

Data Path : Z:\SVOASRV\HPCHEM1\BNA N\DATA\BN020620\  
 Data File : BN009613.D  
 Acq On : 06 Feb 2020 17:23  
 Operator : CG/JU  
 Sample : L1323-18DL 5X  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 BNA\_N  
 ClientSampleID :  
 GAT56DL

Manual Integrations  
 APPROVED

mohammad  
 2/10/2020 8:19:19 AM

Quant Time: Feb 06 22:32:27 2020  
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA\_N\METHODS\SOM-EPA-BN020320MA.M  
 Quant Title : SVOA CALIBRATION  
 QLast Update : Mon Feb 03 16:39:56 2020  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 7.43  | 152  | 157787   | 20.00 | ng/ul | -0.01    |
| 18) Naphthalene-d8        | 10.19 | 136  | 668496   | 20.00 | ng/ul | 0.00     |
| 35) Acenaphthene-d10      | 14.07 | 164  | 407870   | 20.00 | ng/ul | -0.01    |
| 61) Phenanthrene-d10      | 16.83 | 188  | 844876   | 20.00 | ng/ul | 0.00     |
| 77) Chrysene-d12          | 21.04 | 240  | 777114   | 20.00 | ng/ul | 0.00     |
| 85) Perylene-d12          | 23.15 | 264  | 851603   | 20.00 | ng/ul | 0.00     |

## System Monitoring Compounds

|                                |       |     |        |      |       |       |
|--------------------------------|-------|-----|--------|------|-------|-------|
| 3) 1,4-Dioxane-d8              | 3.08  | 96  | 3514   | 0.91 | ng/uL | 0.00  |
| 5) Phenol-d5                   | 6.64  | 99  | 56090  | 4.08 | ng/ul | 0.00  |
| 7) Bis-(2-Chloroethyl)ether-d  | 6.79  | 67  | 42817  | 4.63 | ng/ul | 0.00  |
| 9) 2-Chlorophenol-d4           | 6.98  | 132 | 45248  | 4.47 | ng/ul | 0.00  |
| 13) 4-Methylphenol-d8          | 8.15  | 113 | 44379  | 4.05 | ng/ul | 0.00  |
| 19) Nitrobenzene-d5            | 8.58  | 128 | 21304  | 4.29 | ng/ul | 0.00  |
| 22) 2-Nitrophenol-d4           | 9.29  | 143 | 23001  | 4.15 | ng/ul | 0.00  |
| 26) 2,4-Dichlorophenol-d3      | 9.83  | 165 | 43849  | 4.22 | ng/ul | 0.00  |
| 29) 4-Chloroaniline-d4         | 10.34 | 131 | 58495  | 5.23 | ng/ul | 0.00  |
| 43) Dimethylphthalate-d6       | 13.50 | 166 | 142809 | 4.80 | ng/ul | 0.00  |
| 46) Acenaphthylene-d8          | 13.76 | 160 | 171758 | 4.77 | ng/ul | -0.01 |
| 51) 4-Nitrophenol-d4           | 14.32 | 143 | 12883  | 2.29 | ng/ul | 0.00  |
| 57) Fluorene-d10               | 15.07 | 176 | 128295 | 4.90 | ng/ul | 0.00  |
| 62) 4,6-Dinitro-2-methylphenol | 15.22 | 200 | 11530  | 2.19 | ng/ul | 0.00  |
| 70) Anthracene-d10             | 16.93 | 188 | 195873 | 5.10 | ng/ul | 0.00  |
| 78) Pyrene-d10                 | 19.23 | 212 | 210722 | 5.16 | ng/ul | 0.00  |
| 89) Benzo(a)pyrene-d12         | 23.02 | 264 | 210495 | 5.02 | ng/ul | 0.00  |

## Target Compounds

|                            |       |     |         |         | Ovalue |    |
|----------------------------|-------|-----|---------|---------|--------|----|
| 28) Naphthalene            | 10.24 | 128 | 7346361 | 202.647 | ng/ul  | 99 |
| 34) 2-Methylnaphthalene    | 11.86 | 142 | 1681980 | 66.299  | ng/ul  | 96 |
| 40) 1,1'-Biphenyl          | 12.89 | 154 | 277896  | 8.751   | ng/ul  | 99 |
| 47) Acenaphthylene         | 13.79 | 152 | 923088  | 23.446  | ng/ul  | 99 |
| 49) Acenaphthene           | 14.13 | 153 | 80146   | 2.994   | ng/ul  | 97 |
| 53) Dibenzofuran           | 14.48 | 168 | 86163   | 2.312   | ng/ul  | 97 |
| 58) Fluorene               | 15.13 | 166 | 586750  | 18.837  | ng/ul  | 97 |
| 69) Phenanthrene           | 16.87 | 178 | 2810809 | 58.337  | ng/ul  | 99 |
| 71) Anthracene             | 16.96 | 178 | 635141  | 12.992  | ng/ul  | 99 |
| 76) Fluoranthene           | 18.90 | 202 | 1077223 | 19.589  | ng/ul  | 99 |
| 79) Pyrene                 | 19.26 | 202 | 1612352 | 28.422  | ng/ul  | 98 |
| 82) Benzo(a)anthracene     | 21.03 | 228 | 551106m | 10.271  | ng/ul  |    |
| 84) Chrysene               | 21.07 | 228 | 457024  | 8.556   | ng/ul  | 97 |
| 87) Benzo(b)fluoranthene   | 22.53 | 252 | 333884  | 6.266   | ng/ul  | 94 |
| 88) Benzo(k)fluoranthene   | 22.57 | 252 | 137856m | 2.627   | ng/ul  |    |
| 90) Benzo(a)pyrene         | 23.06 | 252 | 431753  | 8.746   | ng/ul  | 98 |
| 91) Indeno(1,2,3-cd)pyrene | 25.22 | 276 | 155535  | 2.650   | ng/ul  | 93 |
| 93) Benzo(g,h,i)perylene   | 25.84 | 276 | 164096  | 3.336   | ng/ul  | 97 |

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

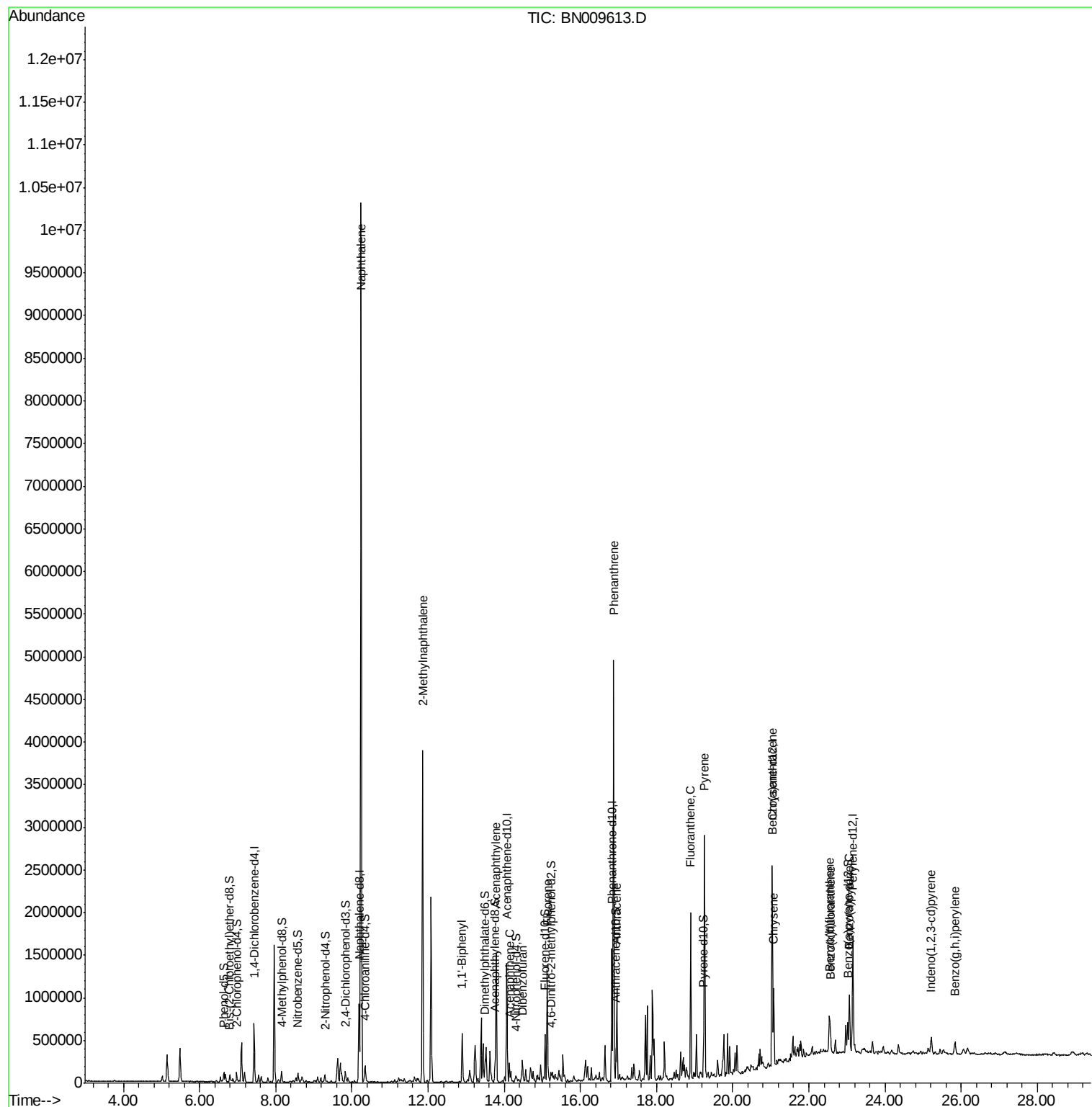
Data Path : Z:\SVOASRV\HPCHEM1\BNA N\DATA\BN020620\  
Data File : BN009613.D  
Acq On : 06 Feb 2020 17:23  
Operator : CG/JU  
Sample : L1323-18DL 5X  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

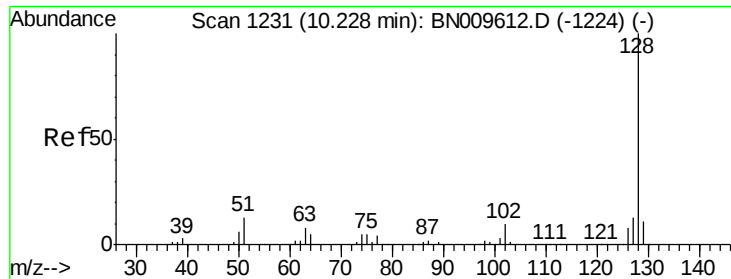
Instrument :  
BNA\_N  
ClientSampleId :  
GAT56DL

Manual Integrations  
APPROVED

mohammad  
2/10/2020 8:19:19 AM

Quant Time: Feb 06 22:32:27 2020  
Quant Method : Z:\SVOASRV\HPCHEM1\BNA\_N\METHODS\SOM-EPA-BN020320MA.M  
Quant Title : SVOA CALIBRATION  
QLast Update : Mon Feb 03 16:39:56 2020  
Response via : Initial Calibration





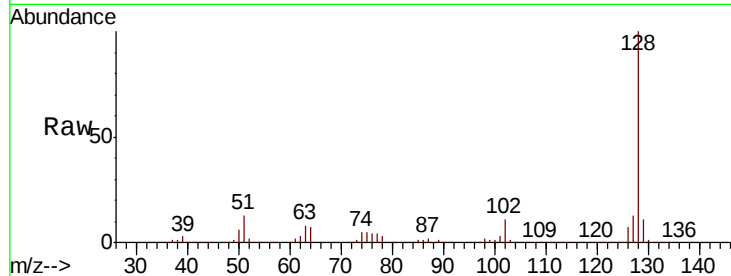
#28  
Naphthalene  
Concen: 202.647 ng/ul  
RT: 10.24 min Scan# 1233  
Delta R.T. -0.01 min  
Lab File: BN009613.D  
Acq: 06 Feb 2020 17:23

Instrument :  
BNA\_N  
ClientSampleId :  
GAT56DL

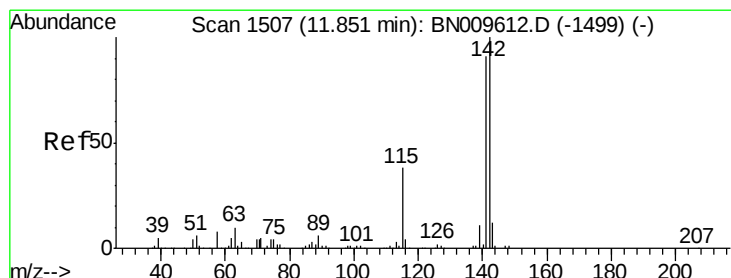
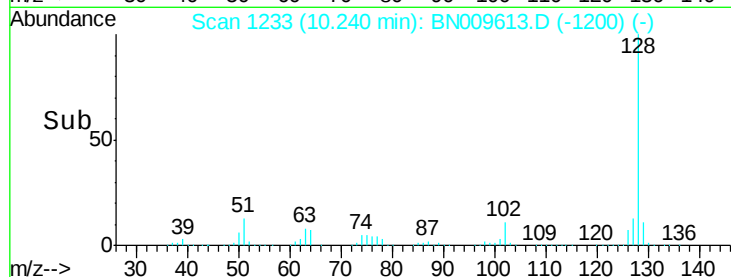
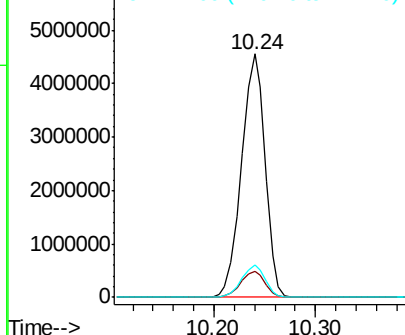
Tot Ion:128 Resp: 7346361  
Ion Ratio Lower Upper  
128 100  
129 10.6 8.7 13.1  
127 13.3 10.7 16.1

Manual Integrations  
APPROVED

mohammad  
2/10/2020 8:19:19 AM

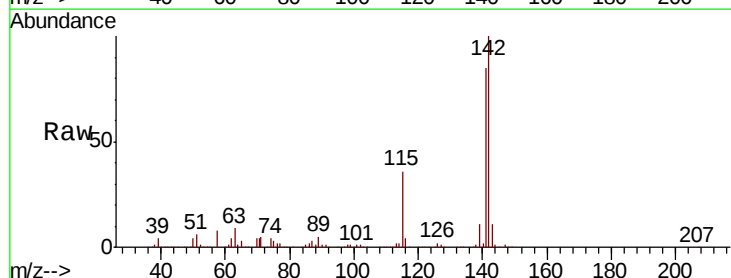


Abundance Ion 128.00 (127.70 to 128.70): E  
Ion 129.00 (128.70 to 129.70): E  
Ion 127.00 (126.70 to 127.70): E

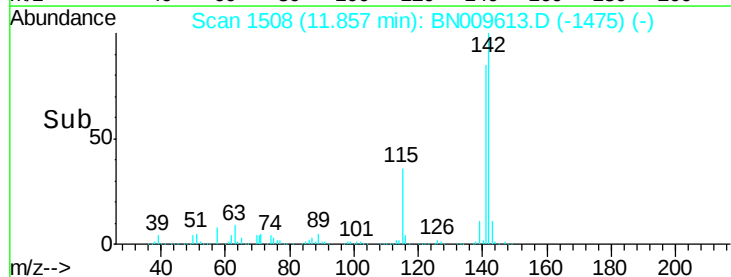
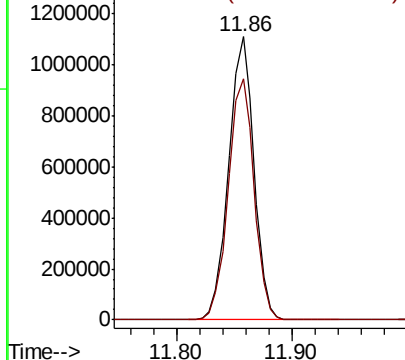


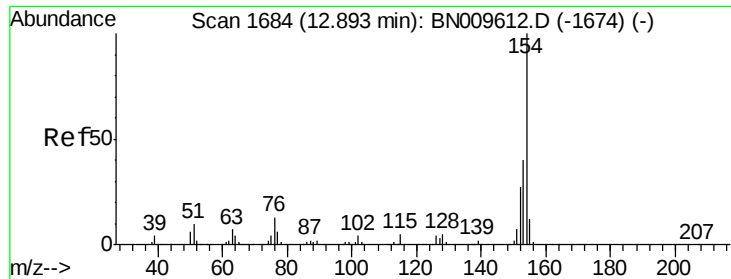
#34  
2-Methylnaphthalene  
Concen: 66.299 ng/ul  
RT: 11.86 min Scan# 1508  
Delta R.T. -0.01 min  
Lab File: BN009613.D  
Acq: 06 Feb 2020 17:23

Tgt Ion:142 Resp: 1681980  
Ion Ratio Lower Upper  
142 100  
141 85.2 71.5 107.3



Abundance Ion 142.00 (141.70 to 142.70): E  
Ion 141.00 (140.70 to 141.70): E





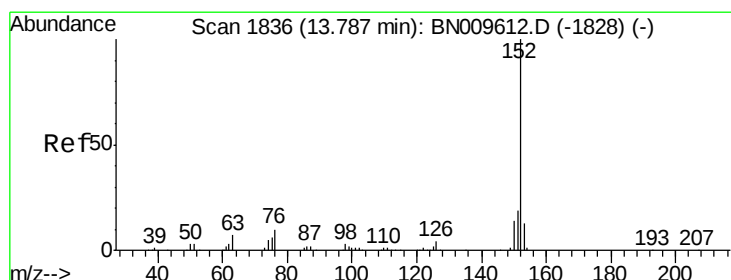
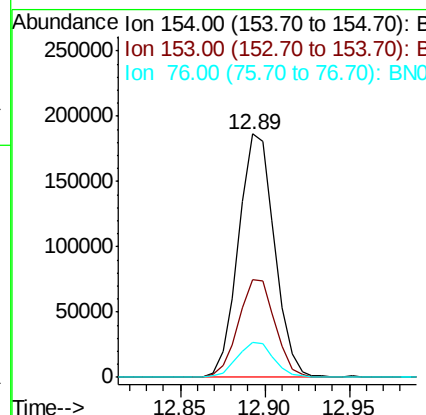
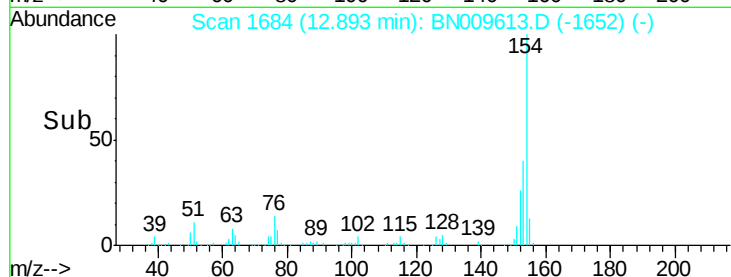
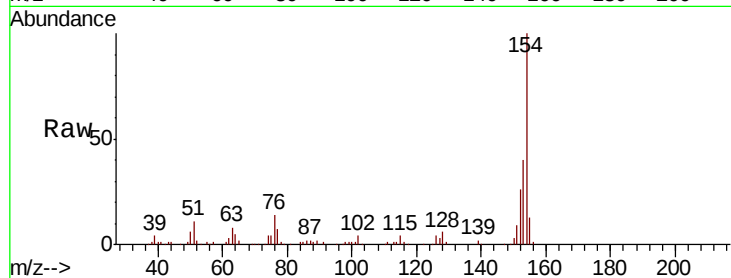
#40  
1,1'-Biphenyl  
Concen: 8.751 ng/ul  
RT: 12.89 min Scan# 1684  
Delta R.T. -0.01 min  
Lab File: BN009613.D  
Acq: 06 Feb 2020 17:23

Instrument :  
BNA\_N  
ClientSampled :  
GAT56DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 154     | 100   |       |       |
| 153     | 40.2  | 31.2  | 46.8  |
| 76      | 14.2  | 11.4  | 17.2  |

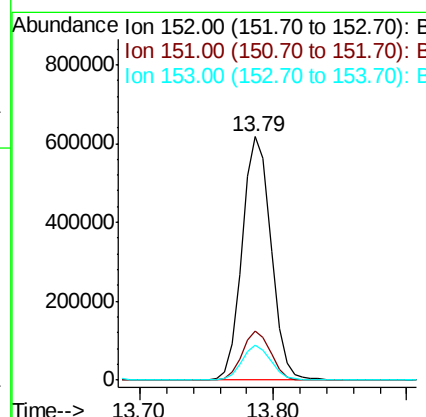
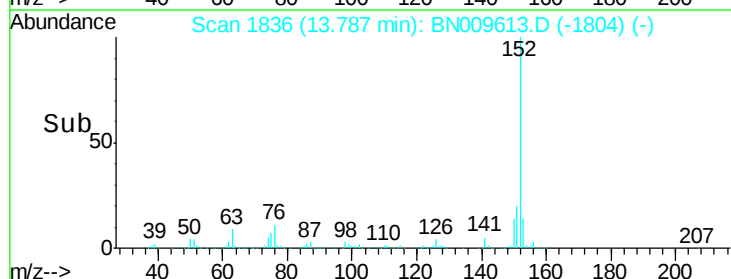
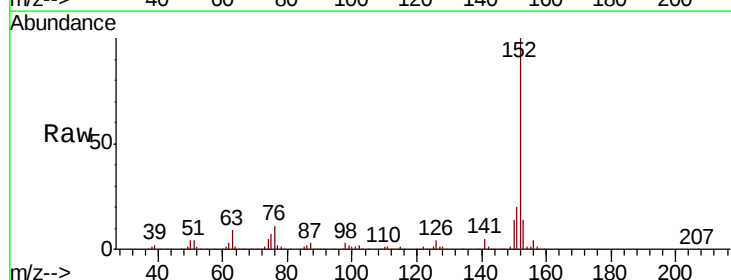
Manual Integrations  
APPROVED

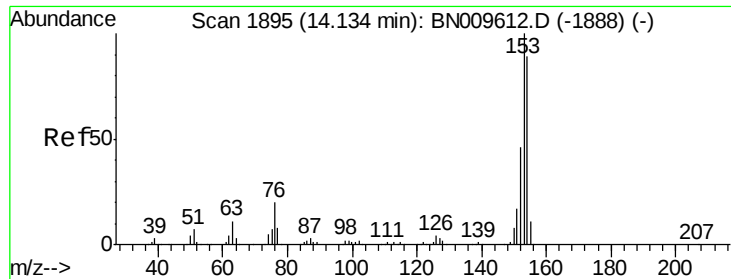
mohammad  
2/10/2020 8:19:19 AM



#47  
Acenaphthylene  
Concen: 23.446 ng/ul  
RT: 13.79 min Scan# 1836  
Delta R.T. -0.01 min  
Lab File: BN009613.D  
Acq: 06 Feb 2020 17:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 151     | 20.2  | 16.2  | 24.2  |
| 153     | 14.3  | 10.6  | 15.8  |





#49

Acenaphthene

Concen: 2.994 ng/ul

RT: 14.13 min Scan# 1895

Delta R.T. -0.01 min

Lab File: BN009613.D

Acq: 06 Feb 2020 17:23

Instrument :

BNA\_N

ClientSampleId :

GAT56DL

Tot Ion:153 Resp: 80146

Ion Ratio Lower Upper

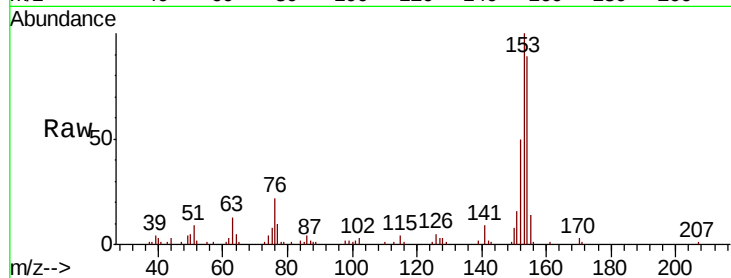
153 100

152 50.3 37.3 55.9

154 89.3 70.2 105.2

Manual Integrations  
APPROVED

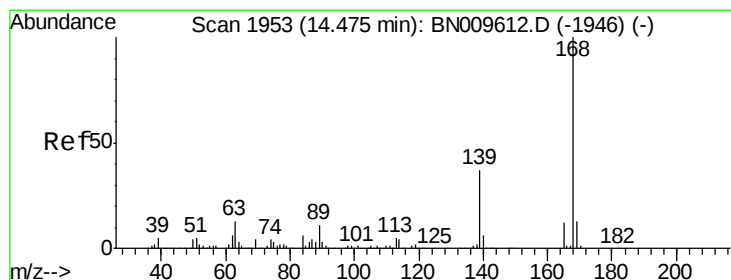
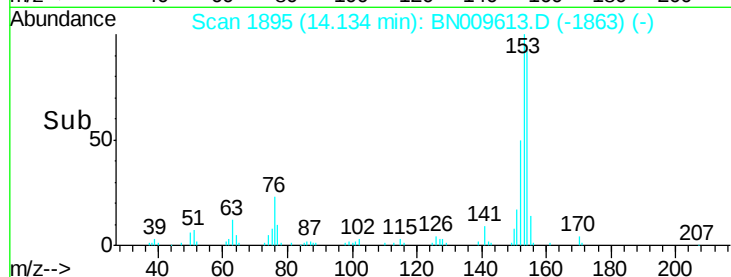
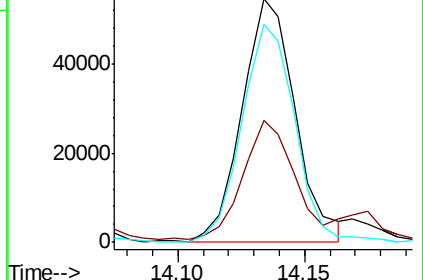
mohammad  
2/10/2020 8:19:19 AM



Abundance Ion 153.00 (152.70 to 153.70): E

Ion 152.00 (151.70 to 152.70): E

Ion 154.00 (153.70 to 154.70): E



#53

Dibenzofuran

Concen: 2.312 ng/ul

RT: 14.48 min Scan# 1954

Delta R.T. -0.01 min

Lab File: BN009613.D

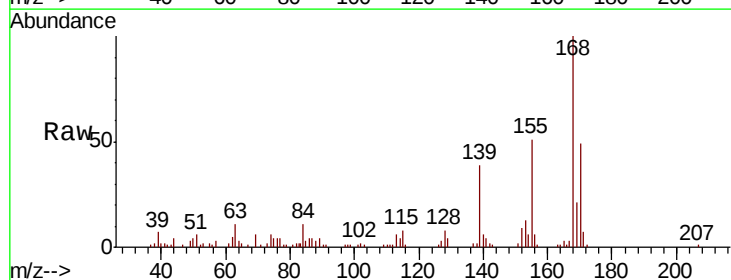
Acq: 06 Feb 2020 17:23

Tgt Ion:168 Resp: 86163

Ion Ratio Lower Upper

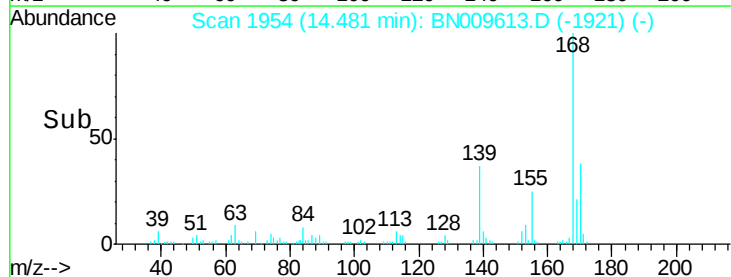
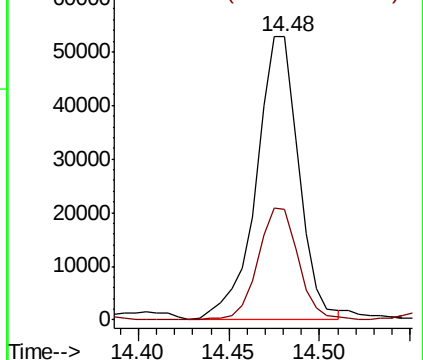
168 100

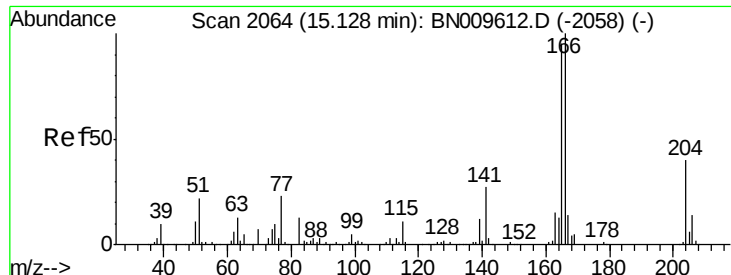
139 39.0 29.5 44.3



Abundance Ion 168.00 (167.70 to 168.70): E

Ion 139.00 (138.70 to 139.70): E





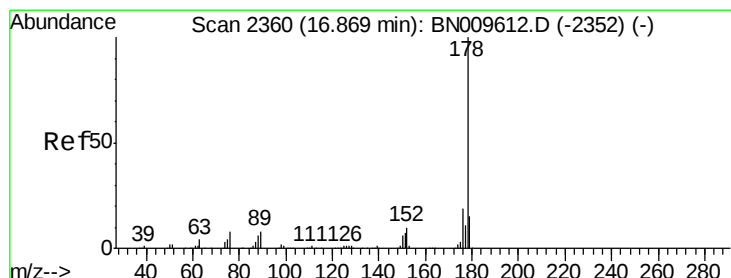
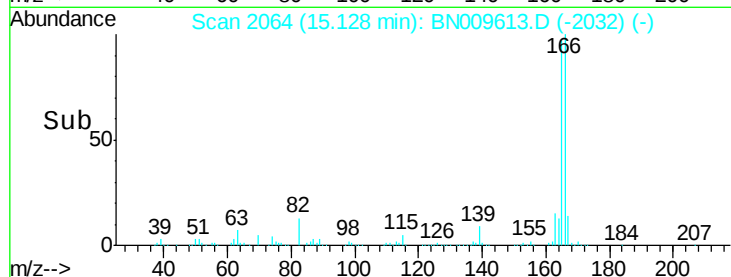
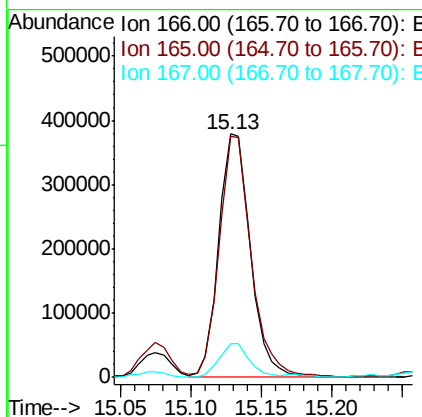
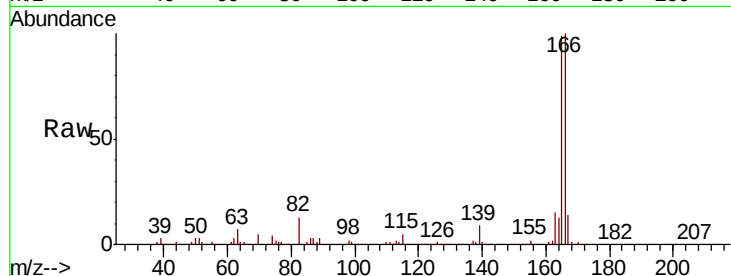
#58  
**Fluorene**  
 Concen: 18.837 ng/ul  
 RT: 15.13 min Scan# 2064  
 Delta R.T. -0.01 min  
 Lab File: BN009613.D  
 Acq: 06 Feb 2020 17:23

Instrument :  
 BNA\_N  
 ClientSampleId :  
 GAT56DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 166     | 100   |       |       |
| 165     | 98.9  | 76.7  | 115.1 |
| 167     | 14.0  | 11.1  | 16.7  |

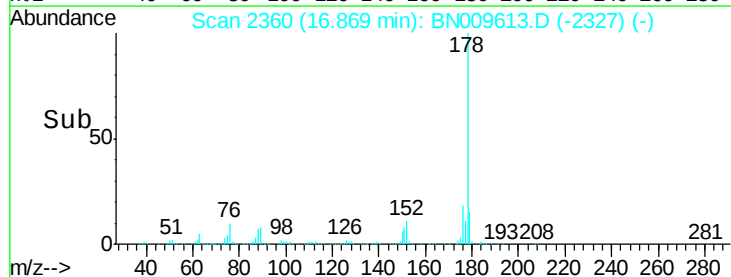
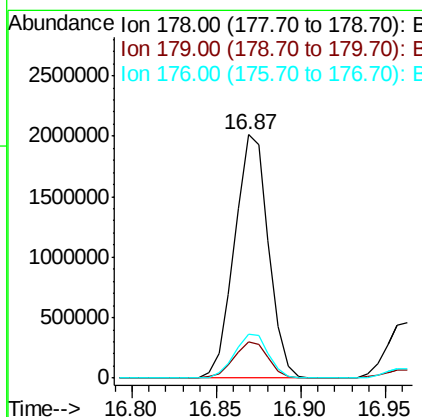
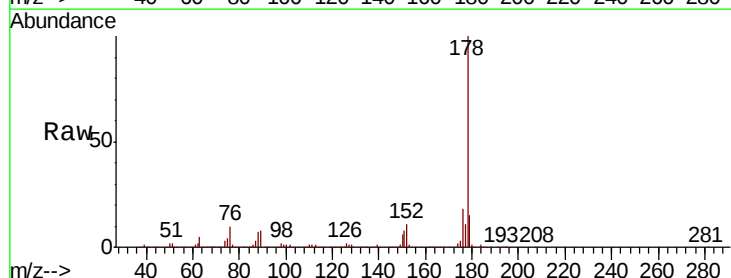
Manual Integrations  
 APPROVED

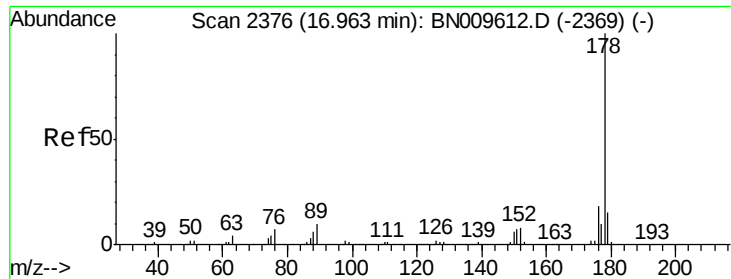
mohammad  
 2/10/2020 8:19:19 AM



#69  
**Phenanthrene**  
 Concen: 58.337 ng/ul  
 RT: 16.87 min Scan# 2360  
 Delta R.T. -0.01 min  
 Lab File: BN009613.D  
 Acq: 06 Feb 2020 17:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 179     | 15.0  | 12.2  | 18.2  |
| 176     | 18.1  | 14.8  | 22.2  |





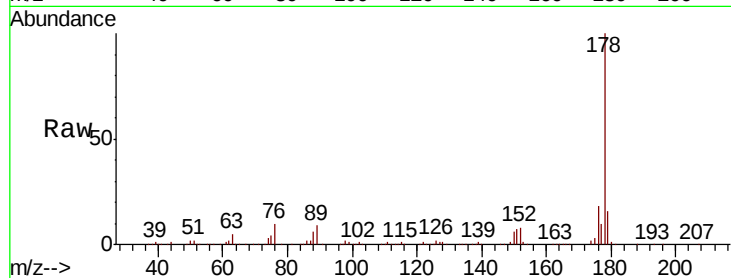
#71  
 Anthracene  
 Concen: 12.992 ng/ul  
 RT: 16.96 min Scan# 2376  
 Delta R.T. -0.01 min  
 Lab File: BN009613.D  
 Acq: 06 Feb 2020 17:23

Instrument :  
 BNA\_N  
 ClientSampleID :  
 GAT56DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 179     | 15.6  | 12.1  | 18.1  |
| 176     | 17.9  | 14.6  | 21.8  |

Manual Integrations  
 APPROVED

mohammad  
 2/10/2020 8:19:19 AM

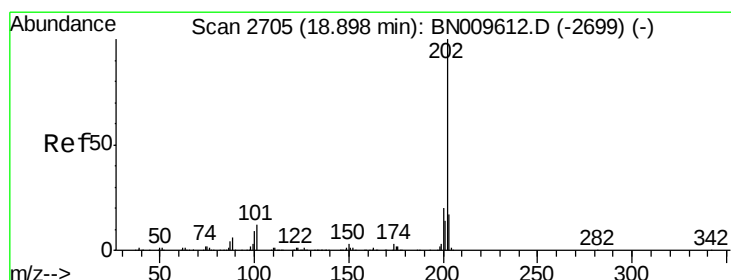
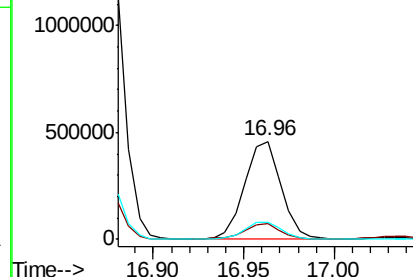
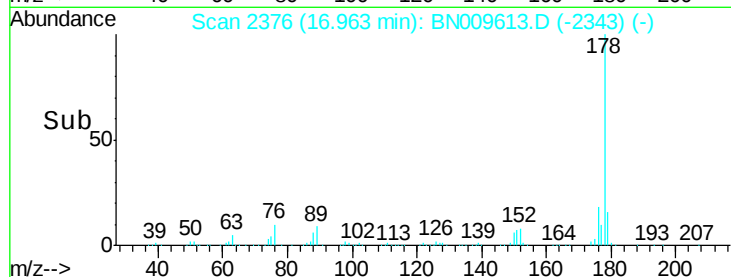


Abundance

Ion 178.00 (177.70 to 178.70): E

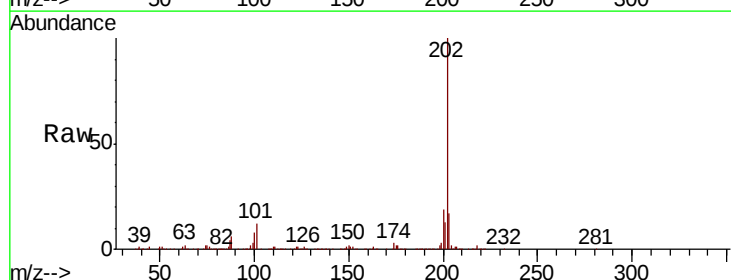
Ion 179.00 (178.70 to 179.70): E

Ion 176.00 (175.70 to 176.70): E



#76  
 Fluoranthene  
 Concen: 19.589 ng/ul  
 RT: 18.90 min Scan# 2705  
 Delta R.T. -0.01 min  
 Lab File: BN009613.D  
 Acq: 06 Feb 2020 17:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 11.8  | 9.2   | 13.8  |
| 100     | 8.4   | 6.9   | 10.3  |

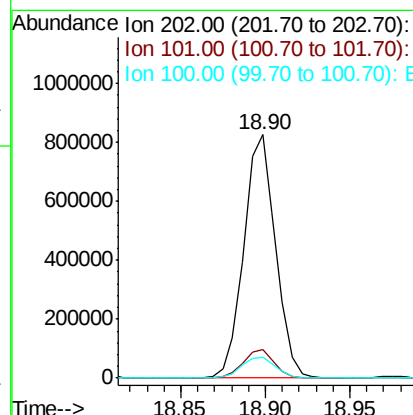
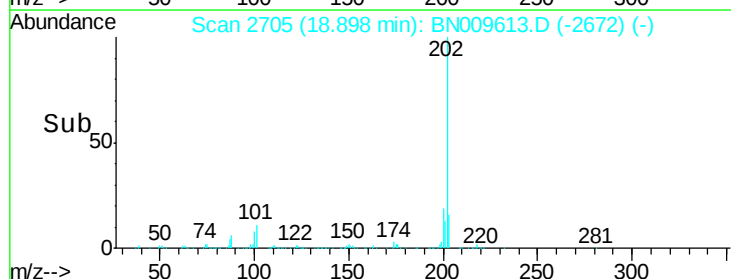


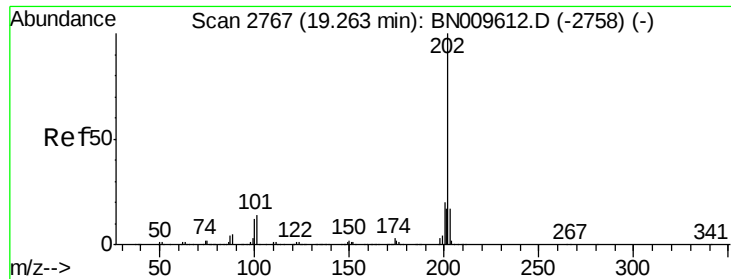
Abundance

Ion 202.00 (201.70 to 202.70): E

Ion 101.00 (100.70 to 101.70): E

Ion 100.00 (99.70 to 100.70): B





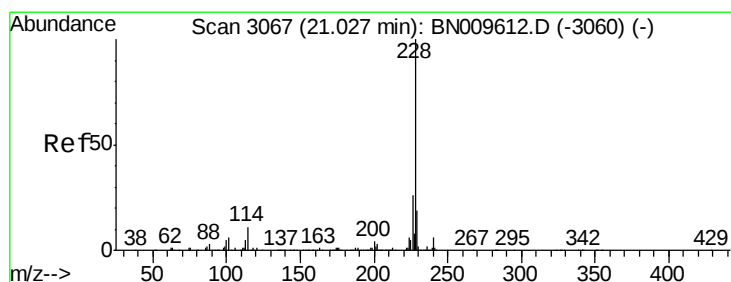
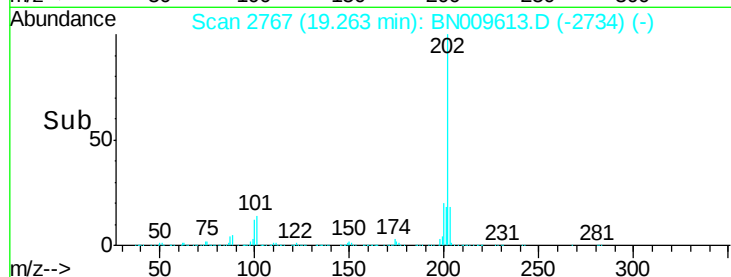
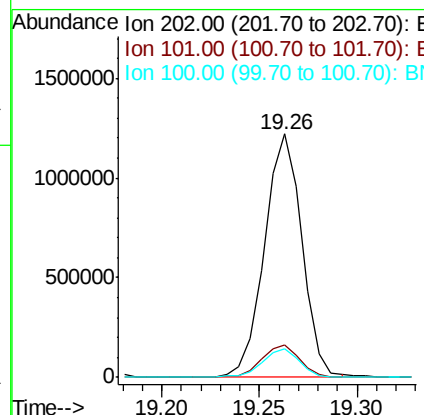
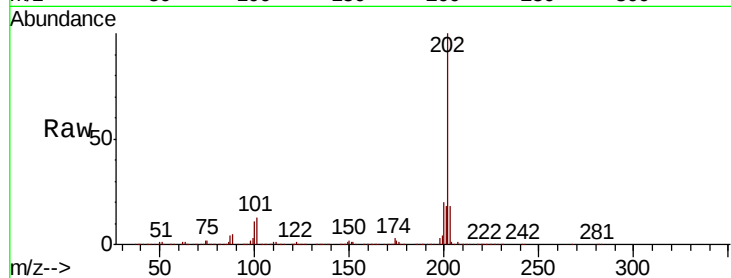
#79  
Pvrene  
Concen: 28.422 ng/ul  
RT: 19.26 min Scan# 2767  
Delta R.T. -0.01 min  
Lab File: BN009613.D  
Acq: 06 Feb 2020 17:23

Instrument :  
BNA\_N  
ClientSampleId :  
GAT56DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 101     | 13.5  | 10.3  | 15.5  |
| 100     | 11.5  | 8.4   | 12.6  |

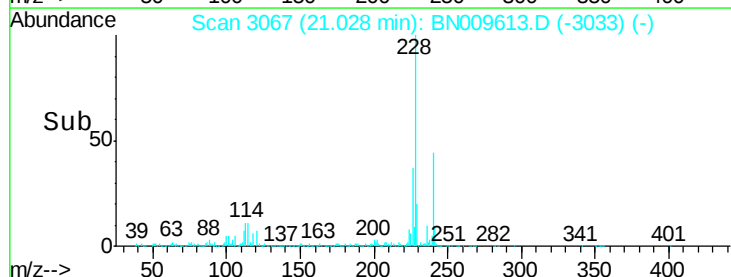
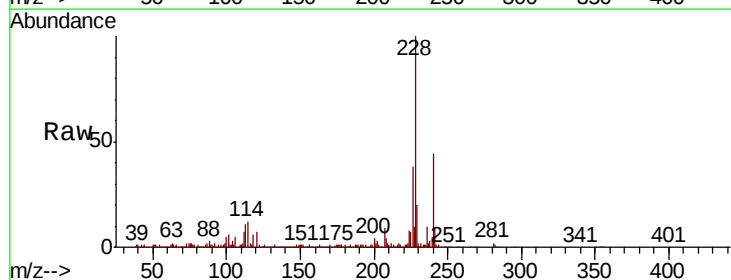
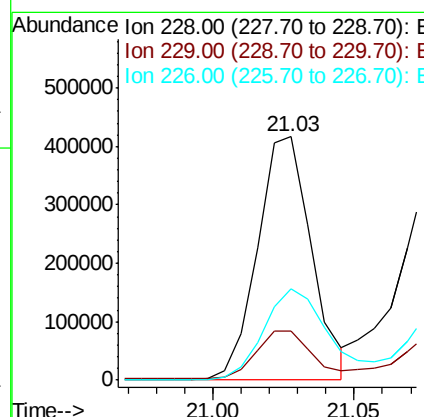
Manual Integrations  
APPROVED

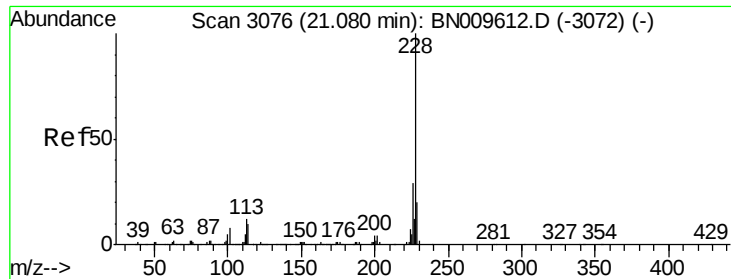
mohammad  
2/10/2020 8:19:19 AM



#82  
Benzo(a)anthracene  
Concen: 10.271 ng/ul m  
RT: 21.03 min Scan# 3067  
Delta R.T. 0.00 min  
Lab File: BN009613.D  
Acq: 06 Feb 2020 17:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 228     | 100   |       |       |
| 229     | 20.2  | 15.0  | 22.4  |
| 226     | 37.5  | 20.9  | 31.3  |





#84

Chrysene

Concen: 8.556 ng/ul

RT: 21.07 min Scan# 3075

Delta R.T. -0.01 min

Lab File: BN009613.D

Acq: 06 Feb 2020 17:23

Instrument :

BNA\_N

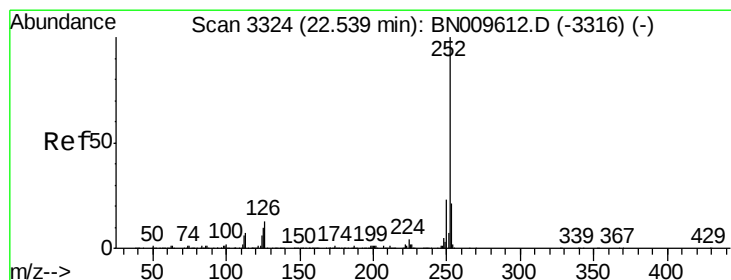
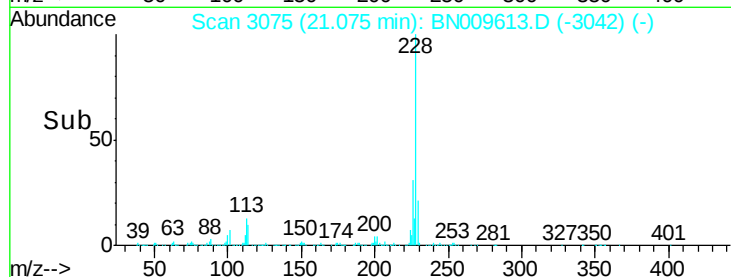
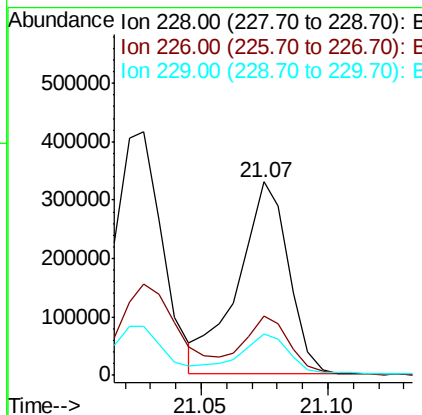
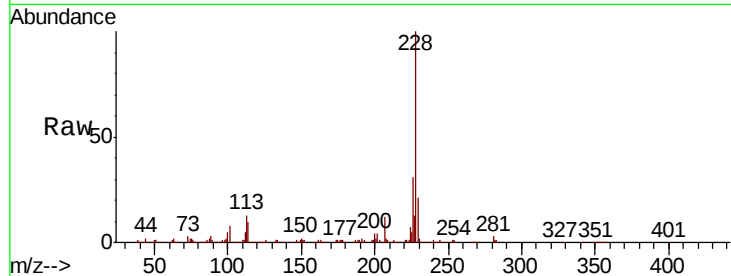
ClientSampled :

GAT56DL

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 228   | Resp: | 457024 |
| Ion      | Ratio | Lower | Upper  |
| 228      | 100   |       |        |
| 226      | 30.8  | 23.5  | 35.3   |
| 229      | 21.3  | 15.8  | 23.8   |

Manual Integrations  
APPROVED

mohammad  
2/10/2020 8:19:19 AM



#87

Benzo(b)fluoranthene

Concen: 6.266 ng/ul

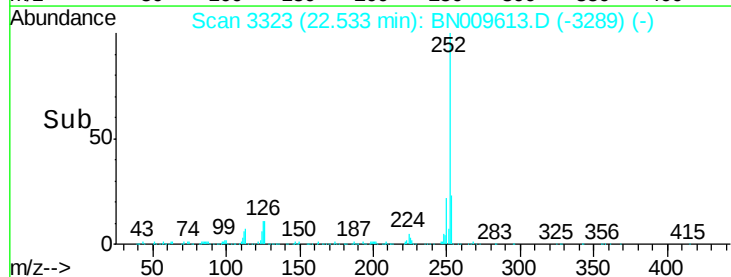
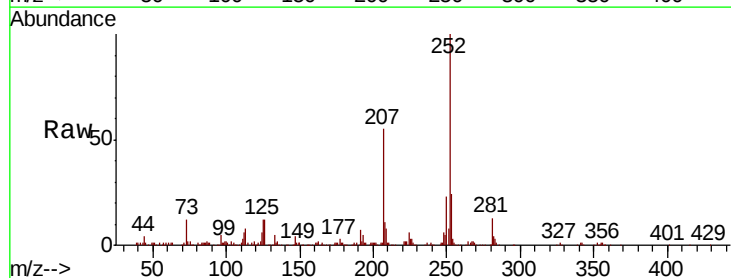
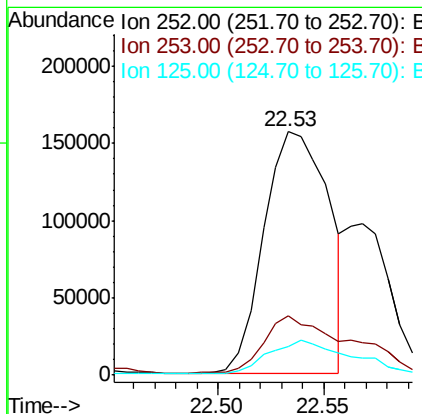
RT: 22.53 min Scan# 3323

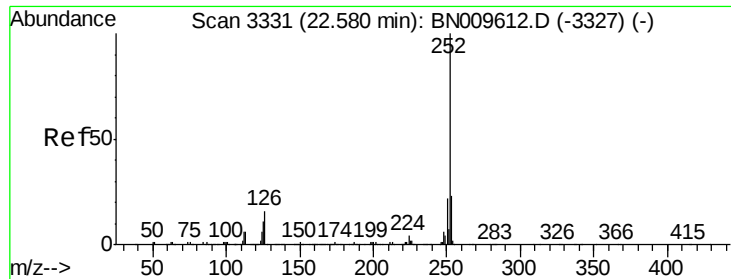
Delta R.T. 0.00 min

Lab File: BN009613.D

Acq: 06 Feb 2020 17:23

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 252   | Resp: | 333884 |
| Ion      | Ratio | Lower | Upper  |
| 252      | 100   |       |        |
| 253      | 24.3  | 17.0  | 25.6   |
| 125      | 11.7  | 8.2   | 12.2   |





#88

Benzo(k)fluoranthene

Concen: 2.627 ng/ul m

RT: 22.57 min Scan# 3329

Delta R.T. -0.01 min

Lab File: BN009613.D

Acq: 06 Feb 2020 17:23

Instrument :

BNA\_N

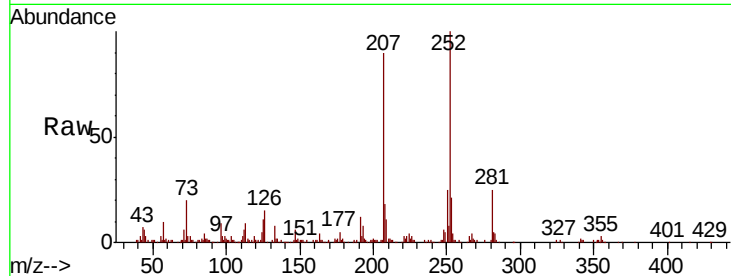
ClientSampleId :

GAT56DL

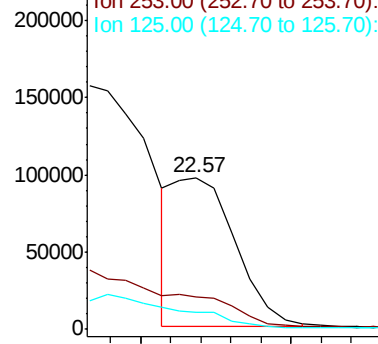
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 21.2  | 17.0  | 25.4  |
| 125     | 11.4  | 8.0   | 12.0  |

Manual Integrations  
APPROVED

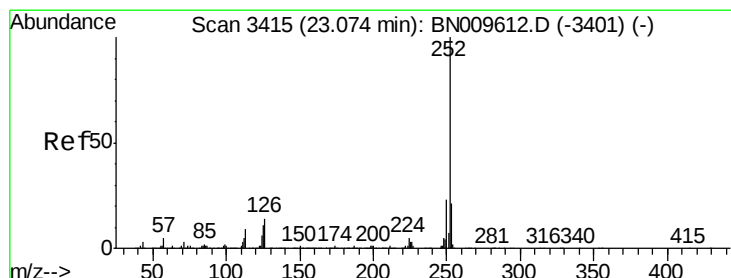
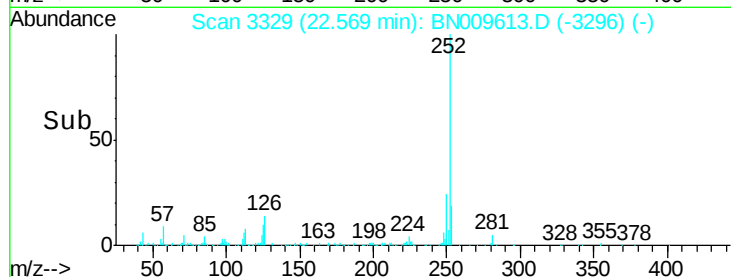
mohammad  
2/10/2020 8:19:19 AM



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



Time-->



#90

Benzo(a)pyrene

Concen: 8.746 ng/ul

RT: 23.06 min Scan# 3413

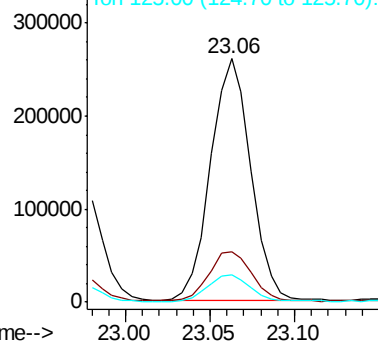
Delta R.T. -0.01 min

Lab File: BN009613.D

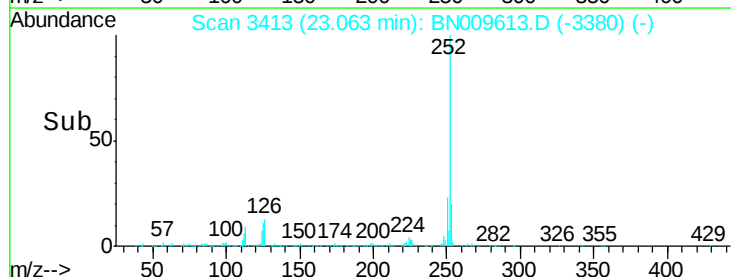
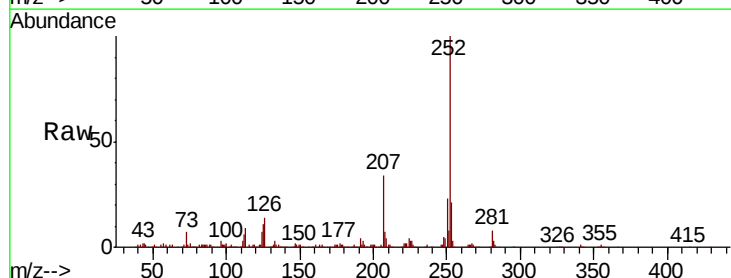
Acq: 06 Feb 2020 17:23

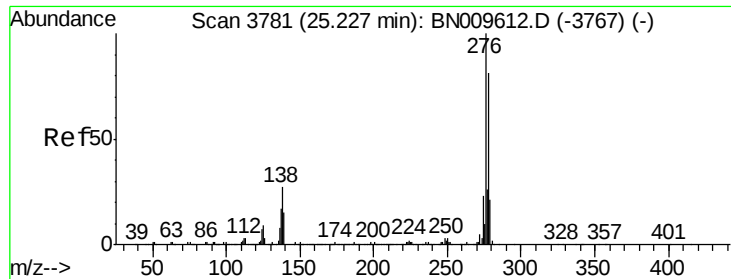
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 20.9  | 15.8  | 23.8  |
| 125     | 11.1  | 8.7   | 13.1  |

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



Time-->





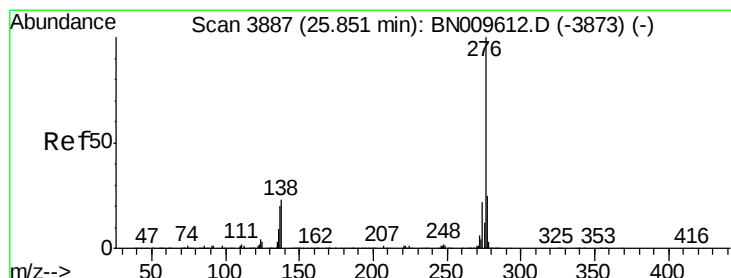
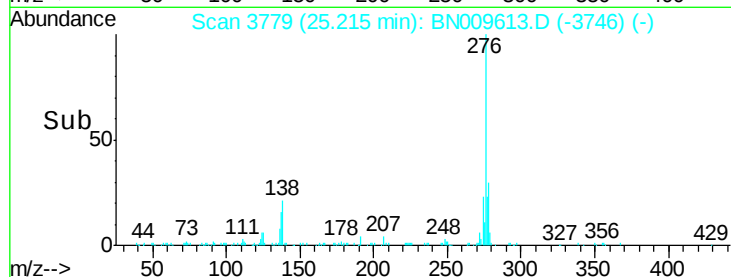
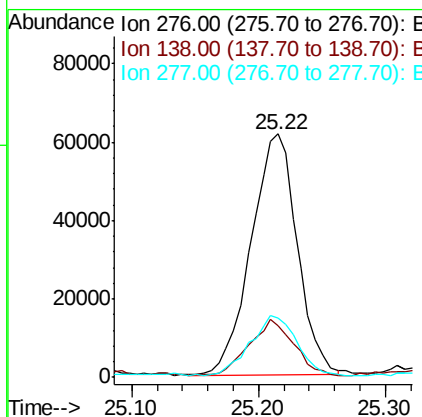
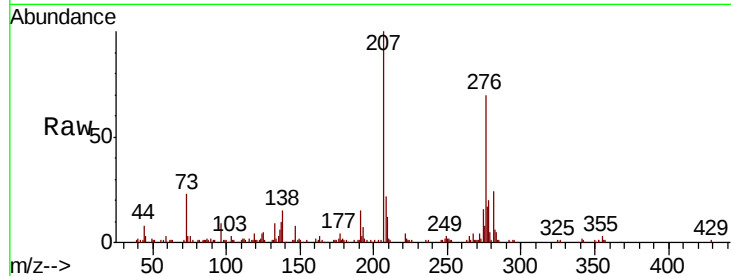
#91  
 Indeno(1,2,3-cd)pyrene  
 Concen: 2.650 ng/ul  
 RT: 25.22 min Scan# 3779  
 Delta R.T. -0.01 min  
 Lab File: BN009613.D  
 Acq: 06 Feb 2020 17:23

Instrument :  
 BNA\_N  
 ClientSampleId :  
 GAT56DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 21.1  | 20.3  | 30.5  |
| 277     | 24.2  | 21.2  | 31.8  |

Manual Integrations  
 APPROVED

mohammad  
 2/10/2020 8:19:19 AM



#93  
 Benzo(g,h,i)perylene  
 Concen: 3.336 ng/ul  
 RT: 25.84 min Scan# 3885  
 Delta R.T. -0.01 min  
 Lab File: BN009613.D  
 Acq: 06 Feb 2020 17:23

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 138     | 20.7  | 16.0  | 24.0  |
| 277     | 23.7  | 17.0  | 25.6  |

