

Data File : VL034088.D
Acq On : 5 Aug 2019 14:01
Operator : SY/AP
Sample : VSTDIC001
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC001

Quant Time: Aug 05 14:27:08 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL080519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Aug 05 13:52:58 2019
QLast Update : Mon Aug 05 13:52:58 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.71	49	1093000	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.24	114	2209600	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.18	117	2312451	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.52	95	1856152	9.08	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	90.80%

Target Compounds					Qvalue
2) Dichlorodifluoromethane	3.05	85	154525	0.741	ppbv 92
3) Chlorodifluoromethane	2.99	51	133963	1.040	ppbv 98
4) Chloromethane	3.14	50	88762	1.194	ppbv 99
5) Vinyl Chloride	3.26	62	75086	1.020	ppbv # 88
6) Bromomethane	3.48	94	39379	0.715	ppbv 90
7) Chloroethane	3.57	64	28259	0.796	ppbv 96
8) Dichlorotetrafluoroethane	3.19	85	173638	0.851	ppbv 93
9) Propene	3.01	41	79471	1.598	ppbv 92
10) Heptane	8.19	43	211593	1.536	ppbv 97
11) Trichlorofluoromethane	3.97	101	173685	0.831	ppbv 93
12) 1,1,2-Trichlorotrifluoroet	4.51	101	124500	0.783	ppbv 95
13) Ethanol	3.62	45	13557	0.672	ppbv # 42
14) Bromoethene	3.75	108	54104	0.607	ppbv 95
15) Acetone	3.87	43	175581	0.976	ppbv 98
16) 1,3-Butadiene	3.33	39	72682	1.104	ppbv 94
17) tert-Butyl alcohol	4.33	59	160688	1.230	ppbv 97
18) 1,1-Dichloroethene	4.31	96	57631	0.828	ppbv 80
19) Isopropyl Alcohol	3.99	45	137615	1.240	ppbv 94
20) Methylene Chloride	4.36	84	25103	0.387	ppbv 96
21) Allyl Chloride	4.44	41	116322	1.067	ppbv 96
22) trans-1,2-Dichloroethene	4.92	96	53105	0.749	ppbv # 81
23) Vinyl Acetate	5.11	43	280538	1.513	ppbv # 97
24) 1,1-Dichloroethane	5.05	63	167154	1.074	ppbv 99
25) Ethyl Acetate	5.73	43	340570	1.280	ppbv 99
26) Hexane	5.73	57	141345	1.173	ppbv 96
27) Carbon Disulfide	4.58	76	142033	0.792	ppbv 95
28) Methyl tert-Butyl Ether	5.08	73	235671	1.303	ppbv 98
29) Chloroform	5.80	83	195384	0.932	ppbv 91
30) Cyclohexane	7.19	84	72016	0.750	ppbv # 5
31) cis-1,2-Dichloroethene	5.59	61	137955	1.167	ppbv 95
32) 1,1,1-Trichloroethane	6.57	97	176953	0.801	ppbv 98
34) 2-Butanone	5.29	43	229758	1.815	ppbv 100
35) Carbon Tetrachloride	7.08	117	181495	1.017	ppbv 96
36) Benzene	6.95	78	273023	1.296	ppbv 96
37) 1,2-Dichloroethane	6.36	62	146483	1.066	ppbv 98
38) Trichloroethene	7.90	130	40892	0.575	ppbv 87
39) 1,2-Dichloropropane	7.68	63	113934	1.495	ppbv 94
40) 1,4-Dioxane	7.93	88	28555	0.978	ppbv # 35
41) Tetrahydrofuran	6.11	42	133047	1.961	ppbv 99
42) Bromodichloromethane	7.86	83	206477	1.192	ppbv 96
43) Methyl Methacrylate	8.08	69	107374	1.478	ppbv 92

Data File : VL034088.D
Acq On : 5 Aug 2019 14:01
Operator : SY/AP
Sample : VSTDIC001
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC001

Quant Time: Aug 05 14:27:08 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL080519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Aug 05 13:52:58 2019
QLast Update : Mon Aug 05 13:52:58 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2,2,4-Trimethylpentane	7.94	57	515932	1.641	ppbv	96
45) t-1,3-Dichloropropene	9.36	75	131000	1.459	ppbv	89
46) cis-1,3-Dichloropropene	8.78	75	158024	1.516	ppbv	96
47) 1,1,2-Trichloroethane	9.56	97	105364	1.284	ppbv	94
48) Dibromochloromethane	10.39	129	164076	1.182	ppbv	99
49) Bromoform	13.14	173	148760	1.237	ppbv	99
50) 4-Methyl-2-Pentanone	8.82	43	351464	1.870	ppbv	98
51) 2-Hexanone	10.23	43	277614	1.916	ppbv #	97
52) Tetrachloroethene	11.32	164	94213	1.533	ppbv	98
53) Toluene	9.89	91	324118	1.548	ppbv	97
54) 1,2-Dibromoethane	10.70	107	159855	1.313	ppbv	99
56) 1,1,1,2-Tetrachloroethane	12.22	131	120095	1.178	ppbv #	1
57) Chlorobenzene	12.24	112	234466	1.242	ppbv #	95
58) Ethyl Benzene	12.80	91	449166	1.472	ppbv	94
59) m/p-Xylene	13.09	91	261535	0.959	ppbv #	1
60) o-Xylene	13.79	91	362935	1.324	ppbv	97
61) Styrene	13.62	104	272406	1.519	ppbv	98
62) Isopropylbenzene	14.77	105	487932	1.356	ppbv	97
63) 1,1,2,2-Tetrachloroethane	13.78	83	254622	1.181	ppbv	99
64) n-propylbenzene	15.66	120	64921	0.714	ppbv #	1
65) tert-Butylbenzene	16.85	119	431061	1.335	ppbv	98
66) Benzyl Chloride	17.09	91	222340	1.408	ppbv	100
67) sec-Butylbenzene	17.40	105	624781	1.350	ppbv	95
69) p-Isopropyltoluene	17.75	119	502296	1.333	ppbv	98
70) n-Butylbenzene	18.66	91	554449	1.349	ppbv	95
71) 2-Chlorotoluene	15.56	91	389775	1.464	ppbv	97
72) 4-Ethyltoluene	15.94	105	426917	1.390	ppbv	97
73) 1,3,5-Trimethylbenzene	16.10	105	418634	1.384	ppbv	87
74) 1,2,4-Trimethylbenzene	16.87	105	430888	1.288	ppbv	93
75) 1,3-Dichlorobenzene	17.10	146	235436	1.188	ppbv	99
76) 1,4-Dichlorobenzene	17.25	146	227441	1.216	ppbv	97
77) 1,2-Dichlorobenzene	17.93	146	227739	1.224	ppbv	97
78) Hexachloro-1,3-Butadiene	23.48	225	91219	0.534	ppbv #	18
79) Naphthalene	22.34	128	228207	0.762	ppbv #	95
80) Naphthalene,2-methyl-	25.07	142	115981	1.009	ppbv	99
81) 1,2,4-Trichlorobenzene	22.06	180	245000	1.322	ppbv	99

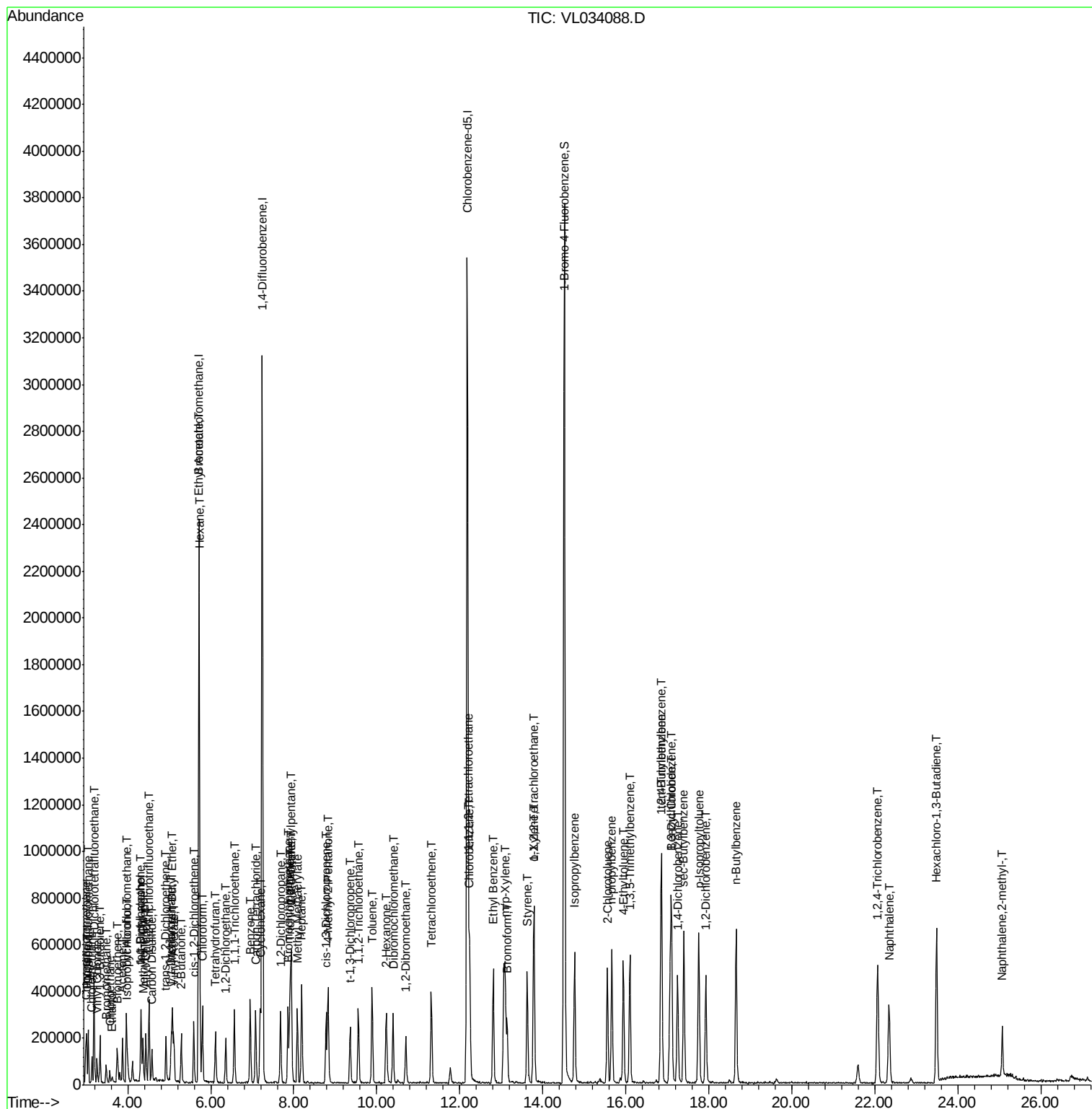
(#) = qualifier out of range (m) = manual integration (+) = signals summed

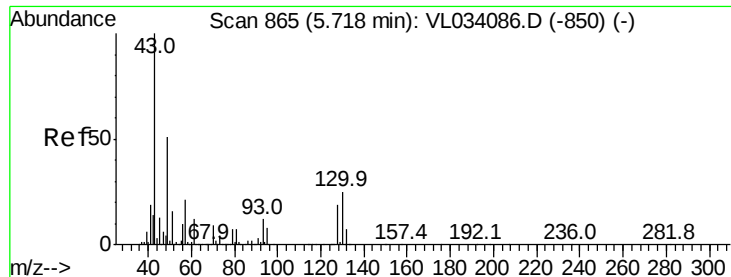
Data File : VL034088.D

```
Acq On       : 5 Aug 2019 14:01
Operator     : SY/AP
Sample       : VSTDICC001
Misc        : 400ml/MSV0A_L
ALS Vial     : 1 Sample Multipl
```

Instrument :
MSVOA_L
ClientSampleId :
VSTDICC001

Quant Time: Aug 05 14:27:08 2019
Quant Method : Z:\VQASRV\HPCHEM1\MSVOA_L\METHODS\VL080519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Aug 05 13:52:58 2019
QLast Update : Mon Aug 05 13:52:58 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.71 min Scan# 863

Delta R.T. -0.01 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

VSTDIC001

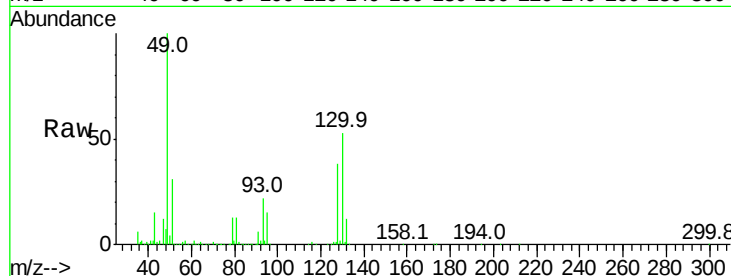
Tgt Ion: 49 Resp: 1093000

Ion Ratio Lower Upper

49 100

128 39.5 19.5 58.5

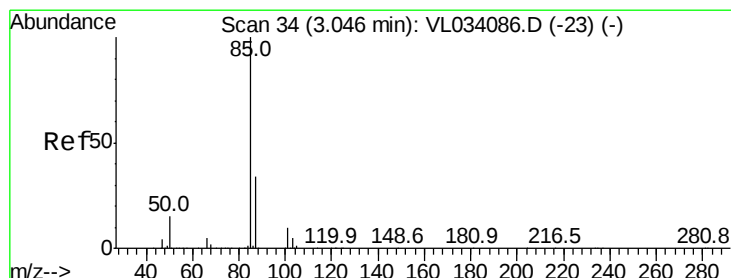
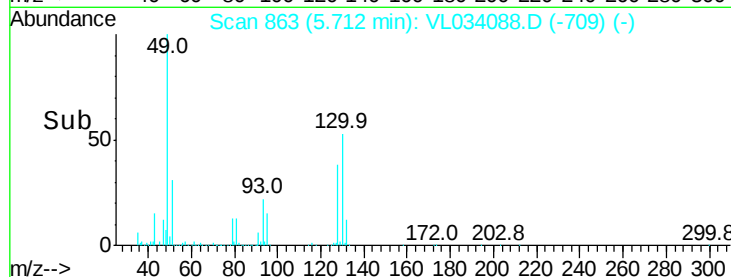
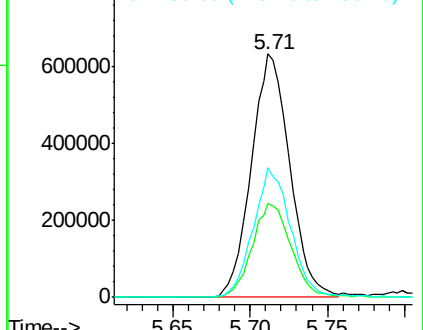
130 52.4 25.4 76.0



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: 0.741 ppbv

RT: 3.05 min Scan# 34

Delta R.T. 0.00 min

Lab File: VL034088.D

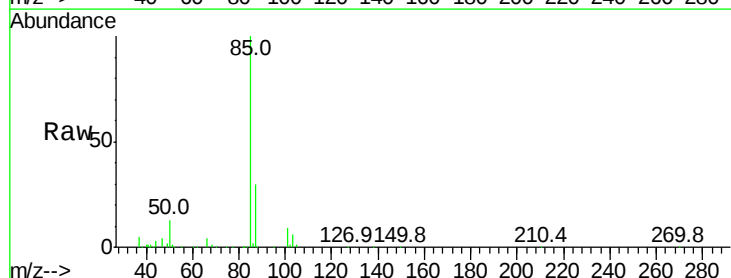
Acq: 5 Aug 2019 14:01

Tgt Ion: 85 Resp: 154525

Ion Ratio Lower Upper

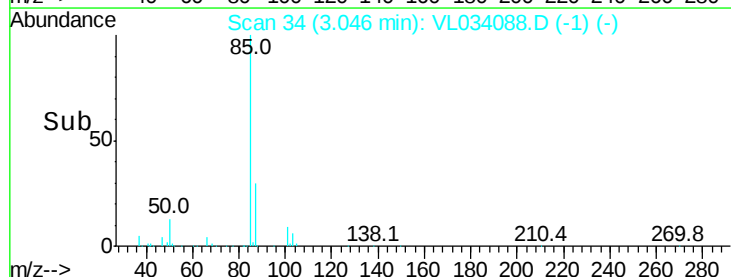
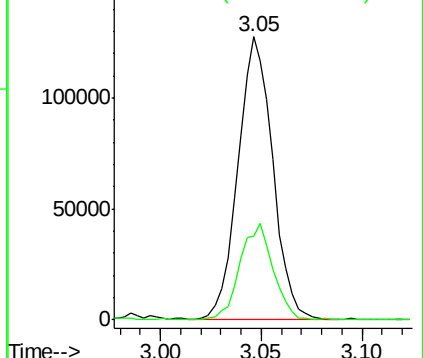
85 100

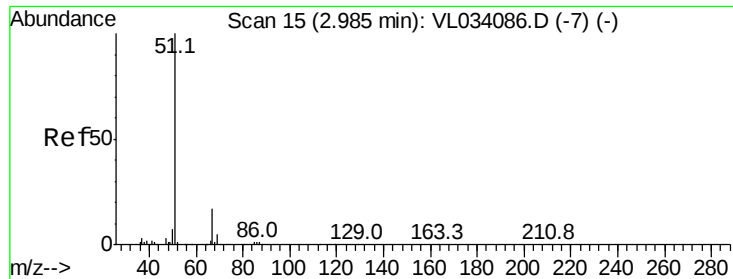
87 29.5 27.1 40.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

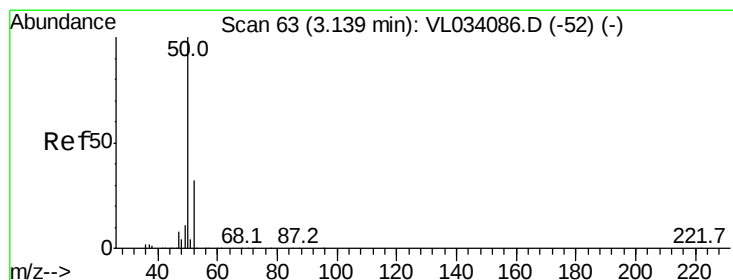
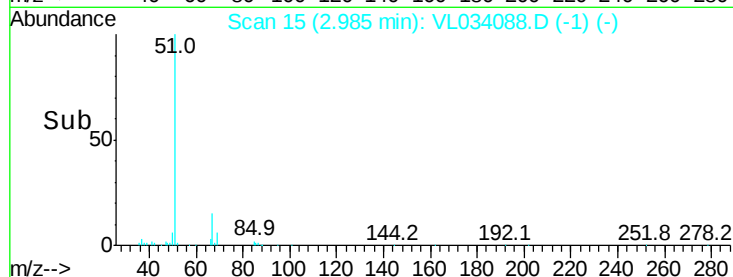
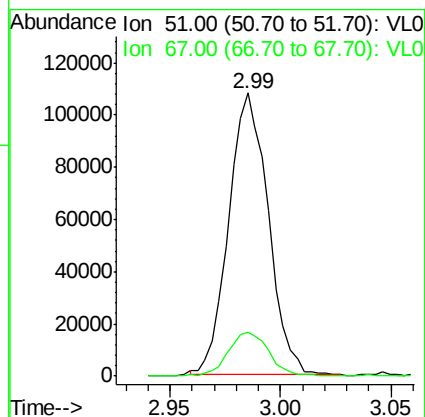
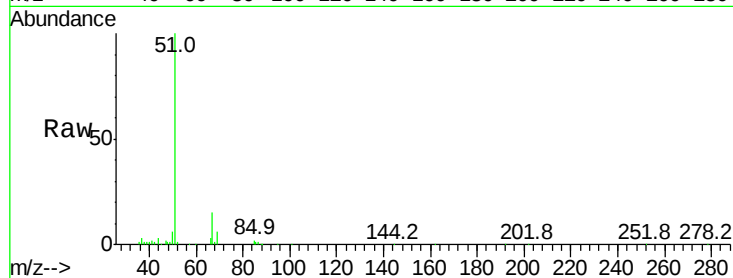




#3
Chlorodifluoromethane
Concen: 1.040 ppbv
RT: 2.99 min Scan# 15
Delta R.T. 0.00 min
Lab File: VL034088.D
Acq: 5 Aug 2019 14:01

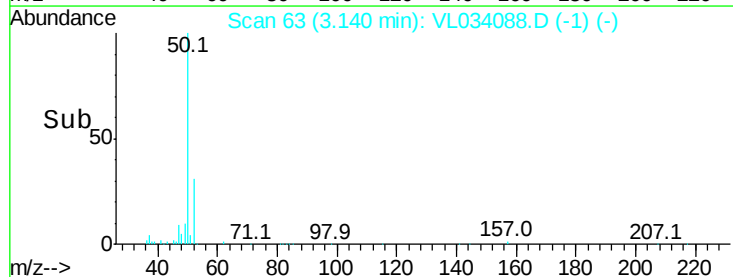
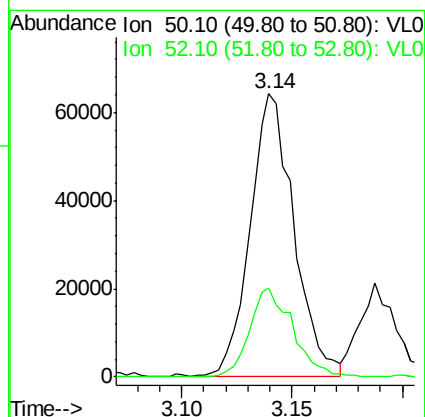
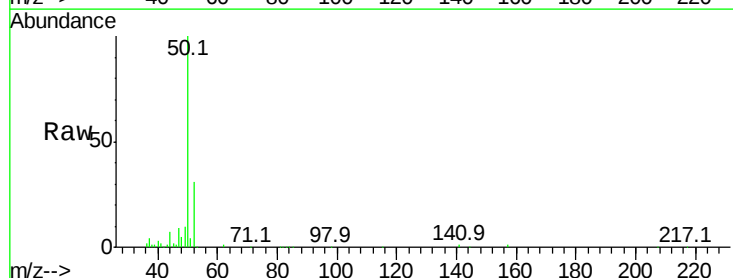
Instrument :
MSVOA_L
ClientSampleId :
VSTDIC001

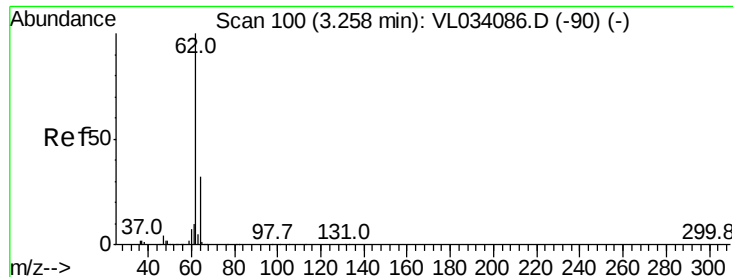
Tgt Ion: 51 Resp: 133963
Ion Ratio Lower Upper
51 100
67 15.6 13.3 19.9



#4
Chloromethane
Concen: 1.194 ppbv
RT: 3.14 min Scan# 63
Delta R.T. 0.00 min
Lab File: VL034088.D
Acq: 5 Aug 2019 14:01

Tgt Ion: 50 Resp: 88762
Ion Ratio Lower Upper
50 100
52 31.3 25.7 38.5





#5

Vinyl Chloride

Concen: 1.020 ppbv

RT: 3.26 min Scan# 100

Delta R.T. 0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

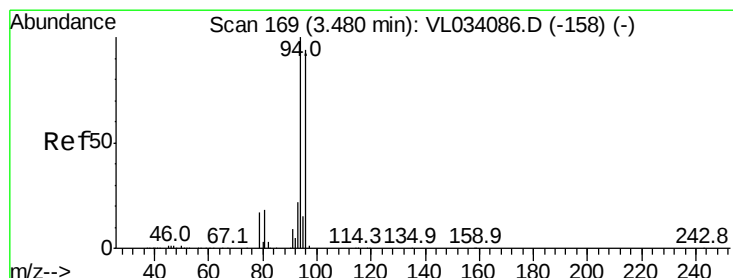
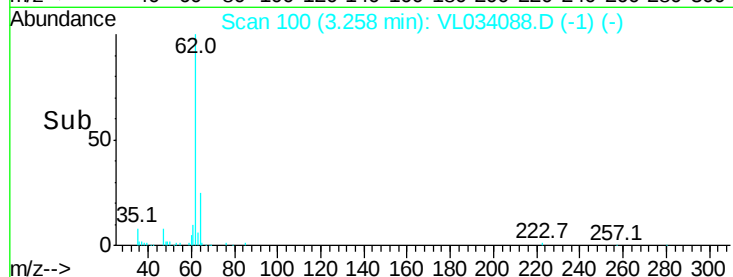
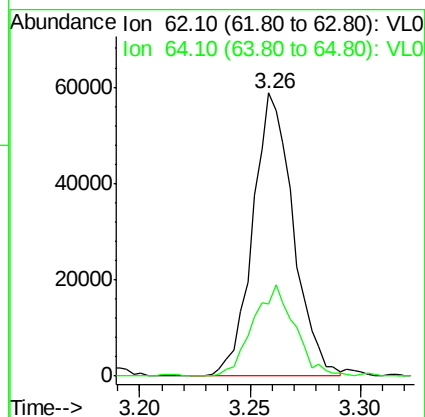
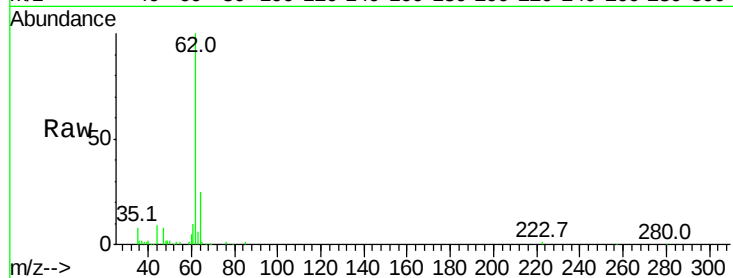
VSTDIC001

Tgt Ion: 62 Resp: 75086

Ion Ratio Lower Upper

62 100

64 25.4 25.8 38.6#



#6

Bromomethane

Concen: 0.715 ppbv

RT: 3.48 min Scan# 169

Delta R.T. 0.00 min

Lab File: VL034088.D

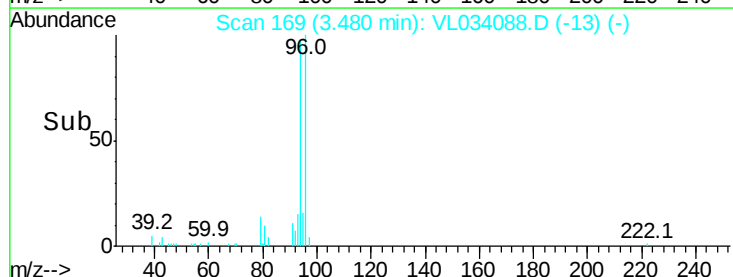
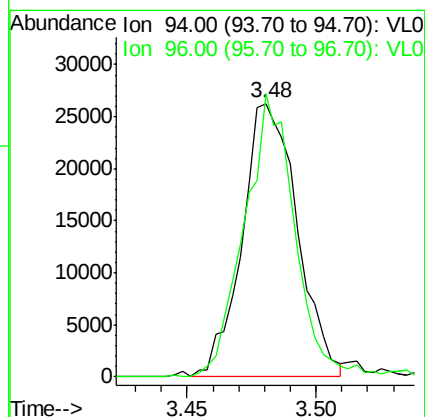
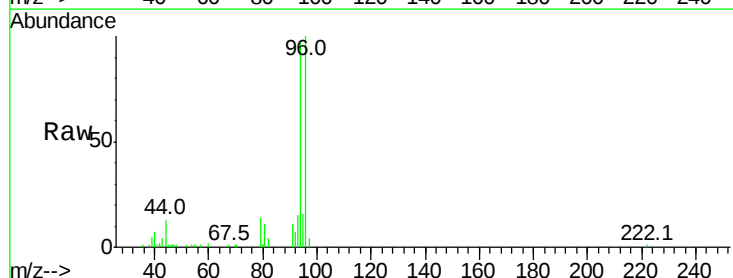
Acq: 5 Aug 2019 14:01

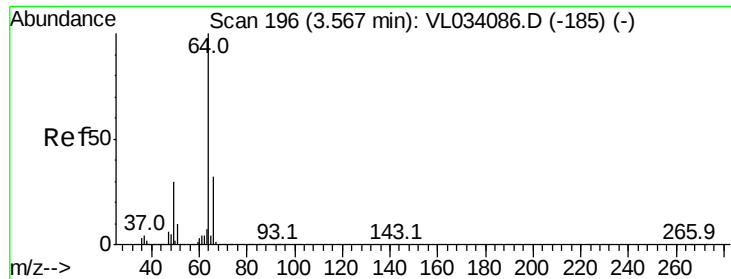
Tgt Ion: 94 Resp: 39379

Ion Ratio Lower Upper

94 100

96 103.4 75.3 112.9





#7

Chloroethane

Concen: 0.796 ppbv

RT: 3.57 min Scan# 196

Delta R.T. 0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

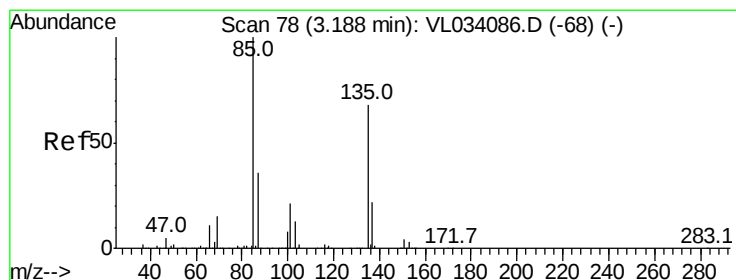
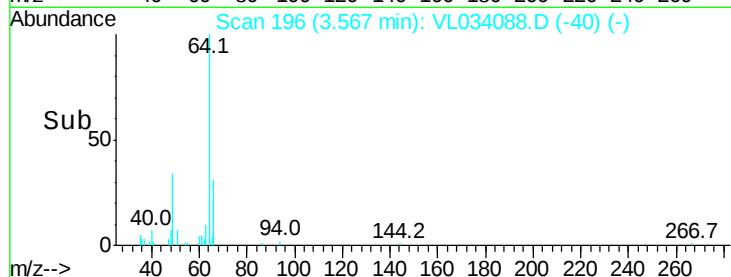
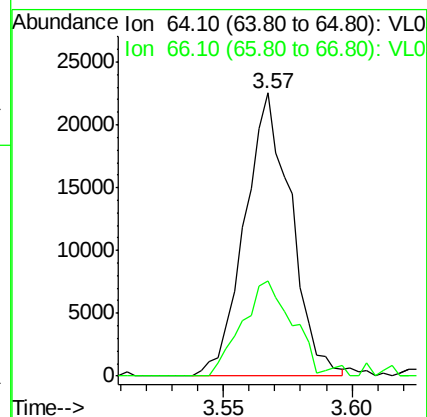
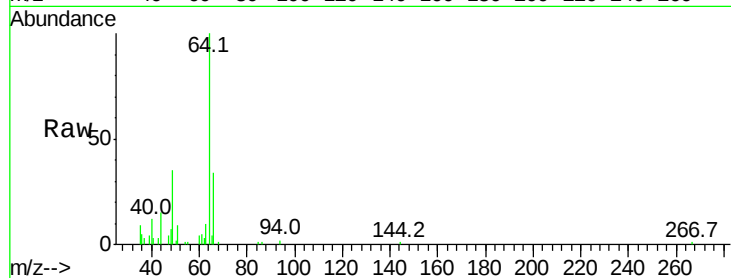
VSTDIC001

Tgt Ion: 64 Resp: 28259

Ion Ratio Lower Upper

64 100

66 33.8 25.2 37.8



#8

Dichlorotetrafluoroethane

Concen: 0.851 ppbv

RT: 3.19 min Scan# 78

Delta R.T. 0.00 min

Lab File: VL034088.D

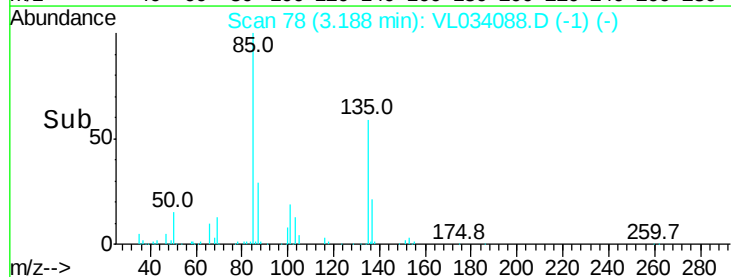
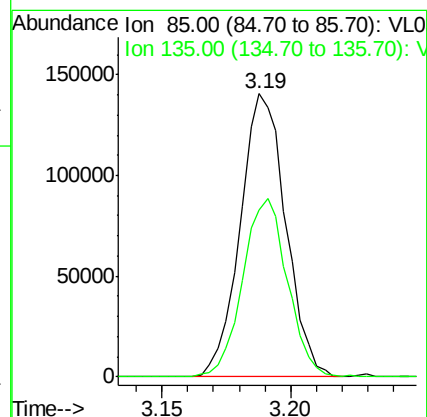
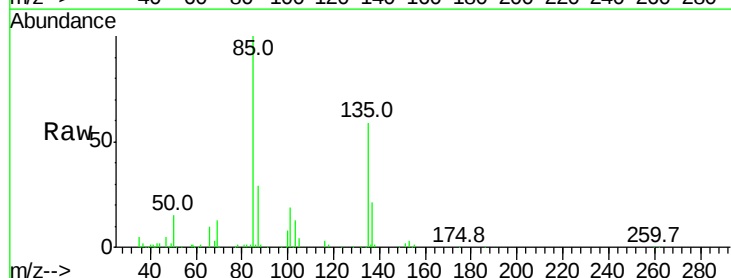
Acq: 5 Aug 2019 14:01

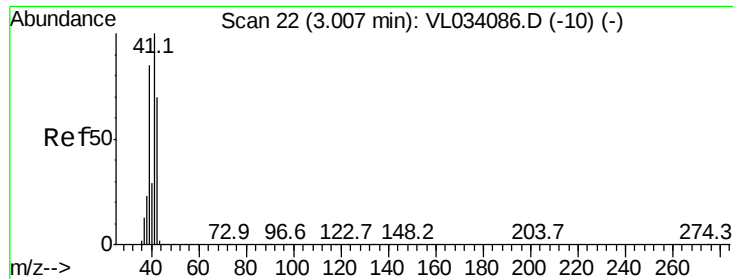
Tgt Ion: 85 Resp: 173638

Ion Ratio Lower Upper

85 100

135 61.9 54.0 81.0





#9

Propene

Concen: 1.598 ppbv

RT: 3.01 min Scan# 22

Delta R.T. 0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

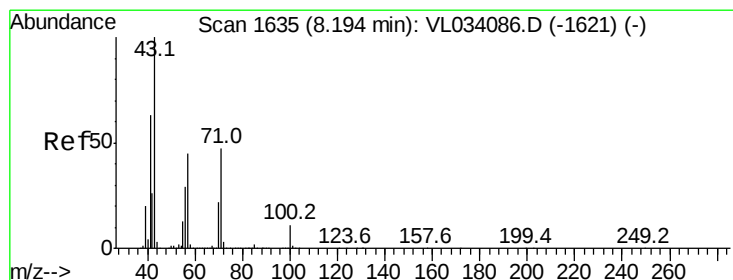
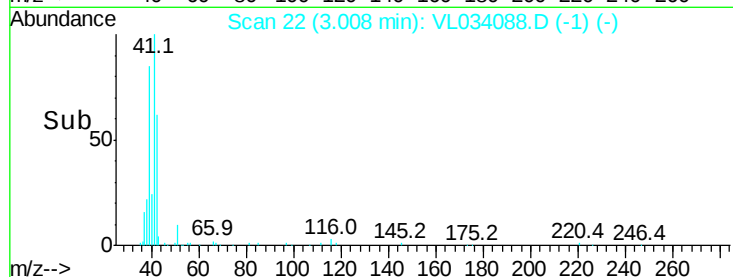
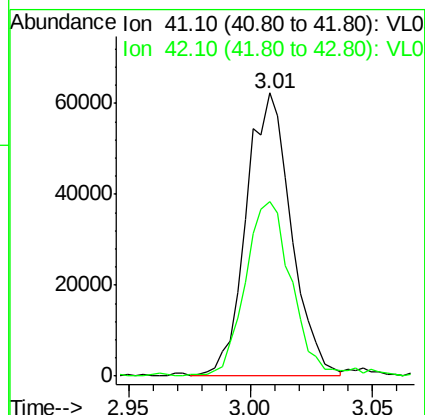
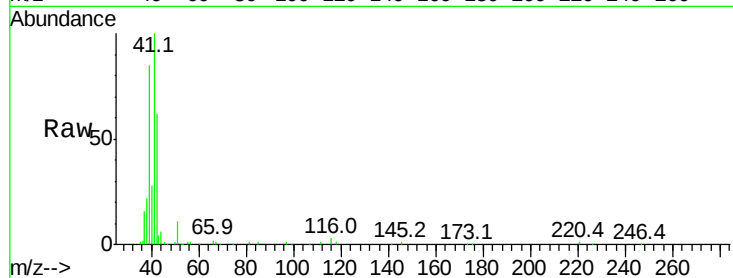
VSTDIC001

Tgt Ion: 41 Resp: 79471

Ion Ratio Lower Upper

41 100

42 63.3 55.8 83.6



#10

Heptane

Concen: 1.536 ppbv

RT: 8.19 min Scan# 1633

Delta R.T. -0.01 min

Lab File: VL034088.D

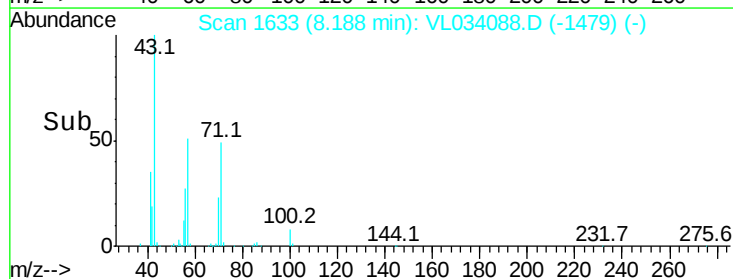
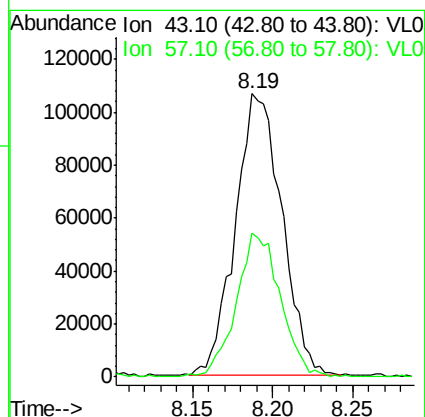
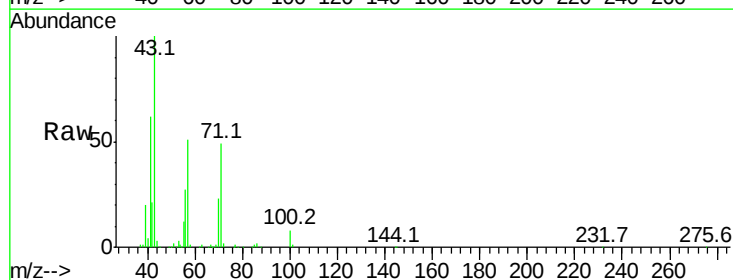
Acq: 5 Aug 2019 14:01

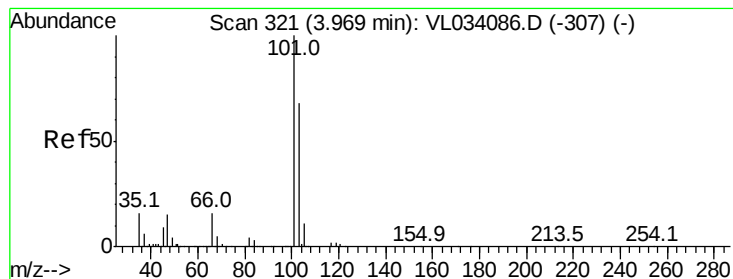
Tgt Ion: 43 Resp: 211593

Ion Ratio Lower Upper

43 100

57 48.3 37.2 55.8





#11

Trichlorofluoromethane

Concen: 0.831 ppbv

RT: 3.97 min Scan# 320

Delta R.T. -0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

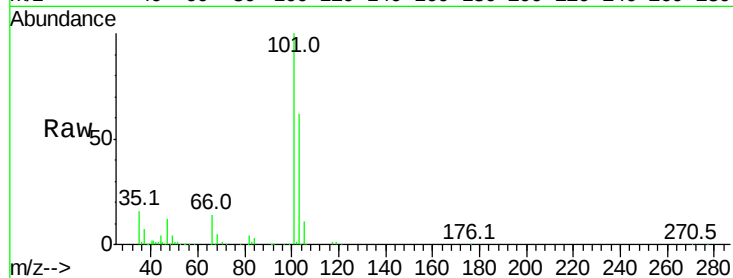
VSTDIC001

Tgt Ion:101 Resp: 173685

Ion Ratio Lower Upper

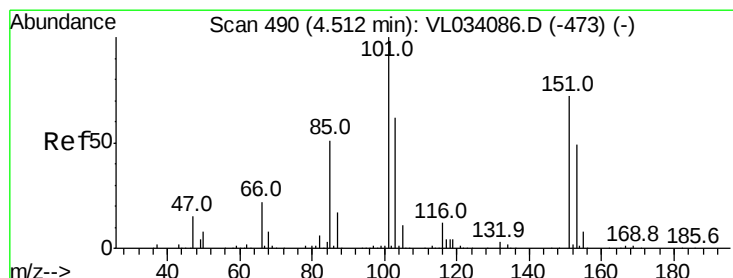
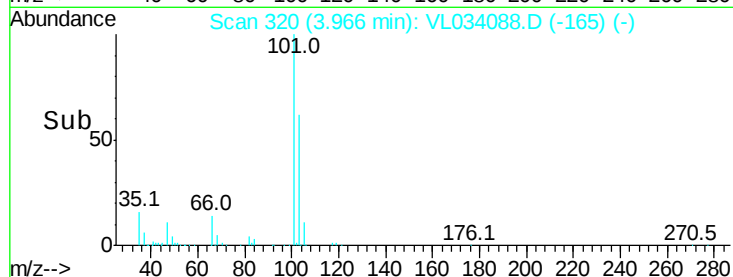
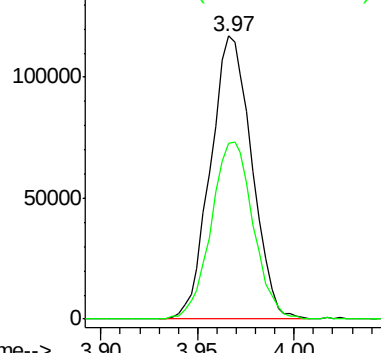
101 100

103 62.2 54.3 81.5



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: 0.783 ppbv

RT: 4.51 min Scan# 490

Delta R.T. 0.00 min

Lab File: VL034088.D

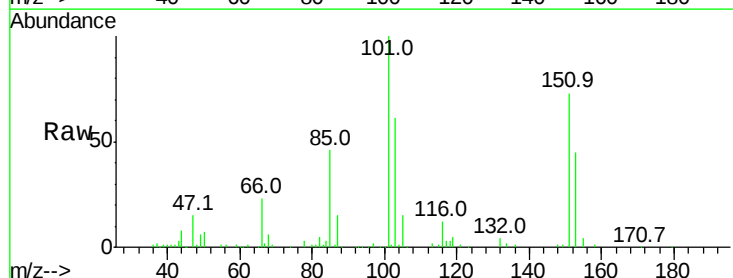
Acq: 5 Aug 2019 14:01

Tgt Ion:101 Resp: 124500

Ion Ratio Lower Upper

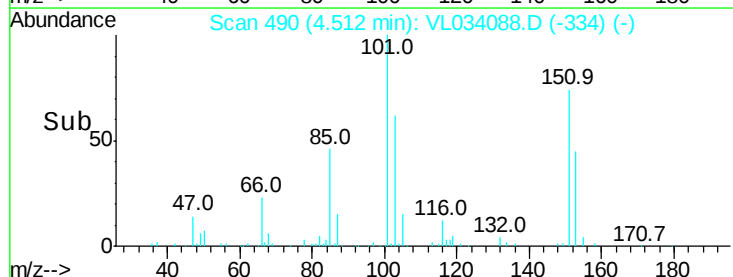
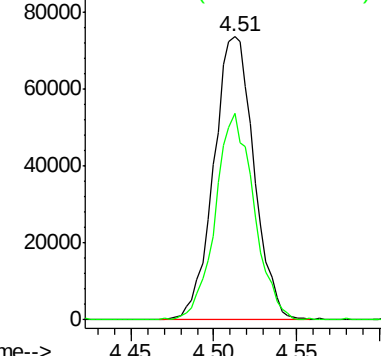
101 100

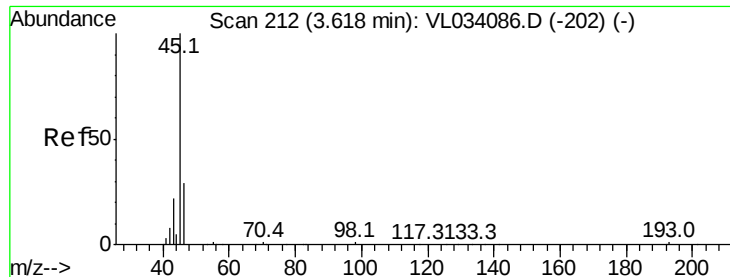
151 70.2 59.4 89.0



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 0.672 ppbv

RT: 3.62 min Scan# 212

Delta R.T. 0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

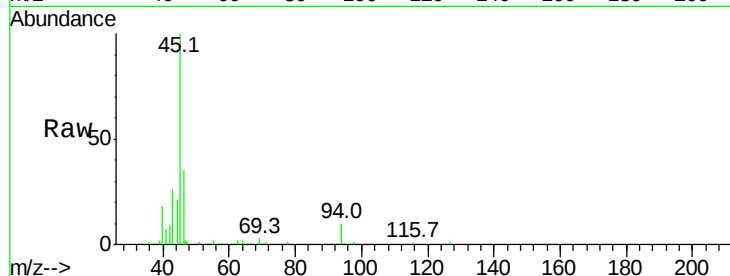
VSTDIC001

Tgt Ion: 45 Resp: 13557

Ion Ratio Lower Upper

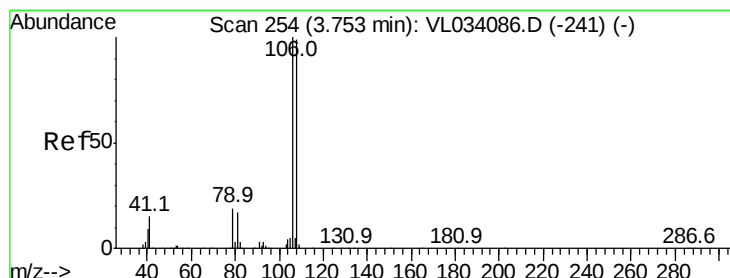
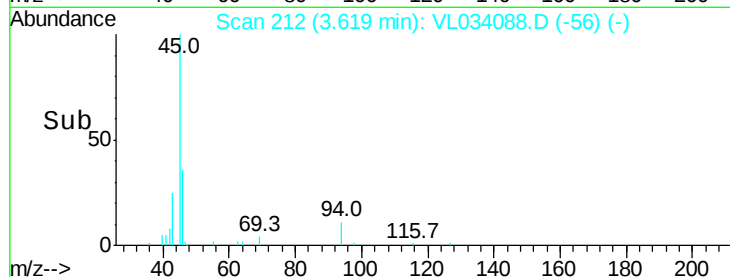
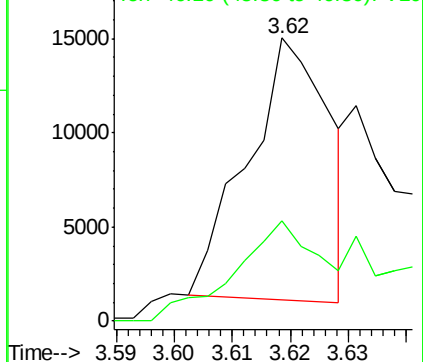
45 100

46 71.9 14.9 59.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0



#14

Bromoethene

Concen: 0.607 ppbv

RT: 3.75 min Scan# 253

Delta R.T. -0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

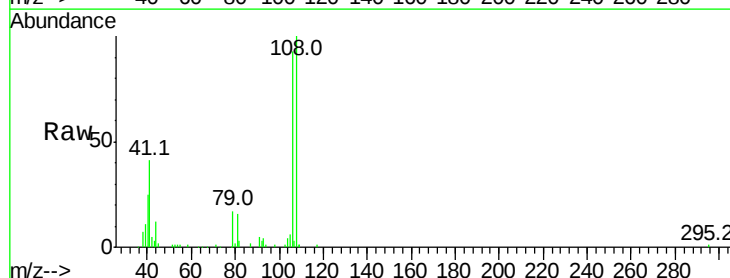
Tgt Ion: 108 Resp: 54104

Ion Ratio Lower Upper

108 100

106 100.8 85.0 127.6

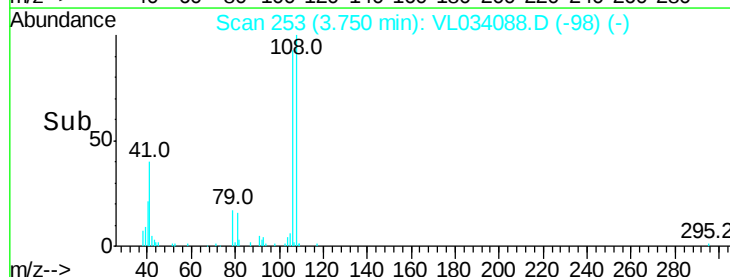
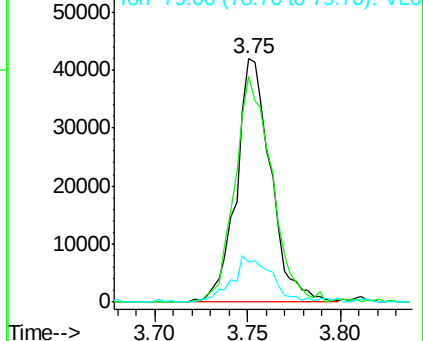
79 22.8 15.8 23.8

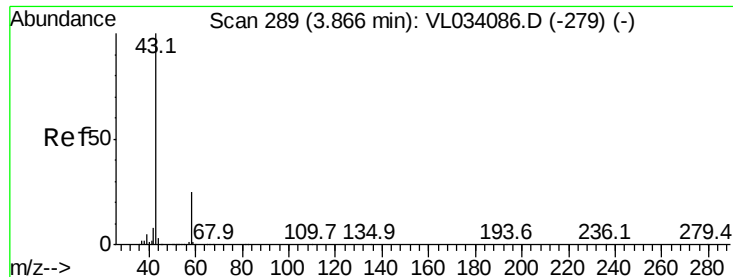


Abundance Ion 108.00 (107.70 to 108.70): V

Ion 106.00 (105.70 to 106.70): V

Ion 79.00 (78.70 to 79.70): VL0





#15

Acetone

Concen: 0.976 ppbv

RT: 3.87 min Scan# 291

Delta R.T. 0.01 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

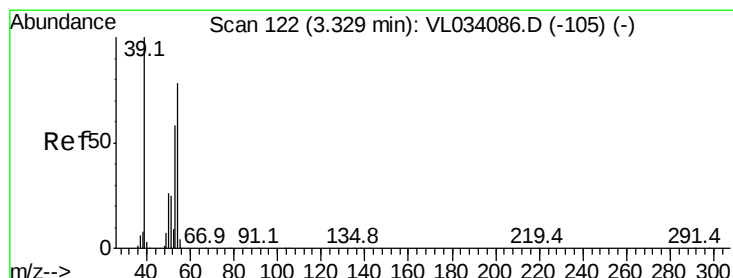
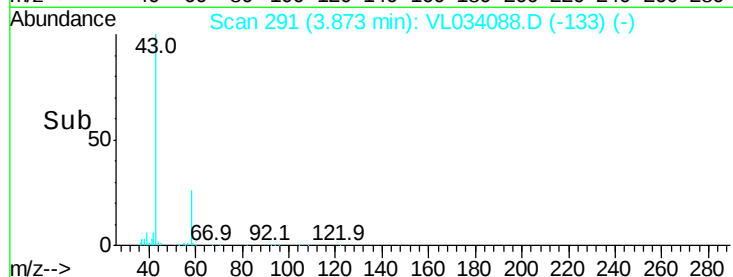
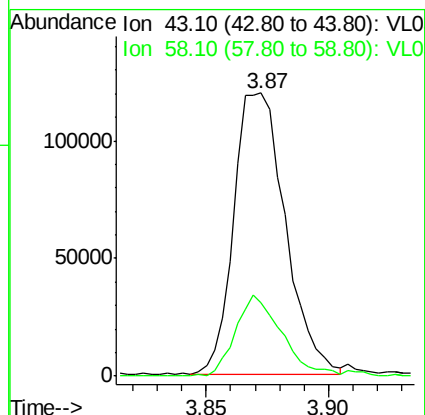
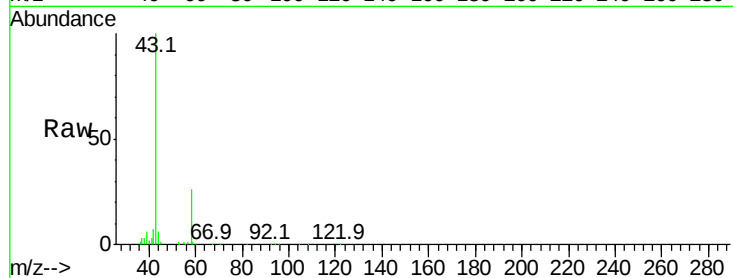
VSTDIC001

Tgt Ion: 43 Resp: 175581

Ion Ratio Lower Upper

43 100

58 26.6 20.6 30.8



#16

1,3-Butadiene

Concen: 1.104 ppbv

RT: 3.33 min Scan# 123

Delta R.T. 0.00 min

Lab File: VL034088.D

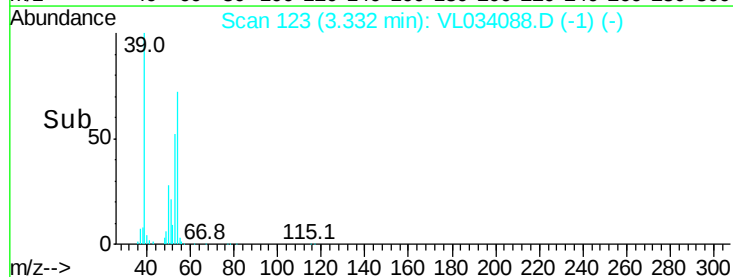
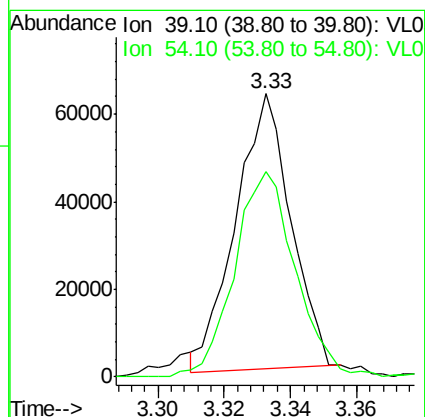
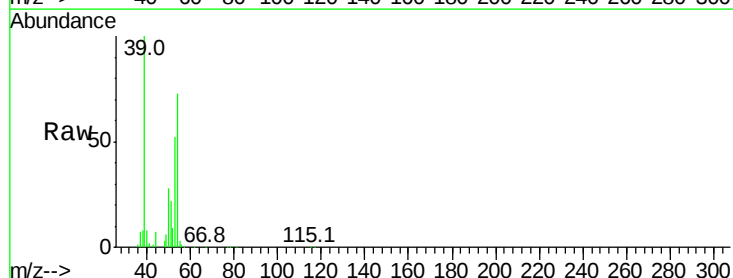
Acq: 5 Aug 2019 14:01

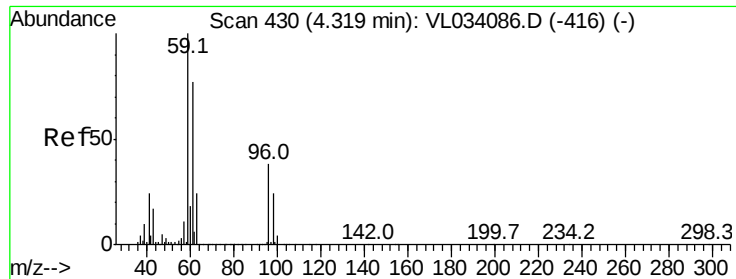
Tgt Ion: 39 Resp: 72682

Ion Ratio Lower Upper

39 100

54 83.7 62.7 94.1



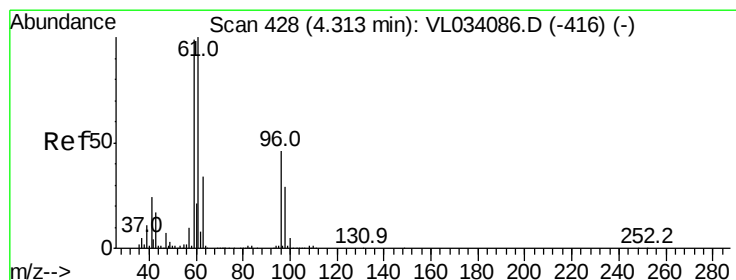
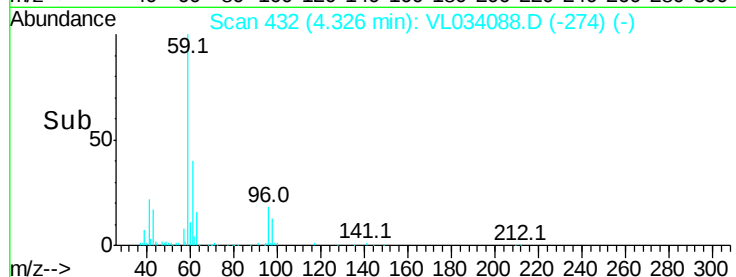
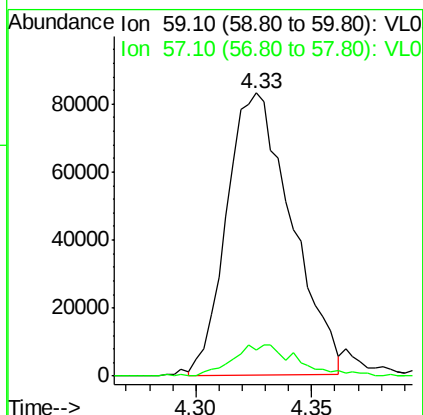
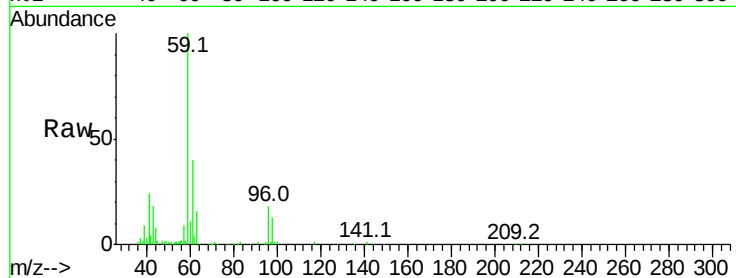


#17

tert-Butyl alcohol
 Concen: 1.230 ppbv
 RT: 4.33 min Scan# 432
 Delta R.T. 0.01 min
 Lab File: VL034088.D
 Acq: 5 Aug 2019 14:01

Instrument :
 MSVOA_L
 ClientSampleId :
 VSTDIC001

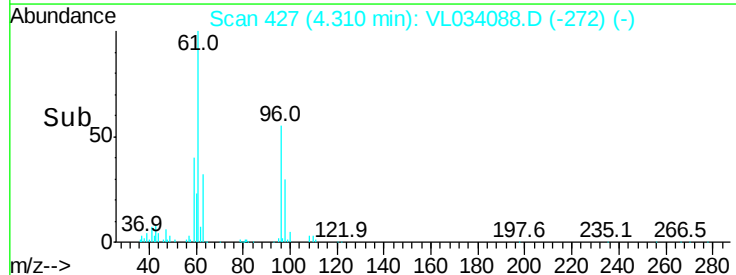
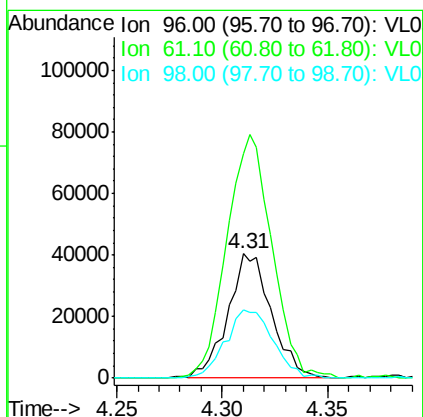
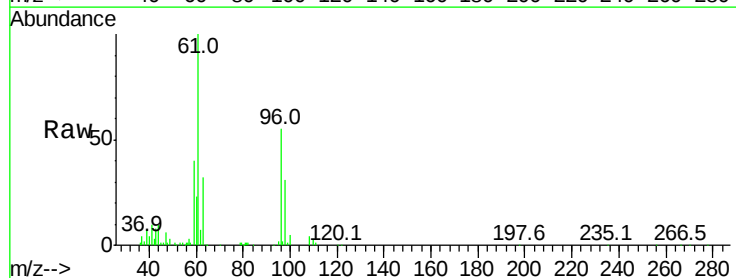
Tgt Ion: 59 Resp: 160688
 Ion Ratio Lower Upper
 59 100
 57 11.5 8.4 12.6

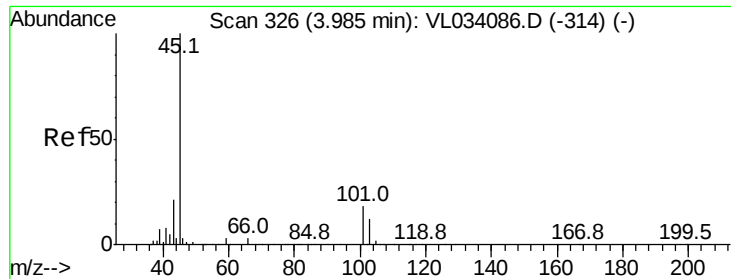


#18

1,1-Dichloroethene
 Concen: 0.828 ppbv
 RT: 4.31 min Scan# 427
 Delta R.T. -0.00 min
 Lab File: VL034088.D
 Acq: 5 Aug 2019 14:01

Tgt Ion: 96 Resp: 57631
 Ion Ratio Lower Upper
 96 100
 61 179.9 173.1 259.7
 98 55.2 50.3 75.5





#19

Isopropyl Alcohol

Concen: 1.240 ppbv

RT: 3.99 min Scan# 328

Delta R.T. 0.01 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :

MSVOA_L

ClientSampleId :

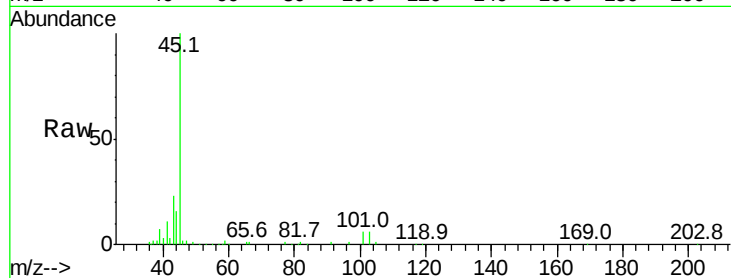
VSTDIC001

Tgt Ion: 45 Resp: 137615

Ion Ratio Lower Upper

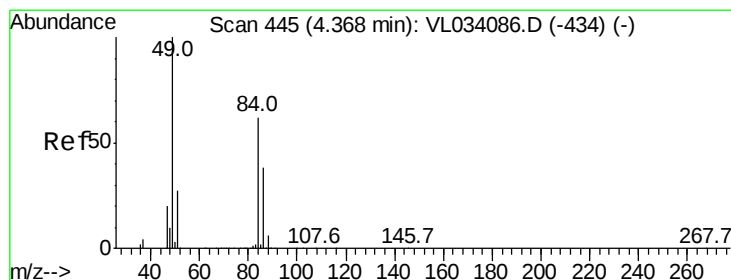
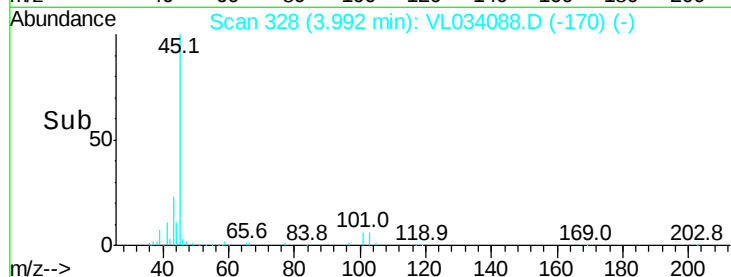
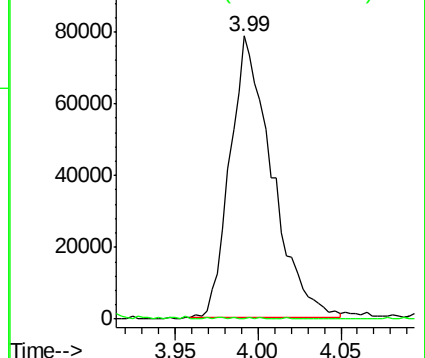
45 100

58 34.2 24.6 37.0



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 0.387 ppbv

RT: 4.36 min Scan# 444

Delta R.T. -0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Tgt Ion: 84 Resp: 25103

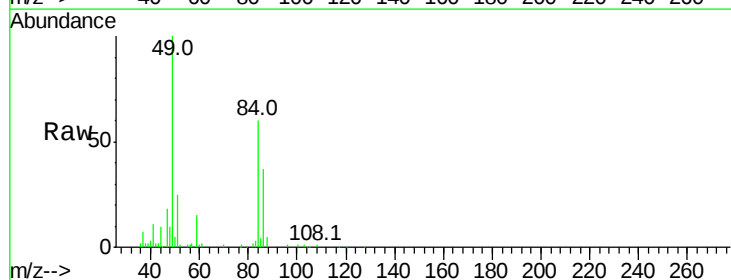
Ion Ratio Lower Upper

84 100

49 166.9 129.7 194.5

51 38.4 35.8 53.8

86 61.7 49.8 74.8

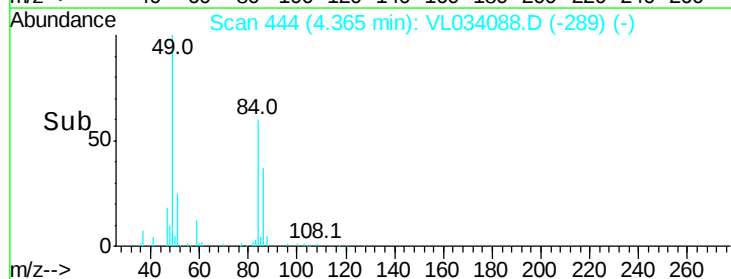
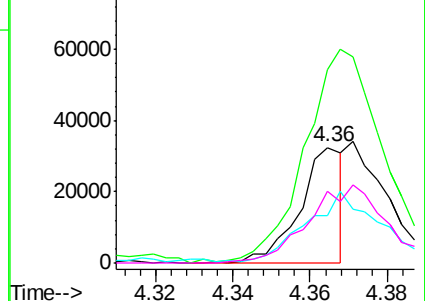


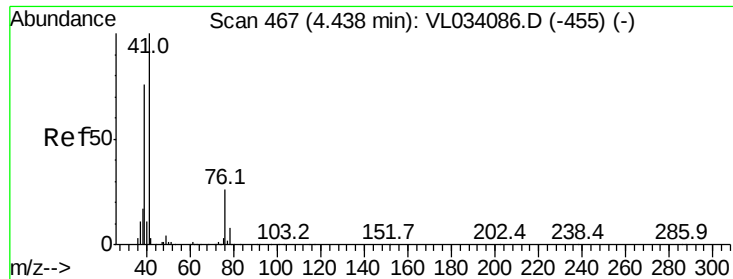
Abundance Ion 84.00 (83.70 to 84.70): VL0

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





#21

Allyl Chloride

Concen: 1.067 ppbv

RT: 4.44 min Scan# 468

Delta R.T. 0.00 min

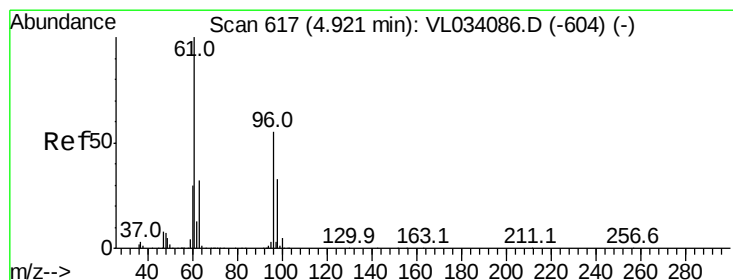
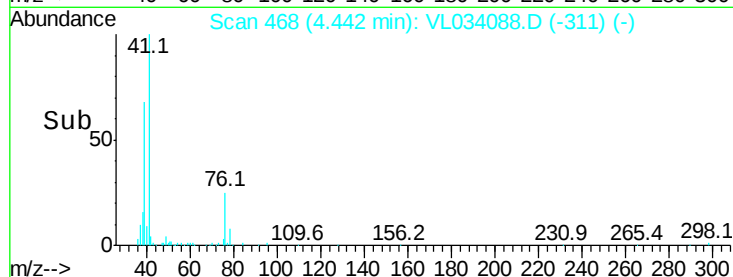
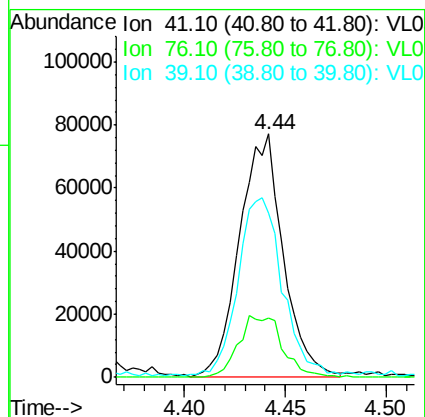
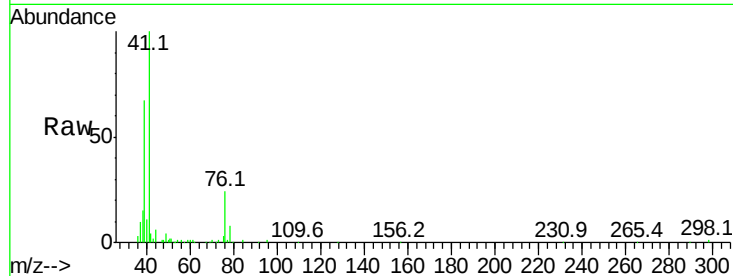
Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Instrument :
MSVOA_L
ClientSampleId :
VSTDIC001

Tgt Ion: 41 Resp: 116322

Ion	Ratio	Lower	Upper
41	100		
76	25.6	20.8	31.2
39	80.7	61.3	91.9



#22

trans-1,2-Dichloroethene

Concen: 0.749 ppbv

RT: 4.92 min Scan# 617

Delta R.T. 0.00 min

Lab File: VL034088.D

Acq: 5 Aug 2019 14:01

Tgt Ion: 96 Resp: 53105

Ion	Ratio	Lower	Upper
96	100		
61	152.9	144.2	216.2
98	46.3	48.0	72.0

