

Data File : VL036433.D

Acq On : 3 Mar 2021 9:33

Operator : SY/AP

Sample : VSTDICCC010

Misc : 400ml/MSVOA_L

ALS Vial : 1 Sample Multiplier: 1

Instrument :

MSVOA_L

ClientSampleId :

VSTDICCC010

Quant Time: Mar 03 10:37:20 2021

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL030321AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Feb 10 16:04:02 2021

QLast Update : Wed Feb 10 16:04:02 2021

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1709120	10.00	ppbv	0.03
33) 1,4-Difluorobenzene	7.18	114	4044251	10.00	ppbv	0.03
55) Chlorobenzene-d5	12.10	117	4698278	10.00	ppbv	0.04

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	3199057	8.28	ppbv	0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	82.80%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	3.05	85	2071762	8.122	ppbv	99
3) Chlorodifluoromethane	2.99	51	1833035	8.632	ppbv	100
4) Chloromethane	3.14	50	924817	9.014	ppbv	95
5) Vinyl Chloride	3.26	62	891538	9.332	ppbv	98
6) Bromomethane	3.48	94	519630	9.151	ppbv	91
7) Chloroethane	3.56	64	324345	9.562	ppbv	97
8) Dichlorotetrafluoroethane	3.19	85	2113424	9.110	ppbv	97
9) Propene	3.01	41	841765	10.632	ppbv	100
10) Heptane	8.13	43	2162803	9.269	ppbv	99
11) Trichlorofluoromethane	3.95	101	2268332	9.082	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.49	101	1452520	9.388	ppbv	99
13) Ethanol	3.62	45	143601	9.656	ppbv	97
14) Bromoethene	3.74	108	627722	9.694	ppbv	97
15) Acetone	3.85	43	1699439	8.134	ppbv	98
16) 1,3-Butadiene	3.33	39	886782	8.877	ppbv	100
17) tert-Butyl alcohol	4.30	59	1516639	9.352	ppbv	100
18) 1,1-Dichloroethene	4.29	96	629154	8.948	ppbv	96
19) Isopropyl Alcohol	3.97	45	1047359	9.049	ppbv	100
20) Methylene Chloride	4.35	84	542668	8.051	ppbv	98
21) Allyl Chloride	4.42	41	1079082	9.277	ppbv	96
22) trans-1,2-Dichloroethene	4.89	96	588991	9.222	ppbv	98
23) Vinyl Acetate	5.08	43	2299153	9.360	ppbv	98
24) 1,1-Dichloroethane	5.01	63	1686290	9.282	ppbv	99
25) Ethyl Acetate	5.68	43	3664543	9.086	ppbv	99
26) Hexane	5.69	57	1481939	8.943	ppbv	99
27) Carbon Disulfide	4.55	76	1634775	10.734	ppbv	98
28) Methyl tert-Butyl Ether	5.04	73	2032426	9.389	ppbv	100
29) Chloroform	5.76	83	2382737	8.925	ppbv	99
30) Cyclohexane	7.14	84	1250693	9.075	ppbv	97
31) cis-1,2-Dichloroethene	5.56	61	1491899	9.098	ppbv	91
32) 1,1,1-Trichloroethane	6.52	97	2332922	9.347	ppbv	99
34) 2-Butanone	5.25	43	2250847	8.377	ppbv	100
35) Carbon Tetrachloride	7.02	117	2421234	8.933	ppbv	99
36) Benzene	6.90	78	3091452	8.999	ppbv	98
37) 1,2-Dichloroethane	6.31	62	1851044	8.715	ppbv	99
38) Trichloroethene	7.85	130	1092372	8.876	ppbv	93
39) 1,2-Dichloropropane	7.62	63	1206038	8.642	ppbv	97
40) 1,4-Dioxane	7.84	88	406070	8.398	ppbv #	1
41) Tetrahydrofuran	6.06	42	1393665	9.294	ppbv	98
42) Bromodichloromethane	7.80	83	2590522	9.106	ppbv	100
43) Methyl Methacrylate	8.02	69	1357033	9.366	ppbv	99

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 10 16:04:02 2021

QLast Update : Wed Feb 10 16:04:02 2021

Response via : Initial Calibration

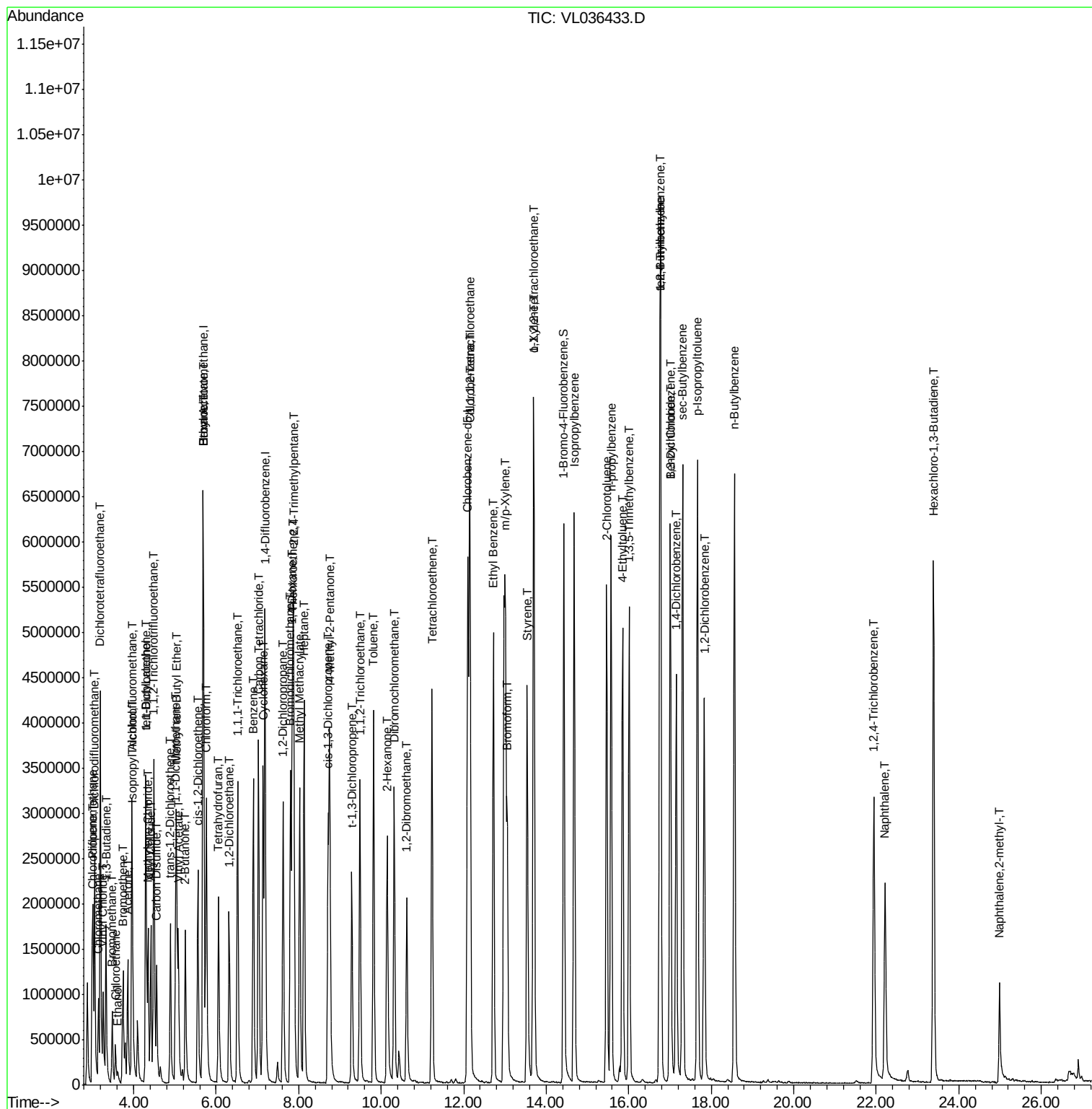
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2,2,4-Trimethylpentane	7.88	57	5283152	8.457	ppbv	99
45) t-1,3-Dichloropropene	9.29	75	1445145	10.340	ppbv	98
46) cis-1,3-Dichloropropene	8.71	75	1771880	9.980	ppbv	98
47) 1,1,2-Trichloroethane	9.48	97	1257867	8.807	ppbv	97
48) Dibromochloromethane	10.31	129	2099504	9.851	ppbv	99
49) Bromoform	13.05	173	1745462	10.131	ppbv	99
50) 4-Methyl-2-Pentanone	8.75	43	3589018	8.997	ppbv	100
51) 2-Hexanone	10.14	43	2924103	9.647	ppbv #	98
52) Tetrachloroethene	11.23	164	1042694	8.291	ppbv	97
53) Toluene	9.81	91	3476776	9.343	ppbv	99
54) 1,2-Dibromoethane	10.62	107	1866263	9.042	ppbv	96
56) 1,1,1,2-Tetrachloroethane	12.14	131	1571640	7.273	ppbv	98
57) Chlorobenzene	12.16	112	2546640	7.016	ppbv	98
58) Ethyl Benzene	12.72	91	4714952	7.329	ppbv	98
59) m/p-Xylene	13.01	91	4009952	7.096	ppbv #	29
60) o-Xylene	13.70	91	3815275	7.061	ppbv	100
61) Styrene	13.54	104	2716044	8.111	ppbv	98
62) Isopropylbenzene	14.68	105	5652542	6.979	ppbv	99
63) 1,1,2,2-Tetrachloroethane	13.69	83	2719424	6.379	ppbv	100
64) n-propylbenzene	15.57	120	1479633	7.423	ppbv	96
65) tert-Butylbenzene	16.76	119	4873490	7.033	ppbv	97
66) Benzyl Chloride	17.00	91	1807012	9.592	ppbv	100
67) sec-Butylbenzene	17.31	105	6854809	6.859	ppbv	98
69) p-Isopropyltoluene	17.67	119	5633205	7.294	ppbv	99
70) n-Butylbenzene	18.56	91	5830527	7.040	ppbv	99
71) 2-Chlorotoluene	15.46	91	4450363	7.168	ppbv	98
72) 4-Ethyltoluene	15.85	105	4408997	7.333	ppbv	99
73) 1,3,5-Trimethylbenzene	16.01	105	4154484	7.128	ppbv	99
74) 1,2,4-Trimethylbenzene	16.78	105	4202188	7.062	ppbv	96
75) 1,3-Dichlorobenzene	17.01	146	2327986	7.208	ppbv	99
76) 1,4-Dichlorobenzene	17.15	146	2278978	6.795	ppbv	97
77) 1,2-Dichlorobenzene	17.83	146	2256792	7.043	ppbv	99
78) Hexachloro-1,3-Butadiene	23.39	225	1576276	6.022	ppbv	98
79) Naphthalene	22.22	128	1403952	3.980	ppbv	98
80) Naphthalene,2-methyl-	24.99	142	837475	12.823	ppbv	94
81) 1,2,4-Trichlorobenzene	21.95	180	1520445	7.065	ppbv	98

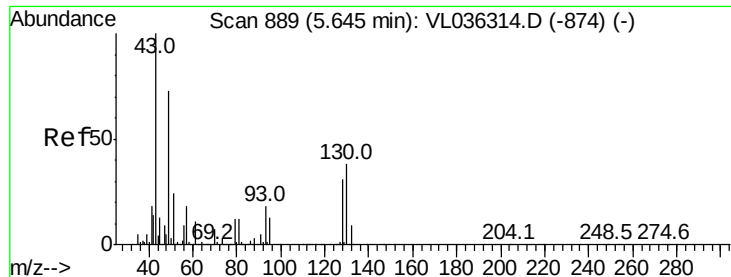
(#)=qualifier out of range (m)=manual integration (+)=signals summed

ALS Vial : 1 Sample Multiplier: 1

VSTDICCC010

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 3 Mar 2021 9:33

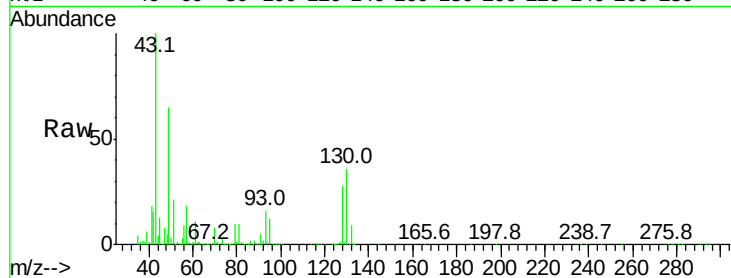
Tgt Ion: 49 Resp: 1709120

Ion Ratio Lower Upper

49 100

128 44.8 20.8 62.5

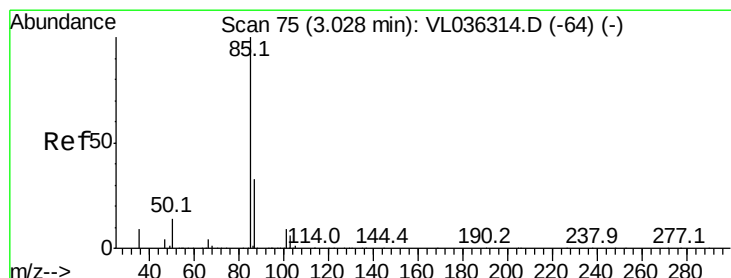
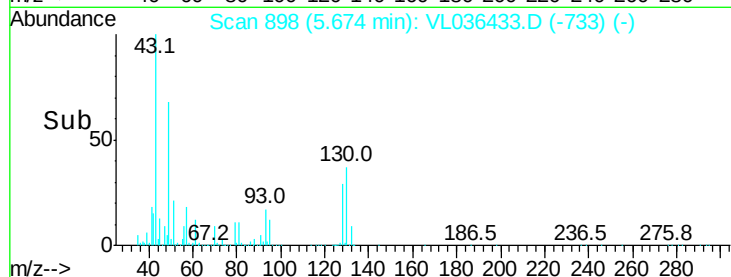
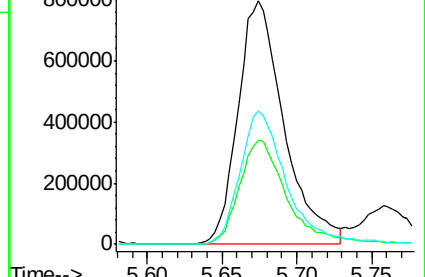
130 56.0 26.7 80.1



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: 8.122 ppbv

RT: 3.05 min Scan# 82

Delta R.T. 0.02 min

Lab File: VL036433.D

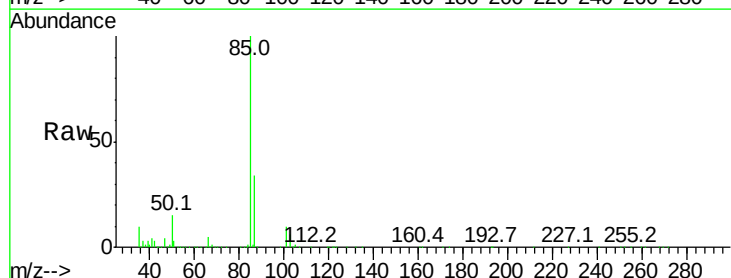
Acq: 3 Mar 2021 9:33

Tgt Ion: 85 Resp: 2071762

Ion Ratio Lower Upper

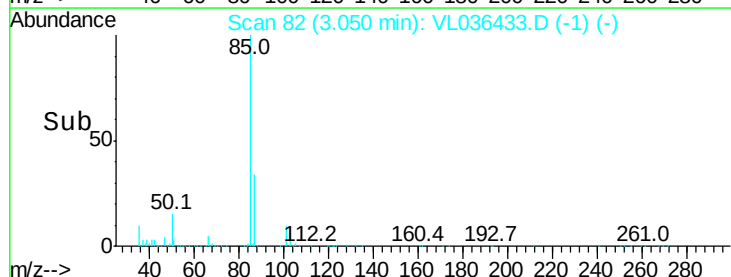
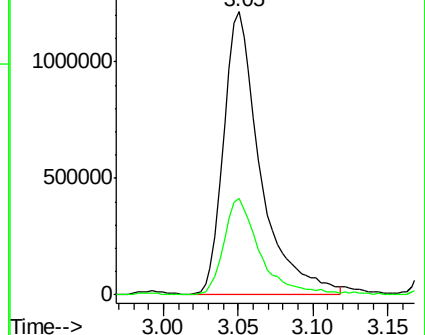
85 100

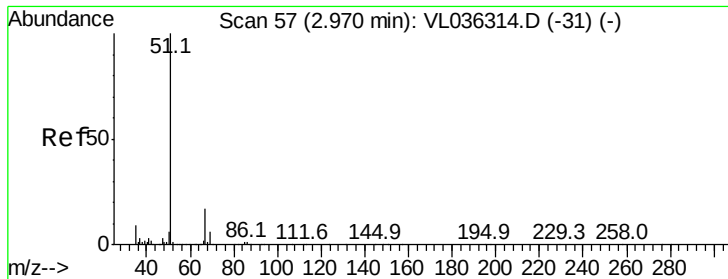
87 33.9 26.5 39.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 8.632 ppbv

RT: 2.99 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: VSTDICCC010

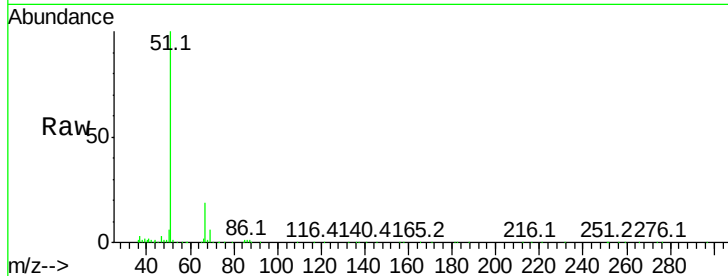
Acq: 3 Mar 2021 9:33

Tgt Ion: 51 Resp: 1833035

Ion Ratio Lower Upper

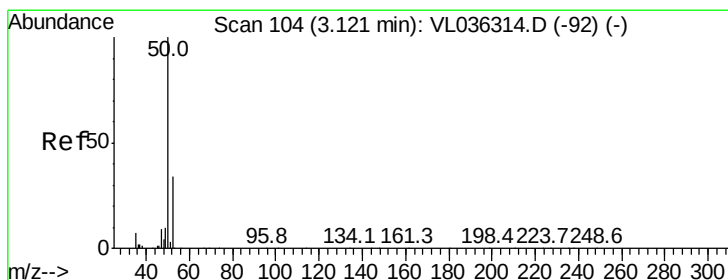
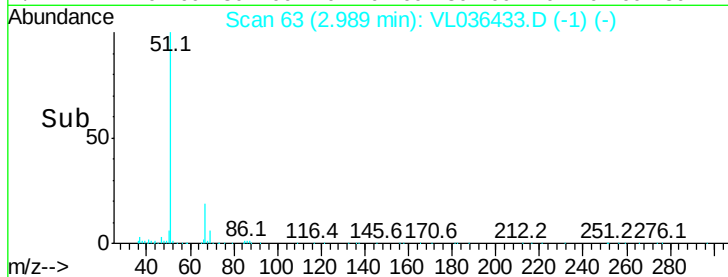
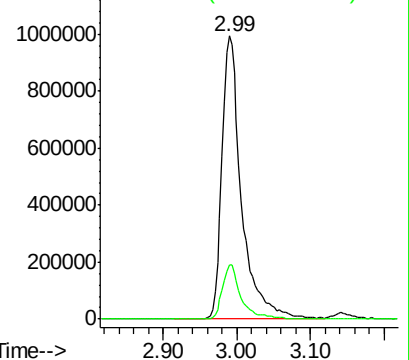
51 100

67 18.5 14.7 22.1



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 9.014 ppbv

RT: 3.14 min Scan# 110

Delta R.T. 0.02 min

Lab File: VL036433.D

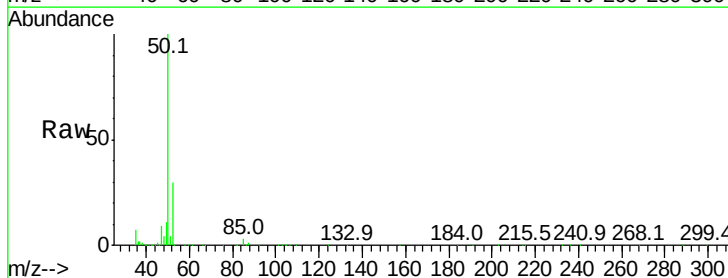
Acq: 3 Mar 2021 9:33

Tgt Ion: 50 Resp: 924817

Ion Ratio Lower Upper

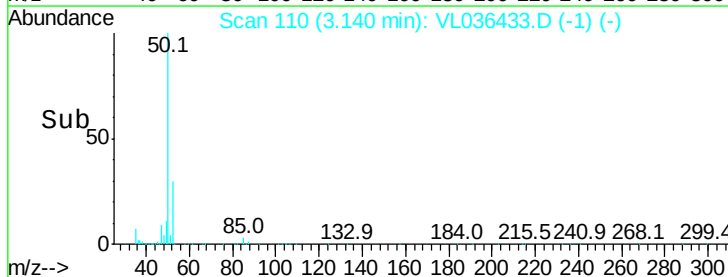
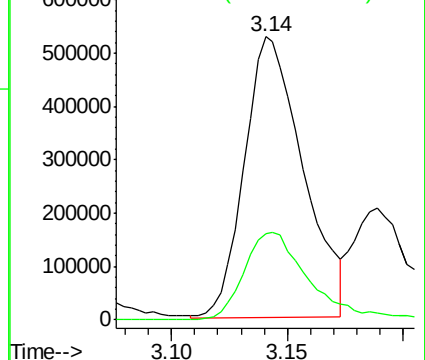
50 100

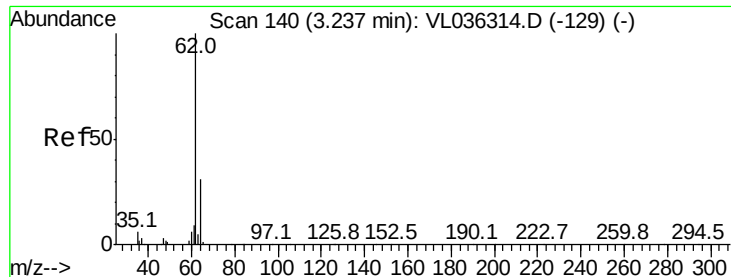
52 30.7 27.0 40.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 9.332 ppbv

RT: 3.26 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

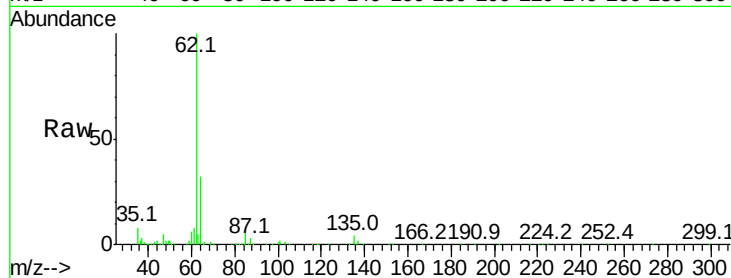
Acq: 3 Mar 2021 9:33

Tgt Ion: 62 Resp: 891538

Ion Ratio Lower Upper

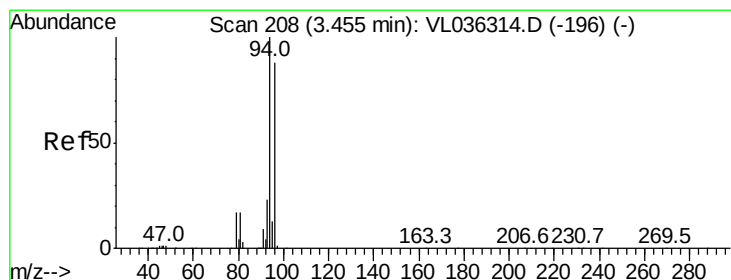
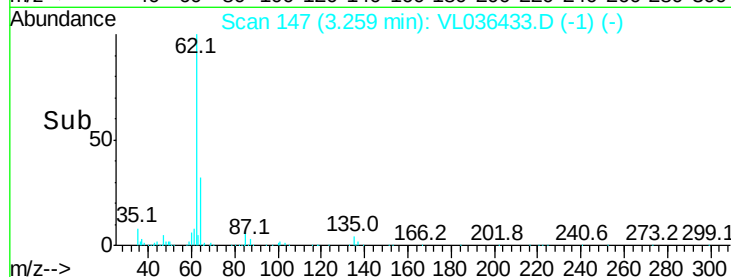
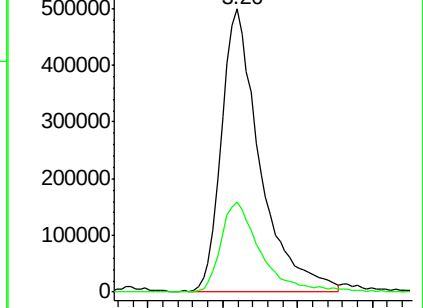
62 100

64 31.8 24.4 36.6



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0



#6

Bromomethane

Concen: 9.151 ppbv

RT: 3.48 min Scan# 215

Delta R.T. 0.02 min

Lab File: VL036433.D

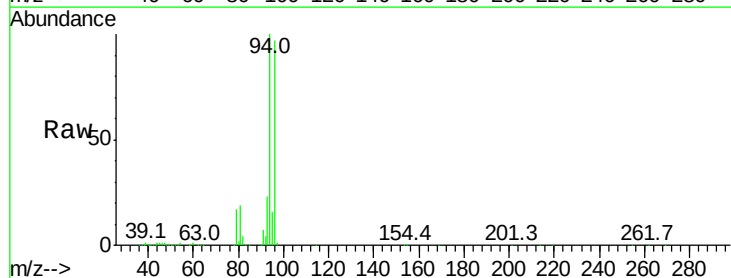
Acq: 3 Mar 2021 9:33

Tgt Ion: 94 Resp: 519630

Ion Ratio Lower Upper

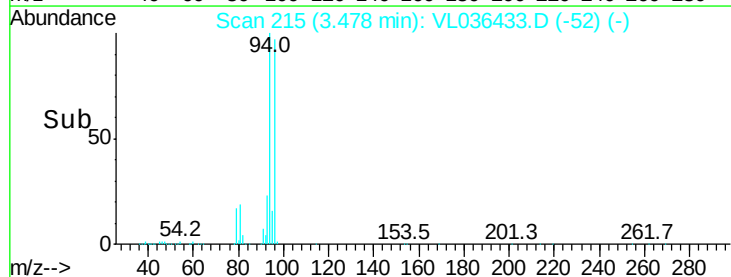
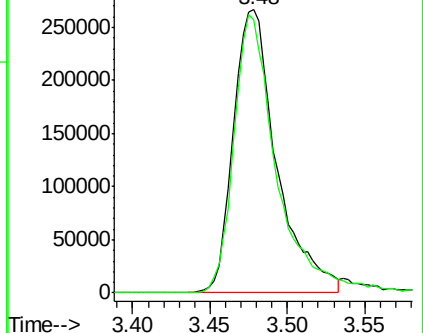
94 100

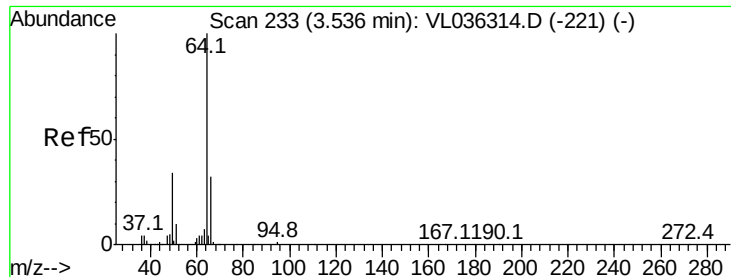
96 96.6 70.8 106.2



Abundance Ion 94.00 (93.70 to 94.70): VL0

Ion 96.00 (95.70 to 96.70): VL0





#7

Chloroethane

Concen: 9.562 ppbv

RT: 3.56 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

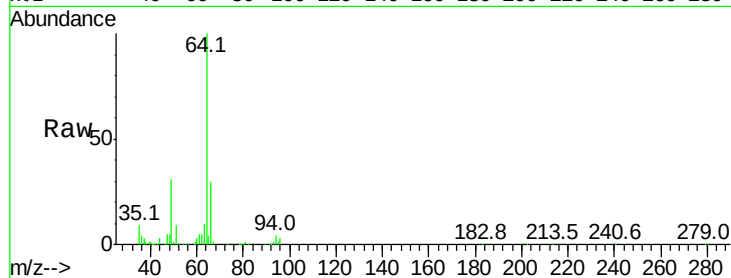
Acq: 3 Mar 2021 9:33 VSTDICCC010

Tgt Ion: 64 Resp: 324345

Ion Ratio Lower Upper

64 100

66 30.4 25.6 38.4



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0

3.56

200000

150000

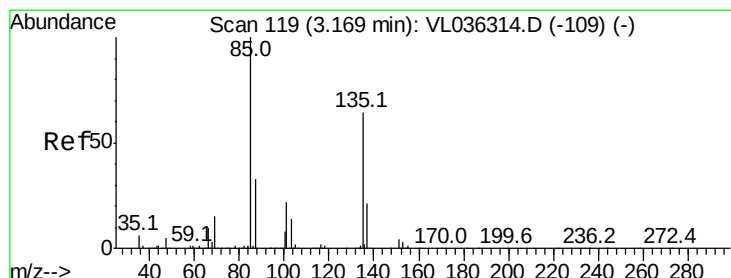
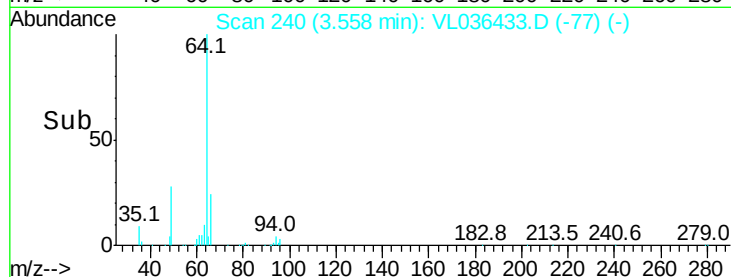
100000

50000

0

3.50 3.55 3.60

Time-->



#8

Dichlorotetrafluoroethane

Concen: 9.110 ppbv

RT: 3.19 min Scan# 125

Delta R.T. 0.02 min

Lab File: VL036433.D

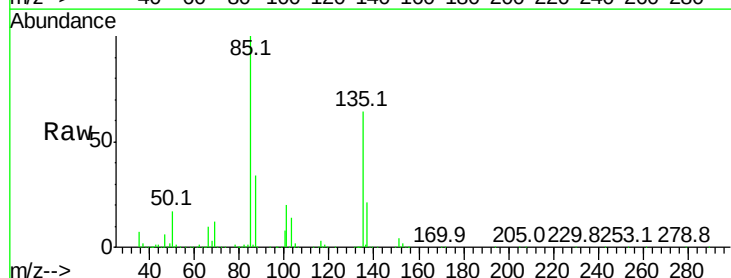
Acq: 3 Mar 2021 9:33

Tgt Ion: 85 Resp: 2113424

Ion Ratio Lower Upper

85 100

135 66.0 51.1 76.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V

3.19

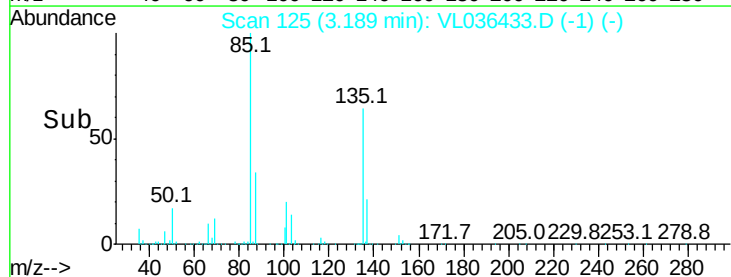
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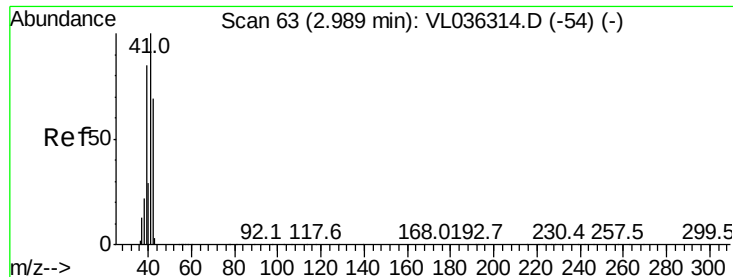
500000

0

3.15 3.20 3.25 3.30

Time-->





#9

Propene

Concen: 10.632 ppbv

RT: 3.01 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

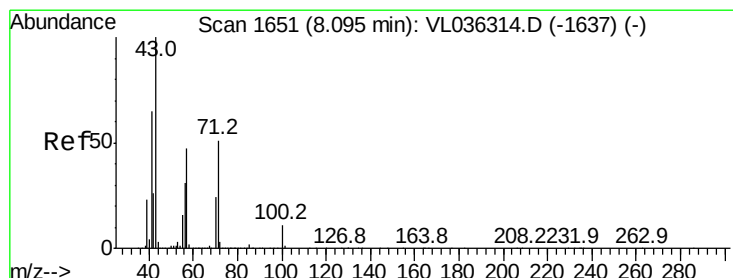
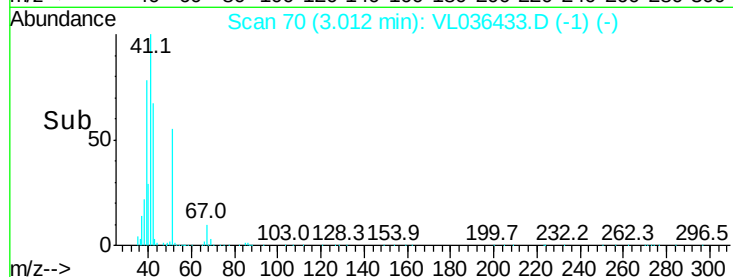
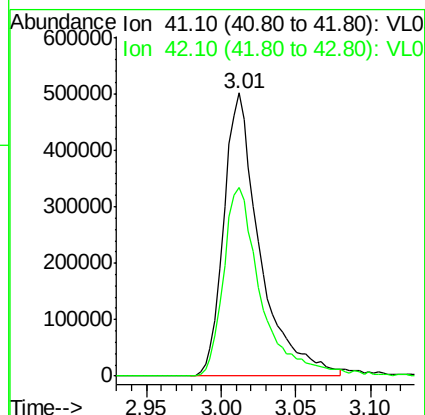
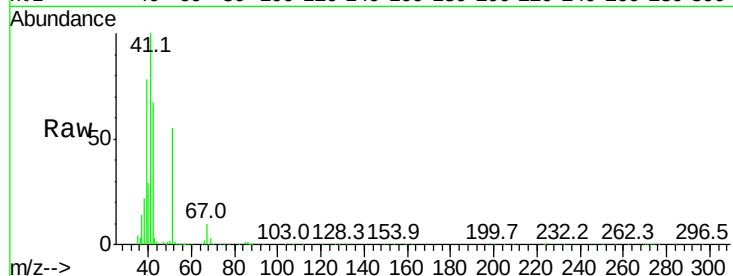
Acq: 3 Mar 2021 9:33 VSTDICCC010

Tgt Ion: 41 Resp: 841765

Ion Ratio Lower Upper

41 100

42 70.3 56.2 84.2



#10

Heptane

Concen: 9.269 ppbv

RT: 8.13 min Scan# 1661

Delta R.T. 0.03 min

Lab File: VL036433.D

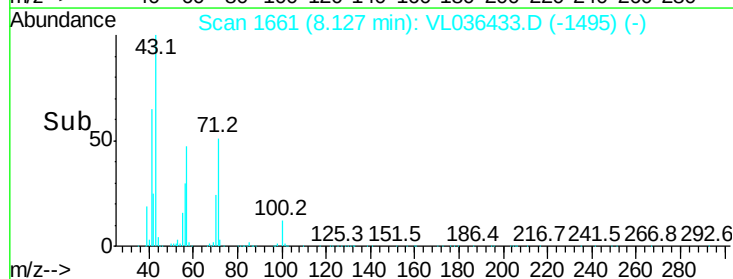
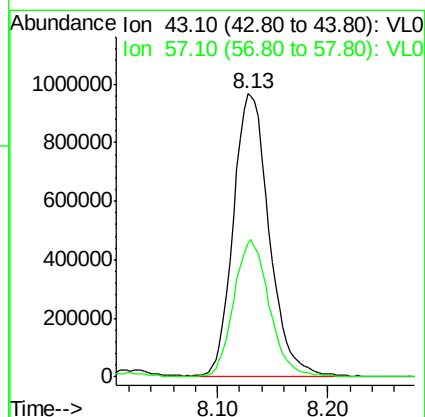
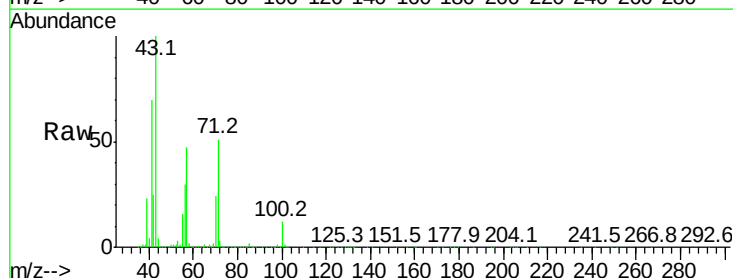
Acq: 3 Mar 2021 9:33

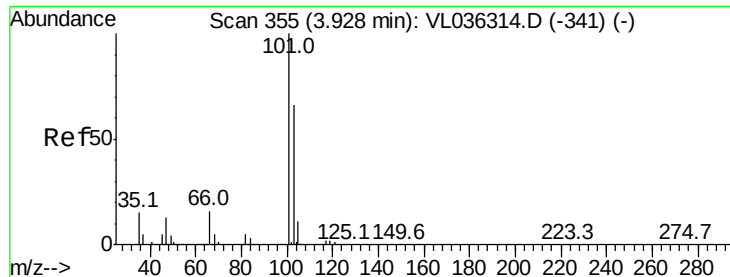
Tgt Ion: 43 Resp: 2162803

Ion Ratio Lower Upper

43 100

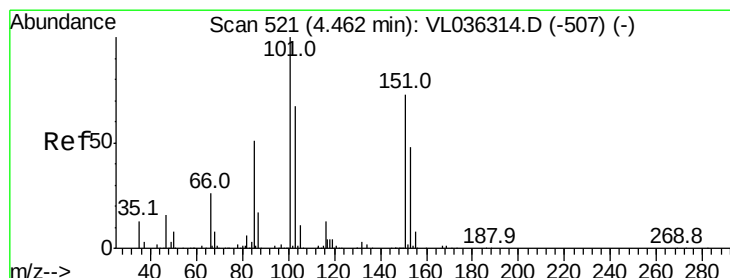
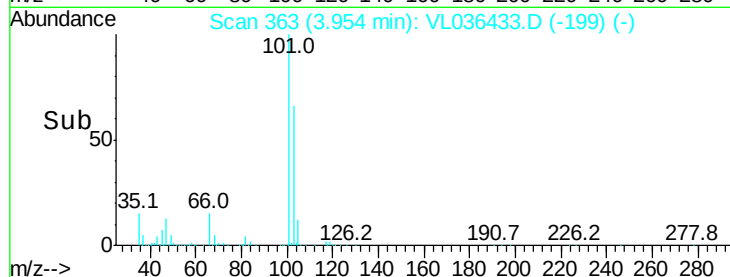
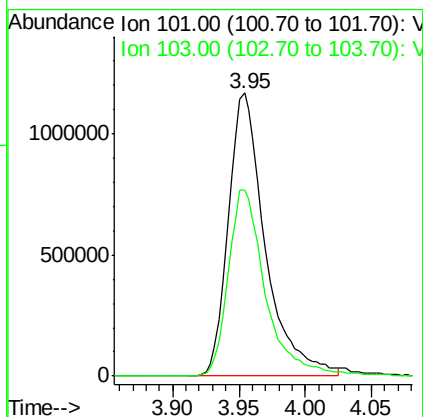
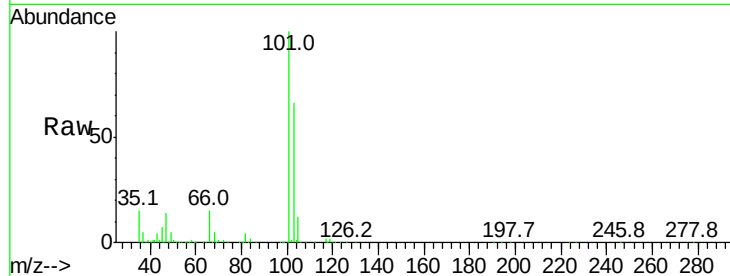
57 48.9 39.4 59.2





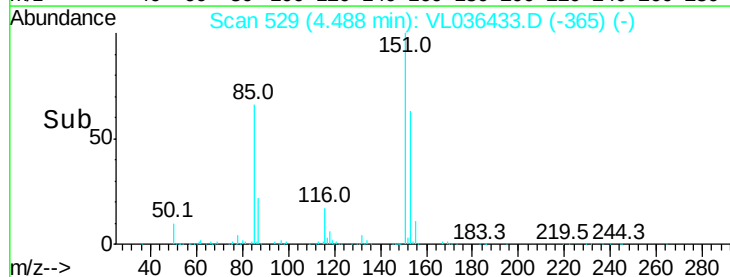
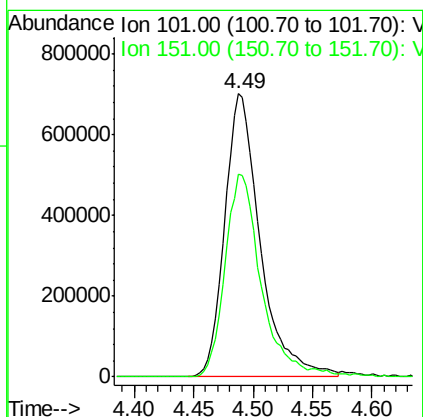
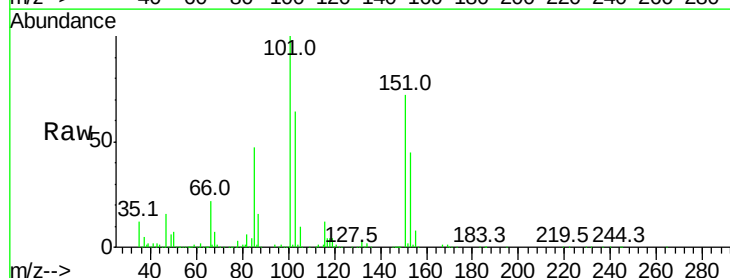
#11
 Trichlorofluoromethane
 Concen: 9.082 ppbv
 RT: 3.95
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Mar 2021 9:33

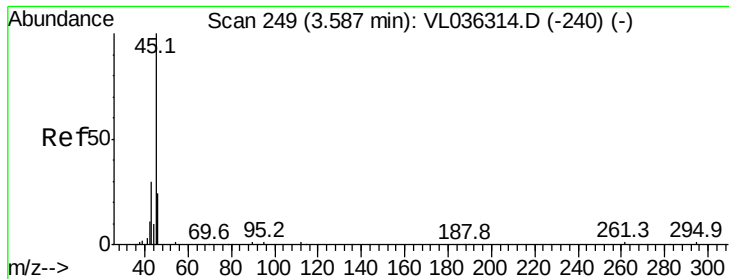
Tgt Ion:101 Resp: 2268332
 Ion Ratio Lower Upper
 101 100
 103 65.5 52.9 79.3



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 9.388 ppbv
 RT: 4.49 min Scan# 529
 Delta R.T. 0.03 min
 Lab File: VL036433.D
 Acq: 3 Mar 2021 9:33

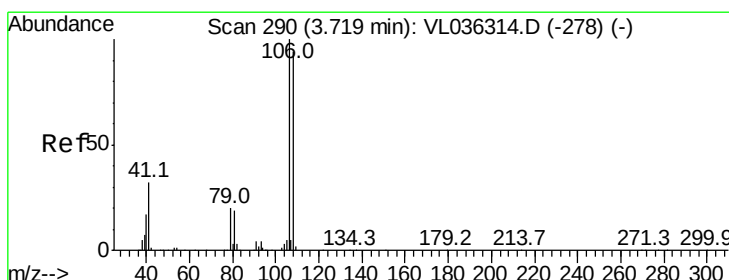
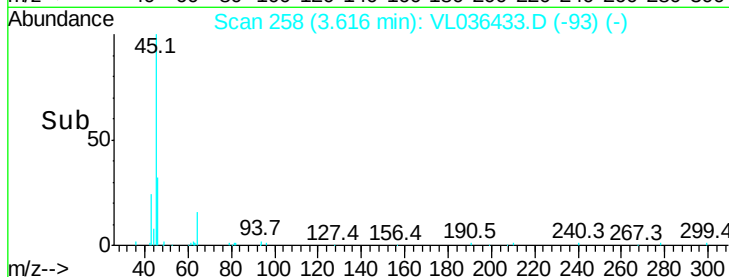
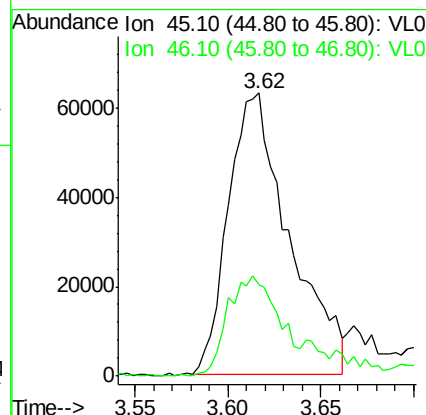
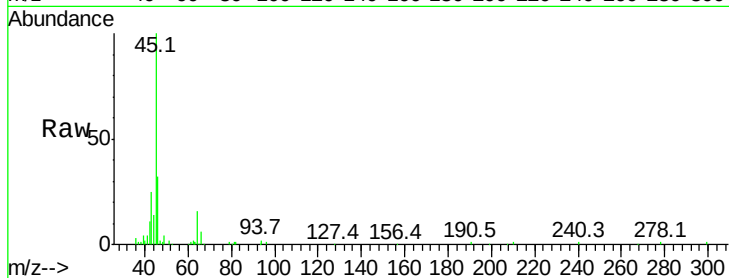
Tgt Ion:101 Resp: 1452520
 Ion Ratio Lower Upper
 101 100
 151 73.7 58.2 87.4





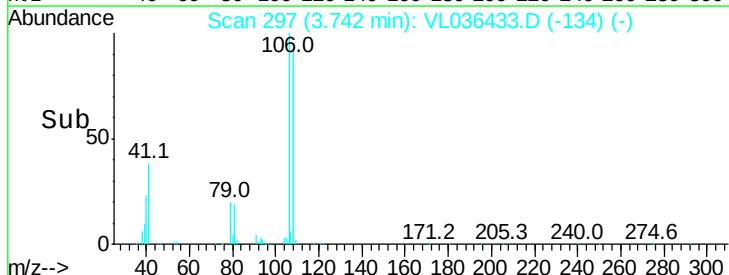
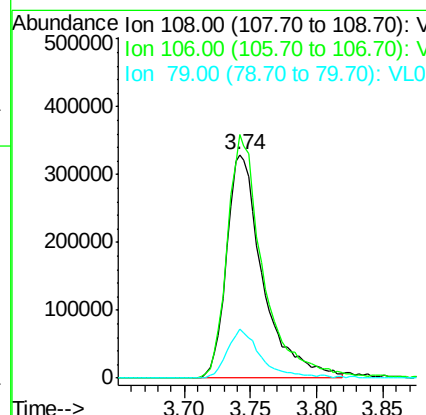
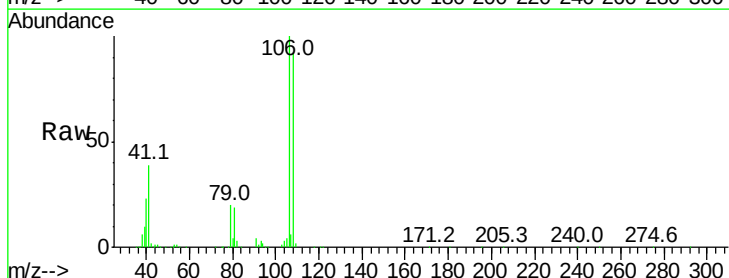
#13
 Ethanol
 Concen: 9.656 ppbv
 RT: 3.62
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Mar 2021 9:33

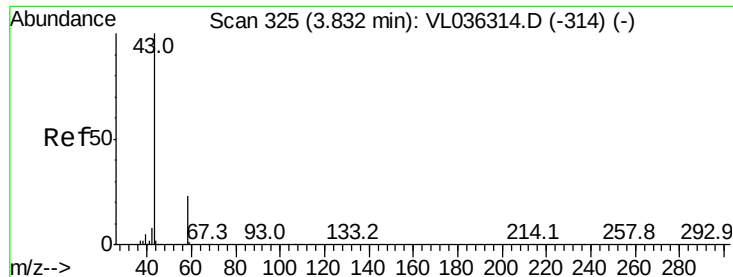
Tgt Ion: 45 Resp: 143601
 Ion Ratio Lower Upper
 45 100
 46 42.1 17.7 70.7



#14
 Bromoethene
 Concen: 9.694 ppbv
 RT: 3.74 min Scan# 297
 Delta R.T. 0.02 min
 Lab File: VL036433.D
 Acq: 3 Mar 2021 9:33

Tgt Ion: 108 Resp: 627722
 Ion Ratio Lower Upper
 108 100
 106 108.7 89.8 134.8
 79 21.4 17.1 25.7





#15

Acetone

Concen: 8.134 ppbv

RT: 3.85 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

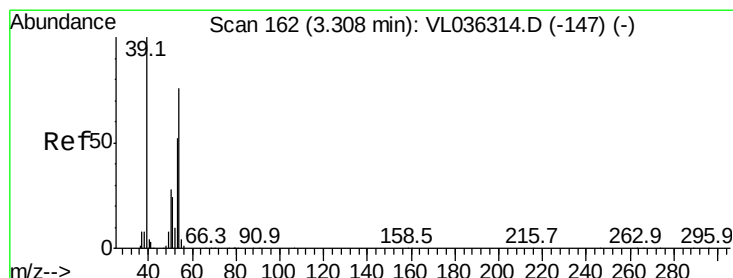
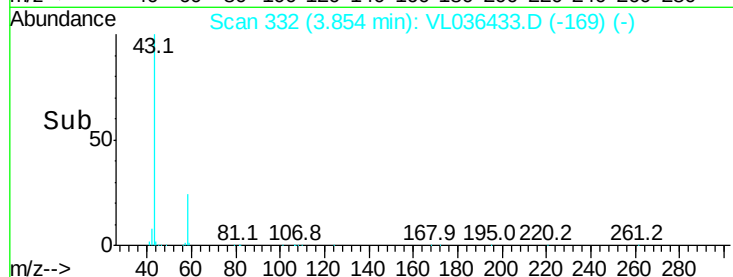
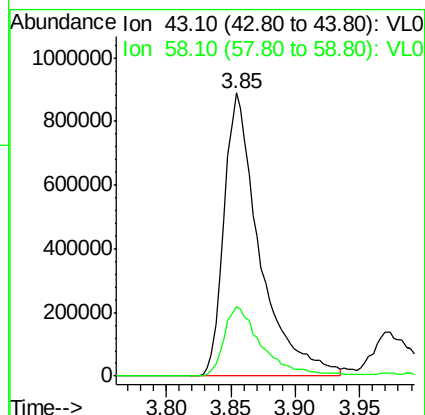
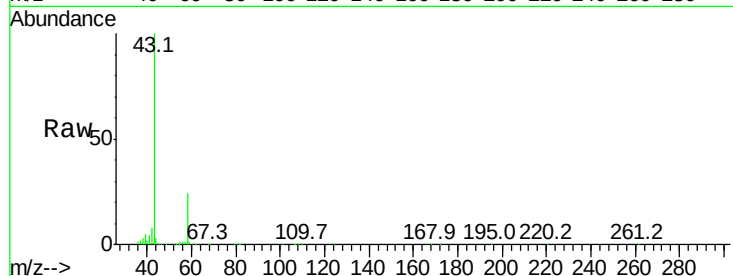
Acq: 3 Mar 2021 9:33 VSTDICCC010

Tgt Ion: 43 Resp: 1699439

Ion Ratio Lower Upper

43 100

58 26.3 20.3 30.5



#16

1,3-Butadiene

Concen: 8.877 ppbv

RT: 3.33 min Scan# 169

Delta R.T. 0.02 min

Lab File: VL036433.D

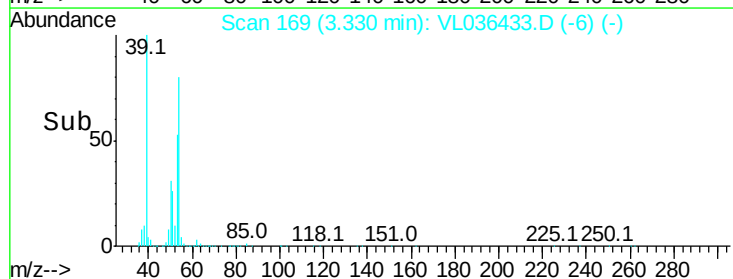
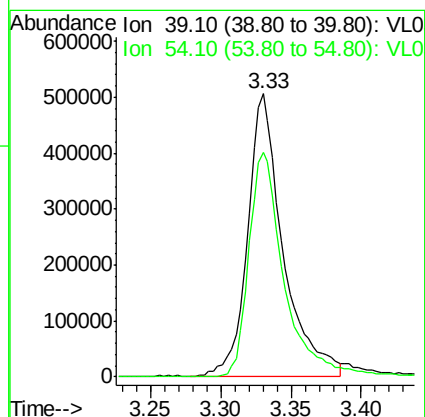
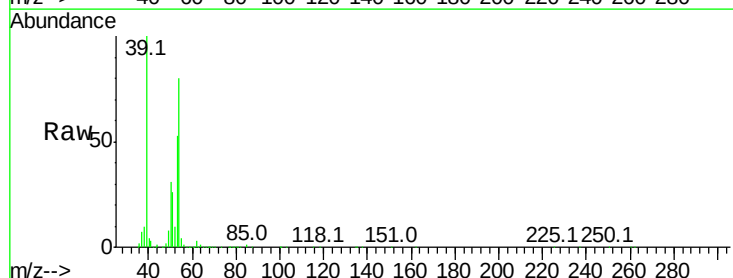
Acq: 3 Mar 2021 9:33

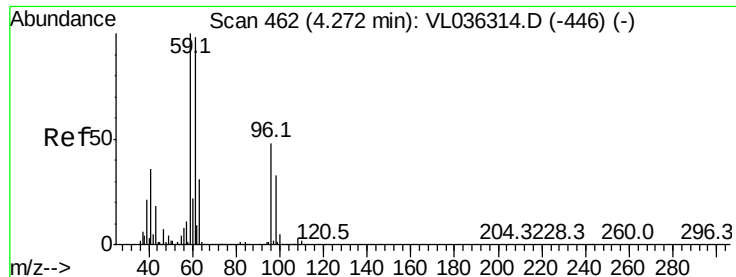
Tgt Ion: 39 Resp: 886782

Ion Ratio Lower Upper

39 100

54 80.6 64.4 96.6





#17

tert-Butyl alcohol

Concen: 9.352 ppbv

RT: 4.30 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

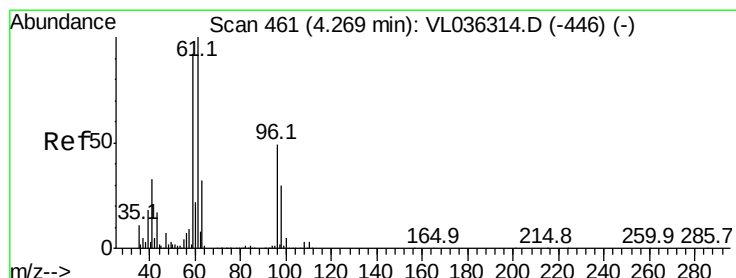
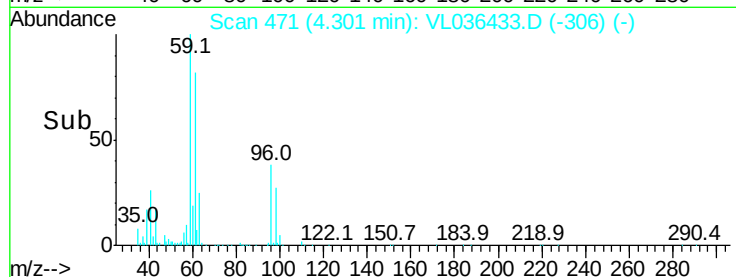
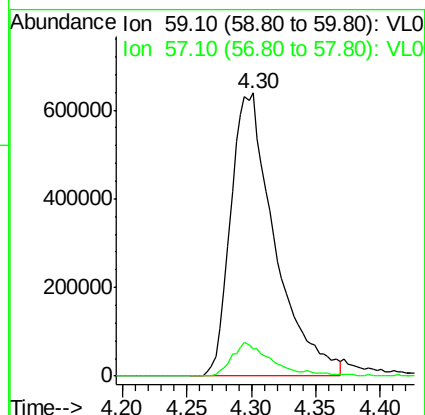
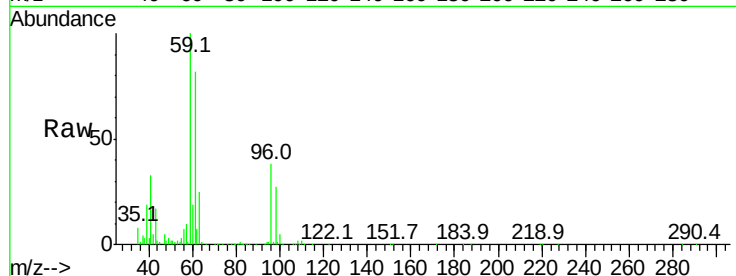
Acq: 3 Mar 2021 9:33

Tgt Ion: 59 Resp: 1516639

Ion Ratio Lower Upper

59 100

57 11.1 9.0 13.4



#18

1,1-Dichloroethene

Concen: 8.948 ppbv

RT: 4.29 min Scan# 469

Delta R.T. 0.03 min

Lab File: VL036433.D

Acq: 3 Mar 2021 9:33

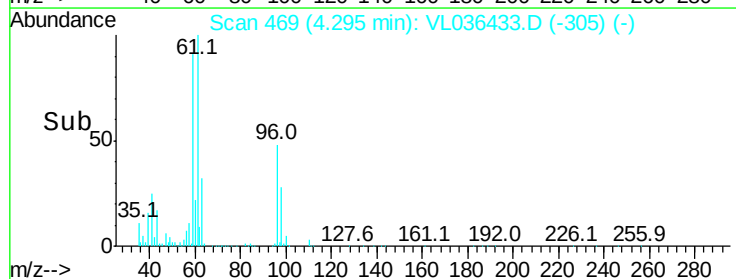
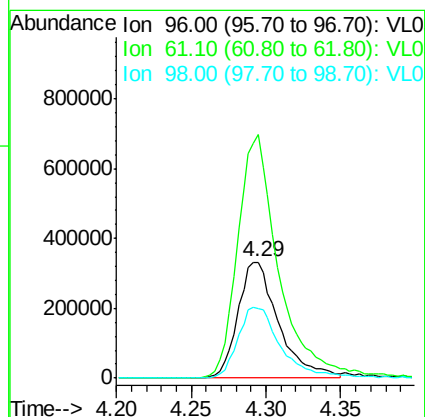
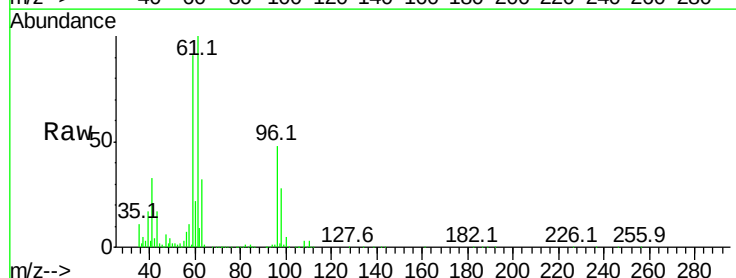
Tgt Ion: 96 Resp: 629154

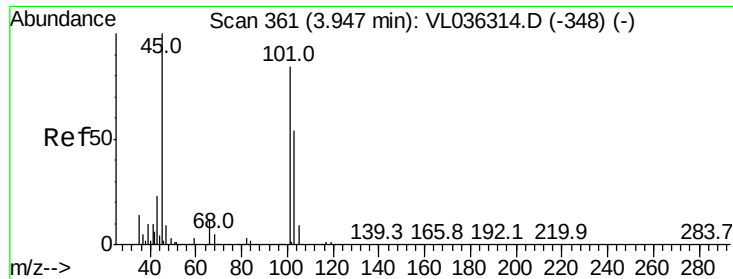
Ion Ratio Lower Upper

96 100

61 210.2 162.5 243.7

98 59.7 48.5 72.7





#19

Isopropyl Alcohol

Concen: 9.049 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

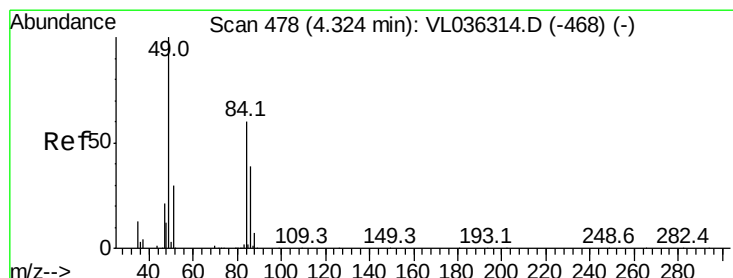
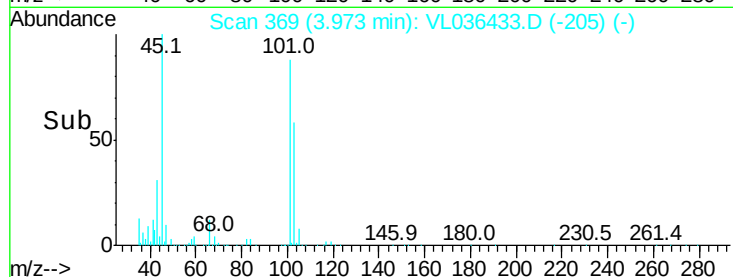
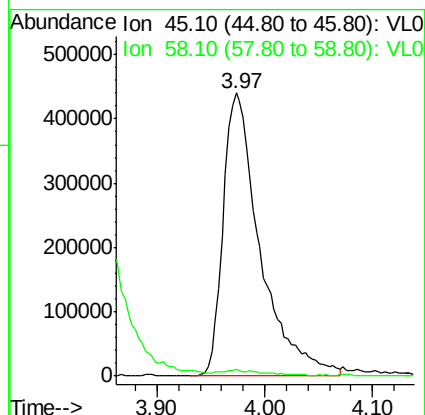
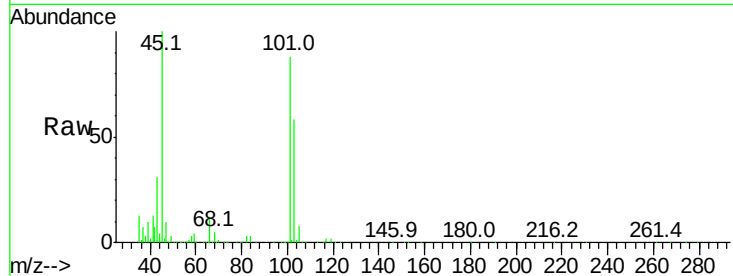
Acq: 3 Mar 2021 9:33 VSTDICCC010

Tgt Ion: 45 Resp: 1047359

Ion Ratio Lower Upper

45 100

58 2.5 1.9 2.9



#20

Methylene Chloride

Concen: 8.051 ppbv

RT: 4.35 min Scan# 485

Delta R.T. 0.02 min

Lab File: VL036433.D

Acq: 3 Mar 2021 9:33

Tgt Ion: 84 Resp: 542668

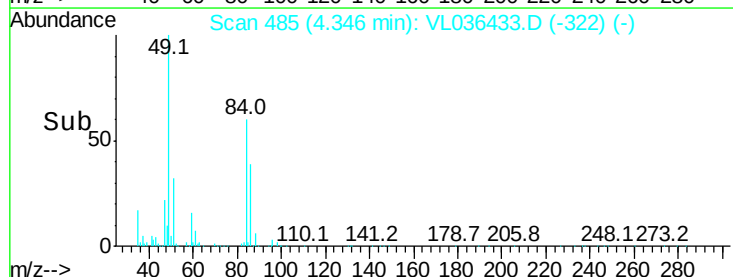
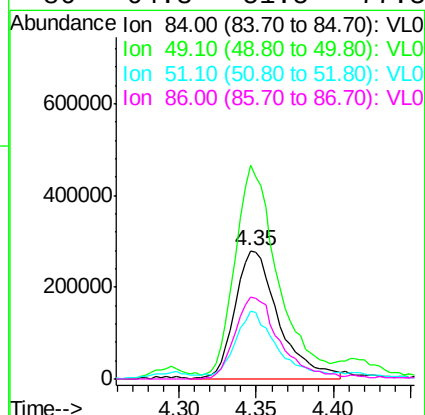
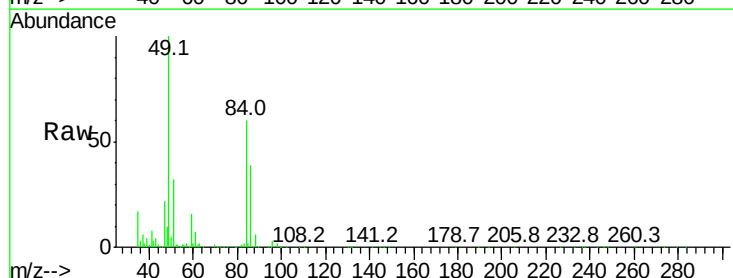
Ion Ratio Lower Upper

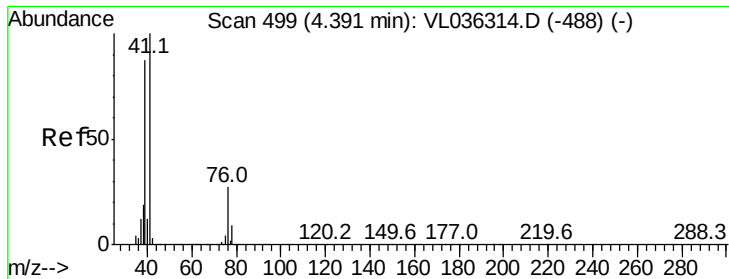
84 100

49 162.7 133.8 200.8

51 50.6 41.4 62.0

86 64.3 51.5 77.3





#21

Allyl Chloride

Concen: 9.277 ppbv

RT: 4.42 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 3 Mar 2021 9:33

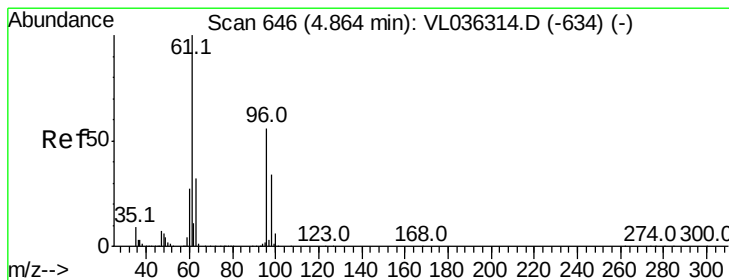
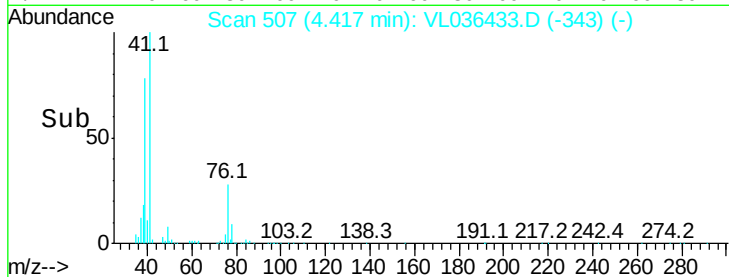
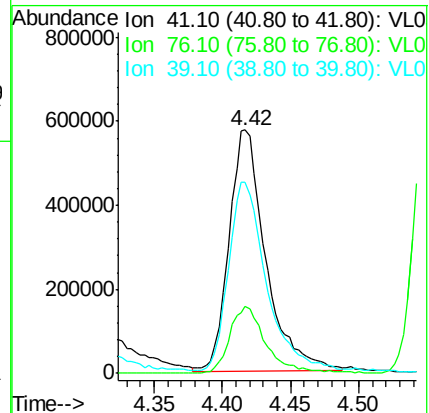
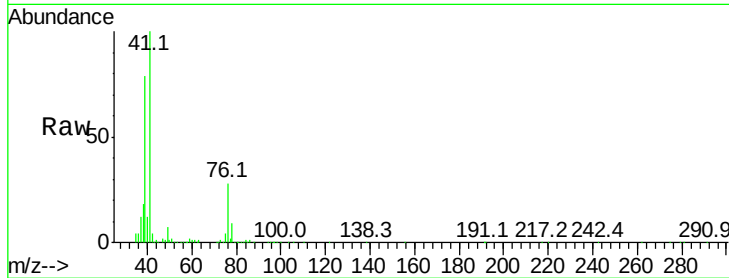
Tgt Ion: 41 Resp: 1079082

Ion Ratio Lower Upper

41 100

76 27.3 22.0 33.0

39 82.5 70.2 105.2



#22

trans-1,2-Dichloroethene

Concen: 9.222 ppbv

RT: 4.89 min Scan# 654

Delta R.T. 0.03 min

Lab File: VL036433.D

Acq: 3 Mar 2021 9:33

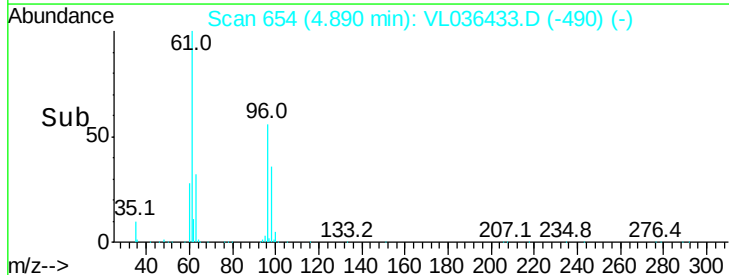
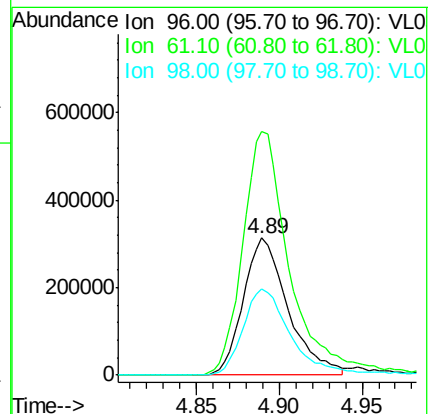
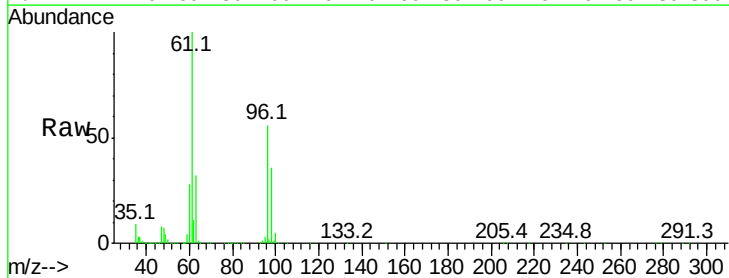
Tgt Ion: 96 Resp: 588991

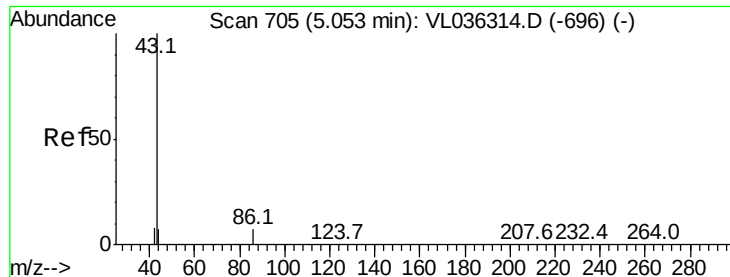
Ion Ratio Lower Upper

96 100

61 177.6 143.7 215.5

98 63.2 48.5 72.7

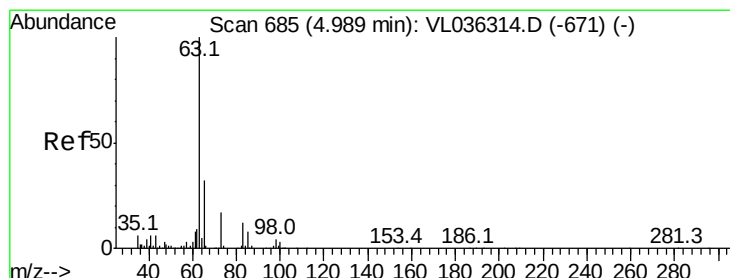
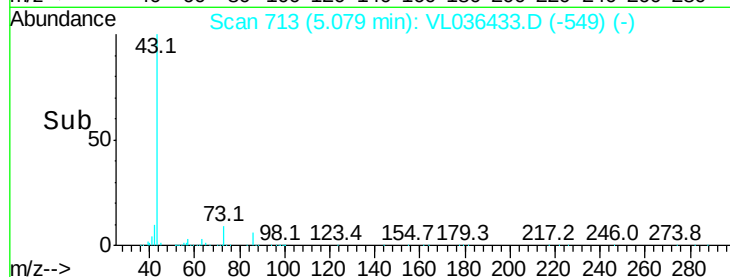
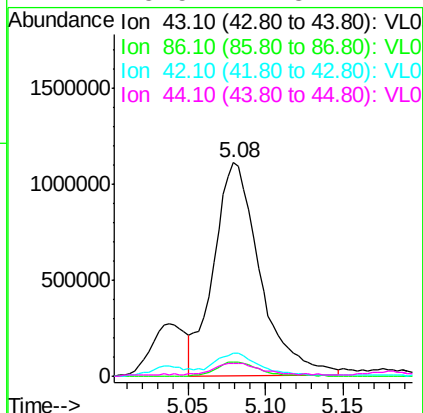
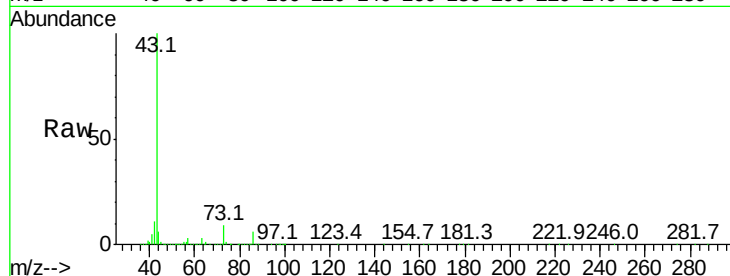




#23
 Vinyl Acetate
 Concen: 9.360 ppbv
 RT: 5.08
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Mar 2021 9:33

Tgt Ion: 43 Resp: 2299153

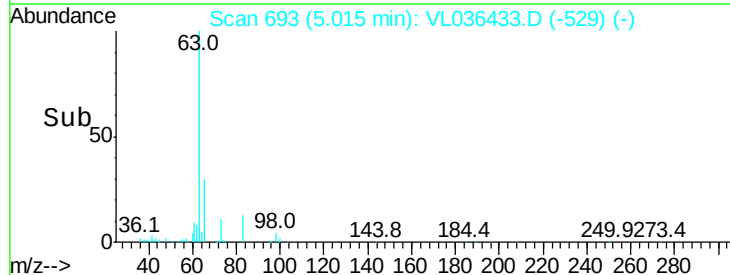
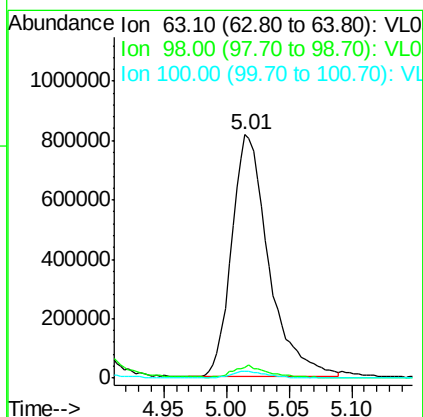
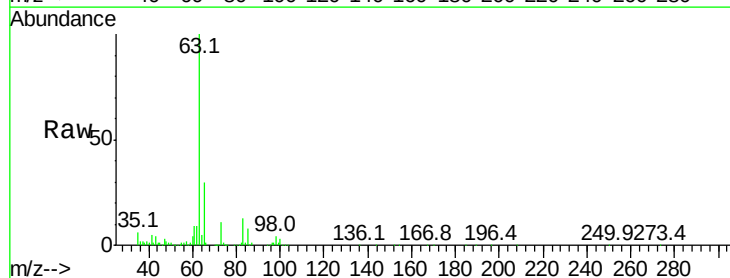
Ion	Ratio	Lower	Upper
43	100		
86	6.5	4.8	7.2
42	10.4	7.4	11.0
44	5.5	4.8	7.2

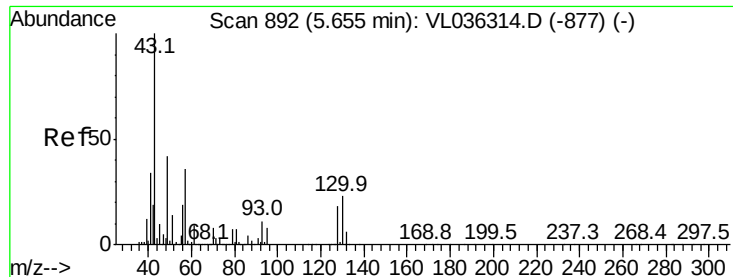


#24
 1,1-Dichloroethane
 Concen: 9.282 ppbv
 RT: 5.01 min Scan# 693
 Delta R.T. 0.03 min
 Lab File: VL036433.D
 Acq: 3 Mar 2021 9:33

Tgt Ion: 63 Resp: 1686290

Ion	Ratio	Lower	Upper
63	100		
98	3.9	2.0	6.0
100	2.5	1.5	4.4

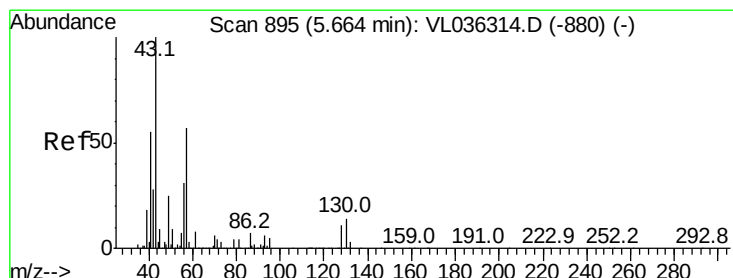
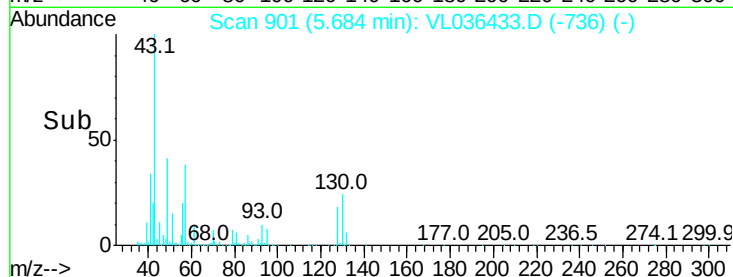
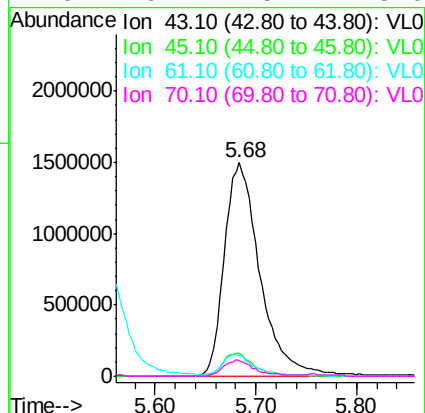
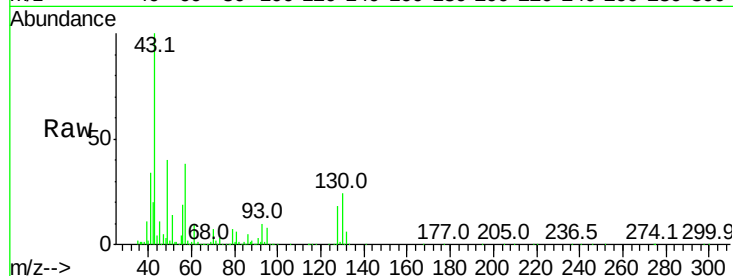




#25
Ethyl Acetate
Concen: 9.086 ppbv
RT: 5.68
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
VSTDICCC010
Acq: 3 Mar 2021 9:33

Tgt Ion: 43 Resp: 3664543

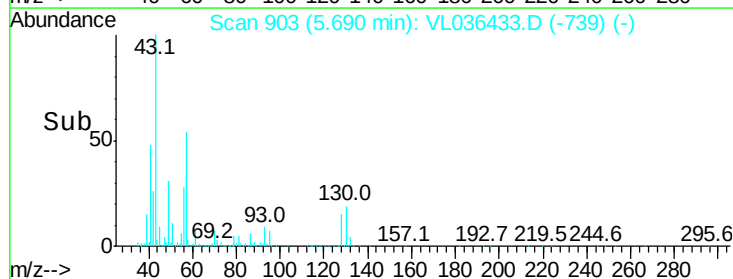
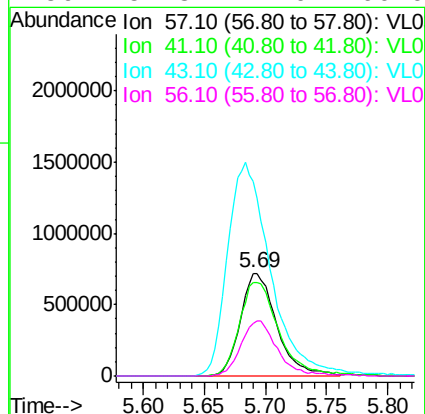
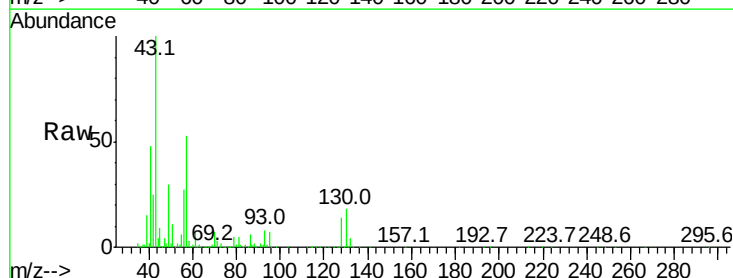
Ion	Ratio	Lower	Upper
43	100		
45	10.0	8.3	12.5
61	9.6	7.3	10.9
70	6.7	5.4	8.0

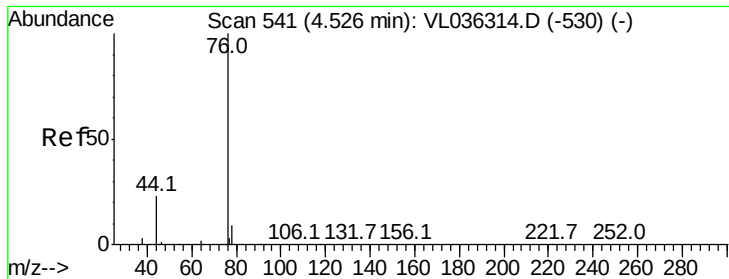


#26
Hexane
Concen: 8.943 ppbv
RT: 5.69 min Scan# 903
Delta R.T.: 0.03 min
Lab File: VL036433.D
Acq: 3 Mar 2021 9:33

Tgt Ion: 57 Resp: 1481939

Ion	Ratio	Lower	Upper
57	100		
41	100.5	81.7	122.5
43	249.7	199.1	298.7
56	54.8	44.0	66.0





#27

Carbon Disulfide

Concen: 10.734 ppbv

RT: 4.55 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 3 Mar 2021 9:33

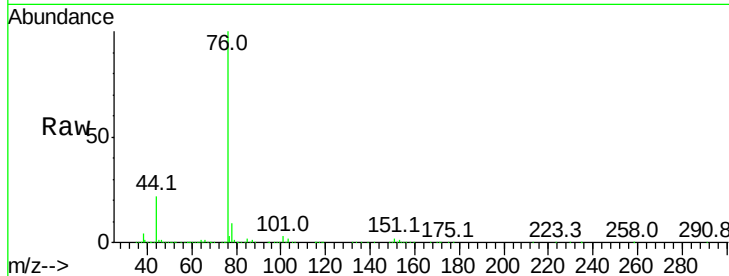
Tgt Ion: 76 Resp: 1634775

Ion Ratio Lower Upper

76 100

44 21.7 18.4 27.6

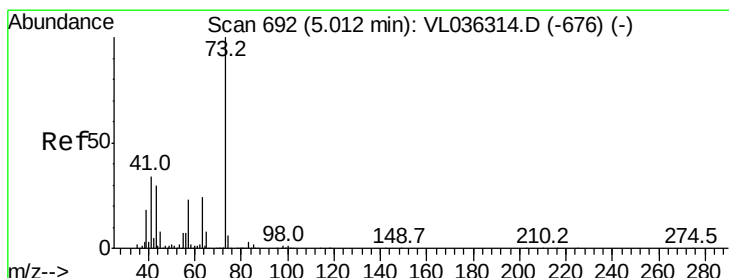
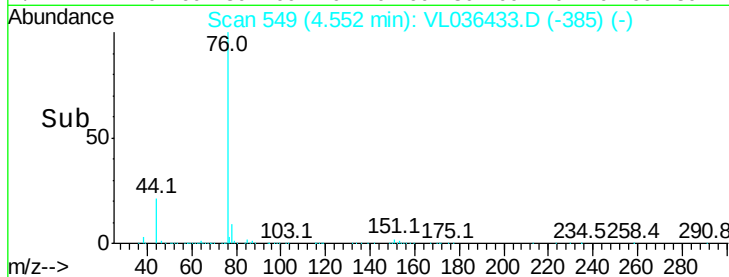
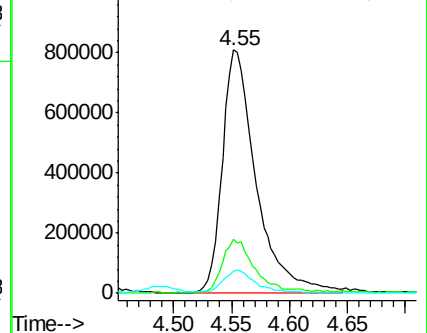
78 9.2 8.0 12.0



Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0



#28

Methyl tert-Butyl Ether

Concen: 9.389 ppbv

RT: 5.04 min Scan# 701

Delta R.T. 0.03 min

Lab File: VL036433.D

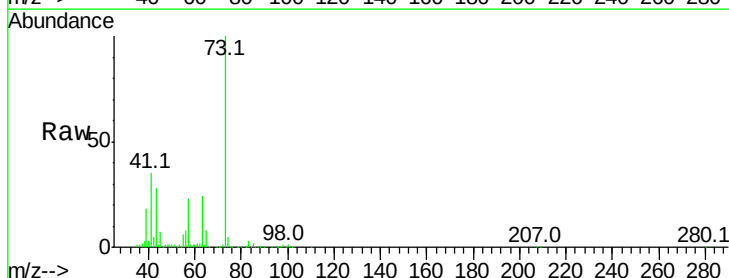
Acq: 3 Mar 2021 9:33

Tgt Ion: 73 Resp: 2032426

Ion Ratio Lower Upper

73 100

57 23.8 19.2 28.8



Abundance Ion 73.10 (72.80 to 73.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

