

Data File : VL036793.D  
Acq On : 12 Apr 2021 18:35  
Operator : SY/AP  
Sample : M1877-08  
Misc : 400mL/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-5(2021)

Quant Time: Apr 12 19:35:08 2021  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL032521AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LThu Mar 25 09:42:40 2021  
QLast Update : Thu Mar 25 09:42:40 2021  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 1409257  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.19  | 114  | 3391861  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.10 | 117  | 2699542  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.43  | 95    | 1692943  | 7.87     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 78.70% |

| Target Compounds               |      |     |          |         |        | Qvalue |
|--------------------------------|------|-----|----------|---------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.04 | 85  | 14916    | 0.065   | ppbv   | 100    |
| 3) Chlorodifluoromethane       | 2.99 | 51  | 60495    | 0.230   | ppbv   | 95     |
| 4) Chloromethane               | 3.14 | 50  | 48597    | 0.523   | ppbv   | 94     |
| 9) Propene                     | 3.02 | 41  | 32015    | 0.381   | ppbv # | 76     |
| 10) Heptane                    | 8.13 | 43  | 21416    | 0.100   | ppbv # | 28     |
| 11) Trichlorofluoromethane     | 3.95 | 101 | 42767    | 0.183   | ppbv   | 97     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.48 | 101 | 5743     | 0.038   | ppbv # | 17     |
| 13) Ethanol                    | 3.62 | 45  | 1086390  | 108.685 | ppbv   | 93     |
| 15) Acetone                    | 3.85 | 43  | 10646910 | 76.760  | ppbv   | 100    |
| 16) 1,3-Butadiene              | 3.31 | 39  | 4427     | 0.046   | ppbv # | 38     |
| 19) Isopropyl Alcohol          | 3.99 | 45  | 2752753  | 36.078  | ppbv   | 99     |
| 20) Methylene Chloride         | 4.35 | 84  | 2769627  | 42.648  | ppbv   | 92     |
| 21) Allyl Chloride             | 4.40 | 41  | 4630     | 0.042   | ppbv # | 18     |
| 23) Vinyl Acetate              | 5.06 | 43  | 278642   | 1.174   | ppbv # | 1      |
| 25) Ethyl Acetate              | 5.69 | 43  | 3213131  | 9.744   | ppbv # | 90     |
| 26) Hexane                     | 5.69 | 57  | 2758760  | 18.028  | ppbv # | 63     |
| 31) cis-1,2-Dichloroethene     | 5.68 | 61  | 145054   | 0.980   | ppbv # | 27     |
| 34) 2-Butanone                 | 5.25 | 43  | 33962    | 0.205   | ppbv # | 54     |
| 36) Benzene                    | 6.90 | 78  | 85373    | 0.273   | ppbv   | 93     |
| 39) 1,2-Dichloropropane        | 7.19 | 63  | 878881   | 6.926   | ppbv # | 24     |
| 40) 1,4-Dioxane                | 7.86 | 88  | 1556     | 0.053   | ppbv # | 1      |
| 41) Tetrahydrofuran            | 6.32 | 42  | 28816    | 0.377   | ppbv # | 41     |
| 43) Methyl Methacrylate        | 8.02 | 69  | 744267   | 7.085   | ppbv   | 98     |
| 44) 2,2,4-Trimethylpentane     | 7.88 | 57  | 1475839  | 2.681   | ppbv   | 98     |
| 53) Toluene                    | 9.82 | 91  | 129030   | 0.387   | ppbv   | 98     |

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

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Instrument :

MSVOA\_L

ClientSampleId :

UP-SG-5(2021)

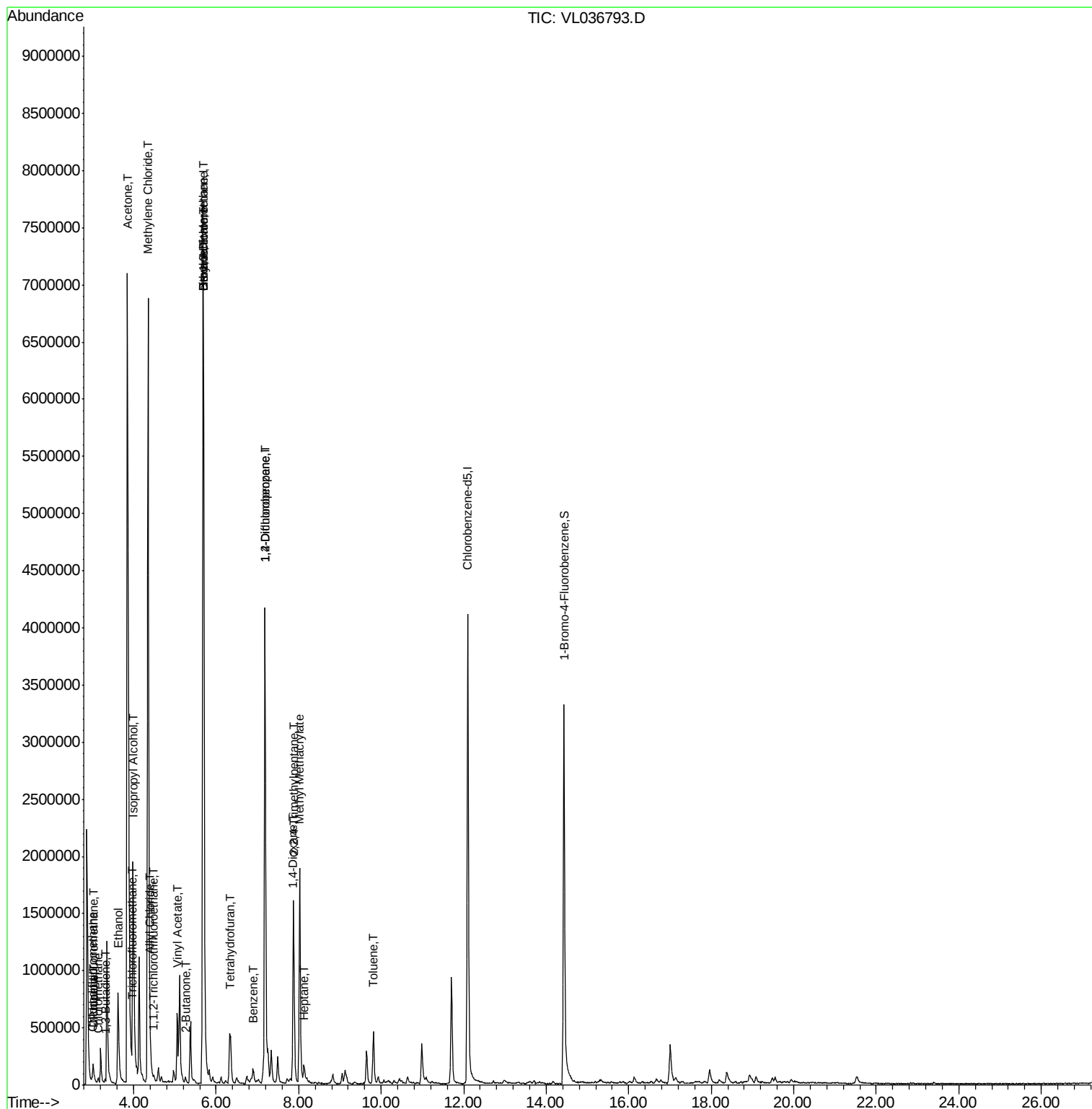
Quant Time: Apr 12 19:35:08 2021

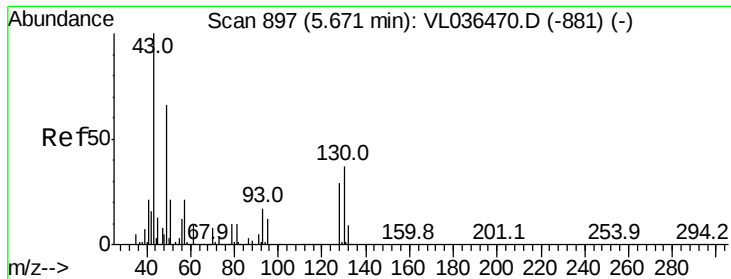
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL032521AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Mar 25 09:42:40 2021

QLast Update : Thu Mar 25 09:42:40 2021

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.00 min

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Instrument :

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ClientSampleId :

UP-SG-5(2021)

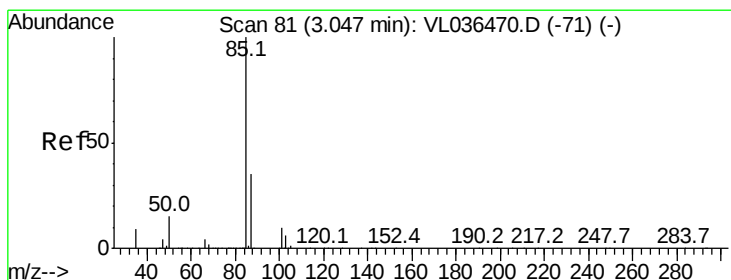
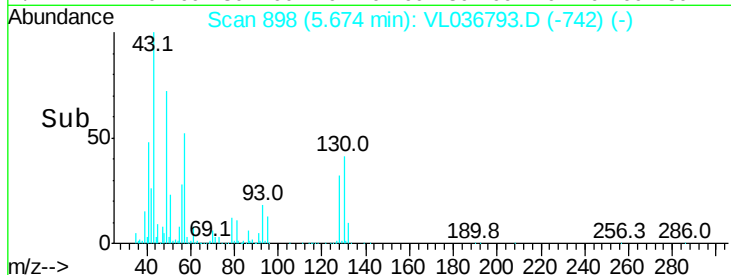
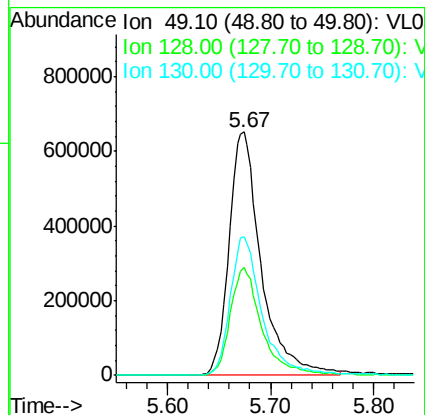
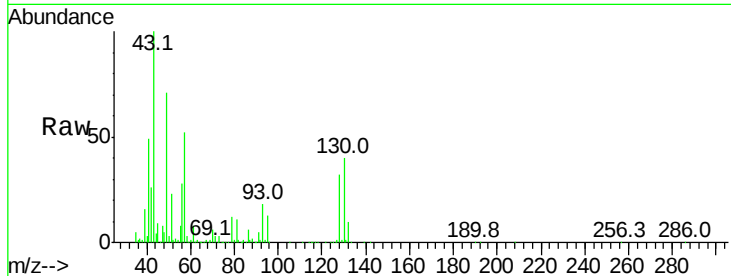
Tgt Ion: 49 Resp: 1409257

Ion Ratio Lower Upper

49 100

128 44.2 23.5 70.6

130 57.7 29.1 87.4



#2

Dichlorodifluoromethane

Concen: 0.065 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.00 min

Lab File: VL036793.D

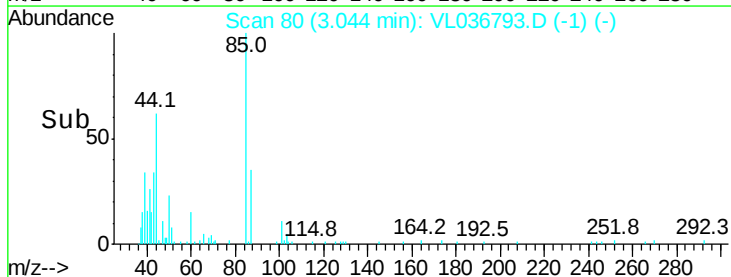
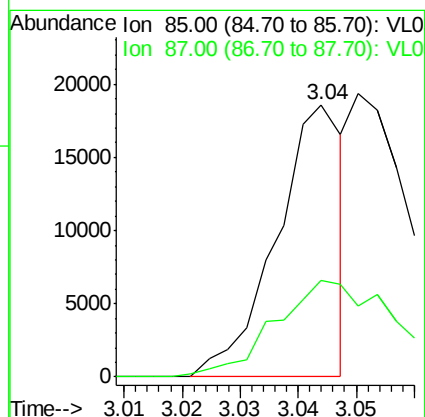
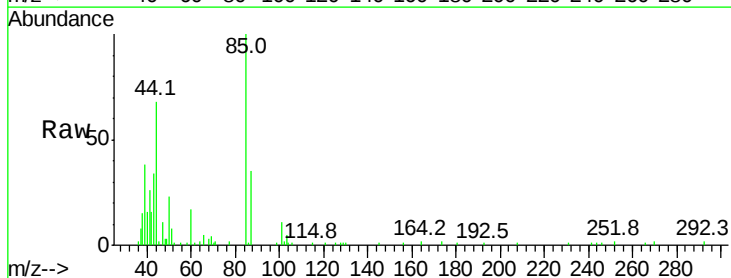
Acq: 12 Apr 2021 18:35

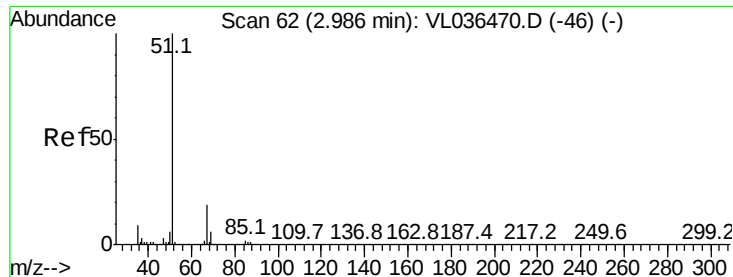
Tgt Ion: 85 Resp: 14916

Ion Ratio Lower Upper

85 100

87 34.5 27.8 41.8





#3

Chlorodifluoromethane

Concen: 0.230 ppbv

RT: 2.99 min Scan# 64

Delta R.T. 0.01 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Instrument :

MSVOA\_L

ClientSampleId :

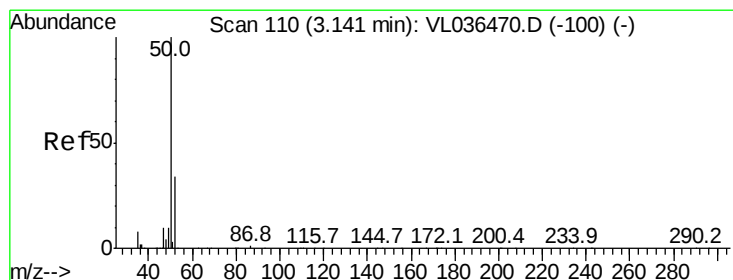
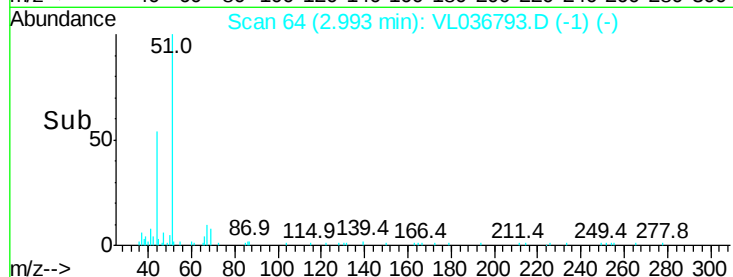
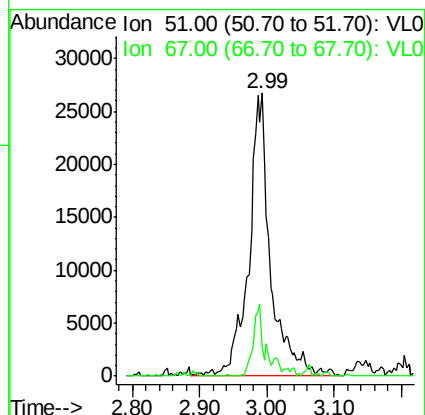
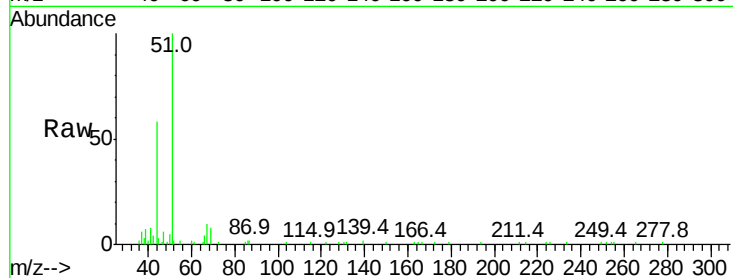
UP-SG-5(2021)

Tgt Ion: 51 Resp: 60495

Ion Ratio Lower Upper

51 100

67 16.0 14.7 22.1



#4

Chloromethane

Concen: 0.523 ppbv

RT: 3.14 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL036793.D

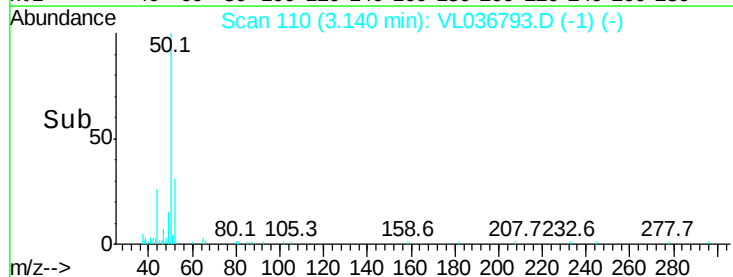
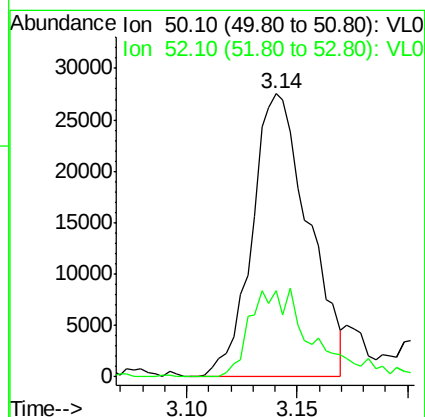
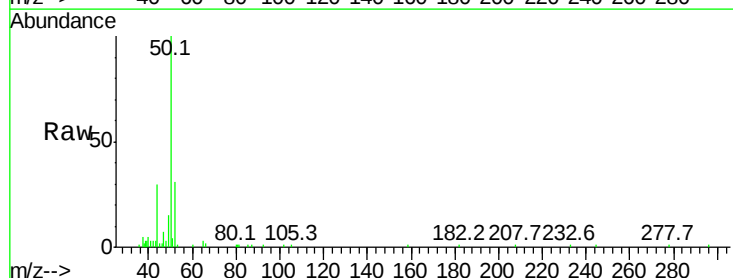
Acq: 12 Apr 2021 18:35

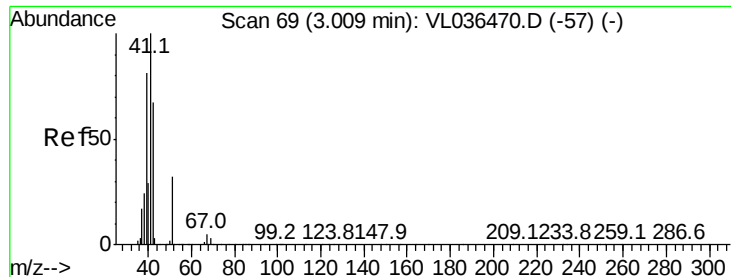
Tgt Ion: 50 Resp: 48597

Ion Ratio Lower Upper

50 100

52 30.5 27.0 40.6





#9

Propene

Concen: 0.381 ppbv

RT: 3.02 min Scan# 72

Delta R.T. 0.01 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Instrument :

MSVOA\_L

ClientSampleId :

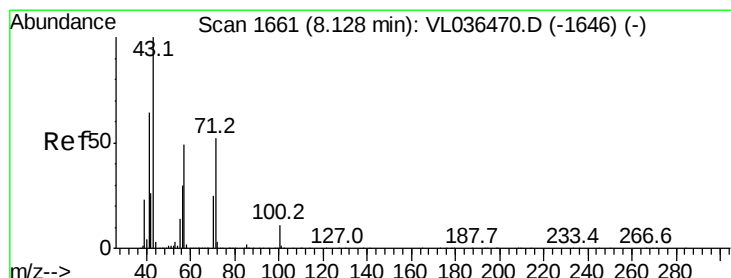
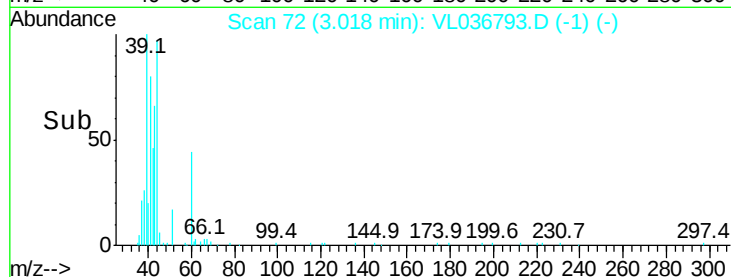
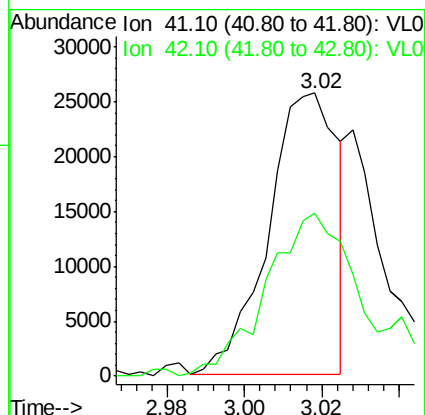
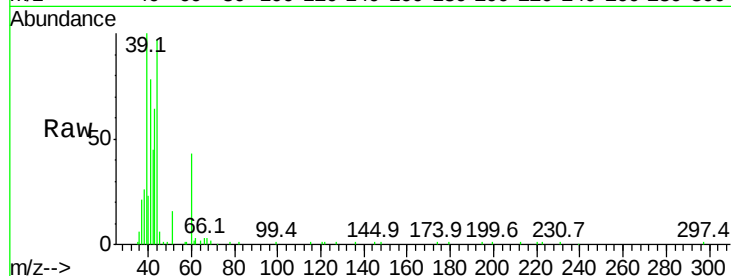
UP-SG-5(2021)

Tgt Ion: 41 Resp: 32015

Ion Ratio Lower Upper

41 100

42 91.1 57.0 85.4#



#10

Heptane

Concen: 0.100 ppbv

RT: 8.13 min Scan# 1661

Delta R.T. -0.00 min

Lab File: VL036793.D

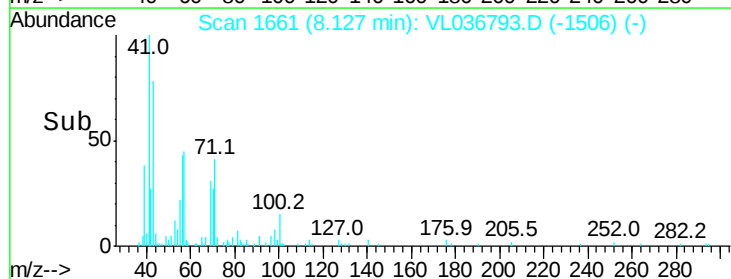
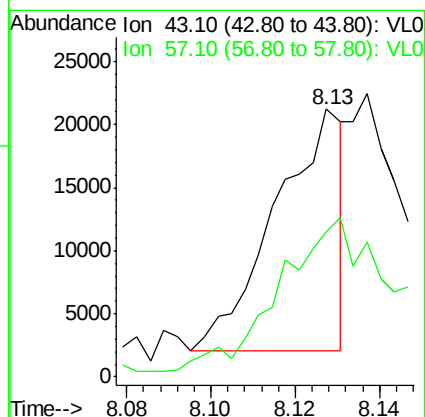
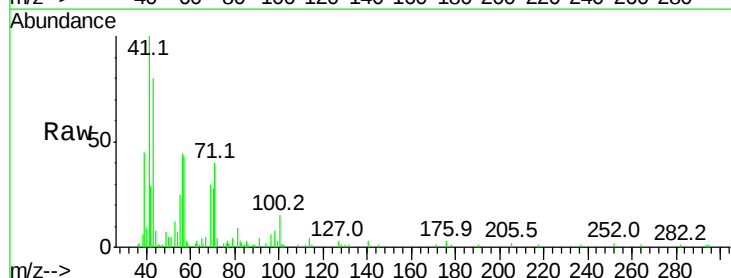
Acq: 12 Apr 2021 18:35

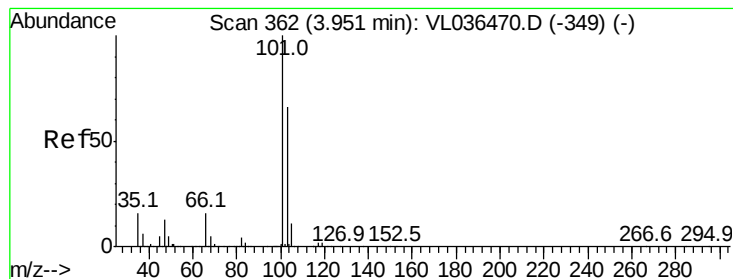
Tgt Ion: 43 Resp: 21416

Ion Ratio Lower Upper

43 100

57 0.0 39.0 58.6#





#11

Trichlorofluoromethane

Concen: 0.183 ppbv

RT: 3.95 min Scan# 362

Delta R.T. -0.00 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Instrument :

MSVOA\_L

ClientSampleId :

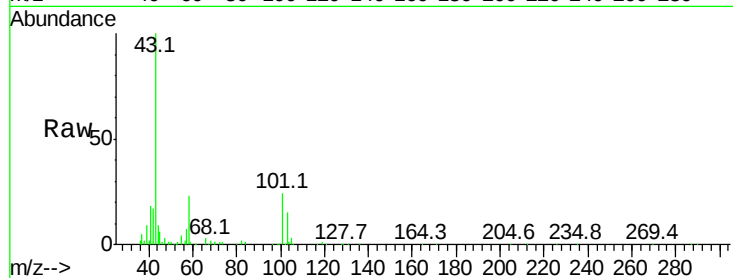
UP-SG-5(2021)

Tgt Ion:101 Resp: 42767

Ion Ratio Lower Upper

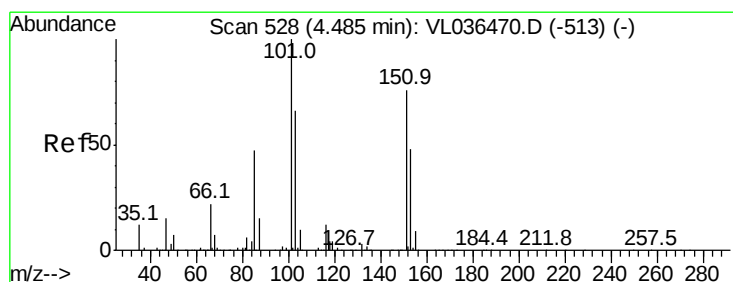
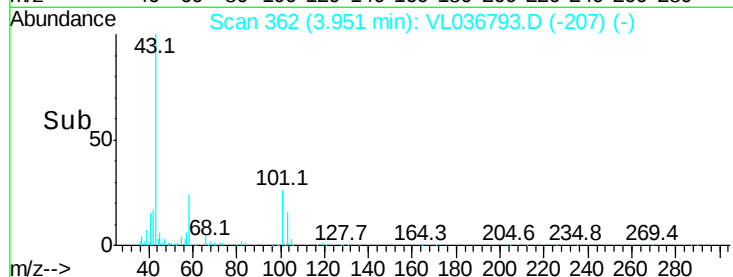
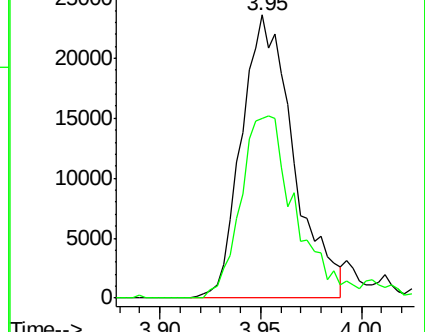
101 100

103 63.5 52.5 78.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.038 ppbv

RT: 4.48 min Scan# 528

Delta R.T. -0.00 min

Lab File: VL036793.D

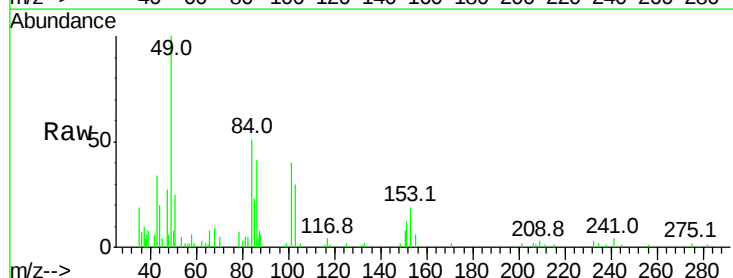
Acq: 12 Apr 2021 18:35

Tgt Ion:101 Resp: 5743

Ion Ratio Lower Upper

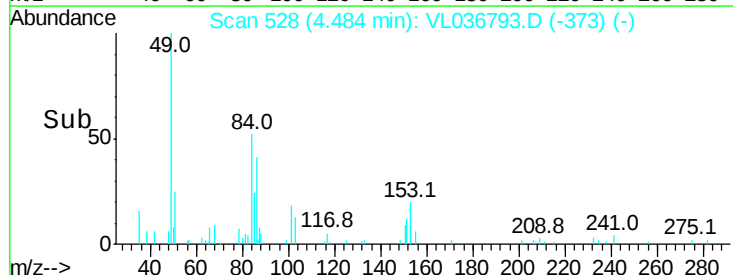
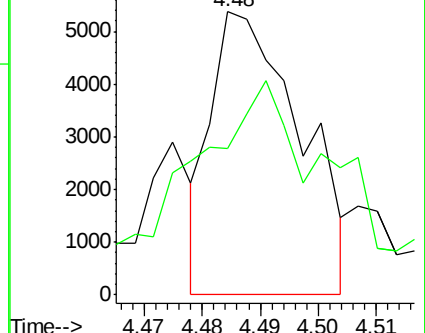
101 100

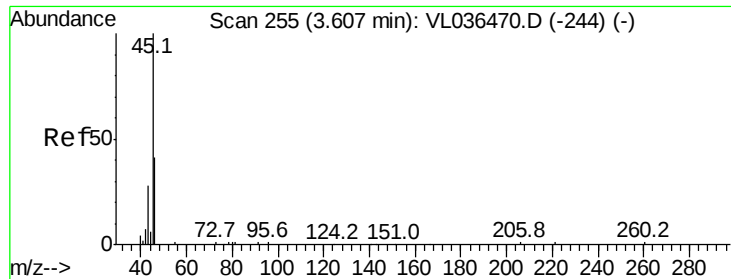
151 147.1 60.9 91.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

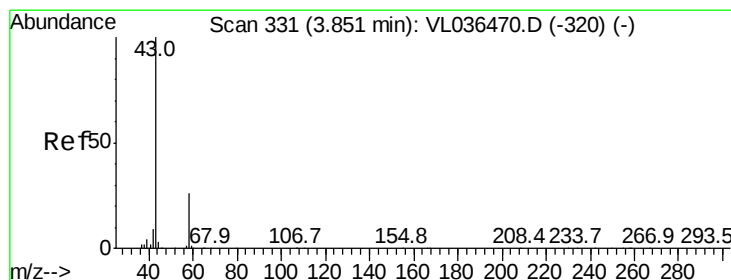
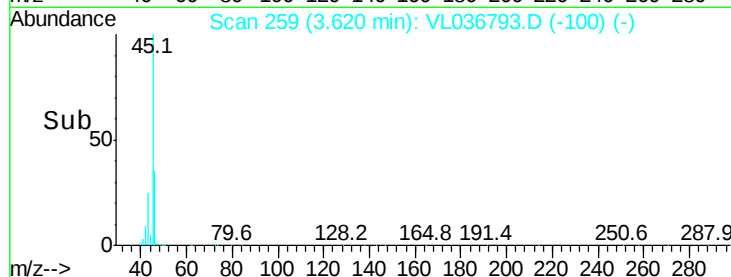
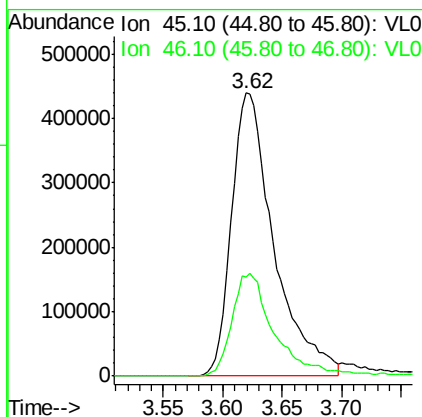
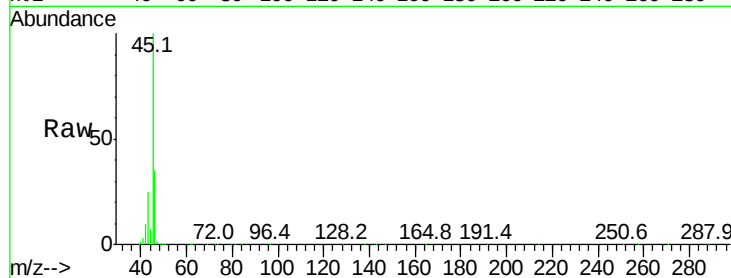




#13  
Ethanol  
Concen: 108.685 ppbv  
RT: 3.62 min Scan# 259  
Delta R.T. 0.01 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

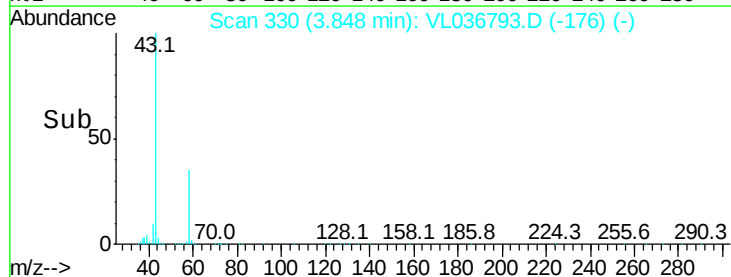
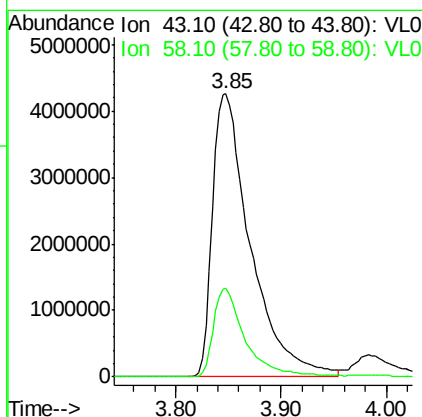
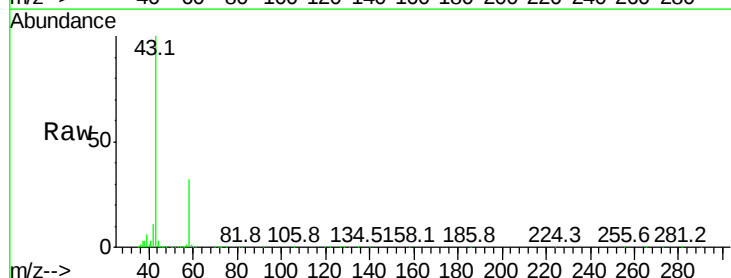
Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-5(2021)

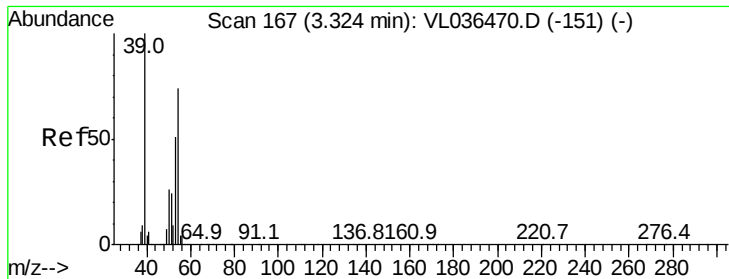
Tgt Ion: 45 Resp: 1086390  
Ion Ratio Lower Upper  
45 100  
46 37.0 16.6 66.2



#15  
Acetone  
Concen: 76.760 ppbv  
RT: 3.85 min Scan# 330  
Delta R.T. -0.00 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

Tgt Ion: 43 Resp: 10646910  
Ion Ratio Lower Upper  
43 100  
58 26.3 21.2 31.8

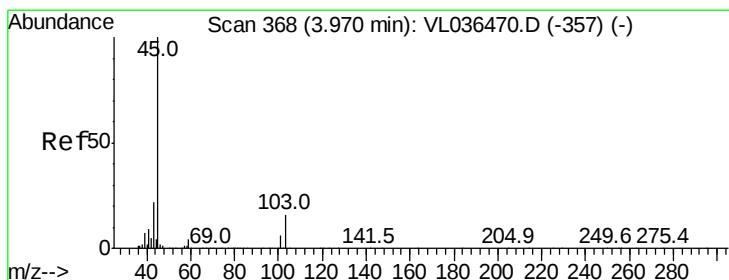
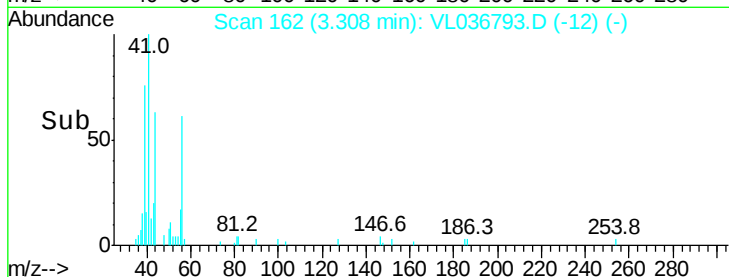
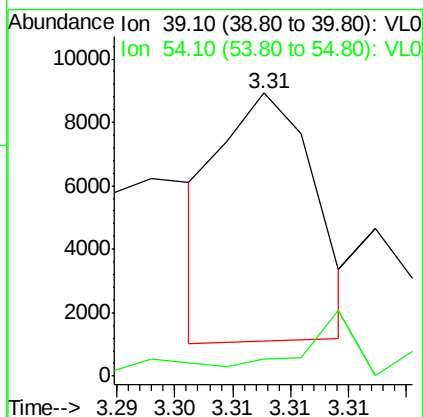
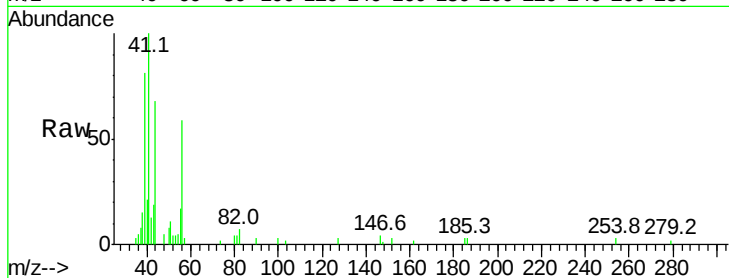




#16  
 1,3-Butadiene  
 Concen: 0.046 ppbv  
 RT: 3.31 min Scan# 162  
 Delta R.T. -0.02 min  
 Lab File: VL036793.D  
 Acq: 12 Apr 2021 18:35

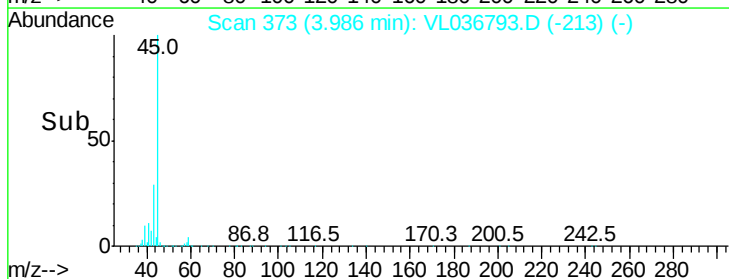
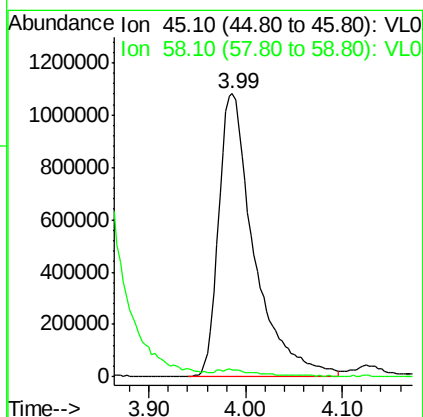
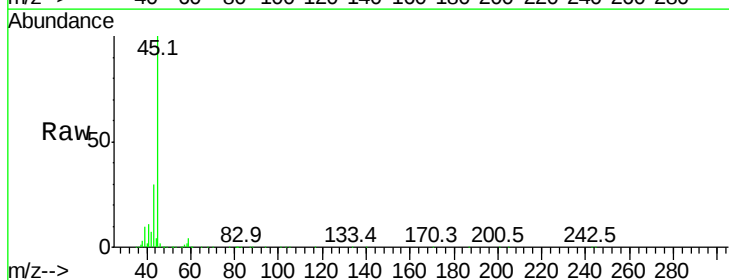
Instrument :  
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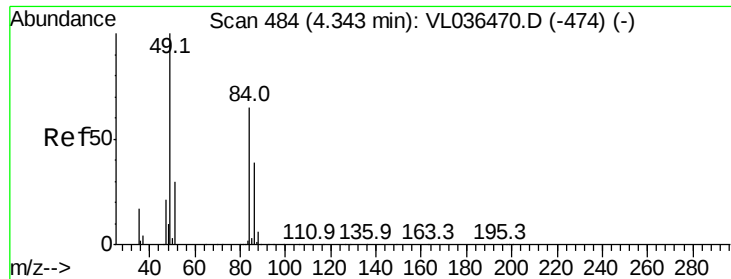
Tgt Ion: 39 Resp: 4427  
 Ion Ratio Lower Upper  
 39 100  
 54 20.9 58.8 88.2#



#19  
 Isopropyl Alcohol  
 Concen: 36.078 ppbv  
 RT: 3.99 min Scan# 373  
 Delta R.T. 0.02 min  
 Lab File: VL036793.D  
 Acq: 12 Apr 2021 18:35

Tgt Ion: 45 Resp: 2752753  
 Ion Ratio Lower Upper  
 45 100  
 58 3.2 2.9 4.3



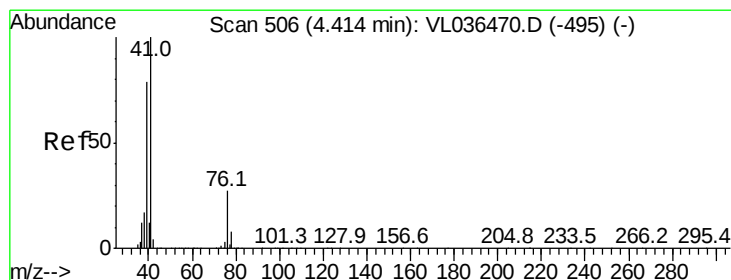
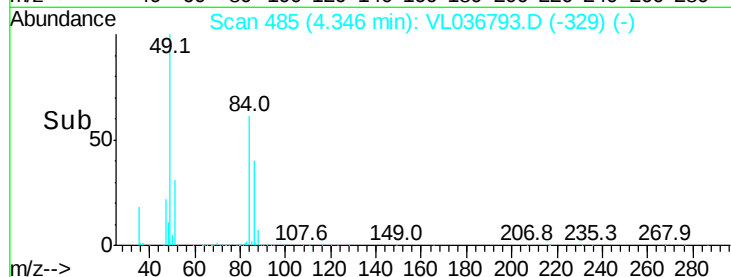
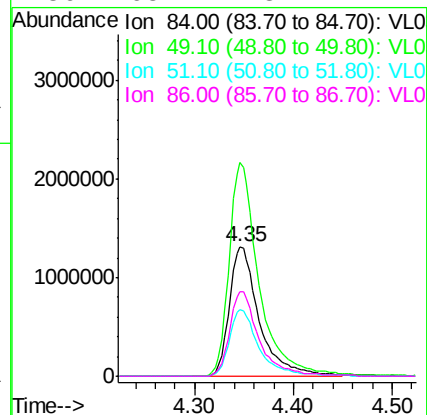
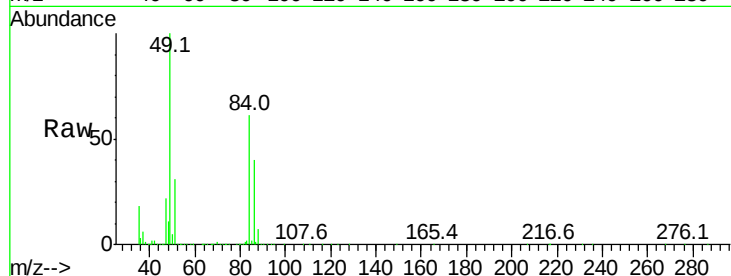


#20  
Methylene Chloride  
Concen: 42.648 ppbv  
RT: 4.35 min Scan# 485  
Delta R.T. 0.00 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-5(2021)

Tgt Ion: 84 Resp: 2769627

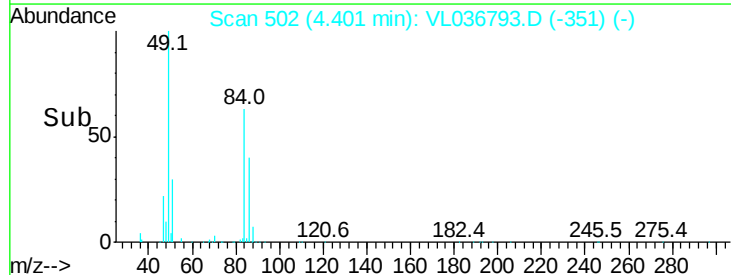
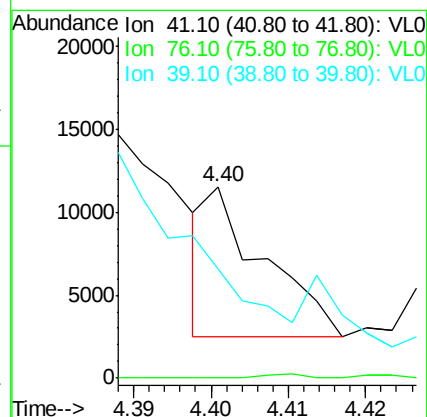
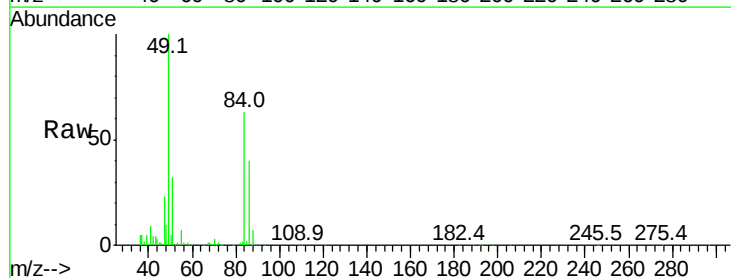
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 84  | 100   |       |       |
| 49  | 165.1 | 122.9 | 184.3 |
| 51  | 51.8  | 36.9  | 55.3  |
| 86  | 65.7  | 48.2  | 72.4  |

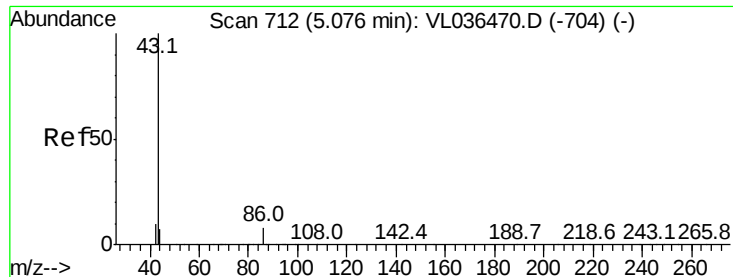


#21  
Allyl Chloride  
Concen: 0.042 ppbv  
RT: 4.40 min Scan# 502  
Delta R.T. -0.01 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

Tgt Ion: 41 Resp: 4630

| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 41  | 100   |       |        |
| 76  | 2.0   | 22.9  | 34.3#  |
| 39  | 0.0   | 67.3  | 100.9# |





#23

Vinyl Acetate

Concen: 1.174 ppbv

RT: 5.06 min Scan# 707

Delta R.T. -0.02 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Instrument :

MSVOA\_L

ClientSampleId :

UP-SG-5(2021)

Tgt Ion: 43 Resp: 278642

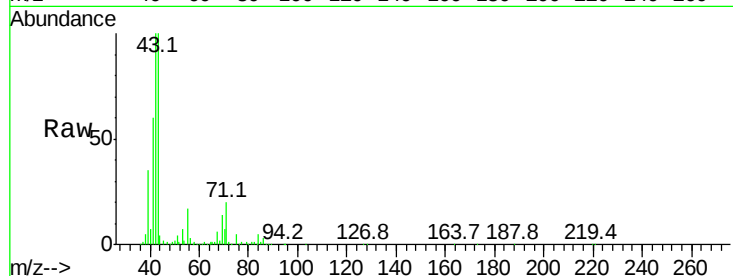
Ion Ratio Lower Upper

43 100

86 2.4 5.4 8.0#

42 101.2 8.5 12.7#

44 2.7 4.6 7.0#

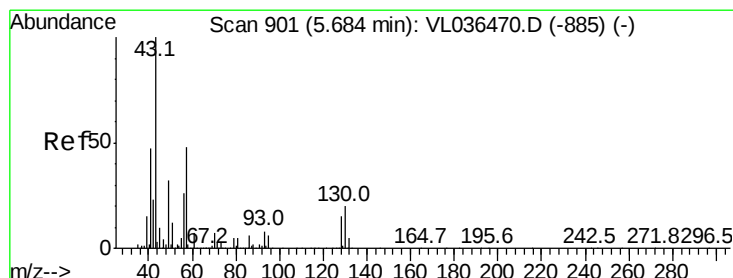
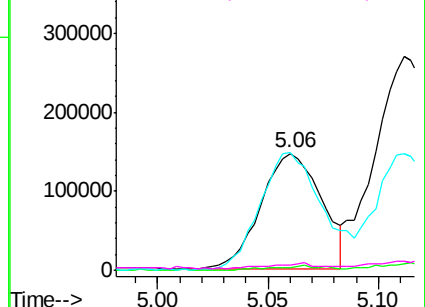
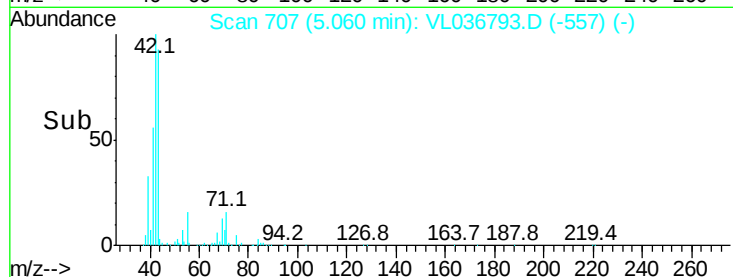


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 9.744 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.00 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Tgt Ion: 43 Resp: 3213131

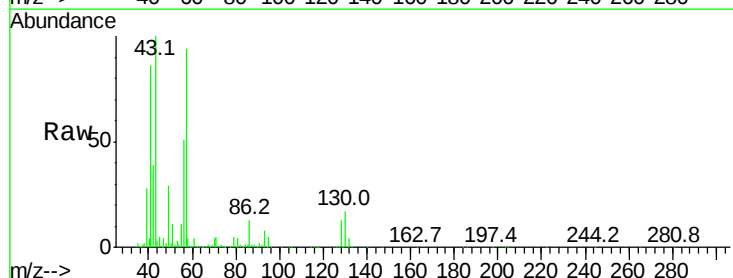
Ion Ratio Lower Upper

43 100

45 5.8 7.9 11.9#

61 5.0 7.4 11.2#

70 4.4 5.1 7.7#

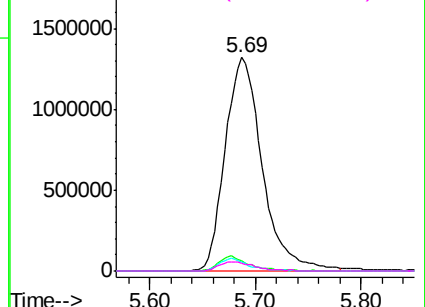
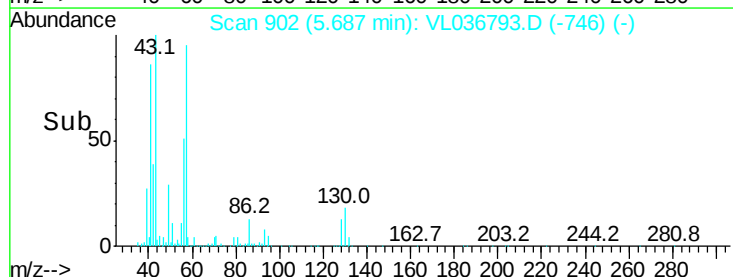


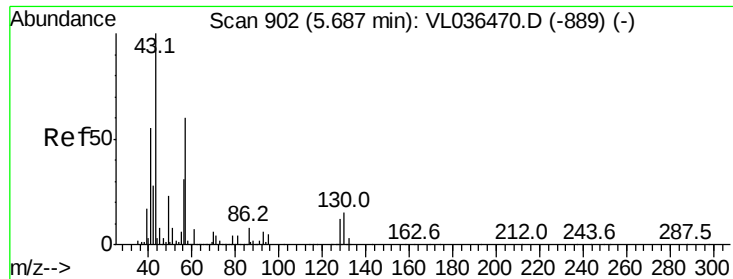
Abundance Ion 43.10 (42.80 to 43.80): VL0

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



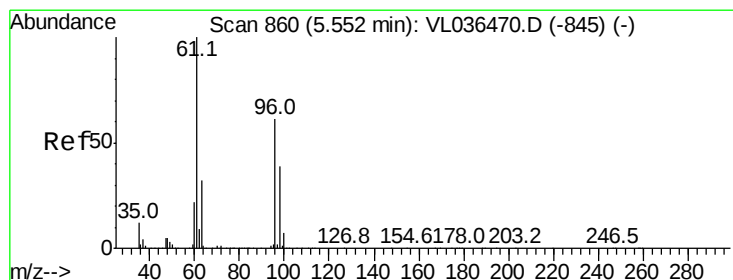
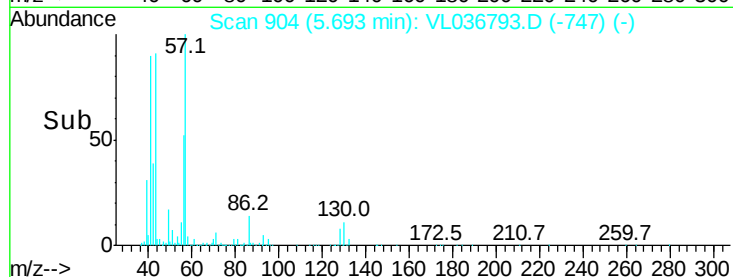
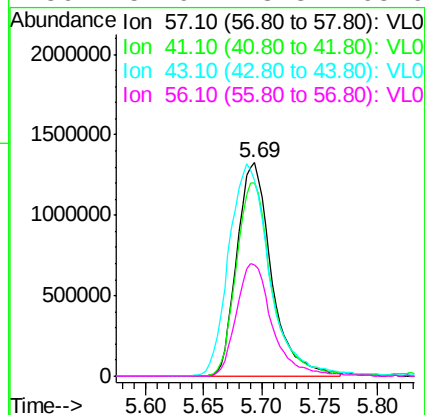
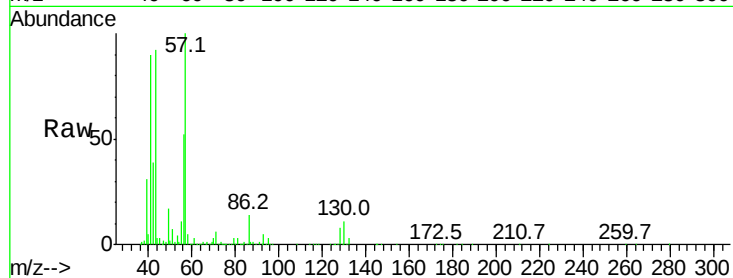


#26  
Hexane  
Concen: 18.028 ppbv  
RT: 5.69 min Scan# 904  
Delta R.T. 0.01 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-5(2021)

Tgt Ion: 57 Resp: 2758760

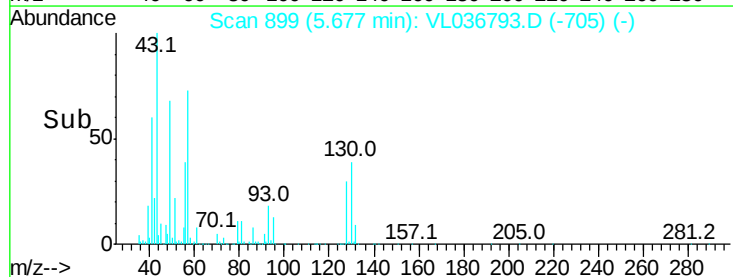
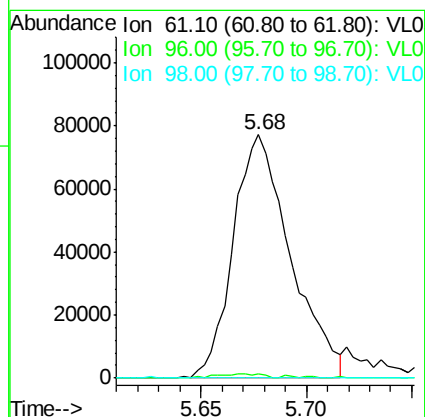
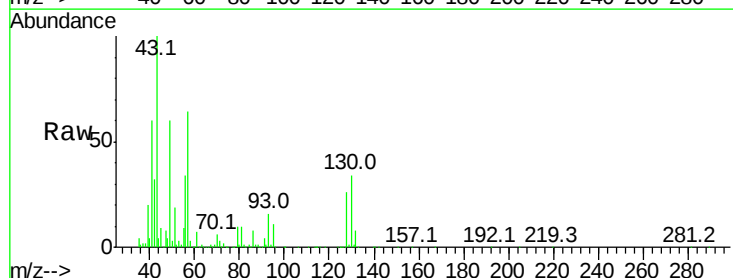
| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 57  | 100   |       |        |
| 41  | 93.7  | 77.2  | 115.8  |
| 43  | 118.1 | 173.8 | 260.6# |
| 56  | 54.9  | 43.8  | 65.6   |

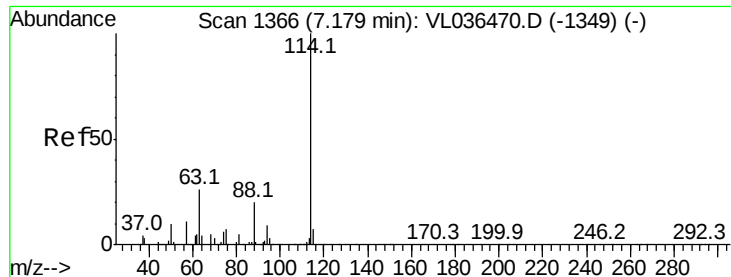


#31  
cis-1,2-Dichloroethene  
Concen: 0.980 ppbv  
RT: 5.68 min Scan# 899  
Delta R.T. 0.13 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

Tgt Ion: 61 Resp: 145054

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 61  | 100   |       |       |
| 96  | 1.4   | 48.7  | 73.1# |
| 98  | 0.0   | 31.4  | 47.0# |

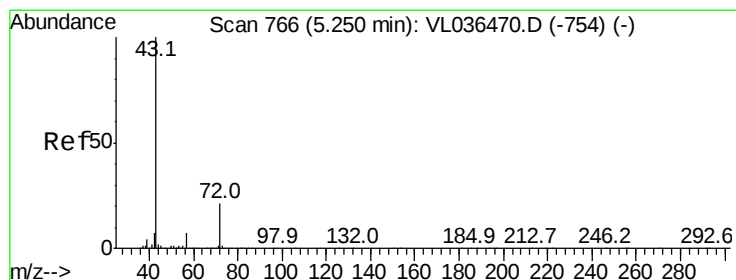
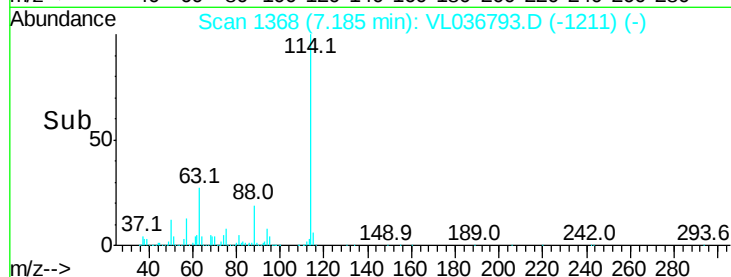
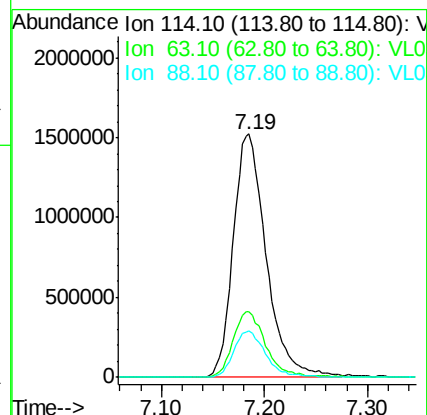
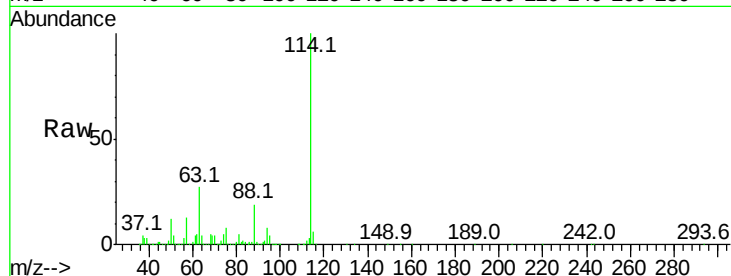




#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.19 min Scan# 1368  
 Delta R.T. 0.01 min  
 Lab File: VL036793.D  
 Acq: 12 Apr 2021 18:35

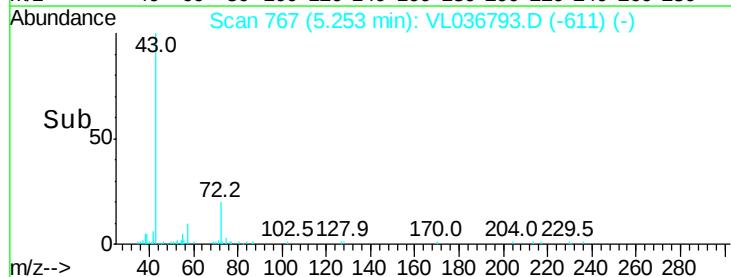
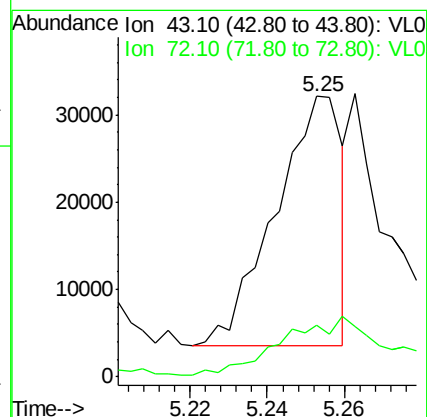
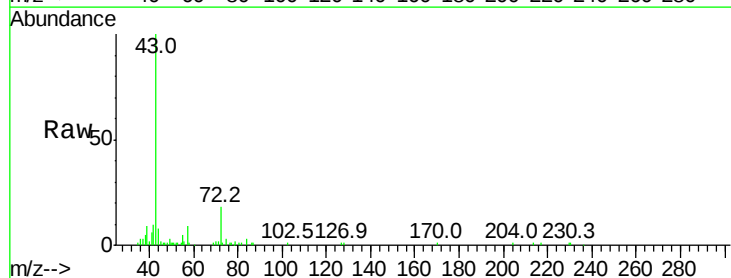
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 UP-SG-5(2021)

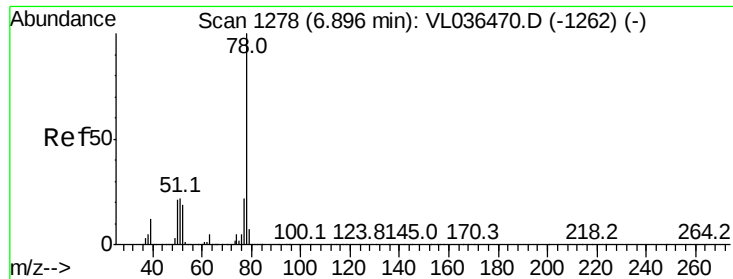
Tgt Ion: 114 Resp: 3391861  
 Ion Ratio Lower Upper  
 114 100  
 63 27.2 22.4 33.6  
 88 18.8 15.4 23.0



#34  
 2-Butanone  
 Concen: 0.205 ppbv  
 RT: 5.25 min Scan# 767  
 Delta R.T. 0.00 min  
 Lab File: VL036793.D  
 Acq: 12 Apr 2021 18:35

Tgt Ion: 43 Resp: 33962  
 Ion Ratio Lower Upper  
 43 100  
 72 43.2 17.0 25.6#

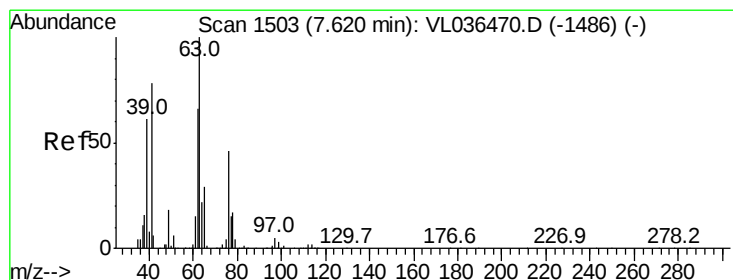
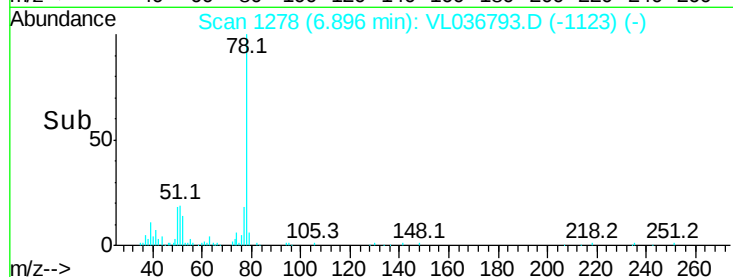
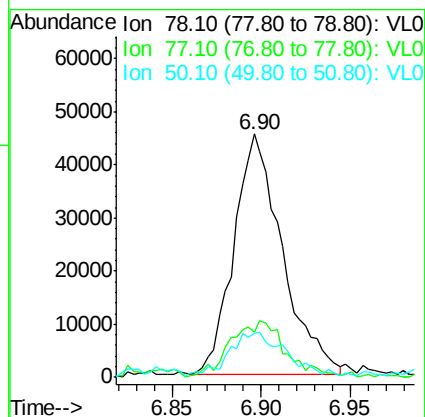
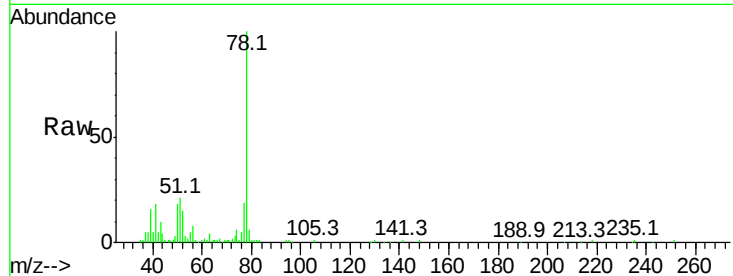




#36  
Benzene  
Concen: 0.273 ppbv  
RT: 6.90 min Scan# 1278  
Delta R.T. -0.00 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

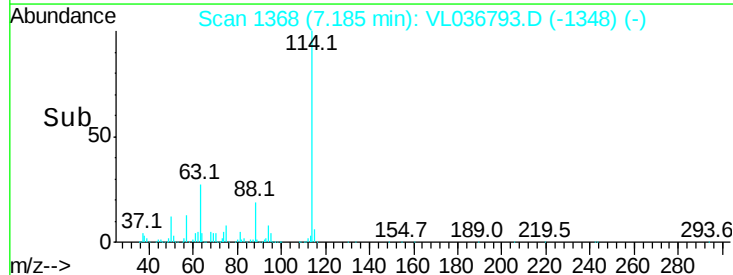
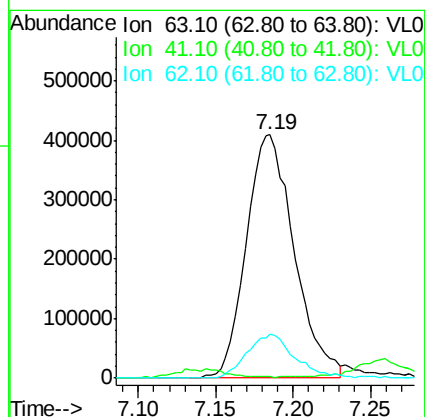
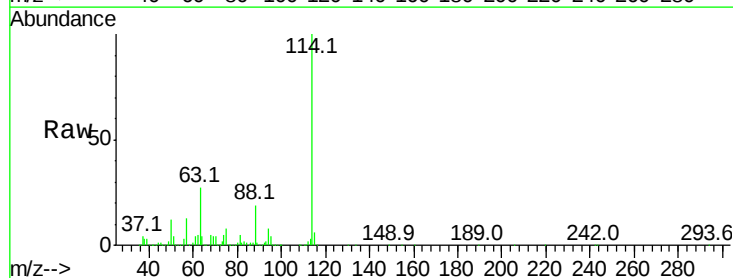
Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-5(2021)

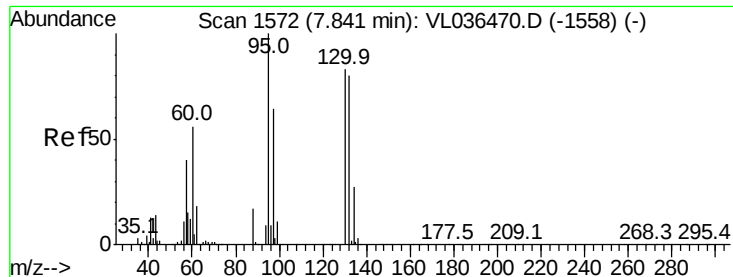
Tgt Ion: 78 Resp: 85373  
Ion Ratio Lower Upper  
78 100  
77 18.3 18.0 27.0  
50 17.8 16.5 24.7



#39  
1,2-Dichloropropane  
Concen: 6.926 ppbv  
RT: 7.19 min Scan# 1368  
Delta R.T. -0.43 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

Tgt Ion: 63 Resp: 878881  
Ion Ratio Lower Upper  
63 100  
41 0.0 62.4 93.6#  
62 17.8 52.8 79.2#





#40

1,4-Dioxane

Concen: 0.053 ppbv

RT: 7.86 min Scan# 1577

Delta R.T. 0.02 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Instrument :

MSVOA\_L

ClientSampleId :

UP-SG-5(2021)

Tgt Ion: 88 Resp: 1556

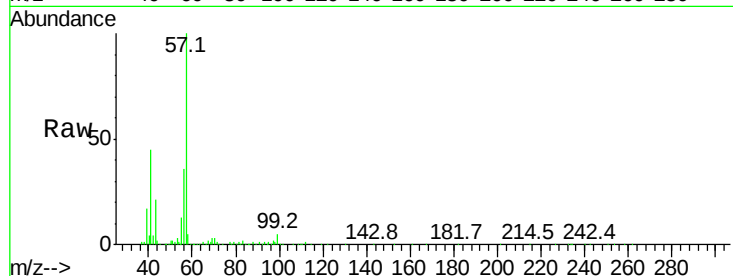
Ion Ratio Lower Upper

88 100

58 0.0 134.1 201.1#

43 0.0 346.6 520.0#

57 0.0 1481.8 2222.8#

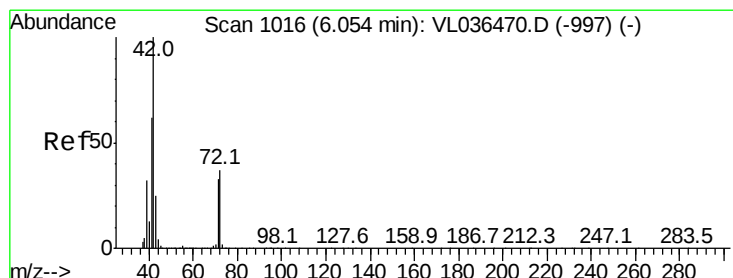
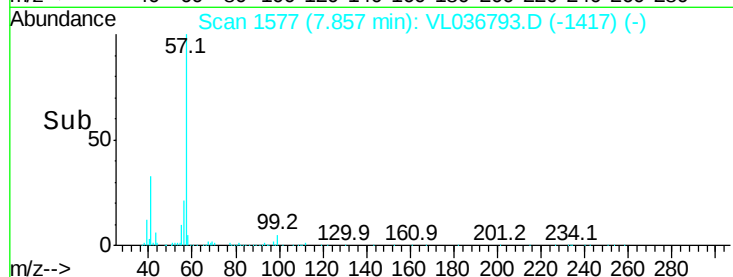
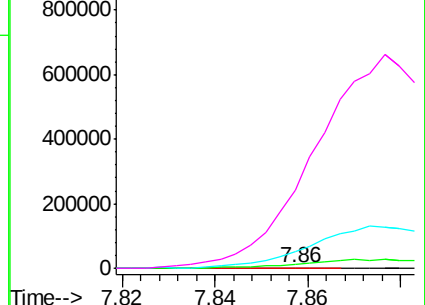


Abundance Ion 88.10 (87.80 to 88.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#41

Tetrahydrofuran

Concen: 0.377 ppbv

RT: 6.32 min Scan# 1100

Delta R.T. 0.27 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

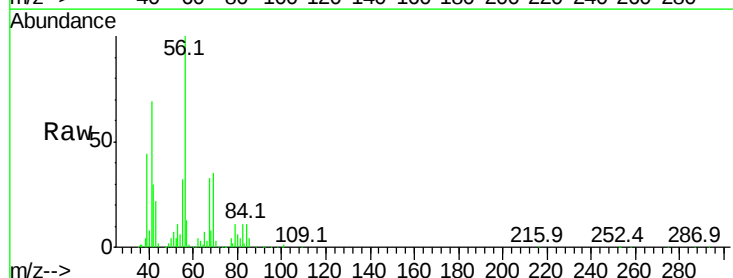
Tgt Ion: 42 Resp: 28816

Ion Ratio Lower Upper

42 100

72 0.0 27.6 41.4#

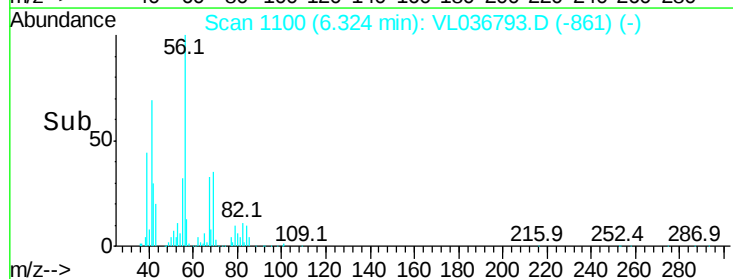
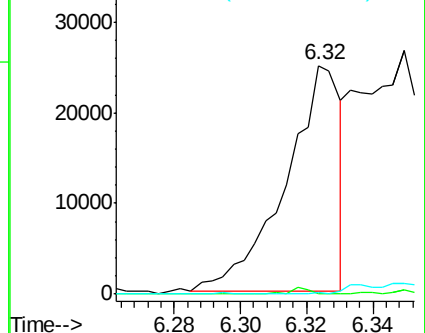
71 0.0 27.0 40.4#

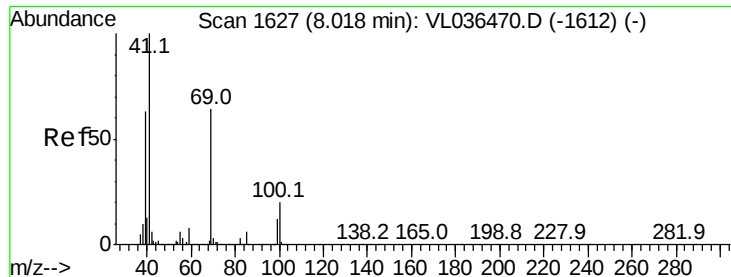


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0

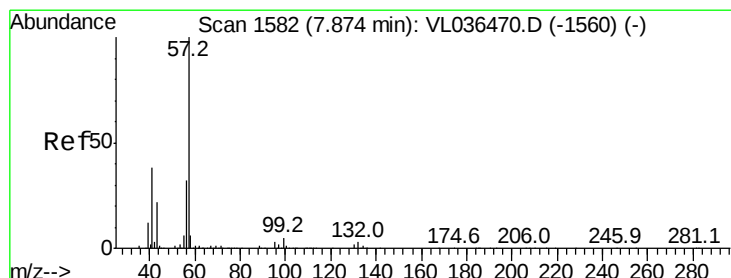
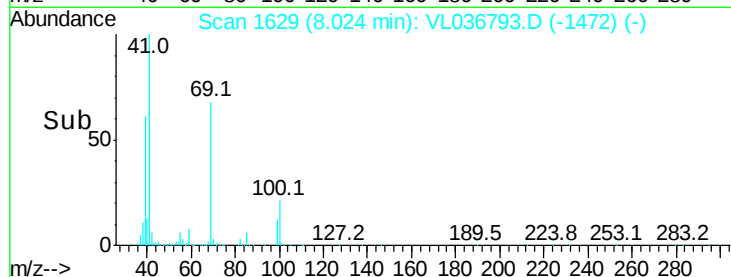
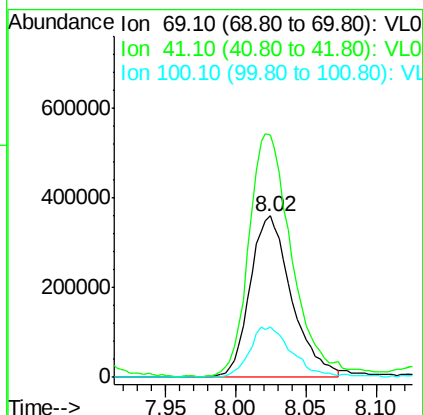
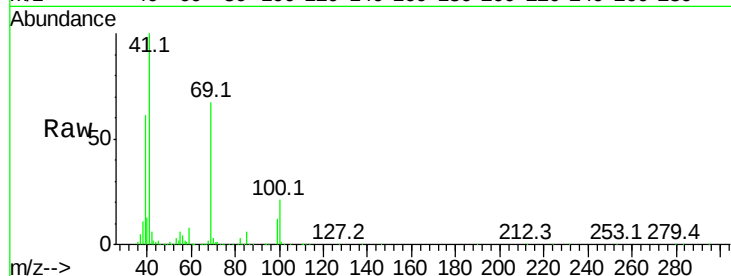




#43  
Methyl Methacrylate  
Concen: 7.085 ppbv  
RT: 8.02 min Scan# 1629  
Delta R.T. 0.01 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

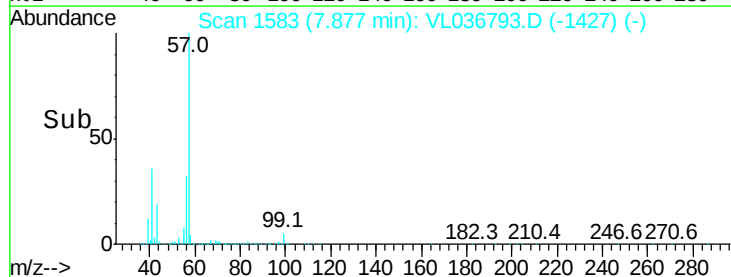
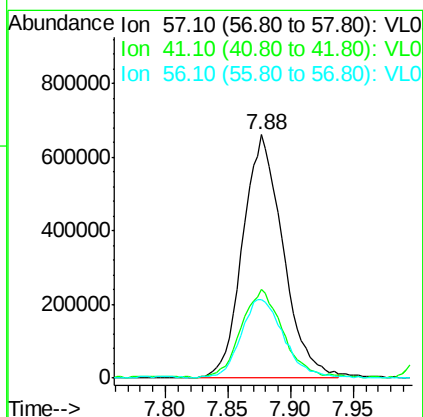
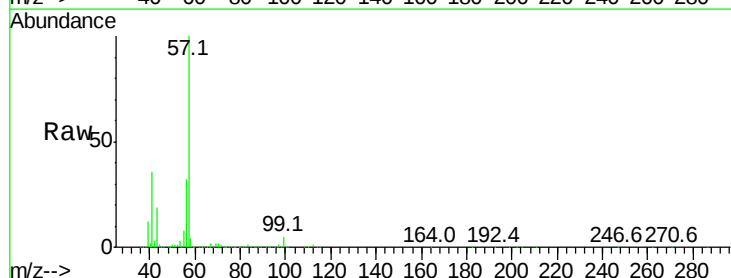
Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-5(2021)

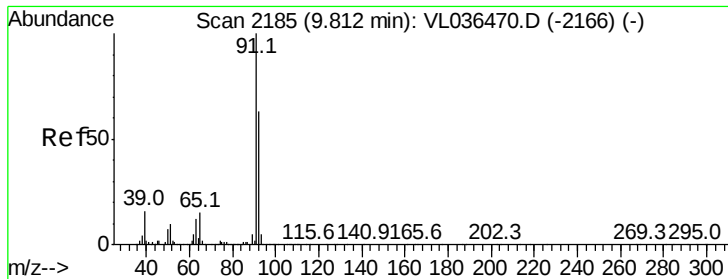
Tgt Ion: 69 Resp: 744267  
Ion Ratio Lower Upper  
69 100  
41 156.5 126.8 190.2  
100 32.7 24.9 37.3



#44  
2,2,4-Trimethylpentane  
Concen: 2.681 ppbv  
RT: 7.88 min Scan# 1583  
Delta R.T. 0.00 min  
Lab File: VL036793.D  
Acq: 12 Apr 2021 18:35

Tgt Ion: 57 Resp: 1475839  
Ion Ratio Lower Upper  
57 100  
41 37.2 28.8 43.2  
56 34.2 26.1 39.1





#53

Toluene

Concen: 0.387 ppbv

RT: 9.82 min Scan# 2187

Delta R.T. 0.01 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Instrument :

MSVOA\_L

ClientSampleId :

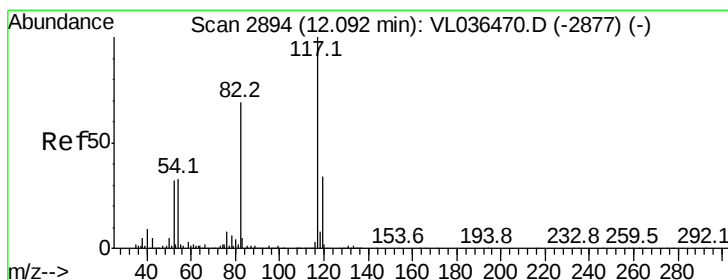
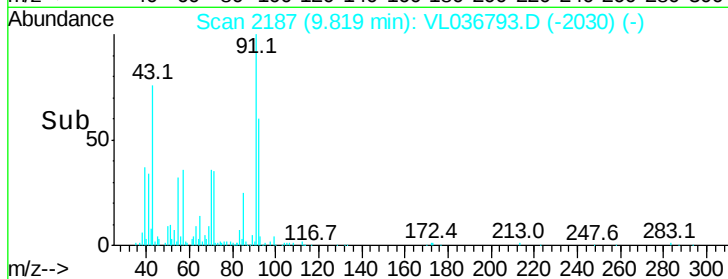
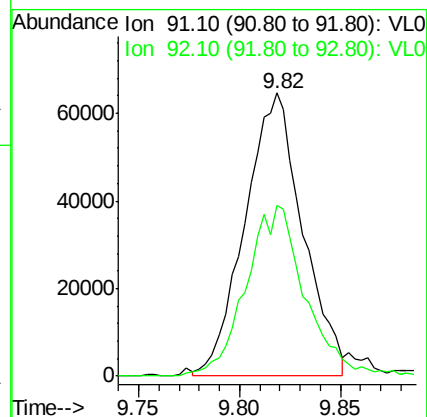
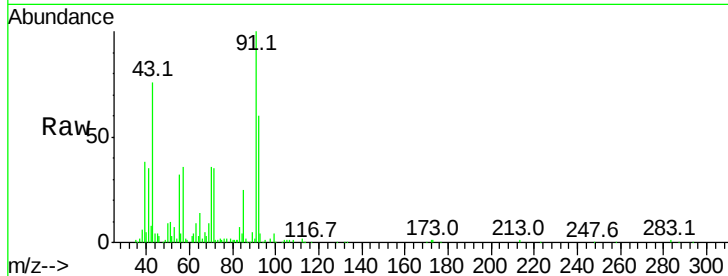
UP-SG-5(2021)

Tgt Ion: 91 Resp: 129030

Ion Ratio Lower Upper

91 100

92 62.3 48.8 73.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2896

Delta R.T. 0.01 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

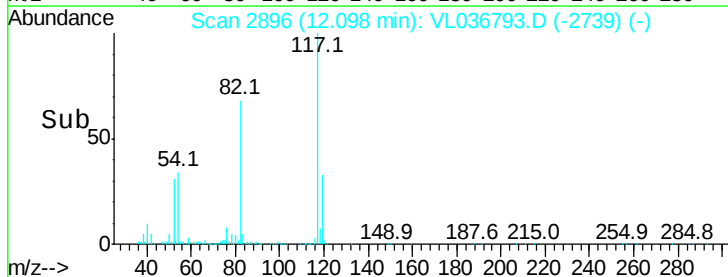
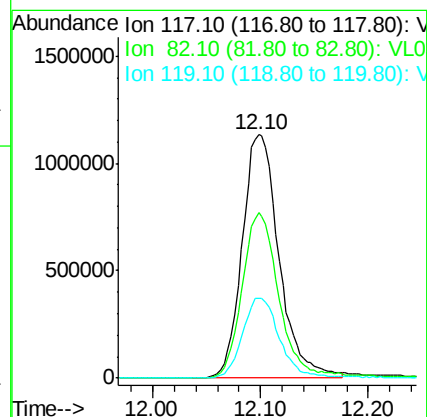
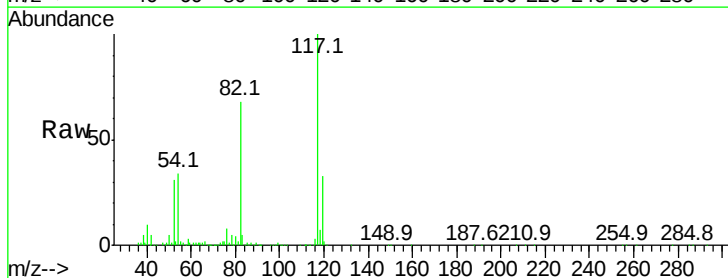
Tgt Ion: 117 Resp: 2699542

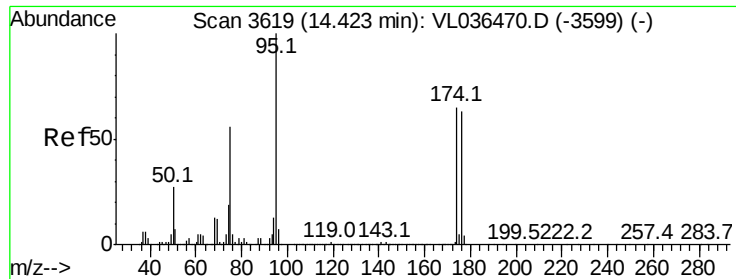
Ion Ratio Lower Upper

117 100

82 69.0 57.4 86.0

119 33.9 47.4 71.0#





#68

1-Bromo-4-Fluorobenzene

Concen: 7.868 ppbv

RT: 14.43 min Scan# 3621

Delta R.T. 0.01 min

Lab File: VL036793.D

Acq: 12 Apr 2021 18:35

Instrument :

MSVOA\_L

ClientSampleId :

UP-SG-5(2021)

Tgt Ion: 95 Resp: 1692943

Ion Ratio Lower Upper

95 100

174 67.0 51.0 76.6

175 4.7 3.9 5.9

