

Data Path : Z:\HPCHEM1\BNA F\DATA\BF040317\  
 Data File : BF094165.D  
 Acq On : 4 Apr 2017 13:12  
 Operator : SJ/MA  
 Sample : I2510-11DL 5X  
 Misc :  
 ALS Vial : 47 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

Manual Integrations  
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 4/4/2017 5:35:46 PM

Quant Time: Apr 04 13:51:10 2017  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF032217.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Fri Mar 31 14:38:29 2017  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 5.89  | 152  | 168577   | 20.00 | ng    | -0.02    |
| 21) Naphthalene-d8          | 7.39  | 136  | 622081   | 20.00 | ng    | -0.02    |
| 38) Acenaphthene-d10        | 9.53  | 164  | 245095   | 20.00 | ng    | -0.02    |
| 63) Phenanthrene-d10        | 11.36 | 188  | 389519   | 20.00 | ng    | -0.01    |
| 75) Chrysene-d12            | 14.62 | 240  | 319695   | 20.00 | ng    | -0.01    |
| 86) Perylene-d12            | 16.24 | 264  | 218077   | 20.00 | ng    | 0.00     |
| System Monitoring Compounds |       |      |          |       |       |          |
| 5) 2-Fluorophenol           | 4.42  | 112  | 223627   | 22.41 | ng    | -0.02    |
| 7) Phenol-d6                | 5.49  | 99   | 275613   | 22.32 | ng    | -0.02    |
| 23) Nitrobenzene-d5         | 6.53  | 82   | 118656   | 10.89 | ng    | -0.03    |
| 41) 2,4,6-Tribromophenol    | 10.50 | 330  | 34472    | 17.80 | ng    | -0.02    |
| 44) 2-Fluorobiphenyl        | 8.71  | 172  | 282481   | 17.58 | ng    | -0.02    |
| 78) Terphenyl-d14           | 13.33 | 244  | 187845   | 13.17 | ng    | -0.02    |
| Target Compounds            |       |      |          |       |       | Qvalue   |
| 51) Acenaphthene            | 9.57  | 154  | 62785    | 4.18  | ng    | 99       |
| 54) Dibenzofuran            | 9.79  | 168  | 59552    | 2.92  | ng    | 98       |
| 57) Fluorene                | 10.20 | 166  | 67828    | 4.00  | ng    | 99       |
| 70) Phenanthrene            | 11.39 | 178  | 721695   | 33.31 | ng    | 99       |
| 71) Anthracene              | 11.45 | 178  | 171508   | 7.69  | ng    | 98       |
| 72) Carbazole               | 11.65 | 167  | 83943    | 3.67  | ng    | 99       |
| 74) Fluoranthene            | 12.86 | 202  | 681833   | 30.73 | ng    | 99       |
| 77) Pyrene                  | 13.13 | 202  | 550184   | 23.71 | ng    | 99       |
| 80) Benzo(a)anthracene      | 14.60 | 228  | 233600   | 12.53 | ng    | 99       |
| 82) Chrysene                | 14.64 | 228  | 209049   | 12.08 | ng    | 96       |
| 85) Indeno(1,2,3-cd)pyrene  | 17.59 | 276  | 61040    | 4.07  | ng    | 95       |
| 87) Benzo(b)fluoranthene    | 15.84 | 252  | 191040m  | 14.29 | ng    |          |
| 88) Benzo(k)fluoranthene    | 15.86 | 252  | 53442m   | 4.09  | ng    |          |
| 89) Benzo(a)pyrene          | 16.19 | 252  | 121070   | 9.84  | ng    | 99       |
| 91) Benzo(a,h,i)perylene    | 17.99 | 276  | 59852    | 5.70  | ng    | 100      |

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

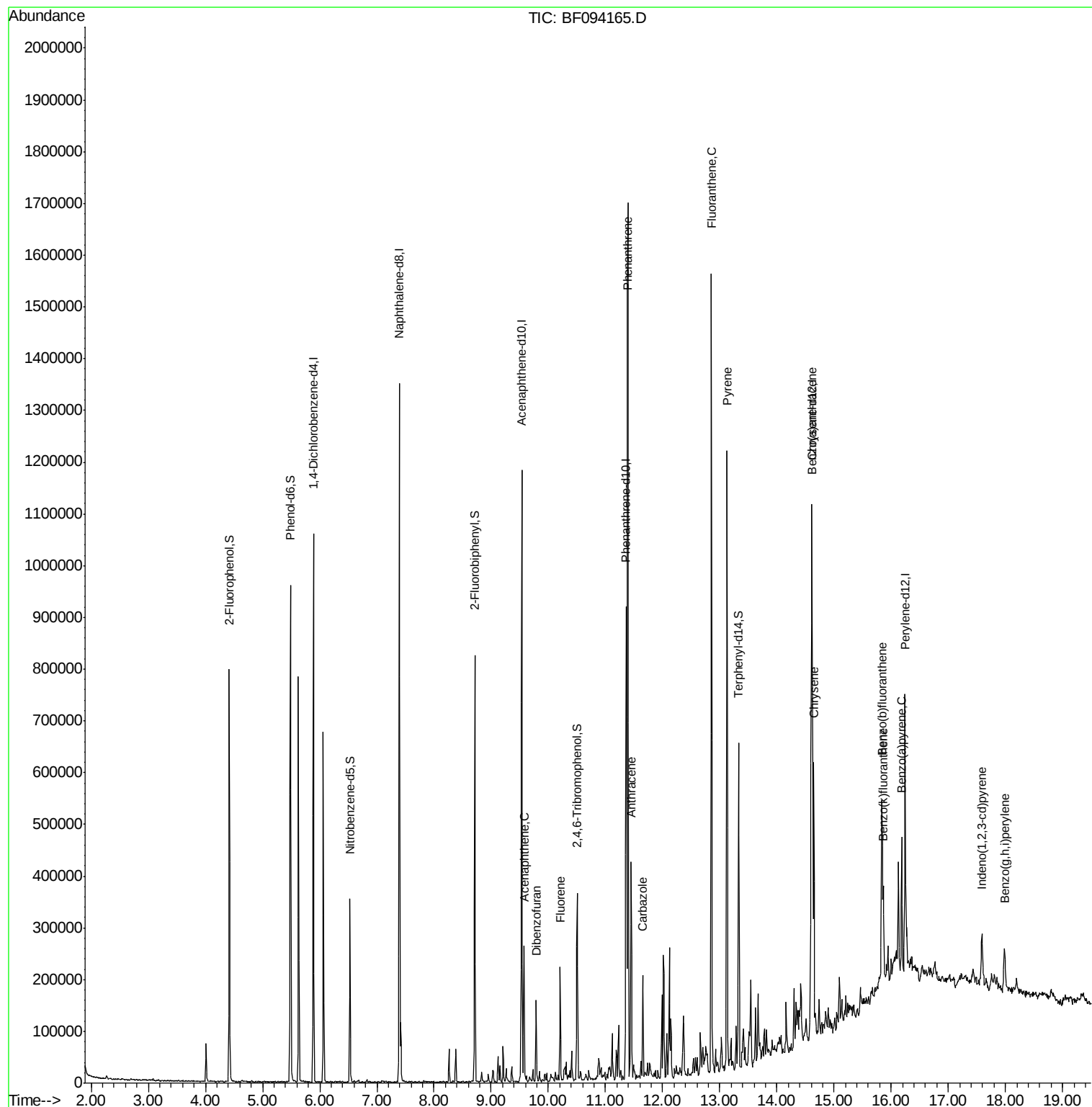
Data Path : Z:\HPCHEM1\BNA F\DATA\BF040317\  
Data File : BF094165.D  
Acq On : 4 Apr 2017 13:12  
Operator : SJ/MA  
Sample : I2510-11DL 5X  
Misc :  
ALS Vial : 47 Sample Multiplier: 1

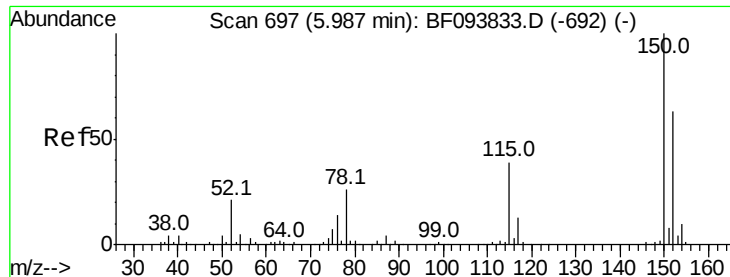
Instrument :  
BNA\_F  
ClientSampleID :  
E2-U4-WSWDL

Manual Integrations  
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4/4/2017 5:35:46 PM

Quant Time: Apr 04 13:51:10 2017  
Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF032217.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Fri Mar 31 14:38:29 2017  
Response via : Initial Calibration





#1

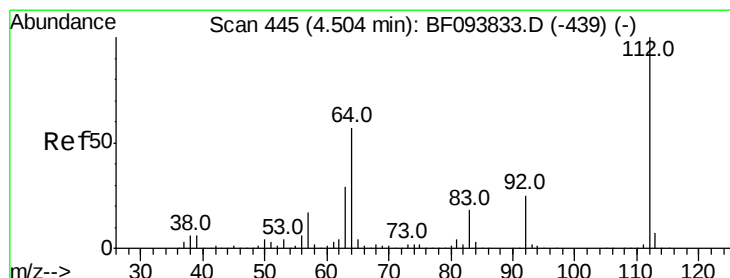
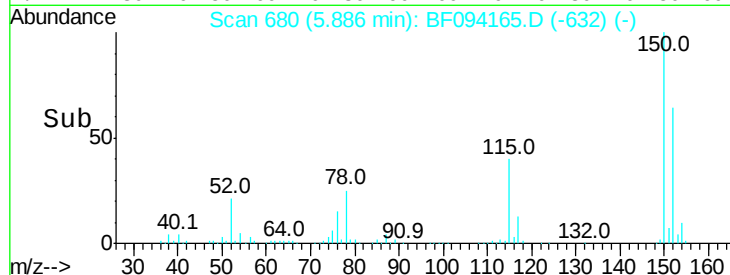
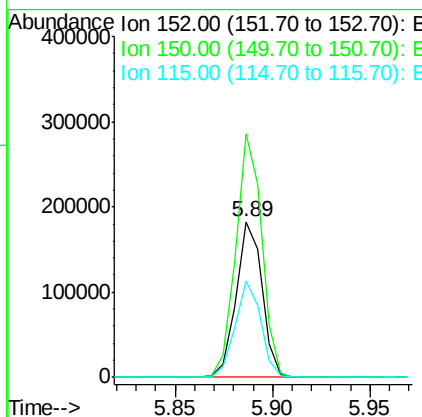
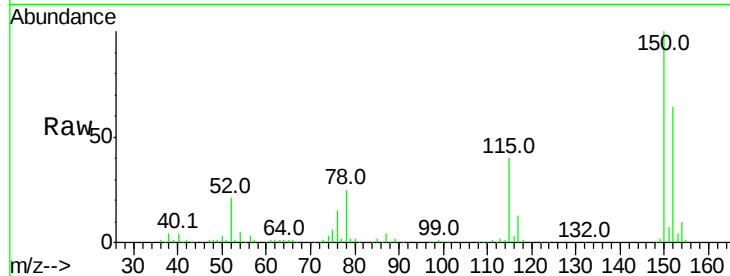
1,4-Dichlorobenzene-d4  
 Concen: 20.00 ng  
 RT: 5.89 min Scan# 680  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 150     | 156.7 | 126.2 | 189.2 |
| 115     | 62.2  | 52.2  | 78.2  |

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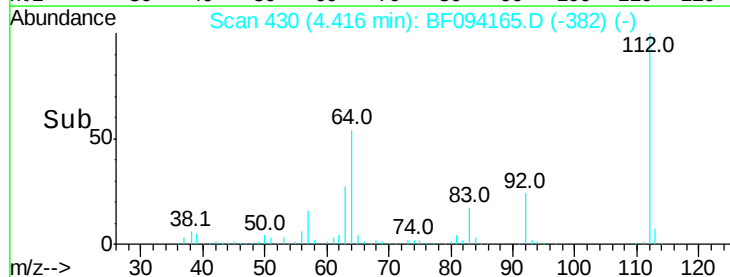
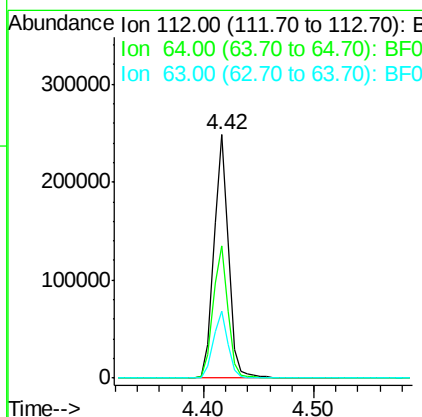
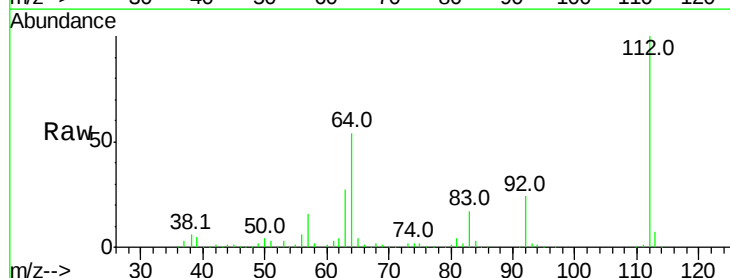
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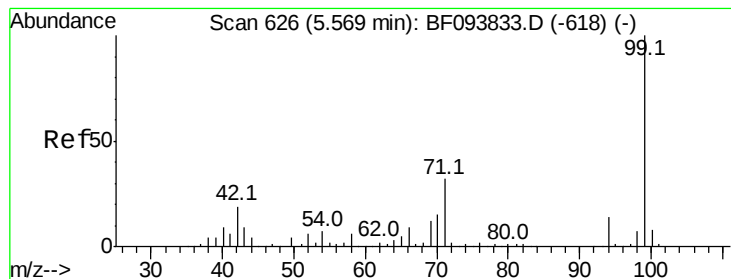


#5

2-Fluorophenol  
 Concen: 22.41 ng  
 RT: 4.42 min Scan# 430  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 64      | 54.2  | 46.0  | 69.0  |
| 63      | 27.5  | 23.4  | 35.0  |





#7

Phenol-d6

Concen: 22.32 ng

RT: 5.49 min Scan# 612

Delta R.T. -0.02 min

Lab File: BF094165.D

Acq: 4 Apr 2017 13:12

Instrument :

BNA\_F

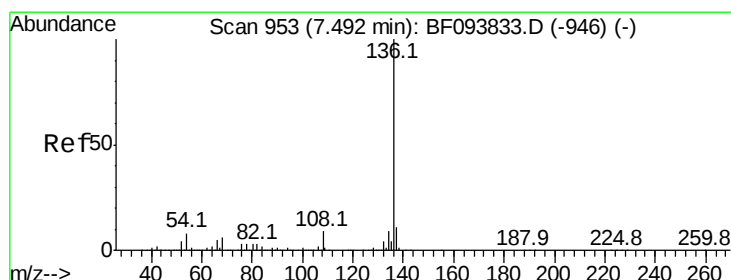
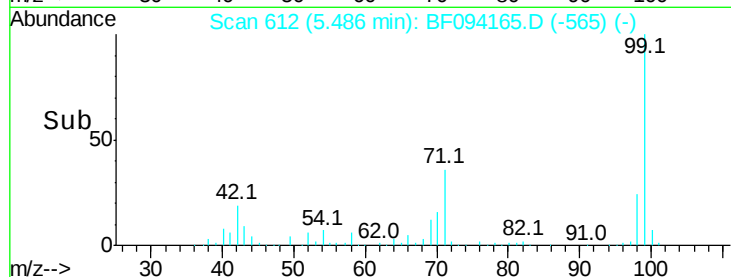
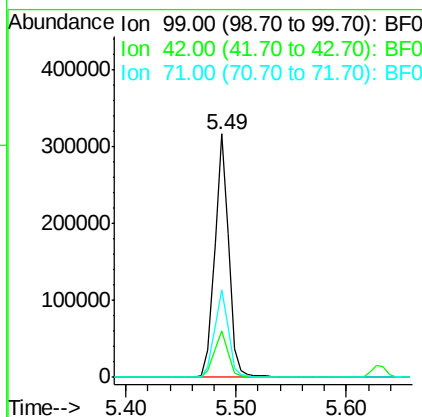
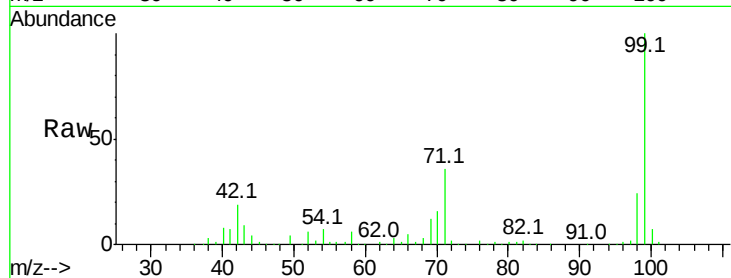
ClientSampleId :

E2-U4-WSWDL

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 99    | Resp: | 275613 |
| Ion Ratio | Lower | Upper |        |
| 99        | 100   |       |        |
| 42        | 19.1  | 13.5  | 20.3   |
| 71        | 36.0  | 24.5  | 36.7   |

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#21

Naphthalene-d8

Concen: 20.00 ng

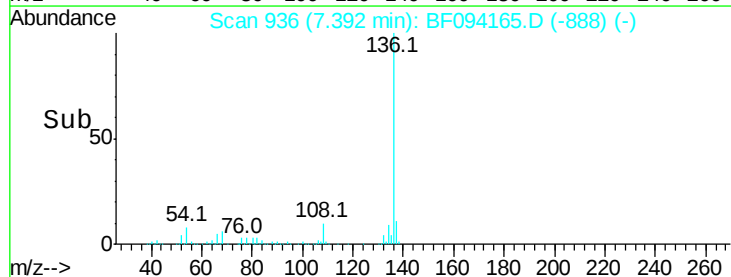
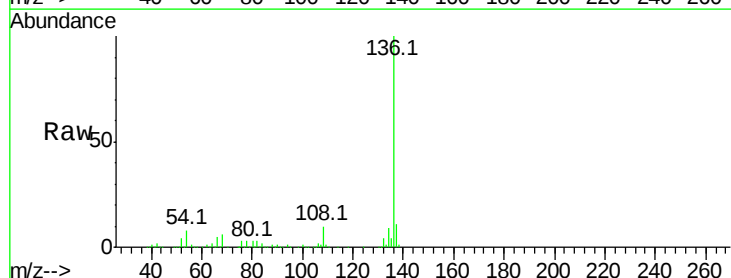
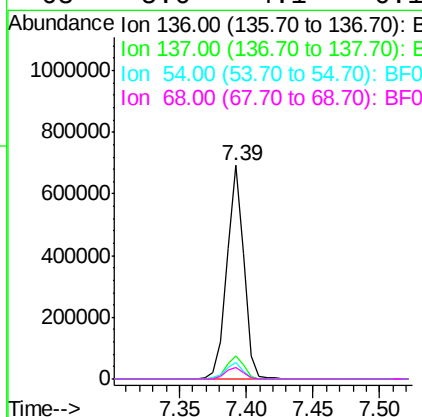
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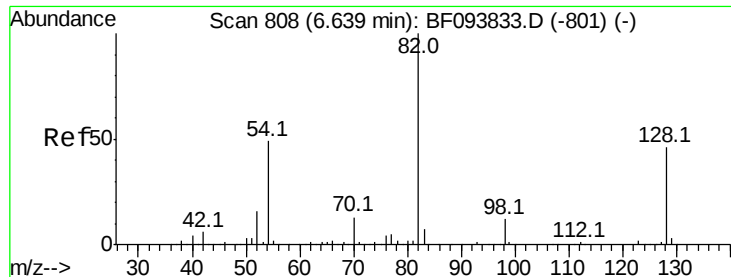
Delta R.T. -0.02 min

Lab File: BF094165.D

Acq: 4 Apr 2017 13:12

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 136   | Resp: | 622081 |
| Ion Ratio | Lower | Upper |        |
| 136       | 100   |       |        |
| 137       | 11.1  | 8.5   | 12.7   |
| 54        | 7.6   | 4.9   | 7.3#   |
| 68        | 5.6   | 4.1   | 6.1    |





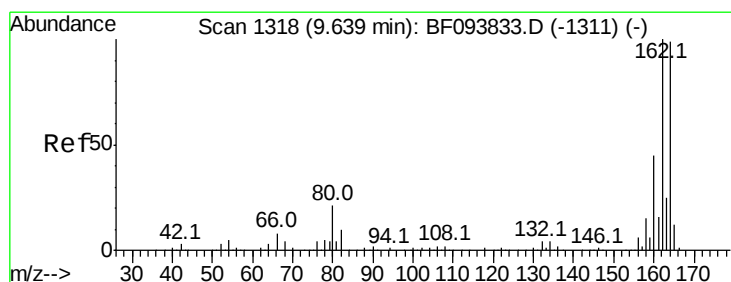
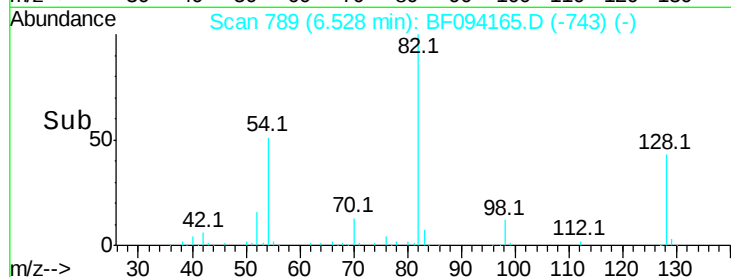
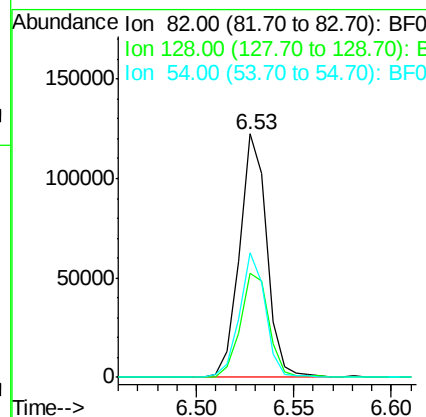
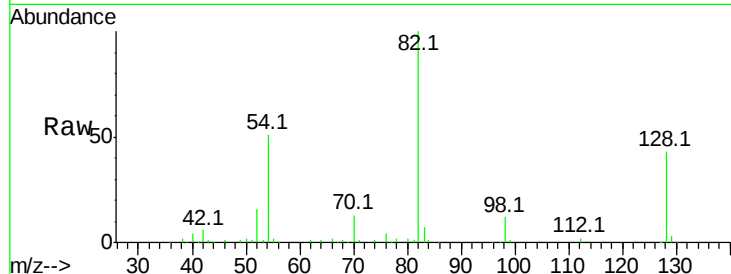
#23  
 Nitrobenzene-d5  
 Concen: 10.89 ng  
 RT: 6.53 min Scan# 789  
 Delta R.T. -0.03 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

| Tot Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 82      | 100   |      |       |       |
| 128     | 42.7  | 34.0 | 51.0  |       |
| 54      | 51.1  | 42.2 | 63.2  |       |

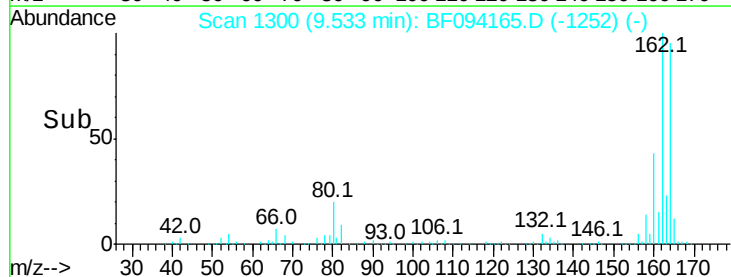
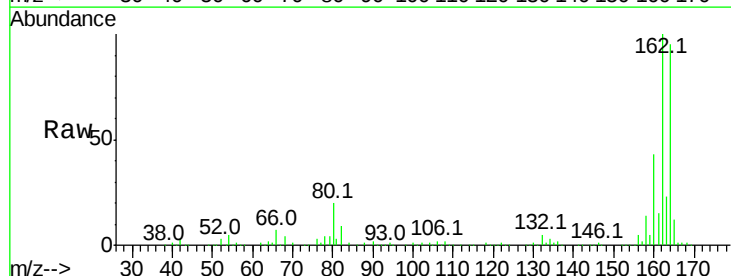
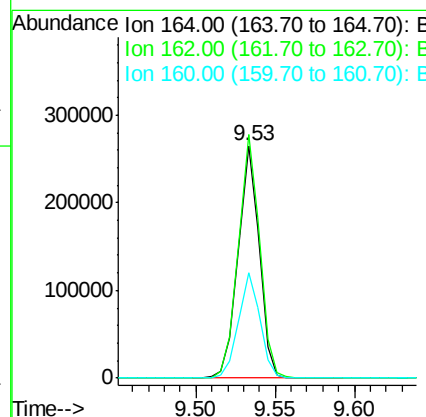
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#38  
 Acenaphthene-d10  
 Concen: 20.00 ng  
 RT: 9.53 min Scan# 1300  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 164     | 100   |      |       |       |
| 162     | 104.9 | 82.6 | 123.8 |       |
| 160     | 45.5  | 36.2 | 54.2  |       |





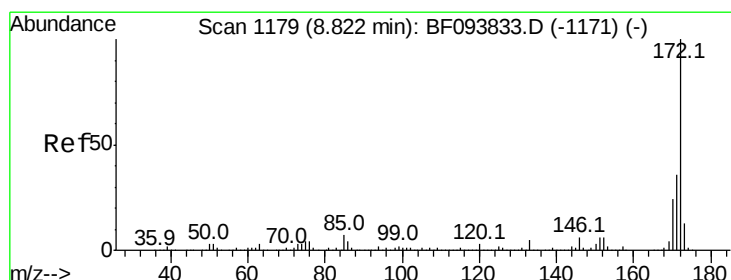
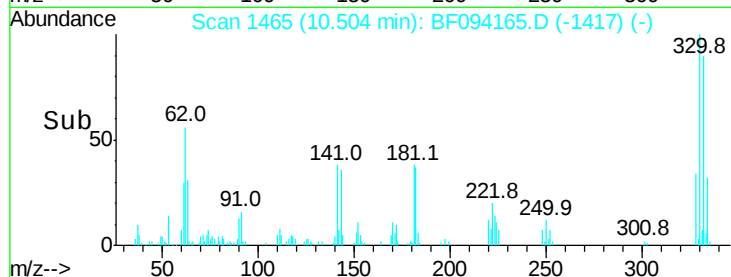
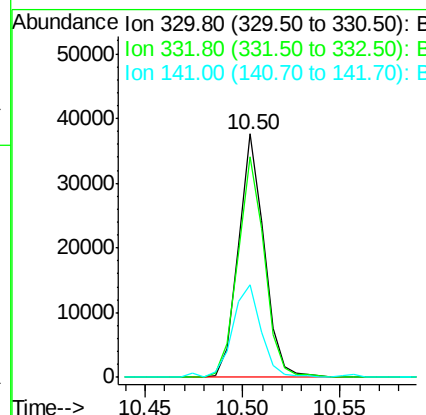
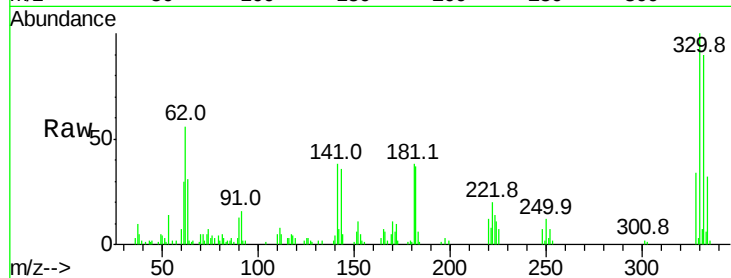
#41  
 2,4,6-Tribromophenol  
 Concen: 17.80 ng  
 RT: 10.50 min Scan# 1465  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 330     | 100   |       |       |
| 332     | 93.7  | 76.6  | 115.0 |
| 141     | 42.8  | 31.4  | 47.2  |

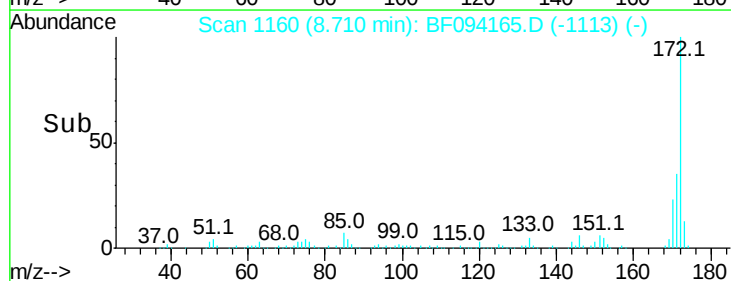
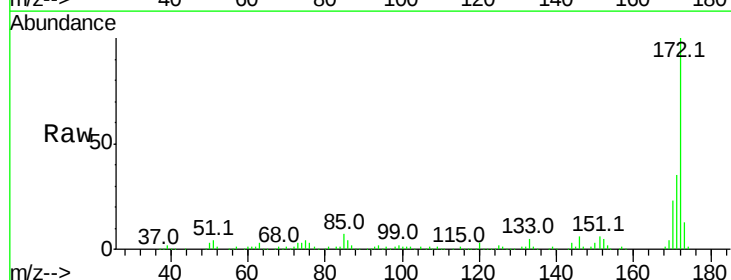
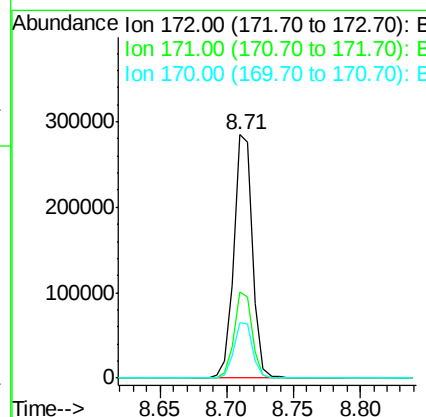
Manual Integrations  
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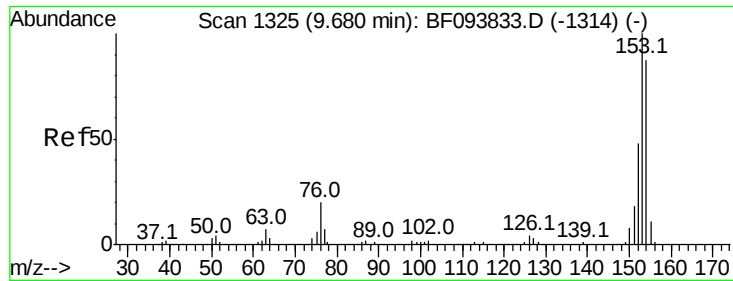
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#44  
 2-Fluorobiphenyl  
 Concen: 17.58 ng  
 RT: 8.71 min Scan# 1160  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 172     | 100   |       |       |
| 171     | 35.2  | 29.6  | 44.4  |
| 170     | 22.8  | 19.8  | 29.8  |





#51

Acenaphthene

Concen: 4.18 ng

RT: 9.57 min Scan# 1307

Delta R.T. -0.02 min

Lab File: BF094165.D

Acq: 4 Apr 2017 13:12

Instrument :

BNA\_F

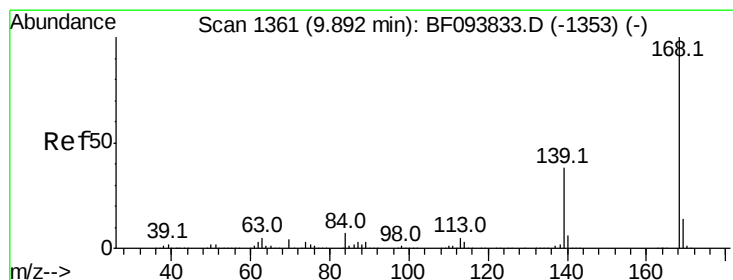
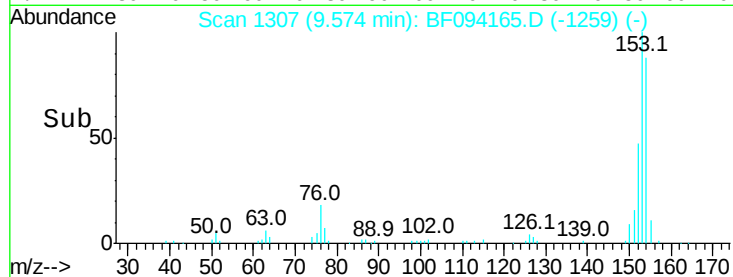
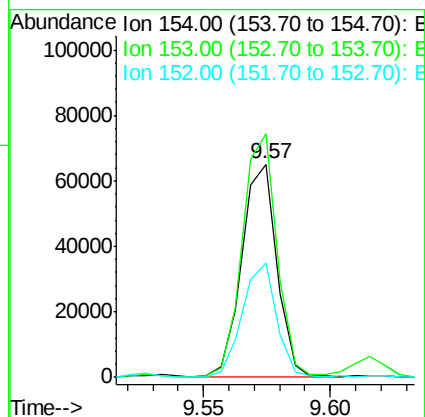
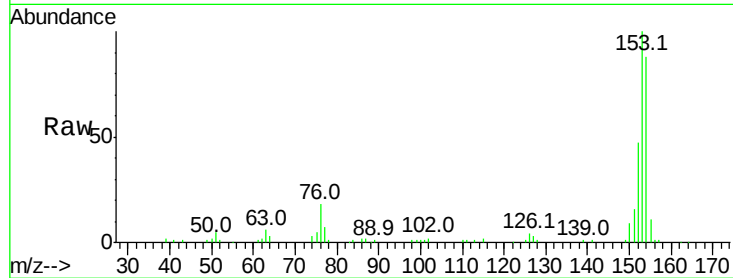
ClientSampleId :

E2-U4-WSWDL

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 154   | Resp: | 62785 |
| Ion Ratio | Lower | Upper |       |
| 154       | 100   |       |       |
| 153       | 114.2 | 90.5  | 135.7 |
| 152       | 53.9  | 43.6  | 65.4  |

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#54

Dibenzofuran

Concen: 2.92 ng

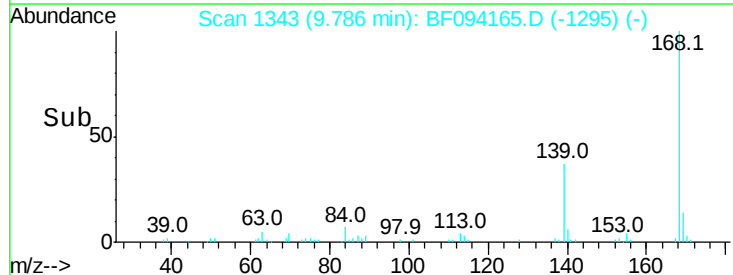
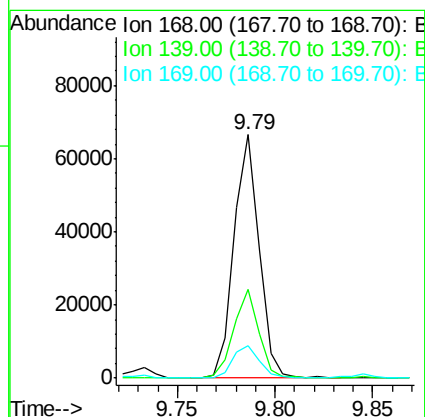
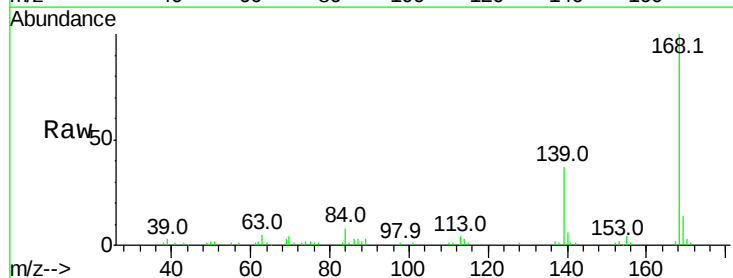
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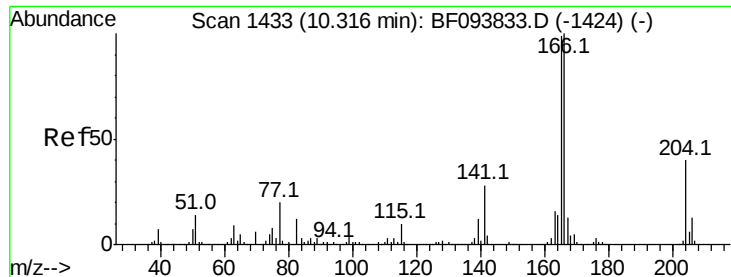
Delta R.T. -0.02 min

Lab File: BF094165.D

Acq: 4 Apr 2017 13:12

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 168   | Resp: | 59552 |
| Ion Ratio | Lower | Upper |       |
| 168       | 100   |       |       |
| 139       | 36.7  | 30.6  | 45.8  |
| 169       | 13.5  | 10.8  | 16.2  |





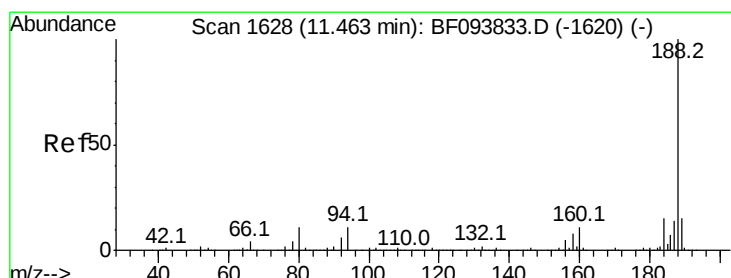
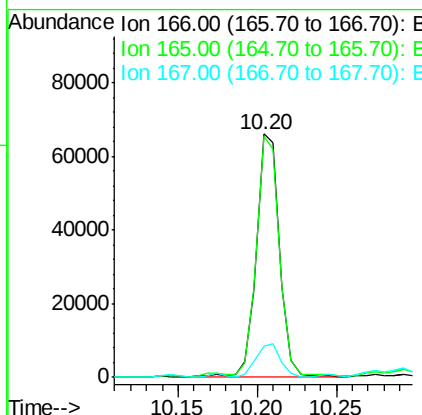
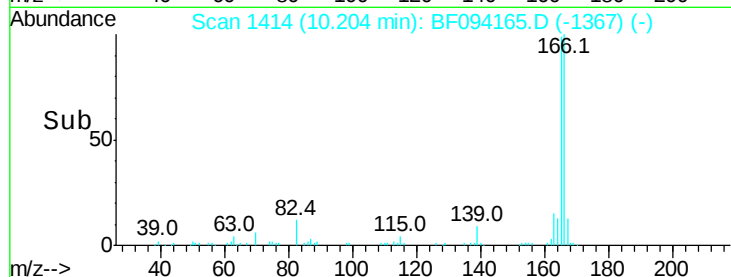
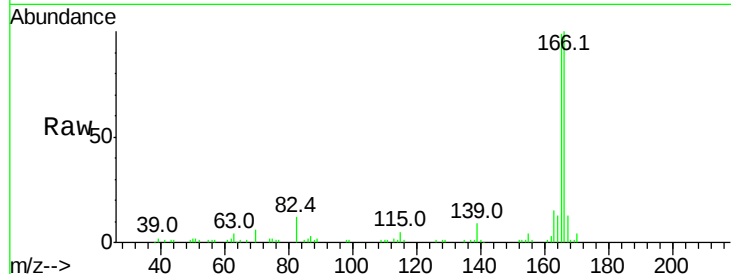
#57  
**Fluorene**  
 Concen: 4.00 ng  
 RT: 10.20 min Scan# 1414  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 166     | 100   |       |       |
| 165     | 99.1  | 78.8  | 118.2 |
| 167     | 12.9  | 10.6  | 16.0  |

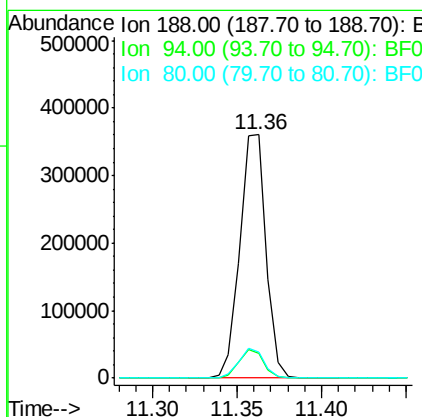
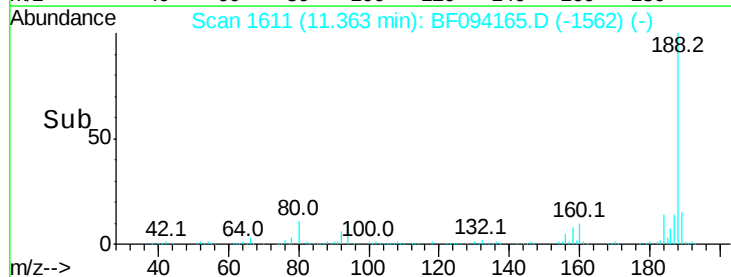
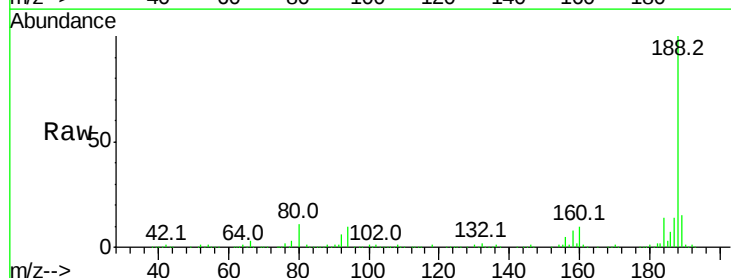
Manual Integrations  
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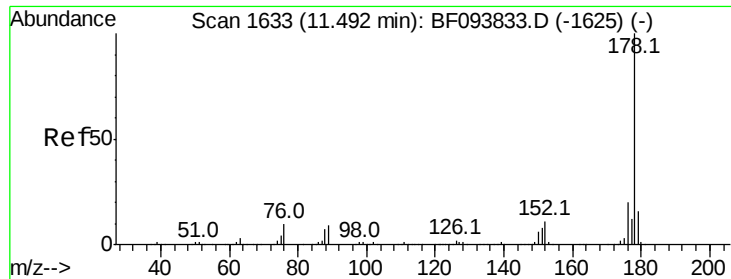
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#63  
**Phenanthrene-d10**  
 Concen: 20.00 ng  
 RT: 11.36 min Scan# 1611  
 Delta R.T. -0.01 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 188     | 100   |       |       |
| 94      | 10.0  | 9.4   | 14.2  |
| 80      | 10.5  | 10.2  | 15.2  |





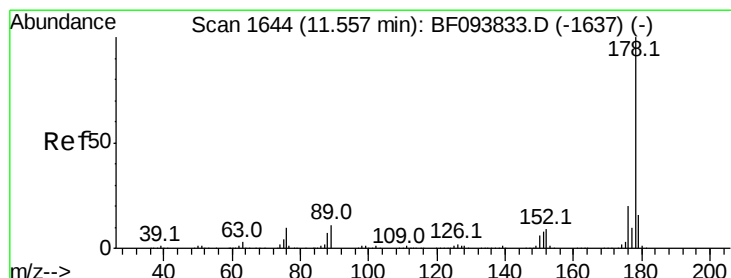
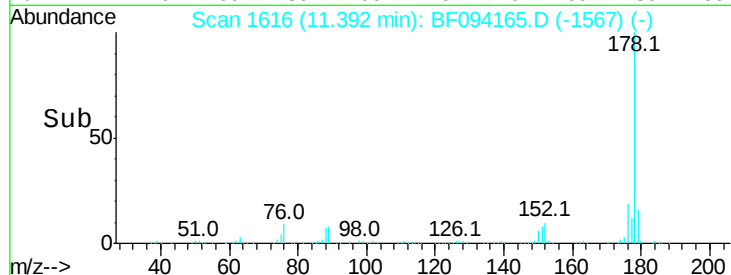
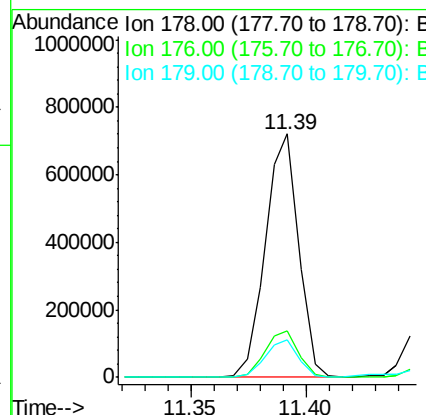
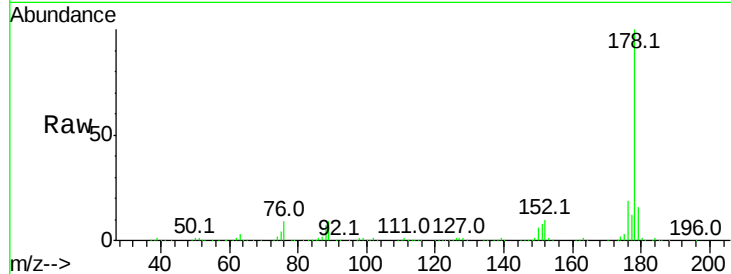
#70  
Phenanthrene  
Concen: 33.31 ng  
RT: 11.39 min Scan# 1616  
Delta R.T. -0.01 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

Instrument :  
BNA\_F  
ClientSampleId :  
E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 19.3  | 16.2  | 24.4  |
| 179     | 15.6  | 12.6  | 19.0  |

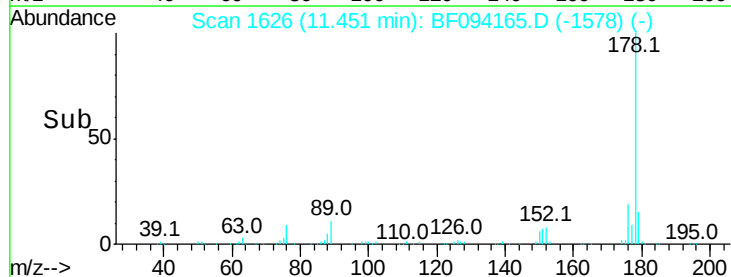
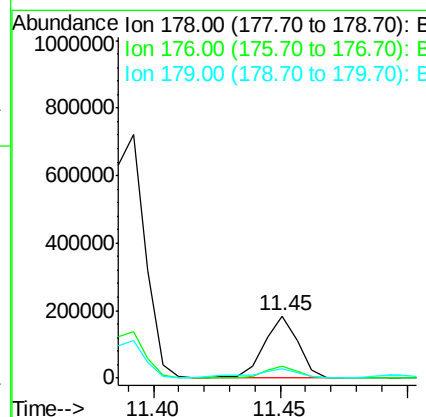
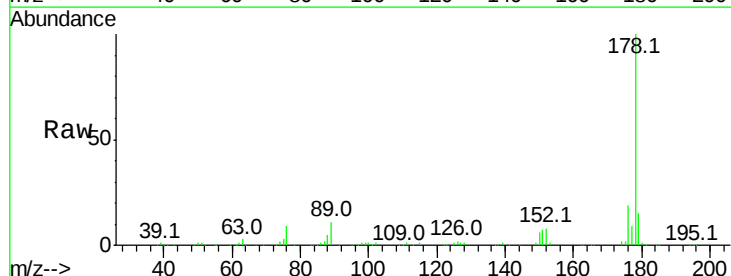
Manual Integrations  
APPROVED

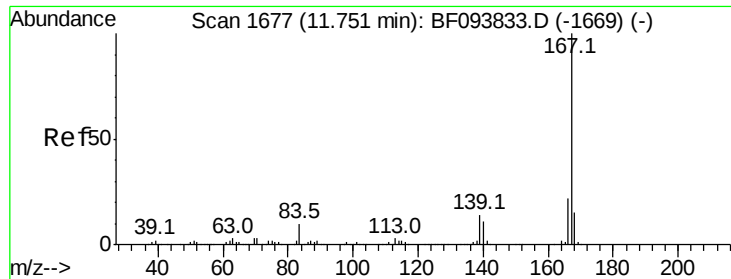
mohammad  
4/4/2017 5:35:46 PM



#71  
Anthracene  
Concen: 7.69 ng  
RT: 11.45 min Scan# 1626  
Delta R.T. -0.02 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 18.6  | 15.8  | 23.8  |
| 179     | 15.3  | 12.7  | 19.1  |





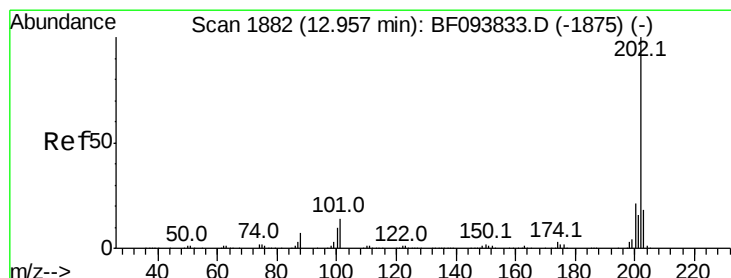
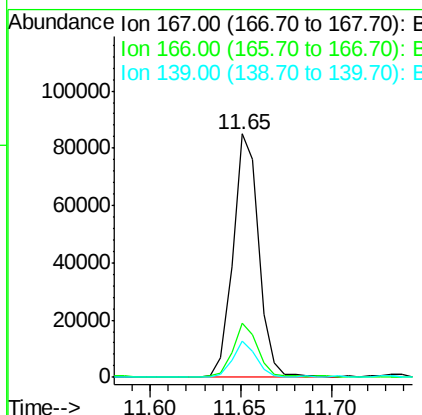
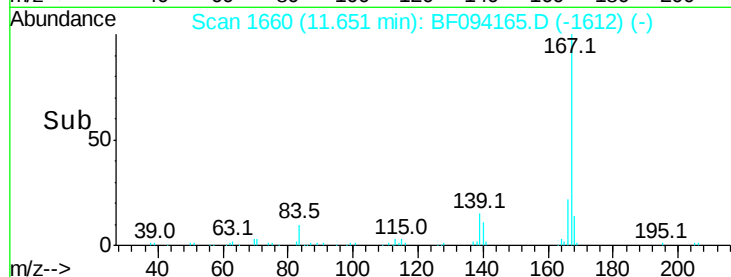
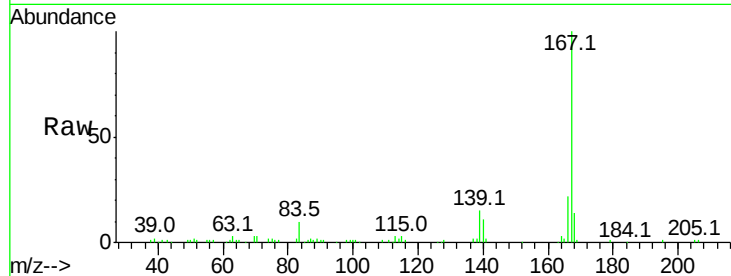
#72  
 Carbazole  
 Concen: 3.67 ng  
 RT: 11.65 min Scan# 1660  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

| Tot Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 167     | 100   |      |       |       |
| 166     | 22.1  | 18.1 | 27.1  |       |
| 139     | 15.1  | 11.7 | 17.5  |       |

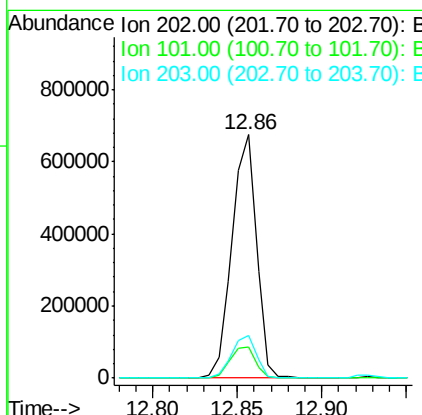
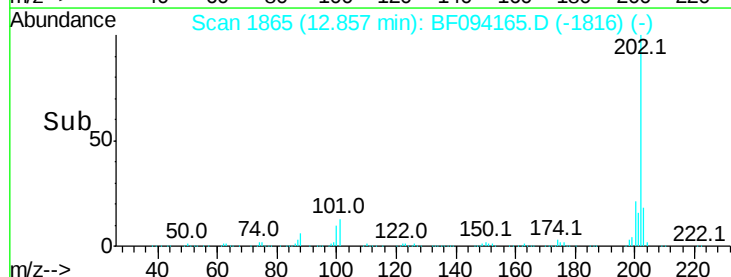
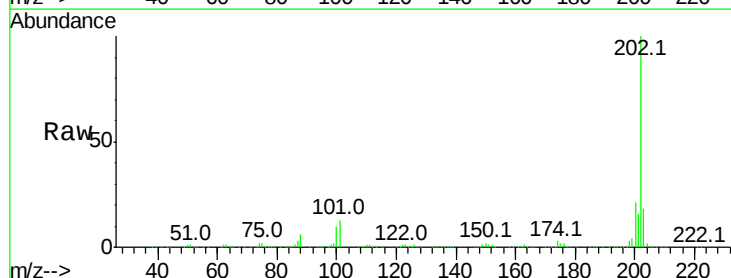
Manual Integrations  
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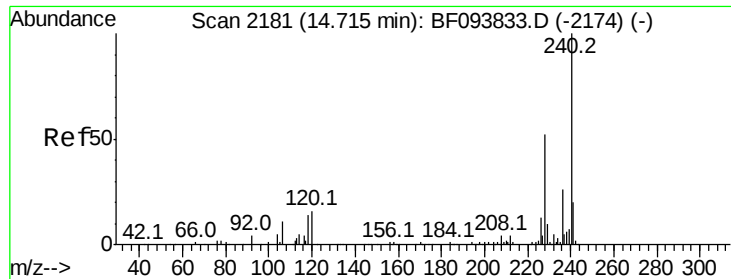
mohammad  
 4/4/2017 5:35:46 PM



#74  
 Fluoranthene  
 Concen: 30.73 ng  
 RT: 12.86 min Scan# 1865  
 Delta R.T. -0.01 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 202     | 100   |      |       |       |
| 101     | 13.0  | 0.0  | 33.2  |       |
| 203     | 17.6  | 0.0  | 38.1  |       |





#75

Chrysene-d12

Concen: 20.00 ng

RT: 14.62 min Scan# 2164

Delta R.T. -0.01 min

Lab File: BF094165.D

Acq: 4 Apr 2017 13:12

Instrument :

BNA\_F

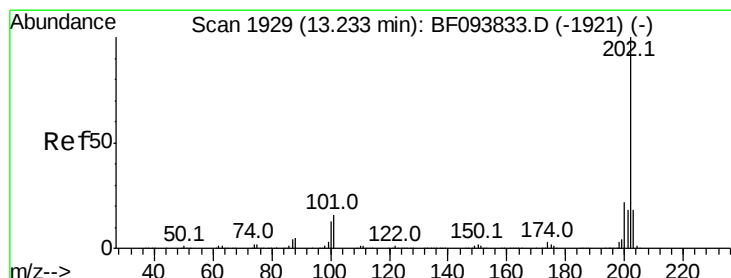
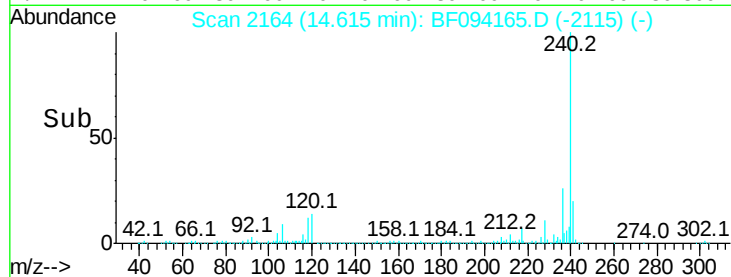
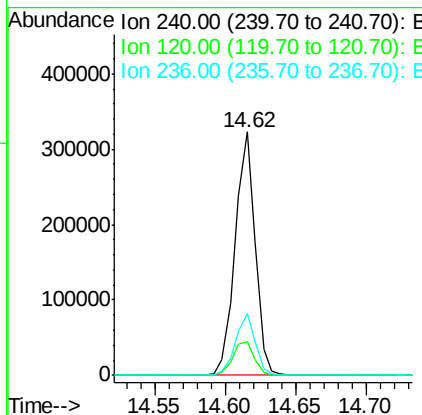
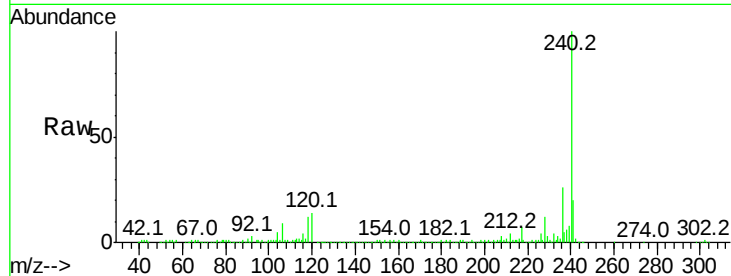
ClientSampleId :

E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 240     | 100   |       |       |
| 120     | 13.7  | 5.8   | 8.8#  |
| 236     | 25.6  | 20.5  | 30.7  |

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#77

Pyrene

Concen: 23.71 ng

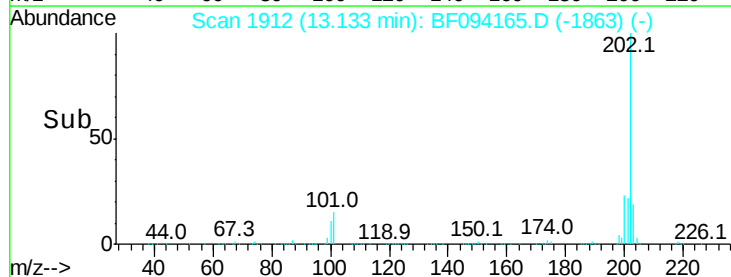
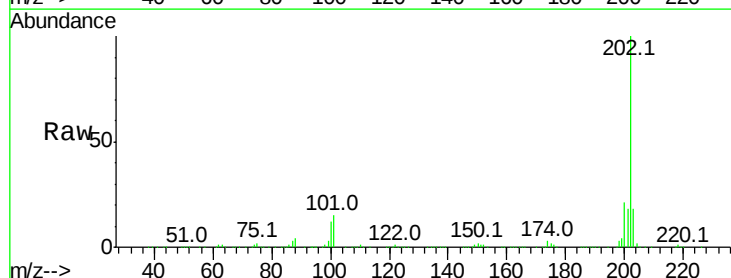
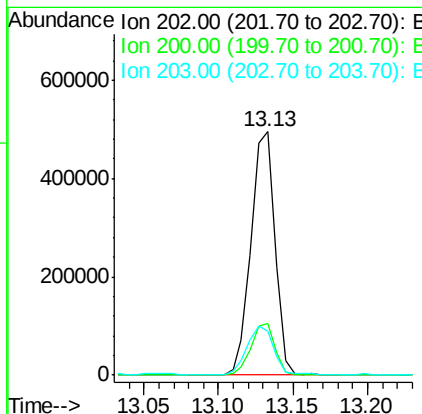
RT: 13.13 min Scan# 1912

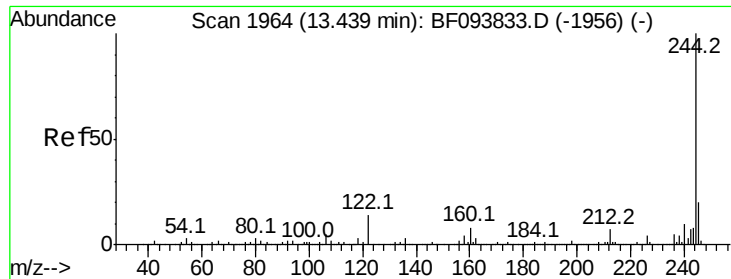
Delta R.T. -0.01 min

Lab File: BF094165.D

Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 200     | 21.4  | 17.6  | 26.4  |
| 203     | 18.1  | 14.4  | 21.6  |





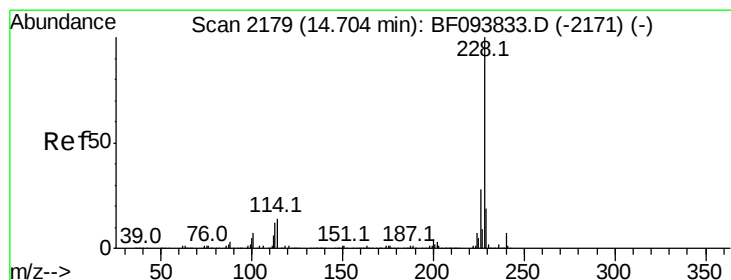
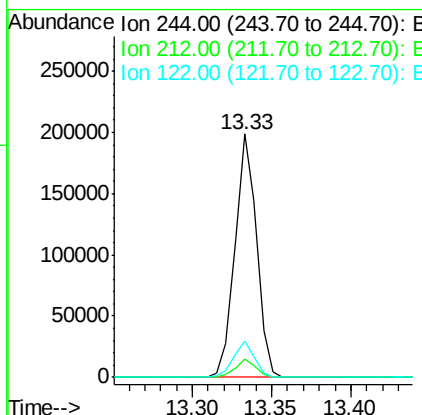
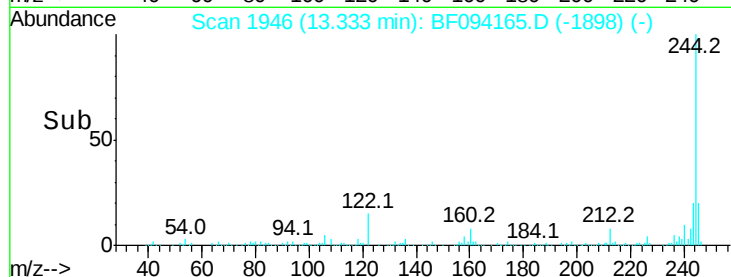
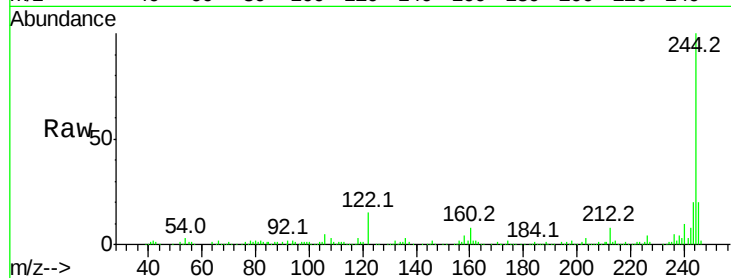
#78  
 Terphenyl-d14  
 Concen: 13.17 ng  
 RT: 13.33 min Scan# 1946  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 244     | 100   |       |       |
| 212     | 7.7   | 6.0   | 9.0   |
| 122     | 14.8  | 10.3  | 15.5  |

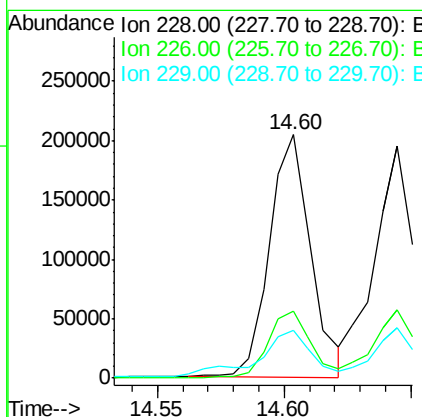
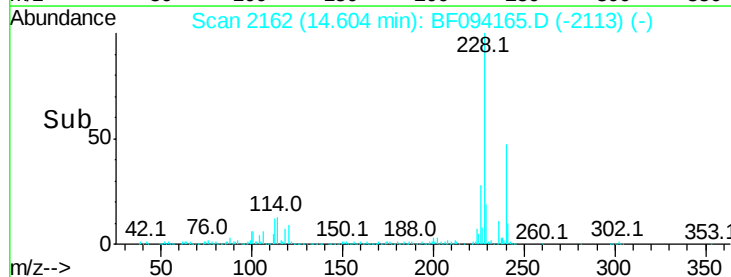
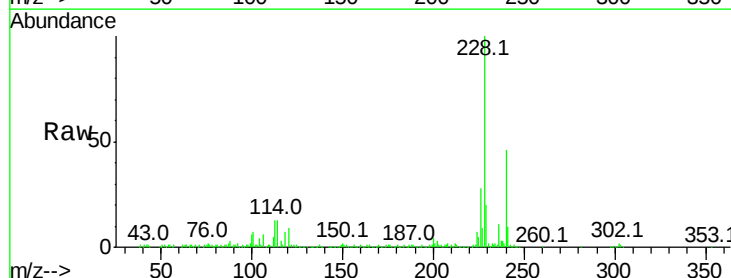
Manual Integrations  
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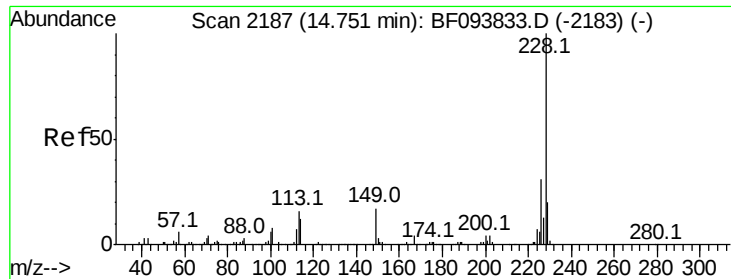
mohammad  
 4/4/2017 5:35:46 PM



#80  
 Benzo(a)anthracene  
 Concen: 12.53 ng  
 RT: 14.60 min Scan# 2162  
 Delta R.T. -0.01 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 27.8  | 22.6  | 33.8  |
| 229     | 19.8  | 16.3  | 24.5  |





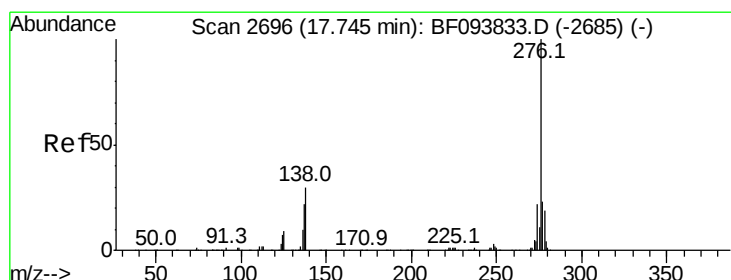
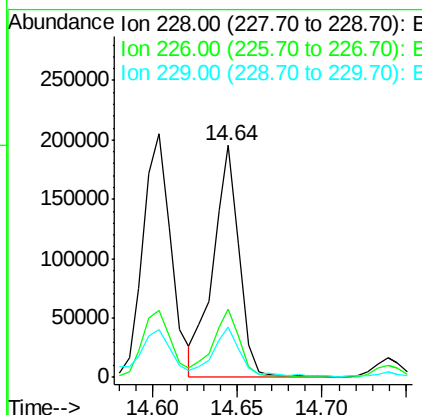
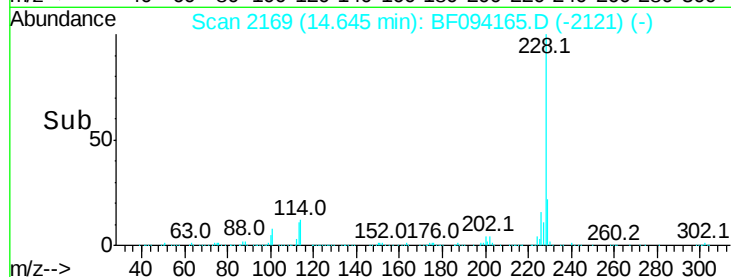
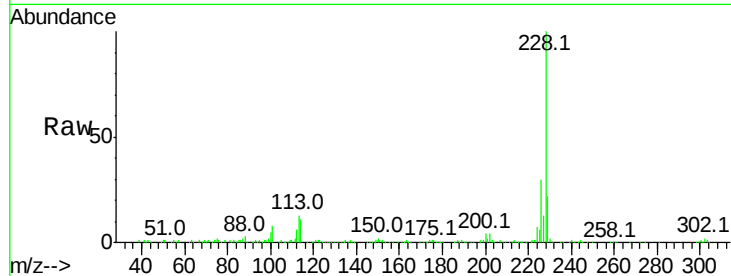
#82  
Chrysene  
Concen: 12.08 ng  
RT: 14.64 min Scan# 2169  
Delta R.T. -0.02 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

Instrument :  
BNA\_F  
ClientSampleId :  
E2-U4-WSWDL

|             |       |        |
|-------------|-------|--------|
| Tot Ion:228 | Resp: | 209049 |
| Ion Ratio   | Lower | Upper  |
| 228 100     |       |        |
| 226 29.6    | 24.9  | 37.3   |
| 229 21.9    | 15.8  | 23.6   |

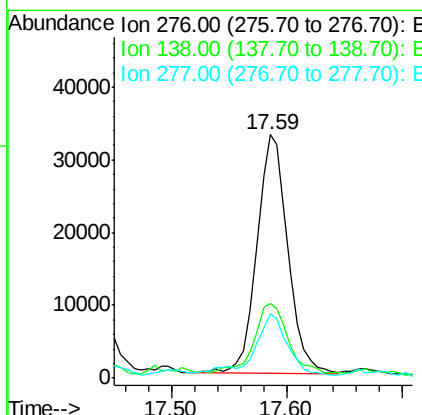
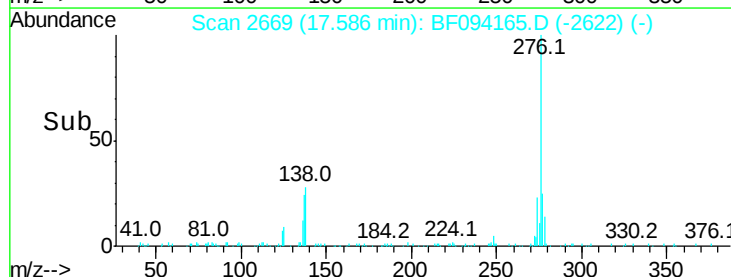
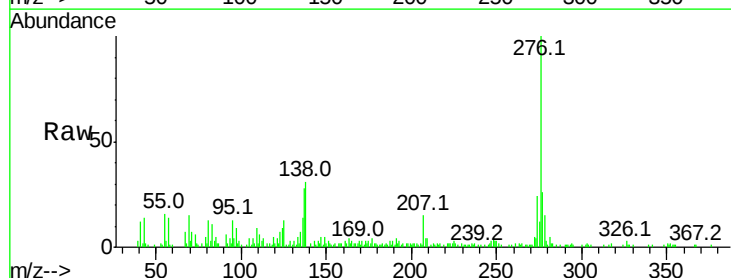
Manual Integrations  
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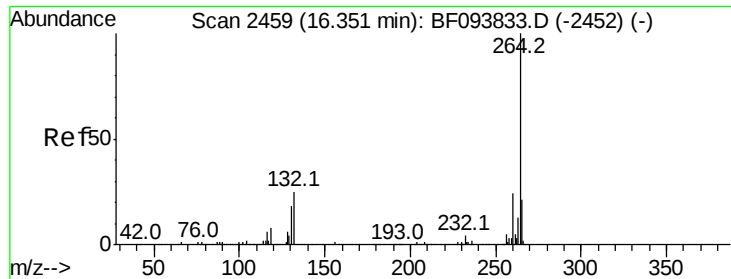
mohammad  
4/4/2017 5:35:46 PM



#85  
Indeno(1,2,3-cd)pyrene  
Concen: 4.07 ng  
RT: 17.59 min Scan# 2669  
Delta R.T. -0.02 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

|             |       |       |
|-------------|-------|-------|
| Tgt Ion:276 | Resp: | 61040 |
| Ion Ratio   | Lower | Upper |
| 276 100     |       |       |
| 138 32.9    | 27.8  | 41.6  |
| 277 28.7    | 20.2  | 30.4  |





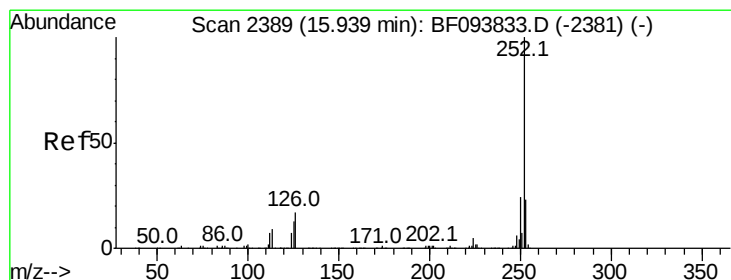
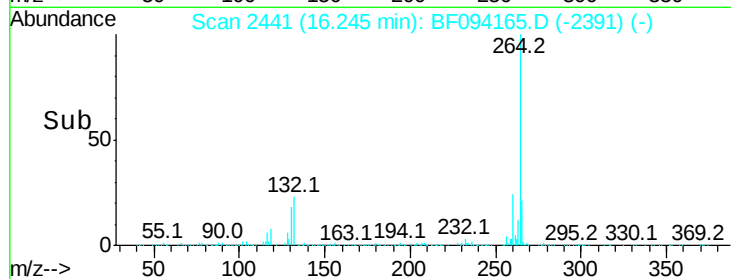
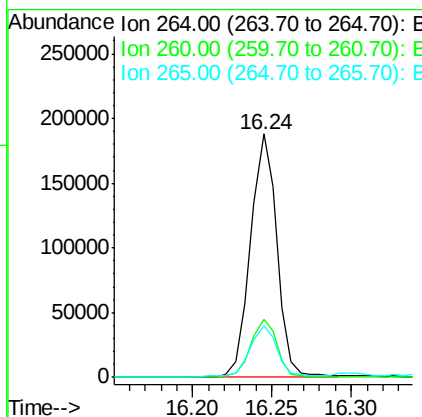
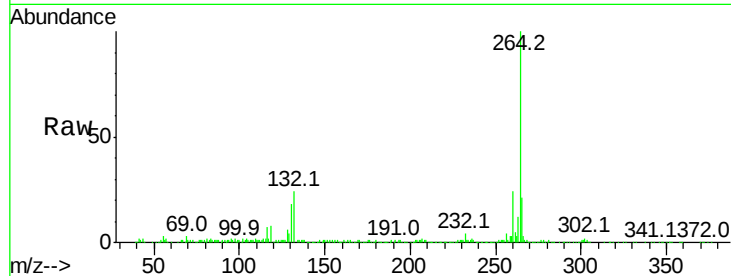
#86  
Pervlene-d12  
Concen: 20.00 ng  
RT: 16.24 min Scan# 2441  
Delta R.T. -0.01 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

Instrument :  
BNA\_F  
ClientSampleId :  
E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 264     | 100   |       |       |
| 260     | 23.7  | 19.5  | 29.3  |
| 265     | 21.4  | 17.2  | 25.8  |

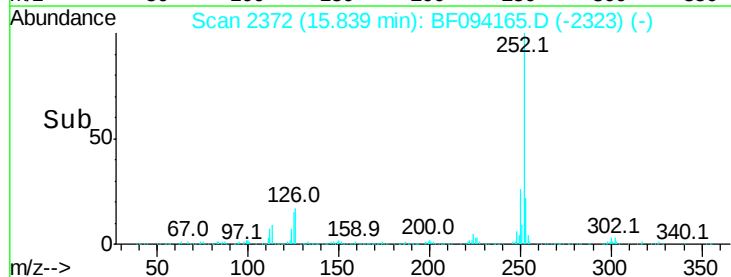
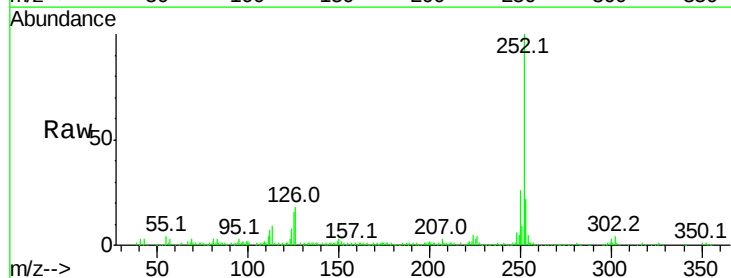
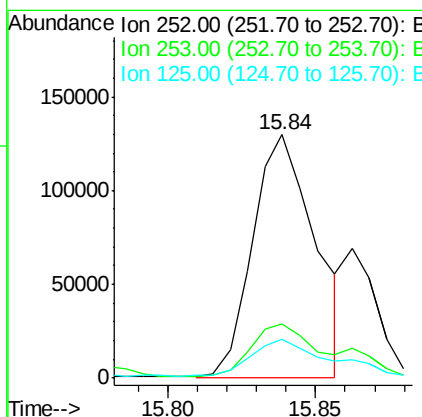
Manual Integrations  
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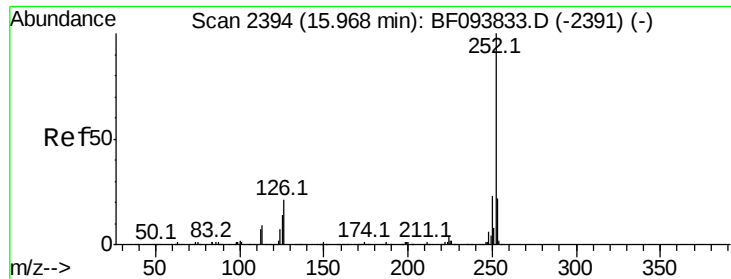
mohammad  
4/4/2017 5:35:46 PM



#87  
Benzo(b)fluoranthene  
Concen: 14.29 ng m  
RT: 15.84 min Scan# 2372  
Delta R.T. -0.01 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.4  | 18.1  | 27.1  |
| 125     | 15.8  | 9.8   | 14.8# |





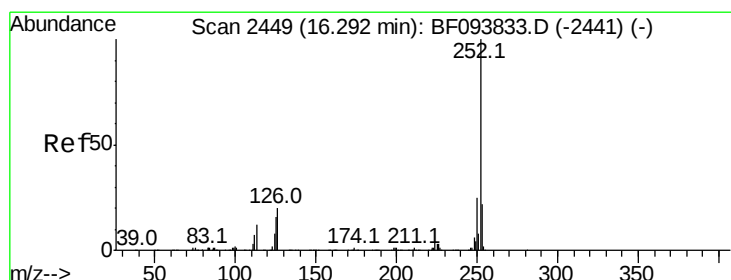
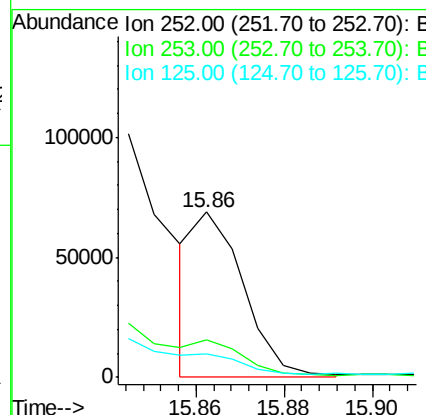
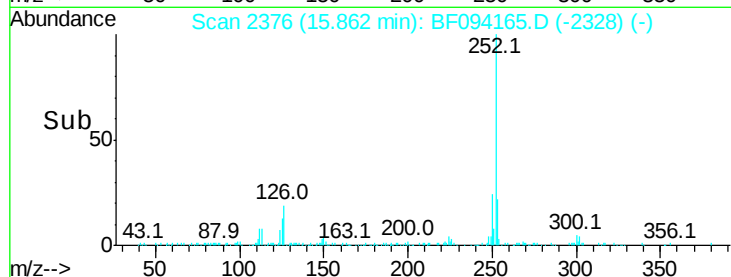
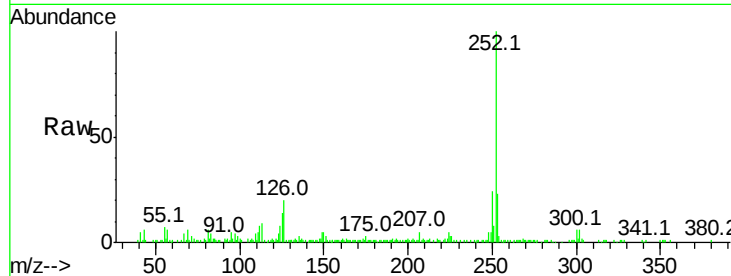
#88  
Benzo(k)fluoranthene  
Concen: 4.09 ng m  
RT: 15.86 min Scan# 2376  
Delta R.T. -0.02 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

Instrument :  
BNA\_F  
ClientSampleId :  
E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.7  | 18.4  | 27.6  |
| 125     | 14.3  | 13.1  | 19.7  |

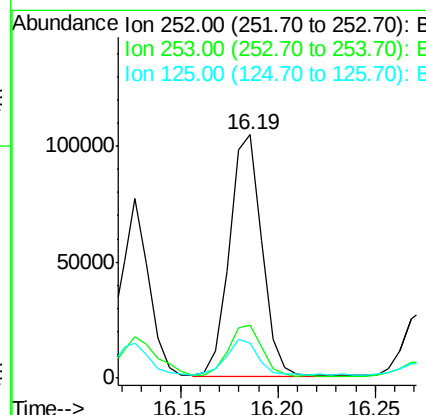
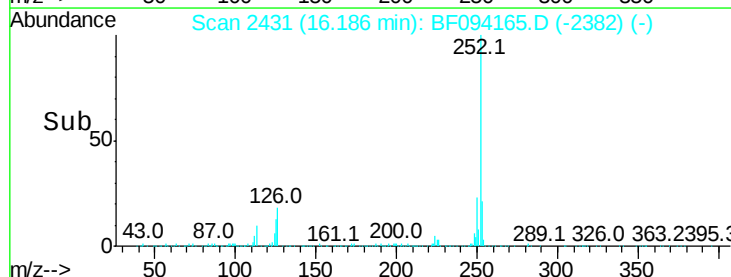
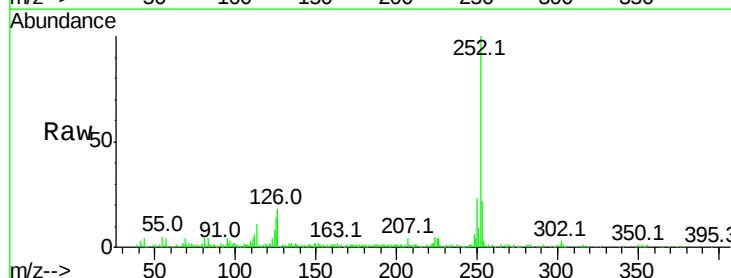
Manual Integrations  
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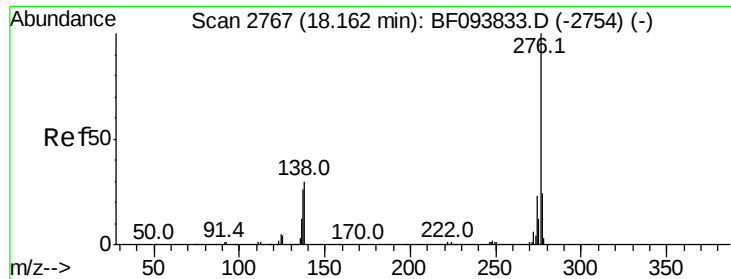
mohammad  
4/4/2017 5:35:46 PM



#89  
Benzo(a)pyrene  
Concen: 9.84 ng  
RT: 16.19 min Scan# 2431  
Delta R.T. -0.01 min  
Lab File: BF094165.D  
Acq: 4 Apr 2017 13:12

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 21.9  | 17.5  | 26.3  |
| 125     | 14.5  | 11.0  | 16.4  |





#91  
 Benzo(a,h,i)perylene  
 Concen: 5.70 ng  
 RT: 17.99 min Scan# 2737  
 Delta R.T. -0.02 min  
 Lab File: BF094165.D  
 Acq: 4 Apr 2017 13:12

Instrument :  
 BNA\_F  
 ClientSampleId :  
 E2-U4-WSWDL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 277     | 23.3  | 18.6  | 28.0  |
| 138     | 31.9  | 25.4  | 38.0  |

Manual Integrations  
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