

Data Path : Z:\SVOASRV\HPCHEM1\BNA F\DATA\BF051419\  
 Data File : BF114263.D  
 Acq On : 14 May 2019 19:45  
 Operator : JU/SJ  
 Sample : K2766-18DL 2X  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 P026-SS009-0002-01DL

Manual Integrations  
 APPROVED

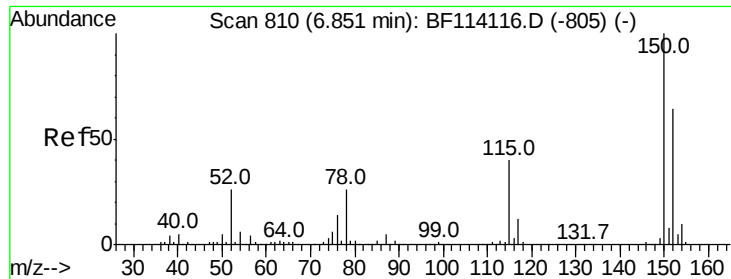
mohammad  
 5/16/2019 9:10:11 AM

Quant Time: May 15 03:23:34 2019  
 Quant Method : Z:\SVOASRV\HPCHEM1\BNA F\METHODS\8270-BF051019.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Fri May 10 15:56:46 2019  
 Response via : Initial Calibration

| Internal Standards          | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|-------|------|----------|--------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4   | 6.86  | 152  | 231519   | 20.00  | ng    | 0.00     |
| 21) Naphthalene-d8          | 8.13  | 136  | 899944   | 20.00  | ng    | 0.00     |
| 39) Acenaphthene-d10        | 9.89  | 164  | 400314   | 20.00  | ng    | 0.00     |
| 64) Phenanthrene-d10        | 11.38 | 188  | 717058   | 20.00  | ng    | 0.01     |
| 76) Chrysene-d12            | 14.03 | 240  | 530462   | 20.00  | ng    | 0.00     |
| 87) Perylene-d12            | 15.51 | 264  | 606759   | 20.00  | ng    | 0.00     |
| System Monitoring Compounds |       |      |          |        |       |          |
| 5) 2-Fluorophenol           | 5.49  | 112  | 886815   | 61.64  | ng    | 0.01     |
| 7) Phenol-d6                | 6.50  | 99   | 1168960  | 68.70  | ng    | 0.01     |
| 23) Nitrobenzene-d5         | 7.42  | 82   | 714341   | 44.55  | ng    | 0.00     |
| 42) 2,4,6-Tribromophenol    | 10.68 | 330  | 221706   | 53.57  | ng    | 0.00     |
| 45) 2-Fluorobiphenyl        | 9.21  | 172  | 1102293  | 41.65  | ng    | 0.00     |
| 79) Terphenyl-d14           | 12.96 | 244  | 890450   | 34.60  | ng    | 0.00     |
| Target Compounds            |       |      |          |        |       |          |
| 31) Naphthalene             | 8.16  | 128  | 114911   | 2.734  | ng    | 98       |
| 49) Acenaphthylene          | 9.75  | 152  | 244306   | 6.172  | ng    | 97       |
| 50) Dimethylphthalate       | 9.60  | 163  | 233061   | 7.931  | ng    | 98       |
| 71) Phenanthrene            | 11.40 | 178  | 934576   | 26.790 | ng    | 97       |
| 72) Anthracene              | 11.45 | 178  | 163715   | 4.672  | ng    | 97       |
| 75) Fluoranthene            | 12.60 | 202  | 1379903  | 36.731 | ng    | 99       |
| 78) Pyrene                  | 12.83 | 202  | 2425903  | 56.849 | ng    | 99       |
| 81) Benzo(a)anthracene      | 14.02 | 228  | 926992m  | 27.018 | ng    |          |
| 83) Chrysene                | 14.05 | 228  | 1078730  | 32.073 | ng    | 99       |
| 86) Indeno(1,2,3-cd)pyrene  | 16.99 | 276  | 353117   | 11.880 | ng    | 94       |
| 88) Benzo(b)fluoranthene    | 15.08 | 252  | 1169350m | 30.082 | ng    |          |
| 89) Benzo(k)fluoranthene    | 15.10 | 252  | 255861m  | 7.165  | ng    |          |
| 90) Benzo(a)pyrene          | 15.44 | 252  | 757972   | 22.156 | ng    | 99       |
| 91) Dibenzo(a,h)anthracene  | 16.99 | 278  | 93537    | 3.290  | ng    | # 34     |
| 92) Benzo(a,h,i)perylene    | 17.44 | 276  | 479330   | 16.825 | ng    | 97       |

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





#1

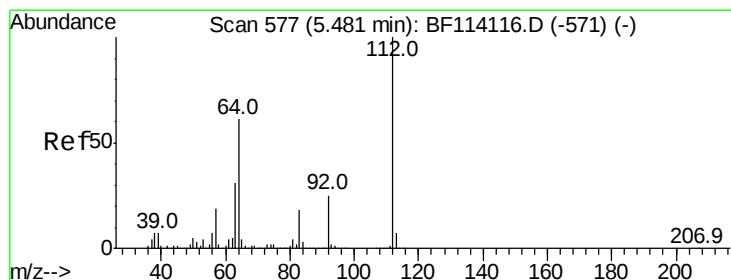
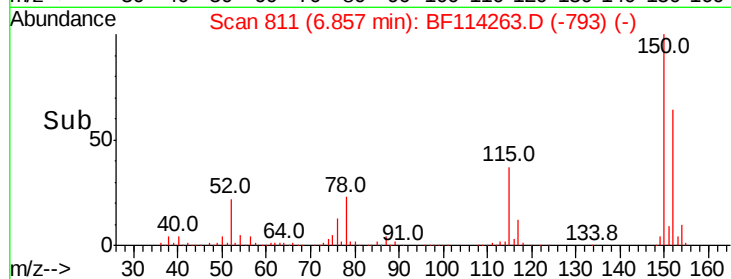
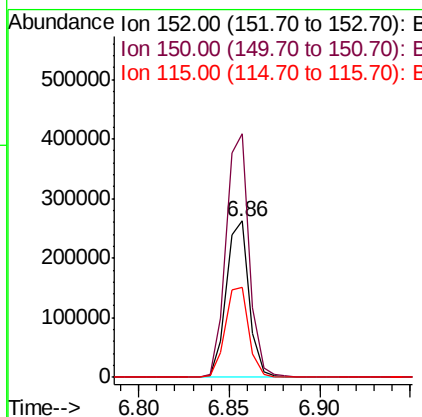
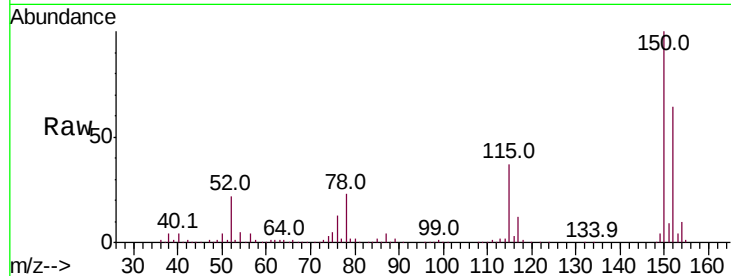
1,4-Dichlorobenzene-d4  
Concen: 20.000 ng  
RT: 6.86 min Scan# 811  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 150     | 155.6 | 124.3 | 186.5 |
| 115     | 57.5  | 49.1  | 73.7  |

Manual Integrations  
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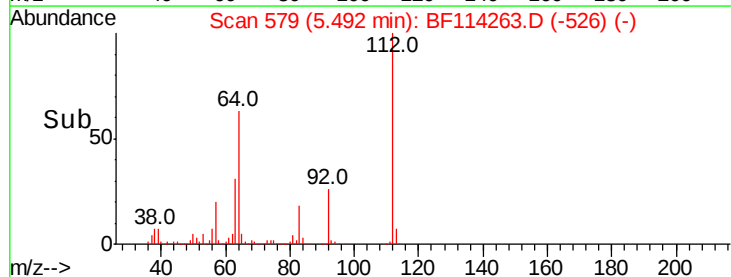
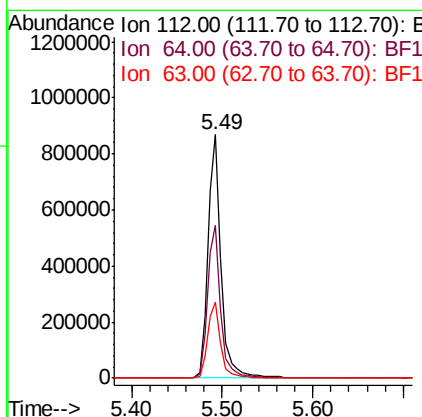
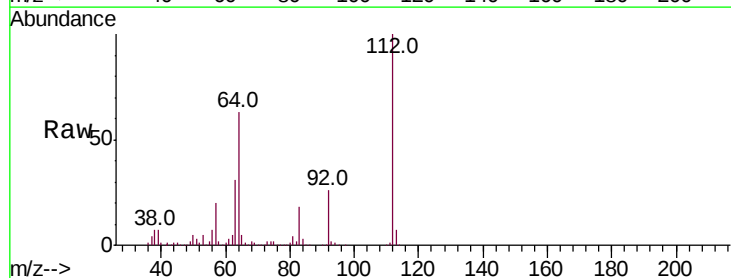
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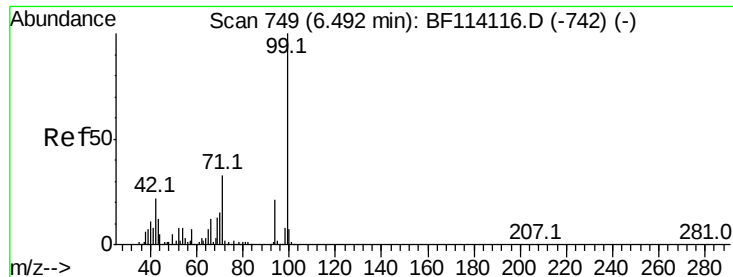


#5

2-Fluorophenol  
Concen: 61.641 ng  
RT: 5.49 min Scan# 579  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 64      | 62.9  | 49.0  | 73.6  |
| 63      | 31.3  | 24.6  | 37.0  |





#7

Phenol-d6

Concen: 68.699 ng

RT: 6.50 min Scan# 751

Delta R.T. 0.01 min

Lab File: BF114263.D

Acq: 14 May 2019 19:45

Instrument :

BNA\_F

ClientSampleId :

P026-SS009-0002-01DL

Tot Ion: 99 Resp: 1168960

Ion Ratio Lower Upper

99 100

42 21.8 17.9 26.9

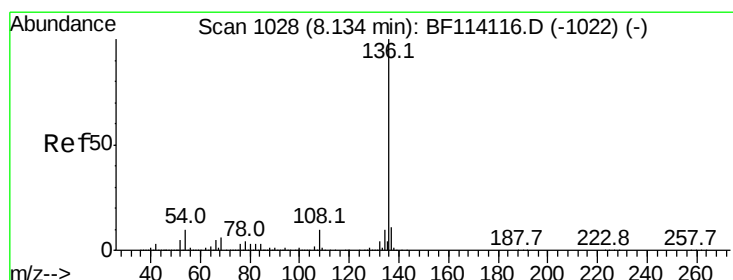
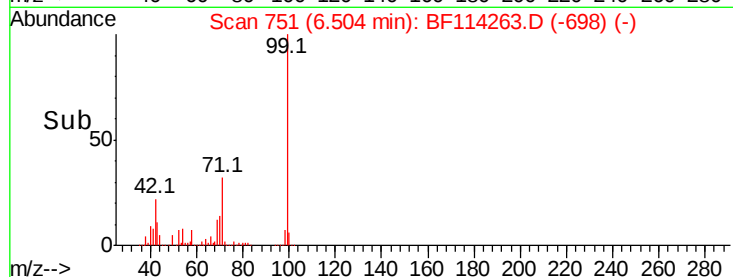
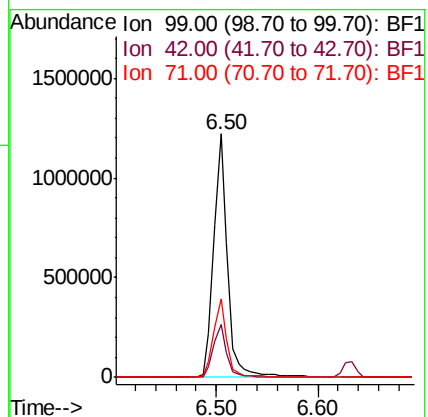
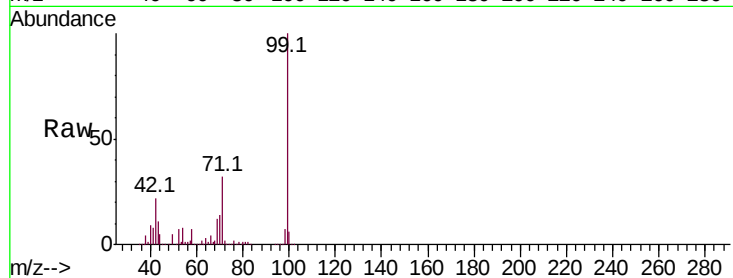
71 32.1 26.2 39.2

Manual Integrations

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#21

Naphthalene-d8

Concen: 20.000 ng

RT: 8.13 min Scan# 1028

Delta R.T. -0.00 min

Lab File: BF114263.D

Acq: 14 May 2019 19:45

Tgt Ion: 136 Resp: 899944

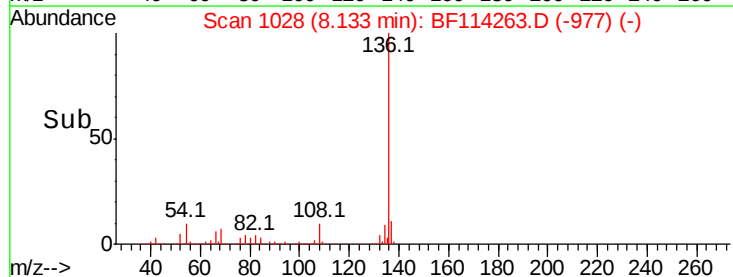
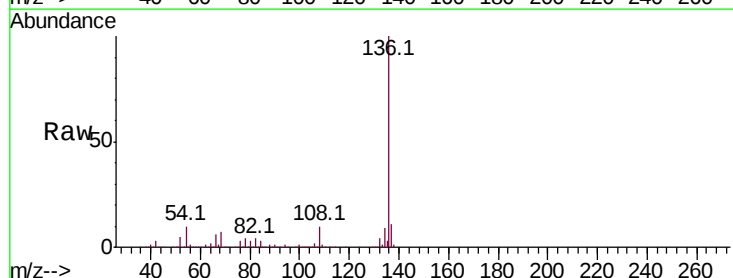
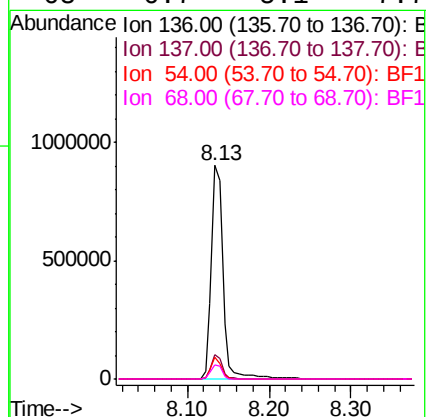
Ion Ratio Lower Upper

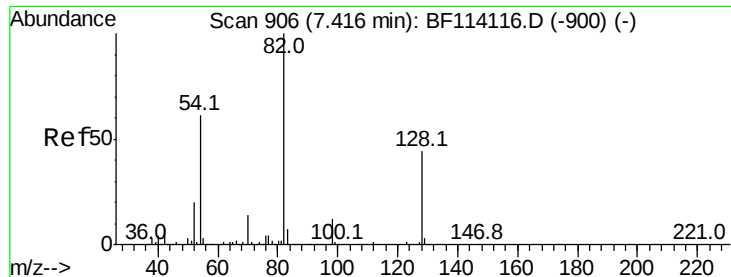
136 100

137 11.3 8.8 13.2

54 10.4 7.8 11.8

68 6.7 5.1 7.7





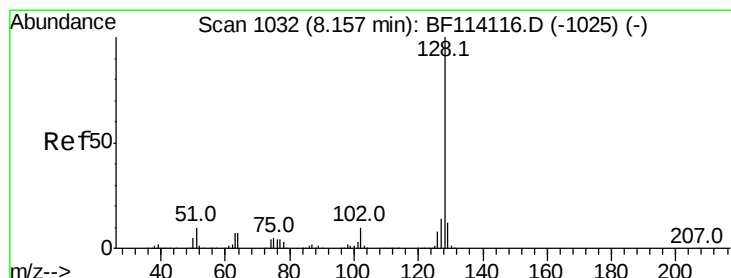
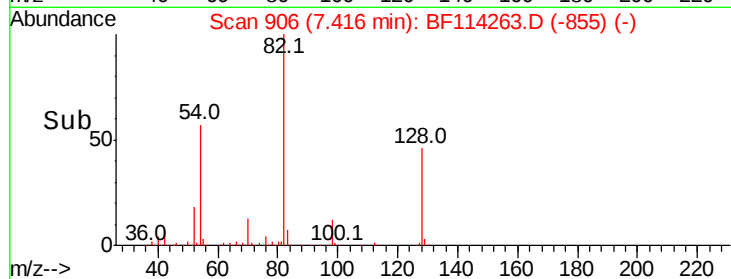
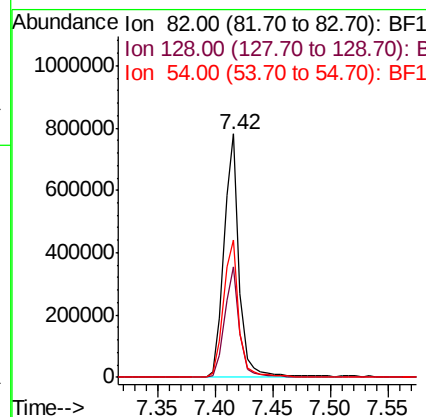
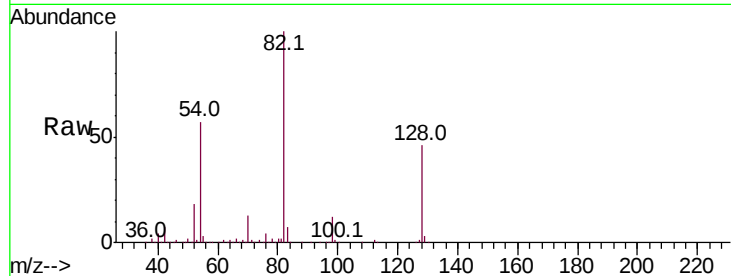
#23  
 Nitrobenzene-d5  
 Concen: 44.546 ng  
 RT: 7.42 min Scan# 906  
 Delta R.T. -0.00 min  
 Lab File: BF114263.D  
 Acq: 14 May 2019 19:45

Instrument :  
 BNA\_F  
 ClientSampleId :  
 P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 82      | 100   |       |       |
| 128     | 45.6  | 35.5  | 53.3  |
| 54      | 56.5  | 48.5  | 72.7  |

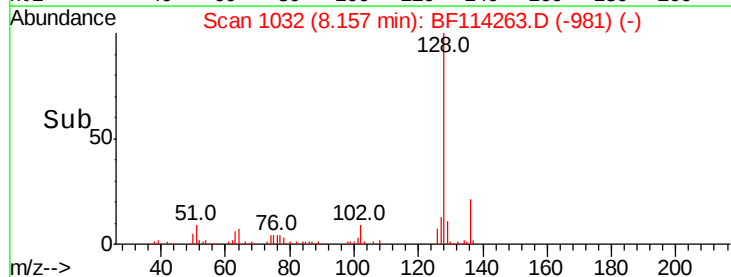
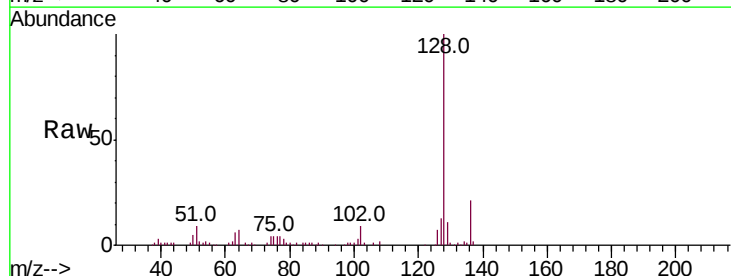
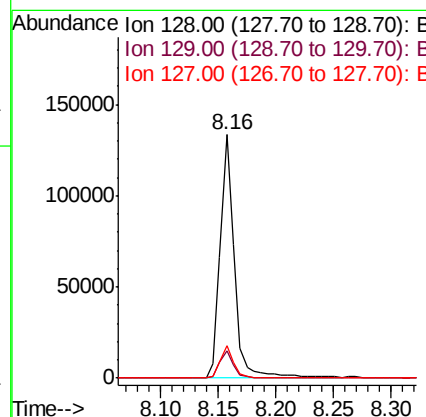
Manual Integrations  
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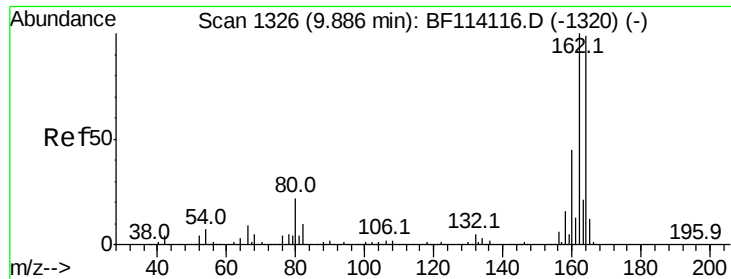
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#31  
 Naphthalene  
 Concen: 2.734 ng  
 RT: 8.16 min Scan# 1032  
 Delta R.T. -0.00 min  
 Lab File: BF114263.D  
 Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 129     | 11.3  | 9.6   | 14.4  |
| 127     | 13.2  | 11.3  | 16.9  |





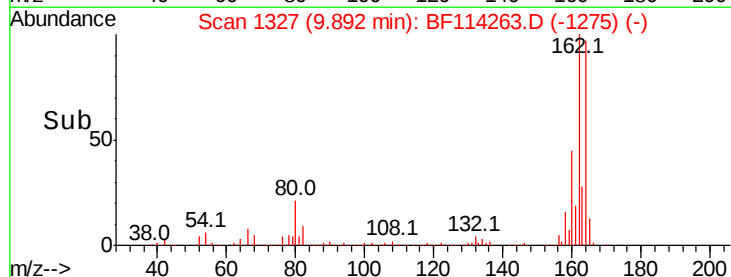
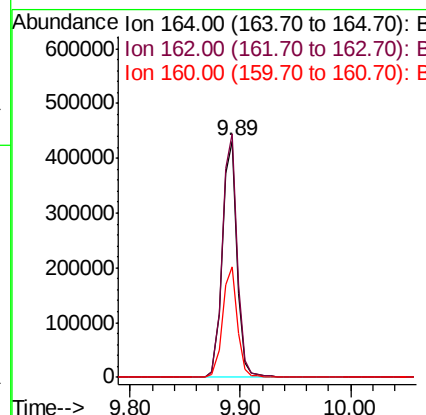
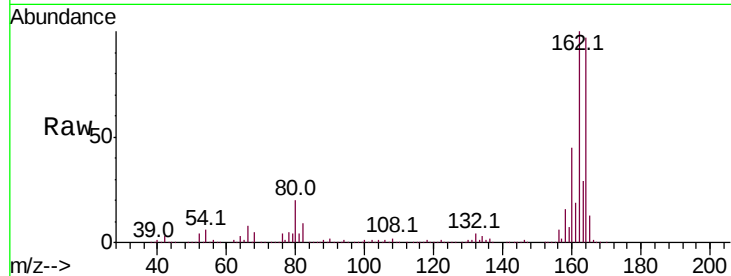
#39  
Acenaphthene-d10  
Concen: 20.000 ng  
RT: 9.89 min Scan# 1327  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 164     | 100   | 400314 |       |       |
| 162     | 103.1 | 80.6   | 120.8 |       |
| 160     | 46.8  | 36.5   | 54.7  |       |

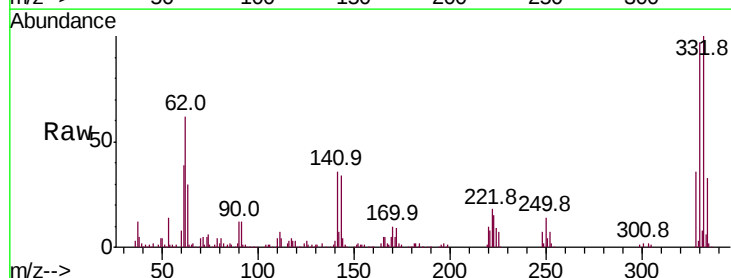
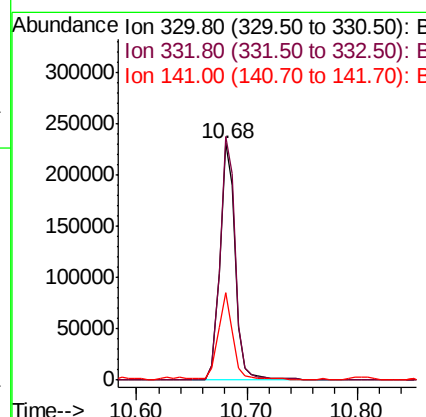
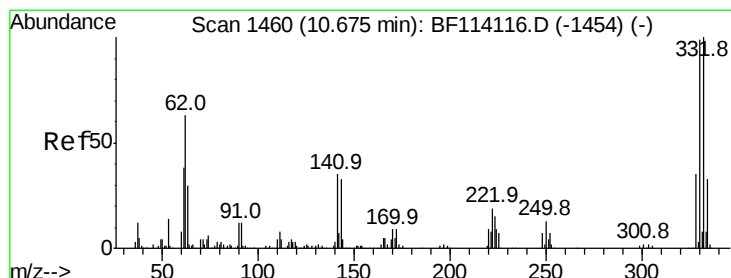
Manual Integrations  
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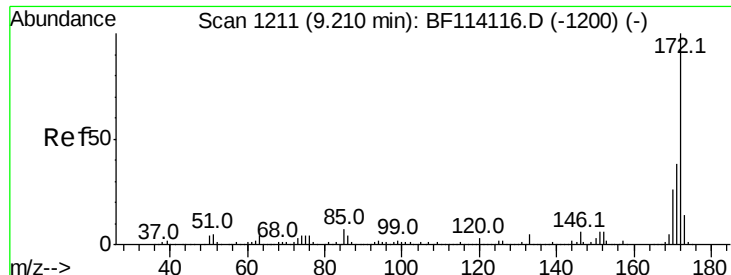
mohammad  
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#42  
2,4,6-Tribromophenol  
Concen: 53.571 ng  
RT: 10.68 min Scan# 1461  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 330     | 100   | 221706 |       |       |
| 332     | 103.6 | 81.4   | 122.2 |       |
| 141     | 34.6  | 26.6   | 40.0  |       |





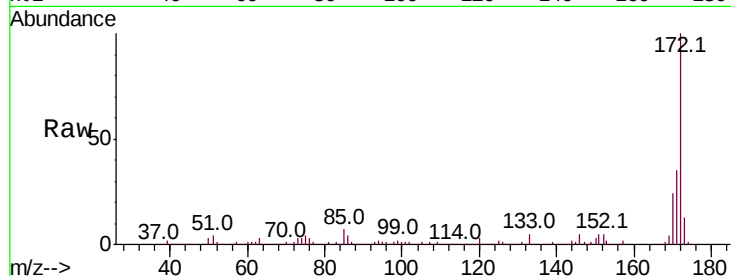
#45  
2-Fluorobiphenyl  
Concen: 41.652 ng  
RT: 9.21 min Scan# 1211  
Delta R.T. -0.00 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 172     | 100   |       |       |
| 171     | 35.4  | 30.7  | 46.1  |
| 170     | 23.9  | 20.5  | 30.7  |

Manual Integrations  
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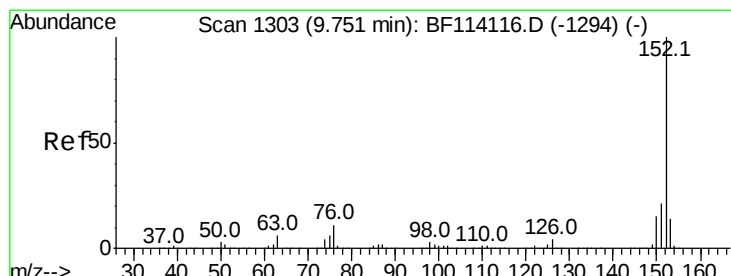
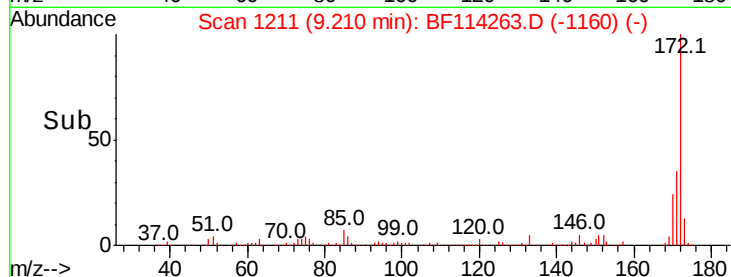
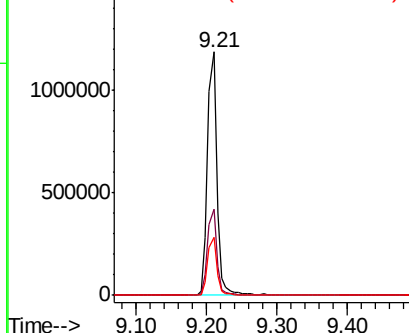


Abundance

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



#49  
Acenaphthylene  
Concen: 6.172 ng  
RT: 9.75 min Scan# 1303  
Delta R.T. -0.00 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

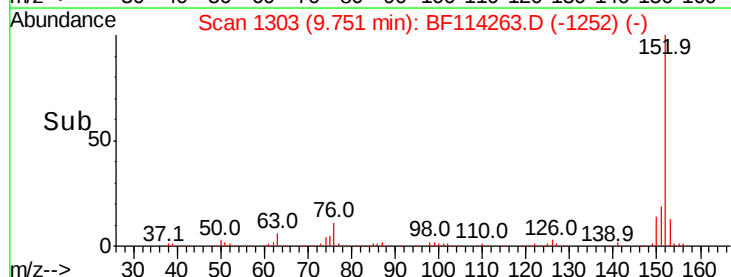
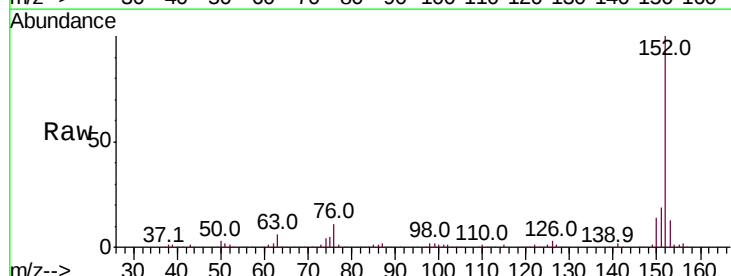
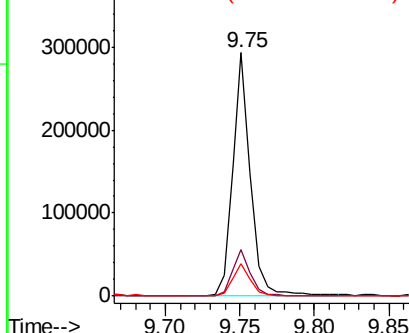
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 152     | 100   |       |       |
| 151     | 19.1  | 16.8  | 25.2  |
| 153     | 13.2  | 11.4  | 17.2  |

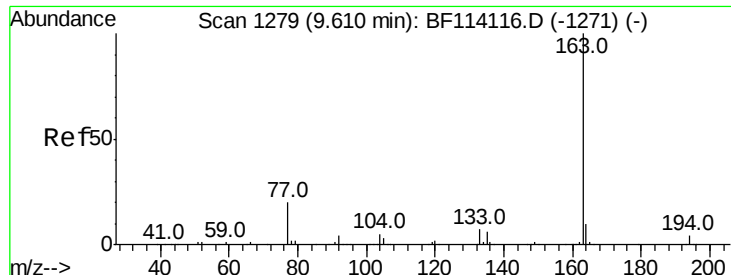
Abundance

Ion 152.00 (151.70 to 152.70): E

Ion 151.00 (150.70 to 151.70): E

Ion 153.00 (152.70 to 153.70): E





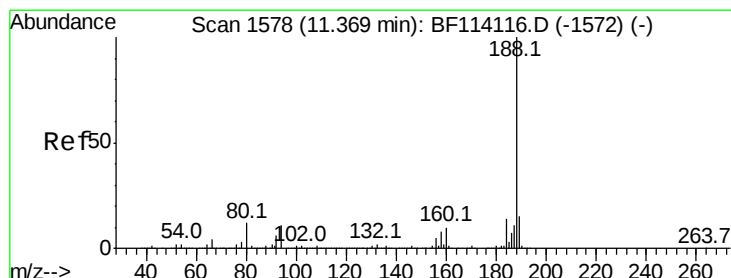
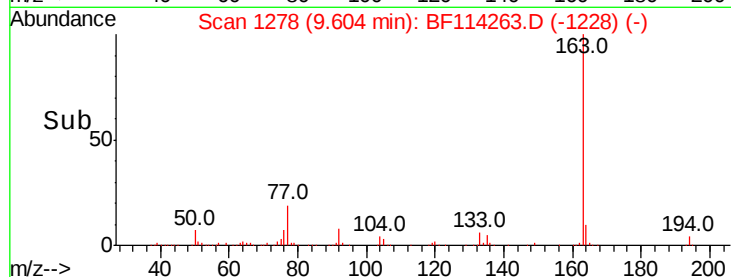
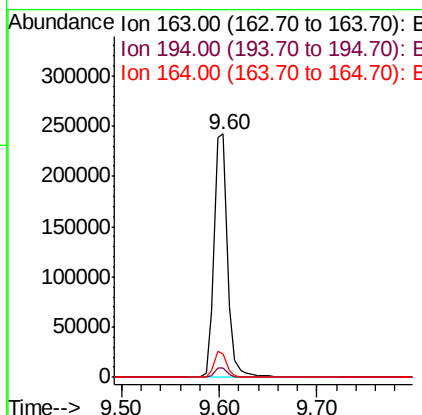
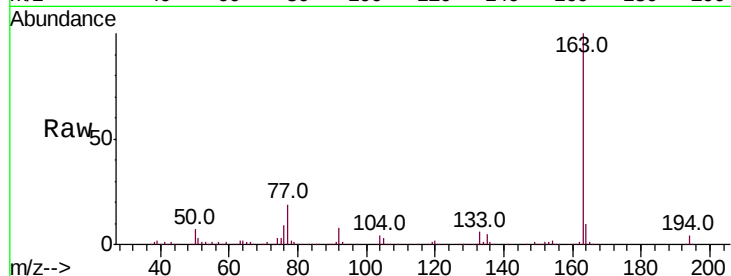
#50  
Dimethylphthalate  
Concen: 7.931 ng  
RT: 9.60 min Scan# 1278  
Delta R.T. -0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 163     | 100   | 233061 |       |       |
| 194     | 3.8   |        | 3.4   | 5.0   |
| 164     | 9.6   |        | 8.2   | 12.2  |

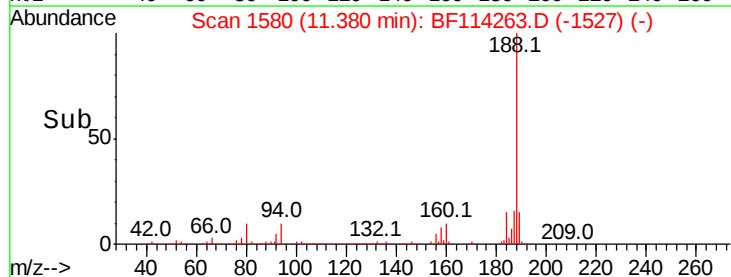
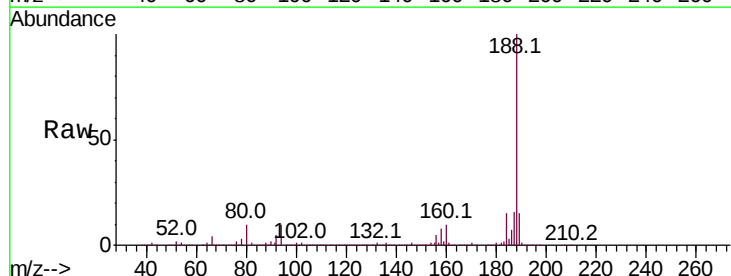
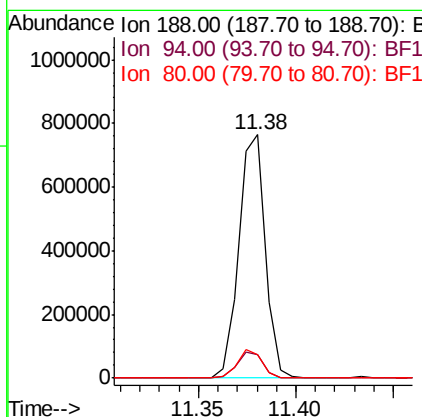
Manual Integrations  
APPROVED

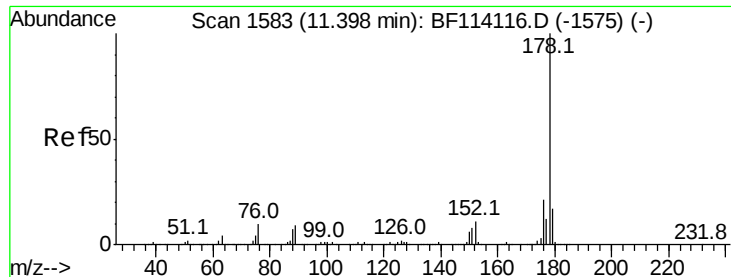
mohammad  
5/16/2019 9:10:11 AM



#64  
Phenanthrene-d10  
Concen: 20.000 ng  
RT: 11.38 min Scan# 1580  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Resp   | Lower | Upper |
|---------|-------|--------|-------|-------|
| 188     | 100   | 717058 |       |       |
| 94      | 9.6   |        | 8.4   | 12.6  |
| 80      | 9.6   |        | 9.2   | 13.8  |





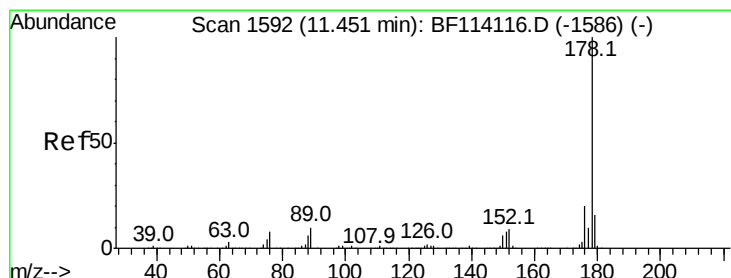
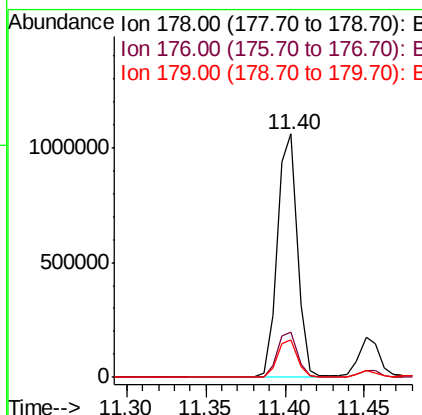
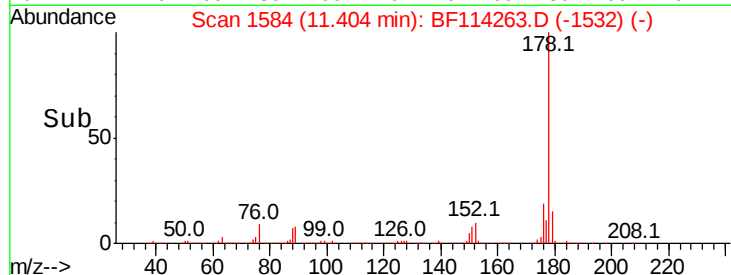
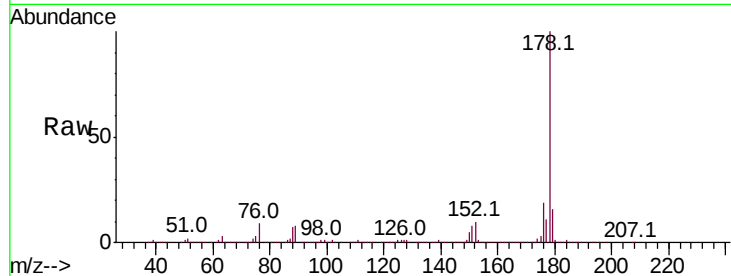
#71  
Phenanthrene  
Concen: 26.790 ng  
RT: 11.40 min Scan# 1584  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 18.7  | 16.4  | 24.6  |
| 179     | 15.6  | 13.2  | 19.8  |

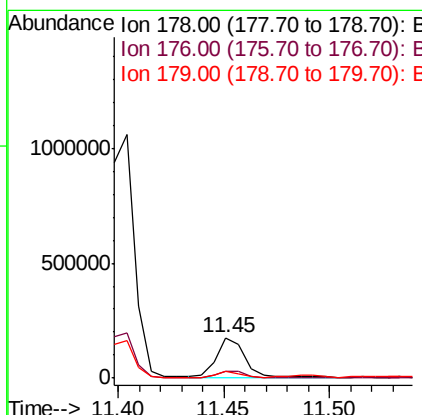
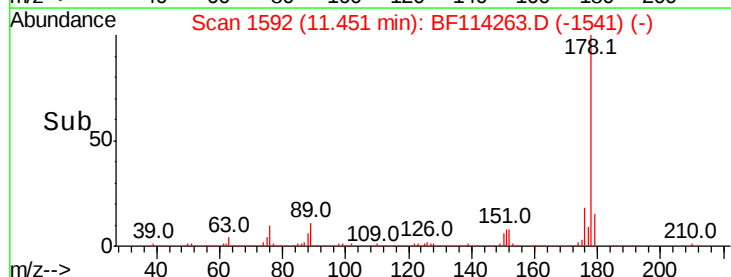
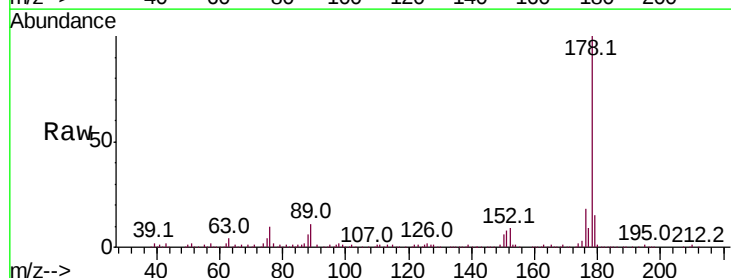
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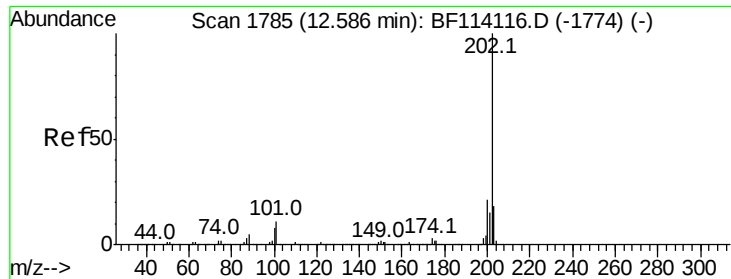
mohammad  
5/16/2019 9:10:11 AM



#72  
Anthracene  
Concen: 4.672 ng  
RT: 11.45 min Scan# 1592  
Delta R.T. -0.00 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 178     | 100   |       |       |
| 176     | 17.9  | 15.8  | 23.8  |
| 179     | 15.3  | 13.0  | 19.4  |





#75

Fluoranthene

Concen: 36.731 ng

RT: 12.60 min Scan# 1787

Delta R.T. 0.01 min

Lab File: BF114263.D

Acq: 14 May 2019 19:45

Instrument :

BNA\_F

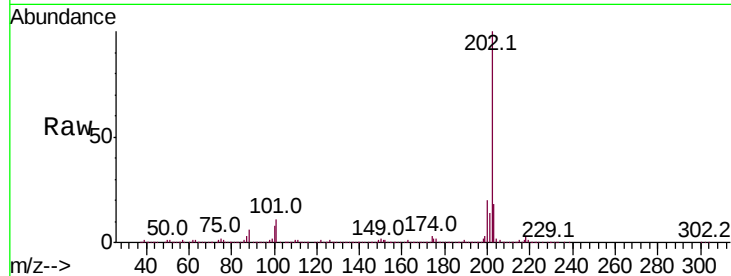
ClientSampleId :

P026-SS009-0002-01DL

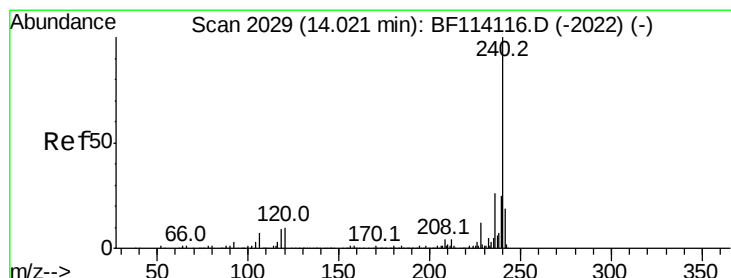
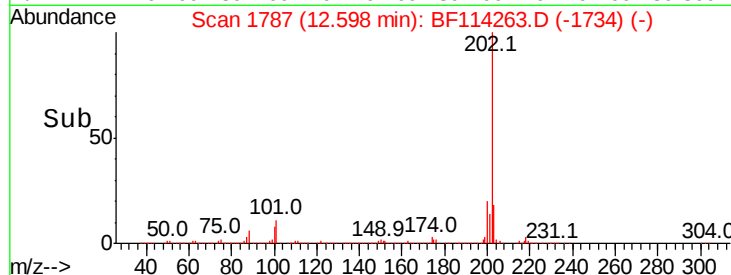
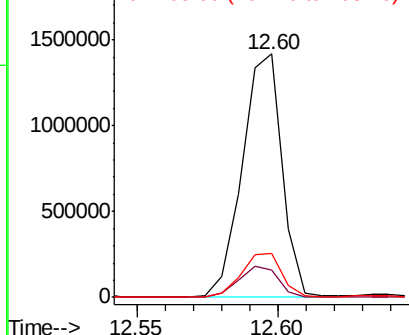
|          |       |       |         |
|----------|-------|-------|---------|
| Tot Ion: | 202   | Resp: | 1379903 |
| Ion      | Ratio | Lower | Upper   |
| 202      | 100   |       |         |
| 101      | 11.1  | 0.0   | 31.0    |
| 203      | 18.0  | 0.0   | 38.4    |

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Abundance Ion 202.00 (201.70 to 202.70): E  
Ion 101.00 (100.70 to 101.70): E  
Ion 203.00 (202.70 to 203.70): E



#76

Chrysene-d12

Concen: 20.000 ng

RT: 14.03 min Scan# 2030

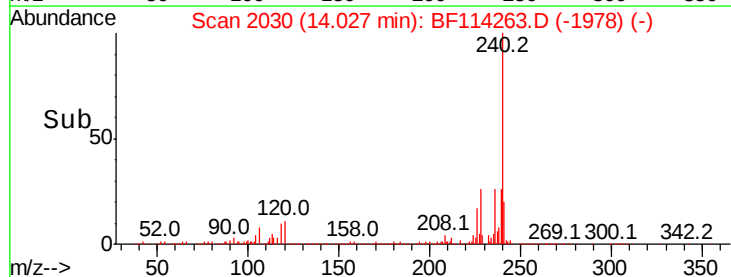
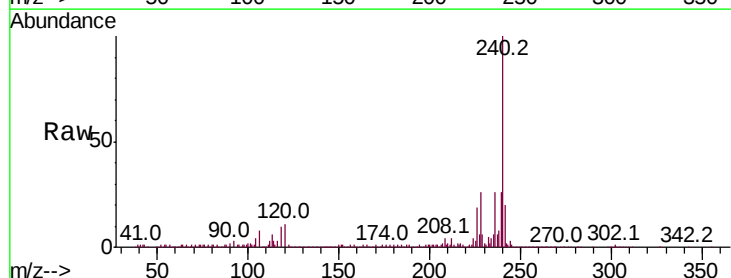
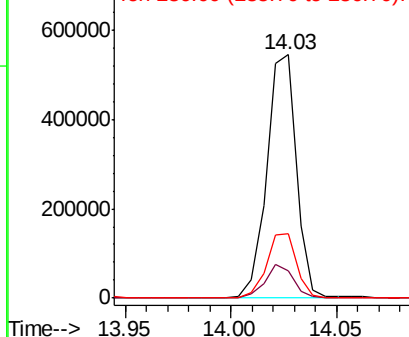
Delta R.T. 0.01 min

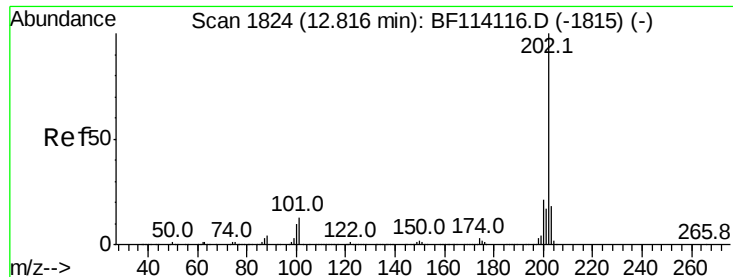
Lab File: BF114263.D

Acq: 14 May 2019 19:45

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 240   | Resp: | 530462 |
| Ion      | Ratio | Lower | Upper  |
| 240      | 100   |       |        |
| 120      | 11.3  | 8.3   | 12.5   |
| 236      | 26.3  | 20.8  | 31.2   |

Abundance Ion 240.00 (239.70 to 240.70): E  
Ion 120.00 (119.70 to 120.70): E  
Ion 236.00 (235.70 to 236.70): E





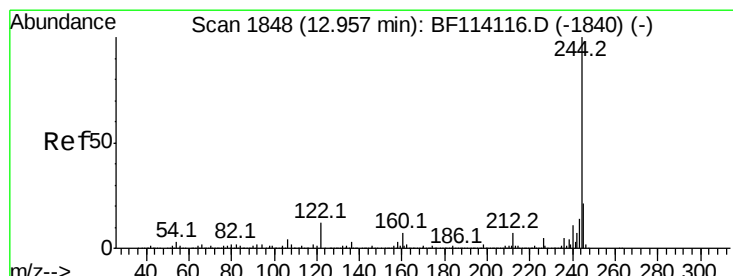
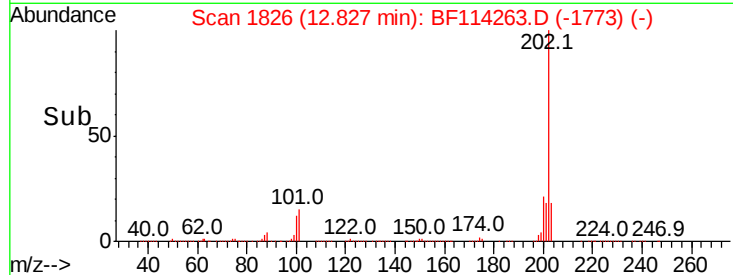
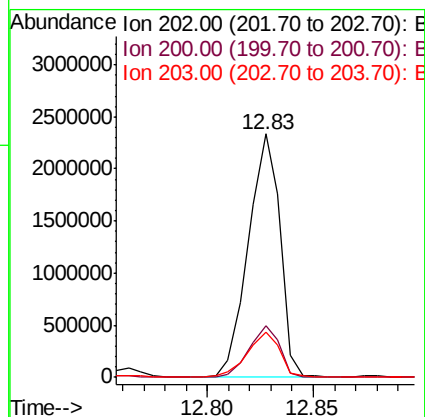
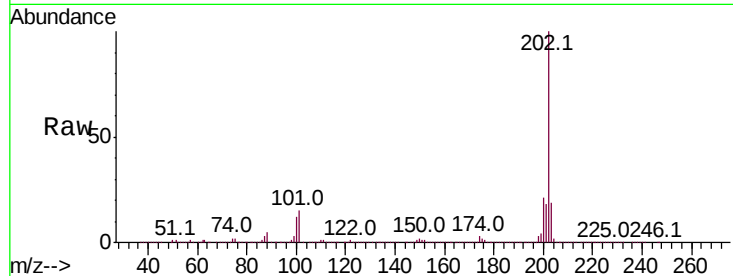
#78  
Pvrene  
Concen: 56.849 ng  
RT: 12.83 min Scan# 1826  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 202     | 100   |       |       |
| 200     | 21.0  | 16.9  | 25.3  |
| 203     | 18.6  | 14.5  | 21.7  |

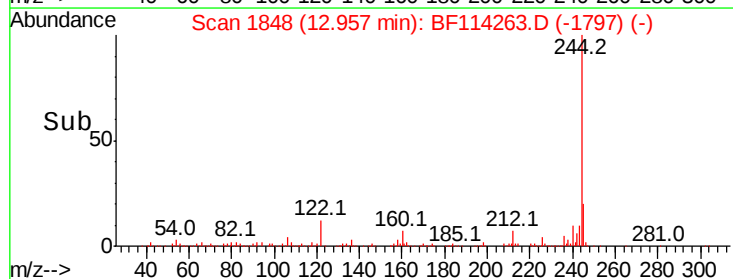
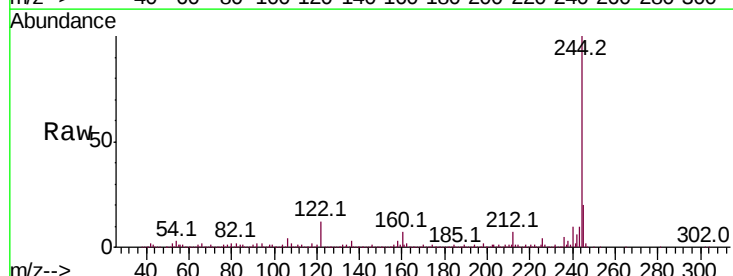
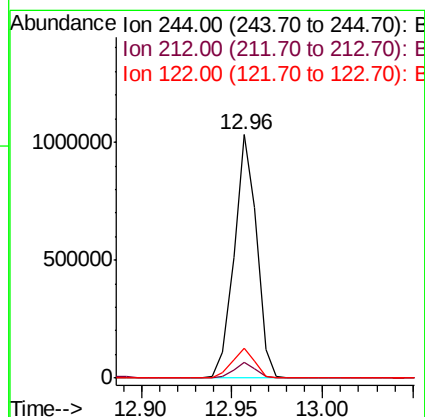
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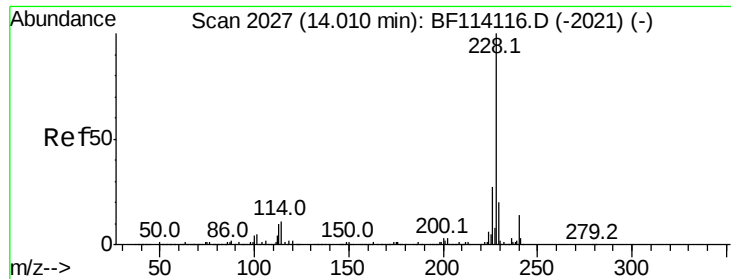
mohammad  
5/16/2019 9:10:11 AM



#79  
Terphenyl-d14  
Concen: 34.604 ng  
RT: 12.96 min Scan# 1848  
Delta R.T. -0.00 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 244     | 100   |       |       |
| 212     | 6.7   | 5.8   | 8.6   |
| 122     | 12.5  | 9.4   | 14.2  |





#81

Benzo(a)anthracene

Concen: 27.018 ng

RT: 14.02 min Scan# 2028

Delta R.T. 0.01 min

Lab File: BF114263.D

Acq: 14 May 2019 19:45

Instrument :

BNA\_F

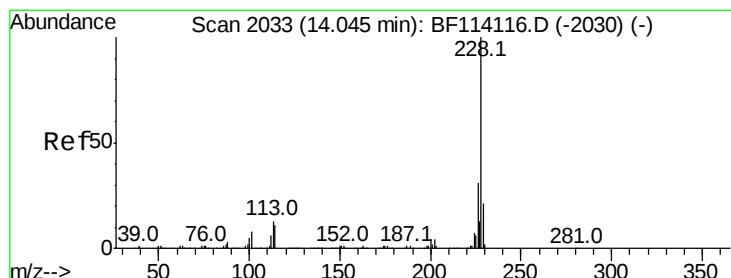
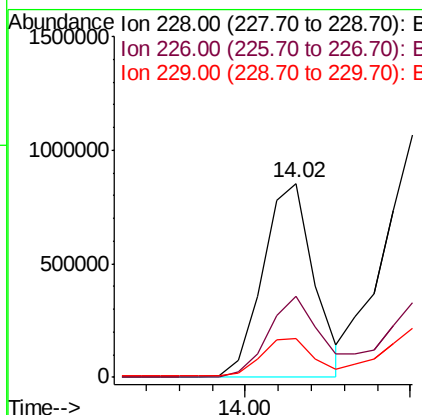
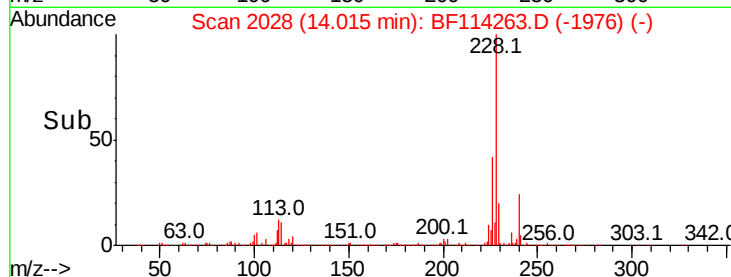
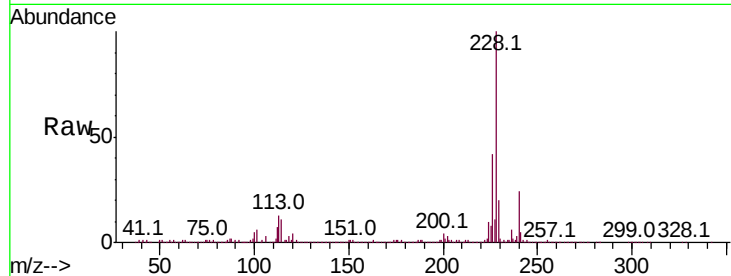
ClientSampleId :

P026-SS009-0002-01DL

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 228   | Resp: | 926992 |
| Ion Ratio | Lower | Upper |        |
| 228       | 100   |       |        |
| 226       | 41.9  | 22.2  | 33.2#  |
| 229       | 20.1  | 16.4  | 24.6   |

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#83

Chrysene

Concen: 32.073 ng

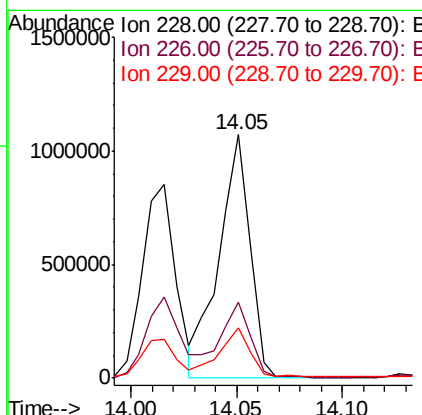
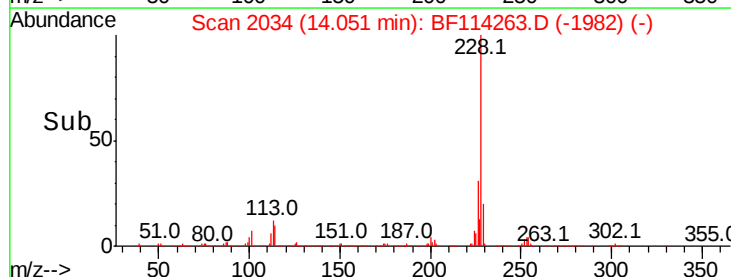
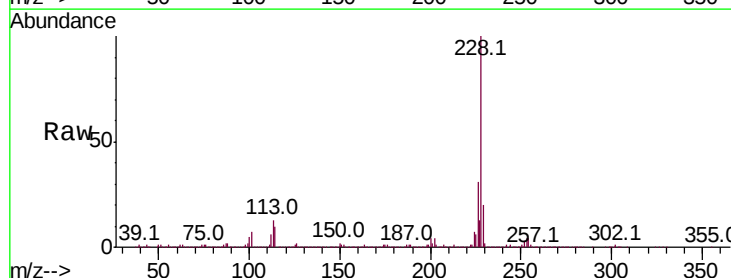
RT: 14.05 min Scan# 2034

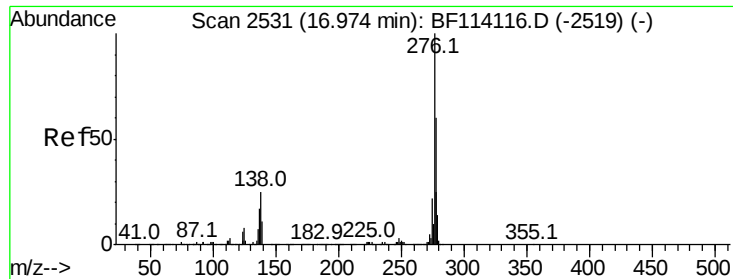
Delta R.T. 0.01 min

Lab File: BF114263.D

Acq: 14 May 2019 19:45

|           |       |       |         |
|-----------|-------|-------|---------|
| Tgt Ion:  | 228   | Resp: | 1078730 |
| Ion Ratio | Lower | Upper |         |
| 228       | 100   |       |         |
| 226       | 31.0  | 25.0  | 37.6    |
| 229       | 20.5  | 17.0  | 25.6    |





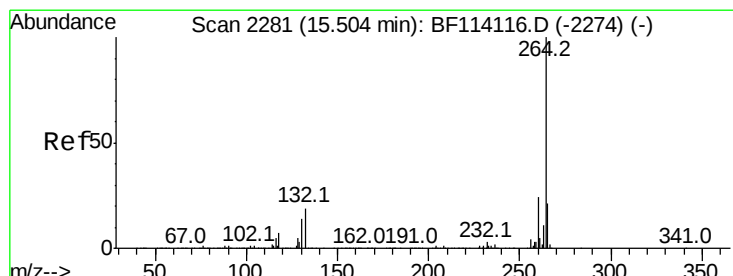
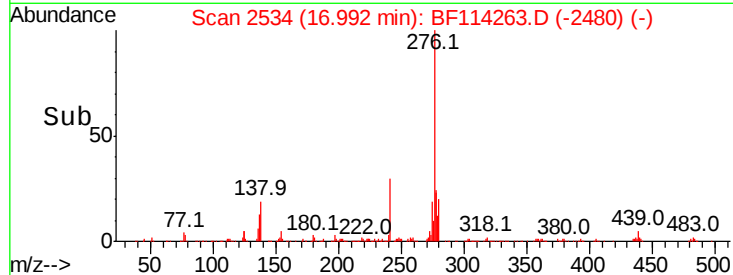
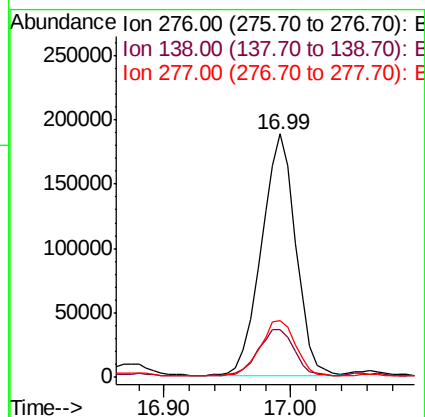
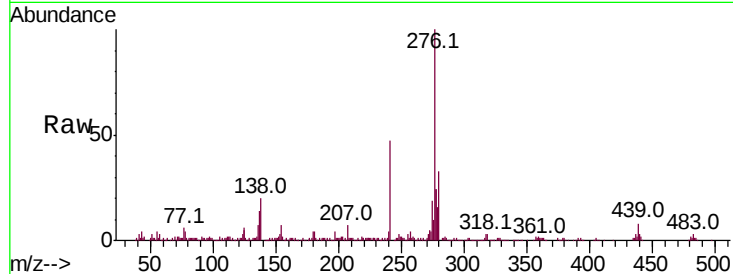
#86  
Indeno(1,2,3-cd)pyrene  
Concen: 11.880 ng  
RT: 16.99 min Scan# 2534  
Delta R.T. 0.02 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

|             |       |        |
|-------------|-------|--------|
| Tot Ion:276 | Resp: | 353117 |
| Ion Ratio   | Lower | Upper  |
| 276 100     |       |        |
| 138 20.2    | 20.2  | 30.2   |
| 277 23.7    | 20.0  | 30.0   |

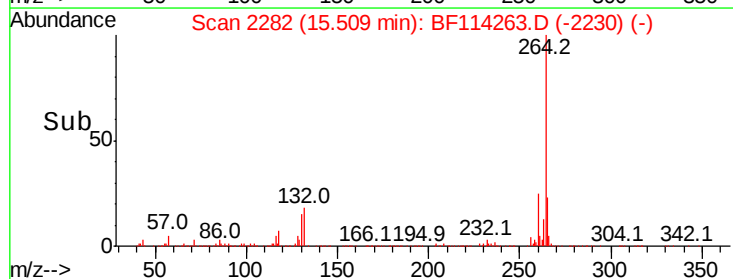
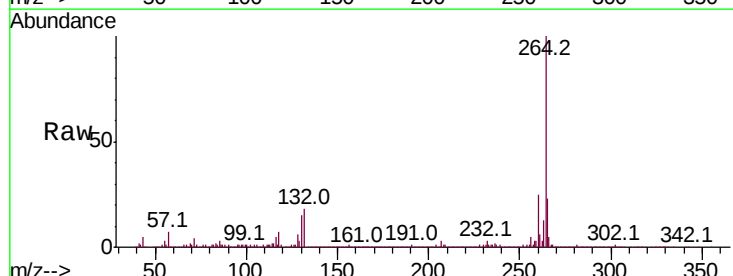
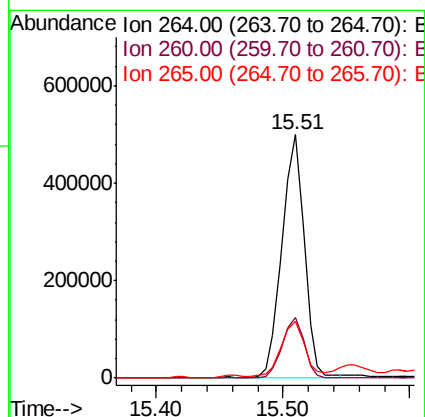
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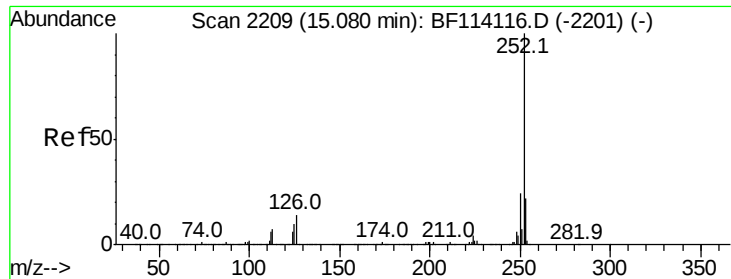
mohammad  
5/16/2019 9:10:11 AM



#87  
Perylene-d12  
Concen: 20.000 ng  
RT: 15.51 min Scan# 2282  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

|             |       |        |
|-------------|-------|--------|
| Tgt Ion:264 | Resp: | 606759 |
| Ion Ratio   | Lower | Upper  |
| 264 100     |       |        |
| 260 25.1    | 19.4  | 29.0   |
| 265 23.3    | 16.9  | 25.3   |





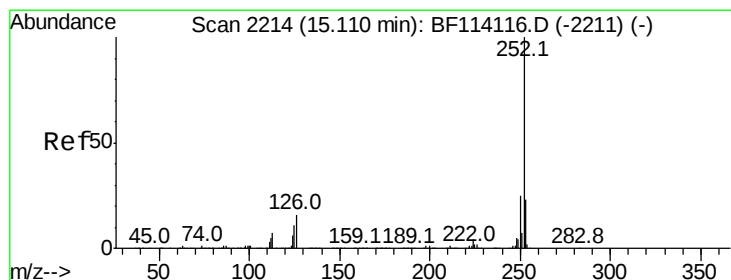
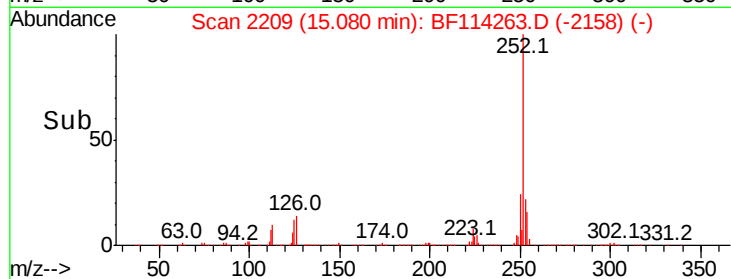
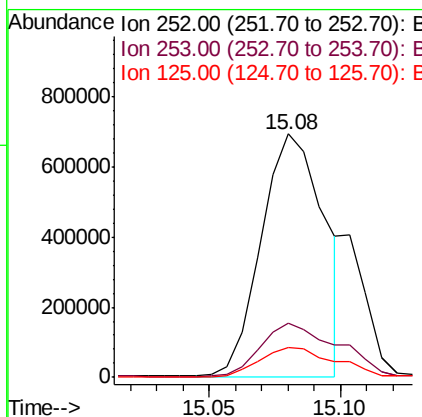
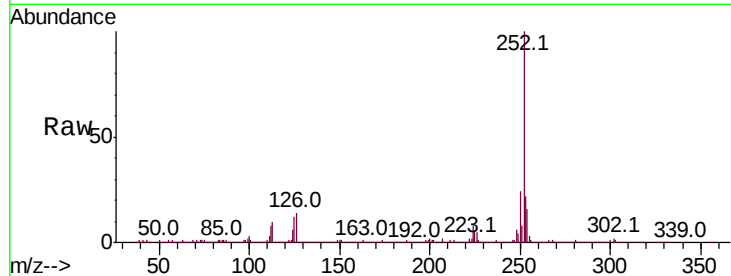
#88  
Benzo(b)fluoranthene  
Concen: 30.082 ng m  
RT: 15.08 min Scan# 2209  
Delta R.T. -0.00 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.3  | 17.8  | 26.8  |
| 125     | 12.5  | 8.3   | 12.5  |

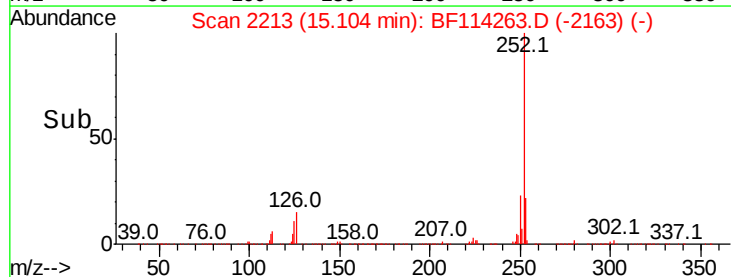
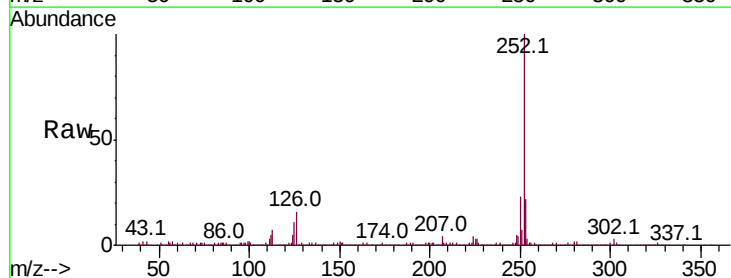
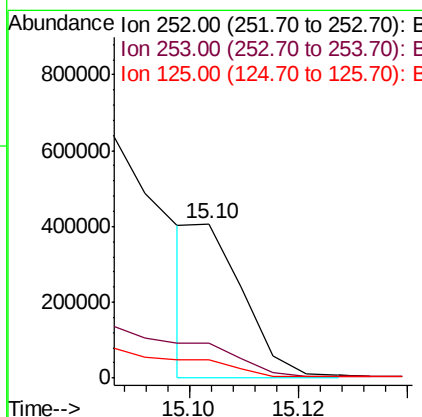
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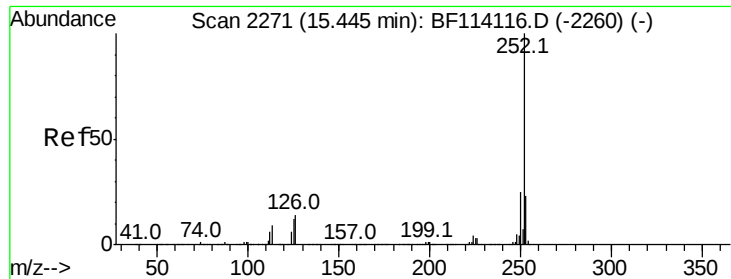
mohammad  
5/16/2019 9:10:11 AM



#89  
Benzo(k)fluoranthene  
Concen: 7.165 ng m  
RT: 15.10 min Scan# 2213  
Delta R.T. -0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 22.5  | 18.2  | 27.2  |
| 125     | 11.5  | 8.6   | 13.0  |





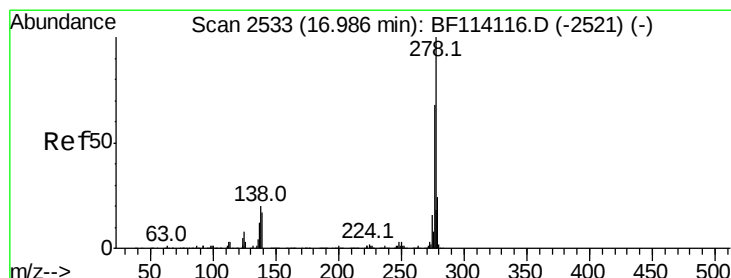
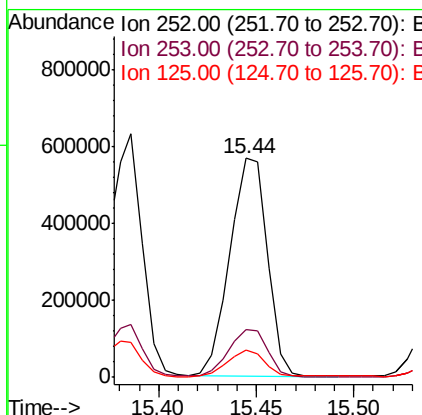
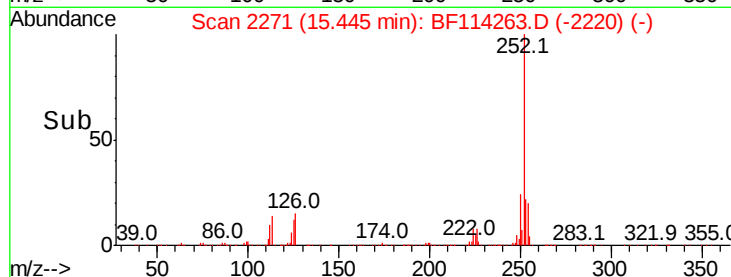
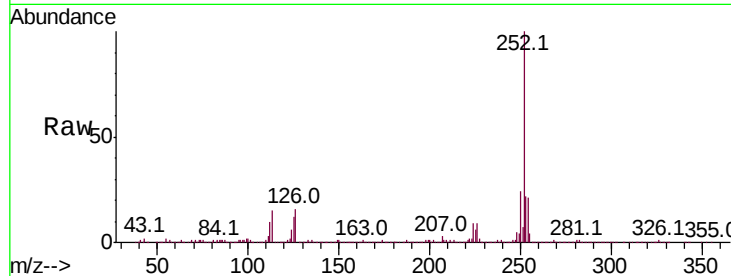
#90  
Benzo(a)pyrene  
Concen: 22.156 ng  
RT: 15.44 min Scan# 2271  
Delta R.T. -0.00 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

Instrument :  
BNA\_F  
ClientSampleId :  
P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 252     | 100   |       |       |
| 253     | 21.9  | 18.1  | 27.1  |
| 125     | 12.3  | 9.5   | 14.3  |

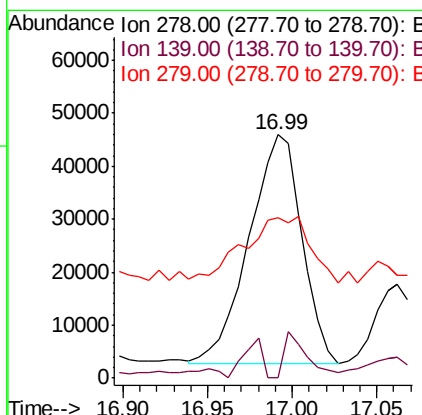
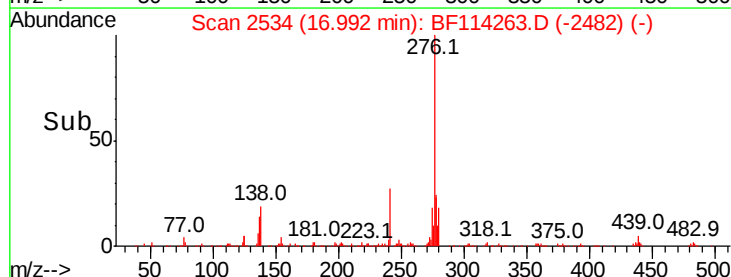
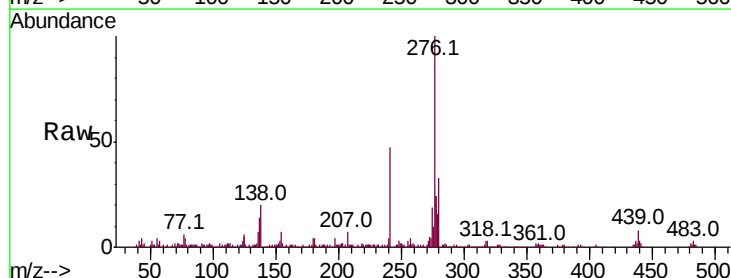
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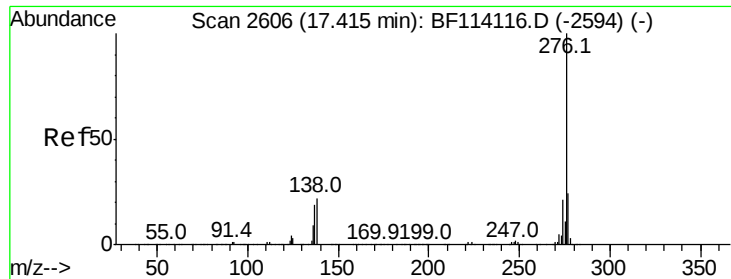
mohammad  
5/16/2019 9:10:11 AM



#91  
Dibenzo(a,h)anthracene  
Concen: 3.290 ng  
RT: 16.99 min Scan# 2534  
Delta R.T. 0.01 min  
Lab File: BF114263.D  
Acq: 14 May 2019 19:45

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 278     | 100   |       |       |
| 139     | 0.0   | 13.5  | 20.3# |
| 279     | 65.7  | 19.0  | 28.6# |





#92  
 Benzo(a,h,i)perylene  
 Concen: 16.825 ng  
 RT: 17.44 min Scan# 2610  
 Delta R.T. 0.02 min  
 Lab File: BF114263.D  
 Acq: 14 May 2019 19:45

Instrument :  
 BNA\_F  
 ClientSampleId :  
 P026-SS009-0002-01DL

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 276     | 100   |       |       |
| 277     | 24.7  | 19.0  | 28.4  |
| 138     | 24.0  | 17.8  | 26.6  |

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mohammad  
 5/16/2019 9:10:11 AM

