

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF020619\  
 Data File : BF112422.D  
 Acq On : 6 Feb 2019 16:16  
 Operator : JU/SJ  
 Sample : K1356-03 5X  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 SU-01-020519-B

Manual Integrations  
 APPROVED

mohammad  
 2/7/2019 8:40:16 AM

Quant Time: Feb 06 18:12:33 2019  
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Mon Jan 28 10:38:18 2019  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|-------|------|----------|--------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 6.83  | 152  | 151426   | 20.00  | ng    | -0.01    |
| 21) Naphthalene-d8          | 8.12  | 136  | 583228   | 20.00  | ng    | -0.01    |
| 39) Acenaphthene-d10        | 9.87  | 164  | 277309   | 20.00  | ng    | -0.02    |
| 64) Phenanthrene-d10        | 11.36 | 188  | 449898   | 20.00  | ng    | -0.01    |
| 76) Chrysene-d12            | 14.00 | 240  | 320622   | 20.00  | ng    | -0.01    |
| 87) Perylene-d12            | 15.47 | 264  | 330604   | 20.00  | ng    | 0.00     |
| System Monitoring Compounds |       |      |          |        |       |          |
| 5) 2-Fluorophenol           | 5.46  | 112  | 171615   | 24.07  | ng    | -0.02    |
| 7) Phenol-d6                | 6.48  | 99   | 224743   | 22.69  | ng    | -0.01    |
| 23) Nitrobenzene-d5         | 7.39  | 82   | 135309   | 13.37  | ng    | -0.02    |
| 42) 2,4,6-Tribromophenol    | 10.66 | 330  | 58841    | 18.23  | ng    | -0.02    |
| 45) 2-Fluorobiphenyl        | 9.19  | 172  | 275142   | 14.03  | ng    | -0.02    |
| 79) Terphenyl-d14           | 12.93 | 244  | 202617   | 11.90  | ng    | -0.02    |
| Target Compounds            |       |      |          |        |       |          |
| 52) Acenaphthene            | 9.90  | 154  | 34061    | 2.069  | ng    | 99       |
| 71) Phenanthrene            | 11.38 | 178  | 310372   | 13.270 | ng    | 98       |
| 72) Anthracene              | 11.43 | 178  | 50062    | 2.149  | ng    | 97       |
| 75) Fluoranthene            | 12.57 | 202  | 378614   | 15.092 | ng    | 96       |
| 78) Pyrene                  | 12.80 | 202  | 303748   | 13.684 | ng    | 98       |
| 81) Benzo(a)anthracene      | 13.99 | 228  | 132339   | 7.021  | ng    | 100      |
| 83) Chrysene                | 14.03 | 228  | 129776   | 7.213  | ng    | 99       |
| 86) Indeno(1,2,3-cd)pyrene  | 16.95 | 276  | 60988    | 4.278  | ng    | 93       |
| 88) Benzo(b)fluoranthene    | 15.04 | 252  | 179846m  | 9.096  | ng    |          |
| 89) Benzo(k)fluoranthene    | 15.07 | 252  | 51159m   | 2.701  | ng    |          |
| 90) Benzo(a)pyrene          | 15.41 | 252  | 114050   | 6.411  | ng    | 99       |
| 92) Benzo(a,h,i)perylene    | 17.40 | 276  | 56277    | 4.160  | ng    | 97       |

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

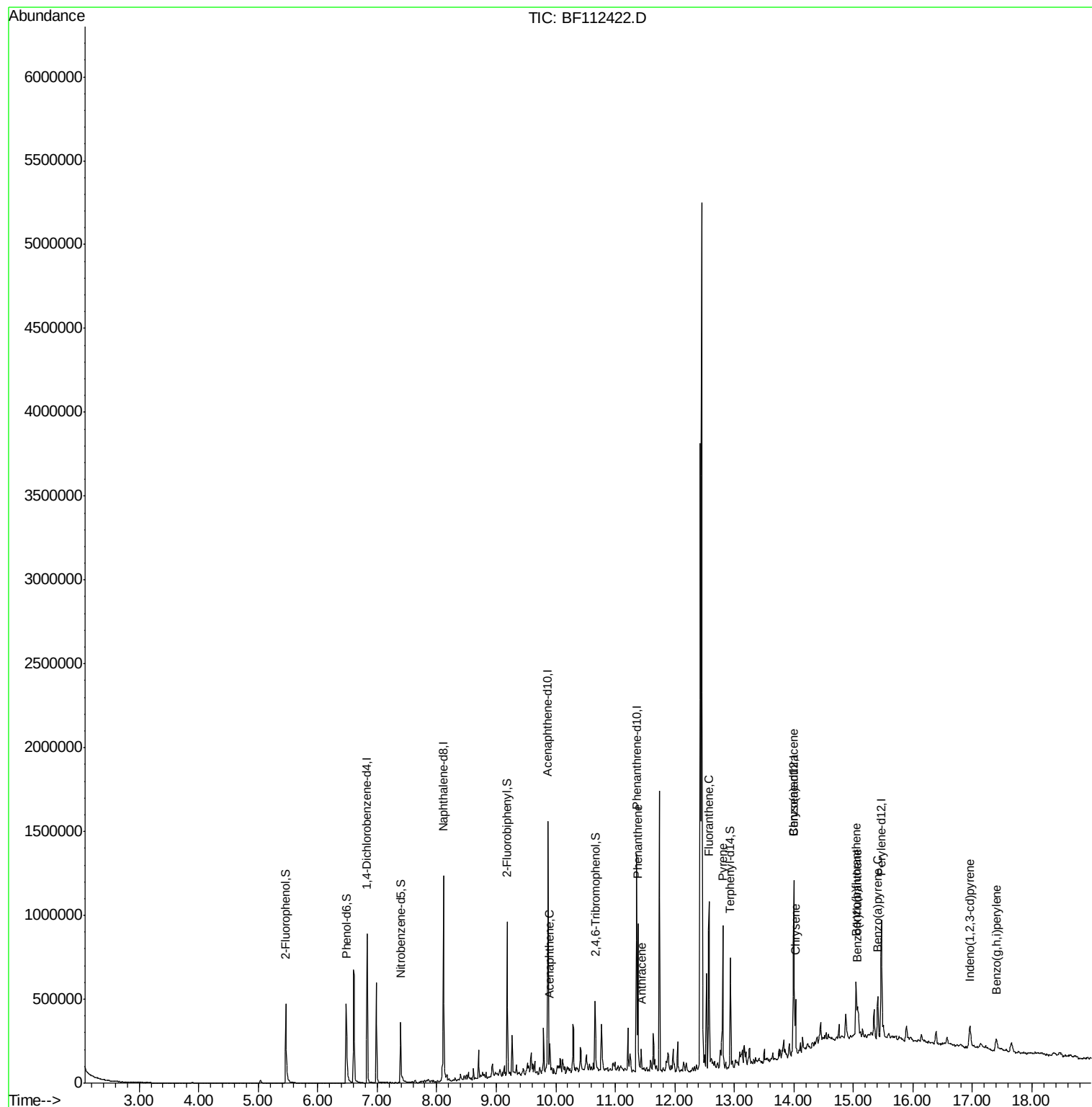
Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF020619\  
Data File : BF112422.D  
Acq On : 6 Feb 2019 16:16  
Operator : JU/SJ  
Sample : K1356-03 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

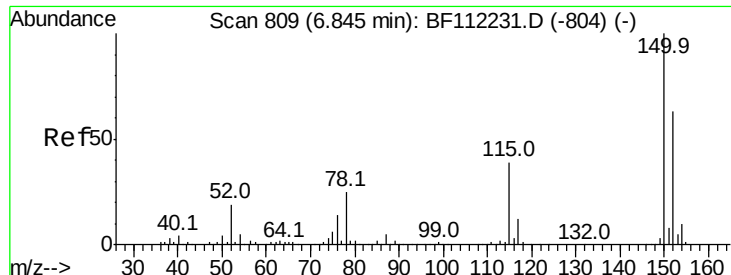
Instrument :  
BNA\_F  
ClientSampleId :  
SU-01-020519-B

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM

Quant Time: Feb 06 18:12:33 2019  
Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF012519.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Mon Jan 28 10:38:18 2019  
Response via : Initial Calibration





#1

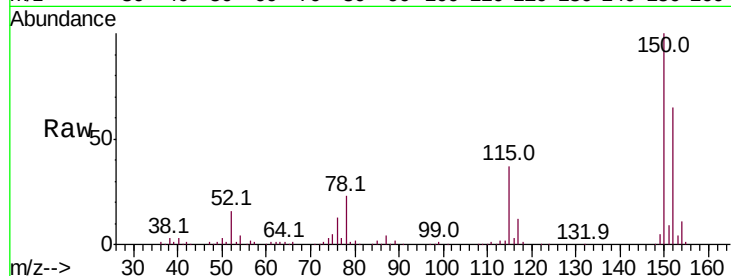
1,4-Dichlorobenzene-d4  
Concen: 20.000 ng  
RT: 6.83 min Scan# 807  
Delta R.T. -0.01 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

Instrument :  
BNA\_F  
ClientSampleId :  
SU-01-020519-B

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 150     | 153.4 | 127.4 | 191.0 |
| 115     | 56.6  | 45.5  | 68.3  |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM

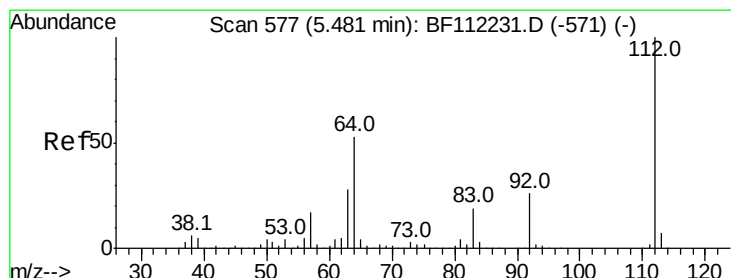
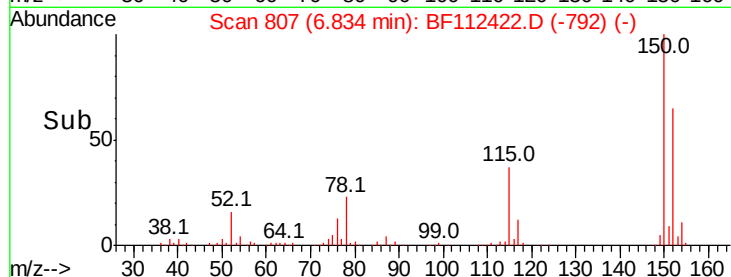
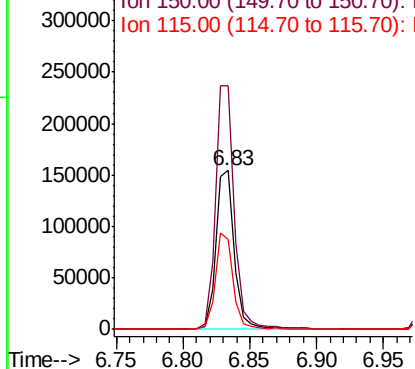


Abundance

Ion 152.00 (151.70 to 152.70): E

Ion 150.00 (149.70 to 150.70): E

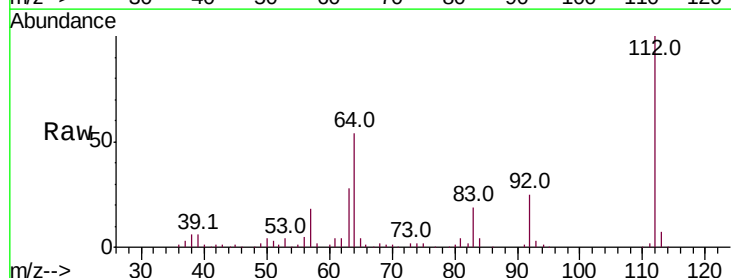
Ion 115.00 (114.70 to 115.70): E



#5

2-Fluorophenol  
Concen: 24.073 ng  
RT: 5.46 min Scan# 574  
Delta R.T. -0.02 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 64      | 54.2  | 45.7  | 68.5  |
| 63      | 28.3  | 23.6  | 35.4  |

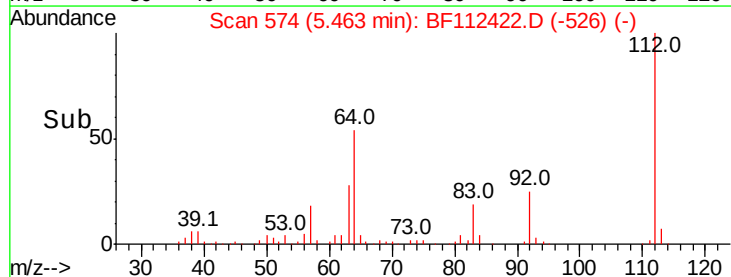
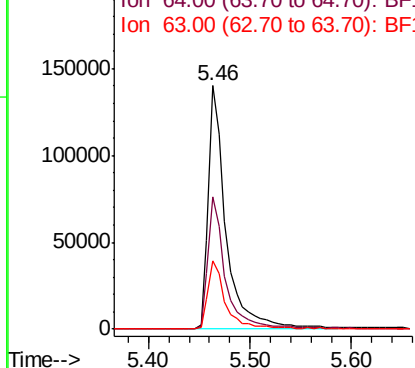


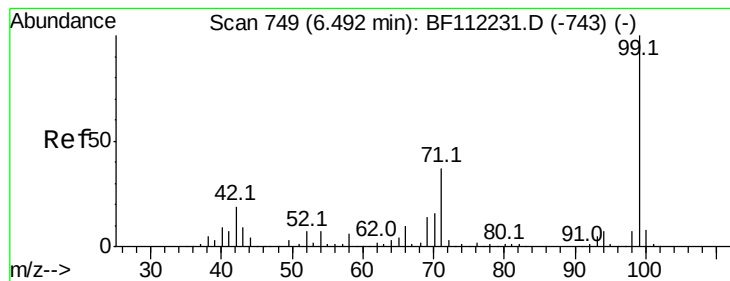
Abundance

Ion 112.00 (111.70 to 112.70): E

Ion 64.00 (63.70 to 64.70): BF1

Ion 63.00 (62.70 to 63.70): BF1





#7

Phenol-d6

Concen: 22.687 ng

RT: 6.48 min Scan# 747

Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

Instrument :

BNA\_F

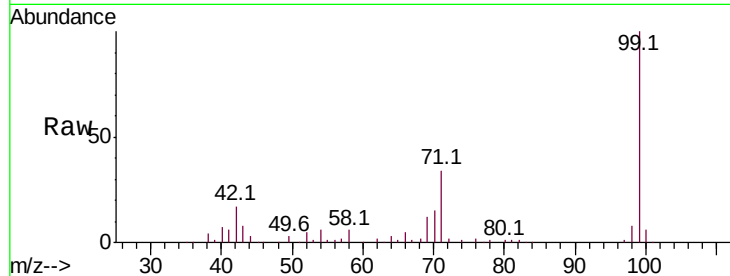
ClientSampleId :

SU-01-020519-B

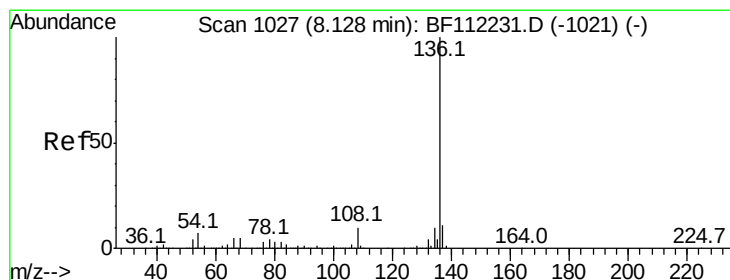
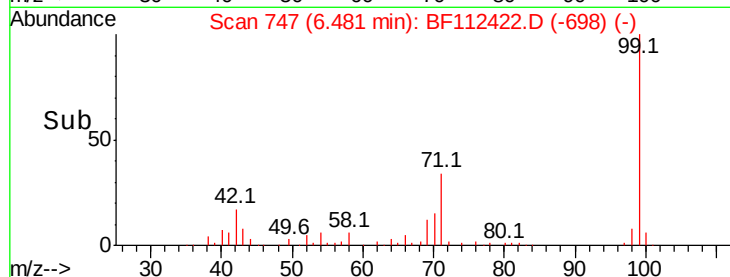
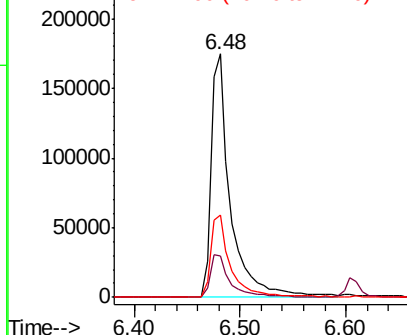
| Tot Ion | Ion  | Ratio | Resp   | Lower | Upper |
|---------|------|-------|--------|-------|-------|
| 99      | 100  |       | 224743 |       |       |
| 42      | 17.2 | 15.1  | 22.7   |       |       |
| 71      | 33.9 | 26.9  | 40.3   |       |       |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM



Abundance Ion 99.00 (98.70 to 99.70): BF1  
Ion 42.00 (41.70 to 42.70): BF1  
Ion 71.00 (70.70 to 71.70): BF1



#21

Naphthalene-d8

Concen: 20.000 ng

RT: 8.12 min Scan# 1025

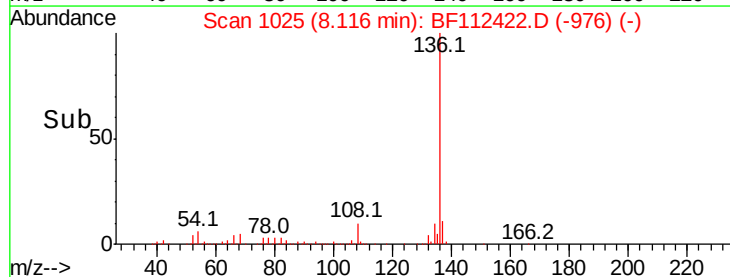
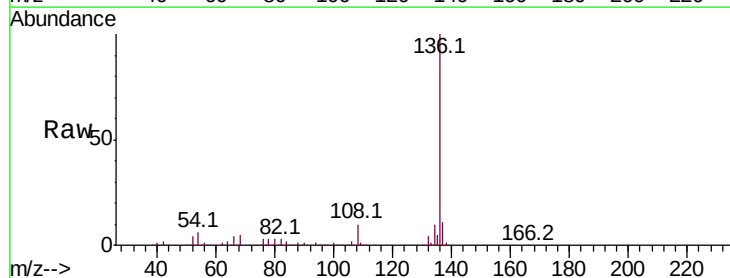
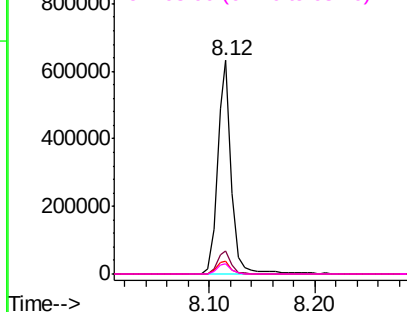
Delta R.T. -0.01 min

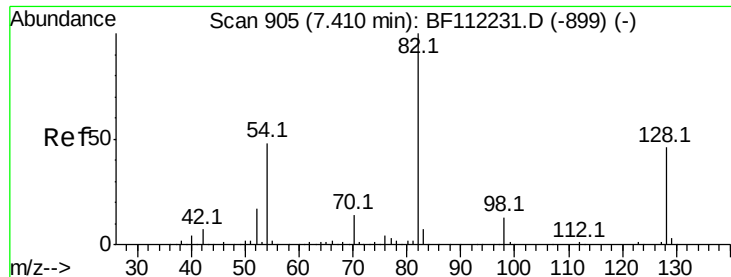
Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

| Tgt Ion | Ion  | Ratio | Resp   | Lower | Upper |
|---------|------|-------|--------|-------|-------|
| 136     | 100  |       | 583228 |       |       |
| 137     | 11.1 | 9.1   | 13.7   |       |       |
| 54      | 6.0  | 5.9   | 8.9    |       |       |
| 68      | 4.6  | 5.1   | 7.7#   |       |       |

Abundance Ion 136.00 (135.70 to 136.70): E  
Ion 137.00 (136.70 to 137.70): E  
Ion 54.00 (53.70 to 54.70): BF1  
Ion 68.00 (67.70 to 68.70): BF1





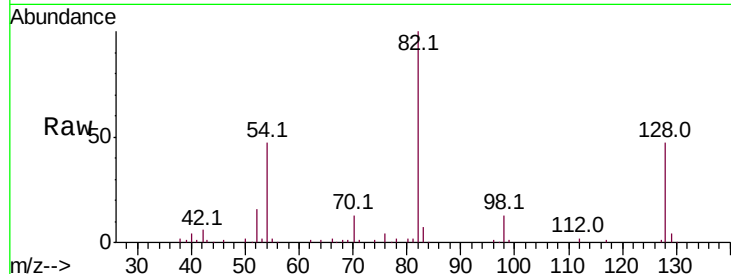
#23  
Nitrobenzene-d5  
Concen: 13.368 ng  
RT: 7.39 min Scan# 902  
Delta R.T. -0.02 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

Instrument :  
BNA\_F  
ClientSampleId :  
SU-01-020519-B

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 82      | 100   |       |       |
| 128     | 47.0  | 37.8  | 56.8  |
| 54      | 47.4  | 39.7  | 59.5  |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM

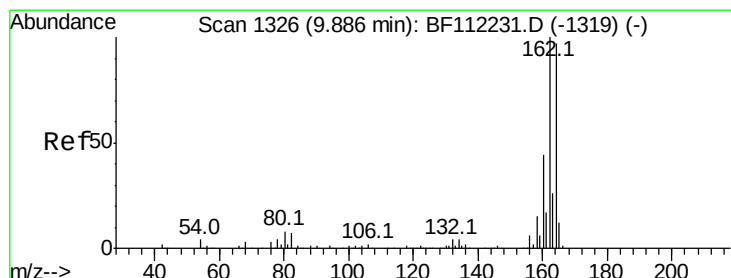
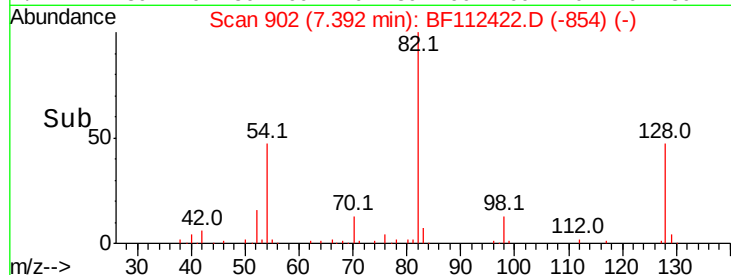
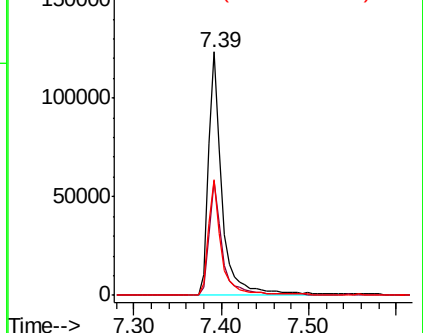


Abundance

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



#39  
Acenaphthene-d10  
Concen: 20.000 ng  
RT: 9.87 min Scan# 1323  
Delta R.T. -0.02 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

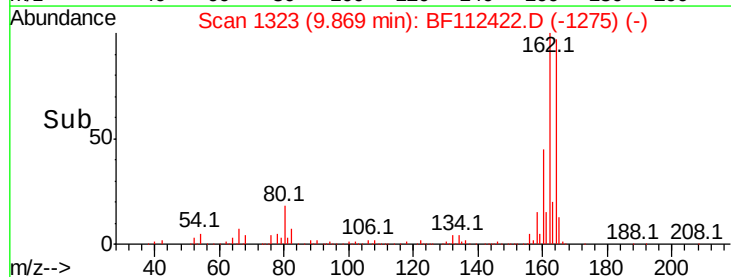
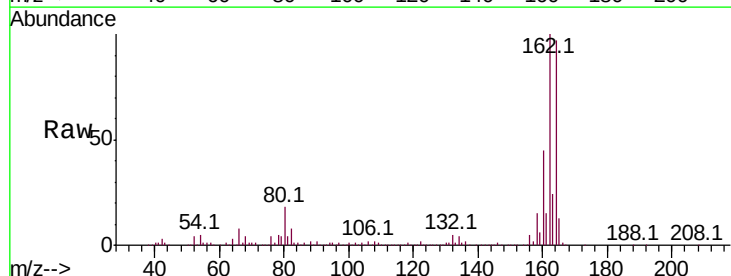
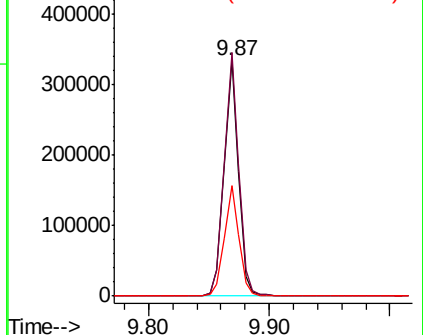
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 164     | 100   |       |       |
| 162     | 103.2 | 82.2  | 123.4 |
| 160     | 46.7  | 36.2  | 54.4  |

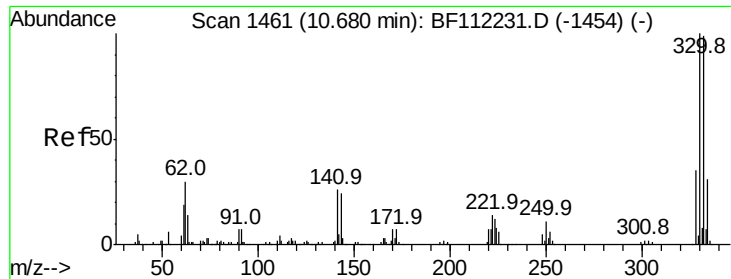
Abundance

Ion 164.00 (163.70 to 164.70): BF1

Ion 162.00 (161.70 to 162.70): BF1

Ion 160.00 (159.70 to 160.70): BF1





#42

2,4,6-Tribromophenol

Concen: 18.229 ng

RT: 10.66 min Scan# 1458

Delta R.T. -0.02 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

Instrument :

BNA\_F

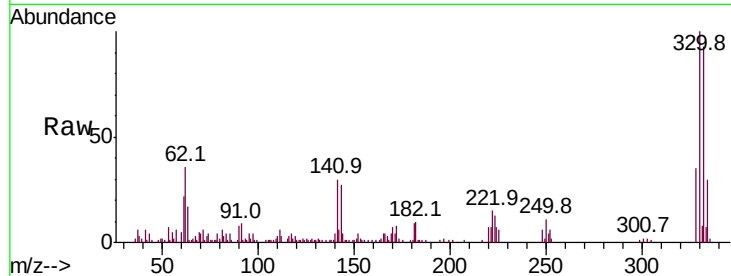
ClientSampleId :

SU-01-020519-B

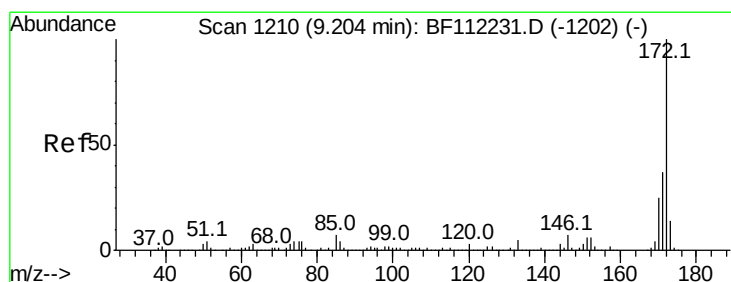
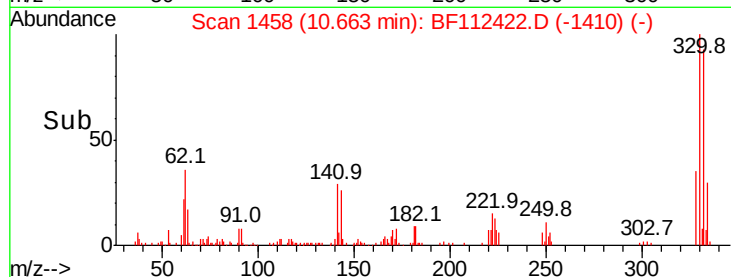
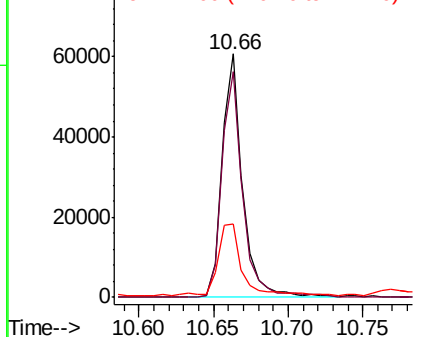
|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 330   | Resp: | 58841 |
| Ion Ratio | Lower | Upper |       |
| 330       | 100   |       |       |
| 332       | 94.5  | 76.6  | 114.8 |
| 141       | 33.4  | 24.3  | 36.5  |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM



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



#45

2-Fluorobiphenyl

Concen: 14.033 ng

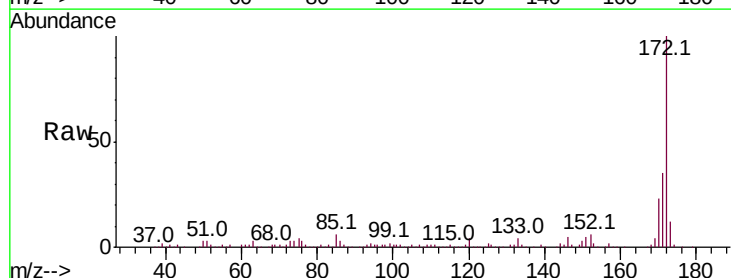
RT: 9.19 min Scan# 1207

Delta R.T. -0.02 min

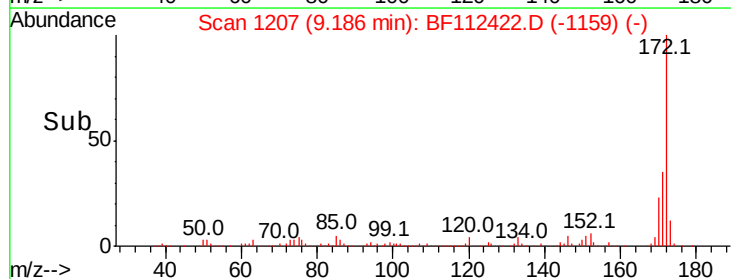
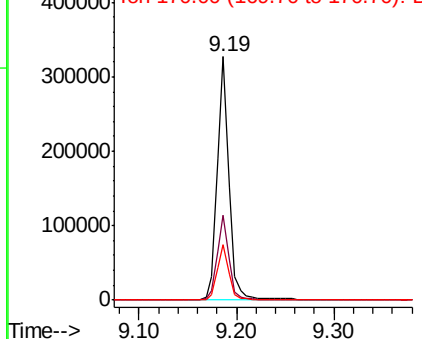
Lab File: BF112422.D

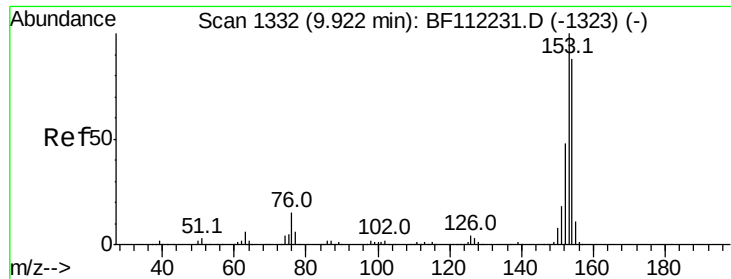
Acq: 6 Feb 2019 16:16

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 172   | Resp: | 275142 |
| Ion Ratio | Lower | Upper |        |
| 172       | 100   |       |        |
| 171       | 34.8  | 30.5  | 45.7   |
| 170       | 23.0  | 20.2  | 30.4   |



Abundance Ion 172.00 (171.70 to 172.70): E  
Ion 171.00 (170.70 to 171.70): E  
Ion 170.00 (169.70 to 170.70): E





#52

Acenaphthene

Concen: 2.069 ng

RT: 9.90 min Scan# 1328

Delta R.T. -0.02 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

Instrument :

BNA\_F

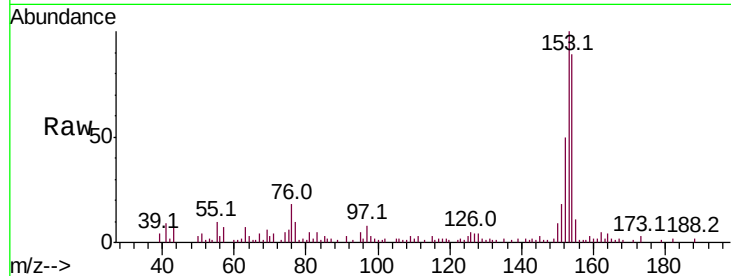
ClientSampleId :

SU-01-020519-B

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 154   | Resp: | 34061 |
| Ion Ratio | Lower | Upper |       |
| 154       | 100   |       |       |
| 153       | 112.7 | 89.8  | 134.6 |
| 152       | 55.9  | 43.5  | 65.3  |

Manual Integrations  
APPROVED

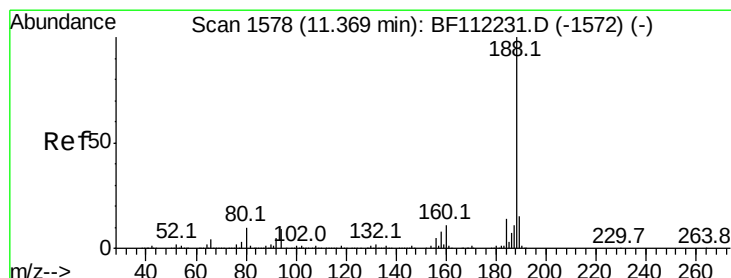
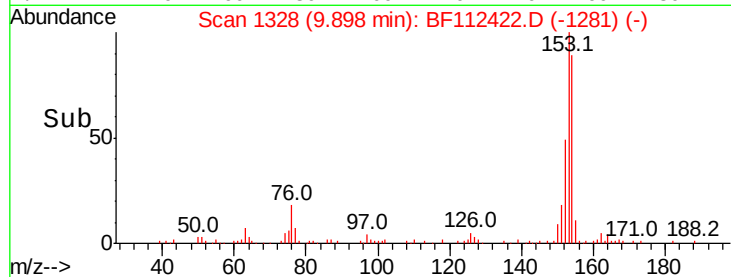
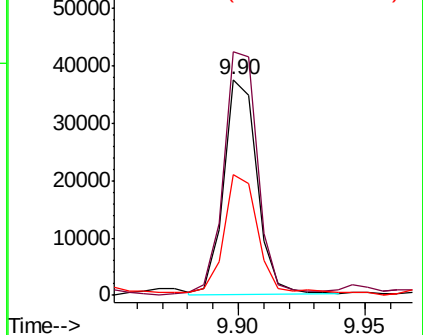
mohammad  
2/7/2019 8:40:16 AM



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



#64

Phenanthrene-d10

Concen: 20.000 ng

RT: 11.36 min Scan# 1576

Delta R.T. -0.01 min

Lab File: BF112422.D

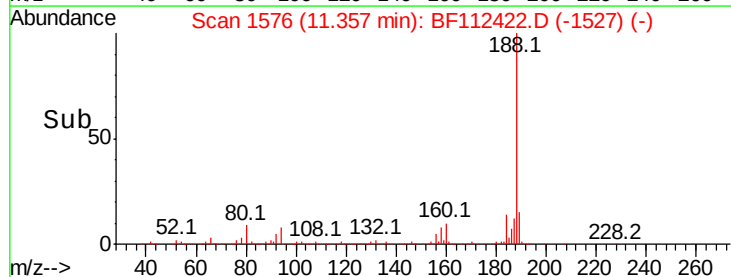
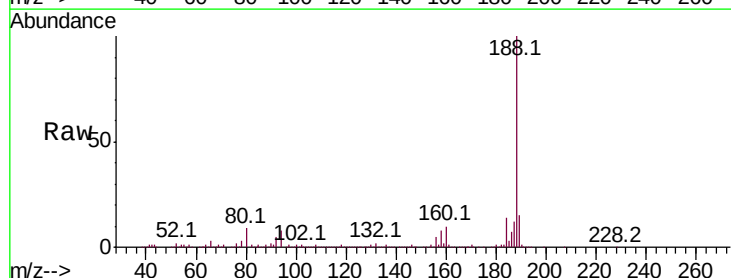
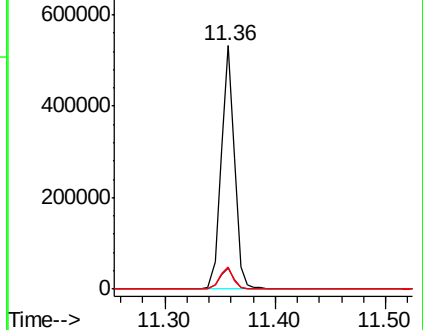
Acq: 6 Feb 2019 16:16

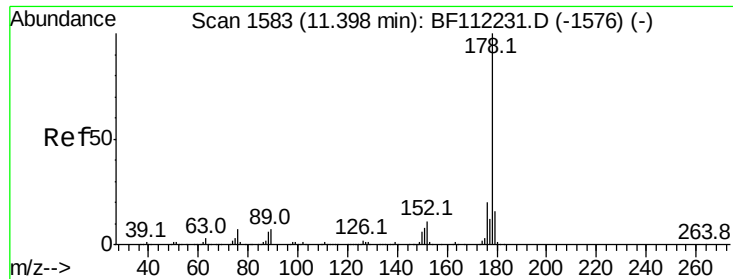
|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 188   | Resp: | 449898 |
| Ion Ratio | Lower | Upper |        |
| 188       | 100   |       |        |
| 94        | 8.4   | 8.2   | 12.2   |
| 80        | 9.2   | 8.9   | 13.3   |

Abundance Ion 188.00 (187.70 to 188.70): E

Ion 94.00 (93.70 to 94.70): BF1

Ion 80.00 (79.70 to 80.70): BF1





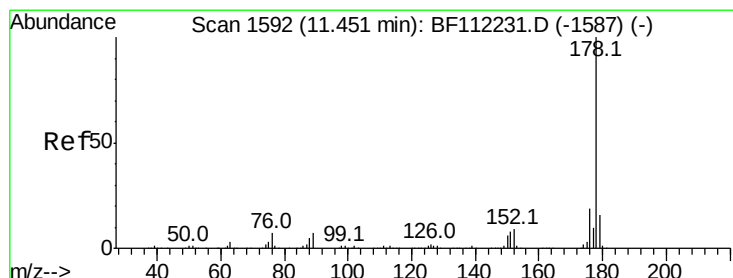
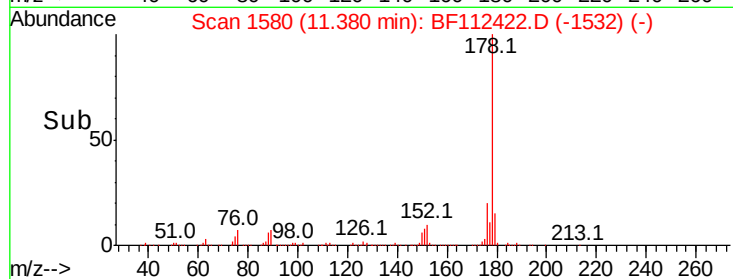
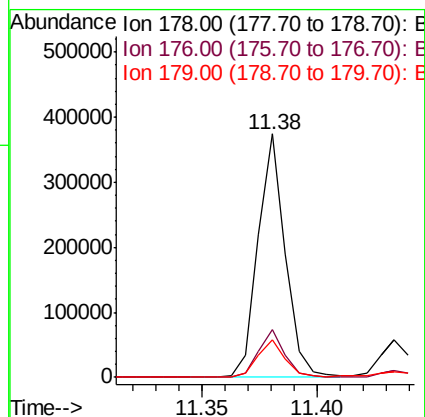
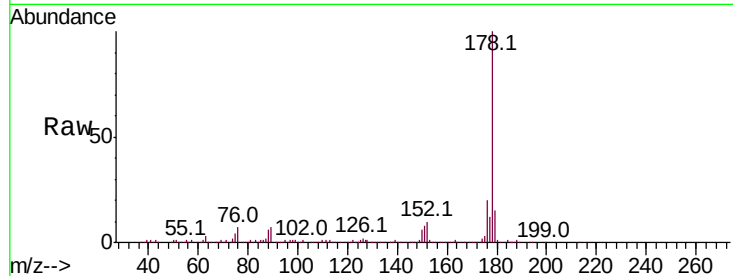
#71  
Phenanthrene  
Concen: 13.270 ng  
RT: 11.38 min Scan# 1580  
Delta R.T. -0.02 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

Instrument :  
BNA\_F  
ClientSampleId :  
SU-01-020519-B

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 19.5  | 16.3  | 24.5  |
| 179     | 15.2  | 13.0  | 19.4  |

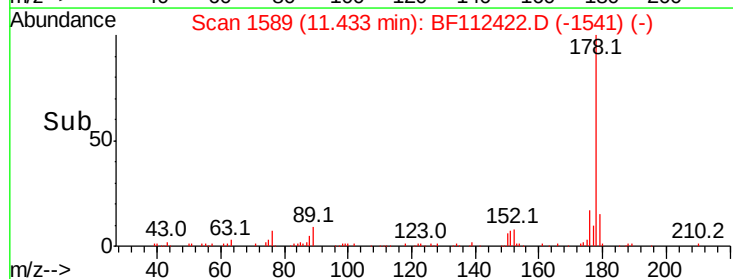
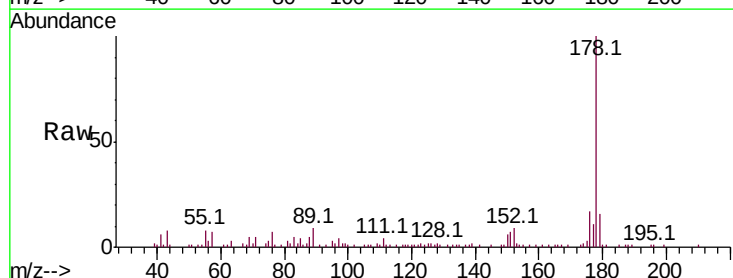
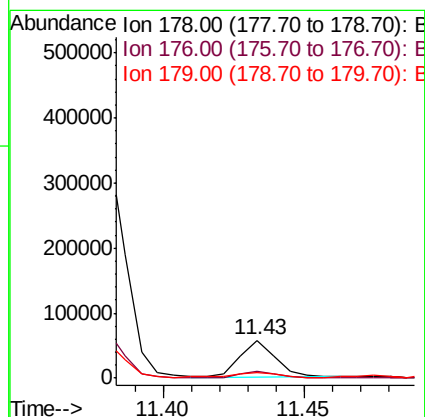
Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM

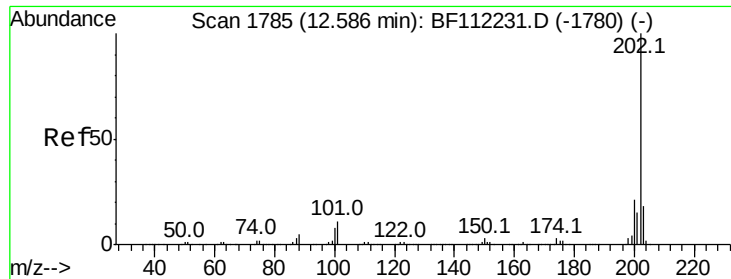


#72  
Anthracene  
Concen: 2.149 ng  
RT: 11.43 min Scan# 1589  
Delta R.T. -0.02 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 17.3  | 15.5  | 23.3  |
| 179     | 15.6  | 12.8  | 19.2  |







#75

Fluoranthene

Concen: 15.092 ng

RT: 12.57 min Scan# 1783

Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

Instrument :

BNA\_F

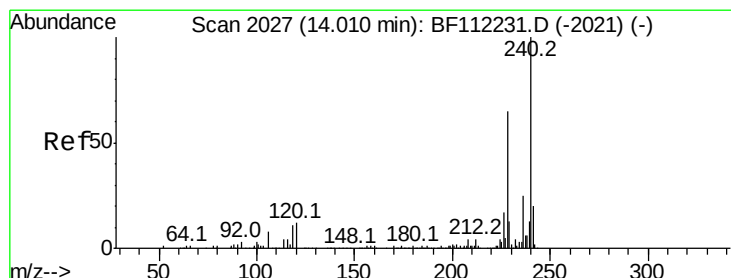
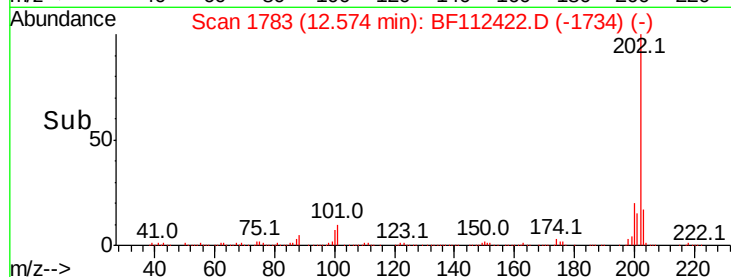
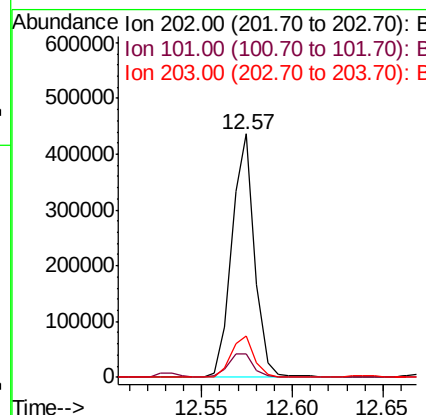
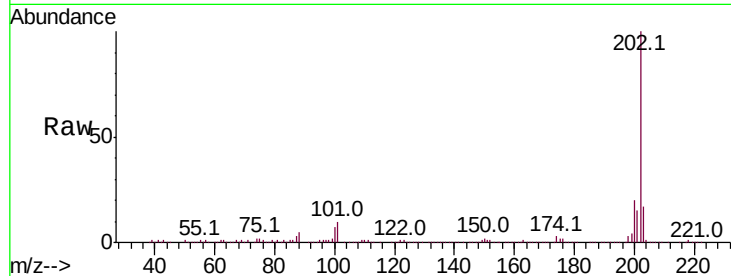
ClientSampleId :

SU-01-020519-B

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 202     | 100   | 378614 |       |       |
| 101     | 9.8   | 0.0    | 31.8  |       |
| 203     | 17.1  | 0.0    | 38.4  |       |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM



#76

Chrysene-d12

Concen: 20.000 ng

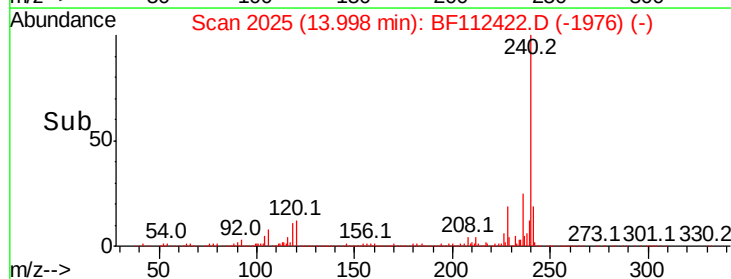
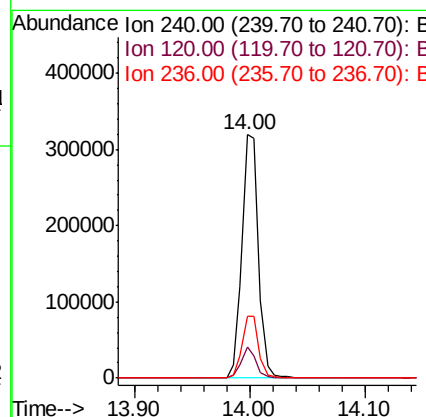
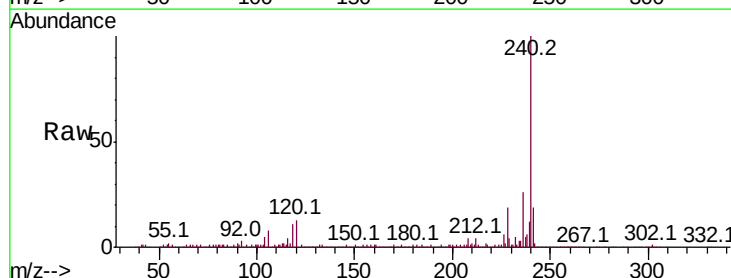
RT: 14.00 min Scan# 2025

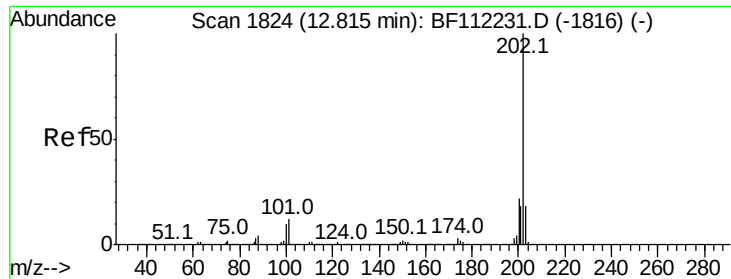
Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 240     | 100   | 320622 |       |       |
| 120     | 12.6  | 9.0    | 13.6  |       |
| 236     | 25.7  | 20.7   | 31.1  |       |





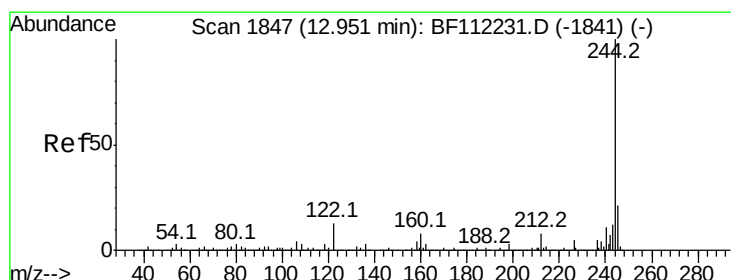
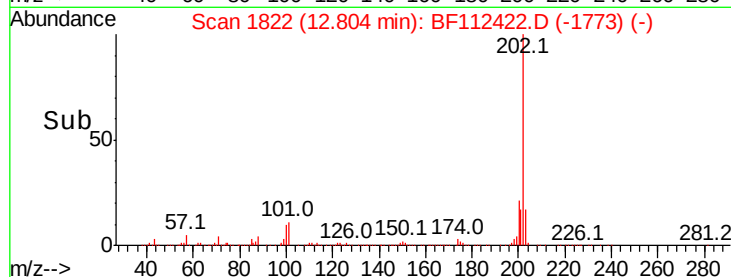
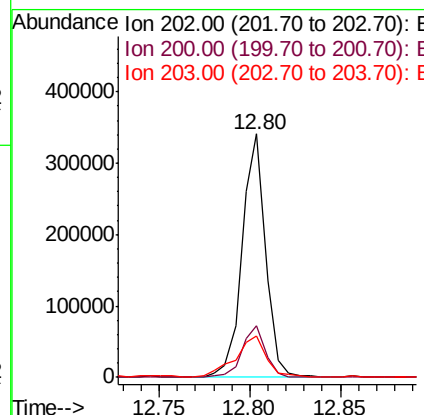
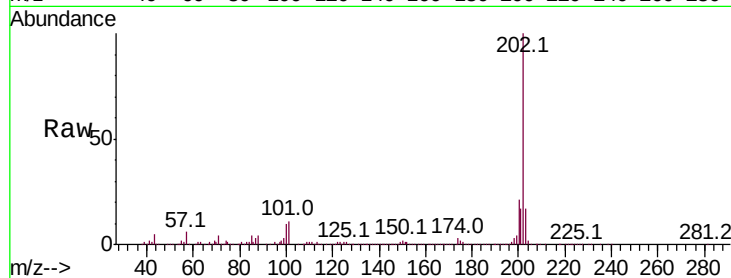
#78  
Pvrene  
Concen: 13.684 ng  
RT: 12.80 min Scan# 1822  
Delta R.T. -0.01 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

Instrument :  
BNA\_F  
ClientSampleId :  
SU-01-020519-B

| Tot Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 202     | 100   |            |       |
| 200     | 21.2  | 17.7       | 26.5  |
| 203     | 17.0  | 14.6       | 22.0  |

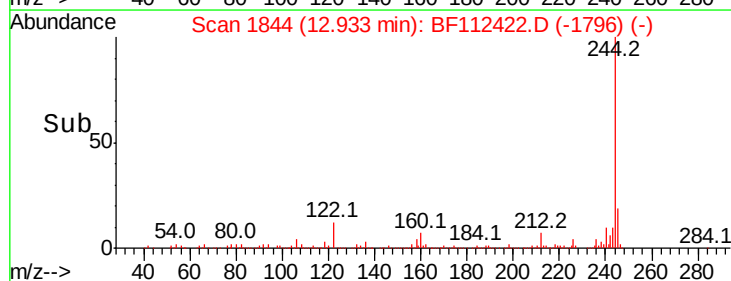
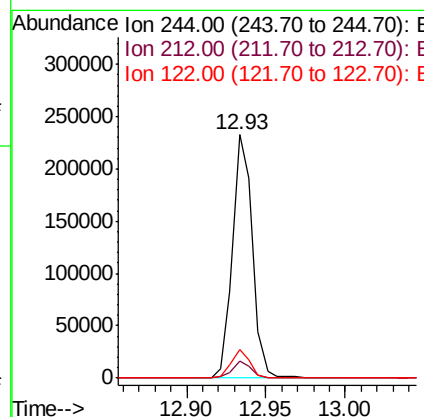
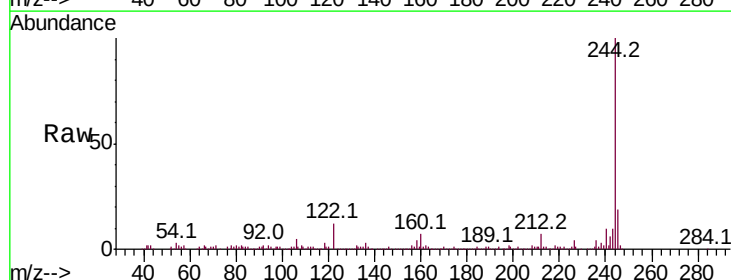
Manual Integrations  
APPROVED

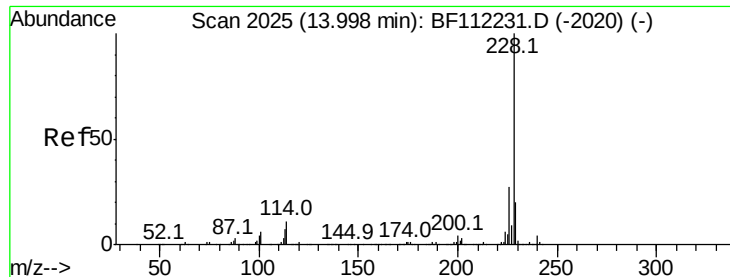
mohammad  
2/7/2019 8:40:16 AM



#79  
Terphenyl-d14  
Concen: 11.902 ng  
RT: 12.93 min Scan# 1844  
Delta R.T. -0.02 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

| Tgt Ion | Ratio | Resp Lower | Upper |
|---------|-------|------------|-------|
| 244     | 100   |            |       |
| 212     | 7.1   | 5.9        | 8.9   |
| 122     | 11.8  | 9.8        | 14.6  |





#81

Benzo(a)anthracene

Concen: 7.021 ng

RT: 13.99 min Scan# 2024

Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

Instrument :

BNA\_F

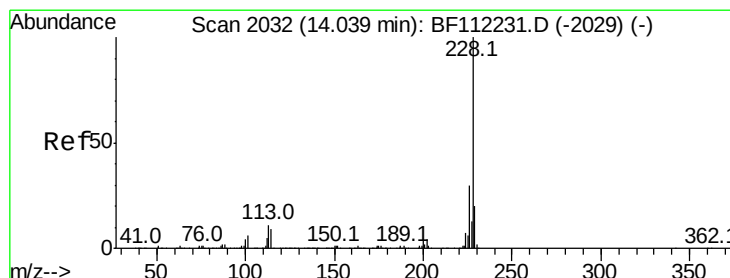
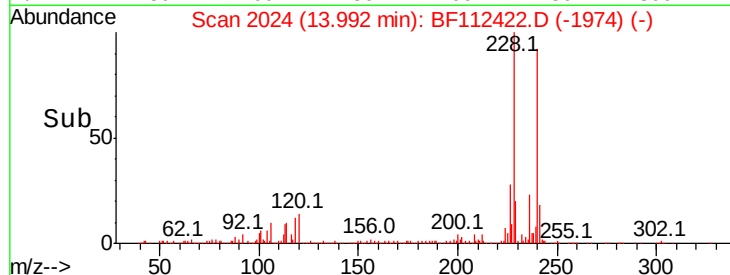
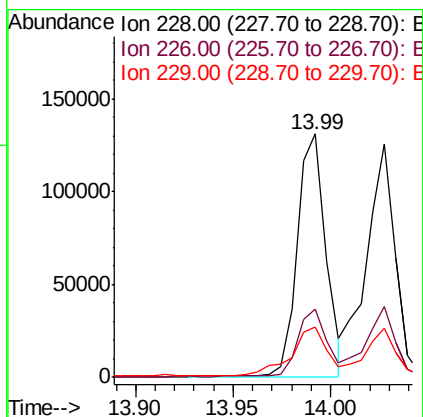
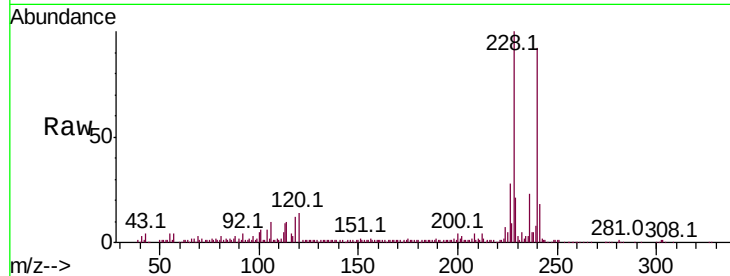
ClientSampleId :

SU-01-020519-B

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 228   | Resp: | 132339 |
| Ion Ratio | Lower | Upper |        |
| 228       | 100   |       |        |
| 226       | 28.3  | 22.6  | 34.0   |
| 229       | 20.6  | 16.5  | 24.7   |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM



#83

Chrysene

Concen: 7.213 ng

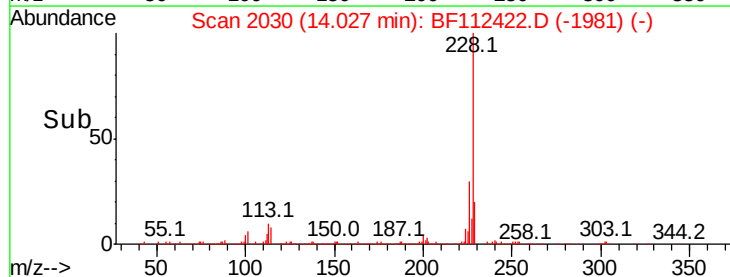
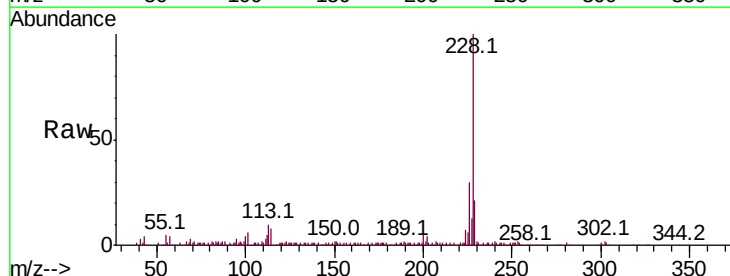
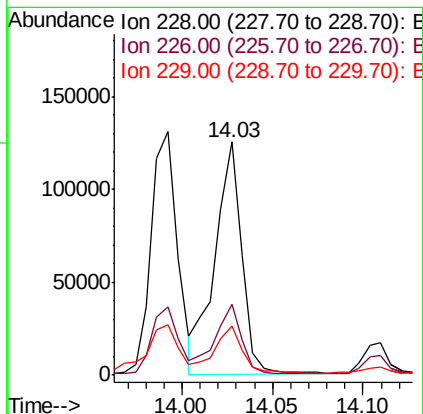
RT: 14.03 min Scan# 2030

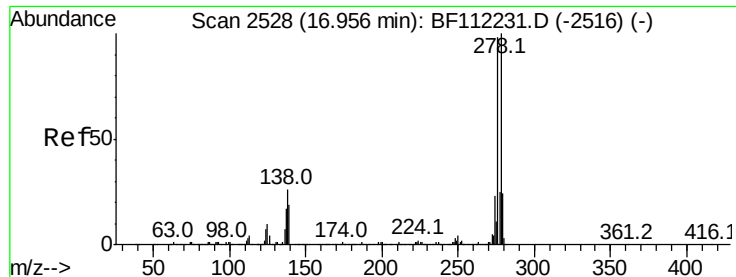
Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 228   | Resp: | 129776 |
| Ion Ratio | Lower | Upper |        |
| 228       | 100   |       |        |
| 226       | 30.4  | 25.0  | 37.6   |
| 229       | 20.9  | 16.6  | 24.8   |





#86

Indeno(1,2,3-cd)pyrene

Concen: 4.278 ng

RT: 16.95 min Scan# 2527

Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

Instrument :

BNA\_F

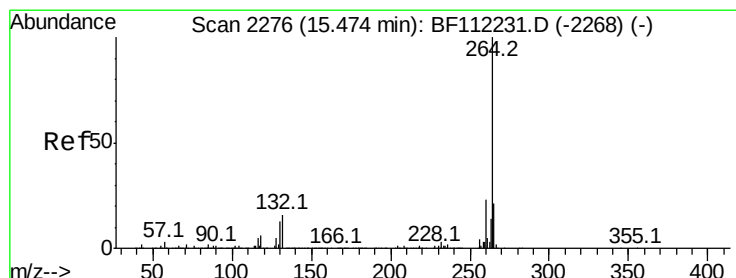
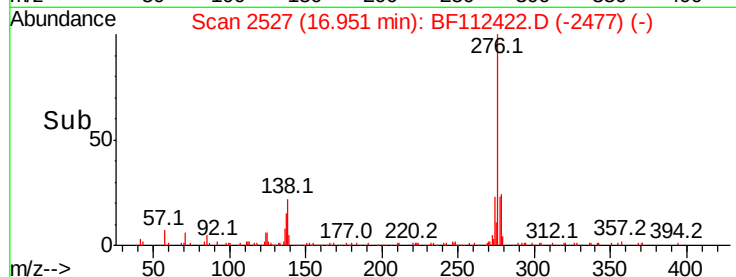
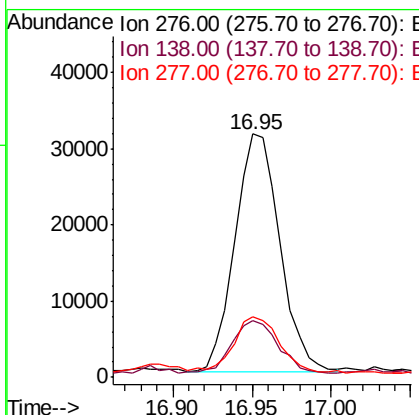
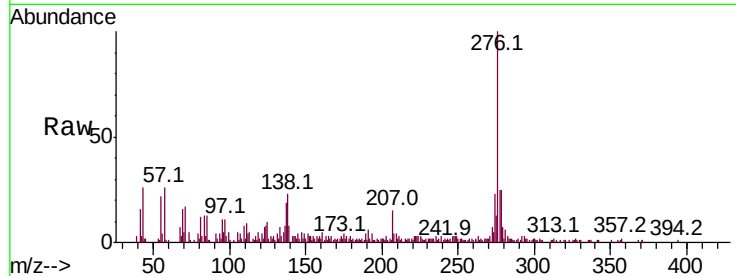
ClientSampleId :

SU-01-020519-B

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 276   | Resp: | 60988 |
| Ion Ratio | Lower | Upper |       |
| 276       | 100   |       |       |
| 138       | 23.2  | 22.6  | 34.0  |
| 277       | 23.5  | 20.3  | 30.5  |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM



#87

Perylene-d12

Concen: 20.000 ng

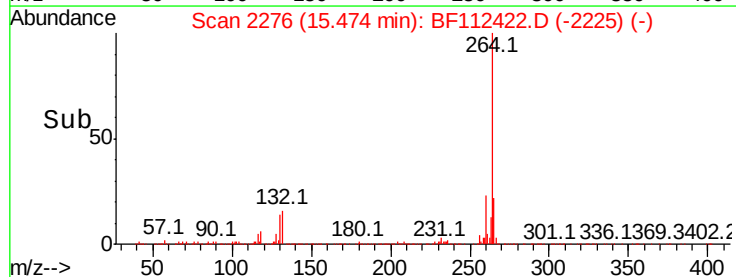
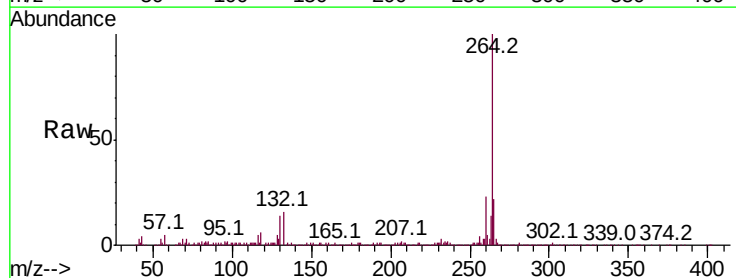
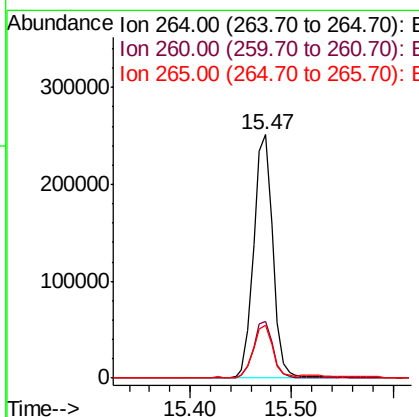
RT: 15.47 min Scan# 2276

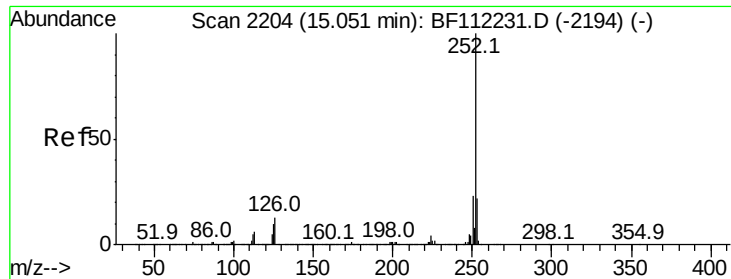
Delta R.T. 0.00 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 264   | Resp: | 330604 |
| Ion Ratio | Lower | Upper |        |
| 264       | 100   |       |        |
| 260       | 23.4  | 18.2  | 27.2   |
| 265       | 21.9  | 17.0  | 25.4   |





#88

Benzo(b)fluoranthene

Concen: 9.096 ng m

RT: 15.04 min Scan# 2203

Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

Instrument :

BNA\_F

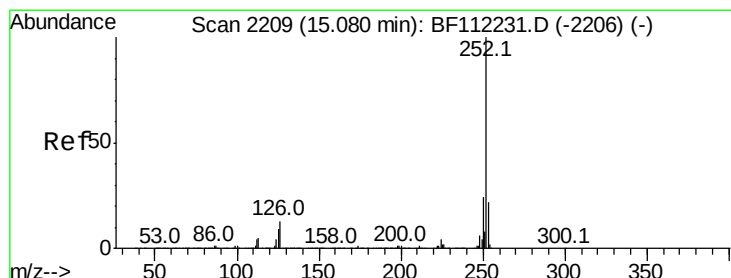
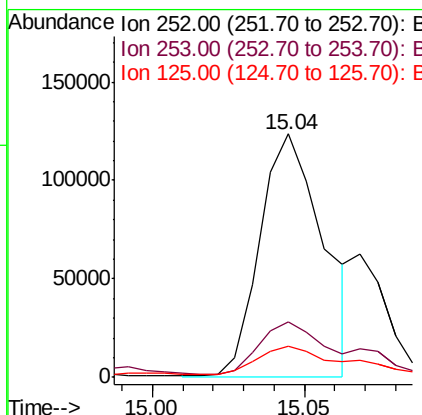
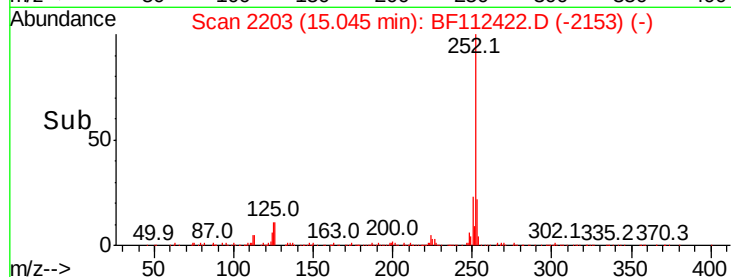
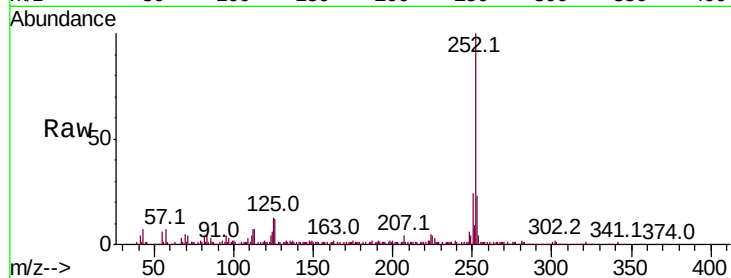
ClientSampleId :

SU-01-020519-B

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 252   | Resp: | 179846 |
| Ion Ratio | Lower | Upper |        |
| 252       | 100   |       |        |
| 253       | 22.9  | 18.0  | 27.0   |
| 125       | 12.9  | 8.7   | 13.1   |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM



#89

Benzo(k)fluoranthene

Concen: 2.701 ng m

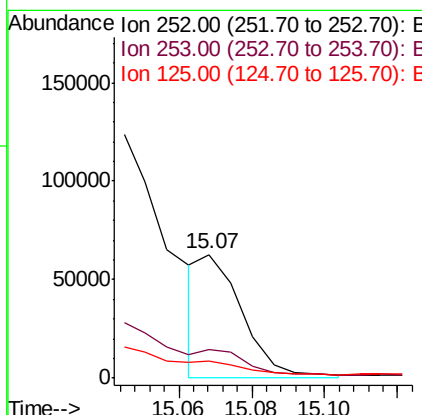
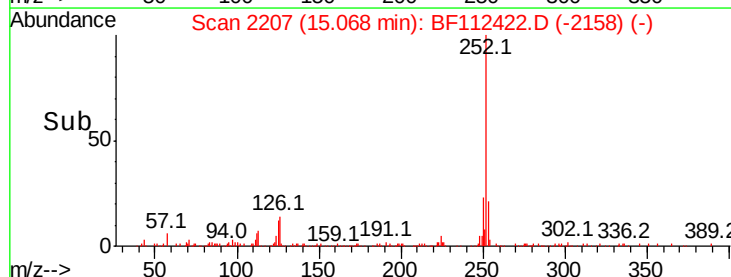
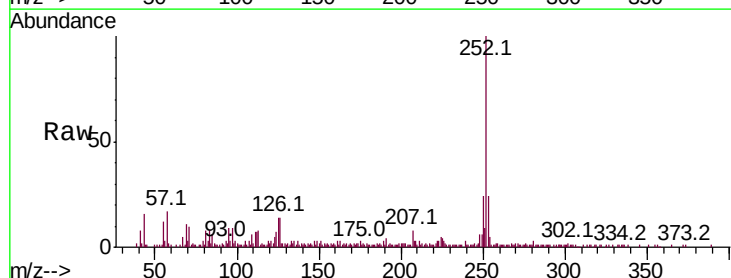
RT: 15.07 min Scan# 2207

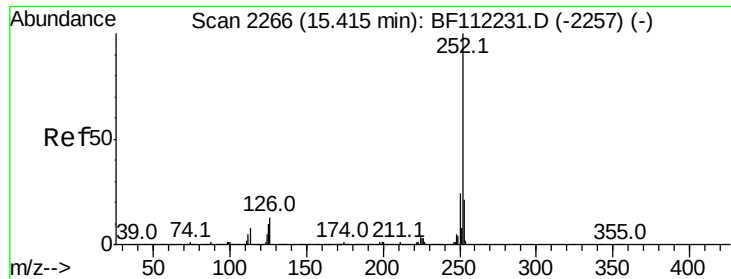
Delta R.T. -0.01 min

Lab File: BF112422.D

Acq: 6 Feb 2019 16:16

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 252   | Resp: | 51159 |
| Ion Ratio | Lower | Upper |       |
| 252       | 100   |       |       |
| 253       | 23.6  | 18.0  | 27.0  |
| 125       | 13.7  | 9.1   | 13.7# |





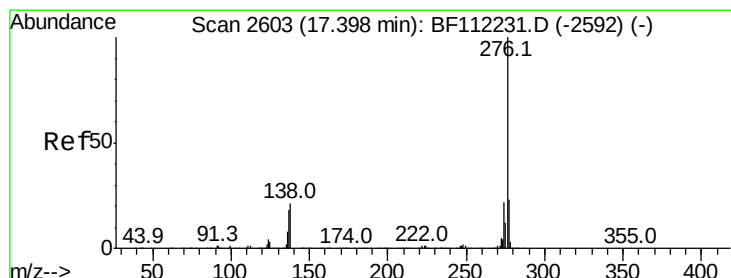
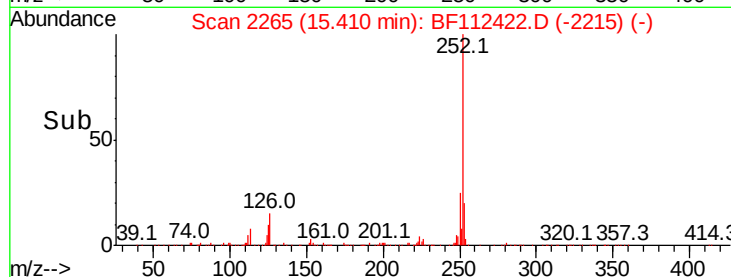
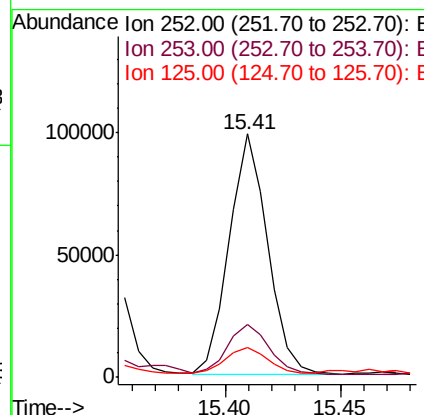
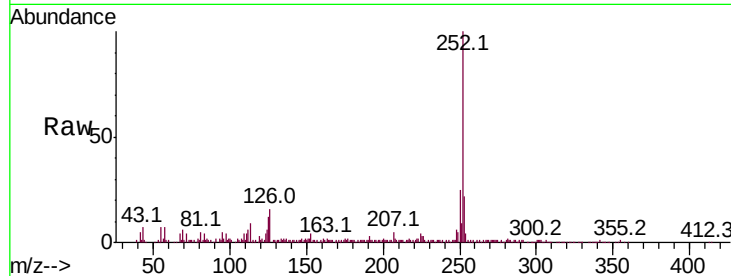
#90  
Benzo(a)pyrene  
Concen: 6.411 ng  
RT: 15.41 min Scan# 2265  
Delta R.T. -0.01 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

Instrument :  
BNA\_F  
ClientSampleId :  
SU-01-020519-B

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 21.7  | 17.5  | 26.3  |
| 125     | 12.4  | 9.0   | 13.4  |

Manual Integrations  
APPROVED

mohammad  
2/7/2019 8:40:16 AM



#92  
Benzo(g,h,i)perylene  
Concen: 4.160 ng  
RT: 17.40 min Scan# 2603  
Delta R.T. 0.00 min  
Lab File: BF112422.D  
Acq: 6 Feb 2019 16:16

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 277     | 26.2  | 19.4  | 29.0  |
| 138     | 23.3  | 19.1  | 28.7  |

