

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL102721\
 Data File : VL037925.D
 Acq On : 27 Oct 2021 20:52
 Operator : SY/AP
 Sample : M4068-13 0.1 LOD
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA L
 ClientSampleId :
 LOD-MDL-AIR-01-QT4-2021

Quant Time: Oct 28 05:19:17 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL100421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Oct 04 17:43:54 2021
 QLast Update : Mon Oct 04 17:43:54 2021
 Response via : Initial Calibration

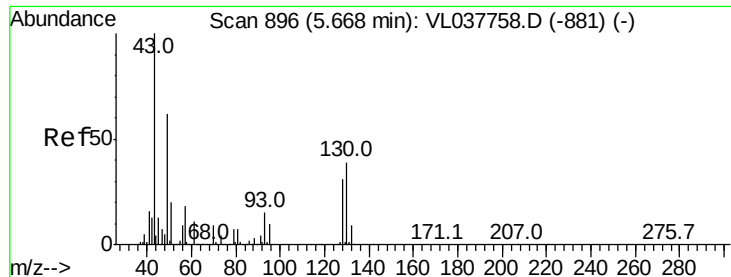
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	1288533	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	3889029	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	3298194	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2339924	10.15	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.50%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.20	85	23893	0.116	ppbv	93
3) Chlorodifluoromethane	3.00	51	29080	0.117	ppbv #	89
4) Chloromethane	3.15	50	10815	0.119	ppbv	91
5) Vinyl Chloride	3.26	62	3407	0.041	ppbv	95
6) Bromomethane	3.48	94	2286	0.051	ppbv #	65
7) Chloroethane	3.56	64	1472	0.048	ppbv #	40
8) Dichlorotetrafluoroethane	3.20	85	23893	0.117	ppbv	95
11) Trichlorofluoromethane	3.96	101	17511	0.095	ppbv #	83
13) Ethanol	3.63	45	226	0.030	ppbv #	27
14) Bromoethene	3.75	108	4019	0.066	ppbv #	1
16) 1,3-Butadiene	3.34	39	7425	0.088	ppbv #	76
18) 1,1-Dichloroethene	4.29	96	2210	0.035	ppbv #	38
20) Methylene Chloride	4.36	84	16689	0.286	ppbv	85
21) Allyl Chloride	4.42	41	3487	0.034	ppbv #	1
24) 1,1-Dichloroethane	5.02	63	9234	0.073	ppbv #	87
27) Carbon Disulfide	4.55	76	4676	0.033	ppbv #	64
29) Chloroform	5.76	83	12069	0.053	ppbv	90
31) cis-1,2-Dichloroethene	5.55	61	5710	0.039	ppbv #	80
32) 1,1,1-Trichloroethane	6.52	97	10752	0.050	ppbv #	1
35) Carbon Tetrachloride	7.02	117	12759	0.058	ppbv #	80
37) 1,2-Dichloroethane	6.32	62	11960	0.076	ppbv #	93
39) 1,2-Dichloropropane	7.24	63	11996	0.096	ppbv #	37
42) Bromodichloromethane	7.80	83	9718	0.042	ppbv #	89
47) 1,1,2-Trichloroethane	9.48	97	5895	0.043	ppbv #	47
57) Chlorobenzene	12.16	112	11251	0.042	ppbv #	58
59) m/p-Xylene	13.00	91	12272	0.032	ppbv #	30
62) Isopropylbenzene	14.67	105	22079	0.043	ppbv #	48
66) Benzyl Chloride	16.99	91	1070	0.048	ppbv #	66
74) 1,2,4-Trimethylbenzene	16.77	105	14130	0.036	ppbv #	79
75) 1,3-Dichlorobenzene	17.00	146	11184	0.046	ppbv #	1

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 27 Oct 2021 20:52 LOD-MDL-AIR-01-QT4-2021

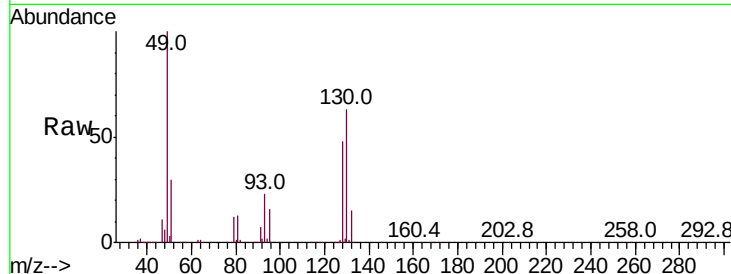
Tot Ion: 49 Resp: 1288533

Ion Ratio Lower Upper

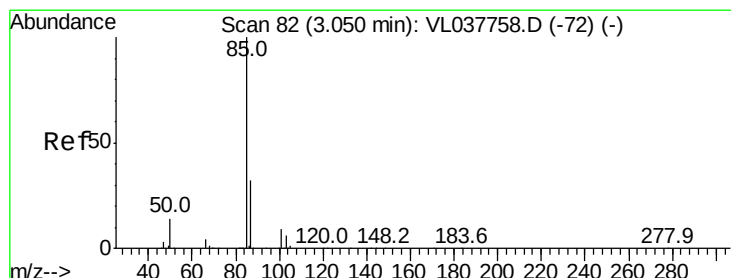
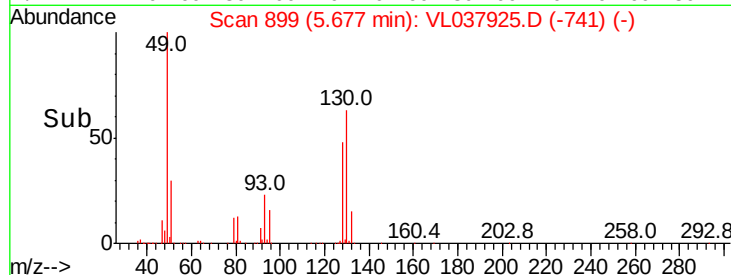
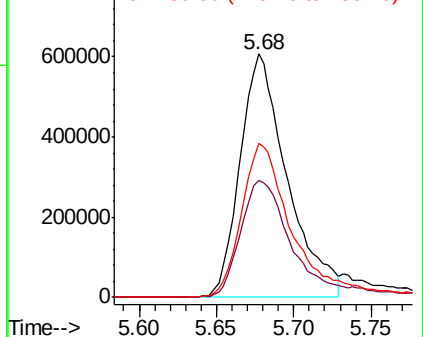
49 100

128 55.1 27.1 81.3

130 71.6 33.2 99.6



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.116 ppbv

RT: 3.20 min Scan# 128

Delta R.T. 0.15 min

Lab File: VL037925.D

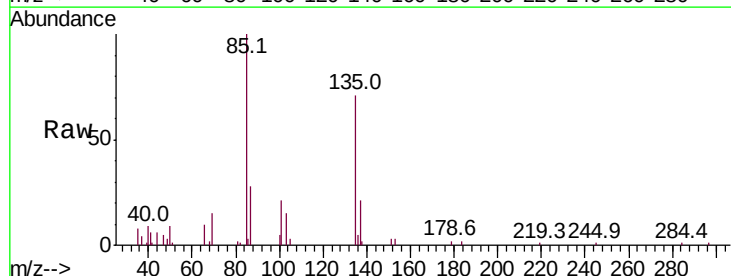
Acq: 27 Oct 2021 20:52

Tgt Ion: 85 Resp: 23893

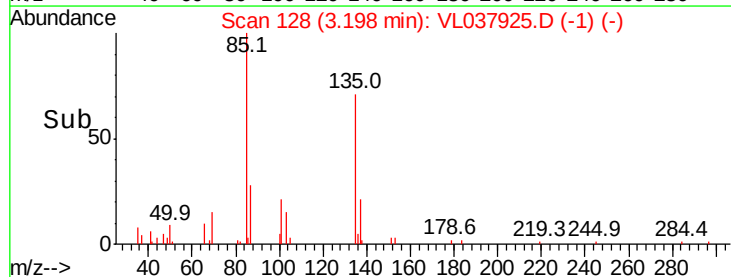
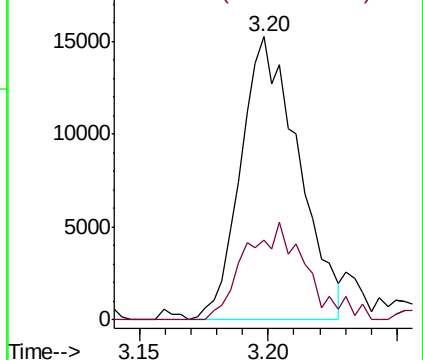
Ion Ratio Lower Upper

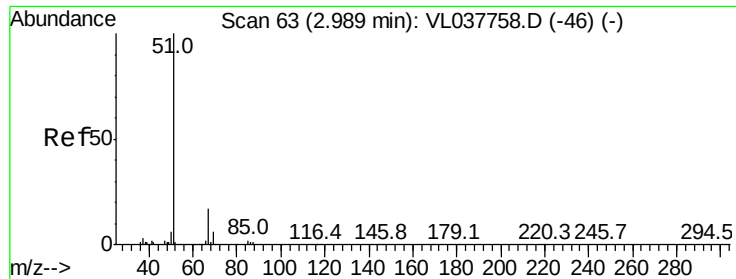
85 100

87 28.4 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.117 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

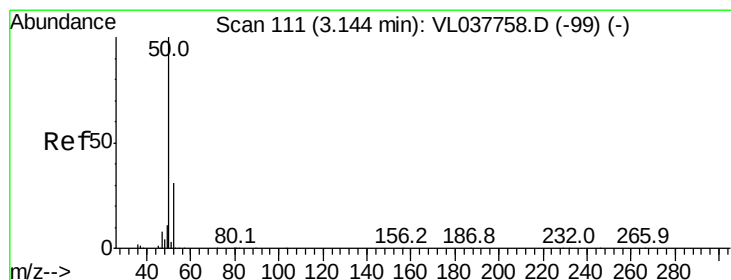
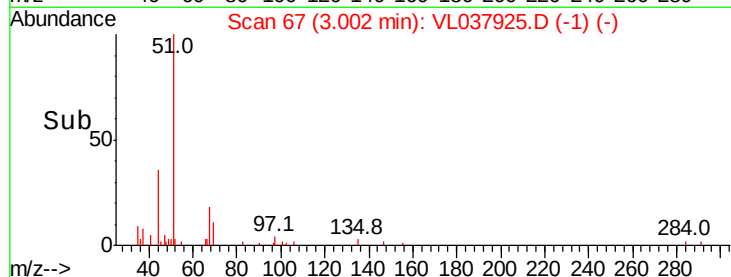
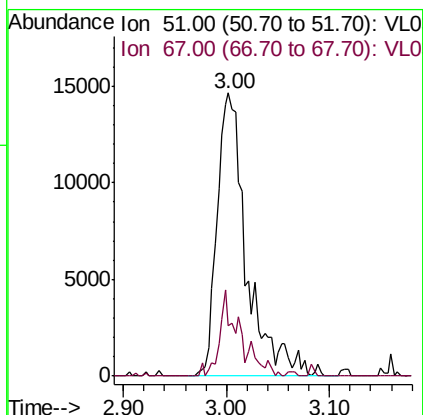
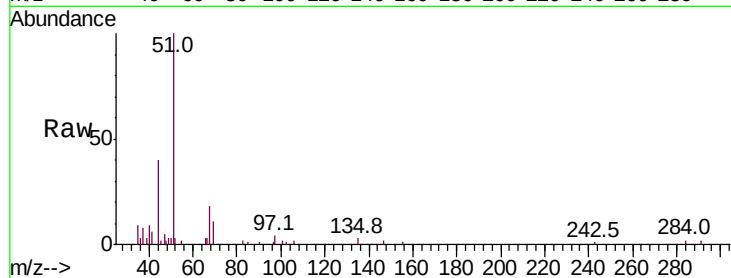
Acq: 27 Oct 2021 20:52 LOD-MDL-AIR-01-QT4-2021

Tot Ion: 51 Resp: 29080

Ion Ratio Lower Upper

51 100

67 21.7 13.5 20.3#



#4

Chloromethane

Concen: 0.119 ppbv

RT: 3.15 min Scan# 113

Delta R.T. 0.01 min

Lab File: VL037925.D

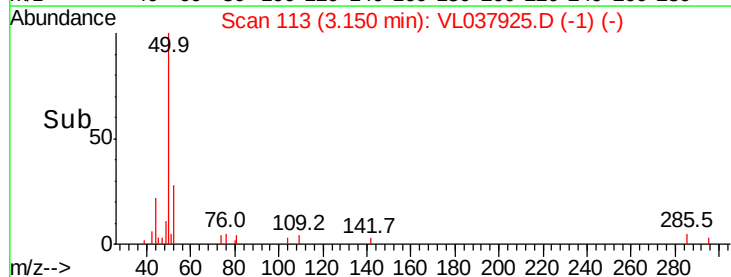
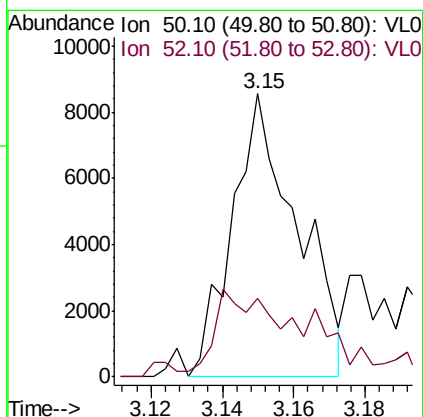
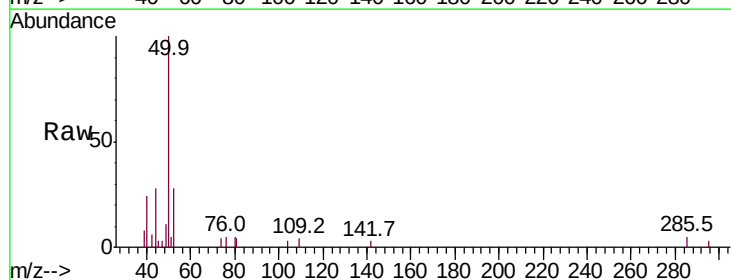
Acq: 27 Oct 2021 20:52

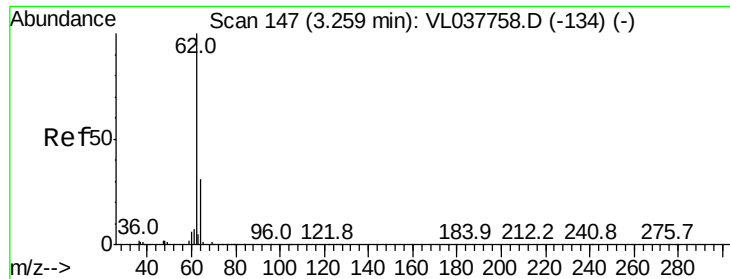
Tgt Ion: 50 Resp: 10815

Ion Ratio Lower Upper

50 100

52 25.7 24.4 36.6





#5

Vinyl Chloride

Concen: 0.041 ppbv

RT: 3.26 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

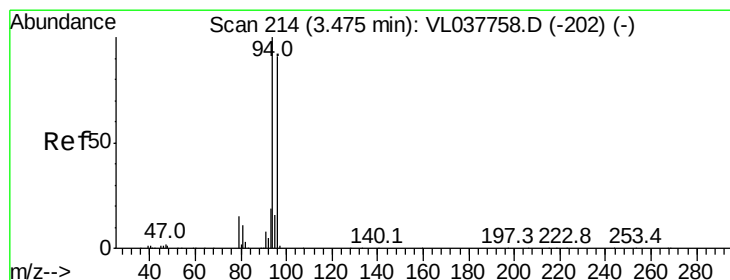
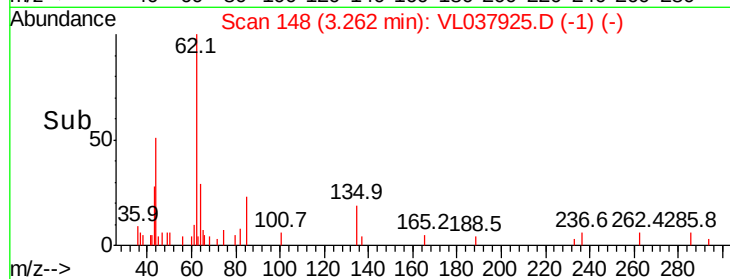
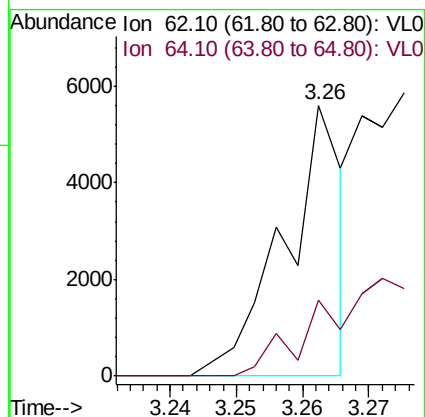
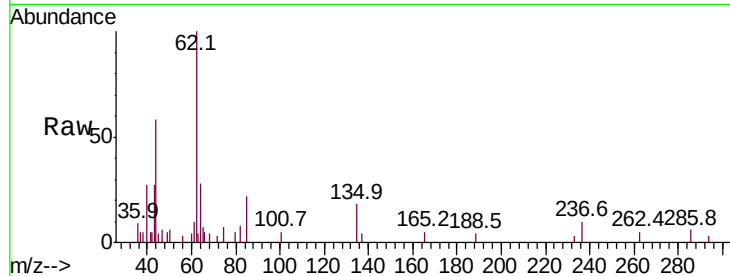
Acq: 27 Oct 2021 20:52 LOD-MDL-AIR-01-QT4-2021

Tot Ion: 62 Resp: 3407

Ion Ratio Lower Upper

62 100

64 28.1 24.9 37.3



#6

Bromomethane

Concen: 0.051 ppbv

RT: 3.48 min Scan# 215

Delta R.T. 0.00 min

Lab File: VL037925.D

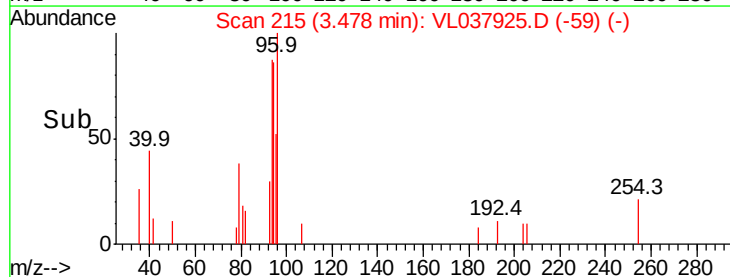
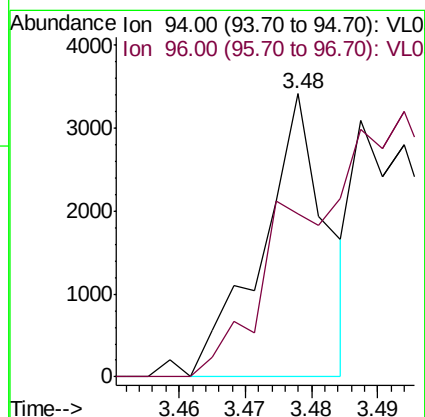
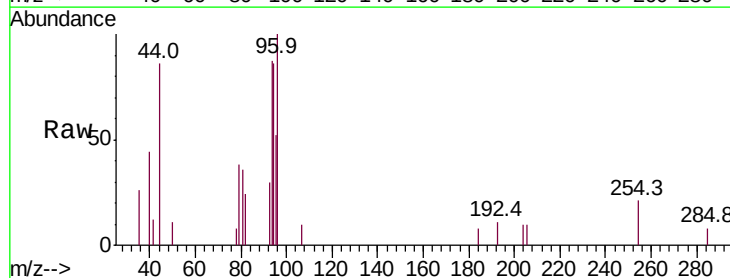
Acq: 27 Oct 2021 20:52

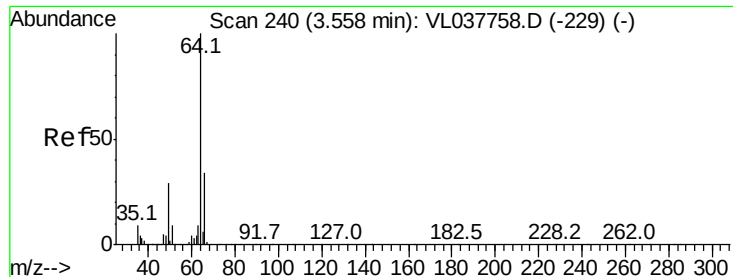
Tgt Ion: 94 Resp: 2286

Ion Ratio Lower Upper

94 100

96 57.7 72.5 108.7#





#7

Chloroethane

Concen: 0.048 ppbv

RT: 3.56 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

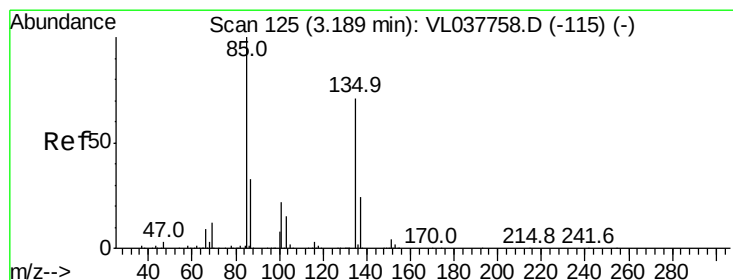
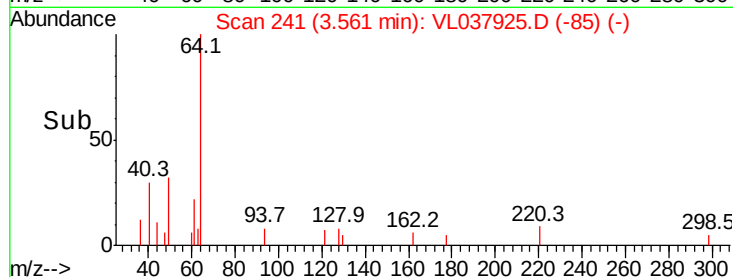
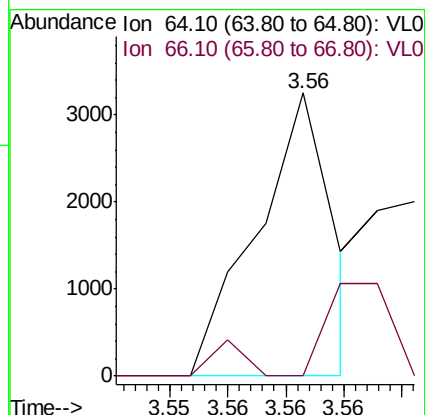
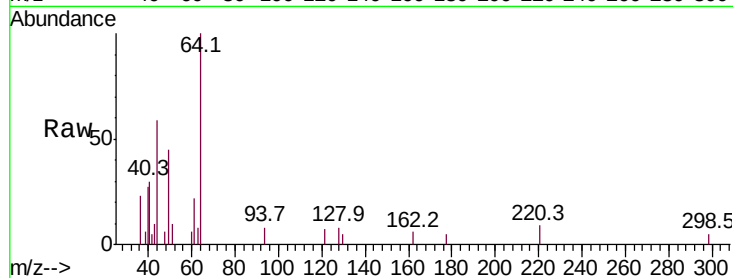
Acq: 27 Oct 2021 20:52 LOD-MDL-AIR-01-QT4-2021

Tot Ion: 64 Resp: 1472

Ion Ratio Lower Upper

64 100

66 0.0 27.5 41.3#



#8

Dichlorotetrafluoroethane

Concen: 0.117 ppbv

RT: 3.20 min Scan# 128

Delta R.T. 0.01 min

Lab File: VL037925.D

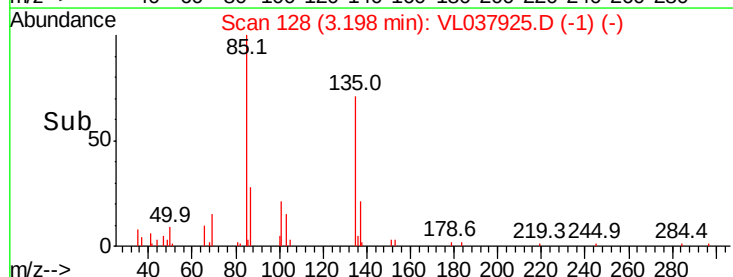
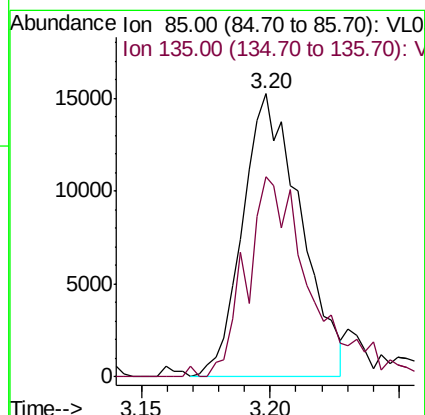
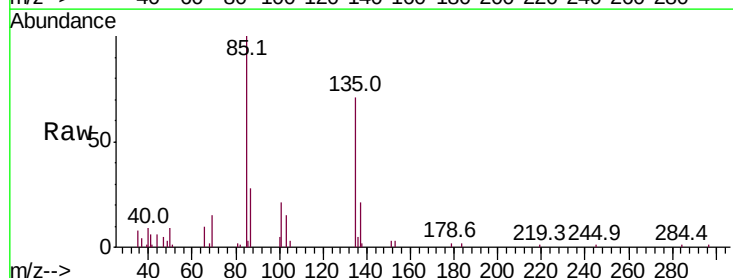
Acq: 27 Oct 2021 20:52

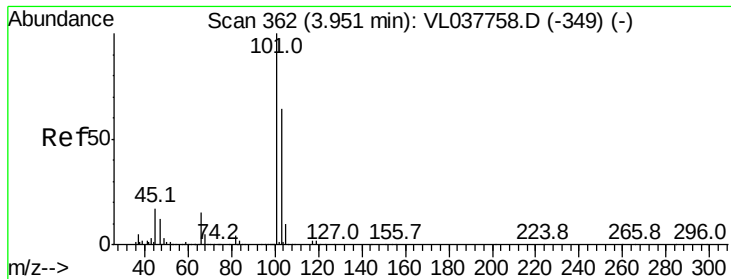
Tgt Ion: 85 Resp: 23893

Ion Ratio Lower Upper

85 100

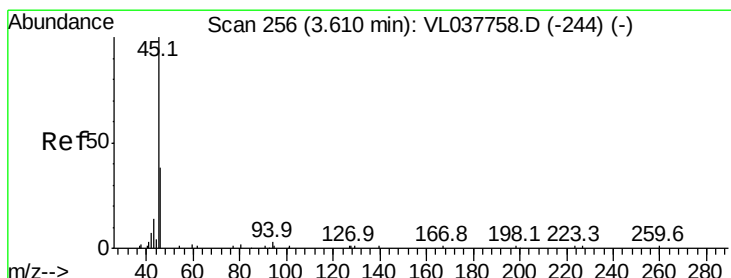
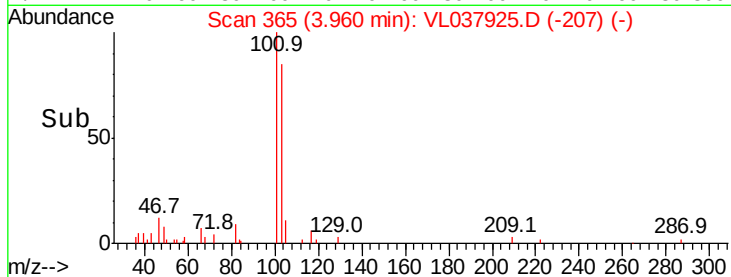
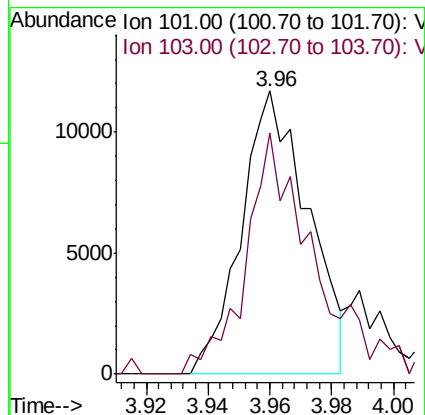
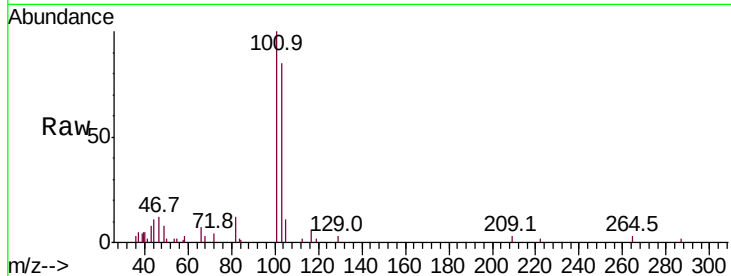
135 78.2 59.5 89.3





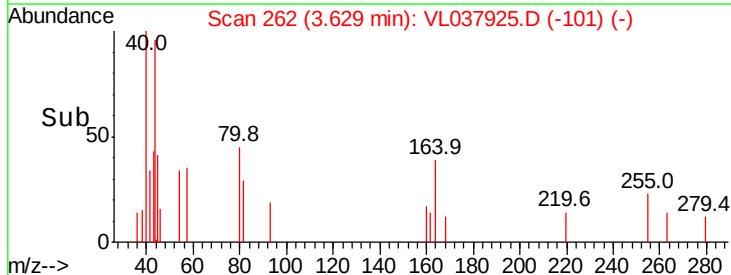
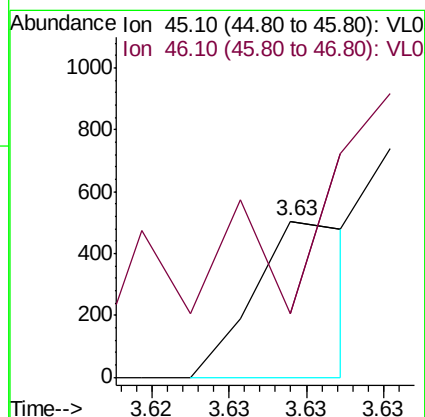
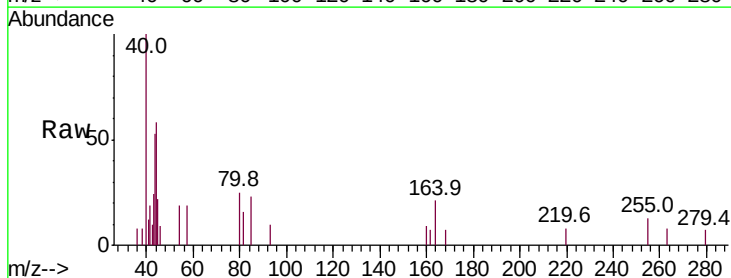
#11
 Trichlorofluoromethane
 Concen: 0.095 ppbv
 RT: 3.96
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 LOD-MDL-AIR-01-QT4-2021
 Acq: 27 Oct 2021 20:52

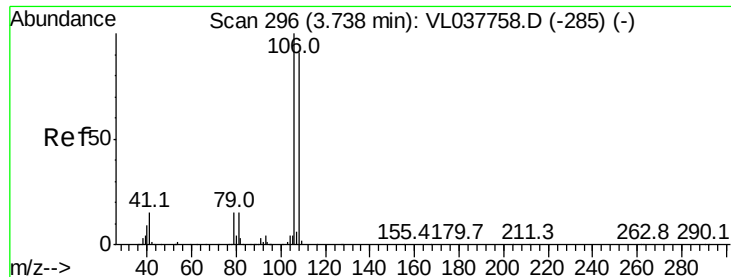
Tot Ion:101 Resp: 17511
 Ion Ratio Lower Upper
 101 100
 103 78.0 51.5 77.3#



#13
 Ethanol
 Concen: 0.030 ppbv
 RT: 3.63 min Scan# 262
 Delta R.T. 0.02 min
 Lab File: VL037925.D
 Acq: 27 Oct 2021 20:52

Tgt Ion: 45 Resp: 226
 Ion Ratio Lower Upper
 45 100
 46 0.0 20.2 81.0#





#14

Bromoethene

Concen: 0.066 ppbv

RT: 3.75 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 20:52 LOD-MDL-AIR-01-QT4-2021

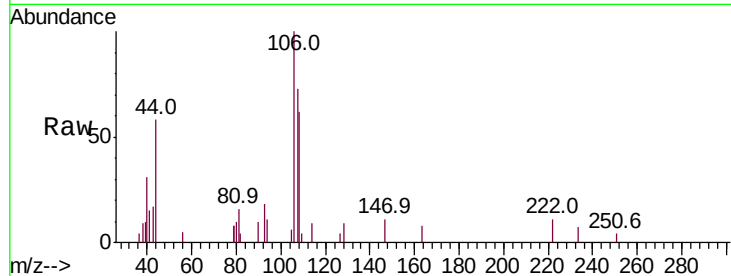
Tot Ion: 108 Resp: 4019

Ion Ratio Lower Upper

108 100

106 0.0 91.9 137.9#

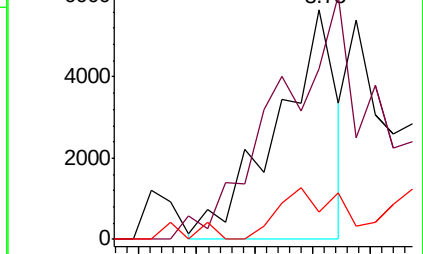
79 47.5 13.9 20.9#



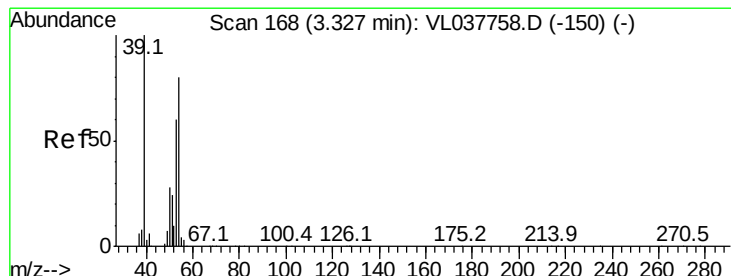
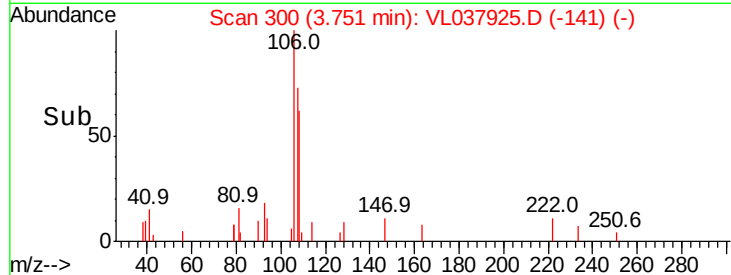
Abundance Ion 108.00 (107.70 to 108.70): V

Ion 106.00 (105.70 to 106.70): V

Ion 79.00 (78.70 to 79.70): VLO



Time-->



#16

1,3-Butadiene

Concen: 0.088 ppbv

RT: 3.34 min Scan# 172

Delta R.T. 0.01 min

Lab File: VL037925.D

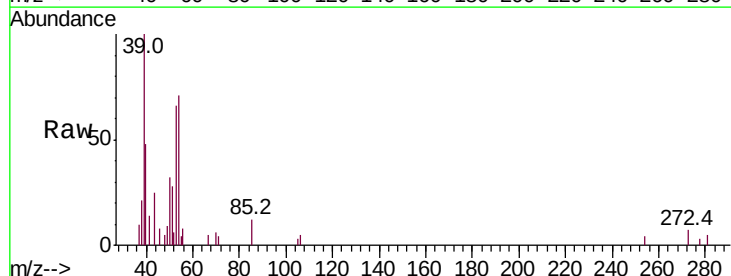
Acq: 27 Oct 2021 20:52

Tgt Ion: 39 Resp: 7425

Ion Ratio Lower Upper

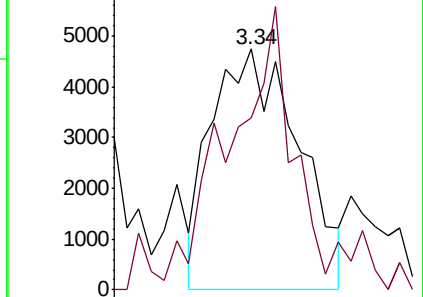
39 100

54 98.0 61.7 92.5#

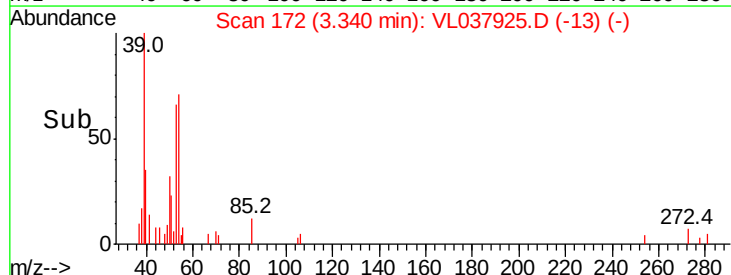


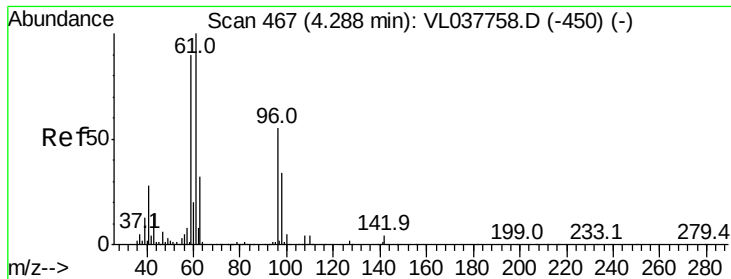
Abundance Ion 39.10 (38.80 to 39.80): VLO

Ion 54.10 (53.80 to 54.80): VLO



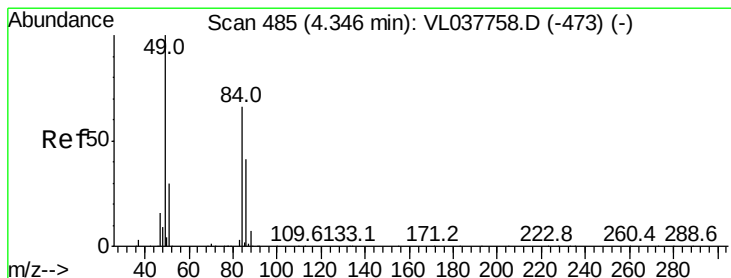
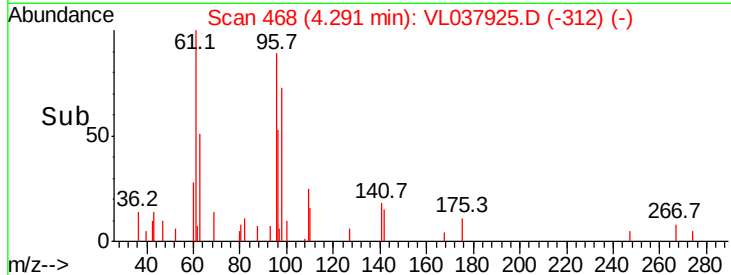
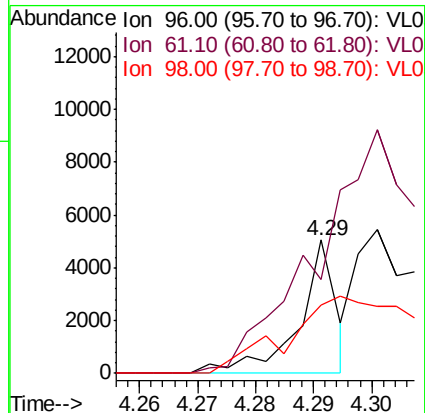
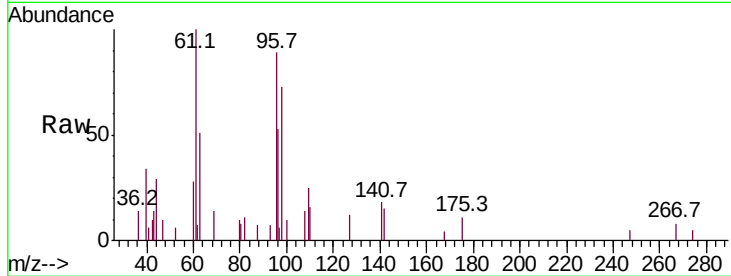
Time-->





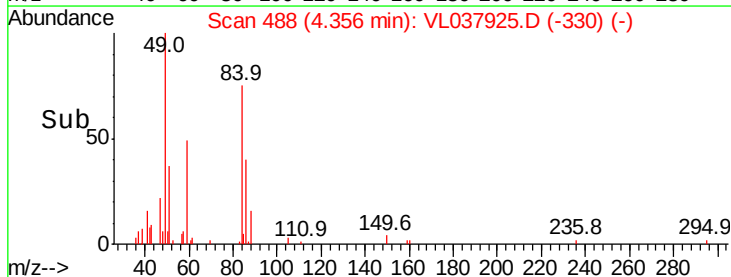
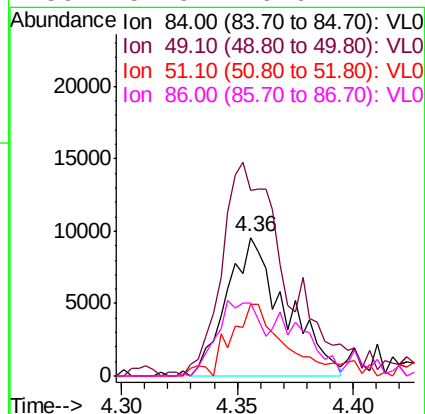
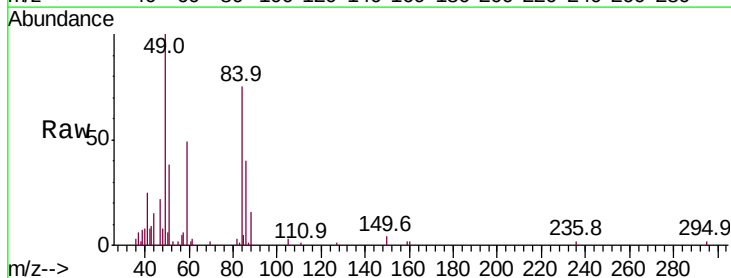
#18
 1,1-Dichloroethene
 Concen: 0.035 ppbv
 RT: 4.29
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId:
 Acq: 27 Oct 2021 20:52
 LOD-MDL-AIR-01-QT4-2021

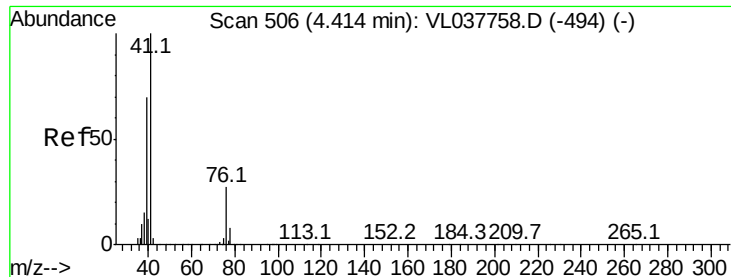
Tot Ion: 96 Resp: 2210
 Ion Ratio Lower Upper
 96 100
 61 70.4 146.2 219.4#
 98 51.2 50.0 75.0



#20
 Methylene Chloride
 Concen: 0.286 ppbv
 RT: 4.36 min Scan# 488
 Delta R.T. 0.01 min
 Lab File: VL037925.D
 Acq: 27 Oct 2021 20:52

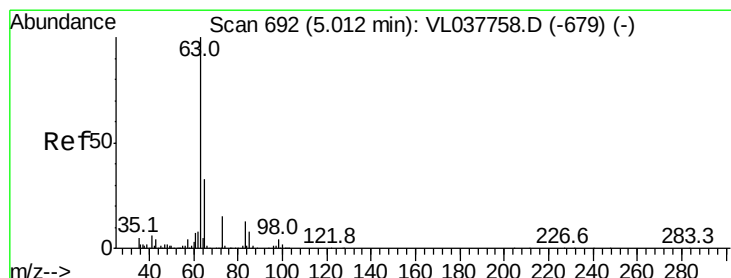
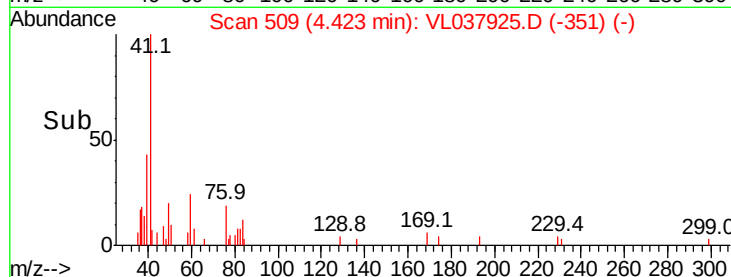
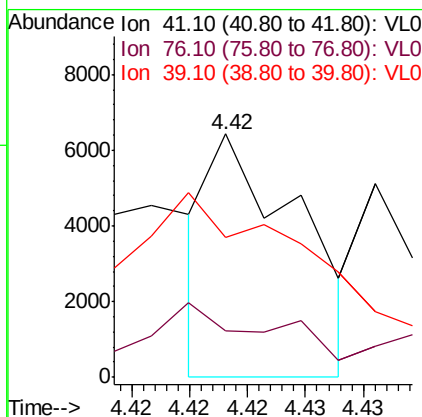
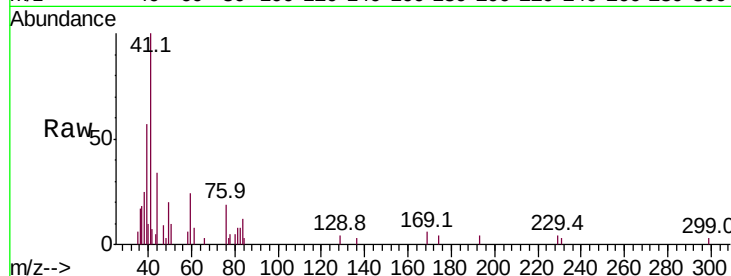
Tgt Ion: 84 Resp: 16689
 Ion Ratio Lower Upper
 84 100
 49 125.4 120.7 181.1
 51 45.4 36.2 54.4
 86 52.9 49.6 74.4





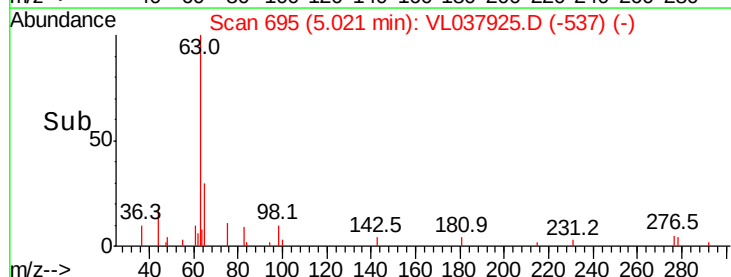
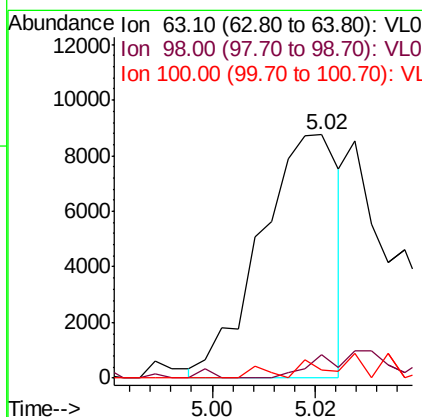
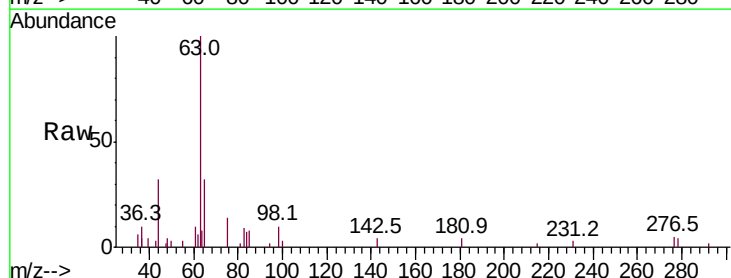
#21
 Allvl Chloride
 Concen: 0.034 ppbv
 RT: 4.42
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 27 Oct 2021 20:52
 LOD-MDL-AIR-01-QT4-2021

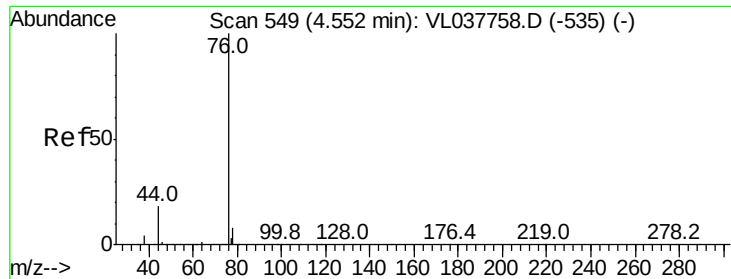
Tot Ion:	41	Resp:	3487
Ion	Ratio	Lower	Upper
41	100		
76	66.6	22.4	33.6#
39	282.2	58.0	87.0#



#24
 1,1-Dichloroethane
 Concen: 0.073 ppbv
 RT: 5.02 min Scan# 695
 Delta R.T. 0.01 min
 Lab File: VL037925.D
 Acq: 27 Oct 2021 20:52

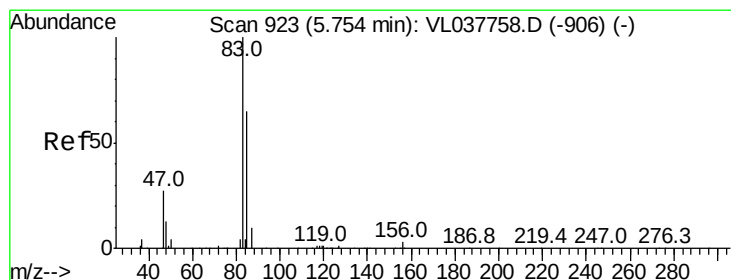
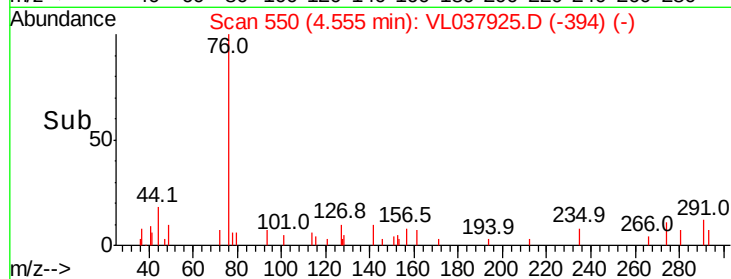
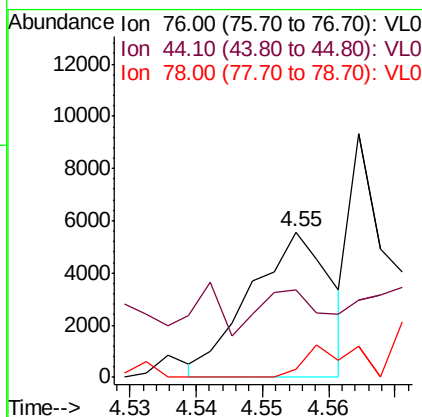
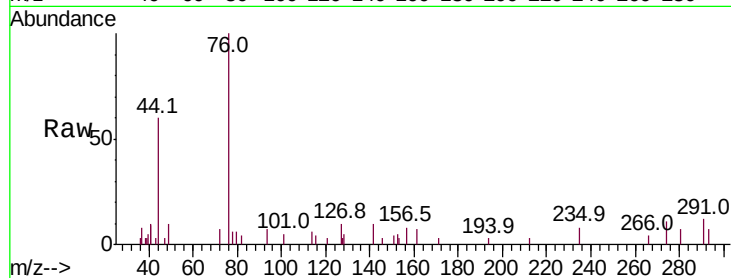
Tgt Ion:	63	Resp:	9234
Ion	Ratio	Lower	Upper
63	100		
98	10.2	2.3	6.9#
100	3.3	1.1	3.1#





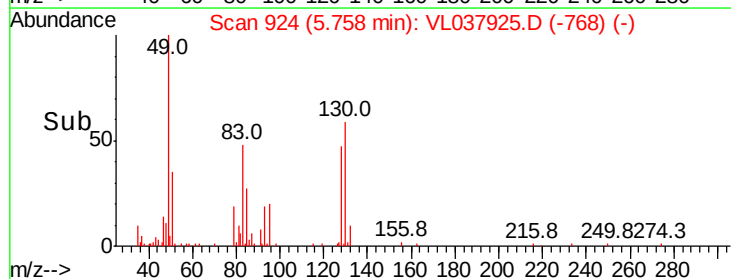
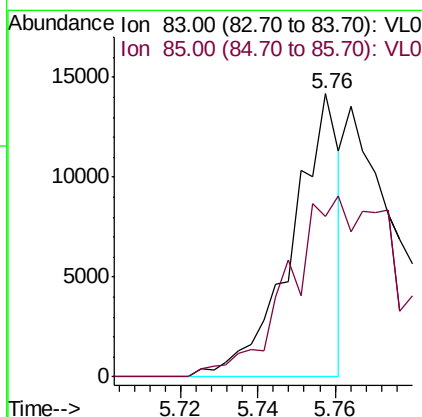
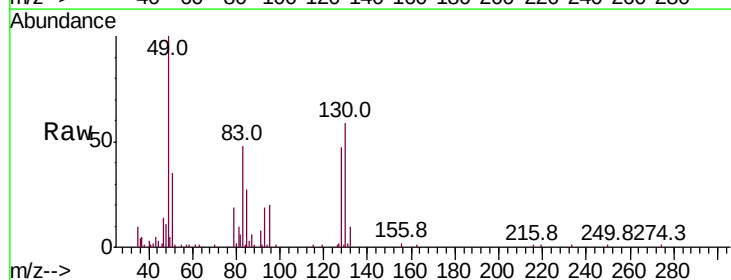
#27
Carbon Disulfide
Concen: 0.033 ppbv
RT: 4.55
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 27 Oct 2021 20:52
LOD-MDL-AIR-01-QT4-2021

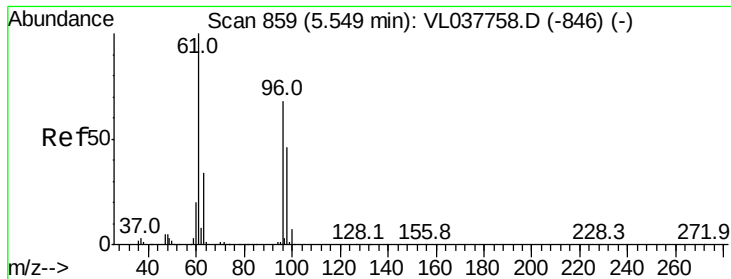
Tot Ion: 76 Resp: 4676
Ion Ratio Lower Upper
76 100
44 0.0 14.3 21.5#
78 0.0 7.8 11.6#



#29
Chloroform
Concen: 0.053 ppbv
RT: 5.76 min Scan# 924
Delta R.T. 0.00 min
Lab File: VL037925.D
Acq: 27 Oct 2021 20:52

Tgt Ion: 83 Resp: 12069
Ion Ratio Lower Upper
83 100
85 56.6 51.8 77.8





#31

cis-1,2-Dichloroethene

Concen: 0.039 ppbv

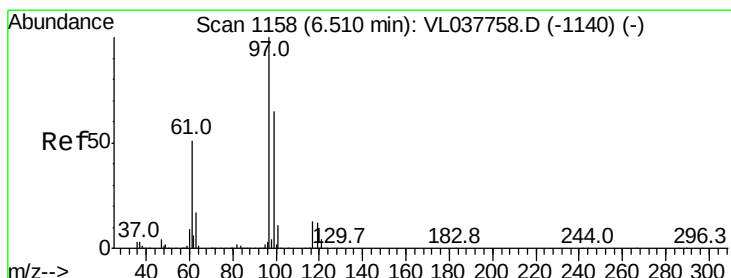
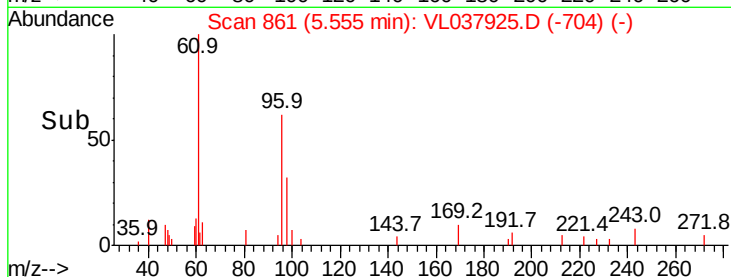
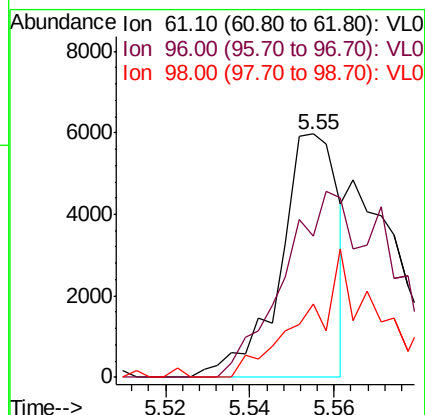
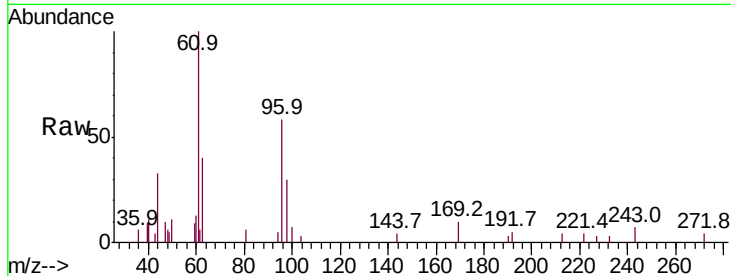
RT: 5.55 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: LOD-MDL-AIR-01-QT4-2021

Acq: 27 Oct 2021 20:52

Tot Ion:	61	Resp:	5710
Ion	Ratio	Lower	Upper
61	100		
96	54.9	54.2	81.2
98	28.5	36.6	54.8#



#32

1,1,1-Trichloroethane

Concen: 0.050 ppbv

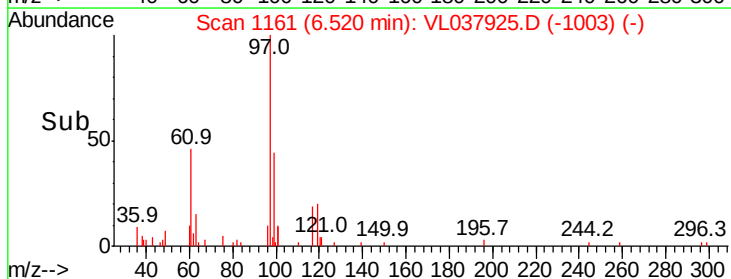
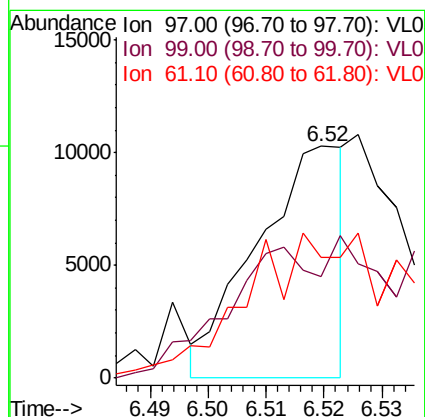
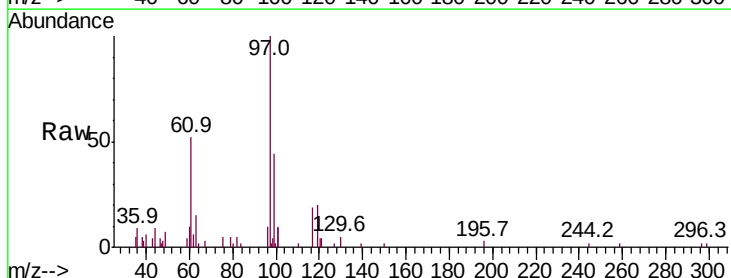
RT: 6.52 min Scan# 1161

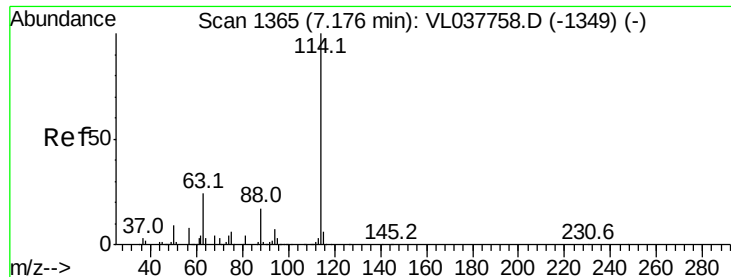
Delta R.T. 0.01 min

Lab File: VL037925.D

Acq: 27 Oct 2021 20:52

Tgt Ion:	97	Resp:	10752
Ion	Ratio	Lower	Upper
97	100		
99	143.0	52.6	78.8#
61	127.3	40.2	60.4#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 20:52 LOD-MDL-AIR-01-QT4-2021

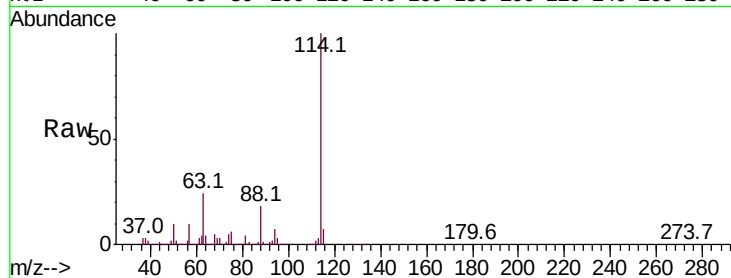
Tot Ion:114 Resp: 3889029

Ion Ratio Lower Upper

114 100

63 24.0 19.4 29.2

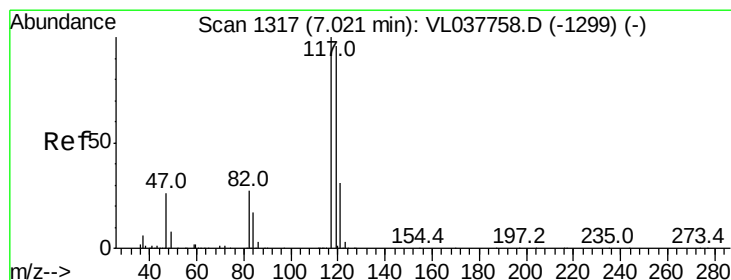
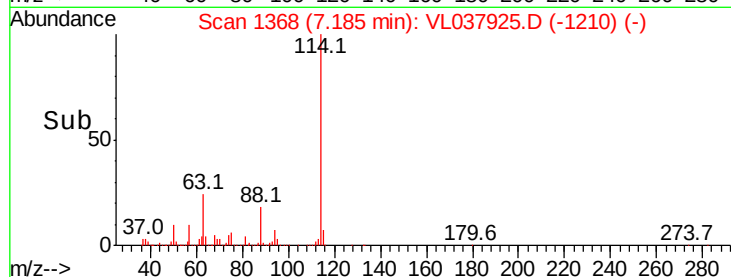
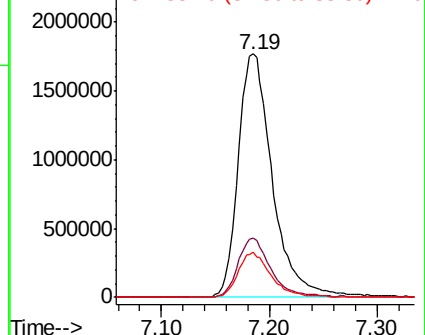
88 18.1 14.4 21.6



Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#35

Carbon Tetrachloride

Concen: 0.058 ppbv

RT: 7.02 min Scan# 1318

Delta R.T. 0.00 min

Lab File: VL037925.D

Acq: 27 Oct 2021 20:52

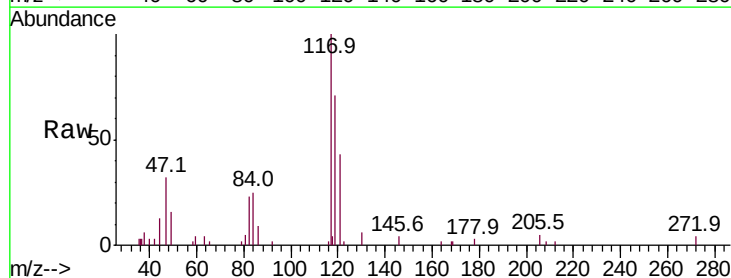
Tgt Ion:117 Resp: 12759

Ion Ratio Lower Upper

117 100

119 70.8 76.5 114.7#

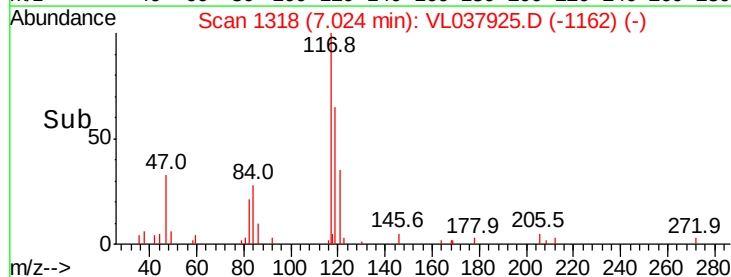
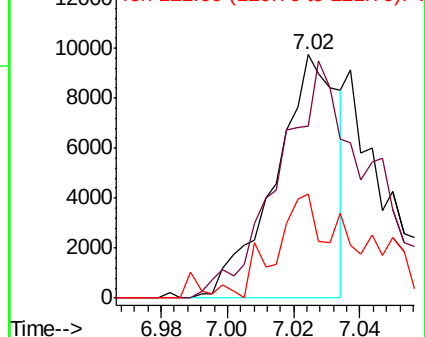
121 32.1 24.9 37.3

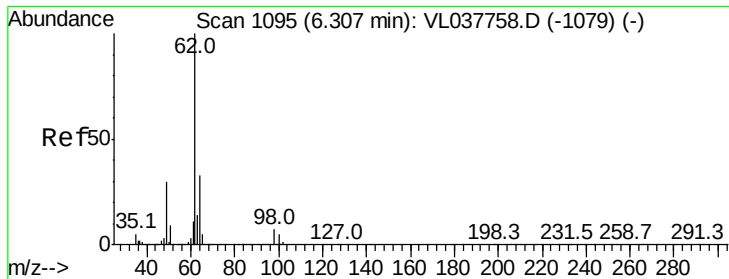


Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

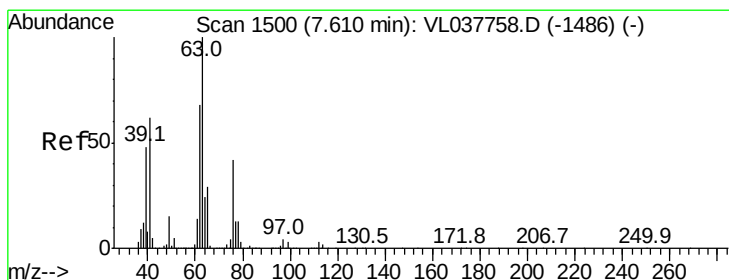
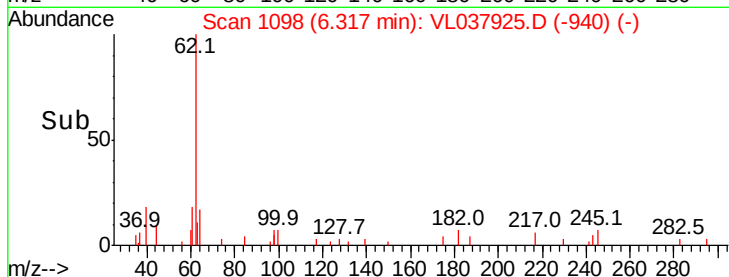
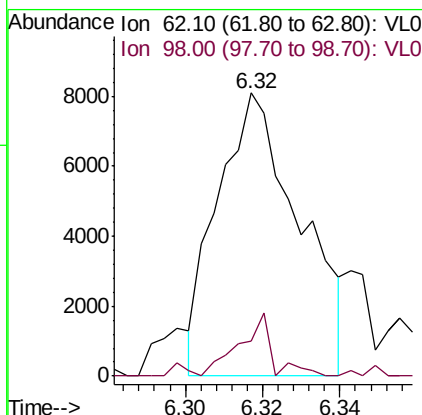
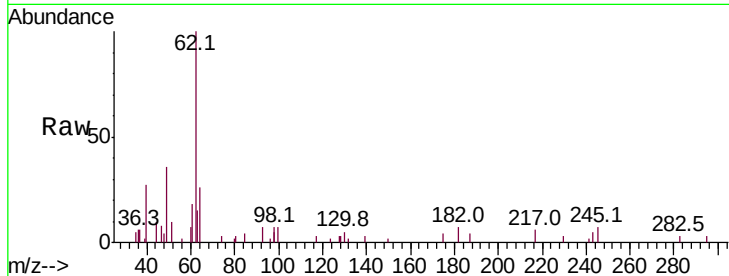
Ion 121.00 (120.70 to 121.70): V





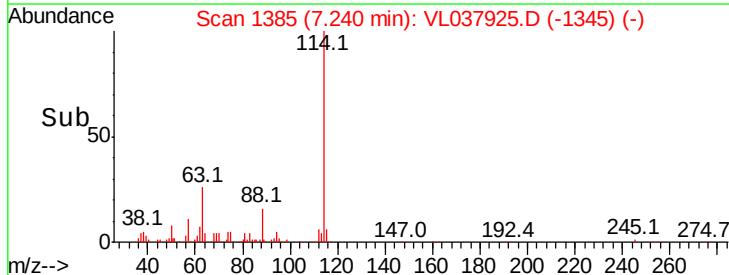
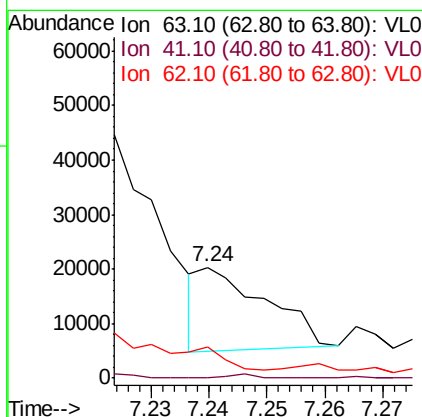
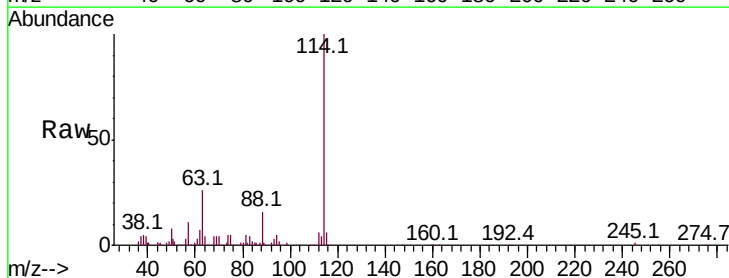
#37
 1,2-Dichloroethane
 Concen: 0.076 ppbv
 RT: 6.32
 Delta R.T. MSVOA_1
 Lab File: ClientSampleId :
 LOD-MDL-AIR-01-QT4-2021
 Acq: 27 Oct 2021 20:52

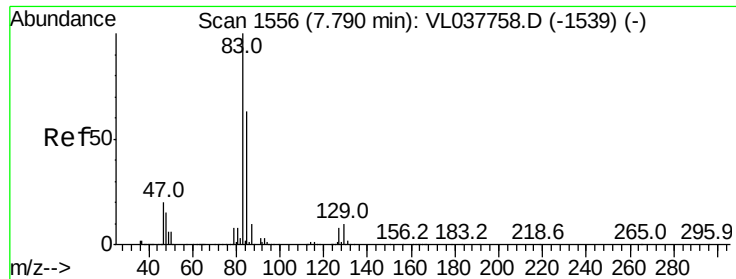
Tot Ion: 62 Resp: 11960
 Ion Ratio Lower Upper
 62 100
 98 10.0 6.1 9.1#



#39
 1,2-Dichloropropane
 Concen: 0.096 ppbv
 RT: 7.24 min Scan# 1385
 Delta R.T. -0.37 min
 Lab File: VL037925.D
 Acq: 27 Oct 2021 20:52

Tgt Ion: 63 Resp: 11996
 Ion Ratio Lower Upper
 63 100
 41 0.0 49.8 74.6#
 62 30.1 54.6 82.0#





#42

Bromodichloromethane

Concen: 0.042 ppbv

RT: 7.80 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 20:52 LOD-MDL-AIR-01-QT4-2021

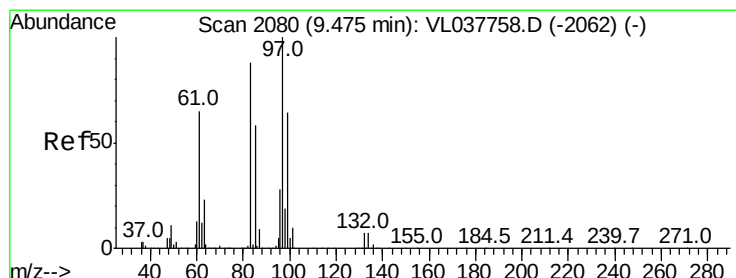
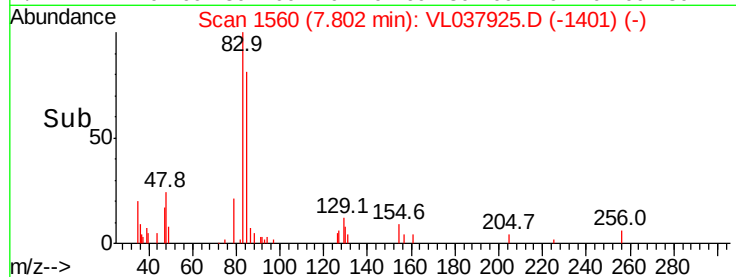
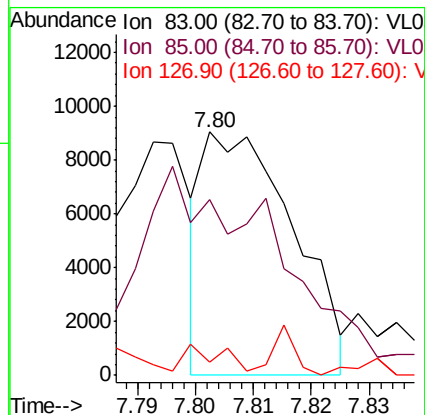
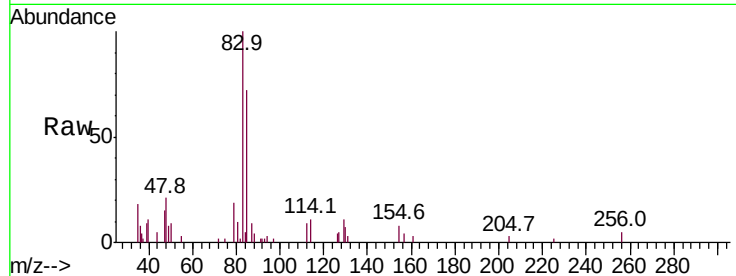
Tot Ion: 83 Resp: 9718

Ion Ratio Lower Upper

83 100

85 55.1 50.6 75.8

127 2.8 6.2 9.4#



#47

1,1,2-Trichloroethane

Concen: 0.043 ppbv

RT: 9.48 min Scan# 2082

Delta R.T. 0.01 min

Lab File: VL037925.D

Acq: 27 Oct 2021 20:52

Tgt Ion: 97 Resp: 5895

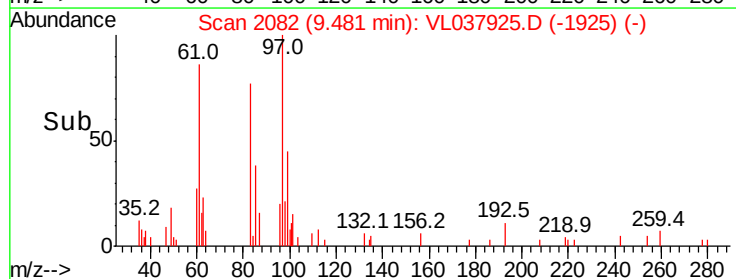
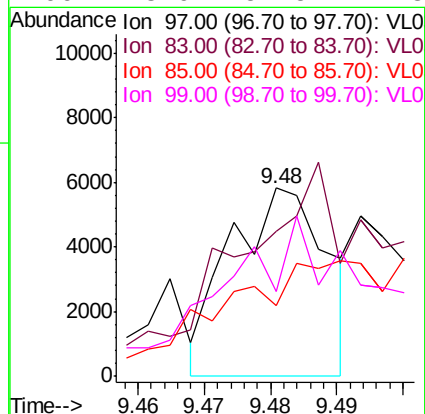
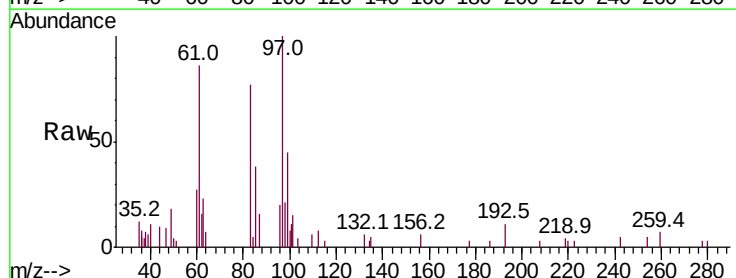
Ion Ratio Lower Upper

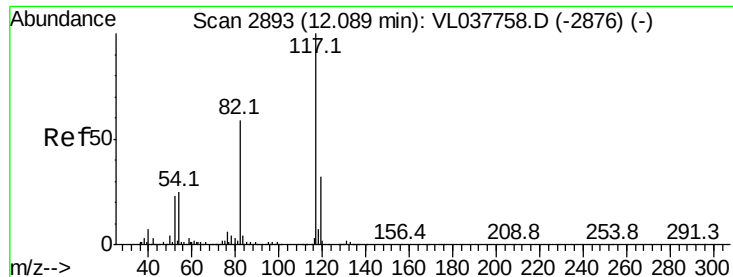
97 100

83 63.3 70.6 105.8#

85 2.7 45.9 68.9#

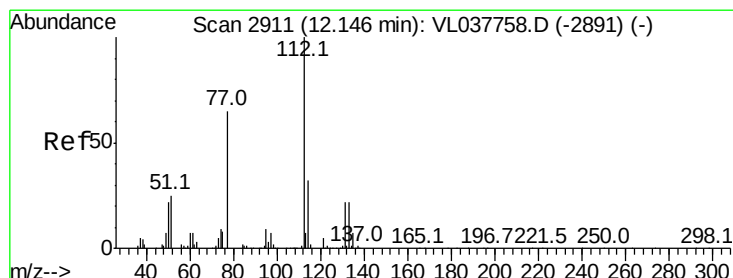
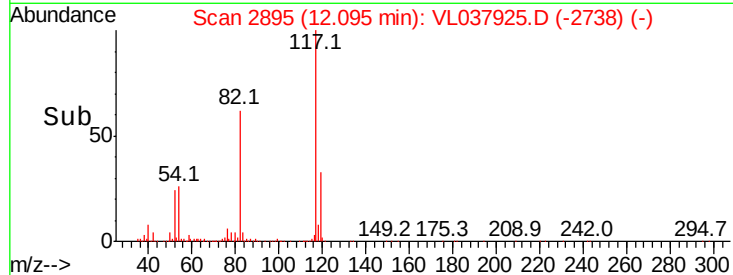
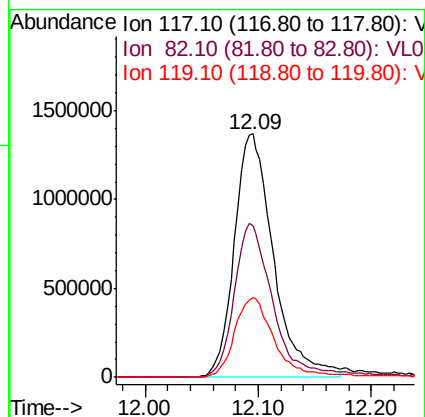
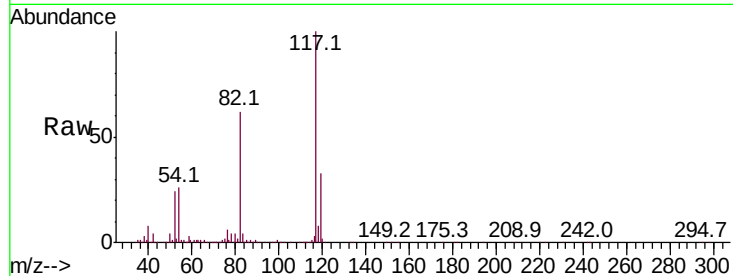
99 8.9 51.5 77.3#





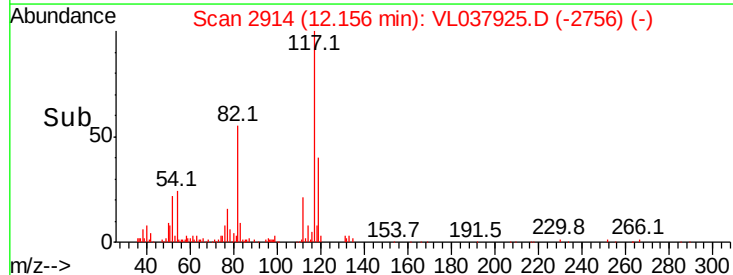
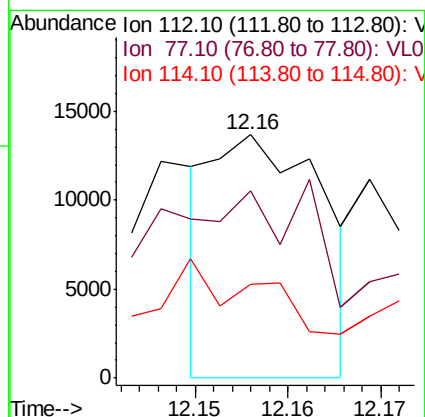
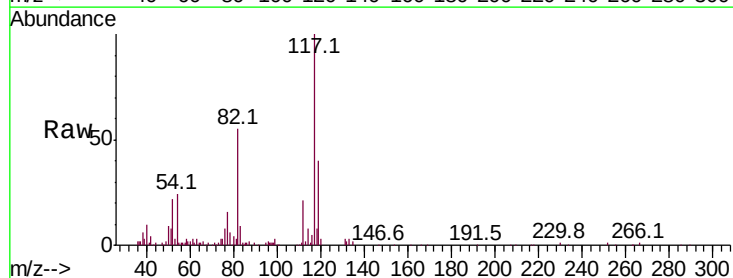
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min
Instrument: MSVOA_1
Delta R.T.:
Client Sample Id:
Lab File: LOD-MDL-AIR-01-QT4-2021
Acq: 27 Oct 2021 20:52

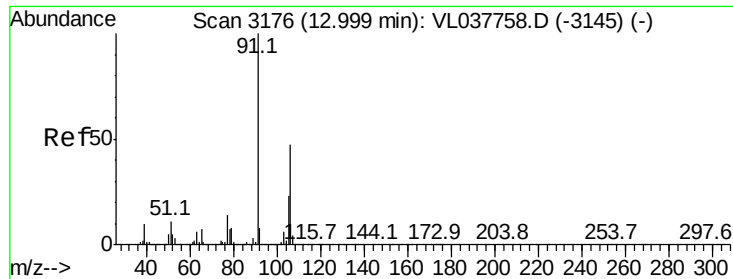
Tot Ion:117 Resp: 3298194
Ion Ratio Lower Upper
117 100
82 64.9 52.2 78.2
119 34.4 26.0 39.0



#57
Chlorobenzene
Concen: 0.042 ppbv
RT: 12.16 min Scan# 2914
Delta R.T. 0.01 min
Lab File: VL037925.D
Acq: 27 Oct 2021 20:52

Tgt Ion:112 Resp: 11251
Ion Ratio Lower Upper
112 100
77 104.6 51.8 77.8#
114 45.2 28.8 35.2#





#59

m/p-Xylene

Concen: 0.032 ppbv

RT: 13.00

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

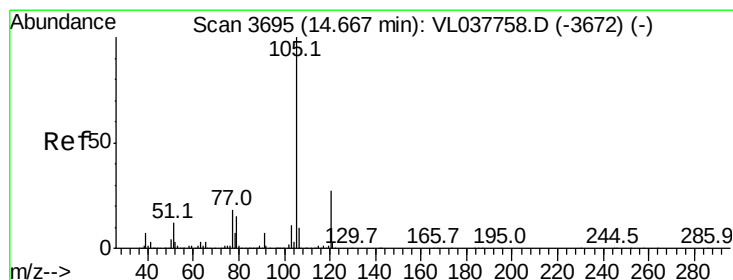
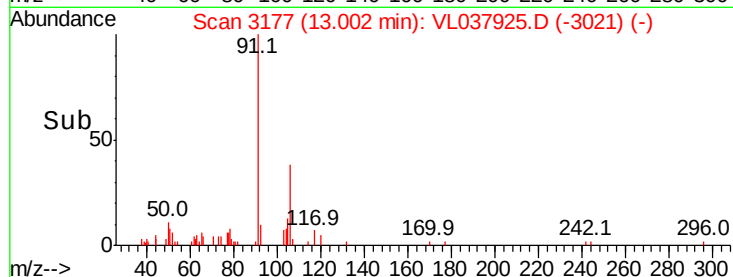
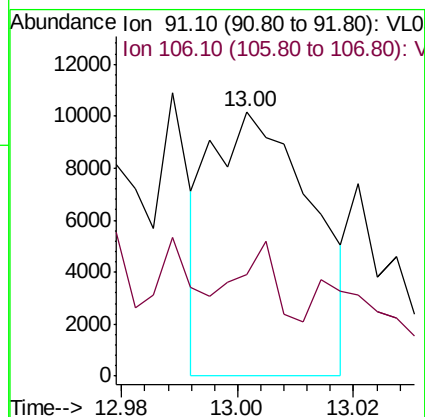
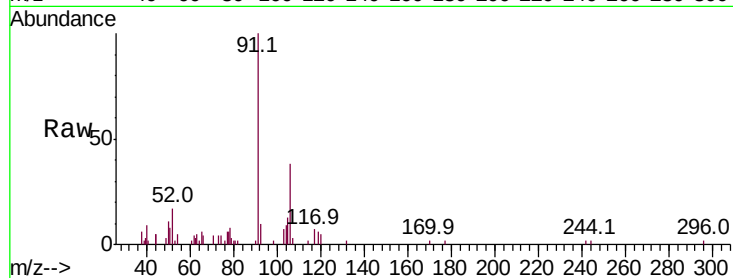
Acq: 27 Oct 2021 20:52

Tot Ion: 91 Resp: 12272

Ion Ratio Lower Upper

91 100

106 0.0 36.7 55.1#



#62

Isopropylbenzene

Concen: 0.043 ppbv

RT: 14.67 min Scan# 3697

Delta R.T. 0.01 min

Lab File: VL037925.D

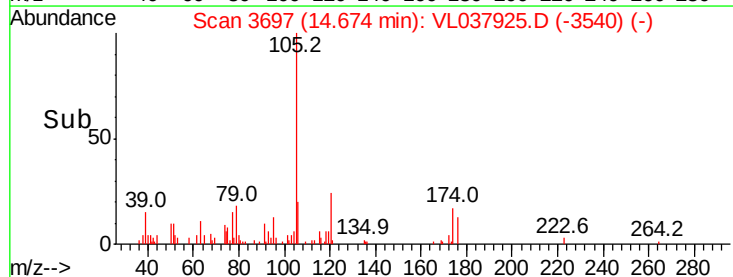
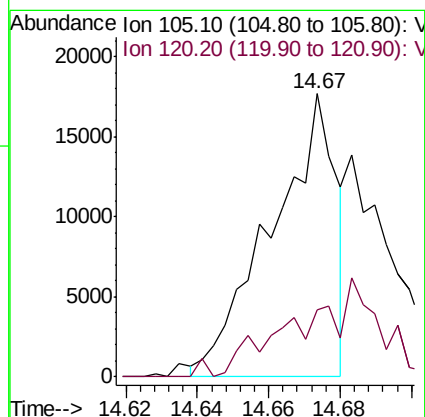
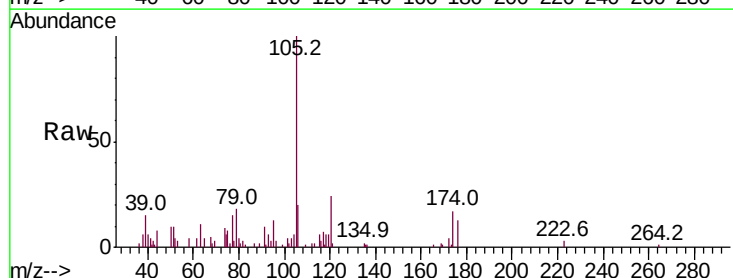
Acq: 27 Oct 2021 20:52

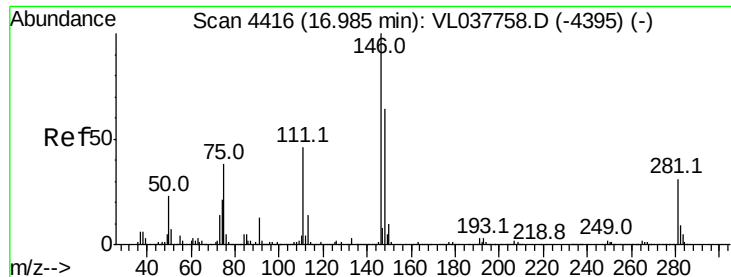
Tgt Ion: 105 Resp: 22079

Ion Ratio Lower Upper

105 100

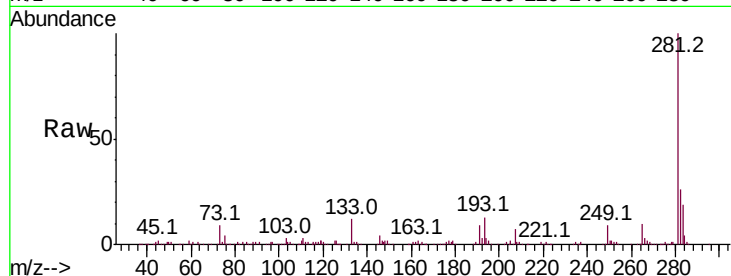
120 0.0 21.3 31.9#



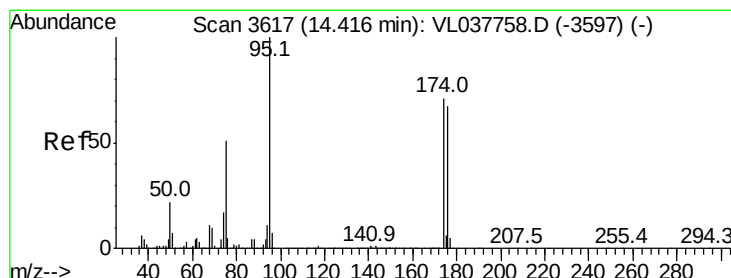
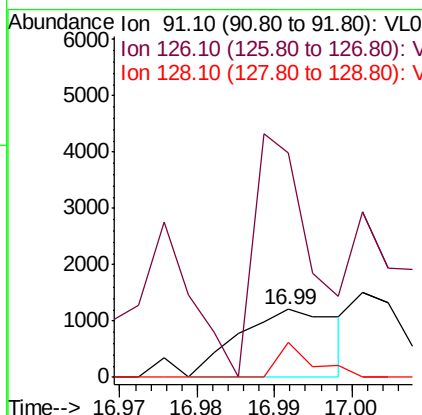
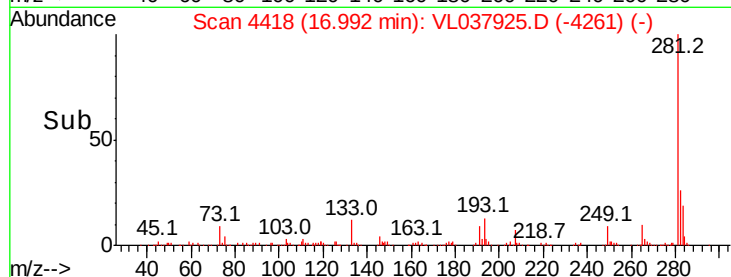


#66
Benzyl Chloride
Concen: 0.048 ppbv
RT: 16.99 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 27 Oct 2021 20:52
LOD-MDL-AIR-01-QT4-2021

Tot Ion: 91 Resp: 1070
Ion Ratio Lower Upper
91 100
126 0.0 0.0 0.0
128 18.1 5.3 7.9#

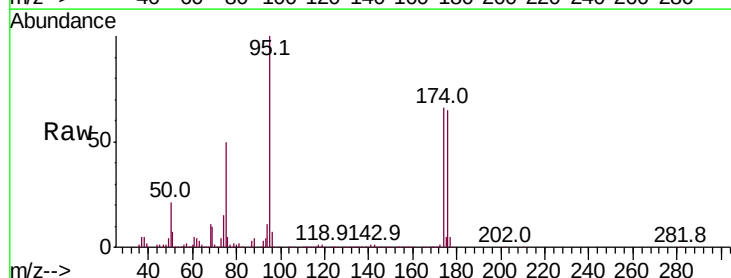


Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 126.10 (125.80 to 126.80): V
Ion 128.10 (127.80 to 128.80): V

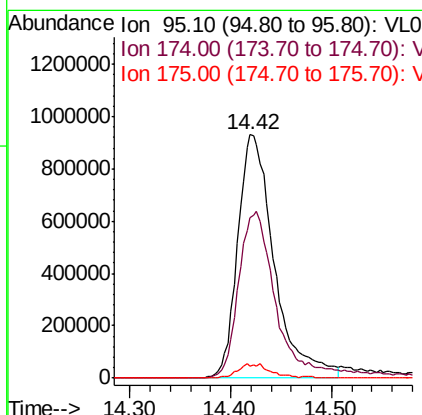
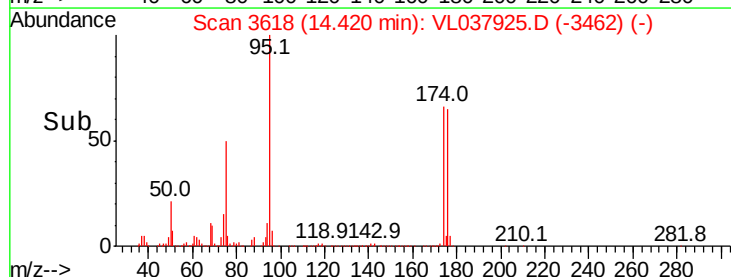


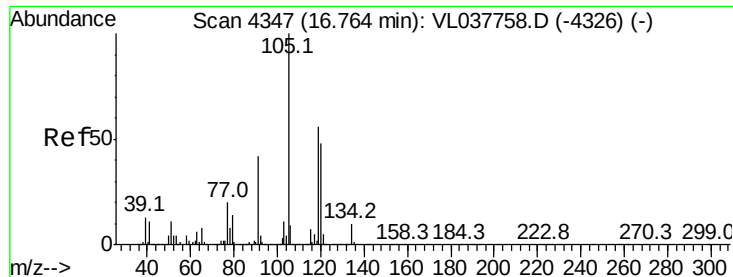
#68
1-Bromo-4-Fluorobenzene
Concen: 10.145 ppbv
RT: 14.42 min Scan# 3618
Delta R.T.: 0.00 min
Lab File: VL037925.D
Acq: 27 Oct 2021 20:52

Tgt Ion: 95 Resp: 2339924
Ion Ratio Lower Upper
95 100
174 73.7 57.8 86.6
175 5.3 4.7 7.1



Abundance Ion 95.10 (94.80 to 95.80): VL0
Ion 174.00 (173.70 to 174.70): V
Ion 175.00 (174.70 to 175.70): V





#74

1,2,4-Trimethylbenzene

Concen: 0.036 ppbv

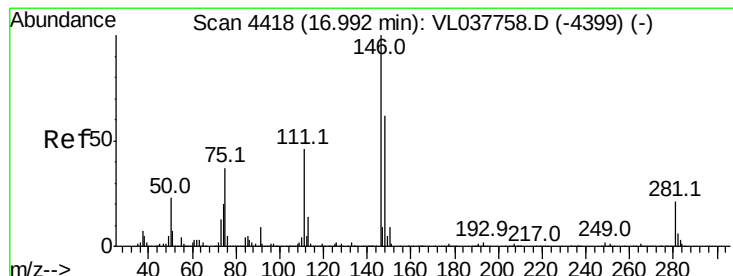
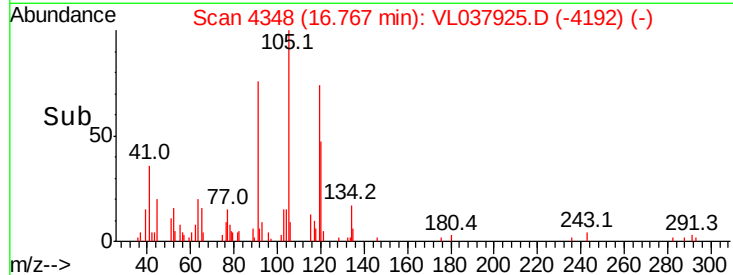
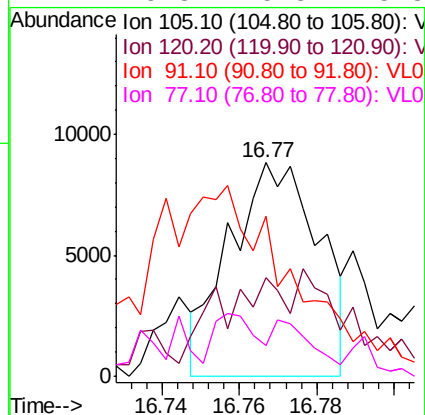
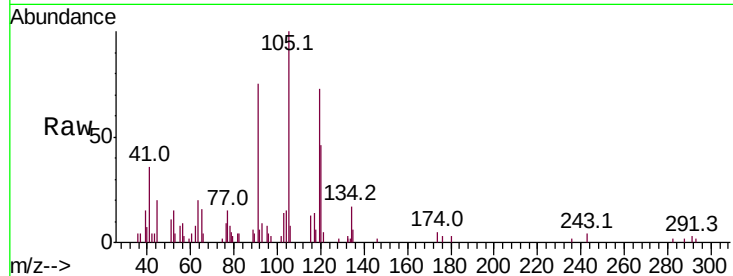
RT: 16.77

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 27 Oct 2021 20:52

Tot Ion:	105	Resp:	14130
Ion	Ratio	Lower	Upper
105	100		
120	39.0	38.4	57.6
91	58.9	34.2	51.2#
77	5.8	15.8	23.8#



#75

1,3-Dichlorobenzene

Concen: 0.046 ppbv

RT: 17.00 min Scan# 4420

Delta R.T. 0.01 min

Lab File: VL037925.D

Acq: 27 Oct 2021 20:52

Tgt Ion:	146	Resp:	11184
Ion	Ratio	Lower	Upper
146	100		
111	150.8	22.8	68.4#
148	167.9	32.8	98.3#

