

Data File : VL034942.D
Acq On : 6 May 2020 14:02
Operator : SY/AP
Sample : VSTDIC015
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC015

Quant Time: May 06 14:44:30 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL050620AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed May 06 12:36:21 2020
QLast Update : Wed May 06 12:36:21 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1215251	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2832873	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.13	117	2847292	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.46	95	2198413	9.90	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.00%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.01	85	1673681	10.057	ppbv	97
3) Chlorodifluoromethane	2.95	51	1749770	12.889	ppbv	100
4) Chloromethane	3.10	50	1026678	13.381	ppbv	98
5) Vinyl Chloride	3.22	62	1003019	13.598	ppbv	100
6) Bromomethane	3.44	94	580300	13.515	ppbv	90
7) Chloroethane	3.52	64	358113	13.444	ppbv	97
8) Dichlorotetrafluoroethane	3.15	85	2034856	11.774	ppbv	99
9) Propene	2.97	41	818013	12.621	ppbv	98
10) Heptane	8.14	43	2200954	13.798	ppbv	98
11) Trichlorofluoromethane	3.92	101	2128906	12.025	ppbv	100
12) 1,1,2-Trichlorotrifluoroet	4.46	101	1491969	12.041	ppbv	100
13) Ethanol	3.57	45	199232	10.111	ppbv	100
14) Bromoethene	3.71	108	675587	12.625	ppbv	98
15) Acetone	3.82	43	1743758	11.071	ppbv	100
16) 1,3-Butadiene	3.29	39	922255	12.948	ppbv	98
17) tert-Butyl alcohol	4.27	59	1607935	10.596	ppbv	99
18) 1,1-Dichloroethene	4.27	96	694506	12.657	ppbv	93
19) Isopropyl Alcohol	3.94	45	1168538	11.748	ppbv	100
20) Methylene Chloride	4.32	84	606578	12.180	ppbv	95
21) Allyl Chloride	4.39	41	1226309	12.123	ppbv	99
22) trans-1,2-Dichloroethene	4.87	96	684564	12.297	ppbv	94
23) Vinyl Acetate	5.06	43	2823083	12.134	ppbv	98
24) 1,1-Dichloroethane	5.00	63	1979462	12.691	ppbv	99
25) Ethyl Acetate	5.67	43	3528908	12.576	ppbv	99
26) Hexane	5.68	57	1590566	13.163	ppbv	98
27) Carbon Disulfide	4.53	76	1807767	13.184	ppbv	100
28) Methyl tert-Butyl Ether	5.02	73	2325509	11.567	ppbv	98
29) Chloroform	5.75	83	2408002	13.061	ppbv	97
30) Cyclohexane	7.14	84	1336099	13.252	ppbv	98
31) cis-1,2-Dichloroethene	5.55	61	1643578	13.300	ppbv	97
32) 1,1,1-Trichloroethane	6.52	97	2301742	12.813	ppbv	100
34) 2-Butanone	5.23	43	2398915	12.743	ppbv	100
35) Carbon Tetrachloride	7.03	117	2356020	13.372	ppbv	98
36) Benzene	6.90	78	3173407	12.567	ppbv	100
37) 1,2-Dichloroethane	6.31	62	1885766	13.245	ppbv	100
38) Trichloroethene	7.85	130	1176484	12.268	ppbv	98
39) 1,2-Dichloropropane	7.63	63	1283370	12.828	ppbv	97
40) 1,4-Dioxane	7.85	88	451971	11.962	ppbv	82
41) Tetrahydrofuran	6.04	42	1376303	13.511	ppbv	99
42) Bromodichloromethane	7.81	83	2581370	13.303	ppbv	96
43) Methyl Methacrylate	8.03	69	1488034	13.988	ppbv	100

Data File : VL034942.D
Acq On : 6 May 2020 14:02
Operator : SY/AP
Sample : VSTDIC015
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC015

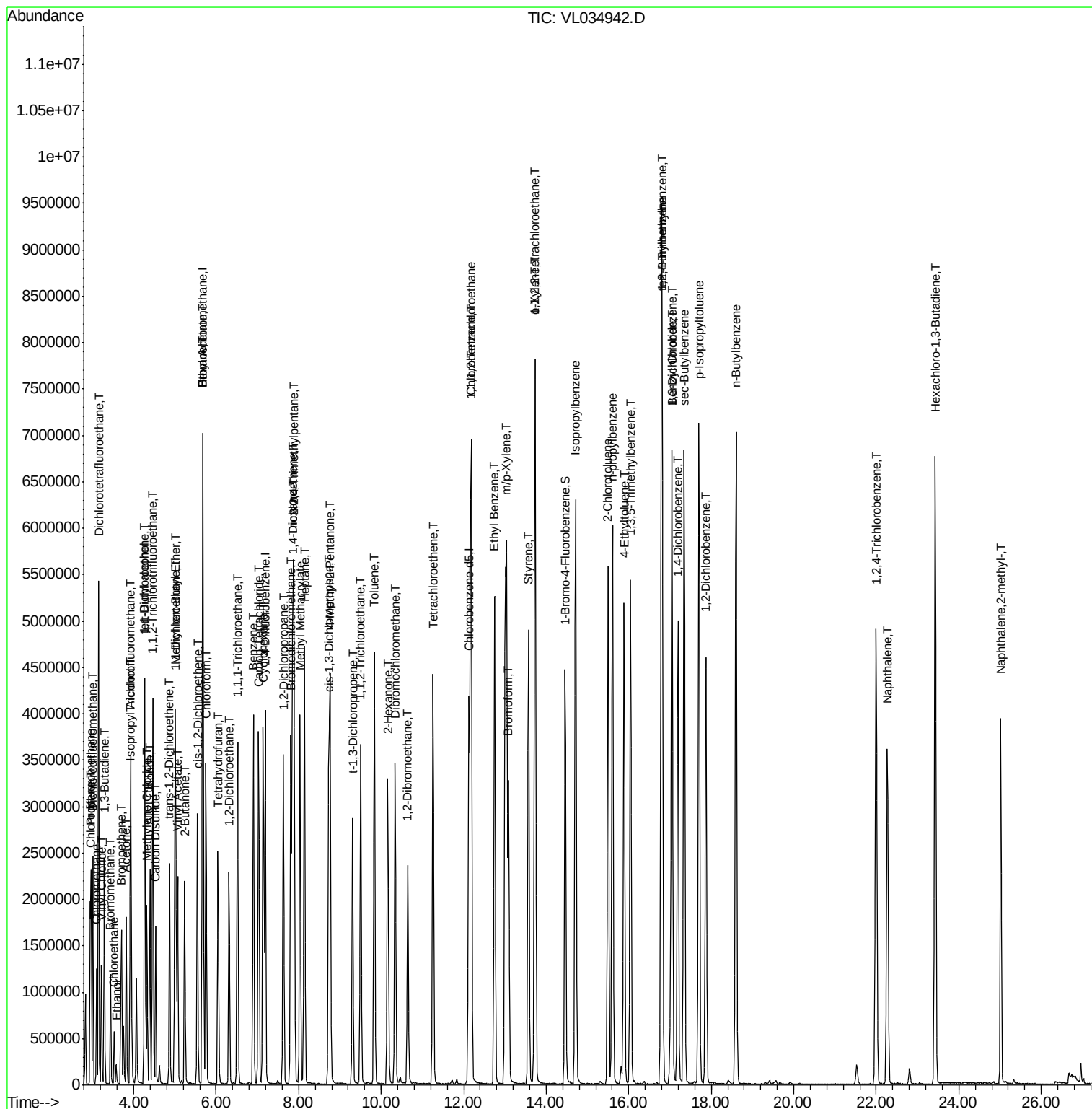
Quant Time: May 06 14:44:30 2020
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL050620AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed May 06 12:36:21 2020
QLast Update : Wed May 06 12:36:21 2020
Response via : Initial Calibration

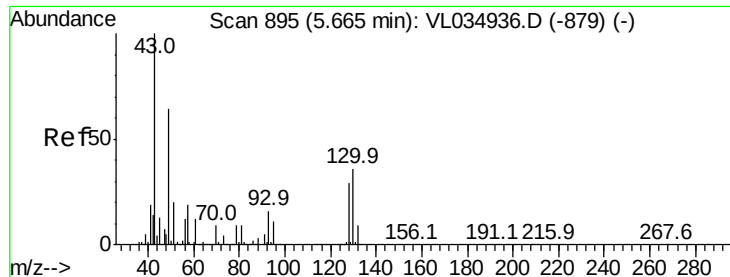
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2,2,4-Trimethylpentane	7.88	57	5354438	12.548	ppbv	99
45) t-1,3-Dichloropropene	9.30	75	1696538	13.574	ppbv	96
46) cis-1,3-Dichloropropene	8.73	75	1982692	13.350	ppbv	98
47) 1,1,2-Trichloroethane	9.51	97	1318097	12.838	ppbv	99
48) Dibromochloromethane	10.34	129	2164830	13.020	ppbv	100
49) Bromoform	13.09	173	1912958	12.903	ppbv	99
50) 4-Methyl-2-Pentanone	8.76	43	3595407	13.267	ppbv	100
51) 2-Hexanone	10.16	43	3004422	13.642	ppbv	100
52) Tetrachloroethene	11.26	164	1101398	11.026	ppbv	98
53) Toluene	9.83	91	3669329	12.584	ppbv	99
54) 1,2-Dibromoethane	10.65	107	1977256	12.794	ppbv	98
56) 1,1,1,2-Tetrachloroethane	12.16	131	1592171	12.448	ppbv	96
57) Chlorobenzene	12.19	112	2718468	12.202	ppbv	100
58) Ethyl Benzene	12.75	91	4838076	12.547	ppbv	96
59) m/p-Xylene	13.04	91	4081232	12.634	ppbv	92
60) o-Xylene	13.73	91	3909839	12.396	ppbv	99
61) Styrene	13.57	104	2919100	13.188	ppbv	100
62) Isopropylbenzene	14.71	105	5695863	11.943	ppbv	98
63) 1,1,2,2-Tetrachloroethane	13.72	83	2761336	12.896	ppbv	99
64) n-propylbenzene	15.61	120	1549604	12.484	ppbv	93
65) tert-Butylbenzene	16.80	119	4839467	11.608	ppbv	100
66) Benzyl Chloride	17.04	91	2117403	12.180	ppbv	99
67) sec-Butylbenzene	17.35	105	6922921	11.975	ppbv	99
69) p-Isopropyltoluene	17.70	119	5732462	11.826	ppbv	99
70) n-Butylbenzene	18.60	91	6007177	12.146	ppbv	99
71) 2-Chlorotoluene	15.50	91	4500547	12.461	ppbv	100
72) 4-Ethyltoluene	15.89	105	4619646	12.402	ppbv	100
73) 1,3,5-Trimethylbenzene	16.04	105	4281845	12.280	ppbv	96
74) 1,2,4-Trimethylbenzene	16.82	105	4275246	11.901	ppbv	95
75) 1,3-Dichlorobenzene	17.05	146	2516516	11.618	ppbv	99
76) 1,4-Dichlorobenzene	17.19	146	2558571	11.837	ppbv	99
77) 1,2-Dichlorobenzene	17.88	146	1063434	5.065	ppbv #	8
78) Hexachloro-1,3-Butadiene	23.43	225	1906902	10.873	ppbv	99
79) Naphthalene	22.27	128	4594821	16.401	ppbv	99
80) Naphthalene,2-methyl-	25.02	142	2166014	29.585	ppbv	99
81) 1,2,4-Trichlorobenzene	22.00	180	2366540	13.296	ppbv	100

(#) = 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

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC015

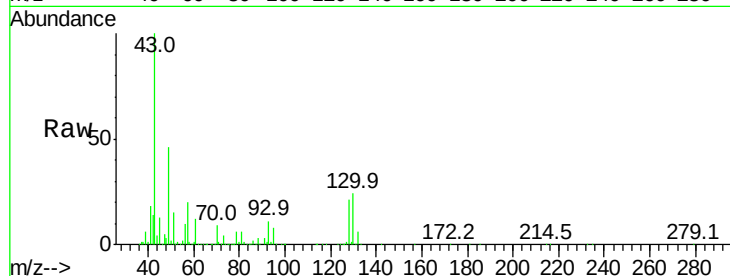
Tgt Ion: 49 Resp: 1215251

Ion Ratio Lower Upper

49 100

128 44.0 22.1 66.5

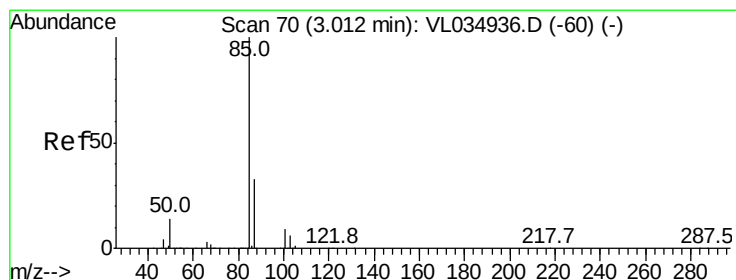
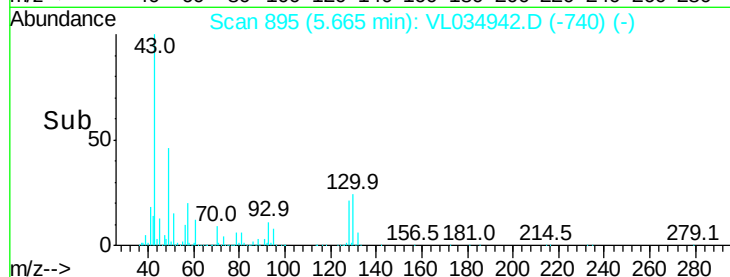
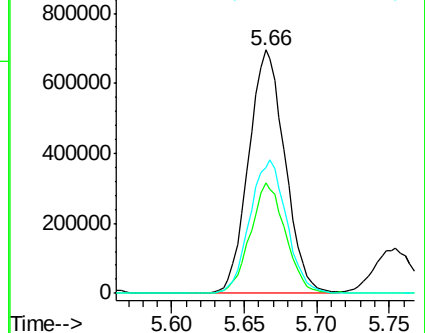
130 55.4 29.1 87.3



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: 10.057 ppbv

RT: 3.01 min Scan# 69

Delta R.T. -0.00 min

Lab File: VL034942.D

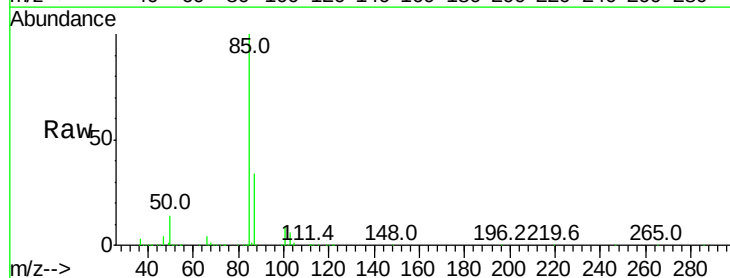
Acq: 6 May 2020 14:02

Tgt Ion: 85 Resp: 1673681

Ion Ratio Lower Upper

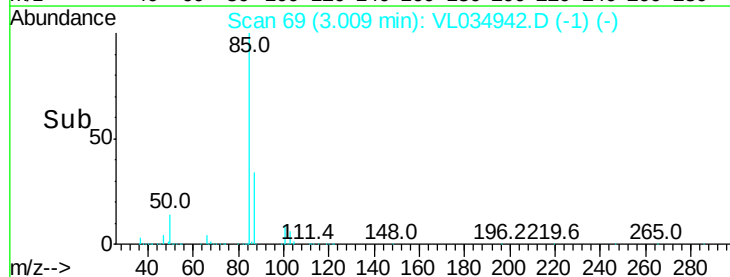
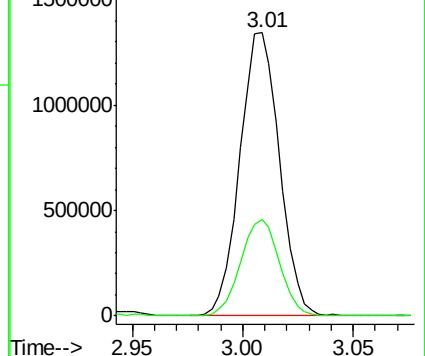
85 100

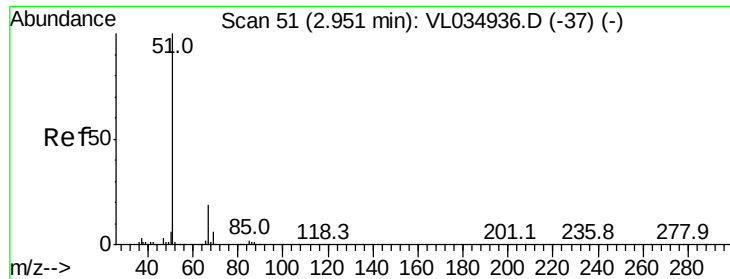
87 34.2 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

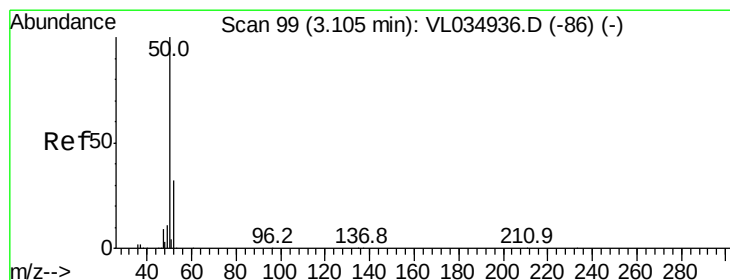
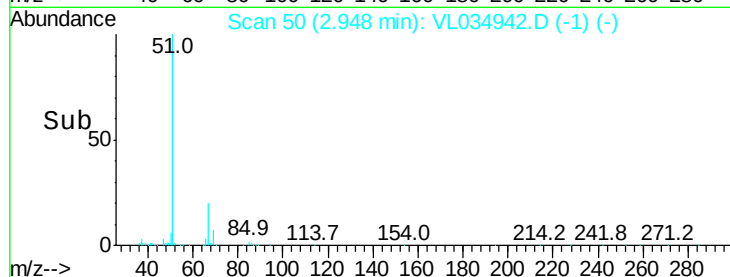
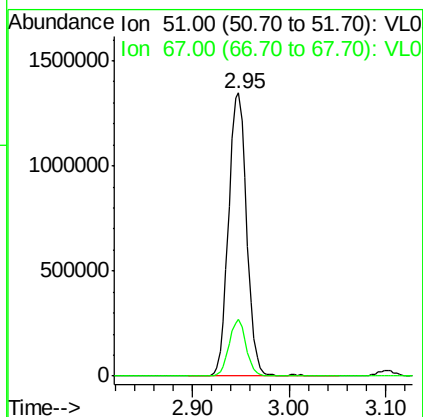
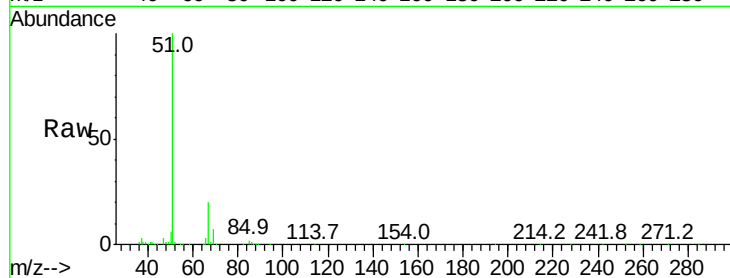




#3
Chlorodifluoromethane
Concen: 12.889 ppbv
RT: 2.95 min Scan# 50
Delta R.T. -0.00 min
Lab File: VL034942.D
Acq: 6 May 2020 14:02

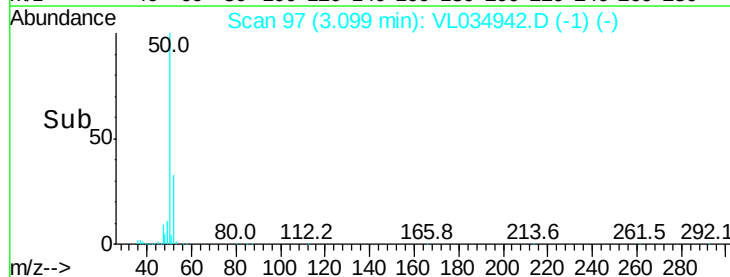
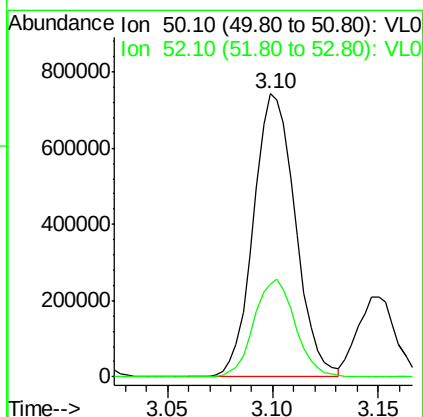
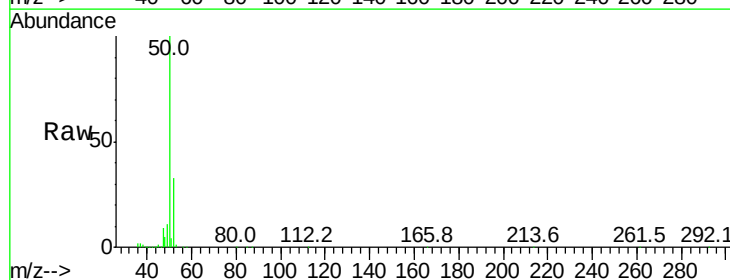
Instrument :
MSVOA_L
ClientSampleId :
VSTDIC015

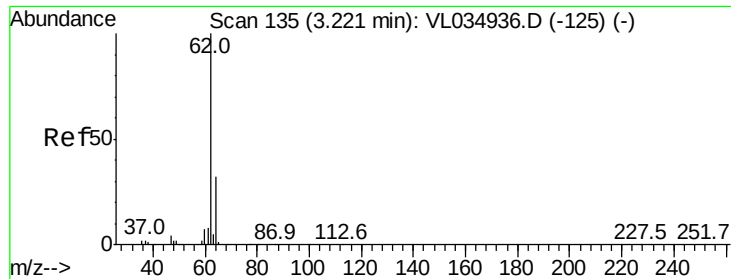
Tgt Ion: 51 Resp: 1749770
Ion Ratio Lower Upper
51 100
67 18.8 15.0 22.6



#4
Chloromethane
Concen: 13.381 ppbv
RT: 3.10 min Scan# 97
Delta R.T. -0.01 min
Lab File: VL034942.D
Acq: 6 May 2020 14:02

Tgt Ion: 50 Resp: 1026678
Ion Ratio Lower Upper
50 100
52 32.9 25.4 38.2





#5

Vinyl Chloride

Concen: 13.598 ppbv

RT: 3.22 min Scan# 135

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

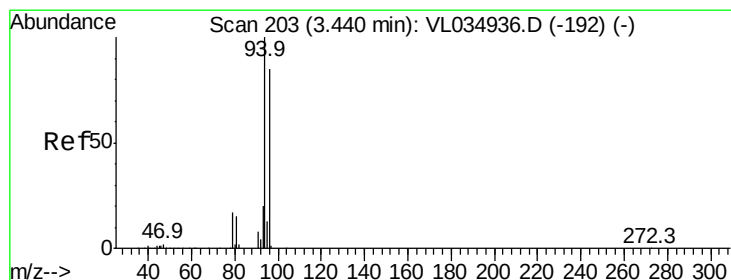
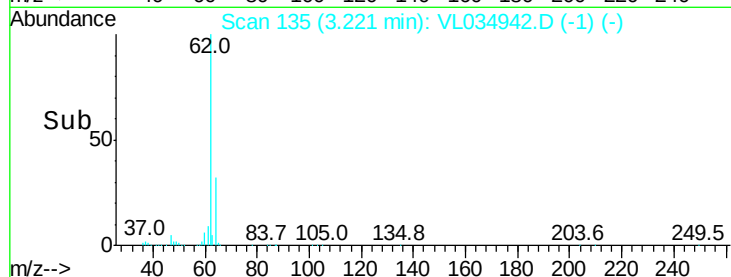
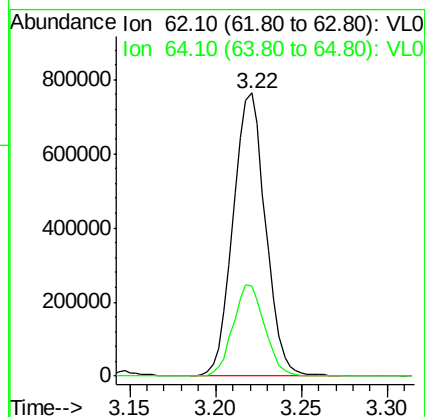
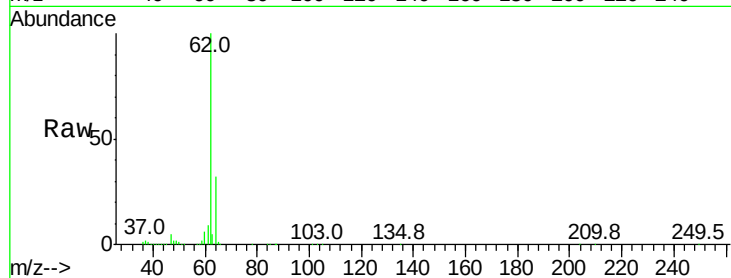
VSTDIC015

Tgt Ion: 62 Resp: 1003019

Ion Ratio Lower Upper

62 100

64 31.9 25.7 38.5



#6

Bromomethane

Concen: 13.515 ppbv

RT: 3.44 min Scan# 203

Delta R.T. -0.00 min

Lab File: VL034942.D

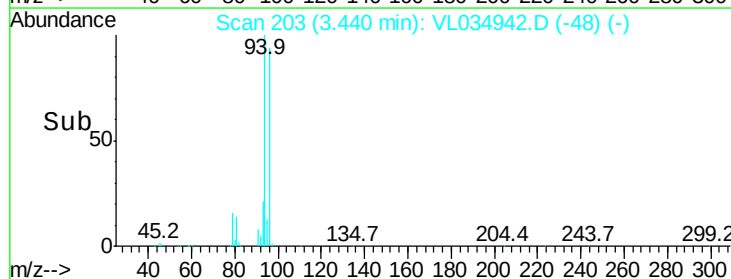
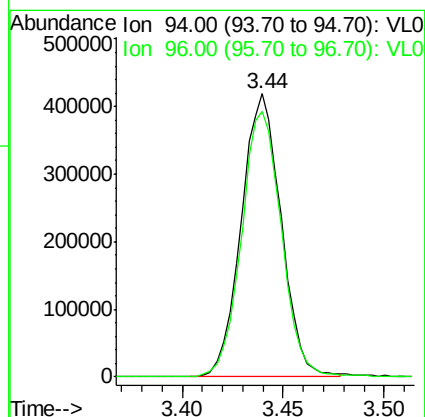
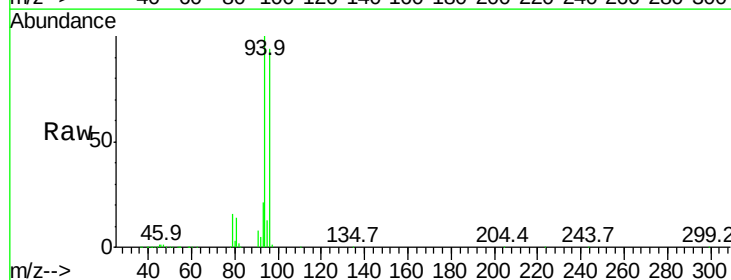
Acq: 6 May 2020 14:02

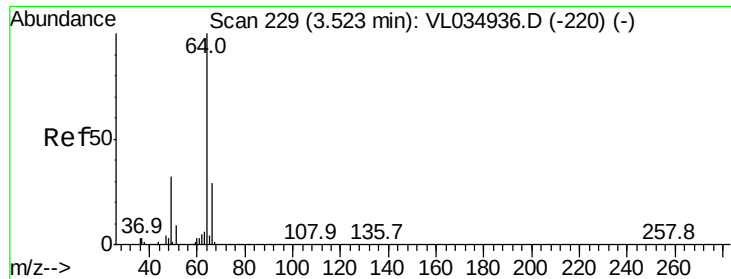
Tgt Ion: 94 Resp: 580300

Ion Ratio Lower Upper

94 100

96 93.7 67.9 101.9





#7

Chloroethane

Concen: 13.444 ppbv

RT: 3.52 min Scan# 229

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

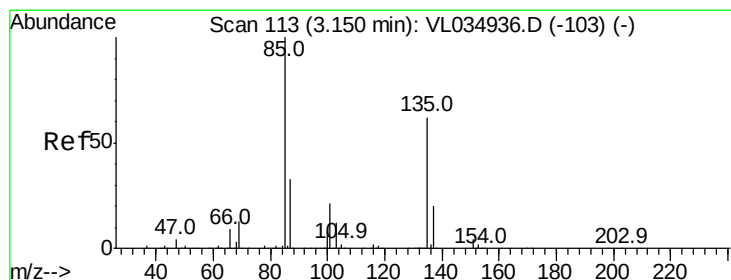
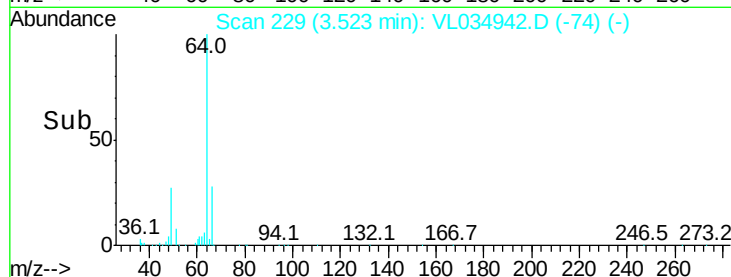
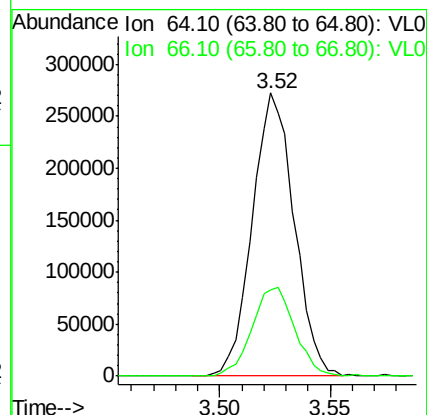
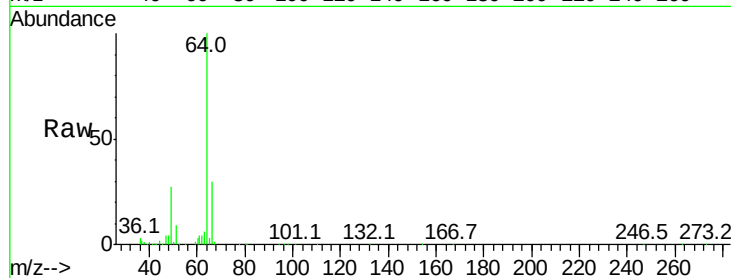
VSTDIC015

Tgt Ion: 64 Resp: 358113

Ion Ratio Lower Upper

64 100

66 30.4 23.2 34.8



#8

Dichlorotetrafluoroethane

Concen: 11.774 ppbv

RT: 3.15 min Scan# 113

Delta R.T. -0.00 min

Lab File: VL034942.D

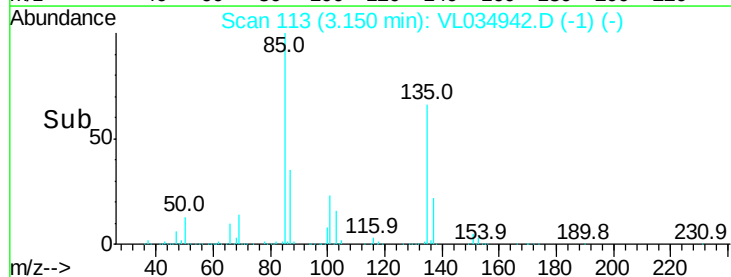
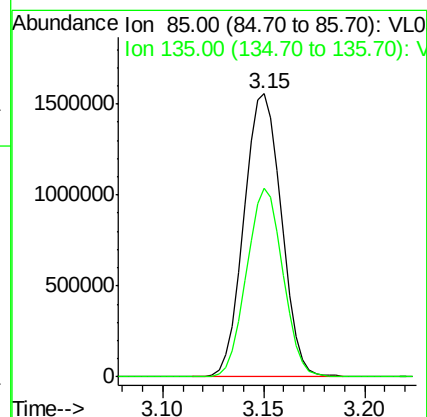
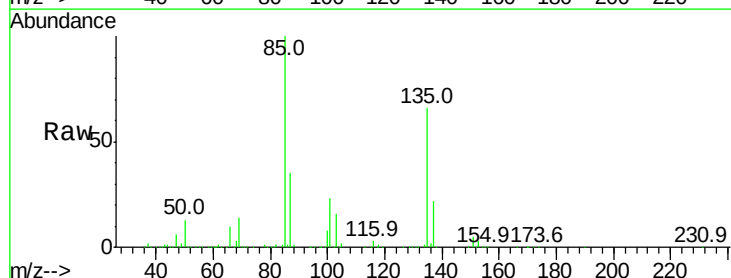
Acq: 6 May 2020 14:02

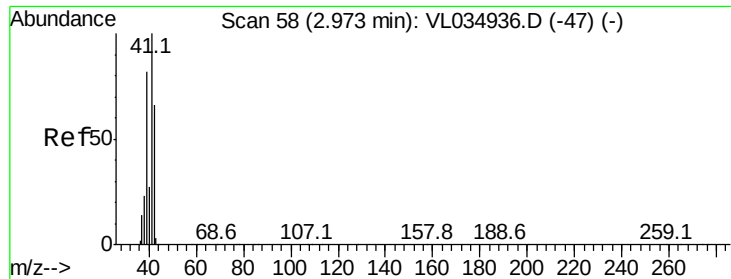
Tgt Ion: 85 Resp: 2034856

Ion Ratio Lower Upper

85 100

135 64.7 50.9 76.3





#9

Propene

Concen: 12.621 ppbv

RT: 2.97 min Scan# 56

Delta R.T. -0.01 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

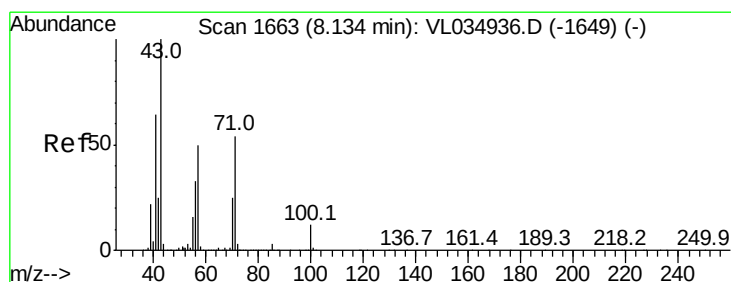
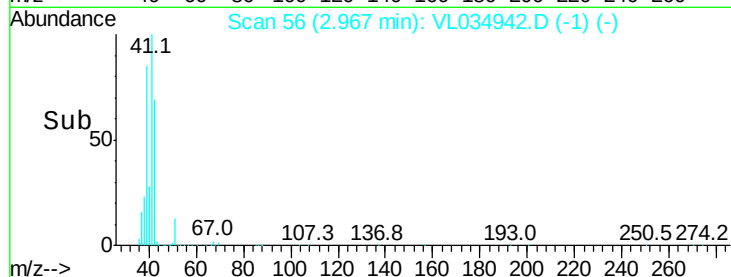
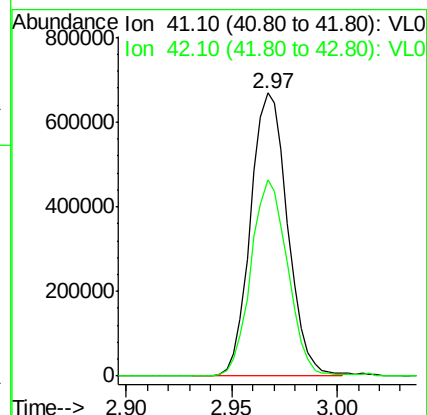
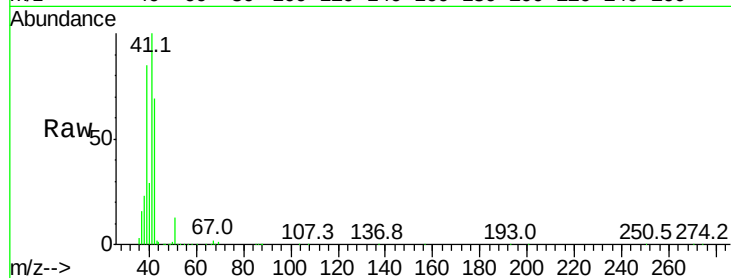
VSTDIC015

Tgt Ion: 41 Resp: 818013

Ion Ratio Lower Upper

41 100

42 69.6 54.5 81.7



#10

Heptane

Concen: 13.798 ppbv

RT: 8.14 min Scan# 1665

Delta R.T. 0.01 min

Lab File: VL034942.D

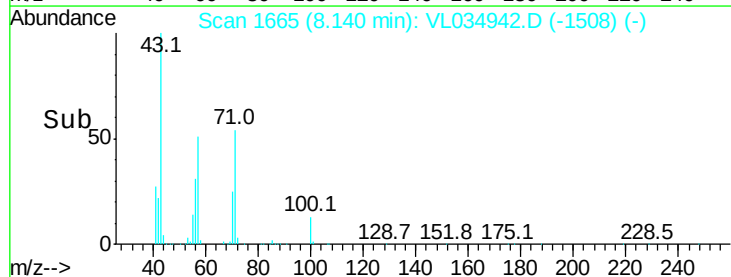
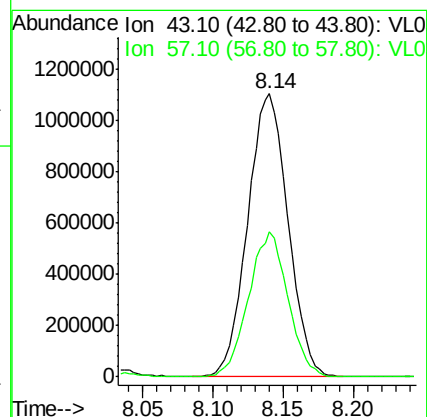
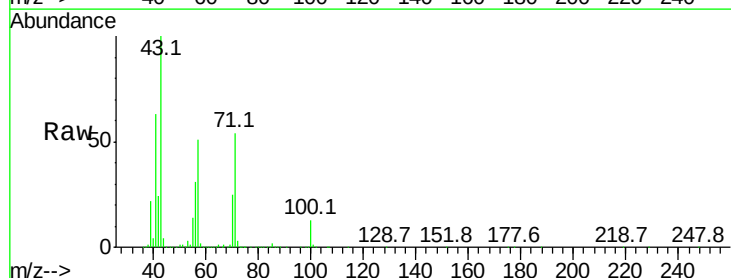
Acq: 6 May 2020 14:02

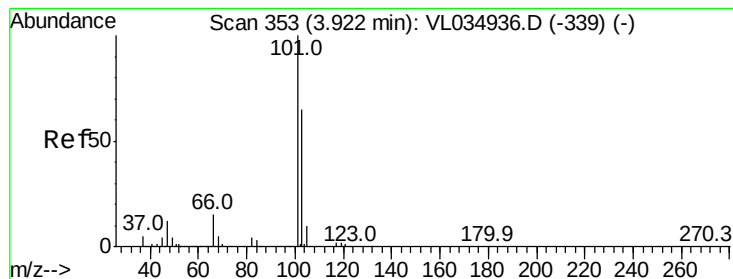
Tgt Ion: 43 Resp: 2200954

Ion Ratio Lower Upper

43 100

57 50.1 41.1 61.7





#11

Trichlorofluoromethane

Concen: 12.025 ppbv

RT: 3.92 min Scan# 353

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

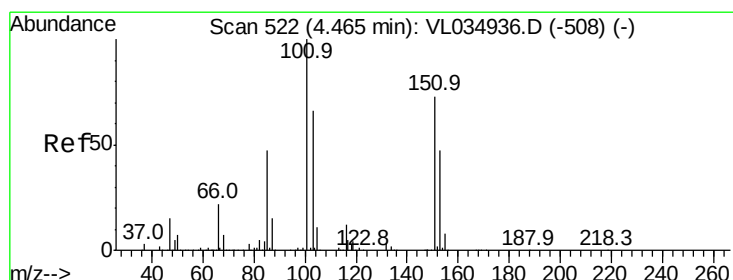
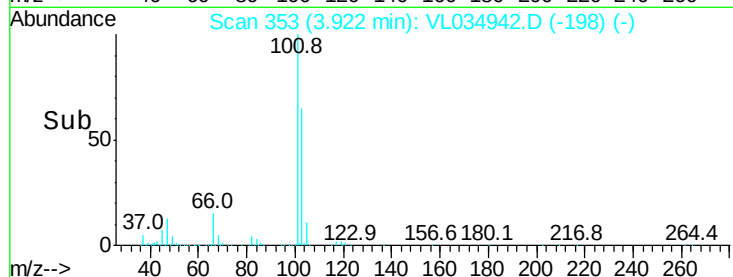
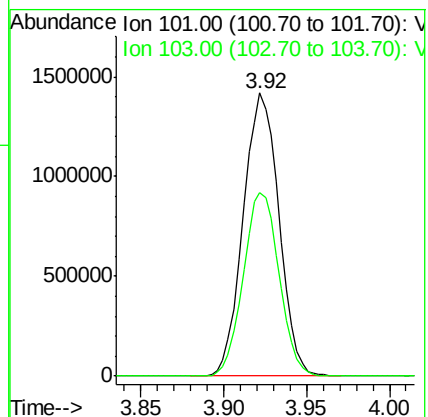
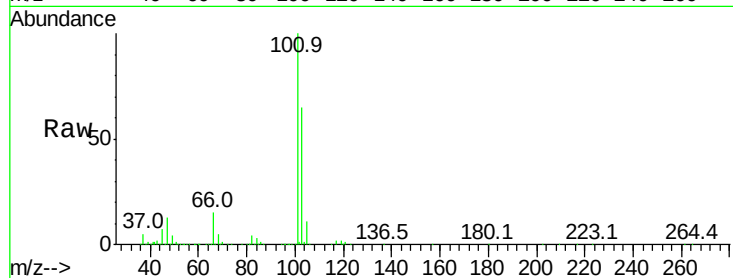
VSTDIC015

Tgt Ion:101 Resp: 2128906

Ion Ratio Lower Upper

101 100

103 65.0 51.9 77.9



#12

1,1,2-Trichlorotrifluoroethane

Concen: 12.041 ppbv

RT: 4.46 min Scan# 521

Delta R.T. -0.00 min

Lab File: VL034942.D

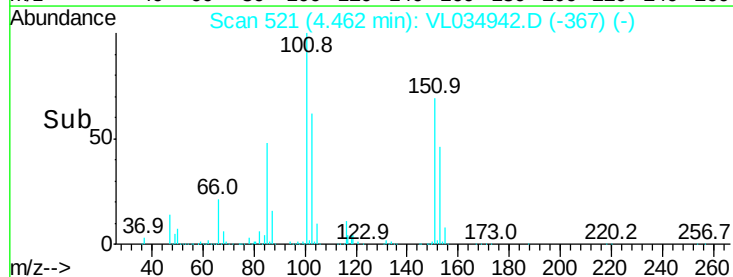
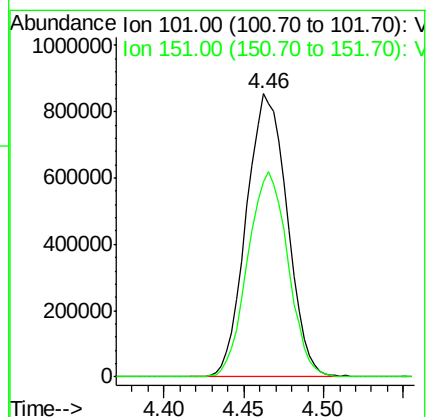
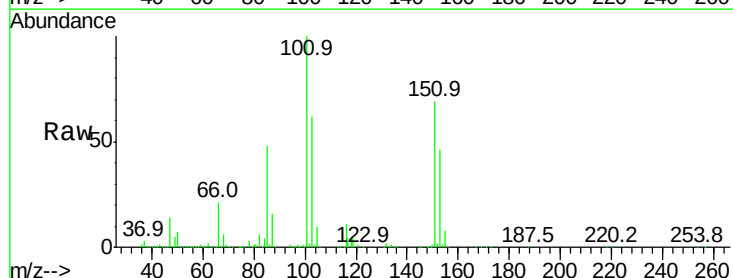
Acq: 6 May 2020 14:02

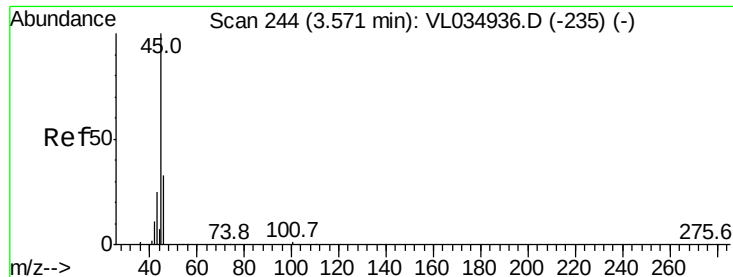
Tgt Ion:101 Resp: 1491969

Ion Ratio Lower Upper

101 100

151 71.6 57.6 86.4





#13

Ethanol

Concen: 10.111 ppbv

RT: 3.57 min Scan# 244

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

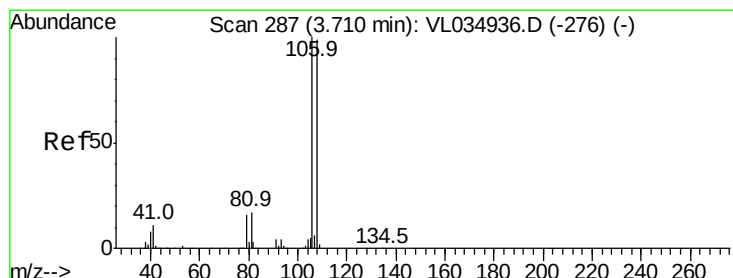
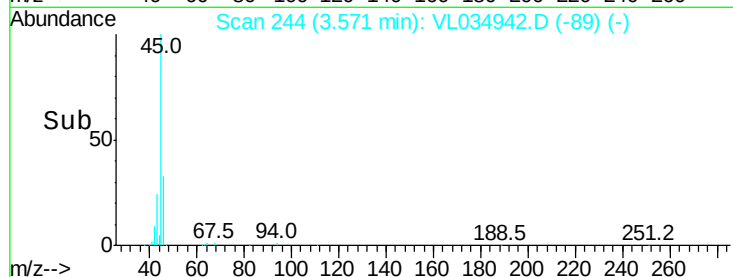
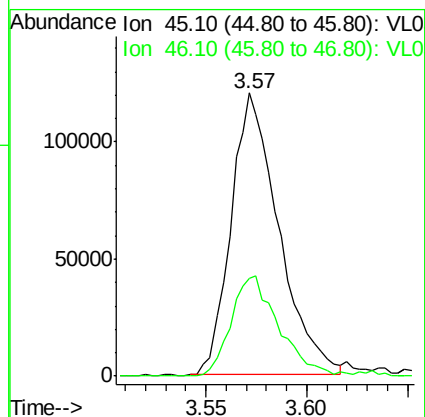
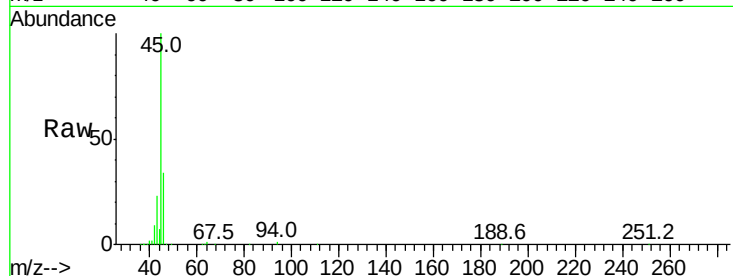
VSTDIC015

Tgt Ion: 45 Resp: 199232

Ion Ratio Lower Upper

45 100

46 35.6 14.3 57.3



#14

Bromoethene

Concen: 12.625 ppbv

RT: 3.71 min Scan# 287

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

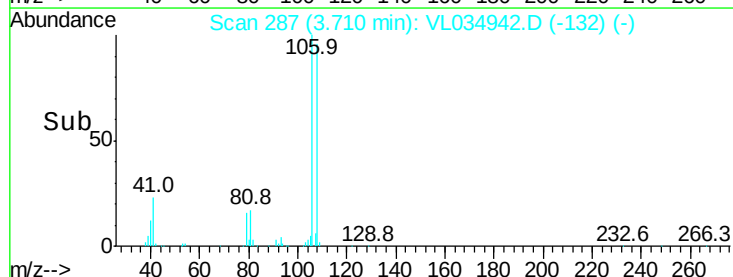
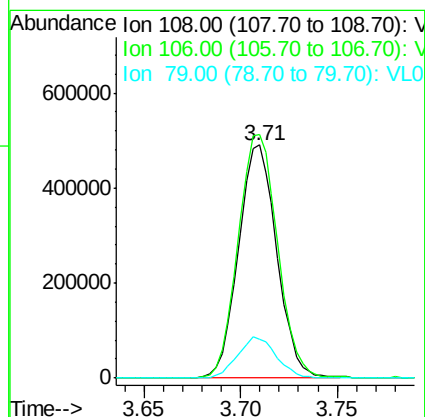
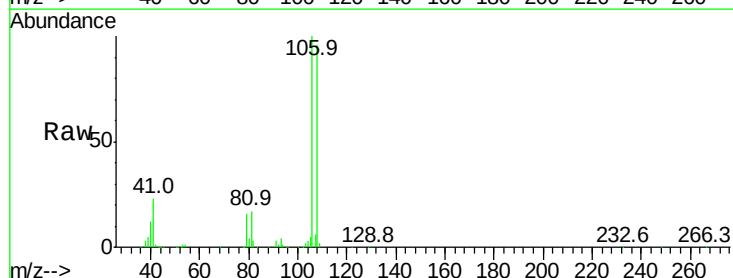
Tgt Ion: 108 Resp: 675587

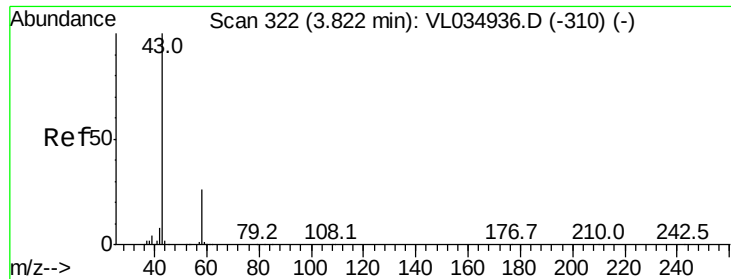
Ion Ratio Lower Upper

108 100

106 108.3 84.9 127.3

79 18.0 14.1 21.1





#15

Acetone

Concen: 11.071 ppbv

RT: 3.82 min Scan# 321

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

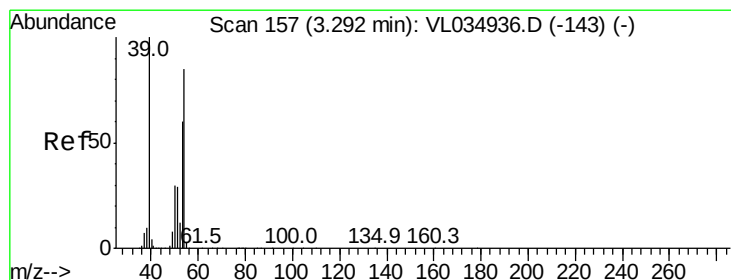
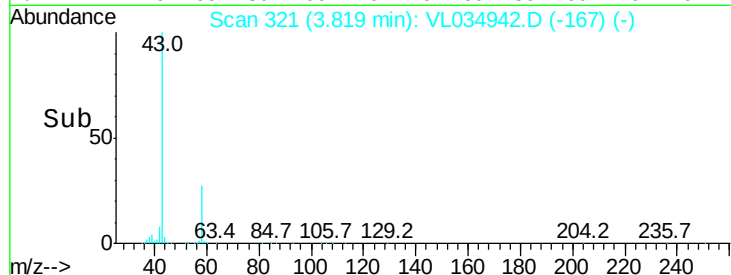
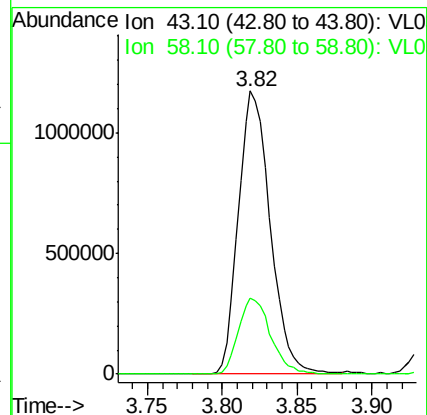
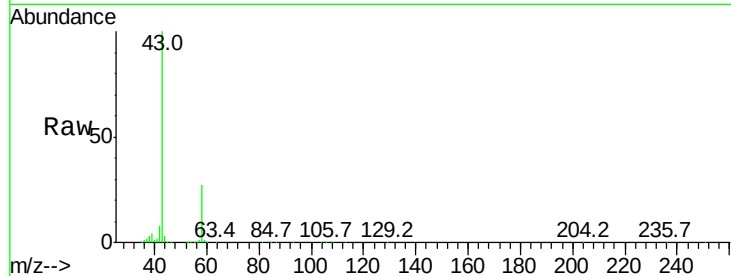
VSTDIC015

Tgt Ion: 43 Resp: 1743758

Ion Ratio Lower Upper

43 100

58 27.0 21.7 32.5



#16

1,3-Butadiene

Concen: 12.948 ppbv

RT: 3.29 min Scan# 157

Delta R.T. -0.00 min

Lab File: VL034942.D

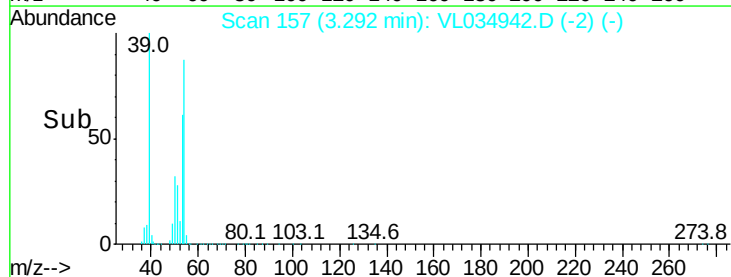
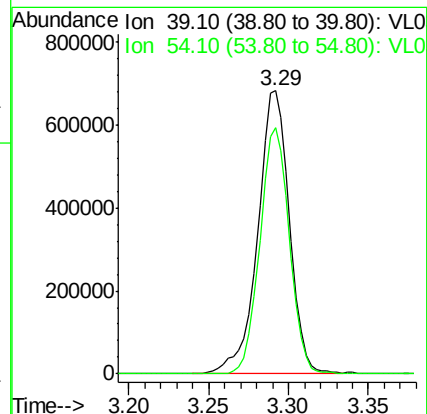
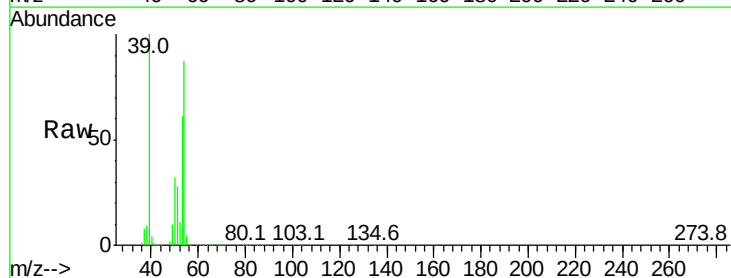
Acq: 6 May 2020 14:02

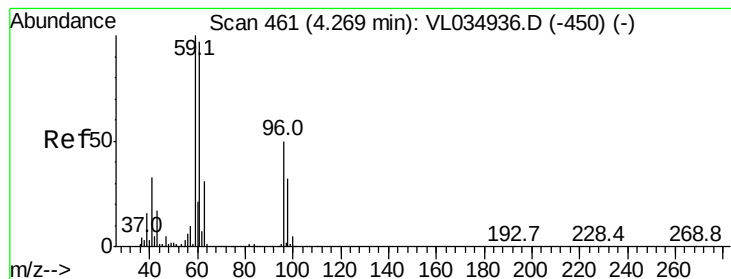
Tgt Ion: 39 Resp: 922255

Ion Ratio Lower Upper

39 100

54 81.6 66.6 100.0





#17

tert-Butyl alcohol

Concen: 10.596 ppbv

RT: 4.27 min Scan# 461

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

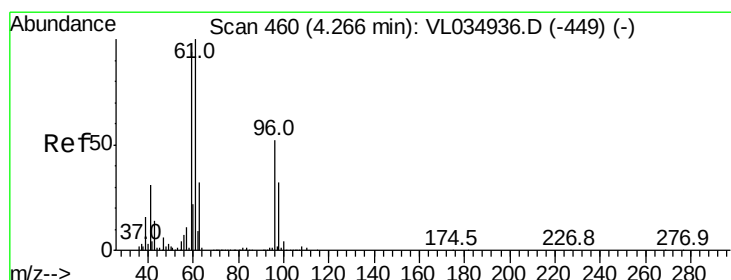
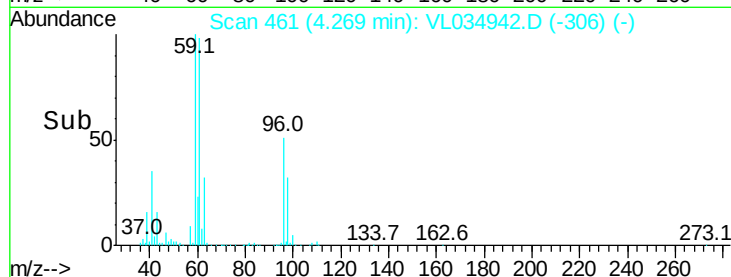
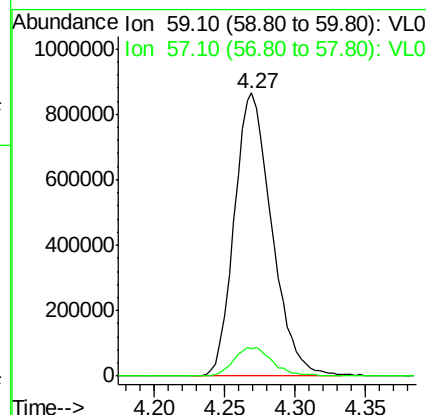
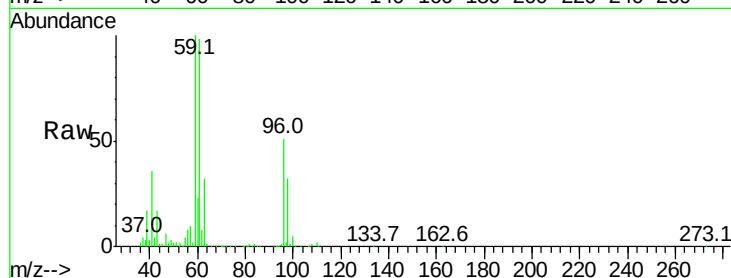
VSTDIC015

Tgt Ion: 59 Resp: 1607935

Ion Ratio Lower Upper

59 100

57 10.6 8.7 13.1



#18

1,1-Dichloroethene

Concen: 12.657 ppbv

RT: 4.27 min Scan# 460

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

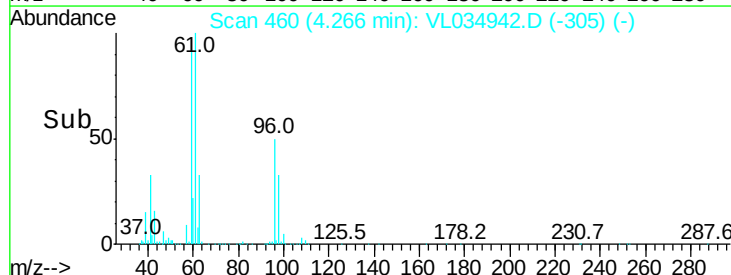
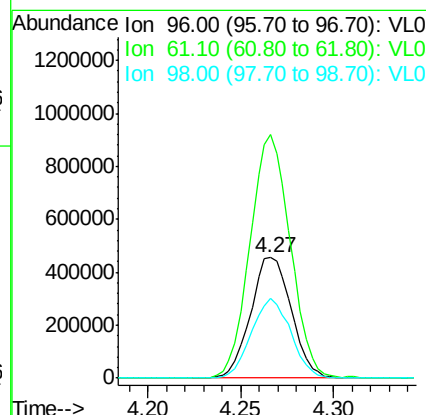
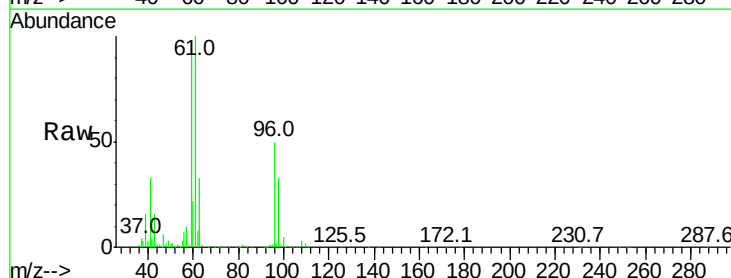
Tgt Ion: 96 Resp: 694506

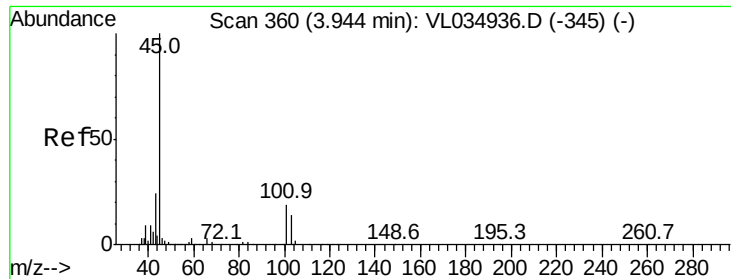
Ion Ratio Lower Upper

96 100

61 201.9 152.4 228.6

98 65.8 48.8 73.2





#19

Isopropyl Alcohol

Concen: 11.748 ppbv

RT: 3.94 min Scan# 359

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

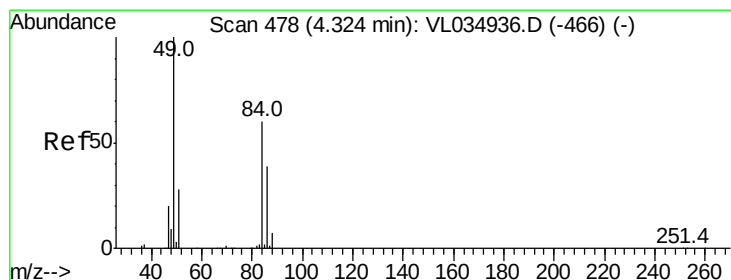
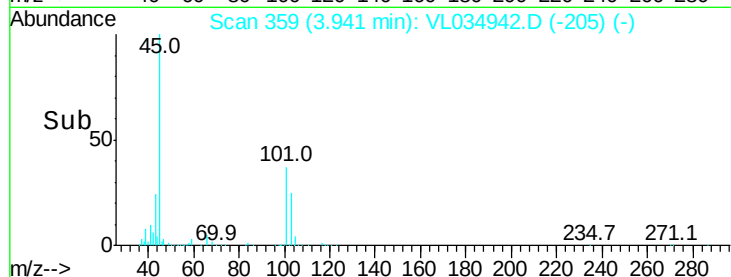
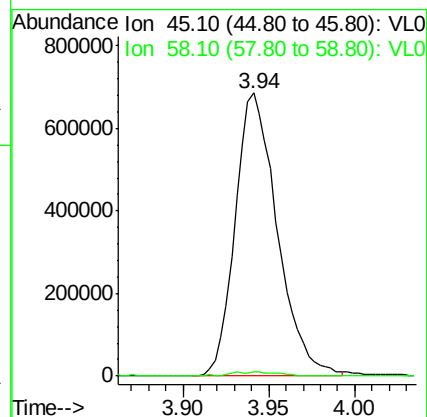
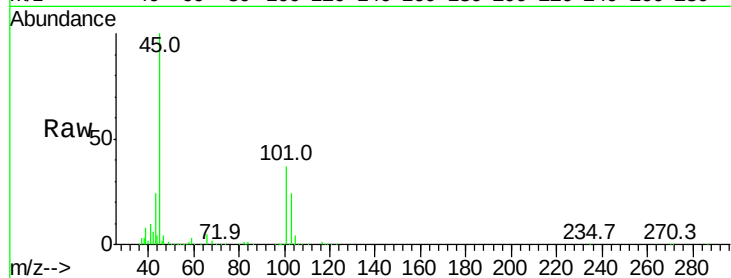
VSTDIC015

Tgt Ion: 45 Resp: 1168538

Ion Ratio Lower Upper

45 100

58 2.0 1.7 2.5



#20

Methylene Chloride

Concen: 12.180 ppbv

RT: 4.32 min Scan# 478

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Tgt Ion: 84 Resp: 606578

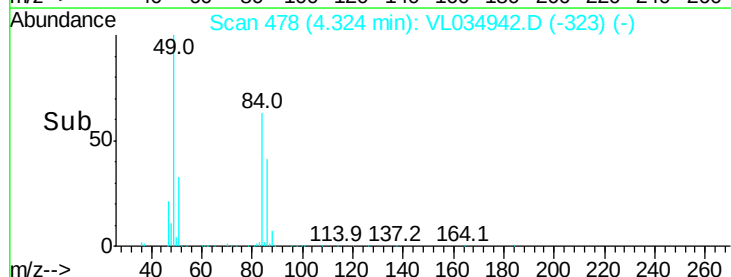
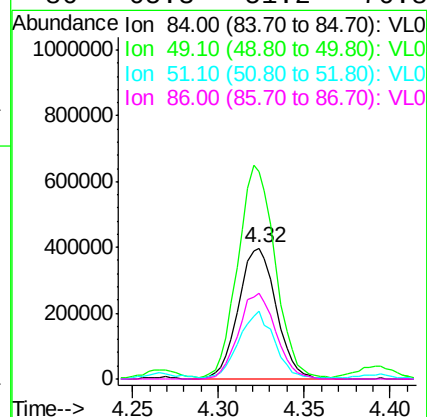
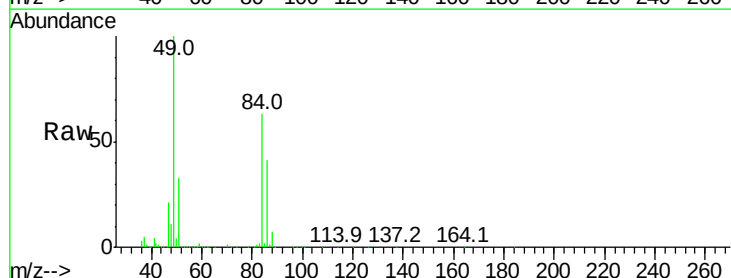
Ion Ratio Lower Upper

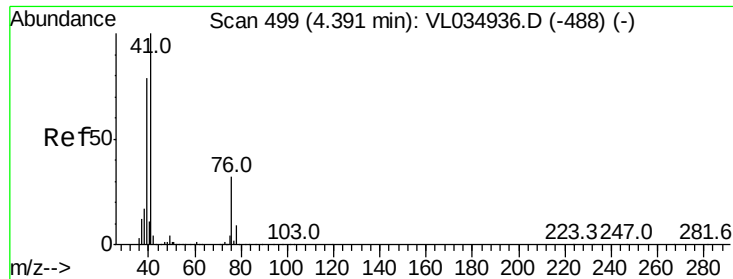
84 100

49 157.2 132.5 198.7

51 51.2 38.4 57.6

86 65.3 51.2 76.8

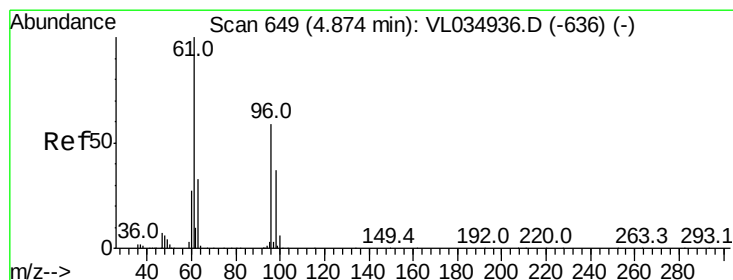
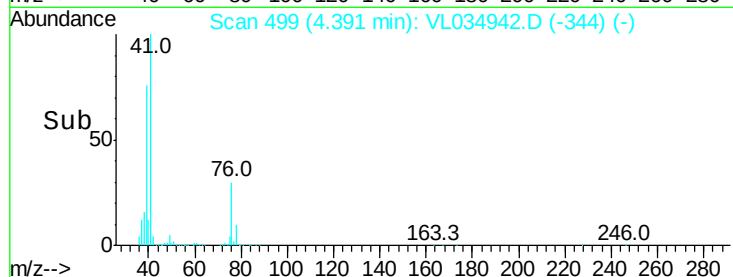
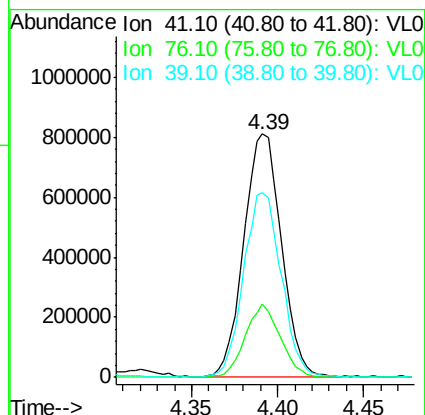
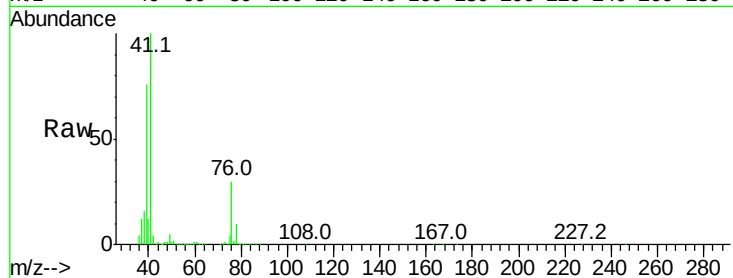




#21
 Allyl Chloride
 Concen: 12.123 ppbv
 RT: 4.39 min Scan# 499
 Delta R.T. -0.00 min
 Lab File: VL034942.D
 Acq: 6 May 2020 14:02

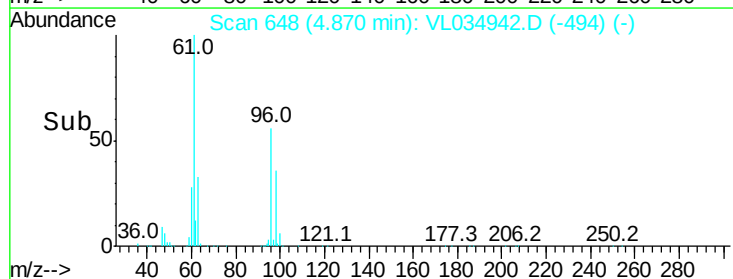
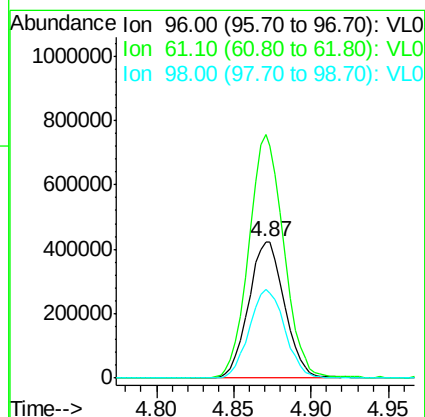
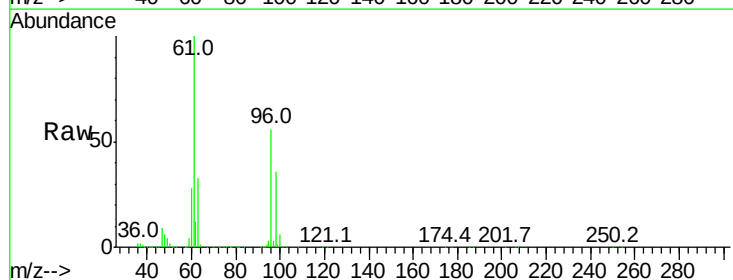
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC015

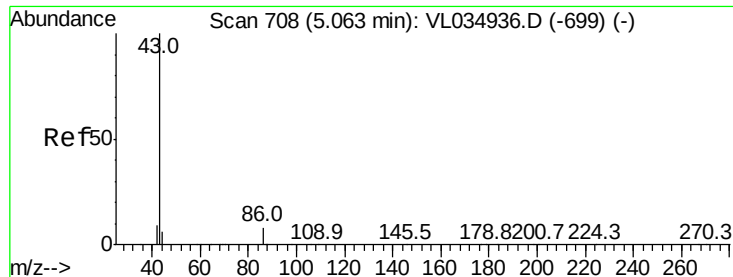
Tgt Ion: 41 Resp: 1226309
 Ion Ratio Lower Upper
 41 100
 76 28.1 23.6 35.4
 39 76.8 61.9 92.9



#22
 trans-1,2-Dichloroethene
 Concen: 12.297 ppbv
 RT: 4.87 min Scan# 648
 Delta R.T. -0.00 min
 Lab File: VL034942.D
 Acq: 6 May 2020 14:02

Tgt Ion: 96 Resp: 684564
 Ion Ratio Lower Upper
 96 100
 61 178.4 135.3 202.9
 98 65.0 50.4 75.6





#23

Vinyl Acetate

Concen: 12.134 ppbv

RT: 5.06 min Scan# 708

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC015

Tgt Ion: 43 Resp: 2823083

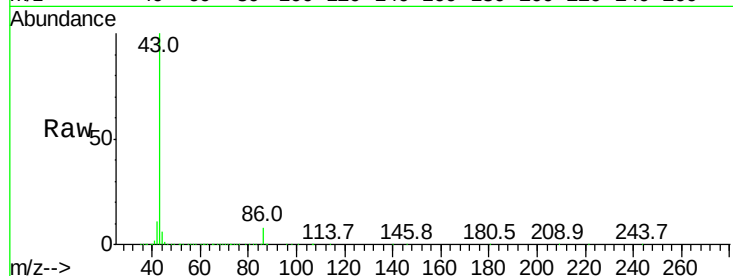
Ion Ratio Lower Upper

43 100

86 8.2 5.5 8.3

42 10.6 8.0 12.0

44 6.0 4.5 6.7

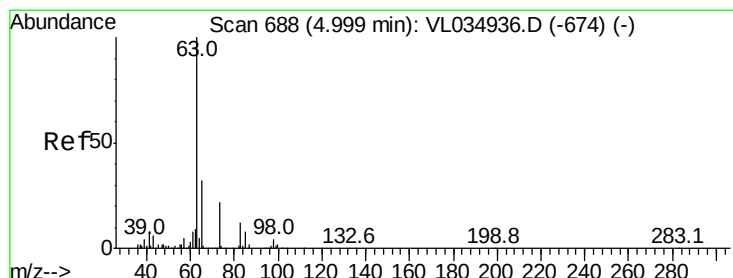
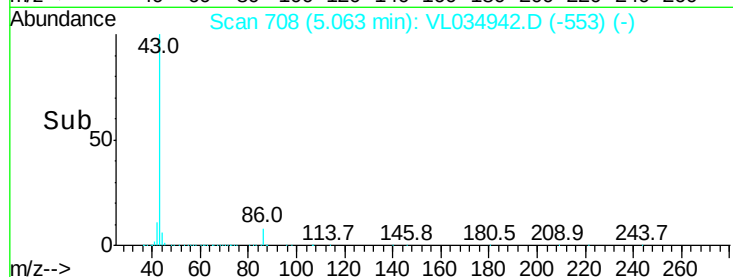
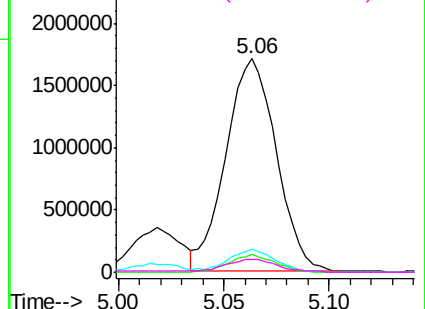


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 12.691 ppbv

RT: 5.00 min Scan# 688

Delta R.T. -0.00 min

Lab File: VL034942.D

Acq: 6 May 2020 14:02

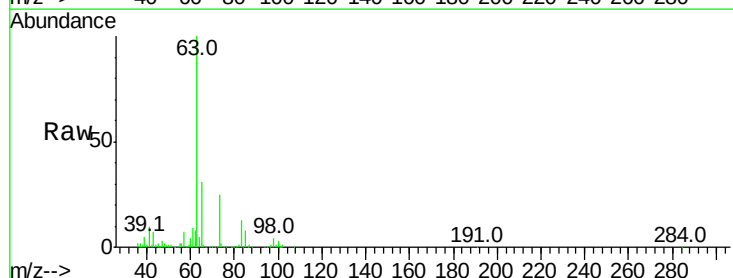
Tgt Ion: 63 Resp: 1979462

Ion Ratio Lower Upper

63 100

98 4.2 2.0 6.0

100 2.5 1.1 3.5



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

