

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL101920\
 Data File : VL035795.D
 Acq On : 19 Oct 2020 15:16
 Operator : SY/AP
 Sample : L4214-15 MDL 0.03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MDL-AIR-01-QT4-2020

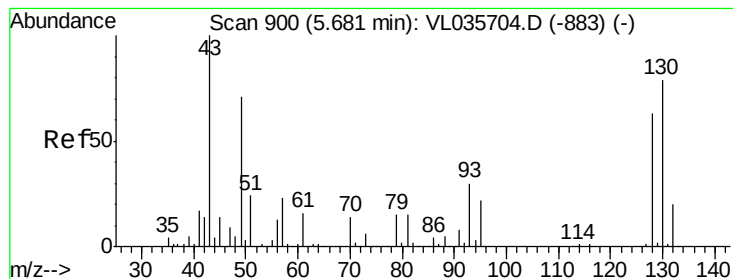
Quant Time: Oct 20 08:11:15 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL092320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Sep 23 07:38:05 2020
 QLast Update : Wed Sep 23 07:38:05 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1095827	10.00	ppbv	-0.03
33) 1,4-Difluorobenzene	7.16	114	3938527	10.00	ppbv	-0.04
55) Chlorobenzene-d5	12.08	117	3917609	10.00	ppbv	-0.04

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.41	95	2931870	9.99	ppbv	-0.04	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.90%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.03	85	12089	0.067	ppbv	96
3) Chlorodifluoromethane	2.97	51	6003	0.051	ppbv	98
4) Chloromethane	3.12	50	3774	0.060	ppbv	94
6) Bromomethane	3.46	94	3243	0.051	ppbv	92
7) Chloroethane	3.53	64	1637	0.060	ppbv #	81
8) Dichlorotetrafluoroethane	3.17	85	10610	0.049	ppbv	98
9) Propene	3.00	41	4784	0.112	ppbv	92
11) Trichlorofluoromethane	3.93	101	12817	0.050	ppbv	86
12) 1,1,2-Trichlorotrifluoroet	4.46	101	9370	0.049	ppbv	98
15) Acetone	3.85	43	19227	0.163	ppbv #	55
16) 1,3-Butadiene	3.31	39	1312	0.030	ppbv	83
17) tert-Butyl alcohol	4.30	59	6712	0.052	ppbv	99
18) 1,1-Dichloroethene	4.27	96	3643	0.044	ppbv #	75
20) Methylene Chloride	4.32	84	17190	0.198	ppbv	98
21) Allyl Chloride	4.39	41	2432	0.043	ppbv #	83
24) 1,1-Dichloroethane	4.99	63	7172	0.046	ppbv #	94
25) Ethyl Acetate	5.67	43	6645	0.031	ppbv #	91
26) Hexane	5.66	57	5397	0.046	ppbv #	90
29) Chloroform	5.73	83	11495	0.049	ppbv	93
31) cis-1,2-Dichloroethene	5.54	61	3650	0.033	ppbv #	76
38) Trichloroethene	7.82	130	5030	0.039	ppbv #	82
39) 1,2-Dichloropropane	7.16	63	796409	8.562	ppbv #	31
42) Bromodichloromethane	7.77	83	8852	0.041	ppbv	93

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.03 min

Lab File: VL035795.D

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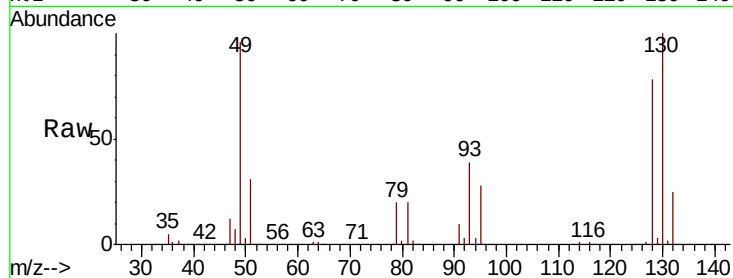
Tot Ion: 49 Resp: 1095827

Ion Ratio Lower Upper

49 100

128 81.1 43.1 129.4

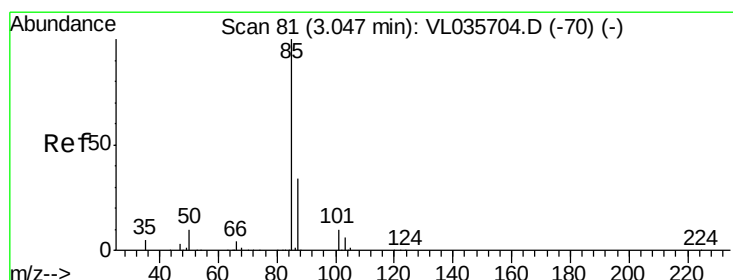
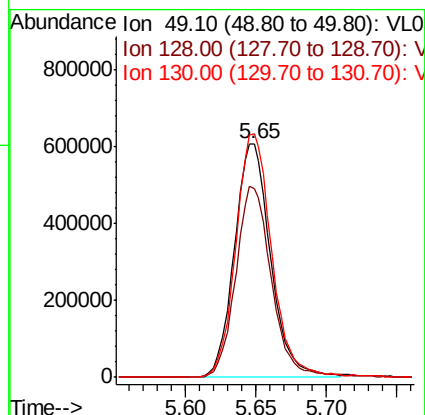
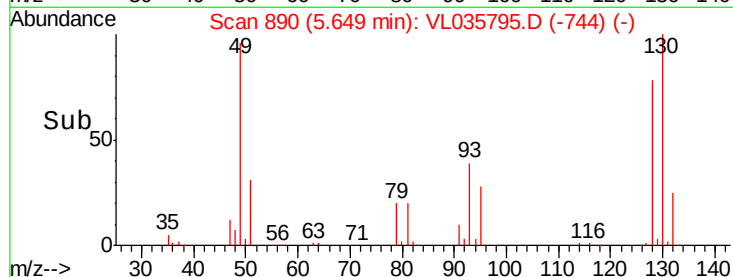
130 104.2 54.9 164.7



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: 0.067 ppbv

RT: 3.03 min Scan# 76

Delta R.T. -0.02 min

Lab File: VL035795.D

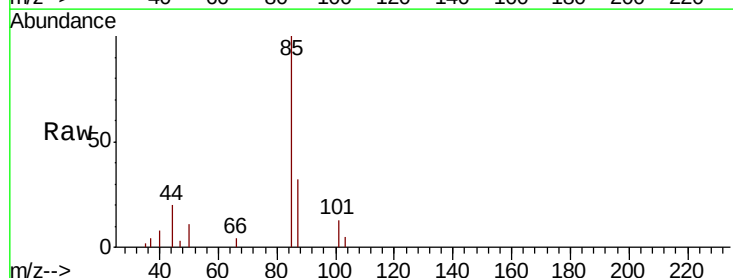
Acq: 19 Oct 2020 15:16

Tgt Ion: 85 Resp: 12089

Ion Ratio Lower Upper

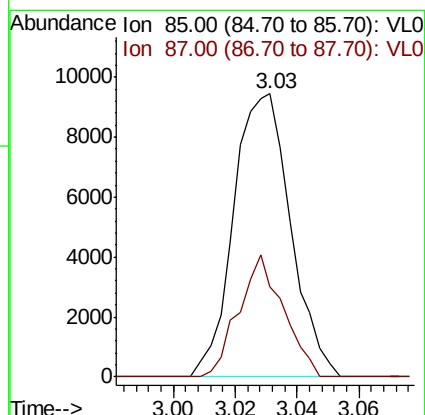
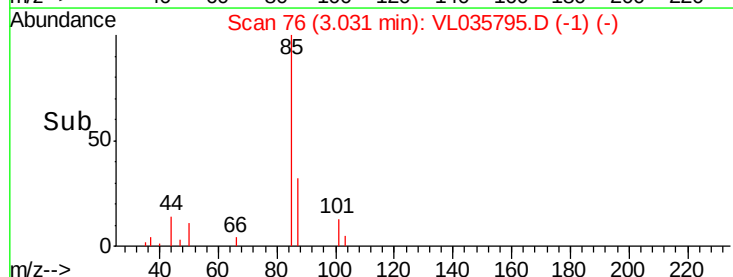
85 100

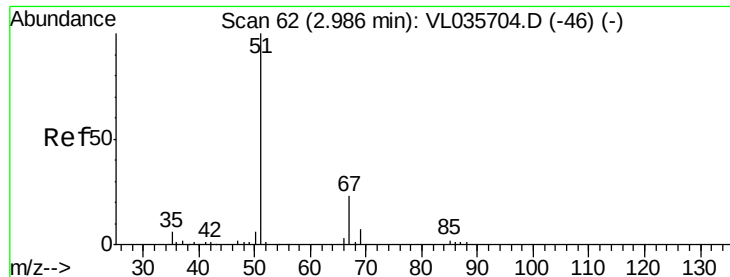
87 32.0 27.3 40.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.051 ppbv

RT: 2.97 min Scan# 57

Delta R.T. -0.02 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

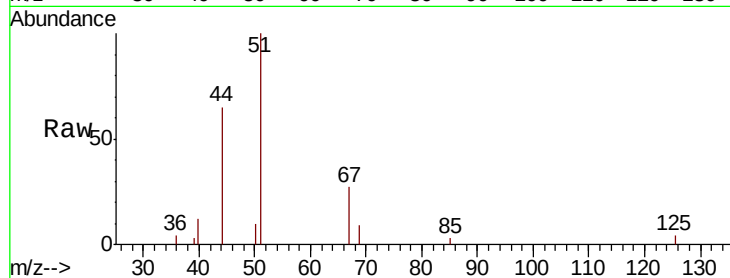
MDL-AIR-01-QT4-2020

Tot Ion: 51 Resp: 6003

Ion Ratio Lower Upper

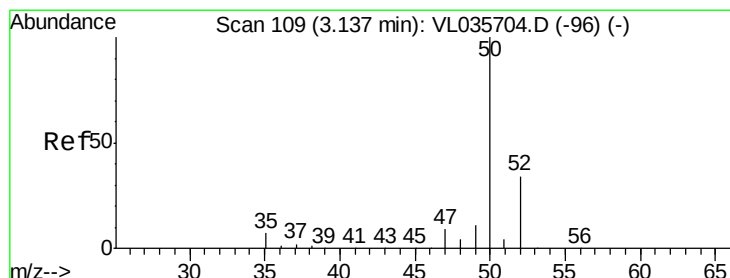
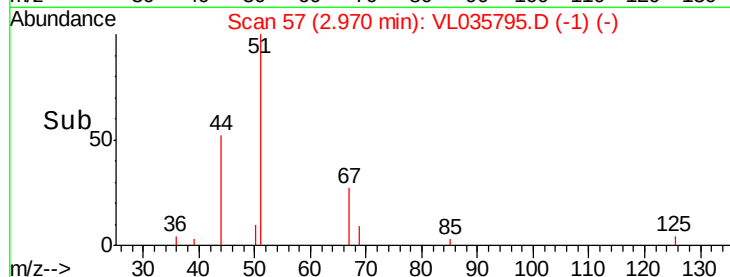
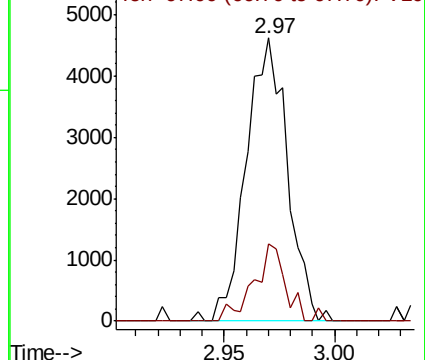
51 100

67 21.2 17.8 26.8



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.060 ppbv

RT: 3.12 min Scan# 105

Delta R.T. -0.01 min

Lab File: VL035795.D

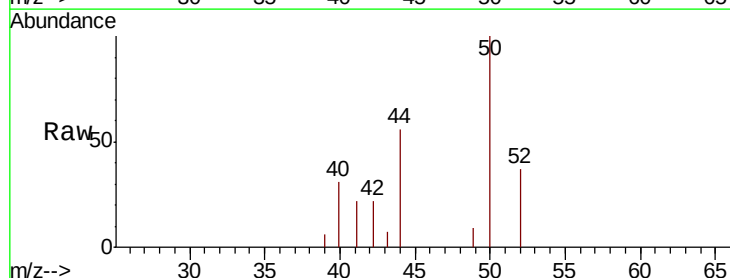
Acq: 19 Oct 2020 15:16

Tgt Ion: 50 Resp: 3774

Ion Ratio Lower Upper

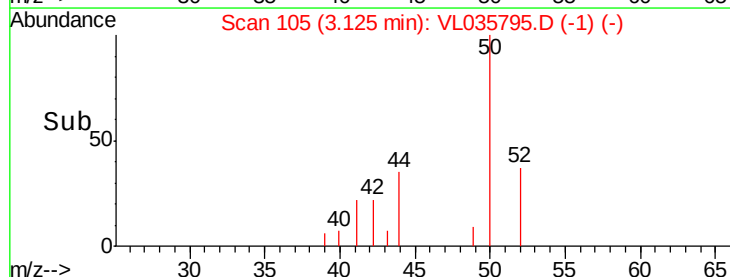
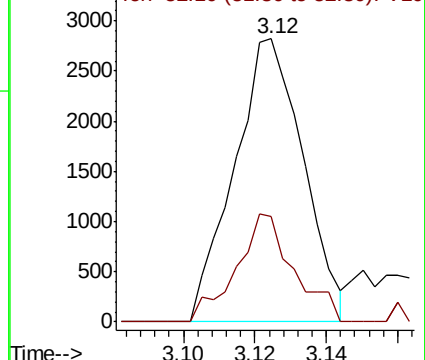
50 100

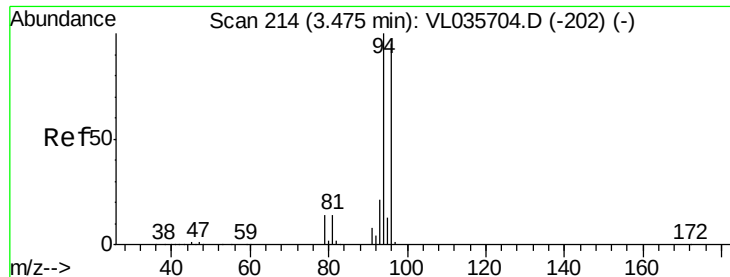
52 37.0 26.8 40.2



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#6

Bromomethane

Concen: 0.051 ppbv

RT: 3.46 min Scan# 208

Delta R.T. -0.02 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

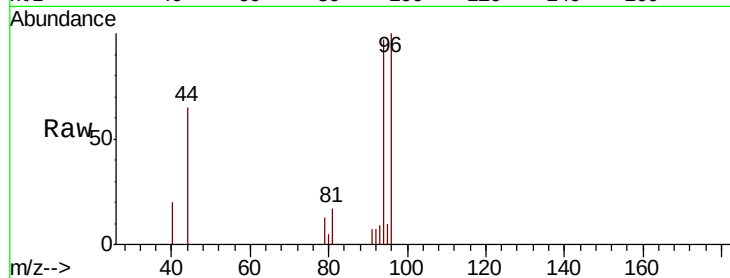
MDL-AIR-01-QT4-2020

Tot Ion: 94 Resp: 3243

Ion Ratio Lower Upper

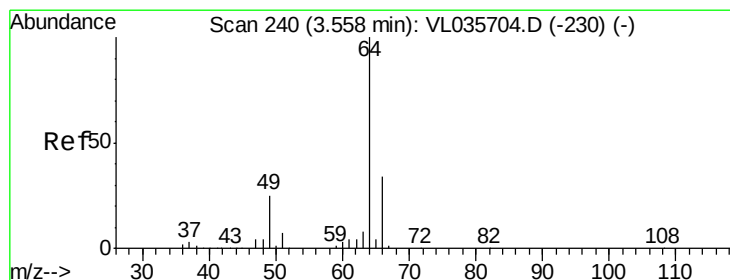
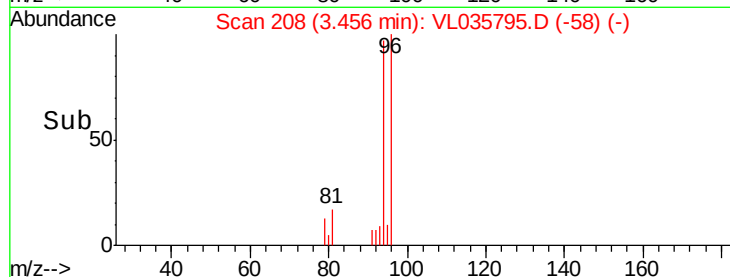
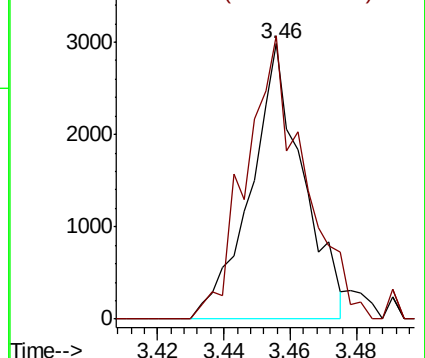
94 100

96 102.8 76.3 114.5



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0



#7

Chloroethane

Concen: 0.060 ppbv

RT: 3.53 min Scan# 232

Delta R.T. -0.03 min

Lab File: VL035795.D

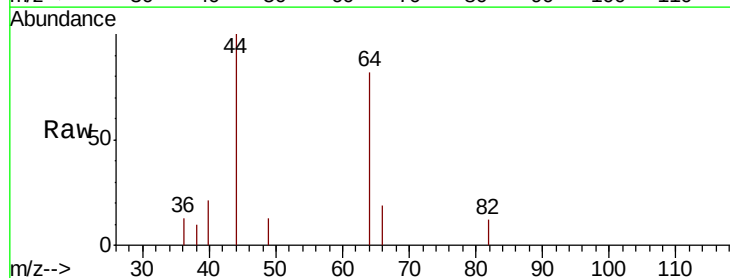
Acq: 19 Oct 2020 15:16

Tgt Ion: 64 Resp: 1637

Ion Ratio Lower Upper

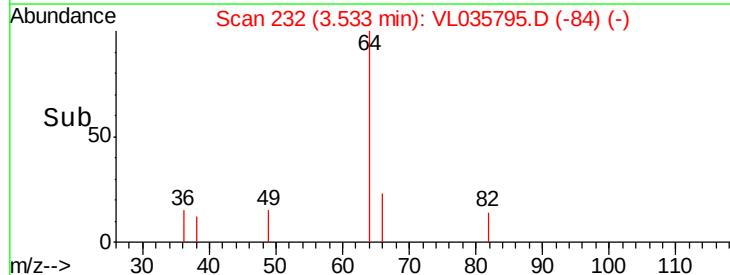
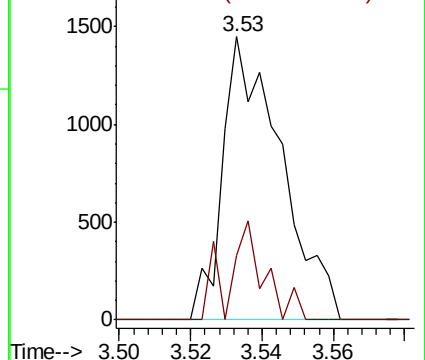
64 100

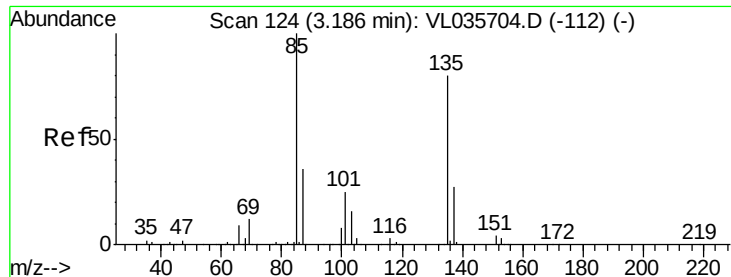
66 23.0 26.9 40.3#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0

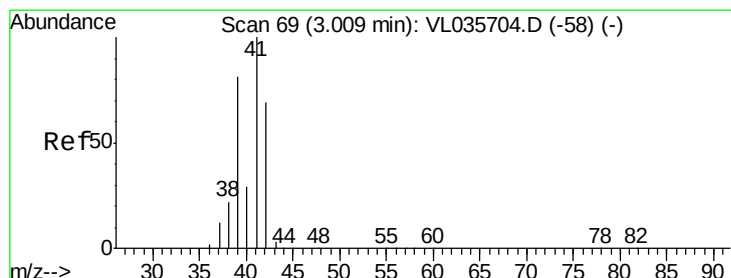
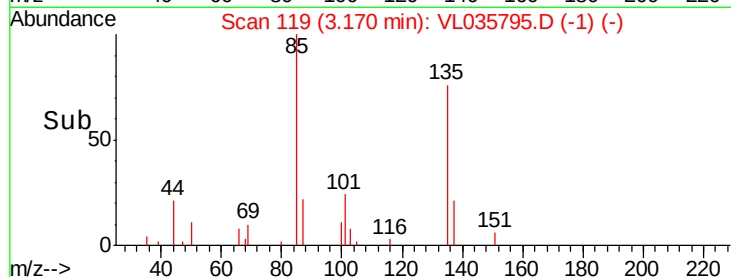
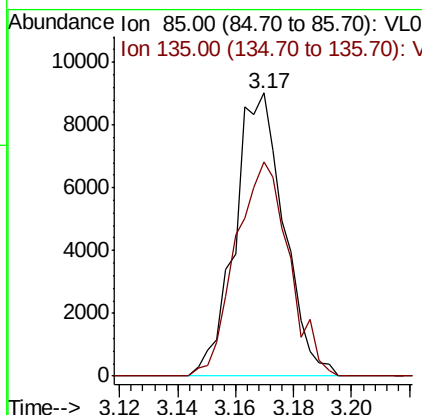
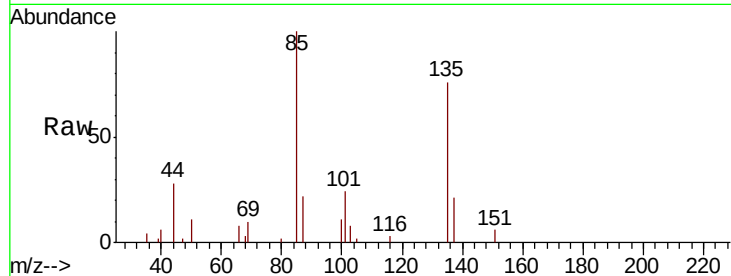




#8
Dichlorotetrafluoroethane
Concen: 0.049 ppbv
RT: 3.17 min Scan# 119
Delta R.T. -0.02 min
Lab File: VL035795.D
Acq: 19 Oct 2020 15:16

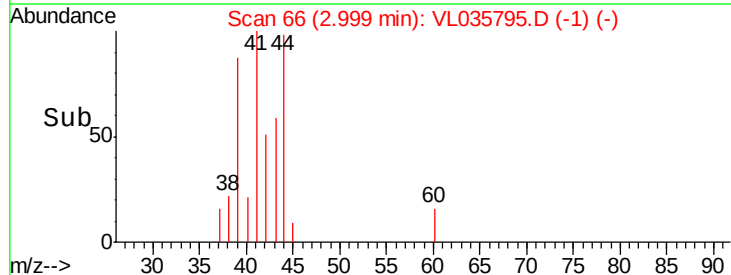
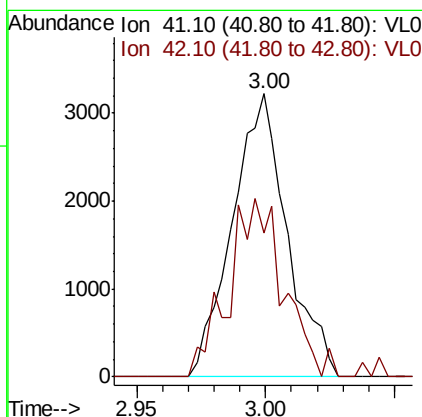
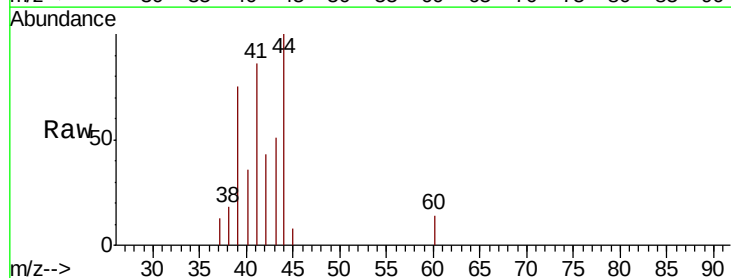
Instrument :
MSVOA_L
ClientSampleId :
MDL-AIR-01-QT4-2020

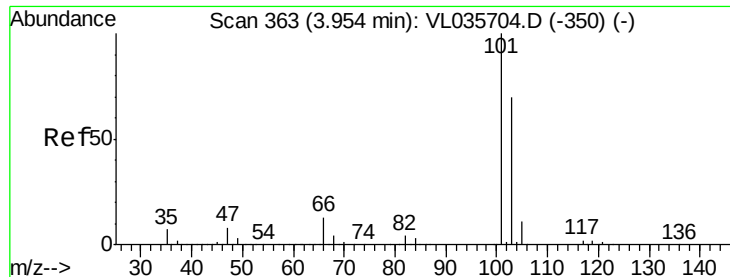
Tot Ion: 85 Resp: 10610
Ion Ratio Lower Upper
85 100
135 82.2 64.3 96.5



#9
Propene
Concen: 0.112 ppbv
RT: 3.00 min Scan# 66
Delta R.T. -0.01 min
Lab File: VL035795.D
Acq: 19 Oct 2020 15:16

Tgt Ion: 41 Resp: 4784
Ion Ratio Lower Upper
41 100
42 63.5 56.2 84.4

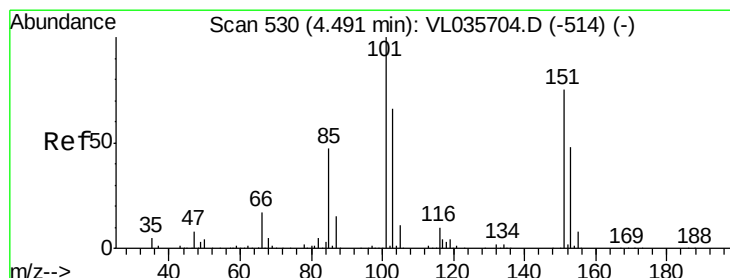
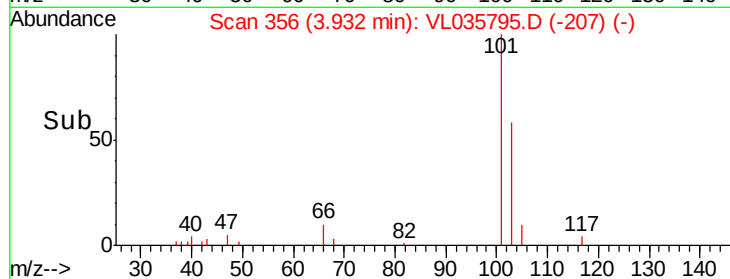
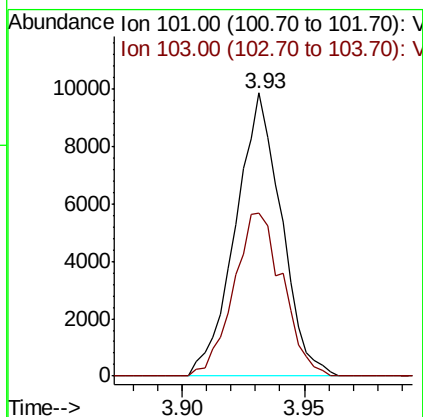
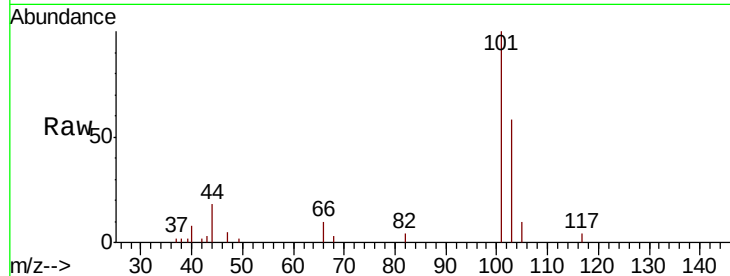




#11
 Trichlorofluoromethane
 Concen: 0.050 ppbv
 RT: 3.93 min Scan# 356
 Delta R.T. -0.02 min
 Lab File: VL035795.D
 Acq: 19 Oct 2020 15:16

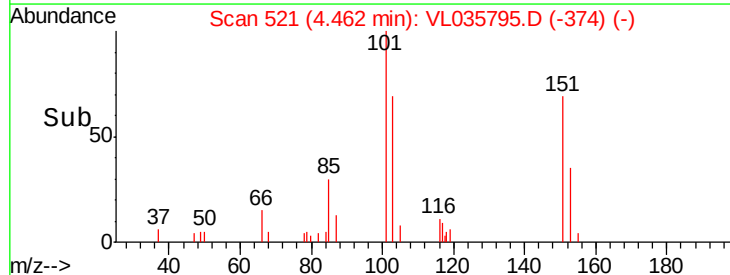
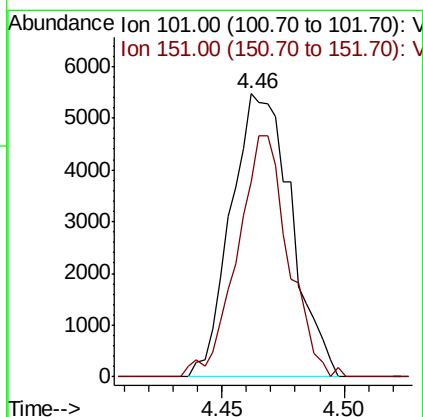
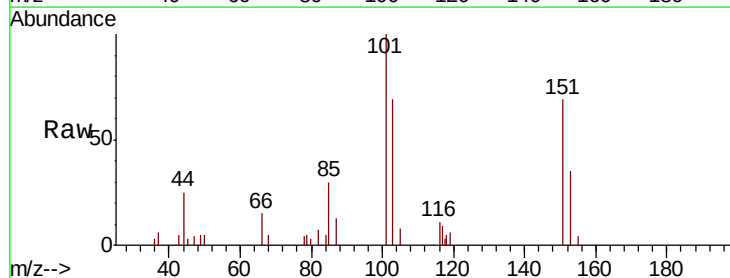
Instrument :
 MSVOA_L
 ClientSampleId :
 MDL-AIR-01-QT4-2020

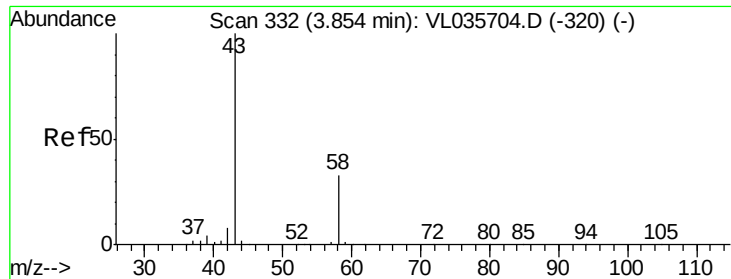
Tot Ion:101 Resp: 12817
 Ion Ratio Lower Upper
 101 100
 103 57.7 55.6 83.4



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.049 ppbv
 RT: 4.46 min Scan# 521
 Delta R.T. -0.03 min
 Lab File: VL035795.D
 Acq: 19 Oct 2020 15:16

Tgt Ion:101 Resp: 9370
 Ion Ratio Lower Upper
 101 100
 151 72.0 59.1 88.7





#15

Acetone

Concen: 0.163 ppbv

RT: 3.85 min Scan# 332

Delta R.T. 0.00 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

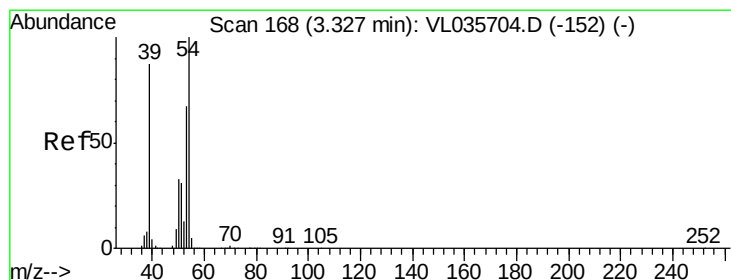
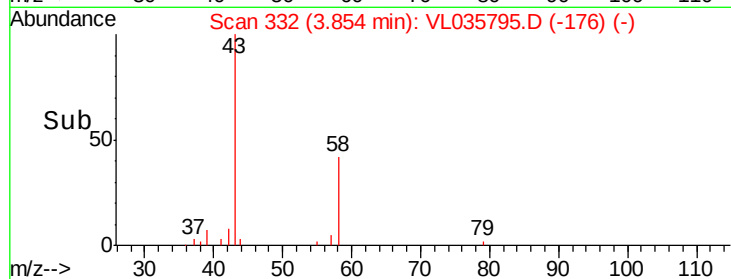
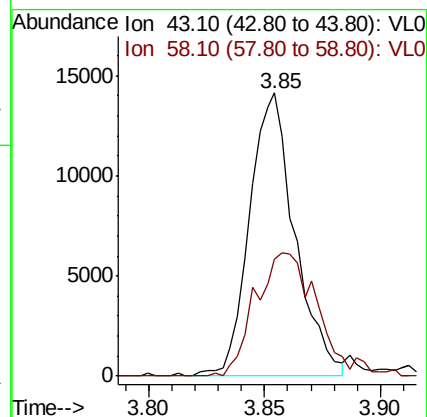
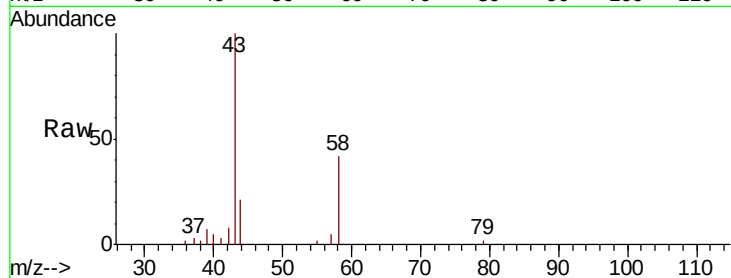
MDL-AIR-01-QT4-2020

Tot Ion: 43 Resp: 19227

Ion Ratio Lower Upper

43 100

58 59.9 27.3 40.9#



#16

1,3-Butadiene

Concen: 0.030 ppbv

RT: 3.31 min Scan# 162

Delta R.T. -0.02 min

Lab File: VL035795.D

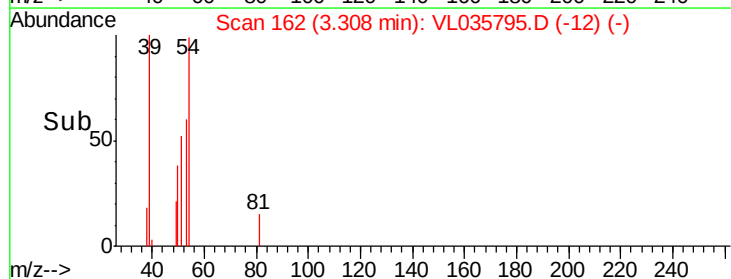
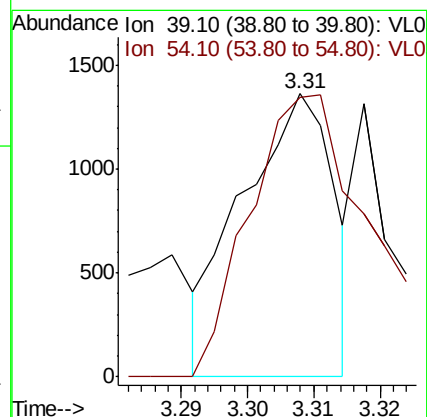
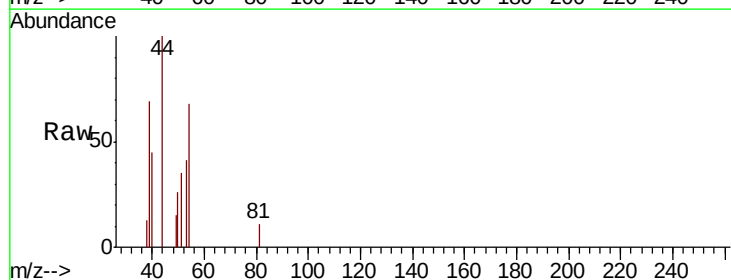
Acq: 19 Oct 2020 15:16

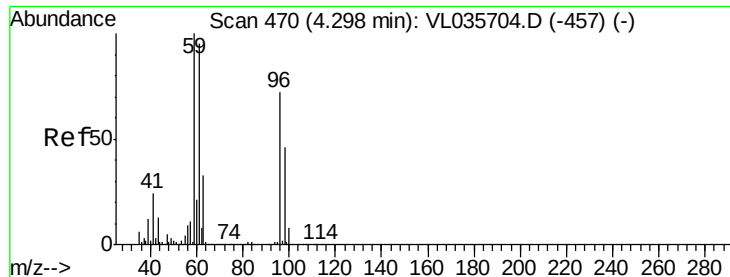
Tgt Ion: 39 Resp: 1312

Ion Ratio Lower Upper

39 100

54 126.8 87.4 131.0





#17

tert-Butyl alcohol

Concen: 0.052 ppbv

RT: 4.30 min Scan# 471

Delta R.T. 0.00 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

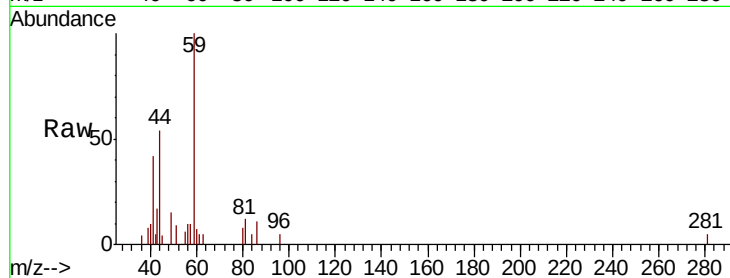
MDL-AIR-01-QT4-2020

Tot Ion: 59 Resp: 6712

Ion Ratio Lower Upper

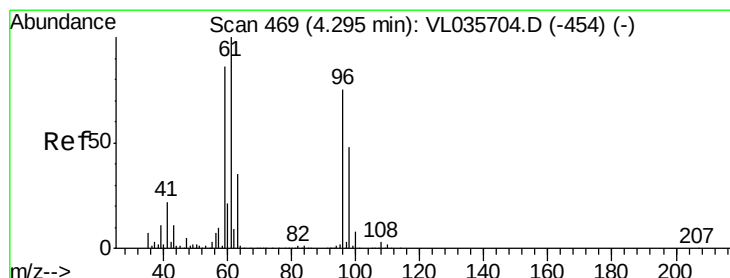
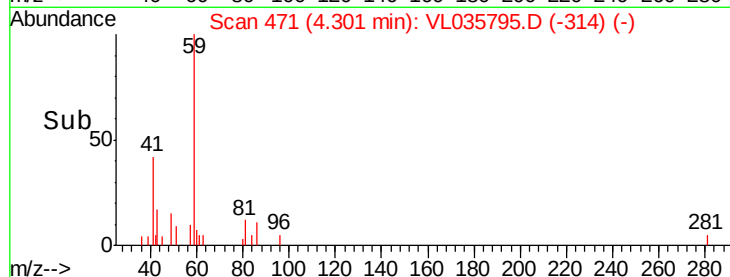
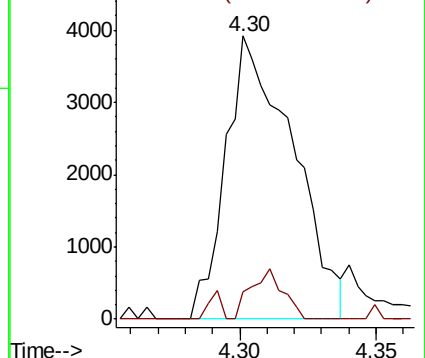
59 100

57 10.2 8.5 12.7



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#18

1,1-Dichloroethene

Concen: 0.044 ppbv

RT: 4.27 min Scan# 462

Delta R.T. -0.02 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

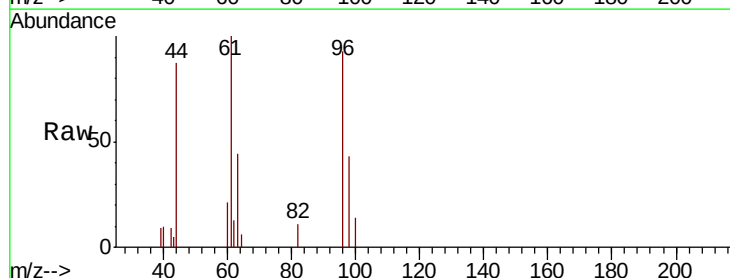
Tgt Ion: 96 Resp: 3643

Ion Ratio Lower Upper

96 100

61 102.0 106.7 160.1#

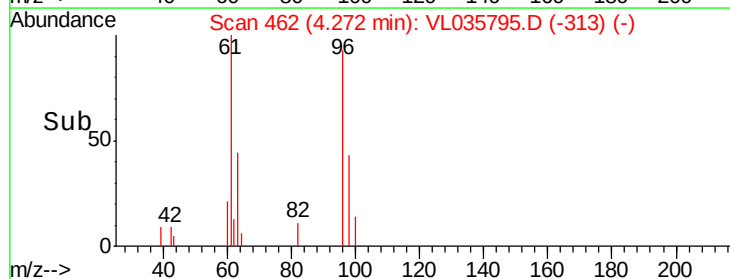
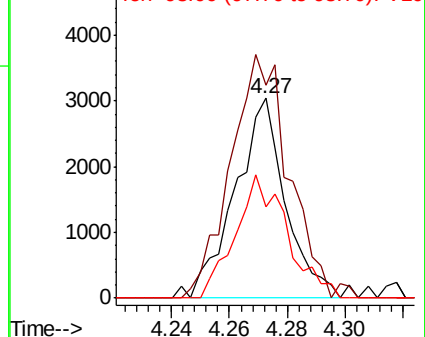
98 45.5 50.8 76.2#

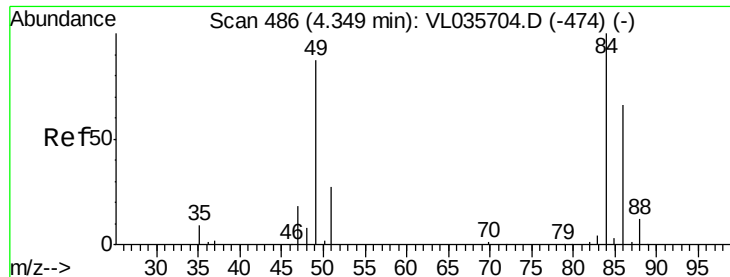


Abundance Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

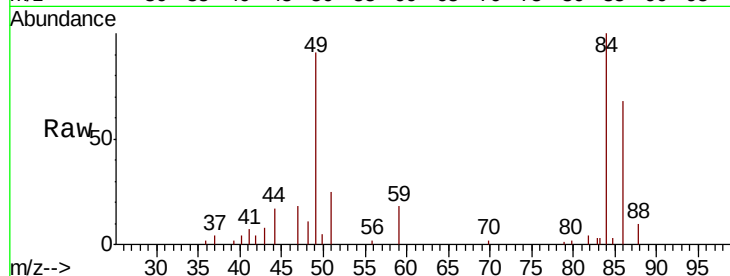




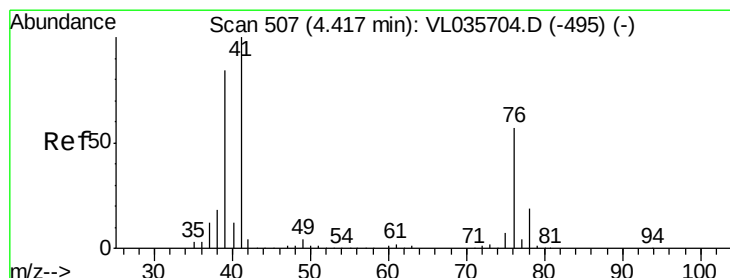
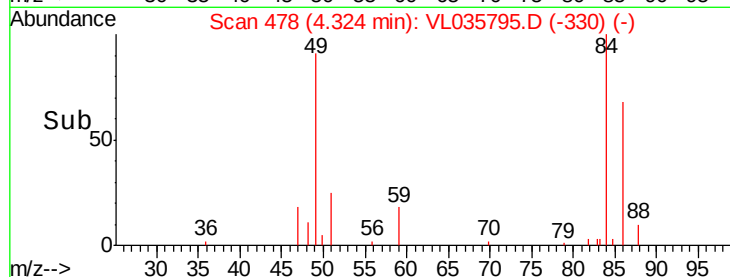
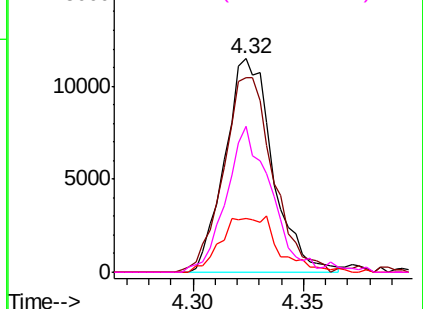
#20
Methylene Chloride
Concen: 0.198 ppbv
RT: 4.32 min Scan# 478
Delta R.T. -0.03 min
Lab File: VL035795.D
Acq: 19 Oct 2020 15:16

Instrument :
MSVOA_L
ClientSampleId :
MDL-AIR-01-QT4-2020

Tot Ion:	84	Resp:	17190
Ion	Ratio	Lower	Upper
84	100		
49	89.3	69.8	104.6
51	25.4	21.8	32.8
86	66.1	52.6	78.8

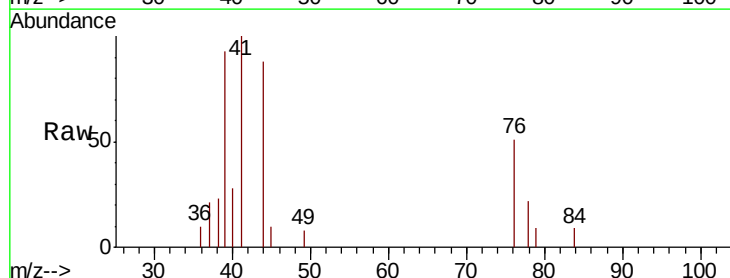


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

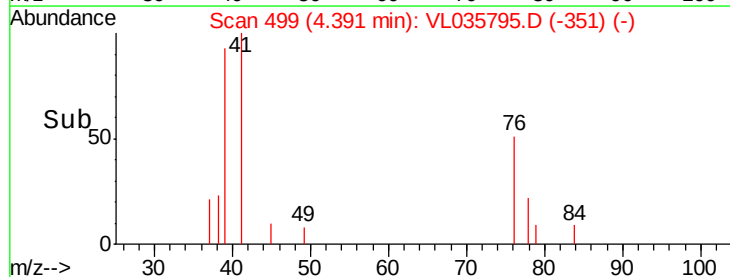
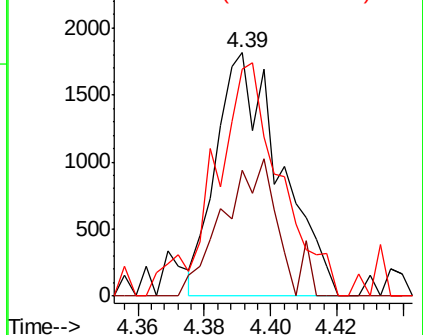


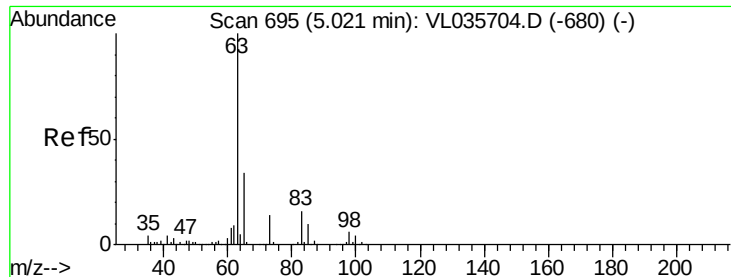
#21
Allyl Chloride
Concen: 0.043 ppbv
RT: 4.39 min Scan# 499
Delta R.T. -0.03 min
Lab File: VL035795.D
Acq: 19 Oct 2020 15:16

Tgt Ion:	41	Resp:	2432
Ion	Ratio	Lower	Upper
41	100		
76	48.5	44.8	67.2
39	105.0	68.4	102.6#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0





#24

1,1-Dichloroethane

Concen: 0.046 ppbv

RT: 4.99 min Scan# 686

Delta R.T. -0.03 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

MDL-AIR-01-QT4-2020

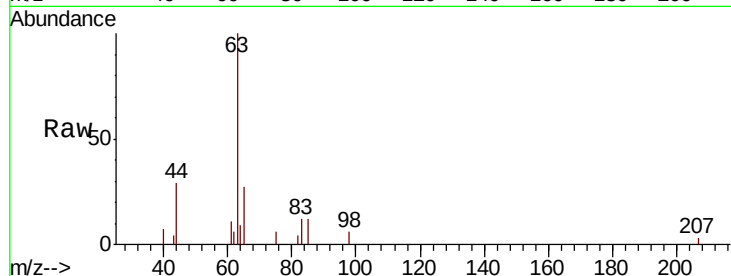
Tot Ion: 63 Resp: 7172

Ion Ratio Lower Upper

63 100

98 5.7 3.3 9.8

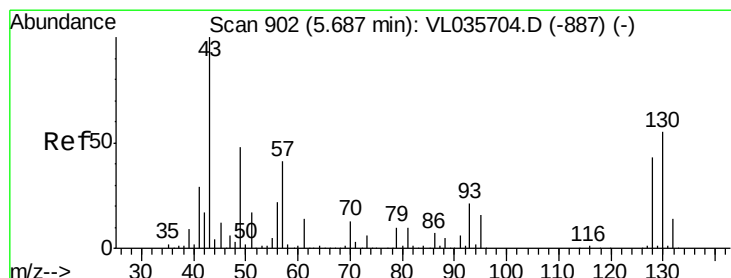
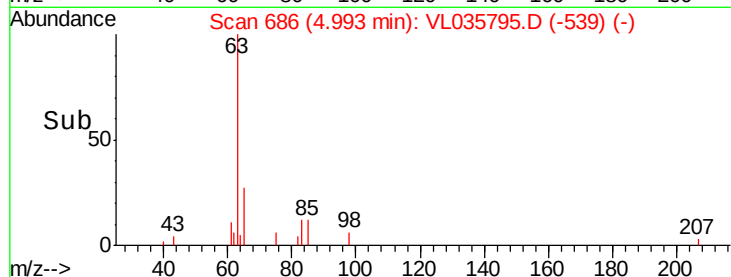
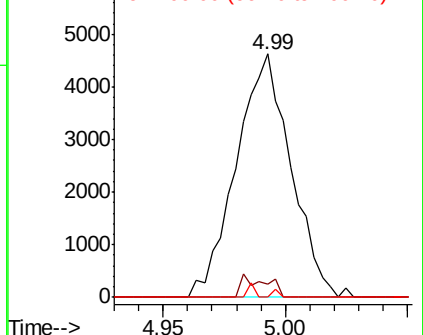
100 0.0 2.0 5.8#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0



#25

Ethyl Acetate

Concen: 0.031 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Tgt Ion: 43 Resp: 6645

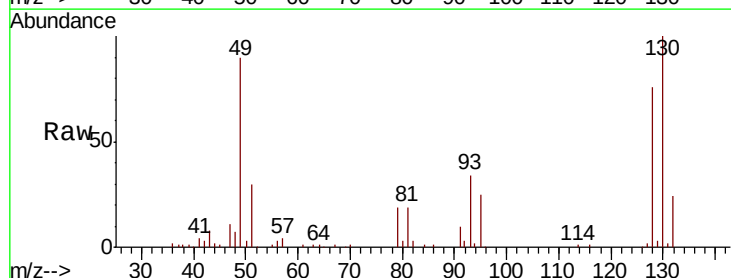
Ion Ratio Lower Upper

43 100

45 16.9 8.6 12.8#

61 13.6 10.4 15.6

70 15.5 8.9 13.3#

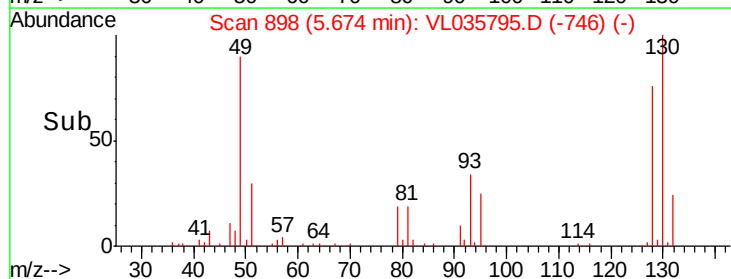
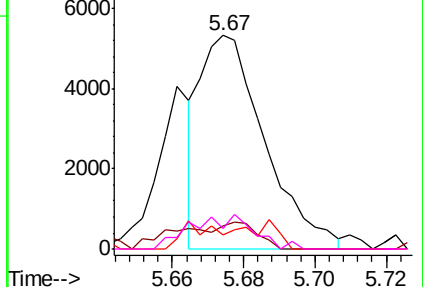


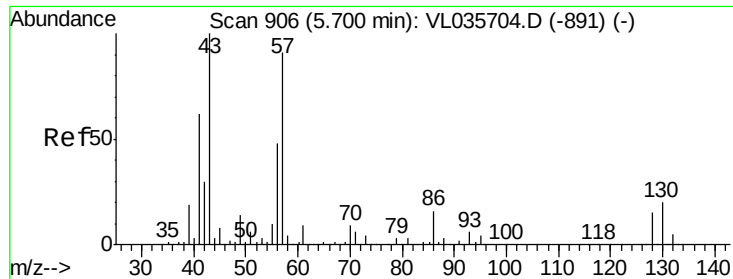
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

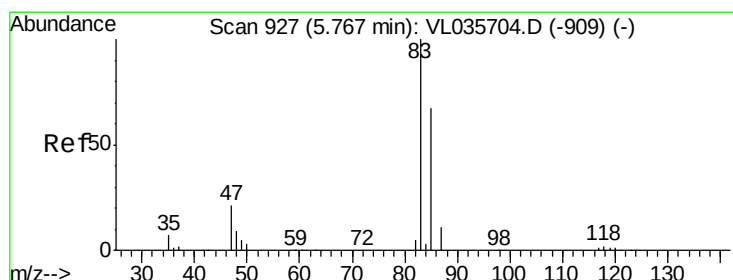
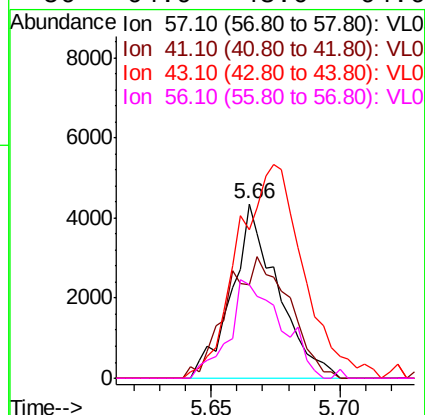
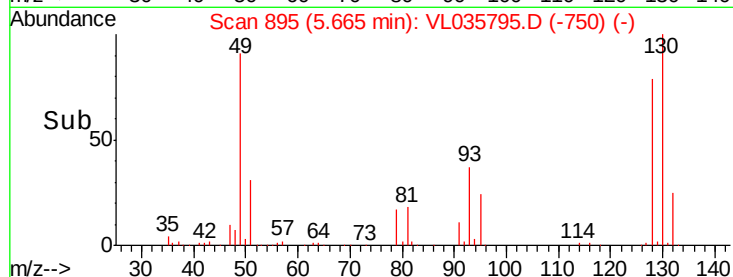
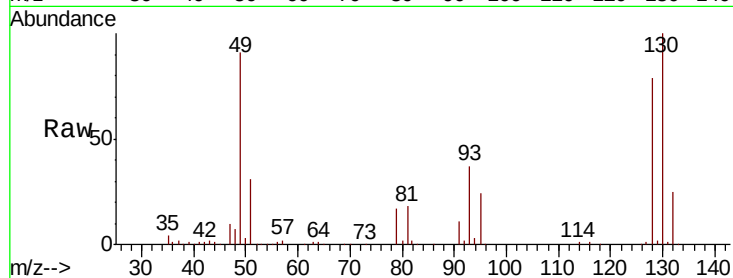




#26
Hexane
Concen: 0.046 ppbv
RT: 5.66 min Scan# 895
Delta R.T. -0.04 min
Lab File: VL035795.D
Acq: 19 Oct 2020 15:16

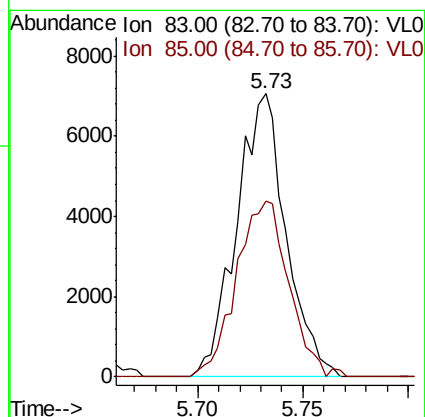
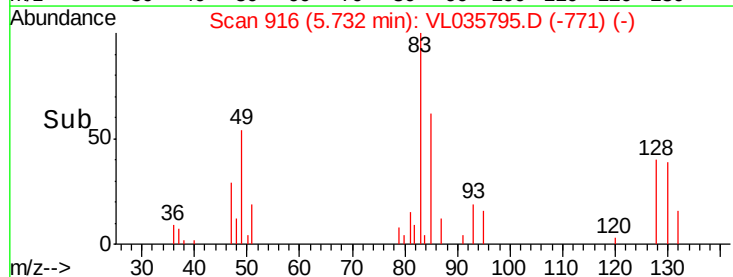
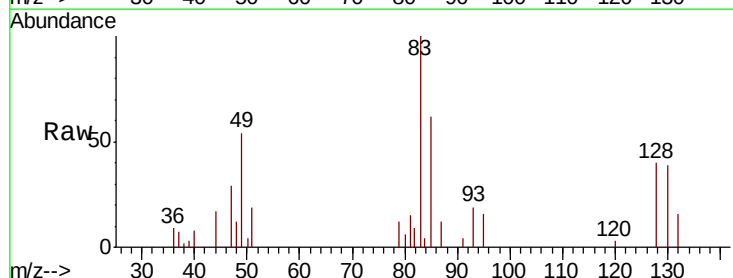
Instrument :
MSVOA_L
ClientSampleId :
MDL-AIR-01-QT4-2020

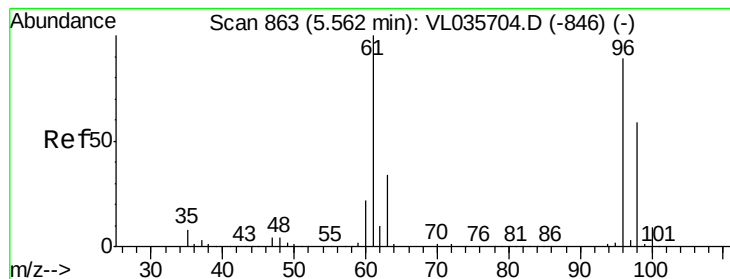
Tot Ion: 57 Resp: 5397
Ion Ratio Lower Upper
57 100
41 94.7 57.9 86.9#
43 177.0 143.8 215.6
56 64.9 43.0 64.6#



#29
Chloroform
Concen: 0.049 ppbv
RT: 5.73 min Scan# 916
Delta R.T. -0.04 min
Lab File: VL035795.D
Acq: 19 Oct 2020 15:16

Tgt Ion: 83 Resp: 11495
Ion Ratio Lower Upper
83 100
85 62.2 54.0 81.0





#31

cis-1,2-Dichloroethene

Concen: 0.033 ppbv

RT: 5.54 min Scan# 855

Delta R.T. -0.03 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

MDL-AIR-01-QT4-2020

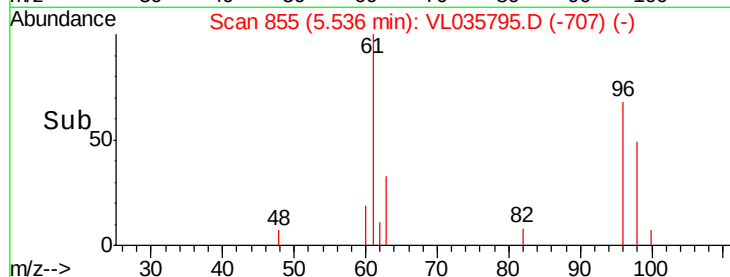
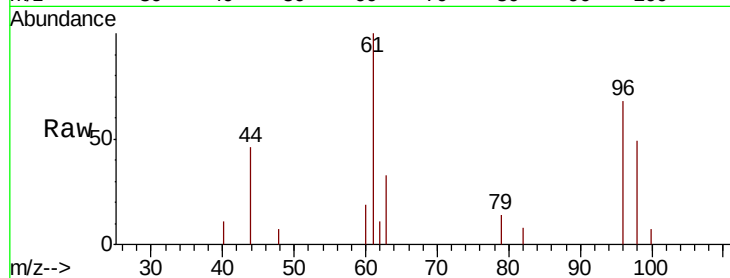
Tot Ion: 61 Resp: 3650

Ion Ratio Lower Upper

61 100

96 60.5 71.4 107.2#

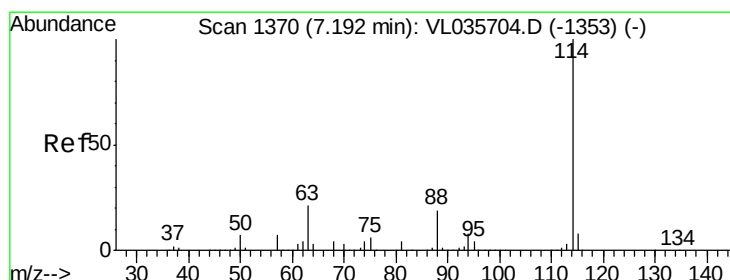
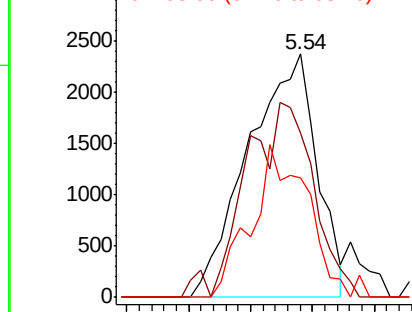
98 48.9 47.4 71.2



Abundance Ion 61.10 (60.80 to 61.80): VL0

Ion 96.00 (95.70 to 96.70): VL0

Ion 98.00 (97.70 to 98.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.04 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

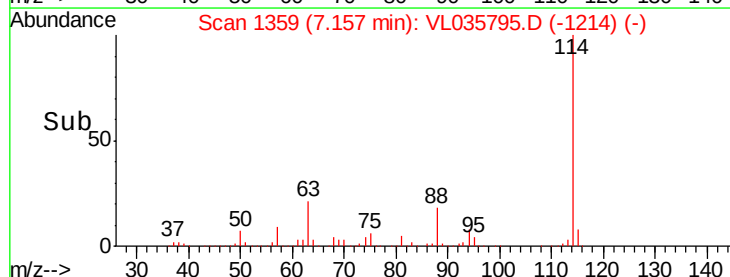
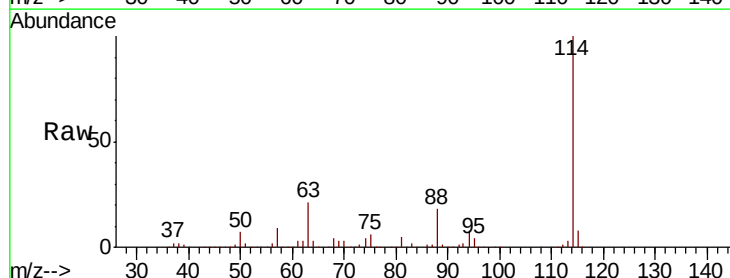
Tgt Ion: 114 Resp: 3938527

Ion Ratio Lower Upper

114 100

63 20.3 16.1 24.1

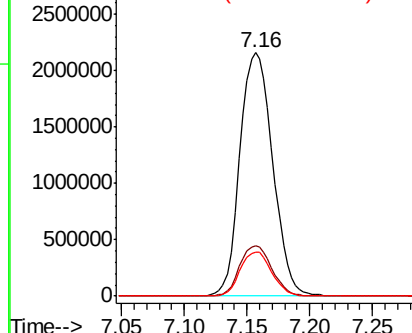
88 17.6 14.1 21.1

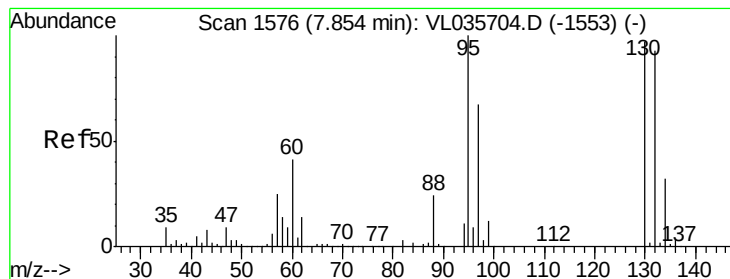


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





#38

Trichloroethene

Concen: 0.039 ppbv

RT: 7.82 min Scan# 1564

Delta R.T. -0.04 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

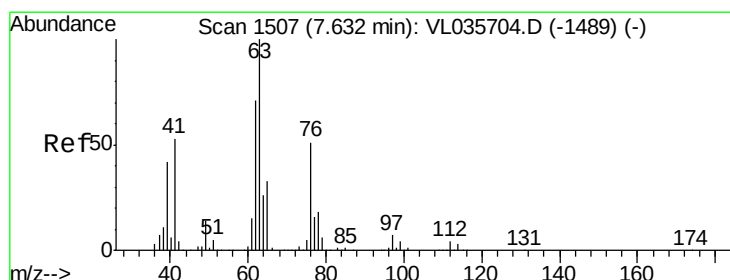
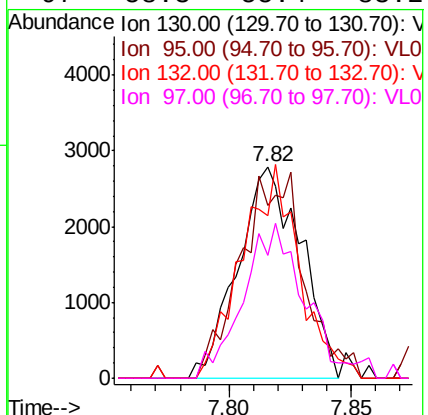
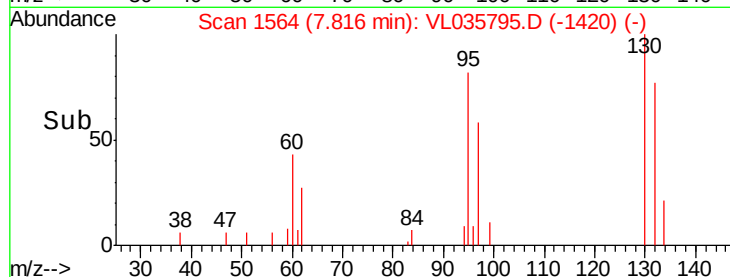
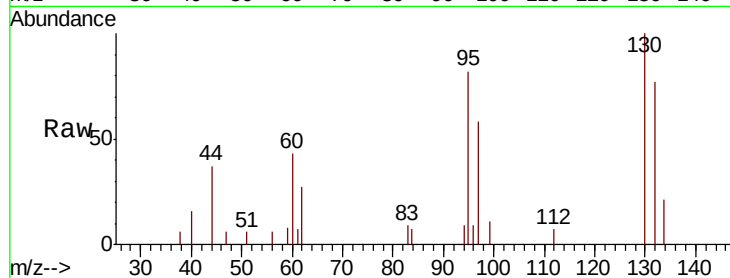
Instrument :

MSVOA_L

ClientSampleId :

MDL-AIR-01-QT4-2020

Tot Ion:130	Resp:	5030
Ion Ratio	Lower	Upper
130	100	
95	81.7	82.4 123.6#
132	76.9	76.8 115.2
97	58.3	55.4 83.2



#39

1,2-Dichloropropane

Concen: 8.562 ppbv

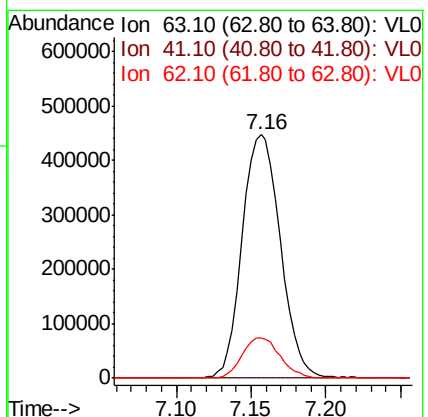
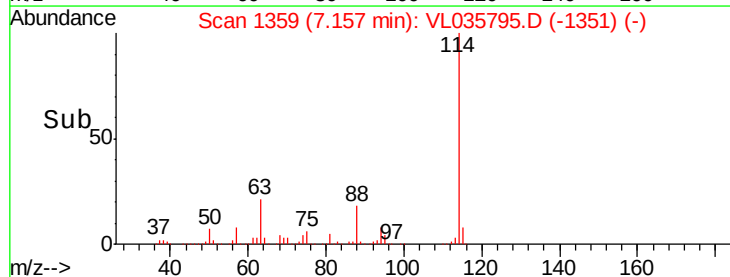
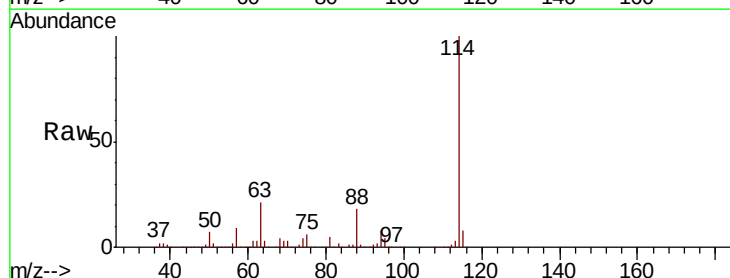
RT: 7.16 min Scan# 1359

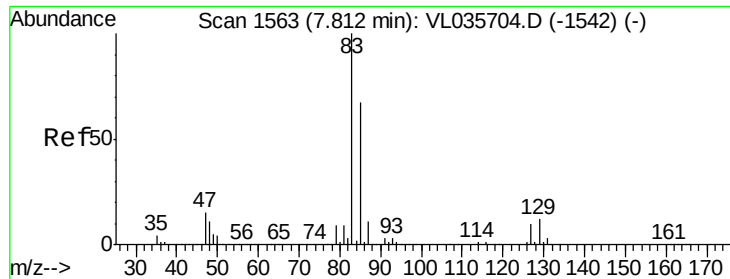
Delta R.T. -0.48 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Tgt Ion: 63	Resp:	796409
Ion Ratio	Lower	Upper
63	100	
41	0.0	42.6 63.8#
62	16.6	56.5 84.7#





#42

Bromodichloromethane

Concen: 0.041 ppbv

RT: 7.77 min Scan# 1551

Delta R.T. -0.04 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

MDL-AIR-01-QT4-2020

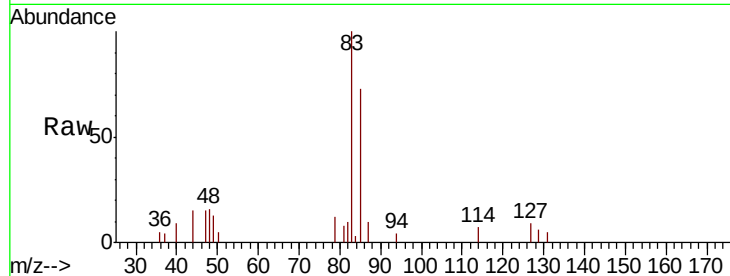
Tot Ion: 83 Resp: 8852

Ion Ratio Lower Upper

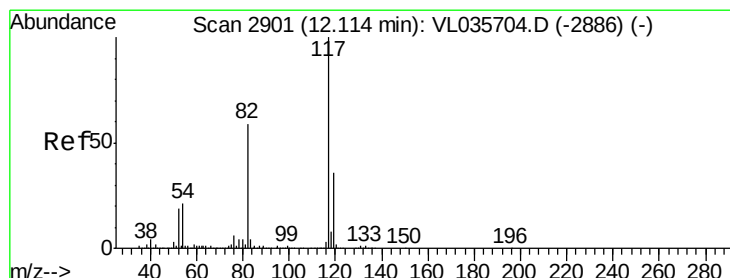
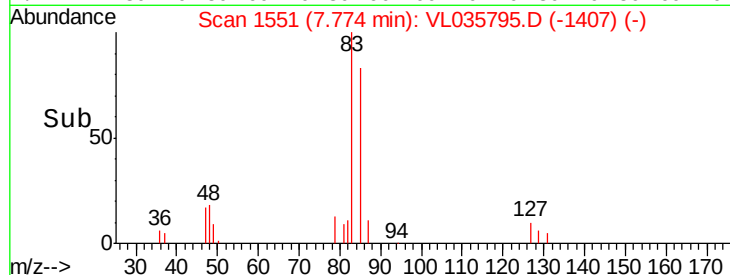
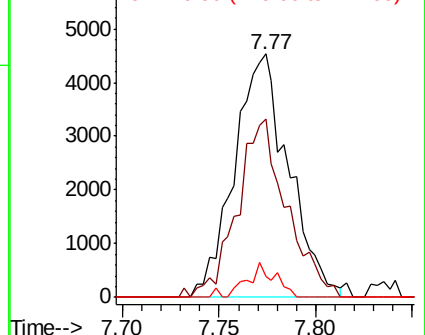
83 100

85 73.1 53.4 80.0

127 8.7 7.8 11.6



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0
Ion 126.90 (126.60 to 127.60): V



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2889

Delta R.T. -0.04 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

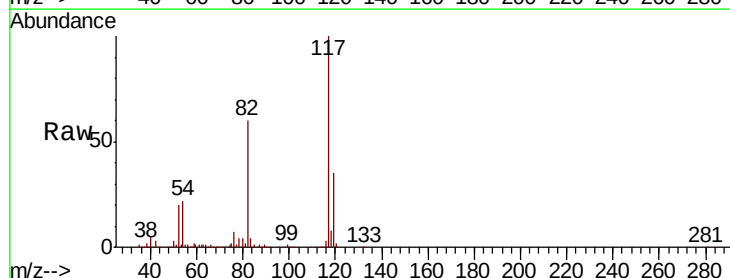
Tgt Ion: 117 Resp: 3917609

Ion Ratio Lower Upper

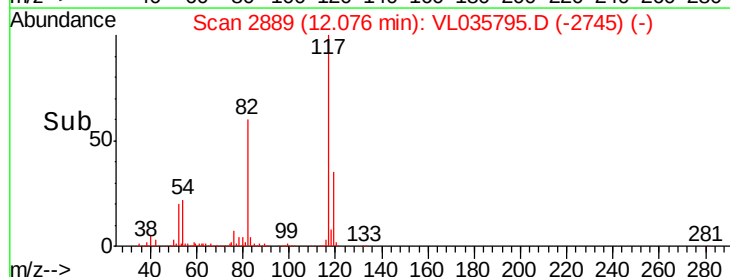
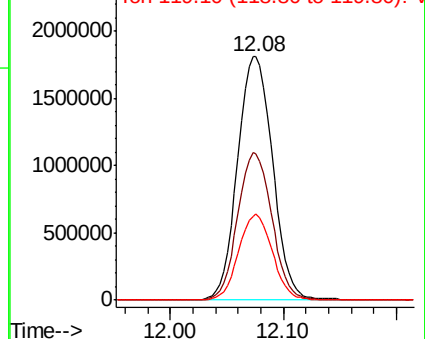
117 100

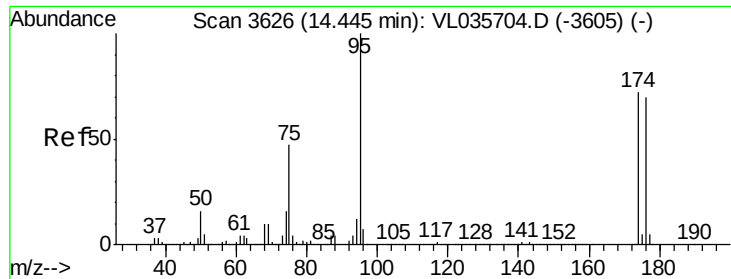
82 59.3 46.1 69.1

119 34.2 28.0 42.0



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





#68

1-Bromo-4-Fluorobenzene

Concen: 9.987 ppbv

RT: 14.41 min Scan# 3614

Delta R.T. -0.04 min

Lab File: VL035795.D

Acq: 19 Oct 2020 15:16

Instrument :

MSVOA_L

ClientSampleId :

MDL-AIR-01-QT4-2020

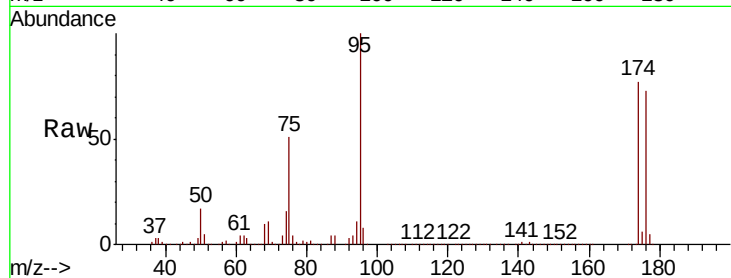
Tot Ion: 95 Resp: 2931870

Ion Ratio Lower Upper

95 100

174 76.0 59.6 89.4

175 5.5 4.2 6.4



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

