

Data File : VW011102.D
Acq On : 02 Jul 2019 10:21
Operator : SY/VA
Sample : VSTD02515
Misc : 5.00G/10ML/MSVOA_W/SOIL
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_W
ClientSampleId :
VSTD02505

Quant Time: Jul 02 10:47:20 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_W\METHOD\SOM2WLM070219S.M
Quant Title : VOC Analysis
QLast Update : Tue Jul 02 09:45:01 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	8.84	114	347499	25.00	ug/L	0.00
28) Chlorobenzene-d5	11.63	117	313898	25.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.56	152	154613	25.00	ug/L	0.00

System Monitoring Compounds

4) Vinyl Chloride-d3	2.35	65	149611	33.21	ug/L	0.00
7) Chloroethane-d5	2.89	69	104156	30.00	ug/L	0.00
10) 1,1-Dichloroethene-d2	4.02	63	305037	28.65	ug/L	0.00
20) 2-Butanone-d5	7.07	46	112819	53.34	ug/L	0.00
24) Chloroform-d	7.65	84	257407	27.47	ug/L	0.00
26) 1,2-Dichloroethane-d4	8.30	65	161203	27.75	ug/L	0.00
29) Benzene-d6	8.27	84	531385	28.20	ug/L	0.00
33) 1,2-Dichloropropane-d6	9.27	67	172034	27.63	ug/L	0.00
37) Toluene-d8	10.32	98	479481	28.20	ug/L	0.00
38) trans-1,3-Dichloropropene-	10.58	79	74484	27.03	ug/L	0.00
39) 2-Hexanone-d5	10.93	63	81738	58.41	ug/L	0.00
48) 1,1,2,2-Tetrachloroethane-	12.69	84	143928	28.04	ug/L	0.00
61) 1,2-Dichlorobenzene-d4	13.85	152	160600	27.52	ug/L	0.00

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.01	85	105101	21.517	ug/L	97
3) Chloromethane	2.21	50	108384	20.870	ug/L	100
5) Vinyl chloride	2.36	62	147885	23.816	ug/L	98
6) Bromomethane	2.78	94	69498	22.675	ug/L	99
8) Chloroethane	2.92	64	77437	23.547	ug/L	100
9) Trichlorofluoromethane	3.24	101	48569	23.161	ug/L	97
11) 1,1,2-Trichloro-1,2,2-trif	4.06	101	114456	23.486	ug/L	99
12) 1,1-Dichloroethene	4.04	96	114367	23.512	ug/L #	81
13) Acetone	4.12	43	84770	41.849	ug/L	98
14) Carbon disulfide	4.38	76	319006	22.151	ug/L	100
15) Methyl Acetate	4.67	43	81587	23.268	ug/L	100
16) Methylene chloride	4.92	84	122271	23.758	ug/L	95
17) Methyl tert-butyl Ether	5.42	73	178541	23.443	ug/L	100
18) trans-1,2-Dichloroethene	5.42	96	111180	22.731	ug/L	99
19) 1,1-Dichloroethane	6.21	63	230675	23.091	ug/L	98
21) 2-Butanone	7.16	43	121753	45.704	ug/L	99
22) cis-1,2-Dichloroethene	7.16	96	122621	23.300	ug/L	97
23) Bromochloromethane	7.51	128	51475	22.997	ug/L	96
25) Chloroform	7.67	83	217372	23.715	ug/L	100
27) 1,2-Dichloroethane	8.40	62	167528	23.325	ug/L	100
30) Cyclohexane	7.95	56	236118	22.747	ug/L	99
31) 1,1,1-Trichloroethane	7.87	97	162089	23.743	ug/L	100
32) Carbon tetrachloride	8.07	117	150144	23.284	ug/L	98
34) Benzene	8.32	78	488457	23.680	ug/L	100
35) Trichloroethene	9.09	95	119688	22.881	ug/L	99
36) Methylcyclohexane	9.34	83	220527	22.968	ug/L	100
40) 1,2-Dichloropropane	9.37	63	133213	23.464	ug/L	99
41) Bromodichloromethane	9.64	83	156345	23.466	ug/L	96
42) cis-1,3-Dichloropropene	10.07	75	202354	23.169	ug/L	99
43) 4-Methyl-2-pentanone	10.21	43	246151	46.720	ug/L	99

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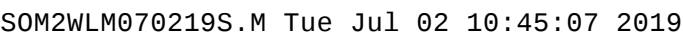
Instrument :
MSVOA_W
ClientSampleId :
VSTD02505

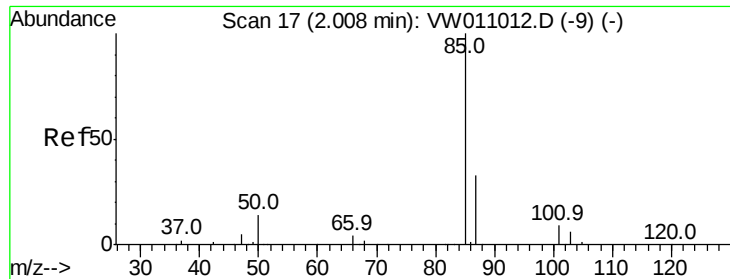
Quant Time: Jul 02 10:47:20 2019
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Quant Title : VOC Analysis
QLast Update : Tue Jul 02 09:45:01 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) Toluene	10.38	91	504522	23.391	ug/L	99
45) trans-1,3-Dichloropropene	10.60	75	167657	23.223	ug/L	99
46) 1,1,2-Trichloroethane	10.79	97	91496	23.515	ug/L	98
47) Tetrachloroethene	10.86	164	91679	23.110	ug/L	97
49) 2-Hexanone	10.97	43	183489	48.953	ug/L	100
50) Dibromochloromethane	11.13	129	100152	23.377	ug/L	99
51) 1,2-Dibromoethane	11.24	107	88564	23.537	ug/L	98
52) Chlorobenzene	11.66	112	305133	23.509	ug/L	99
53) Ethylbenzene	11.73	91	569279	23.427	ug/L	99
54) m,p-Xylene	11.84	106	210178	23.835	ug/L	96
55) o-xylene	12.16	106	200379	23.681	ug/L	99
56) Styrene	12.18	104	345906	23.706	ug/L	98
57) Isopropylbenzene	12.46	105	546335	23.799	ug/L	100
58) 1,1,2,2-Tetrachloroethane	12.71	83	123867	24.347	ug/L	100
59) 1,2,3-Trichloropropane	12.77	75	94049	23.809	ug/L	100
62) Bromoform	12.35	173	56600	22.871	ug/L	98
63) 1,3-Dichlorobenzene	13.50	146	232243	23.072	ug/L	100
64) 1,4-Dichlorobenzene	13.58	146	240123	23.748	ug/L	97
65) 1,2-Dichlorobenzene	13.87	146	218948	23.518	ug/L	99
66) 1,2-Dibromo-3-chloropropan	14.49	75	21189	22.243	ug/L	94
67) 1,3,5-Trichlorobenzene	14.63	180	178661	23.319	ug/L	99
68) 1,2,4-trichlorobenzene	15.14	180	152918	23.550	ug/L	99
69) Naphthalene	15.37	128	330122	23.825	ug/L	99
70) 1,2,3-Trichlorobenzene	15.56	180	141937	24.064	ug/L	100

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

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#2

Dichlorodifluoromethane

Concen: 21.517 ug/L

RT: 2.01 min Scan# 17

Delta R.T. -0.00 min

Lab File: VW011012.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

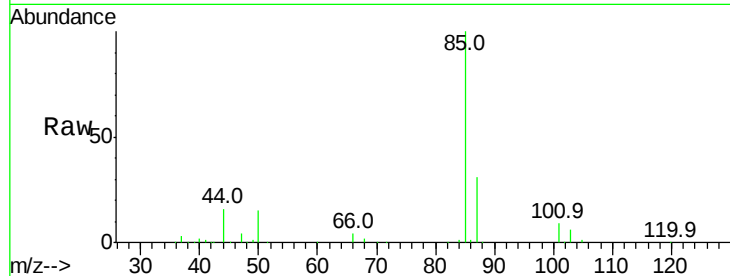
VSTD02505

Tgt Ion: 85 Resp: 105101

Ion Ratio Lower Upper

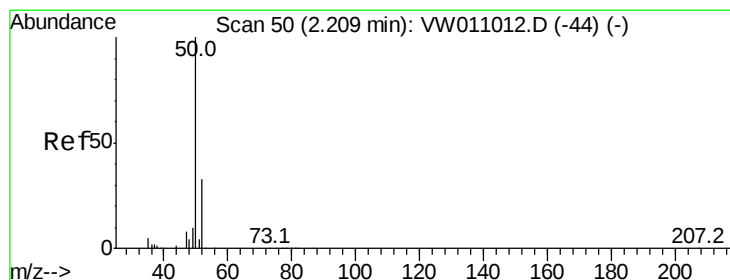
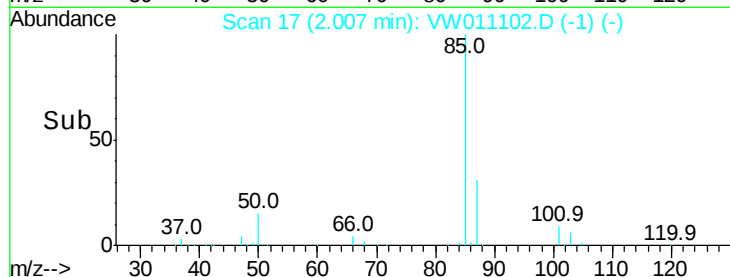
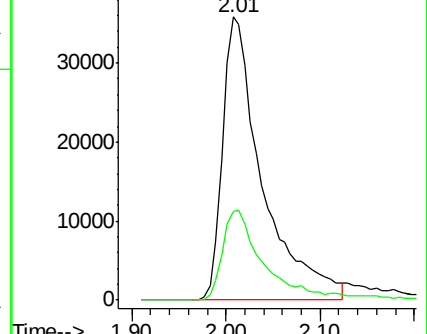
85 100

87 29.5 21.8 40.6



Abundance Ion 85.00 (84.70 to 85.70): VW

Ion 87.00 (86.70 to 87.70): VW



#3

Chloromethane

Concen: 20.870 ug/L

RT: 2.21 min Scan# 50

Delta R.T. -0.00 min

Lab File: VW011012.D

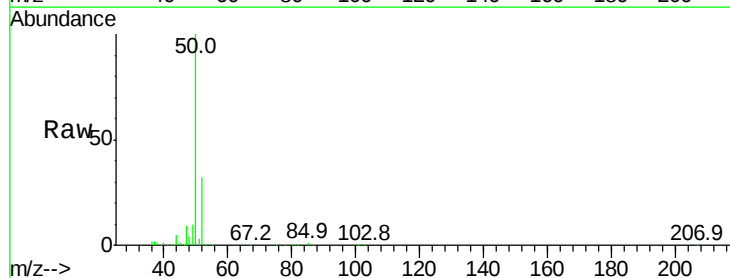
Acq: 02 Jul 2019 10:21

Tgt Ion: 50 Resp: 108384

Ion Ratio Lower Upper

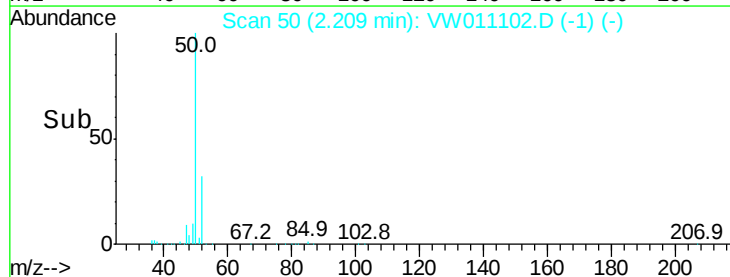
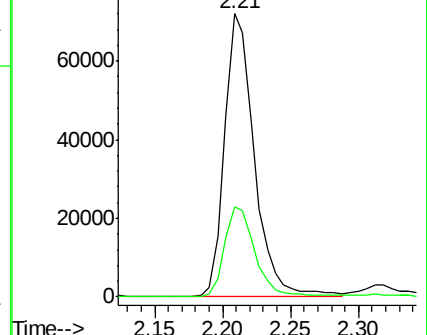
50 100

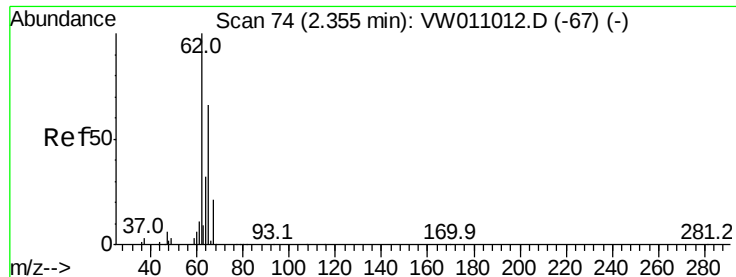
52 31.9 22.3 41.5



Abundance Ion 50.00 (49.70 to 50.70): VW

Ion 52.00 (51.70 to 52.70): VW





#5

Vinyl chloride

Concen: 23.816 ug/L

RT: 2.36 min Scan# 75

Delta R.T. 0.01 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

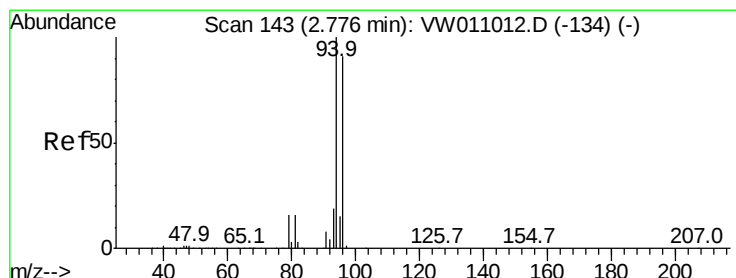
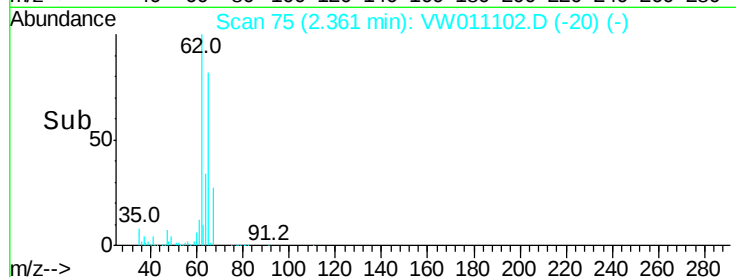
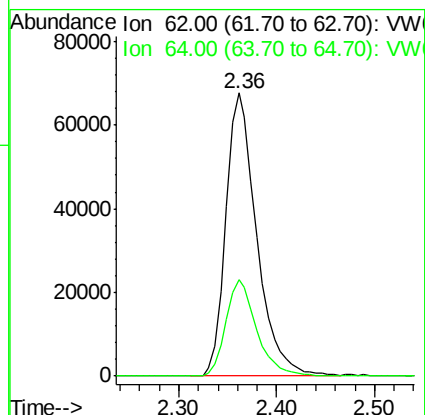
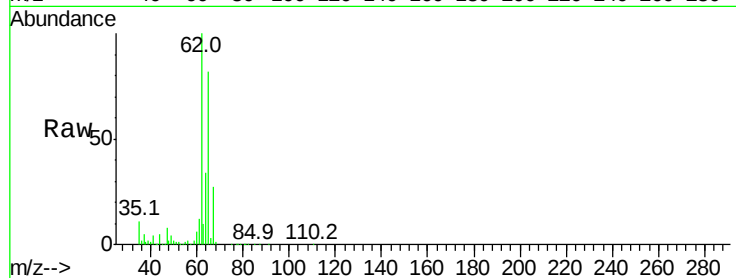
VSTD02505

Tgt Ion: 62 Resp: 147885

Ion Ratio Lower Upper

62 100

64 34.1 22.9 42.5



#6

Bromomethane

Concen: 22.675 ug/L

RT: 2.78 min Scan# 143

Delta R.T. -0.00 min

Lab File: VW011102.D

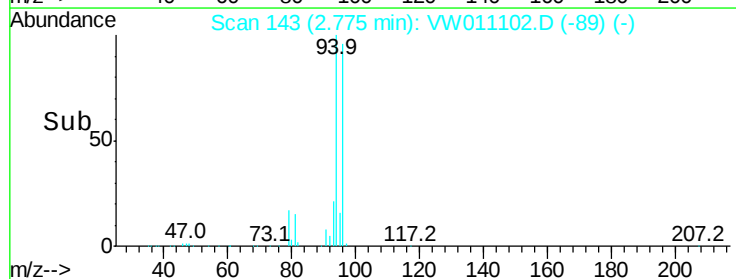
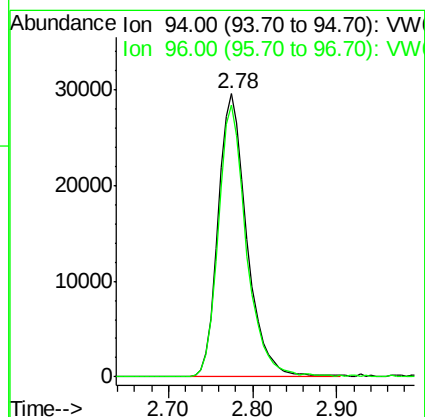
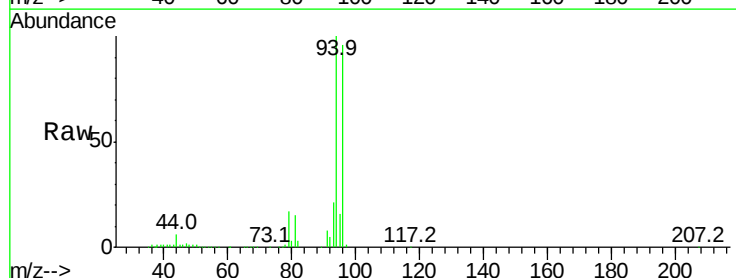
Acq: 02 Jul 2019 10:21

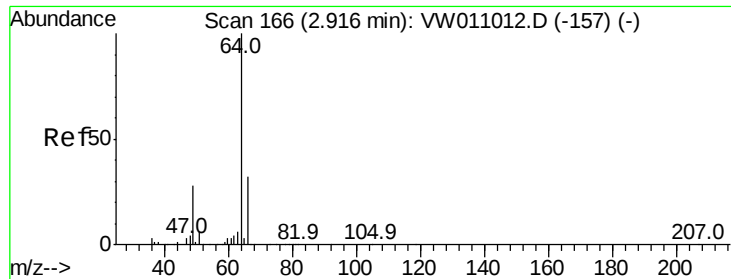
Tgt Ion: 94 Resp: 69498

Ion Ratio Lower Upper

94 100

96 93.3 9.2 175.8





#8

Chloroethane

Concen: 23.547 ug/L

RT: 2.92 min Scan# 167

Delta R.T. 0.01 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

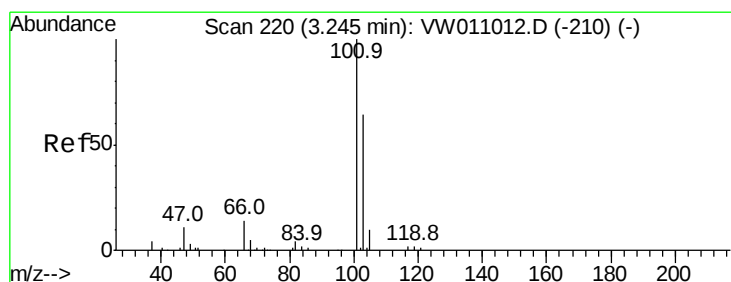
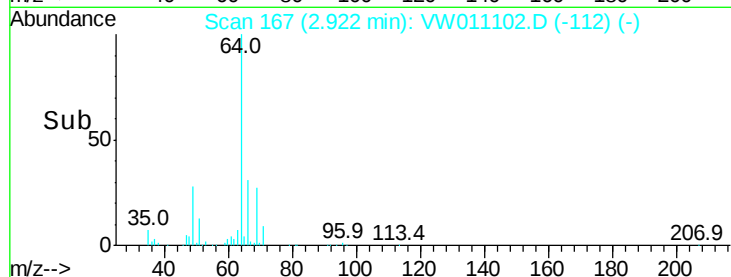
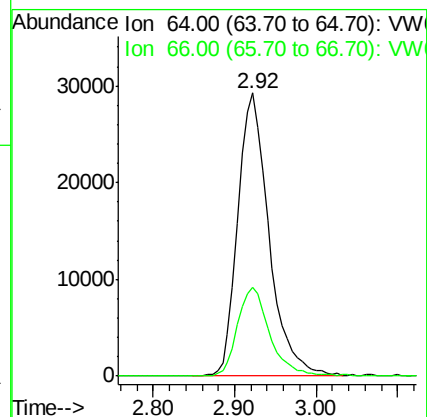
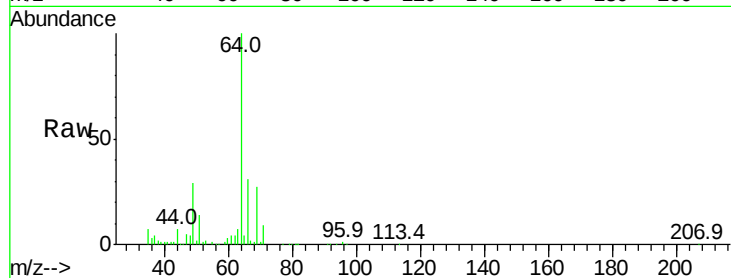
VSTD02505

Tgt Ion: 64 Resp: 77437

Ion Ratio Lower Upper

64 100

66 31.3 21.8 40.4



#9

Trichlorofluoromethane

Concen: 23.161 ug/L

RT: 3.24 min Scan# 220

Delta R.T. -0.00 min

Lab File: VW011102.D

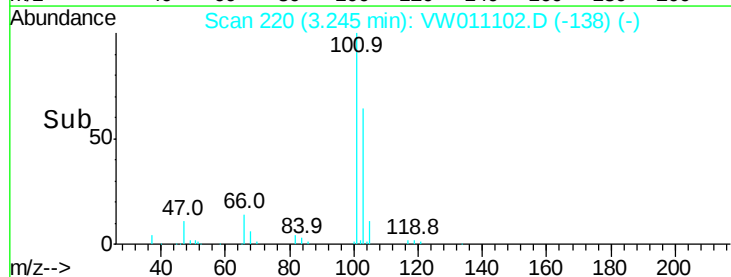
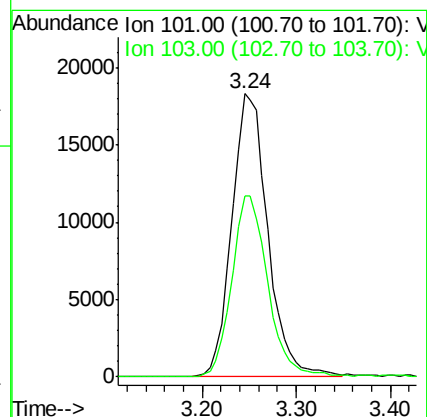
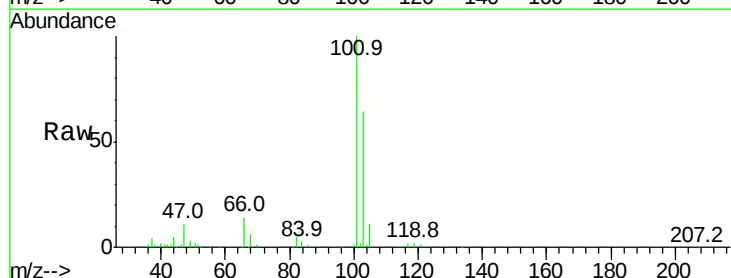
Acq: 02 Jul 2019 10:21

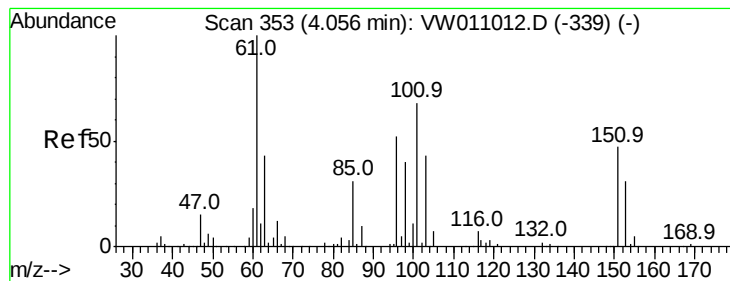
Tgt Ion: 101 Resp: 48569

Ion Ratio Lower Upper

101 100

103 63.7 46.4 86.2





#11

1,1,2-Trichloro-1,2,2-trifluoroethane

Concen: 23.486 ug/L

RT: 4.06 min Scan# 353

Delta R.T. -0.00 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

VSTD02505

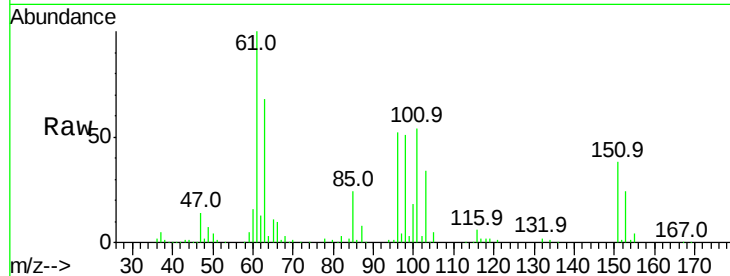
Tgt Ion:101 Resp: 114456

Ion Ratio Lower Upper

101 100

85 42.3 35.8 53.8

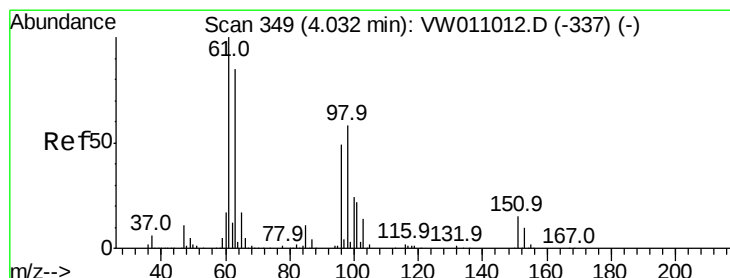
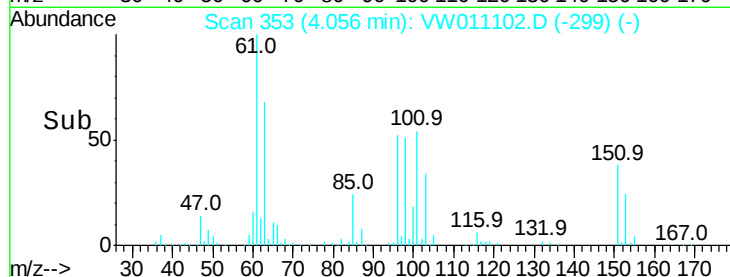
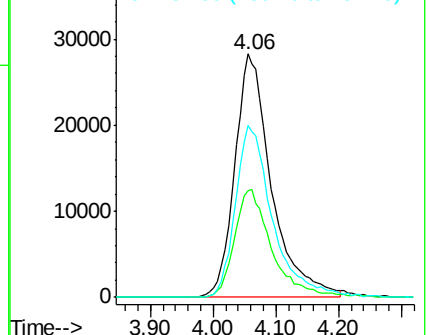
151 71.1 56.9 85.3



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 85.00 (84.70 to 85.70): VW

Ion 151.00 (150.70 to 151.70): V



#12

1,1-Dichloroethene

Concen: 23.512 ug/L

RT: 4.04 min Scan# 350

Delta R.T. 0.01 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

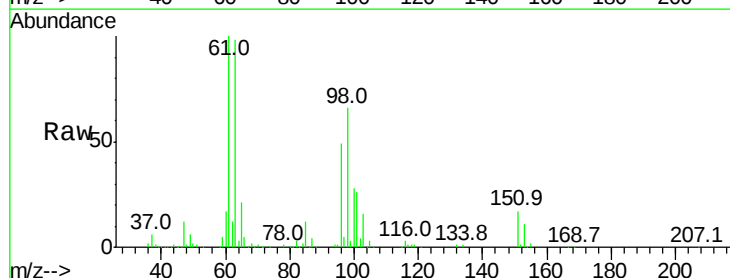
Tgt Ion: 96 Resp: 114367

Ion Ratio Lower Upper

96 100

61 203.1 144.5 268.3

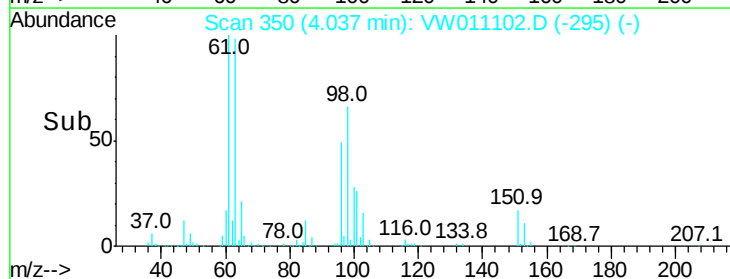
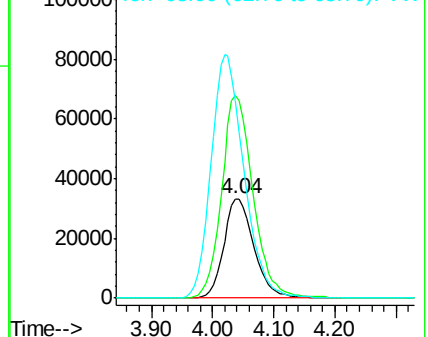
63 198.4 102.3 189.9#

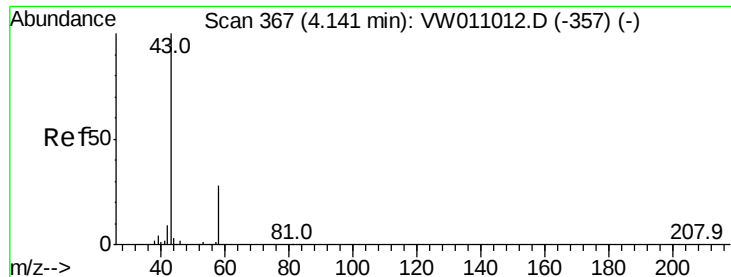


Abundance Ion 96.00 (95.70 to 96.70): VW

Ion 61.00 (60.70 to 61.70): VW

Ion 63.00 (62.70 to 63.70): VW





#13

Acetone

Concen: 41.849 ug/L

RT: 4.12 min Scan# 363

Delta R.T. -0.02 min

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ClientSampleId :

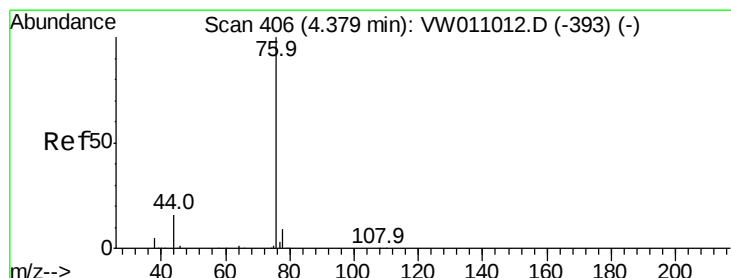
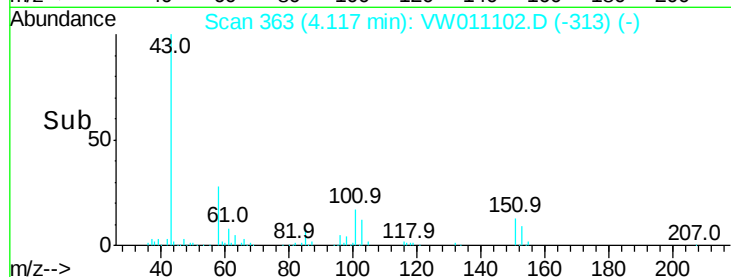
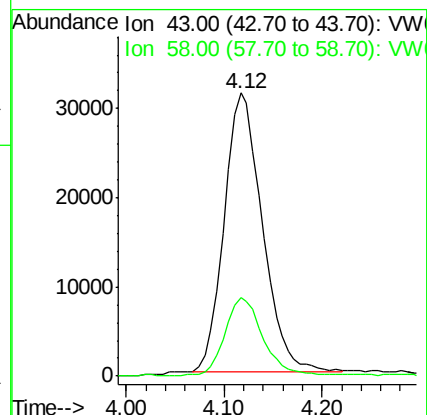
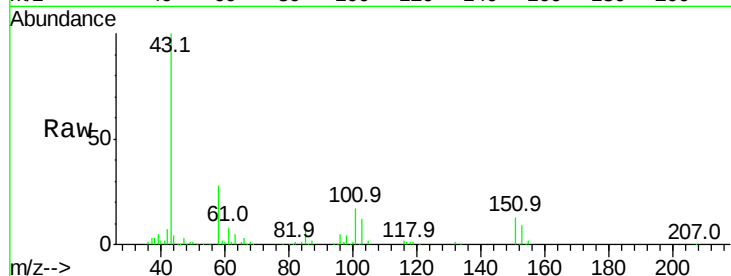
VSTD02505

Tgt Ion: 43 Resp: 84770

Ion Ratio Lower Upper

43 100

58 27.5 0.0 53.2



#14

Carbon disulfide

Concen: 22.151 ug/L

RT: 4.38 min Scan# 407

Delta R.T. 0.01 min

Lab File: VW011102.D

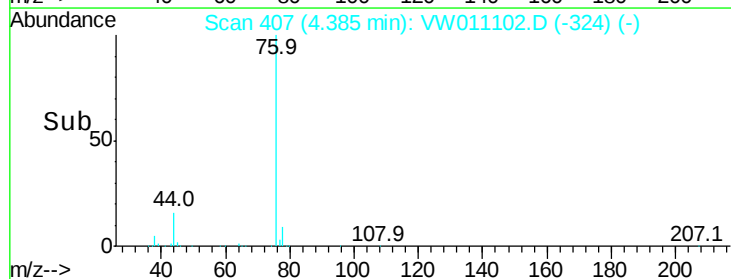
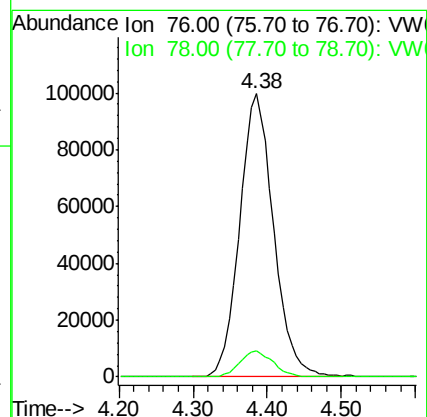
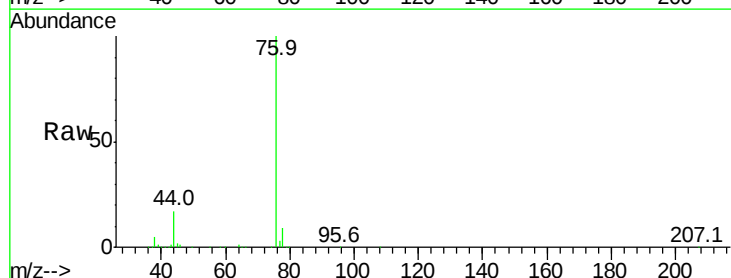
Acq: 02 Jul 2019 10:21

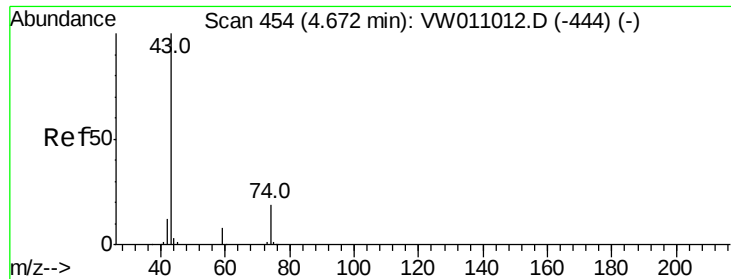
Tgt Ion: 76 Resp: 319006

Ion Ratio Lower Upper

76 100

78 9.1 7.2 10.8

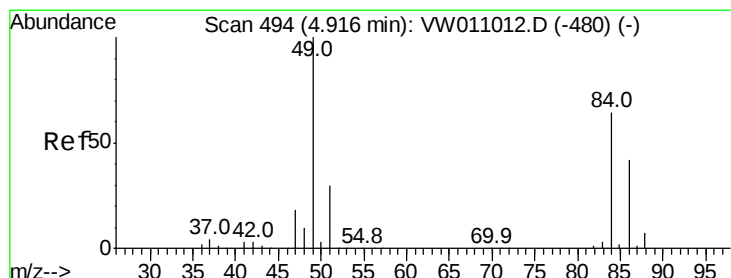
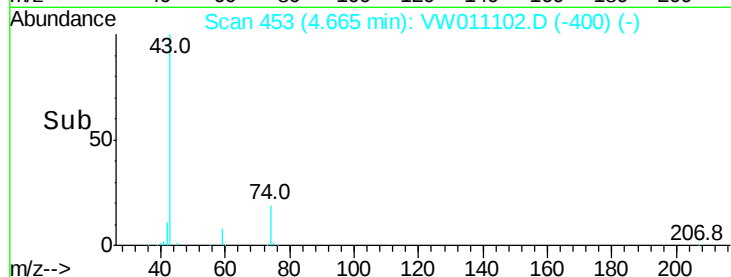
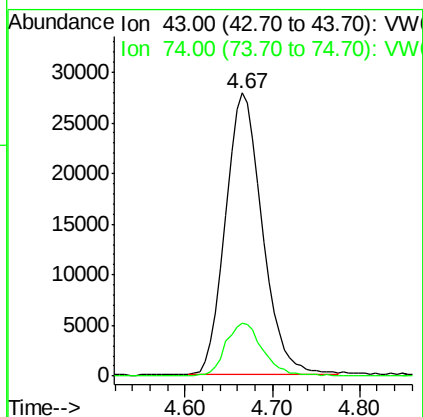
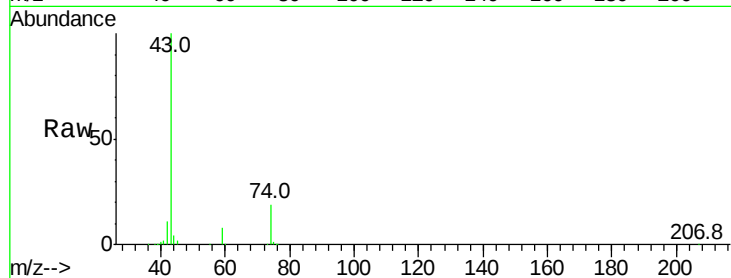




#15
Methyl Acetate
Concen: 23.268 ug/L
RT: 4.67 min Scan# 453
Delta R.T. -0.01 min
Lab File: VW011102.D
Acq: 02 Jul 2019 10:21

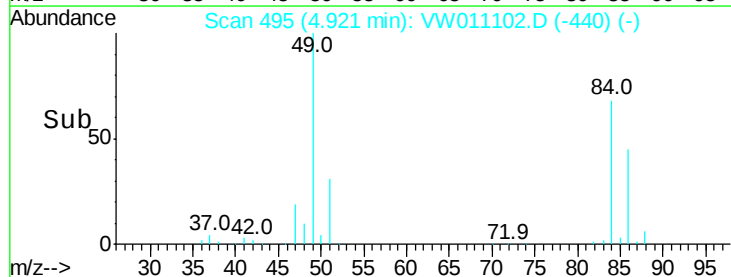
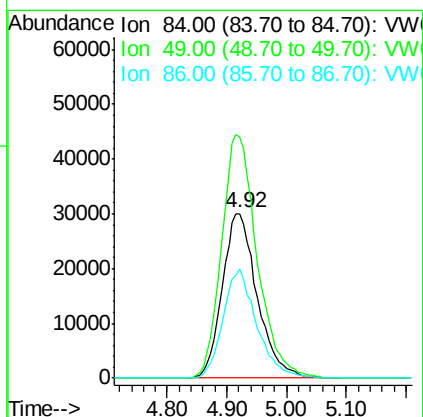
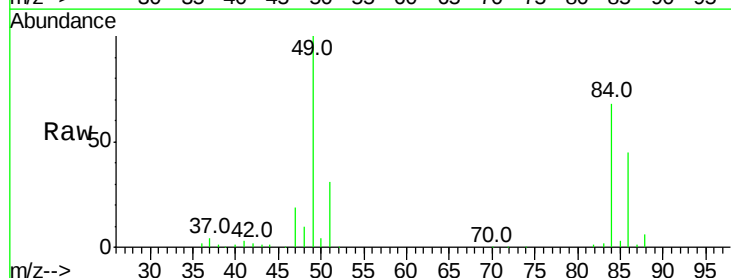
Instrument :
MSVOA_W
ClientSampleId :
VSTD02505

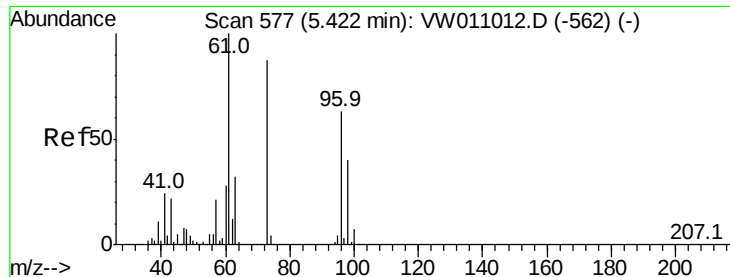
Tgt Ion: 43 Resp: 81587
Ion Ratio Lower Upper
43 100
74 18.9 15.3 22.9



#16
Methylene chloride
Concen: 23.758 ug/L
RT: 4.92 min Scan# 495
Delta R.T. 0.01 min
Lab File: VW011102.D
Acq: 02 Jul 2019 10:21

Tgt Ion: 84 Resp: 122271
Ion Ratio Lower Upper
84 100
49 146.4 107.0 198.8
86 66.3 44.4 82.5

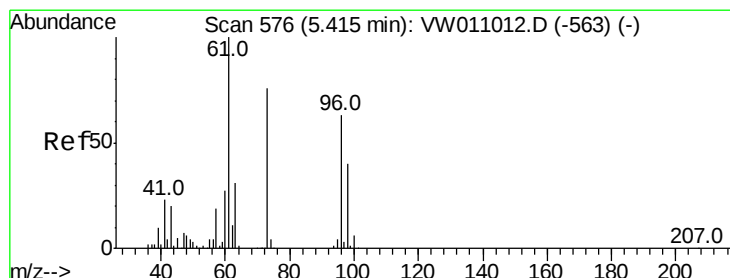
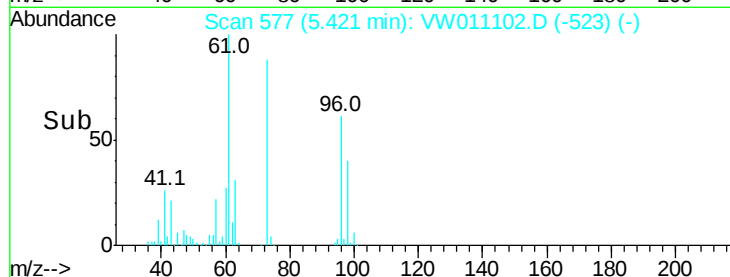
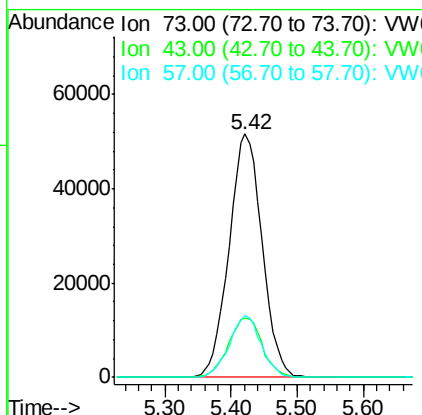
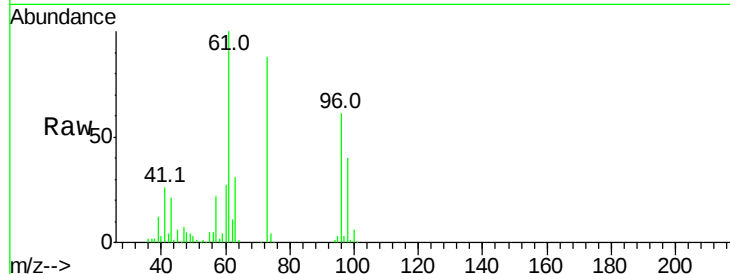




#17
Methyl tert-butyl Ether
Concen: 23.443 ug/L
RT: 5.42 min Scan# 577
Delta R.T. -0.00 min
Lab File: VW011102.D
Acq: 02 Jul 2019 10:21

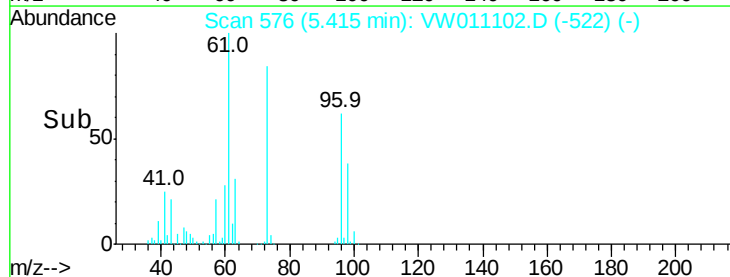
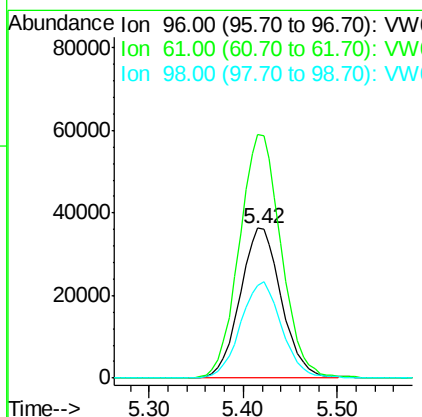
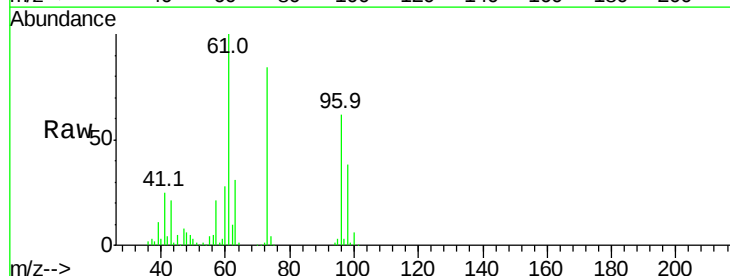
Instrument :
MSVOA_W
ClientSampleId :
VSTD02505

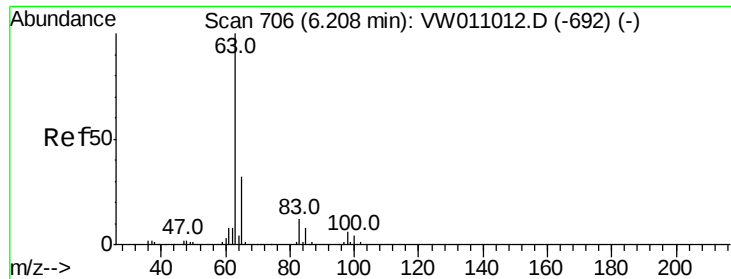
Tgt Ion: 73 Resp: 178541
Ion Ratio Lower Upper
73 100
43 25.2 20.2 30.2
57 24.5 19.4 29.0



#18
trans-1,2-Dichloroethene
Concen: 22.731 ug/L
RT: 5.42 min Scan# 576
Delta R.T. -0.00 min
Lab File: VW011102.D
Acq: 02 Jul 2019 10:21

Tgt Ion: 96 Resp: 111180
Ion Ratio Lower Upper
96 100
61 162.4 113.3 210.3
98 61.8 44.1 81.9





#19

1,1-Dichloroethane

Concen: 23.091 ug/L

RT: 6.21 min Scan# 707

Delta R.T. 0.01 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

VSTD02505

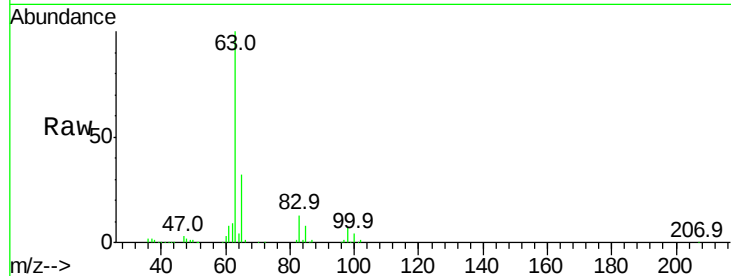
Tgt Ion: 63 Resp: 230675

Ion Ratio Lower Upper

63 100

65 31.6 21.3 39.6

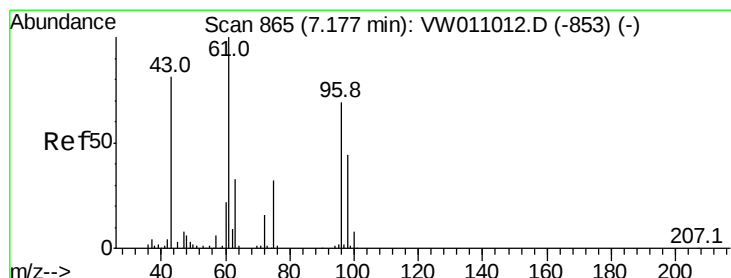
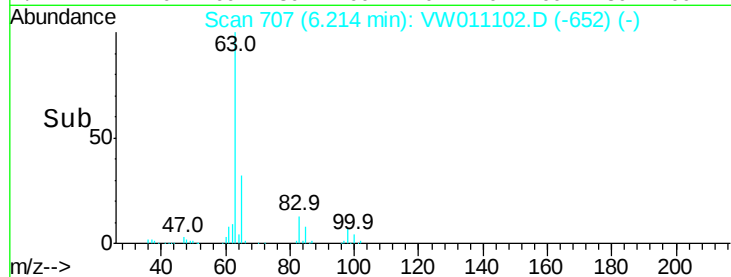
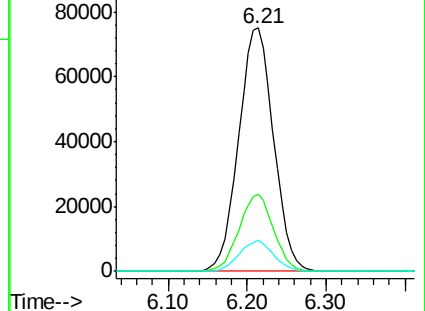
83 12.8 8.5 15.9



Abundance Ion 63.00 (62.70 to 63.70): VW

Ion 65.00 (64.70 to 65.70): VW

Ion 83.00 (82.70 to 83.70): VW



#21

2-Butanone

Concen: 45.704 ug/L

RT: 7.16 min Scan# 863

Delta R.T. -0.01 min

Lab File: VW011102.D

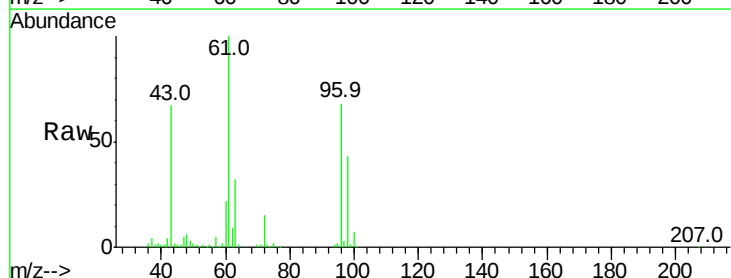
Acq: 02 Jul 2019 10:21

Tgt Ion: 43 Resp: 121753

Ion Ratio Lower Upper

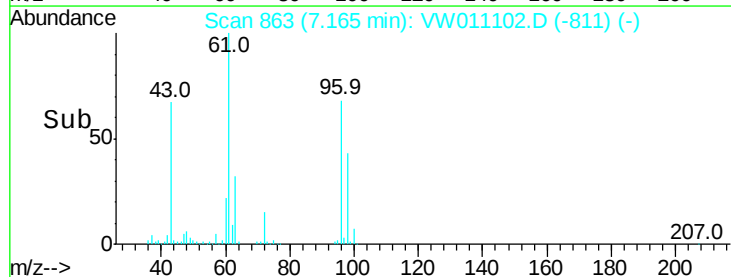
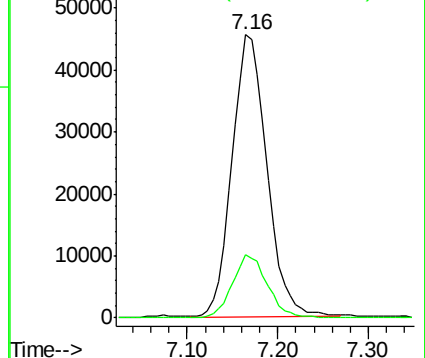
43 100

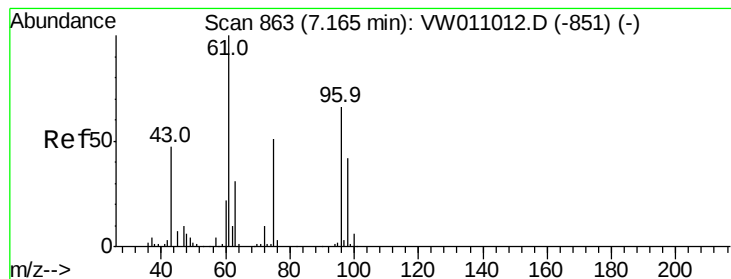
72 22.4 10.9 32.6



Abundance Ion 43.00 (42.70 to 43.70): VW

Ion 72.00 (71.70 to 72.70): VW





#22

cis-1,2-Dichloroethene

Concen: 23.300 ug/L

RT: 7.16 min Scan# 863

Delta R.T. -0.00 min

Lab File: VW011012.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

VSTD02505

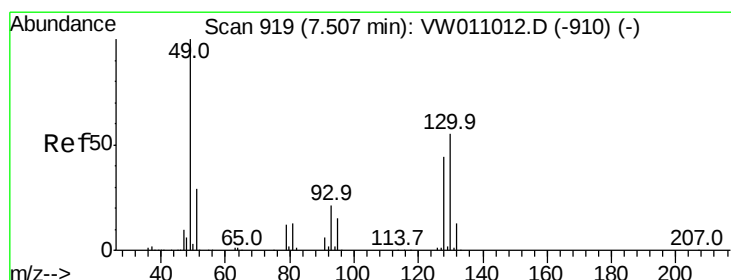
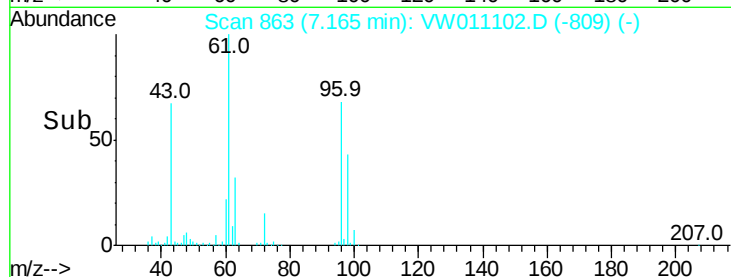
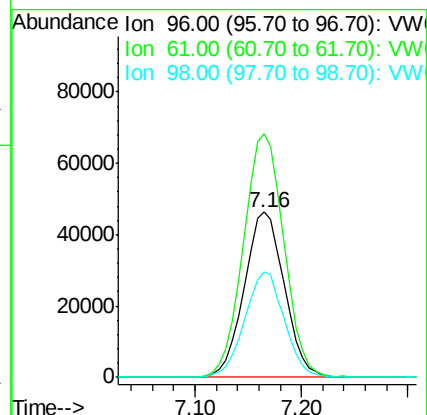
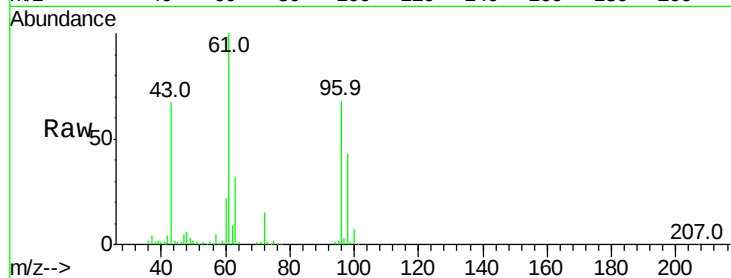
Tgt Ion: 96 Resp: 122621

Ion Ratio Lower Upper

96 100

61 147.4 106.5 197.7

98 64.0 45.5 84.5



#23

Bromochloromethane

Concen: 22.997 ug/L

RT: 7.51 min Scan# 919

Delta R.T. -0.00 min

Lab File: VW011012.D

Acq: 02 Jul 2019 10:21

Tgt Ion: 128 Resp: 51475

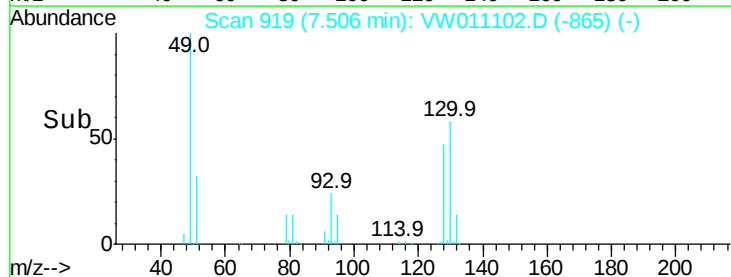
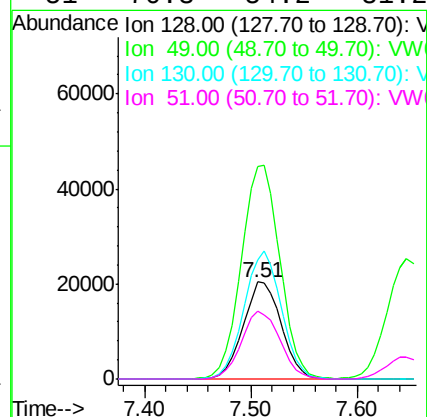
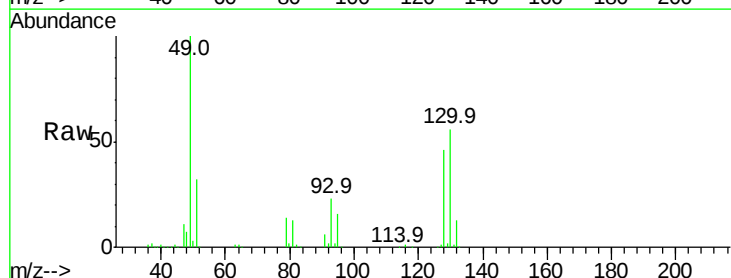
Ion Ratio Lower Upper

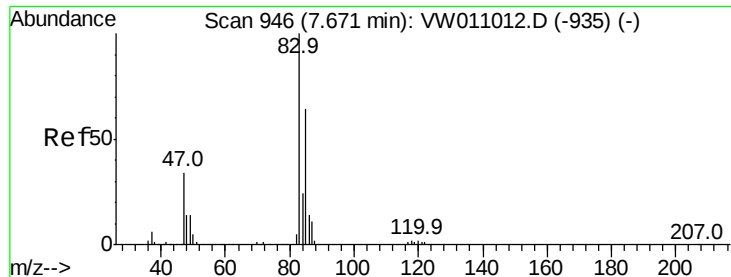
128 100

49 219.7 157.7 292.9

130 123.4 91.6 170.0

51 70.3 54.2 81.2

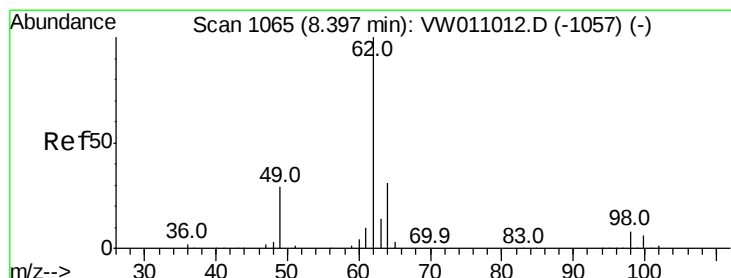
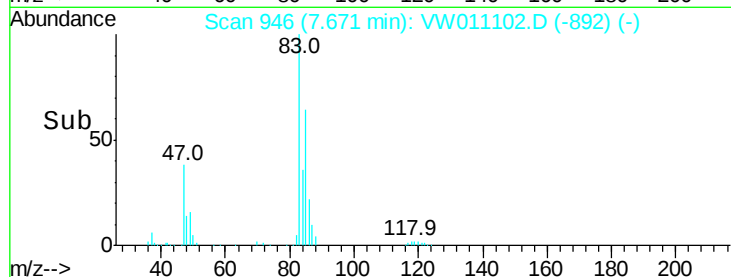
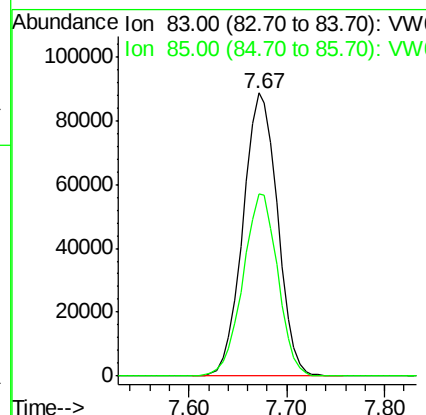
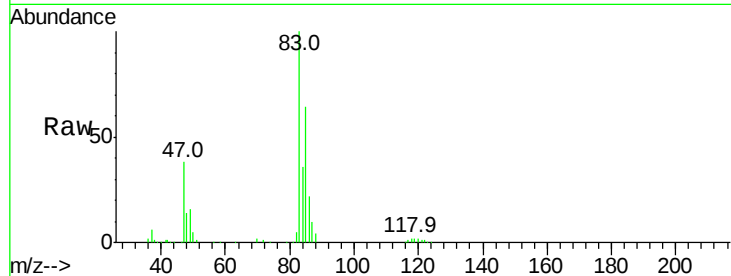




#25
Chloroform
Concen: 23.715 ug/L
RT: 7.67 min Scan# 946
Delta R.T. -0.00 min
Lab File: VW011012.D
Acq: 02 Jul 2019 10:21

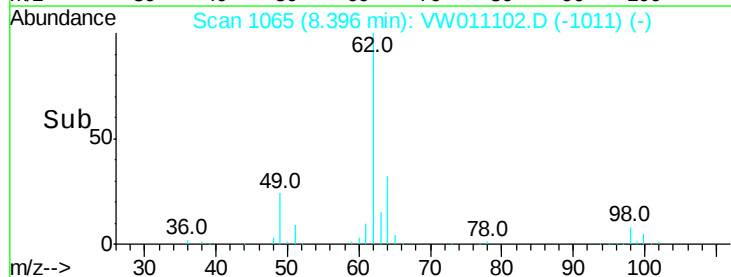
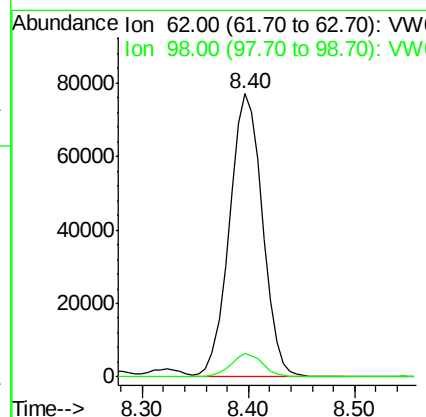
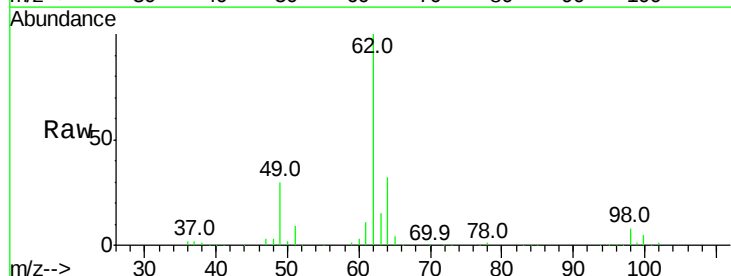
Instrument :
MSVOA_W
ClientSampleId :
VSTD02505

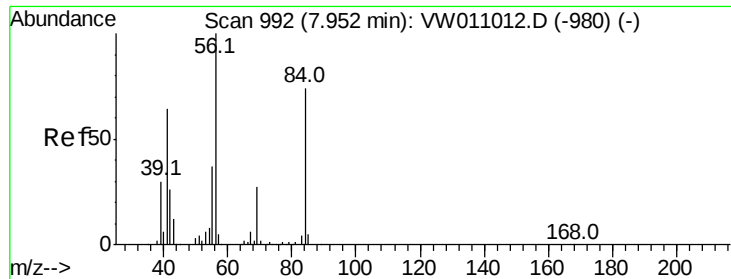
Tgt Ion: 83 Resp: 217372
Ion Ratio Lower Upper
83 100
85 65.1 45.6 84.8



#27
1,2-Dichloroethane
Concen: 23.325 ug/L
RT: 8.40 min Scan# 1065
Delta R.T. -0.00 min
Lab File: VW011012.D
Acq: 02 Jul 2019 10:21

Tgt Ion: 62 Resp: 167528
Ion Ratio Lower Upper
62 100
98 8.3 6.7 10.1

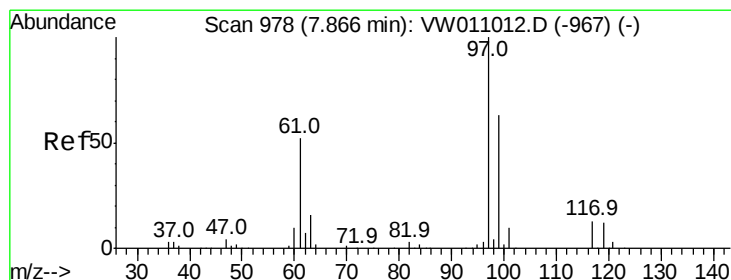
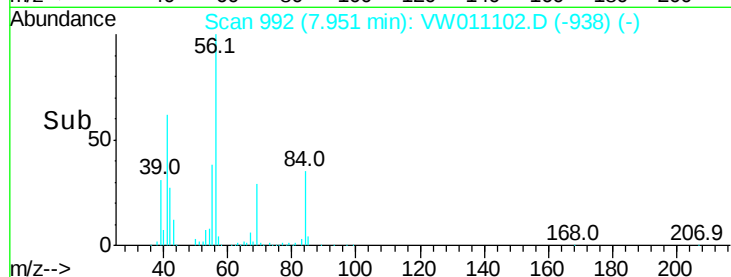
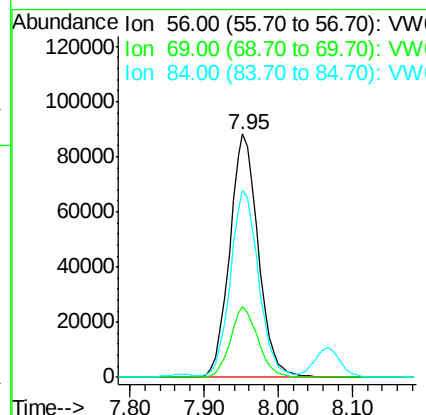
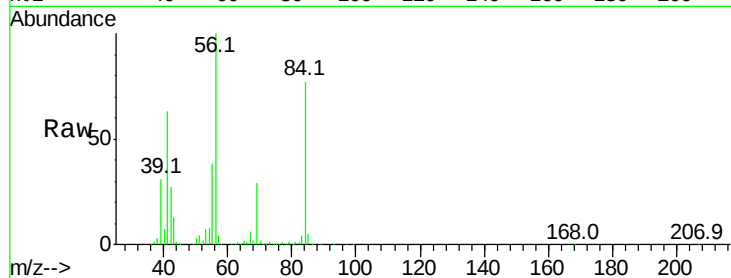




#30
Cyclohexane
Concen: 22.747 ug/L
RT: 7.95 min Scan# 992
Delta R.T. -0.00 min
Lab File: VW011012.D
Acq: 02 Jul 2019 10:21

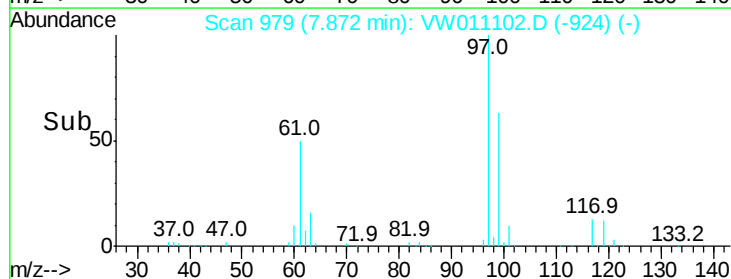
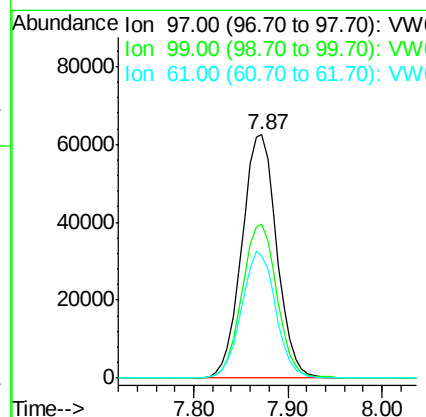
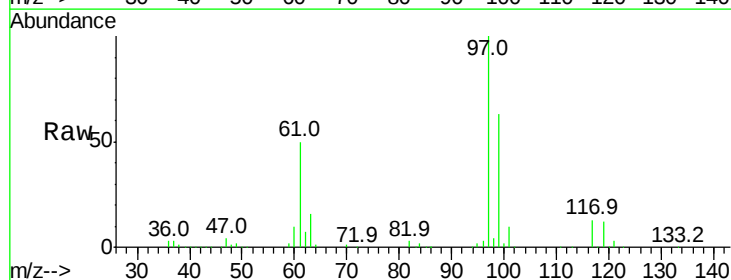
Instrument :
MSVOA_W
ClientSampleId :
VSTD02505

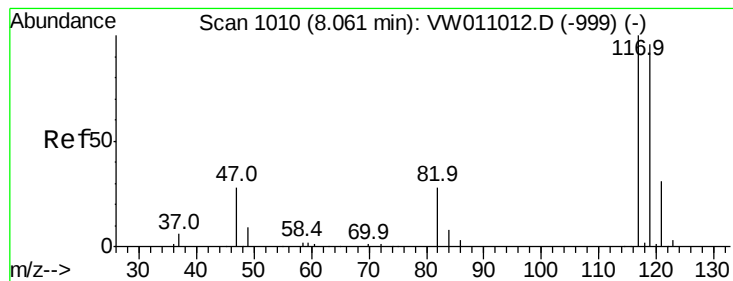
Tgt Ion: 56 Resp: 236118
Ion Ratio Lower Upper
56 100
69 28.1 22.2 33.4
84 76.1 60.3 90.5



#31
1,1,1-Trichloroethane
Concen: 23.743 ug/L
RT: 7.87 min Scan# 979
Delta R.T. 0.01 min
Lab File: VW011012.D
Acq: 02 Jul 2019 10:21

Tgt Ion: 97 Resp: 162089
Ion Ratio Lower Upper
97 100
99 63.2 50.7 76.1
61 51.1 41.2 61.8





#32

Carbon tetrachloride

Concen: 23.284 ug/L

RT: 8.07 min Scan# 1011

Delta R.T. 0.01 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

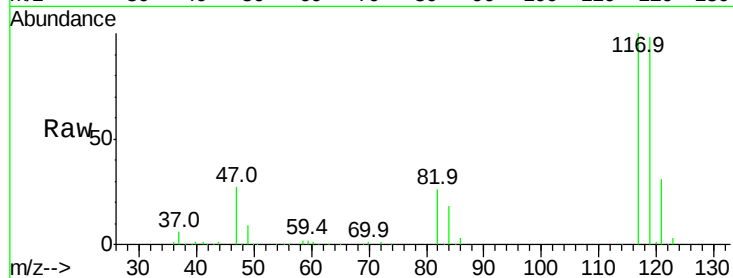
VSTD02505

Tgt Ion:117 Resp: 150144

Ion Ratio Lower Upper

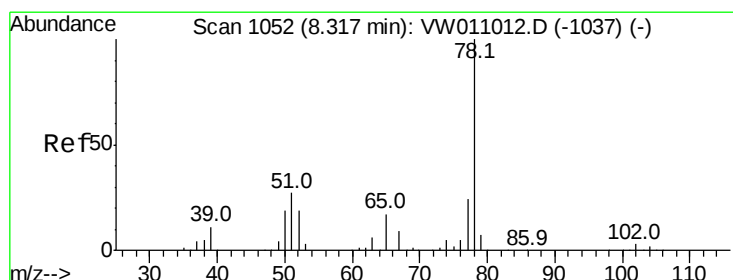
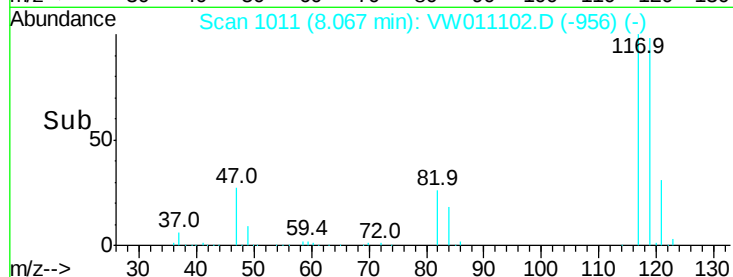
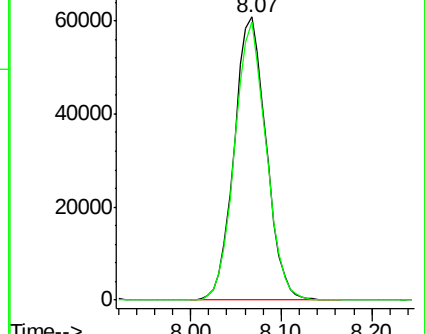
117 100

119 96.7 75.7 113.5



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V



#34

Benzene

Concen: 23.680 ug/L

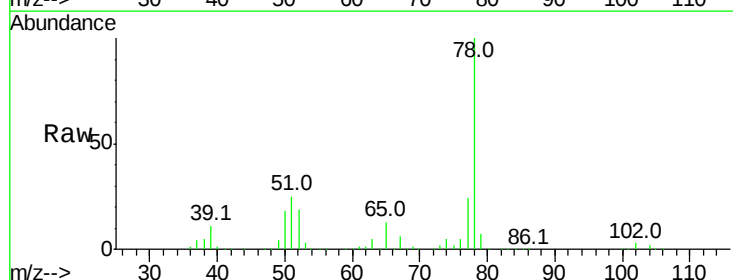
RT: 8.32 min Scan# 1053

Delta R.T. 0.01 min

Lab File: VW011102.D

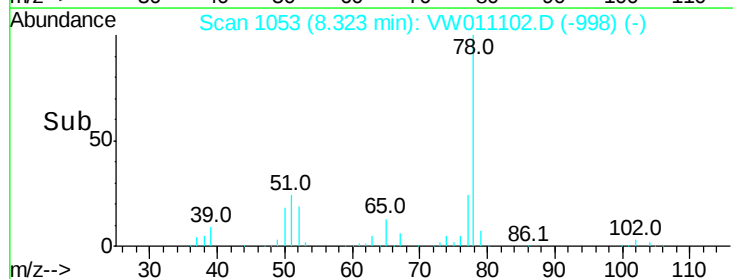
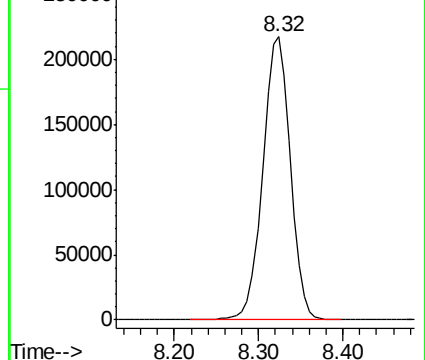
Acq: 02 Jul 2019 10:21

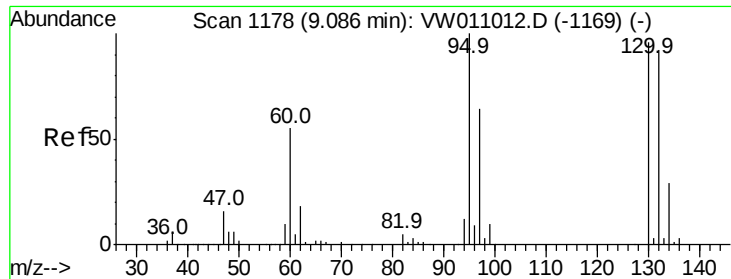
Tgt Ion: 78 Resp: 488457



Abundance Ion 78.00 (77.70 to 78.70): VW

8.32





#35

Trichloroethene

Concen: 22.881 ug/L

RT: 9.09 min Scan# 1178

Delta R.T. -0.00 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

Instrument :

MSVOA_W

ClientSampleId :

VSTD02505

Tgt Ion: 95 Resp: 119688

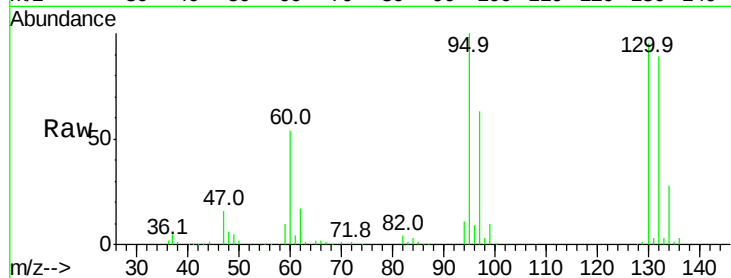
Ion Ratio Lower Upper

95 100

97 64.8 44.9 83.3

132 92.9 64.0 119.0

130 96.9 67.4 125.2

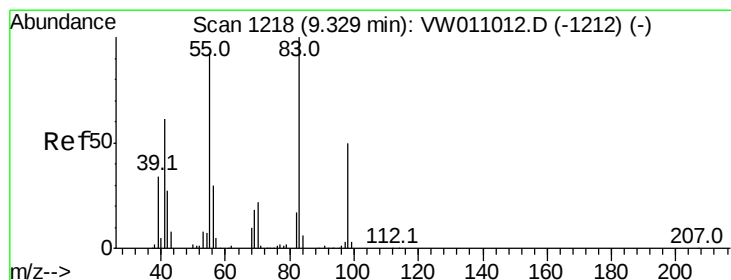
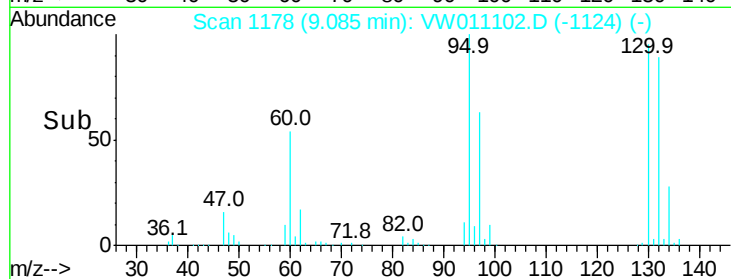
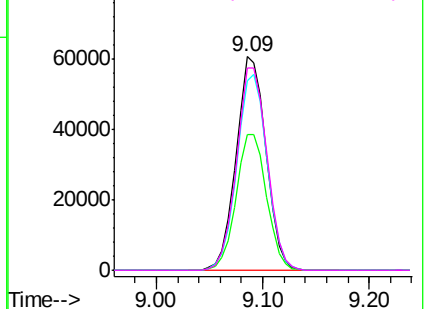


Abundance Ion 95.00 (94.70 to 95.70): VW

Ion 97.00 (96.70 to 97.70): VW

Ion 132.00 (131.70 to 132.70): V

Ion 130.00 (129.70 to 130.70): V



#36

Methylcyclohexane

Concen: 22.968 ug/L

RT: 9.34 min Scan# 1219

Delta R.T. 0.01 min

Lab File: VW011102.D

Acq: 02 Jul 2019 10:21

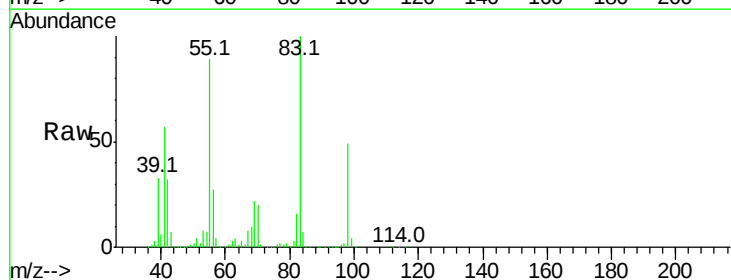
Tgt Ion: 83 Resp: 220527

Ion Ratio Lower Upper

83 100

55 90.3 72.2 108.2

98 47.8 37.8 56.8



Abundance Ion 83.00 (82.70 to 83.70): VW

Ion 55.00 (54.70 to 55.70): VW

Ion 98.00 (97.70 to 98.70): VW

