

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121620\
 Data File : VL036185.D
 Acq On : 17 Dec 2020 3:08
 Operator : SY/AP
 Sample : L5041-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 17 07:42:33 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120720AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 07 16:56:49 2020
 QLast Update : Mon Dec 07 16:56:49 2020
 Response via : Initial Calibration

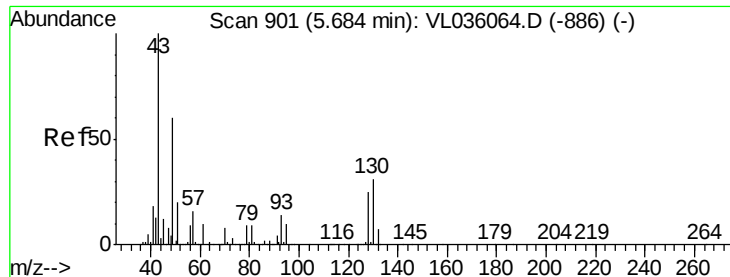
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	1329081	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2593054	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.11	117	2403337	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	2143047	11.23	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	112.30%

Target Compounds					Ovalue
3) Chlorodifluoromethane	2.99	51	68533	0.452	ppbv 98
4) Chloromethane	3.14	50	56693	0.762	ppbv 91
7) Chloroethane	3.56	64	82240	2.915	ppbv 91
9) Propene	3.02	41	60196	0.792	ppbv # 82
11) Trichlorofluoromethane	3.96	101	207386	1.139	ppbv 98
13) Ethanol	3.62	45	499013	47.652	ppbv 90
15) Acetone	3.85	43	1030526	6.451	ppbv 100
16) 1,3-Butadiene	3.31	39	34742	0.432	ppbv # 18
17) tert-Butyl alcohol	4.30	59	17356	0.112	ppbv # 38
18) 1,1-Dichloroethene	4.30	96	117952	2.148	ppbv 94
19) Isopropyl Alcohol	3.98	45	1460708	14.962	ppbv # 100
20) Methylene Chloride	4.35	84	580363	8.866	ppbv 95
22) trans-1,2-Dichloroethene	4.89	96	11854	0.216	ppbv # 76
23) Vinyl Acetate	5.07	43	48107	0.226	ppbv # 71
24) 1,1-Dichloroethane	5.02	63	1165544	7.792	ppbv 99
25) Ethyl Acetate	5.70	43	465981	1.460	ppbv # 79
26) Hexane	5.70	57	619308	4.312	ppbv # 39
31) cis-1,2-Dichloroethene	5.56	61	4426	0.034	ppbv # 47
34) 2-Butanone	5.26	43	71245	0.414	ppbv # 84
36) Benzene	6.90	78	6603	0.030	ppbv 97
39) 1,2-Dichloropropane	7.19	63	866817	9.988	ppbv # 24
41) Tetrahydrofuran	5.74	42	4081	0.040	ppbv # 59
53) Toluene	9.83	91	183316	0.743	ppbv 96
58) Ethyl Benzene	12.73	91	23872	0.072	ppbv 96
59) m/p-Xylene	13.03	91	14492	0.052	ppbv # 34
60) o-Xylene	13.72	91	28291	0.108	ppbv 75
65) tert-Butylbenzene	17.01	119	333921	1.053	ppbv # 19
74) 1,2,4-Trimethylbenzene	16.79	105	47985	0.177	ppbv # 69
75) 1,3-Dichlorobenzene	17.02	146	96600	0.711	ppbv # 1

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 min Scan# 900

Delta R.T. -0.00 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

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ClientSampleId :

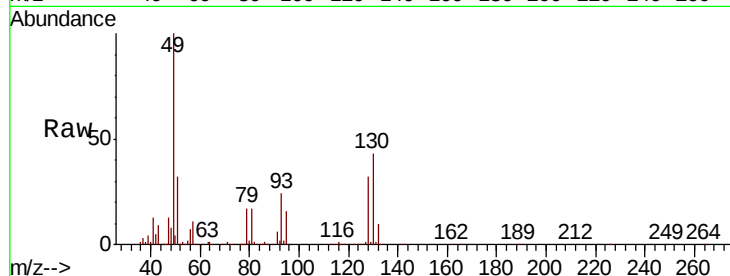
Tot Ion: 49 Resp: 1329081

Ion	Ratio	Lower	Upper
49	100		
128	35.8	21.1	63.1
130	46.7	27.1	81.3

49 100

128 35.8 21.1 63.1

130 46.7 27.1 81.3



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

5.68

800000

600000

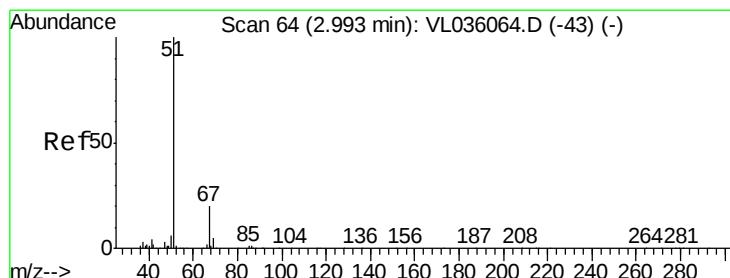
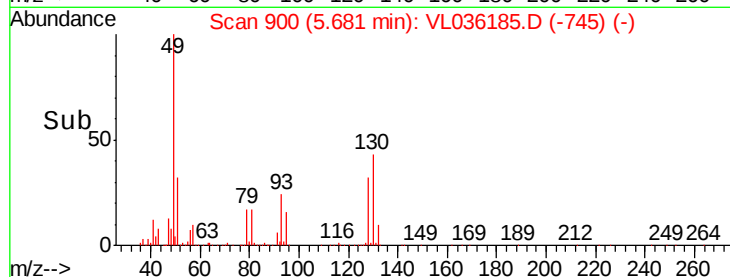
400000

200000

0

Time-->

5.60 5.65 5.70 5.75



#3

Chlorodifluoromethane

Concen: 0.452 ppbv

RT: 2.99 min Scan# 64

Delta R.T. 0.00 min

Lab File: VL036185.D

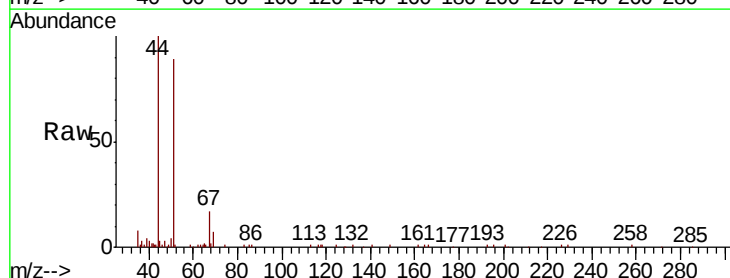
Acq: 17 Dec 2020 3:08

Tgt Ion: 51 Resp: 68533

Ion	Ratio	Lower	Upper
51	100		
67	18.9	14.3	21.5

51 100

67 18.9 14.3 21.5



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

2.99

80000

60000

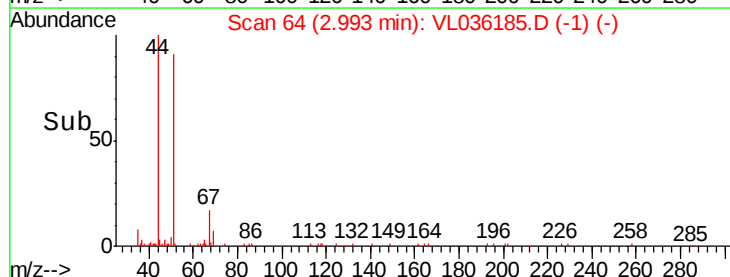
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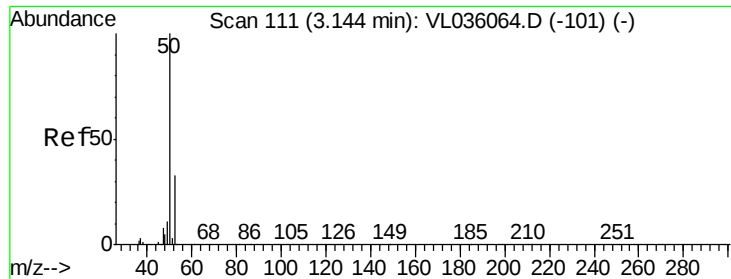
20000

0

Time-->

2.95 3.00





#4

Chloromethane

Concen: 0.762 ppbv

RT: 3.14 min Scan# 111

Delta R.T. 0.00 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

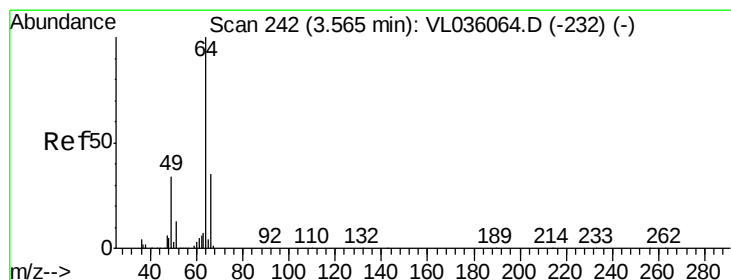
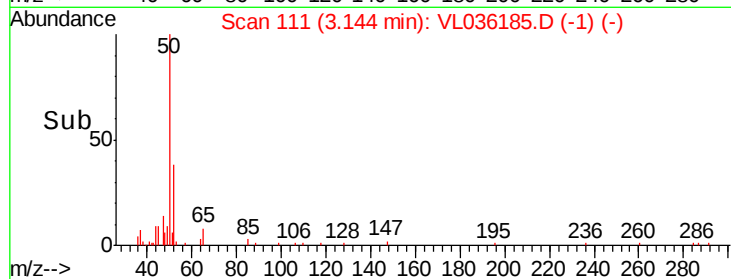
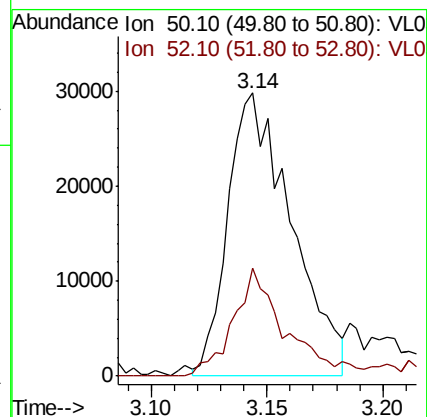
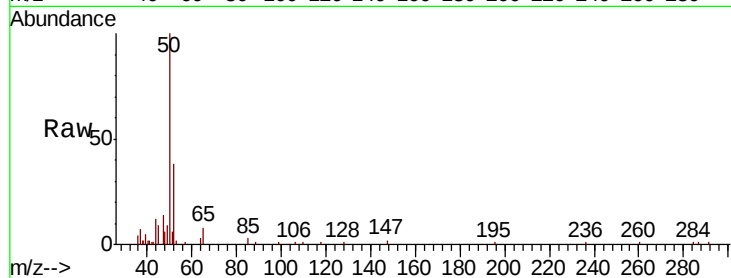
ClientSampleId :

Tot Ion: 50 Resp: 56693

Ion Ratio Lower Upper

50 100

52 37.9 26.1 39.1



#7

Chloroethane

Concen: 2.915 ppbv

RT: 3.56 min Scan# 242

Delta R.T. 0.00 min

Lab File: VL036185.D

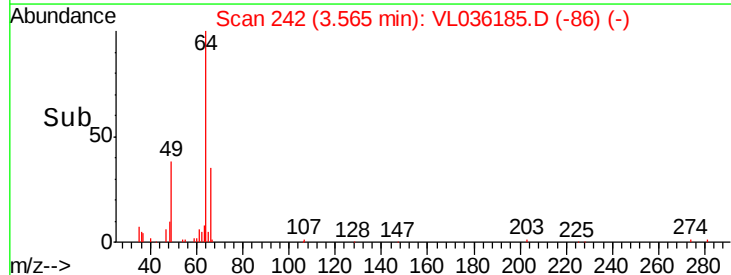
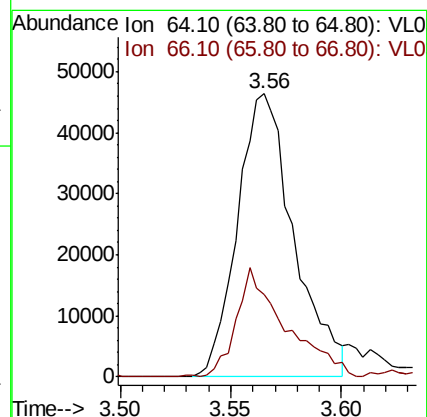
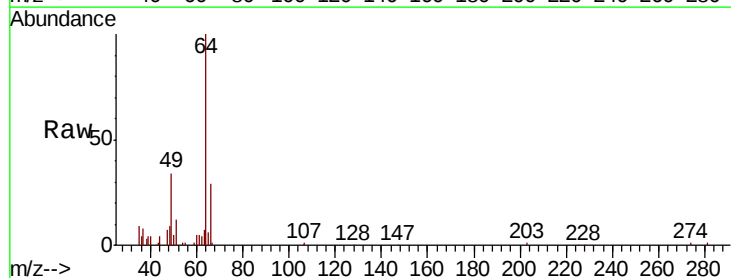
Acq: 17 Dec 2020 3:08

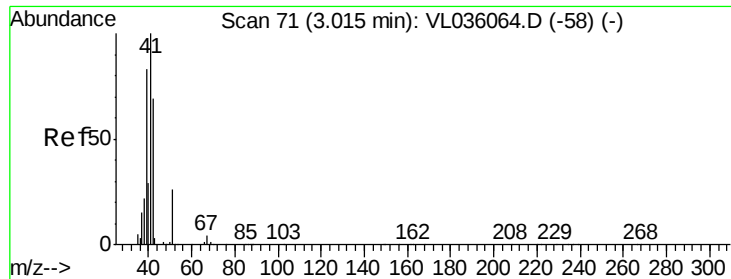
Tgt Ion: 64 Resp: 82240

Ion Ratio Lower Upper

64 100

66 29.2 27.7 41.5





#9

Propene

Concen: 0.792 ppbv

RT: 3.02 min Scan# 74

Delta R.T. 0.01 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

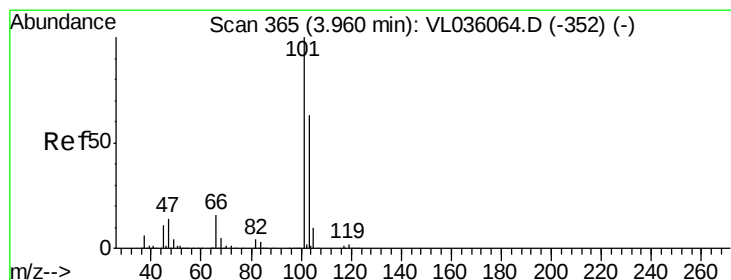
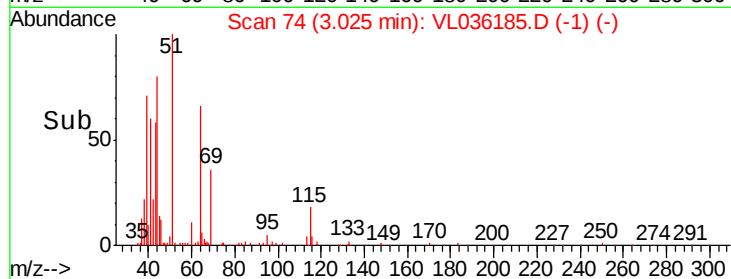
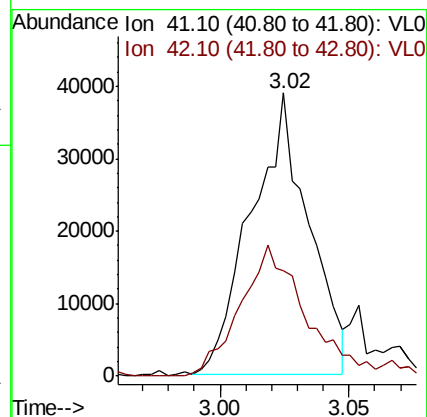
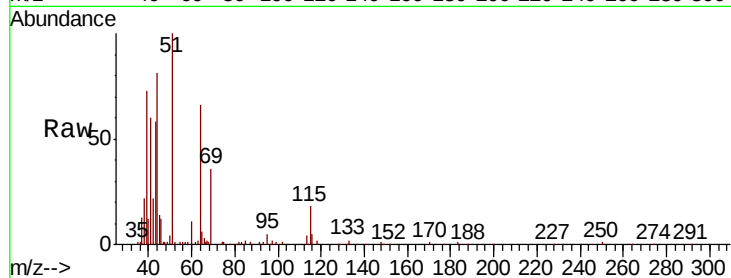
ClientSampled :

Tot Ion: 41 Resp: 60196

Ion Ratio Lower Upper

41 100

42 56.4 57.0 85.6#



#11

Trichlorofluoromethane

Concen: 1.139 ppbv

RT: 3.96 min Scan# 364

Delta R.T. -0.00 min

Lab File: VL036185.D

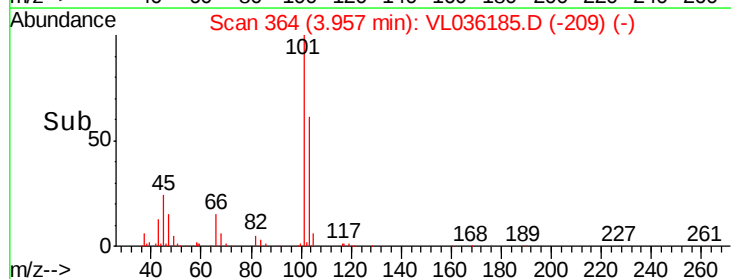
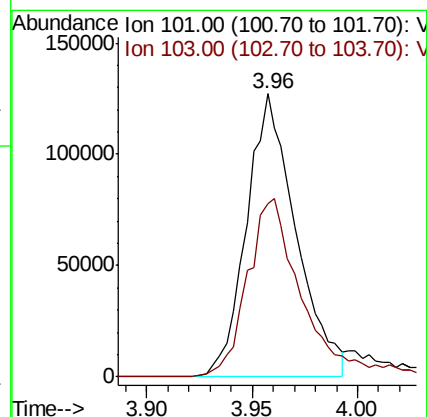
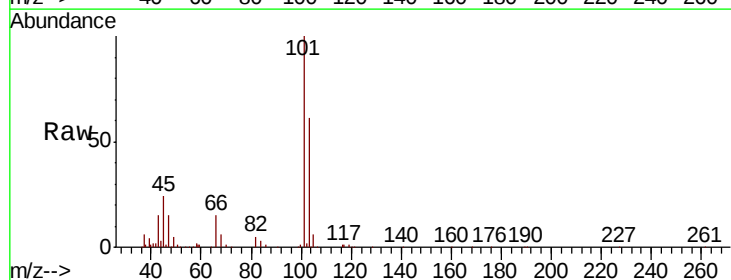
Acq: 17 Dec 2020 3:08

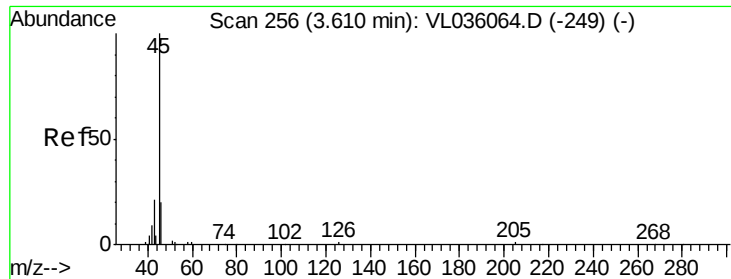
Tgt Ion: 101 Resp: 207386

Ion Ratio Lower Upper

101 100

103 61.1 50.3 75.5

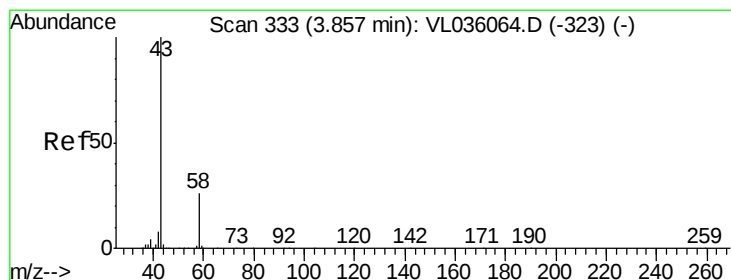
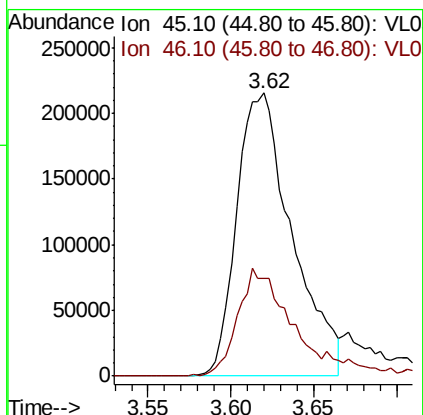
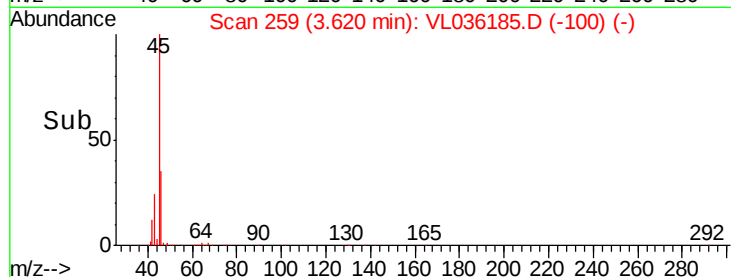
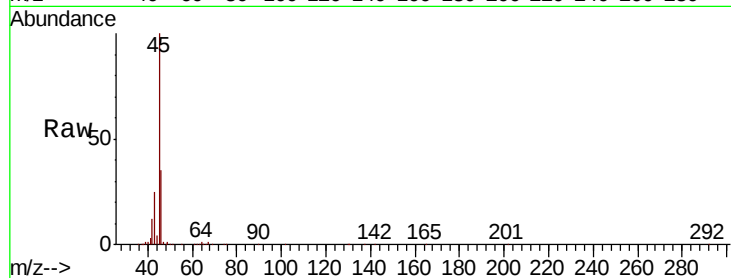




#13
Ethanol
Concen: 47.652 ppbv
RT: 3.62 min Scan# 259
Delta R.T. 0.01 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

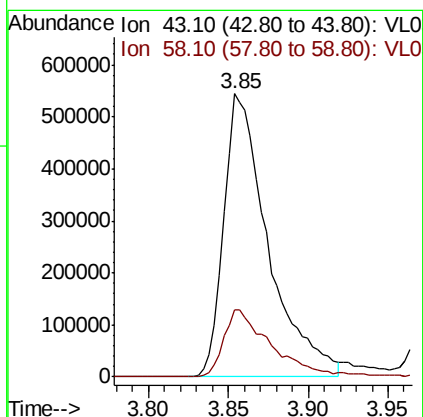
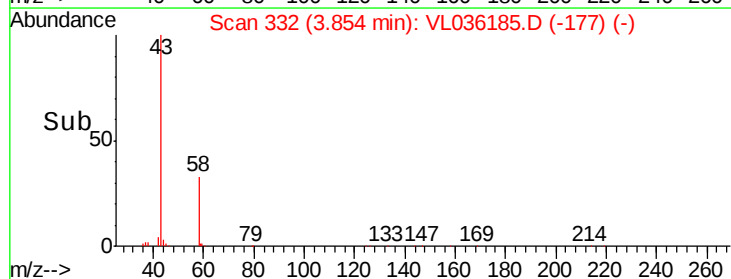
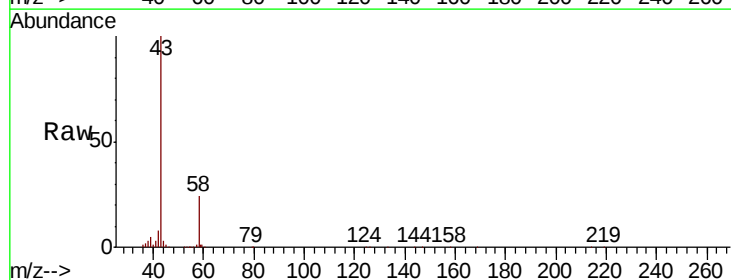
Instrument :
MSVOA_L
ClientSampleId :

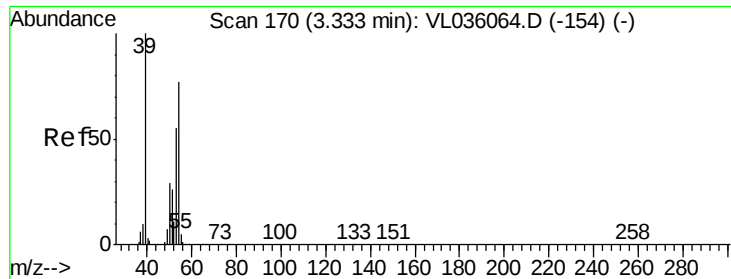
Tot Ion: 45 Resp: 499013
Ion Ratio Lower Upper
45 100
46 40.7 19.0 75.8



#15
Acetone
Concen: 6.451 ppbv
RT: 3.85 min Scan# 332
Delta R.T. -0.00 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

Tgt Ion: 43 Resp: 1030526
Ion Ratio Lower Upper
43 100
58 26.0 20.9 31.3

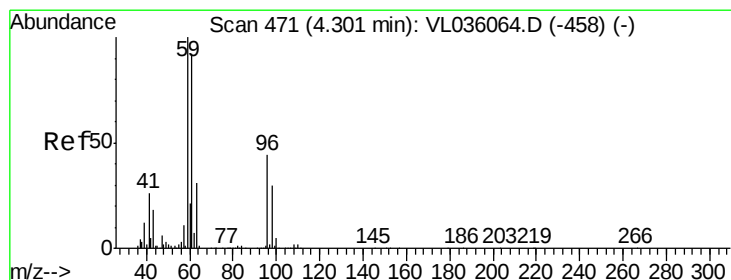
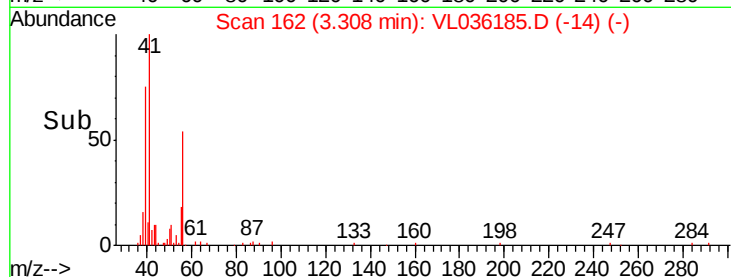
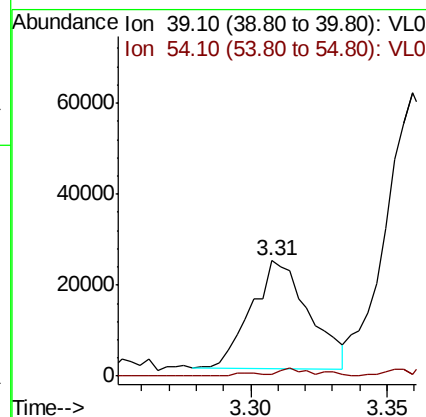
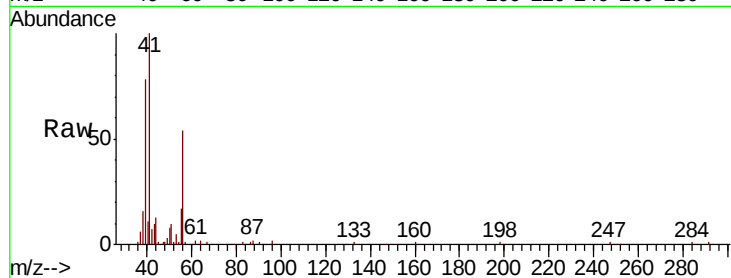




#16
 1,3-Butadiene
 Concen: 0.432 ppbv
 RT: 3.31 min Scan# 162
 Delta R.T. -0.03 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

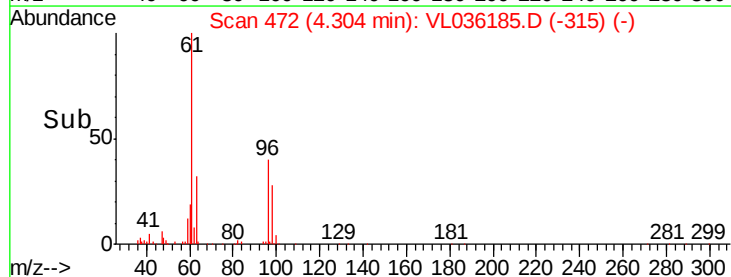
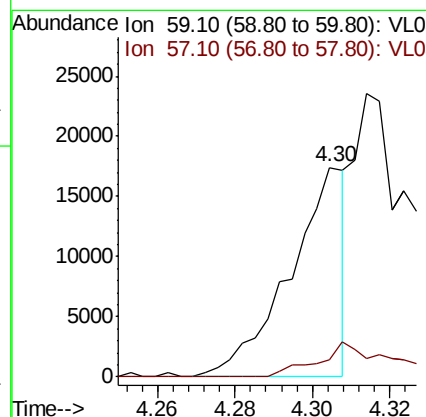
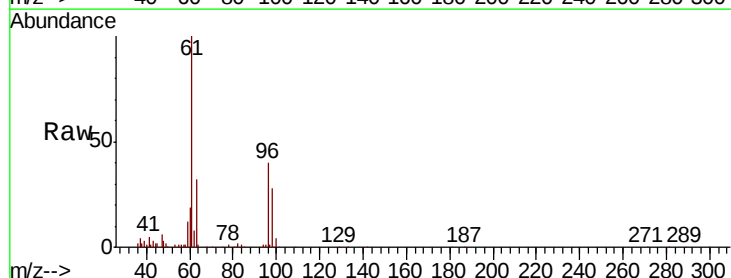
Instrument :
 MSVOA_L
 ClientSampleId :

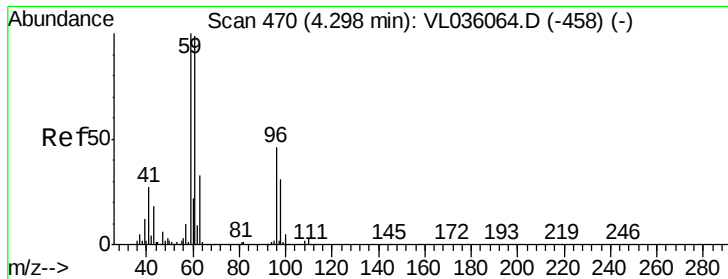
Tot Ion: 39 Resp: 34742
 Ion Ratio Lower Upper
 39 100
 54 6.5 62.1 93.1#



#17
 tert-Butyl alcohol
 Concen: 0.112 ppbv
 RT: 4.30 min Scan# 472
 Delta R.T. 0.00 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

Tgt Ion: 59 Resp: 17356
 Ion Ratio Lower Upper
 59 100
 57 34.3 8.7 13.1#

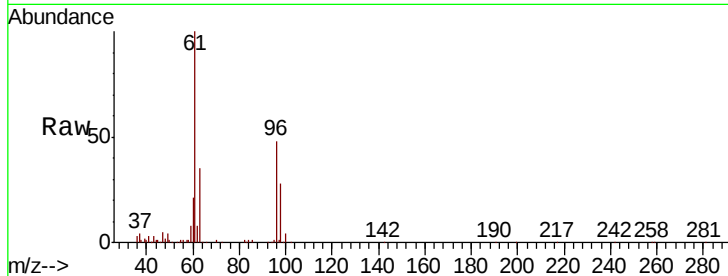




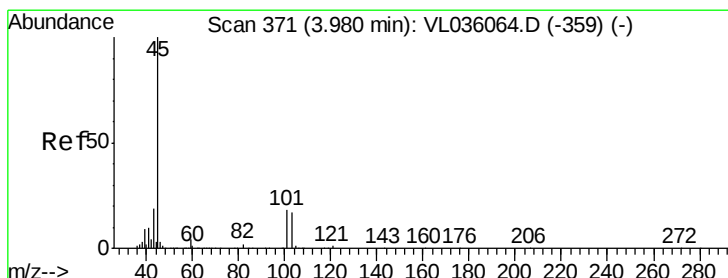
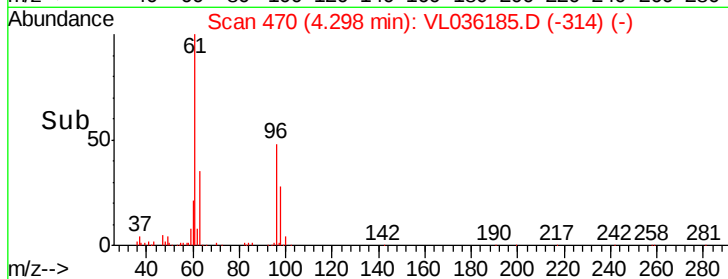
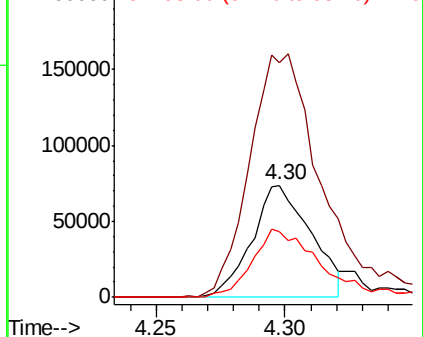
#18
 1,1-Dichloroethene
 Concen: 2.148 ppbv
 RT: 4.30 min Scan# 470
 Delta R.T. 0.00 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion: 96 Resp: 117952
 Ion Ratio Lower Upper
 96 100
 61 207.8 171.4 257.2
 98 58.9 54.2 81.2

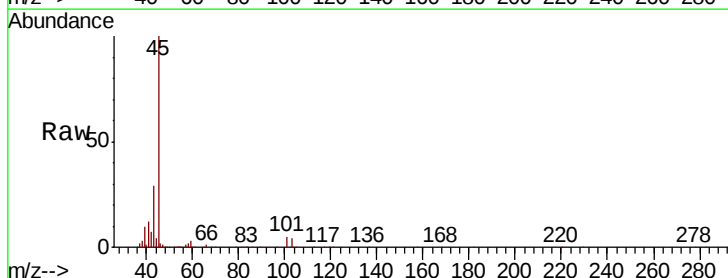


Abundance Ion 96.00 (95.70 to 96.70): VL0
 Ion 61.10 (60.80 to 61.80): VL0
 Ion 98.00 (97.70 to 98.70): VL0

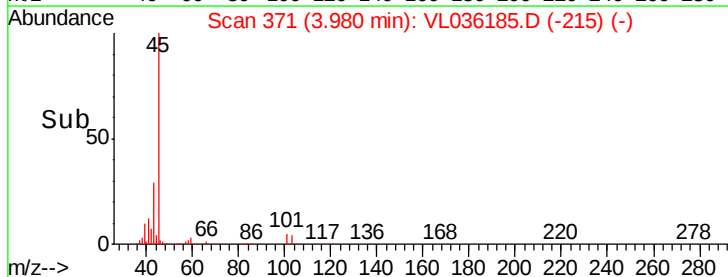
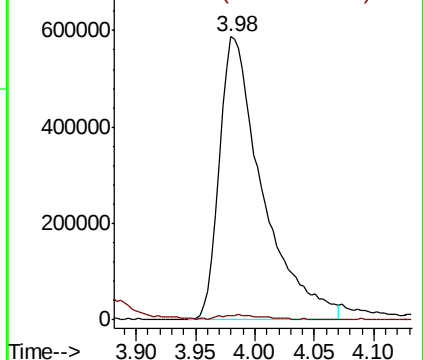


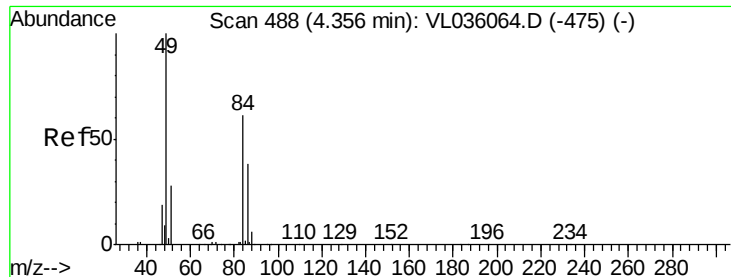
#19
 Isopropyl Alcohol
 Concen: 14.962 ppbv
 RT: 3.98 min Scan# 371
 Delta R.T. 0.00 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

Tgt Ion: 45 Resp: 1460708
 Ion Ratio Lower Upper
 45 100
 58 2.1 0.0 0.0#



Abundance Ion 45.10 (44.80 to 45.80): VL0
 Ion 58.10 (57.80 to 58.80): VL0

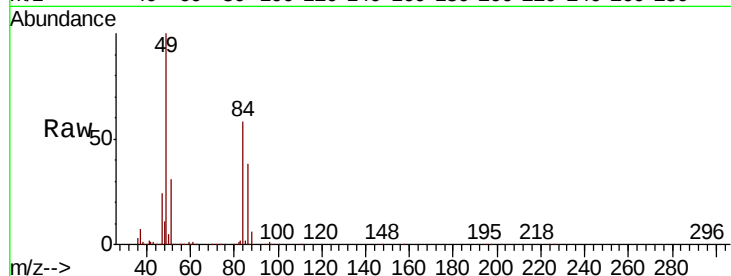




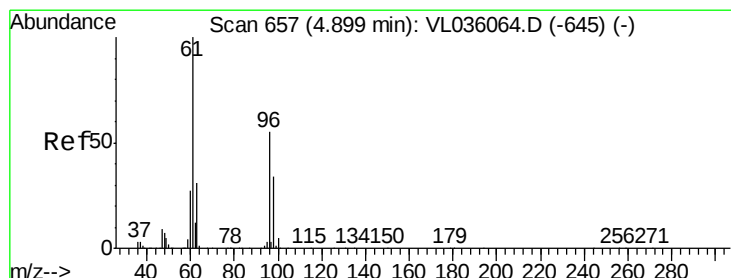
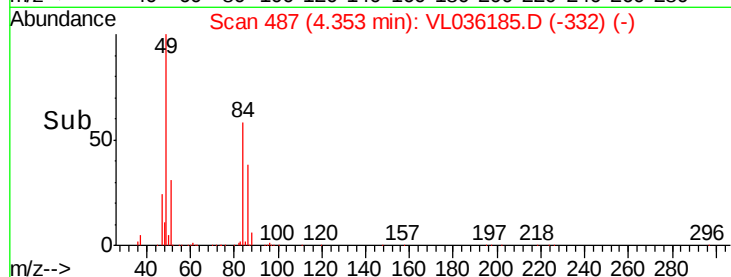
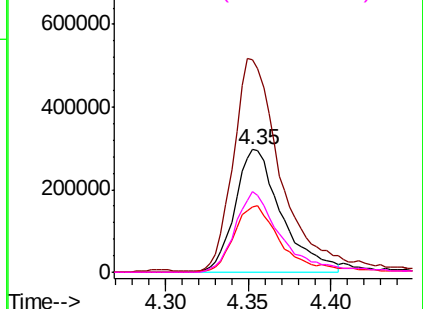
#20
Methvlene Chloride
Concen: 8.866 ppbv
RT: 4.35 min Scan# 487
Delta R.T. -0.00 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion:	84	Resp:	580363
Ion	Ratio	Lower	Upper
84	100		
49	171.3	133.0	199.4
51	53.0	38.9	58.3
86	65.3	48.8	73.2

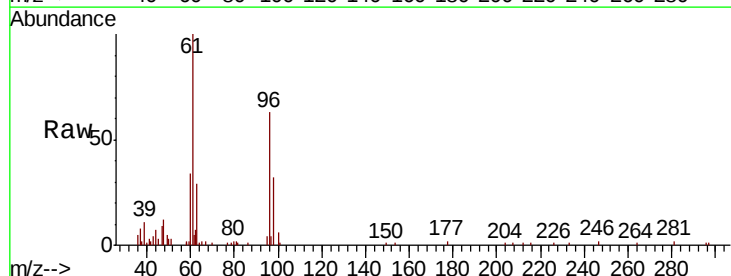


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

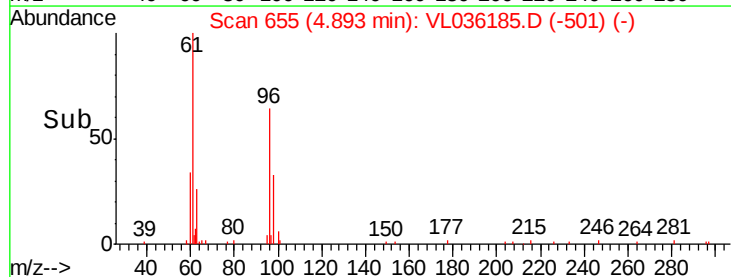
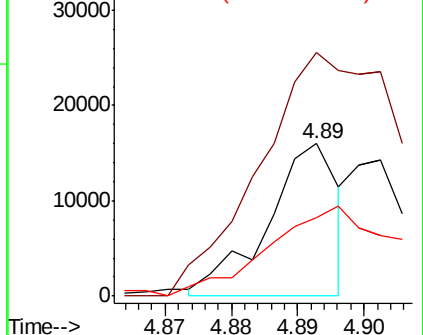


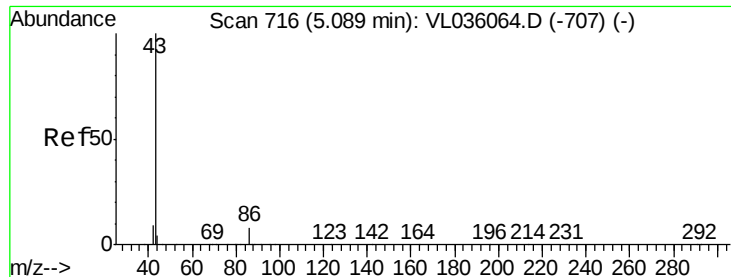
#22
trans-1,2-Dichloroethene
Concen: 0.216 ppbv
RT: 4.89 min Scan# 655
Delta R.T. -0.01 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

Tgt Ion:	96	Resp:	11854
Ion	Ratio	Lower	Upper
96	100		
61	145.4	145.7	218.5#
98	47.6	49.2	73.8#



Abundance Ion 96.00 (95.70 to 96.70): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 98.00 (97.70 to 98.70): VL0





#23

Vinyl Acetate

Concen: 0.226 ppbv

RT: 5.07 min Scan# 711

Delta R.T. -0.02 min

Lab File: VL036185.D

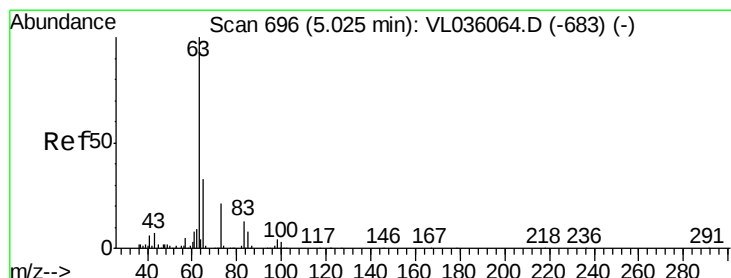
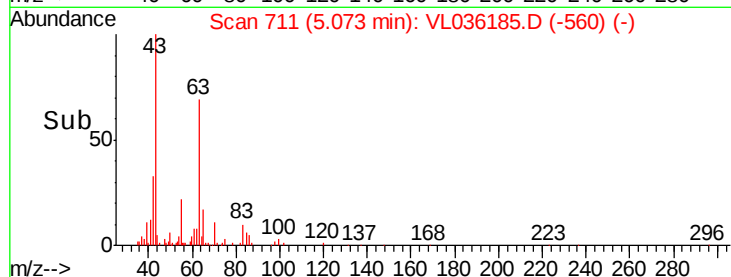
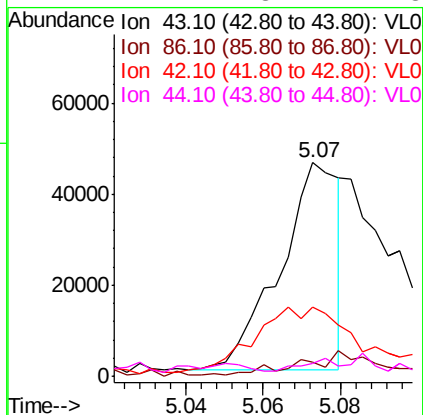
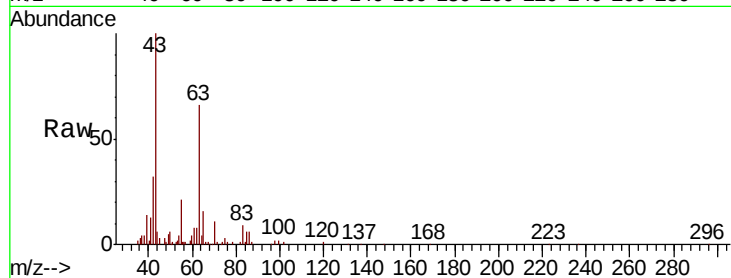
Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	43	Resp:	48107
Ion	Ratio	Lower	Upper
43	100		
86	5.7	5.0	7.4
42	30.1	7.8	11.6#
44	1.4	3.2	4.8#



#24

1,1-Dichloroethane

Concen: 7.792 ppbv

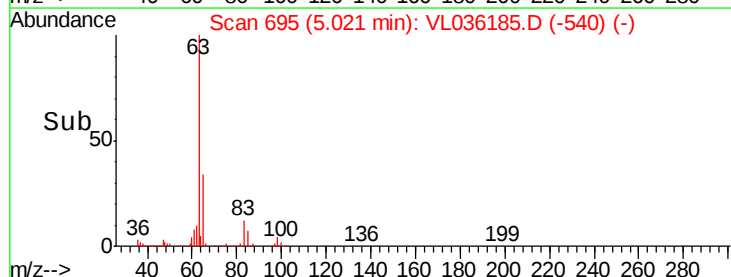
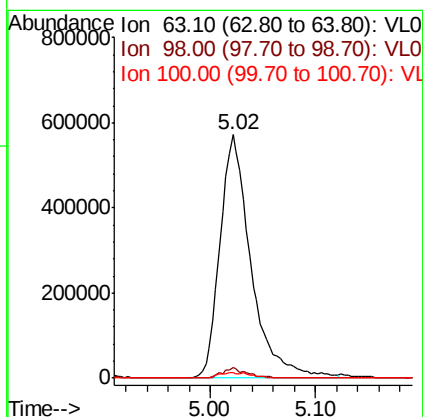
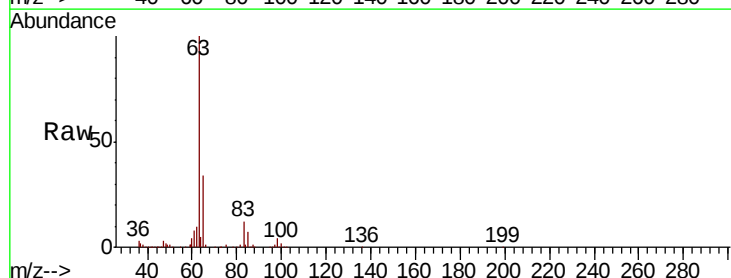
RT: 5.02 min Scan# 695

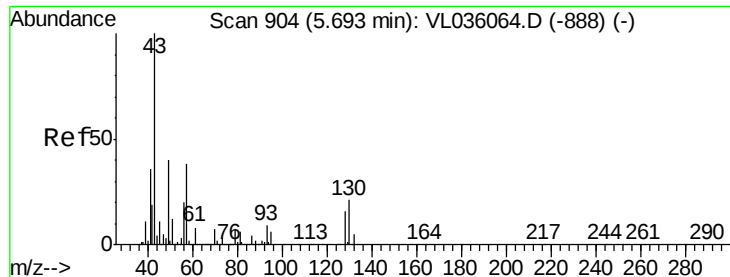
Delta R.T. -0.00 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Tgt Ion:	63	Resp:	1165544
Ion	Ratio	Lower	Upper
63	100		
98	4.1	2.2	6.6
100	2.2	1.5	4.4

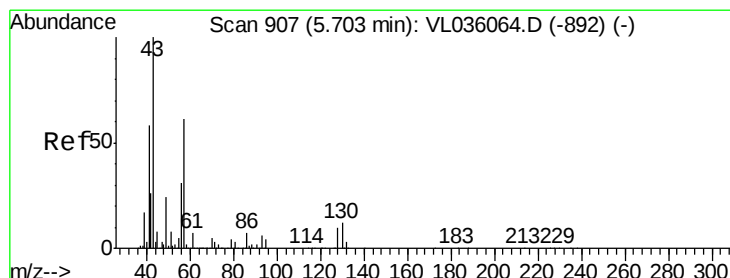
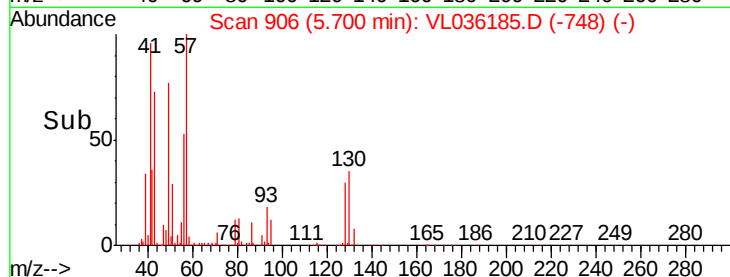
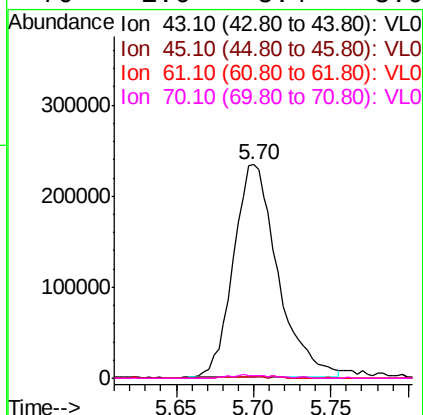
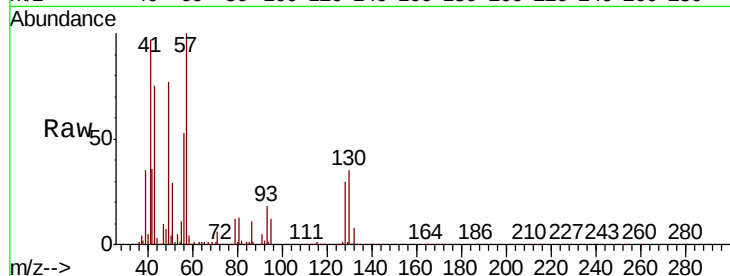




#25
Ethyl Acetate
Concen: 1.460 ppbv
RT: 5.70 min Scan# 906
Delta R.T. 0.01 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

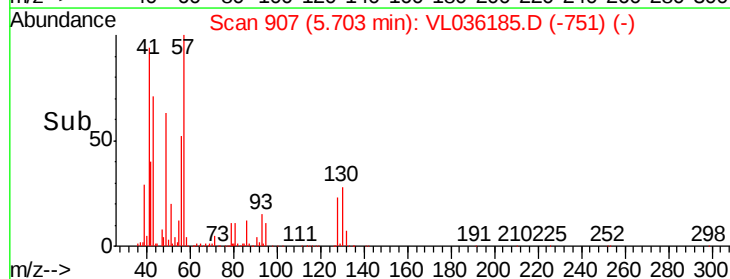
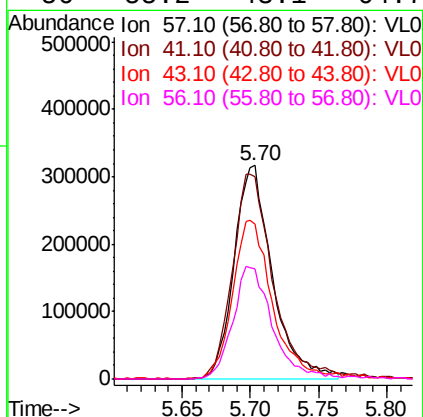
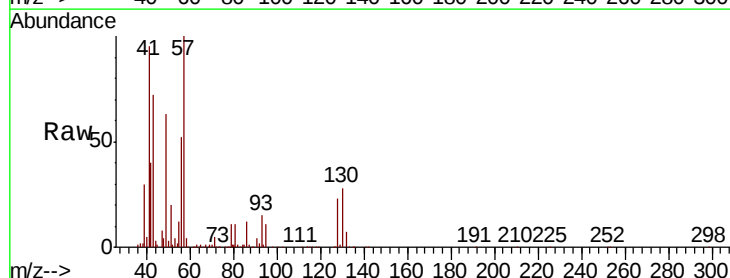
Instrument :
MSVOA_L
ClientSampleId :

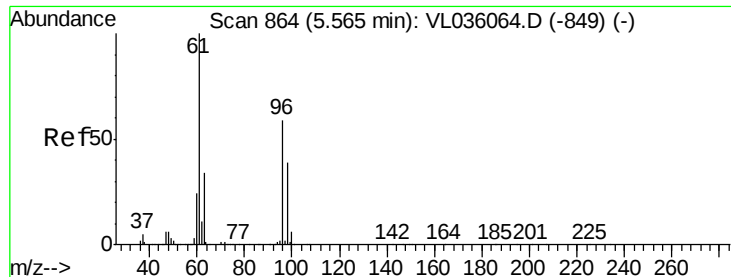
Tot Ion:	43	Resp:	465981
Ion	Ratio	Lower	Upper
43	100		
45	1.1	8.2	12.4#
61	1.0	7.4	11.2#
70	1.6	5.4	8.0#



#26
Hexane
Concen: 4.312 ppbv
RT: 5.70 min Scan# 907
Delta R.T. 0.00 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

Tgt Ion:	57	Resp:	619308
Ion	Ratio	Lower	Upper
57	100		
41	102.9	82.9	124.3
43	77.7	199.9	299.9#
56	55.2	43.1	64.7





#31

cis-1,2-Dichloroethene

Concen: 0.034 ppbv

RT: 5.56 min Scan# 864

Delta R.T. 0.00 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

ClientSampleId :

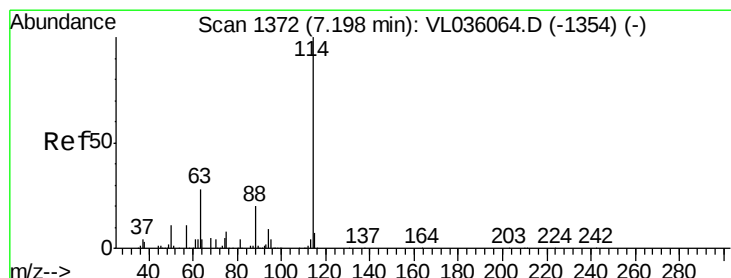
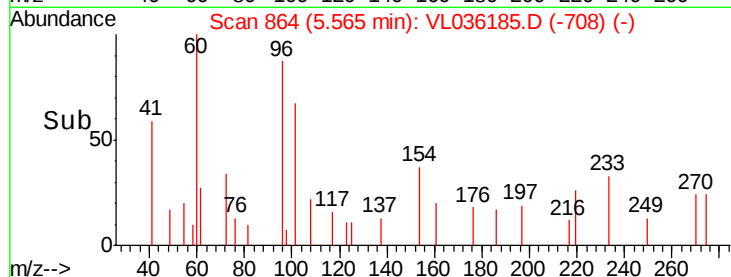
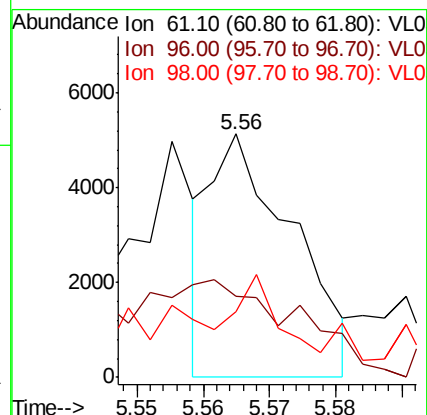
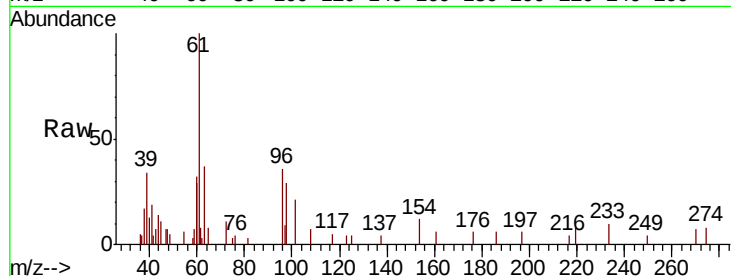
Tot Ion: 61 Resp: 4426

Ion Ratio Lower Upper

61 100

96 19.9 47.3 70.9#

98 6.3 31.4 47.0#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1370

Delta R.T. -0.01 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

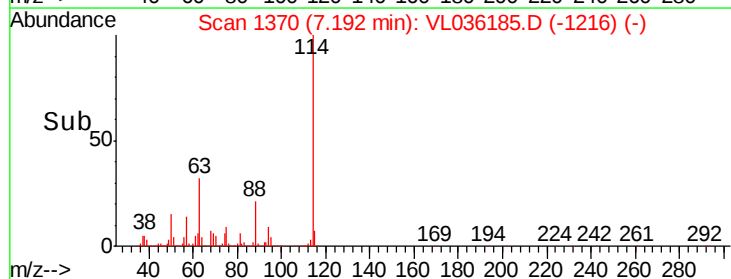
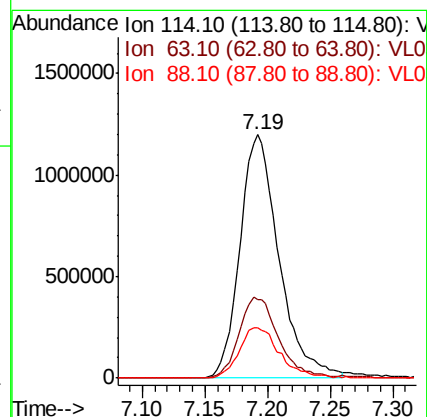
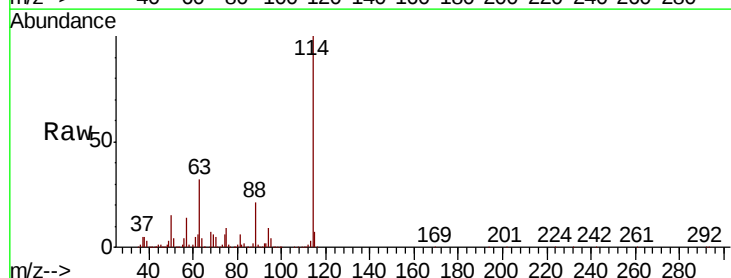
Tgt Ion: 114 Resp: 2593054

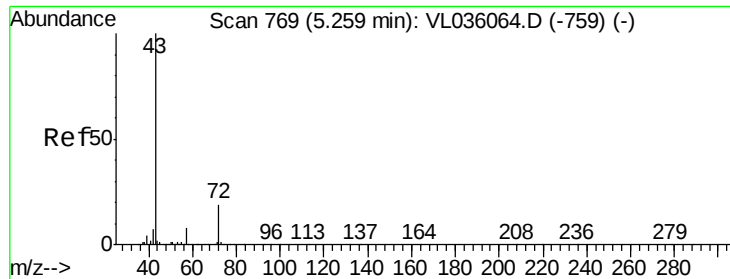
Ion Ratio Lower Upper

114 100

63 34.4 23.6 35.4

88 22.0 15.8 23.6

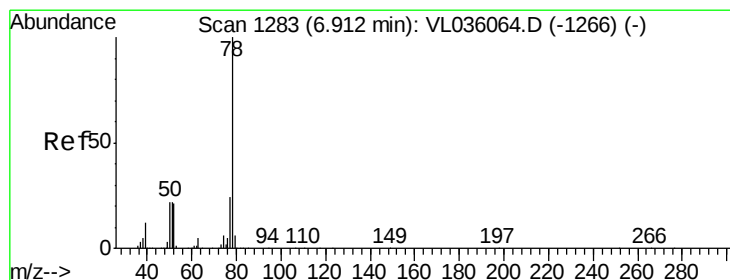
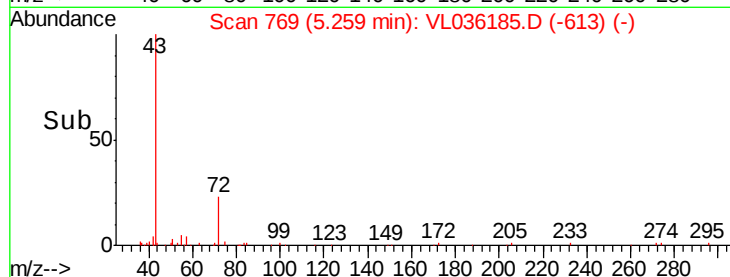
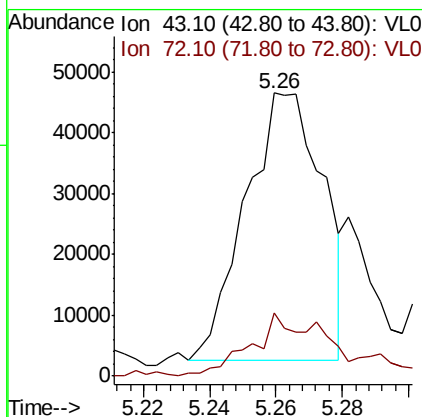
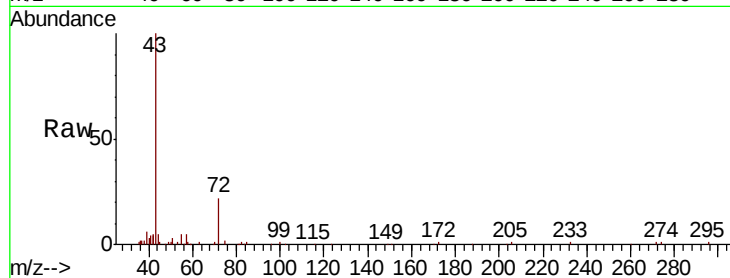




#34
 2-Butanone
 Concen: 0.414 ppbv
 RT: 5.26 min Scan# 769
 Delta R.T. 0.00 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

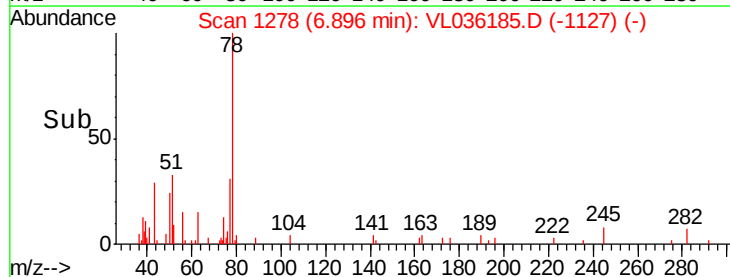
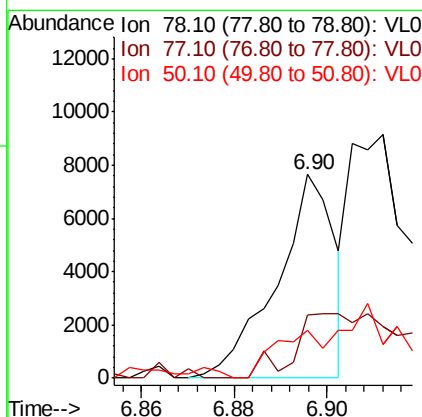
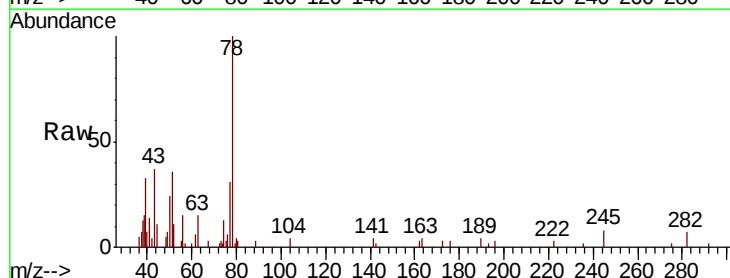
Instrument :
 MSVOA_L
 ClientSampleId :

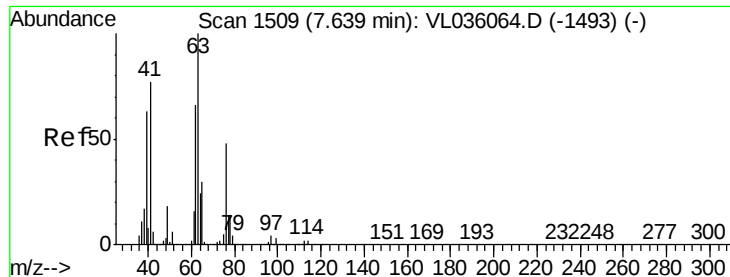
Tot Ion: 43 Resp: 71245
 Ion Ratio Lower Upper
 43 100
 72 27.9 16.5 24.7#



#36
 Benzene
 Concen: 0.030 ppbv
 RT: 6.90 min Scan# 1278
 Delta R.T. -0.02 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

Tgt Ion: 78 Resp: 6603
 Ion Ratio Lower Upper
 78 100
 77 26.5 19.4 29.2
 50 21.2 17.8 26.8





#39

1,2-Dichloropropane

Concen: 9.988 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. -0.45 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

ClientSampleId :

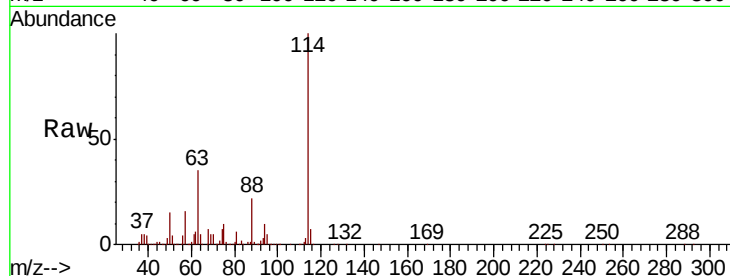
Tot Ion: 63 Resp: 866817

Ion Ratio Lower Upper

63 100

41 0.1 61.9 92.9#

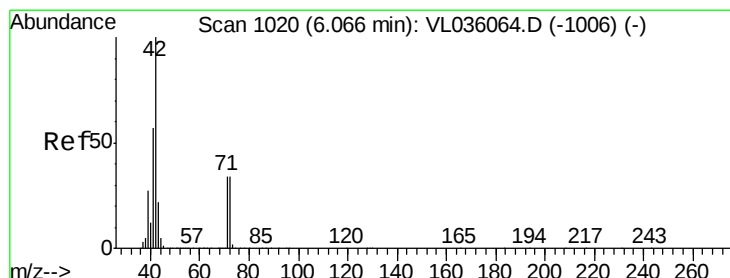
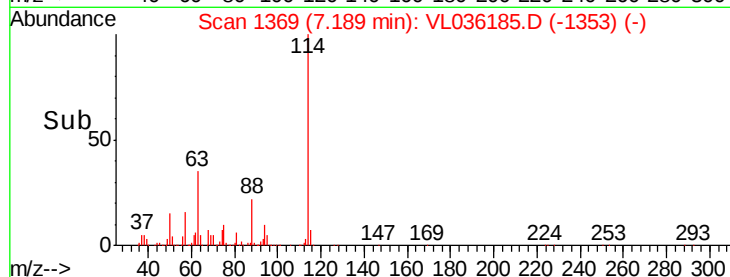
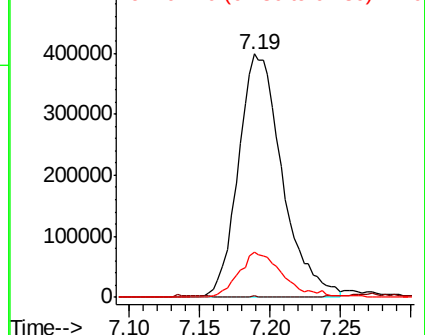
62 18.4 52.5 78.7#



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: 0.040 ppbv

RT: 5.74 min Scan# 920

Delta R.T. -0.32 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

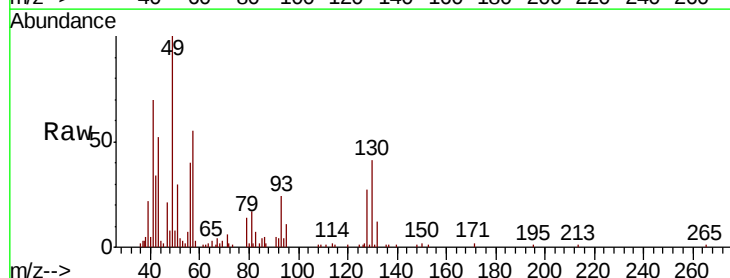
Tgt Ion: 42 Resp: 4081

Ion Ratio Lower Upper

42 100

72 22.0 28.3 42.5#

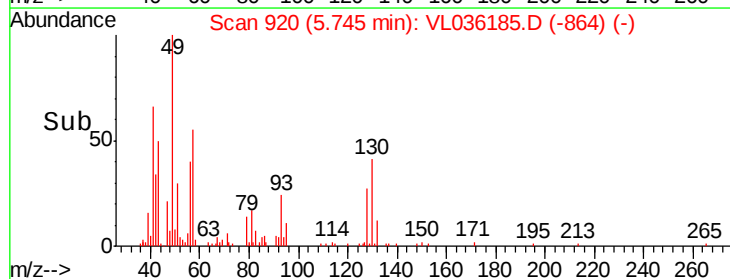
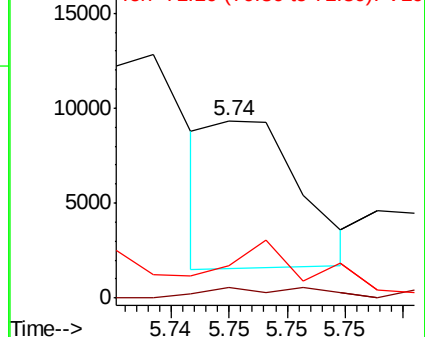
71 0.0 27.3 40.9#

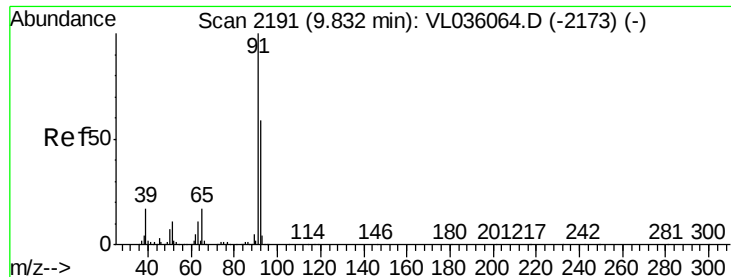


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0





#53

Toluene

Concen: 0.743 ppbv

RT: 9.83 min Scan# 2191

Delta R.T. 0.00 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

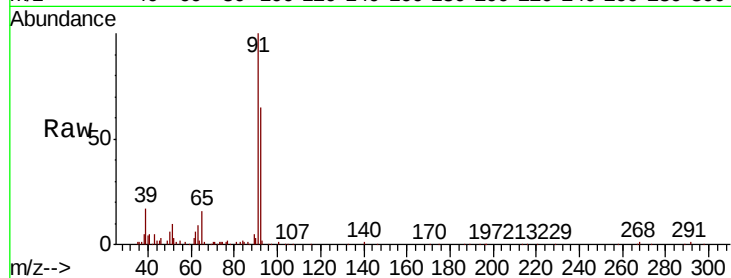
ClientSampleId :

Tot Ion: 91 Resp: 183316

Ion Ratio Lower Upper

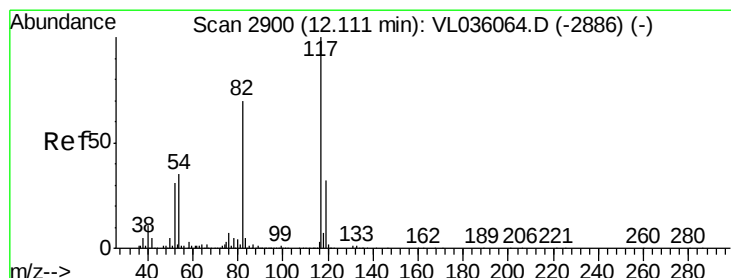
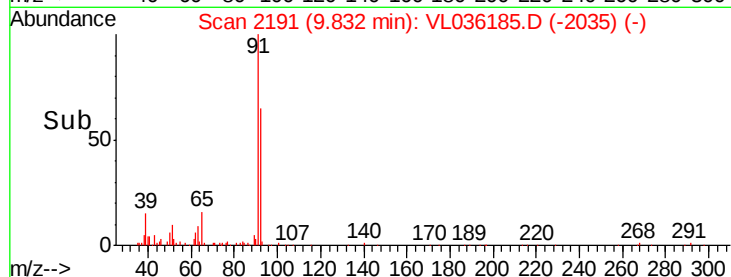
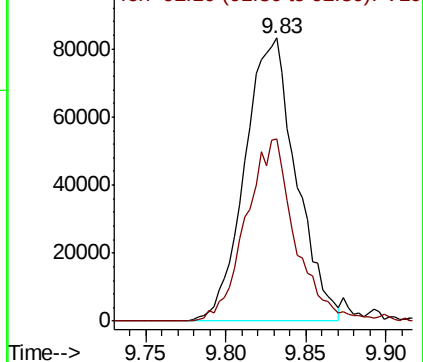
91 100

92 62.9 48.2 72.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.11 min Scan# 2900

Delta R.T. 0.00 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

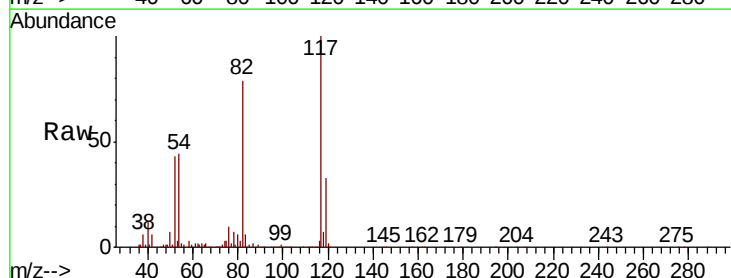
Tgt Ion: 117 Resp: 2403337

Ion Ratio Lower Upper

117 100

82 80.9 0.0 0.0#

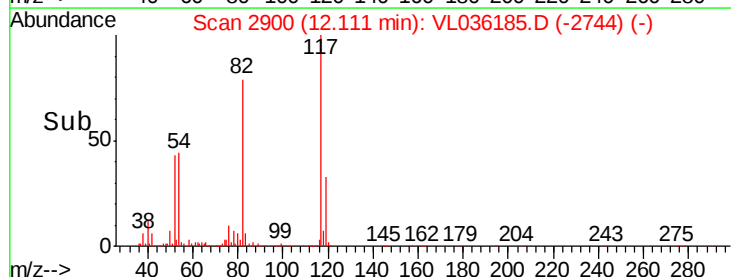
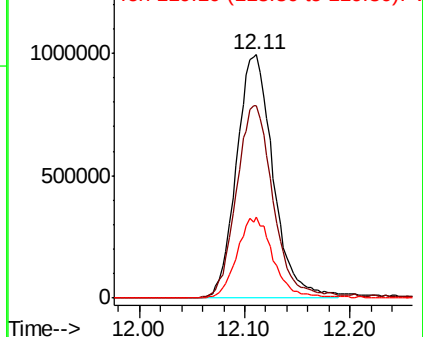
119 33.3 0.0 0.0#

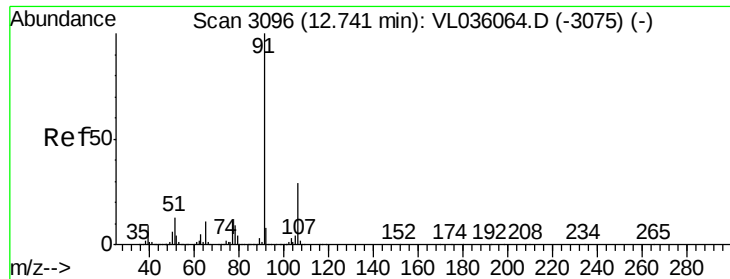


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.072 ppbv

RT: 12.73 min Scan# 3093

Delta R.T. -0.01 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

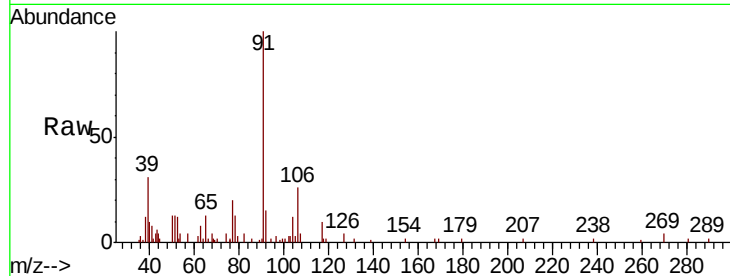
ClientSampleId :

Tot Ion: 91 Resp: 23872

Ion Ratio Lower Upper

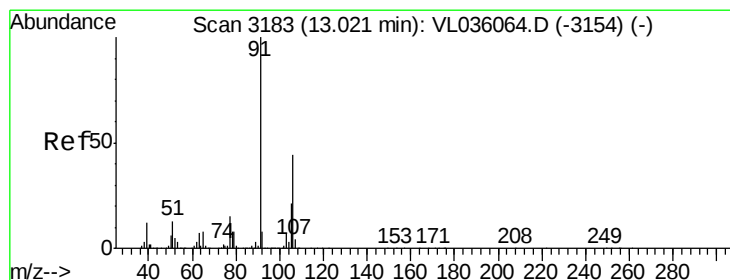
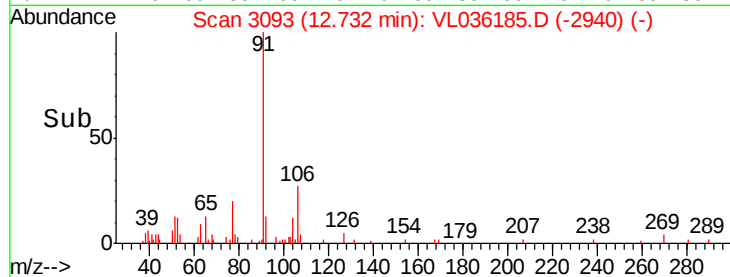
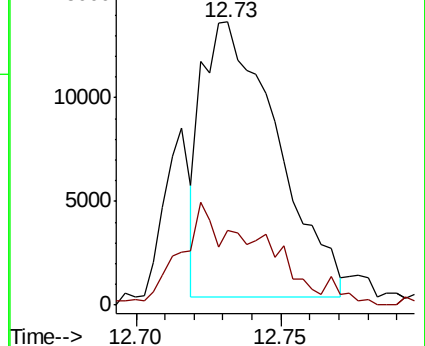
91 100

106 26.4 23.0 34.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.052 ppbv

RT: 13.03 min Scan# 3185

Delta R.T. 0.01 min

Lab File: VL036185.D

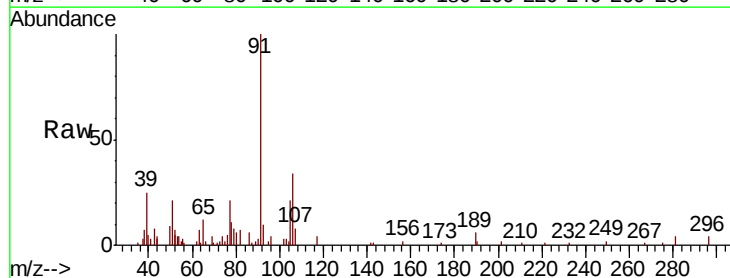
Acq: 17 Dec 2020 3:08

Tgt Ion: 91 Resp: 14492

Ion Ratio Lower Upper

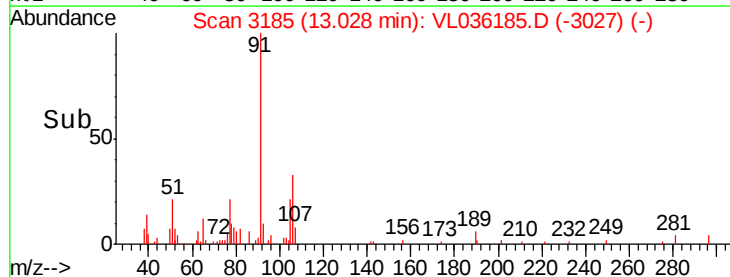
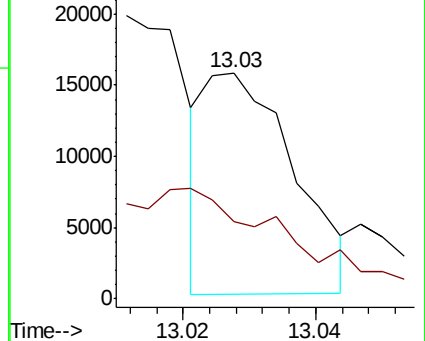
91 100

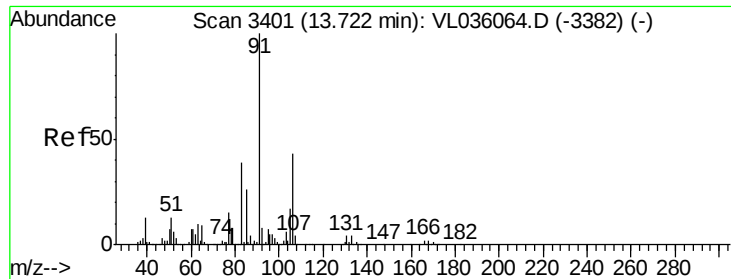
106 0.0 33.6 50.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

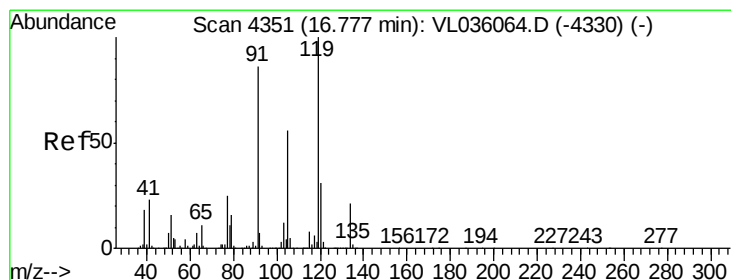
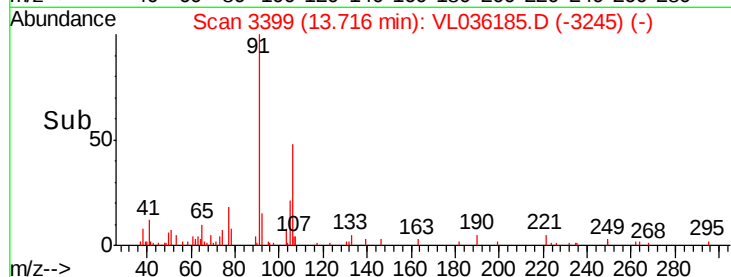
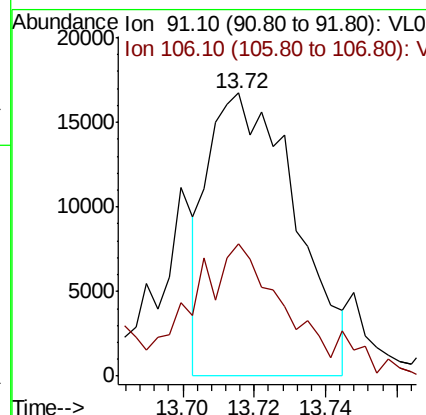
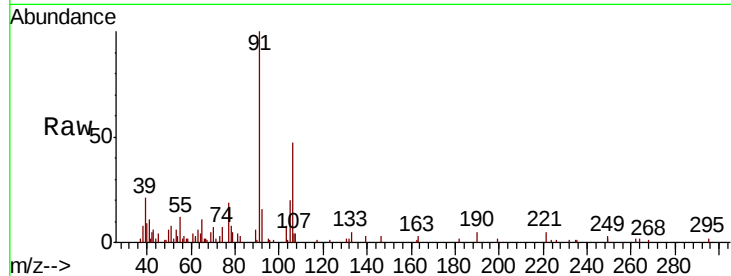




#60
o-Xylene
Concen: 0.108 ppbv
RT: 13.72 min Scan# 3399
Delta R.T. -0.01 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

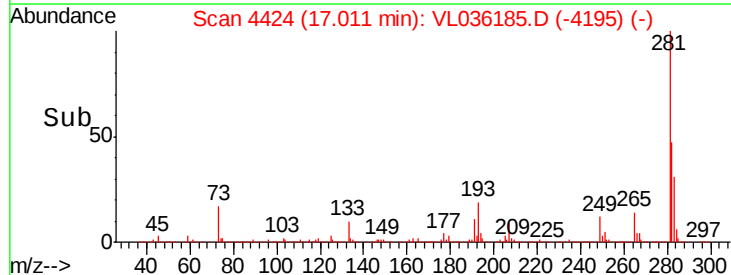
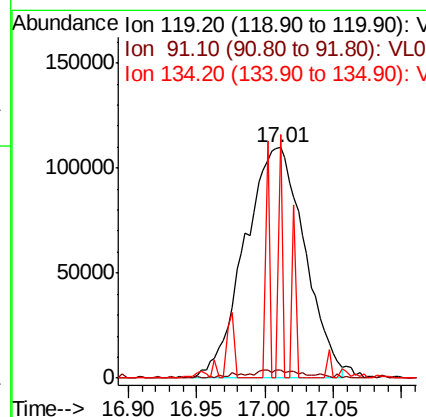
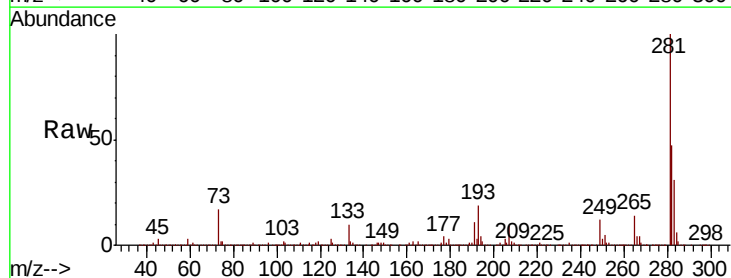
Instrument :
MSVOA_L
ClientSampleId :

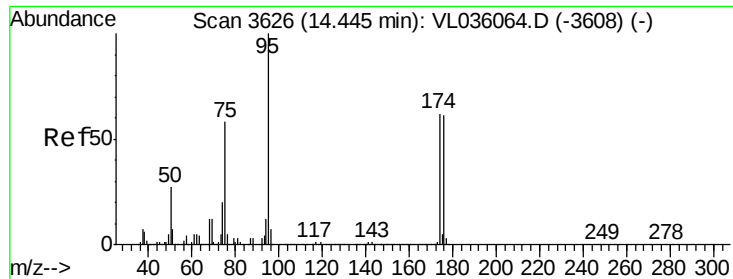
Tot Ion: 91 Resp: 28291
Ion Ratio Lower Upper
91 100
106 59.2 21.6 64.6



#65
tert-Butylbenzene
Concen: 1.053 ppbv
RT: 17.01 min Scan# 4424
Delta R.T. 0.23 min
Lab File: VL036185.D
Acq: 17 Dec 2020 3:08

Tgt Ion: 119 Resp: 333921
Ion Ratio Lower Upper
119 100
91 3.7 70.2 105.2#
134 1.1 15.8 23.6#

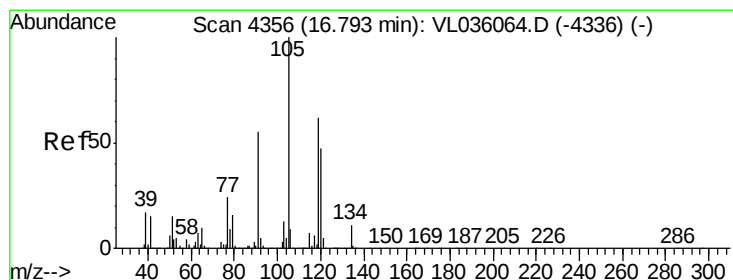
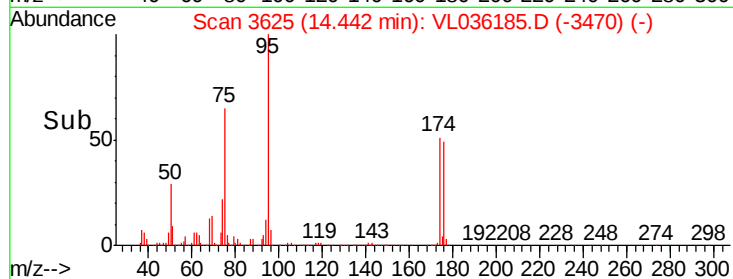
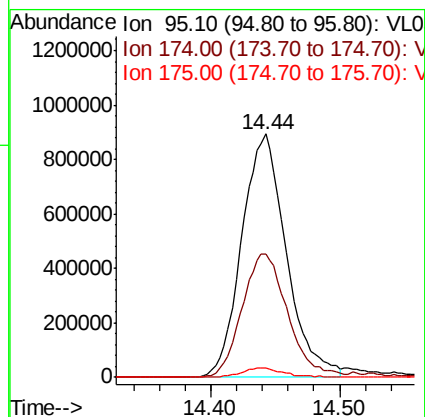
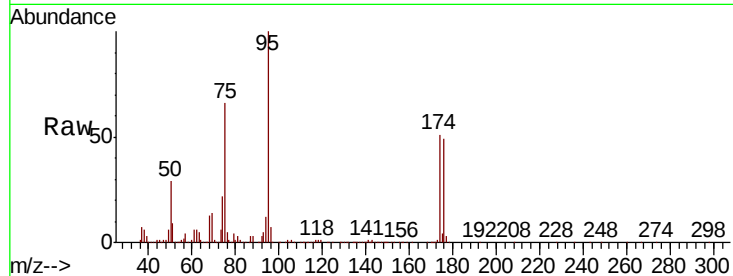




#68
 1-Bromo-4-Fluorobenzene
 Concen: 11.230 ppbv
 RT: 14.44 min Scan# 3625
 Delta R.T. -0.00 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

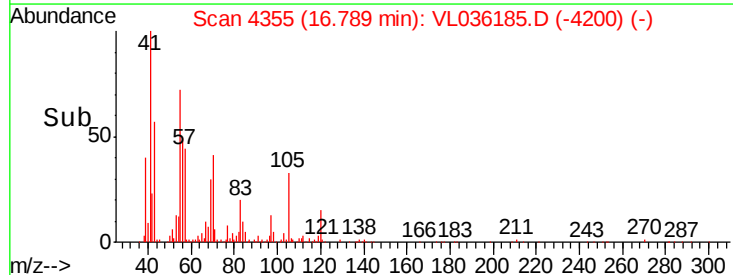
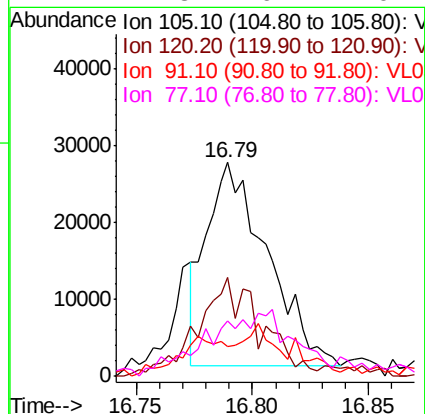
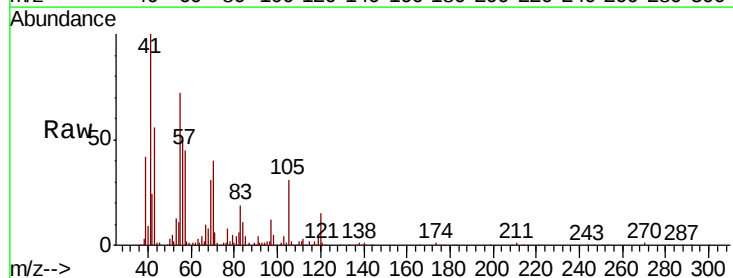
Instrument :
 MSVOA_L
 ClientSampled :

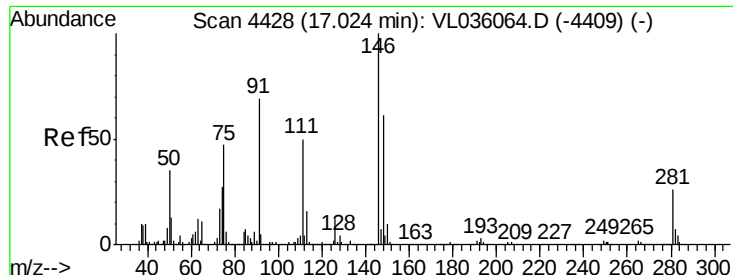
Tot Ion: 95 Resp: 2143047
 Ion Ratio Lower Upper
 95 100
 174 54.3 50.7 76.1
 175 3.8 4.0 6.0#



#74
 1,2,4-Trimethylbenzene
 Concen: 0.177 ppbv
 RT: 16.79 min Scan# 4355
 Delta R.T. -0.00 min
 Lab File: VL036185.D
 Acq: 17 Dec 2020 3:08

Tgt Ion:105 Resp: 47985
 Ion Ratio Lower Upper
 105 100
 120 44.6 37.4 56.0
 91 12.6 45.6 68.4#
 77 17.3 19.4 29.2#





#75

1,3-Dichlorobenzene

Concen: 0.711 ppbv

RT: 17.02 min Scan# 4427

Delta R.T. -0.00 min

Lab File: VL036185.D

Acq: 17 Dec 2020 3:08

Instrument :

MSVOA_L

ClientSampleId :

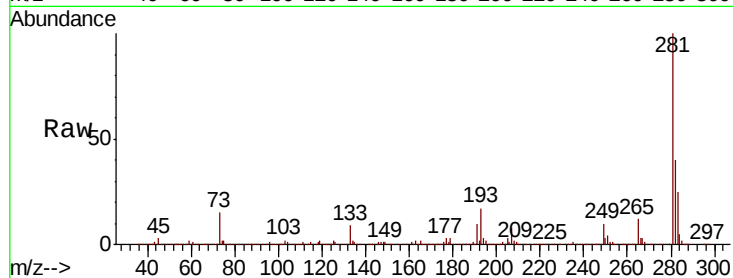
Tot Ion:146 Resp: 96600

Ion Ratio Lower Upper

146 100

111 186.2 25.1 75.3#

148 156.2 32.9 98.6#



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

