

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040621\  
 Data File : VL036709.D  
 Acq On : 6 Apr 2021 22:27  
 Operator : SY/AP  
 Sample : M1977-09  
 Misc : 400mL/MSVOA L  
 ALS Vial : 11 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 UP-SG-6(2021)

Quant Time: Apr 07 04:28:55 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

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 1267858  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.18  | 114  | 3137356  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.09 | 117  | 2777473  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.42  | 95    | 2161916  | 9.77     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 97.70% |

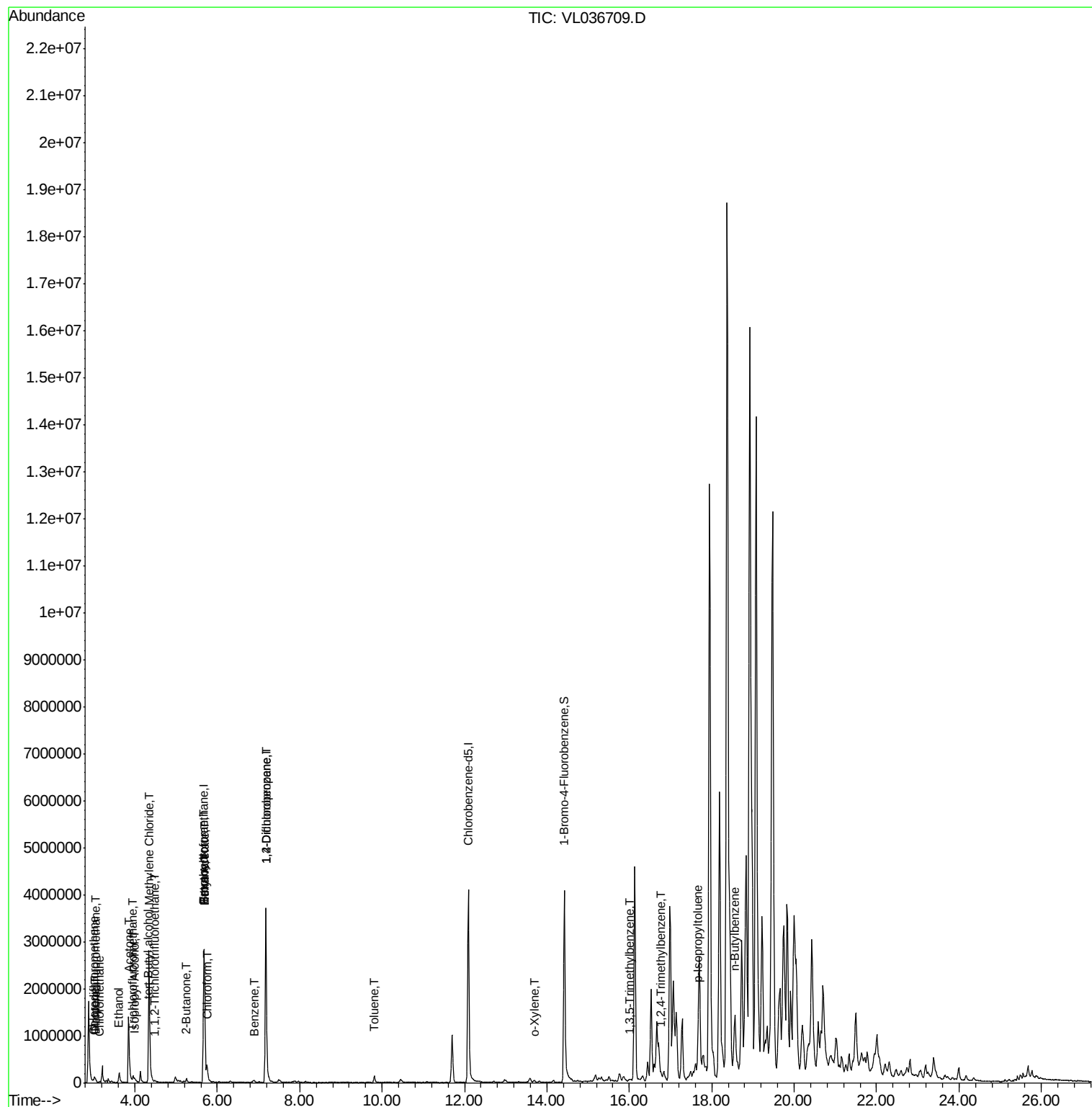
| Target Compounds               | R.T.  | QIon | Response | Conc   | Units  | Ovalue |
|--------------------------------|-------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.05  | 85   | 44089    | 0.213  | ppbv   | 98     |
| 3) Chlorodifluoromethane       | 2.99  | 51   | 71980    | 0.304  | ppbv # | 84     |
| 4) Chloromethane               | 3.14  | 50   | 25703    | 0.307  | ppbv # | 87     |
| 9) Propene                     | 3.01  | 41   | 36661    | 0.485  | ppbv   | 90     |
| 11) Trichlorofluoromethane     | 3.95  | 101  | 77228    | 0.366  | ppbv   | 95     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.48  | 101  | 5349     | 0.040  | ppbv # | 33     |
| 13) Ethanol                    | 3.61  | 45   | 271518   | 30.193 | ppbv   | 95     |
| 15) Acetone                    | 3.84  | 43   | 1916751  | 15.360 | ppbv   | 99     |
| 17) tert-Butyl alcohol         | 4.32  | 59   | 56689    | 0.522  | ppbv # | 83     |
| 19) Isopropyl Alcohol          | 3.99  | 45   | 92277    | 1.344  | ppbv # | 1      |
| 20) Methylene Chloride         | 4.34  | 84   | 1055490  | 18.066 | ppbv   | 90     |
| 25) Ethyl Acetate              | 5.69  | 43   | 551989   | 1.861  | ppbv # | 78     |
| 26) Hexane                     | 5.69  | 57   | 720288   | 5.232  | ppbv # | 48     |
| 29) Chloroform                 | 5.75  | 83   | 209332   | 0.951  | ppbv   | 95     |
| 34) 2-Butanone                 | 5.25  | 43   | 104081   | 0.680  | ppbv # | 89     |
| 36) Benzene                    | 6.89  | 78   | 12383    | 0.043  | ppbv # | 92     |
| 39) 1,2-Dichloropropane        | 7.18  | 63   | 818166   | 6.971  | ppbv # | 23     |
| 41) Tetrahydrofuran            | 5.68  | 42   | 292031   | 4.136  | ppbv # | 55     |
| 53) Toluene                    | 9.81  | 91   | 106471   | 0.346  | ppbv   | 98     |
| 60) o-Xylene                   | 13.70 | 91   | 23601    | 0.069  | ppbv   | 81     |
| 69) p-Isopropyltoluene         | 17.66 | 119  | 23843    | 0.054  | ppbv # | 46     |
| 70) n-Butylbenzene             | 18.56 | 91   | 16780    | 0.037  | ppbv # | 1      |
| 73) 1,3,5-Trimethylbenzene     | 16.00 | 105  | 19274    | 0.055  | ppbv   | 91     |
| 74) 1,2,4-Trimethylbenzene     | 16.77 | 105  | 26081    | 0.070  | ppbv # | 60     |

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

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Misc : 400mL/MSVOA L  
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Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-6(2021)

Quant Time: Apr 07 04:28:55 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# 896

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

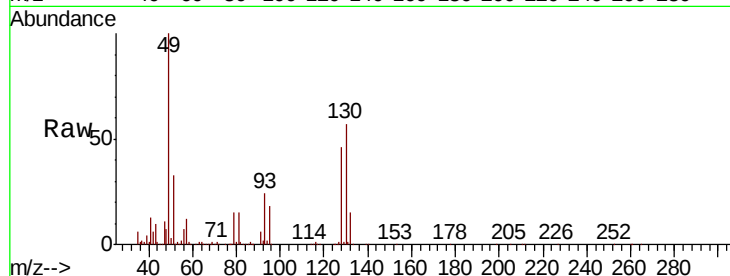
MSVOA\_L

ClientSampleId :

UP-SG-6(2021)

Tot Ion: 49 Resp: 1267858

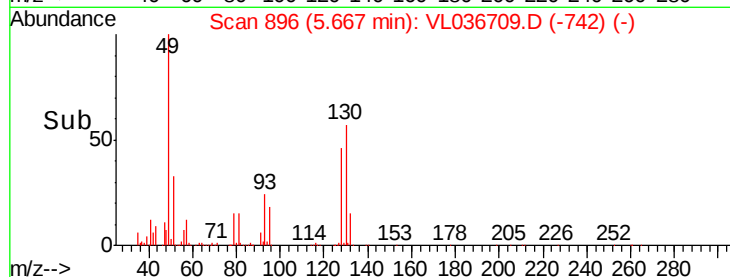
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 49  | 100   |       |       |
| 128 | 47.2  | 23.5  | 70.6  |
| 130 | 60.5  | 29.1  | 87.4  |



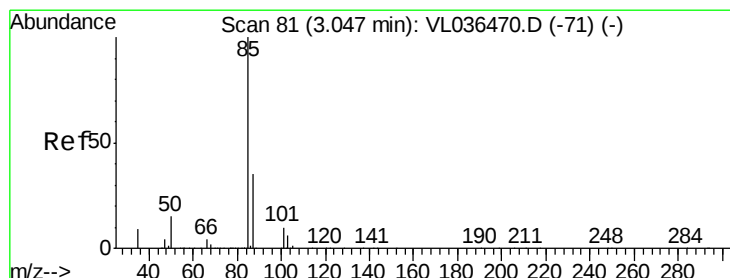
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



Time-->



#2

Dichlorodifluoromethane

Concen: 0.213 ppbv

RT: 3.05 min Scan# 82

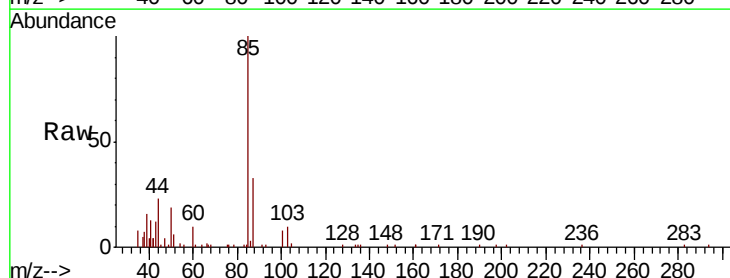
Delta R.T. 0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

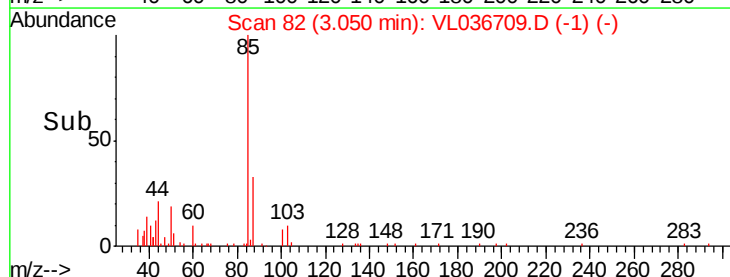
Tgt Ion: 85 Resp: 44089

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 85  | 100   |       |       |
| 87  | 33.5  | 27.8  | 41.8  |



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0



Time-->



#3

Chlorodifluoromethane

Concen: 0.304 ppbv

RT: 2.99 min Scan# 63

Delta R.T. 0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

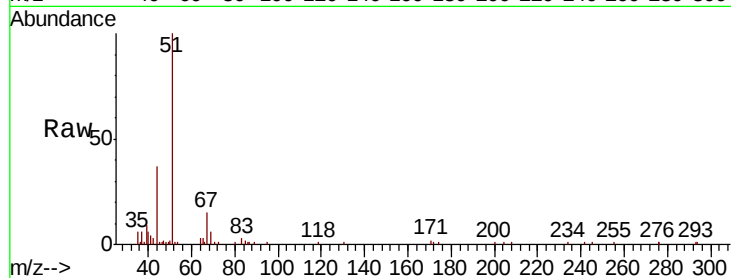
UP-SG-6(2021)

Tot Ion: 51 Resp: 71980

Ion Ratio Lower Upper

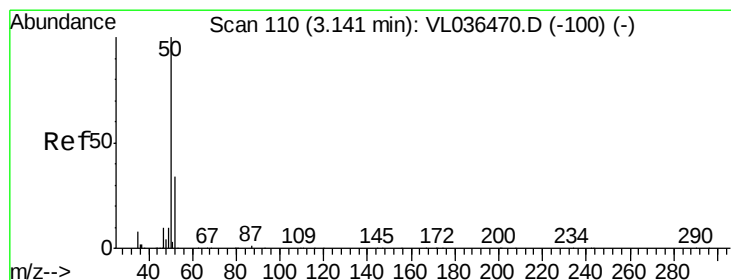
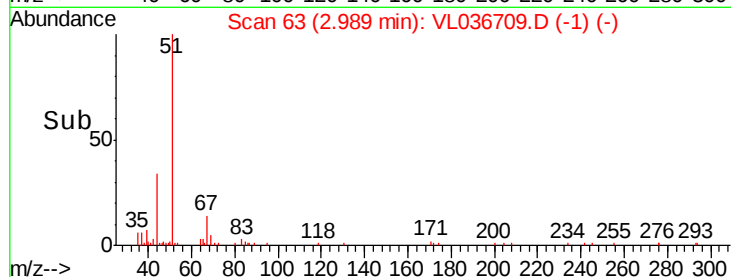
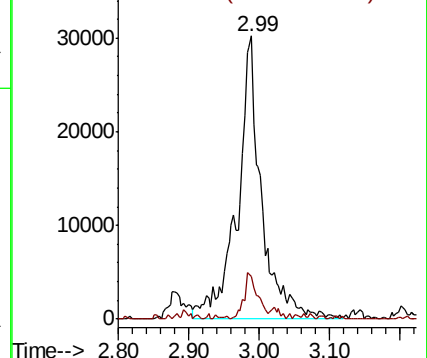
51 100

67 11.3 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.307 ppbv

RT: 3.14 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL036709.D

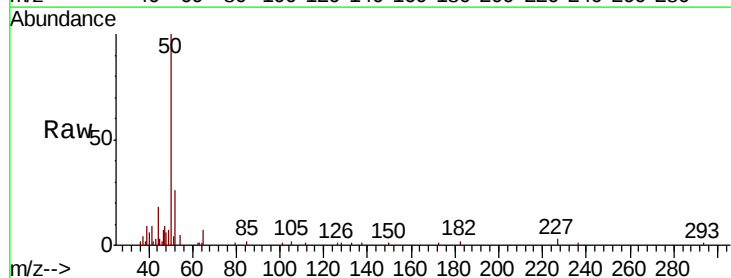
Acq: 6 Apr 2021 22:27

Tgt Ion: 50 Resp: 25703

Ion Ratio Lower Upper

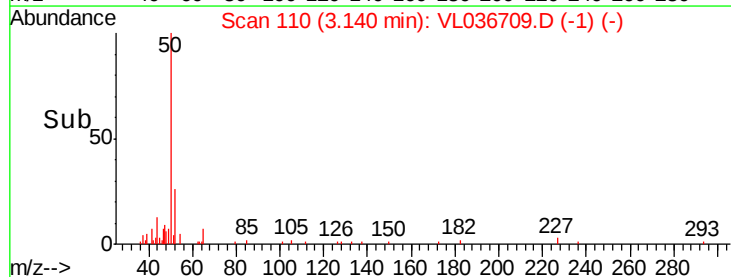
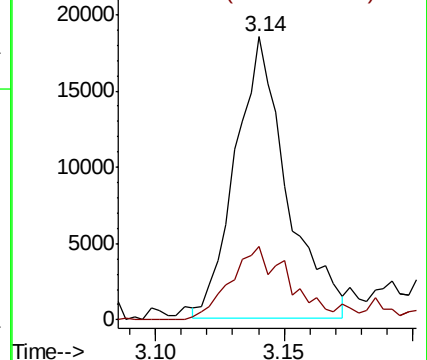
50 100

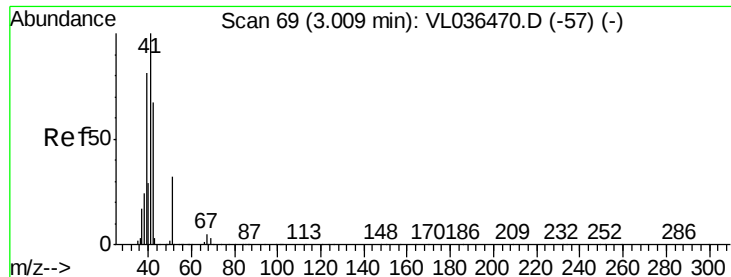
52 26.2 27.0 40.6#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.485 ppbv

RT: 3.01 min Scan# 70

Delta R.T. 0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

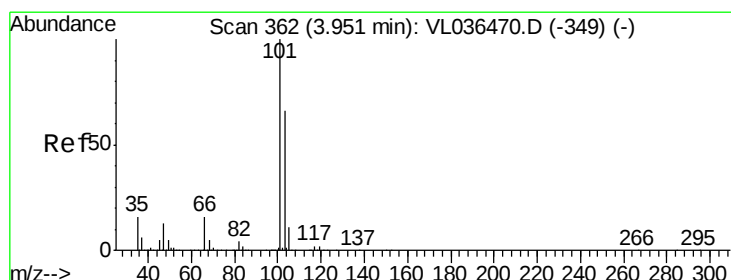
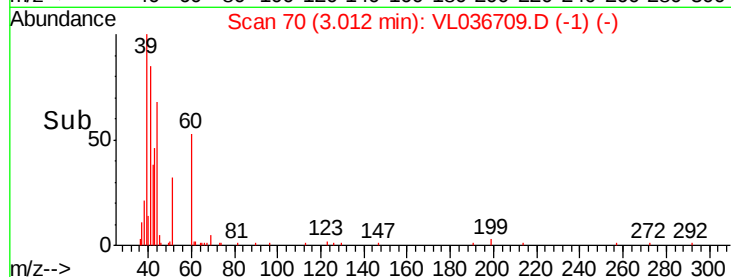
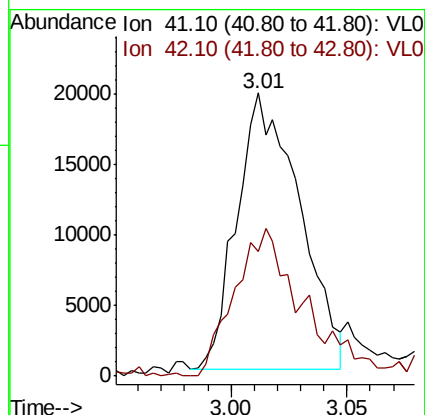
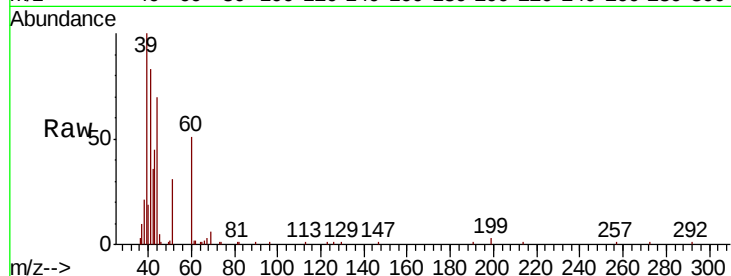
UP-SG-6(2021)

Tot Ion: 41 Resp: 36661

Ion Ratio Lower Upper

41 100

42 63.2 57.0 85.4



#11

Trichlorofluoromethane

Concen: 0.366 ppbv

RT: 3.95 min Scan# 361

Delta R.T. -0.00 min

Lab File: VL036709.D

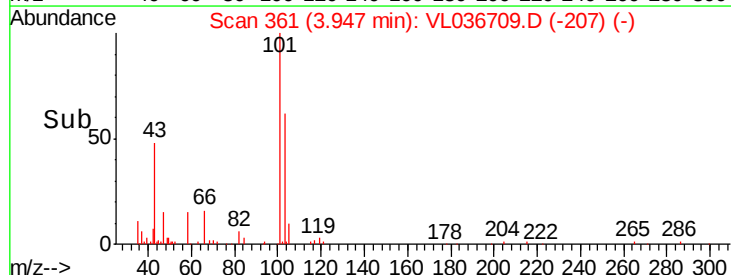
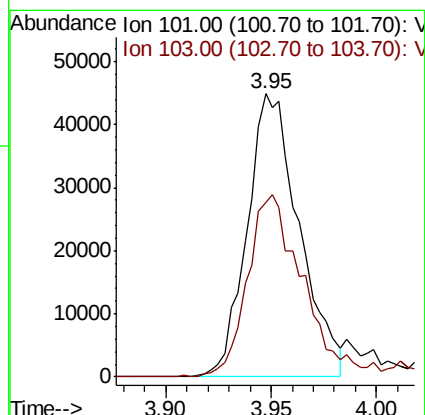
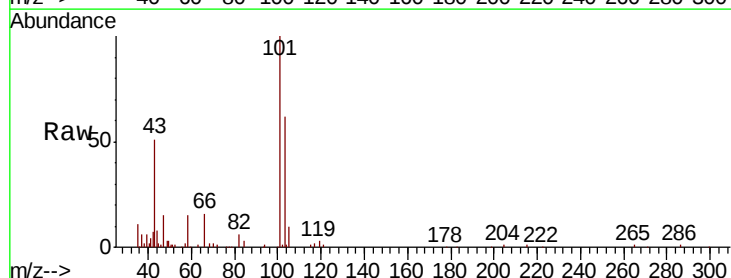
Acq: 6 Apr 2021 22:27

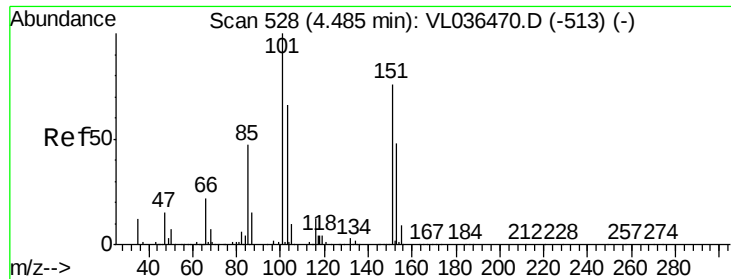
Tgt Ion: 101 Resp: 77228

Ion Ratio Lower Upper

101 100

103 61.5 52.5 78.7





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.040 ppbv

RT: 4.48 min Scan# 528

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

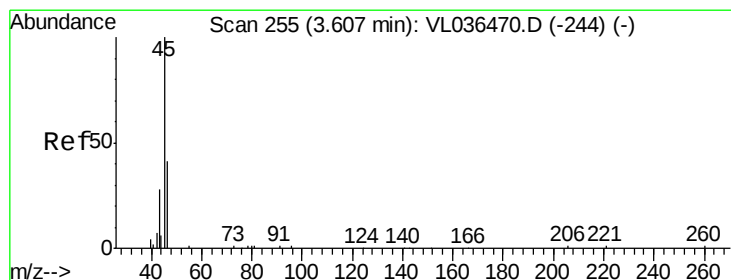
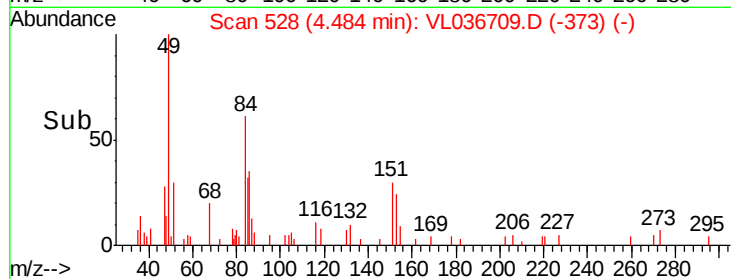
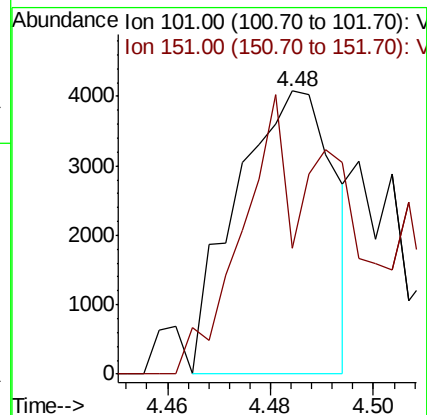
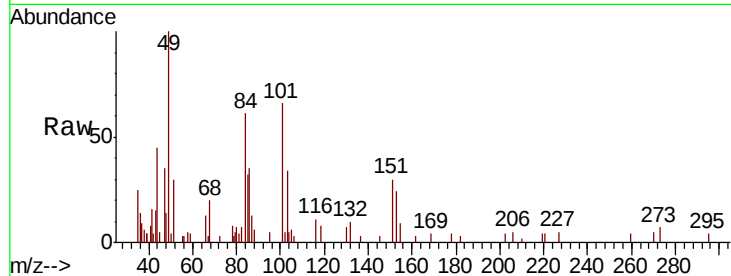
UP-SG-6(2021)

Tot Ion:101 Resp: 5349

Ion Ratio Lower Upper

101 100

151 133.7 60.9 91.3#



#13

Ethanol

Concen: 30.193 ppbv

RT: 3.61 min Scan# 257

Delta R.T. 0.01 min

Lab File: VL036709.D

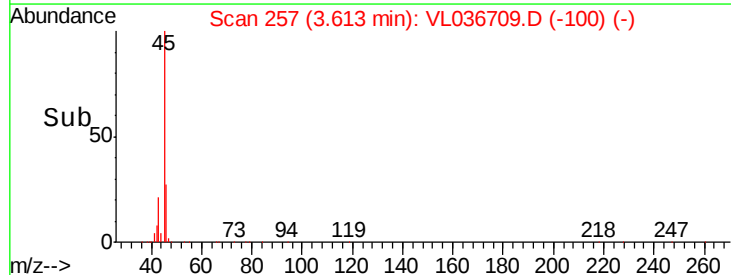
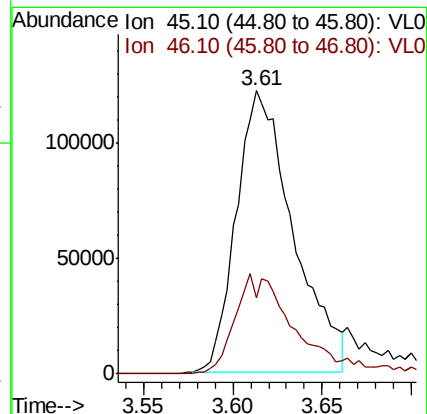
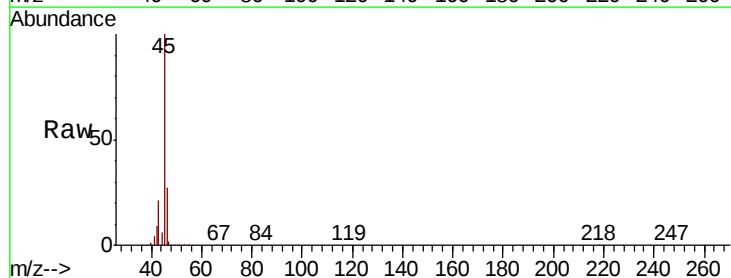
Acq: 6 Apr 2021 22:27

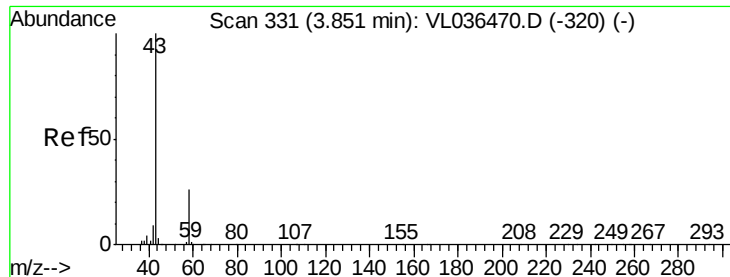
Tgt Ion: 45 Resp: 271518

Ion Ratio Lower Upper

45 100

46 38.2 16.6 66.2





#15

Acetone

Concen: 15.360 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.01 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

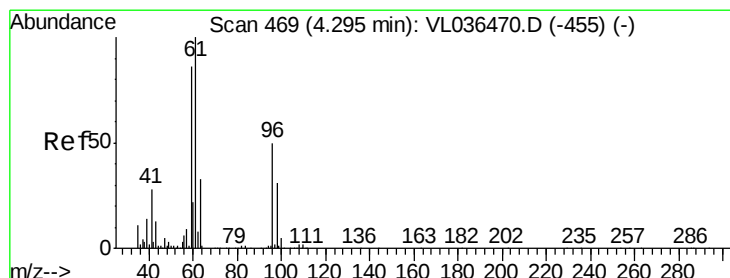
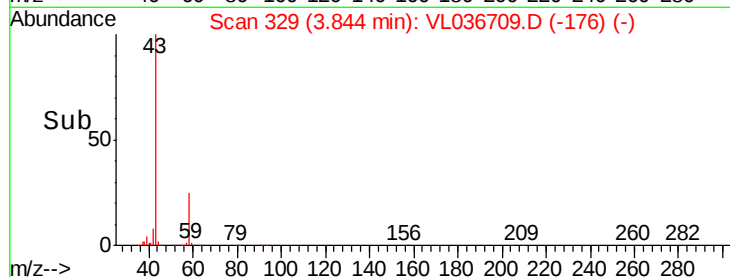
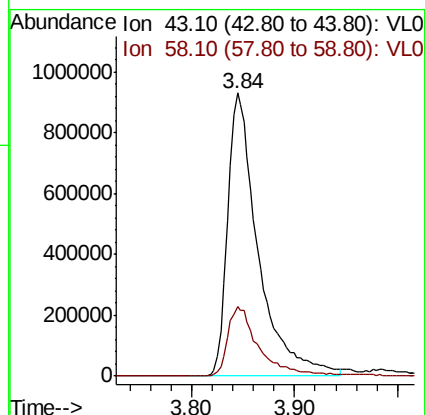
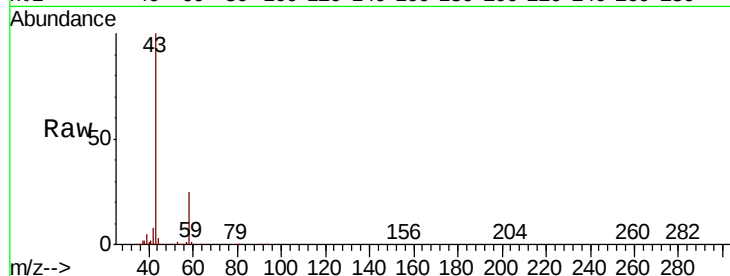
UP-SG-6(2021)

Tot Ion: 43 Resp: 1916751

Ion Ratio Lower Upper

43 100

58 26.2 21.2 31.8



#17

tert-Butyl alcohol

Concen: 0.522 ppbv

RT: 4.32 min Scan# 476

Delta R.T. 0.02 min

Lab File: VL036709.D

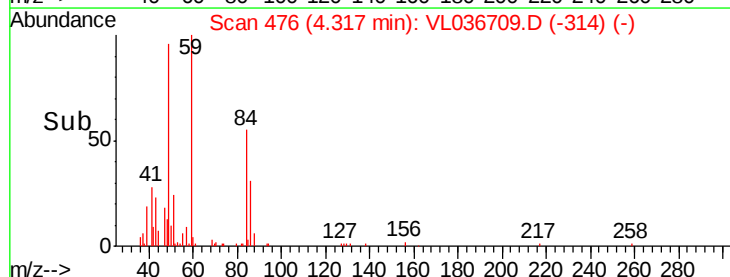
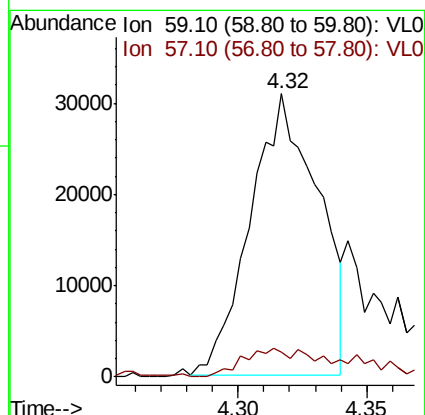
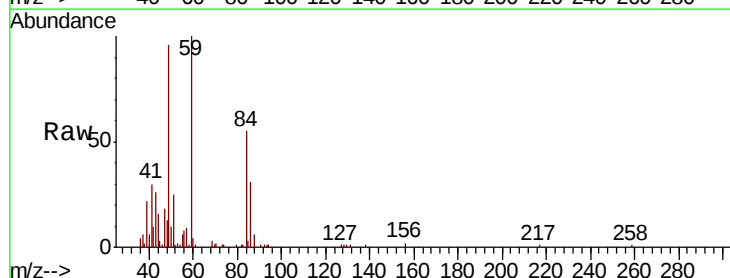
Acq: 6 Apr 2021 22:27

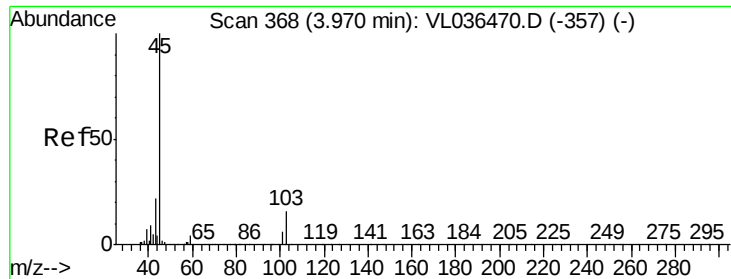
Tgt Ion: 59 Resp: 56689

Ion Ratio Lower Upper

59 100

57 17.0 8.6 12.8#

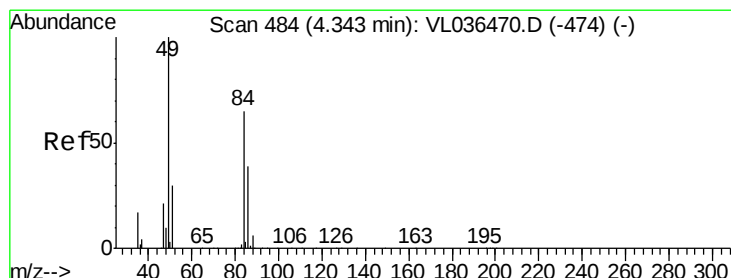
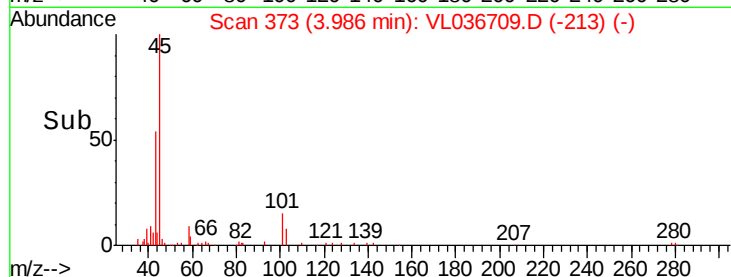
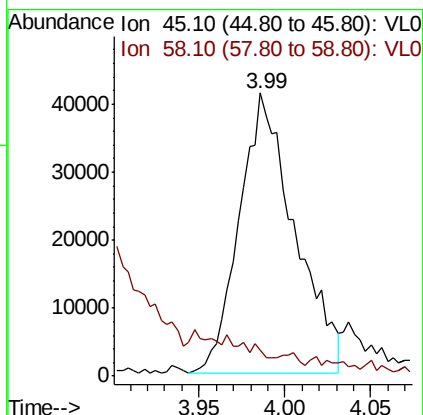
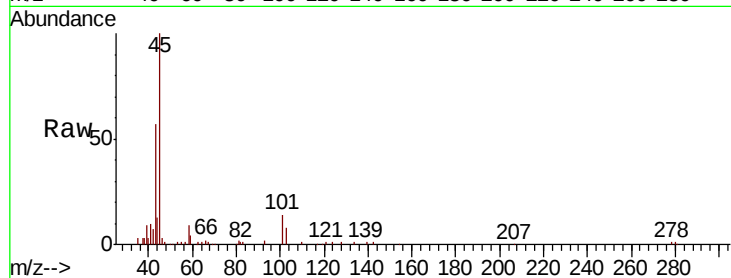




#19  
Isopropyl Alcohol  
Concen: 1.344 ppbv  
RT: 3.99 min Scan# 373  
Delta R.T. 0.02 min  
Lab File: VL036709.D  
Acq: 6 Apr 2021 22:27

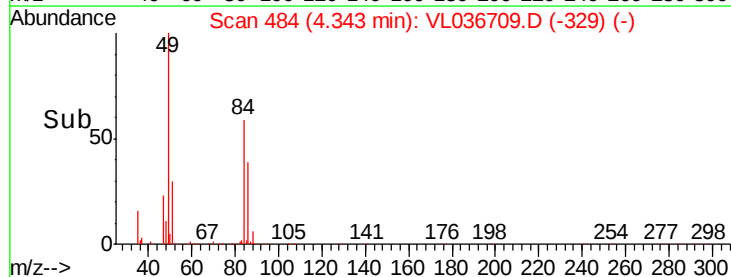
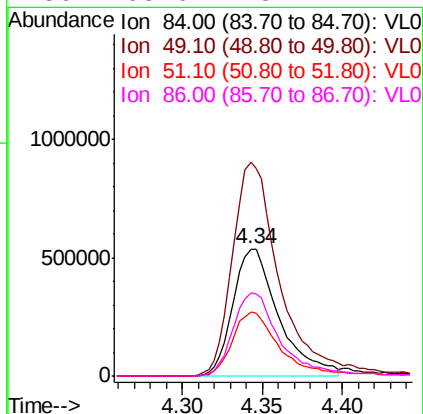
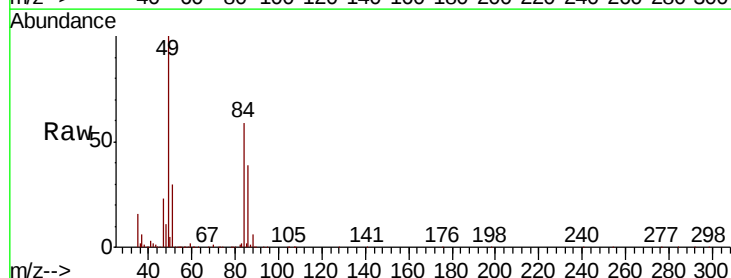
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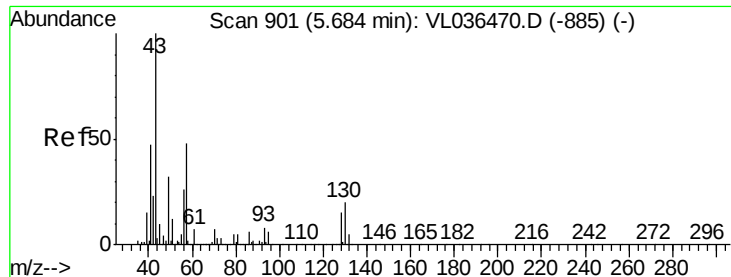
Tot Ion: 45 Resp: 92277  
Ion Ratio Lower Upper  
45 100  
58 545.6 2.9 4.3#



#20  
Methylene Chloride  
Concen: 18.066 ppbv  
RT: 4.34 min Scan# 484  
Delta R.T. -0.00 min  
Lab File: VL036709.D  
Acq: 6 Apr 2021 22:27

Tgt Ion: 84 Resp: 1055490  
Ion Ratio Lower Upper  
84 100  
49 168.3 122.9 184.3  
51 50.9 36.9 55.3  
86 65.6 48.2 72.4





#25

Ethyl Acetate

Concen: 1.861 ppbv

RT: 5.69 min Scan# 903

Delta R.T. 0.01 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

UP-SG-6(2021)

Tot Ion: 43 Resp: 551989

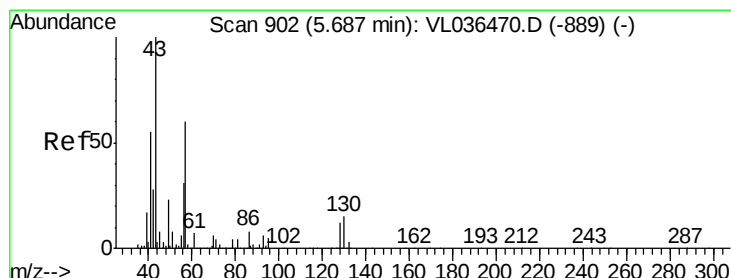
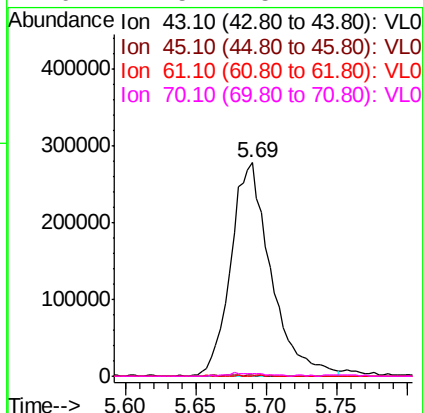
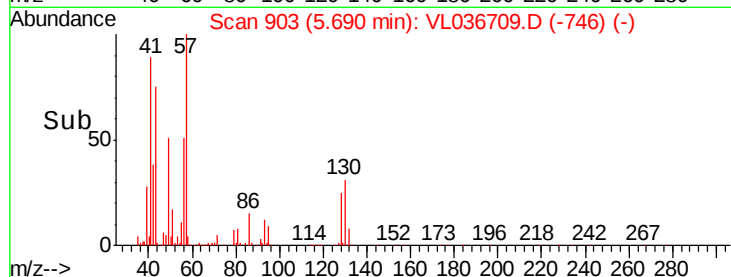
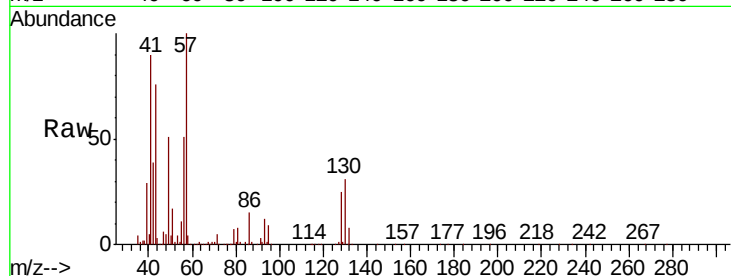
Ion Ratio Lower Upper

43 100

45 0.6 7.9 11.9#

61 0.6 7.4 11.2#

70 1.5 5.1 7.7#



#26

Hexane

Concen: 5.232 ppbv

RT: 5.69 min Scan# 903

Delta R.T. 0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Tgt Ion: 57 Resp: 720288

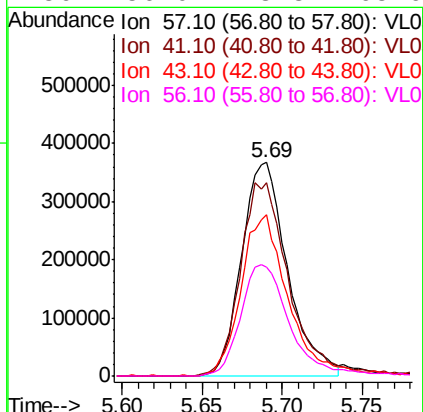
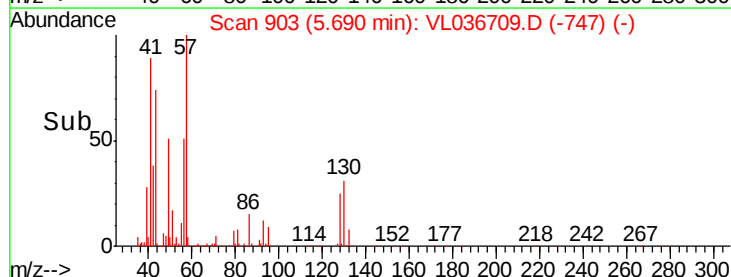
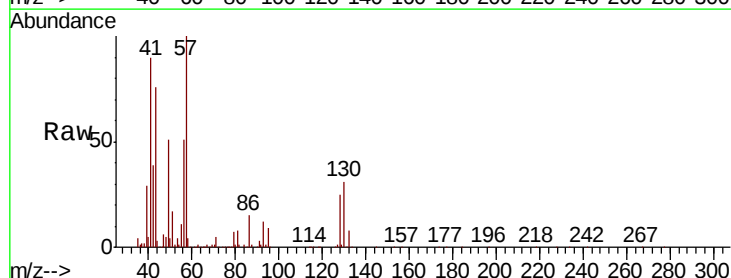
Ion Ratio Lower Upper

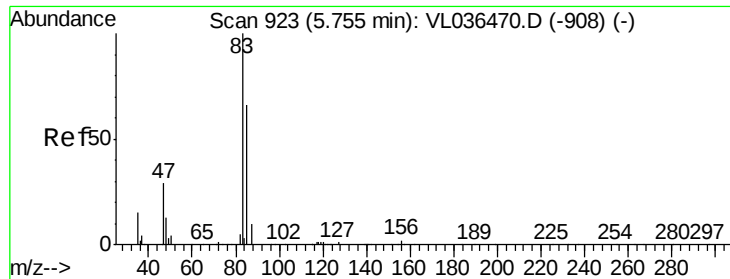
57 100

41 97.5 77.2 115.8

43 77.9 173.8 260.6#

56 56.0 43.8 65.6





#29

Chloroform

Concen: 0.951 ppbv

RT: 5.75 min Scan# 922

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

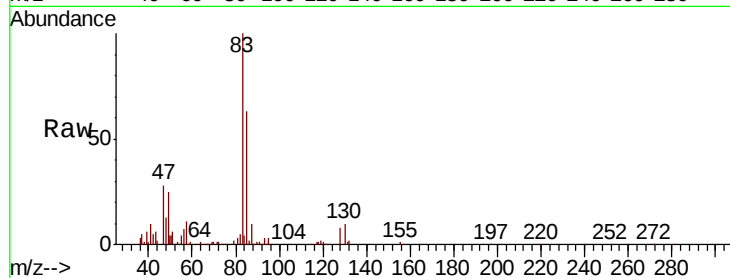
UP-SG-6(2021)

Tot Ion: 83 Resp: 209332

Ion Ratio Lower Upper

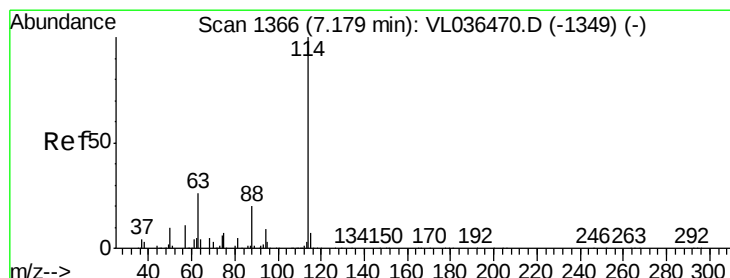
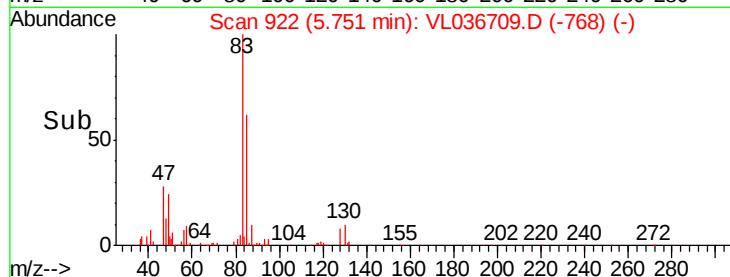
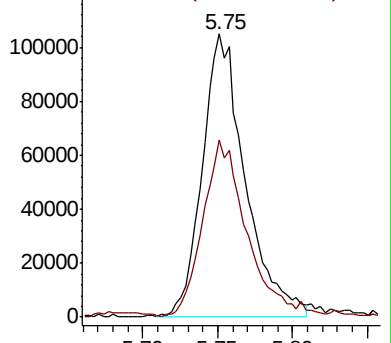
83 100

85 61.9 52.6 78.8



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

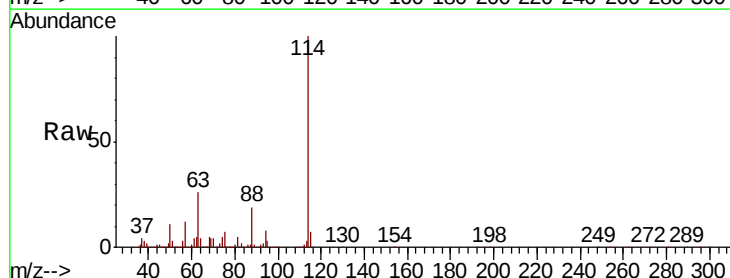
Tgt Ion: 114 Resp: 3137356

Ion Ratio Lower Upper

114 100

63 26.6 22.4 33.6

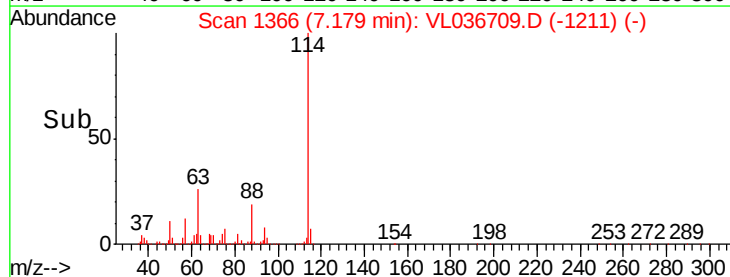
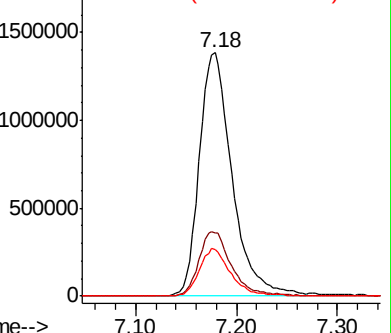
88 18.8 15.4 23.0

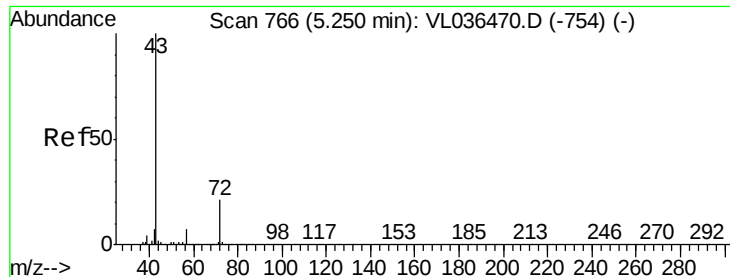


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

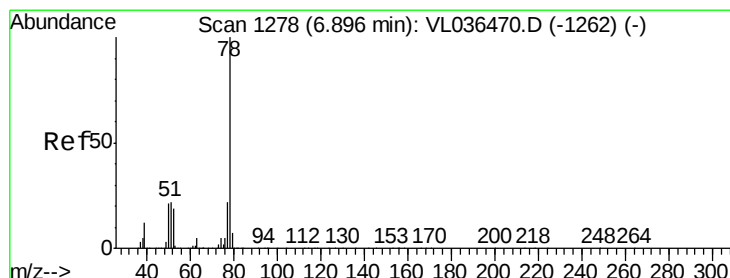
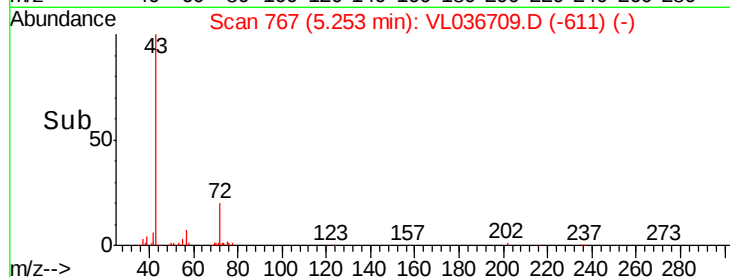
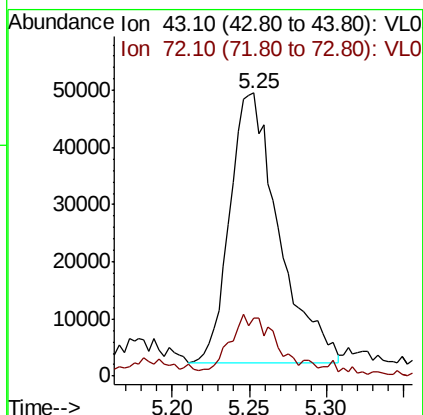
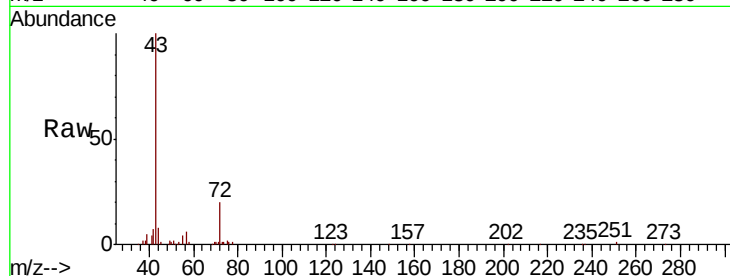




#34  
2-Butanone  
Concen: 0.680 ppbv  
RT: 5.25 min Scan# 767  
Delta R.T. 0.00 min  
Lab File: VL036709.D  
Acq: 6 Apr 2021 22:27

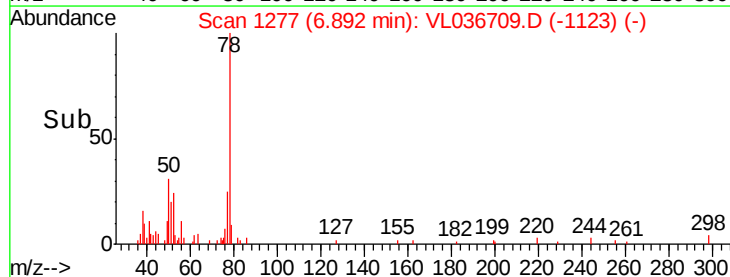
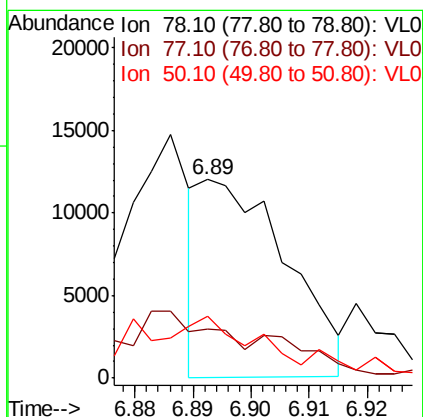
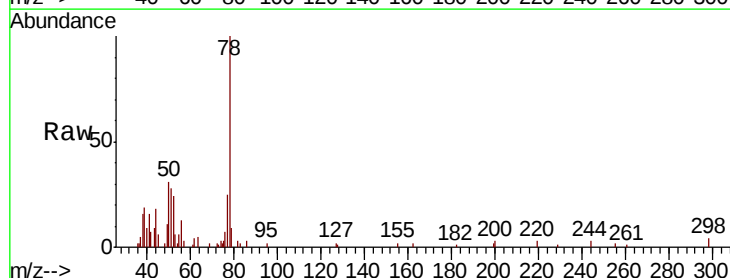
Instrument :  
MSVOA\_L  
ClientSampleId :  
UP-SG-6(2021)

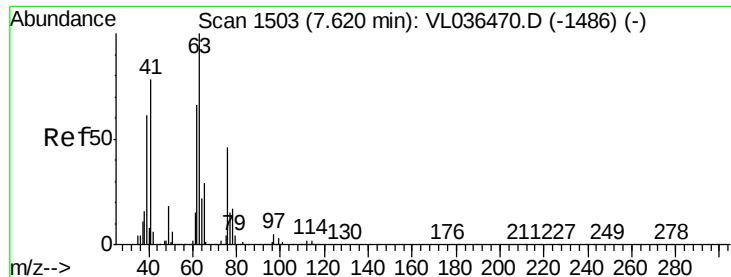
Tot Ion: 43 Resp: 104081  
Ion Ratio Lower Upper  
43 100  
72 26.6 17.0 25.6#



#36  
Benzene  
Concen: 0.043 ppbv  
RT: 6.89 min Scan# 1277  
Delta R.T. -0.00 min  
Lab File: VL036709.D  
Acq: 6 Apr 2021 22:27

Tgt Ion: 78 Resp: 12383  
Ion Ratio Lower Upper  
78 100  
77 22.9 18.0 27.0  
50 28.4 16.5 24.7#

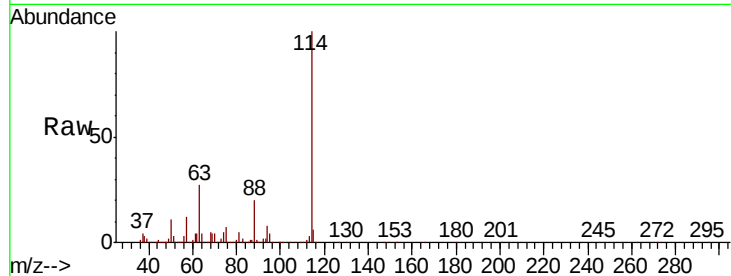




#39  
 1,2-Dichloropropane  
 Concen: 6.971 ppbv  
 RT: 7.18 min Scan# 1365  
 Delta R.T. -0.44 min  
 Lab File: VL036709.D  
 Acq: 6 Apr 2021 22:27

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 UP-SG-6(2021)

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 41      | 0.0   | 62.4  | 93.6# |
| 62      | 16.3  | 52.8  | 79.2# |

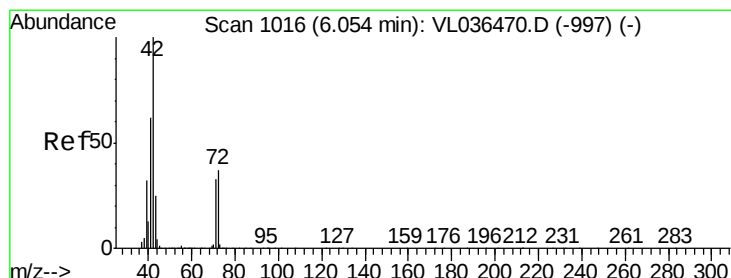
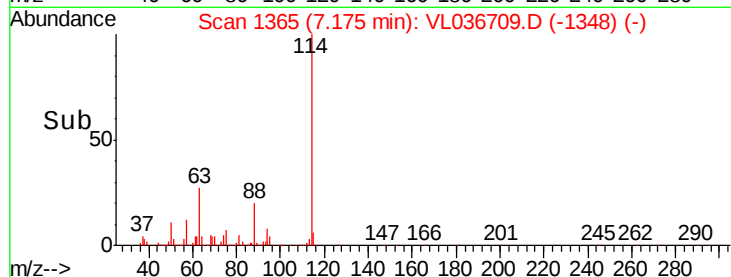
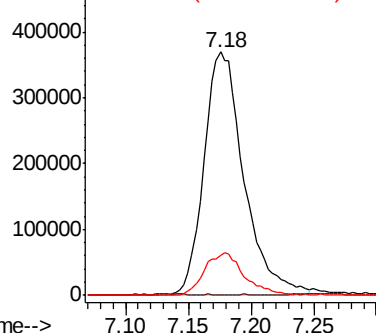


Abundance

Ion 63.10 (62.80 to 63.80): VL0

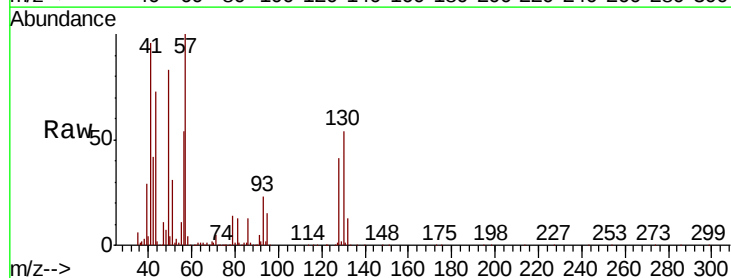
Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#41  
 Tetrahydrofuran  
 Concen: 4.136 ppbv  
 RT: 5.68 min Scan# 901  
 Delta R.T. -0.37 min  
 Lab File: VL036709.D  
 Acq: 6 Apr 2021 22:27

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 42      | 100   |       |       |
| 72      | 1.1   | 27.6  | 41.4# |
| 71      | 15.3  | 27.0  | 40.4# |

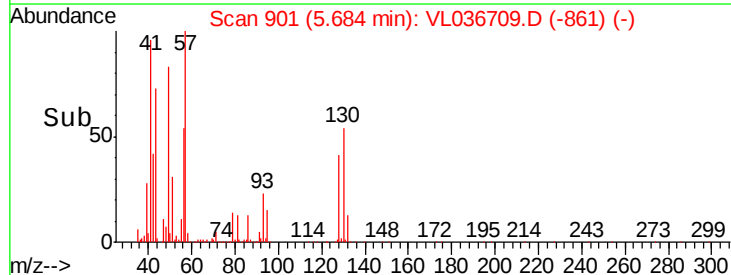
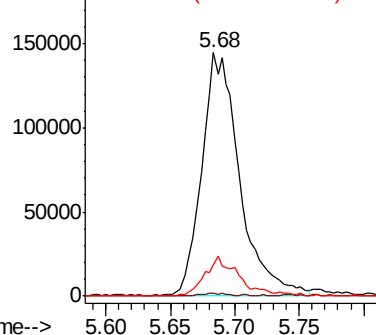


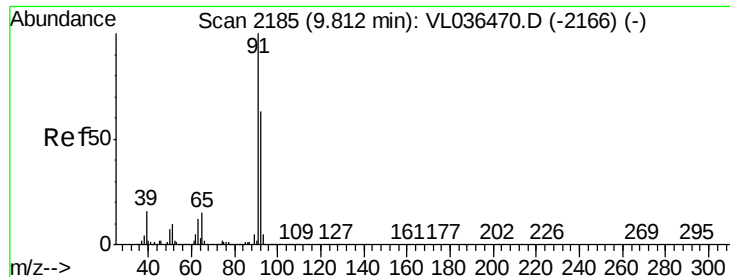
Abundance

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





#53

Toluene

Concen: 0.346 ppbv

RT: 9.81 min Scan# 2185

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

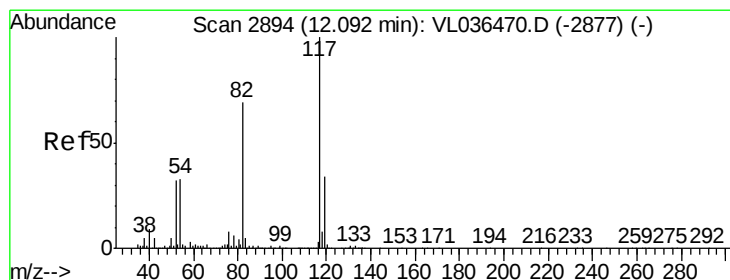
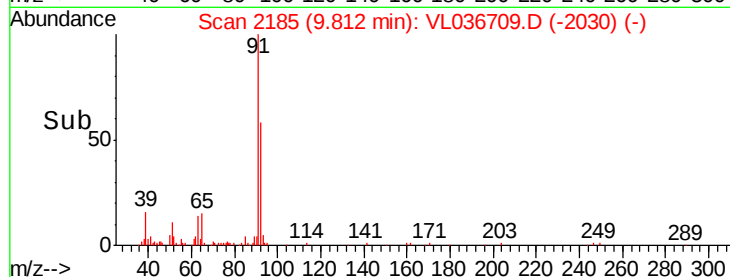
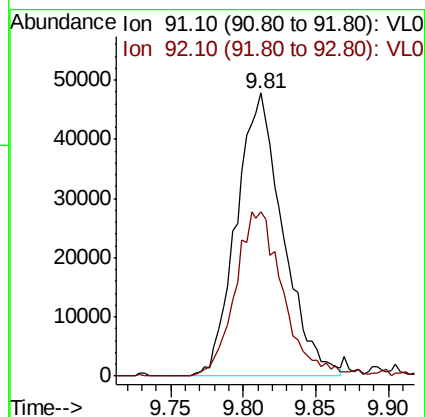
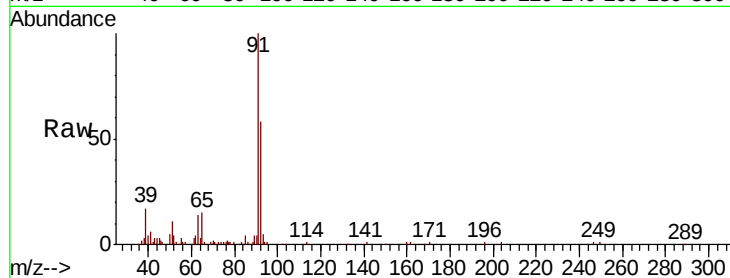
UP-SG-6(2021)

Tot Ion: 91 Resp: 106471

Ion Ratio Lower Upper

91 100

92 59.4 48.8 73.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2894

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

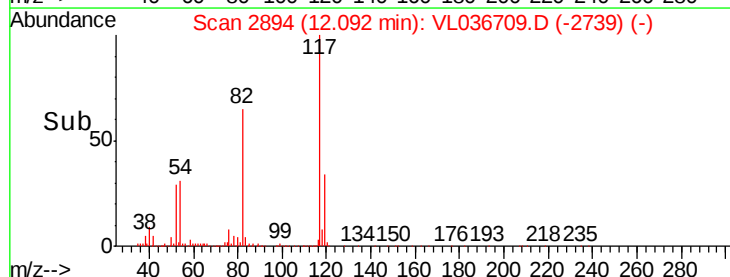
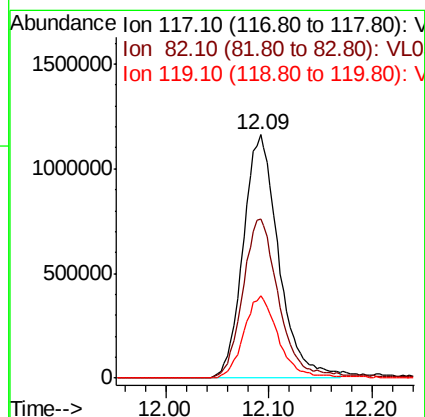
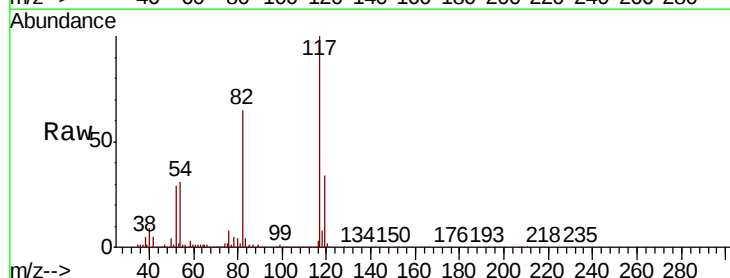
Tgt Ion: 117 Resp: 2777473

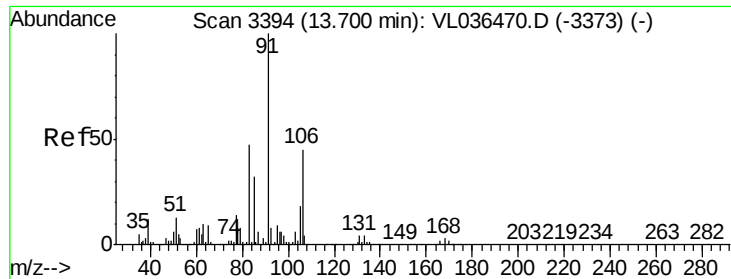
Ion Ratio Lower Upper

117 100

82 68.5 57.4 86.0

119 34.0 47.4 71.0#





#60

o-Xylene

Concen: 0.069 ppbv

RT: 13.70 min Scan# 3394

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

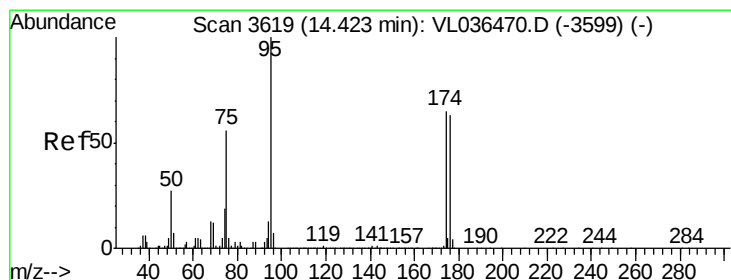
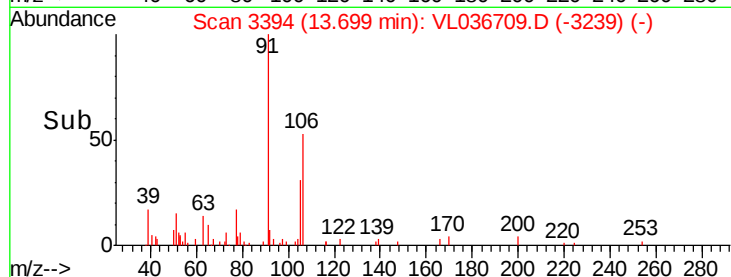
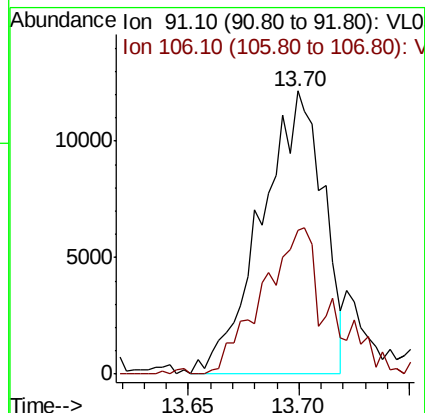
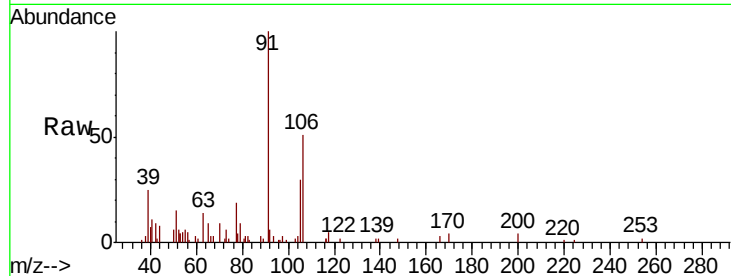
UP-SG-6(2021)

Tot Ion: 91 Resp: 23601

Ion Ratio Lower Upper

91 100

106 57.0 22.3 66.9



#68

1-Bromo-4-Fluorobenzene

Concen: 9.766 ppbv

RT: 14.42 min Scan# 3619

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

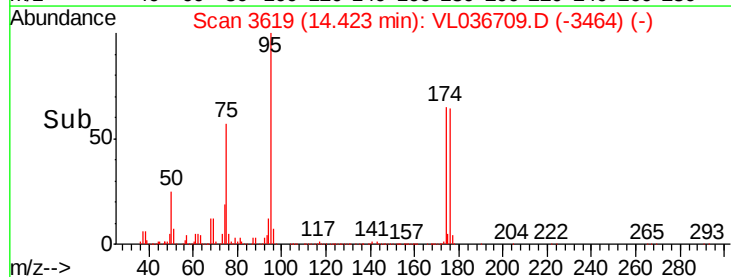
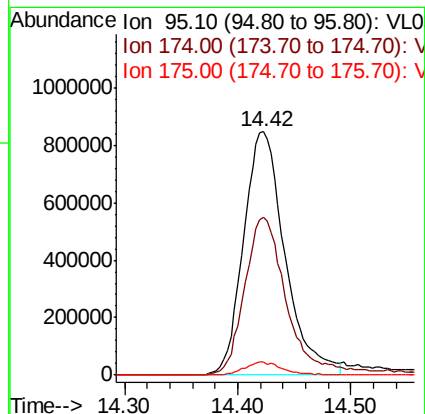
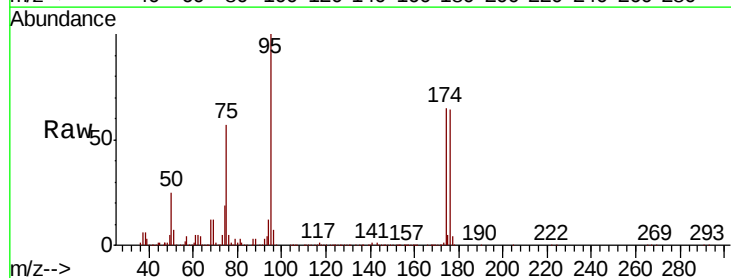
Tgt Ion: 95 Resp: 2161916

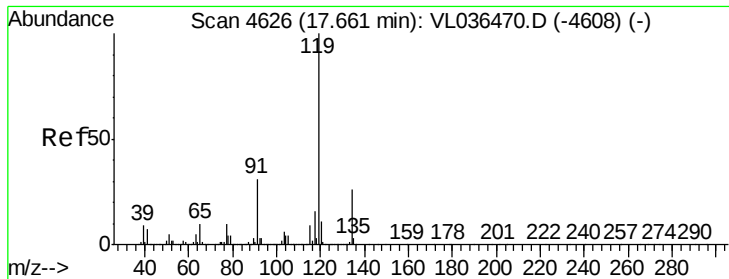
Ion Ratio Lower Upper

95 100

174 68.5 51.0 76.6

175 5.1 3.9 5.9





#69

p-Isopropyltoluene

Concen: 0.054 ppbv

RT: 17.66 min Scan# 4625

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

UP-SG-6(2021)

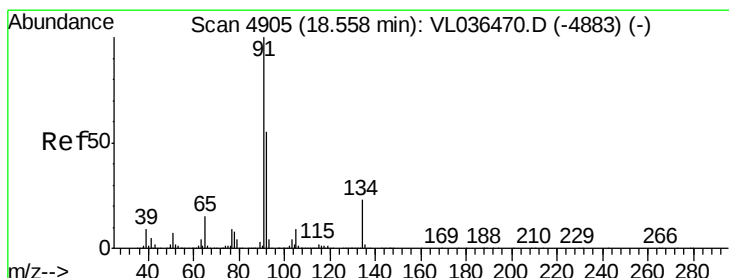
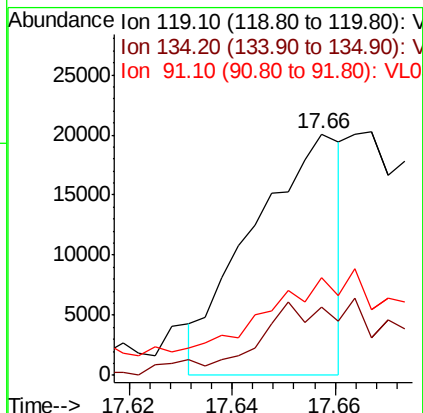
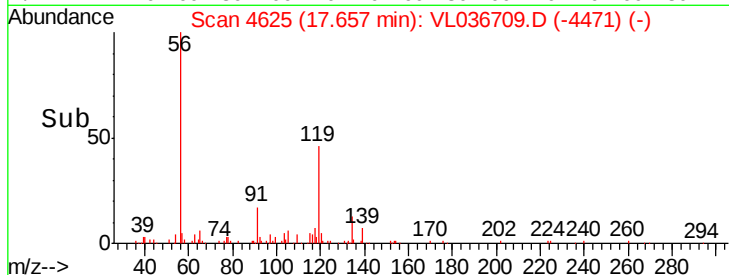
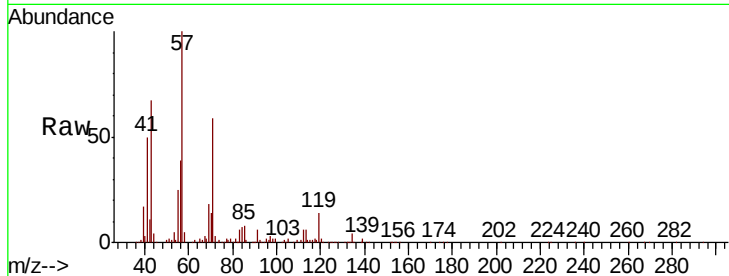
Tot Ion:119 Resp: 23843

Ion Ratio Lower Upper

119 100

134 0.0 20.6 30.8#

91 0.0 25.0 37.6#



#70

n-Butylbenzene

Concen: 0.037 ppbv

RT: 18.56 min Scan# 4905

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

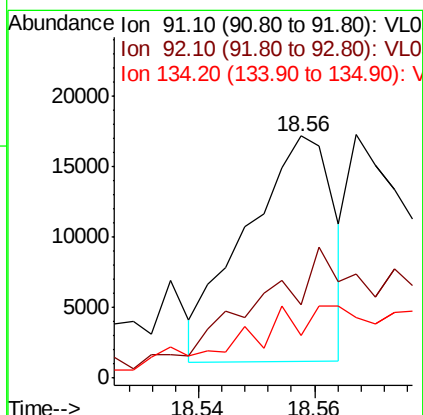
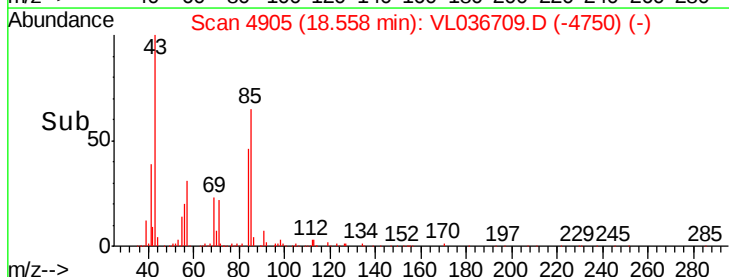
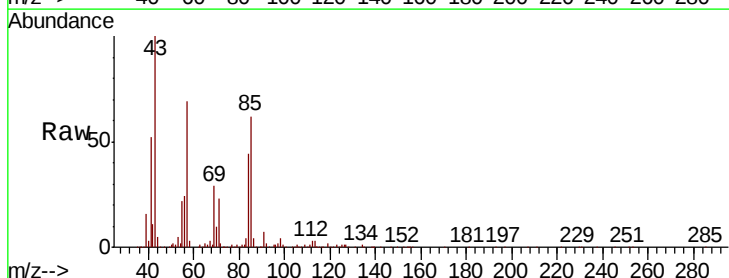
Tgt Ion: 91 Resp: 16780

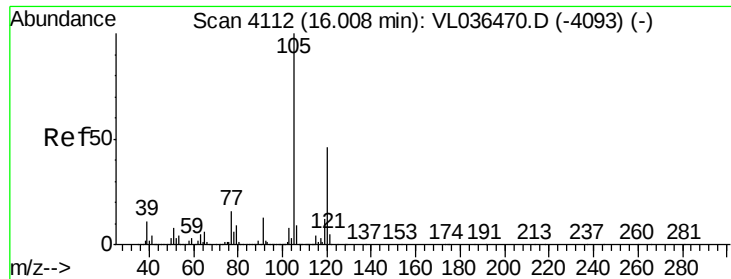
Ion Ratio Lower Upper

91 100

92 128.3 43.8 65.8#

134 96.6 18.0 27.0#





#73

1,3,5-Trimethylbenzene

Concen: 0.055 ppbv

RT: 16.00 min Scan# 4111

Delta R.T. -0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Instrument :

MSVOA\_L

ClientSampleId :

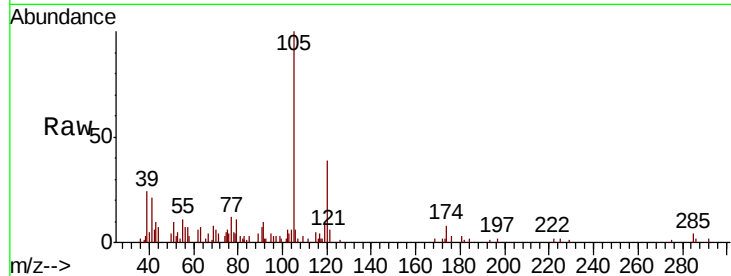
UP-SG-6(2021)

Tot Ion:105 Resp: 19274

Ion Ratio Lower Upper

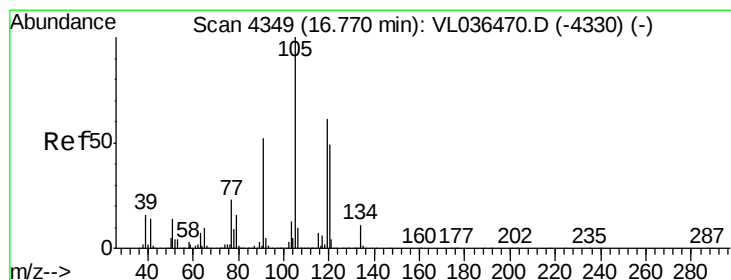
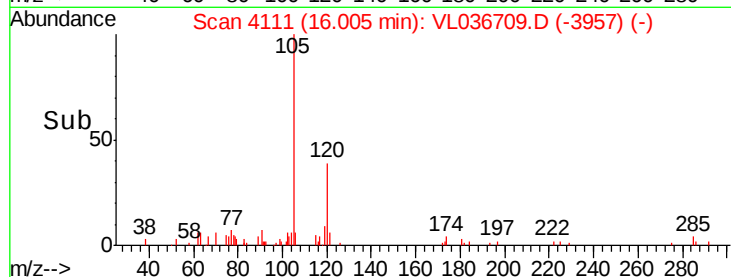
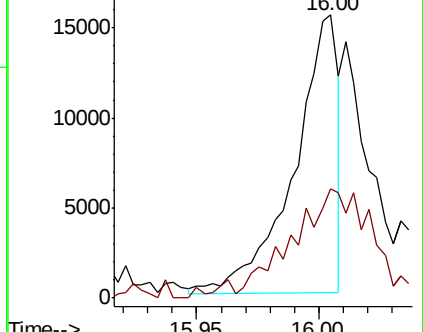
105 100

120 39.9 36.6 54.8



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.070 ppbv

RT: 16.77 min Scan# 4350

Delta R.T. 0.00 min

Lab File: VL036709.D

Acq: 6 Apr 2021 22:27

Tgt Ion:105 Resp: 26081

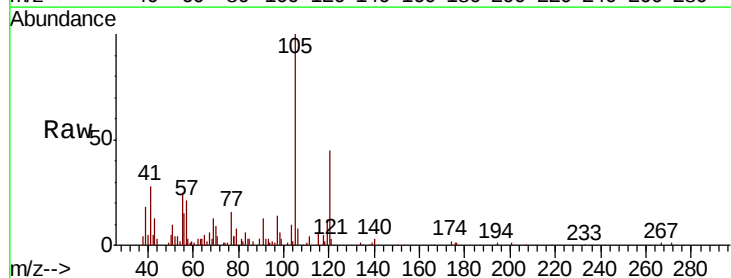
Ion Ratio Lower Upper

105 100

120 35.5 39.2 58.8#

91 5.7 42.6 64.0#

77 14.3 18.6 28.0#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

