

Data Path : Z:\HPCHEM1\BNA F\DATA\BF121117\  
 Data File : BF101318.D  
 Acq On : 12 Dec 2017 6:56  
 Operator : SJ/JU  
 Sample : I6764-09 5X  
 Misc :  
 ALS Vial : 40 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 MAP-3-E(0-1)

Manual Integrations  
 APPROVED

Quant Time: Dec 12 09:59:17 2017  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF113017.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Fri Dec 08 18:17:31 2017  
 Response via : Initial Calibration

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| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 6.83  | 152  | 41838    | 20.00 | ng    | 0.00     |
| 21) Naphthalene-d8        | 8.12  | 136  | 148495   | 20.00 | ng    | 0.00     |
| 38) Acenaphthene-d10      | 9.87  | 164  | 57912    | 20.00 | ng    | 0.00     |
| 63) Phenanthrene-d10      | 11.36 | 188  | 101458   | 20.00 | ng    | 0.00     |
| 75) Chrysene-d12          | 14.02 | 240  | 86806    | 20.00 | ng    | 0.01     |
| 86) Perylene-d12          | 15.49 | 264  | 65815    | 20.00 | ng    | 0.02     |

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#### System Monitoring Compounds

|                          |       |     |       |       |    |      |
|--------------------------|-------|-----|-------|-------|----|------|
| 5) 2-Fluorophenol        | 5.45  | 112 | 40056 | 15.82 | ng | 0.01 |
| 7) Phenol-d6             | 6.47  | 99  | 47809 | 15.55 | ng | 0.00 |
| 23) Nitrobenzene-d5      | 7.39  | 82  | 24604 | 9.88  | ng | 0.00 |
| 41) 2,4,6-Tribromophenol | 10.67 | 330 | 8250  | 11.86 | ng | 0.00 |
| 44) 2-Fluorobiphenyl     | 9.19  | 172 | 58250 | 13.76 | ng | 0.00 |
| 78) Terphenyl-d14        | 12.94 | 244 | 50243 | 12.66 | ng | 0.00 |

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#### Target Compounds

|                            |       |     |        |        |    | Qvalue |
|----------------------------|-------|-----|--------|--------|----|--------|
| 48) Acenaphthylene         | 9.73  | 152 | 18584  | 3.001  | ng | 97     |
| 70) Phenanthrene           | 11.39 | 178 | 45015  | 8.057  | ng | 100    |
| 71) Anthracene             | 11.44 | 178 | 14462  | 2.557  | ng | 98     |
| 74) Fluoranthene           | 12.58 | 202 | 93558  | 15.106 | ng | 93     |
| 77) Pyrene                 | 12.81 | 202 | 92344  | 15.417 | ng | 98     |
| 80) Benzo(a)anthracene     | 14.00 | 228 | 48998  | 8.940  | ng | 96     |
| 82) Chrysene               | 14.04 | 228 | 43387  | 8.524  | ng | 99     |
| 85) Indeno(1,2,3-cd)pyrene | 16.99 | 276 | 19429  | 4.293  | ng | # 86   |
| 87) Benzo(b)fluoranthene   | 15.06 | 252 | 48614m | 12.332 | ng |        |
| 88) Benzo(k)fluoranthene   | 15.09 | 252 | 14079m | 3.625  | ng |        |
| 89) Benzo(a)pyrene         | 15.43 | 252 | 29663  | 8.277  | ng | 96     |
| 90) Dibenzo(a,h)anthracene | 16.99 | 278 | 6861   | 2.172  | ng | # 83   |
| 91) Benzo(a,h,i)perylene   | 17.44 | 276 | 22864  | 7.679  | ng | 92     |

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

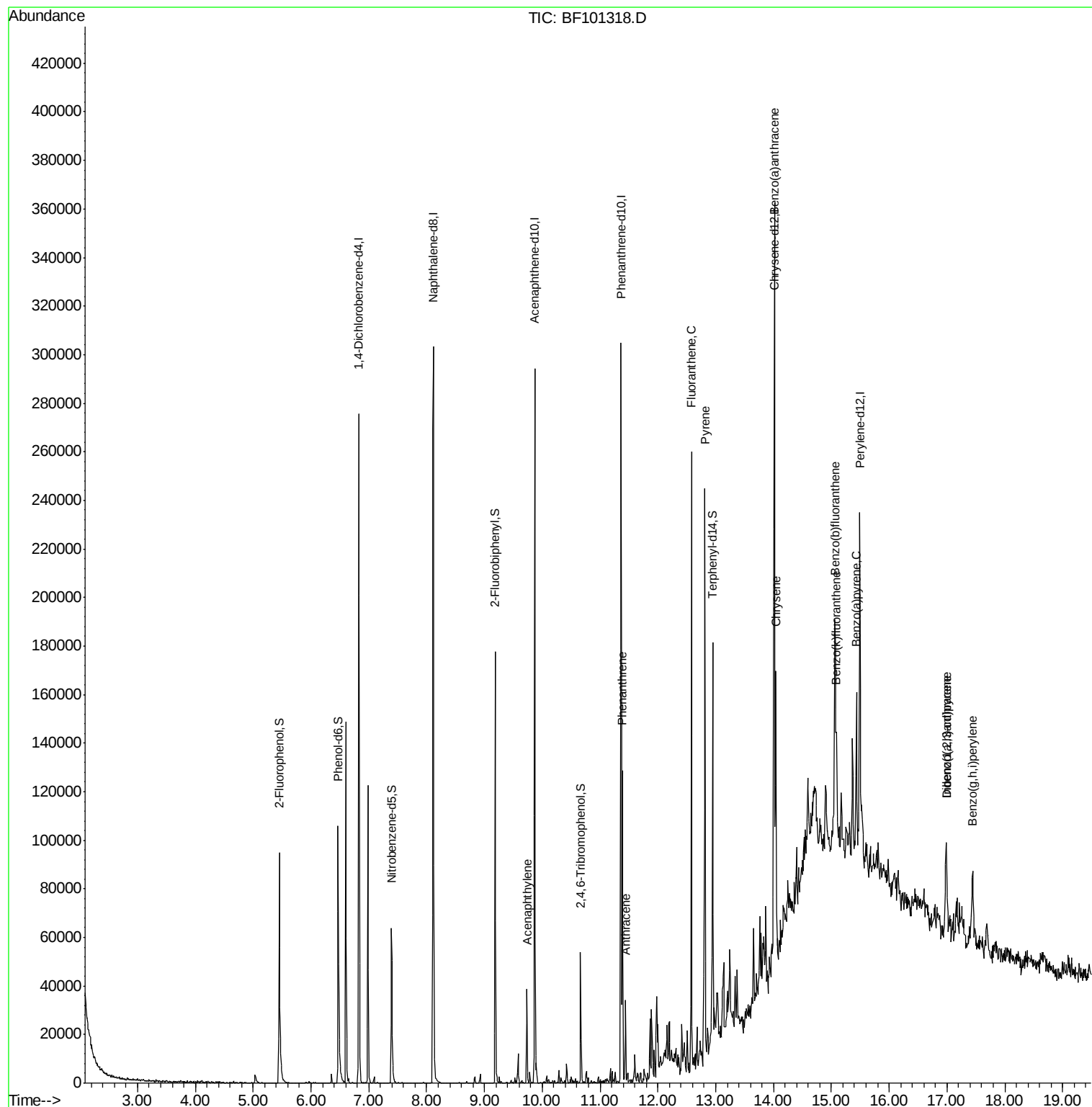
Data Path : Z:\HPCHEM1\BNA F\DATA\BF121117\  
Data File : BF101318.D  
Acq On : 12 Dec 2017 6:56  
Operator : SJ/JU  
Sample : I6764-09 5X  
Misc :  
ALS Vial : 40 Sample Multiplier: 1

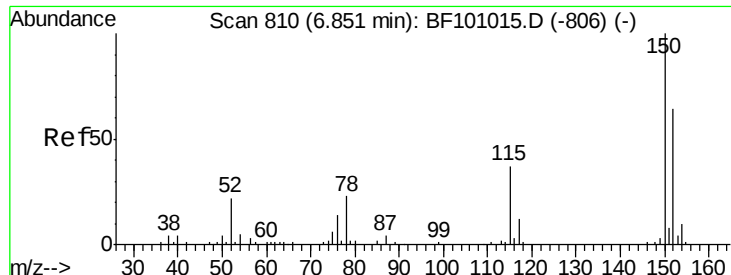
Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

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Quant Time: Dec 12 09:59:17 2017  
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF113017.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Fri Dec 08 18:17:31 2017  
Response via : Initial Calibration





#1

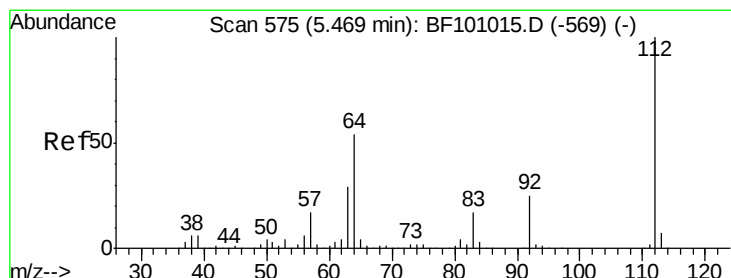
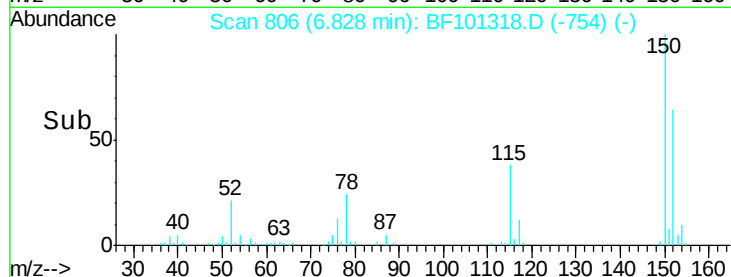
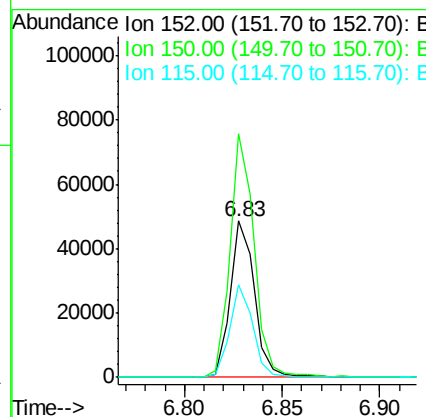
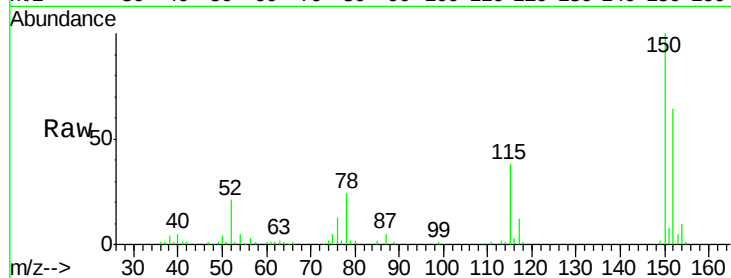
1,4-Dichlorobenzene-d4  
Concen: 20.000 ng  
RT: 6.83 min Scan# 806  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampled :  
MAP-3-E(0-1)

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 150     | 156.1 | 124.6 | 186.8 |
| 115     | 58.9  | 50.1  | 75.1  |

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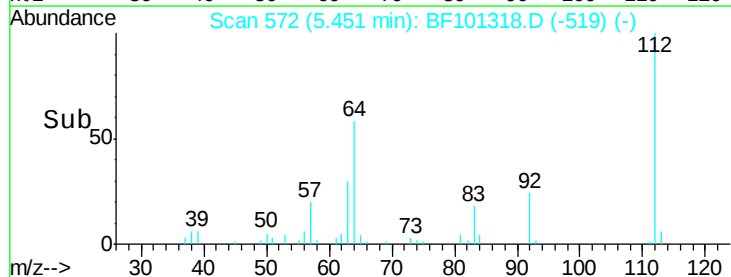
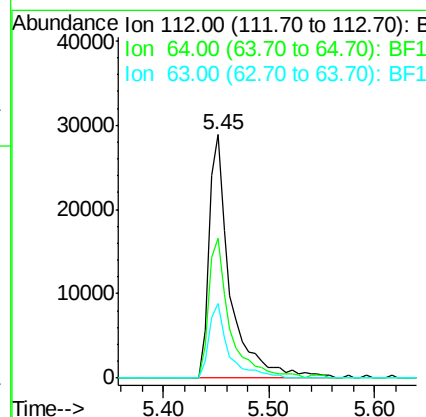
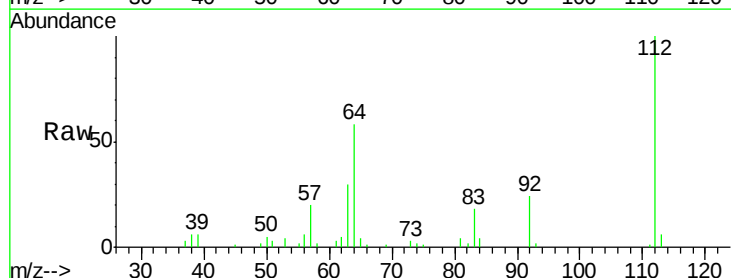
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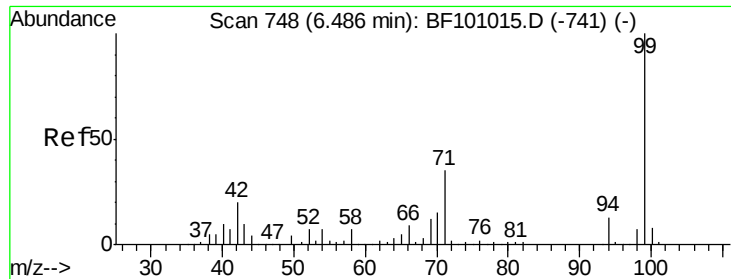


#5

2-Fluorophenol  
Concen: 15.821 ng  
RT: 5.45 min Scan# 572  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 64      | 57.7  | 47.9  | 71.9  |
| 63      | 30.5  | 23.7  | 35.5  |





#7

Phenol-d6

Concen: 15.553 ng

RT: 6.47 min Scan# 745

Delta R.T. 0.01 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

Instrument :

BNA\_F

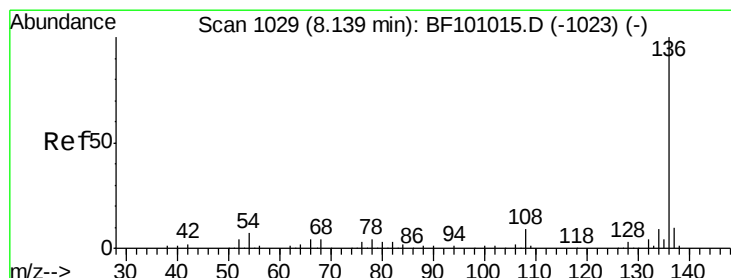
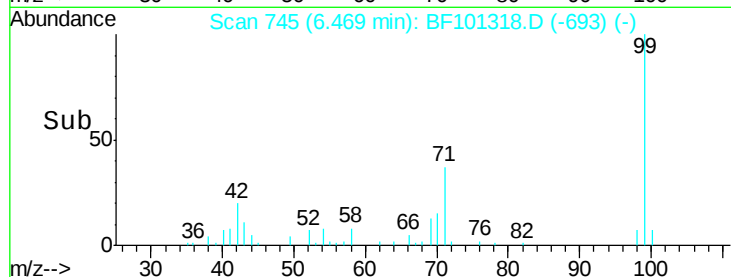
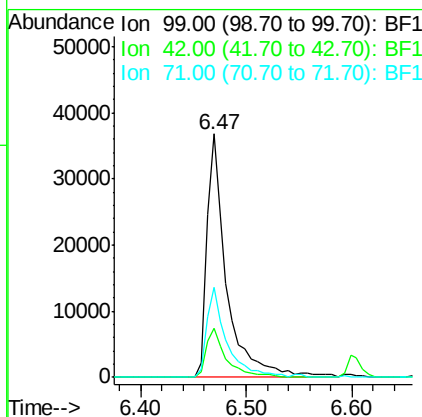
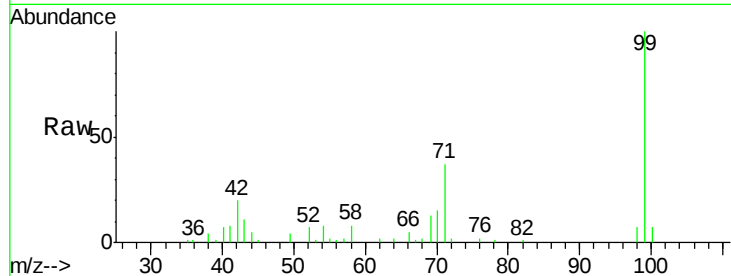
ClientSampleId :

MAP-3-E(0-1)

| Tot Ion | Ion  | Ratio | Resp  | Lower | Upper |
|---------|------|-------|-------|-------|-------|
| 99      | 100  |       | 47809 |       |       |
| 42      | 20.0 | 14.5  | 21.7  |       |       |
| 71      | 37.2 | 25.4  | 38.0  |       |       |

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#21

Naphthalene-d8

Concen: 20.000 ng

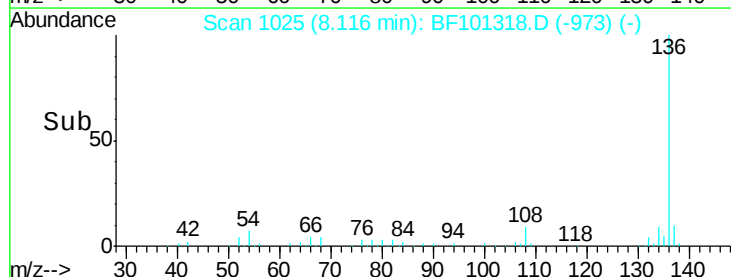
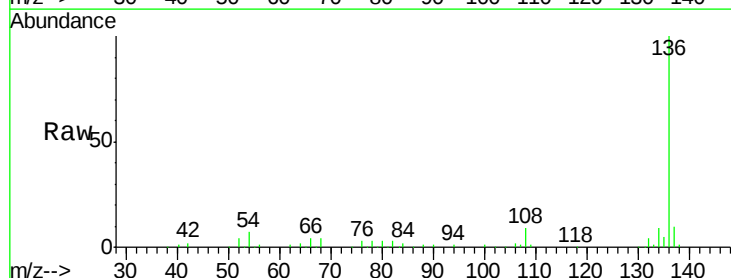
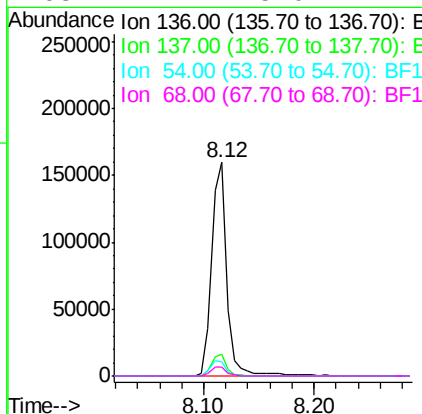
RT: 8.12 min Scan# 1025

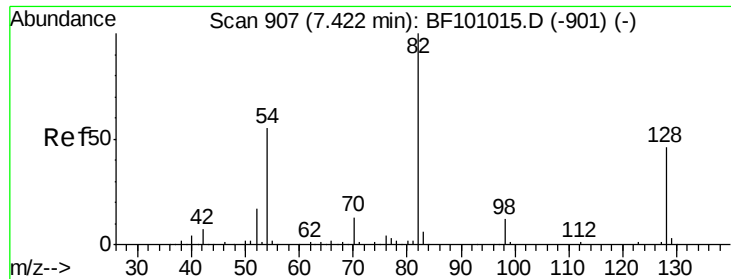
Delta R.T. 0.01 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

| Tgt Ion | Ion  | Ratio | Resp   | Lower | Upper |
|---------|------|-------|--------|-------|-------|
| 136     | 100  |       | 148495 |       |       |
| 137     | 10.1 | 8.9   | 13.3   |       |       |
| 54      | 6.8  | 6.6   | 9.8    |       |       |
| 68      | 4.1  | 5.0   | 7.4#   |       |       |





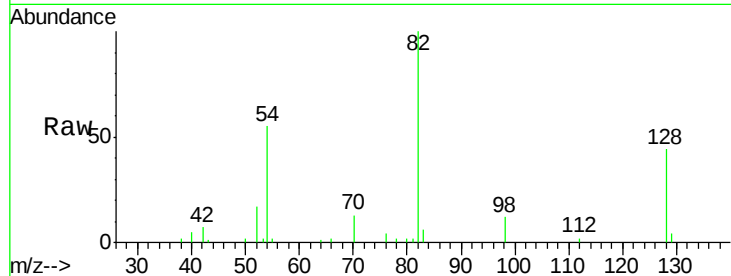
#23  
Nitrobenzene-d5  
Concen: 9.884 ng  
RT: 7.39 min Scan# 902  
Delta R.T. -0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

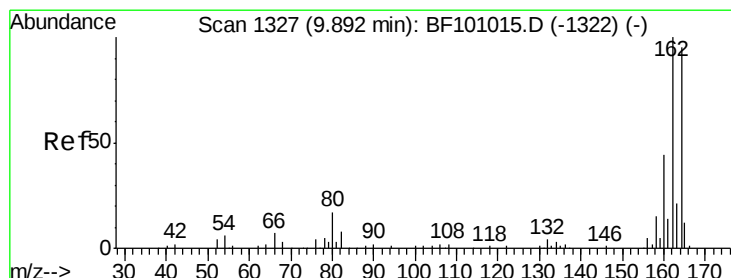
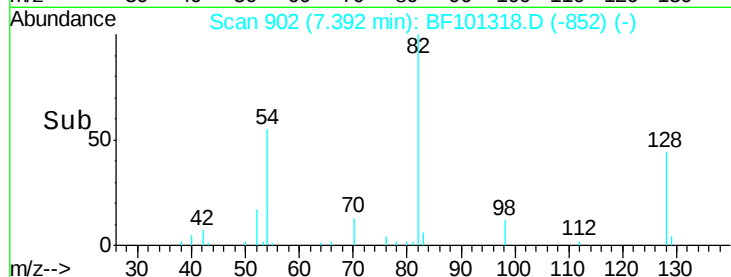
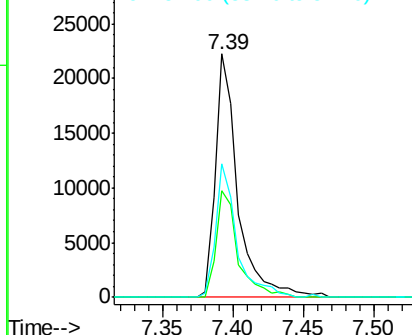
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 82      | 100   |       |       |
| 128     | 43.8  | 36.1  | 54.1  |
| 54      | 54.9  | 41.4  | 62.2  |

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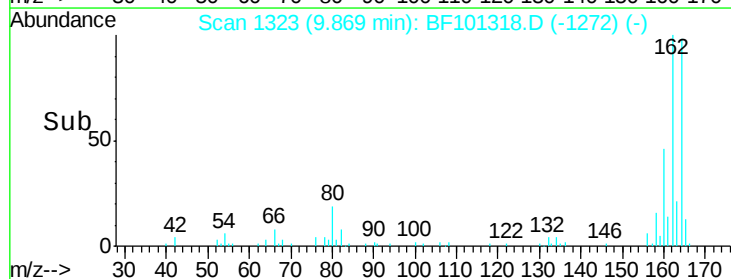
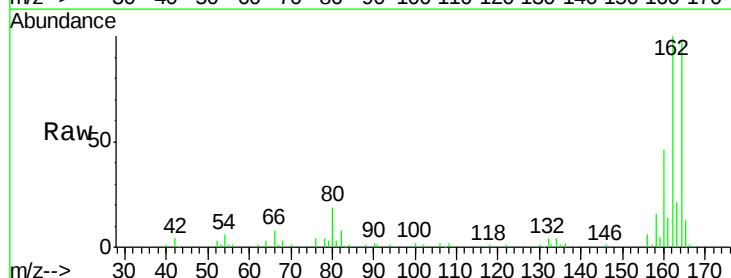
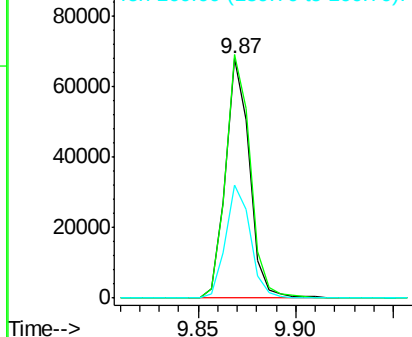
Abundance Ion 82.00 (81.70 to 82.70): BF1  
Ion 128.00 (127.70 to 128.70): BF1  
Ion 54.00 (53.70 to 54.70): BF1

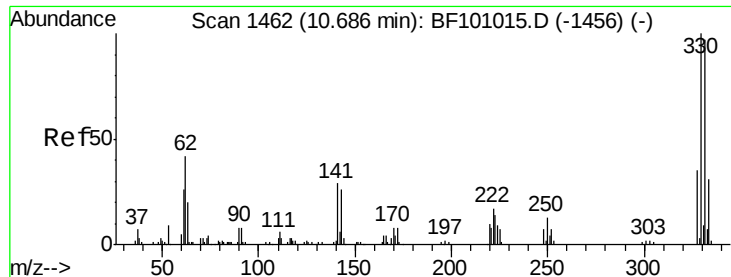


#38  
Acenaphthene-d10  
Concen: 20.000 ng  
RT: 9.87 min Scan# 1323  
Delta R.T. -0.00 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 162     | 101.7 | 86.1  | 129.1 |
| 160     | 47.3  | 38.3  | 57.5  |

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





#41

2,4,6-Tribromophenol

Concen: 11.859 ng

RT: 10.67 min Scan# 1459

Delta R.T. 0.01 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

Instrument :

BNA\_F

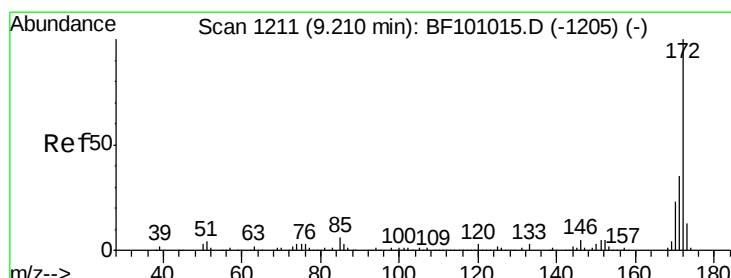
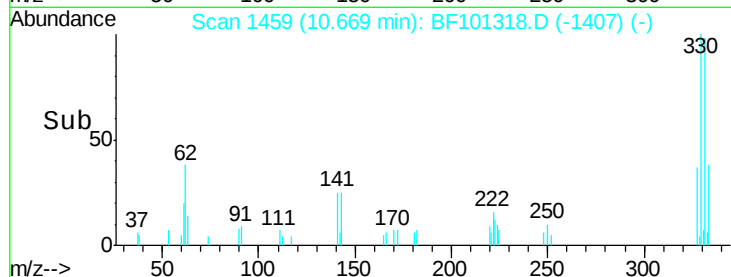
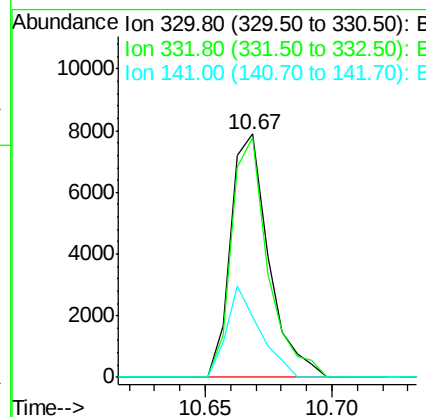
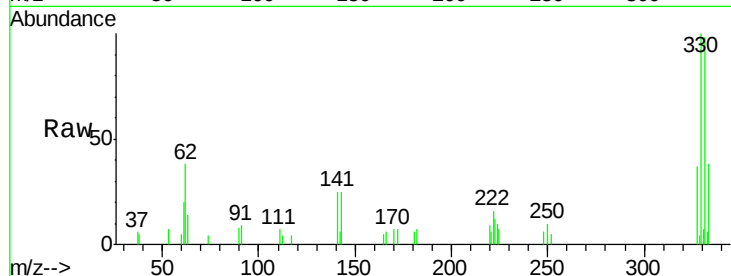
ClientSampled :

MAP-3-E(0-1)

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 330   | Resp: | 8250  |
| Ion Ratio | Lower | Upper |       |
| 330       | 100   |       |       |
| 332       | 94.2  | 77.0  | 115.6 |
| 141       | 32.5  | 29.9  | 44.9  |

Manual Integrations  
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#44

2-Fluorobiphenyl

Concen: 13.762 ng

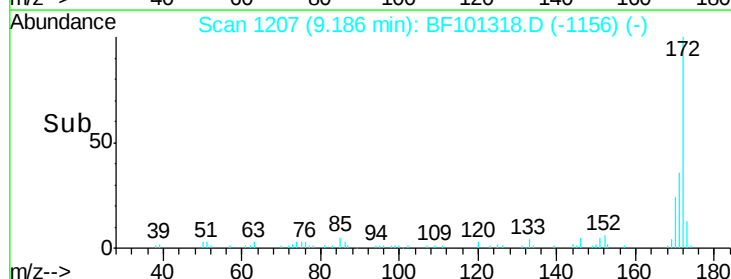
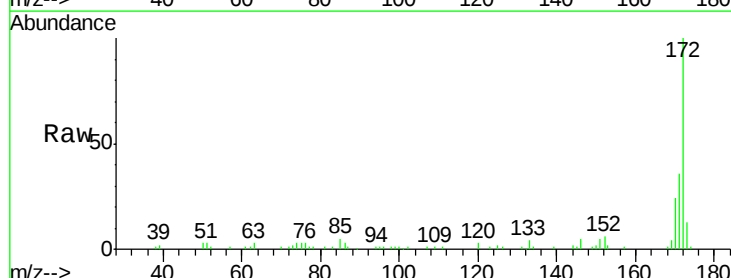
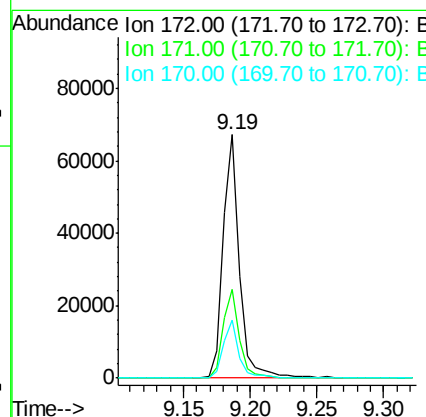
RT: 9.19 min Scan# 1207

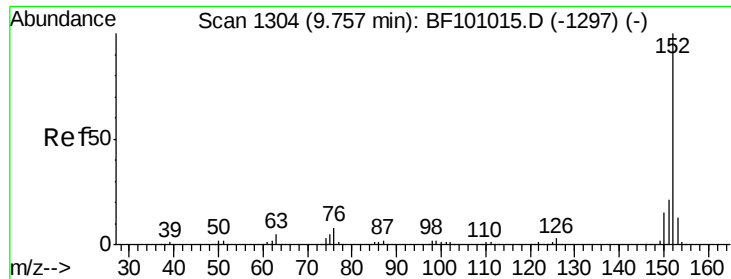
Delta R.T. -0.00 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 172   | Resp: | 58250 |
| Ion Ratio | Lower | Upper |       |
| 172       | 100   |       |       |
| 171       | 36.2  | 29.7  | 44.5  |
| 170       | 23.7  | 19.6  | 29.4  |





#48

Acenaphthylene

Concen: 3.001 ng

RT: 9.73 min Scan# 1300

Delta R.T. 0.01 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

Instrument :

BNA\_F

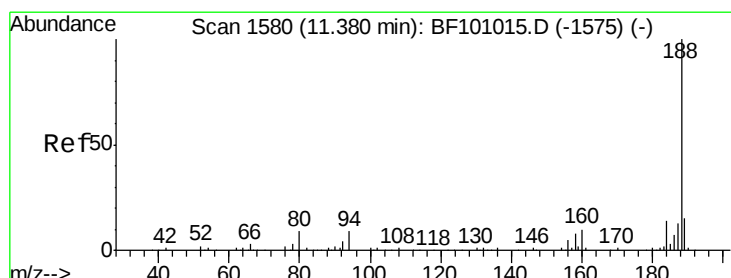
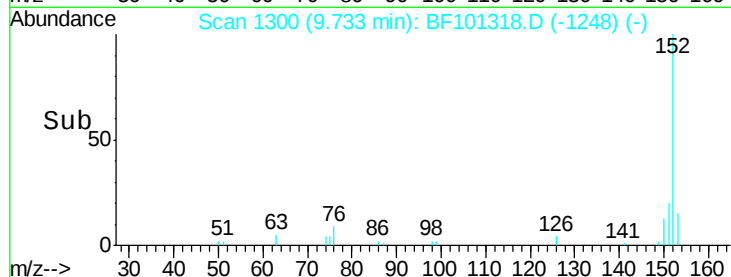
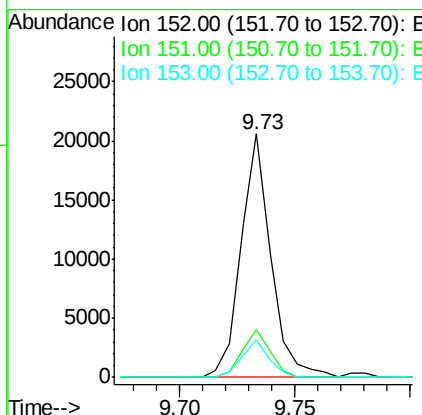
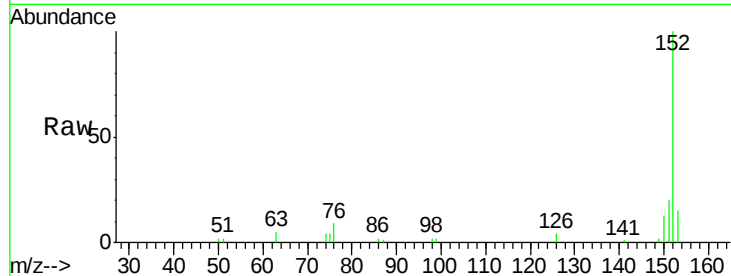
ClientSampleId :

MAP-3-E(0-1)

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 152   | Resp: | 18584 |
| Ion Ratio | Lower | Upper |       |
| 152       | 100   |       |       |
| 151       | 19.5  | 16.3  | 24.5  |
| 153       | 15.2  | 10.7  | 16.1  |

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#63

Phenanthrene-d10

Concen: 20.000 ng

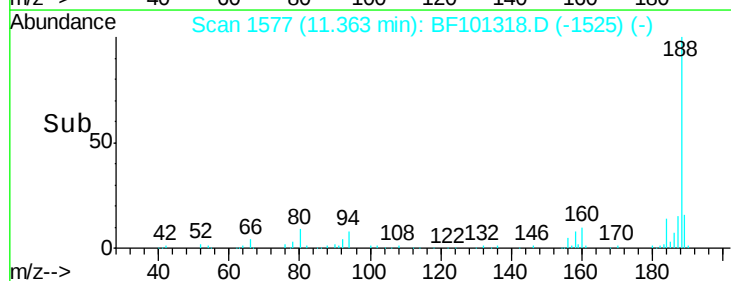
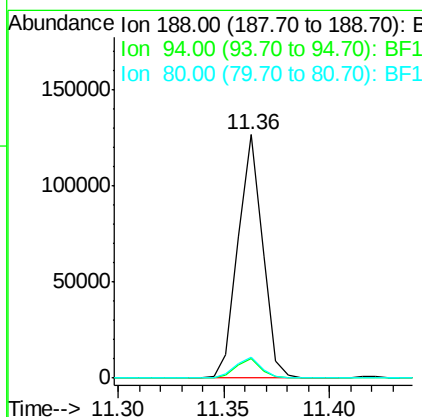
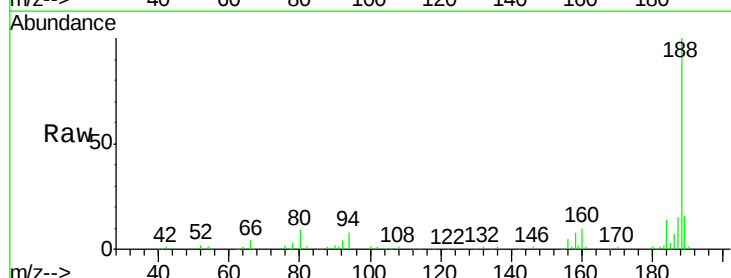
RT: 11.36 min Scan# 1577

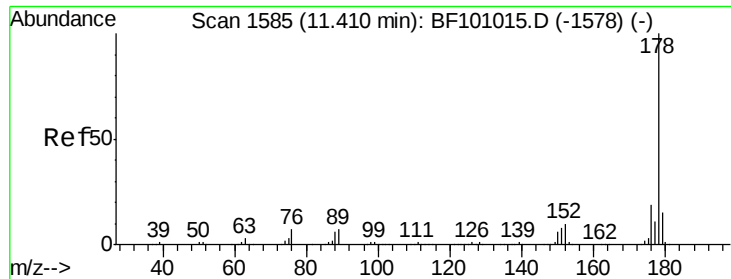
Delta R.T. 0.01 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 188   | Resp: | 101458 |
| Ion Ratio | Lower | Upper |        |
| 188       | 100   |       |        |
| 94        | 8.2   | 8.5   | 12.7#  |
| 80        | 8.7   | 9.2   | 13.8#  |





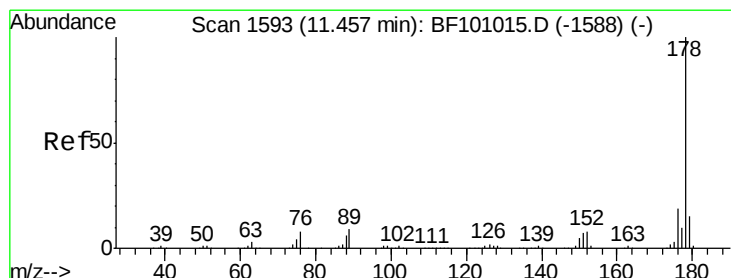
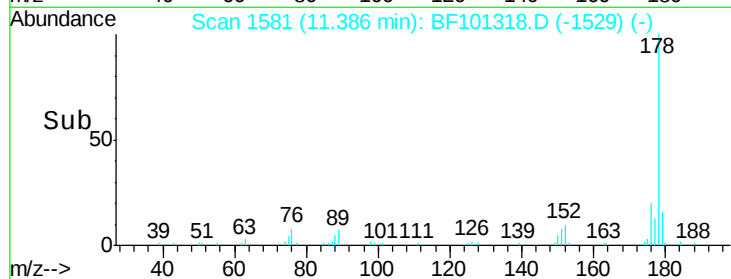
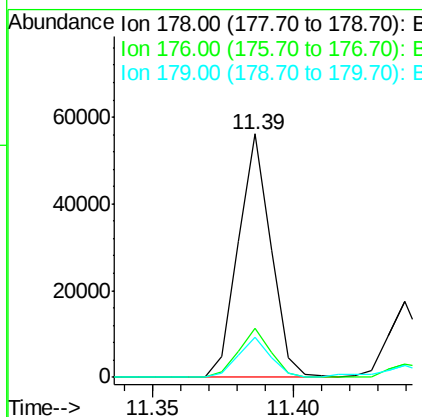
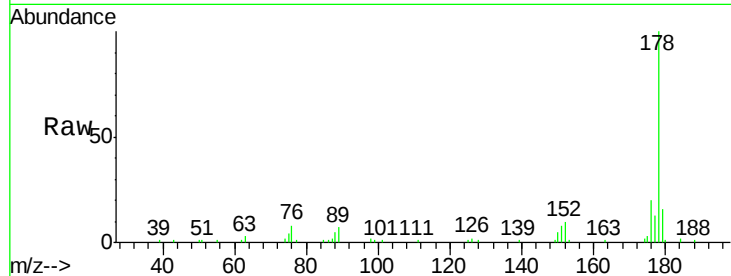
#70  
Phenanthrene  
Concen: 8.057 ng  
RT: 11.39 min Scan# 1581  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 19.9  | 15.8  | 23.8  |
| 179     | 16.3  | 13.0  | 19.6  |

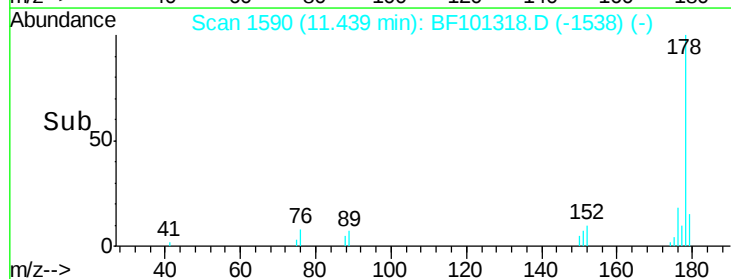
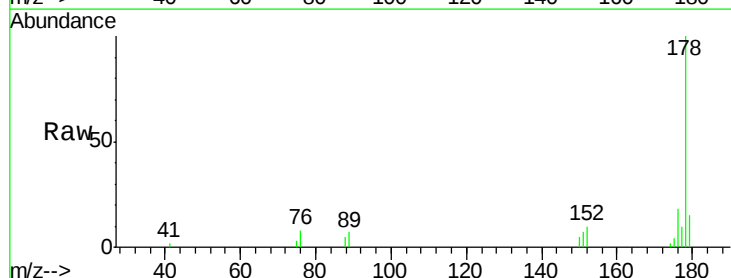
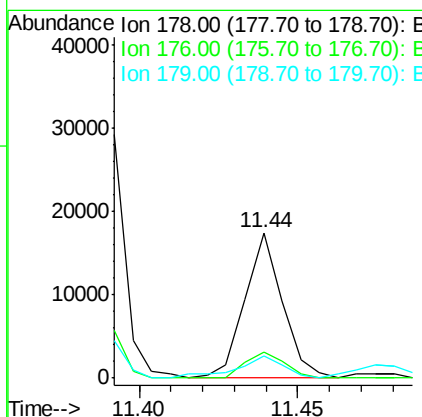
Manual Integrations  
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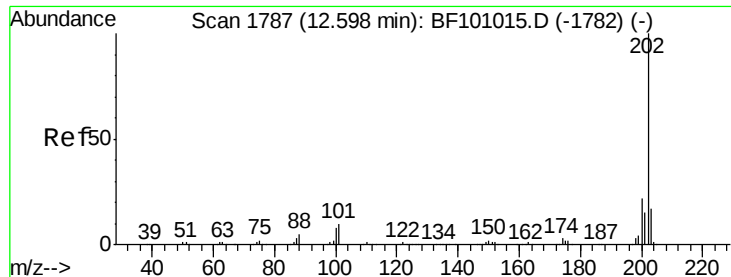
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#71  
Anthracene  
Concen: 2.557 ng  
RT: 11.44 min Scan# 1590  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 18.0  | 15.4  | 23.2  |
| 179     | 15.4  | 12.6  | 19.0  |





#74

Fluoranthene

Concen: 15.106 ng

RT: 12.58 min Scan# 1784

Delta R.T. 0.01 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

Instrument :

BNA\_F

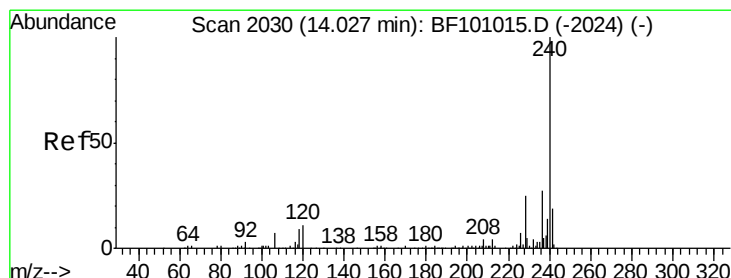
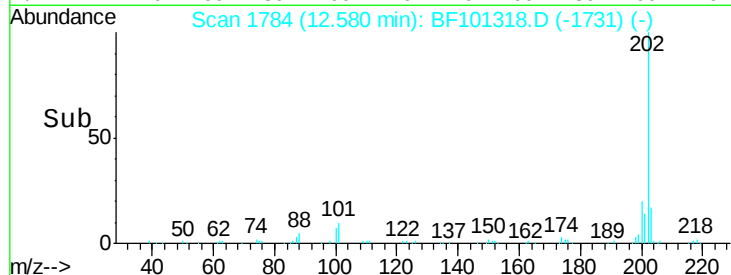
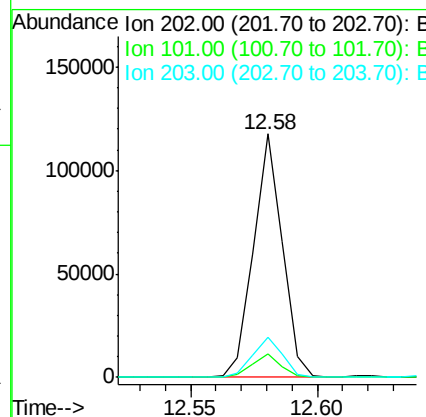
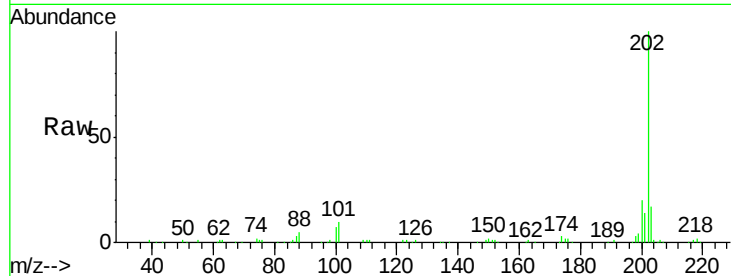
ClientSampleId :

MAP-3-E(0-1)

| Tot Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 202     | 100   |            |       |
| 101     | 9.7   | 0.0        | 34.1  |
| 203     | 16.6  | 0.0        | 38.1  |

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#75

Chrysene-d12

Concen: 20.000 ng

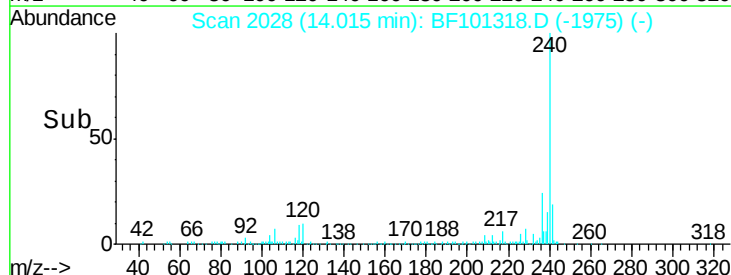
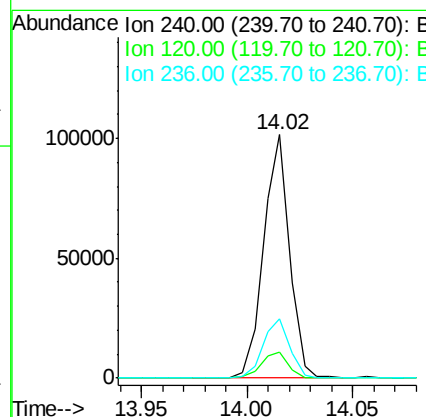
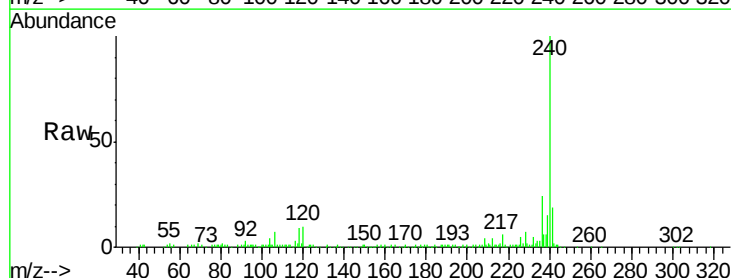
RT: 14.02 min Scan# 2028

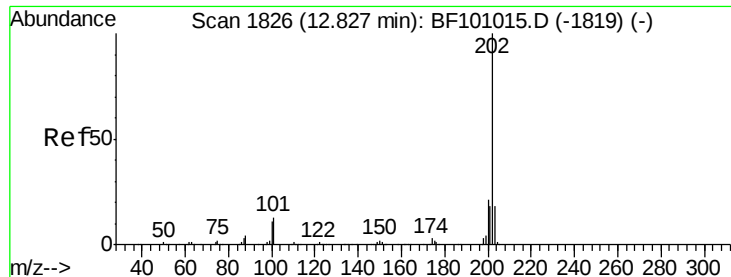
Delta R.T. 0.01 min

Lab File: BF101318.D

Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 240     | 100   |            |       |
| 120     | 10.5  | 9.5        | 14.3  |
| 236     | 24.3  | 20.7       | 31.1  |





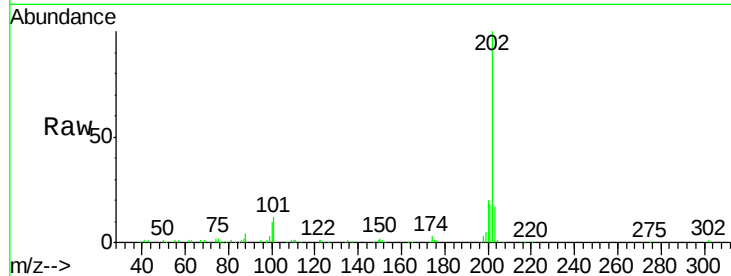
#77  
Pvrene  
Concen: 15.417 ng  
RT: 12.81 min Scan# 1823  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

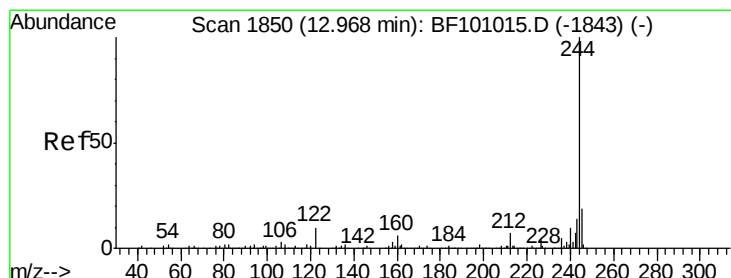
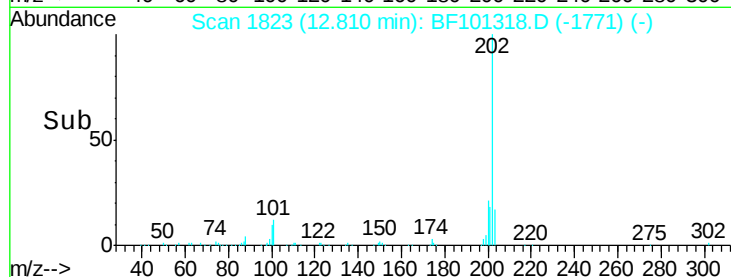
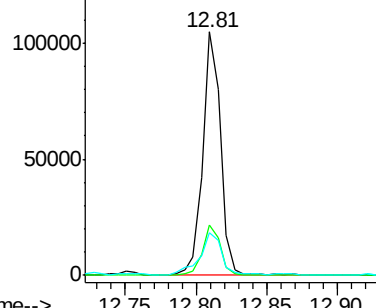
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 200     | 20.5  | 17.4  | 26.2  |
| 203     | 17.5  | 14.3  | 21.5  |

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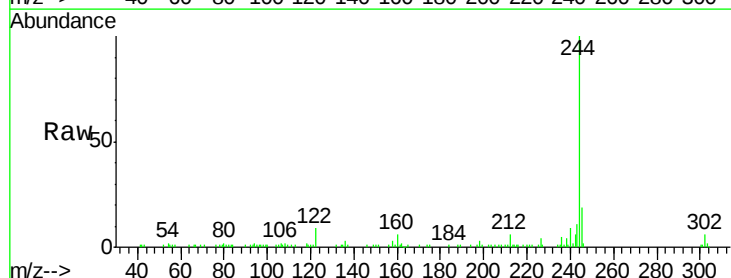


Abundance Ion 202.00 (201.70 to 202.70): E  
Ion 200.00 (199.70 to 200.70): E  
Ion 203.00 (202.70 to 203.70): E

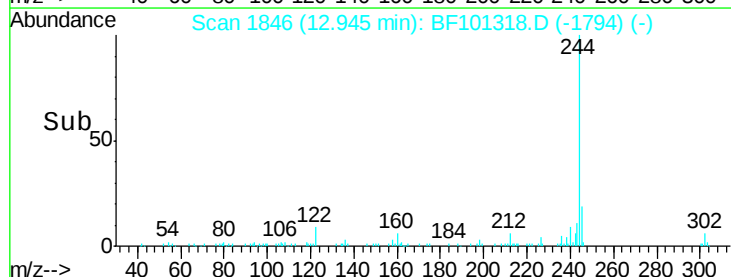
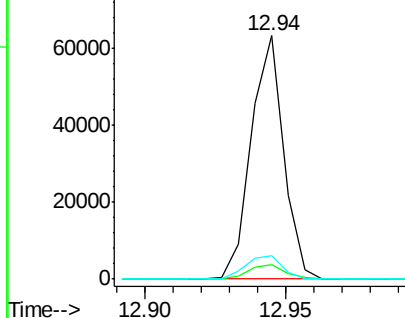


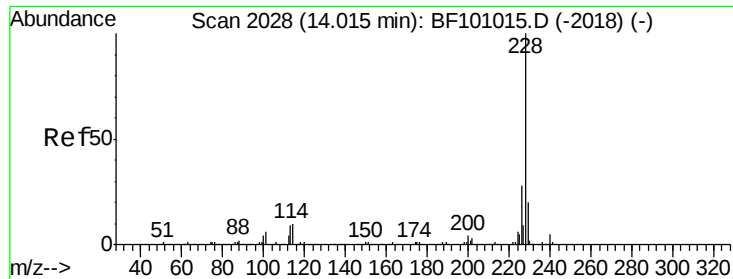
#78  
Terphenyl-d14  
Concen: 12.660 ng  
RT: 12.94 min Scan# 1846  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 244     | 100   |       |       |
| 212     | 6.2   | 5.4   | 8.0   |
| 122     | 9.5   | 11.0  | 16.4# |



Abundance Ion 244.00 (243.70 to 244.70): E  
Ion 212.00 (211.70 to 212.70): E  
Ion 122.00 (121.70 to 122.70): E





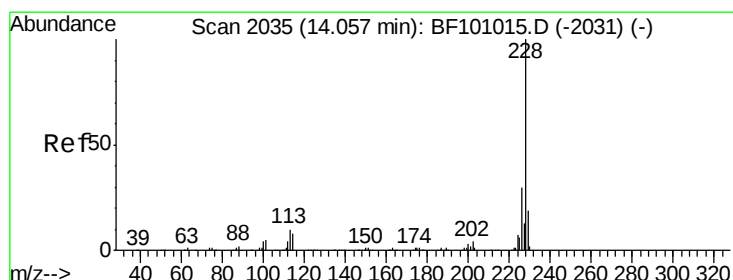
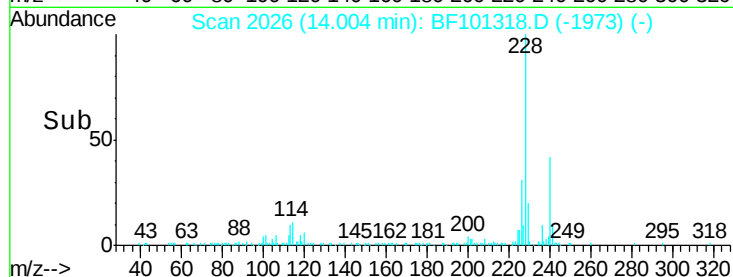
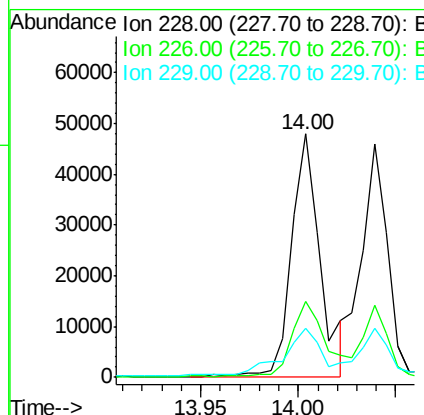
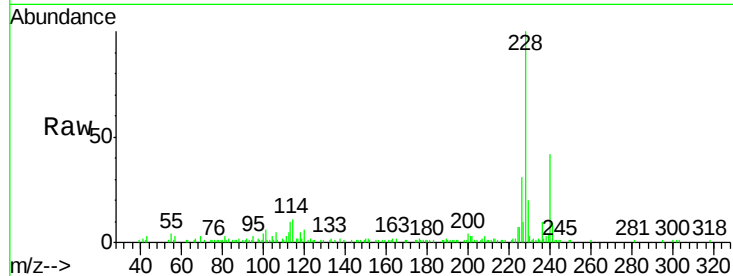
#80  
Benzo(a)anthracene  
Concen: 8.940 ng  
RT: 14.00 min Scan# 2026  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 31.1  | 22.6  | 33.8  |
| 229     | 20.4  | 15.8  | 23.6  |

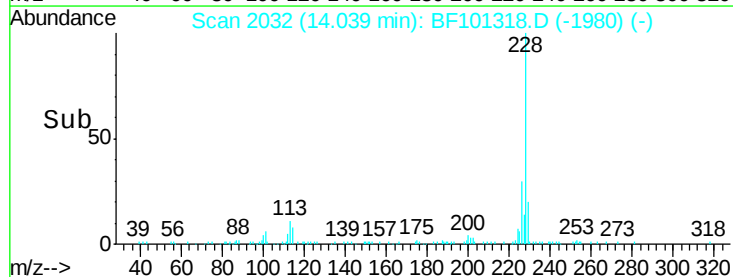
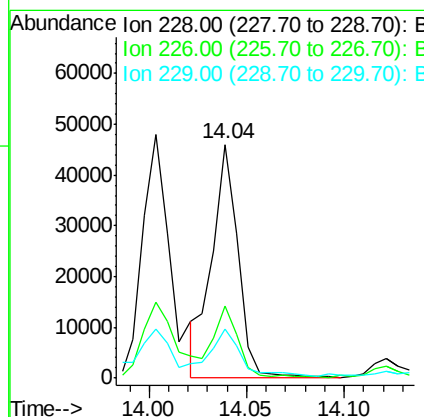
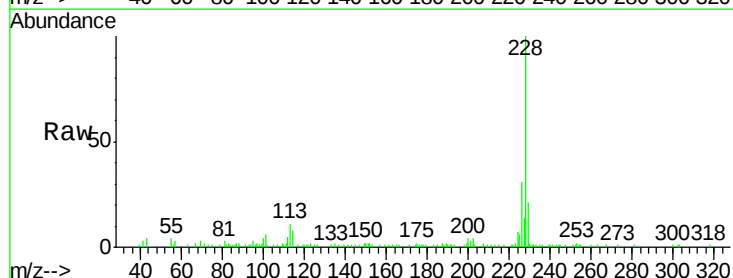
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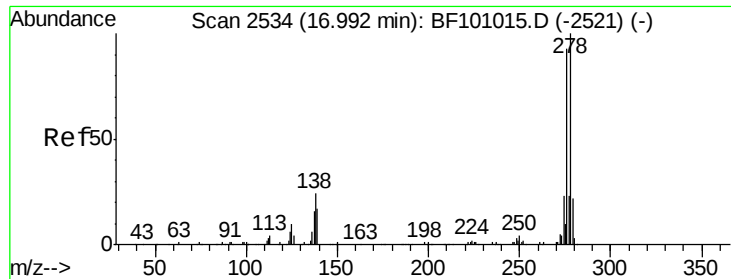
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#82  
Chrysene  
Concen: 8.524 ng  
RT: 14.04 min Scan# 2032  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 30.7  | 25.0  | 37.6  |
| 229     | 21.3  | 16.2  | 24.4  |





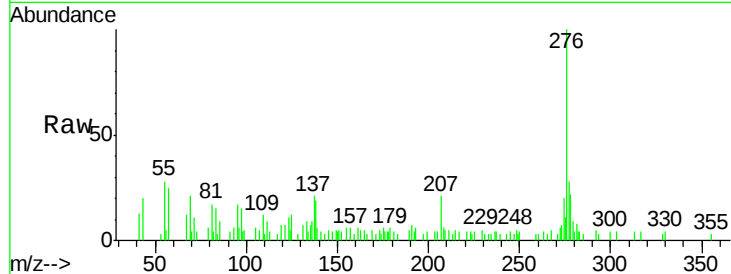
#85  
Indeno(1,2,3-cd)pyrene  
Concen: 4.293 ng  
RT: 16.99 min Scan# 2534  
Delta R.T. 0.05 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampled :  
MAP-3-E(0-1)

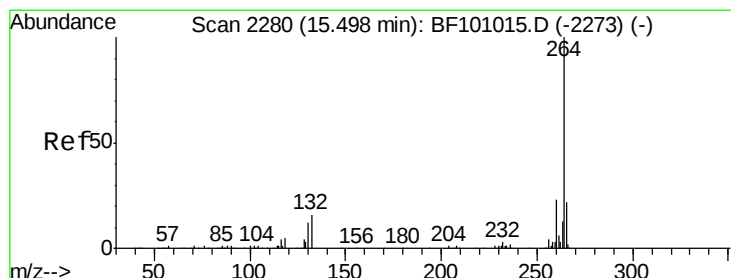
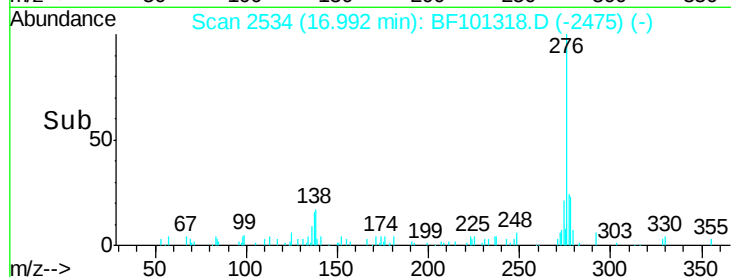
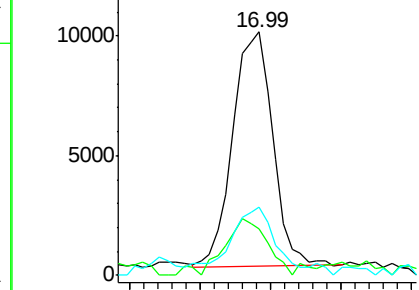
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 26.2  | 25.0  | 37.6  |
| 277     | 35.3  | 20.1  | 30.1  |

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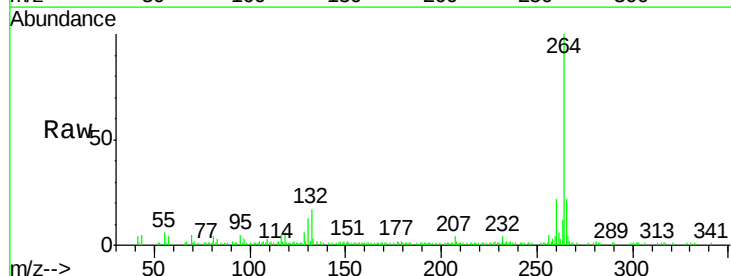


Abundance Ion 276.00 (275.70 to 276.70): E  
Ion 138.00 (137.70 to 138.70): E  
Ion 277.00 (276.70 to 277.70): E

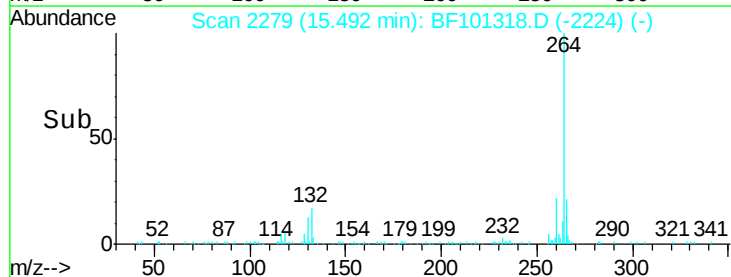
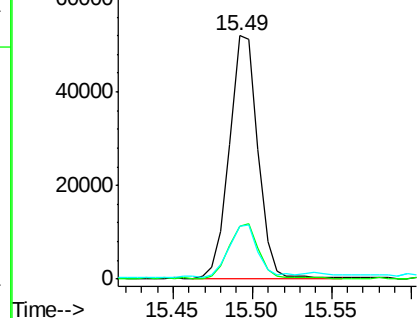


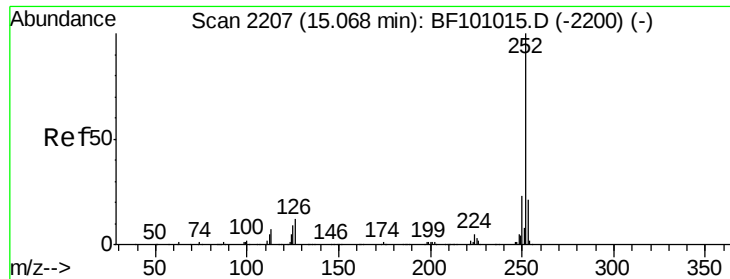
#86  
Perylene-d12  
Concen: 20.000 ng  
RT: 15.49 min Scan# 2279  
Delta R.T. 0.02 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 264     | 100   |       |       |
| 260     | 22.0  | 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





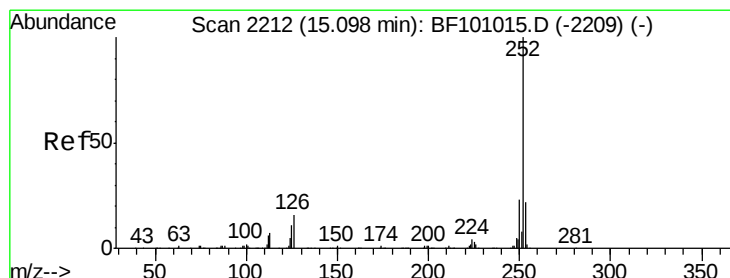
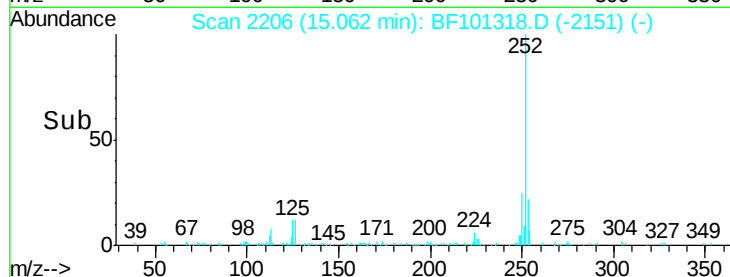
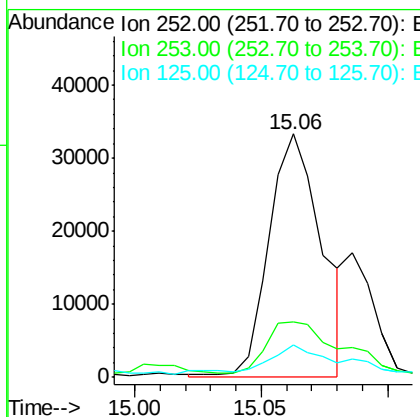
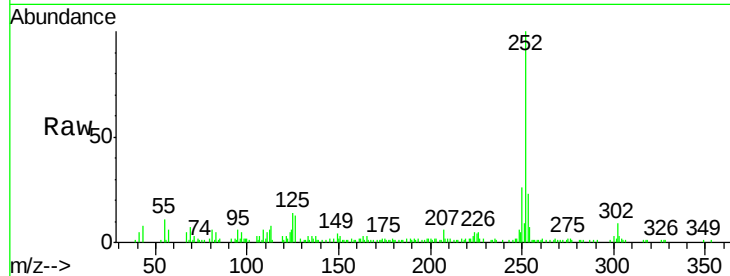
#87  
Benzo(b)fluoranthene  
Concen: 12.332 ng m  
RT: 15.06 min Scan# 2206  
Delta R.T. 0.02 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.7  | 17.0  | 25.6  |
| 125     | 13.6  | 9.0   | 13.6  |

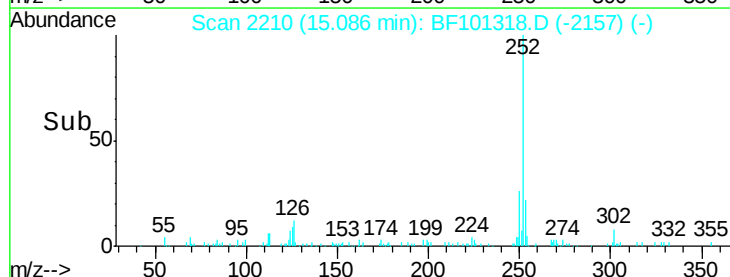
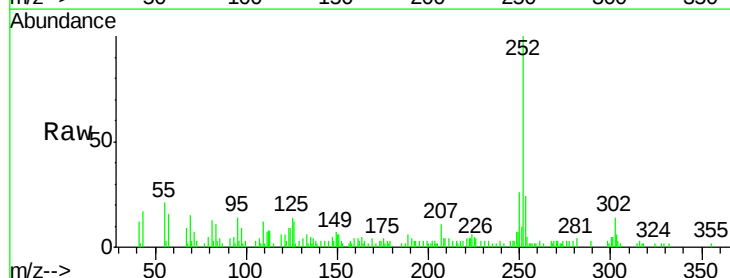
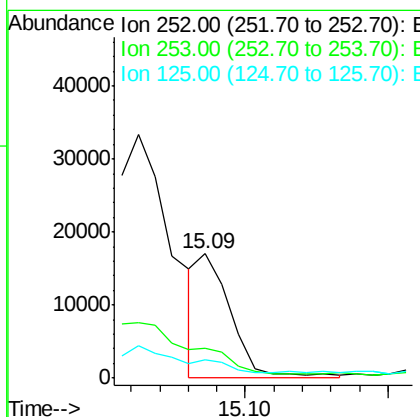
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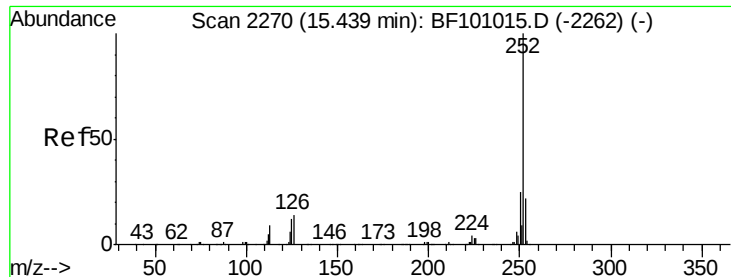
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#88  
Benzo(k)fluoranthene  
Concen: 3.625 ng m  
RT: 15.09 min Scan# 2210  
Delta R.T. 0.01 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 24.0  | 17.9  | 26.9  |
| 125     | 14.3  | 10.2  | 15.2  |





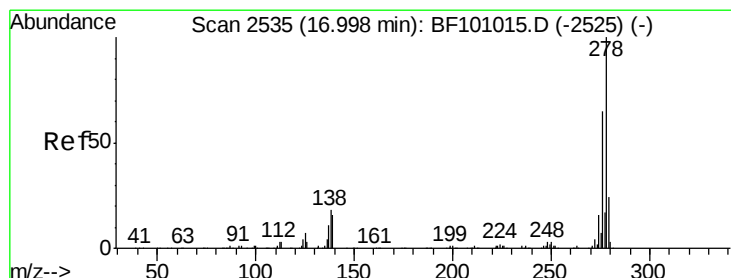
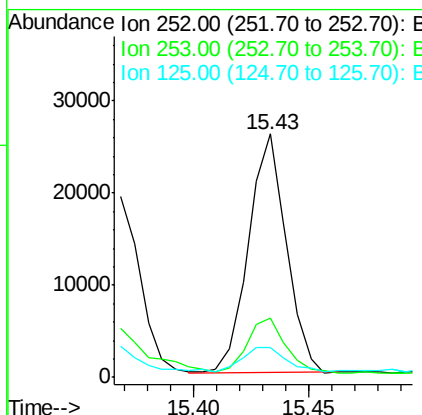
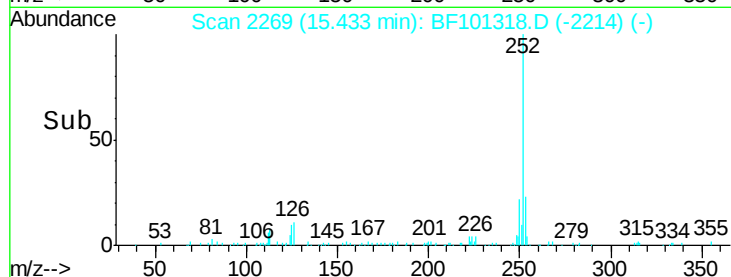
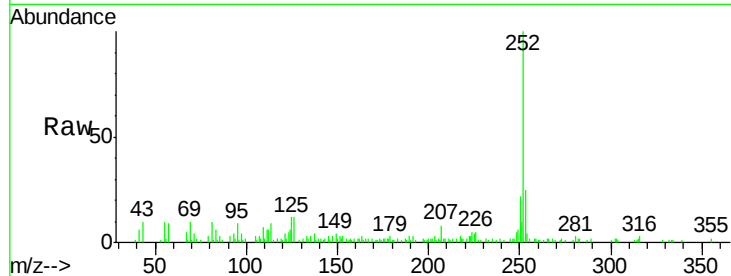
#89  
Benzo(a)pyrene  
Concen: 8.277 ng  
RT: 15.43 min Scan# 2269  
Delta R.T. 0.02 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 24.6  | 17.1  | 25.7  |
| 125     | 12.3  | 9.8   | 14.6  |

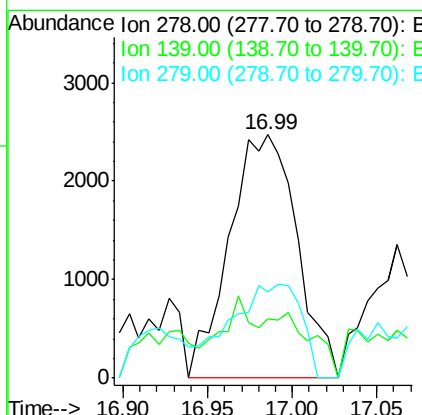
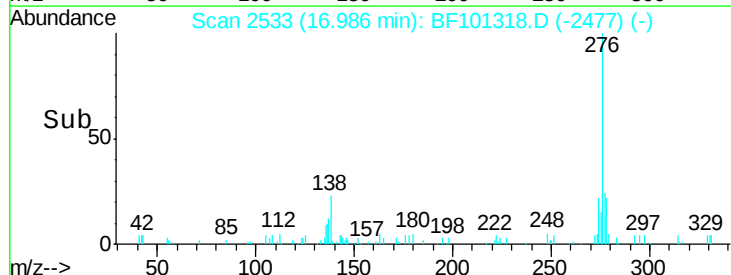
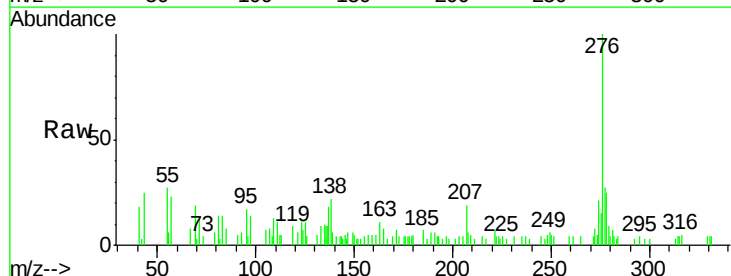
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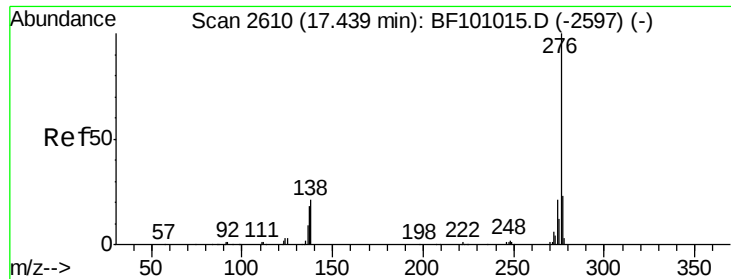
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#90  
Dibenzo(a,h)anthracene  
Concen: 2.172 ng  
RT: 16.99 min Scan# 2533  
Delta R.T. 0.03 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 278     | 100   |       |       |
| 139     | 24.4  | 15.9  | 23.9# |
| 279     | 35.2  | 19.0  | 28.4# |





#91  
Benzo(a,h,i)perylene  
Concen: 7.679 ng  
RT: 17.44 min Scan# 2610  
Delta R.T. 0.05 min  
Lab File: BF101318.D  
Acq: 12 Dec 2017 6:56

Instrument :  
BNA\_F  
ClientSampleId :  
MAP-3-E(0-1)

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 277     | 25.0  | 17.9  | 26.9  |
| 138     | 21.9  | 21.8  | 32.8  |

Manual Integrations  
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