

Data Path : Z:\SVOASRV\HPCHEM1\BNA\_M\DATA\BM080319\  
 Data File : BM021811.D  
 Acq On : 04 Aug 2019 14:10  
 Operator : HP/JU  
 Sample : K3850-16  
 Misc :  
 ALS Vial : 54 Sample Multiplier: 1

Instrument :  
 BNA\_M  
 ClientSampleId :  
 BENR8

Manual Integrations  
 APPROVED

mohammad  
 8/5/2019 10:15:39 PM

Quant Time: Aug 05 06:46:35 2019  
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA\_M\METHODS\SOM-EPA-SIM-BM080319.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Mon Aug 05 05:26:43 2019  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|--------|--------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 7.64  | 152  | 1004     | 0.40   | ng/ul  | 0.00     |
| 2) Naphthalene-d8           | 10.42 | 136  | 4050     | 0.40   | ng/ul  | -0.02    |
| 6) Acenaphthene-d10         | 14.29 | 164  | 2477     | 0.40   | ng/ul  | 0.00     |
| 10) Phenanthrene-d10        | 17.04 | 188  | 6442m    | 0.40   | ng/ul  | -0.02    |
| 16) Chrysene-d12            | 21.24 | 240  | 6616m    | 0.40   | ng/ul  | 0.00     |
| 20) Perylene-d12            | 23.46 | 264  | 7059m    | 0.40   | ng/ul  | 0.00     |
| System Monitoring Compounds |       |      |          |        |        |          |
| 4) 2-Methylnaphthalene-d10  | 12.03 | 152  | 1200     | 0.18   | ng/ul  | -0.01    |
| 14) Fluoranthene-d10        | 19.08 | 212  | 4706m    | 0.22   | ng/ul  | -0.01    |
| Target Compounds            |       |      |          | Qvalue |        |          |
| 3) Naphthalene              | 10.46 | 128  | 613      | 0.054  | ng/ul# | 81       |
| 5) 2-Methylnaphthalene      | 12.10 | 142  | 339      | 0.044  | ng/ul  | 98       |
| 7) Acenaphthylene           | 14.01 | 152  | 1237     | 0.107  | ng/ul# | 95       |
| 8) Acenaphthene             | 14.35 | 153  | 1392     | 0.147  | ng/ul  | 97       |
| 9) Fluorene                 | 15.34 | 166  | 1533     | 0.146  | ng/ul  | 99       |
| 12) Phenanthrene            | 17.08 | 178  | 29124m   | 1.554  | ng/ul  |          |
| 13) Anthracene              | 17.17 | 178  | 6874m    | 0.430  | ng/ul  |          |
| 15) Fluoranthene            | 19.11 | 202  | 52629m   | 2.096  | ng/ul  |          |
| 17) Pyrene                  | 19.47 | 202  | 57800    | 2.126  | ng/ul  | 97       |
| 18) Benzo(a)anthracene      | 21.22 | 228  | 32636    | 1.379  | ng/ul  | 99       |
| 19) Chrysene                | 21.27 | 228  | 32633    | 1.072  | ng/ul  | 98       |
| 21) Benzo(b)fluoranthene    | 22.79 | 252  | 34904m   | 1.466  | ng/ul  |          |
| 22) Benzo(k)fluoranthene    | 22.83 | 252  | 12549m   | 0.466  | ng/ul  |          |
| 23) Benzo(a)pyrene          | 23.36 | 252  | 28181m   | 1.164  | ng/ul  |          |
| 24) Indeno(1,2,3-cd)pyrene  | 25.67 | 276  | 16230m   | 0.562  | ng/ul  |          |
| 25) Dibenzo(a,h)anthracene  | 25.68 | 278  | 4464m    | 0.191  | ng/ul  |          |
| 26) Benzo(g,h,i)perylene    | 26.36 | 276  | 16205m   | 0.623  | ng/ul  |          |

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

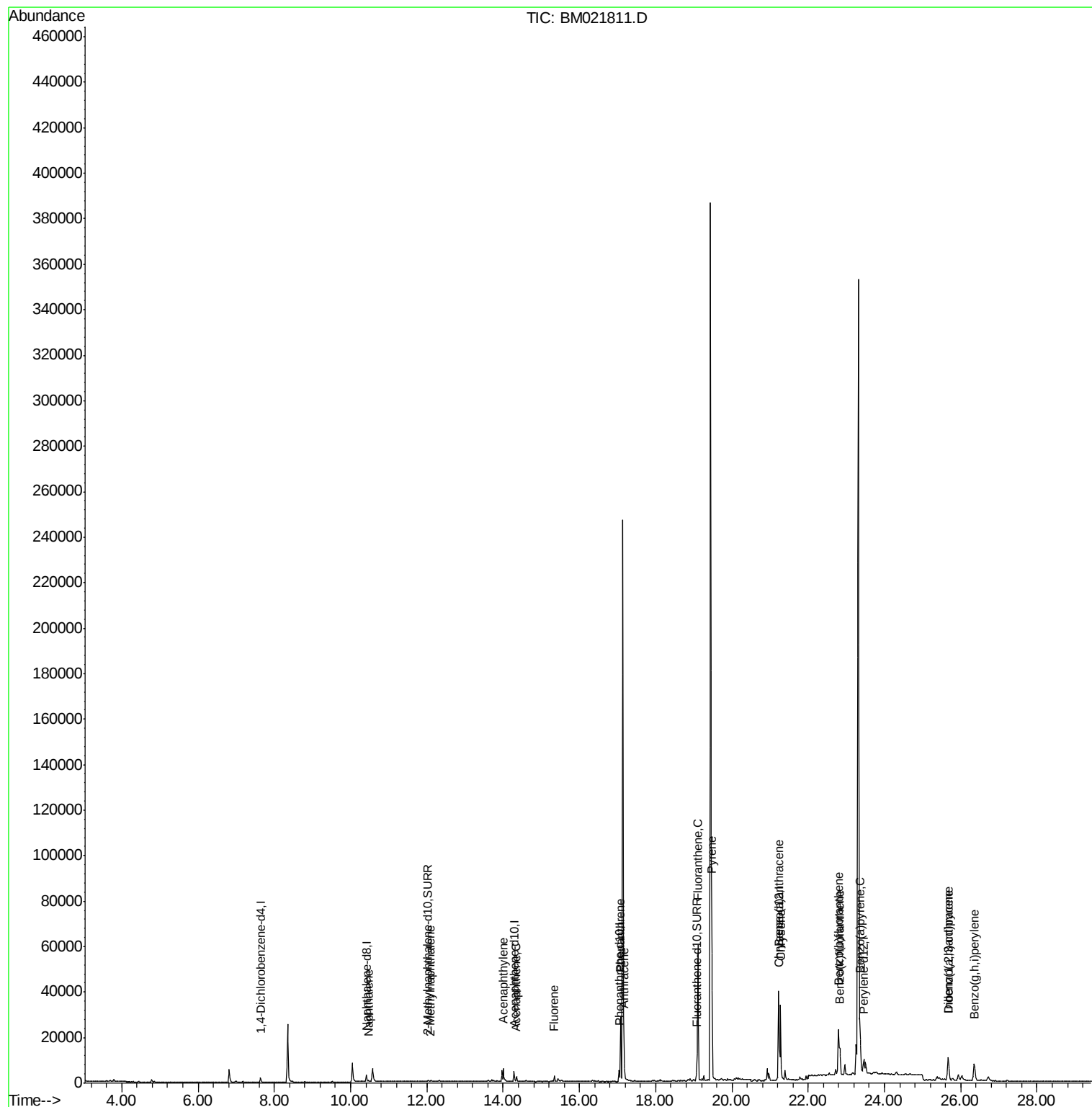
Data Path : Z:\SVOASRV\HPCHEM1\BNA\_M\DATA\BM080319\  
Data File : BM021811.D  
Acq On : 04 Aug 2019 14:10  
Operator : HP/JU  
Sample : K3850-16  
Misc :  
ALS Vial : 54 Sample Multiplier: 1

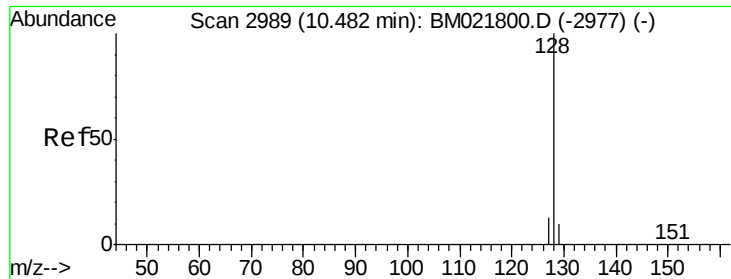
Instrument :  
BNA\_M  
ClientSampleId :  
BENR8

Manual Integrations  
APPROVED

mohammad  
8/5/2019 10:15:39 PM

Quant Time: Aug 05 06:46:35 2019  
Quant Method : Z:\SVOASRV\HPCHEM1\BNA\_M\METHODS\SOM-EPA-SIM-BM080319.M  
Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
QLast Update : Mon Aug 05 05:26:43 2019  
Response via : Initial Calibration





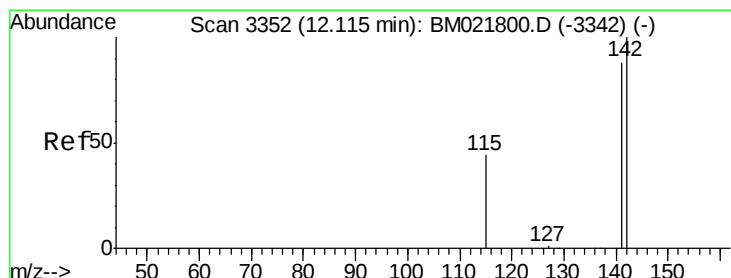
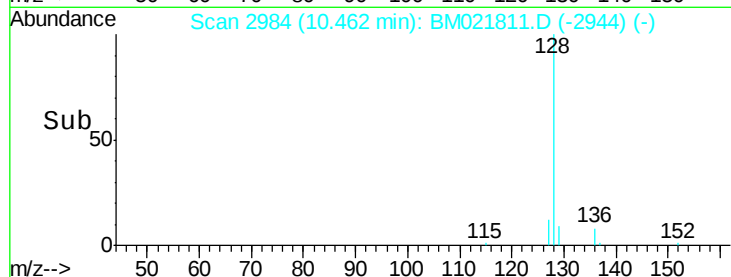
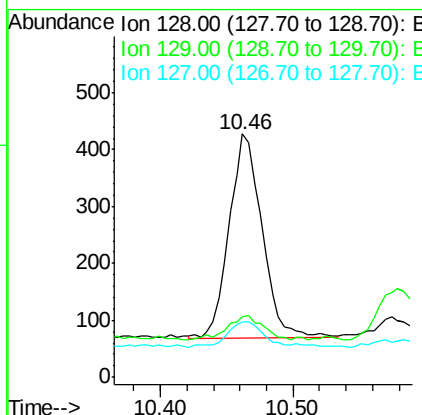
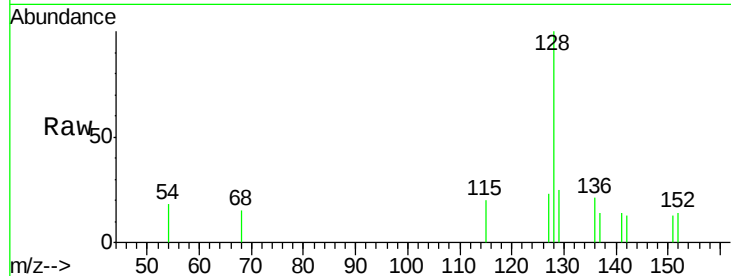
#3  
Naphthalene  
Concen: 0.054 ng/ul  
RT: 10.46 min Scan# 2984  
Delta R.T. -0.02 min  
Lab File: BM021811.D  
Acq: 04 Aug 2019 14:10

Instrument :  
BNA\_M  
ClientSampled :  
BENR8

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 129     | 24.8  | 12.3  | 18.5# |
| 127     | 22.7  | 13.0  | 19.6# |

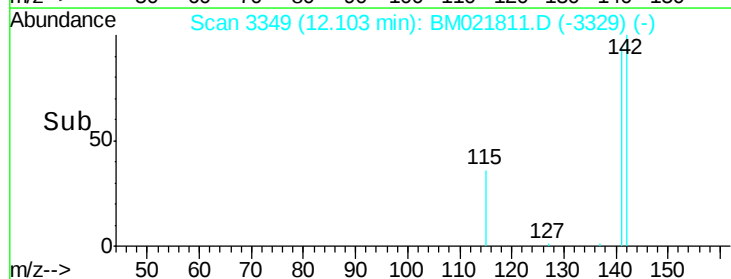
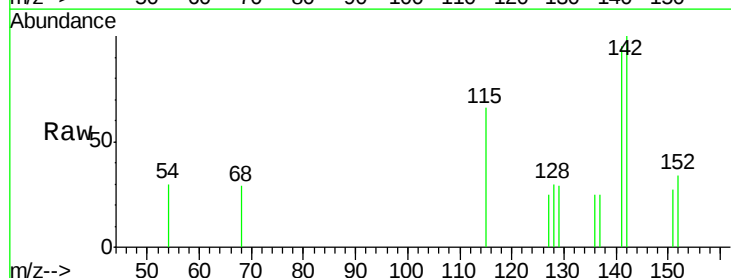
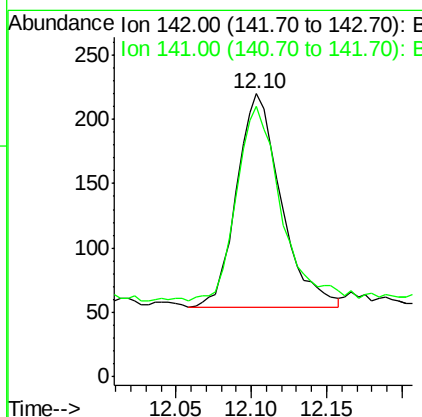
Manual Integrations  
APPROVED

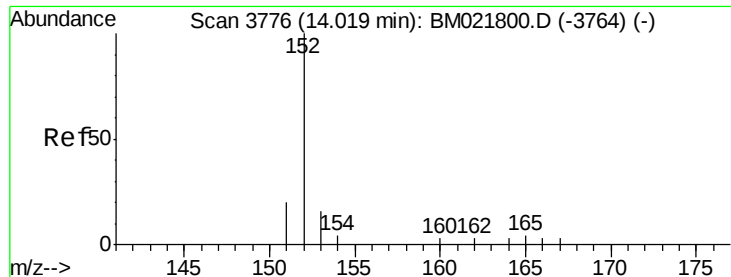
mohammad  
8/5/2019 10:15:39 PM



#5  
2-Methylnaphthalene  
Concen: 0.044 ng/ul  
RT: 12.10 min Scan# 3349  
Delta R.T. -0.01 min  
Lab File: BM021811.D  
Acq: 04 Aug 2019 14:10

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 142     | 100   |       |       |
| 141     | 94.4  | 74.3  | 111.5 |





#7

Acenaphthylene

Concen: 0.107 ng/ul

RT: 14.01 min Scan# 3773

Delta R.T. -0.01 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

Instrument :

BNA\_M

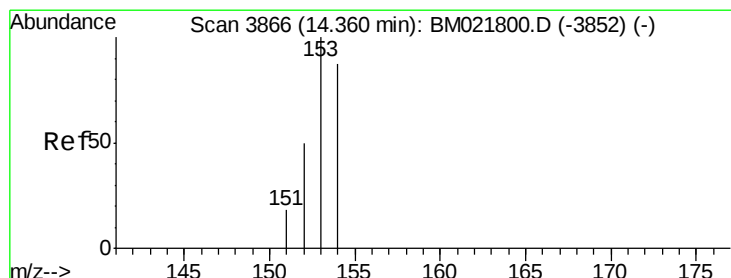
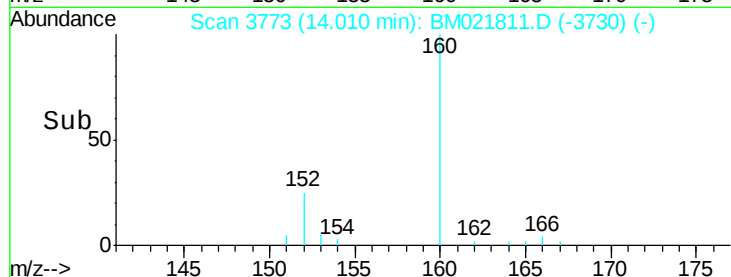
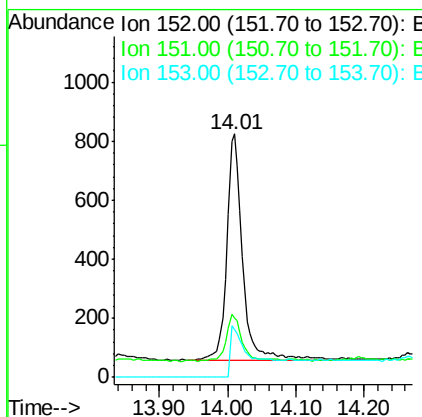
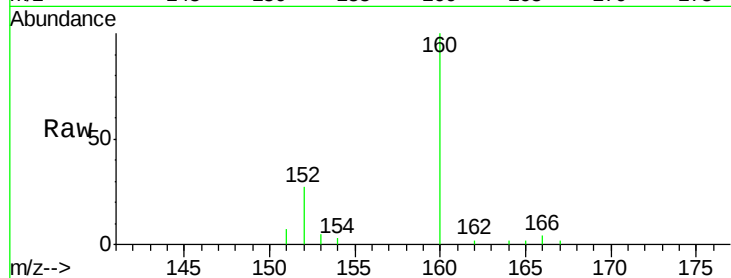
ClientSampled :

BENR8

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 152     | 100   | 1237 |       |       |
| 151     | 24.1  | 18.3 | 27.5  |       |
| 153     | 19.6  | 12.8 | 19.2  |       |

Manual Integrations  
APPROVED

mohammad  
8/5/2019 10:15:39 PM



#8

Acenaphthene

Concen: 0.147 ng/ul

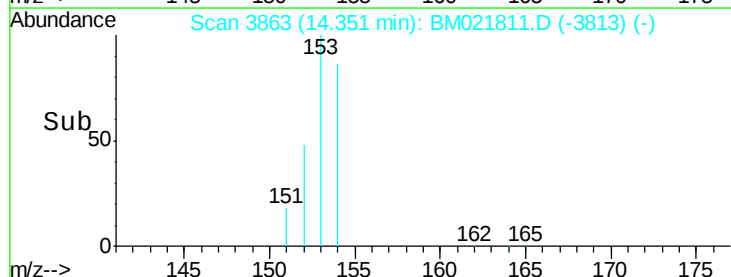
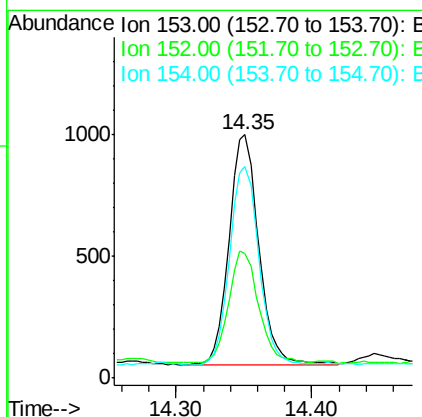
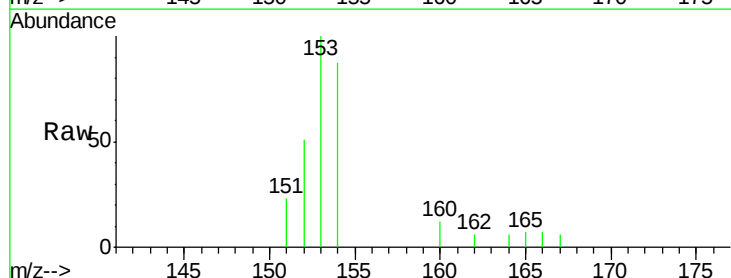
RT: 14.35 min Scan# 3863

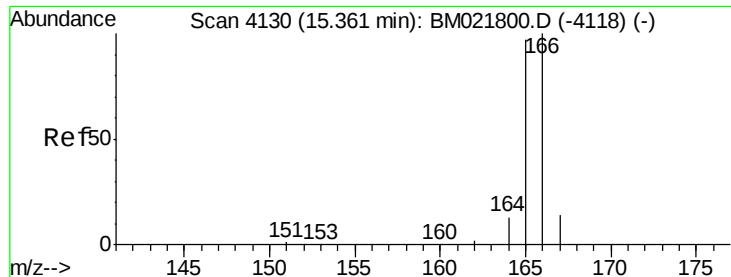
Delta R.T. -0.01 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 153     | 100   | 1392 |       |       |
| 152     | 51.2  | 41.3 | 61.9  |       |
| 154     | 86.7  | 72.3 | 108.5 |       |





#9

Fluorene

Concen: 0.146 ng/ul

RT: 15.34 min Scan# 4125

Delta R.T. -0.02 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

Instrument :

BNA\_M

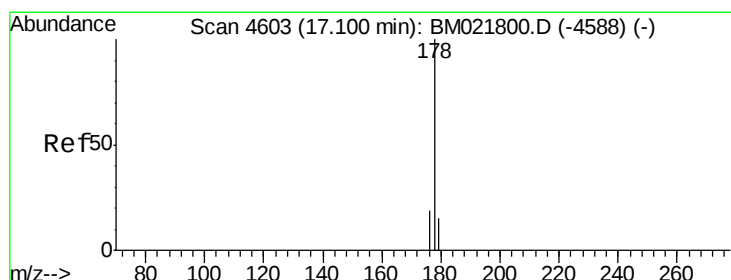
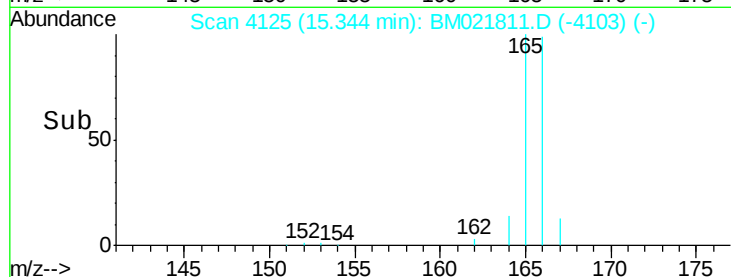
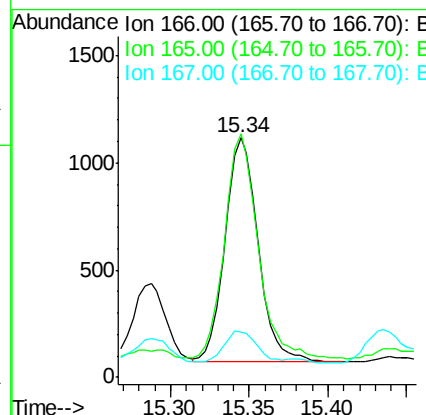
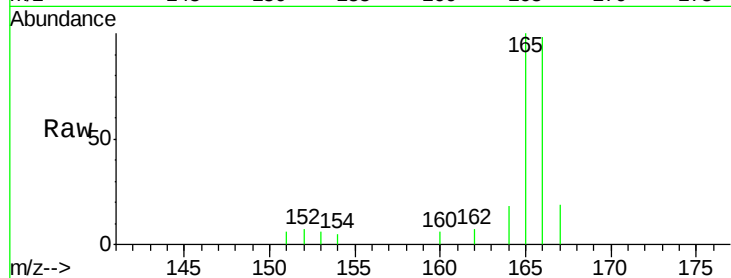
ClientSampleId :

BENR8

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 166   | Resp: | 1533  |
| Ion Ratio | Lower | Upper |       |
| 166       | 100   |       |       |
| 165       | 101.6 | 81.4  | 122.0 |
| 167       | 19.0  | 13.7  | 20.5  |

Manual Integrations  
APPROVED

mohammad  
8/5/2019 10:15:39 PM



#12

Phenanthrene

Concen: 1.554 ng/ul m

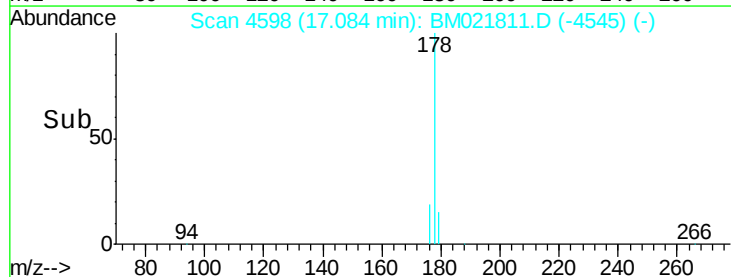
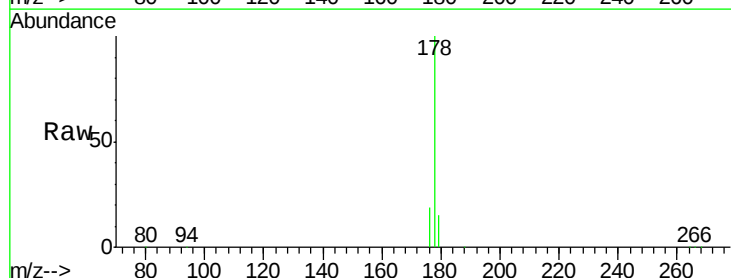
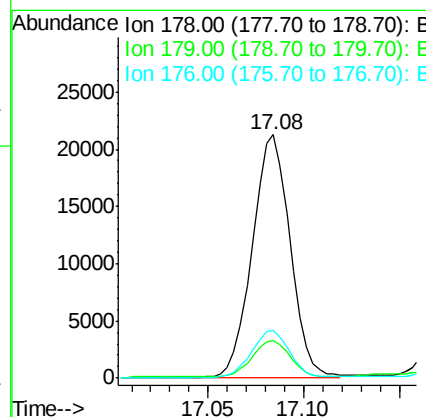
RT: 17.08 min Scan# 4598

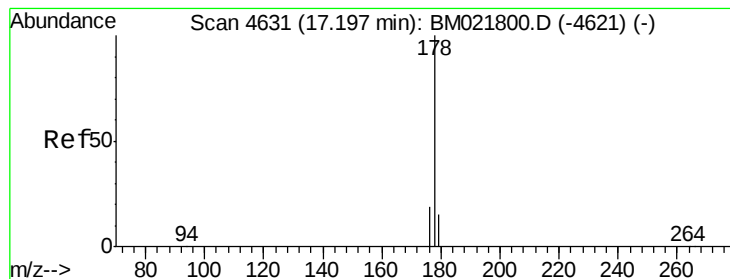
Delta R.T. -0.02 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 178   | Resp: | 29124 |
| Ion Ratio | Lower | Upper |       |
| 178       | 100   |       |       |
| 179       | 15.5  | 14.2  | 21.2  |
| 176       | 19.5  | 16.8  | 25.2  |





#13

Anthracene

Concen: 0.430 ng/ul m

RT: 17.17 min Scan# 4624

Delta R.T. -0.02 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

Instrument :

BNA\_M

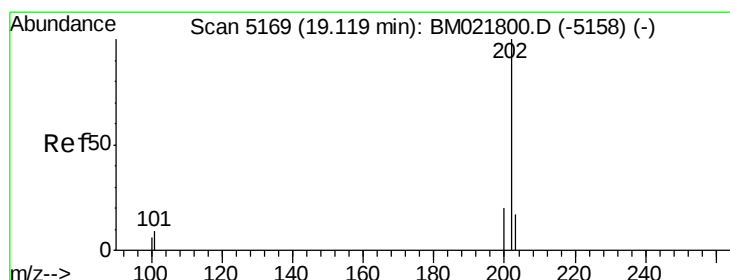
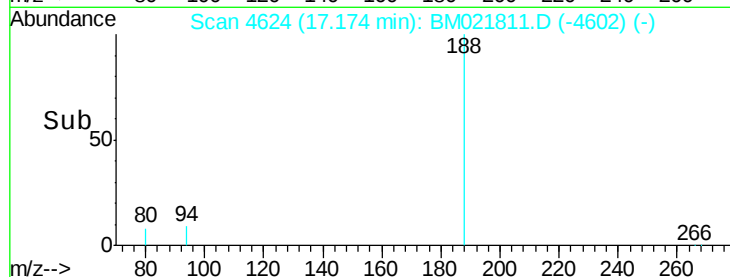
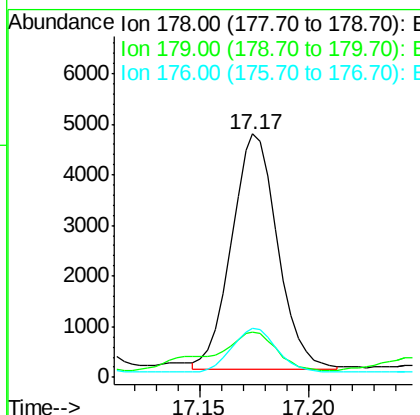
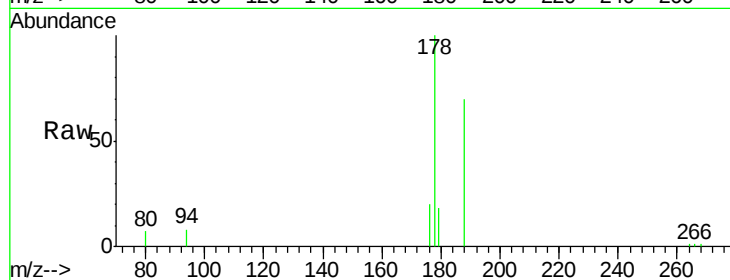
ClientSampleId :

BENR8

|           |       |       |      |
|-----------|-------|-------|------|
| Tgt Ion:  | 178   | Resp: | 6874 |
| Ion Ratio | Lower | Upper |      |
| 178       | 100   |       |      |
| 179       | 18.5  | 15.5  | 23.3 |
| 176       | 20.1  | 16.6  | 25.0 |

Manual Integrations  
APPROVED

mohammad  
8/5/2019 10:15:39 PM



#15

Fluoranthene

Concen: 2.096 ng/ul m

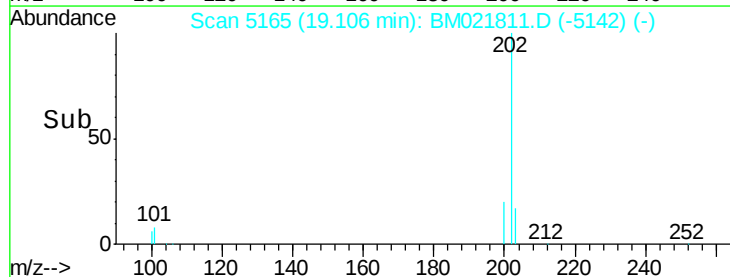
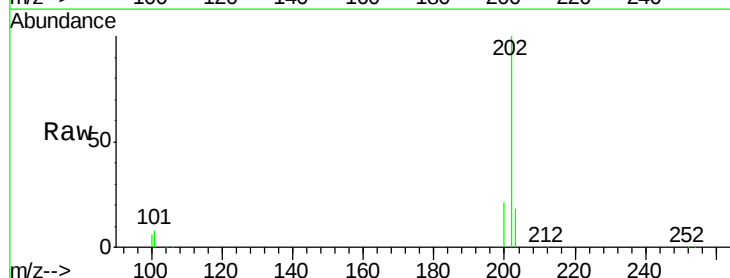
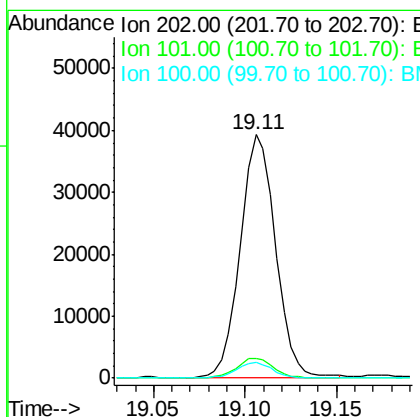
RT: 19.11 min Scan# 5165

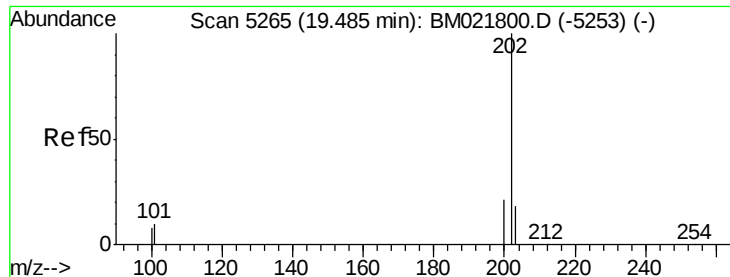
Delta R.T. -0.01 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 202   | Resp: | 52629 |
| Ion Ratio | Lower | Upper |       |
| 202       | 100   |       |       |
| 101       | 8.2   | 0.0   | 30.2  |
| 100       | 6.2   | 0.0   | 28.1  |





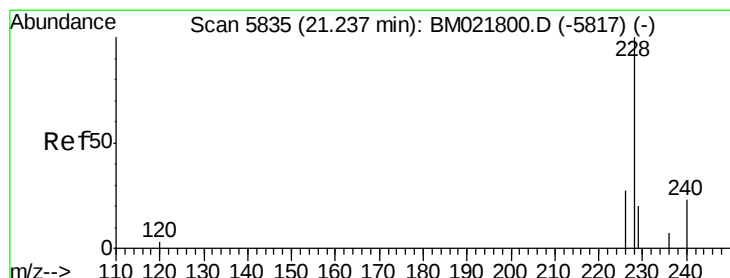
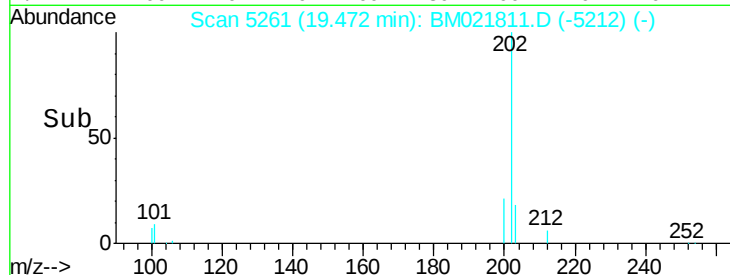
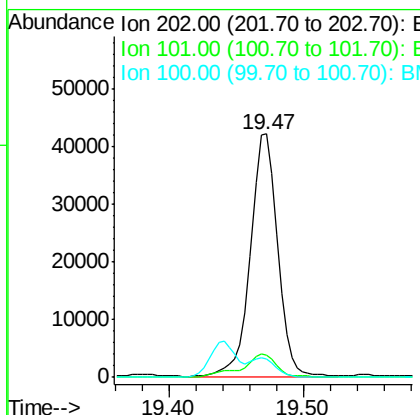
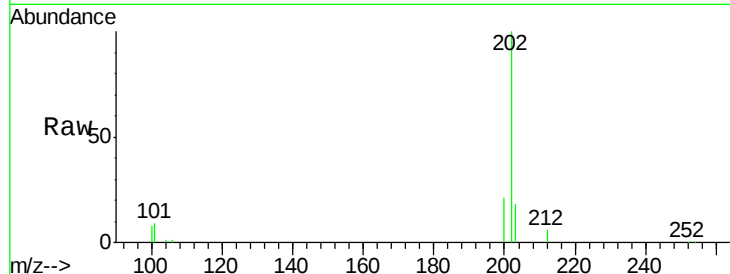
#17  
**Pyrene**  
 Concen: 2.126 ng/ul  
 RT: 19.47 min Scan# 5261  
 Delta R.T. -0.01 min  
 Lab File: BM021811.D  
 Acq: 04 Aug 2019 14:10

Instrument :  
 BNA\_M  
 ClientSampleId :  
 BENR8

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 202   | Resp: | 57800 |
| Ion Ratio | Lower | Upper |       |
| 202       | 100   |       |       |
| 101       | 9.3   | 8.3   | 12.5  |
| 100       | 7.6   | 7.2   | 10.8  |

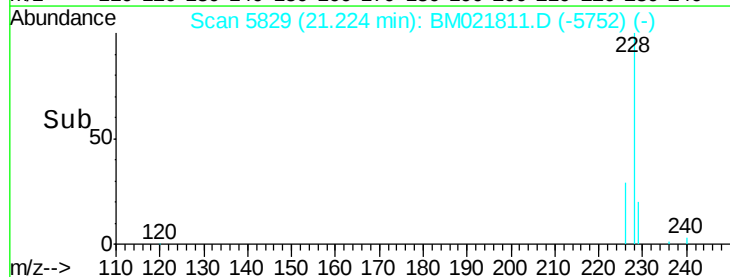
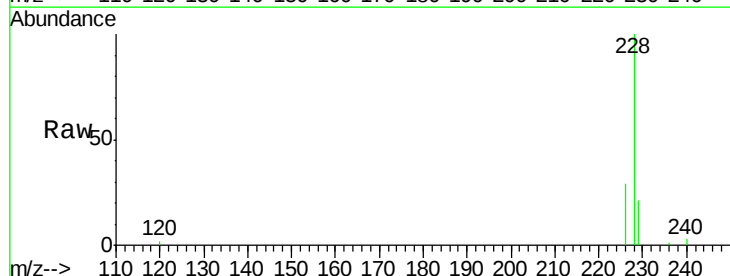
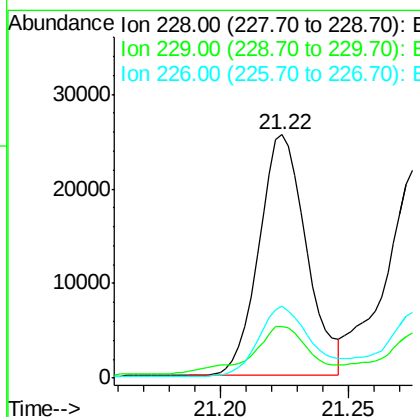
Manual Integrations  
 APPROVED

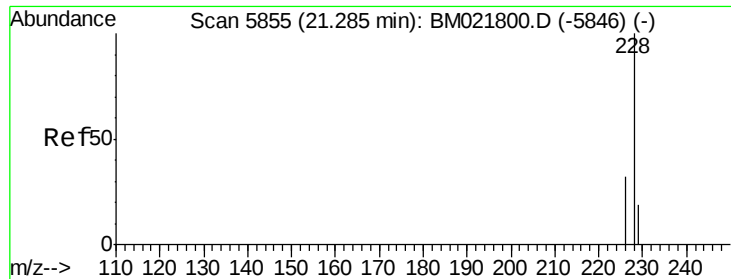
mohammad  
 8/5/2019 10:15:39 PM



#18  
**Benzo(a)anthracene**  
 Concen: 1.379 ng/ul  
 RT: 21.22 min Scan# 5829  
 Delta R.T. -0.01 min  
 Lab File: BM021811.D  
 Acq: 04 Aug 2019 14:10

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 228   | Resp: | 32636 |
| Ion Ratio | Lower | Upper |       |
| 228       | 100   |       |       |
| 229       | 21.4  | 17.2  | 25.8  |
| 226       | 29.4  | 22.6  | 34.0  |





#19

Chrysene

Concen: 1.072 ng/ul

RT: 21.27 min Scan# 5850

Delta R.T. -0.01 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

Instrument :

BNA\_M

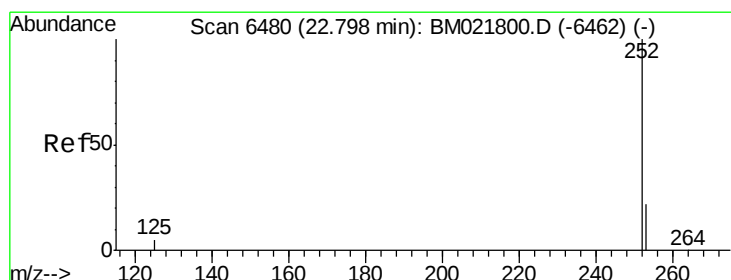
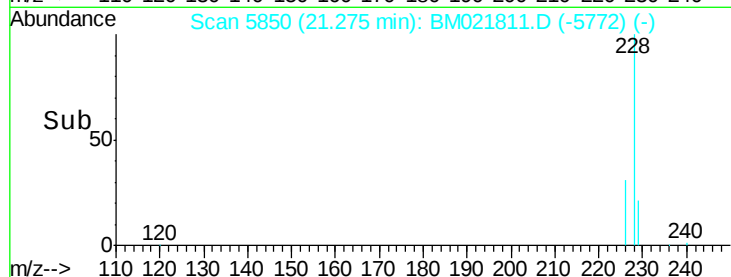
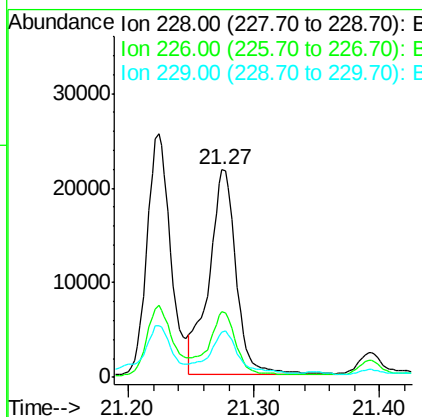
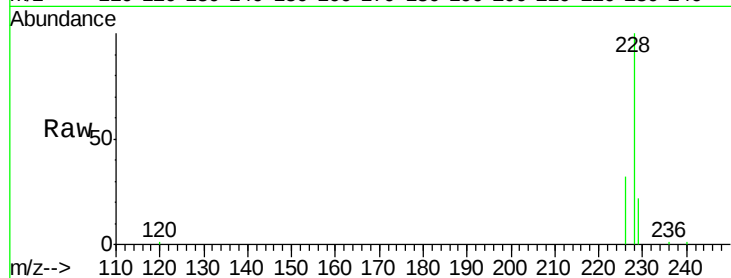
ClientSampleId :

BENR8

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 228   | Resp: | 32633 |
| Ion Ratio | Lower | Upper |       |
| 228       | 100   |       |       |
| 226       | 31.7  | 24.9  | 37.3  |
| 229       | 22.1  | 16.6  | 25.0  |

Manual Integrations  
APPROVED

mohammad  
8/5/2019 10:15:39 PM



#21

Benzo(b)fluoranthene

Concen: 1.466 ng/ul m

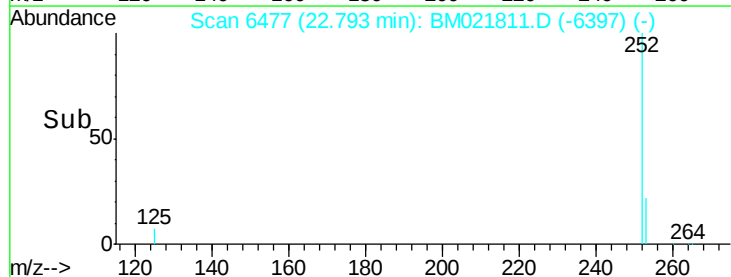
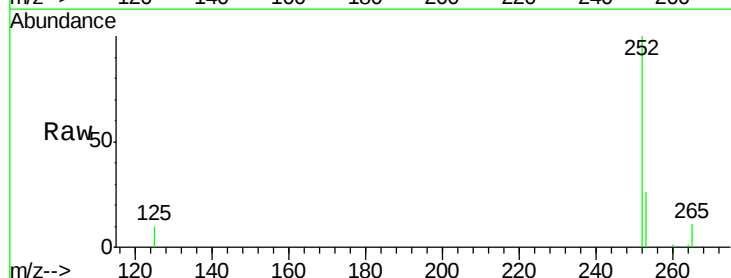
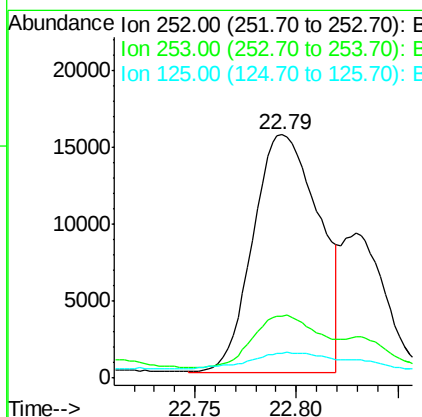
RT: 22.79 min Scan# 6477

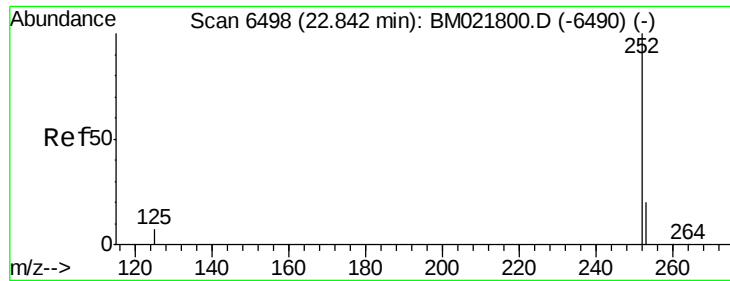
Delta R.T. -0.01 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 252   | Resp: | 34904 |
| Ion Ratio | Lower | Upper |       |
| 252       | 100   |       |       |
| 253       | 25.6  | 0.0   | 67.4  |
| 125       | 10.4  | 0.0   | 31.0  |





#22

Benzo(k)fluoranthene

Concen: 0.466 ng/ul m

RT: 22.83 min Scan# 6492

Delta R.T. -0.01 min

Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

Instrument :

BNA\_M

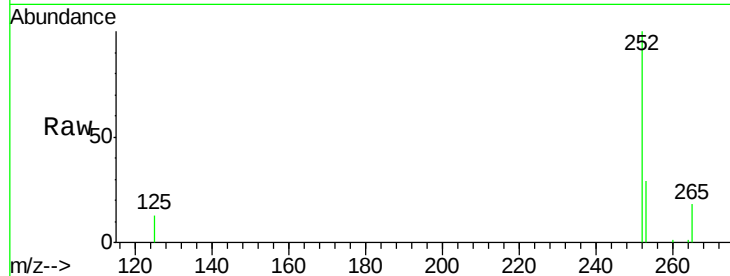
ClientSampleId :

BENR8

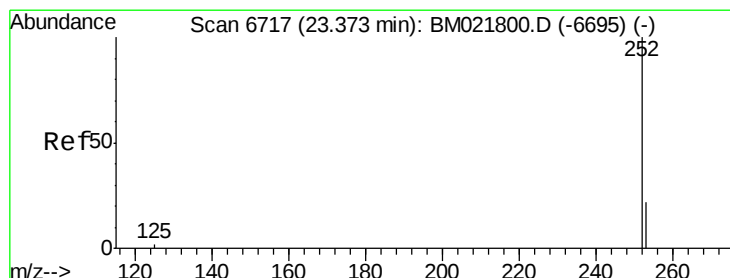
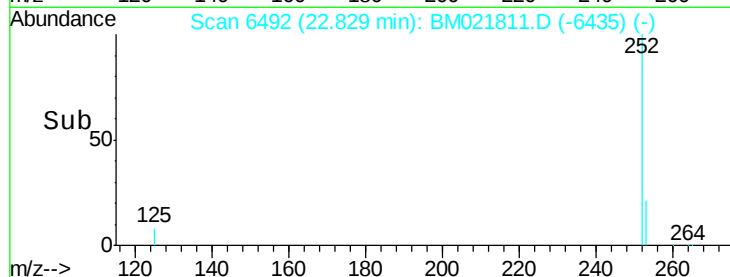
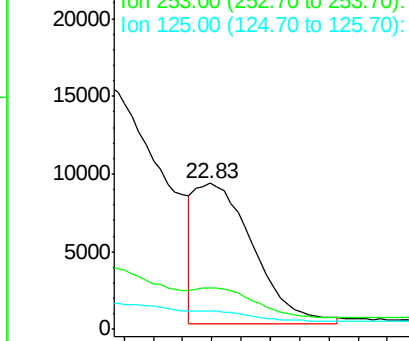
|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 252   | Resp: | 12549 |
| Ion Ratio | Lower | Upper |       |
| 252       | 100   |       |       |
| 253       | 28.6  | 27.0  | 40.4  |
| 125       | 12.6  | 12.2  | 18.2  |

Manual Integrations  
APPROVED

mohammad  
8/5/2019 10:15:39 PM



Abundance Ion 252.00 (251.70 to 252.70): E  
Ion 253.00 (252.70 to 253.70): E  
Ion 125.00 (124.70 to 125.70): E



#23

Benzo(a)pyrene

Concen: 1.164 ng/ul m

RT: 23.36 min Scan# 6711

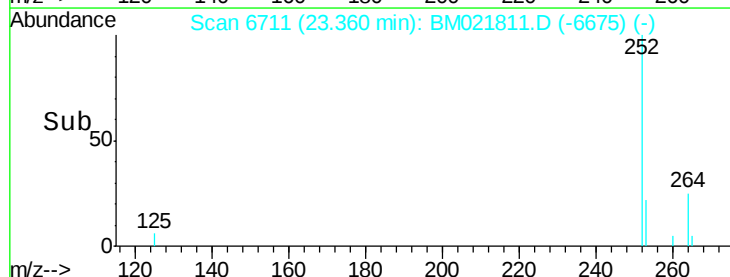
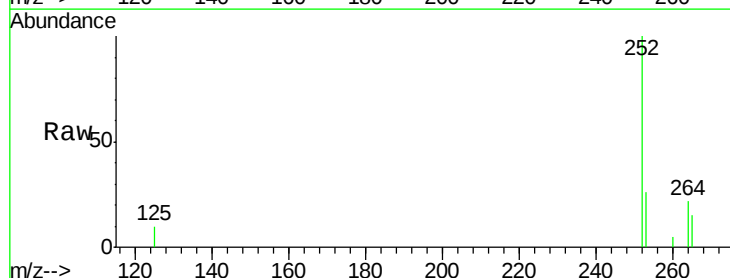
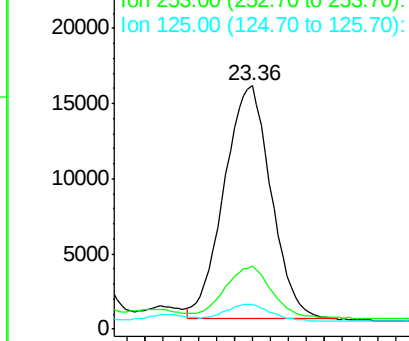
Delta R.T. -0.01 min

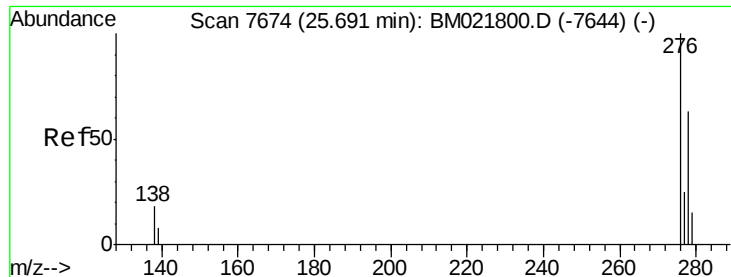
Lab File: BM021811.D

Acq: 04 Aug 2019 14:10

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 252   | Resp: | 28181 |
| Ion Ratio | Lower | Upper |       |
| 252       | 100   |       |       |
| 253       | 25.7  | 31.7  | 47.5# |
| 125       | 10.0  | 14.6  | 21.8# |

Abundance Ion 252.00 (251.70 to 252.70): E  
Ion 253.00 (252.70 to 253.70): E  
Ion 125.00 (124.70 to 125.70): E





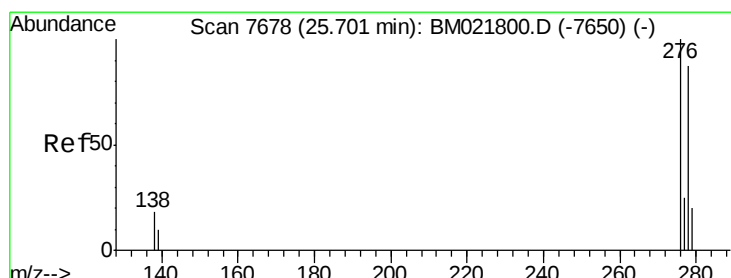
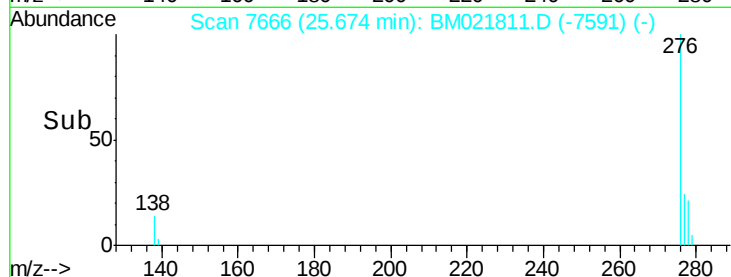
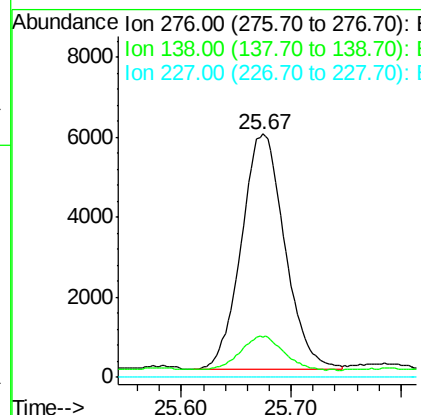
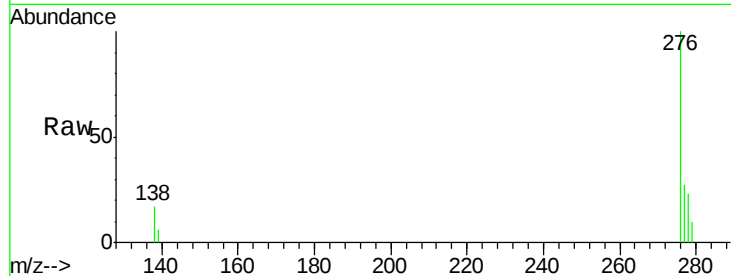
#24  
 Indeno(1,2,3-cd)pyrene  
 Concen: 0.562 ng/ul m  
 RT: 25.67 min Scan# 7666  
 Delta R.T. -0.02 min  
 Lab File: BM021811.D  
 Acq: 04 Aug 2019 14:10

Instrument :  
 BNA\_M  
 ClientSampleId :  
 BENR8

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 1.2   | 15.1  | 22.7# |
| 227     | 0.0   | 0.0   | 0.0   |

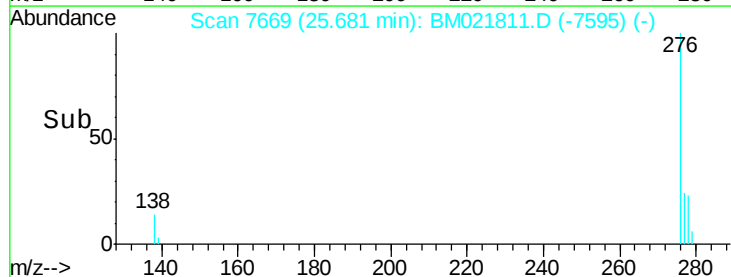
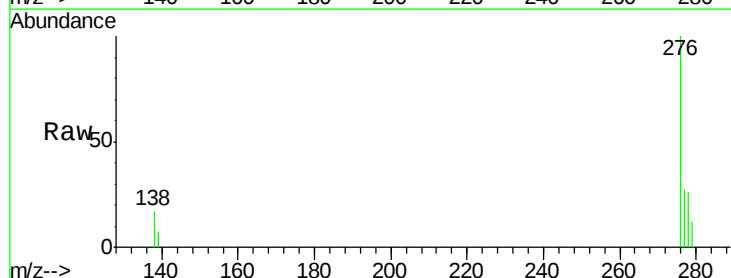
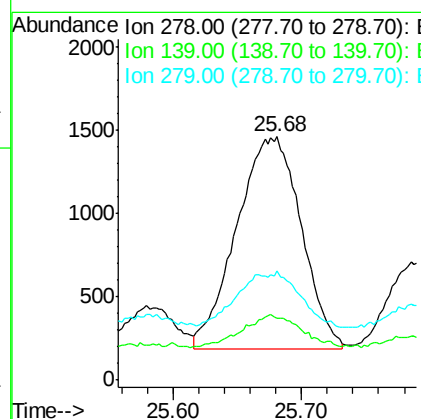
Manual Integrations  
 APPROVED

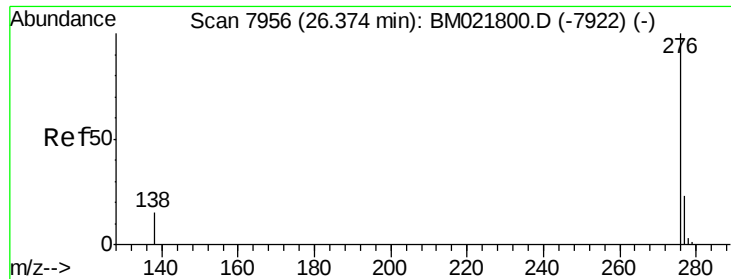
mohammad  
 8/5/2019 10:15:39 PM



#25  
 Dibenzo(a,h)anthracene  
 Concen: 0.191 ng/ul m  
 RT: 25.68 min Scan# 7669  
 Delta R.T. -0.02 min  
 Lab File: BM021811.D  
 Acq: 04 Aug 2019 14:10

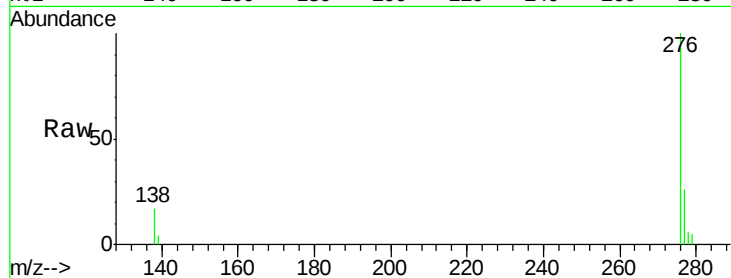
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 278     | 100   |       |       |
| 139     | 25.4  | 14.2  | 21.2# |
| 279     | 45.0  | 28.3  | 42.5# |





#26  
 Benzo(g,h,i)perylene  
 Concen: 0.623 ng/ul m  
 RT: 26.36 min Scan# 7948  
 Delta R.T. -0.02 min  
 Lab File: BM021811.D  
 Acq: 04 Aug 2019 14:10

Instrument :  
 BNA\_M  
 ClientSampleId :  
 BENR8



| Tgt | Ion  | Ratio | Lower | Upper |
|-----|------|-------|-------|-------|
| 276 | 100  |       |       |       |
| 138 | 16.9 | 15.5  | 23.3  |       |
| 277 | 26.4 | 21.4  | 32.2  |       |

Manual Integrations  
 APPROVED

mohammad  
 8/5/2019 10:15:39 PM

