

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL101220\
 Data File : VL035776.D
 Acq On : 13 Oct 2020 00:14
 Operator : SY/AP
 Sample : L4214-13 LOD 0.03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

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

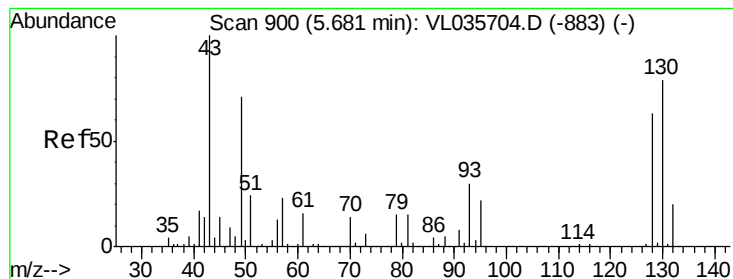
Quant Time: Oct 13 02:04:30 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL092320AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Sep 23 07:38:05 2020
 QLast Update : Wed Sep 23 07:38:05 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1030075	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.18	114	3880435	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.10	117	3822195	10.00	ppbv	-0.02

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.43	95	2810189	9.81	ppbv	-0.02	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.10%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	12175	0.072	ppbv	100
3) Chlorodifluoromethane	2.98	51	5403	0.049	ppbv	98
4) Chloromethane	3.14	50	3524	0.059	ppbv #	83
5) Vinyl Chloride	3.26	62	3089	0.044	ppbv #	82
6) Bromomethane	3.47	94	3029	0.051	ppbv	86
8) Dichlorotetrafluoroethane	3.19	85	10365	0.051	ppbv	100
9) Propene	3.01	41	3030	0.075	ppbv #	70
11) Trichlorofluoromethane	3.95	101	12220	0.051	ppbv	85
12) 1,1,2-Trichlorotrifluoroet	4.48	101	8644	0.048	ppbv	100
13) Ethanol	3.62	45	538	0.054	ppbv #	38
14) Bromoethene	3.74	108	3561	0.047	ppbv	98
15) Acetone	3.87	43	9261	0.084	ppbv #	41
18) 1,1-Dichloroethene	4.29	96	3164	0.040	ppbv #	66
20) Methylene Chloride	4.35	84	14709	0.181	ppbv #	88
22) trans-1,2-Dichloroethene	4.88	96	4232	0.051	ppbv #	74
23) Vinyl Acetate	5.08	43	6555	0.048	ppbv #	91
24) 1,1-Dichloroethane	5.01	63	6973	0.047	ppbv	97
25) Ethyl Acetate	5.69	43	9557	0.048	ppbv #	94
29) Chloroform	5.75	83	11536	0.052	ppbv #	81
32) 1,1,1-Trichloroethane	6.51	97	8454	0.043	ppbv	96
34) 2-Butanone	5.27	43	7116	0.055	ppbv	97
35) Carbon Tetrachloride	7.02	117	7819	0.039	ppbv #	94
39) 1,2-Dichloropropane	7.18	63	758923	8.281	ppbv #	30
42) Bromodichloromethane	7.79	83	8181	0.039	ppbv #	80
48) Dibromochloromethane	10.31	129	6177	0.031	ppbv	98
54) 1,2-Dibromoethane	10.62	107	6128	0.031	ppbv	93
78) Hexachloro-1,3-Butadiene	23.41	225	7426	0.049	ppbv	93

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.01 min

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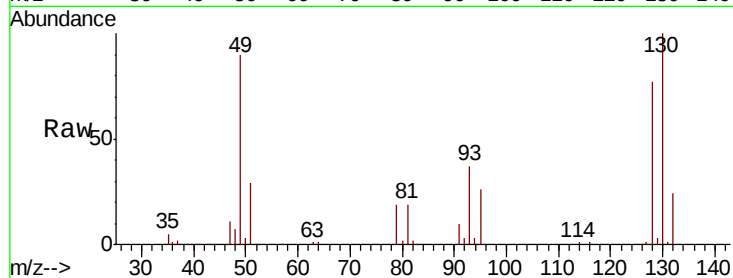
Tot Ion: 49 Resp: 1030075

Ion Ratio Lower Upper

49 100

128 84.8 43.1 129.4

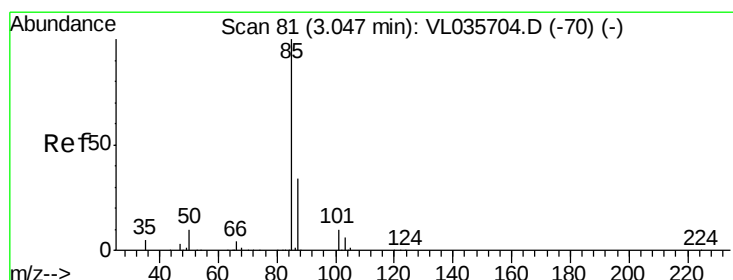
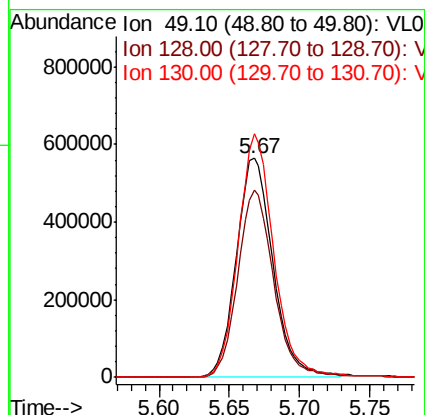
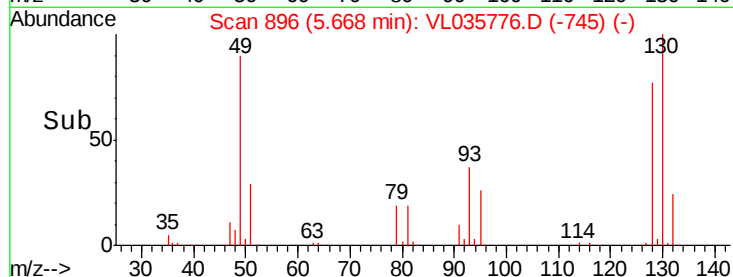
130 109.1 54.9 164.7



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: 0.072 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.00 min

Lab File: VL035776.D

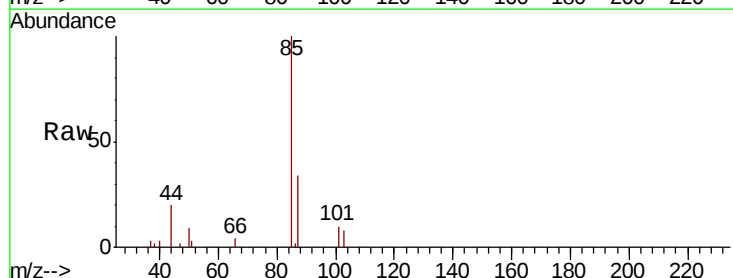
Acq: 13 Oct 2020 00:14

Tgt Ion: 85 Resp: 12175

Ion Ratio Lower Upper

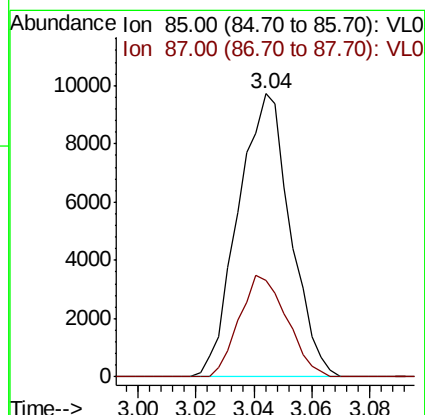
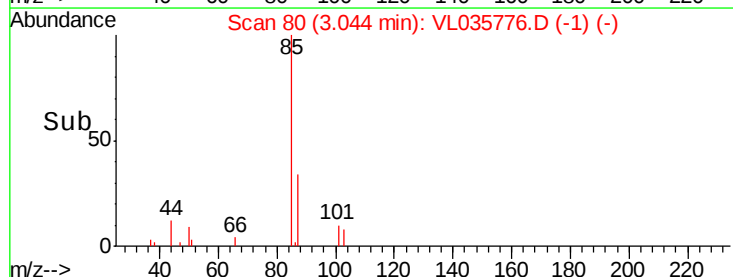
85 100

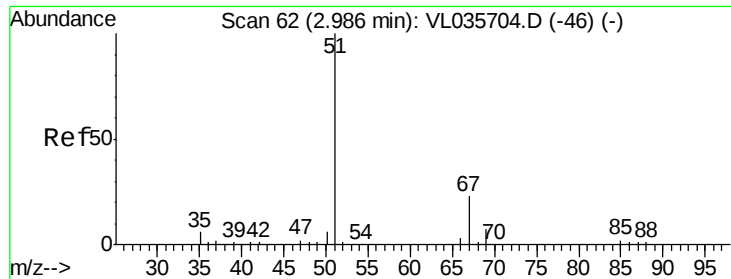
87 34.2 27.3 40.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.049 ppbv

RT: 2.98 min Scan# 61

Delta R.T. -0.00 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

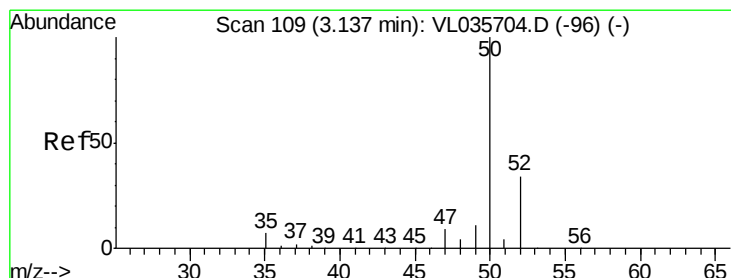
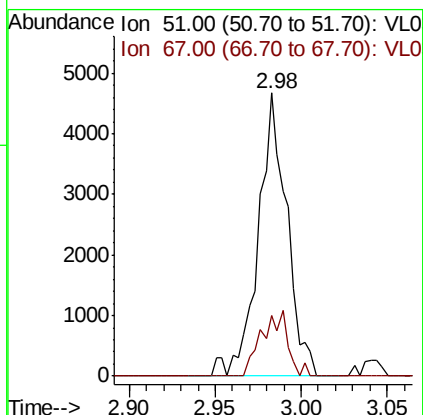
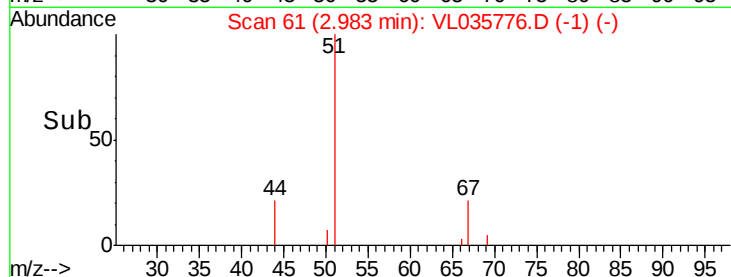
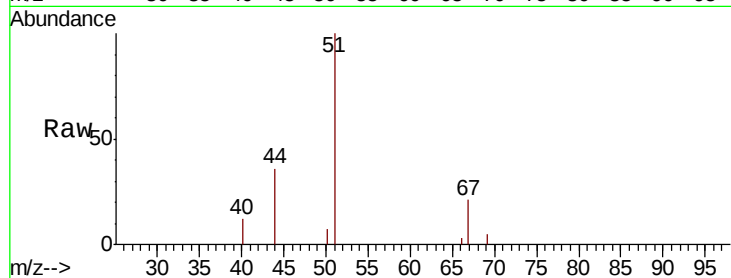
LOD-MDL-AIR-01-QT4-2020

Tot Ion: 51 Resp: 5403

Ion Ratio Lower Upper

51 100

67 21.1 17.8 26.8



#4

Chloromethane

Concen: 0.059 ppbv

RT: 3.14 min Scan# 109

Delta R.T. -0.00 min

Lab File: VL035776.D

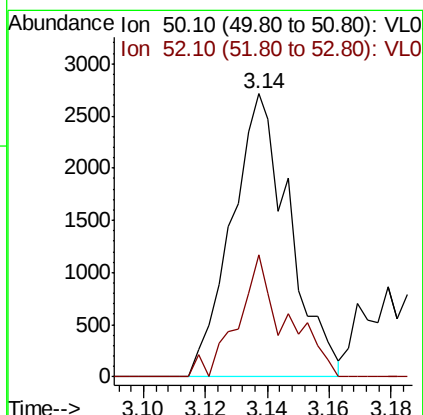
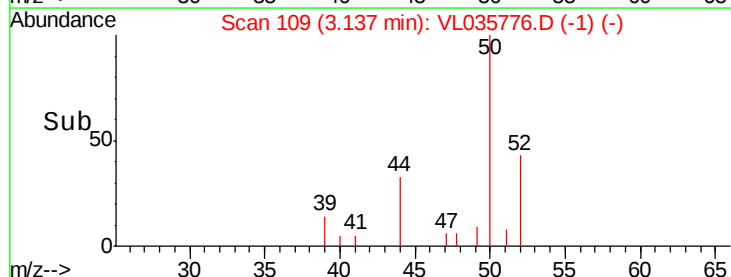
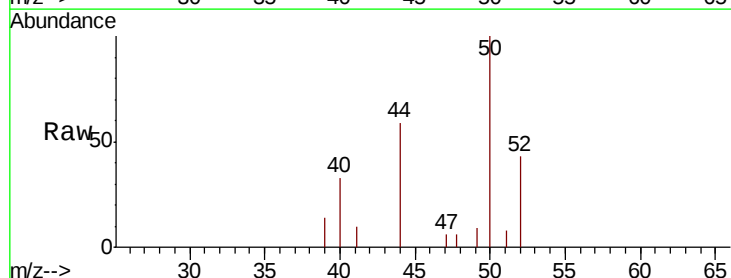
Acq: 13 Oct 2020 00:14

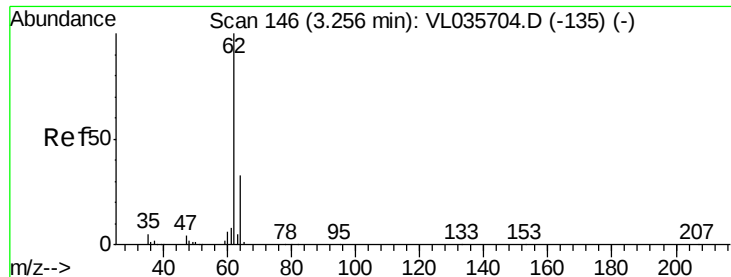
Tgt Ion: 50 Resp: 3524

Ion Ratio Lower Upper

50 100

52 43.0 26.8 40.2#





#5

Vinyl Chloride

Concen: 0.044 ppbv

RT: 3.26 min Scan# 146

Delta R.T. -0.00 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

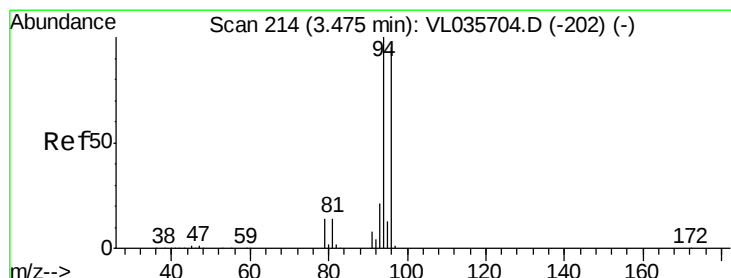
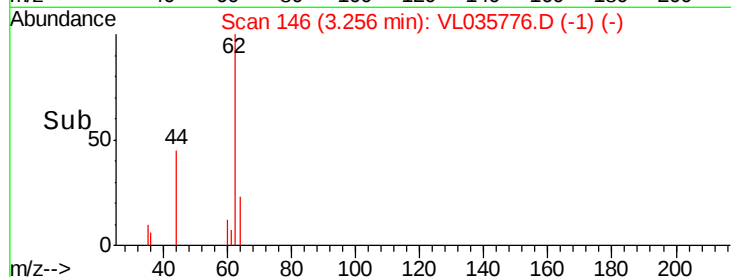
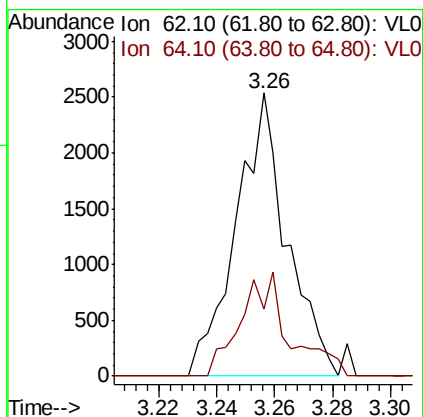
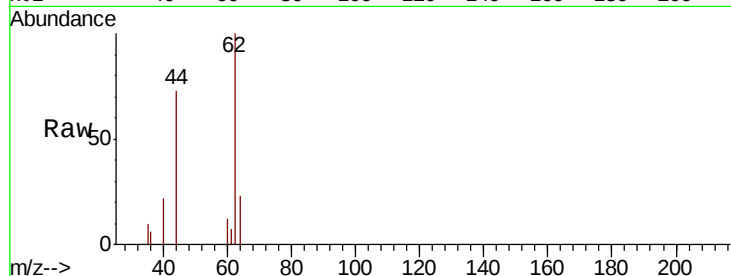
LOD-MDL-AIR-01-QT4-2020

Tot Ion: 62 Resp: 3089

Ion Ratio Lower Upper

62 100

64 23.5 26.8 40.2#



#6

Bromomethane

Concen: 0.051 ppbv

RT: 3.47 min Scan# 214

Delta R.T. -0.00 min

Lab File: VL035776.D

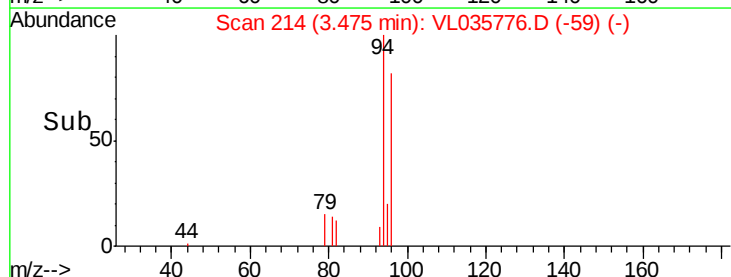
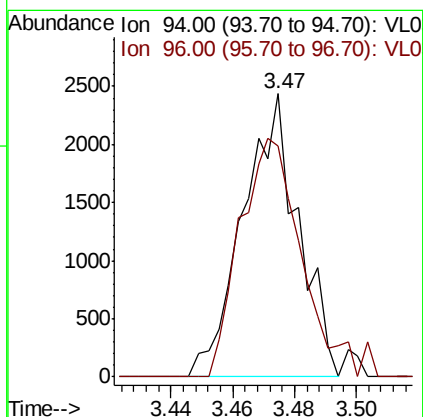
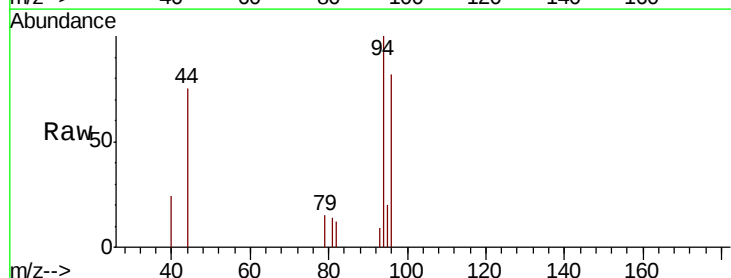
Acq: 13 Oct 2020 00:14

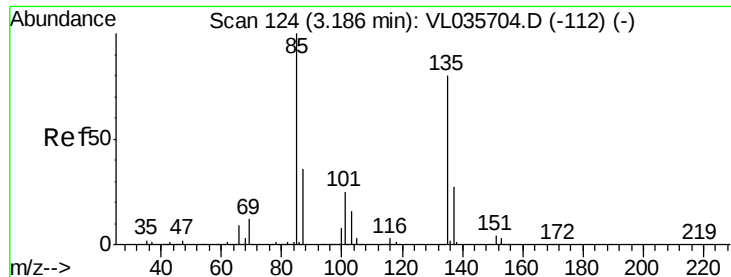
Tgt Ion: 94 Resp: 3029

Ion Ratio Lower Upper

94 100

96 81.7 76.3 114.5

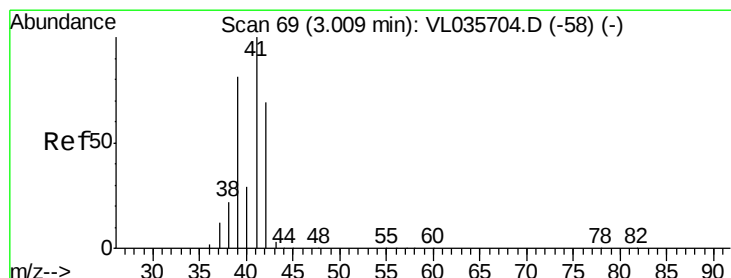
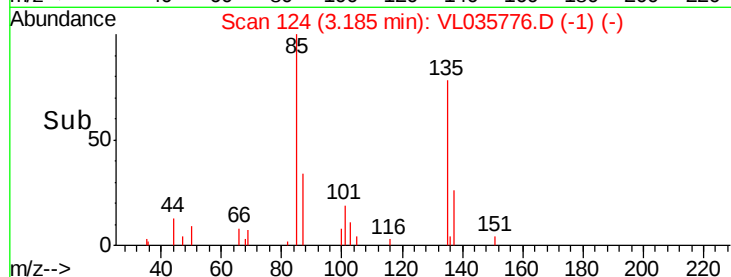
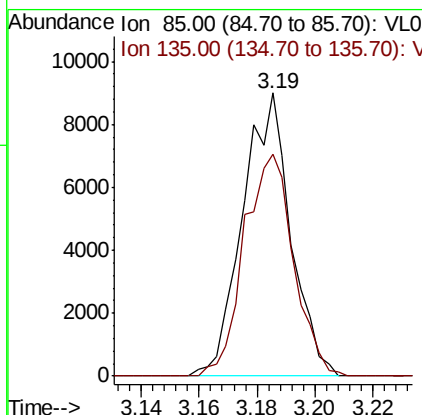
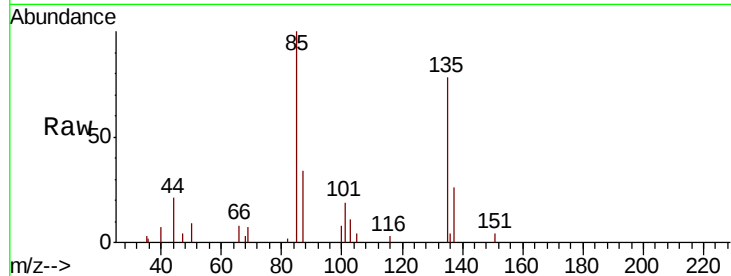




#8
Dichlorotetrafluoroethane
Concen: 0.051 ppbv
RT: 3.19 min Scan# 124
Delta R.T. -0.00 min
Lab File: VL035776.D
Acq: 13 Oct 2020 00:14

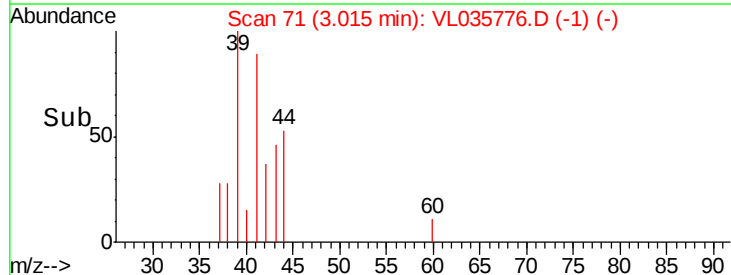
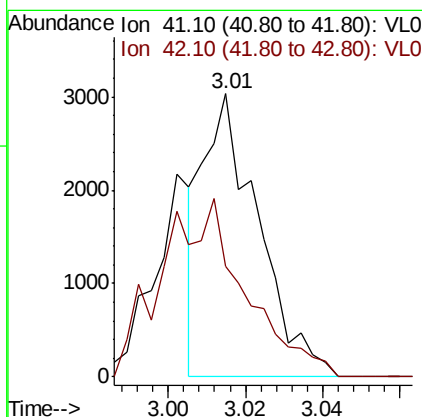
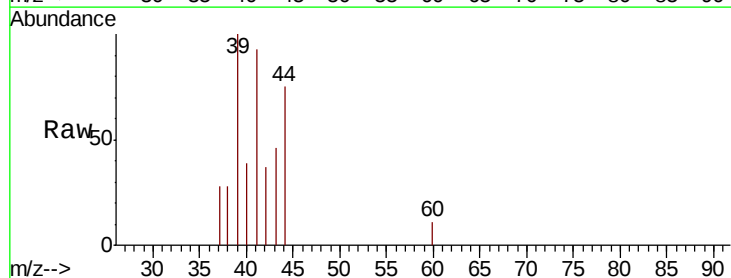
Instrument :
MSVOA_L
ClientSampleId :
LOD-MDL-AIR-01-QT4-2020

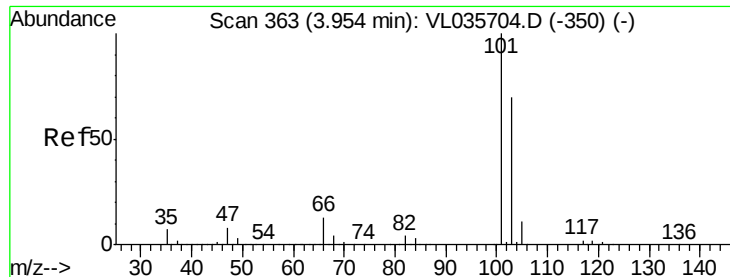
Tot Ion: 85 Resp: 10365
Ion Ratio Lower Upper
85 100
135 80.7 64.3 96.5



#9
Propene
Concen: 0.075 ppbv
RT: 3.01 min Scan# 71
Delta R.T. 0.01 min
Lab File: VL035776.D
Acq: 13 Oct 2020 00:14

Tgt Ion: 41 Resp: 3030
Ion Ratio Lower Upper
41 100
42 94.7 56.2 84.4#

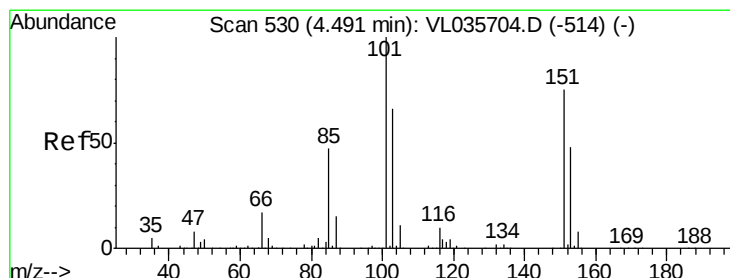
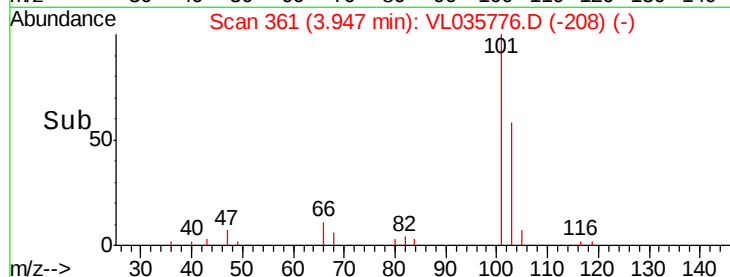
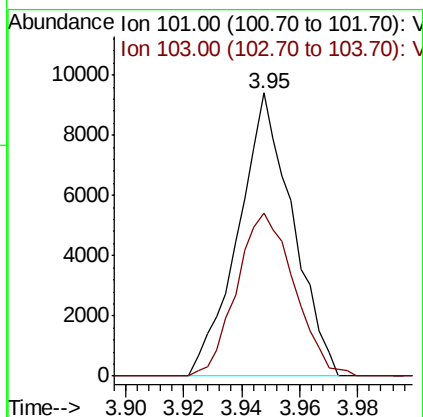
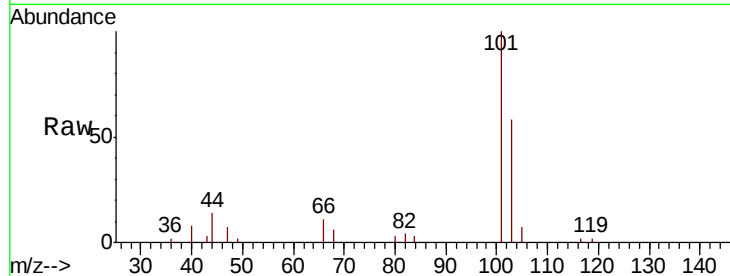




#11
 Trichlorofluoromethane
 Concen: 0.051 ppbv
 RT: 3.95 min Scan# 361
 Delta R.T. -0.01 min
 Lab File: VL035776.D
 Acq: 13 Oct 2020 00:14

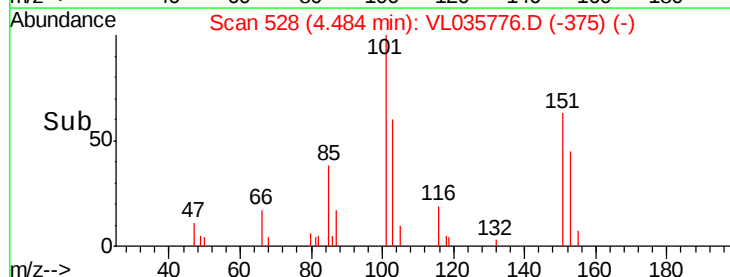
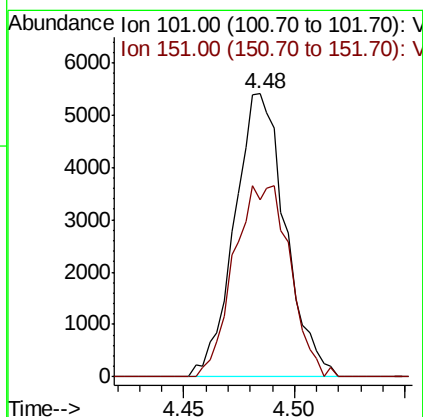
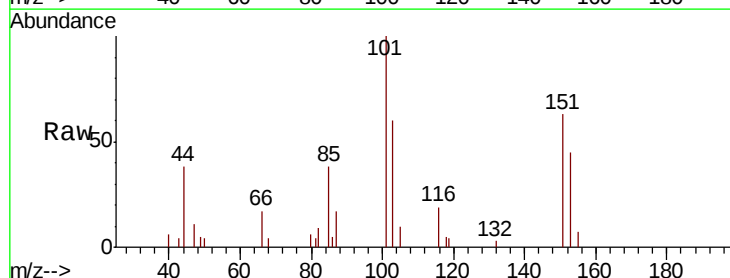
Instrument :
 MSVOA_L
 ClientSampleId :
 LOD-MDL-AIR-01-QT4-2020

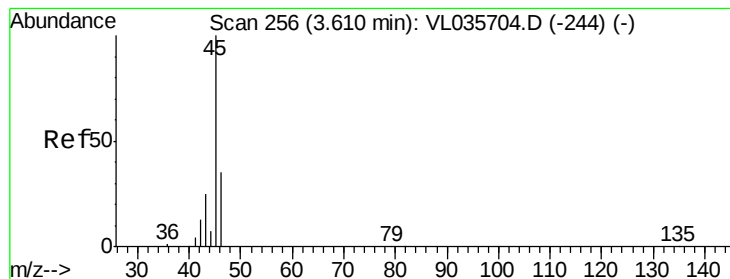
Tot Ion:101 Resp: 12220
 Ion Ratio Lower Upper
 101 100
 103 57.6 55.6 83.4



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.048 ppbv
 RT: 4.48 min Scan# 528
 Delta R.T. -0.01 min
 Lab File: VL035776.D
 Acq: 13 Oct 2020 00:14

Tgt Ion:101 Resp: 8644
 Ion Ratio Lower Upper
 101 100
 151 74.3 59.1 88.7





#13

Ethanol

Concen: 0.054 ppbv

RT: 3.62 min Scan# 259

Delta R.T. 0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

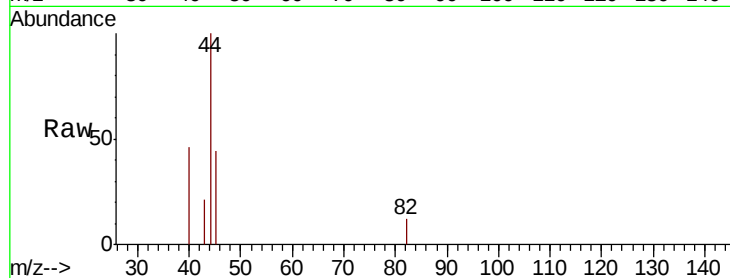
LOD-MDL-AIR-01-QT4-2020

Tot Ion: 45 Resp: 538

Ion Ratio Lower Upper

45 100

46 0.0 14.7 58.7#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

3.62

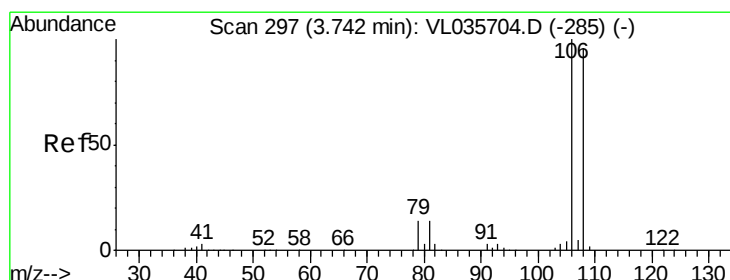
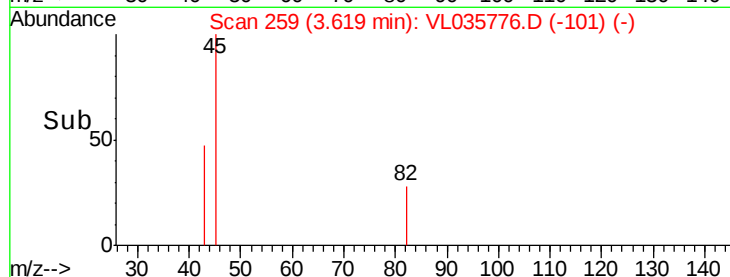
600

400

200

0

Time-->



#14

Bromoethene

Concen: 0.047 ppbv

RT: 3.74 min Scan# 296

Delta R.T. -0.00 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

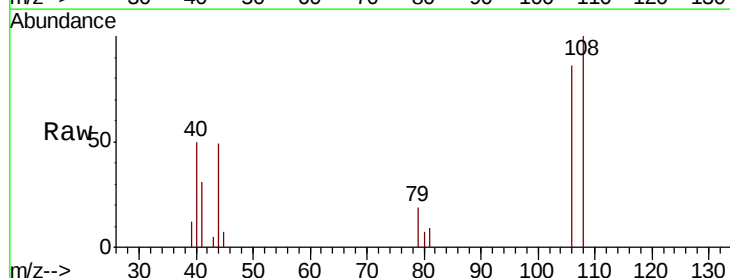
Tgt Ion: 108 Resp: 3561

Ion Ratio Lower Upper

108 100

106 107.1 84.6 126.8

79 17.2 11.6 17.4



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): VL0

3.74

4000

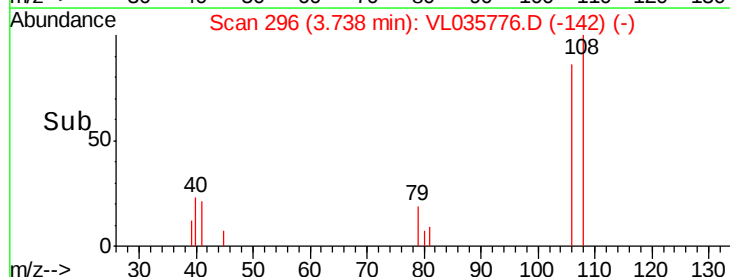
3000

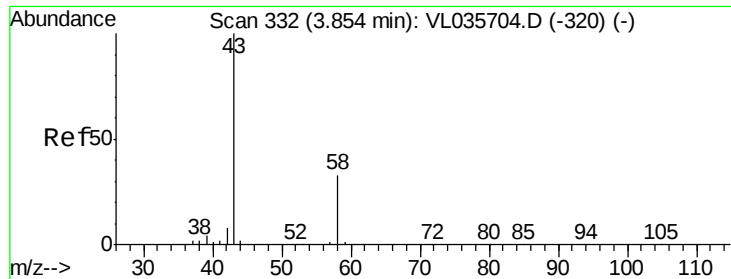
2000

1000

0

Time-->





#15

Acetone

Concen: 0.084 ppbv

RT: 3.87 min Scan# 336

Delta R.T. 0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

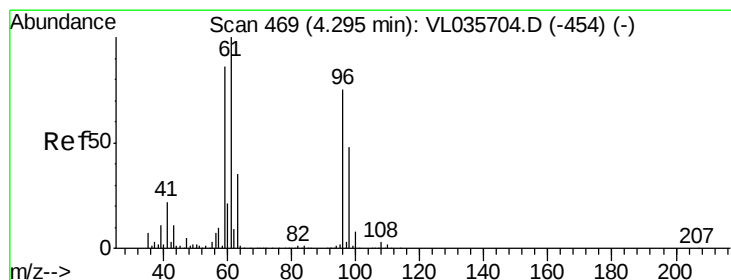
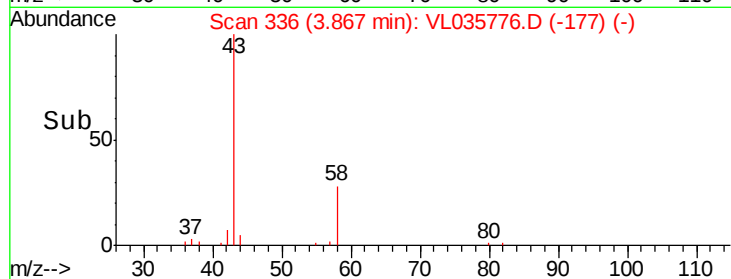
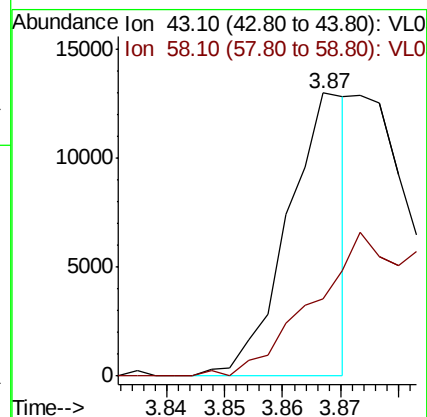
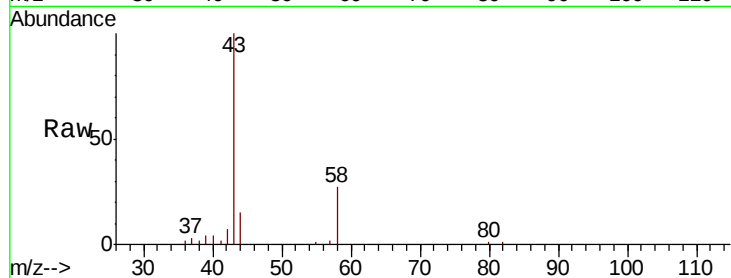
LOD-MDL-AIR-01-QT4-2020

Tot Ion: 43 Resp: 9261

Ion Ratio Lower Upper

43 100

58 0.0 27.3 40.9#



#18

1,1-Dichloroethene

Concen: 0.040 ppbv

RT: 4.29 min Scan# 467

Delta R.T. -0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

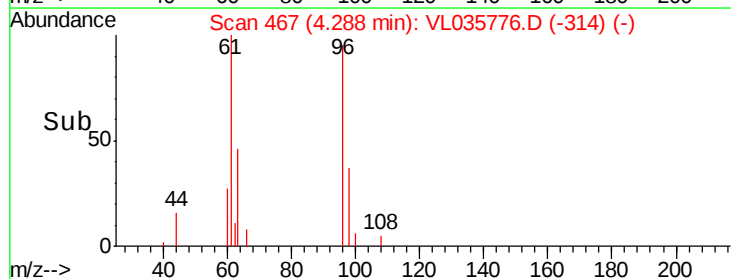
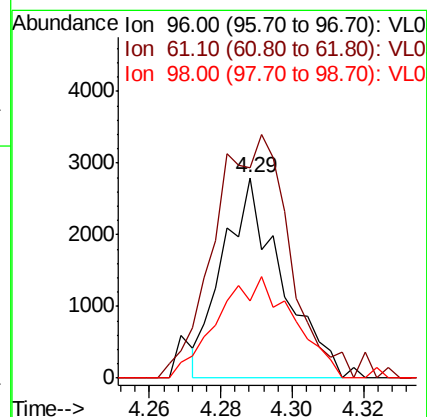
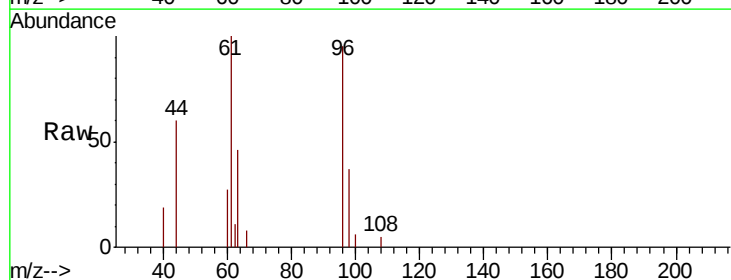
Tgt Ion: 96 Resp: 3164

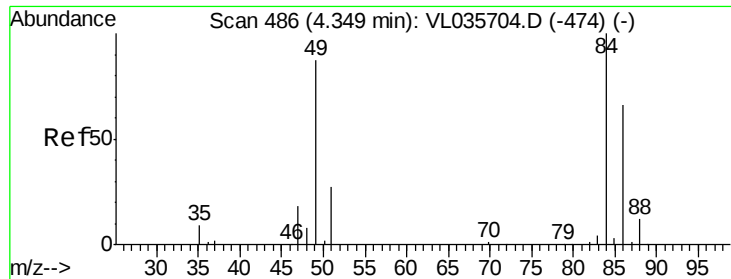
Ion Ratio Lower Upper

96 100

61 92.5 106.7 160.1#

98 38.7 50.8 76.2#

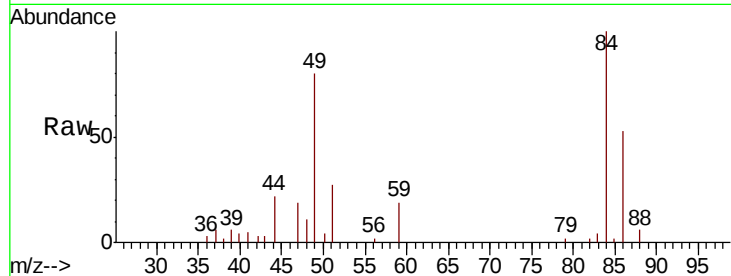




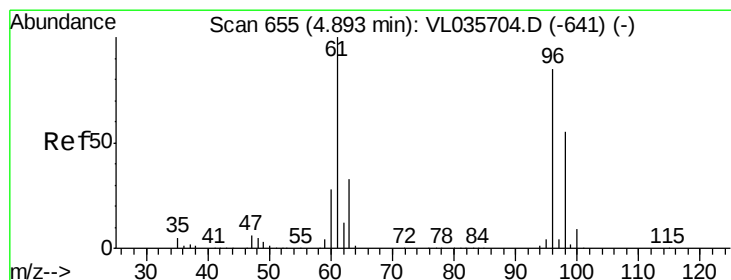
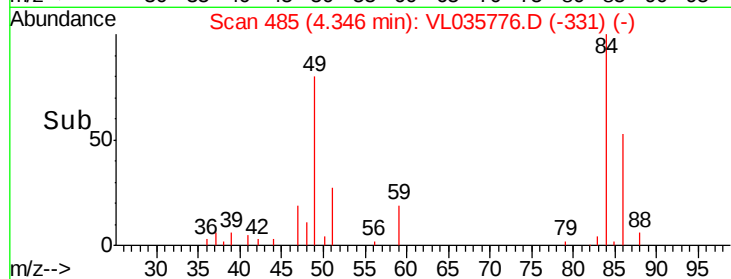
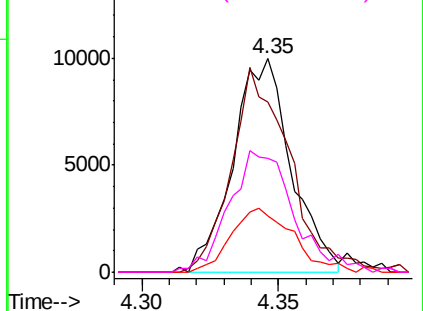
#20
Methylene Chloride
Concen: 0.181 ppbv
RT: 4.35 min Scan# 485
Delta R.T. -0.00 min
Lab File: VL035776.D
Acq: 13 Oct 2020 00:14

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

Tot Ion: 84 Resp: 14709
Ion Ratio Lower Upper
84 100
49 77.8 69.8 104.6
51 26.5 21.8 32.8
86 51.5 52.6 78.8#

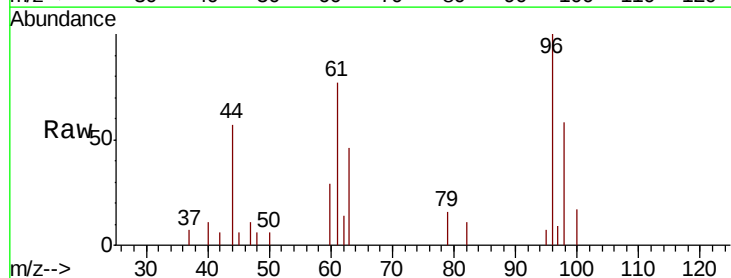


Abundance Ion 84.00 (83.70 to 84.70): VL0
Ion 49.10 (48.80 to 49.80): VL0
Ion 51.10 (50.80 to 51.80): VL0
Ion 86.00 (85.70 to 86.70): VL0

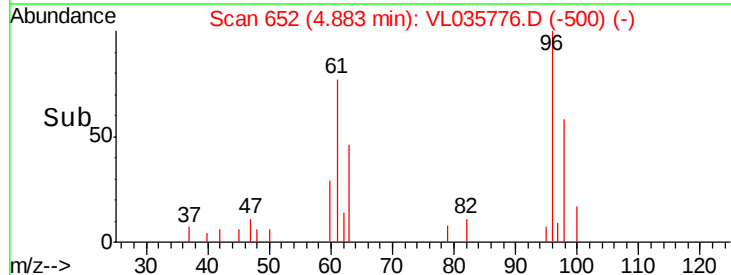
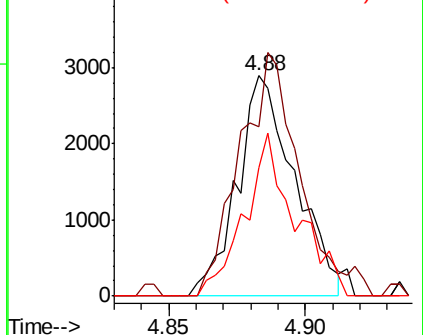


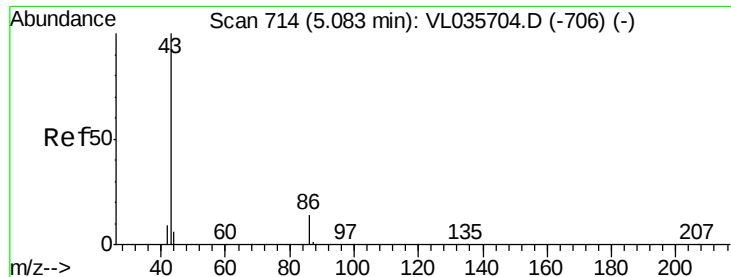
#22
trans-1,2-Dichloroethene
Concen: 0.051 ppbv
RT: 4.88 min Scan# 652
Delta R.T. -0.01 min
Lab File: VL035776.D
Acq: 13 Oct 2020 00:14

Tgt Ion: 96 Resp: 4232
Ion Ratio Lower Upper
96 100
61 76.9 93.7 140.5#
98 58.0 51.2 76.8



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: 0.048 ppbv

RT: 5.08 min Scan# 713

Delta R.T. -0.00 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

LOD-MDL-AIR-01-QT4-2020

Tot Ion: 43 Resp: 6555

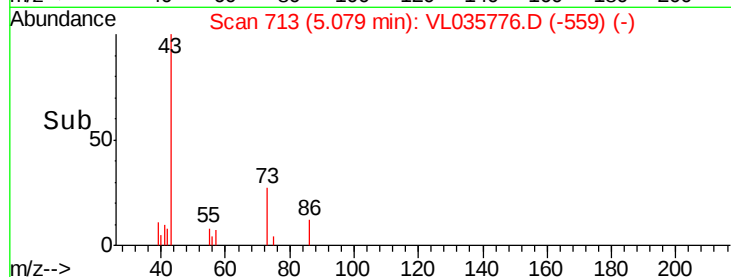
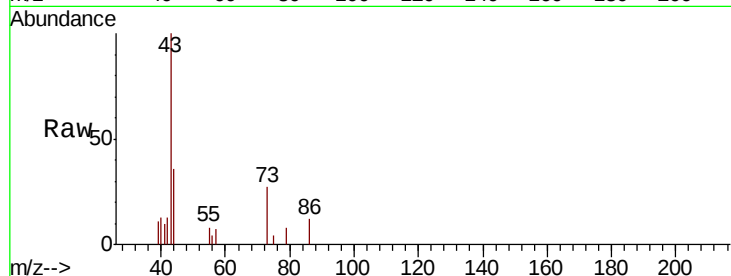
Ion Ratio Lower Upper

43 100

86 13.0 9.7 14.5

42 14.0 7.9 11.9#

44 0.0 4.8 7.2#

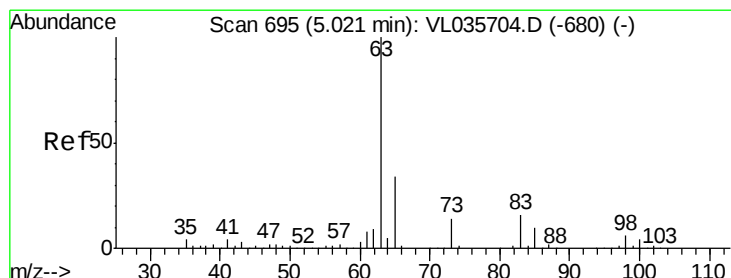
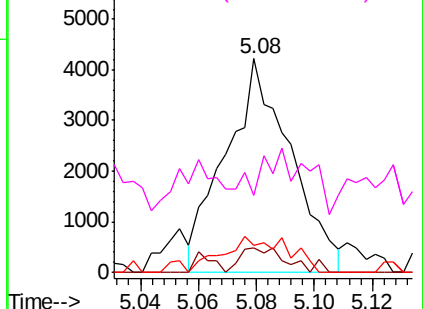


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#24

1,1-Dichloroethane

Concen: 0.047 ppbv

RT: 5.01 min Scan# 692

Delta R.T. -0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

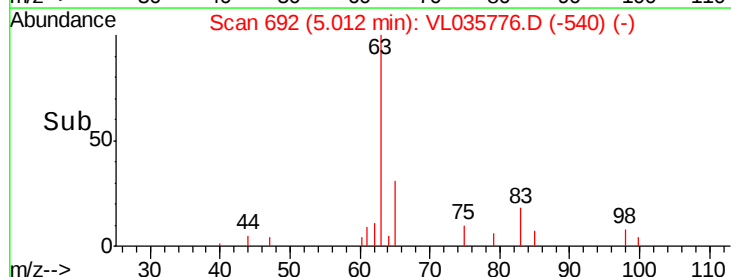
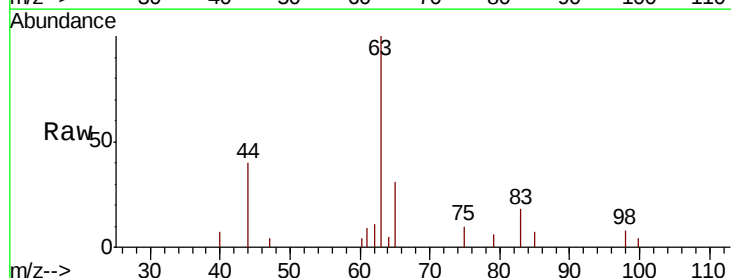
Tgt Ion: 63 Resp: 6973

Ion Ratio Lower Upper

63 100

98 7.9 3.3 9.8

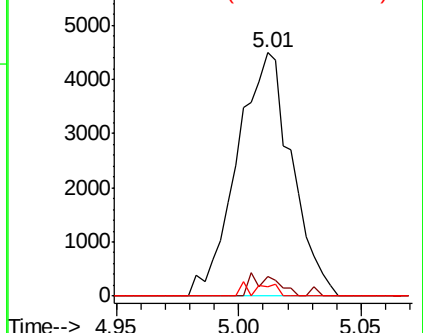
100 3.7 2.0 5.8

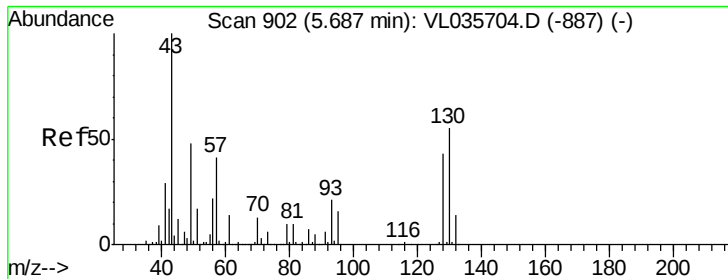


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0





#25

Ethyl Acetate

Concen: 0.048 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

LOD-MDL-AIR-01-QT4-2020

Tot Ion: 43 Resp: 9557

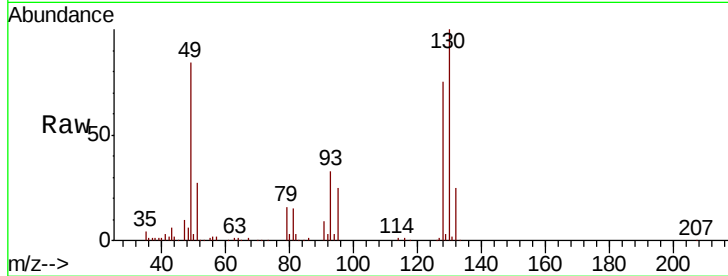
Ion Ratio Lower Upper

43 100

45 11.5 8.6 12.8

61 9.4 10.4 15.6#

70 8.2 8.9 13.3#

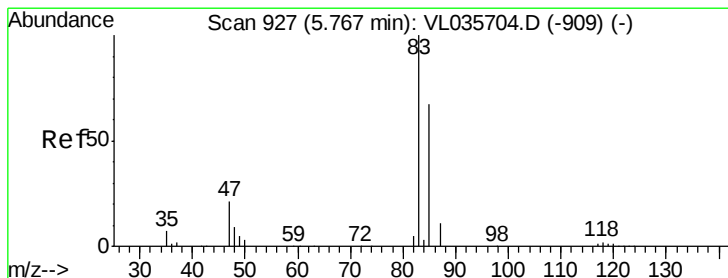
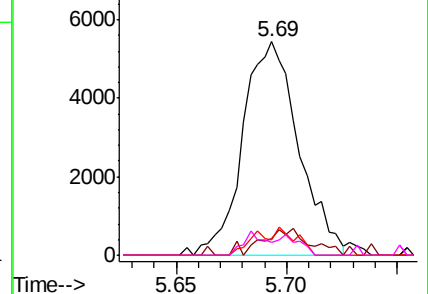
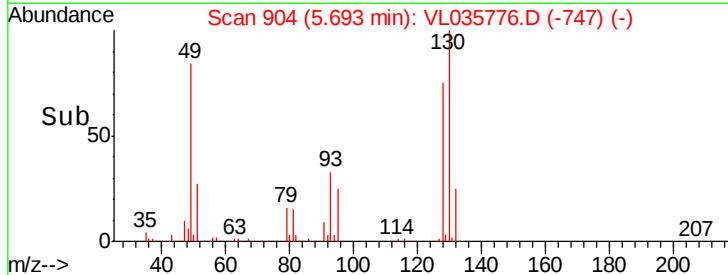


Abundance Ion 43.10 (42.80 to 43.80): VL0

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



#29

Chloroform

Concen: 0.052 ppbv

RT: 5.75 min Scan# 922

Delta R.T. -0.02 min

Lab File: VL035776.D

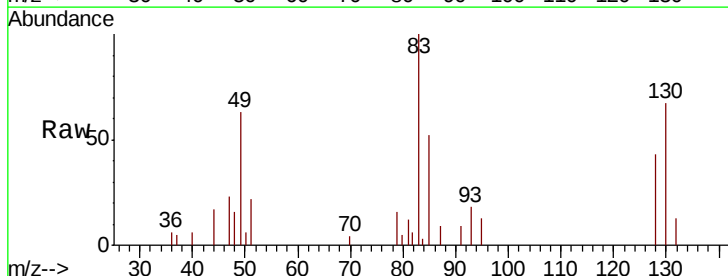
Acq: 13 Oct 2020 00:14

Tgt Ion: 83 Resp: 11536

Ion Ratio Lower Upper

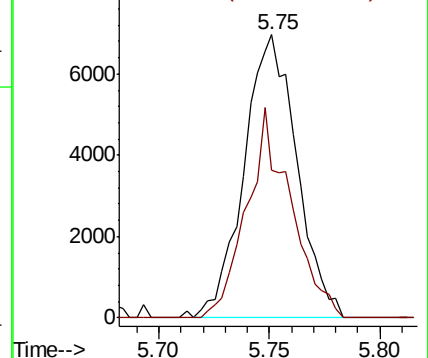
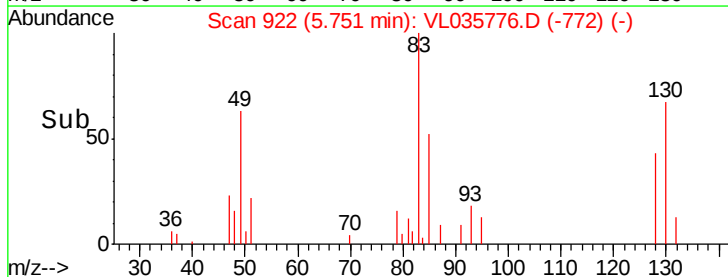
83 100

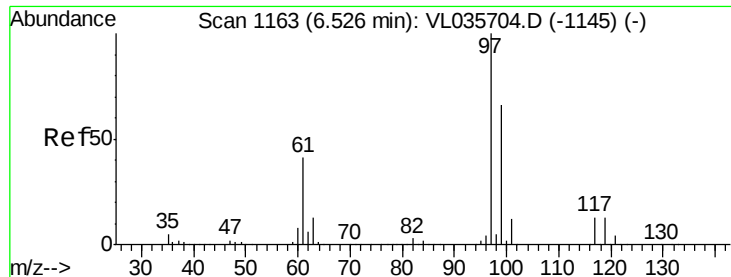
85 52.0 54.0 81.0#



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0





#32

1,1,1-Trichloroethane

Concen: 0.043 ppbv

RT: 6.51 min Scan# 1159

Delta R.T. -0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

LOD-MDL-AIR-01-QT4-2020

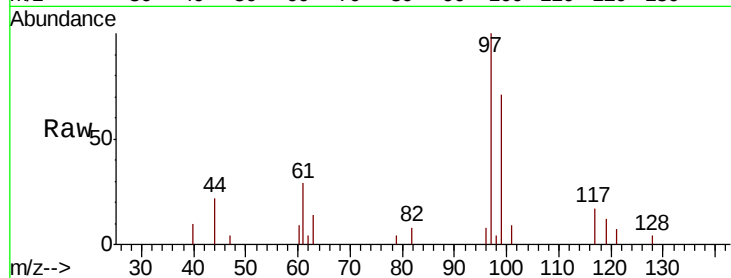
Tot Ion: 97 Resp: 8454

Ion Ratio Lower Upper

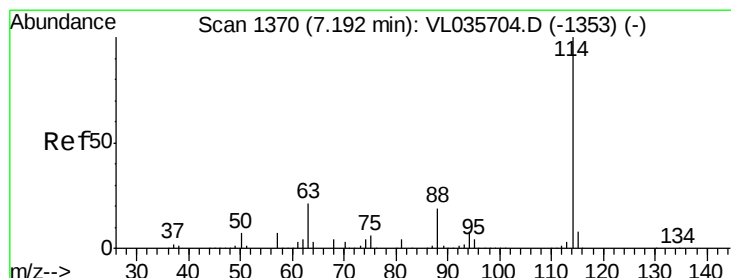
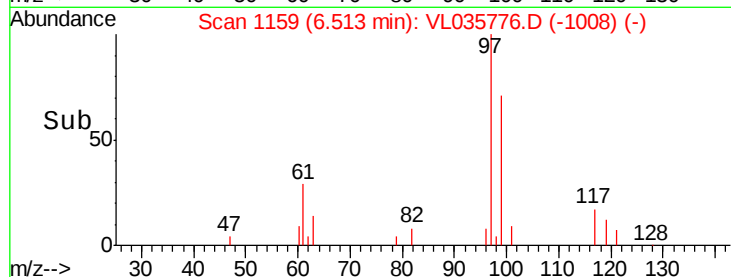
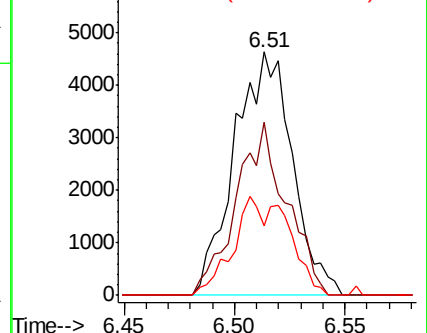
97 100

99 61.8 52.7 79.1

61 38.9 32.7 49.1



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 99.00 (98.70 to 99.70): VL0
Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. -0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

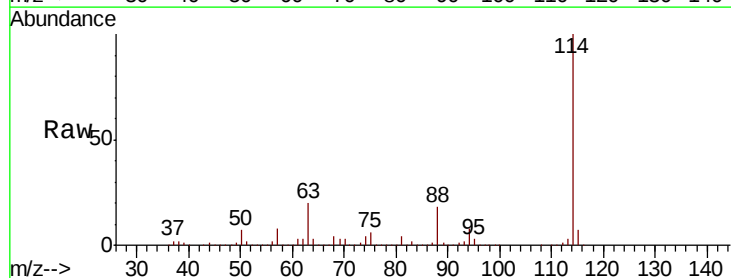
Tgt Ion: 114 Resp: 3880435

Ion Ratio Lower Upper

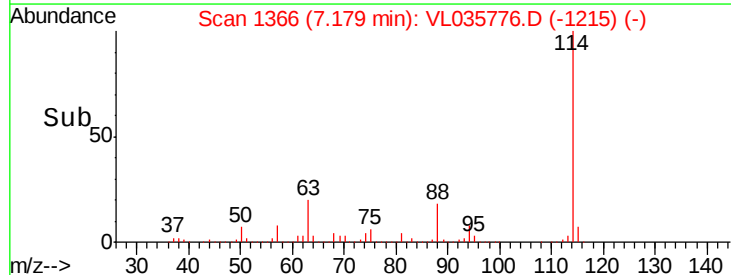
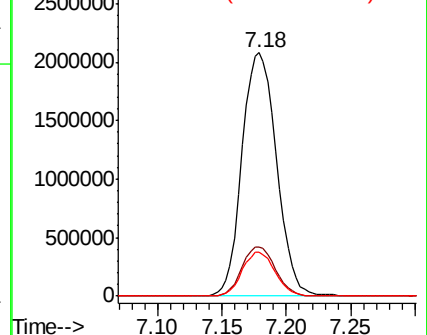
114 100

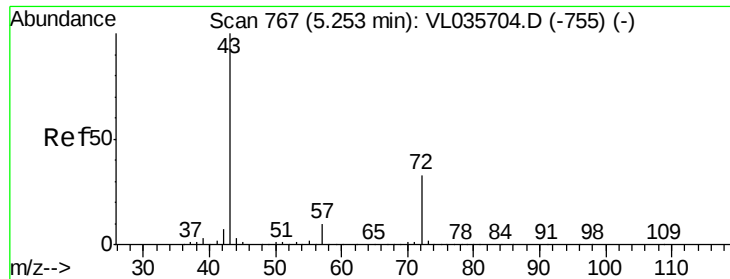
63 19.7 16.1 24.1

88 17.3 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

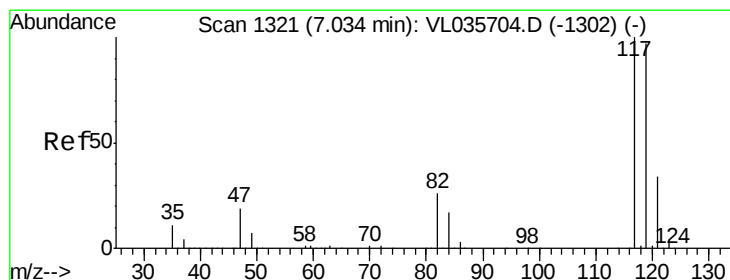
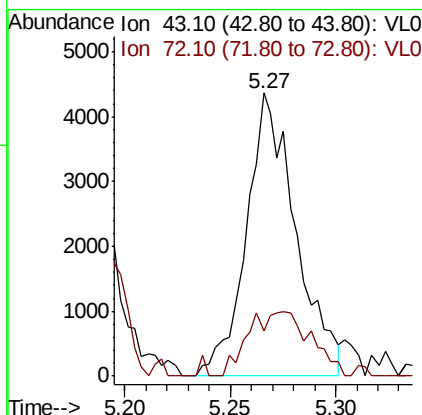
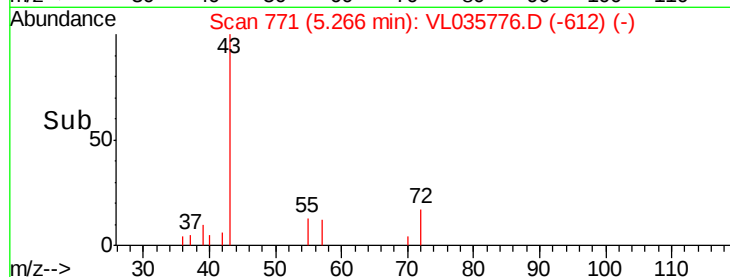
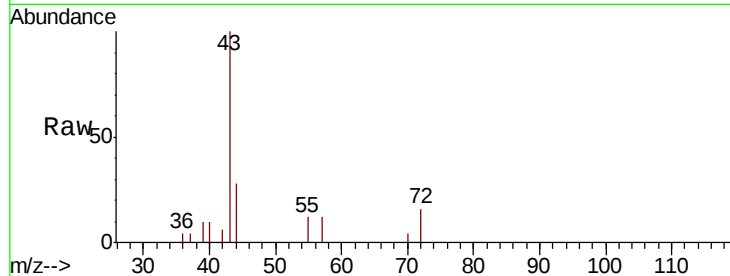




#34
 2-Butanone
 Concen: 0.055 ppbv
 RT: 5.27 min Scan# 771
 Delta R.T. 0.01 min
 Lab File: VL035776.D
 Acq: 13 Oct 2020 00:14

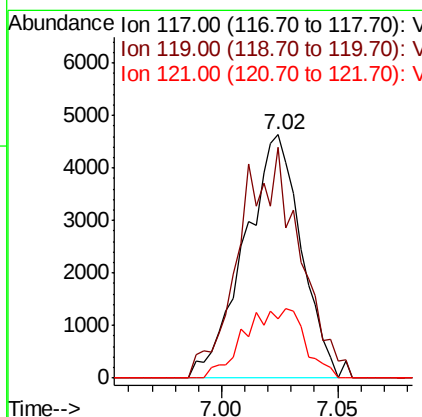
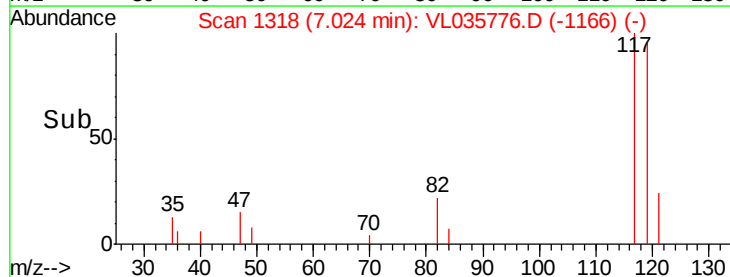
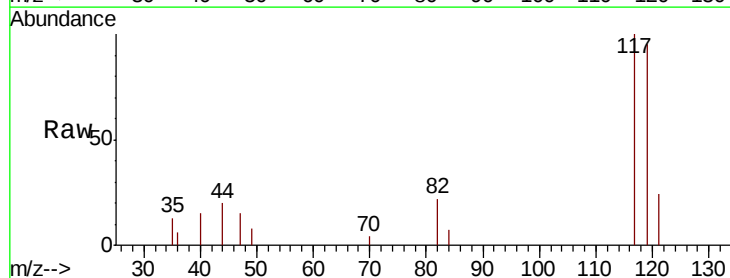
Instrument :
 MSVOA_L
 ClientSampleId :
 LOD-MDL-AIR-01-QT4-2020

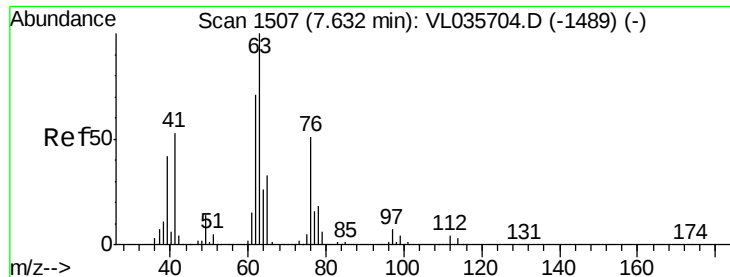
Tot Ion: 43 Resp: 7116
 Ion Ratio Lower Upper
 43 100
 72 30.7 26.1 39.1



#35
 Carbon Tetrachloride
 Concen: 0.039 ppbv
 RT: 7.02 min Scan# 1318
 Delta R.T. -0.01 min
 Lab File: VL035776.D
 Acq: 13 Oct 2020 00:14

Tgt Ion: 117 Resp: 7819
 Ion Ratio Lower Upper
 117 100
 119 94.6 77.7 116.5
 121 24.1 26.9 40.3#





#39

1,2-Dichloropropane

Concen: 8.281 ppbv

RT: 7.18 min Scan# 1365

Delta R.T. -0.46 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

LOD-MDL-AIR-01-QT4-2020

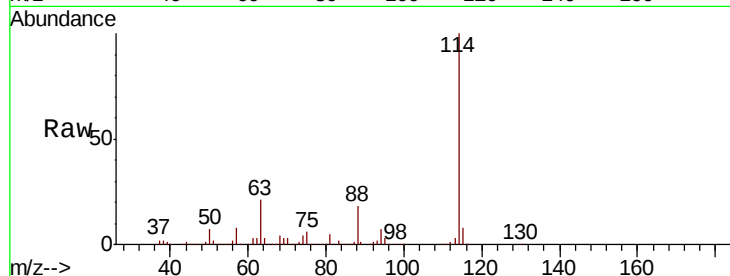
Tot Ion: 63 Resp: 758923

Ion Ratio Lower Upper

63 100

41 0.0 42.6 63.8#

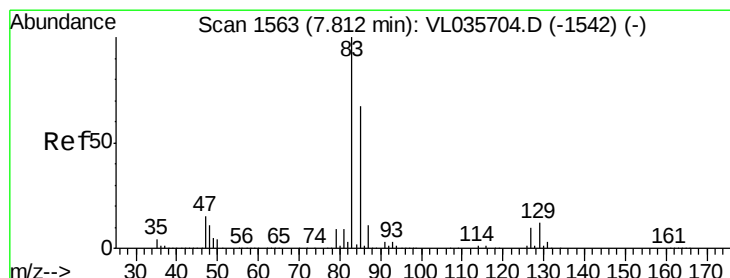
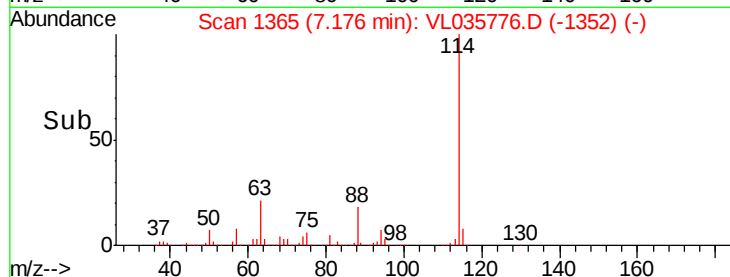
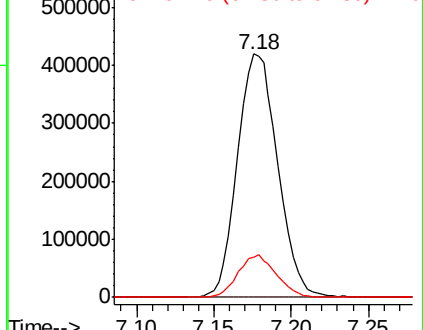
62 16.6 56.5 84.7#



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



#42

Bromodichloromethane

Concen: 0.039 ppbv

RT: 7.79 min Scan# 1556

Delta R.T. -0.02 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

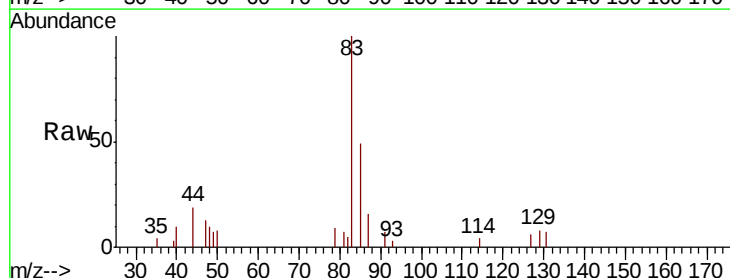
Tgt Ion: 83 Resp: 8181

Ion Ratio Lower Upper

83 100

85 49.4 53.4 80.0#

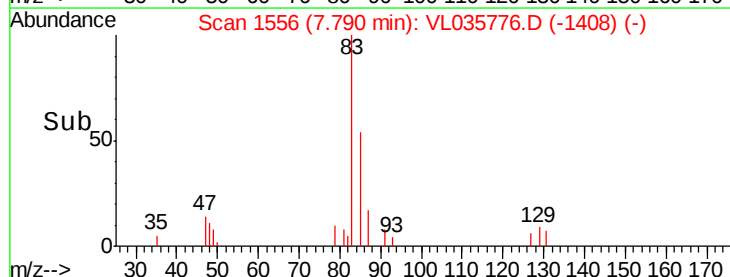
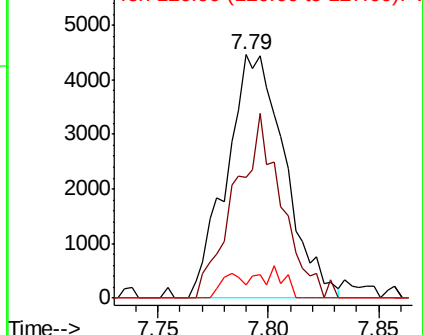
127 5.5 7.8 11.6#

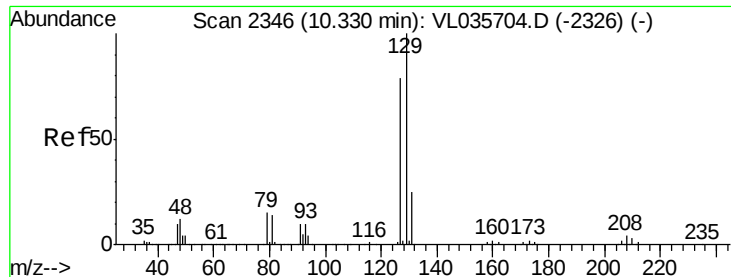


Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

Ion 126.90 (126.60 to 127.60): V

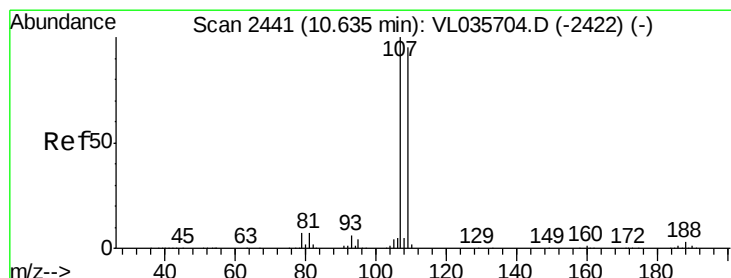
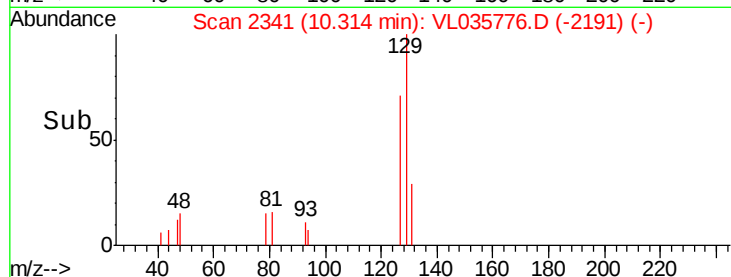
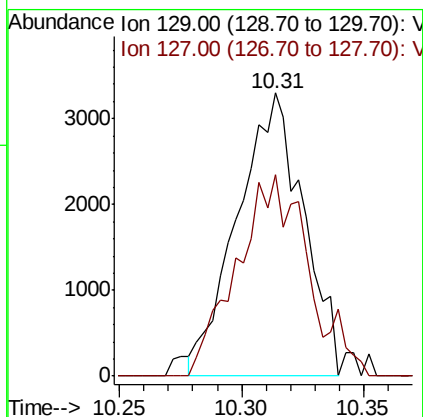
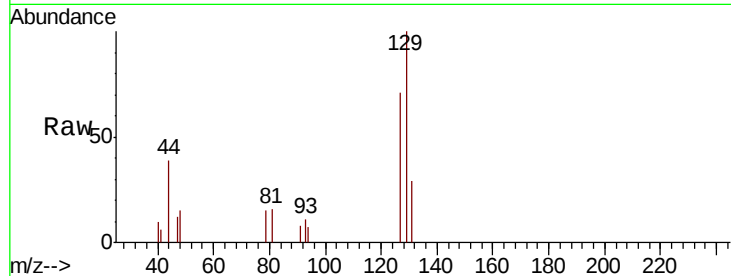




#48
 Dibromochloromethane
 Concen: 0.031 ppbv
 RT: 10.31 min Scan# 2341
 Delta R.T. -0.02 min
 Lab File: VL035776.D
 Acq: 13 Oct 2020 00:14

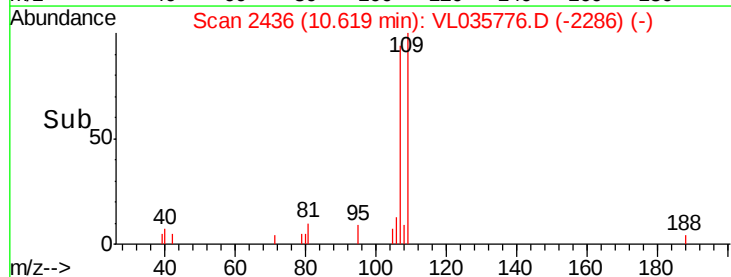
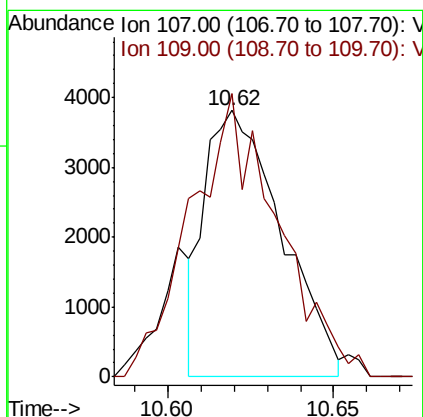
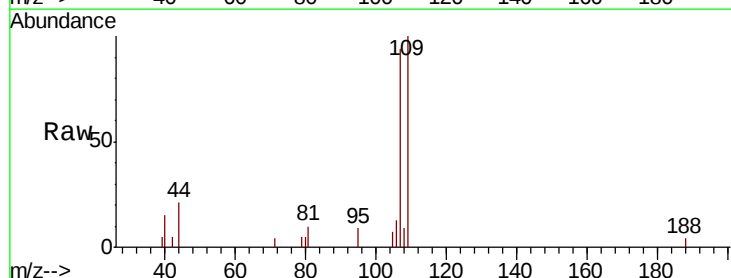
Instrument :
 MSVOA_L
 ClientSampleId :
 LOD-MDL-AIR-01-QT4-2020

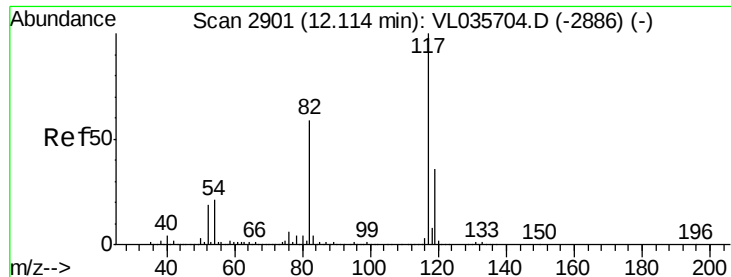
Tot Ion:129 Resp: 6177
 Ion Ratio Lower Upper
 129 100
 127 77.2 39.4 118.1



#54
 1,2-Dibromoethane
 Concen: 0.031 ppbv
 RT: 10.62 min Scan# 2436
 Delta R.T. -0.02 min
 Lab File: VL035776.D
 Acq: 13 Oct 2020 00:14

Tgt Ion:107 Resp: 6128
 Ion Ratio Lower Upper
 107 100
 109 101.3 76.0 114.0

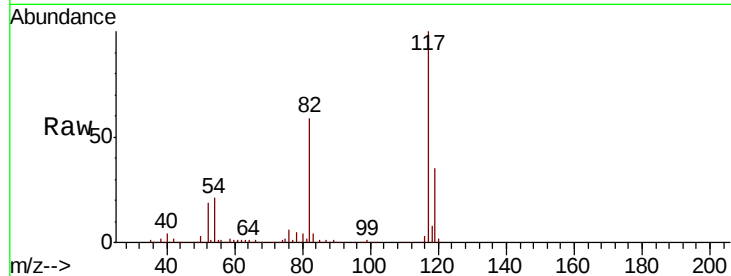




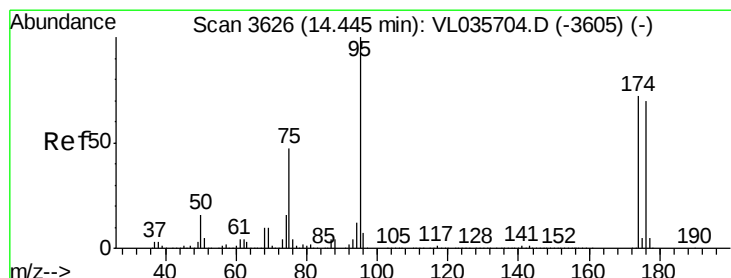
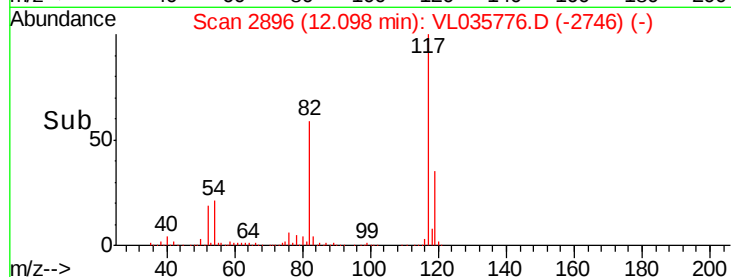
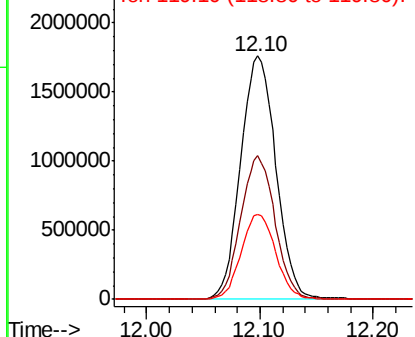
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min Scan# 2896
Delta R.T. -0.02 min
Lab File: VL035776.D
Acq: 13 Oct 2020 00:14

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

Tot Ion:117 Resp: 3822195
Ion Ratio Lower Upper
117 100
82 57.7 46.1 69.1
119 34.5 28.0 42.0

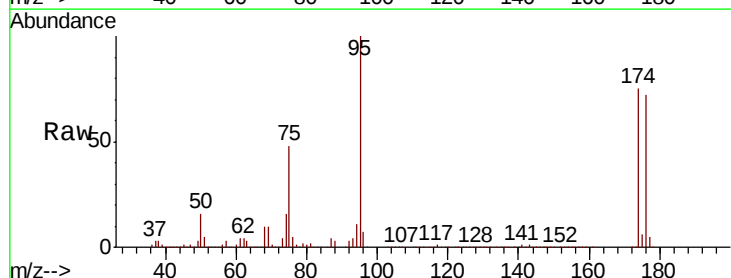


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

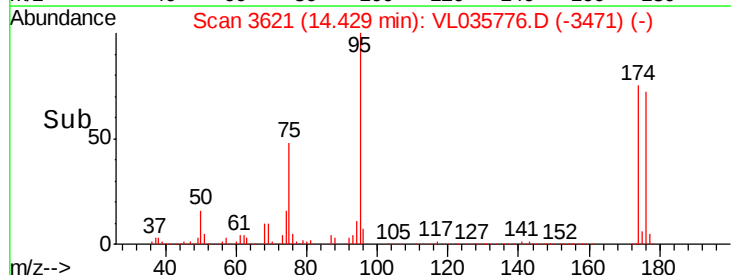
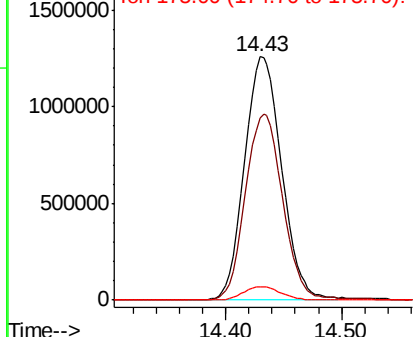


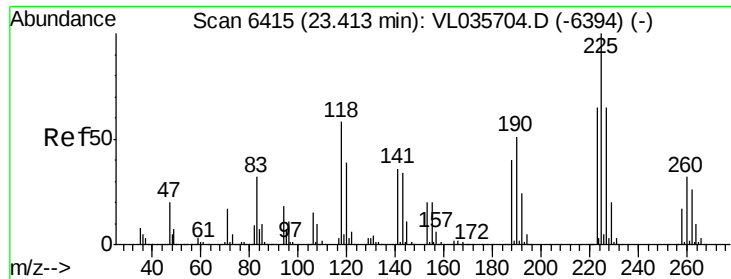
#68
1-Bromo-4-Fluorobenzene
Concen: 9.812 ppbv
RT: 14.43 min Scan# 3621
Delta R.T. -0.02 min
Lab File: VL035776.D
Acq: 13 Oct 2020 00:14

Tgt Ion: 95 Resp: 2810189
Ion Ratio Lower Upper
95 100
174 77.7 59.6 89.4
175 5.6 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





#78

Hexachloro-1,3-Butadiene

Concen: 0.049 ppbv

RT: 23.41 min Scan# 6413

Delta R.T. -0.01 min

Lab File: VL035776.D

Acq: 13 Oct 2020 00:14

Instrument :

MSVOA_L

ClientSampleId :

LOD-MDL-AIR-01-QT4-2020

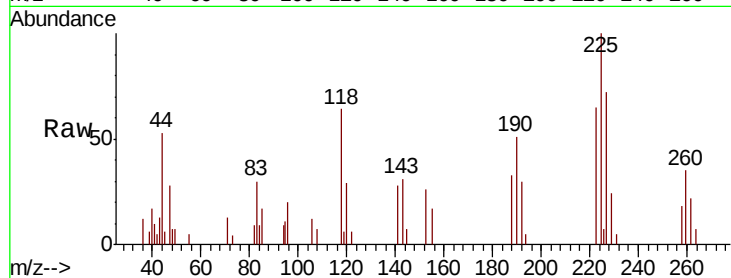
Tot Ion: 225 Resp: 7426

Ion Ratio Lower Upper

225 100

223 70.2 51.3 76.9

227 69.6 51.6 77.4



Abundance Ion 224.90 (224.60 to 225.60): V

Ion 222.90 (222.60 to 223.60): V

Ion 226.90 (226.60 to 227.60): V

