

Data File : VL034086.D
Acq On : 5 Aug 2019 12:43
Operator : SY/AP
Sample : VSTDICCC010
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDICCC010

Quant Time: Aug 05 13:51:47 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL080519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 02 09:11:40 2019
QLast Update : Fri Aug 02 09:11:40 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.72	49	1059072	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.25	114	2249719	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.18	117	2480424	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.52	95	1928914	8.80	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	88.00%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	3.05	85	1113457	5.509	ppbv	97
3) Chlorodifluoromethane	2.98	51	1099231	8.805	ppbv	92
4) Chloromethane	3.14	50	726300	10.081	ppbv	95
5) Vinyl Chloride	3.26	62	656613	9.205	ppbv	93
6) Bromomethane	3.48	94	340426	6.383	ppbv	98
7) Chloroethane	3.57	64	236574	6.874	ppbv	90
8) Dichlorotetrafluoroethane	3.19	85	1330046	6.731	ppbv	96
9) Propene	3.01	41	651262	13.512	ppbv	97
10) Heptane	8.19	43	1694565	12.696	ppbv	88
11) Trichlorofluoromethane	3.97	101	1376353	6.800	ppbv	93
12) 1,1,2-Trichlorotrifluoroet	4.51	101	974358	6.324	ppbv	93
13) Ethanol	3.62	45	125432	6.420	ppbv #	100
14) Bromoethene	3.75	108	452060	5.238	ppbv	99
15) Acetone	3.87	43	1223800	7.021	ppbv	98
16) 1,3-Butadiene	3.33	39	679226	10.650	ppbv	93
17) tert-Butyl alcohol	4.32	59	1332286	10.528	ppbv	99
18) 1,1-Dichloroethene	4.31	96	467093	6.925	ppbv	82
19) Isopropyl Alcohol	3.98	45	1019075	9.473	ppbv #	17
20) Methylene Chloride	4.37	84	404480	6.442	ppbv #	83
21) Allyl Chloride	4.44	41	967043	9.154	ppbv	94
22) trans-1,2-Dichloroethene	4.92	96	465038	6.765	ppbv	90
23) Vinyl Acetate	5.11	43	2270397	12.641	ppbv #	97
24) 1,1-Dichloroethane	5.05	63	1358179	9.004	ppbv	98
25) Ethyl Acetate	5.72	43	2641980	10.246	ppbv	98
26) Hexane	5.74	57	1120573	9.600	ppbv	95
27) Carbon Disulfide	4.58	76	1274086	7.331	ppbv #	91
28) Methyl tert-Butyl Ether	5.07	73	1915425	10.932	ppbv	95
29) Chloroform	5.80	83	1552448	7.644	ppbv	98
30) Cyclohexane	7.20	84	910486	9.781	ppbv #	74
31) cis-1,2-Dichloroethene	5.60	61	1138240	9.941	ppbv	97
32) 1,1,1-Trichloroethane	6.57	97	1528296	7.137	ppbv	99
34) 2-Butanone	5.28	43	1834125	14.233	ppbv	91
35) Carbon Tetrachloride	7.08	117	1511838	8.317	ppbv	98
36) Benzene	6.96	78	2216711	10.337	ppbv	95
37) 1,2-Dichloroethane	6.37	62	1253215	8.958	ppbv	99
38) Trichloroethene	7.91	130	775047	10.698	ppbv	96
39) 1,2-Dichloropropane	7.69	63	919905	11.859	ppbv	95
40) 1,4-Dioxane	7.90	88	335008	11.269	ppbv #	81
41) Tetrahydrofuran	6.10	42	1149442	16.640	ppbv #	82
42) Bromodichloromethane	7.87	83	1738088	9.856	ppbv	99
43) Methyl Methacrylate	8.09	69	948038	12.817	ppbv	82

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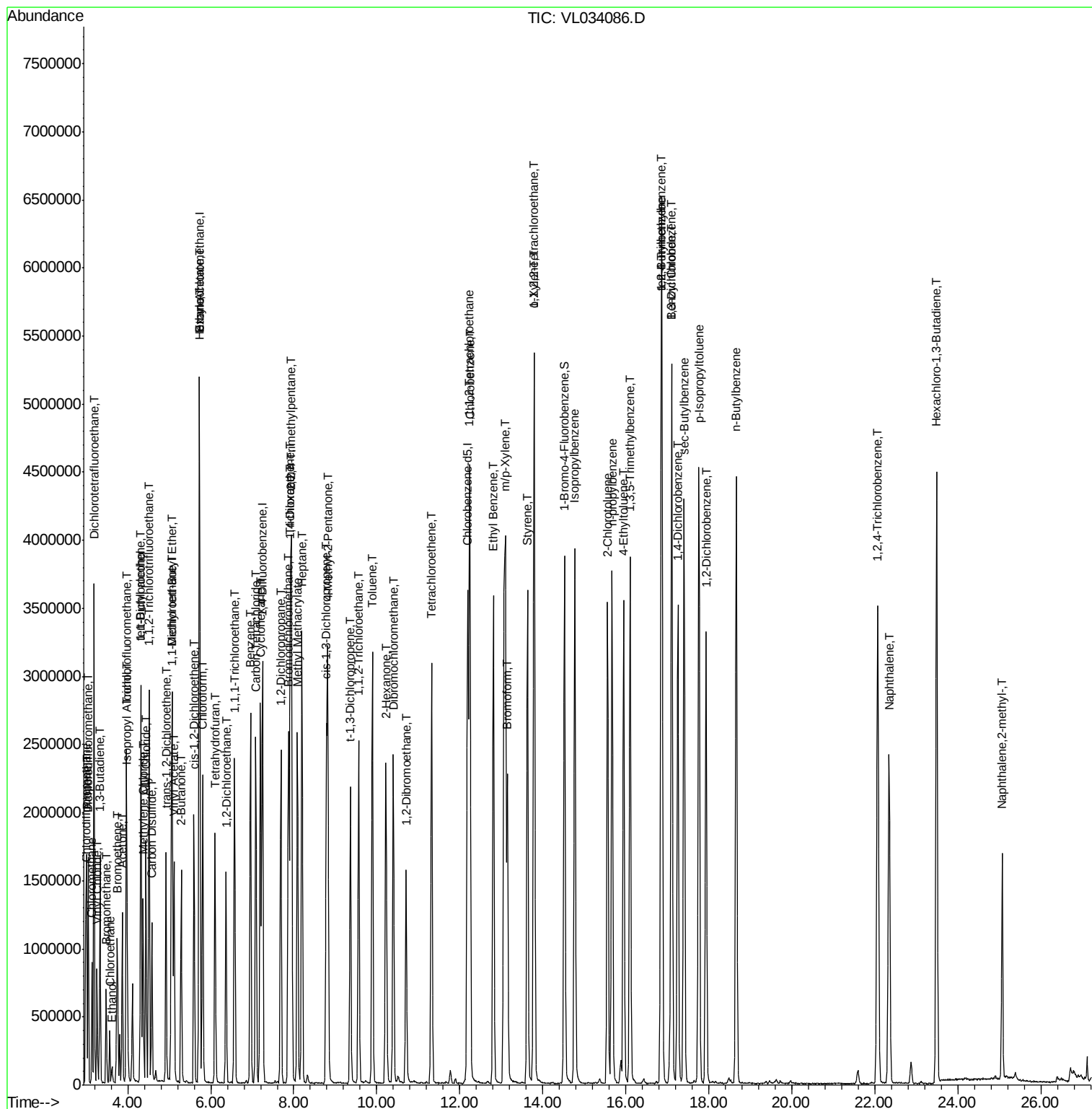
Quant Time: Aug 05 13:51:47 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL080519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 02 09:11:40 2019
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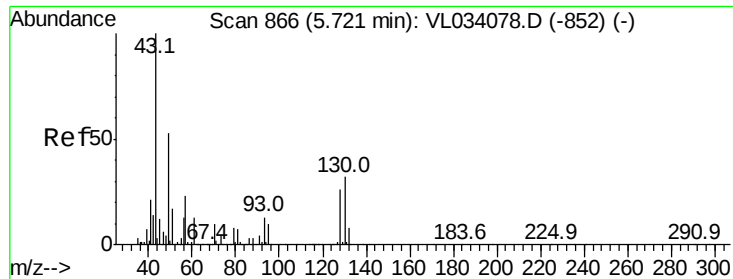
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2,2,4-Trimethylpentane	7.94	57	3791233	11.840	ppbv	94
45) t-1,3-Dichloropropene	9.36	75	1274195	13.938	ppbv	95
46) cis-1,3-Dichloropropene	8.79	75	1439760	13.568	ppbv	89
47) 1,1,2-Trichloroethane	9.56	97	481388	5.764	ppbv	98
48) Dibromochloromethane	10.40	129	1464207	10.360	ppbv	99
49) Bromoform	13.15	173	1330884	10.871	ppbv	99
50) 4-Methyl-2-Pentanone	8.82	43	2725180	14.239	ppbv	95
51) 2-Hexanone	10.22	43	2347525	15.909	ppbv #	97
52) Tetrachloroethene	11.32	164	797668	12.748	ppbv	91
53) Toluene	9.89	91	2540712	11.921	ppbv	94
54) 1,2-Dibromoethane	10.70	107	1339174	10.804	ppbv	95
56) 1,1,1,2-Tetrachloroethane	12.23	131	968996	8.863	ppbv #	54
57) Chlorobenzene	12.25	112	1828249	9.026	ppbv	97
58) Ethyl Benzene	12.81	91	3369605	10.293	ppbv	94
59) m/p-Xylene	13.09	91	2671909	9.134	ppbv #	17
60) o-Xylene	13.80	91	2663569	9.062	ppbv	96
61) Styrene	13.63	104	2234455	11.615	ppbv	99
62) Isopropylbenzene	14.77	105	3560486	9.228	ppbv	95
63) 1,1,2,2-Tetrachloroethane	13.78	83	1863177	8.054	ppbv	100
64) n-propylbenzene	15.67	120	972661	9.969	ppbv	81
65) tert-Butylbenzene	16.85	119	3131281	9.040	ppbv	98
66) Benzyl Chloride	17.10	91	2092422	12.353	ppbv	95
67) sec-Butylbenzene	17.41	105	4314873	8.694	ppbv	96
69) p-Isopropyltoluene	17.76	119	3629321	8.978	ppbv	97
70) n-Butylbenzene	18.66	91	3815725	8.653	ppbv	95
71) 2-Chlorotoluene	15.56	91	2859207	10.010	ppbv	96
72) 4-Ethyltoluene	15.94	105	3155658	9.580	ppbv	98
73) 1,3,5-Trimethylbenzene	16.10	105	3023738	9.322	ppbv	93
74) 1,2,4-Trimethylbenzene	16.87	105	3024903	8.428	ppbv #	88
75) 1,3-Dichlorobenzene	17.11	146	1764210	8.302	ppbv	99
76) 1,4-Dichlorobenzene	17.25	146	1808295	9.012	ppbv	99
77) 1,2-Dichlorobenzene	17.93	146	1760148	8.820	ppbv	99
78) Hexachloro-1,3-Butadiene	23.49	225	1269877	6.935	ppbv	99
79) Naphthalene	22.34	128	3156678	9.824	ppbv	95
80) Naphthalene,2-methyl-	25.06	142	958200	7.770	ppbv	97
81) 1,2,4-Trichlorobenzene	22.07	180	1750245	8.807	ppbv	100

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

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.72 min Scan# 865

Delta R.T. -0.00 min

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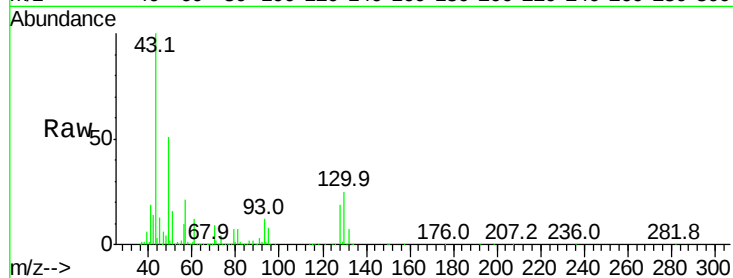
Tgt Ion: 49 Resp: 1059072

Ion Ratio Lower Upper

49 100

128 39.0 25.3 75.8

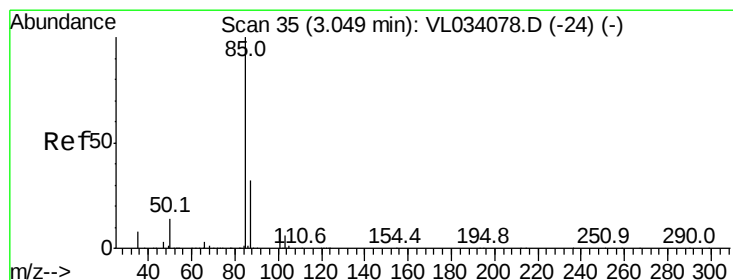
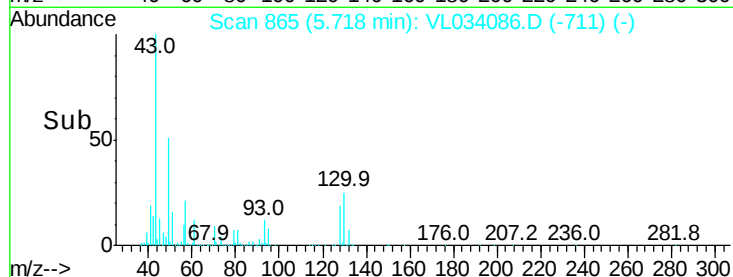
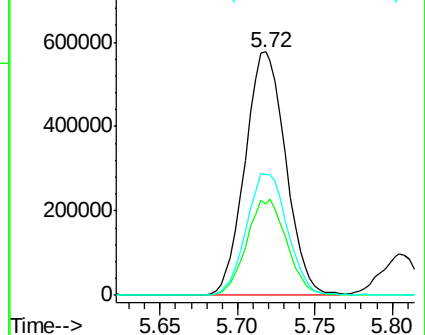
130 50.7 32.5 97.5



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: 5.509 ppbv

RT: 3.05 min Scan# 34

Delta R.T. -0.00 min

Lab File: VL034086.D

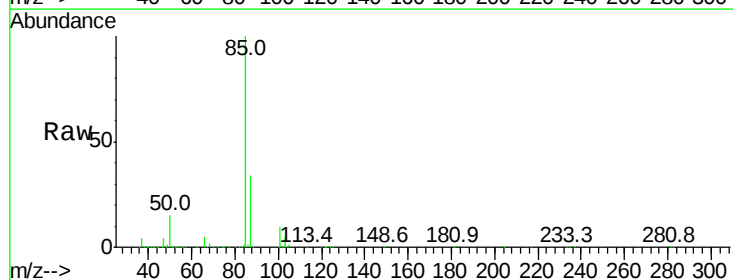
Acq: 5 Aug 2019 12:43

Tgt Ion: 85 Resp: 1113457

Ion Ratio Lower Upper

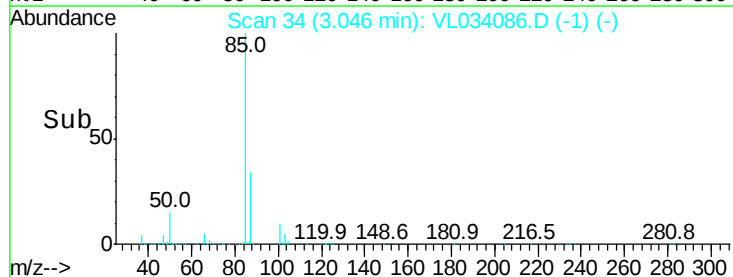
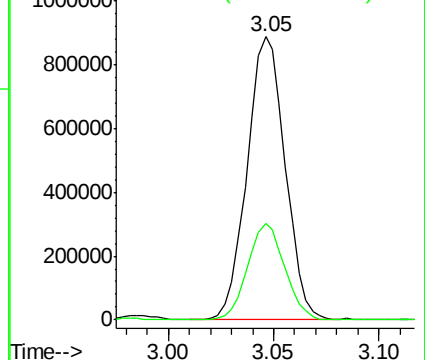
85 100

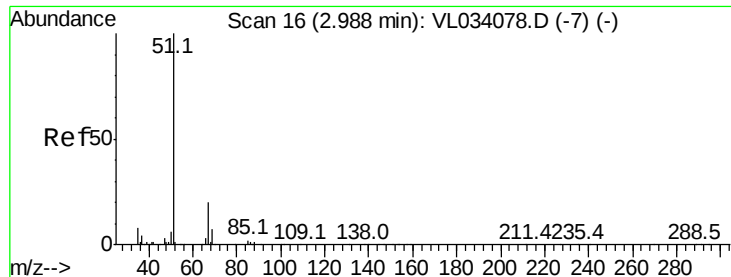
87 33.9 25.8 38.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

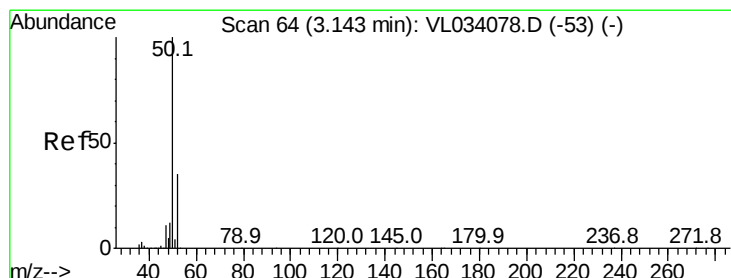
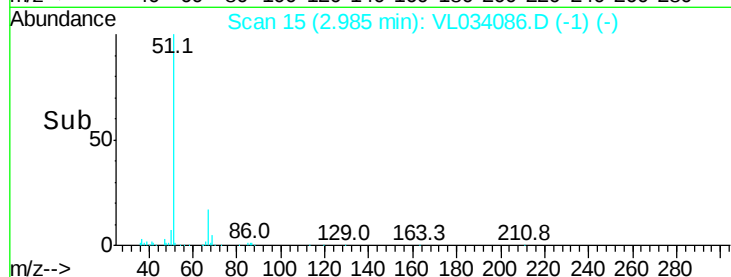
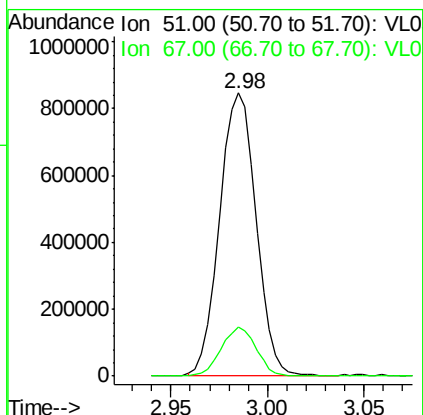
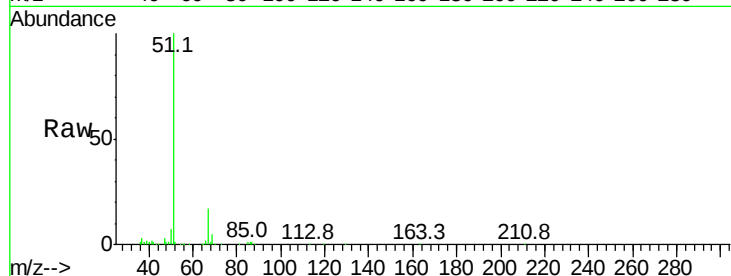




#3
Chlorodifluoromethane
Concen: 8.805 ppbv
RT: 2.98 min Scan# 15
Delta R.T. -0.00 min
Lab File: VL034086.D
Acq: 5 Aug 2019 12:43

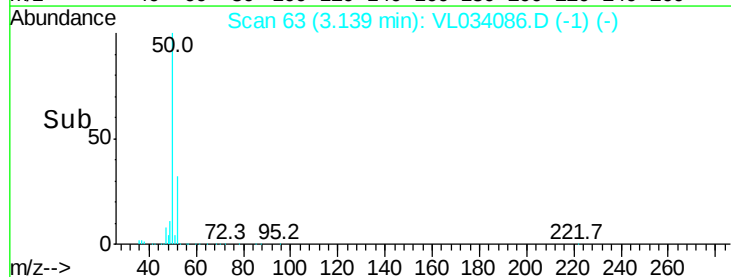
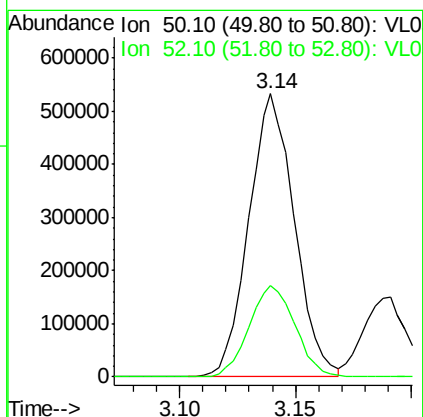
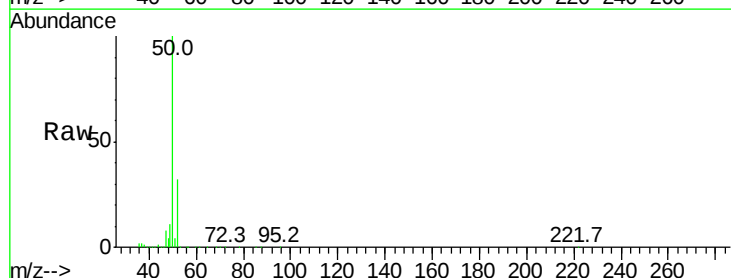
Instrument :
MSVOA_L
ClientSampleId :
VSTDICCC010

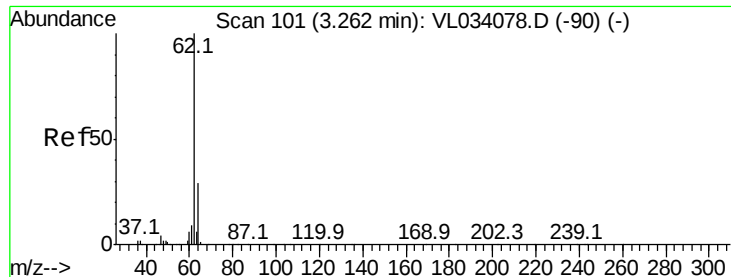
Tgt Ion: 51 Resp: 1099231
Ion Ratio Lower Upper
51 100
67 16.6 16.3 24.5



#4
Chloromethane
Concen: 10.081 ppbv
RT: 3.14 min Scan# 63
Delta R.T. -0.00 min
Lab File: VL034086.D
Acq: 5 Aug 2019 12:43

Tgt Ion: 50 Resp: 726300
Ion Ratio Lower Upper
50 100
52 32.1 28.2 42.2





#5

Vinyl Chloride

Concen: 9.205 ppbv

RT: 3.26 min Scan# 100

Delta R.T. -0.00 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

Instrument :

MSVOA_L

ClientSampleId :

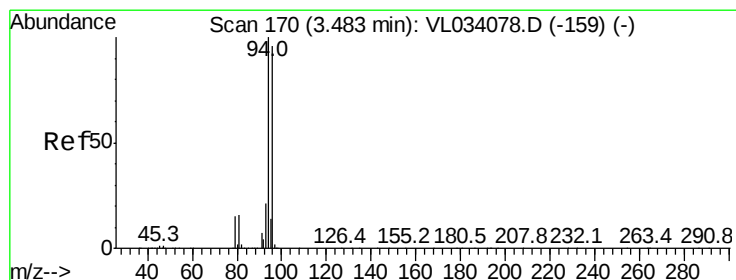
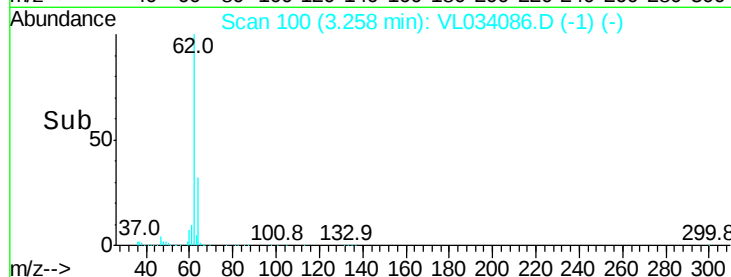
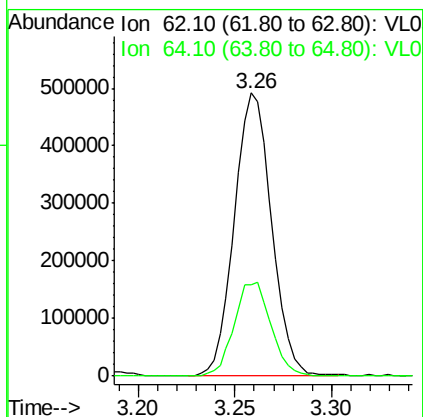
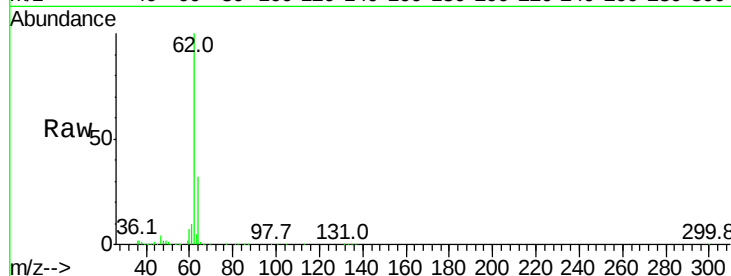
VSTDICCC010

Tgt Ion: 62 Resp: 656613

Ion Ratio Lower Upper

62 100

64 32.2 22.8 34.2



#6

Bromomethane

Concen: 6.383 ppbv

RT: 3.48 min Scan# 169

Delta R.T. -0.00 min

Lab File: VL034086.D

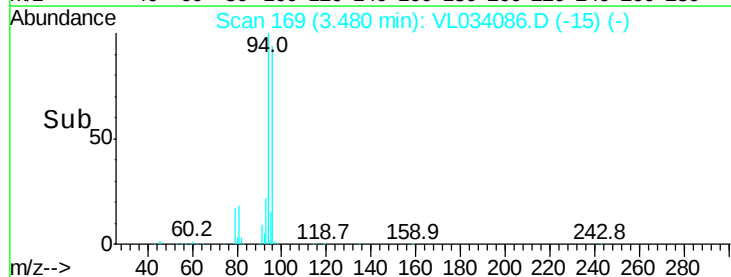
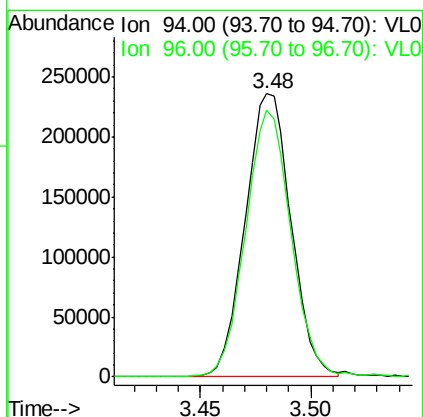
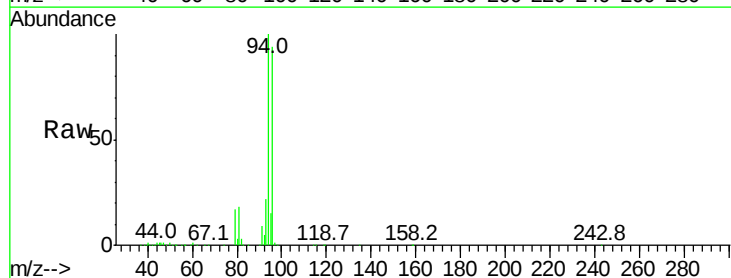
Acq: 5 Aug 2019 12:43

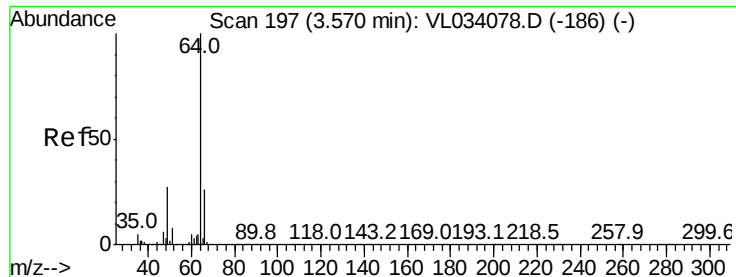
Tgt Ion: 94 Resp: 340426

Ion Ratio Lower Upper

94 100

96 94.1 76.8 115.2





#7

Chloroethane

Concen: 6.874 ppbv

RT: 3.57 min Scan# 196

Delta R.T. -0.00 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

Instrument :

MSVOA_L

ClientSampleId :

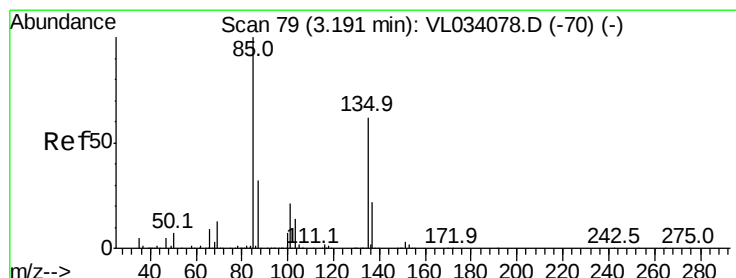
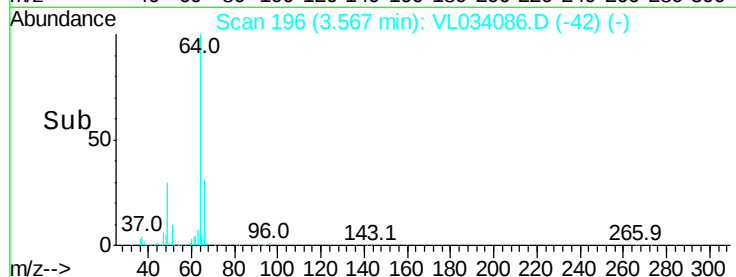
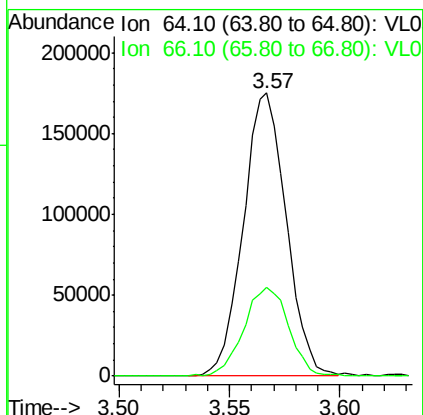
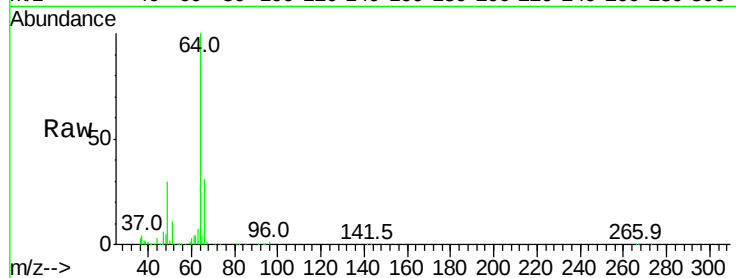
VSTDICCC010

Tgt Ion: 64 Resp: 236574

Ion Ratio Lower Upper

64 100

66 31.5 21.0 31.6



#8

Dichlorotetrafluoroethane

Concen: 6.731 ppbv

RT: 3.19 min Scan# 78

Delta R.T. -0.00 min

Lab File: VL034086.D

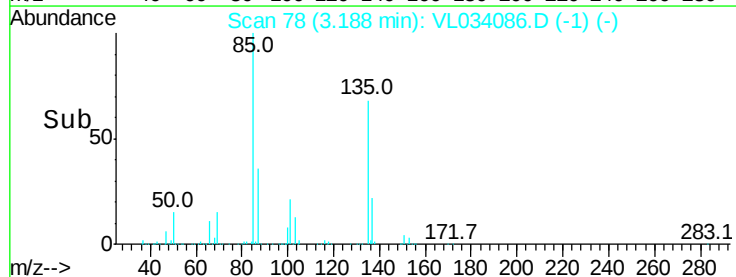
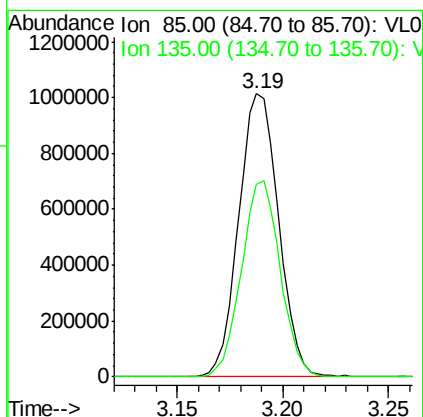
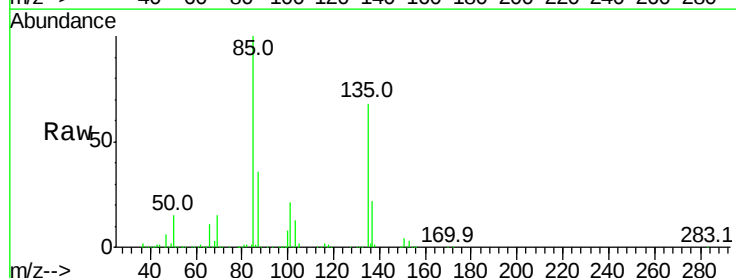
Acq: 5 Aug 2019 12:43

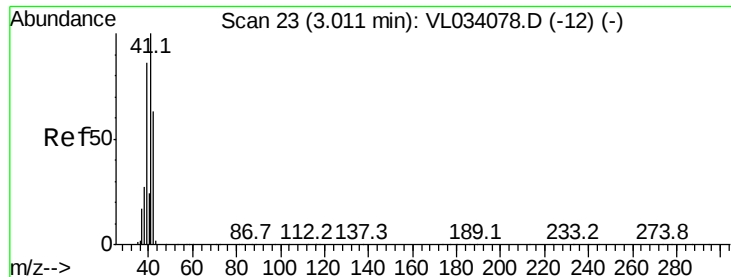
Tgt Ion: 85 Resp: 1330046

Ion Ratio Lower Upper

85 100

135 67.5 51.5 77.3





#9

Propene

Concen: 13.512 ppbv

RT: 3.01 min Scan# 22

Delta R.T. -0.00 min

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Acq: 5 Aug 2019 12:43

Instrument :

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ClientSampleId :

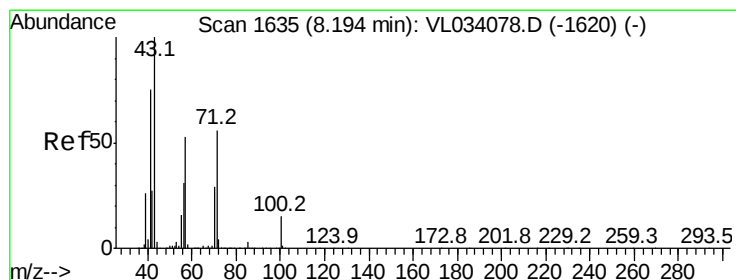
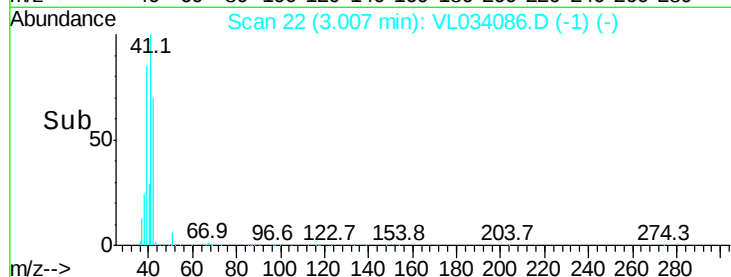
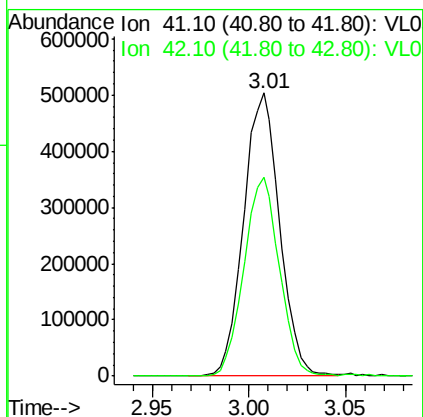
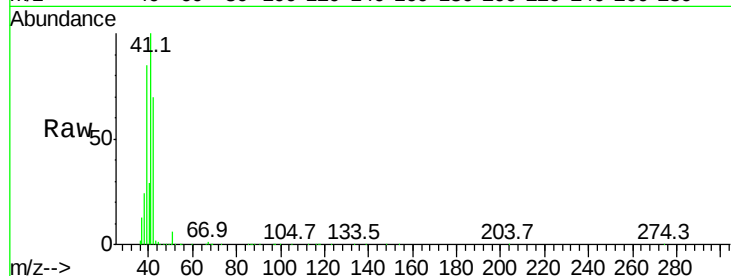
VSTDICCC010

Tgt Ion: 41 Resp: 651262

Ion Ratio Lower Upper

41 100

42 69.7 53.9 80.9



#10

Heptane

Concen: 12.696 ppbv

RT: 8.19 min Scan# 1635

Delta R.T. -0.00 min

Lab File: VL034086.D

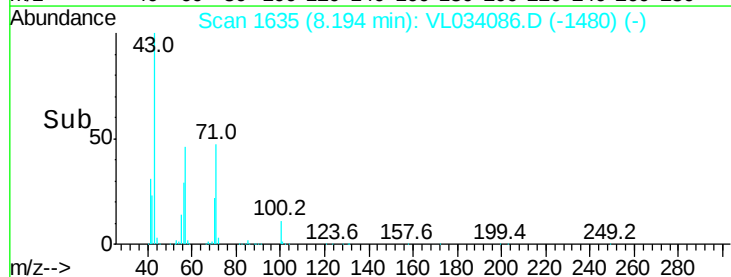
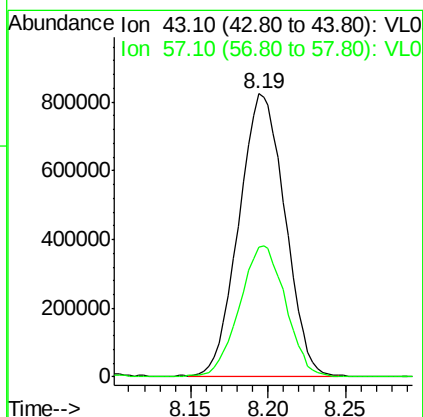
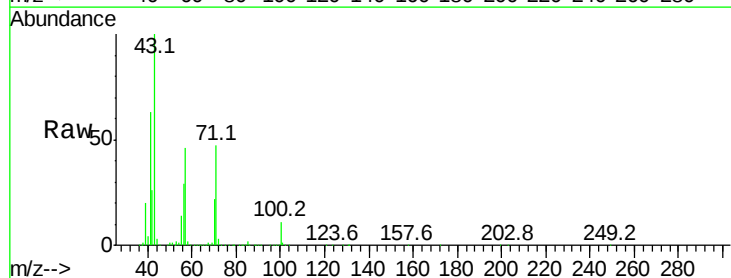
Acq: 5 Aug 2019 12:43

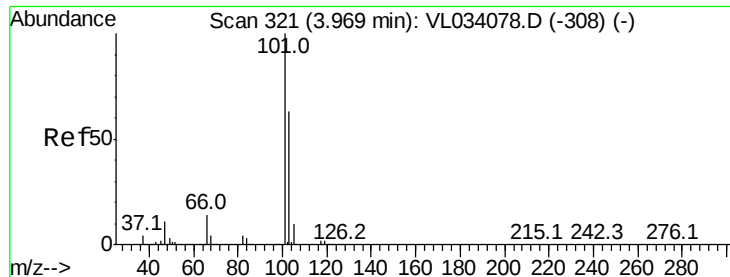
Tgt Ion: 43 Resp: 1694565

Ion Ratio Lower Upper

43 100

57 46.5 44.4 66.6





#11

Trichlorofluoromethane

Concen: 6.800 ppbv

RT: 3.97 min Scan# 321

Delta R.T. -0.00 min

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Acq: 5 Aug 2019 12:43

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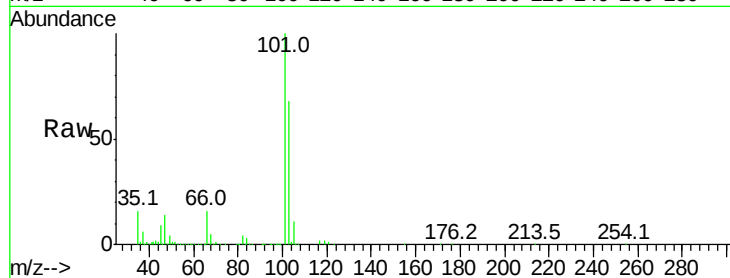
VSTDICCC010

Tgt Ion:101 Resp: 1376353

Ion Ratio Lower Upper

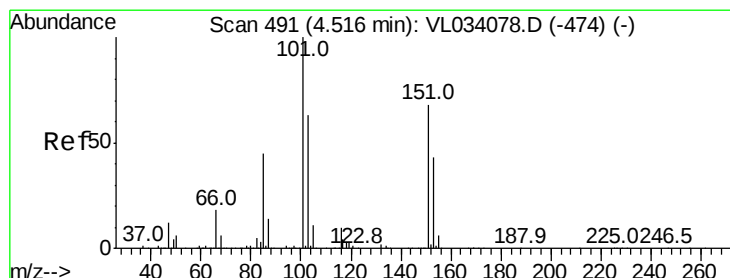
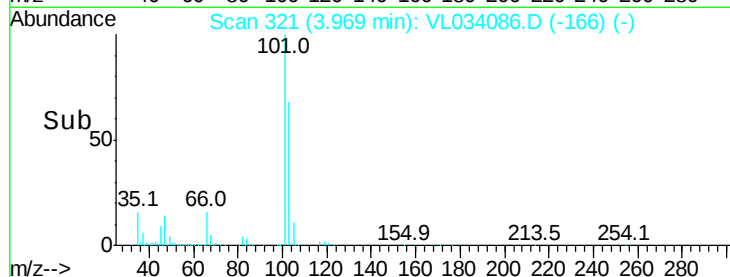
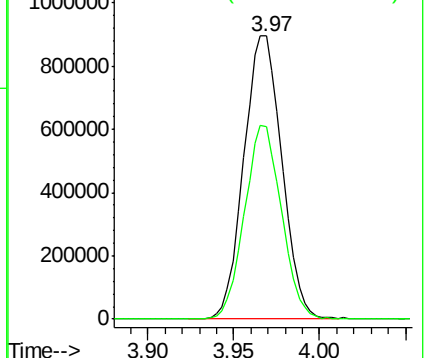
101 100

103 67.9 50.2 75.2



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 6.324 ppbv

RT: 4.51 min Scan# 490

Delta R.T. -0.00 min

Lab File: VL034086.D

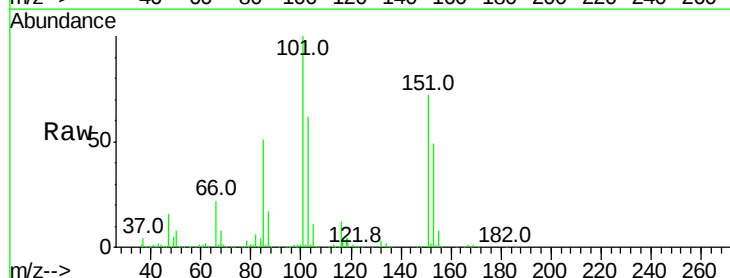
Acq: 5 Aug 2019 12:43

Tgt Ion:101 Resp: 974358

Ion Ratio Lower Upper

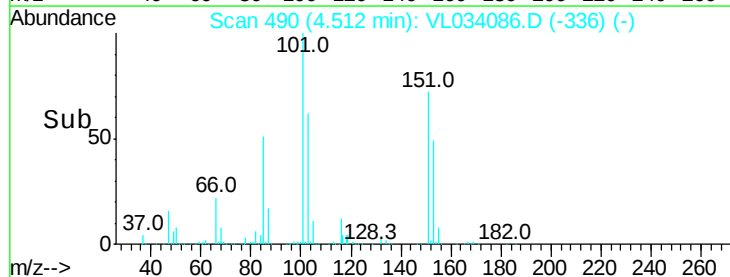
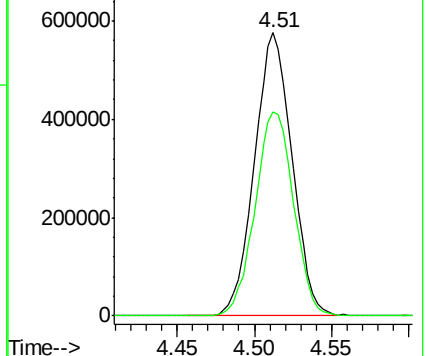
101 100

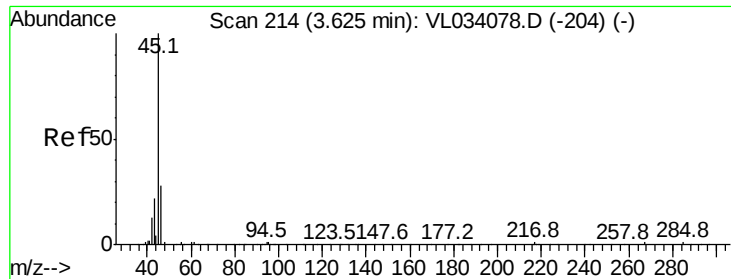
151 74.2 54.5 81.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

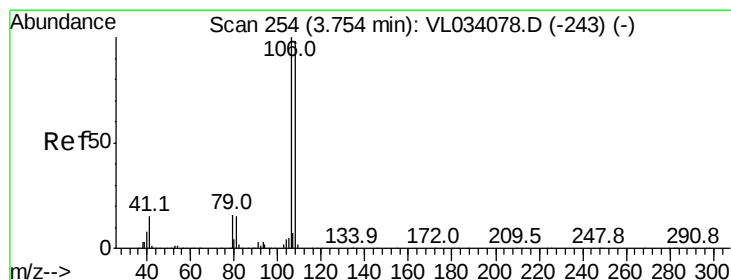
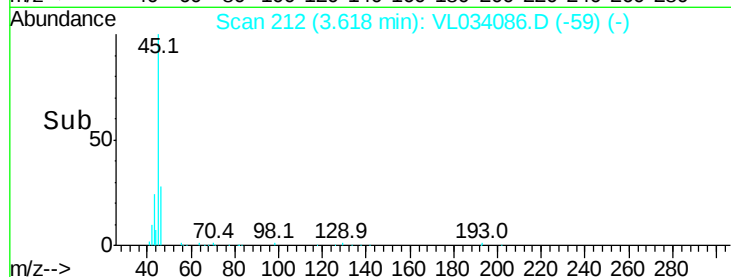
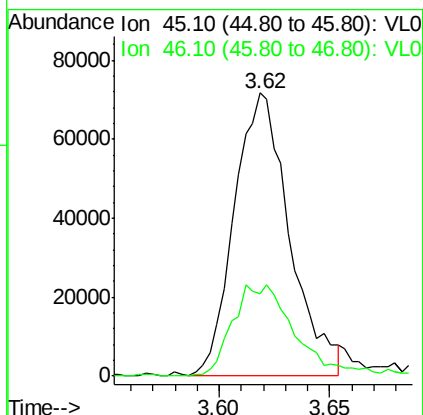
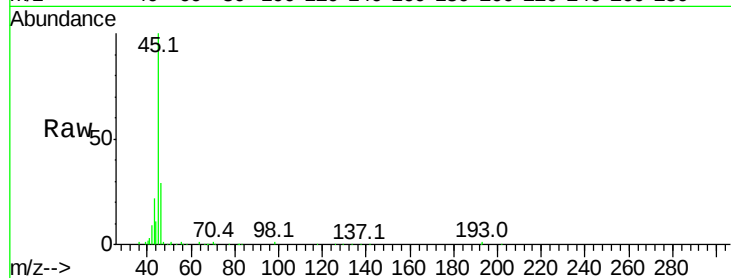




#13
Ethanol
Concen: 6.420 ppbv
RT: 3.62 min Scan# 212
Delta R.T. -0.01 min
Lab File: VL034086.D
Acq: 5 Aug 2019 12:43

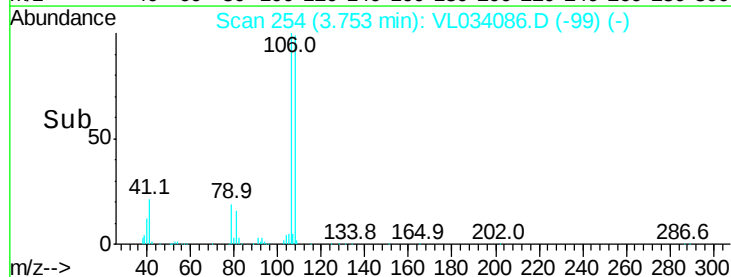
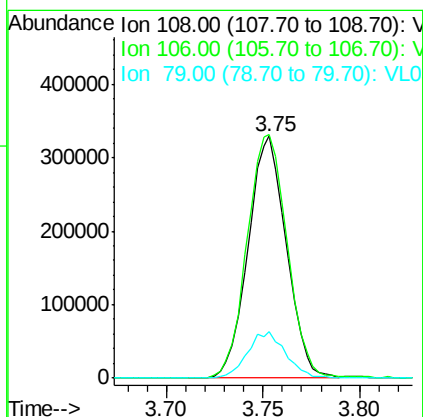
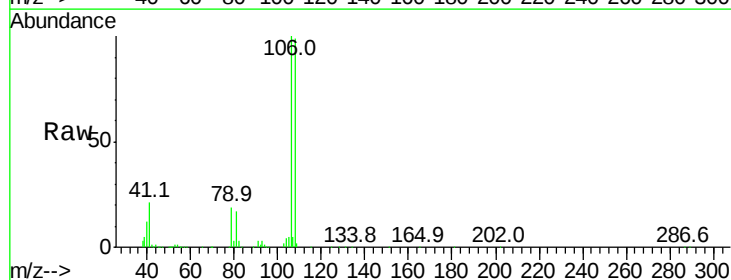
Instrument :
MSVOA_L
ClientSampleId :
VSTDICCC010

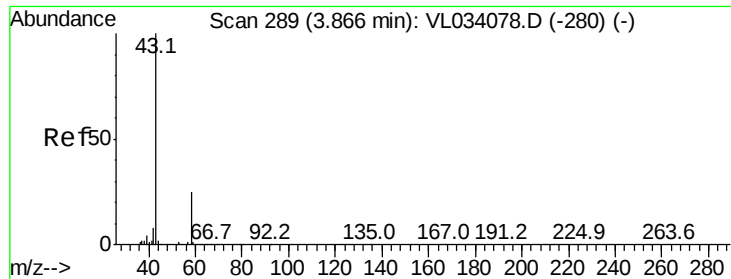
Tgt Ion: 45 Resp: 125432
Ion Ratio Lower Upper
45 100
46 37.2 0.0 0.0#



#14
Bromoethene
Concen: 5.238 ppbv
RT: 3.75 min Scan# 254
Delta R.T. -0.00 min
Lab File: VL034086.D
Acq: 5 Aug 2019 12:43

Tgt Ion: 108 Resp: 452060
Ion Ratio Lower Upper
108 100
106 106.3 85.5 128.3
79 19.8 13.3 19.9

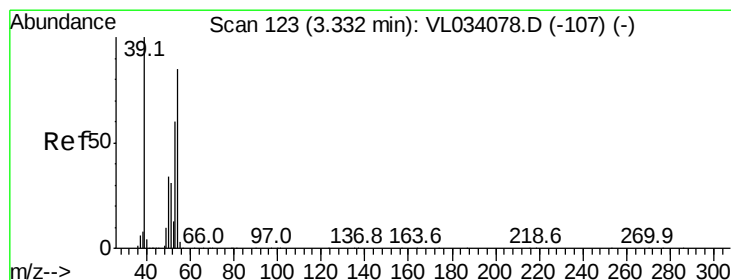
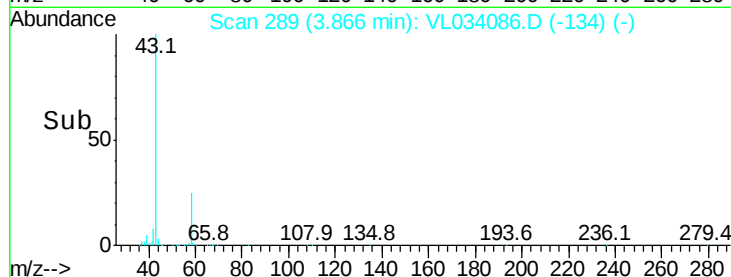
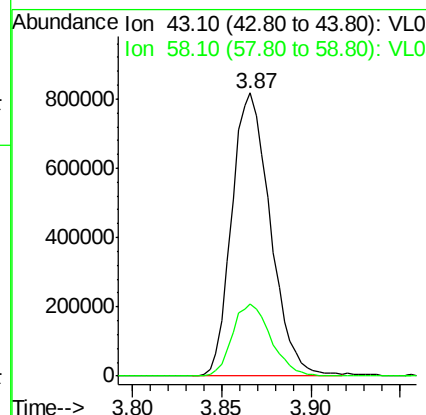
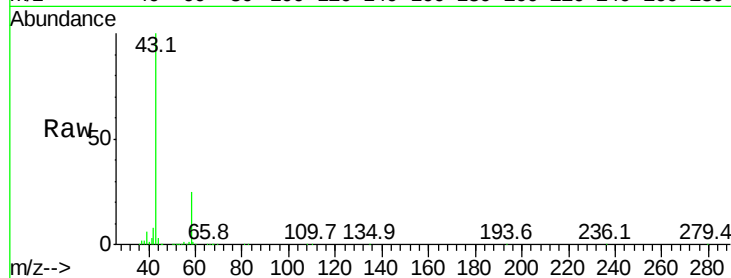




#15
Acetone
Concen: 7.021 ppbv
RT: 3.87 min Scan# 289
Delta R.T. -0.00 min
Lab File: VL034086.D
Acq: 5 Aug 2019 12:43

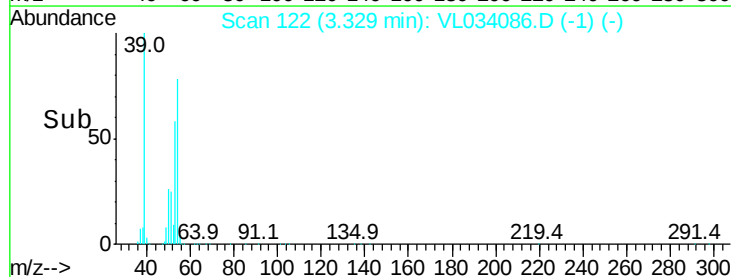
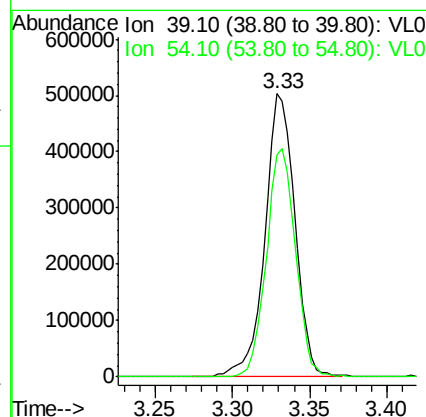
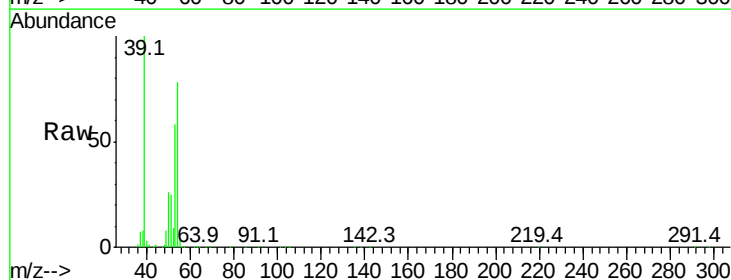
Instrument :
MSVOA_L
ClientSampleId :
VSTDICCC010

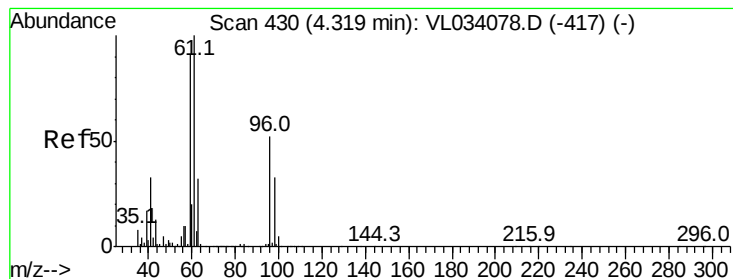
Tgt Ion: 43 Resp: 1223800
Ion Ratio Lower Upper
43 100
58 25.7 21.2 31.8



#16
1,3-Butadiene
Concen: 10.650 ppbv
RT: 3.33 min Scan# 122
Delta R.T. -0.00 min
Lab File: VL034086.D
Acq: 5 Aug 2019 12:43

Tgt Ion: 39 Resp: 679226
Ion Ratio Lower Upper
39 100
54 78.4 67.8 101.8





#17

tert-Butyl alcohol

Concen: 10.528 ppbv

RT: 4.32 min Scan# 430

Delta R.T. -0.00 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

Instrument :

MSVOA_L

ClientSampleId :

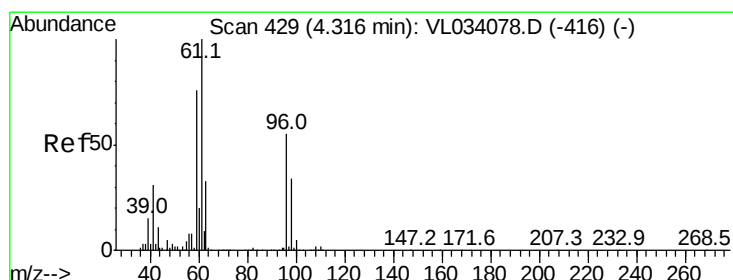
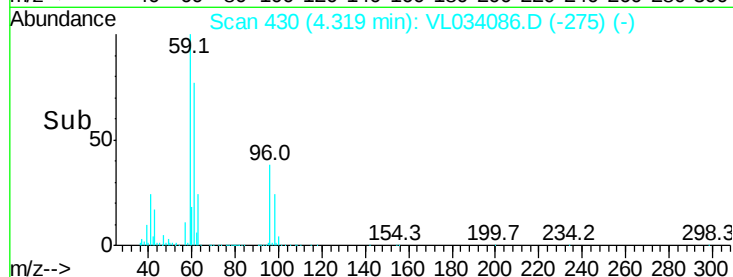
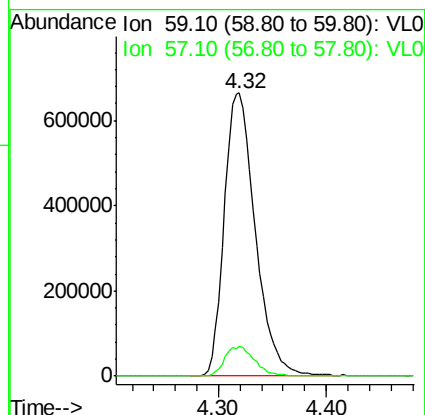
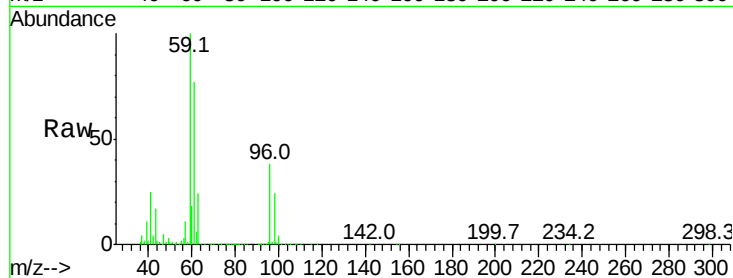
VSTDICCC010

Tgt Ion: 59 Resp: 1332286

Ion Ratio Lower Upper

59 100

57 10.5 8.8 13.2



#18

1,1-Dichloroethene

Concen: 6.925 ppbv

RT: 4.31 min Scan# 428

Delta R.T. -0.00 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

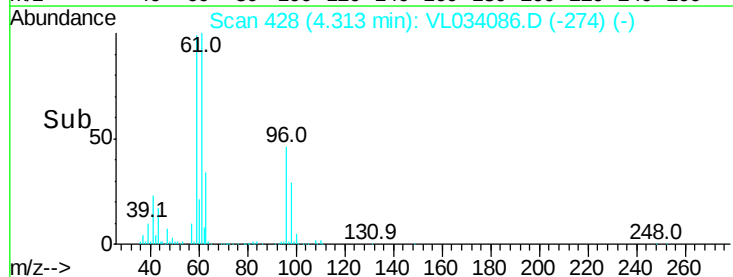
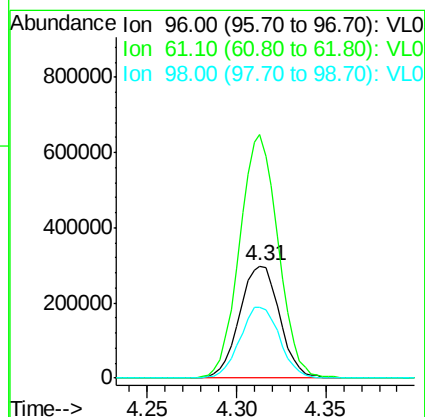
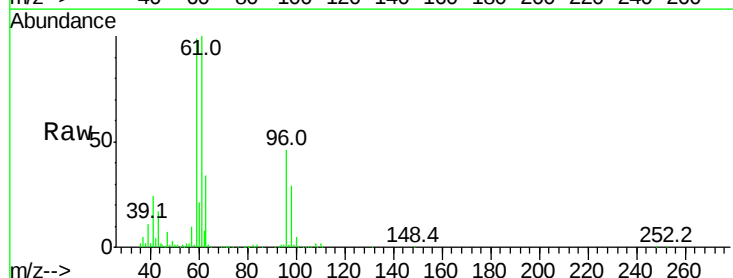
Tgt Ion: 96 Resp: 467093

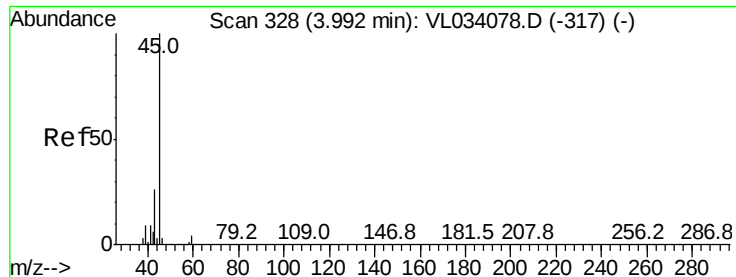
Ion Ratio Lower Upper

96 100

61 216.4 145.8 218.8

98 62.9 49.4 74.2





#19

Isopropyl Alcohol

Concen: 9.473 ppbv

RT: 3.98 min Scan# 326

Delta R.T. -0.01 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

Instrument :

MSVOA_L

ClientSampleId :

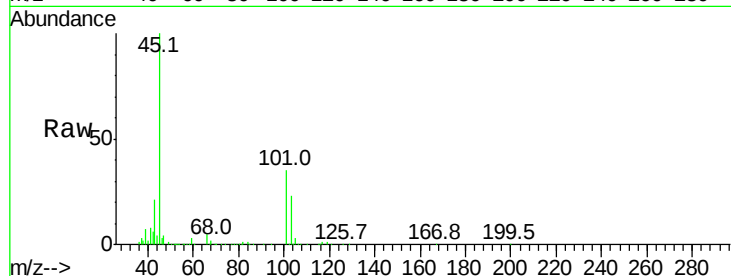
VSTDICCC010

Tgt Ion: 45 Resp: 1019075

Ion Ratio Lower Upper

45 100

58 30.8 1.8 2.6#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.98

600000

500000

400000

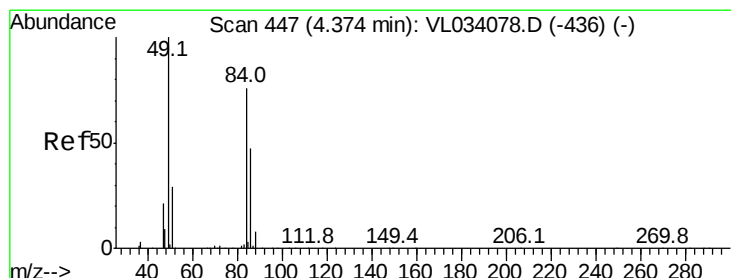
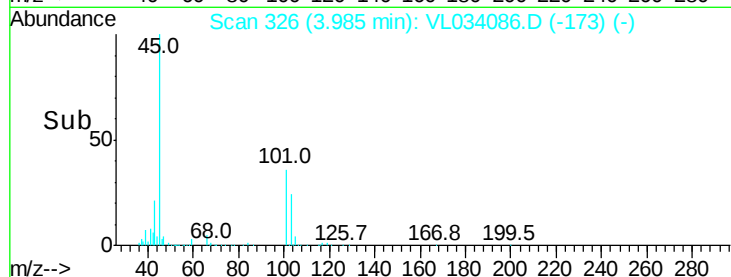
300000

200000

100000

0

Time--> 3.90 3.95 4.00 4.05 4.10



#20

Methylene Chloride

Concen: 6.442 ppbv

RT: 4.37 min Scan# 445

Delta R.T. -0.01 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

Tgt Ion: 84 Resp: 404480

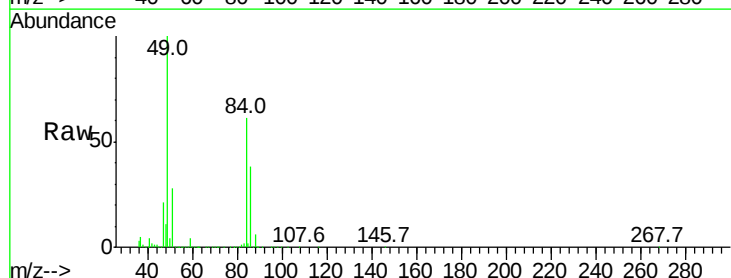
Ion Ratio Lower Upper

84 100

49 162.1 104.8 157.2#

51 44.8 31.1 46.7

86 62.3 49.4 74.0



Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

4.37

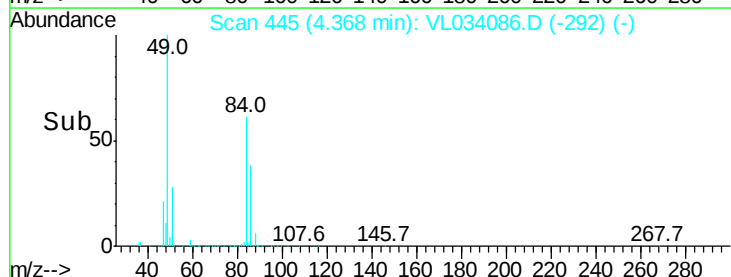
600000

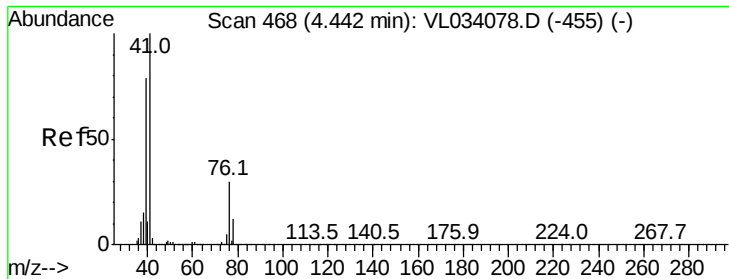
400000

200000

0

Time--> 4.30 4.35 4.40 4.45

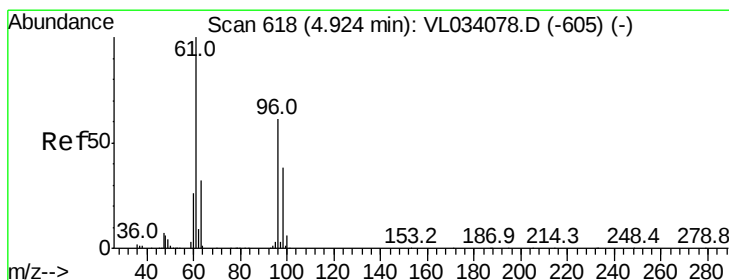
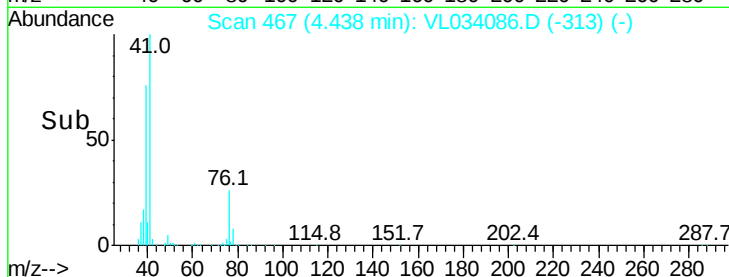
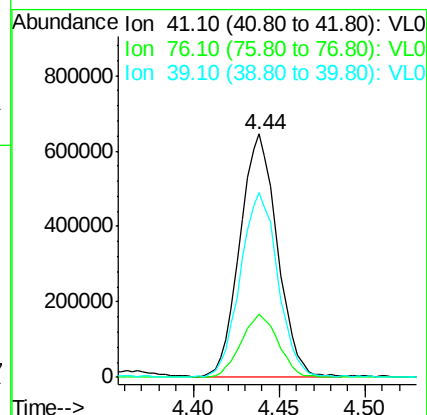
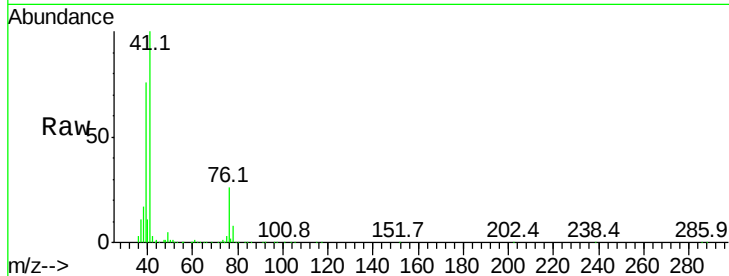




#21
 Allyl Chloride
 Concen: 9.154 ppbv
 RT: 4.44 min Scan# 467
 Delta R.T. -0.00 min
 Lab File: VL034086.D
 Acq: 5 Aug 2019 12:43

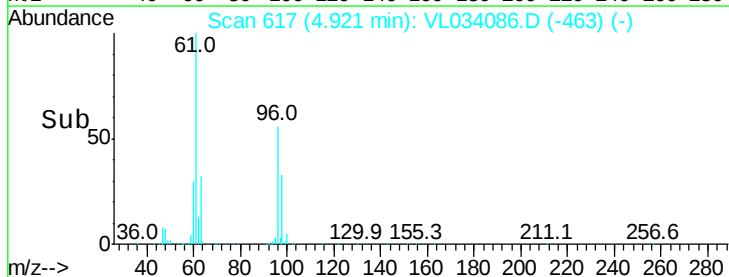
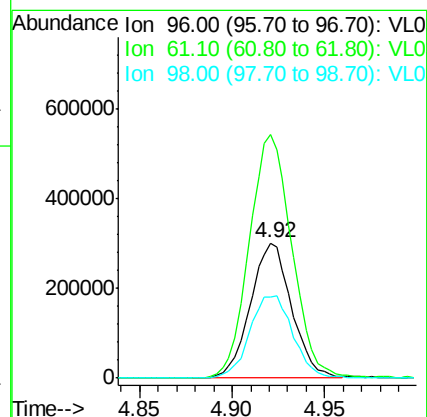
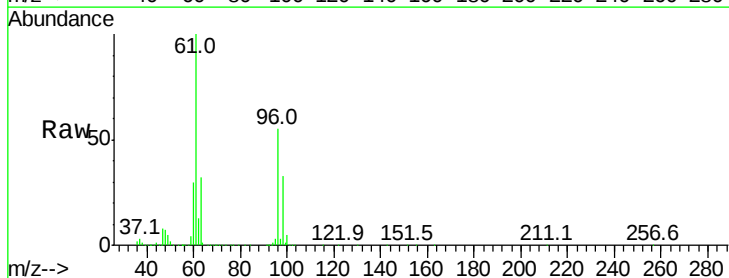
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDICCC010

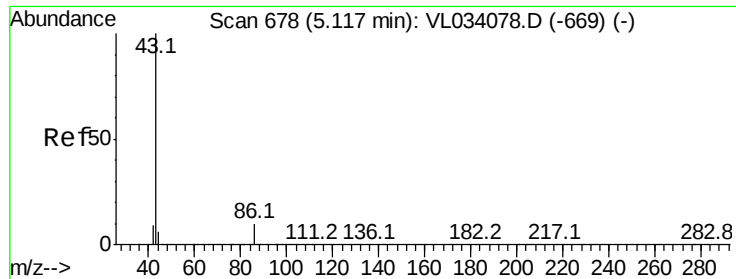
Tgt Ion: 41 Resp: 967043
 Ion Ratio Lower Upper
 41 100
 76 26.0 25.0 37.6
 39 76.6 64.7 97.1



#22
 trans-1,2-Dichloroethene
 Concen: 6.765 ppbv
 RT: 4.92 min Scan# 617
 Delta R.T. -0.00 min
 Lab File: VL034086.D
 Acq: 5 Aug 2019 12:43

Tgt Ion: 96 Resp: 465038
 Ion Ratio Lower Upper
 96 100
 61 180.2 131.0 196.6
 98 60.0 49.4 74.2





#23

Vinyl Acetate

Concen: 12.641 ppbv

RT: 5.11 min Scan# 677

Delta R.T. -0.00 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

Instrument :

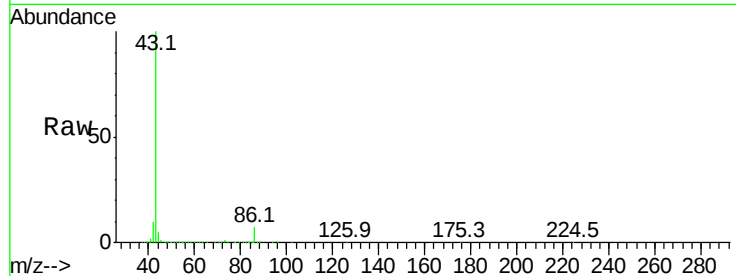
MSVOA_L

ClientSampleId :

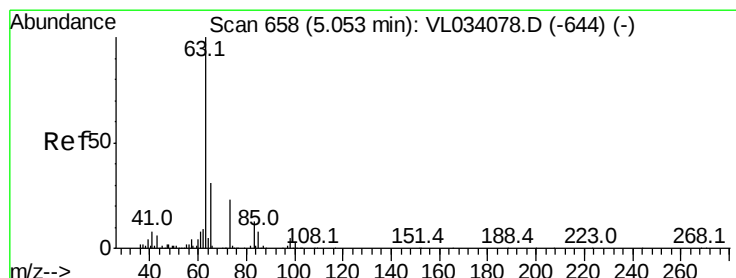
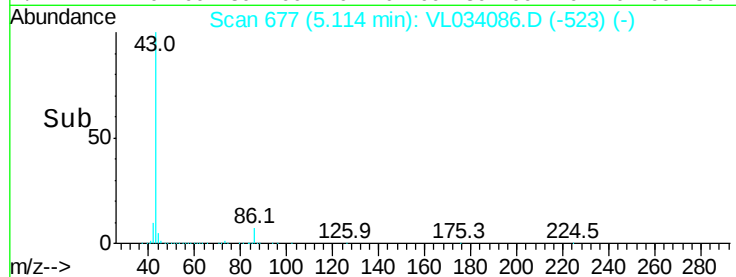
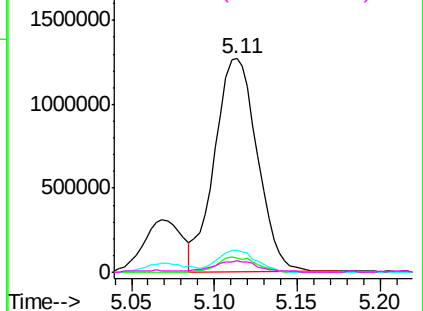
VSTDICCC010

Tgt Ion: 43 Resp: 2270397

Ion	Ratio	Lower	Upper
43	100		
86	6.7	7.3	10.9#
42	9.9	7.7	11.5
44	5.0	4.3	6.5



Abundance Ion 43.10 (42.80 to 43.80): VL0
 2000000 Ion 86.10 (85.80 to 86.80): VL0
 1500000 Ion 42.10 (41.80 to 42.80): VL0
 1000000 Ion 44.10 (43.80 to 44.80): VL0
 500000
 0



#24

1,1-Dichloroethane

Concen: 9.004 ppbv

RT: 5.05 min Scan# 657

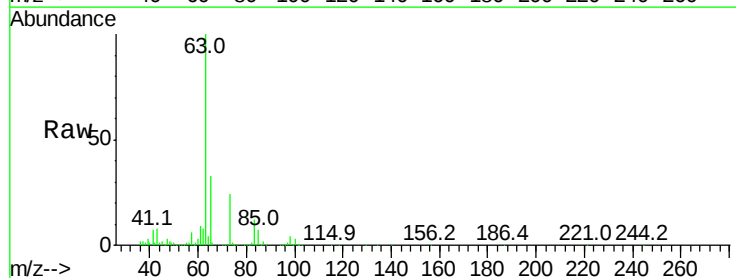
Delta R.T. -0.00 min

Lab File: VL034086.D

Acq: 5 Aug 2019 12:43

Tgt Ion: 63 Resp: 1358179

Ion	Ratio	Lower	Upper
63	100		
98	4.0	2.5	7.5
100	2.5	1.5	4.5



Abundance Ion 63.10 (62.80 to 63.80): VL0
 1000000 Ion 98.00 (97.70 to 98.70): VL0
 800000 Ion 100.00 (99.70 to 100.70): VL0
 600000
 400000
 200000
 0

