

Data File : VL033925.D
Acq On : 14 Jun 2019 9:44
Operator : SY/AP
Sample : K3295-02DL 40X
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
V2DL

Quant Time: Jun 14 11:29:00 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	1016031	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.27	114	2593760	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.22	117	2726622	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.56	95	1984707	8.86	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	88.60%

Target Compounds

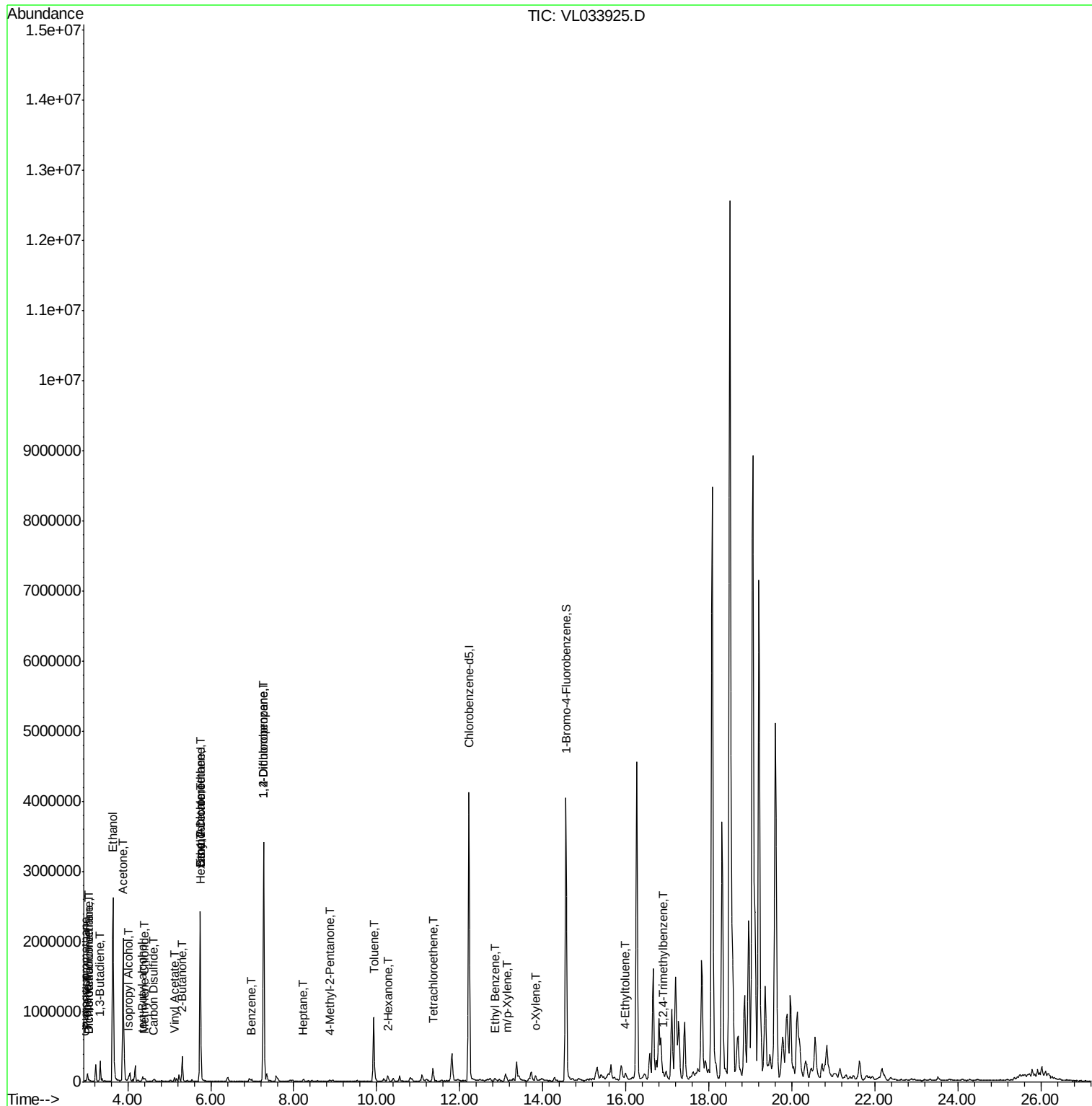
						Qvalue
2) Dichlorodifluoromethane	3.07	85	18136	0.110	ppbv #	88
3) Chlorodifluoromethane	2.98	51	10460	0.087	ppbv #	90
8) Dichlorotetrafluoroethane	3.07	85	18136	0.103	ppbv #	18
9) Propene	3.03	41	34436	0.769	ppbv	100
10) Heptane	8.22	43	5393	0.048	ppbv #	1
13) Ethanol	3.64	45	3120389	214.289	ppbv	97
15) Acetone	3.89	43	2053620	13.859	ppbv	98
16) 1,3-Butadiene	3.33	39	73927	1.311	ppbv #	19
17) tert-Butyl alcohol	4.36	59	35568	0.307	ppbv #	72
19) Isopropyl Alcohol	4.02	45	57347	0.677	ppbv #	1
20) Methylene Chloride	4.40	84	8658	0.150	ppbv	92
23) Vinyl Acetate	5.12	43	14635	0.085	ppbv #	1
25) Ethyl Acetate	5.75	43	139392	0.618	ppbv #	90
26) Hexane	5.76	57	26579	0.259	ppbv #	1
27) Carbon Disulfide	4.61	76	5804	0.041	ppbv #	28
31) cis-1,2-Dichloroethene	5.75	61	16947	0.188	ppbv #	35
34) 2-Butanone	5.31	43	380790	2.602	ppbv	99
36) Benzene	6.98	78	17755	0.090	ppbv	96
39) 1,2-Dichloropropane	7.27	63	618897	8.093	ppbv #	26
50) 4-Methyl-2-Pentanone	8.87	43	9180	0.042	ppbv #	75
51) 2-Hexanone	10.27	43	64395	0.378	ppbv #	94
52) Tetrachloroethene	11.35	164	45941	0.659	ppbv	96
53) Toluene	9.92	91	713504	3.254	ppbv	99
58) Ethyl Benzene	12.84	91	33446	0.109	ppbv	96
59) m/p-Xylene	13.14	91	13480	0.048	ppbv #	31
60) o-Xylene	13.83	91	44059	0.153	ppbv	97
72) 4-Ethyltoluene	15.98	105	10352	0.032	ppbv #	42
74) 1,2,4-Trimethylbenzene	16.91	105	29969	0.080	ppbv #	71

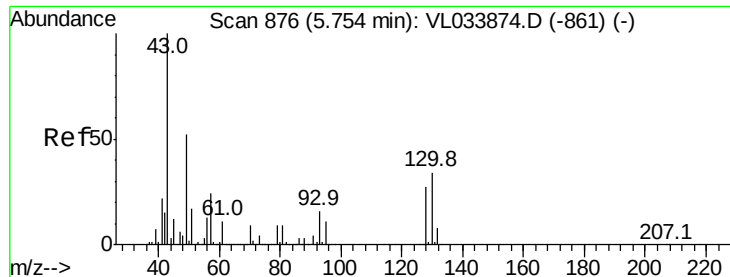
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.74 min Scan# 873

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

V2DL

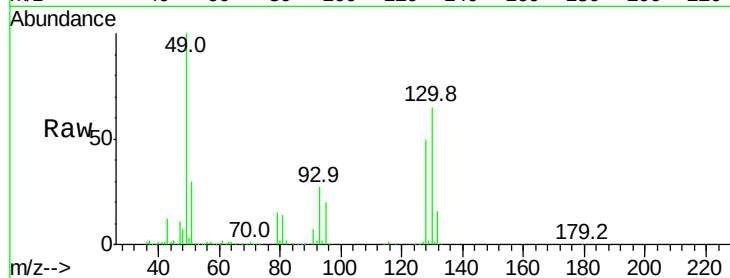
Tgt Ion: 49 Resp: 1016031

Ion Ratio Lower Upper

49 100

128 52.3 25.5 76.5

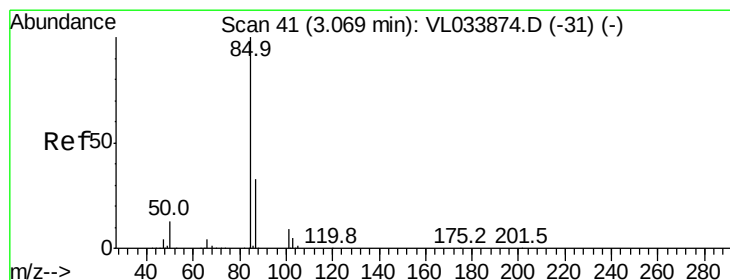
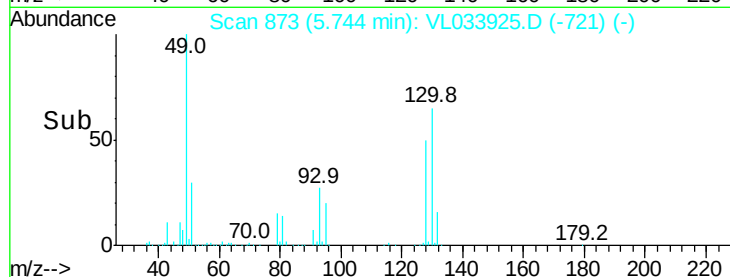
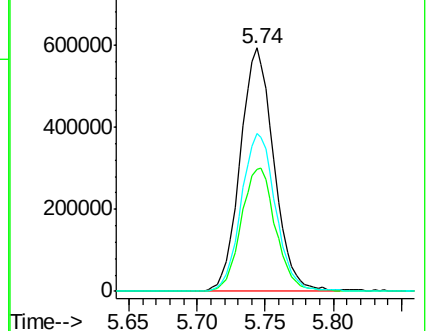
130 66.9 32.5 97.4



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: 0.110 ppbv

RT: 3.07 min Scan# 40

Delta R.T. -0.00 min

Lab File: VL033925.D

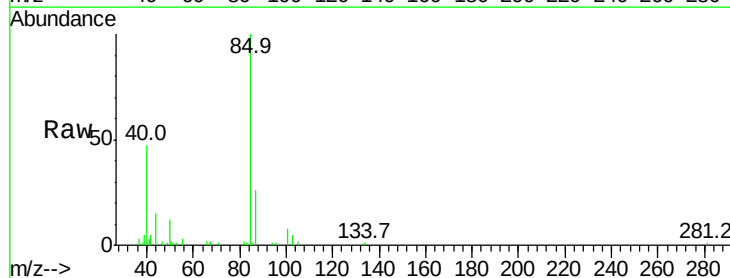
Acq: 14 Jun 2019 9:44

Tgt Ion: 85 Resp: 18136

Ion Ratio Lower Upper

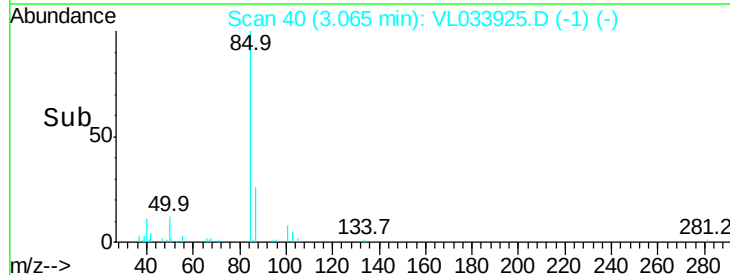
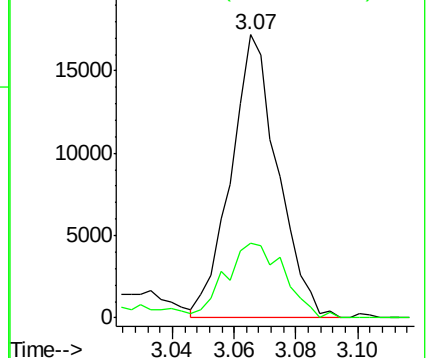
85 100

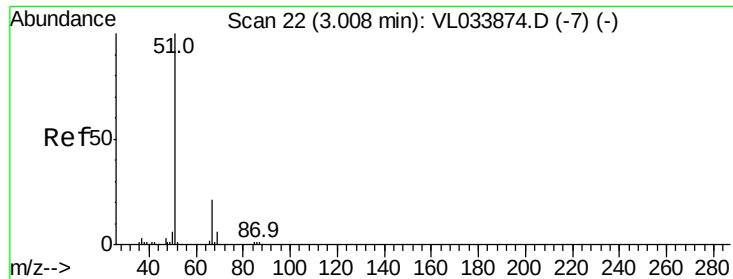
87 26.3 26.6 40.0#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

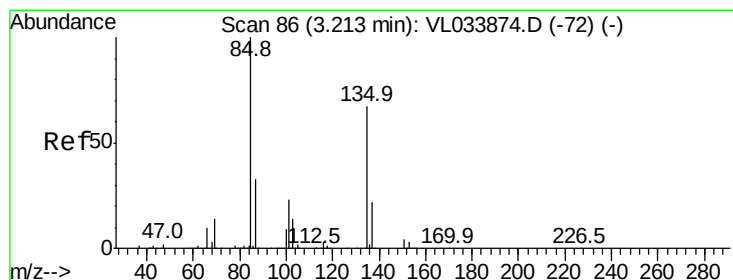
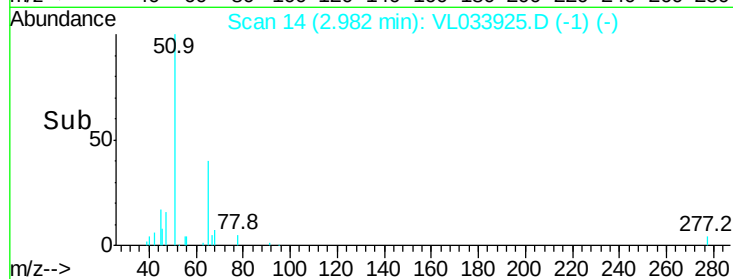
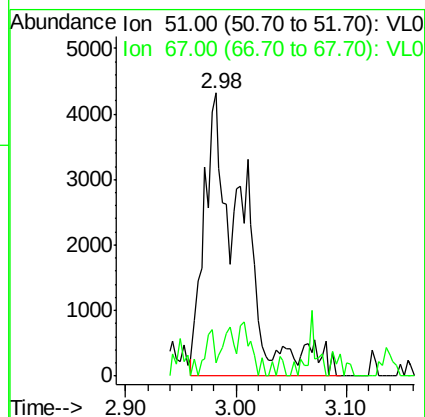
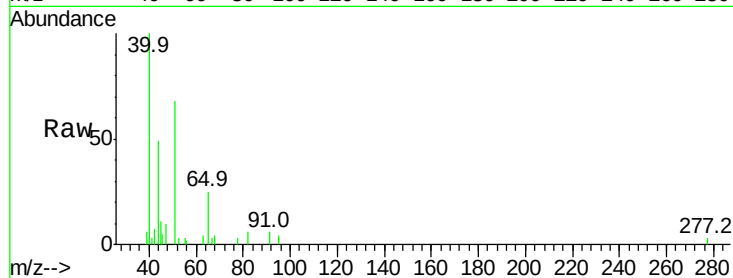




#3
Chlorodifluoromethane
Concen: 0.087 ppbv
RT: 2.98 min Scan# 14
Delta R.T. -0.03 min
Lab File: VL033925.D
Acq: 14 Jun 2019 9:44

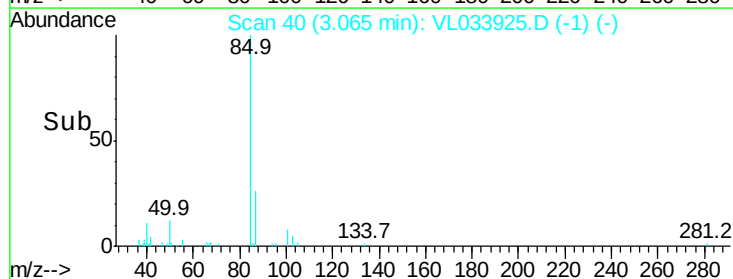
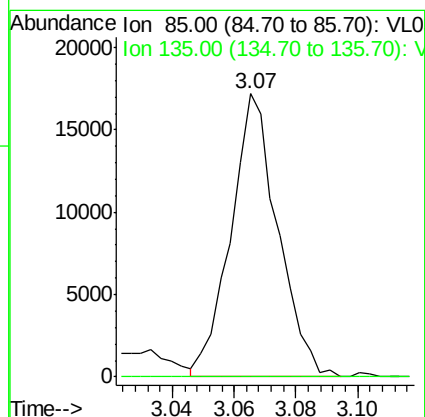
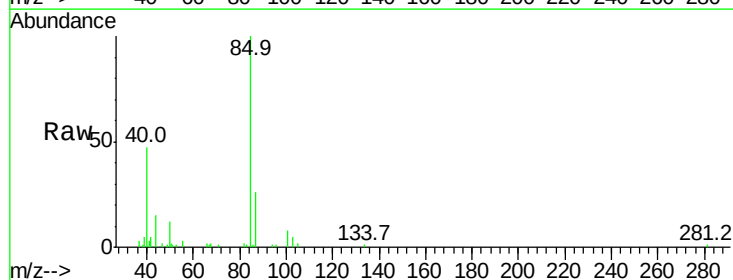
Instrument :
MSVOA_L
ClientSampleId :
V2DL

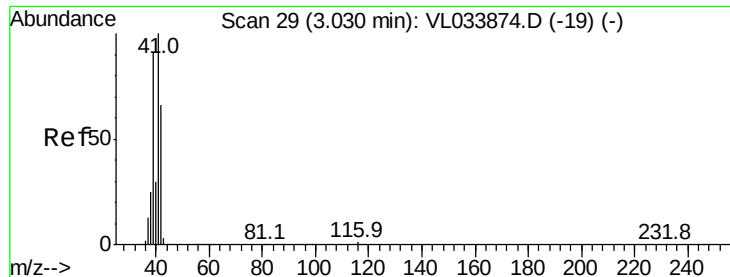
Tgt Ion: 51 Resp: 10460
Ion Ratio Lower Upper
51 100
67 16.0 16.4 24.6#



#8
Dichlorotetrafluoroethane
Concen: 0.103 ppbv
RT: 3.07 min Scan# 40
Delta R.T. -0.15 min
Lab File: VL033925.D
Acq: 14 Jun 2019 9:44

Tgt Ion: 85 Resp: 18136
Ion Ratio Lower Upper
85 100
135 1.4 53.7 80.5#





#9

Propene

Concen: 0.769 ppbv

RT: 3.03 min Scan# 28

Delta R.T. -0.00 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

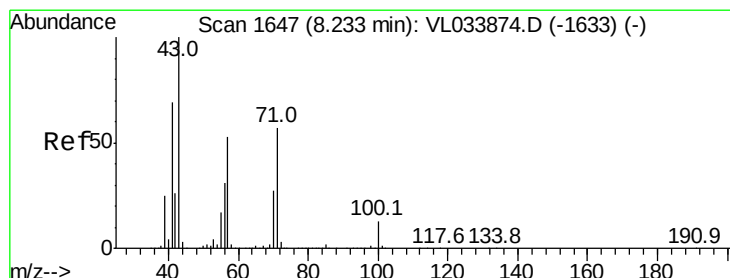
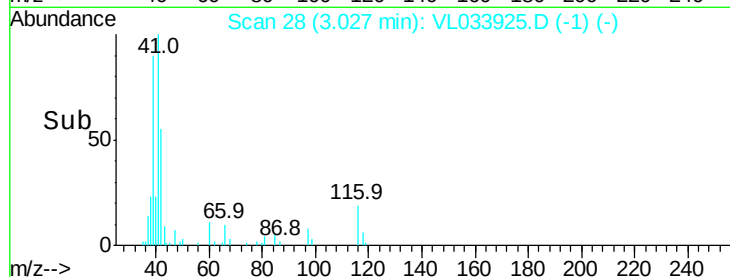
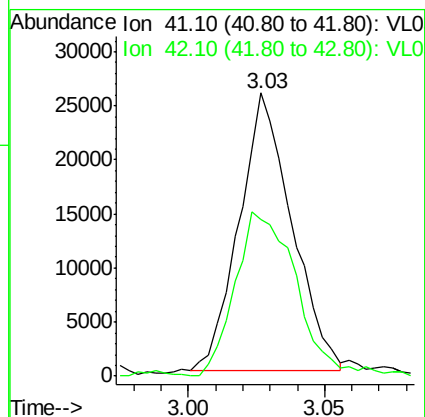
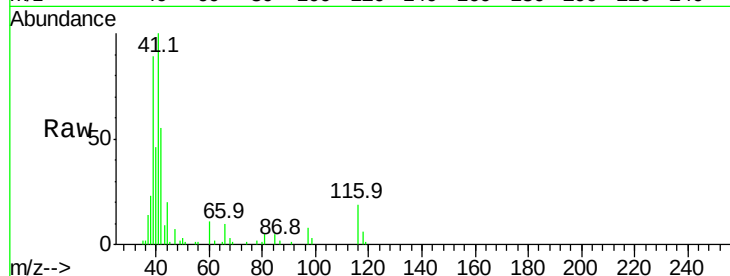
V2DL

Tgt Ion: 41 Resp: 34436

Ion Ratio Lower Upper

41 100

42 70.5 56.3 84.5



#10

Heptane

Concen: 0.048 ppbv

RT: 8.22 min Scan# 1644

Delta R.T. -0.01 min

Lab File: VL033925.D

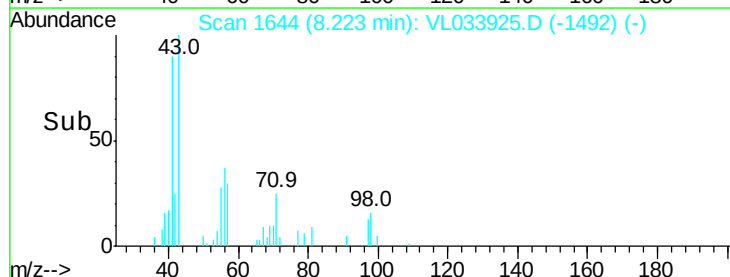
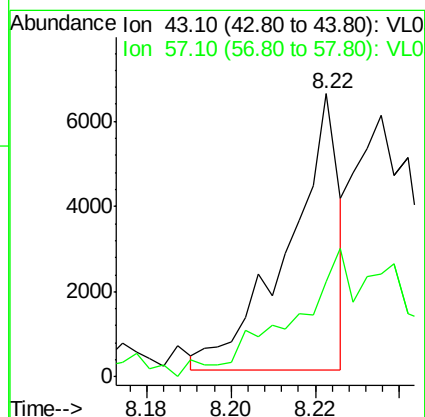
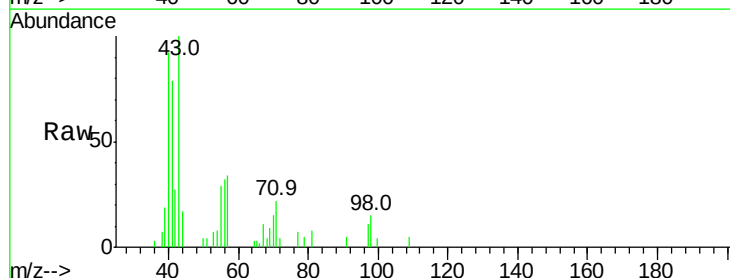
Acq: 14 Jun 2019 9:44

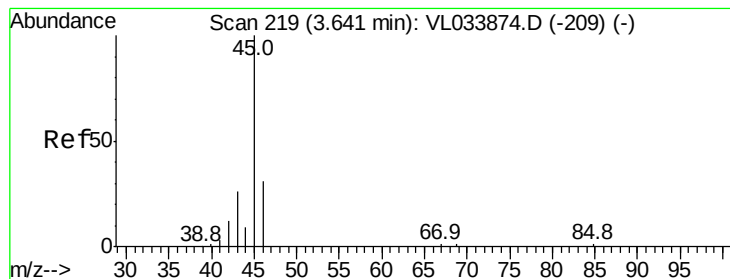
Tgt Ion: 43 Resp: 5393

Ion Ratio Lower Upper

43 100

57 121.6 41.7 62.5#





#13

Ethanol

Concen: 214.289 ppbv

RT: 3.64 min Scan# 219

Delta R.T. -0.00 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

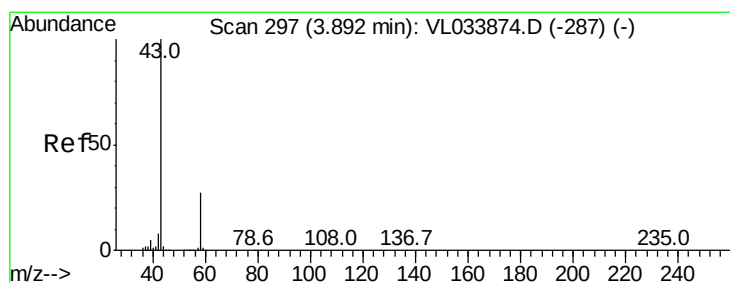
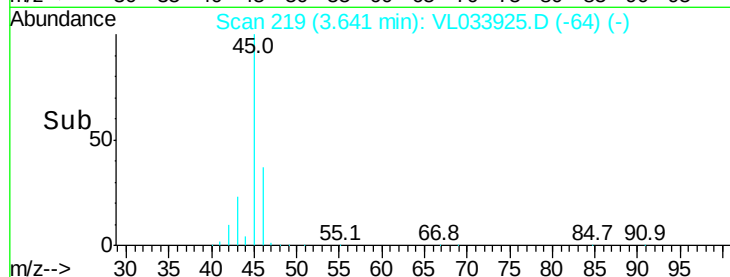
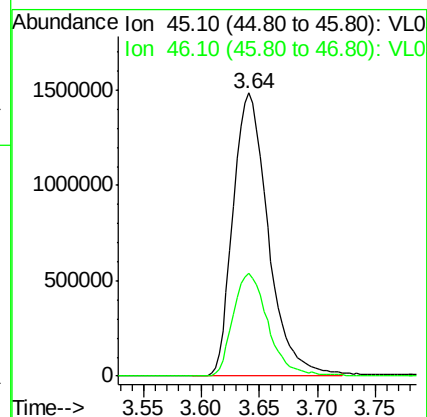
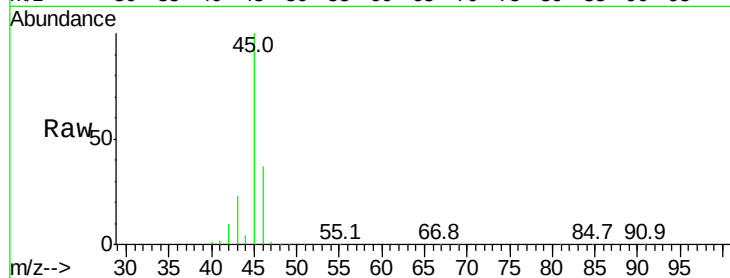
V2DL

Tgt Ion: 45 Resp: 3120389

Ion Ratio Lower Upper

45 100

46 36.6 15.3 61.1



#15

Acetone

Concen: 13.859 ppbv

RT: 3.89 min Scan# 295

Delta R.T. -0.01 min

Lab File: VL033925.D

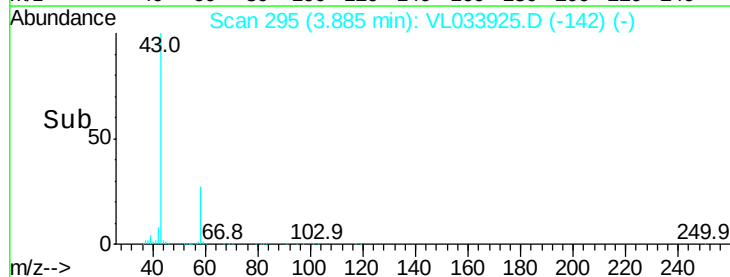
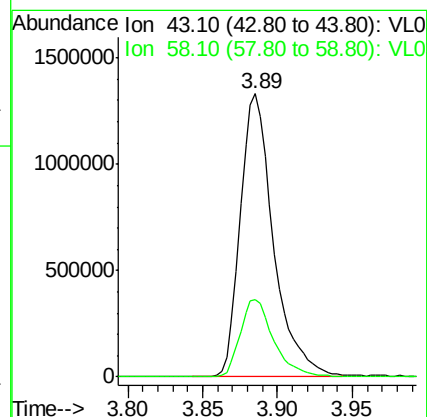
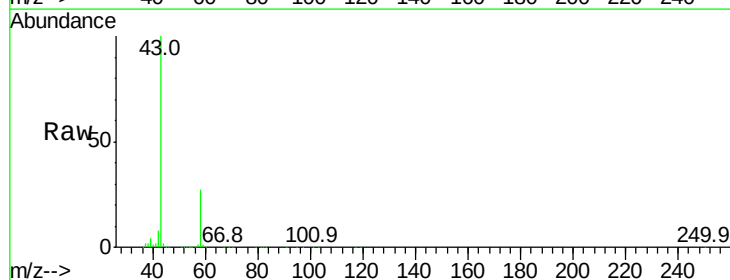
Acq: 14 Jun 2019 9:44

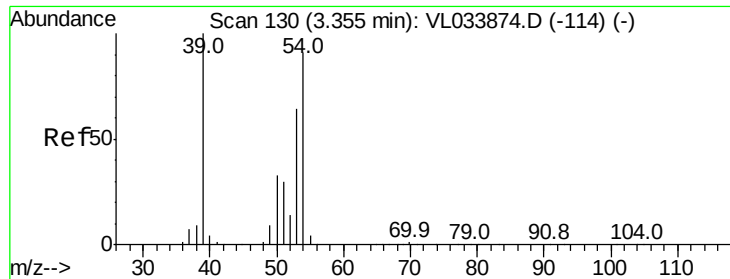
Tgt Ion: 43 Resp: 2053620

Ion Ratio Lower Upper

43 100

58 27.8 21.3 31.9





#16

1,3-Butadiene

Concen: 1.311 ppbv

RT: 3.33 min Scan# 123

Delta R.T. -0.02 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

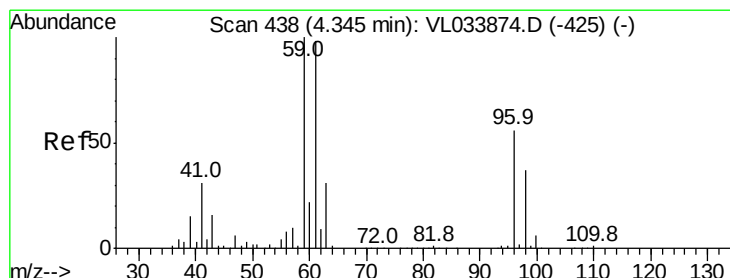
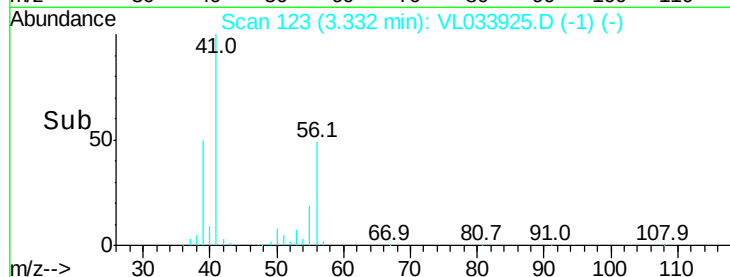
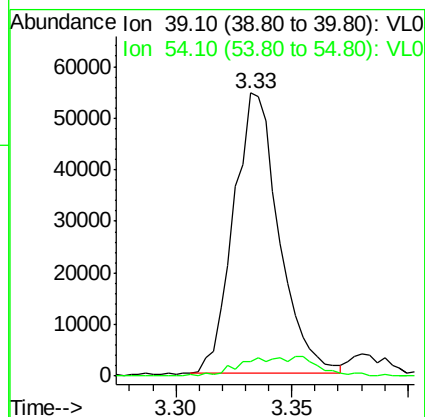
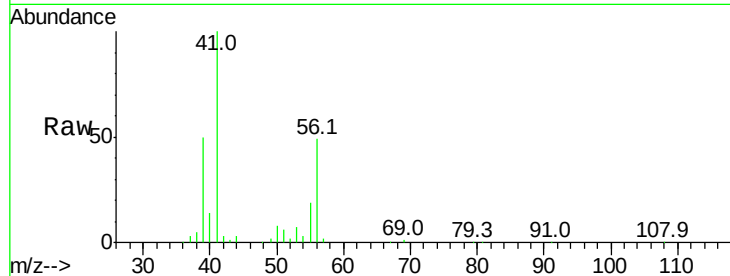
V2DL

Tgt Ion: 39 Resp: 73927

Ion Ratio Lower Upper

39 100

54 11.7 68.6 103.0#



#17

tert-Butyl alcohol

Concen: 0.307 ppbv

RT: 4.36 min Scan# 442

Delta R.T. 0.01 min

Lab File: VL033925.D

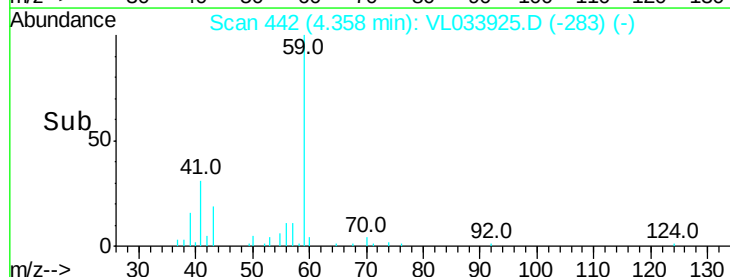
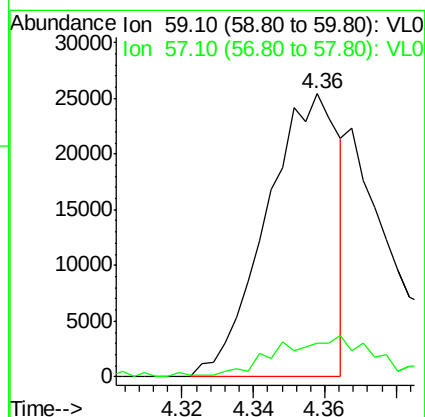
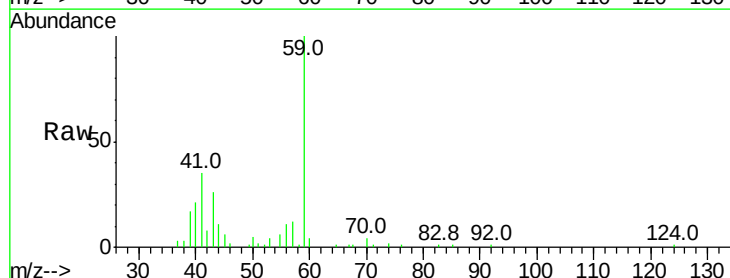
Acq: 14 Jun 2019 9:44

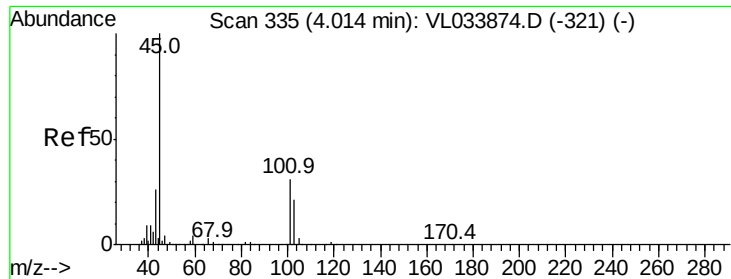
Tgt Ion: 59 Resp: 35568

Ion Ratio Lower Upper

59 100

57 0.0 8.4 12.6#





#19

Isopropyl Alcohol

Concen: 0.677 ppbv

RT: 4.02 min Scan# 338

Delta R.T. 0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

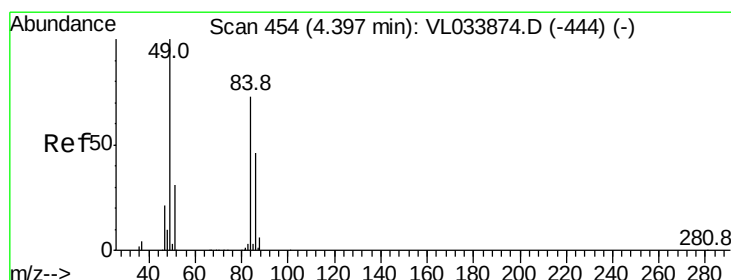
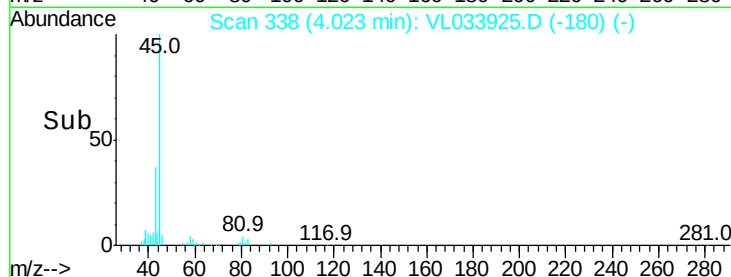
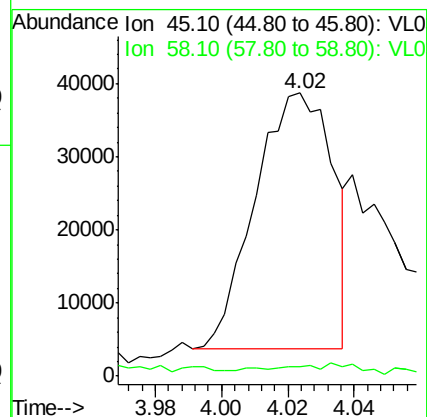
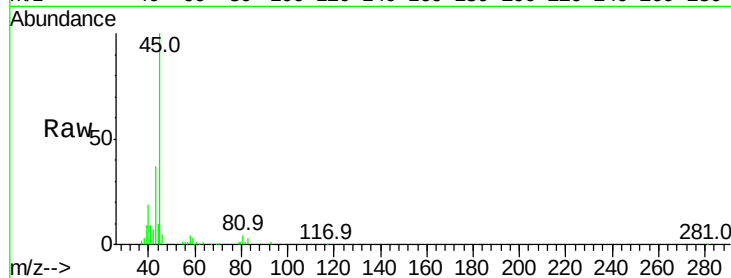
V2DL

Tgt Ion: 45 Resp: 57347

Ion Ratio Lower Upper

45 100

58 995.9 1.8 2.6#



#20

Methylene Chloride

Concen: 0.150 ppbv

RT: 4.40 min Scan# 454

Delta R.T. -0.00 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Tgt Ion: 84 Resp: 8658

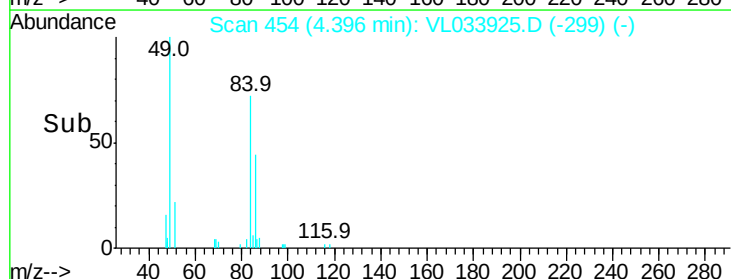
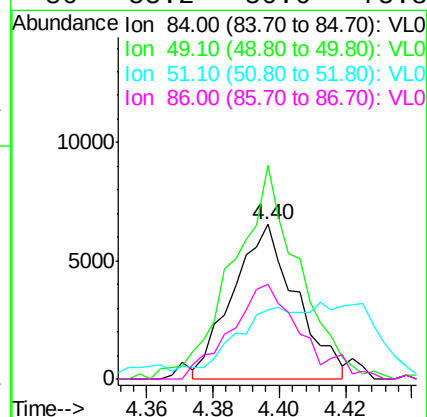
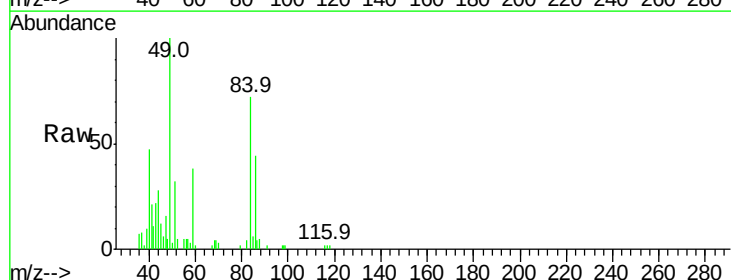
Ion Ratio Lower Upper

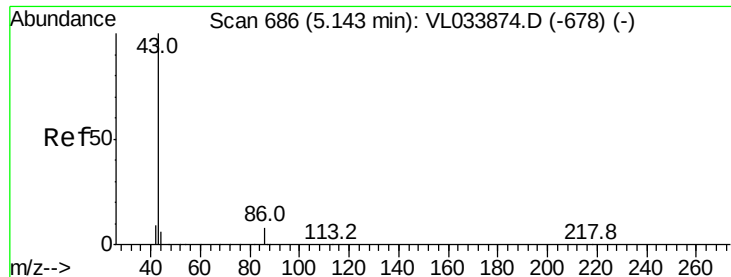
84 100

49 127.2 110.0 165.0

51 39.9 34.6 51.8

86 55.2 50.6 75.8





#23

Vinyl Acetate

Concen: 0.085 ppbv

RT: 5.12 min Scan# 680

Delta R.T. -0.02 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

V2DL

Tgt Ion: 43 Resp: 14635

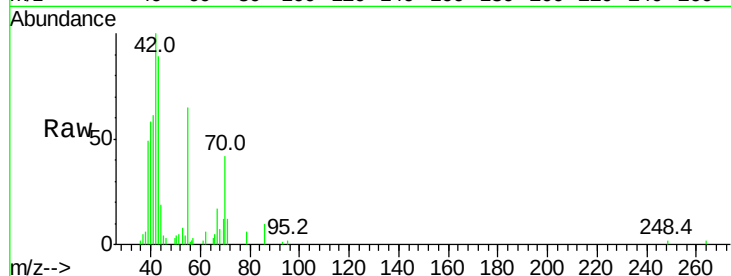
Ion Ratio Lower Upper

43 100

86 11.2 5.8 8.8#

42 113.9 7.8 11.8#

44 6.6 4.2 6.4#

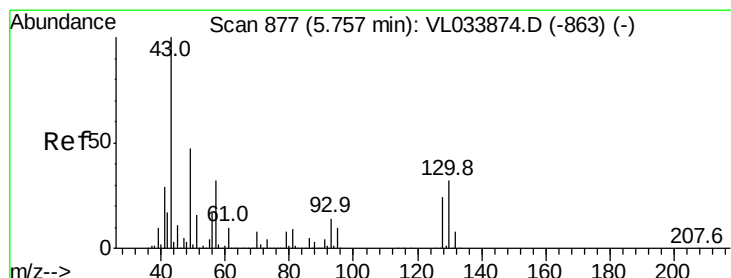
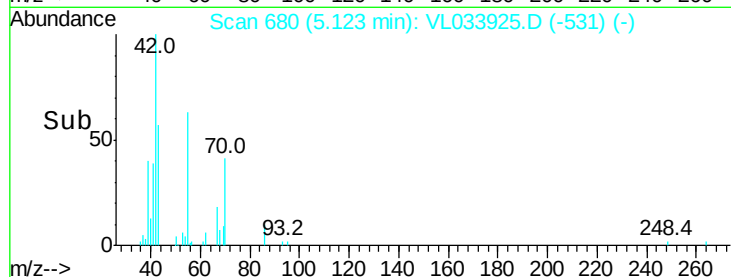
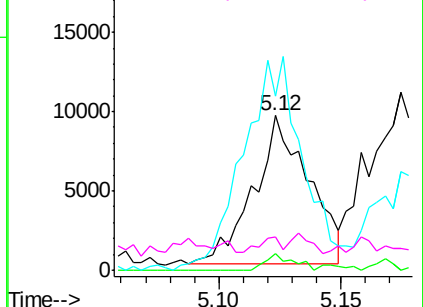


Abundance Ion 43.10 (42.80 to 43.80): VL0

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



#25

Ethyl Acetate

Concen: 0.618 ppbv

RT: 5.75 min Scan# 875

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Tgt Ion: 43 Resp: 139392

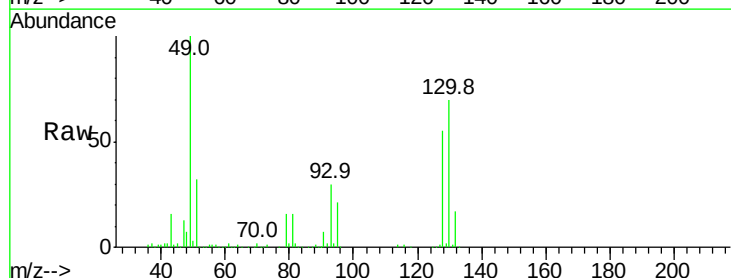
Ion Ratio Lower Upper

43 100

45 15.4 7.9 11.9#

61 12.3 7.8 11.6#

70 9.7 5.8 8.6#

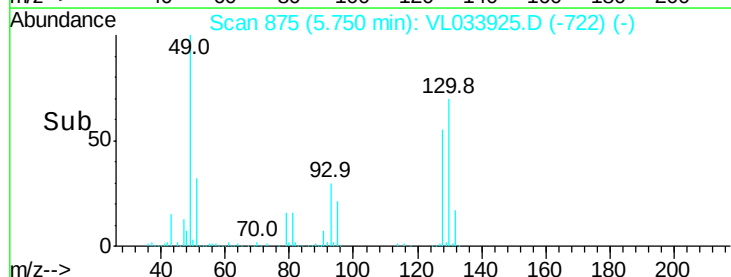
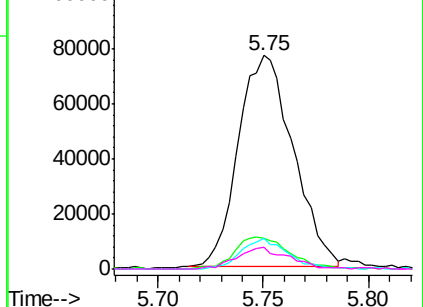


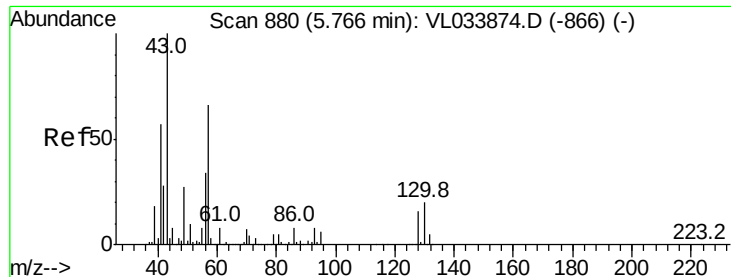
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.259 ppbv

RT: 5.76 min Scan# 878

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

V2DL

Tgt Ion: 57 Resp: 26579

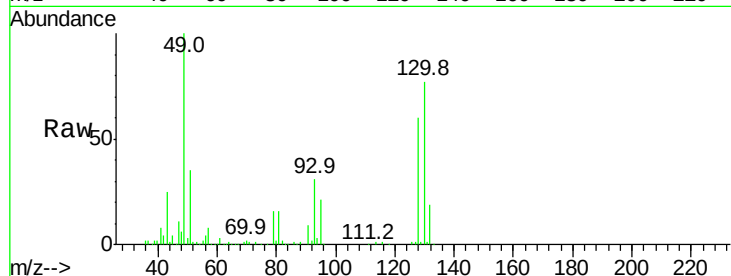
Ion Ratio Lower Upper

57 100

41 120.5 71.4 107.2#

43 546.3 183.7 275.5#

56 61.9 42.7 64.1



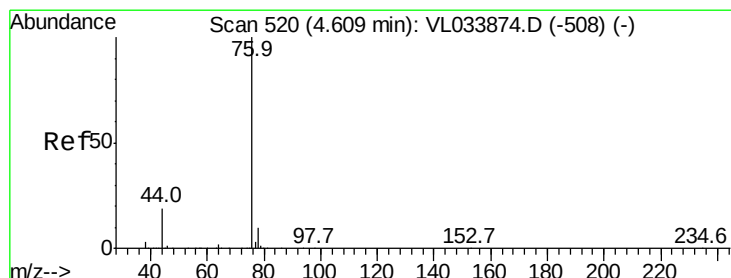
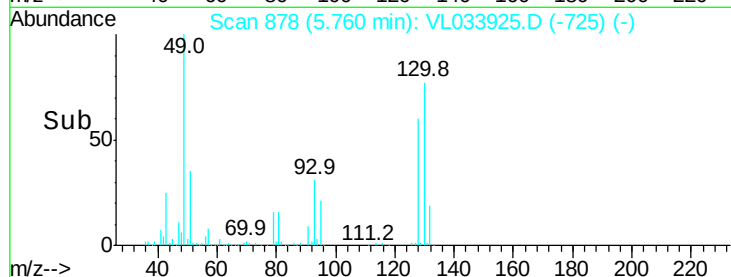
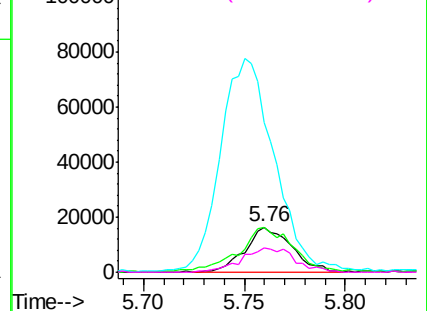
Abundance

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



#27

Carbon Disulfide

Concen: 0.041 ppbv

RT: 4.61 min Scan# 520

Delta R.T. -0.00 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

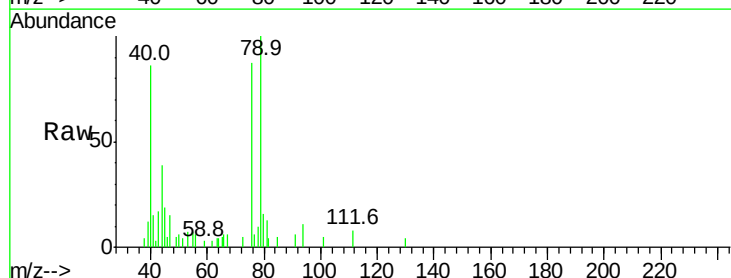
Tgt Ion: 76 Resp: 5804

Ion Ratio Lower Upper

76 100

44 60.4 14.4 21.6#

78 0.0 7.5 11.3#

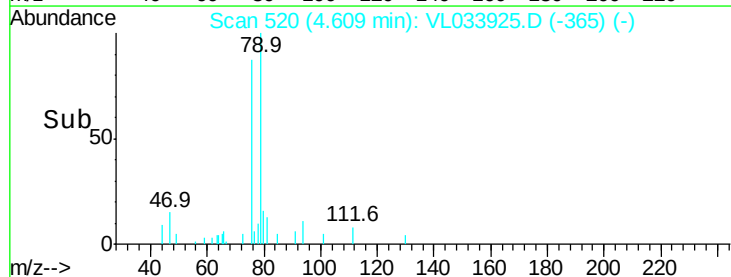
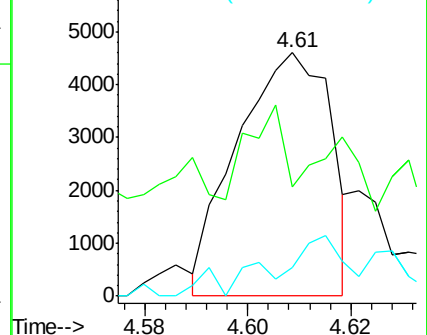


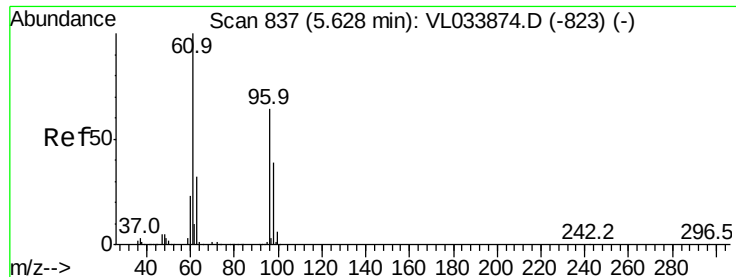
Abundance

Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0



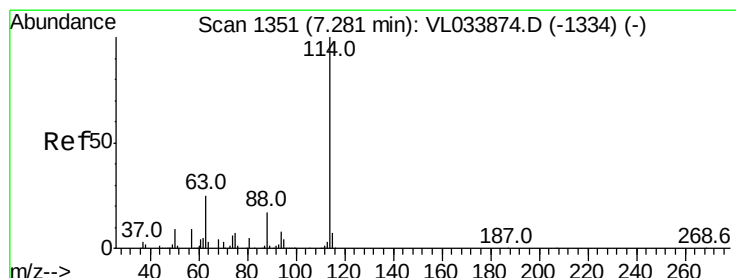
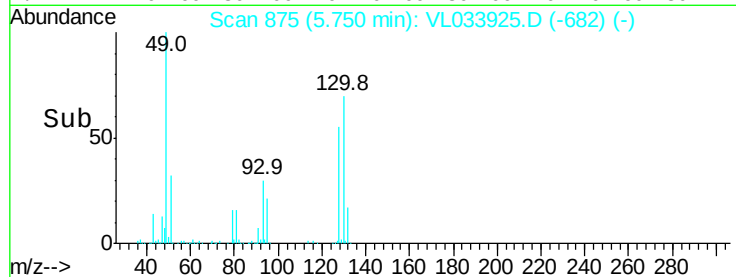
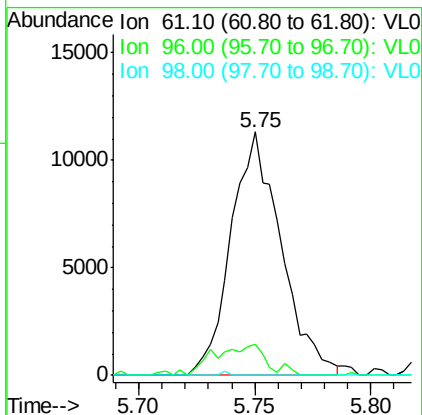
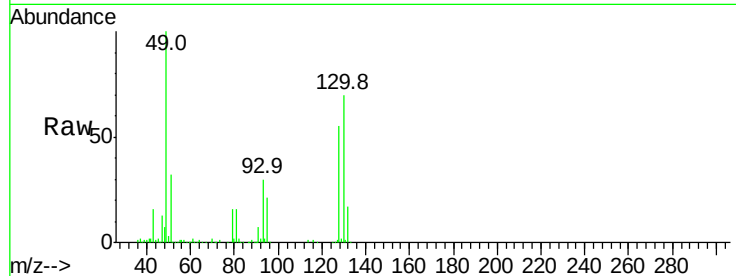


#31

cis-1,2-Dichloroethene
 Concen: 0.188 ppbv
 RT: 5.75 min Scan# 875
 Delta R.T. 0.12 min
 Lab File: VL033925.D
 Acq: 14 Jun 2019 9:44

Instrument :
 MSVOA_L
 ClientSampleId :
 V2DL

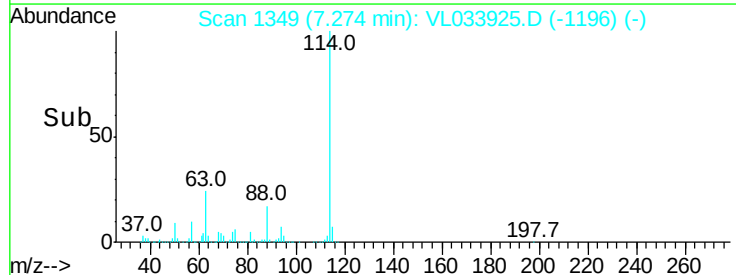
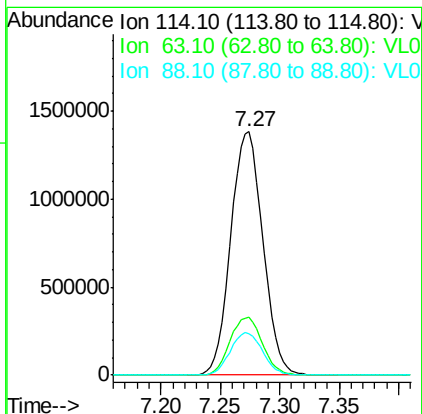
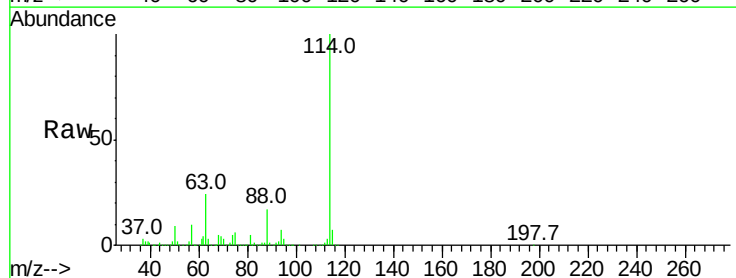
Tgt Ion: 61 Resp: 16947
 Ion Ratio Lower Upper
 61 100
 96 13.0 50.9 76.3#
 98 0.0 31.4 47.2#

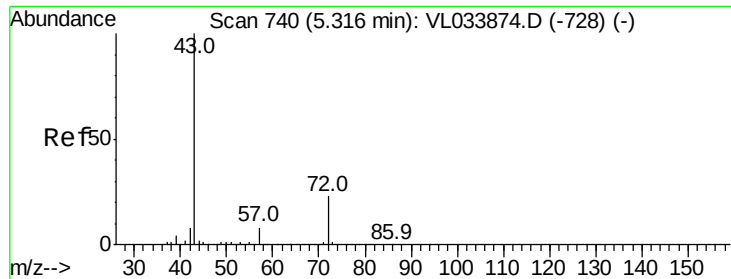


#33

1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.27 min Scan# 1349
 Delta R.T. -0.01 min
 Lab File: VL033925.D
 Acq: 14 Jun 2019 9:44

Tgt Ion: 114 Resp: 2593760
 Ion Ratio Lower Upper
 114 100
 63 24.1 21.1 31.7
 88 17.6 14.2 21.4





#34

2-Butanone

Concen: 2.602 ppbv

RT: 5.31 min Scan# 738

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

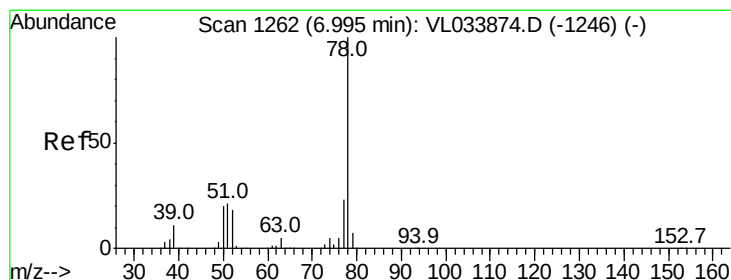
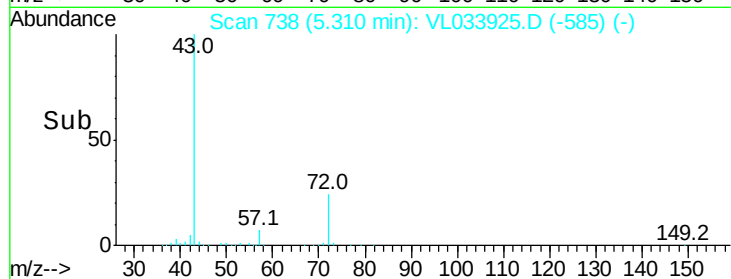
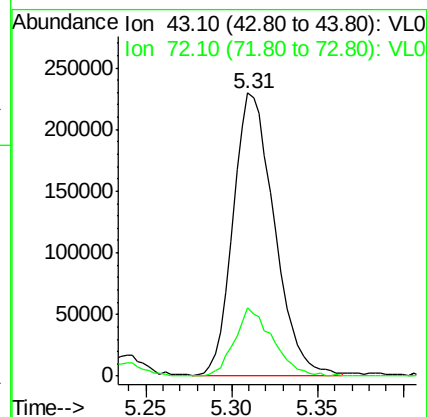
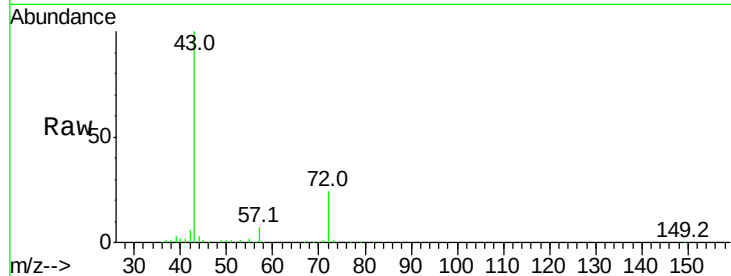
V2DL

Tgt Ion: 43 Resp: 380790

Ion Ratio Lower Upper

43 100

72 22.7 17.9 26.9



#36

Benzene

Concen: 0.090 ppbv

RT: 6.98 min Scan# 1258

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

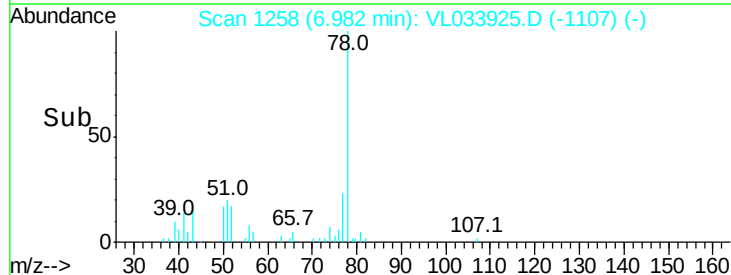
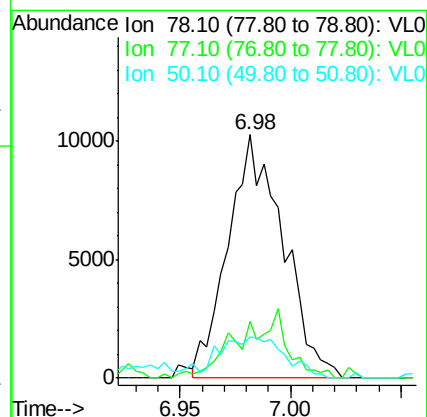
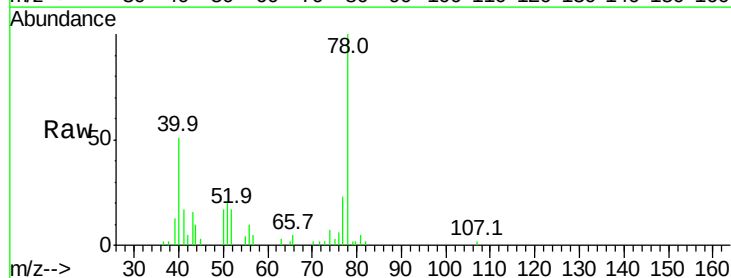
Tgt Ion: 78 Resp: 17755

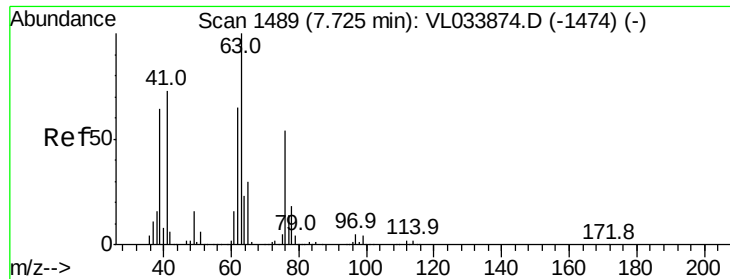
Ion Ratio Lower Upper

78 100

77 23.4 18.2 27.2

50 16.8 15.9 23.9





#39

1,2-Dichloropropane

Concen: 8.093 ppbv

RT: 7.27 min Scan# 1349

Delta R.T. -0.45 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

V2DL

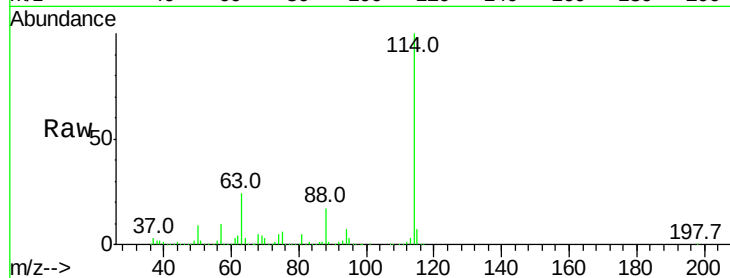
Tgt Ion: 63 Resp: 618897

Ion Ratio Lower Upper

63 100

41 0.0 58.7 88.1#

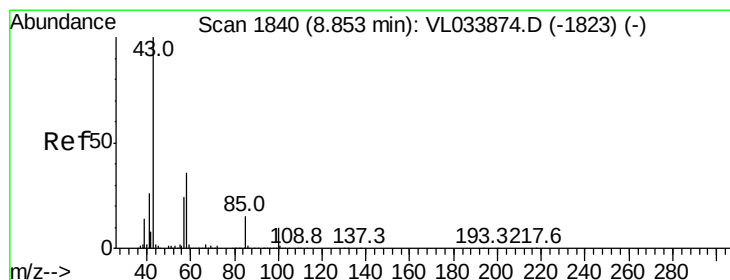
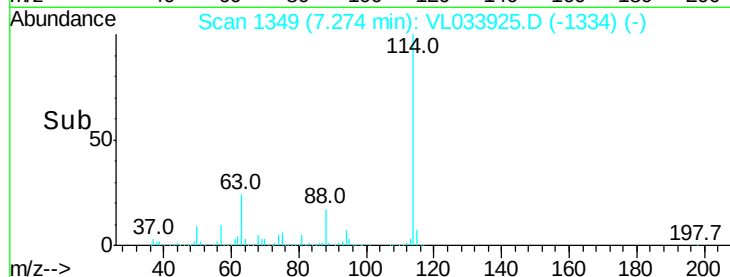
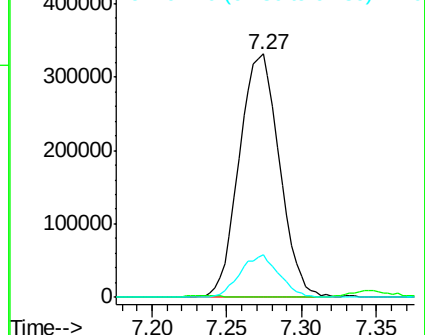
62 17.8 51.9 77.9#



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



#50

4-Methyl-2-Pentanone

Concen: 0.042 ppbv

RT: 8.87 min Scan# 1844

Delta R.T. 0.01 min

Lab File: VL033925.D

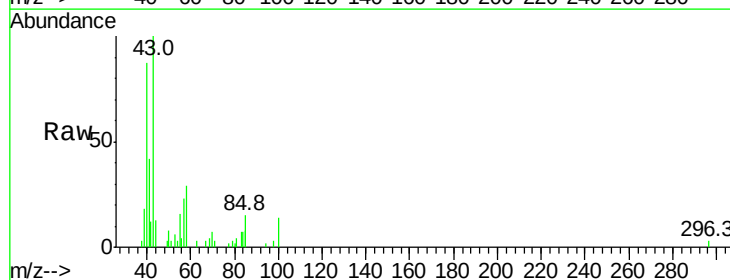
Acq: 14 Jun 2019 9:44

Tgt Ion: 43 Resp: 9180

Ion Ratio Lower Upper

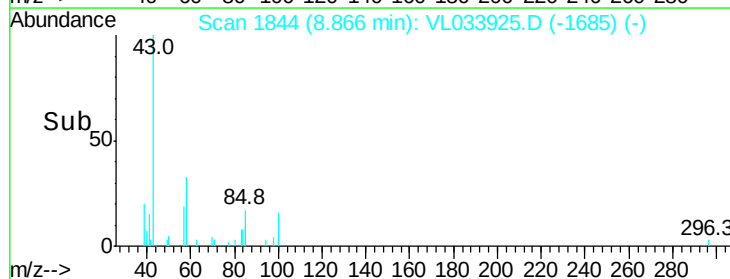
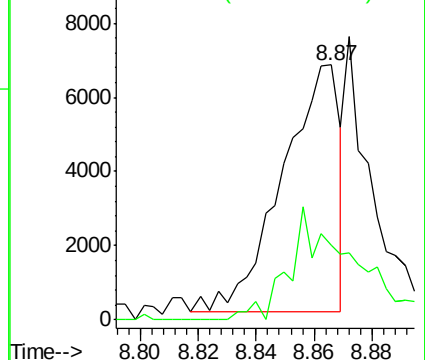
43 100

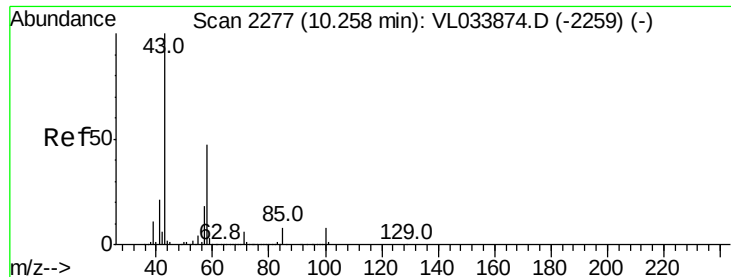
58 50.5 28.6 42.8#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

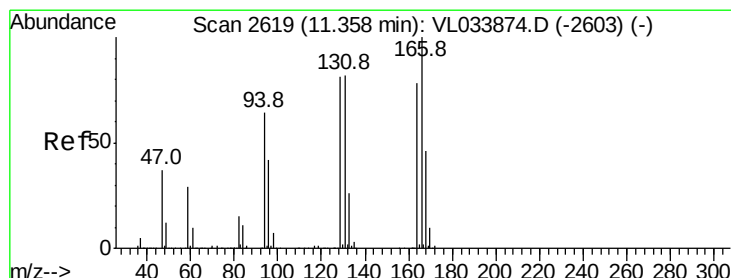
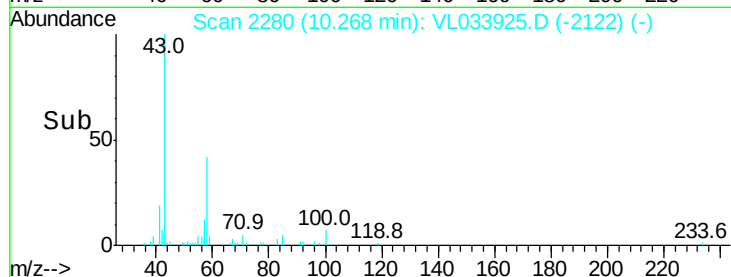
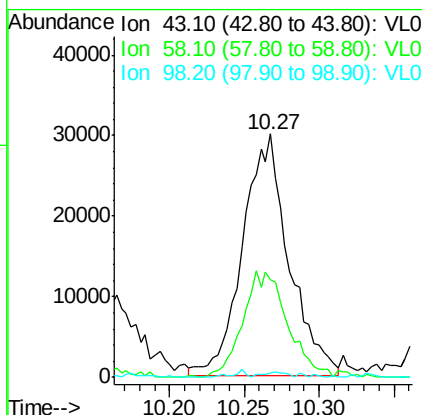
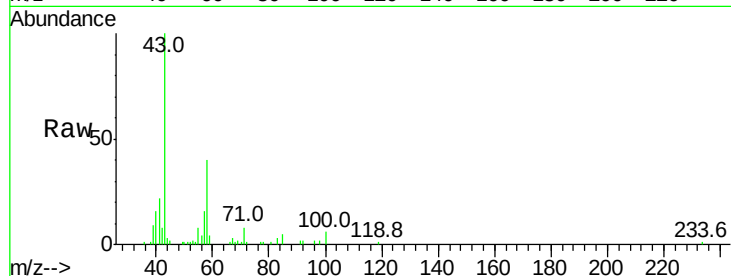




#51
2-Hexanone
Concen: 0.378 ppbv
RT: 10.27 min Scan# 2280
Delta R.T. 0.01 min
Lab File: VL033925.D
Acq: 14 Jun 2019 9:44

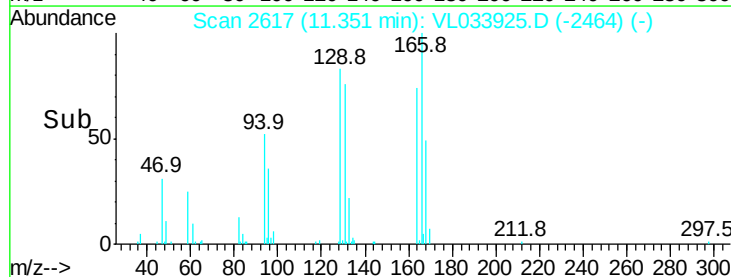
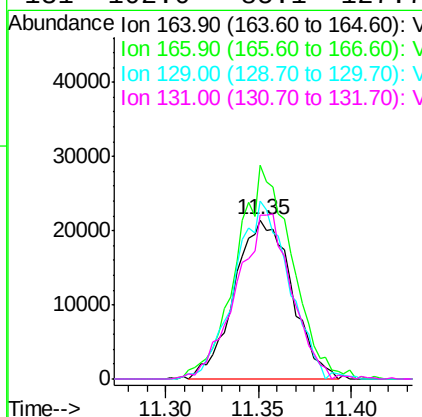
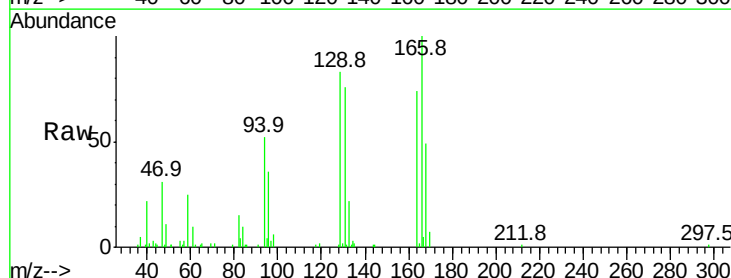
Instrument :
MSVOA_L
ClientSampleId :
V2DL

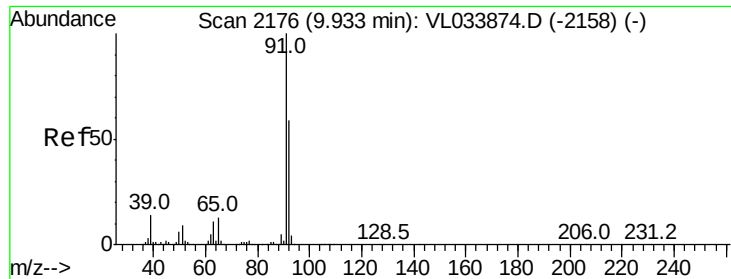
Tgt Ion: 43 Resp: 64395
Ion Ratio Lower Upper
43 100
58 43.5 38.2 57.4
98 2.5 0.2 0.2#



#52
Tetrachloroethene
Concen: 0.659 ppbv
RT: 11.35 min Scan# 2617
Delta R.T. -0.01 min
Lab File: VL033925.D
Acq: 14 Jun 2019 9:44

Tgt Ion: 164 Resp: 45941
Ion Ratio Lower Upper
164 100
166 129.9 103.1 154.7
129 111.6 83.9 125.9
131 102.0 85.1 127.7





#53

Toluene

Concen: 3.254 ppbv

RT: 9.92 min Scan# 2173

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

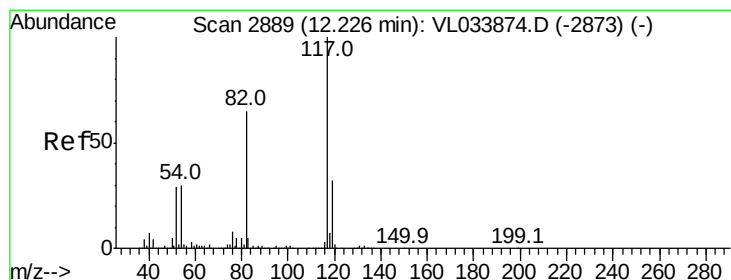
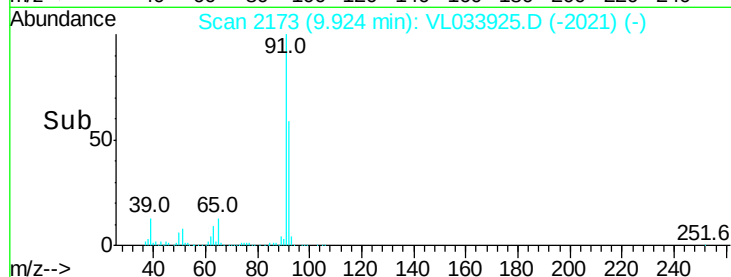
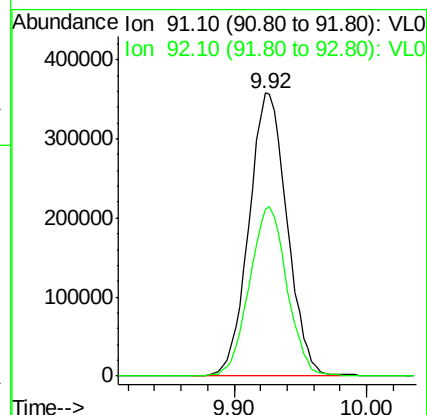
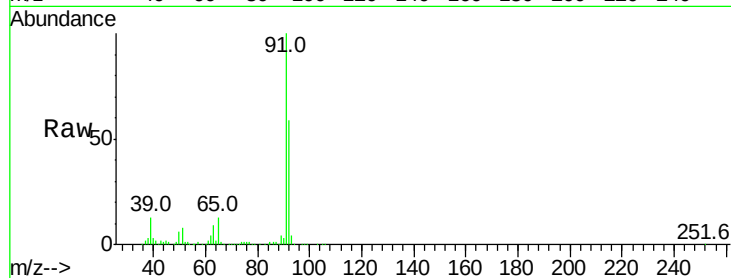
V2DL

Tgt Ion: 91 Resp: 713504

Ion Ratio Lower Upper

91 100

92 59.3 47.0 70.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.22 min Scan# 2887

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

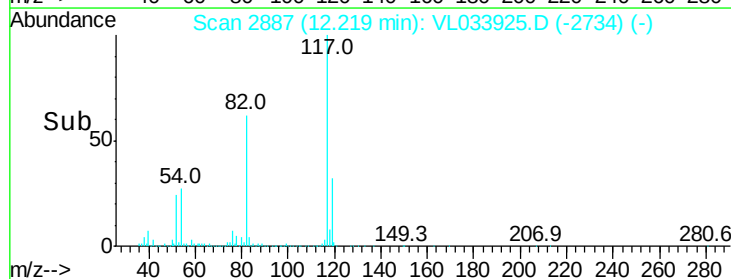
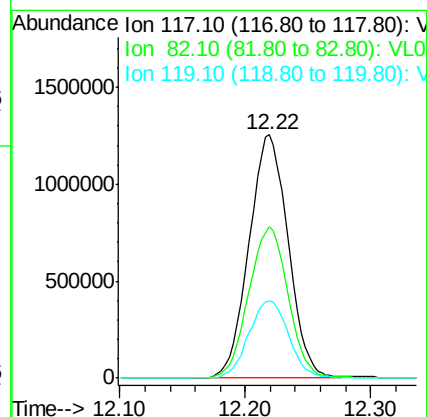
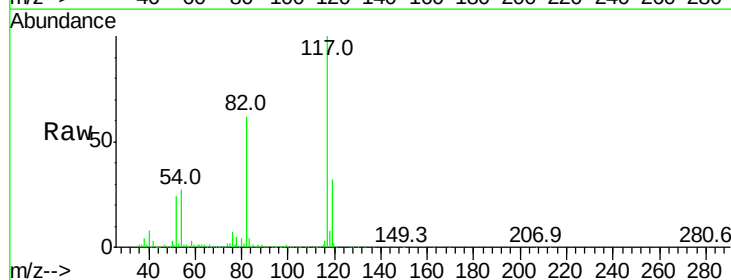
Tgt Ion: 117 Resp: 2726622

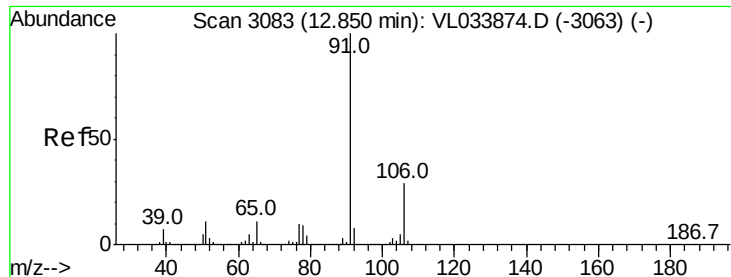
Ion Ratio Lower Upper

117 100

82 63.0 50.2 75.2

119 32.5 24.8 37.2





#58

Ethyl Benzene

Concen: 0.109 ppbv

RT: 12.84 min Scan# 3081

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Instrument :

MSVOA_L

ClientSampleId :

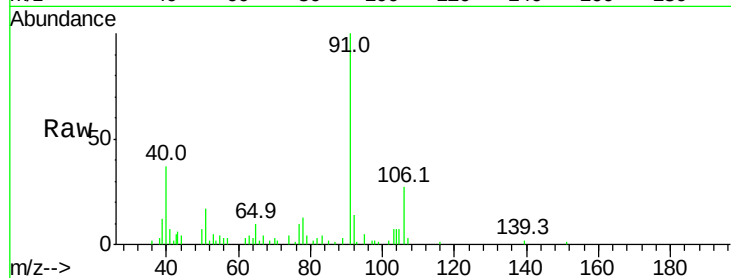
V2DL

Tgt Ion: 91 Resp: 33446

Ion Ratio Lower Upper

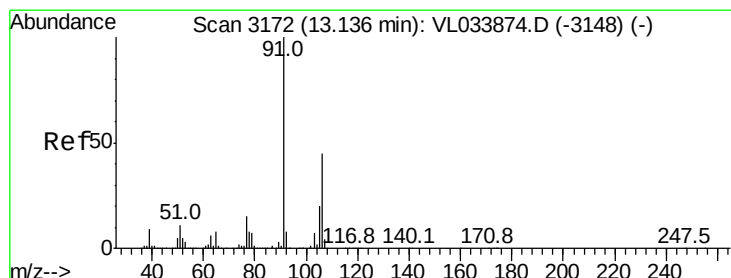
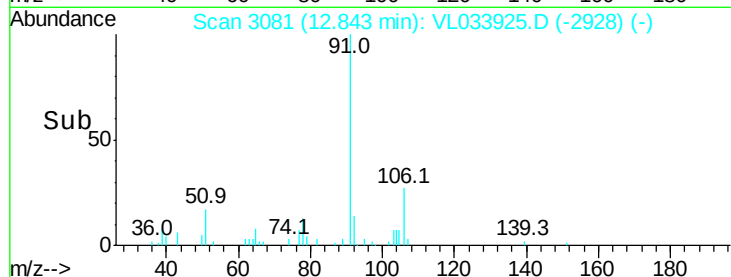
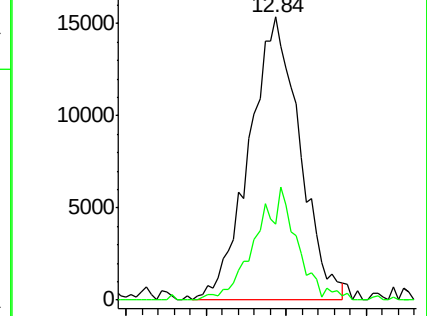
91 100

106 26.8 23.0 34.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.048 ppbv

RT: 13.14 min Scan# 3172

Delta R.T. -0.00 min

Lab File: VL033925.D

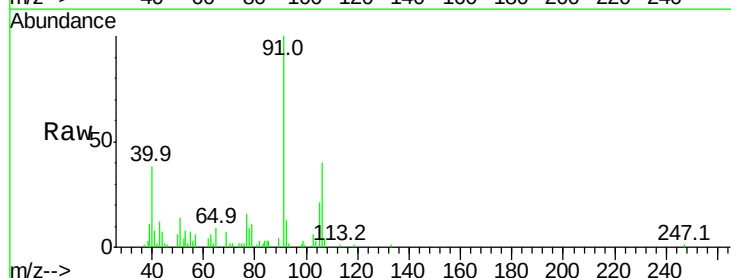
Acq: 14 Jun 2019 9:44

Tgt Ion: 91 Resp: 13480

Ion Ratio Lower Upper

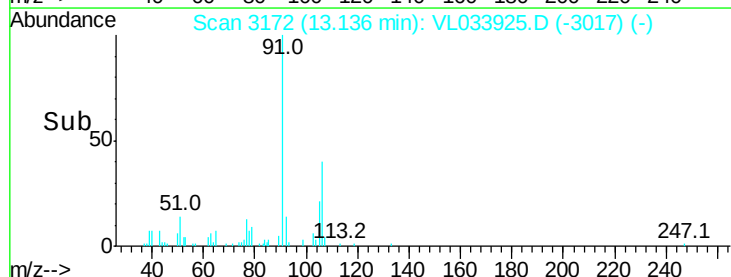
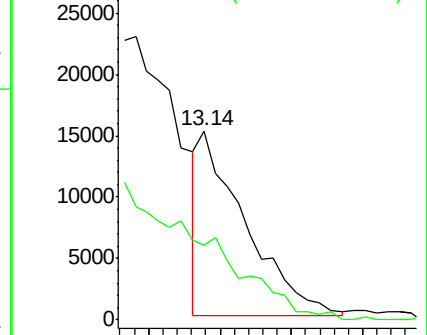
91 100

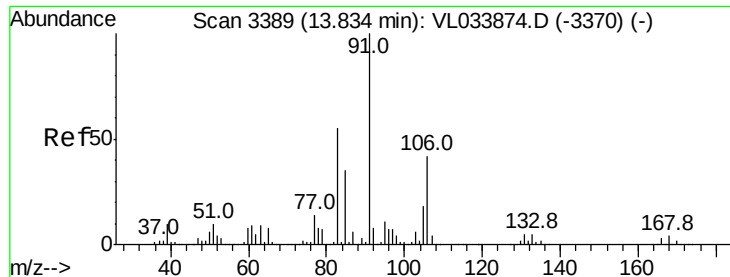
106 0.0 35.8 53.8#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

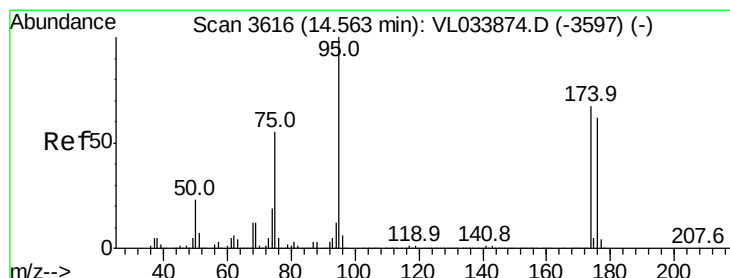
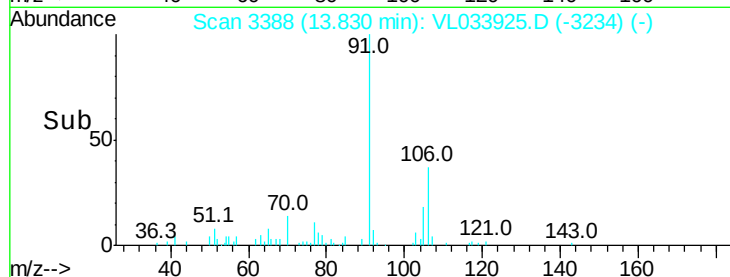
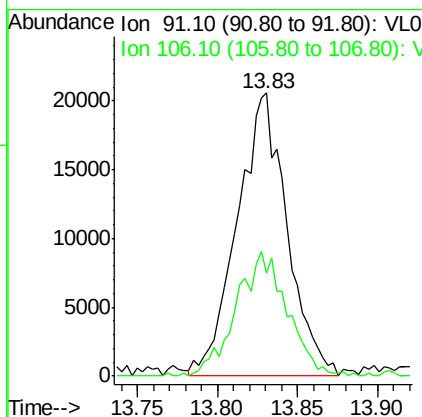
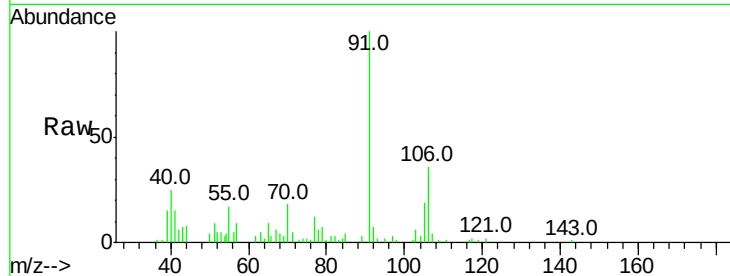




#60
o-Xylene
Concen: 0.153 ppbv
RT: 13.83 min Scan# 3388
Delta R.T. -0.00 min
Lab File: VL033925.D
Acq: 14 Jun 2019 9:44

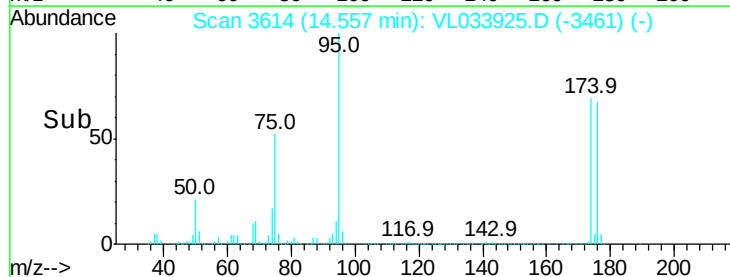
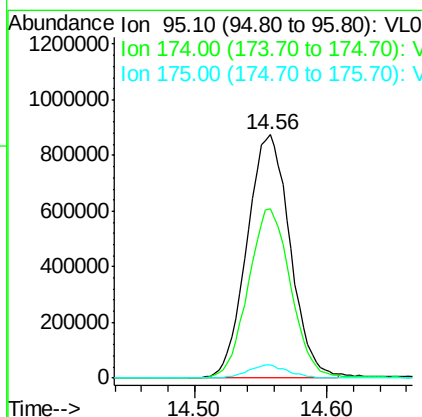
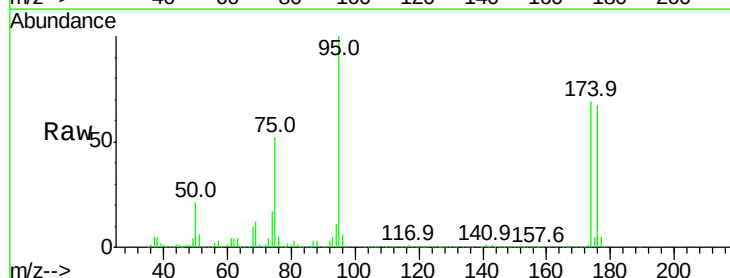
Instrument :
MSVOA_L
ClientSampled :
V2DL

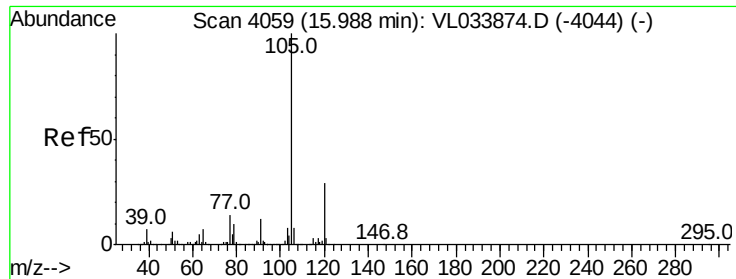
Tgt Ion: 91 Resp: 44059
Ion Ratio Lower Upper
91 100
106 45.5 21.7 65.1



#68
1-Bromo-4-Fluorobenzene
Concen: 8.862 ppbv
RT: 14.56 min Scan# 3614
Delta R.T. -0.01 min
Lab File: VL033925.D
Acq: 14 Jun 2019 9:44

Tgt Ion: 95 Resp: 1984707
Ion Ratio Lower Upper
95 100
174 69.5 54.0 81.0
175 5.1 3.8 5.8





#72

4-Ethyltoluene

Concen: 0.032 ppbv

RT: 15.98 min Scan# 4057

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

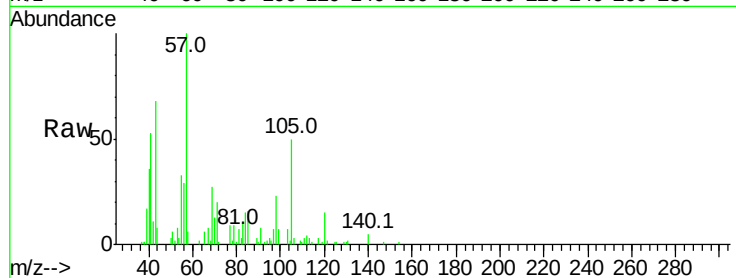
Instrument :

MSVOA_L

ClientSampleId :

V2DL

Tgt Ion:	105	Resp:	10352
Ion Ratio	Lower	Upper	
105	100		
120	48.9	23.5	35.3#
91	66.3	10.4	15.6#
77	0.0	11.7	17.5#

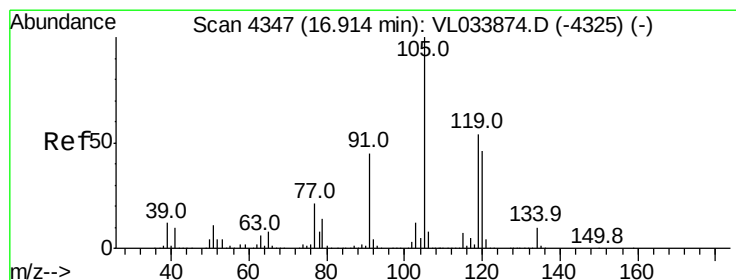
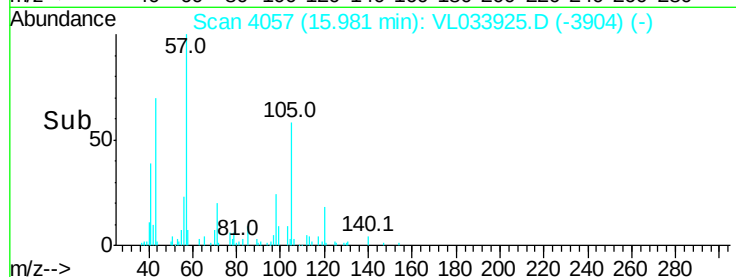
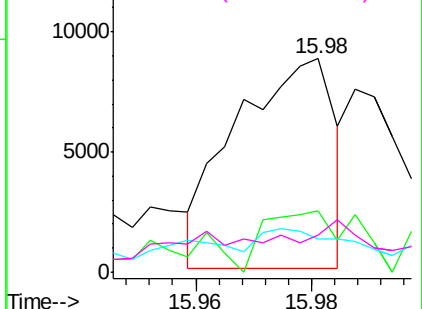


Abundance Ion 105.10 (104.80 to 105.80): V

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



#74

1,2,4-Trimethylbenzene

Concen: 0.080 ppbv

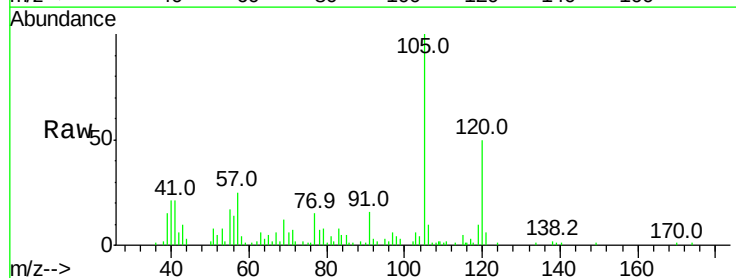
RT: 16.91 min Scan# 4345

Delta R.T. -0.01 min

Lab File: VL033925.D

Acq: 14 Jun 2019 9:44

Tgt Ion:	105	Resp:	29969
Ion Ratio	Lower	Upper	
105	100		
120	56.7	36.7	55.1#
91	14.6	35.8	53.8#
77	12.8	16.9	25.3#



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

