

Data Path : Z:\HPCHEM1\BNA F\DATA\BF061917\  
 Data File : BF096039.D  
 Acq On : 20 Jun 2017 11:11  
 Operator : SJ/MA  
 Sample : I3688-12 10X  
 Misc :  
 ALS Vial : 39 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 G15-0-1.5

Manual Integrations  
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 6/20/2017 4:31:08 PM

Quant Time: Jun 20 14:01:08 2017  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF060517.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Fri Jun 16 17:12:03 2017  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 7.31  | 152  | 66954    | 20.00 | ng    | -0.01    |
| 21) Naphthalene-d8          | 9.34  | 136  | 249215   | 20.00 | ng    | -0.02    |
| 38) Acenaphthene-d10        | 12.16 | 164  | 96344    | 20.00 | ng    | -0.02    |
| 63) Phenanthrene-d10        | 14.56 | 188  | 161670   | 20.00 | ng    | -0.01    |
| 75) Chrysene-d12            | 18.29 | 240  | 126749   | 20.00 | ng    | -0.01    |
| 86) Perylene-d12            | 19.96 | 264  | 90567    | 20.00 | ng    | 0.00     |
| System Monitoring Compounds |       |      |          |       |       |          |
| 5) 2-Fluorophenol           | 5.29  | 112  | 26161    | 6.23  | ng    | 0.07     |
| 7) Phenol-d6                | 6.96  | 99   | 38632    | 7.68  | ng    | 0.05     |
| 23) Nitrobenzene-d5         | 8.27  | 82   | 19004    | 4.74  | ng    | 0.02     |
| 41) 2,4,6-Tribromophenol    | 13.49 | 330  | 6503     | 7.63  | ng    | 0.00     |
| 44) 2-Fluorobiphenyl        | 11.12 | 172  | 56872    | 8.21  | ng    | -0.02    |
| 78) Terphenyl-d14           | 16.93 | 244  | 44929    | 8.80  | ng    | -0.02    |
| Target Compounds            |       |      |          |       |       |          |
| 70) Phenanthrene            | 14.60 | 178  | 21142    | 2.27  | ng    | 93       |
| 74) Fluoranthene            | 16.39 | 202  | 40962    | 4.44  | ng    | 99       |
| 77) Pyrene                  | 16.69 | 202  | 32505    | 3.44  | ng    | # 90     |
| 82) Chrysene                | 18.32 | 228  | 20460    | 2.78  | ng    | 95       |
| 87) Benzo(b)fluoranthene    | 19.56 | 252  | 22340m   | 3.94  | ng    |          |

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

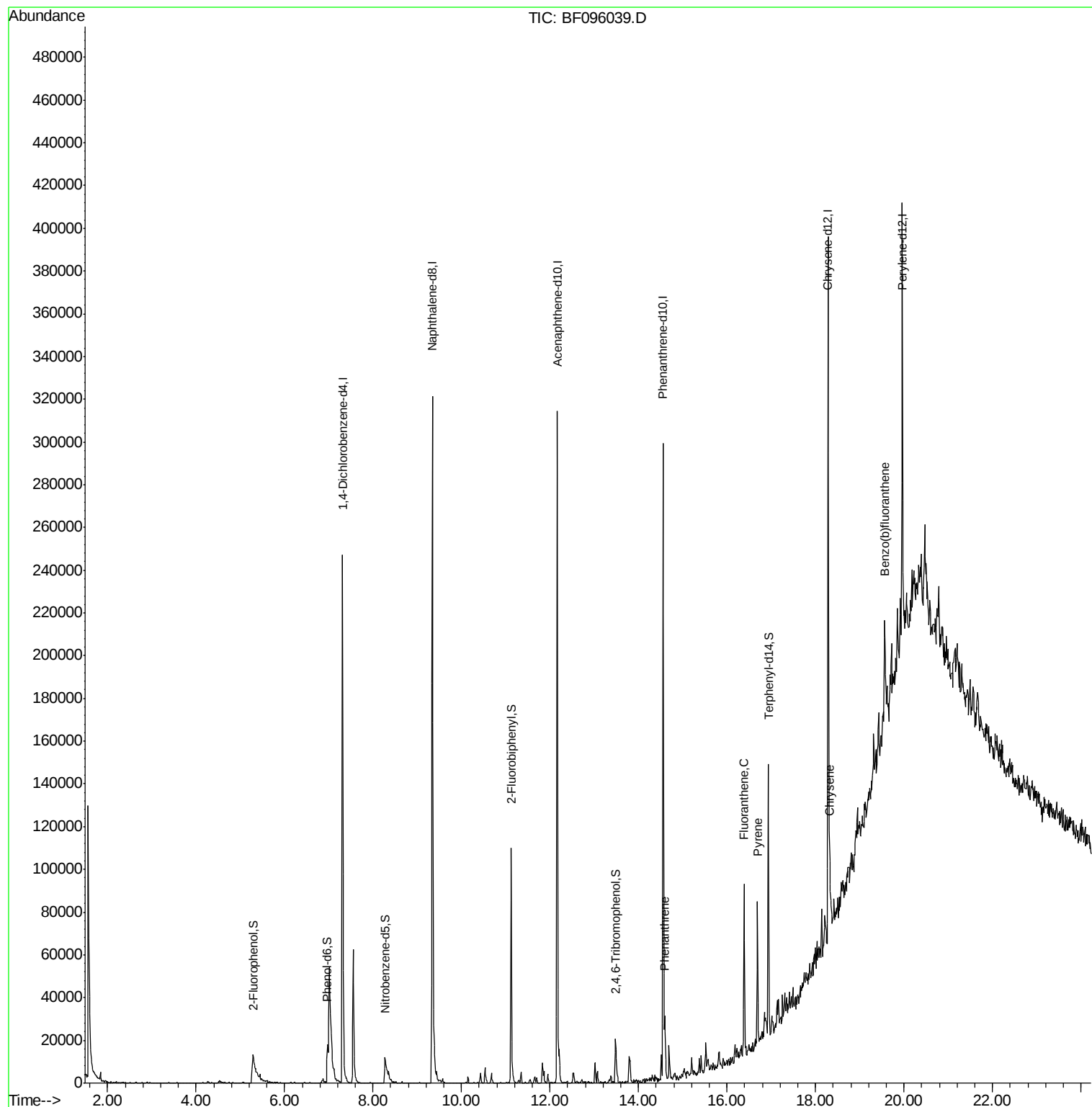
Data Path : Z:\HPCHEM1\BNA F\DATA\BF061917\  
Data File : BF096039.D  
Acq On : 20 Jun 2017 11:11  
Operator : SJ/MA  
Sample : I3688-12 10X  
Misc :  
ALS Vial : 39 Sample Multiplier: 1

Instrument :  
BNA\_F  
ClientSampleId :  
G15-0-1.5

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Quant Time: Jun 20 14:01:08 2017  
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF060517.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Fri Jun 16 17:12:03 2017  
Response via : Initial Calibration





#1

1,4-Dichlorobenzene-d4

Concen: 20.00 ng

RT: 7.31 min Scan# 990

Delta R.T. -0.01 min

Lab File: BF096039.D

Acq: 20 Jun 2017 11:11

Instrument :

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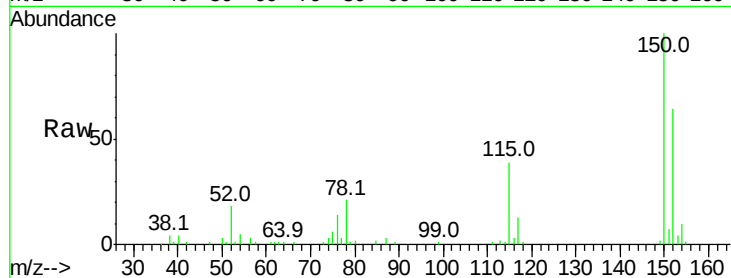
ClientSampleId :

G15-0-1.5

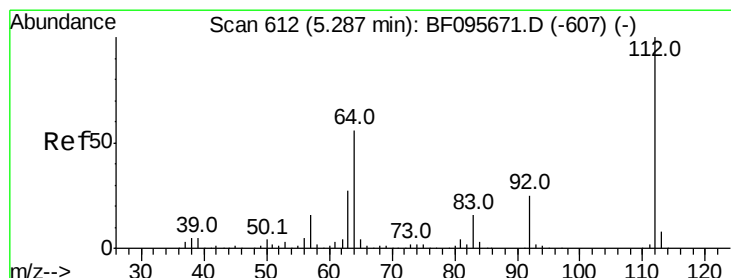
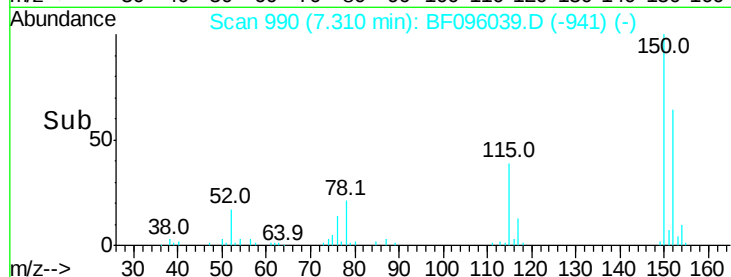
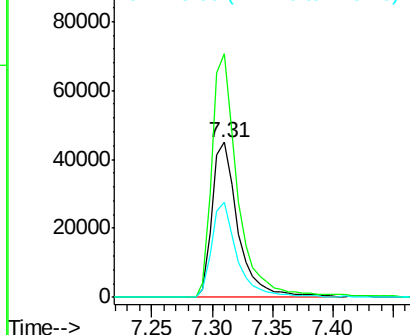
|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 152   | Resp: | 66954 |
| Ion      | Ratio | Lower | Upper |
| 152      | 100   |       |       |
| 150      | 157.3 | 126.2 | 189.2 |
| 115      | 61.5  | 52.2  | 78.2  |

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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: 6.23 ng

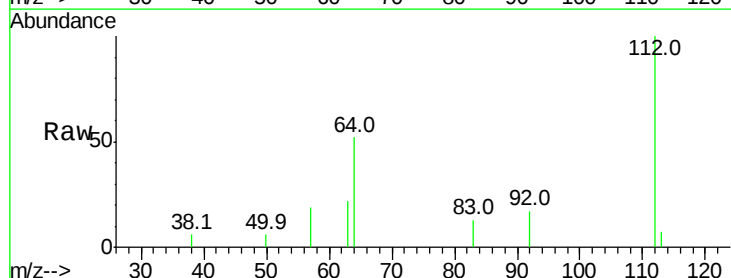
RT: 5.29 min Scan# 646

Delta R.T. 0.07 min

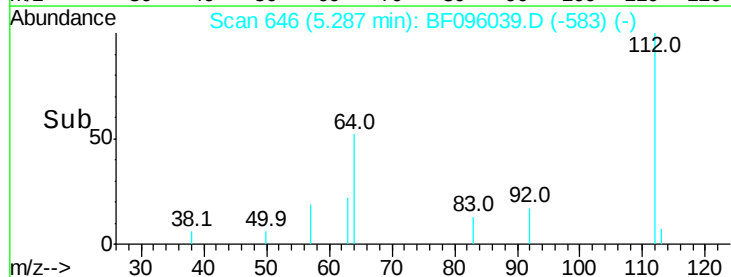
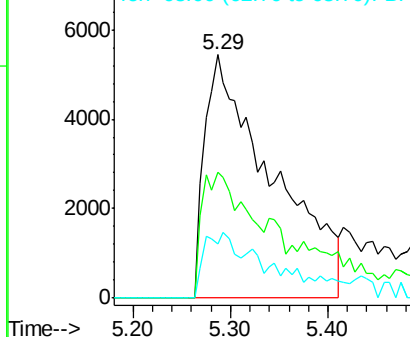
Lab File: BF096039.D

Acq: 20 Jun 2017 11:11

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 112   | Resp: | 26161 |
| Ion      | Ratio | Lower | Upper |
| 112      | 100   |       |       |
| 64       | 51.9  | 46.0  | 69.0  |
| 63       | 22.3  | 23.4  | 35.0# |



Abundance Ion 112.00 (111.70 to 112.70): E  
Ion 64.00 (63.70 to 64.70): BF0  
Ion 63.00 (62.70 to 63.70): BF0





#7

Phenol-d6

Concen: 7.68 ng

RT: 6.96 min Scan# 931

Delta R.T. 0.05 min

Lab File: BF096039.D

Acq: 20 Jun 2017 11:11

Instrument :

BNA\_F

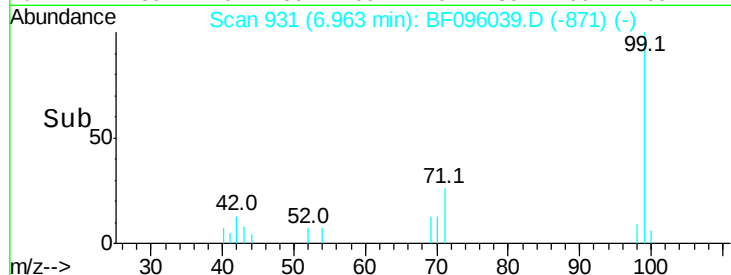
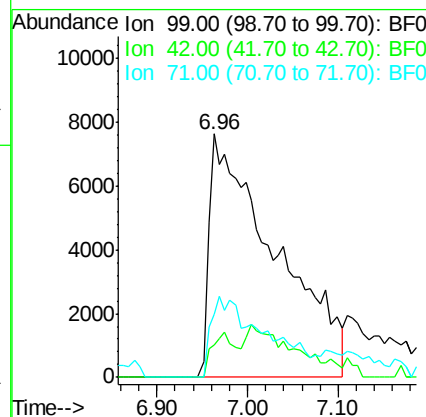
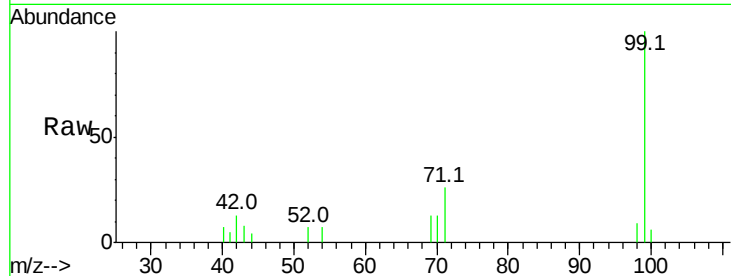
ClientSampled :

G15-0-1.5

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 99    | Resp: | 38632 |
| Ion Ratio | Lower | Upper |       |
| 99        | 100   |       |       |
| 42        | 13.3  | 13.5  | 20.3# |
| 71        | 26.1  | 24.5  | 36.7  |

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#21

Naphthalene-d8

Concen: 20.00 ng

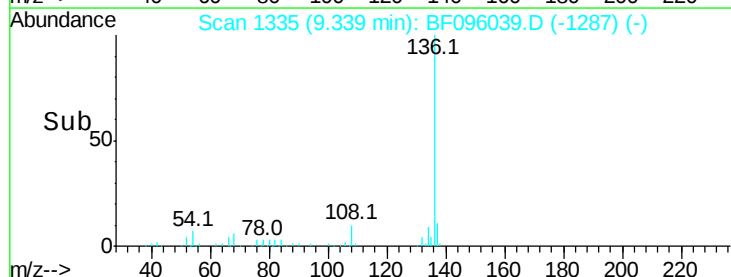
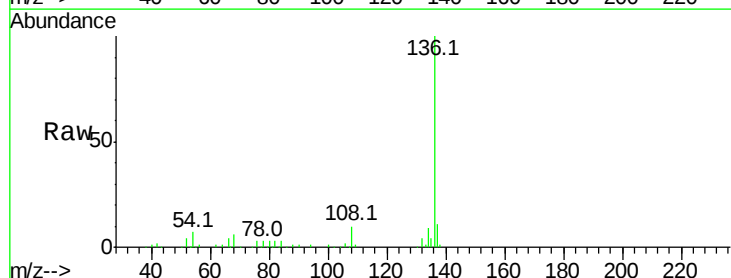
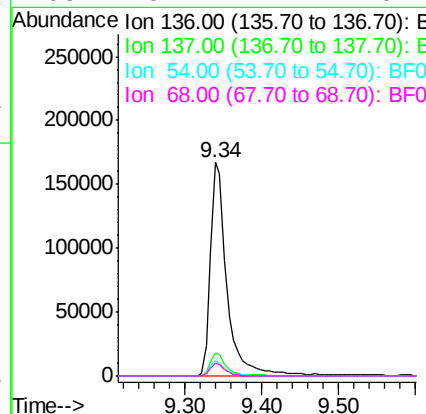
RT: 9.34 min Scan# 1335

Delta R.T. -0.02 min

Lab File: BF096039.D

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|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 136   | Resp: | 249215 |
| Ion Ratio | Lower | Upper |        |
| 136       | 100   |       |        |
| 137       | 11.1  | 8.5   | 12.7   |
| 54        | 7.4   | 4.9   | 7.3#   |
| 68        | 6.2   | 4.1   | 6.1#   |





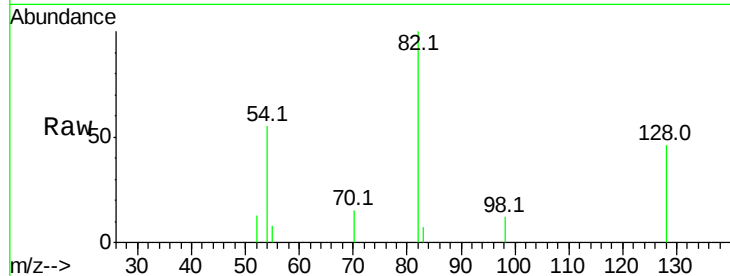
#23  
 Nitrobenzene-d5  
 Concen: 4.74 ng  
 RT: 8.27 min Scan# 1153  
 Delta R.T. 0.02 min  
 Lab File: BF096039.D  
 Acq: 20 Jun 2017 11:11

Instrument :  
 BNA\_F  
 ClientSampleId :  
 G15-0-1.5

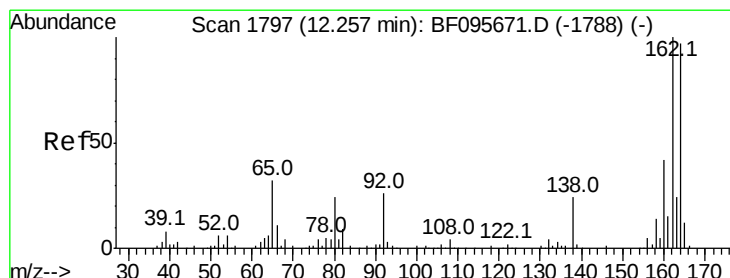
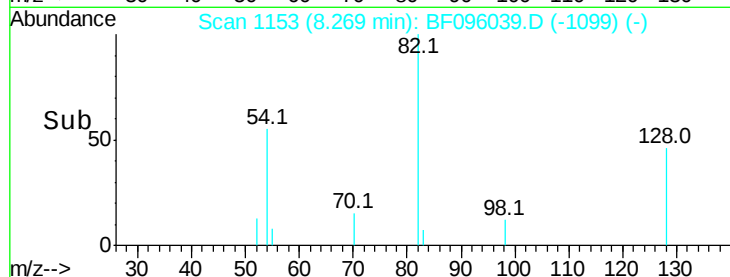
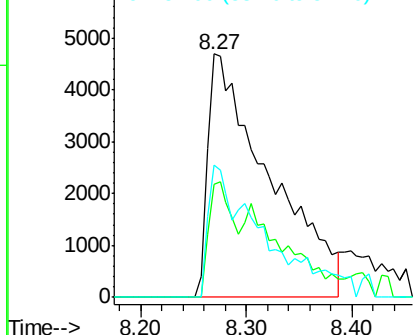
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 82      | 100   |       |       |
| 128     | 46.2  | 34.0  | 51.0  |
| 54      | 54.5  | 42.2  | 63.2  |

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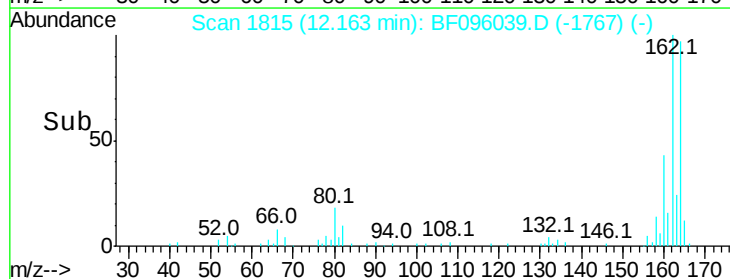
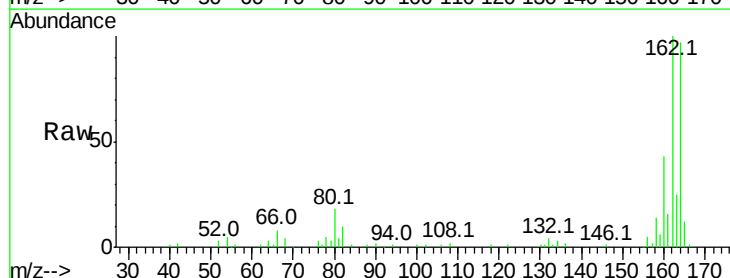
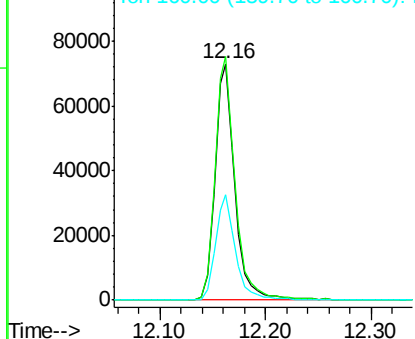
Abundance Ion 82.00 (81.70 to 82.70): BF0  
 Ion 128.00 (127.70 to 128.70): BF0  
 Ion 54.00 (53.70 to 54.70): BF0



#38  
 Acenaphthene-d10  
 Concen: 20.00 ng  
 RT: 12.16 min Scan# 1815  
 Delta R.T. -0.02 min  
 Lab File: BF096039.D  
 Acq: 20 Jun 2017 11:11

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 162     | 103.1 | 82.6  | 123.8 |
| 160     | 44.7  | 36.2  | 54.2  |

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





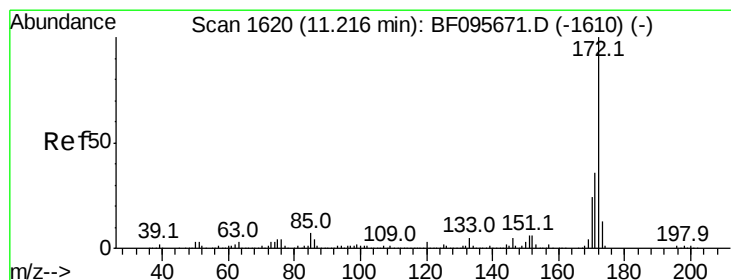
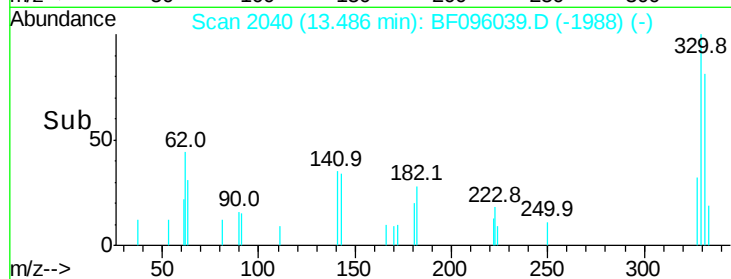
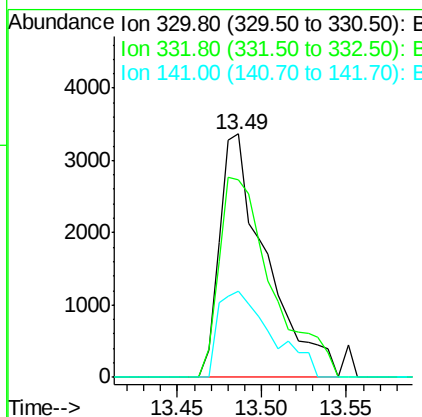
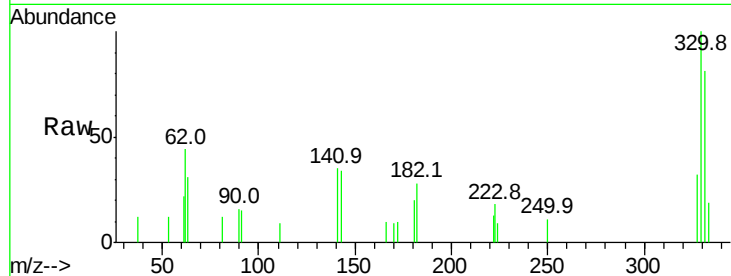
#41  
 2,4,6-Tribromophenol  
 Concen: 7.63 ng  
 RT: 13.49 min Scan# 2040  
 Delta R.T. 0.01 min  
 Lab File: BF096039.D  
 Acq: 20 Jun 2017 11:11

Instrument :  
 BNA\_F  
 ClientSampleId :  
 G15-0-1.5

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 330     | 100   |       |       |
| 332     | 92.7  | 76.6  | 115.0 |
| 141     | 40.4  | 31.4  | 47.2  |

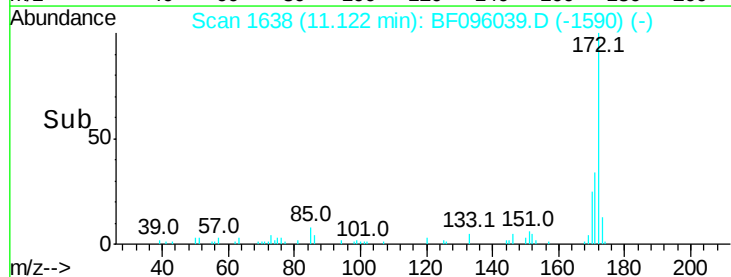
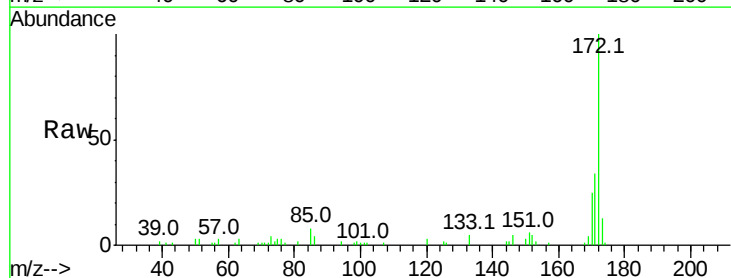
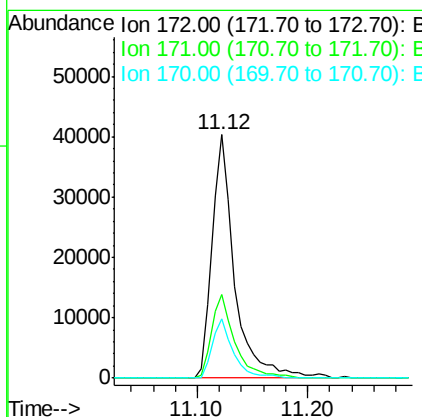
Manual Integrations  
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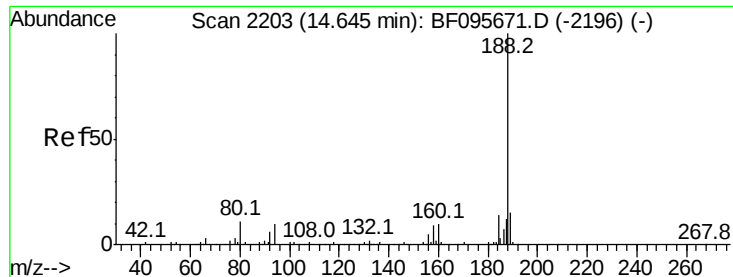
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#44  
 2-Fluorobiphenyl  
 Concen: 8.21 ng  
 RT: 11.12 min Scan# 1638  
 Delta R.T. -0.02 min  
 Lab File: BF096039.D  
 Acq: 20 Jun 2017 11:11

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 172     | 100   |       |       |
| 171     | 34.3  | 29.6  | 44.4  |
| 170     | 24.5  | 19.8  | 29.8  |





#63

Phenanthrene-d10

Concen: 20.00 ng

RT: 14.56 min Scan# 2222

Delta R.T. -0.01 min

Lab File: BF096039.D

Acq: 20 Jun 2017 11:11

Instrument :

BNA\_F

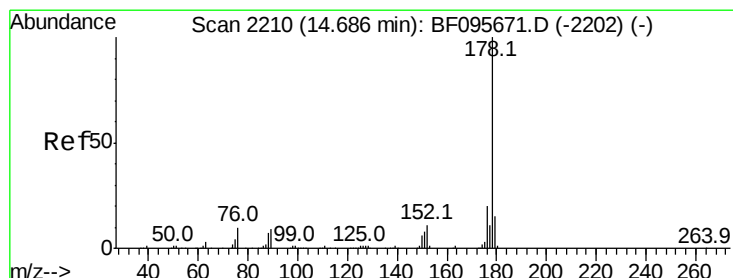
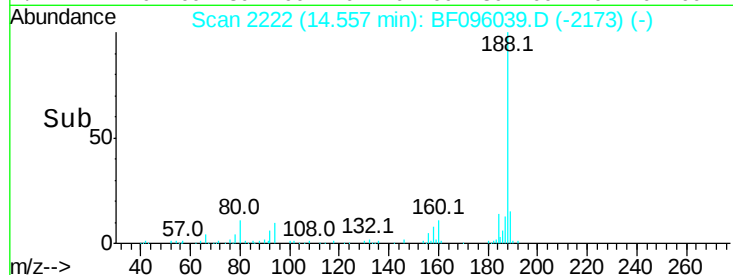
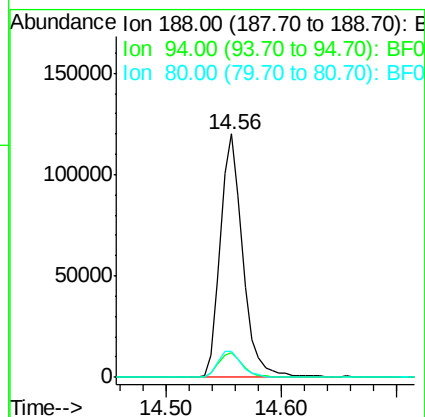
ClientSampleId :

G15-0-1.5

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 188   | Resp: | 161670 |
| Ion Ratio | Lower | Upper |        |
| 188       | 100   |       |        |
| 94        | 10.3  | 9.4   | 14.2   |
| 80        | 10.9  | 10.2  | 15.2   |

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#70

Phenanthrene

Concen: 2.27 ng

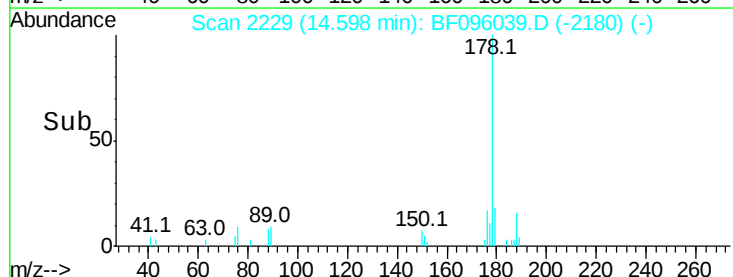
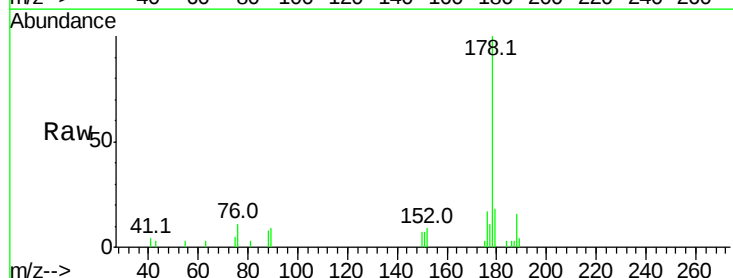
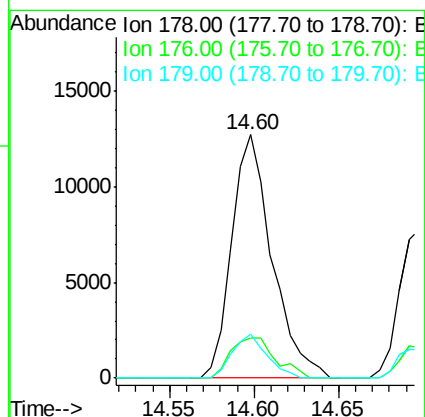
RT: 14.60 min Scan# 2229

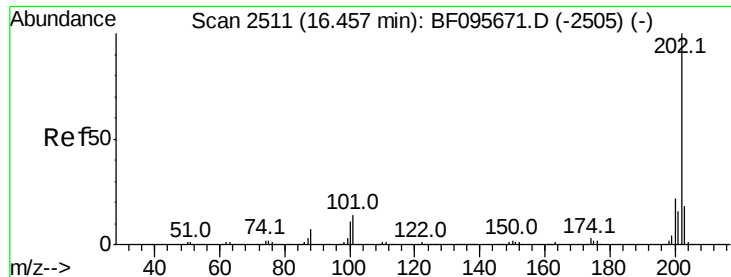
Delta R.T. -0.01 min

Lab File: BF096039.D

Acq: 20 Jun 2017 11:11

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 178   | Resp: | 21142 |
| Ion Ratio | Lower | Upper |       |
| 178       | 100   |       |       |
| 176       | 16.6  | 16.2  | 24.4  |
| 179       | 18.1  | 12.6  | 19.0  |





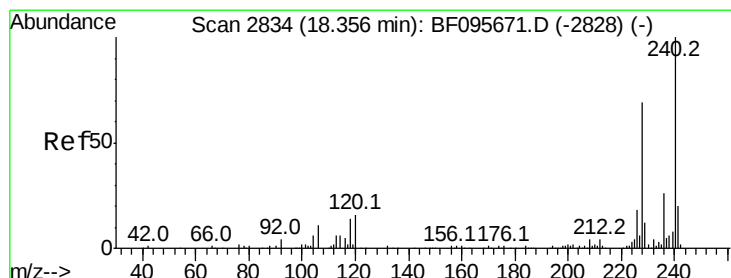
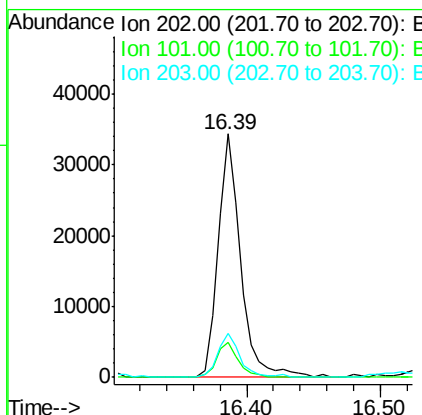
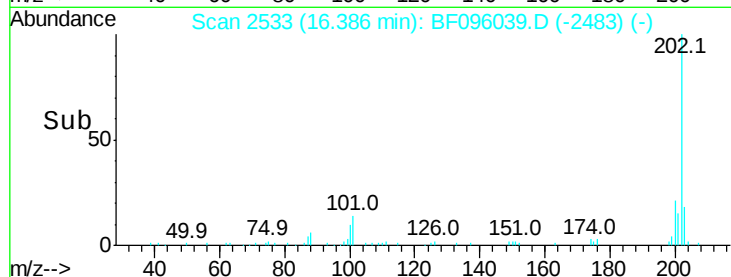
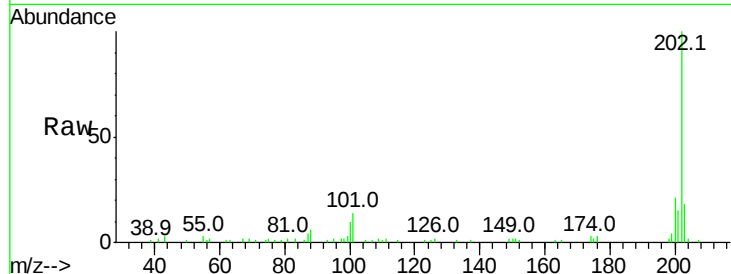
#74  
**Fluoranthene**  
 Concen: 4.44 ng  
 RT: 16.39 min Scan# 2533  
 Delta R.T. -0.01 min  
 Lab File: BF096039.D  
 Acq: 20 Jun 2017 11:11

Instrument :  
 BNA\_F  
 ClientSampleId :  
 G15-0-1.5

| Tot Ion | Ratio | Resp  | Lower | Upper |
|---------|-------|-------|-------|-------|
| 202     | 100   | 40962 |       |       |
| 101     | 14.3  | 0.0   | 33.2  |       |
| 203     | 18.2  | 0.0   | 38.1  |       |

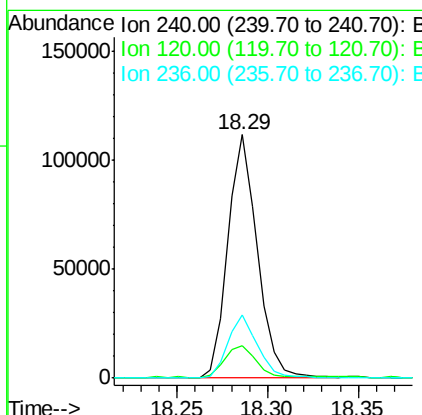
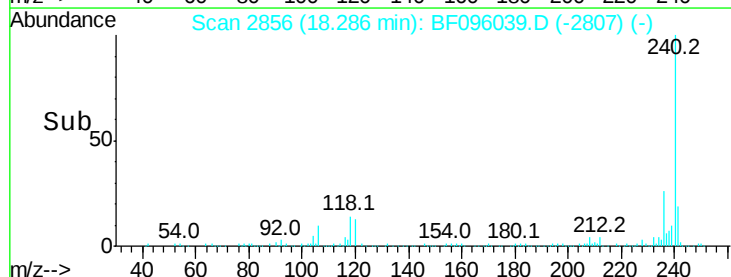
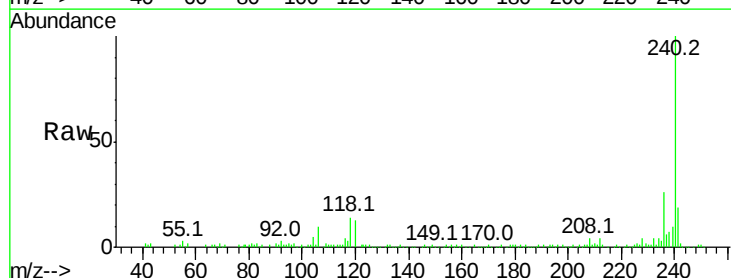
Manual Integrations  
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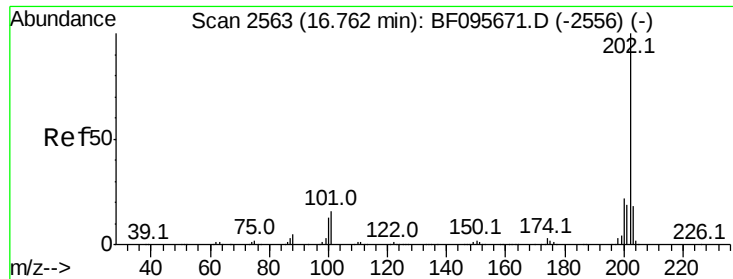
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#75  
**Chrysene-d12**  
 Concen: 20.00 ng  
 RT: 18.29 min Scan# 2856  
 Delta R.T. -0.01 min  
 Lab File: BF096039.D  
 Acq: 20 Jun 2017 11:11

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 240     | 100   | 126749 |       |       |
| 120     | 13.4  | 5.8    | 8.8#  |       |
| 236     | 25.9  | 20.5   | 30.7  |       |





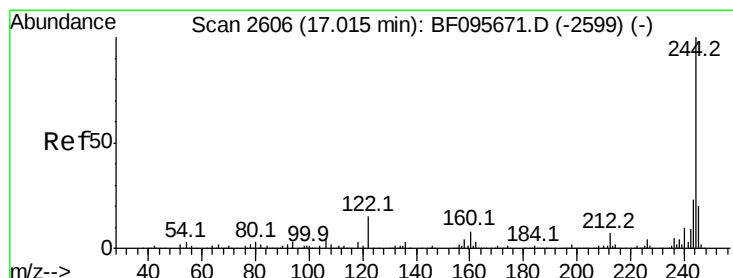
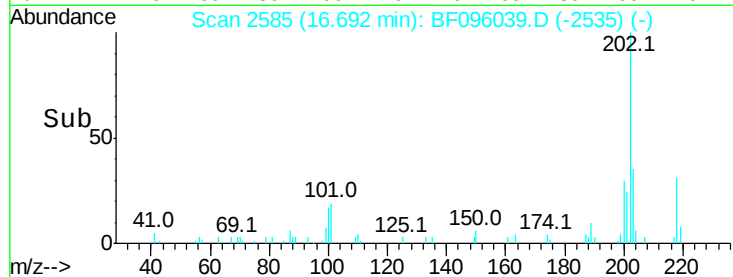
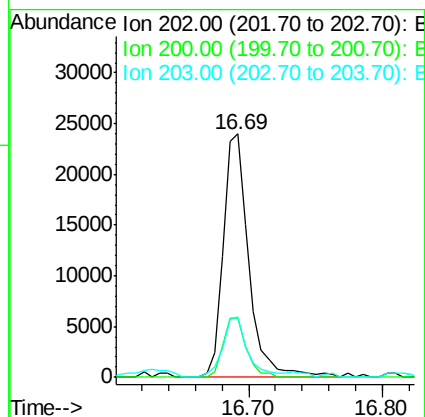
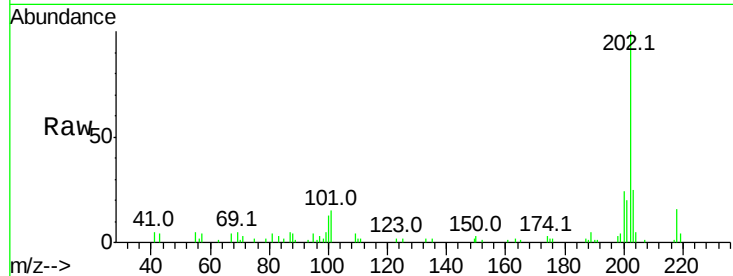
#77  
Pvrene  
Concen: 3.44 ng  
RT: 16.69 min Scan# 2585  
Delta R.T. -0.01 min  
Lab File: BF096039.D  
Acq: 20 Jun 2017 11:11

Instrument :  
BNA\_F  
ClientSampleId :  
G15-0-1.5

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 200     | 24.5  | 17.6  | 26.4  |
| 203     | 24.9  | 14.4  | 21.6  |

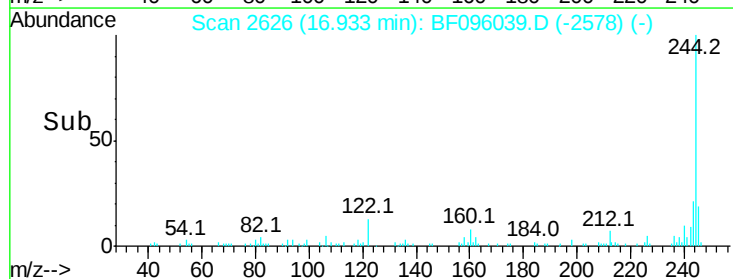
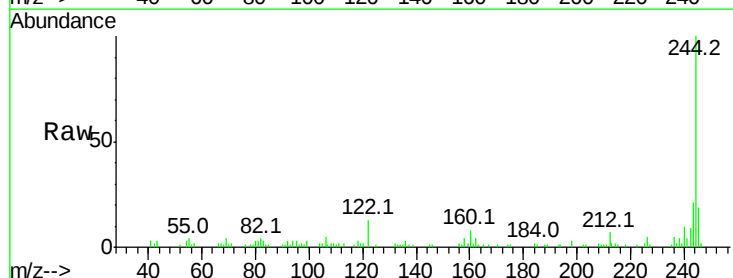
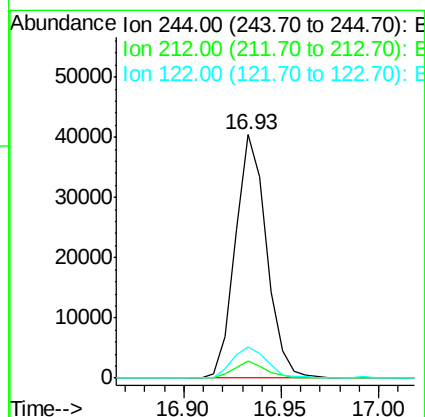
Manual Integrations  
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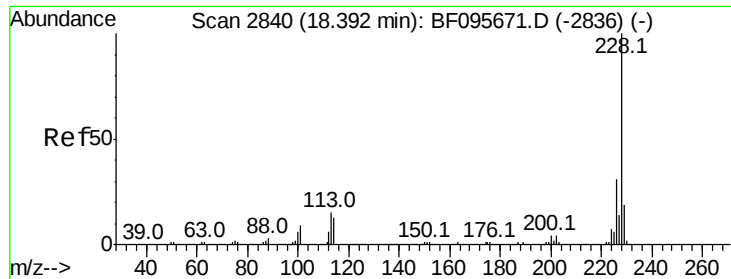
mohammad  
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#78  
Terphenyl-d14  
Concen: 8.80 ng  
RT: 16.93 min Scan# 2626  
Delta R.T. -0.02 min  
Lab File: BF096039.D  
Acq: 20 Jun 2017 11:11

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 244     | 100   |       |       |
| 212     | 7.3   | 6.0   | 9.0   |
| 122     | 13.0  | 10.3  | 15.5  |





#82

Chrysene

Concen: 2.78 ng

RT: 18.32 min Scan# 2862

Delta R.T. -0.01 min

Lab File: BF096039.D

Acq: 20 Jun 2017 11:11

Instrument :

BNA\_F

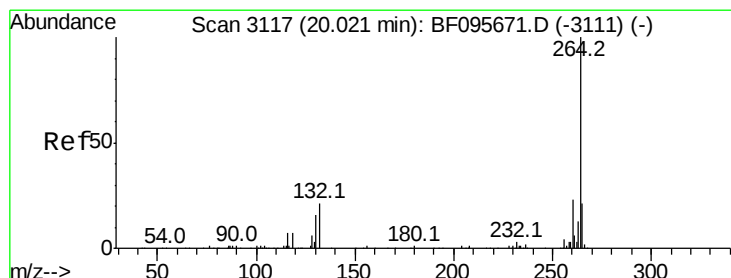
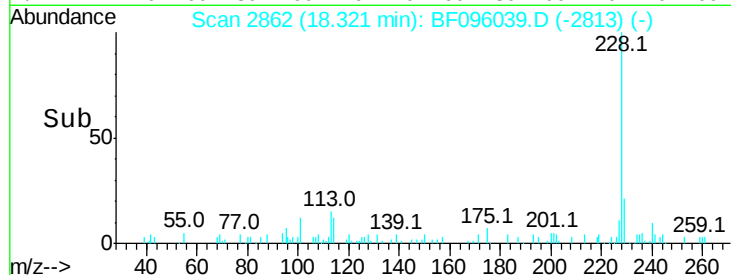
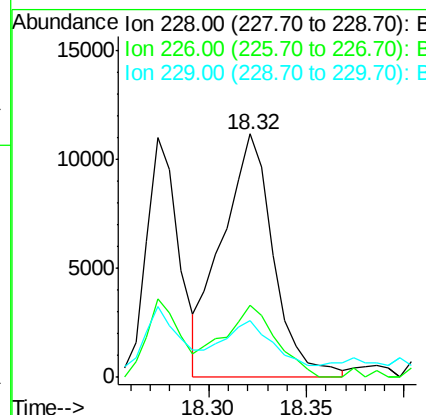
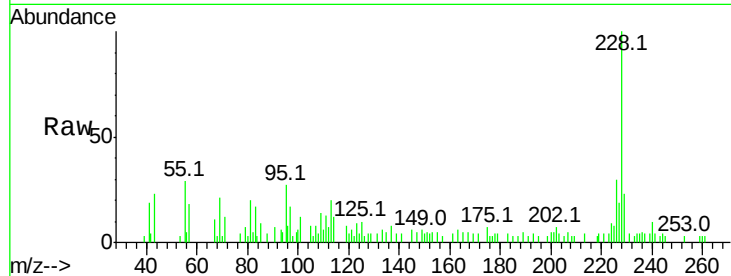
ClientSampled :

G15-0-1.5

|           |      |       |       |
|-----------|------|-------|-------|
| Tot Ion:  | 228  | Resp: | 20460 |
| Ion Ratio |      | Lower | Upper |
| 228       | 100  |       |       |
| 226       | 29.6 | 24.9  | 37.3  |
| 229       | 23.3 | 15.8  | 23.6  |

Manual Integrations  
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#86

Perylene-d12

Concen: 20.00 ng

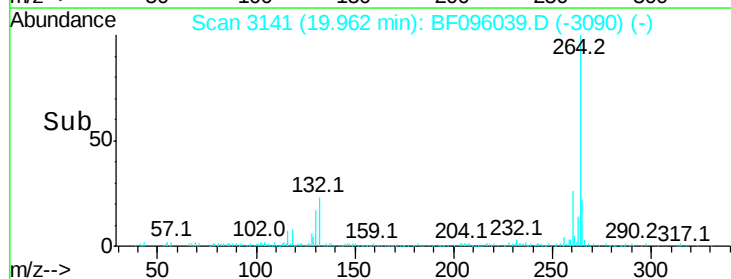
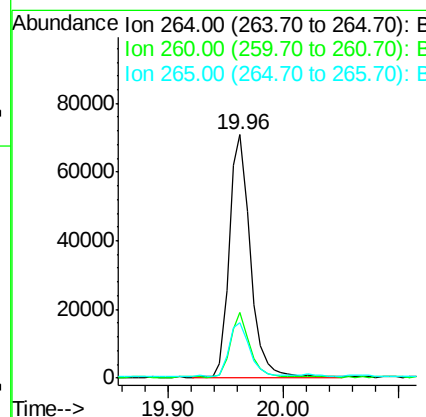
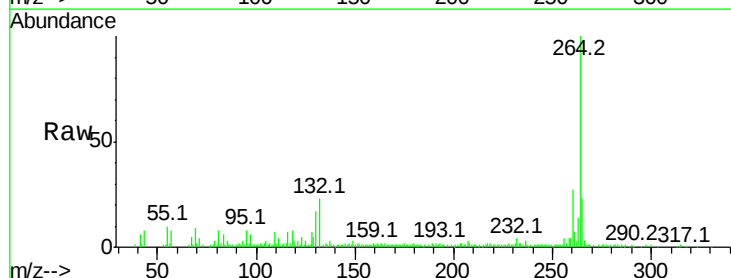
RT: 19.96 min Scan# 3141

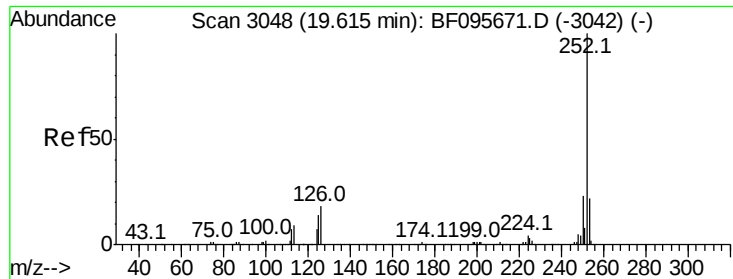
Delta R.T. 0.00 min

Lab File: BF096039.D

Acq: 20 Jun 2017 11:11

|           |      |       |       |
|-----------|------|-------|-------|
| Tgt Ion:  | 264  | Resp: | 90567 |
| Ion Ratio |      | Lower | Upper |
| 264       | 100  |       |       |
| 260       | 26.7 | 19.5  | 29.3  |
| 265       | 22.5 | 17.2  | 25.8  |





#87  
 Benzo(b)fluoranthene  
 Concen: 3.94 ng m  
 RT: 19.56 min Scan# 3073  
 Delta R.T. 0.01 min  
 Lab File: BF096039.D  
 Acq: 20 Jun 2017 11:11

Instrument :  
 BNA\_F  
 ClientSampleId :  
 G15-0-1.5

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 29.0  | 18.1  | 27.1# |
| 125     | 25.6  | 9.8   | 14.8# |

Manual Integrations  
 APPROVED

mohammad  
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