

Data Path : Z:\HPCHEM1\BNA\_F\DATA\BF062416\  
 Data File : BF088363.D  
 Acq On : 25 Jun 2016 7:15  
 Operator : UM/SJ  
 Sample : H3731-01MSD  
 Misc :  
 ALS Vial : 31 Sample Multiplier: 1

Instrument :  
 BNA\_F  
 ClientSampleId :  
 HSR-WC-55-062216MSD

Quant Time: Jun 27 01:50:39 2016  
 Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF060716.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Wed Jun 22 14:55:14 2016  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 6.58  | 152  | 68380    | 20.00 | ng    | -0.02    |
| 21) Naphthalene-d8        | 7.87  | 136  | 267311   | 20.00 | ng    | -0.02    |
| 38) Acenaphthene-d10      | 9.61  | 164  | 114525   | 20.00 | ng    | -0.03    |
| 63) Phenanthrene-d10      | 11.10 | 188  | 180912   | 20.00 | ng    | -0.02    |
| 75) Chrysene-d12          | 13.71 | 240  | 140199   | 20.00 | ng    | -0.03    |
| 86) Perylene-d12          | 15.07 | 264  | 111458   | 20.00 | ng    | -0.03    |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|-------|------|----------|--------|-------|----------|
| 5) 2-Fluorophenol           | 5.19  | 112  | 470095   | 117.53 | ng    | 0.01     |
| 7) Phenol-d6                | 6.25  | 99   | 546486   | 112.73 | ng    | -0.01    |
| 23) Nitrobenzene-d5         | 7.16  | 82   | 382615   | 83.58  | ng    | -0.01    |
| 41) 2,4,6-Tribromophenol    | 10.41 | 330  | 130983   | 108.32 | ng    | -0.02    |
| 44) 2-Fluorobiphenyl        | 8.95  | 172  | 706341   | 97.72  | ng    | -0.02    |
| 78) Terphenyl-d14           | 12.67 | 244  | 529791   | 85.99  | ng    | -0.02    |

| Target Compounds               | R.T. | QIon | Response | Conc  | Units | Qvalue |
|--------------------------------|------|------|----------|-------|-------|--------|
| 2) 1,4-Dioxane                 | 2.15 | 88   | 59792    | 30.76 | ng    | # 87   |
| 3) Pyridine                    | 2.84 | 79   | 27599    | 6.01  | ng    | 95     |
| 4) n-Nitrosodimethylamine      | 2.73 | 42   | 26960    | 13.87 | ng    | # 80   |
| 6) Aniline                     | 6.28 | 93   | 30545    | 4.43  | ng    | # 1    |
| 8) 2-Chlorophenol              | 6.38 | 128  | 99471    | 21.01 | ng    | 91     |
| 9) Benzaldehyde                | 6.14 | 77   | 48736    | 12.40 | ng    | 98     |
| 10) Phenol                     | 6.27 | 94   | 106884   | 19.97 | ng    | 92     |
| 11) bis(2-Chloroethyl)ether    | 6.33 | 93   | 99269    | 23.35 | ng    | 86     |
| 12) 1,3-Dichlorobenzene        | 6.75 | 146  | 86455    | 17.02 | ng    | 96     |
| 13) 1,4-Dichlorobenzene        | 6.60 | 146  | 102985   | 20.13 | ng    | 97     |
| 14) 1,2-Dichlorobenzene        | 6.75 | 146  | 102528   | 22.03 | ng    | 96     |
| 15) Benzyl Alcohol             | 6.75 | 79   | 71022    | 18.73 | ng    | 95     |
| 16) 2,2'-oxybis(1-Chloropropan | 6.88 | 45   | 104771   | 18.24 | ng    | # 27   |
| 17) 2-Methylphenol             | 6.88 | 107  | 69377    | 18.07 | ng    | # 85   |
| 18) Hexachloroethane           | 7.08 | 117  | 32343    | 17.81 | ng    | # 83   |
| 19) n-Nitroso-di-n-propylamine | 7.02 | 70   | 69199    | 22.31 | ng    | # 81   |
| 20) 3+4-Methylphenols          | 7.04 | 107  | 89812    | 20.05 | ng    | # 82   |
| 22) Acetophenone               | 7.00 | 105  | 143925   | 24.09 | ng    | # 97   |
| 24) Nitrobenzene               | 7.18 | 77   | 93671    | 21.12 | ng    | 89     |
| 25) Isophorone                 | 7.42 | 82   | 176470   | 20.81 | ng    | 100    |
| 26) 2-Nitrophenol              | 7.50 | 139  | 51431    | 21.65 | ng    | # 87   |
| 27) 2,4-Dimethylphenol         | 7.55 | 122  | 88514    | 20.24 | ng    | 96     |
| 28) bis(2-Chloroethoxy)methane | 7.63 | 93   | 121859   | 23.17 | ng    | # 95   |
| 29) 2,4-Dichlorophenol         | 7.76 | 162  | 83267    | 22.80 | ng    | 95     |
| 30) 1,2,4-Trichlorobenzene     | 7.82 | 180  | 84004    | 21.13 | ng    | 98     |
| 31) Naphthalene                | 7.90 | 128  | 322428   | 24.37 | ng    | 98     |
| 32) Benzoic acid               | 7.70 | 122  | 34914    | 14.50 | ng    | 86     |
| 33) 4-Chloroaniline            | 7.98 | 127  | 38616    | 6.54  | ng    | 99     |
| 34) Hexachlorobutadiene        | 8.01 | 225  | 45672    | 21.78 | ng    | 97     |
| 35) Caprolactam                | 8.32 | 113  | 19508    | 16.13 | ng    | 93     |
| 36) 4-Chloro-3-methylphenol    | 8.46 | 107  | 86593    | 22.17 | ng    | 91     |
| 37) 2-Methylnaphthalene        | 8.58 | 142  | 197543   | 22.66 | ng    | 97     |
| 39) 1,2,4,5-Tetrachlorobenzene | 8.75 | 216  | 76209    | 21.54 | ng    | # 1    |
| 42) 2,4,6-Trichlorophenol      | 8.88 | 196  | 48327    | 21.10 | ng    | 97     |

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 Misc :  
 ALS Vial : 31 Sample Multiplier: 1

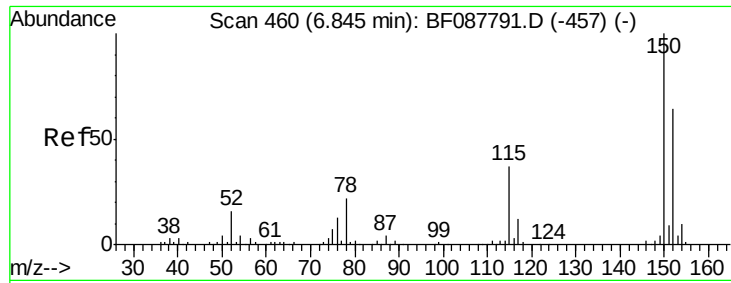
Instrument :  
 BNA\_F  
 ClientSampleId :  
 HSR-WC-55-062216MSD

Quant Time: Jun 27 01:50:39 2016  
 Quant Method : Z:\HPCHEM1\BNA\_F\METHODS\8270-BF060716.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Wed Jun 22 14:55:14 2016  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|--------------------------------|-------|------|----------|-------|-------|----------|
| 43) 2,4,5-Trichlorophenol      | 8.92  | 196  | 55338    | 23.22 | ng    | 95       |
| 45) 1,1'-Biphenyl              | 9.05  | 154  | 235007   | 24.51 | ng    | 96       |
| 46) 2-Chloronaphthalene        | 9.07  | 162  | 175106   | 23.63 | ng    | 93       |
| 47) 2-Nitroaniline             | 9.18  | 65   | 49194    | 22.50 | ng    | 94       |
| 48) Acenaphthylene             | 9.47  | 152  | 266115   | 22.57 | ng    | 99       |
| 49) Dimethylphthalate          | 9.36  | 163  | 213455   | 25.73 | ng    | 98       |
| 50) 2,6-Dinitrotoluene         | 9.42  | 165  | 43106    | 22.69 | ng    | # 65     |
| 51) Acenaphthene               | 9.64  | 154  | 161767   | 22.00 | ng    | 99       |
| 52) 3-Nitroaniline             | 9.60  | 138  | 25436    | 11.60 | ng    | 87       |
| 53) 2,4-Dinitrophenol          | 9.72  | 184  | 15672    | 20.41 | ng    | 88       |
| 54) Dibenzofuran               | 9.82  | 168  | 240729   | 23.77 | ng    | # 82     |
| 55) 4-Nitrophenol              | 9.82  | 139  | 159386   | 93.67 | ng    | # 18     |
| 56) 2,4-Dinitrotoluene         | 9.83  | 165  | 55997    | 22.93 | ng    | # 78     |
| 57) Fluorene                   | 10.16 | 166  | 182476   | 24.46 | ng    | 98       |
| 58) 2,3,4,6-Tetrachlorophenol  | 9.95  | 232  | 43625    | 23.30 | ng    | # 62     |
| 59) Diethylphthalate           | 10.04 | 149  | 200640   | 23.89 | ng    | 96       |
| 60) 4-Chlorophenyl-phenylether | 10.16 | 204  | 85248    | 25.31 | ng    | 95       |
| 61) 4-Nitroaniline             | 10.20 | 138  | 38340    | 18.44 | ng    | 97       |
| 62) Azobenzene                 | 10.32 | 77   | 191345   | 23.04 | ng    | 91       |
| 64) 4,6-Dinitro-2-methylphenol | 10.24 | 198  | 8373     | 9.24  | ng    | 83       |
| 65) n-Nitrosodiphenylamine     | 10.28 | 169  | 162388   | 27.05 | ng    | 100      |
| 66) 4-Bromophenyl-phenylether  | 10.64 | 248  | 49428    | 25.47 | ng    | # 78     |
| 67) Hexachlorobenzene          | 10.71 | 284  | 48290    | 23.95 | ng    | # 78     |
| 68) Atrazine                   | 10.81 | 200  | 40057    | 22.04 | ng    | 92       |
| 69) Pentachlorophenol          | 10.91 | 266  | 53790    | 50.60 | ng    | 98       |
| 70) Phenanthrene               | 11.12 | 178  | 223403   | 23.53 | ng    | 98       |
| 71) Anthracene                 | 11.16 | 178  | 254771   | 26.61 | ng    | 98       |
| 72) Carbazole                  | 11.34 | 167  | 215550   | 24.05 | ng    | 97       |
| 73) Di-n-butylphthalate        | 11.67 | 149  | 291883   | 25.73 | ng    | # 97     |
| 74) Fluoranthene               | 12.30 | 202  | 228910   | 22.85 | ng    | 97       |
| 76) Benzidine                  | 12.43 | 184  | 54622    | 14.07 | ng    | 99       |
| 77) Pyrene                     | 12.53 | 202  | 223457   | 21.48 | ng    | 97       |
| 79) Butylbenzylphthalate       | 13.14 | 149  | 105880   | 23.02 | ng    | # 78     |
| 80) Benzo(a)anthracene         | 13.70 | 228  | 189913   | 23.77 | ng    | 98       |
| 81) 3,3'-Dichlorobenzidine     | 13.68 | 252  | 51587    | 24.01 | ng    | # 99     |
| 82) Chrysene                   | 13.75 | 228  | 196347   | 26.12 | ng    | 97       |
| 83) Bis(2-ethylhexyl)phthalate | 13.71 | 149  | 145911   | 26.06 | ng    | # 97     |
| 84) Di-n-octyl phthalate       | 14.32 | 149  | 265876   | 29.22 | ng    | # 100    |
| 85) Indeno(1,2,3-cd)pyrene     | 16.32 | 276  | 135829   | 19.45 | ng    | # 100    |
| 87) Benzo(b)fluoranthene       | 14.71 | 252  | 336873   | 43.36 | ng    | # 97     |
| 88) Benzo(k)fluoranthene       | 14.71 | 252  | 336873   | 57.49 | ng    | 98       |
| 89) Benzo(a)pyrene             | 15.02 | 252  | 150678   | 23.97 | ng    | 99       |
| 90) Dibenzo(a,h)anthracene     | 16.32 | 278  | 115896   | 19.85 | ng    | 96       |
| 91) Benzo(g,h,i)perylene       | 16.70 | 276  | 109787   | 18.28 | ng    | 97       |

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

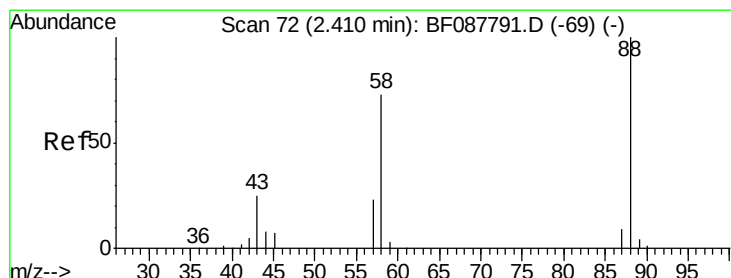
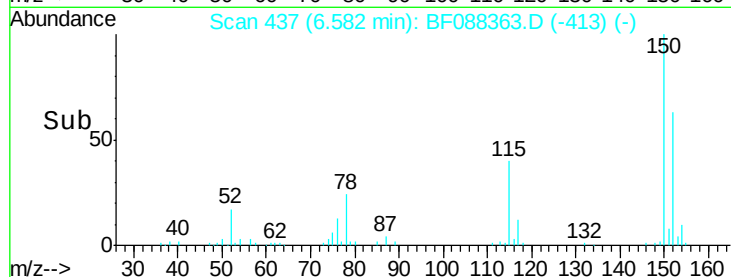
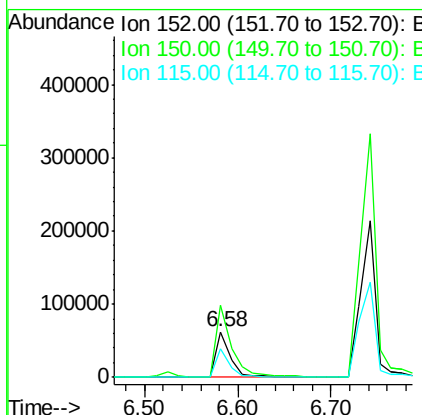
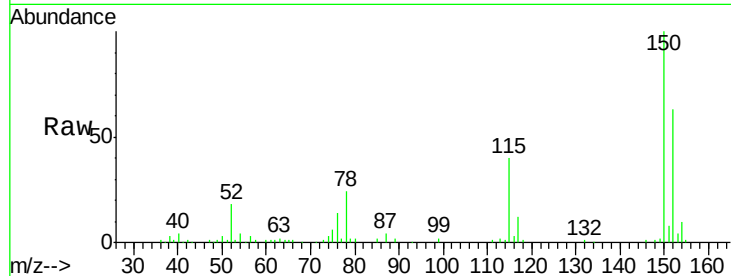




#1  
 1,4-Dichlorobenzene-d4  
 Concen: 20.00 ng  
 RT: 6.58 min Scan# 437  
 Delta R.T. -0.02 min  
 Lab File: BF088363.D  
 Acq: 25 Jun 2016 7:15

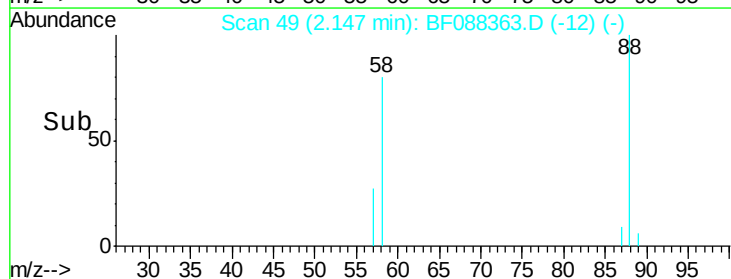
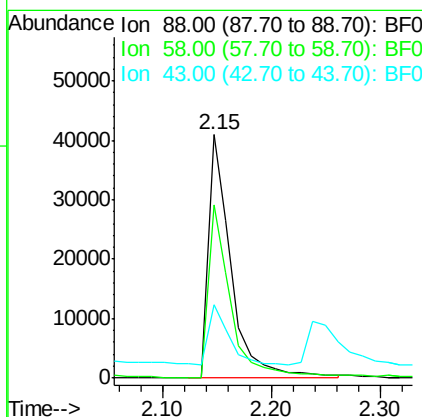
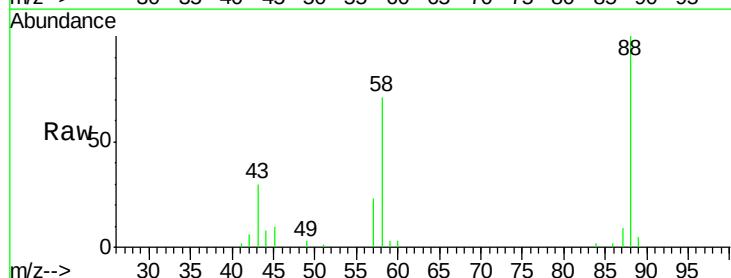
Instrument :  
 BNA\_F  
 ClientSampleId :  
 HSR-WC-55-062216MSD

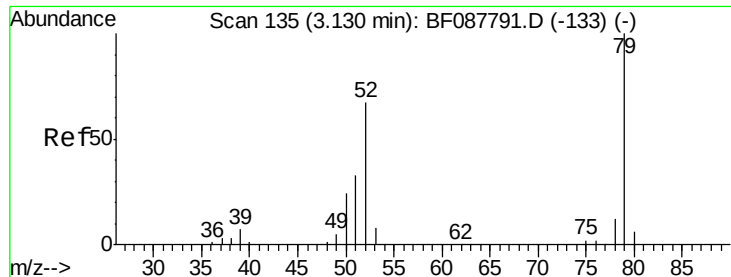
Tgt Ion:152 Resp: 68380  
 Ion Ratio Lower Upper  
 152 100  
 150 158.4 123.8 185.6  
 115 63.2 39.6 59.4#



#2  
 1,4-Dioxane  
 Concen: 30.76 ng  
 RT: 2.15 min Scan# 49  
 Delta R.T. 0.13 min  
 Lab File: BF088363.D  
 Acq: 25 Jun 2016 7:15

Tgt Ion: 88 Resp: 59792  
 Ion Ratio Lower Upper  
 88 100  
 58 71.1 0.0 0.0#  
 43 0.0 3.4 5.2#

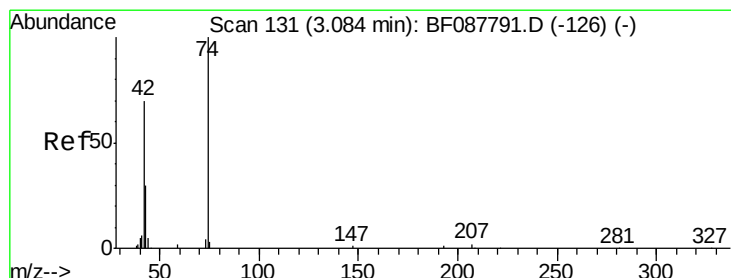
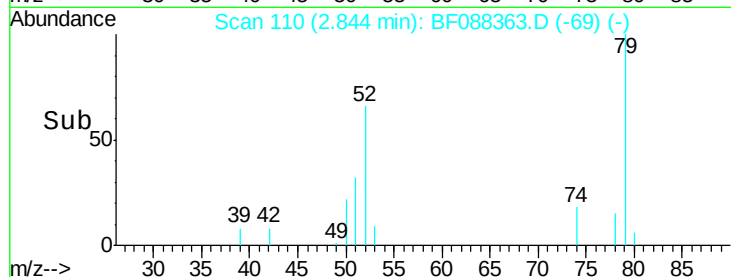
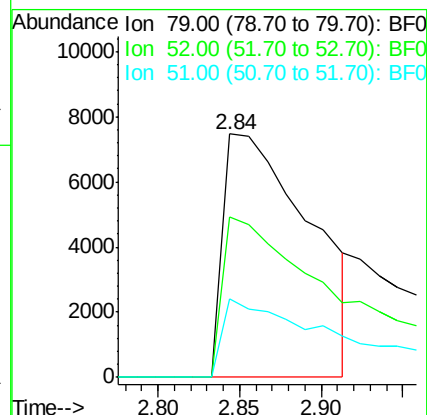
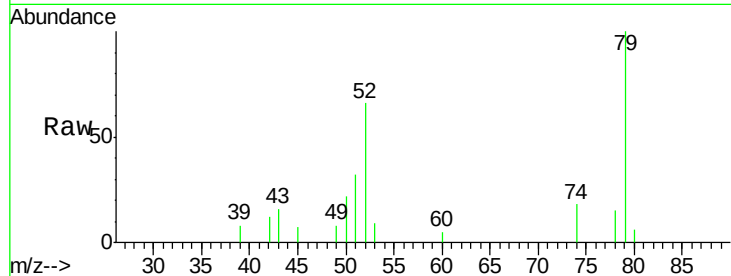




#3  
 Pyridine  
 Concen: 6.01 ng  
 RT: 2.84 min Scan# 110  
 Delta R.T. 0.17 min  
 Lab File: BF088363.D  
 Acq: 25 Jun 2016 7:15

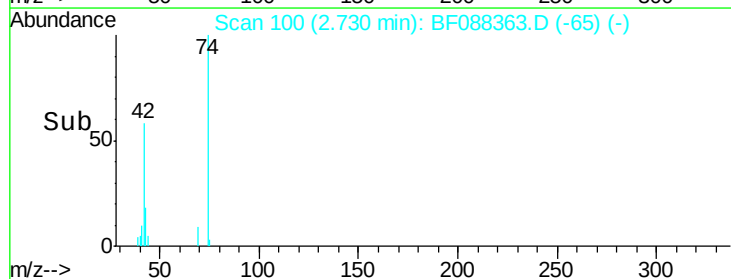
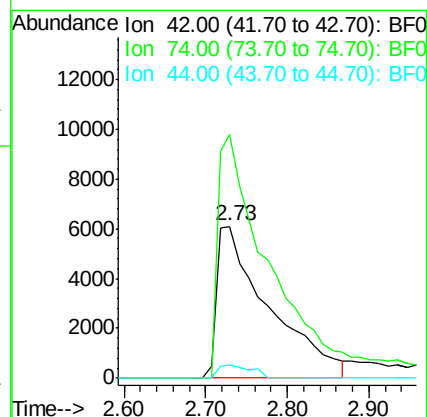
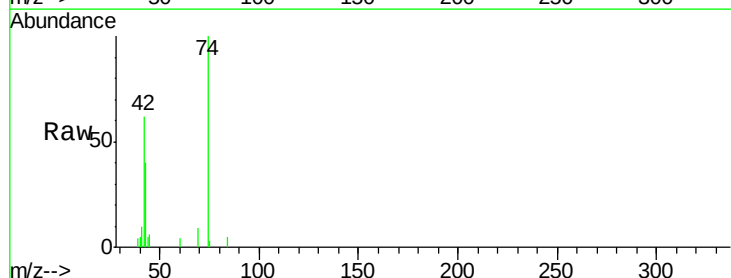
Instrument :  
 BNA\_F  
 ClientSampleId :  
 HSR-WC-55-062216MSD

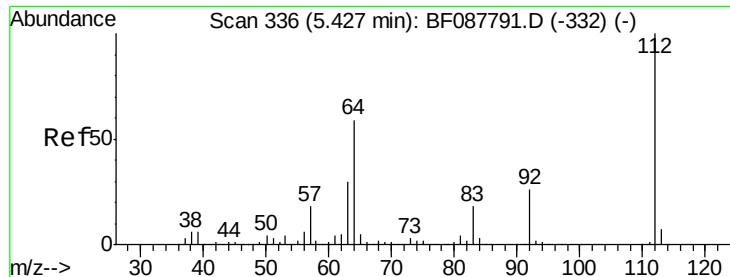
Tgt Ion: 79 Resp: 27599  
 Ion Ratio Lower Upper  
 79 100  
 52 65.8 56.3 84.5  
 51 32.4 27.4 41.2



#4  
 n-Nitrosodimethylamine  
 Concen: 13.87 ng  
 RT: 2.73 min Scan# 100  
 Delta R.T. 0.10 min  
 Lab File: BF088363.D  
 Acq: 25 Jun 2016 7:15

Tgt Ion: 42 Resp: 26960  
 Ion Ratio Lower Upper  
 42 100  
 74 160.5 108.6 163.0  
 44 8.5 5.5 8.3#





#5

2-Fluorophenol

Concen: 117.53 ng

RT: 5.19 min Scan# 315

Delta R.T. 0.01 min

Lab File: BF088363.D

Acq: 25 Jun 2016 7:15

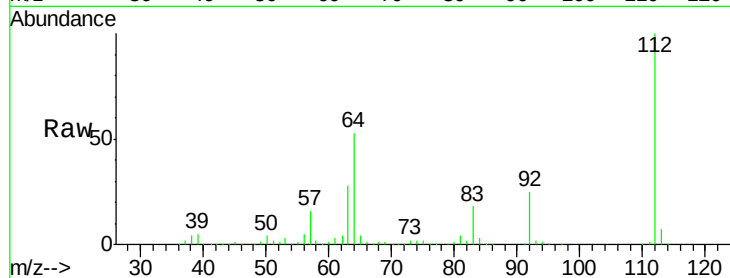
Instrument :

BNA\_F

ClientSampleId :

HSR-WC-55-062216MSD

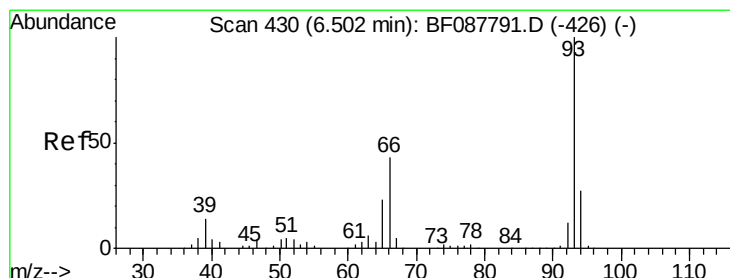
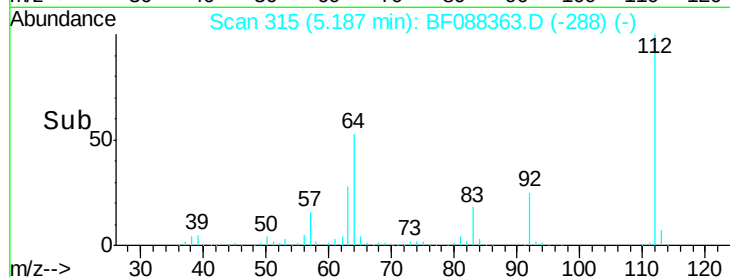
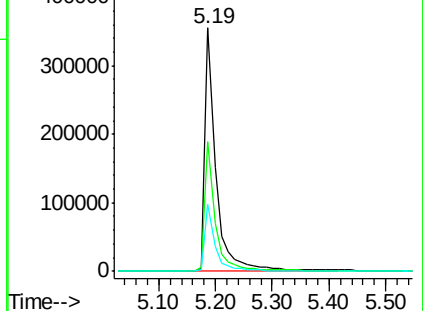
|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 112   | Resp: | 470095 |
| Ion      | Ratio | Lower | Upper  |
| 112      | 100   |       |        |
| 64       | 53.3  | 42.2  | 63.2   |
| 63       | 27.6  | 21.8  | 32.8   |



Abundance Ion 112.00 (111.70 to 112.70): B

Ion 64.00 (63.70 to 64.70): BF0

Ion 63.00 (62.70 to 63.70): BF0



#6

Aniline

Concen: 4.43 ng

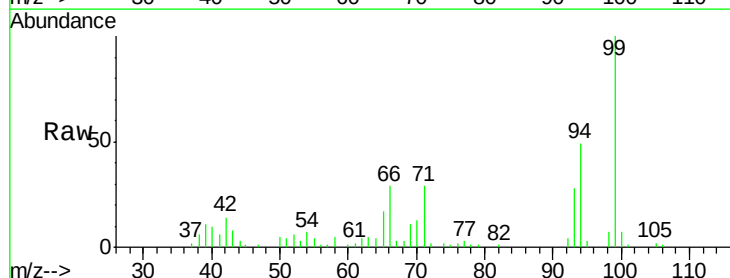
RT: 6.28 min Scan# 411

Delta R.T. 0.01 min

Lab File: BF088363.D

Acq: 25 Jun 2016 7:15

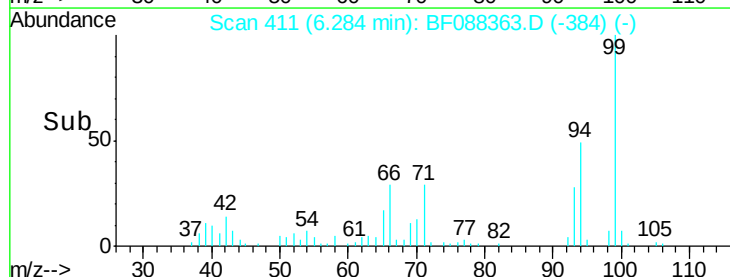
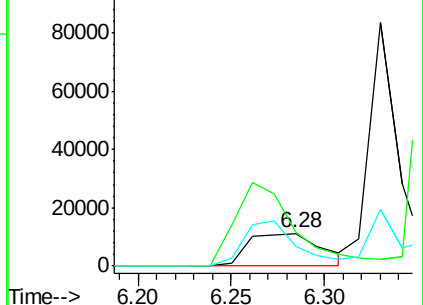
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 93    | Resp: | 30545 |
| Ion      | Ratio | Lower | Upper |
| 93       | 100   |       |       |
| 66       | 103.0 | 29.8  | 44.8# |
| 65       | 59.7  | 14.9  | 22.3# |

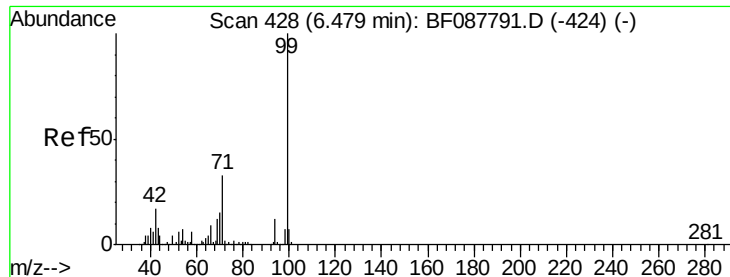


Abundance Ion 93.00 (92.70 to 93.70): BF0

Ion 66.00 (65.70 to 66.70): BF0

Ion 65.00 (64.70 to 65.70): BF0





#7

Phenol-d6

Concen: 112.73 ng

RT: 6.25 min Scan# 408

Delta R.T. -0.01 min

Lab File: BF088363.D

Acq: 25 Jun 2016 7:15

Instrument :

BNA\_F

ClientSampleId :

HSR-WC-55-062216MSD

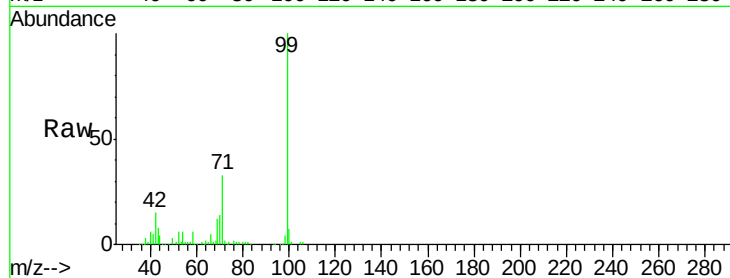
Tgt Ion: 99 Resp: 546486

Ion Ratio Lower Upper

99 100

42 15.4 12.2 18.2

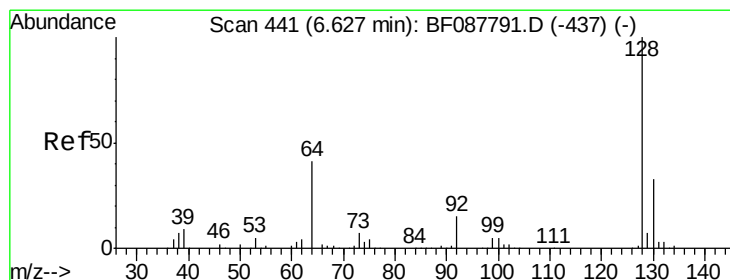
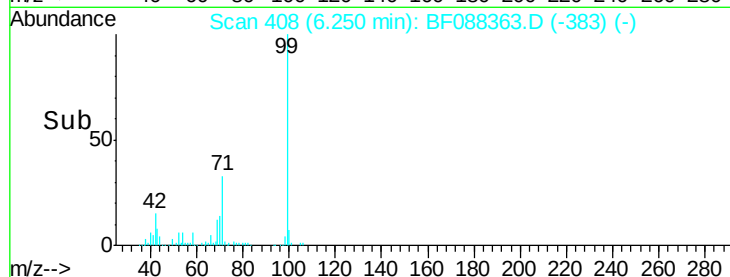
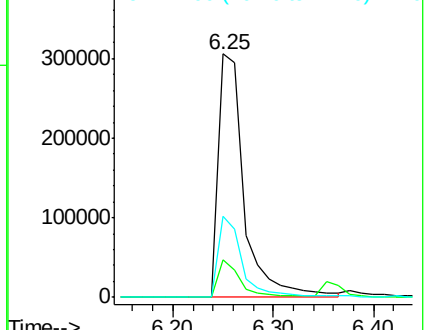
71 33.4 23.4 35.0



Abundance Ion 99.00 (98.70 to 99.70): BF0

Ion 42.00 (41.70 to 42.70): BF0

Ion 71.00 (70.70 to 71.70): BF0



#8

2-Chlorophenol

Concen: 21.01 ng

RT: 6.38 min Scan# 419

Delta R.T. -0.01 min

Lab File: BF088363.D

Acq: 25 Jun 2016 7:15

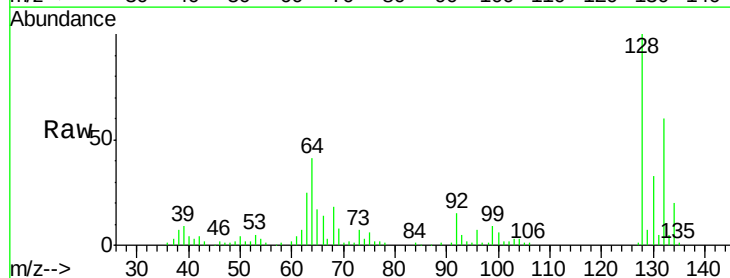
Tgt Ion: 128 Resp: 99471

Ion Ratio Lower Upper

128 100

130 32.7 12.0 52.0

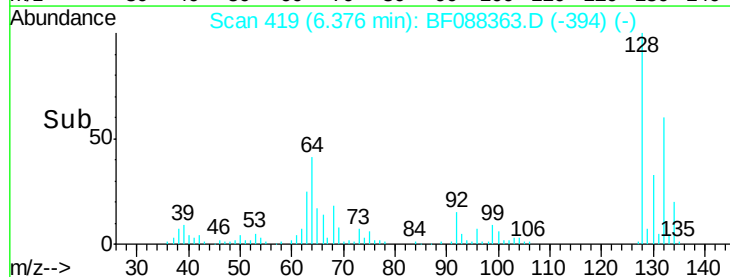
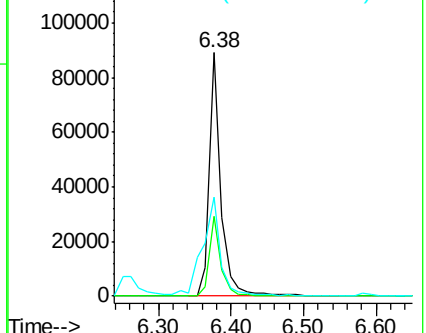
64 40.7 30.8 70.8

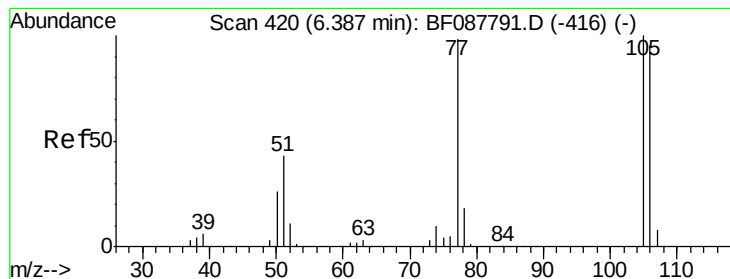


Abundance Ion 128.00 (127.70 to 128.70): E

Ion 130.00 (129.70 to 130.70): E

Ion 64.00 (63.70 to 64.70): BF0





#9

Benzaldehyde

Concen: 12.40 ng

RT: 6.14 min Scan# 398

Delta R.T. -0.01 min

Lab File: BF088363.D

Acq: 25 Jun 2016 7:15

Instrument :

BNA\_F

ClientSampleId :

HSR-WC-55-062216MSD

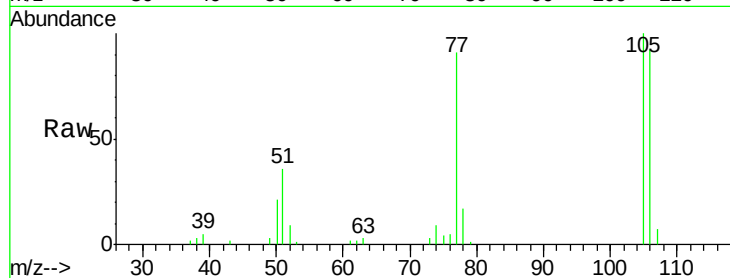
Tgt Ion: 77 Resp: 48736

Ion Ratio Lower Upper

77 100

105 109.8 90.6 130.6

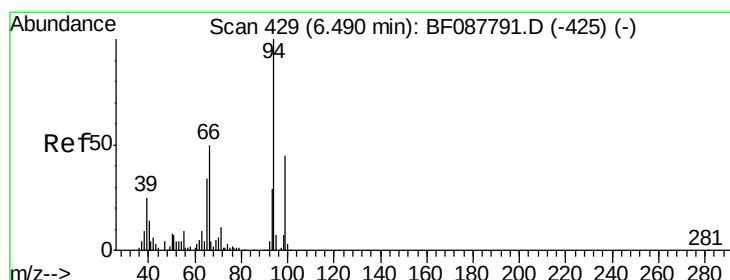
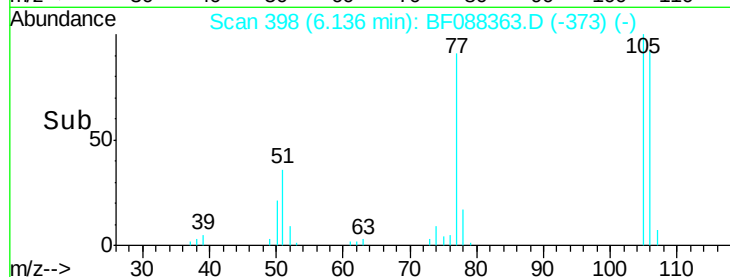
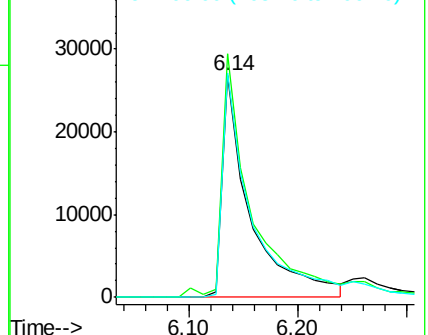
106 101.3 85.3 125.3



Abundance Ion 77.00 (76.70 to 77.70): BF0

Ion 105.00 (104.70 to 105.70): BF0

Ion 106.00 (105.70 to 106.70): BF0



#10

Phenol

Concen: 19.97 ng

RT: 6.27 min Scan# 410

Delta R.T. 0.00 min

Lab File: BF088363.D

Acq: 25 Jun 2016 7:15

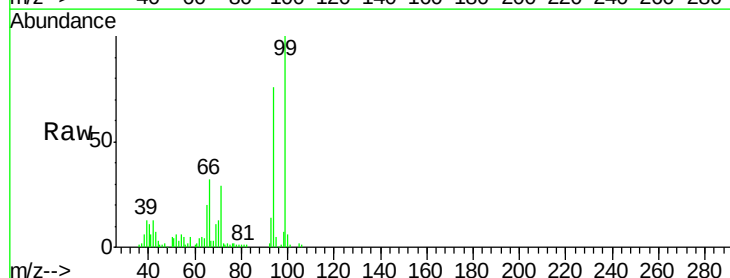
Tgt Ion: 94 Resp: 106884

Ion Ratio Lower Upper

94 100

65 26.6 5.9 45.9

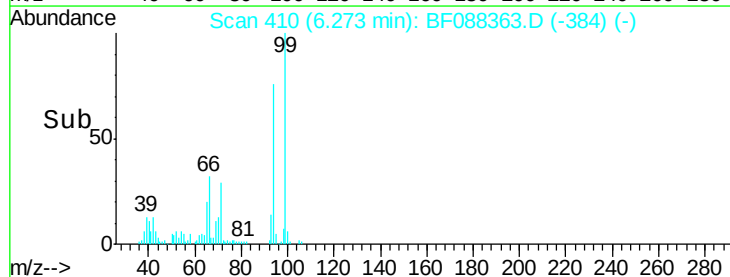
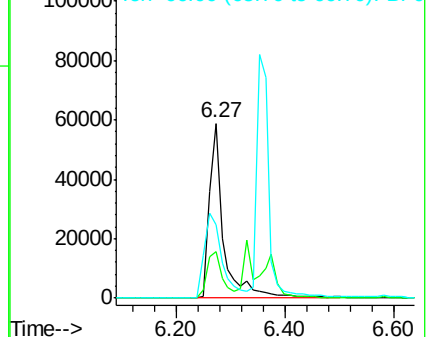
66 41.8 14.0 54.0



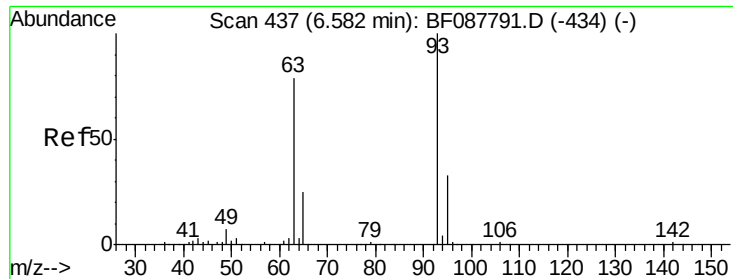
Abundance Ion 94.00 (93.70 to 94.70): BF0

Ion 65.00 (64.70 to 65.70): BF0

Ion 66.00 (65.70 to 66.70): BF0



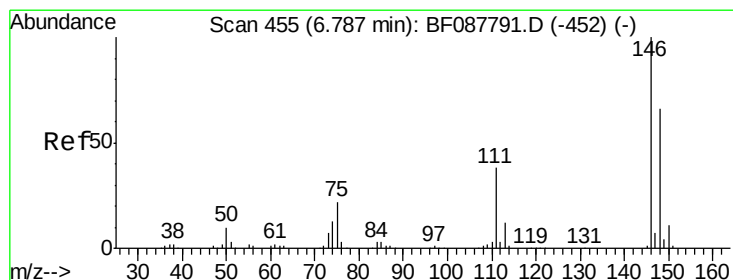
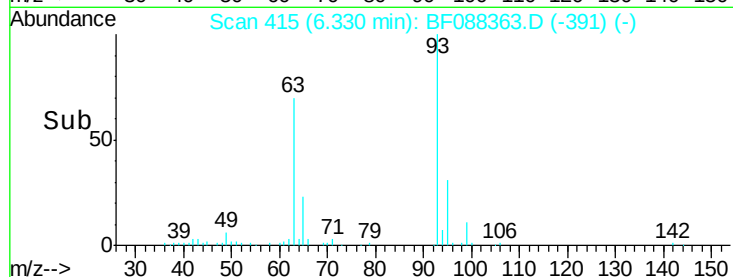
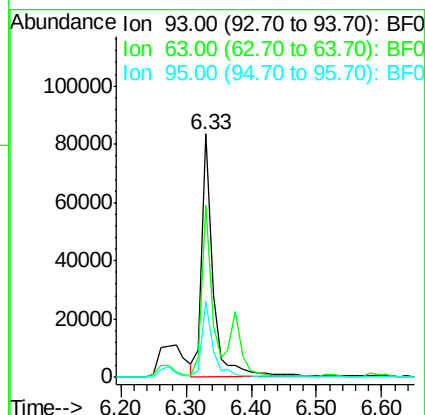
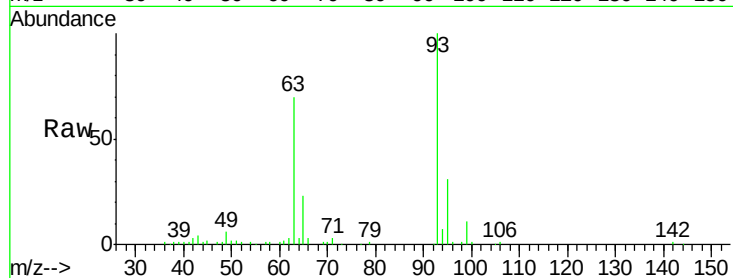




#11  
 bis(2-Chloroethyl)ether  
 Concen: 23.35 ng  
 RT: 6.33 min Scan# 415  
 Delta R.T. -0.02 min  
 Lab File: BF088363.D  
 Acq: 25 Jun 2016 7:15

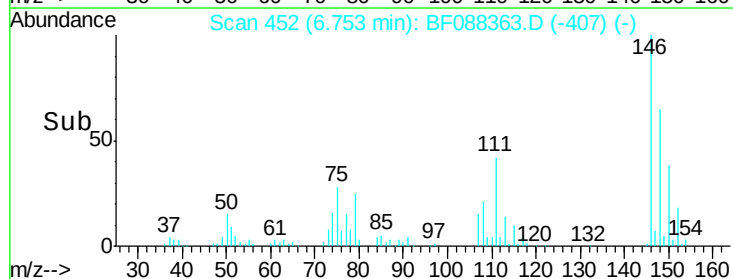
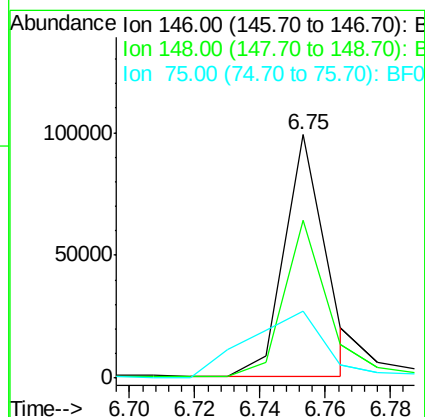
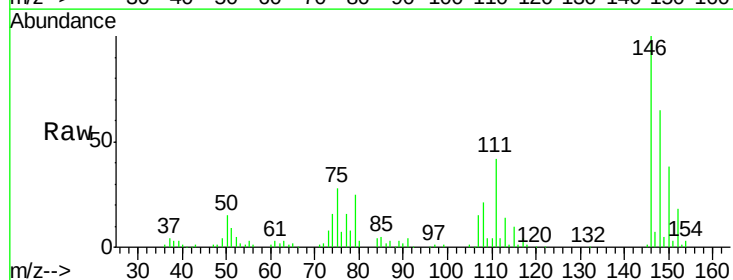
Instrument :  
 BNA\_F  
 ClientSampleId :  
 HSR-WC-55-062216MSD

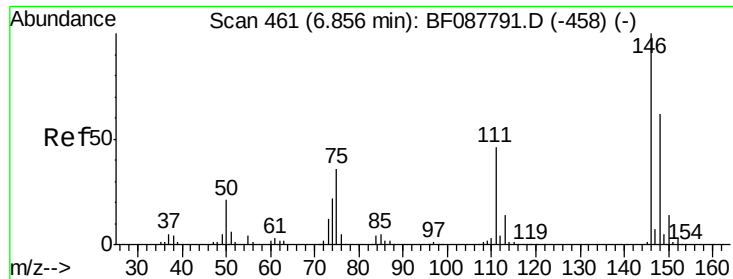
Tgt Ion: 93 Resp: 99269  
 Ion Ratio Lower Upper  
 93 100  
 63 70.4 67.6 107.6  
 95 31.0 12.5 52.5



#12  
 1,3-Dichlorobenzene  
 Concen: 17.02 ng  
 RT: 6.75 min Scan# 452  
 Delta R.T. 0.22 min  
 Lab File: BF088363.D  
 Acq: 25 Jun 2016 7:15

Tgt Ion: 146 Resp: 86455  
 Ion Ratio Lower Upper  
 146 100  
 148 64.8 50.9 76.3  
 75 27.5 25.6 38.4

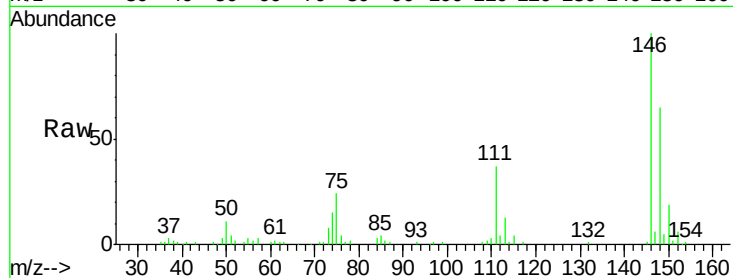




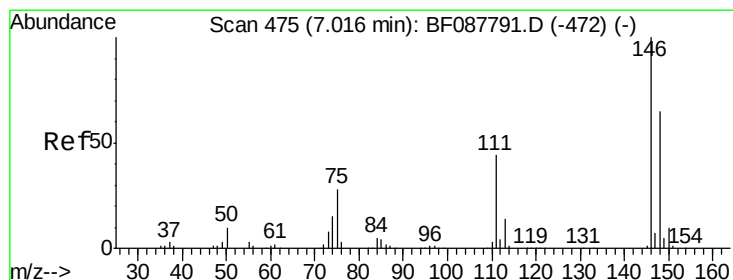
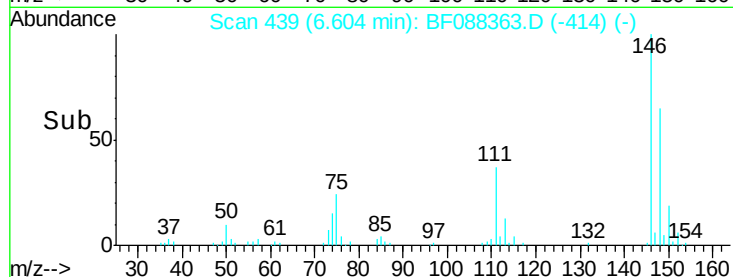
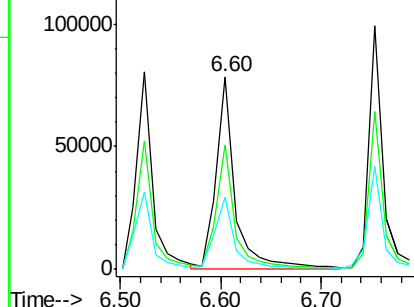
#13  
1,4-Dichlorobenzene  
Concen: 20.13 ng  
RT: 6.60 min Scan# 439  
Delta R.T. -0.01 min  
Lab File: BF088363.D  
Acq: 25 Jun 2016 7:15

Instrument :  
BNA\_F  
ClientSampleId :  
HSR-WC-55-062216MSD

Tgt Ion:146 Resp: 102985  
Ion Ratio Lower Upper  
146 100  
148 64.6 52.0 78.0  
111 37.2 33.8 50.8

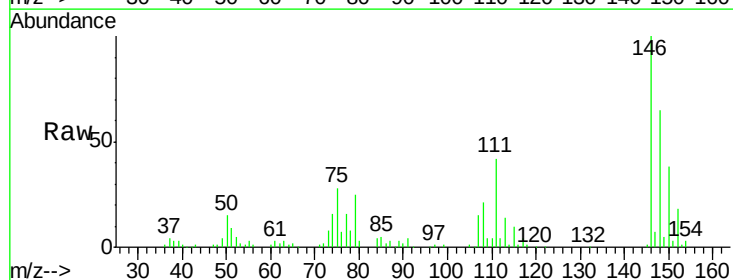


Abundance Ion 146.00 (145.70 to 146.70): E  
Ion 148.00 (147.70 to 148.70): E  
Ion 111.00 (110.70 to 111.70): E

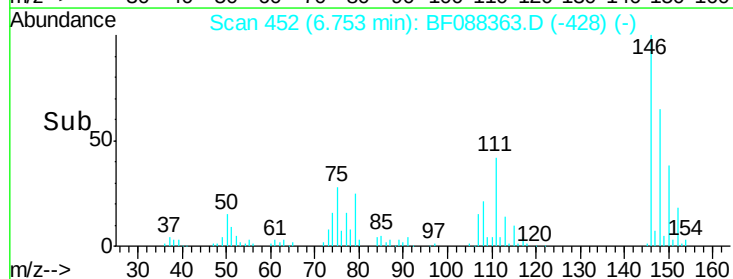
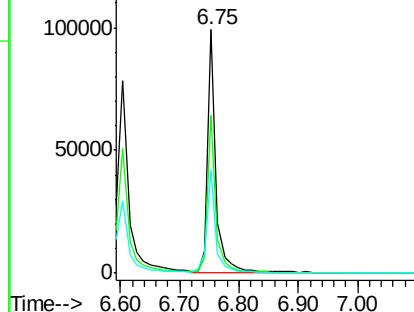


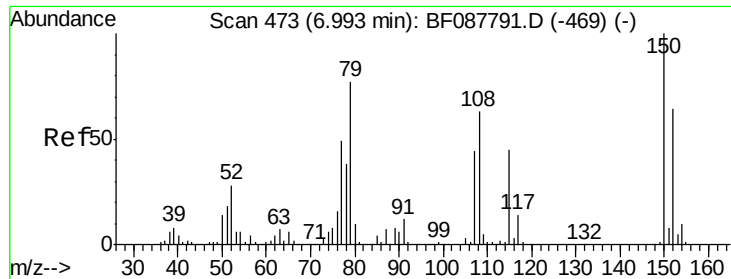
#14  
1,2-Dichlorobenzene  
Concen: 22.03 ng  
RT: 6.75 min Scan# 452  
Delta R.T. -0.02 min  
Lab File: BF088363.D  
Acq: 25 Jun 2016 7:15

Tgt Ion:146 Resp: 102528  
Ion Ratio Lower Upper  
146 100  
148 64.8 52.3 78.5  
111 42.5 28.7 43.1



Abundance Ion 146.00 (145.70 to 146.70): E  
Ion 148.00 (147.70 to 148.70): E  
Ion 111.00 (110.70 to 111.70): E

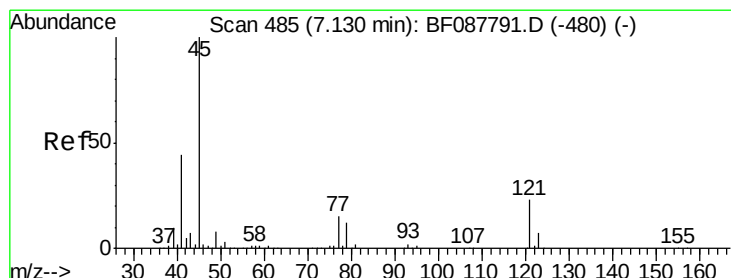
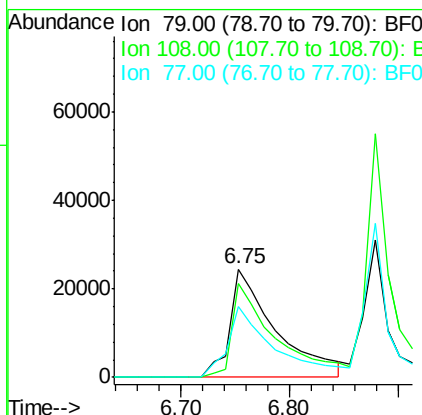
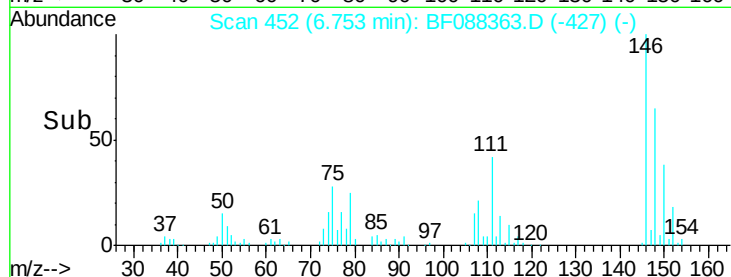
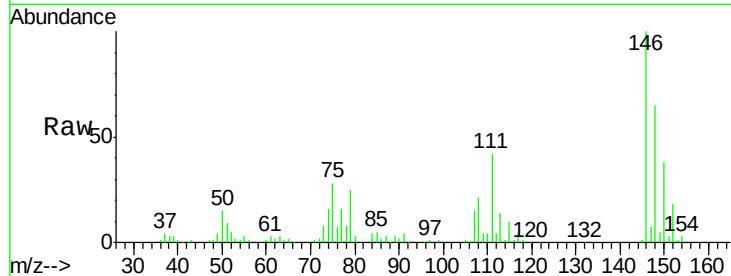




#15  
Benzyl Alcohol  
Concen: 18.73 ng  
RT: 6.75 min Scan# 452  
Delta R.T. -0.01 min  
Lab File: BF088363.D  
Acq: 25 Jun 2016 7:15

Instrument :  
BNA\_F  
ClientSampleId :  
HSR-WC-55-062216MSD

Tgt Ion: 79 Resp: 71022  
Ion Ratio Lower Upper  
79 100  
108 86.4 65.0 97.6  
77 65.3 50.3 75.5



#16  
2,2'-oxybis(1-Chloropropane)  
Concen: 18.24 ng  
RT: 6.88 min Scan# 463  
Delta R.T. -0.02 min  
Lab File: BF088363.D  
Acq: 25 Jun 2016 7:15

Tgt Ion: 45 Resp: 104771  
Ion Ratio Lower Upper  
45 100  
77 41.0 0.0 32.5#  
79 36.7 0.0 29.5#

