

Data File : VL031418.D

Acq On : 22 Jan 2018 15:25

Operator : SY/AP

Sample : VSTDIC0.5

Misc : 400ml/MSVOA_L

ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC0.5

Quant Time: Jan 22 16:45:03 2018

Quant Method : W:\HPCHEM1\MSVOA_L\METHODS\VL012218AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Jan 22 16:42:46 2018

QLast Update : Mon Jan 22 16:42:46 2018

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.90	49	1274666	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.44	114	3013476	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.41	117	3073513	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.75	95	2460937	10.14	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.40%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	3.17	85	119192	0.48	ppbv	96
3) Chlorodifluoromethane	3.11	51	95107	0.51	ppbv	100
4) Chloromethane	3.27	50	41458	0.49	ppbv	95
5) Vinyl Chloride	3.40	62	38540	0.44	ppbv	95
6) Bromomethane	3.62	94	27986	0.48	ppbv	96
7) Chloroethane	3.71	64	16718	0.49	ppbv #	82
8) Dichlorotetrafluoroethane	3.32	85	116743	0.52	ppbv	100
9) Propene	3.13	41	30517	0.44	ppbv	97
10) Heptane	8.40	43	91389	0.44	ppbv	99
11) Trichlorofluoromethane	4.13	101	139345	0.53	ppbv	90
12) 1,1,2-Trichlorotrifluoroet	4.68	101	83959	0.51	ppbv	100
13) Ethanol	3.77	45	11726	0.34	ppbv	89
14) Bromoethene	3.91	108	32915	0.48	ppbv	95
15) Acetone	4.03	43	100046	0.47	ppbv	99
16) 1,3-Butadiene	3.47	39	35630	0.45	ppbv	99
17) tert-Butyl alcohol	4.50	59	44590	0.46	ppbv	100
18) 1,1-Dichloroethene	4.48	96	35821	0.49	ppbv	86
19) Isopropyl Alcohol	4.15	45	58555	0.40	ppbv #	95
20) Methylene Chloride	4.54	84	40491	0.53	ppbv	82
21) Allyl Chloride	4.61	41	54855	0.48	ppbv	96
22) trans-1,2-Dichloroethene	5.09	96	23373	0.30	ppbv	87
23) Vinyl Acetate	5.29	43	113628	0.47	ppbv #	96
24) 1,1-Dichloroethane	5.22	63	97954	0.48	ppbv	99
25) Ethyl Acetate	5.92	43	158618	0.44	ppbv	98
26) Hexane	5.92	57	68812	0.46	ppbv	94
27) Carbon Disulfide	4.76	76	89871	0.45	ppbv #	85
28) Methyl tert-Butyl Ether	5.26	73	44190	0.24	ppbv #	54
29) Chloroform	5.99	83	121697	0.47	ppbv	97
30) Cyclohexane	7.40	84	47022	0.39	ppbv	84
31) cis-1,2-Dichloroethene	5.78	61	61446	0.42	ppbv	96
32) 1,1,1-Trichloroethane	6.77	97	122259	0.45	ppbv	97
34) 2-Butanone	5.48	43	97018	0.39	ppbv	99
35) Carbon Tetrachloride	7.29	117	129162	0.45	ppbv	99
36) Benzene	7.16	78	135906	0.44	ppbv	98
37) 1,2-Dichloroethane	6.55	62	109640	0.48	ppbv	100
38) Trichloroethene	8.12	130	27893	0.22	ppbv	92
39) 1,2-Dichloropropane	7.90	63	21005	0.18	ppbv	95
41) Tetrahydrofuran	6.32	42	32882	0.26	ppbv #	73
42) Bromodichloromethane	8.07	83	130176	0.46	ppbv	89
43) Methyl Methacrylate	8.30	69	45842	0.39	ppbv	98
44) 2,2,4-Trimethylpentane	8.15	57	234076	0.45	ppbv	96

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ClientSampleId :

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Quant Time: Jan 22 16:45:03 2018

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Jan 22 16:42:46 2018

QLast Update : Mon Jan 22 16:42:46 2018

Response via : Initial Calibration

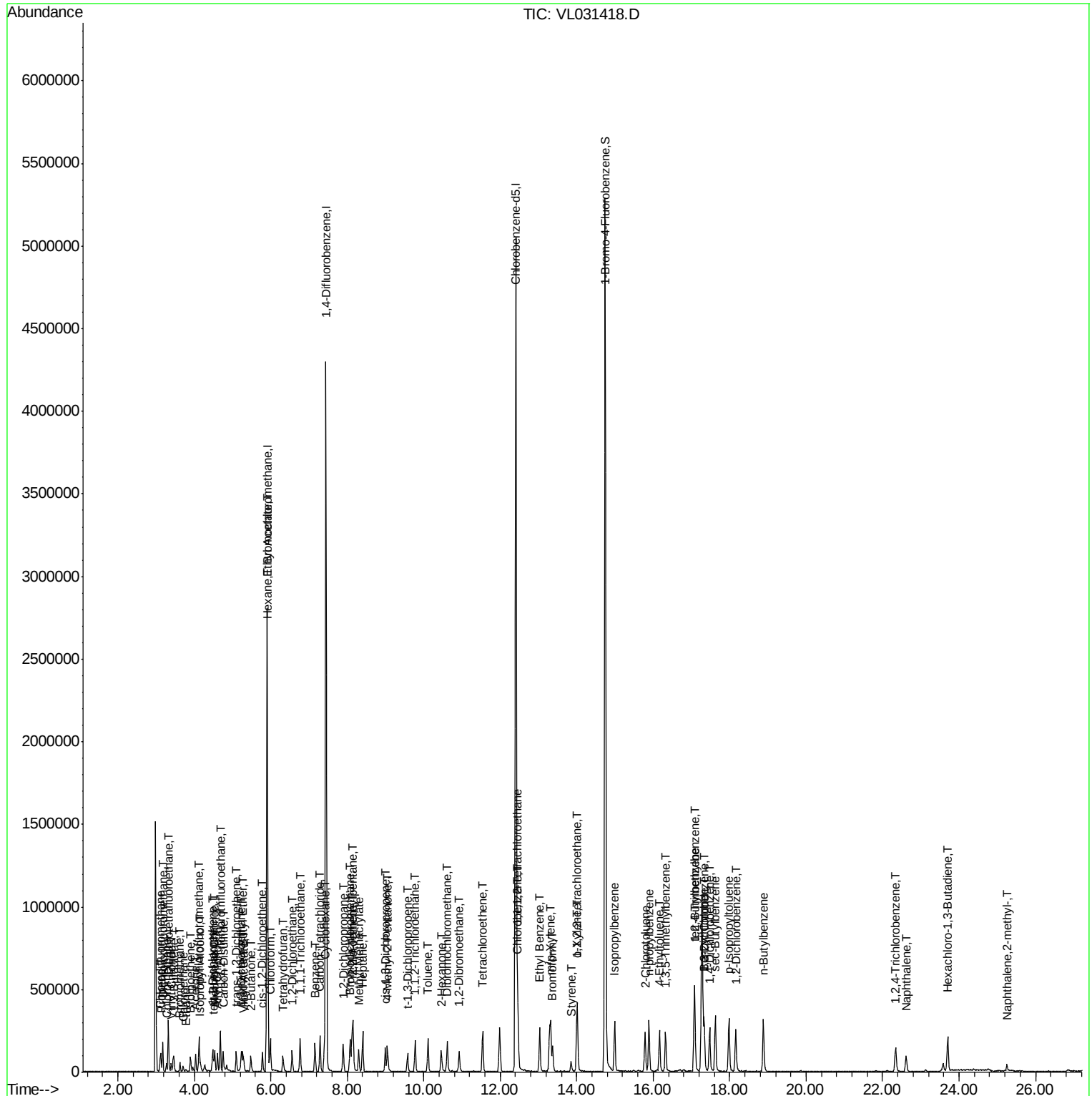
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) t-1,3-Dichloropropene	9.58	75	59774	0.37	ppbv	95
46) cis-1,3-Dichloropropene	9.00	75	79840	0.40	ppbv	97
47) 1,1,2-Trichloroethane	9.78	97	61599	0.45	ppbv	93
48) Dibromochloromethane	10.62	129	106579	0.44	ppbv	99
49) Bromoform	13.37	173	41680	0.22	ppbv #	30
50) 4-Methyl-2-Pentanone	9.05	43	118888	0.36	ppbv	98
51) 2-Hexanone	10.46	43	111271	0.33	ppbv #	98
52) Tetrachloroethene	11.54	164	55798	0.45	ppbv	87
53) Toluene	10.11	91	146794	0.40	ppbv	98
54) 1,2-Dibromoethane	10.93	107	92917	0.44	ppbv	98
56) 1,1,1,2-Tetrachloroethane	12.45	131	36802	0.23	ppbv #	2
57) Chlorobenzene	12.47	112	139114	0.48	ppbv	98
58) Ethyl Benzene	13.03	91	215672	0.43	ppbv	96
59) m/p-Xylene	13.31	91	208199	0.50	ppbv #	44
60) o-Xylene	14.02	91	185184	0.44	ppbv	99
61) Styrene	13.85	104	33753	0.36	ppbv	99
62) Isopropylbenzene	15.00	105	240744	0.45	ppbv	99
63) 1,1,2,2-Tetrachloroethane	14.00	83	143943	0.45	ppbv	98
64) n-propylbenzene	15.89	120	59504	0.44	ppbv	91
65) tert-Butylbenzene	17.08	119	210905	0.45	ppbv	94
66) Benzyl Chloride	17.32	91	7720	0.17	ppbv #	41
67) sec-Butylbenzene	17.63	105	295083	0.44	ppbv	100
69) p-Isopropyltoluene	17.98	119	228472	0.43	ppbv	98
70) n-Butylbenzene	18.88	91	236258	0.42	ppbv	100
71) 2-Chlorotoluene	15.78	91	93324	0.23	ppbv #	45
72) 4-Ethyltoluene	16.17	105	181362	0.42	ppbv	98
73) 1,3,5-Trimethylbenzene	16.32	105	169448	0.44	ppbv	98
74) 1,2,4-Trimethylbenzene	17.09	105	198773	0.47	ppbv	94
75) 1,3-Dichlorobenzene	17.33	146	130986	0.49	ppbv	94
76) 1,4-Dichlorobenzene	17.48	146	124335	0.46	ppbv	99
77) 1,2-Dichlorobenzene	18.16	146	123181	0.46	ppbv	99
78) Hexachloro-1,3-Butadiene	23.70	225	31974	0.37	ppbv #	69
79) Naphthalene	22.62	128	103337	0.51	ppbv	99
80) Naphthalene,2-methyl-	25.25	142	25710	0.51	ppbv	94
81) 1,2,4-Trichlorobenzene	22.34	180	62912	0.53	ppbv	99

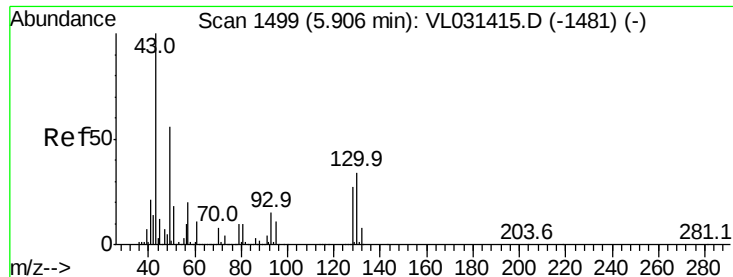
(#)=qualifier out of range (m)=manual integration (+)=signals summed

ALS Vial : 1 Sample Multiplier: 1

VSTDICC0.5

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#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.90 min Scan# 1497

Delta R.T. -0.01 min

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ClientSampleId :

VSTDIC0.5

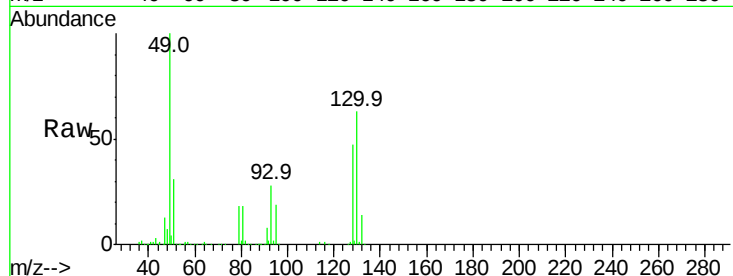
Tgt Ion: 49 Resp: 1274666

Ion Ratio Lower Upper

49 100

128 47.3 23.5 70.6

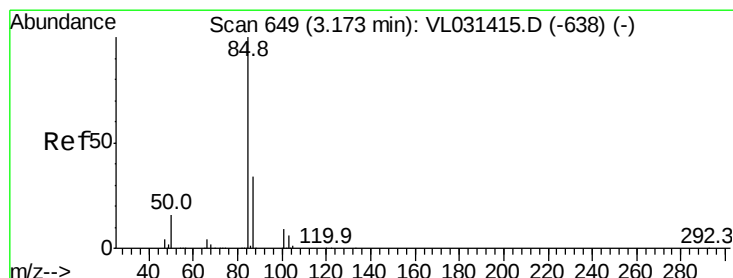
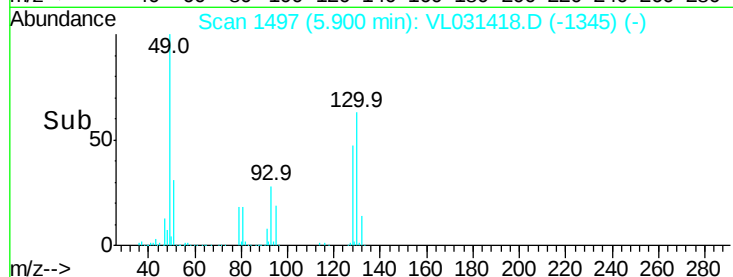
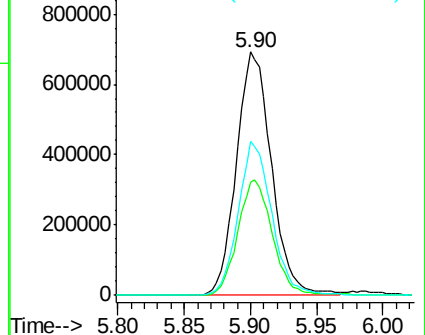
130 60.7 29.9 89.7



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.48 ppbv

RT: 3.17 min Scan# 649

Delta R.T. -0.00 min

Lab File: VL031418.D

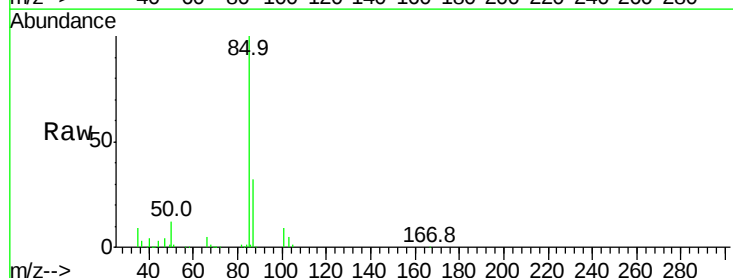
Acq: 22 Jan 2018 15:25

Tgt Ion: 85 Resp: 119192

Ion Ratio Lower Upper

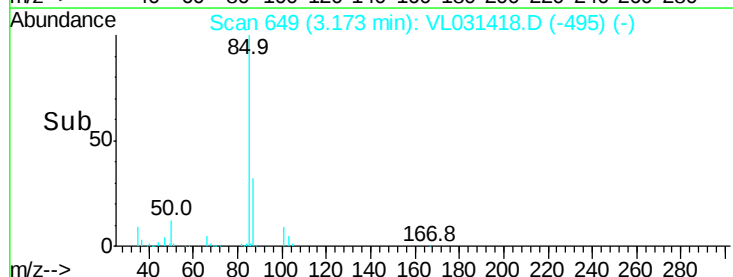
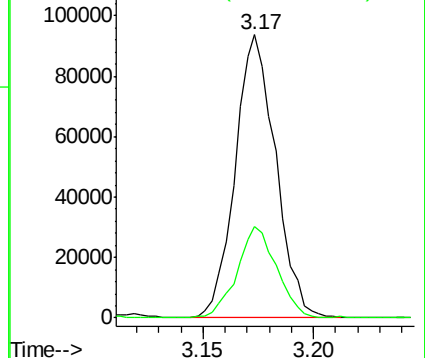
85 100

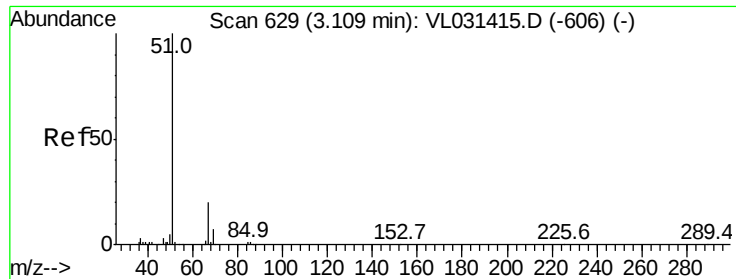
87 32.1 27.4 41.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.51 ppbv

RT: 3.11 min Scan# 629

Delta R.T. -0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

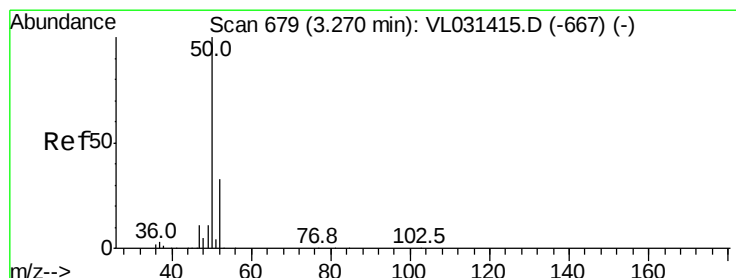
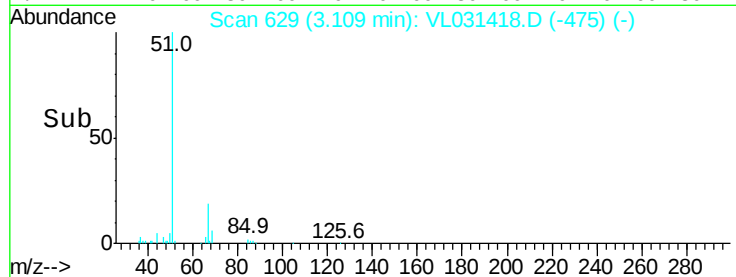
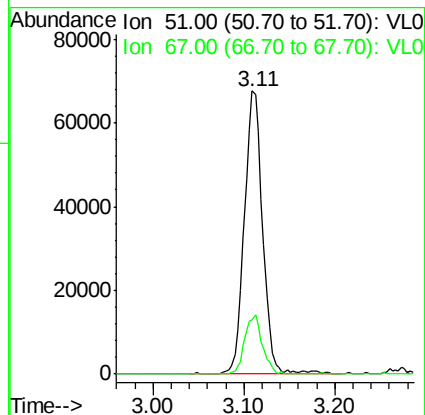
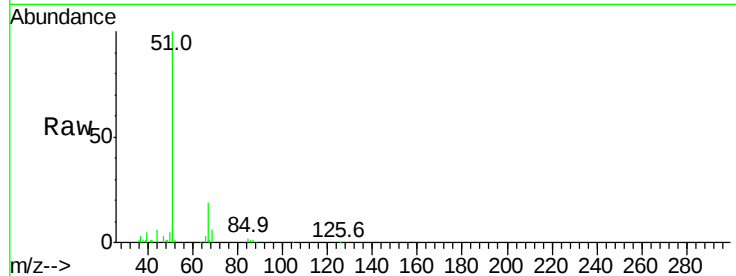
VSTDIC0.5

Tgt Ion: 51 Resp: 95107

Ion Ratio Lower Upper

51 100

67 20.2 16.0 24.0



#4

Chloromethane

Concen: 0.49 ppbv

RT: 3.27 min Scan# 680

Delta R.T. -0.00 min

Lab File: VL031418.D

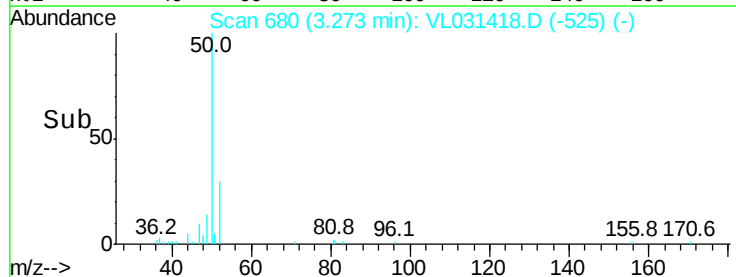
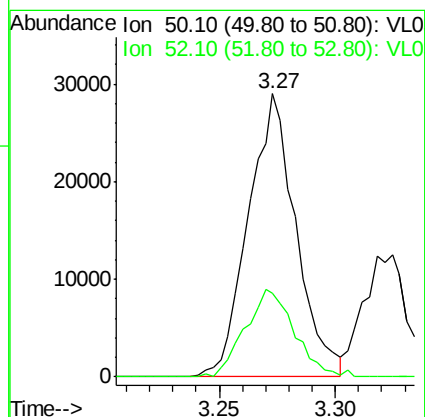
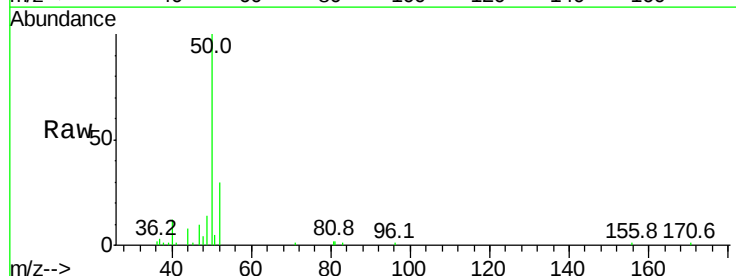
Acq: 22 Jan 2018 15:25

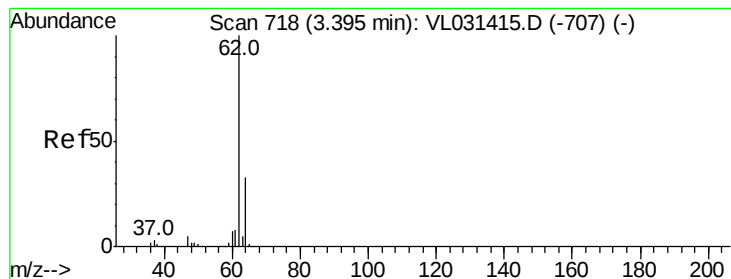
Tgt Ion: 50 Resp: 41458

Ion Ratio Lower Upper

50 100

52 30.0 26.4 39.6





#5

Vinyl Chloride

Concen: 0.44 ppbv

RT: 3.40 min Scan# 718

Delta R.T. -0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

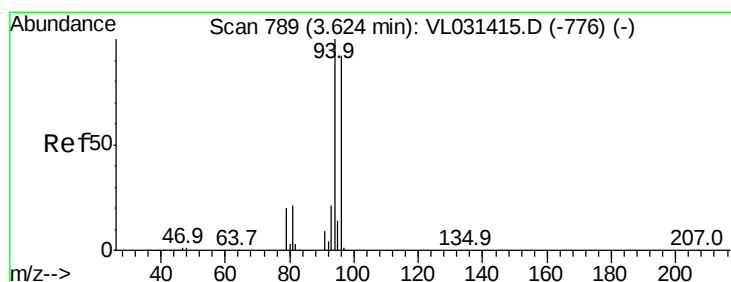
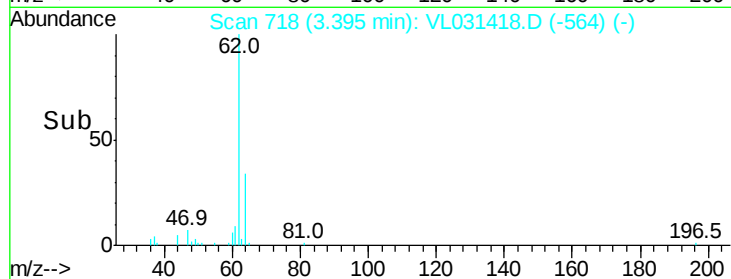
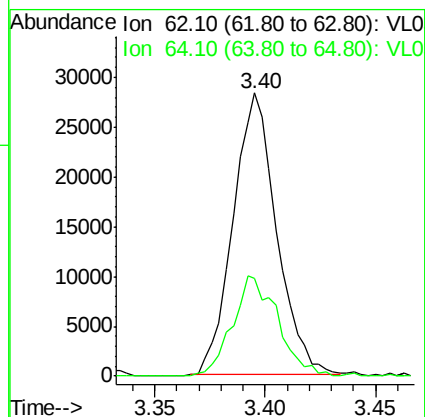
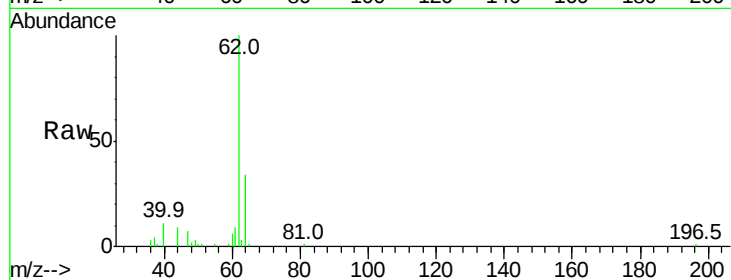
VSTDIC0.5

Tgt Ion: 62 Resp: 38540

Ion Ratio Lower Upper

62 100

64 34.6 25.4 38.0



#6

Bromomethane

Concen: 0.48 ppbv

RT: 3.62 min Scan# 789

Delta R.T. -0.00 min

Lab File: VL031418.D

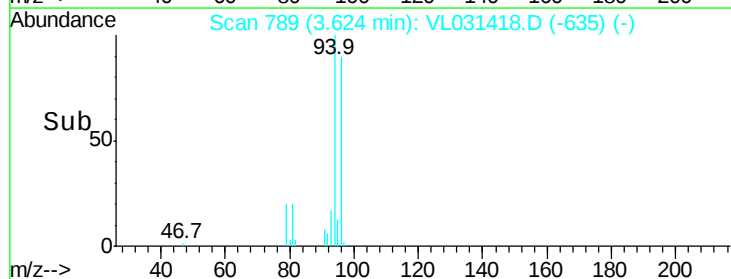
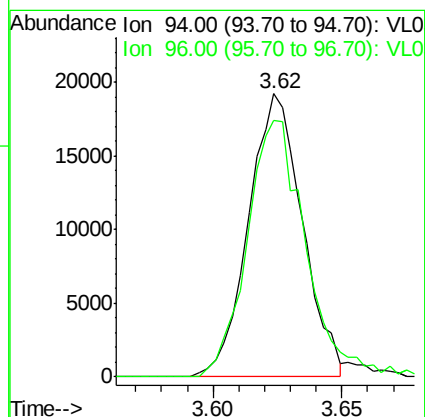
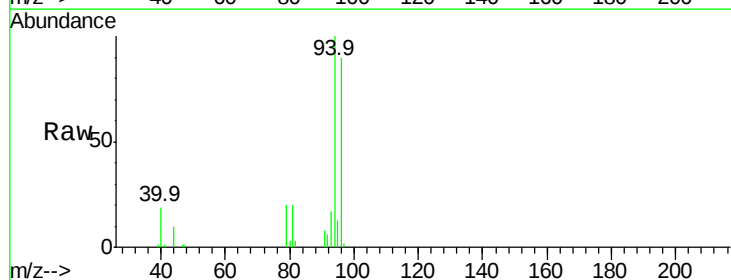
Acq: 22 Jan 2018 15:25

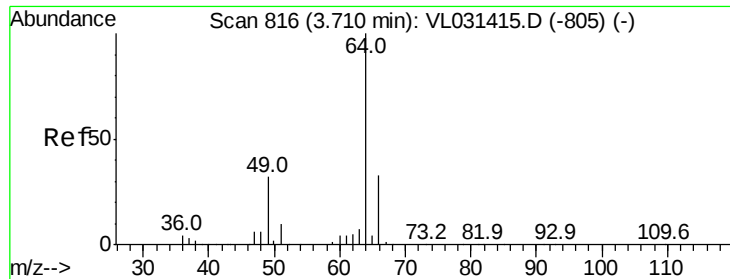
Tgt Ion: 94 Resp: 27986

Ion Ratio Lower Upper

94 100

96 90.4 75.1 112.7





#7

Chloroethane

Concen: 0.49 ppbv

RT: 3.71 min Scan# 817

Delta R.T. -0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

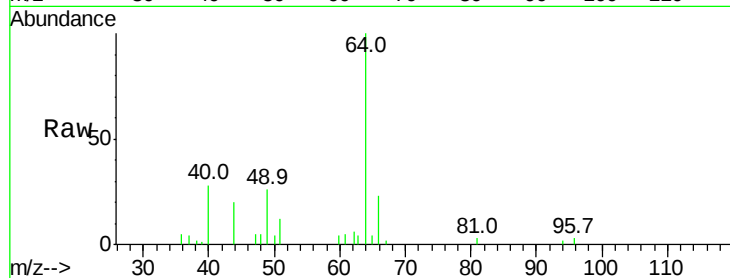
VSTDIC0.5

Tgt Ion: 64 Resp: 16718

Ion Ratio Lower Upper

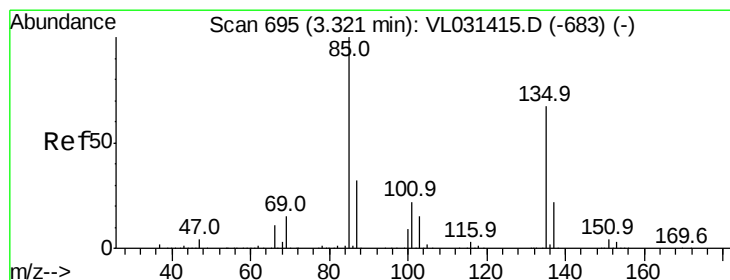
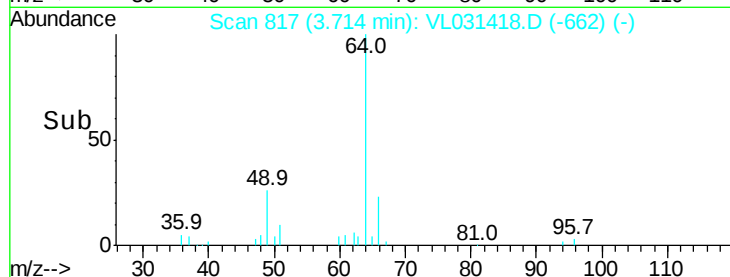
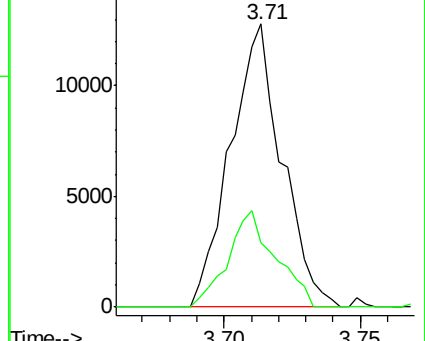
64 100

66 23.0 26.3 39.5#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#8

Dichlorotetrafluoroethane

Concen: 0.52 ppbv

RT: 3.32 min Scan# 695

Delta R.T. -0.00 min

Lab File: VL031418.D

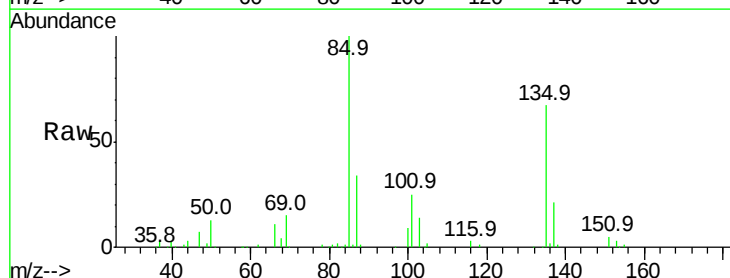
Acq: 22 Jan 2018 15:25

Tgt Ion: 85 Resp: 116743

Ion Ratio Lower Upper

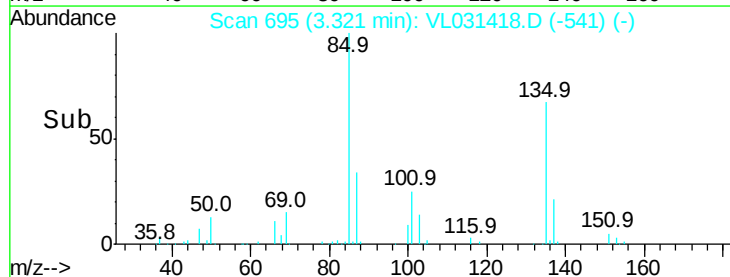
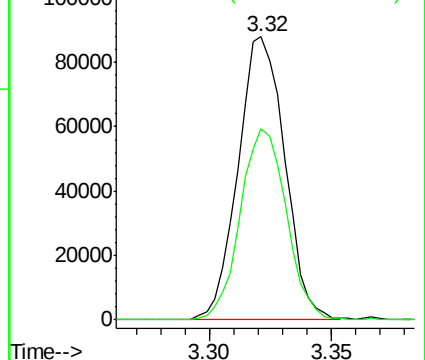
85 100

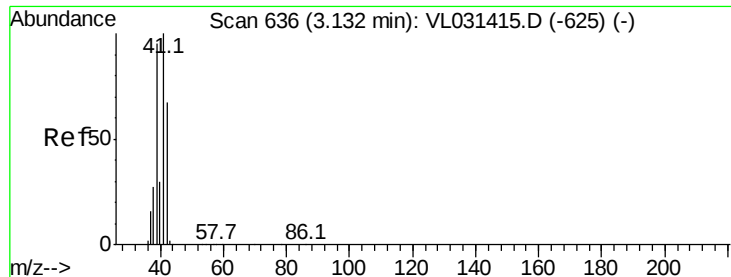
135 66.4 53.3 79.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V





#9

Propene

Concen: 0.44 ppbv

RT: 3.13 min Scan# 637

Delta R.T. -0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

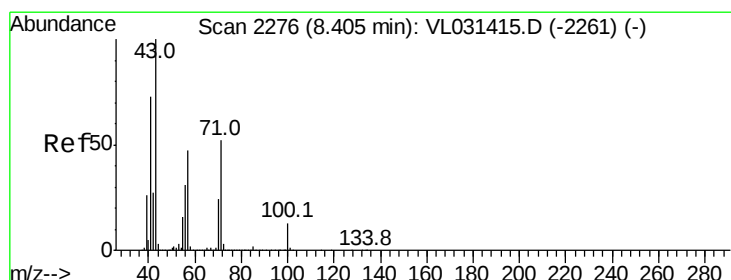
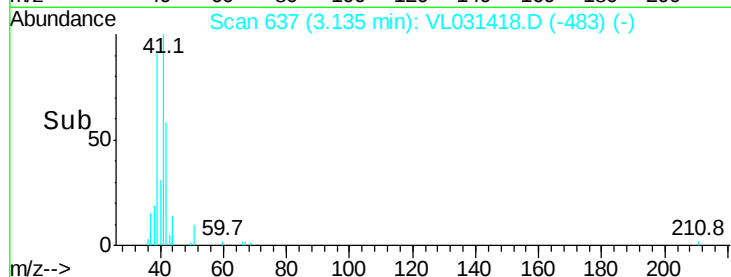
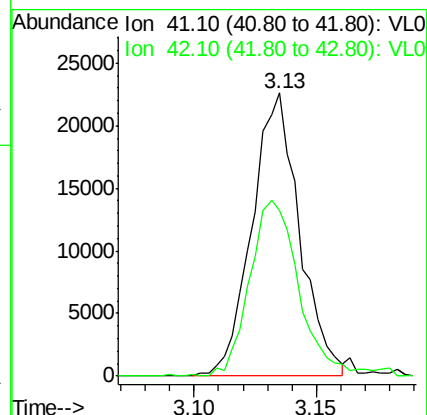
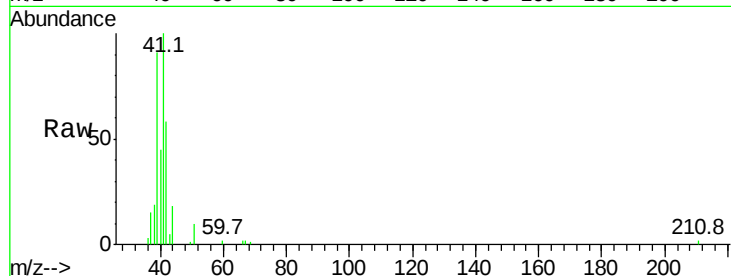
VSTDIC0.5

Tgt Ion: 41 Resp: 30517

Ion Ratio Lower Upper

41 100

42 65.6 54.6 82.0



#10

Heptane

Concen: 0.44 ppbv

RT: 8.40 min Scan# 2274

Delta R.T. -0.01 min

Lab File: VL031418.D

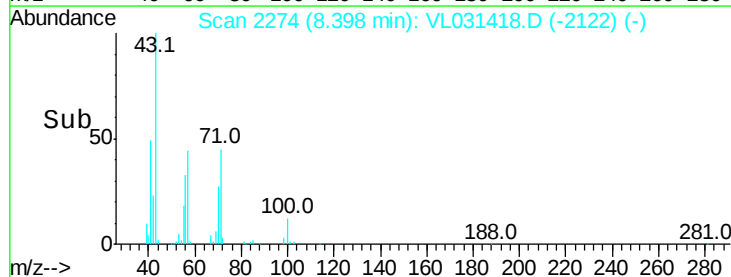
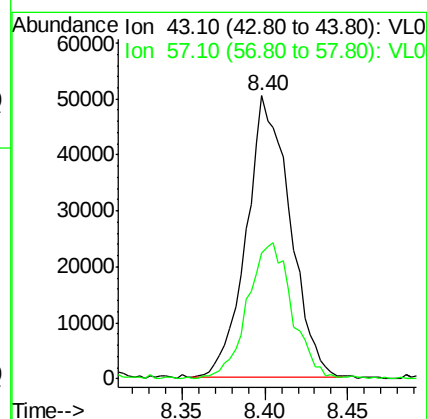
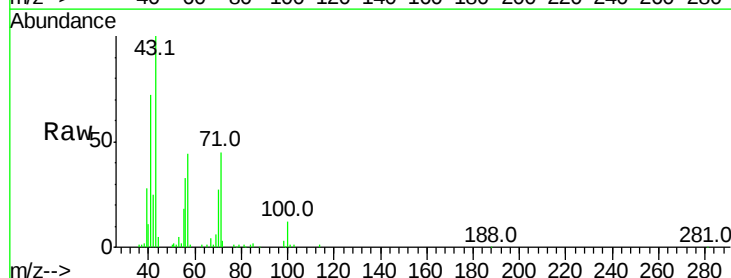
Acq: 22 Jan 2018 15:25

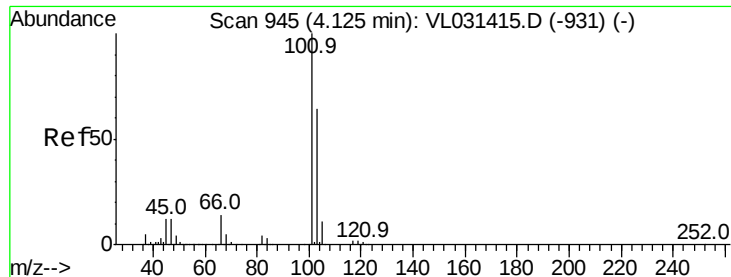
Tgt Ion: 43 Resp: 91389

Ion Ratio Lower Upper

43 100

57 50.1 39.7 59.5

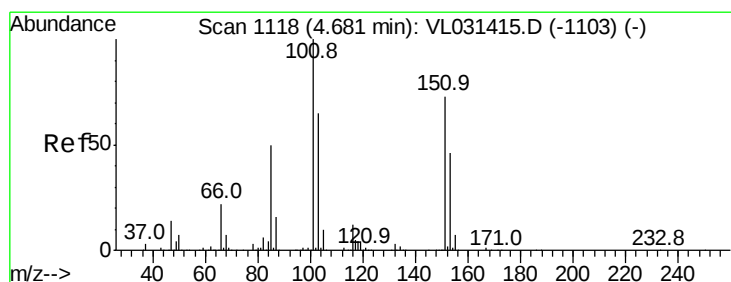
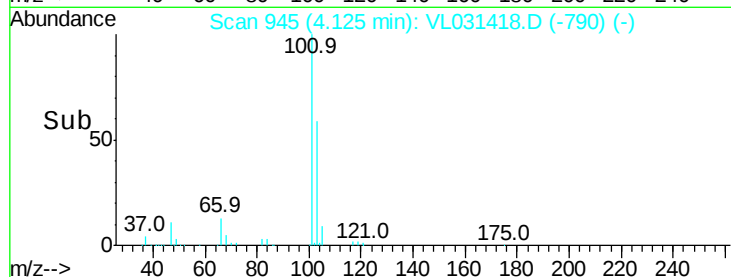
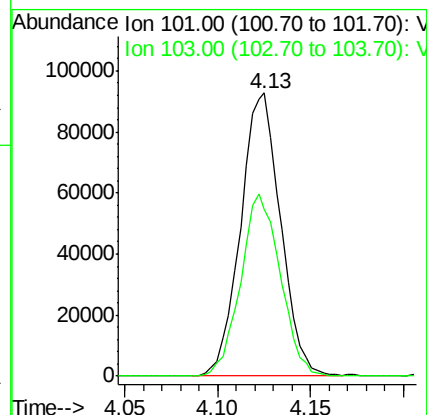
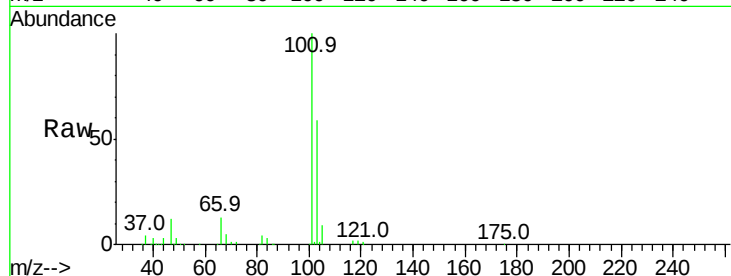




#11
 Trichlorofluoromethane
 Concen: 0.53 ppbv
 RT: 4.13 min Scan# 945
 Delta R.T. -0.00 min
 Lab File: VL031418.D
 Acq: 22 Jan 2018 15:25

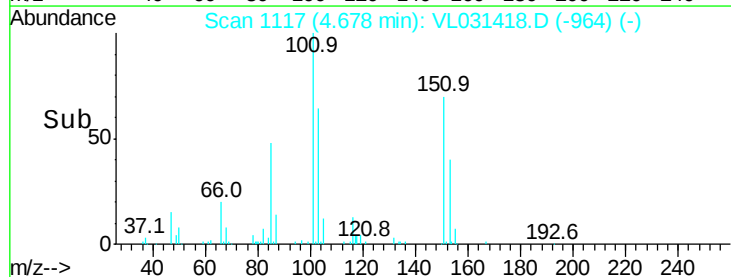
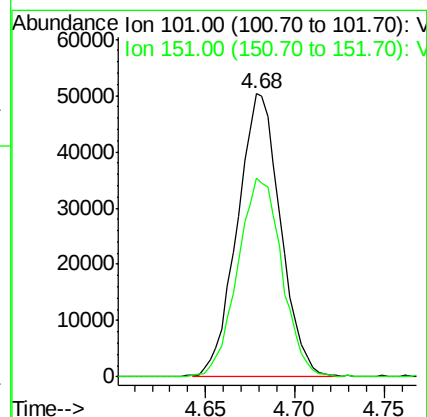
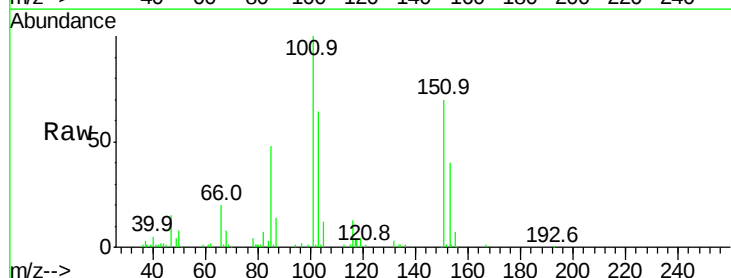
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC0.5

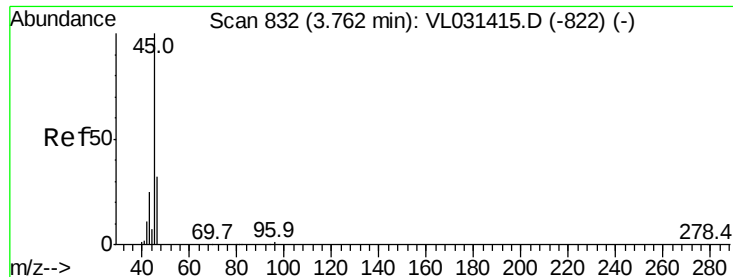
Tgt Ion:101 Resp: 139345
 Ion Ratio Lower Upper
 101 100
 103 58.7 53.1 79.7



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.51 ppbv
 RT: 4.68 min Scan# 1117
 Delta R.T. -0.01 min
 Lab File: VL031418.D
 Acq: 22 Jan 2018 15:25

Tgt Ion:101 Resp: 83959
 Ion Ratio Lower Upper
 101 100
 151 72.5 58.1 87.1





#13

Ethanol

Concen: 0.34 ppbv

RT: 3.77 min Scan# 836

Delta R.T. 0.01 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

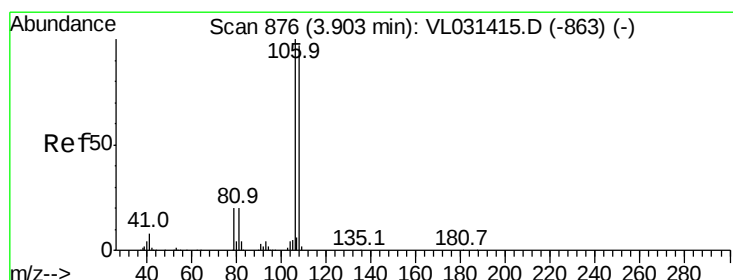
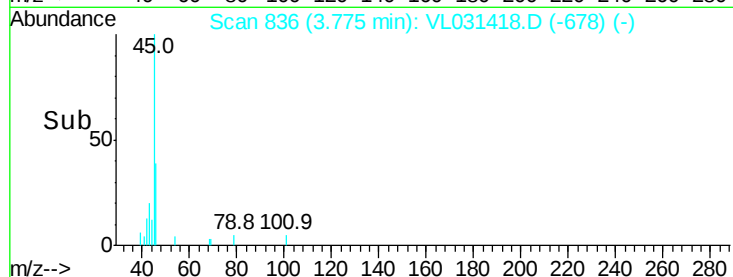
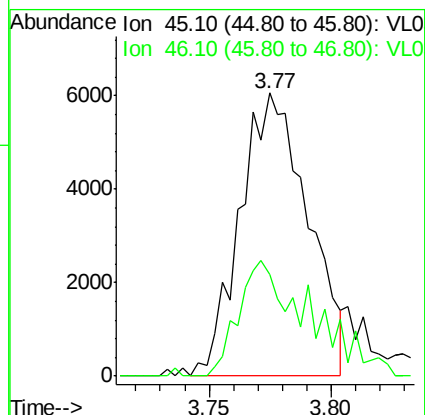
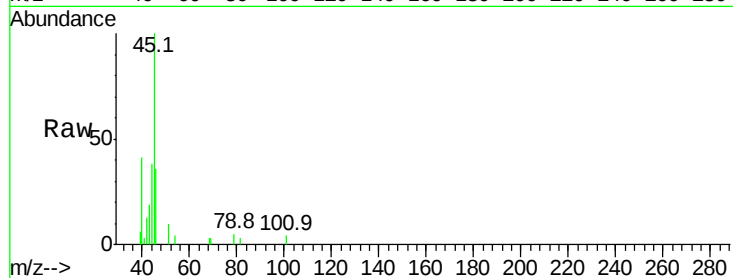
VSTDIC0.5

Tgt Ion: 45 Resp: 11726

Ion Ratio Lower Upper

45 100

46 43.8 14.9 59.5



#14

Bromoethene

Concen: 0.48 ppbv

RT: 3.91 min Scan# 877

Delta R.T. -0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

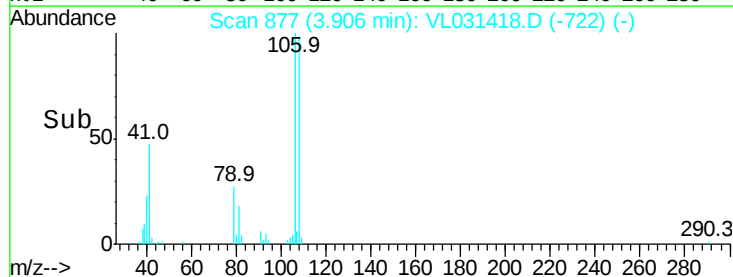
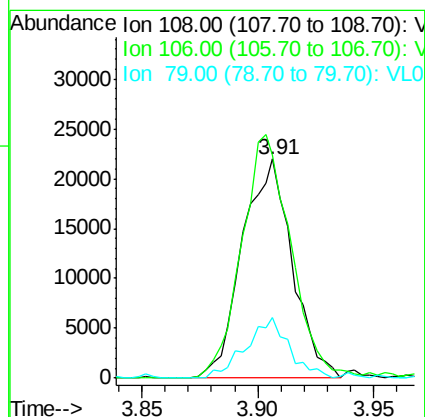
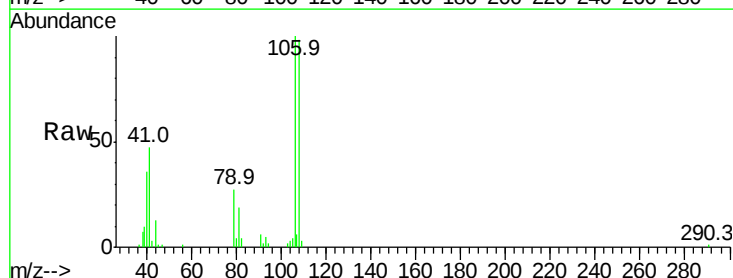
Tgt Ion: 108 Resp: 32915

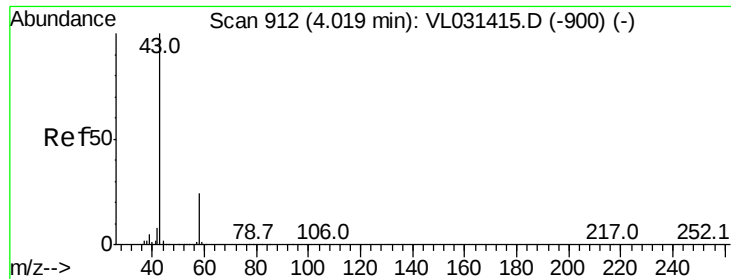
Ion Ratio Lower Upper

108 100

106 111.1 85.3 127.9

79 25.0 16.8 25.2





#15

Acetone

Concen: 0.47 ppbv

RT: 4.03 min Scan# 916

Delta R.T. 0.01 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

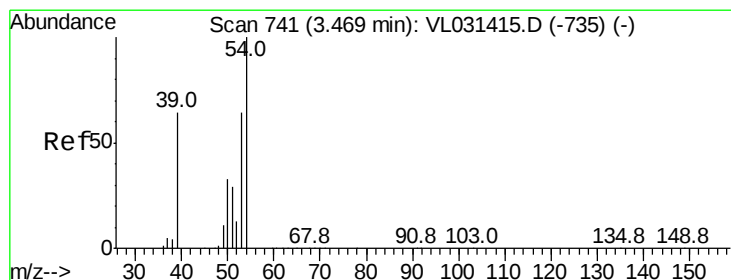
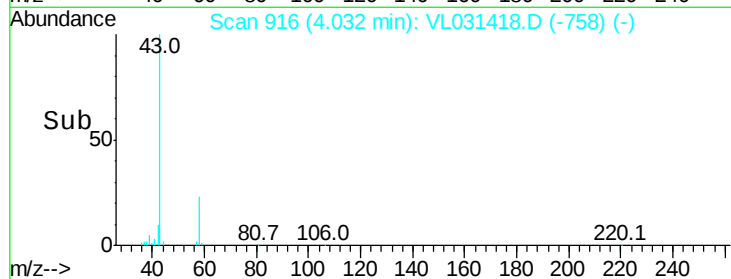
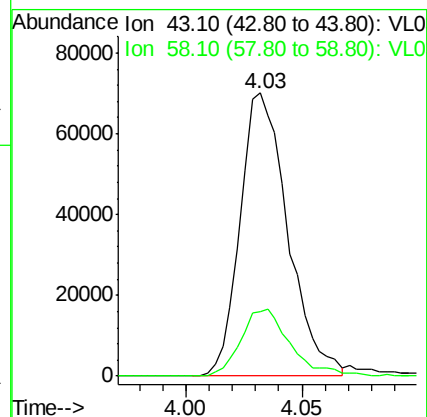
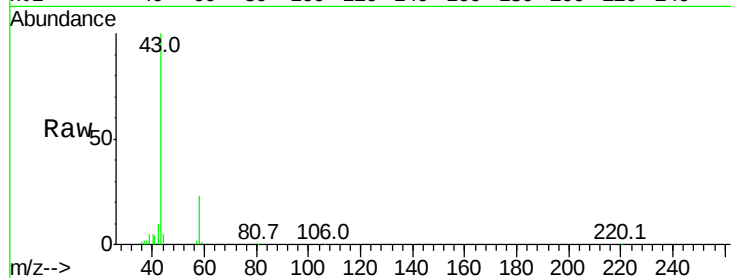
VSTDIC0.5

Tgt Ion: 43 Resp: 100046

Ion Ratio Lower Upper

43 100

58 24.9 19.4 29.2



#16

1,3-Butadiene

Concen: 0.45 ppbv

RT: 3.47 min Scan# 741

Delta R.T. -0.00 min

Lab File: VL031418.D

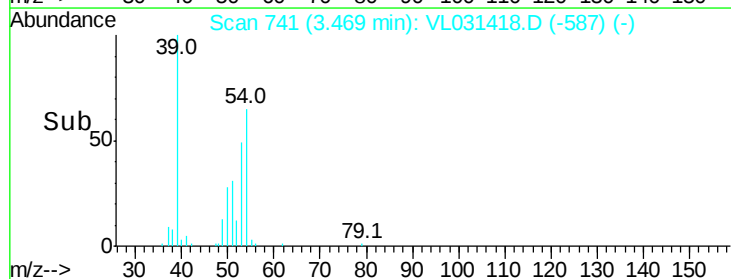
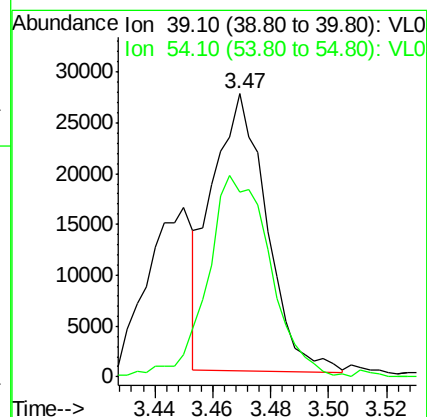
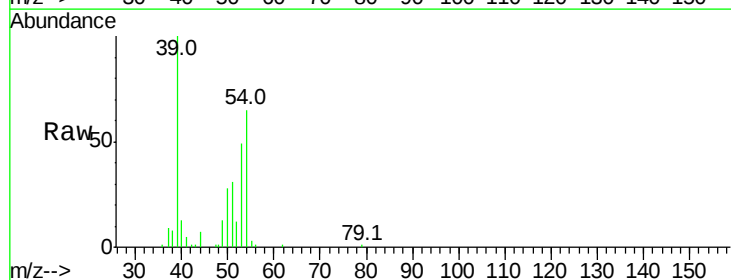
Acq: 22 Jan 2018 15:25

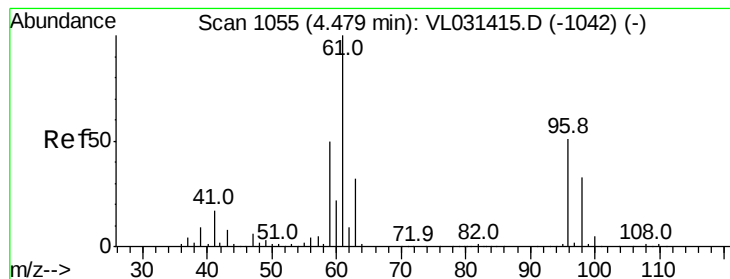
Tgt Ion: 39 Resp: 35630

Ion Ratio Lower Upper

39 100

54 84.3 67.0 100.6





#17

tert-Butyl alcohol

Concen: 0.46 ppbv

RT: 4.50 min Scan# 1062

Delta R.T. 0.02 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

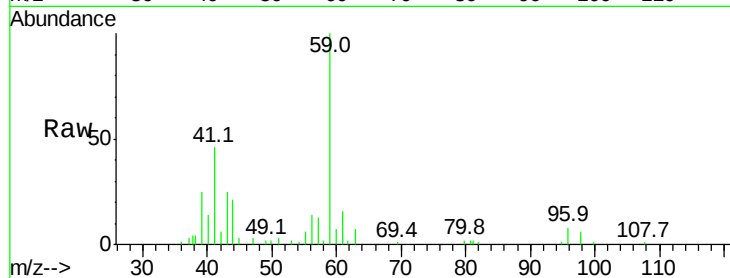
VSTDIC0.5

Tgt Ion: 59 Resp: 44590

Ion Ratio Lower Upper

59 100

57 10.8 8.6 13.0



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

25000

20000

15000

10000

5000

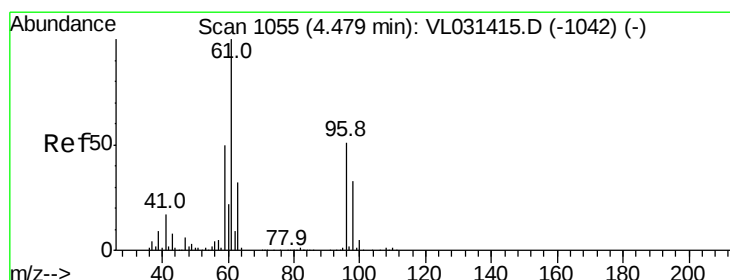
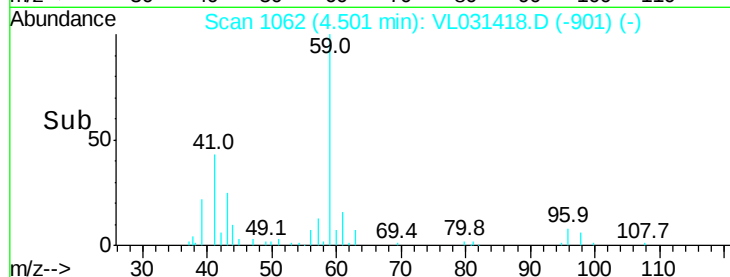
0

4.45

4.50

4.55

Time-->



#18

1,1-Dichloroethene

Concen: 0.49 ppbv

RT: 4.48 min Scan# 1054

Delta R.T. -0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

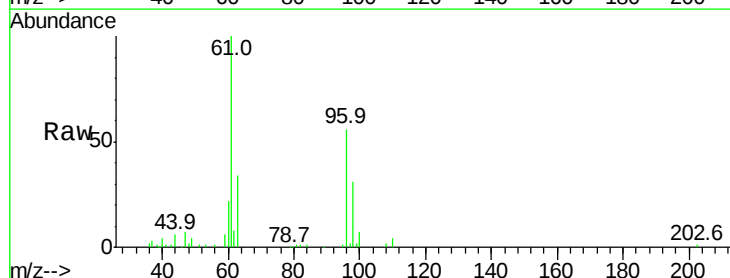
Tgt Ion: 96 Resp: 35821

Ion Ratio Lower Upper

96 100

61 178.0 161.6 242.4

98 55.6 49.6 74.4



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

60000

50000

40000

30000

20000

10000

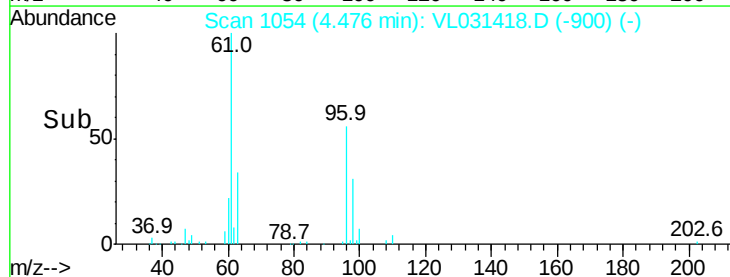
0

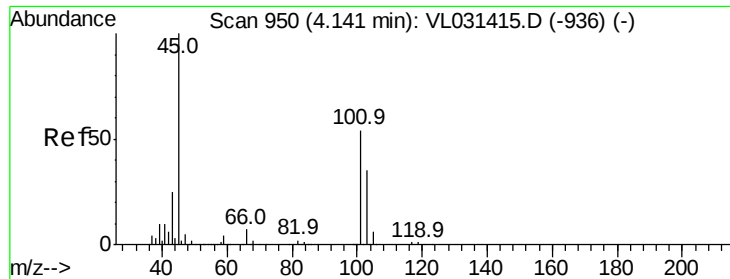
4.45

4.48

4.50

Time-->





#19

Isopropyl Alcohol

Concen: 0.40 ppbv

RT: 4.15 min Scan# 954

Delta R.T. 0.01 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

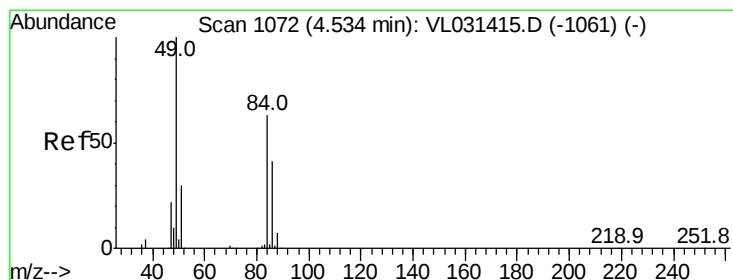
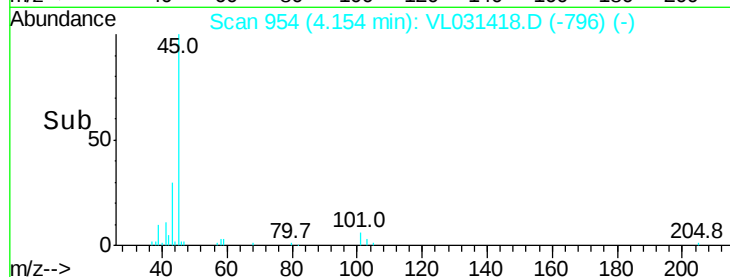
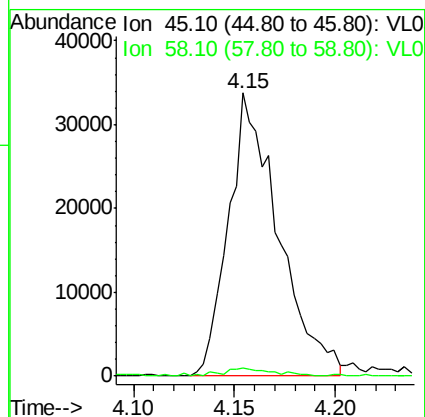
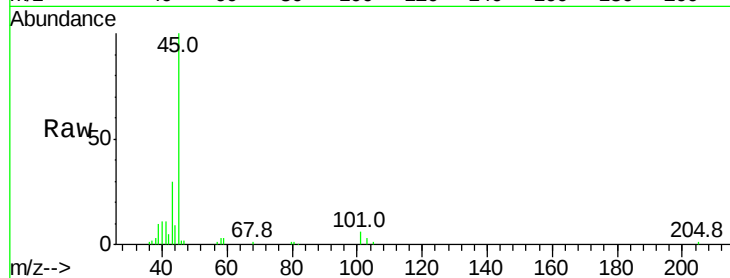
VSTDIC0.5

Tgt Ion: 45 Resp: 58555

Ion Ratio Lower Upper

45 100

58 3.3 1.0 1.4#



#20

Methylene Chloride

Concen: 0.53 ppbv

RT: 4.54 min Scan# 1073

Delta R.T. -0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Tgt Ion: 84 Resp: 40491

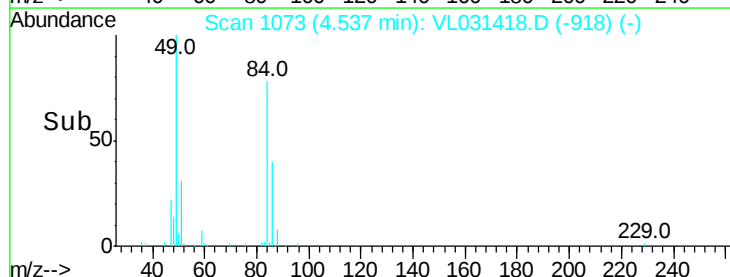
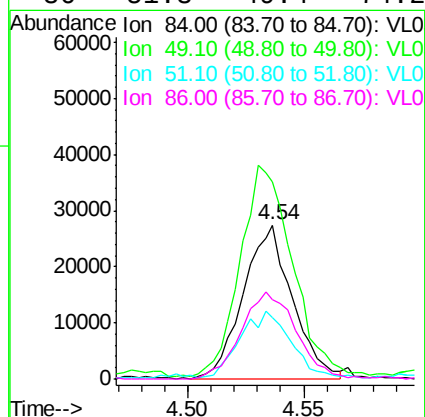
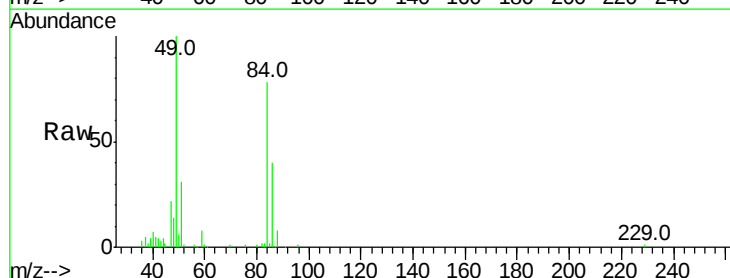
Ion Ratio Lower Upper

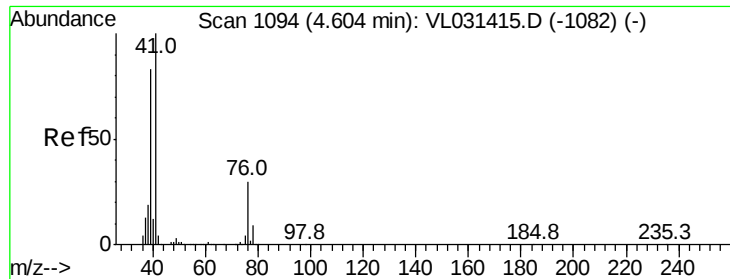
84 100

49 125.9 123.4 185.0

51 38.1 35.6 53.4

86 51.3 49.4 74.2





#21

Allyl Chloride

Concen: 0.48 ppbv

RT: 4.61 min Scan# 1095

Delta R.T. -0.00 min

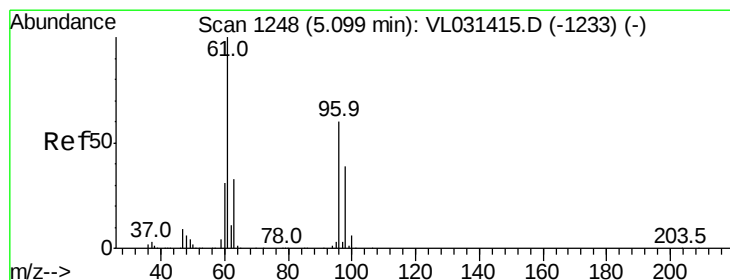
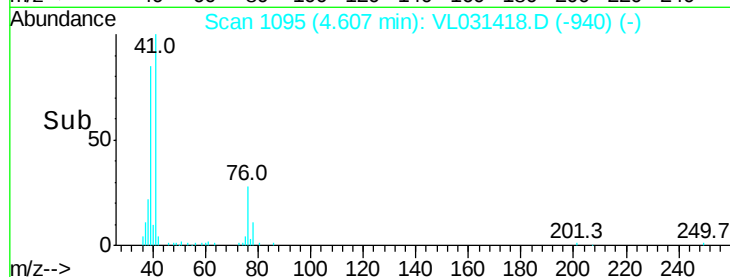
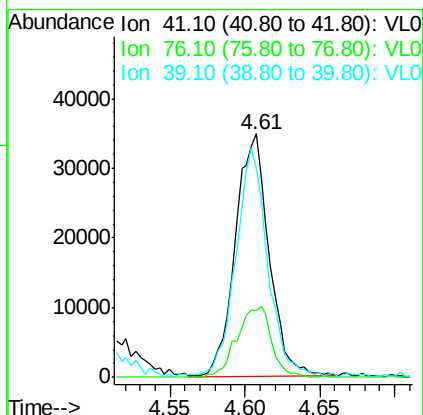
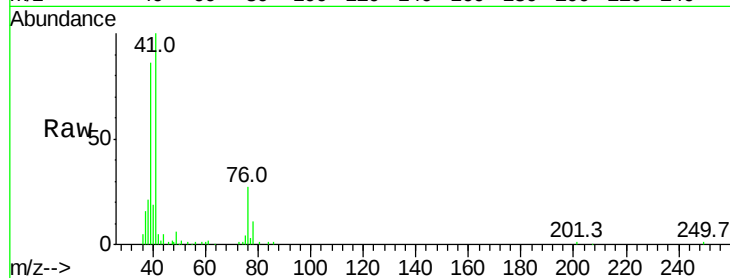
Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC0.5

Tgt Ion: 41 Resp: 54855

Ion	Ratio	Lower	Upper
41	100		
76	29.8	24.2	36.2
39	91.7	69.8	104.8



#22

trans-1,2-Dichloroethene

Concen: 0.30 ppbv

RT: 5.09 min Scan# 1246

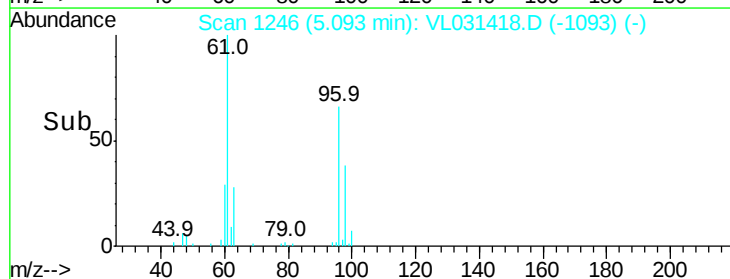
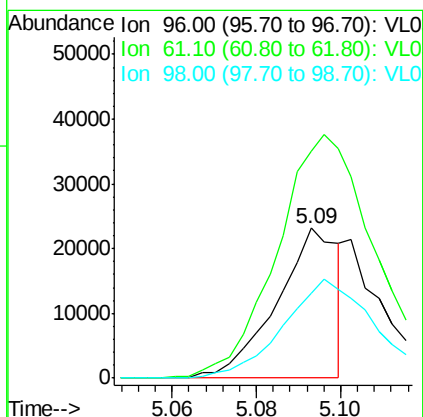
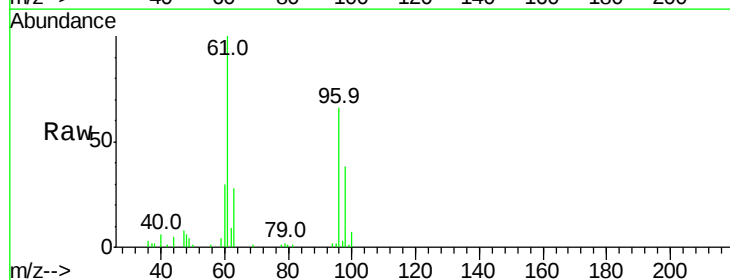
Delta R.T. -0.01 min

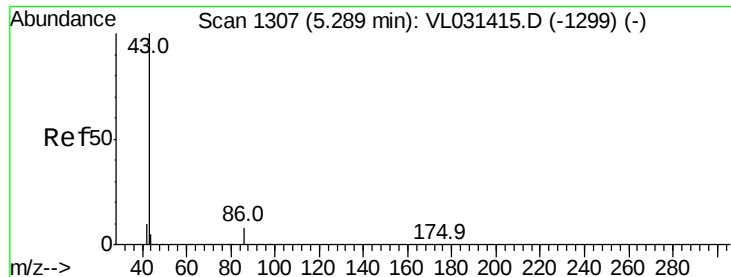
Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Tgt Ion: 96 Resp: 23373

Ion	Ratio	Lower	Upper
96	100		
61	150.4	135.0	202.4
98	56.8	52.2	78.2

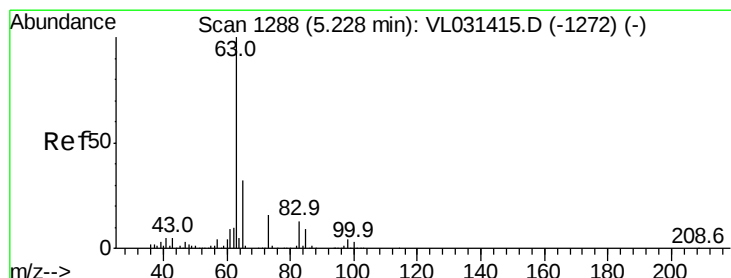
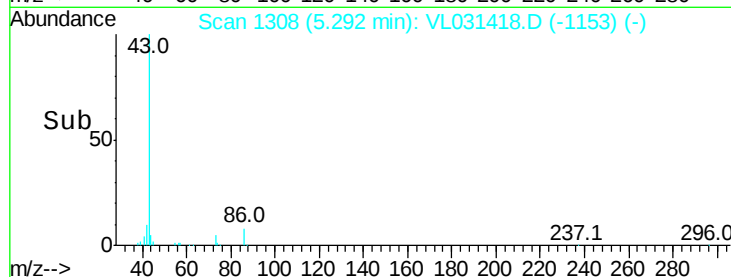
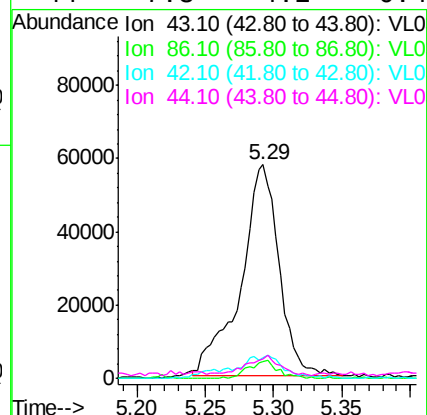
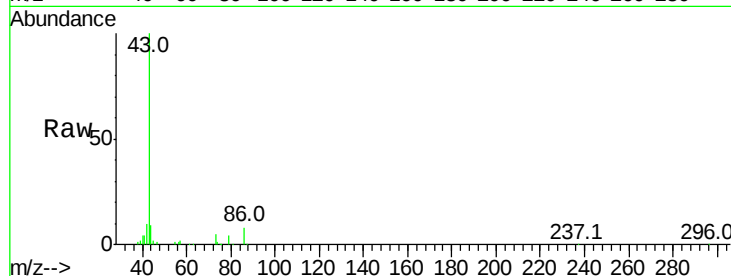




#23
 Vinyl Acetate
 Concen: 0.47 ppbv
 RT: 5.29 min Scan# 1308
 Delta R.T. -0.00 min
 Lab File: VL031418.D
 Acq: 22 Jan 2018 15:25

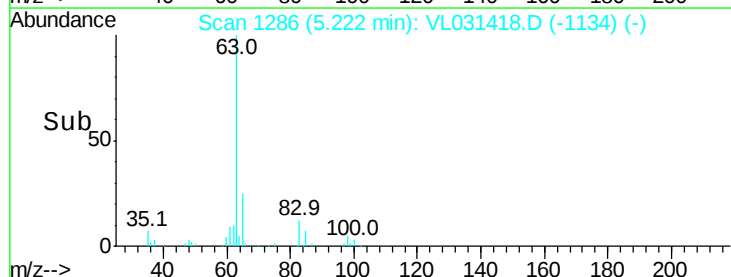
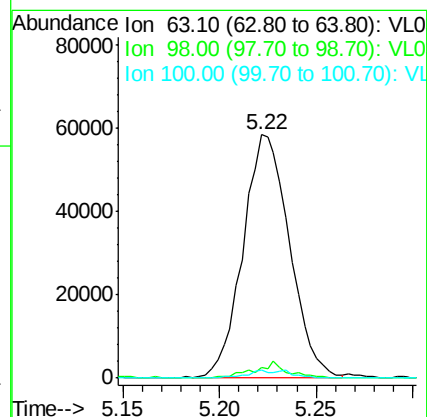
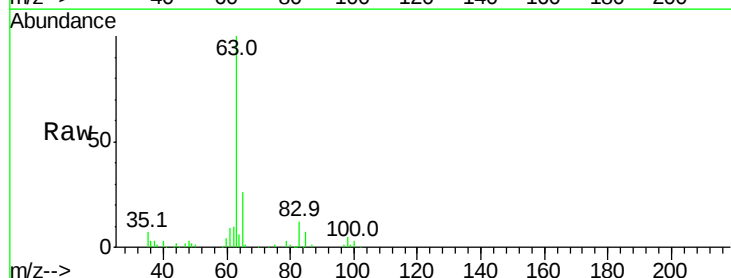
Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC0.5

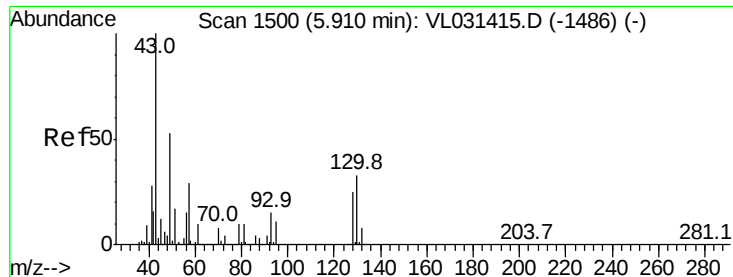
Tgt Ion:	43	Resp:	113628
Ion	Ratio	Lower	Upper
43	100		
86	8.0	5.6	8.4
42	9.6	8.6	12.8
44	7.3	4.2	6.4#



#24
 1,1-Dichloroethane
 Concen: 0.48 ppbv
 RT: 5.22 min Scan# 1286
 Delta R.T. -0.01 min
 Lab File: VL031418.D
 Acq: 22 Jan 2018 15:25

Tgt Ion:	63	Resp:	97954
Ion	Ratio	Lower	Upper
63	100		
98	4.5	2.4	7.1
100	3.3	1.3	3.9





#25

Ethyl Acetate

Concen: 0.44 ppbv

RT: 5.92 min Scan# 1502

Delta R.T. 0.00 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC0.5

Tgt Ion: 43 Resp: 158618

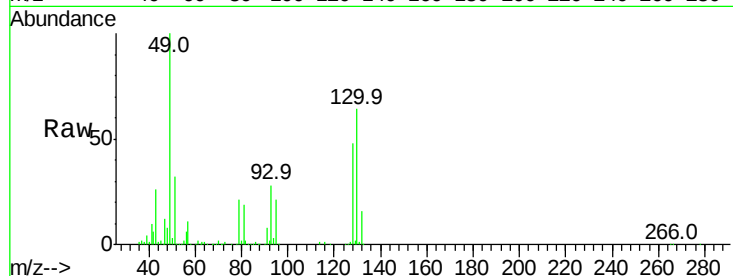
Ion Ratio Lower Upper

43 100

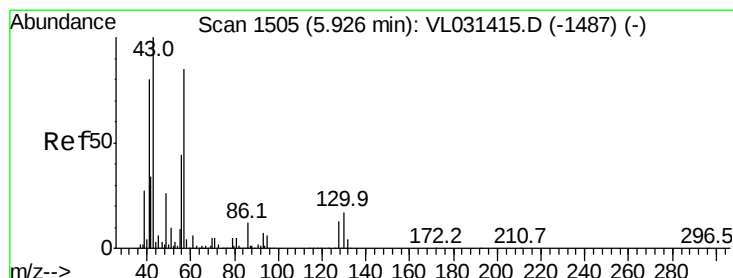
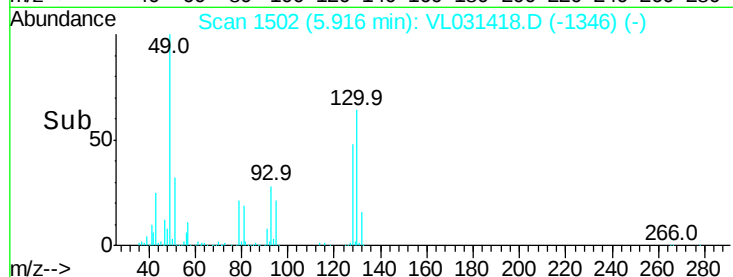
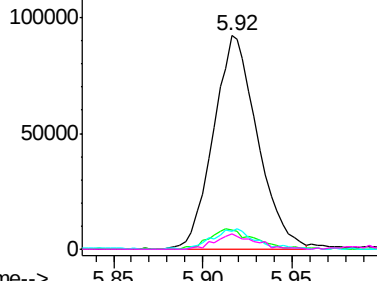
45 10.3 7.8 11.6

61 9.6 7.0 10.6

70 6.4 5.4 8.0



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0



#26

Hexane

Concen: 0.46 ppbv

RT: 5.92 min Scan# 1503

Delta R.T. -0.01 min

Lab File: VL031418.D

Acq: 22 Jan 2018 15:25

Tgt Ion: 57 Resp: 68812

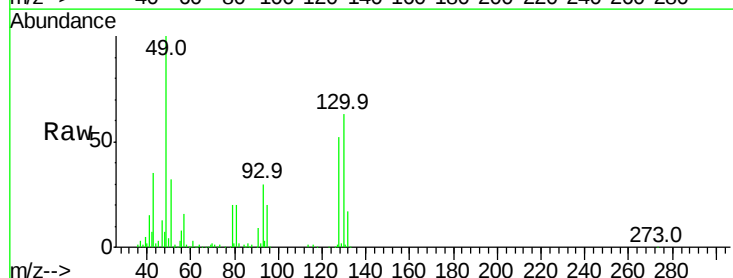
Ion Ratio Lower Upper

57 100

41 102.8 77.1 115.7

43 237.4 180.7 271.1

56 55.5 42.2 63.2



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

