

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL073021\  
 Data File : VL037307.D  
 Acq On : 31 Jul 2021 7:18  
 Operator : SY/AP  
 Sample : M3121-05  
 Misc : 400mL/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :

Quant Time: Jul 31 07:57:38 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL073021AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jul 30 23:19:30 2021  
 QLast Update : Fri Jul 30 23:19:30 2021  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.66  | 49   | 1065116  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.17  | 114  | 3440635  | 10.00 | ppbv  | -0.01    |
| 55) Chlorobenzene-d5    | 12.08 | 117  | 3025639  | 10.00 | ppbv  | -0.02    |

| System Monitoring Compounds |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| 68) 1-Bromo-4-Fluorobenzene | 14.41  | 95    | 2179320  | 9.90     | ppbv | -0.02  |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 99.00% |

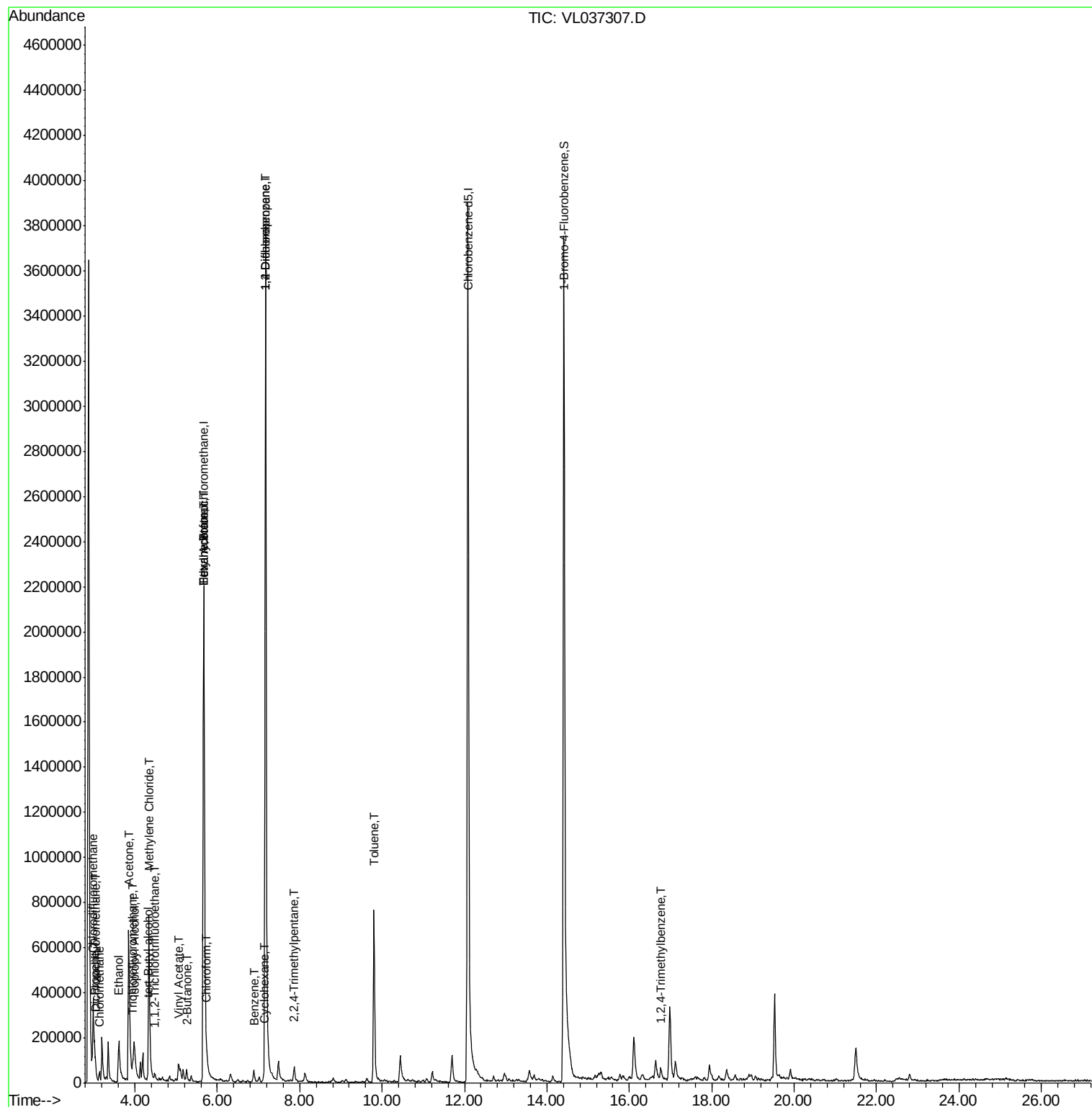
| Target Compounds               |       |     |        |              | Ovalue |
|--------------------------------|-------|-----|--------|--------------|--------|
| 2) Dichlorodifluoromethane     | 3.05  | 85  | 54064  | 0.353 ppbv   | 92     |
| 3) Chlorodifluoromethane       | 2.99  | 51  | 443953 | 2.080 ppbv   | 97     |
| 4) Chloromethane               | 3.13  | 50  | 45344  | 0.609 ppbv # | 88     |
| 9) Propene                     | 3.02  | 41  | 36059  | 0.502 ppbv   | 90     |
| 11) Trichlorofluoromethane     | 3.94  | 101 | 45994  | 0.242 ppbv   | 98     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.48  | 101 | 10298  | 0.073 ppbv   | 85     |
| 13) Ethanol                    | 3.61  | 45  | 269694 | 17.091 ppbv  | 94     |
| 15) Acetone                    | 3.85  | 43  | 885678 | 4.617 ppbv   | 98     |
| 17) tert-Butyl alcohol         | 4.31  | 59  | 3886   | 0.032 ppbv # | 71     |
| 19) Isopropyl Alcohol          | 3.98  | 45  | 198826 | 2.679 ppbv # | 81     |
| 20) Methylene Chloride         | 4.34  | 84  | 333304 | 4.490 ppbv   | 94     |
| 23) Vinyl Acetate              | 5.07  | 43  | 27722  | 0.171 ppbv # | 79     |
| 25) Ethyl Acetate              | 5.68  | 43  | 236267 | 0.849 ppbv # | 83     |
| 26) Hexane                     | 5.68  | 57  | 302900 | 2.036 ppbv # | 54     |
| 29) Chloroform                 | 5.75  | 83  | 15350  | 0.072 ppbv   | 93     |
| 30) Cyclohexane                | 7.12  | 84  | 4372   | 0.038 ppbv # | 1      |
| 34) 2-Butanone                 | 5.25  | 43  | 59056  | 0.400 ppbv # | 77     |
| 36) Benzene                    | 6.89  | 78  | 28202  | 0.097 ppbv   | 92     |
| 39) 1,2-Dichloropropane        | 7.17  | 63  | 773516 | 7.061 ppbv # | 26     |
| 41) Tetrahydrofuran            | 5.68  | 42  | 110461 | 1.862 ppbv # | 50     |
| 44) 2,2,4-Trimethylpentane     | 7.87  | 57  | 48638  | 0.102 ppbv # | 63     |
| 53) Toluene                    | 9.80  | 91  | 654035 | 1.910 ppbv   | 99     |
| 74) 1,2,4-Trimethylbenzene     | 16.76 | 105 | 21770  | 0.053 ppbv # | 67     |

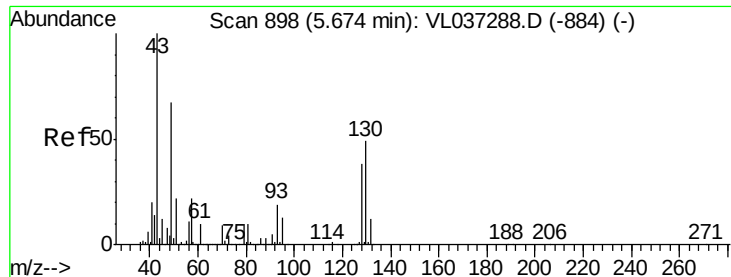
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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MSVOA\_L  
ClientSampleId :

Quant Time: Jul 31 07:57:38 2021  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL073021AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Jul 30 23:19:30 2021  
QLast Update : Fri Jul 30 23:19:30 2021  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 895

Delta R.T. -0.01 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

Instrument :

MSVOA\_L

ClientSampleId :

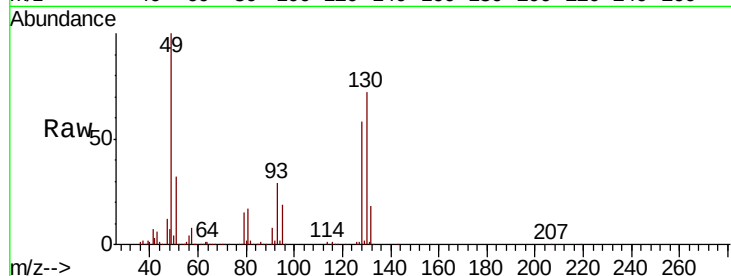
Tot Ion: 49 Resp: 1065116

Ion Ratio Lower Upper

49 100

128 63.0 30.6 92.0

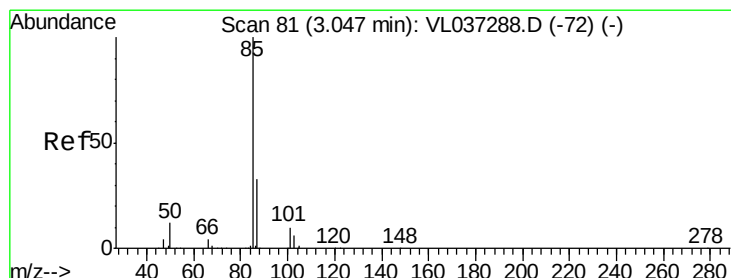
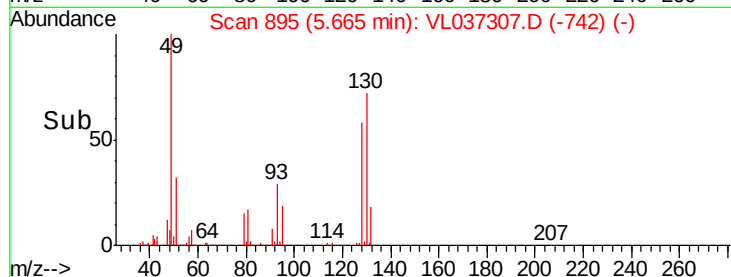
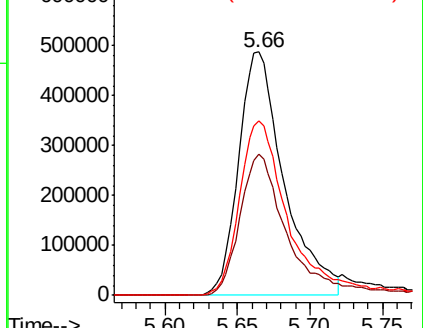
130 80.1 37.8 113.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.353 ppbv

RT: 3.05 min Scan# 81

Delta R.T. 0.00 min

Lab File: VL037307.D

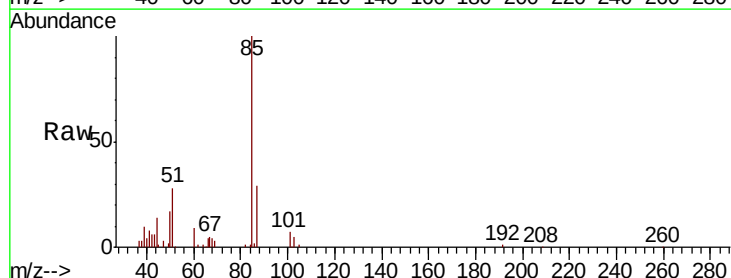
Acq: 31 Jul 2021 7:18

Tgt Ion: 85 Resp: 54064

Ion Ratio Lower Upper

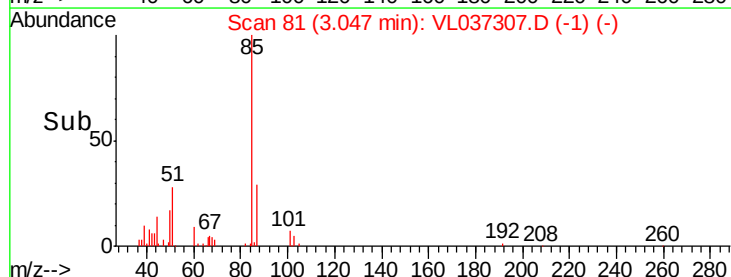
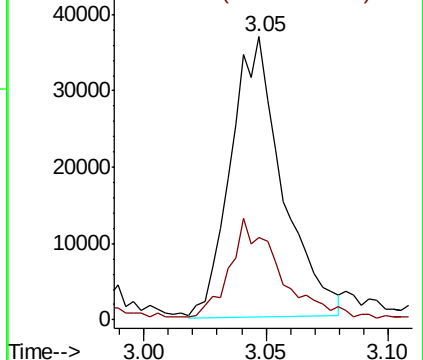
85 100

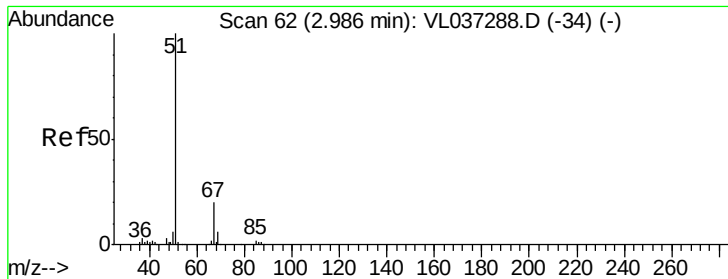
87 28.5 26.6 40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 2.080 ppbv

RT: 2.99 min Scan# 62

Delta R.T. 0.00 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

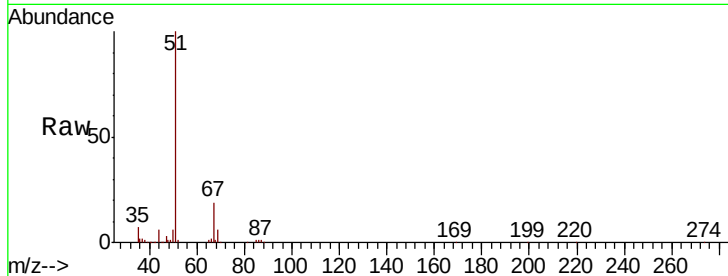
Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion: 51 Resp: 443953

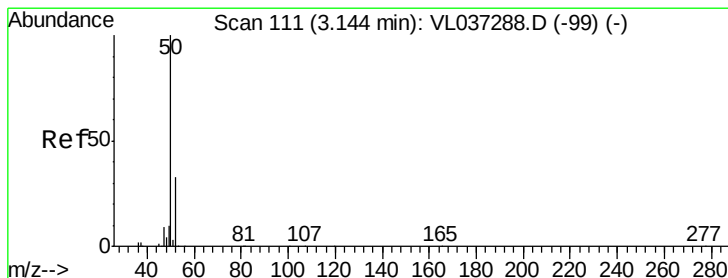
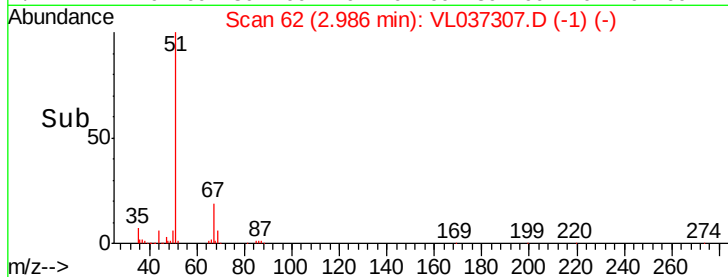
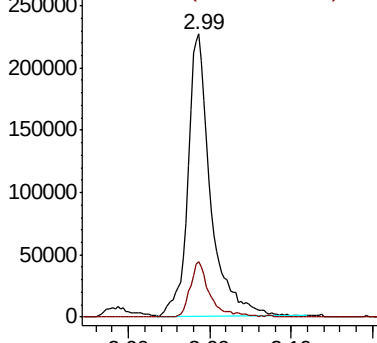
Ion Ratio Lower Upper

51 100

67 17.5 15.2 22.8



Abundance Ion 51.00 (50.70 to 51.70): VL0  
Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.609 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL037307.D

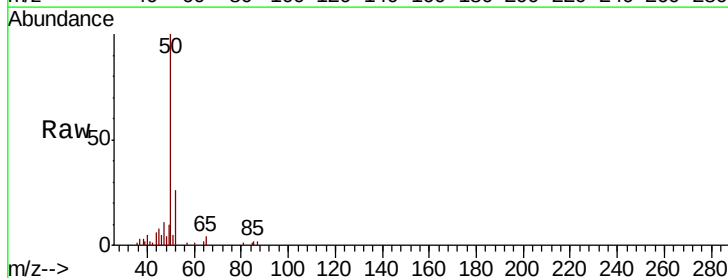
Acq: 31 Jul 2021 7:18

Tgt Ion: 50 Resp: 45344

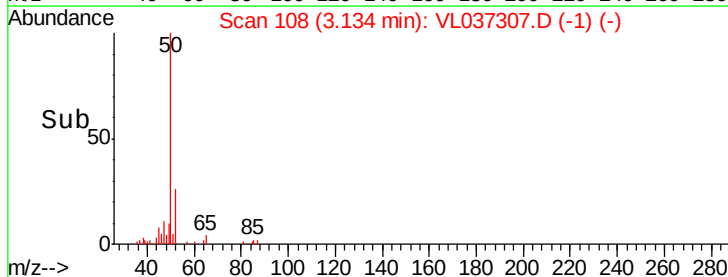
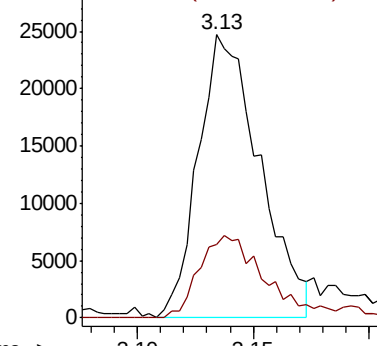
Ion Ratio Lower Upper

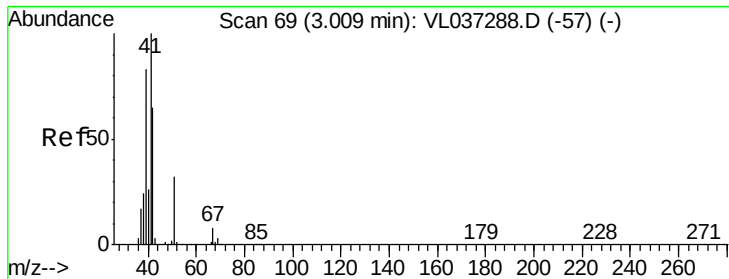
50 100

52 26.1 26.2 39.4#



Abundance Ion 50.10 (49.80 to 50.80): VL0  
Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.502 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

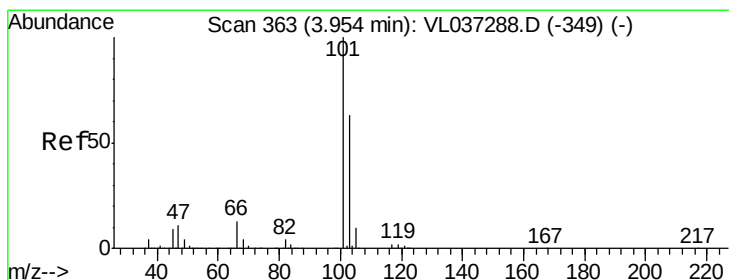
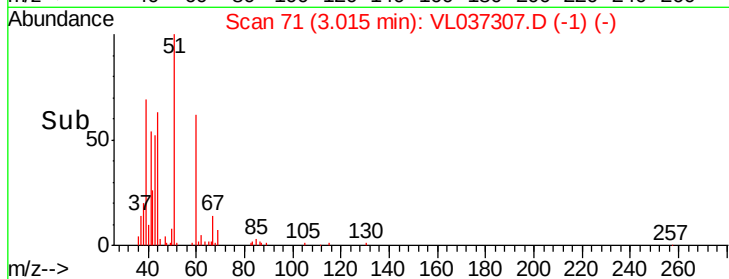
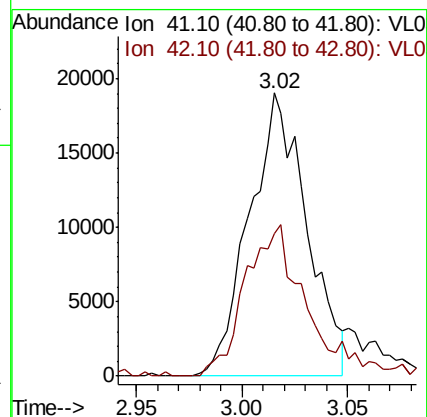
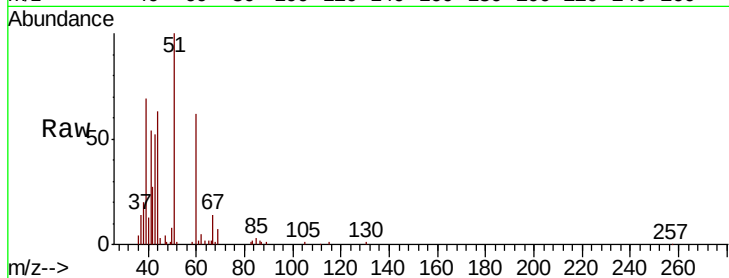
Instrument :  
MSVOA\_L  
ClientSampled :

Tot Ion: 41 Resp: 36059

Ion Ratio Lower Upper

41 100

42 59.3 54.0 81.0



#11

Trichlorofluoromethane

Concen: 0.242 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.01 min

Lab File: VL037307.D

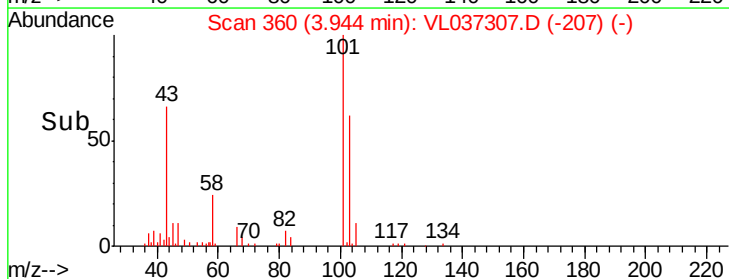
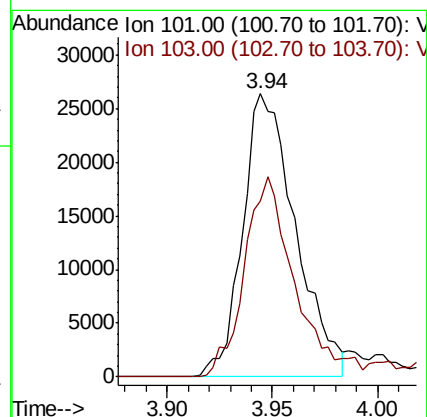
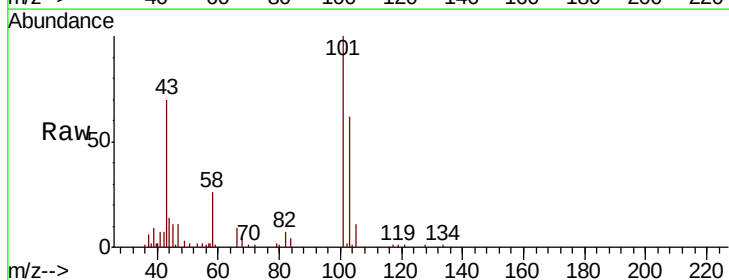
Acq: 31 Jul 2021 7:18

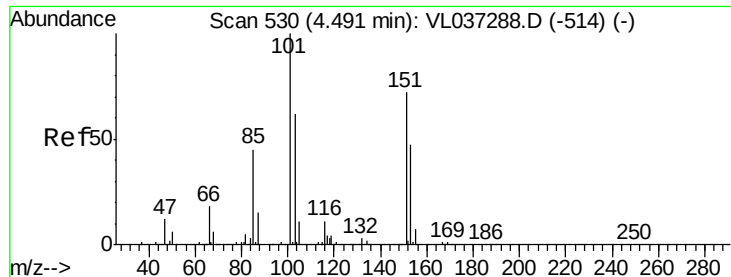
Tgt Ion: 101 Resp: 45994

Ion Ratio Lower Upper

101 100

103 62.0 50.6 75.8





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.073 ppbv

RT: 4.48 min Scan# 527

Delta R.T. -0.01 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

Instrument :

MSVOA\_L

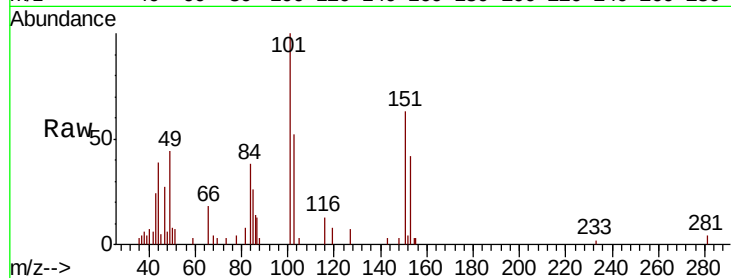
ClientSampleId :

Tot Ion:101 Resp: 10298

Ion Ratio Lower Upper

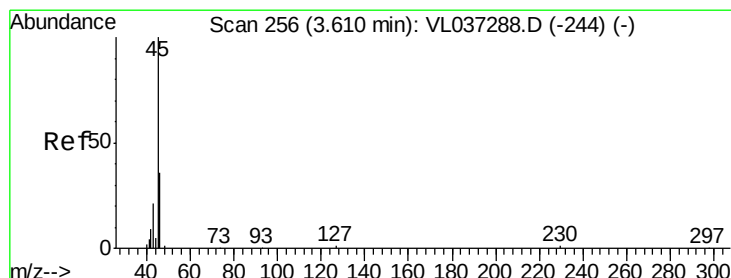
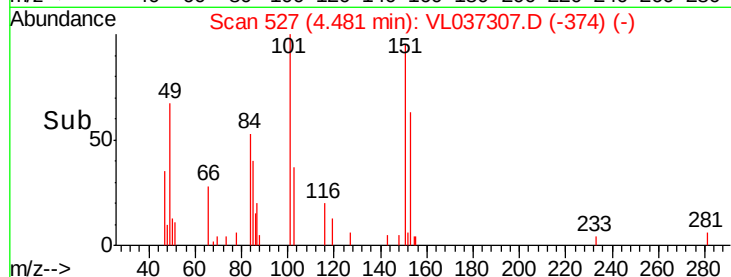
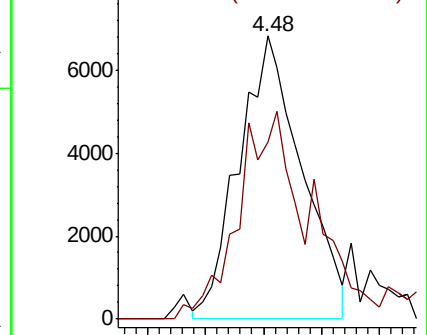
101 100

151 89.8 61.4 92.0



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 17.091 ppbv

RT: 3.61 min Scan# 255

Delta R.T. -0.00 min

Lab File: VL037307.D

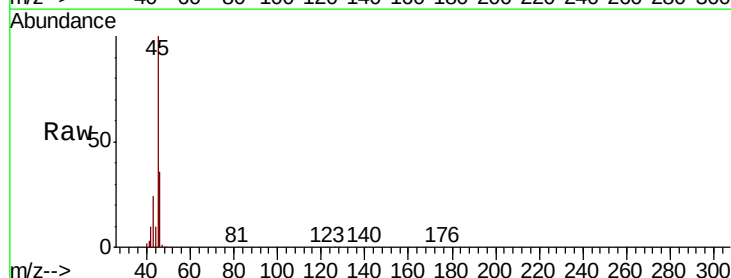
Acq: 31 Jul 2021 7:18

Tgt Ion: 45 Resp: 269694

Ion Ratio Lower Upper

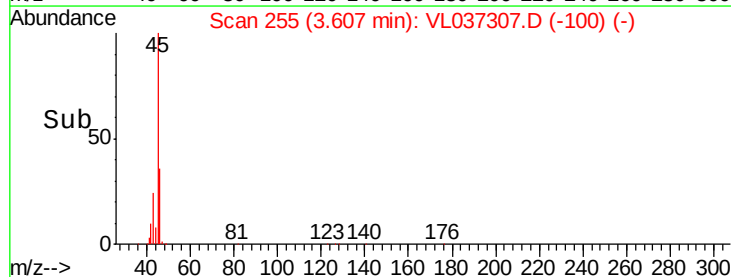
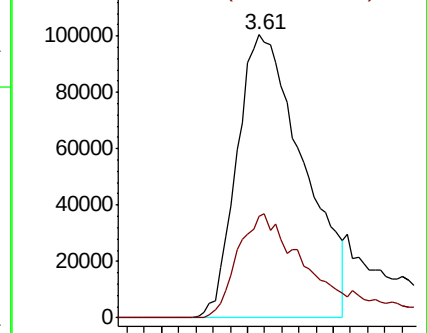
45 100

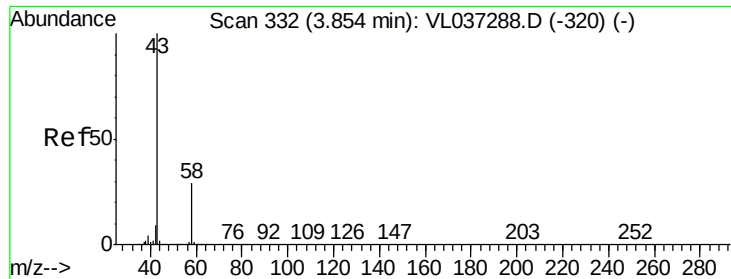
46 44.4 16.2 64.8



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 4.617 ppbv

RT: 3.85 min Scan# 330

Delta R.T. -0.01 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

Instrument :

MSVOA\_L

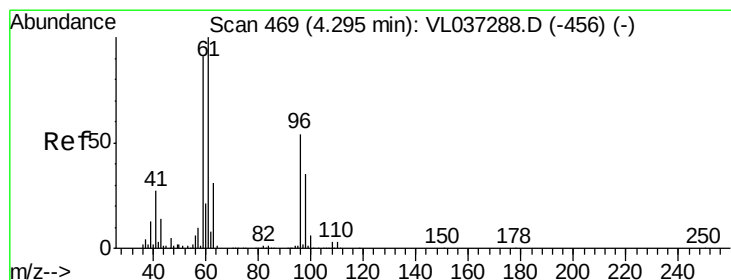
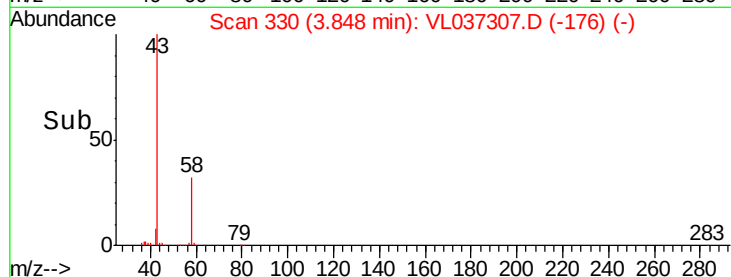
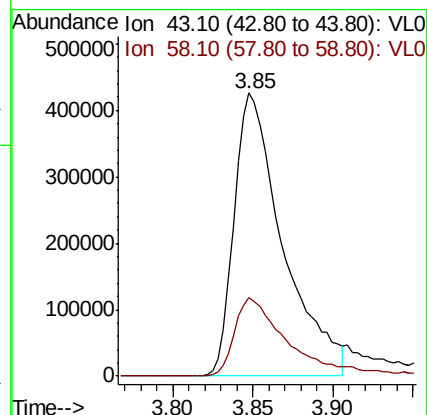
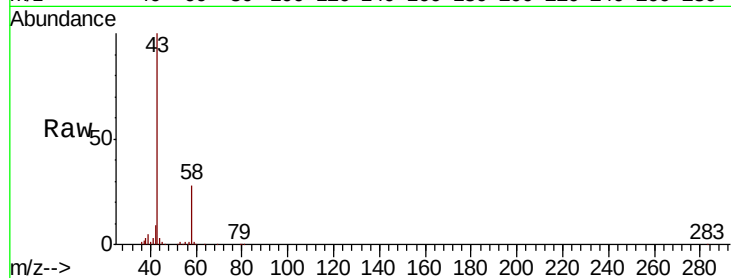
ClientSampleId :

Tot Ion: 43 Resp: 885678

Ion Ratio Lower Upper

43 100

58 31.2 24.2 36.4



#17

tert-Butyl alcohol

Concen: 0.032 ppbv

RT: 4.31 min Scan# 475

Delta R.T. 0.02 min

Lab File: VL037307.D

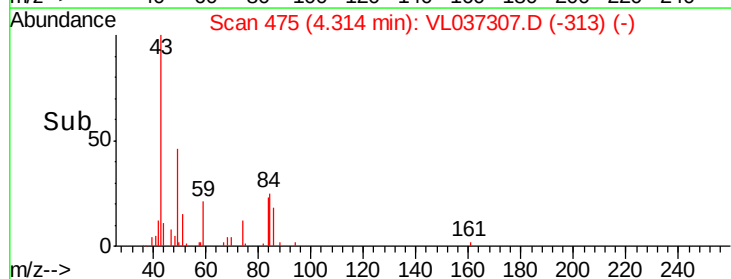
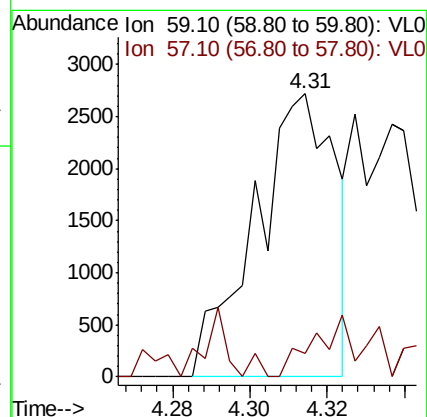
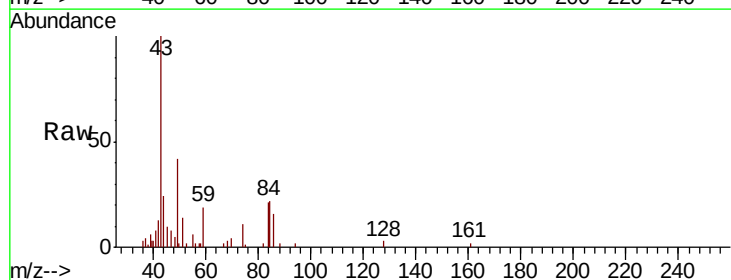
Acq: 31 Jul 2021 7:18

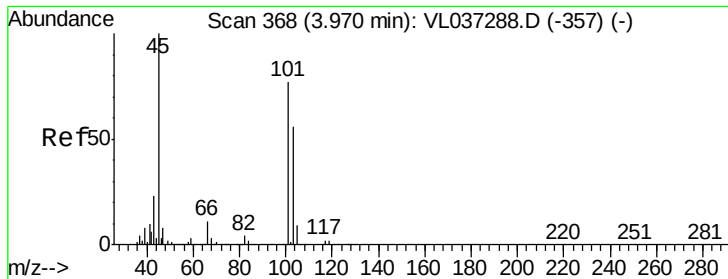
Tgt Ion: 59 Resp: 3886

Ion Ratio Lower Upper

59 100

57 0.0 8.6 13.0#





#19

Isopropyl Alcohol

Concen: 2.679 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.01 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

Instrument :

MSVOA\_L

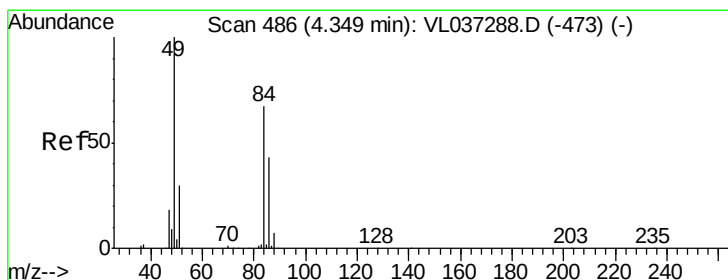
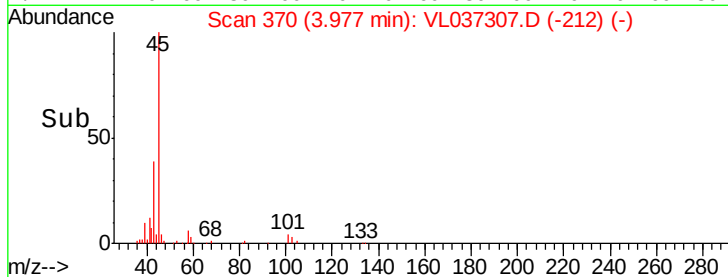
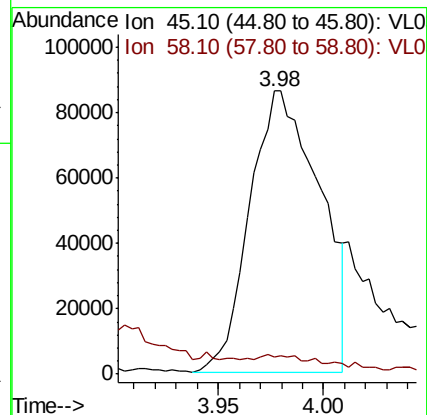
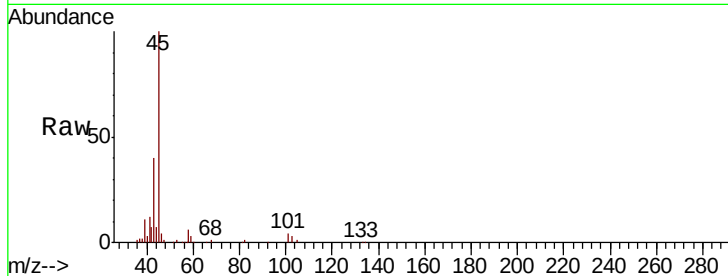
ClientSampleId :

Tot Ion: 45 Resp: 198826

Ion Ratio Lower Upper

45 100

58 8.9 2.2 3.2#



#20

Methylene Chloride

Concen: 4.490 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.01 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

Tgt Ion: 84 Resp: 333304

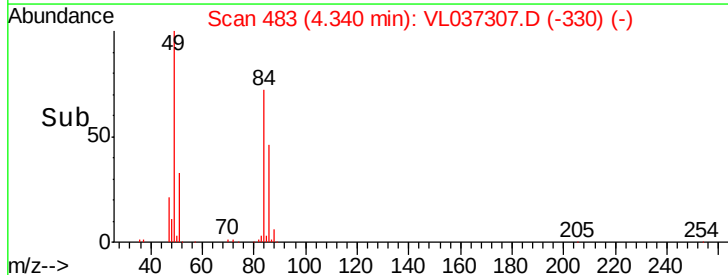
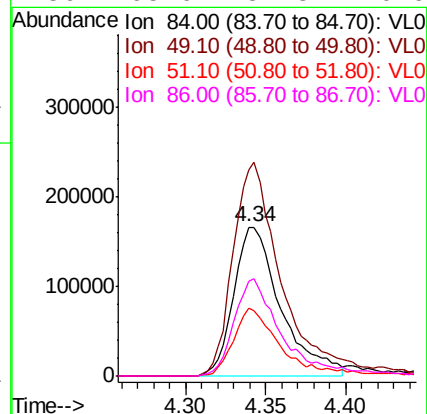
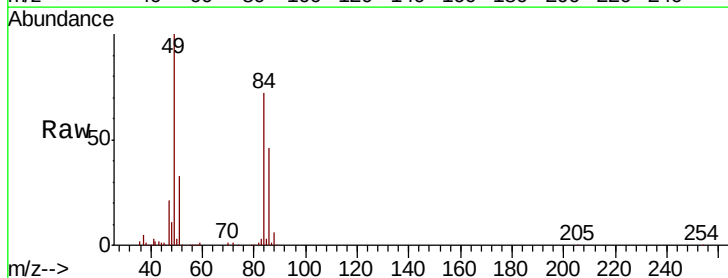
Ion Ratio Lower Upper

84 100

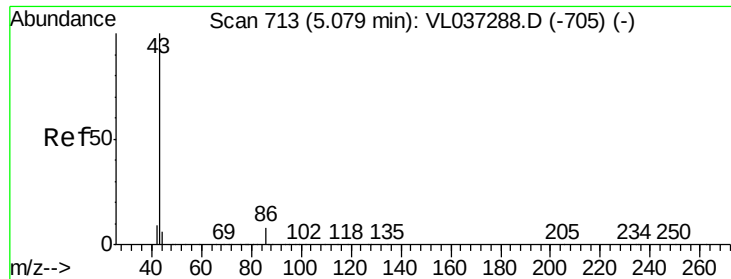
49 138.3 120.2 180.4

51 45.2 36.5 54.7

86 63.6 51.3 76.9







#23

Vinyl Acetate

Concen: 0.171 ppbv

RT: 5.07 min Scan# 710

Delta R.T. -0.01 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

Instrument :  
MSVOA\_L  
ClientSampled :

Tot Ion: 43 Resp: 27722

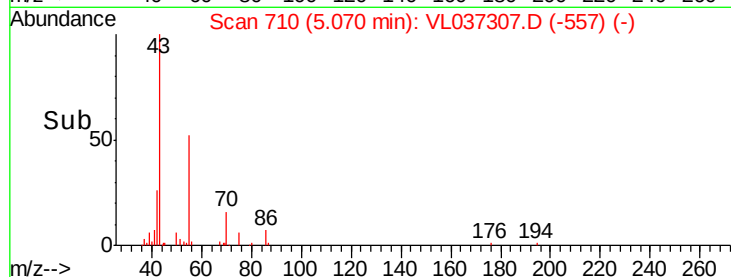
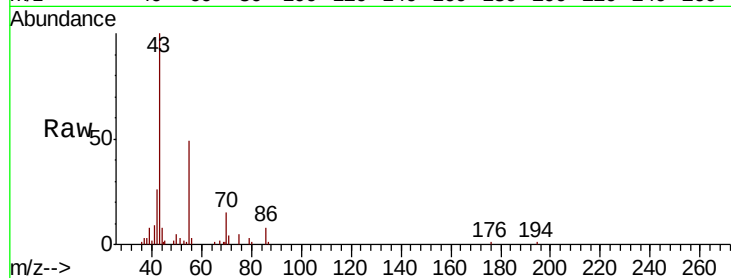
Ion Ratio Lower Upper

43 100

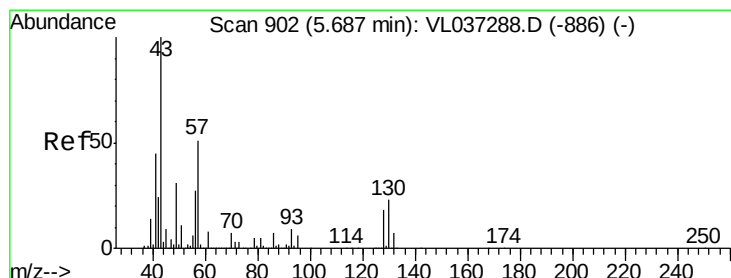
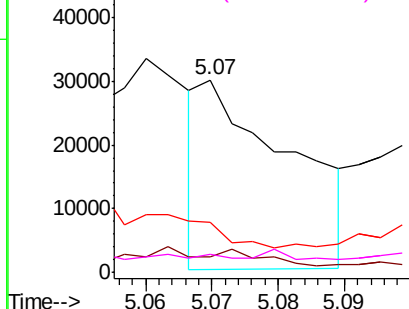
86 9.5 5.7 8.5#

42 24.6 8.1 12.1#

44 6.5 4.1 6.1#



Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 86.10 (85.80 to 86.80): VL0  
Ion 42.10 (41.80 to 42.80): VL0  
Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.849 ppbv

RT: 5.68 min Scan# 901

Delta R.T. -0.00 min

Lab File: VL037307.D

Acq: 31 Jul 2021 7:18

Tgt Ion: 43 Resp: 236267

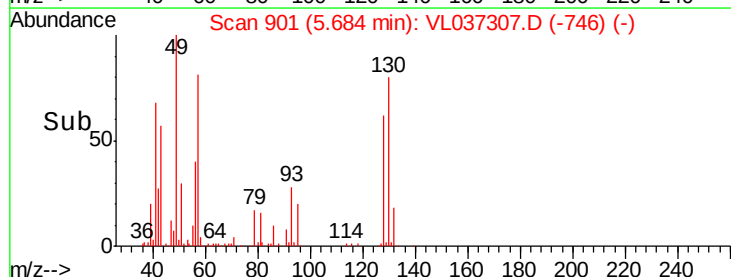
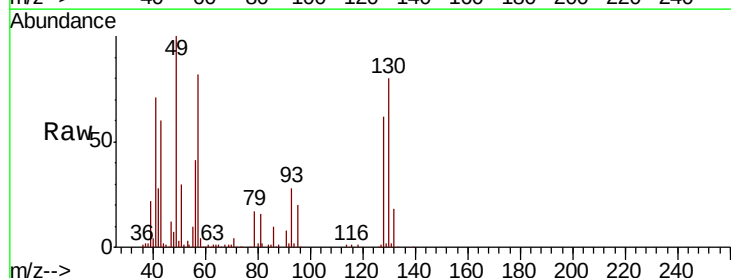
Ion Ratio Lower Upper

43 100

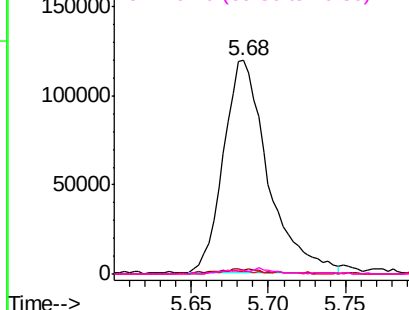
45 3.1 7.4 11.2#

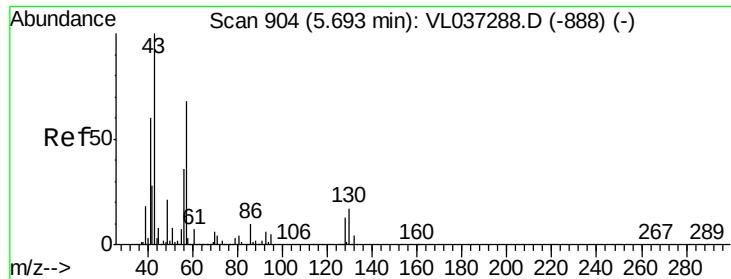
61 2.1 7.8 11.6#

70 3.1 5.4 8.2#



Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 45.10 (44.80 to 45.80): VL0  
Ion 61.10 (60.80 to 61.80): VL0  
Ion 70.10 (69.80 to 70.80): VL0

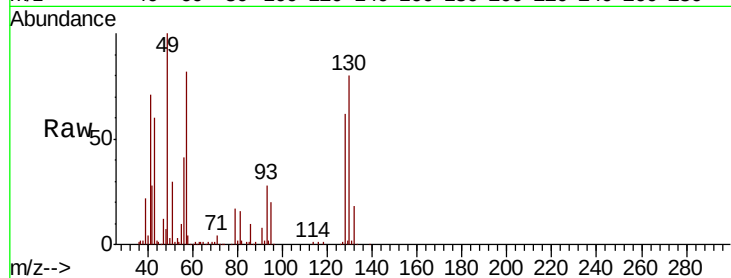




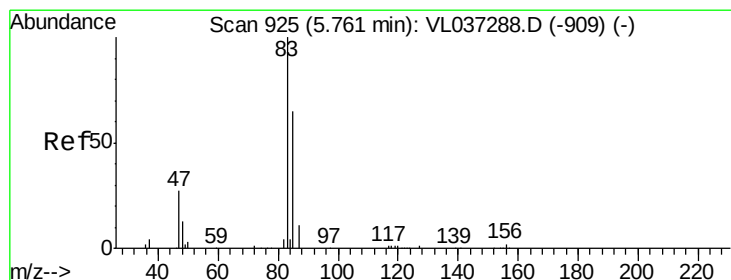
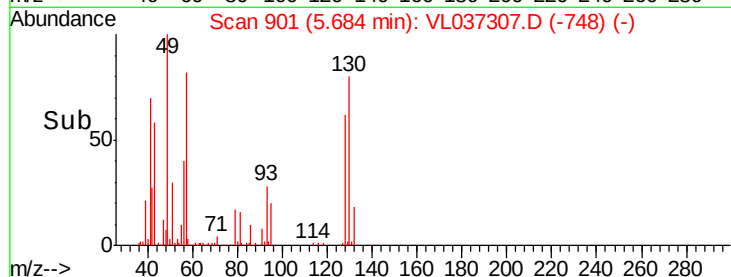
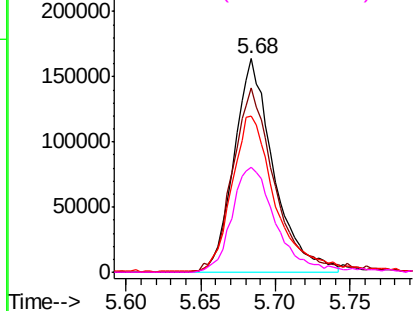
#26  
Hexane  
Concen: 2.036 ppbv  
RT: 5.68 min Scan# 901  
Delta R.T. -0.01 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

Instrument :  
MSVOA\_L  
ClientSampleId :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 57    | Resp: | 302900 |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 94.5  | 71.0  | 106.6  |
| 43       | 82.2  | 155.0 | 232.4# |
| 56       | 55.5  | 42.0  | 63.0   |

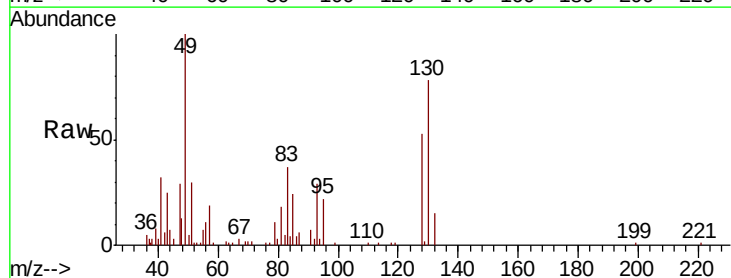


Abundance Ion 57.10 (56.80 to 57.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0  
Ion 43.10 (42.80 to 43.80): VL0  
Ion 56.10 (55.80 to 56.80): VL0

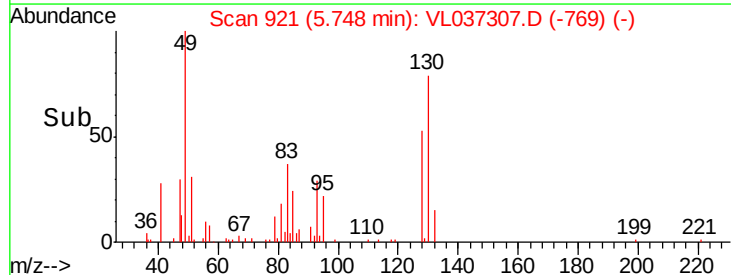
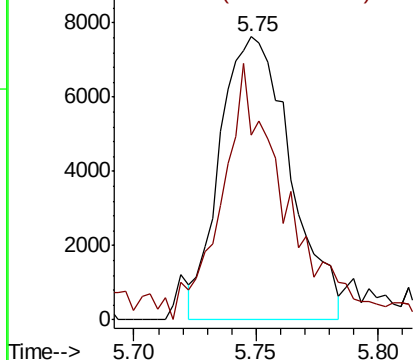


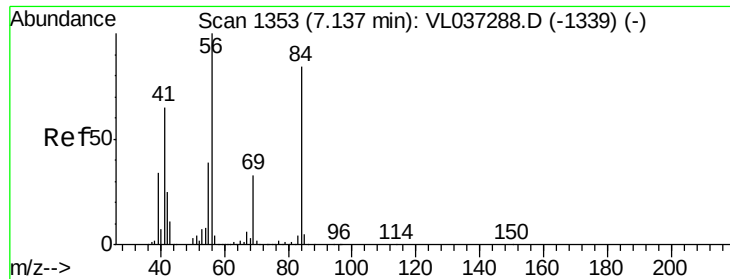
#29  
Chloroform  
Concen: 0.072 ppbv  
RT: 5.75 min Scan# 921  
Delta R.T. -0.01 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 83    | Resp: | 15350 |
| Ion      | Ratio | Lower | Upper |
| 83       | 100   |       |       |
| 85       | 59.7  | 51.9  | 77.9  |



Abundance Ion 83.00 (82.70 to 83.70): VL0  
Ion 85.00 (84.70 to 85.70): VL0

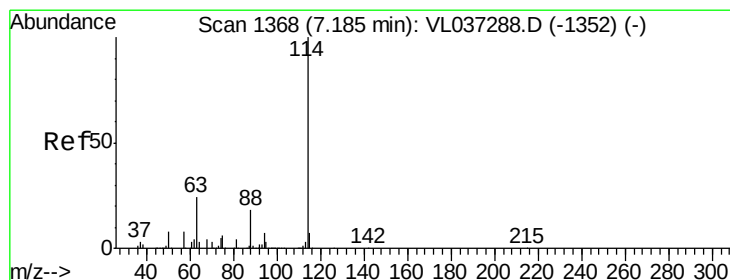
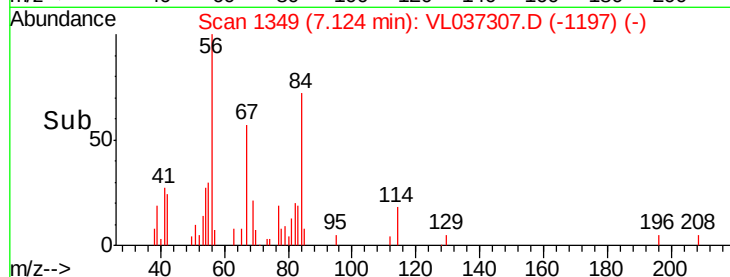
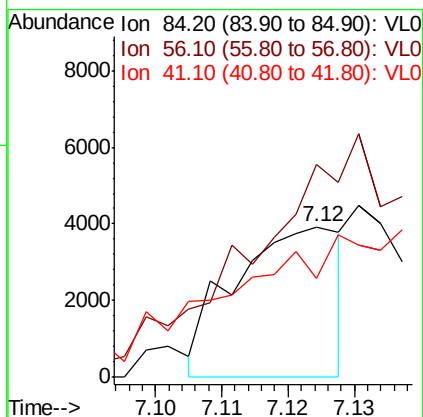
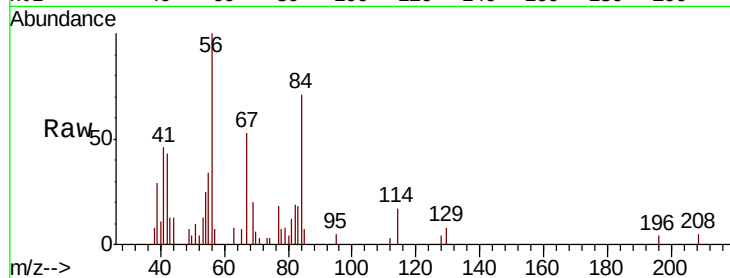




#30  
Cvclohexane  
Concen: 0.038 ppbv  
RT: 7.12 min Scan# 1349  
Delta R.T. -0.01 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

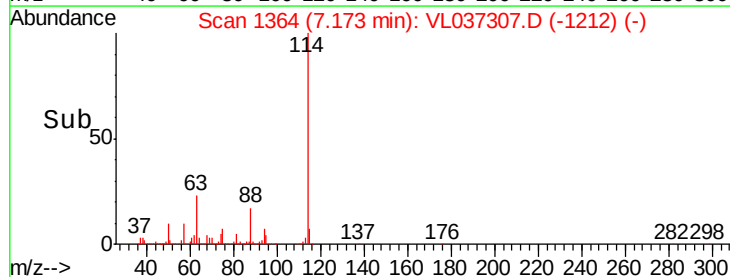
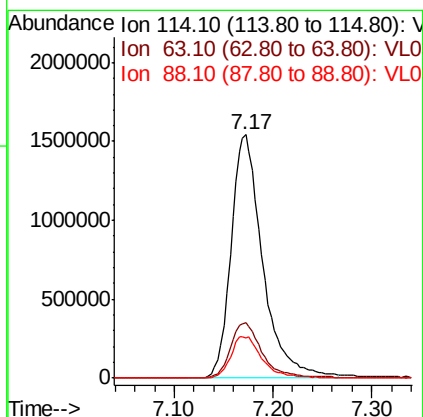
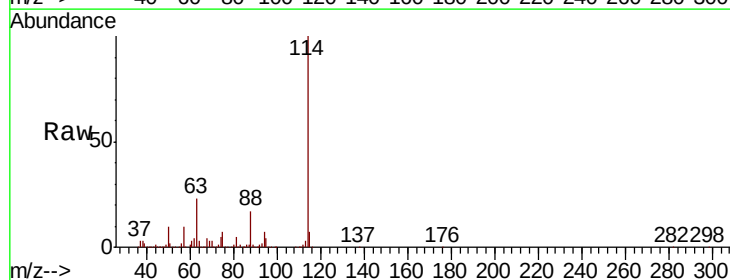
Instrument :  
MSVOA\_L  
ClientSampleId :

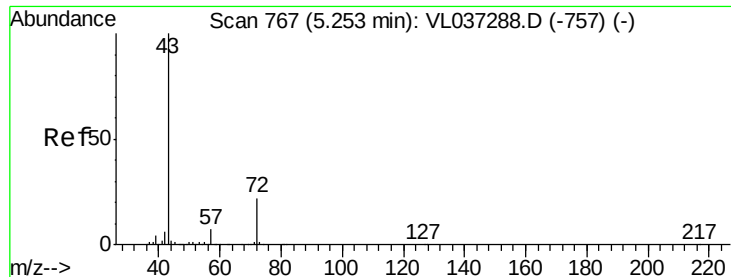
Tot Ion: 84 Resp: 4372  
Ion Ratio Lower Upper  
84 100  
56 0.0 104.1 156.1#  
41 0.0 64.7 97.1#



#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 7.17 min Scan# 1364  
Delta R.T. -0.01 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

Tgt Ion:114 Resp: 3440635  
Ion Ratio Lower Upper  
114 100  
63 23.1 19.0 28.4  
88 17.4 14.0 21.0

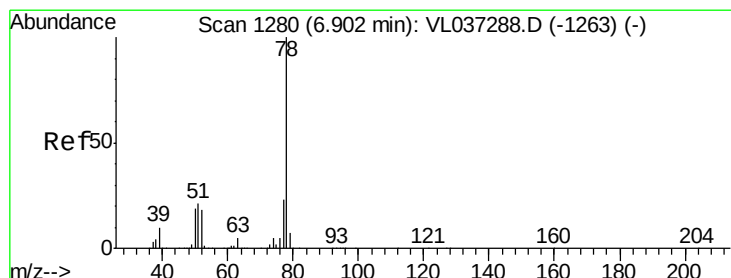
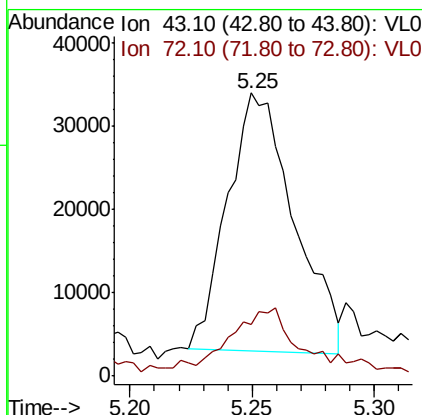
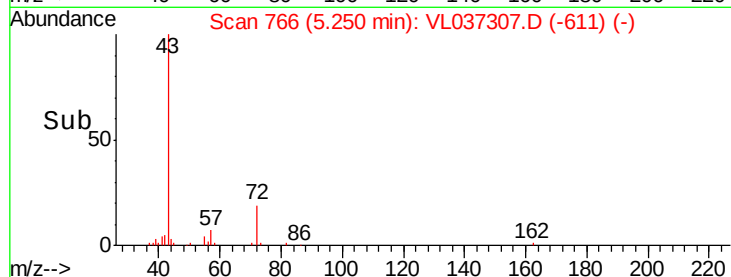
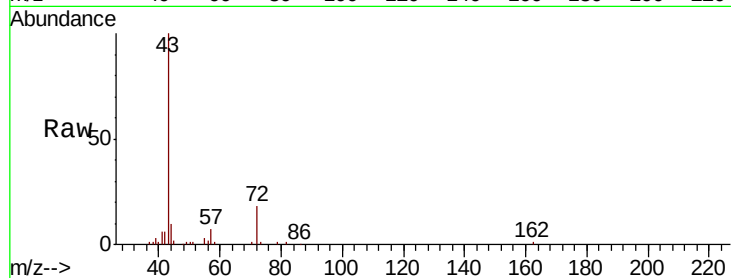




#34  
2-Butanone  
Concen: 0.400 ppbv  
RT: 5.25 min Scan# 766  
Delta R.T. -0.00 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

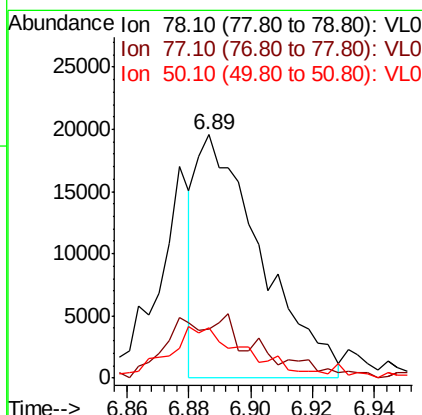
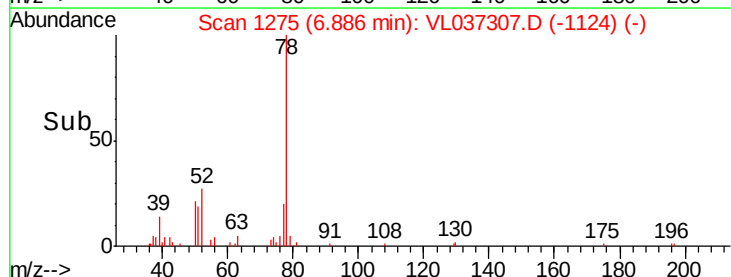
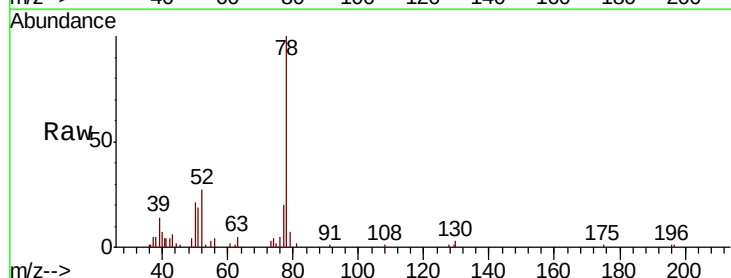
Instrument :  
MSVOA\_L  
ClientSampleId :

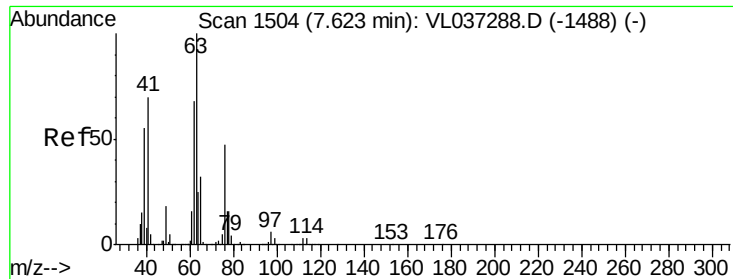
Tot Ion: 43 Resp: 59056  
Ion Ratio Lower Upper  
43 100  
72 34.1 18.5 27.7#



#36  
Benzene  
Concen: 0.097 ppbv  
RT: 6.89 min Scan# 1275  
Delta R.T. -0.02 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

Tgt Ion: 78 Resp: 28202  
Ion Ratio Lower Upper  
78 100  
77 18.9 18.3 27.5  
50 15.8 15.5 23.3

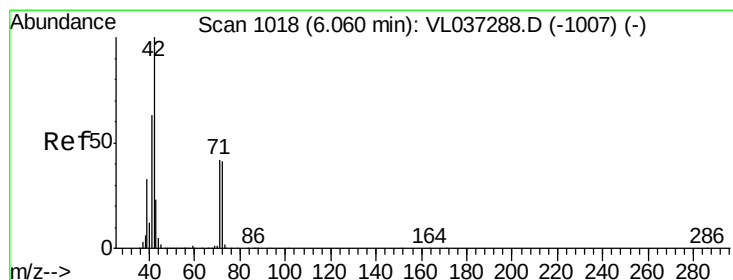
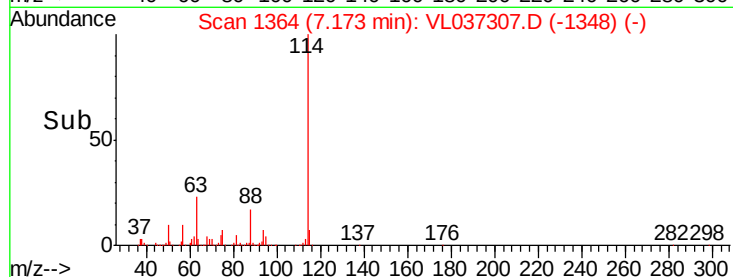
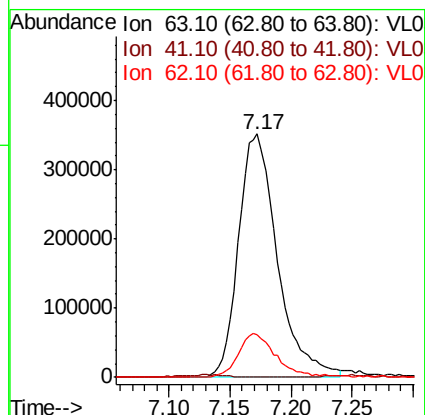
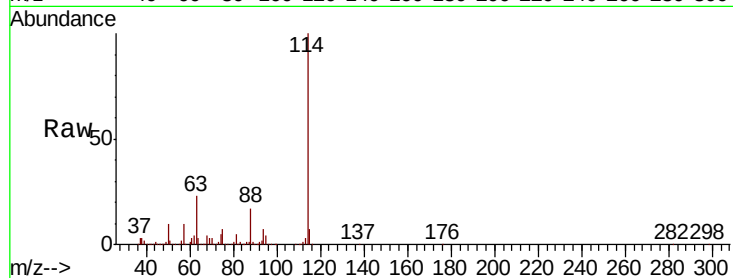




#39  
 1,2-Dichloropropane  
 Concen: 7.061 ppbv  
 RT: 7.17 min Scan# 1364  
 Delta R.T. -0.45 min  
 Lab File: VL037307.D  
 Acq: 31 Jul 2021 7:18

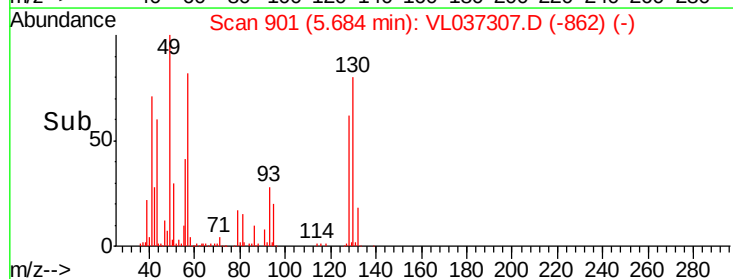
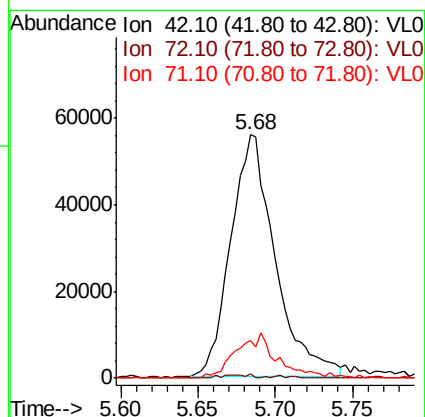
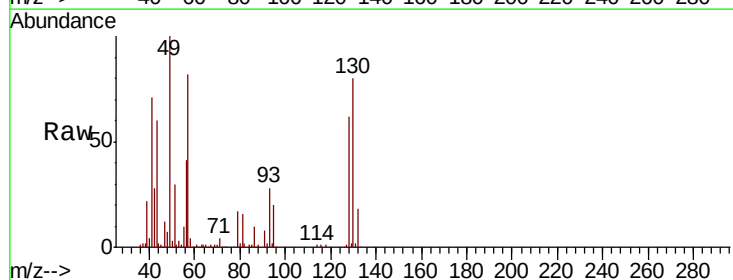
Instrument :  
 MSVOA\_L  
 ClientSampleId :

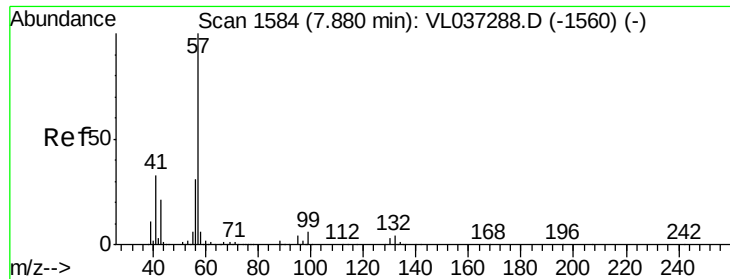
Tot Ion: 63 Resp: 773516  
 Ion Ratio Lower Upper  
 63 100  
 41 0.0 56.4 84.6#  
 62 17.5 54.6 82.0#



#41  
 Tetrahydrofuran  
 Concen: 1.862 ppbv  
 RT: 5.68 min Scan# 901  
 Delta R.T. -0.38 min  
 Lab File: VL037307.D  
 Acq: 31 Jul 2021 7:18

Tgt Ion: 42 Resp: 110461  
 Ion Ratio Lower Upper  
 42 100  
 72 1.3 33.0 49.6#  
 71 18.0 32.7 49.1#

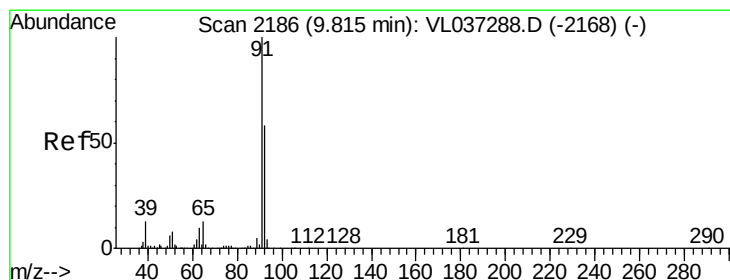
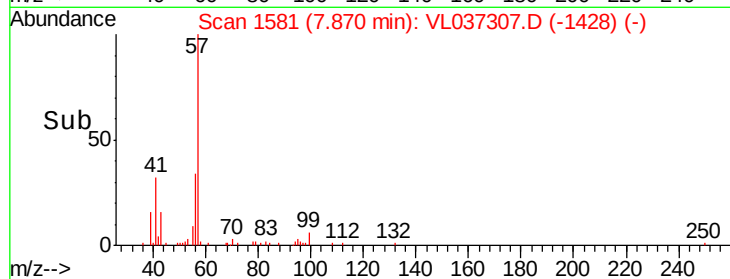
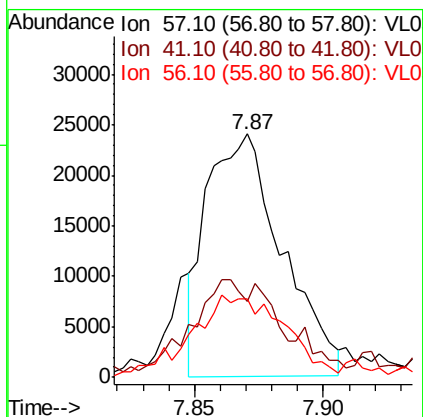
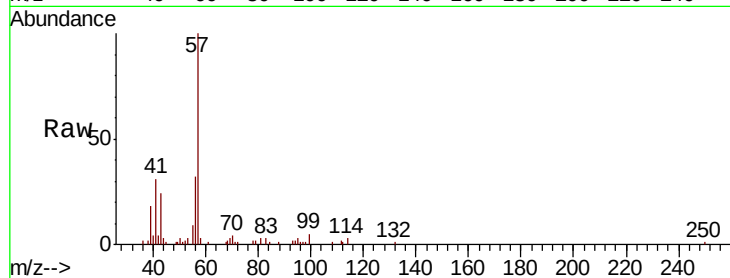




#44  
 2,2,4-Trimethylpentane  
 Concen: 0.102 ppbv  
 RT: 7.87 min Scan# 1581  
 Delta R.T. -0.01 min  
 Lab File: VL037307.D  
 Acq: 31 Jul 2021 7:18

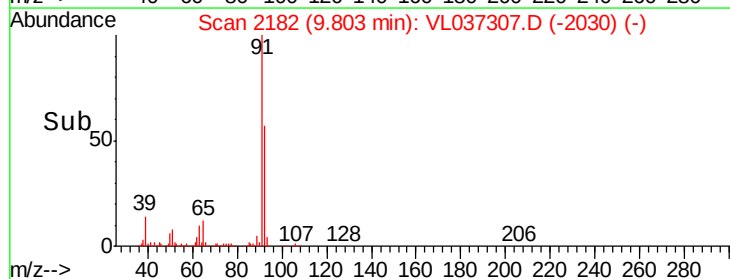
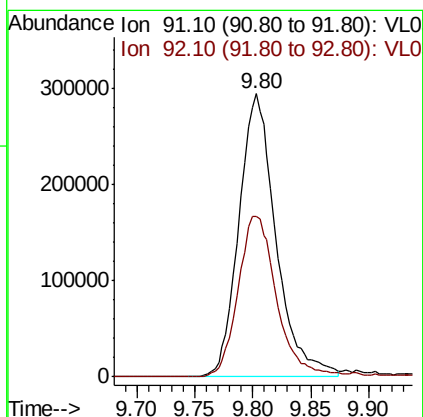
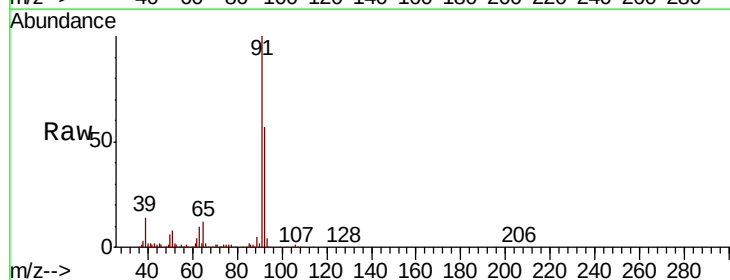
Instrument :  
 MSVOA\_L  
 ClientSampleId :

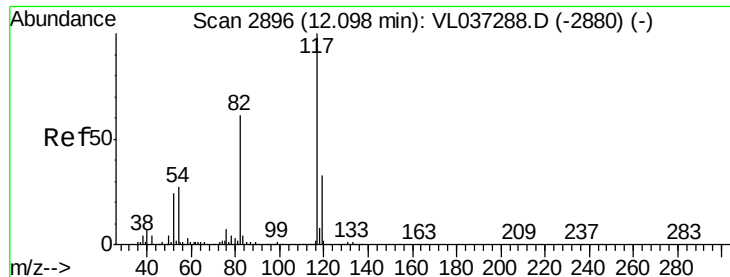
Tot Ion: 57 Resp: 48638  
 Ion Ratio Lower Upper  
 57 100  
 41 60.5 26.6 40.0#  
 56 46.1 25.3 37.9#



#53  
 Toluene  
 Concen: 1.910 ppbv  
 RT: 9.80 min Scan# 2182  
 Delta R.T. -0.01 min  
 Lab File: VL037307.D  
 Acq: 31 Jul 2021 7:18

Tgt Ion: 91 Resp: 654035  
 Ion Ratio Lower Upper  
 91 100  
 92 60.8 48.2 72.2

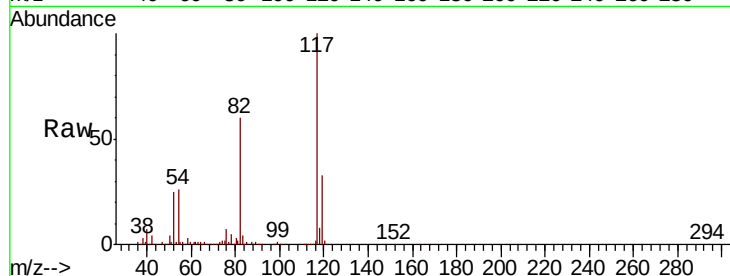




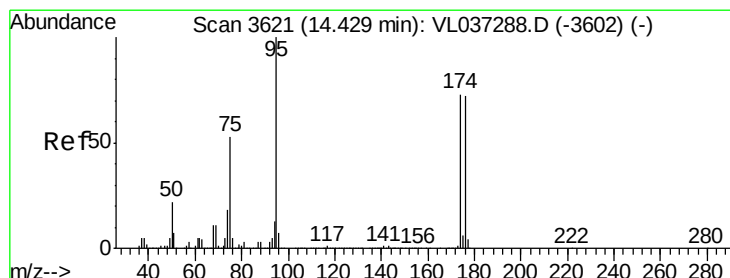
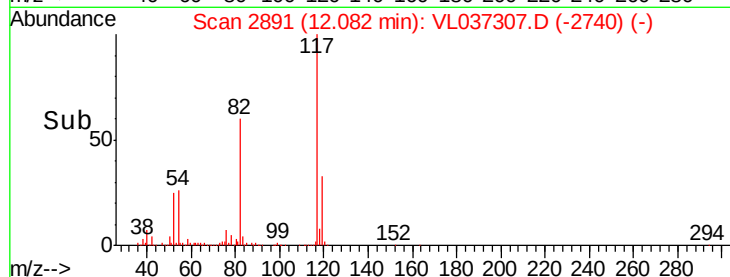
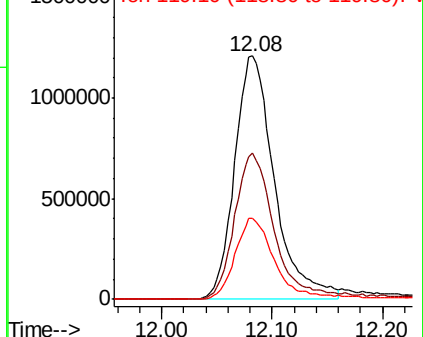
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.08 min Scan# 2891  
Delta R.T. -0.02 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

Instrument :  
MSVOA\_L  
ClientSampleId :

Tot Ion:117 Resp: 3025639  
Ion Ratio Lower Upper  
117 100  
82 63.6 47.2 70.8  
119 34.8 45.8 68.8#

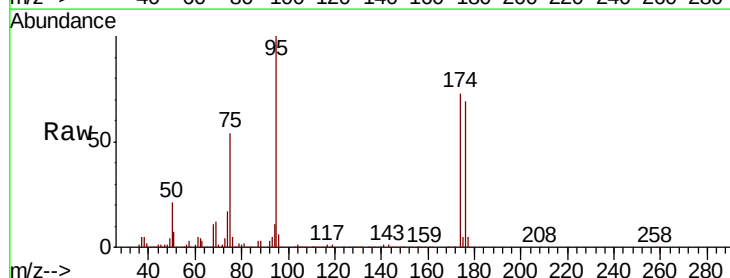


Abundance Ion 117.10 (116.80 to 117.80): V  
Ion 82.10 (81.80 to 82.80): VL0  
Ion 119.10 (118.80 to 119.80): V

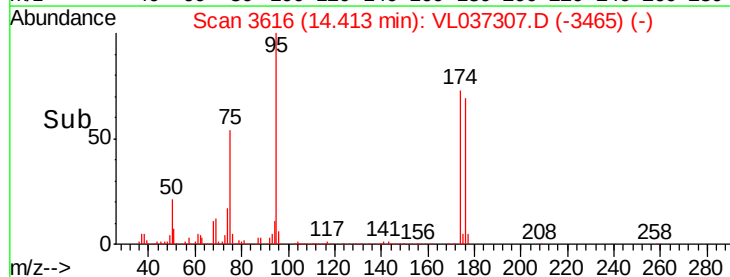
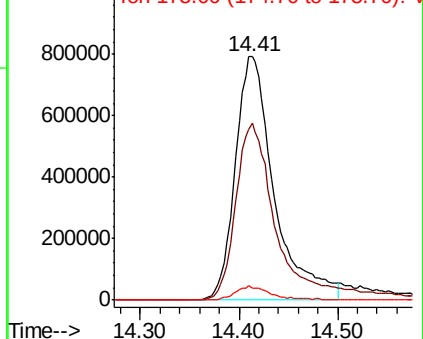


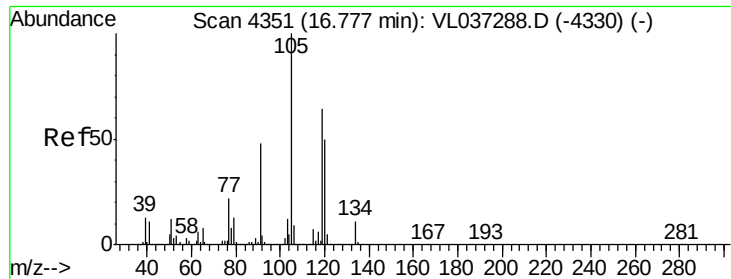
#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.901 ppbv  
RT: 14.41 min Scan# 3616  
Delta R.T. -0.02 min  
Lab File: VL037307.D  
Acq: 31 Jul 2021 7:18

Tgt Ion: 95 Resp: 2179320  
Ion Ratio Lower Upper  
95 100  
174 78.9 59.8 89.6  
175 5.5 4.5 6.7



Abundance Ion 95.10 (94.80 to 95.80): VL0  
Ion 174.00 (173.70 to 174.70): V  
Ion 175.00 (174.70 to 175.70): V





#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.053 ppbv  
 RT: 16.76 min Scan# 4346  
 Delta R.T. -0.02 min  
 Lab File: VL037307.D  
 Acq: 31 Jul 2021 7:18

Instrument :  
 MSVOA\_L  
 ClientSampleId :

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 105   | Resp: | 21770 |
| Ion      | Ratio | Lower | Upper |
| 105      | 100   |       |       |
| 120      | 40.3  | 40.2  | 60.4  |
| 91       | 8.4   | 39.0  | 58.6# |
| 77       | 12.8  | 17.4  | 26.0# |

