

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL101719\
 Data File : VL034321.D
 Acq On : 17 Oct 2019 18:02
 Operator : SY/AP
 Sample : K5111-15 0.1 PPB MDL
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MDL-MDL-AIR-03-QT4-2019DL

Quant Time: Oct 18 04:34:10 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL101619AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Oct 17 05:12:37 2019
 QLast Update : Thu Oct 17 05:12:37 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	973621	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.21	114	1859874	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.15	117	1885572	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.49	95	1613594	10.10	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.03	85	21019	0.125	ppbv #	75
3) Chlorodifluoromethane	2.97	51	14825	0.130	ppbv	98
4) Chloromethane	3.12	50	3372	0.050	ppbv #	1
5) Vinyl Chloride	3.24	62	3665	0.057	ppbv	97
6) Bromomethane	3.46	94	2468	0.078	ppbv	97
7) Chloroethane	3.55	64	2708	0.120	ppbv	98
8) Dichlorotetrafluoroethane	3.17	85	16816	0.116	ppbv	97
10) Heptane	8.17	43	4466	0.034	ppbv #	1
11) Trichlorofluoromethane	3.94	101	20361	0.128	ppbv	87
12) 1,1,2-Trichlorotrifluoroet	4.49	101	13785	0.132	ppbv	95
13) Ethanol	3.61	45	1246	0.110	ppbv #	36
14) Bromoethene	3.73	108	2616	0.064	ppbv #	17
15) Acetone	3.86	43	38742	0.278	ppbv	93
16) 1,3-Butadiene	3.31	39	4631	0.082	ppbv #	63
18) 1,1-Dichloroethene	4.29	96	4642	0.102	ppbv	97
20) Methylene Chloride	4.35	84	9012	0.179	ppbv	86
21) Allyl Chloride	4.41	41	3116	0.040	ppbv #	5
22) trans-1,2-Dichloroethene	4.90	96	2151	0.047	ppbv #	19
23) Vinyl Acetate	5.10	43	14458	0.083	ppbv #	59
24) 1,1-Dichloroethane	5.02	63	13319	0.103	ppbv #	92
25) Ethyl Acetate	5.71	43	19445	0.083	ppbv #	90
26) Hexane	5.71	57	3647	0.036	ppbv #	1
27) Carbon Disulfide	4.56	76	4767	0.046	ppbv #	60
29) Chloroform	5.77	83	15524	0.098	ppbv #	79
30) Cyclohexane	7.17	84	3603	0.049	ppbv #	1
31) cis-1,2-Dichloroethene	5.56	61	7235	0.071	ppbv #	73
32) 1,1,1-Trichloroethane	6.55	97	8179	0.053	ppbv #	18
34) 2-Butanone	5.28	43	16110	0.106	ppbv	99
35) Carbon Tetrachloride	7.05	117	9675	0.060	ppbv	90
36) Benzene	6.93	78	13079	0.073	ppbv #	73
37) 1,2-Dichloroethane	6.34	62	16264	0.122	ppbv	98
38) Trichloroethene	7.88	130	2411	0.034	ppbv #	55
39) 1,2-Dichloropropane	7.21	63	569327	7.409	ppbv #	23
40) 1,4-Dioxane	7.94	88	1339	0.050	ppbv #	1
42) Bromodichloromethane	7.83	83	14283	0.088	ppbv	90
47) 1,1,2-Trichloroethane	9.53	97	3874	0.050	ppbv #	70
48) Dibromochloromethane	10.36	129	4943	0.039	ppbv #	10
49) Bromoform	13.11	173	3709	0.033	ppbv #	21
52) Tetrachloroethene	11.28	164	2104	0.030	ppbv #	48
57) Chlorobenzene	12.22	112	5473	0.035	ppbv #	43
61) Styrene	13.60	104	5620	0.035	ppbv #	24

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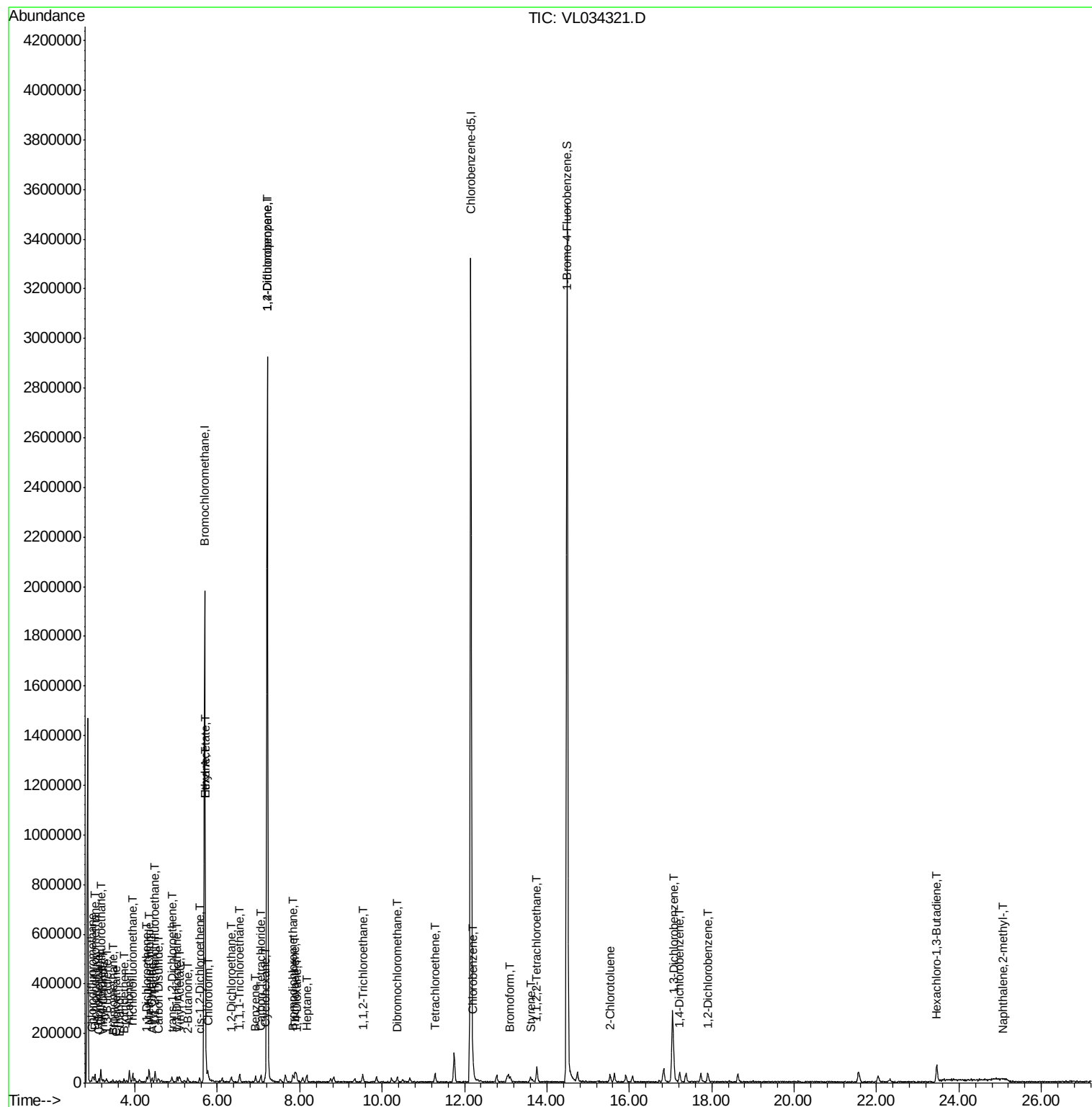
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
63) 1,1,2,2-Tetrachloroethane	13.76	83	13431	0.073	ppbv #	52
71) 2-Chlorotoluene	15.53	91	9655	0.041	ppbv #	45
75) 1,3-Dichlorobenzene	17.08	146	9232	0.058	ppbv #	9
76) 1,4-Dichlorobenzene	17.23	146	14694	0.095	ppbv	93
77) 1,2-Dichlorobenzene	17.90	146	6201	0.040	ppbv #	22
78) Hexachloro-1,3-Butadiene	23.46	225	11725	0.091	ppbv #	53
80) Naphthalene,2-methyl-	25.06	142	2694	0.048	ppbv #	83

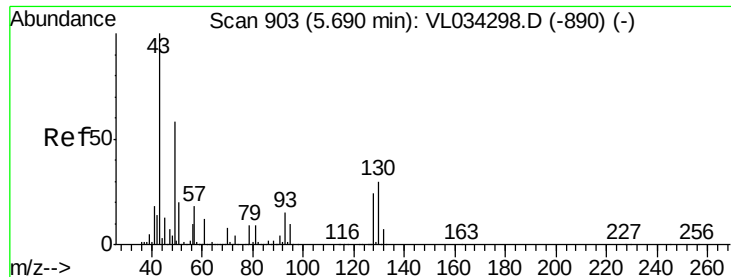
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 903

Delta R.T. 0.00 min

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Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

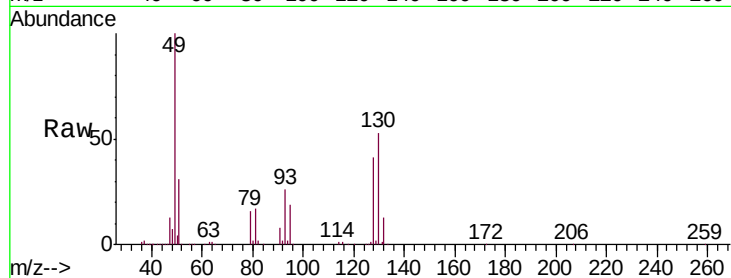
Tgt Ion: 49 Resp: 973621

Ion Ratio Lower Upper

49 100

128 41.2 20.6 61.8

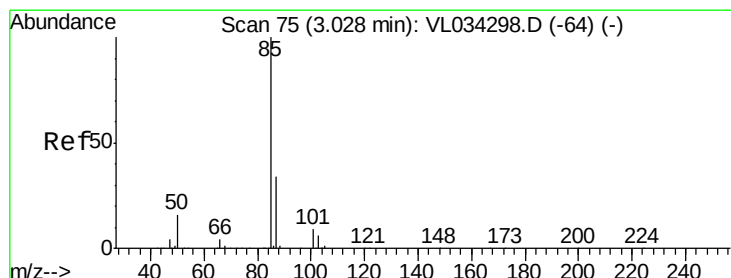
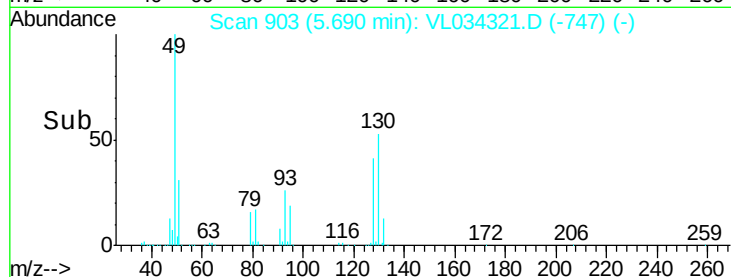
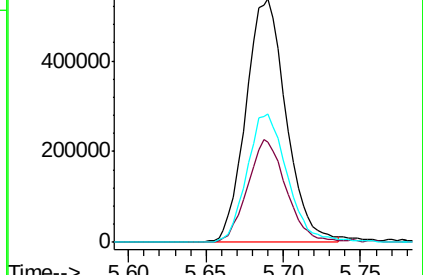
130 53.5 26.2 78.5



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: 0.125 ppbv

RT: 3.03 min Scan# 75

Delta R.T. 0.00 min

Lab File: VL034321.D

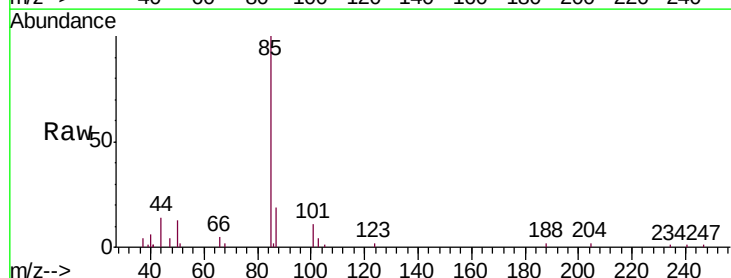
Acq: 17 Oct 2019 18:02

Tgt Ion: 85 Resp: 21019

Ion Ratio Lower Upper

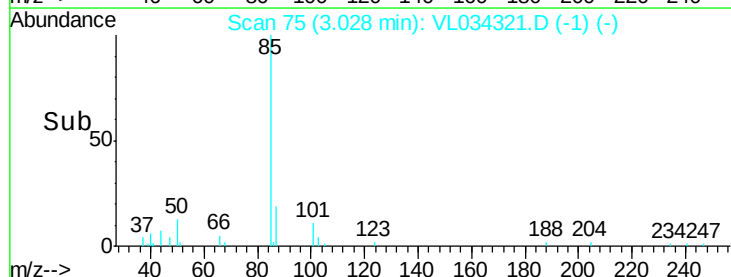
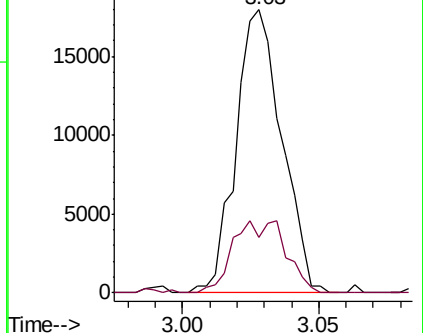
85 100

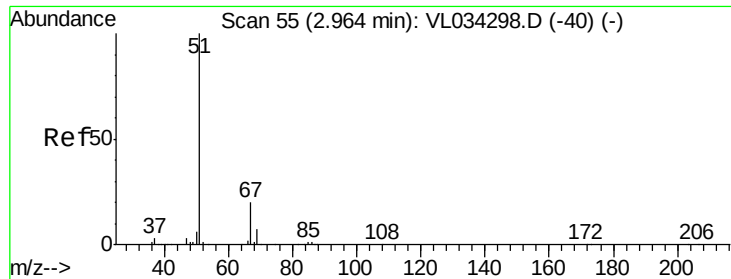
87 19.5 27.0 40.6#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.130 ppbv

RT: 2.97 min Scan# 56

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

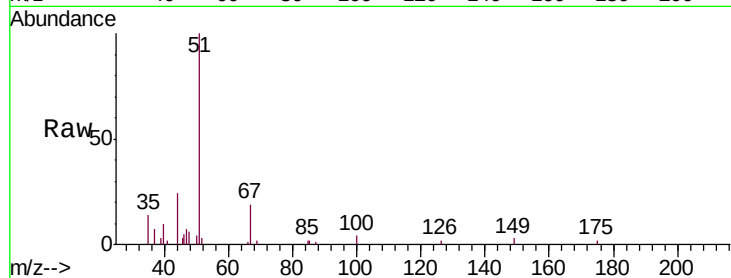
MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion: 51 Resp: 14825

Ion Ratio Lower Upper

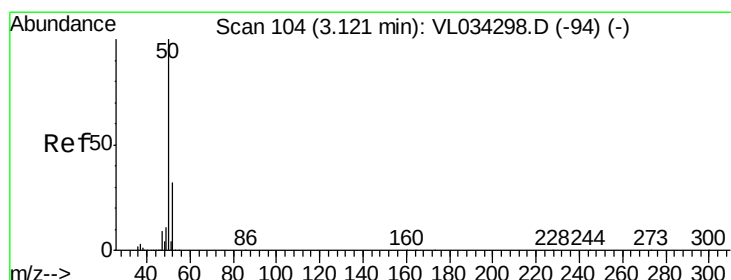
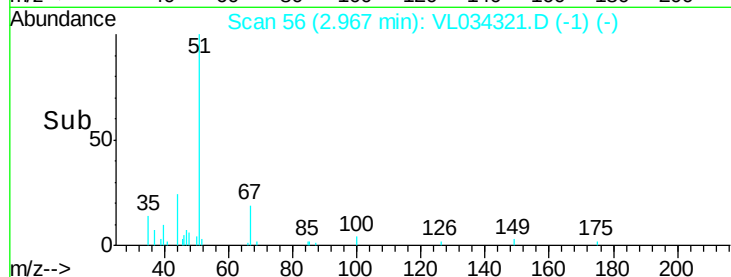
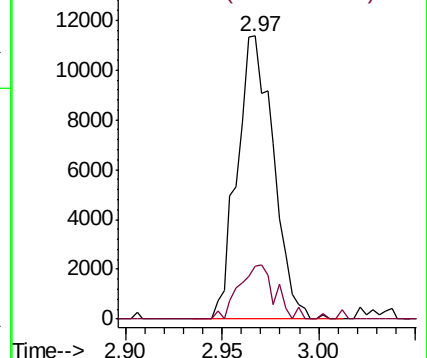
51 100

67 18.9 15.8 23.8



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.050 ppbv

RT: 3.12 min Scan# 104

Delta R.T. 0.00 min

Lab File: VL034321.D

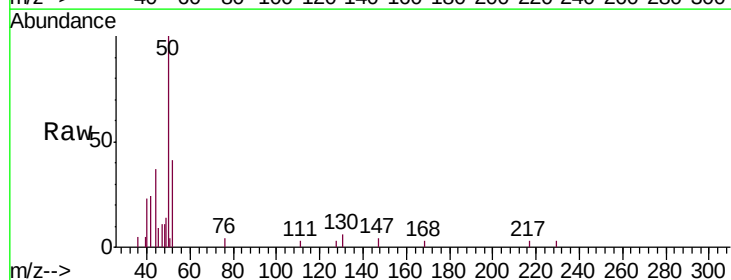
Acq: 17 Oct 2019 18:02

Tgt Ion: 50 Resp: 3372

Ion Ratio Lower Upper

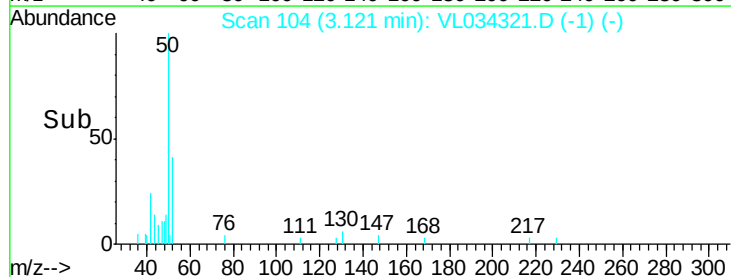
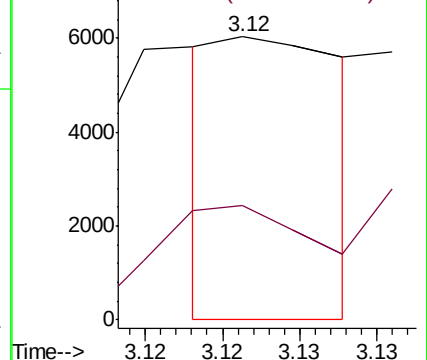
50 100

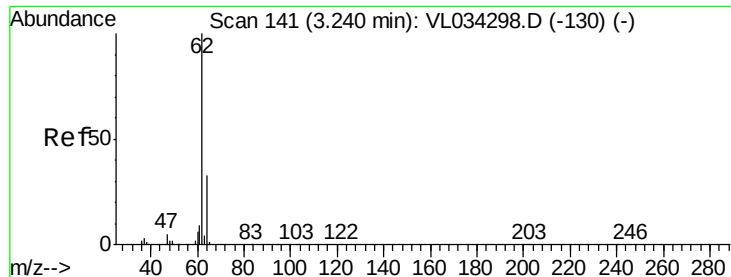
52 153.6 25.4 38.2#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.057 ppbv

RT: 3.24 min Scan# 142

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

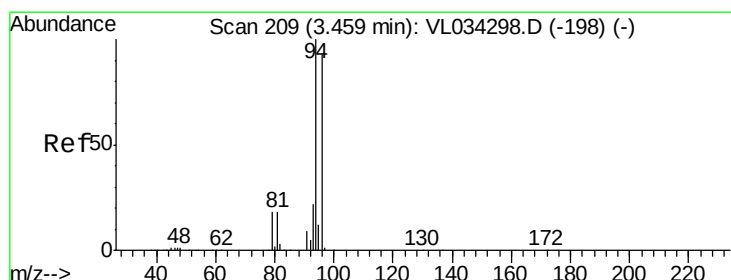
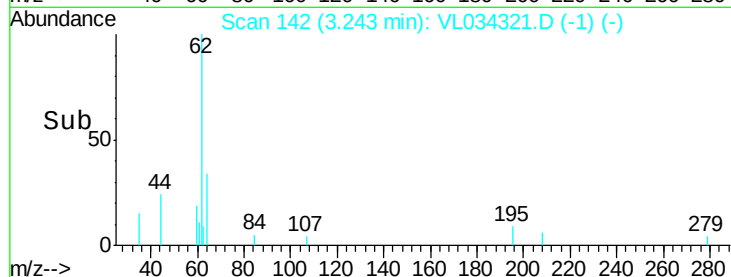
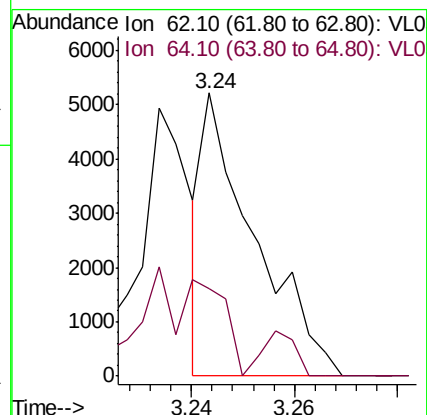
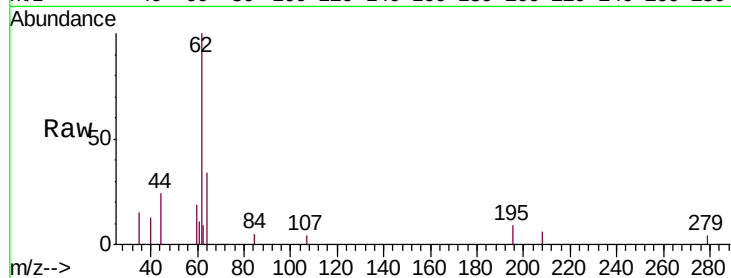
MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion: 62 Resp: 3665

Ion Ratio Lower Upper

62 100

64 31.0 26.0 39.0



#6

Bromomethane

Concen: 0.078 ppbv

RT: 3.46 min Scan# 210

Delta R.T. 0.00 min

Lab File: VL034321.D

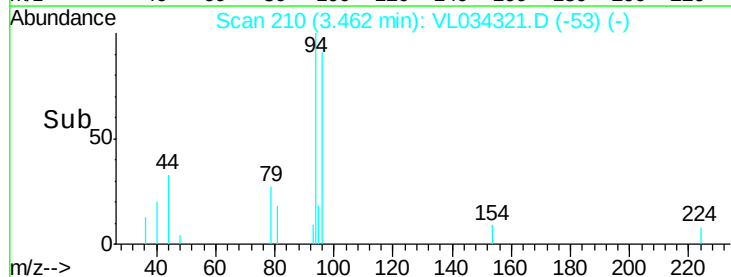
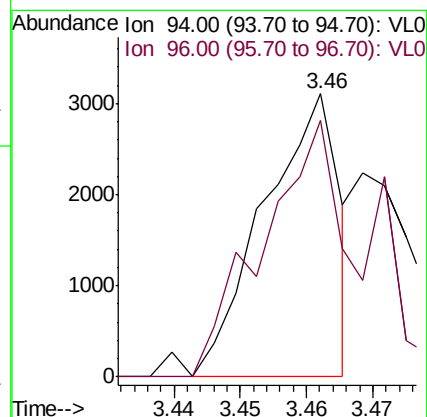
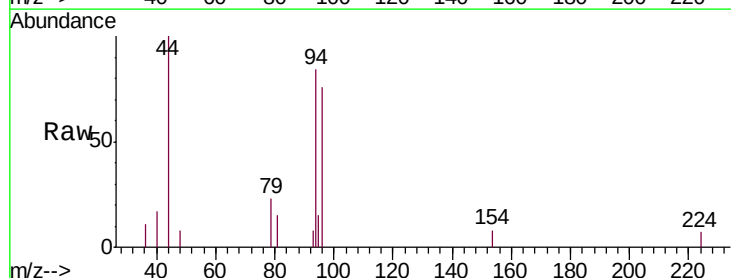
Acq: 17 Oct 2019 18:02

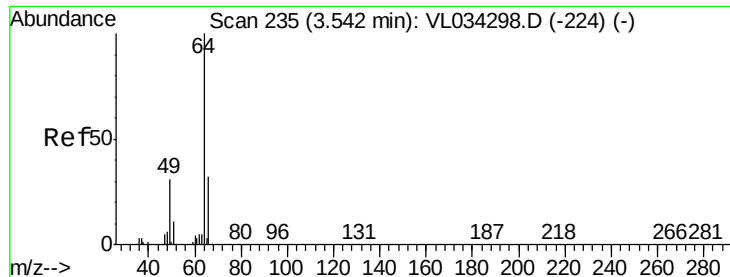
Tgt Ion: 94 Resp: 2468

Ion Ratio Lower Upper

94 100

96 90.6 74.6 112.0





#7

Chloroethane

Concen: 0.120 ppbv

RT: 3.55 min Scan# 236

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

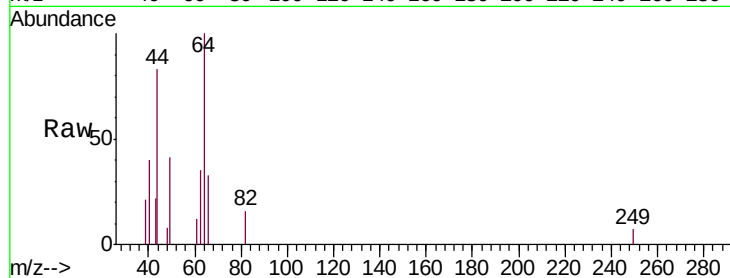
MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion: 64 Resp: 2708

Ion Ratio Lower Upper

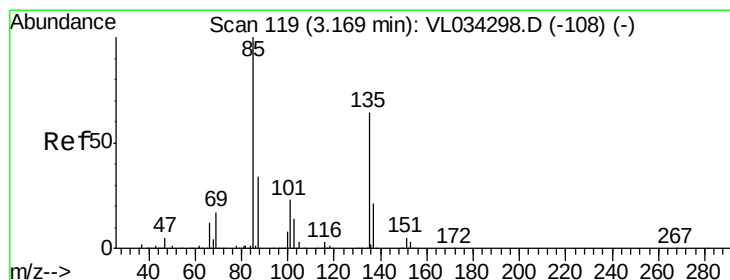
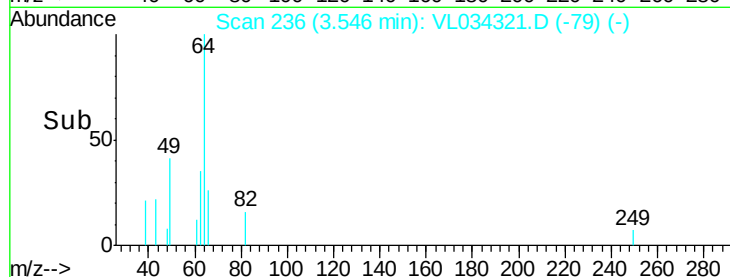
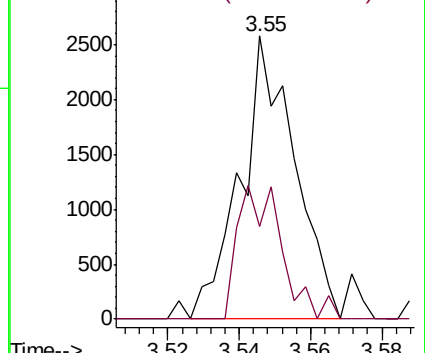
64 100

66 32.7 25.4 38.0



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#8

Dichlorotetrafluoroethane

Concen: 0.116 ppbv

RT: 3.17 min Scan# 120

Delta R.T. 0.00 min

Lab File: VL034321.D

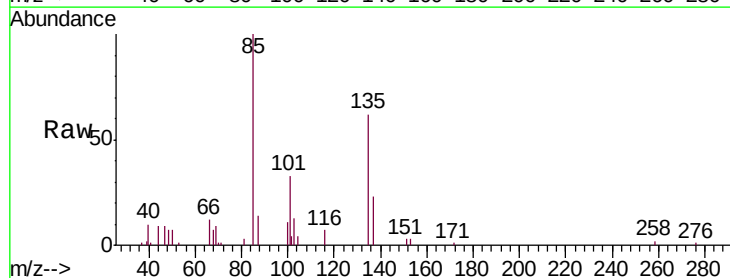
Acq: 17 Oct 2019 18:02

Tgt Ion: 85 Resp: 16816

Ion Ratio Lower Upper

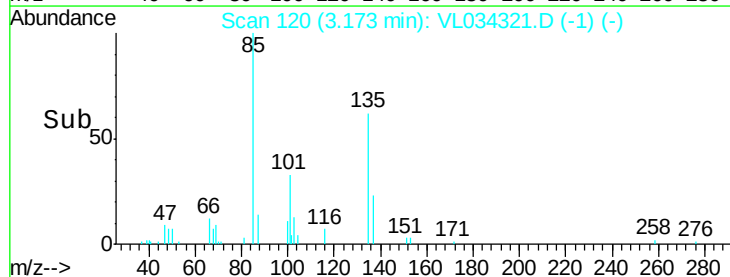
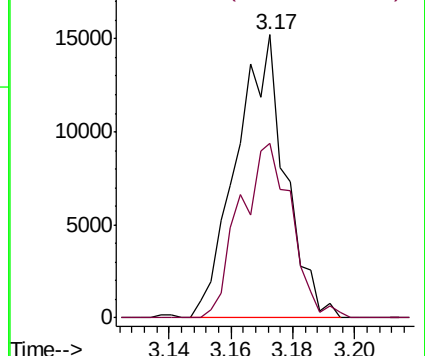
85 100

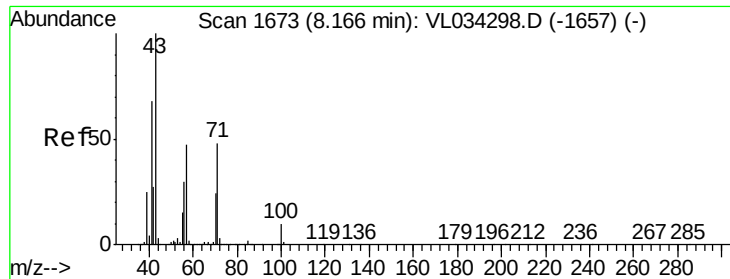
135 64.7 50.2 75.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): VL0

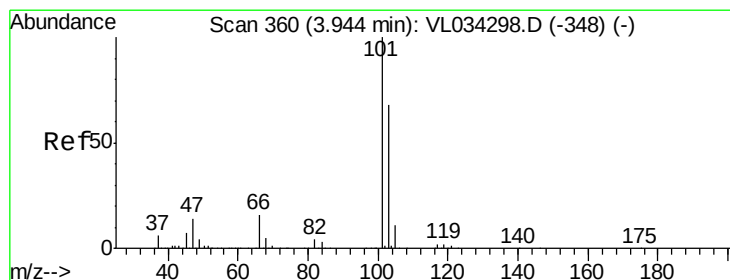
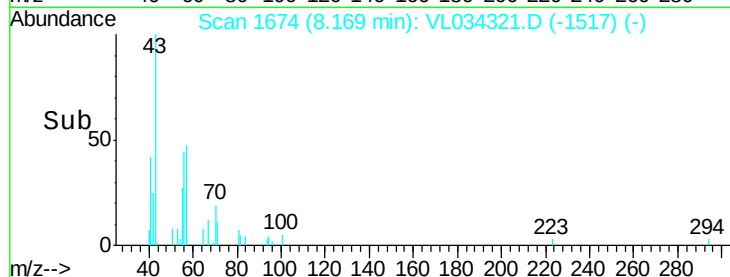
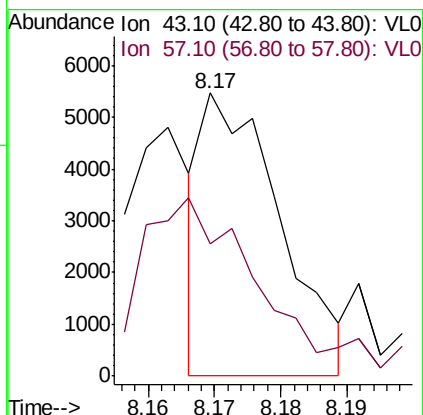
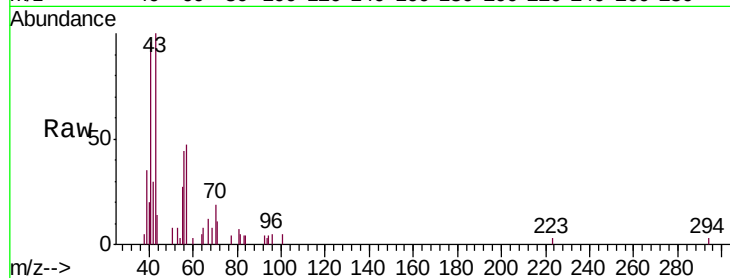




#10
Heptane
Concen: 0.034 ppbv
RT: 8.17 min Scan# 1674
Delta R.T. 0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

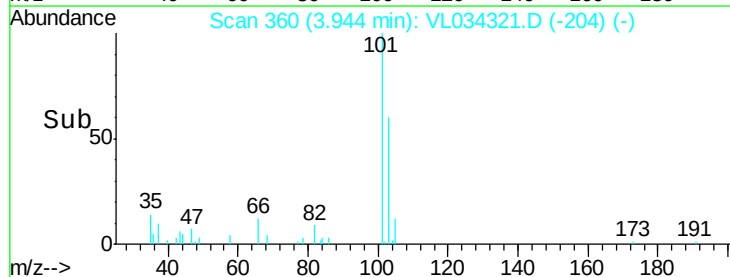
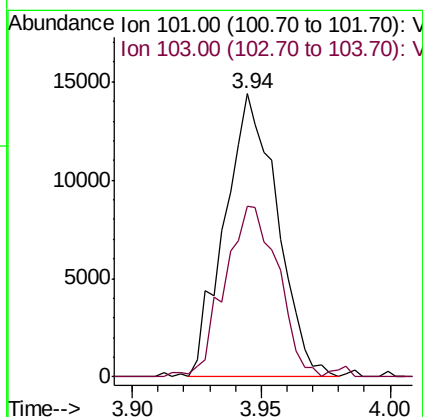
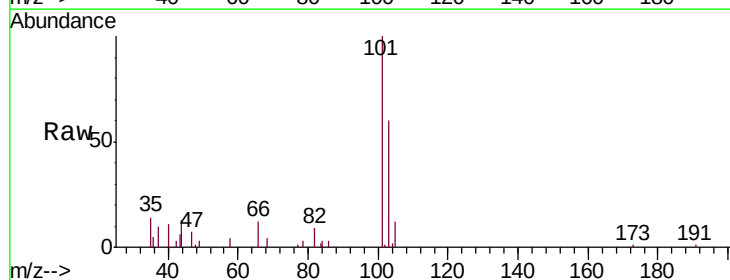
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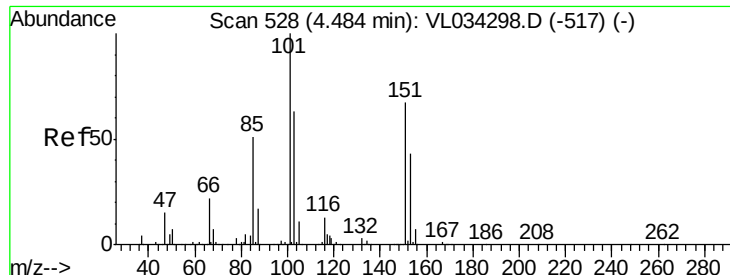
Tgt Ion: 43 Resp: 4466
Ion Ratio Lower Upper
43 100
57 125.8 39.5 59.3#



#11
Trichlorofluoromethane
Concen: 0.128 ppbv
RT: 3.94 min Scan# 360
Delta R.T. 0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

Tgt Ion: 101 Resp: 20361
Ion Ratio Lower Upper
101 100
103 57.8 54.5 81.7





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.132 ppbv

RT: 4.49 min Scan# 531

Delta R.T. 0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

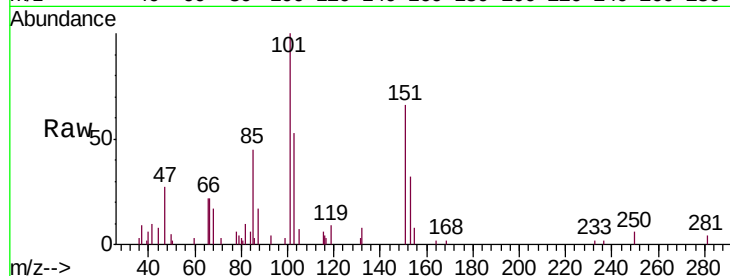
MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion:101 Resp: 13785

Ion Ratio Lower Upper

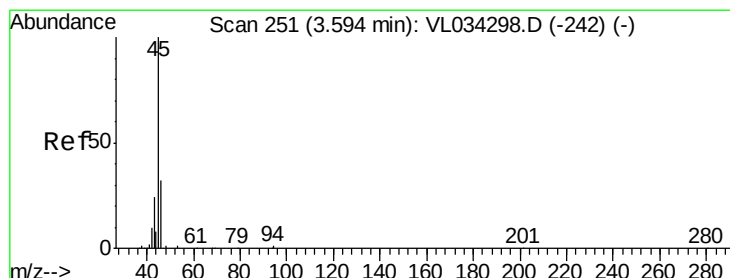
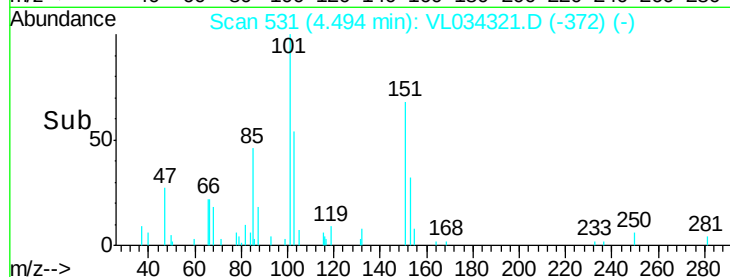
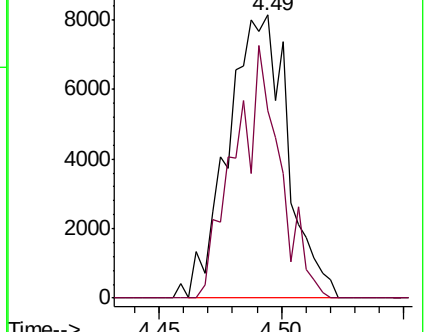
101 100

151 67.5 57.4 86.2



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V



#13

Ethanol

Concen: 0.110 ppbv

RT: 3.61 min Scan# 256

Delta R.T. 0.02 min

Lab File: VL034321.D

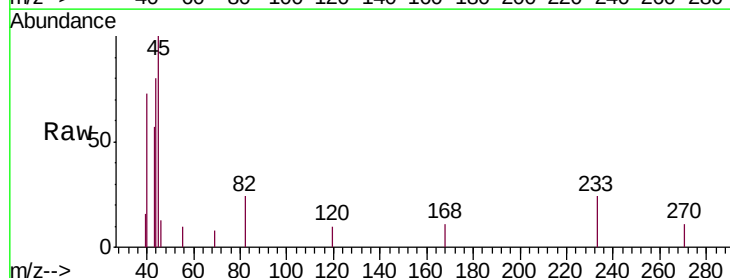
Acq: 17 Oct 2019 18:02

Tgt Ion: 45 Resp: 1246

Ion Ratio Lower Upper

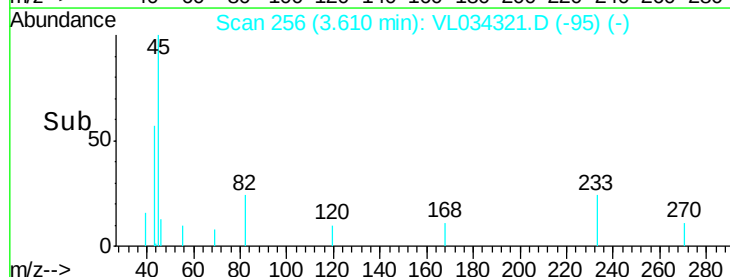
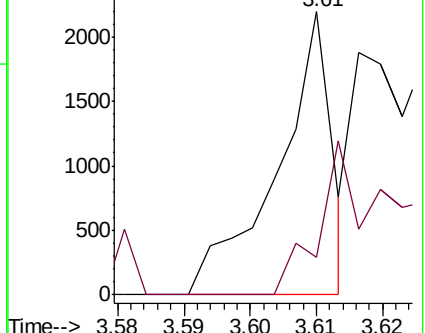
45 100

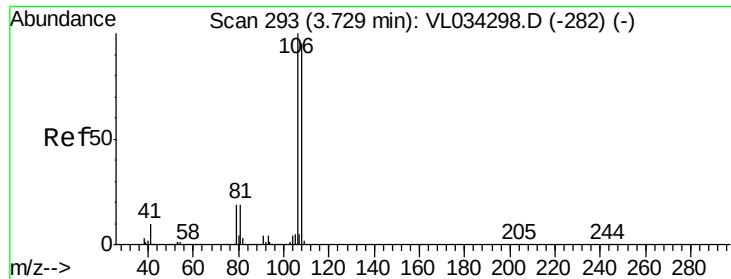
46 0.0 15.8 63.2#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

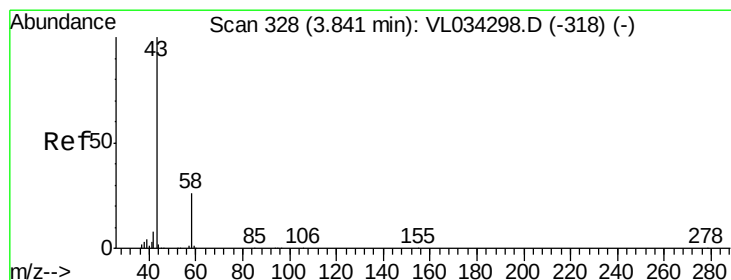
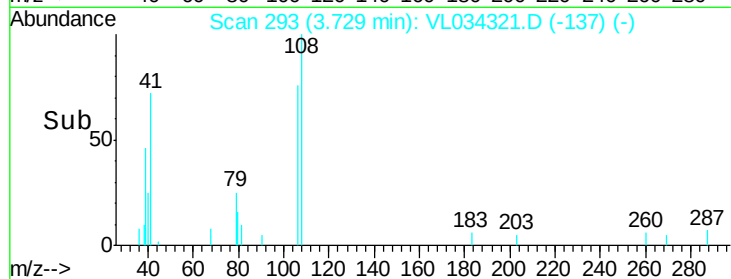
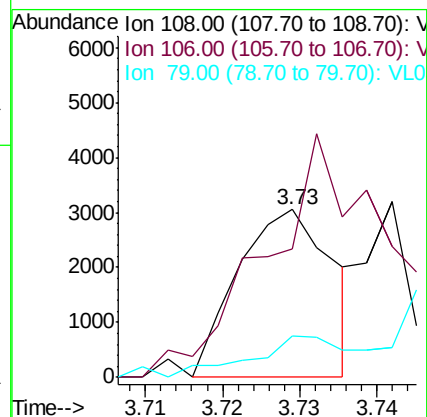
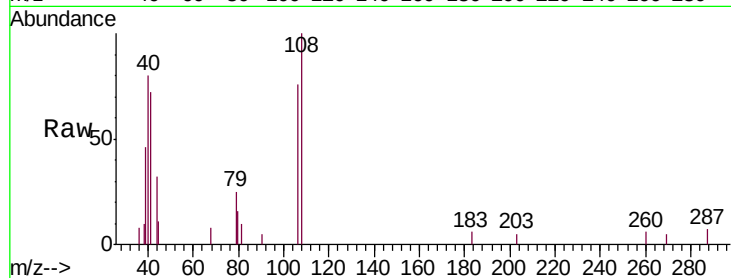




#14
Bromoethene
Concen: 0.064 ppbv
RT: 3.73 min Scan# 293
Delta R.T. 0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

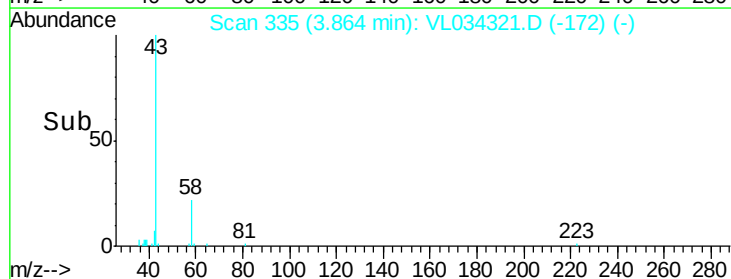
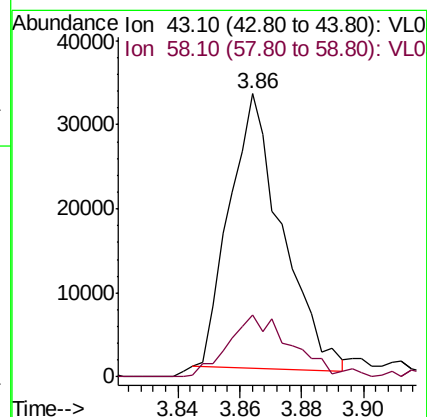
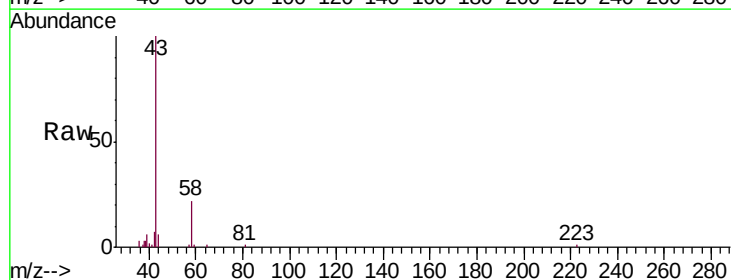
Instrument :
MSVOA_L
ClientSampleId :
MDL-MDL-AIR-03-QT4-2019DL

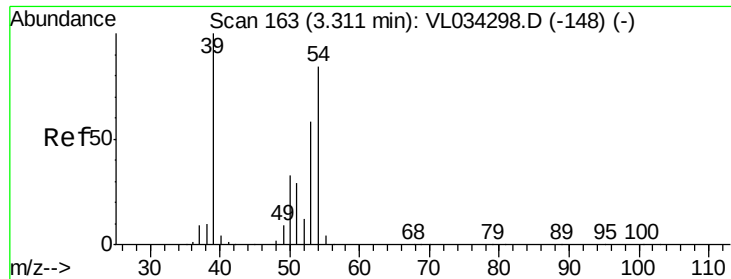
Tgt Ion: 108 Resp: 2616
Ion Ratio Lower Upper
108 100
106 199.4 84.8 127.2#
79 0.0 17.0 25.4#



#15
Acetone
Concen: 0.278 ppbv
RT: 3.86 min Scan# 335
Delta R.T. 0.02 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

Tgt Ion: 43 Resp: 38742
Ion Ratio Lower Upper
43 100
58 28.9 20.4 30.6

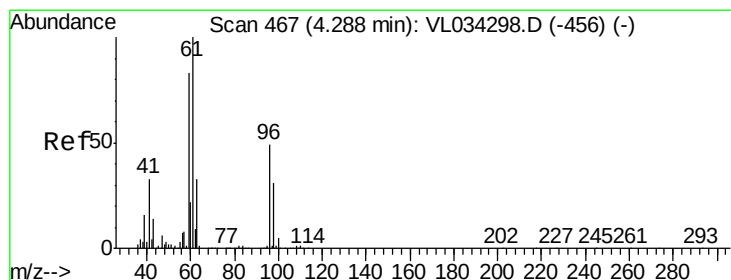
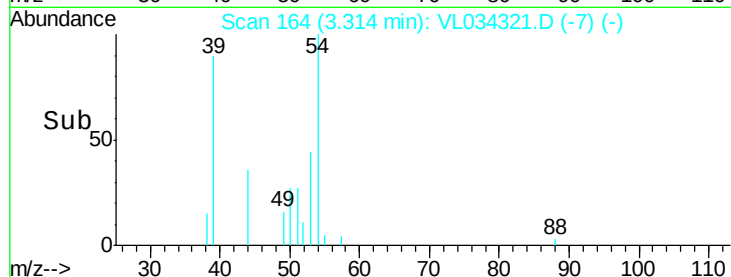
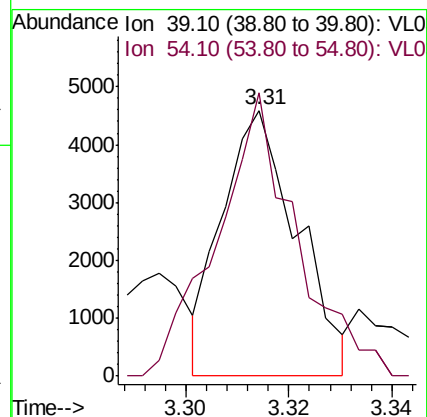
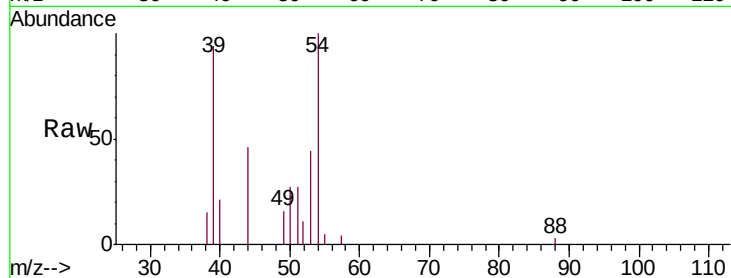




#16
 1,3-Butadiene
 Concen: 0.082 ppbv
 RT: 3.31 min Scan# 164
 Delta R.T. 0.00 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

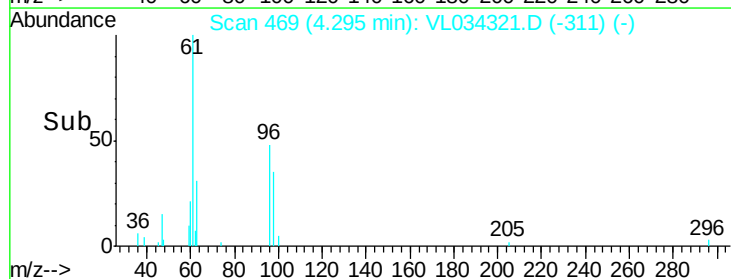
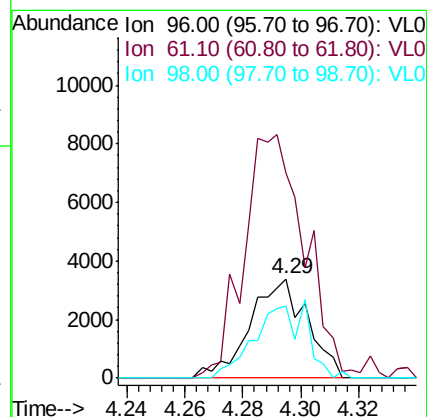
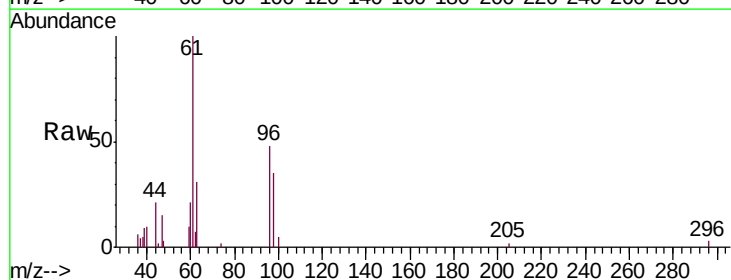
Instrument :
 MSVOA_L
 ClientSampleId :
 MDL-MDL-AIR-03-QT4-2019DL

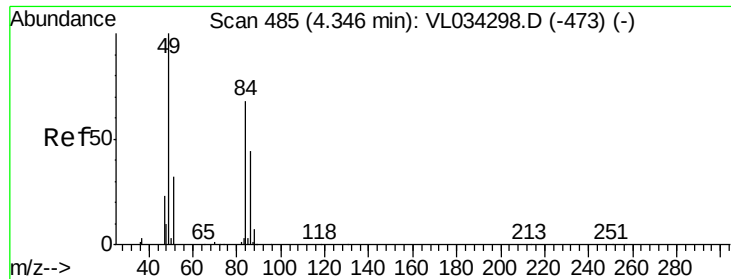
Tgt Ion: 39 Resp: 4631
 Ion Ratio Lower Upper
 39 100
 54 112.2 63.9 95.9#



#18
 1,1-Dichloroethene
 Concen: 0.102 ppbv
 RT: 4.29 min Scan# 469
 Delta R.T. 0.01 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

Tgt Ion: 96 Resp: 4642
 Ion Ratio Lower Upper
 96 100
 61 206.3 164.5 246.7
 98 72.3 51.7 77.5

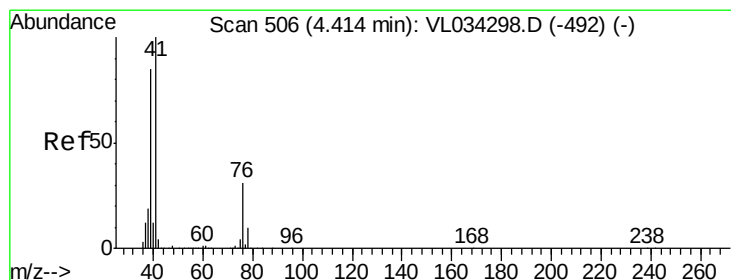
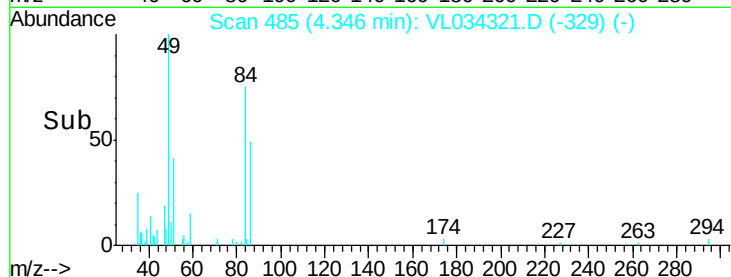
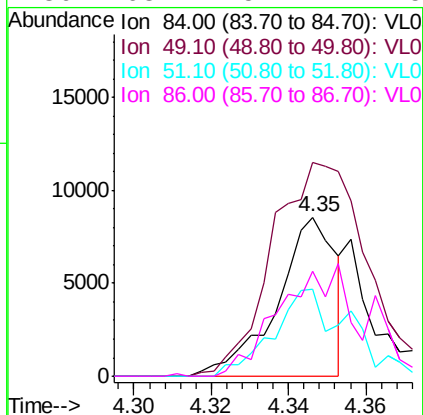
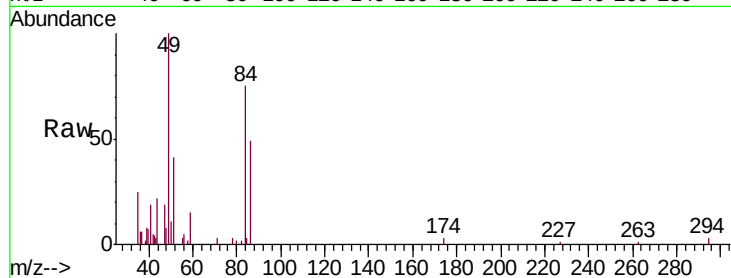




#20
Methylene Chloride
Concen: 0.179 ppbv
RT: 4.35 min Scan# 485
Delta R.T. 0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

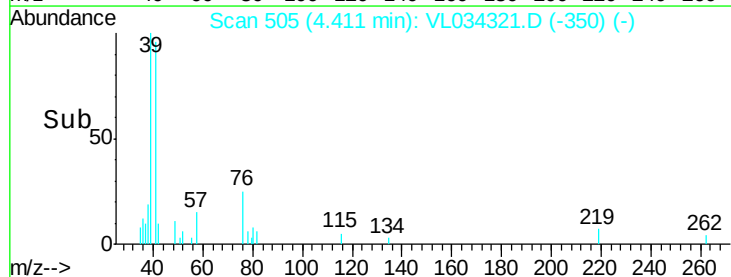
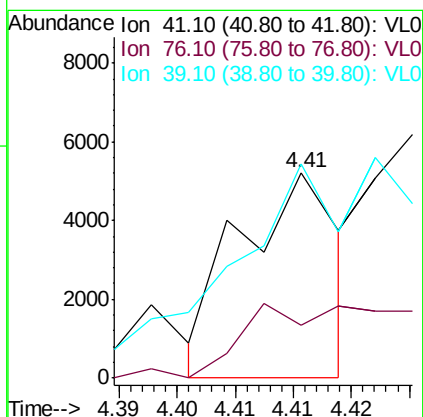
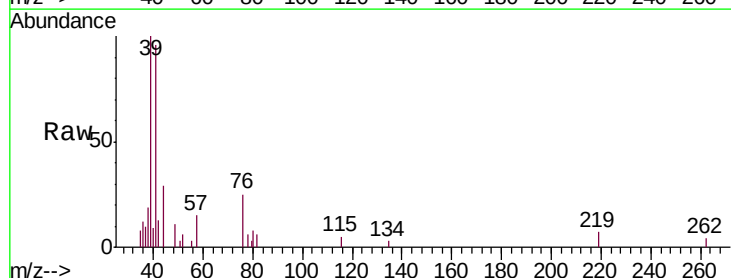
Instrument :
MSVOA_L
ClientSampleId :
MDL-MDL-AIR-03-QT4-2019DL

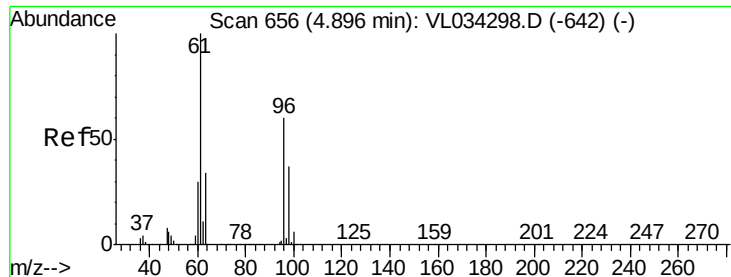
Tgt Ion:	84	Resp:	9012
Ion	Ratio	Lower	Upper
84	100		
49	121.0	118.5	177.7
51	52.2	38.8	58.2
86	63.2	51.7	77.5



#21
Allyl Chloride
Concen: 0.040 ppbv
RT: 4.41 min Scan# 505
Delta R.T. -0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

Tgt Ion:	41	Resp:	3116
Ion	Ratio	Lower	Upper
41	100		
76	84.4	22.8	34.2#
39	0.0	66.0	99.0#





#22

trans-1,2-Dichloroethene

Concen: 0.047 ppbv

RT: 4.90 min Scan# 656

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

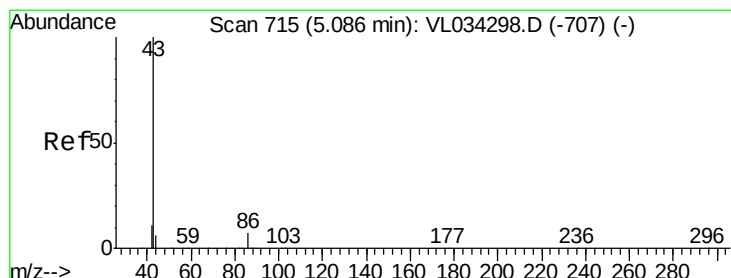
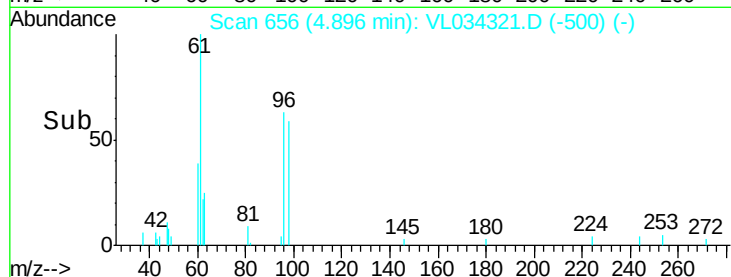
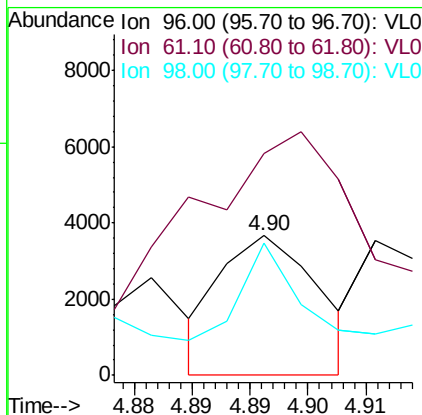
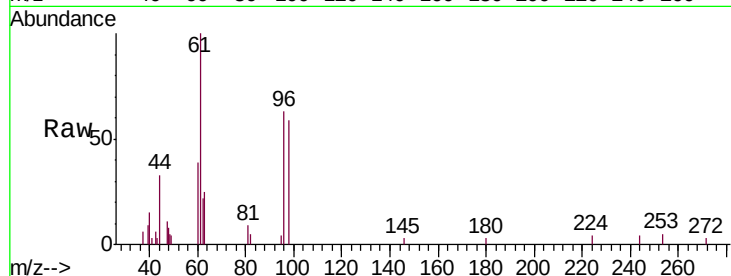
Tgt Ion: 96 Resp: 2151

Ion Ratio Lower Upper

96 100

61 52.5 133.8 200.6#

98 116.9 49.4 74.0#



#23

Vinyl Acetate

Concen: 0.083 ppbv

RT: 5.10 min Scan# 718

Delta R.T. 0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Tgt Ion: 43 Resp: 14458

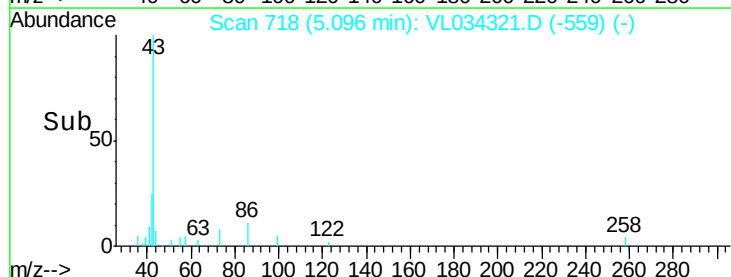
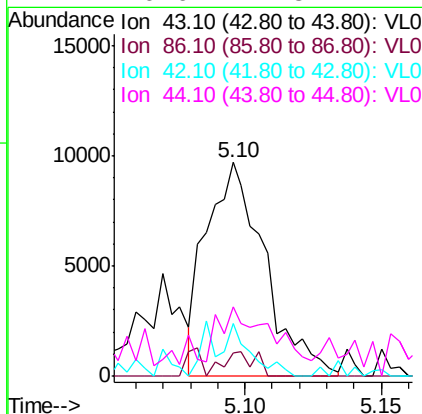
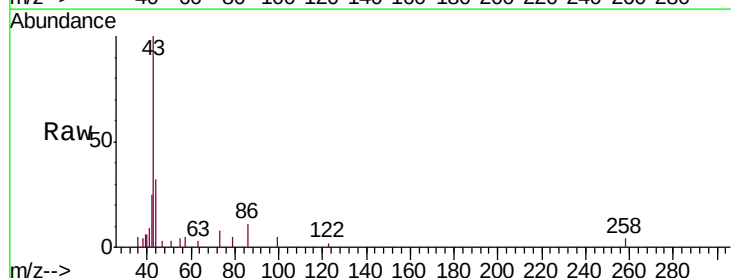
Ion Ratio Lower Upper

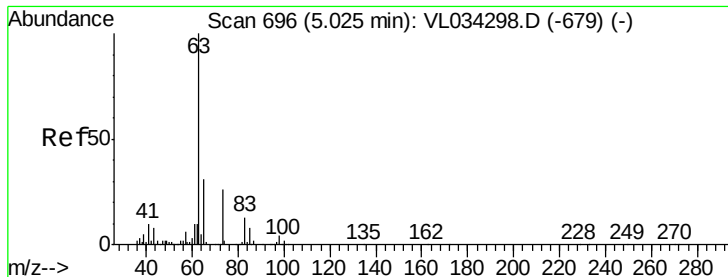
43 100

86 11.9 5.0 7.4#

42 27.4 8.6 13.0#

44 26.6 4.8 7.2#





#24

1,1-Dichloroethane

Concen: 0.103 ppbv

RT: 5.02 min Scan# 695

Delta R.T. -0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

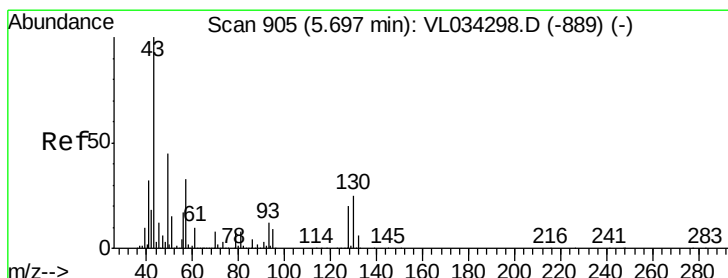
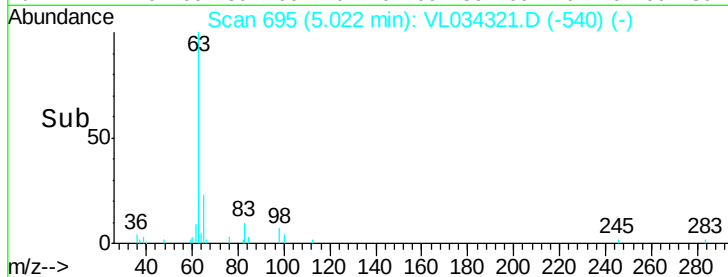
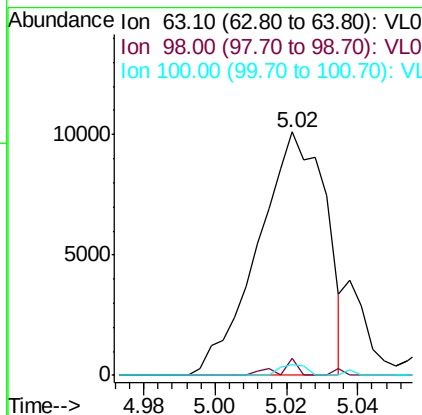
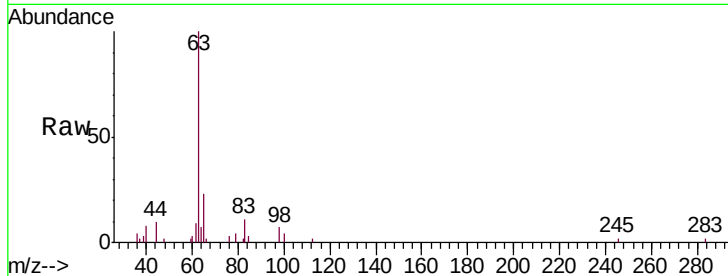
Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion:	63	Resp:	13319
Ion	Ratio	Lower	Upper
63	100		
98	7.1	2.0	6.0#
100	4.4	1.1	3.5#



#25

Ethyl Acetate

Concen: 0.083 ppbv

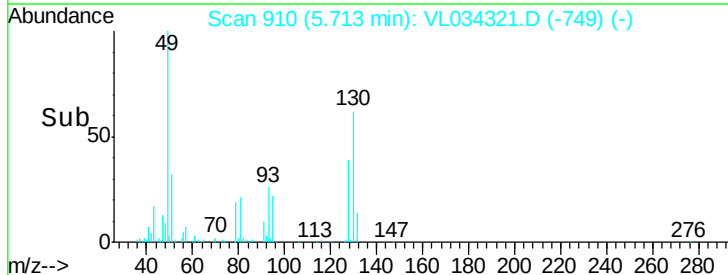
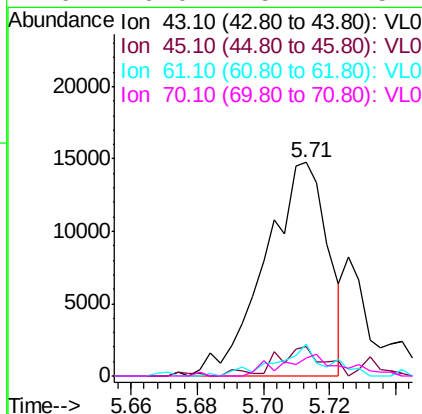
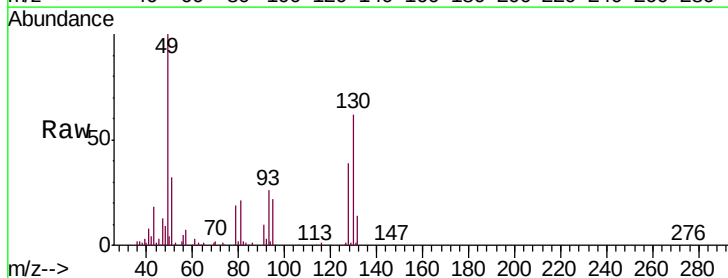
RT: 5.71 min Scan# 910

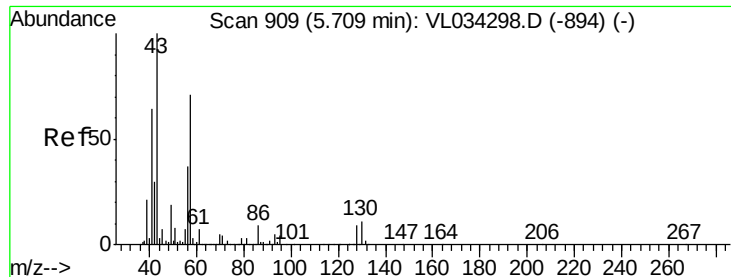
Delta R.T. 0.02 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Tgt Ion:	43	Resp:	19445
Ion	Ratio	Lower	Upper
43	100		
45	15.3	8.3	12.5#
61	11.7	7.7	11.5#
70	10.0	5.4	8.2#

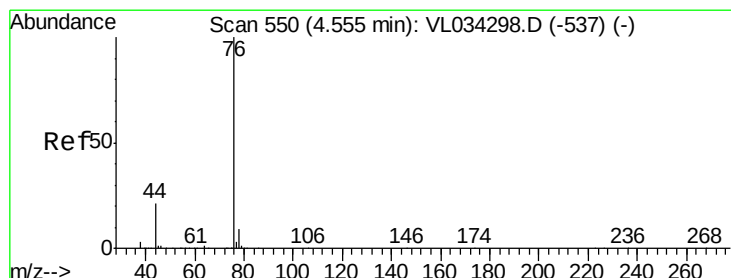
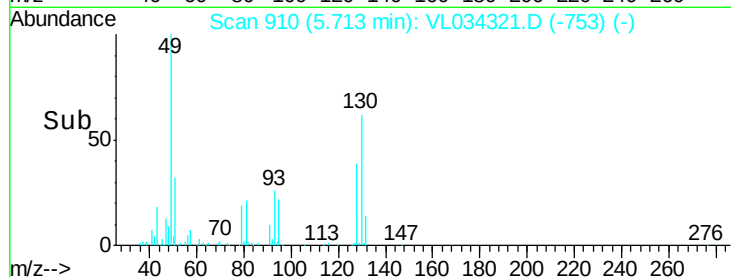
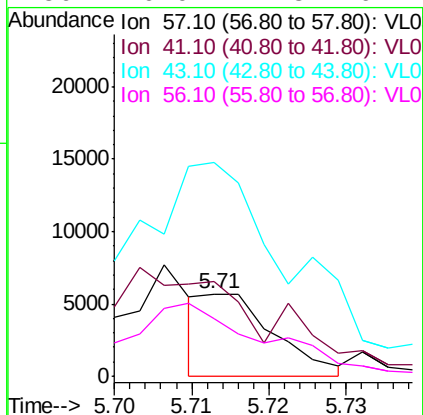
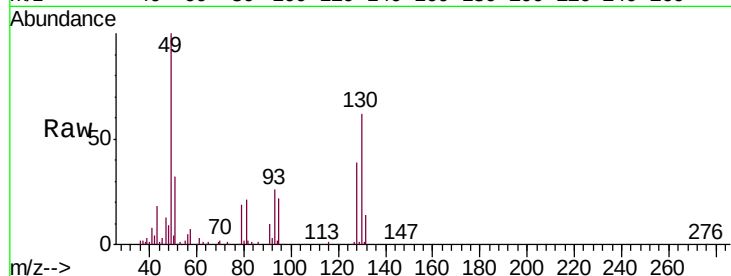




#26
Hexane
Concen: 0.036 ppbv
RT: 5.71 min Scan# 910
Delta R.T. 0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

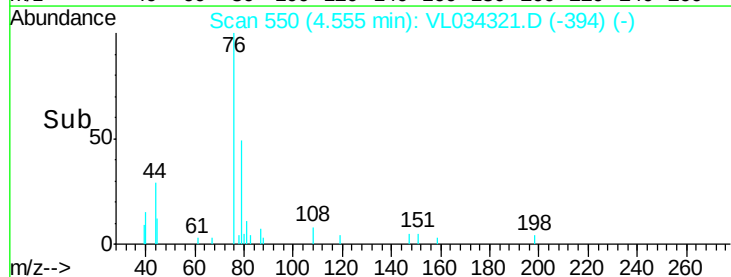
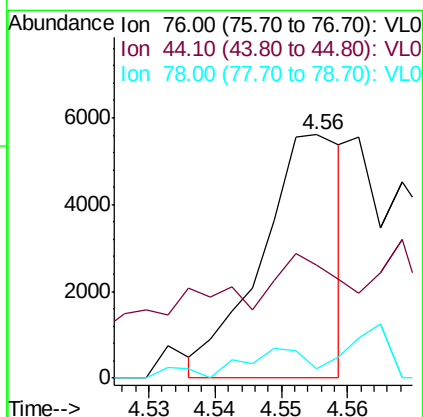
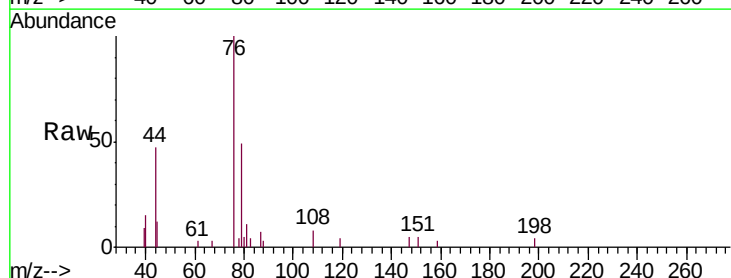
Instrument :
MSVOA_L
ClientSampleId :
MDL-MDL-AIR-03-QT4-2019DL

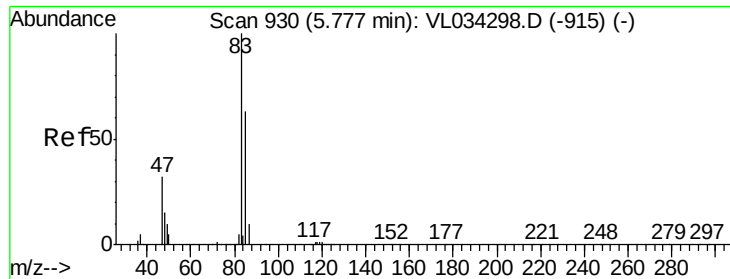
Tgt Ion: 57 Resp: 3647
Ion Ratio Lower Upper
57 100
41 0.0 76.5 114.7#
43 702.6 188.5 282.7#
56 0.0 42.8 64.2#



#27
Carbon Disulfide
Concen: 0.046 ppbv
RT: 4.56 min Scan# 550
Delta R.T. 0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

Tgt Ion: 76 Resp: 4767
Ion Ratio Lower Upper
76 100
44 0.0 17.3 25.9#
78 0.0 7.8 11.6#

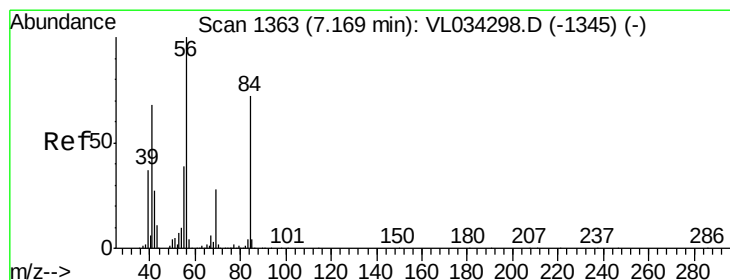
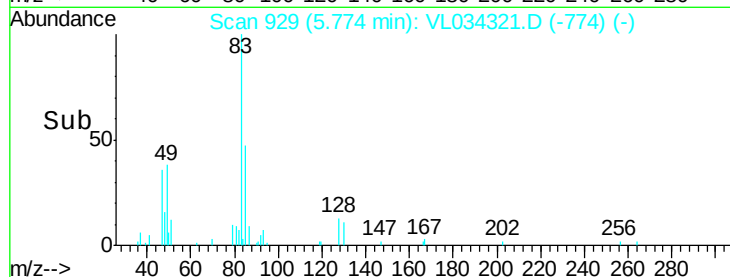
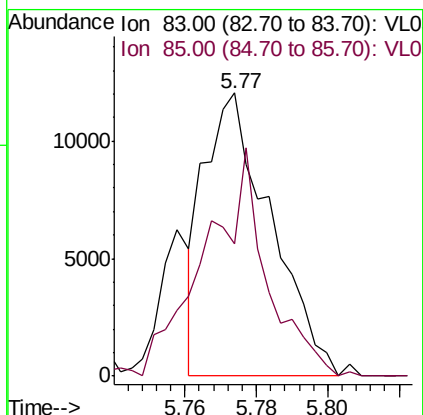
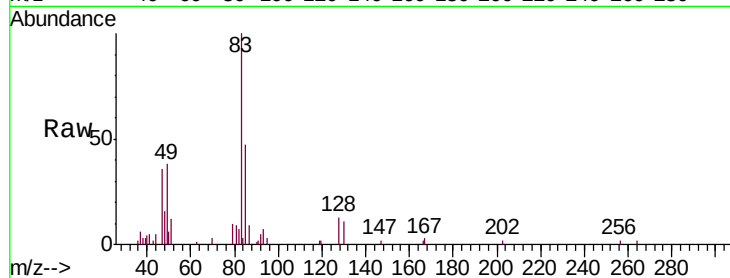




#29
Chloroform
Concen: 0.098 ppbv
RT: 5.77 min Scan# 929
Delta R.T. -0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

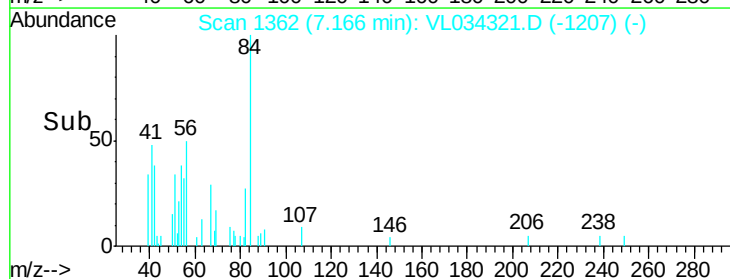
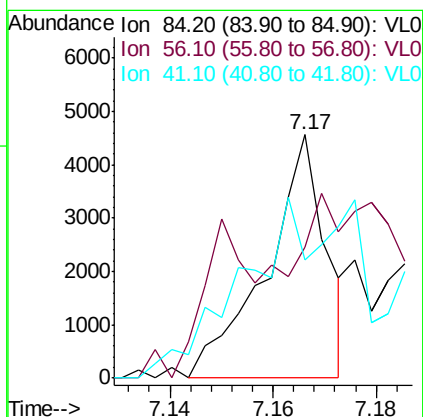
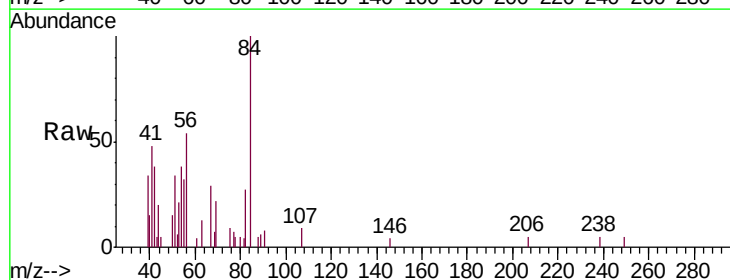
Instrument :
MSVOA_L
ClientSampleId :
MDL-MDL-AIR-03-QT4-2019DL

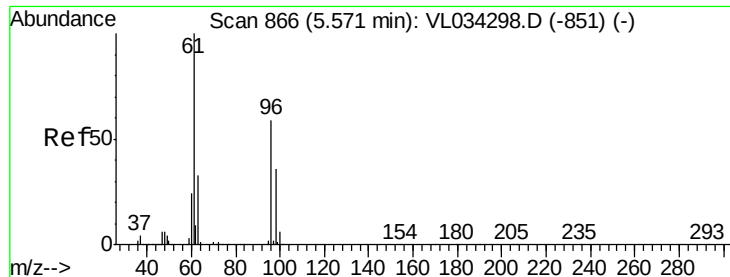
Tgt Ion: 83 Resp: 15524
Ion Ratio Lower Upper
83 100
85 46.9 50.5 75.7#



#30
Cyclohexane
Concen: 0.049 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.00 min
Lab File: VL034321.D
Acq: 17 Oct 2019 18:02

Tgt Ion: 84 Resp: 3603
Ion Ratio Lower Upper
84 100
56 0.0 119.4 179.0#
41 176.7 78.7 118.1#





#31

cis-1,2-Dichloroethene

Concen: 0.071 ppbv

RT: 5.56 min Scan# 864

Delta R.T. -0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

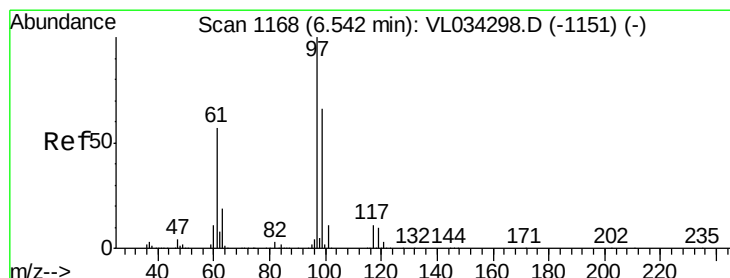
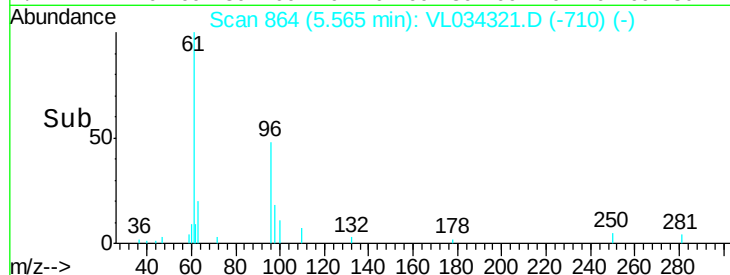
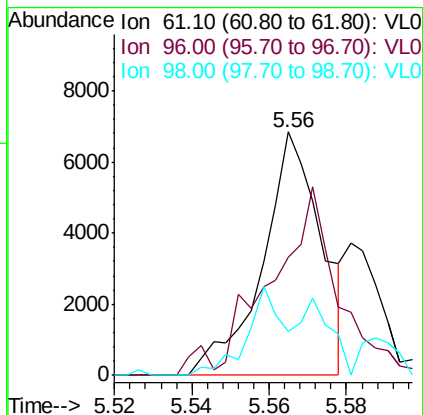
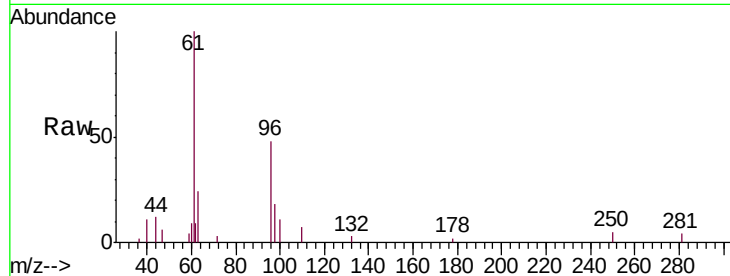
Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion:	61	Resp:	7235
Ion	Ratio	Lower	Upper
61	100		
96	40.6	47.5	71.3#
98	18.1	28.8	43.2#



#32

1,1,1-Trichloroethane

Concen: 0.053 ppbv

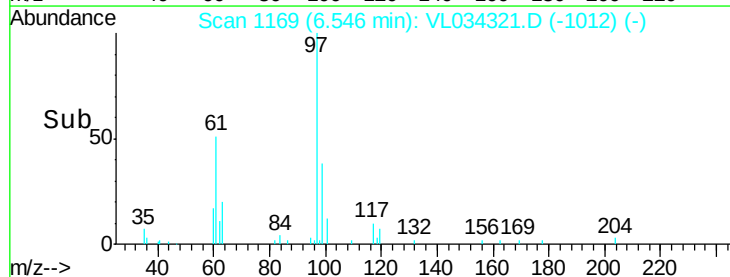
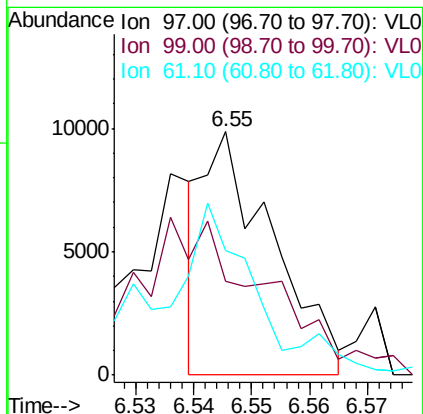
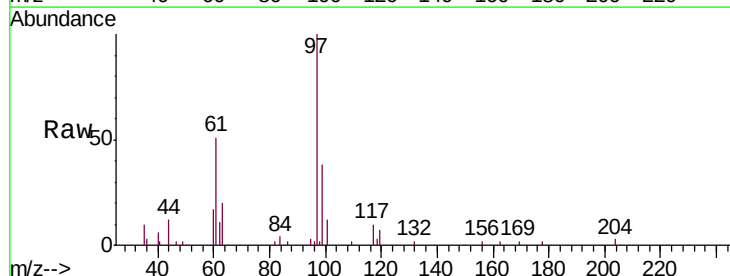
RT: 6.55 min Scan# 1169

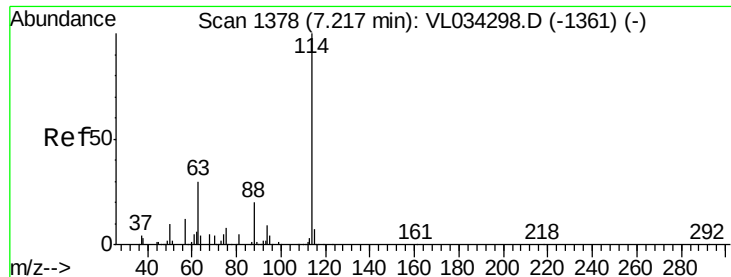
Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Tgt Ion:	97	Resp:	8179
Ion	Ratio	Lower	Upper
97	100		
99	0.0	52.6	78.8#
61	114.3	44.5	66.7#

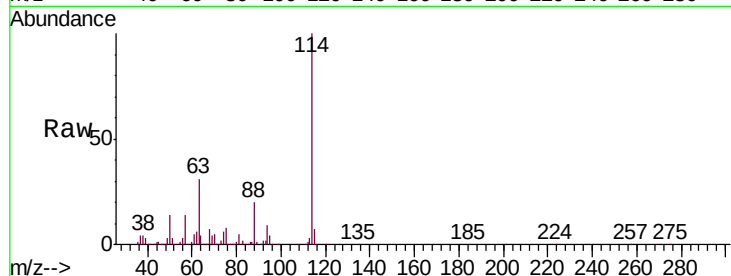




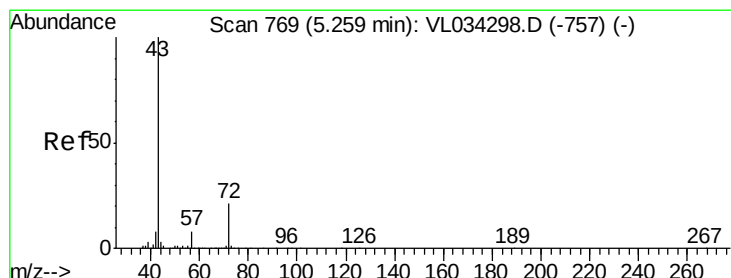
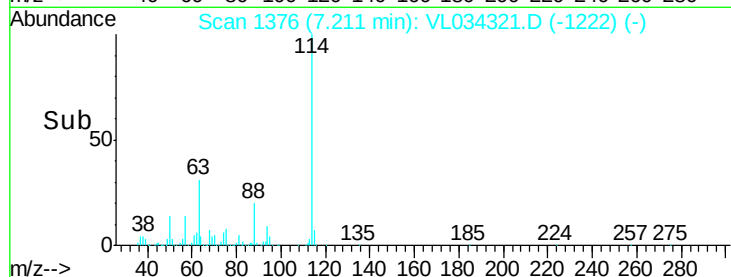
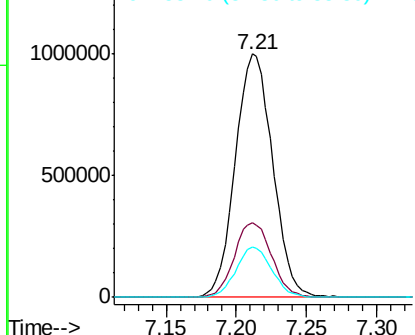
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.21 min Scan# 1376
 Delta R.T. -0.01 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

Instrument :
 MSVOA_L
 ClientSampleId :
 MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion:114 Resp: 1859874
 Ion Ratio Lower Upper
 114 100
 63 30.8 25.2 37.8
 88 20.0 16.0 24.0

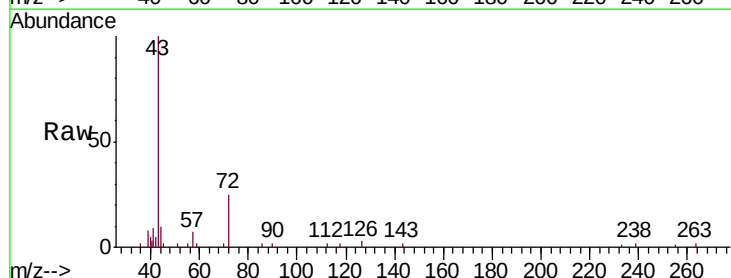


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

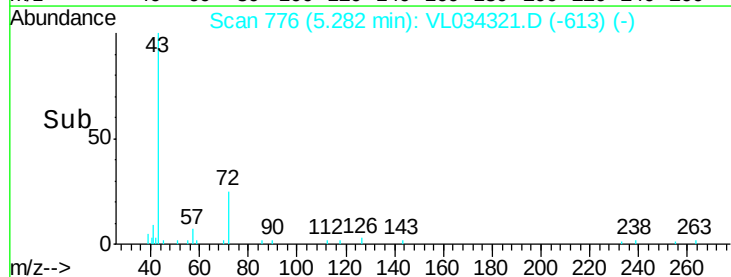
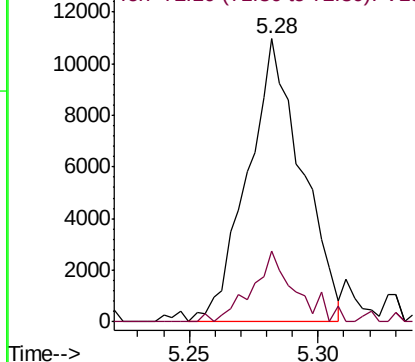


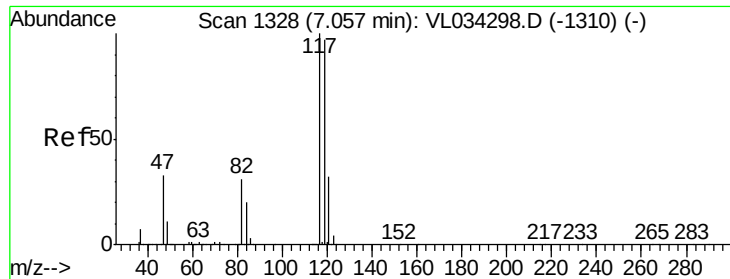
#34
 2-Butanone
 Concen: 0.106 ppbv
 RT: 5.28 min Scan# 776
 Delta R.T. 0.02 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

Tgt Ion: 43 Resp: 16110
 Ion Ratio Lower Upper
 43 100
 72 20.0 16.3 24.5



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.060 ppbv

RT: 7.05 min Scan# 1327

Delta R.T. -0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

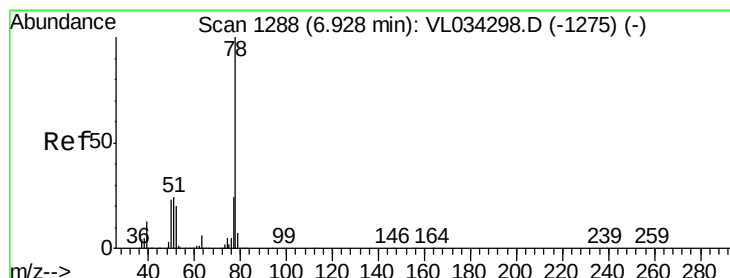
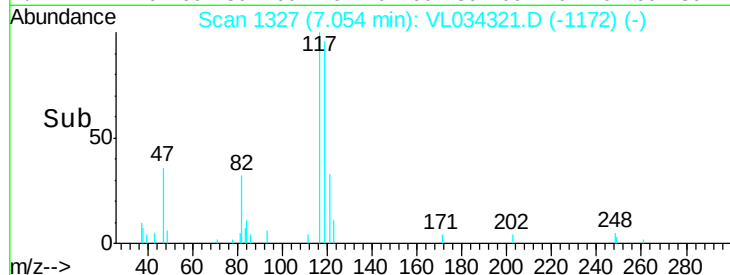
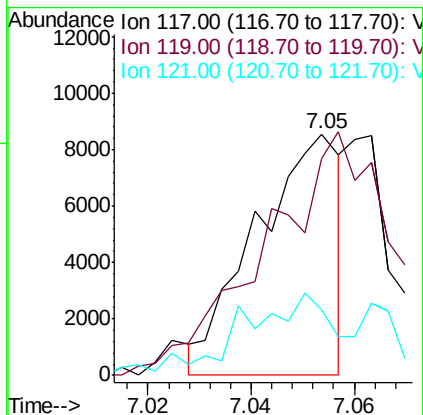
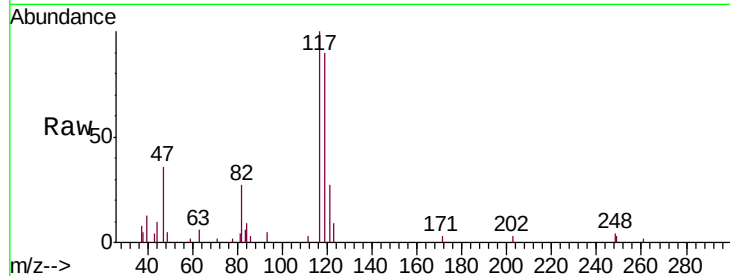
Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion:	117	Resp:	9675
Ion	Ratio	Lower	Upper
117	100		
119	87.6	77.3	115.9
121	25.7	25.5	38.3



#36

Benzene

Concen: 0.073 ppbv

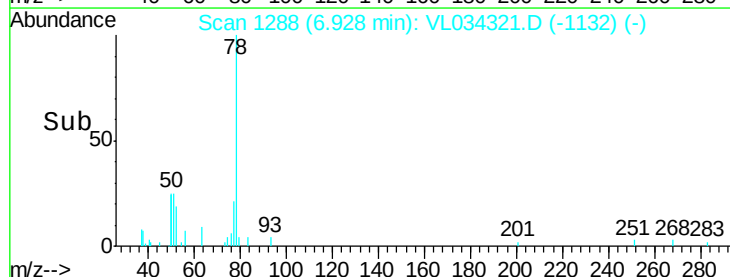
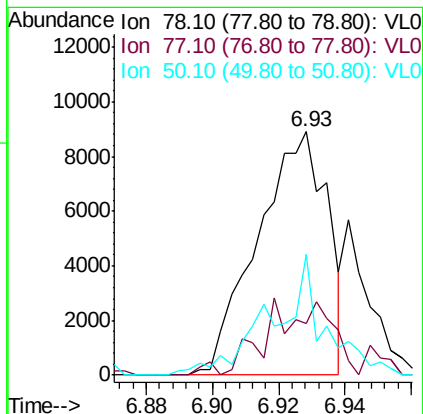
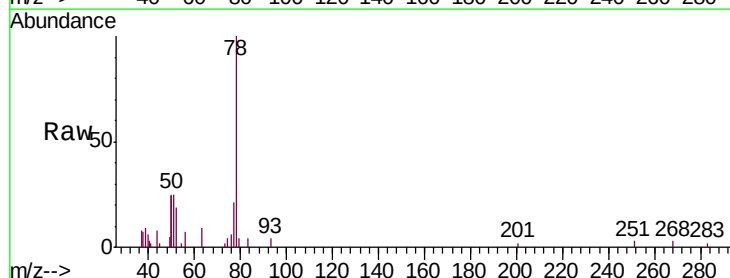
RT: 6.93 min Scan# 1288

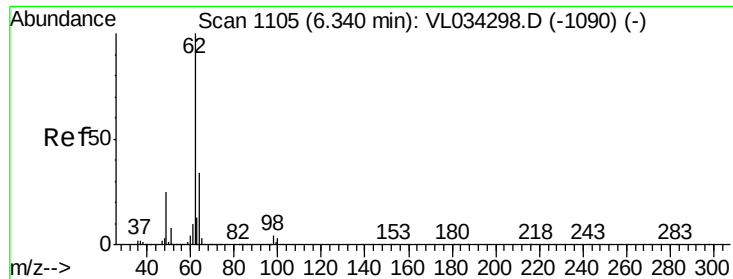
Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Tgt Ion:	78	Resp:	13079
Ion	Ratio	Lower	Upper
78	100		
77	21.1	19.0	28.4
50	47.6	18.6	27.8

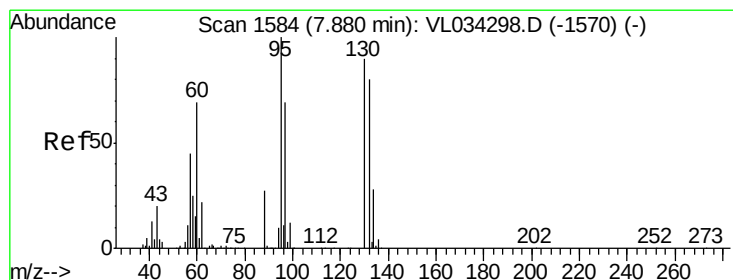
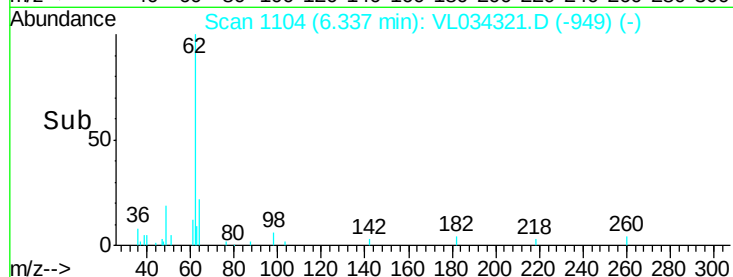
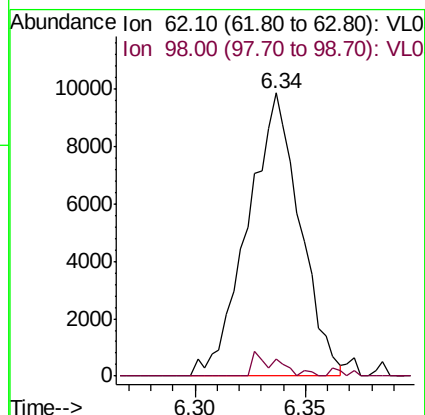
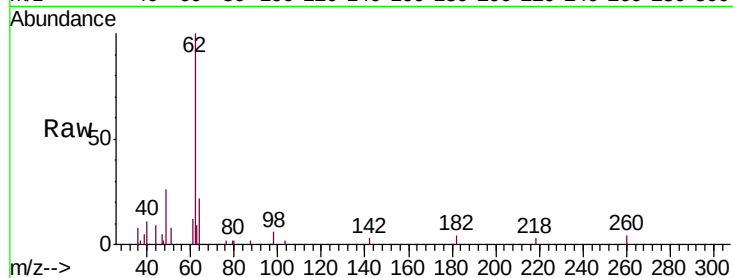




#37
 1,2-Dichloroethane
 Concen: 0.122 ppbv
 RT: 6.34 min Scan# 1104
 Delta R.T. -0.00 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

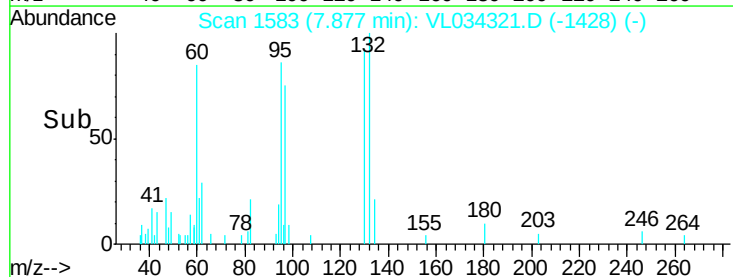
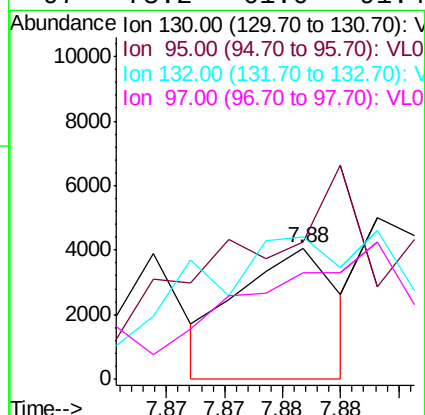
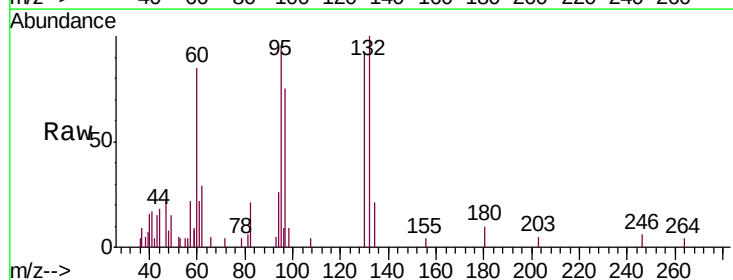
Instrument :
 MSVOA_L
 ClientSampleId :
 MDL-MDL-AIR-03-QT4-2019DL

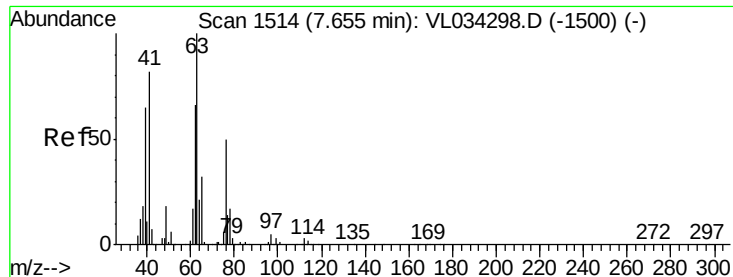
Tgt Ion: 62 Resp: 16264
 Ion Ratio Lower Upper
 62 100
 98 4.0 3.8 5.6



#38
 Trichloroethene
 Concen: 0.034 ppbv
 RT: 7.88 min Scan# 1583
 Delta R.T. -0.00 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

Tgt Ion: 130 Resp: 2411
 Ion Ratio Lower Upper
 130 100
 95 38.2 88.6 132.8#
 132 41.1 71.2 106.8#
 97 73.2 61.0 91.4





#39

1,2-Dichloropropane

Concen: 7.409 ppbv

RT: 7.21 min Scan# 1376

Delta R.T. -0.44 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

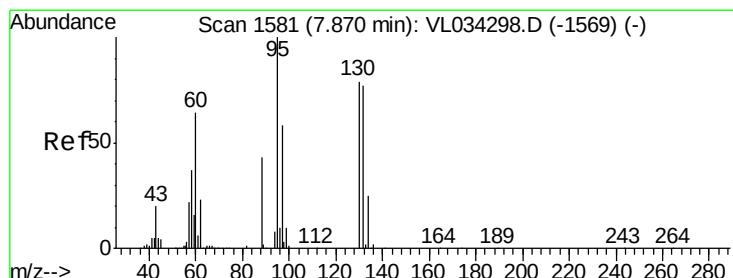
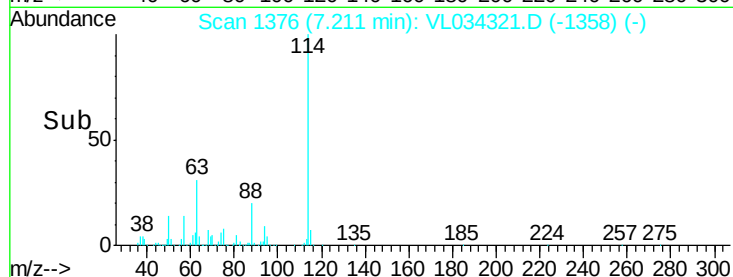
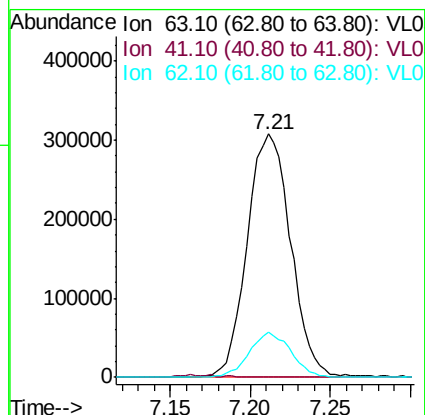
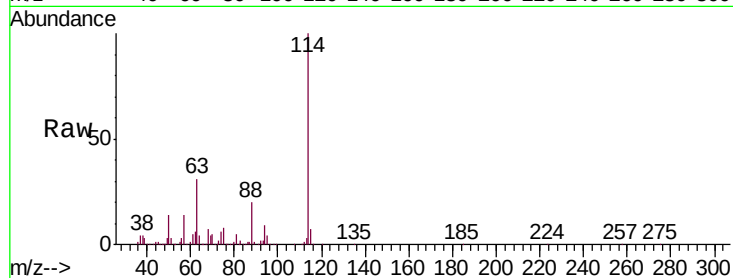
Tgt Ion: 63 Resp: 569327

Ion Ratio Lower Upper

63 100

41 0.1 65.6 98.4#

62 18.4 53.0 79.6#



#40

1,4-Dioxane

Concen: 0.050 ppbv

RT: 7.94 min Scan# 1603

Delta R.T. 0.07 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Tgt Ion: 88 Resp: 1339

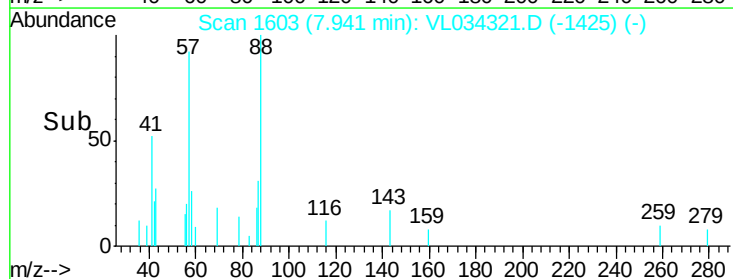
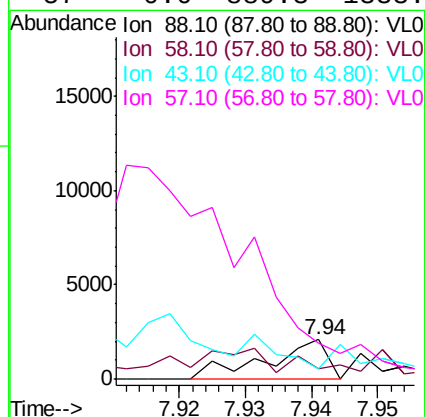
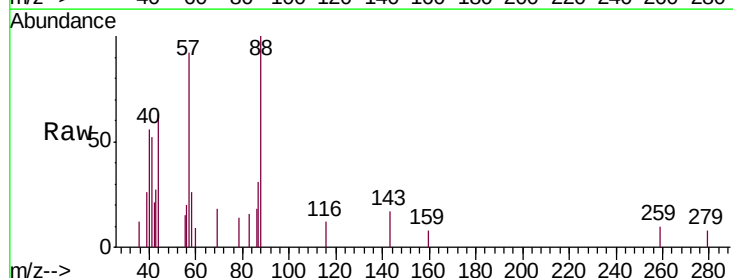
Ion Ratio Lower Upper

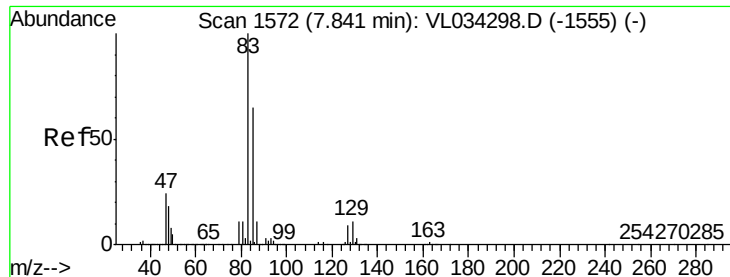
88 100

58 130.0 110.3 165.5

43 0.0 228.1 342.1#

57 0.0 889.3 1333.9#





#42

Bromodichloromethane

Concen: 0.088 ppbv

RT: 7.83 min Scan# 1570

Delta R.T. -0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

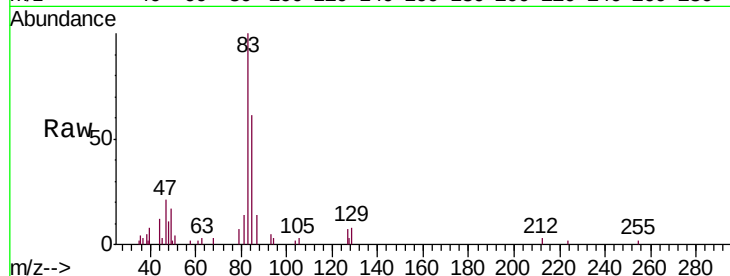
Tgt Ion: 83 Resp: 14283

Ion Ratio Lower Upper

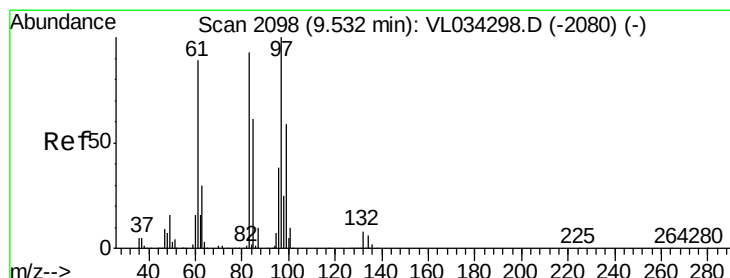
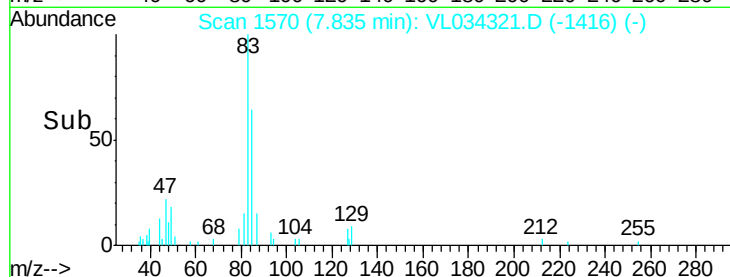
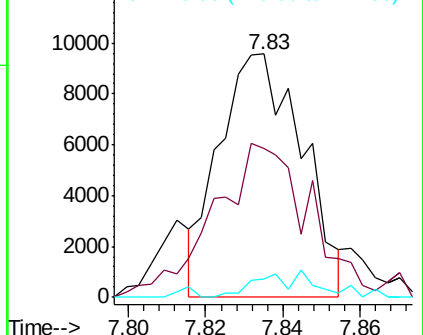
83 100

85 56.2 51.8 77.6

127 10.3 7.0 10.6



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



#47

1,1,2-Trichloroethane

Concen: 0.050 ppbv

RT: 9.53 min Scan# 2096

Delta R.T. -0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Tgt Ion: 97 Resp: 3874

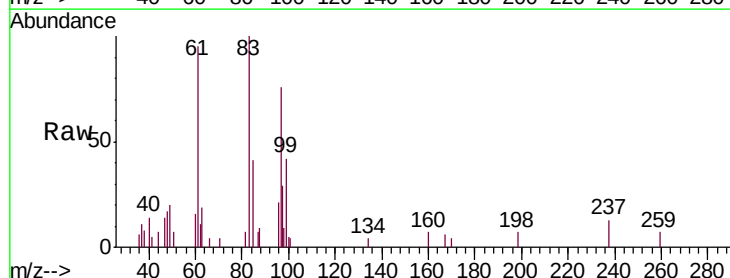
Ion Ratio Lower Upper

97 100

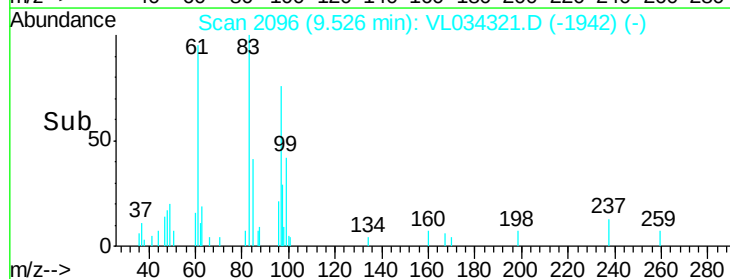
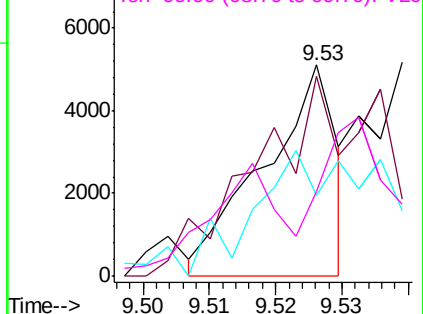
83 73.6 74.2 111.2#

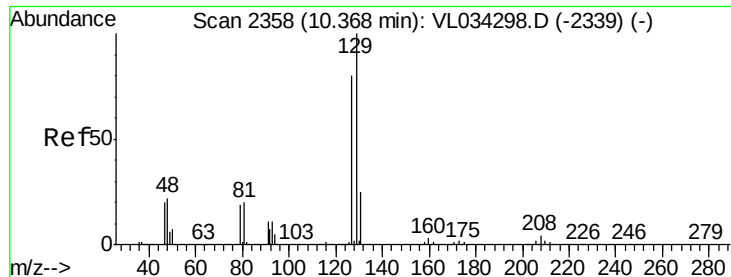
85 41.9 48.6 73.0#

99 21.0 47.0 70.6#



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0
Ion 99.00 (98.70 to 99.70): VL0





#48

Dibromochloromethane

Concen: 0.039 ppbv

RT: 10.36 min Scan# 2354

Delta R.T. -0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

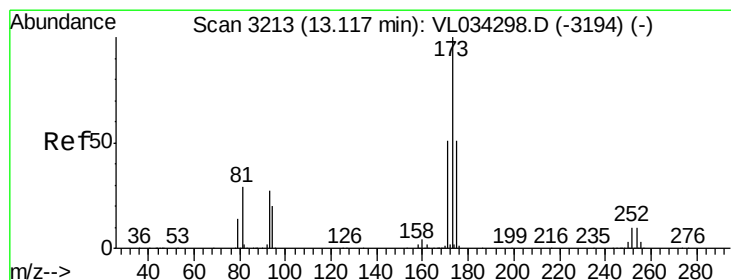
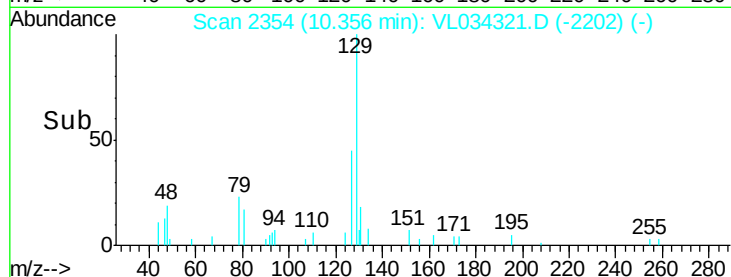
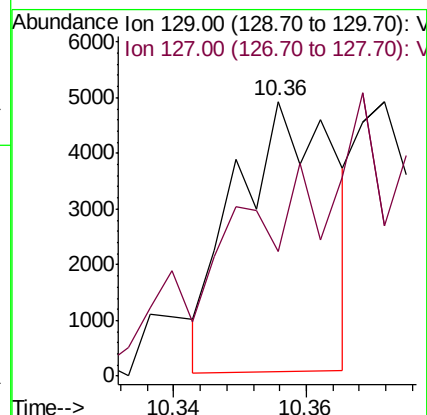
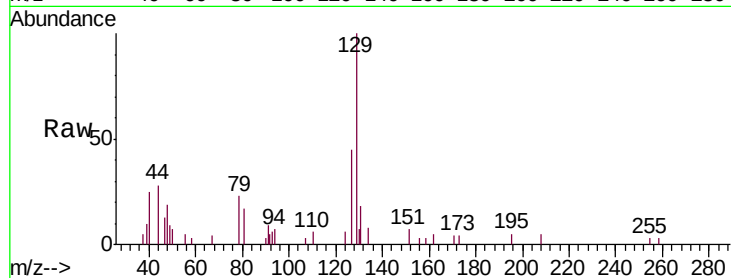
MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion:129 Resp: 4943

Ion Ratio Lower Upper

129 100

127 0.0 39.7 119.1#



#49

Bromoform

Concen: 0.033 ppbv

RT: 13.11 min Scan# 3210

Delta R.T. -0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

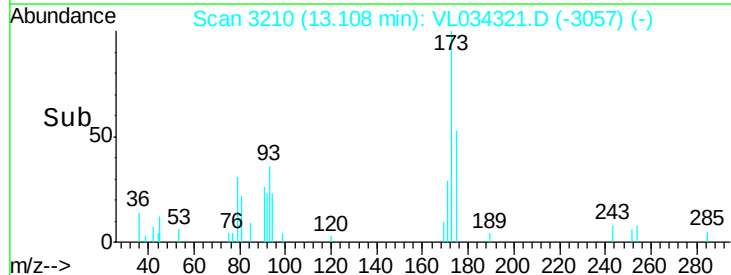
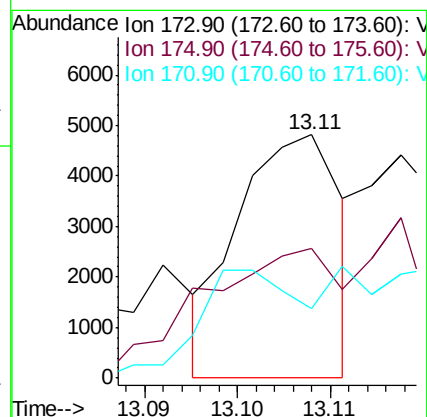
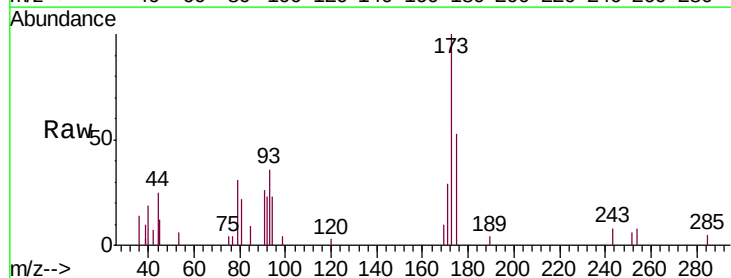
Tgt Ion:173 Resp: 3709

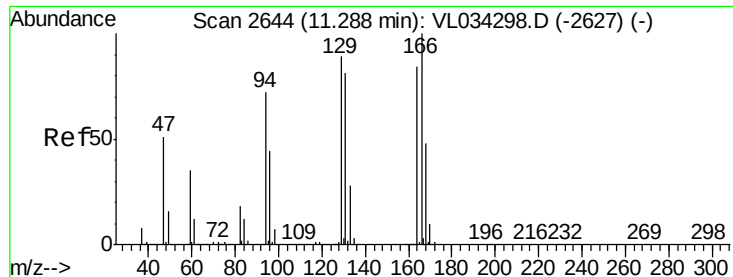
Ion Ratio Lower Upper

173 100

175 0.0 39.8 59.6#

171 111.9 41.8 62.6#





#52

Tetrachloroethene

Concen: 0.030 ppbv

RT: 11.28 min Scan# 2640

Delta R.T. -0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion:164 Resp: 2104

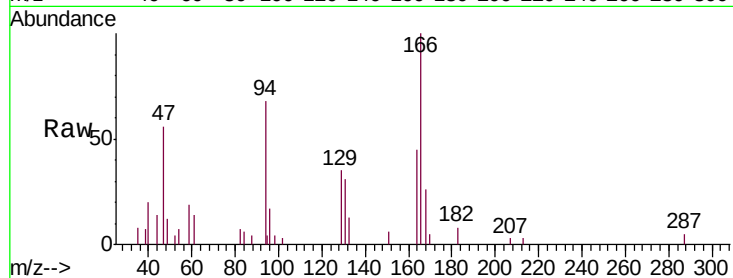
Ion Ratio Lower Upper

164 100

166 220.5 95.3 142.9#

129 77.9 84.5 126.7#

131 67.5 77.3 115.9#



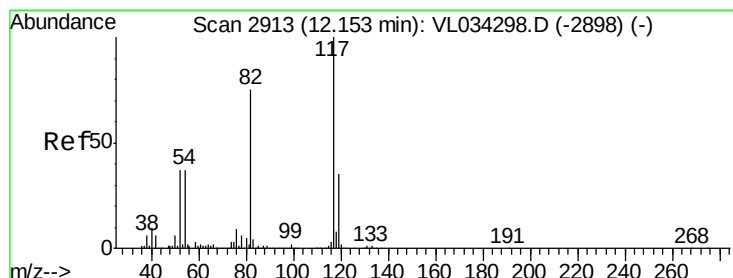
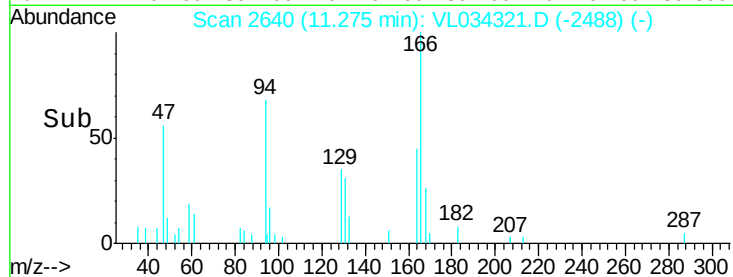
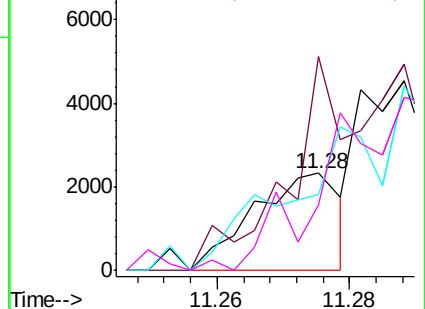
Abundance

Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.15 min Scan# 2913

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

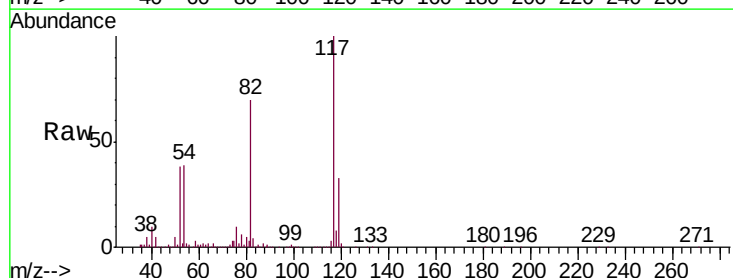
Tgt Ion:117 Resp: 1885572

Ion Ratio Lower Upper

117 100

82 71.6 55.5 83.3

119 33.1 26.5 39.7

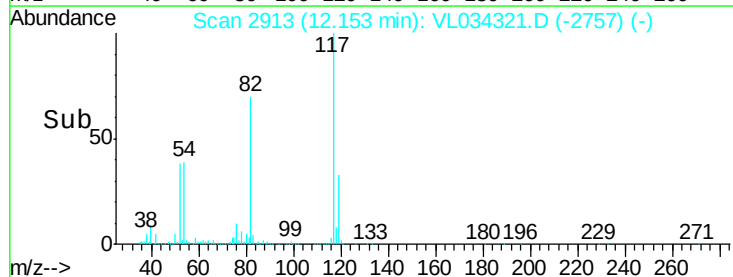
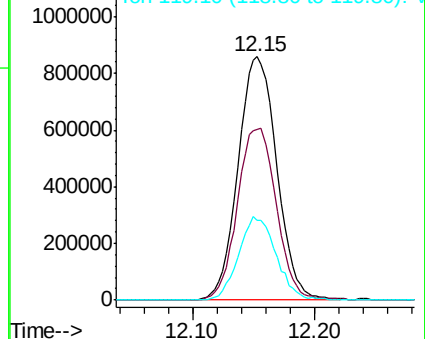


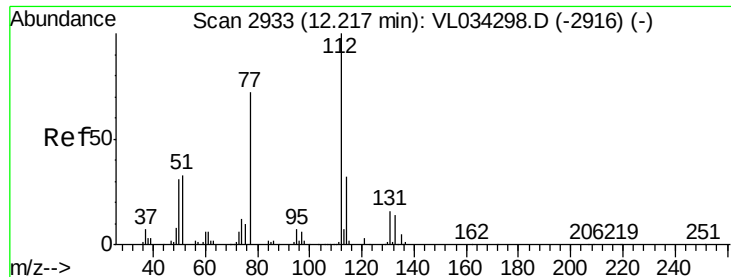
Abundance

Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): V

Ion 119.10 (118.80 to 119.80): V





#57

Chlorobenzene

Concen: 0.035 ppbv

RT: 12.22 min Scan# 2933

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

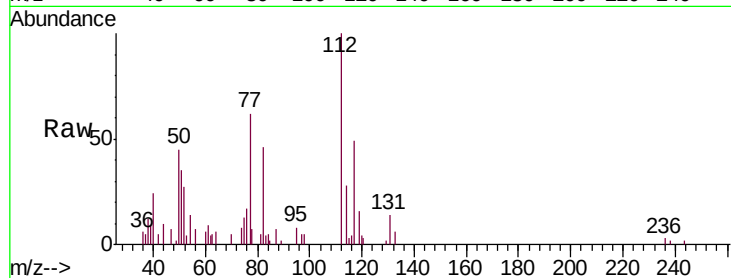
Tgt Ion:112 Resp: 5473

Ion Ratio Lower Upper

112 100

77 21.3 58.6 88.0#

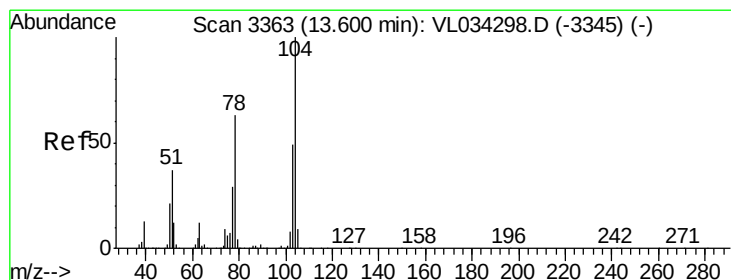
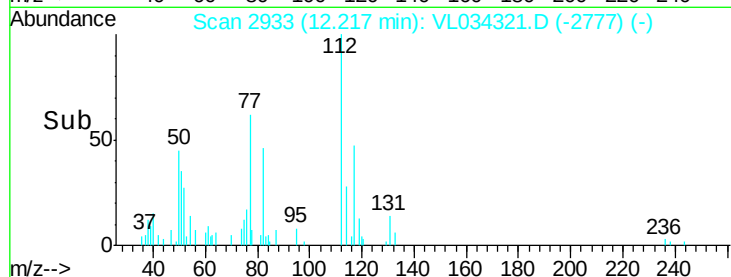
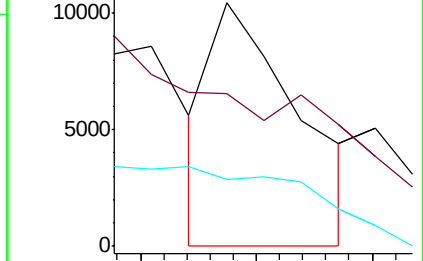
114 6.3 28.6 35.0#



Abundance Ion 112.10 (111.80 to 112.80): V

Ion 77.10 (76.80 to 77.80): VL0

Ion 114.10 (113.80 to 114.80): V



#61

Styrene

Concen: 0.035 ppbv

RT: 13.60 min Scan# 3363

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

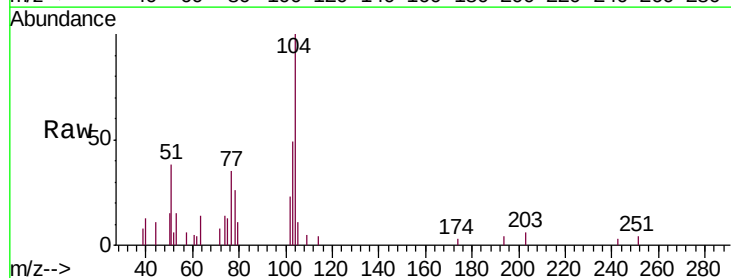
Tgt Ion:104 Resp: 5620

Ion Ratio Lower Upper

104 100

78 0.0 47.8 71.8#

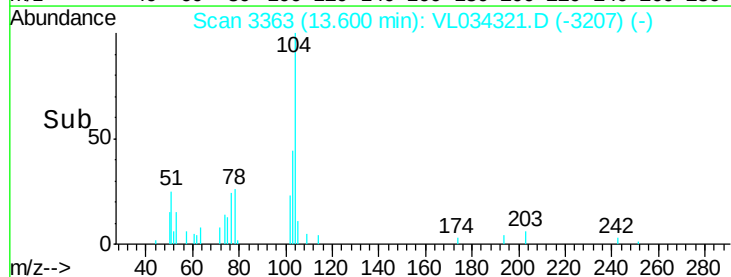
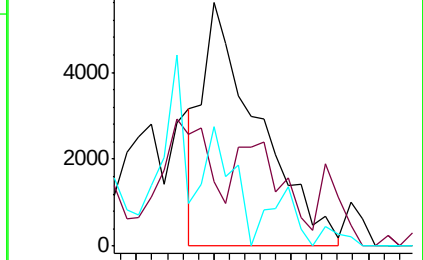
103 0.0 39.0 58.6#

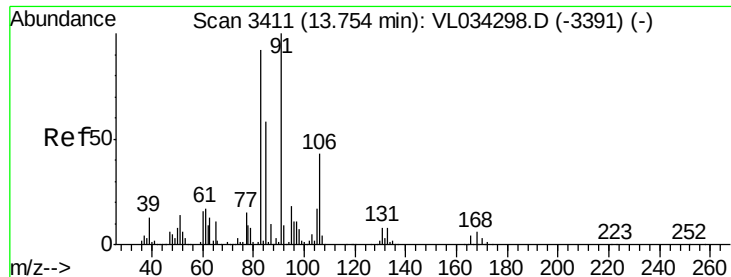


Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V





#63

1,1,2,2-Tetrachloroethane

Concen: 0.073 ppbv

RT: 13.76 min Scan# 3412

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

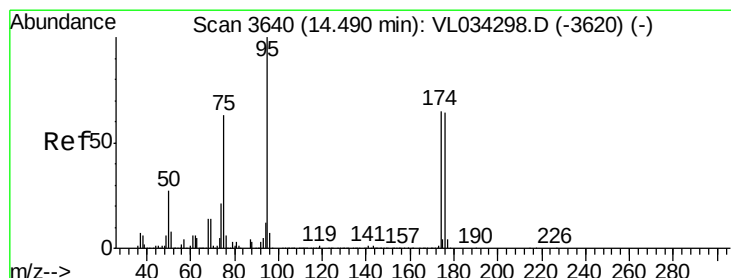
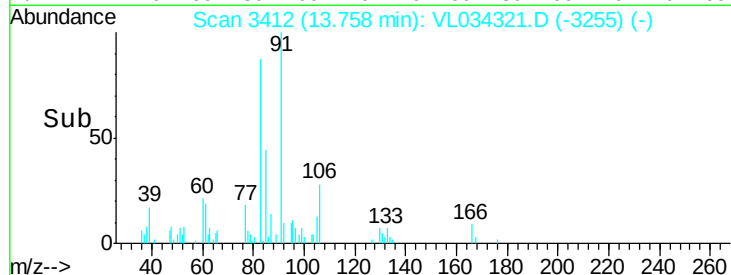
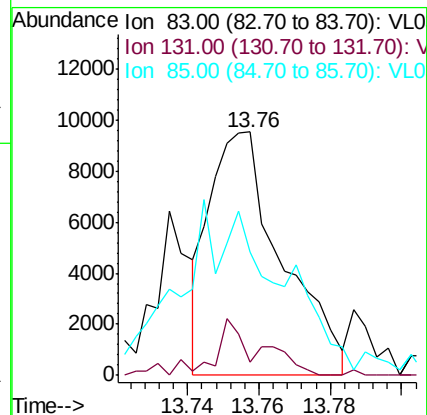
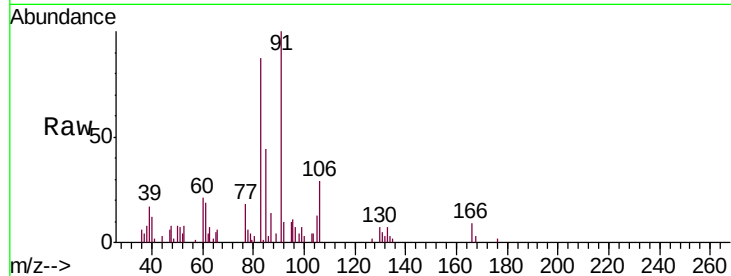
Tgt Ion: 83 Resp: 13431

Ion Ratio Lower Upper

83 100

131 14.7 4.8 14.4#

85 106.3 32.5 97.4#



#68

1-Bromo-4-Fluorobenzene

Concen: 10.104 ppbv

RT: 14.49 min Scan# 3640

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

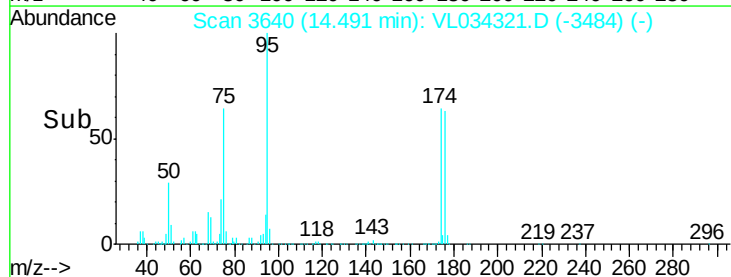
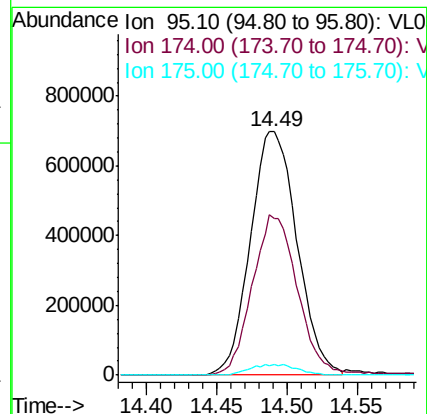
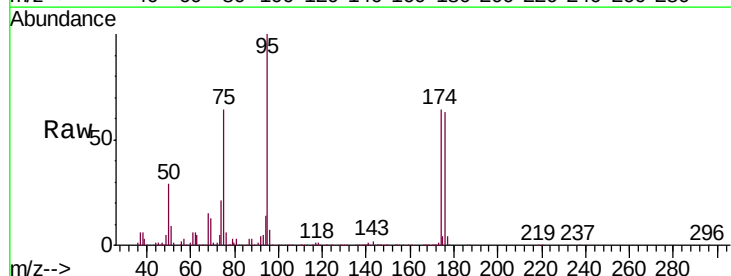
Tgt Ion: 95 Resp: 1613594

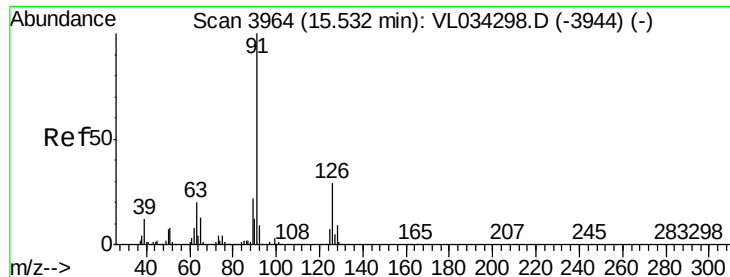
Ion Ratio Lower Upper

95 100

174 64.5 52.6 78.8

175 4.5 3.8 5.6





#71

2-Chlorotoluene

Concen: 0.041 ppbv

RT: 15.53 min Scan# 3964

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

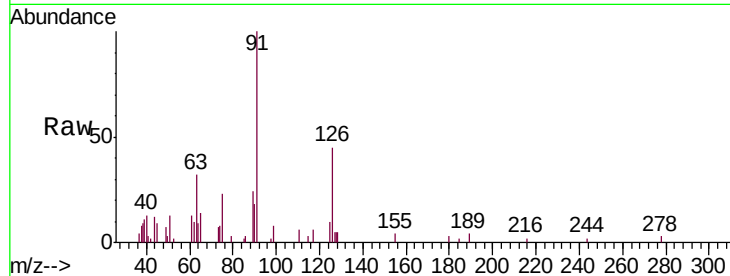
MDL-MDL-AIR-03-QT4-2019DL

Tgt Ion: 91 Resp: 9655

Ion Ratio Lower Upper

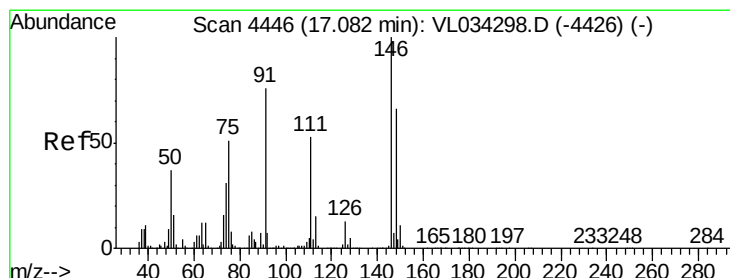
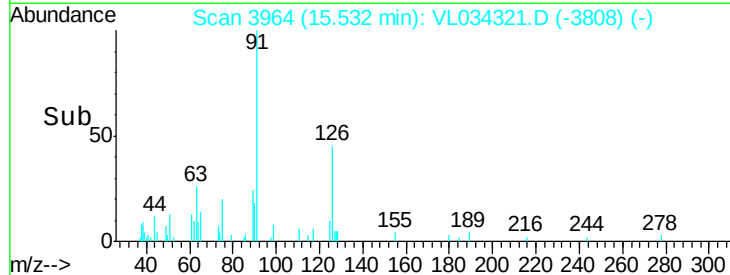
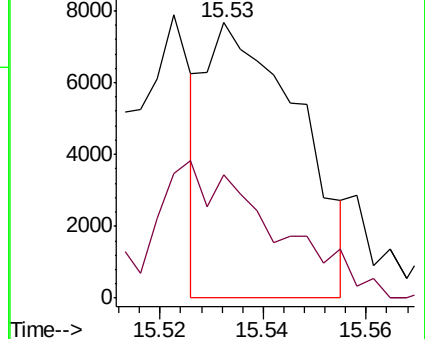
91 100

126 0.0 11.9 47.5#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V



#75

1,3-Dichlorobenzene

Concen: 0.058 ppbv

RT: 17.08 min Scan# 4445

Delta R.T. -0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

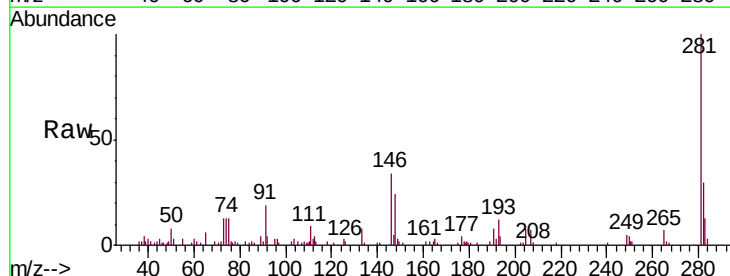
Tgt Ion: 146 Resp: 9232

Ion Ratio Lower Upper

146 100

111 107.4 24.5 73.5#

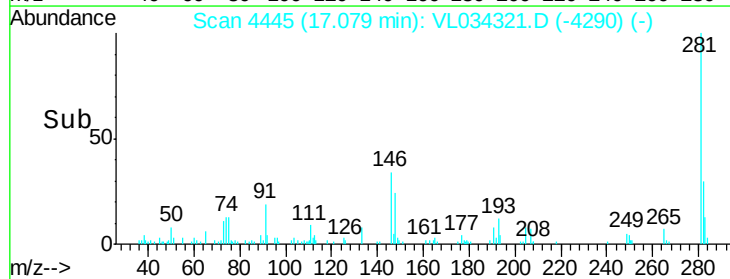
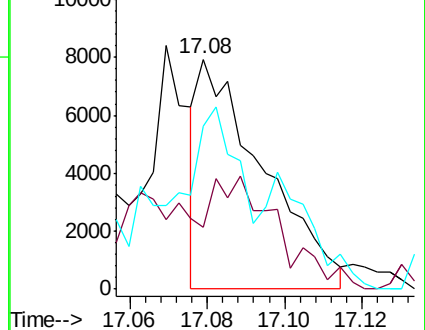
148 138.6 32.3 96.8#

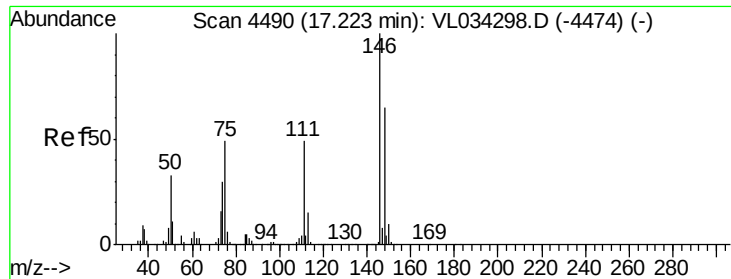


Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V

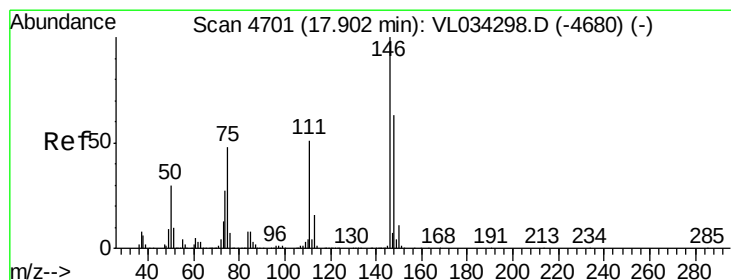
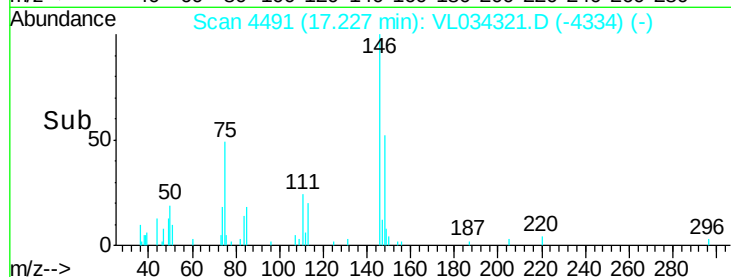
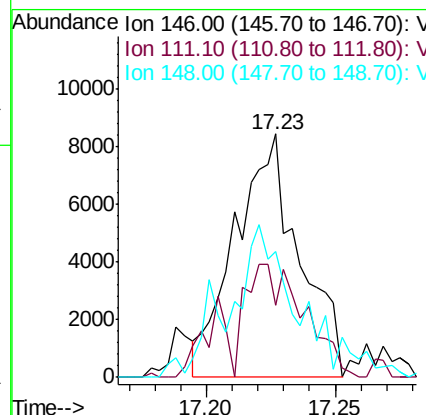
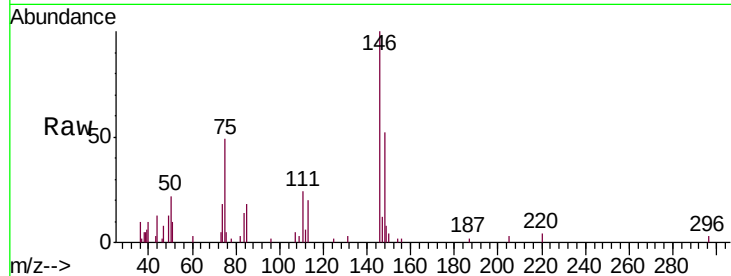




#76
 1,4-Dichlorobenzene
 Concen: 0.095 ppbv
 RT: 17.23 min Scan# 4491
 Delta R.T. 0.00 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

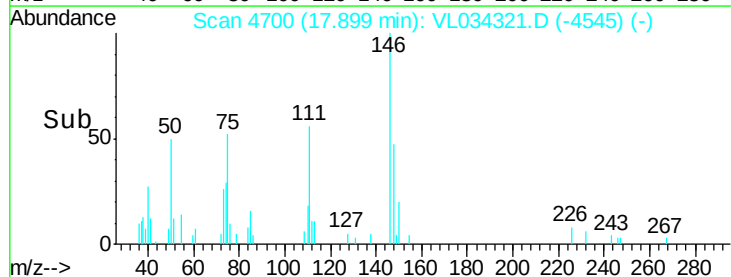
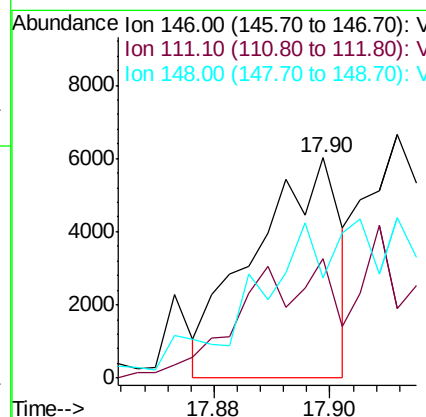
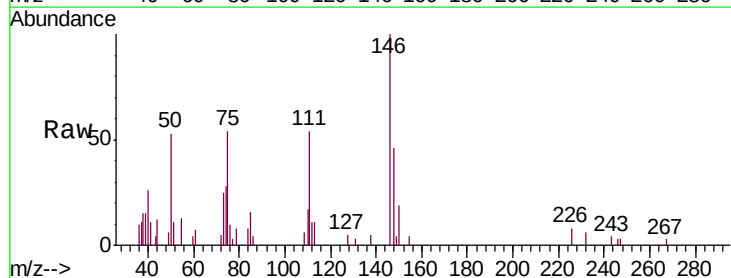
Instrument :
 MSVOA_L
 ClientSampleId :
 MDL-MDL-AIR-03-QT4-2019DL

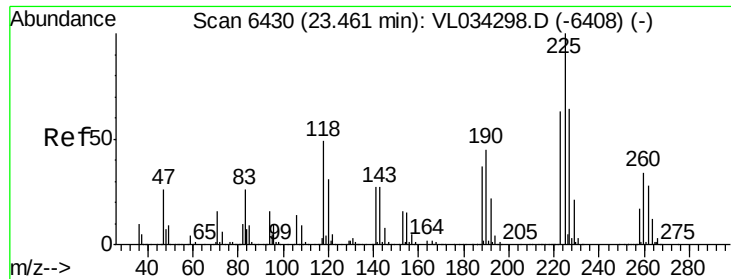
Tgt Ion:146 Resp: 14694
 Ion Ratio Lower Upper
 146 100
 111 55.2 23.9 71.7
 148 69.0 33.1 99.2



#77
 1,2-Dichlorobenzene
 Concen: 0.040 ppbv
 RT: 17.90 min Scan# 4700
 Delta R.T. -0.00 min
 Lab File: VL034321.D
 Acq: 17 Oct 2019 18:02

Tgt Ion:146 Resp: 6201
 Ion Ratio Lower Upper
 146 100
 111 0.0 25.1 75.3#
 148 0.0 32.3 96.8#





#78

Hexachloro-1,3-Butadiene

Concen: 0.091 ppbv

RT: 23.46 min Scan# 6431

Delta R.T. 0.00 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

Instrument :

MSVOA_L

ClientSampleId :

MDL-MDL-AIR-03-QT4-2019DL

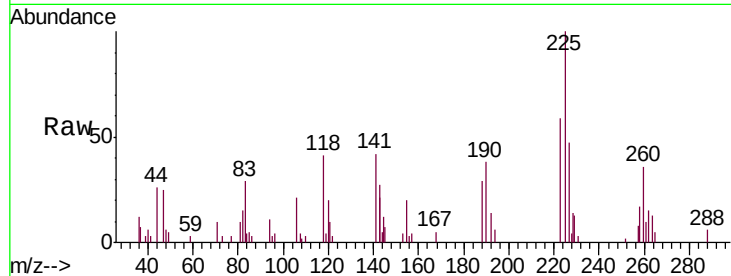
Tgt Ion:225 Resp: 11725

Ion Ratio Lower Upper

225 100

223 101.3 50.8 76.2#

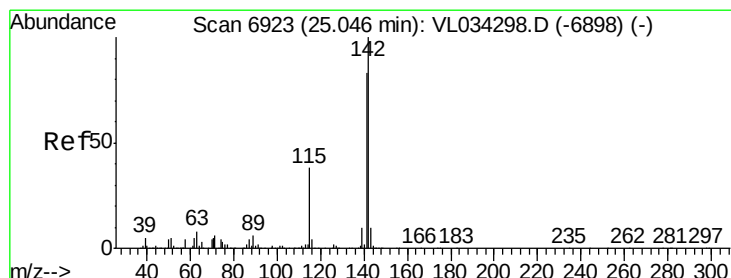
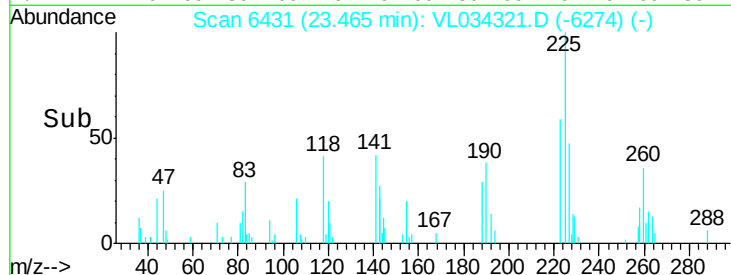
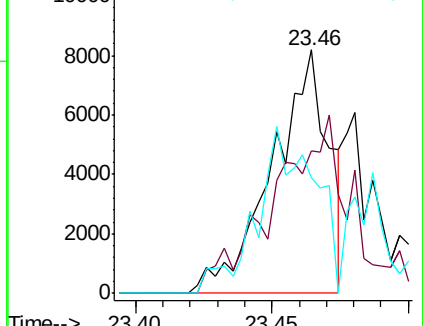
227 99.8 51.5 77.3#



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



#80

Naphthalene, 2-methyl-

Concen: 0.048 ppbv

RT: 25.06 min Scan# 6927

Delta R.T. 0.01 min

Lab File: VL034321.D

Acq: 17 Oct 2019 18:02

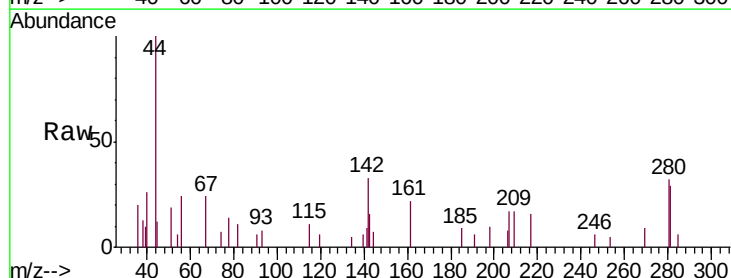
Tgt Ion:142 Resp: 2694

Ion Ratio Lower Upper

142 100

141 62.3 65.7 98.5#

115 42.8 30.9 46.3



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

