

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
 Data File : VL033960.D
 Acq On : 25 Jun 2019 6:34
 Operator : SY/AP
 Sample : K3474-01DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 INFLUENTDL

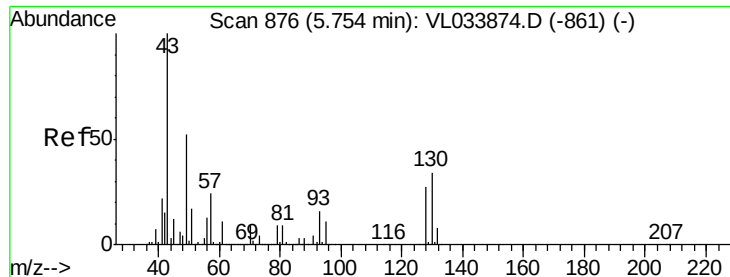
Quant Time: Jun 25 09:10:06 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 07 08:53:27 2019
 QLast Update : Fri Jun 07 08:53:27 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.74	49	838872	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.27	114	2000688	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.21	117	2112049	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.55	95	1671848	9.64	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.06	85	12736	0.094	ppbv	95
3) Chlorodifluoromethane	3.00	51	18606	0.188	ppbv #	84
7) Chloroethane	3.59	64	923	0.045	ppbv #	68
9) Propene	3.03	41	11270	0.305	ppbv	91
11) Trichlorofluoromethane	3.99	101	9336	0.053	ppbv	98
13) Ethanol	3.64	45	228840	19.034	ppbv	97
15) Acetone	3.89	43	292177	2.388	ppbv	97
16) 1,3-Butadiene	3.33	39	12649	0.272	ppbv #	13
17) tert-Butyl alcohol	4.36	59	20041	0.210	ppbv	99
18) 1,1-Dichloroethene	4.33	96	1754	0.035	ppbv #	57
19) Isopropyl Alcohol	4.02	45	256371	3.668	ppbv #	97
20) Methylene Chloride	4.39	84	22440	0.470	ppbv #	87
22) trans-1,2-Dichloroethene	4.95	96	9905	0.187	ppbv	88
23) Vinyl Acetate	5.13	43	21247	0.149	ppbv #	90
24) 1,1-Dichloroethane	5.07	63	84839	0.767	ppbv	96
25) Ethyl Acetate	5.75	43	7376	0.040	ppbv #	76
26) Hexane	5.75	57	7421	0.087	ppbv #	1
32) 1,1,1-Trichloroethane	6.60	97	465041	3.318	ppbv	99
34) 2-Butanone	5.32	43	44936	0.398	ppbv	100
37) 1,2-Dichloroethane	6.60	62	30873	0.273	ppbv #	1
39) 1,2-Dichloropropane	7.26	63	496026	8.409	ppbv #	25
41) Tetrahydrofuran	6.14	42	17184	0.300	ppbv #	35
53) Toluene	9.92	91	19886	0.118	ppbv #	57
56) 1,1,1,2-Tetrachloroethane	11.80	131	18765	0.203	ppbv #	1
60) o-Xylene	13.81	91	6961	0.031	ppbv #	43
65) tert-Butylbenzene	17.10	119	339619	1.218	ppbv #	19
67) sec-Butylbenzene	17.12	105	20506	0.052	ppbv #	74
75) 1,3-Dichlorobenzene	17.14	146	40381	0.223	ppbv #	23

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.74 min Scan# 872

Delta R.T. -0.01 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

INFLUENTDL

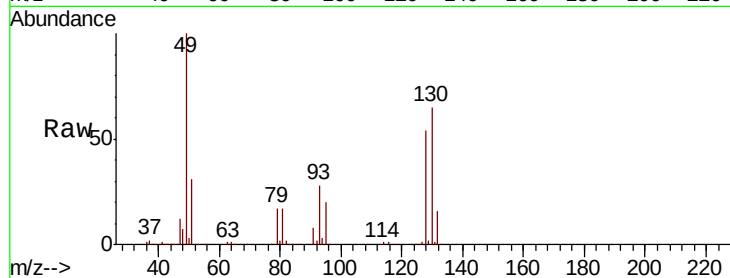
Tot Ion: 49 Resp: 838872

Ion Ratio Lower Upper

49 100

128 52.6 25.5 76.5

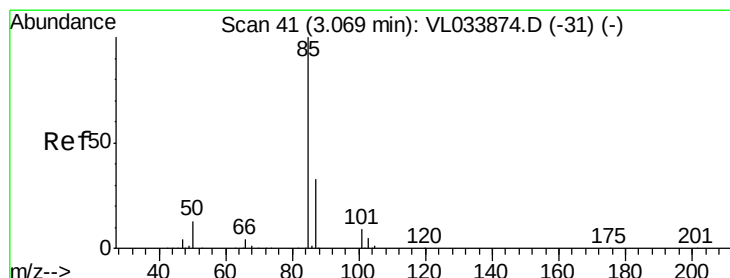
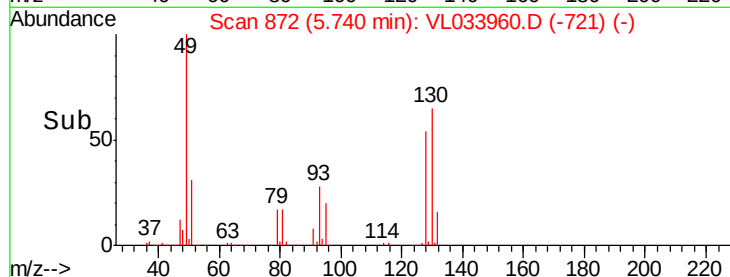
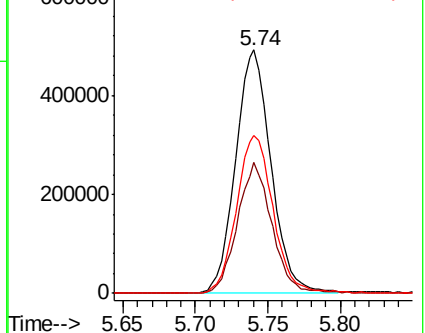
130 67.0 32.5 97.4



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: 0.094 ppbv

RT: 3.06 min Scan# 39

Delta R.T. -0.01 min

Lab File: VL033960.D

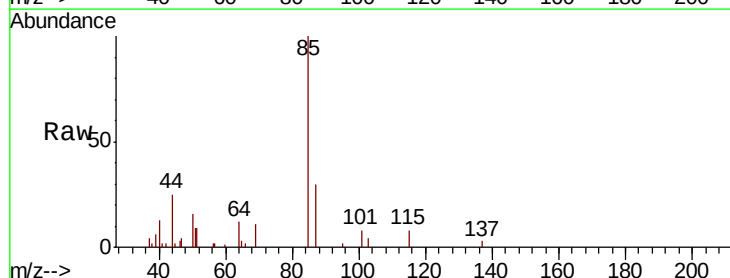
Acq: 25 Jun 2019 6:34

Tgt Ion: 85 Resp: 12736

Ion Ratio Lower Upper

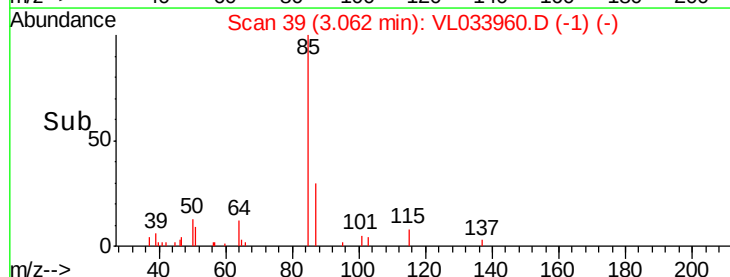
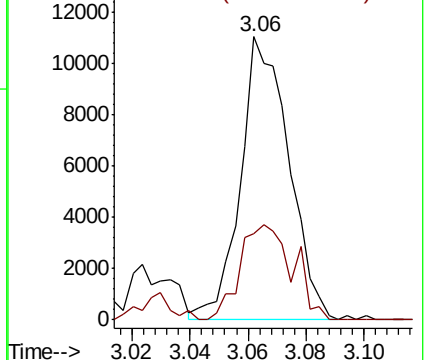
85 100

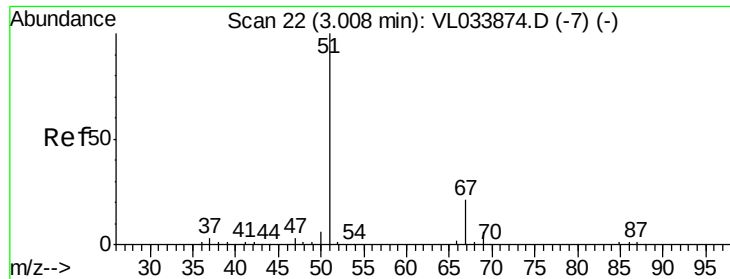
87 30.3 26.6 40.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.188 ppbv

RT: 3.00 min Scan# 21

Delta R.T. -0.00 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

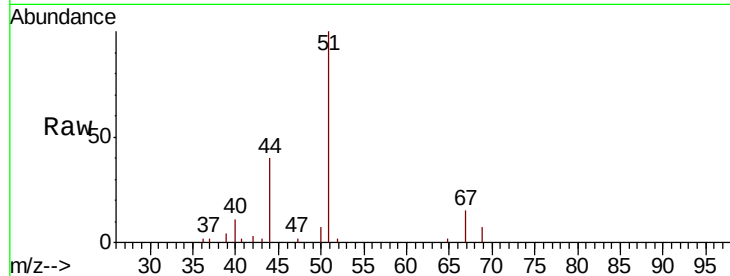
INFLUENTDL

Tot Ion: 51 Resp: 18606

Ion Ratio Lower Upper

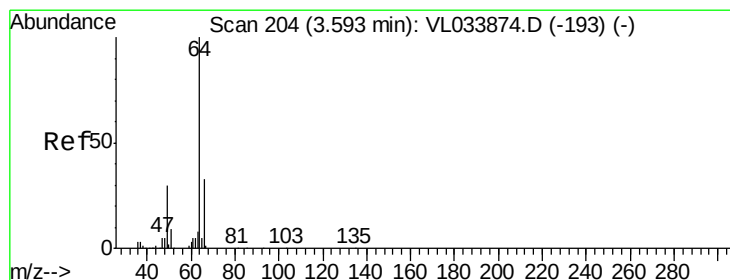
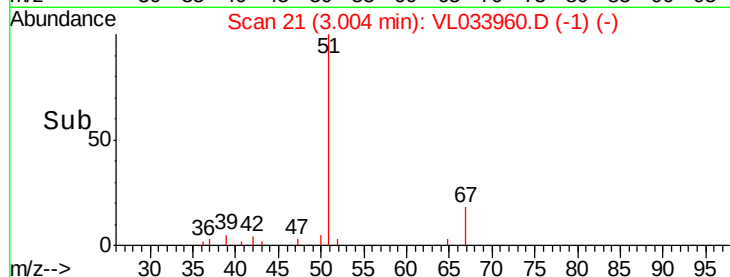
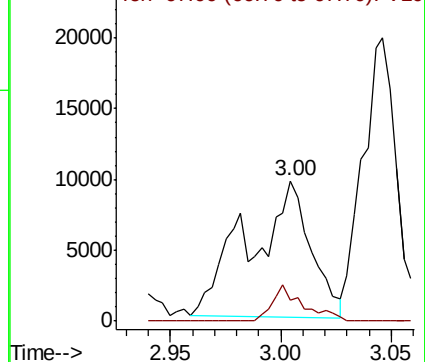
51 100

67 13.1 16.4 24.6#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#7

Chloroethane

Concen: 0.045 ppbv

RT: 3.59 min Scan# 203

Delta R.T. -0.00 min

Lab File: VL033960.D

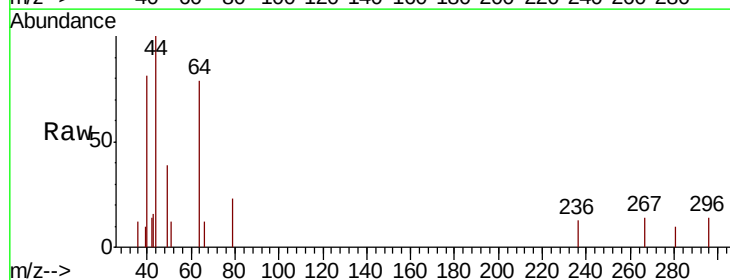
Acq: 25 Jun 2019 6:34

Tgt Ion: 64 Resp: 923

Ion Ratio Lower Upper

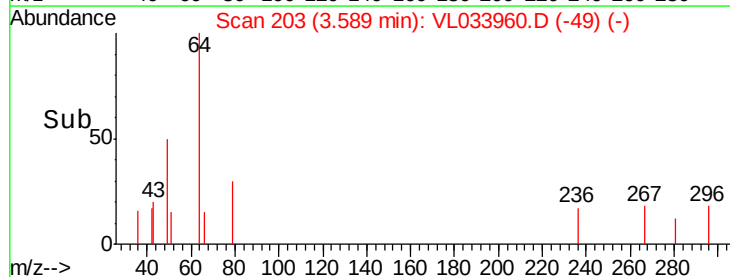
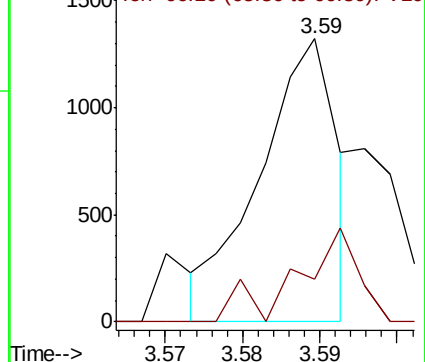
64 100

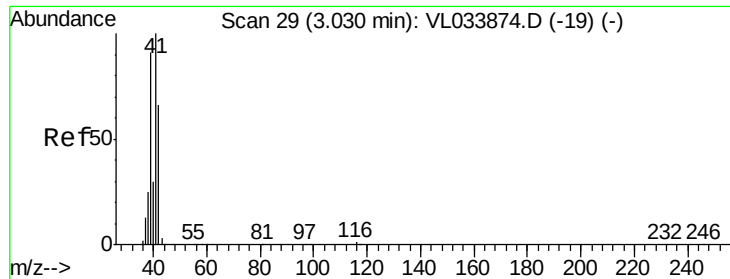
66 15.2 26.7 40.1#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0





#9

Propene

Concen: 0.305 ppbv

RT: 3.03 min Scan# 29

Delta R.T. -0.00 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

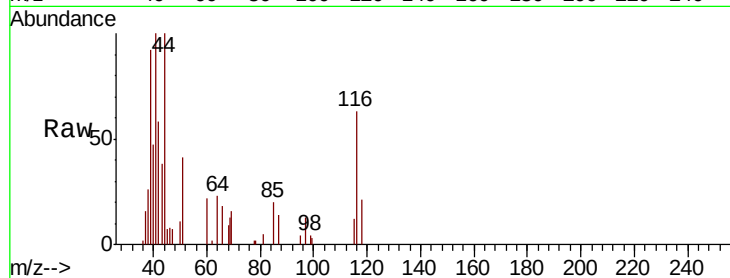
INFLUENTDL

Tot Ion: 41 Resp: 11270

Ion Ratio Lower Upper

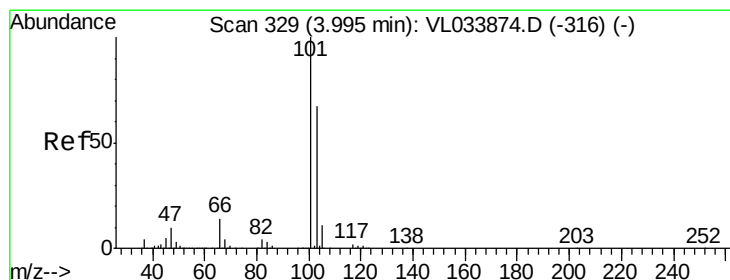
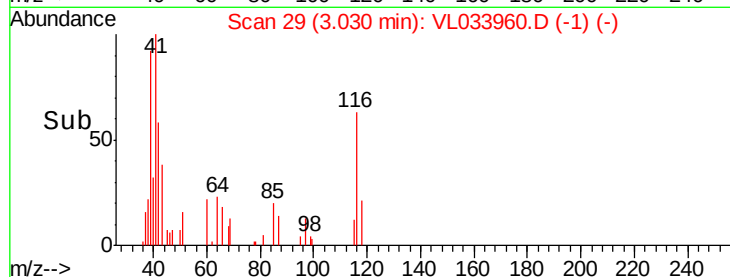
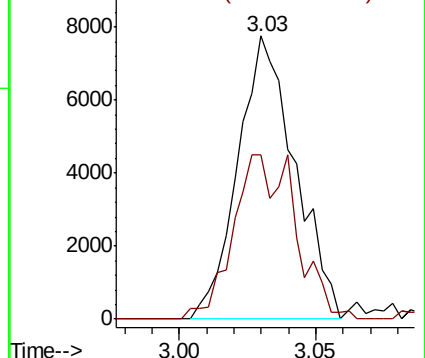
41 100

42 63.1 56.3 84.5



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#11

Trichlorofluoromethane

Concen: 0.053 ppbv

RT: 3.99 min Scan# 327

Delta R.T. -0.01 min

Lab File: VL033960.D

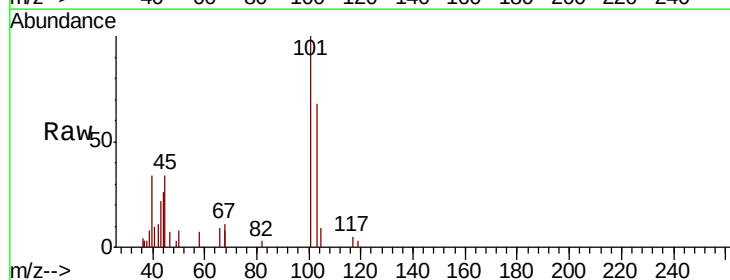
Acq: 25 Jun 2019 6:34

Tgt Ion: 101 Resp: 9336

Ion Ratio Lower Upper

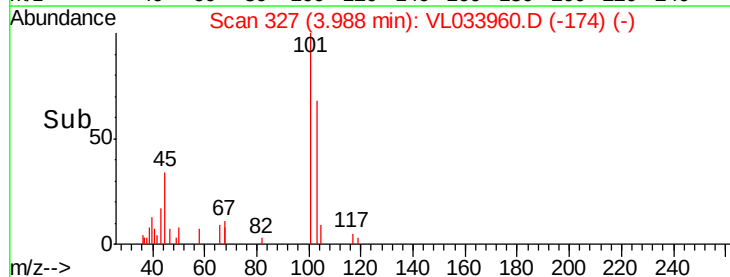
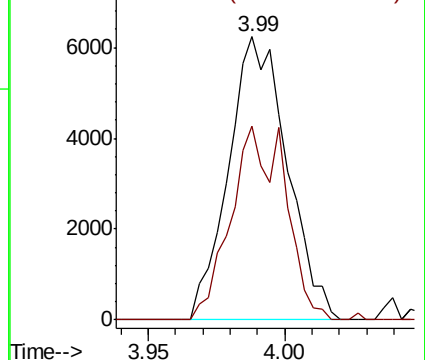
101 100

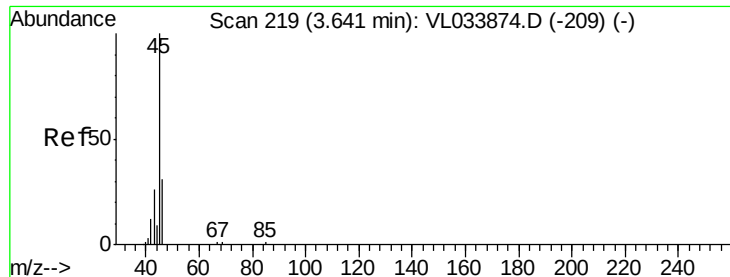
103 68.5 53.6 80.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V





#13

Ethanol

Concen: 19.034 ppbv

RT: 3.64 min Scan# 219

Delta R.T. -0.00 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

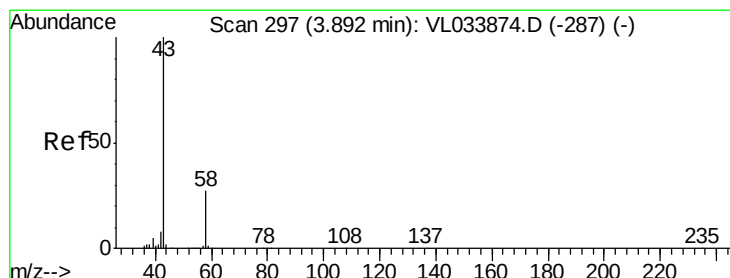
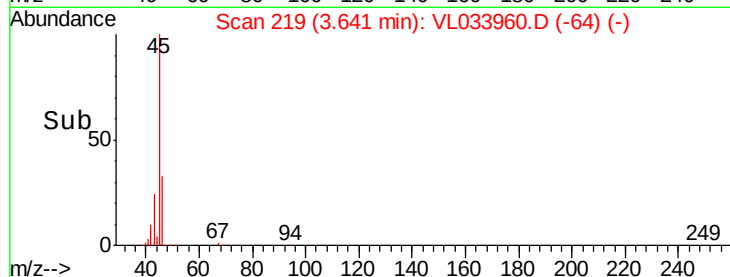
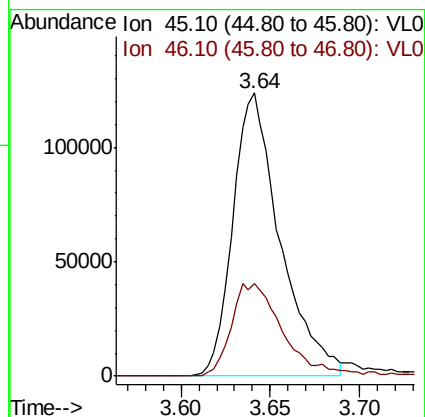
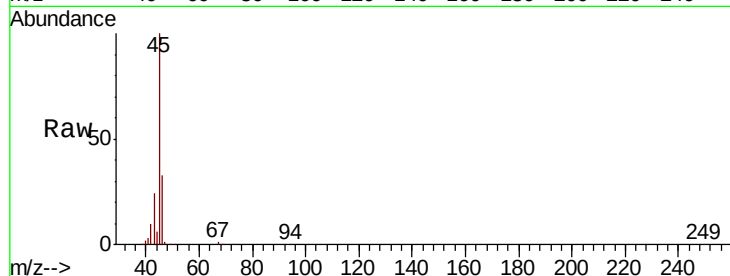
INFLUENTDL

Tot Ion: 45 Resp: 228840

Ion Ratio Lower Upper

45 100

46 36.5 15.3 61.1



#15

Acetone

Concen: 2.388 ppbv

RT: 3.89 min Scan# 297

Delta R.T. -0.00 min

Lab File: VL033960.D

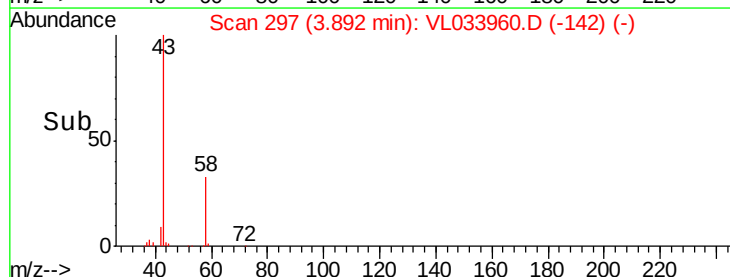
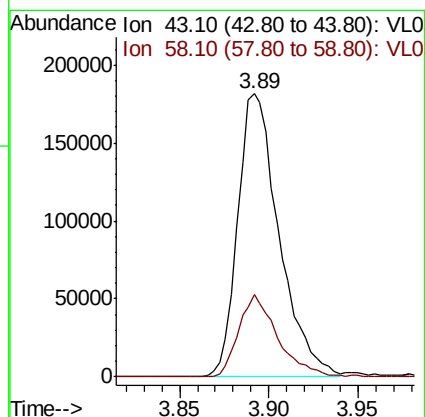
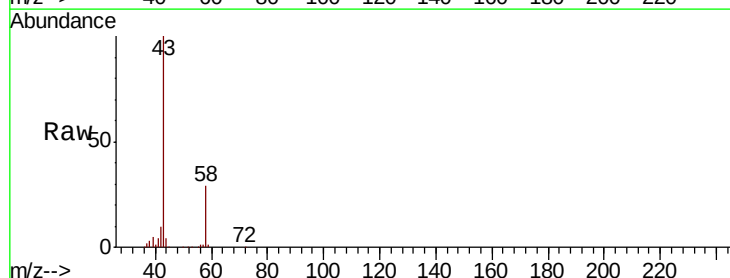
Acq: 25 Jun 2019 6:34

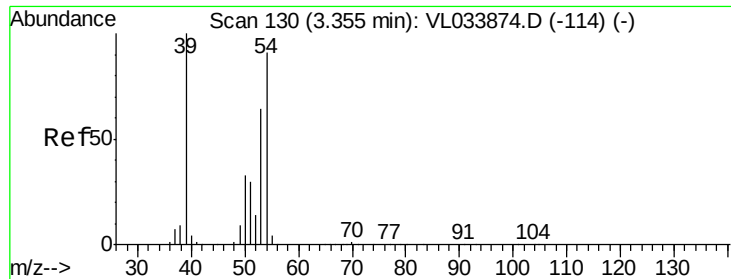
Tgt Ion: 43 Resp: 292177

Ion Ratio Lower Upper

43 100

58 27.9 21.3 31.9

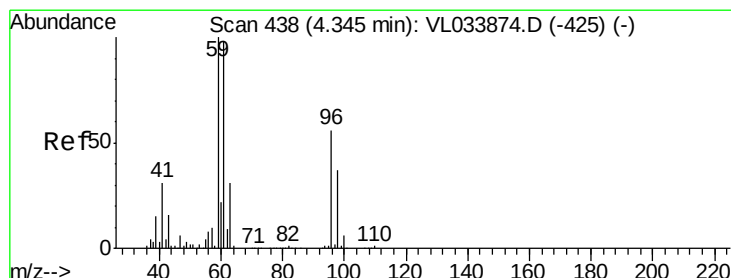
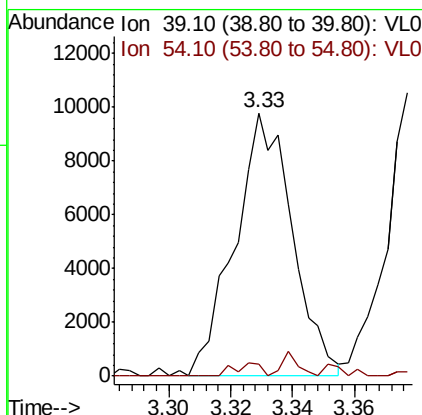
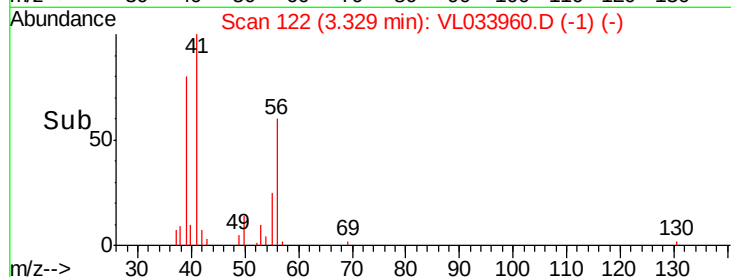
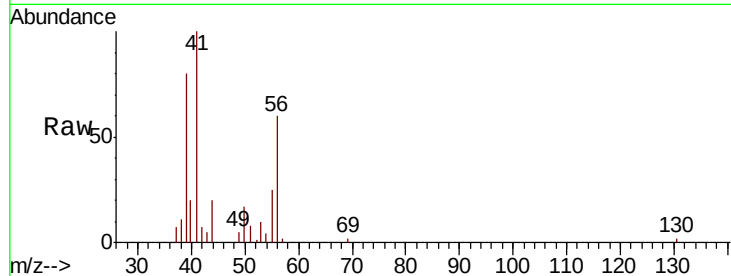




#16
 1,3-Butadiene
 Concen: 0.272 ppbv
 RT: 3.33 min Scan# 122
 Delta R.T. -0.03 min
 Lab File: VL033960.D
 Acq: 25 Jun 2019 6:34

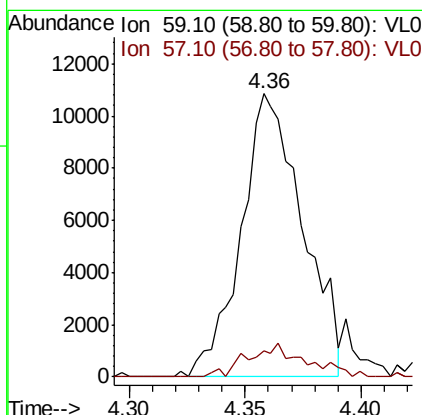
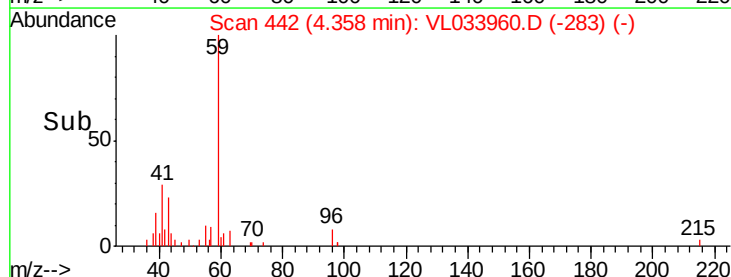
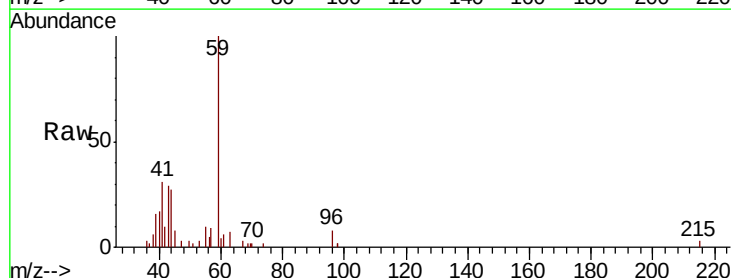
Instrument :
 MSVOA_L
 ClientSampleId :
 INFLUENTDL

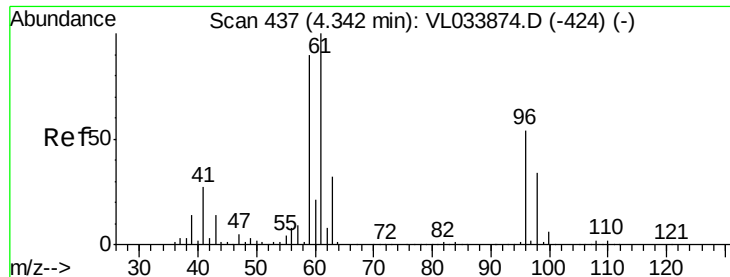
Tot Ion: 39 Resp: 12649
 Ion Ratio Lower Upper
 39 100
 54 6.4 68.6 103.0#



#17
 tert-Butyl alcohol
 Concen: 0.210 ppbv
 RT: 4.36 min Scan# 442
 Delta R.T. 0.01 min
 Lab File: VL033960.D
 Acq: 25 Jun 2019 6:34

Tgt Ion: 59 Resp: 20041
 Ion Ratio Lower Upper
 59 100
 57 11.0 8.4 12.6





#18

1,1-Dichloroethene

Concen: 0.035 ppbv

RT: 4.33 min Scan# 434

Delta R.T. -0.01 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleID :

INFLUENTDL

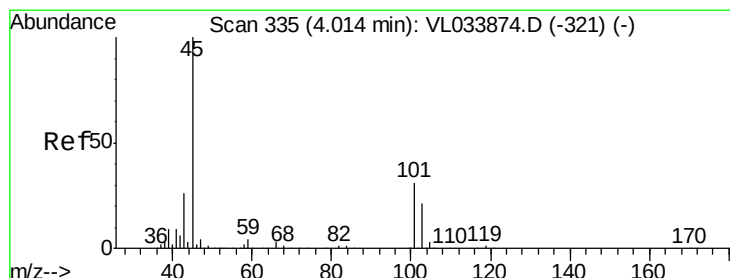
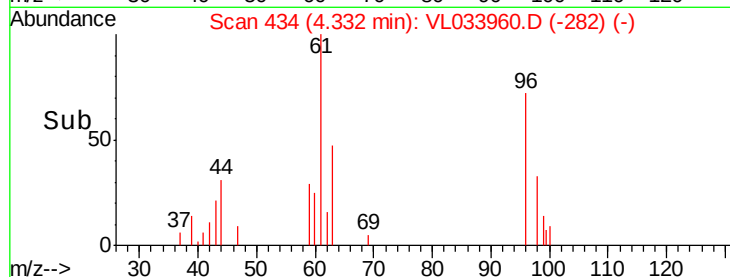
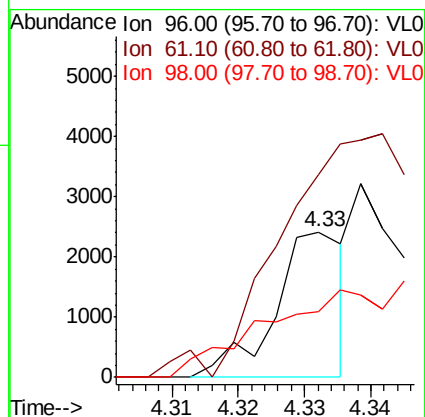
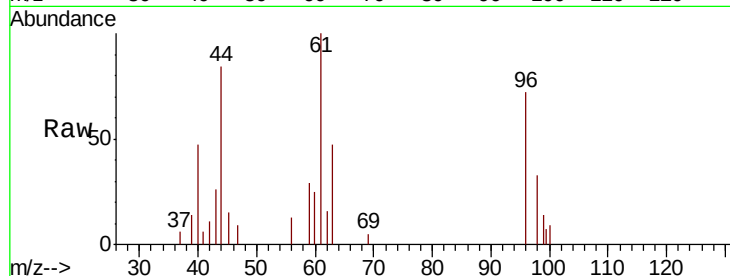
Tot Ion: 96 Resp: 1754

Ion Ratio Lower Upper

96 100

61 120.0 147.0 220.6#

98 32.7 49.4 74.0#



#19

Isopropyl Alcohol

Concen: 3.668 ppbv

RT: 4.02 min Scan# 336

Delta R.T. 0.00 min

Lab File: VL033960.D

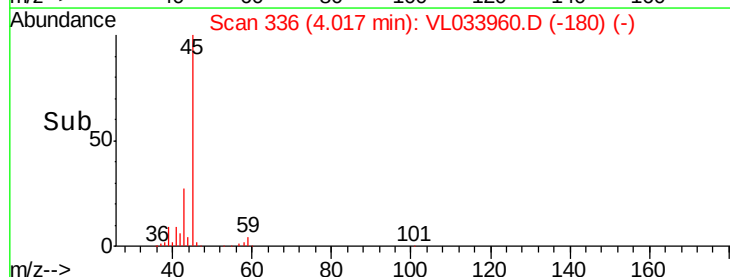
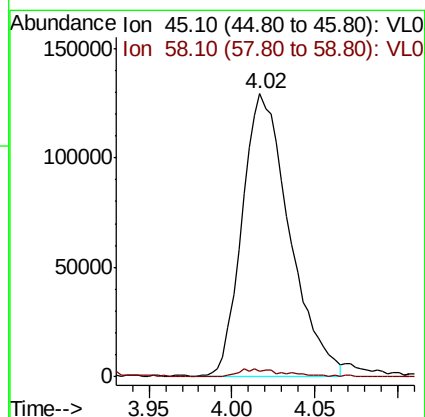
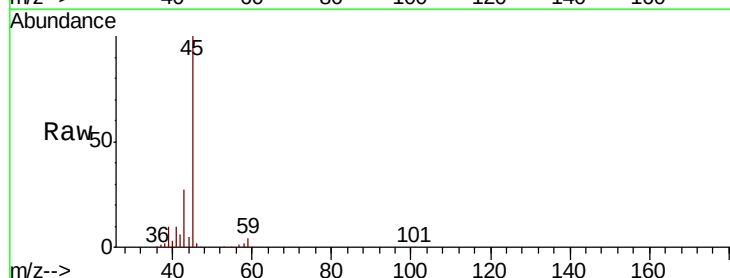
Acq: 25 Jun 2019 6:34

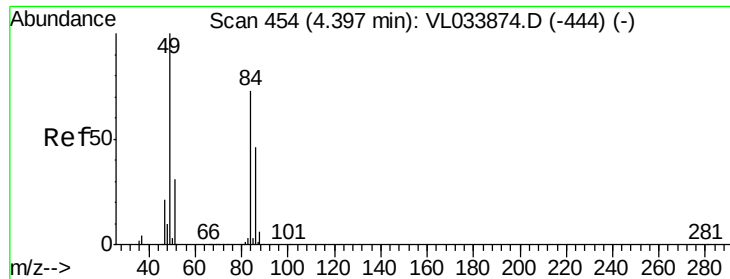
Tgt Ion: 45 Resp: 256371

Ion Ratio Lower Upper

45 100

58 3.2 1.8 2.6#

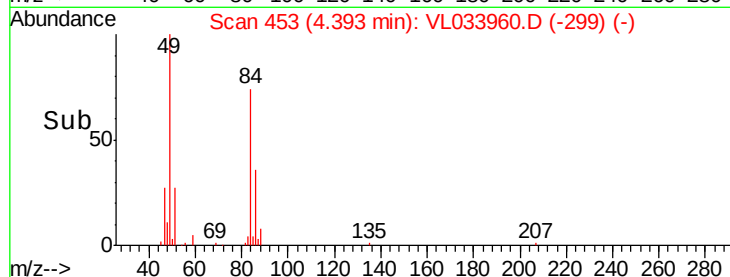
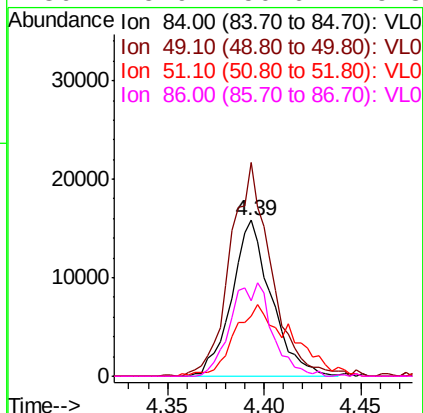
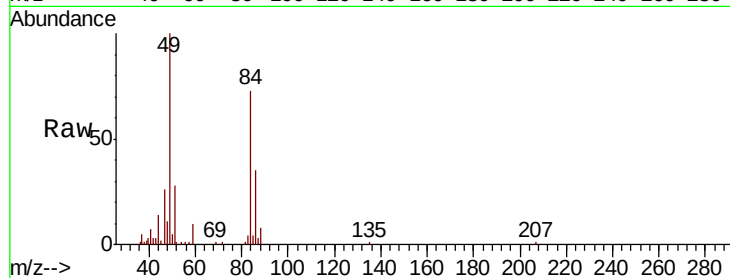




#20
Methylene Chloride
Concen: 0.470 ppbv
RT: 4.39 min Scan# 453
Delta R.T. -0.00 min
Lab File: VL033960.D
Acq: 25 Jun 2019 6:34

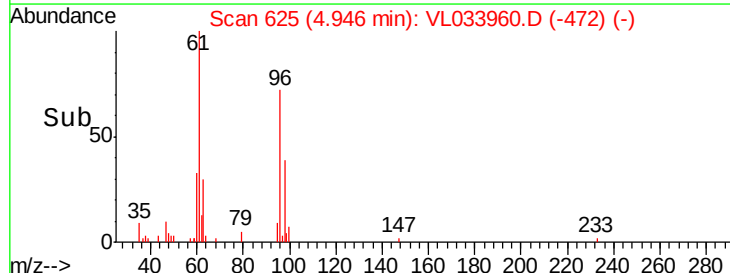
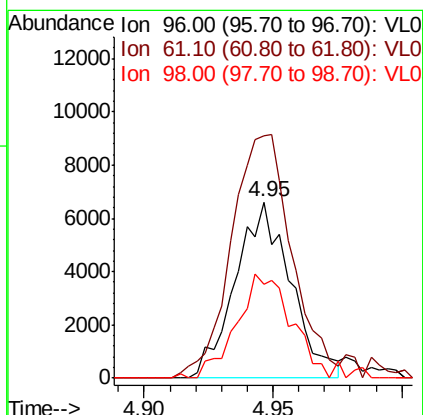
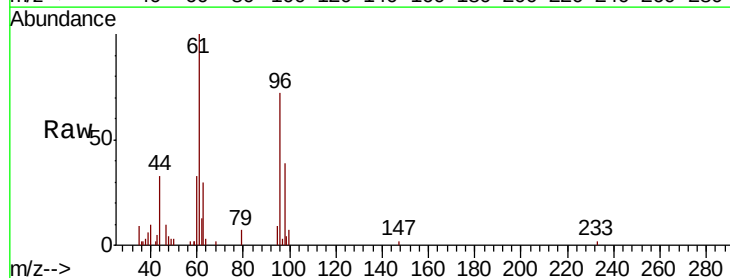
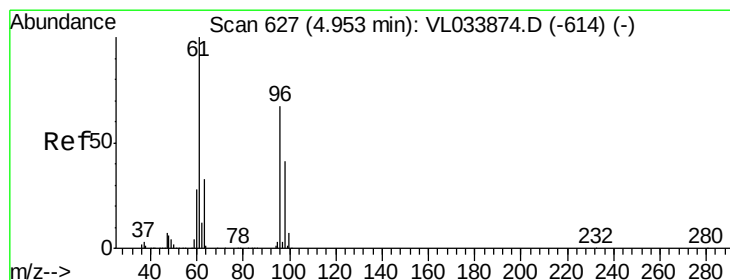
Instrument :
MSVOA_L
ClientSampleId :
INFLUENTDL

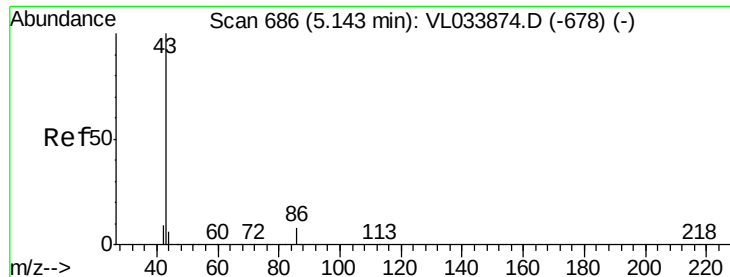
Tot Ion: 84 Resp: 22440
Ion Ratio Lower Upper
84 100
49 127.3 110.0 165.0
51 35.5 34.6 51.8
86 45.9 50.6 75.8#



#22
trans-1,2-Dichloroethene
Concen: 0.187 ppbv
RT: 4.95 min Scan# 625
Delta R.T. -0.01 min
Lab File: VL033960.D
Acq: 25 Jun 2019 6:34

Tgt Ion: 96 Resp: 9905
Ion Ratio Lower Upper
96 100
61 131.5 119.0 178.6
98 53.7 48.3 72.5





#23

Vinyl Acetate

Concen: 0.149 ppbv

RT: 5.13 min Scan# 682

Delta R.T. -0.01 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

INFLUENTDL

Tot Ion: 43 Resp: 21247

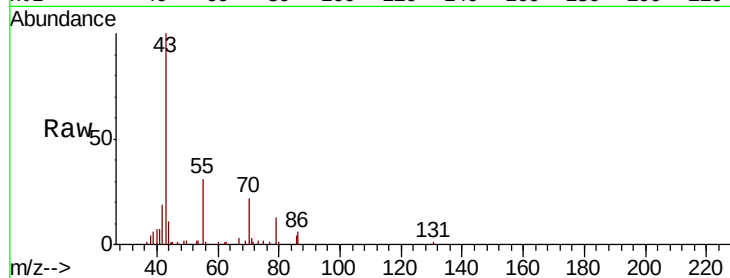
Ion Ratio Lower Upper

43 100

86 5.3 5.8 8.8#

42 14.7 7.8 11.8#

44 2.7 4.2 6.4#

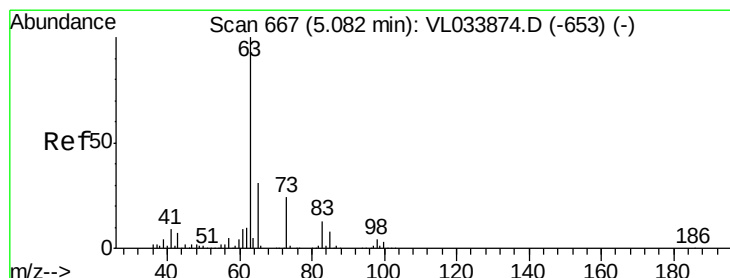
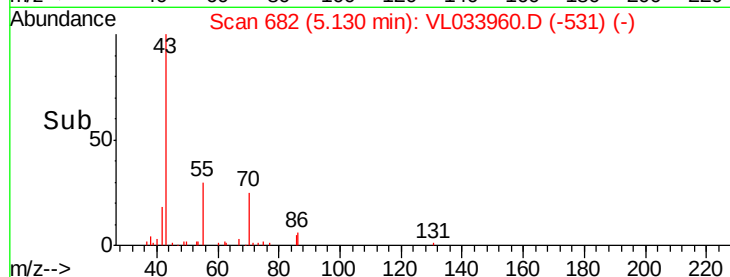
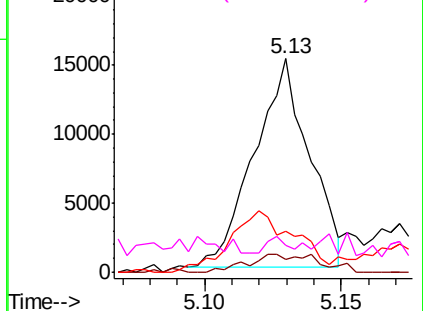


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#24

1,1-Dichloroethane

Concen: 0.767 ppbv

RT: 5.07 min Scan# 664

Delta R.T. -0.01 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

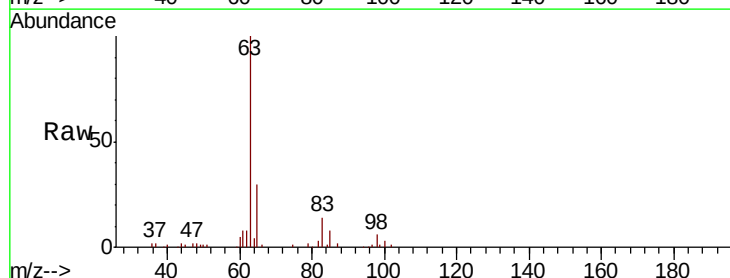
Tgt Ion: 63 Resp: 84839

Ion Ratio Lower Upper

63 100

98 6.1 2.2 6.6

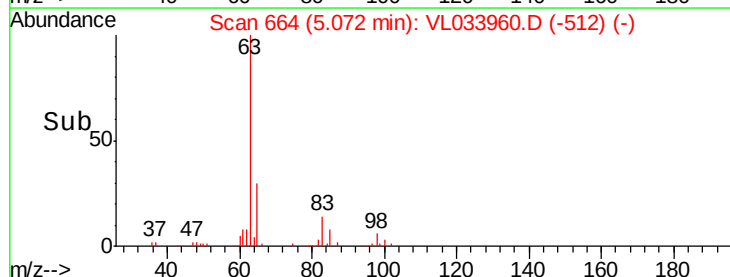
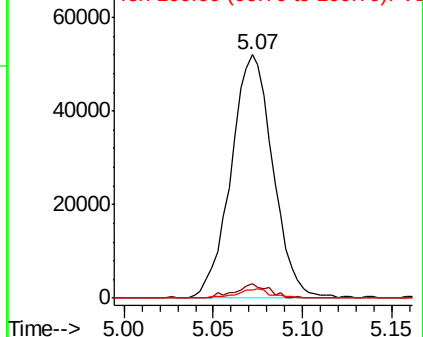
100 3.1 1.3 3.8

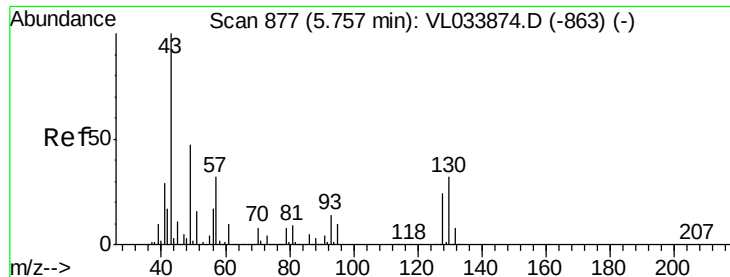


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0





#25

Ethyl Acetate

Concen: 0.040 ppbv

RT: 5.75 min Scan# 875

Delta R.T. -0.01 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleID :

INFLUENTDL

Tot Ion: 43 Resp: 7376

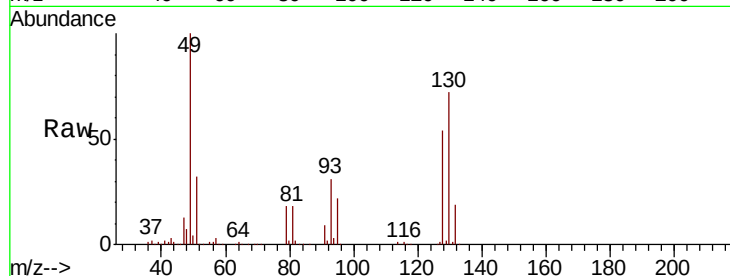
Ion Ratio Lower Upper

43 100

45 0.0 7.9 11.9#

61 0.6 7.8 11.6#

70 0.0 5.8 8.6#

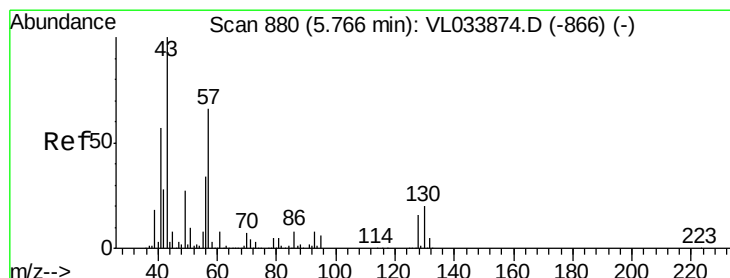
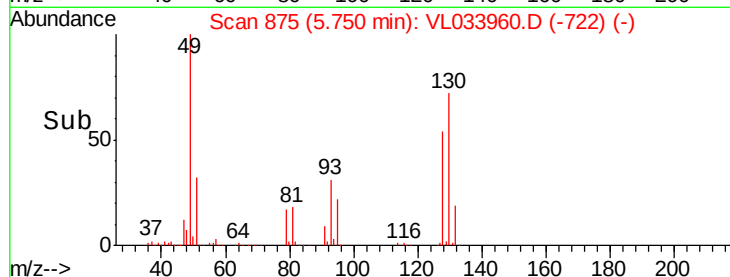
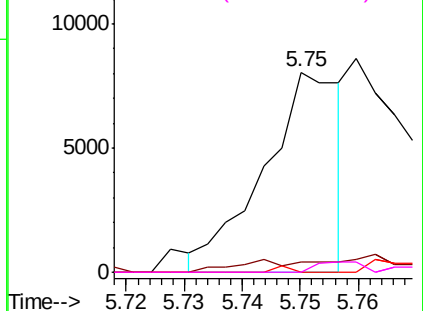


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.087 ppbv

RT: 5.75 min Scan# 875

Delta R.T. -0.02 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Tgt Ion: 57 Resp: 7421

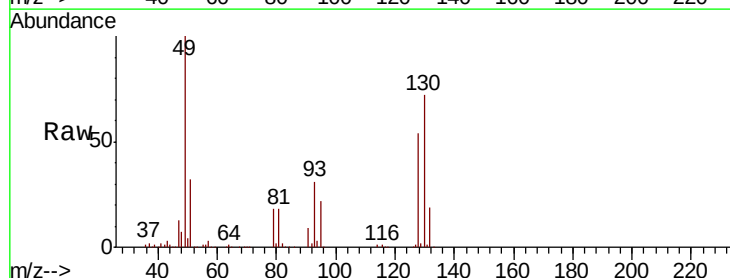
Ion Ratio Lower Upper

57 100

41 0.0 71.4 107.2#

43 0.0 183.7 275.5#

56 0.0 42.7 64.1#

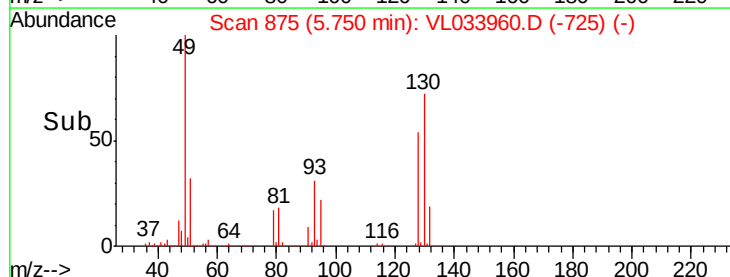
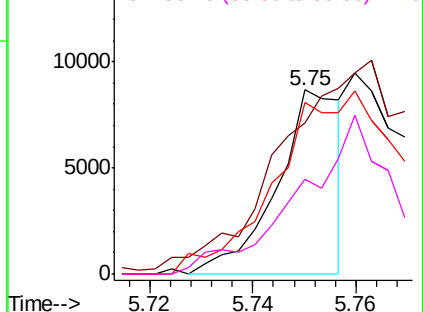


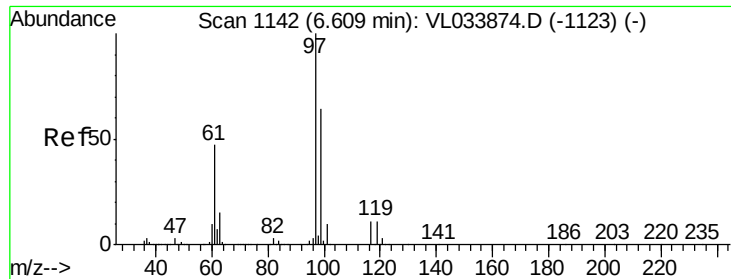
Abundance Ion 57.10 (56.80 to 57.80): VL0

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





#32

1,1,1-Trichloroethane

Concen: 3.318 ppbv

RT: 6.60 min Scan# 1138

Delta R.T. -0.01 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

INFLUENTDL

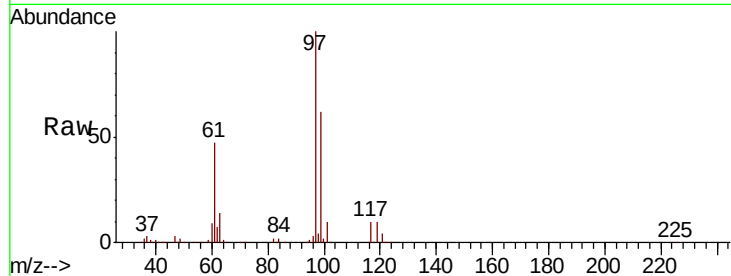
Tot Ion: 97 Resp: 465041

Ion Ratio Lower Upper

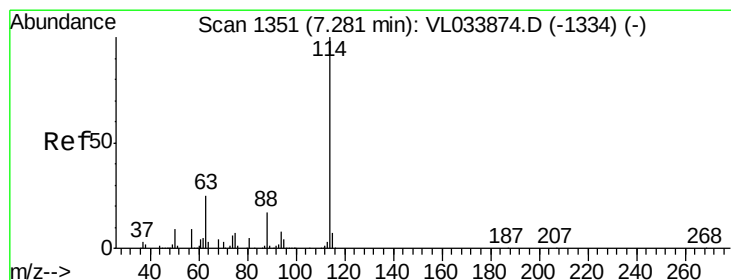
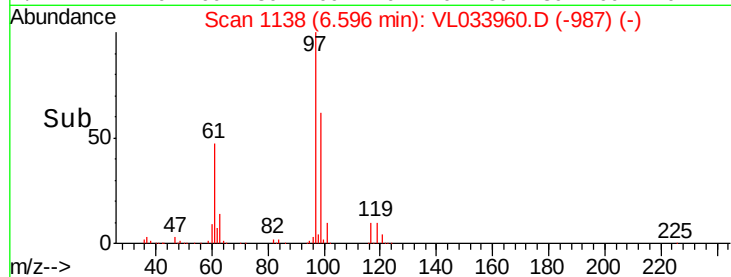
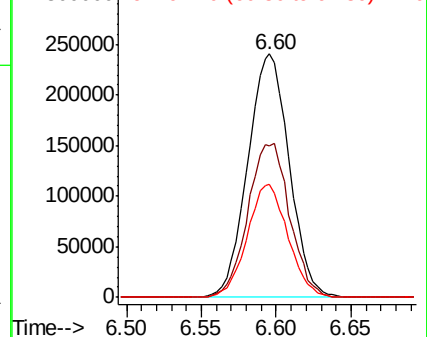
97 100

99 63.9 51.7 77.5

61 45.7 37.7 56.5



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 99.00 (98.70 to 99.70): VL0
Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.27 min Scan# 1347

Delta R.T. -0.01 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

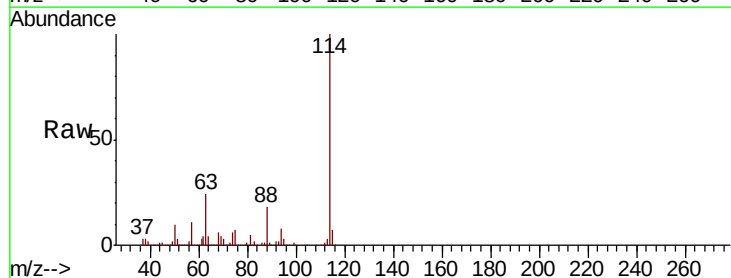
Tgt Ion: 114 Resp: 2000688

Ion Ratio Lower Upper

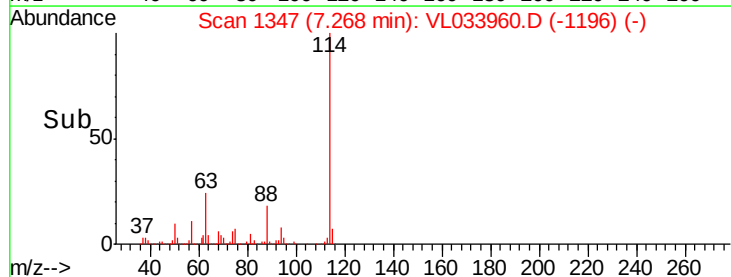
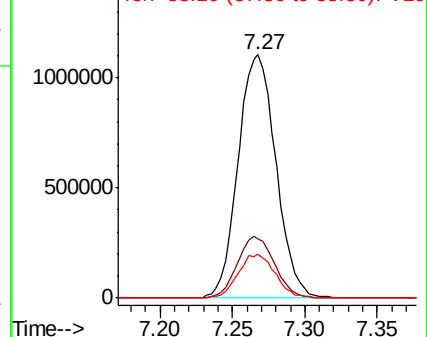
114 100

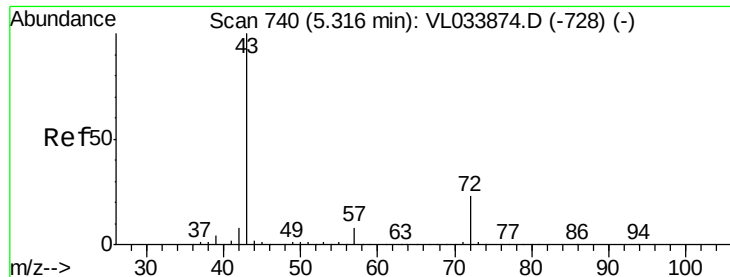
63 25.0 21.1 31.7

88 17.7 14.2 21.4



Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





#34

2-Butanone

Concen: 0.398 ppbv

RT: 5.32 min Scan# 740

Delta R.T. -0.00 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

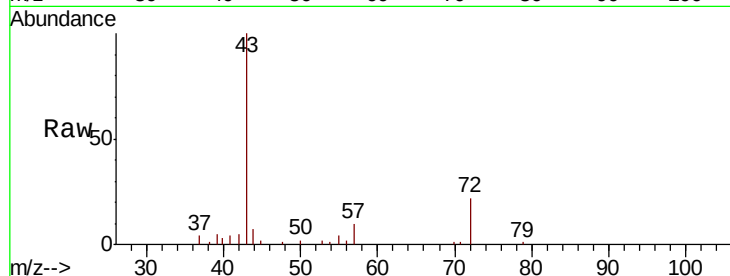
INFLUENTDL

Tot Ion: 43 Resp: 44936

Ion Ratio Lower Upper

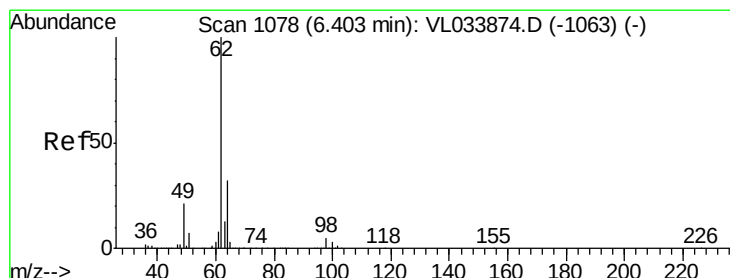
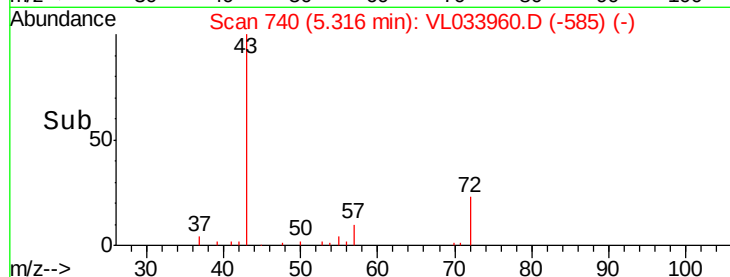
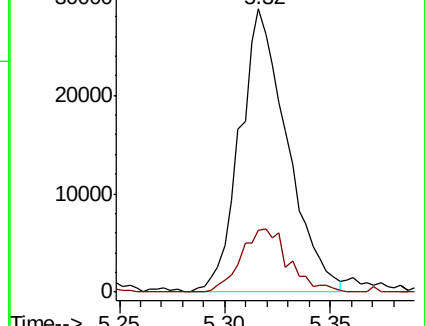
43 100

72 22.5 17.9 26.9



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#37

1,2-Dichloroethane

Concen: 0.273 ppbv

RT: 6.60 min Scan# 1138

Delta R.T. 0.19 min

Lab File: VL033960.D

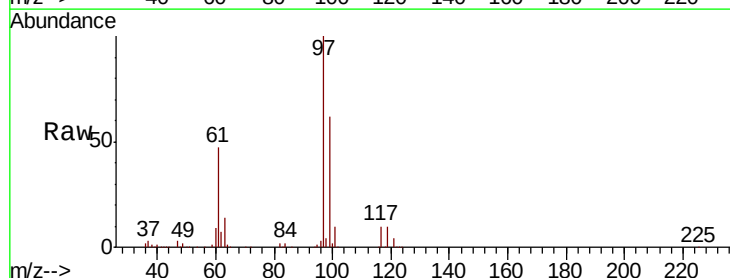
Acq: 25 Jun 2019 6:34

Tgt Ion: 62 Resp: 30873

Ion Ratio Lower Upper

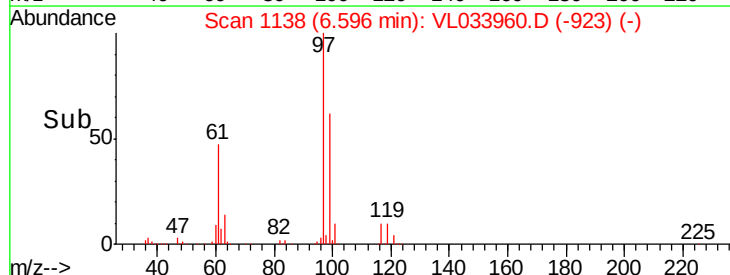
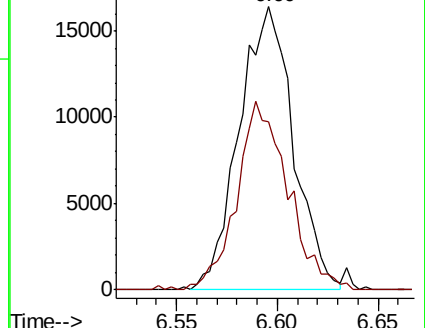
62 100

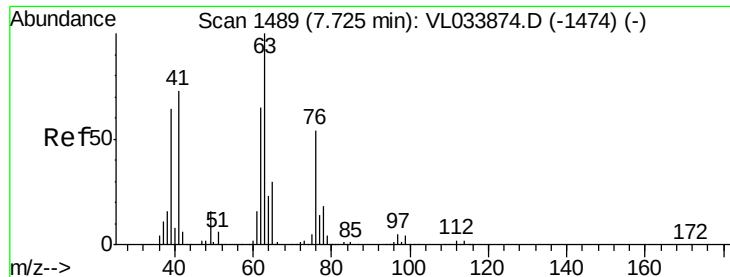
98 62.9 4.0 6.0#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

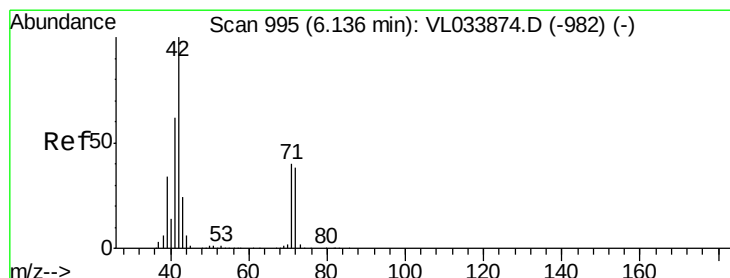
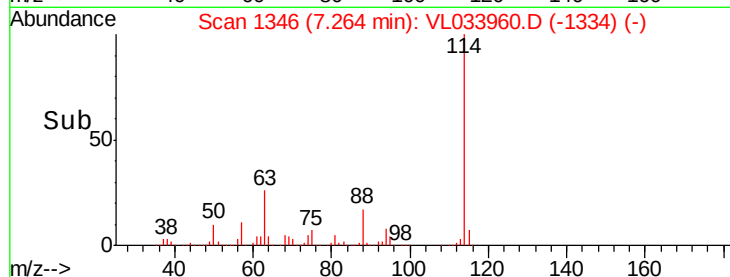
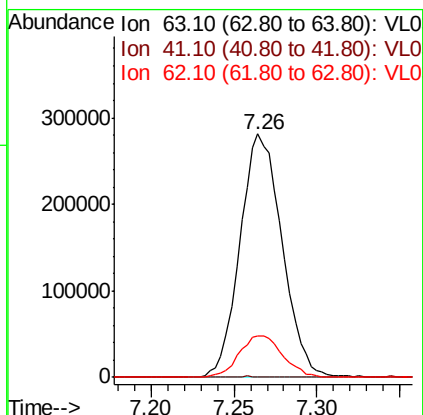
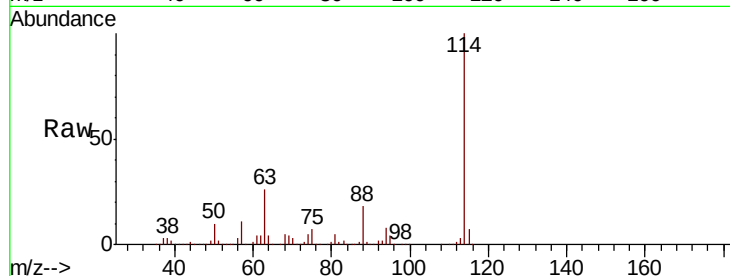




#39
 1,2-Dichloropropane
 Concen: 8.409 ppbv
 RT: 7.26 min Scan# 1346
 Delta R.T. -0.46 min
 Lab File: VL033960.D
 Acq: 25 Jun 2019 6:34

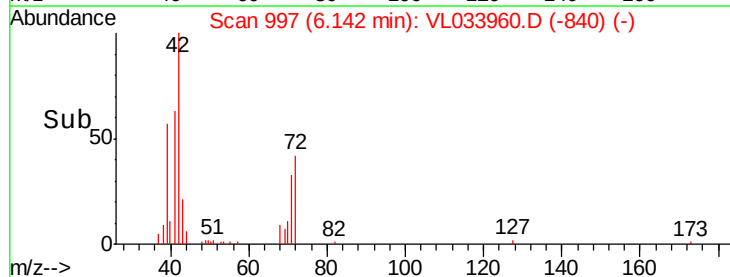
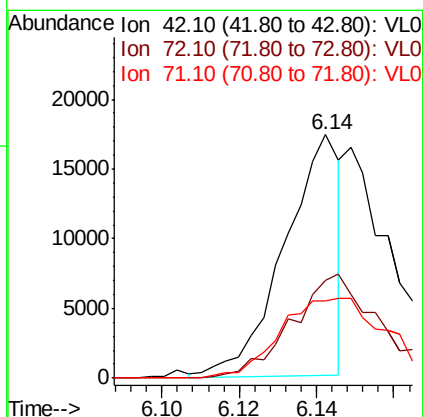
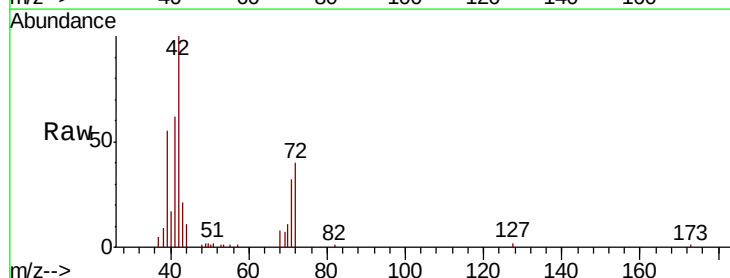
Instrument :
 MSVOA_L
 ClientSampleId :
 INFLUENTDL

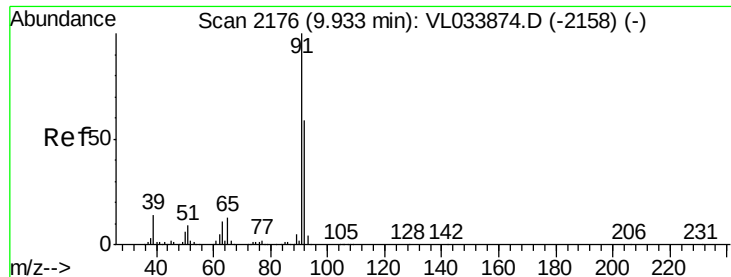
Tot Ion	Ratio	Lower	Upper
63	100		
41	0.2	58.7	88.1#
62	17.1	51.9	77.9#



#41
 Tetrahydrofuran
 Concen: 0.300 ppbv
 RT: 6.14 min Scan# 997
 Delta R.T. 0.01 min
 Lab File: VL033960.D
 Acq: 25 Jun 2019 6:34

Tgt Ion	Ratio	Lower	Upper
42	100		
72	0.0	32.2	48.4#
71	0.0	31.7	47.5#





#53

Toluene

Concen: 0.118 ppbv

RT: 9.92 min Scan# 2171

Delta R.T. -0.02 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

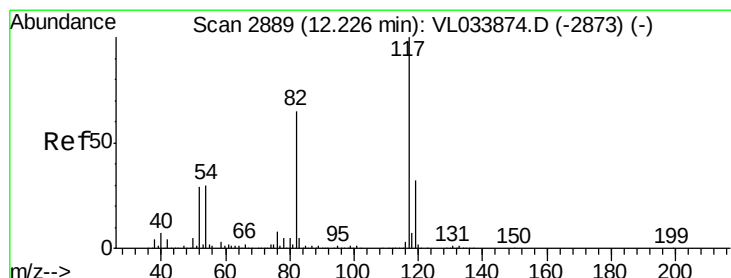
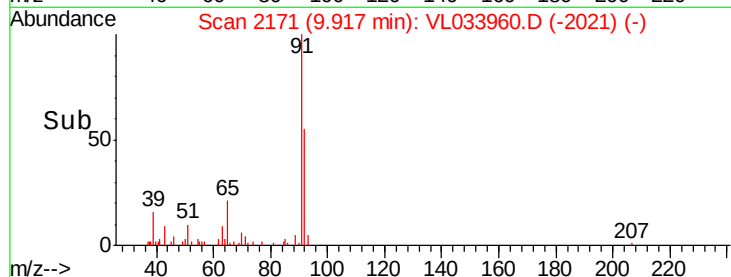
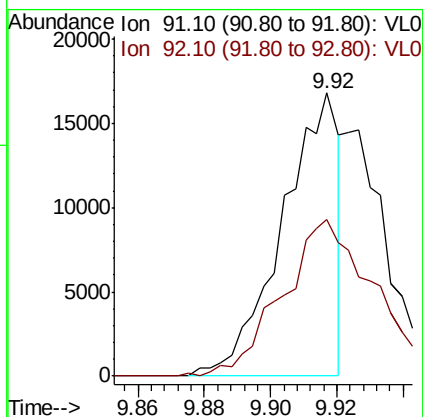
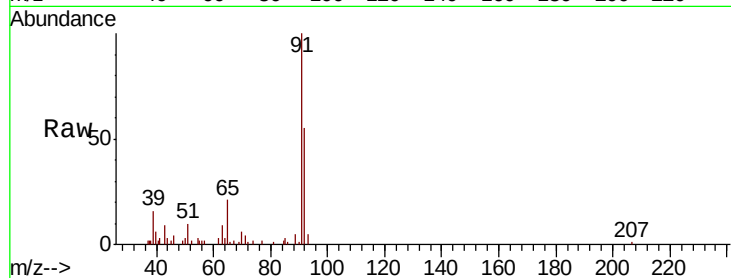
INFLUENTDL

Tot Ion: 91 Resp: 19886

Ion Ratio Lower Upper

91 100

92 90.8 47.0 70.6#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.21 min Scan# 2884

Delta R.T. -0.02 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

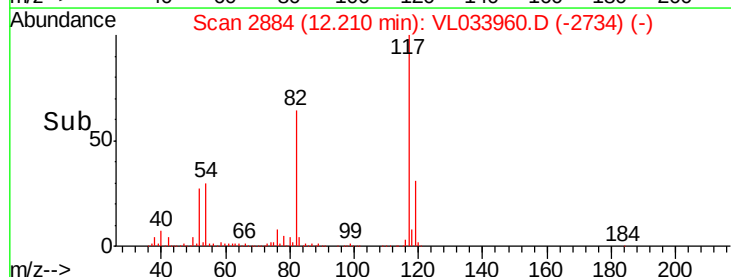
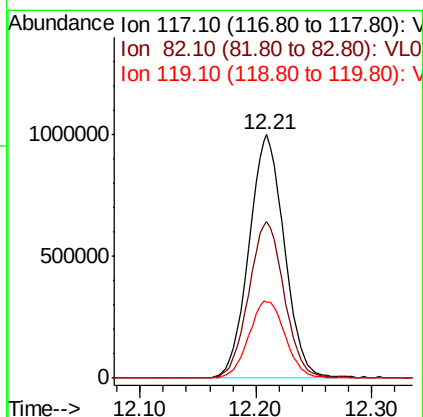
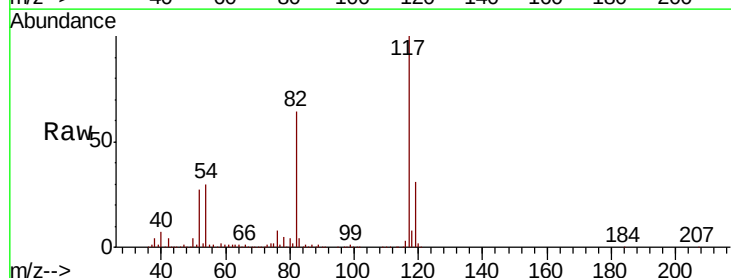
Tgt Ion: 117 Resp: 2112049

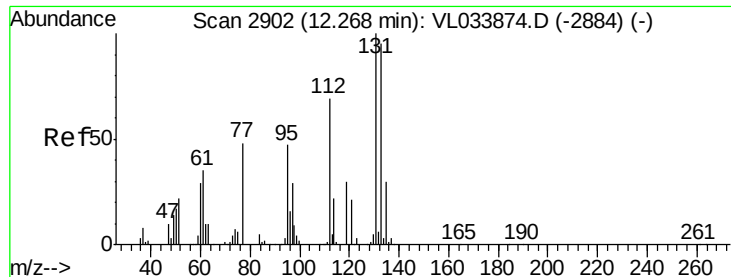
Ion Ratio Lower Upper

117 100

82 65.1 50.2 75.2

119 32.8 24.8 37.2





#56

1,1,1,2-Tetrachloroethane

Concen: 0.203 ppbv

RT: 11.80 min Scan# 2758

Delta R.T. -0.46 min

Lab File: VL033960.D

Acq: 25 Jun 2019 6:34

Instrument :

MSVOA_L

ClientSampleId :

INFLUENTDL

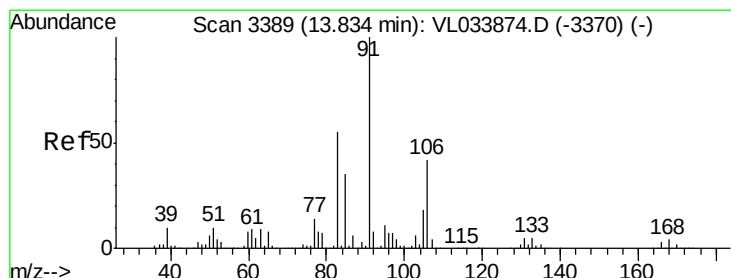
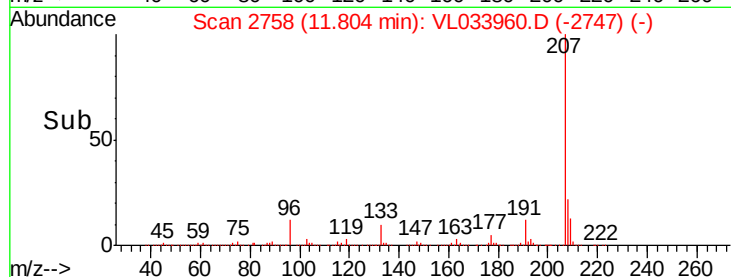
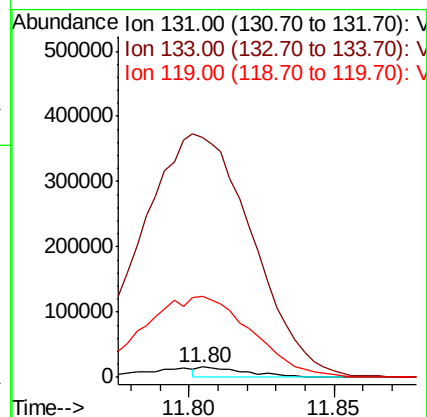
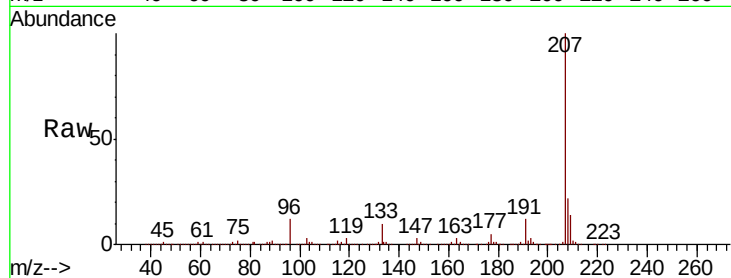
Tot Ion:131 Resp: 18765

Ion Ratio Lower Upper

131 100

133 5124.9 76.5 114.7#

119 1683.7 42.6 64.0#



#60

o-Xylene

Concen: 0.031 ppbv

RT: 13.81 min Scan# 3383

Delta R.T. -0.02 min

Lab File: VL033960.D

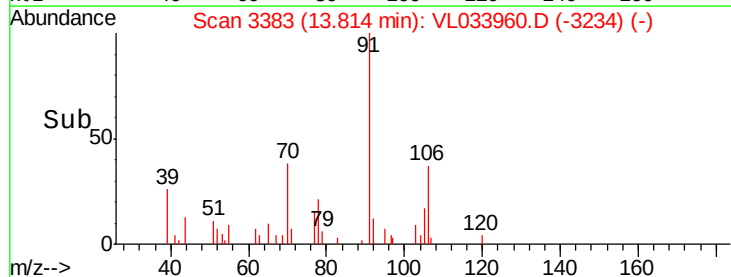
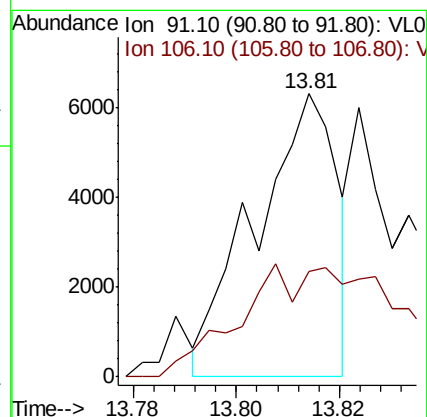
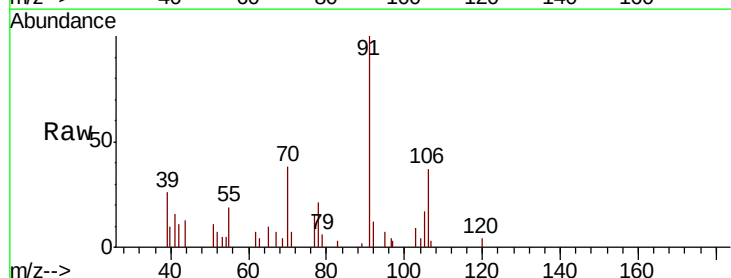
Acq: 25 Jun 2019 6:34

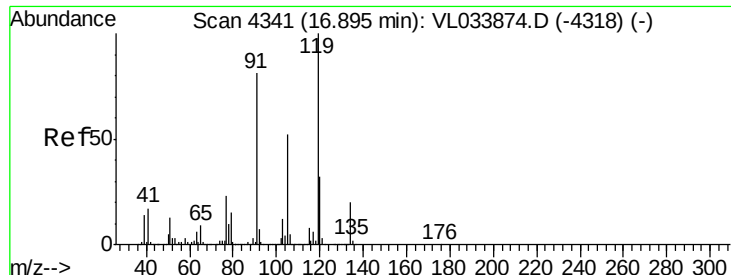
Tgt Ion: 91 Resp: 6961

Ion Ratio Lower Upper

91 100

106 79.8 21.7 65.1#

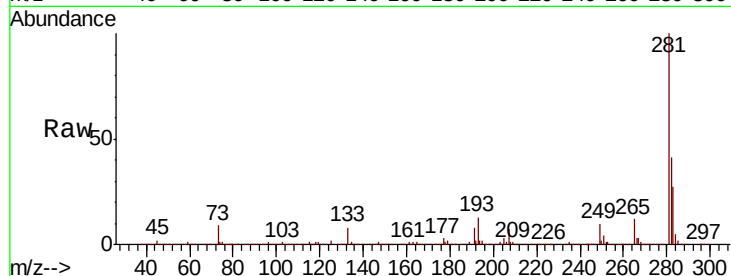




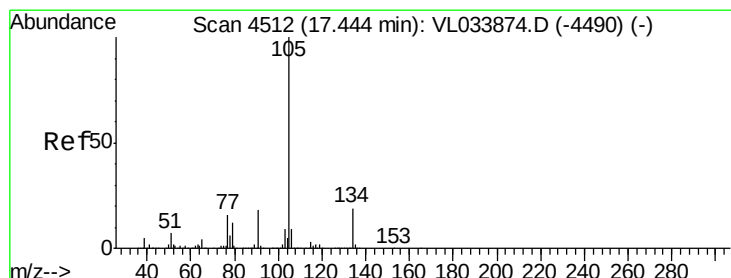
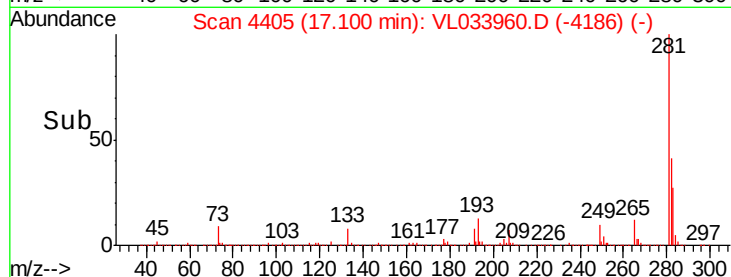
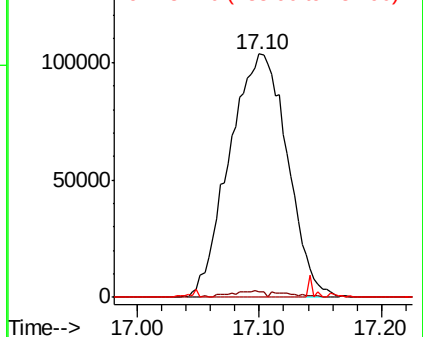
#65
tert-Butylbenzene
Concen: 1.218 ppbv
RT: 17.10 min Scan# 4405
Delta R.T. 0.21 min
Lab File: VL033960.D
Acq: 25 Jun 2019 6:34

Instrument :
MSVOA_L
ClientSampleId :
INFLUENTDL

Tot Ion	Ratio	Lower	Upper
119	100		
91	1.5	66.6	100.0#
134	0.4	15.5	23.3#

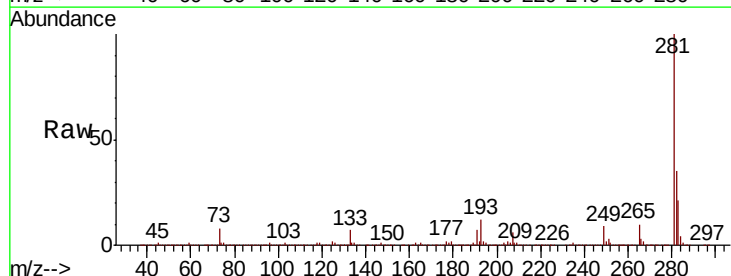


Abundance Ion 119.20 (118.90 to 119.90): V
Ion 91.10 (90.80 to 91.80): VL0
Ion 134.20 (133.90 to 134.90): V

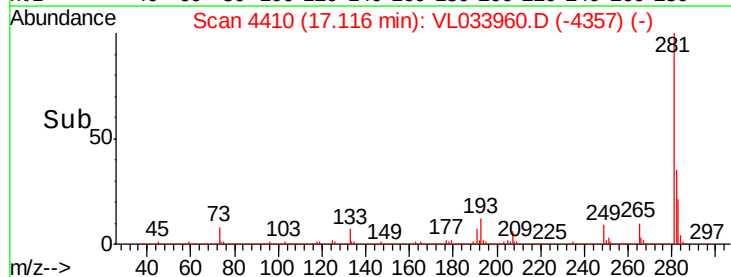
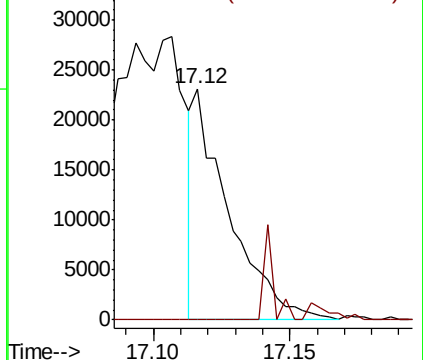


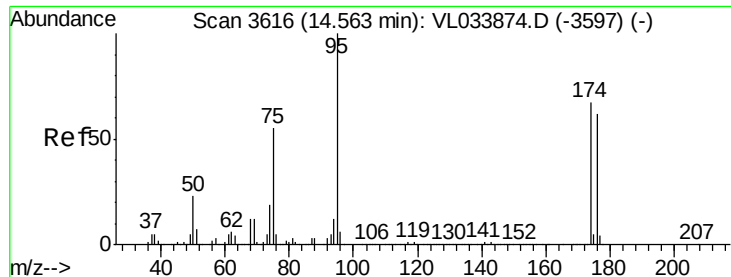
#67
sec-Butylbenzene
Concen: 0.052 ppbv
RT: 17.12 min Scan# 4410
Delta R.T. -0.33 min
Lab File: VL033960.D
Acq: 25 Jun 2019 6:34

Tgt Ion	Ratio	Lower	Upper
105	100		
134	6.7	14.6	22.0#



Abundance Ion 105.10 (104.80 to 105.80): V
Ion 134.20 (133.90 to 134.90): V

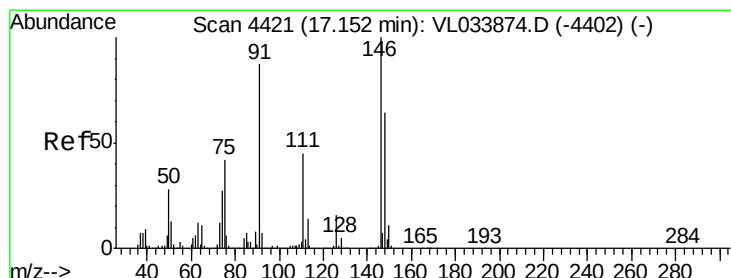
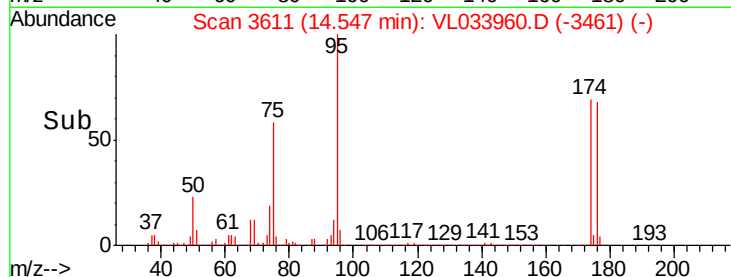
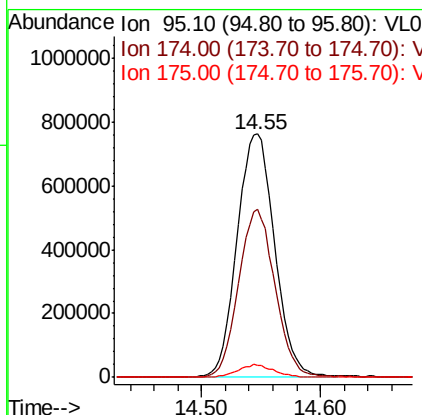
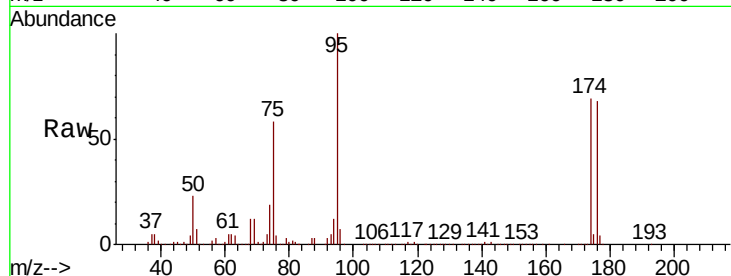




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.637 ppbv
 RT: 14.55 min Scan# 3611
 Delta R.T. -0.02 min
 Lab File: VL033960.D
 Acq: 25 Jun 2019 6:34

Instrument :
 MSVOA_L
 ClientSampleId :
 INFLUENTDL

Tot Ion: 95 Resp: 1671848
 Ion Ratio Lower Upper
 95 100
 174 67.1 54.0 81.0
 175 4.9 3.8 5.8



#75
 1,3-Dichlorobenzene
 Concen: 0.223 ppbv
 RT: 17.14 min Scan# 4416
 Delta R.T. -0.02 min
 Lab File: VL033960.D
 Acq: 25 Jun 2019 6:34

Tgt Ion: 146 Resp: 40381
 Ion Ratio Lower Upper
 146 100
 111 0.0 22.8 68.3#
 148 0.0 32.2 96.6#

