

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_L\DATA\VL100521\  
 Data File : VL037781.D  
 Acq On : 5 Oct 2021 19:59  
 Operator : SY/AP  
 Sample : M4012-10  
 Misc : 400mL/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 C0P01

Quant Time: Oct 06 04:47:57 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL100421AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Oct 04 17:43:54 2021  
 QLast Update : Mon Oct 04 17:43:54 2021  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.65  | 49   | 1236678  | 10.00 | ppbv  | -0.02    |
| 33) 1,4-Difluorobenzene | 7.15  | 114  | 3546370  | 10.00 | ppbv  | -0.02    |
| 55) Chlorobenzene-d5    | 12.06 | 117  | 3127970  | 10.00 | ppbv  | -0.03    |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.39  | 95    | 2200485  | 10.06    | ppbv | -0.03   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 100.60% |

| Target Compounds               | R.T.  | QIon | Response | Conc   | Units  | Qvalue |
|--------------------------------|-------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.04  | 85   | 25621    | 0.130  | ppbv   | 98     |
| 3) Chlorodifluoromethane       | 2.98  | 51   | 13730    | 0.058  | ppbv   | 98     |
| 4) Chloromethane               | 3.13  | 50   | 59787    | 0.687  | ppbv   | 97     |
| 6) Bromomethane                | 3.46  | 94   | 922      | 0.021  | ppbv # | 22     |
| 7) Chloroethane                | 3.55  | 64   | 1284     | 0.044  | ppbv   | 96     |
| 9) Propene                     | 3.00  | 41   | 28467    | 0.326  | ppbv   | 91     |
| 10) Heptane                    | 8.10  | 43   | 35032    | 0.176  | ppbv # | 2      |
| 12) 1,1,2-Trichlorotrifluoroet | 4.47  | 101  | 7253     | 0.054  | ppbv # | 50     |
| 13) Ethanol                    | 3.59  | 45   | 290382   | 40.612 | ppbv   | 85     |
| 15) Acetone                    | 3.83  | 43   | 1327752  | 11.960 | ppbv # | 79     |
| 16) 1,3-Butadiene              | 3.32  | 39   | 2908     | 0.036  | ppbv # | 11     |
| 19) Isopropyl Alcohol          | 3.95  | 45   | 551858   | 7.990  | ppbv # | 1      |
| 20) Methylene Chloride         | 4.33  | 84   | 1934699  | 34.491 | ppbv   | 97     |
| 21) Allyl Chloride             | 4.38  | 41   | 2754     | 0.028  | ppbv # | 23     |
| 23) Vinyl Acetate              | 5.04  | 43   | 192787   | 1.159  | ppbv # | 62     |
| 25) Ethyl Acetate              | 5.67  | 43   | 512015   | 1.644  | ppbv # | 78     |
| 26) Hexane                     | 5.67  | 57   | 695468   | 4.534  | ppbv # | 45     |
| 27) Carbon Disulfide           | 4.54  | 76   | 327176   | 2.407  | ppbv   | 99     |
| 29) Chloroform                 | 5.73  | 83   | 145804   | 0.665  | ppbv   | 96     |
| 30) Cyclohexane                | 7.10  | 84   | 7071     | 0.054  | ppbv # | 1      |
| 32) 1,1,1-Trichloroethane      | 6.48  | 97   | 75410    | 0.363  | ppbv   | 91     |
| 34) 2-Butanone                 | 5.23  | 43   | 228819   | 1.598  | ppbv # | 83     |
| 36) Benzene                    | 6.87  | 78   | 126466   | 0.418  | ppbv   | 95     |
| 39) 1,2-Dichloropropane        | 7.15  | 63   | 837598   | 7.351  | ppbv # | 28     |
| 41) Tetrahydrofuran            | 6.04  | 42   | 2053     | 0.029  | ppbv # | 1      |
| 42) Bromodichloromethane       | 7.76  | 83   | 6019     | 0.029  | ppbv # | 46     |
| 44) 2,2,4-Trimethylpentane     | 7.84  | 57   | 24133    | 0.047  | ppbv # | 1      |
| 50) 4-Methyl-2-Pentanone       | 8.72  | 43   | 17586    | 0.094  | ppbv # | 38     |
| 51) 2-Hexanone                 | 10.12 | 43   | 3582     | 0.043  | ppbv # | 1      |
| 52) Tetrachloroethene          | 11.20 | 164  | 5011386  | 42.524 | ppbv   | 96     |
| 53) Toluene                    | 9.78  | 91   | 228305   | 0.680  | ppbv   | 98     |
| 58) Ethyl Benzene              | 12.69 | 91   | 135470   | 0.323  | ppbv   | 92     |
| 59) m/p-Xylene                 | 12.96 | 91   | 34035    | 0.094  | ppbv # | 30     |
| 60) o-Xylene                   | 13.66 | 91   | 79973    | 0.231  | ppbv   | 66     |
| 61) Styrene                    | 13.50 | 104  | 4404     | 0.026  | ppbv # | 1      |
| 64) n-propylbenzene            | 15.52 | 120  | 2821     | 0.023  | ppbv # | 1      |
| 66) Benzyl Chloride            | 16.95 | 91   | 3592     | 0.172  | ppbv # | 81     |
| 73) 1,3,5-Trimethylbenzene     | 15.97 | 105  | 37726    | 0.106  | ppbv # | 74     |
| 74) 1,2,4-Trimethylbenzene     | 16.73 | 105  | 74124    | 0.198  | ppbv # | 75     |
| 75) 1,3-Dichlorobenzene        | 16.96 | 146  | 23150    | 0.100  | ppbv # | 23     |
| 79) Naphthalene                | 22.17 | 128  | 20317    | 0.089  | ppbv   | 97     |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_L\DATA\VL100521\  
Data File : VL037781.D  
Acq On : 5 Oct 2021 19:59  
Operator : SY/AP  
Sample : M4012-10  
Misc : 400mL/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

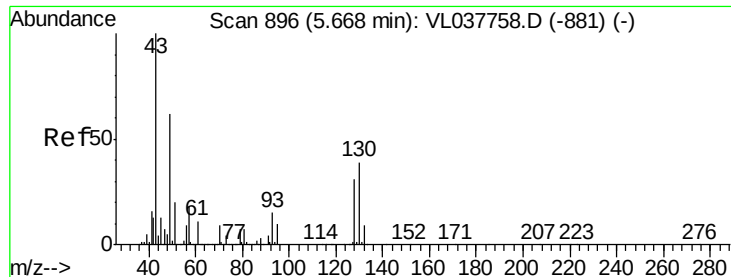
Instrument :  
MSVOA\_L  
ClientSampleId :  
C0P01

Quant Time: Oct 06 04:47:57 2021  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL100421AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Mon Oct 04 17:43:54 2021  
QLast Update : Mon Oct 04 17:43:54 2021  
Response via : Initial Calibration

| Internal Standards        | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|---------------------------|-------|------|----------|-------|-------|----------|
| 80) Naphthalene,2-methyl- | 24.96 | 142  | 4650     | 0.076 | ppbv  | # 44     |

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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 889

Delta R.T. -0.02 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Instrument :

MSVOA\_L

ClientSampleId :

C0P01

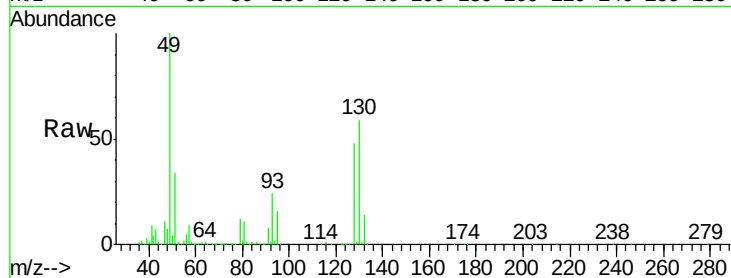
Tgt Ion: 49 Resp: 1236678

Ion Ratio Lower Upper

49 100

128 52.4 27.1 81.3

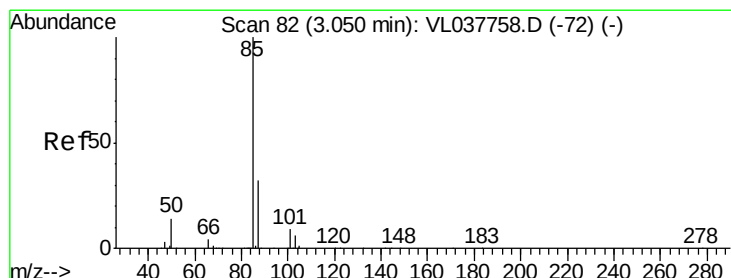
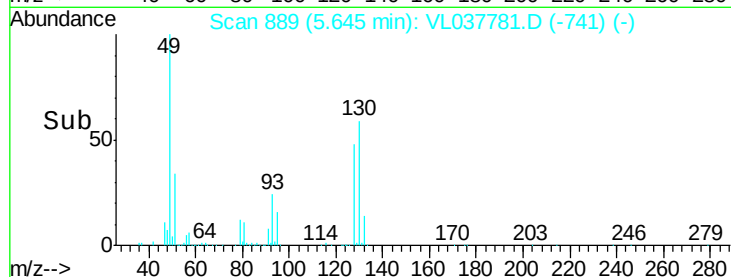
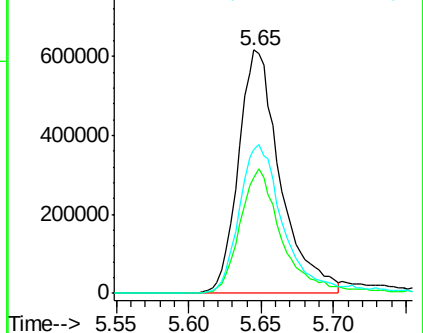
130 67.2 33.2 99.6



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: 0.130 ppbv

RT: 3.04 min Scan# 78

Delta R.T. -0.01 min

Lab File: VL037781.D

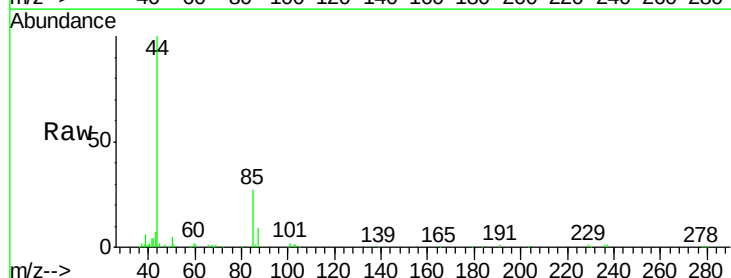
Acq: 5 Oct 2021 19:59

Tgt Ion: 85 Resp: 25621

Ion Ratio Lower Upper

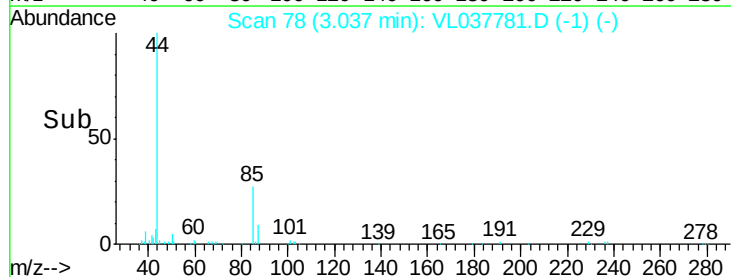
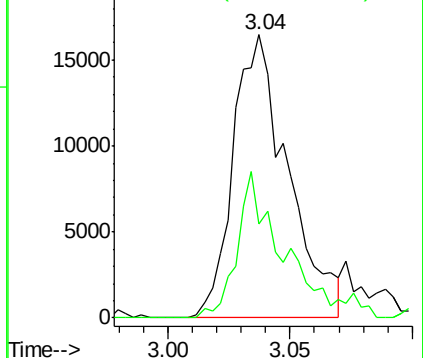
85 100

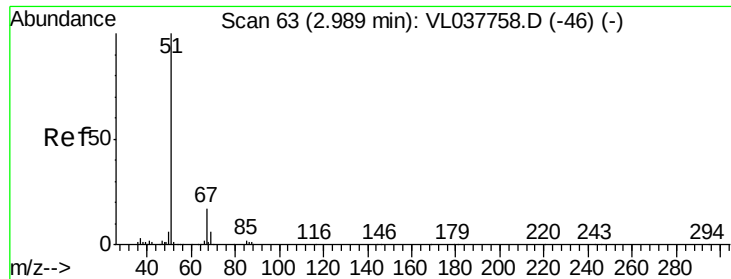
87 33.0 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.058 ppbv

RT: 2.98 min Scan# 61

Delta R.T. -0.01 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Instrument :

MSVOA\_L

ClientSampleId :

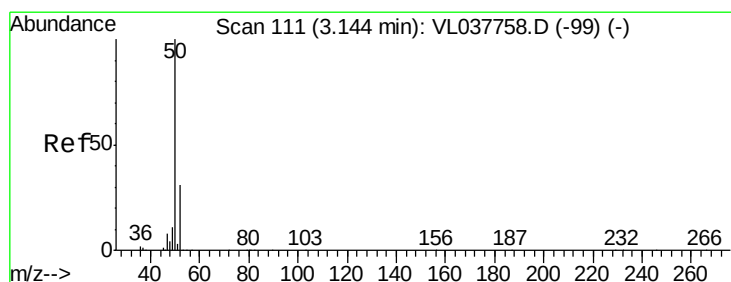
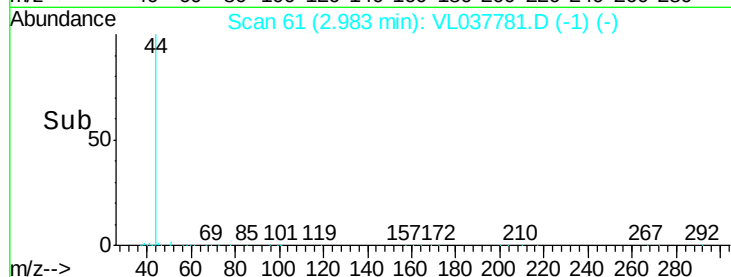
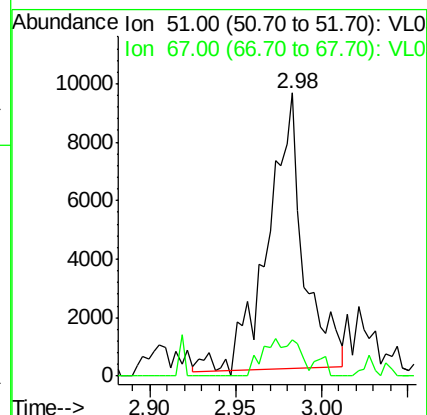
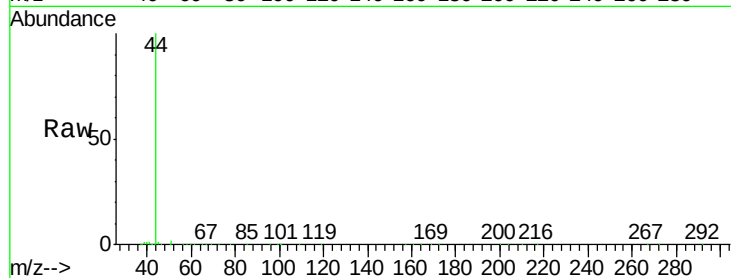
C0P01

Tgt Ion: 51 Resp: 13730

Ion Ratio Lower Upper

51 100

67 17.9 13.5 20.3



#4

Chloromethane

Concen: 0.687 ppbv

RT: 3.13 min Scan# 106

Delta R.T. -0.02 min

Lab File: VL037781.D

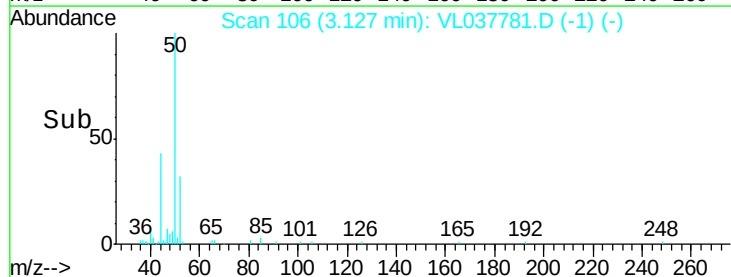
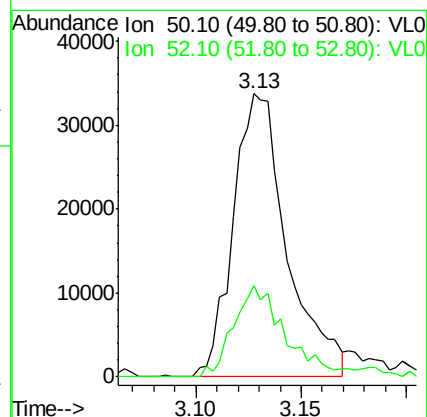
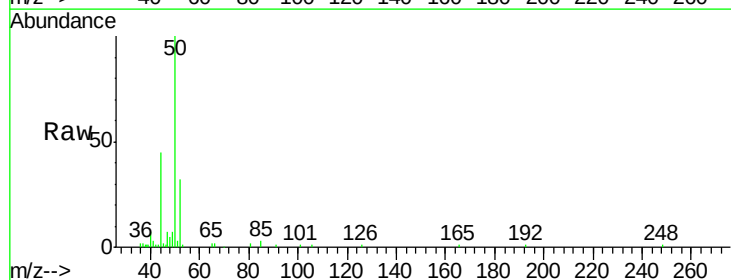
Acq: 5 Oct 2021 19:59

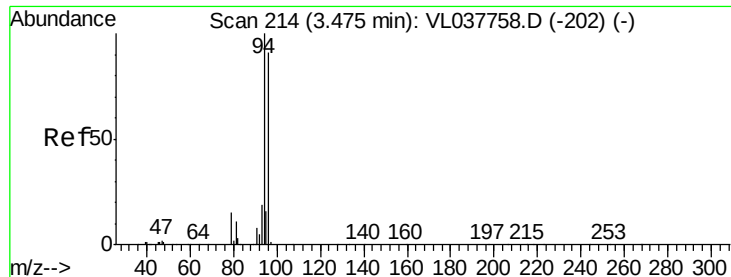
Tgt Ion: 50 Resp: 59787

Ion Ratio Lower Upper

50 100

52 32.3 24.4 36.6





#6

Bromomethane

Concen: 0.021 ppbv

RT: 3.46 min Scan# 209

Delta R.T. -0.02 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Instrument :

MSVOA\_L

ClientSampleId :

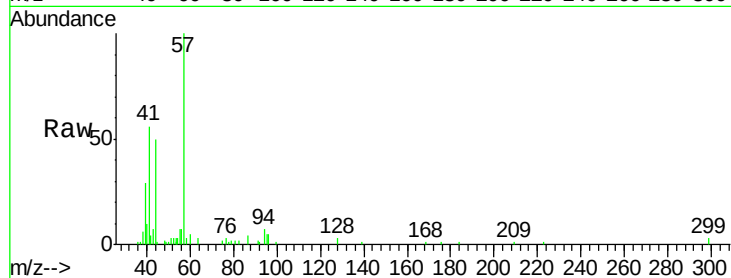
C0P01

Tgt Ion: 94 Resp: 922

Ion Ratio Lower Upper

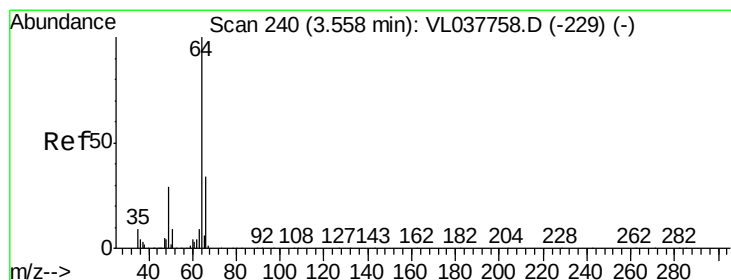
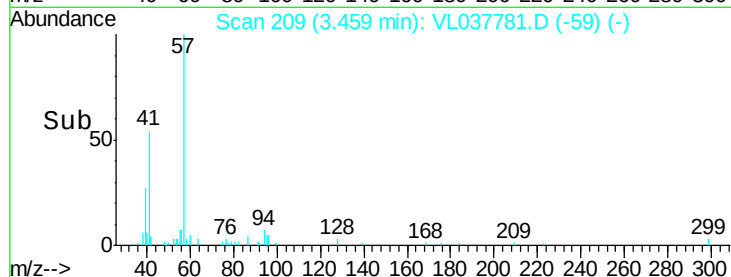
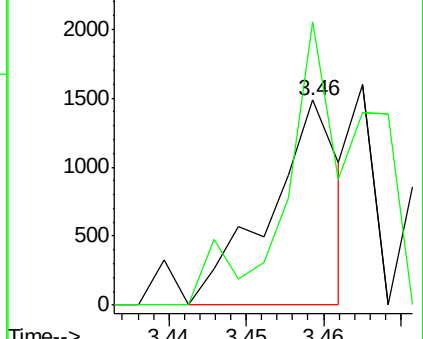
94 100

96 164.1 72.5 108.7#



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0



#7

Chloroethane

Concen: 0.044 ppbv

RT: 3.55 min Scan# 236

Delta R.T. -0.01 min

Lab File: VL037781.D

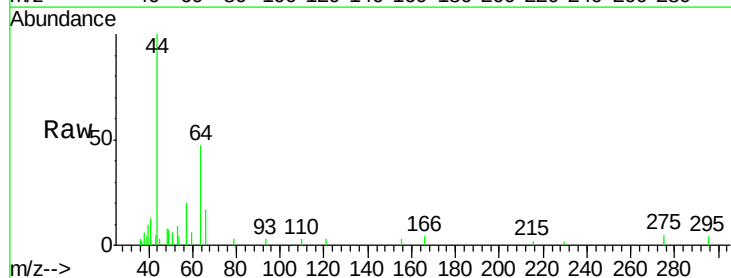
Acq: 5 Oct 2021 19:59

Tgt Ion: 64 Resp: 1284

Ion Ratio Lower Upper

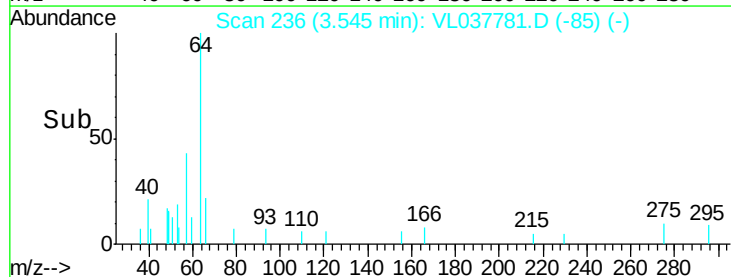
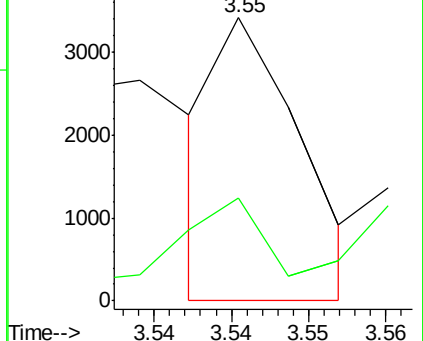
64 100

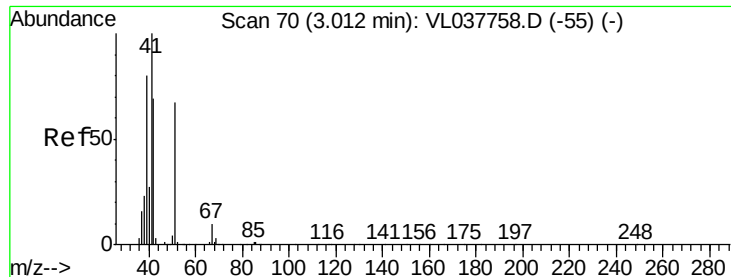
66 36.4 27.5 41.3



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#9

Propene

Concen: 0.326 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Instrument :

MSVOA\_L

ClientSampleId :

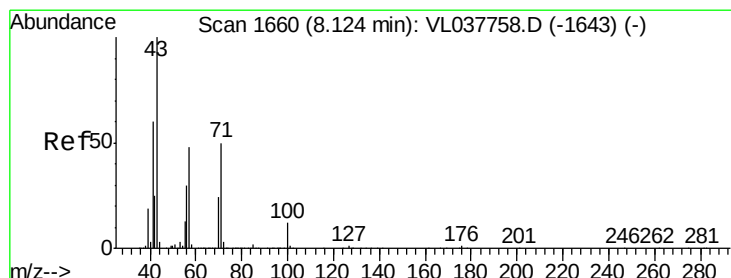
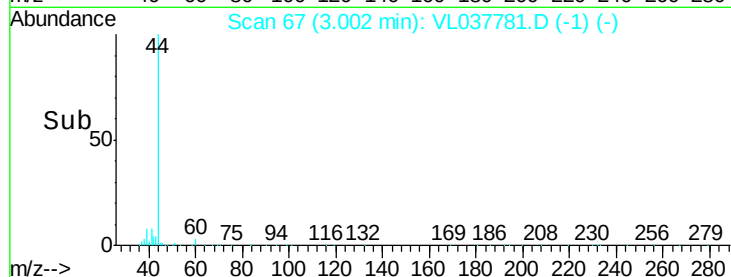
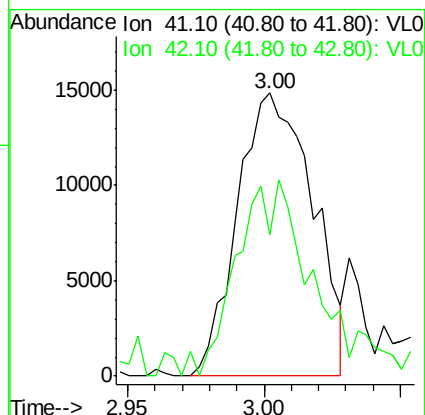
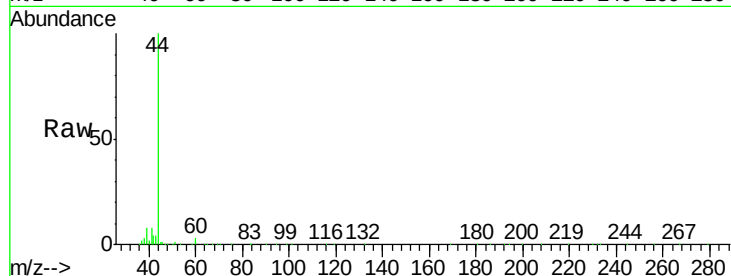
C0P01

Tgt Ion: 41 Resp: 28467

Ion Ratio Lower Upper

41 100

42 75.3 54.2 81.2



#10

Heptane

Concen: 0.176 ppbv

RT: 8.10 min Scan# 1653

Delta R.T. -0.02 min

Lab File: VL037781.D

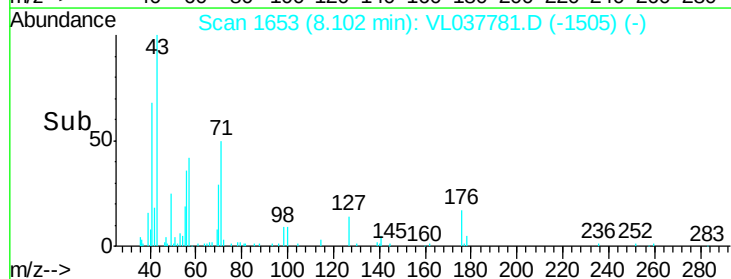
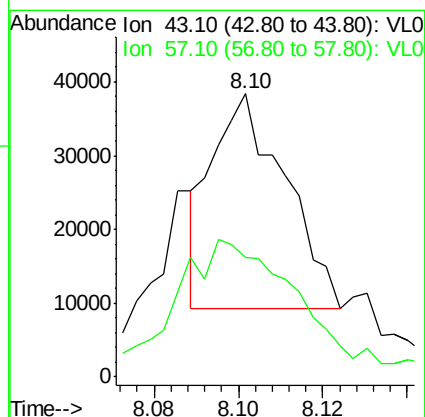
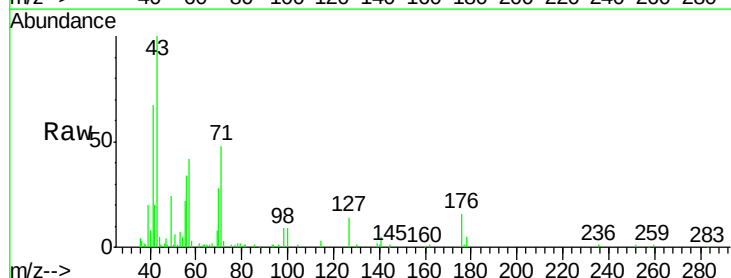
Acq: 5 Oct 2021 19:59

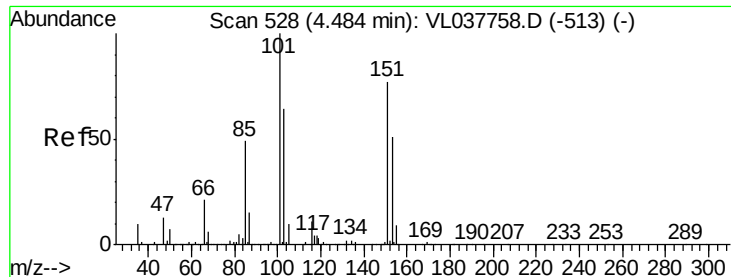
Tgt Ion: 43 Resp: 35032

Ion Ratio Lower Upper

43 100

57 117.3 40.0 60.0#





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.054 ppbv

RT: 4.47 min Scan# 523

Delta R.T. -0.02 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Instrument :

MSVOA\_L

ClientSampleId :

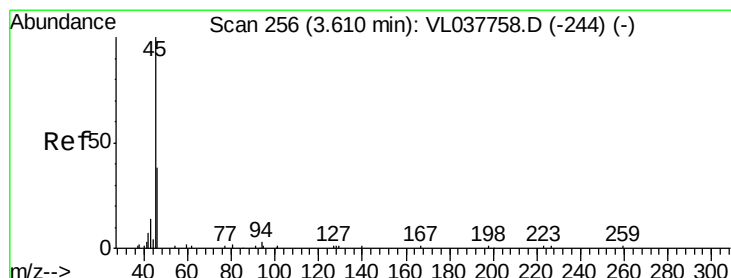
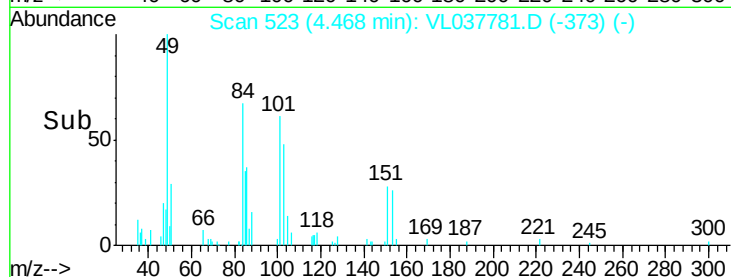
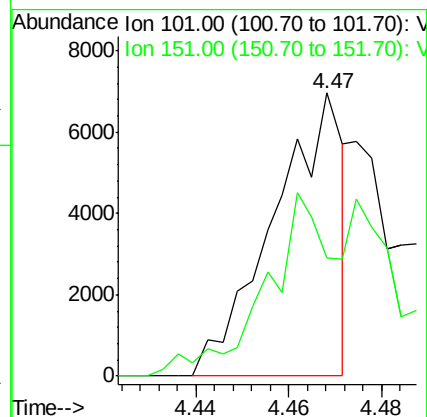
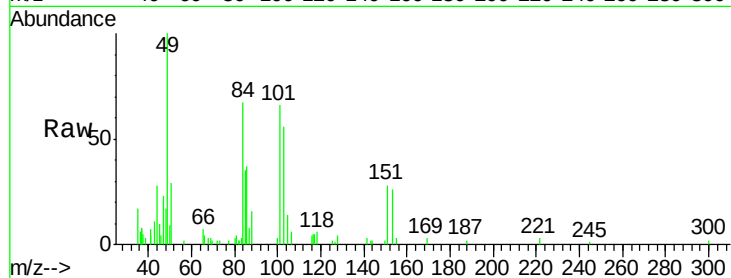
C0P01

Tgt Ion: 101 Resp: 7253

Ion Ratio Lower Upper

101 100

151 122.6 62.9 94.3#



#13

Ethanol

Concen: 40.612 ppbv

RT: 3.59 min Scan# 249

Delta R.T. -0.02 min

Lab File: VL037781.D

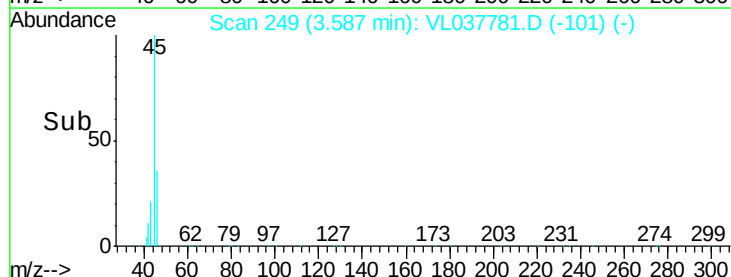
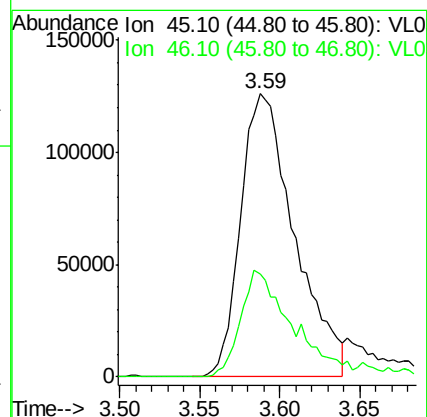
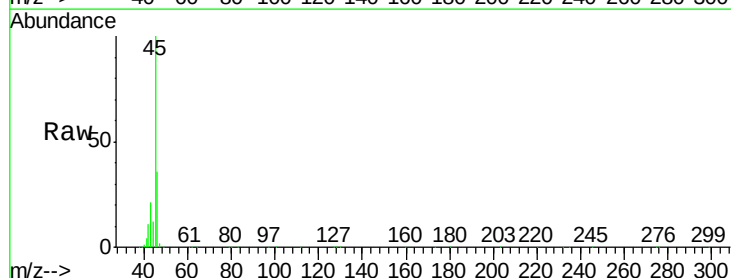
Acq: 5 Oct 2021 19:59

Tgt Ion: 45 Resp: 290382

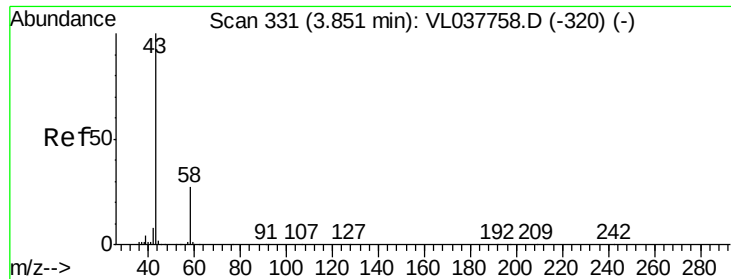
Ion Ratio Lower Upper

45 100

46 40.2 20.2 81.0







#15

Acetone

Concen: 11.960 ppbv

RT: 3.83 min Scan# 325

Delta R.T. -0.02 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Instrument :

MSVOA\_L

ClientSampleId :

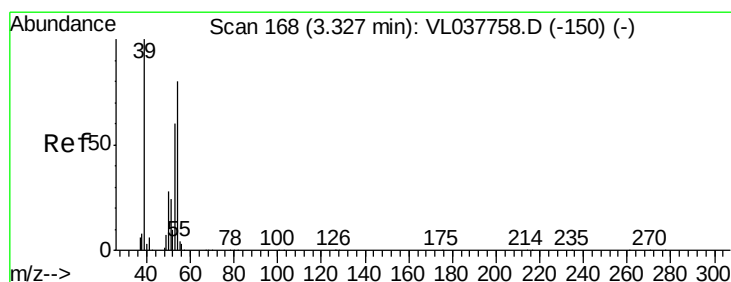
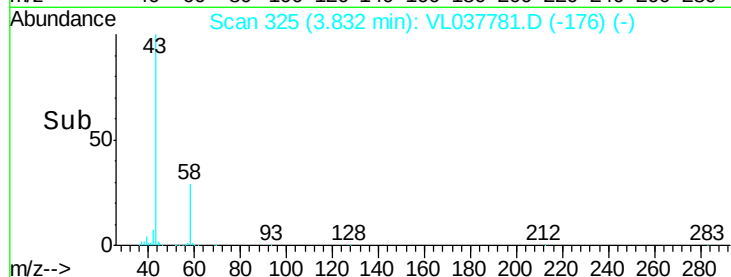
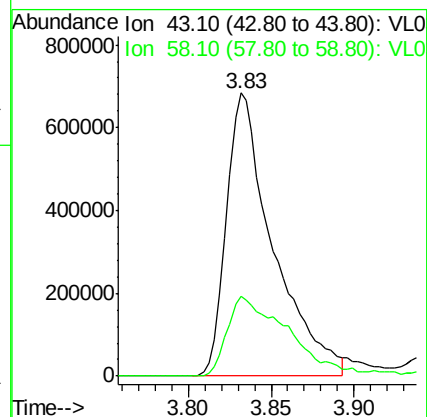
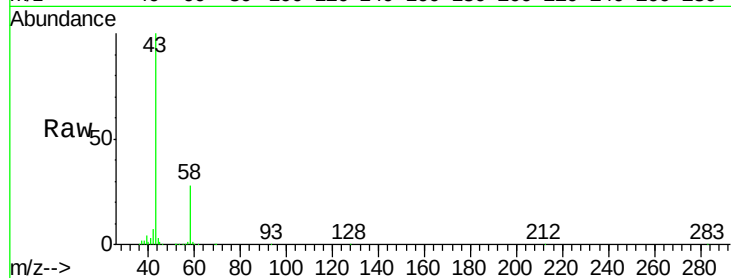
C0P01

Tgt Ion: 43 Resp: 1327752

Ion Ratio Lower Upper

43 100

58 40.2 23.0 34.6#



#16

1,3-Butadiene

Concen: 0.036 ppbv

RT: 3.32 min Scan# 165

Delta R.T. -0.01 min

Lab File: VL037781.D

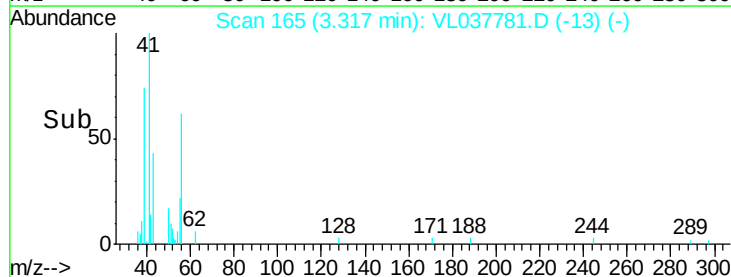
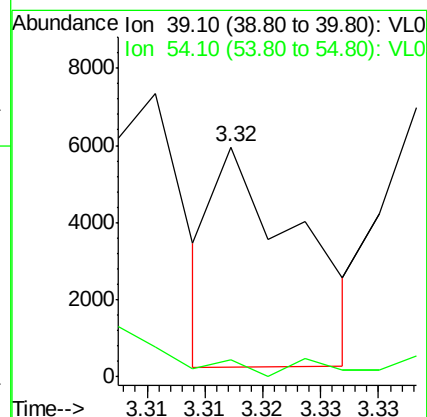
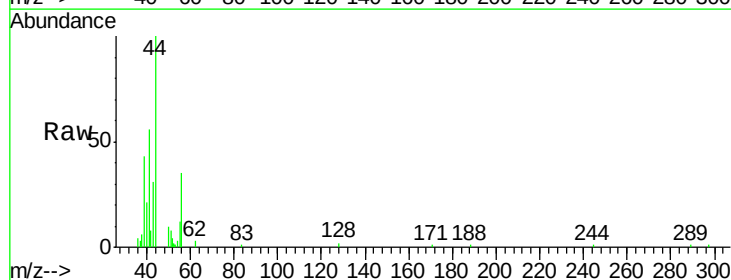
Acq: 5 Oct 2021 19:59

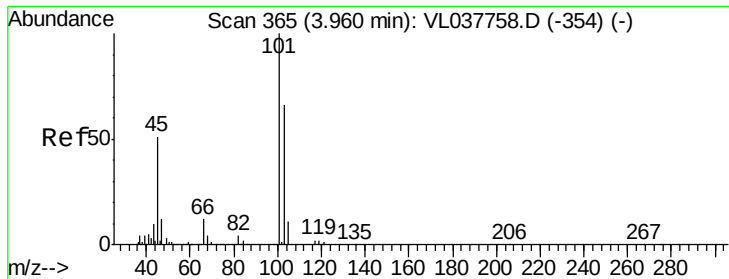
Tgt Ion: 39 Resp: 2908

Ion Ratio Lower Upper

39 100

54 0.0 61.7 92.5#





#19

Isopropyl Alcohol

Concen: 7.990 ppbv

RT: 3.95 min Scan# 363

Delta R.T. -0.01 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Instrument :

MSVOA\_L

ClientSampleId :

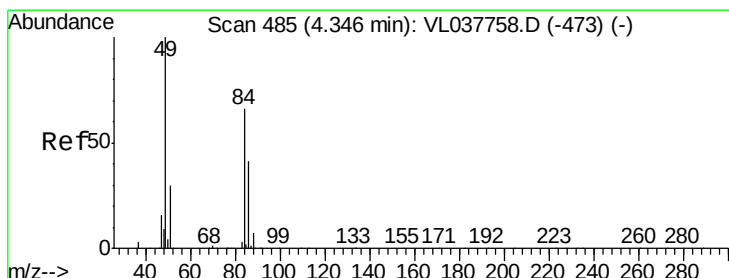
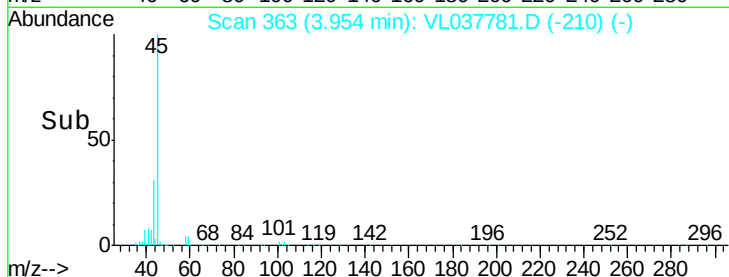
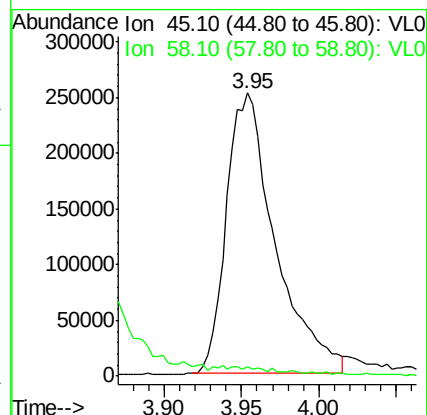
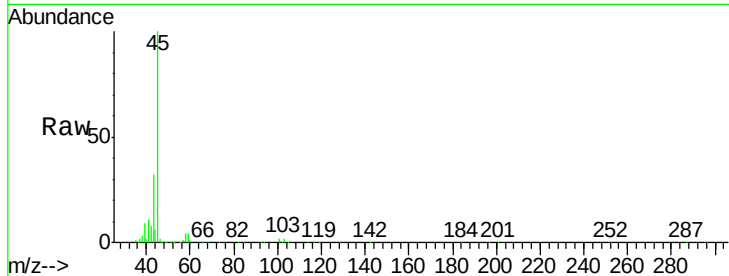
C0P01

Tgt Ion: 45 Resp: 551858

Ion Ratio Lower Upper

45 100

58 91.0 1.1 1.7#



#20

Methylene Chloride

Concen: 34.491 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.02 min

Lab File: VL037781.D

Acq: 5 Oct 2021 19:59

Tgt Ion: 84 Resp: 1934699

Ion Ratio Lower Upper

84 100

49 155.1 120.7 181.1

51 48.0 36.2 54.4

86 63.4 49.6 74.4

