

Data Path : \\74.0.250.170\SV0ASRV\HPCHEM1\BNA F\DATA\BF030818\  
 Data File : BF103515.D  
 Acq On : 8 Mar 2018 14:41  
 Operator : SJ/JU  
 Sample : J1749-01  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 BU-01-030618

Manual Integrations  
 APPROVED

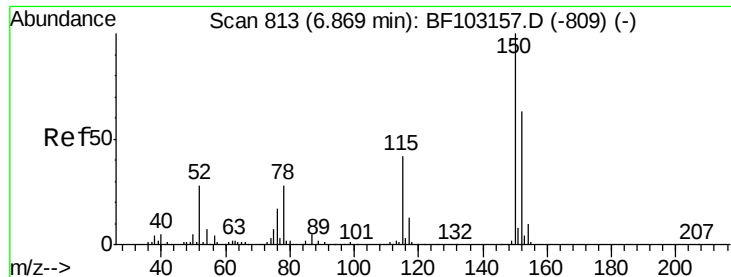
Sohil  
 3/9/2018 11:39:19 AM

Quant Time: Mar 08 16:22:29 2018  
 Quant Method : Z:\HPCHEM1\BNA F\METHODS\8270-BF022218.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Thu Mar 08 14:20:19 2018  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|-------|------|----------|--------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 6.86  | 152  | 146673   | 20.00  | ng    | 0.00     |
| 21) Naphthalene-d8          | 8.15  | 136  | 626459   | 20.00  | ng    | 0.00     |
| 38) Acenaphthene-d10        | 9.90  | 164  | 262670   | 20.00  | ng    | 0.00     |
| 63) Phenanthrene-d10        | 11.40 | 188  | 451361   | 20.00  | ng    | 0.00     |
| 75) Chrysene-d12            | 14.05 | 240  | 289077   | 20.00  | ng    | -0.01    |
| 86) Perylene-d12            | 15.56 | 264  | 270661   | 20.00  | ng    | -0.01    |
| System Monitoring Compounds |       |      |          |        |       |          |
| 5) 2-Fluorophenol           | 5.49  | 112  | 586839   | 60.51  | ng    | 0.00     |
| 7) Phenol-d6                | 6.50  | 99   | 714862   | 60.24  | ng    | 0.00     |
| 23) Nitrobenzene-d5         | 7.43  | 82   | 439098   | 40.03  | ng    | 0.00     |
| 41) 2,4,6-Tribromophenol    | 10.70 | 330  | 118943   | 53.50  | ng    | 0.00     |
| 44) 2-Fluorobiphenyl        | 9.22  | 172  | 654571   | 36.95  | ng    | 0.00     |
| 78) Terphenyl-d14           | 12.98 | 244  | 529324   | 44.02  | ng    | 0.00     |
| Target Compounds            |       |      |          |        |       | Qvalue   |
| 51) Acenaphthene            | 9.93  | 154  | 50223    | 3.215  | ng    | 99       |
| 54) Dibenzofuran            | 10.12 | 168  | 44126    | 2.058  | ng    | 97       |
| 57) Fluorene                | 10.46 | 166  | 69719    | 3.816  | ng    | 98       |
| 70) Phenanthrene            | 11.42 | 178  | 443778   | 17.866 | ng    | 99       |
| 71) Anthracene              | 11.48 | 178  | 167422   | 6.573  | ng    | 97       |
| 72) Carbazole               | 11.65 | 167  | 53227    | 2.098  | ng    | 98       |
| 73) Di-n-butylphthalate     | 11.94 | 149  | 277388   | 8.739  | ng    | 98       |
| 74) Fluoranthene            | 12.62 | 202  | 523249   | 20.962 | ng    | 99       |
| 77) Pyrene                  | 12.85 | 202  | 439037   | 19.480 | ng    | 99       |
| 80) Benzo(a)anthracene      | 14.04 | 228  | 187338   | 9.988  | ng    | 98       |
| 82) Chrysene                | 14.08 | 228  | 183517   | 10.077 | ng    | 98       |
| 85) Indeno(1,2,3-cd)pyrene  | 17.09 | 276  | 80853    | 5.608  | ng    | 98       |
| 87) Benzo(b)fluoranthene    | 15.12 | 252  | 190511m  | 10.705 | ng    |          |
| 88) Benzo(k)fluoranthene    | 15.14 | 252  | 64179m   | 3.830  | ng    |          |
| 89) Benzo(a)pyrene          | 15.49 | 252  | 138966   | 8.745  | ng    | # 96     |
| 91) Benzo(g,h,i)perylene    | 17.56 | 276  | 79049    | 6.587  | ng    | # 90     |

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





#1

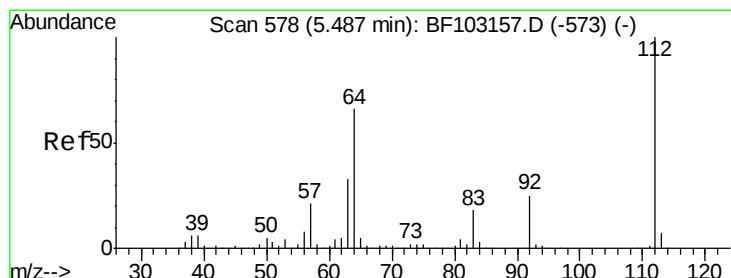
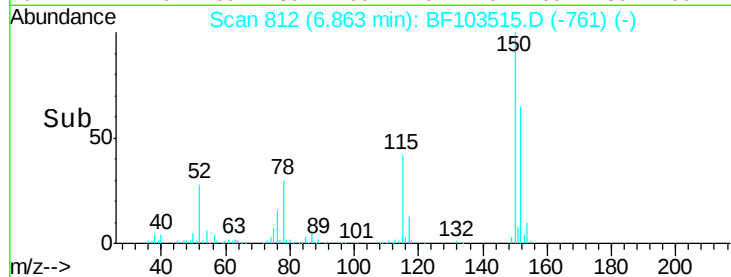
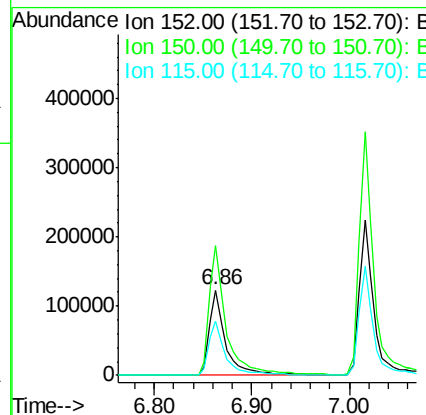
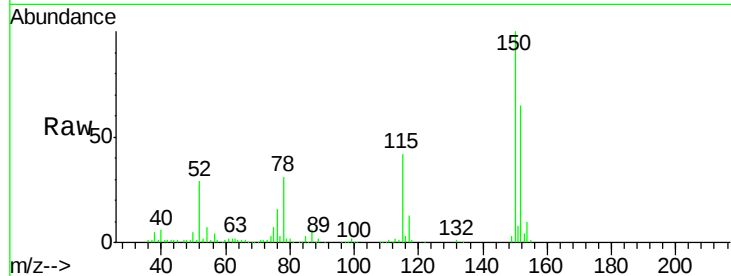
1,4-Dichlorobenzene-d4  
Concen: 20.000 ng  
RT: 6.86 min Scan# 812  
Delta R.T. 0.00 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 150     | 152.9 | 124.6 | 186.8 |
| 115     | 63.8  | 50.1  | 75.1  |

Manual Integrations  
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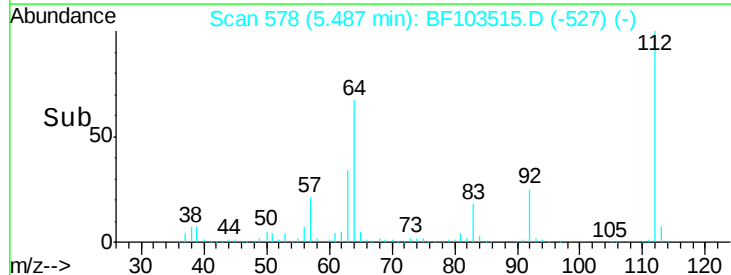
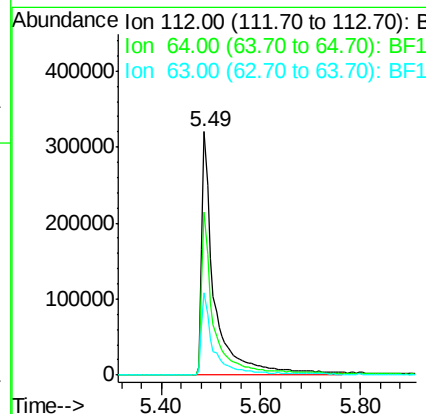
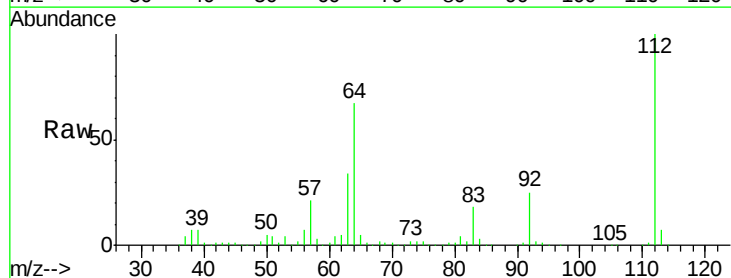
Sohil  
3/9/2018 11:39:19 AM

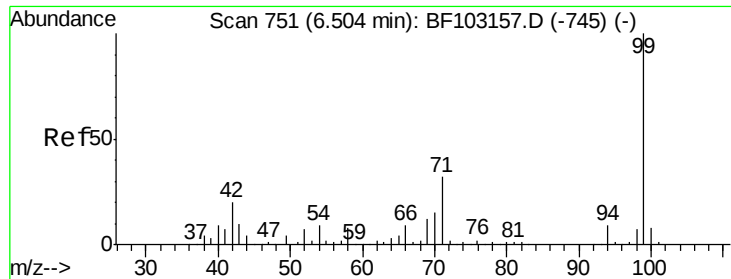


#5

2-Fluorophenol  
Concen: 60.512 ng  
RT: 5.49 min Scan# 578  
Delta R.T. 0.00 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 64      | 66.9  | 47.9  | 71.9  |
| 63      | 33.9  | 23.7  | 35.5  |





#7

Phenol-d6

Concen: 60.241 ng

RT: 6.50 min Scan# 750

Delta R.T. -0.01 min

Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

Instrument :

BNA\_F

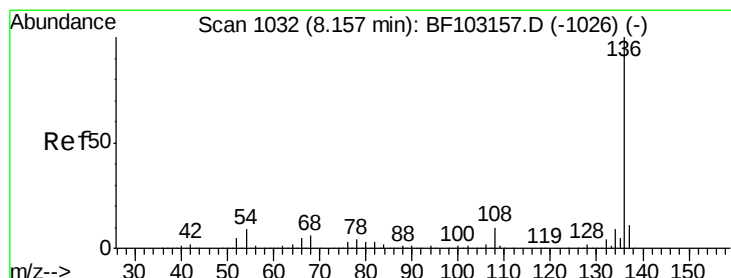
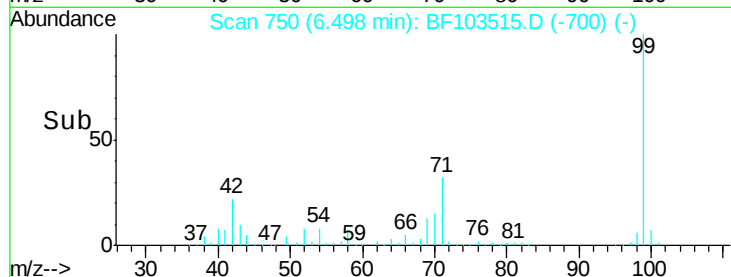
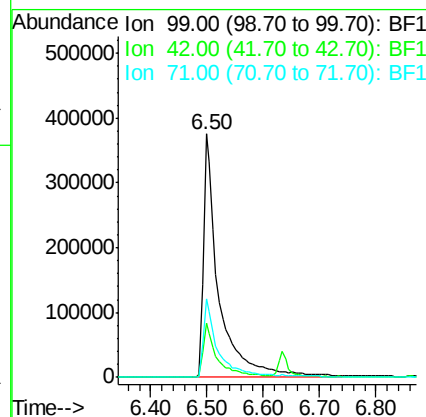
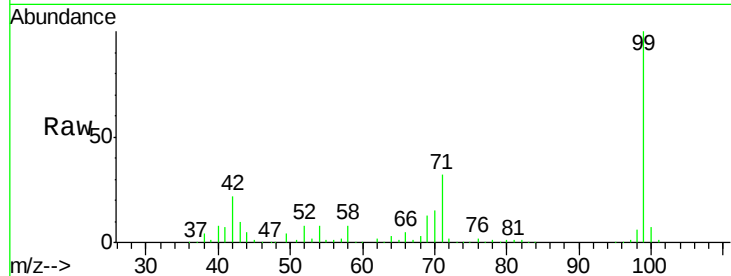
ClientSampleId :

BU-01-030618

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 99    | Resp: | 714862 |
| Ion Ratio | Lower | Upper |        |
| 99        | 100   |       |        |
| 42        | 22.1  | 14.5  | 21.7#  |
| 71        | 32.2  | 25.4  | 38.0   |

Manual Integrations  
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#21

Naphthalene-d8

Concen: 20.000 ng

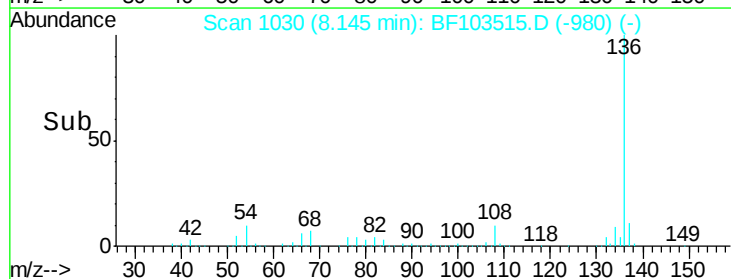
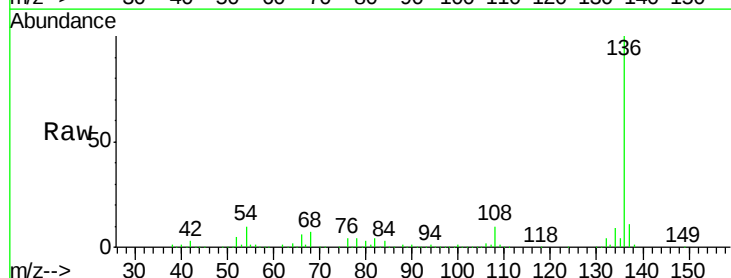
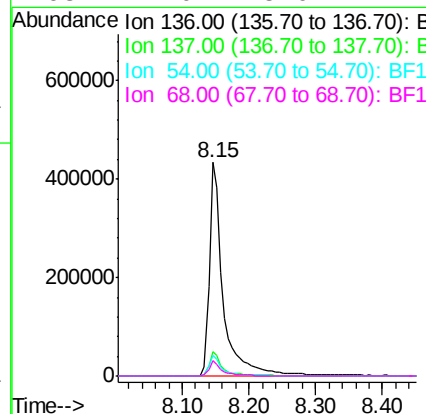
RT: 8.15 min Scan# 1030

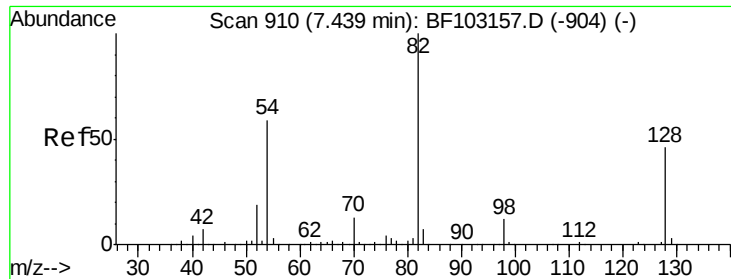
Delta R.T. -0.01 min

Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 136   | Resp: | 626459 |
| Ion Ratio | Lower | Upper |        |
| 136       | 100   |       |        |
| 137       | 11.3  | 8.9   | 13.3   |
| 54        | 9.8   | 6.6   | 9.8    |
| 68        | 7.0   | 5.0   | 7.4    |





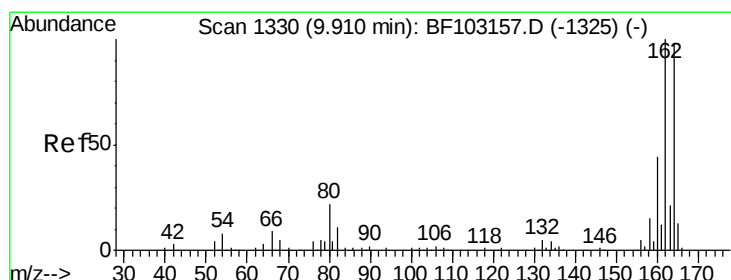
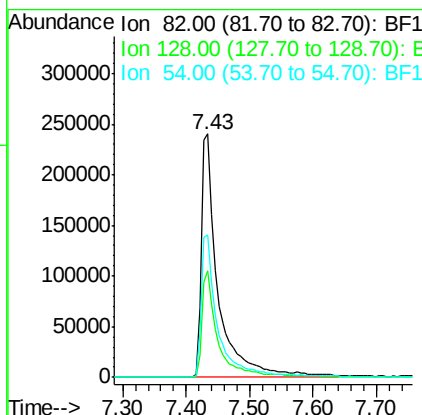
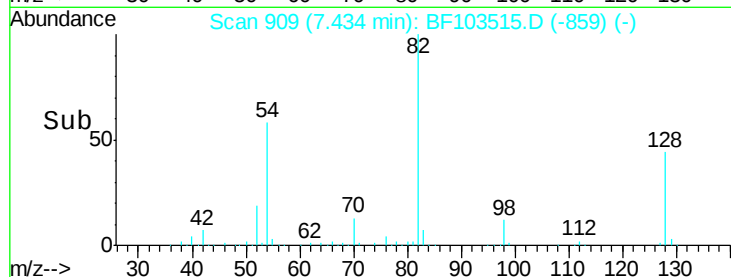
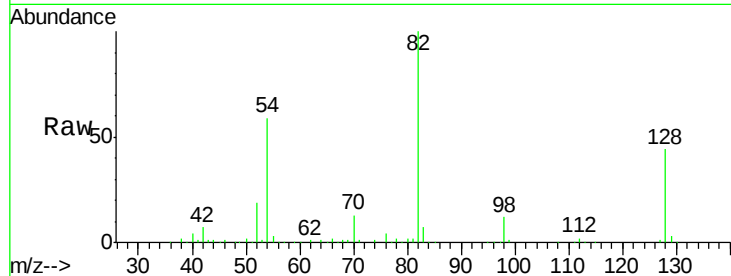
#23  
Nitrobenzene-d5  
Concen: 40.028 ng  
RT: 7.43 min Scan# 909  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 82      | 100   |       |       |
| 128     | 43.8  | 36.1  | 54.1  |
| 54      | 58.7  | 41.4  | 62.2  |

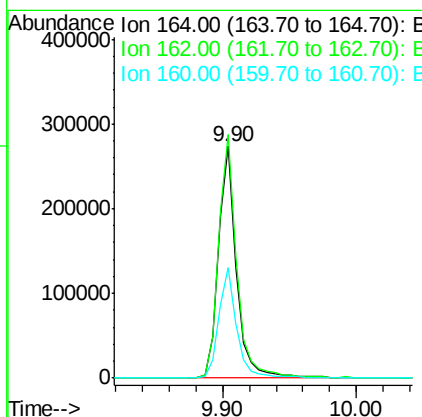
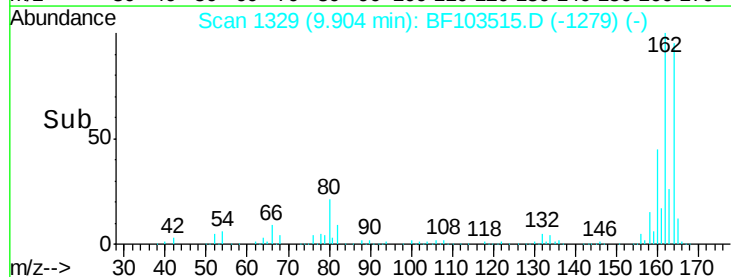
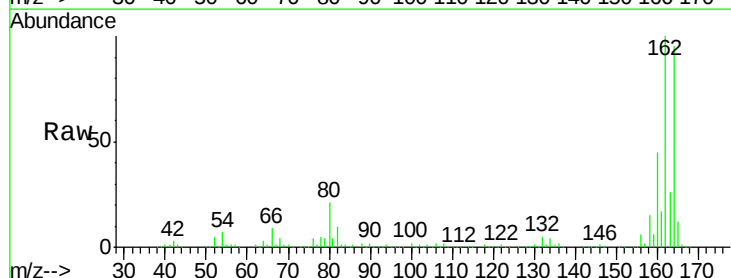
Manual Integrations  
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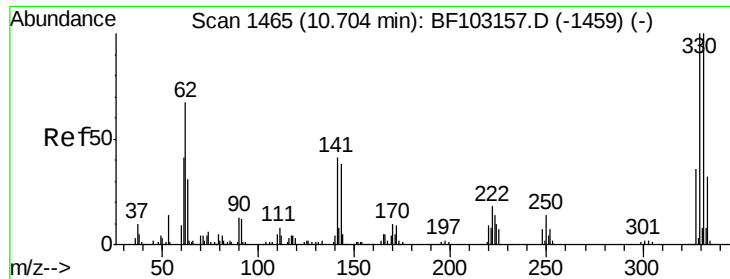
Sohil  
3/9/2018 11:39:19 AM



#38  
Acenaphthene-d10  
Concen: 20.000 ng  
RT: 9.90 min Scan# 1329  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 162     | 104.9 | 86.1  | 129.1 |
| 160     | 47.4  | 38.3  | 57.5  |





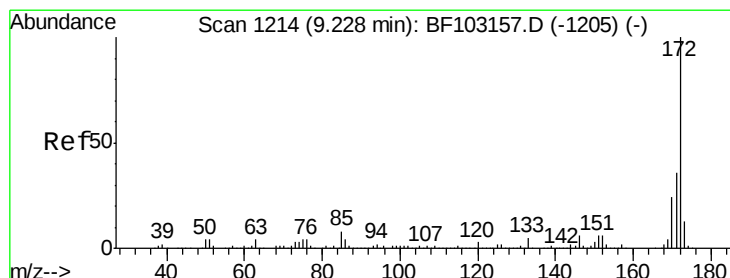
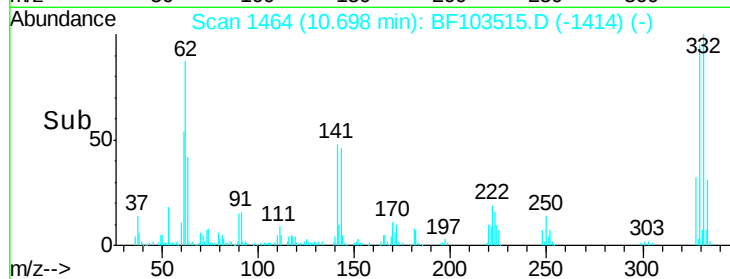
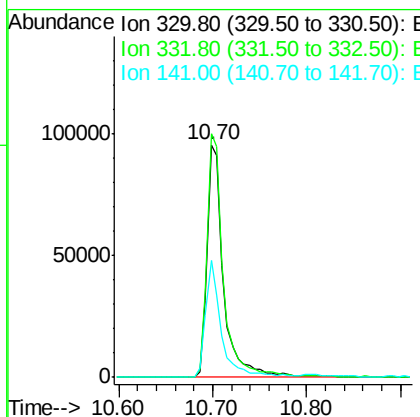
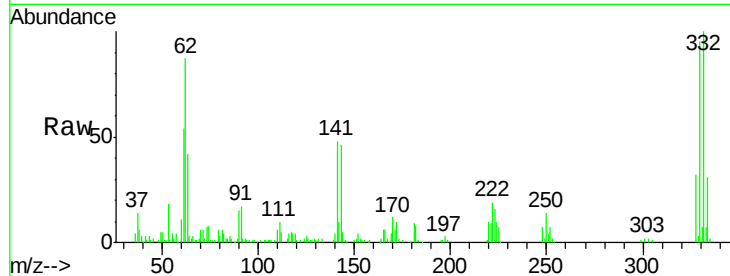
#41  
 2,4,6-Tribromophenol  
 Concen: 53.497 ng  
 RT: 10.70 min Scan# 1464  
 Delta R.T. -0.01 min  
 Lab File: BF103515.D  
 Acq: 8 Mar 2018 14:41

Instrument :  
 BNA\_F  
 ClientSampleId :  
 BU-01-030618

| Tot Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 330     | 100   |      |       |       |
| 332     | 103.0 | 77.0 | 115.6 |       |
| 141     | 47.2  | 29.9 | 44.9  |       |

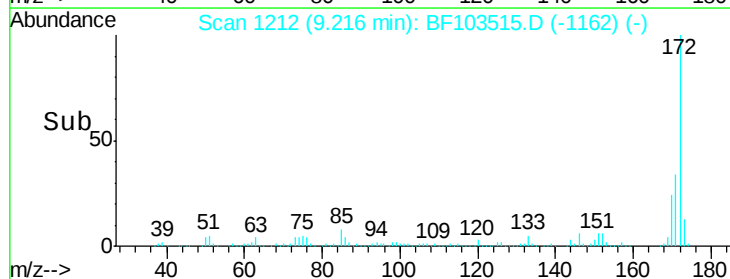
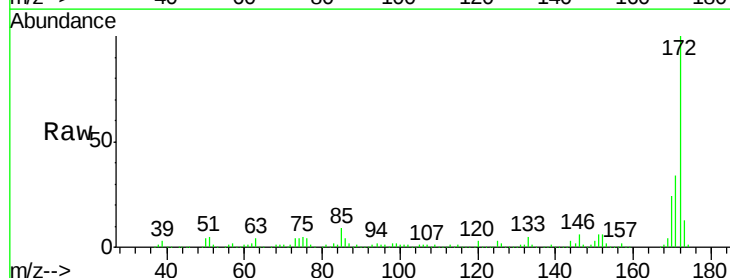
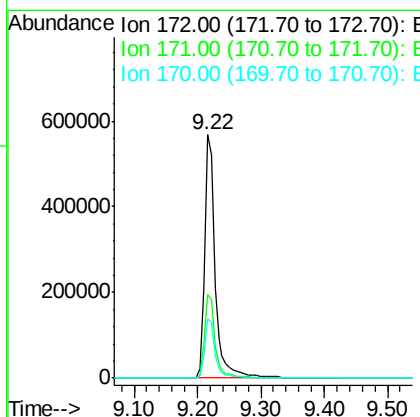
Manual Integrations  
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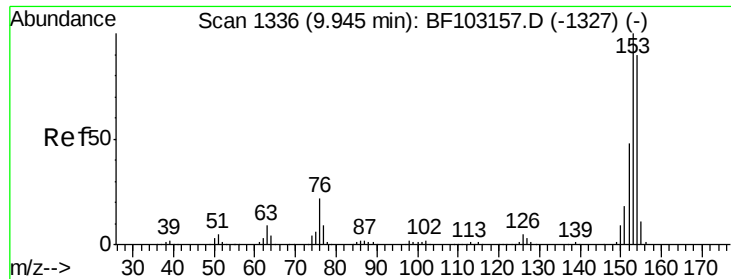
Sohil  
 3/9/2018 11:39:19 AM



#44  
 2-Fluorobiphenyl  
 Concen: 36.953 ng  
 RT: 9.22 min Scan# 1212  
 Delta R.T. -0.01 min  
 Lab File: BF103515.D  
 Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 172     | 100   |      |       |       |
| 171     | 34.4  | 29.7 | 44.5  |       |
| 170     | 24.2  | 19.6 | 29.4  |       |





#51

Acenaphthene

Concen: 3.215 ng

RT: 9.93 min Scan# 1334

Delta R.T. -0.01 min

Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

Instrument :

BNA\_F

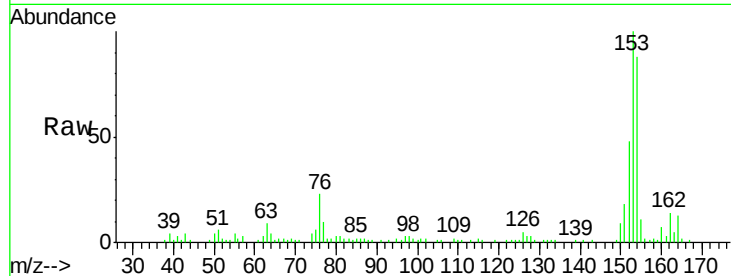
ClientSampleId :

BU-01-030618

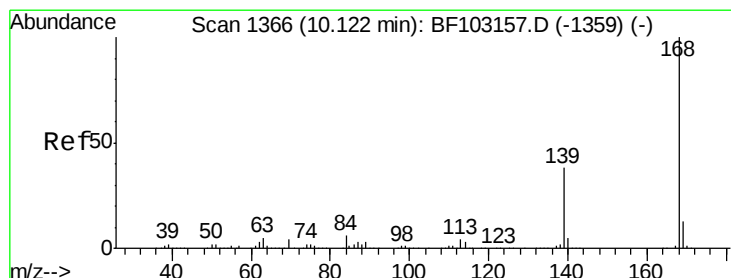
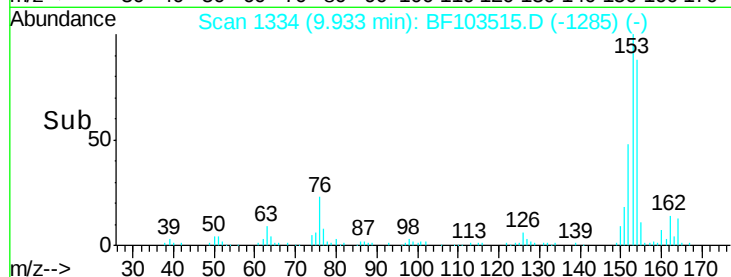
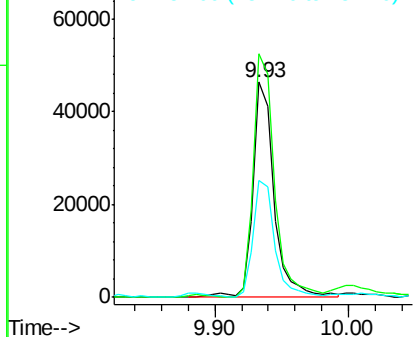
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|-----------|-------|-------|-------|
| Tot Ion:  | 154   | Resp: | 50223 |
| Ion Ratio | Lower | Upper |       |
| 154       | 100   |       |       |
| 153       | 113.1 | 91.2  | 136.8 |
| 152       | 54.5  | 43.8  | 65.8  |

Manual Integrations  
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3/9/2018 11:39:19 AM



Abundance Ion 154.00 (153.70 to 154.70): E  
Ion 153.00 (152.70 to 153.70): E  
Ion 152.00 (151.70 to 152.70): E



#54

Dibenzofuran

Concen: 2.058 ng

RT: 10.12 min Scan# 1365

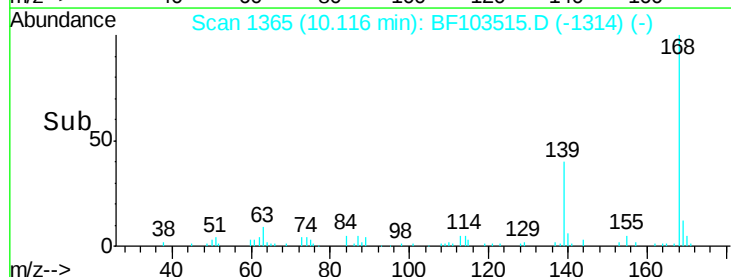
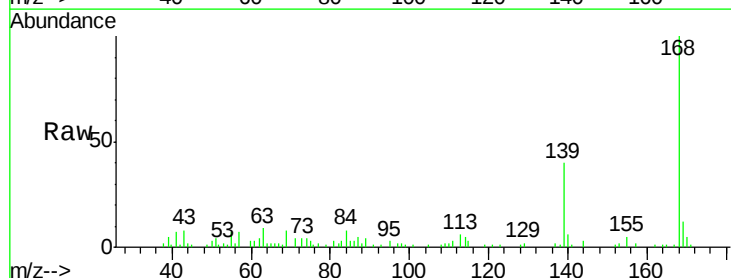
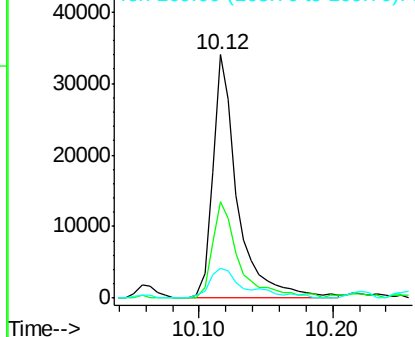
Delta R.T. 0.00 min

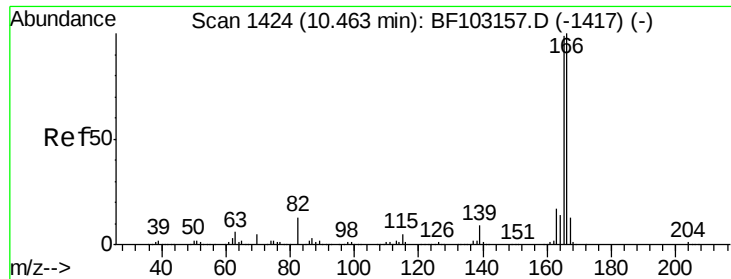
Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 168   | Resp: | 44126 |
| Ion Ratio | Lower | Upper |       |
| 168       | 100   |       |       |
| 139       | 39.8  | 30.1  | 45.1  |
| 169       | 12.4  | 10.9  | 16.3  |

Abundance Ion 168.00 (167.70 to 168.70): E  
Ion 139.00 (138.70 to 139.70): E  
Ion 169.00 (168.70 to 169.70): E





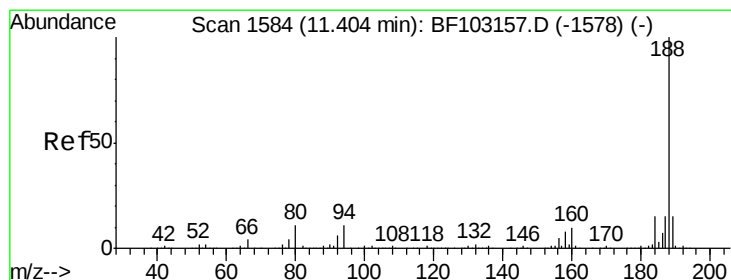
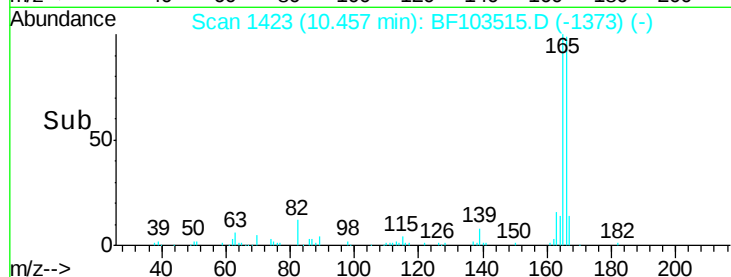
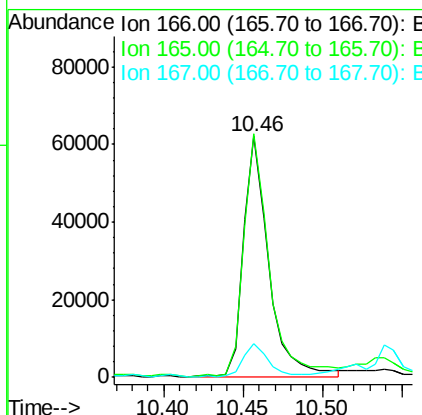
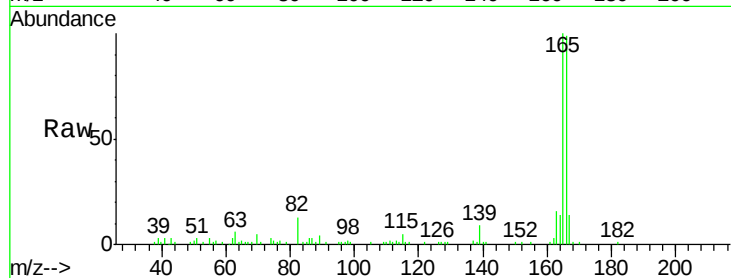
#57  
**Fluorene**  
 Concen: 3.816 ng  
 RT: 10.46 min Scan# 1423  
 Delta R.T. -0.01 min  
 Lab File: BF103515.D  
 Acq: 8 Mar 2018 14:41

Instrument :  
 BNA\_F  
 ClientSampleId :  
 BU-01-030618

| Tot Ion | Ion   | Ratio | Lower | Upper |
|---------|-------|-------|-------|-------|
| 166     | 100   |       |       |       |
| 165     | 101.3 | 79.8  | 119.8 |       |
| 167     | 14.1  | 10.6  | 16.0  |       |

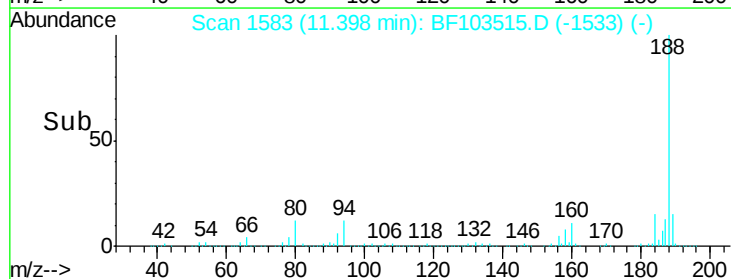
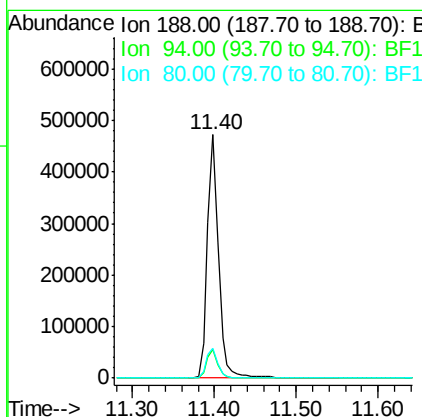
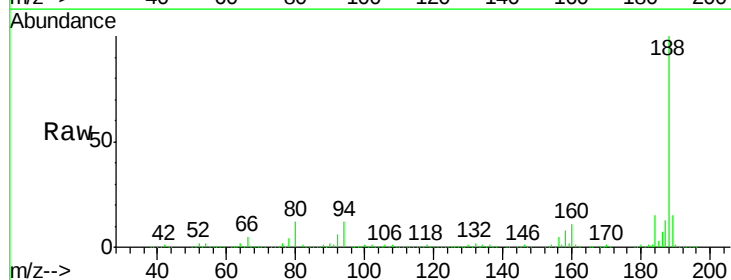
Manual Integrations  
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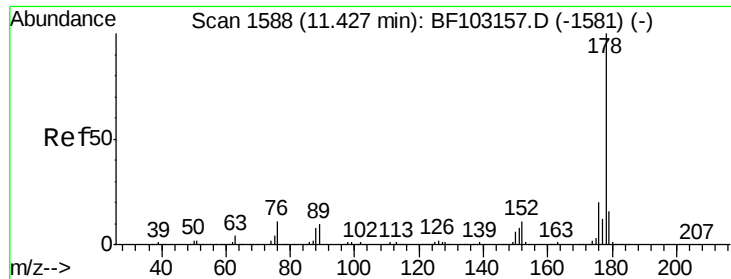
Sohil  
 3/9/2018 11:39:19 AM



#63  
**Phenanthrene-d10**  
 Concen: 20.000 ng  
 RT: 11.40 min Scan# 1583  
 Delta R.T. -0.01 min  
 Lab File: BF103515.D  
 Acq: 8 Mar 2018 14:41

| Tgt Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 188     | 100  |       |       |       |
| 94      | 11.5 | 8.5   | 12.7  |       |
| 80      | 12.3 | 9.2   | 13.8  |       |





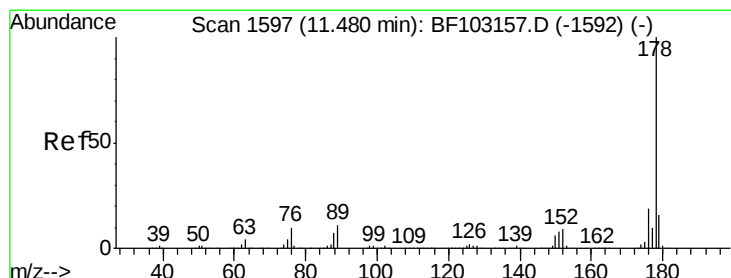
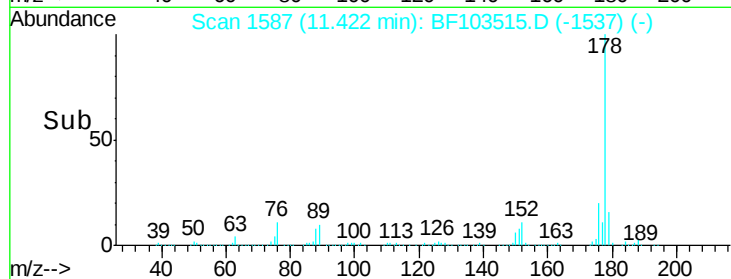
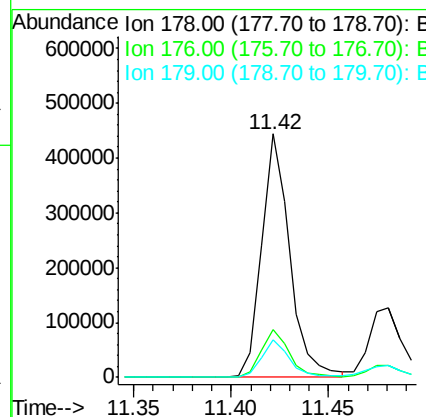
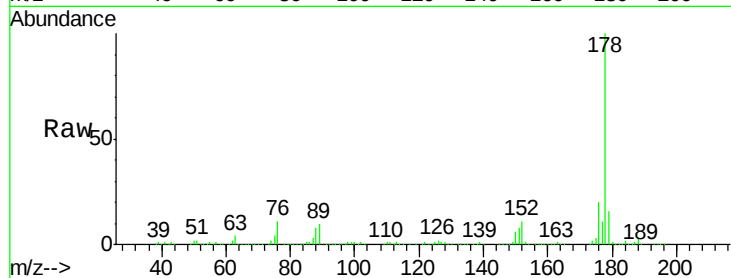
#70  
Phenanthrene  
Concen: 17.866 ng  
RT: 11.42 min Scan# 1587  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 19.5  | 15.8  | 23.8  |
| 179     | 15.6  | 13.0  | 19.6  |

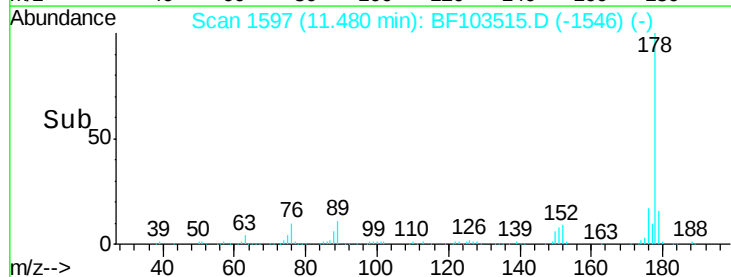
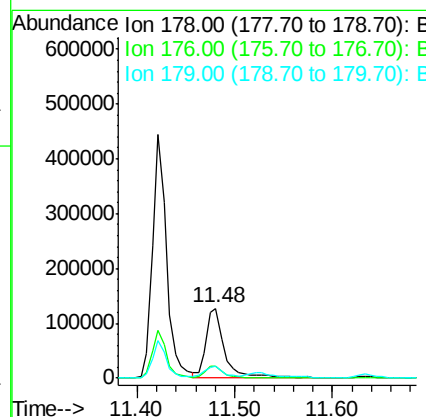
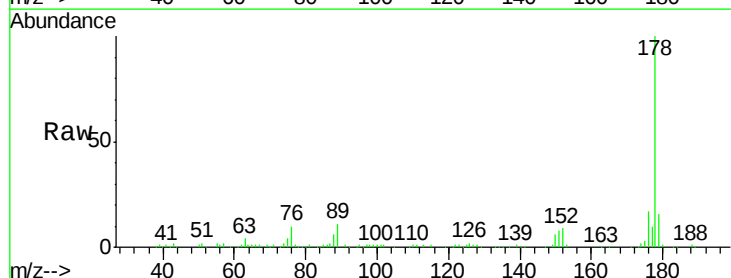
Manual Integrations  
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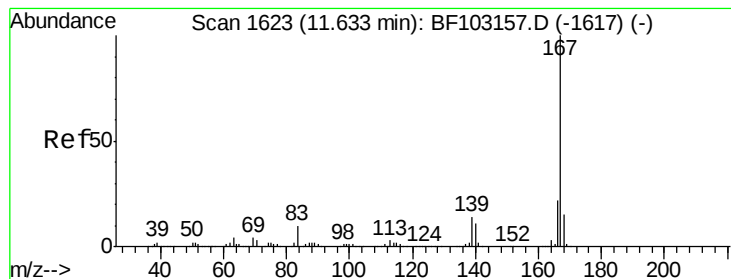
Sohil  
3/9/2018 11:39:19 AM



#71  
Anthracene  
Concen: 6.573 ng  
RT: 11.48 min Scan# 1597  
Delta R.T. 0.00 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 17.1  | 15.4  | 23.2  |
| 179     | 16.2  | 12.6  | 19.0  |





#72

Carbazole

Concen: 2.098 ng

RT: 11.65 min Scan# 1625

Delta R.T. 0.01 min

Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

Instrument :

BNA\_F

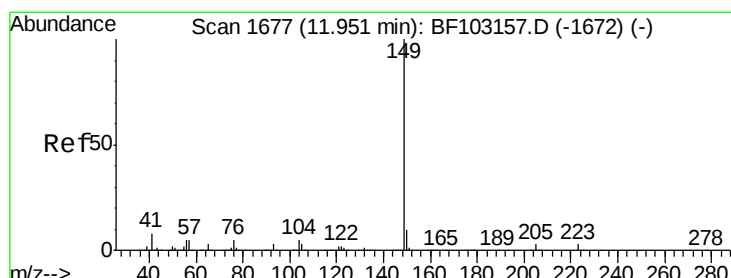
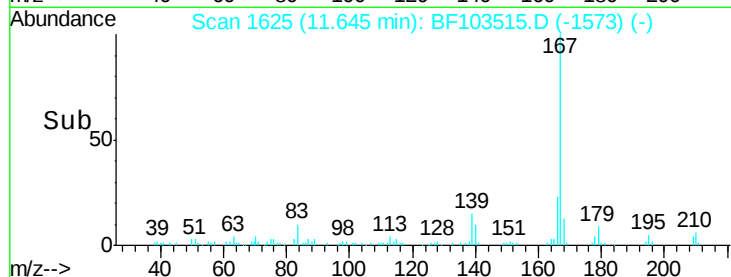
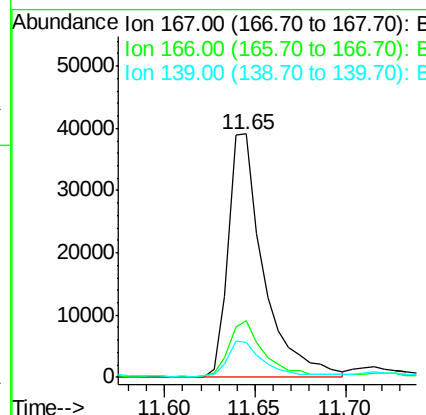
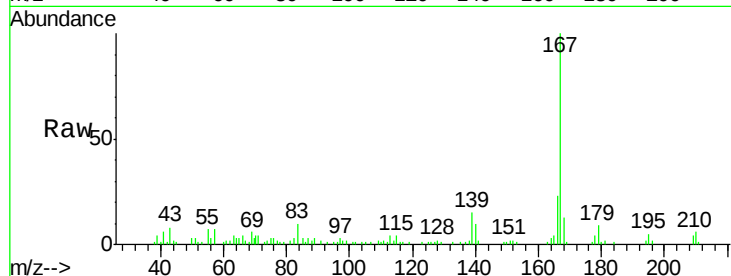
ClientSampleId :

BU-01-030618

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 167   | Resp: | 53227 |
| Ion Ratio | Lower | Upper |       |
| 167       | 100   |       |       |
| 166       | 23.2  | 17.6  | 26.4  |
| 139       | 14.5  | 10.9  | 16.3  |

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#73

Di-n-butylphthalate

Concen: 8.739 ng

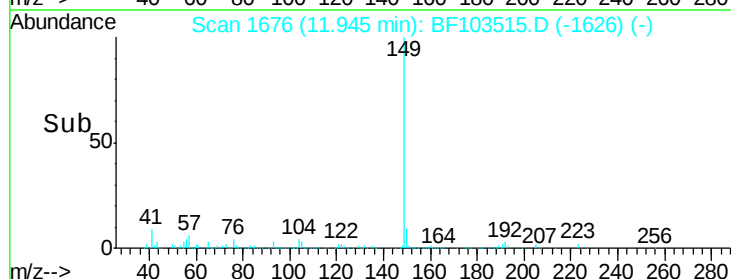
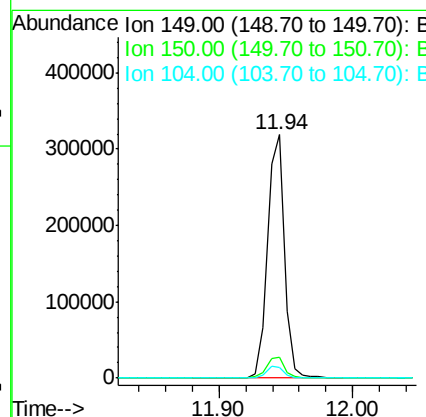
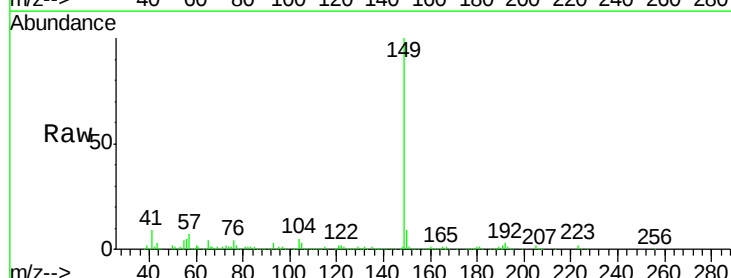
RT: 11.94 min Scan# 1676

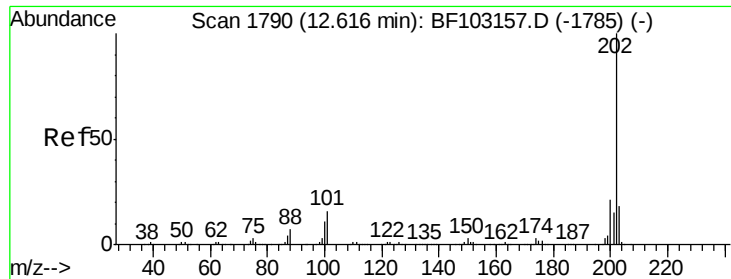
Delta R.T. -0.01 min

Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 149   | Resp: | 277388 |
| Ion Ratio | Lower | Upper |        |
| 149       | 100   |       |        |
| 150       | 8.7   | 7.8   | 11.6   |
| 104       | 4.6   | 3.8   | 5.8    |





#74

Fluoranthene

Concen: 20.962 ng

RT: 12.62 min Scan# 1790

Delta R.T. -0.01 min

Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

Instrument :

BNA\_F

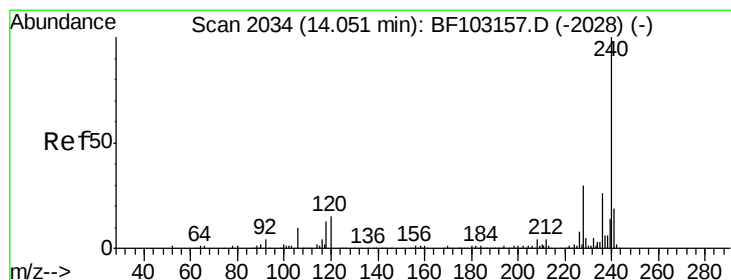
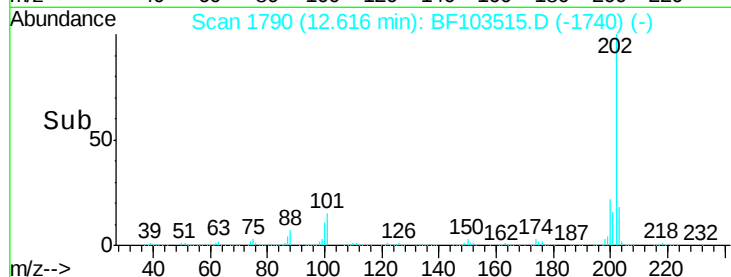
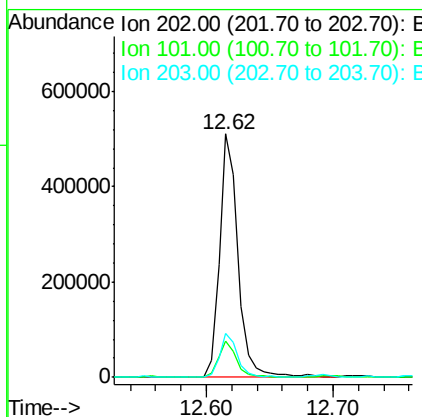
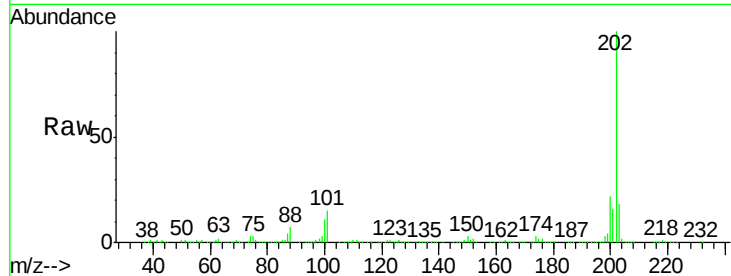
ClientSampleId :

BU-01-030618

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 202     | 100   | 523249 |       |       |
| 101     | 14.9  | 0.0    | 34.1  |       |
| 203     | 17.9  | 0.0    | 38.1  |       |

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#75

Chrysene-d12

Concen: 20.000 ng

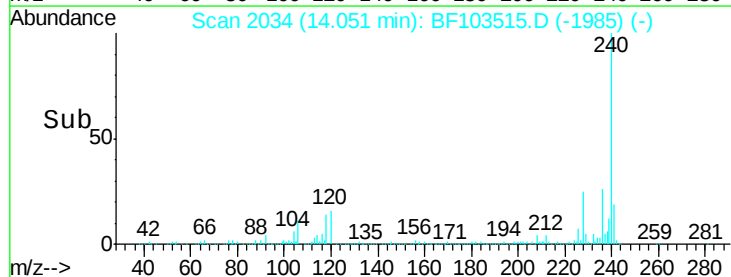
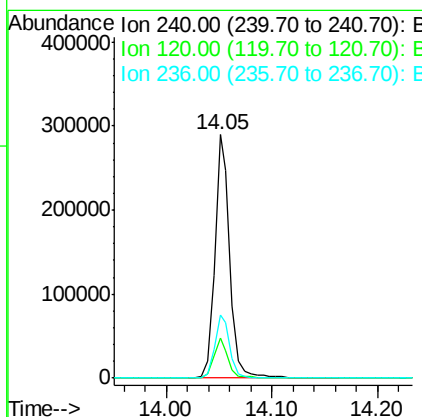
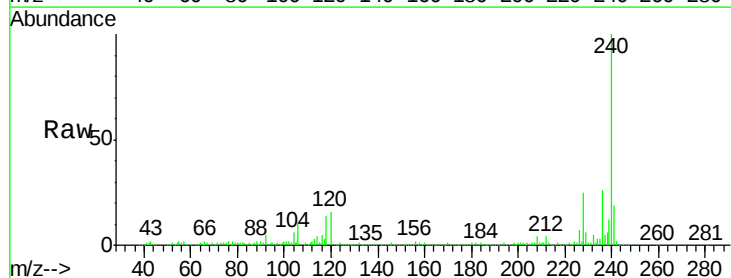
RT: 14.05 min Scan# 2034

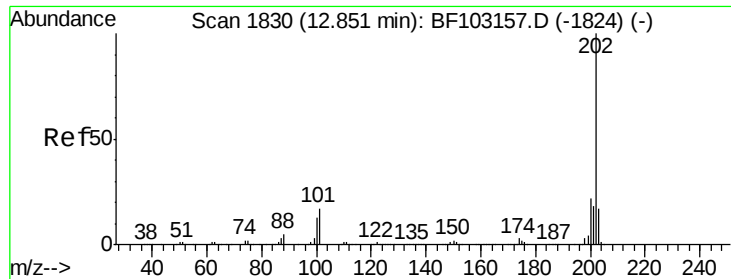
Delta R.T. -0.01 min

Lab File: BF103515.D

Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 240     | 100   | 289077 |       |       |
| 120     | 16.3  | 9.5    | 14.3# |       |
| 236     | 25.9  | 20.7   | 31.1  |       |





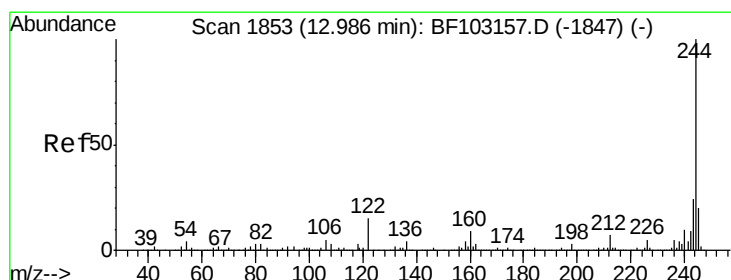
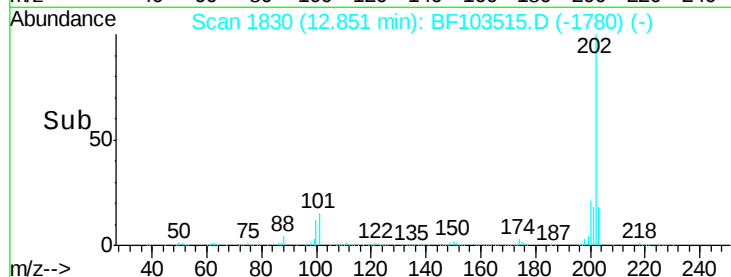
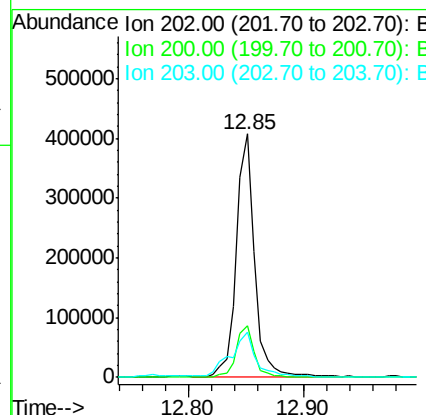
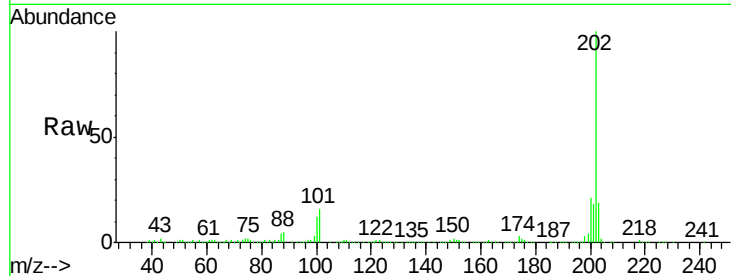
#77  
Pvrene  
Concen: 19.480 ng  
RT: 12.85 min Scan# 1830  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 200     | 21.4  | 17.4  | 26.2  |
| 203     | 18.7  | 14.3  | 21.5  |

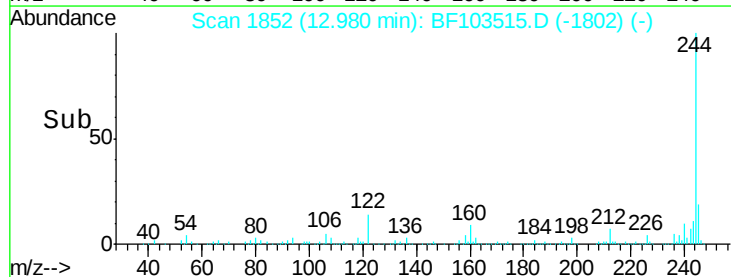
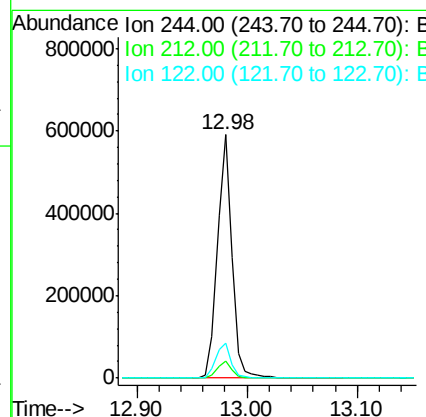
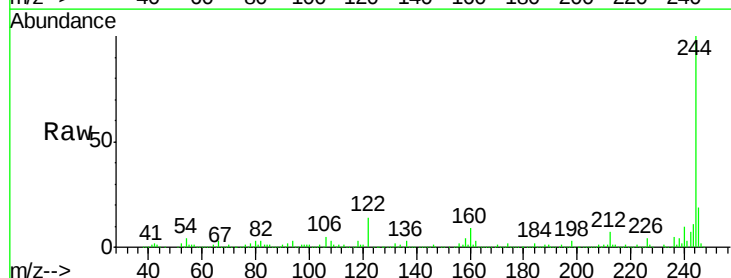
Manual Integrations  
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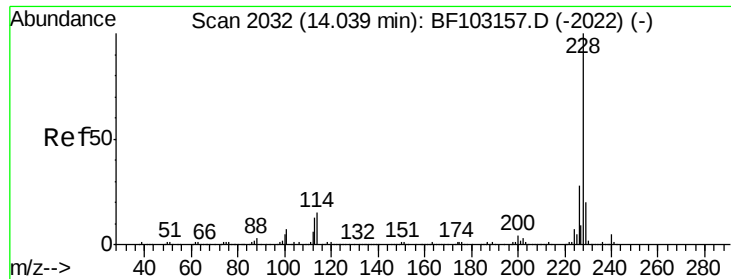
Sohil  
3/9/2018 11:39:19 AM



#78  
Terphenyl-d14  
Concen: 44.017 ng  
RT: 12.98 min Scan# 1852  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 244     | 100   |       |       |
| 212     | 7.2   | 5.4   | 8.0   |
| 122     | 14.3  | 11.0  | 16.4  |





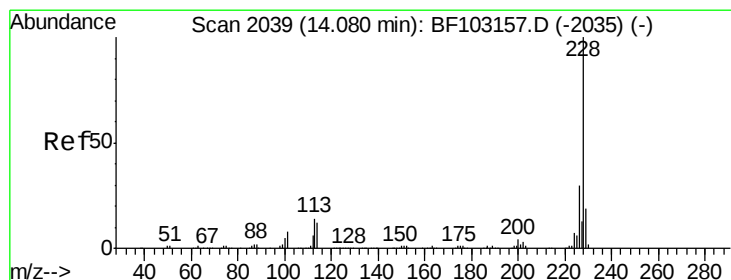
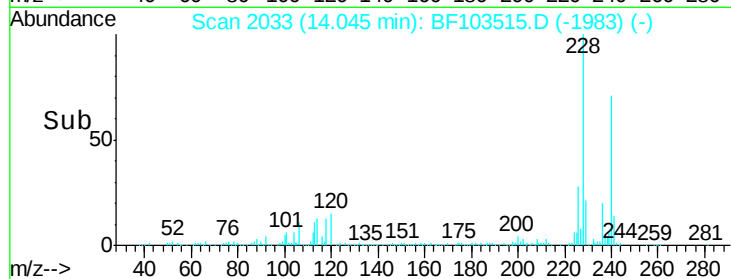
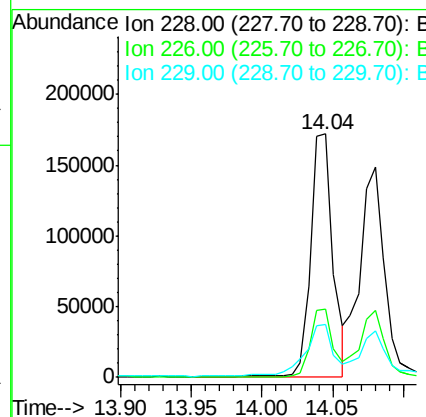
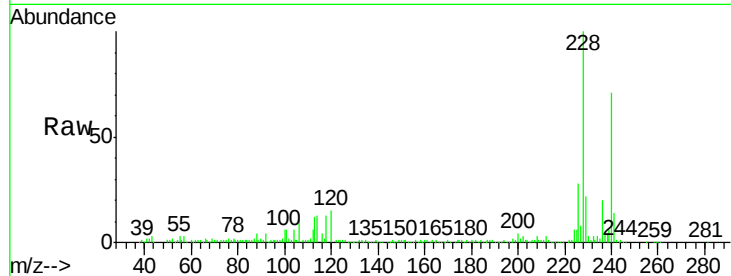
#80  
Benzo(a)anthracene  
Concen: 9.988 ng  
RT: 14.04 min Scan# 2033  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 28.0  | 22.6  | 33.8  |
| 229     | 21.7  | 15.8  | 23.6  |

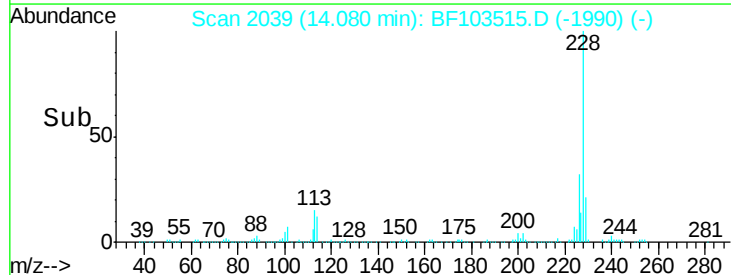
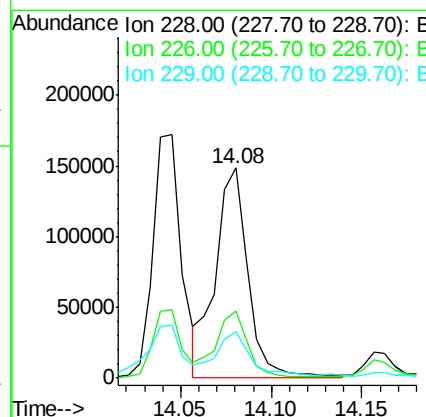
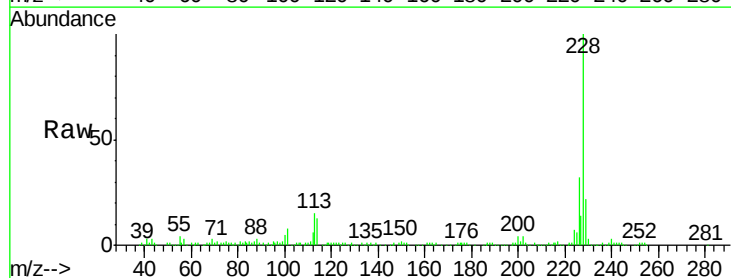
Manual Integrations  
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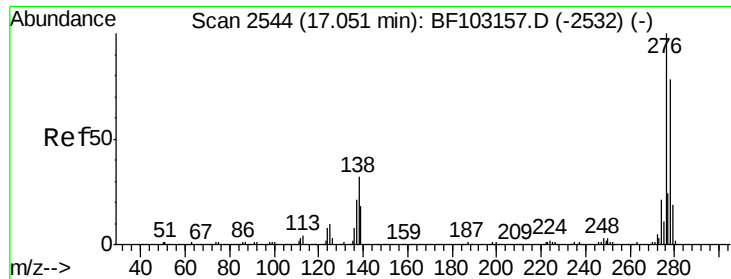
Sohil  
3/9/2018 11:39:19 AM



#82  
Chrysene  
Concen: 10.077 ng  
RT: 14.08 min Scan# 2039  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 226     | 32.0  | 25.0  | 37.6  |
| 229     | 22.0  | 16.2  | 24.4  |





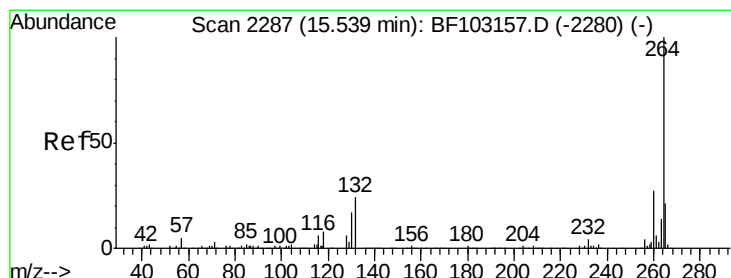
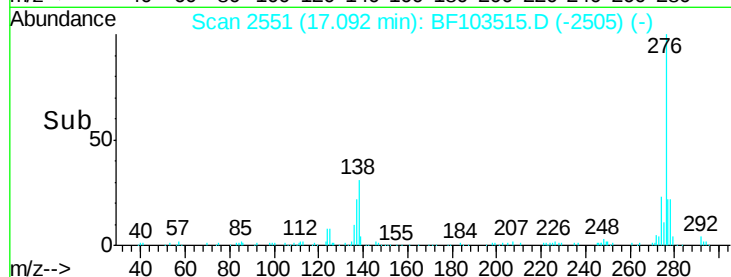
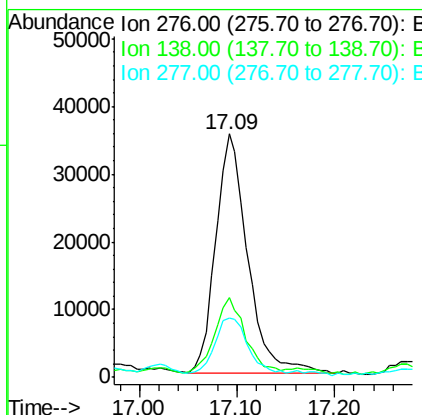
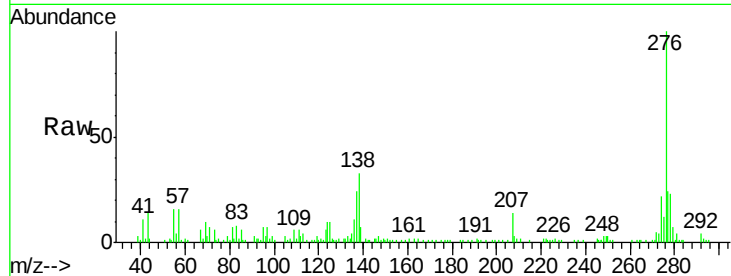
#85  
Indeno(1,2,3-cd)pyrene  
Concen: 5.608 ng  
RT: 17.09 min Scan# 2551  
Delta R.T. -0.03 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 29.4  | 25.0  | 37.6  |
| 277     | 24.7  | 20.1  | 30.1  |

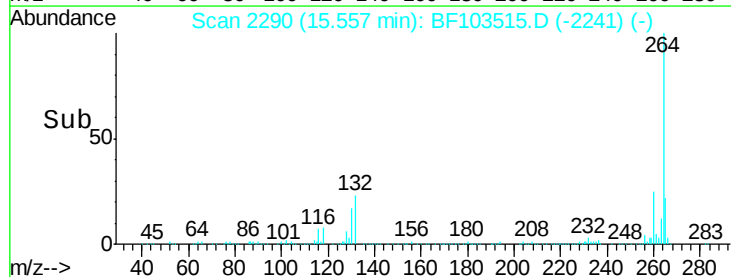
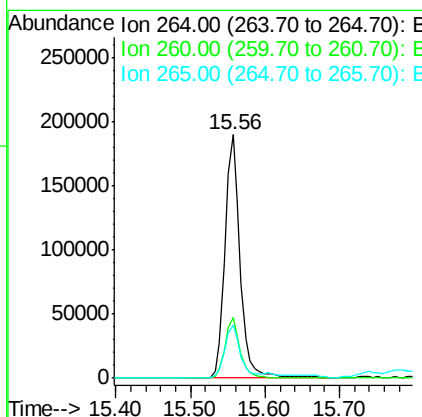
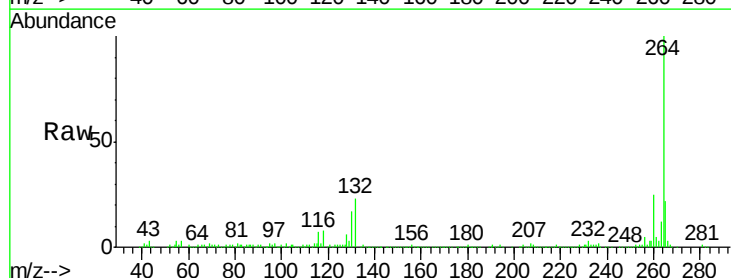
Manual Integrations  
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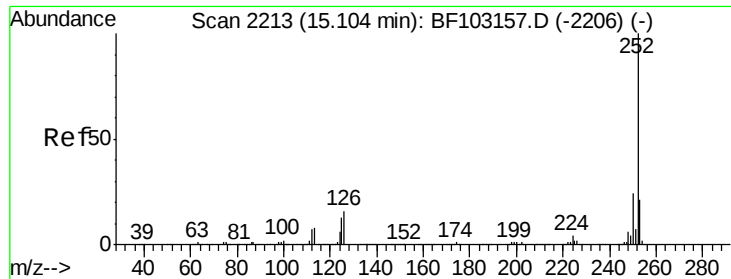
Sohil  
3/9/2018 11:39:19 AM



#86  
Perylene-d12  
Concen: 20.000 ng  
RT: 15.56 min Scan# 2290  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 264     | 100   |       |       |
| 260     | 24.7  | 19.2  | 28.8  |
| 265     | 21.7  | 17.5  | 26.3  |





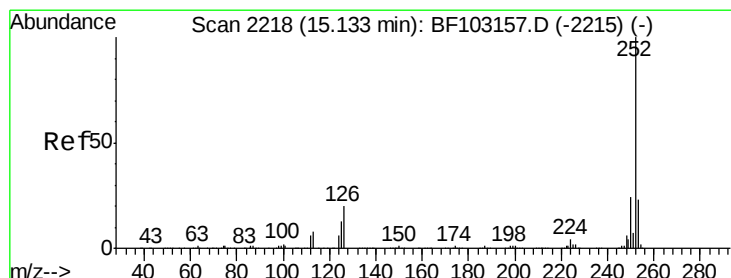
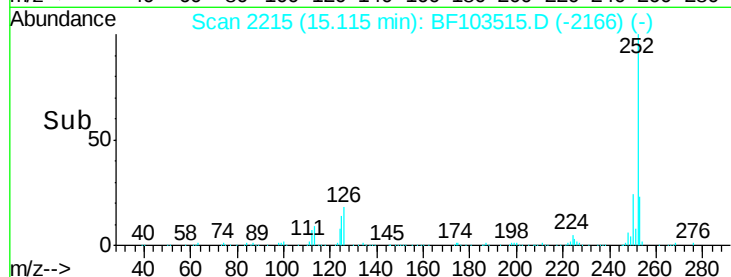
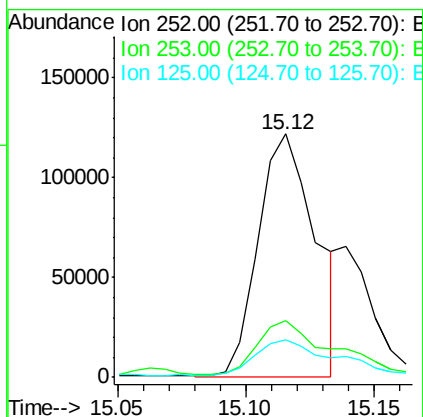
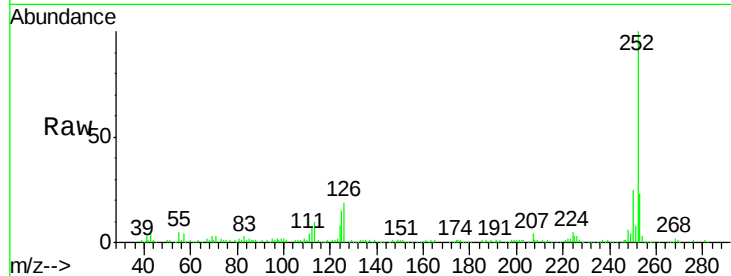
#87  
Benzo(b)fluoranthene  
Concen: 10.705 ng m  
RT: 15.12 min Scan# 2215  
Delta R.T. -0.01 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 23.4  | 17.0  | 25.6  |
| 125     | 15.3  | 9.0   | 13.6  |

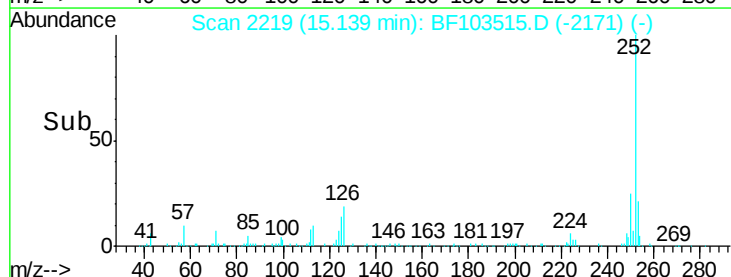
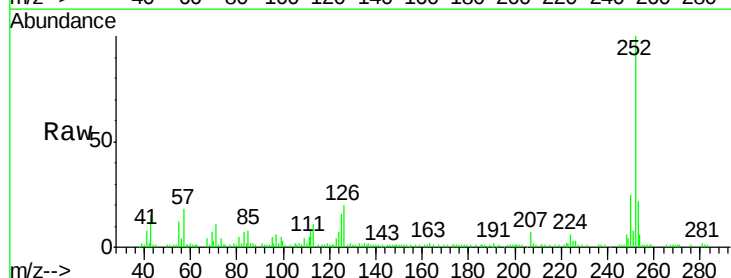
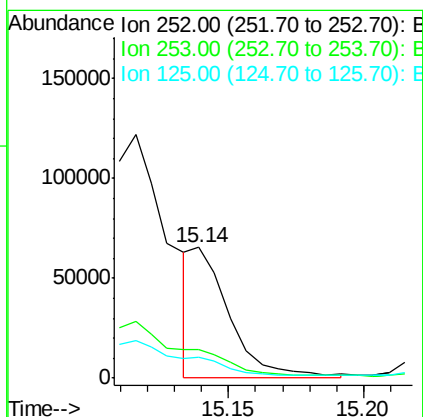
Manual Integrations  
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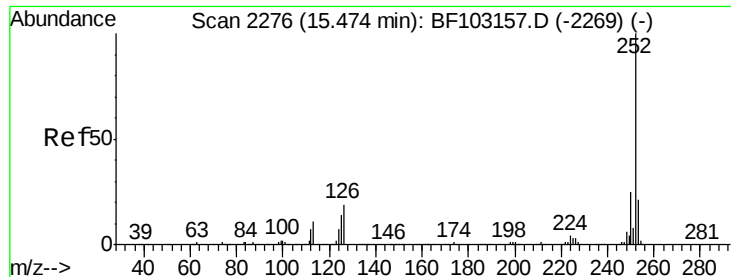
Sohil  
3/9/2018 11:39:19 AM



#88  
Benzo(k)fluoranthene  
Concen: 3.830 ng m  
RT: 15.14 min Scan# 2219  
Delta R.T. -0.02 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.1  | 17.9  | 26.9  |
| 125     | 15.6  | 10.2  | 15.2  |





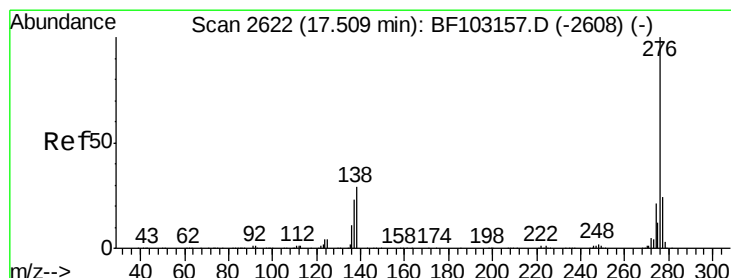
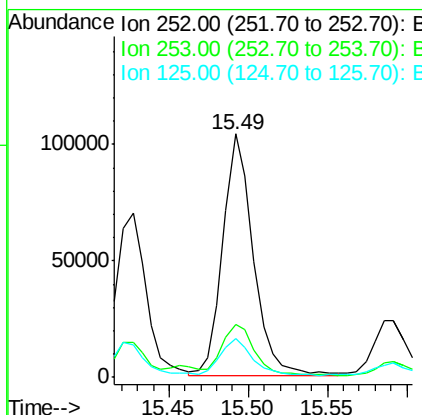
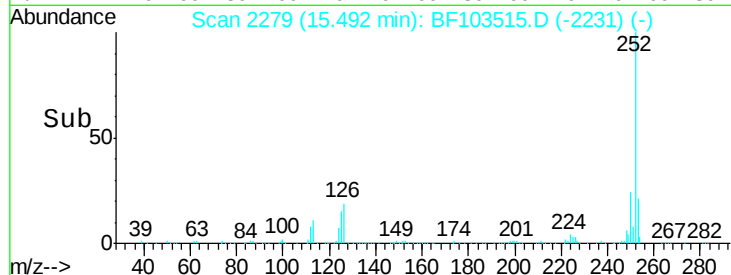
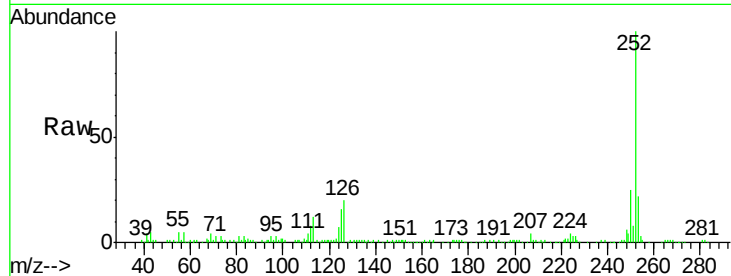
#89  
Benzo(a)pyrene  
Concen: 8.745 ng  
RT: 15.49 min Scan# 2279  
Delta R.T. -0.02 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

Instrument :  
BNA\_F  
ClientSampleId :  
BU-01-030618

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.0  | 17.1  | 25.7  |
| 125     | 15.8  | 9.8   | 14.6  |

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3/9/2018 11:39:19 AM



#91  
Benzo(g,h,i)perylene  
Concen: 6.587 ng  
RT: 17.56 min Scan# 2631  
Delta R.T. -0.02 min  
Lab File: BF103515.D  
Acq: 8 Mar 2018 14:41

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 277     | 28.8  | 17.9  | 26.9  |
| 138     | 31.1  | 21.8  | 32.8  |

