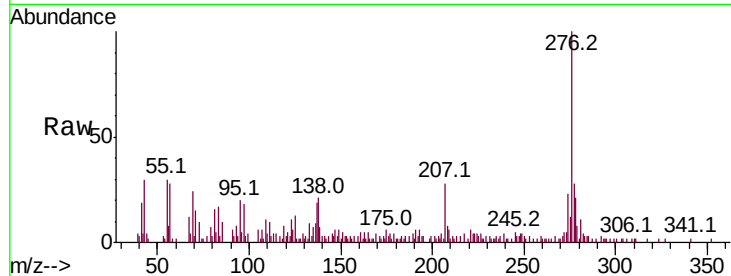
ClientSampleId :

OK-01-082118

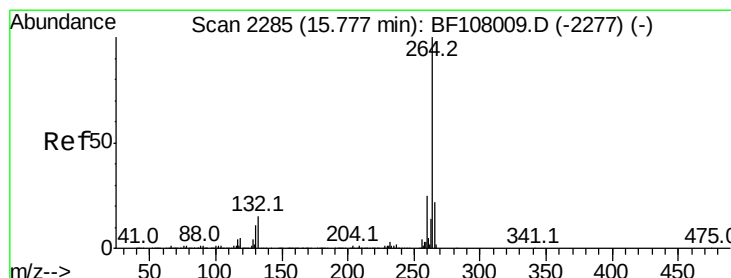
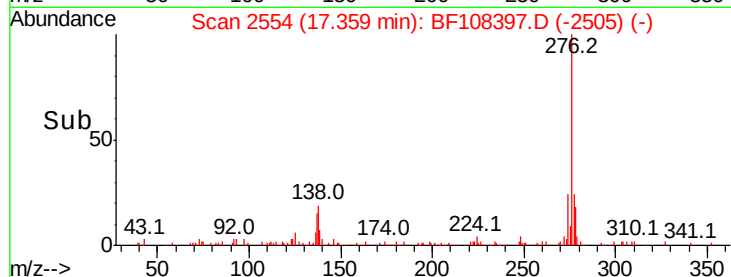
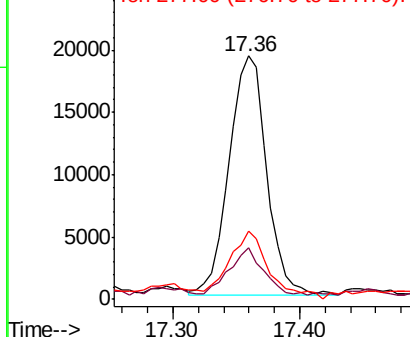
|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 276   | Resp: | 39010 |
| Ion Ratio | Lower | Upper |       |
| 276       | 100   |       |       |
| 138       | 17.9  | 25.0  | 37.6# |
| 277       | 30.7  | 20.1  | 30.1# |

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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

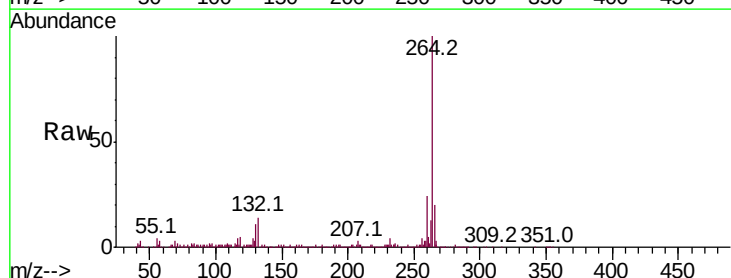
RT: 15.75 min Scan# 2281

Delta R.T. -0.01 min

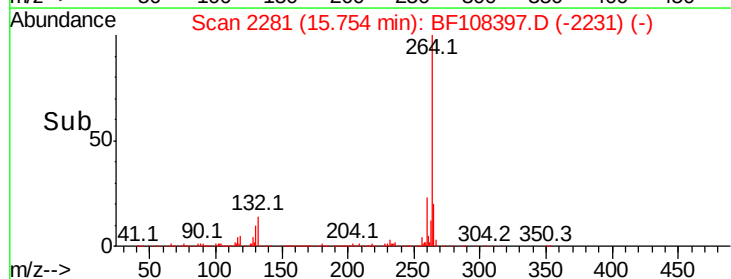
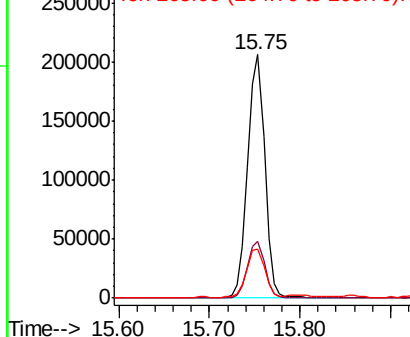
Lab File: BF108397.D

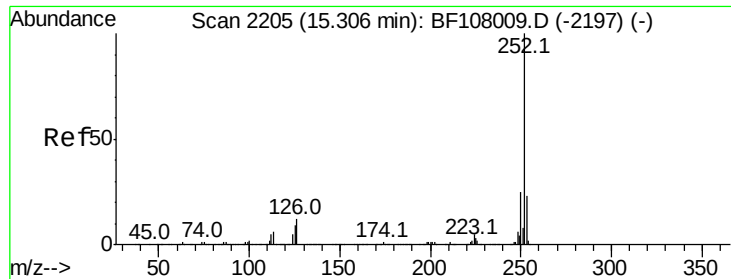
Acq: 22 Aug 2018 21:39

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 264   | Resp: | 272151 |
| Ion Ratio | Lower | Upper |        |
| 264       | 100   |       |        |
| 260       | 23.5  | 19.2  | 28.8   |
| 265       | 20.1  | 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





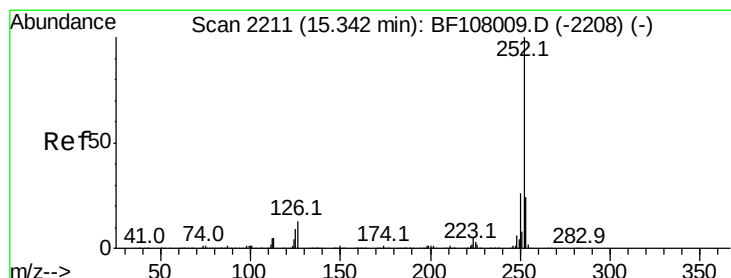
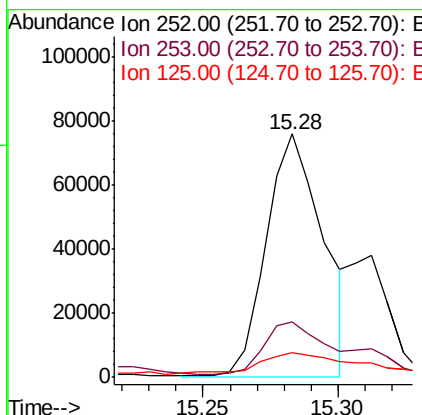
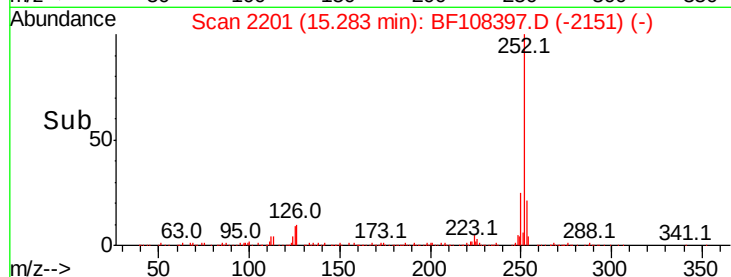
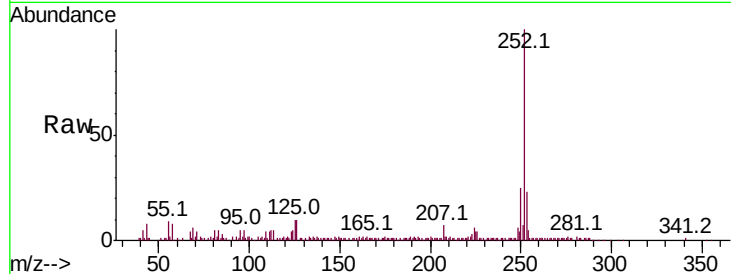
#87  
Benzo(b)fluoranthene  
Concen: 6.918 ng m  
RT: 15.28 min Scan# 2201  
Delta R.T. -0.01 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

Instrument :  
BNA\_F  
ClientSampleId :  
OK-01-082118

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.6  | 17.0  | 25.6  |
| 125     | 10.3  | 9.0   | 13.6  |

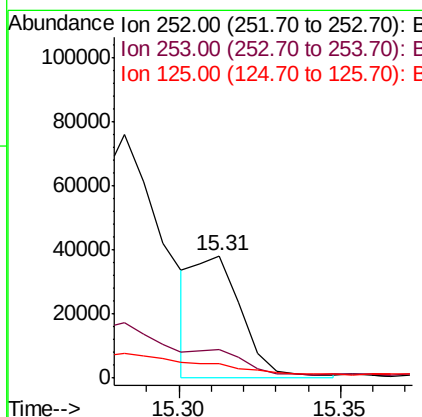
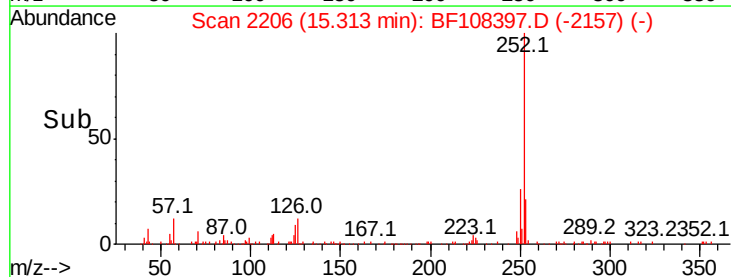
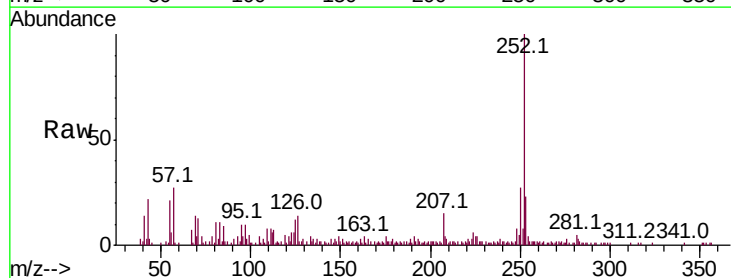
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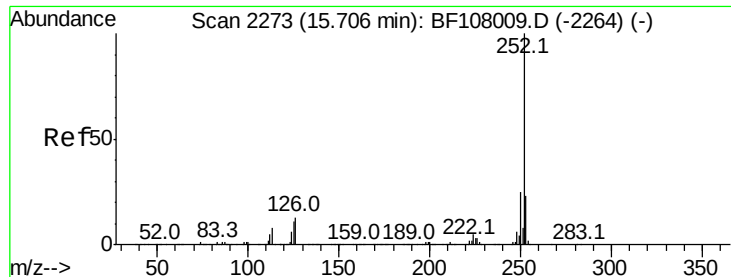
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8/23/2018 3:43:23 PM



#88  
Benzo(k)fluoranthene  
Concen: 2.616 ng m  
RT: 15.31 min Scan# 2206  
Delta R.T. -0.01 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 23.4  | 17.9  | 26.9  |
| 125     | 12.1  | 10.2  | 15.2  |





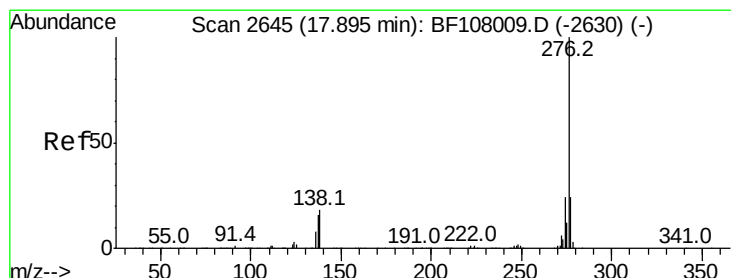
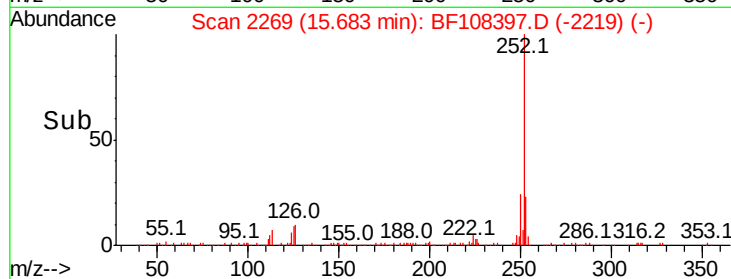
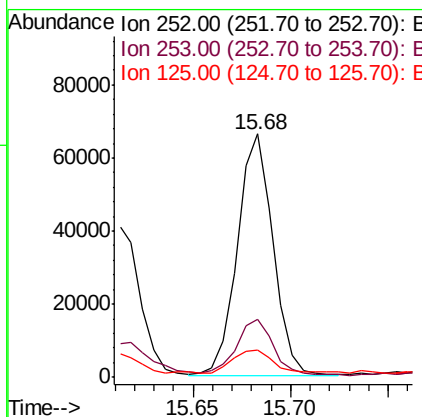
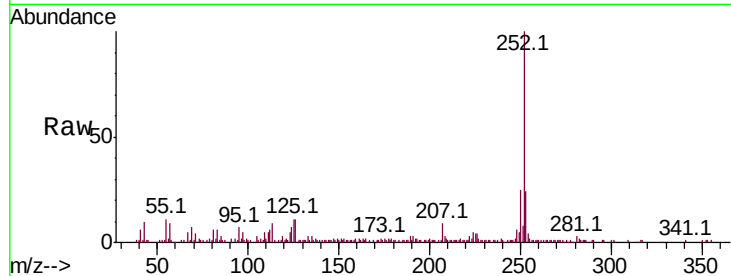
#89  
Benzo(a)pyrene  
Concen: 5.715 ng  
RT: 15.68 min Scan# 2269  
Delta R.T. -0.01 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

Instrument :  
BNA\_F  
ClientSampleId :  
OK-01-082118

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 23.9  | 17.1  | 25.7  |
| 125     | 11.1  | 9.8   | 14.6  |

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#91  
Benzo(g,h,i)perylene  
Concen: 3.269 ng  
RT: 17.85 min Scan# 2637  
Delta R.T. -0.02 min  
Lab File: BF108397.D  
Acq: 22 Aug 2018 21:39

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 277     | 26.0  | 17.9  | 26.9  |
| 138     | 20.3  | 21.8  | 32.8# |

