

Data Path : W:\HPCHEM1\MSVOA\_L\DATA\VL122017\  
 Data File : VL031287.D  
 Acq On : 21 Dec 2017 2:37  
 Operator : SY/AP  
 Sample : I7005-08  
 Misc : 400ml/MSVOA\_L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-7

Quant Time: Dec 21 08:43:21 2017

Quant Method : W:\HPCHEM1\MSVOA\_L\METHODS\VL121317AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Dec 14 04:29:58 2017

QLast Update : Thu Dec 14 04:29:58 2017

Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.92  | 49   | 1403900  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.46  | 114  | 3734464  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.41 | 117  | 3334411  | 10.00 | ppbv  | 0.00     |

#### System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.75  | 95    | 2631067  | 11.09    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 110.90% |

#### Target Compounds

|                                |       |     |          |       |        | Qvalue |
|--------------------------------|-------|-----|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.18  | 85  | 72314    | 0.61  | ppbv   | 96     |
| 3) Chlorodifluoromethane       | 3.08  | 51  | 82731    | 0.52  | ppbv # | 87     |
| 4) Chloromethane               | 3.27  | 50  | 40460    | 0.47  | ppbv   | 89     |
| 5) Vinyl Chloride              | 3.40  | 62  | 5763     | 0.06  | ppbv   | 93     |
| 6) Bromomethane                | 3.63  | 94  | 5992     | 0.11  | ppbv   | 98     |
| 7) Chloroethane                | 3.71  | 64  | 5192     | 0.16  | ppbv   | 97     |
| 9) Propene                     | 3.13  | 41  | 4708128  | 60.10 | ppbv   | 96     |
| 10) Heptane                    | 8.41  | 43  | 1074890  | 4.51  | ppbv   | 100    |
| 11) Trichlorofluoromethane     | 4.13  | 101 | 45244    | 0.23  | ppbv   | 96     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.69  | 101 | 9935     | 0.07  | ppbv   | 96     |
| 13) Ethanol                    | 3.77  | 45  | 540680   | 23.93 | ppbv   | 99     |
| 15) Acetone                    | 4.02  | 43  | 7122595  | 38.44 | ppbv # | 79     |
| 16) 1,3-Butadiene              | 3.45  | 39  | 4214966  | 52.88 | ppbv # | 16     |
| 17) tert-Butyl alcohol         | 4.49  | 59  | 635957   | 6.12  | ppbv   | 97     |
| 19) Isopropyl Alcohol          | 4.15  | 45  | 221197   | 1.89  | ppbv # | 41     |
| 20) Methylene Chloride         | 4.55  | 84  | 52385    | 0.85  | ppbv   | 96     |
| 21) Allyl Chloride             | 4.57  | 41  | 100361   | 0.92  | ppbv # | 24     |
| 23) Vinyl Acetate              | 5.28  | 43  | 371730   | 1.25  | ppbv # | 1      |
| 25) Ethyl Acetate              | 5.93  | 43  | 1239176  | 3.27  | ppbv # | 79     |
| 26) Hexane                     | 5.93  | 57  | 1735299  | 9.67  | ppbv # | 41     |
| 27) Carbon Disulfide           | 4.76  | 76  | 426114   | 2.37  | ppbv   | 97     |
| 28) Methyl tert-Butyl Ether    | 5.26  | 73  | 12389    | 0.05  | ppbv # | 52     |
| 29) Chloroform                 | 6.00  | 83  | 27995    | 0.12  | ppbv   | 98     |
| 30) Cyclohexane                | 7.41  | 84  | 423059   | 2.68  | ppbv # | 77     |
| 32) 1,1,1-Trichloroethane      | 6.77  | 97  | 10769    | 0.04  | ppbv # | 43     |
| 34) 2-Butanone                 | 5.47  | 43  | 12386683 | 46.96 | ppbv   | 91     |
| 36) Benzene                    | 7.17  | 78  | 711588   | 1.80  | ppbv   | 99     |
| 38) Trichloroethene            | 8.13  | 130 | 9234     | 0.06  | ppbv # | 71     |
| 39) 1,2-Dichloropropane        | 7.46  | 63  | 887664   | 6.34  | ppbv # | 27     |
| 41) Tetrahydrofuran            | 6.30  | 42  | 64737    | 0.44  | ppbv # | 90     |
| 42) Bromodichloromethane       | 8.08  | 83  | 56251    | 0.22  | ppbv # | 27     |
| 43) Methyl Methacrylate        | 8.28  | 69  | 4042     | 0.03  | ppbv # | 1      |
| 44) 2,2,4-Trimethylpentane     | 8.16  | 57  | 517499   | 0.87  | ppbv # | 35     |
| 50) 4-Methyl-2-Pentanone       | 9.04  | 43  | 166097   | 0.51  | ppbv   | 99     |
| 51) 2-Hexanone                 | 10.44 | 43  | 1738694  | 5.64  | ppbv # | 93     |
| 52) Tetrachloroethene          | 11.55 | 164 | 9190     | 0.06  | ppbv # | 69     |
| 53) Toluene                    | 10.12 | 91  | 1043637  | 2.43  | ppbv   | 98     |
| 58) Ethyl Benzene              | 13.03 | 91  | 751511   | 1.37  | ppbv   | 99     |
| 59) m/p-Xylene                 | 13.29 | 91  | 921245   | 2.09  | ppbv   | 100    |
| 60) o-Xylene                   | 14.02 | 91  | 415878   | 0.94  | ppbv   | 97     |
| 61) Styrene                    | 13.85 | 104 | 50412    | 0.40  | ppbv # | 68     |

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Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-7

Quant Time: Dec 21 08:43:21 2017  
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 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Dec 14 04:29:58 2017  
 QLast Update : Thu Dec 14 04:29:58 2017  
 Response via : Initial Calibration

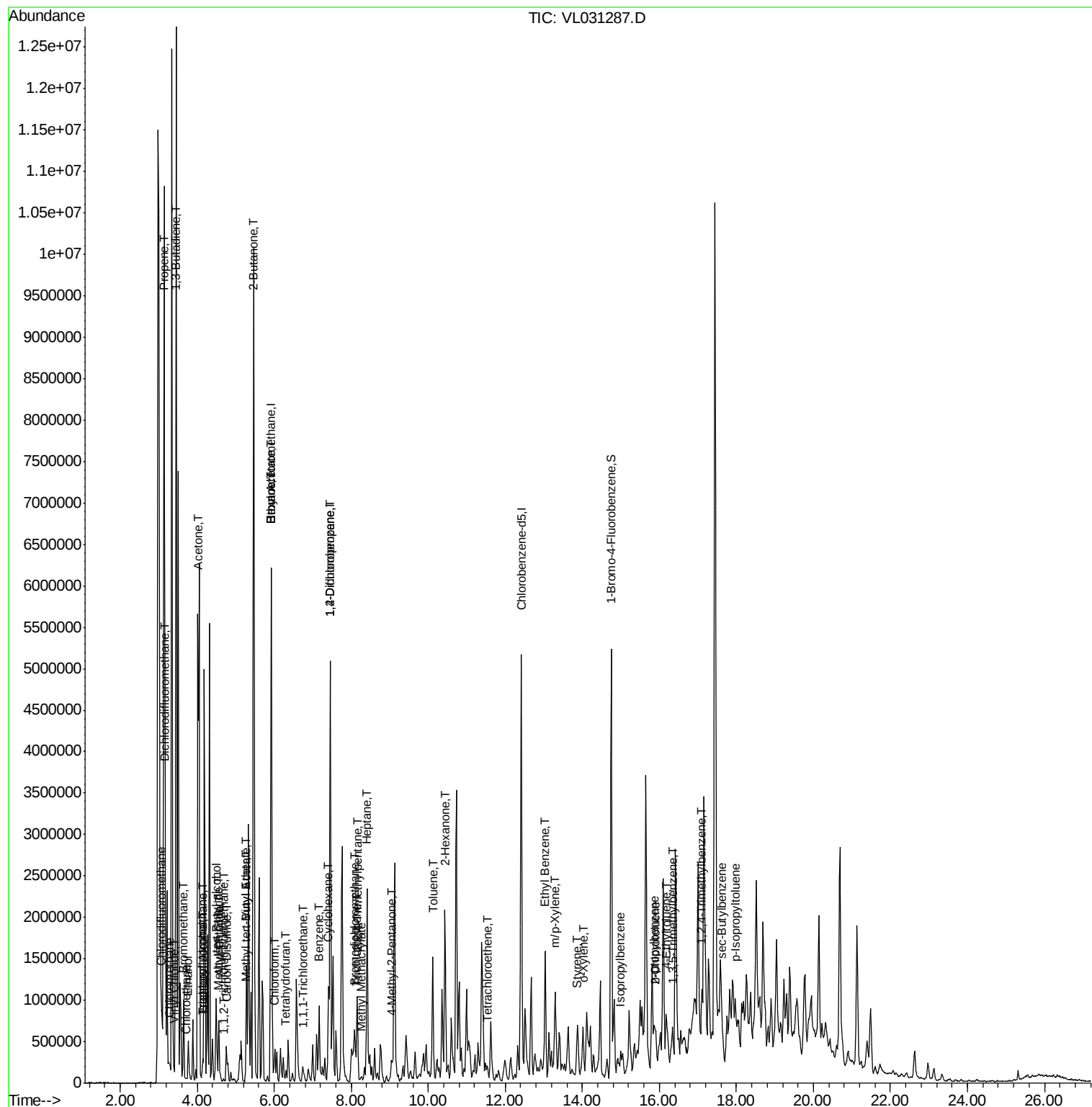
| Internal Standards         | R.T.  | QIon | Response | Conc | Units  | Dev(Min) |
|----------------------------|-------|------|----------|------|--------|----------|
| 62) Isopropylbenzene       | 15.00 | 105  | 246336   | 0.42 | ppbv   | 99       |
| 64) n-propylbenzene        | 15.89 | 120  | 29165    | 0.19 | ppbv   | 69       |
| 67) sec-Butylbenzene       | 17.63 | 105  | 49613    | 0.07 | ppbv   | 98       |
| 69) p-Isopropyltoluene     | 17.99 | 119  | 20817    | 0.04 | ppbv # | 1        |
| 71) 2-Chlorotoluene        | 15.90 | 91   | 66481    | 0.15 | ppbv   | 78       |
| 72) 4-Ethyltoluene         | 16.17 | 105  | 105169   | 0.22 | ppbv # | 74       |
| 73) 1,3,5-Trimethylbenzene | 16.33 | 105  | 170903   | 0.39 | ppbv   | 99       |
| 74) 1,2,4-Trimethylbenzene | 17.10 | 105  | 117451   | 0.26 | ppbv # | 64       |

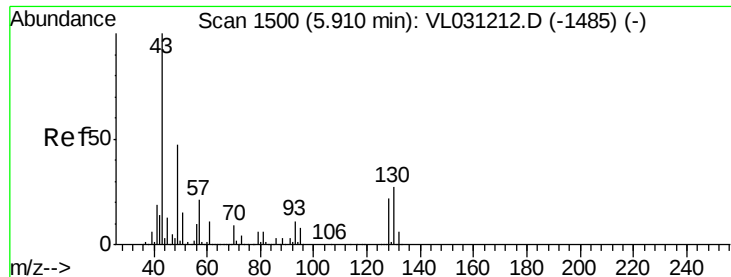
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : W:\HPCHEM1\MSVOA\_L\DATA\VL122017\  
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Instrument :  
MSVOA\_L  
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EP1-SV-7

Quant Time: Dec 21 08:43:21 2017  
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QLast Update : Thu Dec 14 04:29:58 2017  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.92 min Scan# 1502

Delta R.T. 0.01 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-7

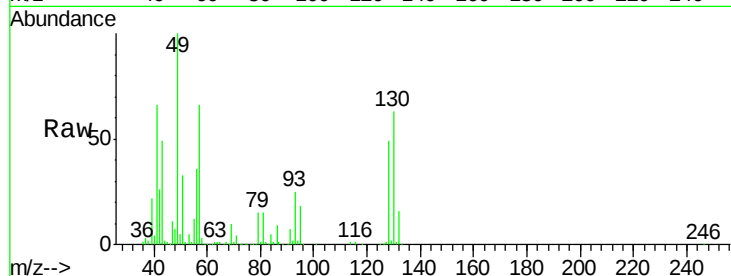
Tgt Ion: 49 Resp: 1403900

Ion Ratio Lower Upper

49 100

128 49.9 23.2 69.5

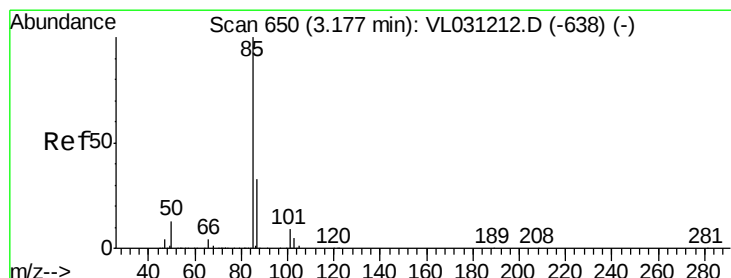
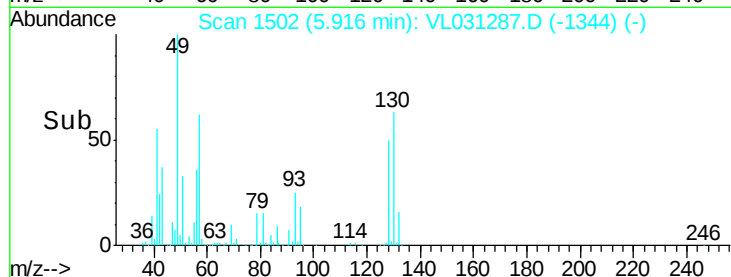
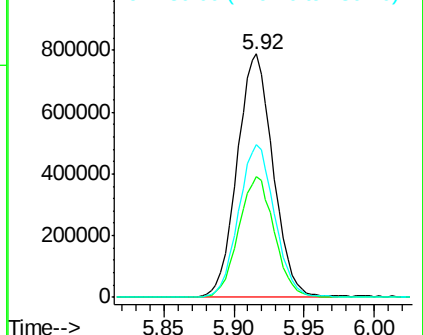
130 63.4 29.6 88.8



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: 0.61 ppbv

RT: 3.18 min Scan# 651

Delta R.T. 0.00 min

Lab File: VL031287.D

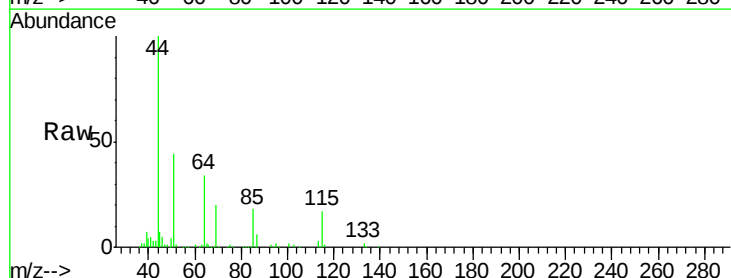
Acq: 21 Dec 2017 2:37

Tgt Ion: 85 Resp: 72314

Ion Ratio Lower Upper

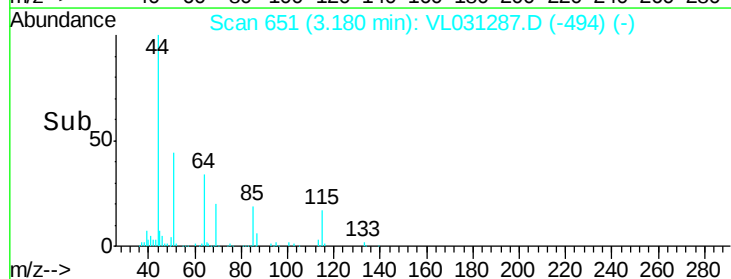
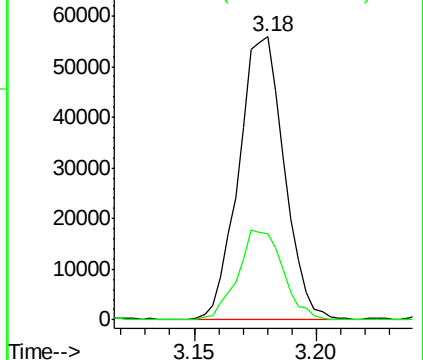
85 100

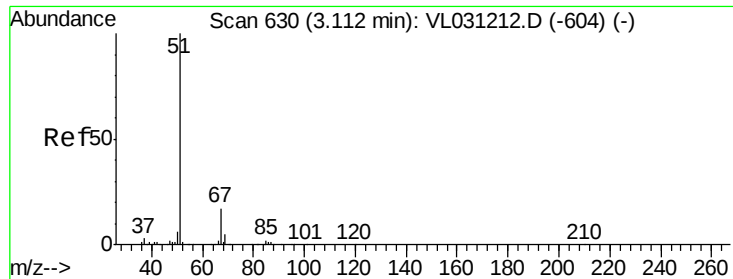
87 30.7 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.52 ppbv

RT: 3.08 min Scan# 621

Delta R.T. -0.03 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

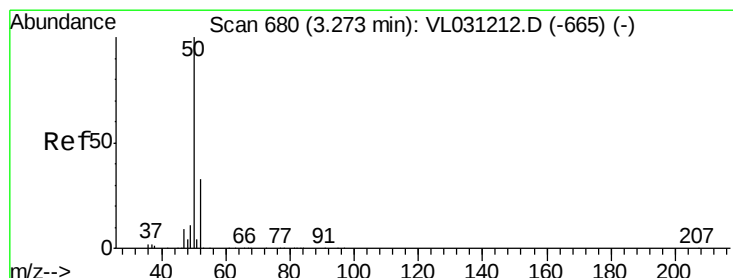
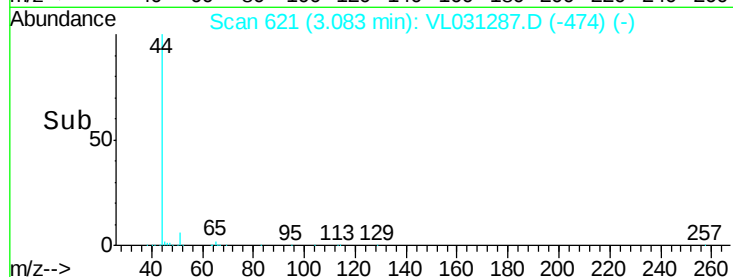
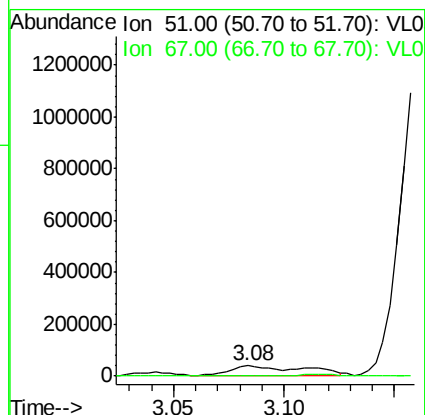
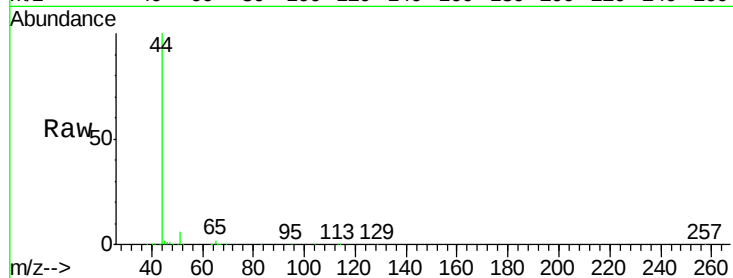
EP1-SV-7

Tgt Ion: 51 Resp: 82731

Ion Ratio Lower Upper

51 100

67 11.6 13.8 20.6#



#4

Chloromethane

Concen: 0.47 ppbv

RT: 3.27 min Scan# 680

Delta R.T. 0.00 min

Lab File: VL031287.D

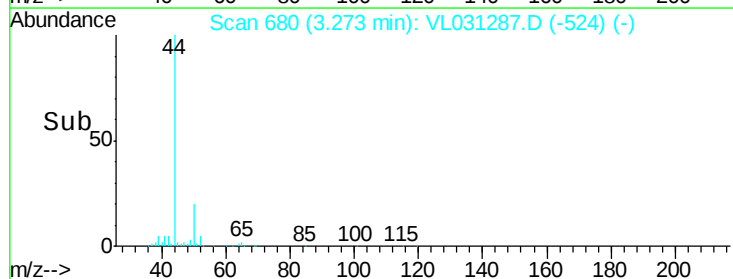
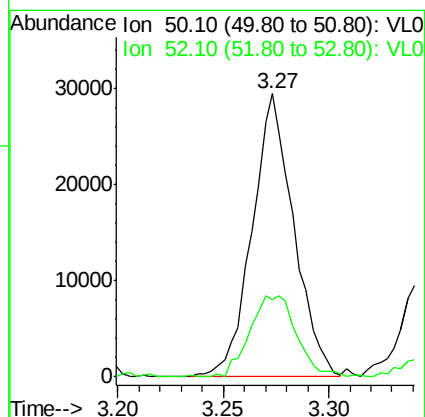
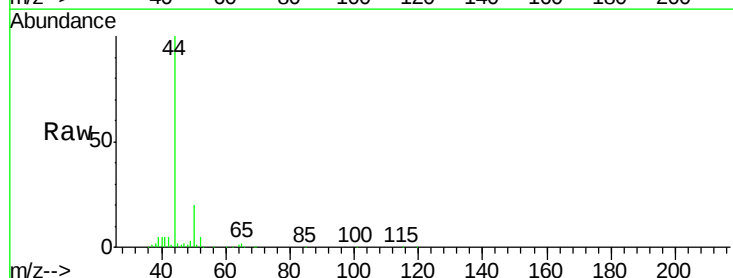
Acq: 21 Dec 2017 2:37

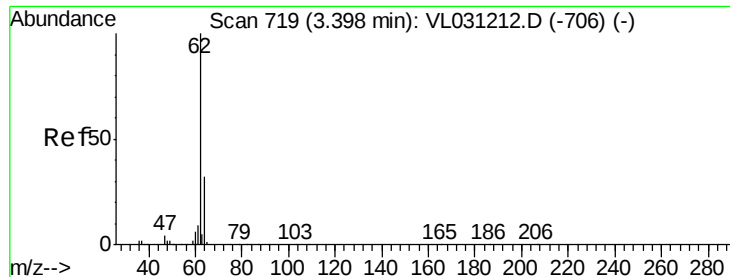
Tgt Ion: 50 Resp: 40460

Ion Ratio Lower Upper

50 100

52 26.8 26.5 39.7





#5

Vinyl Chloride

Concen: 0.06 ppbv

RT: 3.40 min Scan# 720

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

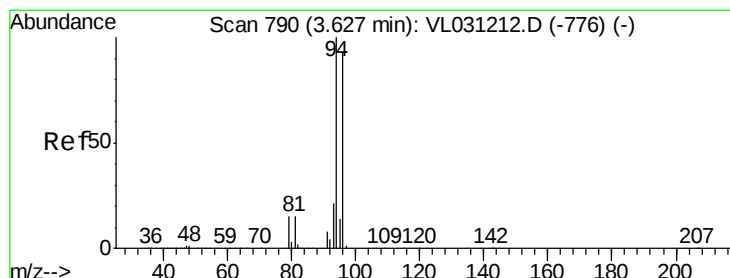
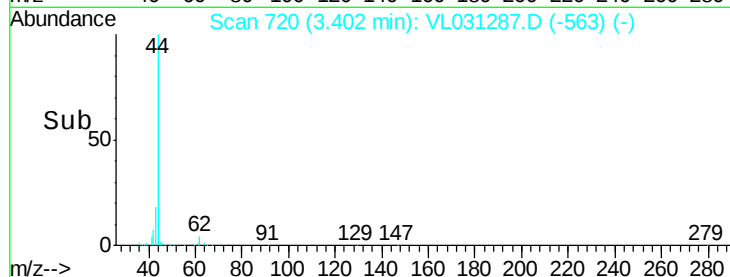
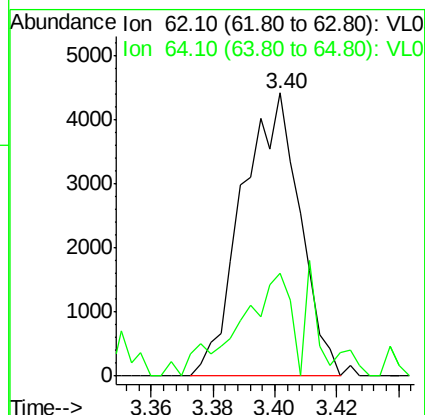
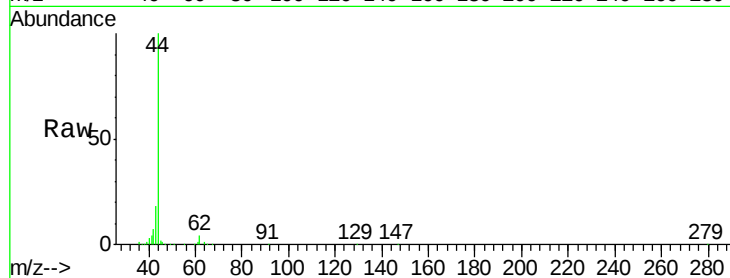
EP1-SV-7

Tgt Ion: 62 Resp: 5763

Ion Ratio Lower Upper

62 100

64 28.6 25.9 38.9



#6

Bromomethane

Concen: 0.11 ppbv

RT: 3.63 min Scan# 791

Delta R.T. 0.00 min

Lab File: VL031287.D

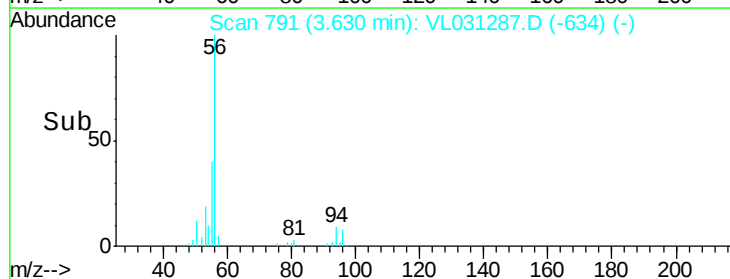
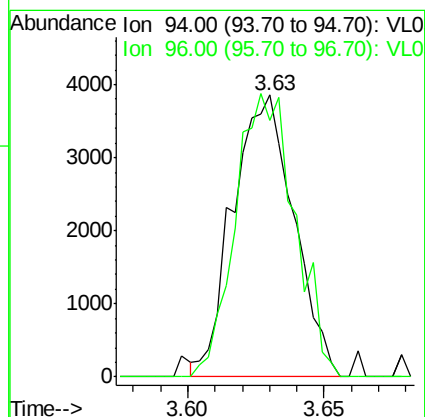
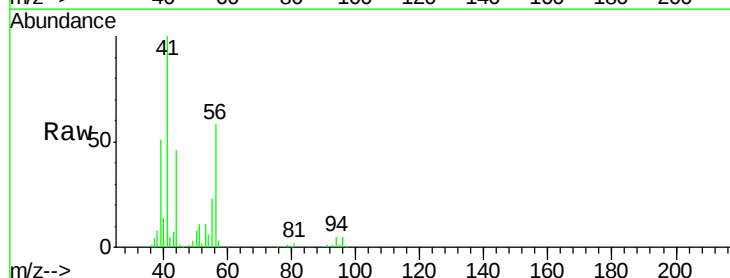
Acq: 21 Dec 2017 2:37

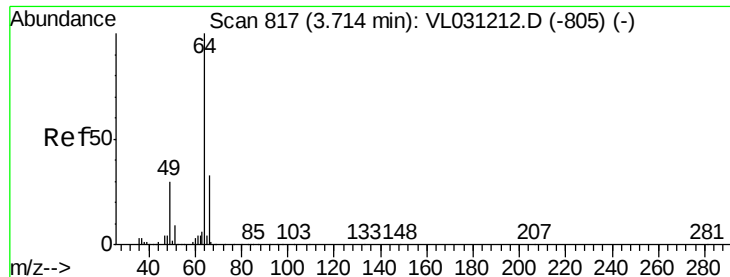
Tgt Ion: 94 Resp: 5992

Ion Ratio Lower Upper

94 100

96 90.9 74.4 111.6





#7

Chloroethane

Concen: 0.16 ppbv

RT: 3.71 min Scan# 817

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

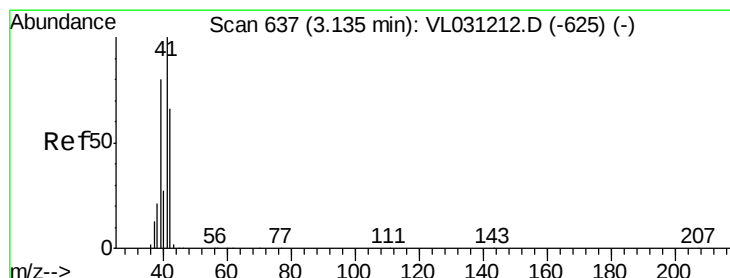
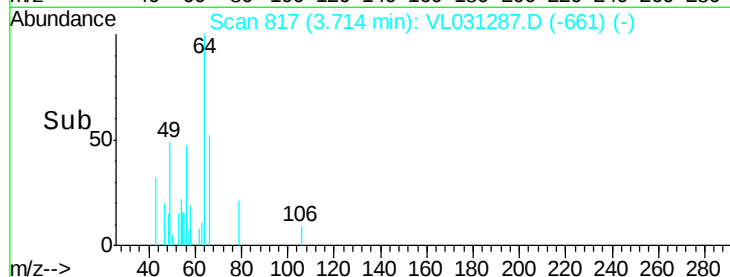
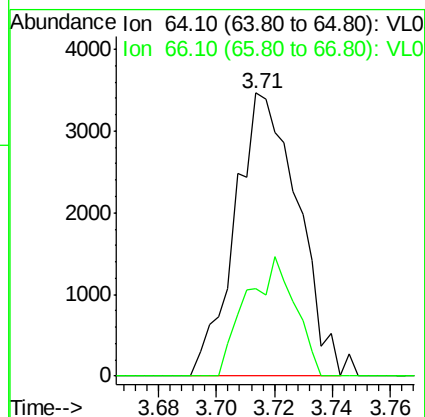
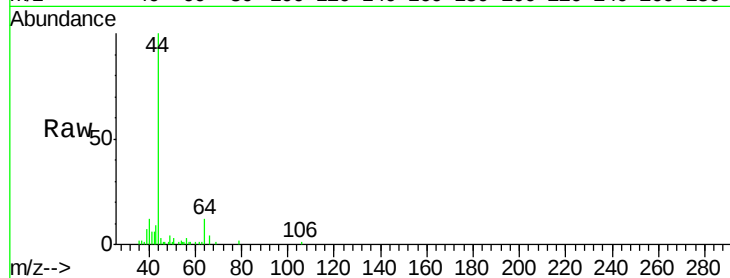
EP1-SV-7

Tgt Ion: 64 Resp: 5192

Ion Ratio Lower Upper

64 100

66 30.8 26.2 39.2



#9

Propene

Concen: 60.10 ppbv

RT: 3.13 min Scan# 637

Delta R.T. 0.00 min

Lab File: VL031287.D

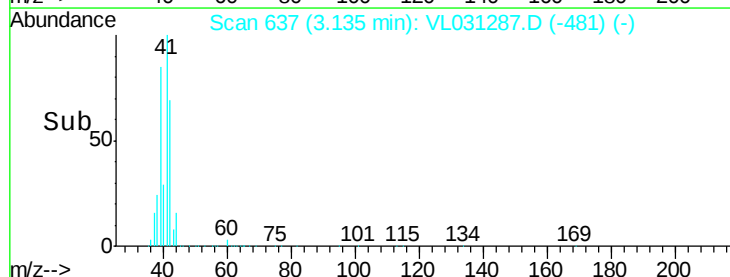
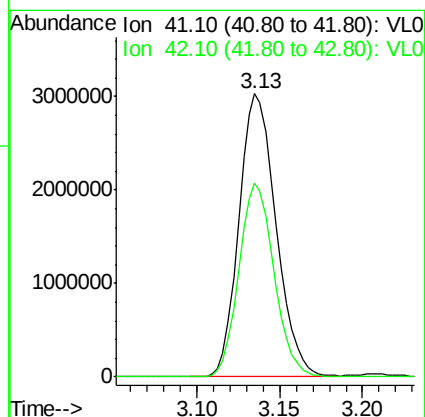
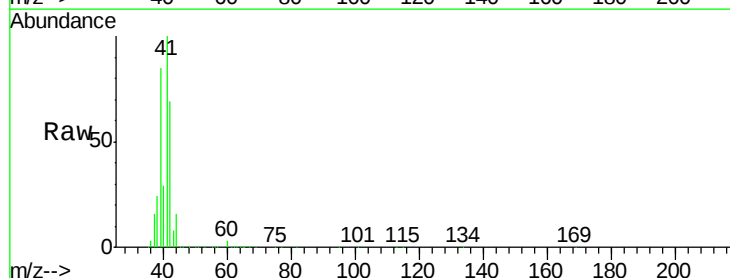
Acq: 21 Dec 2017 2:37

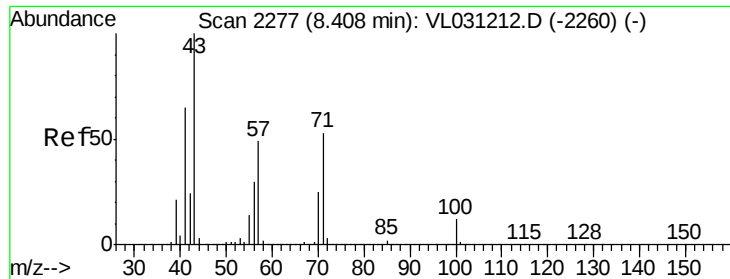
Tgt Ion: 41 Resp: 4708128

Ion Ratio Lower Upper

41 100

42 64.9 54.3 81.5





#10

Heptane

Concen: 4.51 ppbv

RT: 8.41 min Scan# 2277

Delta R.T. 0.00 min

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ClientSampleId :

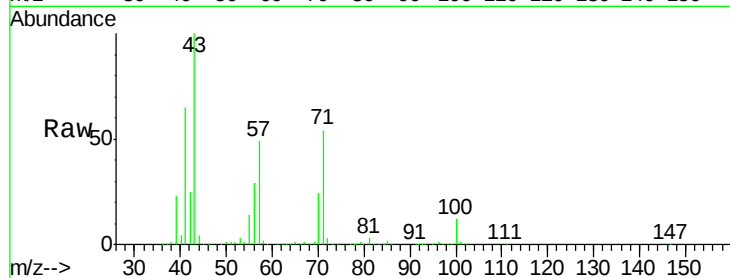
EP1-SV-7

Tgt Ion: 43 Resp: 1074890

Ion Ratio Lower Upper

43 100

57 49.5 39.8 59.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

8.41

600000

500000

400000

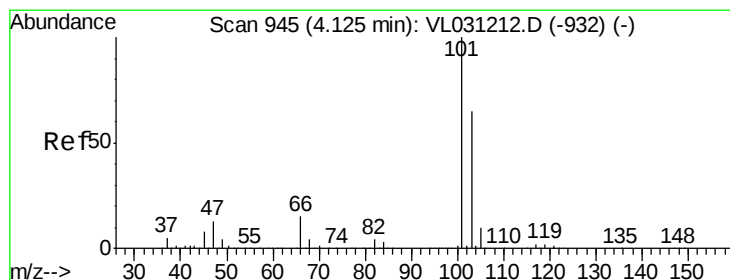
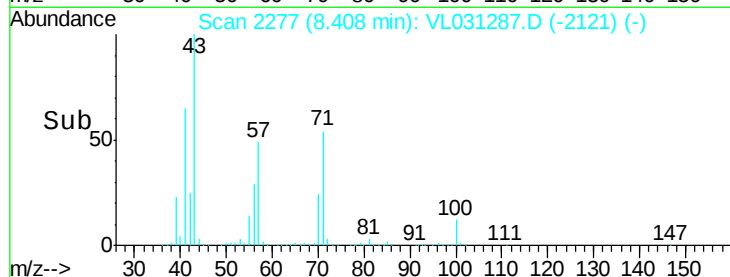
300000

200000

100000

0

Time-->



#11

Trichlorofluoromethane

Concen: 0.23 ppbv

RT: 4.13 min Scan# 948

Delta R.T. 0.01 min

Lab File: VL031287.D

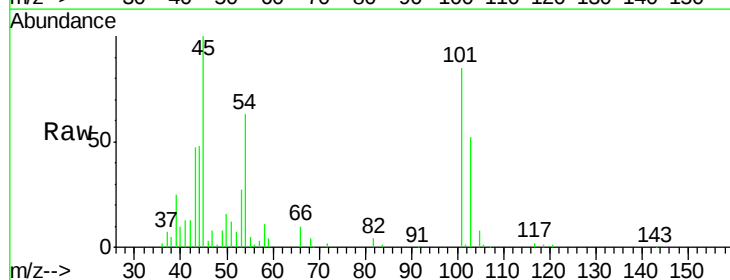
Acq: 21 Dec 2017 2:37

Tgt Ion: 101 Resp: 45244

Ion Ratio Lower Upper

101 100

103 61.4 51.8 77.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

4.13

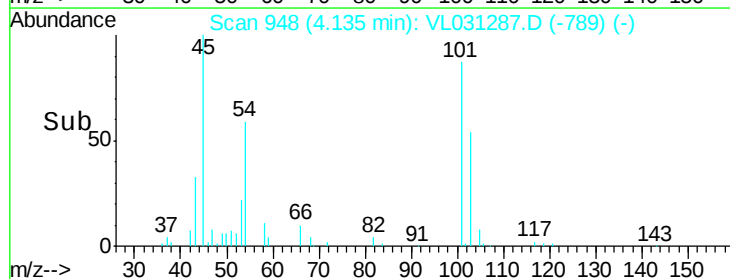
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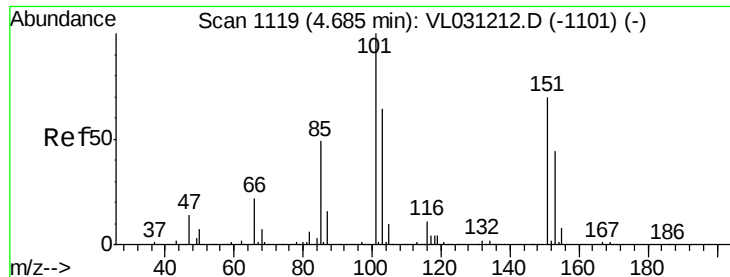
20000

10000

0

Time-->





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.07 ppbv

RT: 4.69 min Scan# 1121

Delta R.T. 0.01 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

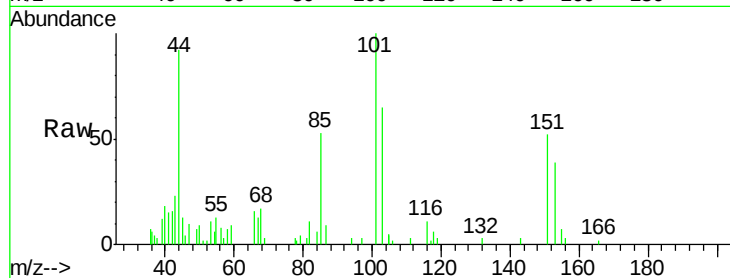
EP1-SV-7

Tgt Ion: 101 Resp: 9935

Ion Ratio Lower Upper

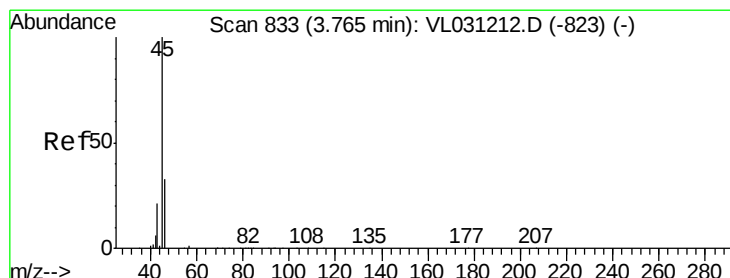
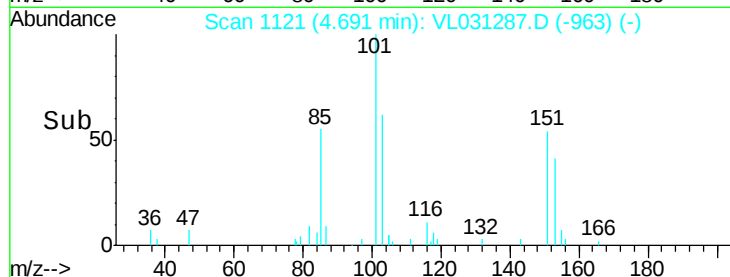
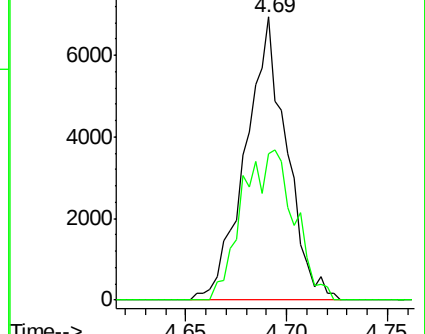
101 100

151 67.2 56.5 84.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 23.93 ppbv

RT: 3.77 min Scan# 834

Delta R.T. 0.00 min

Lab File: VL031287.D

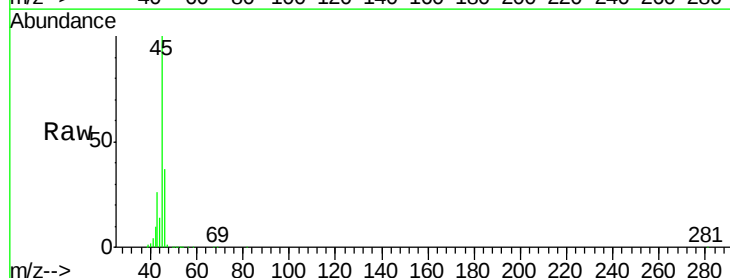
Acq: 21 Dec 2017 2:37

Tgt Ion: 45 Resp: 540680

Ion Ratio Lower Upper

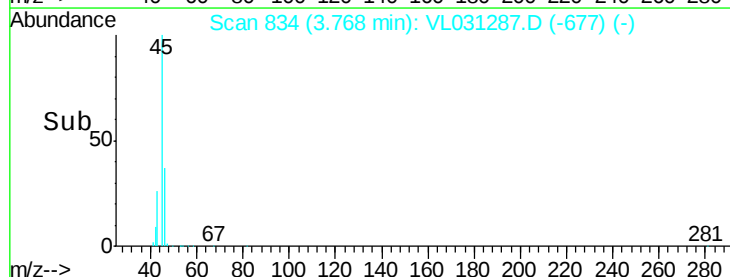
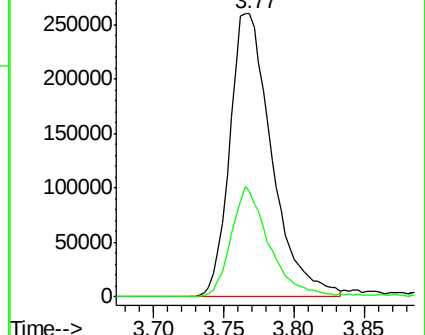
45 100

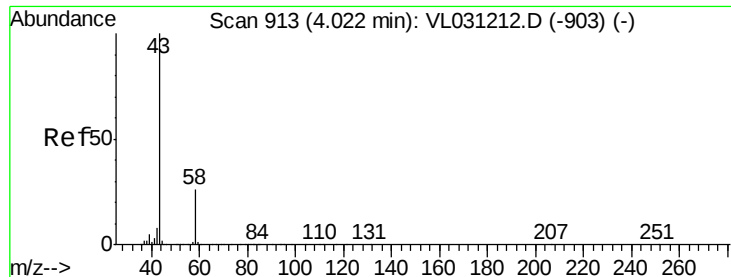
46 37.0 14.6 58.4



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 38.44 ppbv

RT: 4.02 min Scan# 912

Delta R.T. -0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

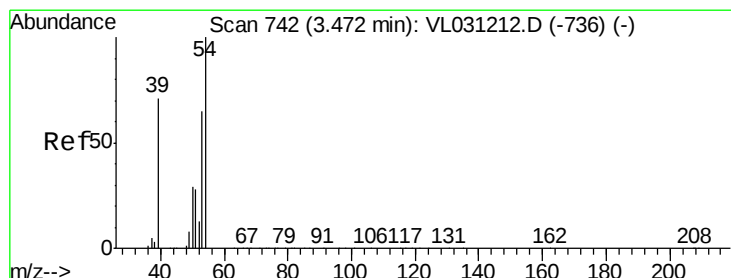
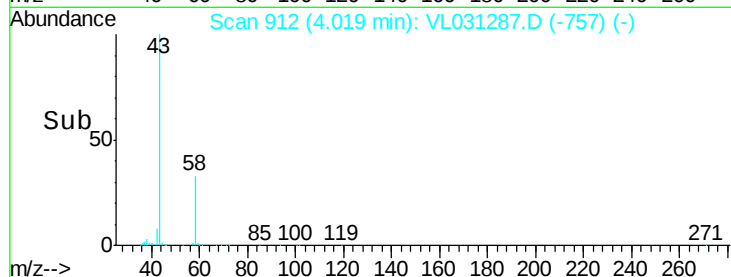
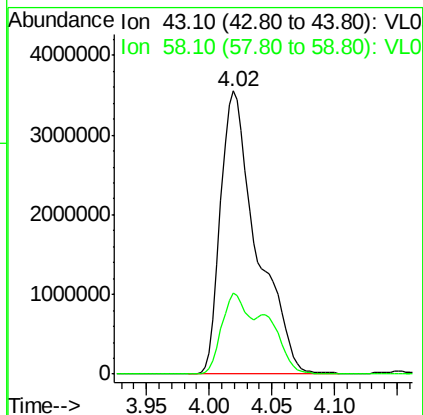
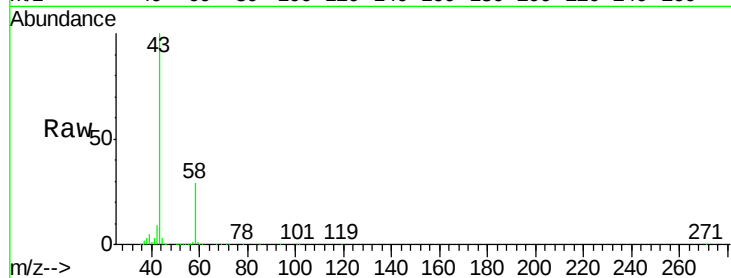
EP1-SV-7

Tgt Ion: 43 Resp: 7122595

Ion Ratio Lower Upper

43 100

58 35.9 20.3 30.5#



#16

1,3-Butadiene

Concen: 52.88 ppbv

RT: 3.45 min Scan# 736

Delta R.T. -0.02 min

Lab File: VL031287.D

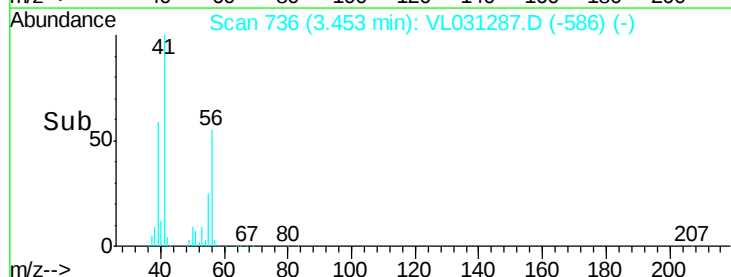
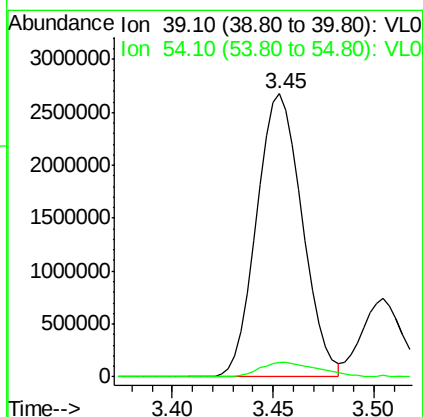
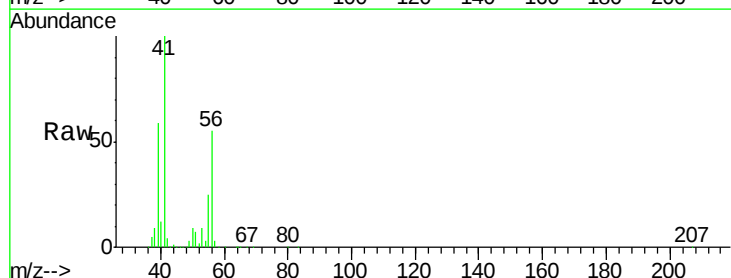
Acq: 21 Dec 2017 2:37

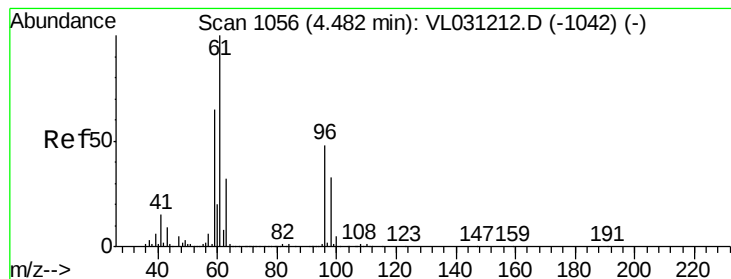
Tgt Ion: 39 Resp: 4214966

Ion Ratio Lower Upper

39 100

54 7.0 66.4 99.6#





#17

tert-Butyl alcohol

Concen: 6.12 ppbv

RT: 4.49 min Scan# 1059

Delta R.T. 0.01 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

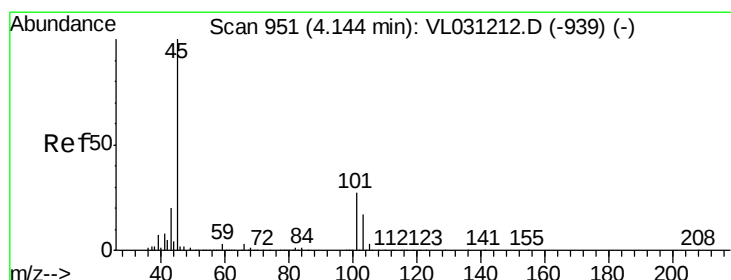
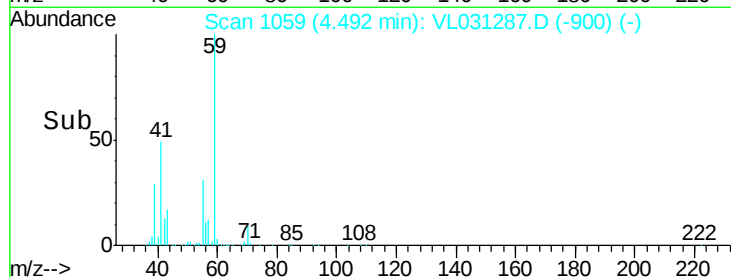
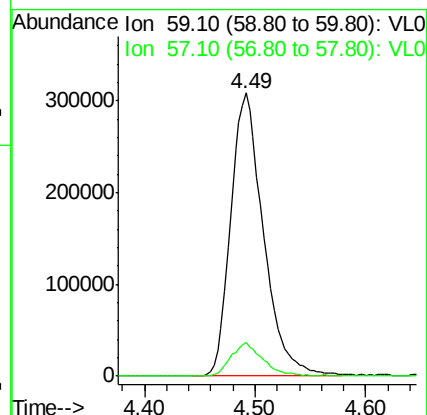
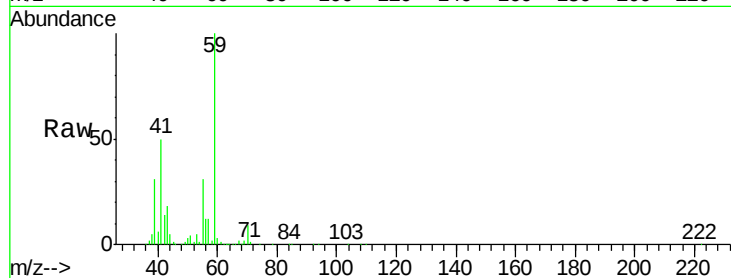
EP1-SV-7

Tgt Ion: 59 Resp: 635957

Ion Ratio Lower Upper

59 100

57 11.5 8.2 12.2



#19

Isopropyl Alcohol

Concen: 1.89 ppbv

RT: 4.15 min Scan# 953

Delta R.T. 0.01 min

Lab File: VL031287.D

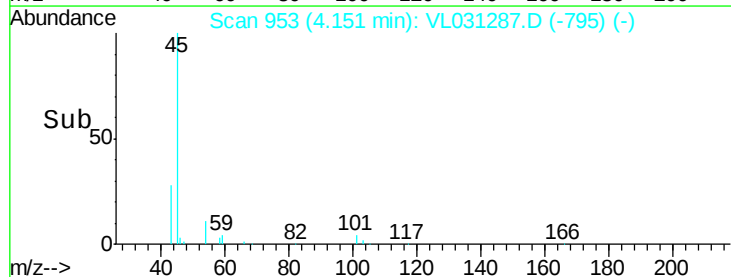
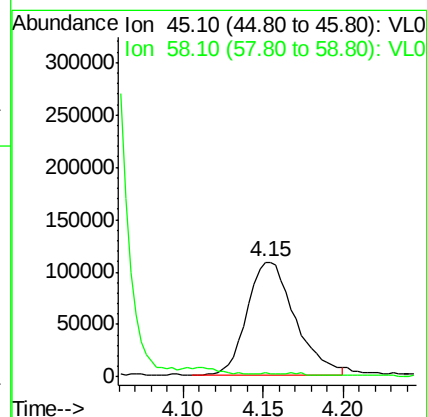
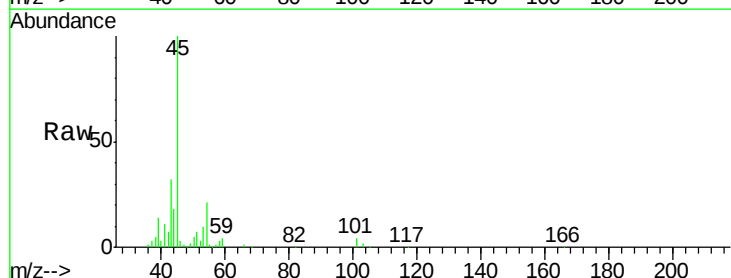
Acq: 21 Dec 2017 2:37

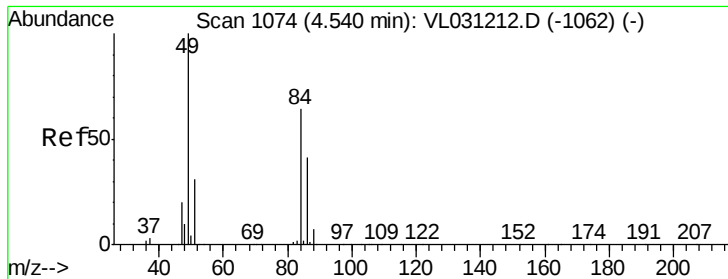
Tgt Ion: 45 Resp: 221197

Ion Ratio Lower Upper

45 100

58 0.0 27.2 40.8#

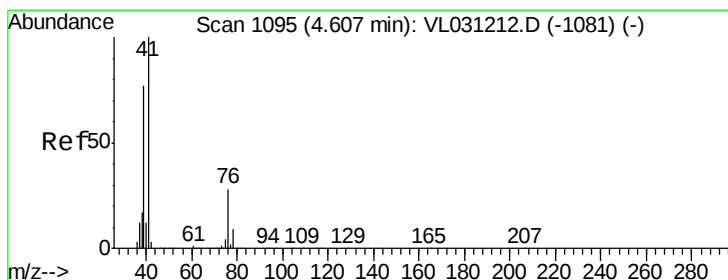
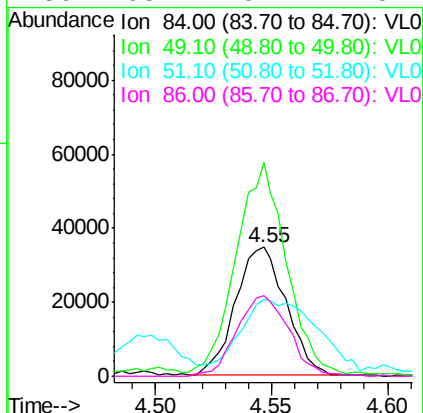
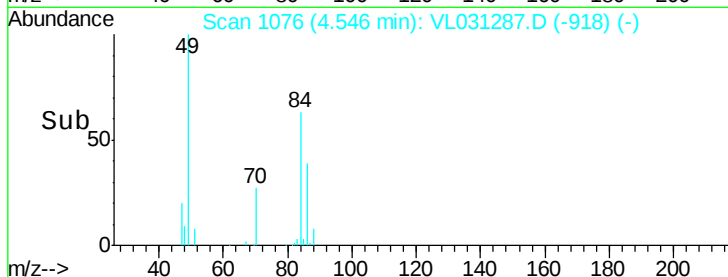
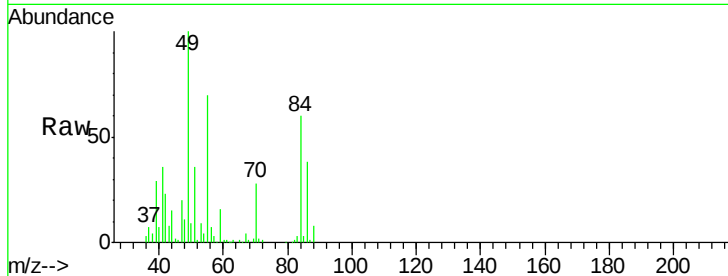




#20  
Methylene Chloride  
Concen: 0.85 ppbv  
RT: 4.55 min Scan# 1076  
Delta R.T. 0.01 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

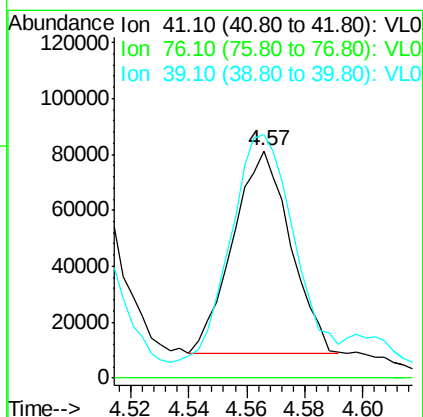
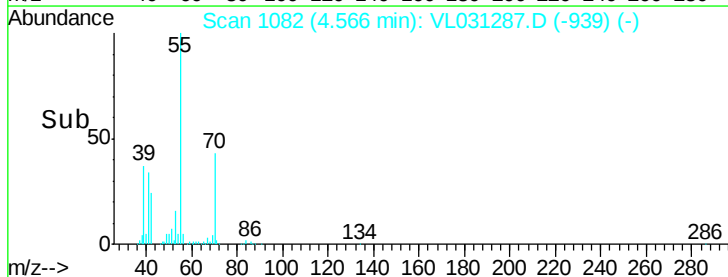
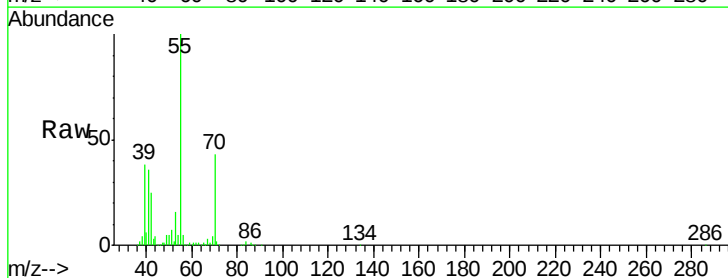
Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-7

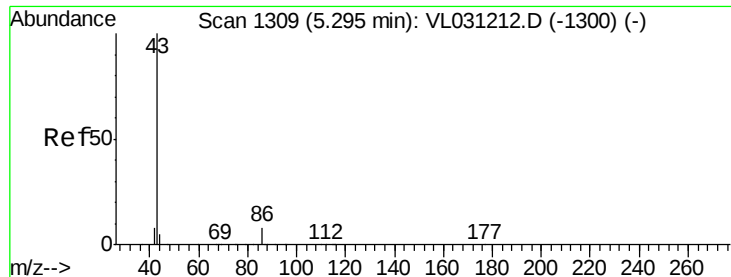
Tgt Ion: 84 Resp: 52385  
Ion Ratio Lower Upper  
84 100  
49 164.4 125.8 188.6  
51 48.1 39.3 58.9  
86 63.1 51.1 76.7



#21  
Allyl Chloride  
Concen: 0.92 ppbv  
RT: 4.57 min Scan# 1082  
Delta R.T. -0.04 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Tgt Ion: 41 Resp: 100361  
Ion Ratio Lower Upper  
41 100  
76 0.0 22.9 34.3#  
39 151.9 62.6 93.8#





#23

Vinyl Acetate

Concen: 1.25 ppbv

RT: 5.28 min Scan# 1304

Delta R.T. -0.02 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-7

Tgt Ion: 43 Resp: 371730

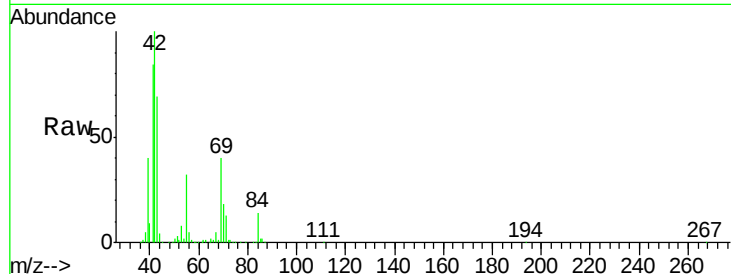
Ion Ratio Lower Upper

43 100

86 3.5 5.9 8.9#

42 145.0 7.3 10.9#

44 3.0 3.7 5.5#

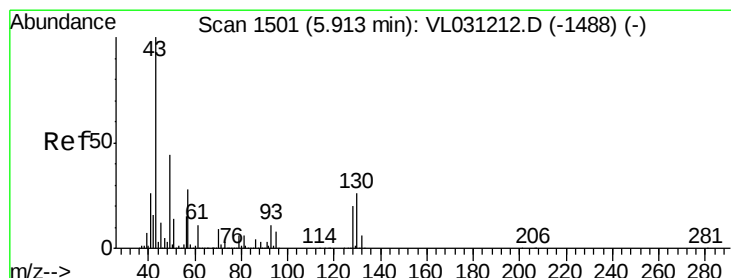
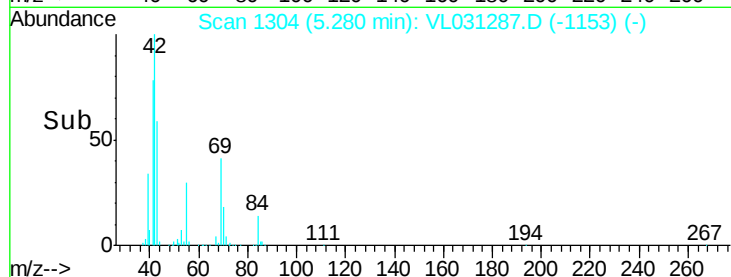
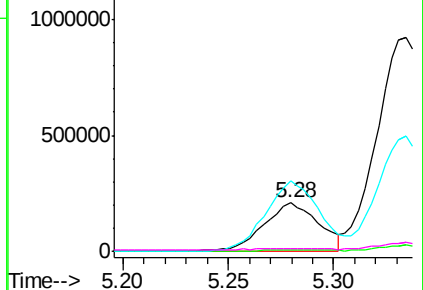


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 3.27 ppbv

RT: 5.93 min Scan# 1507

Delta R.T. 0.02 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Tgt Ion: 43 Resp: 1239176

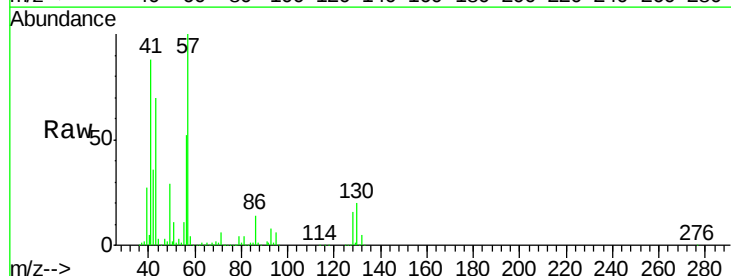
Ion Ratio Lower Upper

43 100

45 0.9 8.0 12.0#

61 0.5 7.4 11.0#

70 2.3 5.8 8.8#

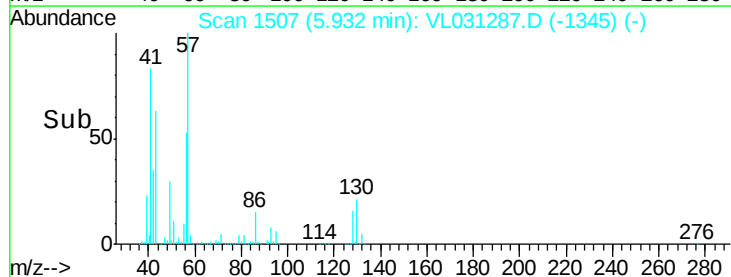
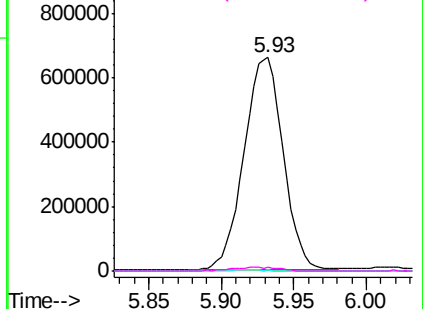


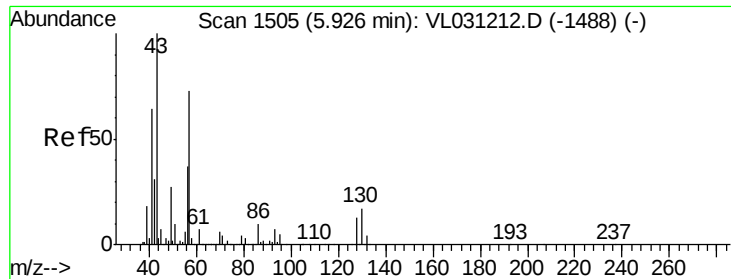
Abundance Ion 43.10 (42.80 to 43.80): VL0

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



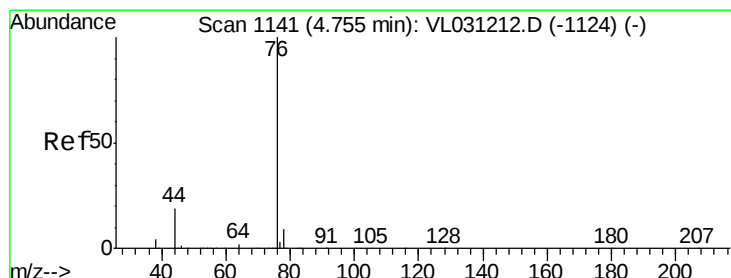
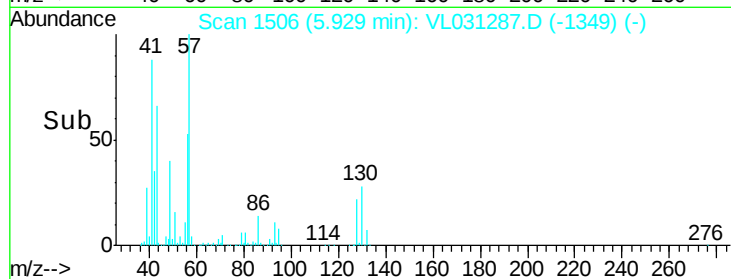
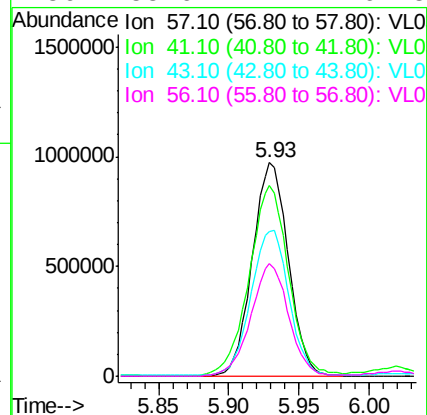
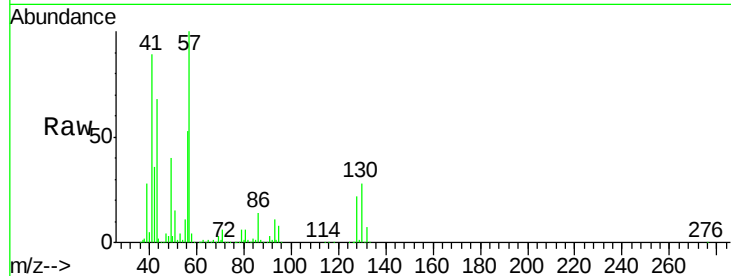


#26  
Hexane  
Concen: 9.67 ppbv  
RT: 5.93 min Scan# 1506  
Delta R.T. 0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-7

Tgt Ion: 57 Resp: 1735299

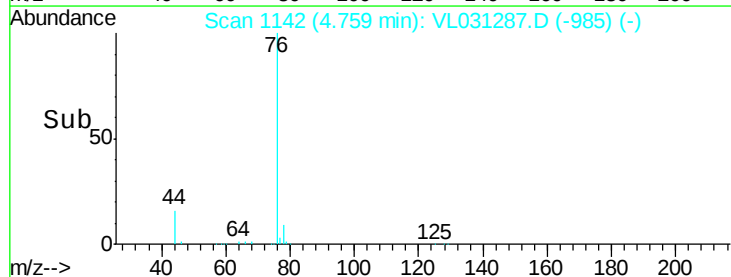
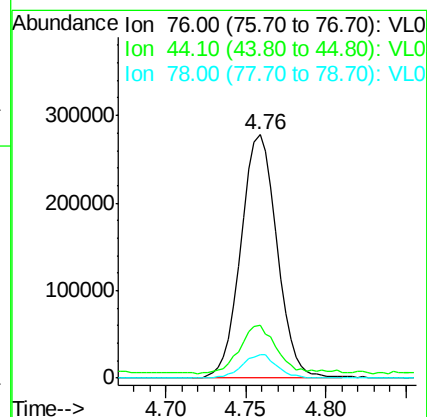
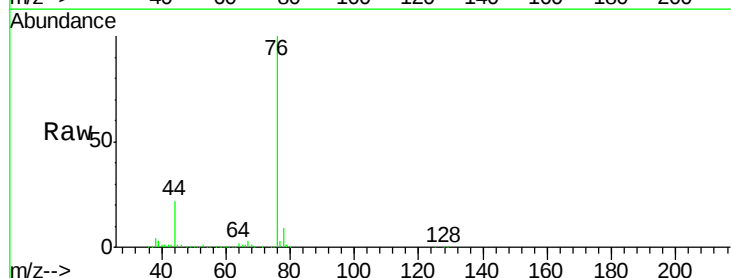
| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 57  | 100   |       |        |
| 41  | 98.1  | 70.3  | 105.5  |
| 43  | 71.6  | 173.8 | 260.8# |
| 56  | 55.6  | 41.7  | 62.5   |

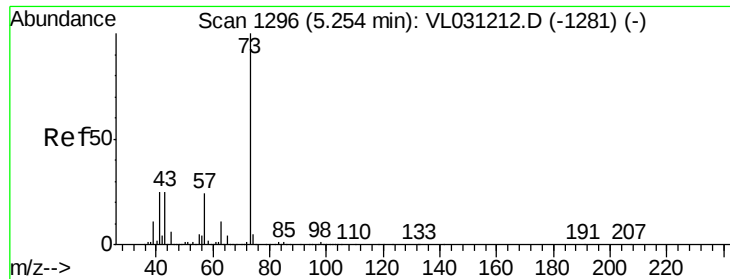


#27  
Carbon Disulfide  
Concen: 2.37 ppbv  
RT: 4.76 min Scan# 1142  
Delta R.T. 0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Tgt Ion: 76 Resp: 426114

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 76  | 100   |       |       |
| 44  | 21.9  | 16.0  | 24.0  |
| 78  | 9.2   | 7.5   | 11.3  |

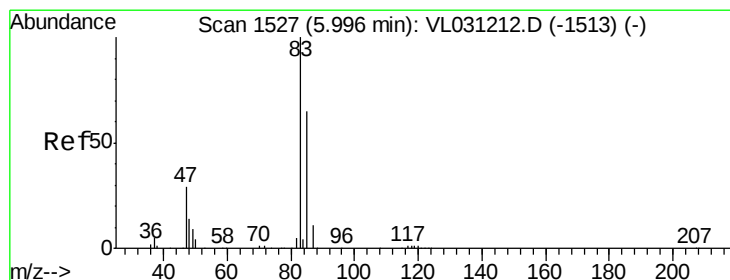
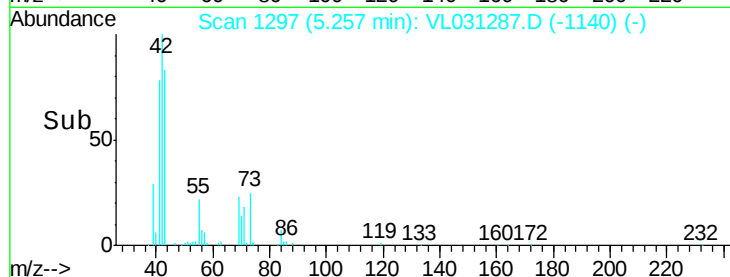
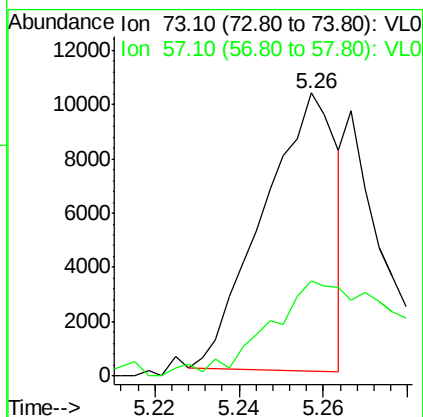
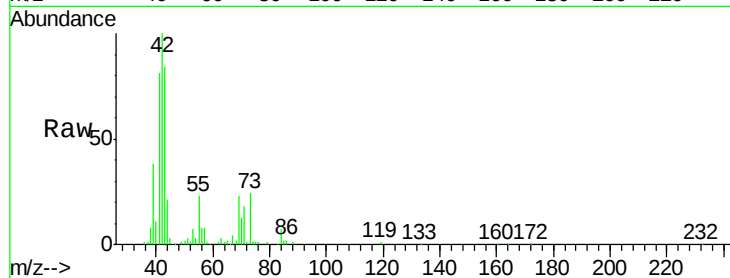




#28  
Methyl tert-Butyl Ether  
Concen: 0.05 ppbv  
RT: 5.26 min Scan# 1297  
Delta R.T. 0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

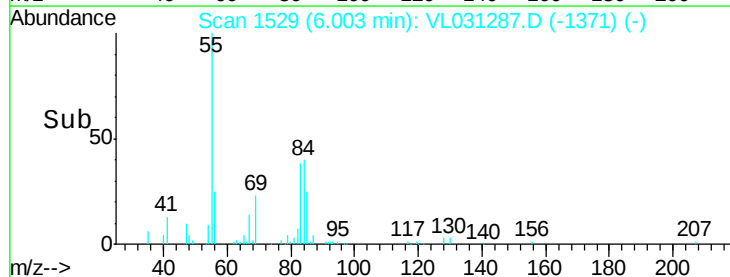
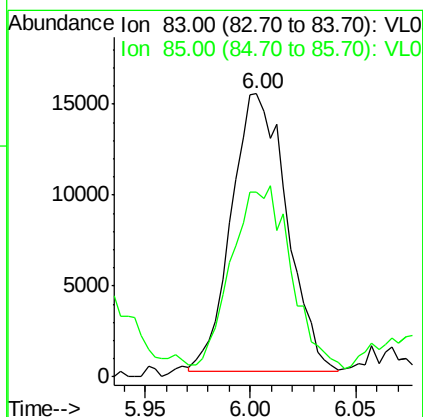
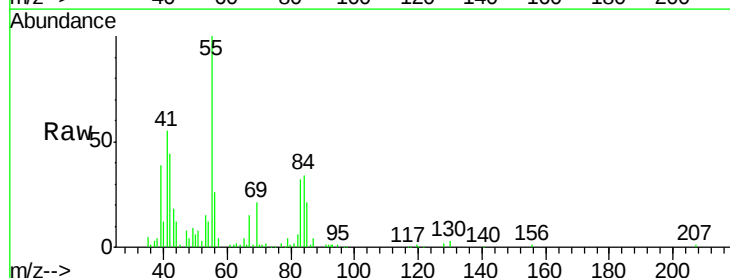
Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-7

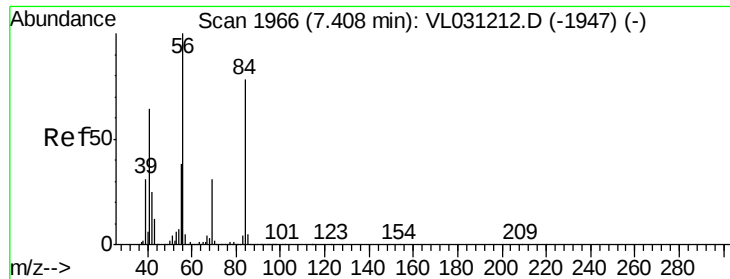
Tgt Ion: 73 Resp: 12389  
Ion Ratio Lower Upper  
73 100  
57 0.0 18.5 27.7#



#29  
Chloroform  
Concen: 0.12 ppbv  
RT: 6.00 min Scan# 1529  
Delta R.T. 0.01 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Tgt Ion: 83 Resp: 27995  
Ion Ratio Lower Upper  
83 100  
85 62.8 51.8 77.6

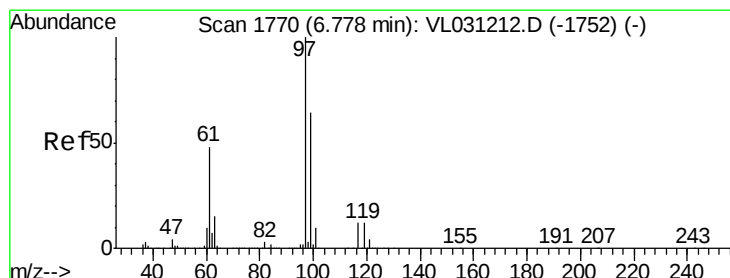
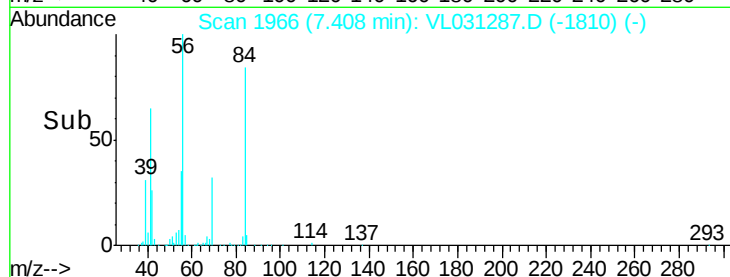
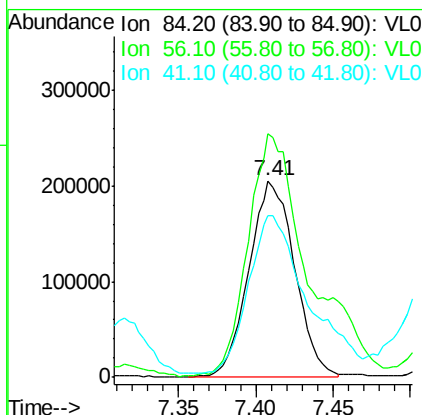
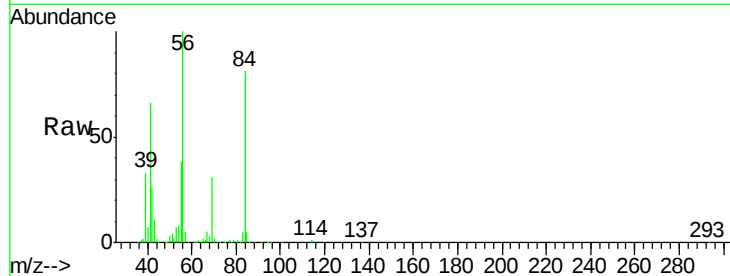




#30  
Cyclohexane  
Concen: 2.68 ppbv  
RT: 7.41 min Scan# 1966  
Delta R.T. 0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

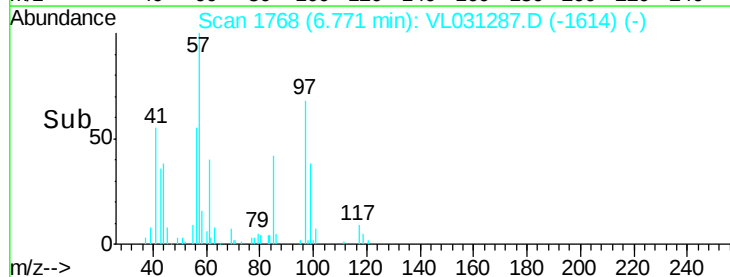
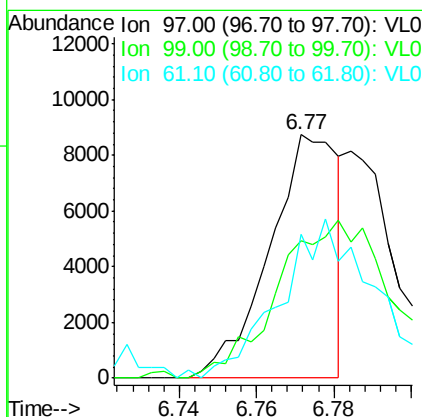
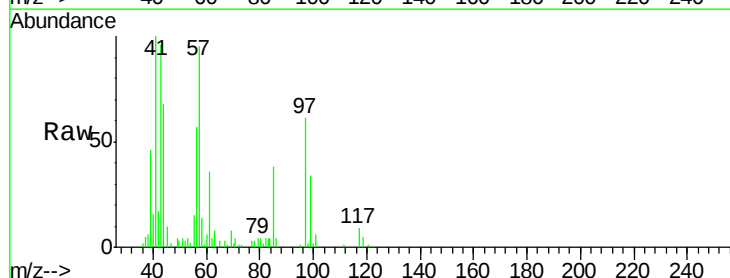
Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-7

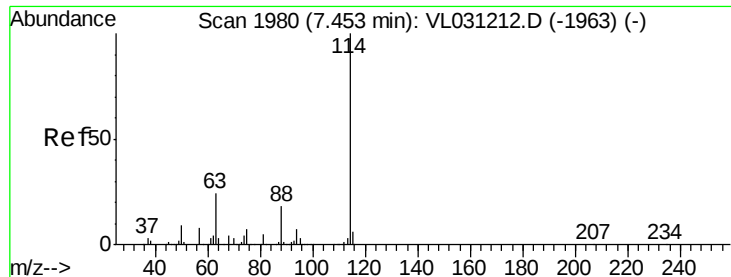
Tgt Ion: 84 Resp: 423059  
Ion Ratio Lower Upper  
84 100  
56 164.1 108.0 162.0#  
41 101.6 66.2 99.4#



#32  
1,1,1-Trichloroethane  
Concen: 0.04 ppbv  
RT: 6.77 min Scan# 1768  
Delta R.T. -0.01 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Tgt Ion: 97 Resp: 10769  
Ion Ratio Lower Upper  
97 100  
99 104.3 51.4 77.0#  
61 91.7 38.4 57.6#

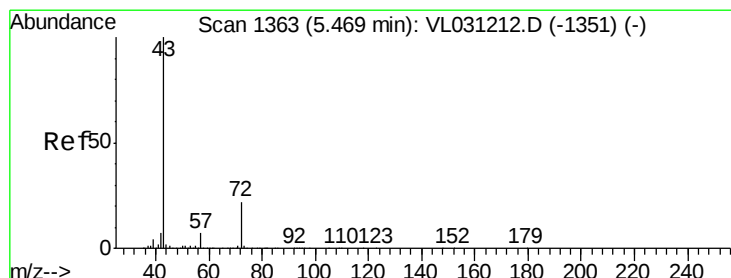
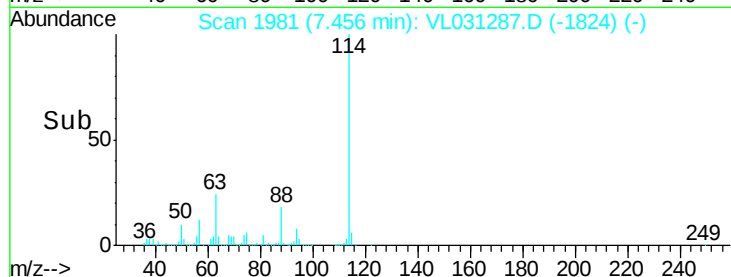
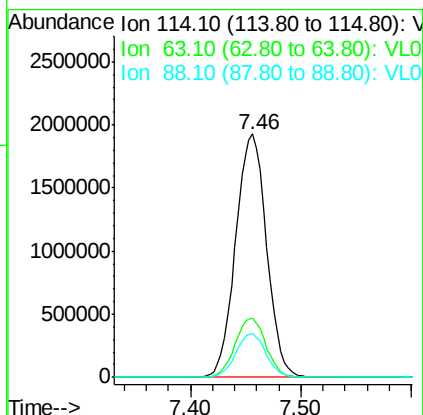
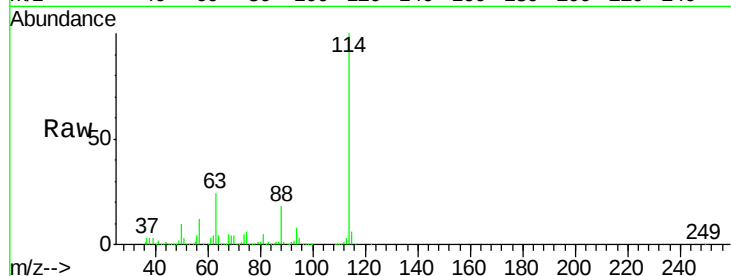




#33  
 1,4-Difluorobenzene  
 Concen: 10.00 ppbv  
 RT: 7.46 min Scan# 1981  
 Delta R.T. 0.00 min  
 Lab File: VL031287.D  
 Acq: 21 Dec 2017 2:37

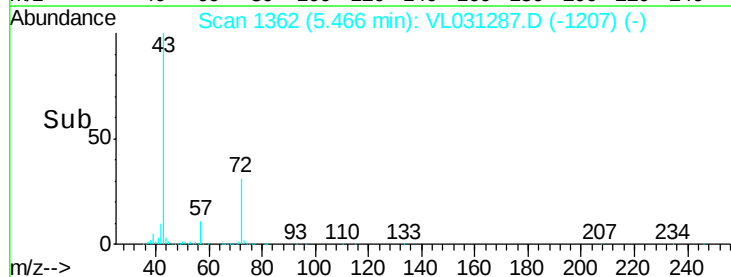
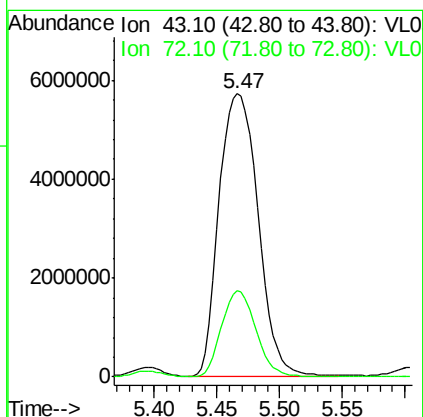
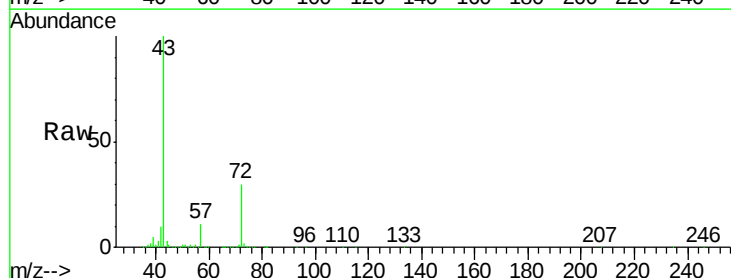
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-7

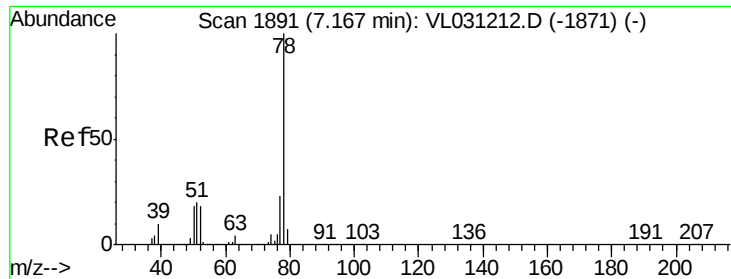
Tgt Ion:114 Resp: 3734464  
 Ion Ratio Lower Upper  
 114 100  
 63 24.4 19.8 29.8  
 88 17.6 14.2 21.4



#34  
 2-Butanone  
 Concen: 46.96 ppbv  
 RT: 5.47 min Scan# 1362  
 Delta R.T. -0.00 min  
 Lab File: VL031287.D  
 Acq: 21 Dec 2017 2:37

Tgt Ion: 43 Resp:12386683  
 Ion Ratio Lower Upper  
 43 100  
 72 26.8 18.1 27.1

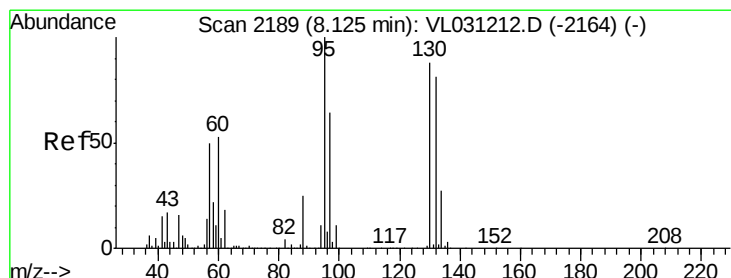
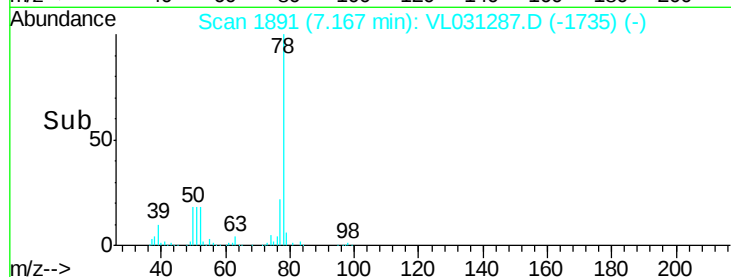
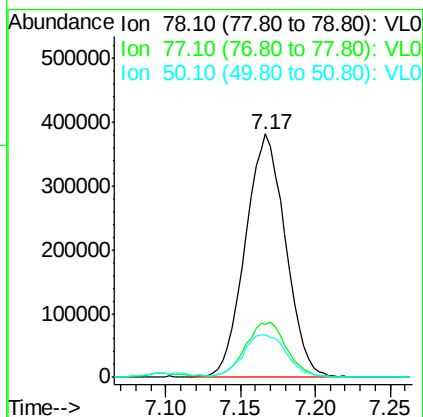
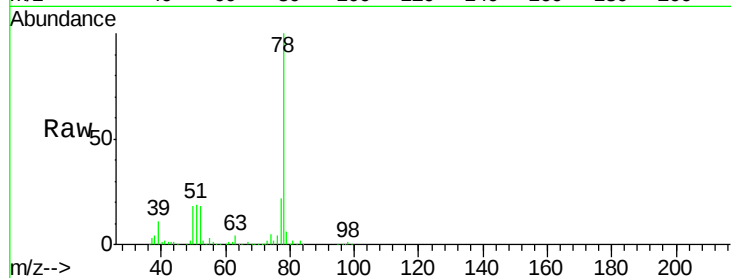




#36  
Benzene  
Concen: 1.80 ppbv  
RT: 7.17 min Scan# 1891  
Delta R.T. 0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

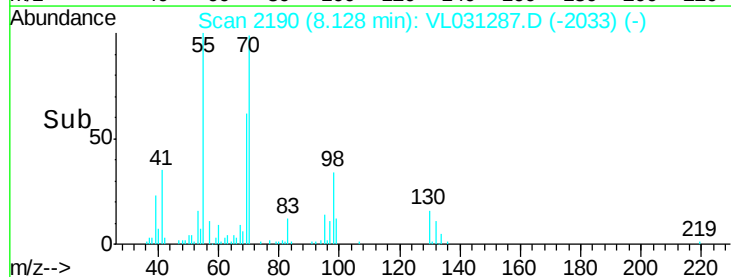
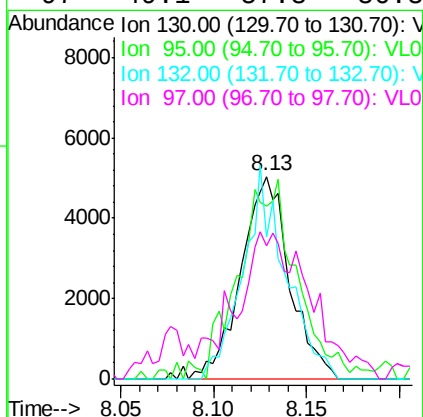
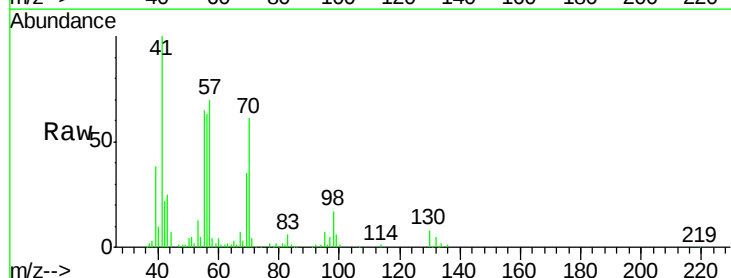
Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-7

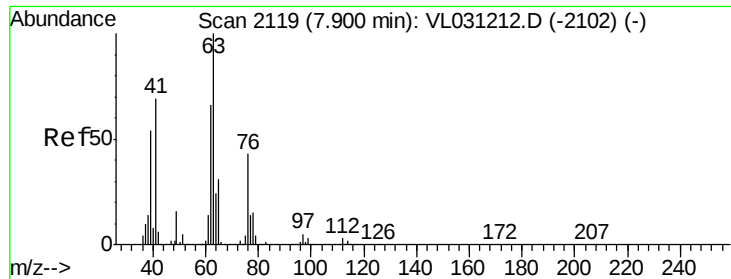
Tgt Ion: 78 Resp: 711588  
Ion Ratio Lower Upper  
78 100  
77 21.9 18.1 27.1  
50 17.6 14.6 21.8



#38  
Trichloroethene  
Concen: 0.06 ppbv  
RT: 8.13 min Scan# 2190  
Delta R.T. 0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Tgt Ion: 130 Resp: 9234  
Ion Ratio Lower Upper  
130 100  
95 76.1 90.6 135.8#  
132 69.8 73.5 110.3#  
97 49.1 57.8 86.8#

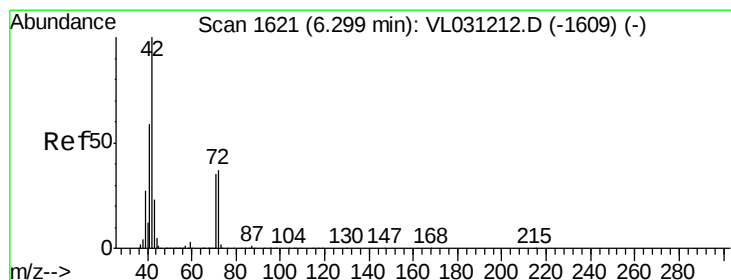
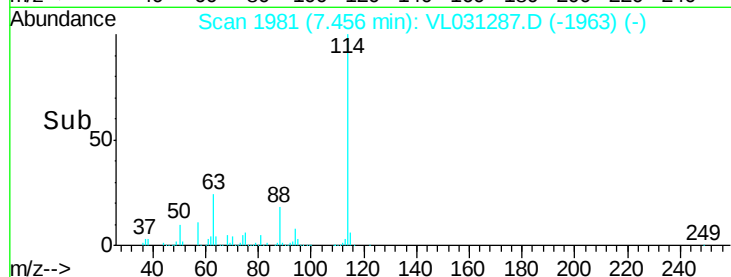
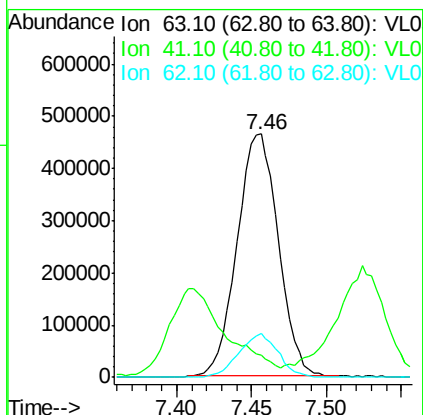
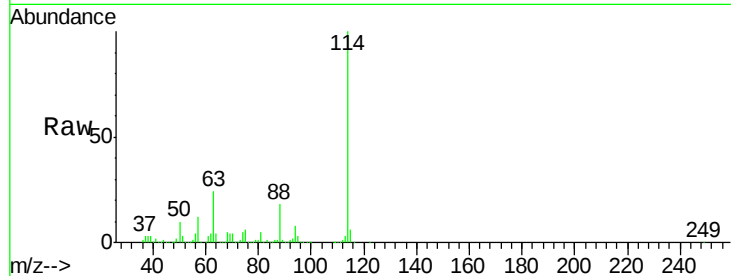




#39  
 1,2-Dichloropropane  
 Concen: 6.34 ppbv  
 RT: 7.46 min Scan# 1981  
 Delta R.T. -0.44 min  
 Lab File: VL031287.D  
 Acq: 21 Dec 2017 2:37

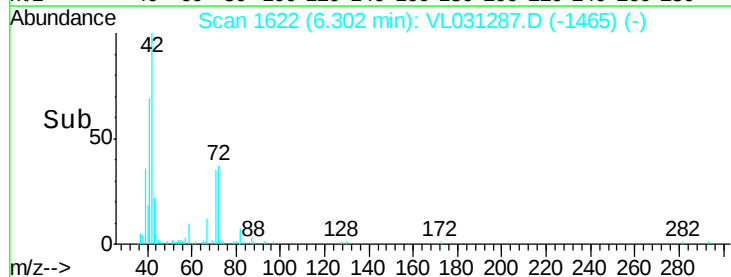
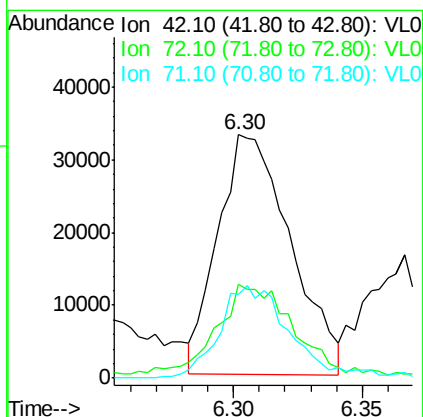
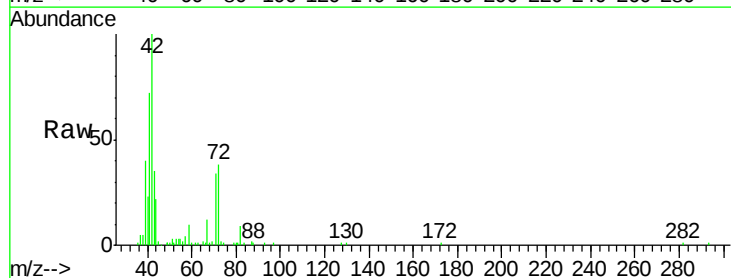
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-7

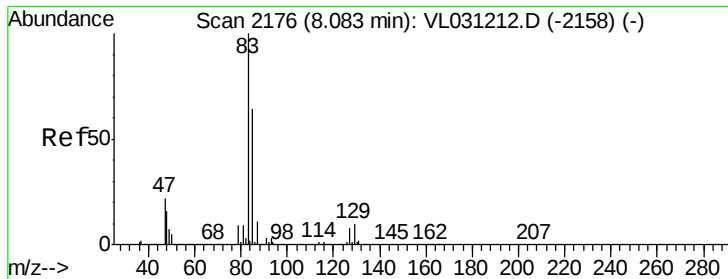
Tgt Ion: 63 Resp: 887664  
 Ion Ratio Lower Upper  
 63 100  
 41 0.0 55.2 82.8#  
 62 18.0 53.0 79.4#



#41  
 Tetrahydrofuran  
 Concen: 0.44 ppbv  
 RT: 6.30 min Scan# 1622  
 Delta R.T. 0.00 min  
 Lab File: VL031287.D  
 Acq: 21 Dec 2017 2:37

Tgt Ion: 42 Resp: 64737  
 Ion Ratio Lower Upper  
 42 100  
 72 46.9 30.2 45.4#  
 71 38.7 29.0 43.6





#42

Bromodichloromethane

Concen: 0.22 ppbv

RT: 8.08 min Scan# 2176

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-7

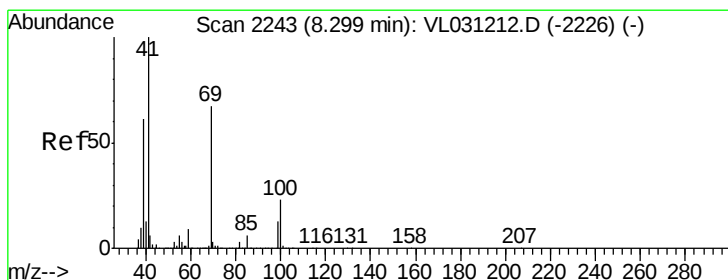
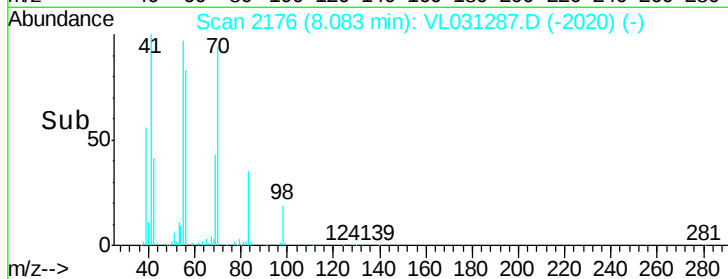
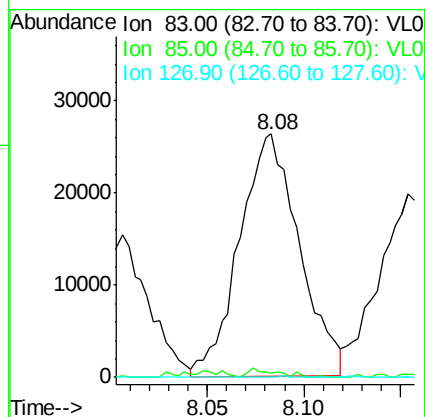
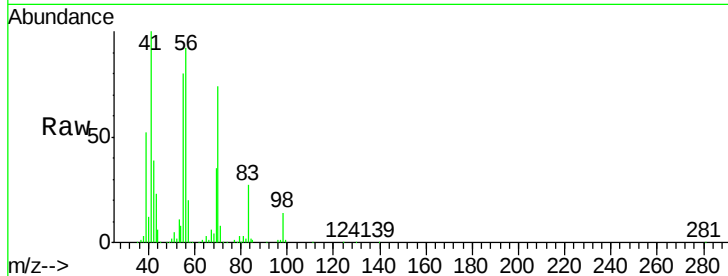
Tgt Ion: 83 Resp: 56251

Ion Ratio Lower Upper

83 100

85 2.0 51.5 77.3#

127 0.0 6.5 9.7#



#43

Methyl Methacrylate

Concen: 0.03 ppbv

RT: 8.28 min Scan# 2237

Delta R.T. -0.02 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

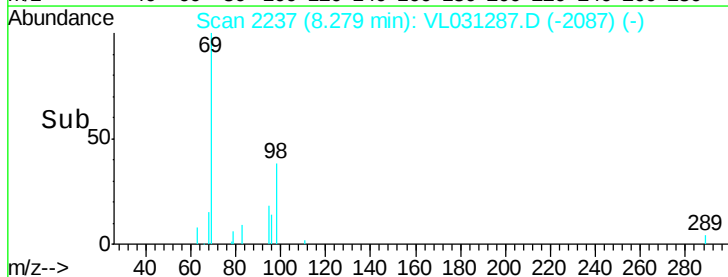
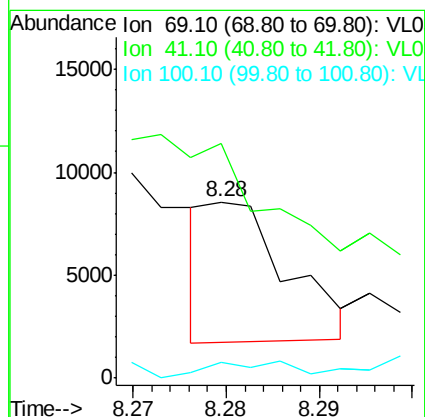
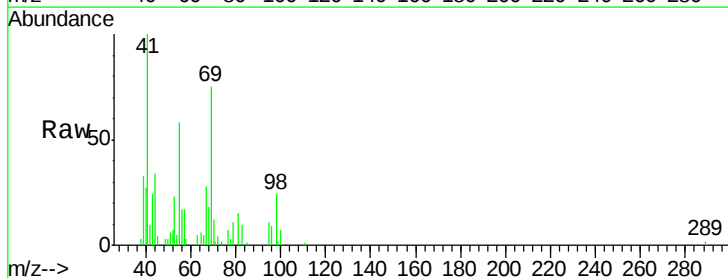
Tgt Ion: 69 Resp: 4042

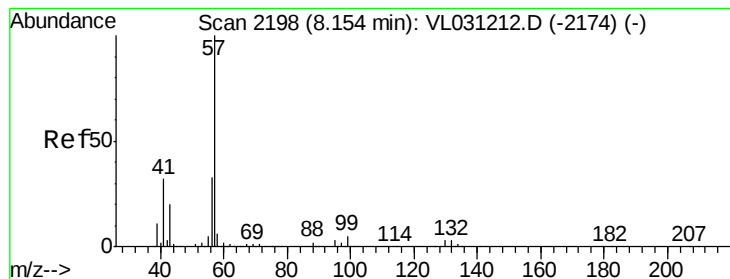
Ion Ratio Lower Upper

69 100

41 778.1 121.1 181.7#

100 0.0 27.4 41.2#





#44

2,2,4-Trimethylpentane

Concen: 0.87 ppbv

RT: 8.16 min Scan# 2199

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-7

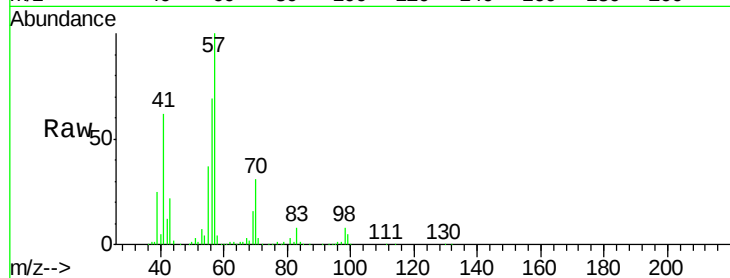
Tgt Ion: 57 Resp: 517499

Ion Ratio Lower Upper

57 100

41 65.3 25.5 38.3#

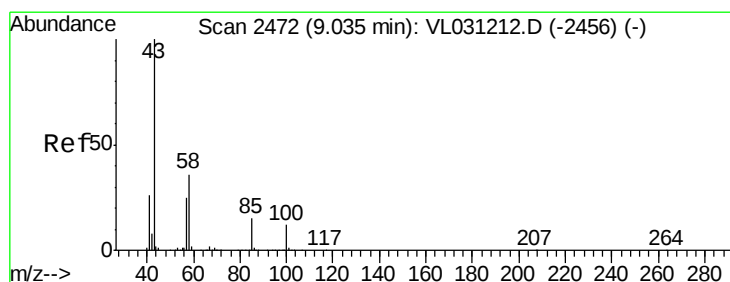
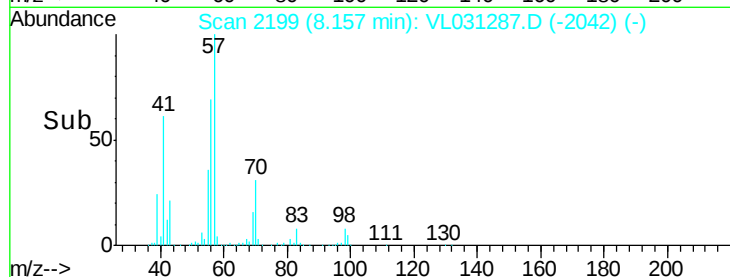
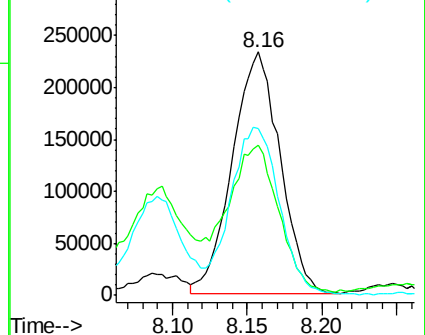
56 69.5 25.0 37.6#



Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#50

4-Methyl-2-Pentanone

Concen: 0.51 ppbv

RT: 9.04 min Scan# 2474

Delta R.T. 0.01 min

Lab File: VL031287.D

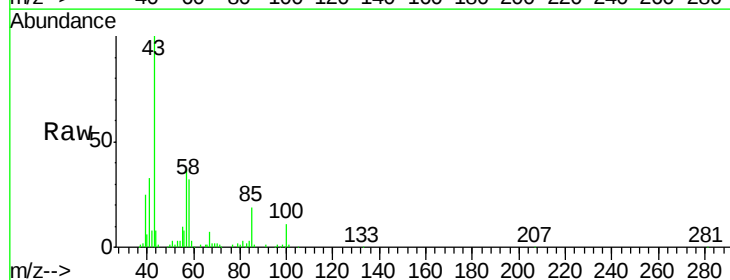
Acq: 21 Dec 2017 2:37

Tgt Ion: 43 Resp: 166097

Ion Ratio Lower Upper

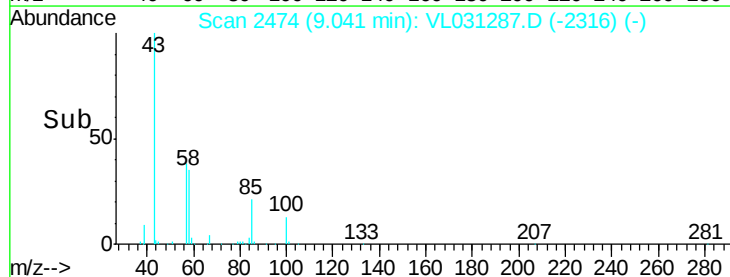
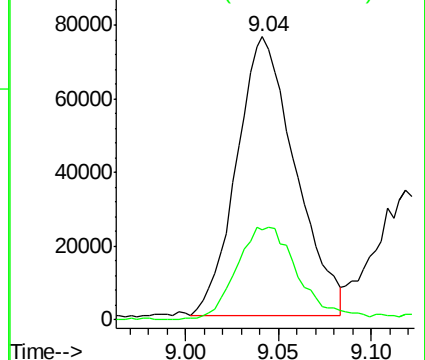
43 100

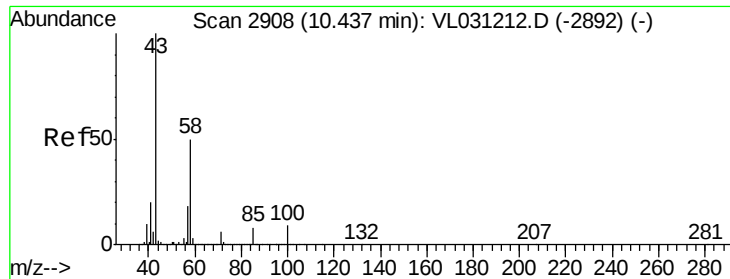
58 35.4 28.8 43.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0





#51

2-Hexanone

Concen: 5.64 ppbv

RT: 10.44 min Scan# 2908

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-7

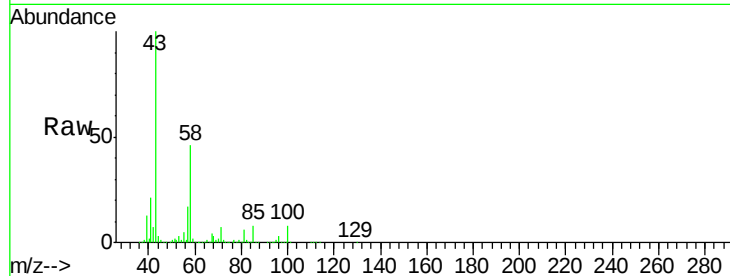
Tgt Ion: 43 Resp: 1738694

Ion Ratio Lower Upper

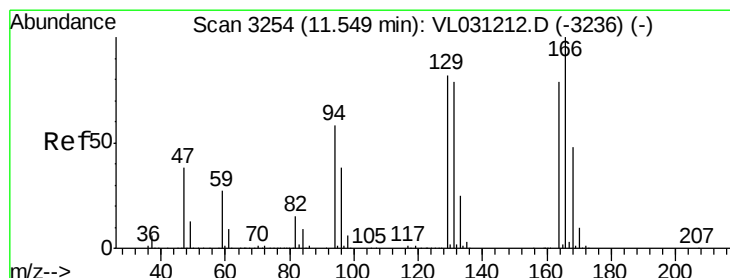
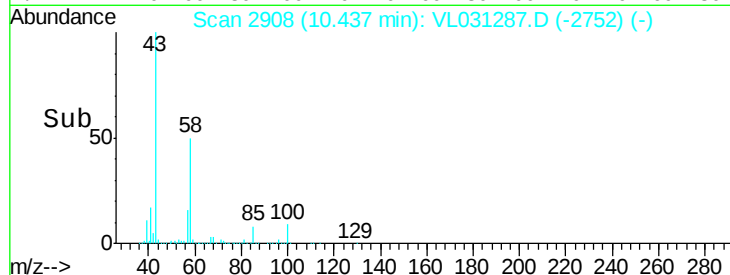
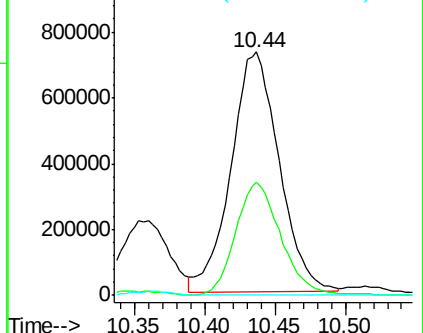
43 100

58 44.6 39.8 59.6

98 0.2 0.0 0.0#



Abundance Ion 43.10 (42.80 to 43.80): VL0  
Ion 58.10 (57.80 to 58.80): VL0  
Ion 98.20 (97.90 to 98.90): VL0



#52

Tetrachloroethene

Concen: 0.06 ppbv

RT: 11.55 min Scan# 3254

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Tgt Ion:164 Resp: 9190

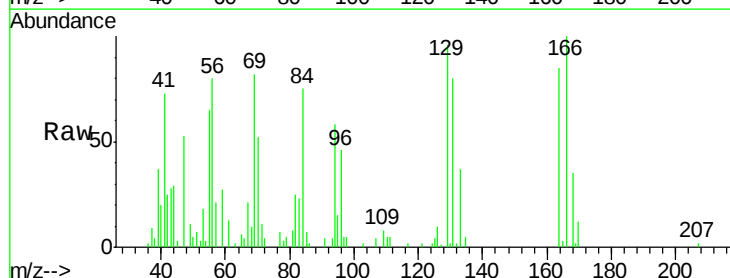
Ion Ratio Lower Upper

164 100

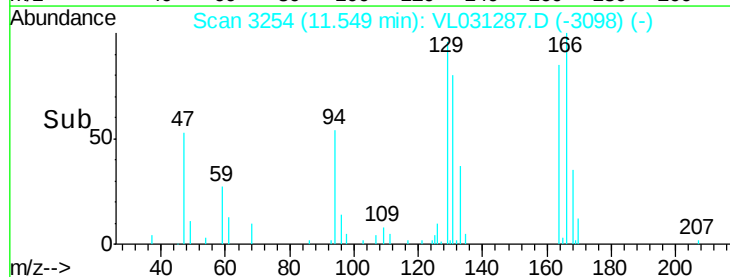
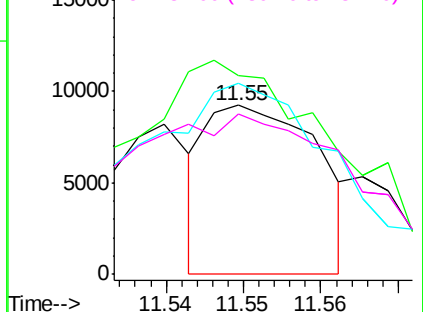
166 99.8 100.6 151.0#

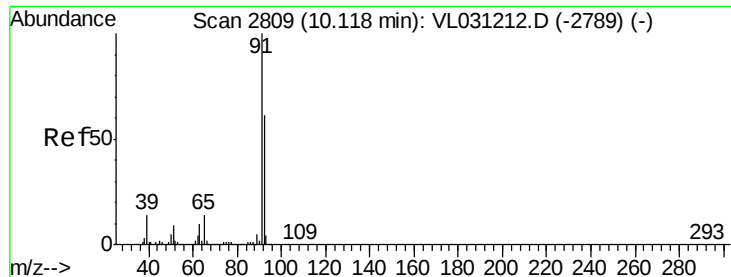
129 88.9 82.9 124.3

131 41.8 79.2 118.8#



Abundance Ion 163.90 (163.60 to 164.60): V  
Ion 165.90 (165.60 to 166.60): V  
Ion 129.00 (128.70 to 129.70): V  
Ion 131.00 (130.70 to 131.70): V





#53

Toluene

Concen: 2.43 ppbv

RT: 10.12 min Scan# 2809

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

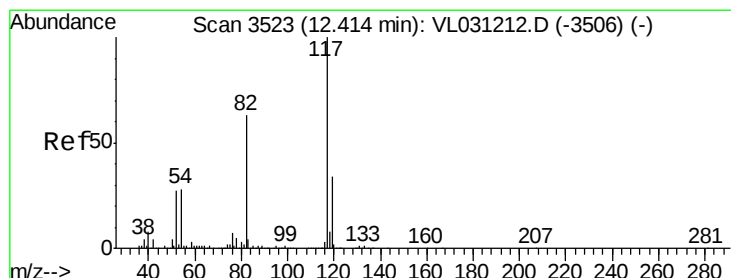
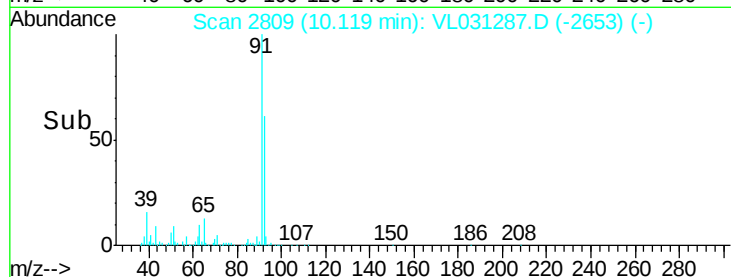
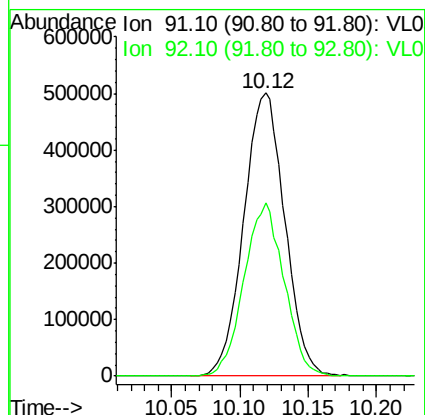
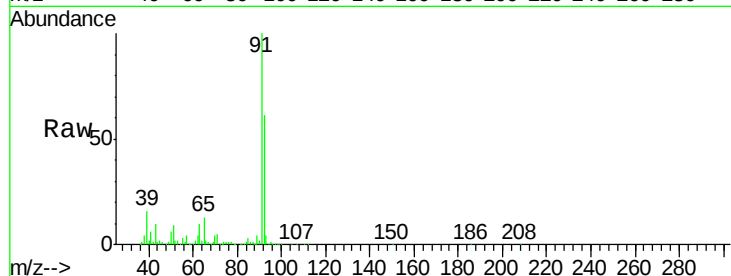
EP1-SV-7

Tgt Ion: 91 Resp: 1043637

Ion Ratio Lower Upper

91 100

92 60.1 49.1 73.7



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.41 min Scan# 3523

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

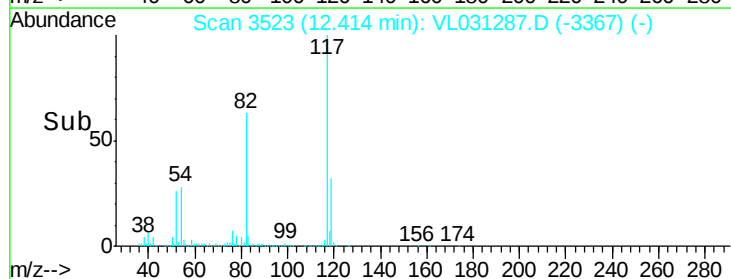
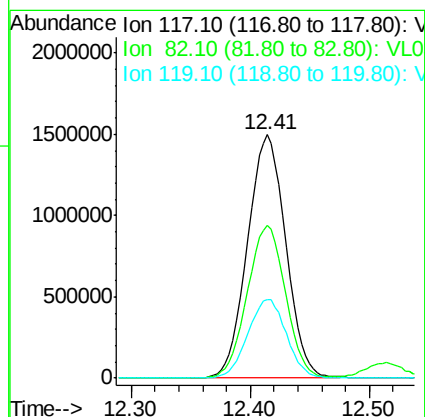
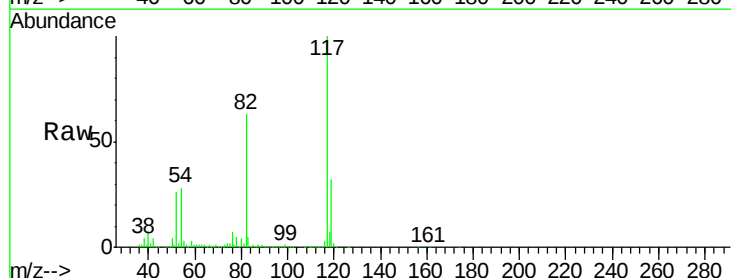
Tgt Ion: 117 Resp: 3334411

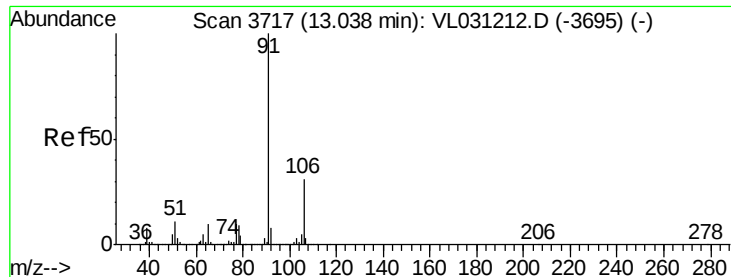
Ion Ratio Lower Upper

117 100

82 62.8 48.1 72.1

119 32.7 23.1 34.7





#58

Ethyl Benzene

Concen: 1.37 ppbv

RT: 13.03 min Scan# 3716

Delta R.T. -0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

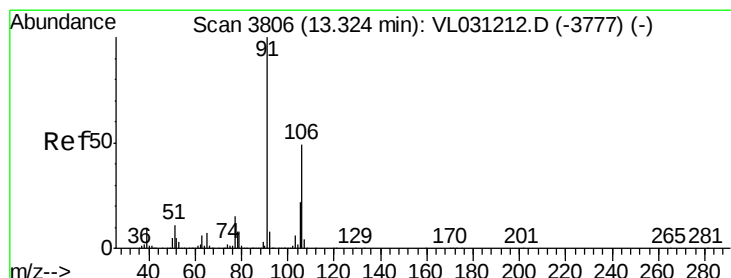
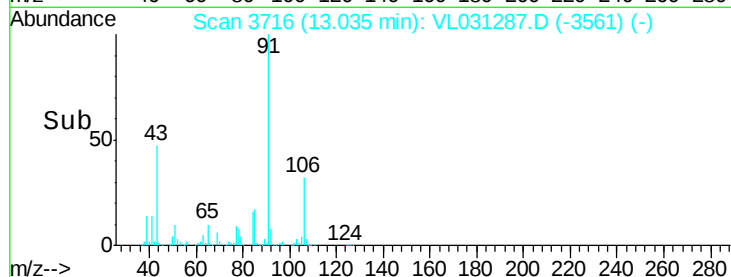
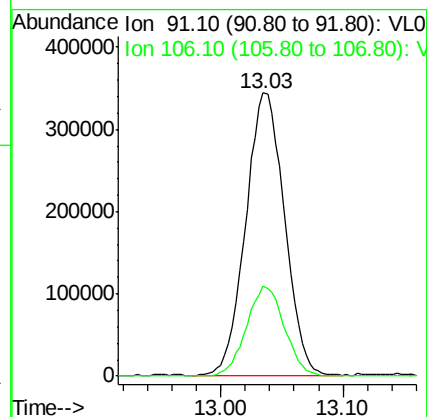
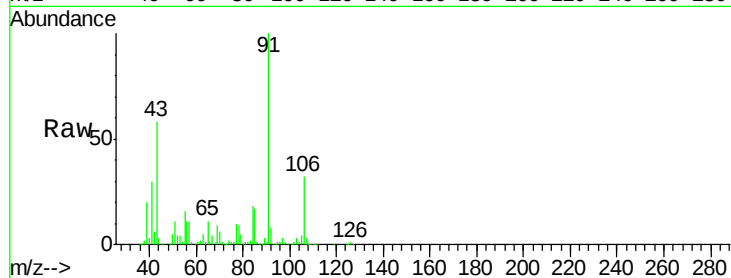
EP1-SV-7

Tgt Ion: 91 Resp: 751511

Ion Ratio Lower Upper

91 100

106 31.8 25.1 37.7



#59

m/p-Xylene

Concen: 2.09 ppbv

RT: 13.29 min Scan# 3796

Delta R.T. -0.03 min

Lab File: VL031287.D

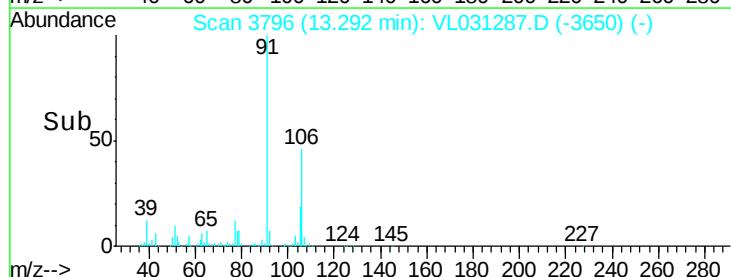
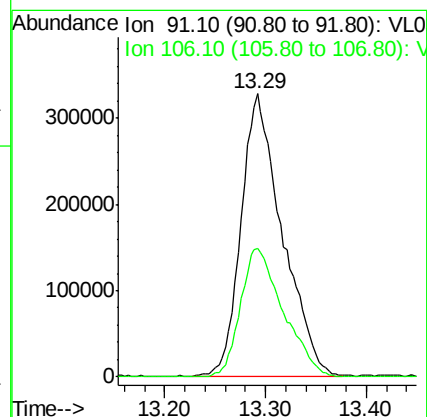
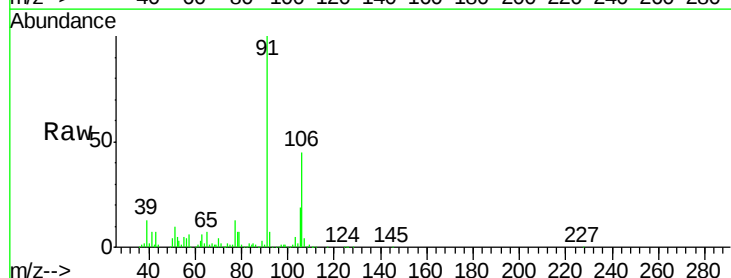
Acq: 21 Dec 2017 2:37

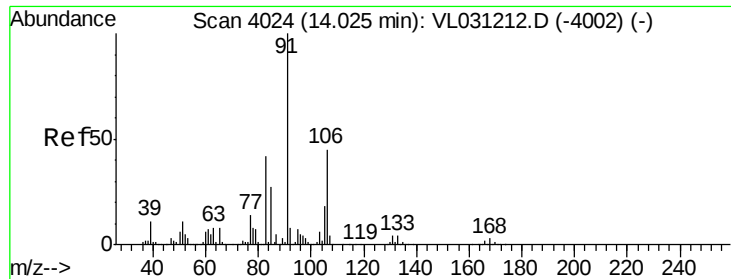
Tgt Ion: 91 Resp: 921245

Ion Ratio Lower Upper

91 100

106 47.8 38.5 57.7

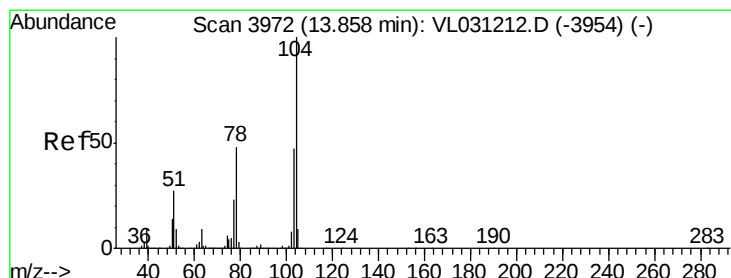
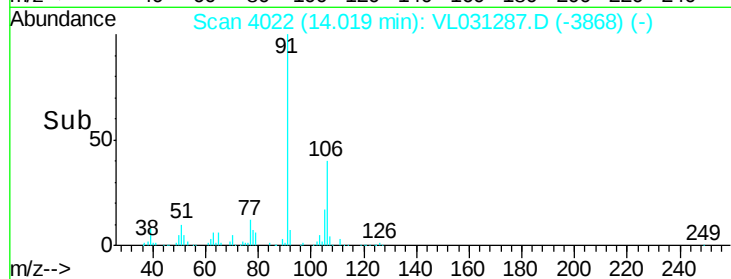
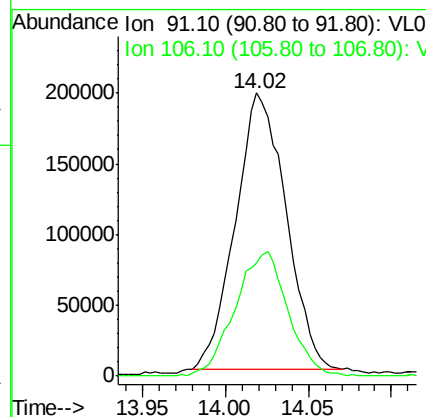
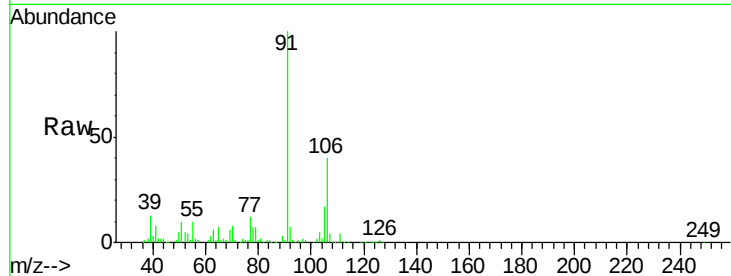




#60  
o-Xylene  
Concen: 0.94 ppbv  
RT: 14.02 min Scan# 4022  
Delta R.T. -0.01 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

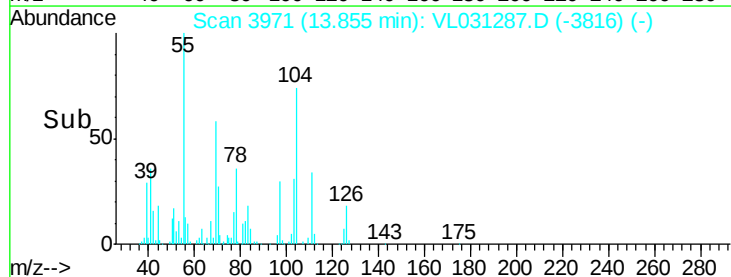
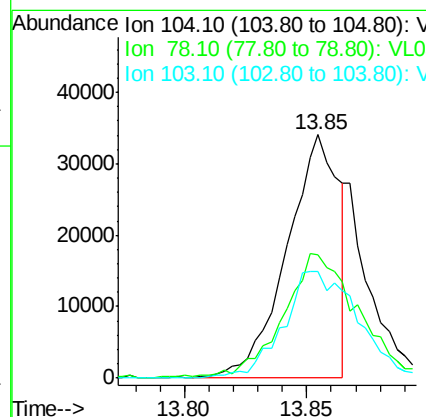
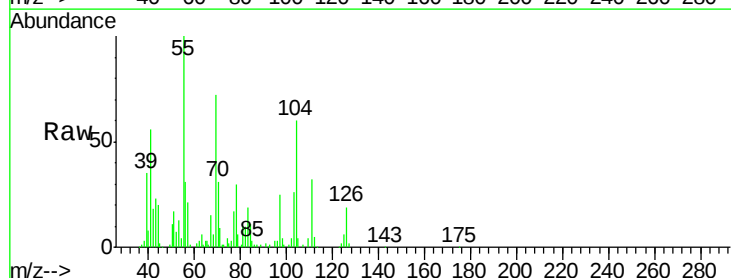
Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-7

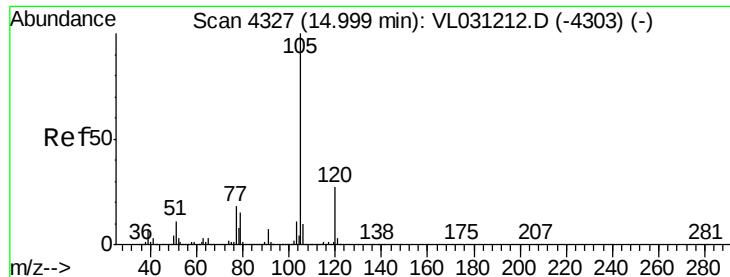
Tgt Ion: 91 Resp: 415878  
Ion Ratio Lower Upper  
91 100  
106 47.5 22.7 68.1



#61  
Styrene  
Concen: 0.40 ppbv  
RT: 13.85 min Scan# 3971  
Delta R.T. -0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Tgt Ion: 104 Resp: 50412  
Ion Ratio Lower Upper  
104 100  
78 76.0 39.1 58.7#  
103 63.0 37.3 55.9#





#62

Isopropylbenzene

Concen: 0.42 ppbv

RT: 15.00 min Scan# 4327

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

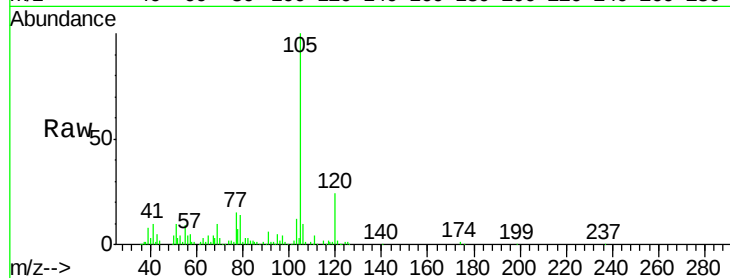
EP1-SV-7

Tgt Ion:105 Resp: 246336

Ion Ratio Lower Upper

105 100

120 25.7 21.0 31.6



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

15.00

120000

100000

80000

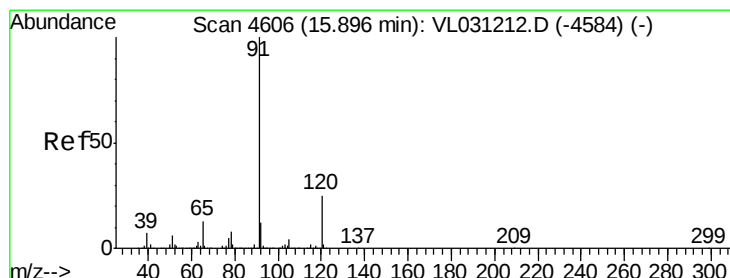
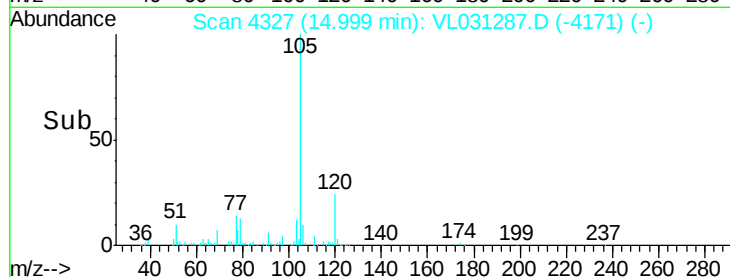
60000

40000

20000

0

Time--> 14.90 14.95 15.00 15.05



#64

n-propylbenzene

Concen: 0.19 ppbv

RT: 15.89 min Scan# 4605

Delta R.T. -0.00 min

Lab File: VL031287.D

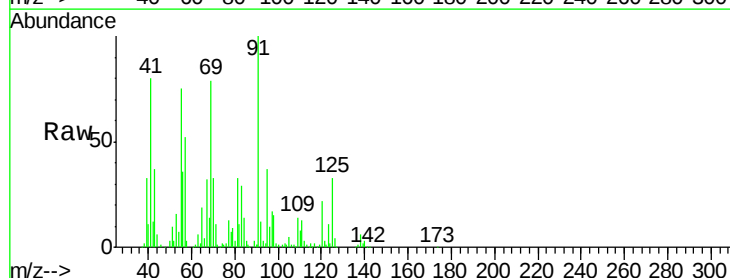
Acq: 21 Dec 2017 2:37

Tgt Ion:120 Resp: 29165

Ion Ratio Lower Upper

120 100

91 519.3 352.1 528.1



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

15.89

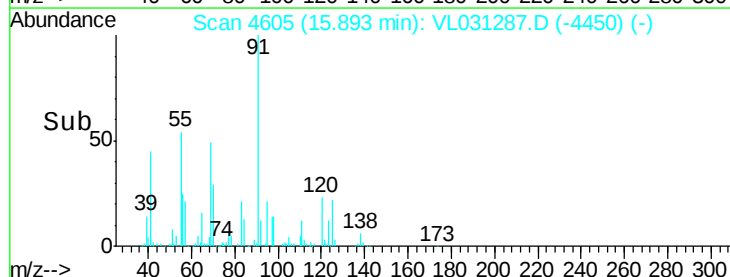
60000

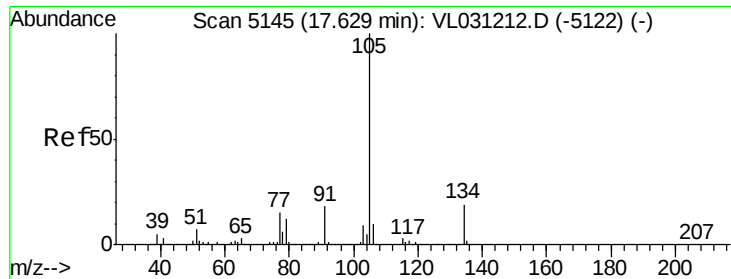
40000

20000

0

Time--> 15.85 15.90 15.95

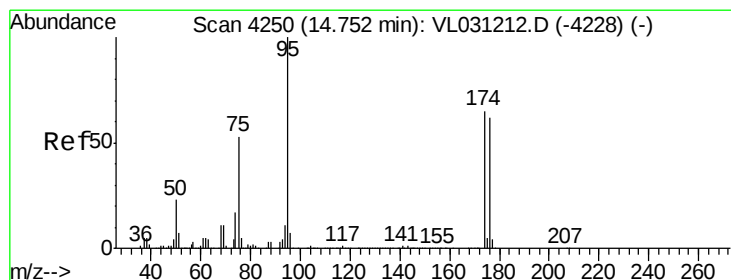
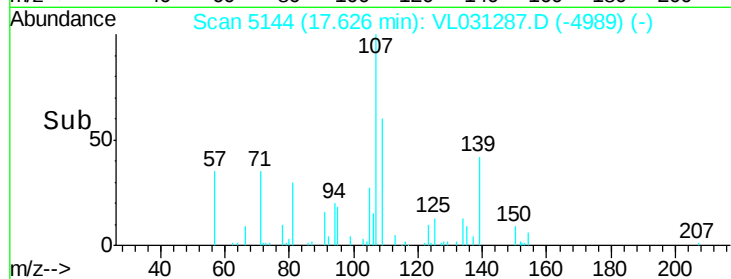
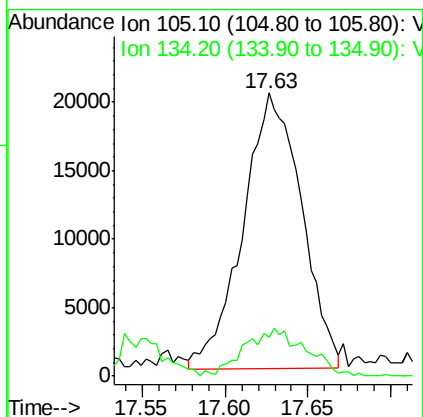
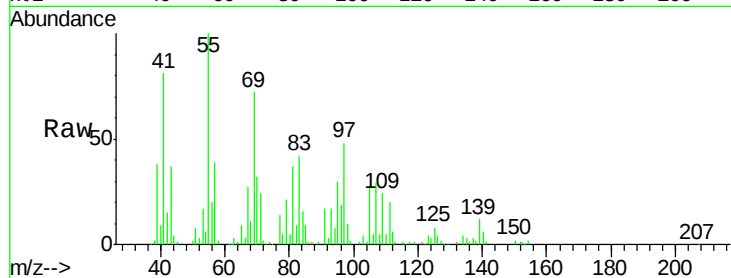




#67  
 sec-Butylbenzene  
 Concen: 0.07 ppbv  
 RT: 17.63 min Scan# 5144  
 Delta R.T. -0.00 min  
 Lab File: VL031287.D  
 Acq: 21 Dec 2017 2:37

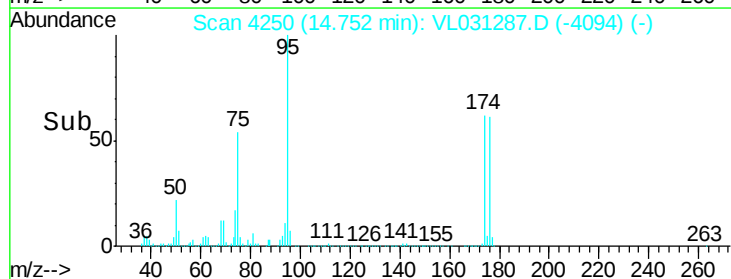
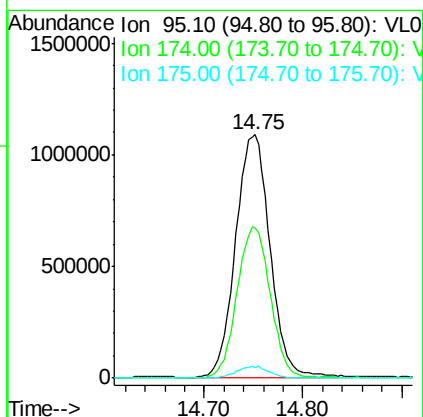
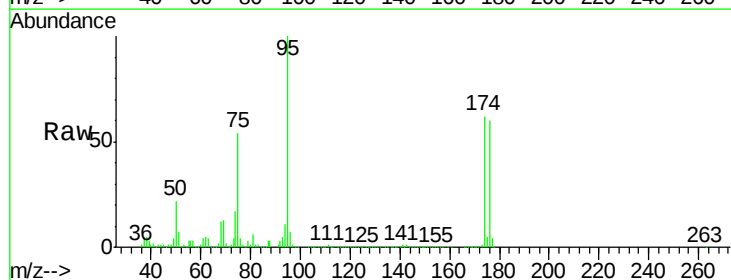
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-7

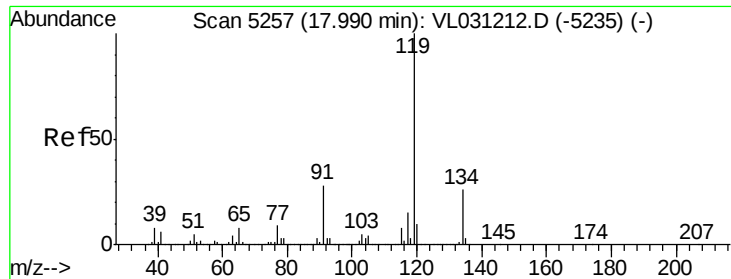
Tgt Ion: 105 Resp: 49613  
 Ion Ratio Lower Upper  
 105 100  
 134 18.2 15.3 22.9



#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 11.09 ppbv  
 RT: 14.75 min Scan# 4250  
 Delta R.T. 0.00 min  
 Lab File: VL031287.D  
 Acq: 21 Dec 2017 2:37

Tgt Ion: 95 Resp: 2631067  
 Ion Ratio Lower Upper  
 95 100  
 174 61.1 52.5 78.7  
 175 4.6 4.1 6.1

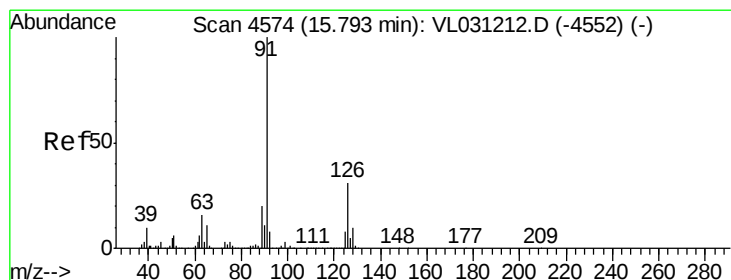
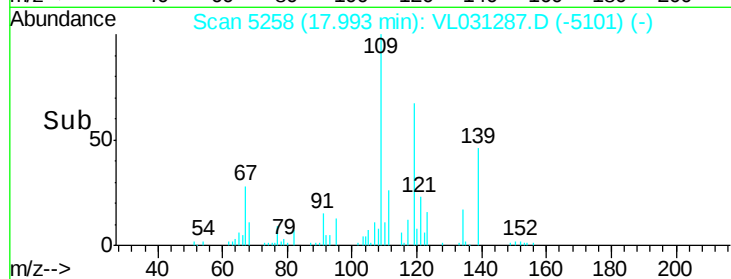
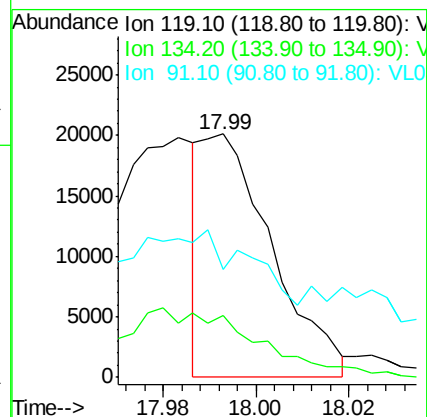
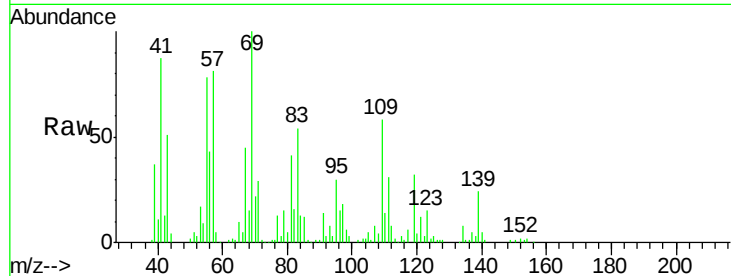




#69  
p-Isopropyltoluene  
Concen: 0.04 ppbv  
RT: 17.99 min Scan# 5258  
Delta R.T. 0.00 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

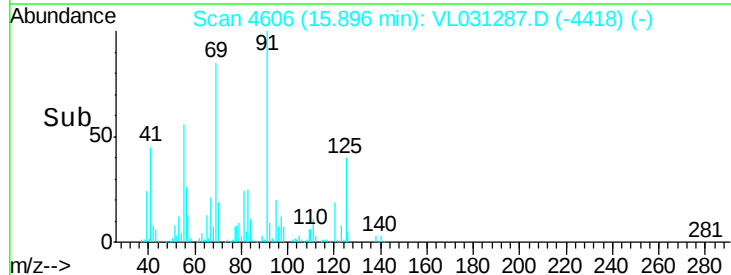
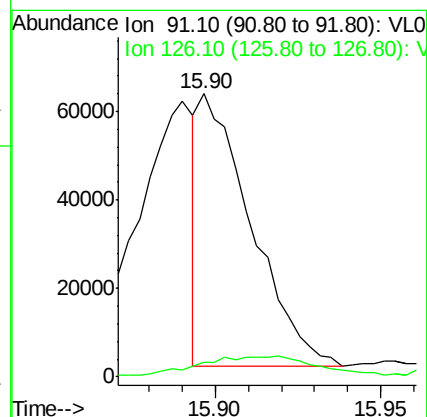
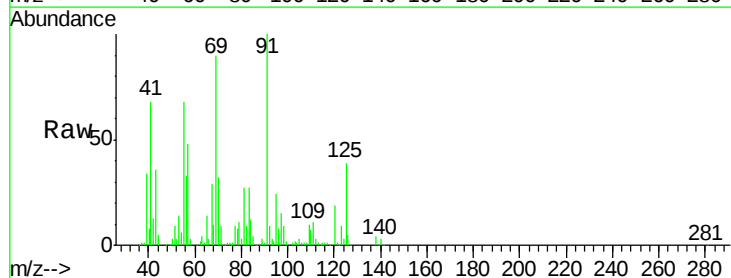
Instrument :  
MSVOA\_L  
ClientSampleId :  
EP1-SV-7

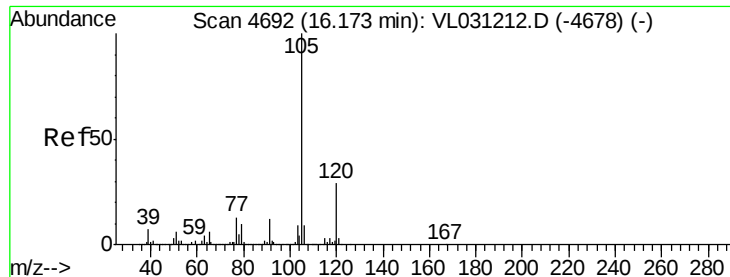
Tgt Ion: 119 Resp: 20817  
Ion Ratio Lower Upper  
119 100  
134 0.0 20.7 31.1#  
91 141.3 22.3 33.5#



#71  
2-Chlorotoluene  
Concen: 0.15 ppbv  
RT: 15.90 min Scan# 4606  
Delta R.T. 0.10 min  
Lab File: VL031287.D  
Acq: 21 Dec 2017 2:37

Tgt Ion: 91 Resp: 66481  
Ion Ratio Lower Upper  
91 100  
126 19.4 12.6 50.6





#72

4-Ethyltoluene

Concen: 0.22 ppbv

RT: 16.17 min Scan# 4692

Delta R.T. 0.00 min

Lab File: VL031287.D

Acq: 21 Dec 2017 2:37

Instrument :

MSVOA\_L

ClientSampleId :

EP1-SV-7

Tgt Ion:105 Resp: 105169

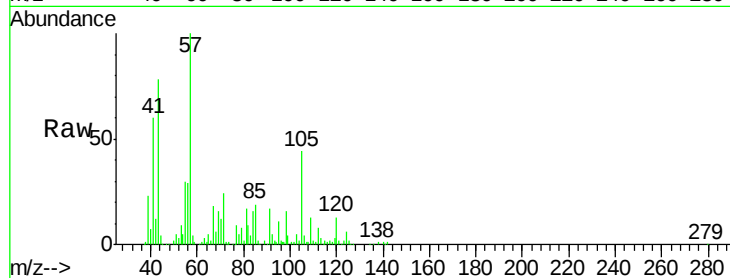
Ion Ratio Lower Upper

105 100

120 32.4 24.2 36.2

91 39.7 9.8 14.8#

77 26.7 10.5 15.7#

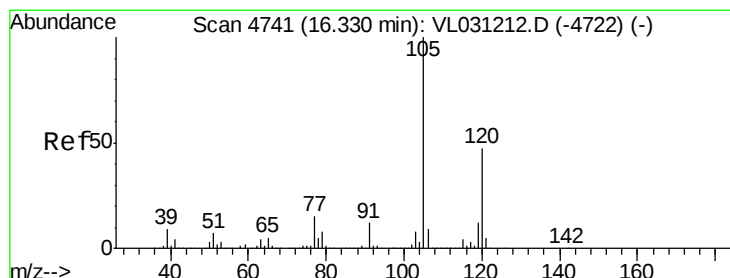
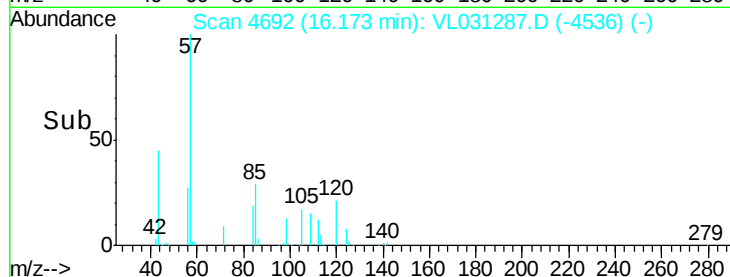
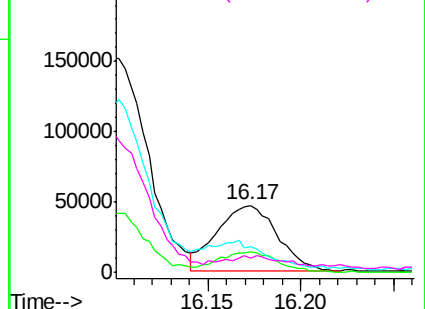


Abundance Ion 105.10 (104.80 to 105.80): V

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



#73

1,3,5-Trimethylbenzene

Concen: 0.39 ppbv

RT: 16.33 min Scan# 4741

Delta R.T. 0.00 min

Lab File: VL031287.D

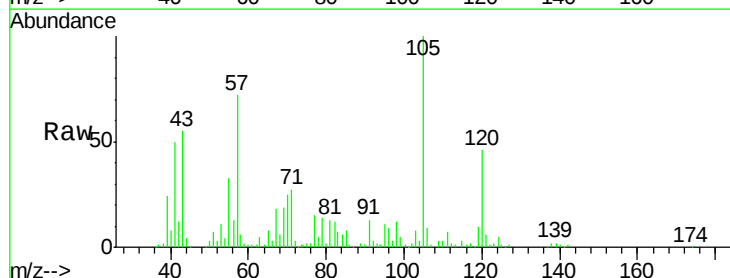
Acq: 21 Dec 2017 2:37

Tgt Ion:105 Resp: 170903

Ion Ratio Lower Upper

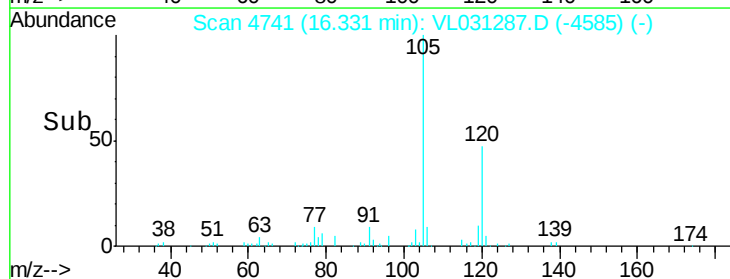
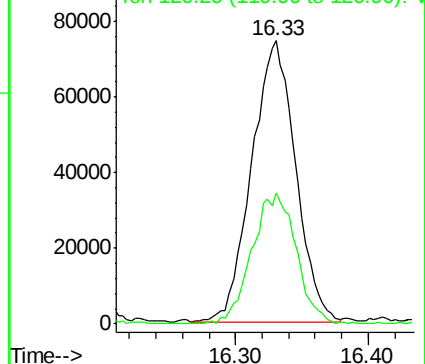
105 100

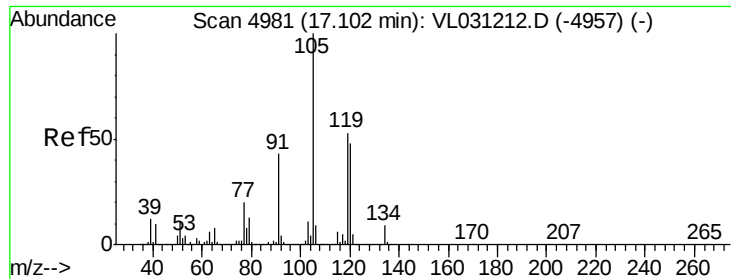
120 46.7 37.8 56.6



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: 0.26 ppbv  
 RT: 17.10 min Scan# 4980  
 Delta R.T. -0.00 min  
 Lab File: VL031287.D  
 Acq: 21 Dec 2017 2:37

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 EP1-SV-7

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 105   | Resp: | 117451 |
| Ion Ratio | Lower | Upper |        |
| 105       | 100   |       |        |
| 120       | 42.1  | 38.6  | 58.0   |
| 91        | 1.2   | 34.2  | 51.4#  |
| 77        | 1.5   | 16.1  | 24.1#  |

