

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032119\
 Data File : VL033426.D
 Acq On : 21 Mar 2019 21:51
 Operator : SY/AP
 Sample : K1975-03DL2 40X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 22 08:46:49 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar 15 14:52:14 2019
 QLast Update : Fri Mar 15 14:52:14 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	749319	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2068106	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1923383	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	1541400	10.82	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	108.20%

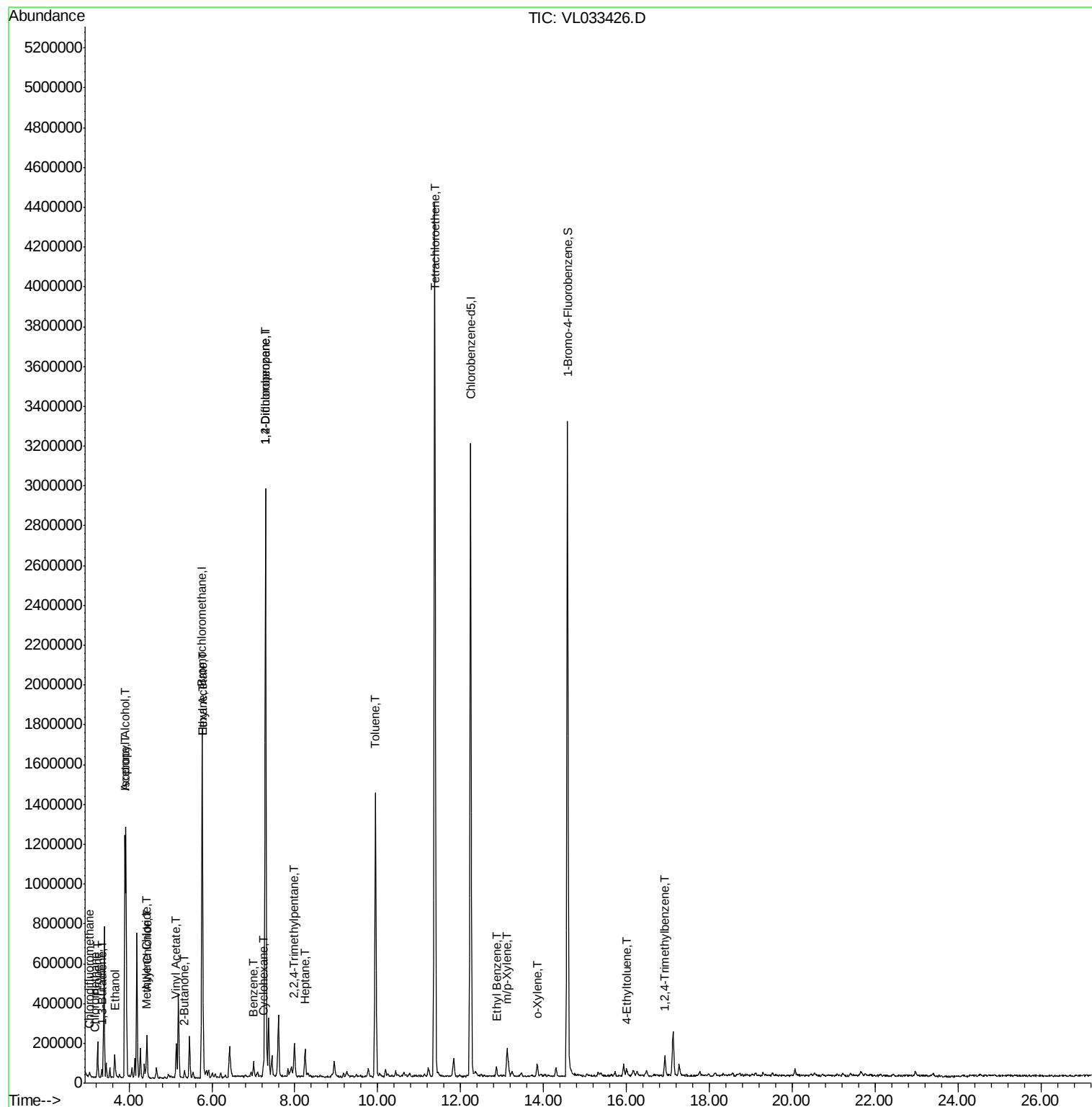
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	3.02	51	2868	0.033	ppbv #	87
4) Chloromethane	3.18	50	1708	0.037	ppbv #	43
9) Propene	3.24	41	49370	1.286	ppbv	90
10) Heptane	8.25	43	52684	0.553	ppbv	99
13) Ethanol	3.65	45	121780	6.654	ppbv	98
15) Acetone	3.90	43	1532926	13.160	ppbv	90
16) 1,3-Butadiene	3.35	39	10703	0.283	ppbv #	2
19) Isopropyl Alcohol	3.90	45	2808	0.051	ppbv #	1
20) Methylene Chloride	4.41	84	8932	0.235	ppbv #	88
21) Allyl Chloride	4.44	41	27460	0.486	ppbv #	39
23) Vinyl Acetate	5.14	43	55421	0.411	ppbv #	1
25) Ethyl Acetate	5.78	43	76481	0.452	ppbv #	78
26) Hexane	5.78	57	110124	1.455	ppbv #	38
30) Cyclohexane	7.24	84	8227	0.136	ppbv #	1
34) 2-Butanone	5.34	43	37560	0.277	ppbv	94
36) Benzene	7.01	78	50144	0.271	ppbv	95
39) 1,2-Dichloropropane	7.29	63	550626	7.944	ppbv #	24
44) 2,2,4-Trimethylpentane	7.99	57	112674	0.368	ppbv #	74
52) Tetrachloroethene	11.37	164	1078434	13.986	ppbv	98
53) Toluene	9.94	91	1071400	5.094	ppbv	100
58) Ethyl Benzene	12.86	91	23498	0.086	ppbv	89
59) m/p-Xylene	13.12	91	111136	0.475	ppbv #	100
60) o-Xylene	13.85	91	45240	0.198	ppbv	98
72) 4-Ethyltoluene	16.00	105	11203	0.043	ppbv #	42
74) 1,2,4-Trimethylbenzene	16.93	105	59882	0.224	ppbv #	71

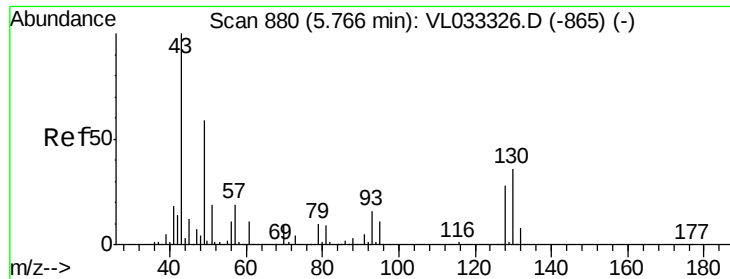
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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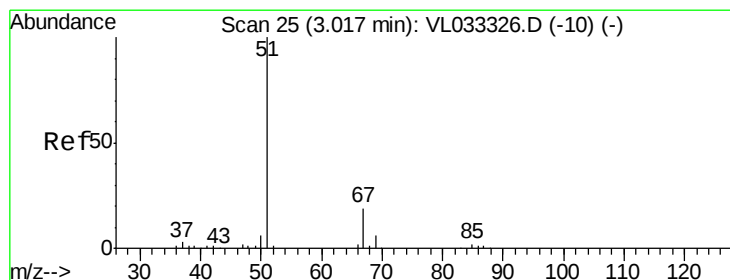
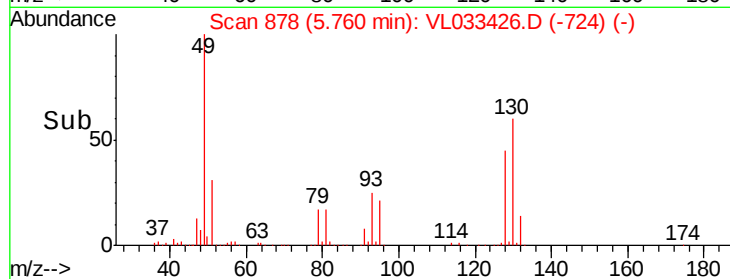
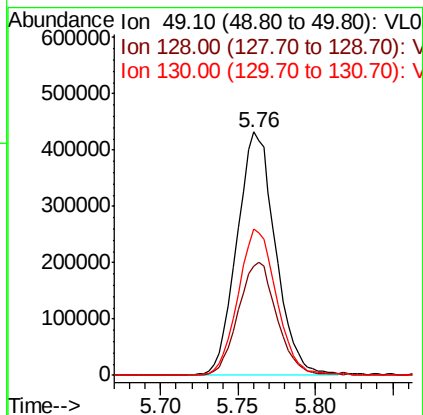
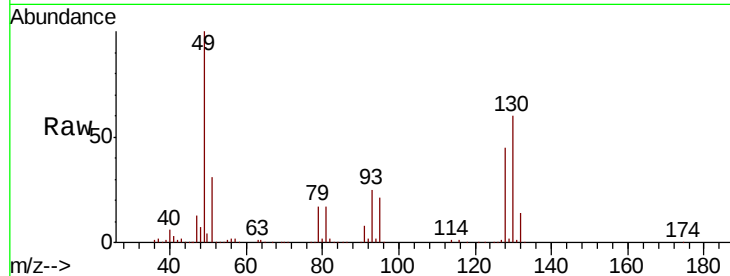


#1

Bromochloromethane
Concen: 10.000 ppbv
RT: 5.76 min Scan# 878
Delta R.T. -0.01 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Instrument :
MSVOA_L
ClientSampled :

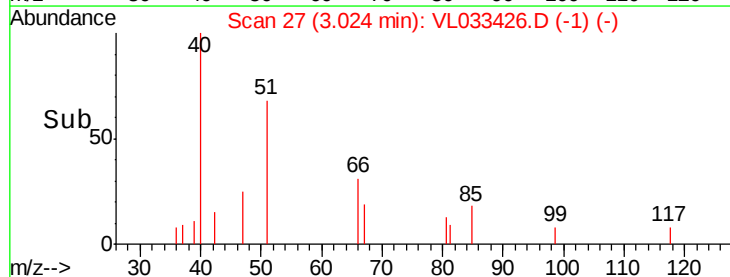
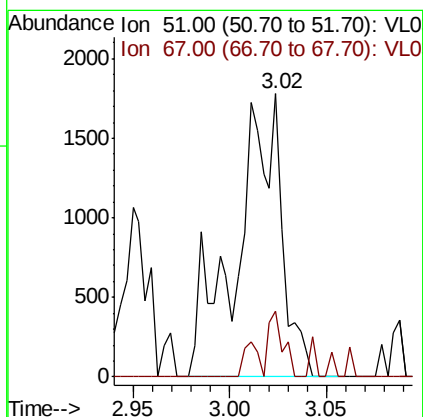
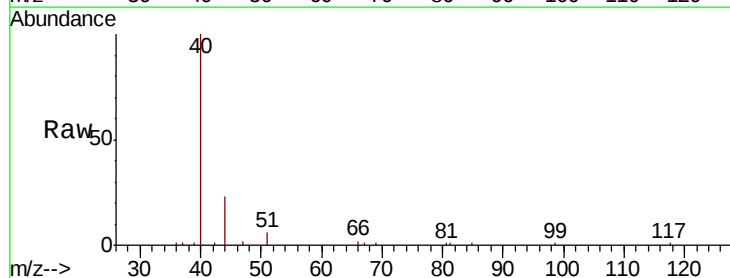
Tot Ion	49	Resp	749319
Ion	Ratio	Lower	Upper
49	100		
128	47.1	23.5	70.6
130	60.7	30.1	90.3

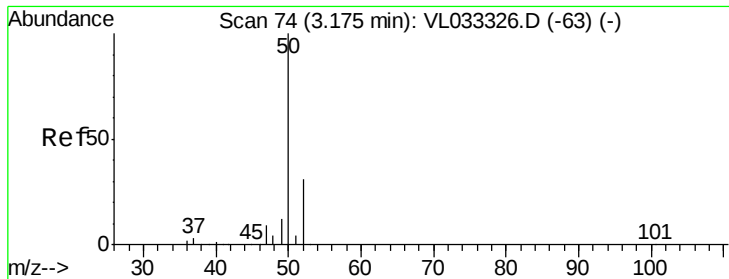


#3

Chlorodifluoromethane
Concen: 0.033 ppbv
RT: 3.02 min Scan# 27
Delta R.T. 0.01 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Tgt Ion	51	Resp	2868
Ion	Ratio	Lower	Upper
51	100		
67	13.0	14.9	22.3





#4

Chloromethane

Concen: 0.037 ppbv

RT: 3.18 min Scan# 75

Delta R.T. 0.00 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

Instrument :

MSVOA_L

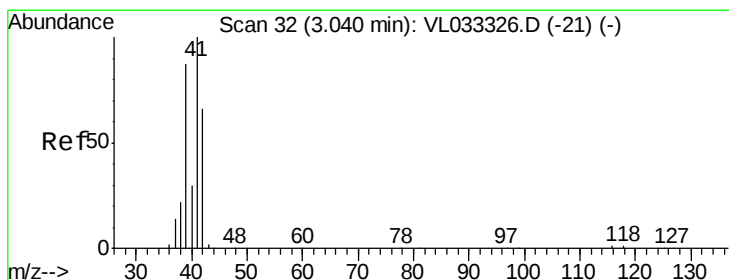
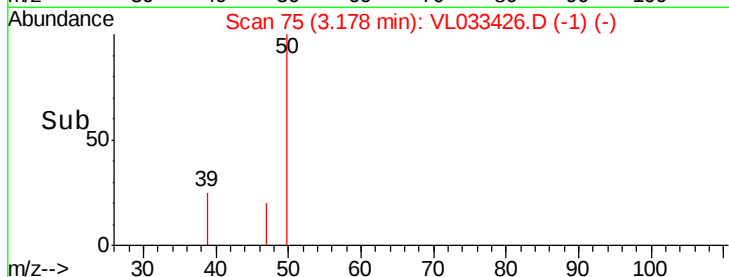
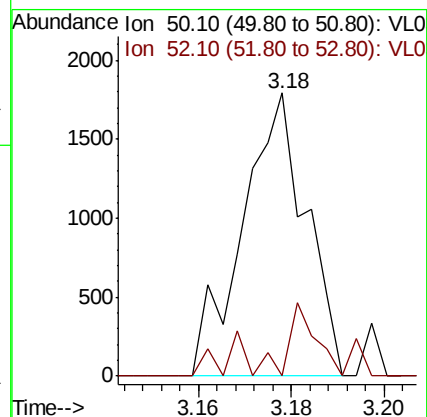
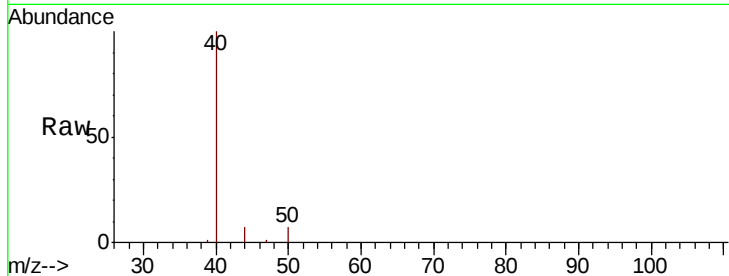
ClientSampleId :

Tot Ion: 50 Resp: 1708

Ion Ratio Lower Upper

50 100

52 0.0 25.0 37.6#



#9

Propene

Concen: 1.286 ppbv

RT: 3.24 min Scan# 93

Delta R.T. 0.20 min

Lab File: VL033426.D

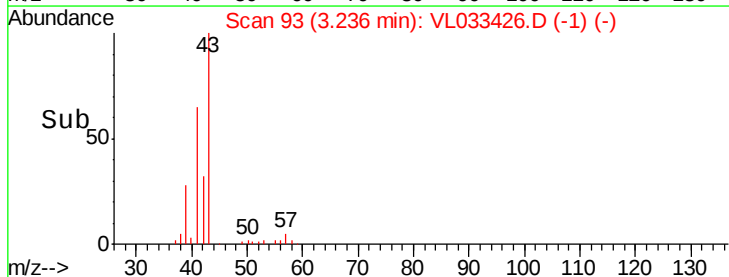
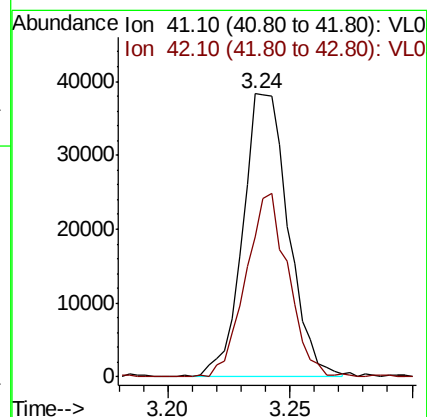
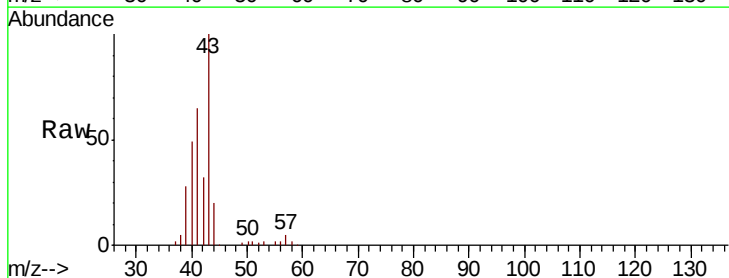
Acq: 21 Mar 2019 21:51

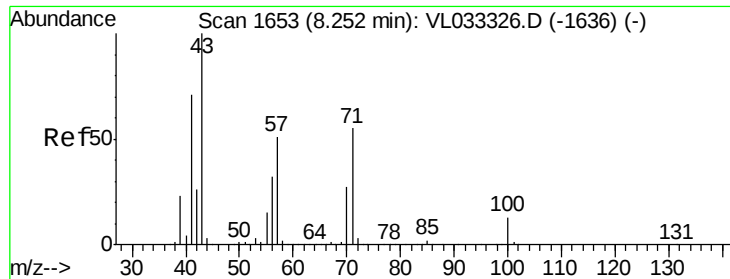
Tgt Ion: 41 Resp: 49370

Ion Ratio Lower Upper

41 100

42 60.7 55.2 82.8

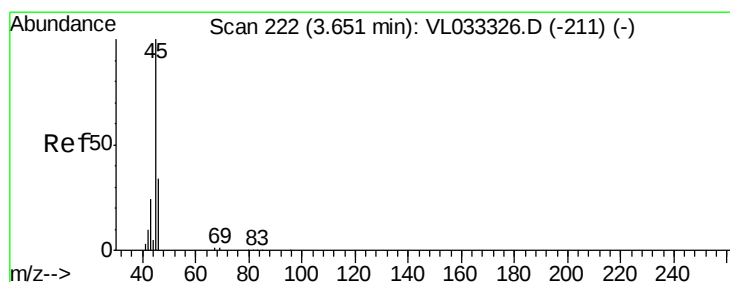
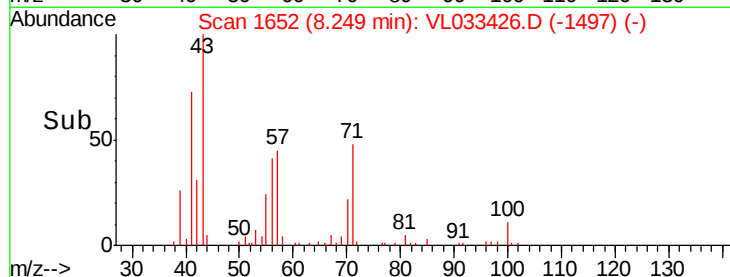
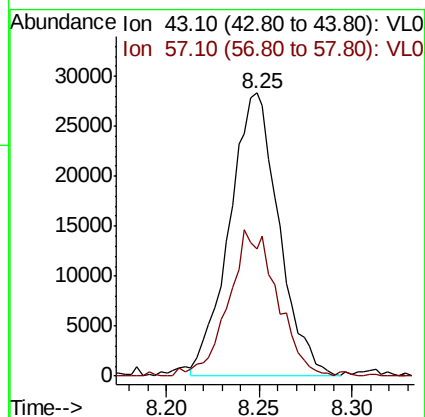
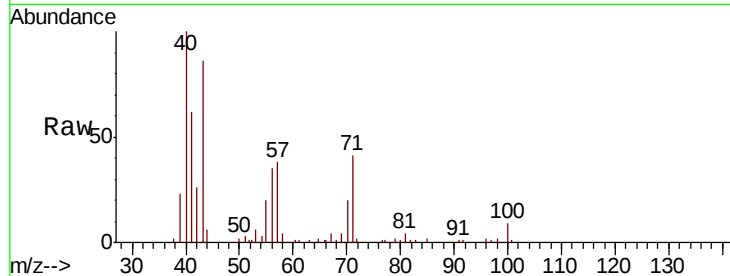




#10
Heptane
Concen: 0.553 ppbv
RT: 8.25 min Scan# 1652
Delta R.T. -0.00 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

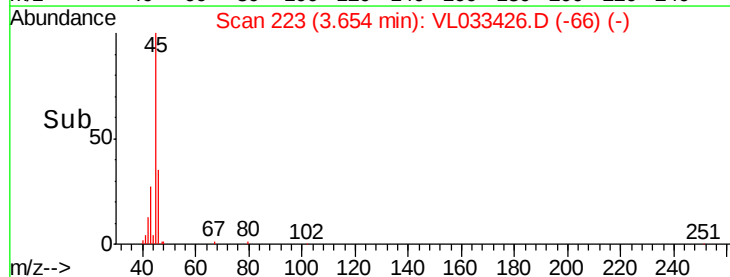
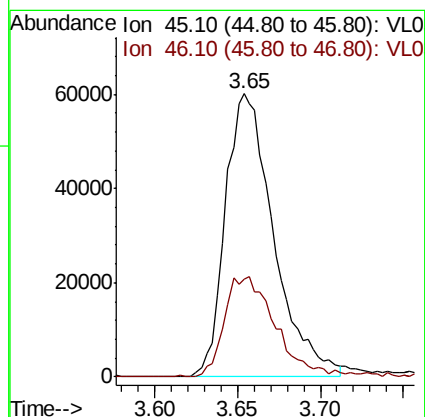
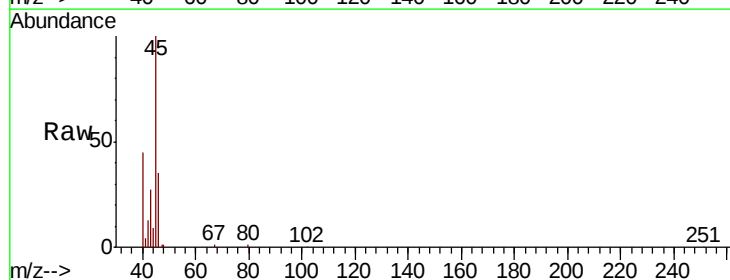
Instrument :
MSVOA_L
ClientSampleId :

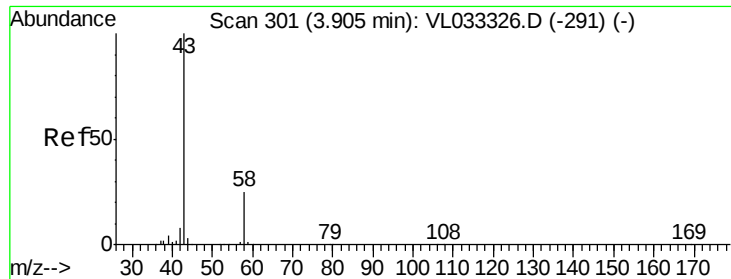
Tot Ion: 43 Resp: 52684
Ion Ratio Lower Upper
43 100
57 51.3 40.4 60.6



#13
Ethanol
Concen: 6.654 ppbv
RT: 3.65 min Scan# 223
Delta R.T. 0.00 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Tgt Ion: 45 Resp: 121780
Ion Ratio Lower Upper
45 100
46 38.4 14.9 59.7





#15

Acetone

Concen: 13.160 ppbv

RT: 3.90 min Scan# 300

Delta R.T. -0.00 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

Instrument :

MSVOA_L

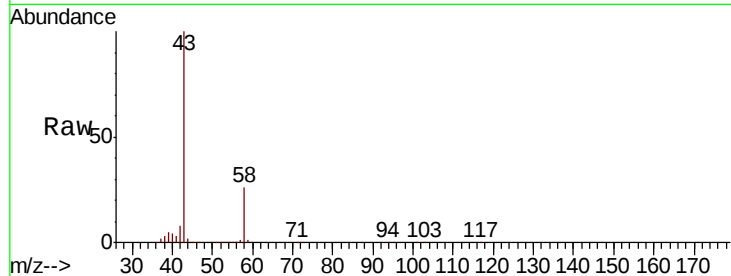
ClientSampled :

Tot Ion: 43 Resp: 1532926

Ion Ratio Lower Upper

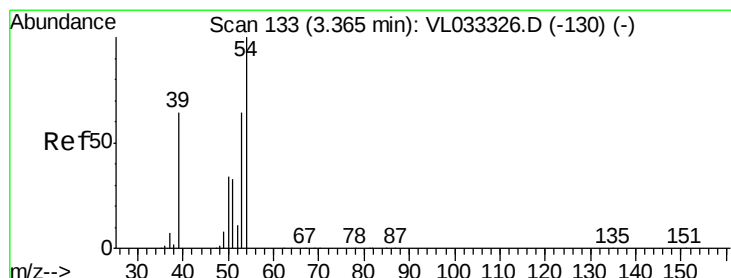
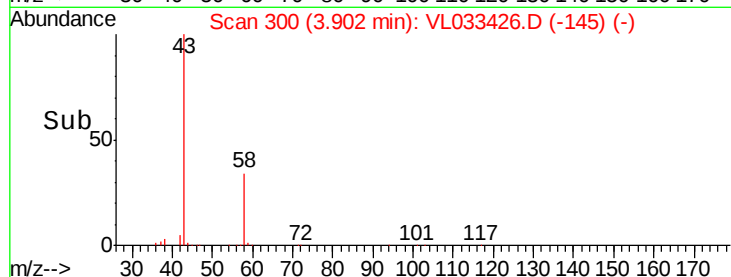
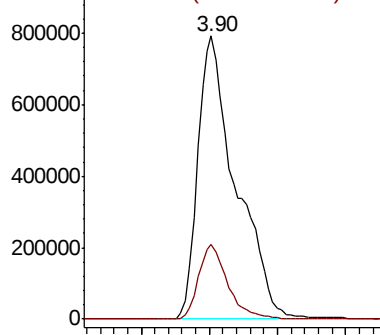
43 100

58 20.4 20.4 30.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.283 ppbv

RT: 3.35 min Scan# 127

Delta R.T. -0.02 min

Lab File: VL033426.D

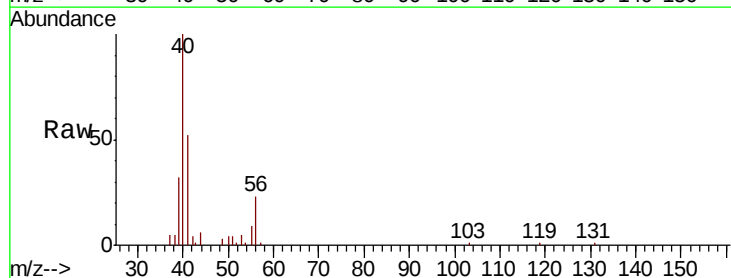
Acq: 21 Mar 2019 21:51

Tgt Ion: 39 Resp: 10703

Ion Ratio Lower Upper

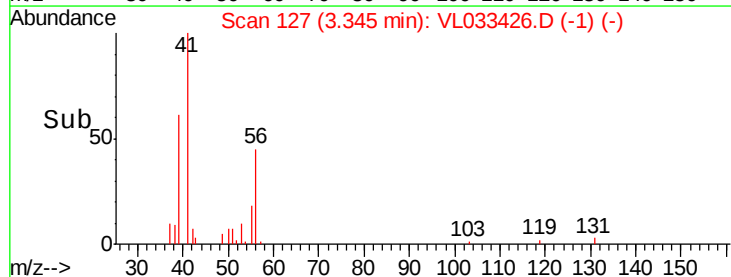
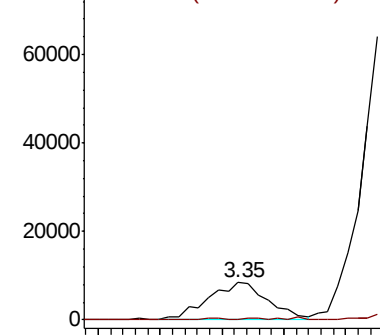
39 100

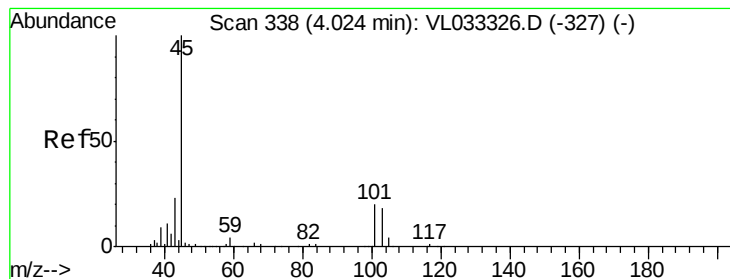
54 0.0 76.8 115.2#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#19

Isopropyl Alcohol

Concen: 0.051 ppbv

RT: 3.90 min Scan# 299

Delta R.T. -0.13 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

Instrument :

MSVOA_L

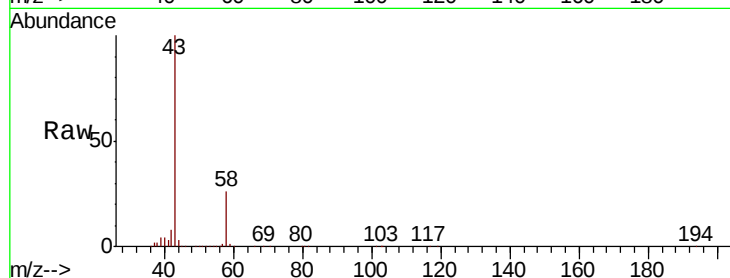
ClientSampleId :

Tot Ion: 45 Resp: 2808

Ion Ratio Lower Upper

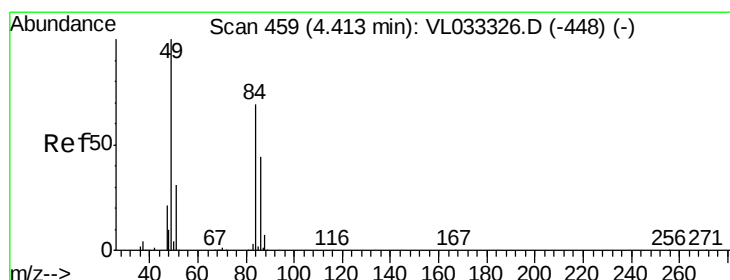
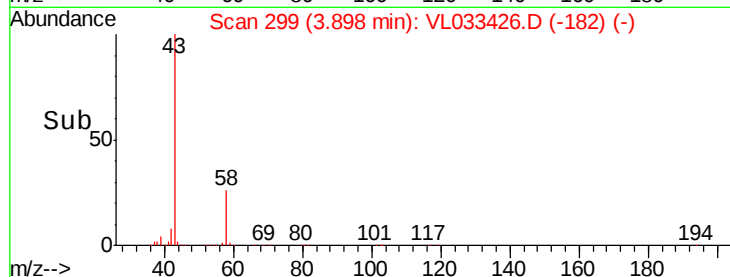
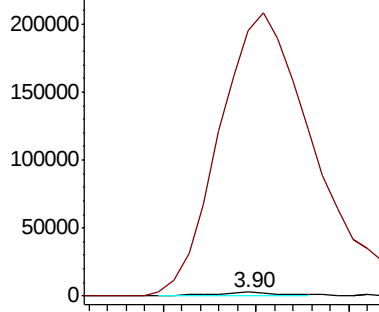
45 100

58 11195.0 1.5 2.3#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 0.235 ppbv

RT: 4.41 min Scan# 459

Delta R.T. -0.00 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

Tgt Ion: 84 Resp: 8932

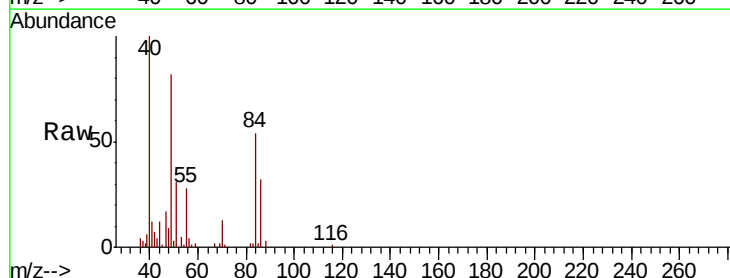
Ion Ratio Lower Upper

84 100

49 147.5 115.4 173.0

51 16.4 35.8 53.6#

86 54.8 50.6 75.8

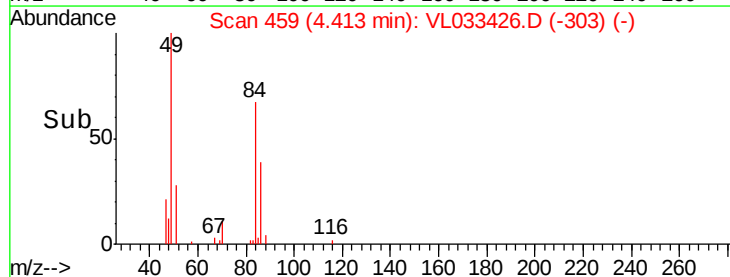
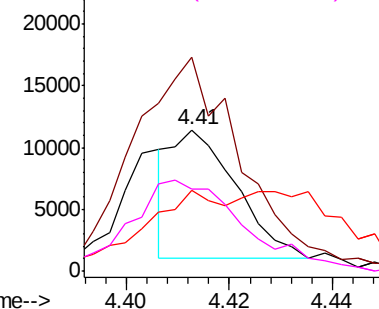


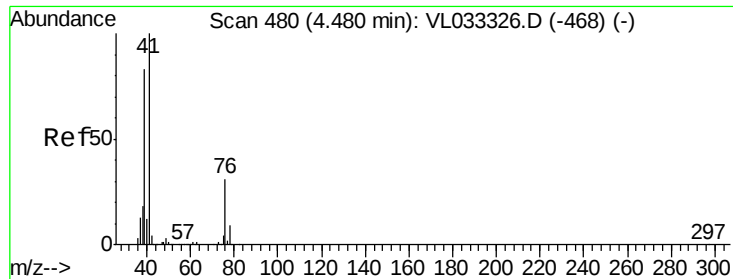
Abundance Ion 84.00 (83.70 to 84.70): VL0

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

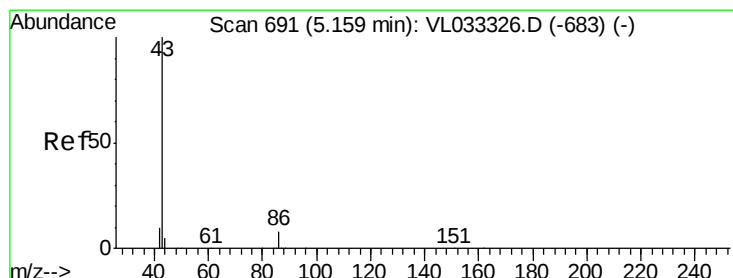
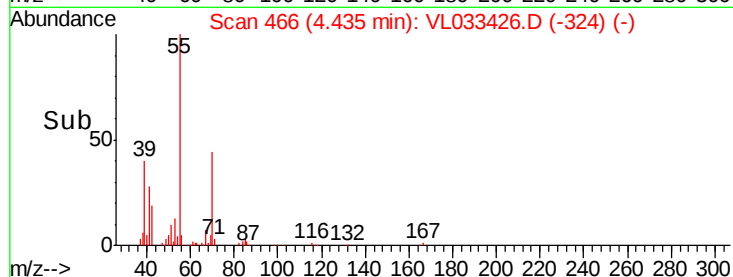
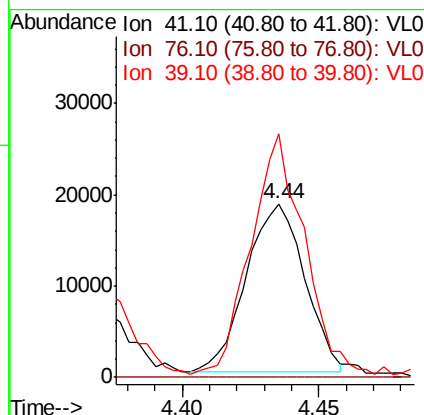
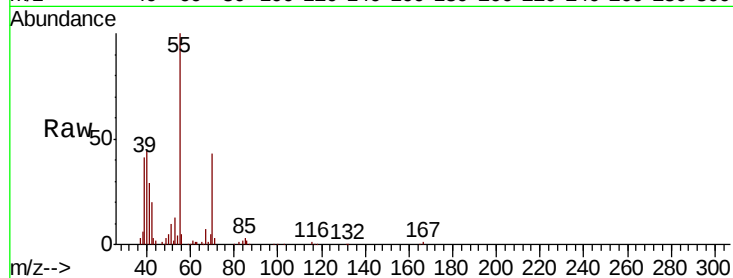




#21
Allvl Chloride
Concen: 0.486 ppbv
RT: 4.44 min Scan# 466
Delta R.T. -0.05 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

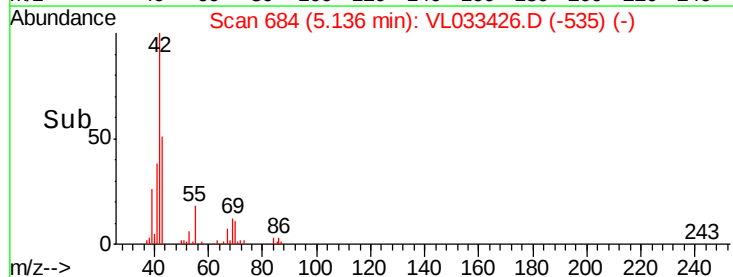
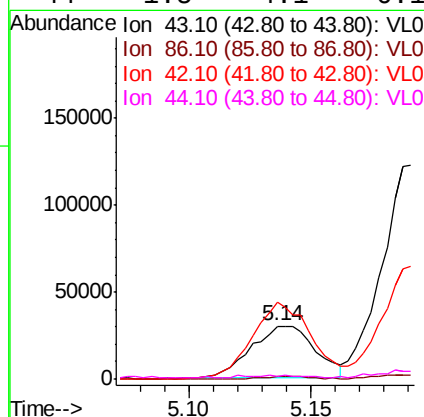
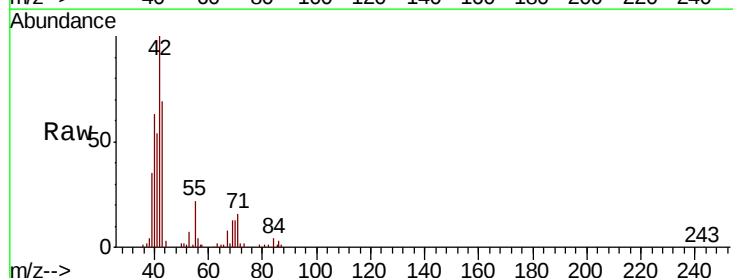
Instrument :
MSVOA_L
ClientSampleId :

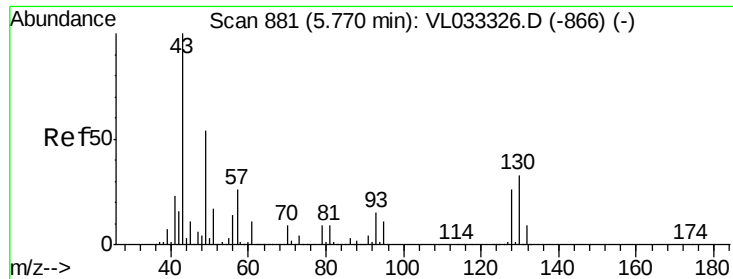
Tot Ion: 41 Resp: 27460
Ion Ratio Lower Upper
41 100
76 0.0 25.0 37.4#
39 139.1 65.9 98.9#



#23
Vinyl Acetate
Concen: 0.411 ppbv
RT: 5.14 min Scan# 684
Delta R.T. -0.02 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Tgt Ion: 43 Resp: 55421
Ion Ratio Lower Upper
43 100
86 3.8 6.2 9.2#
42 145.6 8.1 12.1#
44 1.5 4.1 6.1#

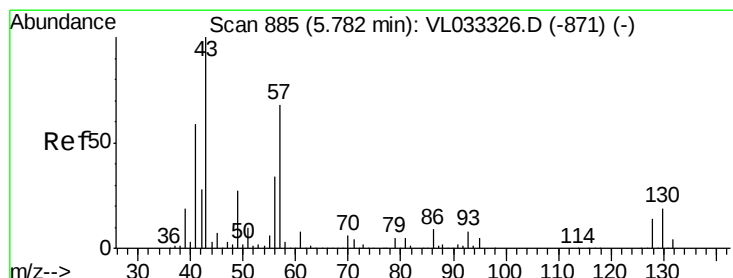
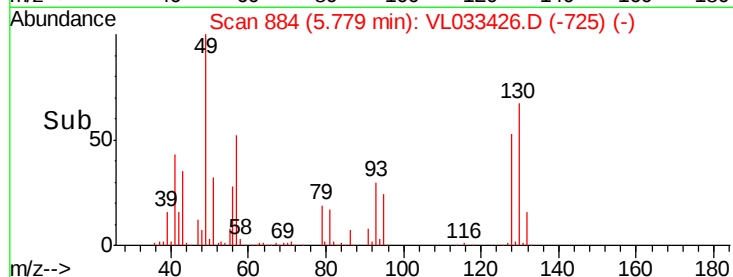
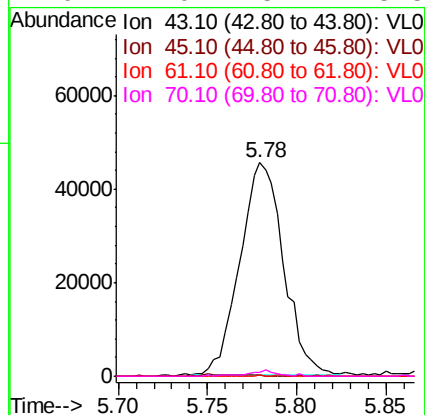
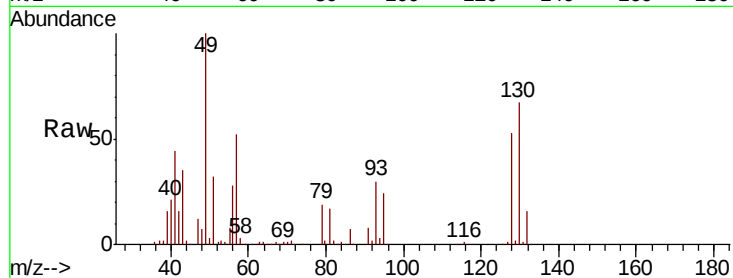




#25
Ethyl Acetate
Concen: 0.452 ppbv
RT: 5.78 min Scan# 884
Delta R.T. 0.01 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

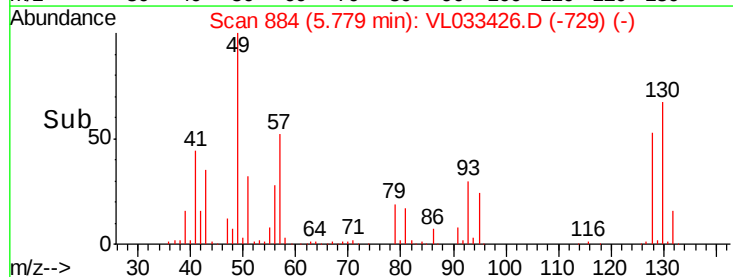
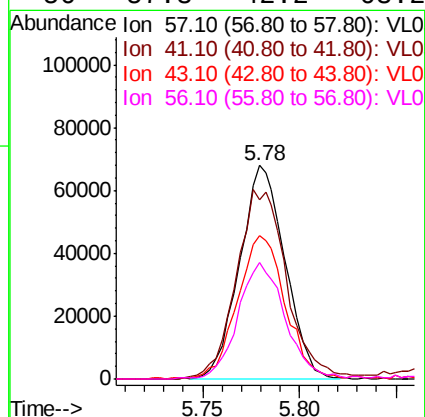
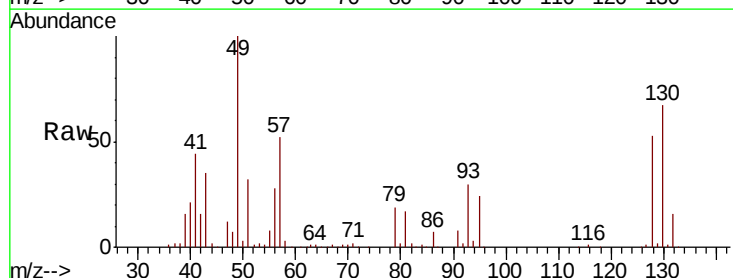
Instrument :
MSVOA_L
ClientSampleId :

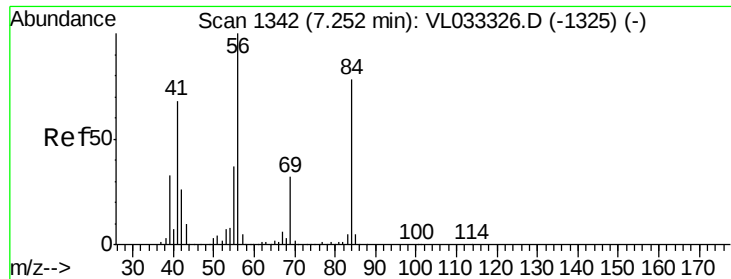
Tot Ion:	43	Resp:	76481
Ion	Ratio	Lower	Upper
43	100		
45	0.9	7.9	11.9#
61	0.0	7.4	11.2#
70	2.0	5.7	8.5#



#26
Hexane
Concen: 1.455 ppbv
RT: 5.78 min Scan# 884
Delta R.T. -0.00 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Tgt Ion:	57	Resp:	110124
Ion	Ratio	Lower	Upper
57	100		
41	98.7	70.5	105.7
43	72.1	181.8	272.8#
56	57.3	42.2	63.2

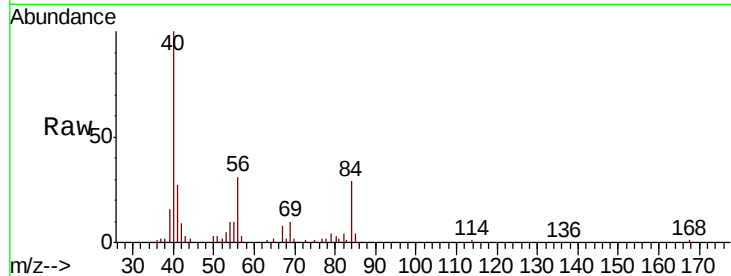




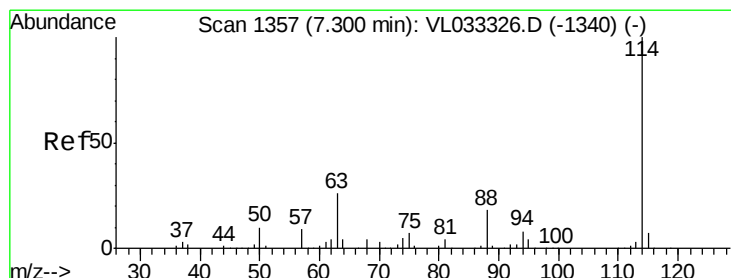
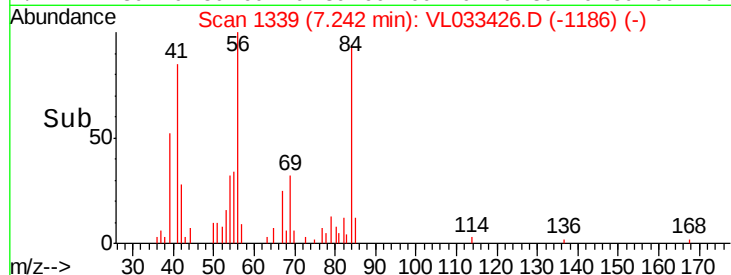
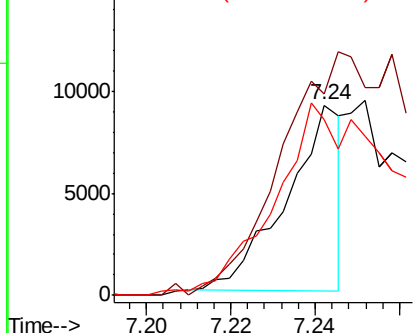
#30
Cvclohexane
Concen: 0.136 ppbv
RT: 7.24 min Scan# 1339
Delta R.T. -0.01 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 84 Resp: 8227
Ion Ratio Lower Upper
84 100
56 288.7 111.3 166.9#
41 255.0 69.6 104.4#

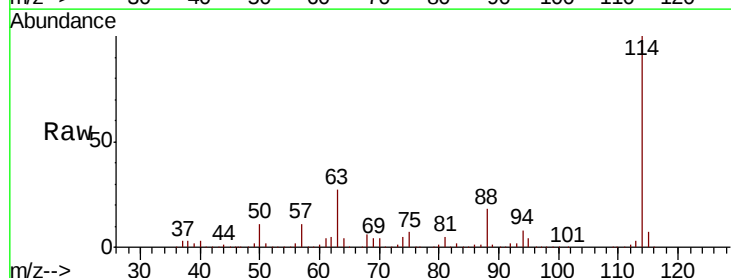


Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

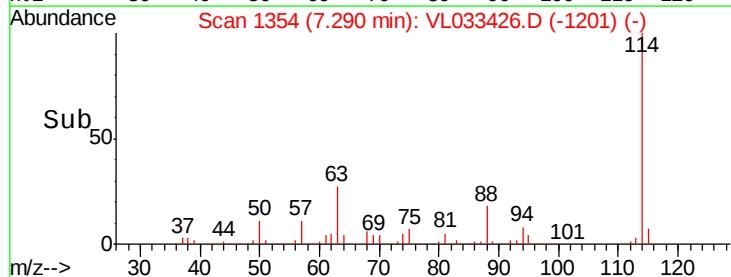
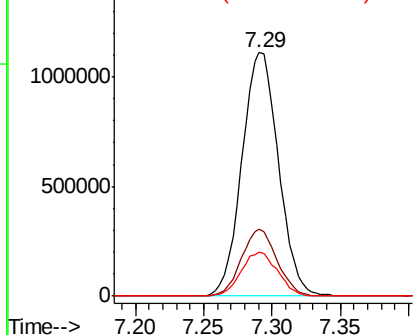


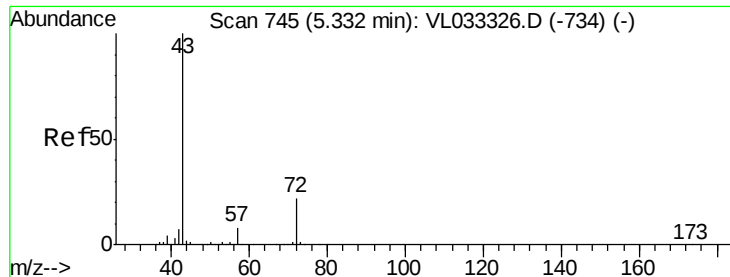
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1354
Delta R.T. -0.01 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Tgt Ion: 114 Resp: 2068106
Ion Ratio Lower Upper
114 100
63 26.8 21.4 32.2
88 18.1 14.5 21.7



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: 0.277 ppbv

RT: 5.34 min Scan# 748

Delta R.T. 0.01 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

Instrument :

MSVOA_L

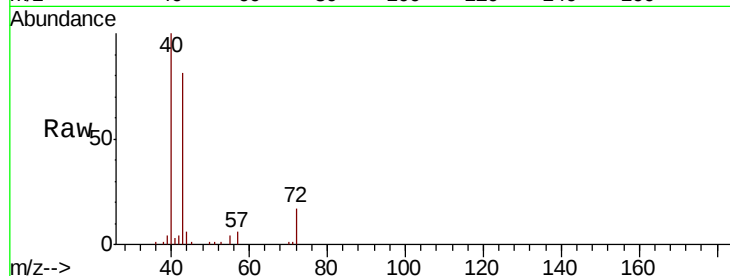
ClientSampleId :

Tot Ion: 43 Resp: 37560

Ion Ratio Lower Upper

43 100

72 25.0 17.7 26.5



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

5.34

25000

20000

15000

10000

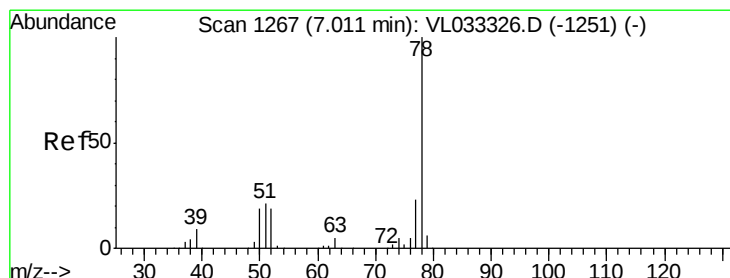
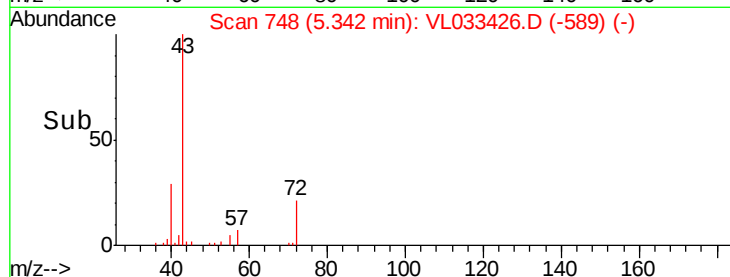
5000

0

Time-->

5.30

5.35



#36

Benzene

Concen: 0.271 ppbv

RT: 7.01 min Scan# 1266

Delta R.T. -0.00 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

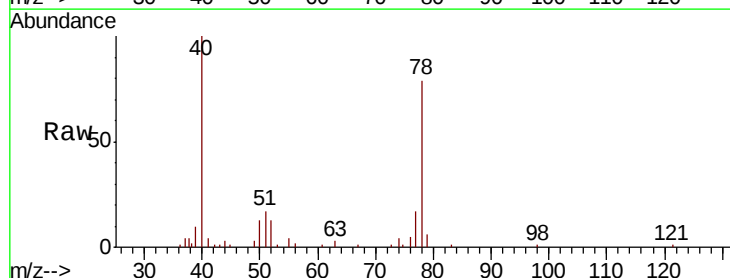
Tgt Ion: 78 Resp: 50144

Ion Ratio Lower Upper

78 100

77 20.7 18.1 27.1

50 16.0 15.2 22.8



Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

7.01

30000

20000

10000

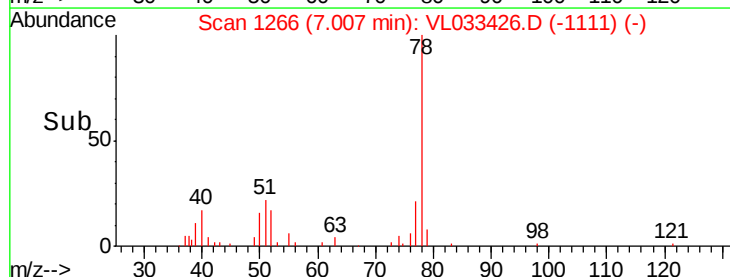
0

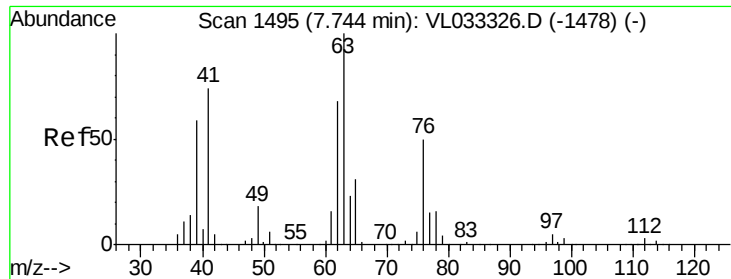
Time-->

6.95

7.00

7.05





#39

1,2-Dichloropropane

Concen: 7.944 ppbv

RT: 7.29 min Scan# 1354

Delta R.T. -0.45 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

Instrument :

MSVOA_L

ClientSampleId :

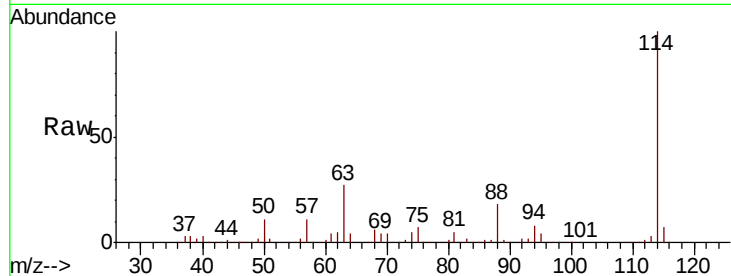
Tot Ion: 63 Resp: 550626

Ion Ratio Lower Upper

63 100

41 0.0 59.5 89.3#

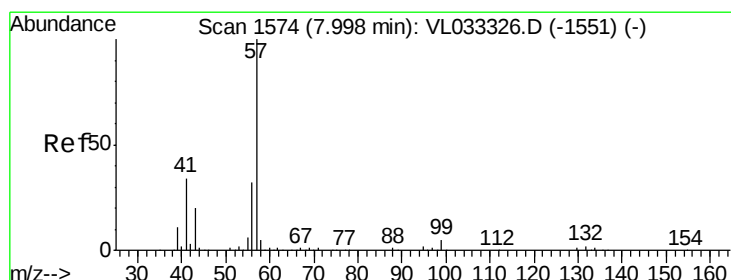
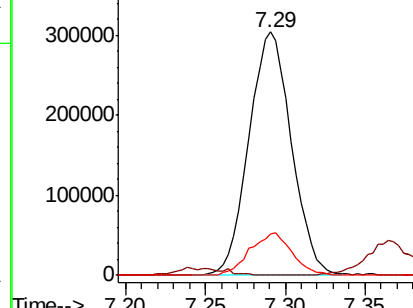
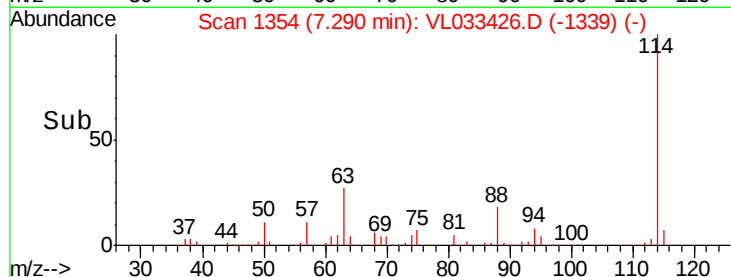
62 17.2 54.7 82.1#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.368 ppbv

RT: 7.99 min Scan# 1572

Delta R.T. -0.01 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

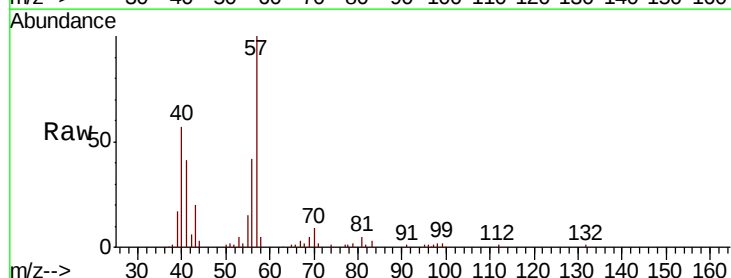
Tgt Ion: 57 Resp: 112674

Ion Ratio Lower Upper

57 100

41 46.7 26.0 39.0#

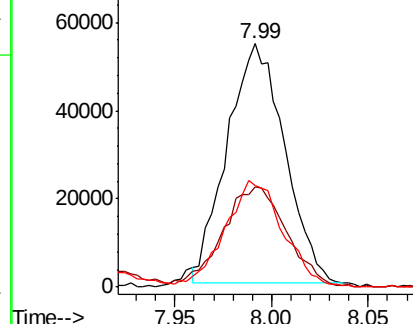
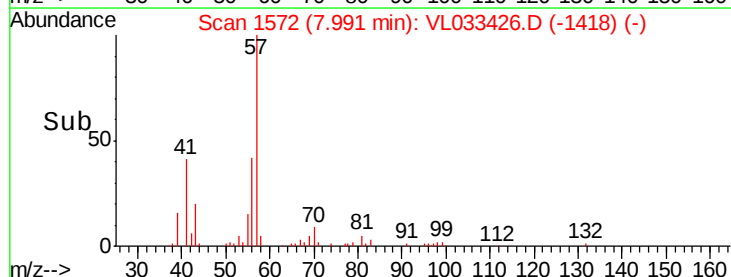
56 45.3 24.6 36.8#

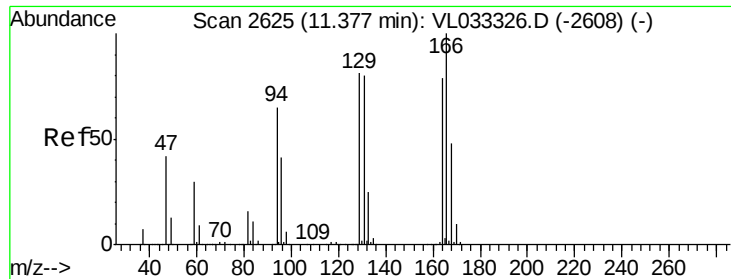


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 13.986 ppbv

RT: 11.37 min Scan# 2624

Delta R.T. -0.00 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

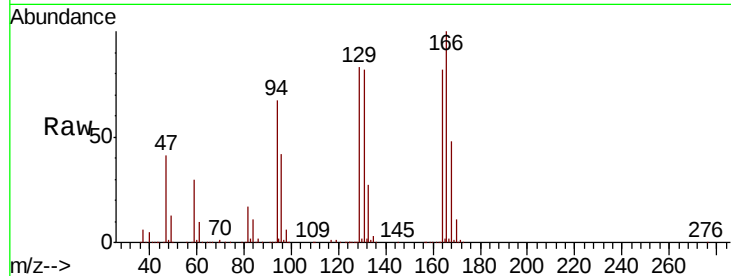
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 1078434

Ion	Ratio	Lower	Upper
164	100		
166	122.3	101.5	152.3
129	101.6	82.2	123.2
131	99.9	81.1	121.7

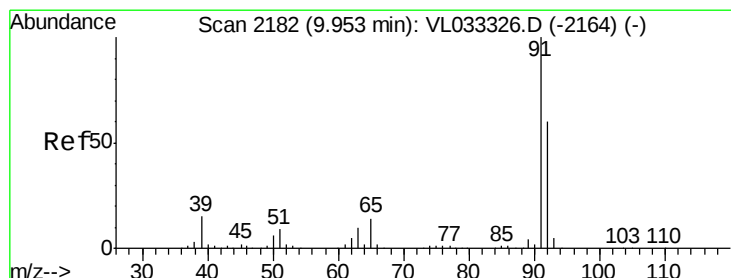
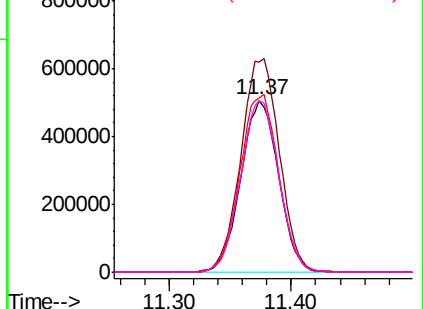
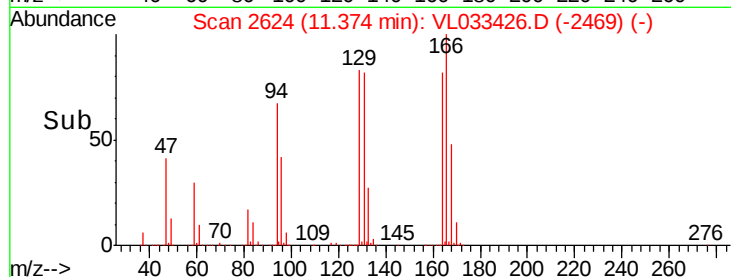


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 5.094 ppbv

RT: 9.94 min Scan# 2179

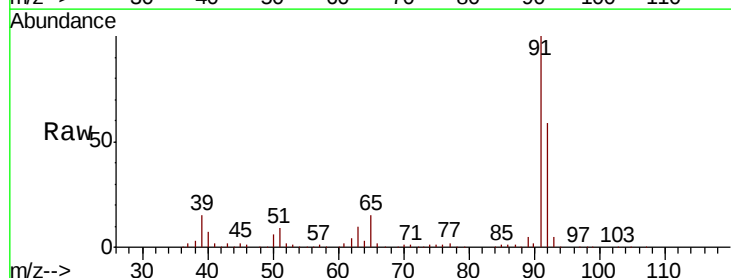
Delta R.T. -0.01 min

Lab File: VL033426.D

Acq: 21 Mar 2019 21:51

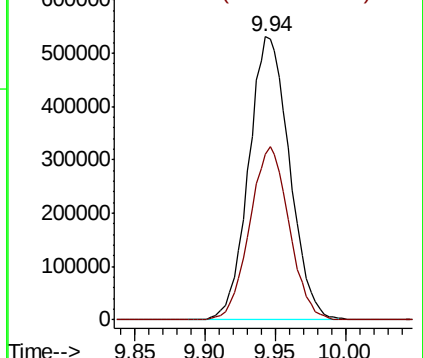
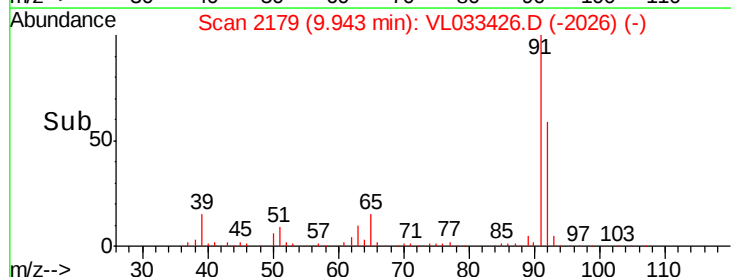
Tgt Ion: 91 Resp: 1071400

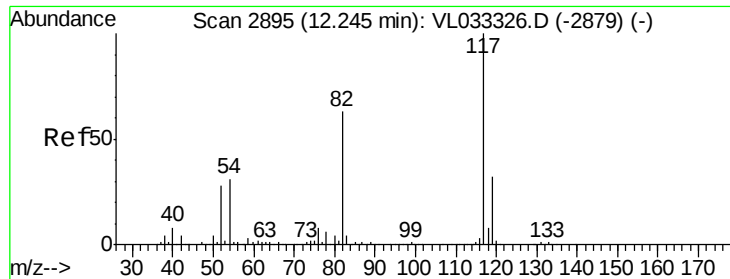
Ion	Ratio	Lower	Upper
91	100		
92	59.4	47.4	71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

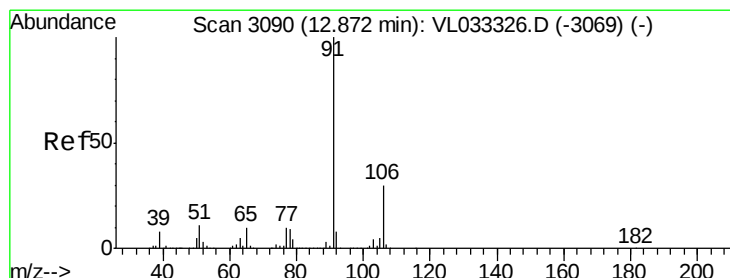
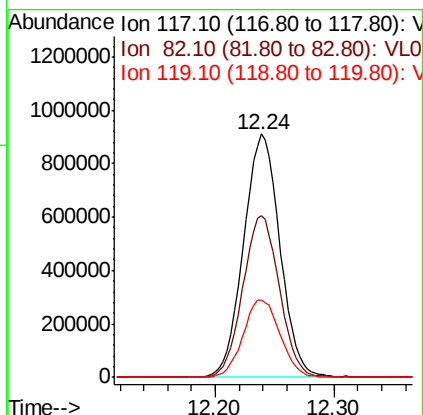
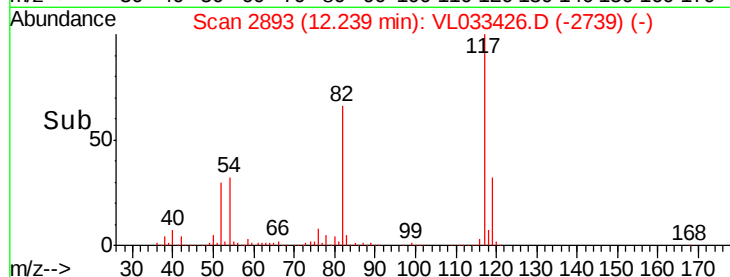
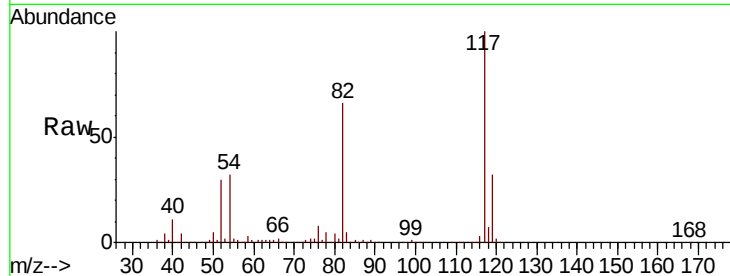




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2893
Delta R.T. -0.01 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

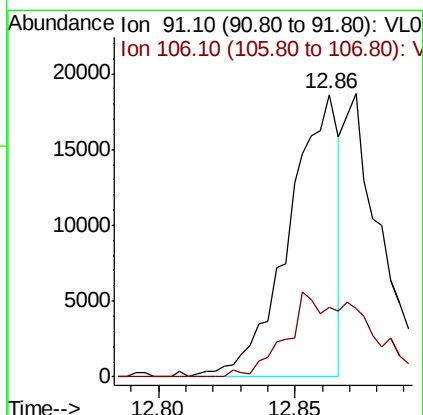
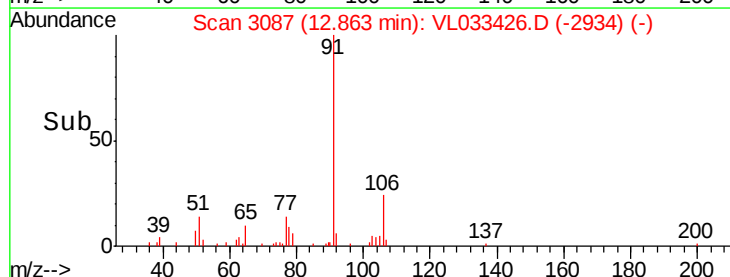
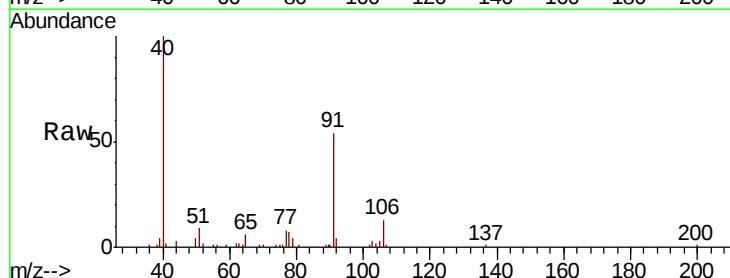
Instrument :
MSVOA_L
ClientSampleId :

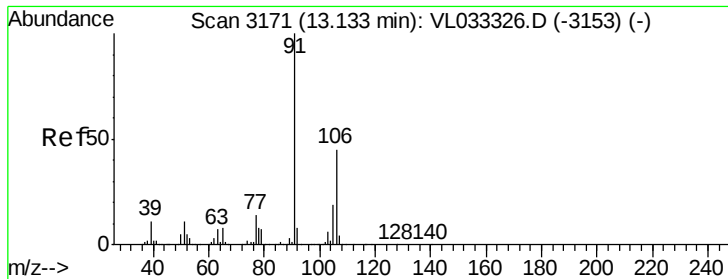
Tot Ion:117 Resp: 1923383
Ion Ratio Lower Upper
117 100
82 67.1 53.4 80.2
119 32.7 27.3 40.9



#58
Ethyl Benzene
Concen: 0.086 ppbv
RT: 12.86 min Scan# 3087
Delta R.T. -0.01 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Tgt Ion: 91 Resp: 23498
Ion Ratio Lower Upper
91 100
106 24.5 24.2 36.2

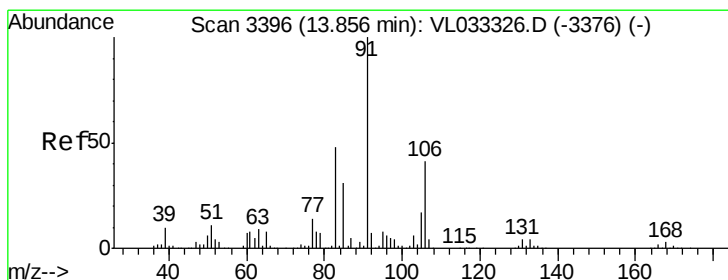
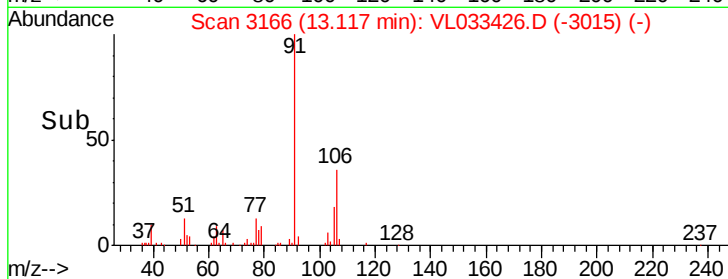
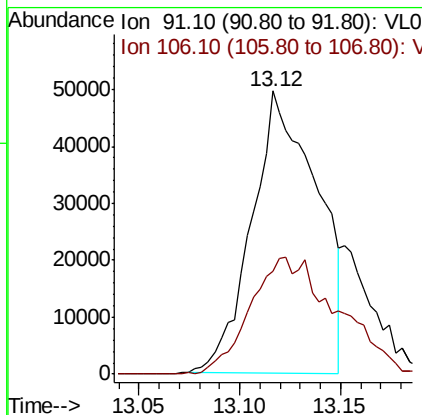
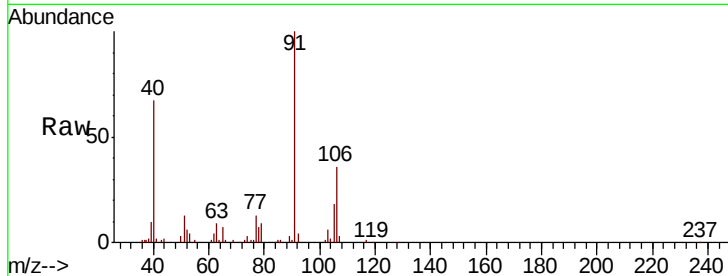




#59
m/p-Xylene
Concen: 0.475 ppbv
RT: 13.12 min Scan# 3166
Delta R.T. -0.02 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

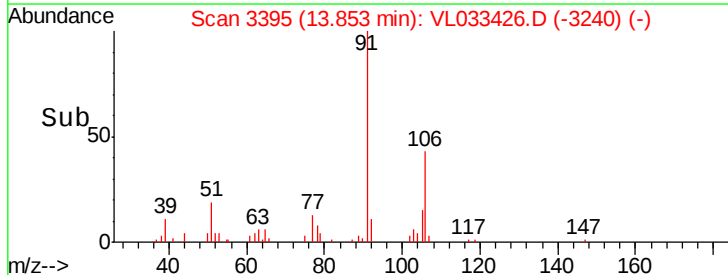
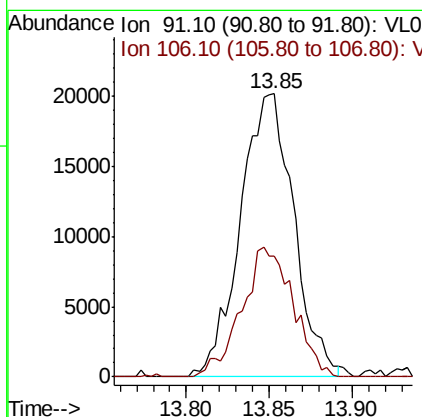
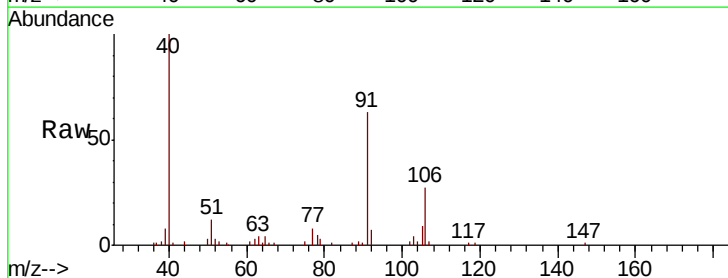
Instrument :
MSVOA_L
ClientSampled :

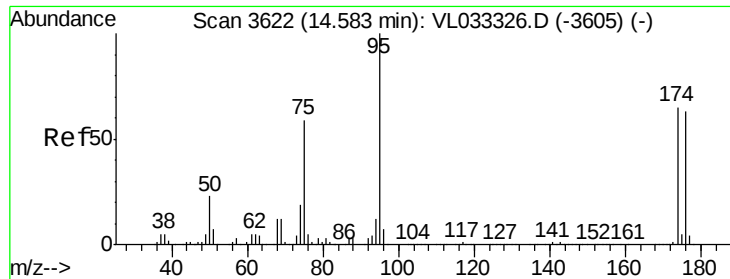
Tot Ion: 91 Resp: 111136
Ion Ratio Lower Upper
91 100
106 55.5 0.0 0.0#



#60
o-Xylene
Concen: 0.198 ppbv
RT: 13.85 min Scan# 3395
Delta R.T. -0.00 min
Lab File: VL033426.D
Acq: 21 Mar 2019 21:51

Tgt Ion: 91 Resp: 45240
Ion Ratio Lower Upper
91 100
106 44.0 21.3 63.9

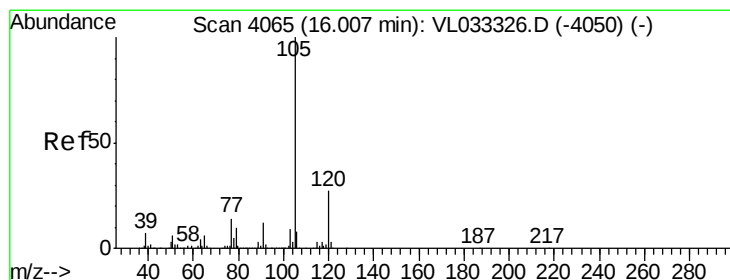
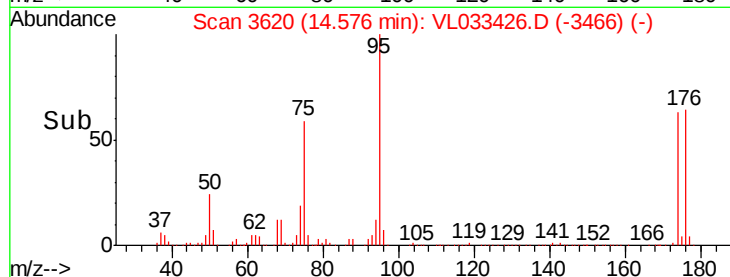
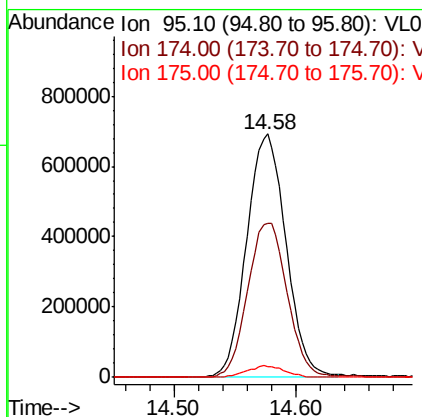
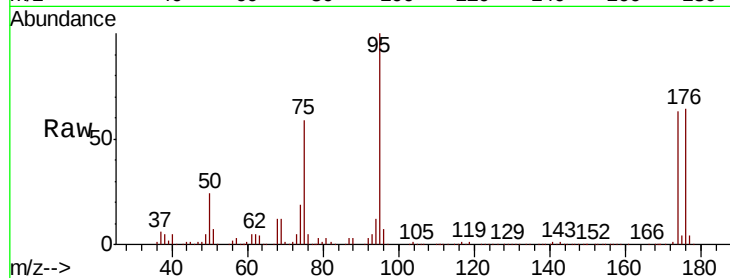




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.815 ppbv
 RT: 14.58 min Scan# 3620
 Delta R.T. -0.01 min
 Lab File: VL033426.D
 Acq: 21 Mar 2019 21:51

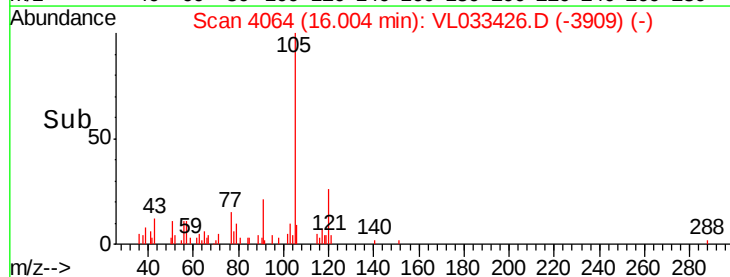
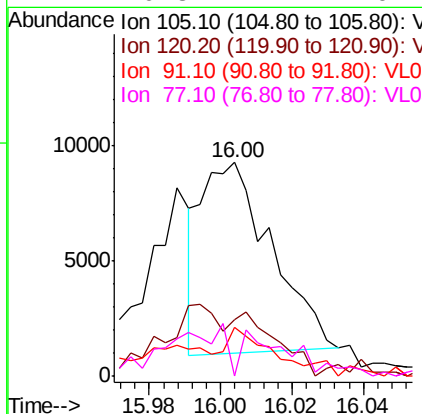
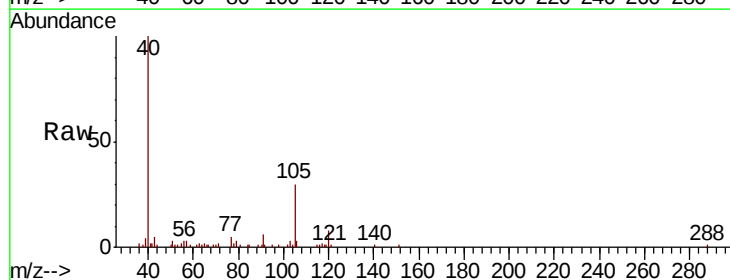
Instrument :
 MSVOA_L
 ClientSampleId :

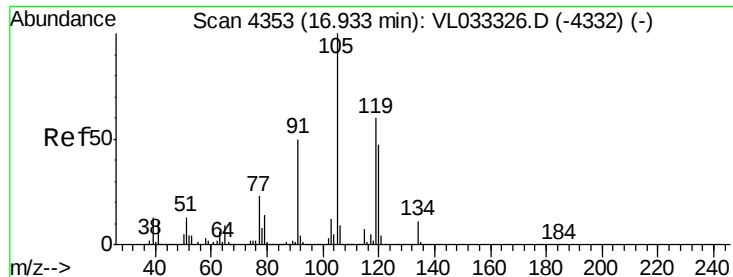
Tot Ion: 95 Resp: 1541400
 Ion Ratio Lower Upper
 95 100
 174 64.8 51.5 77.3
 175 4.6 3.8 5.6



#72
 4-Ethyltoluene
 Concen: 0.043 ppbv
 RT: 16.00 min Scan# 4064
 Delta R.T. -0.00 min
 Lab File: VL033426.D
 Acq: 21 Mar 2019 21:51

Tgt Ion:105 Resp: 11203
 Ion Ratio Lower Upper
 105 100
 120 55.8 22.9 34.3#
 91 37.7 10.2 15.2#
 77 40.3 11.1 16.7#





#74

1,2,4-Trimethylbenzene

Concen: 0.224 ppbv

RT: 16.93 min Scan# 4351

Delta R.T. -0.01 min

Lab File: VL033426.D

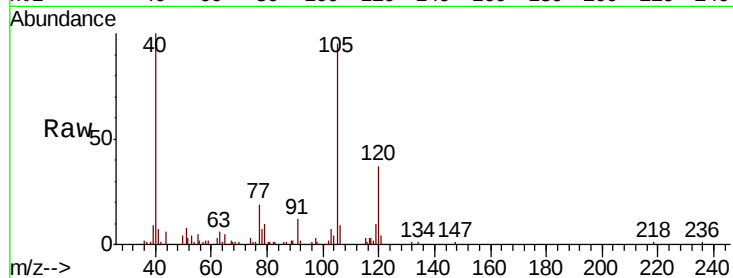
Acq: 21 Mar 2019 21:51

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	105	Resp:	59882
Ion Ratio	Lower	Upper	
105	100		
120	39.5	37.4	56.2
91	12.3	41.0	61.4#
77	19.5	18.5	27.7



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

