

Data File : VL037442.D

Acq On : 13 Aug 2021 10:31

Operator : SY/AP

Sample : VSTDCCC010

Misc : 400mL/MSVOA_L

ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDCCC010

Quant Time: Aug 13 12:19:51 2021

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL081221AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Aug 12 15:26:13 2021

QLast Update : Thu Aug 12 15:26:13 2021

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1305931	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3951830	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	4382599	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2518222	8.01	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	80.10%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	3.04	85	1552582	7.782	ppbv	99
3) Chlorodifluoromethane	2.99	51	2357031	9.191	ppbv	99
4) Chloromethane	3.14	50	873260	9.473	ppbv	100
5) Vinyl Chloride	3.25	62	878229	9.326	ppbv	100
6) Bromomethane	3.47	94	483529	9.180	ppbv	95
7) Chloroethane	3.56	64	321388	9.583	ppbv	91
8) Dichlorotetrafluoroethane	3.19	85	2058325	9.243	ppbv	99
9) Propene	3.01	41	846210	9.826	ppbv	99
10) Heptane	8.12	43	2087366	9.968	ppbv	100
11) Trichlorofluoromethane	3.95	101	1936931	8.972	ppbv	94
12) 1,1,2-Trichlorotrifluoroet	4.48	101	1453683	9.612	ppbv	99
13) Ethanol	3.62	45	44373	4.828	ppbv #	51
14) Bromoethene	3.74	108	614036	9.128	ppbv	96
15) Acetone	3.84	43	1067156	7.705	ppbv	95
16) 1,3-Butadiene	3.32	39	858027	9.231	ppbv	97
17) tert-Butyl alcohol	4.29	59	1209546	9.150	ppbv	100
18) 1,1-Dichloroethene	4.29	96	649808	9.254	ppbv	89
19) Isopropyl Alcohol	3.96	45	725376	8.999	ppbv #	1
20) Methylene Chloride	4.34	84	584352	7.979	ppbv	96
21) Allyl Chloride	4.41	41	1045346	9.632	ppbv	98
22) trans-1,2-Dichloroethene	4.88	96	681655	10.349	ppbv	96
23) Vinyl Acetate	5.07	43	1633450	7.686	ppbv	99
24) 1,1-Dichloroethane	5.01	63	1330024	8.058	ppbv	99
25) Ethyl Acetate	5.67	43	3228462	9.781	ppbv	99
26) Hexane	5.68	57	1597709	9.380	ppbv	99
27) Carbon Disulfide	4.55	76	1577409	10.984	ppbv	98
28) Methyl tert-Butyl Ether	5.03	73	1406319	7.715	ppbv	98
29) Chloroform	5.75	83	2258006	9.416	ppbv	98
30) Cyclohexane	7.12	84	1329970	9.481	ppbv	99
31) cis-1,2-Dichloroethene	5.54	61	1507219	10.237	ppbv	98
32) 1,1,1-Trichloroethane	6.50	97	2238689	9.250	ppbv	100
34) 2-Butanone	5.24	43	1402195	8.594	ppbv	97
35) Carbon Tetrachloride	7.01	117	2341871	9.610	ppbv	100
36) Benzene	6.89	78	3267500	9.806	ppbv	99
37) 1,2-Dichloroethane	6.30	62	1643718	9.666	ppbv	99
38) Trichloroethene	7.83	130	1301355	8.848	ppbv	97
39) 1,2-Dichloropropane	7.61	63	1234060	9.722	ppbv	97
40) 1,4-Dioxane	7.82	88	128168	4.149	ppbv #	100
41) Tetrahydrofuran	6.05	42	750857	10.021	ppbv	98
42) Bromodichloromethane	7.78	83	2478689	10.409	ppbv	99
43) Methyl Methacrylate	8.01	69	1170040	10.360	ppbv	98

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Aug 12 15:26:13 2021

QLast Update : Thu Aug 12 15:26:13 2021

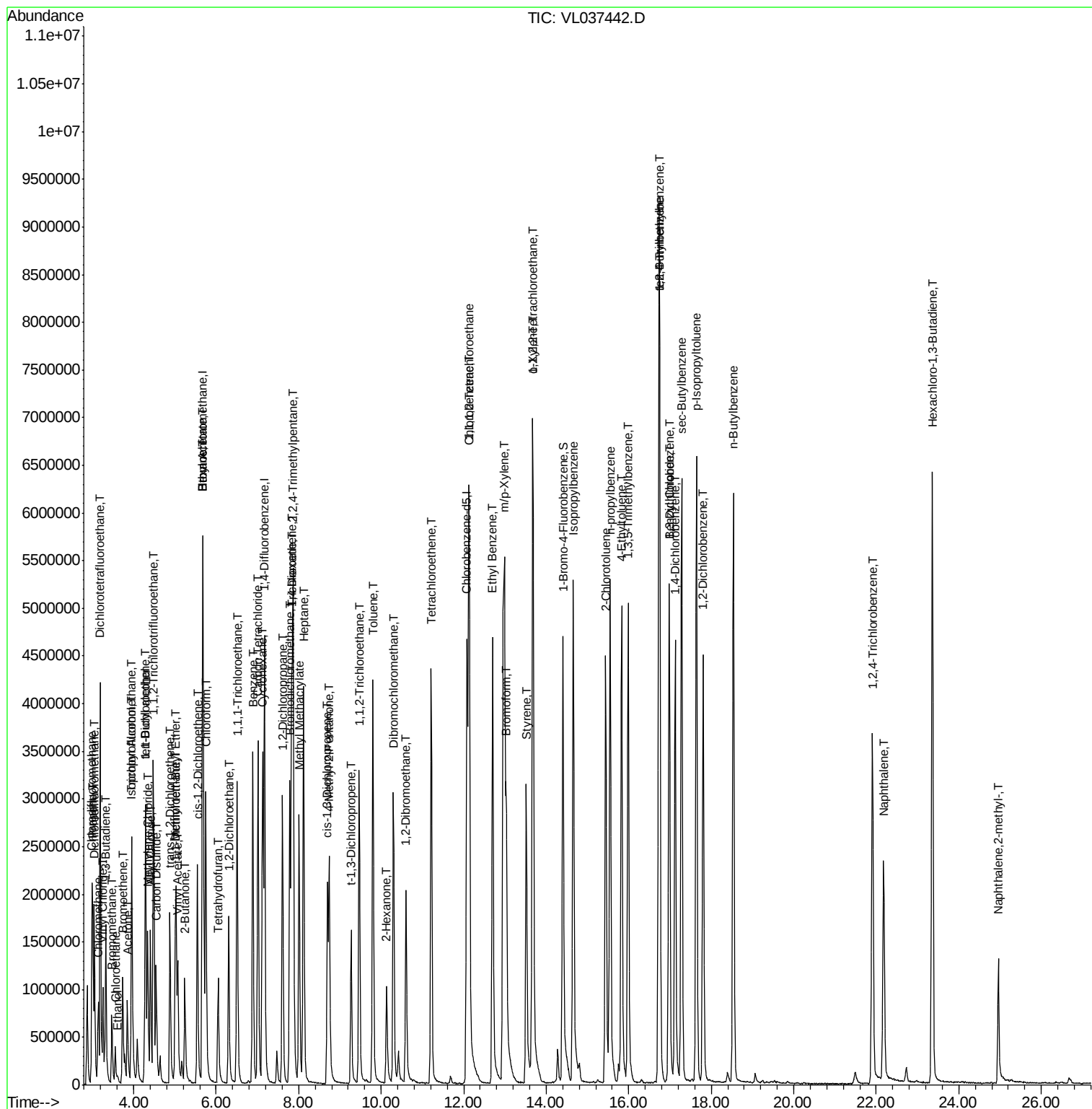
Response via : Initial Calibration

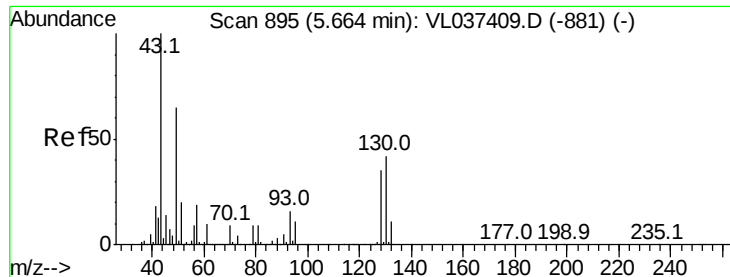
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2,2,4-Trimethylpentane	7.86	57	5392547	9.679	ppbv	99
45) t-1,3-Dichloropropene	9.27	75	1020407	12.159	ppbv	98
46) cis-1,3-Dichloropropene	8.70	75	1321732	11.281	ppbv	97
47) 1,1,2-Trichloroethane	9.47	97	1311474	9.557	ppbv	96
48) Dibromochloromethane	10.30	129	2095563	10.584	ppbv	100
49) Bromoform	13.03	173	1632652	10.883	ppbv	91
50) 4-Methyl-2-Pentanone	8.74	43	2103497	10.248	ppbv	100
51) 2-Hexanone	10.13	43	1014799	10.509	ppbv #	99
52) Tetrachloroethene	11.21	164	1198922	8.541	ppbv	95
53) Toluene	9.80	91	3820039	10.041	ppbv	98
54) 1,2-Dibromoethane	10.60	107	1903127	10.190	ppbv	96
56) 1,1,1,2-Tetrachloroethane	12.12	131	1411980	8.093	ppbv	97
57) Chlorobenzene	12.14	112	2683416	7.555	ppbv	96
58) Ethyl Benzene	12.70	91	4848913	8.156	ppbv	98
59) m/p-Xylene	12.99	91	3372522	6.458	ppbv #	1
60) o-Xylene	13.68	91	3765509	7.761	ppbv	100
61) Styrene	13.52	104	2127037	8.678	ppbv	100
62) Isopropylbenzene	14.66	105	5244460	7.559	ppbv	99
63) 1,1,2,2-Tetrachloroethane	13.67	83	2707389	7.400	ppbv	98
64) n-propylbenzene	15.55	120	1428573	8.182	ppbv	95
65) tert-Butylbenzene	16.73	119	4811305	7.690	ppbv	99
66) Benzyl Chloride	16.98	91	299902	10.475	ppbv	99
67) sec-Butylbenzene	17.28	105	6734338	7.910	ppbv	99
69) p-Isopropyltoluene	17.64	119	5653731	8.091	ppbv	100
70) n-Butylbenzene	18.54	91	5533401	8.520	ppbv	99
71) 2-Chlorotoluene	15.44	91	3893968	7.935	ppbv	99
72) 4-Ethyltoluene	15.83	105	4655044	8.266	ppbv	99
73) 1,3,5-Trimethylbenzene	15.99	105	4204158	7.896	ppbv	99
74) 1,2,4-Trimethylbenzene	16.75	105	4391791	8.057	ppbv	96
75) 1,3-Dichlorobenzene	16.98	146	2654526	7.957	ppbv	99
76) 1,4-Dichlorobenzene	17.13	146	2582409	7.808	ppbv	98
77) 1,2-Dichlorobenzene	17.81	146	2593329	8.080	ppbv	99
78) Hexachloro-1,3-Butadiene	23.36	225	1915916	7.369	ppbv	99
79) Naphthalene	22.18	128	3231112	10.906	ppbv	97
80) Naphthalene,2-methyl-	24.96	142	956522	15.287	ppbv	94
81) 1,2,4-Trichlorobenzene	21.91	180	1947657	9.676	ppbv	99

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

ALS Vial : 1 Sample Multiplier: 1

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 895

Delta R.T. 0.00 min

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ClientSampleId :

VSTDCCC010

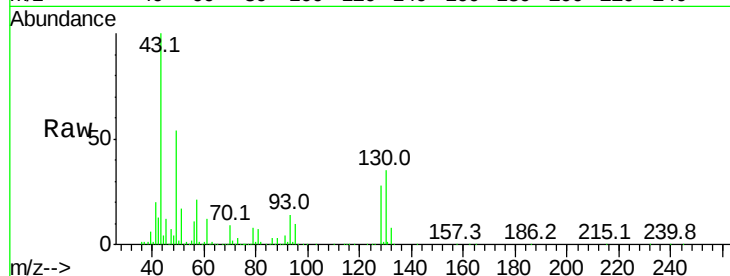
Tgt Ion: 49 Resp: 1305931

Ion Ratio Lower Upper

49 100

128 56.4 27.9 83.6

130 69.1 34.6 103.8



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

5.66

800000

600000

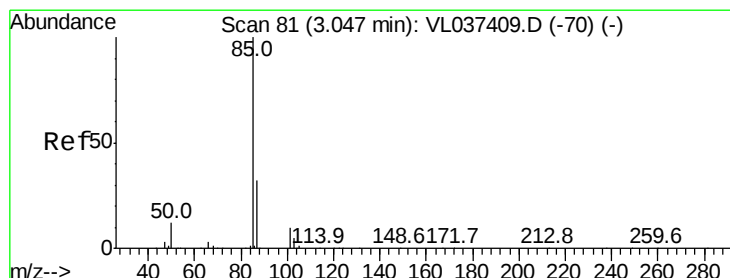
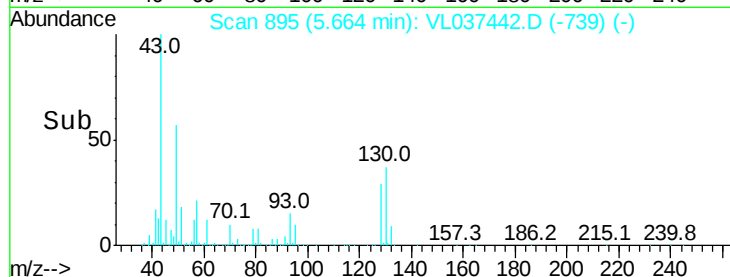
400000

200000

0

5.60 5.65 5.70 5.75

Time-->



#2

Dichlorodifluoromethane

Concen: 7.782 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.00 min

Lab File: VL037442.D

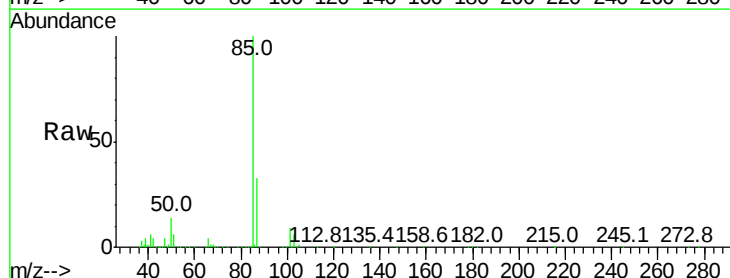
Acq: 13 Aug 2021 10:31

Tgt Ion: 85 Resp: 1552582

Ion Ratio Lower Upper

85 100

87 32.9 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.04

1000000

800000

600000

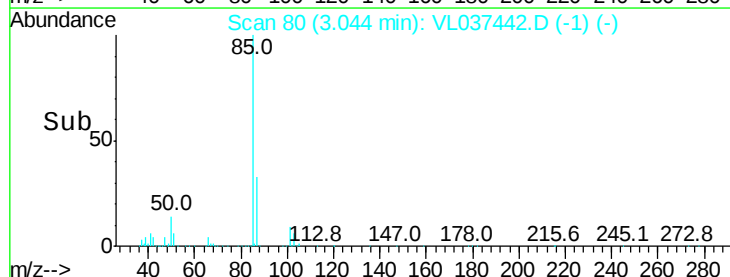
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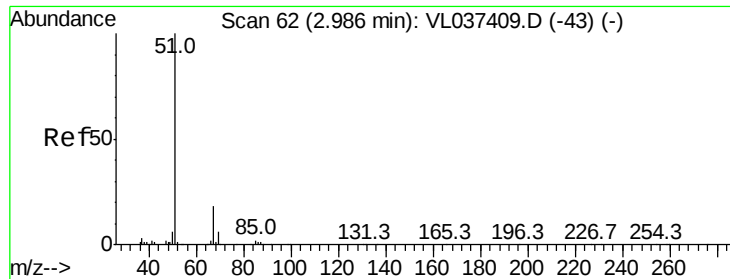
200000

0

3.00 3.05 3.10

Time-->





#3

Chlorodifluoromethane

Concen: 9.191 ppbv

RT: 2.99 min Scan# 62

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

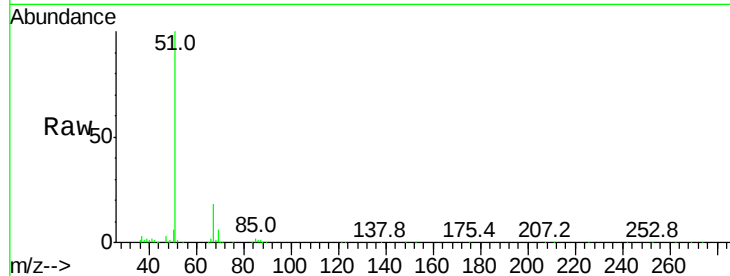
VSTDCCC010

Tgt Ion: 51 Resp: 2357031

Ion Ratio Lower Upper

51 100

67 18.1 14.7 22.1



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

1500000

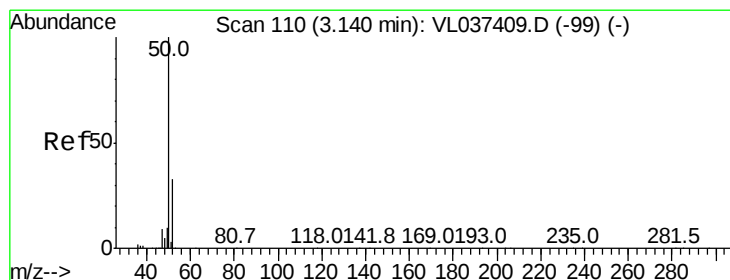
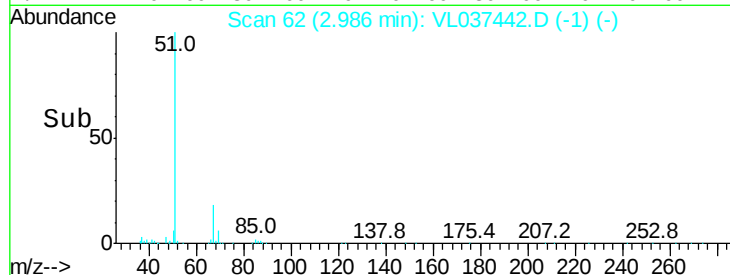
2.99

1000000

500000

0

Time-->



#4

Chloromethane

Concen: 9.473 ppbv

RT: 3.14 min Scan# 109

Delta R.T. -0.00 min

Lab File: VL037442.D

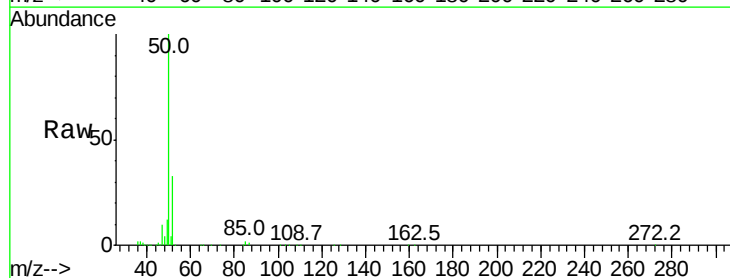
Acq: 13 Aug 2021 10:31

Tgt Ion: 50 Resp: 873260

Ion Ratio Lower Upper

50 100

52 32.8 26.2 39.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

600000

3.14

500000

400000

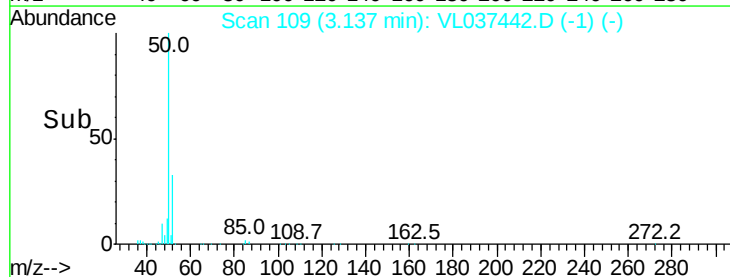
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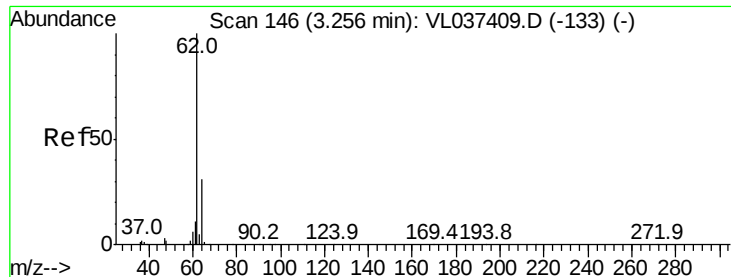
200000

100000

0

Time-->





#5

Vinyl Chloride

Concen: 9.326 ppbv

RT: 3.25 min Scan# 145

Delta R.T. -0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

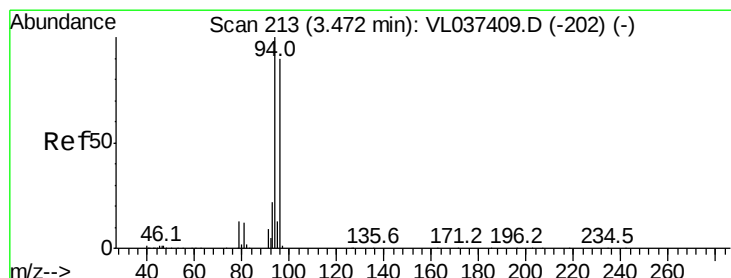
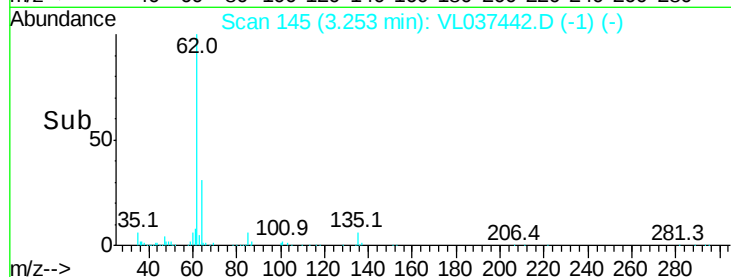
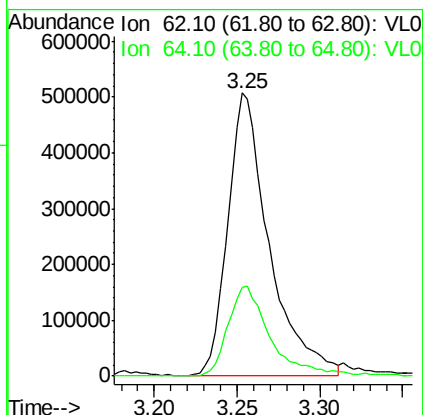
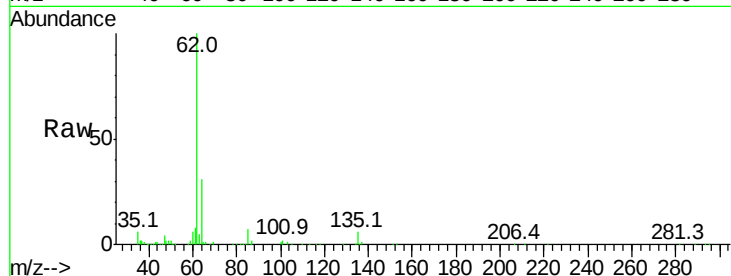
VSTDCCC010

Tgt Ion: 62 Resp: 878229

Ion Ratio Lower Upper

62 100

64 31.3 25.0 37.6



#6

Bromomethane

Concen: 9.180 ppbv

RT: 3.47 min Scan# 212

Delta R.T. -0.00 min

Lab File: VL037442.D

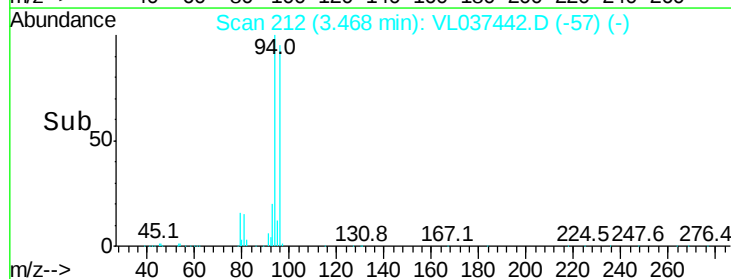
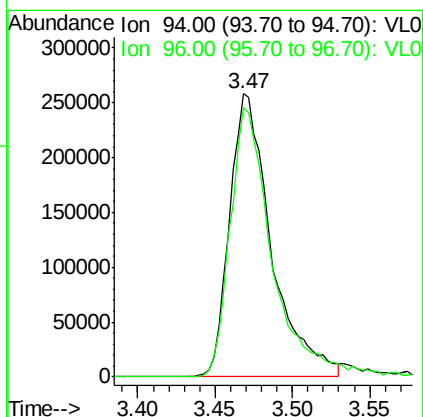
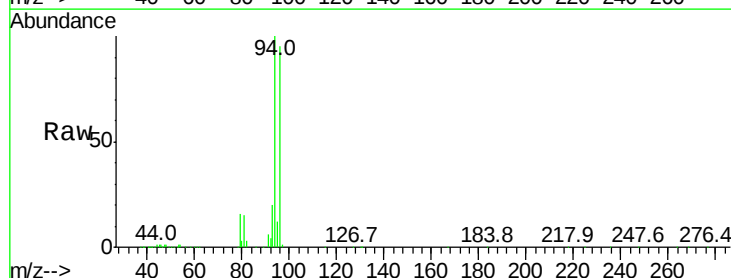
Acq: 13 Aug 2021 10:31

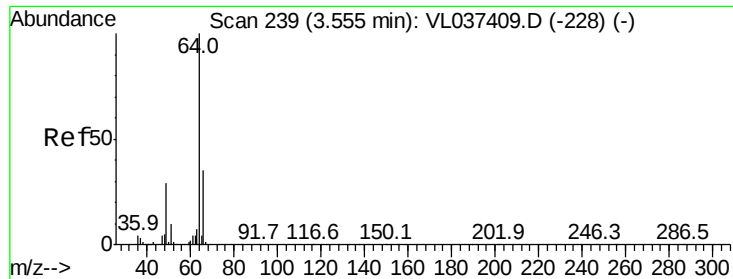
Tgt Ion: 94 Resp: 483529

Ion Ratio Lower Upper

94 100

96 95.4 72.2 108.4





#7

Chloroethane

Concen: 9.583 ppbv

RT: 3.56 min Scan# 239

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

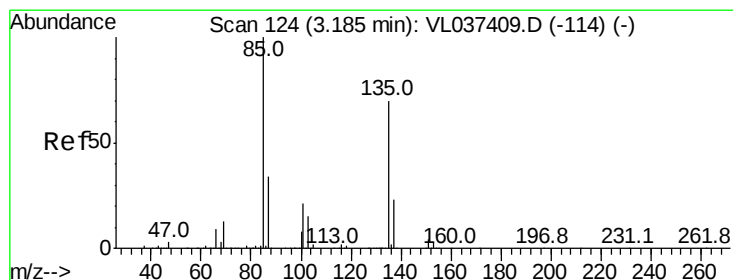
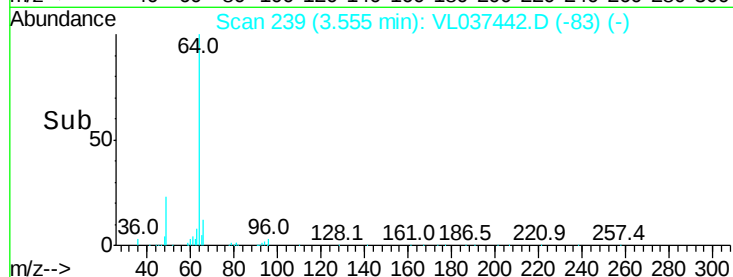
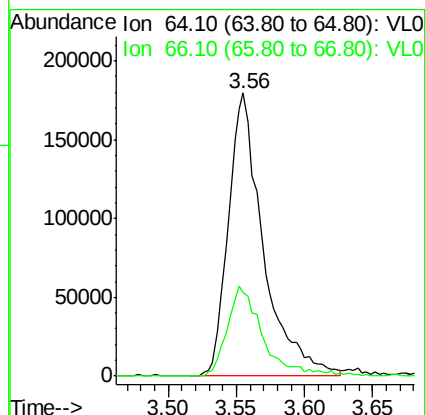
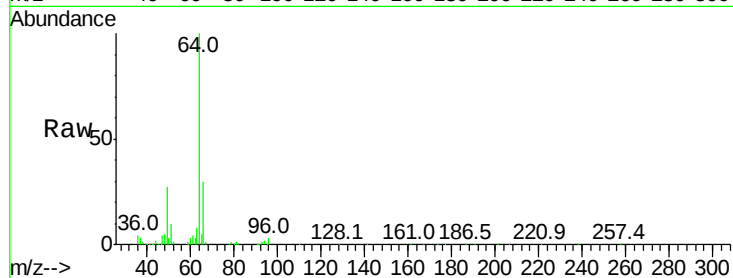
VSTDCCC010

Tgt Ion: 64 Resp: 321388

Ion Ratio Lower Upper

64 100

66 29.7 27.8 41.8



#8

Dichlorotetrafluoroethane

Concen: 9.243 ppbv

RT: 3.19 min Scan# 124

Delta R.T. 0.00 min

Lab File: VL037442.D

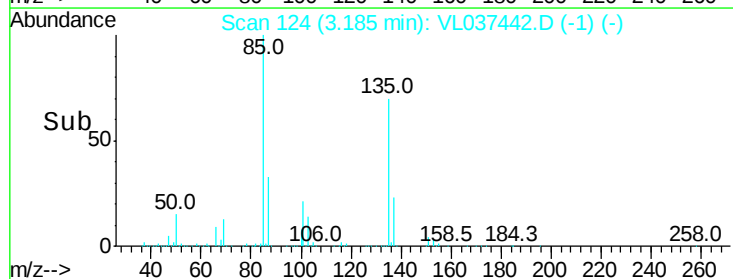
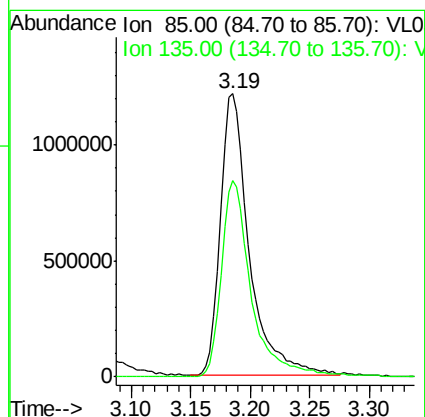
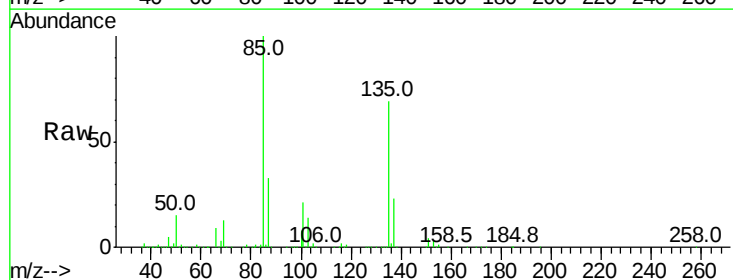
Acq: 13 Aug 2021 10:31

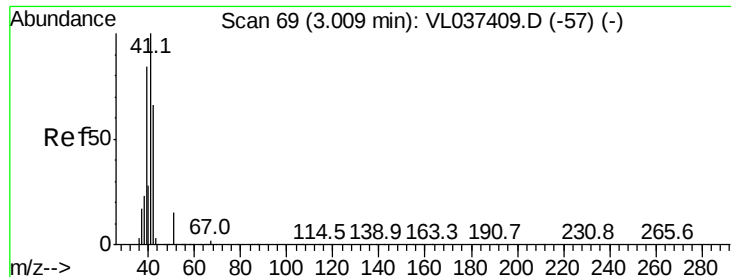
Tgt Ion: 85 Resp: 2058325

Ion Ratio Lower Upper

85 100

135 72.7 58.6 88.0





#9

Propene

Concen: 9.826 ppbv

RT: 3.01 min Scan# 68

Delta R.T. -0.00 min

Lab File: VL037442.D

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ClientSampleId :

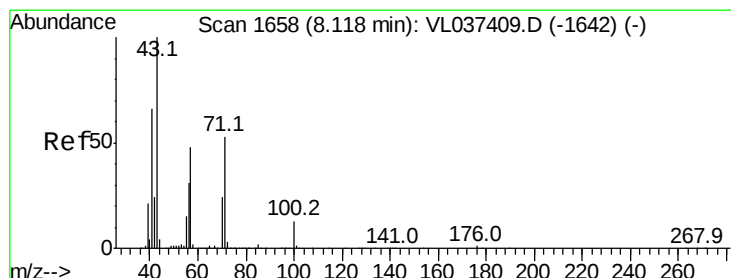
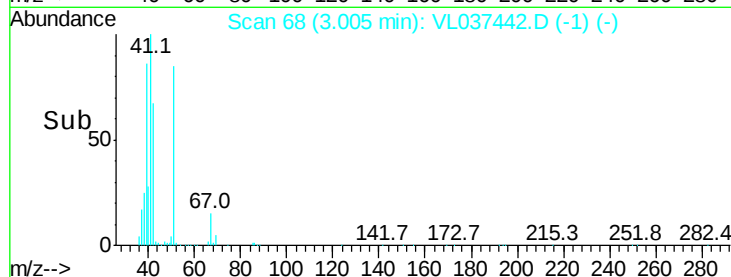
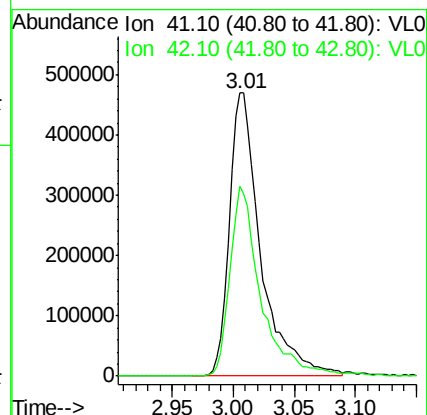
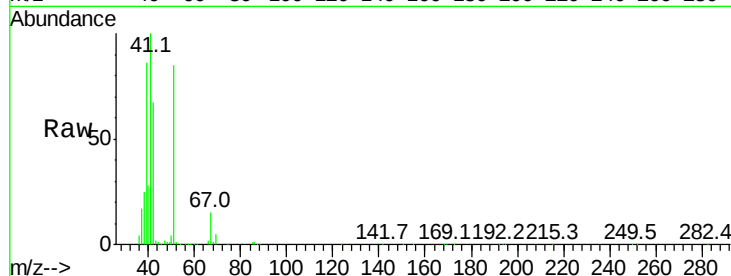
VSTDCCC010

Tgt Ion: 41 Resp: 846210

Ion Ratio Lower Upper

41 100

42 66.2 53.8 80.8



#10

Heptane

Concen: 9.968 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. 0.00 min

Lab File: VL037442.D

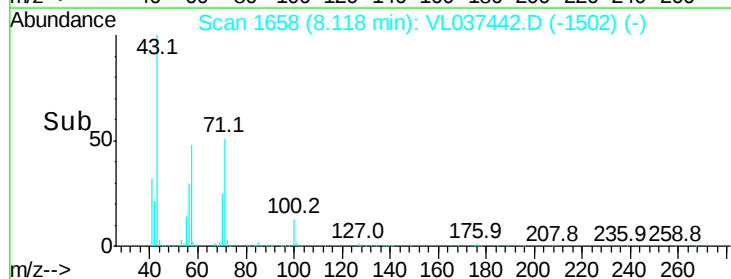
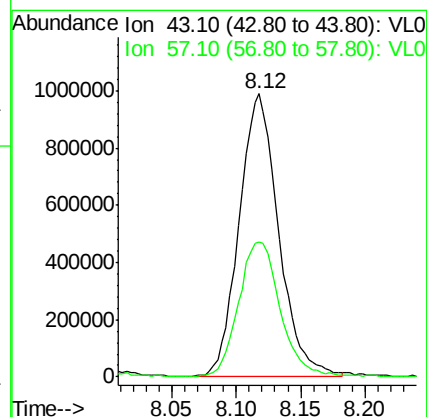
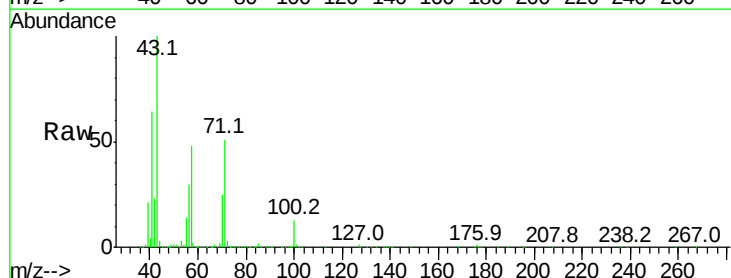
Acq: 13 Aug 2021 10:31

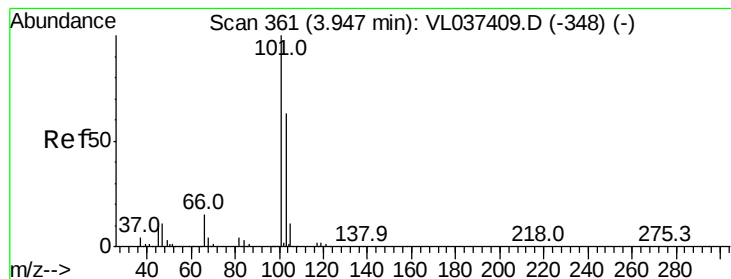
Tgt Ion: 43 Resp: 2087366

Ion Ratio Lower Upper

43 100

57 50.4 40.3 60.5





#11

Trichlorofluoromethane

Concen: 8.972 ppbv

RT: 3.95 min Scan# 361

Delta R.T. 0.00 min

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Instrument :

MSVOA_L

ClientSampleId :

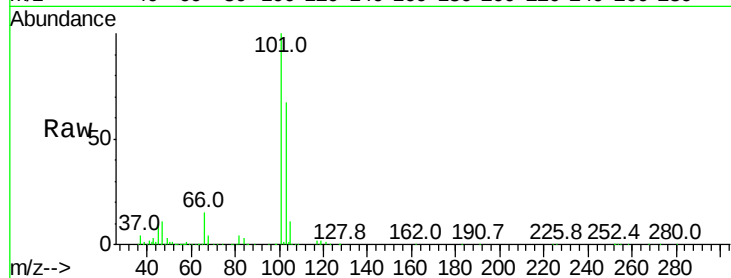
VSTDCCC010

Tgt Ion:101 Resp: 1936931

Ion Ratio Lower Upper

101 100

103 67.2 50.2 75.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

1200000

1000000

800000

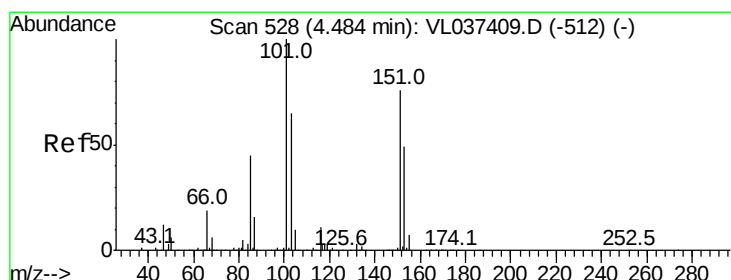
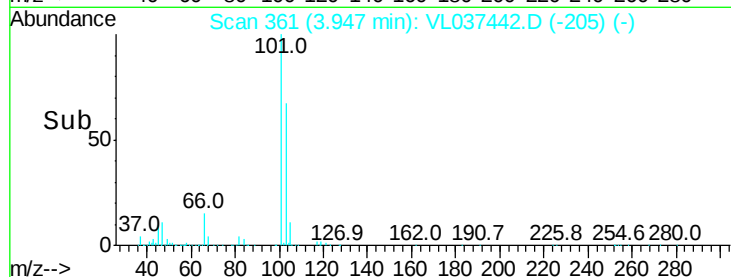
600000

400000

200000

0

Time--> 3.85 3.90 3.95 4.00 4.05



#12

1,1,2-Trichlorotrifluoroethane

Concen: 9.612 ppbv

RT: 4.48 min Scan# 527

Delta R.T. -0.00 min

Lab File: VL037442.D

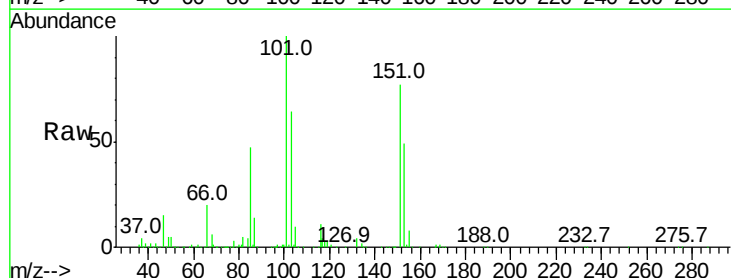
Acq: 13 Aug 2021 10:31

Tgt Ion:101 Resp: 1453683

Ion Ratio Lower Upper

101 100

151 77.5 61.2 91.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

800000

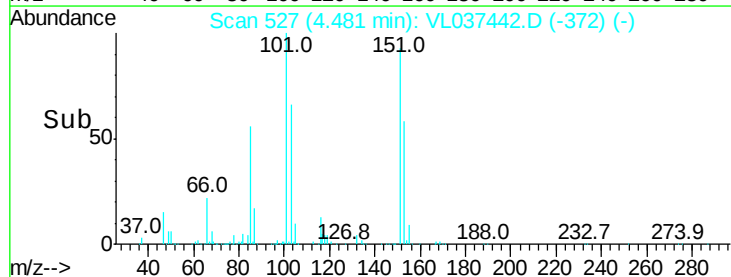
600000

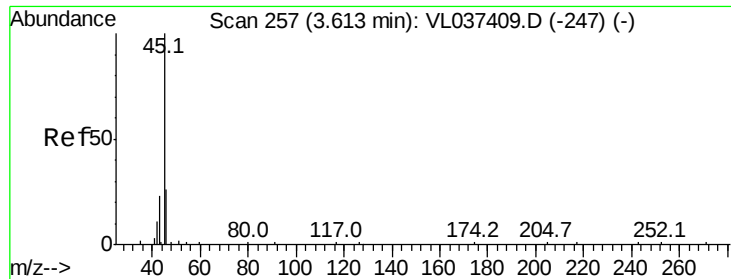
400000

200000

0

Time--> 4.40 4.45 4.50 4.55 4.60





#13

Ethanol

Concen: 4.828 ppbv

RT: 3.62 min Scan# 258

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

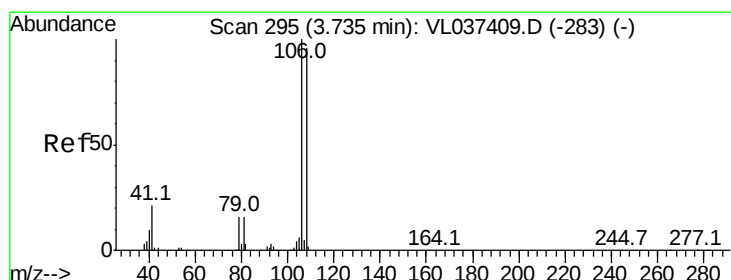
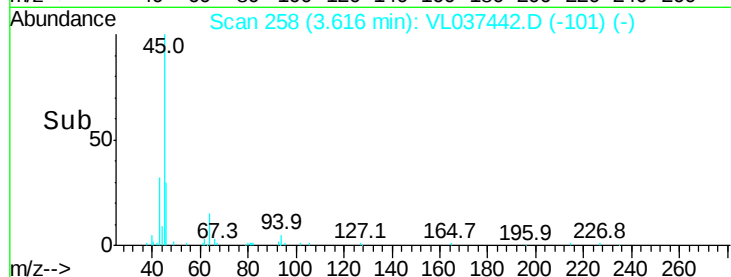
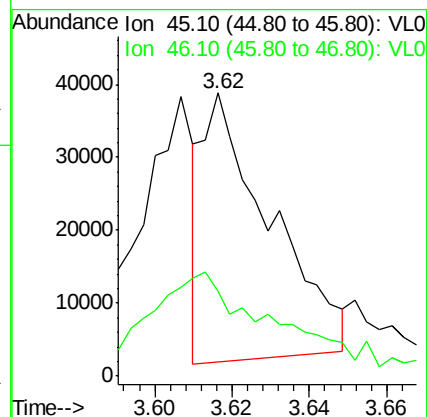
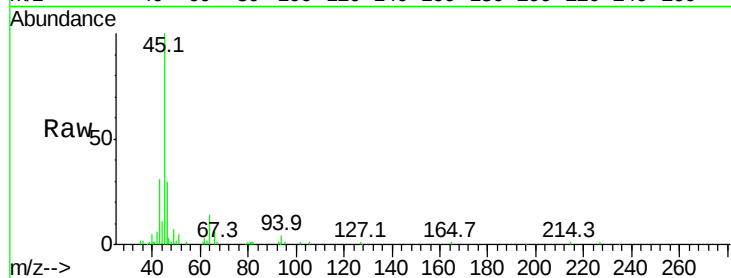
VSTDCCC010

Tgt Ion: 45 Resp: 44373

Ion Ratio Lower Upper

45 100

46 76.9 18.0 72.2#



#14

Bromoethene

Concen: 9.128 ppbv

RT: 3.74 min Scan# 295

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

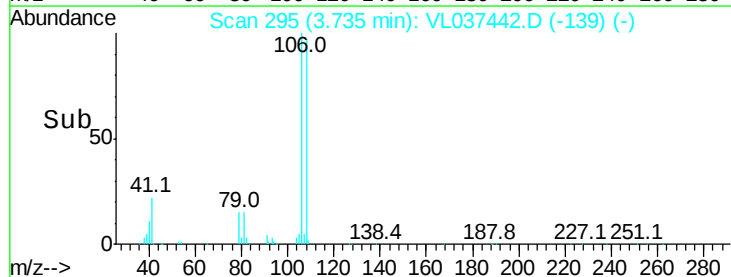
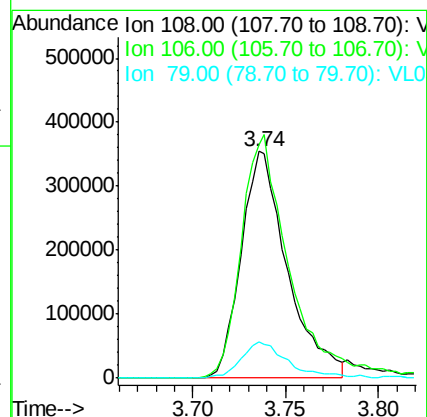
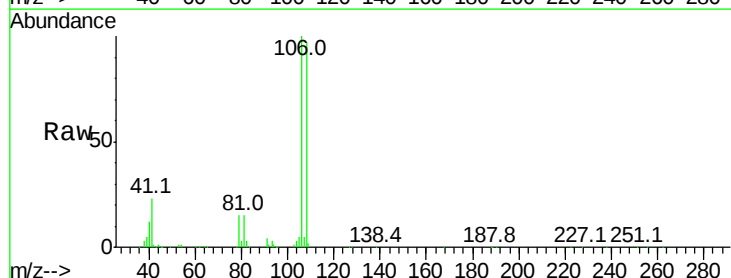
Tgt Ion: 108 Resp: 614036

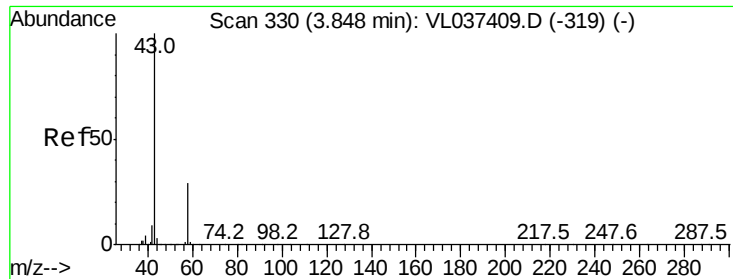
Ion Ratio Lower Upper

108 100

106 114.3 87.5 131.3

79 17.1 13.5 20.3





#15

Acetone

Concen: 7.705 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

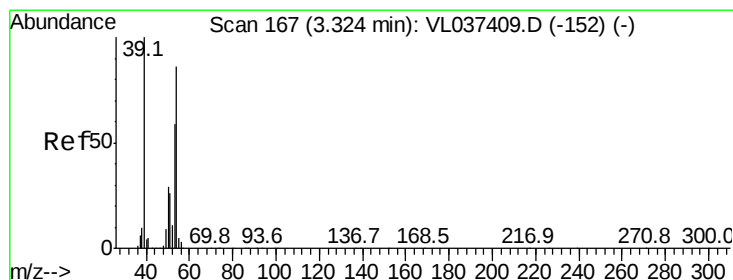
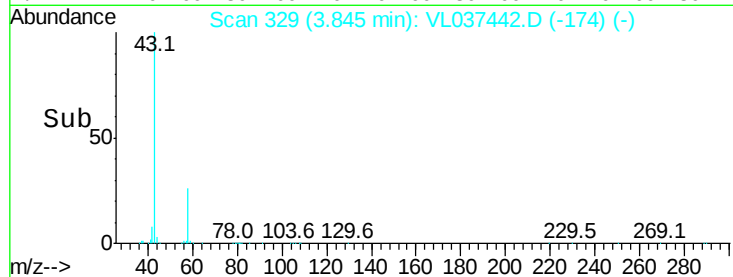
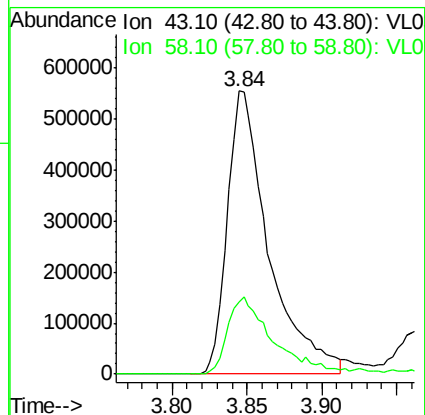
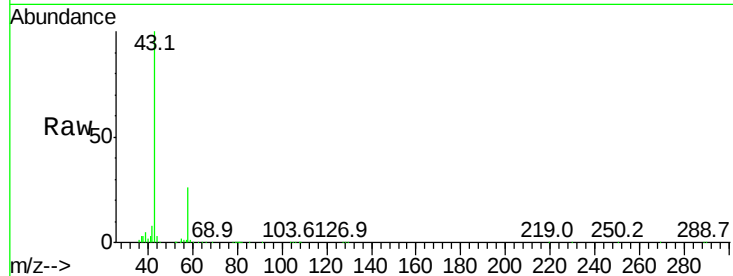
VSTDCCC010

Tgt Ion: 43 Resp: 1067156

Ion Ratio Lower Upper

43 100

58 33.0 24.4 36.6



#16

1,3-Butadiene

Concen: 9.231 ppbv

RT: 3.32 min Scan# 167

Delta R.T. 0.00 min

Lab File: VL037442.D

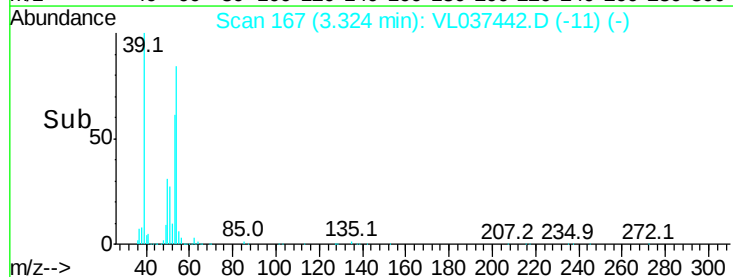
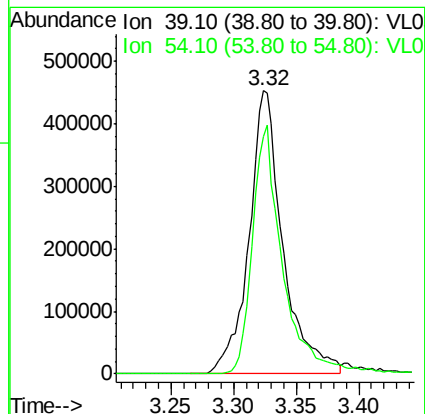
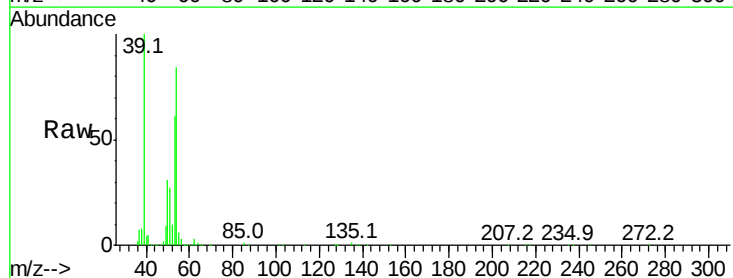
Acq: 13 Aug 2021 10:31

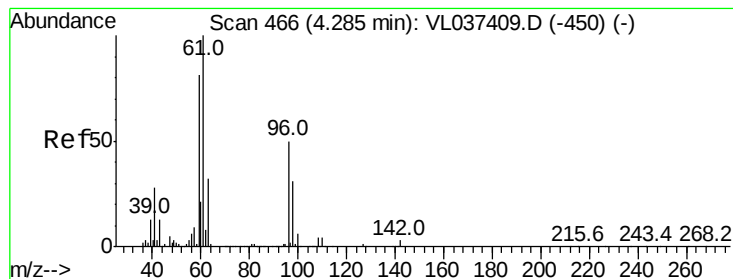
Tgt Ion: 39 Resp: 858027

Ion Ratio Lower Upper

39 100

54 78.9 61.4 92.0





#17

tert-Butyl alcohol

Concen: 9.150 ppbv

RT: 4.29 min Scan# 466

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

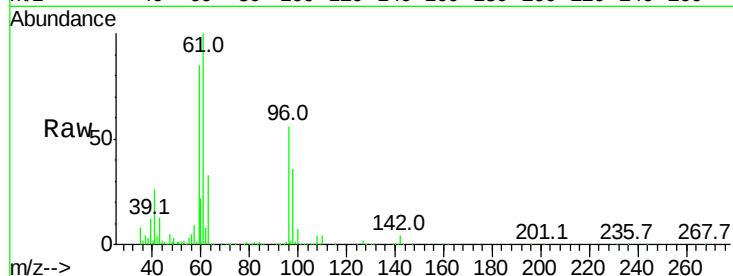
VSTDCCC010

Tgt Ion: 59 Resp: 1209546

Ion Ratio Lower Upper

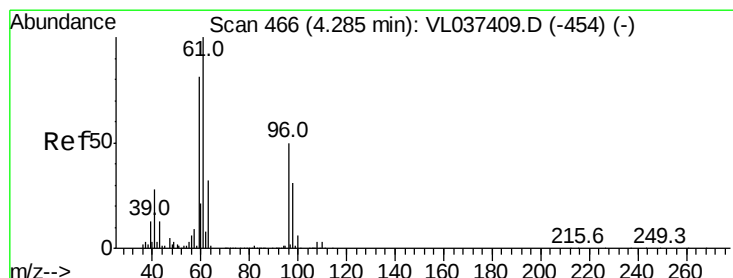
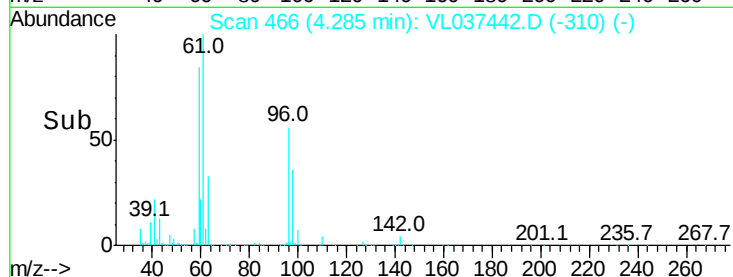
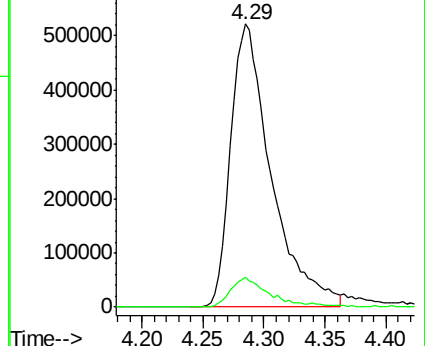
59 100

57 10.7 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: 9.254 ppbv

RT: 4.29 min Scan# 466

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

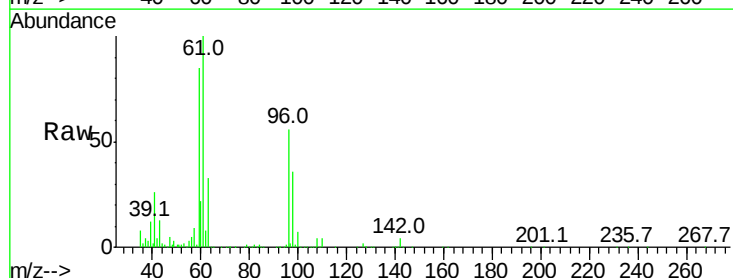
Tgt Ion: 96 Resp: 649808

Ion Ratio Lower Upper

96 100

61 178.7 159.0 238.4

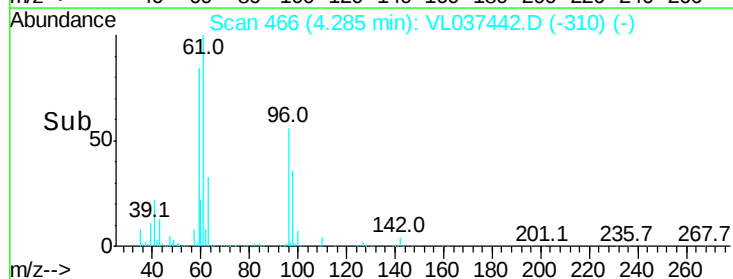
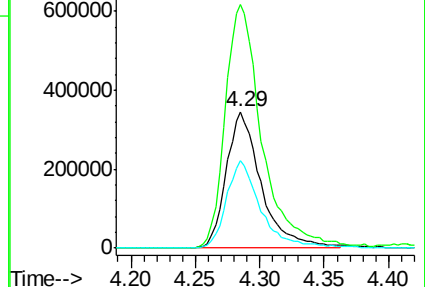
98 63.8 49.4 74.2

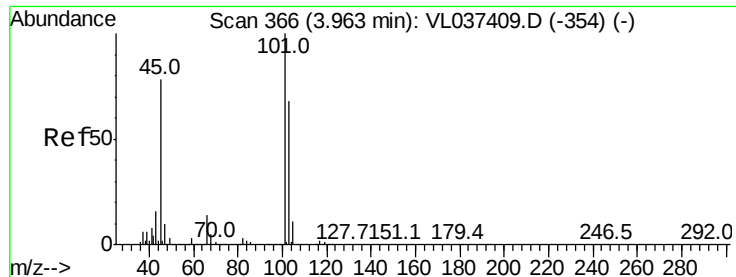


Abundance Ion 96.00 (95.70 to 96.70): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 98.00 (97.70 to 98.70): VL0





#19

Isopropyl Alcohol

Concen: 8.999 ppbv

RT: 3.96 min Scan# 365

Delta R.T. -0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

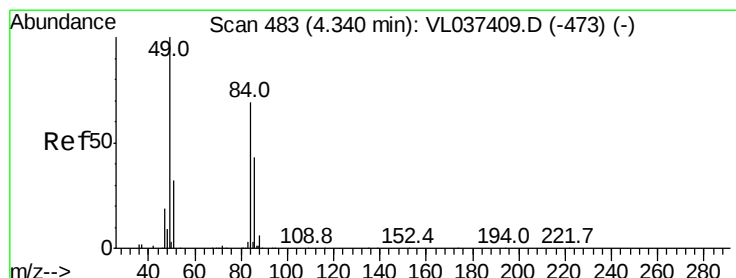
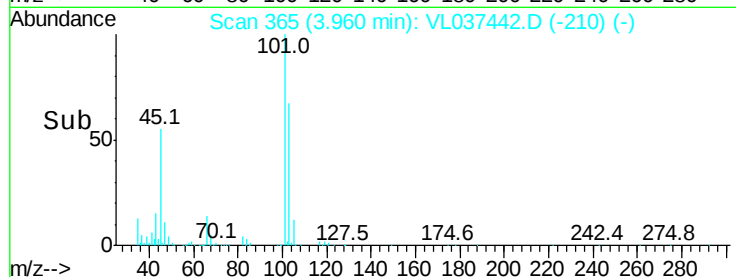
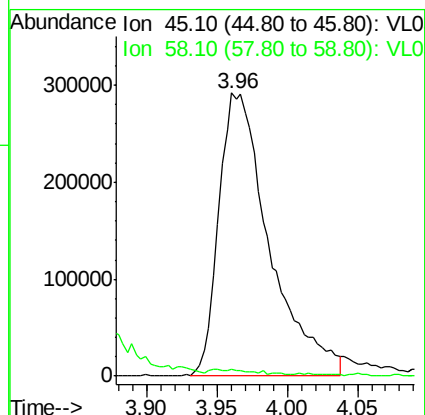
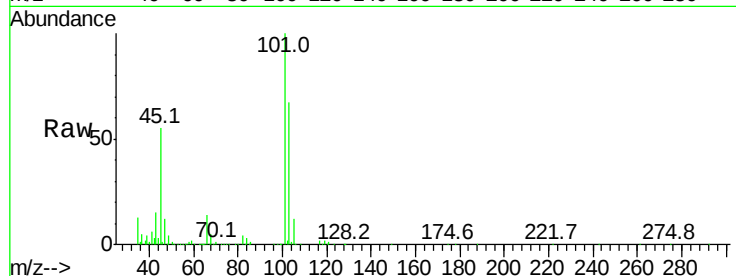
VSTDCCC010

Tgt Ion: 45 Resp: 725376

Ion Ratio Lower Upper

45 100

58 48.5 2.2 3.4#



#20

Methylene Chloride

Concen: 7.979 ppbv

RT: 4.34 min Scan# 483

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Tgt Ion: 84 Resp: 584352

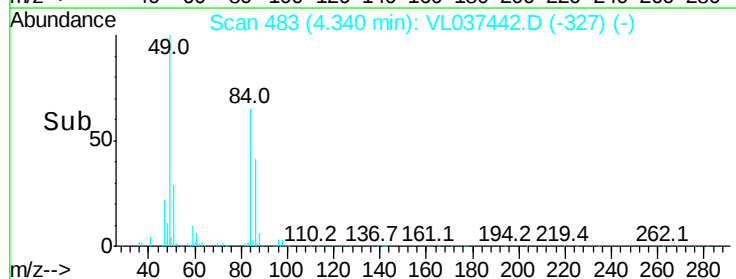
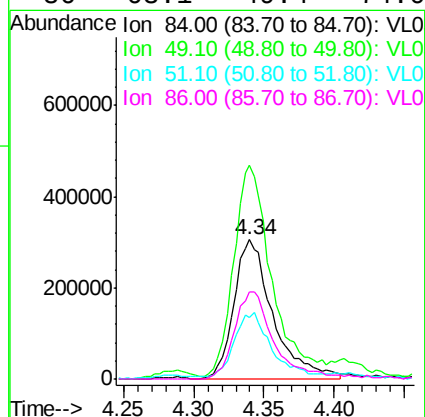
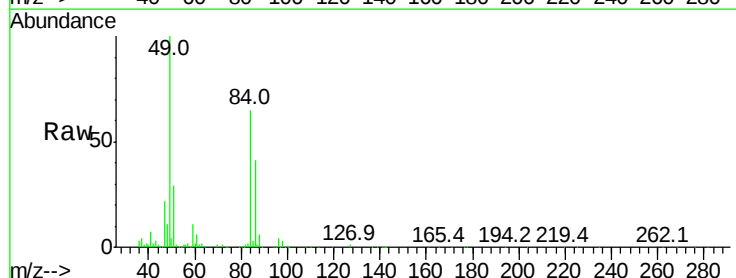
Ion Ratio Lower Upper

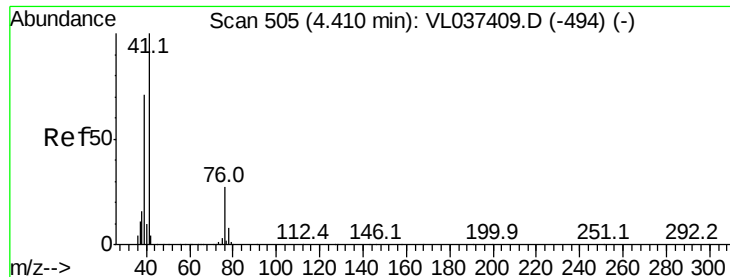
84 100

49 150.8 116.0 174.0

51 43.0 37.1 55.7

86 63.1 49.4 74.0

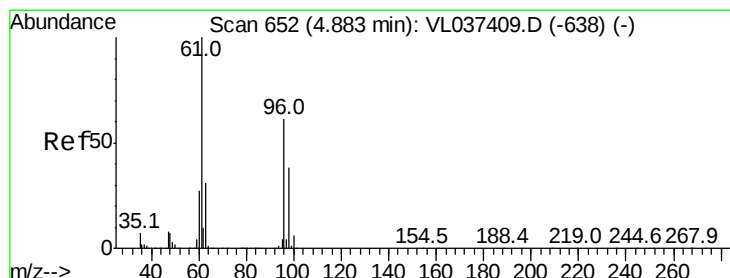
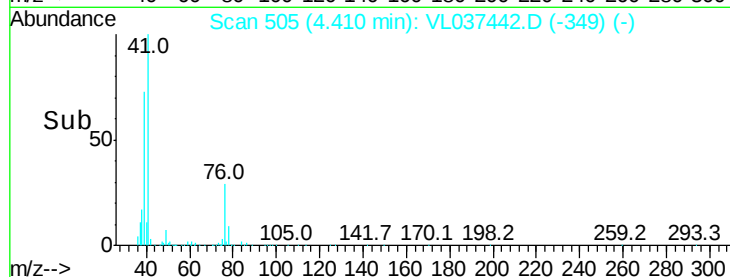
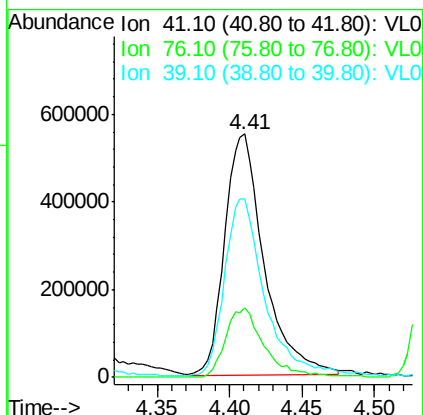
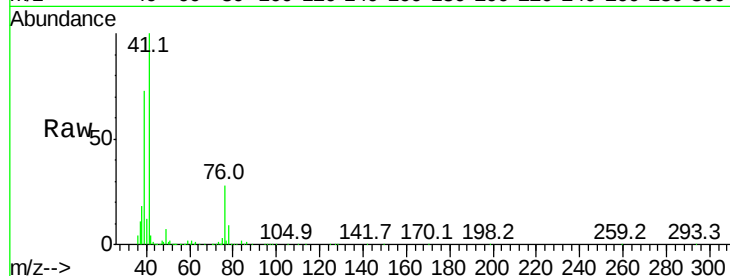




#21
 Allyl Chloride
 Concen: 9.632 ppbv
 RT: 4.41 min Scan# 505
 Delta R.T. 0.00 min
 Lab File: VL037442.D
 Acq: 13 Aug 2021 10:31

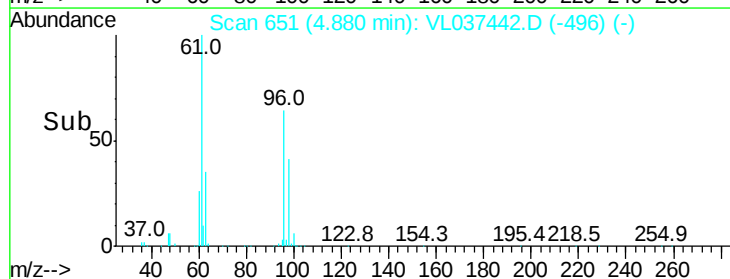
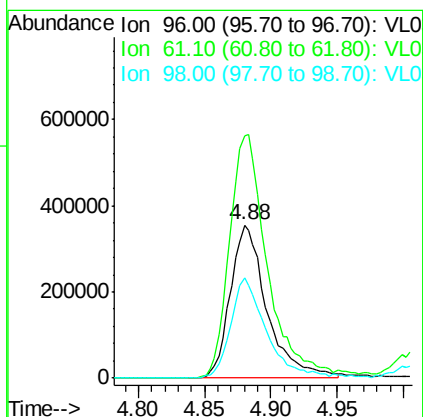
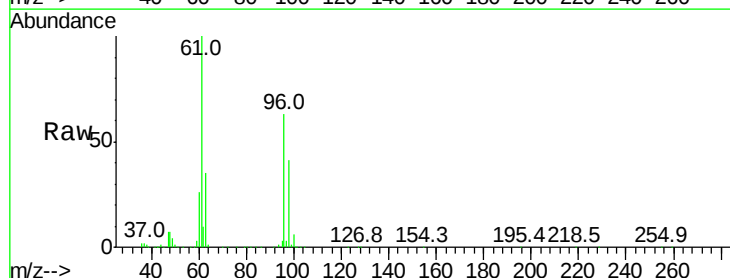
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDCCC010

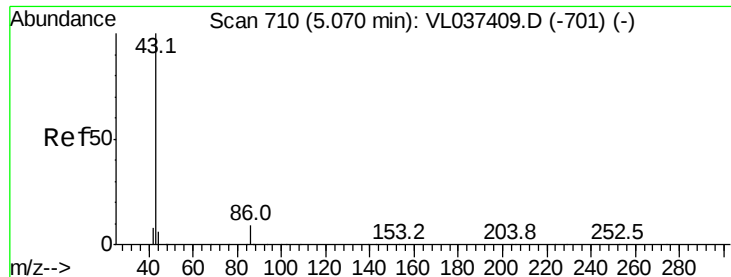
Tgt Ion: 41 Resp: 1045346
 Ion Ratio Lower Upper
 41 100
 76 28.5 23.7 35.5
 39 75.7 62.3 93.5



#22
 trans-1,2-Dichloroethene
 Concen: 10.349 ppbv
 RT: 4.88 min Scan# 651
 Delta R.T. -0.00 min
 Lab File: VL037442.D
 Acq: 13 Aug 2021 10:31

Tgt Ion: 96 Resp: 681655
 Ion Ratio Lower Upper
 96 100
 61 158.1 131.0 196.4
 98 65.1 50.2 75.4





#23

Vinyl Acetate

Concen: 7.686 ppbv

RT: 5.07 min Scan# 710

Delta R.T. 0.00 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

Instrument :

MSVOA_L

ClientSampleId :

VSTDCCC010

Tgt Ion: 43 Resp: 1633450

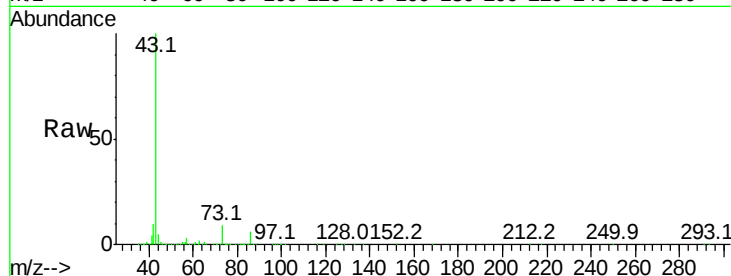
Ion	Ratio	Lower	Upper
43	100		
86	6.4	5.8	8.8
42	10.0	7.7	11.5
44	4.9	4.0	6.0

43 100

86 6.4 5.8 8.8

42 10.0 7.7 11.5

44 4.9 4.0 6.0

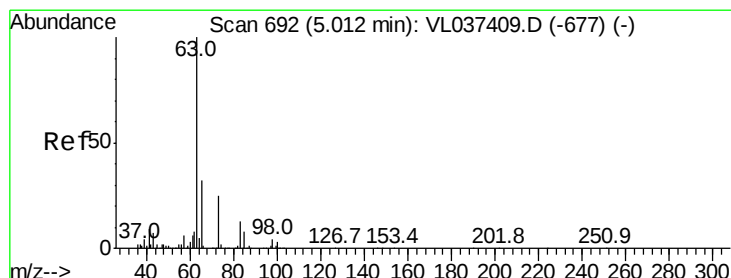
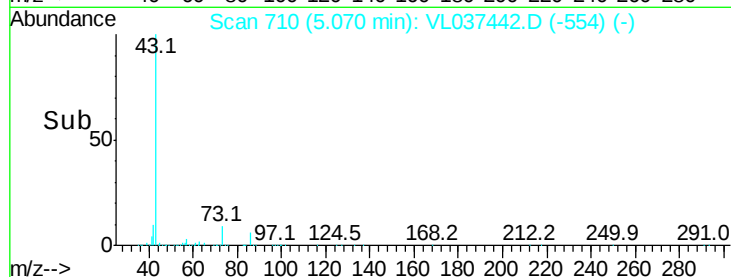
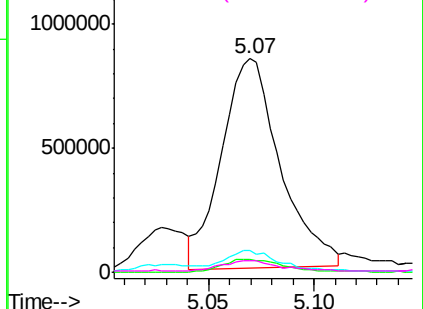


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 8.058 ppbv

RT: 5.01 min Scan# 690

Delta R.T. -0.01 min

Lab File: VL037442.D

Acq: 13 Aug 2021 10:31

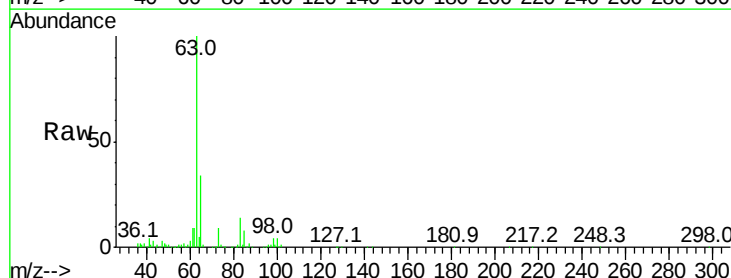
Tgt Ion: 63 Resp: 1330024

Ion	Ratio	Lower	Upper
63	100		
98	3.8	2.1	6.3
100	3.7	1.6	4.7

63 100

98 3.8 2.1 6.3

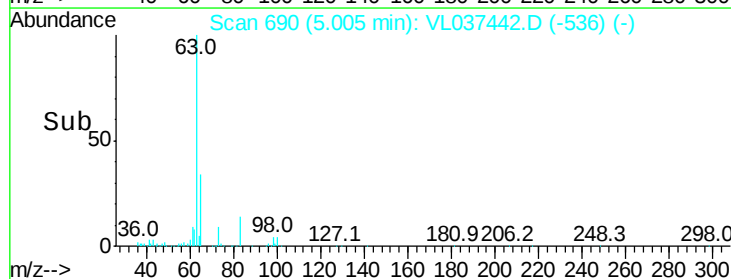
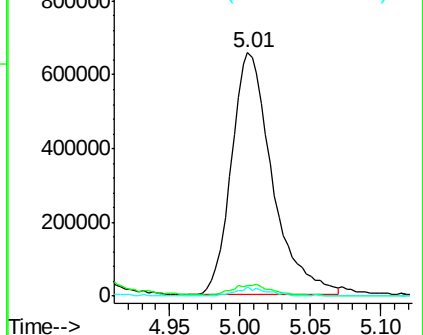
100 3.7 1.6 4.7

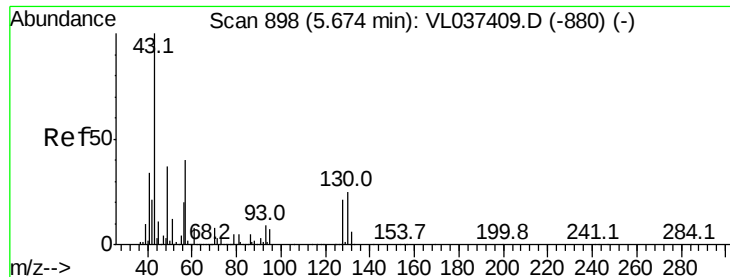


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0



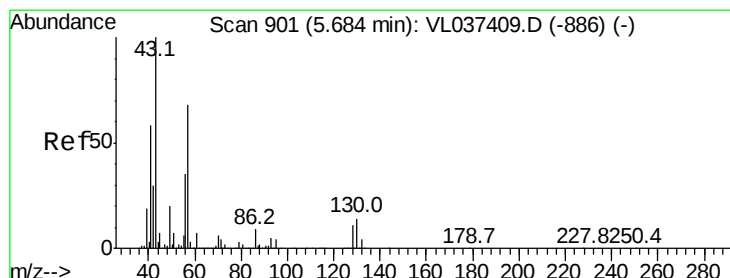
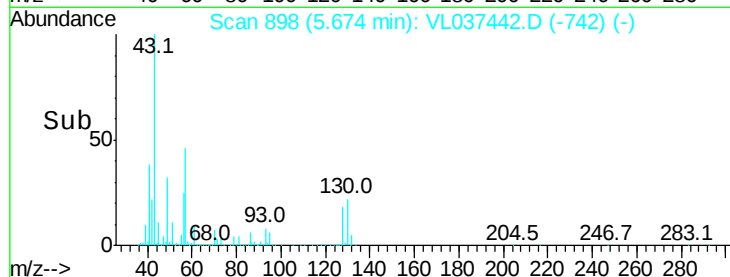
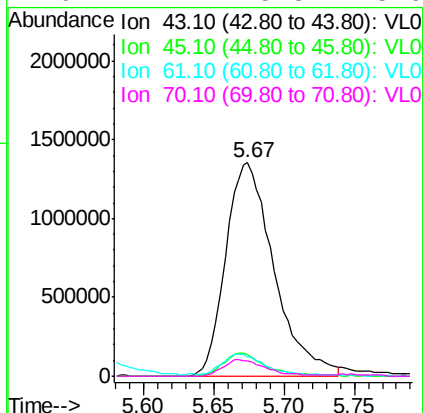
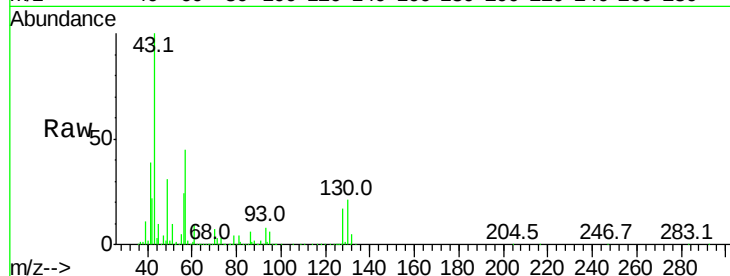


#25
Ethyl Acetate
Concen: 9.781 ppbv
RT: 5.67 min Scan# 898
Delta R.T. 0.00 min
Lab File: VL037442.D
Acq: 13 Aug 2021 10:31

Instrument :
MSVOA_L
ClientSampleId :
VSTDCCC010

Tgt Ion: 43 Resp: 3228462

Ion	Ratio	Lower	Upper
43	100		
45	9.8	7.9	11.9
61	10.8	7.7	11.5
70	7.1	5.8	8.6



#26
Hexane
Concen: 9.380 ppbv
RT: 5.68 min Scan# 900
Delta R.T. -0.00 min
Lab File: VL037442.D
Acq: 13 Aug 2021 10:31

Tgt Ion: 57 Resp: 1597709

Ion	Ratio	Lower	Upper
57	100		
41	89.2	72.5	108.7
43	209.4	169.3	253.9
56	52.5	42.3	63.5

