

Data Path : Z:\HPCHEM1\BNA\_G\DATA\BG072316\  
 Data File : BG023226.D  
 Acq On : 22 Jul 2016 22:04  
 Operator : UM/SJ  
 Sample : H4131-21MSD  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 BNA\_G  
 ClientSampleId :  
 D-2MSD

Quant Time: Jul 22 23:54:56 2016  
 Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\8270-BG070816.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Tue Jul 19 15:46:37 2016  
 Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Dichlorobenzene-d4 | 8.14  | 152  | 126312   | 20.00 | ng    | 0.00     |
| 21) Naphthalene-d8        | 10.98 | 136  | 592513   | 20.00 | ng    | 0.00     |
| 38) Acenaphthene-d10      | 14.81 | 164  | 417241   | 20.00 | ng    | 0.01     |
| 63) Phenanthrene-d10      | 17.57 | 188  | 1006626  | 20.00 | ng    | 0.02     |
| 75) Chrysene-d12          | 21.90 | 240  | 1040318  | 20.00 | ng    | 0.02     |
| 86) Perylene-d12          | 25.30 | 264  | 965299   | 20.00 | ng    | 0.03     |

## System Monitoring Compounds

|                          |       |     |         |        |    |      |
|--------------------------|-------|-----|---------|--------|----|------|
| 5) 2-Fluorophenol        | 5.68  | 112 | 857289  | 111.00 | ng | 0.00 |
| 7) Phenol-d6             | 7.30  | 99  | 1244392 | 102.87 | ng | 0.00 |
| 23) Nitrobenzene-d5      | 9.32  | 82  | 987469  | 71.36  | ng | 0.00 |
| 41) 2,4,6-Tribromophenol | 16.31 | 330 | 603257  | 80.45  | ng | 0.01 |
| 44) 2-Fluorobiphenyl     | 13.43 | 172 | 1840851 | 69.49  | ng | 0.02 |
| 78) Terphenyl-d14        | 20.18 | 244 | 2679606 | 79.82  | ng | 0.02 |

## Target Compounds

|                                |       |     |         |       |    | Qvalue |
|--------------------------------|-------|-----|---------|-------|----|--------|
| 2) 1,4-Dioxane                 | 3.54  | 88  | 79298   | 26.42 | ng | # 72   |
| 3) Pyridine                    | 3.95  | 79  | 229739  | 22.36 | ng | 97     |
| 4) n-Nitrosodimethylamine      | 3.86  | 42  | 155105  | 35.19 | ng | # 94   |
| 6) Aniline                     | 7.47  | 93  | 233385  | 13.92 | ng | 97     |
| 8) 2-Chlorophenol              | 7.70  | 128 | 312824  | 38.06 | ng | 96     |
| 9) Benzaldehyde                | 7.27  | 77  | 88355   | 10.93 | ng | 92     |
| 10) Phenol                     | 7.33  | 94  | 449656  | 36.13 | ng | 89     |
| 11) bis(2-Chloroethyl)ether    | 7.56  | 93  | 344848  | 34.96 | ng | 91     |
| 12) 1,3-Dichlorobenzene        | 8.03  | 146 | 299490  | 29.77 | ng | 96     |
| 13) 1,4-Dichlorobenzene        | 8.18  | 146 | 303935  | 30.18 | ng | 98     |
| 14) 1,2-Dichlorobenzene        | 8.50  | 146 | 298063  | 29.77 | ng | 99     |
| 15) Benzyl Alcohol             | 8.38  | 79  | 391050  | 35.30 | ng | 97     |
| 16) 2,2'-oxybis(1-Chloropropan | 8.68  | 45  | 450739  | 37.41 | ng | 92     |
| 17) 2-Methylphenol             | 8.59  | 107 | 309103  | 38.15 | ng | 96     |
| 18) Hexachloroethane           | 9.24  | 117 | 126255  | 29.70 | ng | 96     |
| 19) n-Nitroso-di-n-propylamine | 8.95  | 70  | 366579  | 33.62 | ng | 94     |
| 20) 3+4-Methylphenols          | 8.92  | 107 | 430165  | 38.07 | ng | 94     |
| 22) Acetophenone               | 8.97  | 105 | 580959  | 32.67 | ng | # 95   |
| 24) Nitrobenzene               | 9.37  | 77  | 500603  | 34.05 | ng | 94     |
| 25) Isophorone                 | 9.88  | 82  | 947520  | 34.05 | ng | 97     |
| 26) 2-Nitrophenol              | 10.08 | 139 | 194486  | 33.71 | ng | 91     |
| 27) 2,4-Dimethylphenol         | 10.13 | 122 | 344202  | 34.51 | ng | 91     |
| 28) bis(2-Chloroethoxy)methane | 10.37 | 93  | 534168  | 34.41 | ng | 99     |
| 29) 2,4-Dichlorophenol         | 10.63 | 162 | 366528  | 34.46 | ng | 96     |
| 30) 1,2,4-Trichlorobenzene     | 10.84 | 180 | 358676  | 29.43 | ng | 95     |
| 31) Naphthalene                | 11.03 | 128 | 1005885 | 33.35 | ng | 98     |
| 32) Benzoic acid               | 10.27 | 122 | 229396  | 25.28 | ng | 97     |
| 33) 4-Chloroaniline            | 11.15 | 127 | 45838   | 3.11  | ng | # 86   |
| 34) Hexachlorobutadiene        | 11.31 | 225 | 252219  | 25.53 | ng | 96     |
| 35) Caprolactam                | 11.92 | 113 | 60244   | 13.77 | ng | # 90   |
| 36) 4-Chloro-3-methylphenol    | 12.26 | 107 | 468490  | 32.20 | ng | 95     |
| 37) 2-Methylnaphthalene        | 12.64 | 142 | 767286  | 32.19 | ng | 96     |
| 39) 1,2,4,5-Tetrachlorobenzene | 13.00 | 216 | 446273  | 24.82 | ng | 97     |
| 40) Hexachlorocyclopentadiene  | 12.98 | 237 | 609184  | 58.85 | ng | 98     |

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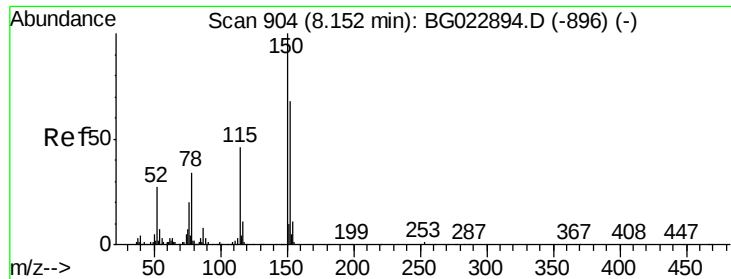
Instrument :  
 BNA\_G  
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Quant Time: Jul 22 23:54:56 2016  
 Quant Method : Z:\HPCHEM1\BNA\_G\METHODS\8270-BG070816.M  
 Quant Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION  
 QLast Update : Tue Jul 19 15:46:37 2016  
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| Internal Standards             | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|--------------------------------|-------|------|----------|-------|-------|----------|
| 42) 2,4,6-Trichlorophenol      | 13.24 | 196  | 338824   | 32.79 | ng    | 98       |
| 43) 2,4,5-Trichlorophenol      | 13.32 | 196  | 352845   | 33.25 | ng    | 94       |
| 45) 1,1'-Biphenyl              | 13.64 | 154  | 1077819  | 34.43 | ng    | 96       |
| 46) 2-Chloronaphthalene        | 13.69 | 162  | 891310   | 35.10 | ng    | 97       |
| 47) 2-Nitroaniline             | 13.89 | 65   | 387118   | 35.73 | ng    | 97       |
| 48) Acenaphthylene             | 14.54 | 152  | 1347411  | 35.37 | ng    | 96       |
| 49) Dimethylphthalate          | 14.26 | 163  | 1199613  | 35.20 | ng    | 98       |
| 50) 2,6-Dinitrotoluene         | 14.38 | 165  | 277077   | 36.17 | ng    | 90       |
| 51) Acenaphthene               | 14.88 | 154  | 872433   | 35.05 | ng    | 97       |
| 52) 3-Nitroaniline             | 14.72 | 138  | 75214    | 9.85  | ng    | 97       |
| 53) 2,4-Dinitrophenol          | 14.93 | 184  | 362678   | 69.01 | ng    | 94       |
| 54) Dibenzofuran               | 15.21 | 168  | 1402330  | 37.63 | ng    | 99       |
| 55) 4-Nitrophenol              | 15.03 | 139  | 423990   | 66.22 | ng    | 93       |
| 56) 2,4-Dinitrotoluene         | 15.18 | 165  | 402573   | 36.05 | ng    | 95       |
| 57) Fluorene                   | 15.86 | 166  | 1128342  | 35.18 | ng    | 95       |
| 58) 2,3,4,6-Tetrachlorophenol  | 15.44 | 232  | 357995   | 33.72 | ng    | 97       |
| 59) Diethylphthalate           | 15.62 | 149  | 1260799  | 36.36 | ng    | 98       |
| 60) 4-Chlorophenyl-phenylether | 15.85 | 204  | 611476   | 31.31 | ng    | 99       |
| 61) 4-Nitroaniline             | 15.89 | 138  | 228910   | 27.70 | ng    | # 80     |
| 62) Azobenzene                 | 16.15 | 77   | 1425705  | 42.98 | ng    | 94       |
| 64) 4,6-Dinitro-2-methylphenol | 15.94 | 198  | 252659   | 33.77 | ng    | 87       |
| 65) n-Nitrosodiphenylamine     | 16.07 | 169  | 984601   | 33.95 | ng    | 97       |
| 66) 4-Bromophenyl-phenylether  | 16.75 | 248  | 411532   | 31.42 | ng    | 98       |
| 67) Hexachlorobenzene          | 16.87 | 284  | 418676   | 29.40 | ng    | 97       |
| 68) Atrazine                   | 17.01 | 200  | 118930   | 9.24  | ng    | 97       |
| 69) Pentachlorophenol          | 17.22 | 266  | 548003   | 59.43 | ng    | 97       |
| 70) Phenanthrene               | 17.62 | 178  | 1856055  | 37.62 | ng    | 97       |
| 71) Anthracene                 | 17.71 | 178  | 1890311  | 37.84 | ng    | 97       |
| 72) Carbazole                  | 17.98 | 167  | 1561237  | 36.17 | ng    | 99       |
| 73) Di-n-butylphthalate        | 18.52 | 149  | 2041303  | 42.53 | ng    | 98       |
| 74) Fluoranthene               | 19.63 | 202  | 2156881  | 35.63 | ng    | 98       |
| 77) Pyrene                     | 19.99 | 202  | 2178931  | 37.27 | ng    | 99       |
| 79) Butylbenzylphthalate       | 20.87 | 149  | 984233   | 42.51 | ng    | 97       |
| 80) Benzo(a)anthracene         | 21.88 | 228  | 2144530  | 36.85 | ng    | 97       |
| 81) 3,3'-Dichlorobenzidine     | 21.79 | 252  | 111462   | 4.36  | ng    | # 90     |
| 82) Chrysene                   | 21.94 | 228  | 2012180  | 36.85 | ng    | 98       |
| 83) Bis(2-ethylhexyl)phthalate | 21.76 | 149  | 1347503  | 41.91 | ng    | # 98     |
| 84) Di-n-octyl phthalate       | 23.04 | 149  | 2284507  | 42.60 | ng    | 99       |
| 85) Indeno(1,2,3-cd)pyrene     | 29.21 | 276  | 2316222  | 33.27 | ng    | # 100    |
| 87) Benzo(b)fluoranthene       | 24.22 | 252  | 2194441  | 39.40 | ng    | # 98     |
| 88) Benzo(k)fluoranthene       | 24.29 | 252  | 2096468  | 39.67 | ng    | # 98     |
| 89) Benzo(a)pyrene             | 25.15 | 252  | 2066676  | 38.71 | ng    | # 97     |
| 90) Dibenzo(a,h)anthracene     | 29.28 | 278  | 1975784  | 37.29 | ng    | # 94     |
| 91) Benzo(g,h,i)perylene       | 30.43 | 276  | 1884679  | 35.52 | ng    | # 92     |

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





#1

1,4-Dichlorobenzene-d4

Concen: 20.00 ng

RT: 8.14 min Scan# 903

Delta R.T. -0.00 min

Lab File: BG023226.D

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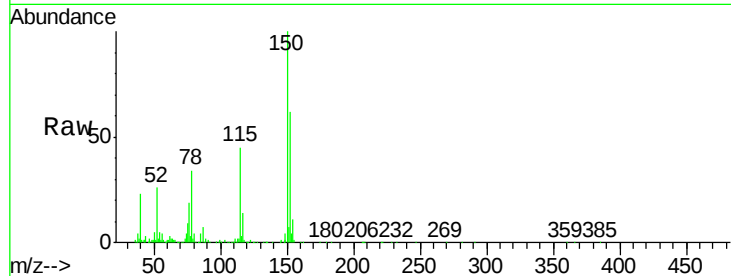
Tgt Ion:152 Resp: 126312

Ion Ratio Lower Upper

152 100

150 161.5 144.7 217.1

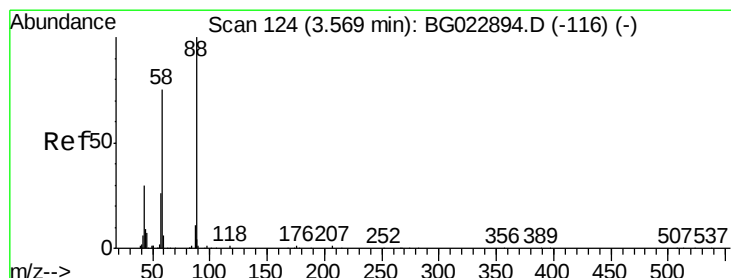
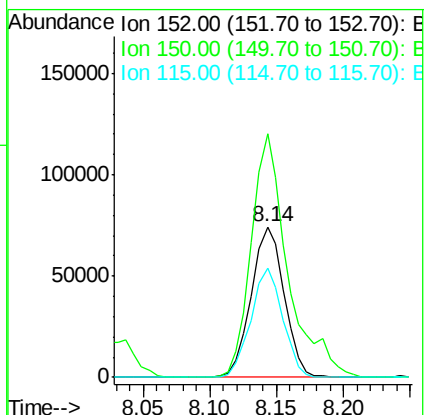
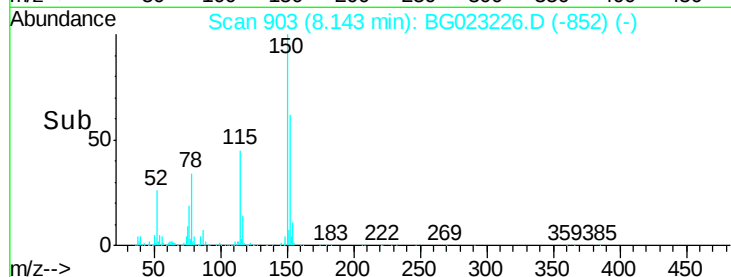
115 72.2 64.0 96.0



Abundance Ion 152.00 (151.70 to 152.70): E

Ion 150.00 (149.70 to 150.70): E

Ion 115.00 (114.70 to 115.70): E



#2

1,4-Dioxane

Concen: 26.42 ng

RT: 3.54 min Scan# 120

Delta R.T. -0.00 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

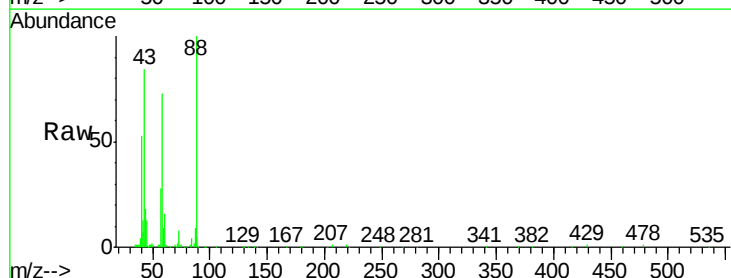
Tgt Ion: 88 Resp: 79298

Ion Ratio Lower Upper

88 100

58 77.8 60.4 90.6

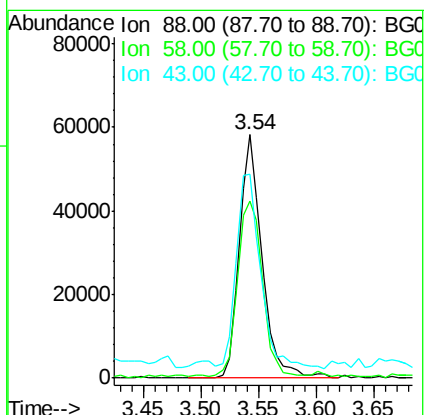
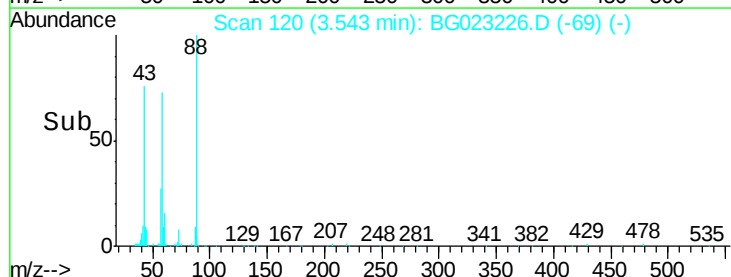
43 86.7 31.1 46.7#

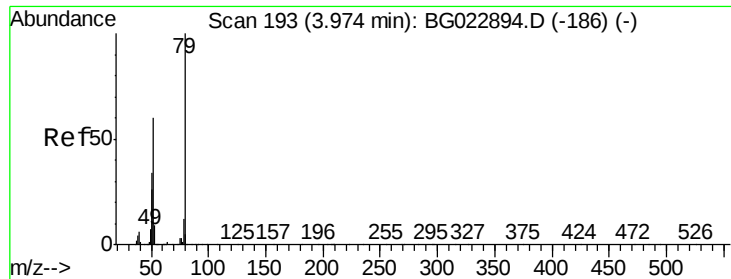


Abundance Ion 88.00 (87.70 to 88.70): BGC

Ion 58.00 (57.70 to 58.70): BGC

Ion 43.00 (42.70 to 43.70): BGC





#3

Pyridine

Concen: 22.36 ng

RT: 3.95 min Scan# 190

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

Instrument :

BNA\_G

ClientSampleId :

D-2MSD

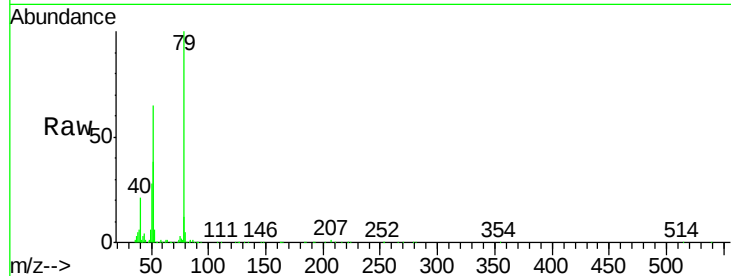
Tgt Ion: 79 Resp: 229739

Ion Ratio Lower Upper

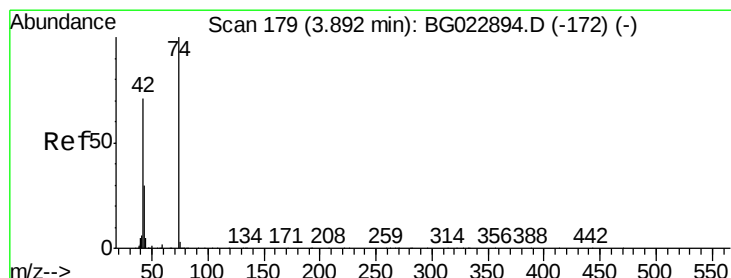
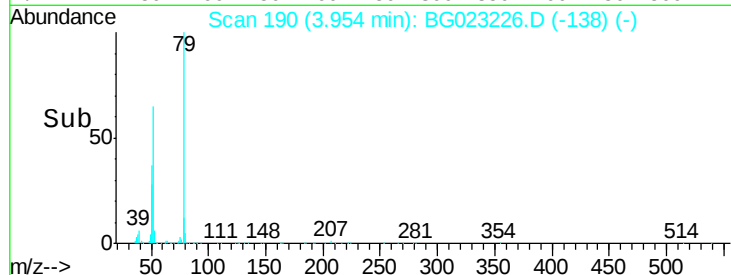
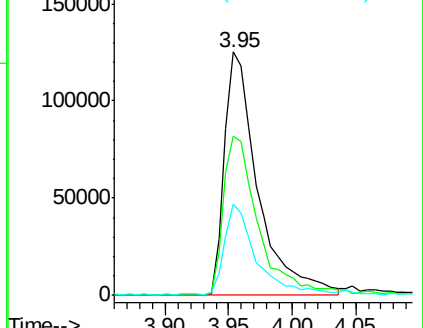
79 100

52 65.4 51.8 77.8

51 37.6 32.7 49.1



Abundance Ion 79.00 (78.70 to 79.70): BGC  
Ion 52.00 (51.70 to 52.70): BGC  
Ion 51.00 (50.70 to 51.70): BGC



#4

n-Nitrosodimethylamine

Concen: 35.19 ng

RT: 3.86 min Scan# 174

Delta R.T. -0.00 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

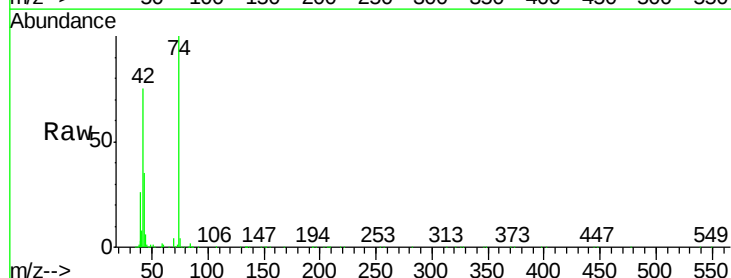
Tgt Ion: 42 Resp: 155105

Ion Ratio Lower Upper

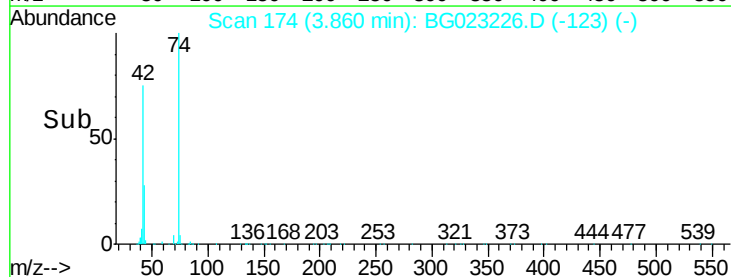
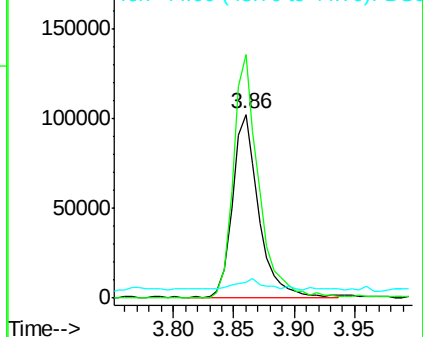
42 100

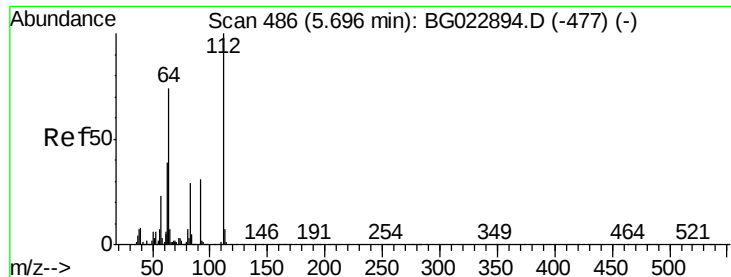
74 132.5 100.6 150.8

44 8.5 4.5 6.7#



Abundance Ion 42.00 (41.70 to 42.70): BGC  
Ion 74.00 (73.70 to 74.70): BGC  
Ion 44.00 (43.70 to 44.70): BGC





#5

2-Fluorophenol

Concen: 111.00 ng

RT: 5.68 min Scan# 484

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

Instrument :

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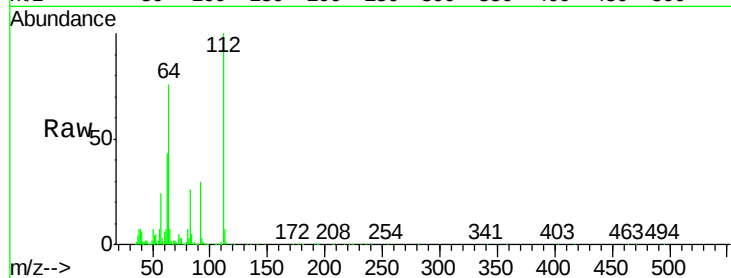
Tgt Ion: 112 Resp: 857289

Ion Ratio Lower Upper

112 100

64 75.9 59.0 88.4

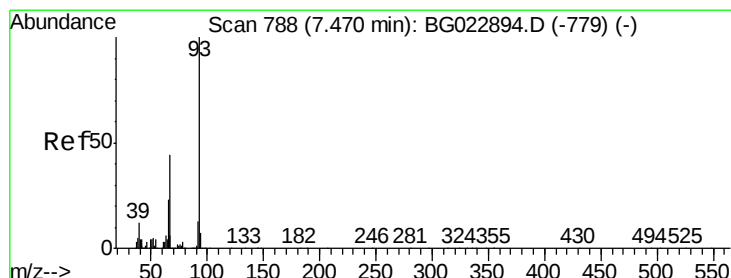
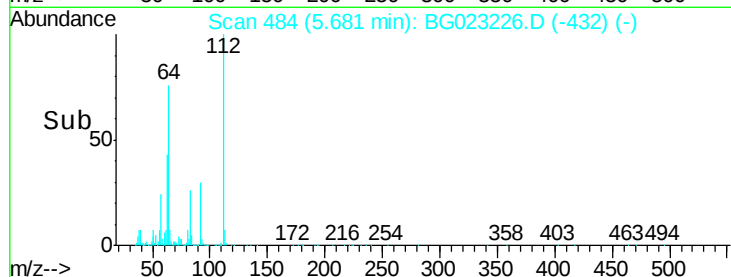
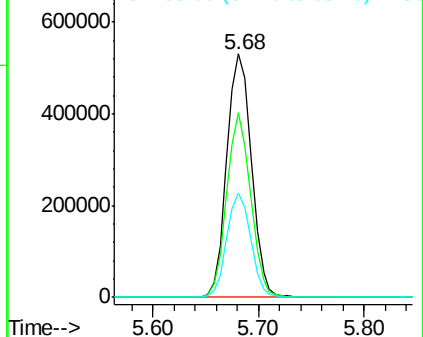
63 42.5 37.8 56.8



Abundance Ion 112.00 (111.70 to 112.70): BGC

Ion 64.00 (63.70 to 64.70): BGC

Ion 63.00 (62.70 to 63.70): BGC



#6

Aniline

Concen: 13.92 ng

RT: 7.47 min Scan# 788

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

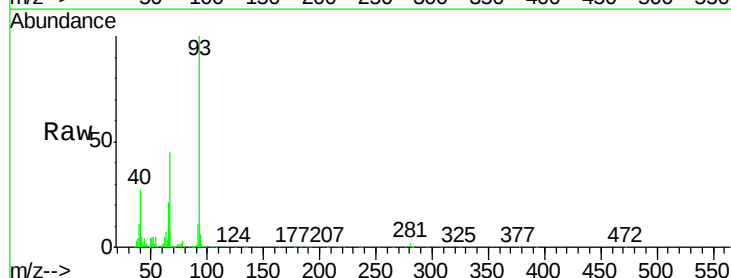
Tgt Ion: 93 Resp: 233385

Ion Ratio Lower Upper

93 100

66 44.8 37.5 56.3

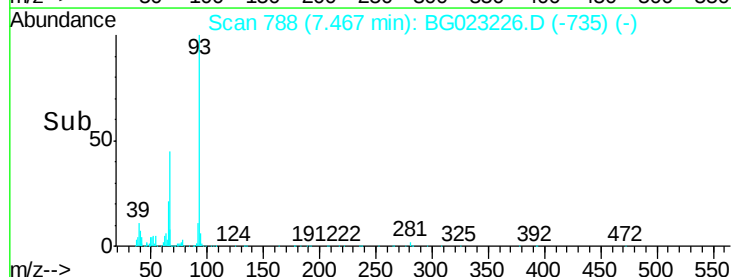
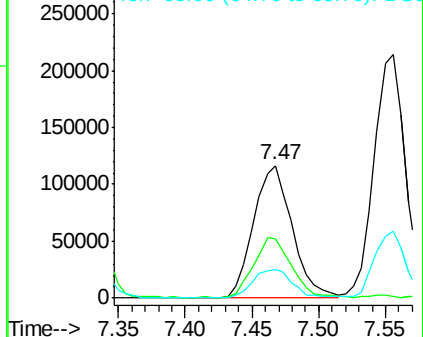
65 21.3 17.9 26.9

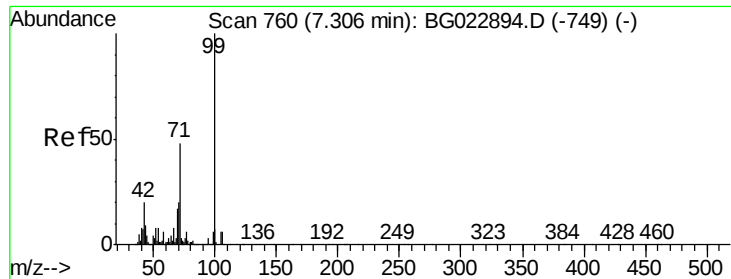


Abundance Ion 93.00 (92.70 to 93.70): BGC

Ion 66.00 (65.70 to 66.70): BGC

Ion 65.00 (64.70 to 65.70): BGC





#7

Phenol-d6

Concen: 102.87 ng

RT: 7.30 min Scan# 759

Delta R.T. -0.00 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

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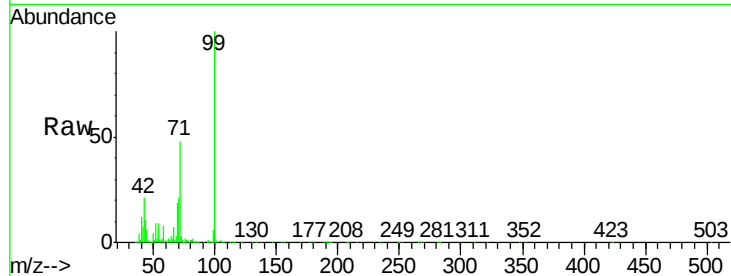
Tgt Ion: 99 Resp: 1244392

Ion Ratio Lower Upper

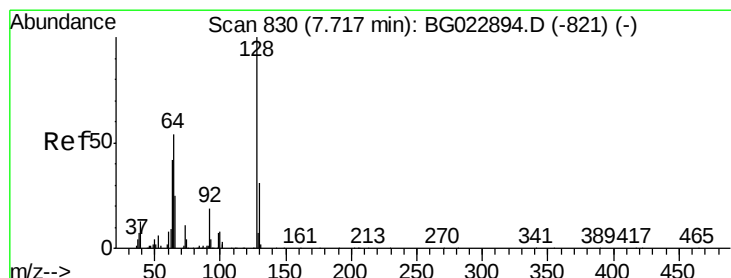
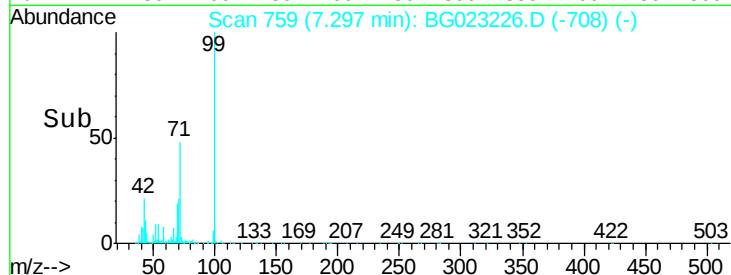
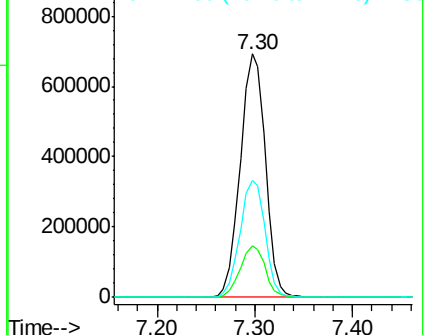
99 100

42 21.3 17.8 26.6

71 48.3 41.5 62.3



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



#8

2-Chlorophenol

Concen: 38.06 ng

RT: 7.70 min Scan# 828

Delta R.T. -0.00 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

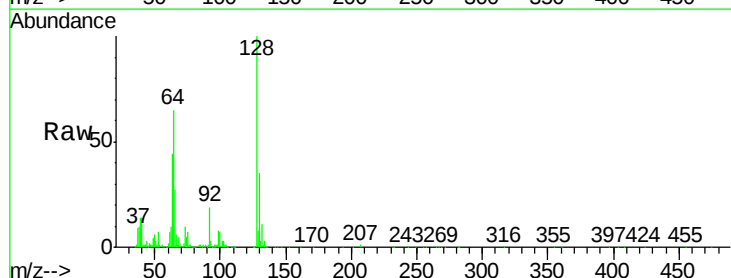
Tgt Ion: 128 Resp: 312824

Ion Ratio Lower Upper

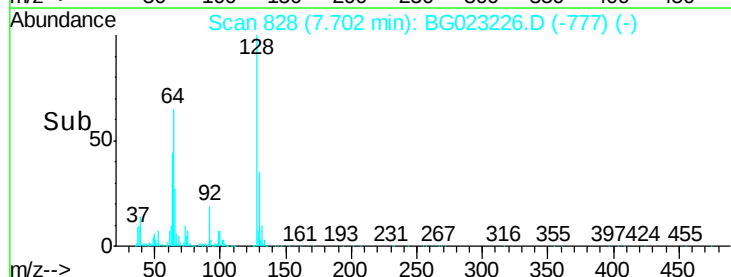
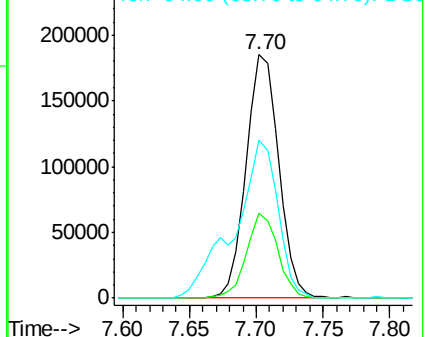
128 100

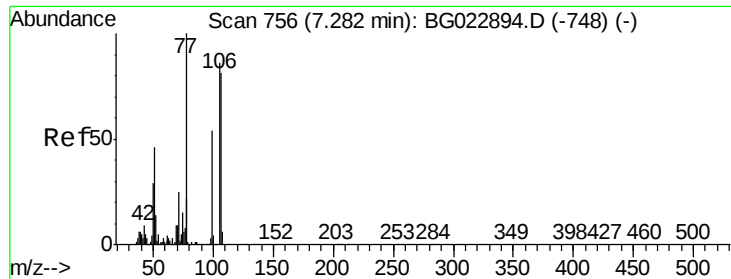
130 34.9 12.9 52.9

64 65.0 42.0 82.0



Abundance Ion 128.00 (127.70 to 128.70): BGC  
Ion 130.00 (129.70 to 130.70): BGC  
Ion 64.00 (63.70 to 64.70): BGC





#9

Benzaldehyde

Concen: 10.93 ng

RT: 7.27 min Scan# 755

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

Instrument :

BNA\_G

ClientSampleId :

D-2MSD

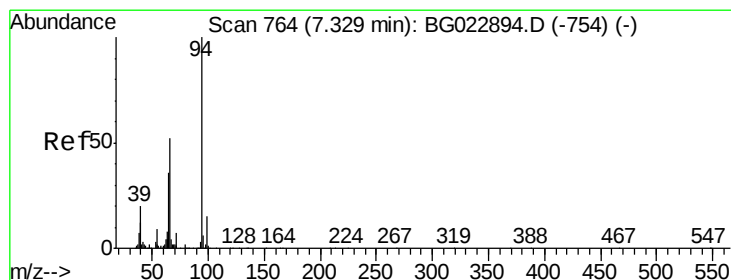
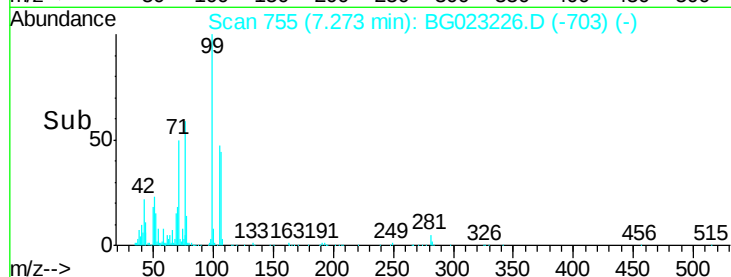
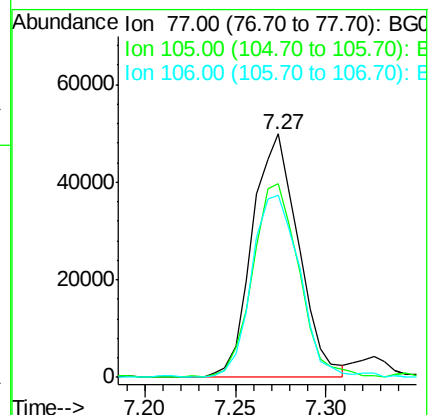
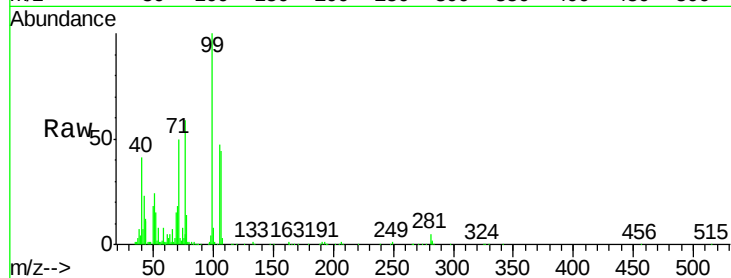
Tgt Ion: 77 Resp: 88355

Ion Ratio Lower Upper

77 100

105 79.7 58.7 98.7

106 74.9 67.5 107.5



#10

Phenol

Concen: 36.13 ng

RT: 7.33 min Scan# 764

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

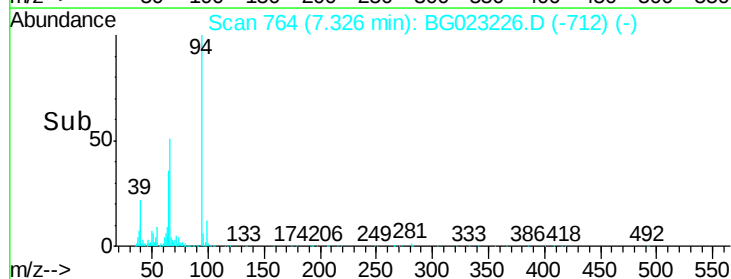
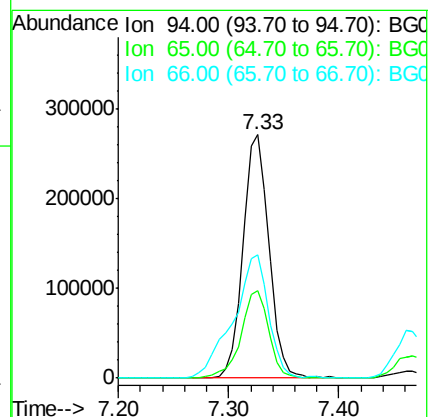
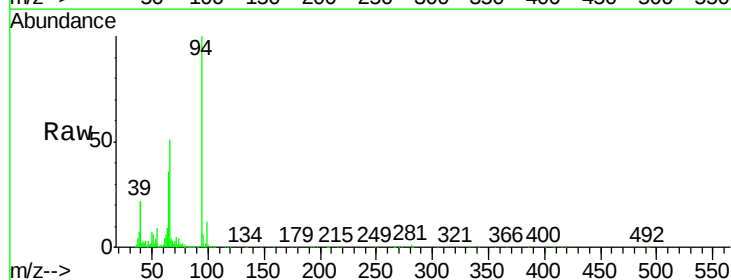
Tgt Ion: 94 Resp: 449656

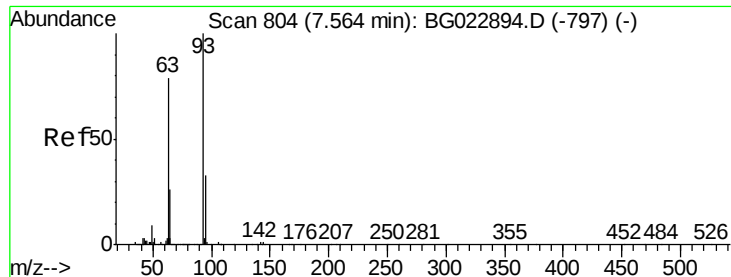
Ion Ratio Lower Upper

94 100

65 35.9 18.1 58.1

66 50.5 42.1 82.1

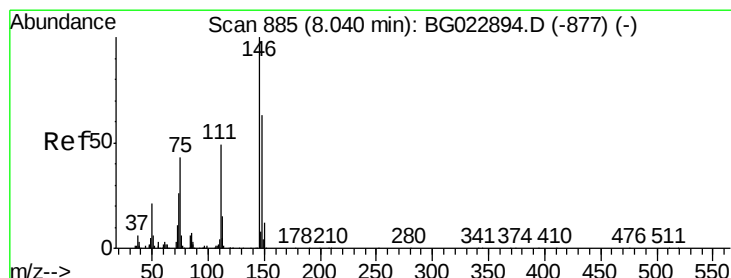
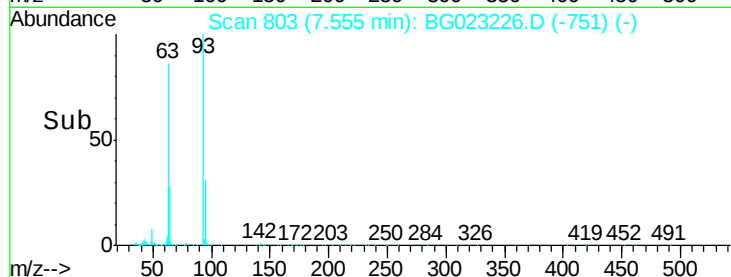
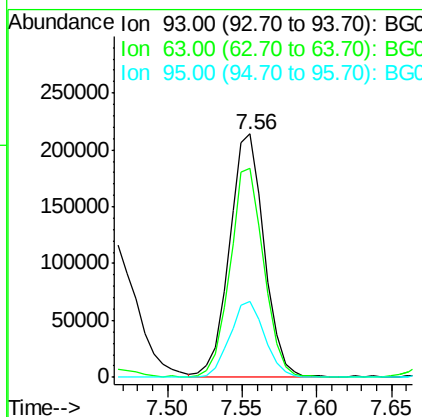
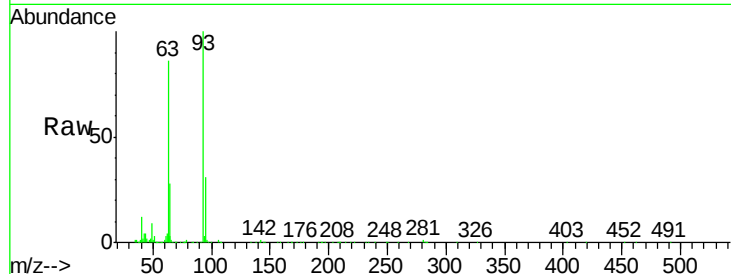




#11  
bis(2-Chloroethyl)ether  
Concen: 34.96 ng  
RT: 7.56 min Scan# 803  
Delta R.T. 0.01 min  
Lab File: BG023226.D  
Acq: 22 Jul 2016 22:04

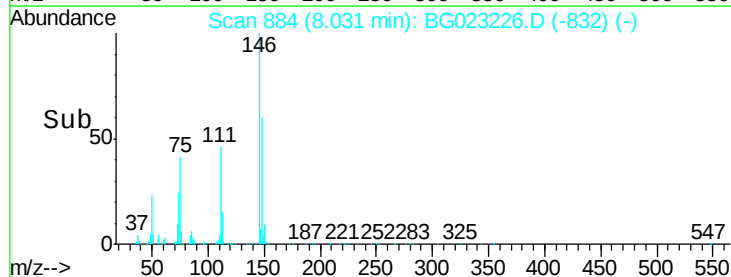
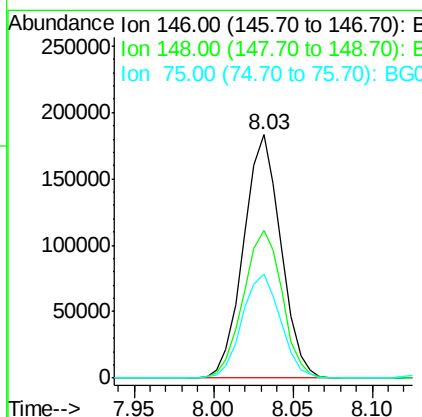
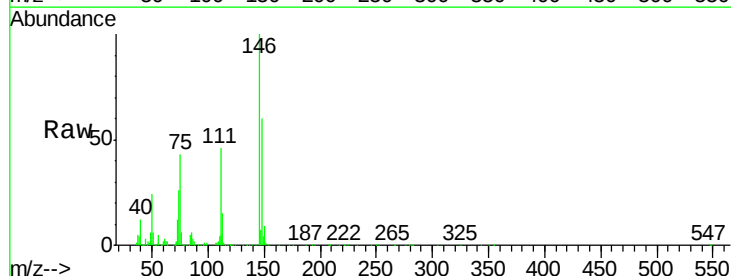
Instrument :  
BNA\_G  
ClientSampleId :  
D-2MSD

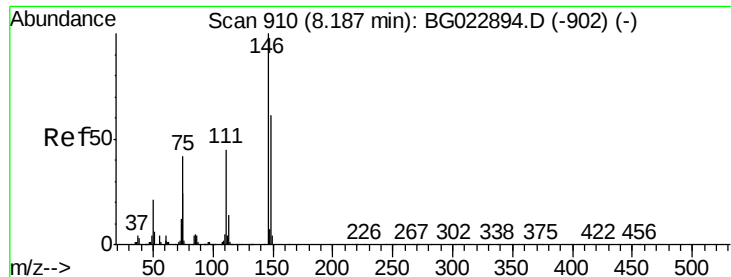
Tgt Ion: 93 Resp: 344848  
Ion Ratio Lower Upper  
93 100  
63 85.7 55.0 95.0  
95 31.3 11.0 51.0



#12  
1,3-Dichlorobenzene  
Concen: 29.77 ng  
RT: 8.03 min Scan# 884  
Delta R.T. 0.01 min  
Lab File: BG023226.D  
Acq: 22 Jul 2016 22:04

Tgt Ion: 146 Resp: 299490  
Ion Ratio Lower Upper  
146 100  
148 60.5 50.3 75.5  
75 42.5 37.0 55.6





#13

1,4-Dichlorobenzene

Concen: 30.18 ng

RT: 8.18 min Scan# 909

Delta R.T. -0.00 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

Instrument :

BNA\_G

ClientSampleId :

D-2MSD

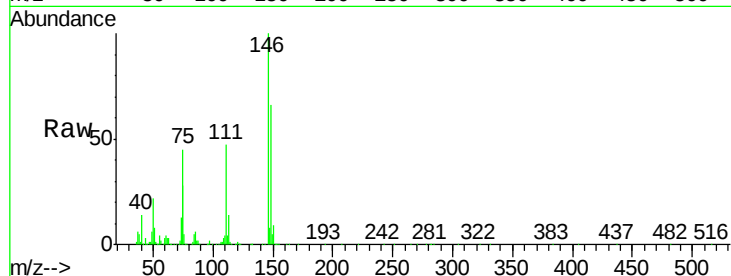
Tgt Ion:146 Resp: 303935

Ion Ratio Lower Upper

146 100

148 65.7 54.5 81.7

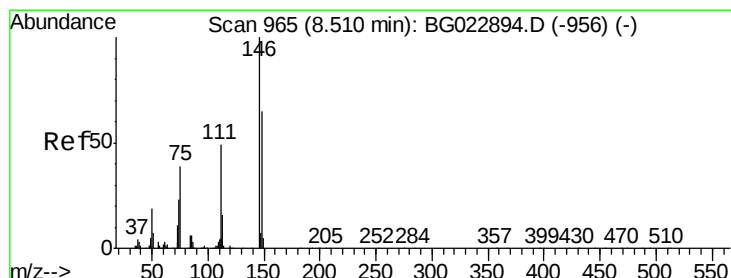
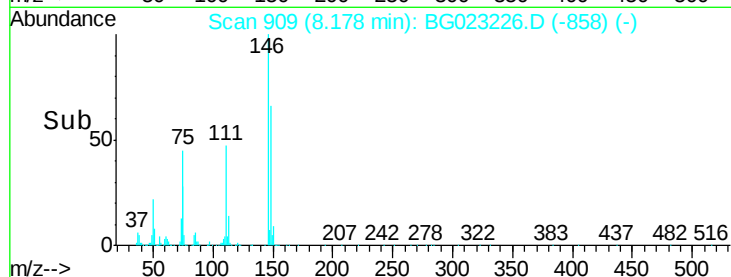
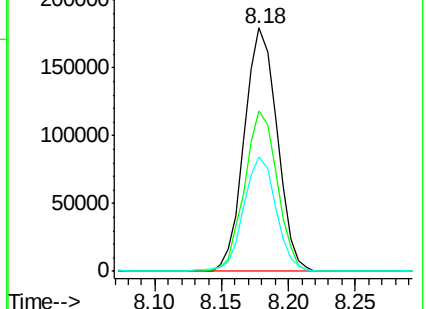
111 46.9 37.8 56.8



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: 29.77 ng

RT: 8.50 min Scan# 964

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

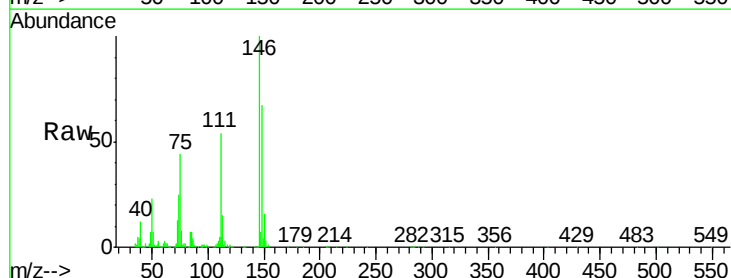
Tgt Ion:146 Resp: 298063

Ion Ratio Lower Upper

146 100

148 67.0 52.9 79.3

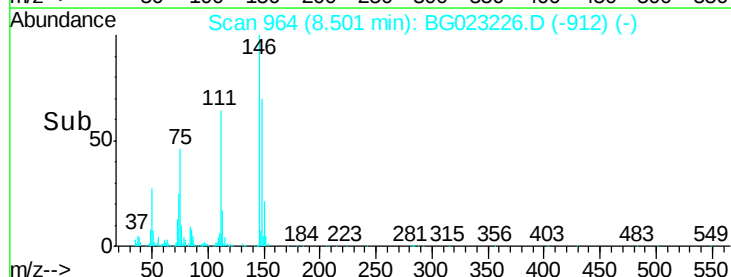
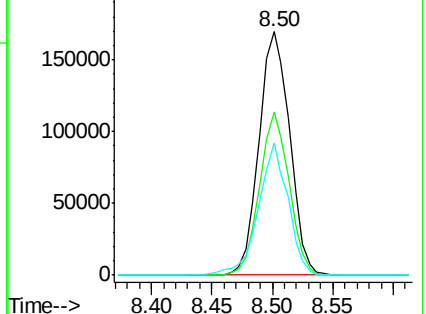
111 54.3 43.5 65.3

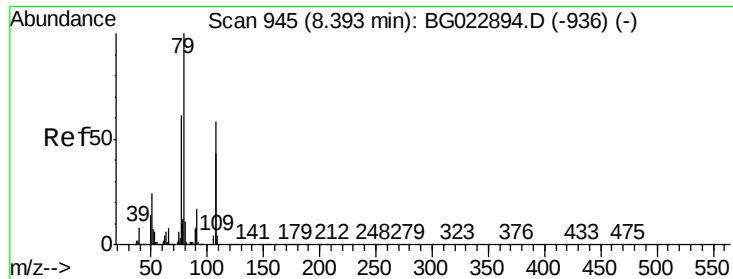


Abundance Ion 146.00 (145.70 to 146.70): E

Ion 148.00 (147.70 to 148.70): E

Ion 111.00 (110.70 to 111.70): E





#15

Benzyl Alcohol

Concen: 35.30 ng

RT: 8.38 min Scan# 944

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

Instrument :

BNA\_G

ClientSampleId :

D-2MSD

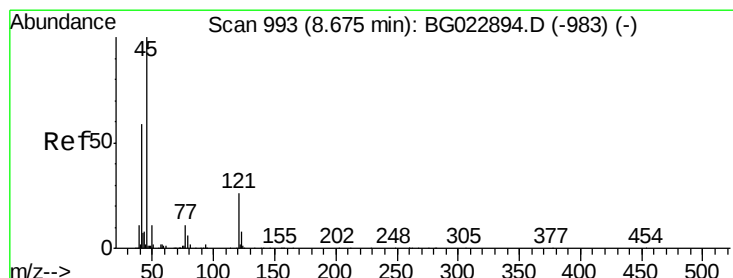
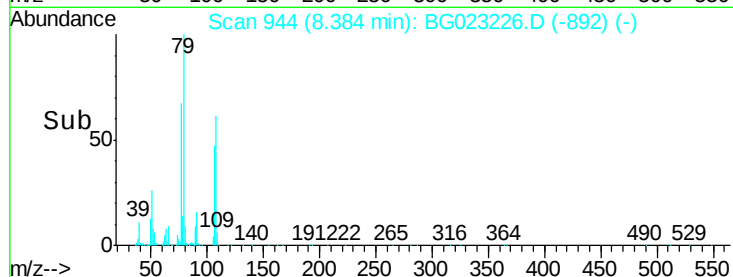
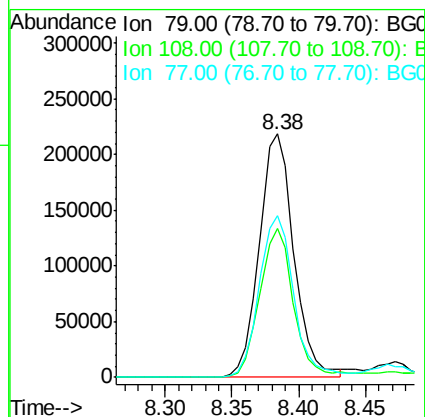
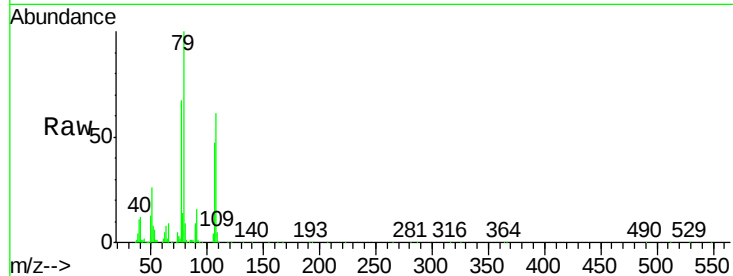
Tgt Ion: 79 Resp: 391050

Ion Ratio Lower Upper

79 100

108 61.3 46.5 69.7

77 66.6 52.3 78.5



#16

2,2'-oxybis(1-Chloropropane)

Concen: 37.41 ng

RT: 8.68 min Scan# 994

Delta R.T. 0.01 min

Lab File: BG023226.D

Acq: 22 Jul 2016 22:04

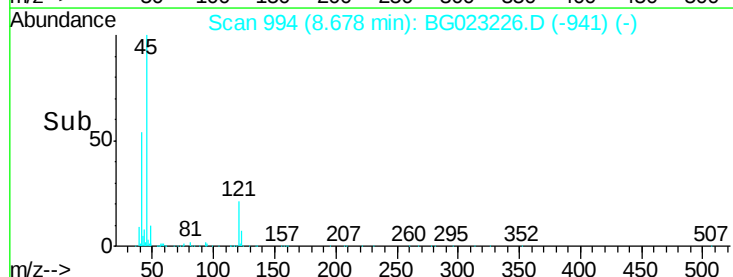
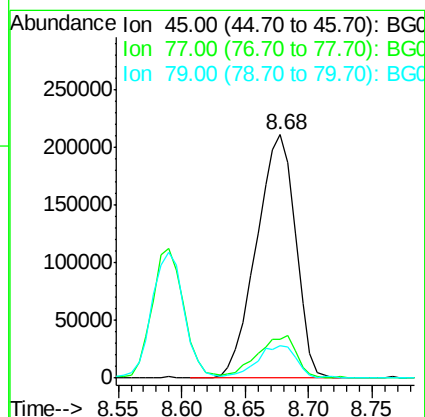
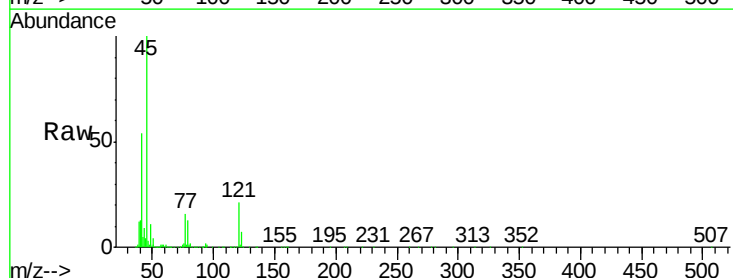
Tgt Ion: 45 Resp: 450739

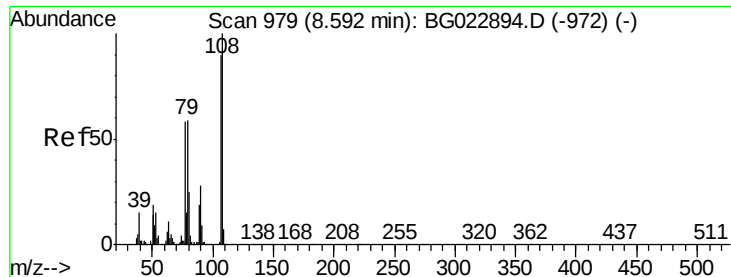
Ion Ratio Lower Upper

45 100

77 16.0 0.6 40.6

79 13.4 0.0 36.2

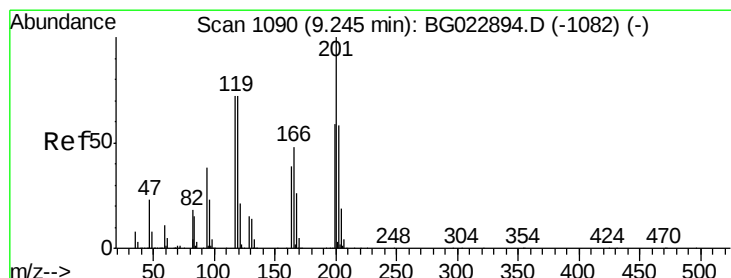
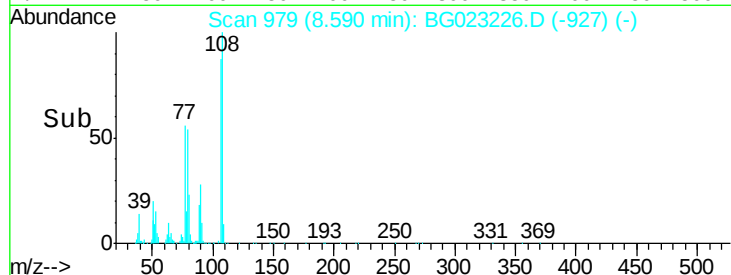
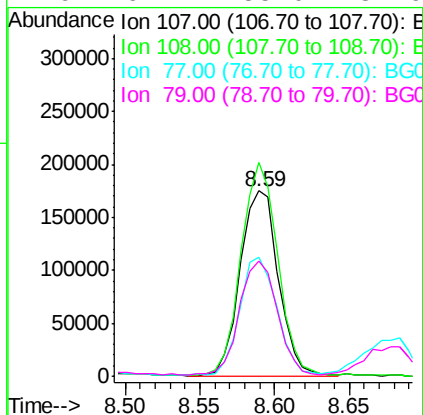
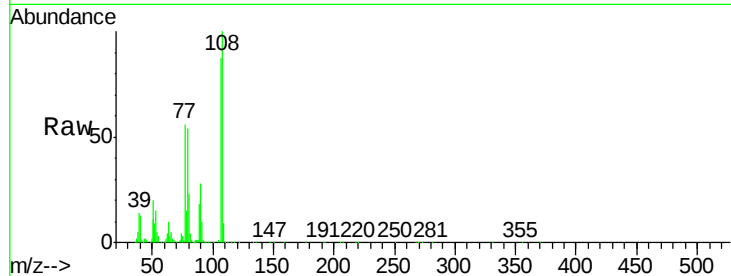




#17  
2-Methylphenol  
Concen: 38.15 ng  
RT: 8.59 min Scan# 979  
Delta R.T. 0.01 min  
Lab File: BG023226.D  
Acq: 22 Jul 2016 22:04

Instrument :  
BNA\_G  
ClientSampleId :  
D-2MSD

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 107   | Resp: | 309103 |
| Ion      | Ratio | Lower | Upper  |
| 107      | 100   |       |        |
| 108      | 115.4 | 92.0  | 138.0  |
| 77       | 64.6  | 55.8  | 83.6   |
| 79       | 62.2  | 55.0  | 82.6   |



#18  
Hexachloroethane  
Concen: 29.70 ng  
RT: 9.24 min Scan# 1089  
Delta R.T. 0.01 min  
Lab File: BG023226.D  
Acq: 22 Jul 2016 22:04

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 117   | Resp: | 126255 |
| Ion      | Ratio | Lower | Upper  |
| 117      | 100   |       |        |
| 119      | 86.3  | 73.7  | 110.5  |
| 201      | 113.2 | 88.7  | 133.1  |

